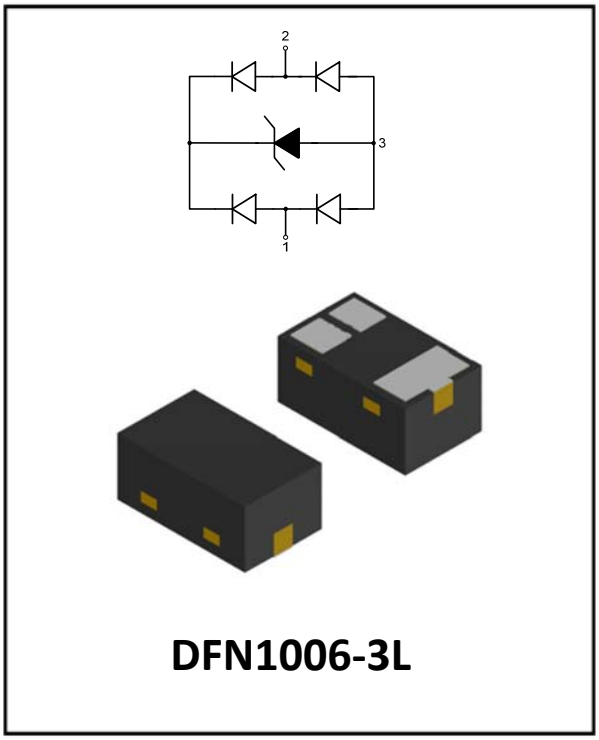
2-Lines, Uni-directional, Ultra-low Capacitance, Transient Voltage Suppressor



Features

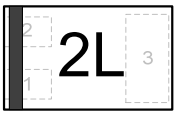
- Ultra small package
- Stand-off voltage: ±5V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±20kV (contact)
  IEC61000-4-5(surge): 3.5A (8/20μs)
- Ultra-low capacitance: C_J = 0.4pF typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

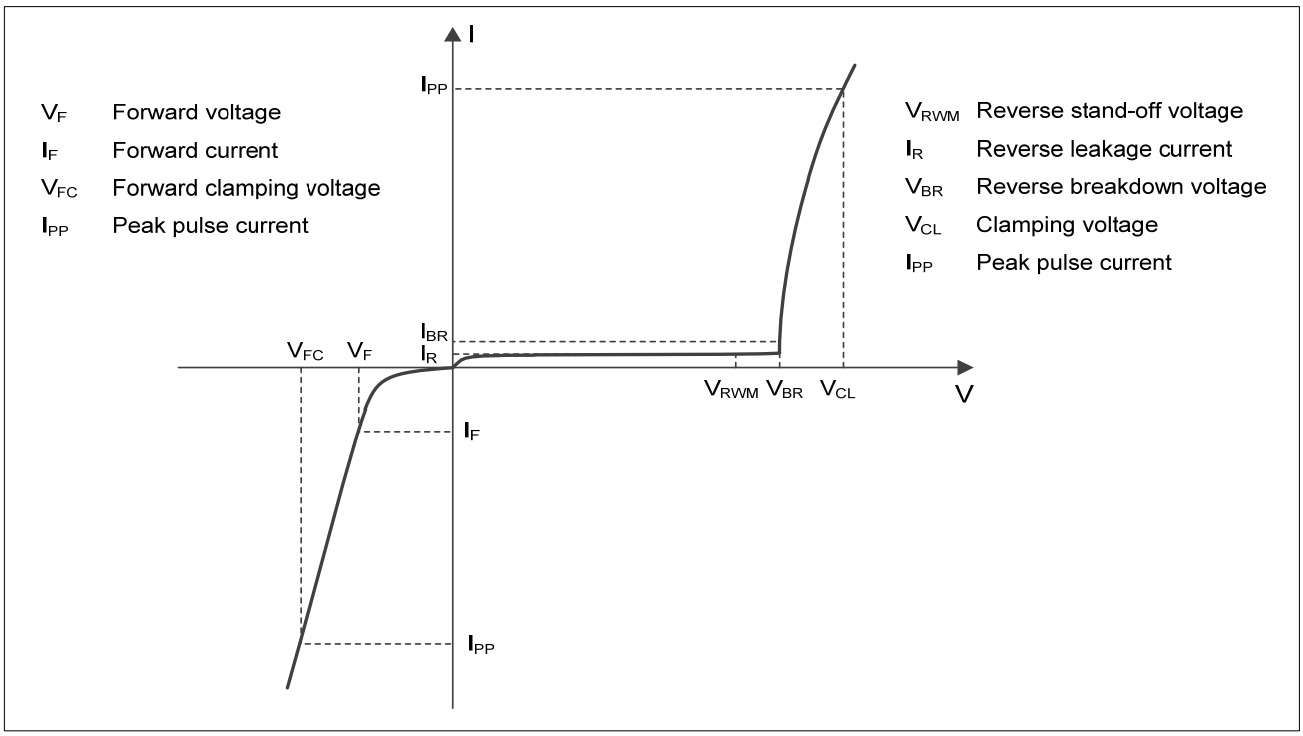
- USB 2.0 and USB 3.0
- HDMI 1.3, HDMI 1.4 and HDMI 2.0
- SATA and eSATA interface
- DVI
- IEEE 1394
- Portable Electronics and Notebooks
- Ethernet port: 10/100/1000 Mbs/s
- Desktop and Notebooks PCS

Mechanical Characteristics

- Package: DFN1006-3L
- Case Material: “Green” Molding Compound.
  - Moisture Sensitivity: Level 3 per J-STD-020
  - Marking Information: See Below



■Definitions of electrical characteristics



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

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	42	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	3.5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±20	KV
ESD according to IEC61000-4-2 contact discharge		±20	KV
Junction temperature	T_J	125	°C
Operating temperature	T_{OP}	-40~85	°C
Storage temperature	T_{STG}	-55~150	°C

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				5.0
Reverse leakage current	I_R	nA	V_{RWM} =5V			100
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	7.0	8.0	9.0
Forward voltage	V_F	V	I_F = 10mA	0.6	0.9	1.2
Clamping voltage [1)]	V_{CL}	V	I_{PP} = 16A, t_p = 100ns		14	
Dynamic resistance [1)]	R_{DYN}	Ω			0.33	
Clamping voltage [2)]	V_{CL}	V	V_{ESD} +8kV		14	
Clamping voltage [3)]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			10
		V	I_{PP} = 3.5A, t_p = 8/20μs			12
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		0.40	0.65
		pF	V_R = 2.5V, f = 1MHz		0.25	0.40

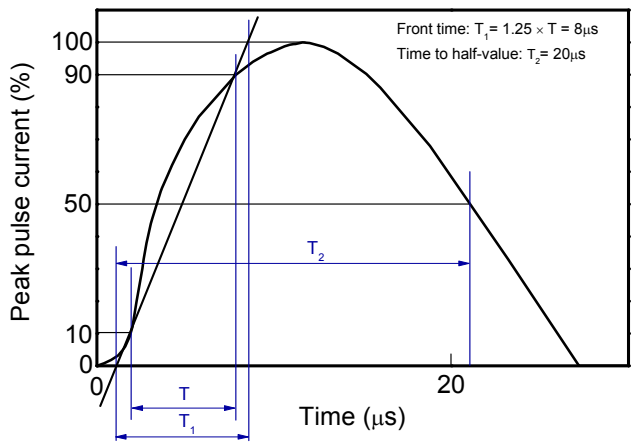
(1). TLP parameter: Z_0 = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.
(2). Contact discharge mode, according to IEC61000-4-2.
(3). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

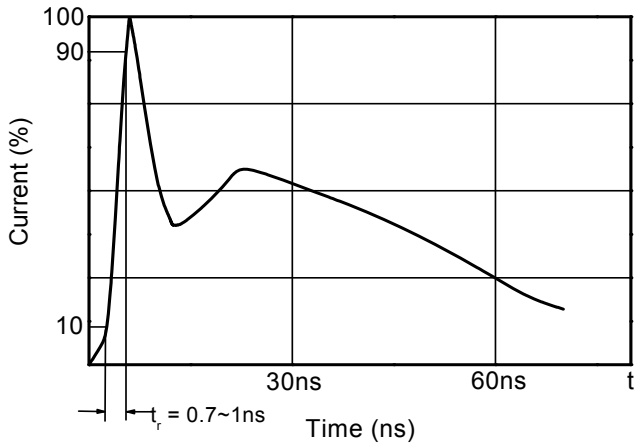
PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSLC5V0LT	Approximate 0.9	10000	100000	400000	Tape & reel

■ Typical Performance Characteristics (Ta=25℃ unless otherwise Specified)

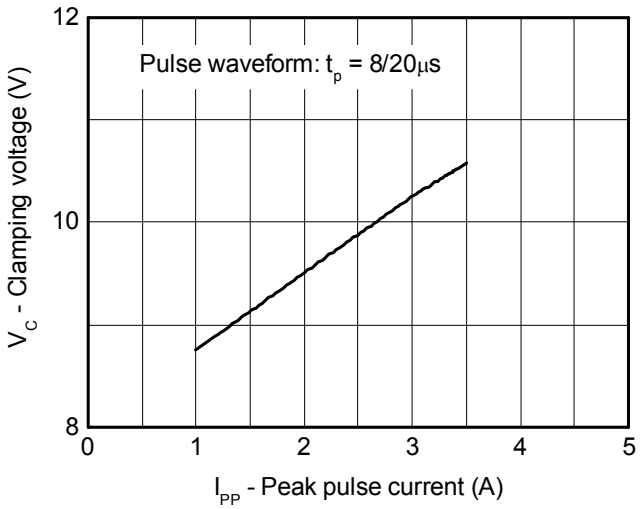
8/20μs waveform per IEC61000-4-5



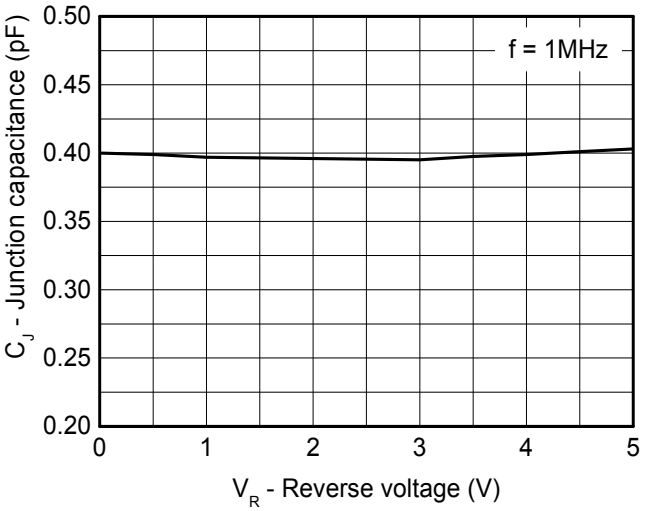
Contact discharge current waveform per IEC61000-4-2



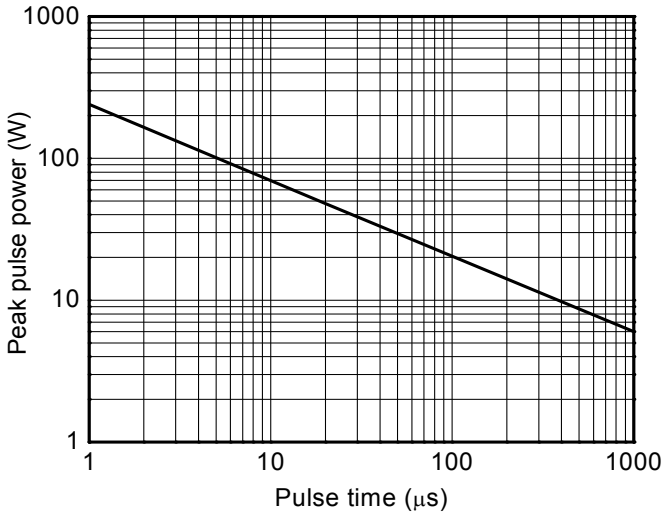
lamping voltage vs. Peak pulse current



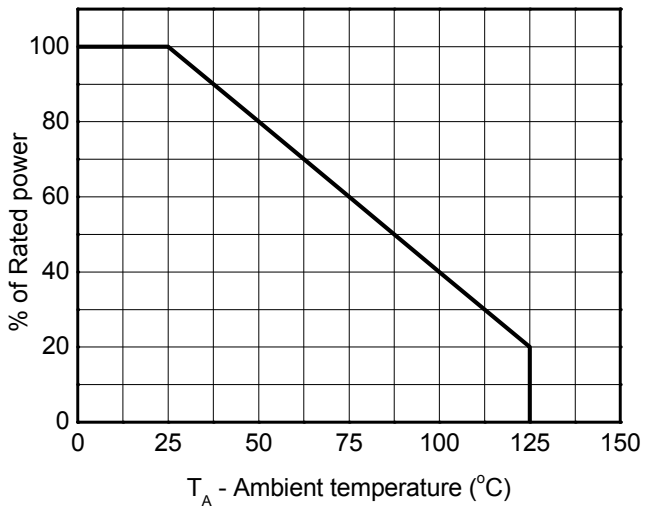
Capacitance vs. Reverse voltage



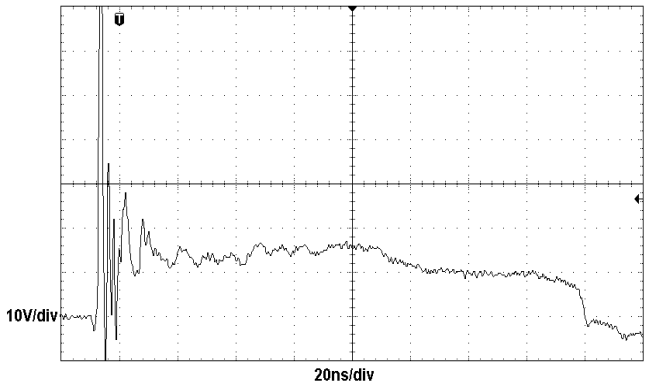
Non-repetitive peak pulse power vs. Pulse time



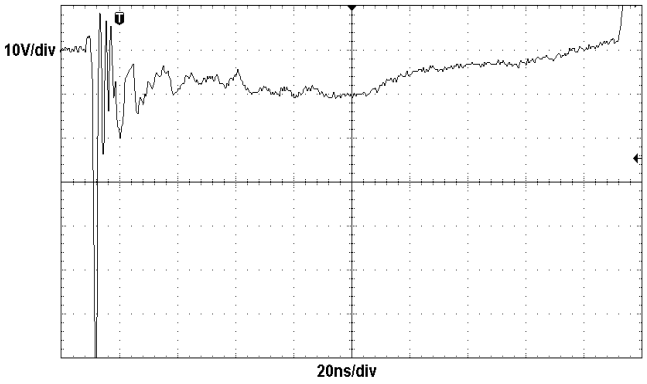
Power derating vs. Ambient temperature



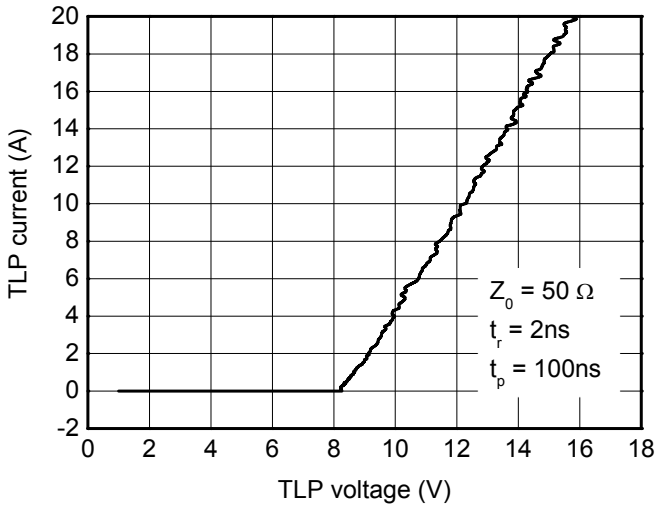
ESD clamping
(+8kV contact discharge per IEC61000-4-2)



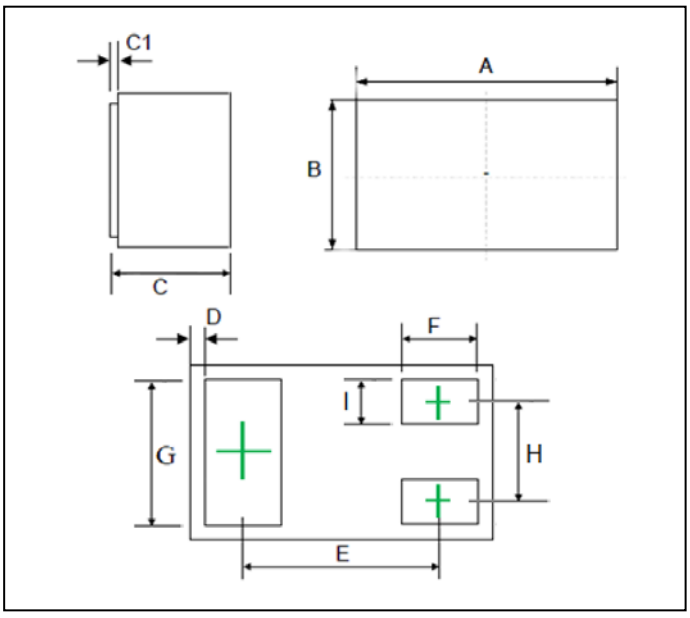
ESD clamping
(-8kV contact discharge per IEC61000-4-2)



TLP Measurement

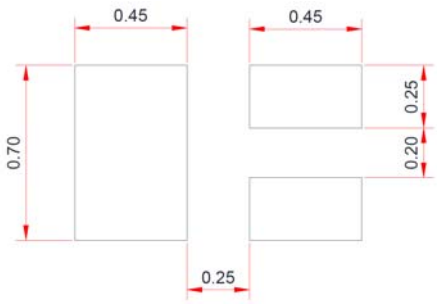


■ Outline Dimensions



Symbol	min. (mm)	Max. (mm)
A	0.95	1.05
B	0.55	0.65
C	0.40	0.55
C1		0.05
D	0.01	0.08
E	0.675 BSC	
F	0.20	0.40
G	0.40	0.60
H	0.35 BSC	
I	0.10	0.20

■ Recommend land pattern (Unit:mm)



Notes:
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met

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