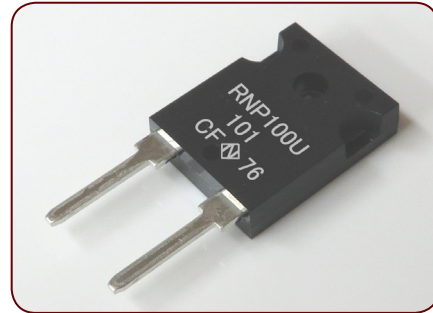


RoHS

RNP-100U

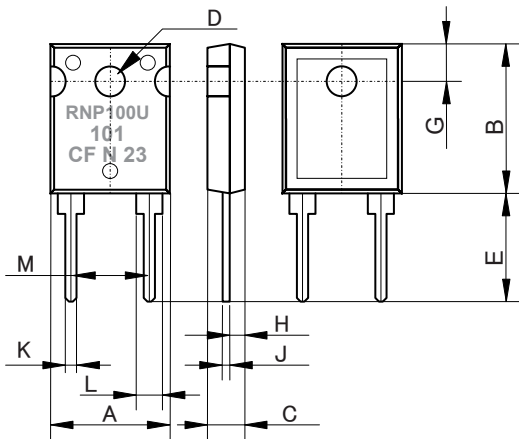
TO247 100W
HIGH POWER RESISTORS



Features and Applications

100W high power resistor in TO-247 molded package.
 Only 1.3 °C/W heat resistance between resistor and flange for excellent cooling.
 Non-inductive designs fit for high frequency circuit and wide band amplifiers.
 Small size and thin shape fit for high density design of power electronics.
 Complete thermal conduction and heat dissipation design will be available.
 Applications include power electronics / inverter of automotive, rail traction, wind turbine, PV, UPS and industrial motor control as harmonic filter, dumping, snubber, gate control, bleeder resistor and rush current protection,

Dimensions



| | mm | +/-mm | inches | +/-inch |
|---|-------|---------|--------|----------|
| A | 16.0 | +/-0.2 | 0.630 | +/-0.008 |
| B | 20.0 | +/-0.5 | 0.787 | +/-0.020 |
| C | 4.8 | +/-0.2 | 0.189 | +/-0.008 |
| D | 3.55 | +/-0.1 | 0.140 | +/-0.004 |
| E | 14.5 | +/-0.5 | 0.571 | +/-0.020 |
| F | - | - | | |
| G | 5.1 | +/-0.5 | 0.200 | +/-0.020 |
| H | 3.63 | +/-0.2 | 0.143 | +/-0.008 |
| J | 0.80 | +/-0.1 | 0.060 | +/-0.004 |
| K | 1.52 | +/-0.1 | 0.060 | +/-0.004 |
| L | 3.63 | +/-0.18 | 0.143 | +/-0.007 |
| M | 10.16 | +/-0.26 | 0.400 | +/-0.010 |

Specifications and Performances

| Specification Items | Specification-Performance | | | Test Conditions |
|------------------------|----------------------------|------------|-----------|---|
| Rating Power | 100 Watts | | | Note, at 25 °C flange temperature |
| Rating Power | 3.0 Watts | | | Free air. |
| Heat Resistance | 1.3 °C/W | | | From resistor to flange |
| Resistance Range | 0.01 - 0.09Ω | 0.1-1M Ω | 10-51K Ω | |
| Nominal Resistance | +E12 | +E24 | +E24 | + shows Additional 2.0 and 5.0. |
| TCR | 250ppm/°C | 100 ppm/°C | 50 ppm/°C | For -55 to +175 °C |
| Tolerance | +/-5% | +/-1%, 5% | +/-1% | |
| Capacitance | 2.35 pF | | | At point of terminal length 10mm |
| Inductance | 11.72 nH | | | At point of terminal length 10mm |
| Operation Temp. Range | -55 - +155 °C | | | |
| Max. Applied Voltage | 500V or $\sqrt{P \cdot R}$ | | | Max operating current 100A |
| Max. Operating Current | 100A | | | |
| Short Time Overload | +/-0.5% | | | 1.5 times rated power for 5 seconds |
| Withstanding Voltage | 2500VAC | | | 60 seconds. 1mA |
| Load Life | +/-1.0 % | | | 25°C, 90 min.ON, 30min.OFF, 1000hours. |
| Humidity | +/-1.0 % | | | 70°C, 90 - 95%RH, DC0.1W, 1000hours. |
| Temperature Cycle | +/-0.25 % | | | -55°C, 30 min., +155°C 30min., 5cycles. |
| Soldering Heat | +/-0.25 % | | | 350+/-5 °C, 3seconds, |
| Solder ability | Over 3/4 of round | | | 230+/-5 °C, 3seconds. |
| Insulation Resistance | Over 1000 Meg Ω | | | Between terminals and tab. |
| Vibration | +/-0.25 % | | | |
| Flammability | UL94V-0 | | | |
| Weight | 7.2 grams | | | |

RoHS

RNP-100U - T0247 100W HIGH POWER RESISTORS

Ordering Information

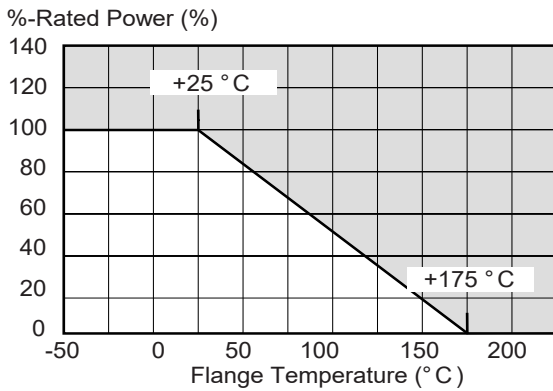
| | | | | | |
|----------|-------------------------------------|---|--------------------------------|-----|------------|
| RNP-100U | C | 10R0 (*) | F | Z03 | Note |
| RNP-100U | H(>250ppm) A(100ppm) C(50ppm) | R02-R09 (+E6) R10-1M0 (+E24) 10R-51K (+E24) | J(5%) F(1%), J(5%) F(1%) | Z03 | Tube/25pcs |

Resistance value (*) is available following modified E24, +E24.

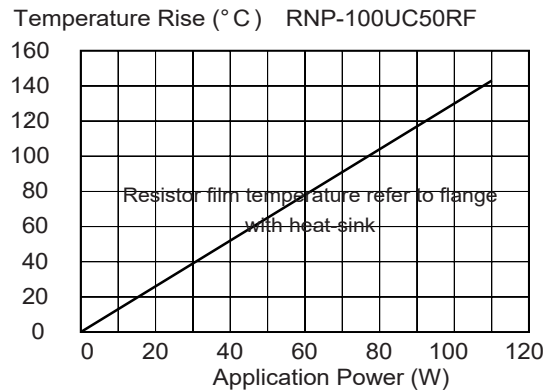
| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1.0 | 1.1 | 1.2 | 1.3 | 1.5 | 1.6 | 1.8 | 2.0 | 2.2 | 2.4 | 2.5 | 2.7 | 3.0 | 3.3 |
| 3.6 | 3.9 | 4.0 | 4.3 | 4.7 | 5.0 | 5.1 | 5.6 | 6.2 | 6.8 | 7.5 | 8.0 | 8.2 | 9.1 |

Note*: When ordering, additional ohm resistance notation is recommended for keeping out of misunderstanding.

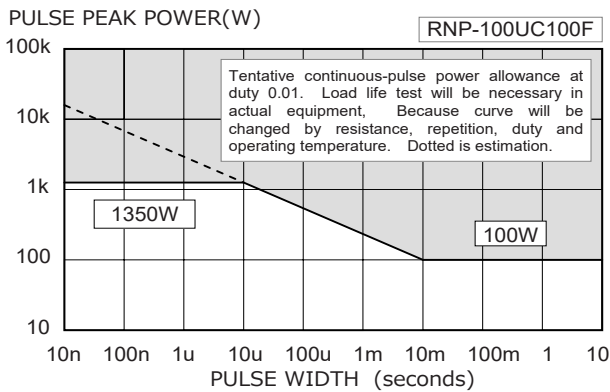
Derating Curve



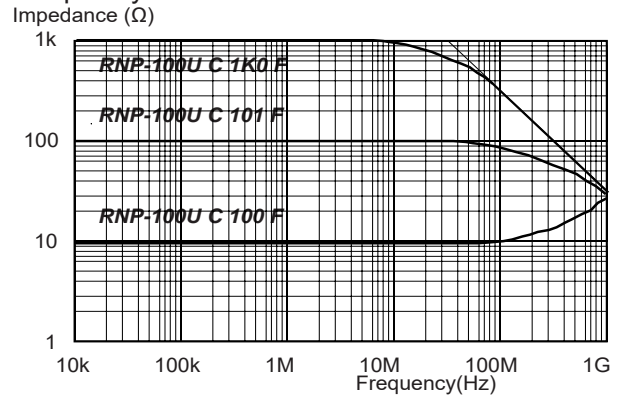
Temperature Rise



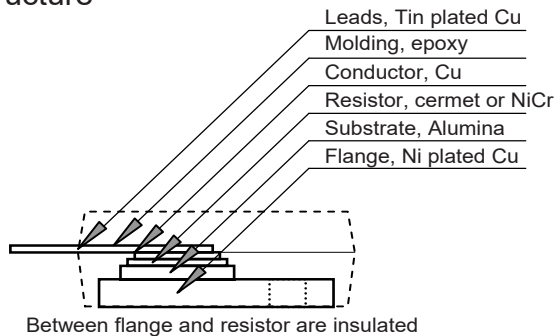
Pulse Energy Durability



Frequency Characteristics



Structure



Design for heat release

