

**FEATURES**

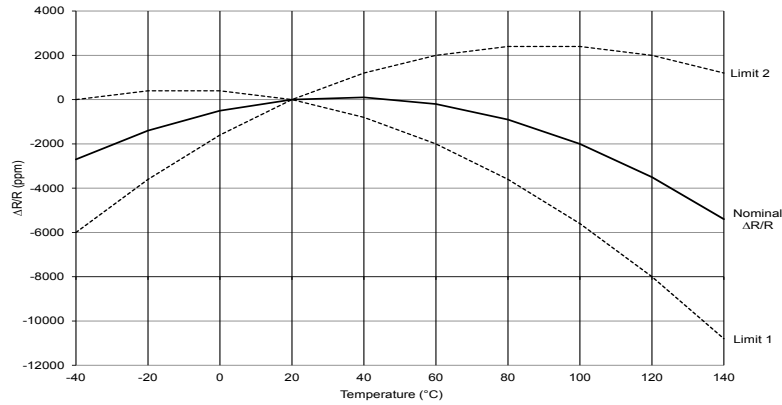
- Resistances from 0.002Ohm to 20Ohms
- Power Rating to 30Watt
- Resistance Tolerances to  $\pm 0.25\%$
- TCR to  $\pm 50\text{ppm/K}$
- Load Stability to 0.1%
- TO-218 (TO-247) Housing



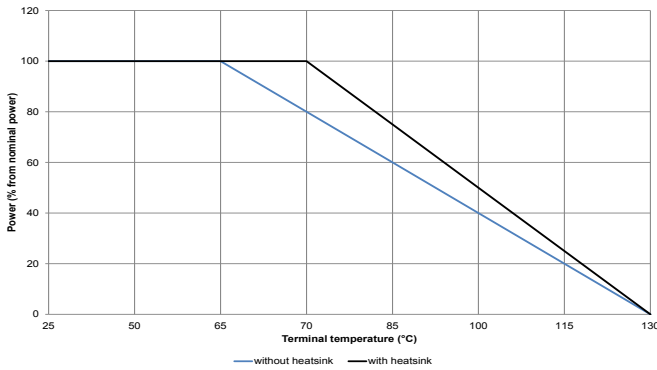
TABLE 1 – SPECIFICATIONS						
TYPE		FPR 2-T218				
Resistance Range		0.002 to 20 Ohms				
Power Rating	Free air 65°C	3 W				
	With heatsink	30 W				
Tolerances from 0.002 Ohms from 0.01 Ohms from 0.02 Ohms		1% / 2% / 5% 0.5% / 1% / 2% / 5% 0.25% / 0.5% / 1% / 2% / 5%				
Thermal Resistance		2.5 K/W				
Stability (1000h)		0.1% / 0.2% / 0.5% (depends on stress)				
Temperature Coefficient (ppm/K) (20 to 60°C)		R $\leq$ 0R005	R $\leq$ 0R010	R $\leq$ 0R050	R $\leq$ 0R500	R > 0R500
		$\pm 200$	$\pm 150$	$\pm 100$	$\pm 50$	$\pm 30$
Voltage Proof		500 VAC				
Thermal EMF		<0.1 $\mu\text{V/K}$				
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**



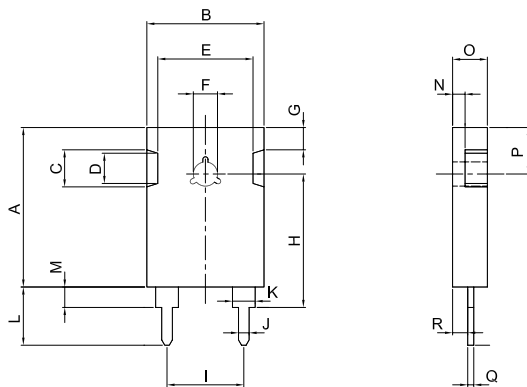
**Power Rating Notes -**

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)		∅3.2 (∅0.13)	
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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