

**Transient Voltage Suppressor**

**Features**

- Low clamping voltage
- IEC 61000-4-2(ESD) ±15KV(air), ±8KV(contact)
- Small package: SMB
- Moisture sensitivity level: Level 1
- Max surge capability: 4KV@10/700us

**Exterior**



SMB

**Application Information**

- POE
- DC-48V

**Agency Approvals**

Icon	Description
<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

**Part Number and Electrical Parameter**

Part Number	I <sub>R</sub> @V <sub>R</sub>		V <sub>BR</sub> @I <sub>t</sub>		VC@10/700us <sup>①</sup>	Surge capability@10/700us <sup>①</sup>	
	μA	V	V		V	KV	
	MAX		MIN	MAX	MAX	MAX	
BV-SMBJ58C2H	1	58	62.4	71.2	1	85	4

Absolute maximum ratings measured at T= 25°C RH = 45%-75% (unless otherwise noted).

①Ri=40Ω

**Part Number System**

BV SMBJ 58 C 2 H

(1) (2) (3) (4) (5) (6)

- (1) Bencent Transient Voltage Suppressor
- (2) SMB Package
- (3) V<sub>R</sub>=58V
- (4) Bidirectional polar
- (5) 2 chip
- (6) High surge capability

**Mark**



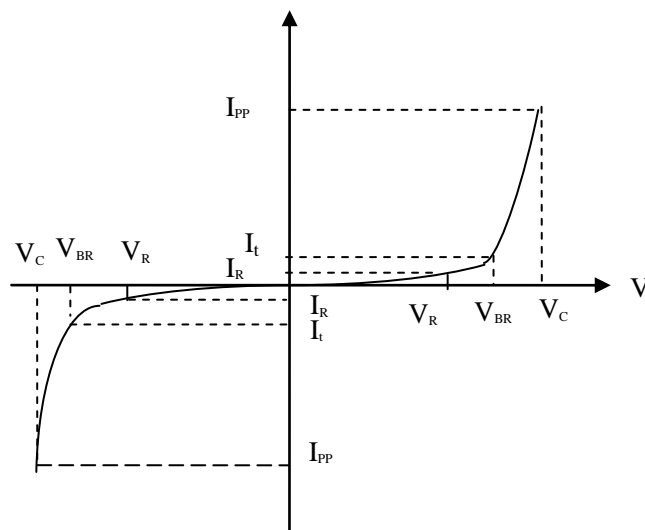
B58C2: Part Number

Transient Voltage Suppressor

Version: A2 2017-12-11

V-I Curve

Parameters	Definition
$V_C$	Clamping Voltage
$I_{PP}$	Surge Waveform
$V_R$	Stand-off Voltage
$V_{BR}$	Breakdown Voltage
$I_R$	Reverse Leakage Current
$I_t$	Test Current
$P_{pp}$	Peak Pulse Power Dissipation



Thermal Considerations

symbol	Parameter	Value	Unit
$T_J$	Operating Junction Temperature Range	-55 to +150	°C
$T_S$	Storage Temperature Range	-55 to +150	°C

Environmental Characteristics

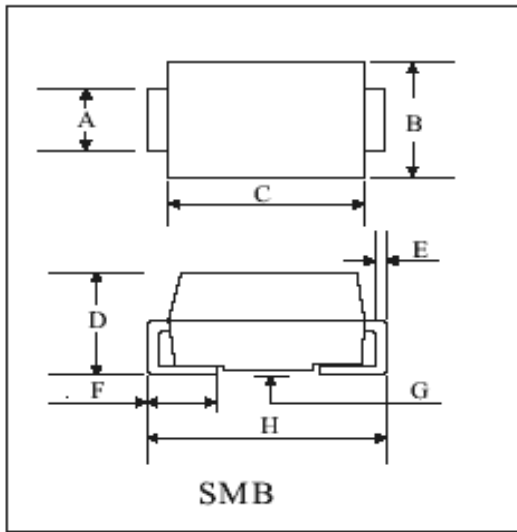
Testing items	Technical standards
High Temperature Reverse Bias Test	Temperature: $150 \pm 3^\circ\text{C}$ Bias= $80\%V_{DRM}$ Time: 168H
High Temperature Life Test	Temperature: $150^\circ\text{C}$ Time: 168H
High-low Temperature Cycle Test	Temperature: From $-40^\circ\text{C}$ to $125^\circ\text{C}$ Dwell time: 30min, 10cycles
High Temperature & High Humidity Test	Temperature: $85^\circ\text{C}$ Humidity: 85% Time: 168H
Pressure Cooker Test	Temperature: $121^\circ\text{C}$ , 2atm. Humidity: 100% Time: 24H
Resistance of Soldering Heat	Temperature: $260 \pm 5^\circ\text{C}$ Time of dip soldering: 10s, 3times

Note: The above testing items can be specified by customer's special request

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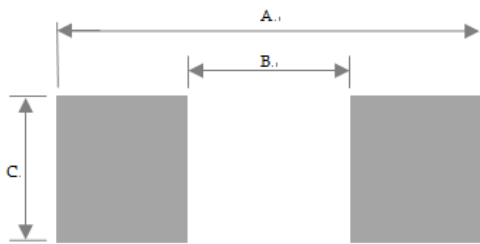
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Product Dimensions



REF.	mm	inch
A	1.85--2.15	0.073--0.085
B	3.45--3.75	0.138--0.148
C	4.35--4.65	0.171--0.183
D	2.10--2.60	0.083--0.102
E	0.15--0.25	0.006--0.010
F	0.80--1.50	0.031--0.059
G	0.00--0.40	0.000--0.016
H	4.95--5.45	0.195--0.215

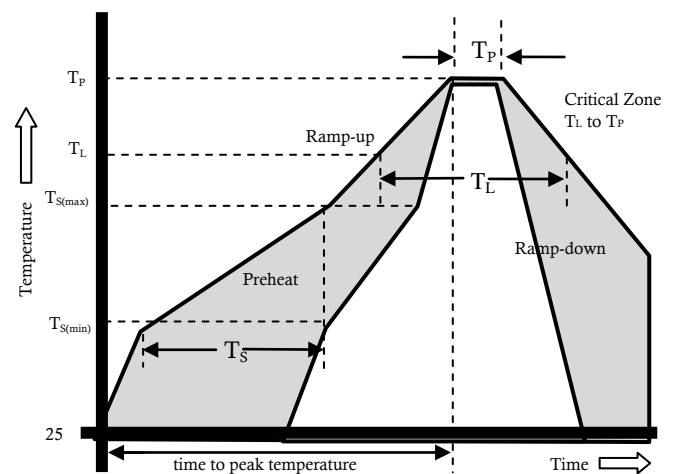
Recommended Soldering Pad



REF	mm	inch
A	5.45	0.215
B	2.45	0.097
C	2.15	0.085

Reflow Profile

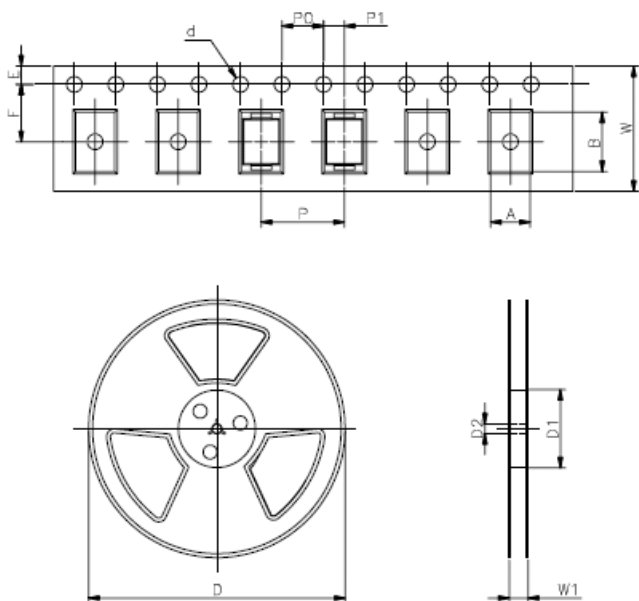
Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (min to max)	60 – 180 secs
Average ramp up rate (Liquidus) T <sub>amp</sub> (T <sub>L</sub> ) to peak		3°C/s max
T <sub>S(max)</sub> to T <sub>L</sub> - Ramp-up Rate		3°C/s max
Reflow	- Temperature (T <sub>L</sub> ) (Liquidus)	217°C
	- Time (min to max)	60 – 150 secs
Peak Temperature (T <sub>P</sub> )		260+0/-5 °C
Time within 5°C of actual peak Temperature (T <sub>P</sub> )		30secs
Ramp-down Rate		6°C/s max
Time 25°C to peak Temperature (T <sub>P</sub> )		8 min max.
Do not exceed		260°C



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Package Reel Information



REF	mm	inch
A	3.8+/-0.3	0.150+/-0.012
B	5.5+/-0.3	0.217+/-0.012
d	1.5+/-0.1	0.059+/-0.004
D	330+/-1	13+/-0.039
D1	72+/-3	2.835+/-0.118
D2	13+/-0.3	0.512+/-0.012
E	1.75+/-0.2	0.069+/-0.008
F	5.5+/-0.02	0.217+/-0.008
P	8.0+/-0.2	0.315+/-0.008
P0	4.0+/-0.2	0.157+/-0.008
P1	2.0+/-0.2	0.079+/-0.008
W	12.0+/-0.2	0.472+/-0.008
W1	18+/-2.0	0.709+/-0.079

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)	Carton Size(mm)		
				L	W	H
Taping	3,000	48,000	330	360	360	385

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