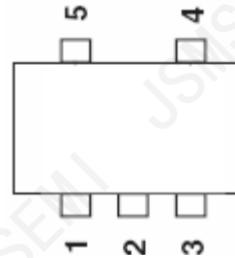


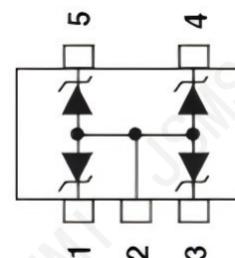
Description

The PESD3V3L4UG,115-JSM is a monolithic ESD suppressor designed to protect components connected to data and transmission lines against electrostatic discharge (ESD). It clamps the voltage just above the logic level supply for positive transients and to a diode drop below ground for negative transients, ensuring reliable protection of sensitive electronic components.



Features

- Integrates 4 unidirectional Transil functions for multi-line protection
- Breakdown voltage (VBR): 6.1V min (primary) and 25V min
- Low leakage current (I_R): $\leq 1\text{mA}$ (max)
- Small PCB footprint: Typically $<4.2\text{ mm}^2$
- High ESD protection level: up to 25kV (HBM), compliant with IEC61000-4-2 Level 4
- Pb-Free package available for environmental compliance



SOT-353

Applications

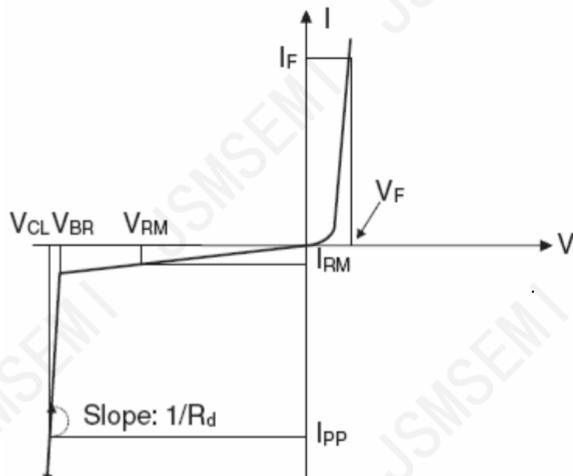
- Cellular phone handsets and accessories
- Wireline and wireless telephone sets
- Set-top boxes
- Computers and computer peripherals
- Printers
- Communication systems

Maximum Ratings($T_A=25^\circ\text{C}$)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power($t_p = 8/20\mu\text{s}$)	150	W
T_L	Maximum lead temperature for soldering during 10s	260	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-40 to +125	$^\circ\text{C}$
T_{op}	Operating Temperature Range	-40 to +125	$^\circ\text{C}$

Partial Electronic Parameters

Symbol	Parameter
V_{RM}	Stand-off voltage
V_{BR}	Breakdown voltage
V_{CL}	Clamping voltage
I_{RM}	Leakage current
I_{PP}	Peak pulse current
I_R	Reverse current
I_F	Forward current
αT	Voltage temperature coefficient
V_F	Forward voltage drop
C	Capacitance
R_d	Dynamic


 Electrical Characteristics($T_A=25^\circ C$)

Part Numbers	V_{BR}		I_R	V_{RM}	I_{RM}	V_F	I_F	R_d	αT	C
	Min.	Max.				Max.		Typ. ⁽¹⁾	Max. ⁽²⁾	Typ. 0v bias
	v	v	mA	v	μA	v	mA	Ω	$10^{-4}/^\circ C$	pF
PESD3V3L4UG,115-JSM	6.1	7.2	1	5	1	1.25	200	0.61	6	90

 1. Square pulse $I_{PP}=15A, t_p=2.5\mu s$ 2. $V_{BR}=\alpha T \cdot (T_{amb}-25^\circ C) \cdot V_{BR}(25^\circ C)$

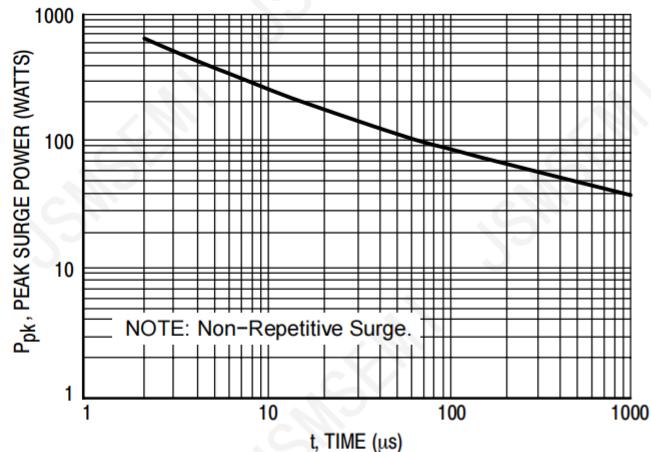
Typical Performance Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise Specified)


Figure 1. Pulse Width

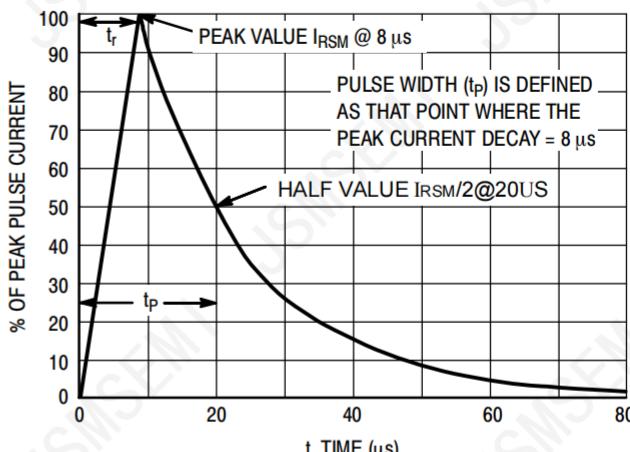
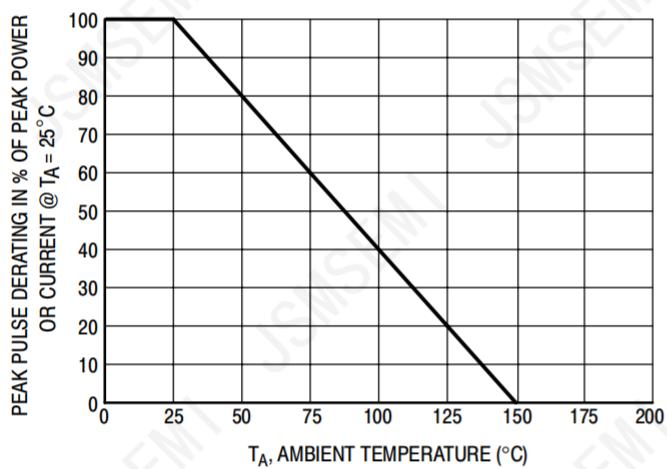

 Figure 2. 8 x 20 μs Pulse Waveform


Figure 3. Pulse Derating Curve

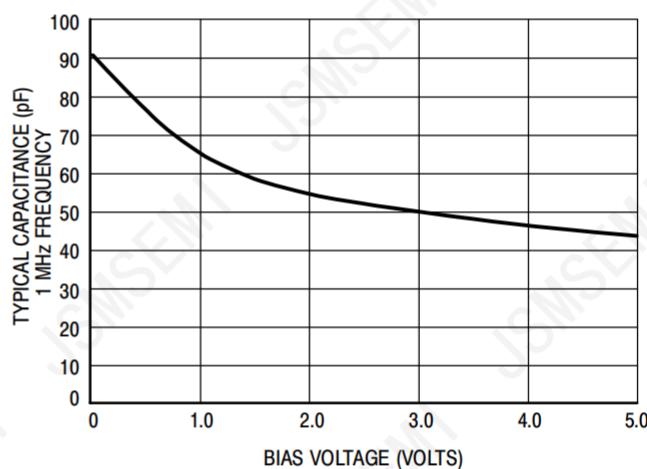


Figure 4. Capacitance

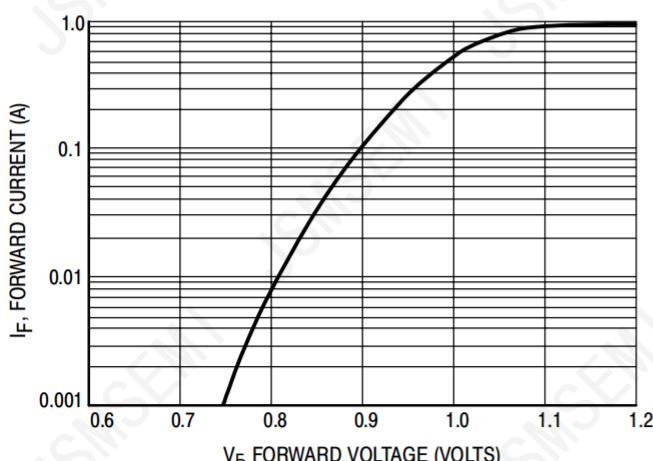


Figure 5. Forward Voltage

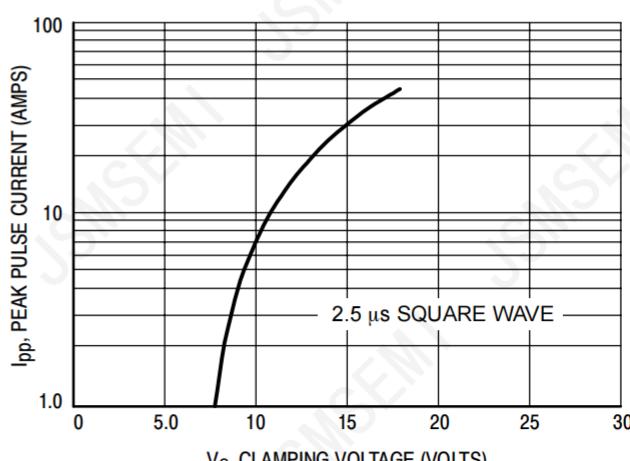
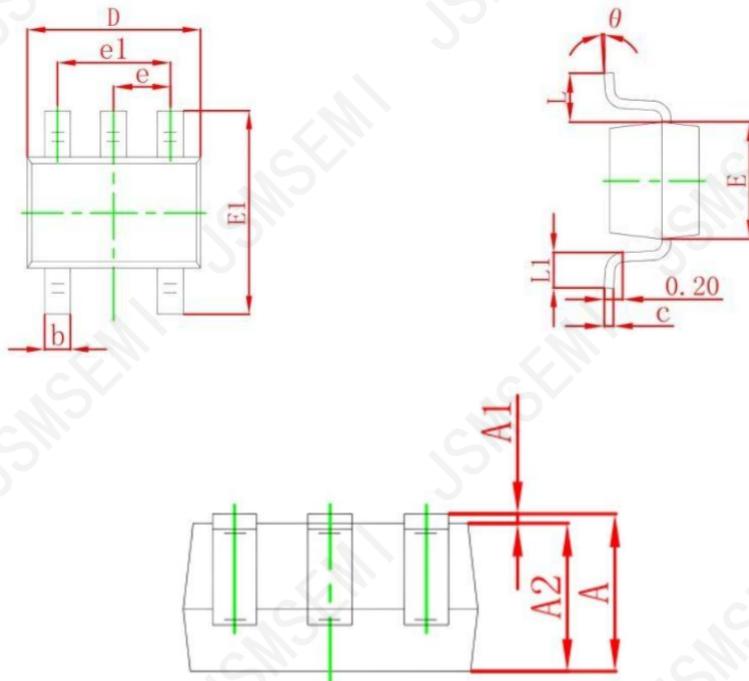


Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)

Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.8	1.10
A1	0.00	0.10
A2	0.90	1.00
b	0.15	0.35
C	0.08	0.15
D	2.05	2.25
E	1.15	1.35
E1	2.15	2.45
e	0.65TYP	
e1	1.20	1.40
L	0.26	0.46
θ	7°REF.	

Revision History

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

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