



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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High Power Precision Shunt Resistor, Up to 500W

FEATURES AND BENEFITS

- **Temperature coefficient of resistance (TCR)**
+25°C to +60°C, 25°C ref.: 0 ±1 ppm/°C
-25°C to +125°C, 25°C ref.: 0 ±5 ppm/°C
- Utilizing Ni-Cr Bulk Metal® Foil Technology for realizing low TCR
- Low thermal resistance with Copper plate
 - Improved to 0.1°C/W from 0.3°C/W (conventional model)
 - Maximum rated power up to 500W on heat sink
- Extended max. ambient temperature to 125°C (85°C with conventional model)
- Built-in Pt100 sensor monitor temperature of resistive element
 - Easily define size of suitable heat sink
 - As safety function for continuous operation



Available
RoHS
COMPLIANT



APPLICATIONS

- Output reference of precision power supply
- Reference of charge-discharge test for high capacity batteries

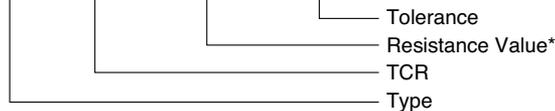
CONSTRUCTION OF MATERIALS

- Base plate: Nickel-plated Copper
- Current terminal: Nickel-plated Copper (T = 1.0 mm)
- Voltage and Pt terminals: Nickel-plated Copper (T = 0.5 mm)
- Package: PPS Injection-molded case

COMPOSITION OF MODEL NUMBER

Example:

FNP Z R0100 B



* R is a dual-purpose letter that designates both the value range (R for ohmic) and the location of decimal point.

TCR – RESISTANCE VS. TOLERANCE

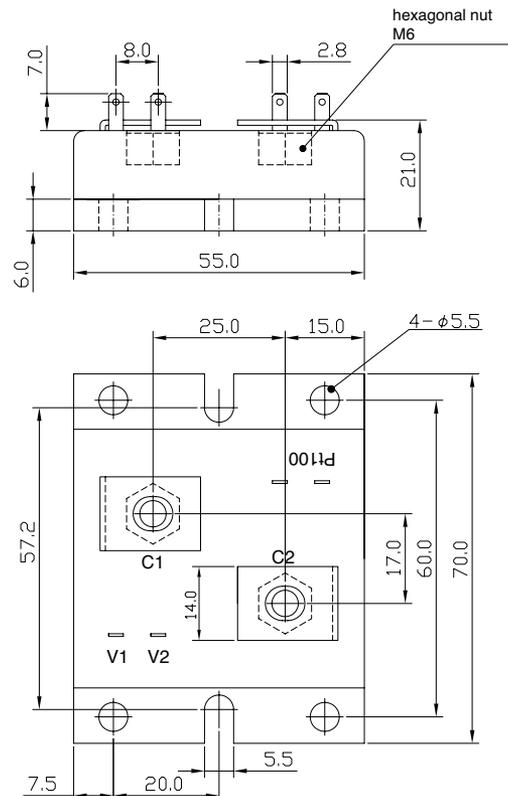
Tolerance of Built-in Pt100 Sensor:
±[0.8 + 0.008(t)]°C

TCR (ppm/°C)	Resistance Range (Ω)	Tolerance (%)	Rated Power (W)
0 ±1 (Z) 0 ±2.5 (Y) (+25°C to 60°C)	0.001 to 1**	±0.05 (A)	500 (on heat sink*)
0 ±5 (X) (-25°C to 125°C)		±0.1 (B)	
		±0.5 (D) ±1.0 (F)	

* Keep temperature of element surface less than 125°C.

** Please contact us for higher resistance value

CONFIGURATION – Dimensions in millimeters



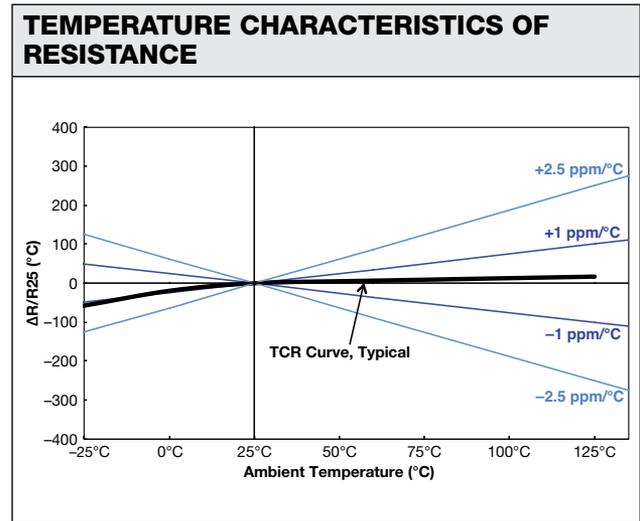
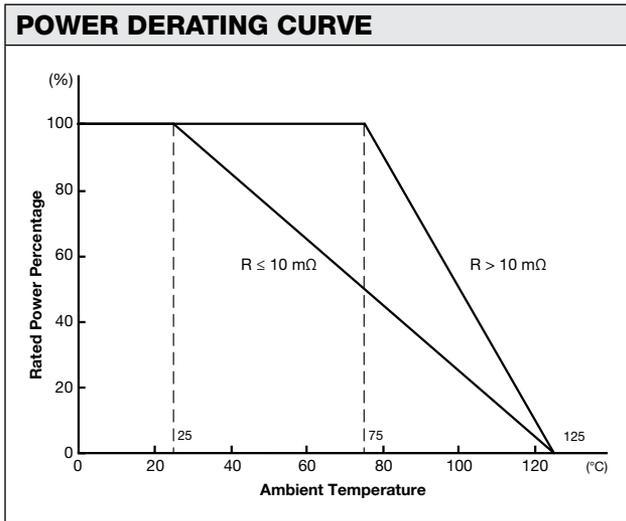


TABLE 2 – PERFORMANCE	
PARAMETERS	SPECIFICATION
Maximum Rated Operating Temperature	25°C ($R \leq 10 \text{ m}\Omega$) 75°C ($R > 10 \text{ m}\Omega$)
Working Temperature Range	-55°C to $+125^\circ\text{C}$
Maximum Working Current	320 A
Single Pulse Power Load	50 J (tp < 10 msec)
Dielectric Withstanding Voltage	AC 500 V
Inductance	< 10 nH
Internal Thermal Resistance (element/base plate)	$R_{\theta} < 0.1^\circ\text{C}/\text{W}$ ($R > 10 \text{ m}\Omega$) $R_{\theta} < 0.2^\circ\text{C}/\text{W}$ ($R \leq 10 \text{ m}\Omega$)
Life (200 W, Element Temperature 100°C)	$\pm 0.2\%$ (2000 h)
High Temperature Exposure (125°C)	$\pm 0.2\%$ (2000 h)

