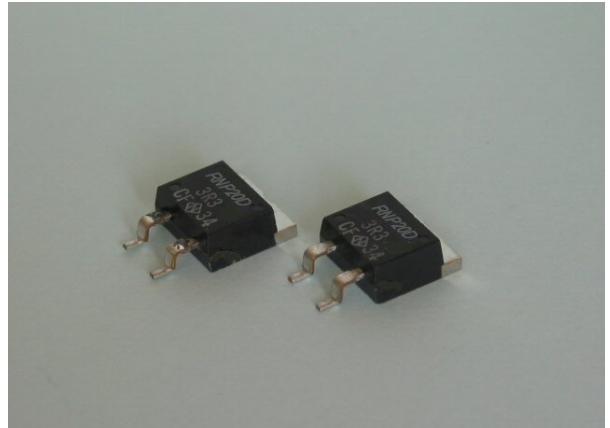


表面実装35W高電力抵抗器

TO263 SURFACE MOUNT  
35W HIGH POWER RESISTORS  
RNP-20D



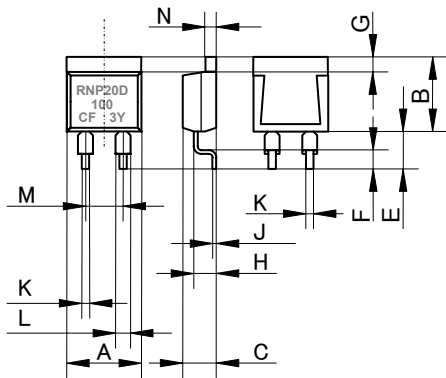
特長 用途

ニッケルめっきのフランジ、TO263(D2-PAK)、定格電力 35W 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。  
独創的内部構造によって、最高使用温度 155°Cの抵抗体とフランジ間の熱抵抗を 3.3°C/W まで減少させ、優秀な熱放散特性。フランジは、回路と耐圧 2KV で絶縁。  
小型、高耐振性、完璧な熱設計の高密度実装が可能。  
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。

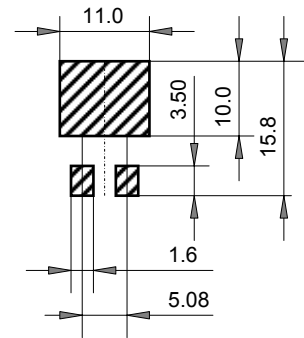
Features and Applications

35W high power resistors in TO263 (D2-PAK) style surface mount mold package with Ni plated flange.  
Non-inductive design suits high frequency applications and high-speed pulse circuits.  
Low, 3.3 deg C/W heat resistance from resistor hot spot to flange and long life performance are presented with thin film metallization technology and rejection of plastic adhesive joint.  
Wide, 10 mΩ to 51KΩ resistance range, non-inductive impedance characteristic and heat venting through insulated metal flange aids circuit designers.  
Small size and thin profile suits high-density compact installations.  
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-20D		
	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



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

プリント基板に実装する場合は、その他の表面実装部品と一緒にリフローはんだを行うことを避けてください。その他の部品を実装した後、SACはんだでプリコートした回路に、先端温度、300-350 deg Cのはんだこてで、抵抗器のフランジを270+/-10°C、20-30秒加熱しフランジのはんだ付を行う必要があります。はんだ付には、ソルダーフラックスを使用する必要があります。

When joint on printed circuit board, reflow soldering by furnace with another parts shall not be recommended. After mounting another parts and after pre-coating solder on to land pattern, dip flange and leads in to soldering resin, place RNP-20D resistor on the land pattern, and heat flange for 20-30 seconds by soldering iron which iron tip temperature is 300-350 deg C. Flange temperature shall be in 270+/-10 deg C for 30 seconds. A better result will be obtained if flange is pre-coating solder. Please note using soldering flux and large caloric capacity.

形名称、Ordering Information

P/N	Type	TC	Resistance*	Tolerance	Package
RNP-20DC500FZ00	RNP-20D	C(50ppm)	50Ω	F(1%)	Z00 (100pcs/TRAY)
RNP-20DC101FZ01	RNP-20D	C(50ppm)	100Ω	F(1%)	Z01 (500pcs/TAPE REEL)
RNP-20DC221FZ01	RNP-20D	C(50ppm)	220Ω	F(1%)	Z01 (500pcs/TAPE REEL)

Note: \* When ordering, additional Ω resistance notation is recommended.

表面実装35W高電力抵抗器

TO263 SMD 35W HIGH POWER RESISTORS

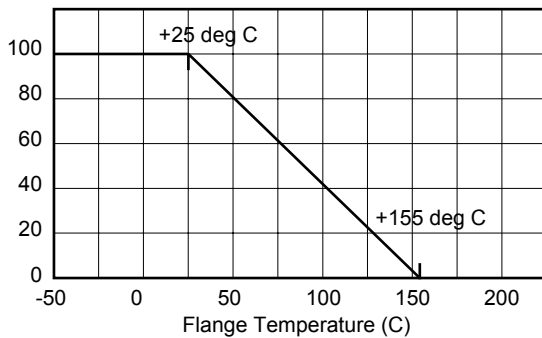
RNP-20D

Specifications

		RNP-20D			Test Conditions
定格電力	Rating Power	35 Watt			-55 deg C to 25 deg C flange temperature
定格電力	Rating Power	2 Watt			Attached on simple foot print.
熱抵抗	Heat Resistance	3.3 deg C/W			Resistor hot spot to flange
抵抗値	Resistance Range	0.01-0.091Ω	0.1-9.1Ω	10-51KΩ	Note 2
公称抵抗値	Nominal	E6	E24	E24	Include 2.5, 4.0, 5.0, 8.0 and 16
TCR(ppm/deg C)	TCR(ppm/deg C)	250(H)	100 (A)	50 (C)	Note 3.
抵抗値許容差	Tolerance	5%(J)	1% (F) 5% (J)	+/-1% (F)	1% tolerance at 0.01-0.091 Ω are available.
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	Operation Temp.	-55 deg C to +155 deg C			
最高使用電圧	Operating Volt.	$\sqrt{P \cdot R}$			P is rating power and R resistance
絶縁耐電圧	Withstanding Volt.	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 Meg Ω			Between terminals and tab.
耐振性	Vibration	+/- 0.25 %			IEC60068-2-6, see note 4
重量	Weight	1.5 grams			

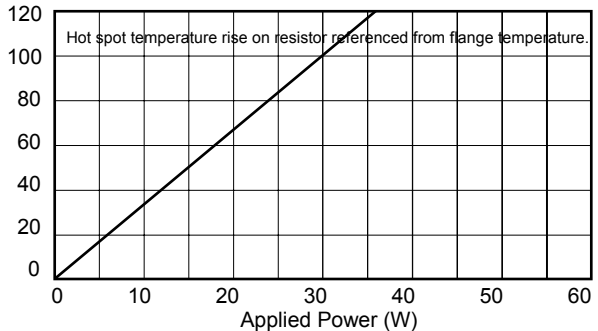
負荷軽減、Power Derating

% Power

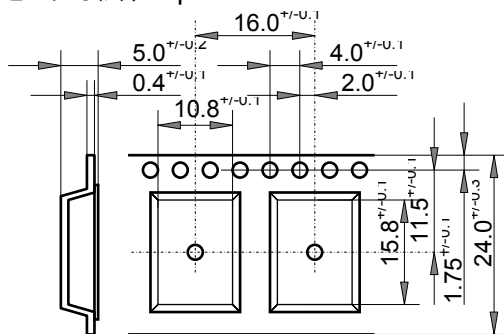


温度上昇、Temperature Rise

Temperature rise (deg C)



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) 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 5.27mm +/-0.6 mm 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 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/s<sup>2</sup>, 90minutes. direction x-y z, Amplitude 0.75mm will be applied under break point Frequency (about 60Hz) and 100m/ s<sup>2</sup> over break point.
- (5) Standard packaging is tape reel, 500pcs/ reel. when small quantity, tube packaging will be used, the tube is made by RoHS PS/PE which contains 50pcs / tube.