

# MGR Series

## Metal Glazed Resistors

- High stable performance against environmental conditions and over load voltage.
- Wide resistance range.



## STANDARD GENERAL SPECIFICATIONS

Model	Rated Power At 70℃	Operating Temperature Range		Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage		Resistance Range			TCE (PPM/℃)	Measured
		Silicone Resin	Epoxy Resin			Silicone Resin	Epoxy Resin	±1%	±2%	±5%		
0623	1/4W	-55℃ ~ +225℃	-55℃ ~ +155℃	DC1600V AC1150V	DC2000V AC1500V	400V	500V	100KΩ~1MΩ			±100	DC100V 100K≤R < 1M  DC1000V 1M≤R
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
0932	1/2W			DC3500V	4000V	500V	700V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
1145	1W			DC4500V	5000V	500V	1000V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
1550	2W			DC7000V	14000V	700V	1200V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
1760	3W			DC12000V	16000V	1000V	1200V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	

## HIGH POWER RATING GENERAL SPECIFICATIONS

Model	Rated Power At 70℃	Operating Temperature Range		Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage		Resistance Range			TCE (PPM/℃)	Measured
		Silicone Resin	Epoxy Resin			Silicone Resin	Epoxy Resin	±1%	±2%	±5%		
0623	1/2W	-55℃ ~ +225℃	-55℃ ~ +155℃	DC1700V	2500V	400V	500V	100KΩ~1MΩ			±100	DC100V 100K≤R < 1M  DC1000V 1M≤R
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
0932	1W			DC4000V	4500V	500V	700V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
1145	2W			DC5000V	10000V	500V	1000V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
1550	3W			DC10000V	14000V	700V	1200V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	
1760	5W			DC13000V	18000V	1000V	1200V	100KΩ~1MΩ			±100	
								100KΩ~10MΩ			±200	
								11MΩ~500MΩ			±500	

\* Operating Voltage =  $\sqrt{P \times R}$  or Max. operating voltage listed above, whichever is lower.

\* Overload Voltage =  $2.5 \times \sqrt{P \times R}$  or Max. overload voltage listed above, whichever is lower.

\* Silicone Resin coating color : Brown (Flame-Proof) / Epoxy Resin coating color : Light Blue.

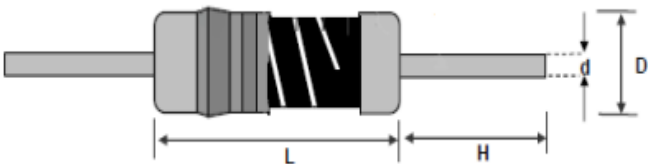
## CHARACTERISTICS

Test	Condition	
Temperature Coefficient (T.C.R)	As Spec	Resistance value at room temperature and room temperature +125°C
Short Time Overload	$\pm(1.0\%+0.05\Omega)$	JIS-C5201-1 5.5 (RCWV $\times$ 2.5 or Max. overload voltage whichever is lower for 5seconds)
Insulation Resistance	$\pm 10,000M\Omega$ Over	MIL-STD-202F Method 302 (500 $\pm$ 50Vdc During 1min. V-Block method)
Endurance	$\pm(3.0\%+0.05\Omega)$	MIL-STD-202F Method 108B (70 $\pm$ 2°C, RCWV for 1000hrs With 1.5hrs "ON" and 0.5hrs "OFF")
Damp Heat with Load	$\pm(5.0\%+0.05\Omega)$	MIL-STD-202F Method 103B (40 $\pm$ 2°C, 90~95%RH, for 1000hrs with 1.5hrs "ON" and 0.5hrs "OFF")
Dielectric Withstanding Voltage	By Type	MIL-STD-202F Method 301 (In-V-Block for 1minute)
Intermittent Overload	$\pm(1.0\%+0.05\Omega)$	JIS-C-5201-1 5.8 (4times RCWV for 10000cycles with 1sec "ON" and 25sec "OFF")
Resistance To Soldering Heat	$\pm(1.0\%+0.05\Omega)$	260°C $\pm$ 5°C for 2 $\pm$ 1seconds
Terminal Strength	Tensile : > 2.5kg	Direct Load for 10sec. In the direction off the terminal leads

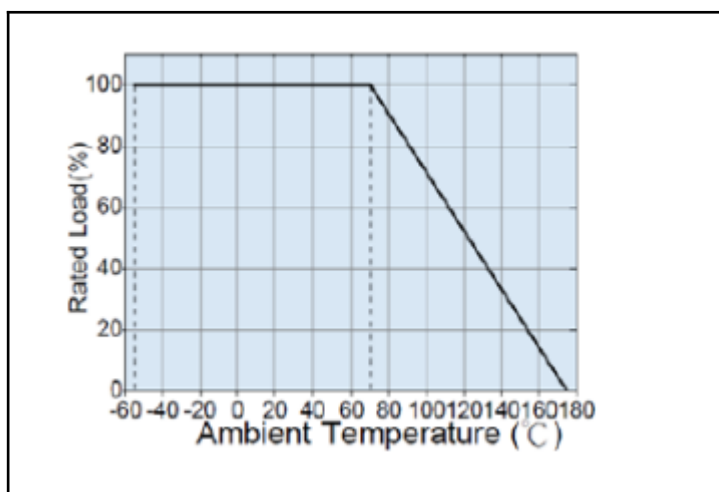
\* RCWV (Rated continuous working voltage) =  $\sqrt{P \times R}$  or Max. operating voltage whichever is lower.

\* Storage Temperature : 15~28°C, Humidity < 80%RH

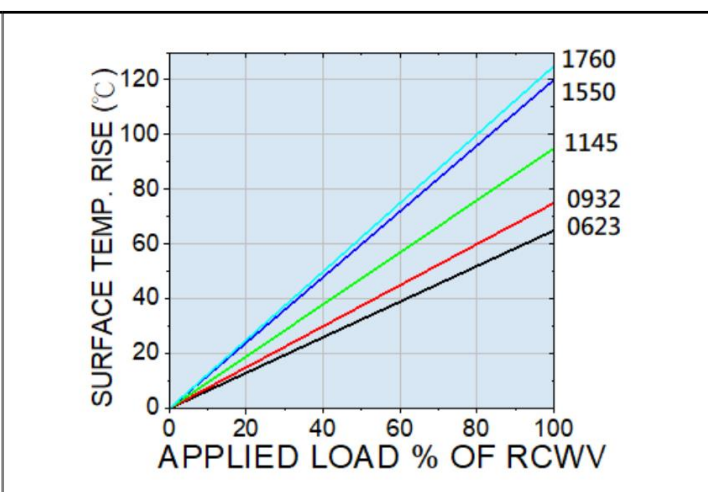
## DIMENSIONS[mm]

	Model	L	D	H	D
	MGR0623	6.3 $\pm$ 0.5	2.3 $\pm$ 0.3	28 $\pm$ 2.0	0.55 $\pm$ 0.03
	MGR0932	9.0 $\pm$ 0.5	3.2 $\pm$ 0.5	26 $\pm$ 2.0	0.65 $\pm$ 0.03
	MGR1145	11.5 $\pm$ 1.0	4.5 $\pm$ 0.5	35 $\pm$ 2.0	0.78 $\pm$ 0.03
	MGR1550	15.5 $\pm$ 1.0	5.0 $\pm$ 0.5	32 $\pm$ 2.0	0.78 $\pm$ 0.03
	MGR1760	17.5 $\pm$ 1.0	6.0 $\pm$ 0.5	35 $\pm$ 2.0	0.78 $\pm$ 0.03

## DERATING CURVE



## SURFACE TEMP RISE



## TAPING/PACKING SPECIFICATIONS

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Model	Packaging	Packing Methods			Reel Packing		Ammo Paking			
		A	B1-B2 Max	S	Across Flange (A)	Qty	A	B	C	Qty
MGR0623		52+1-0	1.2	5±0.3	72	5,000	79±2	100±3	257±5	5,000
MGR0932		52+1-0	1.2	5±0.3	72	2,500	79±2	58±3	257±5	1,000
MGR1145		52+1-0	1.5	5±0.3	95	2,000	103±2	82±3	262±5	1,000
MGR1550		52+1-0	1.5	10±0.8	95	1,000	103±2	96±3	265±5	1,000
MGR1760		73+1-0	1.5	10±0.8	95	1,000	103±2	82±3	262±5	500

## ODERING PROCEFURE EXAMPLE

MGR	0932	F	T	F	U	1004	S
Product Type	Dimensions (L×D)	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Power Rating	Resistance	Special
	0623 : 6.3×2.3 0932 : 9.0×3.2 1145 : 11.5×4.5 1550 : 15.5×5.0 1760 : 17.5×6.0	F : ±1% G : ±2% J : ±5%	A : Ammo T : Taping Reel	E : ±100 F : ±200 I : ±500	V : 1/4W U : 1/2W T : 1W S : 2W R : 3W D : 5W	1003 : 100KΩ 1004 : 1MΩ 1006 : 100MΩ	S : Silicone E : Epoxy