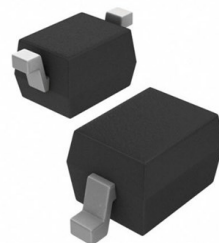


Features

- * Ultra low leakage: nA level
- * Low clamping voltage
- * RoHS Compliant
- * REACH & SVHC Compliant
- * Halogen Compliant
- * SOD-323 Package

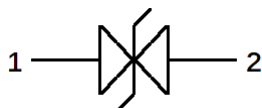


Marking Diagram



Top view

Circuit Diagram

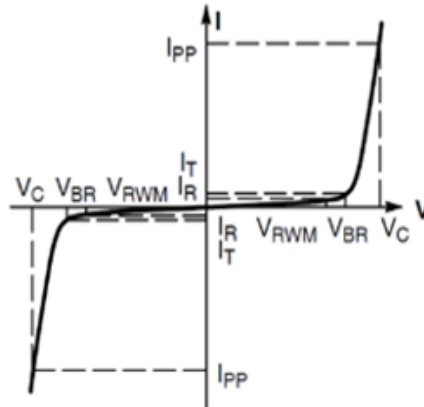


Ordering Information

Part Number	Packaging	Reel Size
PESD5V0S1BA,115-CN	3000/Tape & Reel	7 inch

Portion Electronics Parameter

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

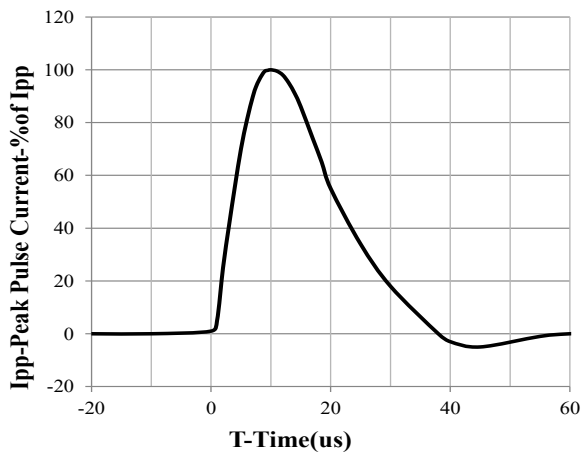
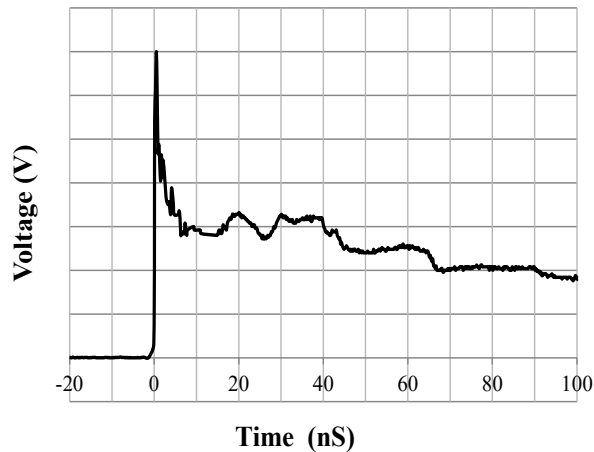
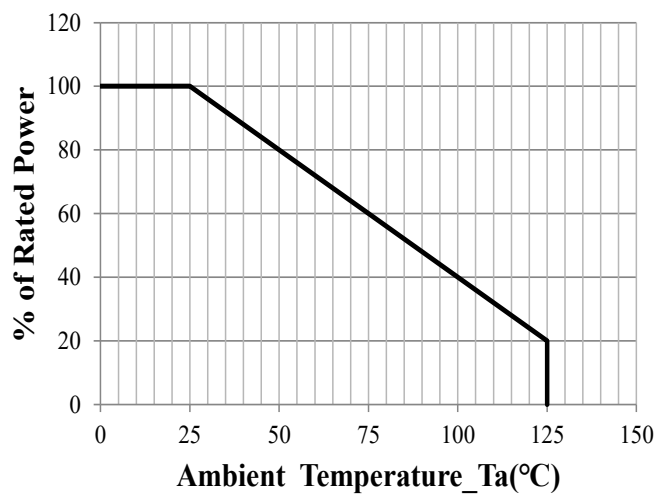


Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

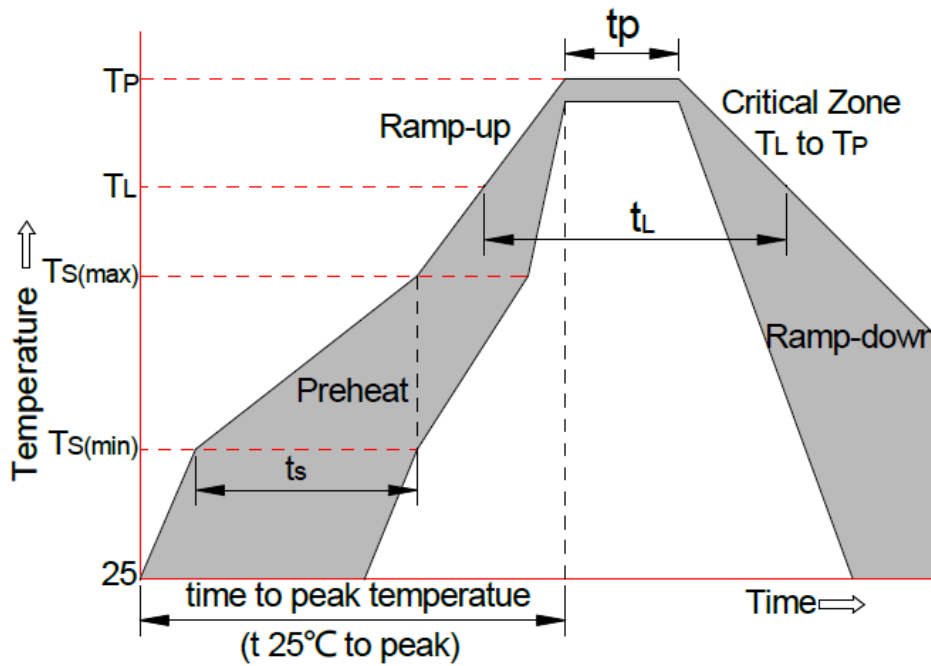
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs pulse)	P_{pk}	120	W
Peak Pulse Current (8/20 μs pulse)	I_{PP}	10	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	6	7.1	8.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$		<10	100	nA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ (8 / 20 μs pulse)		7.1	9	V
Clamping Voltage	V_C	$I_{PP} = 10\text{A}$ (8 / 20 μs pulse)		8.3	12	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$,		17	25	pF

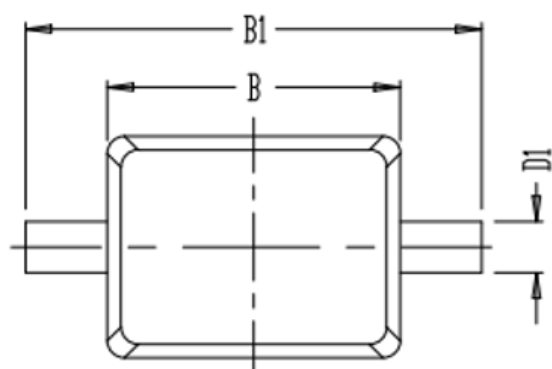
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

8 / 20us Pulse Waveform

IEC61000-4-2 Pulse Waveform

Power Derating Curve

Soldering Parameters

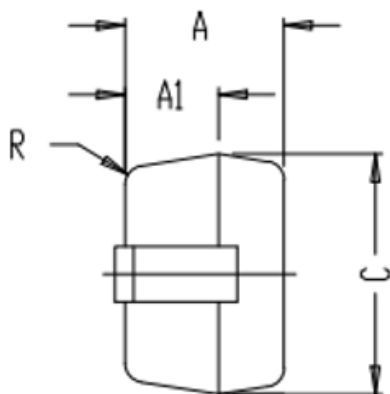


Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{S(min)}$)	+150°C
	-Temperature Max ($T_{S(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs
Average ramp up rate(Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{S(max)}$ to T_L -Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217°C
	-Temperature (t_L)	60-150 secs
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/secs. Max
xTime 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

SOD-323 Package Outline Drawing

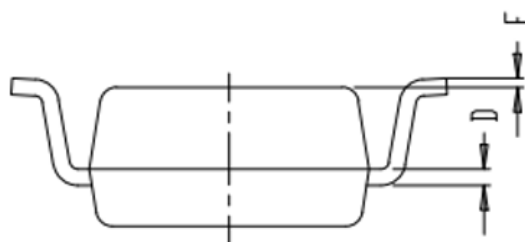


TOP VIEW



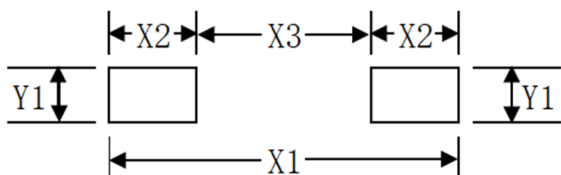
SIDE VIEW

SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	Min	Typ	Max	Min	Typ	Max
A	0.70	0.80	0.90	0.0276	0.0315	0.0354
A1	0.45	0.50	0.55	0.0177	0.0197	0.0217
B	1.65	1.70	1.75	0.0650	0.0669	0.0689
B1	2.55	2.65	2.75	0.1004	0.1043	0.1083
C	1.25	1.30	1.35	0.0492	0.0512	0.0531
D	0.10	0.11	0.12	0.0039	0.0043	0.0047
D1	0.28	0.30	0.32	0.0110	0.0118	0.0126
E	—	—	0.10	—	—	0.0039
R	0.02	—	0.05	0.0008	—	0.0020



SIDE VIEW

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	3.20	0.126
X2	0.80	0.031
X3	1.60	0.063
Y1	0.50	0.020

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