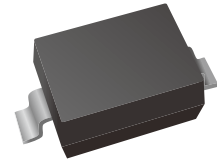
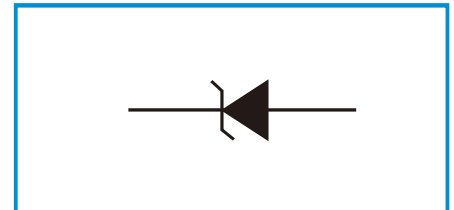


1-Line Uni-directional TVS Diode

Features

- Protects one data line
- Ultra low leakage: nA level
- Operating voltage: 15V
- Ultra low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 55A (8/20 μs)
- RoHS Compliant


Functional Diagram


Mechanical Data

- Package: SOD-323
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Bar denotes cathode
- Marking: 75DL

Applications

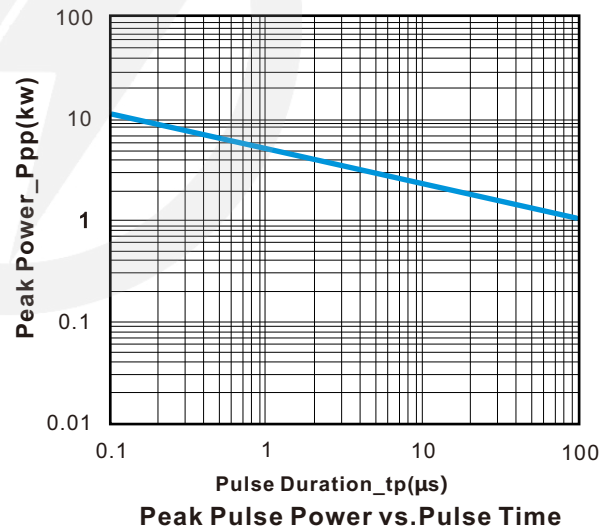
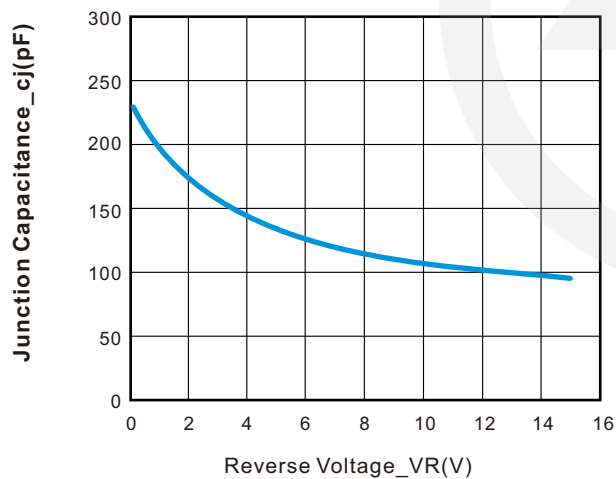
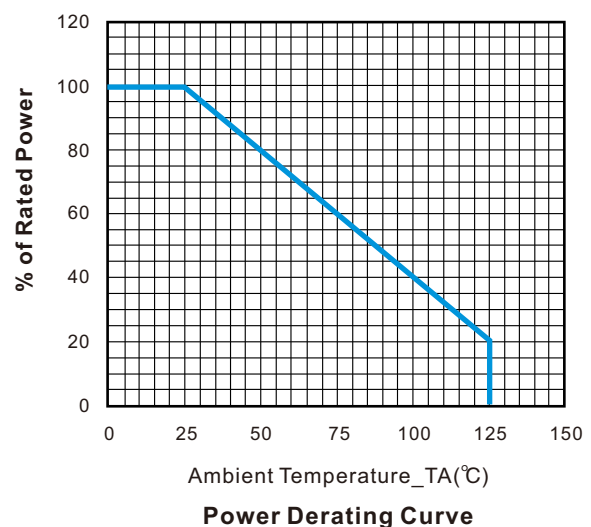
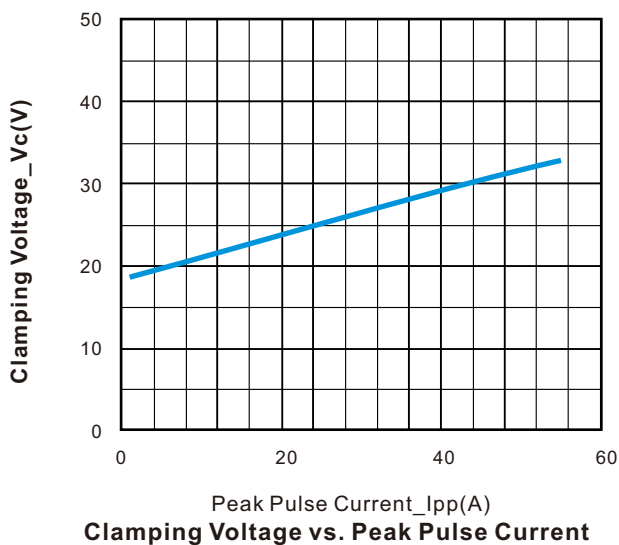
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks, Desktops, Servers
- Portable Instrumentation
- Digital Cameras
- Analog Inputs
- Audio Players
- Keypads, Side Keys, LCD Displays
- Laser Diode Protection

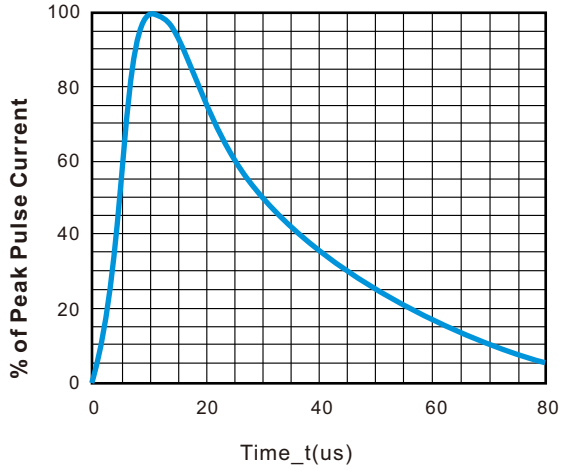
Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	1900	W
Peak Pulse Current (8/20 μs)	Ipp	55	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

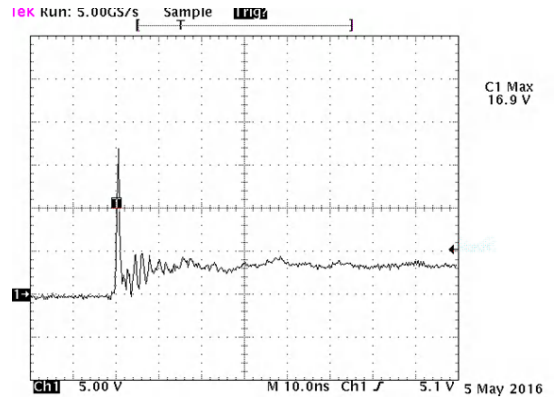
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			15	V	
Breakdown Voltage	VBR	16.5			V	IT = 1mA
Reverse Leakage Current	IR			0.5	μA	VRWM = 15V
Clamping Voltage	VC			20	V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	VC			34.5	V	I _{PP} = 55A (8 x 20μs pulse)
Junction Capacitance	CJ		230		pF	VR = 0V, f = 1MHz

Electrical characteristics Curves

Junction Capacitance vs. Reverse Voltage




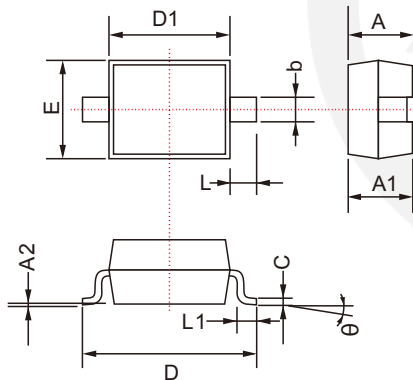
8 X 20 us Pulse Waveform



Note: Data is taken with a 10x attenuator
ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

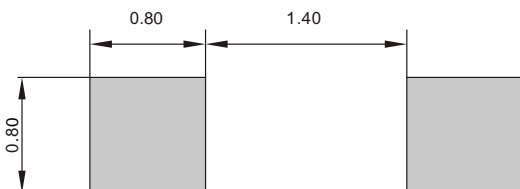
SOD-323 Package Outline

Unit: mm

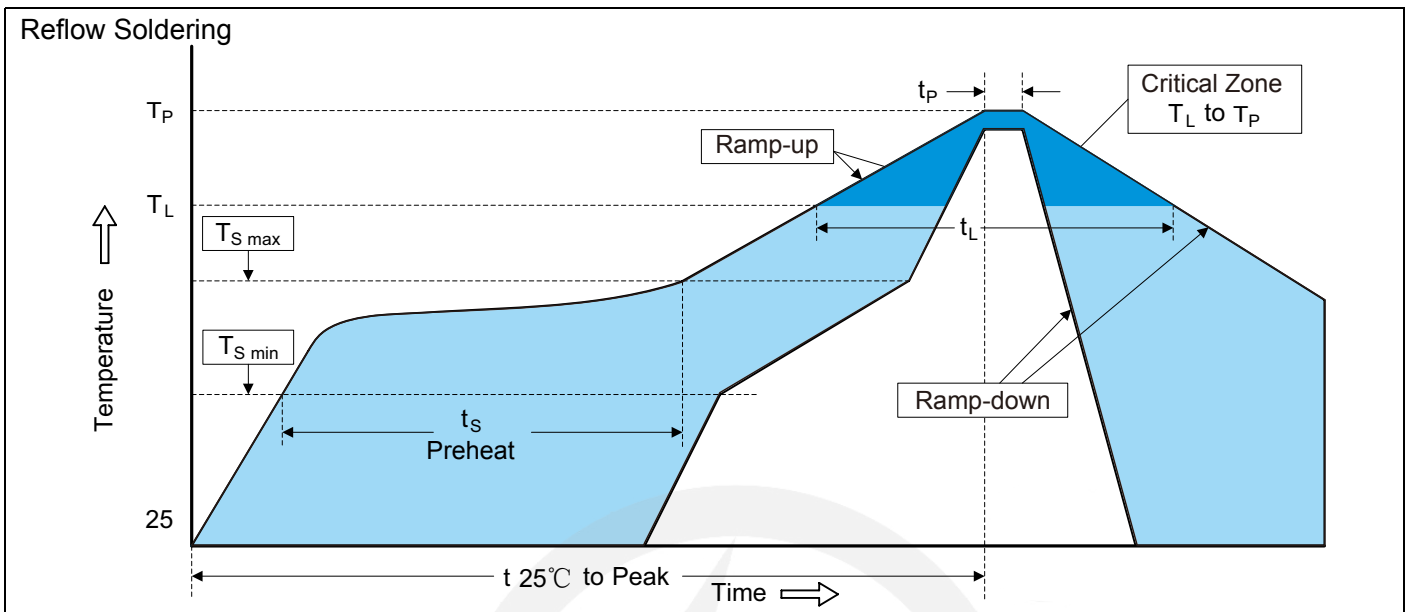


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
A2	0.000	0.100
b	0.250	0.400
c	0.080	0.177
D	2.300	2.800
D1	1.600	1.800
E	1.150	1.400
L	0.475 TYP.	
L1	0.100	0.500
θ	0°	8°

SOD-323 Suggested Pad Layout



Note:
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm
3. The pad layout is for reference purpose only.

Recommended Soldering Conditions

Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

7" Reel


D2	$\Phi 178.0 \pm 2.0$
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D3	$\Phi 50.0 \text{ Min.}$
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D4	$\Phi 13.0 \pm 0.5$
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W1	16.0 ± 2.0
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Quantity: 3000PCS	
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