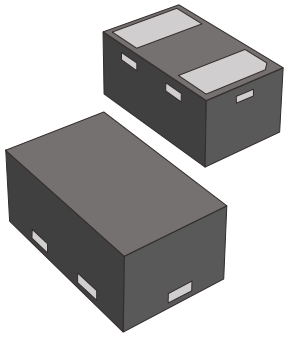
LM-PESD5V5C1BL-QYL

1-Line Low Capacitance Bi-directional TVS Diode

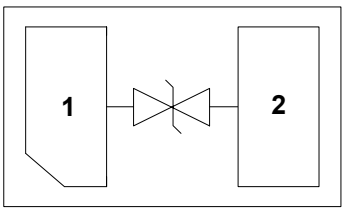
Features

- Operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
  - IEC61000-4-5 (Lightning) 6A (8/20 μs)
- RoHS Compliant
- AEC-Q101 qualified

Dimensions DFN1006



Pin Configuration



Applications

- USB Ports
- SIM Ports
- Smart Phones
- Wireless Systems
- Set-top box and digital TV
- Digital video interface (DVI)
- Ethernet 10/100/1000 Base T

Mechanical Characteristics

- Package: DFN1006
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:10,000pcs
- Reel Size:7 inch
- Device Marking:51F

Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

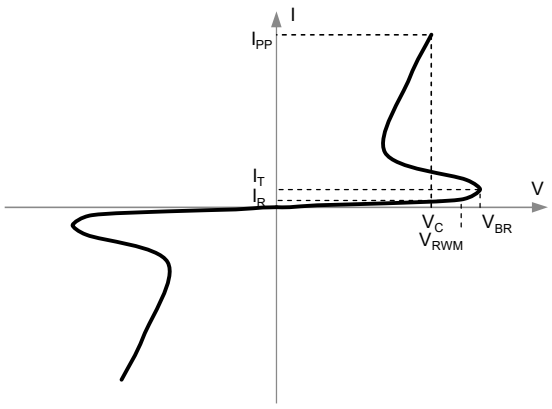
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	60	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000−4−2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

Electrical Characteristics(TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	I_T = 1mA	5.8		9.5	V
Reverse Leakage Current	I_R	V_{RWM} = 5V			0.2	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20 μs pulse)		6	7.5	V
Clamping Voltage	V_C	I_{PP} = 6A (8 x 20 μs pulse)		8	10	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		0.3	0.4	pF

Electrical Parameters(TA=25°C unless otherwise specified)

Symbol	Definition
I_{PP}	Peak Pulse Current
V_C	Clamping Voltage
V_{RWM}	Reverse Working Voltage
I_R	Reverse Leakage Current
V_{BR}	Breakdown Voltage
I_T	Test Current



Typical Performance Characteristics(TA=25°C unless otherwise specified)

Fig.1 - Peak Pulse Power Rating

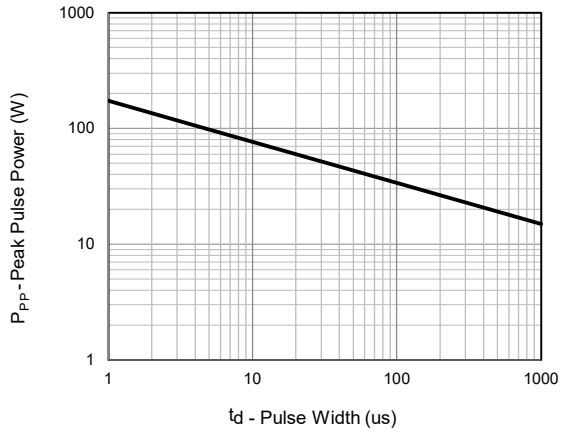


Fig.2 - Pulse Derating Curve

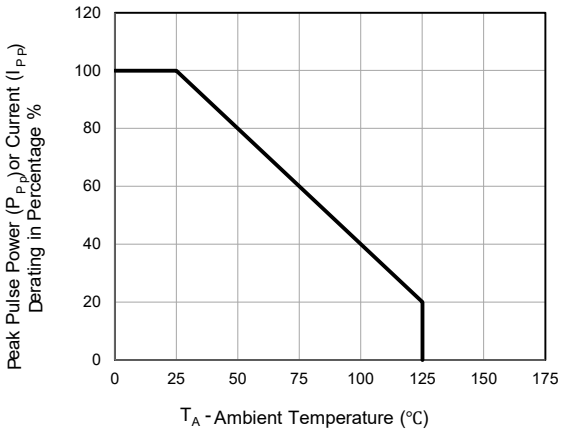


Fig.3 - 8/20us Pulse Waveform

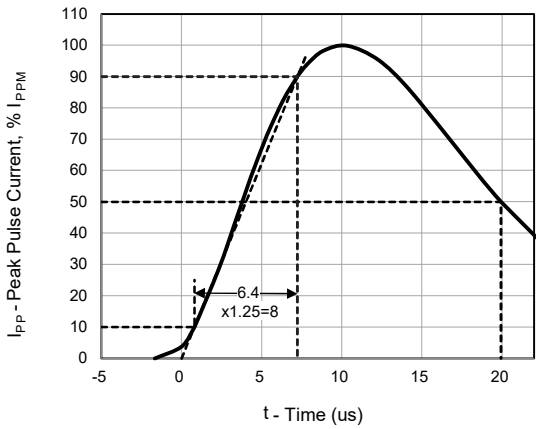


Fig.4 - Typical Clamping Voltage

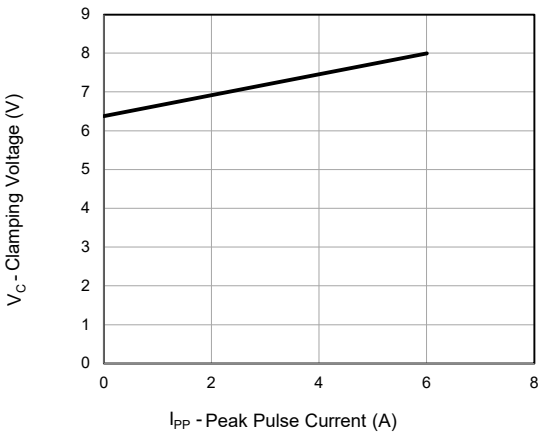


Fig.5 - ESD Pulse Waveform (IEC61000-4-2)

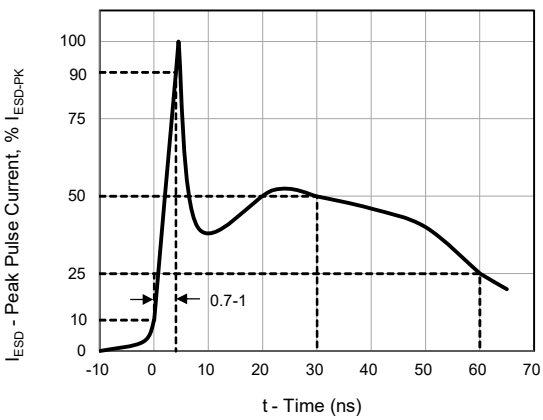
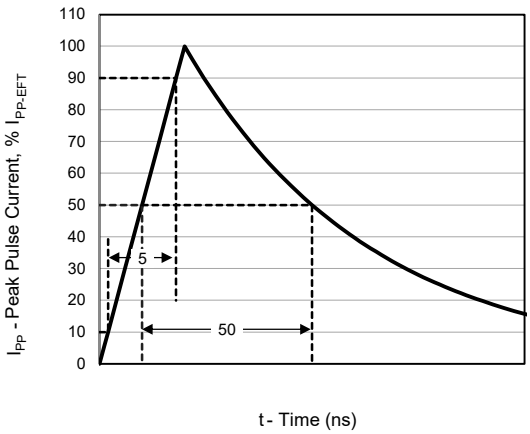
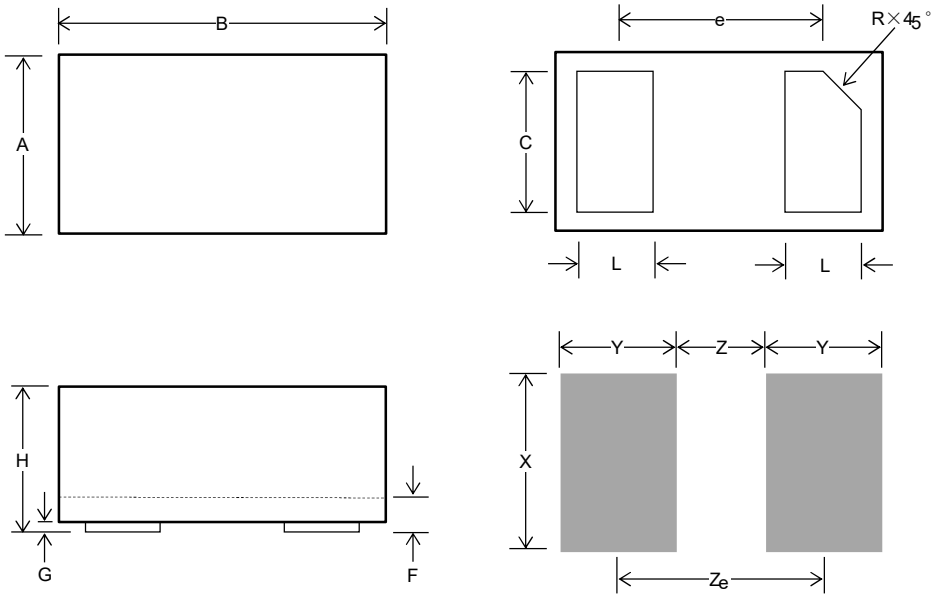


Fig.6 - 5/50ns EFT Waveform (IEC61000-4-4)



DFN1006 Package Outline Drawing



DFN1006			
SYMBOL	Millimeters		
	MIN	NOM	MAX
A	0.55	0.6	0.65
B	0.95	1	1.05
C	0.45	0.5	0.55
F	0.12	0.15	0.18
G	0	0.02	0.05
H	0.45	0.5	0.55
L	0.2	0.25	0.3
e		0.65	
X		0.6	
Y		0.5	
Z		0.3	
Ze		0.8	

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