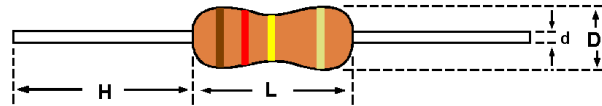


# MG Metal Glazed Resistor

- COAT-INSULATED MEGOHM FIXED RESISTOR
- HIGHER WORKING VOLTAGE
- HIGH PULSE LOADING CAPABILITY
- RESISTANCE TO HIGH TEMP/HUMIDITY
- AVAILABLE IN 5% AND 1% TOLERANCE

## DIMENSIONS

MGS = Silicone Resin - Brown Body (Flame-Proof)  
MGE = Epoxy Resin - Light Blue

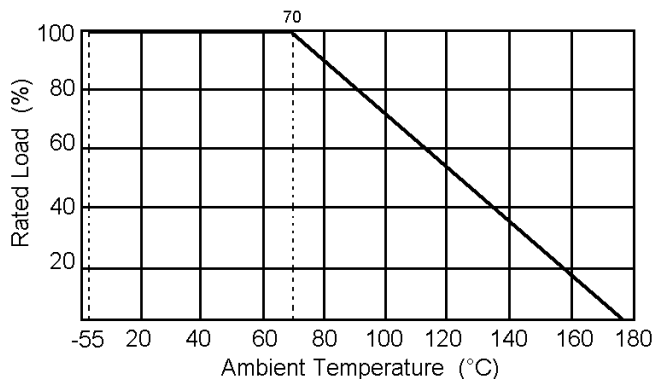


STYLE	DIMENSIONS (mm)			
	L	D	H	d
MG14 / MG12S	6.3 ± 0.5	2.3 ± 0.3	28 ± 2.0	0.55 ± 0.03
MG12 / MG1S	9.0 ± 0.5	3.2 ± 0.5	26 ± 2.0	0.65 ± 0.03
MG1 / MG2S	11.5 ± 1.0	4.5 ± 0.5	35 ± 2.0	0.78 ± 0.03
MG2	15.5 ± 1.0	5.0 ± 0.5	32 ± 2.0	0.78 ± 0.03
MG3S	15.5 ± 1.0	5.0 ± 0.5	32 ± 2.0	0.78 ± 0.03

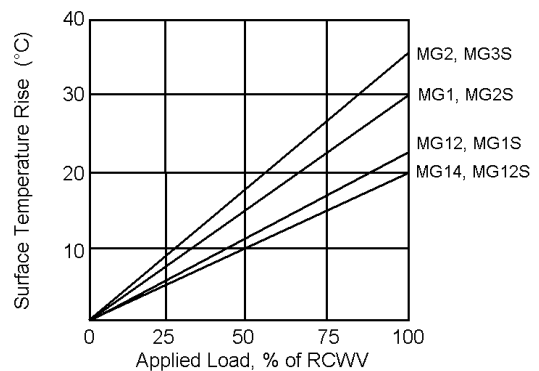
## ELECTRICAL CHARACTERISTICS

Power Rating at 70°C	1/4 W	1/2 W	1/2 WS	1 W	1 WS	2W	2 WS	3W
STYLE	MG14	MG12	MG12S	MG1	MG1S	MG2	MG2S	MG3S
Maximum Working Voltage DC	1600V	3500V	1700V	4500V	4000V	7000V	5000V	7000V
Dielectric Withstanding - Voltage	400V	500V	400V	500V	500V	700V	500V	700V
	500V	700V	500V	1000V	700V	1200V	1000V	1200V
Maximum Overload Voltage DC	2000V	4000V	2500V	5000V	4500V	14000V	10000V	14000V
Temperature Coefficient	1KΩ - ≤1GΩ ±200ppm/°C, >1GΩ ±200ppm/°C, (Special ±100ppm/°C)							
Rating Ambient Temperature	70°C							
Operating Temperature	-55°C ~ +175°C							
Resistance Tolerance	1%, 5%, 10% (>1GΩ)							
Value Range - IEC E24*	1KΩ ~ 10G Ω							

## POWER DERATING CURVE



## HOT-SPOT TEMPERATURE

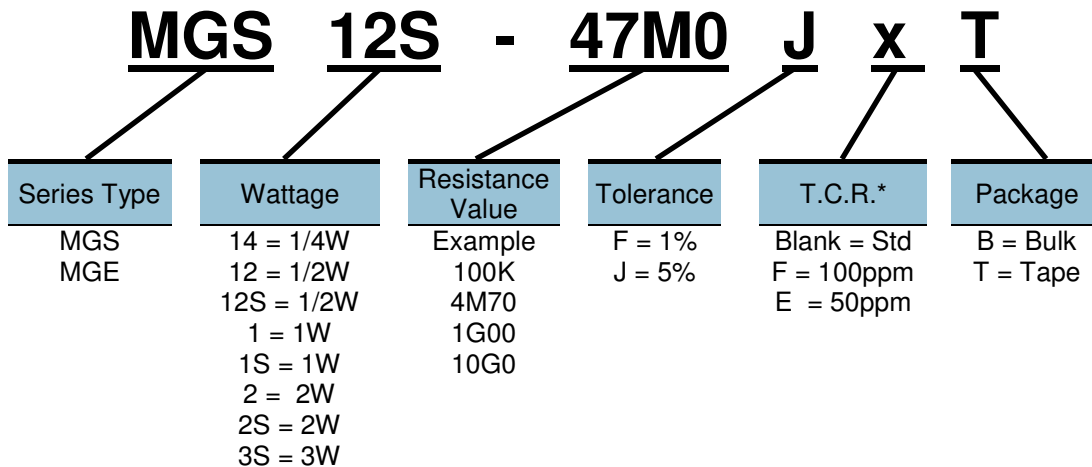


**PERFORMANCE CHARACTERISTICS**

DESCRIPTION	TEST METHOD	SPECIFICATIONS
Load Life	1,000 hours at rated voltage, 70°C 90 min ON, 30 min OFF	± (3.0% + 0.05Ω)
Moisture Resistance	40°C ± 2°C, 90%~95% RH, 1,000 hr 90 min ON, 30 min OFF	± (5.0% + 0.05Ω)
Dielectric Withstanding Voltage	In V-Block for 60 seconds	By Type
Insulation Resistance	500 ± 50V DC During 1 minute V-Block method	± 10,000 MΩ Over
Short Time Overload	Rated Voltage x 2.5 or Max overload V, which ever is lower	± (1.0% + 0.05Ω)
Low Temperature Operation		± (1.0% + 0.05Ω)
Resistance to Soldering Heat Temperature Cycling	260°C ± 5°C, 10 sec ± 1 sec 350°C ± 10°C, 3.5 sec ± 0.5 sec	± (1.0% + 0.05Ω)
Intermittent Overload	4 times RCWV for 10,000 cycles (1 sec on, 25 sec off)	± (1.0% + 0.05Ω)
Terminal Strength	Direct load for 10 sec in direction of the terminal leads	Tensile: ≥ 2.5kg

Rated continuous Working Voltage (RCWV) =  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$

**PART NUMBER**



**STANDARD PACKAGING**

BULK	1/4W ~ 3WS	1,000 pieces	TAPE	1/4W, 1/2WS	5,000 pieces
				1/2W, 1WS	2,500 pieces
				1W, 2WS	2,000 pieces
				2W, 3WS	1,000 pieces

NOTE - This series is a Special Order product.

MG Series parts are  
RoHS & REACH Compliant