TSR Jumper Current-Sensing Resistors

Features

- Excellent solderability
- RoHS and REACH compliant
- Customizable

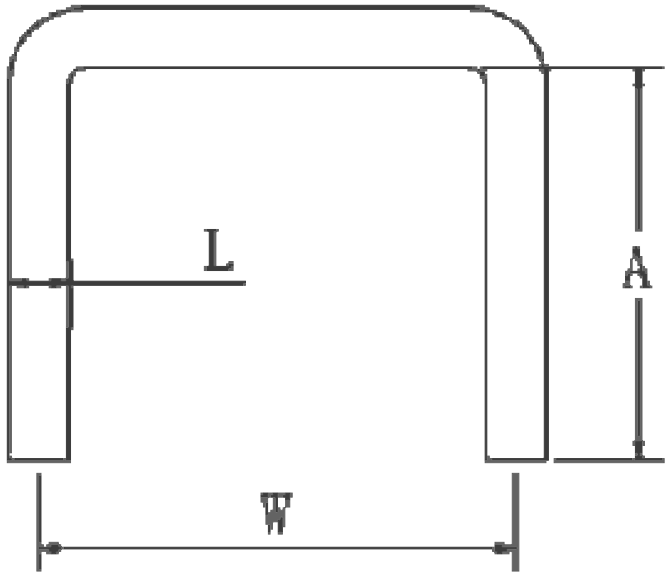


Applications

Current sensing; diversion current; high-current applications.

Standard Dimensions and Structure • mm

L (mm)	W (mm)	A (mm)
0.5~3.0	3~50	4.0±0.2



Materials and Performance

Code	Material	Resistivity
1	Constantan	48μΩ·cm
2	Manganin	44μΩ·cm
c	Tinned copper	/

TCR: 40×10□□/°C (Constantan / Manganin). EMF at 0~100°C: 40μV/°C for Constantan, 1μV/°C for Manganin.

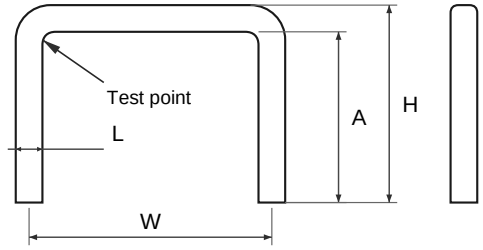
T-Type Diameter, Pitch and Resistance

Rows: diameter L (mm); columns: pitch W (mm); cells: resistance (mΩ). Blank cells follow the source.

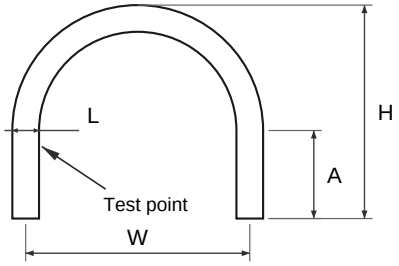
L / W	3	5	8	10	12	15	18	20	25	30	40	50
3.0				1	1.1	1.3	1.5	1.6	1.9	2.3	2.9	3.5
2.5				1.1	1.3	1.3	1.9	2.1	2.6	3.1	4.0	5.0
2.3			1.1	1.4	1.6	1.9	2.3	2.5	3.1	3.6	4.8	5.9
2.0			1.5	1.8	2.1	2.5	3.0	3.3	4.0	4.7	6.2	7.7
1.8		1.3	1.8	2.2	2.6	3.1	3.7	4.1	5.0	5.9	7.8	9.6
1.6		1.6	2.3	2.8	3.3	4.0	4.7	5.1	6.3	7.5	9.8	12.2
1.5	1.3	1.9	2.7	3.2	3.7	4.5	5.3	5.9	7.2	8.5	11.2	13.8
1.4	1.5	2.1	3.1	3.7	4.3	5.2	6.1	6.7	8.2	9.8	12.9	15.9
1.3	1.8	2.5	3.5	4.3	5.0	6.0	7.1	7.8	9.3	11.3	14.9	18.4
1.2	2.1	2.9	4.2	5.0	5.8	7.1	8.3	9.1	11.2	13.3	17.5	21.6
1.1	2.5	3.5	4.9	5.9	6.9	8.4	9.9	10.9	13.4	15.8	20.8	25.7
1.0	2.9	4.2	6.0	7.2	8.4	10.2	12.0	13.2	16.2	19.2	25.1	31.1
0.9	3.2	4.5	7.0	8.4	9.9	12.1	14.3	15.5	19.5	23.2	30.6	38
0.8	3.7	5.6	8.4	10.3	12.2	15.0	17.8	19.6	24.3	29.0	39.4	47.7
0.7	4.9	7.3	11.0	13.4	15.9	19.6	23.2	25.7	31.8	37.9	50.1	62.3
0.6	6.7	10.0	15.0	18.3	21.6	26.6	31.6	34.9	43.2	51.6	68.2	84.8
0.5	7.9	11.9	17.8	21.8	25.7	31.7	37.6	41.6	51.5	61.3	81.1	101

Available Forms

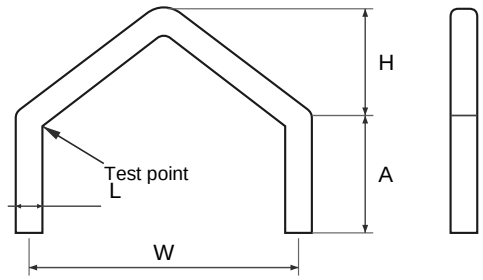
T



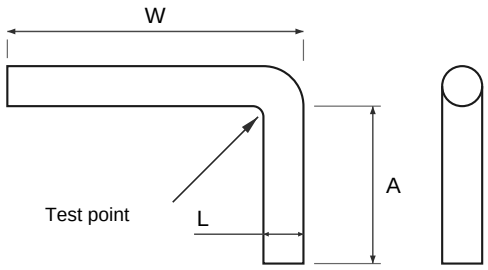
Tr



Ta



L



Tinned-Copper Product Example • mm

A	H	W	L
3.5±0.5	4.7±0.5	10±0.2	1.2±0.1

The example resistance is listed as /. This example and the standard-size A=4.0±0.2 are retained separately.

Endurance Tests

Item	Conditions	Reference	Limit
Operational life	70±2°C, 1000h; rated voltage, 90min ON / 30min OFF	MIL-STD-202 Method 108	±1%
Biased humidity	85°C / 85%RH, 1000h; 10% operating power	MIL-STD-202 Method 103	±1%
Temperature cycling	1000 cycles (-55°C to +125°C)	JESD22 Method JA-104	±1%

Packaging and Storage

Bulk, with internal and external packaging.

Ordering Information

Field	Codes and description
Type	Tr
Material	1: Constantan; 2: Manganin; c: Tinned copper
Diameter	L: 0.5~3.0mm
Pitch	W(mm)
Pin length	A(mm)
Example	T - 1 - 12 - 10 - 3.5

For ordering, specify wire diameter/material L, rated current, pitch W and height A.