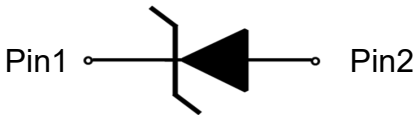
Description

The XE3DHC5VU is a Uni-directional ESD protection diode designed to protect sensitive electronic components which are connected to low speed data lines and control lines from over-stress caused by ESD (Electrostatic Discharge), EFT (Electrical Fast Transients) and Lightning. The XE3DHC5VU may be used to provide ESD protection up to ±30kV (contact and air discharge) according to IEC61000-4-2, and withstand peak pulse current up to 22A (8/20μs) according to IEC61000-4-5.

The XE3DHC5VU is available in SOD323 package. Standard products are Pb-free and Halogen-free.

http//:www.xihangsemi.com

SOD323



Circuit Diagram

Marking（Top View）

Features

- Working voltage: 5V
- SOD323 Package
- Transient protection for data lines to
  IEC61000-4-2 (ESD) ±30kV (air),
  ±30kV (contact)
  IEC61000-4-5 (Surge)22A (8/20us)
  IEC61000-4-4(EFT)40A(5/50ns)
- Low leakage current
- Low clamping voltage
- Solid-state silicon-avalanche technology

Order Information

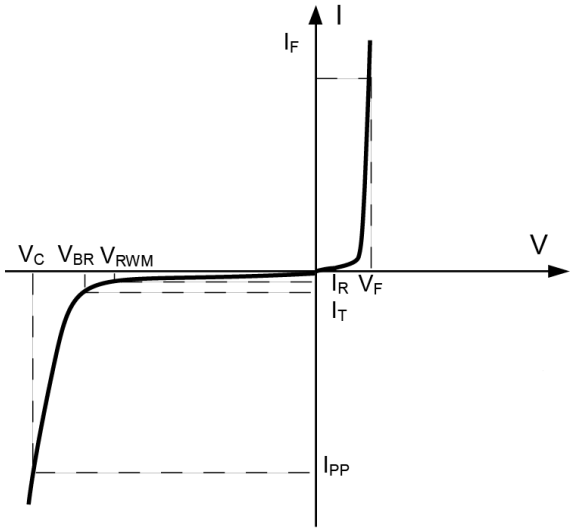
Device	Package	Shipping
XE3DHC5VU	SOD323	3000/Tape&Reel

Applications

- Personal digital assistants (PDA's)
- Notebooks, Desktops, and Servers
- Cell phone Handsets and Accessories
- Portable Electronics
- Peripherals

Definitions of electrical characteristics

Symbol	Parameter
V_{RWM}	Reverse Stand-off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F
C_j	Junction Capacitance
I_{PP}	Peak Pulse Current



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (t_P = 8/20μS)	P_{PK}	350	W
Peak Pulse Currentr (t_P = 8/20μS)	I_{pp}	22	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	kV
ESD according to IEC61000-4-2 contact discharge		±30	kV
Lead Soldering Temperature	T_L	260 (10 sec)	℃
Operating Temperature	T_{OP}	-55 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

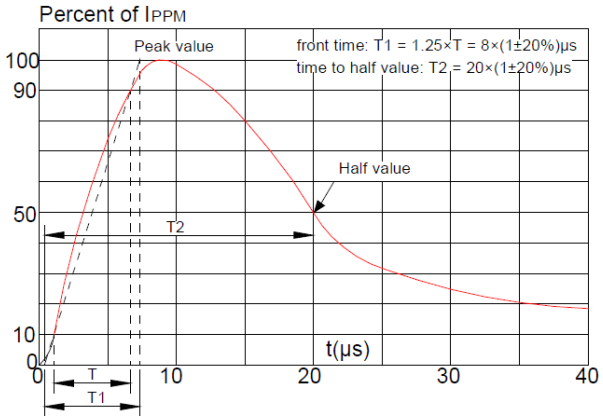
Electrical Characteristics (Ta=25℃, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Leakage Current	I_R	V_{RWM} =5V			1	uA
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Clamping Voltage[1)]	V_{CL}	I_{PP}=1A t_P = 8/20μs			9	V
		I_{PP}=22A t_P = 8/20μs		12	15	V
Junction Capacitance	C_j	V_R=0V f = 1MHz		180		pF

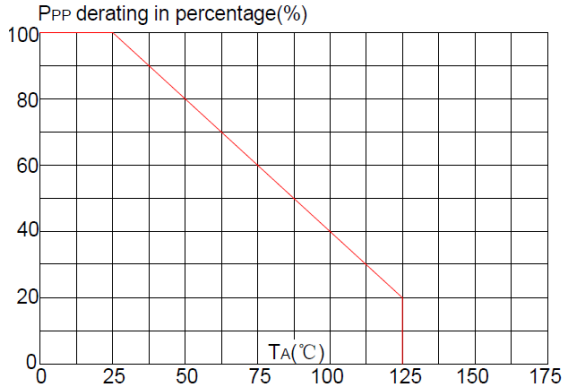
Notes:

1)Non-repetitive current pulse, according to IEC61000-4-5.

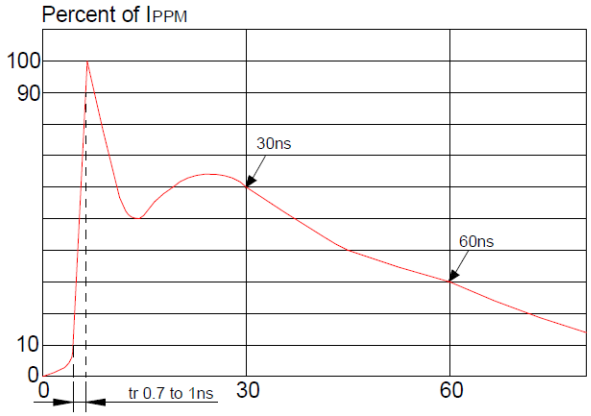
Typical Characteristics (Ta=25℃, unless otherwise noted)



Pulse Waveform (8/20us)

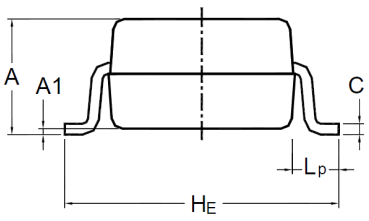


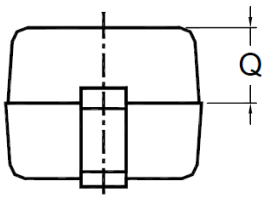
Pulse Derating Curve

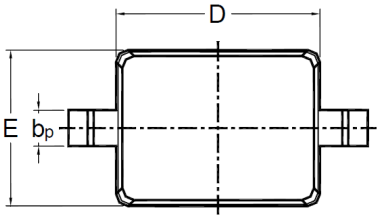


ESD Clamping(8kV Contact Discharge)

Package Outline Dimensions (SOD323）

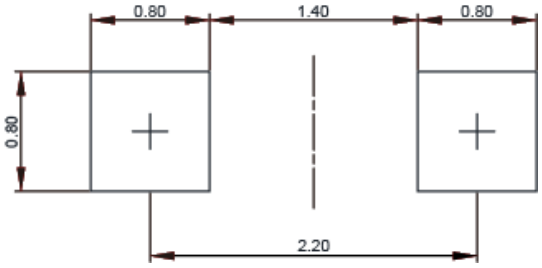






Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.031	0.043	0.8	1.0
A_1	0.000	0.004	0	0.1
b_p	0.010	0.016	0.25	0.4
C	0.000	0.006	0	0.15
D	0.063	0.071	1.6	1.8
E	0.045	0.053	1.15	1.35
H_E	0.091	0.110	2.3	2.8
L_P	0.004	0.020	0.1	0.5
Q	0.012	0.020	0.3	0.5

Recommend Land Pattern (Unit: mm)



Note:
This recommended land pattern is for reference purpose only.

NOTICE

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