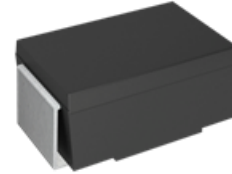


Features

- Surge rating 500A@8/20us
- 1000Watts peak pulse power (tp=10/000μ S)
- IEC 61000-4-2(ESD) ± 15KV(air), ± 8KV(contact)
- Low clamping voltage
- Moisture sensitivity level: Level 1
- Bidirectional polar

Exterior


SMB

Application information

- DC Power
- Alarm
- Other Port

Package (Top View)

Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC 61249-2-21:2003

Schematic symbol


BI-directional

Part Number and Electrical Parameter

Part Number	I _R @V _R		V _{BR} @I _t		V _c @I _{pp} ^①	I _{pp} ^①	
	μA	V	V		V	A	
	MAX		MIN	MAX	MAX	MAX	
BV-SMBJ15CAH	1	15	16.7	18.5	1	24.4	40.8

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

① Surge Waveform: 10/1000us;

Part Number System

BV SMBJ 15 C A H
 (1) (2) (3) (4) (5) (6)

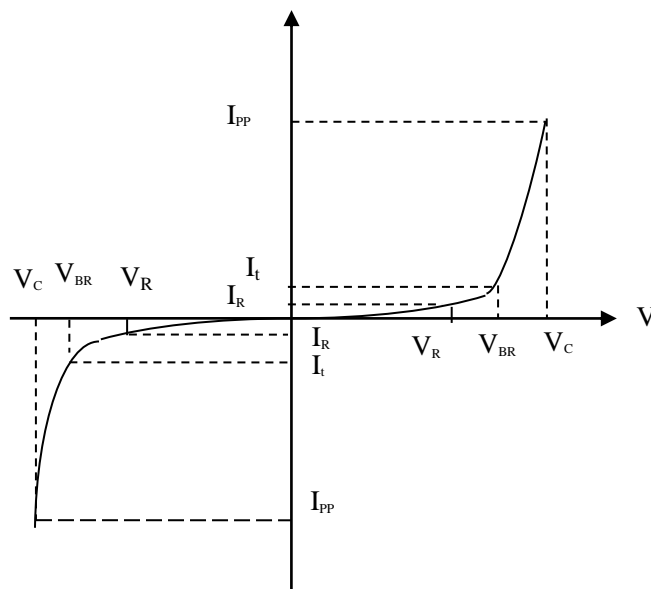
- (1) Bencent TVS
- (2) SMB Package
- (3) V_R=15V
- (4) Bidirectional polar
- (5) Suffix 'A' denotes 5% tolerance devices
- (6) High surge rating

Mark


B15CH: Part Number

V-I Curve

Parameters	Definition
V_C	Clamping voltage
I_{PP}	Surge waveform 10/1000 μ s
V_R	Stand-off Voltage
V_{BR}	Breakdown Voltage
I_R	Reverse Leakage Current
I_t	Test current
P_{pp}	Peak Pulse Power Dissipation

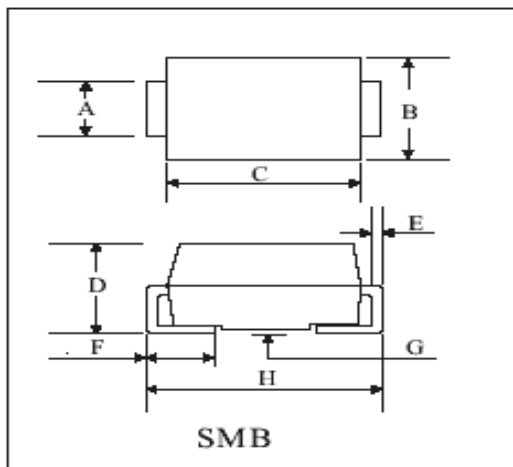

Thermal Considerations

symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-55 to +150	$^{\circ}C$
T_S	Storage Temperature Range	-55 to +150	$^{\circ}C$

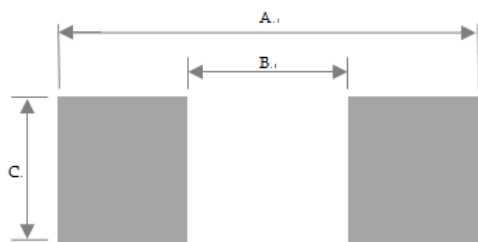
Environmental Characteristics

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: $150 \pm 3^{\circ}C$, Bias=80% V_{DRM} Time:96H
High Temperature Life Test	Temperature: $150^{\circ}C$ Time:168H
High-low Temperature Cycle Test	Temperature: From $-40^{\circ}C$ to $125^{\circ}C$ Dwell time: 30min, 10-100 cycles
High Temperature & High Humidity Test	Temperature: $85^{\circ}C$ Humidity:85% Test time:168H
Pressure Cooker Test	Temperature: $121^{\circ}C$, 2atm. Humidity:100% Test time: 24H to 168H
Resistance of Soldering Heat	Temperature: $260 \pm 5^{\circ}C$ Time of dip soldering: 10s, 3times

Note: The above testing items can be specified by customers by contacting Bencent service

Product Dimensions


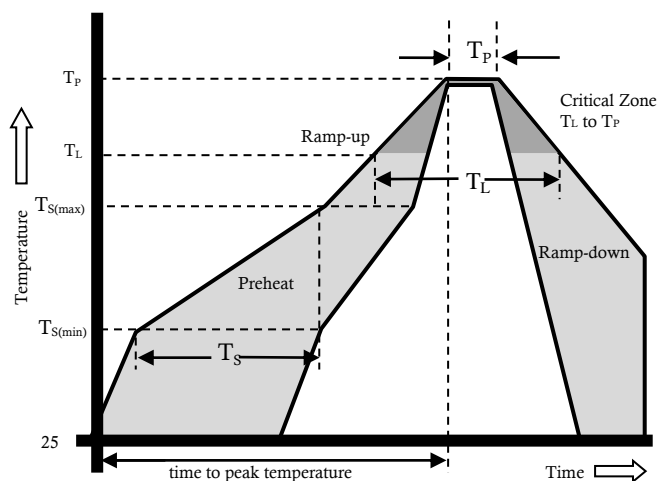
REF.	mm	inch
A	1.85--2.15	0.073--0.085
B	3.45--3.75	0.138--0.148
C	4.35--4.65	0.171--0.183
D	2.1--2.6	0.083--0.102
E	0.15--0.31	0.006--0.012
F	0.15--0.25	0.006--0.01
G	0--0.4	0--0.016
H	4.95--5.45	0.195--0.215

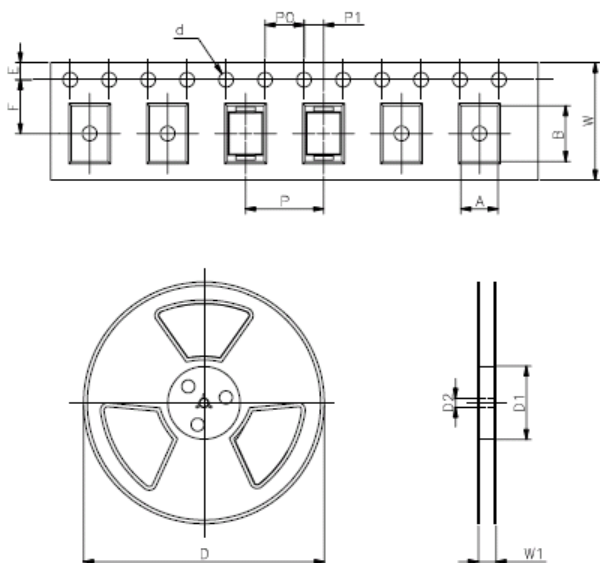
Recommended Soldering Pad


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 Temp(T_L) to peak)		3°C/sec. Max.
Ts(max) to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	- Temperature (T_L) (Liquidus)	+217°C
	- Temperature (T_L)	60 – 150 secs.
Peak Temp (T_P)		+(260±0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		30 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C



Package Reel Information


REF.	mm	inch
A	3.8+/-0.15	0.150+/-0.006
B	5.5+/-0.15	0.217+/-0.006
d	1.5+/-0.01	0.059+/-0.004
D	330.0	13.0
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	24,000	330	360	360	380