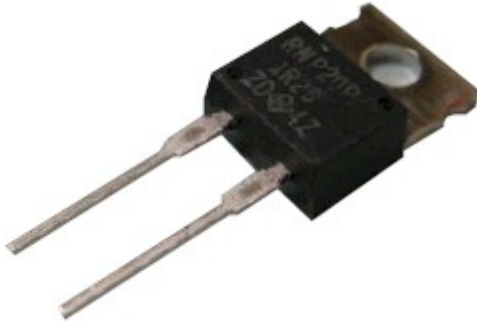




## TNP20P PRECISION POWER RESISTOR TO220



These are TO220 super precision power resistors. This model has proportional temperatures vs. small changes in resistance at temperatures between -55C to 120C. This is achieved with usage of thin film and the absence of bulk metal resistive materials. Within the range DC to 100MHz these models are non-capacitive and non-inductive. Applications for these models include: programmable precision power supplies and current supplies. Programmable low distortion AC power supplies, testing and inspection equipment for power semiconductors and other inverters, UPS, motor control, electronic loads, high frequency amplifiers, 50R terminations, HF adjustment resistors and Wilkinson amplifiers.

### GENERAL SPECIFICATIONS

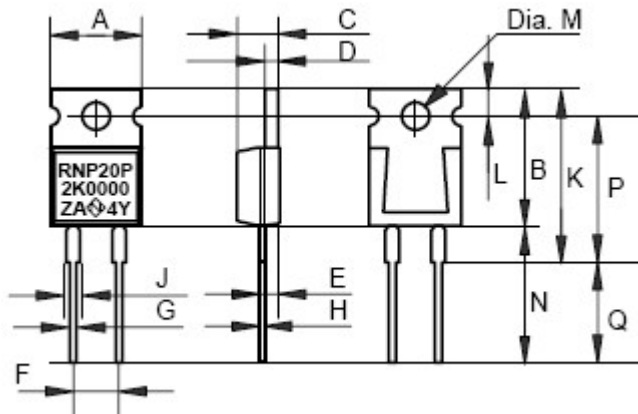
Item	Specification Performance		
Resistance Range	0.1-0.99R	1-5R	5-51KR
TCR[ppm/C]	+/-25(E)	+/-5(Z), +/-10(N), +/-25(E)	+/-5(Z), +/-10(N), +/-25(E)
Tolerance[%]	1(F), 2(G), 5(J)	+/-0.5(D), +/-1(F)	See Note 1
Nominal Resistance	E24 or any value		
Temp. Range	-55C to +155C		
Rated Temperature	+25C		
Rated Power	10W (-55 to 25C flange temperature)		
Derated Rated Power	5W (-55 to 25C flange temperature), 0.5W free air		
Heat Resistance	6.0 C/W		
Max Applied Voltage	500V or Root(PR)		
Inductance	10nH At stand-off		
Capacitance	1pF At stand-off		

Notes:

1/ +/-0.05(A), +/-0.1(B), +/-0.25(c), +/-0.5(D)

Item	Performance	Condition
Withstanding Voltage	DC2000V	60 Sec.
Insulation Resistance	Over 1000MR	Between Terminals and Flange
Short Time Overload	+/- (0.25%+0.05R)	Rated P X 2.5 sec. w/heatsink
Temp. Cycle	+/- (0.25%+0.05R)	-55C 30min., 120C 30min. 5 cycles
Humidity	+/- (1.0%+0.05R)	60C, 90min. ON, 30min. OFF, 1000hrs
Load Life	+/- (1.0%+0.05R)	25C, 90min. ON, 30min. OFF, 1000hrs
Soldering Heat	+/- (0.1%+0.05R)	350 +/-5C, 3 sec.
Solderability	Over 3/4 of surface	230 +/-5C, 3 sec.
Vibration	+/- (0.25%+0.05R)	JISC5202
Terminal Strength	+/- (0.25%+0.05R)	Tension 4.9N, 1-5 sec. Bend 2.45N, 90 degree, 2 times

### DIMENSIONS



- A 10.0+/-0.2
- B 15.0+/-0.2
- C 4.5+/-0.2
- D 1.5+/-0.1
- E 2.45+/-0.2
- F 5.08+/-0.5
- G 0.75
- H 0.50
- J 1.5
- K 19.0
- L 2.7+/-0.5
- M 3.6 diam.
- N 15.0 min.
- P 16.0+/-0.5
- Q 11.0 min.

