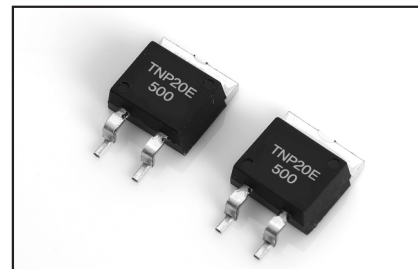


## 35W High Power Thin Film Resistors (TO263)

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 mΩ 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.



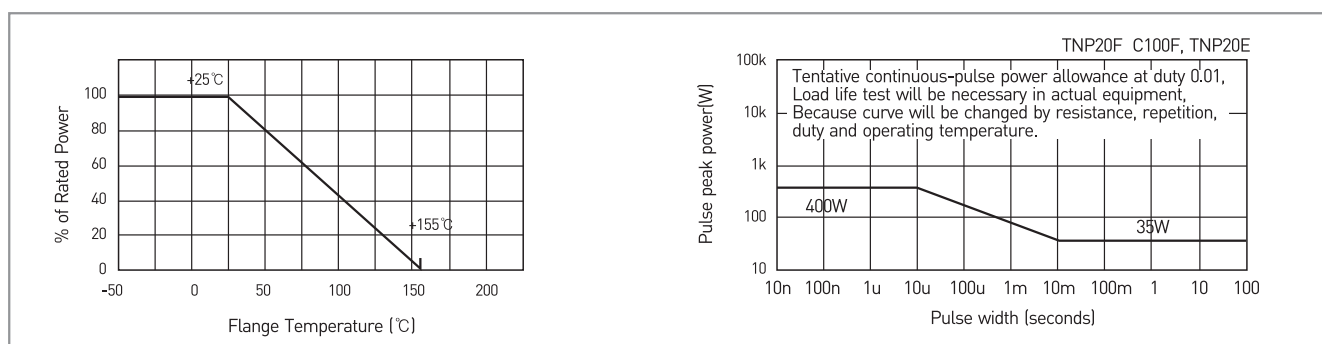
### GENERAL SPECIFICATIONS

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

### CHARACTERISTICS

Power Rating	35 Watt 1 Watt	35W: -55°C to 25°C flange temperature 1W: Attached on simple foot print
Temperature Range		-55°C to +155°C
Insulation Resistance	Over 1000MΩ	Between terminals and tab
Dielectric Withstanding Voltage	AC 2000V	Terminal and flange, 60 seconds, 1mA
Humidity	±1%	40°C, 90 ~ 95% RH, DC 0.1 x Power rating, 1000hours
Soldering Heat	±0.1%	350±5°C, 3seconds
Solder ability	Over 95% of surface	230±5°C, 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°C, 90minutes ON, 30minutes OFF, 1000hours
Flammability		UL94-V0

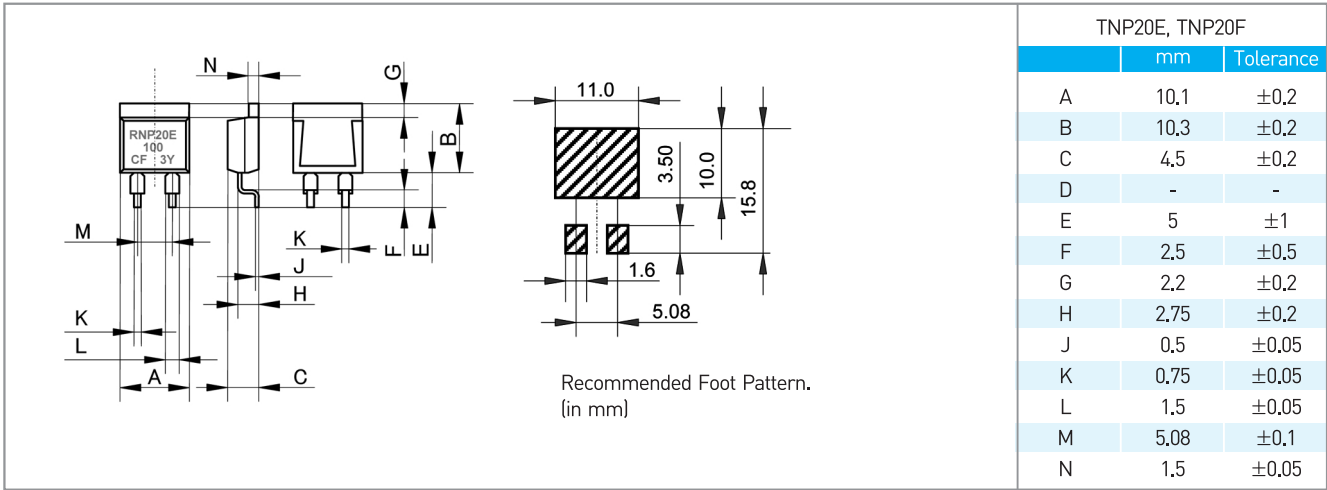
### DERATING CURVE AND PULSE ENERGY DURABILITY



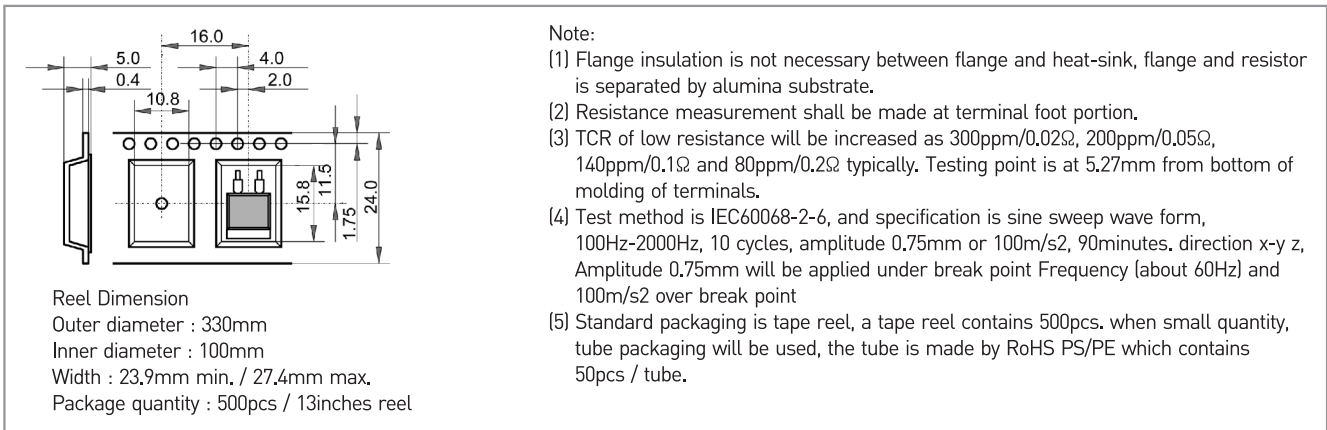
### ORDERING PROCEDURE EXAMPLE

TNP 20F	A	1R0*	F	Z 0 1	Tape reel								
Type	TCR	Resistance	Tolerance	Code	Note								
TNP 20E TNP 20F	H: >250ppm/°C A: 100ppm/°C C: 50ppm/°C	R02~51K E24 + R01- ±1% is option	J[±5%] F[±1%]	Z01 Z03 Z05	Tape/500pcs Tube/50pcs Tray/100pcs								
1	1.1	1.2	1.3	1.5	1.6	1.8	2	2.2	2.4	2.5	2.7	3.0	3.3
3.6	3.9	4	4.3	4.7	5	5.1	5.6	6.2	6.8	7.5	8	8.2	9.1

## DIMENSIONS [mm]



## TAPE DIMENSION [mm]



## MATERIAL AND RELOW TEMPERATURE

