

2W 3W CURRENT DETECTORS

RCS2(100A), RCS3(170A)



Features and Applications

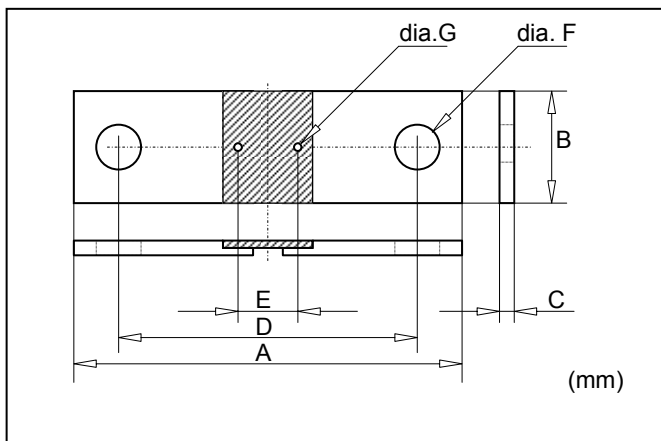
Rating current 170A (0.1mohm-3W) and 100A (0.1mohm-2W) current detecting resistors for electric equipment.

Excellent long-term stability and less than 50ppm/C TCR realized through the use of Ni alloy and fully fine welded structure.

Simple 4-port Kelvin structure enables easy large current bus-bar installation.

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

Dimensions



(mm)	RCS2	RCS3
A	50.0	55.0
B	12.0	15.0
C	2.0	2.0
D	35.0	40.0
E	See below	See below
F	6.2	6.2
G	3.2	0.8

Dimension of E

	RCS2	RCS3
0.1mohm		7.0
0.2mohm		9.6
0.3mohm		12.0
0.4mohm		14.5
0.5mohm		

Ordering Information

P/N	Type	TCR	Resistance	Tolerance	Code
RCS2C0R0001FZ00	RCS2	C(+/-50ppm/C)	0.1mohm	F(+/-1%)	Z00
RCS2C0R0001FZ00	RCS2	C(+/-50ppm/C)	0.1mohm	F(+/-1%)	Z00
RCS2C0R0001FZ00	RCS2	C(+/-50ppm/C)	0.1mohm	F(+/-1%)	Z00
RCS2C0R0001FZ00	RCS2	C(+/-50ppm/C)	0.1mohm	F(+/-1%)	Z00

2W 3W CURRENT SENSING RESISTORS

RCS2(100A), RCS3(170A)

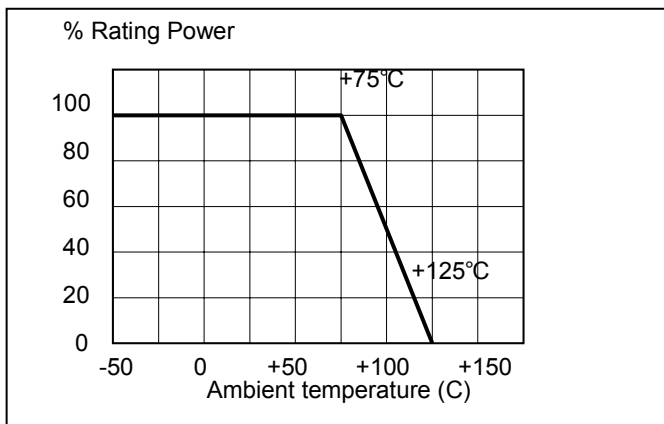
Specification and Performance

Items	Specification		Conditions
	RCS2	RCS3	
Type	RCS2	RCS3	
Resistance	0.1 to 0.5mohm	0.1 to 0.5mohm	See note (2)
TCR	+0 to 80ppm/C (A)	+0 to 80ppm/C (A)	
Tolerance	+/-1% (F) and +/-5% (J)	+/-1% (F) and +/-5% (J)	
Rating Power	2W	3W	
Maximum Power	2kW/0.1seconds	3kW/0.1seconds	
Rating Current	See below	See below	
Operating Temperature	-55C - +125C	-55C - +125C	
Storage Temperature	-55C - +125C	-55C - +125C	

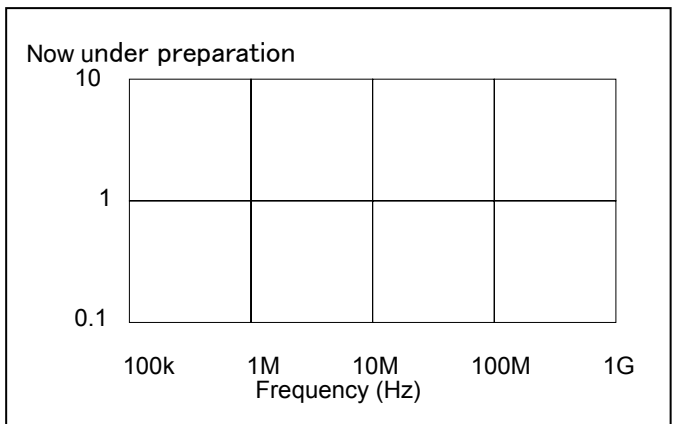
Rating Current

Resistance	0.1mohm	0.2mohm	0.3mohm	0.4mohm	0.5mohm
RCS2(2W)	141.4A	100.0A	81.6A	70.7A	63.2A
RCS3(3W)	173.2A	122.4A	100.0A	86.6A	77.4A

Derating Curve



Frequency Characteristics



Recommendation

Note:
 (1) When RCS current detector is attached to current bus, mechanical strain shall be rejected from the resistor as shown in above illustration.
 (2) Resistance shall be made by calculating from DC voltage on detecting terminal at application of current through current terminals..