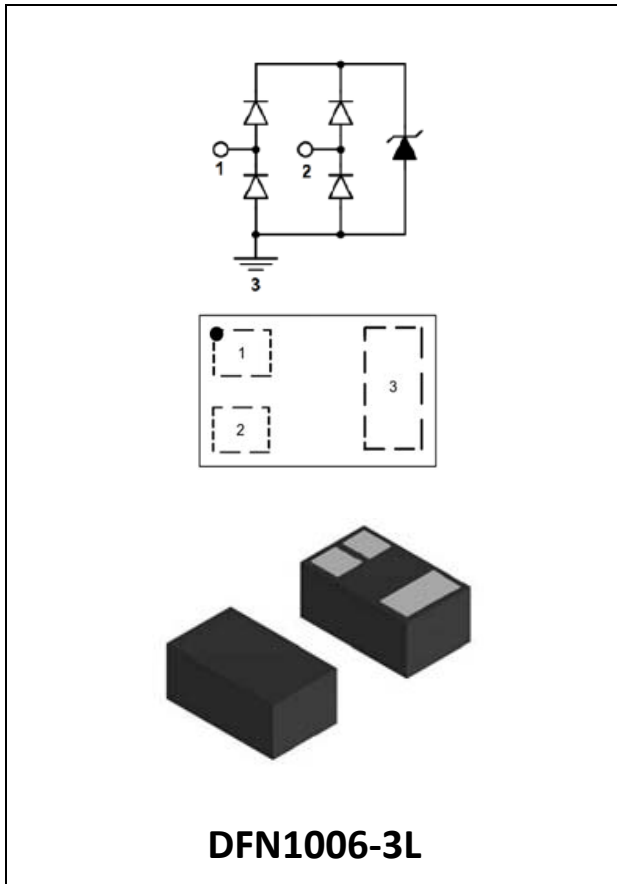


1- Line, Uni-directional, Transient Voltage Suppressor



Features

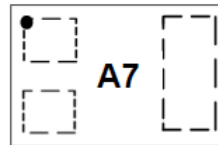
- Stand-off voltage: 5V Max
- Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
IEC61000-4-5(surge): 13A (8/20 μs)
- Low leakage current
- Ultra-low capacitance: $C_J = 0.65\text{pF}$ typ
- Low clamping voltage
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Display Ports
- MDDI / MHL
- USB 2.0 / USB 3.0
- Digital Visual Interface (DVI)
- PCI Express and Serial SATA Ports

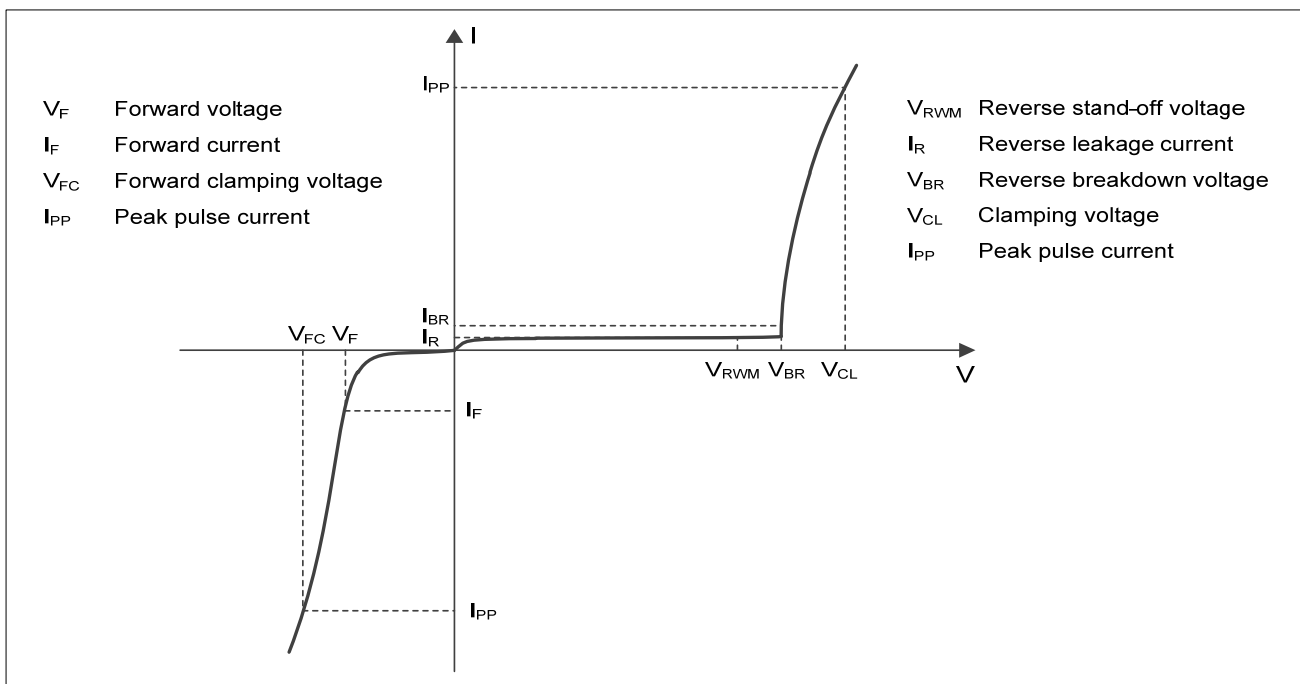
Mechanical Data

- Package: DFN1006-3L;
- Case Material: "Green" Molding Compound
- Marking Information: See Below



A7 = Device Marking Code

■ Definitions of electrical characteristics





ESDSL0502LT

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	65	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	13	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
Junction temperature	T_J	-55~125	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

■Electrical Characteristics ($T_a=25^{\circ}C$ Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				5
Reverse leakage current	I_R	μA	$V_{RWM} = 5V,$			0.2
Reverse breakdown voltage	$V_{(BR)}$	V	$I_T = 1mA,$	6		
Clamping voltage	V_{CL}	V	$I_{PP} = 13A, t_p = 8/20\mu s$			5
Junction capacitance	CJ	μF	$V_{pin3}=0V, V_R = 1.5V, f = 1MHz, \text{ any I/O pin to ground}$		0.65	1
		μF	$V_{pin3}=0V, V_R = 1.5V, f = 1MHz, \text{ between I/O pins}$		0.2	0.5

Notes:

- (1). TLP parameter: $Z_0 = 50\Omega, t_p = 100ns, t_r = 2ns,$ averaging window from 60ns to 80ns. RDYN 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

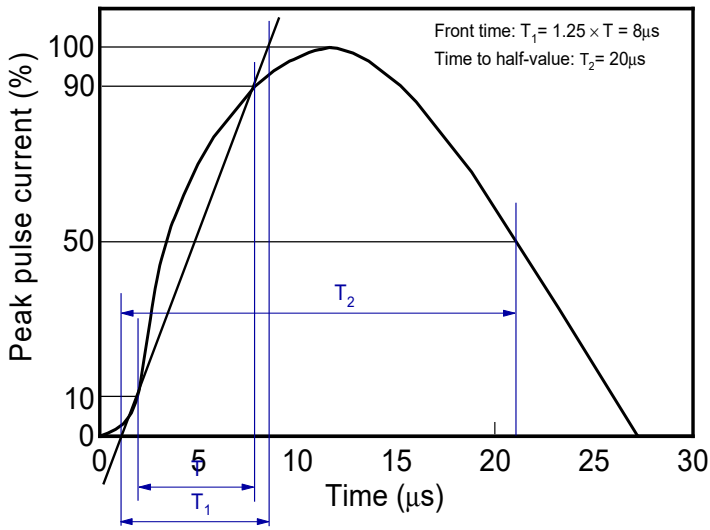
■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSL0502LT	F1	Approximate 0.9	10000	100000	400000	7 reel

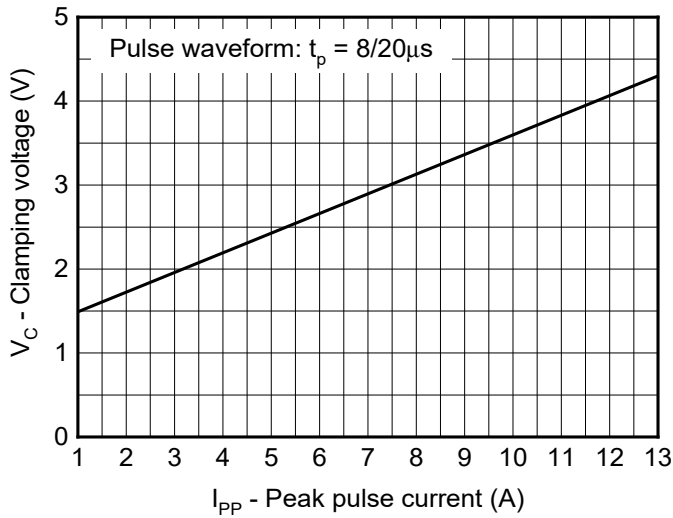


■ Characteristics (Typical)

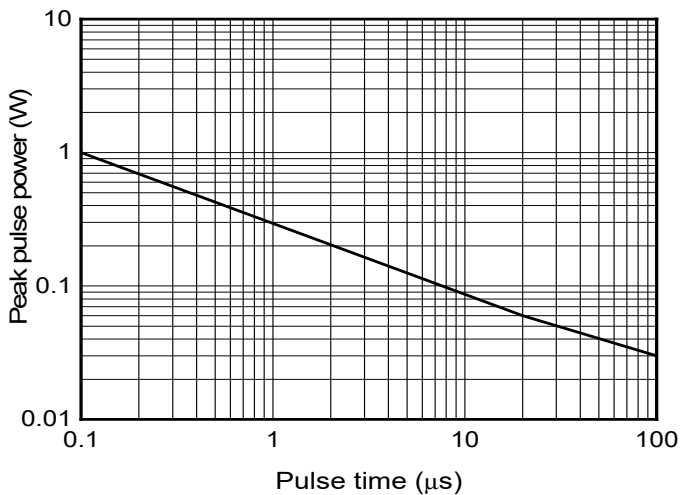
8/20 μ s waveform per IEC61000-4-5



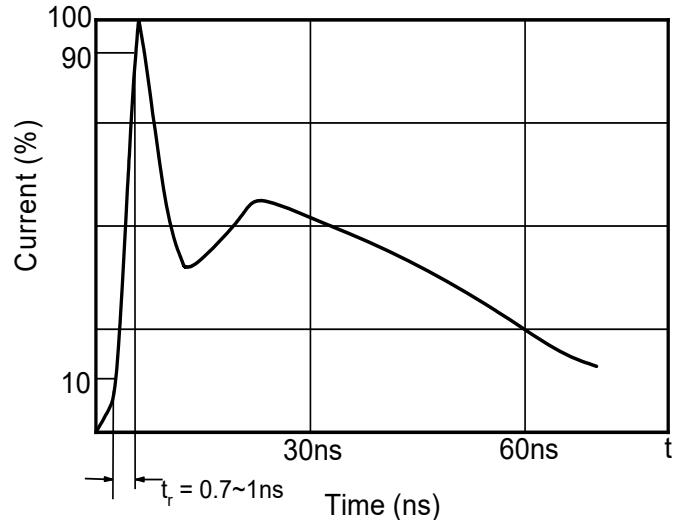
Clamping voltage vs. Peak pulse current



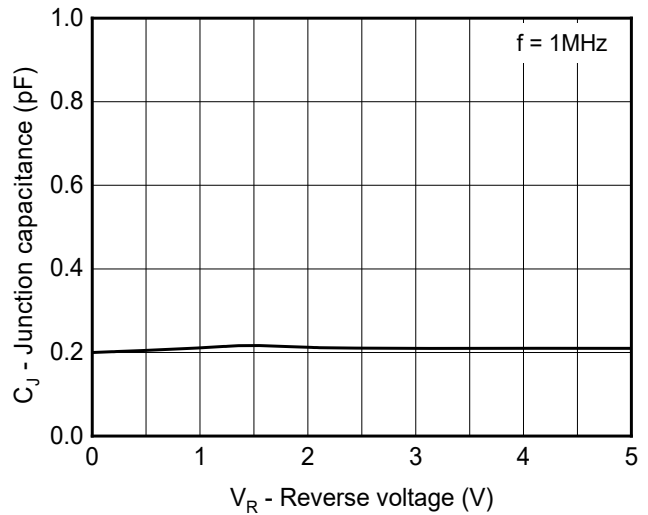
Non-repetitive peak pulse power vs. Pulse time



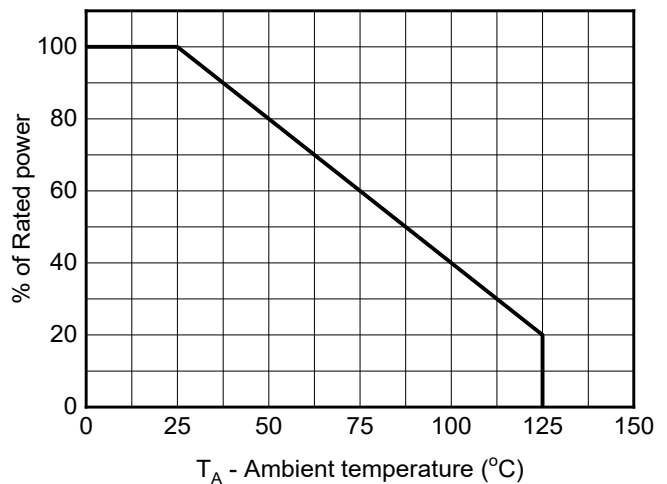
Contact discharge current waveform per IEC61000-4-2



Capacitance vs. Reverse voltage



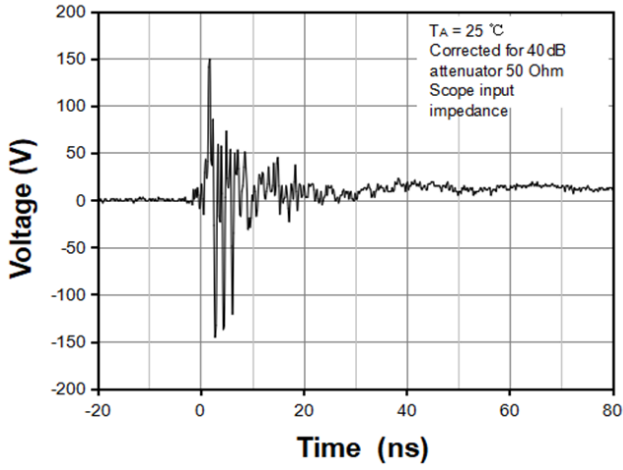
Power derating vs. Ambient temperature



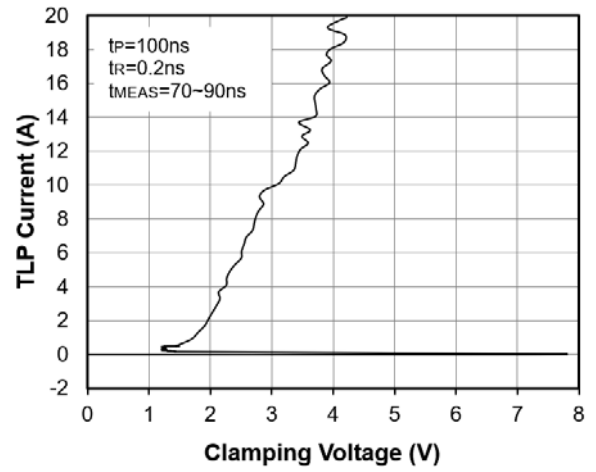


ESDSL0502LT

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

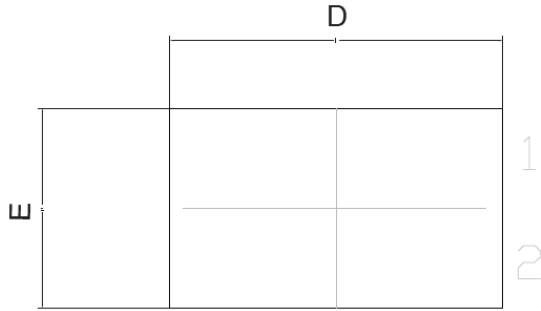


TLP Measurement

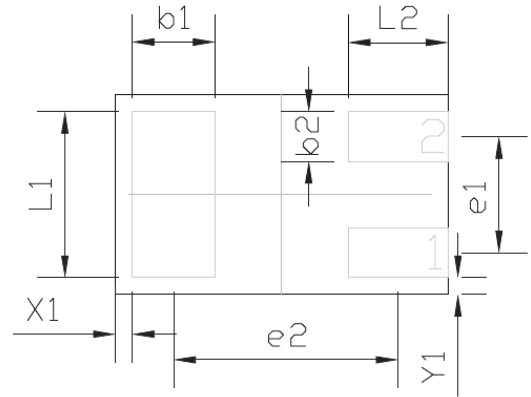




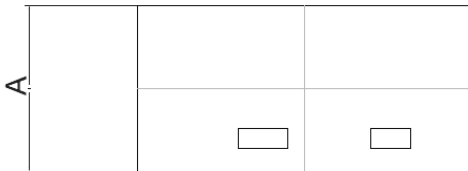
■ Outline Dimensions



TOP VIEW



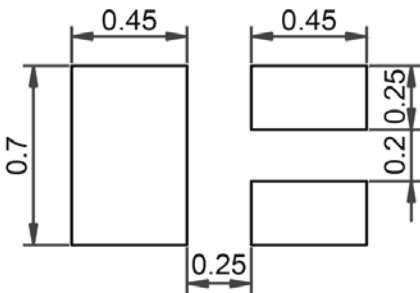
BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (MM)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX
A	0.45	0.50	0.55
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b1	0.20	0.25	0.30
b2	0.10	0.15	0.20
L1	0.45	0.50	0.55
L2	0.25	0.30	0.35
e1	0.350 BSC		
e2	0.675 BSC		
X1	0.225		0.225

■ Soldering Footprint



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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