

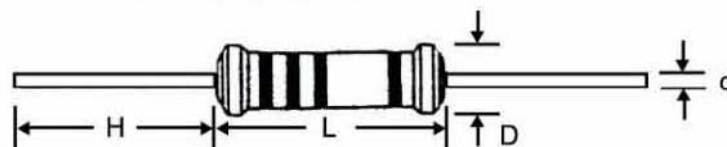


MGR, MGRS

LEADFREE  
RoHS Compliant

### Features

- Excellent anti-surge characteristics
- Suitable for high voltage and high impedance applications
- Stable characteristics of Moisture Resistance
- Standard coating - epoxy, silicon, flameproof coating on request
- Operating temperature range -55°C ~ +175°C



### General Specification

Style		Dimensions				Max Permissible Voltage	Max Impulse Voltage	Resistance Range
MGRS	MGR	L	D	d	H(±2.0mm)	V	V	
1/2W	1/4W	6.5 ± 0.5	2.3 ± 0.2	0.55 ± 0.05	28	1600	3000	1K - 10G
1W	1/2W	9.0 ± 1.0	3.2 ± 0.5	0.70 ± 0.05	26	3500	10000	1K - 10G
2W	1W	11.5 ± 1.0	4.5 ± 0.5	0.78 ± 0.03	35	5000	10000	1K - 10G
3W	2W	15.5 ± 1.0	5.5 ± 0.5	0.78 ± 0.03	32	7500	10000	1K - 10G
5W	3W	17.5 ± 1.0	6.0 ± 0.5	0.78 ± 0.03	35	12000	16000	1K - 10G

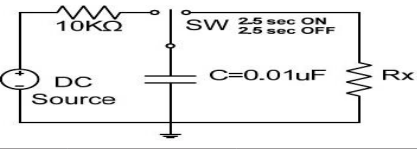
Standard tolerance 5%, ≥ 1G 10%.

**\*Special resistance and tolerances are available upon request.**

### Part Numbering System

MGR	<u>2</u>	<u>5%</u>	<u>200M</u>	<u>T/R</u>	<u>FC</u>																																																				
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### Electrical Characteristics

Characteristics	Specification	Test Method								
Temperature coefficient.	$< 1G \leq \pm 200 \times 10^{-6}/K$ $> 1G \leq \pm 500 \times 10^{-6}/K$	MIL-STD-202 method 304								
Dielectric withstanding voltage of the insulation for 1 min.	1/4 upward 400V~1000V	260°C ± 5°C, 2S ± 1S								
Resistance to soldering heat.	ΔR within ±1%	MIL-STD-202 method 201 350°C, 3 ± 0.5 sec								
Terminal strength.	Leads are not broken or loosened	MIL-STD-202 method 211								
Solderability.	At least 95% coverage	MIL-STD-202 method 218 235°C, 5 sec								
Short time overload.	ΔR within ±1%	MIL-10509 para 4.6.6, 2.5 times rated working voltage								
Humidity.	ΔR within ±2%	MIL-STD-202 method 103, 40°C, 90% RH 1000 hours								
Impulse test.	ΔR within ±2%	MIL-R-10509 para 4.6.5								
Load life.	ΔR within ±3%	MIL-STD-202 method 108, rated working volatge 1 1/2 hours on, 1/2 hours off, 1000 hours								
Resistance to solvent.	Color band legible, no mechanical damage	MIL-STD-202 method 215								
Anti Surge Characteristics	Discharge test: 0.01μF capacitors discharge Pulse 10 times. (1 pulse / 5 sec. max) 									
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	Voltage	3KV		1K ≤ R < 10K ; 5KV		10KV		15KV		
		10K ≤ R < 100K ; 7KV								
		100K ≤ R ; 10KV								

### Derating Curve

