

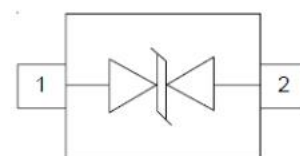
Features

- ◇ 350 W (8x20us) Peak Pulse Power ◇
- Low Clamping Voltage
- ◇ SOD-323 Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free) ◇
- Protect One I/O or Power Line
- ◇ Meet IEC61000-4-2 Level 4:
 - Contact Discharge > 30 kV
 - Air Discharge > 30 kV

Circuit Diagram



PIN Diagram



Applications

- ◇ Smart Phones
- ◇ Laptop Computers
- ◇ Portable Electronics

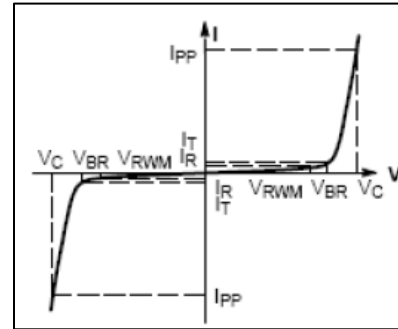
Ordering information

Device	Package	MARKING	Qty / Reel
PSD05C	SOD-323	H	3000

Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Unit
TJ	Junction Temperature	-55 to +150	°C
TSTG	Storage Temperature	-55 to +150	°C
Ipp Max	Maximum Peak Pulse Current	20	A
PPK	Peak Pulse Power	350	W

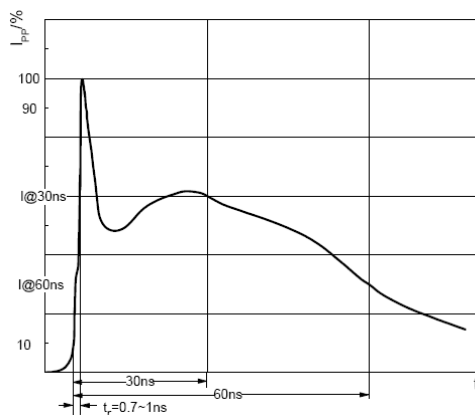
Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage



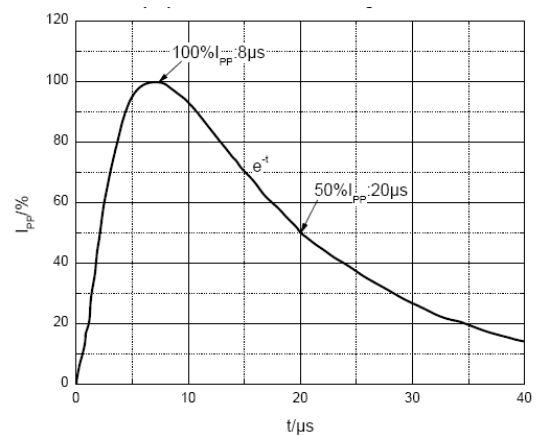
V-I characteristics for a Bi-directional TVS

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

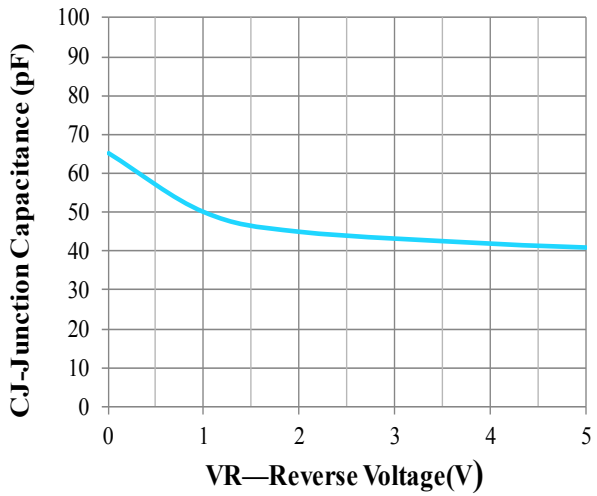
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Peak Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	5.5	7.2	8.5	V
I_R	Reverse Leakage Current	$V_{RWM} = 5.0\text{V}$			0.2	μA
V_C	Clamping Voltage	$I_{PP} = 1\text{A} (8/20\mu\text{s})$			9	V
V_C	Clamping Voltage	$I_{PP} = 20\text{A} (8/20\mu\text{s})$			17	V
I_{PP}	Peak Pulse Current	$t_p = 8/20\mu\text{s}$			20	A
C_J	Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$			80	pF



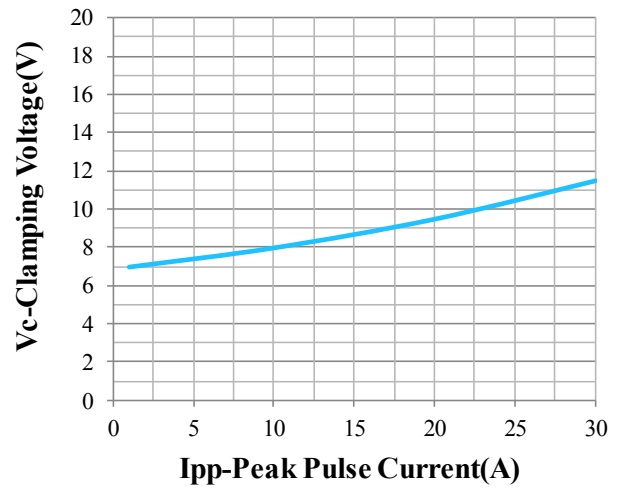
ESD pulse waveform according to IEC61000-4-2


 8/20 μs pulse waveform according to IEC 61000-4-5

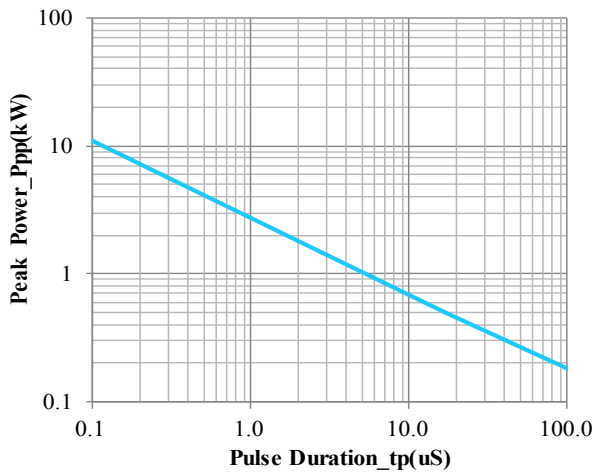
Typical Performance Characteristics (T_A = 25°C unless otherwise Specified)



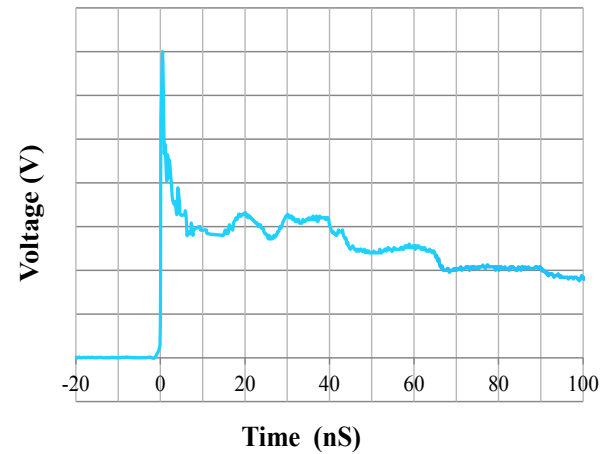
Junction Capacitance vs. Reverse Voltage



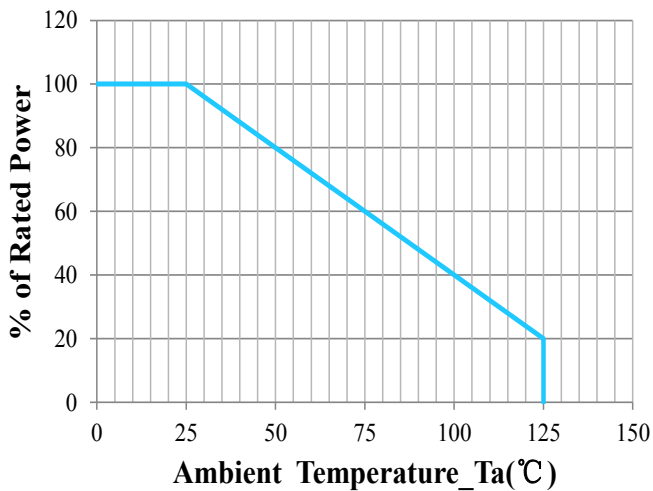
Clamping Voltage vs. Peak Pulse Current



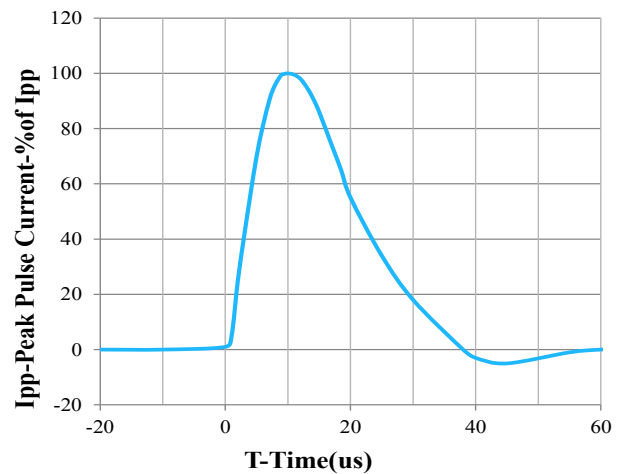
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

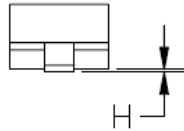
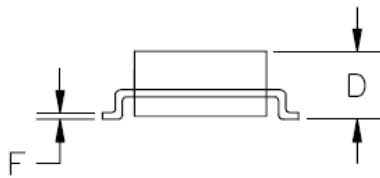
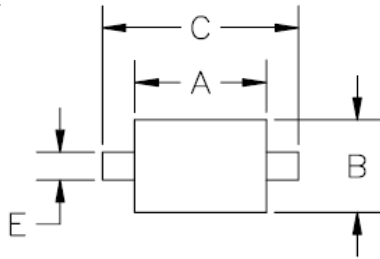


Power Derating Curve



8 X 20μs Pulse Waveform

SOD-323 Dimension



DIM ^N	INCHES		MM [1]		NOTE
	MIN	MAX	MIN	MAX	
A	.060	.071	1.5	1.8	—
B	.045	.054	1.2	1.4	—
C	.090	.107	2.3	2.7	—
D	—	.043	—	1.1	—
E	.012	.016	0.3	0.4	—
F	.004	.010	.10	.25	—
H	—	.004	—	.10	—

[1] CONTROLLING DIMENSION: MILLIMETERS