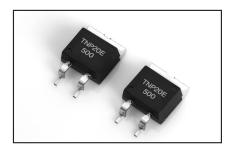


35W High Power Thin Film Resistors (TO263)

35W high power resistors in TO263 (D2-PAK) style surface mount mold package with matte tin plated (TNP20E, TNP20F) flange. Non-inductive design suits high frequency applications and high-speed pulse circuits. Low, 3.3 °C/W heat resistance from resistor hot spot to flange and long life performance are presented with thin film metallization technology. Wide, 10 m Ω to 51K Ω resistance range, non-inductive impedance characteristic and heat extracting through insulated metal flange aids circuit designers. UPS, power unit of machines, motor control, drive circuits, automotive, measurements, industrial computers and high frequency electronics.



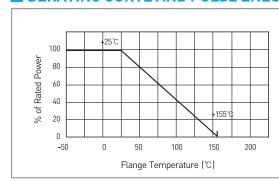
GENERAL SPECIFICATIONS

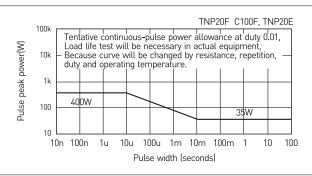
Model	Resistance Range[Ω]	TCR [ppm/℃]	Tolerance [%]	Power Rating	Power Rating In Free Air	Heat Resistance [°C/W]	Weight [g]
TNP20E TNP20F	0.02 - 0.091	250 [H]	J [±5%]	35W	1W	3.3	1.5
	0.1 - 9.1	100 [A]	F [±1%], J [±5%]				
	10 - 51K	50 [C]	F [±1%]				

CHARACTERISTICS

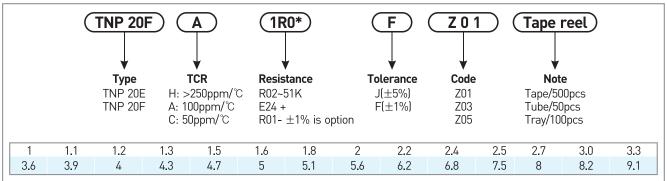
Power Rating	35 Watt	35W: -55 $^{\circ}$ C to 25 $^{\circ}$ C flange temperature
Fower Rading	1 Watt	1W: Attached on simple foot print
Temperature Range		-55℃ to +155℃
Insulation Resistance	Over $1000M\Omega$	Between terminals and tab
Dielectric Withstanding Voltage	AC 2000V	Terminal and flange, 60 seconds, 1mA
Humidity	±1%	40°C , $90\sim95\%$ RH, DC 0.1 x Power rating, 1000hours
Soldering Heat	±0.1%	350 ± 5 ℃, 3seconds
Solder ability	Over 95% of surface	230±5℃, 3seconds
Vibration	±0.25%	IEC60068-2-6
Temperature Cycle	±0 . 25%	-55°C 30minutes, +155°C 30minutes, 5cycles
Operating Voltage		500V or √(P×R)
Load Life	±1%	25℃, 90minutes ON, 30minutes OFF, 1000hours
Flammability		UL94-V0

DERATING CURVE AND PULSE ENEGY DURABILITY





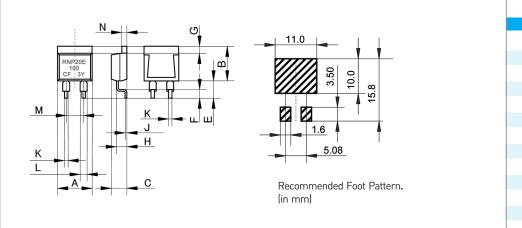
ORDERING PROCEDURE EXAMPLE



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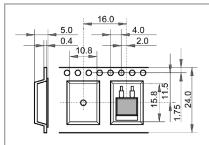


DIMENSIONS [mm]



TNP20E, TNP20F						
	mm	Tolerance				
Α	10.1	±0.2				
В	10.3	±0.2				
С	4.5	±0.2				
D	-	-				
Ε	5	±1				
F	2.5	±0.5				
G	2.2	±0.2				
Н	2.75	±0.2				
J	0.5	±0.05				
K	0.75	±0.05				
L	1.5	±0.05				
М	5.08	±0.1				
Ν	1.5	±0.05				

TAPE DIMENSION [mm]



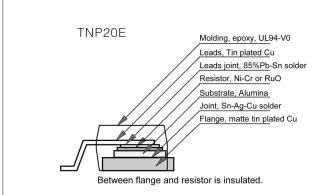
Reel Dimension Outer diameter : 330mm Inner diameter : 100mm

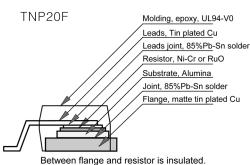
Width: 23.9mm min. / 27.4mm max. Package quantity: 500pcs / 13inches reel

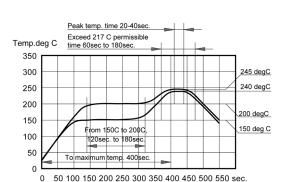
Note:

- (1) Flange insulation is not necessary between flange and heat-sink, flange and resistor is separated by alumina substrate.
- (2) Resistance measurement shall be made at terminal foot portion.
- [3] TCR of low resistance will be increased as 300ppm/0.02 Ω , 200ppm/0.05 Ω , 140ppm/0.1 Ω and 80ppm/0.2 Ω typically. Testing point is at 5.27mm from bottom of molding of terminals.
- (4) Test method is IEC60068-2-6, and specification is sine sweep wave form, 100Hz-2000Hz, 10 cycles, amplitude 0.75mm or 100m/s2, 90minutes direction x-y z, Amplitude 0.75mm will be applied under break point Frequency (about 60Hz) and 100m/s2 over break point
- (5) Standard packaging is tape reel, a tape reel contains 500pcs, when small quantity, tube packaging will be used, the tube is made by RoHS PS/PE which contains 50pcs / tube.

METERIAL AND RELOW TEMPERATURE







Peak temp. time 20-40sec Exceed 217 C permissible time 60sec to 180sec. Temp.deg C Peak temp 350 270 degC 300 250 240 degC Pre-heat temp 200 200 degC 150 150 deg C From 150C to 200C 100 120sec. to 180sec. 50 To maximum temp. 400sec. 0 0 50 100 150 200 250 300 350 400 450 500 550 sec.

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