

## GLO OHM Series Standard Carbon film

Constructed by breaking down hydrocarbon gases at high temperatures forming a deposit of carbon film on the surface of a smooth cylindrical ceramic substrate. Final resistance is obtained by cutting a spiral groove in the film with a diamond wheel.

Several coatings of paint are applied on the surface to protect the substrate and carbon film from humidity, with an excellent dielectric strength.

Marking is by color-code, resistant to most industrial and commercial solvents (MIL STD 202F method 215).

Cooper terminals are electrolytically tinned to a thickness of 4 to 7 microns which allows for excellent solderability.

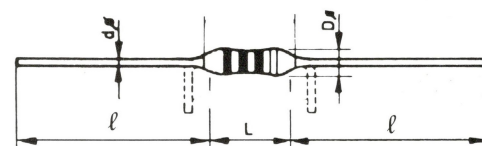


### Electrical characteristics

|                                   | 1/8 watt                                                                 | 1/4 watt      | 1/2 watt                    | 1 watt        | 2 watt                 |
|-----------------------------------|--------------------------------------------------------------------------|---------------|-----------------------------|---------------|------------------------|
| Max. power dissipation, W (70°C)  | 0.25                                                                     | 0.25          | 0.5                         | 1 (40°C)      | 2 (40°C)               |
| Resistance range (Ω)              | 1 ~ 10 meg                                                               | 1 ~ 22 meg    | 1 ~ 22 meg                  | 1 ~ 22 meg    | 1 ~ 22 meg             |
| Tolerance* (series : E-24)        | ± 5 %                                                                    | ± 5 %         | ± 5 % (1Ω to 2.7Ω: ± 20 %.) |               |                        |
| Standardized type                 | DIN 44061<br>MIL R-39017                                                 | 0204<br>RLR05 | 0207<br>RLR07               | 0309<br>RLR20 | 0617<br>—<br>0922<br>— |
| Climatic category                 | 55/125/56 (IEC-68); FKF (DIN 40040); Class I (EIA RS-196); Stability ±5% |               |                             |               |                        |
| Temperature coefficient           | See curve                                                                |               |                             |               |                        |
| Noise level                       | See curve                                                                |               |                             |               |                        |
| Nominal voltage (VDC or Vrms)     | 200                                                                      | 250           | 350                         | 500           | 700                    |
| Dielectric strength (VDC or Vrms) | 400                                                                      | 500           | 700                         | 1.000         | 1.200                  |
| Insulation resistance             | 10 <sup>9</sup> M Ω min.                                                 |               |                             |               |                        |

### Dimensions (mm)

\* Measured according IEC-294



| Type     | L*        | l ± 1.5 | Dø        | dø         |
|----------|-----------|---------|-----------|------------|
| 1/8 watt | 3.5 ± 0.2 | 28      | 1.7 ± 0.2 | 0.45 ± .05 |
| 1/4 watt | 6.5 ± 0.4 | 28      | 2.3 ± 0.2 | 0.6 ± .05  |
| 1/2 watt | 9.5 ± 0.5 | 28      | 3.7 ± 0.2 | 0.7 ± .05  |
| 1 watt   | 14.5 ± 1  | 28      | 5.1 ± 0.5 | 0.8 ± .05  |
| 2 watt   | 18 ± 1    | 28      | 8.1 ± 1   | 0.8 ± .05  |

The information contained herein may be changed without prior notice.

# Specifications

| TEST                         | MAX. DEVIATION ALLOWED                                                                                                                                                                   | TEST METHOD                                       |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Short time overload          | $\pm 0.5\%$ or $0.5\Omega$                                                                                                                                                               | MIL R-39017C. 3.14                                |
| Temperature cycling          | $\pm 1.0\%$ or $0.5\Omega$                                                                                                                                                               | DIN 44052.5.3                                     |
| Resistance to soldering heat | $\pm 0.5\%$ or $0.5\Omega$                                                                                                                                                               | MIL R-39017C. 3.20<br>IEC 115-1.19                |
| Load life                    | $< 100\text{ k}\Omega$ , $\pm 2\%$<br>$\geq 100\text{ k}\Omega$ , $\pm 3\%$                                                                                                              | MIL R-39017C.3.26<br>IEC 115-1.26                 |
| Damp heat                    | $< 100\text{ k}\Omega$ , $\pm 2\%$<br>$100\text{ k}\Omega \sim 1\text{ M}\Omega$ , $\pm 3\%$<br>$> 1\text{ M}\Omega$ , $\pm 5\%$                                                         | IEC 115-1.24                                      |
| Temperature coefficient      | see curve                                                                                                                                                                                | IEC 115-1.11                                      |
| Dielectric strength          | No outer body perforations or arcing<br>$\frac{1}{8}$ watt 400 VAC rms<br>$\frac{1}{4}$ watt 500 VAC rms<br>$\frac{1}{2}$ watt 700 VAC rms<br>1 watt 1000 VAC rms<br>2 watt 1200 VAC rms | MIL R-39017C.3.18<br>IEC 115-1.10                 |
| Noise level                  | See Chart                                                                                                                                                                                | IEC-195<br>Measuring equipment<br>Quan-Tech 315-B |
| Solderability                | $\geq 95\%$ of tested surface covered                                                                                                                                                    | MIL.STD.202 F-208                                 |
| Resistance to solvents       | Marking remains legible                                                                                                                                                                  | MIL.STD.202F-215                                  |
| Self-extinguishibility       | External flame application for 5 sec.<br>Flame duration on the component $\leq 2$ sec.                                                                                                   | UL-94 (V-0)                                       |

## HIGH FREQUENCY BEHAVIOUR

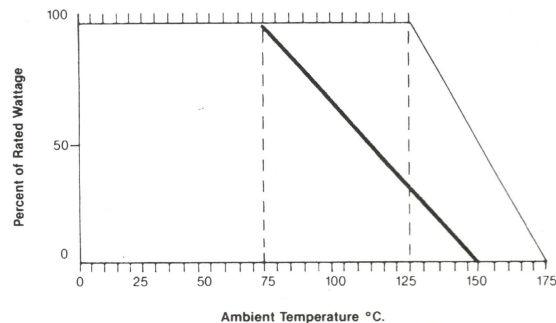
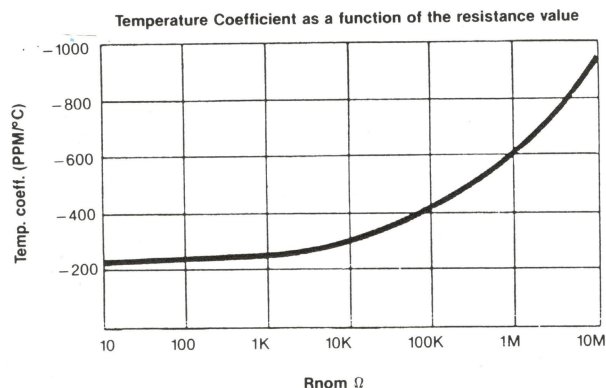
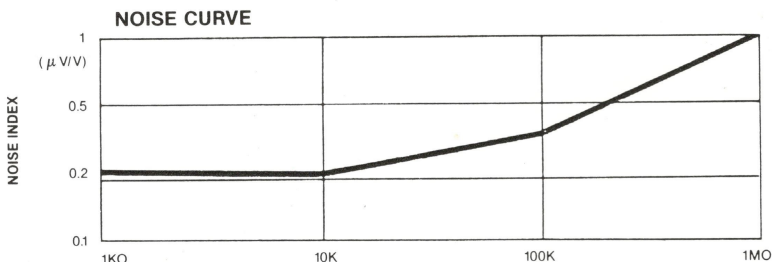
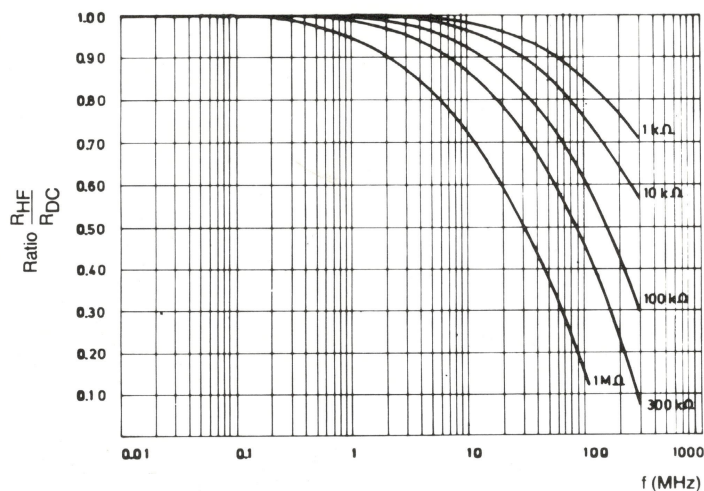
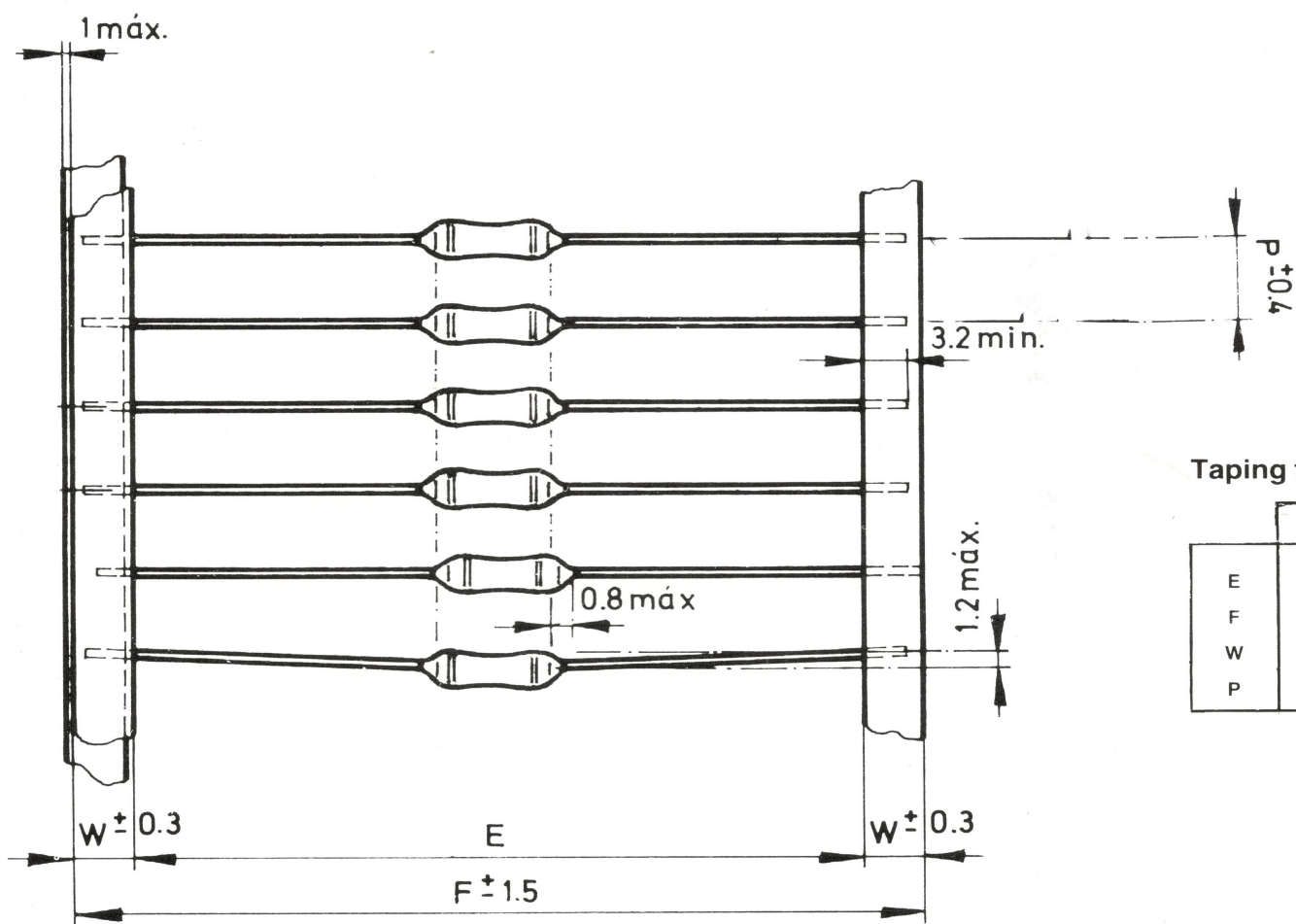


FIGURE 1 POWER DERATING

In no case shall the maximum continuous working voltage be exceeded



### Specifications (Dimensions mm.)



|   | G65      |
|---|----------|
| E | 52 ± 1.0 |
| F | 65       |
| W | 6        |
| P | 5        |

The technical drawing consists of two views of a circular container:

- Cross-section (left):** Shows the internal structure. The top layer is labeled "Kraft paper". Below it is a layer of "Corrugated carton". The inner diameter of the container is labeled  $\varnothing 84$ . The total width of the container at the base is labeled  $B$ .
- Top view (right):** Shows the circular opening of the container. The outer diameter is labeled  $\varnothing A$ . The inner diameter of the opening is labeled  $\varnothing 16^{+0.5}_{-0}$ . A central hole has a diameter of  $\varnothing 8$ . A dimension line indicates a distance of 27 from the center to the edge of the opening.

|   |     |
|---|-----|
|   | G65 |
| A | 305 |
| B | 76  |