

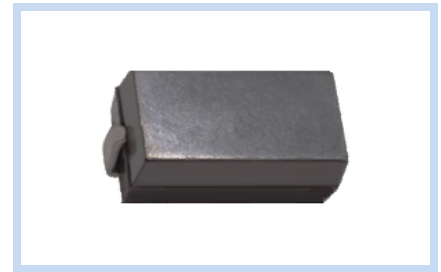
# Metal Glaze Molded Resistors High Voltage Anti Sulfidation

MSMG Series

MERITEK

## FEATURE

- Power Rating up to 3W
- Metal-Glaze Elements Provide High Stable Performance
- Ultra High Surge Withstand and Pulse Withstanding
- Excellent Mechanical Strength and Electrical Stability
- Flameproof Classification: UL94-V0
- 1.2/50µS and 10/700 µS Pulse according to IEC61000-4-5 Standard

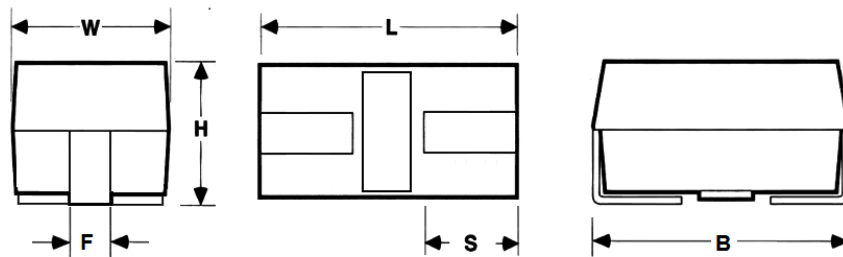


## ELECTRICAL CHARACTERISTICS AND DIMENSIONS

Rated Power	Resistance Range	Working Voltage DC	Working Voltage RMS	Dimensions (mm)					
				W ±0.3	L ±0.3	F ±0.3	H ±0.3	B Max	S ±0.3
1W	100K~10MΩ	1600V	1150V	4.0	6.7	1.4	3.55	7.9	1.5
2W	100K~10MΩ	3500V	2500V	5.5	10.5	1.7	5.00	12.0	2.3
3W	100K~10MΩ	5000V	3500V	7.3	13.5	1.7	6.80	17.0	2.5

### Notes:

1. Rated Continuous Working Voltage (RCWV) =  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$ , or Max Permissible Voltage, Whichever less
2. Too low or too high ohmic values can be supplied only case by case
3. Operating Temperature: -65 °C~200 °C

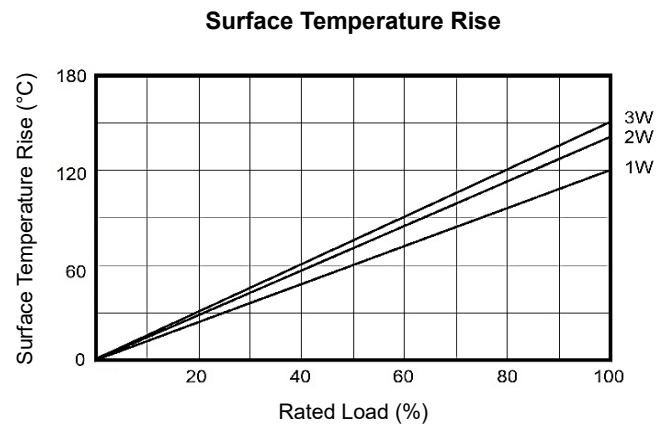
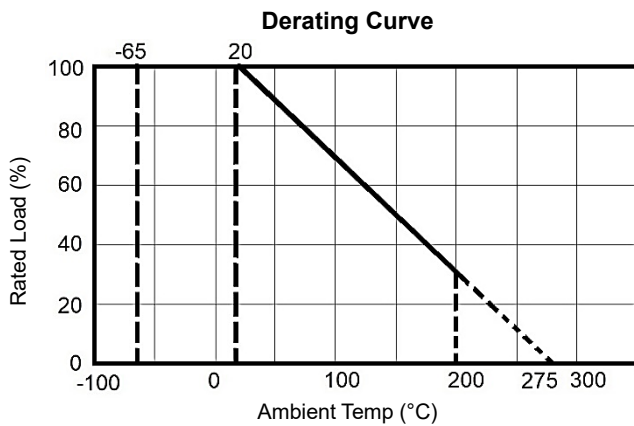


## PART NUMBERING SYSTEM

**MSMG** **3W** **332** **J**  
(1) (2) (3) (4)

No	Item	Code	Description	
(1)	Product Code	MSMG	Metal Glaze Molded Resistor, Surface Mount type	
(2)	Power Rating	3W	3W	1W, 2W
(3)	Resistance	332	3300Ω	First two digits: Significant, Third: Multiplier
(4)	Tolerance	J	±5%	F: ±1%

### DERATING AND SURFACE TEMPERATURE RISE CURVE



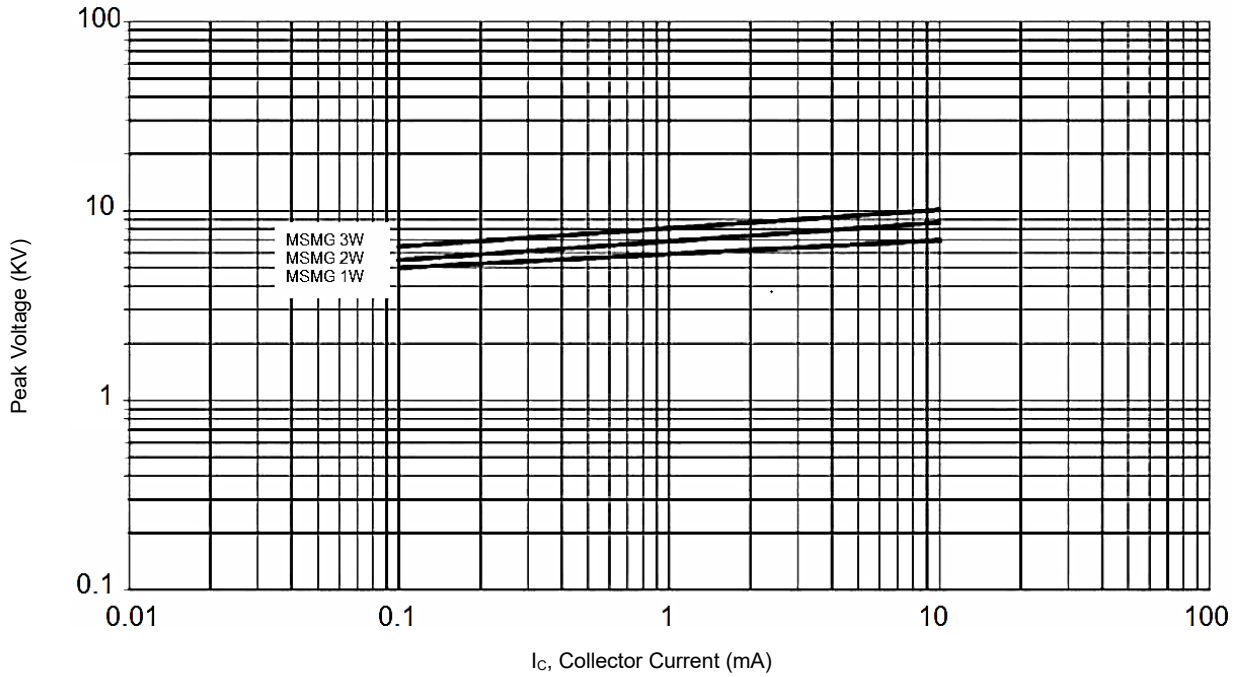
### RELIABILITY TEST CONDITION AND REQUIREMENT

Item	Condition	Requirement
Resistance Tolerance	J: $\pm 5\%$ , F: $\pm 1\%$	--
Temperature Coefficient (TCR)	-65°C~200°C	$\pm 200\text{ppm}/^\circ\text{C}$
Power Rating Load	Rated voltage for 30 minutes	$\Delta R/R \leq \pm 1\%$ , Surface temp. 275°C Max
Short Time Overload	2.5 times rated power for 5 seconds	$\pm 1\%$
Dielectric Withstanding Voltage	1000VAC for 1 minute	No evidence of mechanical damage or
Insulation Resistance	500VDC megger	10,000M $\Omega$
Solderability	235 $\pm 5^\circ\text{C}$ for 2 seconds	95% minimum coverage
Pulse Loading Capability	IEC 60065 14.1	$\Delta R/R \leq \pm 2\%$
Resistance to Soldering Heat	270 $\pm 5^\circ\text{C}$ for 10 $\pm 1$ second	$\Delta R/R \leq \pm 1\%$ ,
Temperature Cycle	-65°C(30min), Room Temp.(3min), 275°C(30min), Room Temp.(3min) 5 Cycles	$\Delta R/R \leq \pm 2\%$
Load Life	Rated power load 90min ON, 30min OFF 70°C for 1000 hours	$\Delta R/R \leq \pm 5\%$
Load Life in Humidity	Rated power load 90min ON, 30min OFF 40°C, 95% R.H. for 1000 hours	$\Delta R/R \leq \pm 5\%$

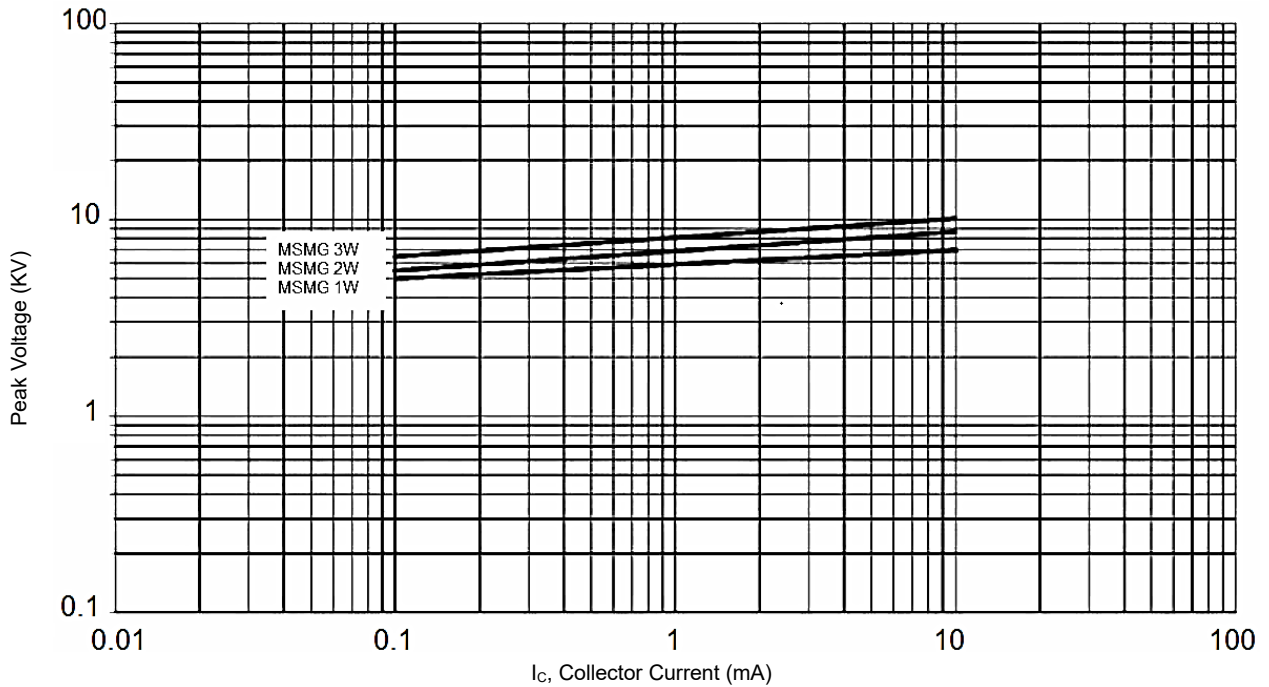
Notes: Reference Standard: IEC 60115-1, JIS C 5201-1

**CHARACTERSTICS CURVES**

**1.2/50 $\mu$ S Lightning Surge**

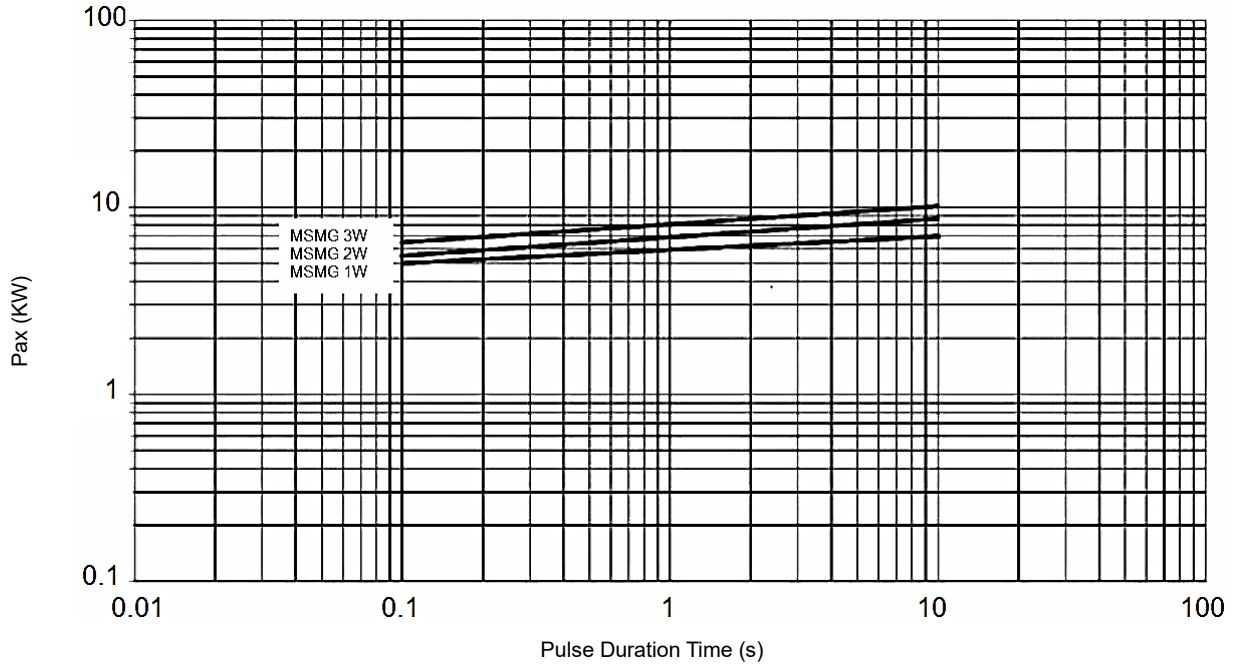


**10/700 $\mu$ S Lightning Surge**

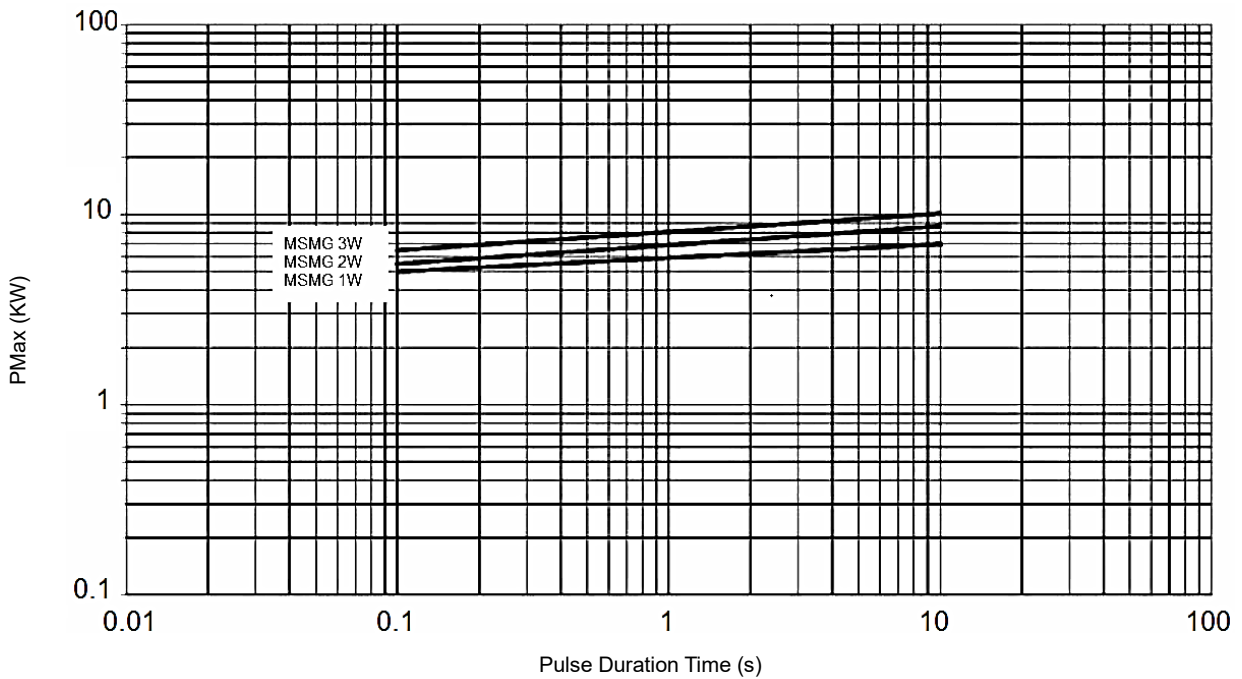


**CHARACTERISTICS CURVES**

**Single Pulse**



**Continuous Pulse**



\*Specifications subject to change without notice.