

SINLOON®

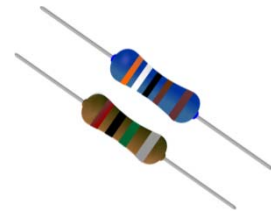
玻璃釉高壓電阻
Resistance Range: 47K - 10GΩ

Type: **MG Series**
Metal Glazed Fixed Resistor

Feature

- ◆ Higher working voltage (高工作電壓)
- ◆ High pulse loading capability (高脈衝負載)
- ◆ Resistance to high temperature and humidity (抵抗高溫和耐濕度)
- ◆ Highly stable performance and highly reliable (電性穩定,特性可靠)

Figure



Applications

- ◆ Ultra-high vacuum applications. (超高真空應用)
- ◆ Casteth forth surge protection and a voltage regulator. (浪湧保護及分壓器)
- ◆ Power protection and discharge path resistance.(電源保護和分流電阻)
- ◆ Current pulse limit, and pulse load equipment.(電流脈衝限制器和脈衝負載設備)
- ◆ Micro-current circuit measurements, medical instrument.(微電流電路測量，醫療儀器)

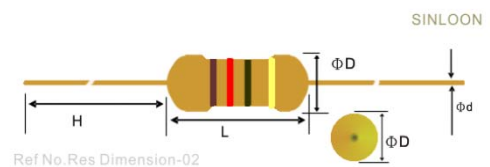
Ordering: Example W-MG0204TEF105

Power	Type	Package	TCR/°C	Tolerance	Resistance	Label
1/8W	W-MG0204	T = T/Box	D=±50ppm	D=±0.5%	E24; E12.	
1/4W	V-MG0207	B = Bulk	E=±100ppm	F=±1%	473=47K	
1/2WS	U-MG0207	R = Reel	K=±150ppm	G=±2%	503=50KΩ	
1/2WS	U-MG0309		F=±200ppm	H=±3%	104=100KΩ	
1/2W	U-MG0410		G=±300ppm	J=±5%	105=1MΩ	
1WS	S-MG0412		H=±400ppm	K=±10%	106=10MΩ	
1W	S-MG0414		I=±500ppm		107=100MΩ	
2WS	Q-MG0416		J=±600ppm		1G Ω	
2W	Q-MG0516				10G Ω	
3WS	N-MG0518					

Dimensions

Unit: mm

Power	Type	L	ΦD	H	Φd
1/8W	W-MG0204	3.3±0.5	1.8±0.3	28±2.0	0.45±0.03
1/4W	V-MG0207	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03
1/2WS	U-MG0207	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03
1/2WS	U-MG0309	8.5±0.5	2.7±0.5	27±2.0	0.60±0.03
1/2W	U-MG0410	9.0±0.5	3.2±0.5	26±2.0	0.65±0.03
1WS	S-MG0412	9.0±0.5	4.0±0.5	26±2.0	0.65±0.03
1W	S-MG0414	11.5±1.0	4.0±0.5	35±2.0	0.78±0.03
2WS	Q-MG0416	11.5±1.0	4.5±0.5	35±2.0	0.78±0.03
2W	Q-MG0516	15.5±1.0	5.0±0.5	32±2.0	0.78±0.03
3WS	N-MG0518	15.5±1.0	5.0±0.5	32±2.0	0.78±0.03

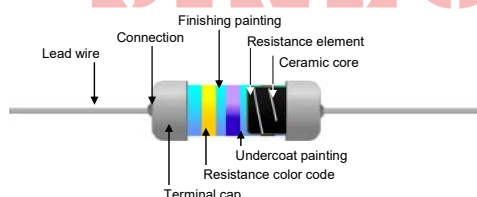


Resistor body color

- MGS = Silicon resin : Brown (Flame Proof)
- MG = Epoxy resin : Light Blue



Structure Diagram



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Resistance Range: 47K - 10GΩ

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Metal Glazed Fixed Resistor

Rated Power

Power Rating	Type	Max. Vol. Working	Max. Vol. Overload	Dielectric With Standing Voltage		Resistance ³	Tolerance	IEC Publications	T.C.R. °C
				Silicone ¹	Epoxy ²				
1/8W	W-MG0204	DC500V	1KV	300V	400V	47K ~ 10G	K = ±10% J = ±5% F = ±1% D = ±0.5%	E12 E24 E24 E24	D=±50ppm E=±100ppm K=±150ppm F=±200ppm G=±300ppm I=±500ppm
1/4W	V-MG0207	DC1.6KV	DC2.0KV	400V	500V				
		AC1.15KV	AC1.5KV	400V	500V				
1/2WS	U-MG0207	DC1.7KV	2.5KV	400V	500V				
1/2WS	U-MG0309	DC1.8KV	2.5KV	400V	500V				
1/2W	U-MG0410	DC3.5KV	4.0KV	500V	700V				
1WS	S-MG0412	DC4.0KV	4.5KV	500V	700V				
1W	S-MG0414	DC4.5KV	5.0KV	500V	1000V				
2WS	Q-MG0416	DC5.0KV	5.5KV	500V	1000V				
2W	Q-MG0516	DC7.0KV	7.5KV	700V	1200V				
3WS	N-MG0518	DC7.0KV	7.5KV	700V	1200V				
Rating Ambient Temperature:			70°C						
Operating Temperature Range:			-55°C ~ +175°C Rating Ambient Temperature ±70°C.						

※Silicone¹ Resistor body coating silicone resin brown (Flame-proof)

※Epoxy² Resistor body coating epoxy resin light blue.

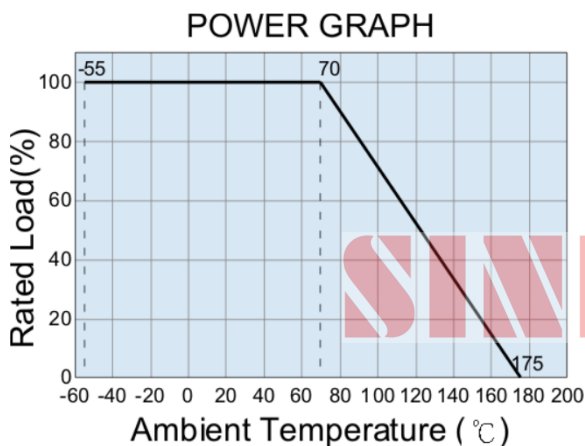
※Resistance³: <10M Tolerance ±0.5% IEC: E24
>1G Tolerance ±10% IEC: E12. TCR ±500ppm

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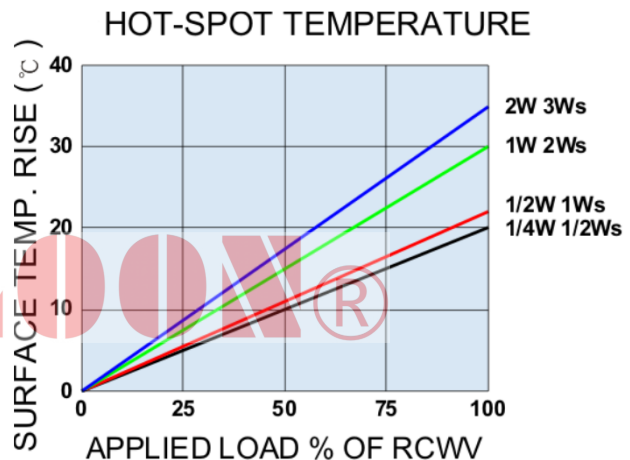
Performance Specifications

Test Items	Test Methods	Specification
Short time overload	Rated voltage x 2.5 or max. overload voltage, whichever is lower for 5 s	±(1.0%+0.05Ω)
Moisture resistor	40°C±2°C, 90% ~ 95%RH, 1000hrs.90 min [ON] , 30 min [OFF].	±(5.0%+0.05Ω)
Load life	1000hrs 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, 10s±1sec or 250°C±10°C, 3.5s±0.5sec.	±(1.0%+0.05Ω)
Temperature cycling		±(1.0%+0.05Ω)
Terminal strength	Direct load for 10 sec, In the direction off the terminal leads.	Tensile ≥2.5Kgs
Intermittent overload	4 times RCWV for 10000cycles (1 sec ON, 25 sec OFF)	±(1.0%+0.05Ω)

Power Graph



Surface Temperature (°C)



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Resistance Range: 47K - 10GΩ

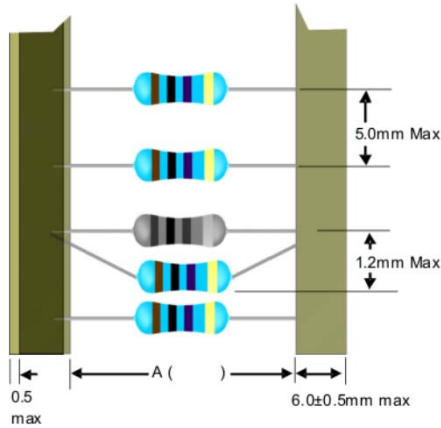
Type: **MG Series**
Metal Glazed Fixed Resistor

□ **PACKAGE:**

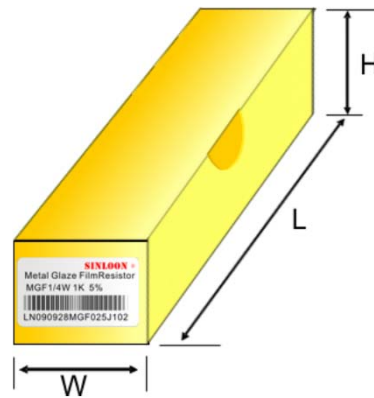
Power	Type	Methods Tape (A)	Tape Box Dimensions (mm)			Quantity		Quantity Cartons	Brand Name
			L	W	H	Bulk Box	Tape Box		
Standard Size (標準)									
1/8W	W-MG0204	52mm	264	80	75	1000 pcs	5000 pcs	100K pcs	SINLOON®
1/4W	V-MG0207	52mm	264	80	105	1000 pcs	5000 pcs	100K pcs	
1/2WS	U-MG0207	52mm	264	80	105	1000 pcs	5000 pcs	100K pcs	
1/2WS	U-MG0309	52mm	264	80	105	1000 pcs	5000 pcs	100K pcs	
1/2W	U-MG0410	52mm	264	80	46	1000 pcs	1000 pcs	20K pcs	
1WS	S-MG0412	52mm	264	80	46	1000 pcs	1000 pcs	20K pcs	
1W	S-MG0414	52mm	265	103	82	500 pcs	1000 pcs	20K pcs	
2WS	Q-MG0416	73mm	265	103	82	500 pcs	1000 pcs	20K pcs	
2W	Q-MG0516	52mm	265	103	96	500 pcs	1000 pcs	20K pcs	
3WS	N-MG0518	52mm	265	103	96	500 pcs	1000 pcs	20K pcs	

※ Contact our sales department to ask for details of packing quantity (聯系我們業務代表獲取更多詳細的包裝數量)

Methods Tape (A)

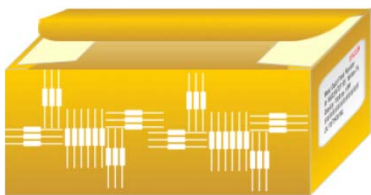


Inner Box



Bulk Box

Size: 145x75x60mm



Carton Package



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※ 美隆公司產品規格及其特性參數的改變或更新恕不另行通知。

※ Mayloon characteristic parameters of electronic product specification changes or updates without notice to improve。

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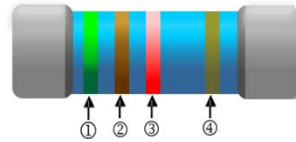
Resistance Range: 47K - 10GΩ

Type: **MG Series**
Metal Glazed Fixed Resistor

Standard Resistor Color Code E24 Series (4 band code)

Color	1st digit	2nd digit	3rd Multiplier	4 Tolerance
Black	0	0	$\times 10^0$	
Brown	1	1	$\times 10^1$	$\pm 1\%$ (F)
Red	2	2	$\times 10^2$	$\pm 2\%$ (G)
Orange	3	3	$\times 10^3$	
Yellow	4	4	$\times 10^4$	
Green	5	5	$\times 10^5$	$\pm 0.5\%$ (D)
Blue	6	6	$\times 10^6$	$\pm 0.25\%$ (C)
Violet	7	7	$\times 10^7$	$\pm 0.1\%$ (B)
Gray	8	8	$\times 10^8$	$\pm 0.05\%$ (A)
White	9	9	$\times 10^9$	
Gold			$\times 0.1$	$\pm 5\%$ (J)
Silver			$\times 0.01$	$\pm 10\%$ (K)
None				$\pm 20\%$ (M)

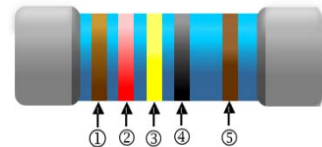
Example : Value : 5.1K Ω $\pm 5\%$



Standard Resistor Color Code E96 Series (5 band code)

Color	1st digit	2nd digit	3rd digit	4 Multiplier	5 Tolerance
Black	0	0	0	$\times 10^0$	
Brown	1	1	1	$\times 10^1$	$\pm 1\%$ (F)
Red	2	2	2	$\times 10^2$	$\pm 2\%$ (G)
Orange	3	3	3	$\times 10^3$	
Yellow	4	4	4	$\times 10^4$	
Green	5	5	5	$\times 10^5$	$\pm 0.5\%$ (D)
Blue	6	6	6	$\times 10^6$	$\pm 0.25\%$ (C)
Violet	7	7	7	$\times 10^7$	$\pm 0.1\%$ (B)
Gray	8	8	8	$\times 10^8$	$\pm 0.05\%$ (A)
White	9	9	9	$\times 10^9$	
Gold				$\times 0.1$	$\pm 5\%$ (J)
Silver				$\times 0.01$	$\pm 10\%$ (K)
None					$\pm 20\%$ (M)

Example : Value : 12.4Ω $\pm 1\%$



STANDARD RESISTANCE VALUE IN A DECADE

For Resistance According to IEC Publication 63 (國際標準阻值)

E12	E24	E96			
10	10	100	178	316	562
	11	102	182	324	576
12	12	105	187	332	590
	13	107	191	340	604
15	15	110	196	348	619
	16	113	200	357	634
	18	115	205	365	649
	20	118	210	374	665
22	22	121	215	383	681
	24	124	221	392	698
	27	127	226	402	715
	30	130	232	412	732
33	33	133	237	422	750
	36	137	243	432	768
	39	140	249	442	787
	43	143	255	453	806
47	47	147	261	464	825
	51	150	267	475	845
	56	154	274	487	866
	62	158	280	499	887
68	68	162	287	511	909
	75	165	294	523	931
	82	169	301	536	953
	91	174	309	549	976

Example : E24 Series: 10
Resistance: 0.1R; 1R0; 10R; 100R;
1K; 10K; 100K; 1M; 100M.

E26 Series: 102
Resistance: 0.102R; 1.02R; 10.2R;
102R; 1K02; 10K2;
102K; 1M02; 10M2;
102M.

ORDERING RESISTANCE CODE

E96 ($\pm 1\%$)		E24 ($\pm 5\%$)	
Resistance (Ω) Code		Resistance (Ω) Code	
m5=R0005Ω	1K = 1001	m5=R0005Ω	1K=102
5m=R005Ω	10K = 1002	5m=R005Ω	10K = 103
50m=R05Ω	100K=1003	50m=R05Ω	100K=104
100m=R1Ω	1M=1-004	100m=R1Ω	1M=105
1000m=1Ω	10M=1005	1000m=1Ω	10M=106
1R = 1R00	100M=1006	1R = 1R0	100M=107
10R=10R0	1G = 1007	10R=100	1G=108
100R=100R	10G = 1008	100R=101	10G=109

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