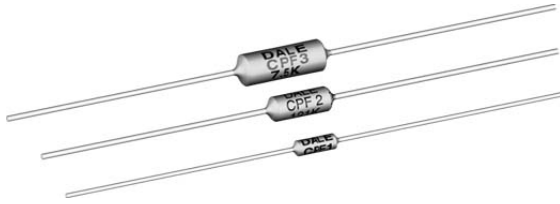


# Metal Film Resistors, Industrial, Power, Flameproof



## FEATURES

- High power rating, small size
- Flameproof, high temperature coating
- Special filming and coating processes
- Excellent high frequency characteristics
- Low noise
- Low voltage coefficient
- Lead (Pb)-Free Version is RoHS Compliant



RoHS\*  
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS									
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING P <sub>70°C</sub> W	LIMITING ELEMENT VOLTAGE MAX V <sub>≅</sub>	RESISTANCE RANGE Ω					
				0.1% - 1% 25ppm	0.1% - 5% 50ppm	0.5% - 5% 100ppm	1% - 5% 150ppm	1% 200ppm	2% - 5% 200ppm
CPF1	CPF-1	1	250	5 - 150K	5 - 150K	1 - 150K	R5 - 150K	R5 - 150K	R1 - 150K
CPF2	CPF-2	2	350	5 - 150K	5 - 150K	1 - 150K	R5 - 150K	R5 - 150K	R1 - 150K
CPF3	CPF-3	3	500	8 - 150K	8 - 150K	1 - 150K	1 - 150K	1 - 150K	R1 - 150K

• Marking: Print marked - DALE, Model, Resistance value, Tolerance / Temperature Coefficient, Date Code

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 <sup>1)</sup>	V <sub>≅</sub>	250	350	500
Insulation Voltage	V-	900	900	900
Thermal Resistance	K/W	85	60	50
Insulation Resistance	Ω	10 <sup>10</sup>		
Category Temperature Range	°C	- 65°C / + 230°C		

<sup>1)</sup>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			
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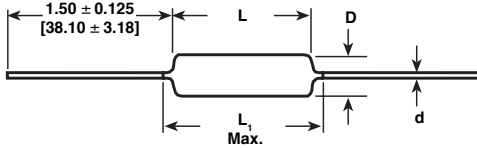
GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	TEMPERATURE COEFFICIENT	PACKAGING	SPECIAL
CPF1 CPF2 CPF3	R = Decimal K = Thousand R10000 = 0.1Ω 10R000 = 10Ω 150K00 = 150KΩ	B = ± 0.1% C = ± 0.25% D = ± 0.5% F = ± 1% G = ± 2% J = ± 5%	E = 25ppm H = 50ppm K = 100ppm L = 150ppm N = 200ppm	E14 = Lead Free, Bulk E36 = Lead Free, T/R (Full) EE6 = Lead Free, T/R (1000 pcs) B14 = Tin/Lead, Bulk R36 = Tin/Lead, T/R (Full) RE6 = Tin/Lead, T/R (1000 pcs)	Blank = Standard (Dash Number) (up to 3 digits) From 1-999 as applicable

Historical Part Number example: CPF-15620FT-1 (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.

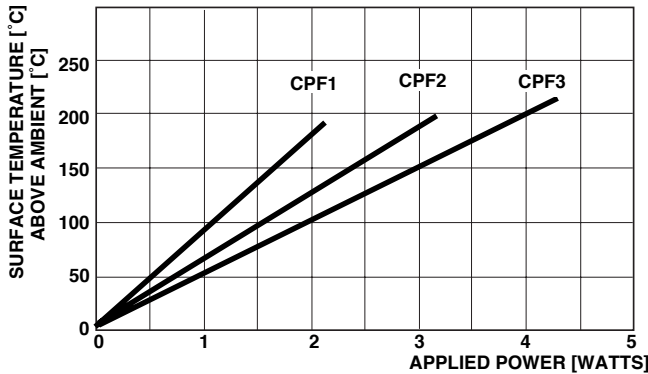
**DIMENSIONS**



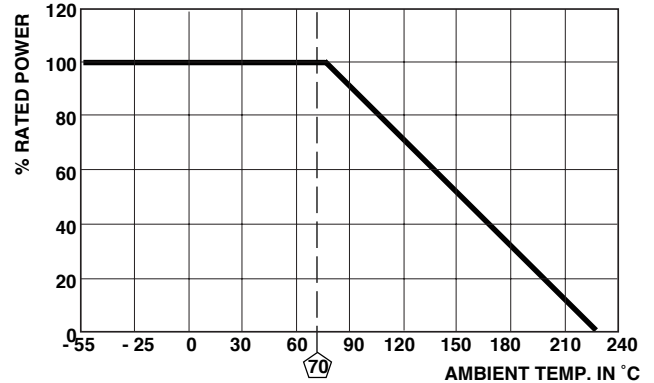
\* 1.08 ± 0.125 [27.43 ± 3.18] IF TAPE AND REEL

GLOBAL MODEL	DIMENSIONS in inches [millimeters]			
	L	D	L <sub>1</sub> (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]

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 .500" [12.70mm] out from the resistor body ends.



**SURFACE TEMPERATURE VS POWER**



**DERATING**

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

MECHANICAL SPECIFICATIONS	
<b>Terminal Strength:</b>	2 pound pull test.
<b>Solderability:</b>	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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