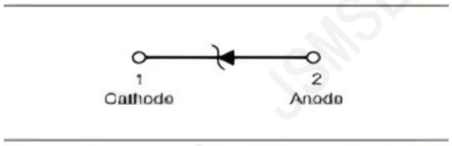
The PESD5V0S1UB,115-JSM is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage,and fast response time,make these parts ideal for ESD protection on designs where board space is at a premium.
Because of its small size,it is suited for use in cellular phones, portable devices,digital cameras,power supplies and many other portable applications.

SOD-523



Specification Features:

- Small Body Outline Dimensions:
  0.047" x 0.032" (1.20 mm x 0.80 mm)
- Low Body Height: 0.028" (0.7 mm)
- Stand−off Voltage: 2.5 V − 12 V
- Peak Power up to 240 Watts @ 8 x 20 μs Pulse
- Low Leakage
- Response Time is 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
- Pb−Free Packages are Available

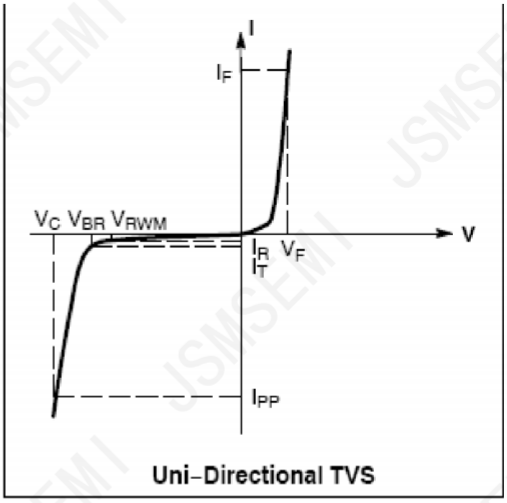
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000−4−2 (ESD) Air Contact		±30 ±30	kV
IEC 61000−4−4 (EFT)		40	A
ESD Voltage Per Human Body Model Per Machine Model		16 400	kV V
Total Power Dissipation on FR−5 Board (Note 1) @ T_A = 25°C	P_D	200	mW
Junction and Storage Temperature Range	T_J, T_{stg}	−55 to +150	°C
Lead Solder Temperature − Maximum (10 Second Duration)	T_L	260	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.
1. FR−5 = 1.0 x 0.75 x 0.62 in.

ELECTRICAL CHARACTERISTICS
(T_A = 25°C unless otherwise noted)

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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Max. Capacitance @V_R = 0 and f = 1 MHz



Uni−Directional TVS

ELECTRICAL CHARACTERISTICS (T_A=25℃ urless otherw ise noted V_F=0.9V Max @I_F=10mA for all types

Device*	V_{RWM} (V)	$I_{R(\mu A)}$ @V_{RWM}	$V_{BR(V@IT}$ (Note 2)	I_T	Vc(V) @pp=5.0A+	Vc(V) @Max Ipp+	pp(A)+	PPKW)+	C(pF)
	Max	Max	Min	mA	Typ	Max	Max	Max	Typ
PESD5V0S1UB,115-JSM	5.0	0.05	6.2	1.0	11.6	18.6	9.4	174	80

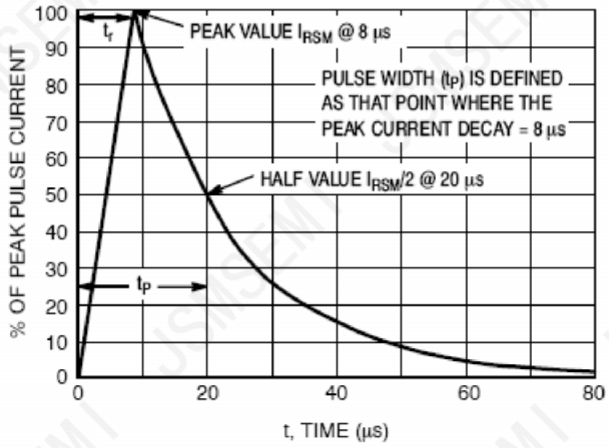


Figure 1. 8 x 20 µs Pulse Waveform

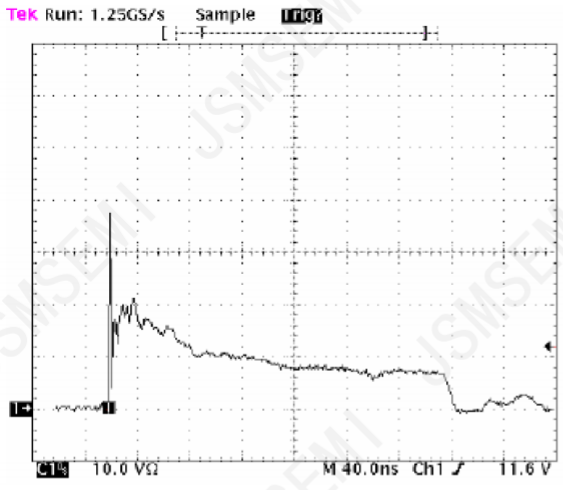


Figure 2. Positive 8 kV contact per IEC 6100−4−2

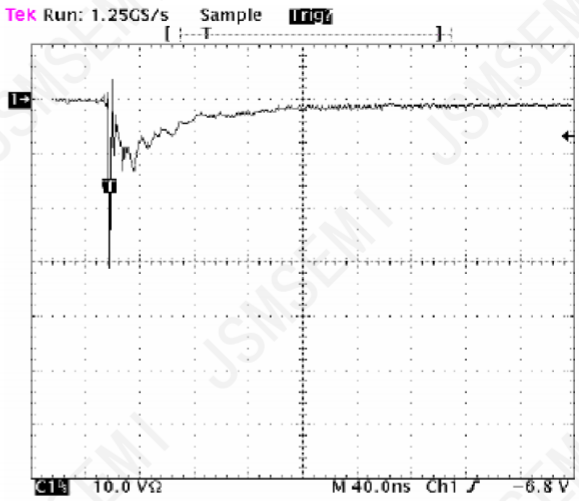
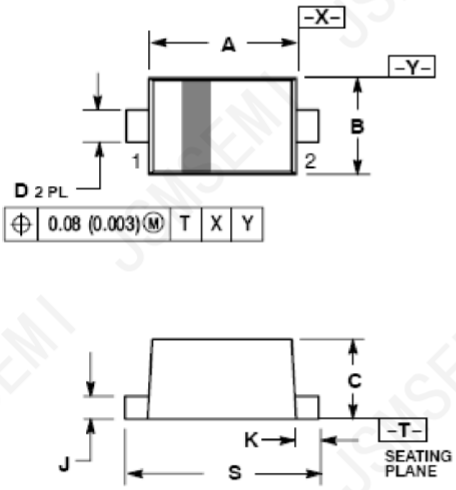


Figure 3. Negative 8 kV contact per IEC 6100−4−2

SOD−523
CASE 502−01
ISSUE B



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067

Revision History

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

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