

POWER SOLUTION - DBL

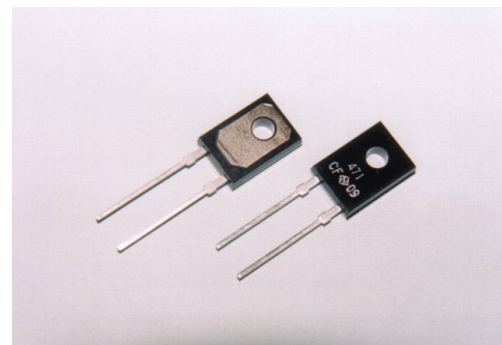
Lead Free

TO126 20W HIGH POWER RESISTORS

RNP-10S



DB LECTRO
COMPOSANTS ÉLECTRONIQUES
ELECTRONIC COMPONENTS



Features and Applications

Small 20Watt high power resistor in TO-126 package with 5.9 C/W heat resistance from hot spot to flange.

Non-Inductive, fit for high speed SW power sources, high precision CRT and high-speed pulse handling circuits.

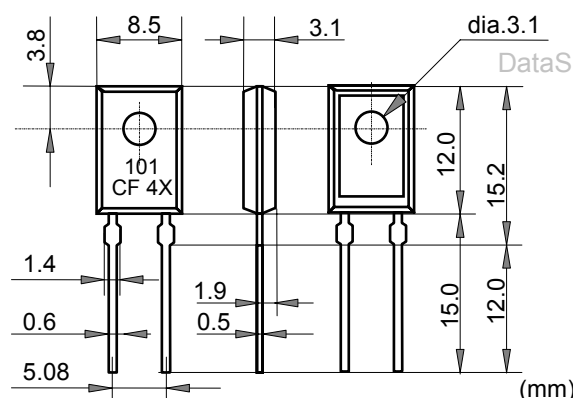
Thin style in small package suits high density installation of electronic instruments.

Superior vibration durability with heat sink mounting.

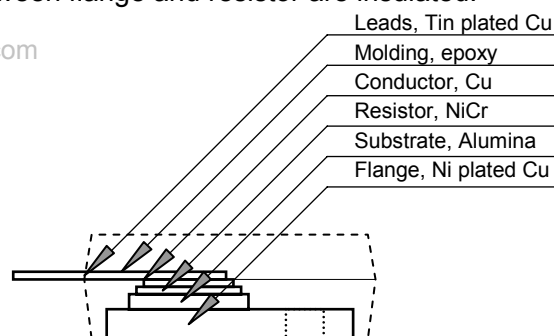
Complete thermal flow design available.

Color video amplifier of CRTs, emitter resistors of power SW circuits, snubber circuits, VHF amplifiers, load resistor of pulse generators.

Dimensions



Between flange and resistor are insulated.



Specifications and Performances

Items	Specification-Performance		Test Conditions
Rating Power	20 Watts		Flange temperature of -55 C to +25 C
Rating Power	1 Watt		Free air (without heat sink).
Hear resistance	5.9 C/W		From hot spot to flange.
Resistance Range	1.0-9.1ohm	10-220ohm	Up to 51kohm resistance are available. Note(6)
Nominal Resistance	E24	E24	
TCR	+/-100 ppm/C(A)	+/-50 ppm/C(C)	Flange temperature -55 to +155 C
Tolerance	+/-5%(J)	+/-1%(F)	
Operation Temp. Range	-55 C to +155 C		
Withstanding Voltage	2000 Volt DC		60 seconds, between terminals and flange.
Load Life	+/- (1.0 % + 0.05ohm)		25C, 90 min.ON, 30min.OFF, 1000hours.
Humidity	+/- (1.0 % + 0.05ohm)		60C, 90 to 95%RH, DC0.1W, 1000hours.
Soldering Heat	+/- (1.0 % + 0.05ohm)		350+/-5C, 3seconds,
Solder ability	Over 3/4 of surface		230+/-5C, 3seconds.
Insulation Resistance	Over 1000 Meg ohm		Between terminals and flange.
Vibration	+/- (0.25 %)		

HIGH POWER RESISTORS

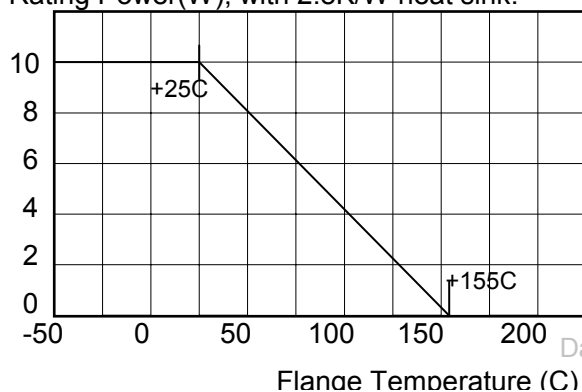
RNP-10S

Ordering Information

Identification	Type	TC	Resistance	Tolerance	Code
RNP10SC500F000	RNP10S	C(50ppm/C)	50ohm	F(1%)	000
RNP10SC500FZ00	RNP10S	C(50ppm/C)	50ohm	F(1%)	Z00 (Z: Lead-free)
RNP10SC101F010	RNP10S	C(50ppm/C)	100ohm	F(1%)	010
RNP10SC101FZ10	RNP10S	C(50ppm/C)	100ohm	F(1%)	Z10(Z: Lead-free)
RNP10SA0R1J000	RNP10S	A(100ppm/C)	0.1ohm	J(5%)	000

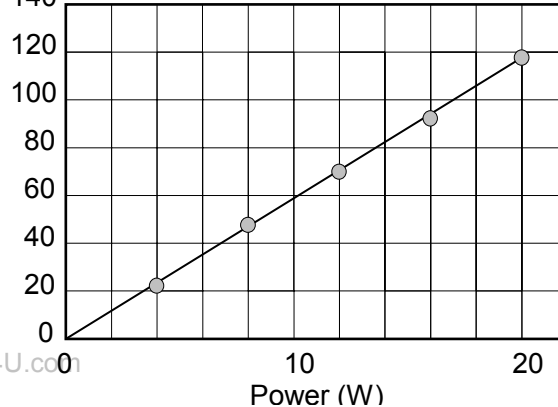
Derating Curve

Rating Power(W), with 2.8K/W heat sink.



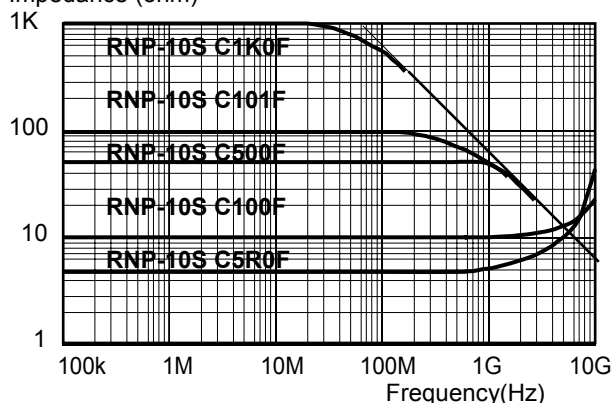
Temperature Rise at flange

Temperature(C)



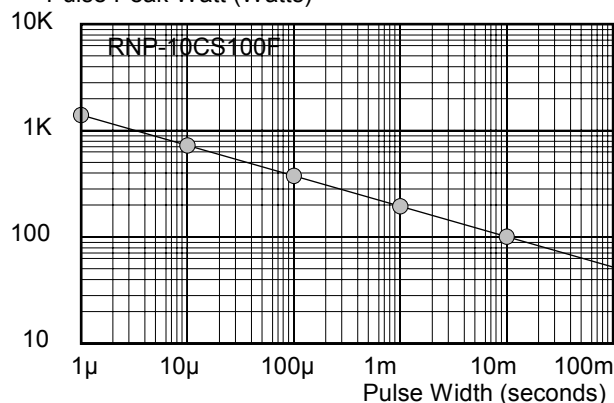
Frequency Characteristics

Impedance (ohm)



One time rectangular impulse.

Pulse Peak Watt (Watts)



Notes

- (1) Insulating material will not be used between flange and resistors, because flange and resistor are separated by alumina substrate.
- (2) Using heat conduction grease on surface of tab is recommended.
- (3) Heat resistance between resistor and tab is 3.6K/W, heat design will be performed as resistor temperature shall be under 155 C in operation.
- (4) 0.1% tolerance resistors are available, please call factory.
- (5) For application to r-f circuit, RMP10S (smd) or lead formed RNP10S are prepared, RNP10S or RMP10S are screw mount style. When soldering mount is better, please use RMP20S.
- (6) At resistance from 220 to 51kohms rating power shall be restricted in 10W.