FPR 2-T218

FEATURES

- Resistances from 0.002Ohm to 20Ohms
- Power Rating to 30Watt
- Resistance Tolerances to ±0.25%
- TCR to ±50ppm/K
- Load Stability to 0.1%
- TO-218 (TO-247) Housing

Pb-free Available

RoHS* COMPLIANT

TABLE 1—SPECIFICATIONS

TYPE		FPR 2-T218				
Resistance Range		0.002 to 20 Ohms				
Power Rating	**Free air 65°C**	3 W				
	With heatsink	30 W				
Tolerances **from 0.002 Ohms** **from 0.01 Ohms** **from 0.02 Ohms**		1% / 2% / 5% 0.5% / 1% / 2% / 5% 0.25% / 0.5% / 1% / 2% / 5%				
Thermal Resistance		2.5 K/W				
Stability (1000h)		0.1% / 0.2% / 0.5% (depends on stress)				
Temperature Coefficient (ppm/K) **(20 to 60°C)**		R ≤ 0R005	R ≤ 0R010	R ≤ 0R050	R ≤ 0R500	R > 0R500
		±200	±150	±100	±50	±30
Voltage Proof		500 VAC				
Thermal EMF		<0.1 µV/K				
Operating Temperature Range		–40°C to 130°C				
Resistor Material		CuNiMn-Foil				
Substrate		Anodized aluminium				
Housing		PPS				
Connector Material		Cu / tinned				
Terminals		2				
Max. Torque		1 Nm				

ORDERING INFORMATION

Part Number - Resistance - Contact - Tolerance
FPR 2-T218 0R010 C 0.5%

FIGURE 1—TEMPERATURE COEFFICIENT

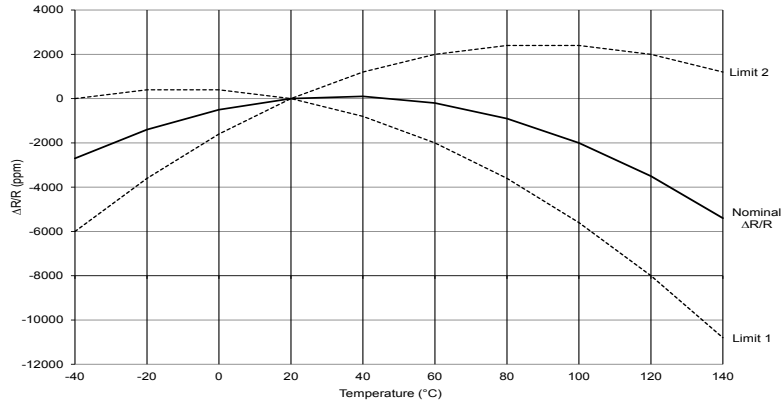
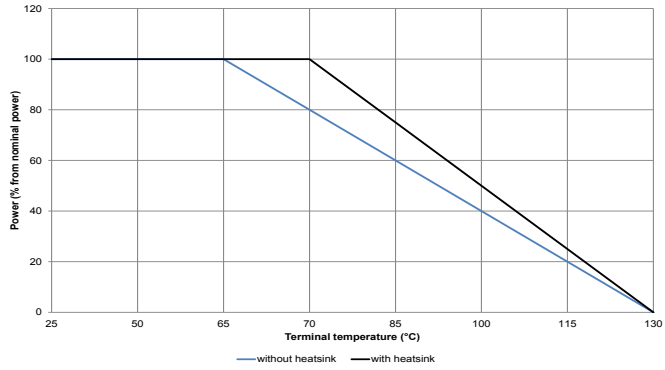


FIGURE 2—DERATING

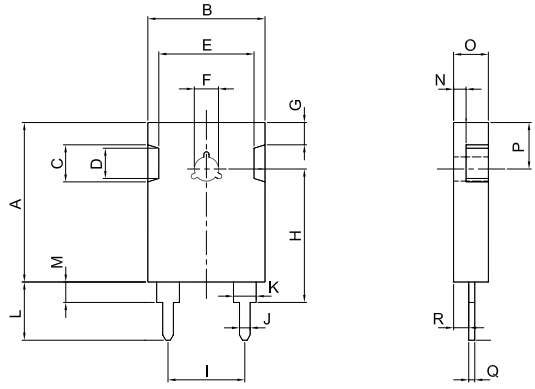


Power Rating Notes -
The FPR Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 130°C.
To specify an appropriate heatsink use the following formula :

$$R_{\theta H} = \frac{T_{MAX} - (P \times R_{\theta R}) - T_A}{P}$$

Where: $R_{\theta H}$ = Thermal Resistance of Heatsink (K/W)
$R_{\theta R}$ = Thermal Resistance of Resistor (K/W)
T_{MAX} = Maximum Temperature of Resistor
T_A = Ambient Temperature of Heatsink (°C)
P = Power Through Resistor (W)

FIGURE 3—DIMENSIONS in mm (inches)



Dimension	A-Contact	B-Contact	C-Contact
A ±0.2(±0.008)	21.10 (0.83)		
B ±0.2(±0.008)	15.50 (0.61)		
C ±0.1(±0.004)	4.90 (0.19)		
D ±0.1(±0.004)	4.00 (0.16)		
E ±0.2(±0.008)	12.60 (0.50)		
F ±0.1(±0.004)	Ø3.2 (Ø0.13)		
G ±0.1(±0.004)	2.95 (0.12)		
H ±0.2(±0.008)	17.65 (0.69)	16.85 (0.66)	17.75 (0.70)
I ±0.2(±0.008)	10.16 (0.40)		
J ±0.1(±0.004)	1.40 (0.06)		
K ±0.1(±0.004)	3.00 (0.12)		
L ±0.2(±0.008)	7.70 (0.30)	5.00 (0.20)	14.50 (0.57)
M ±0.1(±0.004)	2.70 (0.11)	1.90 (0.07)	2.80 (0.11)
N ±0.1(±0.004)	1.65 (0.06)		
O ±0.1(±0.004)	4.60 (0.18)		
P ±0.2(±0.008)	6.15 (0.24)		
Q ±0.1(±0.004)	0.80 (0.03)		
R ±0.1(±0.004)	2.00 (0.08)		

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