



MODEL CCF-07 Metal Film Resistors

Industrial, $\pm 2\%$ and $\pm 5\%$ Tolerance



FEATURES

- 1/4 watt at + 70°C power rating. Dual rated for 1/2 watt.
- $\pm 2\%$ and $\pm 5\%$ tolerance
- $\pm 100\text{PPM}/^\circ\text{C}$ and $\pm 200\text{PPM}/^\circ\text{C}$ temperature coefficient
- Tape and reel packaging for automatic insertion (52.4mm inside tape spacing per EIA-296-E).
- Flame retardant epoxy conformal coating
- Standard 4 band color code marking for ease of identification after mounting

ELECTRICAL SPECIFICATIONS

Resistance Range:

10 ohm to 1 Megohm for $\pm 2\%$ tolerance.
10 ohm to 2 Megohm for $\pm 5\%$ tolerance.

Resistance Tolerance: $\pm 2\%$ and $\pm 5\%$.

Temperature Coefficient: (- 65°C to + 150°C)

$\pm 100\text{PPM}/^\circ\text{C}$ for 10 ohm to 1 Megohm, $\pm 2\%$ tolerance.
 $\pm 200\text{PPM}/^\circ\text{C}$ for 1.1 Megohm to 2 Megohm, $\pm 5\%$ tolerance.

Power Rating: 1/4 watt and 1/2 watt at + 70°C.

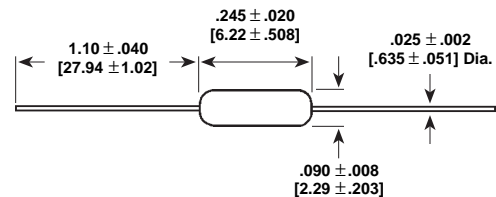
Maximum Working Voltage: 250 V RMS.

Insulation Resistance: 10,000 Megohm.

Operating Temperature Range: - 65°C to + 150°C.

DIMENSIONAL CONFIGURATIONS

[Numbers in brackets indicate millimeters]



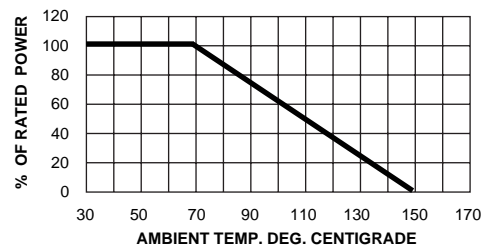
ENVIRONMENTAL PERFORMANCE

TEST*	MAXIMUM ΔR
Thermal Shock	$\pm 1.0\%$
Short Time Overload	$\pm 0.5\%$
Low Temperature Operation	$\pm 0.5\%$
Moisture Resistance	$\pm 1.5\%$
Resistance to Soldering Heat	$\pm 0.5\%$
Shock	$\pm 0.5\%$
Vibration	$\pm 0.5\%$
Terminal Strength	$\pm 0.5\%$
Dielectric Withstanding Voltage	$\pm 0.5\%$
Life	$\pm 1.5\%^{**}$

* Test Methods per MIL-STD-202.

** Life ΔR is $\pm 2.0\%$ for 1/2 watt rating.

DERATING



PART MARKING

— Colorband

RESISTANCE VALUES

Dale® Model CCF-07 is available in the standard 24 resistance values per decade. Values are obtained from the following decade table by multiplying by powers of 10. As an example: 24 can represent 24 ohm, 240 ohm, 2.4 kilohm, 24 kilohm or 240 kilohm.

10	18	33	56
11	20	36	62
12	22	39	68
13	24	43	75
15	27	47	82
16	30	51	91

HOW TO ORDER

CCF-07
MODEL

241
RESISTANCE

First two digits are significant figures. Last digit specifies the number of zeros to follow.

G
TOLERANCE

G = $\pm 2\%$
J = $\pm 5\%$