

Transient Voltage Suppressor

Features

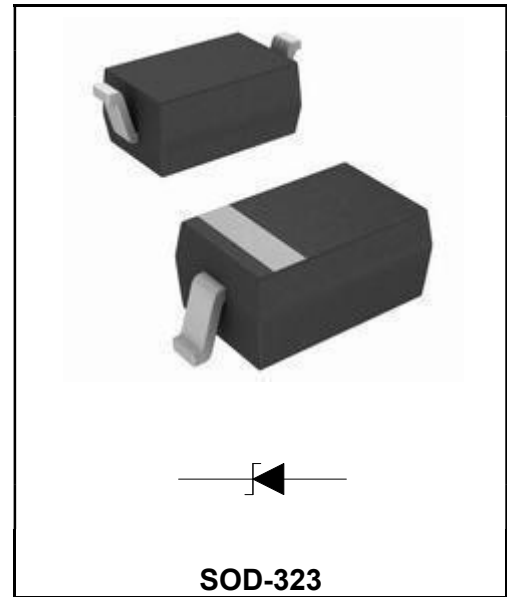
- ♦2800Watts peak pulse power ($t_p = 8/20\mu s$)
- ♦Replacement for MLV (0805)
- ♦Protects one I/O or power line
- ♦Low Clamping Voltage
- ♦Working Voltage: 7V
- ♦Low leakage current
- ♦Response Time is Typically $< 1\text{ ns}$

IEC COMPATIBILITY (EN61000-4)

- ♦IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- ♦IEC 61000-4-4 (EFT) 40A (5/50ns)
- ♦IEC 61000-4-5 (Lightning) 100A (8/20 μs)

Application

- ♦Laptop Computers
- ♦Cellular Phones
- ♦Digital Cameras
- ♦Personal Digital Assistants (PDAs)



Marking Code

ESD7VFD323	Q7
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Limiting Values(TA = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	value	Unit
P _{PPM}	Peak Pulse Power	t _P = 8/20 μs	2800	W
I _{PP}	Rated Peak Pulse Current	t _P = 8/20 μs	115	A
T _J	Junction Temperature	-	-55 to +125	°C
T _{stg}	Storage Temperature Range	-	-55 to +150	°C

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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Stand-Off Voltage		-	-	7	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	8	-	10	V
I _R	Reverse Leakage Current	V _{RWM} = 7 V; TA = 25 °C	-	-	200	uA
V _C	Peak Pulse Current	t _p = 8/20 μs	-	-	115	A
V _C	Clamping Voltage	I _{PP} = 100A, t _P = 8/20 μs	-	23	25	V
C _J	Junction Capacitance	V _R = 0V, f = 1 MHz	-	500	-	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

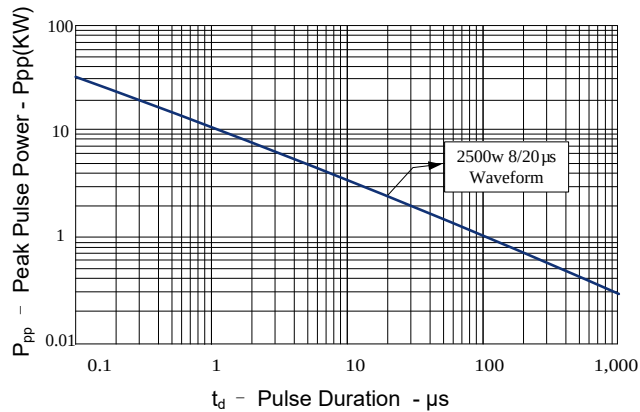


Figure 2: Power Derating Curve

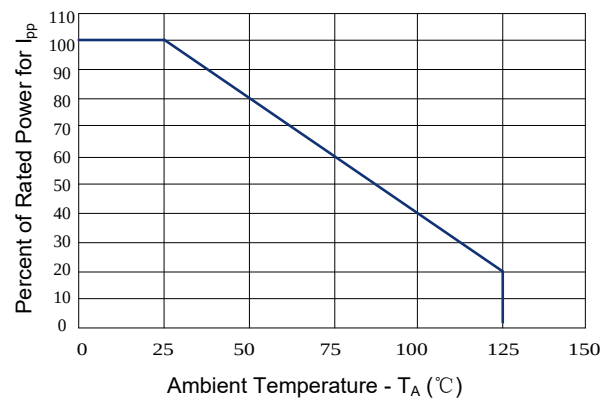


Figure 3: Clamping Voltage vs. Peak Pulse Current

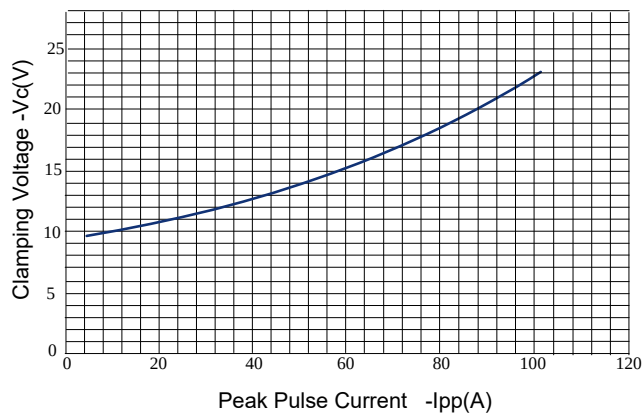


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

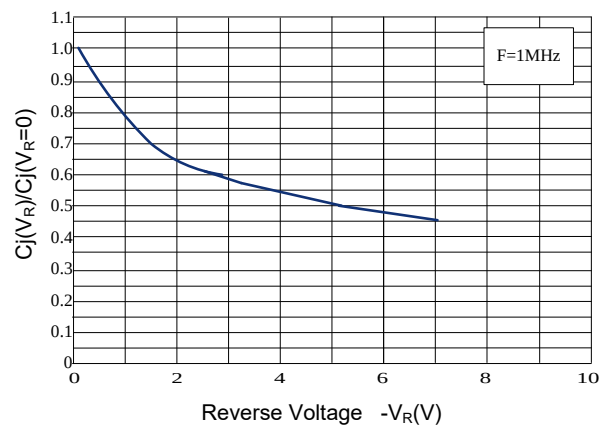
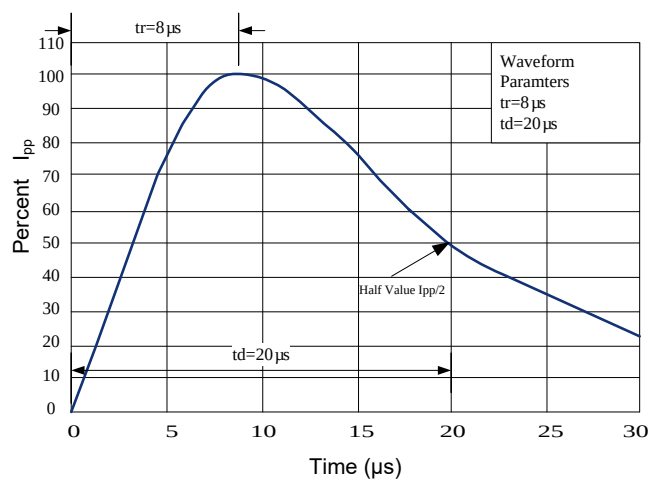


Figure 5: Pulse Waveform



Ordering information

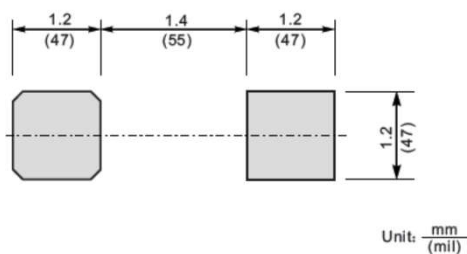
Package	Packing Description	Packing Quantity
SOD-323	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-323

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
C	0.08	0.15	3.1	5.9
D	1.2	1.4	47	55
E	1.4	1.8	63	70
E1	2.55	2.75	100	108
b	0.25	0.4	9.8	16
L1	0.2	0.45	7.9	16
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



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