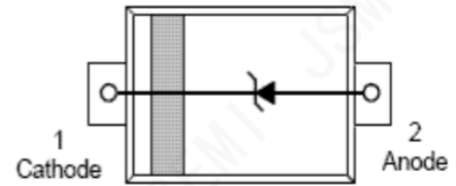


Description

The PESD5Z3.3,115-JSM is an electrostatic discharge (ESD) suppressor designed to safeguard voltage-sensitive components from ESD and transient voltage occurrences. Leveraging advanced technology, it offers excellent clamping capabilities, low leakage, and a rapid response time, making it a prime choice for ESD protection in designs where space on the circuit board is limited.



Features

- ◆ Small Body Outline Dimensions and Low Body Height
- ◆ Stand-off Voltage: 3.3 V
- ◆ Peak Power up to 150 Watts @ 8 x 20 μ s Pulse
- ◆ Low Leakage
- ◆ Response Time Typically <1 ns
- ◆ ESD Rating of Class 3 (>16 kV) per Human Body Model
- ◆ IEC61000 - 4 - 2 Level 4 ESD Protection
- ◆ IEC61000 - 4 - 4 Level 4 EFT Protection
- ◆ RoHS Compliant

Applications

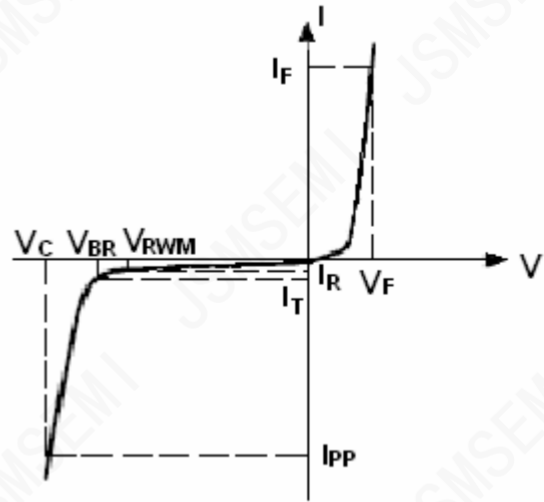
- ◆ Cellular phones
- ◆ Portable devices
- ◆ Digital cameras
- ◆ Power supplies

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power(t _p =8/20 μ s)	150	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to+150	°C
T _{op}	Operating Temperature Range	-40 to+125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2(ESD) air discharge	\pm 20	KV
	contact discharge	\pm 20	
	IEC61000-4-4(EFT)	40	A
	ESD Voltage Per Human Body Model	16	KV

Electronics Parameter

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage@ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current@ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage@ I_T
I_F	Forward Current
V_F	Forward Voltage@ I_F

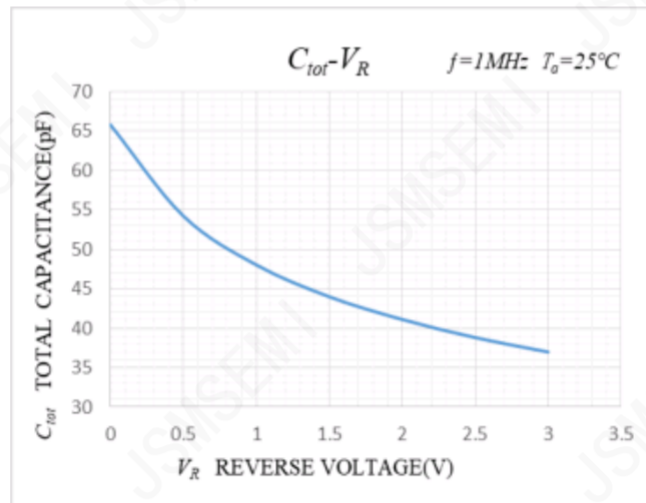
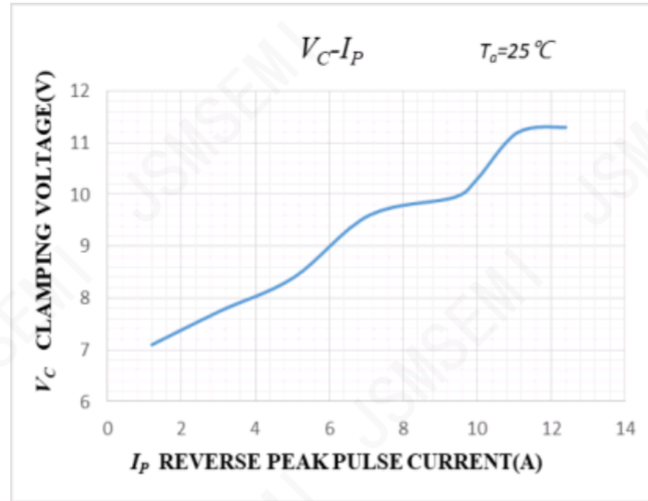

ELECTRICAL CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified $V_F=0.9V$ at $T_F=10mA$

Device	V_{RWM} (V)	$I_R(\mu A)$ @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_{BR} (V)@ I_T (Note 1)	V_C (V) @ Max I_{PP}^*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
	Max	Max	Min	mA	Max	Max	Max	Max	Typ
PESD5Z3.3,115-JSM	3.3	1	5.0	1	8.4	15	10	150	70

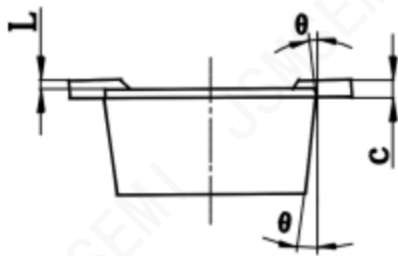
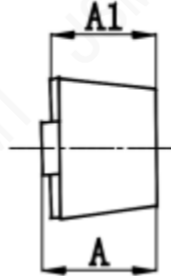
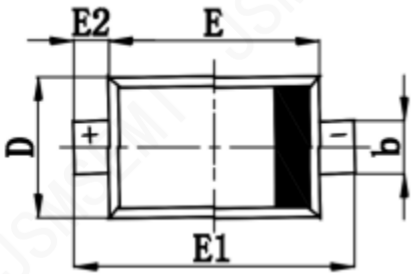
*Surge current waveform per Figure1.

1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25°C.

Typical Performance Curves

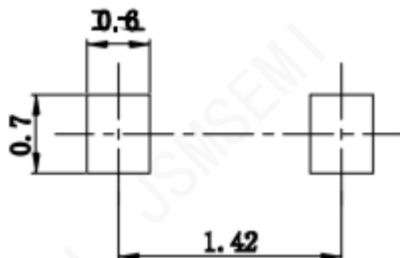


SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested PadLayout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER' S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements diferent from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or s ervice. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact Kevin@jsmsemi.com or visit www.jsmsemi.com