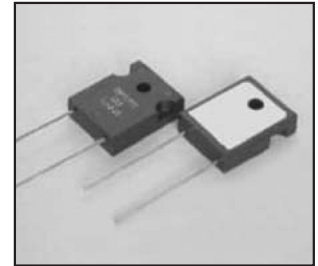


Power Thin Film Resistors (TO247)

This series of power film resistors offers a high power handling capability in a compact, non-inductive format. Both the TNP50S and the TNP100S are TO-247 models handling 100W and 140W respectively, depending on the ohmic value. This entire range is constructed using high thermal conduction alloys resulting in excellent heat transfer when mounted on heatsinks. Applications for these models include: UPS, power units of machines, motor control, drive circuits, automotive, measurements, industrial computers and high frequency electronics.

GENERAL SPECIFICATIONS

Model	Resistance Range [Ω]	TCR [ppm/°C]	Tolerance(%)	Rating Power[W] [See note 1]
TNP50S	0.02 ~ 0.09	>±250[H]	J [±5]	100W (-55°C to +25°C flange temp. 3W (in free air))
	0.1 ~ 9.1	±100[A]	F [±1], J [±5]	
	10 ~ 51K	±50[C]	F [±1]	
TNP100S	0.02 ~ 0.09	>±250[H]	J [±5]	140W (-55°C to +25°C flange temp. 2W (in free air))
	0.1 ~ 9.1	±100[A]	F [±1], J [±5]	
	10 ~ 51K	±50 [O]	F [±1]	



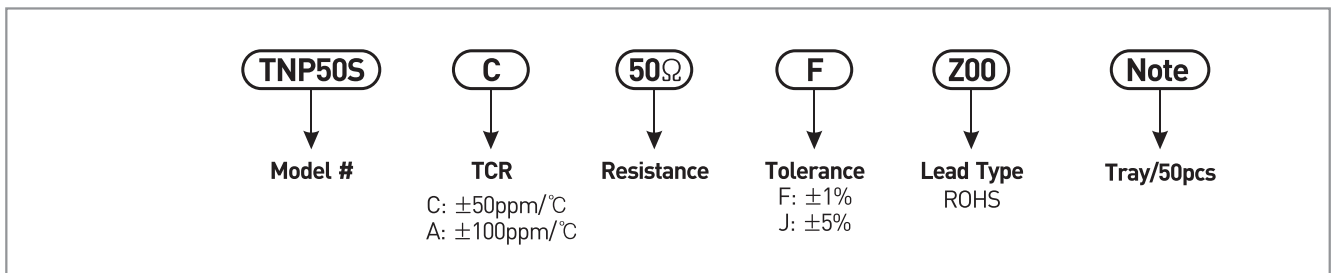
Note. 1) Rating power : Flange Temperature of -55°C to +25°C

CHARACTERISTICS

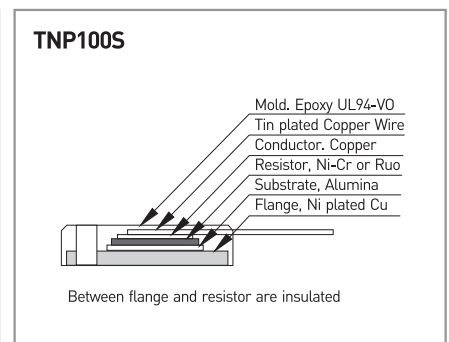
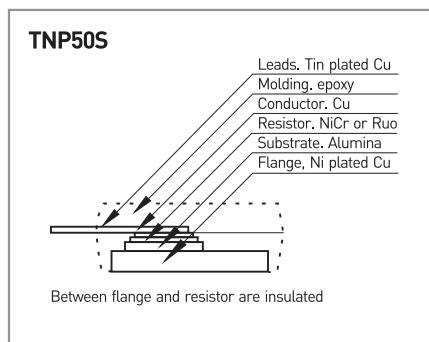
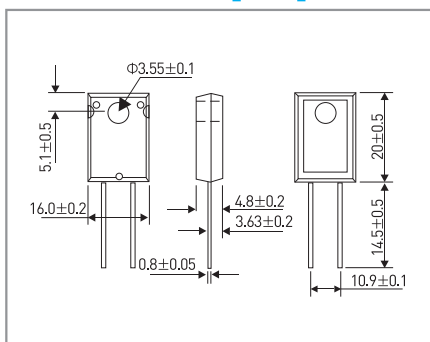
Values in [] mean change in Ω after test

Operating Temperature Range	-55°C ~ +155°C	
Insulation Resistance	[Over 1000 MegΩ]	Between terminals and flange
Dielectric Withstanding Voltage	AC 2500V	Terminal and flange for 60 seconds, 1mA
Moisture Resistance	±[1.0 %+0.05Ω]	40°C, 90-95% RH, DC 0.1 x Power rating, 1000hours
Soldering Heat	±[0.25%+0.05Ω]	350±5°C, 3 seconds
Solderability	[Over 3/4 of round]	230±5°C, 3 seconds
Vibration	±[0.25%+0.05Ω]	IEC60068-2-6
Maximum Working Voltage	700V or $E = \sqrt{P \cdot R}$	
Temperature Cycle	±[0.25%+0.05Ω]	-55°C, 30 minutes, +155°C 30 minutes, 5cycles
Load Life	±[1%+0.05Ω]	25°C, 90 minutes on, 30minutes off, 1000hours

ORDERING PROCEDURE EXAMPLE

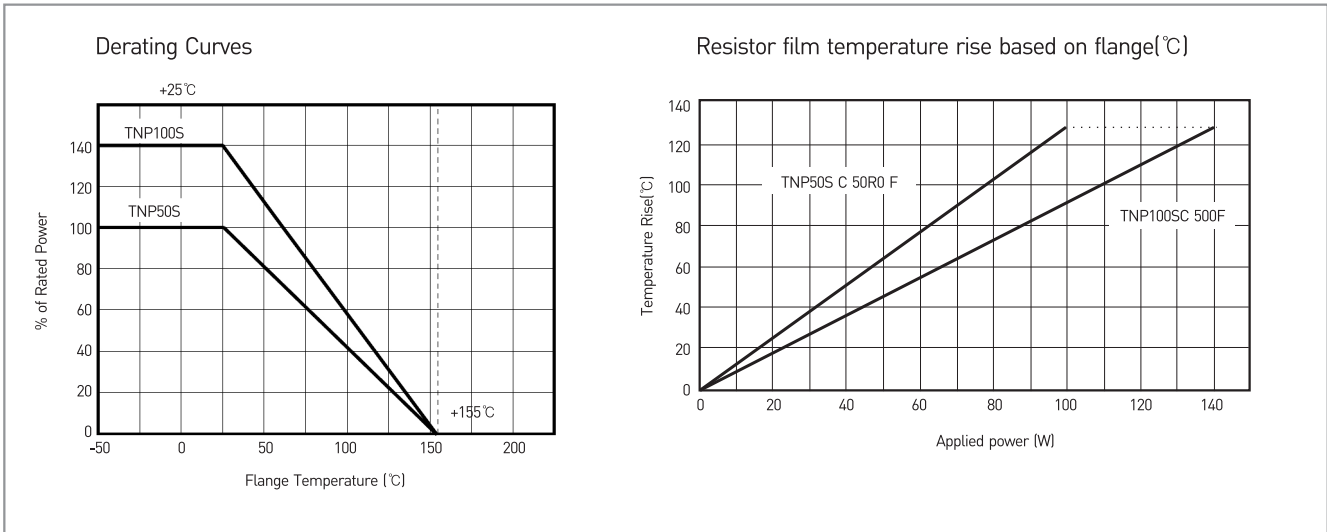


DIMENSIONS [mm] AND STRUCTURE



*TNP50S and TNP100S have the same dimensions.

DERATING CURVES AND TEMPERATURE RISE CURVES



CHARACTERISTIC CURVES

