

Transient Voltage Suppressor

Features

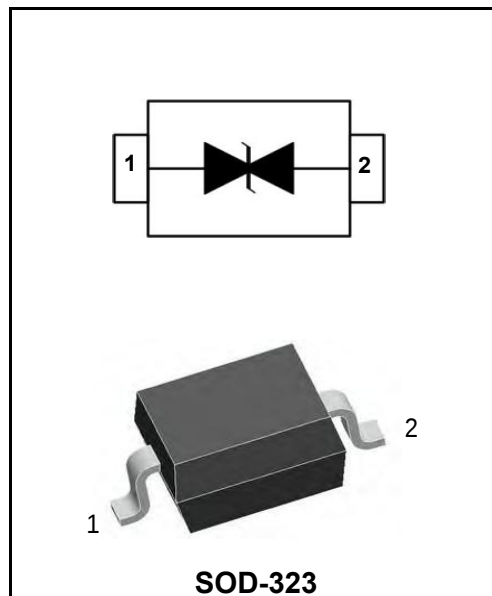
- ◆ 2900 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- ◆ Protects one I/O or power line
- ◆ Low Clamping Voltage
- ◆ Working Voltage: 4.5 V
- ◆ Low Leakage Current

IEC COMPATIBILITY (EN61000-4)

- ◆ IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC 61000-4-5 (Lightning) 160A (8/20 μs)

Application

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



Marking Code

ESD4V5FBD323

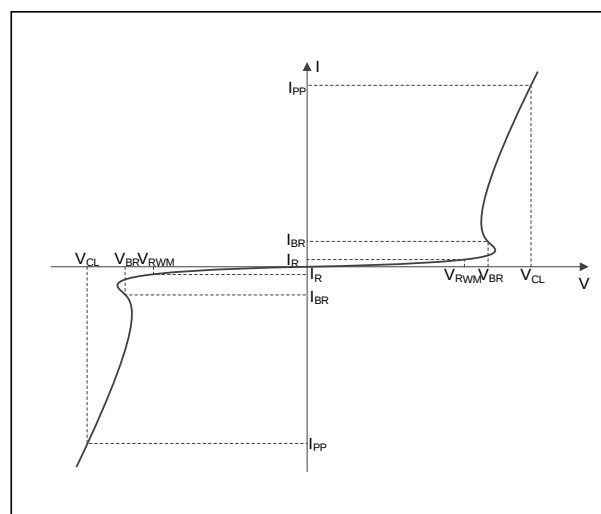
D4

Absolute Maximum Rating

Parameter	Symbol	value	Unit
Peak Pulse Power $t_p = 8/20 \mu s$	P_{PP}	2900	W
Rated Peak Pulse Current $t_p = 8/20 \mu s$	I_{PP}	160	A
Junction Temperature	T_J	-55 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Parameters ($T = 25^{\circ}C$)

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

Parameter	Conditions	Symbol	Min	Typ.	Max	Unit
Reverse Stand-Off Voltage		V_{RWM}	-	-	4.5	V
Reverse Breakdown Voltage	$I_T = 1mA$	V_{BR}	4.6	-	6	V
Reverse Leakage Current	$V_{RWM} = 4.5 V$; $T = 25\text{ }^{\circ}C$	I_R	-	-	1	μA
Peak Pulse Current	$t_p = 8/20\mu s$	I_{PP}	-	160	-	A
Clamping Voltage	$I_{PP} = 160A$, $t_p = 8/20\mu s$	V_C	-	-	16	V
Junction Capacitance	$V_R = 0V$, $f = 1\text{ MHz}$	C_j	-	-	480	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

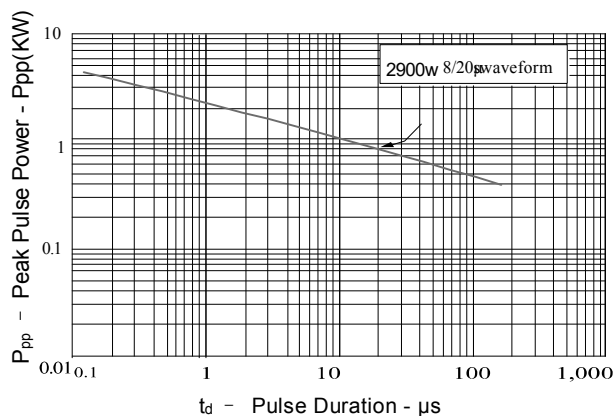


Figure 2: Power Derating Curve

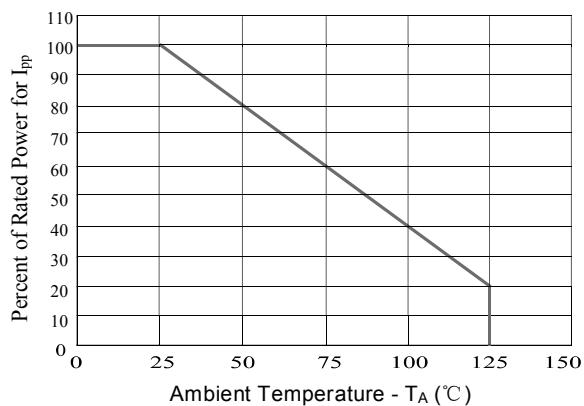


Figure3: Pulse Waveform

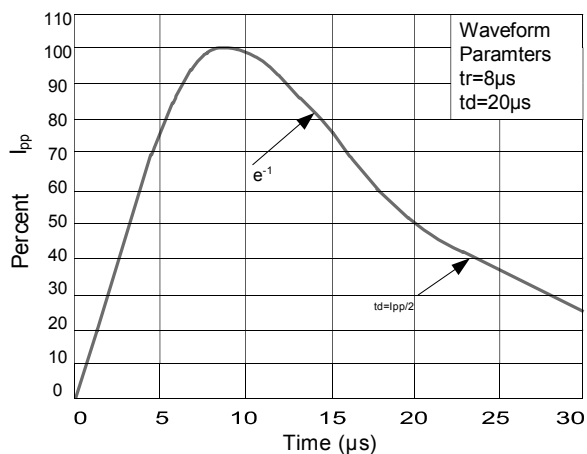
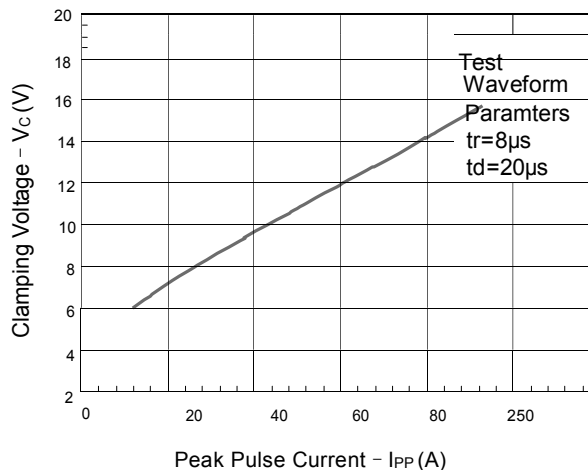


Figure 4: Clamping Voltage vs. Ipp



Ordering information

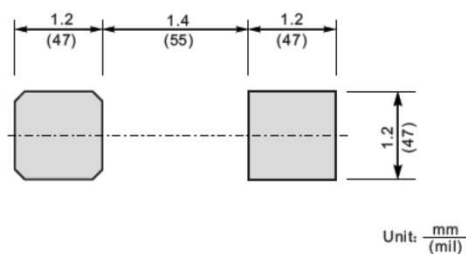
Package	Packing Description	Packing Quantity
SOD-323	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

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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