

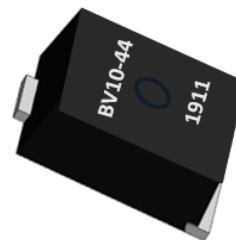
Transient Voltage Suppressor

Version: A1 2024/05/28

Features

- Surge rating:10KAat25℃@8/20μs
- Surge rating:1.3KA at 25℃@10/350μs
- Quick response to surge voltage
- Low clamping voltage
- Moisture sensitivity level: level 1

Exterior



Application Information

- DC Port

Package (Top View)



Agency Approvals

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

Schematic Symbol



Bi-directional

Part Numbering and Electrical Parameter

Part Number	$I_R@V_R$		$V_{BR}@I_t$		25℃ $V_C@8/20\mu s$		25℃ 10/350μs		
	μA	V	V	mA	V	KA	V	kA	kA
	max				max	min	max	min	typ
BV-SMEJ44CA	10	44	48~54	10	100	10	120	1	1.3

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

Part Number System

- BV- SMEJ 44 C A
- (1) (2) (3) (4) (5)
- (1) Bencent TVS
- (2) SMEJ Package
- (3) $V_R=44V$
- (4) Bi-directional polarity
- (5) Suffix 'A' denotes 5% tolerance devices

Mark



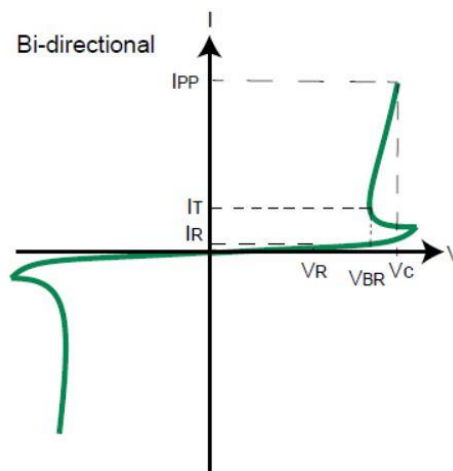
BV10-44: Part Number
1911: November, 2019

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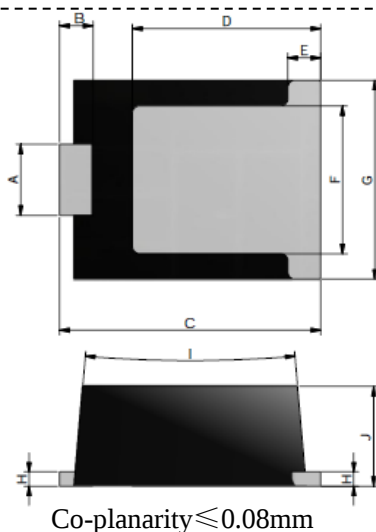
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V-I Curve

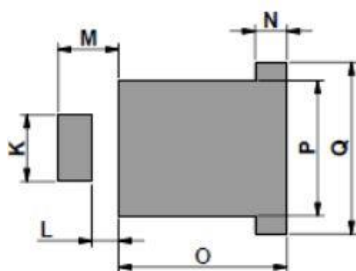
Parameters	Definition
V_C	Clamping Voltage
I_{PP}	Surge Waveform 8/20us & 10/350 us
V_R	Stand-off Voltage
V_{BR}	Breakdown Voltage
I_R	Reverse Leakage Current
I_T	Test Current
P_{PPM}	Peak Pulse Power Dissipation


Thermal Considerations

symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-55 to +125	°C
T_S	Storage Temperature Range	-55 to +150	°C

Product Dimensions


REF.	mm	inch
A	5 ± 0.4	0.197 ± 0.016
B	2.6 ± 0.5	0.102 ± 0.020
C	18.3 ± 0.6	0.720 ± 0.024
D	13.2 ± 0.4	0.520 ± 0.016
E	2.3 ± 0.3	0.091 ± 0.012
F	10.4 ± 0.4	0.409 ± 0.016
G	14 ± 0.4	0.551 ± 0.016
H	1.0 ± 0.3	0.039 ± 0.012
I	10°	0.394°
J	7 ± 0.5	0.276 ± 0.020

Recommended Soldering Pad


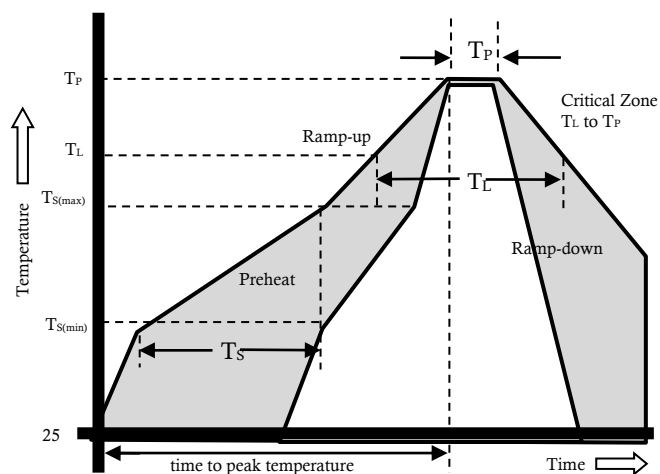
REF	mm	inch
K	5.334	0.210
L	2.159	0.085
M	4.851	0.191
N	2.540	0.100
O	13.462	0.530
P	10.795	0.425
Q	13.716	0.540

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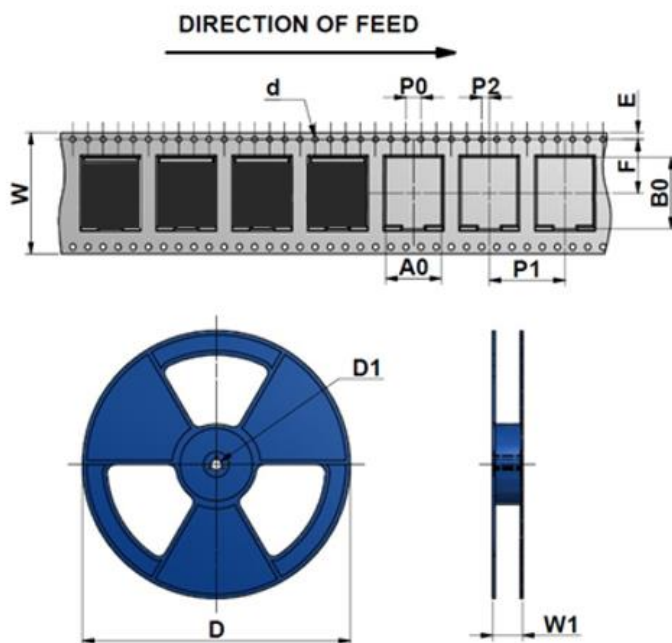
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Reflow Profile

Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (min to max)	60 – 180 seconds
Average ramp up rate (Liquidus) T _{amp} (T _L) to peak		3°C/second max
T _S (max) to T _L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T _L) (Liquidus)	217°C
	- Temperature (T _L)	60 – 150 seconds
Peak Temperature (T _P)		260+0/-5 °C
Time within 5°C of actual peak Temperature (T _P)		8-15 seconds
Ramp-down Rate		6°C/s max
Time 25°C to peak Temperature (T _P)		8 min max.
Do not exceed		260°C



Package Reel Information



REF.	mm	inch
W	32±1	1.260±0.039
E	1.75±0.7	0.069±0.028
F	14.2±1	0.559±0.039
d	1.5±0.3	0.059±0.012
P0	4.0±0.5	0.157±0.020
P1	20±1	0.787±0.039
P2	2.0±0.6	0.079±0.024
A0	14.7±0.7	0.579±0.028
B0	18.8±0.7	0.740±0.028
D	Ø330	Ø13
D1	Ø13.5±1.0	Ø0.531±0.039
W1	37±2.0	1.457±0.079

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)	Carton Size(mm)		
				L	W	H
Taping	400	2,000	330	360	360	220