

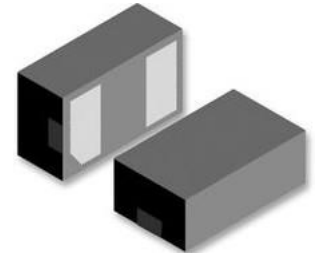
Low Capacitance ESD/ Transient Protection Diode

Features

- DFN1006 package
- Low leakage current
- Low clamping voltage
- Unidirectional configurations
- Low capacitance ($C_j=0.45\text{pF}$ typ.)
- Protection one data/power line to
- IEC 61000-4-2 $\pm 20\text{kV}$ contact $\pm 20\text{kV}$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20 μs)
- 120Watts peak pulse power ($t_p = 8/2\mu\text{s}$)
- Solid-state silicon-avalanche technology
- RoHS compliant



RoHS
COMPLIANT

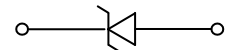


Marking : 5

DFN1006



Schematic Diagram



Applications

- Thunderbolt, Display Port
- USB2.0, USB3.0, Firewire, DVI, HDMI, S-ATA
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC
- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)

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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu\text{s}$)	P_{PP}	120	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	20/20	kV
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	6.0	A
Junction Temperature	T_J	-55 to +125	$^\circ\text{C}$
Storage temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6.0			V
Reverse Leakage Current	I_R	$V_R=5.0\text{V}$			1	μA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=6.0\text{A}$		16.5	20	V
Trigger Voltage (IEC 61000-4-2)	V_T	$V_{ESD}=8\text{kV}$		90		V
Clamping Voltage (IEC 61000-4-2)	V_C	$V_{ESD}=8\text{kV}$		15		V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$		0.45	0.65	pF

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

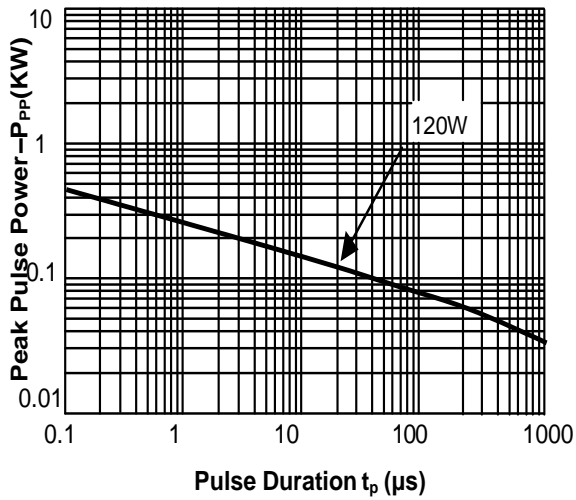


Fig.2 Pulse Derating Curve

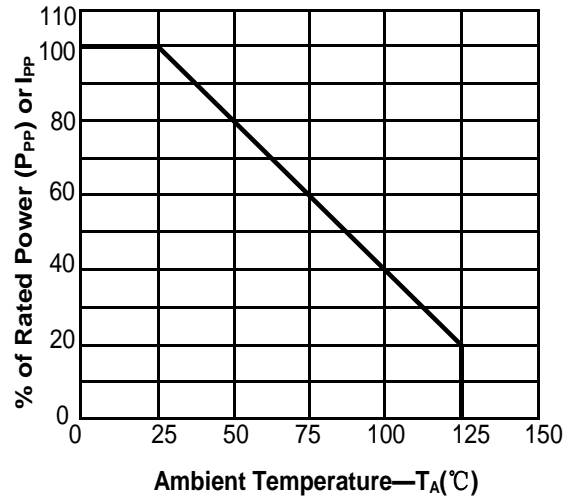


Fig.3 Pulse Waveform-8/20 μs

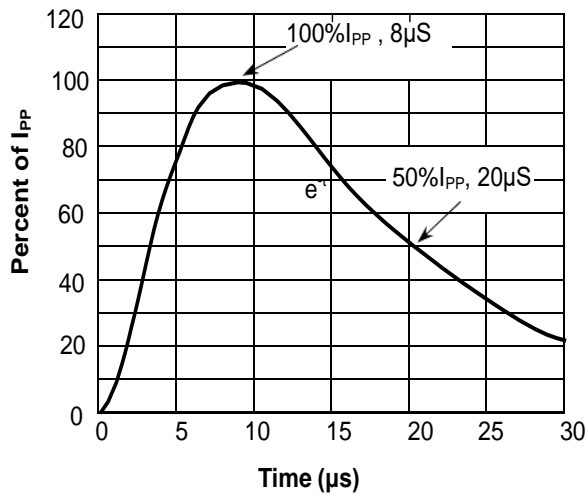
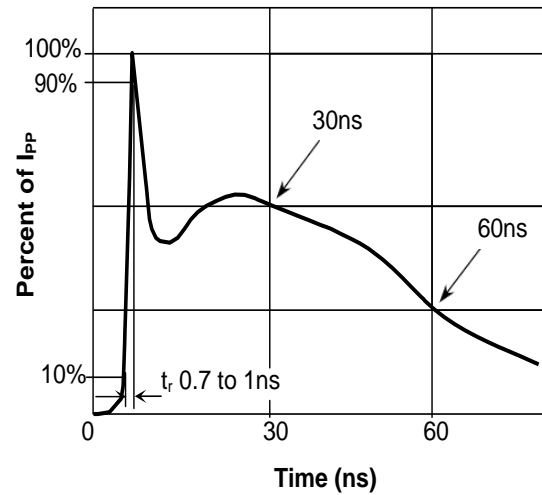
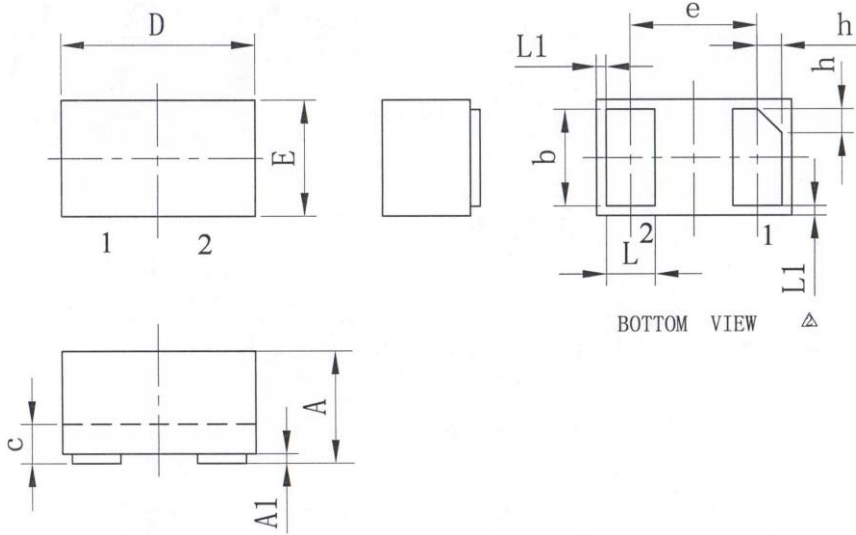


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



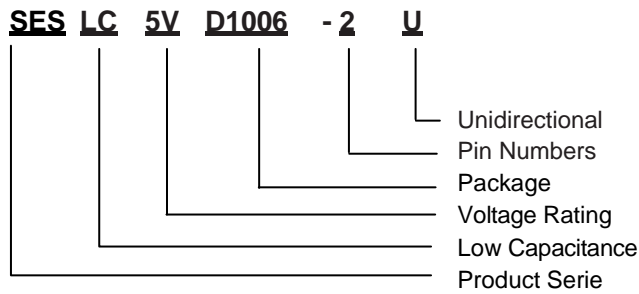
Package Outline Dimensions

in inches (millimeters)



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17
载体尺寸 (M11)	20*20		

Part Number System



Revision History

Document Version	Date of release	Description of changes
Rev.A	2015.04.12	First issue

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