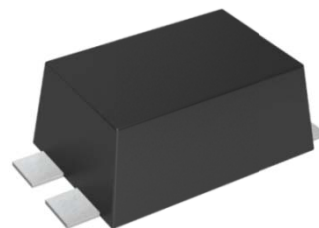


Transient Voltage Suppressor
Features

- Small size: SMC-T
- Surge rating:500A@8/20us (PIN1 or 3 to 2)
- Surge rating:4KV@10/700us (PIN1 or 3 to 2)
- Bi-directional

Exterior

Application information

- POE

Agency Approvals

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

Part Number and Electrical Parameter

Part Number	$I_{DRM}@V_{DRM}$		$V_{BR}^{①}@I_R$		$V_C@I_{pp}^{②}$		$I_{pp}^{③}$	$I_{pp}^{④}$	$C_o^{⑤}$
	μA	V	V	mA	V	A	A	A	PF
	MAX		MIN		MAX		MIN	MIN	MAX
BV-SMCT-58CA	5	58	64.4	1	71.2	1	500	100	2500

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

- ① V_{BR} is measured at $I_R=1mA$ (PIN1 or 3 to 2)
- ② Surge Waveform: 10/1000 μ S(PIN1 or 3 to 2)
- ③ Surge Waveform: 8/20 μ S(PIN1 or 3 to 2)
- ④ Surge Waveform: 10/700 μ S(PIN1 or 3 to 2)
- ⑤ Off-state capacitance is measured in $V_{DC}=0V, V_{RMS}=1V, f=1MHz$ (PIN1 or 3 to 2)

Part Numbering System

BV SMCT 58 C A
 (1) (2) (3) (4) (5)

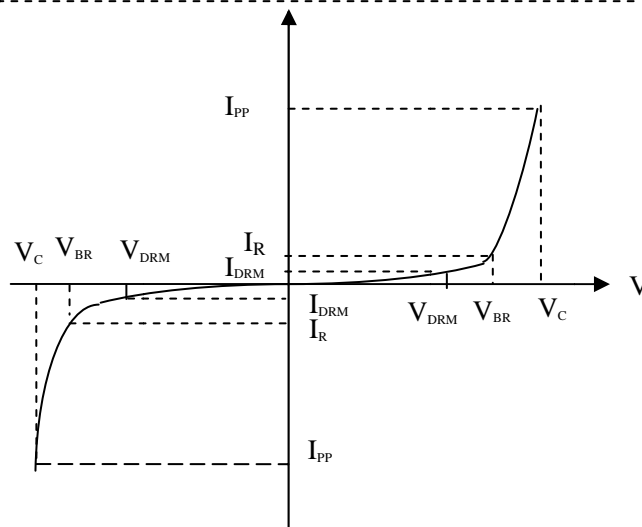
- (1) Bencent TVS
- (2) Package: SMC-T
- (3) VDRM=58V
- (4) Bidirectional polar
- (5) Suffix 'A' denotes 5% tolerance devices

Mark


C58CT: Part Number
 1503 : March,2015

V-I Curve

Parameters	Definition
V_C	Clamping voltage
I_{PP}	Surge waveform 10/1000 μ 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

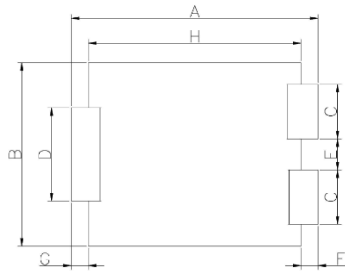
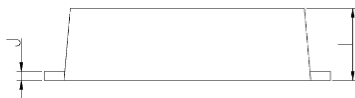

Thermal Considerations

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

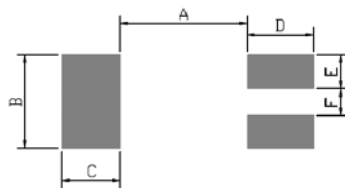
Environmental Characteristics

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

Bottom view

Side view

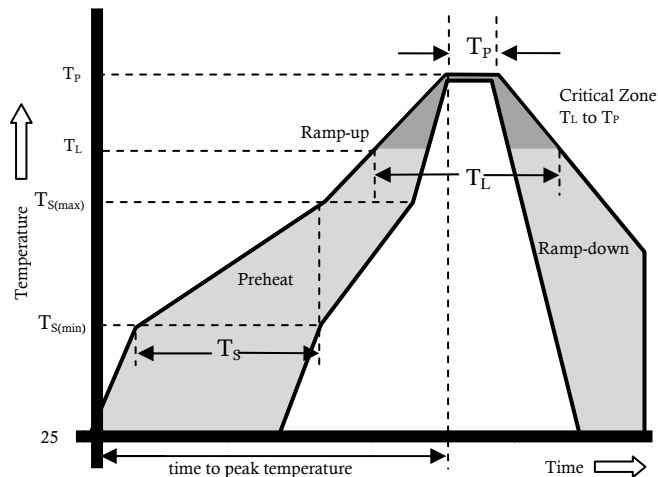
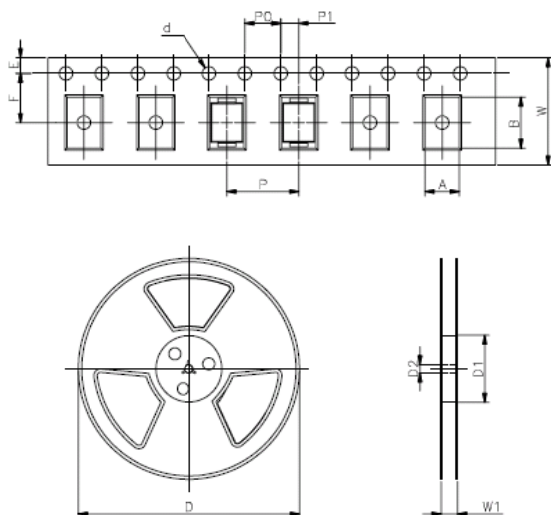
REF	mm	inch
A	8.0±0.3	0.315±0.012
B	5.9±0.3	0.232±0.012
C	1.75±0.03	0.069±0.001
D	3.0±0.2	0.118±0.008
E	1.0±0.2	0.039±0.008
F	0.55±0.1	0.022±0.004
G	0.55±0.1	0.022±0.004
H	6.9±0.3	0.272±0.012
J	0.25±0.05	0.010±0.002
I	2.0±0.2	0.079±0.008

Recommended Soldering Pad


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
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)		8 – 15 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	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	24,000	330	360	360	380