

FEATURES

- Resistances from 0.002Ohm to 100Ohms
- Power Rating to 15Watt
- Resistance Tolerances to $\pm 0.1\%$
- TCR to $\pm 25\text{ppm/K}$
- Load Stability to 0.1%
- SMD D2Pak

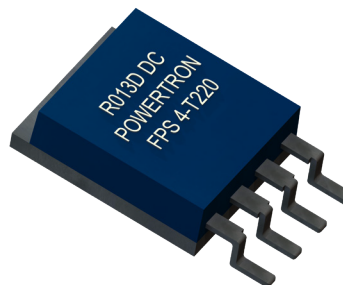


TABLE 1—SPECIFICATIONS

TYPE		FPS 4-T220
Resistance Range		0.002 to 10 Ohms
Power Rating	Free air 70°C	1.5W
	With heatsink	15W
Tolerances from 0.002 Ohms from 0.01 Ohms		1% / 2% / 5% 0.1% / 0.25% / 0.5% / 1% / 2% / 5%
Thermal Resistance		4.8 K/W
Stability (1000h)		0.1% / 0.2% / 0.5% (depends on stress)
Temperature Coefficient Standard (Q) Extended Temperature Range (R)		$\pm 25\text{ ppm/K}$ (20 to 60°C) $\pm 50\text{ ppm/K}$ (-40 to 130°C) other specifications upon request
Voltage Proof		300 VDC
Maximum Current		50A
Thermal EMF		$< 1\mu\text{V/K}$
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		lead free soldering time above 220°C max. 90 s max. temperature 245°C and JEDEC-J-STD-020
Terminals		4 (standard contact S)

ORDERING INFORMATION

Part Number - Resistance - Contact - Tolerance - TCR
FPS 4-T220 R010 S 0.1% Q

FIGURE 1—TEMPERATURE COEFFICIENT

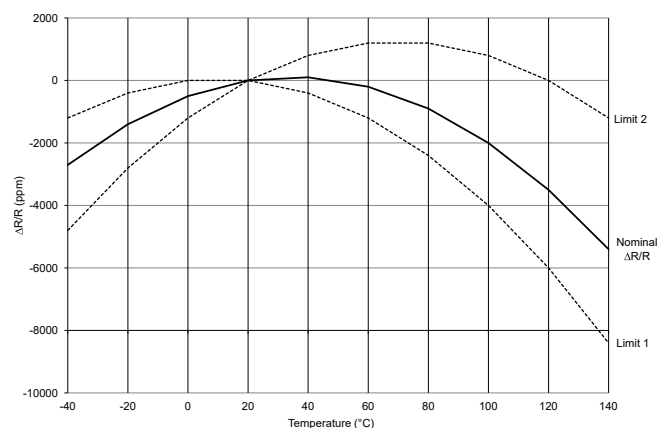
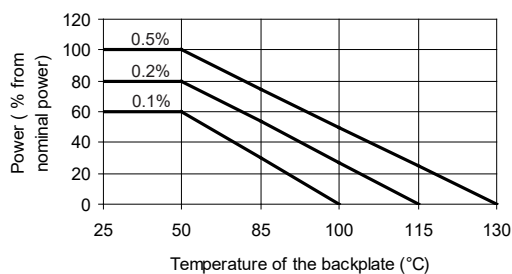


FIGURE 2—DERATING

**Power Rating Notes -**

The FPS 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)

