

# Metal Film Resistors, Axial, Special Purpose, Fusible, Flameproof


**FEATURES**

- Special filming and coating processes
- Fusible - circuit protection in case of other component failure
- Flameproof - meets EIA RS-325, will not flame when overloaded
- Tape and reel packaging is standard
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS\***  
Available

**Note**

\* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

**STANDARD ELECTRICAL SPECIFICATIONS**

| GLOBAL MODEL | HISTORICAL MODEL | POWER RATING<br>$P_{70^\circ\text{C}}$<br>W | RESISTANCE RANGE <sup>(1)</sup><br>$\Omega$ | TOLERANCE<br>$\pm \%$ | TEMPERATURE COEFFICIENT<br>$\pm \text{ppm}/^\circ\text{C}$ |
|--------------|------------------|---|---|-----------------------|--|
| CMF55..39    | CMF-55-39        | 0.25  | 4 to 10K                                    | 1                     | 100  |
| CMF60..64    | CMF-60-64        | 0.50  | 4 to 23K                                    | 1                     | 100  |
| CMF70..5     | CMF-70-5         | 1.5   | 4 to 30K                                    | 1                     | 100  |

**Note**

<sup>(1)</sup> Contact factory for extended values

**TECHNICAL SPECIFICATIONS**

| PARAMETER                   | UNIT             | CMF55..39      | CMF60..64      | CMF70..5       |
|-----------------------------|------------------|----------------|----------------|----------------|
| Rated Dissipation at 70 °C  | W                | 0.25           | 0.50           | 1.5            |
| Maximum Flame Test Voltage  | $V_{\text{RMS}}$ | 350            | 500            | 1000           |
| Dielectric Strength         | $V_{\text{AC}}$  | 450            | 750            | 900            |
| Insulation Resistance       | $\Omega$         | $\geq 10^{10}$ | $\geq 10^{10}$ | $\geq 10^{10}$ |
| Operating Temperature Range | $^\circ\text{C}$ | -65/+165       | -65/+165       | -65/+165       |
| Weight (Max.)               | g                | 0.28           | 0.50           | 1.30           |

**GLOBAL PART NUMBER INFORMATION**

Global Part Numbering: **CMF55100R00FKRE39** (preferred part numbering format)

C M F 5 5 1 0 0 R 0 0 F K R E 3 9

| GLOBAL MODEL                                 | RESISTANCE VALUE  | TOLERANCE CODE        | TEMP. COEFFICIENT  | PACKAGING  | SPECIAL   |
|--|---|-----------------------|--------------------|--|---|
| <b>CMF55</b><br><b>CMF60</b><br><b>CMF70</b> | <b>R</b> = $\Omega$<br><b>K</b> = $\text{k}\Omega$<br><b>4R0000</b> = 4.0 $\Omega$<br><b>680R00</b> = 680 $\Omega$<br><b>23K000</b> = 23 $\text{k}\Omega$ | <b>F</b> = $\pm 1 \%$ | <b>K</b> = 100 ppm | <b>EK</b> = lead (Pb)-free, bulk<br><b>EA</b> = lead (Pb)-free, T/R (full)<br><b>EB</b> = lead (Pb)-free, T/R (1000 pieces; except 70's)<br><b>BF</b> = tin/lead, bulk<br><b>RE</b> = tin/lead, T/R (full; except 70's)<br><b>CP</b> = tin/lead, T/R (full; 70's only)<br><b>R6</b> = tin/lead, T/R (1000 pieces; except 70's) | <b>39</b> = fusible CMF 55<br><b>64</b> = fusible CMF60<br><b>5</b> = fusible CMF70 |

Historical Part Number example: **CMF-55-39100F R36** (will continue to be accepted)

|                  |                  |                |           |
|------------------|------------------|----------------|-----------|
| CMF-55-39        | 1000             | F              | R36       |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

**Note**

- For additional information on packaging, refer to the Through Hole Resistor Packaging document ([www.vishay.com/doc?31544](http://www.vishay.com/doc?31544)).

**DIMENSIONS** in inches (millimeters)



**Note**

(1) Lead length for product in bulk pack. For product supplied in tape and reel, the actual lead length would be based on the body size, tape spacing and lead trim.

| GLOBAL MODEL | A                               | B                              | C (Max.)         | D                              |
|--------------|---------------------------------|--------------------------------|------------------|--------------------------------|
| CMF55..39    | 0.240 ± 0.020<br>(6.10 ± 0.51)  | 0.090 ± 0.008<br>(2.29 ± 0.21) | 0.290<br>(7.37)  | 0.025 ± 0.002<br>(0.64 ± 0.05) |
| CMF60..64    | 0.370 ± 0.035<br>(9.40 ± 0.89)  | 0.145 ± 0.010<br>(3.68 ± 0.25) | 0.425<br>(10.80) | 0.032 ± 0.002<br>(0.81 ± 0.05) |
| CMF70..5     | 0.562 ± 0.031<br>(14.27 ± 0.79) | 0.230 ± 0.015<br>(5.84 ± 0.38) | 0.687<br>(17.54) | 0.032 ± 0.002<br>(0.81 ± 0.05) |

**MARKING**

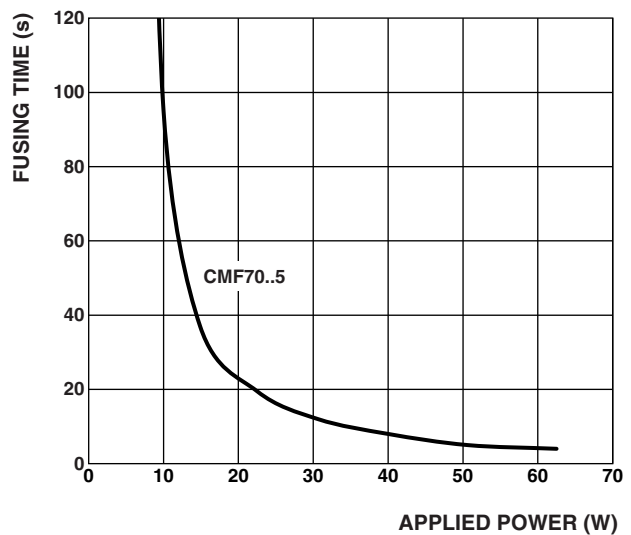
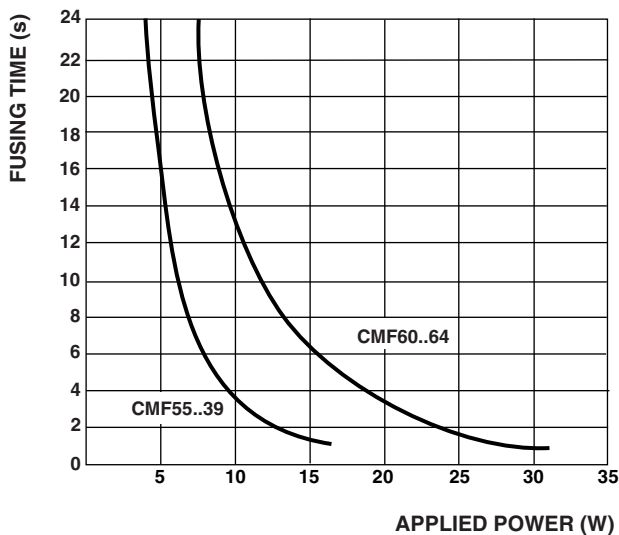
Model: C55-39 = CMF55-39, C60-64 = CMF60-64, C70-5 = CMF70-5  
 Temperature coefficient: T1 = 100 ppm

CMF55-39, CMF60-64, CMF70-5: (5 lines)

|         |                   |
|---------|-------------------|
| DALE    | Manufacturer      |
| C55-39  | Model             |
| 1.47 kΩ | Value             |
| 1 % T1  | Tolerance and TC  |
| 1130    | 4-digit date code |

**FUSIBLE, FLAMEPROOF**

(Typical Fusing Times)



**Note**

• Fusing time graphs represent an average for the resistance value range. Low resistance parts require higher power to fuse than high resistance parts. It is recommended that values less than 200 Ω be evaluated for specific applications.



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