



THIN FILM CHIP RESISTORS



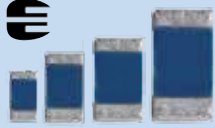
Vishay Beyschlag

FEATURES


- Four industry standard sizes: 0402, 0603, 0805, and 1206
- CECC approved
- AEC-Q200 qualified
- TCR down to ± 10 ppm/K
- Tight tolerance down to ± 0.1 %
- Operating temperature performance from -55 °C to $+175$ °C
- Wide resistance range from 0.1Ω to $130 \text{ M}\Omega$; 0Ω jumper
- Excellent load life stability down to 0.1 %
- Low current noise



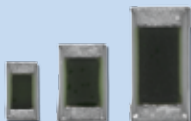


THIN FILM CHIP RESISTORS

Product	Model	Power (W)	Resistance Range	Temperature Coefficient (ppm/K)	Tolerance (%)
Professional Chip 	MCS 0402	0.1	10 Ω to 4.99 MΩ; 0 Ω	± 25/± 50	± 0.5/± 1
	MCT 0603	0.125	1 Ω to 10 MΩ; 0 Ω		
	MCU 0805	0.2	1 Ω to 10 MΩ; 0 Ω		
	MCA 1206	0.4	1 Ω to 2 MΩ; 0 Ω		
Precision Chip 	MCS 0402	0.063	100 Ω to 221 kΩ	± 10/± 15/± 25	± 0.1/± 0.25
	MCT 0603	0.1	39 Ω to 511 kΩ		
	MCU 0805	0.125	39 Ω to 1.5 MΩ		
	MCA 1206	0.25	39 Ω to 2 MΩ		
Established Reliability Chip¹ 	MCS 0402 VG01	0.063	10 Ω to 1 MΩ; 0 Ω	± 15/± 50	± 0.1/± 1
	MCT 0603 VG01	0.1	1 Ω to 1 MΩ; 0 Ω		
	MCU 0805 VG01	0.125	1 Ω to 1 MΩ; 0 Ω		
	MCA 1206 VG01	0.25	1 Ω to 1 MΩ; 0 Ω		
AT Professional Chip <small>AEC-Q200 Qualified</small> 	MCS 0402 AT	0.1	47 Ω to 47 kΩ; 0 Ω	± 25/± 50	± 0.5/± 1
	MCT 0603 AT	0.15	47 Ω to 100 kΩ; 0 Ω		
	MCU 0805 AT	0.2	47 Ω to 100 kΩ; 0 Ω		
	MCA 1206 AT	0.4	47 Ω to 100 kΩ; 0 Ω		
AT Precision Chip <small>AEC-Q200 Qualified</small> 	MCS 0402 AT	0.1	47 Ω to 47 kΩ	± 15/± 25	± 0.1
	MCT 0603 AT	0.125	47 Ω to 100 kΩ		
	MCU 0805 AT	0.2	47 Ω to 100 kΩ		
	MCA 1206 AT	0.4	47 Ω to 100 kΩ		

¹Established failure rate level E6, corresponding to MIL Level P.

 Approval within the IECQ-CECC Quality Assessment System for Electronic Components. The CECC approval ensures that the resistors meet a set of demanding and sophisticated short-term and long-term performance requirements as defined by EN 140401-801. Compliance with these requirements is verified through periodic audits by accredited certification bodies.

Product	Model	Power (W)	Resistance Range	Temperature Coefficient (ppm/K)	Tolerance (%)
High-Ohmic Chip Cermet Technology 	OCT 0603 OCU 0805	Limited by U_{max}	11 M Ω to 130 M Ω	$\pm 100/\pm 250$	± 5
Low-Ohmic Chip Cermet Technology 	NCT 0603 NCU 0805	0.1 0.125	0.1 Ω to 0.91 Ω 0.1 Ω to 0.91 Ω	± 100	± 5
Trimmable Chip Cermet Technology 	TCT 0603 TCU 0805 TCA 1206	0.1 0.125 0.25	10 Ω to 1 M Ω	$\pm 50/\pm 100$ $\pm 50/\pm 100$ ± 100	+ 0/- 10; + 0/- 20; + 0/- 30 + 0/- 10; + 0/- 20; + 0/- 30 + 0/- 20

Applications

Telecommunications:

- Base stations
- Cell phones
- Microwave radio links
- Subscriber line cards
- Switching
- Transmission systems

Automotive:

- ABS and traction
- Analog circuits
- Car and body electronics
- Climate control
- Comfort electronics
- Driver assistance
- Electronic gear boxes
- Engine management
- Lighting
- Motor drives
- Passenger safety
- Signal conditioning
- Suspension control
- X by wire systems

Industrial:

- Building control systems
- Embedded systems
- Lighting
- Oscillators
- Power converters
- Power meters
- Power supplies
- Programmable controllers
- Safety switches
- Sensors
- Signal conditioning

Measurement:

- Analog circuits
- Calibrating systems
- Measurement equipment
- Measuring transducers
- Precision scales
- RF amplifiers
- Signal conditioning

Medical:

- Critical care
- Hearing aids
- Home care
- Monitoring systems

Aircraft:

- Engine management
- Flight controls
- Fly by wire systems
- Positioning systems
- Sensors
- Signal conditioning

Consumer:

- Camcorders
- Home entertainment
- Laptops
- Personal computers

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