FPR FNR 2-T227 4-T227

Foil Power Resistors

In Stock At Riedon

RIEDON



RoHS compliant

- **Resistances from 0.001Ohm to 100Ohms**
- **Power Rating to 80Watt**
- **Resistance Tolerances to ±0.1%**
- **TCR to ±15ppm/°C**
- **Load Stability to 0.1%**

SPECIFICATIONS

Type	FPR 2-T227	FPR 4-T227	FNR 2-T227	FNR 4-T227
Terminals	2	4 (kelvin connection)	2	4 (kelvin connection)
Resistance Range	0.01 to 100 Ohms	0.001 to 100 Ohms	0.01 to 100 Ohms	0.001 to 100 Ohms
Power Rating (with heatsink)	60W		80W	
Thermal Resistance Rthj-c	1.3 K/W		1.0 K/W	
Tolerances (depends on resistance)	0.1%[1] / 1% / 2% / 5% (others upon request)			
Stability	0.1% / 0.2% / 0.5% (depends on stress)			
Temperature Coefficient	±15 ppm/K (20 to 60°C) from R < 0.02 Ohms ±20 ppm/K (20 to 60°C) FPR 2-T227 / FNR 2-T227 TK Shift depends from resistance value (see graph next page)			
Voltage Proof	1.5 kV DC (higher upon request)			
Thermal EMF	< 1 µV/K			
Max. Current	45A (85A on request)		50A (100A on request)	
Operating Temperature	-40°C to 130°C			
Resistor Material	Metalfoil CuNiMn (DIN 17471)			
Substrate	Al_2O_3		AlN	
Housing	Epoxy			
Connector Material	Cu / tinned or nickel plated			
Max. Torque	backplate: 1.5Nm terminals: 1.3 Nm			

[1]Please inquire for low ohm values

Ordering Information

Part Description: Part Type - Resistance - Tolerance
FPR 2-T227 1.1 Ohms 1%

Riedon Inc. 300 Cypress Avenue Alhambra CA 91801 ☎ (626) 284-9901 (626) 284-1704
www.riedon.com

SPECIFICATIONS (continued)

Temperature Coefficient

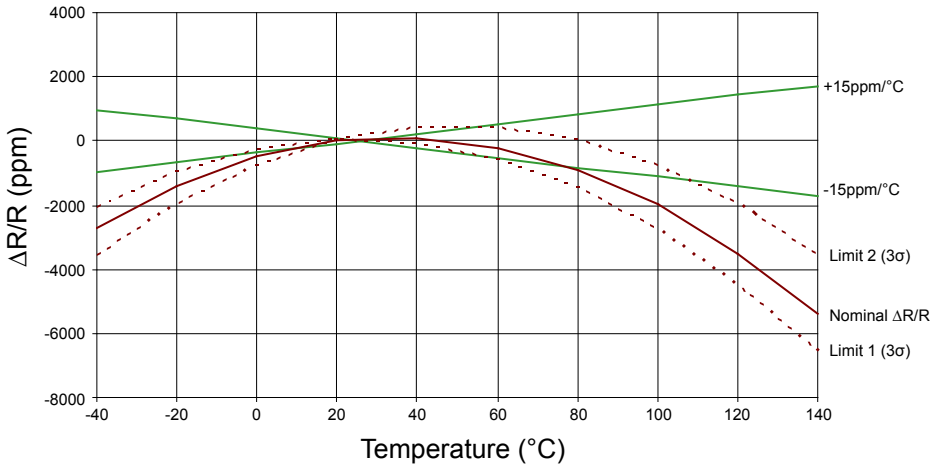
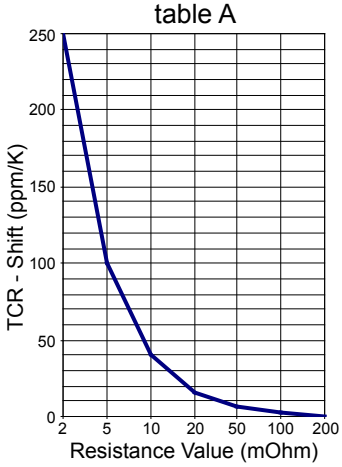
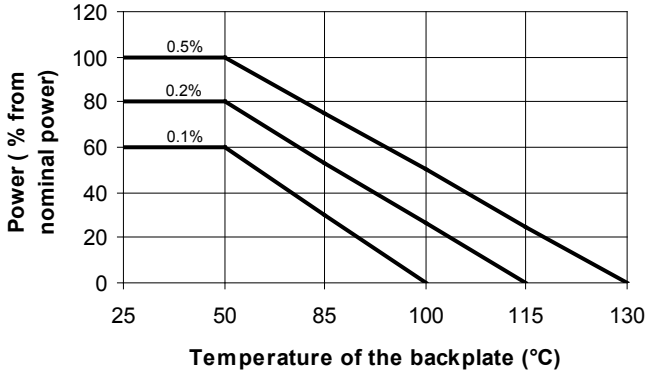


table A



Derating and Stability



Power Rating Notes -

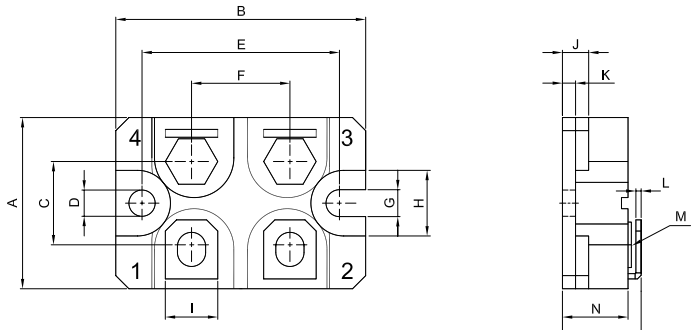
The FPR/FNR Series Foil Resistors must be attached to a suitable heatsink. The maximum internal resistor temperature is 130°C for a 0.5% stability part.

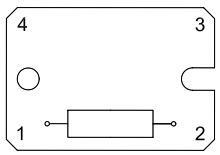
To specify an appropriate heatsink use the following formula :

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

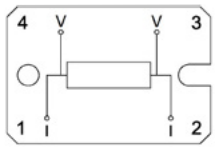
Where: $R_{\theta H}$ = Thermal Resistance of Heatsink (K/W)
$R_{\theta R}$ = Thermal Resistance of Resistor (K/W)
T_{MAX} = Maximum Temperature of Resistor
T_A = Ambient Temperature of Heatsink (°C)
P = Power Through Resistor (W)

Dimensions and Attachment Variations





FPR/FNR 2-T227



FPR/FNR 4-T227

Dimension	mm	tol. (±mm)	inches	tol. (±inches)
A	26	0.5	1.02	0.020
B	38	0.5	1.50	0.020
C	12.7	0.2	0.50	0.008
D	4	0.2	0.16	0.008
E	30	0.2	1.18	0.008
F	15	0.2	0.59	0.008
G	4.1	0.2	0.16	0.008
H	10	0.2	0.39	0.008
I	8	0.2	0.31	0.008
J	4	0.2	0.16	0.008
K	2	0.2	0.08	0.008
L	0.8	0.1	0.03	0.004
M	M4		M4	
N	10	0.2	0.39	0.008
O	11.9	0.2	0.47	0.008