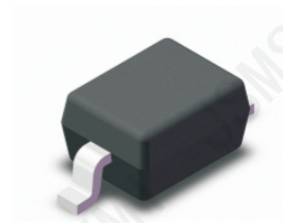## Description

PESD1IVN27-AX-JSM is a compact SOD-323 ESD diode,

designed for protecting circuits from voltage transients and ESD with low leakage and clamping voltage.

SOD-323

Features

◆ Ultra-low leakage (nA level)

◆ Low clamping voltage

◆ RoHS, REACH & SVHC, Halogen Compliant

◆ SOD-323 package; ±30kV ESD protection (IEC 61000−4−2)

◆ -40°C to +125°C operating temp range

Applications

◆ Portable devices (smartphones, wearables)

◆ Consumer electronics (cameras, MP3)

◆ Communication modules (Bluetooth, Wi-Fi)

Maximum Ratings(TA=25℃)

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20µs pulse)	Ppk	150	W
Peak Pulse Current(8/20µs pulse)	Ipp	3	A
ESD per IEC61000-4-2(Air) ESD per IEC61000-4-2(Contact)	VESD	±30 ±30	kV
Operating Temperature Range	Tj	-40 to+125	℃
Storage Temperature Range	Tstg	-55 to+150	℃

Partial Electronic Parameters

Symbol	Parameter
V$_{RWM}$	Peak Reverse Working Voltage
I$_R$	Reverse Leakage Current @VRWM
V$_{BR}$	Breakdown Voltage @ I$_T$
I$_T$	Test Current
IPP	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @ I$_{PP}$
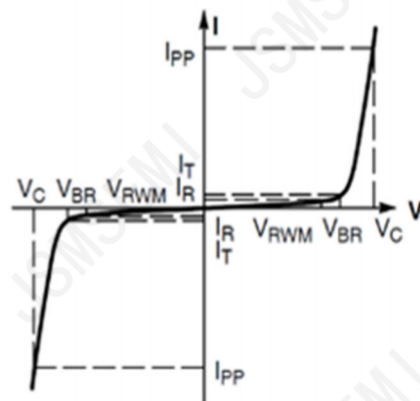
Electrical Characteristics(TA=25℃)

| Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse working voltage	V$_{RWM}$				27	V
Breakdown voltage	V$_{BR}$	I$_T$=1mA	28	33.5	38	V
Reverse leakage curent	I$_R$	V$_{RWM}$=27V		<10	100	nA
Clamping voltage	Vc	Ipp=1A(8/20μs)		35	38	V
Clamping voltage	Vc	Ipp=3A(8/20μs)		40	50	V
Junction capacitance	Cj	V$_R$=0V,f=1MHz		15	20	pF

Typical Perfomance Characteristics(TA=25℃unless otherwise Specified)
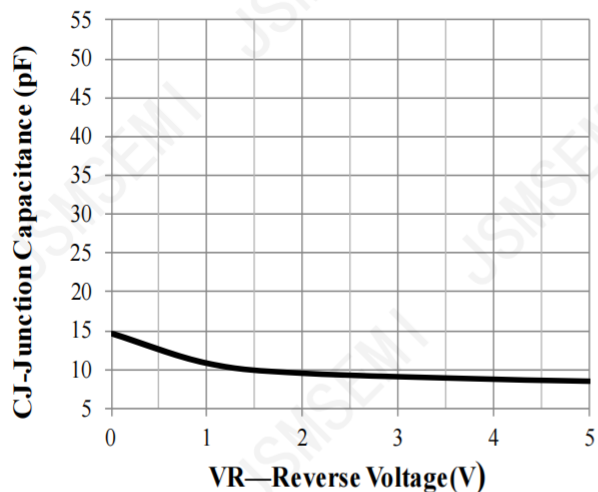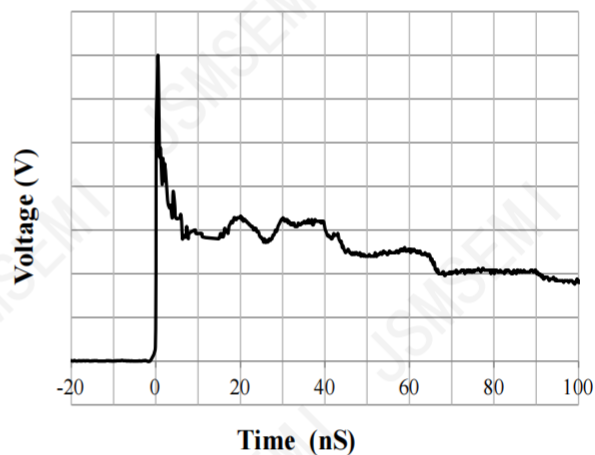

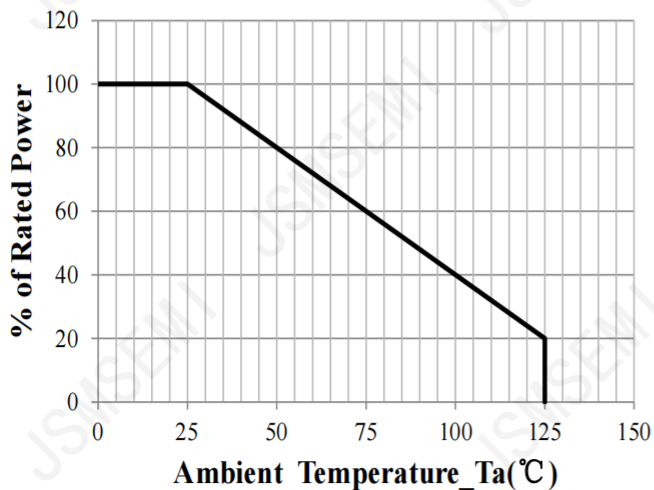**Junction Capacitance vs. Reverse Voltage**
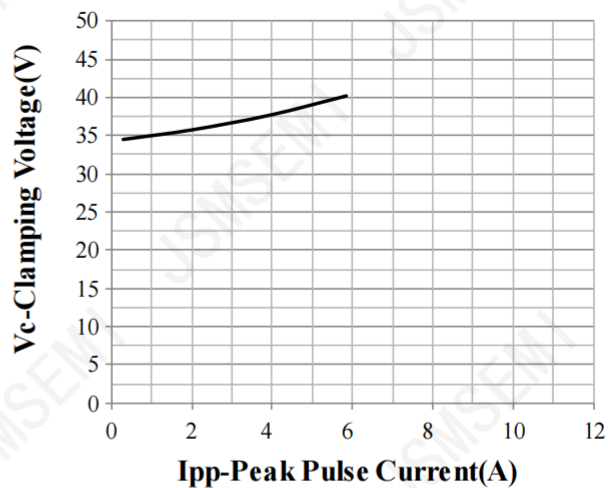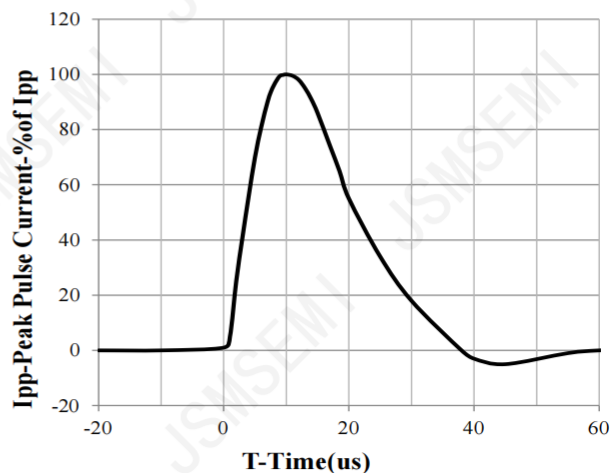

Clamping Voltage vs. Peak Pulse Current
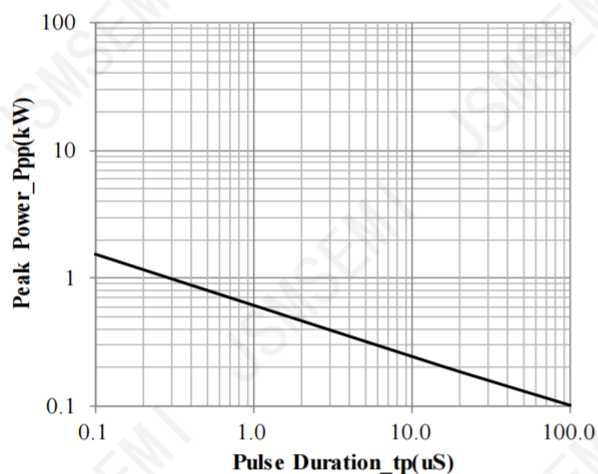
Peak Pulse Power vs. Pulse Time
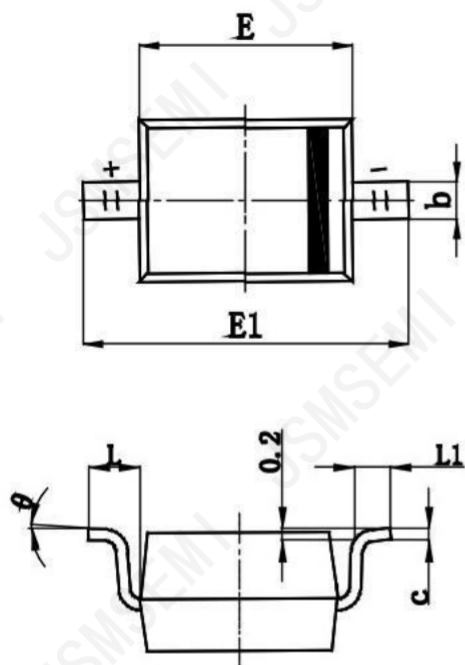

IEC61000−4−2 Pulse Waveform

Power Derating Curve

8 X 20us Pulse Waveform

SOD-323 Package Outline Dimensions

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout
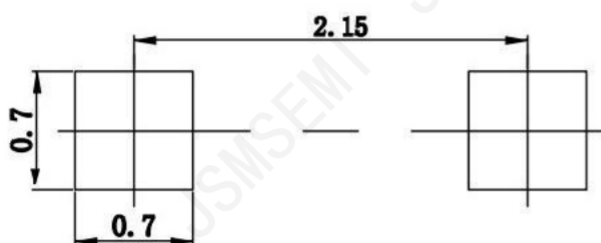
Note:
1. Controlling dimension:in millimeters.
2. General tolerance:±0.05mm.
3. The pad layout is for reference purposes only.

Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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