

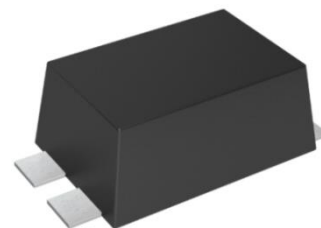
Transient Voltage Suppressor

Version: A2 2017-12-11

Features

- 3000Watts peak pulse power (PIN1,3-2, tp=10/1000μS)
- Low clamping voltage
- Moisture sensitivity level: level 1
- Weight 420 mg
- Bi-directional
- Package: SMC-T

Exterior



Application Information

- POE

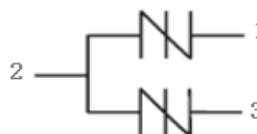
Package (Top View)



Agency Approvals

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

Schematic symbol



Part Number and Electrical Parameter

Part Number	I <sub>DRM</sub> @V <sub>DRM</sub>		V <sub>BR</sub> <sup>①</sup> @I <sub>R</sub>		V <sub>c</sub> @I <sub>pp</sub> <sup>②</sup>		V <sub>c</sub> @I <sub>pp</sub> <sup>②</sup>		Co <sup>③</sup>
	μA	V	V	mA	V	A	V	A	PF
	MAX	PIN1,3-2	MIN	PIN1,3-2	MAX	PIN1,3-2	MAX	PIN1,3-2	MAX
BV-SMCT-30CA	1	30	33.3	1	36.8	1	48.4	62	2500

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

- ① V<sub>BR</sub> is measured at I<sub>R</sub>=1mA
- ② Surge Waveform: 10/1000us
- ③ Off-state capacitance is measured in V<sub>DC</sub>=0V, V<sub>RMS</sub>=1V, f=1MHz, PIN1, 3 -2

## Transient Voltage Suppressor

### Part Numbering System

BV SMCT 30 C A  
(1) (2) (3) (4) (5)

- (1) Bencent TVS
- (2) Package: SMC-T
- (3)  $V_{DRM}=30V$
- (4) Bidirectional polar
- (5) Suffix 'A' denotes 5% tolerance devices

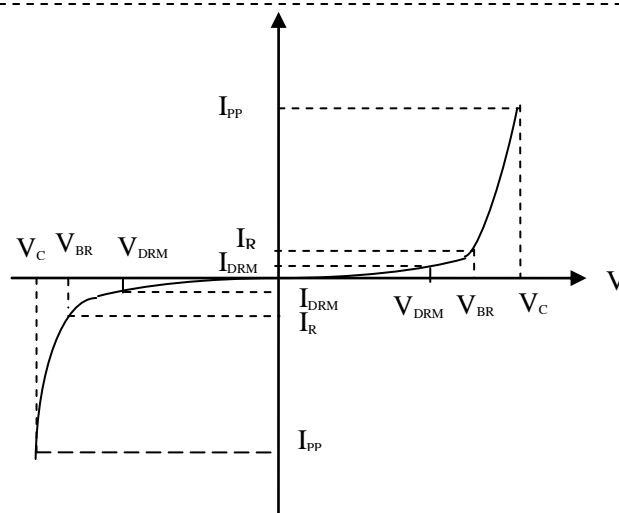
### Mark



C30CT: Part Number  
1511: November, 2015

### V-I Curve

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



### Surge Ratings

Current Waveform	8/20 $\mu$ s	5/320 $\mu$ s	10/1000 $\mu$ s
Voltage Waveform	1.2/50 $\mu$ s	10/700 $\mu$ s	10/1000 $\mu$ s
$I_{pp}$	750A	150A	62A

- Peak pulse current rating (IPP) is repetitive and guaranteed for the life of the product;
- Bencent only management control the test of 10/1000  $\mu$  s@62A, others IPP value derived from experience. Before used the devices, please make sure the parameters, Bencent have no obligation for these parameters.

### 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	$^{\circ}C$

**Transient Voltage Suppressor**

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Environmental Characteristics

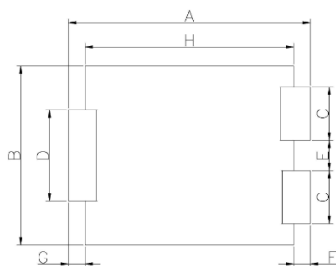
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Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: $150\pm 3^{\circ}\text{C}$ , Bias= $80\%V_{\text{DRM}}$ Time: 168H
High Temperature Life Test	Temperature: $150^{\circ}\text{C}$ Time: 168H
High-low Temperature Cycle Test	Temperature: From $-40^{\circ}\text{C}$ to $125^{\circ}\text{C}$ Dwell time: 30min, 10-100 cycles
High Temperature & High Humidity Test	Temperature: $85^{\circ}\text{C}$ Humidity: 85% Test time: 168H
Pressure Cooker Test	Temperature: $121^{\circ}\text{C}$ , 2atm. Humidity: 100% Test time: 24H to 168H
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 customers by contacting Bencent service

Product Dimensions

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Bottom view

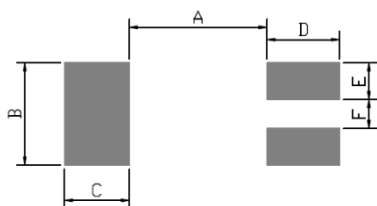


Side view

REF	mm	inch
A	$8.0+0.15/-0.1$	$0.315+0.006/-0.004$
B	$5.9\pm 0.1$	$0.232\pm 0.004$
C	$1.75\pm 0.03$	$0.069\pm 0.001$
D	$3.0\pm 0.2$	$0.118\pm 0.008$
E	$1.0\pm 0.2$	$0.039\pm 0.008$
F	$0.55\pm 0.1$	$0.022\pm 0.004$
G	$0.55\pm 0.1$	$0.022\pm 0.004$
H	$6.9\pm 0.3$	$0.272\pm 0.012$
J	$0.25\pm 0.05$	$0.010\pm 0.002$
I	$2.0\pm 0.1$	$0.079\pm 0.004$

Recommended Soldering Pad

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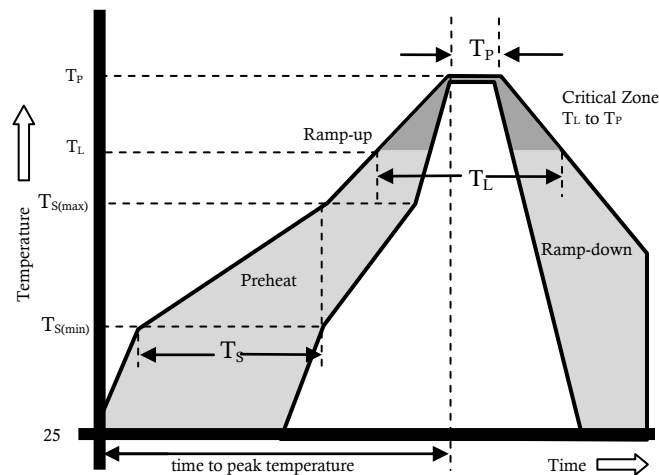
REF	mm	inch
A	6.0	0.236
B	3.4	0.134
C	1.2	0.047
D	1.2	0.047
E	2.2	0.087
F	0.6	0.024

**Transient Voltage Suppressor**

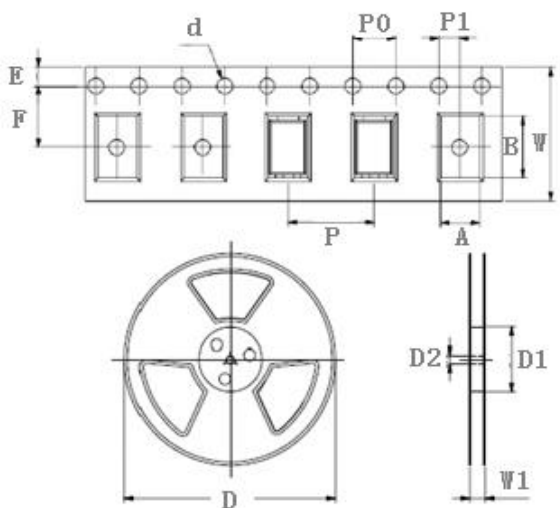
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**Reflow Profile**

Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time (Min to Max)	60 – 180 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 ( $T_P$ )		30secs.
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	6.05+/-0.1	0.238+/-0.004
B	8.3+/-0.1	0.327+/-0.004
d	1.5+/-0.1	0.059+/-0.004
D	330.0	13.0
D1	99+/-1	3.898+/-0.039
D2	12.28+/-0.3	0.483+/-0.012
E	1.75+/-0.1	0.069+/-0.004
F	7.5+/-0.1	0.295+/-0.004
P	8.0+/-0.1	0.315+/-0.004
P0	4.0+/-0.1	0.157+/-0.004
P1	2.0+/-0.1	0.079+/-0.004
W	16.0+/-0.3	0.630+/-0.008
W1	2.0+/-0.3	0.079+/-0.012

OUTLINE	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)	CARTON SIZE(mm)		
				L	W	H
TAPING	3,000	48,000	330	360	360	385

单击下面可查看定价，库存，交付和生命周期等信息

[>>Bencent \(槟城\)](#)