FPR 2-T218

Precision Shunt Resistors

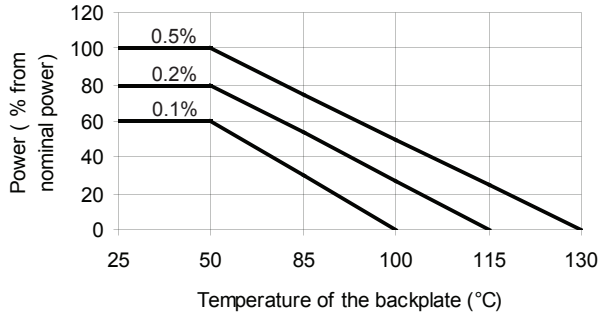


- **Resistances from 0.002 Ohm to 20 Ohms**
- **Power Rating to 30Watt**
- **Resistance Tolerances to ±0.25%**
- **TCR to ±30 ppm/°C**
- **Load Stability to 0.1%**
- **TO-218 (TO-247) Housing**

SPECIFICATIONS

Type	FPR 2-T218				
Resistance Range	0.002 to 20 Ohms				
Power rating free air 70°C with heatsink	 2 W 30 W				
Thermal Resistance	2.5 °C/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%				
Stability (1000h)	0.1% / 0.2% / 0.5% (depends on stress)				
Temperature Coefficient	R ≤ 0.005 Ohm	R ≤ 0.01 Ohm	R ≤ 0.05 Ohm	R ≤ 0.5 Ohm	R > 0.5 Ohm
	±200	±150	±100	±50	±30
Voltage Proof	300 VDC				
Thermal EMF	< 0.1µV/°C				
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				

Derating



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

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

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)

Ordering Information

Part Description: Part Type - Resistance - Contact - Tolerance
FPR 2-T218 0.068 Ohms C 0.5%

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SPECIFICATIONS (continued)

Temperature Coefficient

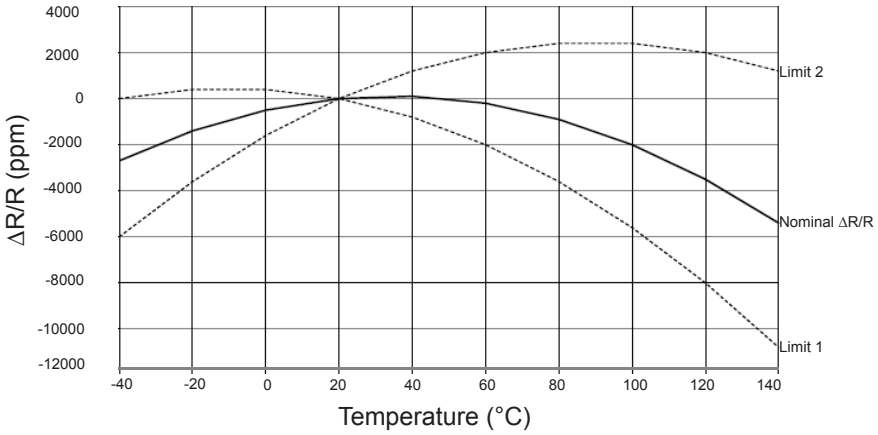
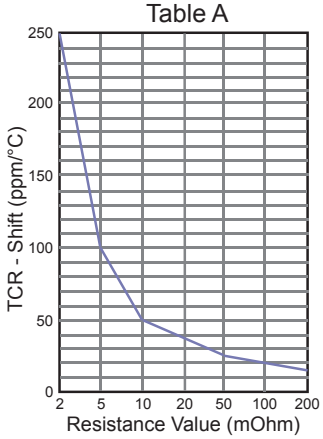
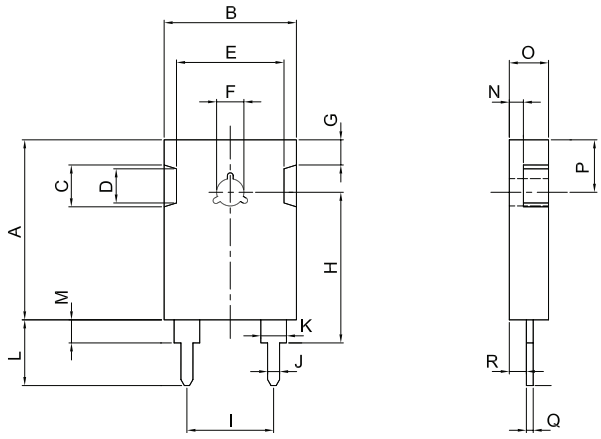


Table A



DIMENSIONS



Dimension	mm / tol.	inches / tol.	A - Contact	B - Contact	C - Contact
A	21.10 **± 0.2**	0.83 **± 0.008**	21.10 (0.83)		
B	15.50 **± 0.2**	0.61 **± 0.008**	15.50 (0.61)		
C	4.90 **± 0.1**	0.19 **± 0.004**	4.90 (0.19)		
D	4.00 **± 0.1**	0.16 **± 0.004**	4.00 (0.16)		
E	12.60 **± 0.2**	0.50 **± 0.008**	12.60 (0.50)		
F	Ø3.2 **± 0.1**	0.13 **± 0.004**	03.2 (0.13)		
G	2.95 **± 0.1**	0.12 **± 0.004**	2.95 (0.12)		
H	17.75 **± 0.2**	0.70 **± 0.008**	17.65 (0.69)	16.85 (0.66)	17.75 (0.70)
I	10.16 **± 0.2**	0.40 **± 0.008**	10.16 (0.40)		
J	1.40 **± 0.1**	0.06 **± 0.004**	1.40 (0.06)		
K	3.00 **± 0.1**	0.12 **± 0.004**	3.00 (0.12)		
L	14.50 **± 0.2**	0.57 **± 0.008**	7.70 (0.30)	5.00 (0.20)	14.50 (0.57)
M	2.80 **± 0.1**	0.11 **± 0.004**	2.70 (0.11)	1.90 (0.07)	2.80 (0.11)
N	1.65 **± 0.1**	0.06 **± 0.004**	1.65 (0.06)		
O	4.60 **± 0.1**	0.18 **± 0.004**	4.60 (0.18)		
P	6.15 **± 0.2**	0.24 **± 0.008**	6.15 (0.24)		
Q	0.80 **± 0.1**	0.03 **± 0.004**	0.80 (0.03)		
R	2.00 **± 0.1**	0.08 **± 0.004**	2.00 (0.08)		

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