

TCS series Current Sensing Resistors

These components are four-terminal, bus-bar, metal strip current shunts. Assembled using electron beam welding. Also they can absorb a high pulse power rating and have very low inductance. They also feature excellent long term stability, less than 100ppm/°C TCR, and have excellent frequency characteristics. Applications include : Battery charging current control of automotive electronics, current detection in precise power sources, constant current sources, industrial power conversion circuits, HEVs, fuel cells and constant electronic loads.



GENERAL SPECIFICATIONS

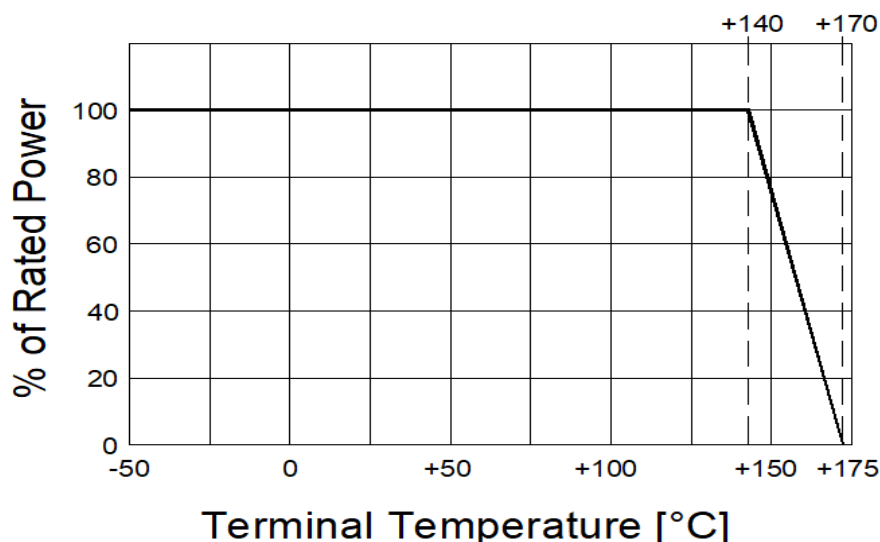
Model	*Power Rating [W] (*At terminal temp.≤140°C)	Resistance [Ω]	Continuous current [A] at 0.025mΩ (*At terminal temp.≤140°C)	Resistance Tolerance
TCS8536	Up to 36	0.025m / 0.05m / 0.1m	1200	J [±5%]

* Referred to power derating curve.

CHARACTERISTICS

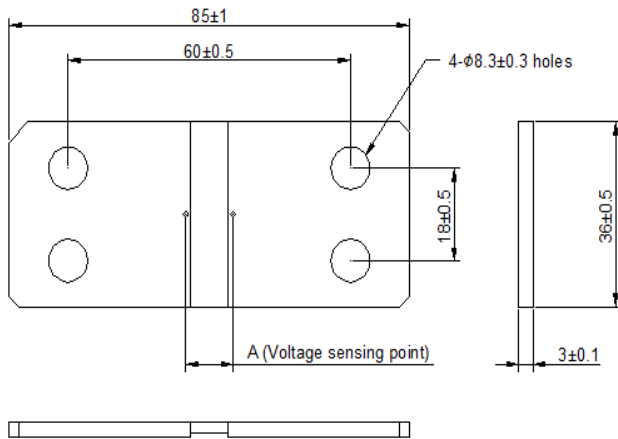
Test	Condition		
Operating Temperature	-40°C~+170°C		
Temperature Coefficient	(+20°C and +60°C) Max.±100ppm/°C		
High temperature exposure	$\Delta R \leq \pm 1.0\%$	+125°C, 1000hrs.	
Temperature cycle	$\Delta R \leq \pm 1.0\%$	-55°C(30min.) to +125°C(30min.) 1000cycles, 1min. Max. transition time.	
Resistance to solvent	$\Delta R \leq \pm 1.0\%$	OKEM Clean or equivalent	
Vibration	$\Delta R \leq \pm 0.5\%$	10-2000Hz, 5g's for 20min., 12cycles each of 3orientations	
Operational Life	$\Delta R \leq \pm 1.0\%$	Rated power, 1.5hrs "On", 0.5hrs "Off", for 1000hrs. (TA=20°C, Terminal temp.≤70°C)	

DERATING CURVE

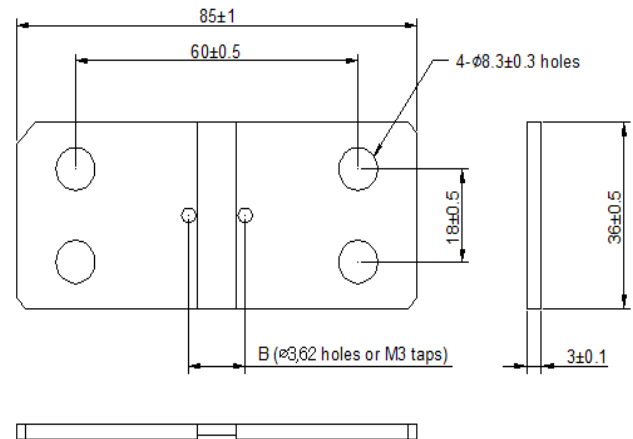


DIMENSIONS (mm)

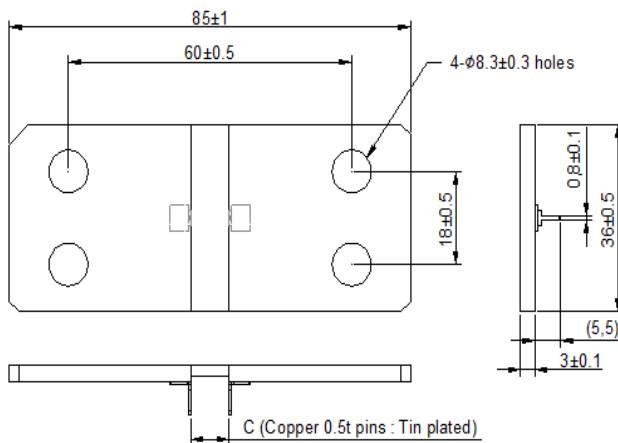
Non type voltage sensing (Standard)



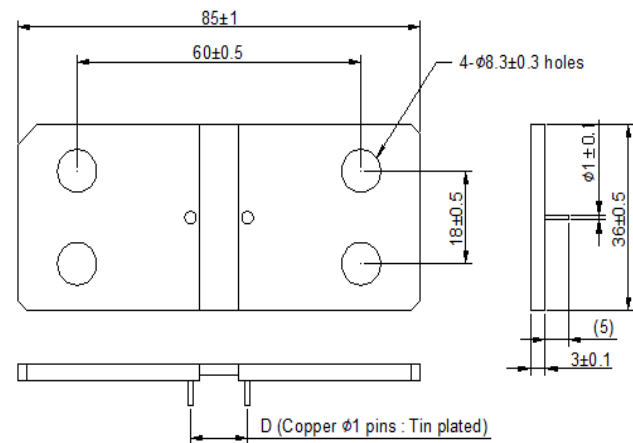
Hole(Tap) type voltage sensing



Pin type voltage sensing



Press Fit type voltage sensing



Model	Resistance [mΩ]	Dimensions [mm]			
		A±0.5	B±0.5	C±0.5	D±0.5
TCS8536	0.025	6	8	4	8
	0.05	10	12	8	12
	0.1	18	20	16	20

ORDERING PROCEDURE EXAMPLE

TCS8536

Model #

H

Voltage sensing
H : Hole type
T : Tap type
P : Pin type
N : Non type
F : Press Fit type

0.1mΩ

Resistance Value

J

Tolerance