

Metal Glaze Film Pulse Load Melf Resistors

Pulse Load MELF (RGM) Provides Maximum Thermal Compliance

► Preview

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, RGM72, RGM73 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 RGM72 and RGM73 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°C to a solid ceramic substrate. The resistors feature power ratings of 0.125W, 0.25W, 0.5W, 1W, 2W and 3W at 70°C. Resistance values range from 50kΩ ~ 2GΩ with standard tolerance to ±0.5%, maximum voltage of up to 10000V and TCRs ±100ppm/°C. Maximum operating temperature for the resistors is +155°C.

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.

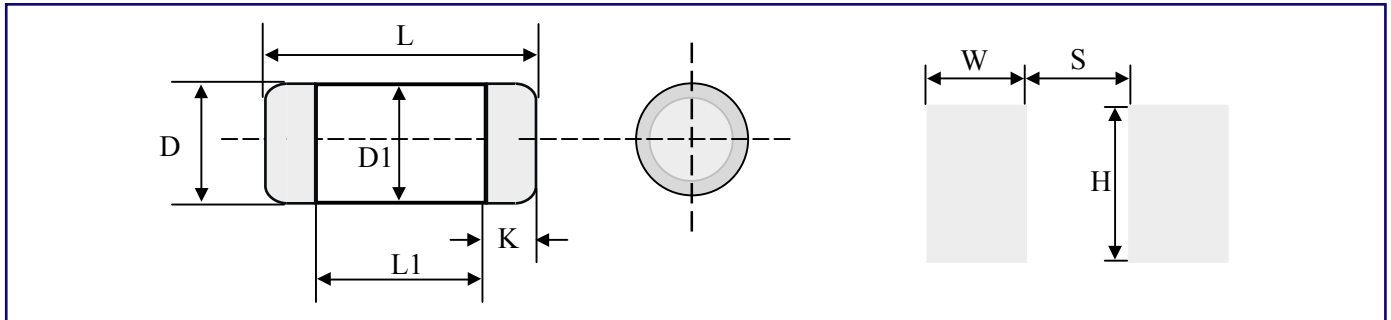
► Applications :

- Lead (Pb)-free and RoHS compliant.
- Speciality metal glaze film technology.
- Power dissipation rating at 70°C up to 3W.
- Combine high resistance range with high voltage.
- Temperature coefficient: ±100ppm/°C, ±200ppm/°C.
- High pulse handling capability. DIN: 0207, 0411, 0617, 0823.
- Tolerance range: ±0.5% to ±10%; Resistance range: 50K Ω ~ 2G Ω.

► Applications :

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

► Dimensions & Recommended Soldering Bath Dimensions



Type		RGM72	RGM73	RGM74	RGM16M	RGM17M	RGM18M
Dimension Max.(mm)	L	2.2	3.5	5.5	5.9	8.6	11.6
	L1	1.0	1.6	3.5	3.9	6.2	8.8
	D	1.3	1.3	2.1	2.1	3.1	3.6
	K	0.4	0.8	1.0	1.2	1.5	1.6
	D1	D+0/D-0.15	D+0/D-0.25	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	1.0	1.6	2.6	2.8	5.6	8.2
	W	2.0	2.5	2.5	2.8	3.2	4.0
	H	2.0	2.5	2.5	2.8	3.8	4.5

► Characteristics

Type	RGM72	RGM73	RGM74	RGM16M	RGM17M	RGM18M
Resistance range (Ω)	50k ~ 200M	50k ~ 200M	50k ~ 1G	50k ~ 1G	100k ~ 2G	50k ~ 2G
Resistance Tolerance	D($\pm 0.5\%$); F($\pm 1\%$); J($\pm 5.0\%$); K($\pm 10\%$)					
Temperature coefficient	$\pm 100\text{ppm}/^\circ\text{C}$; $\pm 200\text{ppm}/^\circ\text{C}$					
Rated dissipation (W) P_{70}	0.125	0.25	0.50	1.0	2.0	3.0
Operating voltage (V) U_{max}	400	800	1500	3000	6000	10000
Short time over load voltage (V)	800	1500	3000	6000	10000	20000
Operating Temperature range	$-55^\circ\text{C} \sim 155^\circ\text{C}$					
Endurance, Max, resistance change at P_{70} $\Delta R/R$ max., after 1000h	50k Ω ~ 10M Ω	50k Ω ~ 10M Ω	50k Ω ~ 22M Ω	50k Ω ~ 22M Ω	50k Ω ~ 22M Ω	50k Ω ~ 22M Ω
	$\leq 1.50\%$					
Insulation voltage	$> 500\text{V}$					
Insulation resistance	$> 1\text{G}\Omega$					

▶ How to Order

RGM16M

❶

510K

❷

J

❸

TR

❹

❶ Product type: RGM72, RGM73, RGM74, RGM16M, RGM17M, RGM18M

❷ Resistance Value:

Code	Resistance Value
51K	51K Ω
510K	510K Ω
5M1	5.1M Ω
51M	51M Ω
510M	510M Ω

❸ Resistance Tolerance (%)

Code	Resistance Tolerance
D	$\pm 0.5\%$
F	$\pm 1\%$
J	$\pm 5.0\%$
K	$\pm 10\%$

❹ Packaging

Code	Packaging
T	Taping Reel
P	Bulk

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