

**FEATURES**

- Resistances from 0.002Ohm to 10Ohms
- Power Rating to 15Watt
- Resistance Tolerances to  $\pm 0.5\%$
- TCR to  $\pm 50\text{ppm/K}$
- Load Stability to 0.1%
- SMD D2Pak

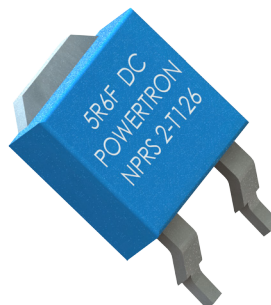
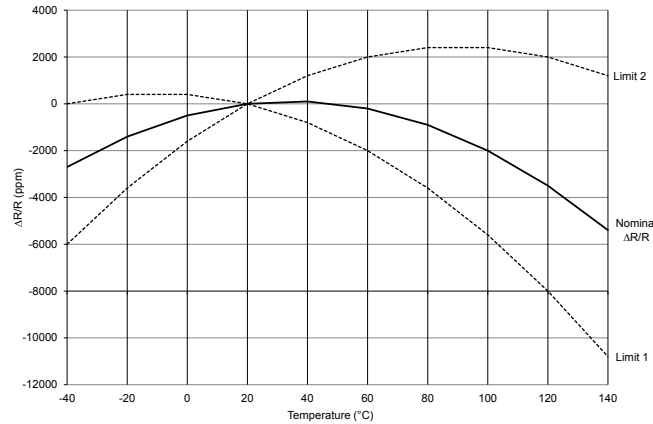


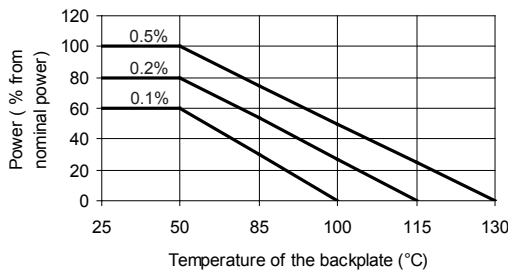
TABLE 1 – SPECIFICATIONS		
TYPE		FPRS 2-T220
Resistance Range		0.002 to 10 Ohms
Power Rating	Free air 70°C	1.5W
	With heatsink	15W
Tolerances		
from 0.002 Ohms		2% / 5%
from 0.01 Ohms		1% / 2% / 5%
from 0.1 Ohms		0.5% / 1% / 2% / 5%
Thermal Resistance		4.8 K/W
Stability (1000h)		0.1% / 0.2% / 0.5% (depends on stress)
Temperature Coefficient		$\pm 50\text{ppm/K}$ (20 to 60°C) other specification upon request
Voltage Proof		300 VDC
Maximum Current		50A
Thermal EMF		$< 0.1\mu\text{V/K}$
Operating Temperature Range		-40 to 130°C
Resistor Material		CuNiMn-Foil
Substrate		Anodized aluminium
Backplate		Copper / Nickel-plated
Housing		PPS
Connector Material		Cu / tinned
Soldering Profile		During surface mount soldering the soldering profile must secure the metal tab of this resistor is not exceeding 220°C
Terminals		2 (standard contact S)

ORDERING INFORMATION
Part Number - Resistance - Contact - Tolerance
FPRS 2-T220 0R010 S 0.5%

**FIGURE 1 – TEMPERATURE COEFFICIENT**



**FIGURE 2 – DERATING**



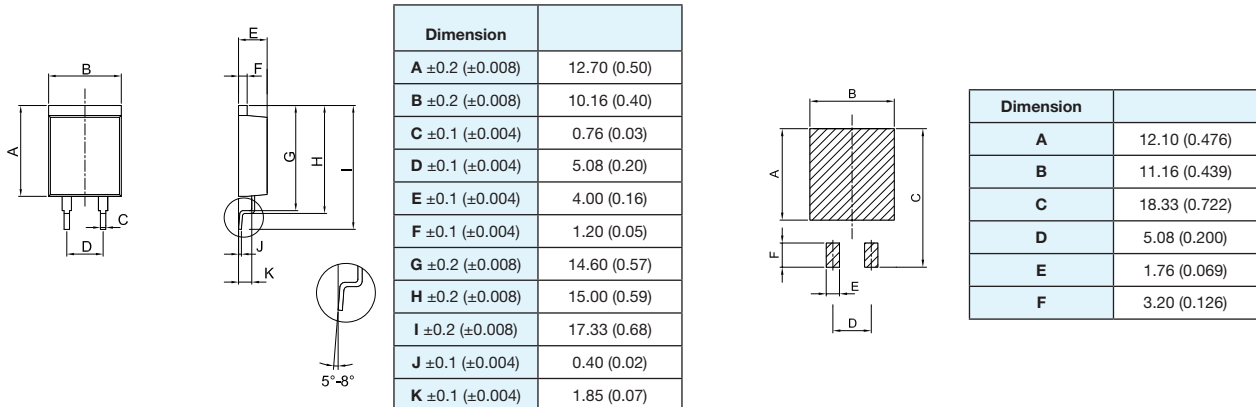
**Power Rating Notes -**

The FPRS Series Resistors must be attached to a suitable heat-sink. The maximum internal resistor temperature is 130 $^{\circ}C$ . To specify an appropriate heatsink use the following formula :

$$R_{0H} = \frac{T_{MAX} - (P \times R_{0R}) - T_A}{P}$$

Where:  $R_{0H}$  = Thermal Resistance of Heatsink ( K/W )  
 $R_{0R}$  = Thermal Resistance of Resistor ( K/W )  
 $T_{MAX}$  = Maximum Temperature of Resistor  
 $T_A$  = Ambient Temperature of Heatsink (  $^{\circ}C$  )  
 $P$  = Power Through Resistor ( W )

**FIGURE 3 – DIMENSIONS** in mm (inches)





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