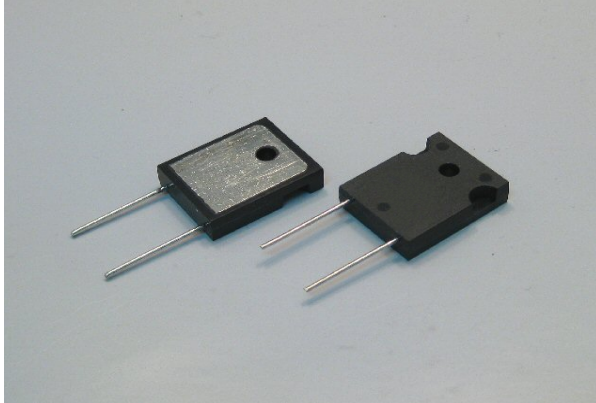


140W HIGH POWER RESISTORS



■ TO247 HPR14S



Features :

- 140W high power resistor in TO247 package.
- Very low heat resistance of 0.9deg C/W.
- Heat dissipation and vibration durable design.
- Small and thin package for high-density assembly.

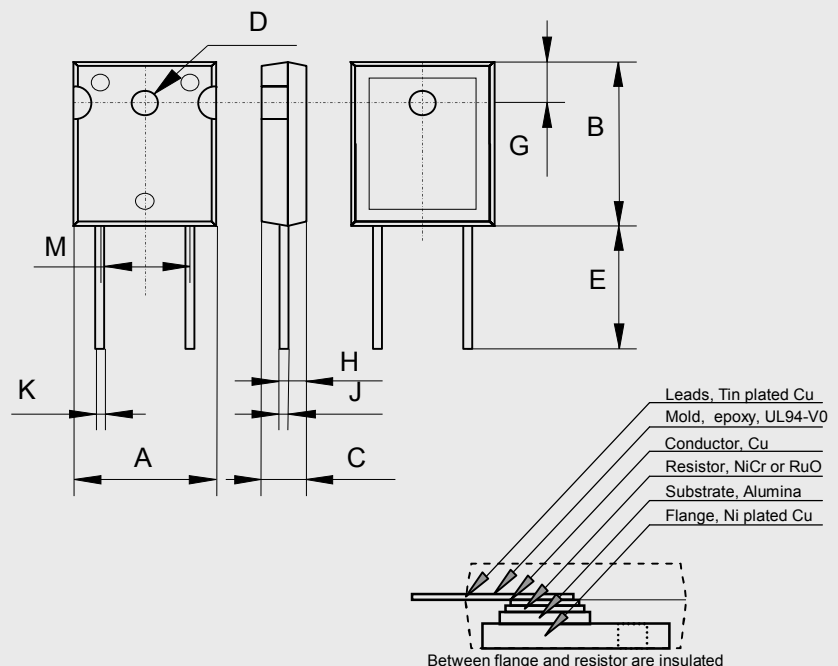
Applications:

Non-inductive design suits high frequency applications and high-speed pulse circuits.

• UPS, power unit of machines, motor control, drive circuits, automotive, measurements, industrial computers and high frequency electronics.

Structure and Dimensions (mm) :

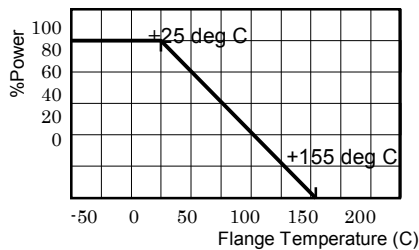
HPR14S		
	mm	+/-mm
A	16.0	+/-0.2
B	20.0	+/-0.5
C	4.8	+/-0.2
D	3.55	+/-0.1
E	14.5	+/-0.5
F	-	-
G	5.1	+/-0.5
H	3.63	+/-0.2
J	-	-
K	0.8	+/-0.05
L	-	-
M	10.9	+/-0.1



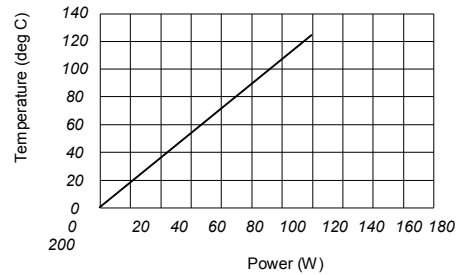
Specifications

Rating Power	140 W			-55 deg C to +25 deg C flange temperature.
Rating Power	3.0 W			Free air.
Heat Resistance	0.9 deg C/W			Hot spot to flange
Resistance Range	0.022-0.068 Ω	0.1-8.1 Ω	10-51k Ω	Note 2
Nominal Resistance	E6	E12	E24	Include 2.5, 4.0, 5.0, 8.0
TCR (ppm/deg C)	±250	±100	±50	Note 3
Tolerance	+/-5%	+/-5%	+/-1%, 5%	-
Capacitance	3.68pF			Equivalent parallel capacitance.
Inductance	12.25nH			Equivalent series inductance
Operation Temp. Range	-55 deg C to +155 deg C			-
Max. Applied Voltage	smaller value either 700V or $\sqrt{P \cdot R}$			P is rating power and R resistance
Withstanding Voltage	2500 VAC			Terminal and flange, 60 seconds, 1mA
Load Life	+/- 1.0 %			25 deg C, 90 min. ON, 30min.OFF, 1000hours.
Humidity	+/-1.0 %			40 deg C, 90 - 95%RH, DC0.1W, 1000hours.
Temperature Cycle	+/- 0.25 %			-55 deg C, 30 min., +155 deg C, 30min., 5cycles.
Soldering Heat	+/- 0.25 %			350+/-5 deg C, 3seconds,
Solder ability	Over 3/4 of round			230+/-5 deg C, 3seconds.
Insulation Resistance	Over 1000 Meg ohm			Between terminals and flange
Vibration	+/- 0.25 %			IEC60068-2-6, see note 4
Weight	6.3 grams			

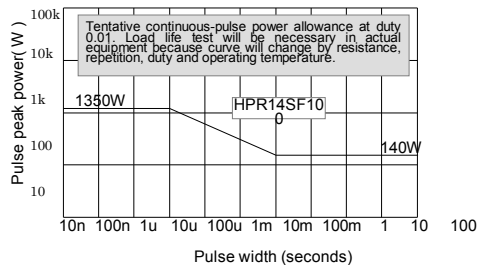
Power Derating



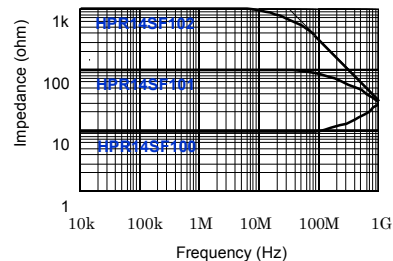
Flange Temperature Rise



Pulse Energy Durability



Frequency Characteristics



Ordering information

Model	Tolerance	Resistance Value	Packaging
HPR14S	F	100	T
HPR14S	J(5%)	R022-513	T (Tray)
	F(1%)		

Note:

- (1) Insulation material is unnecessary between flange and heat-sink, flange and resistor is separated by alumina substrate.
- (2) Resistance measurement shall be made at a point 2.54mm +/- 1.0mm from the resistor body.
- (3) TCR of low resistance will be increased as 300ppm/0.02ohm, 200ppm/0.05ohm, 140ppm/0.1ohm and 80ppm/0.2ohm typically. Testing point is at 2.54mm 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) When mounting resistor on heat-sink by screw, clip and pressure strip with using heat conduction grease on back side of resistor are recommended. Recommended screw torque is 0.5-0.6Nm. In case of screw mount, ISO M3 screw is necessary, also, 1/8" screw can be acceptable.
- (6) Standard packaging is anti-static PE tray, which contains 50pcs / tray.

This specification is subject to change without notice. Please contact below for the technic

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