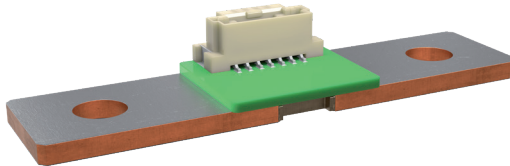




ISA-WELD® // PRECISION RESISTORS



BSS // SIZE 8420 (METRIC)



Features

- Up to 20 W permanent power
- High pulse power rating
- High temperature measurement stability
- Shunt includes a Data Matrix Code (DMC) containing resistance value and TCR
- AEC-Q200 qualified



Applications

- Current sensor for BMS (Battery Management Systems)
- Current sensor for ESS (Energy Storage Systems)

Technical data

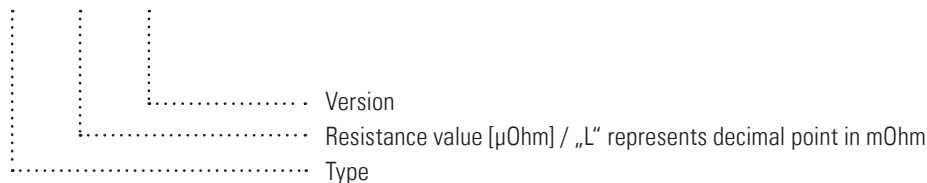
		BSS-L100-001	
Resistance values	μOhm	100	
Resistance tolerance (manufactured)	%	5.0	
Resistance tolerance (measured)	%	DMC ± 0.1	
Temperature coefficient (20-60 °C)	ppm/K	<50	
Applicable temperature range	°C	-40 to 125	
Power rating (nominal load, P_{nom})	W	20	
Load for continuous / pulse operation*		time	
		current	
		continuous	±450 A
		10 s	±600 A
	1 s	±1,100 A	
	100 ms	±3,500 A	
Internal heat resistance (R_{thi})	K/W	2.0	
Thermal EMF (30-60 °C)	μV/K	<0.6	
Inductance	nH	<3	
Maximum resistance drift at nominal load after 2,000h of continuous operation at maximum temperature T_{max}		<0.5% ($T_{max} = 125 °C$)	

Note: For calculation of the maximum derating terminal temperature (T_k) the following formula can be used: $T_k = T_{max} - (R_{thi} \times P_{nom})$.

*Sample loads. Please feel free to contact us in case of differing currents or pulse profiles.

Ordering code example

BSS - L100 - 001



Packaging information

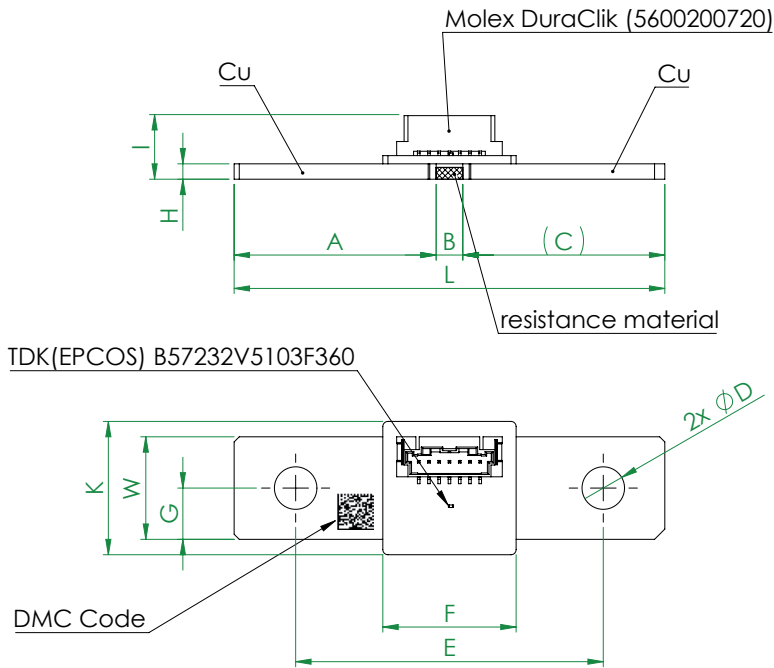
Delivery in ESD plastic trays

15 pcs. per tray, 1,440 pcs. per batch



BSS // SIZE 8420 (METRIC)

Mechanical specification [mm]

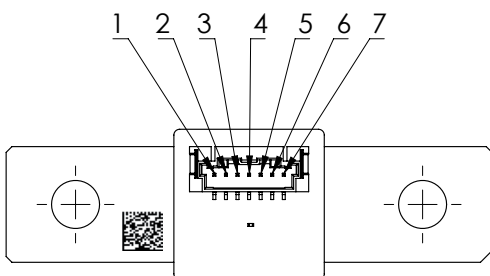


Type / Ordering code	A	B	C	D	E	F	G	H
BSS-L100-001	36.95 ± 0.3	10.1 ± 0.5	(36.95)	∅ 8.3 ± 0.1	60 ± 0.2	26 ± 0.2	10 ± 0.2	3 ± 0.1
Type / Ordering code	I	K	W	L	shunt plating	underlayer	alloy	
BSS-L100-001	13 ± 0.5	22 ± 0.2	20 ± 0.2	84 ± 0.2	Sn	-	MANGANIN®	

PCB Specification

Type / Ordering code	Connector	Part no.	Orientation	Positions	NTC quantity
BSS-L100-001	Molex	5600200720	vertical	7	1

PIN specification BSS-L100-001

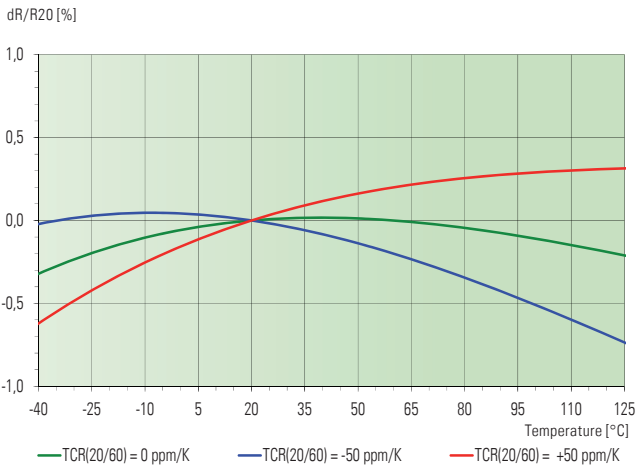


Connector Pin	Signal
1	NTC+
2	R1+
3	R2+
4	R2-
5	R1-
6	NTC-
7	GND

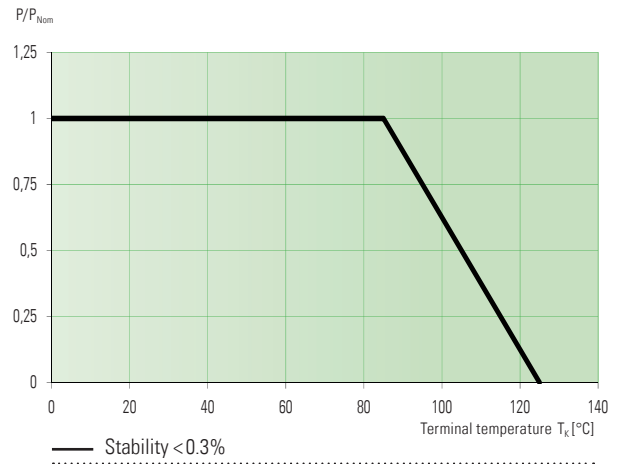


BSS // SIZE 8420 (METRIC)

BSS-L100-001 Resistance Change with Temperature



Power derating curve



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