

**AUTOMOTIVE TRANSIENT SUPPRESSORS  
IGNITION PROTECTION**

Type	$I_{RM}$ @ $V_{RM}$ max		$V_{BR}^*$ (V) @ $T_j = 25^\circ\text{C}$		$V_{BR}$ (V) @ $I_R$ @ $T_j = 120^\circ\text{C}$		$\alpha T$ typ.	$I_{ZM}$	Package	
	( $\mu\text{A}$ )	(V)	min	max	min	max	(mA)	( $10^{-4}/^\circ\text{C}$ )		(mA)
PL 360 D	0.35	270	330	370	358	416	2	11	3.5	F126 PLASTIC

\* Pulse test  $t_p \leq 50 \text{ ms}$   $\delta < 2\%$

**DECENTRALIZED PROTECTION**

Type	$I_{RM}$ @ $V_{RM}$ max			$V_{BR}^*$ @ $I_R$ $T_c = 25^\circ\text{C}$ LOAD DUMP			$V_{CL}$ @ $I_{PP}$ $T_c = 25^\circ\text{C}$		$\alpha T$ max ( $10^{-4}/^\circ\text{C}$ )	C Typ $V_R = 0\text{V}$ $F = 1\text{MHz}$ (nF)	Package
	$T_c = 25^\circ\text{C}$ ( $\mu\text{A}$ )	$T_c = 85^\circ\text{C}$ ( $\mu\text{A}$ )	(V)	min (V)	max (V)	(mA)	max (V)	(A)			
LDP24AS	50	300	24	25	32	1	38	40	9.6	8	AG SOP10 (PowerSO-10) TO-220AB (Plastic) TO-220AB SOP10 (PowerSO-10)
▲ LDP24M	50	300	24	25	32	1	38	30		8	
RBO08-40T	10	100	20	24	32	1	40	37.5†		2	
RBO40-40T	10	100	20	24	32	1	40	20		7	
▲ RBO40-40M	10	100	20	24	32	1	40	20		8	

▲ New Product.

\* Pulse test  $t_p \leq 50 \text{ ms}$   $\delta < 2\%$

† T = 1ms

Use "RL" suffix for tape and reel packaging.



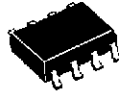
CB429



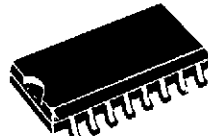
SMB



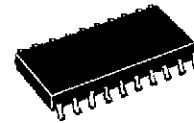
SMC



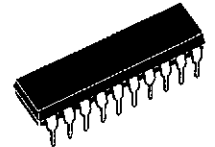
SO8



SO16



SO20



DIL20

**COMPUTER TRANSIENT SUPPRESSORS**  
3V & 5V & 12V SUPPLY PROTECTION

Type	$I_{RM} @ V_{RM}$		$V_{BR}^* @ I_R$		$V_{CL} @ I_{PP}$ 1 ms expo max		$V_{CL} @ I_{PP}$ 1 ms expo max		$V_{CL} @ I_{PP}$ 1 ms expo max		$\alpha T$ max ( $10^{-4}/^{\circ}C$ )	Package
	max		min									
Unidirectional	( $\mu A$ )	(V)	(V)	(mA)	(V)	(A)	(V)	(A)	(V)	(A)		

1.5 KW/1 ms expo.

$I_{FSM} = 250 A - 10 ms$

1N5908	300	5	6	1	7.6	30	8.0	60	8.5	120	5.7	CB429 PLASTIC
SM5908	300	5	6	1	7.6	30	8.0	60	8.5	120	5.7	SMC PLASTIC

600W @ 1 ms

$I_{FSM} = 50 A - 10 ms$

SMLVT3V3	200	3.3	4.1	1	7.3	50	7.3	50	10.3	200	-	SMB
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\* Pulse test  $t_p \leq 50 ms$   $\delta < 2\%$ .

For axial use "RL" suffix for tape and reel packaging.

For SOD15, standard packaging is in film.

Type	Max ratings		$I_{RM} @ V_{RM}$		$V_{BR}^* @ I_R$		$V_{CL} @ I_{PP}$		Package
	$I_{PP}$ 8-20 $\mu s$ (2)		max		min		8-20 $\mu s$ expo max		
			(A)	( $\mu A$ )	(V)	(V)	(mA)	(V)	
DDP6V8	12		5	5 and 12	6.8 and 13.6	1	10 and 20	3	SO8

**RCD NETWORK FOR BUS TERMINATION**

Type	R		C		D					Package
					$I_R @ V_{RRM} = 7.5 V$		$V_F$		$C_d$ @ $V_{bias} = 0V$	
	@ 25°C	@ 70°C	@ 1mA	@ 16mA	@ $V_{bias} = 0V$					
	min	max	min	max	max	max	max	max	max	
	$\Omega$	$\Omega$	pF	pF	$\mu A$	$\mu A$	V	V	pF	
RCD16-47B6	42	52	29	37	1	10	0.5	1	8	SSOP20

**COMPUTER TRANSIENT SUPPRESSORS (Cont'd)**

**TRANSIL ARRAYS FOR DATA LINE INTERFACE PROTECTION  
PROTECTION AGAINST ELECTRICAL OVERSTRESS (EOS)**

Function	Type	Max ratings		I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> * @ I <sub>R</sub>		V <sub>CL</sub> @ I <sub>PP</sub>		Package
		I <sub>PP</sub> 8-20 μs (2)		max		min		8-20 μs expo max		
		(A)	(μA)	(V)	(V)	(mA)	(V)	(A)		
4 Bidirectional Transils	ITA6V5B1 (1)	40	50	5	6.5	1	10	10	SO8 PLASTIC	
	ITA10B1 (1)	40	10	8	10	1	15	10		
	ITA18B1 (1)	40	4	15	18	1	25	10		
	ITA25B1 (1)	40	4	24	25	1	33	10		
8 Bidirectional Transils	ITA6V5B3	40	50	5	6.5	1	9.5	10	SO20 PLASTIC	
	ITA10B3 (1)	40	10	8	10	1	13	10		
	ITA18B3	40	4	15	18	1	23	10		
	ITA25B3 (1)	40	4	24	25	1	31	10		
6 Unidirectional Transils	ITA6V1U1	40	50	5	6.1	1	10	10	SO8 PLASTIC	

\* Pulse test t<sub>p</sub> ≤ 50 ms δ < 2%.

(1) When used on positive & negative data line signal (+/- V<sub>IN</sub>), V<sub>BR</sub> must be greater than 2 x +/- V<sub>IN</sub>.

(2) MIL STD 883C – Method 3015-2.

Standard packaging in tube.

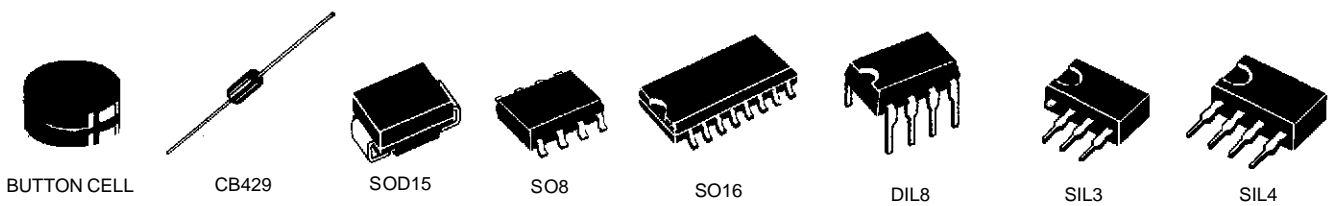
**TRANSIL ARRAYS FOR DATA LINE INTERFACE PROTECTION  
PROTECTION AGAINST ELECTROSTATIC DISCHARGE (ESD)**

Function	Type	I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> @ I <sub>R</sub>			R <sub>d</sub>	C1 @ Ø V	C2 @ V <sub>RM</sub>	Package
				min	max					
		(μA)	(V)	(V)	(V)	(mA)				
6 Bidirectional Transils	ESDA25B1	2	24	25	30	1	1.5	15	9	SO8 PLASTIC
18 Bidirectional Transils	ESDA25DB3	2	24	25	30	1	0.5	50	30	SO20 PLASTIC
6 Unidirectional Transils	ESDA6V1U1	2	5	6.1	7.2	1	0.5	100	50	SO8 PLASTIC
18 Unidirectional Transils	ESDA6V1S3	2	5	6.1	7.2	1	0.5	120	60	SO20 PLASTIC
▲ 18 Unidirectional Transils	ESDA6V1S6	2	5	6.1	7.2	1	0.5	120	60	SSOP20

**HIGH SPEED LINES PROTECTION**

Function	Type	V <sub>RRM</sub>	I <sub>PP</sub> T <sub>a</sub> = 25°C 8/20μs	P <sub>tot</sub> T <sub>a</sub> = 70°C	I <sub>R</sub> @ V <sub>R</sub> = 15V max T <sub>a</sub> = 25°C		V <sub>F</sub> @ I <sub>F</sub> max		V <sub>ip</sub> @ I <sub>PP</sub> 8/20μs		Package
		(V)	(A)	(W)	(μA)	(μA)	(V)	(mA)	(V)	(A)	
8 diodes	DA108S1	18	12	0.73	2		1.2	50	9	12	SO8
12 diodes	DA112S1	18	12	0.73	2		1.2	50	9	12	SO8

▲ New Products


**TELECOM TRANSIENT SUPPRESSORS**  
**TERMINAL PROTECTION**

Type	$I_{RM} @ V_{RM}$		$V_{BR} @ I_R$ (1)		$V_{BO} @ I_{BO}$ (1)			$I_H$ min	$V_T$ $I_T=1A$ typ	Package
	max		min		max					
	( $\mu A$ )	(V)	(V)	(mA)	(V)	min	max	(mA)	(V)	
L3100B	6 40	60 250	265	1	350	200	500	280	2	DIL8 PLASTIC
L3100B1	6 40	60 250	255	1	350	200	500	210	2	
TPP25011	6	60	250	1	340	15	200	180	2.5	SO8 PLASTIC
TPP25012	6	60	250	1	340	15	200	180	2.5	DIL8 PLASTIC
TSI120B5	1 5	50 120	–	–	180	50	400	150	3	SO16 PLASTIC
TSI150B5	1 5	50 150	–	–	230	50	400	150	3	SO16 PLASTIC
TSI180B5	1 5	50 180	–	–	250	50	400	150	3	SO16 PLASTIC
TSI200B5	1 5	50 200	–	–	290	50	400	150	3	SO16 PLASTIC
TSI270B5	1 5	50 270	–	–	380	50	400	150	3	SO16 PLASTIC
TSI62B5	1 5	50 62	–	–	90	50	400	150	3	SO16 PLASTIC

(1) Without any gate reference - Gate open.  
 Standard packaging in tube.

## RING RELAY PROTECTION

Type	I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> @ I <sub>R</sub> (1)		V <sub>BO</sub> @ I <sub>BO</sub>			I <sub>PP</sub> (1)	I <sub>H</sub>	Package
	max		max		max				min	
	(μA)	(V)	(V)	(mA)	(V)	min	max	(V)	(mA)	
THBT15011D THBT20011DA THBT27011	5	135	150	1	210	50	400	30	150	SO8
	5	180	200	1	290	–	400	30	150	
	5	240	270	1	380	50	400	30	150	
THBT15012D THBT20012DA THBT27012	5	135	150	1	210	50	400	30	150	DIL8
	5	180	200	1	290	–	400	30	150	
	5	240	270	1	380	50	400	30	150	
THBT200S THBT200SD	10	180	200	1	290	150	800	75	150	SIL3
	5	180	200	1	290	50	400	75	150	

(1) At 10-1000μs.

For SO8, DIL8 and SIL3 standard packaging is in tube.

For SOD15 standard packaging is in film.

## SLIC PROTECTION - FIXED BREAKDOWN VOLTAGE

Type	I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> @ I <sub>R</sub>		V <sub>BO</sub> @ I <sub>BO</sub>			I <sub>PP</sub> (2)	I <sub>H</sub>	Package
	max		min		max			max	min	
	(μA)	(V)	(V)	(mA)	(V)	min	max	(A)	(mA)	
THDT6511	10	56	65	1	85	50	500	30	150	SO8
THDT6512	10	56	65	1	85	50	500	30	150	DIL8
THDT58S	10	56	58	1	80	150	800	75	150	SIP3
SMTHDT58 (1)	10	56	58	1	80	150	800	75	150	SMC
SMTHD80	10	68	80	1	120	150	800	75	150	SMC
SMDT120	10	102	120	1	180	150	800	75	150	SMC

(1) Single function.

(2) At 10-1000μs.

## SLIC PROTECTION PROGRAMMABLE BREAKDOWN VOLTAGE

Type	Max operating voltage	I <sub>RM</sub> @ V <sub>RM</sub> (1) max		V <sub>DGL</sub> * (2) max	I <sub>PP</sub> (3) max	I <sub>H</sub> min	Package
	(V)	(μA)	(V)	(V)	(A)	(mA)	
LCP3121	80	10	85	-	100	150	SO8
LCP150S	80	10	75	15	50	150	SIP4
LCP1511	80	5	75	10	30	150	SO8
LCP1512D	80	5	75	10	30	150	SO8

1) V<sub>GATE/LINE</sub> = -1V2) At 10-700μs I<sub>PP</sub> = 30A V<sub>GATE</sub> = -48V

3) At 10-1000μs

## ISDN PROTECTION

Types	I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> @ I <sub>R</sub>		V <sub>BO</sub> @ I <sub>BO</sub>		I <sub>H</sub>	V <sub>T</sub>	Package
	max		min		max	max	min	max	
	( $\mu$ A)	(V)	(V)	(mA)	(V)	mA	(mA)	(V)	
TPU58	10	56	58	1	80	800	150	5	CB429
TPU80	10	68	80	1	120	800	150	5	
TPU120	10	102	120	1	180	800	150	5	
SMTHDT58	10	56	58	1	80	800	150	5	SOD15
SMTHDT80	10	68	80	1	120	800	150	5	
SMTHDT120	10	102	120	1	180	800	150	5	
SMDT65	10	56	65	1	90	600	150	4	SOD6
SMDT80	10	68	80	1	120	600	150	4	
SMDT120	10	102	120	1	160	600	150	4	
TPI80xxN	10	70	80	1	120	800	150	8	SO8/DIL8
TPI120xxN	10	105	120	1	180	800	150	8	
▲TPN3021	4	28	–	–	30	100	30	4	SO8

▲ New Products