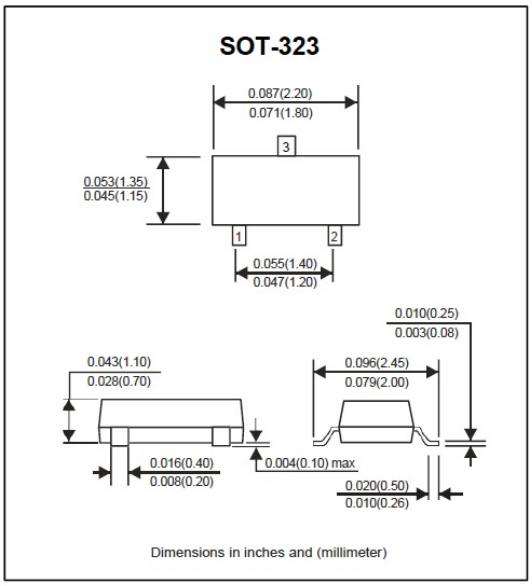
2-Line Bi-directional TVS Diode Array

Features

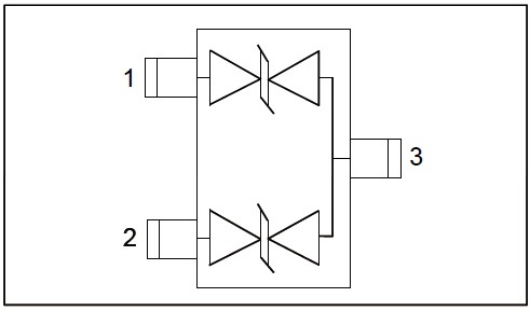
- IEC 61000-4-2 (ESD) ±25kV (air), ±25V (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20μs)
- 270W peak pulse power (8/20μs)
- Low clamping voltage
- Low leakage current
- Operating voltage: 24V
- Protects two bi-directional lines



Applications

- Automotive Networks
- Control & Monitoring Systems
- Wireless Bus Protection
- Set Top Box
- Portable Electronics
- Server and Desktop PC

Circuit and Pin Schematic

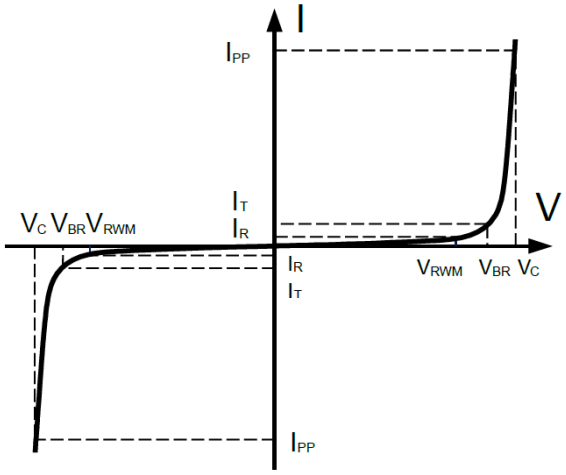


Mechanical Characteristics

- Package: SOT-323
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity Level: Level 3
- RoHS Compliant.

Absolute Maximum Ratings (T_A = 25℃ unless otherwise specified)			
Parameter	**Symbol**	**Value**	**Unit**
Peak Pulse Power (tp = 8/20μs)	P_{PP}	270	W
Peak Pulse Current (tp = 8/20μs)	I_{PP}	6	A
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±25	KV
ESD per IEC 61000−4−2 (Contact)		±25	KV
Operating Temperature Range	T_J	-55 ~ 125	℃
Storage Temperature Range	T_{STG}	-55 ~ 150	℃

Electrical Parameters (T_A = 25℃)	
Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics (T_A = 25℃ unless otherwise specified)						
Parameter	**Symbol**	**Test Conditions**	**Min.**	**Typ.**	**Max.**	**Units**
Reverse Working Voltage	V_{RWM}				24	V
Breakdown Voltage	V_{BR}	I_T = 1mA	26.7			V
Reverse leakage current	I_R	V_{RWM} = 24V			0.5	μA
Clamping Voltage	V_C	I_{PP} = 1A,tp = 8/20μs			35	V
Clamping Voltage	V_C	I_{PP} = 6A,tp = 8/20μs			45	V
Junction capacitance	C_J	V_R = 0V, f = 1MHz, Pin 1 to Pin3 or Pin 2 to Pin 3		14	20	pF

Typical Performance Characteristics (T_A = 25℃ unless otherwise specified)

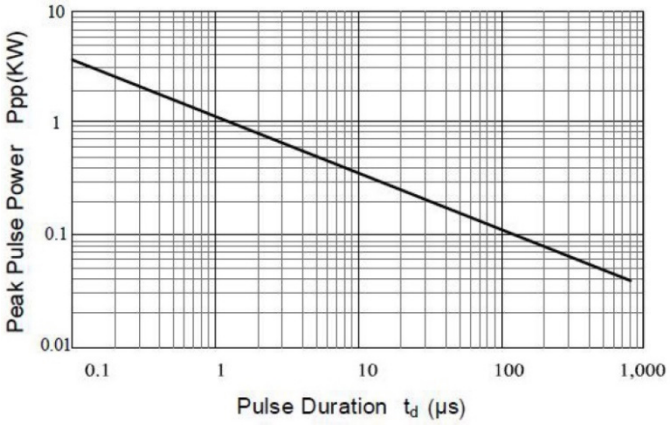


Fig 1. Peak Pulse Power vs. Pulse Time

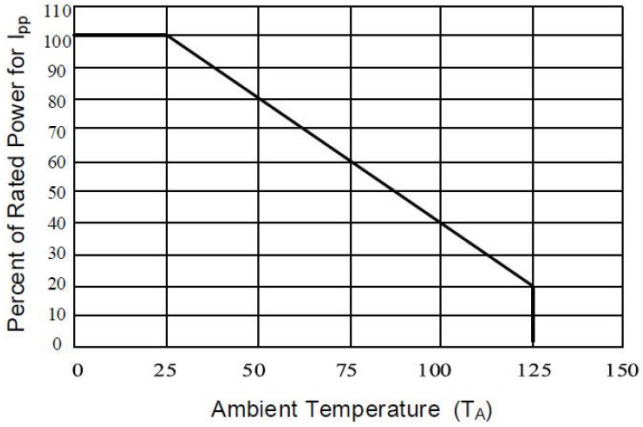


Fig 2. Power Derating Curve

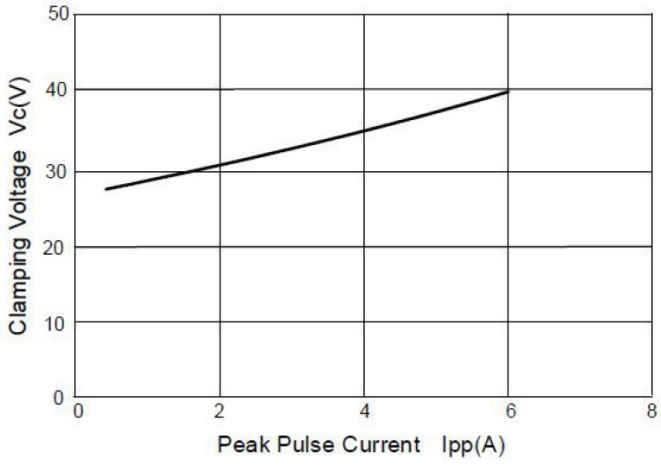


Fig 3. Clamping Voltage vs. Peak Pulse Current

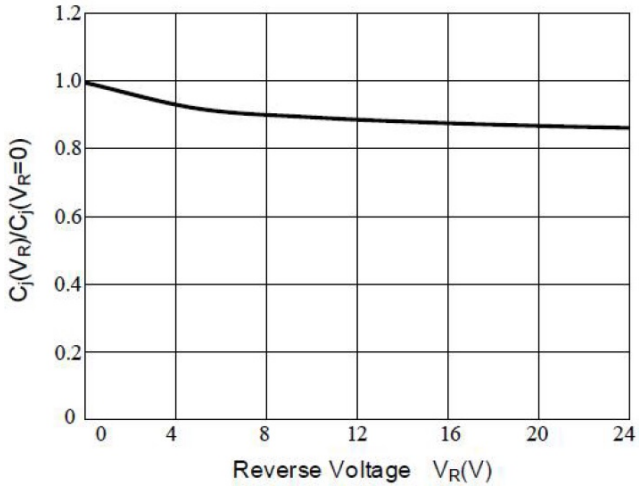


Fig 4. Junction Capacitance .vs. Reverse Voltage

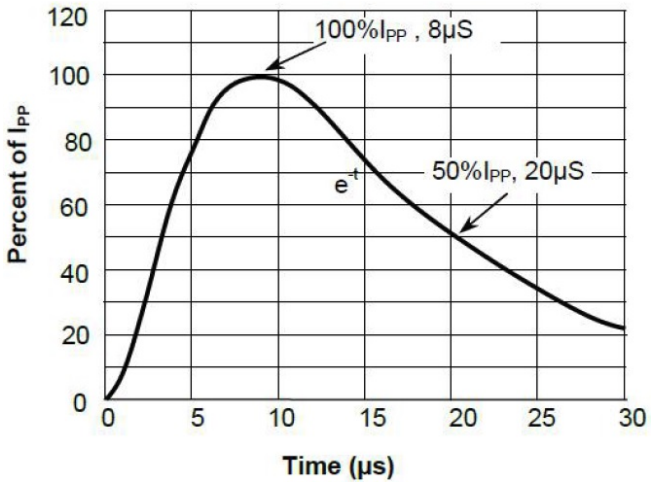


Fig 5. 8/20μs Pulse Waveform

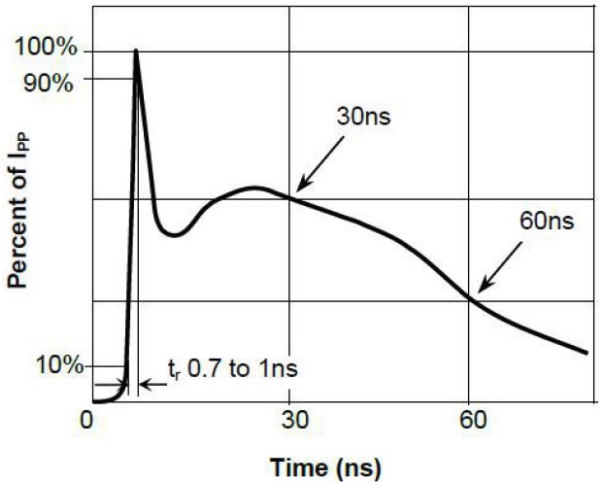
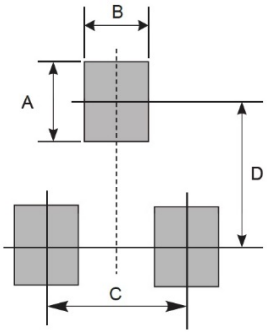


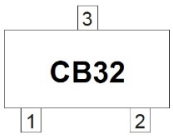
Fig 6. ESD(IEC 61000-4-2)Pulse Waveform

Suggested Land Pattern

Symbol	Dimensions in millimeters
A	0.80
B	0.50
C	1.30
D	2.20



Marking Code



Device Marking Code = CB32

Ordering information

Part Number	Package	Base qty (pcs)	Reel Size (inch)	Delivery mode
SC24N2BTZ	SOT-323	3,000	7	Tape and reel