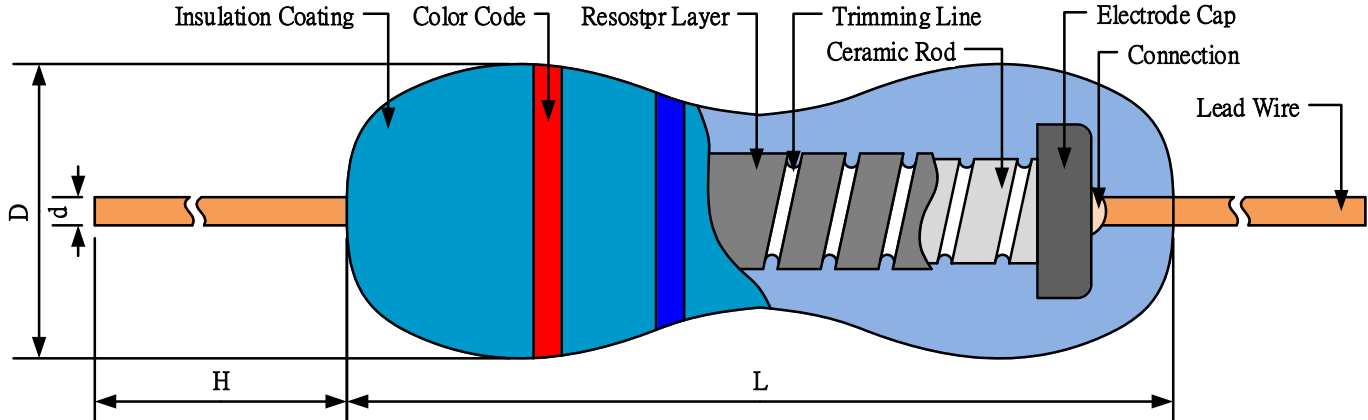


● COAT-INSULATED MEGOHM FIXED RESISTORS (METAL GLAZED)

- ⊙ Higher working voltage
- ⊙ High pulse loading capability
- ⊙ Resistance to high Temp/humidity
- ⊙ Highly stable performance and highly reliable
- ⊙ Operating Temperature Range -55°C ~ +175°C

● DIMENSIONS



STYLE		DIMENSION(mm)				Resistance Range
		L	D	H	d	
1/4W	1/2WS	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03	1K~10G
1/2W	1WS	9.0±0.5	3.2±0.5	26±2.0	0.65±0.03	
1/2WH	1WL	9.0±0.5	4.0±0.5	26±2.0	0.65±0.03	
1WH	2WL	11.5±1.0	4.0±0.5	24±2.0	0.78±0.03	
1W	2WS	11.5±1.0	4.5±0.5	35±2.0	0.78±0.03	
2W	3WS	15.5±1.0	5.0±0.5	32±2.0	0.78±0.03	
2WH	3WL	15.5±1.0	5.5±0.5	32±2.0	0.78±0.03	

● RATING

POWER RATING	MAX. Working VOL	MAX. Overload VOL	Dielectric Withstanding VOL.		Resistance Tolerance	T.C.R	Measured
			Silicone Resin	Epoxy Resin			
1/4W	DC1600V	DC2000V	400V	500V	R > 1G K (±10%) E12	Standard: 1K ≤ R ≤ 1G ±200PPM/°C	DC 100 volts 1K ≤ R < 1M DC 1000 volts 1M ≤ R
	AC1150V	AC1500V					
1/2WS	DC1700V	2500V	400V	500V	R ≤ 1G	R > 1G ±500PPM/°C	
1/2W · 1/2WH	DC3500V	4000V	500V	700V	K (±10%) E12		
1WS · 1WL	DC4000V	4500V	500V	700V	J (±5%) E24	Special : ±100PPM/°C ±50PPM/°C	
1W · 1WH	DC4500V	5000V	500V	1000V	F (±1%) E24		
2Ws · 2WL	DC5000V	10000V	500V	1000V	1M ≤ R ≤ 100 M		
2W · 2WH	DC7000V	14000V	700V	1200V	(±0.5%) E24		
3WS · 3WL	DC10000V	14000V	700V	1200V			

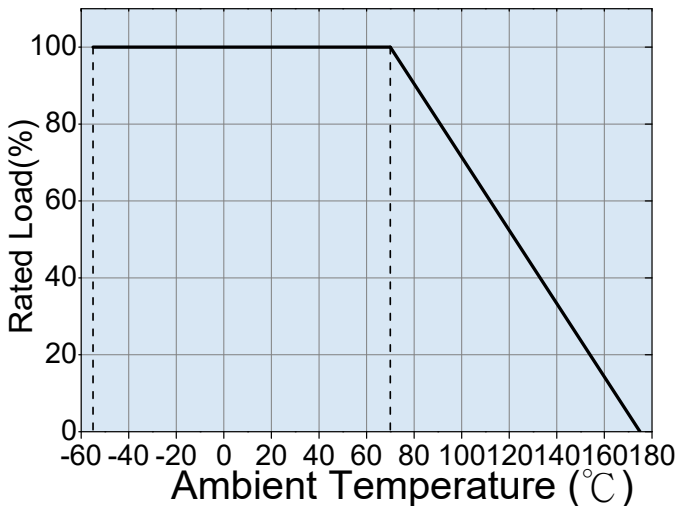
✧ Value Range for standard resistance , below or over this resistance on request. The maximum number can be produced to 10G

✧ Rated continuous Working Voltage (RCWV) = $\sqrt{POWER.RATING.*RESISTANCE.VALUE}$

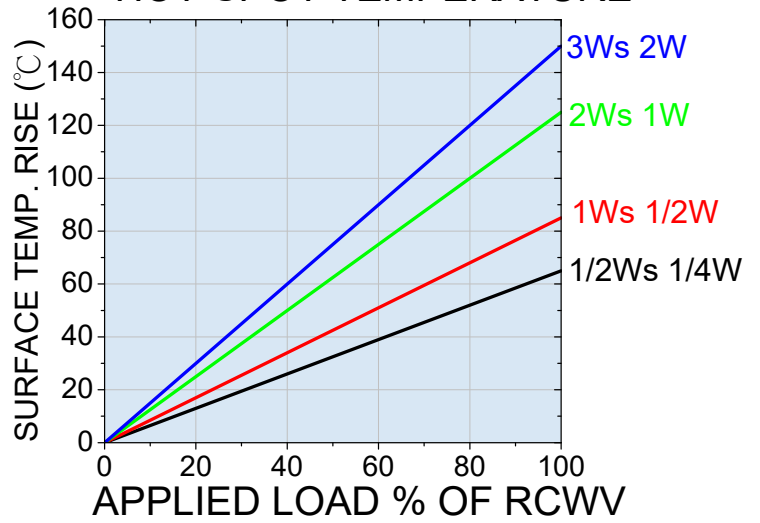
● PERFORMANCE SPECIFICATIONS

TEST ITEMS	Test Methods	SPECIFICATIONS												
Temperature Coefficient(T.C.R.)	Resistance value at room (+25°C) Temperature and room Temperature(+125°C)	By Type												
Short time overload	Rated Voltage X 2.5 or Max. Overload Vol., whichever is lower, for 5sec.	± (1.0% + 0.05Ω)												
Moisture resistance	40°C±2°C, 90%~95%RH,1000h (For Epoxy Resin) 90 min 【ON】 30 min 【OFF】	± (5.0% + 0.05Ω)												
Load life	1000hours at rated voltage, 70°C 90 min 【ON】 30 min 【OFF】	± (3.0% + 0.05Ω)												
Insulation resistance	500±50V DC During 1 min V-Block method	±10,000MΩ Over												
Dielectric withstanding voltage	In V-Block for 60 seconds	By Type												
Resistance to soldering heat	260°C±5°C, 2s±1s	± (1.0% + 0.05Ω)												
Resistance to Solvent	IPA for 5±0.5 Min. with ultrasonic	No abnormality in coatings and markings.												
Terminal strength	Direct load for 10 sec. In the direction off the terminal leads.	Tensile: ≥2.5kg												
Anti Surge characteristics	Discharge Test : 0.01uf capacitor Discharge Pulse 10 time. (1 pulse / 5sec. max)	± (10% + 0.05 Ω)												
	<table border="1"> <tr> <td>Type</td> <td>1/4W 1/2Ws</td> <td>1/2W 1WS 1/2WH 1WL</td> <td>1WH 2WL 1W 2WS</td> <td>2W 3WS 2WH 3WL</td> </tr> <tr> <td rowspan="3">Voltage</td> <td rowspan="3">3KV</td> <td>1K ≤ R < 10K:5KV</td> <td rowspan="3">10KV</td> <td rowspan="3">10KV</td> </tr> <tr> <td>10K ≤ R < 100K:7KV</td> </tr> <tr> <td>100K ≤ R:10KV</td> </tr> </table>	Type	1/4W 1/2Ws	1/2W 1WS 1/2WH 1WL	1WH 2WL 1W 2WS	2W 3WS 2WH 3WL	Voltage	3KV	1K ≤ R < 10K:5KV	10KV	10KV	10K ≤ R < 100K:7KV	100K ≤ R:10KV	
Type	1/4W 1/2Ws	1/2W 1WS 1/2WH 1WL	1WH 2WL 1W 2WS	2W 3WS 2WH 3WL										
Voltage	3KV	1K ≤ R < 10K:5KV	10KV	10KV										
		10K ≤ R < 100K:7KV												
		100K ≤ R:10KV												
Intermittent overload	4 times RCWV for10000cycles(1sec.on , 25secs.off)	±(1%+0.05Ω)												

●POWER GRAPH



●HOT-SPOT TEMPERATURE



● Resistor body color

⊙ Silicone Resin ----- Brown---(Flame-Proof)

⊙ Epoxy Resin-----Light Blue

MG		1/4W		1M		F				TB	
↓		↓		↓		↓		↓		↓	
Type		Power Rating		Resistance		Tolerance		T.C.R		Packaging	
MGB	Silicone	1/4W		100K	100KΩ	F	± 1%	B	200ppm	TB	Taping Box
MG	Epoxy	1/2WS		1M	1MΩ	G	± 2%	C	100ppm	TR	Taping Reel
			1G	1GΩ	J	± 5%	E	50ppm	BU	Bulk
		2WH		10G	10GΩ	K	± 10%		Standard	F	F-TYPE
		3WL								M	M-TYPE
										PANA	PANA