

- Features:
- High voltage capability from 1600 to 7000 volts
 - Inexpensive high voltage leaded resistor solution
 - High resistance values up to 1G
 - Tolerances as low as 1%; TCRs as low as 50PPM/°C
 - Flameproof coating (brown) standard;
 - Epoxy coating (blue) available up to 2W
 - RoHS compliant



Electrical Specifications						
Type / Code	Power Rating (Watts) @ 70°C	Maximum Working Voltage	Dielectric Withstanding Voltage		Resistance Temperature Coefficient (1)	Ohmic Range (Ω) and Tolerance
			Silicone	Epoxy		
MG14	0.25W	1600V	400V	500V	±100 ppm/°C	1K - 1G
MG12	0.5W	3500V	500V	700V		
MG1	1W	4500V	500V	1000V		
MG2	2W	7000V	700V	1200V		
MGM12	0.5W	1700V	400V	500V		
MGM1	1W	4000V	500V	700V		
MGM2	2W	5000V	500V	1000V		
MGM3	3W	7000V	700V	1200V		

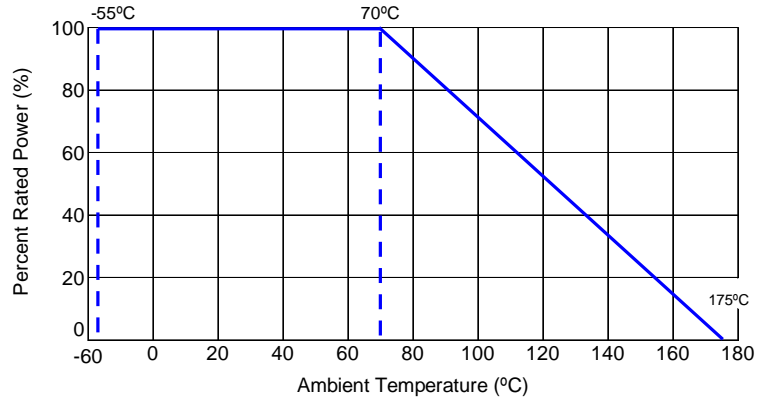
(1) ±50 ppm/°C available for some values and sizes. Contact factory.

Mechanical Specifications					
Type / Code	A Body Length	B Body Diameter	C Lead Length (Bulk)	D Lead Diameter	Unit
MG14	0.248 ± 0.020	0.091 ± 0.012	1.102 ± 0.079	0.022 ± 0.001	inches
	6.30 ± 0.50	2.30 ± 0.30	28.00 ± 2.00	0.55 ± 0.03	mm
MG12	0.354 ± 0.020	0.126 ± 0.020	1.024 ± 0.079	0.026 ± 0.001	inches
	9.00 ± 0.50	3.20 ± 0.50	26.00 ± 2.00	0.65 ± 0.03	mm
MG1	0.453 ± 0.039	0.157 ± 0.020	0.945 ± 0.079	0.031 ± 0.001	inches
	11.50 ± 1.00	4.00 ± 0.50	24.00 ± 2.00	0.78 ± 0.03	mm
MG2	0.610 ± 0.039	0.197 ± 0.020	1.260 ± 0.079	0.031 ± 0.001	inches
	15.50 ± 1.00	5.00 ± 0.50	32.00 ± 2.00	0.78 ± 0.03	mm
MGM12	0.248 ± 0.020	0.091 ± 0.012	1.102 ± 0.079	0.022 ± 0.001	inches
	6.30 ± 0.50	2.30 ± 0.30	28.00 ± 2.00	0.55 ± 0.03	mm
MGM1	0.354 ± 0.020	0.157 ± 0.020	1.024 ± 0.079	0.026 ± 0.001	inches
	9.00 ± 0.50	4.00 ± 0.50	26.00 ± 2.00	0.65 ± 0.03	mm
MGM2	0.453 ± 0.039	0.177 ± 0.020	1.378 ± 0.079	0.031 ± 0.001	inches
	11.50 ± 1.00	4.50 ± 0.50	35.00 ± 2.00	0.78 ± 0.03	mm
MGM3	0.610 ± 0.039	0.197 ± 0.020	1.260 ± 0.079	0.031 ± 0.001	inches
	15.50 ± 1.00	5.00 ± 0.50	32.00 ± 2.00	0.78 ± 0.03	mm

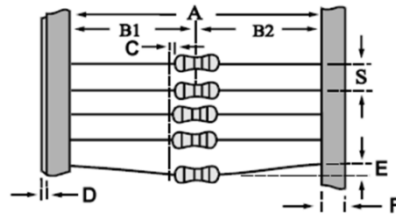
Performance Characteristics	
Test	Requirement
Short Time Overload	± (1% + 0.05Ω)
Moisture Resistance	± (5% + 0.05Ω)
Load Life	± (3% + 0.05Ω)
Insulation Resistance	> 10,000 MΩ
Resistance to Soldering Heat	± (1% + 0.05Ω)
Temperature Cycling	± (1% + 0.05Ω)
Terminal Strength	± (1% + 0.05Ω)
Intermittent Overload	± (1% + 0.05Ω)

Operating Temperature Range: -55°C to +175°C

Power Derating Curve:



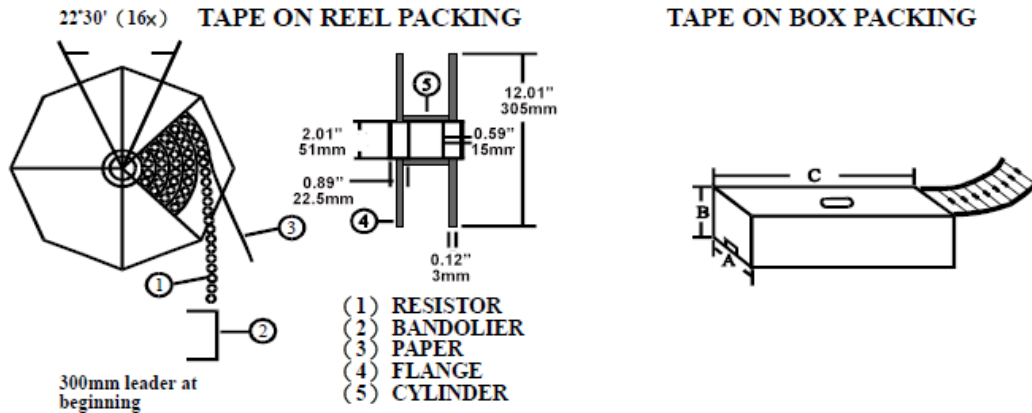
Packaging Specifications



Type / Code	A	B1/B2	C	D	E	F	S	Unit
MG14	2.047 + 0.039 /-0.00	0.047	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.197	inches
	52.00 + 1.00 /-0.00	1.20	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	5.00	mm
MG12	2.047 + 0.039 /-0.00	0.047	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.197	inches
	52.00 + 1.00 /-0.00	1.20	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	5.00	mm
MG1	2.874 + 0.039 /-0.00	0.059	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.197	inches
	73.00 + 1.00 /-0.00	1.50	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	5.00	mm
MG2	2.874 + 0.039 /-0.00	0.059	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.394	inches
	73.00 + 1.00 /-0.00	1.50	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	10.00	mm
MGM12	2.047 + 0.039 /-0.00	0.047	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.197	inches
	52.00 + 1.00 /-0.00	1.20	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	5.00	mm
MGM1	2.047 + 0.039 /-0.00	0.047	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.197	inches
	52.00 + 1.00 /-0.00	1.20	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	5.00	mm
MGM2	2.874 + 0.039 /-0.00	0.059	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.197	inches
	73.00 + 1.00 /-0.00	1.50	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	5.00	mm
MGM3	2.874 + 0.039 /-0.00	0.059	0.031 max.	0.020 max.	0.047 max.	0.236 ± 0.020	0.394	inches
	73.00 + 1.00 /-0.00	1.50	0.80 max.	0.50 max.	1.20 max.	6.00 ± 0.50	10.00	mm

Max. deviation of spacing: 1mm per 10 spacing.

Tape on Reel/Tape on Box Specifications



Type / Code	Quantity per Reel	Quantity per Box	Tape on Reel				Unit
			Across Flange (A)	W (A)	H (B)	L (C)	
MG14	5000	5000	2.835	3.150	2.953	10.394	inches
			72.00	80.00	75.00	264.00	mm
MG12	3000	1000	2.835	3.150	1.811	10.394	inches
			72.00	80.00	46.00	264.00	mm
MG1	2000	1000	2.835	3.150	2.953	10.394	inches
			72.00	80.00	75.00	264.00	mm
MG2	1000	1000	3.740	4.055	3.780	10.433	inches
			95.00	103.00	96.00	265.00	mm
MGM12	5000	5000	2.835	3.150	4.134	10.394	inches
			72.00	80.00	105.00	264.00	mm
MGM1	3000	1000	2.835	3.150	1.811	10.394	inches
			72.00	80.00	46.00	264.00	mm
MGM2	2000	1000	3.740	4.055	3.228	10.433	inches
			95.00	103.00	82.00	265.00	mm
MGM3	1000	1000	3.740	4.055	3.780	10.433	inches
			95.00	103.00	96.00	265.00	mm

RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 2). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament.

RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
MG	High Voltage Metal Glaze Leaded Resistor	Axial	YES(1)	100% Matte Sn	Jan-06	06/01
MGM	High Voltage Mini Metal Glaze Leaded Resistor	Axial	YES(1)	100% Matte Sn	Jan-06	06/01

Note (1): RoHS Compliant by means of exemption 7c-1.

“Conflict Metals” Commitment

We at Stackpole electronics, Inc. are joined with our industry in opposing the use of metals mined in the “conflict region” of the Easter Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to “REACH”

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, “The Registration, Evaluation, Authorization and Restriction of Chemicals”, otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

	1	2	3	4	5	6	7	8	9	10
	M	G	1	2	J	T	1	0	0	K

Product Series		Size	Power Rating	Tolerance			Packaging			Resistance Value			
				Code	Tol	Value	Code	Description	Size	Quantity			
MG	Standard Size	14	0.25W	F	1%	E24	T	Tape and Reel	MG14, MGM12	5,000	Four characters with the multiplier used as the decimal holder. 1 Kohm = 1K00 1 Mohm = 1M00 1 Gohm = 1G00		
	Silicone Coating	12	0.5W						MG12, MGM1	3,000			
MGM	Mini Size	1	1W						J	5%		MG1, MGM2	2,000
	Silicone Coating	2	2W	K	10%	MG2, MGM3			1,000				
MGE	Standard Size	3	3W						A	Ammo		MG14, MGM12	5,000
	Epoxy Coating											MG12, MG1, MG2	1,000
MGME	Only up to 2W							B	Bulk	MGM1, MGM2, MGM3	1,000		
	Mini Size									all sizes	1,000		
Epoxy Coating													