U-shape plug-in shunt

For high current signal sampling，tolerance down to ±0.5%

AEC-Q200 qualified，high stability，ultra-low thermal EMF and TCR

Features:

- vacuum e-beam welding craft, pure copper electrode，ideal solution for current detection applications.
- high reliability and stability ,superb pulse load capability, support ±0.5% torlerance.
- All-metal structure, surface pickling and passivation treatment, vulcanization resistance, strong weather resistance
- high reliability, high overload capacity, high precision
- ultra-low inductance
- Ultra-low thermal EMF
- RoHS compliant
- customization

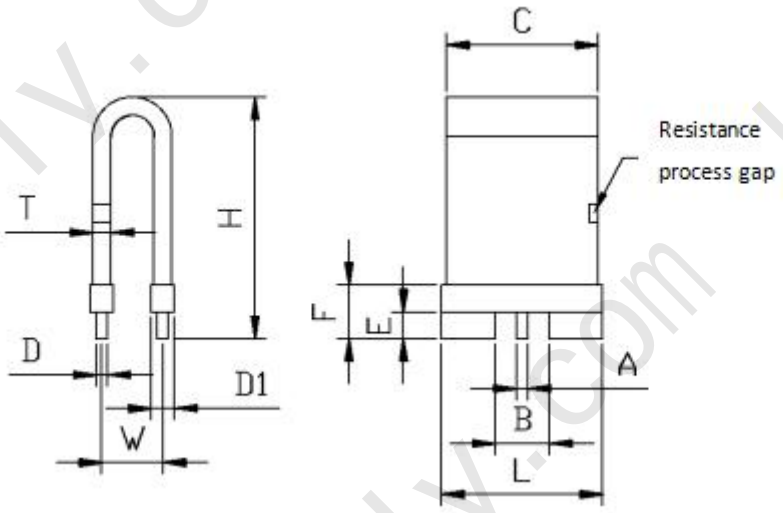
parameter:	
resistance value （mΩ)	0.4~2.5mΩ
tolerance(%)	±0.5%(D),±1%(F),±5%(J)
TCR(ppm)	Min.±25 ppm/℃
operating temperature range (℃)	-55℃~+170℃
inductance (nH)	<5nH
rated power (W)	Max.15W
maximum operating current (A)	$(P/R)^{1/2}$

Type Designation(example)：HYUS2718150A75mV-10　　HYUS 2718 150A75mV span 10

H	Y	U	S	2	7	1	8	1	5	0	A	7	5	m	V	–	1	0

U-shape plug-in shunt	size height: 27 width: 18	current 150A	voltage 75mV	span 10

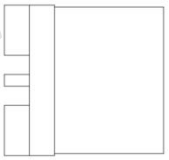
Dimensions(mm):

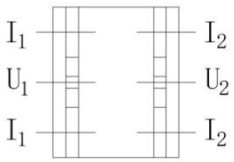


model	resistance value	A/mm	B/mm	C/mm	L/mm	W/mm	H/mm	D/mm	D1/mm	E/mm	F/mm	T/mm
30A75mV	2.5mΩ	1.3±0.1	6±0.2	15±1	18±0.3	10±0.5	27±2	1.3±0.2	2.6±0.2	3±0.2	6±0.5	0.5±0.1
65A50mV	0.769mΩ	1.3±0.2	6±0.3	16±1	18±0.3	6±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
65A50mV	0.769mΩ	1.3±0.2	6±0.3	16±1	18±0.3	6.5±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
65A50mV	0.769mΩ	1.3±0.2	6±0.2	16±1	18±0.1	7±0.3	27±2	1.3±0.1	2.6±0.2	3±0.2	6±0.5	1.5±0.1
65A50mV	0.769mΩ	1.3±0.2	6±0.3	16±1	18±0.3	15±0.5	24±3	1.3±0.2	2.6±0.2	3±0.2	6±0.5	1.5±0.2
65A50mV	0.769mΩ	1.3±0.2	6±0.3	16±1	18±0.3	8.4±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.2
60A75mV	1.25mΩ	1.3±0.1	6±0.2	10±1	18±0.3	10±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
75A30mV	0.4mΩ	1.3±0.1	6±0.1	22±0.5	22±0.2	7.7±0.5	27±2	1.4±0.2	2.6±0.2	3±0.5	6±0.5	2±0.1
75A50mV 100A66.7mV	0.667mΩ	1.3±0.1	6±0.3	13±2	18±0.3	7±0.3	27±2	1.3±0.3	2.6±0.2	3±0.5	6±0.5	2±0.2
75A50mV 150A100mV	0.667mΩ	1.3±0.1	6±0.3	13±2	18±0.3	8.4±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.2
75A75mV	1mΩ	1.3±0.2	6±0.3	13±1	18±0.5	6.5±0.5	26±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
75A75mV	1mΩ	1.3±0.1	6±0.2	13±1	18±0.2	10±0.5	26±2	1.3±0.1	2.6±0.2	3±0.5	6±0.5	1.5±0.1

75A75mV	1mΩ	1.3±0.1	6±0.2	13±1	18±0.2	10.5±0.5	26±2	1.3±0.1	2.6±0.2	3±0.5	6±0.5	1.5±0.1
80A50mV	0.58mΩ	1.3±0.2	6±0.3	14±1	18±0.3	10.5±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.1
100A40mV	0.4mΩ	1.4±0.2	6±0.3	22±0.5	22±0.5	7.7±0.5	27±2	1.5±0.2	2.6±0.2	3±0.5	6±0.5	2±0.1
100A50mV	0.5mΩ	1.3±0.1	6±0.2	17±1	18±0.3	6.8±0.5	27±2	1.3±0.1	2.6±0.2	3.2±0.2	6±0.5	2±0.1
100A50mV	0.5mΩ	1.5±0.1	7±0.1	23.5±1	30±0.2	6.8±0.5	26±2	1.3±0.1	2.6±0.2	3±0.2	6±0.5	1.5±0.1
model	resistance value	A/mm	B/mm	C/mm	L/mm	W/mm	H/mm	D/mm	D1/mm	E/mm	F/mm	T/mm
100A50mV	0.5mΩ	1.3±0.2	6±0.2	17.5±1	18±0.5	7±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.1
100A50mV	0.5mΩ	1.2±0.1	5.8±0.1	15.3±1	18±0.1	8.4±0.5	17±2	1.3±0.1	2.6±0.2	3±0.2	6±0.5	1.5±0.1
100A50mV	0.5mΩ	1.3±0.1	6±0.1	17.2±1	18±0.3	8.4±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.2
100A50mV	0.5mΩ	1.3±0.1	6±0.2	17±1	18±0.3	10.5±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.2
100A75mV	0.75mΩ	1.3±0.1	6±0.2	17±1	18±0.3	7±0.3	27±2	1.4±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
100A75mV	0.75mΩ	1.3±0.1	6±0.1	17±1	18±0.1	8.4±0.5	26±2	1.3±0.1	2.6±0.2	3±0.2	6±0.5	1.5±0.1
100A75mV	0.75mΩ	1.3±0.2	6±0.2	17±1	18±0.5	10.5±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
100A75mV	0.75mΩ	1.3±0.1	6±0.3	17±1	18±0.3	10±0.5	27±2	1.4±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
100A90mV	0.9mΩ	1.3±0.1	6±0.3	13±1	18±0.2	8.4±0.5	27±2	1.3±0.1	2.6±0.2	3±0.5	6±0.5	1.5±0.1
100A100mV	1mΩ	1.3±0.1	6±0.3	13±1	18±0.3	8.4±0.5	27±2	1.4±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.2
120A75mV	0.625mΩ	1.3±0.1	6±0.3	14±2	18±0.3	10±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.2
150A75mV	0.5mΩ	1.3±0.2	6±0.2	16.5±1	18±0.3	8.5±0.3	17±2	1.4±0.2	2.6±0.2	3±0.5	6±0.5	1.5±0.1
150A75mV	0.5mΩ	1.3±0.1	6±0.2	17±1	18±0.3	10±0.5	27±2	1.3±0.2	2.6±0.2	3±0.5	6±0.5	2±0.2

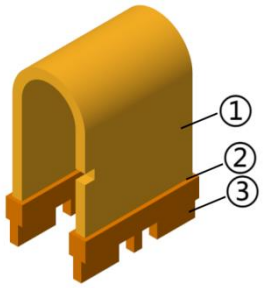
U-shape shunt resistor connection diagram:



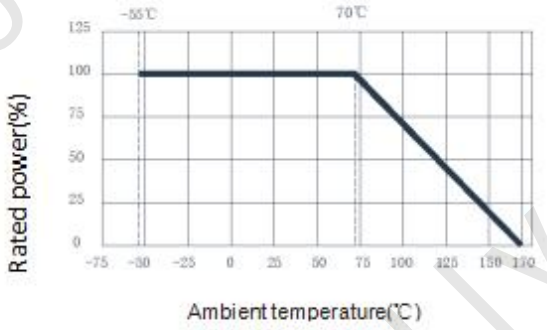


1. I_1I_2 current input terminal
2. U_1U_2 voltage sampling point

分流器结构:	降功耗曲线:



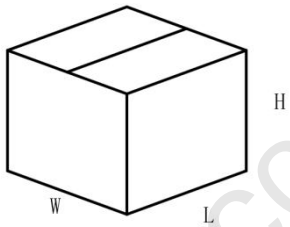
1.resistor component: low TCR manganese copper (<20ppm/℃)
2.stable electron-beam welding structure
3. pure copper four terminals sampling



Performance:		
Test Item	**standard**	**Test method**
TCR	Within specified TCR	IEC60115-1 4.8，measured point20°C～+130°C，reference point +20°C
Short-time overload	No visible damage △R±1% Maximum	IEC60115-1 4.13，five times rated power，5 seconds
High temp. & high humidity	No visible damage △R±1% Maximum	Applying 10% of the rated power (current) or the limiting current of the component (whichever is lower) for a duration of 1000 hours in a temperature of 85°C and a humidity of 85% according to MIL-STD-202 method 103
High temperature storage	No visible damage △R±1% Maximum	IEC60115-1 4.25.3，1000hours@170°C，without loading current and voltage
Low temperature load	No visible damage △R±0.5% Maximum	IEC60115-1 4.36，cooled from room temperature to -55°C ,no load for 1.5 hours,applying rated power,continuously flowing for 45 minutes,cool for 15 minutes，then recover to room temperature for testing again.
temperature cycle	No visible damage △R±1% Maximum	IEC60115-1 4.19，-55°C@30mins～+155°C@30mins,1000 cycles
load life	No visible damage △R±1% Maximum	IEC 60115-1 4.25.1，1000hrs.， 70℃±2℃，rated current, or the maximum current rating of the component (whichever is lower) is applied for 1.5 hours/0.5 hour interruption

Packaging and Storage:

1. Bulk Packaging: packaged in bags and cartons.



carton dimension		
L	W	H
190	190	180

2.Storage: Packaged shunt resistors should be stored in a room with an ambient temperature of 25°C ± 5°C, a relative humidity of less than 75%, no corrosive gases, and a well-ventilated indoor environment.

3.Environmental requirements: ROHS 2.0 (2011/865/EU) compliant. Restriction of hazardous substances.

version update record

Version No.	update record	person in charge	Issue date
A0	Initial Version Release	Qingke Zeng	17Feb2023
A1	Update parameter	Qingke Zeng	07Oct2023