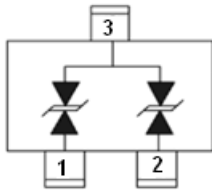


Features

- * Ultra low leakage: nA level
- * Low clamping voltage
- * RoHS Compliant
- * REACH & SVHC Compliant
- * Halogen Compliant
- * SOT-23 Package

Circuit Diagram



Package



SOT-23

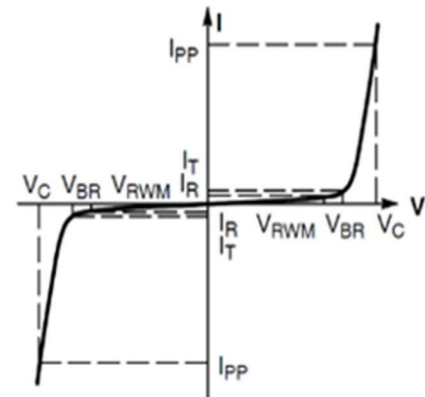
Ordering Information

Part Number	Packaging	Reel Size
BST23C242V	3000/Tape & Reel	7 inch

Marking: CB2

Portion Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}



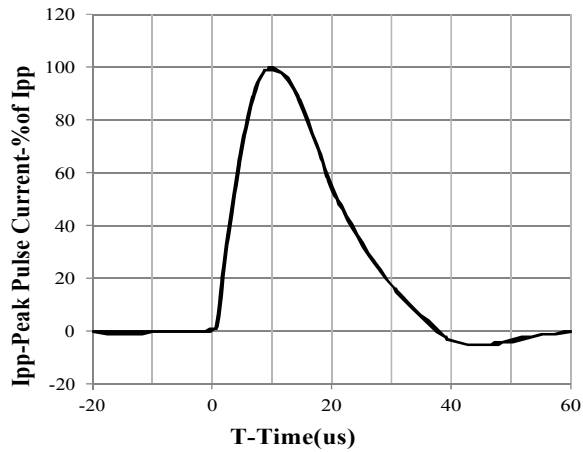
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs pulse, pin1/2 to pin3)	P_{pk}	300	W
Peak Pulse Current (8/20 μs pulse, pin1/2 to pin3)	I_{PP}	6	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T_J	-40 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

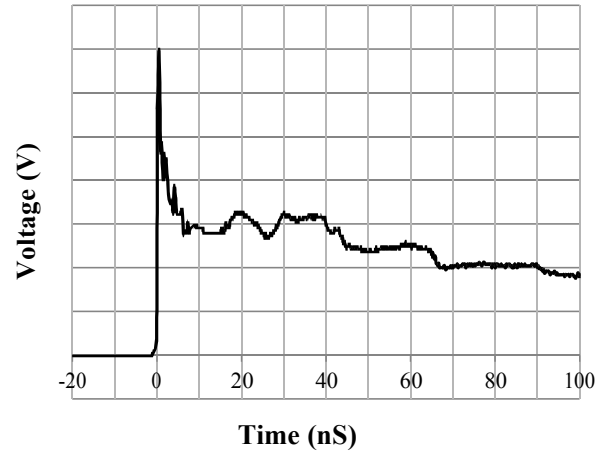
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				24	V
Breakdown Voltage	V _{BR}	I _T = 1mA(pin1/2 to pin3)	26.5	29.5	32	V
Breakdown Voltage	V _{BR}	I _T = 1mA(pin1 to pin2)	53	59	63	V
Reverse Leakage Current	I _R	V _{RWM} = 24V			100	nA
Clamping Voltage	V _C	I _{PP} = 1A (8 / 20μs pulse, pin1/2 to pin3)		33	37	V
Clamping Voltage	V _C	I _{PP} = 6A (8 / 20μs pulse, pin1/2 to pin3)		43	50	V
Clamping Voltage	V _C	I _{PP} = 1A (8 / 20μs pulse, pin1 to pin2)		65	70	V
Clamping Voltage	V _C	I _{PP} = 6A (8 / 20μs pulse, pin1 to pin2)		85	95	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz, (pin1/2 to pin3)		8	15	pF
Junction Capacitance	C _J	V _R = 0V, f = 1MHz, (pin1 to pin2)		4	8	pF

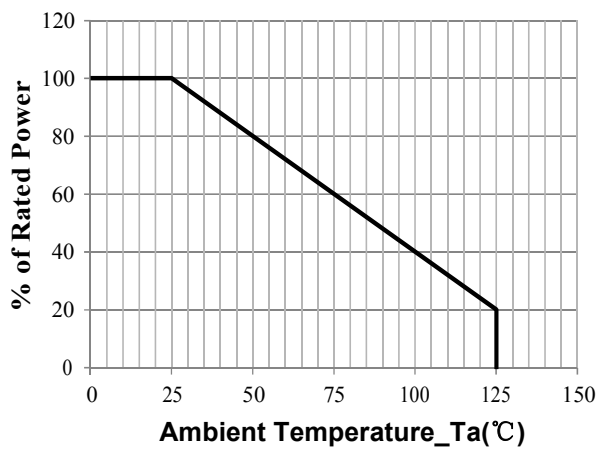
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



8 / 20us Pulse Waveform

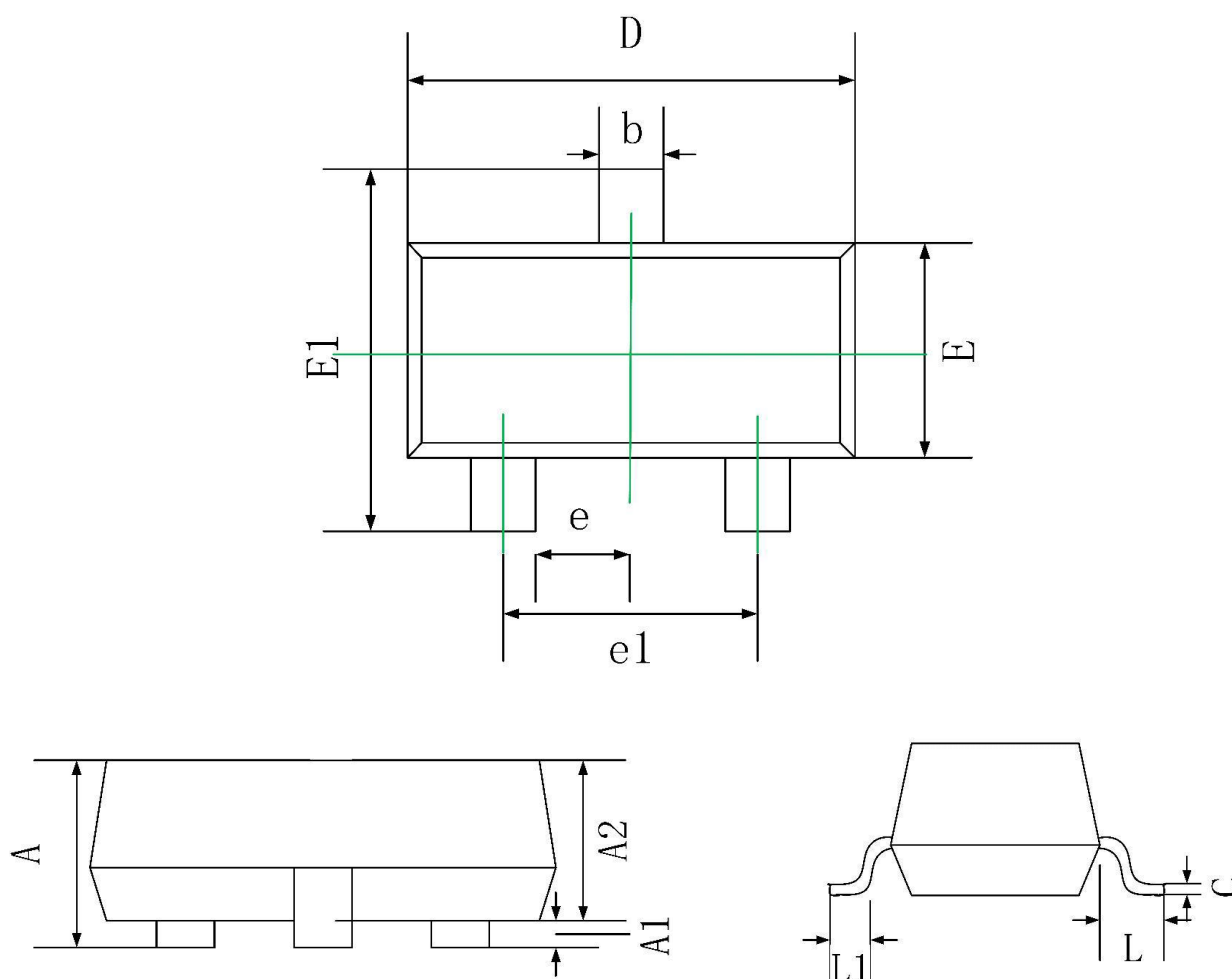


IEC61000-4-2 Pulse Waveform



Power Derating Curve

SOT-23 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020