

Metal Film Resistors, Industrial, ± 2 % and ± 5 % Tolerance



FEATURES

- 0.25 watt at + 70 °C power rating
Dual rated for 0.5 watt
- ± 2 % and ± 5 % tolerance
- ± 100 ppm/°C and ± 200 ppm/°C temperature coefficient
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- Flame retardant epoxy conformal coating
- Standard 4 band color code marking for ease of identification after mounting
- Lead-(Pb)-free version is RoHS compliant



RoHS* COMPLIANT

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | |
|------------------------------------|------------------|-----------------------------------------|----------------------------------------------------|--------------------------------------|----------------|--------------------------|----------|
| GLOBAL MODEL | HISTORICAL MODEL | POWER RATING P _{70 °C} W | LIMITING ELEMENT VOLTAGE MAX. V _≅ | TEMPERATURE COEFFICIENT ppm/°C | TOLERANCE % | RESISTANCE RANGE Ω | E-SERIES |
| CCF07 | CCF-07 | 0.25 / 0.5 | 250 | ± 100 | ± 2, ± 5 | 10R - 1M | 24 |
| CCF07 | CCF-07 | 0.25 / 0.5 | 250 | ± 200 | ± 5 | 1.1M - 2M | 24 |

| TECHNICAL SPECIFICATIONS | | |
|-------------------------------|------------------|--------------------|
| PARAMETER | UNIT | CCF07 |
| Rated Dissipation at 70 °C | W | 0.25 / 0.5 |
| Maximum Working Voltage | V _≅ | ≤ 250 |
| Insulation Voltage (1 min) | V _{eff} | 500 |
| Dielectric Strength | VAC | 450 |
| Insulation Resistance | Ω | ≥ 10 ¹¹ |
| Operating Temperature Range | °C | - 65 / + 150 |
| Terminal Strength (pull test) | lb | 2 |
| Weight | g | 0.35 max |

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CCF07240RGK R 3 6

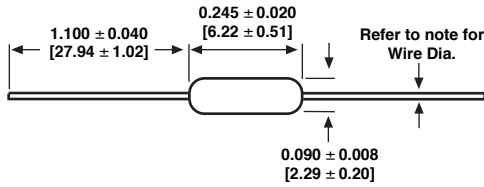
| | | | | | | | | | | | | | | | | |
|--------------|---|---------------------------------------------------------------------------------------------|---|---|---|------------------------|---|----------------------------|---|-------------------------------------------------------------------|---|---|--------------------------------------------------------------------------|--|--|--|
| C | C | F | 0 | 7 | 2 | 4 | 0 | R | G | K | R | 3 | 6 | | | |
| GLOBAL MODEL | | RESISTANCE VALUE | | | | TOLERANCE CODE | | TEMPERATURE COEFFICIENT | | PACKAGING | | | SPECIAL | | | |
| CCF07 | | R = Decimal K = Thousand M = Million 10R0 = 10 Ω 680K = 680K Ω 2M00 = 2.0M Ω | | | | G = ± 2 % J = ± 5 % | | K = 100 ppm N = 200 ppm | | E36 = Lead free, T/R (5000 pcs) R36 = Tin/Lead, T/R (5000 pcs) | | | Blank = Standard (Dash Number) (up to 3 digits) from 1-999 as applicable | | | |

Historical Part Number example: CCF-07241G (will continue to be accepted)

| | | | |
|------------------|------------------|----------------|-----------|
| CCF-07 | 241 | G | R36 |
| HISTORICAL MODEL | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |

* Pb containing terminations are not RoHS compliant, exemptions may apply

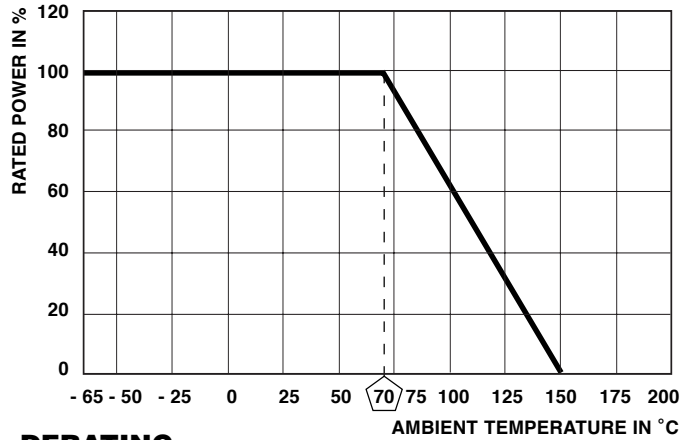
DIMENSIONS in inches [millimeters]



*Note: Wire Dia.

CCF07 (Sn/Pb) = 0.025 ± 0.002 [0.64 ± 0.05]

CCF07 (Sn) = 0.023 ± 0.002 [0.60 ± 0.05]



DERATING

| MARKING | |
|----------------|--|
| - Color band | |

| RESISTANCE VALUES | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|
| Vishay Dale Model CCF07 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 kohm, 24 kohm or 240 kohm. | | | |
| 10 | 18 | 33 | 56 |
| 11 | 20 | 36 | 62 |
| 12 | 22 | 39 | 68 |
| 13 | 24 | 43 | 75 |
| 15 | 27 | 47 | 82 |
| 16 | 30 | 51 | 91 |

| PERFORMANCE | |
|---------------------------------|-----------------------------|
| TEST* | MAX. ΔR (Typical Test Lots) |
| Thermal Shock | ± 1.0 % |
| Short Time Overload | ± 0.5 % |
| Low Temperature Operation | ± 0.5 % |
| Moisture Resistance | ± 1.5 % |
| Resistance to Soldering Heat | ± 0.5 % |
| Shock / Bump | ± 0.5 % |
| Vibration | ± 0.5 % |
| Terminal Strength | ± 0.5 % |
| Dielectric Withstanding Voltage | ± 0.5 % |
| Life | ± 1.5 %** |

* Test Methods per MIL-STD-202G/IEC 60115/DIN EN 140000 (as applicable).

** Life ΔR is ± 2.0 % for 1/2 watt rating.



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