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Passive Components and
Electron Tubes

Preferred Products 1996
Benelux

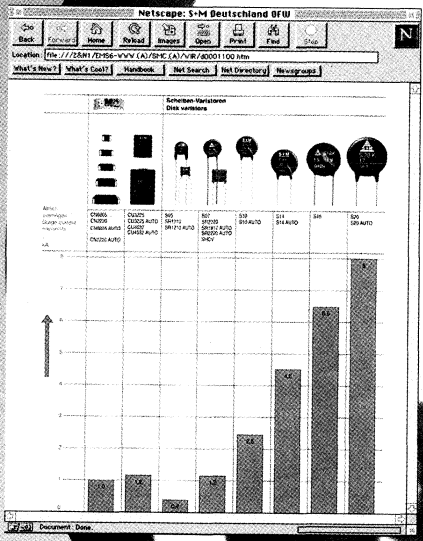
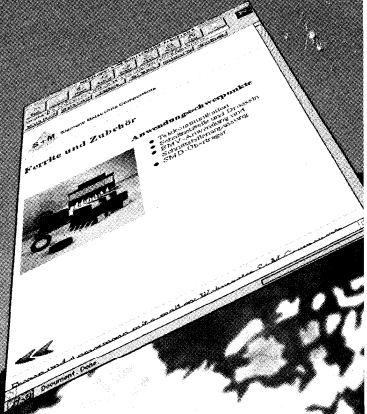
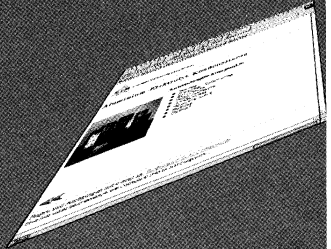


Creating new links

As of now you can tie up with Passive Components and Electron Tubes Group plus Siemens Matsushita Components on the Internet. On our home page under

<http://www.siemens.de/pr/index.htm>

you'll find the latest short form catalogs, data books, technical articles and more subjects too. You can view the documents on-line, or download them to your PC. The "Installation" menu item tells you how to do it. Thanks to the integrated search function, you only have to enter key terms to go straight to the right document. And of course, you can get in touch with us direct by E mail at any time.



SCS - dependable, fast and competent

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Capacitors for Power Electronics

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Siemens Components Service

Passive Components and Electron Tubes

Preferred Products

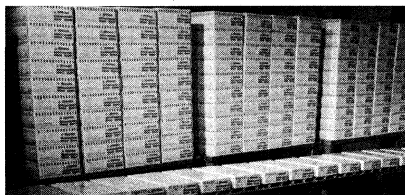
1996

SIEMENS

Now order even more

We've really got things in store

When you need bigger batches than usual, we don't leave you with empty hands. We've pushed up maximum order quantities quite a bit, all of ten times for ceramic chip capacitors for example. But we've got lots more in



store for you, like SCS depots right there in our plants, extra stock with distributors, and experienced sales engineers on the spot around the world. An extensive range of non-SCS components is available too – just contact us.

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Siemens Components Service

The right partner for fast service

Dear SCS customer,

On the some 370 pages of the SCS Catalog we present to you the 1996 selection of preferred components. Again we have made it easy for you. You can find the right components straight away with all the essential specifications. And we will deliver to you immediately – with the dependable, fast and competent service you expect of us.

Geared to service

In the SCS Catalog you will find products from the Siemens Group Passive Components and Electron Tubes as well as of the subsidiaries Siemens Matsushita Components, Munich and Vacuumschmelze, Hanau.

All SCS products are sold worldwide by local agencies. Following the principle of "Think global – act local", committed SCS teams serve the customer on the spot in his region. You have someone locally to place your order with, and one day later the required SCS products will be dispatched from an express warehouse.

We have improved our SCS service even more. You can now obtain much larger quantities of many products than before through the express service. The ordering tables now show the guaranteed quantity that can be delivered from stock for every single product.

You can order by order form or telefax. Please include the following details so that we can get the components on the way fast without having to refer back:

- Quantity
(please observe minimum order quantity)
- Ordering code
- Type
- Price
- Orderer's address
- Order number and reference
- Address for delivery
- Required means of shipment

It is not possible to split the individual items of your order among a number of dates. Orders are subject to the terms of business set down on page 369.

SBS – for you, near you

You order as usual from your SCS contact. From here you can also obtain technical publications and information about our overall product range. You will find the addresses of our agencies on pages 6 and/or 7.

Wishing you lots of success with the SCS Catalog 1996.

Yours truly,

Siemens Components Service

**For you, near you –
our SCS distributors in the Benelux**

Especially if you need small numbers of passive components and electron tubes, you can order them fast and surely from our distributors. Together with your choice from the

entire range of SCS products, you get the best delivery service and all you expect in the way of quality, availability and price. Just find out for yourself!

Eurodis Texim Electronics B.V.

Nijverheidsstraat 16
NL-7482 GZ Haaksbergen
Tel. +(31) 53-5733333
Fax +(31) 53-5733888

Eurodis Texim Electronics N.V./S.A.

Oorlogskruisenlaan 116
Avenue des Croix de Guerre 116
B-1120 Brussel/Bruxelles
Tel. +(32) 2-247 49 69
Fax +(32) 2-2158102

Malchus Electronics B.V.B.A./S.P.R.L.

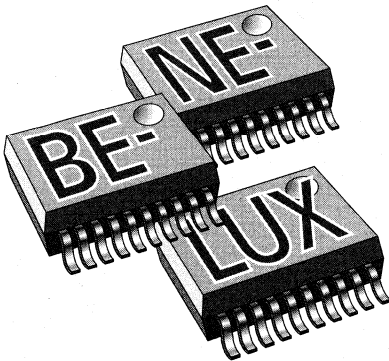
Postbus 193 / Boîte Postal 193
B-2600 Berchem
Tel. (03) 2265967
Fax (03) 2711049

Malchus Electronica B.V.

Fokkerstraat 511-513
NL-3125 BD Schiedam
Tel. (010) 4277777
Fax (010) 4154466

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Handelsmaatschappij
G.W.J.J. van Delden**

Coenecoop 15
NL-2741 PG Waddinxveen
Tel. (0182) 630001
Fax (0182) 619955
(Ferriet, Keramische condensatoren,
Varistoren)



**For you, near you –
our SCS sales agencies**

Our products are sold worldwide by local agencies. True to our principle of "Think global – act local", we support you in the Benelux through two SCS sales agencies. For you that

means individual service, allround consulting and precise shipping details and schedules. Just phone or fax one of the numbers below!

Siemens Electronic Components

Postbus 16068
NL-2500 BB Den Haag
Tel. +(31) 70-333 24 29
Fax +(31) 70-333 28 15

Siemens Electronic Components

Charleroisesteenweg 116
Chaussée de Chaleroi 116
B-1060 Brussel/Bruxelles
Tel. +(32) 2-536 23 48
Fax +(32) 2-536 28 57



Signs:

- ▼ Newly included components
- ▽ Components subject to slight variations, e.g. a new revision status (★★★ -B instead of ★★★ -A) or taped instead of untaped mode of delivery; the components are interchangeable with the previous types.
- Components not for new design
- MIL approved types
- ★ Variable digit
- + Variable letter
- ∅ Diameter
- ® Registered trademark

All dimensions are given in mm, unless otherwise specified.
The commas used in numerical values denote decimal points.

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Please note:

The SCS range of **electromechanical components** is presented in a separate volume titled "Siemens Components Service, Electromechanical Components, Preferred Products 1996".

The product range comprises:

Relays

Connectors

Switches and Pushbuttons

Mounting Fixtures, Sockets and Securing Fixtures

Acoustic Signaling Devices

The SCS Catalog is free of charge and can be ordered from your local Siemens sales office, agency or representative.

SIEMENS

Our service to you

Information fresh from the source

We offer you a whole variety of product information, up to date and free of charge:

- ▶ Short form catalogs
- ▶ Product and SMD survey
- ▶ Technical articles
- ▶ SCS catalog
- ▶ Image brochures
- ▶ "Components", the customer magazine
- ▶ "PR aktuell" circulars
- ▶ "Innovations", the exhibition newspaper
- ▶ Data books (cover charge)
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- ▶ Design aids on diskette (cover charge)
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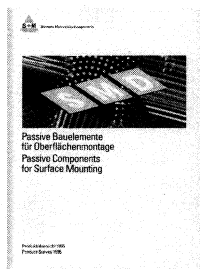


Siemens Matsushita Components

SMDs from stock

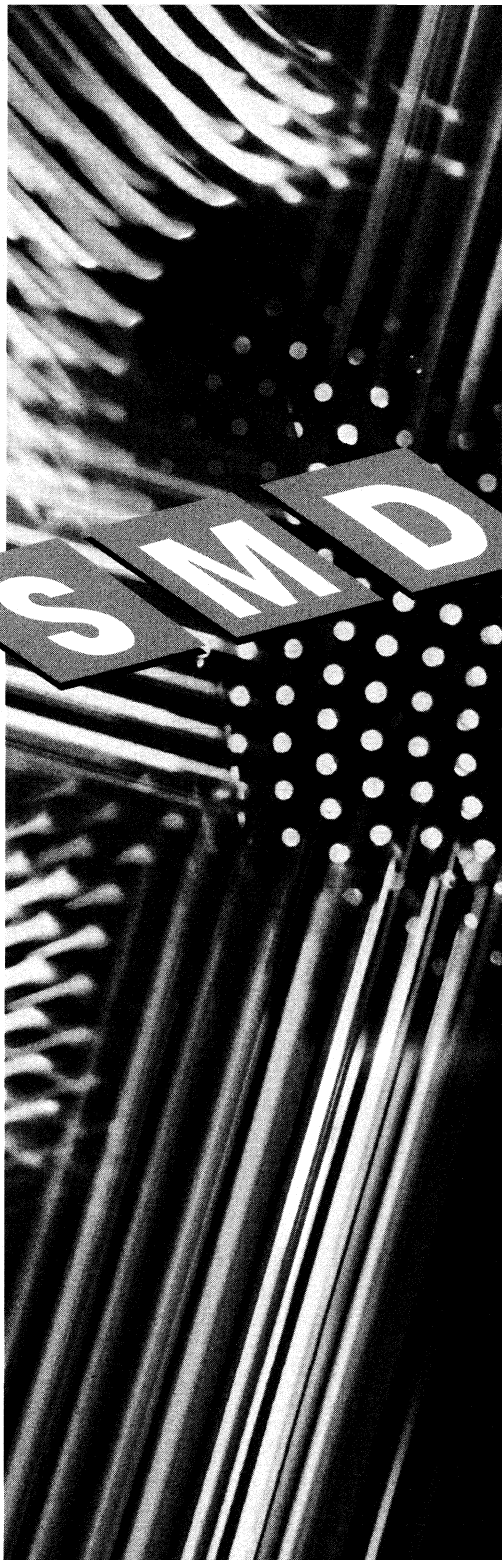
Focus on surface mounting

SCS also offers you an extensive range of components for surface mounting. For example you can have HF chokes SIMID 01 through SIMID 04, thermistor chips for temperature compensation, tantalum chips in sizes A, B, C and D plus surface-mount transformers and laboratory assortments of ceramic chip capacitors.



Ask for our SMD
product survey!

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Current Sensors

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Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

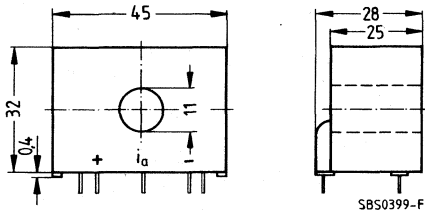
Current sensors	Ordering no.	PB 151-4
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This brochure as well as further technical information can be obtained from
Vacuumschmelze GmbH, P.O.B. 2253, D-63412 Hanau

Current Sensors

Current sensor with soft-magnetic field probe for potential-free current measurement

Rated current	$i_{1\text{Neff}}$	100 A
Rated output current	$i_{a\text{Neff}}$	100 mA
Supply voltage	$\pm U_B$	15 V \pm 5 %
Frequency range	f	DC ... 300 kHz
Measuring accuracy at RT	F_i	≤ 1 %
Linearity	F_{Li}	$\leq 0,1$ %
Ambient temperature range	T_U	-25 ... +75 °C



Ordering code	Min. qty.	Max. qty.	Price each				
			Min. qty. +	25 +	50 +	100 +	250 +
T60404-N4644-X000	10	500					

Current Sensor Modules

Current sensor module with magnetic field probe for potential-free current measurement

Very low offset current

Almost no temperature dependence and long-term drift of the offset current

Very low hysteresis of offset current

Compact design

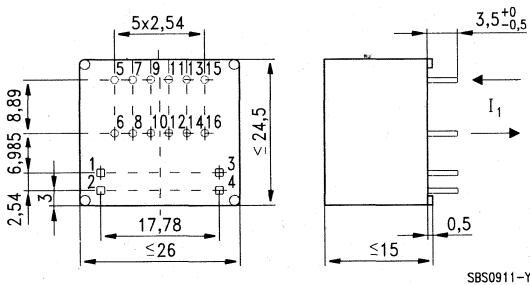
Good versatility due to variable rated currents and transformation ratios

High cost-efficiency by using one drive unit for up to three current sensor modules

For driving and evaluation of the current sensor module the following units are required:

- a) for one phase or one current sensor module: T60404-Q5790-X011 (page 24)
- b) for two phases or two current sensor modules: T60404-Q5790-X021 (page 25)
- c) for three phases or three current sensor modules: T60404-Q5790-X031 (page 26)

T60404-M4645-X000



SBS0911-Y

Pin sizes

- Pin 1 ... 4: 0,6 × 0,88 mm
- Pin 5 ... 16: Ø 1,0 mm

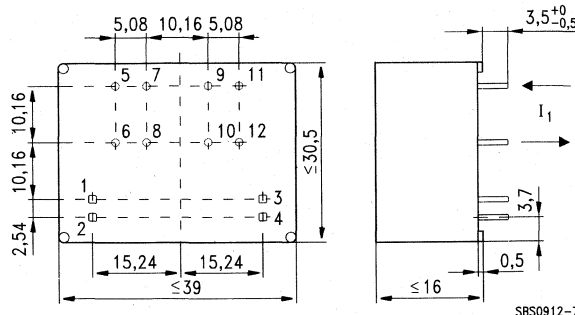
Pinning

- Pin 1: K_1 Compensation windings
- Pin 2: K_2 Compensation windings
- Pin 3: S_1 Sensor windings
- Pin 4: S_2 Sensor windings
- Pin 5 ... 16: Primary windings

Pin numbers not imprinted

Tolerance of pin spacings ± 0,2 mm

T60404-M4645-X020



SBS0912-7

Pin sizes

- Pin 1 ... 4: 0,6 × 0,88 mm
- Pin 5 ... 12: Ø 1,9 mm

Pinning

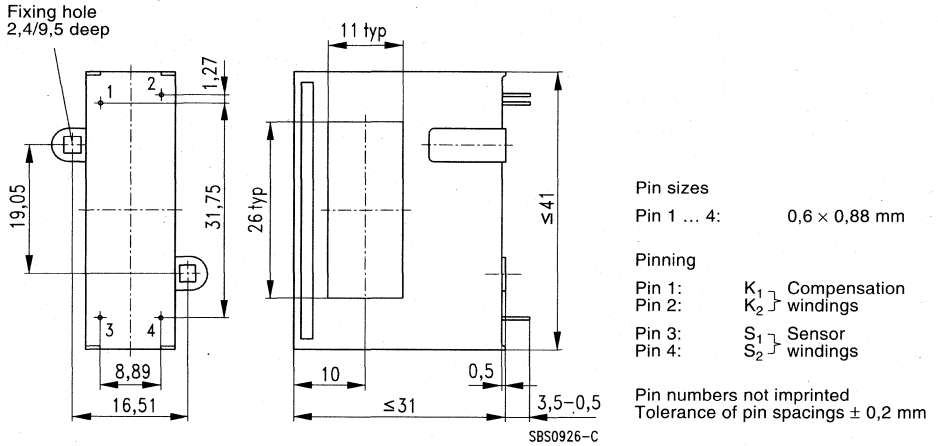
- Pin 1: K_1 Compensation windings
- Pin 2: K_2 Compensation windings
- Pin 3: S_1 Sensor windings
- Pin 4: S_2 Sensor windings
- Pin 5 ... 12: Primary windings

Pin numbers not imprinted

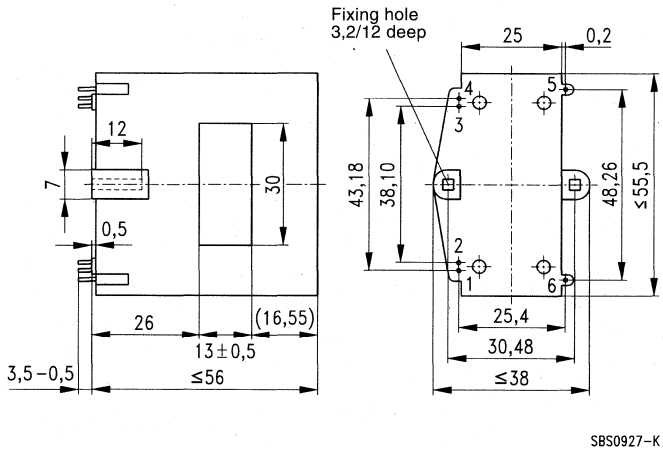
Tolerance of pin spacings ± 0,2 mm

Current Sensor Modules

T60404-M4645-X050



T60404-M4645-X070



Pinning

- Pin 1: K₁ } Compensation
- Pin 2: K₂ } winding
- Pin 3: S₁ } Sensor
- Pin 4: S₂ } winding
- Pin 5, 6: Not connected

Pin sizes

Pin 1 ... 6: 0,6 × 0,88 mm

Pin numbers not imprinted
Tolerance of pin spacings ± 0,2 mm

Current Sensor Modules

Type	T60404-	-M4645-X000	
Rated current	$i_{1 \text{ Neff}}$	4 ... 40	A
Rated output current	$i_{a \text{ Neff}}$	40	mA
Transformation ratio	\ddot{u}	1:1:1:1:1:1:1000	
Overcurrent	$\hat{i}_{1 \text{ max}}$	60	A
Internal resistance (-25 ... +70 °C)	$R_{i (-25 \dots +70^\circ\text{C})}$	< 75	Ω
Min. permissible load resistance	$R_{a \text{ min}}$	100	Ω
Max. permissible load resistance	$R_{a \text{ max}}$	250	Ω
Measuring accuracy at room temperature	F_i	< 0,5	%
Frequency range	f	DC ... 200	kHz
Offset current at room temperature	I_0	< 0,1	mA
Ambient temperature range	T_U	-25 ... +70	°C
Test voltage (50 Hz, 1 min)	U_{peff}	3,1	kV

Connection variants of current sensor module T60404-M4645-X000

N_1 Windg.	$i_{1 \text{ Neff}}$ A	\hat{i}_1 A	$i_{a \text{ Neff}}$ mA	\ddot{u}	R_a Ω	P_{VE} mW	Layout (B side)
1	40	60	40	1:1000	100	395	
1	35	60	35	1:1000	100	370	
1	30	60	30	1:1000	100	340	
1	25	40	25	1:1000	200	240	
2	20	30	40	2:1000	100	395	
2	15	30	30	2:1000	100	340	
3	12	20	36	3:1000	100	375	
3	10	20	30	3:1000	100	340	
3	8	12	24	3:1000	200	235	
4	6	15	24	4:1000	100	295	
6	6	10	36	6:1000	100	375	
6	5	10	30	6:1000	100	340	
6	4	6,5	24	6:1000	200	235	

$i_{1 \text{ Neff}}$ A	$i_{a \text{ Neff}}$ mA	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
4 ... 40	40	T60404-M4645-X000	10	500					

Current Sensor Modules

Type	T60404-	-M4645-X020	
Rated current	$i_{1 \text{ Neff}}$	5 ... 80	A
Rated output current	$i_{a \text{ Neff}}$	80	mA
Transformation ratio	\ddot{u}	1:1:1:1:1000	
Overcurrent	$\hat{i}_{1 \text{ max}}$	130	A
Internal resistance (-25 ... +70)	$R_i (-25 \dots +70^\circ\text{C})$	< 33	Ω
Min. permissible load resistance	$R_{a \text{ min}}$	50	Ω
Max. permissible load resistance	$R_{a \text{ max}}$	250	Ω
Measuring accuracy at room temperature	F_i	< 0,5	%
Frequency range	f	DC ... 100	kHz
Offset current at room temperature	I_0	< 0,1	mA
Ambient temperature range	T_U	-25 ... +70	$^\circ\text{C}$
Test voltage (50 Hz, 1 min)	$U_{p \text{ eff}}$	4	kV

Connection variants of current sensor module T60404-M4645-X020:

N_1 Windg.	$i_{1 \text{ Neff}}$ A	\hat{i}_1 A	$i_{a \text{ Neff}}$ mA	\ddot{u}	R_a Ω	P_{VE} mW	Layout (B side)
1	80	130	80	1:1000	50	800	
1	70	130	70	1:1000	50	750	
1	60	130	60	1:1000	50	685	
1	50	80	50	1:1000	100	480	
2	40	65	80	2:1000	50	800	
2	30	65	60	2:1000	50	685	
4	20	30	80	4:1000	50	800	
4	10	20	40	4:1000	100	435	
4	5	12	20	4:1000	200	225	

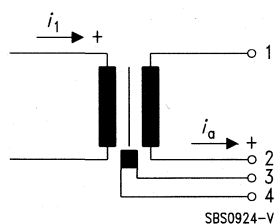
$i_{1 \text{ Neff}}$ A	$i_{a \text{ Neff}}$ mA	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
5 ... 80	80	T60404-M4645-X020	10	500					

Current Sensor Modules

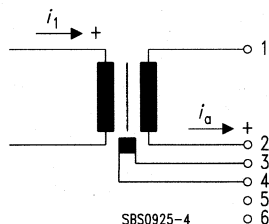
Type	T60404-	-M4645-X050	-M4645-X070	
Rated current	$i_{1 \text{ Neff}}$	100	200	A
Rated output current	$i_{a \text{ Neff}}$	100	100	mA
Transformation ratio	\ddot{u}	1:1000	1:2000	
Overcurrent	$i_{1 \text{ max}}$	160	400	A
Internal resistance (-25 ... +70)	$R_{i (-25 \dots +70^\circ\text{C})}$	< 27	< 31	Ω
Min. permissible load resistance	$R_{a \text{ min}}$	40	20	Ω
Max. permissible load resistance	$R_{a \text{ max}}$	200	200	Ω
Measuring accuracy at room temperature	F_i	< 0,1	< 0,5	%
Frequency range	f	DC ... 100	DC ... 50	kHz
Offset current at room temperature	I_0	< 0,1	< 0,05	mA
Ambient temperature range	T_U	-25...+70	-25...+70	$^\circ\text{C}$
Test voltage (50 Hz, 1 min)	$U_{p \text{ eff}}$	4	6	kV

Schematic diagram

T60404-M4645-X050



T60404-M4645-X070



$i_{1 \text{ Neff}}$	$i_{a \text{ Neff}}$	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	25 +	50 +	100 +
A	mA							
100	100	T60404-M4645-X050	10	500				
200	100	T60404-M4645-X070	10	500				

Evaluation Electronics

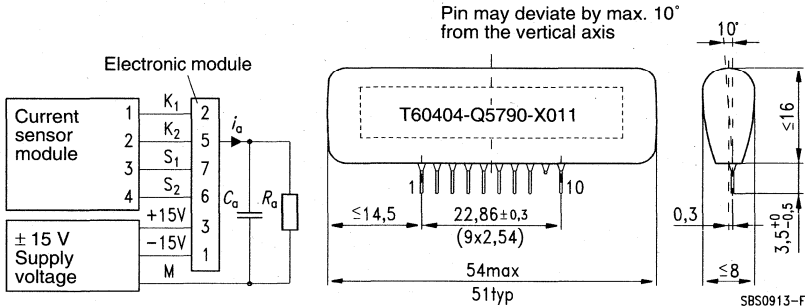
Evaluation electronics (mono) T60404-Q5790-X011: For driving and evaluation of one current sensor module with magnetic field probe

Supply voltage U_B	$\pm 15 \text{ V} \pm 5 \%$
No-load supply current I_{B0}	14 mA
Ambient temperature range T_U	0 ... +70 °C
No-load power loss P_{VE0}	250 mW
Max. perm. power loss at $T_U = 70 \text{ °C}$	1 W
Max. perm. power loss at $T_U = 50 \text{ °C}$	1,5 W
Max. output current I_{atot}	1 A
Power loss $P_{VEges}^*)$	$P_{VEges} = P_{VE0} + P_{VE}$

*): P_{VE} or R_i can be taken from the data tables for the current sensor module or be calculated by the following equation: $P_{VE} = i_{a\text{eff}} \cdot (15,75 \text{ V} - (R_a + R_i / 1,5) \cdot i_{a\text{eff}})$

Schematic diagram

Outline drawing



Pinning:

1: $-U_B$	6: S_2
2: K_1	7: S_1
3: $+U_B$	8: int.
4: int.	9: (omitted)
5: K_2 / i_a	10: int.

Pin size:

Pin 1 ... 10: $0,55 \times 0,28 \text{ mm}$

Ordering code	Min. qty.	Max. qty.	Price each				
			Min. qty. +	25 +	50 +	100 +	250 +
T60404-Q5790-X011	10	500					

Evaluation Electronics

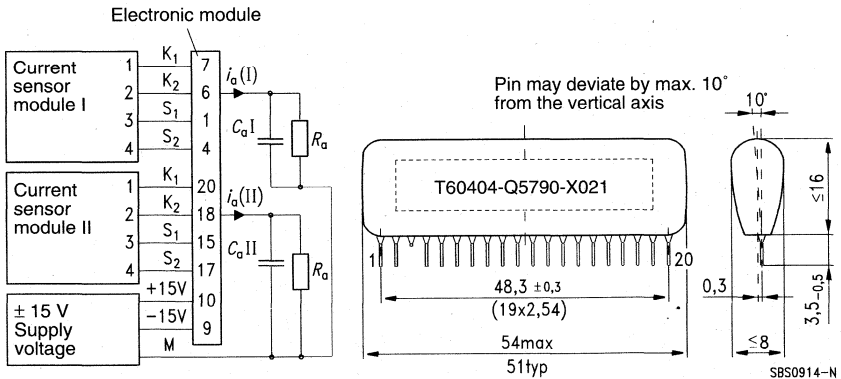
Evaluation electronics (duo) T60404-Q5790-X021: For driving and evaluation of two current sensor modules with magnetic field probe

Supply voltage U_B	$\pm 15\text{ V} \pm 5\%$
No-load supply current I_{B0}	19 mA
Ambient temperature range T_U	0 ... +70 °C
No-load power loss P_{VE0}	330 mW
Max. perm. power loss at $T_U = 70\text{ °C}$	1 W
Max. perm. power loss at $T_U = 50\text{ °C}$	1,5 W
Max. output current I_{atot}	1 A
Power loss P_{VEges*}	$P_{VEges} = P_{VE0} + P_{VE}$

*) : P_{VE} or R_i can be taken from the data tables for the current sensor module or be calculated by the following equation: $P_{VE} = I_{aeff} \cdot (15,75\text{ V} - (R_a + R_i / 1,5) \cdot I_{aeff})$

Schematic diagram

Outline drawing



Pinning:

1: S_1 (I)	6: K_2 (II) / i_a (I)	11: N. C.	16: int.
2: int.	7: K_1 (I)	12: N. C.	17: S_2 (II)
3: (omitted)	8: int.	13: N. C.	18: K_2 (II) / i_a (II)
4: S_2 (I)	9: $-U_B$	14: N. C.	19: int.
5: int.	10: $+U_B$	15: S_1 (II)	20: K_1 (II)

Pin size:

Pin 1 ... 20: 0,55 × 0,28 mm

Ordering code	Min. qty.	Max. qty.	Price each				
			Min. qty. +	25 +	50 +	100 +	250 +
T60404-Q5790-X021	10	500					

Evaluation Electronics

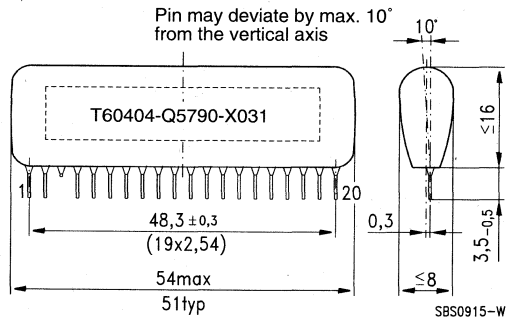
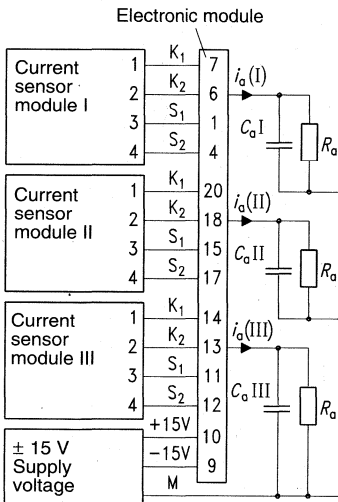
Evaluation electronics (trio) T60404-Q5790-X031: For driving and evaluation of three current sensor modules with magnetic field probe

Supply voltage U_B	$\pm 15\text{ V} \pm 5\%$
No-load supply current I_{B0}	23 mA
Ambient temperature range T_U	0 ... + 70 °C
No-load power loss P_{VE0}	400 mW
Max. perm. power loss at $T_U = 70\text{ °C}$	1 W
Max. perm. power loss at $T_U = 50\text{ °C}$	1,5 W
Max. output current I_{atot}	1 A
Power loss $P_{VEges}^*)$	$P_{VEges} = P_{VE0} + P_{VE}$

*) : P_{VE} or R_i can be taken from the data tables for the current sensor module or be calculated by the following equation: $P_{VE} = i_{a\text{eff}} \cdot (15,75\text{ V} - (R_a + R_i / 1,5) \cdot i_{a\text{eff}})$

Schematic diagram

Outline drawing



Pinning:

1: S_1 (I)	6: K_2 (I) / i_a (I)	11: S_1 (III)	16: int.	Pin size:
2: int.	7: K_1 (I)	12: S_2 (III)	17: S_2 (II)	Pin 1 ... 20: 0,55 × 0,28 mm
3: (omitted)	8: int.	13: K_2 (III) / i_a (III)	18: K_2 (II) / i_a (II)	
4: S_2 (I)	9: $-U_B$	14: K_1 (III)	19: int.	
5: int.	10: $+U_B$	15: S_1 (II)	20: K_1 (II)	

Ordering code	Min. qty.	Max. qty.	Price each				
			Min. qty. +	25 +	50 +	100 +	250 +
T60404-Q5790-X031	10	500					

Chokes and Transformers

Contents	Type	Page
EMI suppression chokes		
Ring core double chokes	T60405-R	29
Ring core triple chokes	T60405-S	31
Thyristor EMI suppression chokes for line applications	T60405-M	33
Storage chokes	T60405-A	34
Thyristor firing transformers	T60403-D	37
Current transformers	T60404-A	39
Flatpack line transformers	T60401-A	40

▼ Newly included in this edition

Ring core double chokes	T60406-R	29
Ring core triple chokes	T60405-S	31

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

In addition to the range of preferred components presented here, we offer transformers for all ISDN interfaces. Information on our S_0 , S_{2M} , U_{K0} and U_{P0} interface transformers is provided by the brochure:

PB-ISDN Ordering code PB-ISDN

Further literature:

Storage chokes	Ordering no.	PB 310-1; -2; -9
Thyristor firing transformers	Ordering no.	PB 210-1 to 2
Current transformers	Ordering no.	PB 161-1
Flatpack line transformers	Ordering no.	Z009

These publications as well as further technical information can be obtained from
Vacuumschmelze GmbH, P.O.B 2253, D-63412 Hanau

Symbols and terms

I_N	Rated direct current
$I_{I \text{ eff}}$	Primary alternating current
$I_{II \text{ eff}}$	Secondary alternating current
L	Inductance at I_N ($f = 10 \text{ kHz}$)
P_N	Rated power (at 50 Hz)
U_{is}	Max. permissible continuous voltage between separate windings (VDE 0550, part 1)
$U_{N \text{ sek.}}$	Rated voltage, secondary
U_p	Voltage (rms) applied between primary and secondary connections during final test. As specified in VDE 0550, part 1, a second test of the same duration but with a 20% lower test voltage is permissible.
\ddot{u}	Transformation ratio
\int_{udt}	Minimum value of the voltage-time area measured under unipolar operation and off-load conditions across one of the secondary windings.

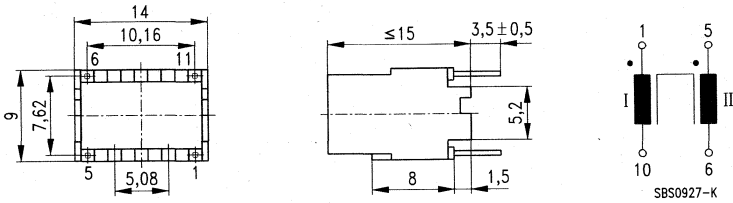
EMI Suppression Chokes

Current-compensated ring core double chokes for line applications

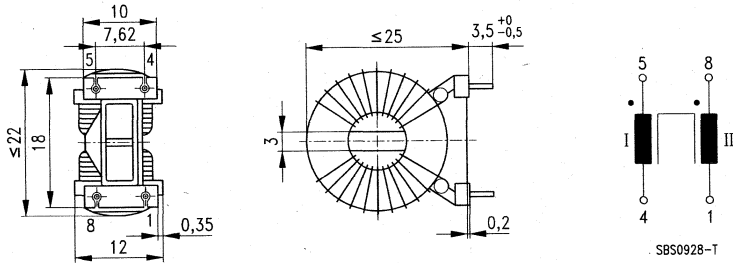
With Vitroperm core

Rated inductance	0,5 ... 39 mH
Rated voltage	250 Vac
Rated current	0,3 ... 25 A
IEC climatic category	40/125/56

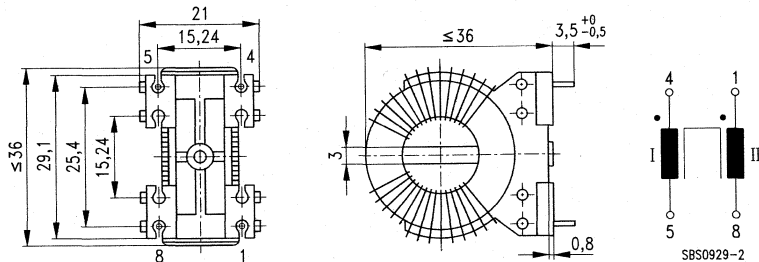
T60405-R4025



T60405-R6131

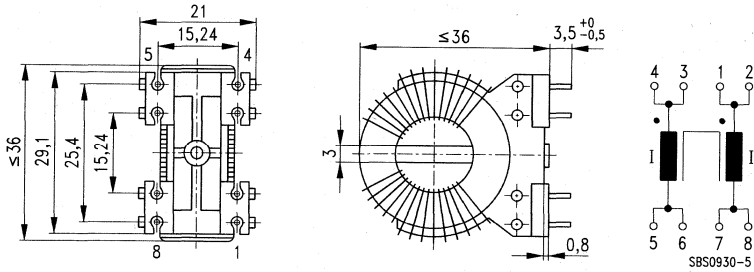


T60405-R6166-X016, -X017

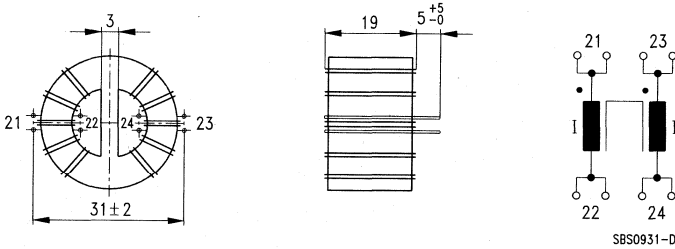


EMI Suppression Chokes

T60405-R6166-X018, -X019, -X028, -X033



T60405-R6100



$I_N^{1)}$	$L_N^{1)}$	$R_{Cu}^{1)}$	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	25 +	50 +	100 +	250 +
A	mH	mΩ								

Double chokes

▼ 0,3	2 × 39	2000	T60405-R4025-X110	50	500					
▼ 0,7	2 × 27	600	T60405-R4025-X094	50	500					
▼ 2,0	2 × 12	45	T60405-R6131-X036	25	500					
▼ 4,0	2 × 4	23	T60405-R6131-X037	25	500					
▼ 4,0	2 × 71	65	T60405-R6166-X016	25	500					
▼ 5,0	2 × 2,2	20	T60405-R6131-X040	25	500					
▼ 6,0	2 × 2,7	15	T60405-R6131-X038	25	500					
▼ 6,0	2 × 32	27	T60405-R6166-X017	12	500					
▼ 8,0	2 × 17	17	T60405-R6166-X018	12	500					
▼ 10,0	2 × 5	7	T60405-R6100-X208	10	500					
▼ 10,0	2 × 12	12	T60405-R6166-X019	10	500					
▼ 16,0	2 × 2,2	4	T60405-R6100-X205	10	500					
▼ 16,0	2 × 6	6	T60405-R6166-X033	10	500					
▼ 25,0	2 × 0,5	2	T60405-R6166-X028	10	500					

1) Per winding

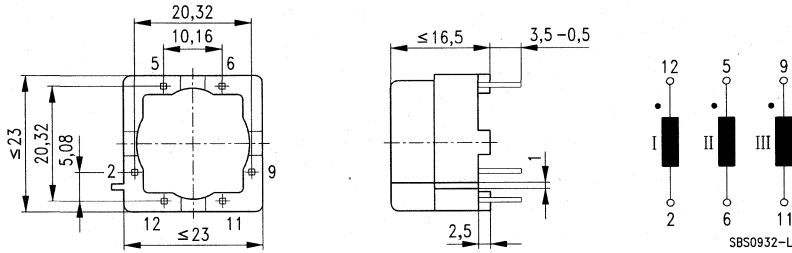
EMI Suppression Chokes

Current-compensated ring core triple chokes for line applications

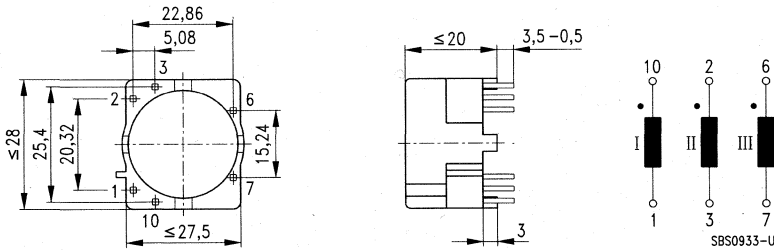
With Vitroperm core in plastic case for PCB mounting
Case and sealing flame-retardant in accordance with UL 94

Rated inductance	1,4 ... 11 mH
Rated voltage	440 Vac
Rated current	3 ... 40 A
IEC climatic category	40/125/56

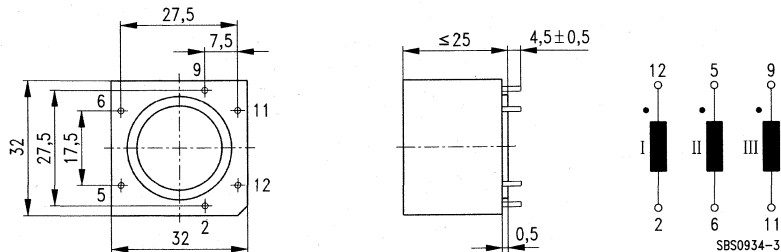
T60405-S4615



T60405-S4185

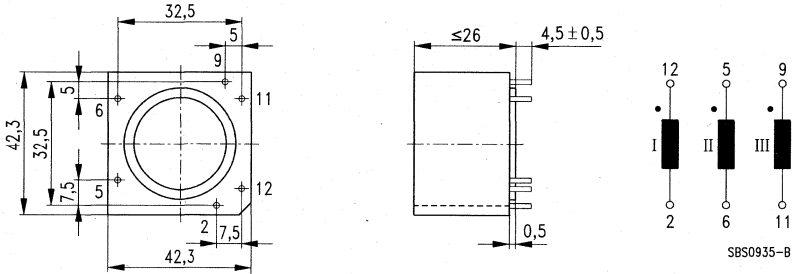


T60405-S4220

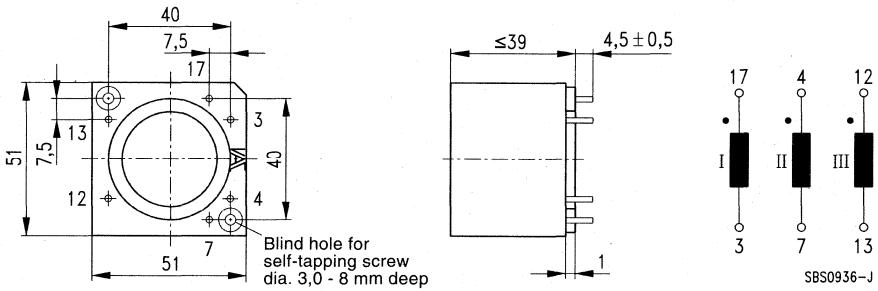


EMI Suppression Chokes

T60405-S4550



T60405-S4200, -S4207



I_N ¹⁾	L_N ¹⁾	R_{Cu} ¹⁾	Ordering code	Min. qty.	Max. qty.	Price each			
						Min. qty. +	25 +	50 +	100 +

Triple chokes

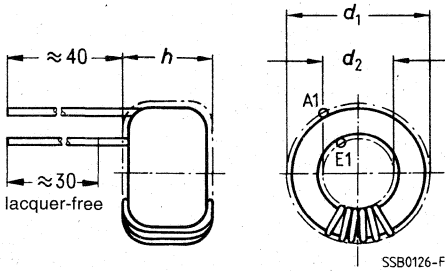
▼ 3	11	50	T60405-S4615-X027	10	500					
▼ 6	5	14	T60405-S4185-X015	10	500					
▼ 10	5	8	T60405-S4220-X309	10	500					
▼ 13	2,3	5	T60405-S4220-X308	10	500					
▼ 16	4,4	4,4	T60405-S4550-X231	10	500					
▼ 20	3	4,4	T60405-S4207-X006	10	500					
▼ 25	5,5	2,8	T60405-S4200-X223	10	500					
▼ 30	3,2	1,8	T60405-S4220-X225	10	500					
▼ 40	1,4	1,1	T60405-S4200-X224	10	500					

1) Per winding

EMI Suppression Chokes

Thyristor EMI suppression chokes for line applications Ring core single chokes

Operating voltage 220 Vac
 Rated current 2,5 ... 16 A
 IEC climatic category 40/125/21



I_N A	R_G per winding (typical) mΩ	Dimensions			Ordering code	Min. qty.	Max. qty.	Price each				
		d_1 mm	d_2 mm	h mm				Min. qty. +	25 +	50 +	100 +	250 +
2,5	200	40	14	16	T60405-M6108-X000	10	500					
4	110	41	17	18	T60405-M6108-X020	10	500					
6	70	44,5	16	19	T60405-M6108-X001	10	500					
10	45	47,5	18	30	T60405-M6108-X002	10	500					
16	30	58	25	30	T60405-M6108-X024	10	500					



Storage Chokes

Linear storage chokes in flatpack or upright design

Type T60405-A4...:

High storage energy with small dimensions

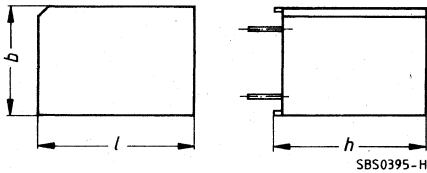
Low rise in inductance in part-load range

Type T60405-A616-x (open style):

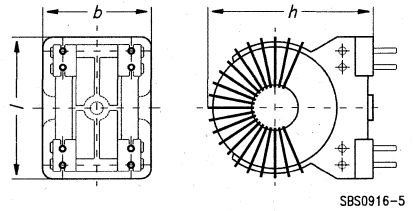
High cut-off frequency

Distinct rise in inductance in part-load range

Schematic representation of T60405-A4...



of T60405-A6...



Mounting dimensions

Type	$l \times b \times h$	Type	$l \times b \times h$
Flatpack design	mm	Upright design	mm
T60405-A4180-X	27 × 29,5 × 13,5	T60405-A4190-X	22,3 × 13,5 × 25
T60405-A4220-X	32 × 32 × 20	T60405-A4192-X	27 × 13,5 × 35
T60405-A4430-X	49 × 49 × 35	T60405-A4194-X	32 × 20 × 35
T60405-A4550-X	42,3 × 42,3 × 25	T60405-A4196-X	38 × 20 × 40
T60405-A4615-X	23 × 23 × 16,5	T60405-A6161-X	25 × 16,5 × 26
		T60405-A6166-X	38 × 24 × 41

Storage Chokes

I_N	$L^{1)}$	Ordering code	Min. qty.	Max. qty.	Price each					
					Min. qty. +	25 +	50 +	100 +	250 +	
A	μH									
Storage chokes, flatpack design										
0,63	2500	T60405-A4615-X013	10	500						
1,0	1000	T60405-A4615-X018	10	500						
1,6	400	T60405-A4615-X017	10	500						
1,6	1000	T60405-A4180-X204	10	500						
2,5	160	T60405-A4615-X016	10	500						
2,5	400	T60405-A4180-X205	10	500						
2,5	1000	T60405-A4220-X058	10	500						
3,15	250	T60405-A4180-X204	10	500						
3,15	630	T60405-A4220-X059	10	500						
4,0	160	T60405-A4180-X206	10	500						
4,0	400	T60405-A4220-X061	10	500						
5,0	100	T60405-A4180-X205	10	500						
5,0	250	T60405-A4220-X060	10	500						
5,0	630	T60405-A4550-X051	10	500						
5,0	1600	T60405-A4430-X081	10	500						
6,3	160	T60405-A4220-X059	10	500						
8,0	100	T60405-A4220-X061	10	500						
10,0	63	T60405-A4220-X060	10	500						
10,0	160	T60405-A4550-X051	10	500						
10,0	400	T60405-A4430-X081	10	500						
Storage chokes, upright design										
1,0	1000	T60405-A4190-X007	10	500						
1,6	400	T60405-A4190-X009	10	500						
1,6	1000	T60405-A4192-X004	10	500						
2,5	160	T60405-A4190-X001	10	500						
2,5	400	T60405-A4192-X005	10	500						
3,15	250	T60405-A4192-X004	10	500						
4,0	400	T60405-A4194-X003	10	500						
4,0	640	T60405-A4196-X002	10	500						
4,0	960	T60405-A4194-X006	10	500						
5,0	100	T60405-A4192-X005	10	500						
5,0	250	T60405-A4194-X007	10	500						
6,3	380	T60405-A4194-X013	10	500						

1) At I_N ($f = 10 \text{ kHz}$)

Storage Chokes

I_N	L ¹⁾	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
A	μ H								

Storage chokes, upright design

8,0	100	T60405-A4194-X003	10	500					
8,0	160	T60405-A4196-X002	10	500					
8,0	240	T60405-A4194-X006	10	500					
10,0	63	T60405-A4194-X007	10	500					
12,5	95	T60405-A4194-X013	10	500					

I_N	L ¹⁾	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
A	μ H								

Storage chokes, upright design, open style

1,5	368	T60405-A6161-X000	10	500					
2,0	225	T60405-A6161-X001	10	500					
2,5	140	T60405-A6161-X002	10	500					
3,0	98	T60405-A6161-X003	10	500					
3,0	92	T60405-A6161-X000	10	500					
4,0	56	T60405-A6161-X001	10	500					
4,0	45	T60405-A6161-X004	10	500					
5,0	35	T60405-A6161-X002	10	500					
6,0	25	T60405-A6161-X003	10	500					
8,0	11	T60405-A6161-X004	10	500					
2,0	720	T60405-A6166-X007	10	500					
2,5	475	T60405-A6166-X006	10	500					
3,0	300	T60405-A6166-X005	10	500					
4,0	180	T60405-A6166-X007	10	500					
4,0	165	T60405-A6166-X004	10	500					
5,0	119	T60405-A6166-X006	10	500					
6,0	78	T60405-A6166-X003	10	500					
6,0	75	T60405-A6166-X005	10	500					
7,5	48	T60405-A6166-X002	10	500					
8,0	41	T60405-A6166-X004	10	500					
12,0	19	T60405-A6166-X003	10	500					
15,0	12	T60405-A6166-X002	10	500					

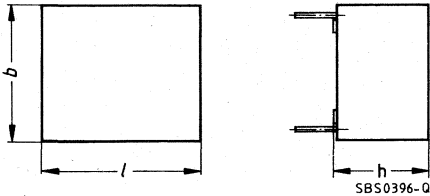
1) At I_N ($f = 10$ kHz)
For open-style storage chokes: $f = 100$ kHz

Thyristor Firing Transformers

Firing transformers for driving semiconductor components (thyristors, triacs)
For reliable dc isolation between control and load circuit

Temperature range - 40 ... + 85 °C
 - 25 ... + 100 °C (for type T60403-D4721-X)

Schematic representation



Mounting dimensions

Type	$l \times b \times h$ mm
T60403-D4185-X	27,0 × 29,5 × 20,0
T60403-D4215-X	21,0 × 21,0 × 13,5
T60403-D4615-X	23,0 × 23,0 × 18,5
T60403-D4721-X	17,8 × 17,0 × 13,5
T60403-D4750-X	35,8 × 34,0 × 25,3

Thyristor Firing Transformers

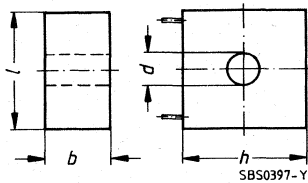
ü	f _{udt} μVs	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
$U_{is} = 380 \text{ V}, U_p = 3,1 \text{ kV}$									
1:1	500	T60403-D4215-X018	10	500					
1:1:1	500	T60403-D4215-X015	10	500					
1:1:1	1000	T60403-D4185-X010	10	500					
$U_{is} = 500 \text{ V}, U_p = 3,1 \text{ kV}$									
1:1	250	T60403-D4721-X003	10	500					
1:1	500	T60403-D4721-X002	10	500					
2:1	250	T60403-D4721-X005	10	500					
1:1:1	250	T60403-D4721-X001	10	500					
1:1:1	250	T60403-D4721-X004	10	500					
1:1:1	500	T60403-D4721-X006	10	500					
3:1:1	250	T60403-D4721-X007	10	500					
$U_{is} = 500 \text{ V}, U_p = 4,5 \text{ kV}$									
1:1	500	T60403-D4615-X019	10	500					
1:1:1	200	T60403-D4615-X011	10	500					
1:1:1	500	T60403-D4185-X014	10	500					
1:1:1	1000	T60403-D4185-X006	10	500					
$U_{is} = 750 \text{ V}, U_p = 5 \text{ kV};$ for long pulses (with double shielding)									
2:1	5000	T60403-D4750-X012	10	500					

Current Transformers

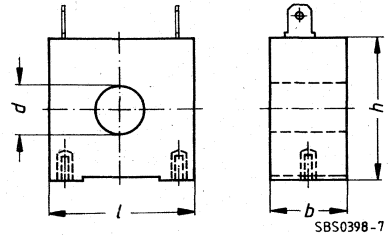
Current transformers with lead-through bushing
For monitoring and control of sinusoidal currents
at line frequency (50/60 Hz)

Ambient temperature T_U $-20 \dots +70 \text{ }^\circ\text{C}$

T60404-A4654-X



T60404-A4655-X,
T60404-A4656-X



Mounting dimensions

Type	$l \times b \times h$ mm	Lead-through bushing d mm
T60404-A4654-X	$32 \times 16,5 \times 32$	≥ 9
T60404-A4655-X	$38 \times 20 \times 38$	13
T60404-A4656-X	$50 \times 32 \times 50$	18

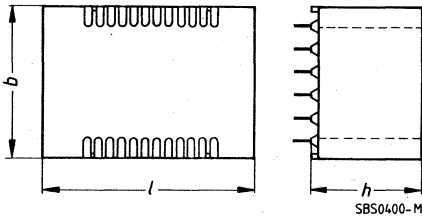
I_{eff} A	$I_{ll\ eff}$ mA	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
25	19	T60404-A4654-X001	10	500					
50	50	T60404-A4655-X001	10	500					
100	100	T60404-A4656-X001	10	500					

Flatpack Line Transformers

Line transformers in compact design; molded encapsulation
 With VDE approval
 For the power supply of individual PC boards or small modules
 as used in equipment or decentralized power supply units

Rated voltage U_N primary 220 V
 Ambient temperature T_U - 55 ... + 60 °C

Schematic representation



Mounting dimensions

Type	$l \times b \times h$ mm
T60401-A4670-X	37,5 × 28 × 20
T60401-A4680-X	48 × 36 × 25
T60401-A4690-X	61 × 43 × 30

U_N sek. V	P_N (50 Hz) VA	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	25 +	50 +	100 +	250 +
2 × 6 2 × 12	1,6	T60401-A4670-X010	10	500					
	1,6	T60401-A4670-X012	10	500					
2 × 6 2 × 12 2 × 16	5,0	T60401-A4680-X010	10	500					
	5,0	T60401-A4680-X012	10	500					
	5,0	T60401-A4680-X013	10	500					
2 × 6 2 × 8 2 × 12 2 × 16	12,5	T60401-A4690-X010	10	500					
	12,5	T60401-A4690-X011	10	500					
	12,5	T60401-A4690-X012	10	500					
	12,5	T60401-A4690-X013	10	500					

SMD Transformers

Contents	Page
E 6,3	42
ER 11	44
RM 4LP	45
RM 5	46
RM 6	48

▼ Newly included in this edition

U_{K0} interface transformers RM 6	48
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Some SMD transformers can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

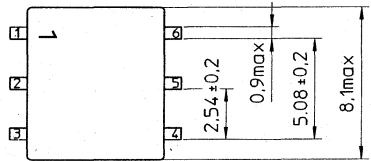
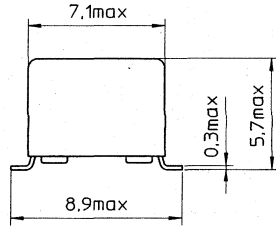
Further technical literature

Data Book "Ferrites and Accessories", B461-P6139-X-X-7600
Short Form Catalog "Ferrites and Accessories", B461-P6142-X-X-7400
(new edition due to appear in April 1996)
Short Form Catalog "ISDN Interface Transformers", B461-P6143-X-X-7400



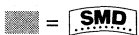
Transformer with very small dimensions and low stray inductance

Voltage strength: 500 V
(winding : winding, 50 Hz, 1 s)



FEK0172-K

Primary inductance L_1 mH	Transformation ratio $N_1 : N_2 : N_3$	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	100 +	250 +	500 +
0,1	1 : 1 : 1	B78304-A1030-A3	10	1000				
1	1 : 1 : 1	B78304-A1031-A3	10	1000				
10	1 : 1 : 1	B78304-A1032-A3	10	1000				
4,3	1 : 0,21 : 0,21	B78304-A1016-A3	10	1000				



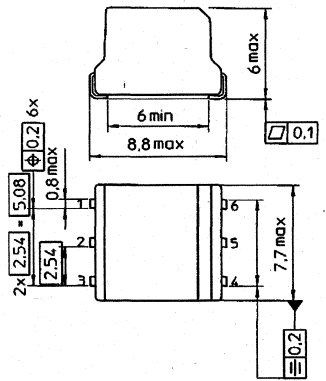


Plastic-molded transformer featuring very high voltage strength

(Encapsulation: liquid crystal polymer)

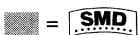
Voltage strength: 2,8 kVac

(winding : winding, 50 Hz, 1 s)



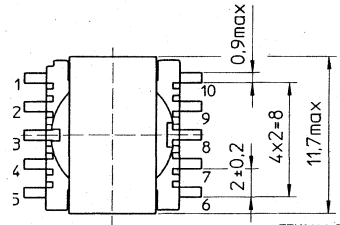
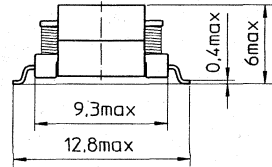
FEK0193-8

Primary inductance L_{1-3} mH	Transformation ratio $N_1 : N_2 : N_3 : N_4$	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	100 +	250 +	500 +	
0,1	1 : 1 : 1 : 1	B78304-A1038-A3	10	1000					



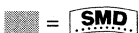
Low-profile transformer featuring low stray inductance, low winding capacitance, low DC resistance and high DC magnetic bias

Voltage strength: 1000 V ¹⁾
 (winding : winding, 50 Hz, 1 s)



FEK0171-C

Primary inductance L_1 mH	Transformation ratio $N_1 : N_2 : N_3 : N_4 : N_5$	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	100 +	250 +	500 +
0,1	1 : 1 : 1 : 1	B78334-A1033-A3	10	1000				
1	1 : 1 : 1 : 1	B78334-A1034-A3	10	1000				
10	1 : 1 : 1 : 1	B78334-A1035-A3	10	1000				
0,27	1 : 2,6 : 2,6 : 2,6 : 2,6	B78334-A1018-A3	10	1000				

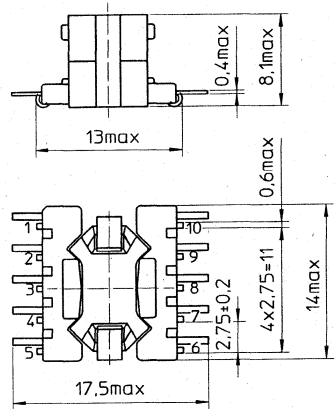


1) The transformer B78334-A1035-A3 has a voltage strength of 800 V.



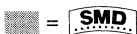
Low-profile transformer with high DC magnetic bias

Voltage strength: 800 V
(winding : winding, 50 Hz, 1 s)



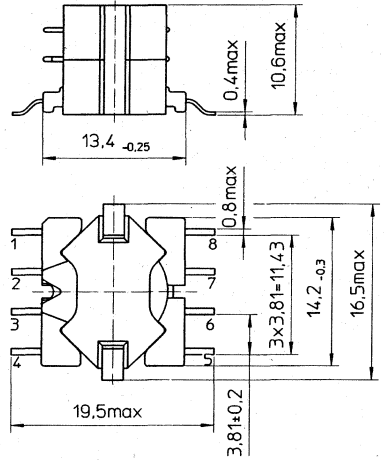
FRM0159-7

Primary inductance L_1 mH	Transformation ratio $N_1 : N_2 : N_3 : N_4$	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	100 +	250 +	500 +
0,3	1 : 1 : 1 : 1	B78381-A1036-A3	10	900				
3	1 : 1 : 1 : 1	B78381-A1037-A3	10	900				



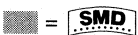
Transformer with high voltage strength

Voltage strength: 1500 V
 (winding : winding, 50 Hz, 1 s)



FRM0154-1

Primary inductance L_1 mH	Transformation ratio $N_1 : N_2 : N_3$	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	100 +	250 +	500 +
50	1 : 0,5 : 0,5	B78384-A1020-A2	10	900				

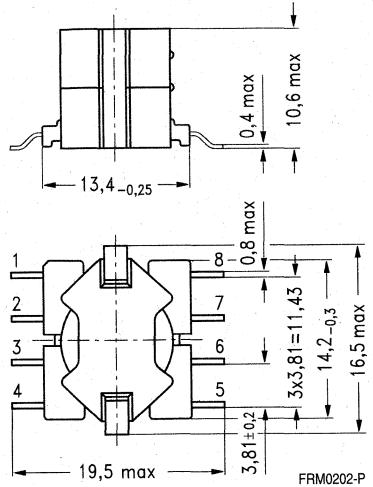


S₀ interface transformer for high-fidelity pulse transmission in ISDN equipment

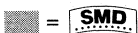
Compatible with Siemens ICs PEB 2081, PEB 2084, PEB 2086 and PEB 2186

Voltage strength: 1500 V
(winding : winding, 50 Hz, 1 s)

Main inductance	L_{5-8}	≥ 30 mH
Leakage inductance	L_s	6 μ H
Coupling capacitance	C_k	120 pF
Main inductance	L_H	≥ 30 mH
Winding capacitance	C_W	80 pF
Test voltage	U_p	1,5 kV _{rms}



Transformation ratio	Ordering code	Min. qty.	Min. qty:	Price each			
				Min. qty. +	100 +	250 +	500 +
$N_1 : N_2 : N_3 : N_4$							
1 : 1 : 2 : 2	B78384-A1060-A2	10	900				

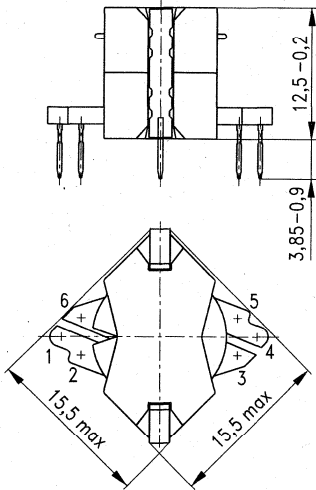


SMD Transformers RM 6

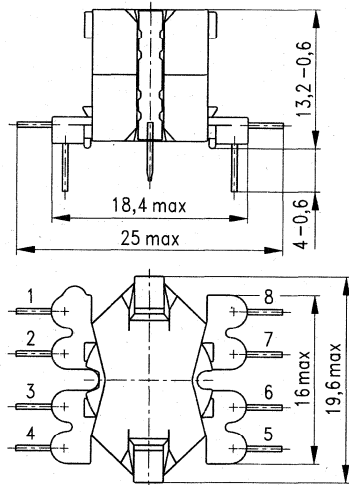
U_{K0} interface transformer for high-fidelity pulse transmission in ISDN equipment

Compatible with Siemens ICs PEB 2091 (4.3), and PEB 20901/20902

B78386-P1114-A2, -P1115-A2

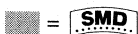


-P1116-A5, -P1127-A5



B78386-		P1114-A2	P1115-A2	P1116-A5	P1127-A5
Main inductance (mH)	L_H	$14,5 \pm 10\%$	$5,5 \pm 10\%$	$13,3 \pm 10\%$	$7,7 \pm 10\%$
Leakage inductance (μ H)	L_S	87	22	45	40
Coupling capacitance (pF)	C_K	130	130	70	45
Test voltage (kV_{rms})	U_p	0,5	0,5	2,0	2,0

Transformation ratio $N_1 : N_2 : N_3 (: N_4)$	Ordering code	Min. qty.	Max. qty.	Price per 100			
				Min. qty. +	100 +	250 +	500 +
▼ 0,8 : 0,8 : 1	B78386-P1114-A2	10	900				
▼ 0,66 : 0,66 : 1	B78386-P1115-A2	10	900				
▼ 1,6 : 1,6 : 1 : 1	B78386-P1116-A5	10	900				
▼ 1,32 : 1,32 : 1 : 1	B78386-P1127-A5	10	500				



Ferrites and Accessories (SIFERRIT)

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SIFERRIT® material properties		51
Adjusting screw drivers	B 63 399	56
RM cores	RM 4 ... RM 14	57
PM cores	PM 50/39 ... PM 114/93	72
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P core halves	5,6 × 3,7 ... 70 × 14,5	90
EP cores	EP 7 ... EP 20	93
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EFD cores	EFD 15 ... EFD 30	106
EC cores	EC 35 ... EC 70	111
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E cores	E 6,3 ... E 70/33/32	118
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▼ Newly included in this edition

ER 9,5 core and SMD coil formers for RM 6, EP 7, ER 9,5 and E 13

Cores made of material N 47 are planned to be changed to material N 49 during this catalog's period of validity. Cores may then be delivered in the new material N 49. We will inform you separately about the change.

The minimum order quantities stated for ferrites and accessories correspond to one delivery unit. Delivery is always in complete units.

Please note that accessories such as coil formers, insulating washers, mounting assemblies, yokes, clamps and adjusting screws can only be ordered in conjunction with ferrite cores.

Some ferrite cores and accessories can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Symbols and terms

$\Sigma//A$	Magnetic core factor
A_e	Effective cross-sectional area
A_L	Inductance factor $A_L = L/N^2$
A_{\min}	Min. cross-sectional area of the core
A_N	Cross-sectional area of the winding
l_e	Effective magnetic length
Dimension "g"	Air gap
V_e	Effective magnetic volume

Further technical literature

Data Book "Ferrites and Accessories", B461-P6139-X-X-7600
Short Form Catalog "Ferrites and Accessories", B461-P6142-X-X-7400
(new edition due to appear in April 1996)
Short Form Catalog "ISDN Interface Transformers", B461-P6143-X-X-7400

SIFERRIT Materials

Material properties

Preferred application			Resonant circuit inductors						
Material			U 17 ¹⁾	K 12 ¹⁾	K 1	M 11	K10	M 33	
Base material			NiZn	NiZn	NiZn	NiZn	NiZn	MnZn	
Color code	Symbol	Unit	grey	yellow	violet	brown	—	white	
Initial permeability B (25°C)	μ_i		10 ± 30%	26 ± 25%	80 ± 20%	250 ± 20%	600 ± 20%	750 ± 20%	
Meas. field strength Flux density (approach- ing saturation) ($f = 10$ kHz)	H	A/m	10000	2000	5000	2400	2000	2000	
	B (25°C) B (100°C)	mT mT	180 170	230 210	310 280	310 230	290 210	400 310	
Coercive field strength ($f = 10$ kHz)	H_c (25°C)	A/m	1900	450	380	90	60	80	
	H_c (100°C)		1800	410	350	70	45	65	
Optimum frequency range	f_{min}	MHz	10	3	1,5	0,4	0,1	0,2	
	f_{max}	MHz	220	40	12	2	1	1,0	
Related loss factor	at f_{min} at f_{max}	$\tan \delta/\mu_i$	10^{-6} 10^{-6}	< 100 < 1700	< 150 < 600	< 40 < 100	< 25 < 50	< 15 < 60	< 12 < 20
Hysteresis material constant	η_B	$10^{-6}/mT$	< 27	< 45	< 36	< 3,6	< 1,8	< 1,8	
Curie temperature	T_C	°C	> 550	> 450	> 400	> 170	> 150	> 200	
Related temperature coefficient at 20 ... 55°C at 5 ... 20°C	α_F	$10^{-6}/K$	25...50	3...14	2...8	—	—	0,5...2,3	
			45...20	12...0	7...1	—	—	2,5...0,5	
Mean value of α_F at 20 ... 55°C		$10^{-6}/K$	37	9	4	14	8	1,6	
Density (typical)		kg/m ³	4400	4600	4650	4600	4700	4500	
Disaccommodation factor at 20°C	DF	10^{-6}	—	—	20	—	—	8	
Resistivity	ρ	Ωm	10^5	10^5	10^5	10^5	10^5	5	
Core shapes The preferred ferrites range presented on the following pages does not include all core shapes listed in this table.			P, double- aperture	P, tube, cylinder, ring	RM, P, ring, P core half	Double- aperture, cylinder, tube	Ring, double- aperture, cylinder, tube	RM, P, ring, double- aperture, P core half	

1) Perminvar ferrite: irreversible variations in quality and permeability may occur in case of strong fields in the core (> 1500 A/m). Shape-related dimensions have a tolerance of up to + 5%.

Material properties (continued)

Preferred application			Resonant cir. inductors		Special designs	
Material			N 4	N 48	N 22	
Base material			NiZn	MnZn	MnZn	
Color code	Symbol	Unit	—	—	red	
Initial permeability B (25°C)	μ_i		2000 ± 20%	2300 ± 25%	2000 ± 25%	2300 ± 25%
Meas. field strength Flux density (approach- ing saturation) ($f = 10$ kHz)	H B (25°C) B (100°C)	A/m mT mT	1200 290 140	1200 400 ²⁾ 290	1200 370 260	
Coercive field strength ($f = 10$ kHz)	$H_c(25^\circ\text{C})$ $H_c(100^\circ\text{C})$	A/m	12 7	19 13	18 14	
Optimum frequency range	f_{\min} f_{\max}	MHz MHz	0,001 0,2	0,001 0,1	0,001 0,2	
Related loss factor	at f_{\min} at f_{\max} $\tan \delta/\mu_i$	10^{-6} 10^{-6}	< 10 < 70	< 0,5 < 2,5	< 2 < 20	
Hysteresis material constant	η_B	$10^{-6}/\text{mT}$	< 4	< 0,4	< 1,4	
Curie temperature	T_C	°C	> 100	> 150	> 145	
Related temperature coefficient at 20 ... 55°C at 5 ... 20°C	α_F	$10^{-6}/\text{K}$	— —	0,4...1,0 1,0...0,4	— —	
Mean value of α_F at 20 ... 55°C		$10^{-6}/\text{K}$	5	0,7	0,9	
Density (typical)		kg/m^3	4800	4700	4700	
Disaccommodation factor at 20°C	DF	10^{-6}	—	2	4	
Resistivity	ρ	Ωm	10^4	3	1	
Core shapes The preferred ferrites range presented on the following pages does not include all core shapes listed in this table.			Ring, cylinder, tube, double- aperture	RM, P	Shielding beads	Ring, P core half, double- aperture

2) Measured at $f = 40$ kHz

Preferred application			Broadband transformers						
Material			N 26	N 30	T 35	T 37	T 44	T 38	T 42 ³⁾
Base material			MnZn	MnZn	MnZn	MnZn	MnZn	MnZn	MnZn
Color code	Symbol	Unit							
Initial permeability <i>B</i> (25°C)	μ_i		2300 ± 20%	4300 ± 20%	6000 ± 20%	6500 ± 25%	8000 ± 30%	10000 ± 30%	12000 ± 30%
Meas. field strength	<i>H</i>	A/m	1200	1200	1200	1200	1200	1200	1200
Flux density (approach- ing saturation) (<i>f</i> = 10 kHz)	<i>B</i> (25°C)	mT	390	380	390	380	400	380	400
	<i>B</i> (100°C)	mT	260	240	270	240	280	240	250
Coercive field strength (<i>f</i> = 10 kHz)	<i>H_c</i> (25°C)	A/m	15	12	12	9	10	9	7
	<i>H_c</i> (100°C)		12	8	9	8	6	6	6
Optimum frequency range	<i>f_{min}</i>	MHz	—	—	—	—	—	—	—
	<i>f_{max}</i>	MHz	—	—	—	—	—	—	—
Related loss factor	at <i>f_{min}</i>	$\tan \delta/\mu_i$	10 ⁻⁶	< 5	—	—	—	—	—
	at <i>f_{max}</i>		10 ⁻⁶	<i>f</i> =100 kHz	—	—	—	—	—
Hysteresis material constant	η_B	10 ⁻⁶ /mT	< 1,5	< 1,1	< 1,1	< 1,1	< 1,1	< 1,4	< 1,4
Curie temperature	<i>T_C</i>	°C	> 150	> 130	> 130	> 130	> 130	> 130	> 130
Related temperature coefficient at 20 ... 55°C at 5 ... 20°C	α_F	10 ⁻⁶ /K	0...1,5	—	—	—	—	—	—
			0...2	—	—	—	—	—	—
Mean value of α_F at 20 ... 55°C		10 ⁻⁶ /K	0,5	0,6	0,8	- 0,3	0,2	- 0,4	- 0,3
Density (typical)		kg/m ³	4700	4800	4900	4900	4900	4900	4950
Disaccommodation factor at 20°C	<i>DF</i>	10 ⁻⁶	—	—	—	—	—	—	—
Resistivity	ρ	Ωm	2	0,5	0,2	0,2	0,25	0,1	0,1
Core shapes The preferred ferrites range presented on the following pages does not include all core shapes listed in this table.			RM, P, EP, Q	RM, PE P,Q,E, ring, double- aper- ture	RM, P, EP, ring	Ring, DE	Ring, DE	RM, P, Q, EP, ER, E, ring	RM, EP, ring

3) Material values defined on small ring cores (≤ R10).

Material properties (continued)

Preferred application			Power transformers				
Material			N 59 ⁴⁾	N 49	N 47	N 62	N 27
Base material	Symbol	Unit	MnZn	MnZn	MnZn	MnZn	MnZn
Initial permeability	μ_i		850 ± 25%	1300 ± 20%	1400 ± 20%	1900 ± 20%	2000 ± 20%
Flux density ($H = 1200 \text{ A/m}$, $f = 10 \text{ kHz}$)	$B(25^\circ\text{C})$	mT	460	430	420	500	480
	$B(100^\circ\text{C})$	mT	370	340	330	410	400
Coercive field strength ($f = 10 \text{ kHz}$)	$H_c(25^\circ\text{C})$	A/m	60	33	33	18	27
	$H_c(100^\circ\text{C})$		50	27	27	11	20
Optimum frequency range	f_{\min}	kHz	500	300	200	—	—
	f_{\max}	kHz	1500	1000	1000	300	150
Hysteresis material constant	η_B	$10^{-6}/\text{mT}$	—	< 0,8	< 0,8	—	< 1,5
Curie temperature	T_C	$^\circ\text{C}$	> 240	> 200	> 200	> 240	> 220
Mean value of α_F at 20 ... 55 $^\circ\text{C}$		$10^{-6}/\text{K}$	—	—	1	—	3
Density (typical)		kg/m^3	4750	4600	4600	4800	4750
Related core loss	P_V						
25 kHz, 200 mT, 100 $^\circ\text{C}$		mW/g mW/cm ³				16 80	32 155
100 kHz, 200 mT, 100 $^\circ\text{C}$		mW/g mW/cm ³				105 500	190 920
300 kHz, 50 mT, 100 $^\circ\text{C}$		mW/g mW/cm ³			25 115		
500 kHz, 50 mT, 100 $^\circ\text{C}$		mW/g mW/cm ³	39 180	32 145	60 280		
1 MHz, 50 mT, 100 $^\circ\text{C}$		mW/g mW/cm ³	110 510	150 680			
Resistivity	ρ	Ωm	26	25	20	4	3
Core shapes The preferred ferrites range presented on the following pages does not include all core shapes listed in this table.			EFD	RM, Q, ring, EFD, ER	RM, ring, Q	ETD, E, U	P, PM, ETD, EC, ED, ER, E, U, CC, ring

4) Preliminary data

Preferred application			Power transformers				
Material			N 67	N 87	N 72	N 41	N 61 ⁴⁾
Base material	Symbol	Unit	MnZn	MnZn	MnZn	MnZn	MnZn
Initial permeability	μ_i		2100 ± 25%	2200 ± 25%	2500 ± 25%	2800 ± 20%	3000 ± 20%
Flux density ($H = 1200 \text{ A/m}$, $f = 10 \text{ kHz}$)	$B (25^\circ\text{C})$	mT	480	480	480	470	490
	$B (100^\circ\text{C})$	mT	380	380	370	380	390
Coercive field strength ($f = 10 \text{ kHz}$)	$H_c(25^\circ\text{C})$	A/m	20	16	15	20	17
	$H_c(100^\circ\text{C})$		14	9	11	22	18
Optimum frequency range	f_{\min}	kHz	—	—	—	—	—
	f_{\max}	kHz	300	500	300	150	150
Hysteresis material constant	η_B	$10^{-6}/\text{mT}$	< 1,4	< 1,4	—	< 1,4	—
Curie temperature	T_C	$^\circ\text{C}$	> 220	> 210	> 210	> 220	> 220
Mean value of α_F at 20 ... 55 $^\circ\text{C}$		$10^{-6}/\text{K}$	4	4	—	4	—
Density (typical)		kg/m^3	4800	4800	4800	4800	4850
Related core loss	P_V						
25 kHz, 200 mT, 100 $^\circ\text{C}$		mW/g	17		16	35	32
		mW/cm ³	80		80	180	165
100 kHz, 200 mT, 100 $^\circ\text{C}$		mW/g	105	80	110	280	220
		mW/cm ³	500	385	540	1400	1100
300 kHz, 50 mT, 100 $^\circ\text{C}$		mW/g	22	15			
	mW/cm ³	105	72				
500 kHz, 50 mT, 100 $^\circ\text{C}$	mW/g						
	mW/cm ³						
1 MHz, 50 mT, 100 $^\circ\text{C}$	mW/g						
	mW/cm ³						
Resistivity	ρ	Ωm	8	8	12	2	2
Core shapes	The preferred ferrites range presented on the following pages does not include all core shapes listed in this table.		RM, P, EP, ETD, ER, ED, EFD, E, U, ring	RM, P, PM, ETD, EFD, E	E, EFD	RM, P	Ring, ≤R12,5 E, ≤E14

4) Preliminary data

Adjusting Screw Drivers

For P and RM core sets

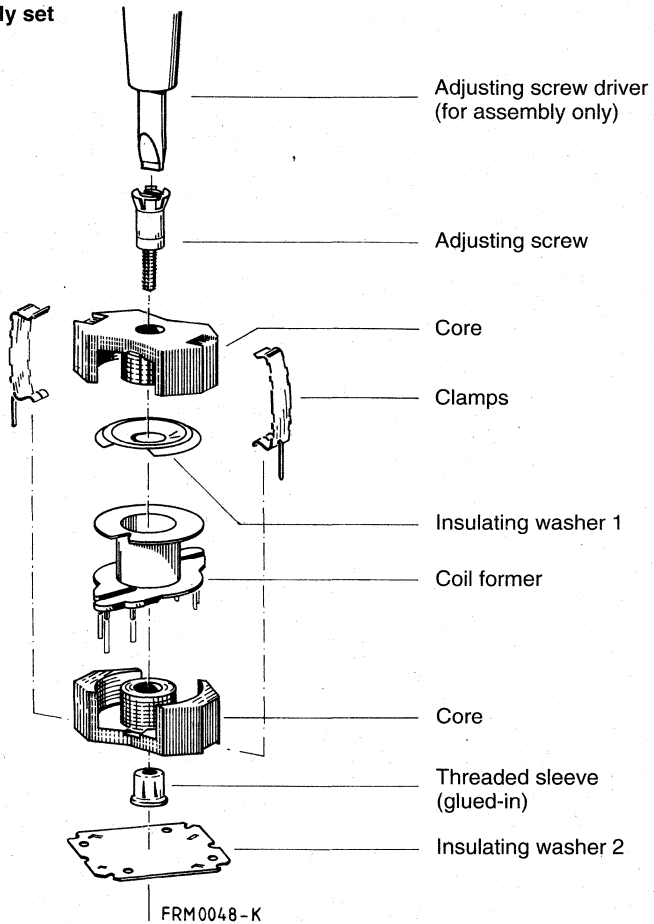
Material: plastic

Screw driver B63399-B4 is double-ended (two blades sizes).

Suitable for adjusting screws of the following core sets	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	100 +	250 +	500 +	1000 +
P22×13 to P36×22, RM8 and RM10 P9×5, P11×7, RM4, RM5 and P14×8, P18×11, RM6 P4,6×4,1, P7×4	B63399-B1	50	2000					
	B63399-B4	50	2000					
	B63399-A1007	50	2000					

RM Cores

Example of an assembly set



Mounting dimensions of the assembly set (mm)

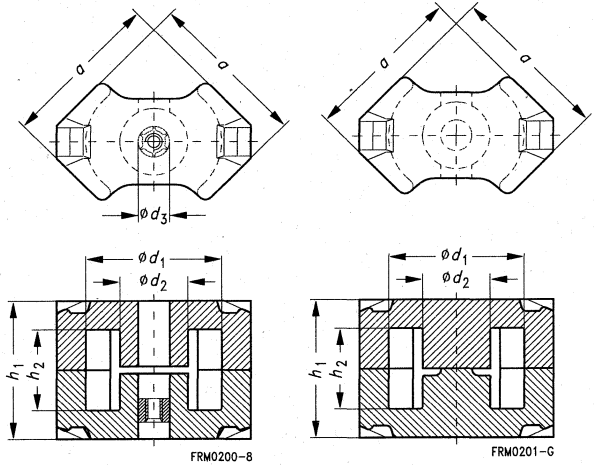
Core type	Base area × height ¹⁾	Special features	Core type	Base area × height ¹⁾	Special features
RM 4	10,16 ² × 10,8		RM 10	25,4 ² × 19 31 × 40 × 19	for power appl.
RM 5	12,7 ² × 10,8 16,5 × 19 × 10,6	SMD	RM 12	30,48 ² × 24,9 32 × 45,7 × 24,9 40,3 × 35,6 × 31	for power appl. with pile-up coil former
RM 6	15,24 ² × 12,8 19,5 × 25 × 12,8 19,6 × 22,2 × 13	for power appl. SMD			
RM 8	20,32 ² × 16,8 26 × 30 × 16,8	for power appl.	RM 14	35,56 ² × 30,5 44 × 29 × 30,5	for power appl.

1) Height above mounting plane

RM Cores

RM cores for high packing density.

Application in filter inductors, low-distortion small-signal broadband transformers and increasingly in power electronics. RM 8 to RM 14 are available with tapered center-post for use in non-linear chokes. Furthermore we supply an extensive range of accessories (also for automatic processing) for all core sizes.



RM 8 to RM 14 core sets for non-linear chokes

Dimensions (mm)

Core type	<i>a</i>	$\varnothing d_1$	$\varnothing d_2$	<i>d</i> ₃	<i>h</i> ₁	<i>h</i> ₂
RM 4 (LP)	9,8 - 0,4	8,0 + 0,3	3,9 - 0,2	2,0 + 0,1	10,5(7,8) - 0,2	7,0(4,3) + 0,4
RM 5	12,3 - 0,5	10,2 + 0,4	4,9 - 0,2	2,0 + 0,1	10,5 - 0,2	6,3 + 0,4
RM 6	14,7 - 0,6	12,4 + 0,5	6,4 - 0,2	3,0 + 0,1	12,5 - 0,2	8,0 + 0,4
RM 8	19,7 - 0,8	17,0 + 0,6	8,55 - 0,3	4,4 + 0,2	16,5 - 0,2	10,8 + 0,4
RM 10	24,7 - 1,1	21,2 + 0,9	10,9 - 0,4	5,4 + 0,2	18,7 - 0,2	12,4 + 0,6
RM 12	29,8 - 1,2	24,9 + 1,1	12,8 - 0,4	—	24,6 - 0,2	16,8 + 0,6
RM 14	34,8 - 1,3	29,0 + 1,0	15,0 - 0,5	—	30,2 - 0,2	20,8 + 0,6

Magnetic characteristics and weight (per set)

Core type	Magnetic characteristics with center hole / without center hole/low profile LP (only for RM 4)					Appr. weight with/without center hole/ LP g
	$\Sigma I/A$ mm ⁻¹	<i>l</i> _e mm	<i>A</i> _e mm ²	<i>A</i> _{min} mm ²	<i>V</i> _e mm ³	
RM 4	1,9 /1,7/1,2	21,0/22,0/17,3	11,0/13,0/14,5	— /11,3/11,3	232/286/251	1,45/1,65/1,2
RM 5	1,0 /0,93	20,8/22,1	20,8/ 23,8	15 / 18	430/ 526	2,9 / 3,0
RM 6	0,86/0,78	26,9/28,6	31,3/ 36,6	— / 31	840/ 1050	4,9 / 5,3
RM 8	0,67/0,59	35,1/38	52 / 64	— / 55	1840/ 2430	10,7 /12
RM 10	0,50/0,45	42 /44	83 / 98	— / 90	3470/ 4310	20,7 /22
RM 12	— /0,39	— /57	— /146	— /125	— / 8340	— /45
RM 14	— /0,35	— /70	— /200	— /170	— /14000	— /74

Core sets in accordance with IEC 431 and DIN 41 980

B 65 803

Item	Rated A _L value nH	Material	Ordering code -N (w. threaded sleeve) -J (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	200 +	300 +	600 +	1200 +
1	63	M33	B65803-N63-A33	100	2400					
2	100	N48	B65803-N100-A48	100	2400					
3	160	N48	B65803-N160-A48	100	2400					
4	1100 ¹⁾	N67	B65803-J-R67	100	2400					
5	1900 ¹⁾	N30	B65803-J-R30	100	2400					
6	3700 ¹⁾	T38	B65803-J-Y38	100	2400					
Low profile							200 +	400 +	800 +	1600 +
7	160	N67	B65803-P160-J67	100	2400					
8	900 ¹⁾	N47	B65803-P-R47	100	2400					
9	1200 ¹⁾	N67	B65803-P-R67	100	2400					
10	5000 ¹⁾	T38	B65803-P-Y38	100	2400					

Coil formers made of GFR thermosetting plastic (UL 94 V-0)

B 65 804

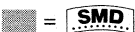
Sections	A _N mm ²	Pins/ termi- nals	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	300 +	600 +	1200 +
1	7,7	5	B65804-K1005-D1	100	2400					
			B65804-K1006-D1	100	2400					
2	7,3	6	B65804-K1005-D2	100	2400					
			B65804-K1006-D2	100	2400					
Low profile							200 +	400 +	800 +	1600 +
1	4,7	6	B65804-R1006-D1	100	2400					

Coil formers made of liquid crystal polymer (UL 94 V-0) for SMD technology

B 65 804

Low profile

1	5,0	10	B65804-A6010-T1	100	2000					
2	4,4	10	B65804-A6010-T2	100	2000					



1) Ungapped

Clamp with ground terminal

B 65 806

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	300 +	600 +	1200 +	2400 +
(required: 2 pcs/set)	B65806-A2203	200	4800					

Low profile

B 65 804

	Ordering code	Min. qty.	Max. qty.	Price per 100			
				400 +	800 +	1600 +	2400 +
(required: 2 pcs/set)	B65804-P2203	200	4800				
(required: 2 pcs/set)	B65804-P2204	200	4800				

Insulating washers made of polycarbonate (UL 94 V-0)

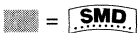
B 65 804

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	Price per 100			
					200 +	300 +	600 +	1200 +
between core/coil former for double-clad PCBs	B65804-A5000	100	2400					
	B65804-C2005	100	2400					

Adjusting screws for core sets (color-coded)

B 65 539

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	Price per 100			
					200 +	300 +	500 +	1000 +
for item 1, 2 for item 3	yellow	B65539-C1003-X1	100	2000				
	red	B65539-C1002-X22	100	2000				



Core sets in accordance with IEC 431 and DIN 41 980

B 65 805

Item	Rated A _L value nH	Material	Ordering code -C (w. center hole) -N (w. threaded sleeve) -J (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	200 +	300 +	500 +	1000 +
1	25	K1	B65805-N25-A1	100	2000					
2	40	K1	B65805-N40-A1	100	2000					
3	63	M33	B65805-N63-A33	100	2000					
4	100	M33	B65805-N100-A33	100	2000					
5	125	N48	B65805-N125-G48	100	2000					
6	160	N48	B65805-N160-A48	100	2000					
7	250	N48	B65805-N250-A48	100	2000					
8	315	N48	B65805-N315-A48	100	2000					
9	1400 ¹⁾	N47	B65805-J-R47	100	2000					
10	1800 ¹⁾	N26	B65805-C-R26	100	2000					
11	2000 ¹⁾	N67	B65805-J-R67	100	2000					
12	3500 ¹⁾	N30	B65805-J-R30	100	2000					
13	5200 ¹⁾	T35	B65805-J-R35	100	2000					
14	6700 ¹⁾	T38	B65805-J-Y38	100	2000					
15	9600 ¹⁾	T42	B65805-J-Y42	100	2000					

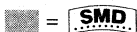
Coil formers

B 65 806, B 65 822

Sections	A _N mm ²	Pins/ termi- nals	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	300 +	500 +	1000 +
1	9,5	4	B65806-K1004-D1	100	2000					
			B65806-K1005-D1							
			B65806-K1006-D1							
			B65806-K1008-D1							
2	8,7	4	B65806-K1004-D2	100	2000					
			B65806-K1008-D2							
			B65806-K1006-D2							

Made of liquid crystal polymer (UL 94 V-0) for SMD technology

1	11,1	8	B65822-E1008-T1	100	2000					
2	10,2	8	B65822-E1008-T2	100	2000					



1) Ungapped

Clamps

B 65 806

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	300 +	500 +	1000 +	2000 +

With ground terminal

(required: 2 pcs/set)	B65806-A2203	200	4000					
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Without ground terminal for SMD technology

(required: 2 pcs/set)	B65806-J2204	200	4000					
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Insulating washers made of polycarbonate (UL 94 V-0)

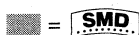
B 65 806

	Ordering code	Min. qty.	Max. qty.	Min. qty. +				
				200 +	300 +	500 +	1000 +	
between core/coil former	B65806-A5000	100	2000					
for double-clad PCBs	B65806-D2005	100	2000					

Adjusting screws for core sets (color-coded)

B 65 539, B 65 806

for item 1	black	B65539-C1003-X101	100	2000				
for item 2, 4, 5	yellow	B65539-C1003-X1	100	2000				
for item 3	white	B65539-C1002-X101	100	2000				
for item 6	red	B65539-C1002-X22	100	2000				
for item 7, 8	green	B65806-C3001-X22	100	2000				



Core sets in accordance with IEC 431 and DIN 41 980

B 65 807

Item	Rated A _L value nH	Mater- ial	Ordering code -C (w. center hole) -N (w. threaded sleeve) -J (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	200 +	300 +	500 +	1000 +
1	40	K1	B65807-N40-A1	100	2000					
2	63	M33	B65807-N63-A33	100	2000					
3	100	M33	B65807-N100-A33	100	2000					
4	160	N48	B65807-N160-G48	100	2000					
5	250	N48	B65807-N250-A48	100	2000					
6	315	N48	B65807-N315-A48	100	2000					
7	400	N48	B65807-N400-A48	100	2000					
8	1000	N26	B65807-C1000-K26	100	2000					
9	1800 ¹⁾	N47	B65807-J-R47	100	2000					
10	2200 ¹⁾	N26	B65807-C-R26	100	2000					
11	2400 ¹⁾	N67	B65807-J-R67	100	2000					
12	3100 ¹⁾	N41	B65807-J-R41	100	2000					
13	4300 ¹⁾	N30	B65807-J-R30	100	2000					
14	6200 ¹⁾	T35	B65807-J-R35	100	2000					
15	8600 ¹⁾	T38	B65807-J-Y38	100	2000					
16	12300 ¹⁾	T42	B65807-J-Y42	100	2000					

Coil formers

B 65 808, B 65 821

Sections	A _N mm ²	Pins/ termi- nals	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	300 +	500 +	1000 +

Made of GFR thermosetting plastic (UL 94 V-0)

1	15	4	B65808-K1004-D1	100	2000					
		5	B65808-K1005-D1	100	2000					
		6	B65808-K1006-D1	100	2000					
2	14	4	B65808-K1004-D2	100	2000					
		5	B65808-K1005-D2	100	2000					
		6	B65808-K1006-D2	100	2000					

Made of GFR polyterephthalate (UL 94 V-0) for power applications

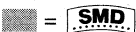
1	15	8	B65808-D1508-T1 ²⁾	100	2000					
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Made of GFR thermosetting plastic (UL 94 V-0) for SMPS transformers with line isolation

2	14	8	B65808-X1108-D2	100	2000					
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Made of liquid crystal polymer (UL 94 V-0) for SMD technology

1	17	8	B65821-C1008-T1	100	2000					
2	15,2	8	B65821-C1008-T2	100	2000					



1) Ungapped

2) Manufacturing technique will be changed during this catalog's period of validity. The equivalent coil former will then be delivered under ordering code B65808-E1508-T1.

Clamps

B 65 808

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	300 +	500 +	1000 +	2000 +
With ground terminal								
(required: 2 pcs/set)	B65808-A2203	200	4000					
Without ground terminal for SMD technology								
(required: 2 pcs/set)	B65808-J2204	200	4000					

Insulating washers made of polycarbonate (UL 94 V-0)

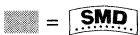
B 65 808

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	200 +	300 +	500 +	1000 +
between core/coil former	B65808-A5000	100	2000					
for double-clad PCBs	B65808-C2005	100	2000					

Adjusting screws for core sets (color-coded)

B 65 659

		Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	200 +	300 +	500 +	1000 +
for item 1, 2	white	B65659-F1-X101	100	2000					
for item 3	brown	B65659-F4-X101	100	2000					
for item 4	green	B65659-F1-X1	100	2000					
for item 5	red	B65659-F1-X23	100	2000					
for item 6	black	B65659-F3-X23	100	2000					
for item 7	yellow	B65659-F4-X23	100	2000					



RM 8

Core sets

B 65 811

Item	Rated A _L value nH	Material	Ordering code -D (w. center hole) -F (w. threaded sleeve) -J (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	100 +	250 +	500 +	1000 +

In accordance with IEC 431

1	250	N48	B65811-F250-A48	50	2000					
2	315	N48	B65811-F315-A48	50	2000					
3	400	N48	B65811-F400-A48	50	2000					
4	630	N48	B65811-F630-J48	50	2000					
5	250	N41	B65811-J250-J41	50	2000					
6	1600	N41	B65811-J1600-K41	50	2000					
7	2400 ¹⁾	N47	B65811-J-R47	50	2000					
8	2900 ¹⁾	N26	B65811-D-R26	50	2000					
9	3300 ¹⁾	N67	B65811-J-R67	50	2000					
10	4100 ¹⁾	N41	B65811-J-R41	50	2000					
11	5700 ¹⁾	N30	B65811-J-R30	50	2000					
12	8400 ¹⁾	T35	B65811-J-R35	50	2000					
13	12500 ¹⁾	T38	B65811-J-Y38	50	2000					

For non-linear chokes

14	2500 ¹⁾	N41	B65811-H2500-X41	50	2000					
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Coil formers

B 65 812

Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	250 +	500 +	1000 +

Made of GFR thermosetting plastic (UL 94 V-0)

1	30	5	B65812-K1005-D1	50	2000					
		8	B65812-K1008-D1	50	2000					
		12	B65812-K1012-D1	50	2000					
2	28,4	5	B65812-K1005-D2	50	2000					
		8	B65812-K1008-D2	50	2000					
		12	B65812-K1012-D2	50	2000					

Made of GFR polyterephthalate (UL 94 V-0) for power applications

1	30	12	B65812-B1512-T1 ²⁾	50	2000					
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Made of GFR thermosetting plastic (UL 94 V-0) for SMPS transformers with line isolation

2	28,4	8	B65812-X1108-D2	50	2000					
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Clamp with ground terminal

B 65 812

			Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	
(required: 2 pcs/set)			100	4000					
B65812-A2203									

¹⁾ Ungapped

²⁾ Manufacturing technique will be changed during this catalog's period of validity. The equivalent coil former will then be delivered under ordering code B65812-C1512-T1.

RM 8

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 812

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	100 +	250 +	500 +	1000 +
between core/coil former for double-clad PCBs	B65812-A5000	50	2000					
	B65812-C2005	50	2000					

Adjusting screws for core sets (color-coded)

B 65 812

for item 1	white	B65812-B3001-X101	50	2000				
for item 2	grey	B65812-B3003-X22	50	2000				
for item 3	brown	B65812-B3002-X22	50	2000				
for item 4	black	B65812-B3001-X22	50	2000				

Core sets

B 65 813

Item	Rated A _L value nH	Material	Ordering code -N (w.threaded sleeve) -J (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	100 +	250 +	500 +	1000 +

In accordance with IEC 431 and DIN 41980

1	315	N48	B65813-N315-A48	50	2000					
2	400	N48	B65813-N400-A48	50	2000					
3	630	N48	B65813-N630-A48	50	2000					
4	250	N41	B65813-J250-A41	50	2000					
5	630	N41	B65813-J630-J41	50	2000					
6	1600	N41	B65813-J1600-K41	50	2000					
7	3100 ¹⁾	N47	B65813-J-R47	50	2000					
8	4200 ¹⁾	N67	B65813-J-R67	50	2000					
9	5500 ¹⁾	N41	B65813-J-R41	50	2000					
10	7600 ¹⁾	N30	B65813-J-R30	50	2000					
11	11000 ¹⁾	T35	B65813-J-R35	50	2000					
12	16000 ¹⁾	T38	B65813-J-Y38	50	2000					

For non-linear chokes

13	3200 ¹⁾	N41	B65813-H3200-X41	50	2000					
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Coil formers

B 65 814

Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	250 +	500 +	1000 +

Made of GFR thermosetting plastic (UL 94 V-0)

1	41,5	12	B65814-K1012-D1	50	2000					
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Made of GFR polyterephthalate (UL 94 V-0) for power applications

1	41,5	12	B65814-B1512-T1 ²⁾	50	2000					
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Made of GFR polyterephthalate (UL 94 V-0) for non-linear chokes

1	41,5	-	B65814-J1000-T1	50	2000					
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Clamp with ground terminal

B 65 814

		Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	
(required: 2 pcs/set)	B65814-A2203	100	4000					

1) Ungappe
 2) Manufacturing technique will be changed during this catalog's period of validity. The equivalent coil former will then be delivered under ordering code B65814-C1512-T1.

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 814

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	100 +	250 +	500 +	1000 +
between core/coil former for double-clad PCBs	B65814-B5000	50	2000					
	B65814-B2005	50	2000					

Adjusting screws for core sets (color-coded)

B 65 679

		Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
for item 2	black	B65679-E2-X22	50	2000					
for item 3	white	B65679-E1-X22	50	2000					

Core sets

Item	Rated A _L value nH	Material	Ordering code -E (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	50 +	100 +	500 +	1000 +

Preferable for power applications

1	160	N41	B65815-E160-A41	25	2000					
2	250	N41	B65815-E250-A41	25	2000					
3	1000	N41	B65815-E1000-J41	25	2000					
4	5300 ¹⁾	N67	B65815-E-R67	25	2000					
5	6000 ¹⁾	N41	B65815-E-R41	25	2000					
6	8400 ¹⁾	N30	B65815-E-R30	25	2000					

For non-linear chokes

7	3700 ¹⁾	N41	B65815-H3700-X41	25	2000					
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Coil formers

Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +

a) Made of GFR thermosetting plastic (UL 94 V-0)

1	73	11	B65816-A1011-D1	25	2000					
		12	B65816-A1012-D1	25	2000					

b) Made of GFR polyterephthalate (UL 94 V-0) for power applications

1	72	12	B65816-B1512-T1 ²⁾	25	2000					
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c) Made of GFR polyterephthalate (UL 94 V-0) for non-linear chokes

1	70,5	-	B65816-J1000-T1	25	2000					
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Pile-up coil former made of GFR polyterephthalate (UL 94 V-0) for power applications

Winding former/ Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +
I/1	3,6	12	B65816-A1212-T102	25	2000					
II/2	26,0									
II/1	2,9									
II/2	4,0									

1) Ungapped

2) Manufacturing technique will be changed during this catalog's period of validity. The equivalent coil former will then be delivered under ordering code B65816-C1512-T1.

Clamps

B 65 816

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	100 +	500 +	1000 +	2000 +

With ground terminal for coil formers a) to c)

(required: 2 pcs/set)	B65816-A2002	50	4000					
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Without ground terminal for pile-up coil former

(required: 2 pcs/set)	B65816-A2204	50	4000					
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Insulating washers made of polycarbonate (UL 94 V-0)

B 65 816

	Ordering code	Min. qty.	Max. qty.	Price per 100				
				Min. qty. +	50 +	100 +	500 +	1000 +
between core/coil former	B65816-B5000	25	2000					
for double-clad PCBs	B65816-D2005	25	2000					

Core sets

B 65 887

Item	Rated A _L value nH	Material	Ordering code -E (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	60 +	120 +	240 +	480 +

Preferable for power applications

1	160	N41	B65887-E160-A41	30	960					
2	250	N41	B65887-E250-A41	30	960					
3	400	N41	B65887-E400-A41	30	960					
4	6000 ¹⁾	N67	B65887-E-R67	30	960					

For non-linear chokes

5	4300 ¹⁾	N41	B65887-H4300-X41	30	960					
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Coil formers

B 65 888

Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	60 +	120 +	240 +	480 +

Made of GFR thermosetting plastic (UL 94 V-0)

1	107	10	B65888-C1010-D1	30	960					
1	107	12	B65888-C1012-D1	30	960					

Made of GFR polyterephthalate (UL 94 V-0) for power applications

1	106	12	B65888-B1512-T1 ²⁾	30	960					
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Insulating washers made of polycarbonate (UL 94 V-0)

B 65 888

	Ordering code	Min. qty.	Max. qty.	Price per 100					
				Min. qty. +	60 +	120 +	240 +	480 +	
between core/coil former for double-clad PCBs	B65888-B5000 B65888-B2005	30 30	960 960						

Clamp with ground terminal

B 65 888

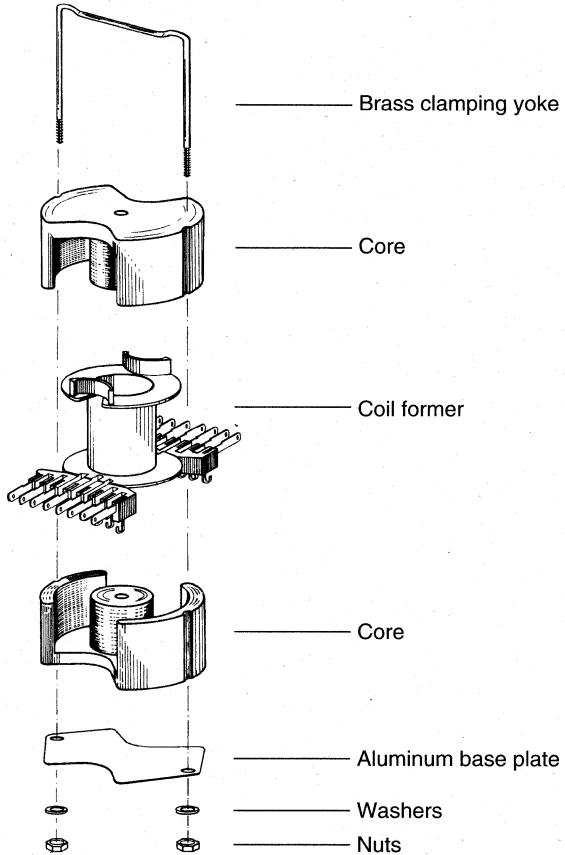
		Min. qty.	Max. qty.	Min. qty. +	120 +	240 +	480 +	960 +
(required: 2 pcs/set)	B65888-A2002	60	1920					

1) Ungapped

2) Manufacturing technique will be changed during this catalog's period of validity. The equivalent coil former will then be delivered under ordering code B65888-C1512-T1.

PM Cores

Example of an assembly set



FPM0002-6

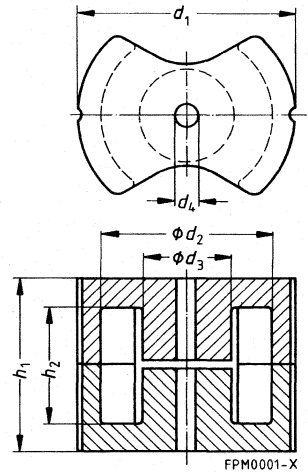
Mounting dimensions of the assembly set (mm)

Core type	Length × width × height ¹⁾	Core type	Length × width × height ¹⁾
PM 50/39	65 × 52 × 45	PM 87/70	101 × 87 × 72
PM 62/49	76 × 64 × 55	PM 114/93	114 × 92 × 93
PM 74/59	85,5 × 75 × 65		

1) Height above mounting plane

PM Cores

PM cores for power transformers and energy-storage chokes in high-performance switch-mode power supplies. Also suitable for applications in telecommunications and industrial electronics.



Dimensions (mm)

Core type	d_1	$\varnothing d_2$	$\varnothing d_3$	d_4	h_1	h_2
PM 50/39	50 - 1,7	39,0 + 1,3	20,0 - 6	5,4 + 0,2	39 - 0,4	26,4 + 0,8
PM 62/49	62 - 2,0	48,8 + 1,5	25,5 - 0,8	5,4 + 0,2	49 - 0,4	33,4 + 0,8
PM 74/59	74 - 2,5	57,5 + 1,8	29,5 - 1,0	5,4 + 0,3	59 - 0,6	40,7 + 0,8
PM 87/70	87 - 3,0	67,1 + 2,1	31,7 - 1,0	8,5 + 0,3	70 - 0,8	48,0 + 0,8
PM 114/93	114 - 4,5	88,0 + 3,7	43,0 - 1,4	5,4 + 0,4	93 - 1,0	63,0 + 1,6

Magnetic characteristics and weight (per set)

Core type	Magnetic characteristics					Approx. weight g
	$\Sigma I/A$ mm^{-1}	l_e mm	A_e mm^2	A_{\min} mm^2	V_e mm^3	
PM 50/39	0,227	84	370	280	31 000	140
PM 62/49	0,191	109	570	470	62 000	280
PM 74/59	0,162	128	790	630	101 000	460
PM 87/70	0,161	146	910	700	133 000	770
PM 114/93	0,116	200	1720	1380	344 000	1940

PM 50/39
PM 62/49

Core sets PM 50/39 in accordance with DIN 41 989

B 65 646

Rated A _L value	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	30 +	60 +	120 +	
nH									
250	N27	B65646-A250-A27	15	240					
7400 (ungapped)	N27	B65646-A-R27	15	240					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 65 647

Sections	A _N mm ²	Solder pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	30 +	60 +	120 +	
1	154	14	B65647-B1014-T1	15	240					

Mounting assembly (yoke and base plate)

incl. nuts and washers

B 65 647

for chassis mounting ¹⁾ or PCBs	B65647-A2000	15	240						
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Core sets PM 62/49 in accordance with DIN 41 989

B 65 684

Rated A _L value	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets			
					Min. qty. +	20 +	50 +	100 +
nH								
315	N27	B65684-A315-A27	10	250				
9200 (ungapped)	N27	B65684-A-R27	10	250				

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 65 685

Sections	A _N mm ²	Solder pins	Ordering code	Min. qty.	Max. qty.	Price per 100			
						Min. qty. +	20 +	50 +	100 +
1	270	16	B65685-B1016-T1	10	250				

Mounting assembly (yoke and base plate)

incl. nuts and washers

B 65 685

for chassis mounting ¹⁾ or PCBs	B65685-A2000	10	250					
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1) On a chassis the coil former has to be mounted with its pins upwards.

PM 74/59
PM 87/70

Core set PM 74/59 in accordance with DIN 41 989

B 65 686

Rated A _L value	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	10 +	20 +	50 +	75 +
nH									
10000 (ungapped)	N27	B65686-A-R27	5	100					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 65 687

Sections	A _N mm ²	Solder pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	10 +	20 +	50 +	75 +
1	442	18	B65687-A1018-T1	5	100					

Mounting assembly (yoke and base plate)

incl. nuts and washers

B 65 687

for chassis mounting ¹⁾ or PCBs	B65687-A2000	5	100						
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Core set PM 87/70 in accordance with DIN 41 989

B 65 713

Rated A _L value	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	4 +	10 +	20 +	50 +
nH									
12000 (ungapped)	N27	B65713-A-R27	2	100					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 65 714

Sections	A _N mm ²	Solder pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	4 +	10 +	20 +	50 +
1	657	20	B65714-K1020-T1	2	100					

Mounting assembly (yoke and base plate)

incl. nuts and washers

B 65 714

for chassis mounting ¹⁾ or PCBs	B65714-A2000	2	100						
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1) On a chassis the coil former has to be mounted with its pins upwards.

PM 114/93

Core set PM 114/93 in accordance with DIN 41 989

B 65 733

Rated A_L value nH	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	2 +	5 +	10 +	25 +
16000 (ungapped)	N27	B65733-A-R27	1	50					

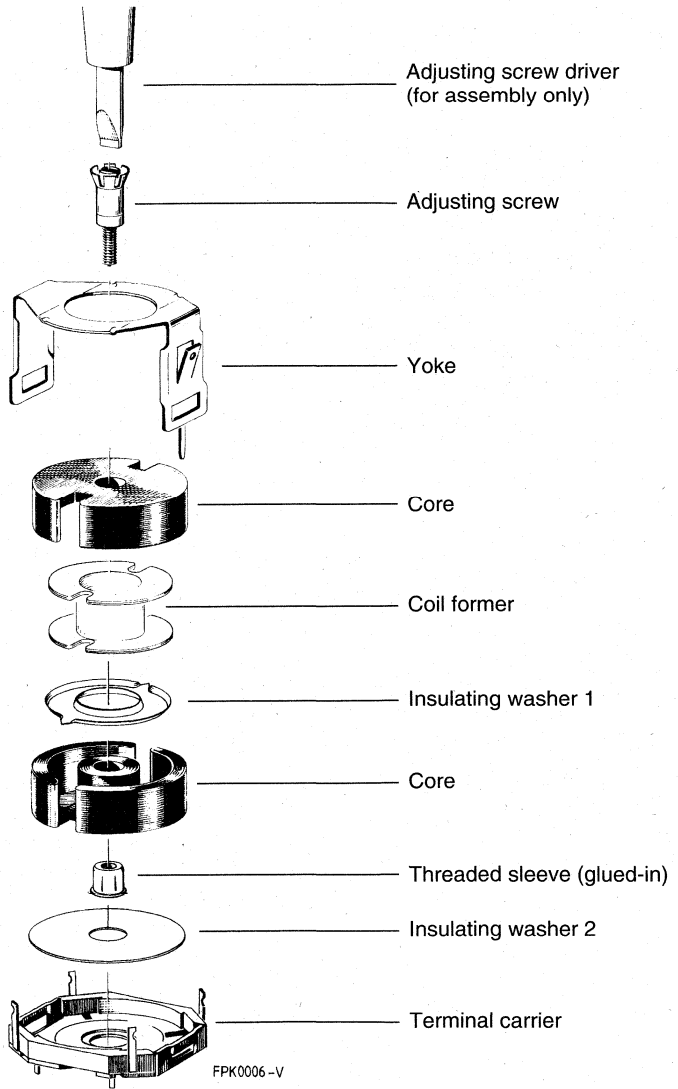
Coil former made of polyphenylene sulphide (UL 94 V-0)

B 65 734

Sections	A_N mm ²	Solder pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	2 +	5 +	10 +	25 +
1	1070	—	B65734-B1000-T1	1	50					

P Cores

Example of an assembly set



B

P Cores

Mounting dimensions of the assembly set (mm)

Core type	Length × width × height ¹⁾	Special features
P 4,6 × 4,1	5,5 × 5 × 5,1 6,8 × 5 × 5,1	SMD
P 7 × 4	7,5 × 7,5 × 7,1	
P 9 × 5	9,9 × 9,9 × 8,3 9,9 × 12,3 × 8,3 12,5 × 12,5 × 7,3 12,2 × 17 × 6,0	with terminal carrier (4 solder pins) with terminal carrier (6 solder pins) with pin coil former ²⁾ SMD
P 11 × 7	12,3 × 12,3 × 9,5 12,3 × 14,6 × 9,5 15,0 × 15,0 × 8,3	with terminal carrier (4 solder pins) with terminal carrier (8 solder pins) with pin coil former ²⁾
P 14 × 8	16,8 × 15,0 × 11,3 16,8 × 19,6 × 11,3 17,5 × 17,5 × 9,9	with terminal carrier (4 solder pins) with terminal carrier (6 solder pins) with pin coil former ²⁾
P 18 × 11	19,9 × 20,7 × 13,5 22,0 × 22,0 × 11,9	with terminal carrier with pin coil former ²⁾
P 22 × 13	24,5 × 26,0 × 16,6	
P 26 × 16	27,8 × 28,5 × 19,0	
P 30 × 19	32,5 × 33,5 × 22,8	
P 36 × 22	40,0 × 41,8 × 27,5	

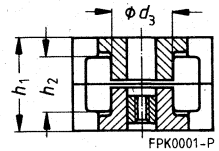
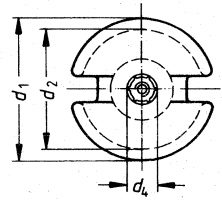
1) Height above mounting plane

2) Mounting dimensions exclusive of clamps

P Cores

P cores (pot cores) for high-Q resonant circuit inductors and low-distortion small-signal broadband transformers as well as for power applications.

P 9 × 5 to P 30 × 19 are provided with broadened wire-protecting side slots.



Outline drawing for
P 9 × 5 to P 30 × 19
(Other cores with
deviating slot shape)

FPK0001-P

Dimensions (mm)

Core type	d_1	d_2	ϕd_3	d_4	h_1	h_2
P 4,6 × 4,1	4,65 - 0,19	3,7 + 0,15	2,2 - 0,1	1,4 + 0,05	4,1 - 0,1	2,7 + 0,2
P 7 × 4	7,35 - 0,25	5,8 + 0,2	3,0 - 0,1	1,4 + 0,05	4,2 - 0,1	2,8 + 0,2
P 9 × 5	9,3 - 0,3	7,5 + 0,25	3,9 - 0,2	2,0 + 0,1	5,4 - 0,2	3,6 + 0,3
P 11 × 7	11,3 - 0,4	9,0 + 0,4	4,7 - 0,2	2,0 + 0,1	6,6 - 0,2	4,4 + 0,3
P 14 × 8	14,3 - 0,5	11,6 + 0,4	6,0 - 0,2	3,0 + 0,1	8,5 - 0,3	5,6 + 0,4
P 18 × 11	18,4 - 0,8	14,9 + 0,5	7,6 - 0,3	3,0 + 0,1	10,6 - 0,2	7,3 + 0,6
P 22 × 13	22,0 - 0,8	17,9 + 0,6	9,4 - 0,3	4,4 + 0,2	13,6 - 0,4	9,2 + 0,4
P 26 × 16	26,0 - 1,0	21,2 + 0,8	11,5 - 0,4	5,4 + 0,2	16,3 - 0,4	11,0 + 0,4
P 30 × 19	30,5 - 1,0	25,0 + 0,8	13,5 - 0,4	5,4 + 0,2	19,0 - 0,4	13,0 + 0,4
P 36 × 22	36,0 - 1,0	29,9 + 0,8	16,2 - 0,4	5,4 + 0,3	22,0 - 0,6	14,6 + 0,4

Magnetic characteristics and weight (per set)

Core type	Magnetic characteristics with center hole / without center hole					Approx. weight with/without center hole g
	Σ/A mm ⁻¹	l_e mm	A_e mm ²	A_{min} mm ²	V_e mm ³	
P 4,6 × 4,1	2,60/—	7,6/—	2,8/—	—	21,3/—	0,17/—
P 7 × 4	1,43/—	10,0/—	7,0/—	—	70 /—	0,5 /—
P 9 × 5	1,25/1,13	12,2/13,4	9,8/ 11,9	—/ 9,3	120 / 159	0,8 / 1,0
P 11 × 7	1,0 /0,92	15,9/16,3	15,9/ 17,7	—/ 14,1	252 / 288	1,7 / 1,8
P 14 × 8	0,8 /0,73	20,0/21,0	25 / 28,7	—/ 23,6	500 / 603	3,2 / 3,5
P 18 × 11	0,6 /0,57	25,9/26,6	43 / 46,7	—/ 33,9	1120 / 1240	6,0 / 6,6
P 22 × 13	0,5 /0,46	31,6/33,2	63 / 72,6	—/ 58,1	2000 / 2410	13 /14
P 26 × 16	0,4 /0,37	37,2/40,0	93 /108	—/ 87,0	3460 / 4320	21 /23
P 30 × 19	0,33/0,32	45,0/46	136 /145	—/117	6100 / 6670	36 /37
P 36 × 22	0,26/0,25	52,0/53,5	202 /213	—/173	10600 /11376	57 /59,5

P 4,6 × 4,1

Miniature pot core sets for adjustable miniature inductors

B 65 495

Item	Rated A _L value	Mate- rial	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	100 +	250 +	500 +	1000 +
	nH		-B (with center hole) -K (with thread)							

Preferable for power applications

1	16	K1	B65495-K16-A1	50	2000					
2	800 ¹⁾	N30	B65495-B-Y30	50	2000					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 65 496

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
1	0,8	B65496-B1000-T1	50	2000					

Terminal carrier with 4 solder pins

B 65 496

for PC boards		B65496-B2002	50	2000					
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¹⁾ Ungapped

Core sets

B 65 511

Item	Rated A _L value nH	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	200 +	400 +	800 +	1600 +
1	8	U17 ¹⁾	B65511-A8-A17	100	2000					
2	25	K1	B65511-A25-A1	100	2000					
3	100	N48	B65511-A100-A48	100	2000					
4	2000 ²⁾	N30	B65511-A-Y30	100	2000					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 65 512

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	200 +	400 +	800 +	1600 +
1	2,2	B65512-C-T1	100	2000					

Mounting assembly (terminal carrier and yoke) for PC boards

Terminal carrier with thread

B 65 512

with 5 solder pins	B65512-C2001	100	2000						
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Adjusting screws for core sets (color-coded)

B 65 512

for item 1, 2	white	B65512-A3001-X17	100	2000					
for item 3	yellow	B65512-A3001-X1	100	2000					

1) Dimensions may be exceeded by up to 10 %
2) Ungapped

Core sets in accordance with IEC 133 and DIN 41 293

B 65 517

Item	Rated A _L value nH	Material	Ordering code -D (with center hole) -W (without center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets			
						Min. qty. +	250 +	500 +	1000 +

With and without center hole

1	16	K12	B65517-D16-A12	125	2000				
2	25	K1	B65517-D25-A1	125	2000				
3	40	K1	B65517-D40-A1	125	2000				
4	63	M33	B65517-D63-A33	125	2000				
5	100	N48	B65517-D100-A48	125	2000				
6	160	N48	B65517-D160-A48	125	2000				
7	250	N26	B65517-D250-K26	125	2000				
8	1300 ¹⁾	N26	B65517-D-R26	125	2000				
9	2500 ¹⁾	N30	B65517-W-R30	125	2000				
10	5500 ¹⁾	T38	B65517-W-Y38	125	2000				

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 522

Sec- tions	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100			
						Min. qty. +	250 +	500 +	1000 +
1	3,6	—	B65522-B-T1	125	2000				
2	3,2	—	B65522-B-T2	125	2000				

Insulating washer made of polycarbonate (UL 94 V-0)

B 65 522

between core/coil former	B65522-A5000	125	2000					
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Mounting assemblies (terminal carrier and yoke) for PC boards

Terminal carrier with thread

B 65 518

with 4 solder pins	B65518-D2001	125	2000					
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Adjusting screws for core sets (color-coded)

B 65 518

for item 1, 2	brown	B65518-C3000-X101	125	2000				
for item 3, 4, 5	blue	B65518-C3000-X1	125	2000				
for item 6	green	B65518-C3000-X22	125	2000				

¹⁾ Ungapped

Core sets in accordance with IEC 133 and DIN 41 293

B 65 531

Item	Rated A _L value nH	Material	Ordering code -D (with center hole) -W (without center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	200 +	400 +	800 +	1600 +

With and without center hole

1	25	K1	B65531-D25-A1	100	2000					
2	40	K1	B65531-D40-A1	100	2000					
3	63	M33	B65531-D63-A33	100	2000					
4	160	N48	B65531-D160-A48	100	2000					
5	250	N48	B65531-D250-A48	100	2000					
6	1800 ¹⁾	N26	B65531-D-R26	100	2000					
7	3500 ¹⁾	N30	B65531-W-R30	100	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 532

Sec- tions	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	800 +	1600 +

1	4,2	—	B65532-B-T1	100	2000					
2	3,8	—	B65532-B-T2	100	2000					

Insulating washer made of polycarbonate (UL 94 V-0)

B 65 532

between core/coil former	B65532-A5000	100	2000						
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Mounting assemblies (terminal carrier and yoke) for PC boards

Terminal carrier with thread

B 65 535

with 4 solder pins	B65535-B2	100	2000						
with 8 solder pins	B65535-B3	100	2000						

Adjusting screws for core sets (color-coded)

B 65 539

for item 1, 2, 8	yellow	B65539-C1003-X1	100	2000					
for item 3	black	B65539-C1003-X101	100	2000					
for item 4, 5	red	B65539-C1002-X22	100	2000					

¹⁾ Ungapped

Core sets in accordance with IEC 133

B 65 541

Item	Rated A _L value nH	Mate- rial	Ordering code -D (w. center hole) -T (w. thread. sleeve) -W (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	250 +	500 +	1000 +	
1	40	K1	B65541-T40-A1	125	2000					
2	100	M33	B65541-T100-A33	125	2000					
3	160	N48	B65541-T160-G48	125	2000					
4	250	N48	B65541-T250-A48	125	2000					
5	315	N48	B65541-T315-A48	125	2000					
6	400	N48	B65541-T400-A48	125	2000					
7	2300 ¹⁾	N26	B65541-D-R26	125	2000					
8	2800 ¹⁾	N67	B65541-W-R67	125	2000					
9	4600 ¹⁾	N30	B65541-W-R30	125	2000					
10	9800 ¹⁾	T38	B65541-W-Y38	125	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 542

Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	250 +	500 +	1000 +	
1	8,4	—	B65542-B-T1	125	2000					
2	7,6	—	B65542-B-T2	125	2000					

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 542

between core/coil former	B65542-A5000	125	2000						
between core/terminal carrier	B65542-A5002	125	2000						

Mounting assemblies (terminal carrier and yoke) for PC boards

B 65 545

with 4 solder pins	B65545-B9	125	2000						
with 6 solder pins	B65545-B10	125	2000						

Adjusting screws for core sets (color-coded)

B 65 549

for item 1	green	B65549-E3-X101	125	2000					
for item 2	white	B65549-E3-X23	125	2000					
for item 3, 4, 5, 6	black	B65549-E4-X23	125	2000					

1) Ungapped

Core sets in accordance with IEC 133

B 65 651

Item	Rated A _L value nH	Material	Ordering code -D (w. center hole) -T (w. thread. sleeve) -W (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	100 +	250 +	500 +	1000 +
1	40	K1	B65651-T40-A1	25	2000					
2	100	M33	B65651-T100-A33	25	2000					
3	160	N48	B65651-T160-G48	25	2000					
4	250	N48	B65651-T250-A48	25	2000					
5	315	N48	B65651-T315-A48	25	2000					
6	400	N48	B65651-T400-A48	25	2000					
7	500	N48	B65651-T500-A48	25	2000					
8	630	N26	B65651-D630-K26	25	2000					
9	2900 ¹⁾	N26	B65651-D-R26	25	2000					
10	3600 ¹⁾	N67	B65651-W-R67	25	2000					
11	5900 ¹⁾	N30	B65651-W-R30	25	2000					
12	12600 ¹⁾	T38	B65651-W-Y38	25	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 652

Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	250 +	500 +	1000 +
1	16	—	B65652-B-T1	25	2000					
2	13	—	B65652-B-T2	25	2000					
3	12	—	B65652-B-T3	25	2000					

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 652

between core/coil former	B65652-A5000	25	2000						
between core/terminal carrier	B65652-A5002	25	2000						

Mounting assemblies (terminal carrier and yoke) for PC boards

B 65 655

with 4 solder pins	B65655-B9	25	2000						
with 8 solder pins	B65655-B10	25	2000						

Adjusting screws for core sets (color-coded)

B 65 659

	Ordering code	Min. qty.	Max. qty.	Price per 100					
				Min. qty. +	200 +	300 +	500 +	1000 +	
for item 1, 2, 3	white B65659-F1-X101	100	2000						
for item 2, 3	brown B65659-F4-X101	100	2000						
for item 4	green B65659-F1-X1	100	2000						
for item 5, 6	black B65659-F3-X23	100	2000						
for item 6, 7	yellow B65659-F4-X23	100	2000						

1) Ungapped

Core sets in accordance with IEC 133 and DIN 41 293

B 65 661

Item	Rated A _N value nH	Material	Ordering code -D (w. center hole) -T (w. thread. sleeve) -W (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	80 +	160 +	480 +	960 +
1	160	N48	B65661-T160-G48	40	1920					
2	250	N48	B65661-T250-G48	40	1920					
3	400	N48	B65661-T400-A48	40	1920					
4	630	N48	B65661-T630-A48	40	1920					
5	1250	N26	B65661-D1250-K26	40	1920					
6	3800 ¹⁾	N26	B65661-D-R26	40	1920					
7	4400 ¹⁾	N67	B65661-W-R67	40	1920					
8	7600 ¹⁾	N30	B65661-W-R30	40	1920					
9	17400 ¹⁾	T38	B65661-W-Y38	40	1920					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 662

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	80 +	160 +	480 +	960 +
1	23,4	B65662-B-T1	40	1920					
2	22,0	B65662-B-T2	40	1920					
3	20,0	B65662-B-T3	40	1920					

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 662

between core/coil former	B65662-A5000	40	1920					
between core/terminal carrier	B65662-A5002	40	1920					

Mounting assembly (terminal carrier and yoke) for PC boards

B 65 665

with 8 solder pins	B65665-C4	40	1920					
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Adjusting screws for core sets (color-coded)

B 65 669

for item 2	yellow	B65669-D11-X22	40	1920				
for item 3	red	B65669-D7-X22						
for item 4	white	B65669-E6-X22	40	1920				

1) Ungapped

Core sets in accordance with IEC 133 and DIN 41 293

B 65 671

Item	Rated A _L value nH	Material	Ordering code -D (w. center hole) -T (w. thread. sleeve) -W (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	100 +	200 +	500 +	1000 +
1	250	N48	B65671-T250-G48	50	2000					
2	400	N48	B65671-T400-A48	50	2000					
3	630	N48	B65671-T630-A48	50	2000					
4	1000	N26	B65671-D1000-J26	50	2000					
5	1600	N26	B65671-D1600-K26	50	2000					
6	4900 ¹⁾	N26	B65671-D-R26	50	2000					
7	9700 ¹⁾	N30	B65671-W-R30	50	2000					
8	22000 ¹⁾	T38	B65671-W-Y38	50	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 672

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	200 +	500 +	1000 +
1	32	B65672-B-T1	50	2000					
2	30	B65672-B-T2	50	2000					

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 672

between core/coil former	B65672-B5000	50	2000					
between core/terminal carrier	B65672-A5002	50	2000					

Mounting assembly (terminal carrier and yoke) for PC boards

B 65 675

with 8 solder pins	B65675-B5	50	2000					
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Adjusting screws for core sets (color-coded)

B 65 679

for item 1	red	B65679-E3-X22	50	2000				
for item 2	black	B65679-E2-X22	50	2000				
for item 3	white	B65679-E1-X22	50	2000				

1) Ungapped

Core sets in accordance with IEC 133 and DIN 41 293

B 65 701

Item	Rated A _L value nH	Material	Ordering code -D (w. center hole) -T (w. thread. sleeve) -W (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	80 +	160 +	480 +	960 +
1	250	N48	B65701-T250-G48	20	1920					
2	400	N48	B65701-T400-A48	20	1920					
3	630	N48	B65701-T630-A48	20	1920					
4	1000	N48	B65701-T1000-A48	20	1920					
5	2000	N26	B65701-D2000-K26	20	1920					
6	6200 ¹⁾	N26	B65701-D-R26	20	1920					
7	11500 ¹⁾	N30	B65701-W-R30	20	1920					
8	28000 ¹⁾	T38	B65701-W-Y38	20	1920					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 702

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	80 +	160 +	480 +	960 +
1	48	B65702-B-T1	20	1920					
2	45	B65702-B-T2	20	1920					

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 702

between core/coil former	B65702-A5000	20	1920					
between core/terminal carrier	B65702-A5002	20	1920					

Mounting assembly (terminal carrier and yoke) for PC boards

B 65 705

with 8 solder pins	B65705-B3	20	1920					
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Adjusting screws for core sets (color-coded)

B 65 679

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	100 +	200 +	500 +	1000 +
for item 1	red	B65679-E3-X22	50	2000					
for item 2, 3	black	B65679-E2-X22	50	2000					
for item 3, 4	white	B65679-E1-X22	50	2000					

1) Ungapped

Core sets in accordance with IEC 133 and DIN 41 293

B 65 611

Item	Rated A _L value nH	Mate- rial	Ordering code -L (w. center hole) -N (w. thread. sleeve) -W (w/o center hole)	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
						Min. qty. +	50 +	100 +	250 +	500 +
1	250	N48	B65611-N250-G48	25	1000					
2	7600 ¹⁾	N26	B65611-D-R26	25	1000					
3	15200 ¹⁾	N30	B65611-W-R30	25	1000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 65 612

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	50 +	100 +	250 +	500 +
1	63	B65612-B-T1	25	1000					
2	59	B65612-B-T2	25	1000					

Insulating washers made of polycarbonate (UL 94 V-0)

B 65 612

between core/coil former	Ordering code	Min. qty.	Max. qty.	Min. qty. +	50 +	100 +	250 +	500 +
	B65612-A5000	25	1000					

Mounting assembly (terminal carrier and yoke) for PC boards

B 65 615

with 10 solder pins	Ordering code	Min. qty.	Max. qty.	Min. qty. +	50 +	100 +	250 +	500 +
	B65615-B1	25	1000					

Adjusting screw for core sets (color-coded)

B 65 679

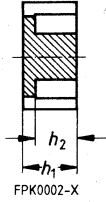
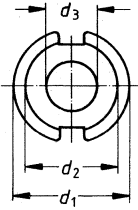
	Ordering code	Min. qty.	Max. qty.	Min. qty. +	100 +	200 +	500 +	1000 +
for item 1	yellow B65679-E2-X101	50	2000					

1) Ungapped

P Core Halves (Pot Cores for Proximity Switches)

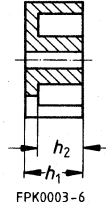
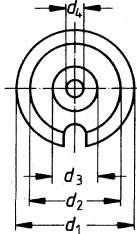
Inductive proximity switches are used as contactless motion detectors and output indicators. The dimensions of most of our P core halves are matched to the standardized switches (DIN EN 50 008).

5,6 × 3,7



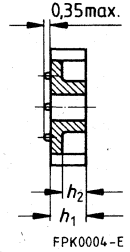
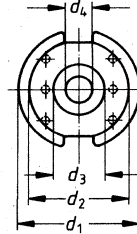
FPK0002-X

7,35 × 3,6



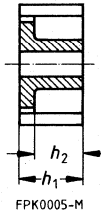
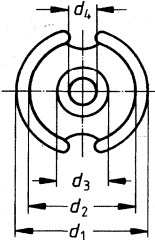
FPK0003-6

9 × 2,8 (without pimples)
9,4 × 4,6



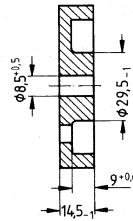
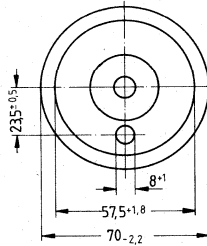
FPK0004-E

14,4 × 7,5 ... 47 × 14,9



FPK0005-M

70 × 14,5



Dimensions (mm)

Core type	d_1	d_2	d_3	d_4	h_1	h_2
5,6 × 3,7	5,6 - 0,25	4,4 + 0,2	2,5 - 0,15	—	3,7 - 0,25	2,7 + 0,25
7,35 × 3,6	7,35 - 0,2	5,8 + 0,1	3,1 - 0,1	1,05 + 0,1	3,6 - 0,1	2,8 + 0,2
9 × 2,8	9 - 0,4	7,3 + 0,3	3,9 - 0,3	1,9 + 0,2	2,8 - 0,1	1,9 + 0,2
9,4 × 4,6	9,4 - 0,6	7,5 + 0,3	3,9 - 0,2	2,1 + 0,3	4,6 - 0,25	3,55 + 0,25
14,4 × 7,5	14,4 - 0,6	11,6 + 0,5	6,0 - 0,3	2,95 + 0,25	7,5 - 0,2	5,6 + 0,3
25 × 8,9	24,8 - 1	20,5 + 1	11,3 - 0,6	5,2 + 0,4	8,9 - 0,45	5,9 + 0,4
30,5 × 10,2	30,5 - 1	25,0 + 0,8	13,5 - 0,4	5,4 + 0,2	10,2 - 0,5	7,0 + 0,4
35 × 10,8	35 - 1	29,2 + 1,2	15,7 - 0,6	5,3 + 0,3	10,8 - 0,5	7,2 + 0,4
47 × 14,9	47 - 1,3	39,0 + 1,1	20,0 - 0,6	5,5 + 0,2	14,9 - 0,7	10 + 0,5
70 × 14,5	70 - 2,2	57,5 + 1,8	29,5 - 1	8,5 + 0,5	14,5 - 1	9 + 0,6

P Core Halves

Cores

Material	Standard size as per DIN EN 50 008	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	1000 +	2000 +	3000 +

Core half 5,6 × 3,7

B 65 931

N22	M 8 × 1	B65931-C-X22	500	6000				
M33		B65931-C-X33	500	6000				

Core half 7,35 × 3,6

B 65 933

N22	—	B65933-A-X22	500	6000				
M33		B65933-A-X33	500	6000				

P core half 9 × 2,8

B 65 935

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	3000 +
N22	M 12 × 1	B65935-J-X22	250	6000					
M33		B65935-J-X33	250	6000					

Core half 9,4 × 4,6

B 65 935

N22	M 12 × 1	B65935-A-X22	250	6000				
M33		B65935-A-X33	250	6000				

Core half 14,4 × 7,5

B 65 937

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	400 +	1000 +	2000 +	3000 +
N22	M 18 × 1	B65937-A-X22	200	6000					

Core half 25 × 8,9 (for matching coil former see next page)

B 65 939

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	200 +	400 +	800 +	1600 +
N22	M 30 × 1,5	B65939-A-X22	100	2000					

Core half 30,5 × 10,2 (for matching coil former see next page)

B 65 941

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	160 +	320 +	640 +	1280 +
N22	M 40 × 1,5	B65941-A-X22	80	1920					

P Core Halves

Cores

Material	Standard size as per DIN EN 50 008	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	100 +	200 +	300 +

Core half 35 × 10,8

B 65 947

N22	—	B65947-A-X22	50	1000					
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Core half 47 × 14,9

B 65 943

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	50 +	100 +	250 +	
N22	—	B65943-A-X22	25	500					

Core half 70 × 14,5

B 65 945

		Ordering code	Min. qty.	Max. qty.	Min. qty. +	40 +	80 +	160 +	320 +
N22	—	B65945-A-X22	20	480					

Coil former made of GFR polyterephthalate (UL 94 V-0)

A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100			
				Min. qty. +	200 +	400 +	800 +

for core half 25 × 8,9

B 65 940

16,7	B65940-B-T1	100	2000					
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for core half 30,5 × 10,2

B 65 942

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	160 +	320 +	640 +	1280 +
24,4	B65942-B-T1	80	1920					

for core half 47 × 14,9

B 65 944

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	50 +	100 +	250 +	
62	B65944-B-T1	25	500					

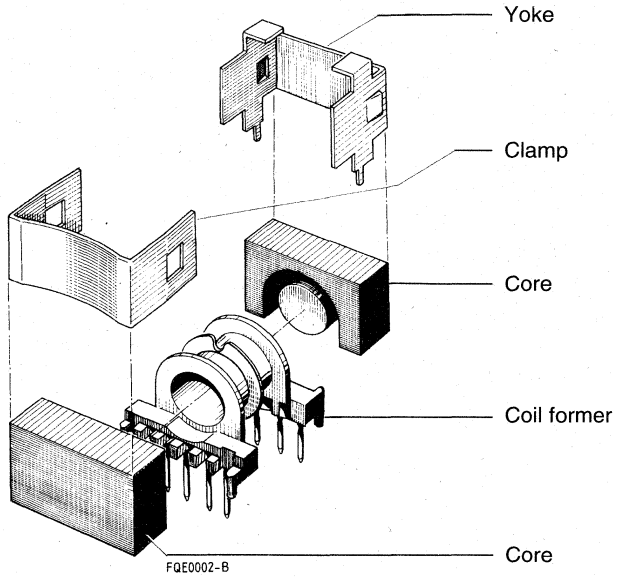
for core half 70 × 14,5

B 65 946

	Ordering code	Min. qty.	Min. qty.	Min. qty. +	40 +	80 +	160 +	320 +
77	B65946-B-T1	20	480					

EP Cores

Example of an assembly set



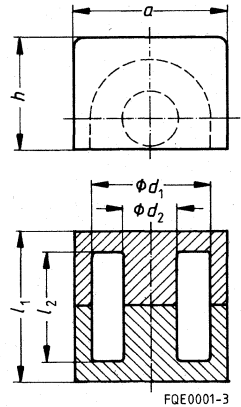
Mounting dimensions of the assembly set (mm)

Core type	Length × width × height ¹⁾	Special features
EP 7	7,5 × 10 × 10 12,8 × 9,2 × 8,5	SMD
EP 10	12,0 × 14,2 × 12,5	
EP 13	15,0 × 16 × 13,7 19,5 × 13 × 12,5	SMD
EP 17	20,0 × 21,6 × 16,2	
EP 20	23,0 × 27,5 × 20,5	

¹⁾ Height above mounting plane

EP Cores

EP cores for transformers featuring high inductance and high economy of space. Also suitable for power applications.



Dimensions (mm)

Core type	a	$\varnothing d_1$	$\varnothing d_2$	h	l_1	l_2
EP 7	9,4 - 0,4	7,2 + 0,4	3,4 - 0,2	6,5 - 0,3	7,5 - 0,2	5,0 + 0,4
EP 10	11,8 - 0,6	9,2 + 0,4	3,45 - 0,3	7,85 - 0,4	10,4 - 0,2	7,2 + 0,4
EP 13	12,8 - 0,6	9,7 + 0,6	4,5 - 0,3	9,0 - 0,4	13,0 - 0,3	9,0 + 0,4
EP 17	18,4 - 0,8	11,6 + 0,8	5,85 - 0,35	11,25 - 0,5	17,0 - 0,6	11,0 + 0,6
EP 20	24,5 - 1,0	16,1 + 0,8	9,0 - 0,5	15,3 - 0,7	21,6 - 0,4	14,0 + 0,6

Magnetic characteristics and weight (per set)

Core type	Magnetic characteristics					Approx. weight g
	$\Sigma I/A$ mm^{-1}	l_e mm	A_e mm^2	A_{min} mm^2	V_e mm^3	
EP 7	1,52	15,7	10,3	8,5	162	1,4
EP 10	1,70	19,2	11,3	8,5	217	2,8
EP 13	1,24	24,2	19,5	14,9	472	4,5
EP 17	0,84	28,5	33,9	25,5	966	12
EP 20	0,51	40,0	78,0	60,0	3120	27,5

EP 7
EP 10

Core sets EP 7

B 65 839

Rated A_L value (ungapped) nH	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	200 +	400 +	800 +	1600 +
1100	N67	B65839-A-R67	100	2000					
2000	N30	B65839-A-R30	100	2000					
5200	T38	B65839-A-Y38	100	2000					

Coil formers

B 65 840

Sections	A_N mm ²	Pins/ terminals	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	800 +	1600 +

Made of GFR thermosetting plastic (UL 94 V-0)

1	3,7	6	B65840-B1006-D1	100	2000					
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Made of GFR liquid crystal polymer (UL 94 V-0) for SMD technology

▼ 1	4,0	6	B65840-N1106-T1	100	2000					
▼ 2	3,6	6	B65840-N1106-T2	100	2000					

Mounting assembly (yoke and clamp)

B 65 840

with ground terminal	B65840-C2000	100	2000						
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Core sets EP 10

B 65 841

Rated A_L value (ungapped) nH	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	200 +	400 +	600 +	1000 +
1100	N67	B65841-A-R67	100	2000					
2000	N30	B65841-A-R30	100	2000					
4800	T38	B65841-A-Y38	100	2000					

Coil formers made of GFR thermosetting plastic (UL 94 V-0)

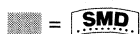
B 65 842

Sections	A_N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	600 +	1000 +
1	11,4	8	B65842-C1008-D1	100	2000					
2	10,0	8	B65842-C1008-D2	100	2000					

Mounting assembly (yoke and clamp)

B 65 842

with ground terminal	B65842-A2000	100	2000						
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EP 13
EP 17

Core sets EP 13

B 65 843

Rated A_L value (ungapped)	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	250 +	500 +	1000 +	
nH									
1600	N67	B65843-A-R67	125	2000					
2800	N30	B65843-A-R30	125	2000					
7000 ¹⁾	T38	B65843-A-Y38	125	2000					
10000 ²⁾	T42	B65843-A-Y42	125	2000					

Coil formers made of GFR thermosetting plastic (UL 94 V-0)

B 65 844

Sections	A_N mm ²	Pins/ terminals	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	250 +	500 +	1000 +	
1	13,8	10	B65844-C1010-D1	125	2000					
2	13,0	10	B65844-C1010-D2	125	2000					

Mounting assembly (yoke and clamp)

B 65 844

with ground terminal	B65844-A2000	125	2000						
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Core sets EP 17

B 65 845

Rated A_L value (ungapped)	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	100 +	200 +	500 +	1000 +
nH									
4300	N30	B65845-J-R30	50	2000					
10800	T38	B65845-J-Y38	50	2000					

Coil formers made of GFR thermosetting plastic (UL 94 V-0)

B 65 846

Sections	A_N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
1	18,8	8	B65846-L1008-D1	50	2000					
2	17,7	8	B65846-L1008-D2	50	2000					

Mounting assembly (yoke and clamp)

B 65 846

with ground terminal	B65846-J2000	50	2000						
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1) Tolerance of A_L value: +40/-30%
2) Tolerance of A_L value: +80/-0%

Core sets EP 20

B 65 847

Rated A_L value (ungapped) nH	Material	Ordering code	Min. qty. (sets)	Max. qty. (sets)	Price per 100 sets				
					Min. qty. +	50 +	100 +	500 +	1000 +
4000	N67	B65847-A-R67	25	2000					
6700	N30	B65847-A-R30	25	2000					
18700	T38	B65847-A-Y38	25	2000					

Coil former made of GFR thermosetting plastic (UL 94 V-0)

B 65 848

Sections	A_N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +
1	33,8	10	B65848-D1010-D1	25	2000					

Mounting assembly (yoke and clamp)

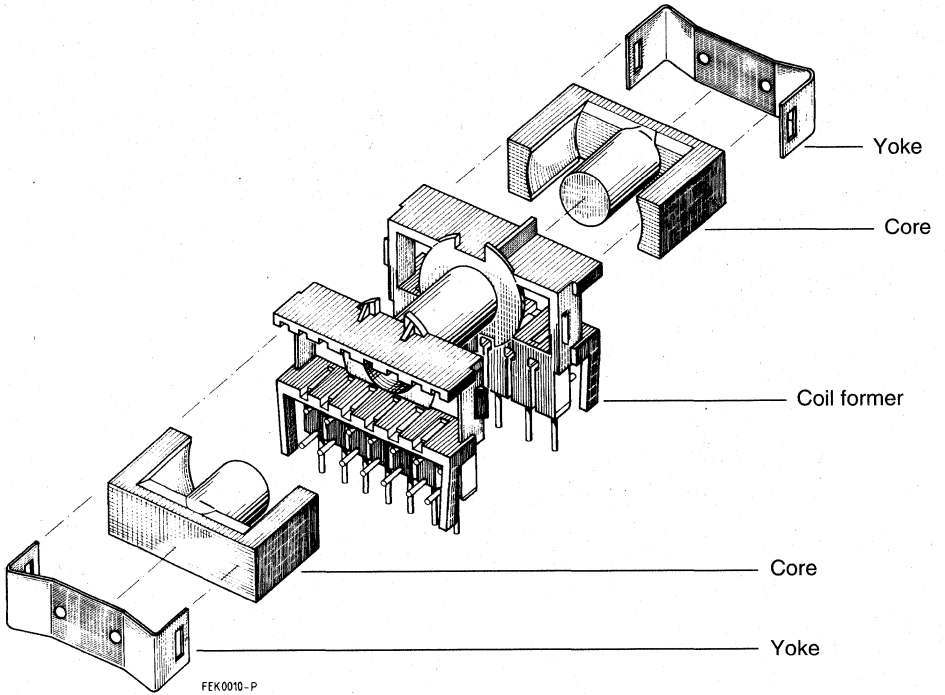
B 65 848

with ground terminal	Ordering code	Min. qty.	Max. qty.	Min. qty. +	50 +	100 +	500 +	1000 +
	B65848-A2000	25	2000					



ETD Cores

Example of an assembly set



Mounting dimensions of the assembly set (mm)

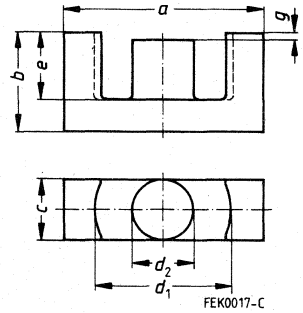
Core type	Length × width × height ¹⁾	Special features
ETD 29	35,5 × 35,5 × 25,5 24,0 × 35,5 × 41,2	Coil former with horizontal magnetic axis Coil former with vertical magnetic axis
ETD 34	43,0 × 40,0 × 35,0 27,5 × 40,0 × 46,0	Coil former with horizontal magnetic axis Coil former with vertical magnetic axis
ETD 39	48,0 × 45,0 × 38,0	
ETD 44	53,0 × 50,0 × 41,0	
ETD 49	58,0 × 55,0 × 43,5	
ETD 54	62,0 × 62,0 × 47,0	
ETD 59	67,0 × 71,0 × 50,0	

1) Height above mounting plane

ETD Cores

ETD cores in accordance with IEC 51 (CO) 276, cores with CECC quality approval available.

ETD cores are particularly suitable for switch-mode power supplies with excellent volume/weight/performance ratio. They feature an almost constant magnetic cross section along the magnetic path and are provided with optimized accessories.



Dimensions (mm)

Core type	a	b	c	d ₁	d ₂	e
ETD 29	30,6 - 1,6	16,0 - 0,4	9,8 - 0,6	22,0 + 1,4	9,8 - 0,6	10,7 + 0,6
ETD 34	34,0 + 1,0/- 0,6	17,5 - 0,4	11,1 - 0,6	25,6 + 1,4	11,1 - 0,6	11,8 + 0,6
ETD 39	38,9 + 1,1/- 0,7	20,0 - 0,4	12,8 - 0,6	29,3 + 1,6	12,8 - 0,6	14,2 + 0,8
ETD 44	43,8 + 1,2/- 0,8	22,5 - 0,4	15,2 - 0,8	32,5 + 1,6	15,2 - 0,8	16,1 + 0,8
ETD 49	48,5 + 1,3/- 0,9	24,9 - 0,4	16,7 - 0,8	36,1 + 1,8	16,7 - 0,8	17,7 + 0,8
ETD 54	54,5 ± 1,3	27,8 - 0,4	19,3 - 0,8	40,1 + 2,2	19,3 - 0,8	19,8 + 0,8
ETD 59	59,8 ± 1,4	31,2 - 0,4	22,1 - 0,9	43,6 + 2,2	22,1 - 0,9	22,0 + 0,9

Magnetic characteristics and weight

Core type	Magnetic characteristics (per set)					Approx. weight/pc. g
	$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	A_{min} mm ²	V_e mm ³	
ETD 29	0,93	70,4	76,0	71,0	5 350	14
ETD 34	0,81	78,6	97,1	91,6	7 630	20
ETD 39	0,74	92,2	125	123	11 500	30
ETD 44	0,60	103	173	172	17 800	47
ETD 49	0,54	114	211	209	24 100	62
ETD 54	0,45	127	280	280	35 600	90
ETD 59	0,38	139	368	368	51 200	130

Cores

B 66 358

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	600 +	1000 +
0	2000	N27	B66358-G-X127	100	2000					
0,2 ± 0,02	380	N27	B66358-G200-X127	100	2000					
0,5 ± 0,05	200	N27	B66358-G500-X127	100	2000					
1,0 ± 0,05	125	N27	B66358-G1000-X127	100	2000					
0	2100	N67	B66358-G-X167	100	2000					
0,2 ± 0,02	380	N67	B66358-G200-X167	100	2000					
0,5 ± 0,05	200	N67	B66358-G500-X167	100	2000					
1,0 ± 0,05	125	N67	B66358-G1000-X167	100	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 66 359

Version	Sec- tions	A _N mm ²	Pins							
horizontal	1	97	13	B66359-A1013-T1	100	2000				
vertical	1	97	14	B66359-J1014-T1	100	2000				

Yoke

B 66 359

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	400 +	600 +	1000 +	2000 +
(required:2 pcs/set)	B66359-A2000	200	4000					

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained.



Cores in accordance with IEC 51 (CO) 276
 N 27 cores with CECC quality approval

B 66 361

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	600 +	1000 +
0	2400	N27	B66361-G-X127	100	2000					
0,2 ± 0,02	480	N27	B66361-G200-X127	100	2000					
0,5 ± 0,05	250	N27	B66361-G500-X127	100	2000					
1,0 ± 0,05	155	N27	B66361-G1000-X127	100	2000					
0	2450	N67	B66361-G-X167	100	2000					
0,2 ± 0,05	480	N67	B66361-G200-X167	100	2000					
0,5 ± 0,05	250	N67	B66361-G500-X167	100	2000					
1,0 ± 0,05	155	N67	B66361-G1000-X167	100	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 66 362

Version	Sec- tions	A _N mm ²	Pins							
horizontal	1	122	14	B66362-A1014-T1	100	2000				
vertical	1	122	14	B66362-L1014-T1	100	2000				

Yoke

B 66 362

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	400 +	600 +	1000 +	2000 +
(required:2 pcs/set)	B66362-A2000	200	4000					

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained.

Cores in accordance with IEC 51 (CO) 276
 N 27 cores with CECC quality approval
B 66 363

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	400 +	1000 +
0	2550	N27	B66363-G-X127	50	2000					
0,5 ± 0,05	325	N27	B66363-G500-X127	50	2000					
1,0 ± 0,05	195	N27	B66363-G1000-X127	50	2000					
0	2600	N67	B66363-G-X167	50	2000					
0,5 ± 0,05	325	N67	B66363-G500-X167	50	2000					
1,0 ± 0,05	195	N67	B66363-G1000-X167	50	2000					

Coil former made of GFR polyterephthalate (UL 94 V-0)
B 66 364

Sections	A _N mm ²	Pins							
1	178	16	B66364-A1016-T1	50	2000				

Yoke**B 66 364**

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	200 +	400 +	1000 +	2000 +
(required:2 pcs/set)	B66364-A2000	100	4000					

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained



ETD 44 cores in accordance with IEC 51 (CO) 276

N 27 cores with CECC quality approval

B 66 365

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	300 +	500 +	1000 +
0	3300	N27	B66365-G-X127	50	2000					
0,5 ± 0,05	440	N27	B66365-G500-X127	50	2000					
1,0 ± 0,05	260	N27	B66365-G1000-X127	50	2000					
0	3350	N67	B66365-G-X167	50	2000					
0,5 ± 0,05	440	N67	B66365-G500-X167	50	2000					
1,0 ± 0,05	260	N67	B66365-G1000-X167	50	2000					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 66 366

Sections	A _N mm ²	Pins							
1	210	18	B66366-A1018-T1	50	2000				

Yoke

B 66 366

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	300 +	500 +	1000 +	2000 +
(required:2 pcs/set)	B66366-A2000	100	4000					

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained.

ETD 49 cores in accordance with IEC 51 (CO) 276

N 27 cores with CECC quality approval

B 66 367

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
0	3700	N27	B66367-G-X127	50	2000					
0,5 ± 0,05	525	N27	B66367-G500-X127	50	2000					
1,0 ± 0,05	315	N27	B66367-G1000-X127	50	2000					
0	3700	N67	B66367-G-X167	50	2000					
0,5 ± 0,05	525	N67	B66367-G500-X167	50	2000					
1,0 ± 0,05	315	N67	B66367-G1000-X167	50	2000					

Coil former made of GFR polyterephthalate (UL 94 V-0)**B 66 368**

Sections	A _N mm ²	Pins							
1	269,4	20	B66368-A1020-T1	50	2000				

Yoke**B 66 368**

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	200 +	500 +	1000 +	2000 +
(required:2 pcs/set)	B66368-A2000	100	4000					

¹⁾ For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained.

ETD 54
ETD 59

ETD 54 core in accordance with IEC 51 (CO) 276

B 66 395

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	150 +	300 +	600 +	1200 +
0	4400	N67	B66395-G-X167	75	1950					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 66 396

Sections	A _N mm ²	Pins								
1	315,6	22	B66396-A1022-T1	75	1950					

Yoke

B 66 396

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	300 +	600 +	1200 +	1950 +
(required:2 pcs/set)	B66396-A2000	150	3900					

ETD 59 core in accordance with IEC 51 (CO) 276

B 66 397

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	80 +	160 +	480 +	960 +
0	5200	N67	B66397-G-X167	40	1920					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 66 398

Sections	A _N mm ²	Pins								
1	365,6	24	B66398-A1024-T1	40	1920					

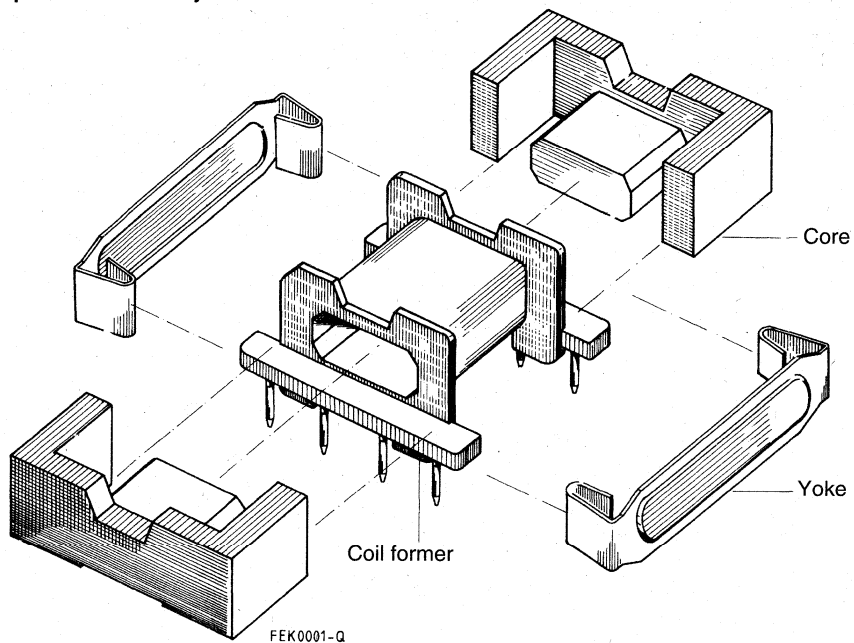
Yoke

B 66 398

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	160 +	480 +	960 +
(required:2 pcs/set)	B66398-A2000	80	3840				

EFD Cores

Example of an assembly set



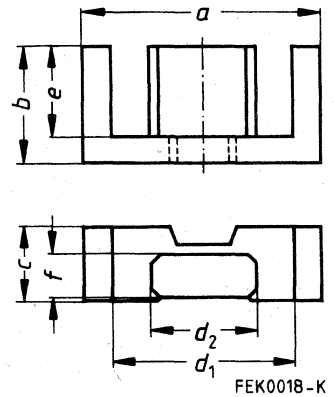
Mounting dimensions of the assembly set (mm)

Core type	Length × width × height ¹⁾
EFD 15/8/5	19,3 × 17,0 × 8,0
EFD 20/10/7	24,3 × 22,0 × 10,0
EFD 25/13/9	29,3 × 27,3 × 12,5
EFD 30/15/9	34,4 × 32,5 × 12,5

1) Height above mounting plane

EFD Cores

E core with flattened and recessed center leg for particularly flat transformer design



B

Dimensions (mm)

Core type	a	b	c	d_1	d_2	e	f
EFD 15/8/5	$15,0 \pm 0,4$	$7,5 \pm 0,15$	$4,65 \pm 0,15$	$11,0 \pm 0,35$	$5,3 \pm 0,15$	$5,5 \pm 0,25$	$2,4 \pm 0,10$
EFD 20/10/7	$20,0 \pm 0,55$	$10,0 \pm 0,15$	$6,65 \pm 0,15$	$15,4 \pm 0,5$	$8,9 \pm 0,2$	$7,7 \pm 0,25$	$3,6 \pm 0,15$
EFD 25/13/9	$25,0 \pm 0,65$	$12,5 \pm 0,15$	$9,1 \pm 0,2$	$18,7 \pm 0,6$	$11,4 \pm 0,2$	$9,3 \pm 0,25$	$5,2 \pm 0,15$
EFD 30/15/9	$30,0 \pm 0,8$	$15,0 \pm 0,15$	$9,1 \pm 0,2$	$22,4 \pm 0,75$	$14,6 \pm 0,25$	$11,2 \pm 0,3$	$4,9 \pm 0,15$

Magnetic characteristics and weight

Core type	Magnetic characteristics (per set)					Approx. weight/pc. g
	$\Sigma I/A$ mm^{-1}	l_e mm	A_e mm^2	A_{min} mm^2	V_e mm^3	
EFD 15/8/5	2,27	34	15	12,2	510	1,4
EFD 20/10/7	1,52	47	31	31	1 460	3,6
EFD 25/13/9	0,98	57	58	57	3 310	8,3
EFD 30/15/9	0,99	68	69	69	4 690	12,0

EFD 15/8/5

EFD 15/8/5 cores

B 66 413

Dimension "g" mm	Typ. A_L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	400 +	600 +	800 +	1600 +
0	600	N49	B66413-G-X149	200	1920					
0	780	N87	B66413-G-X187	200	1920					

Coil formers

B 66 414

Sections	A_N mm ²	Ter- minals								
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Made of GFR thermosetting plastic (UL 94 V-0)

▽ 1	15,8	8	B66414-B1008-D1	200	1920					
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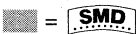
Made of liquid crystal polymer (UL 94 V-0), for SMD technology

1	20,4	8	B66414-A6008-T1	200	1920					
2	19,5	8	B66414-A6008-T2	200	1920					

Yoke and cover disk

B 66 414

Cover disk	B66414-A7000	200	1920						
						800 +	1600 +	3200 +	
Yoke (required: 2 pcs/set)	B66414-A2000	400	3840						



¹⁾ EFD cores are delivered in single pieces (not in sets).
The tabulated A_L value applies to a core set comprising two ungapped cores.

EFD 20/10/7

EFD 20/10/7 cores

B 66 417

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	800 +	1200 +
0	910	N49	B66417-G-X149	100	2520					
0	1200	N87	B66417-G-X187	100	2520					

Coil former made of GFR thermosetting plastic (UL 94 V-0)

B 66 418

Sections	A _N mm ²	Pins							
▽ 1	28,1	8	B66418-B1008-D1	100	2520				

Yoke

B 66 418

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	400 +	800 +	1200 +	2400 +
(required:2 pcs/set)	B66418-A2000	200	5040					

1) EFD cores are delivered in single pieces (not in sets).
The tabulated A_L value applies to a core set comprising two ungapped cores.



EFD 25/13/9
EFD 30/15/9

EFD 25/13/9 core

B 66 421

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
0	2000	N87	B66421-G-X187	50	1950					

Coil former made of GFR thermosetting plastic (UL 94 V-0)

B 66 422

Sections	A _N mm ²	Pins								
▽ 1	40,7	10	B66422-B1010-D1	50	1950					

Yoke

B 66 422

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	200 +	500 +	1000 +	2000 +
(required: 2 pcs./set)	B66422-A2000	100	3900					

EFD 30/15/9 core

B 64 423

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
0	2050	N87	B66423-G-X187	50	2000					

Coil former made of GFR thermosetting plastic (UL 94 V-0)

B 66 424

Sections	A _N mm ²	Pins								
▽ 1	52,3	12	B66424-B1012-D1	50	2000					

Yoke

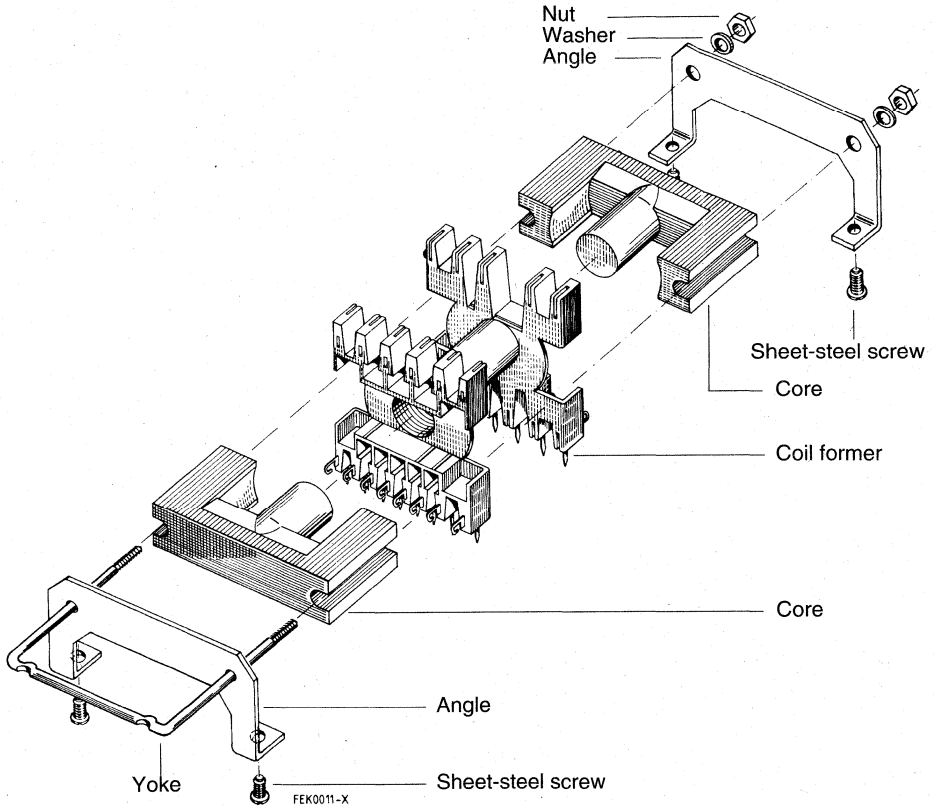
B 66 424

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	200 +	500 +	1000 +	2000 +
(required: 2 pcs./set)	B66424-A2000	100	4000					

1) EFD cores are delivered in single pieces (not in sets). The tabulated A_L value applies to a core set comprising two un-gapped cores.

EC Cores

Example of an assembly set



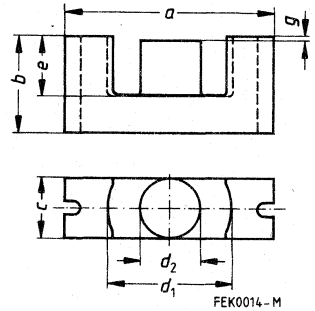
Mounting dimensions of the assembly set (mm)

Core type	Length × width × height ¹⁾	Speical features
EC 35	47 × 36 × 28	Coil former with horizontal magnetic axis
EC 41	52,5 × 47,5 × 42 47,5 × 42 × 44	Coil former with horizontal magnetic axis Coil former with vertical magnetic axis
EC 52	61 × 57,5 × 43,5 54 × 52,5 × 53	Coil former with horizontal magnetic axis Coil former with vertical magnetic axis
EC 70	82 × 81,0 × 48,5 72 × 57,5 × 75	Coil former with horizontal magnetic axis Coil former with vertical magnetic axis

1) Height above mounting plane

EC Cores

EC cores (in accordance with IEC 647) with large winding space. The round center leg is particularly suitable for the use of thick winding wires.



Dimensions (mm)

Core type	a	b	c	d_1	d_2	e
EC 35	$34,5 \pm 0,8$	$17,45 - 0,3$	$9,80 - 0,6$	$22,75 \pm 0,55$	$9,80 - 0,6$	$11,9 + 0,7$
EC 41	$40,6 \pm 1,0$	$19,65 - 0,3$	$11,90 - 0,6$	$27,05 \pm 0,75$	$11,90 - 0,6$	$13,5 + 0,8$
EC 52	$52,2 \pm 1,3$	$24,35 - 0,3$	$13,75 - 0,7$	$33,00 \pm 0,9$	$13,75 - 0,7$	$15,5 + 0,8$
EC 70	$70,0 \pm 1,7$	$34,65 - 0,3$	$16,80 - 0,8$	$44,50 \pm 1,2$	$16,80 - 0,8$	$22,3 + 0,9$

Magnetic characteristics and weight

Core type	Magnetic characteristics (per set)					Approx. weight/pc. g
	$\Sigma l/A$ mm^{-1}	l_e mm	A_e mm^2	A_{min} mm^2	V_e mm^3	
EC 35	0,92	77,4	84,3	71,0	6 530	18
EC 41	0,74	89,3	121	106	10 800	26
EC 52	0,58	105	180	141	18 900	55
EC 70	0,52	144	279	211	40 200	126

EC 35 cores in accordance with IEC 647

B 66 337

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	400 +	600 +	1000 +
0	2100	N27	B66337-G-X127	100	2000					
0,10 ± 0,02	651	N27	B66337-G100-X127	100	2000					
0,25 ± 0,02	336	N27	B66337-G250-X127	100	2000					
0,50 ± 0,05	203	N27	B66337-G500-X127	100	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0), 1 section

B 66 272

Version	A _N mm ²	Ter- minals							
with solder tags									
horizontal	97	13	B66272-C1002-T1	100	2000				
with solder pins									
vertical	97	13	B66272-J1013-T1	100	2000				

EC 41 cores in accordance with IEC 647

B 66 339

Dimension "g" mm	Typ. A _L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
0	2700	N27	B66339-G-X127	50	2000					
0,50 ± 0,05	280	N27	B66339-G500-X127	50	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0), 1 section

B 66 274

Version	A _N mm ²	Ter- minals							
horizontal	134	9	B66274-B1001-T1	50	2000				
horizontal	134	12	B66274-B1002-T1	50	2000				
vertical	134	12	B66274-B1012-T1	50	2000				

Mounting assemblies (incl. screws and nuts)

B 66 274

for horizontal version	B66274-B2001	50	2000					
for vertical version	B66274-B2002	50	2000					

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained.

EC 52 cores in accordance with IEC 647

B 66 341

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +
0	3400	N27	B66341-G-X127	25	2000					
1,00 ± 0,05	225	N27	B66341-G1000-X127	25	2000					

Coil formers made of GFR polyterephthalate (UL 94 V-0), 1 section

B 66 276

Version	A _N mm ²	Ter- minals								
horizontal	212	11	B66276-B1001-T1	25	2000					
horizontal	212	14	B66276-B1002-T1	25	2000					
vertical	212	11	B66276-B1011-T1	25	2000					

Mounting assemblies (incl. screws and nuts)

B 66 276

for horizontal version	B66276-B2001	25	2000						
for vertical version	B66276-B2002	25	2000						

EC 70 core in accordance with IEC 647

B 66 343

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	60 +	120 +	240 +	480 +
0	3900	N27	B66343-G-X127	20	960					

Coil formers made of GFR polyterephthalate (UL 94 V-0), 1 section

B 66 278

Version	A _N mm ²	Ter- minals								
horizontal	469	15	B66278-B1001-T1	20	960					
horizontal	469	19	B66278-B1002-T1	20	960					
vertical	469	15	B66278-B1011-T1	20	960					

Mounting assemblies (incl. screws and nuts)

B 66 278

for horizontal version	B66278-B2001	20	960						
for vertical version	B66278-B2002	20	960						

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) must be ordered. With both cores the typical A_L value specified will be obtained.

ER Cores ER 9,5

For compact transformers, preferably SMDs

Magnetic characteristics (per set)

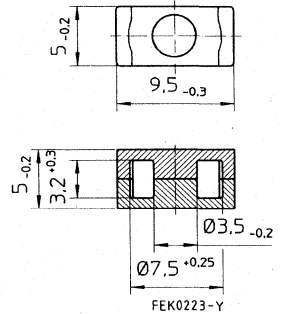
$$\Sigma // A = 1,58 \text{ mm}^{-1}$$

$$l_e = 13,3 \text{ mm}$$

$$A_e = 8,41 \text{ mm}^2$$

$$V_e = 120 \text{ mm}^3$$

Approx. weight 0,6 g/set



ER 9,5 cores

B 65 523

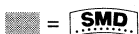
Dimension „g“ mm	Typ. A _L value nH	Mate- rial	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	250 +	500 +	1000 +	
▼ 0	800	N87	B65523-J-R87	125	2000					

Coil former made of GFR liquid crystal polymer (UL 94 V-0) for SMD technology B 65 527

Sections	A _N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	250 +	500 +	1000 +	
▼ 1	3,23	B65527-A1008-T1	125	2000					

Mounting dimensions of the assembly set:

Length × width × height (above mounting plane): 11,9 mm × 9,9 mm × 5,7 mm

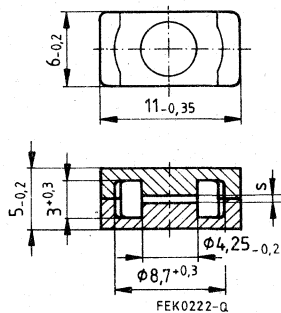


For compact transformers, preferably SMDs

Magnetic characteristics (per set)

- $\Sigma // A = 1,1 \text{ mm}^{-1}$
- $l_e = 14 \text{ mm}$
- $A_e = 12,7 \text{ mm}^2$
- $V_e = 174 \text{ mm}^3$

Approx. weight 0,85 g/set



ER 11 cores

B 65 525

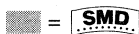
Dimension "g" mm	Typ. A_L value nH	Material	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	500 +	1000 +	
0	1200	N87	B65525-J-R87	100	2000					
0	6400	T38	B65525-J-Y38	100	2000					
0,08	160	N87	B65525-J160-A87	100	2000					

Coil former made of GFR liquid crystal polymer (UL 94 V-0) for SMD technology B 65 526

Sections	A_N mm ²	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	200 +	500 +	1000 +	
1	3,31	B65526-A1010-T1	100	2000					

Mounting dimensions of the assembly set:

Length × width × height (above mounting plane): 12,8 mm × 11,7 mm × 6 mm



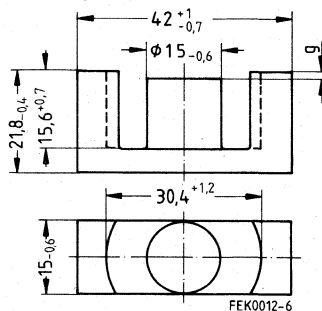
ER 42

**For compact winding design
with low stray inductance**

Magnetic characteristics (per set)

$\Sigma // A = 0,58 \text{ mm}^{-1}$
 $l_e = 99 \text{ mm}$
 $A_e = 170 \text{ mm}^2$
 $A_{min} = 170 \text{ mm}^2$
 $V_e = 16800 \text{ mm}^3$

Approx. weight 42 g/pc



ER 42 core

B 66 347

Dimension "g" mm	Typ. A _L val- ue	Mate- rial	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
0	3200	N27	B66347-G-X127	50	2000	*				

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 66 348

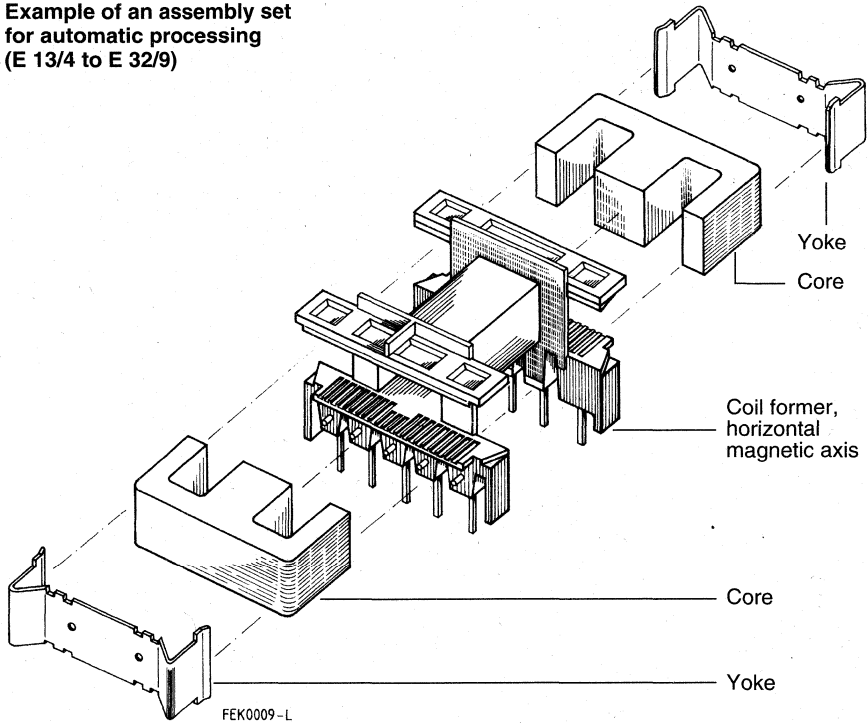
Sections	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	200 +	500 +	1000 +
1	127	18	B66348-A1018-T1	50	2000					

Mounting dimensions of the assembly set:

Length × width × height (above mounting plane): 33 mm × 46 mm × 55 mm

E Cores

**Example of an assembly set
for automatic processing
(E 13/4 to E 32/9)**



Mounting dimensions of the assembly set (mm)

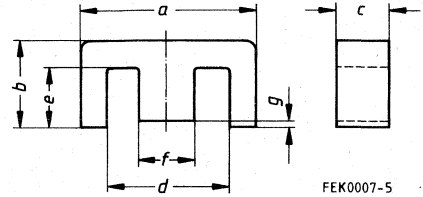
Core type	Length × width × height ¹⁾	Special features	Core type	Length × width × height ¹⁾	Special features
E 6,3	6,6 × 9,0 × 4,9	SMD (not illustrated here)	E 25/13/7 (EF 25)	28 × 28 × 21 18 × 28 × 29	horizontal vertical
E 8,8	9,5 × 12,3 × 5,2		E 30/15/7	32 × 36 × 12 19 × 36 × 36	horizontal vertical
E 13/7/4 (EF 12,6)	15 × 17 × 12 10 × 15 × 17 13 × 19,5 × 9,0	horizontal vertical SMD	E 32/16/9 (EF 32)	35 × 37 × 24	Coil formers with deviating shape (not illustrated here)
E 16/8/5 (EF 16)	18 × 20 × 14 11 × 18 × 20	horizontal vertical	E 42/21/15	42,5 × 43 × 33	
E 20/10/6 (EF 20)	22 × 22 × 17 15 × 22 × 24 24 × 21,5 × 14	horizontal vertical w. angular pins	E 42/21/20	38 × 46 × 52	
			E 55/28/21	56 × 57 × 46	

1) Height above mounting plane

E Cores

E cores with square-shaped center leg, most types to DIN 41 295 or DIN 41 985.

Small cores are also suitable for small-signal applications and EMI/RFI suppression. E 6,3/2 to E 13/4 cores are available with SMD coil former, E 13/4 to E 32/9 cores with accessories for automatic processing (see exploded view).



FEK0007-5

Dimensions (mm)

Core type	a	b	c	d	e	f
E 6,3	6,3 - 0,25	2,9 - 0,1	2 - 0,1	3,6 + 0,2	1,85 + 0,1	1,4 - 0,1
E 8,8	9,0 ± 0,25	4,1 - 0,2	2 - 0,1	5,2 ± 0,13	2,03 + 0,25	1,9 ± 0,12
E 13/7/4 (EF 12,6)	12,6 + 0,5/- 0,4	6,5 - 0,2	3,7 - 0,3	8,9 + 0,6	4,5 + 0,3	3,7 - 0,3
E 16/8/5 (EF 16)	16 + 0,7/- 0,5	8,2 - 0,3	4,7 - 0,4	11,3 + 0,6	5,7 + 0,4	4,7 - 0,3
E 20/10/6 (EF 20)	20,4 - 0,8	10,1 - 0,3	5,9 - 0,3	14,1 + 0,6	7,0 + 0,4	5,9 - 0,4
E 25/13/7 (EF 25)	25 + 0,8/- 0,7	12,8 - 0,5	7,5 - 0,6	17,5 + 0,8	8,7 + 0,5	7,5 - 0,5
E 30/15/7	30 + 0,8/- 0,6	15,2 - 0,4	7,3 - 0,5	19,5 + 0,8	9,7 + 0,6	7,2 - 0,5
E 32/16/9 (EF 32)	32 + 0,9/- 0,7	16,4 - 0,6	9,5 - 0,7	22,7 + 1,0	11,2 + 0,6	9,5 - 0,6
E 42/21/15	42 + 1,0/- 0,7	21,2 - 0,4	15,2 - 0,5	29,5 + 1,2	14,8 + 0,7	12,2 - 0,5
E 42/21/20	42 + 1,0/- 0,7	21,2 - 0,4	20 - 0,8	29,5 + 1,2	14,8 + 0,7	12,2 - 0,5
E 55/28/21	55 + 1,2/- 0,9	27,8 - 0,6	21 - 0,6	37,5 + 1,2	18,5 + 0,8	17,2 - 0,5
E 65/32/27	65 + 1,5/- 1,2	32,8 - 0,6	27,4 - 1,0	44,2 + 1,8	22,2 + 0,8	20 - 0,7
E70/33/32	70,5 ± 1	33,2 - 0,5	32 - 0,8	48 + 1,5	21,9 + 0,7	22 - 0,7

Magnetic characteristics and weight

Core type	Magnetic characteristics (per set)					Approx. weight/pc. g
	$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	A_{min} mm ²	V_e mm ³	
E 6,3	3,7	12,2	3,3	2,6	40,3	0,12
E 8,8	3,1	15,5	5,0	3,6	77,5	0,25
E 13/7/4 (EF 12,6)	2,39	29,6	12,4	12,2	367	1,0
E 16/8/5 (EF 16)	1,87	37,6	20,1	19,4	756	1,8
E 20/10/6 (EF 20)	1,44	46,3	32,1	31,9	1 490	3,7
E 25/13/7 (EF 25)	1,09	57,5	52,5	51,5	3 020	8
E 30/15/7	1,12	67,0	60,0	49,0	4 000	11
E 32/16/9 (EF 32)	0,89	74,0	83,0	81,4	6 140	15
E 42/21/15	0,54	97,0	178	175	17 600	44
E 42/21/20	0,41	97,0	234	229	22 700	58
E 55/28/21	0,35	124	354	351	43 900	108
E 65/32/27	0,27	147	535	529	78 600	197
E70/33/32	0,22	149	683	676	102 000	257

E 6,3
E 8,8

E 6,3 cores

B 66 300

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	2500 +	
0	380	N67	B66300-G-X167	250	5000					
0	1700	T38	B66300-G-X138	250	5000					

Coil formers made of liquid crystal polymer (UL 94 V-0) for SMD technology

B 66 301

Sections	A _N mm ²	Ter- minals							
1	2,1	4	B66301-B1004-T1	250	5000				
1	2,1	6	B66301-B1006-T1	250	5000				
2	1,2	4	B66301-B1004-T2	250	5000				
2	1,2	6	B66301-B1006-T2	250	5000				

Cover cap

B 66 301

Made of plastic	B66301-B2000	250	5000						
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E 8,8 cores

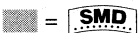
B 66 302

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	500 +	1000 +	2000 +
0	550	N67	B66302-G-X167	100	5000					
0	1000	N30	B66302-G-X130	100	5000					
0	2100	T38	B66302-G-X138	100	5000					

Coil formers made of liquid crystal polymer (UL 94 V-0) for SMD technology

B 66 302

Sections	A _N mm ²	Pins							
1	2,79	8	B66302-D1008-T1	100	5000				
2	2,2	8	B66302-D1008-T2	100	5000				



1) E cores are delivered in single pieces (not in sets). The tabulated A_L value applies to a core set comprising two ungapped cores.

E 13/7/4 (EF 12,6)

Cores in accordance with DIN 41 985

B 66 305

Dimension "g" mm	Typ. A_L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	500 +	1000 +	3450 +
0	800	N27	B66305-G-X127	100	6900					
0	1000	N30	B66305-G-X130	100	6900					
0,04 ± 0,01	250	N27	B66305-G40-X127	100	6900					

Coil formers

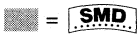
B 66 202, B 66 306

Sections	A_N mm ²	Pins/ Terminals							
Made of GFR polyterephthalate (UL 94 V-0), horizontal version									
1	11,6	8	B66202-A1108-T1	100	6900				
Made of GFR polyterephthalate (UL 94 V-0), vertical version									
1	11,6	6	B66202-J1106-T1	100	6900				
Made of GFR liquid crystal polymer (UL 94 V-0) for SMD technology									
▼ 1	13	6	B66306-B1010-T1	10	3450				
▼ 2	10,2	10	B66306-B1010-T2	10	3450				

Yoke (for horizontal and vertical version)

B 66 202

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	3450 +	6900 +
(required: 2 pcs/set)	B66202-A2010	200	13800					



1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) has to be ordered. With both cores the typical A_L value specified will be obtained.

E 16/8/5 (EF 16)

Cores in accordance with DIN 41 985

B 66 307

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	400 +	1200 +	2000 +	3000 +
0	950	N27	B66307-G-X127	200	6000					
0	990	N67	B66307-G-X167	200	6000					
0	1400	N30	B66307-G-X130	200	6000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 66 308

Version	Sec- tions	A _N mm ²	Pins							
horizontal	1	22,3	8	B66308-A1108-T1	200	6000				
vertical	1	22,3	8	B66308-J1108-T1	200	6000				

For electronic ballasts (no yokes required)

vertical	1	22,3	4	B66308-J1004-T1	200	6000				
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Yoke

B 66 308

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	200 +	3000 +	6000 +	
(required: 2 pcs/set)	B66308-A2010	400	12000					

Cores in accordance with DIN 41 985

B 66 311

Dimension "g" mm	Typ. A_L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	300 +	500 +	1000 +	2000 +
0	1300	N27	B66311-G-X127	100	5000					
0	1350	N67	B66311-G-X167	100	5000					
0	2150	N30	B66311-G-X130	100	5000					
0,09 ± 0,01	330	N27	B66311-G90-X127	100	5000					
0,17 ± 0,02	210	N27	B66311-G170-X127	100	5000					
0,25 ± 0,02	162	N27	B66311-G250-X127	100	5000					
0,50 ± 0,05	100	N27	B66311-G500-X127	100	5000					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 66 206

Versions	Sec- tions	A_N mm ²	Pins							
horizontal	1	34	10	B66206-A1110-T1	100	5000				
vertical	1	34	10	B66206-J1110-T1	100	5000				

With angular pins

horizontal	1	34	12	B66206-B1012-T1	100	5000				
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For electronic ballasts (no yokes required)

vertical	1	32,7	6	B66206-J1106-T1	100	5000				
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Yoke

B 66 206

	Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	5000 +
(required: 2 pcs/set)	B66206-A2010	200	10000					

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) has to be ordered. With both cores the typical A_L value specified will be obtained.

Cores in accordance with DIN 41 985

B 66 317

Dimension "g" mm	Typ. A_L value nH	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	900 +	1800 +	3600 +
0	1750	N27	B66317-G-X127	180	4500					
0	1800	N67	B66317-G-X167	180	4500					
0	2900	N30	B66317-G-X130	180	4500					
0,10 ± 0,02	490	N27	B66317-G100-X127	180	4500					
0,16 ± 0,02	350	N27	B66317-G160-X127	180	4500					
0,25 ± 0,02	250	N27	B66317-G250-X127	180	4500					
0,50 ± 0,05	150	N27	B66317-G500-X127	180	4500					
1,00 ± 0,05	90	N27	B66317-G1000-X127	180	4500					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 66 208

Version	Sec-tions	A_N mm ²	Pins							
horizontal	1	61	10	B66208-A1110-T1	180	4500				
vertical	1	61	10	B66208-J1110-T1	180	4500				

Yoke

B 66 208

(required: 2 pcs/set)	B66208-A2010	360	9000						
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¹⁾ For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) has to be ordered. With both cores the typical A_L value specified will be obtained.

E 30/15/7
E 32/16/9 (EF 32)

E 30/15/7 cores in accordance with DIN 41 295

B 66 319

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	300 +	500 +	1000 +	2000 +
0	1700	N27	B66319-G-X127	100	5100					
0	1850	N67	B66319-G-X167	100	5100					
0	3100	N30	B66319-G-X130	100	5100					
0,10 ± 0,02	470	N27	B66319-G100-X127	100	5100					
0,34 ± 0,02	200	N27	B66319-G340-X127	100	5100					

Coil formers made of GFR polyterephthalate (UL 94 V-0)

B 66 232

Version	Sec- tions	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	5100 +
horizontal	1	90	14	B66232-A1114-T1	100	5100					
vertical	1	90	12	B66232-J1112-T1	100	5100					

Yoke

B 66 232

Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	5100 +
(required: 2 pcs/set)	B66232-A2010	200	10200				

E 32/16/9 cores in accordance with DIN 41 985

B 66 229

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	500 +	1000 +	2000 +
0	2100	N27	B66229-G-X127	96	4800					
0	2250	N67	B66229-G-X167	96	4800					
0,50 ± 0,05	244	N27	B66229-G500-X127	96	4800					
1,00 ± 0,05	145	N27	B66229-G1000-X127	96	4800					

Coil former made of GFR polyterephthalate (UL 94 V-0)

B 66 230

Version	Sec- tions	A _N mm ²	Pins	Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	4800 +
horizontal	1	108,5	14	B66230-A1114-T1	96	4800					

Yoke

B 66 230

Ordering code	Min. qty.	Max. qty.	Min. qty. +	500 +	1000 +	2000 +	4800 +
(required: 2 pcs/set)	B66230-A2010	192	9600				

¹⁾ For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) has to be ordered. With both cores the typical A_L value specified will be obtained.

E 42/21/15
E 42/21/20

E 42/21/15 cores in accordance with DIN 41 295

B 66 325

Dimension "g" mm	Typ. A_L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	200 +	500 +	1000 +	
0	3500	N27	B66325-G-X127	100	2000					
0	3800	N67	B66325-G-X167	100	2000					
0,25 ± 0,02	760	N27	B66325-G250-X127	100	2000					
0,64 ± 0,05	380	N27	B66325-G640-X127	100	2000					
1,00 ± 0,05	270	N27	B66325-G1000-X127	100	2000					

Coil former made of GFR 6-polyamide (UL 94 V-0)

(Without illustration)

B 66 242

Sections	A_N mm ²	Pins							
1	177	10	B66242-J1000-R1	100	2000				

E 42/21/20 cores in accordance with DIN 41 295

B 66 329

Dimension "g" mm	Typ. A_L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	120 +	480 +	960 +	1400 +
0	4750	N27	B66329-G-X127	40	2000					
0	5100	N67	B66329-G-X167	40	2000					
0,5 ± 0,05	600	N27	B66329-G500-X127	40	2000					
1,00 ± 0,05	355	N27	B66329-G1000-X127	40	2000					
1,50 ± 0,05	260	N27	B66329-G1500-X127	40	2000					

Coil former made of GFR polyterephthalate (UL 94 V-0)

(Without illustration)

B 66 243

Sections	A_N mm ²	Pins							
1	172	18	B66243-A1018-T1	40	2000				

1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) has to be ordered. With both cores the typical A_L value specified will be obtained.

E 55/28/21
E 65/32/27, E 70/33/32

E 55/28/21 cores in accordance with DIN 41 295

B 66 335

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +
0	5800	N27	B66335-G-X127	25	2000					
0,50 ± 0,05	840	N27	B66335-G500-X127	25	2000					
1,00 ± 0,05	500	N27	B66335-G1000-X127	25	2000					
1,50 ± 0,05	360	N27	B66335-G1500-X127	25	2000					
2,00 ± 0,05	300	N27	B66335-G2000-X127	25	2000					

Coil former made of GFR 6-polyamide (UL 94 V-0)
(Without illustration)

B 66 252

Sections	A _N mm ²	Pins							
1	280	14	B66252-B-M1	25	2000				

E 65/32/27 cores in accordance with DIN 41 295

B 66 387

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +
0	7200	N27	B66387-G-X127	20	2000					
1,50 ± 0,05	526	N27	B66387-G1500-X127	20	2000					

Cores E 70/33/32

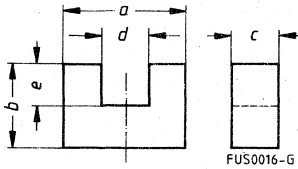
B 66 371

Dimension "g" mm	Typ. A _L value nH	Mate- rial	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	60 +	120 +	480 +	
0	8850	N27	B66371-G-X127	30	960					

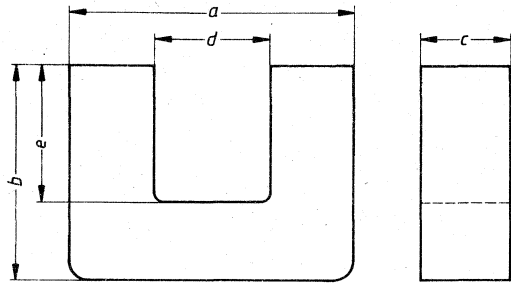
1) For a gapped core (dimension "g") the matching ungapped core (dimension "g" = 0) has to be ordered. With both cores the typical A_L value specified will be obtained.

U and UI Cores

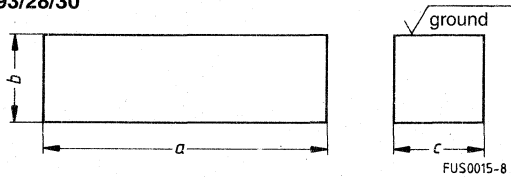
U 15/11/6, U 20/16/7, U 25/20/13



U 93/76/30



I 93/28/30



Dimensions (mm)

Core type	a	b	c	d	e
U 15/11/6	15,2 ± 0,7	11,2 ± 0,5	6,7 - 0,5	5,2 ± 0,3	5,9 + 0,5
U 20/16/7	20,8 ± 0,6	15,9 - 0,6	7,7 - 0,6	6,3 ± 0,3	8,0 + 0,6
U 25/20/13	24,8 ± 0,7	20,0 - 1,0	13,0 - 0,5	8,2 ± 0,3	11,0 + 0,5
U 93/76/30	93,0 ± 1,8	76,0 ± 0,5	30,0 ± 0,5	34,6 min.	48,0 ± 0,9
I 93/28/30	93,0 ± 1,8	28,0 ± 0,5	30,0 ± 0,5		

Magnetic characteristics and weight

Core type	Magnetic characteristics (per set)				Approx. weight g
	$\Sigma l/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
U 15/11/6	1,5	48	32	1 540	4,3 (piece)
U 20/16/7	1,24	68	55	3 740	9 (piece)
U 25/20/13	0,82	86	105	9 030	23 (piece)
UU 93/152/30	0,42	354	840	297 000	1 500 (set)
UI 93/104/30	0,31	258	840	217 000	1 100 (set)

U 15/11/6, U 20/16/7, U 25/20/13
U 93/76/30, I 93/28/30

U cores with rectangular cross section for energy-storage chokes and transformers

Typ. A_L value	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	300 +	500 +	1000 +
nH								

U 15/11/6

B 67 350

1200	N27	B67350-A1-X27	100	2000				
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U 20/16/7 (dimensions in accordance with DIN 41 296)

B 67 348

1600	N27	B67348-A1-X27	100	2000				
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U 25/20/13

B 67 352

2500	N27	B67352-A1-X27	100	2000				
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U cores with rectangular cross section for power transformers

Typ. A_L value	Material	Ordering code ¹⁾	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	10 +	20 +	50 +
nH								

U 93/76/30 ¹⁾

B 67 345

5400	N27	B67345-B1-X27	2	250				
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I 93/28/30 ²⁾

B 67 345

7400	N27	B67345-B2-X27	2	250				
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Coil former made of GFR 6-polyamide (UL 94 V-0) for UU 93/152/30
(not shown)

B 67 345

Sections	A_N mm ²	Pins						
1	1052	—	B67345-A1000-T1	5	250			

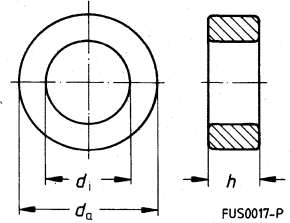
1) U and I cores are delivered in pieces (not in sets). The tabulated A_L value applies to an U core set comprising two ungapped cores.

2) The tabulated A_L value applies to a core set comprising one U core and one I core (combination UI 93/104/30) without air gap.

Ring Cores

Coated ring cores

are primarily used for pulse and broadband transformers as well as for balanced mixers and chokes.



Core type	Dimensions			Magnetic characteristics				Approx. weight g
	d_a mm	d_i mm	h mm	$\Sigma I/A$ mm^{-1}	l_e mm	A_e mm^2	V_e mm^3	
R 2,5 ¹⁾	2,5 ± 0,12	1,5 ± 0,1	1,0 ± 0,1	12,30	6,02	0,49	3,0	0,02
R 4 ¹⁾	4,5 max.	1,9 min.	2,1 max.	7,69	9,63	1,25	12,0	0,06
R 6,3 ¹⁾	7,25 max.	2,85 min.	3,4 max.	4,97	15,21	3,06	46,5	0,3
R 10 ¹⁾	11,0 max.	5,05 min.	4,95 max.	3,07	24,07	7,83	188	0,9
R 12,5	13,6 max.	6,5 min.	5,95 max.	2,46	30,09	12,23	368	1,8
R 16 ¹⁾	17,2 max.	8,5 min.	7,3 max.	1,95	38,52	19,73	760	3,7
R 20/7	21,2 max.	8,7 min.	8,2 max.	1,30	43,55	33,63	1 465	7,6
R 25/10	26,8 max.	13,5 min.	11,0 max.	1,17	60,07	51,26	3079	16
R 34/10	35,5 max.	19,2 min.	11,1 max.	1,24	82,06	66,08	5 420	26
R 34/12,5	35,5 max.	19,2 min.	13,6 max.	0,99	82,06	82,60	6 778	33
R 36	37,5 max.	21,7 min.	16,2 max.	0,94	89,65	95,89	8 597	43
R 40	41,8 max.	22,5 min.	17,2 max.	0,77	96,29	125,3	12 070	61
R 42	43,6 max.	24,8 min.	13,6 max.	1,08	103,0	95,75	9 862	48
R 50	51,8 max.	28,5 min.	21,3 max.	0,62	120,4	195,7	23 560	118
R 58	60,1 max.	39,2 min.	18,8 max.	1,00	152,4	152,4	23 230	115
R100	104,8 max.	63,7 min.	16,3 max.	0,96	255,3	267,2	68 220	330

Version

- polyamide-coated, thickness of coating approx. 0,2 to 0,4 mm
- parylene-coated, thickness of coating approx. 10 to 15 µm
standard coating for small cores ($\leq R4$)

Ordering code

B64290-K ...
B64290-P...

1) Internal and external diameters comply with IEC 525, core heights deviate by:

	IEC	S+M Components
Core height h	$\frac{d_i}{2}$	$\frac{d_i}{1,5}$

Ring Cores

Type	A _L value nH	Material	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	300 +	500 +	1000 +	2000 +
R 2,5	440	N 30	B64290-P35-X830	100	5000					
R 4	700	N 30	B64290-K36-X830	100	5000					
R 4	1630	T 38	B64290-K36-X38	100	5000					
R 6,3	1090	N 30	B64290-K37-X830	100	5000					
R 6,3	2530	T 38	B64290-K37-X38	100	5000					
R 10	1760	N 30	B64290-K38-X830	250	5000					
R 10	4090	T 38	B64290-K38-X38	250	5000					
R 12,5	1020	N 27	B64290-K44-X27	200	5000					
R 12,5	2200	N 30	B64290-K44-X830	200	5000					
R 12,5	5110	T 38	B64290-K44-X38	200	5000					
R 16	1290	N 27	B64290-K45-X27	250	5000					
R 16	2770	N 30	B64290-K45-X830	250	5000					
R 16	6440	T 38	B64290-K45-X38	250	5000					
R 20/7	1930	N 27	B64290-K632-X27	100	2000					
R 20/7	4160	N 30	B64290-K632-X830	100	2000					
R 20/7	5000	T 35	B64290-K632-X35	100	2000					
						50 +	100 +	250 +	500 +	
R 25/10	2150	N 27	B64290-K618-X27	100	2000					
R 25/10	4620	N 30	B64290-K618-X830	100	2000					
R 25/10	5400	T 35	B64290-K618-X35	100	2000					
R 34/12,5	5460	N 30	B64290-K48-X830	50	1000					
R 36	5750	N 30	B64290-K674-X830	50	1000					
R 40	7000	N 30	B64290-K659-X830	40	1000					
R 42	5000	N 30	B64290-K22-X830	50	1000					
						20 +	50 +	100 +		
R 50	8700	N 30	B64290-K82-X830	10	250					
R 58	5400	N 30	B64290-K40-X830	10	250					
						20 +	60 +	120 +	240 +	
R 100	5500	N 30	B64290-A84-X830	12	480					

Material N 27: $\mu_i = 2000$, tolerance of A_L value = $\pm 25\%$

Material N 30: $\mu_i = 4300$, tolerance of A_L value = $\pm 25\%$

Material T 35: $\mu_i = 6000$, tolerance of A_L value = $+ 25/- 30\%$

Material T 38: $\mu_i = 10000$, tolerance of A_L value = $+ 30/- 40\%$

Double-Aperture Cores

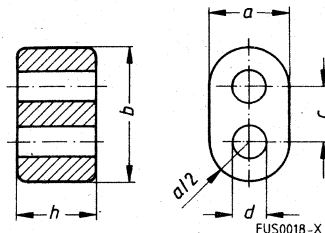
Primarily for broadband transformers up to high frequencies

Application examples:

Material N 30
for low frequencies and for pulse applications

Material K 1
for matching transformers and balancing mixers up to approx. 250 MHz in antenna feeders or input circuits of VHF and TV receivers

Material U 17
for the same applications up to 500 MHz



Dimensions (mm)					Magnetic characteristics ¹⁾				Approx. weight g
<i>h</i>	<i>b</i>	<i>a</i>	<i>c</i>	<i>d</i>	$\Sigma l/A$ mm ⁻¹	<i>l_e</i> mm	<i>A_e</i> mm ²	<i>V_e</i> mm ³	
14,5 - 1,0	14,5 - 1,0	8,5 - 0,5	5,85 + 0,25	3,4 + 0,8	0,31	15,7	50,2	761	4,0
8,3 - 0,6	14,5 - 1,0	8,5 - 0,5	5,85 + 0,25	3,4 + 0,6	0,54	15,7	28,9	435	2,5
6,2 - 0,5	7,25 - 0,5	4,2 - 0,4	2,90 + 0,15	1,7 + 0,3	0,745	8,1	10,7	78	0,4
2,5 - 0,3	3,6 - 0,3	2,1 - 0,3	1,45 + 0,1	0,8 + 0,15	1,78	4,2	2,5	8,3	0,1

Core height mm	<i>A_L</i> value appr. nH	Material	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	300 +	500 +	1000 +	2000 +
14,5	330	K1	B62152-A1-X1	100	5000					
8,3	24 190 10000	U17	B62152-A4-X17	100	5000					
		K1	B62152-A4-X1	100	5000					
		N30	B62152-A4-X30	100	5000					
6,2	17 140 7300	U17	B62152-A7-X17	500	5000					
		K1	B62152-A7-X1	500	5000					
		N30	B62152-A7-X30	500	5000					
2,5	7 3000	U17	B62152-A8-X17	1000	5000					
		N30	B62152-A8-X30	1000	5000					

1) Magnetic characteristics and *A_L* values are based on winding of center leg.

Product Group Index

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PTC thermistors	151
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Surge arresters	171



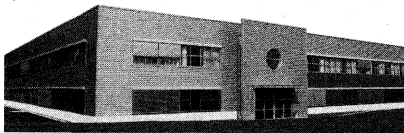


Siemens Matsushita Components

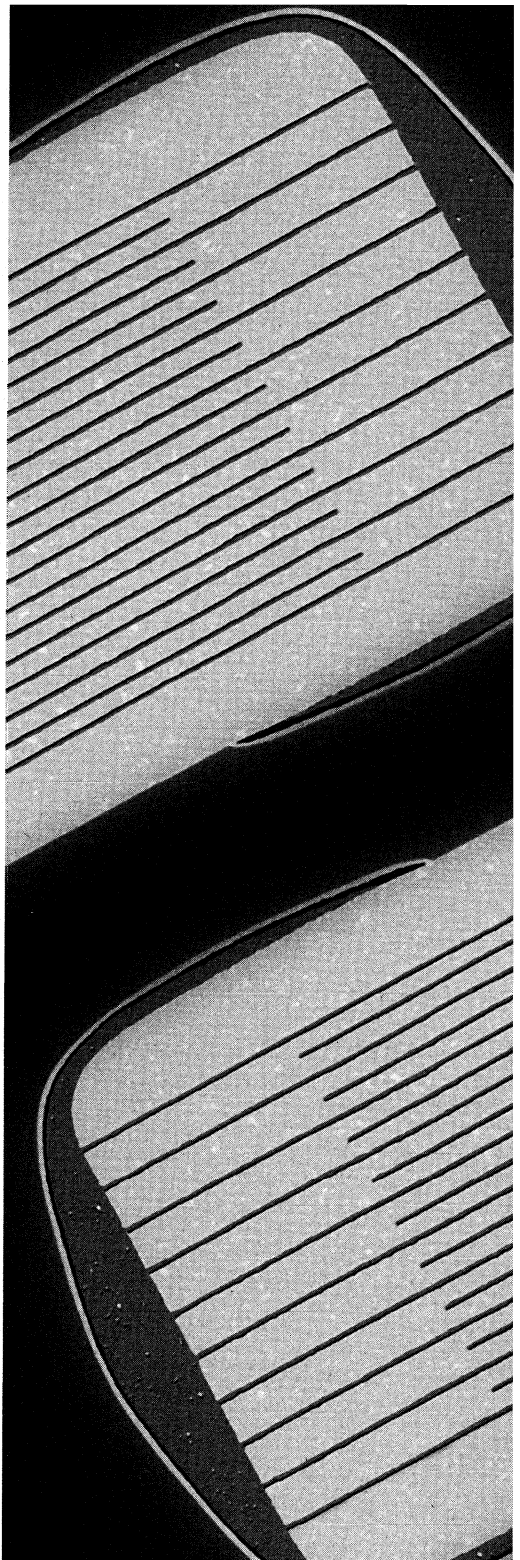
European technology center for
ceramic components

There when you need us

This is an organization that's proven its worth. Because it stands for more customer proximity and thus better service. Here you get information straight from the source, implementation of the latest technologies and products that match the market. Concentration of resources means that design engineers and production engineers are working side by side. And SCS warehousing directly at the plant ensures fastest possible delivery.



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NTC Thermistors

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Mini sensors	M 867	139
	K 164	140
Disks	M 891	141
	S 891	142
	K 17	142
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	K 276	146
	K 277	146
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NTC thermistors for inrush current limiting	S 237	147
	S 235	148
	S 236	148
	S 364	149

▼ Newly included in this edition

NTC thermistor chips for temperature compensation	C 620	137
NTC thermistors for inrush current limiting	S 237	147

NTC thermistors are also available as lab assortment; for details refer to page 330 ff.

Many NTC thermistors can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Data Book "Thermistors", B5-P2532-X-X-7600 (new edition planned for July 1996)
Short Form Catalog "Thermistors", B425-P2542-X-X-7400

Symbols and terms

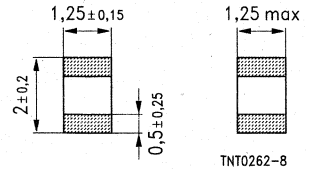
R_R	Rated resistance
R_5	Rated resistance at 5 °C
R_{20}	Rated resistance at 20 °C
R_{25}	Rated resistance at 25 °C
R_{100}	Rated resistance at 100 °C
R_{-25}	Rated resistance at -25 °C
R_{-30}	Rated resistance at -30 °C
T_R	Rated temperature
T_{25}	Rated temperature at 25 °C



Chip thermistor for temperature compensation in hybrid and SMD circuits

Tape packaging in accordance with IEC 286-3, 8-mm blister tape

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 25 °C



Kontaktierung
 Termination

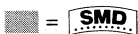
Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	500 +	1000 +	

R_R tolerance ± 5 %

C620/220 /J62	220	B57620-C221-J62	250	4000					
C620/ 10 k/J62	10 k	B57620-C103-J62	250	4000					
▼ C620/ 47 k/J62	47 k	B57620-C473-J62	250	4000					
C620/100 k/J62	100 k	B57620-C104-J62	250	4000					

R_R tolerance ± 10 %

C620/220 /K62	220	B57620-C221-K62	250	4000					
C620/330 /K62	330	B57620-C331-K62	250	4000					
C620/470 /K62	470	B57620-C471-K62	250	4000					
C620/680 /K62	680	B57620-C681-K62	250	4000					
C620/ 1 k/K62	1 k	B57620-C102-K62	250	4000					
C620/ 10 k/K62	10 k	B57620-C103-K62	250	4000					
▼ C620/ 47 k/K62	47 k	B57620-C473-K62	250	4000					
C620/100 k/K62	100 k	B57620-C104-K62	250	4000					

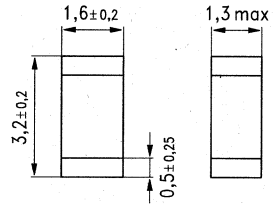




Chip thermistor for temperature compensation in hybrid and SMD circuits

Tape packaging in accordance with IEC 286-3, 8-mm blister tape

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 25 °C



Kontaktierung
 Termination

TNT0263-G

Type	R ₂₅ Ω	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	500 +	1000 +	

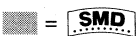
R_R tolerance ± 5 %

C621/ 1 k/J62	1 k	B57621-C102-J62	250	4000					
C621/ 10 k/J62	10 k	B57621-C103-J62	250	4000					
C621/100 k/J62	100 k	B57621-C104-J62	250	4000					
C621/ 2,2 k/J62	2,2 k	B57621-C222-J62	250	4000					
C621/ 22 k/J62	22 k	B57621-C223-J62	250	4000					
C621/470 /J62	470	B57621-C471-J62	250	4000					
C621/ 4,7 k/J62	4,7 k	B57621-C472-J62	250	4000					
C621/ 47 k/J62	47 k	B57621-C473-J62	250	4000					
C621/470 k/J62	470 k	B57621-C474-J62	250	4000					

R_R tolerance ± 10 %

C621/ 1 k/K62	1 k	B57621-C102-K62	250	4000					
C621/ 10 k/K62	10 k	B57621-C103-K62	250	4000					
C621/100 k/K62	100 k	B57621-C104-K62	250	4000					
C621/ 2,2 k/K62	2,2 k	B57621-C222-K62	250	4000					
C621/ 22 k/K62	22 k	B57621-C223-K62	250	4000					
C621/470 /K62	470	B57621-C471-K62	250	4000					
C621/ 4,7 k/K62	4,7 k	B57621-C472-K62	250	4000					
C621/ 47 k/K62	47 k	B57621-C473-K62	250	4000					
C621/470 k/K62	470 k	B57621-C474-K62	250	4000					

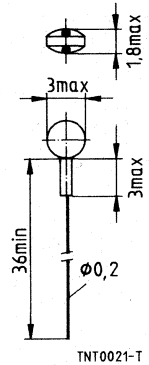
NTC thermistors of type C621 and K164 are also available as lab assortment; for details refer to page 330.



NTC Thermistors

Mini sensor for high-precision temperature measurement

Temperature range - 40 °C ... + 100 °C
 Rated temperature + 25 °C
 Measuring accuracy
 in the range
 - 30 °C ... + 50 °C 0,1 K

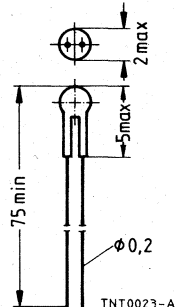


TNT0021-T

Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	250 +	500 +
R_R tolerance $\pm 0,4 \%$									
■ M841/S1/3 k	3 k	B57841-M302-A1	20	500					
■ M841/S1/5 k	5 k	B57841-M502-A1	20	500					

Mini sensor for high-precision temperature measurement in measuring and control engineering

Temperature range - 40 °C ... + 100 °C
 Rated temperature + 25 °C



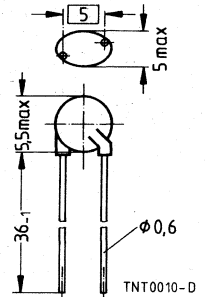
TNT0023-A

Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	250 +	500 +
R_R tolerance $\pm 1 \%$ (measuring error $\pm 0,5$ K)									
■ M867/10 k/1%	10 k	Q63086-M7103-F	20	500					

NTC Thermistors

Thermistor for temperature compensation and measurement, e.g. in transistor circuits

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 25 °C



Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	250 +	500 +	

R_R tolerance ± 5 %

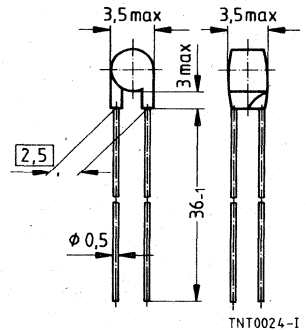
K164/ 68 /5%	68	B57164-K680-J	100	2000					
K164/100 /5%	100	B57164-K101-J	100	2000					
K164/150 /5%	150	B57164-K151-J	100	2000					
K164/220 /5%	220	B57164-K221-J	100	2000					
K164/330 /5%	330	B57164-K331-J	100	2000					
K164/470 /5%	470	B57164-K471-J	100	2000					
K164/ 1 k/5%	1 k	B57164-K102-J	100	2000					
K164/ 2,2 k/5%	2,2 k	B57164-K222-J	100	2000					
K164/ 3,3 k/5%	3,3 k	B57164-K332-J	100	2000					
K164/ 4,7 k/5%	4,7 k	B57164-K472-J	100	2000					
K164/ 6,8 k/5%	6,8 k	B57164-K682-J	100	2000					
K164/ 10 k/5%	10 k	B57164-K103-J	100	2000					
K164/ 15 k/5%	15 k	B57164-K153-J	100	2000					
K164/ 22 k/5%	22 k	B57164-K223-J	100	2000					
K164/ 33 k/5%	33 k	B57164-K333-J	100	2000					
K164/ 47 k/5%	47 k	B57164-K473-J	100	2000					
K164/ 68 k/5%	68 k	B57164-K683-J	100	2000					
K164/100 k/5%	100 k	B57164-K104-J	100	2000					
K164/470 k/5%	470 k	B57164-K474-J	100	2000					

NTC thermistors of type K164 and C621 are also available as lab assortment; for details refer to page 330.

NTC Thermistors

Temperature sensor for measuring and control applications

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 25 °C



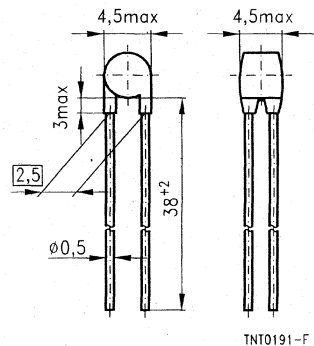
Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	500 +	1000 +	

R_R tolerance $\pm 10\%$

M891/ 2,2 k/10%	2,2 k	B57891-M222-K	250	2000					
M891/ 10 k/10%	10 k	B57891-M103-K	250	2000					
M891/ 22 k/10%	22 k	B57891-M223-K	250	2000					
M891/ 47 k/10%	47 k	B57891-M473-K	250	2000					
M891/100 k/10%	100 k	B57891-M104-K	250	2000					

Temperature sensor for measuring and control applications

Temperature range - 55 °C ... + 155 °C
 Rated temperature + 25 °C
 Absolute measuring accuracy $\pm 1\text{ K}$ (0 ... 70 °C)



Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	250 +	500 +

S891/ 10 k/H9	10 k	B57891-S103-H9	25	500					
S891/100 k/H9	100 k	B57891-S104-H9	25	500					

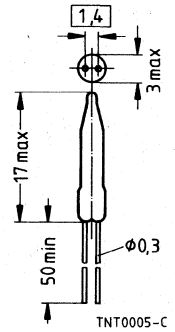
NTC Thermistors

Temperature sensor for measuring and control applications

Glass case, hermetically sealed

Temperature range - 55 °C ... + 250 °C

Rated temperature + 20 °C



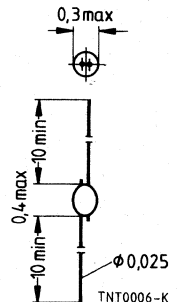
Type	R_{20} Ω	Ordering code	Min. qty.	Max. qty.	Price each					
					Min. qty. +	20 +	50 +	100 +	250 +	
R_R tolerance $\pm 10\%$										
K17/ 2,1 k/10%	2,5 k	B57017-K212-K	2	500						
K17/ 8,2 k/10%	10 k	B57017-K822-K	2	500						
K17/80 ,k/10%	100 k	B57017-K803-K	2	500						

Miniature thermistor with low time constant

Temperature range - 55 °C ... + 200 °C

Rated temperature + 20 °C

Thermal cooling time constant approx. 0,4 s



Type	R_{20} Ω	Ordering code	Min. qty.	Max. qty.	Price each					
					Min. qty. +	10 +	20 +	50 +	100 +	
R_R tolerance $\pm 10\%$										
K19/12 k/10%	12 k	B57019-K992-K	2	200						

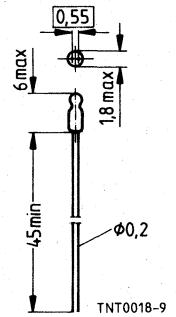
NTC Thermistors

Miniature sensor for measuring and control applications

Glass case, hermetically sealed

Temperature range - 55 °C ... + 200 °C

Rated temperature + 25 °C

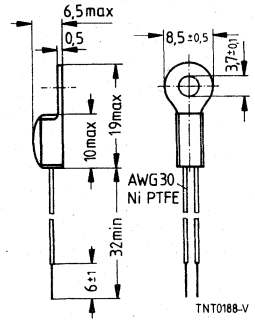


Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	20 +	50 +	100 +
<i>R</i> tolerance $\pm 10\%$								
M85/ 4,7 k/10%	4,7 k	B57085-M472-K	5	200				
M85/ 10 k/10%	10 k	B57085-M103-K	5	200				
M85/ 47 k/10%	47 k	B57085-M473-K	5	200				
M85/100 k/10%	100 k	B57085-M104-K	5	200				

NTC Thermistors

Thermistor for temperature compensation and measurement; for chassis mounting

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 25 °C



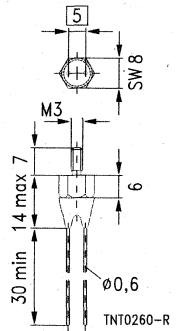
Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	50 +	100 +	250 +

R_R tolerance ± 2 %

M703/10 k/G	10 k	B57703-M103-G	25	1000					
-------------	------	---------------	----	------	--	--	--	--	--

Thermistor for temperature compensation and measurement; for chassis mounting

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 25 °C



Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each		
					Min. qty. +	100 +	250 +

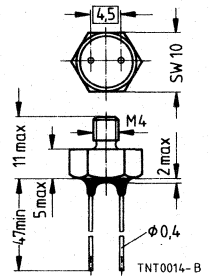
R_R tolerance ± 10 %

K45/ 1 k/10%	1 k	B57045-K102-K	50	500				
K45/ 2,2 k/10%	2,2 k	B57045-K222-K	50	500				
K45/ 4,7 k/10%	4,7 k	B57045-K472-K	50	500				
K45/ 6,8 k/10%	6,8 k	B57045-K682-K	50	500				
K45/ 10 k/10%	10 k	B57045-K103-K	50	500				
K45/ 47 k/10%	47 k	B57045-K473-K	50	500				
K45/150 k/10%	150 k	B57045-K154-K	50	500				

NTC Thermistors

Temperature sensor for measuring and control applications

Temperature range - 55 °C ... + 125 °C
 Rated temperature + 20 °C

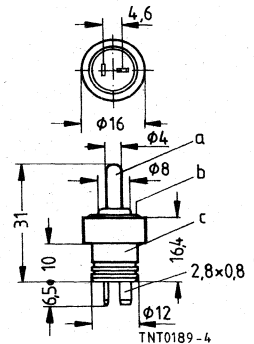


Type	R_{20} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	20 +	50 +	100 +	250 +
R_R tolerance $\pm 2\%$									
■ K252/ 6 k/2%	6 k	Q63025-K2602-G	5	500					
R_R tolerance $\pm 10\%$									
■ K252/ 6 k/10%	6 k	Q63025-K2063-K	10	500					
■ K252/ 40 k/10%	40 k	Q63025-K2044-K	10	500					

Temperature sensor for measuring and control purposes, applicable in liquids and gases; e.g. for temperature measurement in flow-type heaters

Metal case, hermetically sealed

Temperature range - 25 °C ... + 100 °C
 Rated temperature + 25 °C
 Response time < 5 s

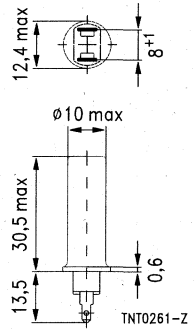


Type	R_{25} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	20 +	50 +	100 +
R_R tolerance $\pm 2\%$									
Z10/10 k/G	10 k	B57010-Z103-G	2	200					

NTC Thermistors

Temperature sensor for measuring and control applications, e.g. in washing machines

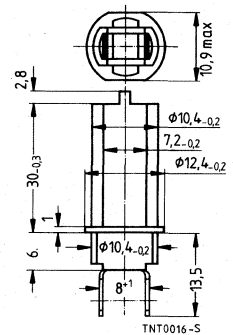
Temperature range - 10 °C ... + 100 °C
 Rated temperature + 100 °C
 Measuring accuracy in the range + 25 °C ... + 100 °C $\lt; \pm 1,5 \text{ K}$



Type	R_{80} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	250 +	500 +
R_R tolerance $\pm 2 \%$									
K276/12k/A3	1,7 k	B57276-K123-A3	20	500					

Temperature sensor for refrigerators and freezers

Temperature range - 40 °C ... + 125 °C
 Rated temperature + 5 °C
 Measuring accuracy in the range - 30 °C ... + 10 °C $\lt; \pm 1 \text{ K}$
 Connector as per DIN 46244, shape A 2,8 x 0,8

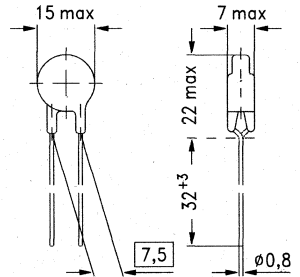


Type	R_{15} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	250 +	500 +
R_R tolerance $\pm 3,5 \%$									
K277/S1/2 k	2 k	B57277-K871-A1	20	500					

NTC Thermistors

Thermistor for inrush current limiting

Temperature range - 25 °C ... + 170 °C
 Rated temperature + 25 °C



TNT0257-7

Type	R_{25} Ω	$I_{25 \text{ max.}}$ A	Ordering code	Min. qty.	Max. qty.	Price each			
						Min. qty. +	100 +	250 +	500 +

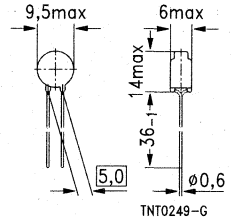
R_R tolerance ± 20 %

■ S234/ 1,0/20%	1,0	11,5	B57234-S109-M	50	2000					
■ S234/ 2,2/20%	2,2	9,0	B57234-S229-M	50	2000					
■ S234/ 2,5/20%	2,5	8,4	B57234-S259-M	50	2000					
■ S234/ 4,7/20%	4,7	6,6	B57234-S479-M	50	2000					
■ S234/ 5,0/20%	5,0	6,4	B57234-S509-M	50	2000					
■ S234/ 7,0/20%	7,0	6,0	B57234-S709-M	50	2000					
■ S234/ 10,0/20%	10,0	5,0	B57234-S100-M	50	2000					
■ S234/ 15,0/20%	15,0	4,0	B57234-S150-M	50	2000					
■ S234/ 22,0/20%	22,0	4,0	B57234-S220-M	50	2000					
■ S234/ 33,0/20%	33,0	3,3	B57234-S330-M	50	2000					
■ S234/ 40,0/20%	40,0	3,4	B57234-S400-M	50	2000					
■ S234/ 60,0/20%	60,0	4,0	B57234-S600-M	50	2000					
■ S234/220,0/20%	220,0	2,0	B57234-S221-M	50	2000					
▼ S237/ 1,0/20%	1,0	9,0	B57237-S109-M	50	2000					
▼ S237/ 2,2/20%	2,2	7,0	B57237-S229-M	50	2000					
▼ S237/ 2,5/20%	2,5	6,5	B57237-S259-M	50	2000					
▼ S237/ 4,7/20%	4,7	5,1	B57237-S479-M	50	2000					
▼ S237/ 5,0/20%	5,0	5,0	B57237-S509-M	50	2000					
▼ S237/ 7,0/20%	7,0	4,2	B57237-S709-M	50	2000					
▼ S237/ 10,0/20%	10,0	3,7	B57237-S100-M	50	2000					
▼ S237/ 15,0/20%	15,0	3,0	B57237-S150-M	50	2000					
▼ S237/ 22,0/20%	22,0	2,8	B57237-S220-M	50	2000					
▼ S237/ 33,0/20%	33,0	2,5	B57237-S330-M	50	2000					

NTC Thermistors

Thermistor for inrush current limiting

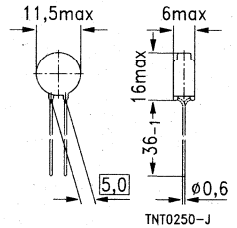
Temperature range - 55 °C ... + 170 °C
 Rated temperature + 25 °C



Type	R_{25}	$I_{25 \text{ max.}}$	Ordering code	Min. qty.	Max. qty.	Price each				
	Ω	A				Min. qty. +	250 +	500 +	1000 +	
R_R tolerance $\pm 20\%$										
S235/ 5/M	5	4,2	B57235-S509-M	100	2000					
S235/10/M	10	3,0	B57235-S100-M	100	2000					

Thermistor for inrush current limiting

Temperature range - 55 °C ... + 170 °C
 Rated temperature + 25 °C

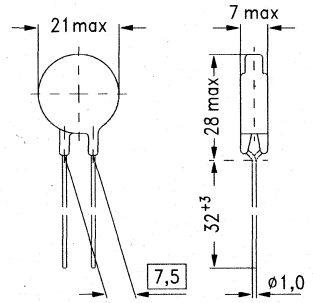


Type	R_{25}	$I_{25 \text{ max.}}$	Ordering code	Min. qty.	Max. qty.	Price each				
	Ω	A				Min. qty. +	250 +	500 +	1000 +	
R_R tolerance $\pm 20\%$										
S236/ 2,5/M	2,5	5,5	B57236-S259-M	100	2000					
S236/ 5 /M	5	4,5	B57236-S509-M	100	2000					
S236/10 /M	10	3,5	B57236-S100-M	100	2000					
S236/16 /M	16	3,5	B57236-S160-M	100	2000					

NTC Thermistors

Thermistor for inrush current limiting

Temperature range $-25\text{ }^{\circ}\text{C} \dots +170\text{ }^{\circ}\text{C}$
 Rated temperature $+25\text{ }^{\circ}\text{C}$



TNT0255-Q

Type	R_{25}		Ordering code	Min. qty.	Max. qty.	Price each				
	Ω	A				Min. qty. +	100 +	250 +	500 +	1000 +
R_R tolerance $\pm 20\%$										
S364/ 2,0/20%	2,0	12,0	B57364-S209-M	50	2000					
S364/ 2,5/20%	2,5	11,0	B57364-S259-M	50	2000					
S364/ 5,0/20%	5,0	8,5	B57364-S509-M	50	2000					
S364/10,0/20%	10,0	7,5	B57364-S100-M	50	2000					

NTC thermistors for inrush current limiting are also available as lab assortment; for details refer to page 331.

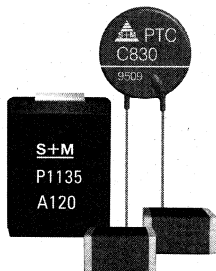


Siemens Matsushita Components

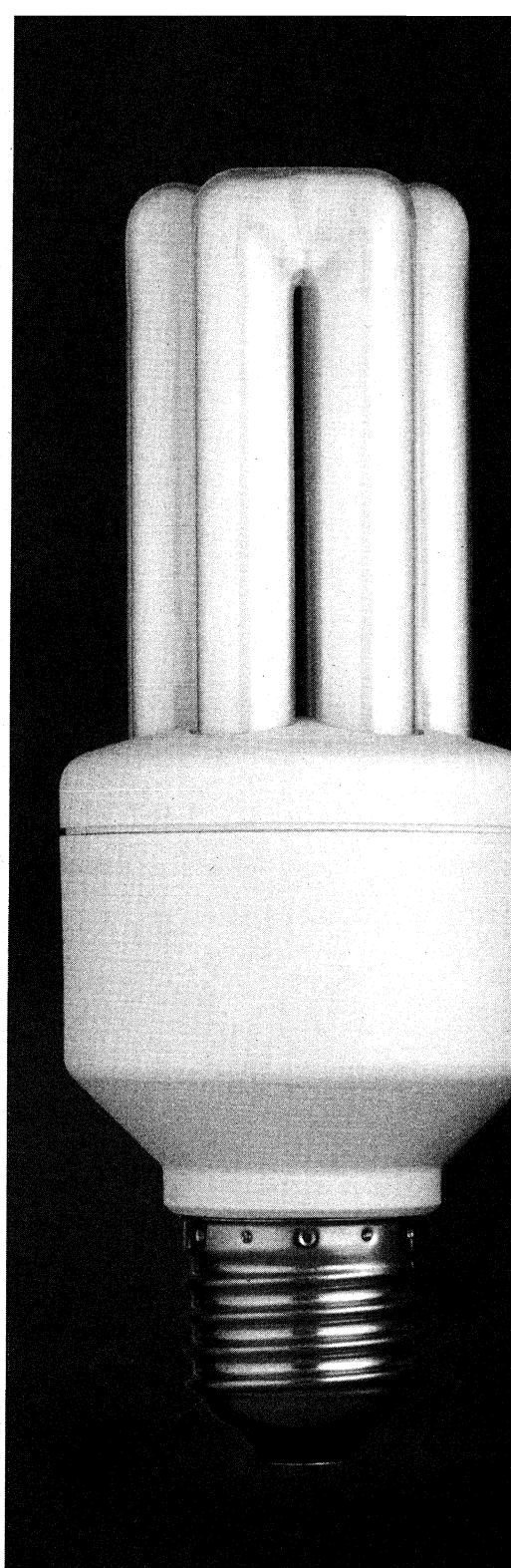
Now twice as many

2,000 PTC thermistors at once

A hot tip in PTCs for overload protection: our new maximum order level of 2,000 pieces. And with more than 50 different models, we've got a lot more to offer too. Maximum operating voltages from 12 to 550 V, rated currents up to 2.5 A, maximum switching currents of 15 A, plus a broad selection of leaded versions and SMDs.



SCS – dependable, fast and competent



PTC Thermistors

Contents	Type	Page
PTC thermistors for measuring and control applications		
SMDs	A1701	153
PTC thermistors for overload protection		
SMDs	A1707	153
Disks	C915 ... C995	154
	C910 ... C990	155
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PTC thermistors as temperature sensors		
for measuring and control applications	C1011	159
	C 8	159
	D901	160
PTC thermistors for motor protection	M135	161
	M155	161

▼ Newly included in this edition

PTC thermistor for overload protection		
Rod	B404	157

PTC thermistors for overload protection are also available as lab assortment; for details refer to page 331 ff.

Many PTC thermistors can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

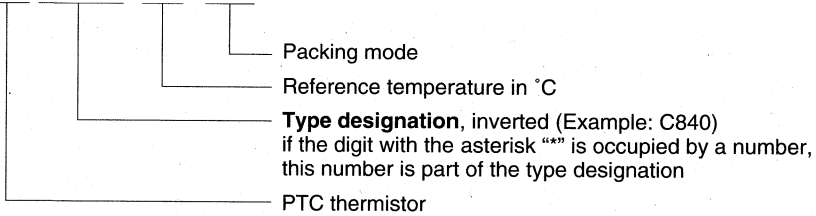
Data Book "Thermistors", B5-P2532-X-X-7600 (new edition planned for July 1996)
Short Form Catalog "Thermistors", B425-P2542-X-X-7400

Symbols and terms

e	Lead spacing
I_R	Rated current
$I_{S \max}$	Max. perm. switching current ($V = V_{\max}$)
R_{PTC}	PTC resistance
R_R	Rated resistance
ΔR_R	Tolerance of R_R
T_A	Ambient temperature
T_{Ref}	Reference temperature
T_{NAT}	Nominal threshold temperature
t_S	Switching time
V_{PTC}	PTC voltage
V_{\max}	Max. operating voltage

Compilation of ordering code

B59 840-C* 160 - A70

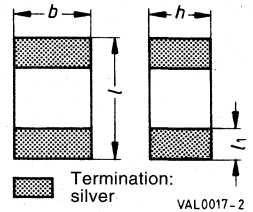




Chip thermistor

Dimensions in mm

Type	<i>l</i>	<i>b</i>	<i>s</i>	<i>l</i> ₁
A1701	2,0 ± 0,2	1,25 ± 0,2	0,85 ± 0,2	0,75 max.
A1707	3,2 ± 0,4	2,5 ± 0,3	1,7 ± 0,2	0,5 ± 0,25



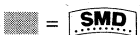
For measuring and control applications

Tape packaging in acc. with IEC 286-3, 8-mm blister tape

Type	<i>T</i> _{NAT} °C	<i>R</i> _{PTC} (<i>V</i> _{PTC} ≤ 2,5 V)		Ordering code	Min. qty.	Max. qty.	Price each			
		<i>T</i> _{NAT} -5K kΩ	<i>T</i> _{NAT} +5K kΩ				Min. qty. +	100 +	500 +	1000 +
<i>V</i> _{max} (40 °C) = 25 V, <i>R</i> _R = 1 kΩ										
A1701	110	≤ 5,5	≥ 13,3	B59701-A1110-A62	50	2000				
A1701	120	≤ 5,5	≥ 13,3	B59701-A1120-A62	50	2000				
A1701	130	≤ 5,5	≥ 13,3	B59701-A1130-A62	50	2000				

For overload protection

Type	<i>I</i> _R mA	<i>I</i> _{S max} mA	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	100 +	500 +	1000 +	
<i>V</i> _{max} (60 °C) = 80 V, <i>R</i> _R = 125 Ω, Δ <i>R</i> _R = ± 25 %										
A1707	45	300	B59707-A1120-A62	50	4000					



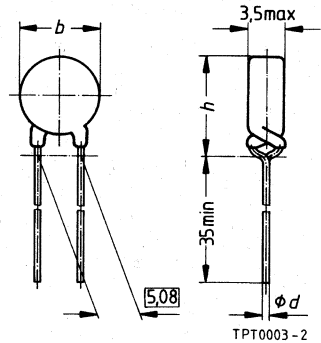
PTC Thermistors

Thermistor for overload protection

Coated

Dimensions in mm

Type	b_{max}	$\varnothing b_{max}$	h_{max}
C915	26	0,8	29,5
C935	22	0,6	25,5
C945	17,5	0,6	21,0
C955	13,5	0,6	17,0
C965	11,0	0,6	14,5
C975	9,0	0,6	12,5
C985	6,5	0,6	10,0
C995	4,0	0,5	7,5



TPT0003-2

$V_{T_{max}}$ ($T_{A=60^{\circ}C}$) V	R_R Ω	I_R mA	$I_{S_{max}}$ A	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	250 +	500 +	1000 +
20	0,8	950	5,5	B59955-C160-A70	50	4000					
20	1,8	550	3	B59975-C160-A70	50	4000					
20	4,6	300	1	B59985-C160-A70	50	4000					
20	13	150	0,7	B59995-C160-A70	50	4000					
30	0,2	2500	15	B59915-C120-A70	50	2000					
30	0,3	1800	10	B59935-C120-A70	50	2000					
30	0,45	1300	8	B59945-C120-A70	50	2000					
30	0,8	850	5,5	B59955-C120-A70	50	4000					
30	1,2	600	4,3	B59965-C120-A70	50	4000					
30	1,8	450	3	B59975-C120-A70	50	4000					
30	4,6	250	1	B59985-C120-A70	50	4000					
30	13	120	0,7	B59995-C120-A70	50	4000					

PTC thermistors for overload protection are also available as lab assortment; for details refer to page 331.

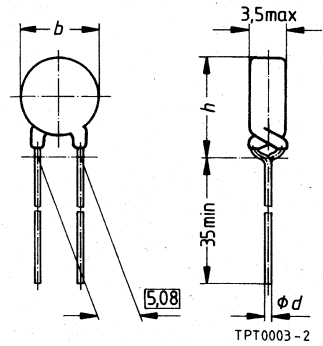
PTC Thermistors

Thermistor for overload protection

Coated

Dimensions in mm

Type	b_{max}	$\varnothing d_{max}$	h_{max}
C910	26	0,8	29,5
C930	22	0,6	25,5
C940	17,5	0,6	21,0
C950	13,5	0,6	17,0
C960	11,0	0,6	14,5
C970	9,0	0,6	12,5
C980	6,5	0,6	10,0
C990	4,0	0,5	7,5



V_{max} ($T_A = 60^\circ C$) V	R_R Ω	I_R mA	$I_{S max}$ A	Ordering code	Min. qty.	Max. qty.	Price each			
							Min. qty. +	100 +	250 +	500 +
80	3,7	170	5,5	B59950-C80-A70	50	4000				
80	5,6	130	4,3	B59960-C80-A70	50	4000				
80	9,4	90	3	B59970-C80-A70	50	4000				
80	25	50	1	B59980-C80-A70	50	4000				
80	55	30	0,7	B59990-C80-A70	50	4000				
80	0,9	1000	15	B59910-C120-A70	50	2000				
80	1,65	700	10	B59930-C120-A70	50	2000				
80	2,3	450	8	B59940-C120-A70	50	2000				
80	3,7	320	5,5	B59950-C120-A70	50	4000				
80	5,6	250	4,3	B59960-C120-A70	50	4000				
80	9,4	150	3	B59970-C120-A70	50	4000				
80	25	85	1	B59980-C120-A70	50	4000				
80	55	50	0,7	B59990-C120-A70	50	4000				

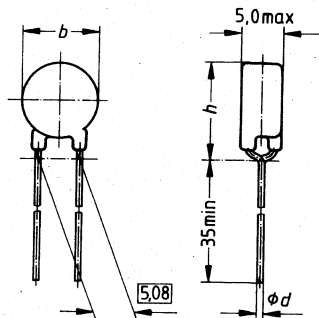
PTC Thermistors

Thermistor for overload protection

Coated

Dimensions in mm

Type	e	b_{max}	h_{max}	l_{min}	$\varnothing d_{max}$
C810	5,08	26,0	29,5	35,0	0,8
C830	5,08	22,0	25,5	35,0	0,6
C840	5,08	17,5	21,0	35,0	0,6
C850	5,08	13,5	17,0	35,0	0,6
C860	5,08	11,0	14,5	35,0	0,6
C87★	5,08	9,0	12,5	35,0	0,6
C880...6	5,08	6,5	10,0	35,0	0,6
C890	5,08	4,0	7,5	35,0	0,5



TPT0355-3

V_{max} ($I_A = 60^\circ C$) V	R_R Ω	I_R mA	I_{Smax} A	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	250 +	500 +	1000 +
160	6	400	4,1	B59840-C160-A70	50	4000					
160	15	180	1,5	B59860-C160-A70	50	4000					
160	25	125	1	B59870-C160-A70	50	4000					
160	70	70	0,4	B59880-C160-A70	50	4000					
160	150	35	0,2	B59890-C160-A70	50	4000					
265	6	170	4,1	B59840-C80-A70	50	4000					
265	10	110	2,2	B59850-C80-A70	50	4000					
265	15	90	1,5	B59860-C80-A70	50	4000					
265	25	60	1	B59870-C80-A70	50	4000					
265	70	30	0,4	B59880-C80-A70	50	4000					
265	150	15	0,2	B59890-C80-A70	50	4000					
265	2,6	650	10	B59810-C120-A70	50	2000					
265	3,7	460	7	B59830-C120-A70	50	4000					
265	6	330	4,1	B59840-C120-A70	50	4000					
265	10	200	2,2	B59850-C120-A70	50	4000					
265	15	140	1,5	B59860-C120-A70	50	4000					
265	25	100	1	B59870-C120-A70	50	4000					
265	35	80	1	B59872-C120-A70	50	4000					
265	45	70	1	B59873-C120-A70	50	4000					
265	55	60	1	B59874-C120-A70	50	4000					
265	65	55	1	B59875-C120-A70	50	4000					
265	70	55	0,4	B59880-C120-A70	50	4000					
265	120	35	0,4	B59883-C120-A70	50	4000					
265	150	30	0,2	B59890-C120-A70	50	4000					
420	600	21	0,2	B59884-C120-A70	50	4000					
550	1200	15	0,1	B59885-C120-A70	50	4000					
550	1500	12	0,1	B59886-C120-A70	50	4000					

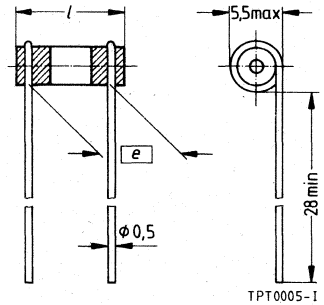
PTC thermistors for overload protection are also available as lab assortment; for details refer to page 332.

PTC Thermistors

Thermistor for overload protection

Dimensions in mm

Type	l_{max}	e
-B403	12	8
-B404	17	12,5
-B406	17	12,5



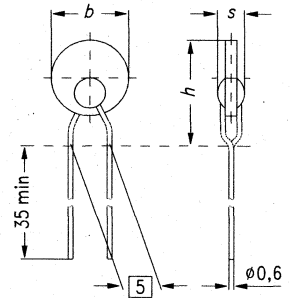
V_{2max} ($T_A = 60^\circ C$) V	R_R Ω	I_R mA	$I_{S max}$ A	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	250 +	500 +	1000 +
■ 440	1600	5	0,7	B59403-B60-A40	50	2000					
▼ 550	3500	4	0,4	B59404-B60-A40	50	2000					
■ 550	6250	2,5	0,3	B59406-B60-A40	50	2000					

Thermistor for overload protection

Without coating

Dimensions in mm

Type	b_{max}	h_{max}	s_{max}
-B75★	12,5	16,0	7
-B77★	8,5	12,0	7

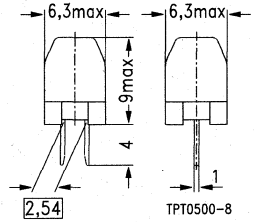


V_{2max} ($T_A = 60^\circ C$) V	R_R Ω	I_R mA	$I_{S max}$ A	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	250 +	500 +	1000 +
■ 420	25	123	2	B59750-B120-A70	50	2000					
■ 420	150	50	2	B59754-B120-A70	50	2000					
■ 550	500	28	1,4	B59755-B115-A70.	50	2000					
■ 420	120	49	1,4	B59771-B120-A70	50	2000					
■ 550	500	24	1	B59773-B120-A70	50	2000					
■ 550	1100	16	1	B59774-B115-A70	50	2000					

PTC Thermistors

Thermistor for switch-mode power supplies

Flame-retardant plastic case



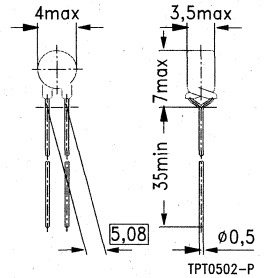
Type	t_s ($I_{S \max}$) s
J29	$\leq 2,0$

Type	V_{\max} ($I_A = 60 \text{ °C}$) V	R_R Ω	$I_{S \max}$ (V_{\max}) mA	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	500 +	1000 +	5000 +
J29	265	5000	100	B59346-A1502-P20	50	5000					

PTC Thermistors

Temperature sensor for measuring and control applications

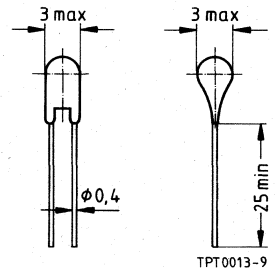
Coated



T_{Ref} °C	R_R ($V_{PTC} \leq 1,5V$) Ω	R_{PTC} ($V_{PTC} \leq 1,5V$)		Ordering code	Min. qty.	Max. qty.	Price each				
		T_{Ref} -5K Ω	T_{Ref} +5K Ω				Min. qty. +	50 +	100 +	500 +	1000 +
$V_{max}(40\text{ °C}) = 30\text{ V}$											
0	> 5 k	≤ 1800	≥ 600	B59011-C1000-A70	25	2000					
40	110	≤ 250	≥ 130	B59011-C1040-A70	25	2000					
60	80	≤ 210	≥ 110	B59011-C1060-A70	25	2000					
80	80	≤ 210	≥ 110	B59011-C1080-A70	25	2000					

Temperature sensor for measuring and control applications

Coated

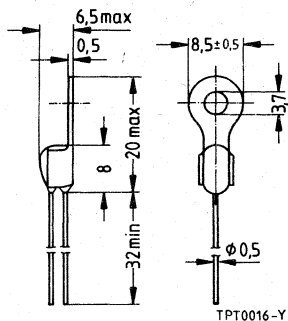


T_{NAT} °C	R_R ($V_{PTC} \leq 2,5V$) Ω	R_{PTC} ($V_{PTC} \leq 2,5V$)		Ordering code	Min. qty.	Max. qty.	Price each				
		T_{NAT} -5K Ω	T_{NAT} +5K Ω				Min. qty. +	100 +	250 +	500 +	1000 +
$V_{max}(40\text{ °C}) = 30\text{ V}$											
70	≤ 250	≤ 570	≥ 570	B59008-C70-A40	50	2000					
80	≤ 250	≤ 570	≥ 570	B59008-C80-A40	50	2000					
90	≤ 250	≤ 550	≥ 1330	B59008-C90-A40	50	2000					
100	≤ 250	≤ 550	≥ 1330	B59008-C100-A40	50	2000					

PTC Thermistors

**Temperature sensor
for measuring and control applications**

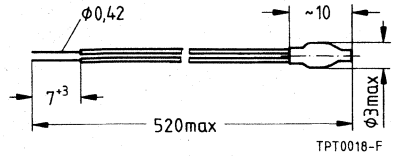
Mounting tag: tinned brass



T_{NAT} °C	R_R ($V_{PTC} \leq 2,5 V$) Ω	R_{PTC} ($V_{PTC} \leq 2,5 V$)		Ordering code	Min. qty.	Max. qty.	Price each				
		T_{NAT} -5K Ω	T_{NAT} +5K Ω				Min. qty. +	50 +	100 +	500 +	1000 +
$V_{max} (40 °C) = 30 V$; test voltage terminals/case 500 V/5 s											
60	≤ 100	≤ 570	≥ 570	B59901-D60-A40	30	1000					
70	≤ 100	≤ 570	≥ 570	B59901-D70-A40	30	1000					
80	≤ 100	≤ 570	≥ 570	B59901-D80-A40	30	1000					
90	≤ 100	≤ 550	≥ 1330	B59901-D90-A40	30	1000					

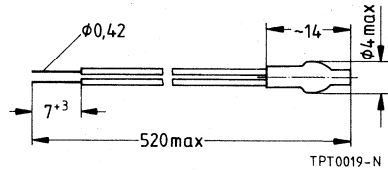
PTC Thermistors

Thermistor for motor protection



T_{NAT} °C	$R_{PTC} (V_{PTC} \leq 2,5 V)$		Ordering code	Min. qty.	Max. qty.	Price each				
	$T_{NAT} - 5 K$ Ω	$T_{NAT} + 5 K$ Ω				Min. qty. +	50 +	100 +	250 +	500 +
$V_{max} = 30 V, R_R \leq 250 \Omega$										
60	≤ 570	≥ 570	B59135-M60-A70	10	1000					
80	≤ 570	≥ 570	B59135-M80-A70	10	1000					
120	≤ 550	≥ 1330	B59135-M120-A70	10	1000					
150	≤ 550	≥ 1330	B59135-M150-A70	10	1000					

Thermistor for motor protection



T_{NAT} °C	$R_{PTC} (V_{PTC} \leq 2,5 V)$		Ordering code	Min. qty.	Max. qty.	Price each				
	$T_{NAT} - 5 K$ Ω	$T_{NAT} + 5 K$ Ω				Min. qty. +	50 +	100 +	250 +	500 +
$V_{max} = 30 V, R_R \leq 100 \Omega$										
80	≤ 570	≥ 570	B59155-M80-A70	10	1000					
90	≤ 550	≥ 1330	B59155-M90-A70	10	1000					
100	≤ 550	≥ 1330	B59155-M100-A70	10	1000					
110	≤ 550	≥ 1330	B59155-M110-A70	10	1000					
120	≤ 550	≥ 1330	B59155-M120-A70	10	1000					
130	≤ 550	≥ 1330	B59155-M130-A70	10	1000					
140	≤ 550	≥ 1330	B59155-M140-A70	10	1000					
155	≤ 550	≥ 1330	B59155-M155-A70	10	1000					
160	≤ 550	≥ 1330	B59155-M160-A70	10	1000					

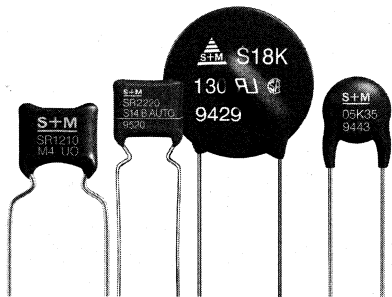


Siemens Matsushita Components

Disk varistors from stock

The choice is yours

In our selection of disk varistors there's something for everything. We offer you application support and deliver models rated from 11 to 460 V straight from SCS stock. Our product certification like UL and CECC makes sure your product conforms with CE. All disk varistors are manufactured in Europe, just like our block, strap and SMD varistors.



SCS – dependable, fast and competent



Varistors

Contents	Type	Page
Metal oxide varistors SIOV		
Disk varistors	SIOV-S05K★★★	165
	SIOV-S07K★★★	166
	SIOV-S10K★★★	167
	SIOV-S14K★★★★	168
	SIOV-S20K★★★★	169

Varistors are also available as lab assortment; for details refer to page 332 ff.

Many varistors can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Short Form Catalog "SIOV Metal Oxide Varistors", B462-P6211-X-X-7400
Data Book "SIOV Metal Oxide Varistors", B5-P6207-X-X-7600


Metal Oxide Varistors


Varistor $\hat{=}$ Variable Resistor

Voltage-dependent resistor


Response time < 25 ns
 Electric strength > 2,5 kV
 Insulation resistance > 1 G Ω


Approvals:


UL (Underwriters Laboratories Inc.) 
 UL 1449 Transient voltage surge suppressors: File E77005 (M)
 UL 1414 Across-the-line components: File E77005 (N)

CSA (Canadian Standards Association) 
 Class 2221 01 Accessories and Parts for Electronic Products File LR 63185

CECC 42 201 - 004 
 Qualification approval certificate no. 101/QA/1
 Manufacturer's registration no. F101

VDE testing and certification institute 
 Approval no. 76815 E

SEV (Schweizerischer Elektrotechnischer Verein) 
 Protection class 1, degree of protection IP 00, test requirement CECC 42 200
 Test report no. 90.1 02484.01 of 17.7.1991

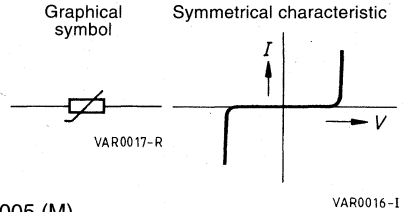
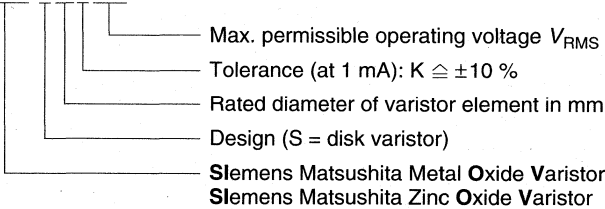
CECC 00 114 Part 1 
 Certificate of approval of manufacturer, registration no. F101/07
 This certificate also covers the requirements of EN 29001, ISO 9001

Mounting instructions:

Due to the unpredictable nature of transients a varistor may be overloaded, although it was carefully selected. Overload may result in package rupture and expulsion of hot material. For this reason the varistor should be physically shielded from adjacent components, e.g. by a suitable metal case. The varistor can be additionally protected by a thermal fuse which is connected to the varistor body.

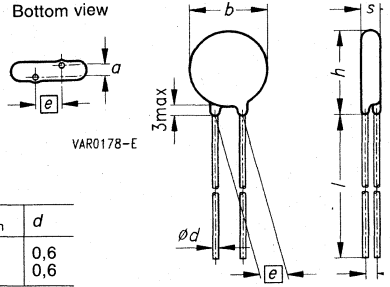
Designation system

SIOV-S14K250



Metal Oxide Varistors

Disk varistors



Dimensions in mm

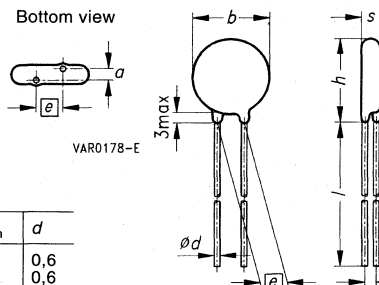
Type	e	a	b _{max}	s _{max}	h _{max}	l _{min}	d
SIOV-S05K11 ... 40	5	1,2 ... 1,8	7	3,5 ... 4,1	9,5	30	0,6
SIOV-S05K50 ... 460	5	1,2 ... 4,7	7	3,5 ... 7,0	9,5	30	0,6

Type	Max. permissible operating voltage		Voltage at 1 mA K ± 10%	Ordering code	Min. qty.	Max. qty.	Price per 100		
	V _{RMS} (V)	V _{DC} (V)					Min. qty. +	500 +	2500 +
SIOV-S05K11	11	14	18	Q69X3445	250	5000			
SIOV-S05K14	14	18	22	Q69X3422	250	5000			
SIOV-S05K17	17	22	27	Q69X3423	250	5000			
SIOV-S05K20	20	26	33	Q69X3424	250	5000			
SIOV-S05K25	25	31	39	Q69X3425	250	5000			
SIOV-S05K30	30	38	47	Q69X3426	250	5000			
SIOV-S05K35	35	45	56	Q69X3427	250	5000			
SIOV-S05K40	40	56	68	Q69X3428	250	5000			
SIOV-S05K50	50	65	82	Q69X3429	250	5000			
SIOV-S05K60	60	85	100	Q69X3025	250	5000			
SIOV-S05K75	75	100	120	Q69X3026	250	5000			
SIOV-S05K95	95	125	150	Q69X3027	250	5000			
SIOV-S05K115	115	150	180	Q69X4318	250	5000			
SIOV-S05K130	130	170	205	Q69X3028	250	5000			
SIOV-S05K140	140	180	220	Q69X3029	250	5000			
SIOV-S05K150	150	200	240	Q69X3030	250	5000			
SIOV-S05K175	175	225	270	Q69X3031	250	5000			
SIOV-S05K230	230	300	360	Q69X3032	250	5000			
SIOV-S05K250	250	320	390	Q69X3033	250	5000			
SIOV-S05K275	275	350	430	Q69X3034	250	5000			
SIOV-S05K300	300	385	470	Q69X3035	250	5000			
SIOV-S05K385	385	505	620	Q69X3700	250	5000			
SIOV-S05K420	420	560	680	Q69X3703	250	5000			
SIOV-S05K460	460	615	750	Q69X4702	250	5000			

Also available are: Types SIOV-S05K11 ... K460 taped to IEC specifications.
Electrically equivalent SMDs (CU3225K11 ... 300G2).

Metal Oxide Varistors

Disk varistors



Dimensions in mm

Type	e	a	b _{max}	s _{max}	h _{max}	l _{min}	d
SIOV-S07K11 ... 40	5	1,2 ... 1,8	9	3,5 ... 4,1	11,5	30	0,6
SIOV-S07K50 ... 460	5	1,2 ... 4,7	9	3,5 ... 7,0	11,5	30	0,6

Type	Max. permissible operating voltage		Voltage at 1 mA K \pm 10%	Ordering code	Min. qty.	Max. qty.	Price per 100		
	V _{RMS} (V)	V _{DC} (V)					(V)	Min. qty. +	500 +
SIOV-S07K11	11	14	18	Q69X3446	250	5000			
SIOV-S07K14	14	18	22	Q69X3447	250	5000			
SIOV-S07K17	17	22	27	Q69X3448	250	5000			
SIOV-S07K20	20	26	33	Q69X3449	250	5000			
SIOV-S07K25	25	31	39	Q69X3450	250	5000			
SIOV-S07K30	30	38	47	Q69X3451	250	5000			
SIOV-S07K35	35	45	56	Q69X3452	250	5000			
SIOV-S07K40	40	56	68	Q69X3453	250	5000			
SIOV-S07K50	50	65	82	Q69X3454	250	5000			
SIOV-S07K60	60	85	100	Q69X3036	250	5000			
SIOV-S07K75	75	100	120	Q69X3037	250	5000			
SIOV-S07K95	95	125	150	Q69X3038	250	5000			
SIOV-S07K115	115	150	180	Q69X4319	250	5000			
SIOV-S07K130	130	170	205	Q69X3039	250	5000			
SIOV-S07K140	140	180	220	Q69X3040	250	5000			
SIOV-S07K150	150	200	240	Q69X3041	250	5000			
SIOV-S07K175	175	225	270	Q69X3042	250	5000			
SIOV-S07K230	230	300	360	Q69X3043	250	5000			
SIOV-S07K250	250	320	390	Q69X3044	250	5000			
SIOV-S07K275	275	350	430	Q69X3045	250	5000			
SIOV-S07K300	300	385	470	Q69X3046	250	5000			
SIOV-S07K385	385	505	620	Q69X3825	250	5000			
SIOV-S07K420	420	560	680	Q69X3826	250	5000			
SIOV-S07K460	460	615	750	Q69X4743	250	5000			

Also available are: Types SIOV-S07K11 ... K460 taped to IEC specifications.

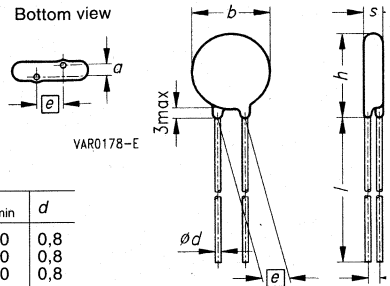
Electrically equivalent SMDs (CU4032K11 ... 300G2).

Special types for telecom applications, leaded and as SMDs.

Special types for automotive applications, leaded and as SMDs.

Metal Oxide Varistors

Disk varistors



Dimensions in mm

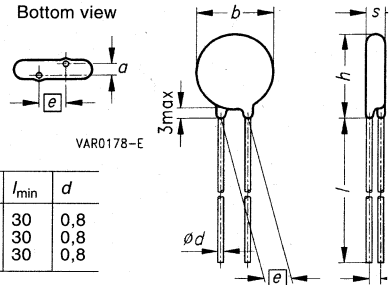
Type	e	a	b_{max}	s_{max}	h_{max}	l_{min}	d
SIOV-S10K11 ... 40	7,5	1,4 ... 2,1	12,5	4,1 ... 4,8	15,0	30	0,8
SIOV-S10K50 ... 300	7,5	1,4 ... 3,4	12,5	4,1 ... 6,1	15,0	30	0,8
SIOV-S10K320 ... 460	7,5	3,6 ... 5,0	12,5	6,3 ... 7,7	15,5	30	0,8

Type	Max. permissible operating voltage		Voltage at 1 mA $K \pm 10\%$	Ordering code	Min. qty.	Max. qty.	Price per 100		
	V_{RMS} (V)	V_{DC} (V)					(V)	Min. qty. +	500 +
SIOV-S10K11	11	14	18	Q69X3455	200	5000			
SIOV-S10K14	14	18	22	Q69X3011	200	5000			
SIOV-S10K17	17	22	27	Q69X3012	200	5000			
SIOV-S10K20	20	26	33	Q69X3013	200	5000			
SIOV-S10K25	25	31	39	Q69X3014	200	5000			
SIOV-S10K30	30	38	47	Q69X3015	200	5000			
SIOV-S10K35	35	45	56	Q69X3016	200	5000			
SIOV-S10K40	40	56	68	Q69X3017	200	5000			
SIOV-S10K50	50	65	82	Q69X3047	200	5000			
SIOV-S10K60	60	85	100	Q69X3048	200	5000			
SIOV-S10K75	75	100	120	Q69X3049	200	5000			
SIOV-S10K95	95	125	150	Q69X3050	200	5000			
SIOV-S10K115	115	150	180	Q69X4320	200	5000			
SIOV-S10K130	130	170	205	Q69X3119	200	5000			
SIOV-S10K140	140	180	220	Q69X3120	200	5000			
SIOV-S10K150	150	200	240	Q69X3121	200	5000			
SIOV-S10K175	175	225	270	Q69X3122	200	5000			
SIOV-S10K230	230	300	360	Q69X3123	200	5000			
SIOV-S10K250	250	320	390	Q69X3124	200	5000			
SIOV-S10K275	275	350	430	Q69X3125	200	5000			
SIOV-S10K300	300	385	470	Q69X3126	200	5000			
SIOV-S10K320	320	420	510	Q69X4746	200	5000			
SIOV-S10K385	385	505	620	Q69X3127	200	5000			
SIOV-S10K420	420	560	680	Q69X3128	200	5000			
SIOV-S10K460	460	615	750	Q69X3129	200	5000			

Also available are: Types SIOV-S10K11 ... K300 taped to IEC specifications; $e = 7,5$ or $5,0$.
Special types for automotive applications, leaded and as SMDs.

Metal Oxide Varistors

Disk varistors



Dimensions in mm

Type	e	a	b _{max}	s _{max}	h _{max}	l _{min}	d
SIOV-S14K11 ... 40	7,5	1,4 ... 2,2	16,5	4,1 ... 4,9	19,0	30	0,8
SIOV-S14K50 ... 300	7,5	1,4 ... 3,4	16,5	4,1 ... 6,1	19,0	30	0,8
SIOV-S14K320 ... 460	7,5	3,6 ... 5,1	16,5	6,3 ... 7,8	19,5	30	0,8

Type	Max. permissible operating voltage		Voltage at 1 mA K ± ± 10%	Ordering code	Min. qty.	Max. qty.	Price per 100		
	V _{RMS} (V)	V _{DC} (V)					Min. qty. +	500 +	2500 +
SIOV-S14K11	11	14	18	Q69X3456	150	5000			
SIOV-S14K14	14	18	22	Q69X3018	150	5000			
SIOV-S14K17	17	22	27	Q69X3019	150	5000			
SIOV-S14K20	20	26	33	Q69X3020	150	5000			
SIOV-S14K25	25	31	39	Q69X3021	150	5000			
SIOV-S14K30	30	38	47	Q69X3022	150	5000			
SIOV-S14K35	35	45	56	Q69X3023	150	5000			
SIOV-S14K40	40	56	68	Q69X3024	150	5000			
SIOV-S14K50	50	65	82	Q69X3135	150	5000			
SIOV-S14K60	60	85	100	Q69X3136	150	5000			
SIOV-S14K75	75	100	120	Q69X3137	150	5000			
SIOV-S14K95	95	125	150	Q69X3138	150	5000			
SIOV-S14K115	115	150	180	Q69X4321	150	5000			
SIOV-S14K130	130	170	205	Q69X3139	150	5000			
SIOV-S14K140	140	180	220	Q69X3140	150	5000			
SIOV-S14K150	150	200	240	Q69X3141	150	5000			
SIOV-S14K175	175	225	270	Q69X3142	150	5000			
SIOV-S14K230	230	300	360	Q69X3143	150	5000			
SIOV-S14K250	250	320	390	Q69X3144	150	5000			
SIOV-S14K275	275	350	430	Q69X3145	150	5000			
SIOV-S14K300	300	385	470	Q69X3146	150	5000			
SIOV-S14K320	320	420	510	Q69X4327	150	5000			
SIOV-S14K385	385	505	620	Q69X3147	150	5000			
SIOV-S14K420	420	560	680	Q69X3148	150	5000			
SIOV-S14K460	460	615	750	Q69X3149	150	5000			

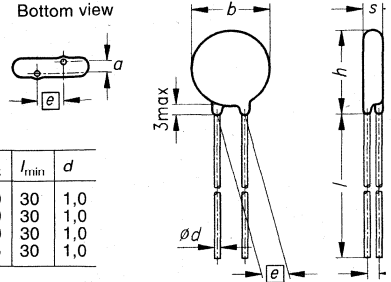
Also available are: Types SIOV-S14K11 ... K300 taped to IEC specifications.
Special types for automotive applications, leaded and as SMDs.

Metal Oxide Varistors

Disk varistors

Dimensions in mm

Type	e	a	b_{max}	s_{max}	h_{max}	l_{min}	d
SIOV-S20K11 ... K40	10	1,5 ... 2,4	22,5	4,5 ... 5,4	26,0	30	1,0
SIOV-S20K50 ... 175	10	1,5 ... 2,3	22,5	4,5 ... 5,3	26,0	30	1,0
SIOV-S20K230 ... 300	10	2,9 ... 3,6	22,5	5,9 ... 6,6	27,0	30	1,0
SIOV-S20K320 ... 460	10	3,8 ... 5,2	22,5	6,8 ... 8,2	27,5	30	1,0



Type	Max. permissible operating voltage		Voltage at 1 mA at 10% K $K \triangleq \pm 10\%$	Ordering code	Min. qty.	Max. qty.	Price per 100			
	V_{RMS} (V)	V_{DC} (V)					(V)	Min. qty. +	100 +	500 +
SIOV-S20K11	11	14	18	Q69X3457	50	5000				
SIOV-S20K14	14	18	22	Q69X3458	50	5000				
SIOV-S20K17	17	22	27	Q69X3459	50	5000				
SIOV-S20K20	20	26	33	Q69X3460	50	5000				
SIOV-S20K25	25	31	39	Q69X3461	50	5000				
SIOV-S20K30	30	38	47	Q69X3462	50	5000				
SIOV-S20K35	35	45	56	Q69X3463	50	5000				
SIOV-S20K40	40	56	68	Q69X3464	50	5000				
SIOV-S20K50	50	65	82	Q69X3465	50	5000				
SIOV-S20K60	60	85	100	Q69X3224	50	5000				
SIOV-S20K75	75	100	120	Q69X3225	50	5000				
SIOV-S20K95	95	125	150	Q69X3226	50	5000				
SIOV-S20K115	115	150	180	Q69X4322	50	5000				
SIOV-S20K130	130	170	205	Q69X3227	50	5000				
SIOV-S20K140	140	180	220	Q69X3228	50	5000				
SIOV-S20K150	150	200	240	Q69X3229	50	5000				
SIOV-S20K175	175	225	270	Q69X3230	50	5000				
SIOV-S20K230	230	300	360	Q69X3231	50	5000				
SIOV-S20K250	250	320	390	Q69X3232	50	5000				
SIOV-S20K275	275	350	430	Q69X3233	50	5000				
SIOV-S20K300	300	385	470	Q69X3234	50	5000				
SIOV-S20K320	320	420	510	Q69X4328	50	5000				
SIOV-S20K385	385	505	620	Q69X3235	50	5000				
SIOV-S20K420	420	560	680	Q69X3236	50	5000				
SIOV-S20K460	460	615	750	Q69X3237	50	5000				

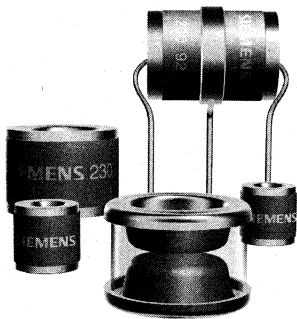
Also available are: Special types for automotive applications, leaded and as SMDs.

SIEMENS

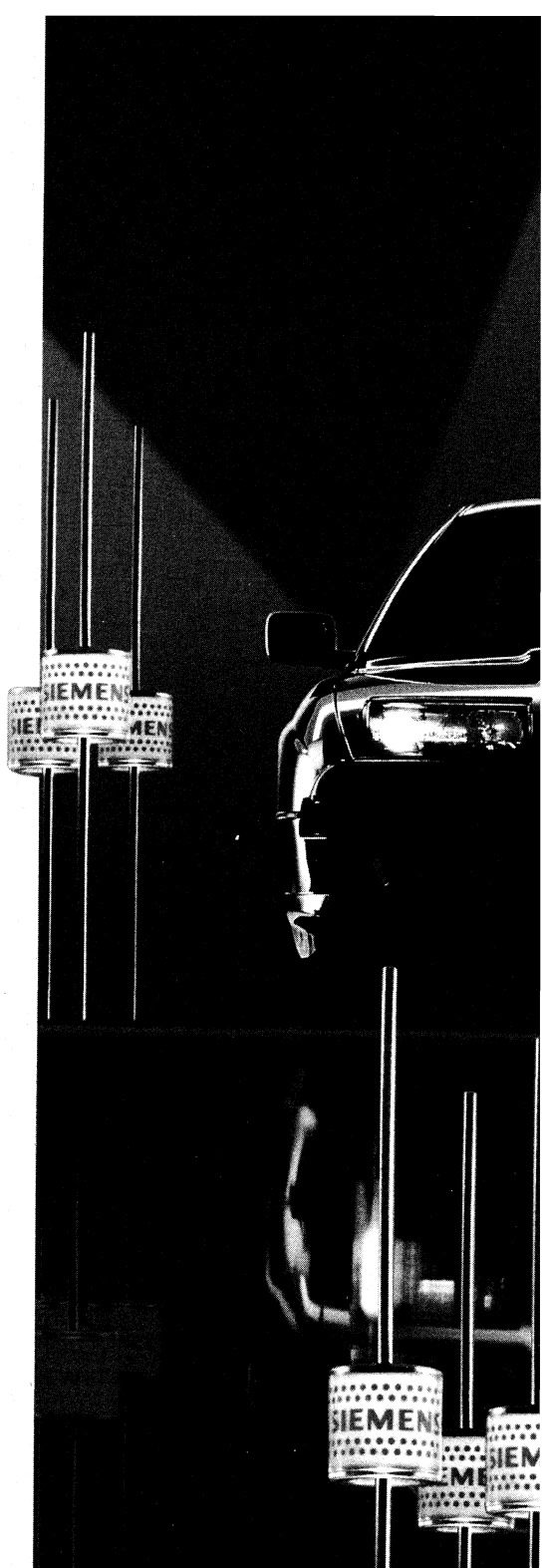
Arresters from stock ...

... to arrest your attention

Have a look at our choice of surge arresters. Fast and dependable, straight from SCS stock, we can deliver you the whole selection from the world's biggest producer of standard button, mini-button $\text{\O} 5 \times 5$, metal-ceramic $\text{\O} 8 \times 6$ and $\text{\O} 8 \times 20$ plus triple-electrode ceramic arresters.



SCS – dependable, fast and competent



Surge Arresters

Contents	Type	Page
Standard buttons 5 kA/5 A	A1-, B1-, B2-	172
Mini buttons $\varnothing 5 \times 5$ 2,5 kA/2,5 A	M51-	173
Metal-ceramic $\varnothing 8 \times 6$ 10 kA/10 A 20 kA/20 A	N80-, N81- A80-, A81-	173 174
Metal-ceramic $\varnothing 8 \times 20$ 20 kA/20 A	A83-	174
3-electrode surge arresters 5 kA/5 A 10 kA/10 A 20 kA/10 A	T31- T80-, T83- T20-, T21-, T23-	175 176 177
Holders	A1-A1 ... 30 A4-A1 T80-A1	178 178 178

▼ Newly included in this edition

Radioactive-free 3-electrode surge arresters 20 kA/10 A	T20-A230X T21-A230X T23-A230X T23-A350X	177 177 177 177
--	--	--------------------------

Many surge arresters can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Short Form Catalog "Gas-Filled Surge Arresters", B6-P4803-X-X-7400

Symbols and terms

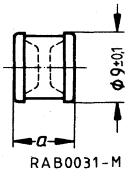
V_{sdCN} Nominal dc spark-over voltage

Surge Arresters

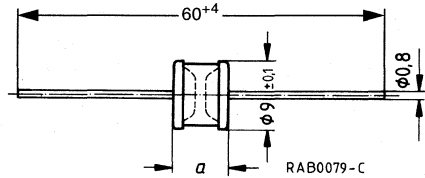
Surge arresters
for overvoltage protection in telecom systems
and in measuring and control equipment

Standard button
5 kA/5 A

A1-,



B1-, B2-



Glass insulator

Type	V_{stdcN}	Dim. a_{max} mm	Ordering code	Min. qty.	Max. qty.	Price each				
	V					Min. qty. +	50 +	100 +	500 +	1000 +
A1-C90/20 ²⁾	90	7,3	Q69-X101	30	1000					
B1-C90/20 ¹⁾	90	7,3	Q69-X184	30	2000					
A1-C150 ²⁾	150	7,3	Q69-X106	30	1000					
B1-C150 ¹⁾	150	7,3	Q69-X198	30	1000					
A1-A230 ²⁾	230	6,25	Q69-X102	30	1000					
B1-A230 ¹⁾	230	6,25	Q69-X185	30	1000					
B1-A350 ¹⁾	350	6,3	Q69-X186	30	2000					
B2-B600 ¹⁾	600	6,8	Q69-X154	30	1000					

1) Also available on tape; PU for taped version: 500 pc.

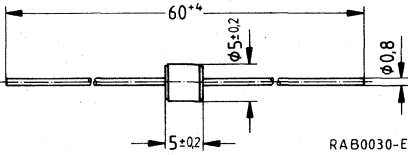
2) Matching holders: A1-A1, A1-A10, A1-A20, A1-A30

Surge arresters with other dc spark-over voltage ratings upon request.

Surge Arresters

Mini button $\varnothing 5 \times 5$ 2,5 kA/2,5 A

M51-

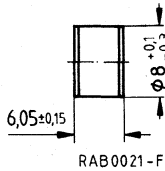


Ceramic insulator

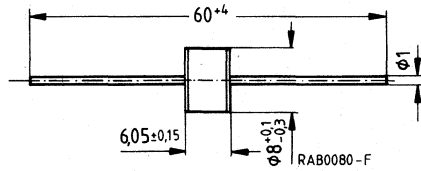
Type	V_{sdcN} V	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
M51-C90 ¹⁾	90	Q69-X468	20	1000					
M51-A230X ¹⁾	230	Q69-X293	20	1000					
M51-A350X ¹⁾	350	Q69-X464	20	1000					

Metal-ceramic $\varnothing 8 \times 6$ 10 kA/10 A

N80-



N81-



Type	V_{sdcN} V	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
N80-C90X ³⁾	90	Q69-X489	30	1000					
N81-C90X ²⁾	90	Q69-X488	30	1000					
N80-A230X ³⁾	230	Q69-X490	30	1000					
N81-A230X ²⁾	230	Q69-X493	30	1000					
N80-A350X ³⁾	350	Q69-X491	20	1000					
N81-A350X ²⁾	350	Q69-X492	30	1000					

1) Also available on tape; PU for taped version: 1000 pc.

2) Also available on tape; PU for taped version: 500 pc.

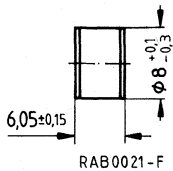
3) Matching holder: A4-A1

Surge arresters with other dc spark-over voltage ratings upon request.

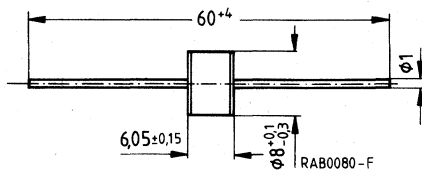
Surge Arresters

Metal-ceramic $\varnothing 8 \times 6$ 20 kA/20 A

A80-



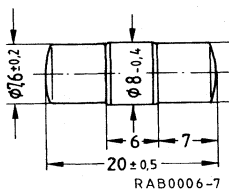
A81-



Type	V_{sdCN} V	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
A80-C90X ²⁾	90	Q69-X141	30	2000					
A81-C90X ¹⁾	90	Q69-X138	30	2000					
A80-A230X ^{2) 3)}	230	Q69-X224	30	1000					
A81-A230X ¹⁾	230	Q69-X225	30	1000					
A81-A350X ¹⁾	350	Q69-X238	30	1000					

Metal-ceramic $\varnothing 8 \times 20$ 20 kA/20 A

A83-



Type	V_{sdCN} V	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
A83-C90	90	Q69-X144	30	1000					
A83-A230X ⁴⁾	230	Q69-X142	30	1000					

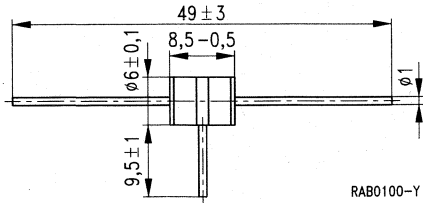
- 1) Also available on tape; PU for taped version: 500 pc.
- 2) Matching holder: A4-A1
- 3) Corresponds to version H of the German Federal Postal Administration Telekom
- 4) Corresponds to version F of the German Federal Postal Administration Telekom

Surge arresters with other dc spark-over voltage ratings upon request.

Surge Arresters

3-electrode surge arresters 5 kA/5 A

T31-A230X



Ceramic insulator

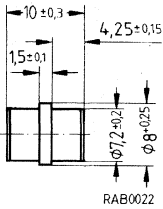
Type	V_{sdcN}	Ordering code	Min. qty.	Max. qty.	Price each				
	V				Min. qty. +	50 +	100 +	500 +	1000 +
T31-A230X	230	Q69-X313	20	1000					

Surge arresters with other dc spark-over voltage ratings upon request.

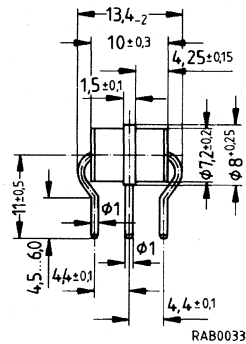
Surge Arresters

3-electrode surge arresters 10 kA/10 A

T80-



T83-



Ceramic insulator

Type	V_{sdCN} V	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
T80-A230X ¹⁾	230	Q69-X938	30	1000					
T83-A230X	230	Q69-X891	20	1000					
T80-A350X ¹⁾	350	Q69-X850	30	1000					
T83-A350X	350	Q69-X869	20	1000					

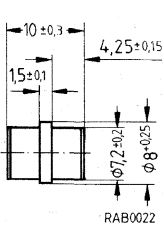
1) Matching holder: T80-A1

Surge arresters with other dc spark-over voltage ratings upon request.

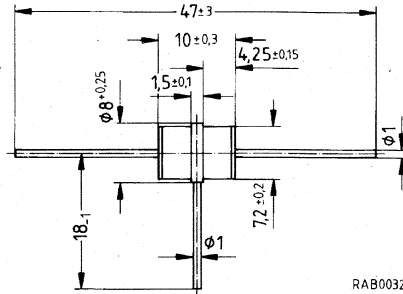
Surge Arresters

3-electrode surge arresters 20 kA/10 A

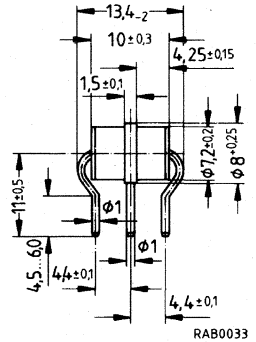
T20-



T21-

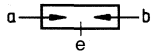


T23-



Ceramic insulator

Type	V _{sdcN} V	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
T23-C90X	90	Q69-X865	20	1000					
■ T20-A230 ¹⁾	230	Q69-X840	20	1000					
▼ T20-A230X ¹⁾	230	Q69-X871	20	1000					
■ T21-A230	230	Q69-X841	20	1000					
▼ T21-A230X	230	Q69-X892	20	1000					
■ T23-A230	230	Q69-X864	20	2000					
▼ T23-A230X	230	Q69-X874	20	2000					
■ T21-A350	350	Q69-X730	20	1000					
■ T23-A350	350	Q69-X729	20	1000					
▼ T23-A350X	350	Q69-X720	20	1000					



RAB0040

a, b Electrodes
e Center electrode

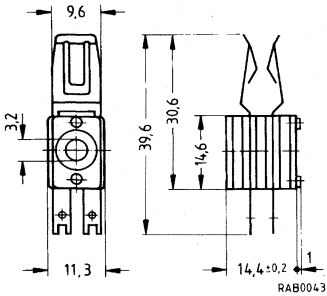
1) Matching holder: T80-A1

Surge arresters with other dc spark-over voltage ratings upon request.

Surge Arresters

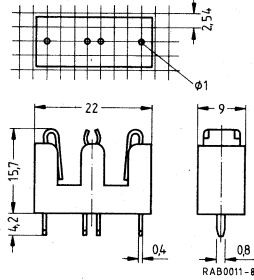
Holders

A1-A1 ... 30



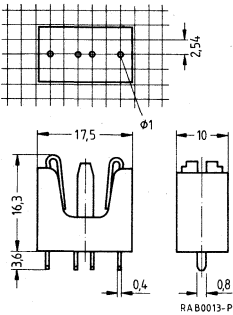
A4-A1

Hole arrangement on 2,54 mm grid



T80-A1

Hole arrangement on 2,54 mm grid



Type	For arresters:		Ordering code	Min. qty.	Max. qty.	Price each				
	Dimensions	Max. number				Min. qty. +	50 +	100 +	500 +	1000 +
A1-A1	Ø 9 × 6,25	1	Q81-X151	40	1000					
A1-A10	to	10	Q81-X152	5	100					
A1-A20		20	Q81-X154	5	100					
A1-A30	Ø 9 × 7,3	30	Q81-X155	5	100					
A4-A1	Ø 8 × 6	2	Q69-X3439	50	1000					
T80-A1	Ø 8 × 10 ¹⁾	1	Q69-X3356	50	1000					

The holders are supplied unequipped

1) 3-electrode surge arrester

Product Group Index

	Page
Ceramic capacitors	181
Film capacitors	195
Tantalum electrolytic capacitors	225
Aluminum electrolytic capacitors	231
Capacitors for power electronics	257





Siemens Matsushita Components

Ceramic chip capacitors from stock

Small in size, big in performance

Our selection of capacitors ranges from standard sizes down to a miniature highlight in 0402 style. Measuring only 1 x 0.5 x 0.5 mm, it's an ideal solution for applications where space is tight, like in handies and cardiac pacemakers. At the same time all our chips can boast excellent soldering characteristics, with special terminal variants for conductive adhesion. And we also thought about the right packing for automatic placement. You get all sizes down to 1206 in bulk case for example, plus voltage ratings from 16 to 500 V. By the way, our leaded models have CECC approval of course, in fact they were certified more than ten years ago.

More in the new short form catalog!



SCS - dependable, fast and competent

Ceramic Capacitors

Contents	V _R	Type	Page
Multilayer chip capacitors			
Outline drawings			182
C0G	50 Vdc	B37871 ... B37949	183
X7R	25 Vdc	B37872, B37941	185
	50 Vdc	B37872 ... B37956	185
Z5U	25 Vdc	B37942	187
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Radial-lead multilayer capacitors			
Outline drawings			189
C0G	50 Vdc	B37979, B37986	190
	100 Vdc	B37979	191
X7R	50 Vdc	B37981, B37987	192
	100 Vdc	B37981 ... B37987	193
Z5U	50 Vdc	B37982 ... B37988	194

▼ Newly included in this edition

Multilayer chip capacitor, X7R with 100 nF	50 Vdc	B37941	185
Multilayer chip capacitor, Z5U with 1 μ F	25 Vdc	B37873	187

Ceramic capacitors are also available as lab assortment; for details refer to page 334 ff.

Abbreviation PU = packing unit

Not only chips but also leaded capacitors can be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

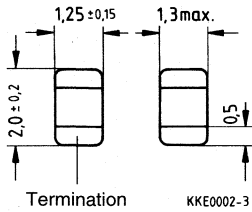
Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

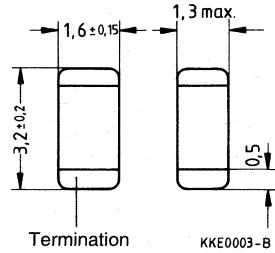
Data Book "Ceramic Capacitors", B463-P6311-X-X-7600
Short Form Catalog "Ceramic Capacitors", B463-P6313-X-X-7400

Chip capacitors

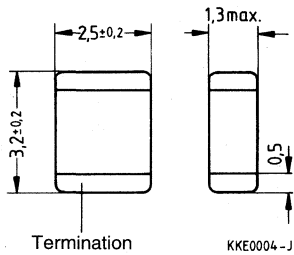
**Outline drawing 1
Size 0805**



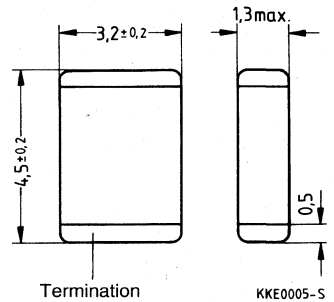
**Outline drawing 2
Size 1206**



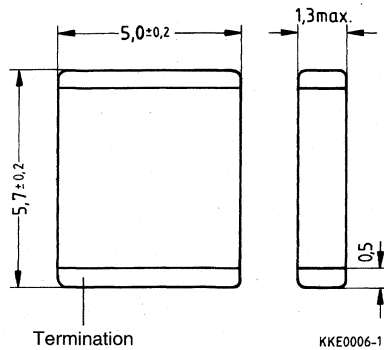
**Outline drawing 3
Size 1210**



**Outline drawing 4
Size 1812**



**Outline drawing 5
Size 2220**



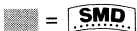
Chip capacitors (C0G)

Silver-nickel-tin terminations

Tape packaging in acc. with IEC 286-3, 8-mm blister tape

Ceramic material	C0G
Rated voltage V_R	50 Vdc
IEC climatic category	55/125/56
Temperature coefficient (tolerance)	$\pm 30 \cdot 10^{-6}/K$
Dissipation factor $\tan \delta$	$< 1,0 \cdot 10^{-3}$
Insulation resistance R_{is} (at 25 °C)	$> 10^5 M\Omega$ or
Time constant τ ($C_R \cdot R_{is}$; at 25 °C)	> 1000 s (whichever is lower)

C_R pF	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	20000 +
B37940; $V_R = 50$ Vdc			Size 0805			Capacitance tolerance $\pm 5\%$				
1,0 ¹⁾	1	B37940-K5010-C62	5000	250	25000					
1,2 ¹⁾		B37940-K5010-C262	5000	250	25000					
1,5 ¹⁾		B37940-K5010-C562	5000	250	25000					
1,8 ¹⁾		B37940-K5010-C862	5000	250	25000					
2,2 ¹⁾		B37940-K5020-C262	5000	250	25000					
2,7 ¹⁾		B37940-K5020-C762	5000	250	25000					
3,3 ¹⁾		B37940-K5030-C362	5000	250	25000					
3,9 ¹⁾		B37940-K5030-C962	5000	250	25000					
4,7 ¹⁾		B37940-K5040-C762	5000	250	25000					
5,6 ¹⁾		B37940-K5050-C662	5000	250	25000					
6,8 ¹⁾		B37940-K5060-C862	5000	250	25000					
8,2 ¹⁾		B37940-K5080-C262	5000	250	25000					
10		B37940-K5100-J62	5000	250	25000					
12		B37940-K5120-J62	5000	250	25000					
15		B37940-K5150-J62	5000	250	25000					
18		B37940-K5180-J62	5000	250	25000					
22		B37940-K5220-J62	5000	250	25000					
27		B37940-K5270-J62	5000	250	25000					
33		B37940-K5330-J62	5000	250	25000					
39		B37940-K5390-J62	5000	250	25000					
47		B37940-K5470-J62	5000	250	25000					
56		B37940-K5560-J62	5000	250	25000					
68		B37940-K5680-J62	5000	250	25000					
82		B37940-K5820-J62	5000	250	25000					
100		B37940-K5101-J62	5000	250	25000					
120		B37940-K5121-J62	5000	250	25000					
150		B37940-K5151-J62	5000	250	25000					
180		B37940-K5181-J62	5000	250	25000					
220		B37940-K5221-J62	5000	250	25000					
270		B37940-K5271-J62	5000	250	25000					
330		B37940-K5331-J62	5000	250	25000					
390		B37940-K5391-J62	5000	250	25000					
470	B37940-K5471-J62	5000	250	25000						



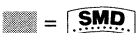
1) Capacitance tolerance $\pm 0,25$ pF



Chip capacitors (C0G)

C _R pF	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	20000 +
B37940; V _R = 50 Vdc			Size 0805			Capacitance tolerance ± 5 %				
560	1	B37940-K5561-J62	5000	250	25000					
680		B37940-K5681-J62	5000	250	25000					
820		B37940-K5821-J62	5000	250	25000					
1,0 nF		B37940-K5102-J62	5000	250	25000					
B37871; V _R = 50 Vdc			Size 1206			Capacitance tolerance ± 5 %				
10	2	B37871-K5100-J62	4000	250	20000					
12		B37871-K5120-J62	4000	250	20000					
15		B37871-K5150-J62	4000	250	20000					
18		B37871-K5180-J62	4000	250	20000					
22		B37871-K5220-J62	4000	250	20000					
27		B37871-K5270-J62	4000	250	20000					
33		B37871-K5330-J62	4000	250	20000					
39		B37871-K5390-J62	4000	250	20000					
47		B37871-K5470-J62	4000	250	20000					
56		B37871-K5560-J62	4000	250	20000					
68		B37871-K5680-J62	4000	250	20000					
82		B37871-K5820-J62	4000	250	20000					
100		B37871-K5101-J62	4000	250	20000					
120		B37871-K5121-J62	4000	250	20000					
150		B37871-K5151-J62	4000	250	20000					
180		B37871-K5181-J62	4000	250	20000					
220		B37871-K5221-J62	4000	250	20000					
270		B37871-K5271-J62	4000	250	20000					
330		B37871-K5331-J62	4000	250	20000					
390		B37871-K5391-J62	4000	250	20000					
470	B37871-K5471-J62	4000	250	20000						
560	B37871-K5561-J62	4000	250	20000						
680	B37871-K5681-J62	4000	250	20000						
820	B37871-K5821-J62	4000	250	20000						
1,0 nF	B37871-K5102-J62	4000	250	20000						
1,5 nF	B37871-K5152-J62	4000	250	20000						
2,2 nF	B37871-K5222-J62	4000	250	20000						
B37949; V _R = 50 Vdc			Size 1210			Capacitance tolerance ± 5 %				
3,3 nF	3	B37949-K5332-J62	4000	250	20000					
4,7 nF		B37949-K5472-J62	4000	250	20000					

C0G chip capacitors in sizes 0805 and 1206 are also available as lab assortment; for details refer to page 334.





Chip capacitors (X7R)

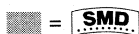
Silver-nickel-tin terminations

Tape packaging in acc. with IEC 286-3; up to size 1210 in 8-mm blister tape, sizes 1812 and 2220 in 12-mm blister tape

Ceramic material	X7R
Rated voltage V_R	25 Vdc, 50 Vdc
IEC climatic category	55/125/56
Max. rel. capacitance change $\Delta C/C_{25}$	$\pm 15\%$
Dissipation factor $\tan \delta$	$< 25 \cdot 10^{-3}$
Insulation resistance R_{is} (at 25 °C)	$> 10^5 \text{ M}\Omega$ or
Time constant τ ($C_R \cdot R_{is}$; at 25 °C)	$> 1000 \text{ s}$ (whichever is lower)

C_R nF	Drawing (page 182)	ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	20000 +
B37941; $V_R = 25 \text{ Vdc}$			Size 0805			Capacitance tolerance $\pm 10\%$				
68 100	1	B37941-K0683-K62	4000	250	20000					
		B37941-K0104-K62	3000	250	15000					
B37872; $V_R = 25 \text{ Vdc}$			Size 1206			Capacitance tolerance $\pm 10\%$				
220	2	B37872-K0224-K62	3000	250	15000					

C_R nF	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	20000 +
B37941; $V_R = 50 \text{ Vdc}$			Size 0805			Capacitance tolerance $\pm 10\%$				
1,0	1	B37941-K5102-K62	5000	250	25000					
1,5		B37941-K5152-K62	5000	250	25000					
2,2		B37941-K5222-K62	5000	250	25000					
3,3		B37941-K5332-K62	5000	250	25000					
4,7		B37941-K5472-K62	5000	250	25000					
6,8		B37941-K5682-K62	5000	250	25000					
10		B37941-K5103-K62	5000	250	25000					
15		B37941-K5153-K62	5000	250	20000					
22		B37941-K5223-K62	4000	250	20000					
33		B37941-K5333-K62	4000	250	20000					
47		B37941-K5473-K62	3000	250	15000					
100		B37941-K5104-K62	3000	250	15000					





Chip capacitors (X7R)

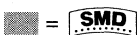
C _R nF	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	20000 +
B37872; V _R = 50 Vdc			Size 1206			Capacitance tolerance ± 10 %				
1,0	2	B37872-K5102-K62	4000	250	20000					
1,5		B37872-K5152-K62	4000	250	20000					
2,2		B37872-K5222-K62	4000	250	20000					
3,3		B37872-K5332-K62	4000	250	20000					
4,7		B37872-K5472-K62	4000	250	20000					
6,8		B37872-K5682-K62	4000	250	20000					
10		B37872-K5103-K62	4000	250	20000					
15		B37872-K5153-K62	4000	250	20000					
22		B37872-K5223-K62	4000	250	20000					
33		B37872-K5333-K62	4000	250	20000					
47		B37872-K5473-K62	4000	250	20000					
68	B37872-K5683-K62	4000	250	20000						
100	B37872-K5104-K62	4000	250	20000						

B37950; V _R = 50 Vdc			Size 1210			Capacitance tolerance ± 10 %				
100	3	B37950-K5104-K62	4000	250	20000					
150		B37950-K5154-K62	4000	250	20000					
220		B37950-K5224-K62	3000	250	15000					

C _R nF	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	250 +	500 +	1500 +	4500 +
B37953; V _R = 50 Vdc			Size 1812			Capacitance tolerance ± 10 %				
220	4	B37953-K5224-K62	1500	100	6000					
330		B37953-K5334-K62	1500	100	6000					
470		B37953-K5474-K62	1500	100	6000					

B37956; V _R = 50 Vdc			Size 2220			Capacitance tolerance ± 10 %				
470 1,0 μF	5	B37956-K5474-K62	1500	100	6000					
		B37956-K5105-K62	1500	100	6000					

X7R and Z5U chip capacitors are also available as lab assortment; for details refer to page 334.



Chip capacitors (Z5U)

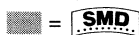
Silver-nickel-tin terminations

Tape packaging in acc. with IEC 286-3; up to size 1210 in 8-mm blister tape, sizes 1812 and 2220 in 12-mm blister tape

Ceramic material	Z5U (Y5U)
Rated voltage V_R	25 Vdc, 50 Vdc
IEC climatic category	30/085/56
Max. rel. capacitance change $\Delta C/C_{25}$	+ 22/-56 %
Dissipation factor $\tan \delta$	< $30 \cdot 10^{-3}$
Insulation resistance R_{is} (at 25 °C)	> 10^4 M Ω or
Time constant τ ($C_R \cdot R_{is}$; at 25 °C)	> 500 s (whichever is lower)

C_R	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	
B37942; $V_R = 25$ Vdc			Size 0805			Capacitance tolerance ± 20 %				
220	1	B37942-K0224-M62	3000	250	15000					
B37873; $V_R = 25$ Vdc			Size 1206			Capacitance tolerance ± 20 %				
▼ 1 μ F	2	B37873-K0105-M62	3000	250	15000					

C_R	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	20000 +
B37942; $V_R = 50$ Vdc			Size 0805			Capacitance tolerance ± 20 %				
47 100	1	B37942-K5473-M62 B37942-K5104-M62	5000 4000	250 250	25000 20000					
B37873; $V_R = 50$ Vdc			Size 1206			Capacitance tolerance ± 20 %				
47 100 220 470	2	B37873-K5473-M62 B37873-K5104-M62 B37873-K5224-M62 B37873-K5474-M62	4000 4000 4000 3000	250 250 250 250	20000 20000 20000 15000					
B37951; $V_R = 50$ Vdc			Size 1210			Capacitance tolerance ± 20 %				
220 470 1 μ F	3	B37951-K5224-M62 B37951-K5474-M62 B37951-K5105-M62	4000 4000 3000	250 250 250	20000 20000 15000					

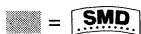




Chip capacitors (Z5U)

C_R	Drawing (page 182)	Ordering code	PU	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	250 +	500 +	1500 +	4500 +
nF										
B37954; $V_R = 50$ Vdc			Size 1812			Capacitance tolerance $\pm 20\%$				
470 1 μ F	4	B37954-K5474-M62 B37954-K5105-M62	1500 1500	100 100	6000 6000					
B37957; $V_R = 50$ Vdc			Size 2220			Capacitance tolerance $\pm 20\%$				
1,0 μ F 2,2 μ F	5	B37957-K5105-M62 B37957-K5225-M62	1500 1500	100 100	6000 6000					

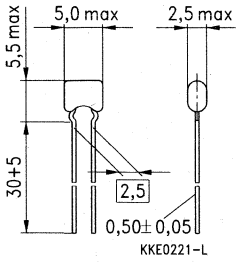
X7R and Z5U chip capacitors are also available as lab assortment; for details refer to page 334.



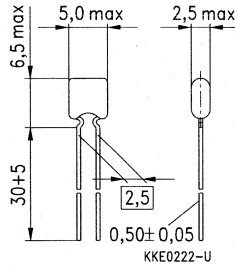
Multilayer Ceramic Capacitors Outline Drawings

Radial-lead capacitors

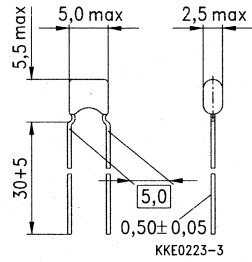
Outline drawing 6



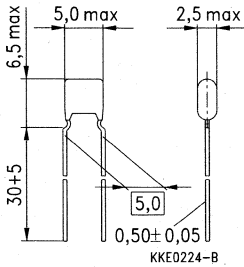
Outline drawing 7



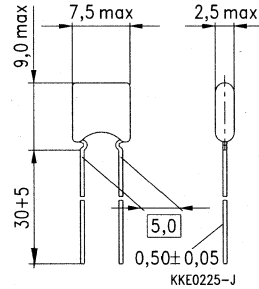
Outline drawing 8



Outline drawing 9



Outline drawing 10



Multilayer Ceramic Capacitors

Radial-lead capacitors (COG)

Plastic encapsulation

Tinned iron-nickel leads

Ceramic material	COG
Rated voltage V_R	50 Vdc; 100 Vdc
IEC climatic category	55/125/56
Temperature coefficient (tolerance)	$\pm 30 \cdot 10^{-6}/K$
Dissipation factor $\tan \delta$	$< 1,0 \cdot 10^{-3}$
Insulation resistance R_{is} (at 25 °C)	$> 10^5 M\Omega$ or
Time constant τ ($C_R \cdot R_{is}$; at 25 °C)	> 1000 s (whichever is lower)

C_R pF	Outline drawing (see page 189)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
B37979; $V_R = 50$ Vdc Lead spacing $\square e$ = 2,5 mm Capacitance tolerance ± 5 %								
100	6	B37979-N5101-J	200	4000				
220		B37979-N5221-J	200	4000				
470		B37979-N5471-J	200	4000				
1 nF		B37979-N5102-J	200	4000				
1,5 nF		B37979-N5152-J	200	4000				
2,2 nF		B37979-N5222-J	200	4000				
B37986; $V_R = 50$ Vdc Lead spacing $\square e$ = 2,5 mm Capacitance tolerance ± 5 %								
3,3 nF	7	B37986-N5332-J	50	4000				
4,7 nF		B37986-N5472-J	50	4000				
B37979; $V_R = 50$ Vdc Lead spacing $\square e$ = 5,0 mm Capacitance tolerance ± 5 %								
100	8	B37979-G5101-J	200	4000				
220		B37979-G5221-J	200	4000				
470		B37979-G5471-J	200	4000				
1 nF		B37979-G5102-J	200	4000				
1,5 nF		B37979-G5152-J	200	4000				
2,2 nF		B37979-G5222-J	200	4000				
B37986; $V_R = 50$ Vdc Lead spacing $\square e$ = 5,0 mm Capacitance tolerance ± 5 %								
3,3 nF	9	B37986-G5332-J	50	4000				
4,7 nF		B37986-G5472-J	50	4000				
10 nF		B37986-G5103-J	50	4000				

Multilayer Ceramic Capacitors

Radial-lead capacitors (C0G)

C _R pF	Outline drawing (see page 189)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
B37979; V _R = 100 Vdc		Lead spacing \boxed{e} = 2,5 mm			Capacitance tolerance ± 5 %			
10	6	B37979-N1100-J	200	4000				
15		B37979-N1150-J	200	4000				
22		B37979-N1220-J	200	4000				
33		B37979-N1330-J	200	4000				
47		B37979-N1470-J	200	4000				
68		B37979-N1680-J	200	4000				
100		B37979-N1101-J	200	4000				
150		B37979-N1151-J	200	4000				
220		B37979-N1221-J	200	4000				
330		B37979-N1331-J	200	4000				
470		B37979-N1471-J	200	4000				
680		B37979-N1681-J	200	4000				
1,0 nF		B37979-N1102-J	200	4000				
B37979; V _R = 100 Vdc		Lead spacing \boxed{e} = 5,0 mm			Capacitance tolerance ± 5 %			
10	8	B37979-G1100-J	200	4000				
15		B37979-G1150-J	200	4000				
22		B37979-G1220-J	200	4000				
33		B37979-G1330-J	200	4000				
47		B37979-G1470-J	200	4000				
68		B37979-G1680-J	200	4000				
100		B37979-G1101-J	200	4000				
150		B37979-G1151-J	200	4000				
220		B37979-G1221-J	200	4000				
330		B37979-G1331-J	200	4000				
470		B37979-G1471-J	200	4000				
680		B37979-G1681-J	200	4000				
1,0 nF		B37979-G1102-J	200	4000				

Radial-lead C0G capacitors with 5,0 mm lead spacing are also available as lab assortment; for details refer to page 335.

Multilayer Ceramic Capacitors

Radial-lead capacitors (X7R)

Plastic encapsulation

Tinned iron-nickel leads

Ceramic material	X7R
Rated voltage V_R	50 Vdc; 100 Vdc
IEC climatic category	55/125/56
Max. rel. capacitance change $\Delta C/C_{25}$	$\pm 15\%$
Dissipation factor $\tan \delta$	$< 25 \cdot 10^{-3}$
Insulation resistance R_{is} (at 25 °C)	$> 10^5 \text{ M}\Omega$ or
Time constant τ ($C_R \cdot R_{is}$; at 25 °C)	$> 1000 \text{ s}$ (whichever is lower)

C_R nF	Outline drawing (see page 189)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
B37981; $V_R = 50 \text{ Vdc}$ Lead spacing $\overline{e} = 2,5 \text{ mm}$ Capacitance tolerance $\pm 10\%$								
4,7	6	B37981-M5472-K	200	4000				
10		B37981-M5103-K	200	4000				
22		B37981-M5223-K	200	4000				
33		B37981-M5333-K	200	4000				
47		B37981-M5473-K	200	4000				
B37987; $V_R = 50 \text{ Vdc}$ Lead spacing $\overline{e} = 2,5 \text{ mm}$ Capacitance tolerance $\pm 10\%$								
68	7	B37987-M5683-K	100	4000				
100		B37987-M5104-K	100	4000				
150		B37987-M5154-K	100	4000				
B37981; $V_R = 50 \text{ Vdc}$ Lead spacing $\overline{e} = 5,0 \text{ mm}$ Capacitance tolerance $\pm 10\%$								
4,7	8	B37981-F5472-K	200	4000				
10		B37981-F5103-K	200	4000				
22		B37981-F5223-K	200	4000				
33		B37981-F5333-K	200	4000				
47		B37981-F5473-K	200	4000				
B37987; $V_R = 50 \text{ Vdc}$ Lead spacing $\overline{e} = 5,0 \text{ mm}$ Capacitance tolerance $\pm 10\%$								
68	9	B37987-F5683-K	100	4000				
100		B37987-F5104-K	100	4000				
150		B37987-F5154-K	100	4000				
220		B37987-F5224-K	100	4000				

C_R nF	Outline drawing (see page 195)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	100 +	250 +	500 +
B37984; $V_R = 50 \text{ Vdc}$ Lead spacing $\overline{e} = 5,0 \text{ mm}$ Capacitance tolerance $\pm 10\%$								
330	10	B37984-M5334-K	25	1000				
470		B37984-M5474-K	25	1000				
680		B37984-M5684-K	25	1000				
1,0 μF		B37984-M5105-K	25	1000				

Multilayer Ceramic Capacitors

Radial-lead capacitors (X7R)

C _R	Outline drawing (see page 189)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
B37981; V _R = 100 Vdc		Lead spacing \overline{e} = 2,5 mm		Capacitance tolerance ± 10 %				
470 pF	6	B37981-M1471-K	200	4000				
1,0		B37981-M1102-K	200	4000				
2,2		B37981-M1222-K	200	4000				
4,7		B37981-M1472-K	200	4000				
10		B37981-M1103-K	200	4000				
B37987; V _R = 100 Vdc		Lead spacing \overline{e} = 2,5 mm		Capacitance tolerance ± 10 %				
22	7	B37987-M1223-K	100	4000				
47		B37987-M1473-K	100	4000				
100		B37987-M1104-K	100	4000				
B37981; V _R = 100 Vdc		Lead spacing \overline{e} = 5,0 mm		Capacitance tolerance ± 10 %				
470 pF	8	B37981-F1471-K	200	4000				
1,0		B37981-F1102-K	200	4000				
2,2		B37981-F1222-K	200	4000				
4,7		B37981-F1472-K	200	4000				
10	B37981-F1103-K	200	4000					
B37987; V _R = 100 Vdc		Lead spacing \overline{e} = 5,0 mm		Capacitance tolerance ± 10 %				
22	9	B37987-F1223-K	100	4000				
47		B37987-F1473-K	100	4000				
100		B37987-F1104-K	100	4000				

Radial-lead X7R and Z5U capacitors with 5,0 mm lead spacing are also available as lab assortment; for details refer to page 335.

Multilayer Ceramic Capacitors

Radial-lead capacitors (Z5U)

Plastic encapsulation

Tinned iron-nickel leads

Ceramic material	Z5U
Rated voltage V_R	50 Vdc
IEC climatic category	25/085/56
Max. rel. capacitance change $\Delta C/C_{25}$	+ 22/- 56 %
Dissipation factor $\tan \delta$	< $30 \cdot 10^{-3}$
Insulation resistance R_{is} (at 25 °C)	> $10^4 \text{ M}\Omega$ or
Time constant τ ($C_R \cdot R_{is}$; at 25 °C)	> 500 s (whichever is lower)

C_R	Outline drawing (see page 189)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
B37982; $V_R = 50 \text{ Vdc}$ Lead spacing \square = 5,0 mm Capacitance tolerance $\pm 20 \%$								
10	8	B37982-G5103-M	200	4000				
22		B37982-G5223-M	200	4000				
47		B37982-G5473-M	200	4000				
100		B37982-G5104-M	200	4000				
B37988; $V_R = 50 \text{ Vdc}$ Lead spacing \square = 5,0 mm Capacitance tolerance $\pm 20 \%$								
220	9	B37988-G5224-M	100	4000				
470		B37988-G5474-M	100	4000				
1 μF		B37988-G5105-M	100	4000				

C_R	Outline drawing (see page 195)	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	100 +	250 +	500 +
B37985; $V_R = 50 \text{ Vdc}$ Lead spacing \square = 5,0 mm Capacitance tolerance $\pm 20 \%$								
2,2	10	B37985-N5225-M	25	1000				
3,3		B37985-N5335-M	25	1000				

Film Capacitors

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▼ Newly included in this edition		
MKT capacitors, 5 mm lead spacing, taped, Ammo pack $V_R = 63$ and 100 V, $1,0$ nF ... $1,5$ μ F	B 32 529	197
MKT capacitors, axial leads, $V_R = 50$... 630 V, 33 nF ... 100 μ F (Replacement for MKL (MKU) capacitor B 32 110)	B 32 537	205

MKT capacitors in plastic case (5 mm lead spacing) are also available as lab assortment; for details refer to page 336.

Most of our capacitors can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

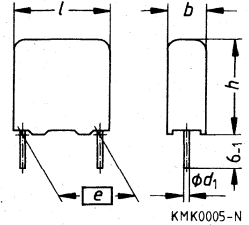
Further technical literature

Data Book "Film Capacitors", B429-P2904-X-X-7600

Metallized Polyester Film Capacitors (MKT)

For standard applications; self-healing
Detail specifications: CECC 30 401-043,
CECC 30401-052/DIN 44112

Dielectric: polyethylene terephthalate (polyester)
 Stacked-film technology for lead spacing
 5 ... 15 mm (50 ... 400 Vdc)
 Flame-retardant (UL 94V-0) plastic case with
 epoxy resin sealing



Dimensions in mm

$e \pm 0,4$	$\varnothing d_1$	Type
5,0	0,5	B 32 529
7,5	0,5	B 32 520
10,0	0,5 ¹⁾ /0,6	B 32 521
15,0	0,8	B 32 522
22,5	0,8	B 32 523
27,5	0,8	B 32 524

1) 0,5 for capacitor width $b = 4$ mm

Rated voltage V_R 50 ... 630 Vdc
 Permissible ac voltage V_{rms} 32 ... 220 Vac ($f \leq 60$ Hz)
 IEC climatic category 55/100/56
 Reliability at 40 °C, 0,5 V_R $1 \cdot 10^{-9}/h = 1$ fit

V_R Vdc	Lead spacing (mm)					
	5	7,5	10 ²⁾	15 ²⁾	22,5 ²⁾	27,5 ²⁾
50	150					
63	160	80		30	(2)	
100	200	100	75	50	(2,5)	(2)
250		200	150	100 (10)	(4)	(3)
400		250	175	125(12,5)	(7)	(5)
630			(20)	(15)	(10)	(8)

C_R μF	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +

B 32 529

$V_R = 50$ Vdc, $V_{rms} = 32$ Vac Lead spacing $e = 5$ mm Capacitance tolerance $\pm 10\%$

1,0	4,5 × 9,5 × 7,3	B32529-C5105-K	100	6000					
2,2	7,2 × 13,0 × 7,8	B32529-C5225-K	100	4000					
3,3	7,2 × 13,0 × 7,8	B32529-C5335-K	100	4000					

1) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} . See also calculation example in data book.
 2) Values in parentheses for wound capacitors.

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) b × h × l	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	1000 +	5000 +	10000 +
μF	mm							
V _R = 63 Vdc, V _{rms} = 40 Vac		Lead spacing [e] = 5 mm		Capacitance tolerance ± 10 %				
0,10	2,5 × 6,5 × 7,2	B32529-C104-K	500	8000				
0,15	2,5 × 6,5 × 7,2	B32529-C154-K	500	8000				
0,22	2,5 × 6,5 × 7,2	B32529-C224-K	500	8000				
0,33	3,0 × 6,5 × 7,2	B32529-C334-K	500	8000				
0,47	3,5 × 8,0 × 7,2	B32529-C474-K	500	8000				
0,68	4,5 × 9,5 × 7,2	B32529-C684-K	500	6000				
1,0	4,5 × 9,5 × 7,2	B32529-C105-K	500	6000				
1,5	6,0 × 10,5 × 7,5	B32529-C155-K	500	4000				

B 32 529, taped, Ammo pack
V_R = 63 Vdc, V_{rms} = 40 Vac Lead spacing [e] = 5 mm Capacitance tolerance ± 10 %

▼ 0,10	2,5 × 6,5 × 7,2	B32529-C104-K289	3200	12800				
▼ 0,15	2,5 × 6,5 × 7,2	B32529-C154-K289	3200	12800				
▼ 0,22	2,5 × 6,5 × 7,2	B32529-C224-K289	2700	10800				
▼ 0,33	3,0 × 6,5 × 7,2	B32529-C334-K289	2300	9200				
▼ 0,47	3,5 × 8,0 × 7,2	B32529-C474-K289	2300	9200				
▼ 0,68	4,5 × 9,5 × 7,2	B32529-C684-K289	1800	7200				
▼ 1,0	4,5 × 9,5 × 7,2	B32529-C105-K289	1600	6400				
▼ 1,5	6,0 × 10,5 × 7,5	B32529-C155-K289	1300	5200				

C _R	Dimensions (max.) b × h × l	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	5000 +		
nF	mm							

B 32 529
V_R = 100 Vdc, V_{rms} = 63 Vac Lead spacing [e] = 5 mm Capacitance tolerance ± 10 %

1,0	2,5 × 6,5 × 7,2	B32529-C1102-K	1000	8000				
1,5	2,5 × 6,5 × 7,2	B32529-C1152-K	1000	8000				
2,2	2,5 × 6,5 × 7,2	B32529-C1222-K	1000	8000				
3,3	2,5 × 6,5 × 7,2	B32529-C1332-K	1000	8000				
4,7	2,5 × 6,5 × 7,2	B32529-C1472-K	1000	8000				
6,8	2,5 × 6,5 × 7,2	B32529-C1682-K	1000	8000				
10	2,5 × 6,5 × 7,2	B32529-C1103-K	1000	8000				
15	2,5 × 6,5 × 7,2	B32529-C1153-K	1000	8000				
22	2,5 × 6,5 × 7,2	B32529-C1223-K	1000	8000				
33	2,5 × 6,5 × 7,2	B32529-C1333-K	1000	8000				
47	2,5 × 6,5 × 7,2	B32529-C1473-K	1000	8000				
68	2,5 × 6,5 × 7,2	B32529-C1683-K	1000	8000				

MKT capacitors with 5 mm lead spacing (B 32 529) are also available as lab assortment; for details refer to page 336.

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	500 +	1000 +	5000 +	10000 +

B 32 529, taped, Ammo pack

$V_R = 100 \text{ Vdc}$, $V_{rms} = 63 \text{ Vac}$

Lead spacing $\boxed{e} = 5 \text{ mm}$

Capacitance tolerance $\pm 10 \%$

▼ 1,0	2,5 × 6,5 × 7,2	B32529-C1102-K289	3200	12800					
▼ 1,5	2,5 × 6,5 × 7,2	B32529-C1152-K289	3200	12800					
▼ 2,2	2,5 × 6,5 × 7,2	B32529-C1222-K289	3200	12800					
▼ 3,3	2,5 × 6,5 × 7,2	B32529-C1332-K289	3200	12800					
▼ 4,7	2,5 × 6,5 × 7,2	B32529-C1472-K289	3200	12800					
▼ 6,8	2,5 × 6,5 × 7,2	B32529-C1682-K289	3200	12800					
▼ 10	2,5 × 6,5 × 7,2	B32529-C1103-K289	3200	12800					
▼ 15	2,5 × 6,5 × 7,2	B32529-C1153-K289	3200	12800					
▼ 22	2,5 × 6,5 × 7,2	B32529-C1223-K289	3200	12800					
▼ 33	2,5 × 6,5 × 7,2	B32529-C1333-K289	3200	12800					
▼ 47	2,5 × 6,5 × 7,2	B32529-C1473-K289	3200	12800					
▼ 68	2,5 × 6,5 × 7,2	B32529-C1683-K289	3200	12800					

B 32 520

$V_R = 63 \text{ Vdc}$, $V_{rms} = 40 \text{ Vac}$

Lead spacing $\boxed{e} = 7,5 \text{ mm}$

Capacitance tolerance $\pm 10 \%$

0,22 μF	2,5 × 7,0 × 10,0	B32520-C224-K	500	10000					
0,33 μF	2,5 × 7,0 × 10,0	B32520-C334-K	500	10000					
0,47 μF	3,0 × 8,0 × 10,0	B32520-C474-K	250	8000					
1,0 μF	5,0 × 10,5 × 10,0	B32520-C105-K	250	4000					
1,5 μF	5,0 × 10,5 × 10,0	B32520-C155-K	250	4000					
2,2 μF	6,0 × 12,0 × 10,0	B32520-C225-K	250	3000					

$V_R = 100 \text{ Vdc}$, $V_{rms} = 63 \text{ Vac}$

Lead spacing $\boxed{e} = 7,5 \text{ mm}$

Capacitance tolerance $\pm 10 \%$

47	2,5 × 7,0 × 10,0	B32520-C1473-K	500	10000					
68	2,5 × 7,0 × 10,0	B32520-C1683-K	500	10000					
0,10 μF	2,5 × 7,0 × 10,0	B32520-C1104-K	500	10000					
0,15 μF	3,0 × 8,0 × 10,0	B32520-C1154-K	500	8000					
0,22 μF	3,0 × 8,0 × 10,0	B32520-C1224-K	500	8000					
0,33 μF	4,0 × 8,5 × 10,0	B32520-C1334-K	500	6000					
0,47 μF	5,0 × 10,5 × 10,0	B32520-C1474-K	250	4000					
0,68 μF	6,0 × 12,0 × 10,0	B32520-C1684-K	250	3000					

$V_R = 250 \text{ Vdc}$, $V_{rms} = 160 \text{ Vac}$

Lead spacing $\boxed{e} = 7,5 \text{ mm}$

Capacitance tolerance $\pm 10 \%$

15	2,5 × 7,0 × 10,0	B32520-C3153-K	500	10000					
22	2,5 × 7,0 × 10,0	B32520-C3223-K	500	10000					
33	2,5 × 7,0 × 10,0	B32520-C3333-K	500	10000					
47	2,5 × 7,0 × 10,0	B32520-C3473-K	500	10000					
68	3,0 × 8,0 × 10,0	B32520-C3683-K	500	8000					
0,10 μF	4,0 × 8,5 × 10,0	B32520-C3104-K	500	6000					
0,15 μF	5,0 × 10,5 × 10,0	B32520-C3154-K	500	4000					

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	500 +	1000 +	5000 +	10000 +
nF	mm								

B 32 520

V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing [e] = 7,5 mm Capacitance tolerance ± 10 %

1,0	2,5 × 7,0 × 10,0	B32520-C6102-K	500	10000					
1,5	2,5 × 7,0 × 10,0	B32520-C6152-K	500	10000					
2,2	2,5 × 7,0 × 10,0	B32520-C6222-K	500	10000					
3,3	2,5 × 7,0 × 10,0	B32520-C6332-K	500	10000					
4,7	2,5 × 7,0 × 10,0	B32520-C6472-K	500	10000					
6,8	2,5 × 7,0 × 10,0	B32520-C6682-K	500	10000					
10	2,5 × 7,0 × 10,0	B32520-C6103-K	500	10000					
15	3,0 × 8,0 × 10,0	B32520-C6153-K	500	8000					
22	4,0 × 8,5 × 10,0	B32520-C6223-K	500	6000					
33	5,0 × 10,5 × 10,0	B32520-C6333-K	500	4000					
47	5,0 × 10,5 × 10,0	B32520-C6473-K	500	4000					

B 32 521

V_R = 100 Vdc, V_{rms} = 63 Vac Lead spacing [e] = 10 mm Capacitance tolerance ± 10 %

0,15 µF	4,0 × 7,0 × 13,0	B32521-C1154-K	500	4000					
0,22 µF	4,0 × 7,0 × 13,0	B32521-C1224-K	500	4000					
0,33 µF	4,0 × 7,0 × 13,0	B32521-C1334-K	500	4000					
0,47 µF	4,0 × 9,0 × 13,0	B32521-C1474-K	500	4000					

V_R = 250 Vdc, V_{rms} = 160 Vac Lead spacing [e] = 10 mm Capacitance tolerance ± 10 %

47	4,0 × 7,0 × 13,0	B32521-C3473-K	500	4000					
68	4,0 × 7,0 × 13,0	B32521-C3683-K	500	4000					
0,10 µF	4,0 × 7,0 × 13,0	B32521-C3104-K	500	4000					
0,15 µF	4,0 × 9,0 × 13,0	B32521-C3154-K	500	4000					
0,22 µF	5,0 × 11,0 × 13,0	B32521-C3224-K	500	4000					

V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing [e] = 10 mm Capacitance tolerance ± 10 %

10	4,0 × 7,0 × 13,0	B32521-C6103-K	500	4000					
15	4,0 × 7,0 × 13,0	B32521-C6153-K	500	4000					
22	4,0 × 7,0 × 13,0	B32521-C6223-K	500	4000					
33	4,0 × 9,0 × 13,0	B32521-C6333-K	1000	4000					
47	5,0 × 11,0 × 13,0	B32521-C6473-K	1000	4000					
0,10 µF	6,0 × 12,0 × 13,0	B32521-C6104-K	1000	4000					

V_R = 630 Vdc, V_{rms} = 220 Vac ¹⁾ Lead spacing [e] = 10 mm Capacitance tolerance ± 10 %

10	4,0 × 9,0 × 13,0	B32521-N8103-K	250	4000					
22	5,0 × 11,0 × 13,0	B32521-N8223-K	250	4000					

B 32 522

V_R = 63 Vdc, V_{rms} = 40 Vac Lead spacing [e] = 15 mm Capacitance tolerance ± 10 %

					Min Stück	250	500	1000	
2,2 µF	5,0 × 10,5 × 18,0	B32522-C225-K	100	4000					
3,3 µF	6,0 × 11,0 × 18,0	B32522-C335-K	100	2000					
4,7 µF	7,0 × 12,5 × 18,0	B32522-C475-K	100	2000					

1) Not for direct line operation

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100				
	μF				mm	Min. qty. +	250 +	500 +	1000 +
B 32 522									
V_R = 100 Vdc, V_{rms} = 63 Vac Lead spacing [e] = 15 mm Capacitance tolerance ± 10 %									
0,33	5,0 × 10,5 × 18,0	B32522-C1334-K	250	4000					
0,47	5,0 × 10,5 × 18,0	B32522-C1474-K	250	4000					
1,0	5,0 × 10,5 × 18,0	B32522-C1105-K	250	4000					
1,5	6,0 × 11,0 × 18,0	B32522-C1155-K	100	4000					
2,2	7,0 × 12,5 × 18,0	B32522-C1225-K	100	2000					
V_R = 250 Vdc, V_{rms} = 160 Vac Lead spacing [e] = 15 mm Capacitance tolerance ± 10 %									
0,10	5,0 × 10,5 × 18,0	B32522-C3104-K	500	4000					
0,22	5,0 × 10,5 × 18,0	B32522-C3224-K	500	4000					
0,33	5,0 × 10,5 × 18,0	B32522-C3334-K	250	4000					
0,47	6,0 × 11,0 × 18,0	B32522-C3474-K	250	4000					
0,68	7,0 × 12,5 × 18,0	B32522-C3684-K	250	2000					
1,0	8,5 × 14,5 × 18,0	B32522-N3105-K ¹⁾	200	2000					
V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing [e] = 15 mm Capacitance tolerance ± 10 %									
47 nF	5,0 × 10,5 × 18,0	B32522-C6473-K	500	4000					
68 nF	5,0 × 10,5 × 18,0	B32522-C6683-K	500	4000					
0,10	5,0 × 10,5 × 18,0	B32522-N6104-K ¹⁾	500	4000					
0,15	5,0 × 10,5 × 18,0	B32522-N6154-K ¹⁾	500	4000					
0,22	6,0 × 11,0 × 18,0	B32522-N6224-K ¹⁾	500	4000					
0,33	8,5 × 14,5 × 18,0	B32522-N6334-K ¹⁾	200	2000					
0,47	8,5 × 14,5 × 18,0	B32522-N6474-K ¹⁾	200	2000					
V_R = 630 Vdc, V_{rms} = 220 Vac²⁾ Lead spacing [e] = 15 mm Capacitance tolerance ± 10 %									
33 nF	5,0 × 10,5 × 18,0	B32522-Q8333-K	250	4000					
47 nF	5,0 × 10,5 × 18,0	B32522-Q8473-K	250	4000					
68 nF	6,0 × 11,0 × 18,0	B32522-Q8683-K	250	4000					
0,10	7,0 × 12,5 × 18,0	B32522-Q8104-K	250	4000					
B 32 523									
V_R = 63 Vdc, V_{rms} = 40 Vac Lead spacing [e] = 22,5 mm Capacitance tolerance ± 10 %									
					Min. qty. +	100 +	250 +	500 +	1000 +
6,8	8,5 × 16,5 × 26,5	B32523-Q685-K	50	2040					
10,0	11,0 × 20,5 × 26,5	B32523-Q106-K	50	2040					
V_R = 100 Vdc, V_{rms} = 63 Vac Lead spacing [e] = 22,5 mm Capacitance tolerance ± 10 %									
2,2	6,0 × 15,0 × 26,5	B32523-Q1225-K	100	2880					
3,3	6,0 × 15,0 × 26,5	B32523-Q1335-K	100	2880					
4,7	8,5 × 16,5 × 26,5	B32523-Q1475-K	100	2040					
V_R = 250 Vdc, V_{rms} = 160 Vac Lead spacing [e] = 22,5 mm Capacitance tolerance ± 10 %									
0,47	6,0 × 15,0 × 26,5	B32523-Q3474-K	200	2880					
1,0	6,0 × 15,0 × 26,5	B32523-Q3105-K	200	2880					
2,2	10,5 × 16,5 × 26,5	B32523-Q3225-K	100	2160					

1) Winding technology
2) Not for direct line operation

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
μF	mm							
B 32 523								
V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing \overline{e} = 22,5 mm Capacitance tolerance ± 10 %								
0,22	6,0 × 15,0 × 26,5	B32523-Q6224-K	200	2880				
0,47	7,0 × 16,0 × 26,5	B32523-Q6474-K	200	2520				
V_R = 630 Vdc, V_{rms} = 220 Vac ¹⁾ Lead spacing \overline{e} = 22,5 mm Capacitance tolerance ± 10 %								
0,10	6,0 × 15,0 × 26,5	B32523-Q8104-K	200	2880				

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	100 +	250 +	500 +
μF	mm							
B 32 524								
V_R = 100 Vdc, V_{rms} = 63 Vac Lead spacing \overline{e} = 27,5 mm Capacitance tolerance ± 10 %								
6,8	11,0 × 21,0 × 31,5	B32524-Q1685-K	50	1280				
10	11,0 × 21,0 × 31,5	B32524-Q1106-K	50	1280				
15	12,5 × 21,5 × 31,5	B32524-Q1156-K	50	1120				
22	15,0 × 24,5 × 31,5	B32524-Q1226-K	50	960				
33	19,0 × 30,0 × 31,5	B32524-Q1336-K	50	720				
V_R = 250 Vdc, V_{rms} = 160 Vac Lead spacing \overline{e} = 27,5 mm Capacitance tolerance ± 10 %								
2,2	11,0 × 21,0 × 31,5	B32524-Q3225-K	50	1280				
4,7	11,0 × 21,0 × 31,5	B32524-Q3475-K	50	1280				
6,8	14,0 × 24,5 × 31,5	B32524-Q3685-K	50	1040				
10	18,0 × 27,5 × 31,5	B32524-Q3106-K	50	800				
V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing \overline{e} = 27,5 mm Capacitance tolerance ± 10 %								
1,0	11,0 × 21,0 × 31,5	B32524-Q6105-K	50	1280				
2,2	12,5 × 21,5 × 31,5	B32524-Q6225-K	50	1120				
3,3	15,0 × 24,5 × 31,5	B32524-Q6335-K	50	960				
4,7	18,0 × 27,5 × 31,5	B32524-Q6475-K	50	800				
V_R = 630 Vdc, V_{rms} = 220 Vac ¹⁾ Lead spacing \overline{e} = 27,5 mm Capacitance tolerance ± 10 %								
0,47	11,0 × 21,0 × 31,5	B32524-Q8474-K	50	1280				
1,0	14,0 × 24,5 × 31,5	B32524-Q8105-K	50	1040				

1) Not for direct line operation

Metallized Polyester Film Capacitors (MKT)

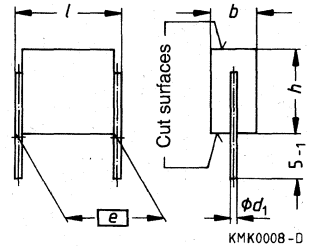
Stacked-film capacitor; extremely small size; self-healing

Detail specification: CECC 30401-007

Dielectric: polyethylene terephthalate (polyester)

Without coating¹⁾

B 32560 (lead spacing 7,5 mm) only for single-clad PCBs



Dimensions in mm

e ± 0,4	∅ d_1	Type
7,5	0,5	B 32 560
10,0	0,5	B 32 561
15,0	0,6	B 32 562

Rated voltage V_R 63 ... 400 Vdc
 Permissible ac voltage V_{rms} 40 ... 200 Vac ($f \leq 60$ Hz)
 IEC climatic category 55/100/56
 Reliability at 40 °C, 0,5 V_R $2 \cdot 10^{-9}/h = 2$ fit

V_R Vdc	Lead spacing (mm)		
	7,5	10	15
63	80		
100	100	75	50
250	200	150	100
400	250	175	125

C_R µF	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +

B 32 560

$V_R = 63$ Vdc, $V_{rms} = 40$ Vac

Lead spacing $e = 7,5$ mm

Capacitance tolerance ± 10 %

1,0	4,0 × 6,8 × 9,0	B32560-J105-K	200	4000				
2,2	6,5 × 8,2 × 9,0	B32560-J225-K	100	2000				
4,7	9,8 × 11,0 × 9,0	B32560-J475-K	50	1200				

1) Observe creepage distances and clearances! Insulating strength of cut surfaces $1,5 \cdot V_R$ or at least 300 Vdc.

2) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} . See also calculation example in data book.

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) b × h × l	Ordering code	Min. qty.	Max. qty.	Price per 100					
					Min. qty. +	250 +	500 +	1000 +	5000 +	
μF	mm									
B 32 560										
V _R = 100 Vdc, V _{rms} = 63 Vac			Lead spacing [e] = 7,5 mm			Capacitance tolerance ± 10 %				
0,10	2,0 × 4,7 × 9,0	B32560-J1104-K	300	12000						
0,15	2,0 × 4,7 × 9,0	B32560-J1154-K	300	12000						
0,22	2,3 × 5,1 × 9,0	B32560-J1224-K	300	10000						
0,33	2,7 × 5,7 × 9,0	B32560-J1334-K	300	8000						
0,47	3,4 × 6,1 × 9,0	B32560-J1474-K	300	6000						
0,68	4,2 × 6,5 × 9,0	B32560-J1684-K	200	4000						
1,0	5,5 × 7,0 × 9,0	B32560-J1105-K	100	2000						
2,2	8,5 × 9,2 × 9,0	B32560-J1225-K	100	1600						
V_R = 250 Vdc, V_{rms} = 160 Vac										
V _R = 250 Vdc, V _{rms} = 160 Vac			Lead spacing [e] = 7,5 mm			Capacitance tolerance ± 10 %				
33 nF	1,9 × 4,8 × 9,0	B32560-J3333-K	300	12000						
47 nF	2,2 × 5,2 × 9,0	B32560-J3473-K	300	10000						
68 nF	2,6 × 5,7 × 9,0	B32560-J3683-K	300	8000						
0,10	3,2 × 6,1 × 9,0	B32560-J3104-K	300	6000						
0,22	4,9 × 7,5 × 9,0	B32560-J3224-K	200	4000						
V_R = 400 Vdc, V_{rms} = 200 Vac										
V _R = 400 Vdc, V _{rms} = 200 Vac			Lead spacing [e] = 7,5 mm			Capacitance tolerance ± 10 %				
1,0 nF	2,2 × 5,5 × 9,0	B32560-J6102-K	300	10000						
1,5 nF	2,2 × 5,5 × 9,0	B32560-J6152-K	300	10000						
2,2 nF	2,2 × 5,5 × 9,0	B32560-J6222-K	300	10000						
3,3 nF	2,2 × 5,5 × 9,0	B32560-J6332-K	300	10000						
4,7 nF	2,2 × 5,5 × 9,0	B32560-J6472-K	300	10000						
6,8 nF	2,2 × 5,5 × 9,0	B32560-J6682-K	300	10000						
10 nF	2,2 × 5,5 × 9,0	B32560-J6103-K	300	10000						
15 nF	2,2 × 5,5 × 9,0	B32560-J6153-K	300	10000						
22 nF	2,2 × 5,5 × 9,0	B32560-J6223-K	300	10000						
47 nF	3,2 × 6,5 × 9,0	B32560-J6473-K	300	6000						
0,10	4,9 × 7,7 × 9,0	B32560-J6104-K	100	2000						
B 32 561										
V _R = 100 Vdc, V _{rms} = 63 Vac			Lead spacing [e] = 10 mm			Capacitance tolerance ± 10 %				
0,33	2,5 × 5,2 × 11,5	B32561-J1334-K	300	6000						
0,47	2,9 × 5,8 × 11,5	B32561-J1474-K	300	6000						
0,68	3,6 × 6,3 × 11,5	B32561-J1684-K	200	4000						
1,0	4,5 × 6,9 × 11,5	B32561-J1105-K	100	2000						
2,2	6,9 × 9,0 × 11,5	B32561-J1225-K	100	1600						
V_R = 250 Vdc, V_{rms} = 160 Vac										
V _R = 250 Vdc, V _{rms} = 160 Vac			Lead spacing [e] = 10 mm			Capacitance tolerance ± 10 %				
47 nF	2,1 × 4,4 × 11,5	B32561-J3473-K	300	8000						
0,10	2,8 × 5,3 × 11,5	B32561-J3104-K	300	6000						
0,15	3,3 × 6,0 × 11,5	B32561-J3154-K	200	4000						
0,22	4,2 × 6,6 × 11,5	B32561-J3224-K	200	4000						
0,47	6,3 × 8,5 × 11,5	B32561-J3474-K	100	2000						

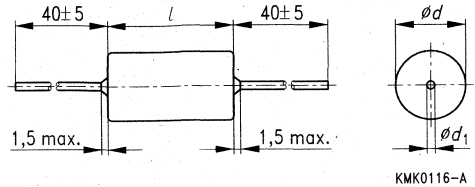
Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	250 +	500 +	1000 +	5000 +
B 32561									
V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing \bar{e} = 10 mm Capacitance tolerance ± 10 %									
10 nF	2,3 × 5,1 × 11,5	B32561-J6103-K	300	8000					
22 nF	2,3 × 5,1 × 11,5	B32561-J6223-K	300	8000					
33 nF	2,3 × 5,1 × 11,5	B32561-J6333-K	300	8000					
47 nF	2,6 × 6,0 × 11,5	B32561-J6473-K	300	6000					
0,10	4,0 × 6,9 × 11,5	B32561-J6104-K	200	4000					
0,22	6,6 × 8,5 × 11,5	B32561-J6224-K	100	2000					
B 32 562									
V_R = 100 Vdc, V_{rms} = 63 Vac Lead spacing \bar{e} = 15 mm Capacitance tolerance ± 10 %									
1,0	3,2 × 6,3 × 16,5	B32562-J1105-K	300	8000					
1,5	4,0 × 7,3 × 16,5	B32562-J1155-K	300	6000					
2,2	4,9 × 8,0 × 16,5	B32562-J1225-K	200	4000					
3,3	6,0 × 9,3 × 16,5	B32562-J1335-K	100	2000					
4,7	7,3 × 10,6 × 16,5	B32562-J1475-K	100	2000					
6,8	9,0 × 11,8 × 16,5	B32562-J1685-K	100	1600					
10	11,8 × 13,0 × 16,5	B32562-J1106-K	100	1000					
V_R = 250 Vdc, V_{rms} = 160 Vac Lead spacing \bar{e} = 15 mm Capacitance tolerance ± 10 %									
0,33	4,0 × 6,2 × 16,5	B32562-J3334-K	300	6000					
0,47	5,0 × 6,7 × 16,5	B32562-J3474-K	200	4000					
0,68	6,0 × 7,8 × 16,5	B32562-J3684-K	100	2000					
1,0	7,0 × 9,3 × 16,5	B32562-J3105-K	100	2000					
1,5	8,7 × 11,0 × 16,5	B32562-J3155-K	100	1600					
2,2	10,7 × 12,8 × 16,5	B32562-J3225-K	100	1000					
3,3	13,9 × 14,5 × 16,5	B32562-J3335-K	100	800					
V_R = 400 Vdc, V_{rms} = 200 Vac Lead spacing \bar{e} = 15 mm Capacitance tolerance ± 10 %									
0,10	3,3 × 5,6 × 16,5	B32562-J6104-K	300	8000					
0,15	3,9 × 6,5 × 16,5	B32562-J6154-K	300	6000					
0,22	4,7 × 7,5 × 16,5	B32562-J6224-K	200	4000					
0,33	6,0 × 8,3 × 16,5	B32562-J6334-K	100	2000					
0,47	7,3 × 9,3 × 16,5	B32562-J6474-K	100	2000					
0,68	8,9 × 10,8 × 16,5	B32562-J6684-K	100	1600					
1,0	10,9 × 12,5 × 16,5	B32562-J6105-K	100	1000					

Metallized Polyester Film Capacitors (MKT)

High-reliability capacitor Replacement for MKL (MKU) capacitors

Dielectric: polyester film with structured metallization
Metal tube sealed with epoxy resin
Insulating sleeve



Dimensions in mm

$\varnothing d$ (mm)	< 8,5	8,5 ... 15	> 15
$\varnothing d_1$ (mm)	0,6	0,8	1,0

Rated voltage V_R
Permissible ac voltage V_{rms}
IEC climatic category
Reliability at 40 °C, 0,5 V_R

50 ... 630 Vdc
20 ... 200 Vac ($f \leq 60$ Hz)
55/100/56
 $1 \cdot 10^{-9}/h = 1$ fit

Max. rate of voltage rise
 V_{pp}/τ in V/ μ s
(for $V_{pp} = V_R$)¹⁾

V_R Vdc	Capacitor length (mm)		
	18,5	21	34
50	2,5	1,5	—
100	13	9	6
160	20	12	8
250	23	16	10
630	40	26	18

C_R μ F	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	20 +	50 +	100 +

$V_R = 50$ Vdc, $V_{rms} = 20$ Vac

Capacitance tolerance $\pm 20\%$

▼ 0,47	7,4 × 18,5	B32537-B5474-M	50	200					
▼ 0,68	7,4 × 18,5	B32537-B5684-M	50	200					
▼ 1,0	8,4 × 18,5	B32537-B5105-M	50	200					
▼ 1,5	8,4 × 18,5	B32537-B5155-M	20	80					
▼ 2,2	8,4 × 21,0	B32537-B5225-M	20	80					
▼ 3,3	9,4 × 21,0	B32537-B5335-M	20	80					
▼ 4,7	10,7 × 21,0	B32537-B5475-M	20	80					
▼ 6,8	11,7 × 21,0	B32537-B5685-M	20	80					
▼ 10	12,7 × 21,0	B32537-B5106-M	10	40					

1) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} . See also calculation example in data book.

Metallized Polyester Film Capacitors (MKT)

C _R	Dimensions (max.) <i>d × l</i>	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	20 +	50 +	100 +
μF	mm								
V_R = 100 Vdc, V_{rms} = 35 Vac					Capacitance tolerance ± 20 %				
▼ 0,10	7,4 × 18,5	B32537-B1104-M	50	200					
▼ 0,15	7,4 × 18,5	B32537-B1154-M	50	200					
▼ 0,22	8,4 × 18,5	B32537-B1224-M	50	200					
▼ 0,33	8,4 × 18,5	B32537-B1334-M	50	200					
▼ 0,47	8,4 × 18,5	B32537-B1474-M	50	200					
▼ 0,68	8,4 × 18,5	B32537-B1684-M	50	200					
▼ 1,0	8,4 × 21,0	B32537-B1105-M	50	200					
▼ 1,5	8,4 × 21,0	B32537-B1155-M	50	200					
▼ 2,2	9,4 × 21,0	B32537-B1225-M	50	200					
▼ 3,3	10,7 × 21,0	B32537-B1335-M	50	200					
▼ 4,7	11,7 × 21,0	B32537-B1475-M	50	200					
▼ 6,8	10,7 × 34,0	B32537-B1685-M	20	80					
▼ 10	11,7 × 34,0	B32537-B1106-M	20	80					
▼ 22	15,7 × 34,0	B32537-B1226-M	20	80					
▼ 47	20,7 × 34,0	B32537-B1476-M	10	40					
▼ 100	29,7 × 34,0	B32537-B1107-M	5	20					
V_R = 160 Vdc, V_{rms} = 60 Vac					Capacitance tolerance ± 20 %				
					Min. qty. +	20 +	50 +	100 +	
▼ 0,10	7,4 × 18,5	B32537-B2104-M							
▼ 0,15	7,4 × 18,5	B32537-B2154-M							
▼ 0,22	7,4 × 18,5	B32537-B2224-M							
▼ 0,33	8,4 × 18,5	B32537-B2334-M							
▼ 0,47	8,4 × 21,0	B32537-B2474-M							
▼ 0,68	8,4 × 21,0	B32537-B2684-M							
▼ 1,0	9,4 × 21,0	B32537-B2105-M							
▼ 1,5	10,7 × 21,0	B32537-B2155-M							
▼ 2,2	11,7 × 21,0	B32537-B2225-M							
▼ 3,3	10,7 × 34,0	B32537-B2335-M							
▼ 4,7	12,7 × 34,0	B32537-B2475-M							
▼ 6,8	13,7 × 34,0	B32537-B2685-M							
▼ 10,0	15,7 × 34,0	B32537-B2106-M							
V_R = 250 Vdc, V_{rms} = 90 Vac					Capacitance tolerance ± 20 %				
▼ 0,10	8,4 × 18,5	B32537-B3104-M							
▼ 0,15	8,4 × 18,5	B32537-B3154-M							
▼ 0,22	8,4 × 18,5	B32537-B3224-M							
▼ 0,33	8,4 × 21,0	B32537-B3334-M							
▼ 0,47	9,4 × 21,0	B32537-B3474-M							
▼ 0,68	10,7 × 21,0	B32537-B3684-M							
▼ 1,0	11,7 × 21,0	B32537-B3105-M							
▼ 1,5	12,7 × 21,0	B32537-B3155-M							
▼ 2,2	15,7 × 21,0	B32537-B3225-M							
▼ 3,3	13,7 × 34,0	B32537-B3335-M							
▼ 4,7	15,7 × 34,0	B32537-B3475-M							
▼ 6,8	17,7 × 34,0	B32537-B3685-M							
▼ 10,0	20,7 × 34,0	B32537-B3106-M							

Metallized Polyester Film Capacitors (MKT)

C_R	Dimensions (max.) $d \times l$	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	20 +	50 +	
μF	mm								
$V_R = 630 \text{ Vdc}, V_{rms} = 200 \text{ Vac}$					Capacitance tolerance $\pm 20 \%$				
▼ 33 nF	8,4 × 18,5	B32537-B8333-M	20	80					
▼ 47 nF	8,4 × 18,5	B32537-B8473-M	20	80					
▼ 68 nF	8,4 × 21,0	B32537-B8683-M	20	80					
▼ 0,10	9,4 × 21,0	B32537-B8104-M	20	80					
▼ 0,15	10,7 × 21,0	B32537-B8154-M	20	80					
▼ 0,22	11,7 × 21,0	B32537-B8224-M	20	80					
▼ 0,33	12,7 × 21,0	B32537-B8334-M	20	80					
▼ 0,47	15,7 × 21,0	B32537-B8474-M	20	80					
▼ 0,68	13,7 × 34,0	B32537-B8684-M	10	40					
▼ 1,0	15,7 × 34,0	B32537-B8105-M	10	40					
▼ 1,5	17,7 × 34,0	B32537-B8155-M	10	40					
▼ 2,2	20,7 × 34,0	B32537-B8225-M	10	40					
▼ 3,3	25,7 × 34,0	B32537-B8335-M	5	20					
▼ 4,7	29,7 × 34,0	B32537-B8475-M	5	20					

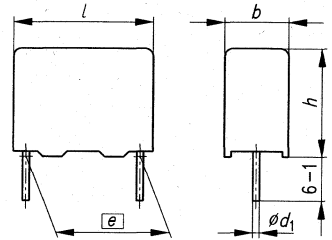


Metallized Polypropylene Film Capacitors (MKP)

Stacked-film capacitor; very small size; self-healing

Very high pulse strength,
high contact reliability
For pulse and ac voltage applications,
energy-saving lamps, TV S-correction

Dielectric: polypropylene
Flame-retardant (UL 94V-0) plastic case with
epoxy resin sealing



KMK0089-9

Dimensions in mm

$e \pm 0,4$	$\varnothing d_1$	Type
7,5	0,5	B 32 620
10	0,5 ¹⁾ /0,6	B 32 621
15	0,8	B 32 622

1) 0,5 for capacitor width $b = 4$ mm

Rated voltage V_R
Permissible ac voltage V_{rms}
IEC climatic category
Reliability at 40 °C, 0,5 V_R

160 ... 1000 Vdc
90 ... 500 Vac ($f \leq 1$ kHz)
55/100/56
 $1 \cdot 10^{-9}/h = 1$ fit

Max. rate of voltage rise
 V_{pp}/τ in V/ μ s
(for $V_{pp} = V_R$)²⁾

V_R Vdc	Lead spacing (mm)		
	7,5 mm	10 mm	15 mm
160	—	600	450
250	1200	—	600
400	1500	1050	750
630	2700	1800	1200
1000	3200	2400	1650

C_R nF	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty +	250 +	500 +	1000 +

B 32 620

$V_R = 250$ Vdc, $V_{rms} = 140$ Vac Lead spacing $e = 7,5$ mm Capacitance tolerance ± 10 %

47	$5,0 \times 10,5 \times 10,0$	B32620-A3473-K	200	4000				
68	$5,0 \times 10,5 \times 10,0$	B32620-A3683-K	200	4000				
0,10 μ F	$6,0 \times 12,0 \times 10,0$	B32620-A3104-K	200	3000				

2) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} .
See also calculation example in data book.

Metallized Polypropylene Film Capacitors (MKP)

C _R	Dimensions (max.) <i>b × h × l</i>	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	250 +	500 +	1000 +	5000 +
nF	mm								
B 32 620									
$V_R = 400 \text{ Vdc}, V_{rms} = 200 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
10	4,0 × 8,5 × 10,0	B32620-A4103-K	300	6000					
22	5,0 × 10,5 × 10,0	B32620-A4223-K	200	4000					
33	6,0 × 12,0 × 10,0	B32620-A4333-K	200	3000					
$V_R = 630 \text{ Vdc}, V_{rms} = 400 \text{ Vac}$					Lead spacing $[e] = 7,5 \text{ mm}$		Capacitance tolerance $\pm 10 \%$		
2,2	4,0 × 8,5 × 10,0	B32620-A6222-K	300	6000					
4,7	4,0 × 8,5 × 10,0	B32620-A6472-K	300	6000					
6,8	5,0 × 10,5 × 10,0	B32620-A6682-K	200	4000					
10	5,0 × 10,5 × 10,0	B32620-A6103-K	200	4000					
$V_R = 1000 \text{ Vdc}, V_{rms} = 500 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
1,5	4,0 × 8,5 × 10,0	B32620-A152-K	300	6000					
2,2	4,0 × 8,5 × 10,0	B32620-A222-K	300	6000					
4,7	5,0 × 10,5 × 10,0	B32620-A472-K	200	4000					
6,8	6,0 × 12,0 × 10,0	B32620-A682-K	200	3000					
B 32 621									
$V_R = 160 \text{ Vdc}, V_{rms} = 90 \text{ Vac}$					Lead spacing $[e] = 10 \text{ mm}$		Capacitance tolerance $\pm 10 \%$		
0,22 μF	6,0 × 12,0 × 13,0	B32621-A5224-K	200	4000					
$V_R = 400 \text{ Vdc}, V_{rms} = 200 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
47	6,0 × 12,0 × 13,0	B32621-A4473-K	200	4000					
$V_R = 630 \text{ Vdc}, V_{rms} = 400 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
4,7	4,0 × 9,0 × 13,0	B32621-A6472-K	200	4000					
6,8	4,0 × 9,0 × 13,0	B32621-A6682-K	200	4000					
10	4,0 × 9,0 × 13,0	B32621-A6103-K	200	4000					
15	5,0 × 11,0 × 13,0	B32621-A6153-K	200	4000					
22	6,0 × 12,0 × 13,0	B32621-A6223-K	200	4000					
$V_R = 1000 \text{ Vdc}, V_{rms} = 500 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
10	6,0 × 12,0 × 13,0	B32621-A103-K	200	4000					
B 32 622									
$V_R = 160 \text{ Vdc}, V_{rms} = 90 \text{ Vac}$					Lead spacing $[e] = 15 \text{ mm}$		Capacitance tolerance $\pm 10 \%$		
1,0 μF	6,0 × 17,5 × 18,0	B32622-A5105-K	100	2000					
$V_R = 250 \text{ Vdc}, V_{rms} = 140 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
0,22 μF	6,0 × 11,0 × 18,0	B32622-A3224-K	200	4000					
0,47 μF	8,5 × 14,5 × 18,0	B32622-A3474-K	100	2000					
0,68 μF	9,0 × 17,5 × 18,0	B32622-A3684-K	100	2000					
$V_R = 400 \text{ Vdc}, V_{rms} = 200 \text{ Vac}$					Capacitance tolerance $\pm 10 \%$				
0,10 μF	7,0 × 12,5 × 18,0	B32622-A4104-K	200	4000					
0,22 μF	9,0 × 17,5 × 18,0	B32622-A4224-K	100	2000					

Metallized Polypropylene Film Capacitors (MKP)

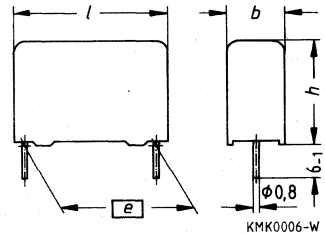
C_R	Dimensions (max.) $b \times h \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	250 +	500 +	1000 +	
nF	mm								
B 32 622									
$V_R = 630 \text{ Vdc}, V_{rms} = 400 \text{ Vac}$ Lead spacing \square = 15 mm Capacitance tolerance $\pm 10 \%$									
33	$5,0 \times 10,5 \times 18,0$	B32622-A6333-K	200	4000					
47	$6,0 \times 11,0 \times 18,0$	B32622-A6473-K	200	4000					
68	$7,0 \times 12,5 \times 18,0$	B32622-A6683-K	200	4000					
0,10 μF	$8,5 \times 14,5 \times 18,0$	B32622-A6104-K	100	2000					
0,15 μF	$9,0 \times 17,5 \times 18,0$	B32622-A6154-K	100	2000					
$V_R = 1000 \text{ Vdc}, V_{rms} = 500 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$									
10	$5,0 \times 10,5 \times 18,0$	B32622-A103-K	200	4000					
22	$7,0 \times 12,5 \times 18,0$	B32622-A223-K	200	4000					
47	$8,5 \times 14,5 \times 18,0$	B32622-A473-K	200	2000					

Metallized Polypropylene Film Capacitors (MKP)

Wound capacitor; small size; self-healing

High pulse strength, high contact reliability
 For TV S-correction, TV flyback, electronic ballasts

Dielectric: polypropylene
 Flame-retardant (UL 94 V-0) plastic case with epoxy resin sealing



Dimensions in mm

$e \pm 0,4$	Type
15,0	B 32 652
22,5	B 32 653
27,5	B 32 654

Rated voltage V_R
 Permissible ac voltage V_{rms}
 IEC climatic category
 Reliability at 40 °C, 0,5 V_R
 Max. rate of voltage rise
 V_{pp}/τ in V/ μ s
 (for $V_{pp} = V_R$)¹⁾

250 ... 2000 Vdc
 160 ... 700 Vac ($f \leq 1$ kHz)
 55/100/56
 $1 \cdot 10^{-9}/h = 1$ fit

V_R Vdc	Lead spacing (mm)		
	15	22,5	27,5
250	140	80	50
400	200	100	70
630	270	140	100
1000	400	230	150
1250	800	500	400
1600	1500	1000	700
2000	—	1400	900

C_R	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +

B 32 652
 $V_R = 250$ Vdc, $V_{rms} = 160$ Vac Lead spacing $e = 15$ mm Capacitance tolerance $\pm 10\%$

0,22 μ F	6,0 × 11,0 × 18,0	B32652-A3224-K	200	4000				
0,33 μ F	7,0 × 12,5 × 18,0	B32652-A3334-K	100	2000				
0,47 μ F	8,5 × 14,5 × 18,0	B32652-A3474-K	100	2000				

1) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} .
 See also calculation example in data book.

Metallized Polypropylene Film Capacitors (MKP)

C _R	Dimensions (max.) <i>b × h × l</i> mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
B 32 652									
V _R = 400 Vdc, V _{rms} = 200 Vac			Capacitance tolerance ± 10 %						
0,10 μF	5,0 × 10,5 × 18,0	B32652-A4104-K	200	4000					
0,15 μF	6,0 × 11,0 × 18,0	B32652-A4154-K	200	4000					
0,22 μF	7,0 × 12,5 × 18,0	B32652-A4224-K	100	4000					
0,33 μF	8,5 × 14,5 × 18,0	B32652-A4334-K	100	2000					
V _R = 630 Vdc, V _{rms} = 250 Vac			Lead spacing \square = 15 mm		Capacitance tolerance ± 10 %				
47 nF	5,0 × 10,5 × 18,0	B32652-A6473-K	200	4000					
68 nF	6,0 × 11,0 × 18,0	B32652-A6683-K	200	4000					
0,10 μF	7,0 × 12,5 × 18,0	B32652-A6104-K	200	4000					
0,15 μF	8,5 × 14,5 × 18,0	B32652-A6154-K	100	2000					
0,22 μF	9,0 × 17,5 × 18,0	B32652-A6224-K	100	2000					
V _R = 1000 Vdc, V _{rms} = 250 Vac			Capacitance tolerance ± 10 %						
10 nF	5,0 × 10,5 × 18,0	B32652-A103-K	200	4000					
22 nF	5,0 × 10,5 × 18,0	B32652-A223-K	200	4000					
33 nF	6,0 × 11,0 × 18,0	B32652-A333-K	200	4000					
47 nF	7,0 × 12,5 × 18,0	B32652-A473-K	200	4000					
68 nF	8,5 × 14,5 × 18,0	B32652-A683-K	100	2000					
0,10 μF	9,0 × 17,5 × 18,0	B32652-A104-K	100	2000					
V _R = 1250 Vdc, V _{rms} = 500 Vac			Capacitance tolerance ± 10 %						
6,8 nF	5,0 × 10,5 × 18,0	B32652-A7682-K	200	4000					
10 nF	6,0 × 11,0 × 18,0	B32652-A7103-K	200	4000					
22 nF	8,5 × 14,5 × 18,0	B32652-A7223-K	100	2000					
V _R = 1600 Vdc, V _{rms} = 500 Vac			Capacitance tolerance ± 10 %						
3,3 nF	5,0 × 10,5 × 18,0	B32652-A1332-K	200	4000					
4,7 nF	6,0 × 11,0 × 18,0	B32652-A1472-K	200	4000					
6,8 nF	7,0 × 12,5 × 18,0	B32652-A1682-K	200	4000					
10 nF	8,5 × 14,5 × 18,0	B32652-A1103-K	100	2000					
15 nF	9,0 × 17,5 × 18,0	B32652-A1153-K	100	2000					
B 32 653									
V _R = 250 Vdc, V _{rms} = 160 Vac			Lead spacing \square = 22,5 mm		Capacitance tolerance ± 10 %				
0,47 μF	7,0 × 16,0 × 26,5	B32653-A3474-K	50	2520					
1,0 μF	10,5 × 16,5 × 26,5	B32653-A3105-K	50	2160					
V _R = 400 Vdc, V _{rms} = 200 Vac			Capacitance tolerance ± 10 %						
0,33 μF	7,0 × 16,0 × 26,5	B32653-A4334-K	50	2520					
0,47 μF	8,5 × 16,5 × 26,5	B32653-A4474-K	50	2040					
0,68 μF	10,5 × 16,5 × 26,5	B32653-A4684-K	50	2160					
1,0 μF	11,0 × 20,5 × 26,5	B32653-A4105-K	50	2040					
V _R = 630 Vdc, V _{rms} = 250 Vac			Capacitance tolerance ± 10 %						
0,22 μF	8,5 × 16,5 × 26,5	B32653-A6224-K	50	2040					
0,33 μF	10,5 × 16,5 × 26,5	B32653-A6334-K	50	2160					
0,47 μF	11,0 × 20,5 × 26,5	B32653-A6474-K	50	2040					

Metallized Polypropylene Film Capacitors (MKP)

C _R	Dimensions (max.) <i>b × h × l</i> mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
B 32 653									
$V_R = 1000 \text{ Vdc}, V_{rms} = 250 \text{ Vac}$ Lead spacing $\boxed{e} = 22,5 \text{ mm}$ Capacitance tolerance $\pm 10 \%$									
47 nF	6,0 × 15,0 × 26,5	B32653-A473-K	100	2880					
68 nF	6,0 × 15,0 × 26,5	B32653-A683-K	100	2880					
0,10 μF	8,5 × 16,5 × 26,5	B32653-A104-K	50	2040					
0,15 μF	10,5 × 16,5 × 26,5	B32653-A154-K	50	2160					
0,22 μF	11,0 × 20,5 × 26,5	B32653-A224-K	50	2040					
$V_R = 1250 \text{ Vdc}, V_{rms} = 500 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$									
22 nF	6,0 × 15,0 × 26,5	B32653-A7223-K	100	2880					
33 nF	6,0 × 15,0 × 26,5	B32653-A7333-K	100	2880					
47 nF	8,5 × 16,5 × 26,5	B32653-A7473-K	50	2040					
0,10 μF	11,0 × 20,5 × 26,5	B32653-A7104-K	50	2040					
$V_R = 1600 \text{ Vdc}, V_{rms} = 500 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$									
22 nF	8,5 × 16,5 × 26,5	B32653-A1223-K	50	2040					
33 nF	10,5 × 16,5 × 26,5	B32653-A1333-K	50	2160					
47 nF	11,0 × 20,5 × 26,5	B32653-A1473-K	50	2040					
$V_R = 2000 \text{ Vdc}, V_{rms} = 700 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$									
2,2 nF	6,0 × 15,0 × 26,5	B32653-A2222-K	100	2880					
3,3 nF	6,0 × 15,0 × 26,5	B32653-A2332-K	100	2880					
4,7 nF	6,0 × 15,0 × 26,5	B32653-A2472-K	100	2880					
6,8 nF	8,5 × 16,5 × 26,5	B32653-A2682-K	50	2040					
10 nF	10,5 × 16,5 × 26,5	B32653-A2103-K	50	2160					
15 nF	11,0 × 20,5 × 26,5	B32653-A2153-K	50	2040					
B 32 654									
$V_R = 250 \text{ Vdc}, V_{rms} = 160 \text{ Vac}$ Lead spacing $\boxed{e} = 27,5 \text{ mm}$ Capacitance tolerance $\pm 10 \%$									
1,5 μF	11,0 × 21,0 × 31,5	B32654-A3155-K	50	1280					
2,2 μF	12,5 × 21,5 × 31,5	B32654-A3225-K	50	1120					
3,3 μF	15,0 × 24,5 × 31,5	B32654-A3335-K	50	960					
4,7 μF	18,0 × 27,5 × 31,5	B32654-A3475-K	50	800					
$V_R = 400 \text{ Vdc}, V_{rms} = 200 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$									
1,0 μF	11,0 × 21,0 × 31,5	B32654-A4105-K	50	1280					
1,5 μF	12,5 × 21,5 × 31,5	B32654-A4155-K	50	1120					
2,2 μF	14,0 × 24,5 × 31,5	B32654-A4225-K	50	1040					
3,3 μF	19,0 × 30,0 × 31,5	B32654-A4335-K	50	720					
$V_R = 630 \text{ Vdc}, V_{rms} = 250 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$									
0,68 μF	11,0 × 21,0 × 31,5	B32654-A6684-K	50	1280					
1,0 μF	13,5 × 23,0 × 31,5	B32654-A6105-K	50	1040					
1,5 μF	18,0 × 27,5 × 31,5	B32654-A6155-K	50	800					

Metallized Polypropylene Film Capacitors (MKP)

C _R	Dimensions (max.) <i>b × h × l</i> mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
B 32 654									
V_R = 1000 Vdc, V_{rms} = 250 Vac Lead spacing $\square e$ = 27,5 mm Capacitance tolerance ± 10 %									
0,22 μF	11,0 × 21,0 × 31,5	B32654-A224-K	50	1280					
0,33 μF	11,0 × 21,0 × 31,5	B32654-A334-K	50	1280					
0,47 μF	14,0 × 24,5 × 31,5	B32654-A474-K	50	1040					
0,68 μF	18,0 × 27,5 × 31,5	B32654-A684-K	50	800					
V_R = 1250 Vdc, V_{rms} = 500 Vac Capacitance tolerance ± 10 %									
0,10 μF	11,0 × 21,0 × 31,5	B32654-A7104-K	50	1280					
0,22 μF	14,0 × 24,5 × 31,5	B32654-A7224-K	50	1040					
0,33 μF	18,0 × 27,5 × 31,5	B32654-A7334-K	50	800					
V_R = 1600 Vdc, V_{rms} = 500 Vac Capacitance tolerance ± 10 %									
68 nF	11,0 × 21,0 × 31,5	B32654-A1683-K	50	1280					
0,10 μF	14,0 × 24,5 × 31,5	B32654-A1104-K	50	1040					
0,15 μF	18,0 × 27,5 × 31,5	B32654-A1154-K	50	800					
V_R = 2000 Vdc, V_{rms} = 700 Vac Capacitance tolerance ± 10 %									
22 nF	11,0 × 21,0 × 31,5	B32654-A2223-K	50	1280					
33 nF	13,5 × 23,0 × 31,5	B32654-A2333-K	50	1040					
47 nF	18,0 × 27,5 × 31,5	B32654-A2473-K	50	800					
68 nF	19,0 × 30,0 × 31,5	B32654-A2683-K	50	720					

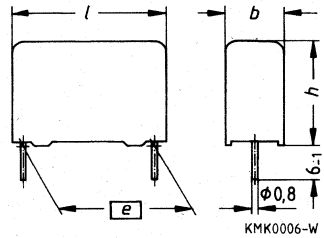
Metallized Polypropylene Film Capacitors (MFP)

Pulse capacitor with excellent contact reliability; self-healing

For pulse circuits with steep rates of voltage rise, for ac voltage applications with high frequencies and for snubbing of semiconductors

Dielectric: polypropylene

Flame-retardant (UL 94 V-0) plastic case with epoxy resin sealing



Dimensions in mm

$e \pm 0,4$	Type
15,0	B 32 682
22,5	B 32 683
27,5	B 32 684

Rated voltage V_R
Permissible ac voltage V_{rms}
IEC climatic category
Reliability at 40 °C, 0,5 V_R

630 ... 2000 Vdc
300 ... 500 Vac ($f \leq 1$ kHz)
55/085/56
 $1 \cdot 10^{-9}/h = 1$ fit

Max. rate of voltage rise
 V_{pp}/τ in V/ μ s
(for $V_{pp} = V_R$)¹⁾

V_R Vdc	Lead spacing (mm)		
	15	22,5	27,5
630	5000	3000	2000
1000	—	5000	—
1250	12000	—	4500
1600	14000	9000	5500
2000	17000	12000	7000

C_R nF	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +

B 32 682

$V_R = 630$ Vdc, $V_{rms} = 300$ Vac Lead spacing $e = 15$ mm Capacitance tolerance $\pm 10\%$

10	5,0 × 10,5 × 18,0	B32682-A6103-K	200	4000				
22	7,0 × 12,5 × 18,0	B32682-A6223-K	200	4000				
47	9,0 × 17,5 × 18,0	B32682-A6473-K	100	2000				

$V_R = 1250$ Vdc, $V_{rms} = 450$ Vac

Capacitance tolerance $\pm 10\%$

1,0	5,0 × 10,5 × 18,0	B32682-A7102-K	200	4000				
10	9,0 × 17,5 × 18,0	B32682-A7103-K	100	2000				

1) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} .
See also calculation example in data book.

Metallized Polypropylene Film Capacitors (MFP)

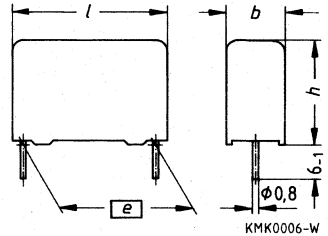
C _R	Dimensions (max.) <i>b × h × l</i>		Ordering code	Min. qty.	Max. qty.	Price per 100				
	mm					Min: qty. +	100 +	250 +	500 +	1000 +
B 32 682										
$V_R = 1600 \text{ Vdc}$, $V_{rms} = 450 \text{ Vac}$ Lead spacing $\boxed{e} = 15 \text{ mm}$ Capacitance tolerance $\pm 10 \%$										
1,0	5,0 × 10,5 × 18,0		B32682-A1102-K	200	4000					
2,2	6,0 × 11,0 × 18,0		B32682-A1222-K	200	4000					
4,7	8,5 × 14,5 × 18,0		B32682-A1472-K	100	2000					
6,8	9,0 × 17,5 × 18,0		B32682-A1682-K	100	2000					
$V_R = 2000 \text{ Vdc}$, $V_{rms} = 500 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
4,7	9,0 × 17,5 × 18,0		B32682-A2472-K	100	2000					
B 32 683										
$V_R = 630 \text{ Vdc}$, $V_{rms} = 300 \text{ Vac}$ Lead spacing $\boxed{e} = 22,5 \text{ mm}$ Capacitance tolerance $\pm 10 \%$										
0,10 μF	10,5 × 16,5 × 26,5		B32683-A6104-K	50	2160					
0,15 μF	11,0 × 20,5 × 26,5		B32683-A6154-K	50	2040					
$V_R = 1000 \text{ Vdc}$, $V_{rms} = 400 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
10	6,0 × 15,0 × 26,5		B32683-A103-K	100	2880					
47	10,5 × 18,5 × 26,5		B32683-A473-K	50	2160					
$V_R = 1600 \text{ Vdc}$, $V_{rms} = 450 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
10	7,0 × 16,0 × 26,5		B32683-A1103-K	100	2520					
22	10,5 × 18,5 × 26,5		B32683-A1223-K	50	2160					
$V_R = 2000 \text{ Vdc}$, $V_{rms} = 500 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
10	10,5 × 16,5 × 26,5		B32683-A2103-K	50	2160					
15	11,0 × 20,5 × 26,5		B32683-A2153-K	50	2040					
B 32 684										
$V_R = 630 \text{ Vdc}$, $V_{rms} = 300 \text{ Vac}$ Lead spacing $\boxed{e} = 27,5 \text{ mm}$ Capacitance tolerance $\pm 10 \%$										
0,22 μF	12,5 × 21,5 × 31,5		B32684-A6224-K	50	1120					
0,47 μF	18,0 × 27,5 × 31,5		B32684-A6474-K	50	800					
$V_R = 1250 \text{ Vdc}$, $V_{rms} = 450 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
0,10 μF	15,0 × 24,5 × 31,5		B32684-A7104-K	50	960					
$V_R = 1600 \text{ Vdc}$, $V_{rms} = 450 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
68	15,0 × 24,5 × 31,5		B32684-A1683-K	50	960					
0,10 μF	19,0 × 30,0 × 31,5		B32684-A1104-K	50	720					
$V_R = 2000 \text{ Vdc}$, $V_{rms} = 500 \text{ Vac}$ Capacitance tolerance $\pm 10 \%$										
22	11,0 × 21,0 × 31,5		B32684-A2223-K	50	1280					
47	18,0 × 27,5 × 31,5		B32684-A2473-K	50	800					

Metallized Polypropylene Film Capacitors (MFP)

**Pulse capacitor for very high current loads;
excellent contact reliability; self-healing**

For circuits with very steep rates of voltage rise and ac voltage applications with very high frequencies

Dielectric: polypropylene
Flame-retardant (UL 94 V-0) plastic case with epoxy resin sealing



Dimensions in mm

$e \pm 0,4$	Type
15,0	B 32642
22,5	B 32643

Rated voltage V_R 1600 Vdc
Permissible ac voltage V_{rms} 500 Vac ($f \leq 10$ kHz)
IEC climatic category 55/085/56
Reliability at 40 °C, 0,5 V_R $1 \cdot 10^{-9}/h = 1$ fit

Max. rate of voltage rise
 V_{pp}/τ in V/ μ s
(for $V_{pp} = V_R$)¹⁾

V_R Vdc	Lead spacing (mm)	
1600	15	22,5
	16000	11000

C_R nF	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +

B 32 642

$V_R = 1600$ Vdc, $V_{rms} = 500$ Vac Lead spacing $e = 15$ mm Capacitance tolerance $\pm 10\%$

0,10	5,0 × 10,5 × 18,0	B32642-C1101-K	200	4000				
0,22	5,0 × 10,5 × 18,0	B32642-C1221-K	200	4000				
0,47	5,0 × 10,5 × 18,0	B32642-C1471-K	200	4000				
0,68	5,0 × 10,5 × 18,0	B32642-C1681-K	200	4000				

B 32 643

$V_R = 1600$ Vdc, $V_{rms} = 500$ Vac Lead spacing $e = 22,5$ mm Capacitance tolerance $\pm 10\%$

1,0	6,0 × 15,0 × 26,5	B32643-C1102-K	200	2880				
2,2	6,0 × 15,0 × 26,5	B32643-C1222-K	200	2880				
4,7	8,5 × 16,5 × 26,5	B32643-C1472-K	100	2040				
6,8	10,5 × 16,5 × 26,5	B32643-C1682-K	100	2160				
10	11,0 × 20,5 × 26,5	B32643-C1103-K	100	2040				

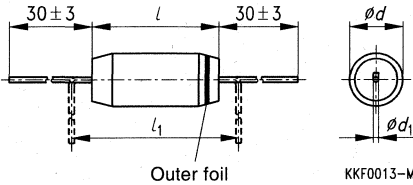
1) For $V_{pp} < V_R$ the permissible rate of voltage rise V_{pp}/τ may be multiplied by the factor V_R/V_{pp} .
See also calculation example in data book.

High-Precision Capacitors (KS)

STYROFLEX capacitor; general-purpose grade In accordance with DIN 44 126, part 1

For resonant circuits, timing circuits, RF and IF filters
Tape packaging in acc. with IEC 286-1, AMMO pack

Rated dc voltage V_R		160 V
AC voltage V_{ac}		65 V
IEC climatic category		25/070/21
Dissipation factor $\tan \delta$	10 kHz	$(0,2 \dots 0,5) \cdot 10^{-3}$
	100 kHz	$(0,3 \dots 0,4) \cdot 10^{-3}$
Temperature coefficient α_c		$-(100 \dots 250) \cdot 10^{-6}/K$ (for $C_R \geq 100$ pF)



Dimensions in mm

Length $L_{1,5}$	Length $l_{1 \text{ min}}$	$\varnothing d_1$
11,5	15,0	0,6
16,5	20,0	0,8
21,5	25,0	0,8

Marking: Rated capacitance (pF)
(black) Capacitance tolerance (code letter)
Rated voltage (color band)
Outer foil: Color band

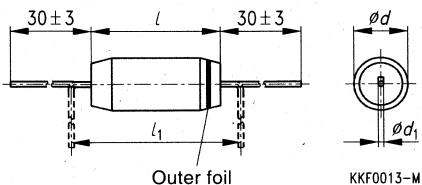
C_R pF	Dimensions (max.) $d \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	500 +	1000 +	2500 +	5000 +
160 Vdc		Color band: red			Capacitance tolerance $\pm 2,5 \%$				
47	4,5 × 11,5	B31063-B1470-H7	250	5000					
68	4,5 × 11,5	B31063-B1680-H7	250	5000					
100	4,5 × 11,5	B31063-B1101-H7	250	5000					
150	4,5 × 11,5	B31063-B1151-H7	250	5000					
220	4,5 × 11,5	B31063-B1221-H7	250	5000					
330	4,5 × 11,5	B31063-B1331-H7	250	5000					
470	4,5 × 11,5	B31063-B1471-H7	250	5000					
560	4,5 × 11,5	B31063-B1561-H7	250	5000					
680	4,5 × 11,5	B31063-B1681-H7	250	5000					
820	4,7 × 11,5	B31063-B1821-H7	250	5000					
1000	4,7 × 11,5	B31063-B1102-H7	250	5000					
1200	5,2 × 11,5	B31063-B1122-H7	250	5000					
1500	5,2 × 11,5	B31063-B1152-H7	250	5000					
2200	5,8 × 11,5	B31063-B1222-H7	250	5000					
2700	6,4 × 11,5	B31063-B1272-H7	250	5000					
3300	6,7 × 11,5	B31063-B1332-H7	250	5000					
4700	7,7 × 11,5	B31063-B1472-H7	250	5000					
6800	6,9 × 16,5	B31063-B1682-H7	250	5000					
10000	8,0 × 16,5	B31063-B1103-H7	250	5000					

High-Precision Capacitors (KS)

STYROFLEX capacitor; long-life grade In accordance with DIN 41 393

For telecom and measuring systems, RF and IF filters, timing and resonant circuits
Tape packaging in acc. with IEC 286-1, AMMO pack

Service life		200000 h
Failure rate		$1 \cdot 10^{-9}/h = 1 \text{ fit}$
Rated dc voltage V_R		160 V
AC voltage V_{ac}		65 V
IEC climatic category		40/070/21
Dissipation factor $\tan \delta$	10 kHz	$(0,2 \dots 0,3) \cdot 10^{-3}$
	100 kHz	$(0,3 \dots 0,4) \cdot 10^{-3}$
Temperature coefficient α_c		$-(100 \dots 250) \cdot 10^{-6}/K$ (for $C_R \geq 100 \text{ pF}$)



Dimensions in mm

Length $L_{1,5}$	Length $l_{1 \text{ min}}$	$\varnothing d_1$
11,5	15,0	0,6
16,5	20,0	0,8
21,5	25,0	0,8

Marking: Rated capacitance (pF)
(blue) Capacitance tolerance (code letter)
Rated voltage (color band)
Manufacturer's logo (for $l \geq 16,5$)
Design (KS) (for $l \geq 21,5$)
Date of manufacture (coded)

Outer foil: Color band

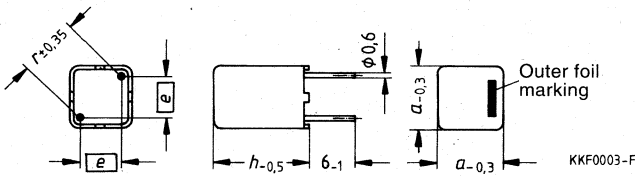
C_R	Dimensions (max.) $d \times l$	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	500 +	1000 +		
pF	mm								
160 Vdc		Color band: red			Capacitance tolerance $\pm 2\%$				
100	4,5 × 11,5	B31861-C1101-G7	250	2500					
220	4,5 × 11,5	B31861-C1221-G7	250	2500					
330	4,5 × 11,5	B31861-C1331-G7	250	2500					
470	4,5 × 11,5	B31861-C1471-G7	250	2500					
560	4,5 × 11,5	B31861-C1561-G7	250	2500					
820	4,7 × 11,5	B31861-C1821-G7	250	2500					
1000	4,7 × 11,5	B31861-C1102-G7	250	2500					
2200	5,8 × 11,5	B31861-C1222-G7	250	2500					
2700	6,4 × 11,5	B31861-C1272-G7	250	2500					
3300	6,7 × 11,5	B31861-C1332-G7	250	2500					
4700	7,6 × 11,5	B31861-C1472-G7	250	2500					
10000	8,0 × 16,5	B31861-C1103-G7	250	2500					
22000	10,2 × 21,5	B31861-C1223-G7	250	2500					

STYROFLEX capacitor; long-life grade Quality approval as per CECC 30901-006

For telecom and measuring systems,
RF and IF filters, timing and resonant circuits

Plastic case, sealed, flame-retardant (UL 94 V-0)
Types with lead spacing 7,5 mm and 10 mm are supplied in stick magazines.

Service life		200000 h
Failure rate		$0,8 \cdot 10^{-9}/h = 0,8 \text{ fit}$
Rated dc voltage V_R		63 V
AC voltage V_{ac}		25 V
IEC climatic category		40/085/21 ¹⁾
Dissipation factor $\tan \delta$	10 kHz	$(0,2 \dots 0,4) \cdot 10^{-3}$
	100 kHz	$(0,3 \dots 0,6) \cdot 10^{-3}$
Temperature coefficient α_c		$-, (60 \dots 180) \cdot 10^{-6}/K$



- Marking: Manufacturer's logo
 Design (KS)
 Rated capacitance (pF)
 Capacitance tolerance (code letter)
 Rated dc voltage
 Date of manufacture (coded)
- Outer foil: Bar

1) Values are also kept after 56 days of humidity test.

High-Precision Capacitors (KS)



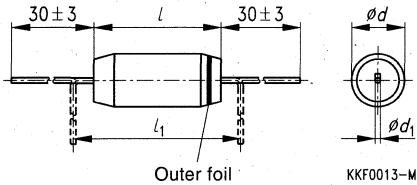
C _R	Dimensions (max.) a × a × h mm	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	100 +	250 +		
63 Vdc		Lead spacing [e] = 5 mm, r = 7,1 mm			Capacitance tolerance ± 1 %				
100	6,3 × 6,3 × 11	B31531-B5101-F	100	250					
150	6,3 × 6,3 × 11	B31531-B5151-F	100	250					
220	6,3 × 6,3 × 11	B31531-B5221-F	100	250					
270	6,3 × 6,3 × 11	B31531-B5271-F	100	250					
330	6,3 × 6,3 × 11	B31531-B5331-F	100	250					
390	6,3 × 6,3 × 11	B31531-B5391-F	100	250					
470	6,3 × 6,3 × 11	B31531-B5471-F	100	250					
560	6,3 × 6,3 × 11	B31531-B5561-F	100	250					
680	6,3 × 6,3 × 11	B31531-B5681-F	100	250					
820	6,3 × 6,3 × 11	B31531-B5821-F	100	250					
1000	6,3 × 6,3 × 11	B31531-B5102-F	100	250					
1200	6,3 × 6,3 × 11	B31531-B5122-F	100	250					
1500	6,3 × 6,3 × 11	B31531-B5152-F	100	250					
1800	6,3 × 6,3 × 11	B31531-B5182-F	100	250					
2200	6,3 × 6,3 × 11	B31531-B5222-F	100	250					
2700	6,3 × 6,3 × 11	B31531-B5272-F	100	250					
3300	6,3 × 6,3 × 11	B31531-B5332-F	100	250					
3900	6,3 × 6,3 × 11	B31531-B5392-F	100	250					
4700	6,3 × 6,3 × 11	B31531-B5472-F	100	250					
5600	6,3 × 6,3 × 11	B31531-B5562-F	100	250					
6800	6,3 × 6,3 × 11	B31531-B5682-F	100	250					
8200	7,5 × 7,5 × 13	B31531-B5822-F	100	250					
10000	7,5 × 7,5 × 13	B31531-B5103-F	100	250					
12000	7,5 × 7,5 × 13	B31531-B5123-F	100	250					
15000	7,5 × 7,5 × 13	B31531-B5153-F	100	250					
63 Vdc		Lead spacing [e] = 7,5 mm, r = 10,6 mm			Capacitance tolerance ± 1 %				
22000	10 × 10 × 13	B31531-B5223-F5	55	250					
33000	10 × 10 × 13	B31531-B5333-F5	50	250					
63 Vdc		Lead spacing [e] = 10 mm, r = 14,1 mm			Capacitance tolerance ± 1 %				
47000	12,5 × 12,5 × 13	B31531-B5473-F5	50	250					
56000	12,5 × 12,5 × 13	B31531-B5563-F5	50	250					

High-Precision Capacitors (KP)

Polypropylene capacitor; general-purpose grade

For RF and IF filters, timing and resonant circuits
Tape packaging in acc. with IEC 286-1, AMMO pack

Rated dc voltage V_R		160 V	630 V
AC voltage V_{ac}		65 V	210 V
IEC climatic category		40/085/21	
Dissipation factor $\tan \delta$	10 kHz	$(0,2 \dots 0,4) \cdot 10^{-3}$	
	100 kHz	$(0,3 \dots 0,5) \cdot 10^{-3}$	
Temperature coefficient α_c (for $C_R \geq 100$ pF)		$-(100 \dots 300) \cdot 10^{-6}/K$	



Dimensions in mm

Length l_2	Length $l_{1 \min}$	ϕd_1
11,0	15,0	0,6
16,5	20,0	0,8
21,5	25,0	0,8

Marking: Design (KP)
(black) Rated capacitance (pF)
Capacitance tolerance (code letter)
Rated dc voltage (color band)
Outer foil: Color band

C_R	Dimensions (max.) $d \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	500 +	1000 +	2500 +	5000 +
pF	mm								
630 Vdc			Color band: black		Capacitance tolerance $\pm 2,5 \%$				
47	$4,0 \times 11$	B33063-B6470-H7	250	5000					
56	$4,5 \times 11$	B33063-B6560-H7	250	5000					
68	$4,5 \times 11$	B33063-B6680-H7	250	5000					
82	$4,5 \times 11$	B33063-B6820-H7	250	5000					
100	$4,5 \times 11$	B33063-B6101-H7	250	5000					
120	$4,5 \times 11$	B33063-B6121-H7	250	5000					
150	$4,5 \times 11$	B33063-B6151-H7	250	5000					
180	$4,5 \times 11$	B33063-B6181-H7	250	5000					
220	$4,5 \times 11$	B33063-B6221-H7	250	5000					
270	$4,5 \times 11$	B33063-B6271-H7	250	5000					
330	$4,5 \times 11$	B33063-B6331-H7	250	5000					
470	$5,2 \times 11$	B33063-B6471-H7	250	5000					
560	$6,0 \times 11$	B33063-B6561-H7	250	5000					
680	$6,0 \times 11$	B33063-B6681-H7	250	5000					
820	$6,0 \times 11$	B33063-B6821-H7	250	5000					

High-Precision Capacitors (KP)

C _R pF	Dimensions (max.) d × l mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	500 +	1000 +	2500 +	5000 +
630 Vdc		Color band: black			Capacitance tolerance ± 2,5 %				
1000	6,0 × 11	B33063-B6102-H7	250	5000					
1200	6,8 × 11	B33063-B6122-H7	250	5000					
1500	6,8 × 11	B33063-B6152-H7	250	5000					
1800	7,9 × 11	B33063-B6182-H7	250	5000					
2200	7,9 × 11	B33063-B6222-H7	250	5000					
3300	7,6 × 16,5	B33063-B6332-H7	250	5000					
4700	9,8 × 16,5	B33063-B6472-H7	250	5000					
5600	9,8 × 16,5	B33063-B6562-H7	250	5000					
6800	10,4 × 16,5	B33063-B6682-H7	250	5000					
10000	10,4 × 21,5	B33063-B6103-H7	250	5000					
22000	14,5 × 21,5	B33063-B6223-H7	250	5000					
160 Vdc		Color band: red			Capacitance tolerance ± 2,5 %				
390	4,5 × 11	B33063-B1391-H7	250	5000					
470	4,5 × 11	B33063-B1471-H7	250	5000					
560	4,5 × 11	B33063-B1561-H7	250	5000					
680	4,5 × 11	B33063-B1681-H7	250	5000					
820	4,5 × 11	B33063-B1821-H7	250	5000					
1000	4,5 × 11	B33063-B1102-H7	250	5000					
1500	5,2 × 11	B33063-B1152-H7	250	5000					
2200	5,2 × 11	B33063-B1222-H7	250	5000					
2700	5,8 × 11	B33063-B1272-H7	250	5000					
3300	5,8 × 11	B33063-B1332-H7	250	5000					
3900	6,6 × 11	B33063-B1392-H7	250	5000					
4700	6,6 × 11	B33063-B1472-H7	250	5000					
6800	8,0 × 11	B33063-B1682-H7	250	5000					
10000	8,7 × 11	B33063-B1103-H7	250	5000					
15000	8,0 × 16,5	B33063-B1153-H7	250	5000					
22000	9,8 × 16,5	B33063-B1223-H7	250	5000					
47000	13,0 × 21,5	B33063-B1473-H7	250	5000					
100000	16,5 × 21,5	B33063-B1104-H7	250	5000					



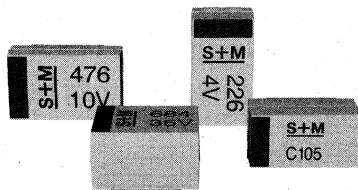


Siemens Matsushita Components

Now even more straight
from stock

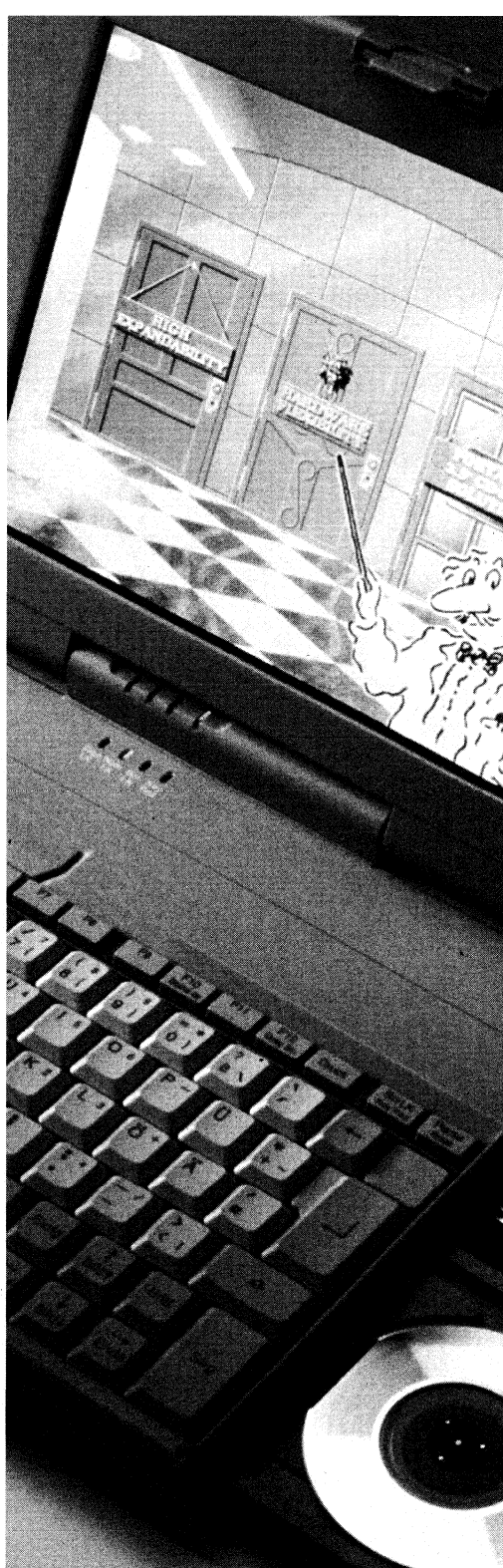
4,000 tantalum chips by express

We're not only Europe's biggest
supplier of tantalum chip capacitors,
we're the fastest too. If you urgently
need a large quantity of a certain
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(failure rate less than 5 fit) and come
with voltage rated from 4 to 35 V
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SCS – dependable, fast and competent



Tantalum Electrolytic Capacitors

Contents	Type	Page
Chip capacitors »SMD«	B 45196	226
Capacitors with radial leads	B 45181	228



Tantalum chip capacitors are also available as lab assortment; for details refer to page 337.

Radial-lead capacitors in sizes A and B can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

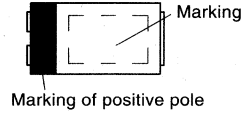
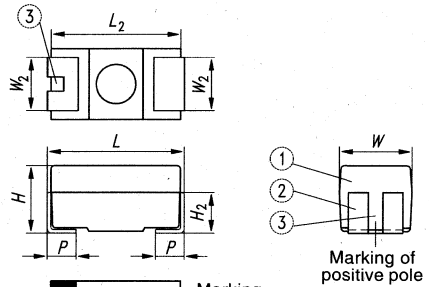
Further technical literature

Data Book "Tantalum Electrolytic Capacitors", B467-P6715-X-X-7600
Short Form Catalog "Tantalum Electrolytic Capacitors", B467-P6710-X-X-7400

Long-life grade chip capacitor
Application in telecom and data processing systems, in measuring and control equipment as well as in automotive electronics
IECQ and CECC quality approval

With solid electrolyte
 Flame-retardant plastic case (UL94V-0)
 Suitable for reflow (IR, vapor phase) and wave soldering
 Tape packaging in acc. with IEC 286-3

Rated voltage V_R 4 ... 35 Vdc
 IEC climatic category 55/125/56
 Service life > 500000 h
 Failure rate for sizes A, B:
 (at 40 °C; $\leq V_R$; $R_S \geq 3 \Omega/V$) $\leq 5 \text{ fit} (\leq 5 \cdot 10^{-9}/h)$
 for sizes C, D:
 $\leq 12 \text{ fit} (\leq 12 \cdot 10^{-9}/h)$



KTA0146-C

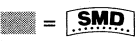
- ① Encapsulation: epoxy molding compound
- ② BdNiFe; surface Sn 60/Pb 40
- ③ For size A limited slot length

Size	Dimensions (mm)						
	$L \pm 0,2$	$L_2 \text{ typ.}$	$W \pm 0,2$	$W_2 \pm 0,1$	$H \pm 0,2$	$H_2 \text{ typ.}$	$p \pm 0,3$
A	3,2	3,0	1,6	1,2	1,6	1,0	0,8
B	3,5	3,3	2,8	2,2	1,9	1,2	0,8
C	6,0	5,8	3,2	2,2	2,5	1,5	1,3
D	7,3	7,1	4,3	2,4	2,8	1,6	1,3

C_R μF	V_R ¹⁾ up to 85 °C Vdc	Size	Ordering code	Min. qty.	Max. qty.	Price per 100			
						Min. qty. +	500 +	1000 +	2500 +

Capacitance tolerance $\pm 20 \%$

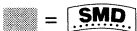
100	4	D	B45196-E107-M409	100	1500					
2,2	6,3	A	B45196-E1225-M109	300	4000					
3,3	6,3	A	B45196-E1335-M109	300	4000					
10	6,3	B	B45196-E1106-M209	250	4000					
22	6,3	C	B45196-E1226-M309	150	1500					
47	6,3	D	B45196-E1476-M409	100	1500					
68	6,3	D	B45196-E1686-M409	100	1500					



1) Peak voltage $V_p = 1,3 V_R$

C _R μF	V _R ¹⁾ up to 85 °C Vdc	Size	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	2500 +	
Capacitance tolerance ± 20 %										
2,2	10	A	B45196-E2225-M109	300	4000					
4,7	10	B	B45196-E2475-M209	250	4000					
6,8	10	B	B45196-E2685-M209	250	4000					
10	10	C	B45196-E2106-M309	150	1500					
15	10	C	B45196-E2156-M309	150	1500					
33	10	D	B45196-E2336-M409	100	1500					
47	10	D	B45196-E2476-M409	100	1500					
1,0	16	A	B45196-E3105-M109	300	4000					
1,5	16	A	B45196-E3155-M109	300	4000					
3,3	16	B	B45196-E3335-M209	250	4000					
4,7	16	B	B45196-E3475-M209	250	4000					
10	16	C	B45196-E3106-M309	150	1500					
22	16	D	B45196-E3226-M409	100	1500					
33	16	D	B45196-E3336-M409	100	1500					
0,68	20	A	B45196-E4684-M109	300	4000					
1,0	20	A	B45196-E4105-M109	300	4000					
2,2	20	B	B45196-E4225-M209	250	4000					
4,7	20	C	B45196-E4475-M309	150	1500					
6,8	20	C	B45196-E4685-M309	150	1500					
15	20	D	B45196-E4156-M409	100	1500					
22	20	D	B45196-E4226-M409	100	1500					
0,47	25	A	B45196-E5474-M109	300	4000					
1,5	25	B	B45196-E5155-M209	250	4000					
3,3	25	C	B45196-E5335-M309	150	1500					
4,7	25	C	B45196-E5475-M309	150	1500					
10	25	D	B45196-E5106-M409	100	1500					
0,10	35	A	B45196-E6104-M109	300	4000					
0,22	35	A	B45196-E6224-M109	300	4000					
0,33	35	A	B45196-E6334-M109	300	4000					
0,47	35	B	B45196-E6474-M209	250	4000					
1,0	35	B	B45196-E6105-M209	250	4000					
1,5	35	C	B45196-E6155-M309	150	1500					
2,2	35	C	B45196-E6225-M309	150	1500					
3,3	35	C	B45196-E6335-M309	150	1500					
4,7	35	D	B45196-E6475-M409	100	1500					
6,8	35	D	B45196-E6685-M409	100	1500					
10	35	D	B45196-E6106-M409	100	1500					

Tantalum chip capacitors are also available as lab assortment; for details refer to page 337.



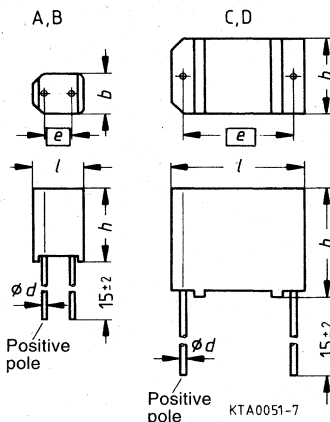
1) Peak voltage V_p = 1,3 V_R

Tantalum capacitor with solid electrolyte For PC boards used in low-voltage equipment

Quality approval as per CECC 30201-009
Flame-retardant, molded encapsulation (UL94V-0)
Radial leads with standard spacing

Rated voltage V_R 6,3 ... 40 Vdc
IEC climatic category 55/125/56
Service life > 500000 h
Failure rate $\leq 15 \text{ fit } (\leq 15 \cdot 10^{-9}/\text{h})$

Size	l_{max} mm	b_{max} mm	h_{max} mm	$\varnothing d$ $\pm 0,05 \text{ mm}$	e $\pm 0,2 \text{ mm}$
A	4,7	4,2	7,3	0,5	2,54
B	7,3	4,8	10,0	0,5	5,08
C	12,3	7,3	10,0	0,63	10,16
D	12,3	12,3	10,5	0,63	10,16



C_R μF	V_R ¹⁾ up to 85 °C Vdc	Dimensions $l \times b \times h$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100			
						Min. qty. +	50 +	100 +	500 +

Capacitance tolerance $\pm 20 \%$

C_R	V_R	Dimensions $l \times b \times h$	Ordering code	Min. qty.	Max. qty.	Price per 100	Price per 100	Price per 100	Price per 100
47	6,3	$7,3 \times 4,8 \times 10,0$	B45181-B476-M	100	2000				
150	6,3	$12,3 \times 7,3 \times 10,0$	B45181-A157-M	25	800				
330	6,3	$12,3 \times 12,3 \times 10,5$	B45181-A337-M	10	750				
4,7	10	$4,7 \times 4,2 \times 7,3$	B45181-B1475-M	150	2000				
33	10	$7,3 \times 4,8 \times 10,0$	B45181-B1336-M	100	2000				
100	10	$12,3 \times 7,3 \times 10,0$	B45181-A1107-M	25	800				
220	10	$12,3 \times 12,3 \times 10,5$	B45181-A1227-M	10	750				
3,3	16	$4,7 \times 4,2 \times 7,3$	B45181-B2335-M	150	2000				
22	16	$7,3 \times 4,8 \times 10,0$	B45181-B2226-M	100	2000				
68	16	$12,3 \times 7,3 \times 10,0$	B45181-A2686-M	25	800				
150	16	$12,3 \times 12,3 \times 10,5$	B45181-A2157-M	10	750				

1) Peak voltage $V_p = 1,3 V_R$

Tantalum Electrolytic Capacitors



C_R	V_R 1) up to 85 °C Vdc	Dimensions $l \times b \times h$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	500 +	1000 +
Capacitance tolerance $\pm 20\%$										
1,5	25	4,7 × 4,2 × 7,3	B45181-C3155-M	150	2000					
10	25	7,3 × 4,8 × 10,0	B45181-C3106-M	100	2000					
33	25	12,3 × 7,3 × 10,0	B45181-B3336-M	25	800					
47	25	12,3 × 12,3 × 10,5	B45181-B3476-M	10	750					
68	25	12,3 × 12,3 × 10,5	B45181-B3686-M	10	750					
1,0	40	4,7 × 4,2 × 7,3	B45181-C4105-M	150	2000					
1,5	40	7,3 × 4,8 × 10,0	B45181-C4155-M	100	1000					
2,2	40	7,3 × 4,8 × 10,0	B45181-C4225-M	100	1000					
3,3	40	7,3 × 4,8 × 10,0	B45181-C4335-M	100	1000					
4,7	40	7,3 × 4,8 × 10,0	B45181-C4475-M	100	1000					
6,8	40	7,3 × 4,8 × 10,0	B45181-C4685-M	100	1000					
10	40	12,3 × 7,3 × 10,0	B45181-B4106-M	25	800					
15	40	12,3 × 7,3 × 10,0	B45181-B4156-M	25	800					
22	40	12,3 × 7,3 × 10,0	B45181-B4226-M	25	800					
33	40	12,3 × 12,3 × 10,5	B45181-B4336-M	10	750					
47	40	12,3 × 12,3 × 10,5	B45181-B4476-M	10	750					

1) Peak voltage $V_p = 1,3 V_R$



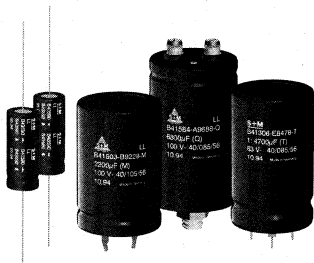


Siemens Matsushita Components

All models from stock

Capacity and variety

No matter what kind of aluminum capacitor you happen to need, we have it – ready stocked: can-type, upright or axially leaded, low-volt from 16 to 100 V, high-volt from 160 to 450 V and capacitance ranges 2.2 through 100,000 μF . Of course



you get everything fast and direct from SCS stock. And for snap-in variants we've improved delivery capability even more by setting up a new production line.

SCS – dependable, fast and competent



Aluminum Electrolytic Capacitors

Contents	Type	Page	
	$V_R \leq 100 \text{ Vdc}$: $V_R \geq 160 \text{ Vdc}$:		
Capacitors with screw terminals	B 41 455	B 43 455	232
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	B 41 588	B 43 588	251
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▼ Newly included in this edition

Snap-in capacitors B 43 502 and B 43 503 with higher capacitance and voltage ratings	243
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Mounting and insulating parts for capacitors in can-type cases	253
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Please note that mounting and insulating parts can only be ordered in conjunction with aluminum electrolytic capacitors.

All axial-lead capacitors with diameters $\leq 16 \text{ mm}$ can also be supplied on tape. Your SCS contact will tell you the ordering code of the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Data Book "Aluminum Electrolytic Capacitors", B4-P2710-X-X-7600
 Short Form Catalog "Aluminum Electrolytic Capacitors", B4-P2707-X-X-7400

Aluminum Electrolytic Capacitors

Capacitor with screw terminals General-purpose grade For professional power supply units and SMPS

Al case with insulating sleeve

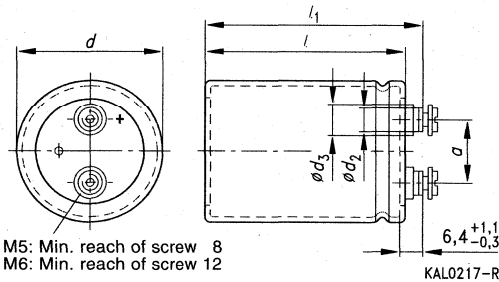
Mounting by ring clips ¹⁾

Rated voltage V_R 16 ... 100 Vdc (B 41 455)
 350 Vdc (B 43 455)

IEC climatic category 40/085/56 (≤ 100 Vdc)
 25/085/56 (350 Vdc)

Service life

	B 41 455	B 43 455
40 °C; V_R	> 200 000 h ($1,7 \times /ac_{R,85} \cdot ^\circ C$)	> 200 000 h ($1,5 \times /ac_{R,85} \cdot ^\circ C$)
85 °C; V_R	> 5 000 h ($/ac_R$)	> 10 000 h ($/ac_R$)



Dimensions in mm

d_{max}	d_{2max}	d_{3max}	$a +0,2/-0,8$	Terminal ²⁾	l_{max}	l_{1max}
35,7	8,2	13,5	12,7	M 5	56,7	64,2
51,6	8,2	13,5	22,2	M 5	82,1	89,6
64,3	8,2	13,5	28,5	M 5	107,5	115,0
76,9	17,7	17,7	31,7	M 6	145,6	153,1

1) Ring clips and insulating parts upon request (see end of chapter)

2) Cylindrical screws and toothed washers are included in delivery (loosely).

Aluminum Electrolytic Capacitors

C_R	V_R ¹⁾	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price each				
						μF	Vdc	mm	Min. qty. +	10 +
B41455						Capacitance tolerance – 10 %/+ 50 %				
10 000	16	35,7 × 56,7	B41455-N4109-T	10	144					
22 000	16	35,7 × 82,1	B41455-P4229-T	6	144					
47 000	16	51,6 × 82,1	B41455-P4479-T	4	144					
100 000	16	64,3 × 82,1	B41455-P4100-T	2	100					
4 700	40	35,7 × 56,7	B41455-N7478-T	10	144					
10 000	40	35,7 × 82,1	B41455-P7109-T	6	144					
22 000	40	51,6 × 82,1	B41455-P7229-T	3	144					
47 000	40	64,3 × 107,5	B41455-P7479-T	2	100					
68 000	40	76,9 × 107,5	B41455-P7689-T	2	80					
2 200	63	35,7 × 56,7	B41455-N8228-T	10	144					
4 700	63	35,7 × 82,1	B41455-P8478-T	5	144					
10 000	63	51,6 × 82,1	B41455-P8109-T	4	144					
22 000	63	64,3 × 107,5	B41455-N8229-T	2	100					
33 000	63	76,9 × 107,5	B41455-P8339-T	2	80					
1 000	100	35,7 × 56,7	B41455-N9108-T	10	144					
2 200	100	35,7 × 82,1	B41455-N9228-T	6	144					
4 700	100	51,6 × 82,1	B41455-P9478-T	4	144					
10 000	100	64,3 × 107,5	B41455-N9109-T	2	100					
B 43 455						Capacitance tolerance ± 20 %				
1 500	350	51,6 × 107,5	B43455-A4158-M	2	144					
3 300	350	76,9 × 107,5	B43455-A4338-M	1	80					
6 000	350	76,9 × 145,6	B43455-A4608-M	1	80					

1) Surge voltage $V_s = 1,15 V_R (\leq 100 \text{ Vdc})$ and $1,1 V_R (\geq 350 \text{ Vdc})$

Aluminum Electrolytic Capacitors

Capacitor with screw terminals

Long-life grade

For industrial electronics and switch-mode power supplies

Al case with insulating sleeve

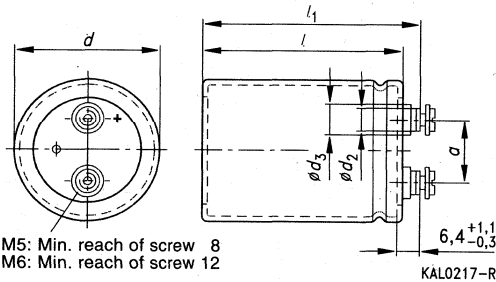
Mounting by ring clips or threaded stud ¹⁾

Rated voltage V_R 40 ... 100 Vdc (B 41 564)
350, 450 Vdc (B 43 564)

IEC climatic category 40/085/56 (≤ 100 Vdc)
25/085/56 (≥ 350 Vdc)

Service life

	B 41 564	B 43 564
40 °C; V_R	> 200 000 h ($1,8 \times /ac_{R,85} \cdot ^\circ C$)	> 200 000 h ($1,6 \times /ac_{R,85} \cdot ^\circ C$)
85 °C; V_R	> 8 000 h ($/ac_R$)	> 15 000 h ($/ac_R$)



M5: Min. reach of screw 8
M6: Min. reach of screw 12

Marking of positive pole: +

Dimensions in mm

d_{max}	d_1	d_{2max}	d_{3max}	$l_2 +0/-1$	$a +0,2/-0,8$	Terminal ²⁾
35,7	M 8	8,2	13,5	13	12,7	M 5
51,6	M 12	8,2	13,5	17	22,2	M 5
64,3	M 12	8,2	13,5	17	28,5	M 5
76,9	M 12	17,7	17,7	17	31,7	M 6

l_{max}	l_{1max}
56,7	64,2
82,1	89,6
107,5	115,0
145,6	153,1

1) Ring clips and insulating parts upon request (see end of chapter)

2) Cylindrical screws and toothed washers are included in delivery (loosely).

Aluminum Electrolytic Capacitors

C _R	V _R 1)	Dimensions d _{max} × l _{max}	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	10 +	20 +	50 +	100 +
μF	Vdc	mm								
B 41 564						Capacitance tolerance – 10 %/+ 30 %				
4 700	40	35,7 × 82,1	B41564-A7478-Q	8	144					
10 000	40	35,7 × 107,5	B41564-A7109-Q	4	144					
22 000	40	51,6 × 107,5	B41564-A7229-Q	2	144					
2 200	63	35,7 × 56,7	B41564-A8228-Q	8	144					
4 700	63	35,7 × 107,5	B41564-A8478-Q	4	144					
10 000	63	51,6 × 82,1	B41564-B8109-Q	3	144					
1 000	100	35,7 × 56,7	B41564-A9108-Q	8	144					
2 200	100	35,7 × 82,1	B41564-A9228-Q	6	144					
10 000	100	64,3 × 107,5	B41564-A9109-Q	2	100					
B 43 564						Capacitance tolerance ± 20 %				
1 000	350	51,6 × 82,1	B43564-A4108-M	2	144					
6 000	350	76,9 × 145,6	B43564-A4608-M	1	80					
2 200	450	76,9 × 107,5	B43564-A5228-M	1	80					
3 300	450	76,9 × 145,6	B43564-A5338-M	1	80					



1) Surge voltage V_s = 1,15 V_R (≤ 100 Vdc) and 1,1 V_R (≥ 350 Vdc)

Aluminum Electrolytic Capacitors

SIKOREL®105 capacitor with screw terminals
For professional power supply units
High current handling capability
Up to 10 years shelf life

Al case with insulating sleeve
 Mounting by ring clips or threaded stud ¹⁾
 Operation up to 125 °C ²⁾ permissible

Rated voltage V_R 40 ... 100 Vdc

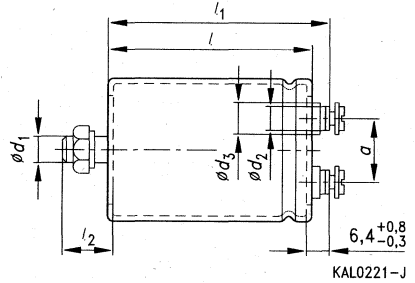
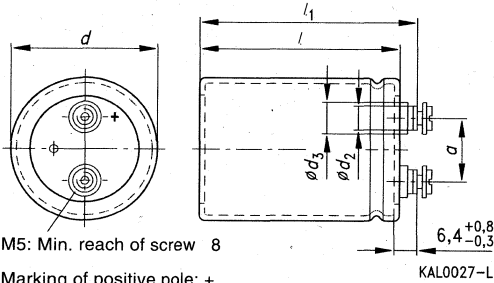
IEC climatic category 55/105/56

Service life

	$d_{max} \leq 51,6$	$d_{max} = 76,9$
40 °C; V_R	> 200 000 h ($2,4 \times /ac_{R,105^\circ C}$)	> 200 000 h ($2,7 \times /ac_{R,105^\circ C}$)
85 °C; V_R	> 15 000 h ($/ac_{max}$)	> 25 000 h ($/ac_{max}$)
105 °C; V_R	> 10 000 h ($/ac_R$)	> 25 000 h ($/ac_R$)

B 41 550

B 41 570



Dimensions in mm

d_{max}	d_1	d_{2max}	d_{3max}	$l_2 +0/-1$	$a +0,2/-0,8$	Terminal ³⁾
35,7	M 8	8,2	13,5	13	12,7	M 5
51,6	M 12	8,2	13,5	17	22,2	M 5
76,9	M 12	8,2	13,5	17	31,7	M 5

l_{max}	l_{1max}
56,7	64,2
82,1	89,6
107,5	115,0

- 1) Ring clips and insulating parts upon request (see end of chapter); hex nuts and toothed washers for the threaded stud are included in delivery (loosely).
- 2) Operation up to 125 °C permissible after removal of insulating sleeve. For $\varnothing \leq 51,6$ mm: 2500 h; for $\varnothing 76,9$ mm: 5000 h.
- 3) Cylindrical screws and toothed washers are included in delivery (loosely).

Aluminum Electrolytic Capacitors

C _R	V _R ¹⁾	Dimensions d _{max} × l _{max}	Ordering code	Min. qty.	Max. qty.	Price each				
						μF	Vdc	mm	Min. qty. +	10 +
B 41 550						Capacitance tolerance – 10 %/+ 30 %				
4 700	40	35,7 × 82,1	B41550-A7478-Q	6	144					
10 000	40	35,7 × 107,5	B41550-A7109-Q	4	144					
22 000	40	51,6 × 107,5	B41550-A7229-Q	2	144					
10 000	63	51,6 × 107,5	B41550-A8109-Q	2	144					
1 000	100	35,7 × 56,7	B41550-A9108-Q	6	144					
2 200	100	35,7 × 82,1	B41550-A9228-Q	4	144					
4 700	100	51,6 × 107,5	B41550-A9478-Q	2	144					
10 000	100	76,9 × 107,5	B41550-A9109-Q	1	80					
B 41 570 (with threaded stud)						Capacitance tolerance – 10 %/+ 30 %				
4 700	40	35,7 × 82,1	B41570-A7478-Q	6	144					
10 000	40	35,7 × 107,5	B41570-A7109-Q	4	144					
22 000	40	51,6 × 107,5	B41570-A7229-Q	2	144					
2 200	63	35,7 × 56,7	B41570-A8228-Q	6	144					
4 700	63	35,7 × 107,5	B41570-A8478-Q	4	144					
10 000	63	51,6 × 107,5	B41570-A8109-Q	2	144					
1 000	100	35,7 × 56,7	B41570-A9108-Q	6	144					
2 200	100	35,7 × 82,1	B41570-A9228-Q	4	144					
4 700	100	51,6 × 107,5	B41570-A9478-Q	2	144					
10 000	100	76,9 × 107,5	B41570-A9109-Q	1	80					



1) Surge voltage V_s = 1,15 V_R

Aluminum Electrolytic Capacitors

High-performance capacitor with screw terminals
For professional power supply units and applications in power electronics
High current handling capability

Al case with insulating sleeve
 Mounting by ring clips or threaded stud ¹⁾

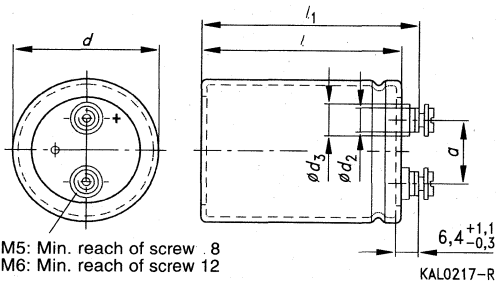
Rated voltage V_R 350 and 400 Vdc

IEC-Klimakategorie 40/105/56 (350 Vdc)²⁾
 25/105/56 (400 Vdc)

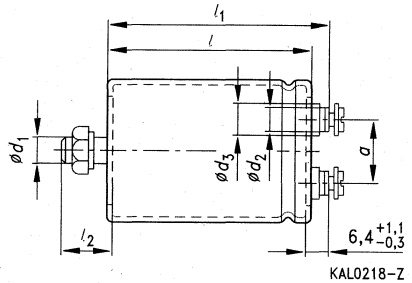
Service life

40 °C; V_R > 200 000 h ($3 \times /ac_{R,105^\circ C}$)
 85 °C; V_R > 15 000 h ($/ac_{max}$)
 105 °C; V_R > 6 000 h ($/ac_R$)

B 43 550



B 43 570



Dimensions in mm

d_{max}	d_1	d_{2max}	d_{3max}	$l_2 +0/-1$	$a +0,2/-0,8$	Terminal ³⁾
51,6	M 12	8,2	13,5	17	22,2	M 5
64,3	M 12	8,2	13,5	17	28,5	M 5
76,9	M 12	17,7	17,7	17	31,7	M 6

l_{max}	l_{1max}
107,5	115,0
145,6	153,1
221,8	229,3

- 1) Ring clips and insulating parts upon request (see end of chapter); hex nuts and toothed washers for the threaded stud are included in delivery (loosely).
- 2) For case size 76,9 × 221,8: IEC climatic category 25/105/56
- 3) Cylindrical screws and toothed washers are included in delivery (loosely).

Aluminum Electrolytic Capacitors

C_R	V_R 1)	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price each				
						μF	Vdc	mm	Min. qty. +	10 +
B 43 550						Capacitance tolerance – 10 %/+ 30 %				
1 500	350	64,3 × 107,5	B43550-A4158-Q	1	100					
3 300	350	76,9 × 145,6	B43550-B4338-Q	1	80					
6 000	350	76,9 × 221,8	B43550-C4608-Q	1	80					
B 43 570 (with threaded stud)						Capacitance tolerance – 10 %/+ 30 %				
3 300	350	76,9 × 145,6	B43570-B4338-Q	1	80					
680	400	51,6 × 107,5	B43570-F687-Q	2	144					

1) Surge voltage $V_s = 1,1 V_R$



Aluminum Electrolytic Capacitors

C_R	V_R ¹⁾	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price each				
						μF	Vdc	mm	Min. qty. +	50 +
B 41 306						Capacitance tolerance -10 %/+ 50 %				
4 700	16	25,8 × 34	B41306-F4478-T	20	768					
10 000	16	30,8 × 44	B41306-E4109-T	20	550					
2 200	40	30,8 × 44	B41306-E7228-T	20	550					
4 700	40	30,8 × 44	B41306-E7478-T	20	550					
10 000	40	30,8 × 54	B41306-F7109-T	20	550					
1 000	63	25,8 × 44	B41306-E8108-T	20	768					
2 200	63	30,8 × 44	B41306-E8228-T	20	550					
4 700	63	35,8 × 54	B41306-E8478-T	20	432					
1 000	100	30,8 × 44	B41306-E9108-T	20	550					
2 200	100	35,8 × 54	B41306-E9228-T	20	432					

C_R	V_R ¹⁾	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price each				
						μF	Vdc	mm	Min. qty. +	20 +
B 43 306						Capacitance tolerance -10 %/+ 50 %				
150	385	30,8 × 44	B43306-E157-T	20	440					
220	385	30,8 × 54	B43306-E227-T	10	440					
470	385	40,8 × 74	B43306-E477-T	6	240					
68	450	30,8 × 39	B43306-A5686-T	10	480					
100	450	30,8 × 44	B43306-B5107-T	10	440					
150	450	30,8 × 49	B43306-A5157-T	8	320					
220	450	30,8 × 59	B43306-B5227-T	8	320					

1) Surge voltage $V_s = 1,15 V_R (\leq 100 \text{ Vdc})$ and $1,1 V_R (\geq 385 \text{ Vdc})$

Aluminum Electrolytic Capacitors

Snap-in capacitor
General-purpose grade
For switch-mode power supplies in industrial and entertainment electronics
High CV product, i.e. small dimensions

Al case, fully insulated
 Snap-in solder pins provide secure locking to PC board
 Uniform 10-mm lead spacing

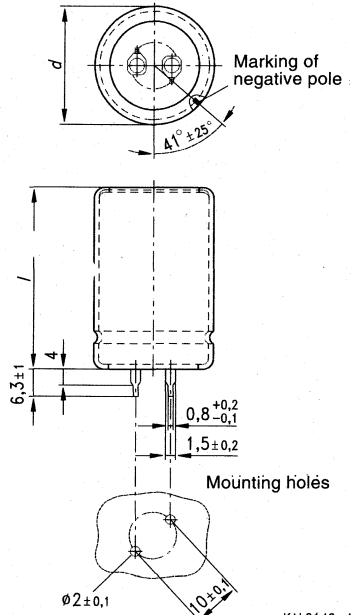
Rated voltage V_R 16 ... 100 Vdc

IEC climatic category 40/085/56

Service life

40 °C; V_R > 100 000 h ($1,3 \times /ac_{R,85^\circ C}$)

85 °C; V_R > 2 000 h ($/ac_R$)



C_R μF	V_R 1) Vdc	Rated dimensions $d \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	50 +	100 +	250 +	500 +
B 41 303						Capacitance tolerance ± 20 %				
10 000	16	25 × 30	B41303-J4109-M	20	768					
22 000	16	30 × 35	B41303-B4229-M	20	480					
4 700	25	25 × 25	B41303-J5478-M	20	768					
10 000	25	30 × 30	B41303-J5109-M	20	480					
22 000	25	30 × 45	B41303-B5229-M	20	320					
3 300	40	25 × 25	B41303-J7338-M	20	768					
4 700	40	22 × 35	B41303-B7478-M	20	768					
6 800	40	30 × 30	B41303-J7688-M	20	480					
10 000	40	30 × 35	B41303-B7109-M	20	480					
15 000	40	30 × 50	B41303-A7159-M	20	320					
2 200	63	22 × 35	B41303-B8228-M	20	768					
3 300	63	30 × 30	B41303-J8338-M	20	480					
4 700	63	30 × 35	B41303-B8478-M	20	480					
6 800	63	30 × 45	B41303-B8688-M	20	320					
1 000	100	25 × 30	B41303-J9108-M	20	768					
1 500	100	25 × 35	B41303-B9158-M	20	768					
2 200	100	30 × 35	B41303-B9228-M	20	480					
3 300	100	30 × 45	B41303-B9338-M	20	320					

1) Surge voltage $V_s = 1,15 V_R$

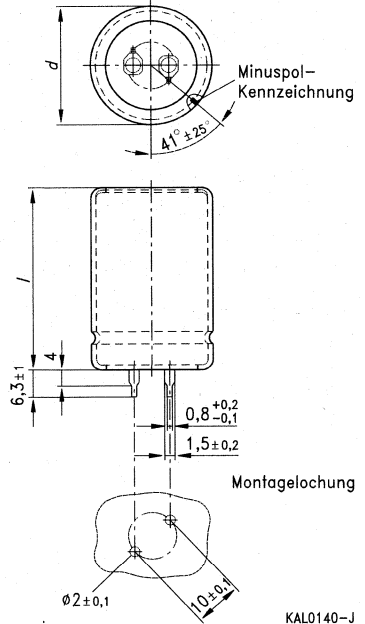
Aluminum Electrolytic Capacitors

Snap-in capacitor
Long-life grade
For professional switch-mode power supplies
in industrial electronics and EDP systems
High ripple current capability
Long service life at 85°C

Al case, fully insulated
 Snap-in solder pins provide
 secure locking to PC board
 Uniform 10-mm lead spacing

Rated voltage V_R 250 ... 450 Vdc
 IEC climatic category 40/085/56 (≤ 385 V-) /
 25/085/56 (≥ 400 Vdc)

Service life
 40 °C; V_R $> 200\,000$ h ($1,3 \times /ac_{R,85^\circ C}$)
 85 °C; V_R $> 10\,000$ h ($/ac_R$)



KAL0140-J

C_R	V_R 1)	Rated dimensions $d \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	20 +	50 +	100 +	250 +
μF	Vdc									
B 43 502						Capacitance tolerance $\pm 20\%$				
150	250	22 × 30	B43502-A2157-M	20	384					
470	250	25 × 50	B43502-A2477-M	16	384					
680	250	30 × 50	B43502-A2687-M	10	320					
▼ 1000	250	35 × 45	B43502-A2108-M90	10	300					
▼ 470	400	35 × 45	B43502-B477-M90	10	300					
47	400	22 × 25	B43502-F476-M	20	384					
68	400	22 × 30	B43502-F686-M	20	384					
100	400	22 × 35	B43502-F107-M	20	384					
150	400	25 × 40	B43502-F157-M	16	384					
220	400	25 × 50	B43502-F227-M	10	384					
330	400	30 × 50	B43502-F337-M	10	320					
47	450	22 × 25	B43502-A5476-M	20	384					
68	450	22 × 30	B43502-A5686-M	20	384					
100	450	25 × 35	B43502-J5107-M	16	384					
150	450	30 × 35	B43502-J5157-M	10	320					
220	450	30 × 45	B43502-A5227-M	10	320					
▼ 330	450	35 × 45	B43502-A5337-M90	10	300					

1) Surge voltage $V_s = 1,15 V_R$ (250 Vdc); $1,1 V_R$ (≥ 400 Vdc)

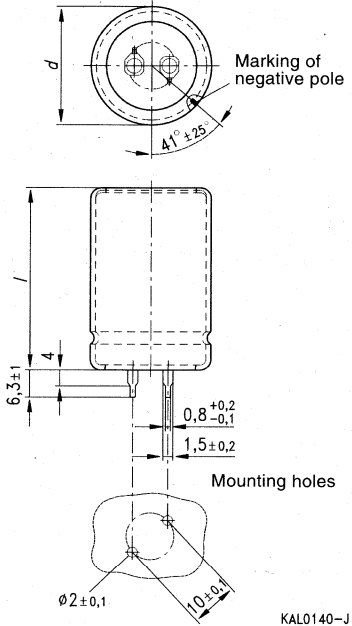
Aluminum Electrolytic Capacitors

Snap-in capacitor
Long-life grade
For professional switch-mode power supplies
in industrial electronics and EDP systems
Wide temperature range
High ripple current capability

Al case, fully insulated
 Snap-in solder pins provide
 secure locking to PC board
 Uniform 10-mm lead spacing

Rated voltage V_R 250 ... 450 Vdc
 IEC climatic category 40/105/56 (250 Vdc)
 25/105/56 (≥ 400 Vdc)

Service life
 40 °C; V_R > 200 000 h ($2,7 \times /ac_{R,105^\circ C}$)
 85 °C; V_R > 12 000 h ($/ac_{max}$)
 105 °C; V_R > 5 500 h ($/ac_R$)



C_R	V_R 1)	Rated dimensions $d \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	20 +	50 +	100 +	250 +
μF	Vdc									
B 43 503						Capacitance tolerance $\pm 20\%$				
150	250	22 × 30	B43503-B2157-M	20	384					
220	250	22 × 35	B43503-B2227-M	20	384					
330	250	25 × 35	B43503-B2337-M	16	384					
470	250	30 × 35	B43503-B2477-M	10	320					
680	250	30 × 45	B43503-B2687-M	10	320					
▼ 1000	250	35 × 45	B43503-A2108-M90	10	300					
47	400	22 × 25	B43503-G476-M	20	384					
68	400	25 × 25	B43503-Q686-M	20	384					
100	400	22 × 35	B43503-G107-M	20	384					
150	400	25 × 40	B43503-G157-M	16	384					
220	400	30 × 40	B43503-G227-M	10	320					
330	400	30 × 50	B43503-F337-M	10	320					
▼ 470	400	35 × 50	B43503-A477-M90	10	300					
47	450	22 × 35	B43503-A5476-M	16	384					
68	450	25 × 35	B43503-A5686-M	16	384					
100	450	30 × 35	B43503-A5107-M	10	320					
150	450	30 × 45	B43503-A5157-M	10	320					
▼ 220	450	35 × 40	B43503-A5227-M90	10	300					
▼ 330	450	35 × 50	B43503-A5337-M90	10	300					

1) Surge voltage $V_s = 1,15 V_R$ (250 Vdc); $1,1 V_R$ (≥ 400 Vdc)

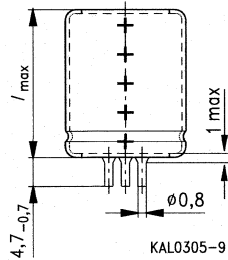
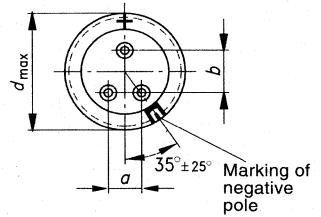
Aluminum Electrolytic Capacitors

3-pin capacitor
Long-life grade
For switch-mode power supplies
with high clock frequencies
Very low self-inductance

Al case with insulating sleeve
 Solder pins with standardized spacing
 Pinning ensures correct insertion
 Operation up to 105 °C ¹⁾ permissible

Rated voltage V_R 16 ... 100 Vdc
 IEC climatic category 40/085/56

Service life
 40 °C; V_R :
 $1,8 \times /ac_{R,85^\circ C}$ > 200 000 h
 85 °C; V_R : $/ac_R$ > 8 000 h



d_{max}	$a^{+0,4}_{-0,2}$	$b^{+0,4}_{-0,2}$
18,8	5	7,5
22,8	7,5	10
25,8	7,5	10

C_R μF	V_R ²⁾ Vdc	Dimensions $d_{max} \times l_{max}$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	20 +	50 +	100 +	250 +
B 41 336						Capacitance tolerance – 10 %/+ 50 %				
2 200	16	18,8 × 30,5	B41336-A4228-T	10	400					
4 700	16	22,8 × 40,5	B41336-A4478-T	10	256					
6 800	16	25,8 × 40,5	B41336-A4688-T	10	256					
1 000	25	18,8 × 30,5	B41336-A5108-T	10	400					
1 500	25	18,8 × 40,5	B41336-A5158-T	10	400					
2 200	25	22,8 × 40,5	B41336-A5228-T	10	256					
4 700	25	25,8 × 40,5	B41336-A5478-T	10	256					
470	40	18,8 × 30,5	B41336-A7477-T	10	400					
680	40	18,8 × 30,5	B41336-A7687-T	10	400					
1 000	40	18,8 × 40,5	B41336-A7108-T	10	400					
2 200	40	25,8 × 40,5	B41336-A7228-T	10	256					
220	63	18,8 × 30,5	B41336-A8227-T	10	400					
470	63	18,8 × 40,5	B41336-A8477-T	10	400					
1 000	63	25,8 × 40,5	B41336-A8108-T	10	256					
220	100	18,8 × 40,5	B41336-A9227-T	10	400					
470	100	25,8 × 40,5	B41336-A9477-T	10	256					

1) Operation at 105 °C permissible for a total of 1000 h
 2) Surge voltage $V_S = 1,15 V_R$

Aluminum Electrolytic Capacitors

3-pin capacitor

Long-life grade

For switch-mode power supplies

with high clock frequencies

Very low self-inductance

Very high current handling capability
despite small size; high reliability

Al case with insulating sleeve

Solder pins with standardized spacing

Pinning ensures correct insertion

Rated voltage V_R 40 and 63 Vdc

IEC climatic category 55/105/56

Service life

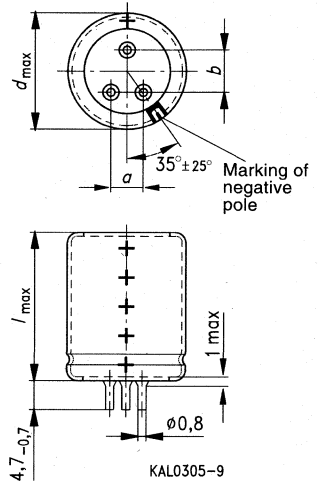
40 °C; V_R ;

$2,9 \times /ac_R, 105^\circ\text{C}$ > 200 000 h

85 °C; V_R ; $/ac_{\text{max}}$ > 12 000 h

105 °C; V_R ; $/ac_R$ > 5 000 h

d_{max}	$a^{+0,4}_{-0,2}$	$b^{+0,4}_{-0,2}$
18,8	5	7,5
22,8	7,5	10
25,8	7,5	10



C_R μF	V_R ¹⁾ Vdc	Dimensions $d_{\text{max}} \times l_{\text{max}}$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	20 +	50 +	100 +	250 +
B 41 538						Capacitance tolerance $\pm 20\%$				
2 200	40	18,8 × 30,5	B41538-A7228-M	10	400					
3 300	40	18,8 × 40,5	B41538-A7338-M	10	400					
2 200	63	22,8 × 40,5	B41538-A8228-M	10	256					
3 300	63	25,8 × 40,5	B41538-A8338-M	10	256					

1) Surge voltage $V_s = 1,15 V_R$

Aluminum Electrolytic Capacitors

Capacitor with soldering star
General-purpose grade
For automotive, entertainment
and industrial electronics

Al case with insulating sleeve
 Mounting socket with solder pins
 Operation up to 105 °C ¹⁾ permissible

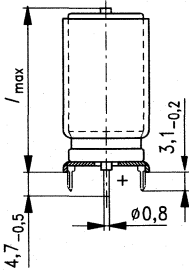
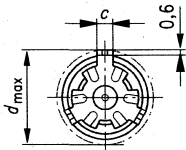
Rated voltage V_R 16 ... 100 Vdc

IEC climatic category 40/085/56

Service life

40 °C; V_R > 200 000 h ($1,5 \times /ac_{R,85^\circ C}$)

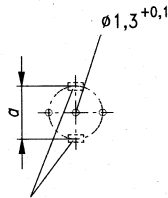
85 °C; V_R > 4 000 h



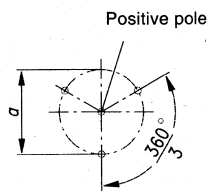
Mounting holes

$d_{max} =$
 13,5 and 15,5

$d_{max} =$
 17,5 ... 26,5



Supporting pin rest



KAL0306-H

Dimensions in mm

d_{max}	13,5	15,5	17,5	19,5	22,5	26,5
$a \pm 0,1$	12,5	14,5	16,5	18,5	21,5	25,5
$c \pm 0,1$	3			3,5		

1) Operation at 105 °C with $0,6 /ac_{max 85^\circ C}$ permissible for a total of 500 h

Aluminum Electrolytic Capacitors

C_R	V_R 1)	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price per 100				
						μF	Vdc	mm	Min. qty. +	100 +
B 41 293						Capacitance tolerance – 10 %/+ 50 %				
2 200	16	17,5 × 33	B41293-B4228-T	50	1200					
4 700	16	22,5 × 42	B41293-A4478-T	32	896					
470	25	13,5 × 33	B41293-A5477-T	80	1440					
1 000	25	15,5 × 33	B41293-J5108-T	80	1440					
2 200	25	19,5 × 40,8	B41293-J5228-T	50	1000					
4 700	25	26,5 × 42	B41293-B5478-T	32	896					
470	40	13,5 × 33	B41293-J7477-T	80	1440					
1 000	40	17,5 × 33	B41293-B7108-T	50	1200					
2 200	40	22,5 × 42	B41293-B7228-T	32	896					
220	63	13,5 × 33	B41293-J8227-T	80	1440					
470	63	17,5 × 33	B41293-B8477-T	50	1200					
1 000	63	22,5 × 42	B41293-A8108-T	32	896					
470	100	22,5 × 42	B41293-B9477-T	32	896					

1) Surge voltage $V_s = 1,15 V_R$ (≤ 250 Vdc); $1,1 V_R$ (385 Vdc)

Aluminum Electrolytic Capacitors

Capacitor with axial leads

General-purpose grade

Standard version for universal application

Al case with insulating sleeve

Welded terminals ensure reliable contacting

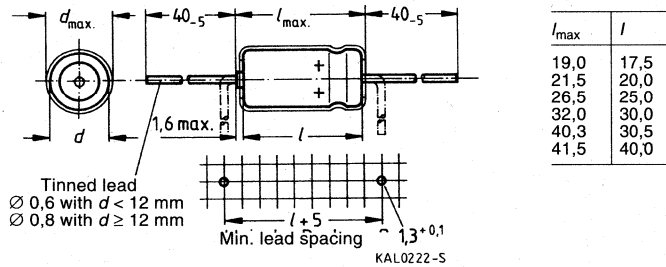
Operation up to 105 °C¹⁾ permissible

Rated voltage V_R 16 ... 100 Vdc (B 41 010, B 43 283)
160 ... 350 Vdc (B 43 050, B 43 283)

IEC climatic category 40/085/56

Service life

	B 41 010 / B 41 283		B 43 050 B 43 283	
	$d_{max} \leq 10,5 \text{ mm}$	$d_{max} \geq 12,5 \text{ mm}$	$d_{max} \leq 10,5 \text{ mm}$	$d_{max} \geq 12,5 \text{ mm}$
40 °C; V_R	> 200 000 h (/ac _{R,85°C})	> 200 000 h (1,4 × /ac _{R,85°C})	> 200 000 h (/ac _{R,85°C})	> 200 000 h (/ac _{R,85°C})
85 °C; V_R	> 3 000 h (/ac _{max})	> 4 000 h (/ac _{max})	> 3 000 h (/ac _{max})	> 3 000 h (/ac _{max})



C_R μF	V_R ²⁾ Vdc	Dimensions $d_{max} \times l_{max}$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	250 +	500 +	1000 +
B 41 283; B 41 010						Capacitance tolerance – 10 %/+ 50 %				
100	16	9,0 × 19,0	B41283-B4107-T	150	3000					
220	16	9,0 × 19,0	B41283-B4227-T	150	3000					
470	16	10,5 × 26,5	B41283-A4477-T	150	2700					
1 000	16	12,5 × 32,0	B41010-B4108-T	150	1800					
2 200	16	16,5 × 32,0	B41010-E4228-T	100	1050					
4 700	16	21,5 × 41,5	B41010-C4478-T	50	800					
100	25	9,0 × 19,0	B41283-B5107-T	150	3000					
220	25	10,5 × 21,5	B41283-B5227-T	150	2700					
470	25	12,5 × 32,0	B41010-B5477-T	150	1800					
1 000	25	14,5 × 32,0	B41010-C5108-T	100	1200					
2 200	25	18,5 × 40,3	B41010-C5228-T	50	1000					
4 700	25	25,5 × 41,5	B41010-C5478-T	50	750					

1) Operation at 105 °C with 0,6 /ac_{max} 85 °C permissible for a total of 500 h
 2) Surge voltage $V_s = 1,15 V_R$

Aluminum Electrolytic Capacitors

C_R	V_R ¹⁾	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price per 100				
						μF	Vdc	mm	Min. qty. +	100 +
B 41 283; B 41 010						Capacitance tolerance – 10 %/+ 50 %				
47	40	9,0 × 19,0	B41283-D7476-T	150	3000					
100	40	10,5 × 21,5	B41283-B7107-T	150	2700					
220	40	10,5 × 26,5	B41283-A7227-T	150	2700					
470	40	12,5 × 32,0	B41010-B7477-T	100	1800					
1 000	40	16,5 × 32,0	B41010-E7108-T	80	1050					
2 200	40	21,5 × 41,5	B41010-C7228-T	50	800					
22	63	9,0 × 19,0	B41283-C8226-T	150	3000					
47	63	9,0 × 19,0	B41283-C8476-T	150	3000					
100	63	10,5 × 26,5	B41283-A8107-T	150	2700					
220	63	12,5 × 32,0	B41010-B8227-T	100	1800					
470	63	16,5 × 32,0	B41010-D8477-T	80	1050					
1 000	63	21,5 × 41,5	B41010-B8108-T	50	800					
10	100	9,0 × 19,0	B41283-J9106-T	150	3000					
22	100	9,0 × 19,0	B41283-C9226-T	150	3000					
47	100	10,5 × 26,5	B41283-A9476-T	150	2700					
100	100	12,5 × 32,0	B41010-B9107-T	100	1800					
220	100	16,5 × 32,0	B41010-E9227-T	80	1050					
470	100	21,5 × 41,5	B41010-B9477-T	50	800					
B 43 283; B 43 050						Capacitance tolerance – 10 %/+ 50 %				
47	160	14,5 × 32,0	B43050-C1476-T	80	1200					
100	160	18,5 × 40,3	B43050-E1107-T	50	1000					
47	250	16,5 × 32,0	B43050-D2476-T	50	1050					
2,2	350	9,0 × 19,0	B43283-C4225-T	100	3000					
4,7	350	10,5 × 21,5	B43283-C4475-T	100	2700					
10	350	12,5 × 32,0	B43050-B4106-T	100	1800					
22	350	14,5 × 32,0	B43050-D4226-T	80	1200					
47	350	18,5 × 40,3	B43050-C4476-T	50	750					

1) Surge voltage $V_s = 1,15 V_R$ (≤ 250 Vdc); $1,1 V_R$ (350 Vdc)

Aluminum Electrolytic Capacitors

Capacitor with axial leads Long-life grade For professional equipment in industrial electronics

Al case with insulating sleeve
Welded terminals ensure reliable contacting
Operation up to 105 °C¹⁾ permissible

Rated voltage V_R 16 ... 100 Vdc (B 41 588)
250 and 350 Vdc (B 43 588)

IEC climatic category 40/085/56

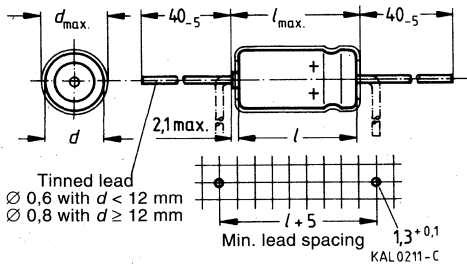
Service life

B 41 588

d_{max}	$\leq 9 \text{ mm}$	$\geq 10,5 \text{ mm}$
40 °C; V_R	$> 200\,000 \text{ h } (1,3 \times /ac_{R,85^\circ\text{C}})$	$> 200\,000 \text{ h } (2,0 \times /ac_{R,85^\circ\text{C}})$
85 °C; V_R	$> 6\,000 \text{ h } (/ac_R)$	$> 10\,000 \text{ h } (/ac_R)$

B 43 588

d_{max}	$\leq 9 \text{ mm}$	$\geq 10,5 \text{ mm}$
40 °C; V_R	$> 200\,000 \text{ h } (1,3 \times /ac_{R,85^\circ\text{C}})$	$> 200\,000 \text{ h } (1,7 \times /ac_{R,85^\circ\text{C}})$
85 °C; V_R	$> 6\,000 \text{ h } (/ac_{max})$	$> 8\,000 \text{ h } (/ac_{max})$



l_{max}	l
19,0	17,5
21,5	20,0
26,5	25,0
32,0	30,0
40,3	30,5
41,5	40,0

1) Operation at 105 °C with $0,6 /ac_{max 85^\circ\text{C}}$ permissible for a total of 500 h

Aluminum Electrolytic Capacitors

C_R	V_R ¹⁾	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	100 +	250 +	500 +	1000 +
μF	Vdc	mm								
B 41 588						Capacitance tolerance – 10 %/+ 50 %				
100	16	9,0 × 19,0	B41588-C4107-T	100	1500					
470	16	12,5 × 32,0	B41588-D4477-T	60	1200					
1 000	16	16,5 × 32,0	B41588-M4108-T	50	700					
2 200	16	18,5 × 40,3	B41588-D4228-T	50	500					
47	25	9,0 × 19,0	B41588-C5476-T	100	1500					
100	25	10,5 × 21,5	B41588-D5107-T	100	900					
470	25	14,5 × 32,0	B41588-E5477-T	50	800					
1 000	25	18,5 × 40,3	B41588-D5108-T	50	500					
22	40	9,0 × 19,0	B41588-C7226-T	100	1500					
47	40	9,0 × 19,0	B41588-D7476-T	100	1500					
100	40	10,5 × 26,5	B41588-D7107-T	80	900					
220	40	12,5 × 32,0	B41588-D7227-T	60	600					
470	40	16,5 × 32,0	B41588-M7477-T	50	700					
1 000	40	21,5 × 41,5	B41588-D7108-T	50	600					
10	63	9,0 × 19,0	B41588-J8106-T	100	1500					
22	63	9,0 × 19,0	B41588-J8226-T	100	1500					
47	63	10,5 × 26,5	B41588-J8476-T	80	900					
100	63	12,5 × 32,0	B41588-J8107-T	60	600					
220	63	16,5 × 32,0	B41588-E8227-T	50	700					
470	63	21,5 × 41,5	B41588-J8477-T	50	600					
10	100	9,0 × 19,0	B41588-C9106-T	80	1500					
22	100	10,5 × 26,5	B41588-C9226-T	70	900					
47	100	12,5 × 32,0	B41588-D9476-T	60	600					
100	100	16,5 × 32,0	B41588-E9107-T	50	700					
220	100	18,5 × 40,3	B41588-D9227-T	50	500					
470	100	25,5 × 41,5	B41588-A9477-T	50	450					

C_R	V_R ¹⁾	Dimensions $d_{max} \times l_{max}$	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	50 +	100 +	250 +	500 +
μF	Vdc	mm								
B 43 588						Capacitance tolerance – 10 %/+ 50 %				
10	250	10,5 × 26,5	B43588-C2106-T	40	900					
47	250	16,5 × 32,0	B43588-M2476-T	20	700					
100	250	21,5 × 41,5	B43588-D2107-T	20	600					
4,7	350	10,5 × 21,5	B43588-C4475-T	50	900					
10	350	12,5 × 32,0	B43588-D4106-T	30	600					
22	350	14,5 × 32,0	B43588-E4226-T	20	800					
47	350	18,5 × 40,3	B43588-D4476-T	20	500					

1) Surge voltage $V_S = 1,15 V_R$

Aluminum Electrolytic Capacitors

Mounting parts

Ring clips for can-type capacitors

Capacitor diameter	Spacing of mounting holes	Length of insulating strip	Ordering code	Price each
mm	mm	mm		1 +

For non-insulated mounting

25	35	—	B44030-A25	
30	40	—	B44030-A30	
35	45	—	B44030-A35	
35,7	46	—	B44030-A36	
40	50	—	B44030-A40	
51,6	60	—	B44030-A50	
51,6	³⁾	—	B44030-A51	
64,3 ¹⁾	³⁾	—	B44030-A64	
▼ 64,3 ²⁾	³⁾	—	B44030-A65	
76,9	³⁾	—	B44030-A75	
91	³⁾	—	B44030-A90	

For insulated mounting (with insulating strips)

25	35,4	170	B44030-J25	
30	40,4	200	B44030-J30	
35	45,4	230	B44030-J35	
35	¹⁾	230	B44030-J36	
40	50,4	260	B44030-J40	
51,6	60,4	325	B44030-J50	
51,6	¹⁾	325	B44030-J51	
64,3	¹⁾	420	B44030-J64	
64,3	75	420	B44030-J65	
76,9	¹⁾	495	B44030-J75	
91	¹⁾	590	B44030-J90	

1) Ring clip height (dimension h_1) 29 mm

2) Ring clip height (dimension h_1) 26 mm

3) Clips are fixed at 3 points. For details refer to Data Book "Aluminum Electrolytic Capacitors".

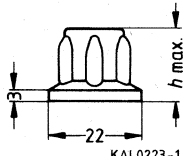
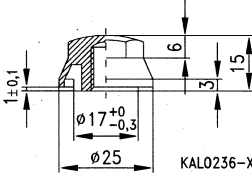
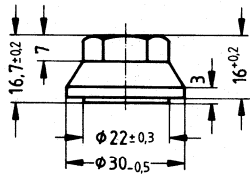
Aluminum Electrolytic Capacitors

Accessories for can-type capacitors with threaded stud on capacitor base

Capacitor diameter	Outline drawing	Ordering code	Price each 1 +						
Insulating shoulder washer P made of plastic (similar to DIN 41 331)									
≤ 40 mm Dimension $d = 8,4$ mm	for M8 thread 	B44020-B1-B25							
> 40 mm Dimension $d = 12,5$ mm	for M12 thread 	B44020-B2-B30							
Insulating washer N made of laminated paper									
≤ 40 mm Dimension $d = 8,4$ mm	for M8/M12 thread 	B44020-A1-B25							
> 40 mm Dimension $d = 13$ mm		B44020-A2-B25							
Insulating washer made of Hostalen									
51,6 mm 76,9 mm		B44020-B6-B51 B44020-B6-B76							
<table border="1"> <tr> <td>$d_1 - 0,5$</td> <td>$d_2 - 0,5$</td> </tr> <tr> <td>51</td> <td>31</td> </tr> <tr> <td>76</td> <td>56</td> </tr> </table>	$d_1 - 0,5$	$d_2 - 0,5$	51	31	76	56			
$d_1 - 0,5$	$d_2 - 0,5$								
51	31								
76	56								

Aluminum Electrolytic Capacitors

Accessories for can-type capacitors with threaded stud on capacitor base

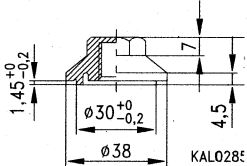
Capacitor diameter	Outline drawing	Ordering code	Price each 1 +
Cap nut V made of plastic			
≤ 40 mm Dimension $h_{\max} = 14$ mm	for M8 thread width across flats 13 mm  KAL0223-1	B44020-B5-B8	
> 40 mm Dimension $h_{\max} = 18$ mm	for M12 thread width across flats 17 mm KAL0223-1	B44020-A5-B12	
Reinforced cap nut made of nylon			
≤ 40 mm	for M8 thread width across flats 17 mm  KAL0236-X	B44020-J6-B8	
> 40 mm	for thread M12 width across flats 19 mm  KAL0062-9	B44020-J6-B12	

Aluminum Electrolytic Capacitors

Accessories for can-type capacitors with threaded stud on capacitor base

Capacitor diameter	Outline drawing	Ordering code	Price each 1 +
--------------------	-----------------	---------------	-------------------

Reinforced cap nut made of nylon

<p>> 40 mm</p>	<p>for M12 thread ¹⁾ width across flats 19 mm</p> 	<p>B44020-J7-B12</p>	
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1) To obtain larger clearances

Capacitors for Power Electronics

Contents	Type	Page
MKV capacitors for ac application		
General-purpose applications, commutation	B25832	258
Damping, commutation	B25834	260
Damping	B25835	263
General-purpose applications, coupling, damping	B25839	265

▼ Newly included in this edition

Higher capacitance and voltage ratings for	B25832	259
	B25834	262
	B25835	264

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Data Book "Capacitors for Power Electronics", B426-P2609-X-X-7600

MKV Capacitors for AC Application

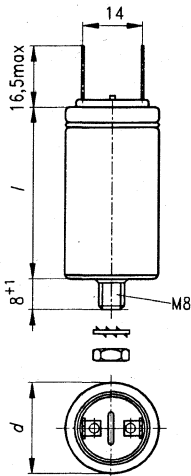
Compact model for general-purpose applications and commutation in the low-frequency range

Self-healing, with overpressure disconnecter

Load duration	30 000 h
Failure quota	1000 failures in 10 ⁹ h
IEC climatic category	25/070/56
Repetitive peak voltage \hat{v}	800 ... 1200 V
Surge peak voltage v_p	1100 ... 1600 V
Rate of voltage rise $(dv/dt)_{max}$	20 ... 40 V/ μ s
Dissipation factor $\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Outline drawing 1

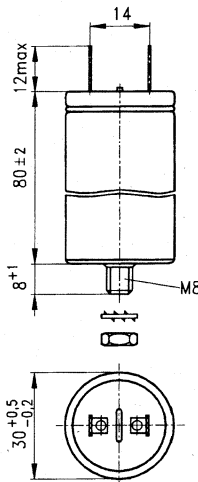
Solderable tab connectors
A6,3 x 0,8 DIN 46 144



KLK0901-8

Outline drawing 2

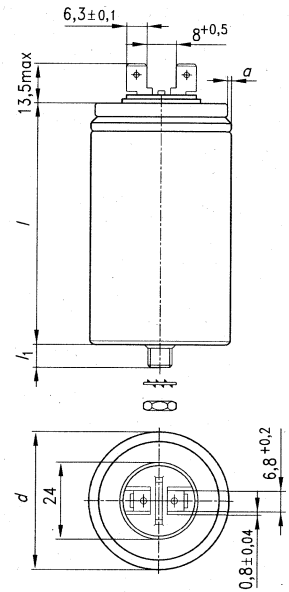
Solderable tab connectors
A6,3 x 0,8 DIN 46 144



KLK0905-6

Outline drawing 3

Dual tab connectors
6,3 x 0,8 mm



KLK0908-V

$d + 0,5/-0,2$ mm	$l + 3/-1$ mm
25	48
25	80

$d + 0,5/-0,2$ mm	$l + 1/-2$ mm	$l_1 + 1^*$ mm	a max. mm
40	86	8	1,0
50	86	12	1,5
50	156	12	1,5
60	86	12	1,5
60	156	12	1,5

Mounting parts (included in delivery):

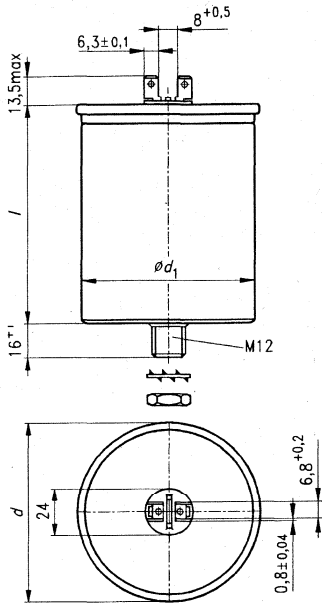
For threaded bolt M 8: toothed washer J 8,2 DIN 6797, hex nut AM 8 DIN 439

For threaded bolt M12: toothed washer J12,5 DIN 6797, hex nut BM12 DIN 439

MKV Capacitors for AC Application

Outline drawing 4

Dual tab connectors 6,3 mm



KLK1264-3

$d_{-1,2}$ mm	l_{-4} mm	$\varnothing d_1 -0,4$ mm
79,2	104	75,2
89,3	104	85,2

Mounting parts (included in delivery):

Toothed washer J12,5 DIN 6797,
hex nut BM12 DIN 439

C_R μF	Dimensions $d \times l$ mm	Out- line drawing	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	5 +	10 +	50 +	100 +
$V_R = 640 \text{ V}; V_{\text{rms}} = 450 \text{ V}$						Capacitance tolerance $\pm 10 \%$				
1,0	25 × 48	1	B25832-J4105-K1	5	128					
2,2	25 × 80	1	B25832-A4225-K1	5	128					
3,3	25 × 80	1	B25832-A4335-K1	5	128					
4,7	30 × 80	2	B25832-A4475-K1	5	80					
10	40 × 86	3	B25832-A4106-K9	4	96					
15	50 × 86	3	B25832-A4156-K9	3	72					
22	60 × 86	3	B25832-B4226-K9	2	72					
33	50 × 156	3	B25832-A4336-K9	2	72					
47	60 × 156	3	B25832-B4476-K9	1	72					
$V_R = 930 \text{ V}; V_{\text{rms}} = 660 \text{ V}$						Capacitance tolerance $\pm 10 \%$				
▼ 10	60 × 86	3	B25832-B6106-K9	3	72					
▼ 15	79,2 × 104	4	B25832-B6156-K9	2	48					
▼ 22	89,3 × 104	4	B25832-B6226-K9	1	48					

MKV Capacitors for AC Application

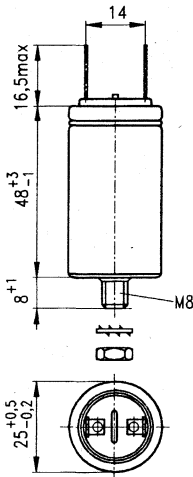
**High dielectric strength and
high peak current capability
For damping and commutation
in the medium frequency range**

Self-healing, with overpressure disconnecter

Load duration	100 000 h
Failure quota	300 failures in 10 ⁹ h
IEC climatic category	25/070/56
Repetitive peak voltage \hat{v}	750 V ... 1100 V
Surge peak voltage v_p	1000 V ... 1500 V
Rate of voltage rise $(dv/dt)_{max}$	45 V/ μ s ... 550 V/ μ s
Dissipation factor $\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Outline drawing 1

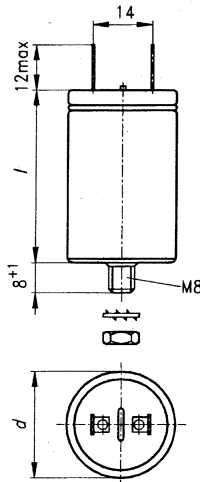
Tab connectors
A6,3 × 0,8 DIN 46 244



KLK0902-G

Outline drawing 2

Tab connectors
A6,3 × 0,8 DIN 46 244



KLK0904-X

$d + 0,5/-0,2$ mm	± 2 mm
30	48
30	80

Mounting parts (included in delivery):

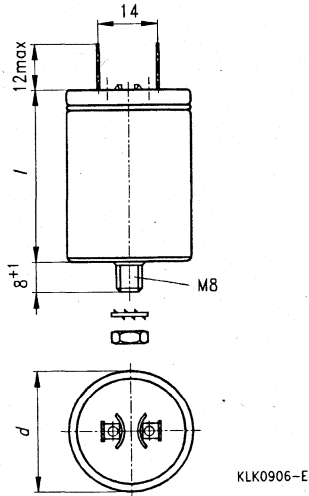
Toothed washer J 8,2 DIN 6797

Hex nut AM 8 DIN 439

MKV Capacitors for AC Application

Outline drawing 3

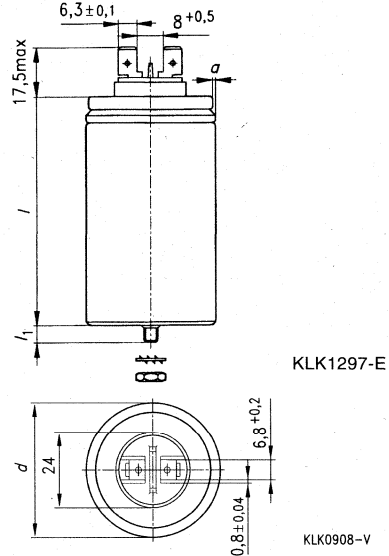
Tab connectors
A6,3 × 0,8 DIN 46 244



$d + 0,5/-0,2$ mm	$l \pm 2$ mm
35	48
35	80

Outline drawing 4

Dual tab connectors
6,3 × 0,8 mm



$d + 0,5/-0,2$ mm	$l + 1/-2$ mm	$l_1 + 1^*)$ mm	a max. mm
40	86	8	1,0
50	86	12	1,5
60	86	12	1,5

*) 8 mm = threaded bolt M 8
12 mm = threaded bolt M 12

Mounting parts (included in delivery):

For threaded bolt M 8: toothed washer J 8,2 DIN 6797, hex nut AM 8 DIN 439

For threaded bolt M 12: toothed washer J 12,5 DIN 6797, hex nut BM 12 DIN 439

MKV Capacitors for AC Application

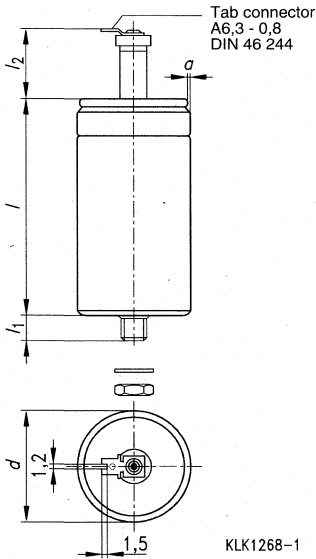
C_R μF	Dimensions $d \times l$ mm	Out- line draw- ing	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	5 +	10 +	50 +	100 +
$V_R = 600 \text{ V}; V_{\text{rms}} = 420 \text{ V}$						Capacitance tolerance $\pm 10 \%$				
1,0	25 × 48	1	B25834-B4105-K1	5	128					
1,5	30 × 48	2	B25834-B4155-K1	5	80					
2,2	30 × 48	2	B25834-B4225-K1	4	80					
3,3	35 × 48	3	B25834-B4335-K1	4	72					
4,7	30 × 80	2	B25834-B4475-K1	4	80					
6,8	35 × 80	3	B25834-B4685-K1	3	72					
10	40 × 86	4	B25834-K4106-K9	3	96					
$V_R = 750 \text{ V}; V_{\text{rms}} = 530 \text{ V}$						Capacitance tolerance $\pm 10 \%$				
4,7	35 × 80	3	B25834-B5475-K1	4	72					
6,8	40 × 86	4	B25834-K5685-K9	3	96					
10	50 × 86	4	B25834-K5106-K9	2	72					
$V_R = 900 \text{ V}; V_{\text{rms}} = 640 \text{ V}$						Capacitance tolerance $\pm 20 \%$				
0,1	25 × 48	1	B25834-J6104-M1	5	128					
0,22	25 × 48	1	B25834-J6224-M1	5	128					
0,33	25 × 48	1	B25834-J6334-M1	5	128					
0,47	25 × 48	1	B25834-B6474-M1	5	128					
0,68	25 × 48	1	B25834-B6684-M1	5	128					
$V_R = 900 \text{ V}; V_{\text{rms}} = 640 \text{ V}$						Capacitance tolerance $\pm 10 \%$				
1,0	30 × 48	2	B25834-B6105-K1	5	80					
1,5	35 × 48	3	B25834-B6155-K1	4	72					
2,2	30 × 80	2	B25834-B6225-K1	4	80					
3,3	35 × 80	3	B25834-B6335-K1	4	72					
4,7	40 × 86	4	B25834-K6475-K9	3	96					
6,8	50 × 86	4	B25834-K6685-K9	2	72					
10	60 × 86	4	B25834-K6106-K9	2	72					

MKV Capacitors for AC Application

Damping capacitor with high dielectric strength and high peak current capability; especially for snubber circuits

Single-pole, self-healing, with overpressure disconnecter

Load duration	100 000 h
Failure quota	300 failures in 10 ⁹ h
IEC climatic category	25/070/56
Repetitive peak voltage \hat{v}	1100 V ... 4300 V
Surge peak voltage v_p	1500 V ... 5800 V
Rate of voltage rise $(dv/dt)_{max}$	250 V/ μ s ... 1800 V/ μ s
Dissipation factor $\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$



$d + 0,5/- 0,2$ mm	$l + 1/- 2$ mm	$l_1 + 1^*)$ mm	l_2 max. mm	a max. mm
25	57	8	15	1,0
25	70	8	23	1,0
25	95	8	23	1,0
30	57	8	15	1,0
30	95	8	23	1,0
35	95	8	26	1,0
35	131	8	32	1,0
45	57	8	22	1,0
45	131	8	32	1,0
50	95	12	26	1,5
50	131	12	32	1,5
60	131	12	32	1,5

*) 8 mm = threaded bolt M 8
12 mm = threaded bolt M 12

Mounting parts (included in delivery)

For threaded bolt M 8: toothed washer J 8,2 DIN 6797, hex nut AM 8 DIN 439

For threaded bolt M 12: toothed washer J 12,5 DIN 6797, hex nut BM 12 DIN 439

MKV Capacitors for AC Application

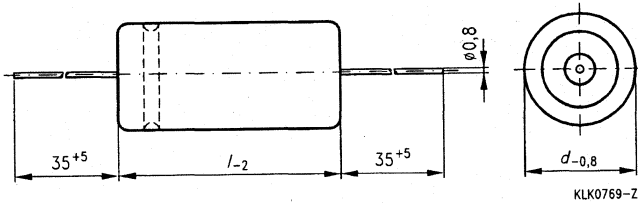
C_R μF	Dimensions $d \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	5 +	10 +	50 +	100 +
$V_R = 900 V; V_{rms} = 640 V$					Capacitance tolerance $\pm 10 \%$				
0,22	25 × 57	B25835-K6224-K7	3	128					
0,33	25 × 57	B25835-K6334-K7	3	128					
0,47	25 × 57	B25835-K6474-K7	3	128					
0,68	30 × 57	B25835-K6684-K7	3	80					
1,0	30 × 57	B25835-K6105-K7	3	80					
2,2	45 × 57	B25835-K6225-K7	2	80					
$V_R = 1400 V; V_{rms} = 990 V$					Capacitance tolerance $\pm 10 \%$				
0,10	25 × 70	B25835-K104-K7	2	128					
0,22	25 × 70	B25835-K224-K7	2	128					
0,33	25 × 95	B25835-K334-K7	2	128					
0,47	30 × 95	B25835-K474-K7	2	80					
0,68	30 × 95	B25835-K684-K7	2	80					
1,0	35 × 95	B25835-K105-K7	2	72					
2,2	50 × 95	B25835-K225-K7	1	72					
$V_R = 1700 V; V_{rms} = 1200 V$					Capacitance tolerance $\pm 10 \%$				
▼ 0,10	25 × 95	B25835-K7104-K7	2	128					
0,22	25 × 95	B25835-K7224-K7	2	128					
$V_R = 2100 V; V_{rms} = 1500 V$					Capacitance tolerance $\pm 10 \%$				
0,47	35 × 131	B25835-K1474-K7	1	72					
0,68	35 × 131	B25835-K1684-K7	1	72					
1,0	45 × 131	B25835-K1105-K7	1	80					
2,2	60 × 131	B25835-L1225-K7	1	72					
$V_R = 3400 V; V_{rms} = 2400 V$					Capacitance tolerance $\pm 10 \%$				
0,10	35 × 131	B25835-K2104-K7	1	72					
0,22	35 × 131	B25835-K2224-K7	1	72					
▼ 0,33	50 × 131	B25835-K2334-K7	1	72					
0,47	50 × 131	B25835-K2474-K7	1	72					

MKV Capacitors for AC Application

Capacitor for coupling and damping, also suitable for general-purpose applications

Self-healing, surge-proof

Load duration	30 000 h
Failure quota	1000 failures in 10^9 h
IEC climatic category	25/070/56
Repetitive peak voltage \hat{v}	880 V
Surge peak voltage v_p	1200 V
Rate of voltage rise $(dv/dt)_{max}$	150 V/ μ s ... 550 V/ μ s
Dissipation factor $\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$



C_R	Dimensions $d \times l$	Ordering code	Min. qty.	Max. qty.	Price each					
					Min. qty. +	10 +	50 +	100 +	250 +	
μ F	mm									
$V_R = 700$ V; $V_{rms} = 500$ V					Capacitance tolerance ± 20 %					
0,10	16,8 \times 32	B25839-B6104-M	8	500						
0,22	16,8 \times 44	B25839-B6224-M	8	500						
0,33	20,8 \times 44	B25839-B6334-M	5	500						
0,47	20,8 \times 44	B25839-B6474-M	5	500						
$V_R = 700$ V; $V_{rms} = 500$ V					Capacitance tolerance ± 10 %					
1,0	20,8 \times 75	B25839-B6105-K	5	360						

Product Group Index

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EMI feed-through elements	278
EMI suppression chokes	281
EMI suppression filters	306



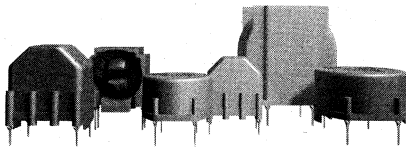


Siemens Matsushita Components

A whole lot of ring core chokes

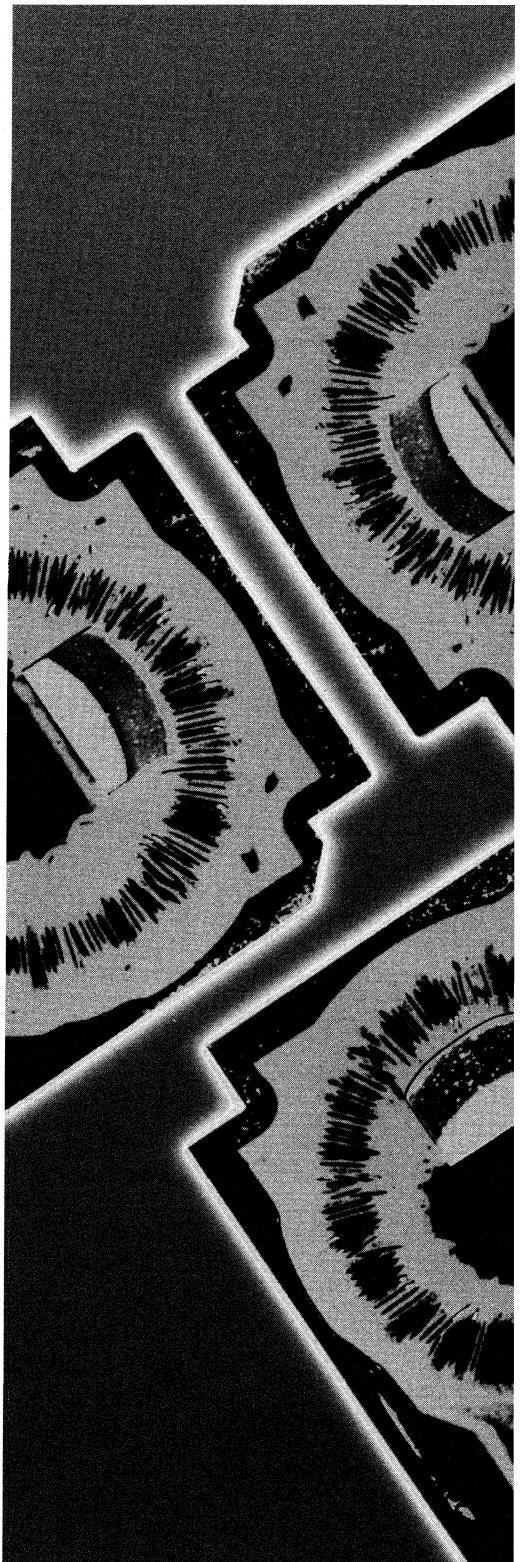
Chokes to your choice

You urgently need particular ring core chokes? That's no problem, we have 200,000 pieces in stock and deliver reliably through SCS. Our automated production guarantees



the best of reliability too. It turns out chokes in different versions: flat and upright, with current rated from 0.4 to 16 A. UL and VDE approved, and complying with the latest EMC standards of course.

SCS – dependable, fast and competent



EMC Components

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▼ Newly included in this edition

Y2 capacitors, plastic case, 10 mm lead spacing, 250 Vac, 50/60 Hz	B 81 122	276
Power line filters for UPS and power electronics (three-phase systems), 16 ... 180 A	B 84 144	324

Symbols and terms

C_R	Rated capacitance
f_R	Resonance frequency
I_R	Rated current
L_R	Rated inductance
R_{typ}	Direct current resistance (typical value)
V_R	Rated voltage
Z	Impedance

EMI suppression capacitors, chokes and filters are also available as lab assortment; for details refer to page 337 ff.

Most of our EMI suppression capacitors can also be supplied on tape. Your SCS contact will tell you the ordering code for the taped version and the matching packing unit.

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Data Book "EMC Components – Capacitors, Chokes, Filters", B4-P2406-X-X-7600
(new edition due to appear in July 1996)

Short Form Catalog "EMC Components – Capacitors, Chokes, Filters", B424-P2411-X-X-7400

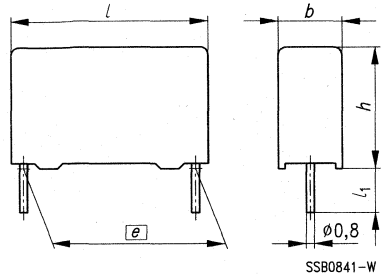
For EMI suppression capacitors: Data Book "Film Capacitors", B429-P2904-X-X-7600

EMI Suppression Capacitors

X2 capacitors, standard version; self-healing



Dielectric: polypropylene (MKP)
 Plastic case (UL 94 V-0)
 Epoxy resin sealing (flame-retardant)

Rated voltage V_R 250 Vac, 50 ... 400 Hz
 Test voltage 1400 Vdc, 2 s
 IEC climatic category 40/085/21



Dimensions in mm

l	l_1	$e \pm 0,4$
18,0	6 - 1	15,0
26,5	6 - 1	22,5
31,5	6 - 1	27,5

Approvals:   (EN 132400/IEC 384-14, edition 2)

C_R μF	Dimensions (max.) $b \times h \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price per 100									
					Min. qty. +	100 +	250 +	500 +	1000 +					
$V_R = 250 \text{ Vac}$					Lead spacing $e = 15 \text{ mm}$					Capacitance tolerance $\pm 20 \%$				
■ 22 nF	5,0 × 10,5 × 18,0	B81121-C-B121	200	4000										
■ 33 nF	5,0 × 10,5 × 18,0	B81121-C-B122	200	4000										
■ 47 nF	7,0 × 12,5 × 18,0	B81121-C-B123	200	4000										
■ 68 nF	8,5 × 14,5 × 18,0	B81121-C-B124	100	2000										
■ 0,10	8,5 × 14,5 × 18,0	B81121-C-B125	100	2000										
$V_R = 250 \text{ Vac}$					Lead spacing $e = 22,5 \text{ mm}$					Capacitance tolerance $\pm 20 \%$				
■ 0,15	8,5 × 16,5 × 26,5	B81121-C-B126	100	2040										
■ 0,22	10,5 × 16,5 × 26,5	B81121-C-B127	100	2160										
■ 0,33	10,5 × 20,5 × 26,5	B81121-C-B128	100	2160										
$V_R = 250 \text{ Vac}$					Lead spacing $e = 27,5 \text{ mm}$					Capacitance tolerance $\pm 20 \%$				
■ 0,47	11,0 × 21,0 × 31,5	B81121-C-B129	50	1280										
■ 0,68	13,5 × 23,0 × 31,5	B81121-C-B130	50	1040										
■ 1,0	18,0 × 27,5 × 31,5	B81121-C-B132	50	800										

EMI Suppression Capacitors

X2 capacitors, small size; self-healing

Dielectric: polyester (MKT)

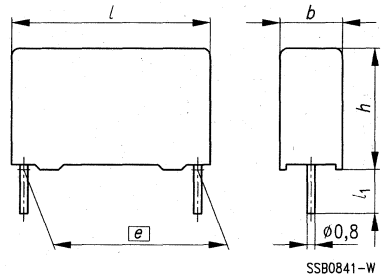
Plastic case (UL 94 V-0)

Epoxy resin sealing (flame-retardant)

Rated voltage V_R 275 Vac, 50/60 Hz

Test voltage 1700 Vdc, 2 s

IEC climatic category 40/100/21



Dimensions in mm

l	l_1	$e \pm 0,4$
18,0	6 - 1	15,0
26,5	6 - 1	22,5
31,5	6 - 1	27,5

Approvals: (EN 132400/IEC 384-14, edition 2)

C_R	Dimensions (max.) $b \times h \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
μF	mm								
$V_R = 275 \text{ Vac}$		Lead spacing $e = 15 \text{ mm}$			Capacitance tolerance $\pm 20 \%$				
22 nF	5,0 × 10,5 × 18,0	B81133-C1223-M	200	4000					
33 nF	5,0 × 10,5 × 18,0	B81133-C1333-M	200	4000					
47 nF	6,0 × 11,0 × 18,0	B81133-C1473-M	200	4000					
68 nF	7,0 × 12,5 × 18,0	B81133-C1683-M	200	4000					
0,10	8,5 × 14,5 × 18,0	B81133-D1104-M	200	2000					
$V_R = 275 \text{ Vac}$		Lead spacing $e = 22,5 \text{ mm}$			Capacitance tolerance $\pm 20 \%$				
0,10	6,0 × 15,0 × 26,5	B81133-C1104-M	200	2880					
0,15	7,0 × 16,0 × 26,5	B81133-C1154-M	100	2520					
0,22	8,5 × 16,5 × 26,5	B81133-C1224-M	100	2040					
0,33	10,5 × 16,5 × 26,5	B81133-D1334-M	100	2160					
0,47	11,0 × 20,5 × 26,5	B81133-D1474-M	100	2040					
$V_R = 275 \text{ Vac}$		Lead spacing $e = 27,5 \text{ mm}$			Capacitance tolerance $\pm 20 \%$				
0,33	11,0 × 21,0 × 31,5	B81133-C1334-M	100	1280					
0,47	11,0 × 21,0 × 31,5	B81133-C1474-M	100	1280					
0,68	12,5 × 21,5 × 31,5	B81133-C1684-M	50	1120					
1,0	14,0 × 24,5 × 31,5	B81133-C1105-M	50	1040					
1,5	18,0 × 27,5 × 31,5	B81133-C1155-M	50	800					

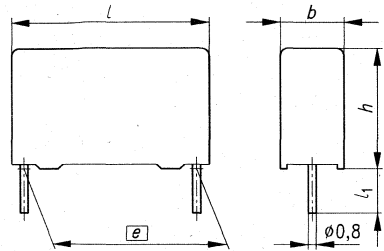
These capacitors are also available as lab assortment (8 capacitance ratings); for details refer to page 337.

EMI Suppression Capacitors

X2 capacitors SAFE-X
Self-healing; best possible safety
in terms of active flammability

Dielectric: polyester (MKT)
 Plastic case (UL 94 V-0)
 Epoxy resin sealing (flame-retardant)

Rated voltage V_R 300 Vac, 50/60 Hz
 Test voltage 2100 Vdc, 2 s
 IEC climatic category 40/100/21



SSB0841-W

Dimensions in mm

l	l_1	$e \pm 0,4$
18,0	6 - 1	15,0
26,5	6 - 1	22,5
31,5	6 - 1	27,5

Approvals: (EN 132400/IEC 384-14, edition 2)

C_R	Dimensions (max.) $b \times h \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100				
					Min. qty. +	100 +	250 +	500 +	1000 +
μF	mm								
$V_R = 300$ Vac		Lead spacing $e = 15$ mm			Capacitance tolerance ± 20 %				
10 nF	5,0 × 10,5 × 18,0	B81131-C1103-M	200	4000					
22 nF	6,0 × 11,0 × 18,0	B81131-C1223-M	200	4000					
33 nF	7,0 × 12,5 × 18,0	B81131-C1333-M	200	4000					
47 nF	8,5 × 14,5 × 18,0	B81131-C1473-M	200	2000					
68 nF	9,0 × 17,5 × 18,0	B81131-C1683-M	200	2000					
0,10	9,0 × 17,5 × 18,0	B81131-D1104-M	200	2000					
$V_R = 300$ Vac		Lead spacing $e = 22,5$ mm			Capacitance tolerance ± 20 %				
0,10	7,0 × 16,0 × 26,5	B81131-C1104-M	200	2520					
0,15	8,5 × 16,5 × 26,5	B81131-C1154-M	100	2040					
0,22	10,5 × 16,5 × 26,5	B81131-C1224-M	100	2160					
0,33	11,0 × 20,5 × 26,5	B81131-D1334-M	100	2040					
$V_R = 300$ Vac		Lead spacing $e = 27,5$ mm			Capacitance tolerance ± 20 %				
0,33	11,0 × 21,0 × 31,5	B81131-C1334-M	100	1280					
0,47	13,5 × 23,0 × 31,5	B81131-C1474-M	100	1040					
0,68	15,0 × 24,5 × 31,5	B81131-C1684-M	50	960					
1,0	19,0 × 30,0 × 31,5	B81131-C1105-M	50	720					

These capacitors are also available as lab assortment (4 capacitance ratings); for details refer to page 337.

EMI Suppression Capacitors

X2 capacitors; self-healing

Dielectric: polypropylene (MKP)

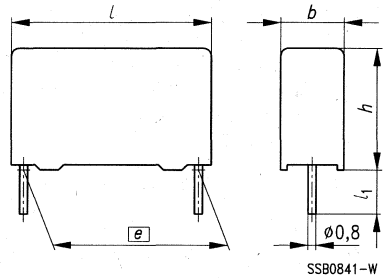
Plastic case (UL 94 V-0)

Epoxy resin sealing (flame-retardant)

Rated voltage V_R 440 Vac, 50 ... 1000 Hz

Test voltage 2400 Vdc, 2 s

IEC climatic category 40/085/21



Dimensions in mm

l	l_1	$e \pm 0,4$
18,0	6 - 1	15,0
26,5	6 - 1	22,5
31,5	6 - 1	27,5

Approvals: (400 V~) (EN 132400/IEC 384-14, edition 2)

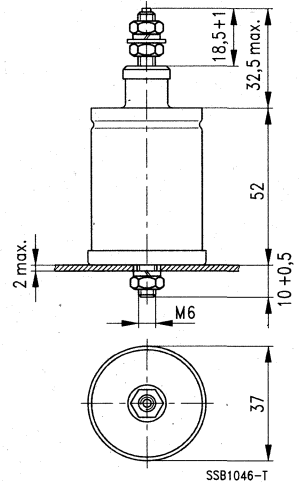
C_R	Dimensions (max.) $b \times h \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100					
					Min. qty. +	100 +	250 +	500 +	1000 +	
μF	mm									
▽ $V_R = 440$ Vac Lead spacing $e = 15$ mm Capacitance tolerance ± 20 %										
10 nF	$6,0 \times 11,0 \times 18,0$	B81121-C-B92	200	4000						
22 nF	$8,5 \times 14,5 \times 18,0$	B81121-C-B93	100	2000						
▽ $V_R = 440$ Vac Lead spacing $e = 22,5$ mm Capacitance tolerance ± 20 %										
47 nF	$8,5 \times 16,5 \times 26,5$	B81121-C-B95	100	2040						
0,10	$10,5 \times 20,5 \times 26,5$	B81121-C-B97	100	2160						
▽ $V_R = 440$ Vac Lead spacing $e = 27,5$ mm Capacitance tolerance ± 20 %										
0,15	$11,0 \times 21,0 \times 31,5$	B81121-C-B98	50	1280						
0,22	$14,0 \times 24,5 \times 31,5$	B81121-C-B99	50	1040						
0,33	$18,0 \times 27,5 \times 31,5$	B81121-C-B100	50	800						

EMI Suppression Capacitors

X2 capacitor
Hermetically sealed metal case
For high rel requirements

Connecting bolt M6 (nuts and spring washers included in delivery)

Rated voltage 800 Vdc, 440 Vac, 50/60 Hz
 IEC climatic category 40/085/56



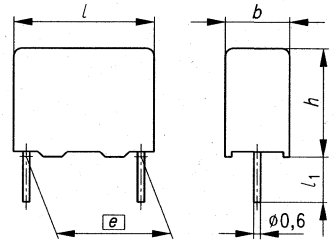
C_R	Dimensions $d \times l$	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	5 +	10 +	25 +	50 +
μF	mm								
800 Vdc, 440 Vac					Capacitance tolerance $\pm 20\%$				
0,6	37 x 52	B81551-A-B16	1	72					

EMI Suppression Capacitors

Y2 capacitors with 10 mm lead spacing Self-healing

Dielectric: polyester (MKT)
Plastic case (UL 94 V-0)
Epoxy resin sealing (flame-retardant)

Rated voltage V_R 250 Vac, 50/60 Hz
Test voltage 2500 Vdc, 2 s
IEC climatic category 40/100/21



SSB0911-G

$$l_1 = 6 - 1$$

Approvals: (EN 132400/IEC 384-14, edition 2)

C_R	Dimensions (max.) $b \times h \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
nF	mm							
$V_R = 250 \text{ Vac}$		Lead spacing $e = 10 \text{ mm}$			Capacitance tolerance $\pm 20 \%$			
▼ 1,0	4,0 × 9,0 × 13,0	B81122-C1102-M	200	4000				
▼ 1,5	4,0 × 9,0 × 13,0	B81122-C1152-M	200	4000				
▼ 2,2	4,0 × 9,0 × 13,0	B81122-C1222-M	200	4000				
▼ 3,3	5,0 × 11,0 × 13,0	B81122-C1332-M	200	4000				
▼ 4,7	5,0 × 11,0 × 13,0	B81122-C1472-M	200	4000				
▼ 5,6	6,0 × 12,0 × 13,0	B81122-C1562-M	200	4000				
▼ 6,8	6,0 × 12,0 × 13,0	B81122-C1682-M	200	4000				

EMI Suppression Capacitors

Y2 capacitors Self-healing

Dielectric: polypropylene (MKP)

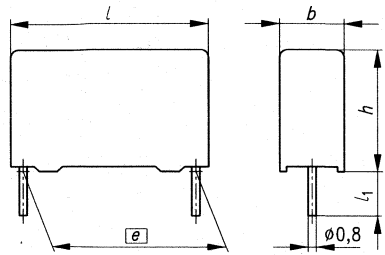
Plastic case (UL 94 V-0)

Epoxy resin sealing (flame-retardant)

Rated voltage V_R 250 Vac, 50 ... 1000 Hz

Test voltage 2700 Vdc, 2 s

IEC climatic category 40/085/21



SSB0841-W

Dimensions in mm

l	l_1	$e \pm 0,4$
18,0	6 - 1	15,0
26,5	6 - 1	22,5
31,5	6 - 1	27,5

Approvals: (EN 132400/IEC 384-14, edition 2)

C_R	Dimensions $b \times h \times l$	Ordering code	Min. qty.	Max. qty.	Price per 100			
					Min. qty. +	250 +	500 +	1000 +
nF	mm							
$V_R = 250$ Vac		Lead spacing $e = 15$ mm			Capacitance tolerance ± 20 %			
2,5	6,0 × 11,0 × 18,0	B81121-C-B141	200	4000				
3,3	7,0 × 12,5 × 18,0	B81121-C-B142	200	4000				
4,7	8,5 × 14,5 × 18,0	B81121-C-B143	100	2000				
$V_R = 250$ Vac		Lead spacing $e = 22,5$ mm			Capacitance tolerance ± 20 %			
6,8	6,0 × 15,0 × 26,5	B81121-C-B144	100	2880				
10	7,0 × 16,0 × 26,5	B81121-C-B145	100	2520				
15	8,5 × 16,5 × 26,5	B81121-C-B146	100	2040				
22	10,5 × 18,5 × 26,5	B81121-C-B147	100	2160				
27	10,5 × 20,5 × 26,5	B81121-C-B148	100	2160				
$V_R = 250$ Vac		Lead spacing $e = 27,5$ mm			Capacitance tolerance ± 20 %			
33	11,0 × 21,0 × 31,5	B81121-C-B149	100	1280				

Y2 capacitors are also available as lab assortment; for details refer to page 337.

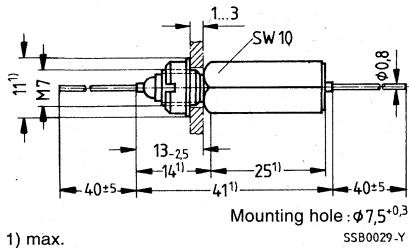
EMI Feed-Through Capacitors

Feed-through capacitors For central screw mounting

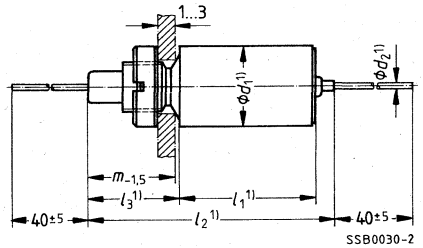
In accordance with VDE 0565-1

Rated voltage 80 ... 440 Vdc
 42 ... 250 Vac, 50/60 Hz
 Rated current 10 ... 25 A
 IEC climatic category 40/100/56

B85121-D



B85121-A



Type	d_1	l_1	l_2	l_3	m	d_2	Thread	Mounting hole
B85121-A-B3, -B7	16	24	42,5	16,5	16	1	M10 × 0,75	10,5 + 0,3
B85121-A-B9	16	34	52,5	16,5	16	1	M10 × 0,75	10,5 + 0,3
B85121-A-B5, -B6	20	38,5	58	18	17	2	M12 × 0,75	12,5 + 0,5

I_R	V_R	C_R	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	5 +	10 +	25 +	50 +
10	350/250 ¹⁾	0,01	B85121-D-B2	2	108					
10	80/42	0,05	B85121-D-B4	2	108					
16	350/250	0,025 (X2)	B85121-A-B7	2	57					
16	350/250	0,05 (X2)	B85121-A-B9	2	57					
▼ 16	440/250	5000 pF (Y)	B85121-A-B3	2	57					
▽ 25	440/250	0,035 (Y)	B85121-A-B5	2	45					
▼ 25	440/250	0,05 (Y)	B85121-A-B6	1	42					

1) Not for line operation

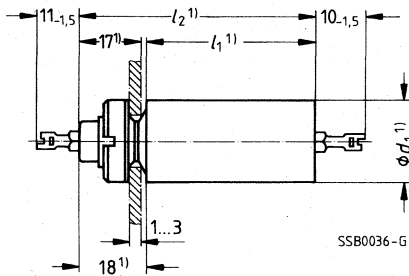
EMI Feed-Through Filters

Feed-through filters For central screw mounting

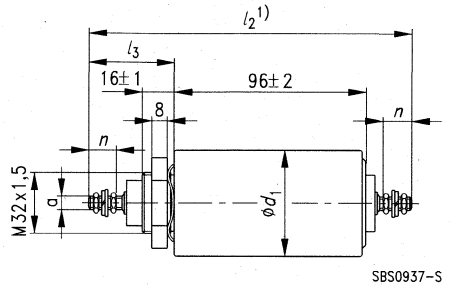
The incorporated capacitors comply with VDE 0565-1

Rated voltage 250 ... 600 Vdc
 250 Vac, 50/60 Hz
 Rated current 16 A ... 100 A
 IEC climatic category 40/085/56

B85321-A-B



B85321-A-J



1) max.

Type	d_1	l_1	l_2	l_3	a	n	Mounting hole
B85321-A-B9	16	40	56	—	—	—	10,5 + 0,3
B85321-A-B6	20	40	58	—	—	—	12,5 + 0,3
B85321-A-J1, -J2, -J12	55 ± 1	—	166	45 ₋₃	M 6	15 min.	32
B85321-A-J11	55 ± 1	—	200	62 ₋₃	M 8	24 min.	32

I_R	V_R	C_R	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	5 +	10 +	25 +	50 +
▼ 16	250/250	2 × 2500 pF (Y)	B85321-A-B9	1	57					
▼ 16	350/250	2 × 2500 pF (Y)	B85321-A-B6	1	42					
▼ 40	350/250 ²⁾	2 × 4,7 μF	B85321-A-J12	1	54					
▼ 40	440/250	2 × 2 μF (X2)	B85321-A-J1	1	54					
▼ 40	600/250	2 × 1 μF (X2)	B85321-A-J2	1	54					
▼ 100	600/250	2 × 1 μF (X2)	B85321-A-J11	1	54					

2) Not for line operation

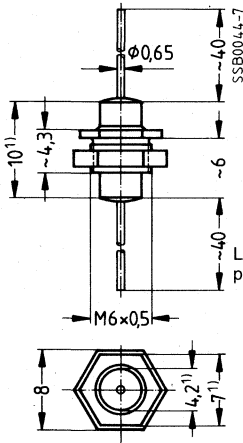
EMI Feed-Through Filters

VHF feed-through filters For telecom systems

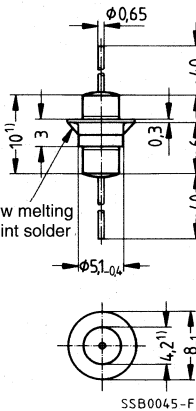
Solder or screw connection

Rated voltage 350 Vdc
 Rated current 6 A
 IEC climatic category 40/085/21

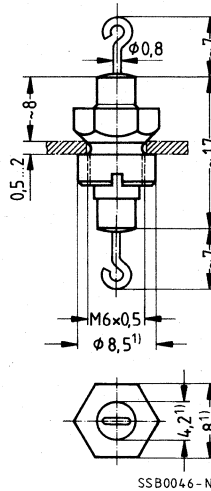
B85313-A-B7



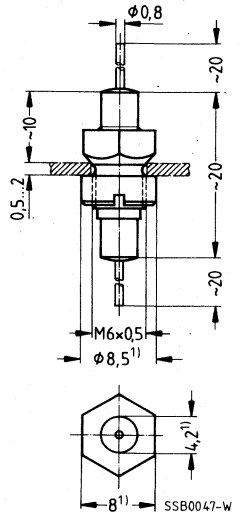
B85313-A-B4



B85313-A-B3



B85313-A-C1



1) max.

Mounting hole for screw connection $6,3 \varnothing^{+0,2}$

Mounting hole for solder connection $5,3 \varnothing^{+0,2}$

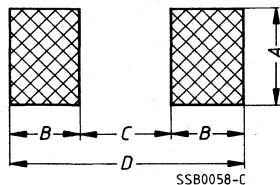
f_R	C_R	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	50 +	100 +	500 +	1000 +
A	pF								
6	2 × 800	B85313-A-B7	10	800					
6	2 × 800	B85313-A-B4	10	1000					
6	2 × 1600	B85313-A-B3	10	1000					
6	2 × 3500	B85313-A-C1	10	800					

HF chokes for surface mounting Chip inductors SIMID 01

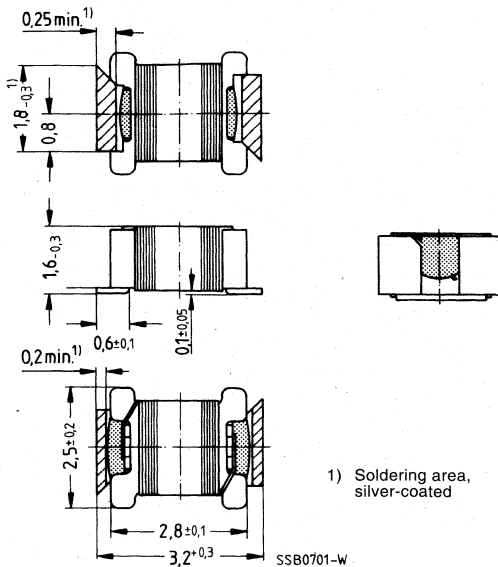
Without encapsulation
Suitable for all soldering methods
Tape packaging in accordance with
IEC 286-3, 8-mm blister tape

Rated inductance 0,022 ... 10 μ H
Rated current 90 ... 600 mA
IEC climatic category 55/125/56

Layout recommendation

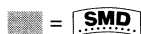


Dimensions	A	B	C	D
Wave soldering	2,3	1,60	2,1	5,3
Reflow soldering	2,7	1,15	2,1	4,4



1) Soldering area, silver-coated

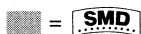
L_R	Quality at measuring frequency		I_R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +
Carrier material: ceramics Inductance tolerance \pm 20 %										
0,022	30	100	600	B82412-A3220-M	250	5000				
Carrier material: ceramics Inductance tolerance \pm 10 %										
0,033	25	50	540	B82412-A3330-K	250	5000				
0,039	25	50	500	B82412-A3390-K	250	5000				
0,047	25	50	470	B82412-A3470-K	250	5000				
0,068	30	50	440	B82412-A3680-K	250	5000				
0,082	30	50	430	B82412-A3820-K	250	5000				
0,10	30	50	400	B82412-A3101-K	250	5000				
0,12	25	30	380	B82412-A3121-K	250	5000				
0,15	25	30	370	B82412-A3151-K	250	5000				
0,18	25	30	340	B82412-A3181-K	250	5000				
0,22	25	30	320	B82412-A3221-K	250	5000				





L_R	Quality at measuring frequency		I_R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +
Carrier material: ceramics										
Inductance tolerance $\pm 10\%$										
0,33	30	30	280	B82412-A3331-K	250	5000				
0,39	30	30	260	B82412-A3391-K	250	5000				
0,47	30	30	225	B82412-A3471-K	250	5000				
0,56	30	30	200	B82412-A3561-K	250	5000				
0,68	30	30	180	B82412-A3681-K	250	5000				
0,82	30	30	150	B82412-A3821-K	250	5000				
Carrier material: ferrite										
Inductance tolerance $\pm 10\%$										
1,0	30	7,96	330	B82412-A1102-K	250	5000				
1,5	30	7,96	300	B82412-A1152-K	250	5000				
2,2	30	7,96	270	B82412-A1222-K	250	5000				
3,3	30	7,96	200	B82412-A1332-K	250	5000				
4,7	35	7,96	160	B82412-A1472-K	250	5000				
6,8	35	7,96	120	B82412-A1682-K	250	5000				
8,2	35	7,96	110	B82412-A1822-K	250	5000				
10,0	35	7,96	90	B82412-A1103-K	250	5000				

Chip inductors B82412 are also available as lab assortment; for details refer to page 338.

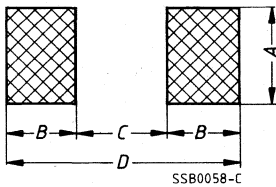


HF chokes for surface mounting Chip inductors SIMID 02 Tinned terminals

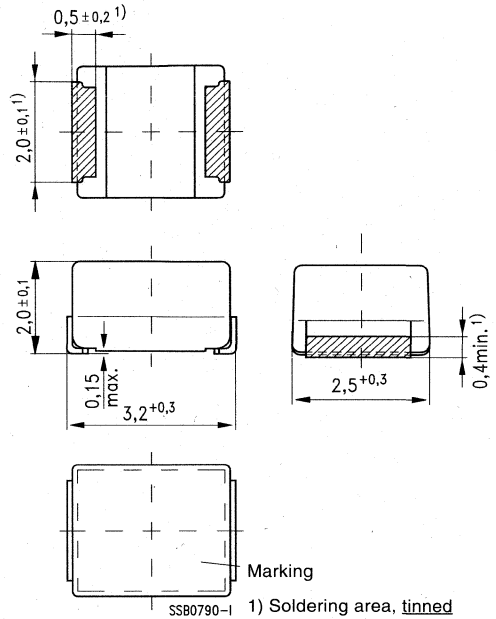
With flame-retardant encapsulation
Suitable for all soldering methods
Tape packaging in accordance with
IEC 286-3, 8-mm blister tape

Rated inductance 0,0082 ... 100 μ H
Rated current 65 ... 800 mA
IEC climatic category 55/125/56

Layout recommendation



Dimensions	A	B	C	D
Wave soldering	2,3	1,60	2,1	5,3
Reflow soldering	2,7	1,15	2,1	4,4



L_R	Quality at measuring frequency	I_R at 105 °C	Ordering code	Min. qty.	Max. qty.	Price per 100				
						Min. qty. +	500 +	1000 +	5000 +	10000 +
μ H	Q_{min}	MHz	mA							

Carrier material: ceramics

Inductance tolerance $\pm 20\%$

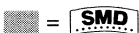
0,0082	20	100	800	B82422-A3829-M100	200	10000					
0,010	20	100	750	B82422-A3100-M100	200	10000					
0,012	25	100	700	B82422-A3120-M100	200	10000					
0,015	27	100	640	B82422-A3150-M100	200	10000					
0,018	30	100	640	B82422-A3180-M100	200	10000					
0,022	30	100	600	B82422-A3220-M100	200	10000					
0,033	20	50	540	B82422-A3330-M100	200	10000					
0,039	25	50	530	B82422-A3390-M100	200	10000					
0,047	26	50	510	B82422-A3470-M100	200	10000					

EMI Suppression Chokes



L_R	Quality at measuring frequency		I_R at 105 °C	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +
Carrier material: ceramics										
Inductance tolerance $\pm 10\%$										
0,068	27	50	480	B82422-A3680-K100	200	10000				
0,082	27	50	450	B82422-A3820-K100	200	10000				
0,10	25	50	440	B82422-A3101-K100	200	10000				
0,12	22	30	400	B82422-A3121-K100	200	10000				
0,15	25	30	390	B82422-A3151-K100	200	10000				
0,18	25	30	360	B82422-A3181-K100	200	10000				
0,22	25	30	280	B82422-A3221-K100	200	10000				
0,27	20	30	235	B82422-A3271-K100	200	10000				
0,33	22	30	200	B82422-A3331-K100	200	10000				
0,39	22	30	190	B82422-A3391-K100	200	10000				
0,47	22	30	150	B82422-A3471-K100	200	10000				
0,68	22	30	145	B82422-A3681-K100	200	10000				
0,82	22	30	140	B82422-A3821-K100	200	10000				
Carrier material: ferrite										
Inductance tolerance $\pm 10\%$										
1,0	20	7,96	380	B82422-A1102-K100	200	10000				
1,5	20	7,96	340	B82422-A1152-K100	200	10000				
1,8	25	7,96	290	B82422-A1182-K100	200	10000				
2,2	25	7,96	270	B82422-A1222-K100	200	10000				
3,3	27	7,96	200	B82422-A1332-K100	200	10000				
4,7	27	7,96	150	B82422-A1472-K100	200	10000				
5,6	27	7,96	140	B82422-A1562-K100	200	10000				
6,8	27	7,96	135	B82422-A1682-K100	200	10000				
8,2	27	7,96	130	B82422-A1822-K100	200	10000				
10	27	2,52	180	B82422-A1103-K100	200	10000				
12	27	2,52	175	B82422-A1123-K100	200	10000				
15	27	2,52	165	B82422-A1153-K100	200	10000				
22	27	2,52	140	B82422-A1223-K100	200	10000				
33	27	2,52	105	B82422-A1333-K100	200	3999				
47	27	2,52	85	B82422-A1473-K100	200	10000				
68	27	2,52	80	B82422-A1683-K100	200	10000				
100	27	2,52	65	B82422-A1104-K100	200	10000				

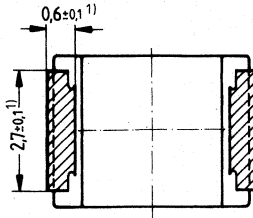
Chip inductors B82422 are also available as lab assortment; for details refer to page 339.



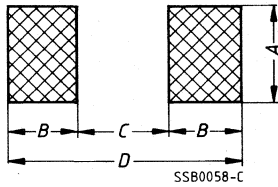
HF chokes for surface mounting Chip inductors SIMID 03

With flame-retardant encapsulation
Suitable for all soldering methods
Tape packaging in accordance with
IEC 286-3, 12-mm blister tape

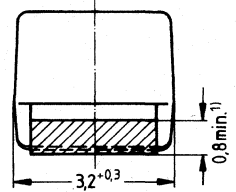
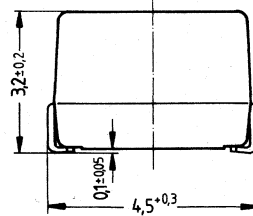
Rated inductance 1 ... 1000 μ H
Rated current 55 ... 600 mA
IEC climatic category 55/125/56



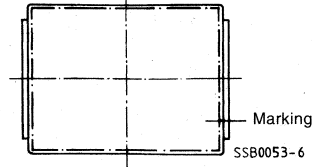
Layout recommendation



Dimensions	A	B	C	D
Wave soldering	3,1	1,7	3,2	6,6
Reflow soldering	3,6	1,3	3,2	5,8



1) Soldering area,
silver-coated

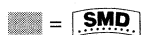


L_R	Quality at measuring frequency		I_R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100						
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +	5000 +		
μ H													

Carrier material: ferrite

Inductance tolerance $\pm 20\%$

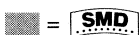
1,0	25	7,96	600	B82432-A1102-M	150	5000						
1,5	25	7,96	535	B82432-A1152-M	150	5000						
1,8	25	7,96	490	B82432-A1182-M	150	5000						
2,2	30	7,96	480	B82432-A1222-M	150	5000						
3,3	30	7,96	425	B82432-A1332-M	150	5000						
3,9	30	7,96	410	B82432-A1392-M	150	5000						
4,7	30	7,96	390	B82432-A1472-M	150	5000						
6,8	30	7,96	360	B82432-A1682-M	150	5000						
8,2	30	7,96	330	B82432-A1822-M	150	5000						





L_R	Quality at measuring frequency		I_B at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +
Carrier material: ferrite										
Inductance tolerance $\pm 10\%$										
10	45	2,52	320	B82432-A1103-K	150	5000				
15	45	2,52	280	B82432-A1153-K	150	5000				
22	45	2,52	260	B82432-A1223-K	150	5000				
33	45	2,52	230	B82432-A1333-K	150	5000				
39	45	2,52	220	B82432-A1393-K	150	5000				
47	40	2,52	210	B82432-A1473-K	150	5000				
56	40	2,52	200	B82432-A1563-K	150	5000				
68	40	2,52	190	B82432-A1683-K	150	5000				
100	40	2,52	145	B82432-A1104-K	150	5000				
150	35	0,796	130	B82432-A1154-K	150	5000				
220	30	0,796	115	B82432-A1224-K	150	5000				
270	30	0,796	90	B82432-A1274-K	150	5000				
330	30	0,796	85	B82432-A1334-K	150	5000				
470	35	0,796	75	B82432-A1474-K	150	5000				
680	30	0,796	65	B82432-A1684-K	150	5000				
820	30	0,796	60	B82432-A1824-K	150	5000				
1000	30	0,796	55	B82432-A1105-K	150	5000				

Chip inductors B82 432 are also available as lab assortment; for details refer to page 340.

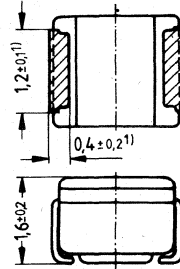
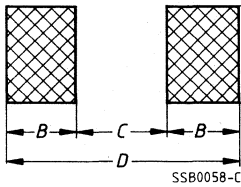


HF chokes for surface mounting Chip inductors SIMID 04

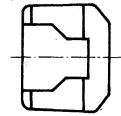
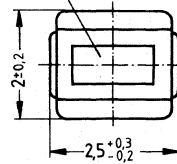
Heat-resistant epoxy encapsulation
Suitable for all soldering methods
Tape packaging in accordance with
IEC 286-3, 8-mm blister tape
L values $\geq 27 \mu\text{H}$ magnetically shielded

Rated inductance 1,0 ... 100 μH
Rated current 10 ... 195 mA
IEC climatic category 55/085/56

Layout recommendation



Marking

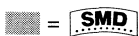


SSB0702-5

1) Soldering area, tinned

Dimensions	A	B	C	D
Wave soldering	1,2	1,25	1,5	4,0
Reflow soldering	1,6	1,05	1,5	3,5

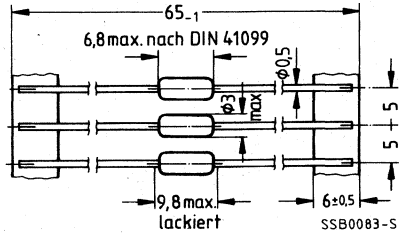
L_R	Quality at measuring frequency		I_R at 85 °C	Ordering code	Min. qty.	Max. qty.	Price per 100						
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +			
μH													
Carrier material: ferrite				Inductance tolerance $\pm 20 \%$									
1,0	25	7,96	195	B82494-A1102-M	200	4000							
2,2	25	7,96	155	B82494-A1222-M	200	4000							
Carrier material: ferrite				Inductance tolerance $\pm 10 \%$									
10	25	2,52	80	B82494-A1103-K	200	4000							
22	25	2,52	60	B82494-A1223-K	200	4000							
100	25	0,796	10	B82494-G1104-K	200	4000							



EMI Suppression Chokes

HF chokes SBC (Small Bobbin Core)

With ferrite drum core and flame-retardant lacquer coating
 Color coding as per IEC 62
 Tape packaging in acc. with IEC 286-1
 Rated inductance 1 ... 1000 μ H
 Rated current 55 ... 725 mA
 IEC climatic category 55/125/56



Min. lead spacing: 10 mm

L_R	Quality at measuring frequency		I_R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100				
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +	5000 +
Inductance tolerance $\pm 10\%$											
1,0	40	7,96	725	B82141-A1102-K	250	10000					
2,2	45	7,96	630	B82141-A1222-K	250	10000					
3,3	50	7,96	580	B82141-A1332-K	250	10000					
4,7	50	7,96	530	B82141-A1472-K	250	10000					
6,8	50	7,96	480	B82141-A1682-K	250	10000					
10	55	2,52	410	B82141-A1103-K	250	10000					
15	55	2,52	365	B82141-A1153-K	250	10000					
33	55	2,52	300	B82141-A1333-K	250	10000					
Inductance tolerance $\pm 5\%$											
47	55	2,52	200	B82141-A1473-J	250	10000					
100	60	0,796	170	B82141-A1104-J	250	10000					
150	60	0,796	150	B82141-A1154-J	250	10000					
220	60	0,796	130	B82141-A1224-J	250	10000					
330	60	0,796	105	B82141-A1334-J	250	10000					
470	60	0,796	90	B82141-A1474-J	250	10000					
1000	60	0,796	55	B82141-A1105-J	250	10000					

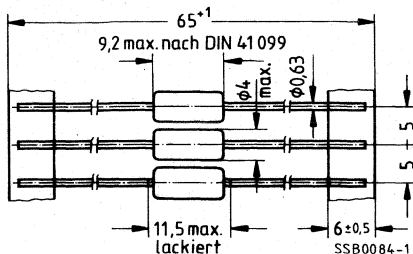
HF chokes of type SBC are also available as lab assortment; for details refer to page 341.

EMI Suppression Chokes

HF chokes BC (Bobbin Core)

With ferrite drum core and flame-retardant lacquer coating
 Color coding as per IEC 62
 Tape packaging in acc. with IEC 286-1

Rated inductance 1 ... 4700 μ H
 Rated current 55 ... 1200 mA
 IEC climatic category 55/125/56



Min. lead spacing 12,5 mm

L_R	Quality at measuring frequency		I_R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +

Inductance tolerance $\pm 10\%$

1,0	55	7,96	1200	B78108-S1102-K	250	10000				
1,2	55	7,96	1150	B78108-S1122-K	250	10000				
1,5	55	7,96	1100	B78108-S1152-K	250	10000				
1,8	55	7,96	1030	B78108-S1182-K	250	10000				
2,2	55	7,96	1000	B78108-S1222-K	250	10000				
3,3	60	7,96	900	B78108-S1332-K	250	10000				
4,7	60	7,96	820	B78108-S1472-K	250	10000				
5,6	60	7,96	780	B78108-S1562-K	250	10000				
6,8	65	7,96	670	B78108-S1682-K	250	10000				
8,2	65	7,96	690	B78108-S1822-K	250	10000				
10	70	2,52	680	B78108-S1103-K	250	10000				
15	60	2,52	610	B78108-S1153-K	250	10000				
18	60	2,52	580	B78108-S1183-K	250	10000				
22	55	2,52	560	B78108-S1223-K	250	10000				
33	55	2,52	500	B78108-S1333-K	250	10000				
39	50	2,52	470	B78108-S1393-K	250	10000				

EMI Suppression Chokes

L_R	Quality at measuring frequency		I_R at 40 °C mA	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					Min. qty. +	500 +	1000 +	5000 +
Induktivitätstoleranz ± 5 %										
47	45	2,52	450	B78108-S1473-J	250	10000				
68	40	2,52	410	B78108-S1683-J	250	10000				
82	35	2,52	390	B78108-S1823-J	250	10000				
100	70	0,796	370	B78108-S1104-J	250	10000				
120	70	0,796	300	B78108-S1124-J	250	10000				
150	70	0,796	280	B78108-S1154-J	250	10000				
180	70	0,796	270	B78108-S1184-J	250	10000				
220	70	0,796	250	B78108-S1224-J	250	10000				
330	70	0,796	190	B78108-S1334-J	250	10000				
390	70	0,796	180	B78108-S1394-J	250	10000				
470	70	0,796	170	B78108-S1474-J	250	10000				
560	60	0,796	160	B78108-S1564-J	250	10000				
680	55	0,796	150	B78108-S1684-J	250	10000				
820	50	0,796	140	B78108-S1824-J	250	10000				
1000	50	0,252	130	B78108-S1105-J	250	10000				
1500	50	0,252	100	B78108-S1155-J	250	10000				
1800	50	0,252	95	B78108-S1185-J	250	10000				
2200	40	0,252	80	B78108-S1225-J	250	10000				
2700	40	0,252	75	B78108-S1275-J	250	10000				
3300	40	0,252	62	B78108-S1335-J	250	10000				
4700	35	0,252	55	B78108-S1475-J	250	10000				

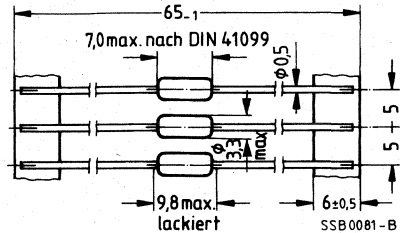
HF chokes of type BC are also available as lab assortment; for details refer to page 341.

EMI Suppression Chokes

HF chokes MCC (Mini Cylinder Core)

With ceramic or ferrite cylinder core and flame-retardant lacquer coating
 Color coding as per IEC 62
 Tape packaging in acc. with IEC 286-1

Rated inductance 0,18 ... 100 μ H
 Rated current 85 ... 1000 mA
 IEC climatic category 55/125/56



Min. lead spacing 10 mm

L_R	Quality at measuring frequency		I_R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100			
	Q_{min}	MHz					mA	Min. qty. +	500 +	1000 +
Ceramic cylinder core										
Inductance tolerance $\pm 10\%$										
0,18	35	25,2	1000	B78108-T3181-K	250	10000				
0,22	35	25,2	990	B78108-T3221-K	250	10000				
0,27	35	25,2	910	B78108-T3271-K	250	10000				
0,33	35	25,2	830	B78108-T3331-K	250	10000				
0,47	35	25,2	750	B78108-T3471-K	250	10000				
0,56	35	25,2	700	B78108-T3561-K	250	10000				
0,68	35	25,2	530	B78108-T3681-K	250	10000				
0,82	35	25,2	500	B78108-T3821-K	250	10000				
Ferrite cylinder core										
Inductance tolerance $\pm 10\%$										
1,0	35	25,2	630	B78108-T1102-K	250	10000				
1,5	40	7,96	570	B78108-T1152-K	250	10000				
1,8	40	7,96	540	B78108-T1182-K	250	10000				
2,2	40	7,96	520	B78108-T1222-K	250	10000				
2,7	40	7,96	480	B78108-T1272-K	250	10000				
3,3	40	7,96	420	B78108-T1332-K	250	10000				
4,7	40	7,96	380	B78108-T1472-K	250	10000				
5,6	45	7,96	260	B78108-T1562-K	250	10000				
6,8	45	7,96	250	B78108-T1682-K	250	10000				
8,2	50	7,96	240	B78108-T1822-K	250	10000				
10	50	7,96	230	B78108-T1103-K	250	10000				
15	55	2,52	185	B78108-T1153-K	250	10000				
22	60	2,52	170	B78108-T1223-K	250	10000				
27	60	2,52	160	B78108-T1273-K	250	10000				
33	60	2,52	150	B78108-T1333-K	250	10000				
47	60	2,52	100	B78108-T1473-K	250	10000				
68	60	2,52	95	B78108-T1683-K	250	10000				
100	60	2,52	85	B78108-T1104-K	250	10000				

HF chokes of type MCC are also available as lab assortment; for details refer to page 341.

EMI Suppression Chokes

HF chokes LBC (Large Bobbin Core)

With ferrite drum core and flame-retardant lacquer coating

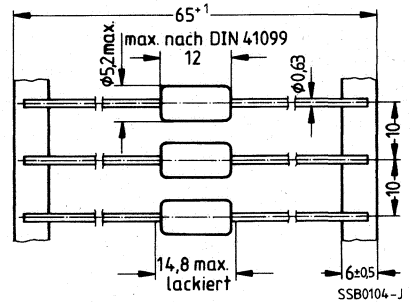
Color coding as per IEC 62

Tape packaging in acc. with IEC 286-1

Rated inductance 1 ... 100000 μ H

Rated current 0,02 ... 2,2 A

IEC climatic category 55/125/56



Min. lead spacing 15 mm

L _R	Quality at measuring frequency		I _R at 40 °C	Ordering code	Min. qty.	Max. qty.	Price per 100						
	Q _{min}	kHz					Min. qty. +	500 +	1000 +	5000 +			
μ H			A										
Inductance tolerance \pm 10 %													
1	40	7960	2,2	B82144-A2102-K	150	6000							
4,7	40	7960	1,6	B82144-A2472-K	150	6000							
10	60	2520	1,4	B82144-A2103-K	150	6000							
22	50	2520	1,1	B82144-A2223-K	150	6000							
Inductance tolerance \pm 5 %													
47	40	2520	0,8	B82144-A2473-J	150	6000							
100	50	796	0,6	B82144-A2104-J	150	6000							
220	50	796	0,4	B82144-A2224-J	150	6000							
470	40	796	0,28	B82144-A2474-J	150	6000							
1000	60	252	0,2	B82144-A2105-J	150	6000							
2200	60	252	0,12	B82144-A2225-J	150	6000							
4700	60	252	0,09	B82144-A2475-J	150	6000							
10000	50	79,6	0,06	B82144-A2106-J	150	6000							
22000	50	79,6	0,04	B82144-A2226-J	150	6000							
100000	40	79,6	0,02	B82144-A2107-J	150	6000							

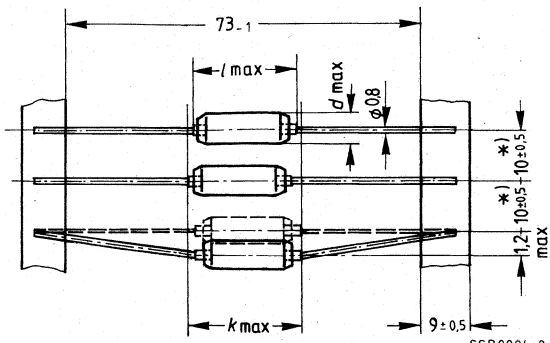
EMI Suppression Chokes

VHF chokes for power line applications

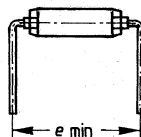
With single-layer winding on carbonyl iron core and insulating sleeve
Tape packaging in acc. with IEC 286-1

Rated inductance 1 ... 150 μ H
Rated voltage 500 Vdc/ac
Rated current 0,15 ... 6 A
IEC climatic category 55/125/56

Approvals:



*) Tolerance over 10 spacings ± 2 mm



l_{max}	e_{min}	k_{max}
14	17,5	15,4
19	22,5	20,4
24	27,5	25,4
29	32,5	30,4

I_R A	L_R μ H	R_{typ} at $+20^\circ C$ Ω	Dimen- sions $d \times l$ mm	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	250 +	500 +	1000 +
Inductance tolerance $\pm 20\%$											
0,15	80	11	5,0 \times 14	B82131-A5151-M	50	4000					
0,3	40	4,1	5,0 \times 14	B82131-A5301-M	50	4000					
0,3	70	5,7	5,5 \times 19	B82132-A5301-M	50	4000					
0,4	27	2	5,0 \times 14	B82131-A5401-M	50	4000					
0,4	50	3	5,5 \times 19	B82132-A5401-M	50	4000					
0,4	150	3,5	7,5 \times 29	B82134-A5401-M	50	4000					
0,7	14	0,76	5,0 \times 14	B82131-A5701-M	50	4000					
0,7	23	0,73	5,5 \times 19	B82132-A5701-M	50	4000					
0,7	55	1,20	7,5 \times 24	B82133-A5701-M	50	4000					
0,7	60	0,77	7,5 \times 29	B82134-A5701-M	50	4000					
1,5	6	0,19	5,0 \times 14	B82131-A5152-M	50	4000					
1,5	8	0,16	5,5 \times 19	B82132-A5152-M	50	4000					
1,5	25	0,32	7,5 \times 24	B82133-A5152-M	50	4000					
1,5	30	0,30	7,5 \times 29	B82134-A5152-M	50	4000					

EMI Suppression Chokes

I _R	L _R	R _{lvs} at + 20 °C	Dimen- sions d × l mm	Ordering code	Min. qty.	Max. qty.	Price each												
							Min. qty. +	100 +	250 +	500 +	1000 +								
A	μH	Ω																	
Inductance tolerance ± 20 %																			
2	3	0,09	5,0 × 14	B82131-A5202-M	50	4000													
2	6	0,11	5,5 × 19	B82132-A5202-M	50	4000													
2	20	0,15	7,5 × 29	B82134-A5202-M	50	4000													
3	2	0,038	5,0 × 14	B82131-A5302-M	50	4000													
3	3	0,035	5,5 × 19	B82132-A5302-M	50	4000													
3	10	0,077	7,5 × 24	B82133-A5302-M	50	4000													
3	12	0,090	7,5 × 29	B82134-A5302-M	50	4000													
4	1	0,014	5,0 × 14	B82131-A5402-M	50	4000													
4	2	0,020	5,5 × 19	B82132-A5402-M	50	4000													
4	5	0,034	7,5 × 24	B82133-A5402-M	50	4000													
6	1	0,010	5,5 × 19	B82132-A5602-M	50	4000													
6	3	0,019	7,5 × 24	B82133-A5602-M	50	4000													

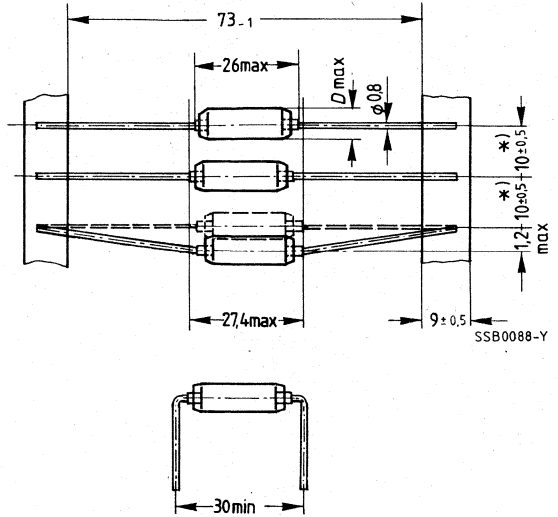
EMI Suppression Chokes

VHF chokes for power line applications

With single-layer winding on ferrite core and insulating sleeve

Rated inductance 7 ... 470 μH
 Inductance tolerance $\pm 20\%$
 Rated voltage 500 Vdc/ac
 Rated current 0,3 ... 6 A
 IEC climatic category 55/125/56

Approvals:



*) Tolerance over 10 spacings $\pm 2\text{ mm}$

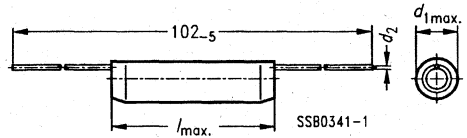
I_R A	L_R μH	R_{typ} at $+20\text{ }^\circ\text{C}$ Ω	Dim. D_{max} mm	Ordering code	Min. qty.	Max. qty.	Price each				
							Min. qty. +	100 +	250 +	500 +	1000 +
0,3	470	6,5	6	B82111-E-C27	50	4000					
0,5	220	2,6	6,5	B82111-E-C26	50	4000					
1	100	0,65	6,5	B82111-E-C25	50	4000					
1,5	56	0,3	6,5	B82111-E-C24	50	4000					
2	40	0,18	7	B82111-E-C23	50	4000					
3	22	0,07	7	B82111-E-C22	50	4000					
4	12	0,04	7,5	B82111-E-C21	50	4000					
6	7	0,02	7,5	B82111-E-C20	50	4000					

EMI Suppression Chokes

VHF chokes for power line applications

With single-layer winding on ferrite core and insulating sleeve

Rated inductance 3 ... 25 μH
 Inductance tolerance $\pm 20\%$
 Rated voltage 500 Vdc/ac
 Rated current 2 ... 10 A
 IEC climatic category 55/125/56



Approvals:



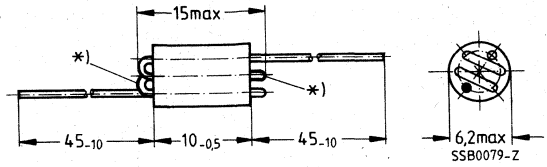
I_R	L_R	R_{typ} at $+20^\circ\text{C}$	Dimensions $d_{1max} \times l_{max}$	Dim. d_2	Ordering code	Min. qty.	Max. qty.	Price each				
								A	μH	$\text{m}\Omega$	mm	mm
2	17	63	7,0 × 24	0,45	B82111-B-C14	50	4000					
3	8	25	7,0 × 24	0,63	B82111-B-C13	50	4000					
3	13	24	6,5 × 29	0,67	B82111-B-C19	50	4000					
3	20	54	6,0 × 29	0,5	B82111-B-C20	50	4000					
3	25	46	8,5 × 34	0,63	B82111-B-C24	50	4000					
4	11	20	6,5 × 29	0,71	B82111-B-C18	50	4000					
4	15	24	8,5 × 34	0,75	B82111-B-C23	50	4000					
6	4	14	7,5 × 24	0,8	B82111-B-C11	50	4000					
6	6	10	7,0 × 29	0,95	B82111-B-C17	50	4000					
6	9	12	9,0 × 34	0,95	B82111-B-C22	50	4000					
9	3	6	7,5 × 29	1,2	B82111-B-C16	50	4000					
10	5	5	9,5 × 34	1,3	B82111-B-C21	50	4000					

EMI Suppression Chokes

VHF chokes for power line applications

With 6-aperture ferrite core,
without insulating sleeve

Rated current max. 1 A
IEC climatic category 55/120/21



*) with insulating sleeve

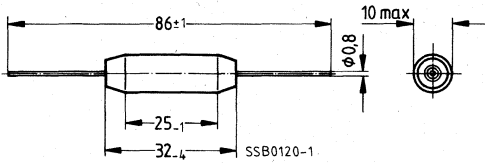
f_R MHz	Z at f_R Ω	Color code	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	100 +	250 +	500 +	1000 +
60	900	brown	B82114-R-A4	50	4000					
100	800	green	B82114-R-A1	50	4000					

EMI Suppression Chokes

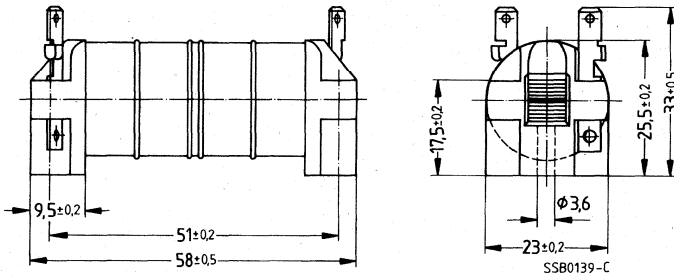
I core single chokes for power line applications

Rated inductance 100 μ H ... 3,9 mH
 Rated voltage 250 Vdc/ac and 400 Vac
 Rated current 0,2 ... 10 A
 IEC climatic category 40/125/56


B82500



B82503



Tab connector A 4,8 x 0,8
 DIN 46244 VZN

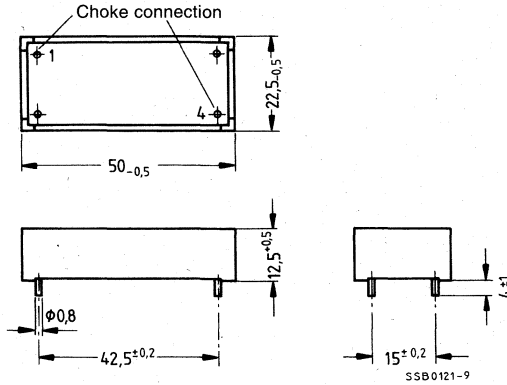
I_R	L_R	R_{typ}	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	50 +	100 +	500 +	1000 +
250 Vdc/ac										
0,2	3,9 mH	20	B82500-C-A2	10	500					
0,5	820 μ H	2,5	B82500-C-A5	10	500					
1	330 μ H	0,6	B82500-C-A8	10	500					
2	120 μ H	0,15	B82500-C-A10	10	500					
400 Vac										
Approvals: 						Min. qty. +	10 +	25 +	50 +	100 +
6	330 μ H	0,1	B82503-U-A13	5	480					
10	100 μ H	0,03	B82503-U-A14	5	480					

EMI Suppression Chokes

I core single chokes for power line applications

In sealed plastic case

Rated voltage 500 Vac
 Rated current 1 A
 IEC climatic category 40/125/56



I_R per winding A	L_R per winding mH	R_{typ} Ω	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	10 +	25 +	50 +	100 +
1	3,3	1,9	B82502-W-C8	5	480					

EMI Suppression Chokes

Current-compensated ring core double chokes for power line applications

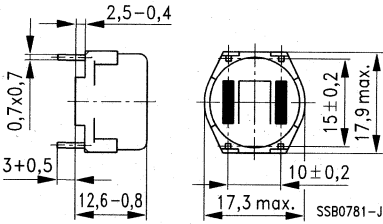
With ferrite core, in sealed plastic case
Case and sealing flame-retardant as per UL94V-0

Rated inductance 0,4 ... 82 mH
Rated voltage 250 Vac
Rated current 0,3 ... 10 A
IEC climatic category 40/125/56

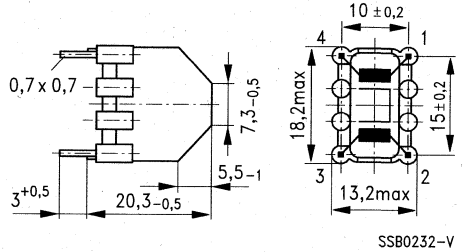
Approvals:



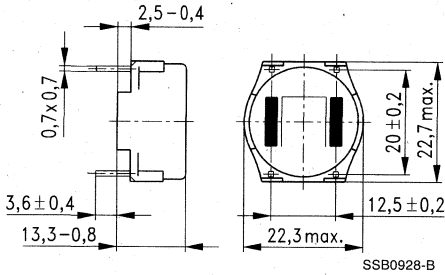
B82721-A, horizontal version



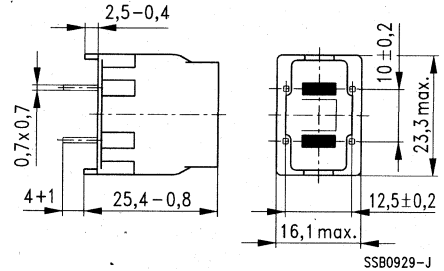
B82721-K, vertical version



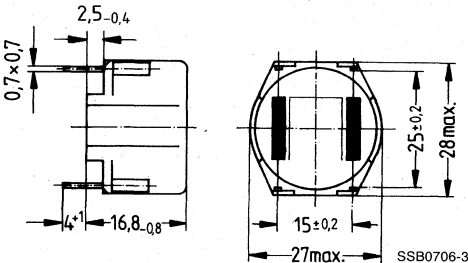
B82722-A, horizontal version



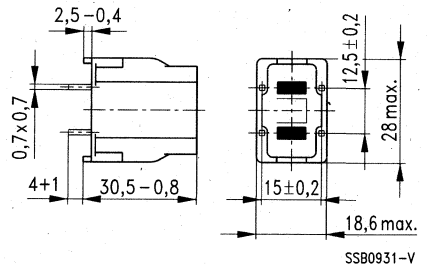
B82722-J, vertical version



B82723-A, horizontal version

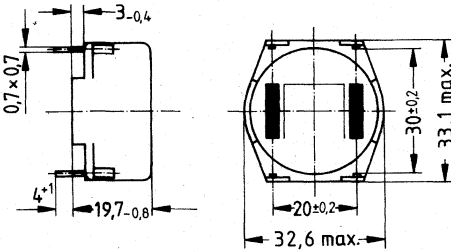


B82723-J, vertical version

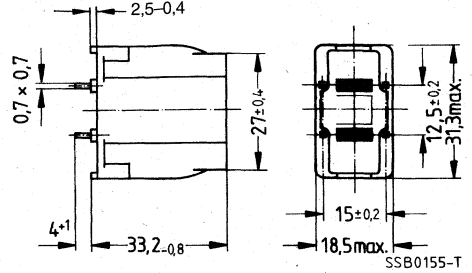


EMI Suppression Chokes

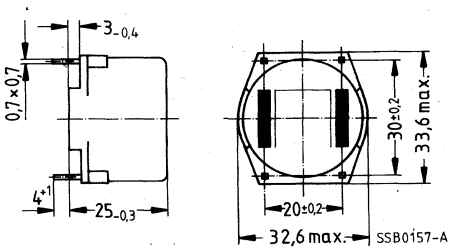
B82724-A, horizontal version



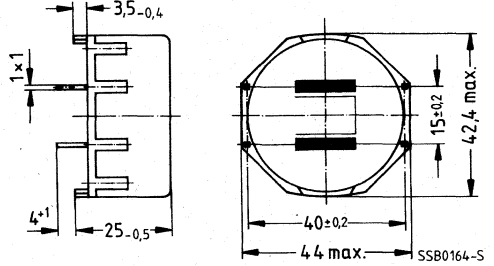
B82724-J, vertical version



B82724-B, horizontal version



B82725-A, horizontal version



I_R per winding	L_R per winding	R_{lyd} per winding	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	50 +	100 +	500 +	1000 +
B 82 721										
0,4	39	2000	B82721-K2401-N20	20	1440					
0,4	27	1700	B82721-K2401-N21	20	1440					
0,5	18	1500	B82721-K2501-N1	20	1440					
0,7	10	600	B82721-K2701-N20	20	1440					
1,2	6,8	280	B82721-K2122-N20	20	1440					
1,5	3,3	180	B82721-K2152-N1	20	1440					
2,0	1,0	90	B82721-K2202-N1	20	1440					
3,6	0,4	35	B82721-K2362-N1	20	1440					
0,4	39	2000	B82721-A2401-N20	20	1200					
0,4	27	1700	B82721-A2401-N21	20	1200					
1,2	6,8	280	B82721-A2122-N20	20	1200					
3,6	0,4	35	B82721-A2362-N1	20	1200					

EMI Suppression Chokes

I_R per winding A	L_R per winding mH	R_{typ} per winding mΩ	Ordering code	Min. qty.	Max. qty.	Price each				
						Min. qty. +	50 +	100 +	500 +	1000 +
B 82 722										
0,3	47	2600	B82722-A2301-N1	20	1200					
0,5	27	1400	B82722-A2501-N1	20	1200					
1	10	540	B82722-A2102-N1	20	1200					
2	2,2	140	B82722-A2202-N1	20	1200					
3	1,2	56	B82722-A2302-N1	20	1200					
0,3	47	2600	B82722-J2301-N1	20	1080					
0,5	27	1400	B82722-J2501-N1	20	1080					
1	10	540	B82722-J2102-N1	20	1080					
2	2,2	140	B82722-J2202-N1	20	1080					
3	1,2	56	B82722-J2302-N1	20	1080					
B 82 723										
1	27	750	B82723-A2102-N1	20	1200					
2	5,6	160	B82723-A2202-N1	20	1200					
4	2,7	60	B82723-A2402-N1	20	1200					
0,5	56	2200	B82723-J2501-N1	20	1200					
1	27	750	B82723-J2102-N1	20	1200					
2	5,6	160	B82723-J2202-N1	20	1200					
4	2,7	60	B82723-J2402-N1	20	1200					
B 82 724										
1,4	27	500	B82724-A2142-N1	20	1200					
1	33	810	B82724-J2102-N1	20	1440					
1,4	27	500	B82724-A2142-N1	20	1440					
2	6,8	190	B82724-J2202-N1	20	1440					
4	3,3	66	B82724-J2402-N1	20	1440					
6	1,8	23	B82724-B2602-N1	10	1440					
B 82 725										
4	6,8	87	B82725-A2402-N1	10	640					
6	3,9	41	B82725-A2602-N1	10	640					
8	2,7	22	B82725-A2802-N1	10	640					
10	1,8	13	B82725-A2103-N1	10	640					

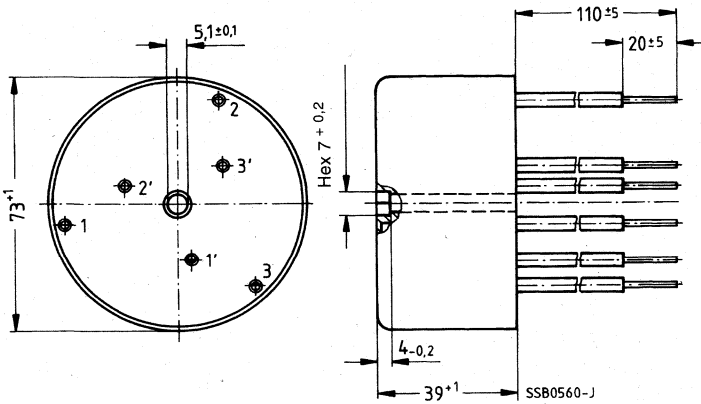
EMI Suppression Chokes

Current-compensated ring core triple chokes for power line applications

With ferrite core in sealed plastic case;
 Case and sealing flame-retardant as per UL94V-0
 Mounting by means of through-hole

Rated voltage 440 Vac
 Rated current 6 ... 16 A

Approvals:



I _R per winding A	L _R per winding mH	R _{typ} per winding mΩ	Ordering code	Min. qty.	Max. qty.	Price each			
						Min. qty. +	25 +	50 +	100 +
6	6	50	B82747-F4602-N1	1	120				
10	3	20	B82747-F4103-N1	1	120				
16	2	12	B82747-F4163-N1	1	120				

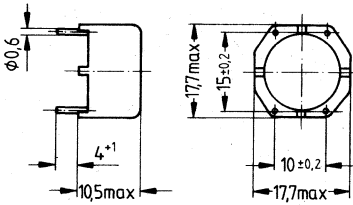
EMI Suppression Chokes

Current-compensated ring core double and quad chokes for data and signal lines

Rated voltage 80 V dc/42 Vac
 Rated current 0,1 A
 IEC climatic category 40/125/56

Ring core double chokes

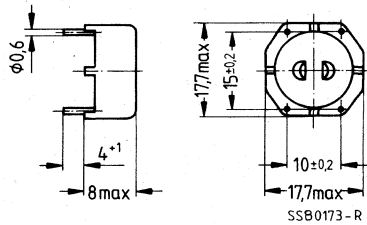
B82791-G12-A14, sealed



Pin configuration

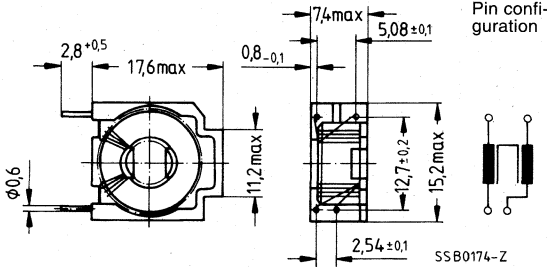


B82791-G15-A16, open



B82791-H15-A25, open

B82791-H15-A16, open

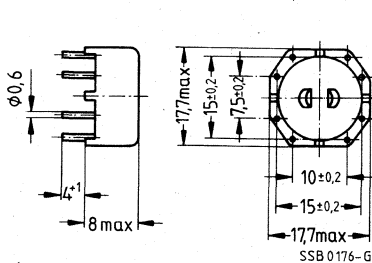


Pin configuration



Ring core quad chokes

B82791-G14-A16, open



Pin configuration



EMI Suppression Chokes

I_R per winding A	L_R per winding mH	R_{typ} per winding m Ω	Ordering code	Min. qty.	Max. qty.	Price each			
						Min. qty. +	50 +	100 +	500 +

Ring core double chokes

0,1	38	3000	B82791-G12-A14	10	1000					
0,1	10	1300	B82791-H15-A25	20	1000					
0,1	4,7	900	B82791-G15-A16	20	1000					
0,1	4,7	900	B82791-H15-A16	25	1000					

Ring core quad chokes

0,1	4,7	900	B82791-G14-A16	10	1000					
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EMI suppression chokes of type series B82791 are also available as lab assortment; for details refer to page 342.

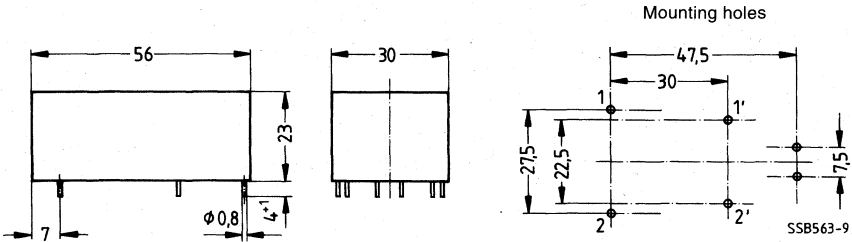
EMI Suppression Filters

Power line filters for single-phase systems

Application: switch-mode power supplies of medium performance, prefiltering in EDP systems

Rated voltage 115/250 Vac, 50/60 Hz
 Rated current 0,5 ... 4 A
 Leakage current < 0,5 mA at 250 Vac, 50 Hz
 IEC climatic category 25/085/21

Approvals:



I_R	L_R	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	50 +	100 +	500 +
A	mH								
0,5	2 × 39	B84110-A-A5	5	540					
1	2 × 10	B84110-A-A10	5	540					
2	2 × 5,6	B84110-A-A20	5	540					
4	2 × 2,7	B84110-A-A40	5	540					

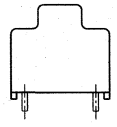
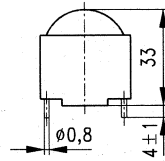
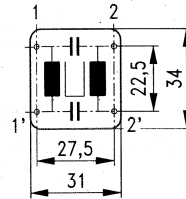
EMI Suppression Filters

Power line filters for single-phase systems

Application: TV, switch-mode power supplies up to 100 W, prefiltering in EDP systems

Rated voltage 250 Vac, 50/60 Hz
 Rated current 1,4 A
 IEC climatic category 25/085/21

Approvals:



SSB0960-9

I _R	L _R	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	50 +	100 +	
A	mH							
1,4	2 × 27	B84110-B-A14	10	480				

EMI Suppression Filters

Power line filters for single-phase systems

With I core double choke and broadband

multiple-section capacitor

Ratings comply with VDE 0565-3

Connection by terminal blocks

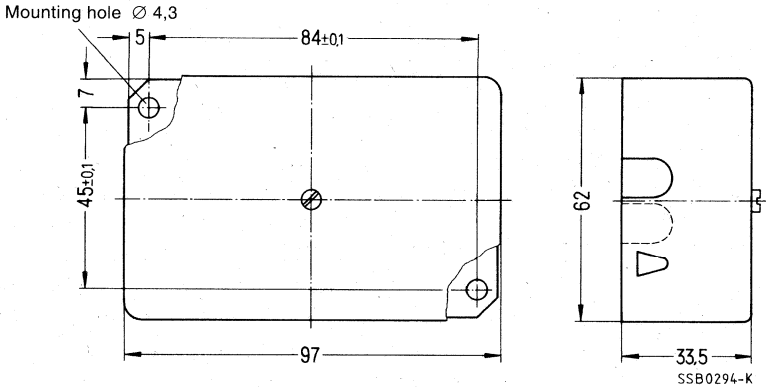
Rated voltage 250 Vdc/250 Vac, 50/60 Hz

Rated current 2 and 6 A

Leakage current < 0,5 mA (type -C30)

< 3,5 mA (type -C180)

IEC climatic category 25/085/21



I_R	L_R	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	10 +	20 +	50 +
2	$2 \times 1,2 \text{ mH}$	B84101-C30	1	96				
6	$2 \times 82 \mu\text{H}$	B84101-C180	1	96				

EMI Suppression Filters

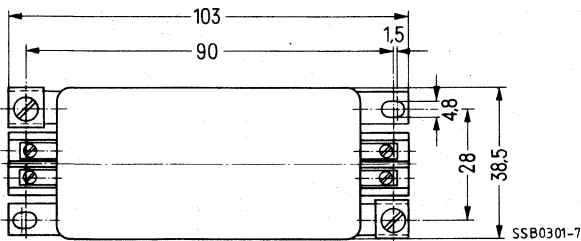
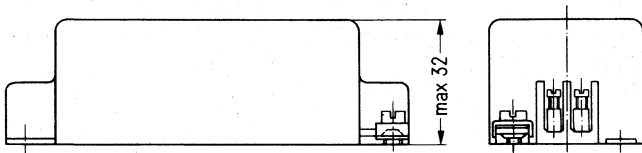
Power line filters for single-phase systems

With 1 core double choke (B84102-C)
 or current-compensated ring core choke (B82102-K)
 Connection by terminal blocks with wire protection

Rated voltage 250 Vdc/250 Vac, 50/60 Hz
 Rated current 0,5 ... 6 A
 Leakage current < 0,5 mA (type -C20 ... -K50)
 < 3,5 mA (type -K160)
 IEC climatic category 25/085/21

Approvals:  for filter B82102-C

Ratings of B82102-K as per VDE 0563-3



I_R	L_R	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	10 +	20 +	50 +
0,5	$2 \times 13,5 \text{ mH}, 2 \times 14 \mu\text{H}$	B84102-C20	2	96				
1	$2 \times 3,1 \text{ mH}, 2 \times 10 \mu\text{H}$	B84102-C30	2	96				
2	$2 \times 1,1 \text{ mH}, 2 \times 2 \mu\text{H}$	B84102-C40	2	96				
4	$2 \times 220 \mu\text{H}, 2 \times 1 \mu\text{H}$	B84102-C50	2	96				
2	$2 \times 10 \text{ mH}$	B84102-K40	2	96				
4	$2 \times 4,7 \text{ mH}$	B84102-K50	2	96				
6	$2 \times 2,2 \text{ mH}$	B84102-K160	2	96				

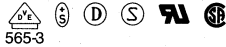
EMI Suppression Filters

Power line filters for single-phase systems SIFI A, standard filter series, normal attenuation

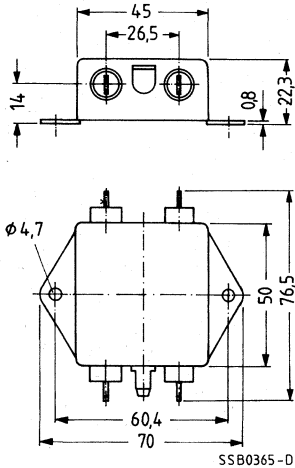
In shielded aluminum case with
flame-retardant sealing (UL 94 V-0)

Rated voltage 115/250 Vac, 50/60 Hz
Rated current 1 ... 20 A
Leakage current < 0,5 mA at 250 Vac/50 Hz
IEC climatic category 25/085/21

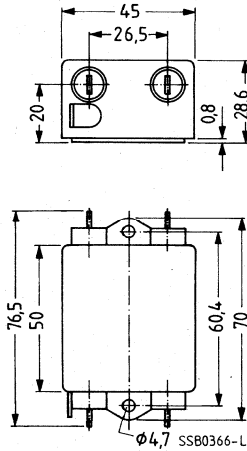
Approvals:



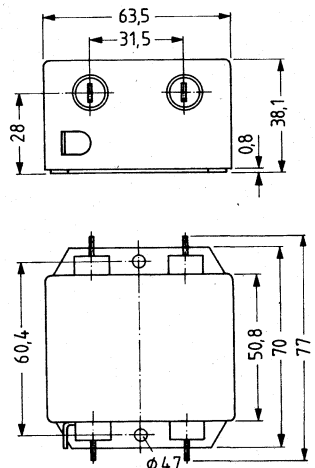
Outline drawing A1



Outline drawing B1



Outline drawing B2



Tab connector A 6,3 x 0,8 DIN 46244

SSB0245-S

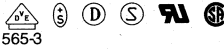
I _R	Outline drawing	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	50 +	100 +	250 +
2	A1	B84111-A-A20	5	320					
3	A1	B84111-A-A30	5	320					
6	B1	B84111-A-B60	4	320					
10	B1	B84111-A-B110	4	320					
20	B2	B84111-A-B120	3	320					

EMI Suppression Filters

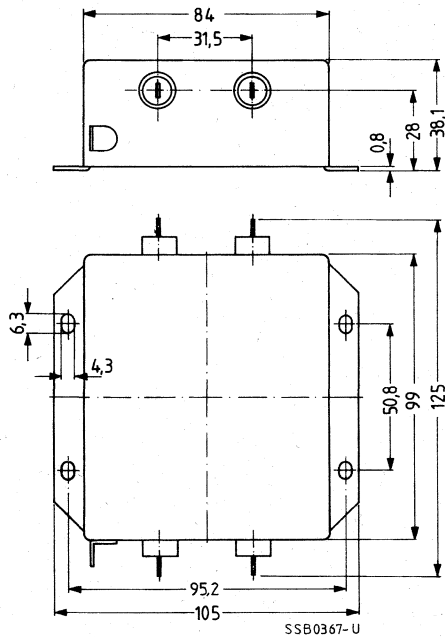
Power line filters for single-phase systems SIFI B, standard filter series, enhanced attenuation

In shielding aluminum case with
flame-retardant sealing (UL 94 V-0)

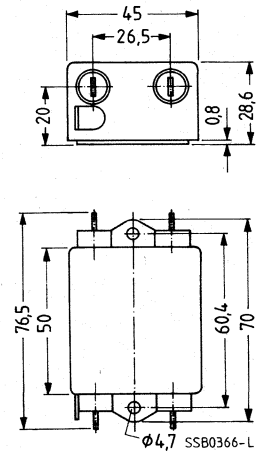
Rated voltage 115/250 Vac, 50/60 Hz
 Rated current 1 ... 20 A
 Leakage current < 0,5 mA at 250 Vac/50 Hz
 IEC climatic category 25/085/21

Approvals:  565-3

Outline drawing A4



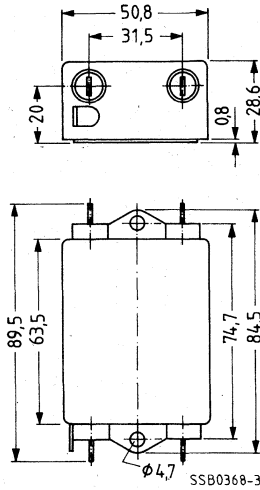
Outline drawing B1



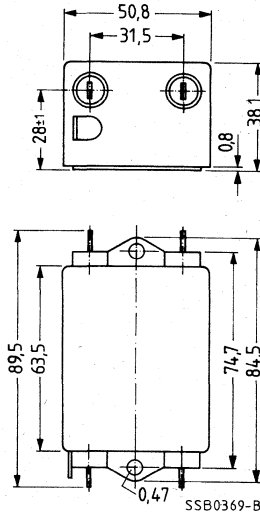
Tab connector A 6,3 × 0,8 DIN 46244

EMI Suppression Filters

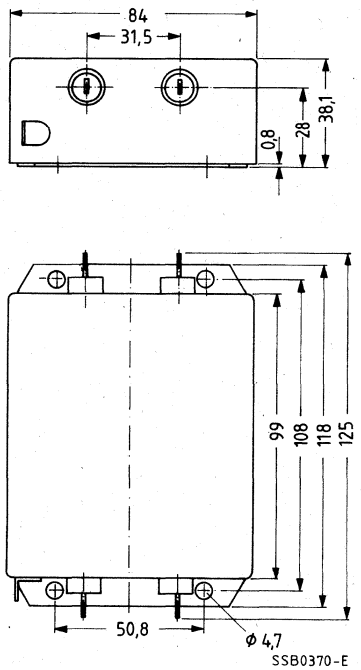
Outline drawing B3



Outline drawing B4



Outline drawing B7



Tab connector A 6,3 × 0,8 DIN 46244

I_R	Outline drawing	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	50 +	100 +	250 +
20	A4	B84112-B-A120	1	320					
1	B1	B84112-B-B10	4	320					
2	B1	B84112-B-B20	4	320					
3	B3	B84112-B-B30	4	320					
6	B3	B84112-B-B60	4	320					
10	B4	B84112-B-B110	4	320					
20	B7	B84112-B-B120	2	320					

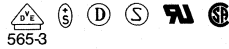
EMI Suppression Filters

Power line filters for single-phase systems SIFI C, standard filter series, extra-high attenuation

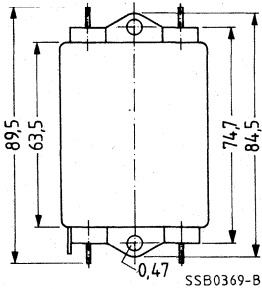
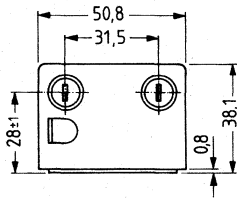
In shielding aluminum case with flame-retardant sealing (UL 94 V-0)

Rated voltage 115/250 Vac, 50/60 Hz
 Rated current 3 ... 10 A
 Leakage current < 0,5 mA at 250 Vac/50 Hz
 IEC climatic category 25/085/21

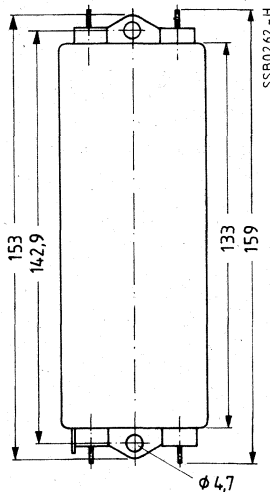
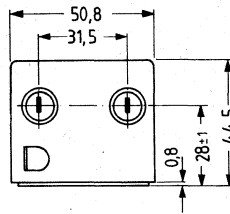
Approvals:



Outline drawing B4



Outline drawing B8



Tab connector A 6,3 × 0,8 DIN 46244

I _R	Outline drawing	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	50 +	100 +	250 +
3	B4	B84113-C-B30	4	320					
6	B8	B84113-C-B60	2	320					
10	B8	B84113-C-B110	1	320					

EMI Suppression Filters

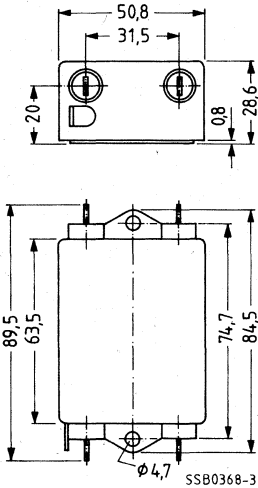
Power line filters for single-phase systems SIFI D, standard filter series, high attenuation

In shielding aluminum case with
flame-retardant sealing (UL 94 V-0)

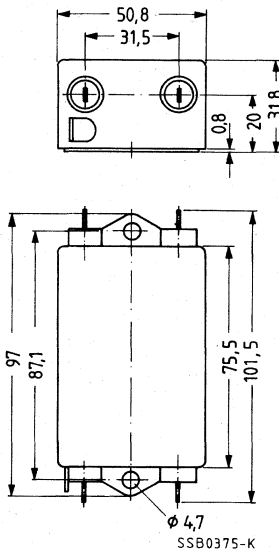
Rated voltage 115/250 Vac, 50/60 Hz
 Rated current 3 ... 10 A
 Leakage current < 0,5 mA at 250 Vac/50 Hz
 IEC climatic category 25/085/21

Approvals: 

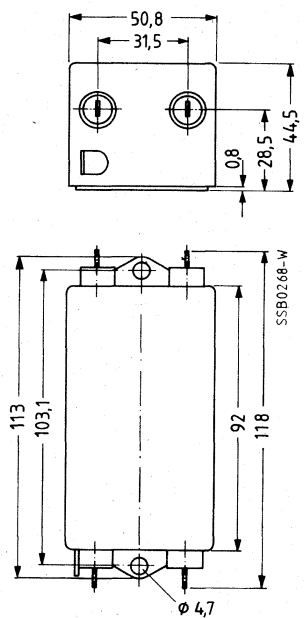
Outline drawing B3



Outline drawing B5



Outline drawing B6



Tab connector A 6,3 x 0,8 DIN 46244

/R	Outline drawing	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	50 +	100 +	250 +
3	B3	B84114-D-B30	2	320					
6	B5	B84114-D-B60	1	320					
10	B6	B84114-D-B110	1	320					

EMI Suppression Filters

Power line filters for single-phase systems

SIFI E, standard filter series, extra-high attenuation, even in the range below 100 kHz

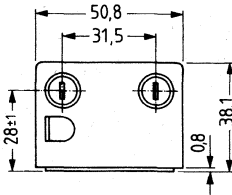
In shielding aluminum case with flame-retardant sealing (UL 94 V-0)

Rated voltage 115/250 Vac, 50/60 Hz
 Rated current 3 ... 10 A
 Leakage current < 0,5 mA (type -B30)
 < 3,5 mA (type -B60, -B110)
 IEC climatic category 25/085/21

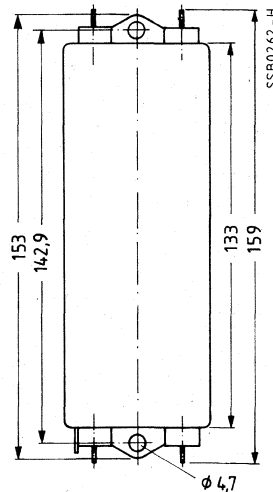
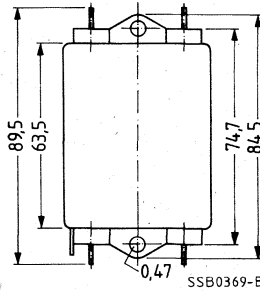
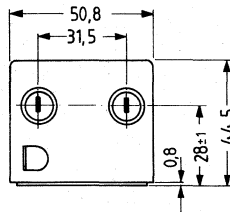
Approvals:



Outline drawing B4



Outline drawing B8



Tab connector A 6,3 × 0,8 DIN 46244

I _R	Outline drawing	Ordering code	Min. qty.	Max. qty.	Price each				
					Min. qty. +	10 +	50 +	100 +	250 +
3	B4	B84115-E-B30	2	320					
6	B8	B84115-E-B60	2	320					
10	B8	B84115-E-B110	1	320					

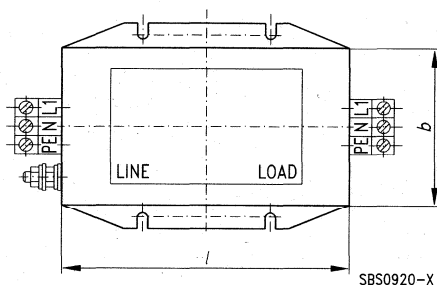
EMI Suppression Filters

Power line filters for frequency converters (single-phase systems)

Extra-high insertion attenuation
Terminal blocks safe to touch

Rated voltage 250 Vac, 50/60 Hz
 Rated current 8 ... 25 A
 Number of lines 2
 Leakage current < 3,5 mA
 IEC climatic category 25/085/21

Schematic representation



I_R	Dimensions (mm)		Ordering code	Min. qty.	Max. qty.	Price each				
	$l \times b$	Height				Min. qty. +	5 +	10 +		
8	121 × 86	61	B84142-B8-R	1	10					
12	121 × 86	61	B84142-B12-R	1	10					
16	121 × 86	61	B84142-B16-R	1	10					
25	156 × 86	81	B84142-B25-R	1	10					










EMI Suppression Filters

Power line filters for three-phase systems Filters with tab connectors or screw terminals

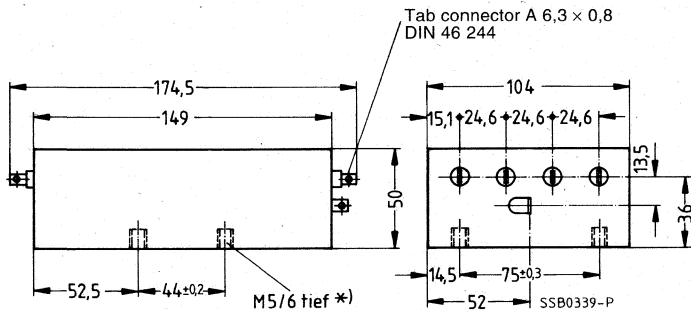
In shielding aluminum case with flame-retardant sealing

Rated voltage 250/440 Vac, 50/60 Hz
 Rated current $4 \times 16 \text{ A} \dots 4 \times 125 \text{ A}$
 Leakage current $< 3,5 \text{ mA}$ at 250 Vac/50 Hz
 IEC climatic category 25/085/21

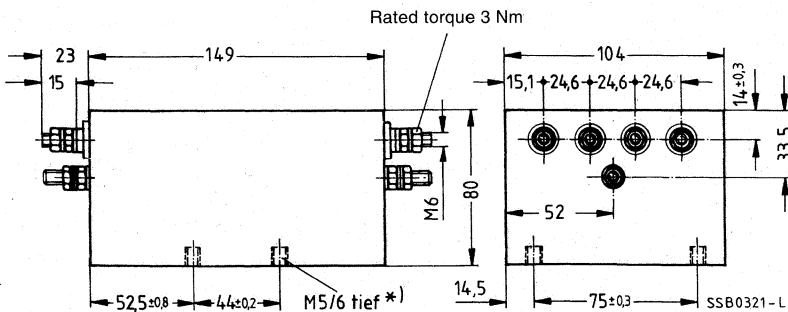
Approvals:

B84131-M3-A116			
B84131-M1-G135			
B84131-M2-G150			
B84131-M2-G163			

B84131-M3-



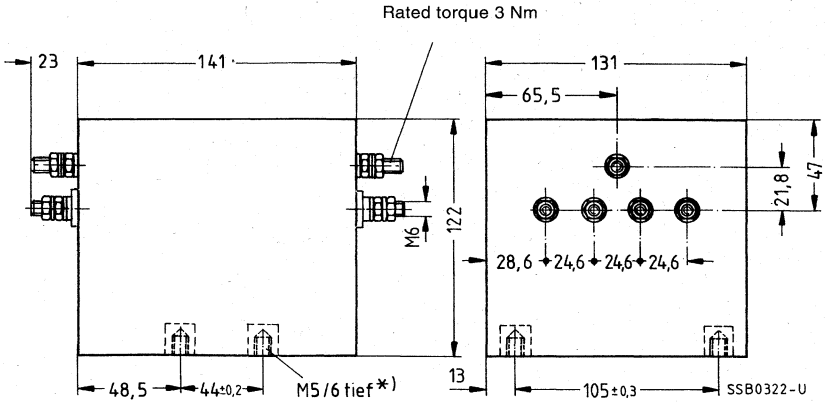
B84131-M1-



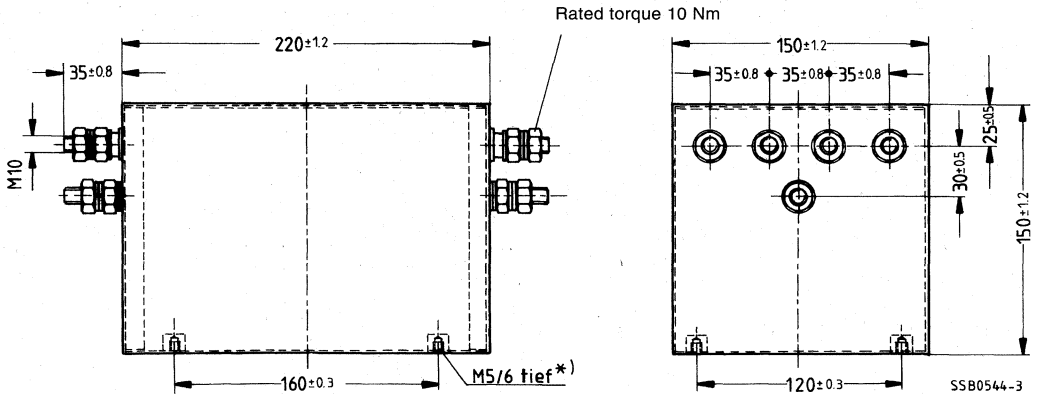
*) Also suitable for screws with thread 10-32 UNF

EMI Suppression Filters

B84131-M2-



B84131-M4-



*) Also suitable for screws with thread 10-32 UNF

/R	Ordering code	Min. qty.	Max. qty.	Price each			
				Min. qty. +	5 +	10 +	
A							
4 × 16	B84131-M3-A116	1	10				
4 × 35	B84131-M1-G135	1	10				
4 × 50	B84131-M2-G150	1	10				
4 × 63	B84131-M2-G163	1	10				
4 × 80	B84131-M4-G180	1	10				
4 × 125	B84131-M4-G225	1	10				

EMI Suppression Filters

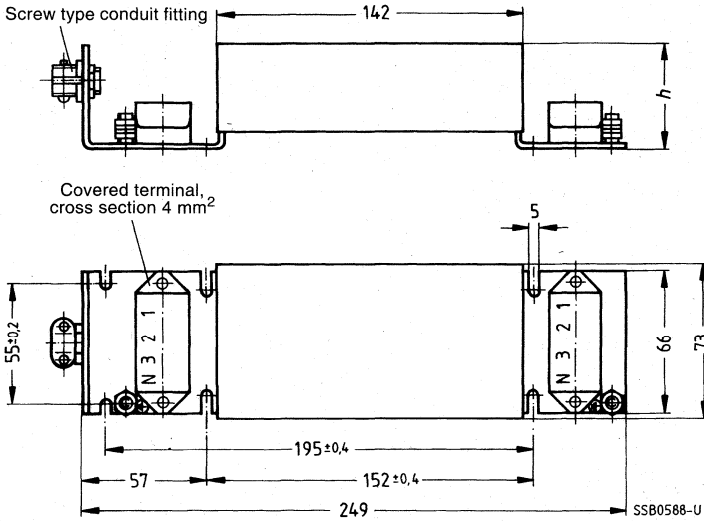
Power line filters for three-phase systems

Terminal blocks safe to touch

Rated voltage 250/440 Vac, 50/60 Hz

Rated current 4 × 6 A ... 4 × 25 A

Approvals:



I_R	Height h mm	Ordering code	Min. qty.	Max. qty.	Price each			
					Min. qty. +	10 +	20 +	
4 × 6	50	B84299-K53	1	20				
4 × 16	67	B84299-K55	1	20				
4 × 25	67	B84299-K56	1	20				

1) Only for 25-A filters

EMI Suppression Filters

Power line filters for frequency converters and power electronics (three-phase systems)

High insertion attenuation

Terminal blocks safe to touch (up to 180 A)

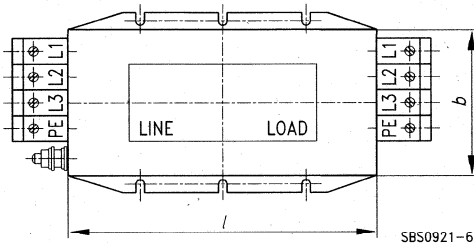
Rated voltage 440/250Vac, 50/60 Hz

Rated current 8 ... 1600 A

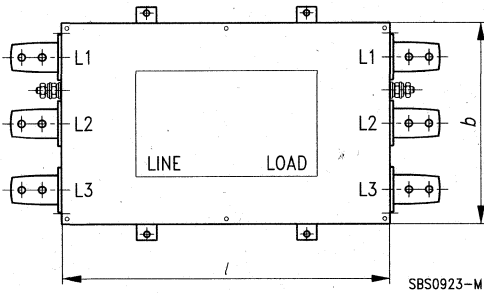
Number of lines 3

IEC climatic category 25/085/21

Schematic representation of B84143-A8-R ... -A180-R



Schematic representation of B84143-A250-S ... -A1600-S



EMI Suppression Filters

I _R	Dimensions (mm)		Leakage current mA	Ordering code	Min. qty.	Max. qty.	Price each				
	<i>l</i> × <i>b</i>	Height					Min. qty. +	5 +	10 +		
8	141 × 86	81	< 3,5	B84143-A8-R	1	10					
12	141 × 86	81	< 3,5	B84143-A12-R	1	10					
16	141 × 86	81	< 3,5	B84143-A16-R	1	10					
25	166 × 126	91	< 3,5	B84143-A25-R	1	10					
36	166 × 126	91	< 3,5	B84143-A36-R	1	10					
50	166 × 126	91	< 6	B84143-A50-R	1	10					
80	221 × 141	141	< 6	B84143-A80-R	1	10					
120	261 × 141	141	< 6	B84143-A120-R	1	10					
150	261 × 141	141	< 6	B84143-A150-R	1	10					
180	301 × 141	141	< 6	B84143-A180-R	1	10					
250	350 × 230	171	< 6	B84143-A250-S	1	2					
500	500 × 250	158	< 6	B84143-A500-S	1	2					
1000	650 × 400	210	< 6	B84143-A1000-S	1	2					
1600	680 × 400	210	< 6	B84143-A1600-S	1	2					



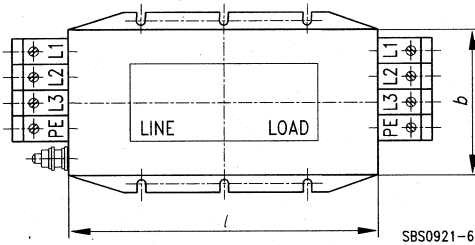
EMI Suppression Filters

Power line filters for frequency converters and power electronics (three-phase systems)

Extra-high insertion attenuation
Terminal blocks safe to touch

Rated voltage 440/250Vac, 50/60 Hz
Rated current 8 ... 80 A
Number of lines 3
IEC climatic category 25/085/21

Schematic representation



I_R	Dimensions (mm)		Leakage current mA	Ordering code	Min. qty.	Max. qty.	Price each				
	$l \times b$	Height					Min. qty. +	5 +			
8	171 × 126	81	< 3,5	B84143-B8-R	1	10					
12	171 × 126	81	< 3,5	B84143-B12-R	1	10					
16	171 × 126	81	< 3,5	B84143-B16-R	1	10					
25	231 × 126	91	< 3,5	B84143-B25-R	1	10					
36	231 × 126	91	< 3,5	B84143-B36-R	1	10					
50	231 × 126	91	< 6	B84143-B50-R	1	10					
80	331 × 141	141	< 6	B84143-B80-R	1	10					

EMI Suppression Filters

Power line filters for UPS systems and power electronics (three-phase systems)

High insertion attenuation
Very small size

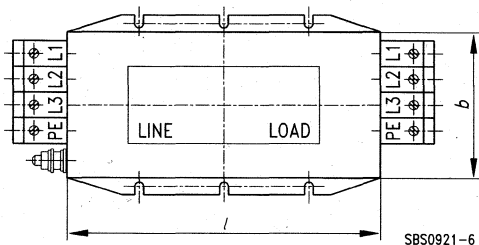
Rated voltage 440/250Vac, 50/60 Hz

Rated current 250 ... 1600 A

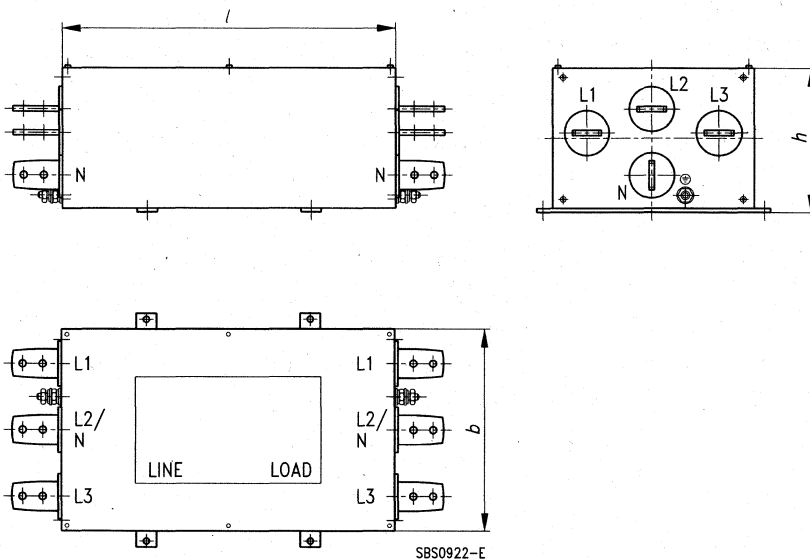
Number of lines 4

IEC climatic category 25/085/21

Schematic representation B84144-A16-R ... B84144-A180-R



Schematic representation B84144-G250-S ... B84144-G1600-S



EMI Suppression Filters

I_R	Dimensions (mm)		I_{leak} mA	Ordering code	Min. qty.	Max. qty.	Price each in DM				
	$l \times b$	Height					Min. qty. +				
▼ 16	141 × 86	81	< 3,5	B84144-A16-R	1	10					
▼ 25	166 × 126	91	< 3,5	B84144-A25-R	1	10					
▼ 36	166 × 126	91	< 3,5	B84144-A36-R	1	10					
▼ 50	166 × 126	91	< 6	B84144-A50-R	1	10					
▼ 80	221 × 141	141	< 6	B84144-A80-R	1	10					
▼ 120	261 × 141	141	< 6	B84144-A120-R	1	10					
▼ 150	261 × 141	141	< 6	B84144-A150-R	1	10					
▼ 180	301 × 141	141	< 6	B84144-A180-R	1	10					
250	350 × 230	171	< 6	B84144-G250-S	1	2					
500	500 × 250	198	< 6	B84144-G500-S	1	2					
1000	650 × 400	290	< 6	B84144-G1000-S	1	2					
1600	680 × 400	290	< 6	B84144-G1600-S	1	2					

Product Group Index

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Lab Assortments

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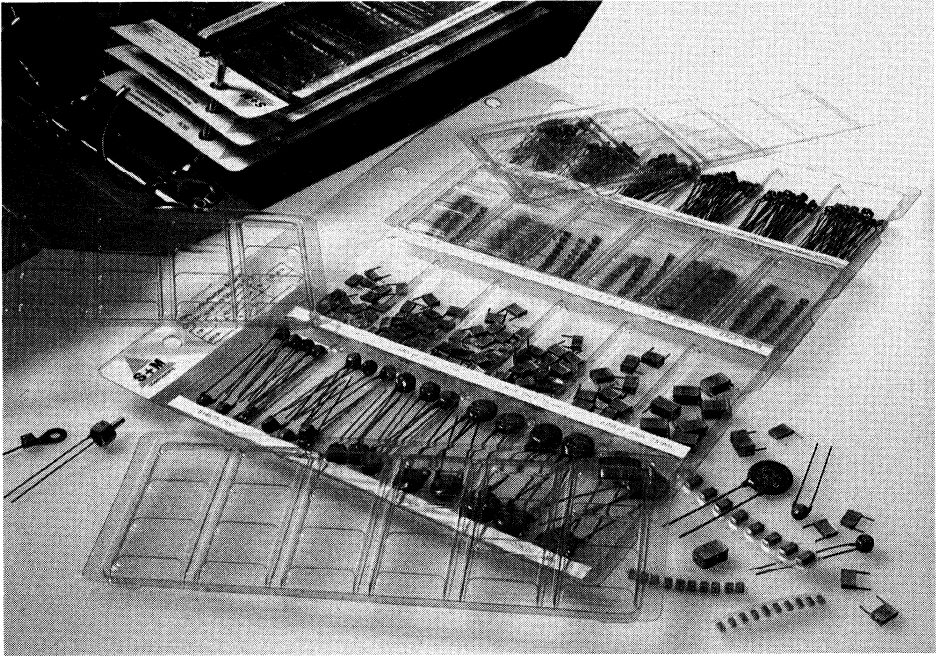
Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Lab Assortments

Our lab assortments are an ideal choice if you want to get to know several component variants at a time. In addition to the well-established sample sets of ferrites and EMC components, our range now includes also a large variety of components in COMP-CARDS®. COMP-CARDS – that's a new and easy-to-use system for storing components. Each of the clear plastic cards contains a set of assorted components with all types of the same kind being packed in individual compartments. All cards have transparent covers which securely snap into place. Grooves in the cover assure continual component separation.

The 18 sets available at present have been compiled by Siemens Matsushita Components in close cooperation with NOVA Elektronik and offer a representative selection of electrical and/or geometric ratings of our passive components.

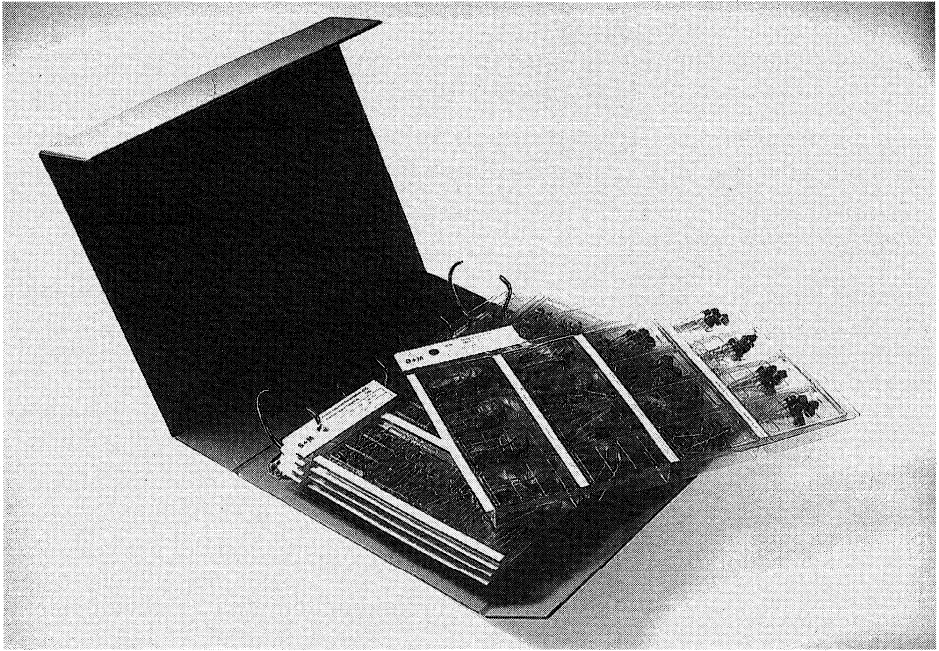
The wide variety of assortments available makes COMP-CARDS suitable for the most versatile applications including development and research, service, spare parts administration, occupational training as well as amateur electronics.



SBS0919-U

® Registered trademark of NOVA Elektronik

Lab Assortments



SBS0917-D

The COMP-CARDS can be stored in a 4-ring binder which fits any standard book shelf. Each of the cards carries a label stating the type of component contained and the most important electrical data. In addition, each compartment is labelled with the electrical ratings of the components contained.

The cards are usually 10 mm in height; COMP-CARDS filled with varistors (CCR-62 and CCR-63) have a height of 20 mm.

The ring binder is closed by Velcro fasteners and can accommodate COMP-CARDS up to a height of 70 mm.

COMP-CARD binder

DIN A4 binder, overall dimensions: 318 × 290 × 82 mm

Type	Ordering code	Min. qty.	Max. qty.	Price per binder			
				Min. qty. +			
CCO-70	B57000-X4	1	1				

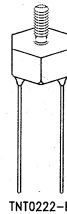
NTC Thermistors

COMP-CARD

NTC thermistors for temperature measurement

(For component description see page 141 ff.)

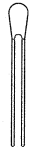
- Tolerances: $\Delta R/R_R = \pm 10\%$ (K17, K45, M87)
 $\Delta R/R_R = \pm 20\%$ (K295)
 $\Delta R/R_R = \pm 2\%$ (M703)
 $\Delta T = \pm 0,2\text{ K}$ (S863, S869)
 $\Delta T = \pm 1,0\text{ K}$ (S891)



TNT0222-E



TNT0224-V



TNT0225-4

Type/rated resistance/pieces:

K17 / 10 kΩ	2 ×	K45 / 1 kΩ	5 ×	K45 / 10 kΩ	5 ×	K45 / 47 kΩ	5 ×
K295/ 10 kΩ	3 ×	K295/100 kΩ	3 ×	M87 / 5 kΩ	5 ×	M87 / 10 kΩ	5 ×
M87 / 100 kΩ	5 ×	M87 / 500 kΩ	5 ×	M703/10 kΩ	5 ×	S863 / 5 kΩ	5 ×
S863/ 10 kΩ	5 ×	S869/ 5 kΩ	5 ×	S869/10 kΩ	5 ×	S891 / 10 kΩ	5 ×

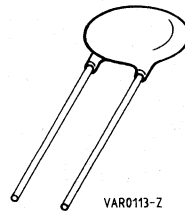
Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
CCR-68 (16 ratings/73 pcs)	B57000-X3	1	1				

COMP-CARD

NTC thermistors for temperature compensation

(For component description see page 138 ff.)

- Tolerances: $\Delta R/R_R = \pm 5\%$ (K164)
 $\Delta R/R_R = \pm 10\%$ (C621)



VAR0113-Z

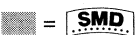


VAR0112-R

Type/rated resistance/pieces:

K164/ 10 Ω	10 ×	K164/100 Ω	10 ×	K164/470 Ω	10 ×	K164/ 1 kΩ	10 ×
K164/ 4,7 kΩ	10 ×	K164/ 10 kΩ	10 ×	K164/ 47 kΩ	10 ×	K164/100 kΩ	10 ×
C621/470 Ω	20 ×	C621/ 1 kΩ	20 ×	C621/ 4,7 kΩ	20 ×	C621/ 10 kΩ	20 ×
C621/ 22 kΩ	20 ×	C621/ 47 kΩ	20 ×	C621/100 kΩ	20 ×	C621/470 kΩ	20 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
CCR-66 (16 ratings/240 pcs)	B57000-X1	1	1				

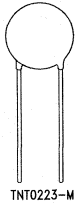


NTC Thermistors PTC Thermistors

COMP-CARD NTC thermistors for inrush current limiting

(For component description see page 147 ff.)

Resistance tolerance: $\Delta R/R_R = \pm 20\%$
 Maximum current: $I_{max} = 2,0 \dots 8,4 \text{ A (S234)}$
 $= 3,0 \text{ A}; 4,2 \text{ A (S235)}$
 $= 3,5 \dots 5,5 \text{ A (S236)}$
 $= 3,5 \dots 16 \text{ A (S364)}$



Type/rated resistance/pieces:

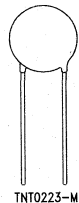
S234/ 2,5 Ω 5 \times	S234/ 4,7 Ω 5 \times	S234/10 Ω 5 \times	S234/ 33 Ω 5 \times
S234/220 Ω 5 \times	S235/ 5,0 Ω 5 \times	S235/10 Ω 5 \times	S236/ 2,5 Ω 5 \times
S236/ 5,0 Ω 5 \times	S236/10 Ω 5 \times	S236/16 Ω 5 \times	S364/ 1,0 Ω 5 \times
S364/ 2,5 Ω 5 \times	S364/ 5,0 Ω 5 \times	S364/10 Ω 5 \times	S364/120 Ω 5 \times

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
CCR-67 (16 ratings/80 pcs)	B57000-X2	1	1				

COMP-CARD PTC thermistors for overload protection

(For component description see page 154 ff.)

Low voltage range
 Max. operating voltage $V_{max} = 30/80 \text{ V}$
 Reference temperature $T_{ref} = 120^\circ\text{C}$
 Rated current $I_R = 50 \text{ mA} \dots 2,5 \text{ A}$



Type/rated voltage/pieces:

C995/30 V 10 \times	C985/30 V 10 \times	C975/30 V 10 \times	C965/30 V 10 \times
C955/30 V 5 \times	C945/30 V 5 \times	C935/30 V 5 \times	C915/30 V 5 \times
C990/80 V 10 \times	C980/80 V 10 \times	C970/80 V 10 \times	C960/80 V 10 \times
C950/80 V 5 \times	C940/80 V 5 \times	C930/80 V 5 \times	C910/80 V 5 \times

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
CCR-64 (16 ratings/80 pcs)	B59000-X1	1	1				

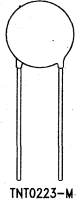
PTC Thermistors Varistors

COMP-CARD PTC thermistors for overload protection

(For component description see page 156)

Line voltage range

Max. operating voltage $V_{max} = 265 \text{ V}$
 Reference temperature $T_{ref} = 120^\circ\text{C}$
 Rated current $I_R = 30 \text{ mA} \dots 650 \text{ mA}$



Type/pieces:

P1135 10 ×	P1235 10 ×	P1335 10 ×	C890 10 ×
C883 10 ×	C880 10 ×	C875 10 ×	C874 10 ×
C873 10 ×	C872 10 ×	C870 10 ×	C860 10 ×
C850 5 ×	C840 5 ×	C830 5 ×	C810 5 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
CCR-65 (16 ratings/140 pcs)	B59000-X2	1	1				

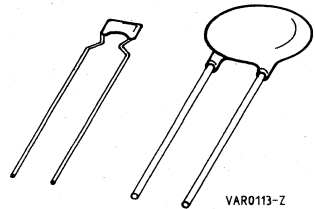
COMP-CARD Varistors

(For component description see page 165 ff.)

Operating voltage range 4 ... 75 Vac

The permissible ac voltage load can be seen from the last or the last two figures of the type designation.

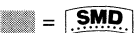
(Example: SR1210M4S: 4 Vac, S20K75: 75 Vac)



Type/pieces:

SR1210M4S 10 ×	S05K11 10 ×	S05K20 10 ×	S05K75 10 ×
S07K11 10 ×	S07K20 10 ×	S07K75 10 ×	S10K11 10 ×
S10K20 10 ×	S10K75 10 ×	S14K11 5 ×	S14K20 5 ×
S14K75 5 ×	S20K11 5 ×	S20K20 5 ×	S20K75 5 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
■ CCR-62 (16 ratings/130 pcs)	Q69X4491	1	1				



Varistors Resistors

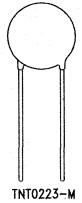
COMP-CARD Varistors

(For component description see page 165 ff.)

Operating voltage range 130 ... 420 Vac

The permissible ac voltage load can be seen from the last 3 figures of the type designation.

(Example: S20K420: 420 Vac)



TNT0223-M

Type/pieces:

S05K275	10 ×	S05K420	10 ×	S07K275	10 ×	S07K420	10 ×
S10K130	10 ×	S10K275	10 ×	S10K420	10 ×	S14K130	10 ×
S14K275	10 ×	S14K420	10 ×	S18K130	5 ×	S18K275	5 ×
S18K420	5 ×	S20K130	5 ×	S20K275	5 ×	S20K420	5 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
■ CCR-63 (16 ratings/130 pcs)	Q69X4492	1	1				

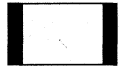
COMP-CARD Chip resistors

Thick-film resistors

Size 0805

$\Delta R/R_R = \pm 1\%$

Power rating: 0,1 W at 70 °C

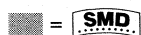


Rated resistance/pieces:

100 pieces each of every rating of the IEC series E96 10 Ω ... 1,0 MΩ (except 976 kΩ)

Note: This assortment is supplied in 3 binders CCO-70.

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
■ SMR-11 (480 ratings/48000 pcs)	B54102-F1	1	1				





COMP-CARD Ceramic chip capacitors

(For component description see page 183 ff.)



Ceramic material C0G
 Rated voltage $V_R = 50$ Vdc
 Tolerance $\Delta C/C_R = \pm 5\%$
 Temperature range: $-55 \dots +125$ °C

Pieces: Size 0805, 1206 (up to $C_R = 1000$ pF): 100 pcs/each
 1206 (from $C_R = 1500$ pF), 1210: 50 pcs/each

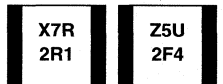
Rated capacitance/size:

10 pF/0805	15 pF/0805	22 pF/0805	33 pF/0805	47 pF/0805	68 pF/0805
100 pF/0805	150 pF/0805	220 pF/0805	330 pF/0805	470 pF/0805	680 pF/0805
1000 pF/0805	100 pF/1206	150 pF/1206	220 pF/1206	330 pF/1206	470 pF/1206
680 pF/1206	1000 pF/1206	1500 pF/1206	2200 pF/1206	3300 pF/1210	4700 pF/1210

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD						
				Min. qty. +						
■ SMC-34 (24 ratings/2200 pcs)	B37500-X1	1	1							

COMP-CARD Ceramic chip capacitors

(For component description see page 185 ff.)



Ceramic material X7R and Z5U
 Rated voltage $V_R = 50$ Vdc
 Tolerance $\Delta C/C_R = \pm 10\%$ (X7R) or $\pm 20\%$ (Z5U)
 Temperature range: $-55 \dots +125$ °C (X7R) or $-25 \dots +85$ °C (Z5U)

Pieces: Size 0805, 1206: 100 pcs/each
 1210: 50 pcs
 1812, 2200: 30 pcs/each

Rated capacitance/size:

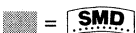
X7R:

1 nF/0805	1,5 nF/0805	2,2 nF/0805	3,3 nF/0805	4,7 nF/0805	6,8 nF/0805
10 nF/0805	15 nF/0805	1 nF/1206	1,5 nF/1206	2,2 nF/1206	3,3 nF/1206
4,7 nF/1206	6,8 nF/1206	10 nF/1206	15 nF/1206	22 nF/1206	33 nF/1206
47 nF/1206	68 nF/1206	0,1 µF/1206			

Z5U:

0,22 µF/1210	0,47 µF/1812	1,0 µF/2220
--------------	--------------	-------------

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD						
				Min. qty. +						
■ SMC-35 (24 ratings/2210 pcs)	B37500-X2	1	1							

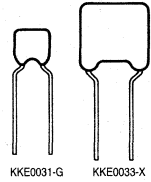


Ceramic Capacitors

COMP-CARD Multilayer ceramic capacitors, leaded

(For component description see page 190 ff.)

Ceramic material C0G
 Lead spacing 5,0 mm
 Tolerance $\Delta C/C_R = \pm 5\%$
 Temperature range: $-55 \dots +125\text{ }^\circ\text{C}$
 Distribution: $C_R \leq 10\text{ nF}$: 25 pcs
 $C_R > 10\text{ nF}$: 10 pcs



Rated capacitance/rated dc voltage:

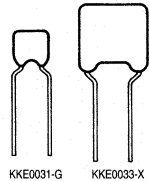
10	pF/100 V	15	pF/100 V	22	pF/100 V	33	pF/100 V	47	pF/100 V	68	pF/100 V
100	pF/100 V	100	pF/ 63 V	150	pF/ 63 V	220	pF/ 63 V	330	pF/ 63 V	470	pF/ 63 V
680	pF/ 63 V	1,0	nF/ 63 V	1,5	nF/ 63 V	2,2	nF/ 63 V	3,3	nF/ 63 V	4,7	nF/ 63 V
6,8	nF/ 63 V	10	nF/ 63 V	15	nF/ 63 V	22	nF/ 63 V	33	nF/ 63 V	47	nF/ 63 V

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD								
				Min. qty. +								
■ CCC-36 (24 ratings/540 pcs)	B37501-X1	1	1									

COMP-CARD Multilayer ceramic capacitors, leaded

(For component description see page 192 ff.)

Ceramic material X7R and Z5U
 Lead spacing 5,0 mm
 Rated voltage $V_R = 50\text{ Vdc}$ ($C_R = 1000\text{ pF}$ and $C_R = 2200\text{ pF}$)
 $V_R = 100\text{ Vdc}$ others
 Tolerance $\Delta C/C_R = \pm 10\%$ (X7R) or $\pm 20\%$ (Z5U)
 Temperature range: $-55 \dots +125\text{ }^\circ\text{C}$ (X7R) or $-25 \dots +85\text{ }^\circ\text{C}$ (Z5U)



Rated capacitance/pcs:

X7R:

1000	pF	25 ×	2200	pF	25 ×	3300	pF	10 ×	4700	pF	20 ×
0,01	μF	25 ×	0,015	μF	10 ×	0,022	μF	20 ×	0,033	μF	10 ×
0,047	μF	25 ×	0,068	μF	10 ×	0,1	μF	25 ×			

Z5U:

0,22	μF	25 ×	0,47	μF	15 ×	1,0	μF	25 ×	0,1	μF	25 ×
									2,2	μF	10 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD								
				Min. qty. +								
■ CCC-37 (16 ratings/305 pcs)	B37501-X2	1	1									

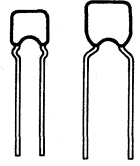
Ceramic Capacitors

Metallized Film Capacitors

COMP-CARD Ceramic capacitors

SIBATIT-VS

Ceramic material 2E3
 Rated voltage $V_R = 63 \text{ Vdc}$
 Tolerance $\Delta C/C_R = +50/-20\%$
 Temperature range: $-40 \dots +85 \text{ }^\circ\text{C}$



KKE0017-G KKE0020-1

Rated capacitance/lead spacing/pieces:

10 nF/2,5 mm 40 ×	22 nF/2,5 mm 20 ×	33 nF/2,5 mm 20 ×
47 nF/2,5 mm 40 ×	68 nF/2,5 mm 20 ×	100 nF/2,5 mm 40 ×
10 nF/5,0 mm 40 ×	22 nF/5,0 mm 20 ×	33 nF/5,0 mm 20 ×
47 nF/5,0 mm 40 ×	68 nF/5,0 mm 20 ×	100 nF/5,0 mm 50 ×

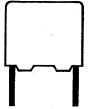
Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD				
				Min. qty. +				
■ CCC-35 (12 ratings/370 pcs)	B37501-X3	1	1					

COMP-CARD Metallized film capacitors

Self-healing stacked-film capacitors in plastic case

(For component description see page 196 ff.)

Rated voltage $V_R = 50 \dots 400 \text{ V}$
 Tolerance $\Delta C/C_R = \pm 5\%$
 Lead spacing 5 mm



Rated capacitance/rated voltage/pieces:

1 nF/400 V 30 ×	1,5 nF/400 V 20 ×	2,2 nF/400 V 30 ×	3,3 nF/400 V 20 ×
4,7 nF/400 V 30 ×	6,8 nF/400 V 20 ×	10 nF/250 V 30 ×	15 nF/250 V 20 ×
22 nF/250 V 30 ×	33 nF/100 V 20 ×	47 nF/100 V 30 ×	68 nF/100 V 20 ×
100 nF/63 V 80 ×	150 nF/63 V 20 ×	220 nF/63 V 20 ×	330 nF/63 V 15 ×
470 nF/63 V 20 ×	680 nF/63 V 20 ×	1,0 μF/63 V 20 ×	1,5 μF/63 V 10 ×
2,2 μF/50 V 10 ×	3,3 μF/50 V 10 ×		

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD				
				Min. qty. +				
CCC-41A (22 ratings/525 pcs)	B32529-X-Y	1	4					

Tantalum Electrolytic Capacitors EMC Components

COMP-CARD Tantalum chip capacitors

(For component description see page 226 ff.)

Rated voltage $V_R = 4 \dots 35 \text{ V}$
 Tolerance $\Delta C/C_R = \pm 20 \%$
 Temperature range: $-55 \dots +125 \text{ }^\circ\text{C}$

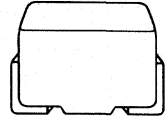
Case dimensions $l \times b \times h$ (mm):

Size A $3,2 \times 1,6 \times 1,6$
 B $3,5 \times 2,8 \times 1,9$
 C $6,0 \times 3,2 \times 2,5$
 D $7,3 \times 4,3 \times 2,8$

Rated capacitance/rated voltage/size:

0,1 $\mu\text{F}/35 \text{ V/A}$ 0,22 $\mu\text{F}/35 \text{ V/A}$ 0,47 $\mu\text{F}/35 \text{ V/B}$ 1,0 $\mu\text{F}/16 \text{ V/A}$ 1,0 $\mu\text{F}/35 \text{ V/B}$ 2,2 $\mu\text{F}/10 \text{ V/A}$
 2,2 $\mu\text{F}/25 \text{ V/B}$ 2,2 $\mu\text{F}/35 \text{ V/C}$ 3,3 $\mu\text{F}/6,3 \text{ V/A}$ 4,7 $\mu\text{F}/16 \text{ V/B}$ 4,7 $\mu\text{F}/35 \text{ V/D}$ 6,8 $\mu\text{F}/10 \text{ V/B}$
 6,8 $\mu\text{F}/20 \text{ V/C}$ 6,8 $\mu\text{F}/35 \text{ V/D}$ 10 $\mu\text{F}/6,3 \text{ V/B}$ 10 $\mu\text{F}/16 \text{ V/C}$ 10 $\mu\text{F}/35 \text{ V/D}$ 15 $\mu\text{F}/25 \text{ V/D}$
 22 $\mu\text{F}/6,3 \text{ V/C}$ 22 $\mu\text{F}/20 \text{ V/D}$ 33 $\mu\text{F}/16 \text{ V/D}$ 47 $\mu\text{F}/10 \text{ V/D}$ 68 $\mu\text{F}/6,3 \text{ V/D}$ 100 $\mu\text{F}/4 \text{ V/D}$

Distribution: 10 to 40 pieces per rating

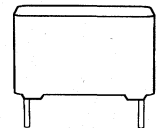


KTA0145-4

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD				
				Min. qty. +				
SMC-02 (24 ratings/600 pcs)	B45196-X2	1	1					

COMP-CARD EMI suppression capacitors

(For description of X2 and Y capacitors see page 271 ff.)

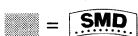


SSB0743-7

Rated capacitance/rated voltage/pieces:

X2: 0,1 $\mu\text{F}/300 \text{ V}$ 12 \times 0,22 $\mu\text{F}/300 \text{ V}$ 8 \times 0,33 $\mu\text{F}/300 \text{ V}$ 2 \times 0,47 $\mu\text{F}/300 \text{ V}$ 2 \times
 47 nF/275 V 12 \times 68 nF/275 V 12 \times 0,1 $\mu\text{F}/275 \text{ V}$ 12 \times 0,22 $\mu\text{F}/275 \text{ V}$ 8 \times
 0,33 $\mu\text{F}/275 \text{ V}$ 8 \times 0,47 $\mu\text{F}/275 \text{ V}$ 2 \times 0,68 $\mu\text{F}/275 \text{ V}$ 2 \times 1,0 $\mu\text{F}/275 \text{ V}$ 2 \times
 Y2: 1 nF/250 V 6 \times 1,5 nF/250 V 6 \times 2,2 nF/250 V 6 \times 2,5 nF/250 V 12 \times
 3,3 nF/250 V 6 \times 4,7 nF/250 V 18 \times 5,6 nF/250 V 6 \times 6,8 nF/250 V 6 \times
 33 nF/250 V 2 \times

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD				
				Min. qty. +				
CCC-42 (21 ratings/140 pcs)	B81133-X-Y	1	4					



Assortment HF chokes

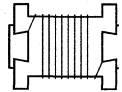
SIMID 01 (see also page 281 ff.)

SIMID 01 assortment comprising 70 pieces	E series	Ordering code	Min. qty.	Max. qty.	Price per assortment			
					Min. qty. +			
5 pcs each/rating Range 0,068 ... 8,2 µH	E 6	B82412-X1	1	1				

COMP-CARD HF chokes

SIMID 01 (see also page 281 ff.)

HF chokes without encapsulation



SSB0785-H

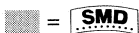
Rated current $I_R = 0,09 \dots 0,6 \text{ A}$

Tolerance $L_R \leq 0,027 \mu\text{H}: \Delta L/L_R = \pm 20 \%$
 $L_R > 0,027 \mu\text{H}: \Delta L/L_R = \pm 10 \%$

Rated inductance/pieces:

0,022 µH 20 ×	0,027 µH 20 ×	0,033 µH 20 ×	0,039 µH 20 ×
0,047 µH 20 ×	0,056 µH 20 ×	0,068 µH 20 ×	0,082 µH 20 ×
0,1 µH 40 ×	0,12 µH 20 ×	0,15 µH 20 ×	0,18 µH 20 ×
0,22 µH 30 ×	0,27 µH 20 ×	0,33 µH 30 ×	0,39 µH 20 ×
0,47 µH 30 ×	0,56 µH 20 ×	0,68 µH 30 ×	0,82 µH 20 ×
1,0 µH 50 ×	1,5 µH 20 ×	1,8 µH 20 ×	2,2 µH 30 ×
2,7 µH 20 ×	3,3 µH 30 ×	3,9 µH 20 ×	4,7 µH 30 ×
5,6 µH 20 ×	6,8 µH 30 ×	8,2 µH 20 ×	10 µH 30 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
SML-01 (32 ratings/780 pcs)	B82412-X2	1	1				



Assortment HF chokes

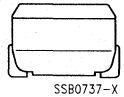
SIMID 02 (see also page 283 ff.)

SIMID 02/100 assortment comprising 100 pieces	E series	Ordering code	Min. qty.	Max. qty.	Price per assortment			
					Min. qty. +			
▽ 5 pieces/rating Range 0,068 ... 100 µH	E 6	B82422-X100	1	1				

COMP-CARD HF chokes

SIMID 02 (see also page 283 ff.)

Encapsulated HF chokes (suitable for all soldering methods)

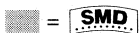


Rated current $I_R = 0,065 \dots 0,7 \text{ A}$
 Tolerance $L_R \leq 0,033 \mu\text{H}: \Delta L/L_R = \pm 20 \%$
 $L_R > 0,033 \mu\text{H}: \Delta L/L_R = \pm 10 \%$

Rated inductance/pieces:

10 nH 20 ×	12 nH 20 ×	15 nH 20 ×	18 nH 20 ×	22 nH 20 ×	27 nH 20 ×
33 nH 20 ×	39 nH 20 ×	47 nH 20 ×	56 nH 20 ×	68 nH 20 ×	82 nH 20 ×
100 nH 30 ×	120 nH 20 ×	150 nH 20 ×	180 nH 20 ×	220 nH 20 ×	270 nH 20 ×
330 nH 20 ×	390 nH 20 ×	470 nH 30 ×	560 nH 20 ×	680 nH 20 ×	820 nH 20 ×
1,0 µH 50 ×	1,2 µH 20 ×	1,5 µH 20 ×	1,8 µH 20 ×	2,2 µH 30 ×	2,7 µH 20 ×
3,3 µH 20 ×	3,9 µH 20 ×	4,7 µH 30 ×	5,6 µH 20 ×	6,8 µH 20 ×	8,2 µH 20 ×
10 µH 50 ×	12 µH 20 ×	15 µH 20 ×	18 µH 20 ×	22 µH 20 ×	27 µH 20 ×
33 µH 20 ×	39 µH 20 ×	47 µH 20 ×	56 µH 20 ×	68 µH 20 ×	100 µH 50 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
SML-02 (48 Werte/1090 Stück)	B82422-X200	1	1				



Assortment HF chokes

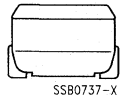
SIMID 03 (see also page 285 ff.)

SIMID 03 assortment comprising 57 pieces	E series	Ordering code	Min. qty.	Max. qty.	Price per assortment			
					Min. qty. +			
3 pcs/rating Range 1 ... 1000 µH	E 6	B82432-X1	1	1				

COMP-CARD HF chokes

SIMID 03 (see also page 285 ff.)

Encapsulated HF chokes
(suitable for all soldering methods)

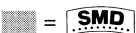


Rated current $I_R = 0,055 \dots 0,6 \text{ A}$
 Tolerance $L_R \leq 8,2 \mu\text{H}: \Delta L/L_R = \pm 20 \%$
 $L_R > 8,2 \mu\text{H}: \Delta L/L_R = \pm 10 \%$

Rated inductance/pieces:

1,0 µH 30 ×	1,5 µH 20 ×	2,2 µH 20 ×	3,3 µH 20 ×
4,7 µH 20 ×	6,8 µH 20 ×	8,2 µH 20 ×	10 µH 40 ×
12 µH 20 ×	15 µH 20 ×	18 µH 20 ×	22 µH 20 ×
27 µH 20 ×	33 µH 20 ×	39 µH 20 ×	47 µH 20 ×
56 µH 20 ×	68 µH 20 ×	82 µH 20 ×	100 µH 40 ×
120 µH 20 ×	150 µH 20 ×	180 µH 20 ×	220 µH 20 ×
270 µH 20 ×	330 µH 20 ×	390 µH 20 ×	470 µH 20 ×
560 µH 20 ×	680 µH 20 ×	820 µH 20 ×	1000 µH 40 ×

Type	Ordering code	Min. qty.	Max. qty.	Price per COMP-CARD			
				Min. qty. +			
SML-03 (32 ratings/710 pcs)	B82432-X2						

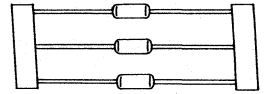


EMC Components

Assortment HF chokes

Type SBC (Small Bobbin Core)

(For component description see page 288)



SS80784-9

Assortment HF chokes comprising 370 pieces	E series	Ordering code	Min. qty.	Max. qty.	Price per assortment			
					Min. qty. +			
10 pcs/rating Range 1 ... 1000 μ H	E 12	B82141-X1	1	1				

Assortment HF chokes

Type BC (Bobbin Core)

(For component description see page 289 ff)

Assortment HF chokes comprising 450 pieces	E series	Ordering code	Min. qty.	Max. qty.	Price per assortment			
					Min. qty. +			
10 pcs/rating Range 1 ... 4700 μ H	E 12	B78108-X4	1	1				

Assortment HF chokes

Type MCC (Mini Cylinder Core)

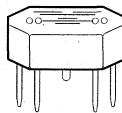
(For component description see page 291)

Assortment HF chokes comprising 370 pieces	E series	Ordering code	Min. qty.	Max. qty.	Price per assortment			
					Min. qty. +			
10 pcs/rating Range 0,1 ... 100 μ H	E 12	B78108-X5	1	1				

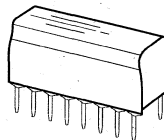
EMC Components

Assortment data line chokes/filters

(For component description see page 304 ff.)



SSB0788-7



SSB0789-F

Assortment data line chokes/filters	Ordering code	Min. qty.	Max. qty.	Price per assortment				
				Min. qty. +				
Contents: 6 double chokes, horizontal 4 double chokes, vertical 4 quad chokes, horizontal 1 filter (16-pin DIP case) 1)	B82791-X1	1	1					

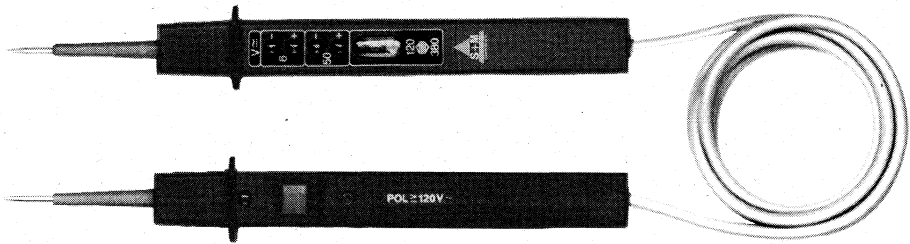
1) From 1.10.96 only available without filter

Voltage Testers

Contents	Type	Page
Combi tester 3	Q63100-D417	344
Voltage tester 3	Q63100-D421	345
Digital voltage tester	Q63100-D422	346
Universal tester 3	Q63100-D424	347
Car Check	Q63100-D430	348
Universal tester 1	Q63100-D433	349
Universal voltage tester	Q63100-D434	350

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Combi Tester 3



TPT0517-3



Combi tester with incorporated battery for voltage, continuity and phase testing.

DC and AC voltage test up to 380 V

Continuity and phase test

Battery and functional test

Rated voltage range
(indicator handle)

6 ... 380 V dc/ac

Rated voltage range
(phase tester)

120 ... 380 V

Mode of indication

+/- 6 V and +/- 50 V LED

120 ... 380 V fluorescent lamp

Surge voltage strength

up to 5 kV/3 Joule (1,2/50 μ s pulse wave)

Input resistance

2 ... 50 k Ω

(PTC-adjusted, dependent on the voltage applied)

Continuous current, adjusted

\leq 10 mA

Max. peak current

(380 V as per VDE 0102, part 1) 130 mA_{Opk} decaying within approx. 3 s

Frequency range

0 ... 100 Hz

Max. ON-time

30 s

Operating temperature range

- 10 °C ... + 50 °C

Type of protection

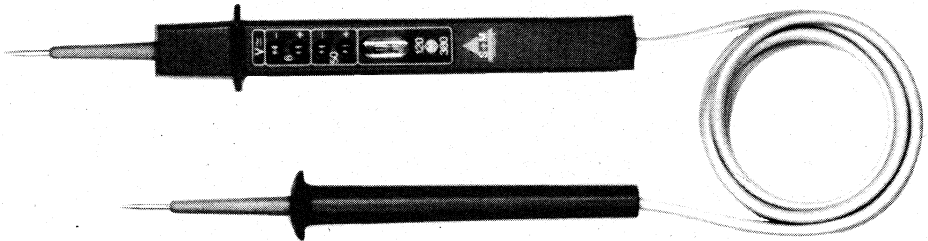
IP 40

Battery for continuity/
phase testing

12 V, type A 23 M VR, 22/EL 12

Designation	Ordering code	Min. qty.	Max. qty.	Price each				
				Min. qty. +	6 +	12 +	24 +	48 +
Combi tester 3	Q63100-D417	2	48					

Voltage Tester 3



TPT0516-U

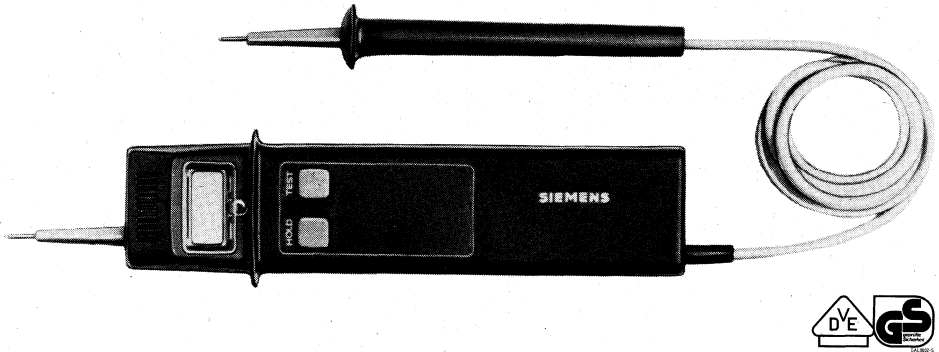


Voltage tester for DC and AC voltage testing up to 380 V.

Rated voltage range	6 ... 380 V dc/ac
Mode of indication	+/- 6 V and +/- 50 V LED 120 ... 380 V fluorescent lamp
Surge voltage strength	up to 5 kV/3 Joule (1,2/50 μ s pulse wave)
Input resistance	2 ... 50 k Ω (PTC-adjusted, dependent on the voltage applied)
Continuous current, adjusted	≤ 10 mA
Max. peak current	(380 V as per VDE 0102, part 1) 130 mA _{Opk} decaying within approx. 3 s
Frequency range	0 ... 100 Hz
Max. ON-time	30 s
Operating temperature range	- 10 °C ... + 50 °C
Type of protection	IP 40

Designation	Ordering code	Min. qty.	Max. qty.	Price each				
				Min. qty. +	6 +	12 +	24 +	48 +
Voltage tester 3	Q63100-D421	3	48					

Digital Voltage Tester



Microprocessor-controlled digital voltage tester with dc/ac indication, continuity test function and buzzer, for general-purpose applications with large voltage ranges.

DC and AC voltage test

Phase-to-ground test

Polarity test

LED as voltage indicator integrated into display window; operates independently of electronic circuitry

Diode test; i.e. polarity-dependent continuity test incl. acoustic indication

Battery test incl. "low bat" indication on display

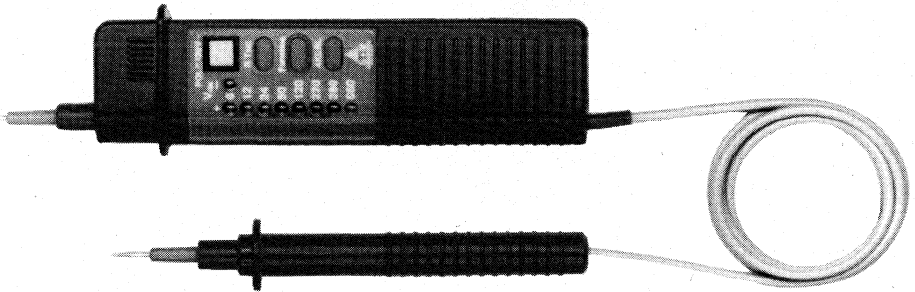
Input resistance $\geq 660 \text{ k}\Omega$
 Input voltage 1 V ac ... 999 V ac
 Insulation test voltage 5 kV
 Surge voltage strength 10 kV_{opk} (1,2/50 μ s pulse wave)
 High-voltage strength 1 kV

Input current approx. 1,5 mA at 999 V
 Operating temperature range $-10 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
 Frequency range 20 Hz ... 2 kHz
 Continuity test 0 ... 500 k Ω

Battery type 9 V block

Designation	Ordering code	Min. qty.	Max. qty.	Price each			
				Min. qty. +	6 +	12 +	24 +
Digital voltage tester	Q63100-D422	1	24				

Universal Tester 3



TPT0518-B



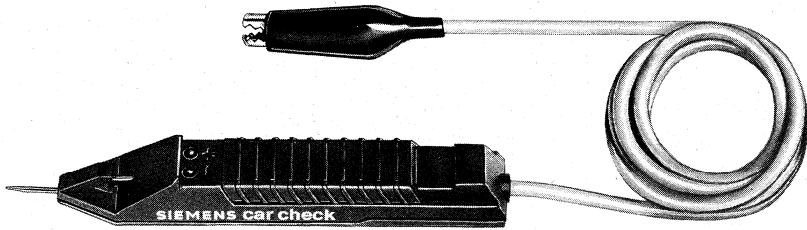
Universal tester 3 for voltage and continuity testing as well as for capacitance discharging.

- Voltage tests up to 660 V
- Battery and functional test
- Continuity test, diode test
- Discharge of capacitances

Input resistance	≥ 660 kΩ (without using push button "R-Test") approx. 4 kΩ (when using push button "R-Test")
Resistance range in continuity test	0 ... approx. 500 kΩ
Rated voltage range	6 ... 660 V dc/ac (for both modes of operation) Pole 120 ... 660 V ac (for phase test)
Surge voltage strength	up to 5 kV _{opk} (1,2/50 μs pulse wave); for both modes of operation
Insulation test voltage	5 kV
Input current at 220 V _{rms}	≥ 0,33 mA (without using push button "R-Test") 55 mA (when using push button "R-Test")
Peak current at 660 V _{rms}	1,41 mA _{opk} (without using push button "R-Test") 160 mA _{opk} (when using push button "R-Test")
Frequency range	0 ... 100 Hz
Max. ON-time	30 s
Operating temperature range	- 10 °C ... + 50 °C
Type of protection	IP 40
Type of battery	Block battery 9 V; IEC 6 F 22, IEC 6 LF 22

Designation	Ordering code	Min. qty.	Max. qty.	Price each				
				Min. qty. +	6 +	12 +	24 +	
Universal tester 3	Q63100-D424	1	24					

Car Check



Special voltage tester for use in passenger cars and motor trucks

Voltage test

Visual indication

Battery test

Cable test

Cable test Plus/Minus

Test probe and test needle for testing insulated cables

Tie wraps for easy cable binding, even in the wiring harness

Voltage range

3 ... 48 Vdc

Test device

test probe and test needle with alignment mechanism,
crocodile clip to ground

Voltage indication

2 LEDs (light-emitting diodes)

Cable length

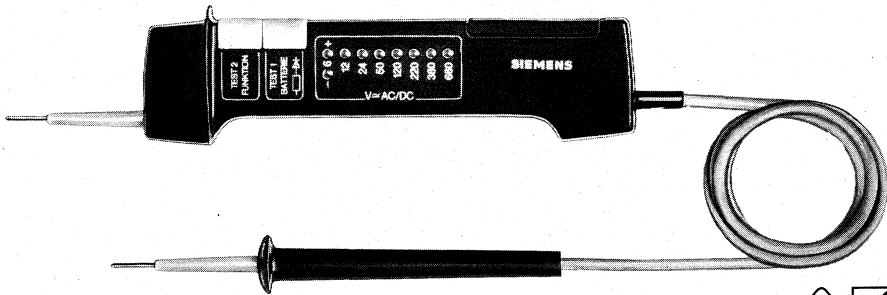
approx. 130 cm

Current consumption

1,5 mA

Designation	Ordering code	Min. qty.	Max. qty.	Price each				
				Min. qty. +	6 +	12 +	24 +	48 +
Car Check	Q63100-D430	3	48					

Universal Tester 1



Combined voltage and continuity tester.

DC and AC voltage test

Phase-to-ground test

Polarity and continuity test as well as polarity-dependent continuity test (diode test)

Acoustic and visual indication

Foolproof

Safe against voltage surges

Shock-hazard protection through high input resistance

Dual series resistors

Battery test

Input resistance $\geq 660 \text{ k}\Omega$
 Rated voltage range 6 ... 660 V dc/ac
 Insulation test voltage 5 kV
 Surge voltage strength 5 kV_{opk} (1,2/50 μs pulse wave)

Operating temperature range $-10 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$

Frequency range 0 ... 100 Hz

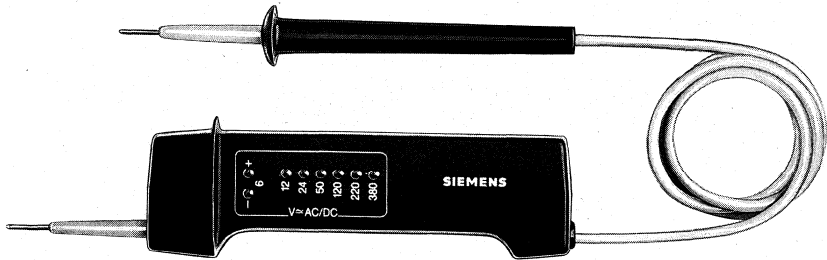
Battery voltage 12 Vdc

Resistance range 0 ... $\approx 2 \text{ M}\Omega$

(for continuity test)

Designation	Ordering code	Min. qty.	Max. qty.	Price each				
				Min. qty. +	6 +	12 +	24 +	48 +
Universal tester 1	Q63100-D433	1	48					
Spare battery	Q63100-D407-C1	6	48					

Universal Voltage Tester



The 2-pole voltage tester is PTC-controlled (PTC = resistance with positive temperature coefficient) and is suitable for working on electrical equipment and for detecting life parts.

DC and AC voltage test

Four low-voltage ranges and three line voltage ranges

Polarity test at dc voltage

Input resistance	2 k Ω ... 50 k Ω
Rated voltage range	6 ... 380 V dc/ac
Insulation test voltage	5 kV
Surge voltage strength	up to 5 kV _{opk} (1,2/50 μ s pulse wave)
Operating temperature range	- 10 °C ... + 50 °C
Frequency range	0 ... 60 Hz
Max. ON-time	30 s

Designation	Ordering code	Min. qty.	Max. qty.	Price each				
				Min. qty. +	6 +	12 +	24 +	48 +
Universal voltage tester	Q63100-D434	2	48					

Passive IR Detector

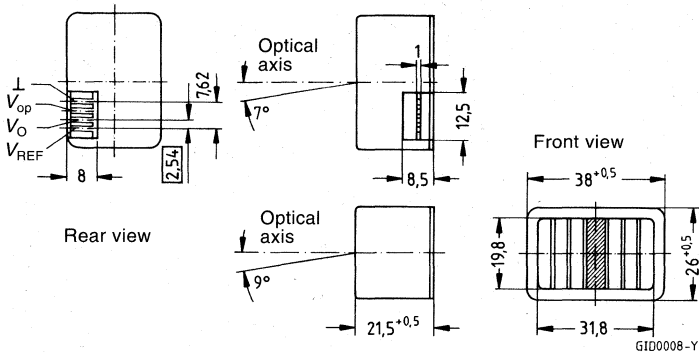
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Passive IR detector	PID 20	352
Connector for PID 20		352

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Passive IR Detector PID 20

Principle: pyroelectric compensation detector made of polymer film plus a preamplifier

The passive IR detector converts the body heat radiation (IR radiation) to electrical pulses. This sensor therefore serves as a basis for a variety of technical applications, e.g. proximity switches or control units.



Type	Ordering code	Min. qty.	Max. qty.	Price each			
				Min. qty. +	10 +	50 +	100 +
■ PID 20	Q63100-P20	2	100				
■ Connector for 0,22 mm ² litz wire or Ø 0,5 ... 0,6 mm solid wire	Q63100-P20-A1	2	100				
■ Connector for 0,15 mm ² litz wire or Ø 0,4 mm solid wire	Q63100-P20-A2	2	100				

Passive IR Detector PID 20

Characteristics ($T_A = 25\text{ °C}$)

Operating temperature range ¹⁾	T_A	- 20 ... + 70	°C
Rated operating voltage	V_{Rop}	5	V
Operating voltage ²⁾	V_{op}	$5 \pm 10\%$	V
Output signal ($V_{op} = V_{Rop}$) (Object area $300 \times 400\text{ mm}$, temperature difference $\pm 5\text{ °C}$ to ambient, distance 1,5 m)	ΔV_O	1,8	V
Reference voltage	V_{REF}	$\frac{V_{op} - 0,7}{2}$	V
Output voltage	V_O	$V_{REF} + \Delta V_O$	V
Input current ($V_{Rop} = 5\text{ V}$)	I_I	0,2	mA
Output impedance ($V_{Rop} = 5\text{ V}$)	Z_O	≥ 100	k Ω
Range ($T_A = 22\text{ °C}$)		approx. 7	m
Response time	τ	500	ms

Constituent parts of the detector:

Sensing element

Optics (parabolic reflector)

Amplifier circuit

Compensation detector

Case (electrical shielding)

Connector

The PID 20 comes in plug-in version. An insulation displacement connector permits solderless connection between the PID 20 and the evaluator circuit.

1) Resistance to thermal cycling in accordance with VDE 0664, part 1

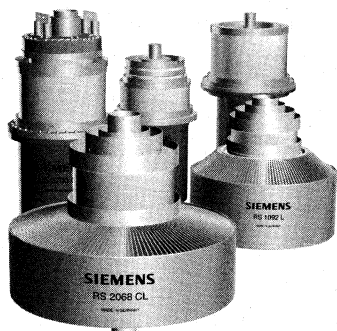
2) When the detector is line-operated, shock-hazard protection to VDE guidelines must be ensured.

SIEMENS

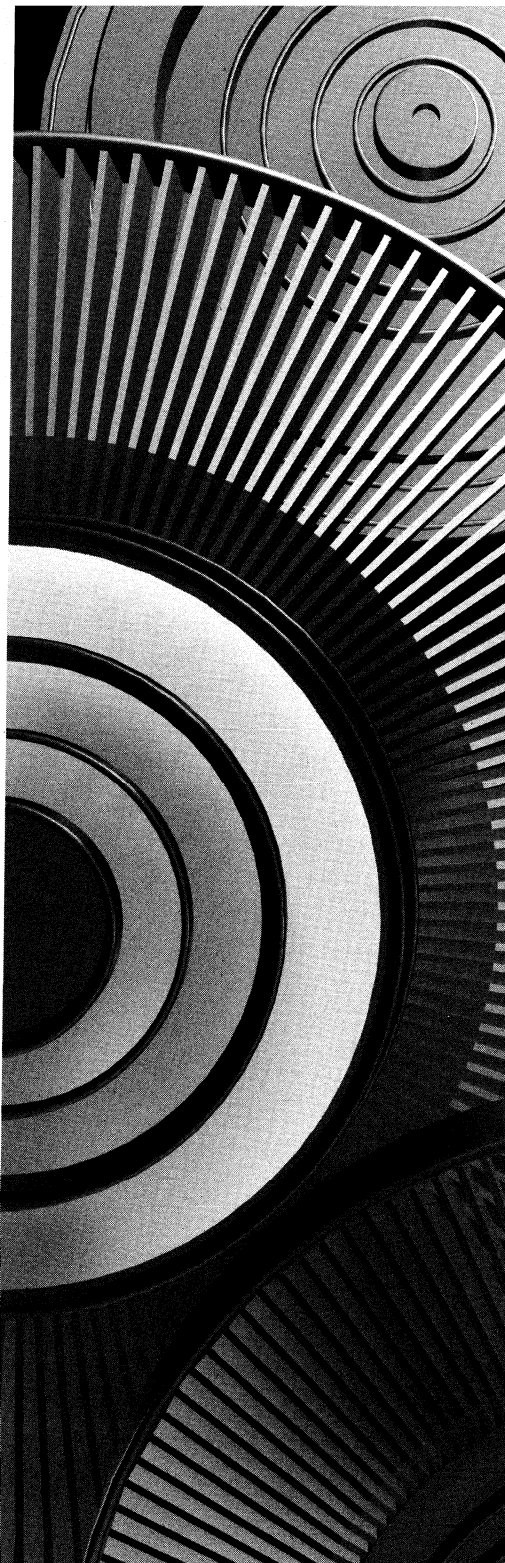
Special-purpose tubes from stock

We don't leave you tubeless

No matter what you're working on, we can supply matching transmitter and generator tubes for your very special application. Whether for high-frequency or low-frequency amplifiers, pulsing, modulation, FM and TV transmitters or industrial heating. We have the right special-purpose tubes waiting, in stock.



SCS - dependable, fast and competent



Special-Purpose Tubes

Contents	Type	Page
<hr/>		
The tubes are listed in alphanumerical order. The type of tube is identified by the first block of the ordering code.		
Power grid tubes		
Generator tubes, transmitter tubes	Q 51/Q 52/Q 53	357
Low-power grid tubes	Q 54	

Quantities exceeding the stated maximum quantities and non-SCS types will be supplied ex works. Inquire for prices and delivery schedules.

Further technical literature

Data Book "Transmitting Tubes", B5-B3530-X-X-7600
Data Book "Transmitter Tubes and Cavities for TV Applications", B442-P4211-X-X-7600
Short Form Catalog "Transmitter and Generator Tubes", B442-P4209-X-X-7400
Data Book "Generator Tubes and Accessories", B6-P4206-X-X-7600

Special-Purpose Tubes

Special-purpose tubes are preferably used in RF/AF amplifiers, for pulse operation, modulation, in VHF and TV transmitters as well as for industrial heating.

Type	Ordering code	Price each	
		1 +	5 +
RS 1002 A	Q54-X1002		
RS 1003	Q54-X1003		
RS 1006 B	Q54-X1006		
RS 1007	Q54-X1007		
RS 1016	Q54-X1016		
RS 1023 L	Q51-X1023		
RS 1026	Q54-X1026		
RS 1034 L	Q51-X1034		
RS 1034 SK	Q53-X1034		
RS 1054 L	Q51-X1054		
RS 1054 SK	Q53-X1054		
RS 1091	Q54-X1091		
RS 2024 CL	Q51-X2024		
RS 2032 CL	Q51-X2032		
RS 3005 CJ	Q52-X3005		
RS 3005 CL	Q51-X3005		
RS 3010 CJ	Q52-X3010		
RS 3010 CL	Q51-X3010		
RS 3021 CJ	Q52-X3021		
RS 3026 CJ	Q52-X3026		
RS 3026 CL	Q51-X3026		
RS 3040 CJ	Q52-X3040		
RS 3040 CL	Q51-X3040		
RS 3060 CJ	Q52-X3060		
RS 3060 CL	Q51-X3060		
RS 3150 CJ	Q52-X3150		
RS 3300 CJ	Q52-X3300		



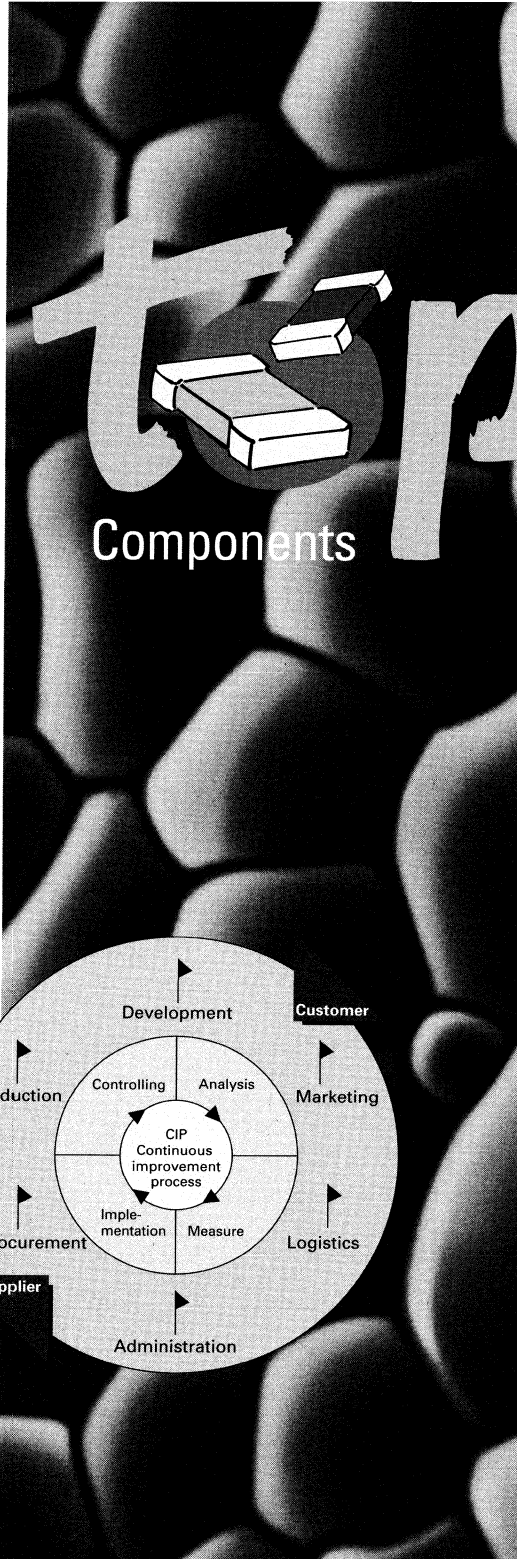


Siemens Matsushita Components

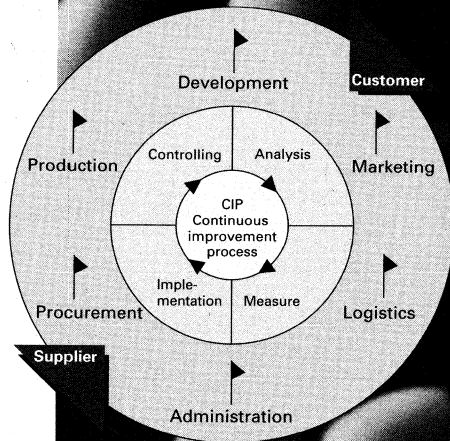
Quality without compromises

top with TQM

We're not satisfied until you are. So our quality demands are quite tough. And they don't start in production, they span the whole field from development to despatch. To watch over it all we implemented Total Quality Management, a system aimed at continuous improvement – in everything. That includes true-to-schedule delivery and service readiness, ISO 9000 for all plants, modern QA, commitment to the environment in manufacturing, materials and packing plus constant training of employees. All embedded in *top*, the worldwide quality campaign of the Siemens organization.



Components



More about "top with TQM" in this brochure!

SCS – dependable, fast and competent

Survey

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