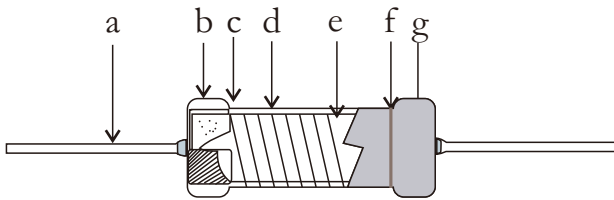


● Features

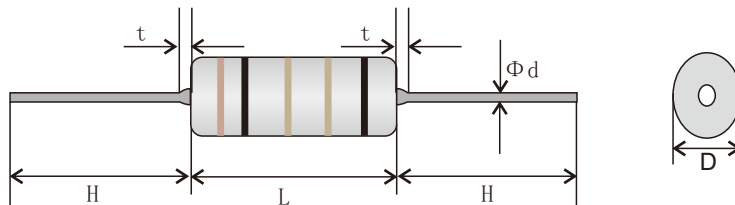
- I Flameproof and insulating coating designed to assure safe usage by special non-flammable silicon-base. (Equivalent to UL94 V-0)
- II Products meet EU-RoHS requirements.

● Construction



a	Lead wire
b	Cap
c	Ceramic base
d	Helical cutting groove
e	Metal glaze film
f	Marking or color code
g	Insulation coat

● Dimensions



Type	Rated Power (W)	Dimensions(mm)					Weight(g) (1000pcs)
		L	t Max	D	Φd	H	
MGR1/6,MGS1/4	1/6W,1/4WS	3.3±0.3	1.5	1.8±0.2	0.45±0.05	28±2	120
MGR1/4,MGS1/2	1/4W,1/2WS	6.0±0.3	2.0	2.4±0.1	0.6±0.05	28±2	218
MGR1/2,MGS1	1/2W,1WS	9±0.5	2.5	3.3±0.5	0.6/0.8±0.05	30±3	320
MGR1,MGS2	1W,2WS	12±1.0	2.5	4.5±0.5	0.8±0.05	38±3	780
MGR2,MGS3	2W,3WS	16±1.0	2.5	5.5±0.5	0.8±0.05	38±3	1450
MGR3,MGS5	3W,5WS	17.5±1.0	2.5	6.5±0.5	0.8±0.05	38±3	1560
MGR5,MGS 6	5W,6WS	24±1.0	2.5	8.0±0.5	0.8±0.05	38±3	1700

● Reference Standards

JISC 5201-1

Ordering Information

Example:

MGR (1) Series Name	14 (2) Power Rating	J (3) Resistance Tolerance	10R0 (4) Resistance	NL (5) Lead wire
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(1)Type: MGR,MGS SERIES

(2)Power Rating: 16=1/6W,14=1/4W,12=1/2W,1=1W,2=2W,3=3W,05=5W,06=6W

(3)Tolerance:F=±1%,G=±2%,J=±5%

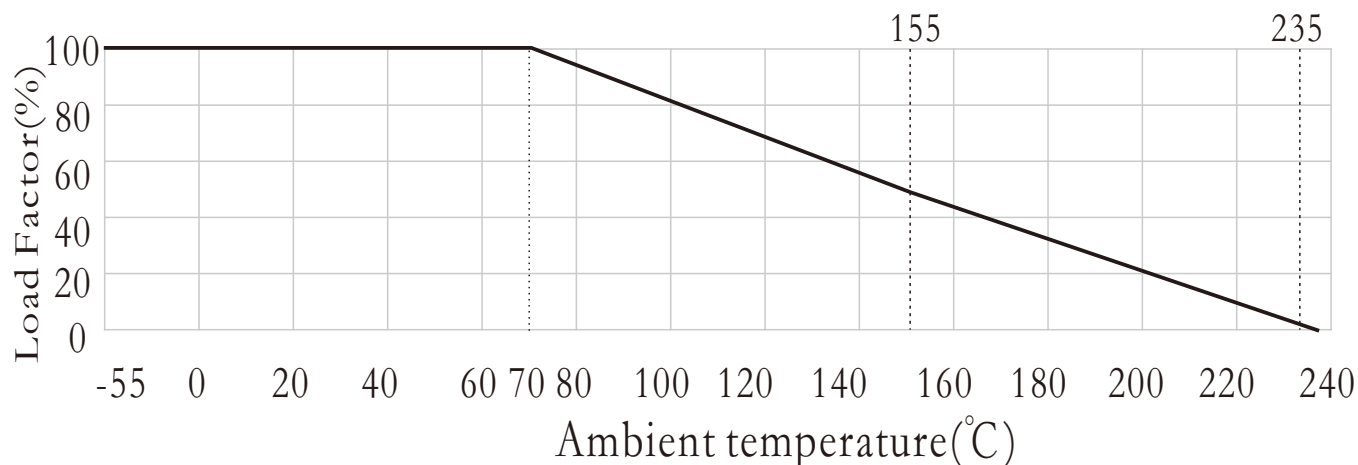
(4)Resistance Value:10R0=10R、R10=0.1Ω、47R0=47Ω

(5)Lead wire: Electro plated

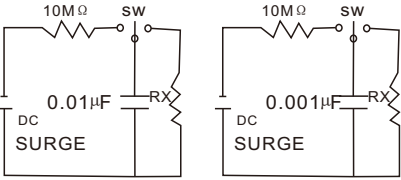
Applications And Ratings

Type	Rated Power(W)	Resistance Range(Ω)			Max Working Voltage(DC)	Maximum Overload Voltage(DC)	Voltage Proof on Insulation (Silicone Type)	Voltage Proof on Insulation (Epoxy Type)	T.C.R
		F±1% (E96)	G±2% (E24)	J±5% (E24)					
MGR1/6,MGS1/4	1/6W,1/4WS	0.1K~<100M			1,600V	3,000V	300V	500V	F±1% ±100ppm/°C G±2% ±200ppm/°C J±5% ±300ppm/°C
MGR1/4,MGS1/2	1/4W,1/2WS				3,500V	7,000V	500V	500V	
MGR1/2,MGS1	1/2W,1WS				3,500V	7,000V	500V	500V	
MGR1,MGS2	1W,2WS				5,000V	10,000V	600V	700V	
MGR2,MGS3	2W,3WS				5,000V	10,000V	600V	700V	
MGR3,MGS5	3W,5WS				7,000V	14,000V	600V	700V	
MGR5,MGS6	5W,6WS				7,000V	14,000V	600V	700V	

Derating Curve



● Performance

Test Items	Performance Requirements	Test Methods(JIS C 5201-1)
Resistance	Within specified tolerance	Measuring points are 10mm from the end cap
T.C.R.	Within specified T.C.R	Room temperature+100°C
Short time overload	$\pm (1\%+0.05\Omega)$	6.25times the rated power for 5 seconds
Load life	$\pm (1.5\%+0.1\Omega)$	Rated voltage at 70°C for 1,000 hours 1.5hr ON/0.5hr OFF Cycles
Load life in humidity	$\pm (5\%+0.1\Omega)$	Rated voltage at 40°C,95%RH for 1,000 hours
Moisture resistance	$\pm (1\%+0.05\Omega)$	40°C,95%RH for 240 hours
Temperature cycle	$\pm (1\%+0.05\Omega)$	5 cycles for -25°C (30min);room temp.(30min) +85°C (30min)room temp.(30min)
Intermittent overload	$\pm (5\%+0.1\Omega)$	Applicable more than 100Ω;Rated voltage*3 1s ON/25s OFF,10,000 cycles
Resistance to soldering heat	$\pm (1\%+0.05\Omega)$	260°C \pm 5°C for 10 seconds 350°C \pm 10°C for 3.5 seconds
Insulation resistance	$\geq 1000M\Omega$	500V insulation test 1min.
Flameproof	No obvious of flaming or arcing	AC voltage of 2,4,8,16,32 times the power rating for 1min.(V \leq 4times max.working voltage)
Pulse withstanding voltage	$\pm 20\%$ 	The following discharge cycle is repeated in the circuit of the left fig. 2.5 sec.ON 2.5 sec.OFF 50 cycles.With following DC pulse test voltage. Pulse voltage:1/6W,S1/4W:(3KV), $\geq 1/4W < 100K$: (3KV)//100K~620K:(5KV) $> 620K$:(10KV) UL-0.01μF Non-UL 0.001μF