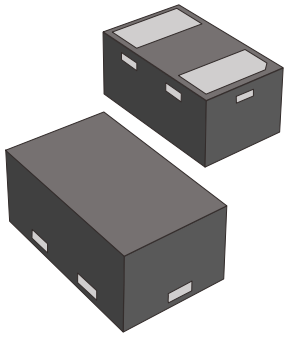
ULC0542CLV

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 (8/20μs)
- RoHS Compliant

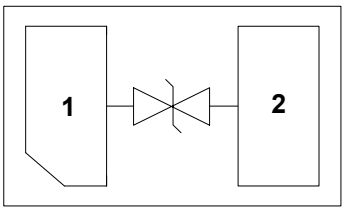
Dimensions DFN1006



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

Pin Configuration



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)

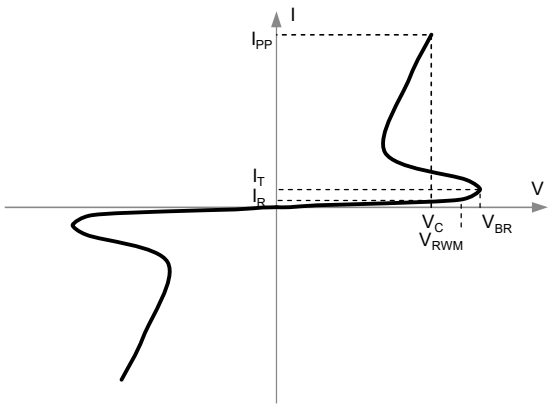
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	60	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000−4−2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

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

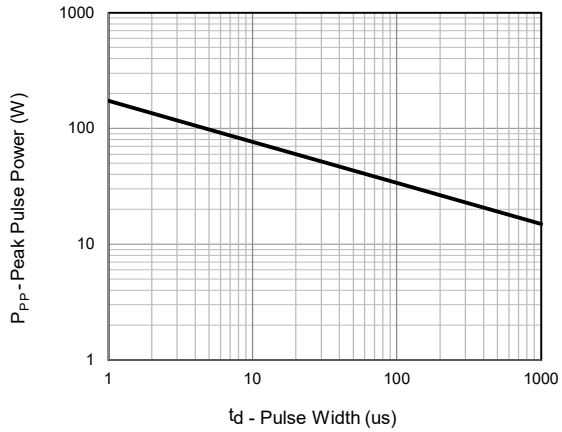


Fig.2 - Pulse Derating Curve

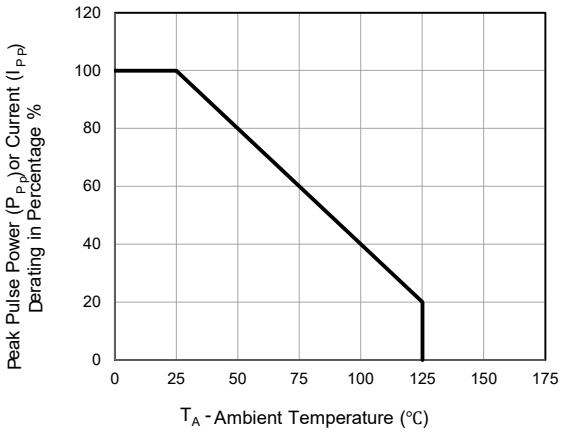


Fig.3 - 8/20us Pulse Waveform

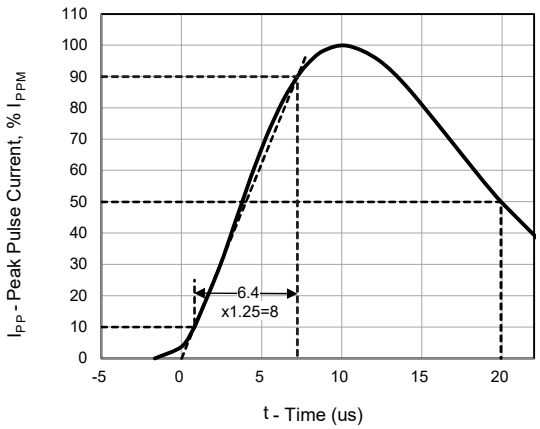


Fig.4 - Typical Clamping Voltage

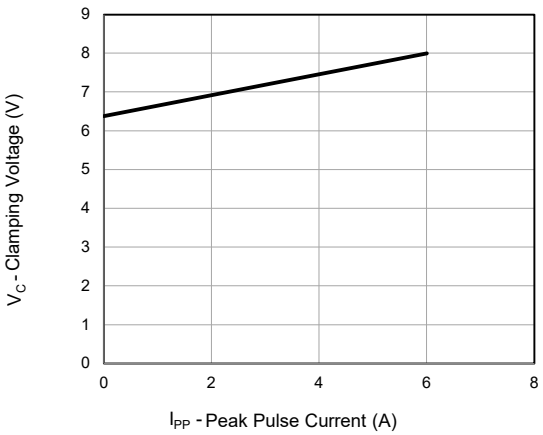


Fig.5 - ESD Pulse Waveform (IEC61000-4-2)

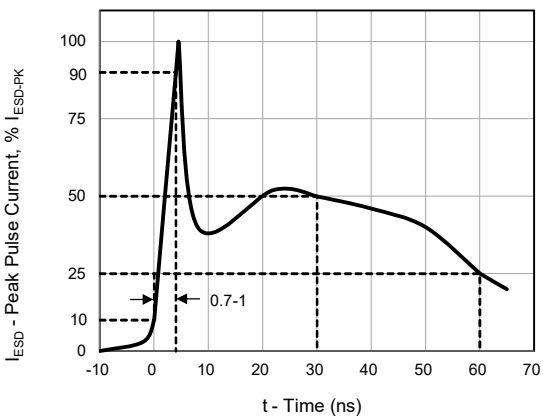
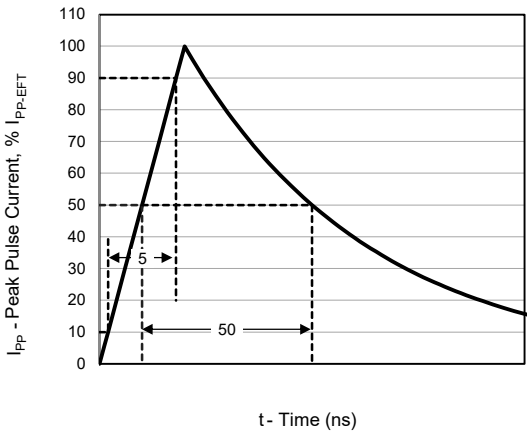
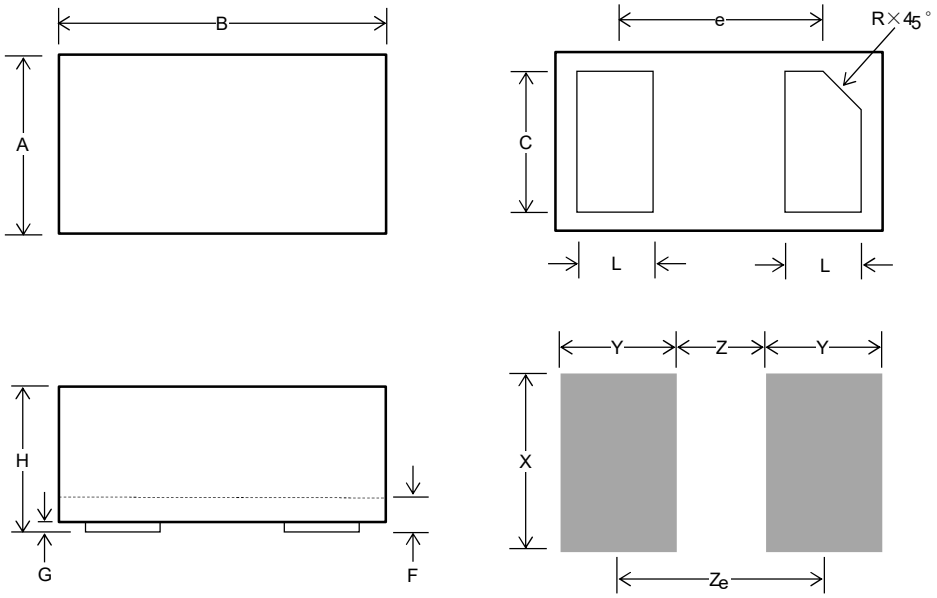


Fig.6 - 5/50ns EFT Waveform (IEC61000-4-4)



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	

NOTICE
Leiditech reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein. Leiditech does not assume any liability arising out of the application or use of any product described herein.

Shanghai Leiditech Electronic Technology Co., Ltd.
Email: sale1@leiditech.com
Tel : +86- 021 50828806
Fax : +86- 021 50477059