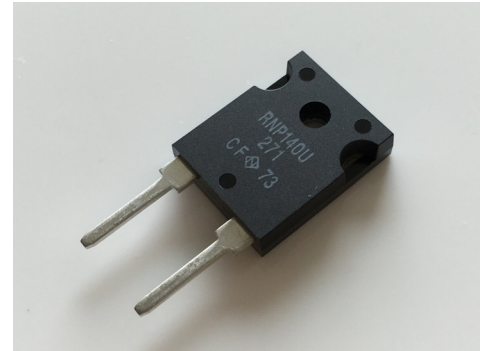


## TO247, 高電力抵抗器

## TO247 140W HIGH POWER RESISTORS

## RNP-140U



## 特長用途

TO247 形定格電力 140W 高電力抵抗器。  
 最高使用温度 155℃の抵抗体とフランジ間の熱抵抗は 1.3℃/W。  
 誘導性、容量性が極めて少なく、高速パルス用、高周波用抵抗器として最適。  
 抵抗器から熱伝導冷却する構造であり、熱設計が簡単で、高密度実装が可能。

自動車、産業用、パワーエレクトロニクス、インバータ、無停電電源装置、ACサーボモータ制御、高効率スイッチング電源、定電流電源、電子負荷、工業用高周波電源装置、高周波直線増幅器、高周波回路のターミネーションなど。

## 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.

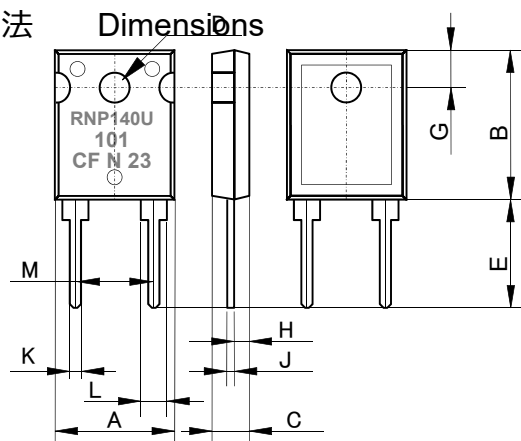
Wide 10mΩ to 510kΩ resistance range, non-inductive design fit for high frequency circuit and wide band amplifiers.

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,

## 外形寸法



	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

## 性能仕様 Specifications and Performances

項目	Specification Items	Specification-Performance			Test Conditions
定格電力	Rating Power	140 W			Note, at 25 °C flange temperature
定格電力	Rating Power	3.0 W			Free air.
熱抵抗	Heat Resistance	0.9 °C/W			From resistor to flange
製作抵抗値	Resistance Range	0.01 - 0.099Ω	0.1 - 9.1 Ω	10-51K Ω	
公称抵抗値	Nominal Resistance	+E12	+E24	+E24	+ shows Additional 2.0 and 5.0.
抵抗温度係数	TCR	> 250ppm/°C	100 ppm/°C	50 ppm/°C	For -55 to +155 °C
抵抗値許容差	Tolerance	+/-5%	+/-1%, 5%	+/-1%	
等価並列容量	Capacitance	3.68 pF			At point of terminal length 10mm
等価直列誘導	Inductance	12.25 nH			At point of terminal length 10mm
使用温度範囲	Operation Temp. Range	-55 - +175 °C			
最高使用電圧	Max. Applied Voltage	500V or $\sqrt{P \cdot R}$			
最大動作電流	Max. Operating Current	40A			
短時間過負荷	Short Time Overload	+/-0.5%			1.5 times rated power for 5 seconds
絶縁耐電圧	Withstanding Voltage	2500VAC			60 seconds. 1mA
負荷寿命	Load Life	+/-1.0 %			25°C, 90 min.ON, 30min.OFF, 1000hours.
耐湿負荷寿命	Humidity	+/-1.0 %			70°C, 90 - 95%RH, DC0.1W, 1000hours.
温度サイクル	Temperature Cycle	+/-0.25 %			-55°C, 30 min., +155°C 30min., 5cycles.
はんだ耐熱性	Soldering Heat	+/-0.25 %			350+/-5 °C, 3seconds.
はんだ付性	Solder ability	Over 3/4 of round			245+/-5 °C, 3seconds.
絶縁抵抗	Insulation Resistance	Over 1000 MΩ			Between terminals and flange
耐振性	Vibration	+/-0.25 %			
難燃性	Flammability	UL94V-0			
重量	Weight	7.2 grams			

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RNP-140U

形名呼称 Ordering Information

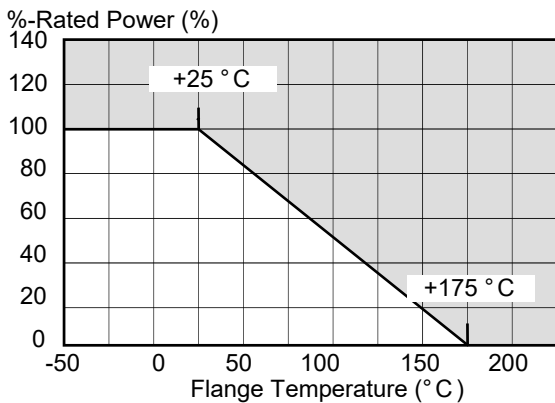
RNP-140U	C	10R0 (*)	F	Z03	Note
RNP-140U	H(>250ppm) A(100ppm) C(50ppm)	R01-R099 (+E12) R10-9R1 (+E24) 10R-51K (+E24)	J(5%) F(1%), J(5%) F(1%)	Z03	Tube/25pcs

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

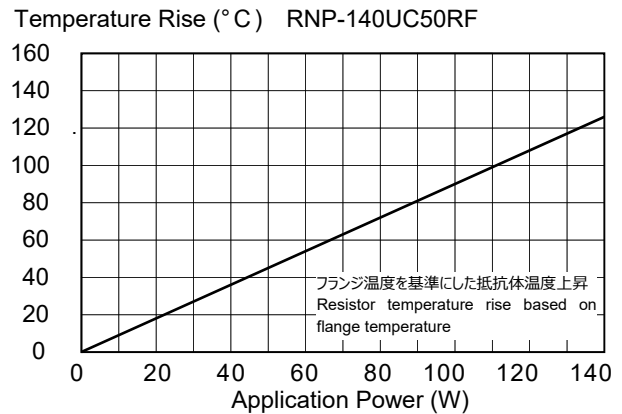
1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.2	2.4	2.5	2.7	3.0	3.3
3.6	3.9	4.0	4.3	4.7	5.0	5.1	5.6	6.2	6.8	7.5	8.0	8.2	9.1

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

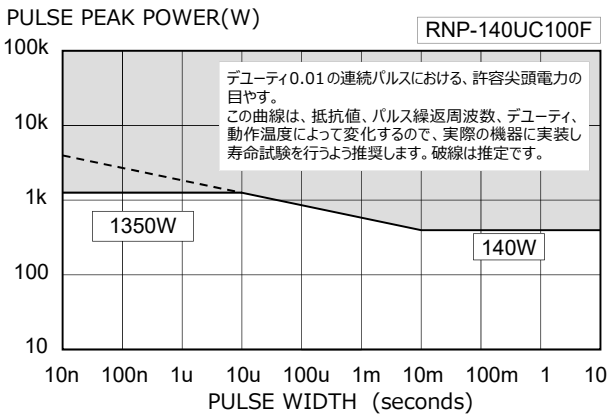
負荷軽減 Derating Curve



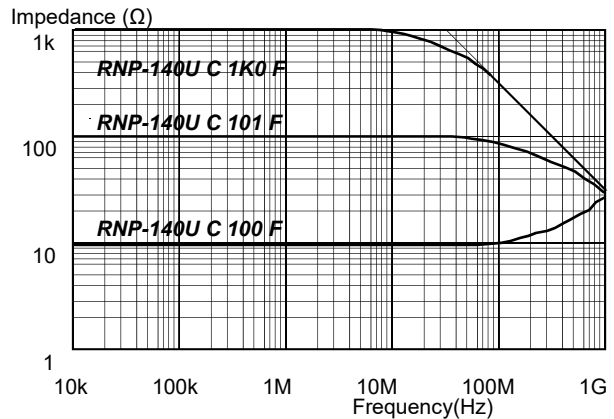
温度上昇 Temperature Rise



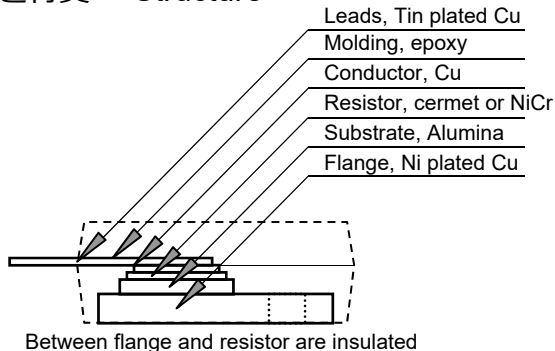
耐パルス性 Pulse Energy Durability



周波数特性 Frequency Characteristics



構造材質 Structure



熱放散 Design for heat release

