

ESD1610HC5VU

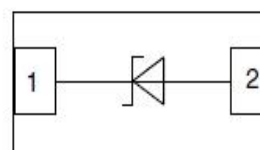
ESD1610HC5VU Transient Voltage Suppressors ESD Protection Diode

General description

Silicon Protection Diode in a DFN1610 Package.

FEATURES

- 1800Watt peak pulse power ($t_p=8/20$)
- DFN1610 Package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low Leakage Current
- Low clamping voltage
- Normal Capacitance ($C_j=1000\text{pF}$)
- Protection one data line / Power Line to :
- IEC 61000-4-2 $\pm 30\text{Kv}$ Contact $\pm 30\text{Kv}$ air.
- IEC 61000-4-4 EFT 40A(5/50nS)
- IEC 61000-4-5 Lightning 40A(8/20uS)
- RoHS Compliant, Halogen Free



Applications

- Laptop Computer/Cell Phone Handset
- Digital Camera/Personal Digital Assistants (PDA)
- DC Power line

DFN1610 Package

Marking: FS or 5P

ABSOLUTE MAXIMUM RATING

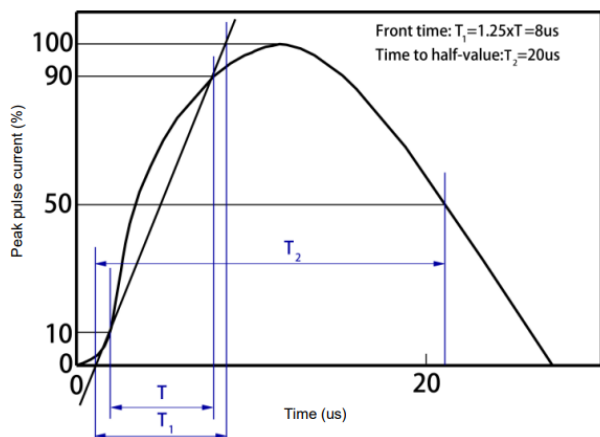
Symbol	Parameter	Value	Units
VESD	ESD per IEC 61000-4-2 (Contact)	± 30	KV
	ESD per IEC 61000-4-2 (Air)	± 30	
P _{PP}	Peak Pulse Power (8/20 μ s)	1800	W
I _{PP}	Peak Pulse Power (8/20 μ s)	135	A
TOPT	Operating Temperature	-55~125	°C
TSTG	Storage Temperature	-55~150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

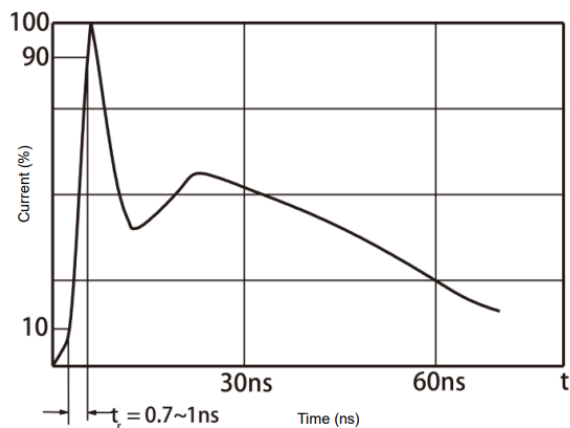
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
VRWM	Reverse Working Voltage				5.0	V
VBR	Reverse Breakdown Voltage	I _T = 1mA	6.0			V
IR	Reverse Leakage Current	V _{RWM} = 5V			2	μ A
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20 μ s		6.5	7.5	V
		I _{PP} = 10A, t _p = 8/20 μ s		7.5	9.8	V
		I _{PP} = 90A, t _p = 8/20 μ s			15	V
C _J	Junction Capacitance	V _R = 0V, f = 1MHz		1000		pF

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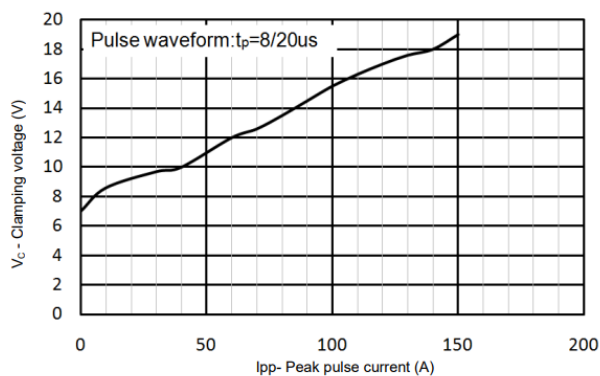
Typical Characteristics



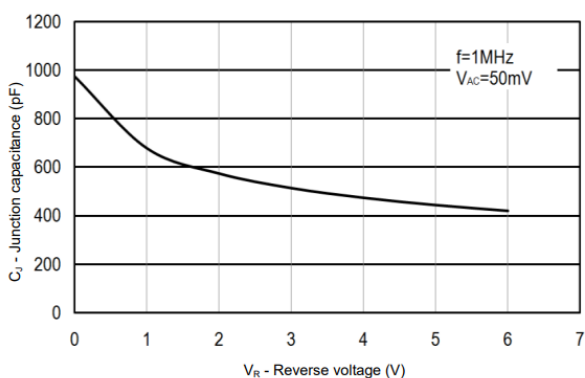
8/20 us waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2

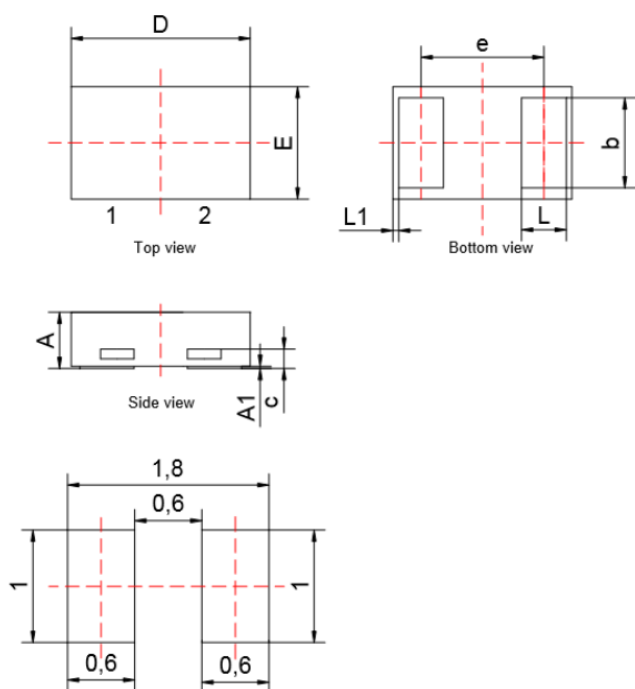


Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

Package Outline Dimensions (DFN1610)



Symbol	Millimeter		
	Min.	Typ.	Max.
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.85	0.90	0.95
c	0.08	0.12	0.18
D	1.55	1.60	1.65
e	1.1BSC		
E	0.95	1.00	1.05
L	0.35	0.40	0.45
L1	0.06BSC		

Recommended Soldering Footprint

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