

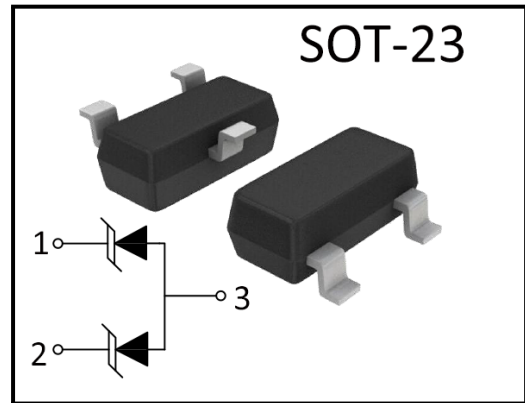
BST23A032V

ESD Protection Diode

Features

- 320W Peak pulse power per line ($t_p = 8/20\mu s$)
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact ; $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 20A(8/20 μs)

Package



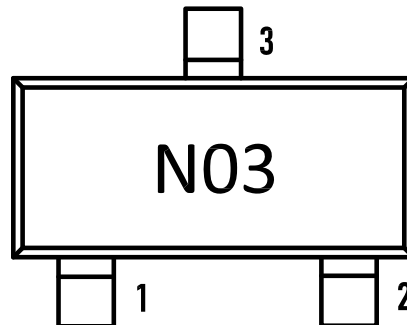
Mechanical Characteristics

- Dataline
- Automatic Teller Machines
- Net works
- Power line

Applications

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
BST23A032V	SOT-23	3K	Tape and reel

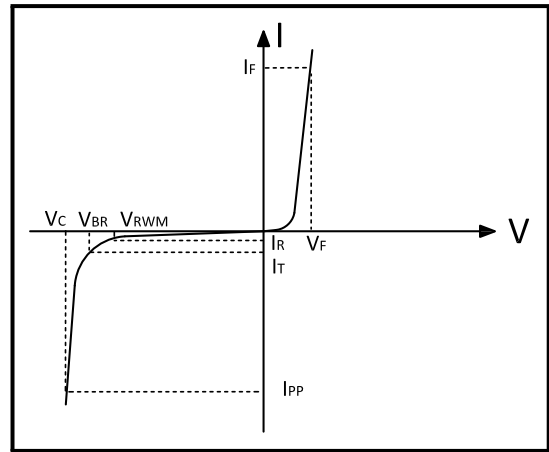


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ESD Protection Diode

Electrical Parameters ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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 Rating

Rating	Symer	Value	Units
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	320	Watts
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	20	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	30	KV
ESD per IEC 61000-4-2 (Contact)		30	
Lead Soldering Temperature	T_L	260(10seconds)	$^\circ\text{C}$
Junction Temperature	T_J	-55 to + 150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to + 150	$^\circ\text{C}$

Electrical Characteristics

Parameter	Symer	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}	—	—	—	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	4.0	6.5	8.0	V
Reverse Leakage Current	I_R	$V_{RWM} = 3\text{V}, T = 25^\circ\text{C}$	—	—	0.5	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu\text{s}$	—	—	20	A
Clamping Voltage	V_C	$I_{PP} = 20\text{A}, t_p = 8/20\mu\text{s}$	—	12	16	V
Junction Capacitance	C_j	$V_R = 0\text{V}, T = 25^\circ\text{C}, f = 1\text{MHZ}$ (pin 1 ,pin2 to pin 3)	—	200	210	pF



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

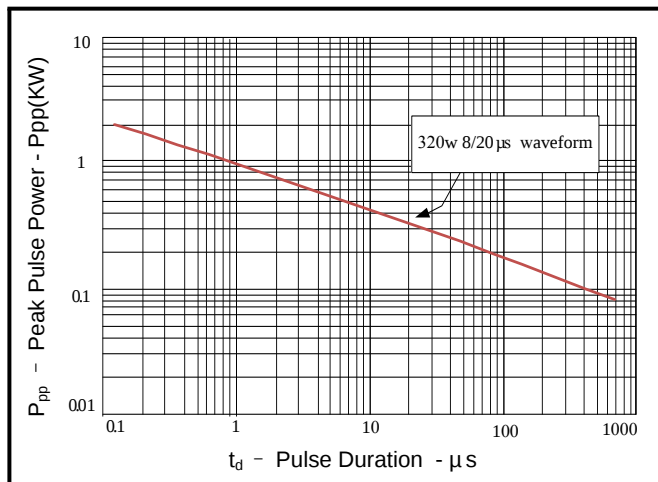


Figure 2: Power Derating Curve

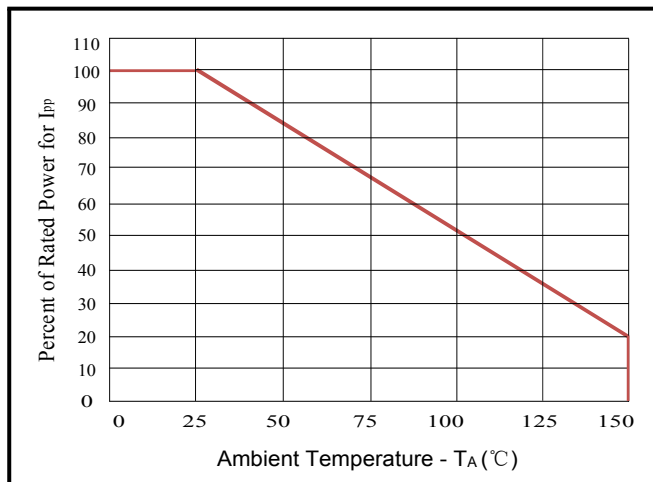


Figure 3: Pulse Waveform

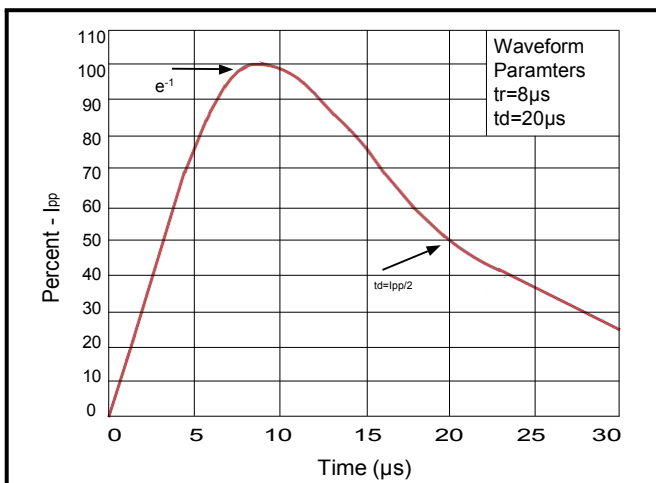
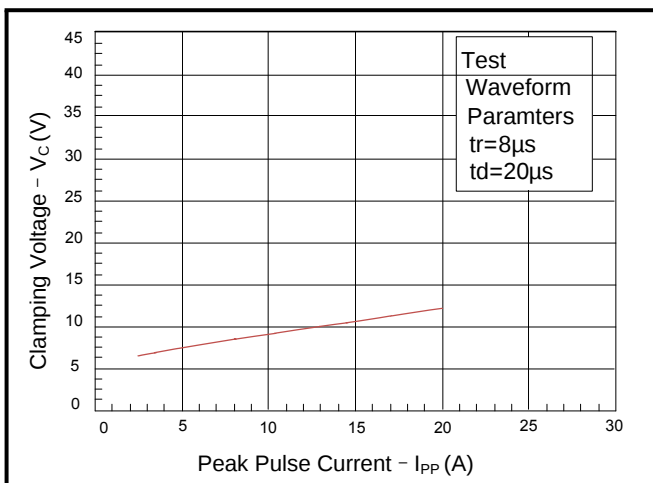


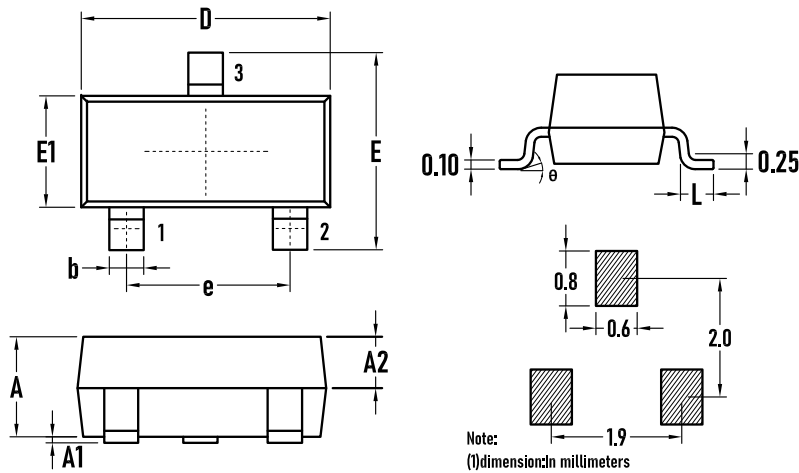
Figure 4: Clamping Voltage vs. I_{pp}



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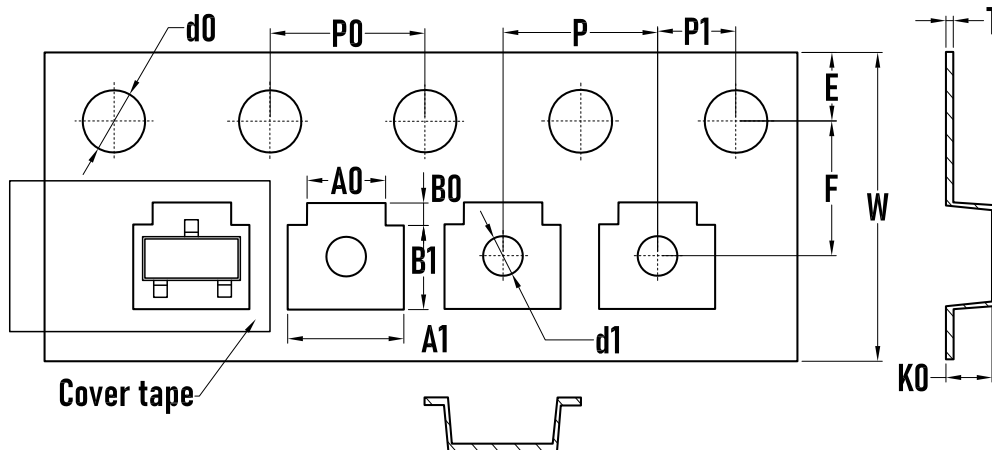
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Outline Drawing – SOT-23



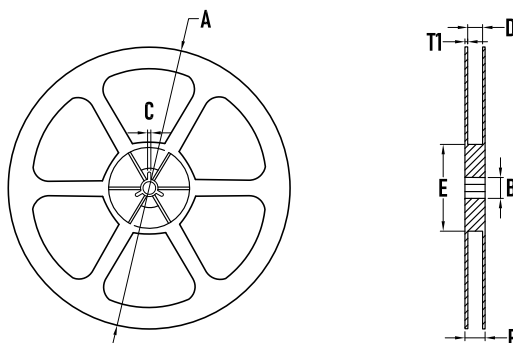
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.01	—	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	—	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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