

Custom solutions are available.

HOW TO ORDER

RST 25-A 4X-100-100 J Y B

Packaging

B = bulk

TCR (ppm/°C)

Z = ±100

Tolerance

J = ±5% K = ±10%

Resistance 2 (leave blank for 1 resistor)

Resistance 1

R10 = 0.1 ohm 101 = 100 ohm
 1R0 = 1.0 ohm 102 = 1.0K ohm
 100 = 10 ohm

Screw Terminals/Circuit

2X, 2Y, 4X, 4Y, 4Z

Package Shape (refer to schematic drawing)

A or B

Rated Power

15 = 150 W 25 = 250 W 60 = 600W
 20 = 200 W 30 = 300 W 90 = 600W (S)

Series

High Power Resistor, Non-Inductive, Screw Terminals



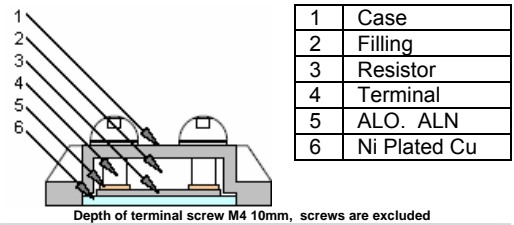
FEATURES

- TO227 package in power ratings of 150W, 250W, 300W, 600W, and 900W
- M4 Screw terminals
- Available in 1 element or 2 elements resistance
- Very low series inductance
- Higher density packaging for vibration proof performance and perfect heat dissipation
- Resistance tolerance of 5% and 10%

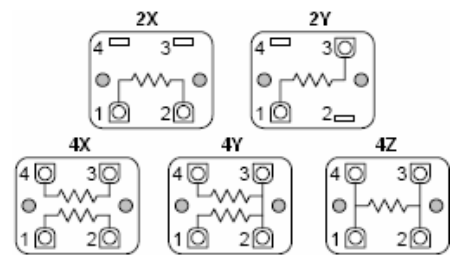
APPLICATIONS

- For attaching to air-cooled heat sink or water cooling applications
- Snubber resistors for power supplies
- Gate resistors
- Pulse generators
- High frequency amplifiers
- Dumping resistance for theater audio equipment on dividing network for loud speaker systems

CONSTRUCTION



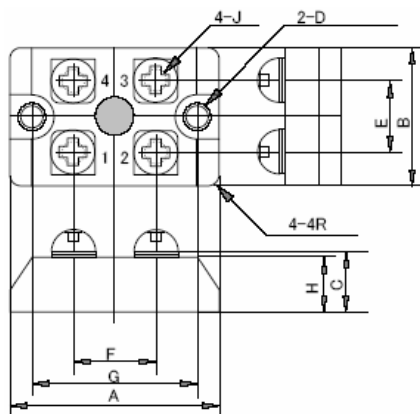
CIRCUIT LAYOUT



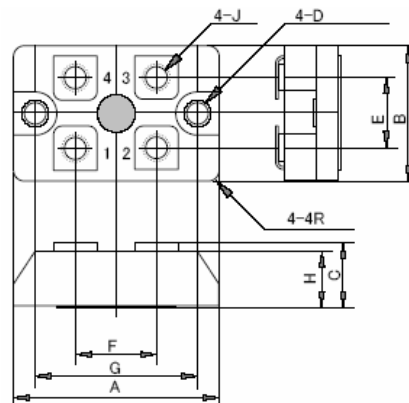
DIMENSIONS (mm)

Shape	A			B
Series	RST20-A2X, A2Y, A4Z RST15-A4X, A4Y	RST25-A4X RST30-A4Z	RST60-A4X RST90-A4Z	RST20-B2X, B2Y, B4Z RST30-B2X, B2Y, B4Z RST60-B2X, B2Y, B4Z RST15-B4X, B4Y RST25-B4X, B4Y RST55-B4X, B4Y
A	38.0 ± 0.2	38.0 ± 0.2	38.0 ± 0.2	38.0 ± 0.2
B	25.0 ± 0.2	25.0 ± 0.2	25.0 ± 0.2	25.0 ± 0.2
C	13.0 ± 0.5	15.0 ± 0.5	15.0 ± 0.5	11.8 ± 0.5
D	4.2 ± 0.1	4.2 ± 0.1	4.2 ± 0.1	4.2 ± 0.1
E	13.0 ± 0.3	13.0 ± 0.3	13.0 ± 0.3	13.0 ± 0.3
F	15.0 ± 0.4	15.0 ± 0.4	15.0 ± 0.4	15.0 ± 0.4
G	30.0 ± 0.1	30.0 ± 0.1	30.0 ± 0.1	30.0 ± 0.1
H	10.0 ± 0.2	12.0 ± 0.2	12.0 ± 0.2	10.0 ± 0.2
J	M4, 10mm	M4, 10mm	M4, 10mm	M4, 10mm

SCHEMATIC



Body Shape A



Body Shape B

SPECIFICATIONS

Series	Body Type/Circuit	Rated Power	Resistance	Resistance Range (Ω)	EIA Values	TCR (ppm/°C)	Tolerance	Operating Temp.
RST15*-	A4X, A4Y	150 W	Dual	0.1 ~ 1.0K	E24	±100	±5%	-55°C ~ +155°C
RST15-	B4X, B4Y	150 W	Dual	0.1 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST20*-	A2X, A2Y, A4Z	200 W	Single	0.1 ~ 1.0K	E24	±100	±5%	-55°C ~ +155°C
RST20-	B2X, B2Y, B4Z	200 W	Single	0.1 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST25*-	A4X	250 W	Dual	1.0 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST25-	B4X, B4Y	250 W	Dual	0.1 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST30*-	A4Z	300 W	Single	1.0 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST30-	B2X, B2Y, B4Z	300 W	Single	0.1 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST55-	B4X, B4Y	550 W	Dual	50.0 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST60-	A4X	600 W	Dual	100 ~ 1.0K	All	±100	±10%	-55°C ~ +155°C
RST60-	B2X, B2Y, B4Z	600 W	Single	50.0 ~ 1.0K	E24	±100	±5%	-55°C ~ +120°C
RST90-	A4Z	600 W	Single	100 ~ 1.0K	All	±100	±10%	-55°C ~ +155°C

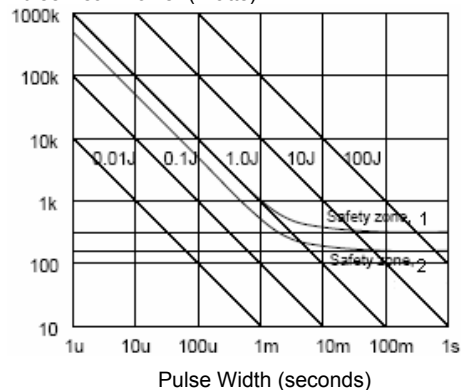
PERFORMANCE

Item	RST15*, RST20*	All other Series	Condition
Rated Power	Per specification	Per specification	RST15, RST20: with heat sink, 0.9 K/W All Other Models: at flange -55°C ~ +25°C
Maximum Applied Voltage	$E = \sqrt{P \cdot R}$	$E = \sqrt{P \cdot R}$	
Withstanding Voltage	2500V DC	2500V DC	60 seconds
Load Life	± (1.0% + 0.05 Ω)	± (1.0% + 0.05 Ω)	25°C, 90 min on, 30 min off, 1000 hrs
Humidity	± (1.0% + 0.05 Ω)	± (1.0% + 0.05 Ω)	40°C, 90 ~ 95% RH, DC 0.1W, 1000 hrs *70°C, 90 ~ 95% RH, DC 0.1W, 1000 hrs
Temperature Cycle	± (1.0% + 0.05 Ω)	± (1.0% + 0.05 Ω)	-55°C, 30 min., +155°C, 30 min.; 20 cycles -55°C, 30 min., +120°C, 30 min.; 20 cycles
Short Time Overload	± (0.25% + 0.05 Ω)	± (0.25% + 0.05 Ω)	Rated Power x 2.5, 2 sec. with heat sink
Soldering Heat	n/a	± (0.25% + 0.05 Ω)	350°C ± 5°C, 3 seconds
Solderability	n/a	n/a	
Insulation Resistance	> 1,000 Meg ohm	> 1,000 Meg ohm	Between Terminals and Flange
Vibration	± (0.25% + 0.05 Ω)	± (0.25% + 0.05 Ω)	
Flammability	UL94V-O	UL94V-O	

PULSE OPERATION DURABILITY

1 = RST30- B2X, B2Y, B4Z
2 = RST25-B4X, B4Y (one resistor)

Pulse Peak Power (Watts)



The figure illustrating pulse load shows the safe operation area, which measured experimentally and which can operate with a rectangle pulse of a long cycle. However, data does not guarantee the operation about the continuous pulse load of a short cycle in which a resistor carries out a temperature rise with average electric power. Pulse peak power recommends operating within the rated electric power. Pulse operation of models RST60-B2X, B2Y, B4Z are the same as models RST30- B2X, B2Y, B4Z.

NOTES

For RST60-A4X and RST90-A4Z

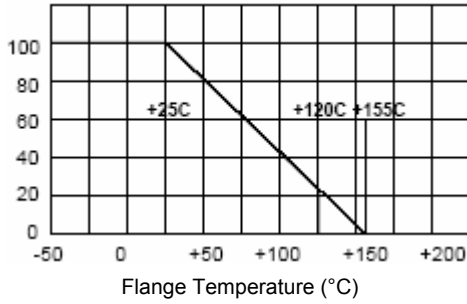
When water cooled heat sink is used, maintaining a flange temperature of 25°C is difficult. When the flange temperature is over 25°C, the rating will be decreased as illustrated in the derating curve. In short pulse applications, the peak power can not exceed over 600W.

DERATING CURVE

RST15-A4X, A4Y

RST20-A2X, A2Y, A4Z

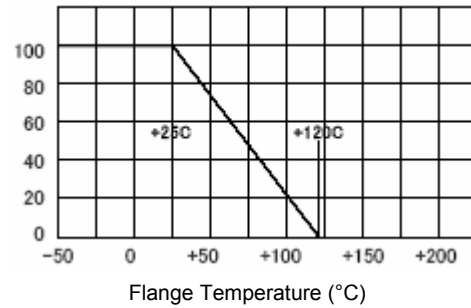
% Rated Power



RST25-A4X

RST30-A4Z

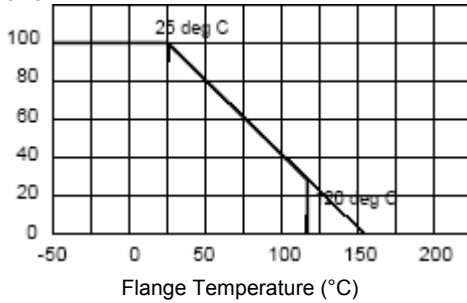
% Rated Power



RST15-B4X, B4Y
RST20-B2X, B2Y, B4Z

RST25- B4X, B4Y
RST30- B2X, B2Y, B4Z

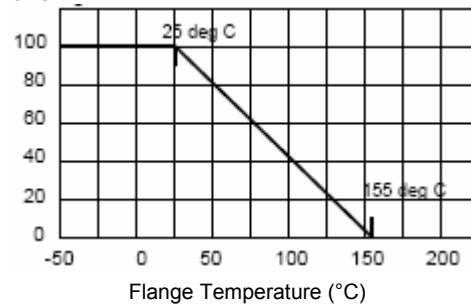
% Rated Power



RST55-B4X, B4Y

RST60-A4X, B2X, B2Y, B4Z

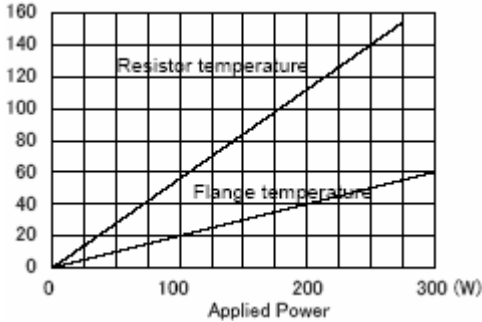
% Rated Power



TEMPERATURE RISE

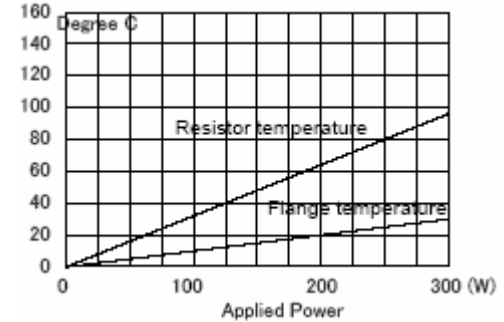
RST20-A2X, A2Y, A4Z with 0.2K/W heat sink

Temperature Rise (°C)



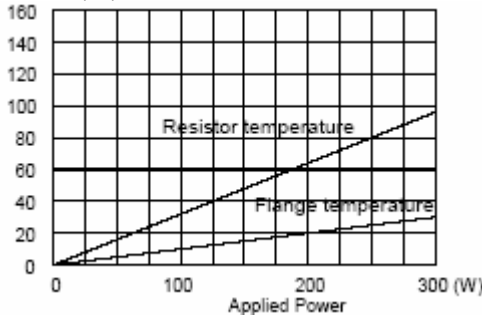
RST30-A4Z with 0.1K/W heat sink

Temperature Rise (°C)



RST30- B2X, B2Y, B4Z with 0.1° C/W heat sink

Temperature Rise (°C)



RST60-AX4, B2X, B2Y, B4Z

Temperature Rise (°C)

