

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



FEATURES

- Dual power rating:
 $P_{70} = 0.25 \text{ W}$ with 1.5 % stability
 $P_{70} = 0.50 \text{ W}$ with 2.0 % stability
- ± 2 % and ± 5 % tolerance
- Temperature coefficient: ± 100 ppm/K and ± 200 ppm/K
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- Flame retardant epoxy conformal coating (red brown color)
- Standard 4 band color code marking for ease of identification after mounting
- Pure tin plating provides compatibility with lead (Pb)-free and lead containing soldering processes
- Compliant to RoHS directive 2002/95/EC



RoHS
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

| PRODUCT | RATED DISSIPATION P_{70} W | LIMITING ELEMENT VOLTAGE MAX. V_{\equiv} | TEMPERATURE COEFFICIENT ppm/K | TOLERANCE % | RESISTANCE RANGE Ω | E-SERIES |
|---------|------------------------------------|--|-------------------------------------|----------------|---------------------------------|----------|
| CCF07 | 0.25/0.5 | 250 | ± 100 | ± 2, ± 5 | 10 Ω to 1 M Ω | E24 |
| CCF07 | 0.25/0.5 | 250 | ± 200 | ± 5 | 1.1 M Ω to 2 M Ω | E24 |

TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | CCF07 |
|------------------------------------|--------------|--------------------|
| Rated Dissipation, P_{70} | W | 0.25/0.5 |
| Maximum Working Voltage, U_{max} | V_{\equiv} | ≤ 250 |
| Insulation Voltage (1 Min) | V_{eff} | 500 |
| Dielectric Strength | V_{AC} | 450 |
| Insulation Resistance | Ω | ≥ 10 ¹¹ |
| Operating Temperature Range | °C | - 65 to + 150 |
| Terminal Strength (Pull Test) | lb | 2 |
| Weight | g | 0.35 max. |

PART NUMBER AND PRODUCT DESCRIPTION

Part Number: CCF07240RGK E36

C C F 0 7 2 4 0 R G K E 3 6

| PRODUCT | RESISTANCE VALUE | TOLERANCE CODE | TEMPERATURE COEFFICIENT | PACKAGING | SPECIAL |
|---------|--|------------------------|--------------------------------|---|---|
| CCF07 | R = Decimal K = Thousand M = Million 10R0 = 10 Ω 680K = 680 k Ω 2M00 = 2.0 M Ω | G = ± 2 % J = ± 5 % | K = 100 ppm/K N = 200 ppm/K | E36 = Lead (Pb)-free T/R (5000 pieces) | Blank = Standard (dash number) (up to 3 digits) From 1 to 999 as applicable |

DIMENSIONS in inches (millimeters)



MARKING

The nominal resistance and tolerance are marked on the resistor using four colored bands in accordance with IEC 60062, marking codes for resistors and capacitors.

RESISTANCE VALUES

Vishay 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 Ω , 240 Ω , 2.4 k Ω , 24 k Ω or 240 k Ω .

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

TECHNICAL SPECIFICATIONS

| TEST ⁽¹⁾ | Max. ΔR (Typical Test Lots) |
|---------------------------------|-------------------------------------|
| 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/Bump | $\pm 0.5\%$ |
| Vibration | $\pm 0.5\%$ |
| Terminal Strength | $\pm 0.5\%$ |
| Dielectric Withstanding Voltage | $\pm 0.5\%$ |
| Life | $\pm 1.5\%$ ⁽²⁾ |

Notes

- ⁽¹⁾ Test specifications as per IEC 60115-1
- ⁽²⁾ Life ΔR is $\pm 2.0\%$ for 1/2 W rating



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