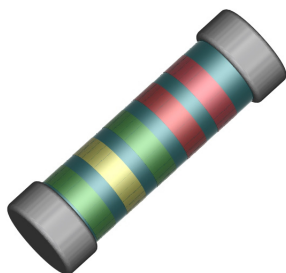


# MGM Series

High Voltage Metal Glaze Film Resistors



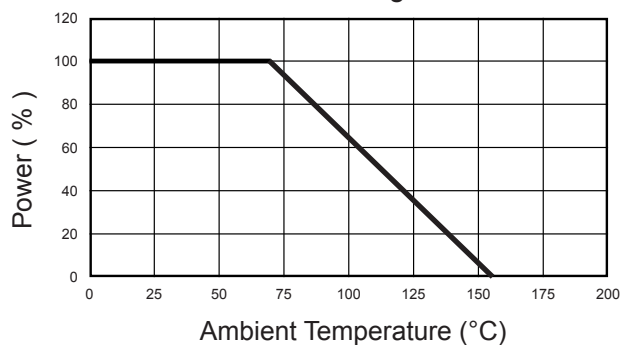
- Resistances from 50k Ohms to 2G Ohms
- Power Rating to 2 Watt
- Resistance Tolerances to  $\pm 0.5\%$
- TCR's to  $\pm 100\text{ppm/K}$
- Max Operating Voltage to 3000V

## SPECIFICATIONS

| Type                        | MGM55                | MGM60               | MGM65               | MGM70               |
|-----------------------------|----------------------|---------------------|---------------------|---------------------|
| DIN                         | 0207                 | 0207                | 0411                | 0617                |
| Resistance Range            | 50k to 1G            |                     | 100k to 2G          |                     |
| Power rating (70°C)         | 0.50W                | 1.0W                | 2.0W                | 2.0W                |
| Tolerances                  | 0.5% / 1% / 5% / 10% |                     |                     |                     |
| Temperature Coefficient     | 100 / 200ppm/K       |                     |                     |                     |
| Max Operating Voltage       | 1600V <sub>DC</sub>  | 1600V <sub>DC</sub> | 2000V <sub>DC</sub> | 3000V <sub>DC</sub> |
| Short time Overload Voltage | 3200V <sub>DC</sub>  | 3200V <sub>DC</sub> | 4000V <sub>DC</sub> | 6000V <sub>DC</sub> |
| Operating Temperature Range | -55 to 125°C         |                     |                     |                     |
| Insulation Resistance       | >1G                  |                     |                     |                     |
| Insulation Voltage          | >500V                |                     |                     |                     |

| Test                | Conditions                                               | Allowable Change $\Delta R/R$ |
|---------------------|----------------------------------------------------------|-------------------------------|
| Short Time Overload | 2.5X rated power up to $2X V_{max}$ ; 5s                 | $\pm 0.10\% + 0.05 \Omega$    |
| Solderability       | Solder Bath; 260°C for 5s $\pm 1s$                       |                               |
| Temperature Cycling | 30min at -55°C, 30min at +155°C, 5 cycles                |                               |
| Humidity Cycling    | 40 $\pm 2^\circ\text{C}$ , 93 $\pm 2/-3\%$ RH, 56 days   | $\pm 0.25\% + 0.05 \Omega$    |
| Vibration           | 10 to 2000Hz for 6h                                      |                               |
| Load Life           | $P_{70}$ up to $V_{max}$ , 1.5h on 0.5h off, 1000h, 70°C |                               |

Power Derating Curve

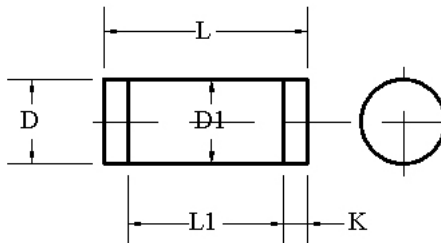


## Ordering Information

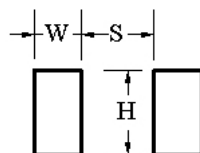
Part Number - Resistance - Tolerance  
MGM55 100 kOhms 0.5%

### SPECIFICATIONS (continued)

#### Dimensions



| Type  | Dimension | mm   | tol.<br>(±mm) | inches | tol.<br>(±inches) |
|-------|-----------|------|---------------|--------|-------------------|
| MGM55 | L         | 5.70 | 0.25          | 0.22   | 0.008             |
|       | D         | 2.10 | 0.25          | 0.08   | 0.008             |
|       | K         | 0.60 | 0.1           | 0.02   | 0.004             |
|       | D1        | 1.95 | MAX           | 0.077  | MAX               |
| MGM60 | L         | 6.10 | 0.25          | 0.24   | 0.008             |
|       | D         | 2.10 | 0.25          | 0.08   | 0.008             |
|       | K         | 0.80 | 0.1           | 0.03   | 0.004             |
|       | D1        | 1.95 | MAX           | 0.077  | MAX               |
| MGM65 | L         | 8.70 | 0.25          | 0.34   | 0.008             |
|       | D         | 3.10 | 0.25          | 0.12   | 0.008             |
|       | K         | 1.00 | 0.1           | 0.04   | 0.004             |
|       | D1        | 2.90 | MAX           | 0.11   | MAX               |
| MGM70 | L         | 11.0 | 0.25          | 0.43   | 0.008             |
|       | D         | 3.90 | 0.25          | 0.15   | 0.008             |
|       | K         | 1.30 | 0.1           | 0.05   | 0.004             |
|       | D1        | 3.65 | MAX           | 0.14   | MAX               |



| Type  | Dimension | mm  | tol.<br>(±mm) | inches | tol.<br>(±inches) |
|-------|-----------|-----|---------------|--------|-------------------|
| MGM55 | S         | 3.3 | 0.25          | 0.13   | 0.008             |
|       | W         | 3.2 | 0.25          | 0.13   | 0.008             |
|       | H         | 3.2 | 0.25          | 0.13   | 0.008             |
| MGM60 | S         | 3.5 | 0.25          | 0.14   | 0.008             |
|       | W         | 4.0 | 0.25          | 0.16   | 0.008             |
|       | H         | 4.5 | 0.25          | 0.18   | 0.008             |
| MGM65 | S         | 5.6 | 0.25          | 0.22   | 0.008             |
|       | W         | 5.0 | 0.25          | 0.20   | 0.008             |
|       | H         | 5.0 | 0.25          | 0.20   | 0.008             |
| MGM70 | S         | 7.2 | 0.25          | 0.28   | 0.008             |
|       | W         | 7.0 | 0.25          | 0.28   | 0.008             |
|       | H         | 5.0 | 0.25          | 0.20   | 0.008             |