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/℃ 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

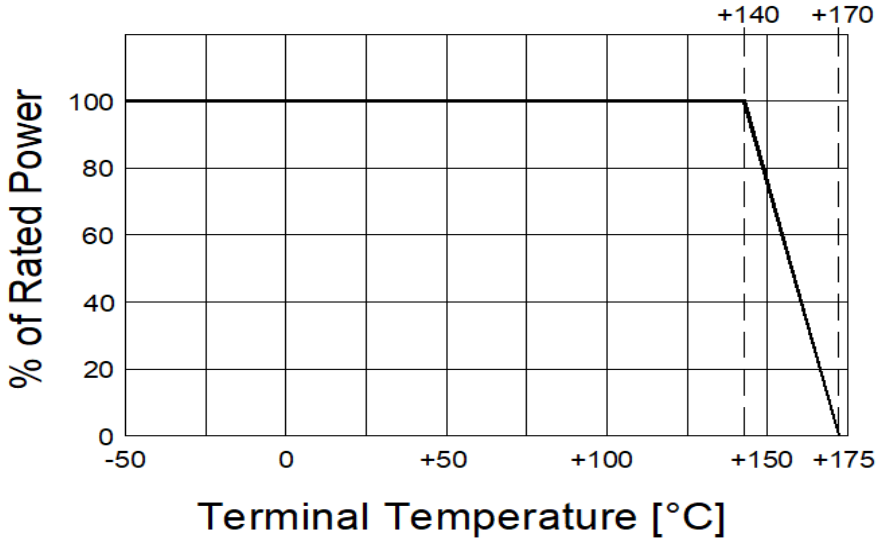
Model	*Power Rating [W] (*At terminal temp.≤140℃)	Resistance [Ω]	Continuous current [A] at 0.025mΩ (*At terminal temp.≤140℃)	Resistance Tolerance
TCS8536	Up to 36	0.025m / 0.05m / 0.1m	1200	J [±5%]

* Referred to power derating curve.

CHARACTERISTICS

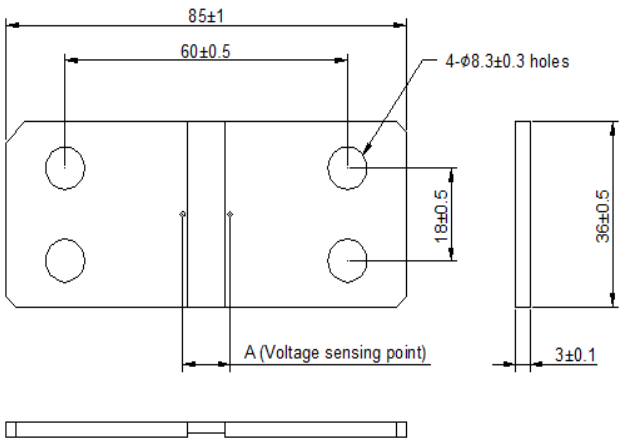
Test	Condition	
Operating Temperature		-40℃~+170℃
Temperature Coefficient		(+20℃ and +60℃) Max.±100ppm/℃
High temperature exposure	△R≤±1.0%	+125℃, 1000hrs.
Temperature cycle	△R≤±1.0%	-55℃(30min.) to +125℃(30min.) 1000cycles, 1min. Max. transition time.
Resistance to solvent	△R≤±1.0%	OKEM Clean or equivalent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

DERATING CURVE

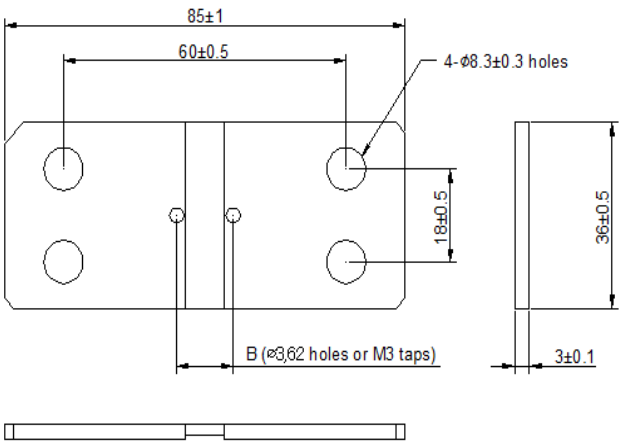


DIMENSIONS (mm)

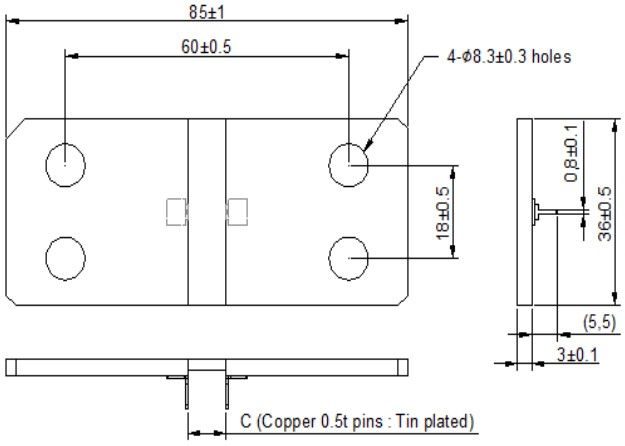
Non type voltage sensing (Standard)



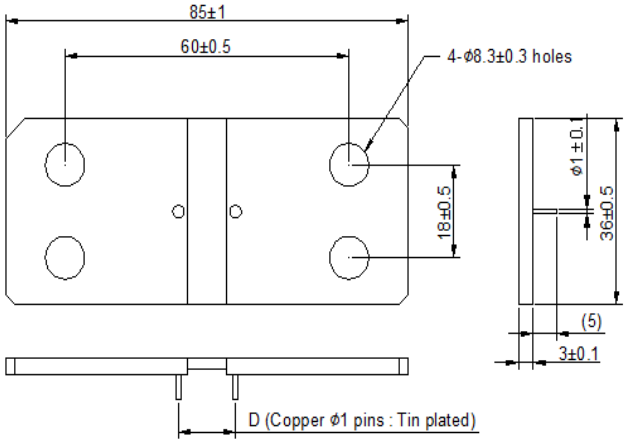
Hole(Tap) type voltage sensing



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	H	0.1mΩ	J
Model #	Voltage sensing H : Hole type T : Tap type P : Pin type N : Non type F : Press Fit type	Resistance Value	Tolerance