HESDUC5VB1EL-B
ESD PROTECTION DIODE

Discription

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a ultra-small and flat lead SOD-323 plastic package designed to protect one signal line from the damage caused by ESD and other transients.

SOD-323

Features

★ Ultra Low Capacitance 0.35 pF(Typ)
★ Reverse stand-off voltage: 5V Max
★ Low leakage current: nA Level
★ Response time is typically < 1 ns
★ IEC61000-4-2 Level 4 ESD Protection
★ RoHS compliant

Circuit Diagram

Applications

★ High-speed data lines
★ Smart phones
★ Display Ports
★ MDDI Ports
★ USB Ports
★ Digital Video Interface (DVI)
★ PCI Express and Serial SATA Ports

Ordering Information

Product ID	Pack	Qty(PCS)
HESDUC5VB1EL-B	SOD-323	3000

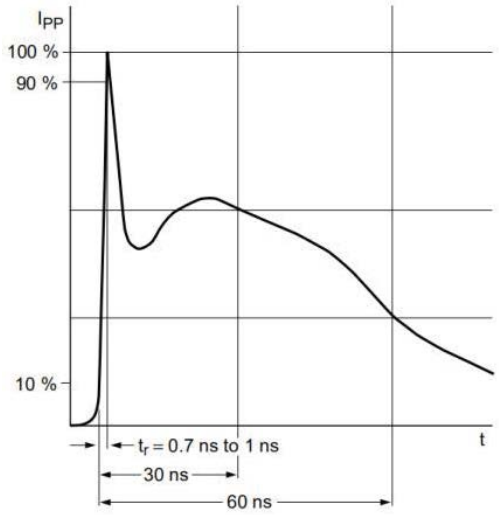
Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	80	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±20 ±15	KV
I_{PPM}	IPeak Pulse Current(tp = 8/20us)	4.0	A

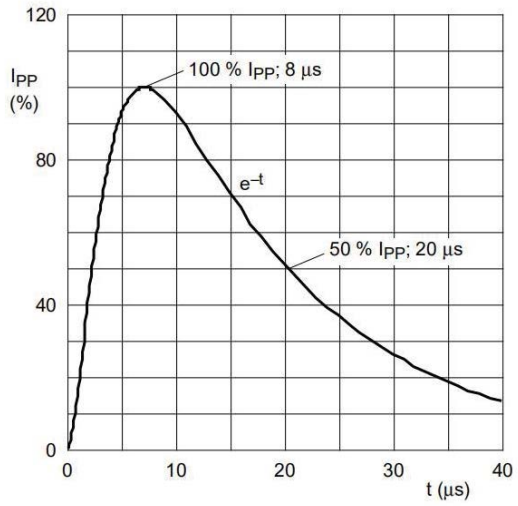
Electrical Characteristics

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	6.2		8.5	V
I_R	Reverse Leakage Current	V_{RWM} = 5.0V			100	nA
V_C	Clamping Voltage	I_{PP} = 4A, t_p = 8/20μs			20.0	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		0.35	0.40	pF

Typical Characteristics

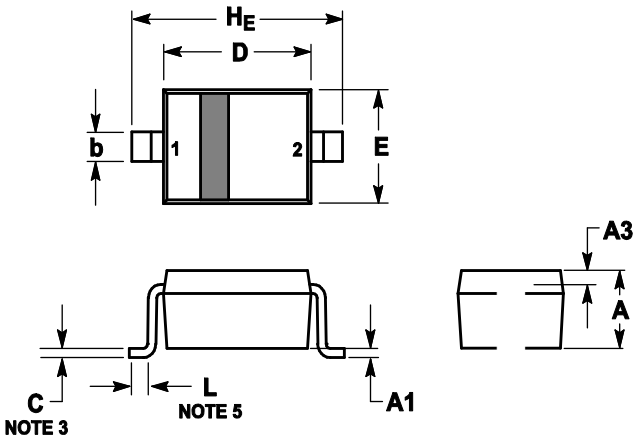


IEC61000−4−2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

Outline And Dimensions

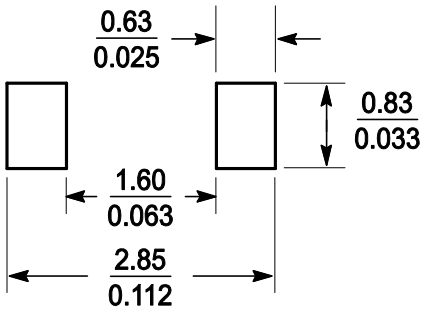


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.8	0.9	1	0.031	0.035	0.04
A1	0	0.05	0.1	0	0.002	0.004
A3	0.15REF			0.006REF		
b	0.25	0.32	0.4	0.01	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.6	1.7	1.8	0.062	0.066	0.07
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.3	2.5	2.7	0.09	0.098	0.105

Soledering Footprint



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