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(RGM) Anti-Surge Pulse Load Melf Resistors

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Product Introduction

Pulse Load MELF Resistor (RGM) provides maximum thermal compliance.

Features :

- Tolerance range: ±0.5% to ±10%; Resistance range: 10K Ω ~ 1G Ω.
- High pulse handling capability. DIN: 0207, 0309, 0411.
- Temperature coefficient: ±100ppm/℃, ±200ppm/℃.
- Combine high resistance range with high voltage.
- Power dissipation rating at 70℃ up to 3W.
- Speciality metal glaze film technology.
- Lead (Pb)-free and RoHS compliant.

Applications :

- Power Supply (SMPS): Voltage Divider, Isolation, PFC control, Mains Protection and Discharge Path Resistor.
- CTV, CRT Monitor: Isolation Resistor, Mains Protection, Discharge Path Resistor and Power Factor Control (PFC).
- Test & Measurement: Voltage Divider and Surge Protection.
- Home Appliances: Control Module for Surge Protection.
- Electronic Ballast: Ignition, Switching Spark Circuit.



Providing design engineers with a family of resistors designed specifically for surge and pulse applications, Token Electronics' family of power MELF resistors feature extended performance capability with ratings up to 3W.

Consisting of the RGM16M, RGM17M, RGM18M, and RGM74 Series resistors, the devices in the power MELF family all use Token's Metal Glaze resistive element on ceramic substrates. The RGM Anti-Surge Melf Series feature metal caps fitted on the terminals of the cylindrical resistor body to give the devices exceptional thermal compliance.

The resistors in the power MELF family provide excellent thermal compliance as well as a variety of surge capabilities. The rugged RGM18M Series resistors are rated up to 3W and provide maximum thermal compliance, while the RGM74 Series resistors offer as much as three times the surge rating of standard resistors, which equates to up to 10 times the surge rating of similar-sized flat thick film chip resistors. The range of capabilities allows customers to select the best device to provide stable performance in harsh environment applications.

The Metal Glaze thick film element on the RGM Series devices is fired at 1000℃ to a solid ceramic substrate. The resistors feature power ratings of 0.5W, 1W, 2W and 3W at 70℃. Resistance values range from 10kΩ ~ 1GΩ with standard tolerance to ±0.5%, maximum voltage of up to 6000V and TCRs ±100ppm/℃. Maximum operating temperature for the resistors is +125℃.

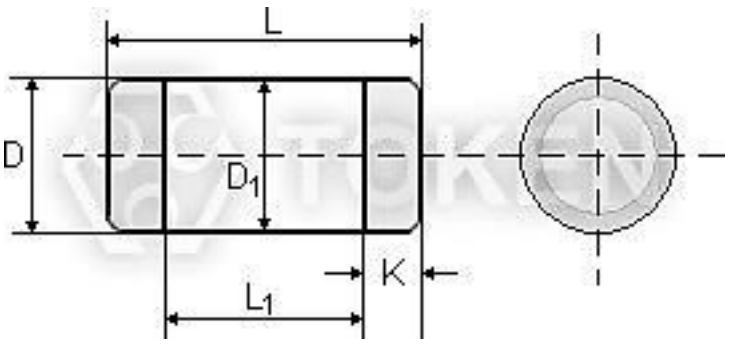
The RGM MELF Series is a perfect fit when an anti-surge resistor is required. Other major applications of RGM resistors are: AC mains protection, isolation between primary/secondary circuits in TVs, voltage dividers, ignition/switching circuit in electronic ballasts.

Token will also produce MELF devices outside these specifications to meet customer requirements. Contact us with your specific needs. Please link to Token official website "Melf Resistors" for more information.

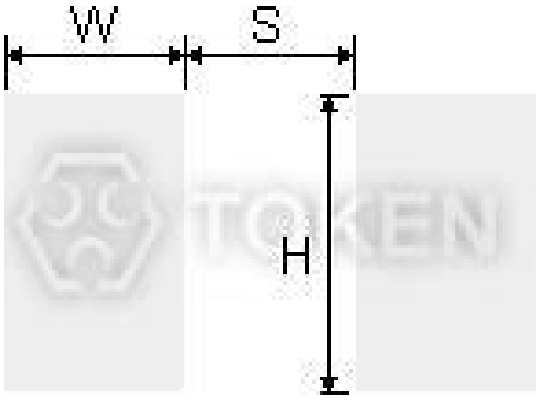
Dimensions

Dimensions & Recommended Soldering Bath Dimensions (RGM)

Type		RGM74	RGM16M	RGM17M	RGM18M
DIN type		DIN: 0207	DIN: 0207	DIN: 0309	DIN: 0411
Dimension Max (±0.3 mm)	L	5.7	6.1	8.7	11
	L1	3.5	3.9	6.2	8.8
	D	2.1	2.1	3.1	3.9
	K	0.6	0.8	1.0	1.3
	D1	D+0/D-0.5	D+0/D-0.5	D+0/D-0.5	D+0/D-0.5
Recommended Soldering Bath Dimension (Unit: mm)	S	3.3	3.5	5.6	7.2
	W	3.2	4.0	5.0	7.0
	H	3.2	4.5	5.0	5.0



Pulse Load MELF (RGM) Dimensions



Recommended Soldering Bath (RGM) Dimensions

Characteristics

Characteristics (RGM)

Type	RGM74	RGM16M	RGM17M	RGM18M
DIN type	DIN: 0207	DIN: 0207	DIN: 0309	DIN: 0411
Resistance range (Ω)	10k ~ 1G	10k ~ 1G	10k ~ 1G	10k ~ 1G
Resistance Tolerance	D(±0.5%); F(±1%); J(±5.0%); K(±10%)			
Temperature coefficient	±100ppm/℃; ±200ppm/℃			
Rated dissipation (W) P70	0.50	1.0	2.0	3.0
Operating voltage (V) U_{max}	1600	1600	2000	3000
Short time over load voltage (V)	3200	3200	4000	6000
Operating Temperature range	-55℃ ~ 125℃			
Endurance, Max, resistance change at P70, ΔR/R max., after 1000h	10KΩ ~ 1MΩ	10KΩ ~ 1MΩ	10KΩ ~ 1MΩ	10KΩ ~ 1MΩ
	≤1.50%			
Insulation voltage	>500V			
Insulation resistance	>1GΩ			

Order Codes

Order Codes (RGM)

RGM16M	510K	J	TR

Part Number	Resistance Value (Ω)		Resistance Tolerance (%)		Package	
RGM74	51K	51KΩ	D	±0.5%	P	Bulk
RGM16M	510K	510KΩ	F	±1.0%	TR	Taping Reel
RGM17M	5M1	5.1MΩ	J	±5.0%		
RGM18M	51M	51MΩ	K	±10%		
	510M	510MΩ				

General Information

Token MELF Offers Designer a Greater Choice

Token Electronics is now offering the complete range of MELF products, comprising DIN-0411, DIN-0309, DIN-0207, DIN-0204 and DIN-0102. This high stability, close-tolerance MELF resistors have a footprint very close to comparable chip resistors but maintain their tolerance and deliver higher stability over a wider temperature range.

Where applications require even tighter tolerance, Token offer Ultra Precision range in the RJM package, with values from 0.1Ω ~ 22MΩ, tolerance from ±5% down to as low as ±0.05% and TC from ±50ppm/℃ to ±5ppm/℃.

For high pulse load and high-frequency applications, Token Electronics offer specialized MELF resistor. The high pulse load resistors are metal glaze film RGM, available in values from 50KΩ ~ 22MΩ and ±0.5% precision tolerance, for 0.125 W ~ 3W applications.

High-frequency RFM resistors are available for RF microwave applications where impedance change due to the parasitic inductance of regular resistors is not acceptable.

Chip Resistor Alternatives

In very low resistance values, between 0.1Ω and 475Ω, not usually offered by conventional chip resistors, these are available in RJM72P 0102, RJM73P 0204, RJM74P 0207 and standard RJM18M 0411 MELF precision packages.

All MELF-type resistors are available on blister tape for automated placement and maintain their high stability, high precision characteristics when exposed to soldering temperatures and operating stresses including moisture, vibration, humidity and temperature variation within the specified range.

This makes them suitable for a wide range of applications, from laboratory and prototyping work to installation in hostile environments such as airframe or under-bonnet areas, exposed parts of vehicles, or other places where electronic sensing and controls must be installed.