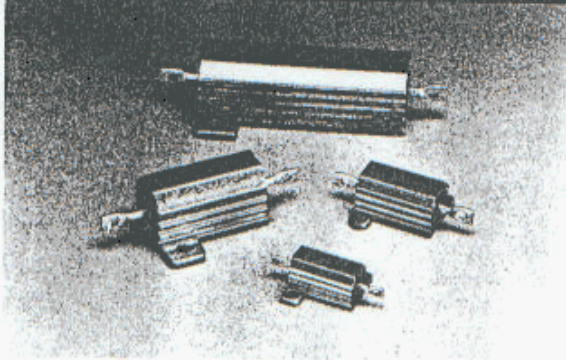


**Series CMC**  
**5, 10, 25, 50 Watt**  
 Wirewound, Aluminum-Housed, Axial-Lead Resistors



**Description**

The CMC series is an exceptionally stable and versatile resistor. The metal housing offers high durability to withstand vibration, shock and harsh environmental conditions. It also offers heat-sinking capabilities and chassis mounting options. Made to MIL-R-18546 standards, the CMC series is axial-lead style, with superior power ratings.

**Features**

- All molded and welded construction
- Screw mounts on chassis surface
- Utilize heat-sink capability
- Complete protection against environment
- Exceeds MIL-R-18546 standards

**Series CMC Material Specifications**

*Housing*  
 Anodized aluminum

*Internal Coating*  
 Silicone

*Core*  
 Ceramic

*Terminals*  
 Copperweld, tinned, axial-lead

*Weight*

| CMC5    | CMC10    | CMC25    | CMC50    |
|---------|----------|----------|----------|
| 5 watts | 10 watts | 25 watts | 50 watts |
| .11 oz. | .25 oz.  | .5 oz.   | 1.04 oz. |
| 3 gms.  | 7 gms.   | 14 gms.  | 29 gms.  |

**Series CMC Electrical Specifications**

*Resistance Tolerance*  
 ±1% standard

*Power Rating*  
 Based on 275°C maximum hotspot at 25°C ambient temperature

| Clarostat Series | MIL Series | Clarostat Wattage | MIL Requirement |
|------------------|------------|-------------------|-----------------|
| CMC5             | RE60G      | 5                 | 5               |
| CMC10            | RE65G      | 10                | 10              |
| CMC25            | RE70G      | 25                | 20              |
| CMC50            | RE75G      | 50                | 30              |

*Proper heat sink as follows:*

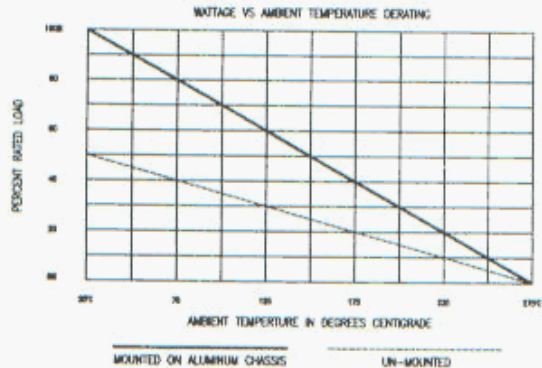
- 4 x 6 x 2 x 0.040 aluminum chassis - 5 & 10 watt units
- 5 x 7 x 2 x 0.040 aluminum chassis - 25 & 50 watt units

*Derating*

CMC resistors are rated to operate with a 275°C maximum hotspot under full rated power at 25°C ambient temperature per MIL-R-18546. They must be derated for higher ambient temperature per "Wattage Vs Ambient Temperature Derating Curve."

Figure 1

**Series CMC Derating**



Electrical Specifications continued, next page

**Overload**

5 times rated wattage for 5 seconds

**Temperature Coefficient**

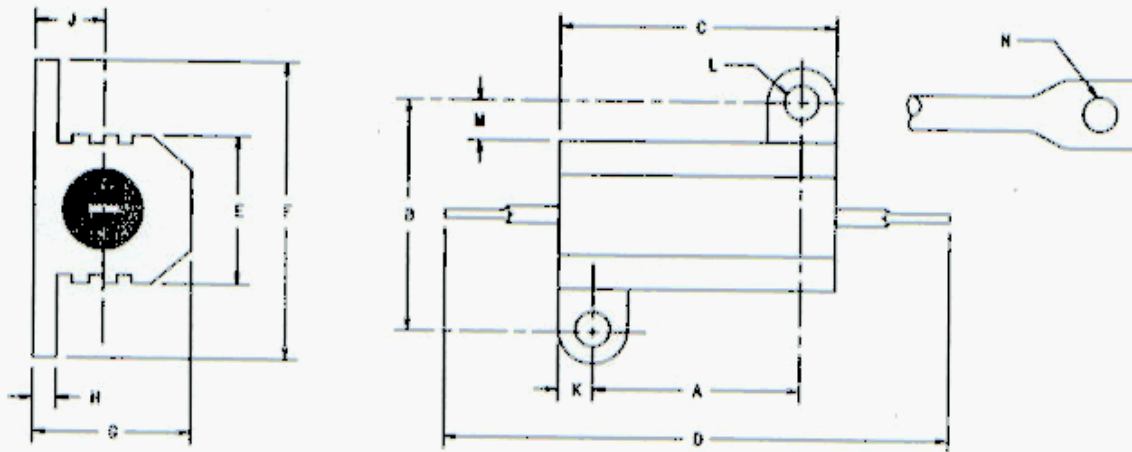
±90 ppm/°C, under 1 ohm  
 ±50 ppm/°C, 1 ohm to 9.99 ohms  
 ±20 ppm/°C, 10 ohms and over

**Dielectric Withstanding Voltage**

1000 Vac: 5 and 10 watt rating  
 2500 Vac: 25 and 50 watt rating

Figure 2

**Series CMC Dimensions**



|                  | A     | B     | C     | D     | E     | F     | G     | H     | J     | K     | L     | M     | N     |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Tolerance</b> |       |       |       |       |       |       |       |       |       |       |       |       |       |
| inches           | ±.005 | ±.005 | ±.031 | ±.062 | ±.015 | ±.015 | ±.015 | ±.010 | ±.010 | ±.010 | ±.005 | ±.015 | ±.005 |
| mm               | ±0.10 | ±0.10 | ±0.80 | ±1.60 | ±0.40 | ±0.40 | ±0.40 | ±0.25 | ±0.25 | ±0.25 | ±0.10 | ±0.10 | ±0.10 |
| <b>CMC-5</b>     |       |       |       |       |       |       |       |       |       |       |       |       |       |
| inches           | .444  | .490  | .600  | 1.125 | .334  | .646  | .320  | .065  | .140  | .078  | .093  | .078  | 0.05  |
| mm               | 11.28 | 12.45 | 15.24 | 28.58 | 8.48  | 16.41 | 8.13  | 1.65  | 3.56  | 1.98  | 2.36  | 1.98  | 1.27  |
| <b>CMC-10</b>    |       |       |       |       |       |       |       |       |       |       |       |       |       |
| inches           | .562  | .625  | .750  | 1.375 | .430  | .800  | .400  | .075  | .190  | .093  | .093  | .102  | .086  |
| mm               | 4.27  | 15.88 | 19.1  | 34.93 | 10.92 | 20.3  | 10.2  | 1.91  | 4.83  | 2.4   | 2.4   | 2.59  | 2.18  |
| <b>CMC-25</b>    |       |       |       |       |       |       |       |       |       |       |       |       |       |
| inches           | .719  | .781  | 1.062 | 1.938 | .530  | 1.080 | .560  | .085  | .260  | .172  | .125  | .115  | .086  |
| mm               | 18.26 | 19.84 | 26.97 | 49.23 | 13.46 | 27.43 | 14.22 | 2.16  | 6.6   | 4.37  | 3.18  | 2.92  | 2.18  |
| <b>CMC-50</b>    |       |       |       |       |       |       |       |       |       |       |       |       |       |
| inches           | 1.563 | .844  | 1.968 | 2.781 | .615  | 1.140 | .615  | .085  | .300  | .196  | .125  | .107  | .086  |
| mm               | 39.7  | 21.44 | 49.99 | 70.64 | 15.62 | 28.96 | 15.62 | 2.16  | 7.62  | 4.97  | 3.18  | 2.71  | 2.18  |

**Series CMC Standard Resistance Values**

**Stock Values (Ohms)**

**Series CMC-5/RE60G\***

|      |     |      |     |     |      |
|------|-----|------|-----|-----|------|
| .100 | 1.5 | 5.11 | 30  | 200 | 750  |
| .200 | 2.0 | 10   | 40  | 250 | 1K   |
| .499 | 3.0 | 15   | 50  | 300 | 1.5K |
| .500 | 4.0 | 20   | 100 | 400 | 2K   |
| 1.00 | 5.0 | 25   | 150 | 500 | 2.5K |

**Series CMC-10/RE65G\***

|     |    |    |     |      |      |      |
|-----|----|----|-----|------|------|------|
| .5  | 4  | 25 | 100 | 400  | 2K   | 4.5K |
| 1   | 5  | 30 | 150 | 500  | 2.5K | 5K   |
| 1.5 | 10 | 40 | 200 | 750  | 3K   |      |
| 2   | 15 | 50 | 250 | 1K   | 3.5K |      |
| 3   | 20 | 75 | 300 | 1.5K | 4K   |      |

**Series CMC-25/RE70G\***

|    |     |    |    |     |      |     |
|----|-----|----|----|-----|------|-----|
| .1 | 1.5 | 8  | 25 | 100 | 500  | 5K  |
| .3 | 2   | 10 | 30 | 150 | 750  | 10K |
| .5 | 3   | 12 | 40 | 200 | 1K   |     |
| .7 | 5   | 15 | 50 | 250 | 1.5K |     |
| 1  | 6   | 20 | 75 | 300 | 3K   |     |

**Series CMC-50/RE75G\***

|    |   |    |     |      |     |
|----|---|----|-----|------|-----|
| .1 | 2 | 10 | 75  | 500  | 3K  |
| .3 | 3 | 15 | 100 | 750  | 5K  |
| .5 | 4 | 25 | 150 | 1K   | 10K |
| .7 | 5 | 30 | 200 | 1.5K | 15K |
| 1  | 8 | 50 | 250 | 2K   | 25K |

*Note:*

*\*Units are dual marked with both commercial and military part numbers.*

**Series CMC How To Order**

**Commercial**

Clarostat Series + Resistance Value = Part Number

Example:

5 watts + 10 ohm = CMC5-10

**Military**

Military Designator + wattage + temperature characteristic + resistance value + resistance tolerance = part number

Example:

If 5 watts; RE60 + G + 10R0 + F = RE60G10R0F

RE=Military Designator

60=Wattage

G=Temperature Characteristic

100=Resistance Value

F=Resistance Tolerance