SLPESD5V0S1BA

Low Capacitance Bidirectional TVS/ESD Protection Diode

DESCRIPTION

The SLPESD5V0S1BA 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 where board space comes at a premium. Also because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed, VGA, DVI, SDI and other high speed line applications.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD(electrostatic discharge), and EFT (electrical fast transients).

FEATURES

- ✧IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ✧IEC61000-4-4 (EFT) 40A (5/50ηs)
- ✧Peak power dissipation: 400W (8/20μs)
- ✧Protects one directional I/O line
- ✧Low clamping voltage
- ✧Working voltages : 5V
- ✧Low leakage current
- ✧Low capacitance

MACHANICAL DATA

- ✧SOD-323 package
- ✧Terminals: Gold plated, solderable per MIL-STD-750, method 2026
- ✧Packaging: Tape and Reel
- ✧Reel size: 7 inch
- ✧Weight: 0.001 gram (approx.)

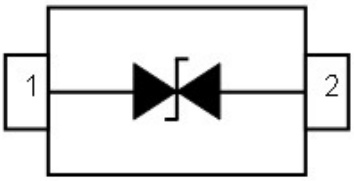
ORDERING INFORMATION

- ✧Device: SLPESD5V0S1BA
- ✧Package: SOD-323
- ✧Marking: E6
- ✧Material: Halogen free
- ✧Packing: Tape & Reel
- ✧Quantity per reel: 3,000pcs

APPLICATIONS

- ✧High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
- ✧Serial and Parallel Ports
- ✧Notebooks, Desktops, Servers
- ✧Projection TV
- ✧Cellular handsets and accessories
- ✧Portable instrumentation
- ✧Peripherals

PIN CONFIGURATION



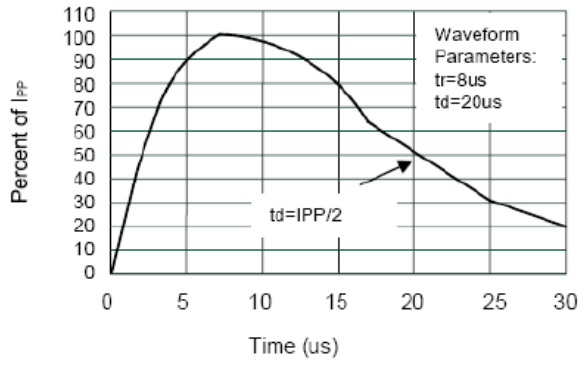
PACKAGE OUTLINE



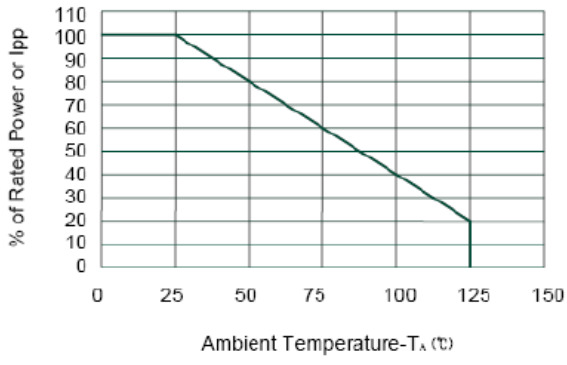
ABSOLUTE MAXIMUM RATING			
Symbol	**Parameter**	**Value**	**Units**
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±15 ±8	kV
P_{PP}	Peak Pulse Power (8/20μs)	400	W
T_{OPT}	Operating Temperature	-55~150	°C
T_{STG}	Storage Temperature	-55~150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)						
Symbol	**Parameter**	**Test Condition**	**Min**	**Typ**	**Max**	**Units**
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	5.8		7.8	V
I_R	Reverse Leakage Current	V_{RWM} = 5V			1.0	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs			9.8	V
V_C	Clamping Voltage	I_{PP} = 25A, t_p = 8/20μs		15	20	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		30	40	pF

ELECTRICAL CHARACTERISTICS CURVE

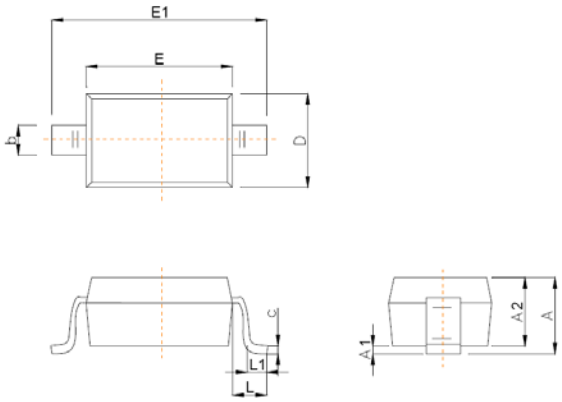


Pulse Waveform

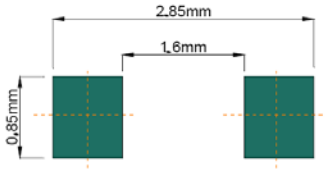


Power Derating Curve

SOD-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°



Recommended Pad outline

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

Slkor:

SL2302 SL4407A SL7333-8 SL9926A ZMM18 MM1Z15B SL15T120FL SL214M SL9459 LM78L05D MMBT3906T MMST2907A MM5Z12V 1SMAF4735A SL0603ESDA-TR1 SL4949 BZT52B9V1 DB305S FR107 SLESD0701OC BAV99DW SL4041 SL45H11 ES2D SL5N100P SLE0504 SLESD0521D52RG SLPESDNC2FD5VB 1SMA5929A MMDT2222A