

Metal Film Resistors, Industrial Power, Flameproof



FEATURES

- Small size suitable for 1/2 W, 1 W and 2 W applications
- High power rating, small size
- Flameproof, high temperature coating meets EIA RS-325-A
- Excellent high frequency characteristics
- Low noise
- Low voltage coefficient
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- Halogen-free according to IEC 61249-2-21 definition
- Compliant to RoHS directive 2002/95/EC



RoHS*
COMPLIANT
HALOGEN
FREE

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{70\text{ }^\circ\text{C}}$ W	MAXIMUM WORKING VOLTAGE (1) V	TEMPERATURE COEFFICIENT \pm ppm/°C	TOLERANCE \pm ppm/°C	RESISTANCE RANGE Ω	E-SERIES
CCF02	CCF-2	2.0	350	100	1, 5	4.99 to 1M	96 for 1 % tolerance 24 for 5 % tolerance

Note

(1) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CCF02
Rated Dissipation at 70 °C	W	2.0
Maximum Working Voltage	V	\leq 350
Insulation Voltage (1 Min)	V_{eff}	$>$ 500
Dielectric Strength	V_{AC}	900
Insulation Resistance	Ω	$\geq 10^{11}$
Operating Temperature Range	°C	- 65/+ 230
Terminal Strength (Pull Test)	lb	2
Failure Rate	$10^{-9}/\text{h}$	$<$ 1
Weight (Max.)	g	0.35

MATERIAL SPECIFICATIONS

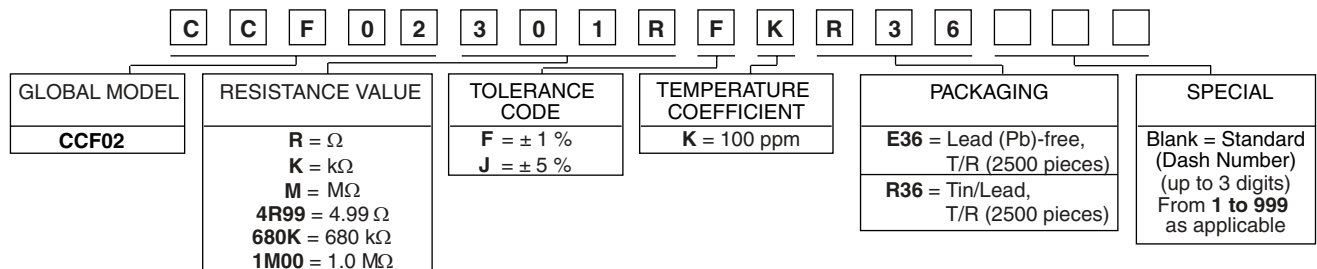
Element	Proprietary nickel-chrome film
Solderability	Satisfactory per MIL-STD-202, Method 208.
Core	Fire-cleaned high purity ceramic
Termination	Standard lead material is solder-coated copper. Solderable and weldable per MIL-STD-1276, Type C.

MARKING

- 5 band colorband for \pm 1 %
- 4 band colorband for \pm 5 %

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CCF02301RFKR36 (preferred part numbering format)

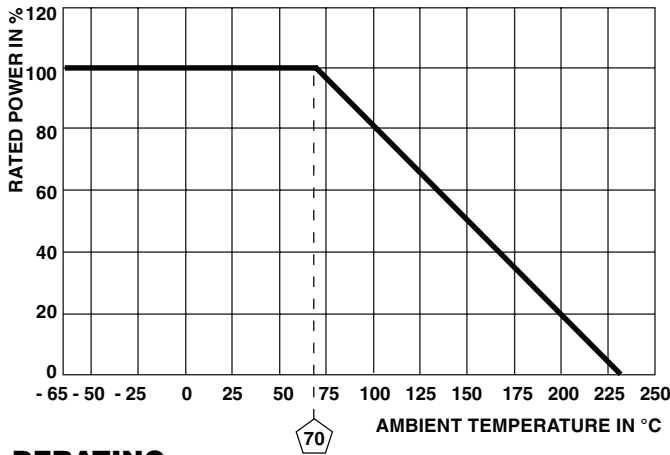
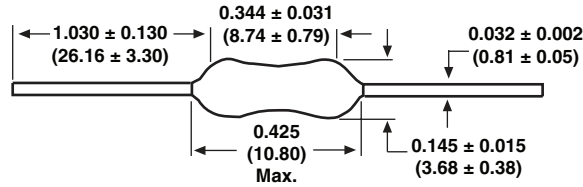


Historical Part Number example: CCF-23010F (will continue to be accepted)



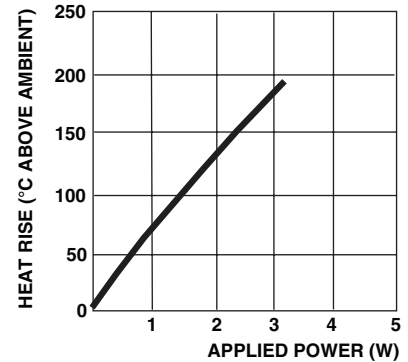
* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS in inches (millimeters)



Surface temperatures were taken with an infrared pyrometer in + 25 °C still air.

Resistors were supported by their leads in test clips at a point 0.5" (12.70 mm) out from the resistor body ends.



DERATING

THERMAL RESISTANCE

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	± 0.5 %
Vibration	± 0.5 %
Terminal Strength	± 0.5 %
Dielectric Withstanding Voltage	± 0.5 %
Life	± 2.0 %



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