

## 2W 3W CURRENT SENSING RESISTORS

RCS2(100A),

RCS3(170A)



### Features and Applications

Rating current 170A (0.1mohm-3W, RCS3 and RCS4) and 100A (0.1mohm-2W, RCS2) current detecting resistors for electric equipment.

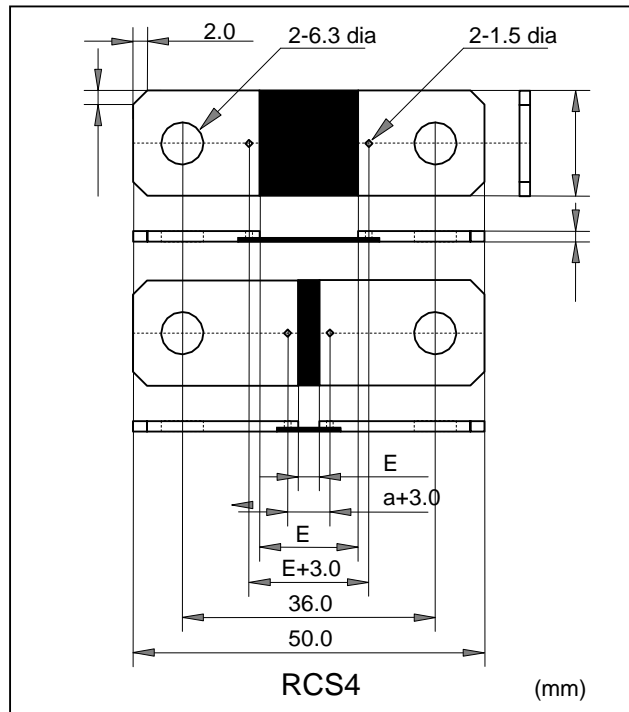
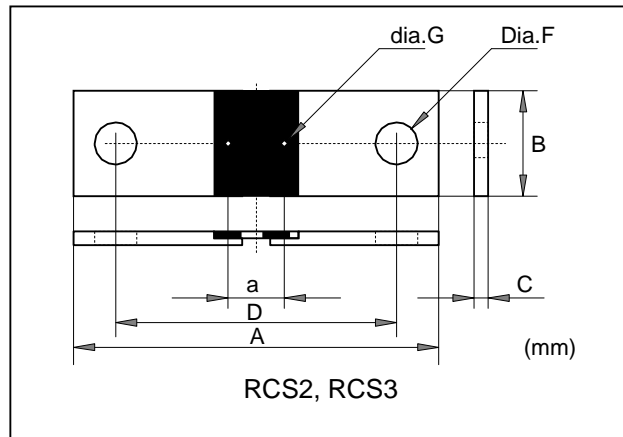
RCS4 has same performance but is smaller and light weight than RCS3

Excellent long term stability and less than 80ppm/C TCR are realized by using Ni alloy and fully fine welding structure.

Simple 4-ports Kelvin structure is easy to install large current bus-bar.

Current detection in precision power source, constant current source, industrial power conversion circuit, HEV, of fuel cells, constant electronic load and etc.

### Dimensions



(mm)		RCS2	RCS3	RCS4
A		50.0	55.0	50.0
B		12.0	15.0	15.5
C		2.0	2.0	1.5
D		35.0	40.0	36.0
F		6.2	6.2	6.3
G		3.2	0.8	1.5
	milliohm	RCS2	RCS3	RCS4
E	0.1	5.6	7.0	3.0
E	0.2	7.7	9.6	6.0
E	0.3	9.6	12.0	9.0
E	0.4	11.6	14.5	12.0
E	0.5	14.0	17.5	7.5
E	0.6	---	---	9.0
E	0.7	---	---	10.5
E	0.8	---	---	12.0
E	0.9	---	---	13.5
E	1.0	---	---	15.0

### Rating current and Maximum, RCS3-RCS4 (1).

milliohm	Rating Current(A)	Max Current (A)
0.1	173	200
0.2	122	141
0.3	100	115
0.4	86	100
0.5	77	89
0.6	70	81
0.7	65	75
0.8	61	70
0.9	57	66
1.0	54	63



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The content of this specification may change without notification 6/23/2010

## RCS2(100A), RCS3(170A), RCS4(170A)

### Ordering Information

P/N	Type	TCR	Resistance	Tolerance	Code
RCS2A0R0001JZ00	RCS2	A(+80ppm/C)	0.1mohm	J(+/-5%)	Z00
RCS2A0R0005FZ00	RCS2	A(+80ppm/C)	0.5mohm	F(+/-1%)	Z00
RCS3A0R0001FZ00	RCS3	A(+80ppm/C)	0.1mohm	F(+/-1%)	Z00
RCS4A0R0001FZ00	RCS4	A(+80ppm/C)	0.1mohm	F(+/-1%)	Z00

### Specification and Performance

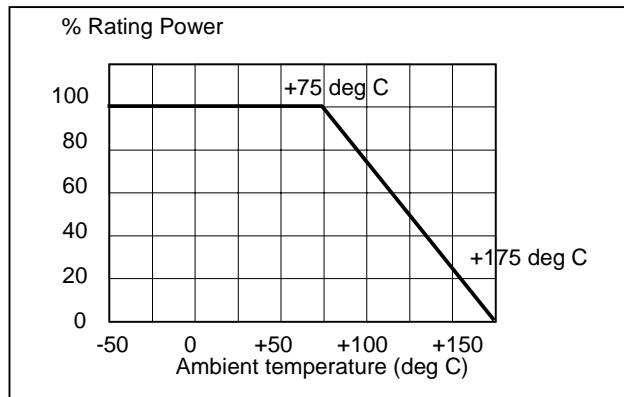
Items	Specification		
	RCS2	RCS3	RCS4
Type	RCS2	RCS3	RCS4
Resistance	0.1 to 0.5 milliohm	0.1 to 0.5 milliohm	0.1 to 1.0 milliohm
TCR	+0 to 80ppm/C (A)	+0 to 80ppm/C (A)	+0 to 60ppm/C (A)
Tolerance	+/-1% (F) and +/-5% (J)	+/-1% (F) and +/-5% (J)	+/-1% (F) and +/-5% (J)
Rating Power	2W	3W	3W
Maximum Power	2kW/0.1seconds	3kW/0.1seconds	3kW/0.1seconds
Rating Current	See below table	See upper table	See upper table
Operating Temperature	-55 - +175degC	-55 - +175degC	-55 - +175degC
Storage Temperature	-55 - +175degC	-55 - +175degC	-55 - +175degC

### Rating Current and Max Current, RCS2 (1)

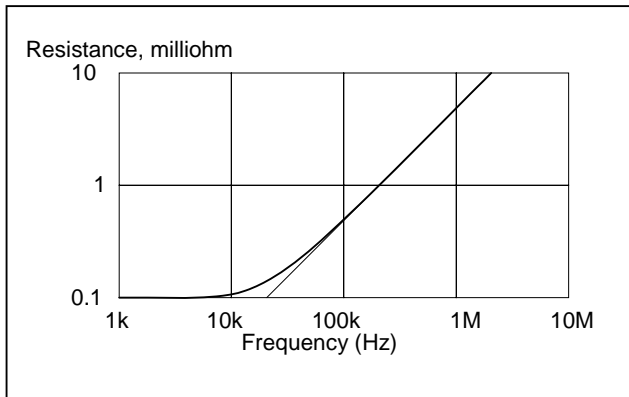
Resistance	0.1mohm	0.2mohm	0.3mohm	0.4mohm	0.5mohm
Rating Current	141.4A	100.0A	81.6A	70.7A	63.2A
Maximum Current	173.0A	122.0A	100.0A	86.0A	77.0A

Note (1): Rating and maximum current are specified in connecting to bus-bar, not at standing alone resistor in free air.

### Derating Curve



### Frequency Characteristics



### Recommendation

