Metal Film Resistors, Industrial Power, Precision, Flameproof

FEATURES

- High power rating, small size
- Flameproof, high temperature coating
- Special filming and coating processes
- Excellent high frequency characteristics
- Low noise
- Low voltage coefficient
- Compliant to RoHS directive 2002/95/EC

Pb-free Available

RoHS* COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{70\,°C}$ W	MAXIMUM WORKING VOLTAGE (1) V	RESISTANCE RANGE Ω					
				0.1 % to 1 %	0.1 % to 5 %	0.5 % to 5 %	1 % to 5 %	1 %	2 % to 5 %
				± 25 ppm/°C	± 50 ppm/°C	± 100 ppm/°C	± 150 ppm/°C	± 200 ppm/°C	± 200 ppm/°C
CPF1	CPF-1	1	250	5 to 150K	5 to 150K	1 to 150K	0.5 to 150K	0.5 to 150K	0.1 to 150K
CPF2	CPF-2	2	350	5 to 150K	5 to 150K	1 to 150K	0.5 to 150K	0.5 to 150K	0.1 to 150K
CPF3	CPF-3	3	500	8 to 150K	8 to 150K	1 to 150K	1 to 150K	1 to 150K	0.1 to 150K

Notes

- Marking: Print marked - DALE, model, resistance value, tolerance/temperature coefficient, date code

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

TEMPERATURE COEFFICIENT CODES

GLOBAL TC CODE	HISTORICAL TC CODE	TEMPERATURE COEFFICIENT
E	T-9	25 ppm/°C
H	T-2	50 ppm/°C
K	T-1	100 ppm/°C
L	T-0	150 ppm/°C
N	T-00	200 ppm/°C

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CPF1	CPF2	CPF3
Rated Dissipation at 70 °C	W	1	2	3
Limiting Element Voltage (1)	V≅	250	350	500
Insulation Voltage	V-	900	900	900
Thermal Resistance	K/W	85	60	50
Insulation Resistance	Ω	10^{10}		
Category Temperature Range	°C	- 65 °C/+ 230 °C		

Note

(1) Rated voltage $\sqrt{P \times R}$

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CPF1562R00FKR36 (preferred part numbering format)

C	P	F	1	5	6	2	R	0	0	F	K	R	3	6			

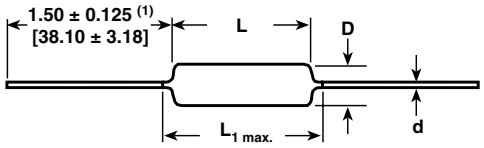
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	TEMPERATURE COEFFICIENT	PACKAGING	SPECIAL
CPF1 **CPF2** **CPF3**	**R** = Ω **K** = kΩ **R10000** = 0.1 Ω **10R000** = 10 Ω **150K00** = 150 kΩ	**B** = ± 0.1 % **C** = ± 0.25 % **D** = ± 0.5 % **F** = ± 1 % **G** = ± 2 % **J** = ± 5 %	**E** = 25 ppm **H** = 50 ppm **K** = 100 ppm **L** = 150 ppm **N** = 200 ppm	**E14** = Lead (Pb)-free, bulk **E36** = Lead(Pb)-free, T/R (full) **EE6** = Lead (Pb)-free, T/R (1000 pieces) **B14** = Tin/lead, bulk **R36** = Tin/lead, T/R (full) **RE6** = Tin/lead, T/R (1000 pieces)	Blank = Standard (Dash Number) (Up to 3 digits) From **1 to 999** as applicable

Historical Part Number example: CPF-15620FT-1 R36 (will continue to be accepted)

CPF-1	5620	F	T-1	R36
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	TEMP. COEFFICIENT	PACKAGING

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

DIMENSIONS

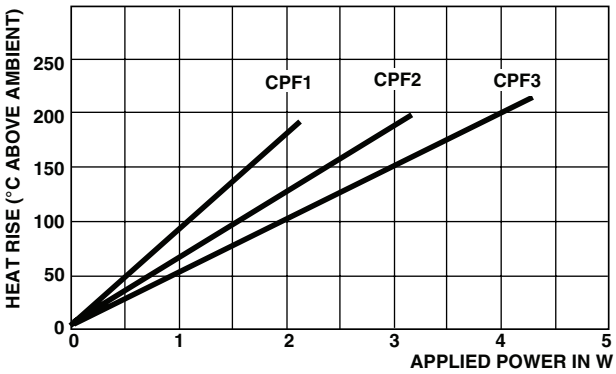


Notes

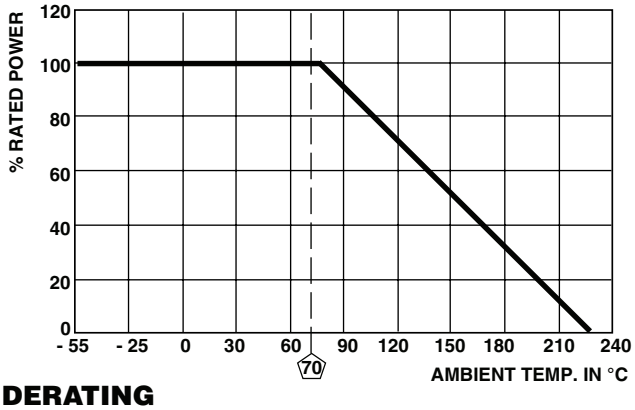
(1) 1.08 ± 0.125 (27.43 ± 3.18) if tape and reel

- 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 0.500" (12.70 mm) out from the resistor body ends.

GLOBAL MODEL	DIMENSIONS in inches (millimeters)			
	L	D	$L_{1\ max.}$	d
CPF1	0.240 ± 0.020 (6.10 ± 0.51)	0.090 ± 0.008 (2.29 ± 0.20)	0.310 (7.87)	0.025 ± 0.002 (0.64 ± 0.05)
CPF2	0.344 ± 0.031 (8.74 ± 0.79)	0.145 ± 0.015 (3.68 ± 0.38)	0.425 (10.80)	0.032 ± 0.002 (0.81 ± 0.05)
CPF3	0.555 ± 0.041 (14.10 ± 1.04)	0.180 ± 0.015 (4.57 ± 0.381)	0.650 (16.51)	0.032 ± 0.002 (0.81 ± 0.05)



THERMAL RESISTANCE



DERATING

MATERIAL SPECIFICATIONS	
Element	Proprietary nickel-chrome alloy
Core	Cleaned high purity ceramic
Coating	Special high temperature conformal coat
Termination	Standard lead material is solder-coated Solderable and weldable per MIL-STD-1276, Type C

MECHANICAL SPECIFICATIONS	
Terminal Strength	2 pound pull test
Solderability	Continuous satisfactory coverage when tested in accordance with MIL-STD-202, Method 208

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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