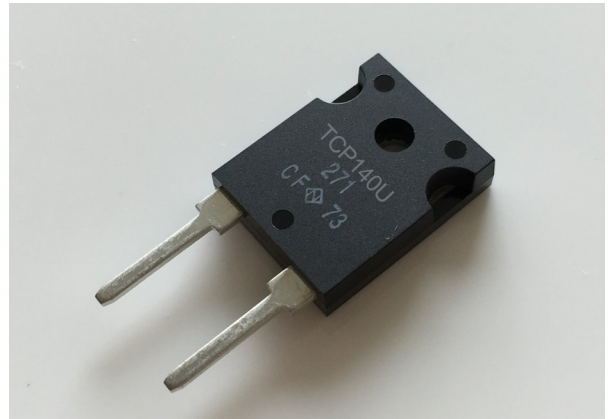


TO247 140W HIGH POWER RESISTORS

TCP140U



Features and Applications

140W high power resistor in TO-247 molded package.

Only 0.9 °C/W heat resistance between resistor and flange for excellent cooling.

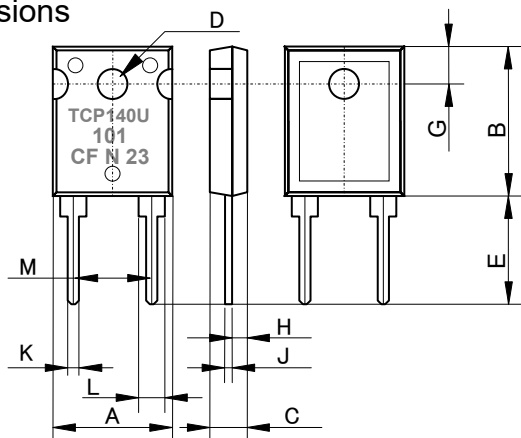
Wide 10mΩ to 510kΩ resistance range, non-inductive design fit for high frequency circuit and wide band amplifiers.

Small size and thin shape provides 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

	TCP140U			Test Conditions
Rating Power	140 Watts			Note, at 25 °C flange temperature
Rating Power	3.0 Watts			Free air.
Heat Resistance	0.9 °C/W			From resistor to flange
Resistance Range	0.01 - 0.099Ω	0.1 - 510K 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	3.68 pF			At point of terminal length 10mm
Inductance	12.25 nH			At point of terminal length 10mm
Operation Temp. Range	-55 - +175 °C			
Max. Applied Voltage	500V or $\sqrt{P \cdot R}$			
Max. Operating Current	120A			
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			

TCP140U

形名呼称 Ordering Information

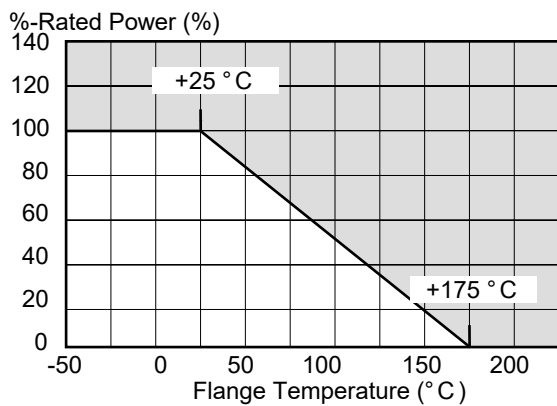
TCP140U -	C	10R0 (*)	F	TB	Note
TCP140U -	H(>250ppm) A(100ppm) C(50ppm)	R01-R099 (+E12) R10-1M0 (+E24) 10R-51K (+E24)	J(5%) F(1%), J(5%) F(1%)	TB	Tube/25pcs

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

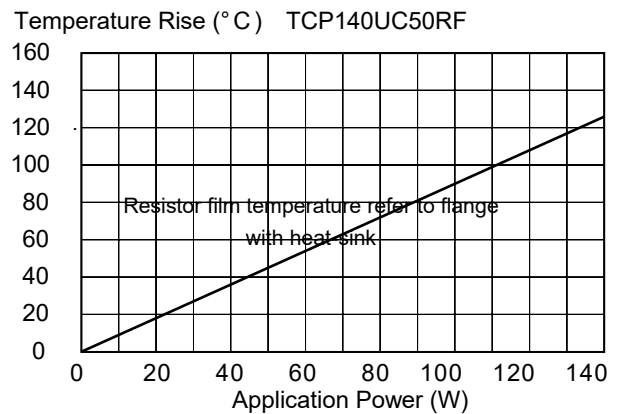
1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.2	2.4	2.5	2.7	3.0	3.3
3.6	3.9	4.0	4.3	4.7	5.0	5.1	5.6	6.2	6.8	7.5	8.0	8.2	9.1

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

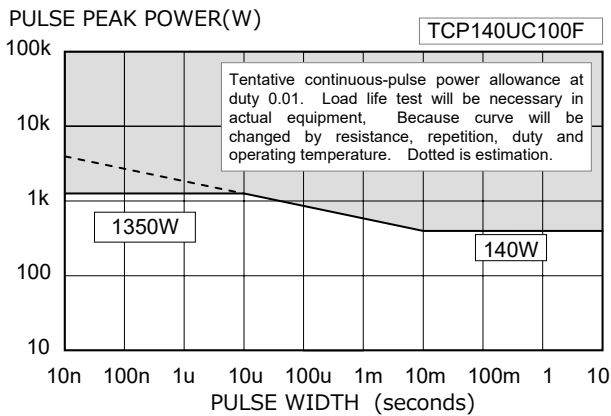
Derating Curve



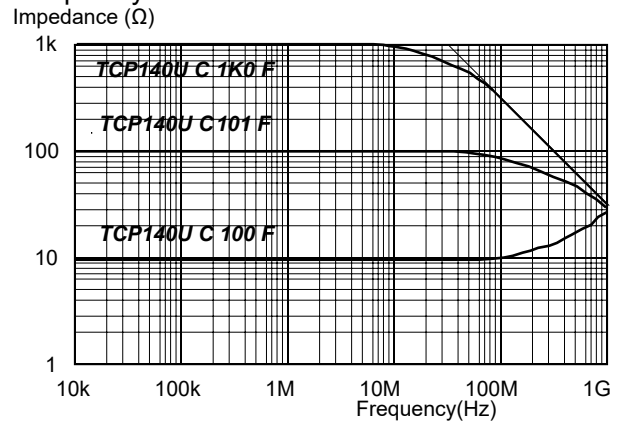
Temperature Rise



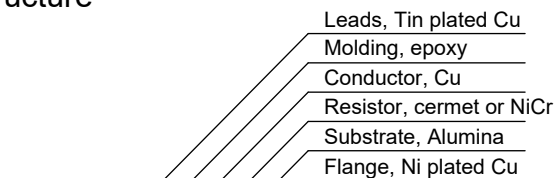
Pulse Energy Durability



Frequency Characteristics



Structure



Design for heat release

