SBH Through-Hole Alloy Shunt Resistors

Features

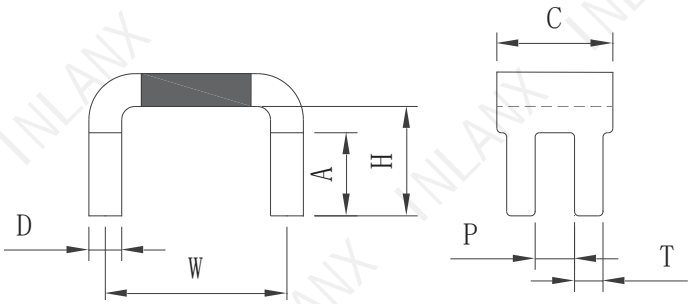
- Tolerance: ±5%, ±2%, ±1%, ±0.5%
- Operating temperature: -65°C~170°C
- Electron-beam welding; pulse applications
- RoHS compliant; customizable



Applications

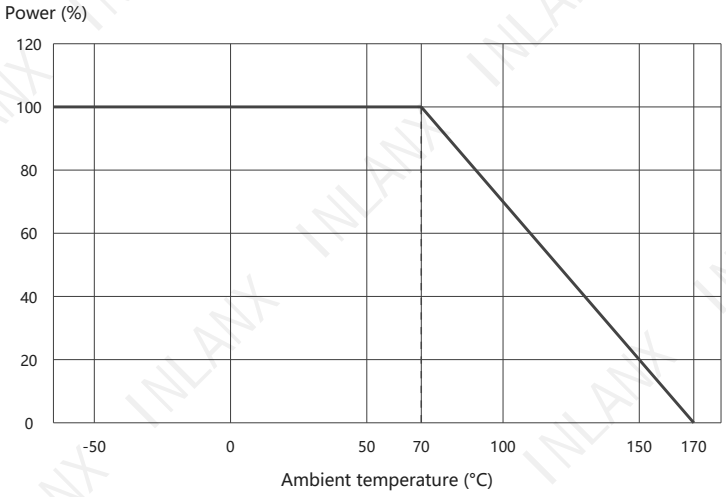
Frequency-conversion and servo drives; high-current battery management; automotive electronic control and oil-pump drives; DC/DC and DC/AC power modules; automatic control; industrial instruments.

Product Dimensions • mm



Type	W (mm)	H (mm)	T (mm)	C (mm)	A (mm)	P (mm)
SBH	8.3±0.3	5±1	1.3±0.2	5.3±0.3	3.8±0.5	1.8±0.2

Power Derating



Electrical Specifications

Type	Element Material	Resistance (mΩ)	D±0.1 (mm)	TCR (ppm/℃)	P70 °C (W)
SBH	M	0.25	1.5	±100	5
SBH	M	0.3	1.34	±100	3
SBH	M	0.4	1.04	±100	3
SBH	M	0.5	0.83	±100	3
SBH	M	0.7	0.59	±100	3
SBH	M	1	0.45	±100	3
SBH	K	1	1.16	±50	5
SBH	K	2	0.63	±50	4
SBH	K	3	0.43	±50	3

TCR test range: 20°C~120°C; D±0.1mm corresponds to D in the drawing.

Endurance Tests

Test item	Test conditions	Reference	Limit
Temperature Cycling	1000 Cycles(-55℃ to +125℃)	JESD22 Method JA- 104	±0.5%
High Temperature Exposure	100hrs.@T=170℃.Unpowered.	MIL-STD-202 Method 108	±0.5%
Biased Humidity	1000hrs 85℃/85%RH。Note:Specified conditions:10% of operating power.	MIL-STD-202 Method 103	±0.5%
Operational Life	Condition D Steady State TA=125℃ at rated power.	MIL-STD-202 Method 108	±0.5%
Solderability	245℃±5℃,5s±0.5s	MIL-STD-202 Method 208H	95% Coverage Minimum
Resistance to Soldering Heat	260℃±5℃，10s±1s	MIL-STD-202 Method 210	±0.5%
Short Time Overload	5×Rated power for 5 s	MIL-STD-202 Method 301	±0.5%

Packaging and Storage

Bulk packing.

Ordering Information

Field	Codes and description
Type	SBH
Material	M: Manganin; K: Karma
Resistance	R001
Tolerance	J: ±5%; G: ±2%; F: ±1%; D: ±0.5%

Standard measuring conditions: 20±2°C, 65±5%RH. When the judgment is unambiguous, measurements may be made at 5~35°C and 45~85%RH.