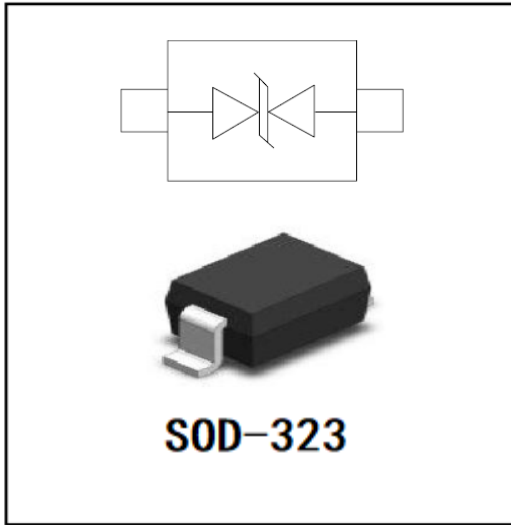


ESD Protection Diode



Features

- For sensitive ESD protection
- Bi-directional ESD protection of one line
- Operating voltage: 15V
- Moisture Sensitivity: Level 3 per J-STD-020

Mechanical Data

- **Package:** SOD323
- **Lead Finish:** Matte Tin
- **Marking:** 15CM



Maximum Ratings

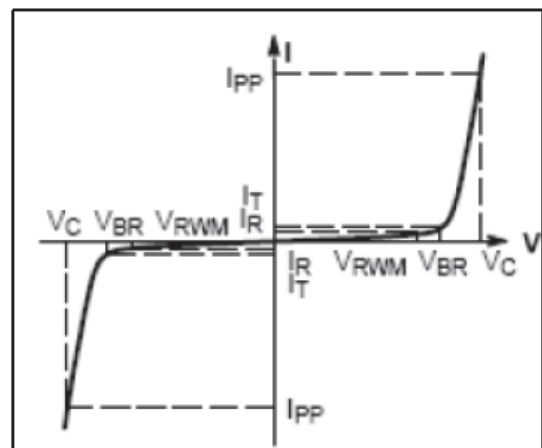
PARAMETER	SYMBOL	LIMITS	UNIT
Operating Junction	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C
IEC61000-4-2(ESD)Air	$V_{ESD}^{(1)}$	±30	KV
IEC61000-4-2(ESD)Contact		±30	KV
Peak Pulse Current	$I_{PP}^{(2)}$	18	A

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20µs exponential decay waveform according to IEC61000-4-5.

Electrical Parameter

PARAMETER	SYMBOL
Clamping Voltage@ I_{PP}	V_C
Breakdown Voltage@ I_T	V_{BR}
Peak Pulse Current	I_{PP}
Test Current	I_T
Reverse Leakage Current@ V_{RWM}	I_R
Reverse Standoff Voltage	V_{RWM}
Peak Power Dissipation	P_{PK}
Max. Capacitance @ $V_R=0$ and $f=1MHz$	C



V-I characteristics for a Bi-directional TVS



ASD15CM

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V _{RWM} ⁽¹⁾	V				15
Reverse Leakage Current	I _R	uA	VRWM=15V			0.5
Breakdown Voltage	V _(BR)	V	I _T =1mA	16.7		
Clamping Voltage	V _C ⁽²⁾	V	I _{pp} =1A			20
Clamping Voltage	V _C ⁽²⁾	V	I _{pp} =18A			25
Junction Capacitance	C _J	pF	V _R =0V,f=1MHz			50

(1).Other voltages available upon request.

(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

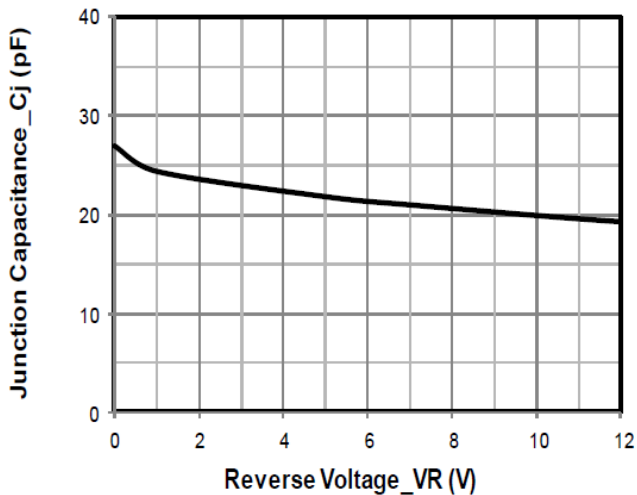
■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ASD15CM
Thermal Resistance(Typical)	R _{θJ-A}	°C/W	625
	R _{θJ-C}	°C/W	250

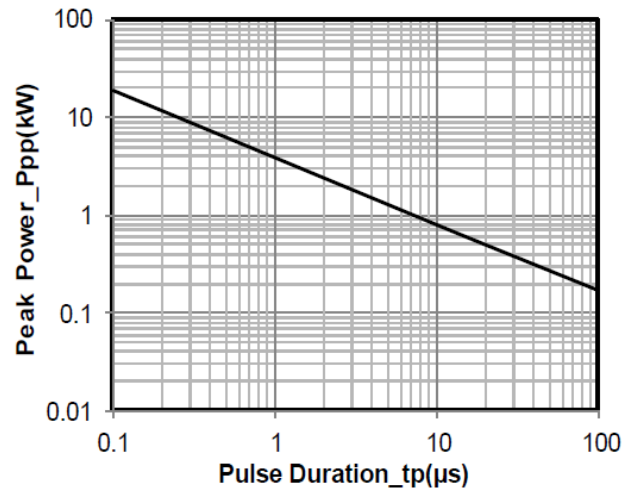
■ Ordering Information (Example)

PART NUMBER	PACKAGING	REEL SIZE
ASD15CM	3000/Tape & Reel	7 inch

■ Characteristics (Typical)



Junction Capacitance vs. Reverse Voltage

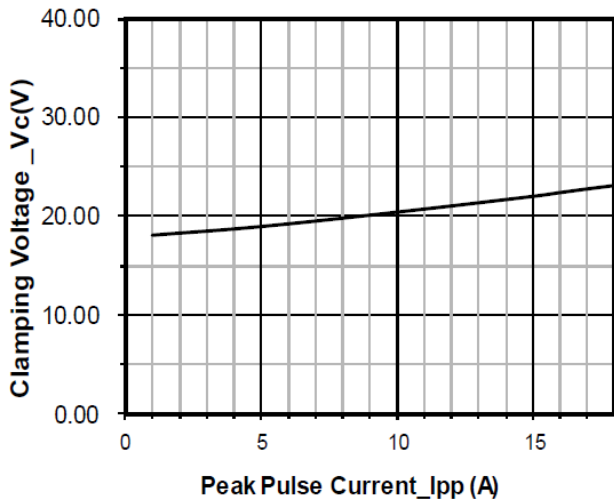


Peak Pulse Power vs. Pulse Time

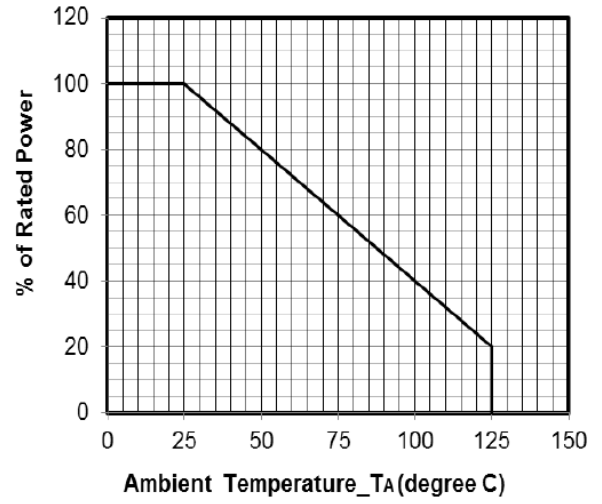


ASD15CM

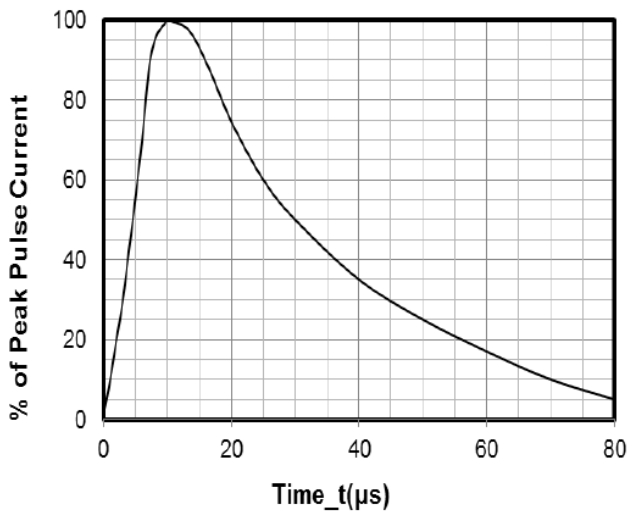
Junction Capacitance vs. Reverse Voltage



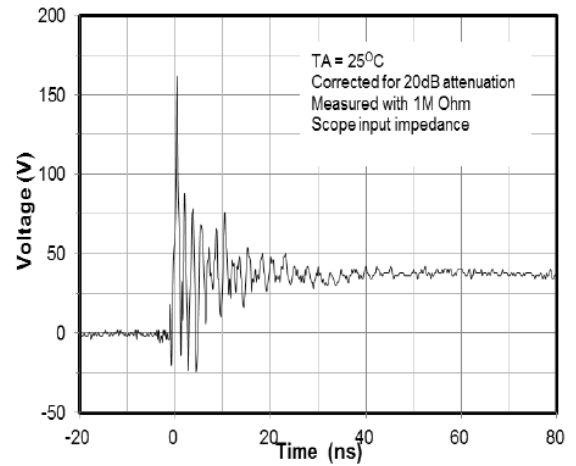
Peak Pulse Power vs. Pulse Time



Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



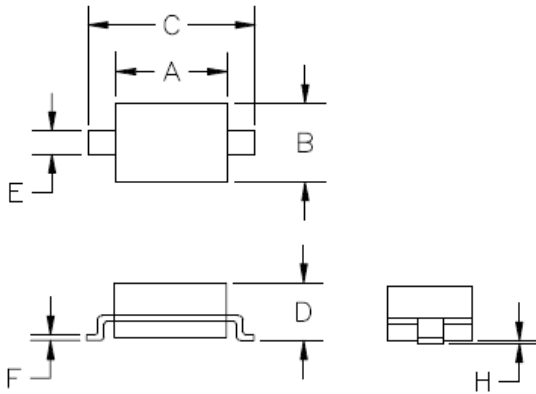
8 X 20μs Pulse Waveform

ESD Clamping Voltage 8 kV Contact per IEC61000-4-2



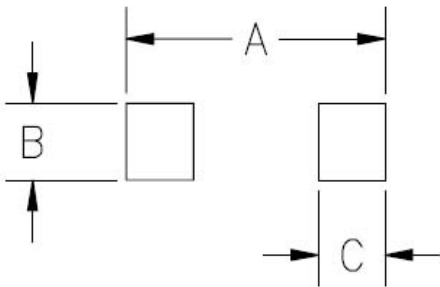
ASD15CM

■ Outline Dimensions



SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.80	0.060	0.071
B	1.20	1.40	0.045	0.054
C	2.30	2.70	0.090	0.107
D	-	1.10	-	0.043
E	0.30	0.40	0.012	0.016
F	0.10	0.25	0.004	0.010
H	-	0.10	-	0.004

■ Soldering Footprint



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	3.15	0.120
B	0.80	0.031
C	0.80	0.031



ASD15CM

Disclaimer

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