

表面実装 50 W高電力抵抗器

TO263 SURFACE MOUNT
50W HIGH POWER RESISTORS
RNP-50F

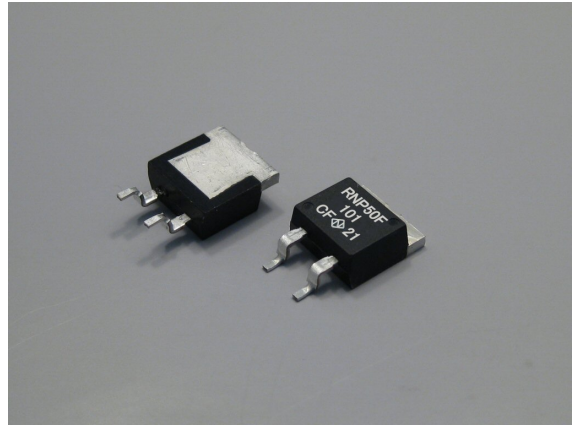
AEC-Q200

特長 用途

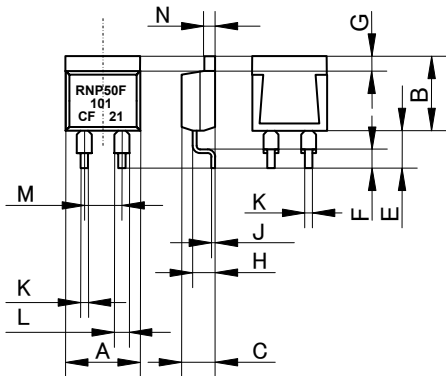
半光沢すずめっきのフランジ、TO263(D2PAK)、定格電力 50W 高電力抵抗器。
DCから数 100MHz にて誘導性、容量性ともにきわめて少ない特長があり、50Ωから 100Ωでは 1GHz 付近まで平坦な特性を示し、高周波回路、高速パルス回路に最適な抵抗器。
独自の内部構造によって、最高使用温度 155°Cの抵抗体とフランジ間の熱抵抗を 2.3°C/W まで減少させ、優秀な熱放散特性。
フランジと回路は、耐圧 2KV で絶縁。
電力制御機器、インバータ、UPS、モータ制御、精密プログラム電源、定電流電源、電子負荷、高周波電源、高周波増幅器、50 Ωターミネーション。

Features and Applications

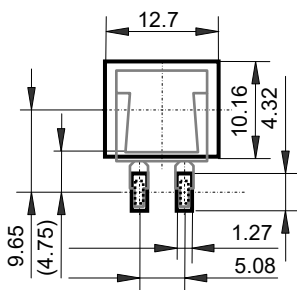
50W high power resistors in TO263 (D2-PAK) style surface mount mold package with matte Tin plated flange.
Non-inductive design suits high frequency applications and high-speed pulse circuits.
Low, 2.3 °C/W heat resistance from resistor to flange and long life performance are presented with thin film metallization technology.
Wide, 20 mΩ to 51KΩ resistance range, non-inductive impedance characteristic and heat extracting through insulated metal flange aids circuit designers.
Applications for UPS, power unit of machines, motor control, drive circuits, automotive, measurements, industrial computers and high frequency electronics.



外形寸法、Dimensional Specifications (mm)

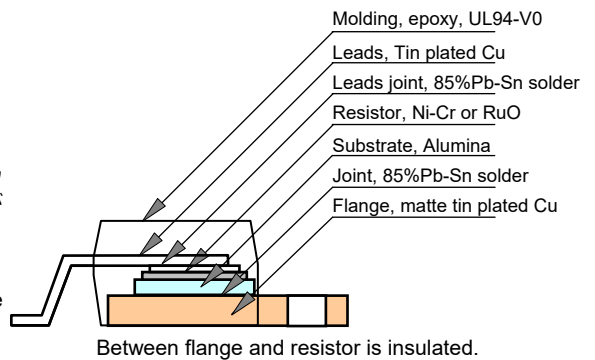
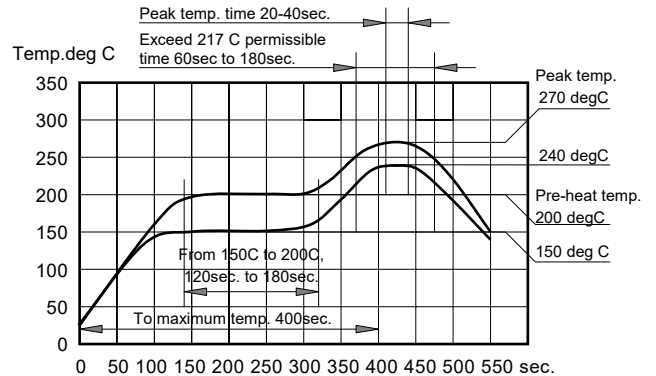


RNP-50F		
	mm	+/-mm
A	10.1	+/-0.2
B	10.3	+/-0.2
C	4.5	+/-0.2
D	-	-
E	5.0	+/-1.0
F	2.5	+/-0.5
G	2.2	+/-0.2
H	2.75	+/-0.2
J	0.5	+/-0.05
K	0.75	+/-0.05
L	1.5	+/-0.05
M	5.08	+/-0.10
N	1.5	+/-0.05



推奨フットパターン(mm)
1 W以上の電力を消費させる場合は、フットパターンから熱を引き出す必要があります。

Recommended Land Pattern. (mm)
Additional heat cooling system will be necessary



形名称呼 Ordering Information

RNP-50F	A	1R0	F	Z01(Tape Reel)	Note
RNP-50F	H(>250ppm) A(100ppm) C(50ppm)	R02 to 0R091 0R1 - 9R1 10 - 51K	J (5%) F (1%) F (1%)	Z01(Tape Reel) Z03(PVC Tube)	Z: RoHS

* TO263 型の抵抗器の包装 Z05(トレイ)は、平坦性が失われる可能性があります。 TO263 type resistor packaging Z05 (tray) has a risk of loss of flatness, co-planarity. 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

表面実装 50 W高電力抵抗器

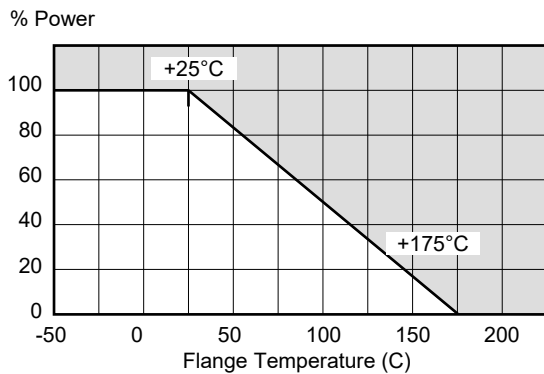
TO263 SMD 50W HIGH POWER RESISTORS

RNP-50F

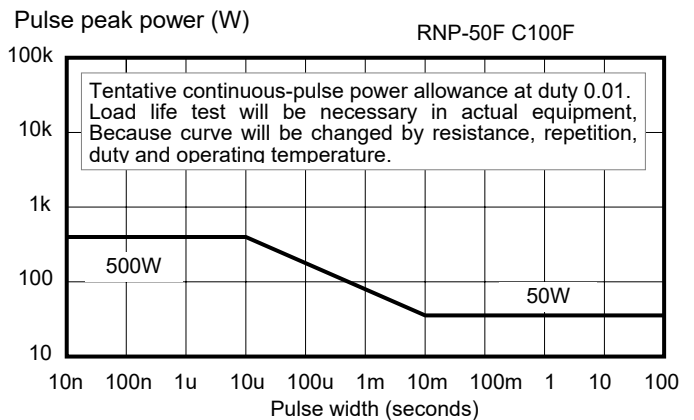
Specifications

		RNP-50F			Test Conditions
定格電力	Rated Power	50 Watt			-55 deg C to 25 deg C flange temperature
定格電力	Rated Power	2 Watt			Attached on simple foot print.
熱抵抗	Heat Resistance	2.3 deg C/W			Resistor hot spot to flange
抵抗値	Resistance Range	0.02-0.091Ω	0.1-9.1Ω	10-51KΩ	Note 2
公称抵抗値	Nominal Resistance	E6	E24	E24	Include 2.5, 4.0, 5.0, 8.0 and 16
TCR(ppm/°C)	TCR(ppm/°C)	>250(H)	100 (A)	50 (C)	Note 3.
抵抗値許容差	Tolerance	5%(J)	1% (F) 5% (J)	+/-1% (F)	
抵抗体材質	Resistor Materials	Thick Film		Thin Film	
等価並列容量	Capacitance	1.44pF			Equivalent parallel capacitance.
等価直列誘導	Inductance	8.38nH			Equivalent series inductance
使用温度範囲	Category Temp.	-55 °C to +155 °C			
最高使用電圧	Max. Element Voltage	Either 500V or $\sqrt{P \cdot R}$			P is rating power and R resistance
絶縁耐電圧	Voltage Proof.	2000 VAC			Terminal and flange, 60 seconds. 1mA
定格負荷寿命	Load Life	+/- 1.0 %			25 deg C, 90 min.ON, 30 min. OFF, 1000h.
耐湿性	Humidity	+/- 1.0 %			40 deg C, 90-95%RH, DC 0.1W, 1000 hours.
温度サイクル	Temp. Cycle	+/- 0.25 %			-55 deg C,30 min., +155 deg C,30 min., 5cyc
はんだ耐熱性	Soldering Heat	+/- 0.1 %			350+/-5 deg C, 3seconds,
はんだ付性	Lead Solder ability	Over 95% of surface			230+/-5 deg C, 3seconds.
絶縁抵抗	Insulation Resistance	Over 1,000 MΩ			Between terminals and tab.
耐振性	Vibration	+/- 0.25 %			IEC60068-2-6, see note 4
難燃性	Flammability	UL94-V0			
重量	Weight	1.5 grams			

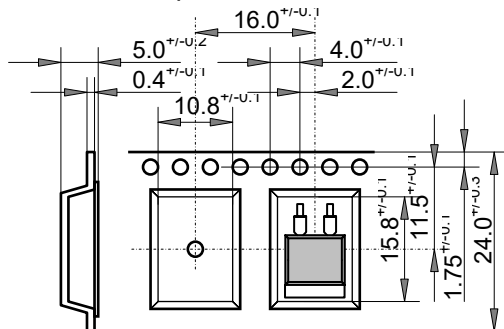
負荷軽減、Power Derating



パルス過負荷特性 Pulse Energy Durability



テーピング寸法、Tape Dimension



Reel Dimension

Outer diameter: 330 mm
 Inner diameter: 100 mm
 Width: 23.9 mm min. 27.4 mm max
 Package quantity: 500pcs/13 inches reel

Note:

- (1) Flange insulation is not necessary between flange and heat-sink, flange and resistor is separated by alumina substrate.
- (2) Resistance measurement makes at terminal foot portion.
- (3) TCR of low resistance will be increased as 300ppm/0.02Ω, 200ppm/0.05Ω, 140ppm/0.1Ω and 80ppm/0.2Ω typically. Testing point is at 5.27mm 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) Standard packaging is tape reel, a tape reel contains 500pcs. when small quantity, tube packaging will be used, the tube is made by RoHS PS/PE which contains 50pcs / tube.

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