

# Metal Glaze Resistors

# MG Series

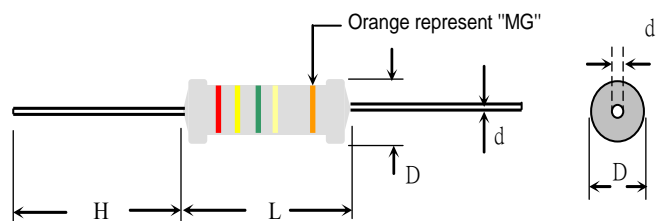
## Feature

- Superior performance against environmental condition and overload.
- Standard value: 100K-33Meg in E24 series
- Standard tolerance:  $\pm 5\%$ , ( $\pm 1\%$  available)
- Flameproof body coating
- Identify "MG" by the fifth Orange color band
- Operating Temperature :  $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$
- Color band marking, but yellow and grey color are used to substitute gold and silver because of high voltage properties in metal lacquer

## Material

Element: super glaze glazed film  
 Core: High purity ceramic  $\text{Al}_2\text{O}_3$   
 Termination: Standard solder-plated copper lead  
 Body Coating: silicone, grey color

## Dimension



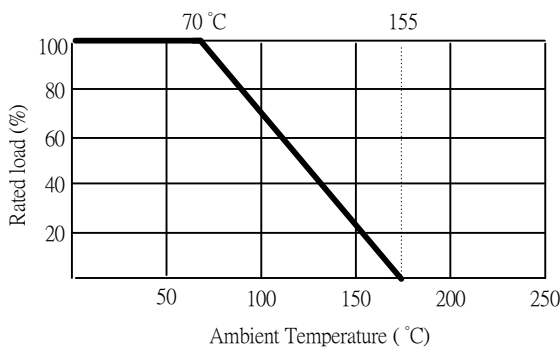
## General Specification

TYPE	DIMENSION(mm)				POWER RATING	MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD VOLTAGE	RESISTANCE RANGE $\pm 1\%$
	L	D	H	$d \pm 0.05$				
MG025	6.0 $\pm$ 0.5	2.3 $\pm$ 0.3	27 $\pm$ 3.0	0.60	1/4W	1000V	1500V	100K $\Omega$ ~ 33M $\Omega$
MG050	9.0 $\pm$ 0.5	3.0 $\pm$ 0.5	27 $\pm$ 3.0	0.70	1/2W	1000V	1500V	100K $\Omega$ ~ 33M $\Omega$
MG100	11 $\pm$ 1.0	4.0 $\pm$ 0.5	33 $\pm$ 3.0	0.80	1W	1000V	1500V	100K $\Omega$ ~ 33M $\Omega$
MG200	15 $\pm$ 1.0	5.0 $\pm$ 0.5	33 $\pm$ 3.0	0.80	2W	1000V	1500V	100K $\Omega$ ~ 33M $\Omega$

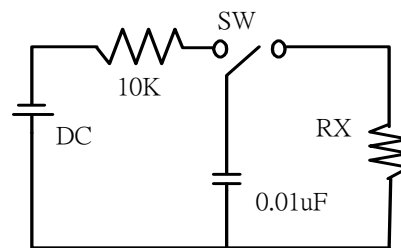
\* Maximum Working Voltage determined by  $E = \sqrt{P \cdot R}$ , where E should not exceed value listed in column above.

\*\*Maximum Overload Voltage equals to 2.5XE, but should not exceed value listed in column above.

## Derating Curve



## Surge Withstand Voltage



Pulse Load 10KV Max  
 2.5 seconds "ON"  
 2.5 seconds "OFF"  
 10 cycles

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## Characteristics

Item	Requirement	Test Method
Short Time Overload	±0.5%	JIS-C-5201-1 5.5 RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	> 1000MΩ	JIS-C-5201-1 5.6 Apply 100VDC for 1 minute
Endurance	±1.5%	JIS-C-5201-1 7.10 70±2°C, Max. RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5hrs "OFF"
Damp Heat with Load	±5%	JIS-C-5201-1 7.9 40±2°C, 90~95% R.H. RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5hrs "OFF"
Solderability	90% min. Coverage	JIS-C-5201-1 6.5 245±5°C for 3 seconds
Dielectric Withstanding Voltage	By Type	JIS-C-5201-1 5.7 Apply Max. Overload Voltage for 1 minute
Temperature Coefficient	±200ppm/°C Max.	Resistance value at room temperature and room Temperature+100°C
Pulse Overload	±20%	JIS-C-5201-1 5.8 4 times RCWV for 10000 cycles with 1 second "ON" and 25 seconds "OFF"
Terminal Strength	Tensile: ≥ 2.5 kg	Direct Load for 10 seconds In the direction off the terminal leads
Shelf Life	ΔR=±0.5%	12 months at room temperature 25±3°C, 80%RH Max.

## Part Numbering

**MG025**   **F**   **TB**   -   **100R**

↓   ↓   ↓   ↓

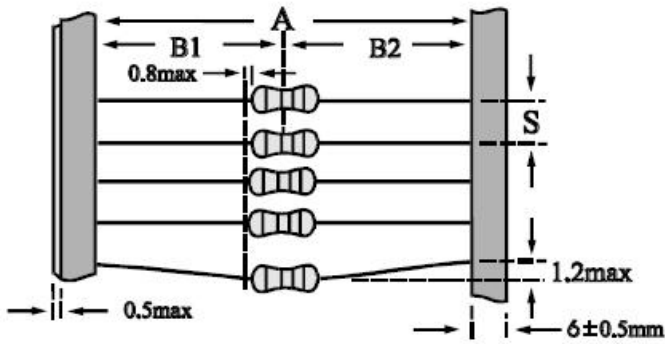
Type/Power	Tol.	Package	Resistance
MG025	F=±1%	B=Bulk	10R = 10Ω
MG050	G=±2%	TB=Tape/box	1K2R = 1.2KΩ
MG100	J=±5%	TR=Tape/reel	1MR = 1MΩ
MG200			

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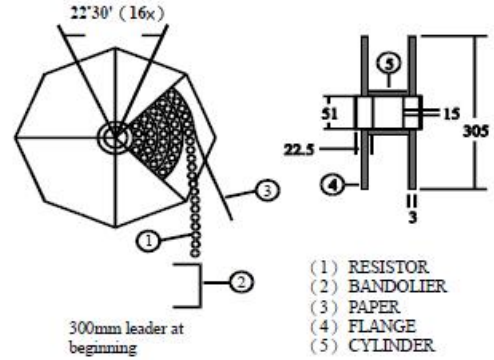
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## Taping/Packing Specification

Packing Methods

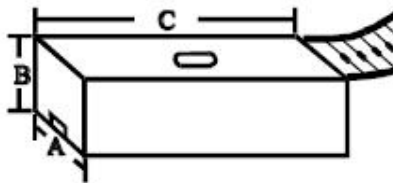


Reel Packing



TYPE	PACKING METHOD			REEL PACKING	
	A	B1-B2	S	Across Flange (A)	Q'TY
		Max			
MG025	52+1/-0	1.2	5	72	5000
MG050	52+1/-0	1.2	5	72	2000
MG100	52+1/-0	1.2	5	72	1000
	73+1/-0	1.5	5	72	1000
MG200	52+1/-0	1.2	10	95	1000
	73+1/-0	1.5	10	95	1000

Ammo Packing



TYPE	PACKING METHOD			AMMO PACKING			
	A	B1-B2	S	A	B	C	Q'TY
		Max					
MG025	52+1/-0	1.2	5	75	22	267	1000
		1.2	5	85	103	263	5000
MG050	52+1/-0	1.2	5	85	95	263	2000
MG100	52+1/-0, 73+1/-0	1.2, 1.5	5	85,103	102,85	263	1000
MG200	52+1/-0, 73+1/-0	1.2, 1.5	10	85, 103	102,95	265	1000