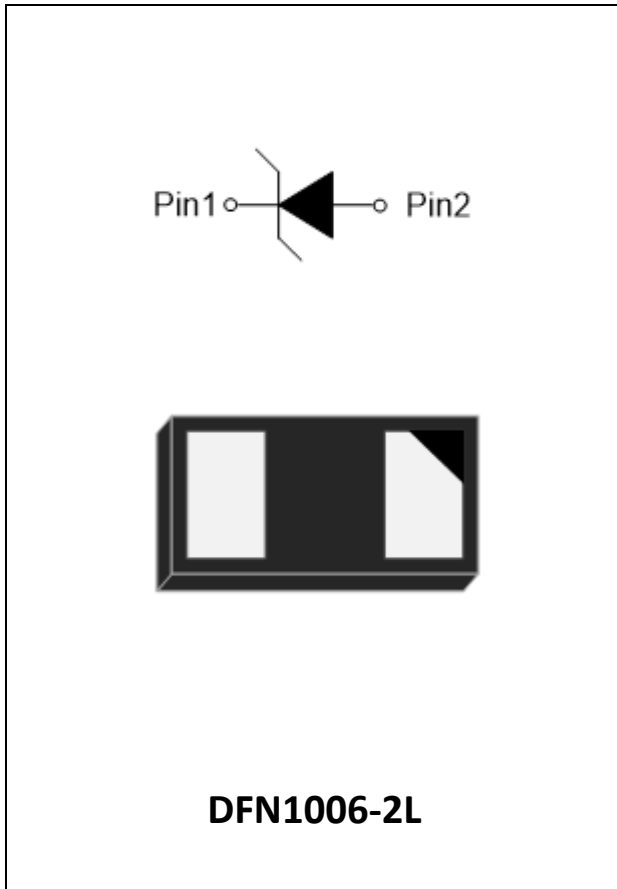


1- Line, Uni-directional, Transient Voltage Suppressor



Features

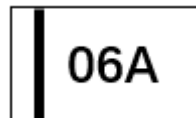
- Stand-off voltage: 6.3V Max
- Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
IEC61000-4-5(surge): 30A (8/20 μs)
- Low leakage current
- Ultra-low capacitance: $C_J = 220\text{pF}$ typ
- Low clamping voltage
 $V_{CL} = 8.2\text{V}$ typ. @ $I_{PP} = 16\text{A}$ (TLP)
- RoHS Compliant

Applications

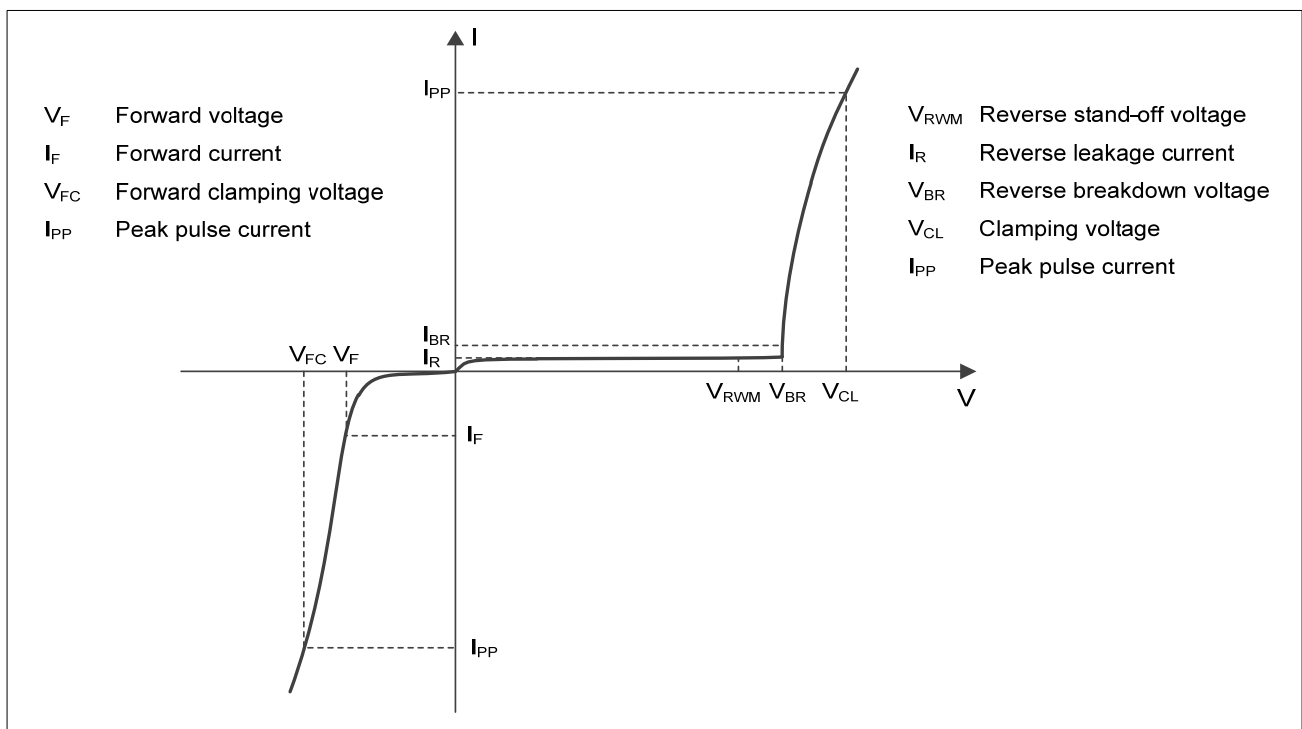
- Power supply protection
- Power management

Mechanical Data

- Package: DFN1006-2L
- Case Material: "Green" Molding Compound
- Marking Information: See Below



■ Definitions of electrical characteristics





ESD6V3LA2

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	450	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	30	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 8	
Junction temperature	T_J	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				6.3
Reverse leakage current	I_R	μA	$V_{RWM} = 6.3V$,			1
Reverse breakdown voltage	$V_{(BR)}$	V	$I_T = 1mA$,	6.6		9
Clamping voltage	V_{CL}	V	$I_{PP} = 1A$, $t_p = 8/20\mu s$			11
		V	$I_{PP} = 30A$, $t_p = 8/20\mu s$			15
Junction capacitance	CJ	pF	$V_R = 0V$, $f = 1MHz$		220	

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)

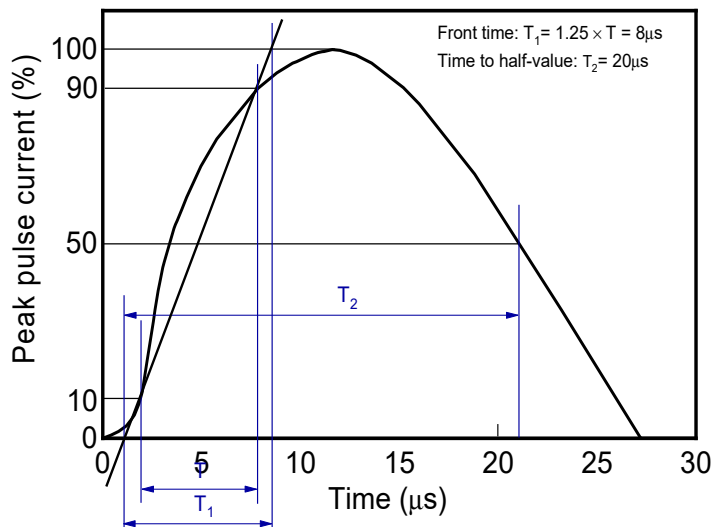
PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD6V3LA2	F1	Approximate 0.9	10000	100000	400000	7 reel



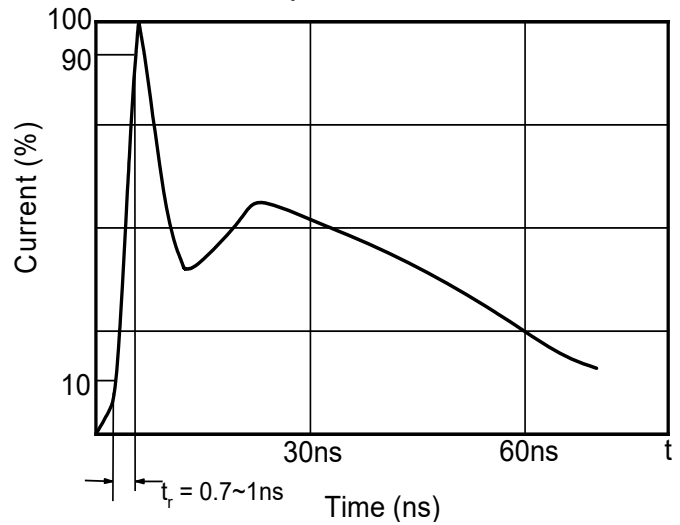
ESD6V3LA2

■ Characteristics (Typical)

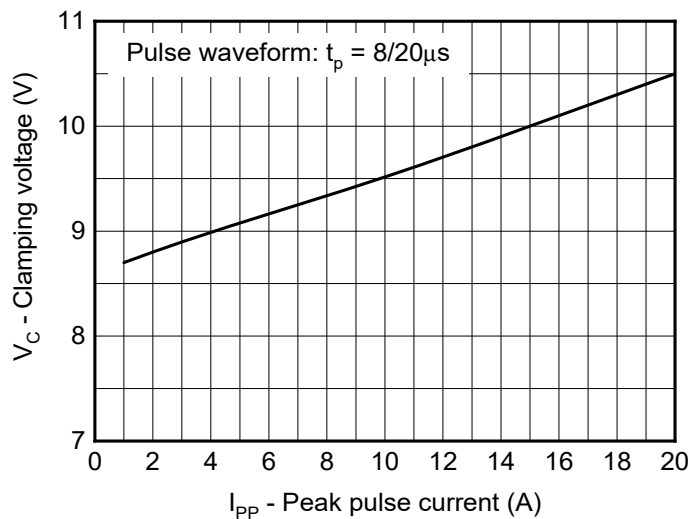
8/20 μ s waveform per IEC61000-4-5



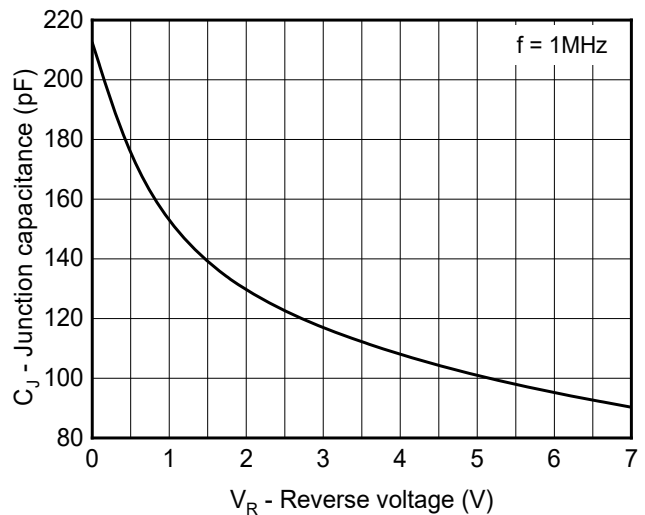
Contact discharge current waveform per IEC61000-4-2



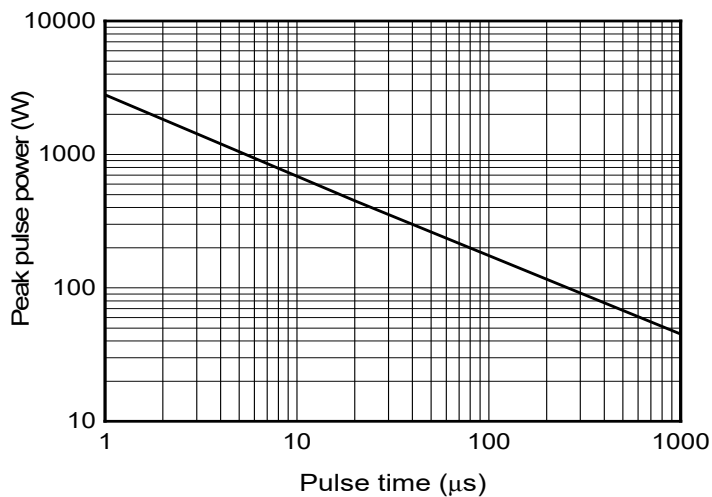
Clamping voltage vs. Peak pulse current



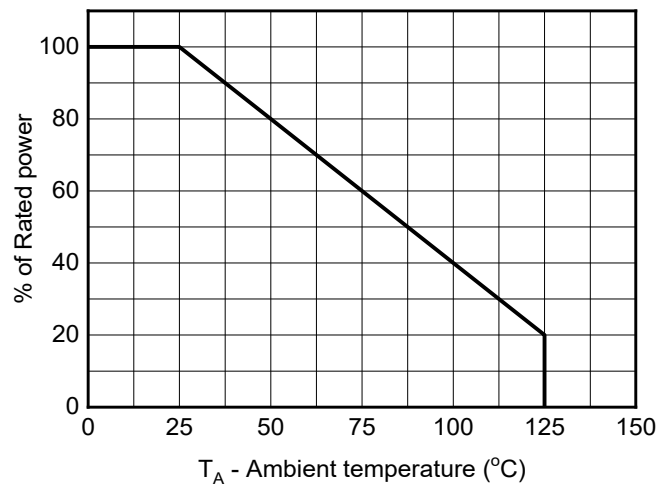
Capacitance vs. Reverse voltage



Non-repetitive peak pulse power vs. Pulse time



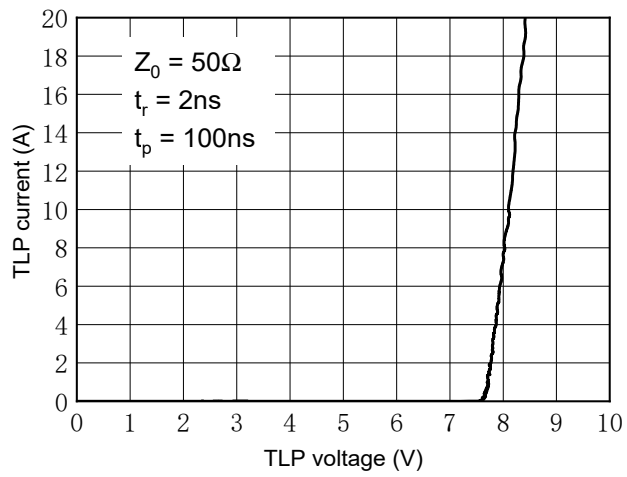
Power derating vs. Ambient temperature





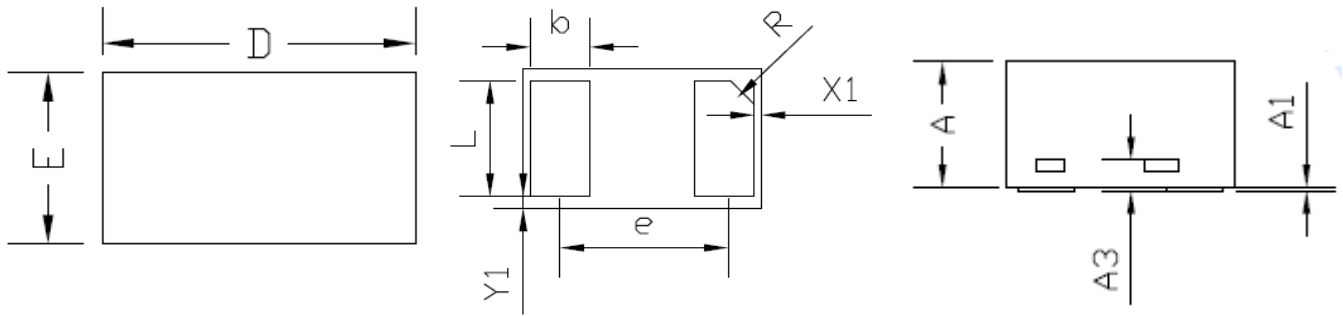
ESD6V3LA2

TLP Measurement



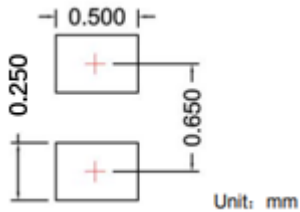


■ Outline Dimensions



COMMON DIMENSION (MM)			
PKG	DFN1006-2L		
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
b	0.20	0.25	0.30
L	0.45	0.50	0.55
e	0.650		
R	0.07	0.10	0.13
X1	0.025	---	0.065
Y1	0.025	---	0.065
A1	0	---	0.015
A3	0.119	---	0.15

■ Soldering Footprint



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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