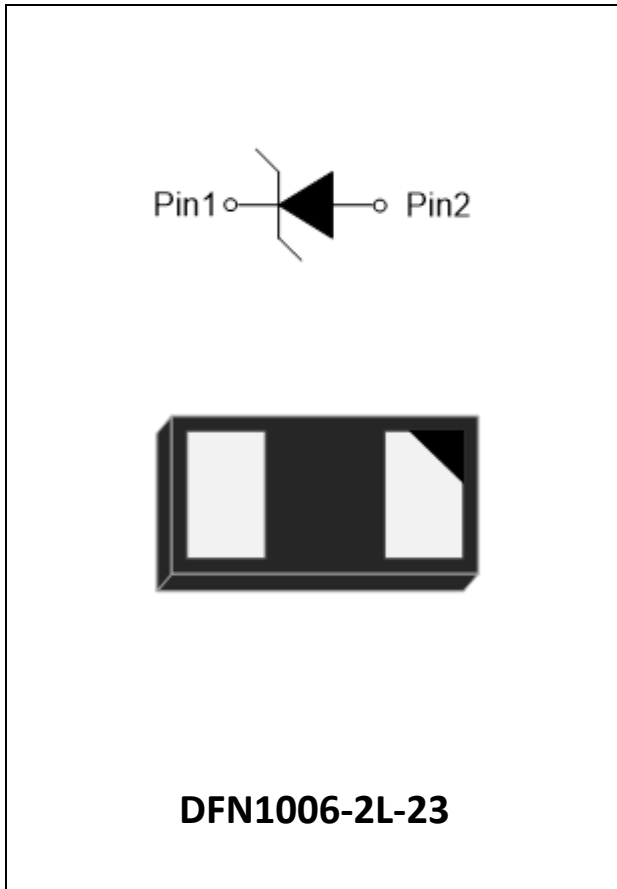


## 1- Line, Uni-directional, Transient Voltage Suppressor



### Features

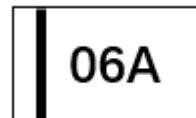
- Stand-off voltage: 6.3V Max
- Transient protection for each line according to  
IEC61000-4-2(ESD):  $\pm 30\text{kV}$  (contact)  
IEC61000-4-5(surge): 30A (8/20 $\mu\text{s}$ )
- Low leakage current
- Ultra-low capacitance:  $C_J = 220\text{pF}$  typ
- Low clamping voltage  
 $V_{CL} = 8.2\text{V}$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

### Applications

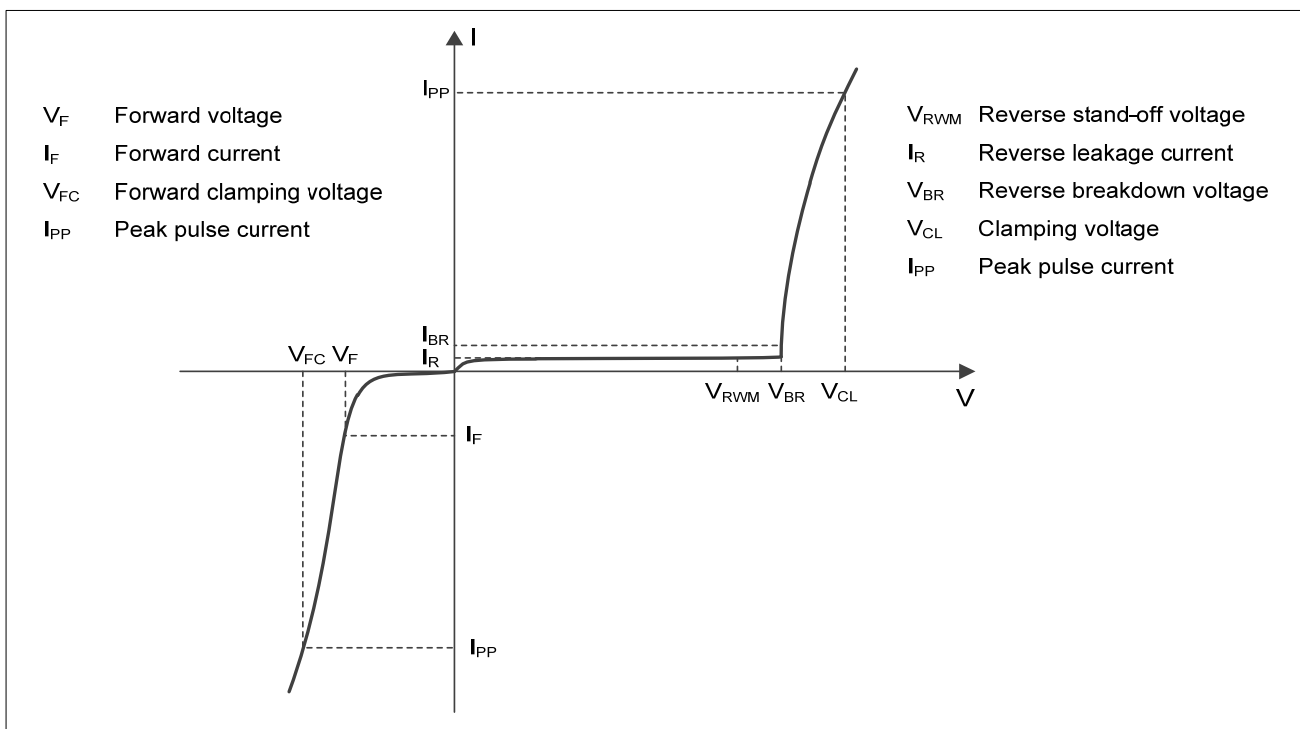
- Power supply protection
- Power management

### 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	$V_{ESD}$	$\pm 30$	KV
ESD according to IEC61000-4-2 contact discharge		$\pm 8$	
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	$I_R$	$\mu A$	$V_{RWM} = 6.3V,$			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)

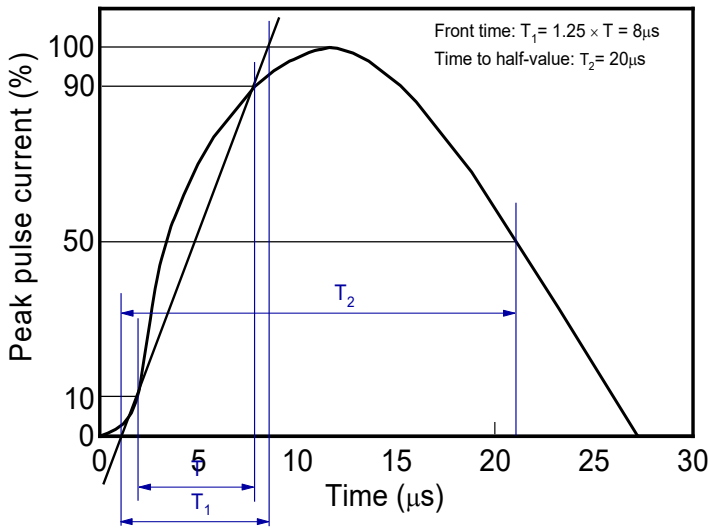
PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD6V3LA2	F1	Approximate 0.9	10000	100000	400000	7 reel



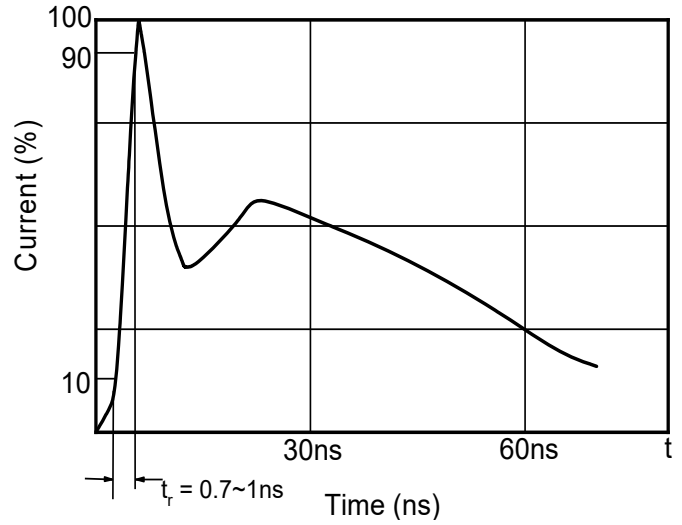
# ESD6V3LA2

## ■ Characteristics (Typical)

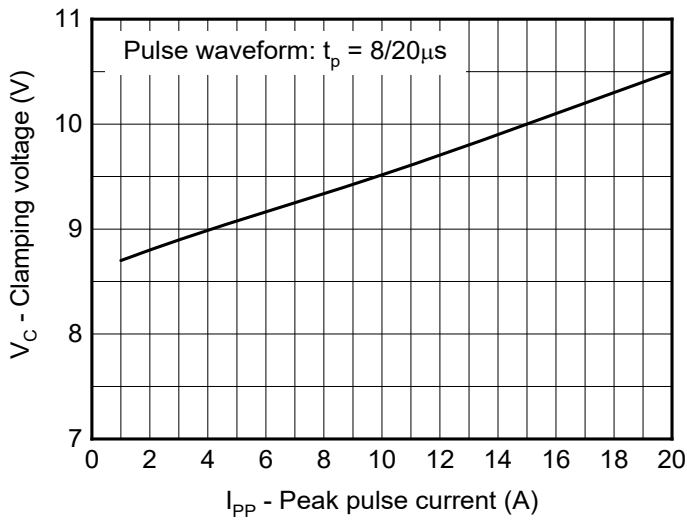
8/20 $\mu$ s waveform per IEC61000-4-5



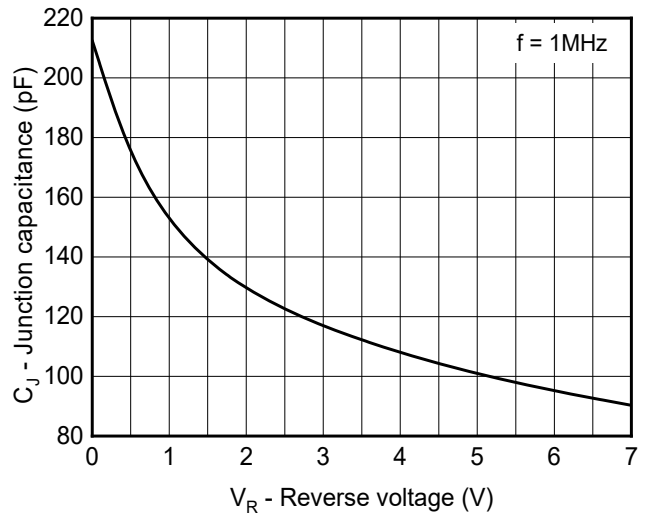
Contact discharge current waveform per IEC61000-4-2



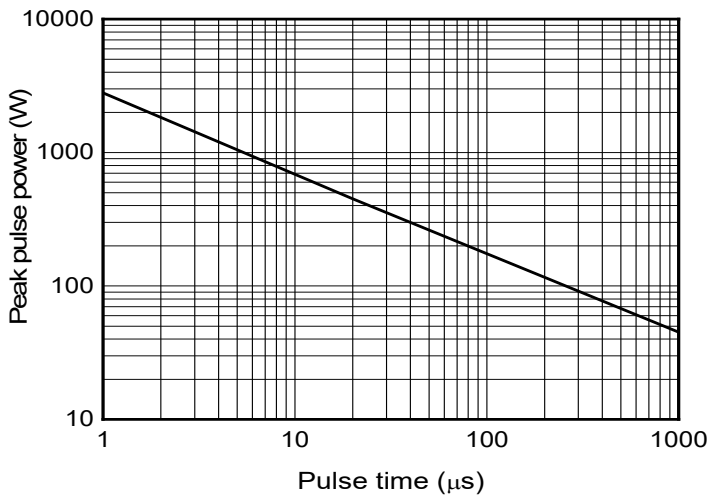
Clamping voltage vs. Peak pulse current



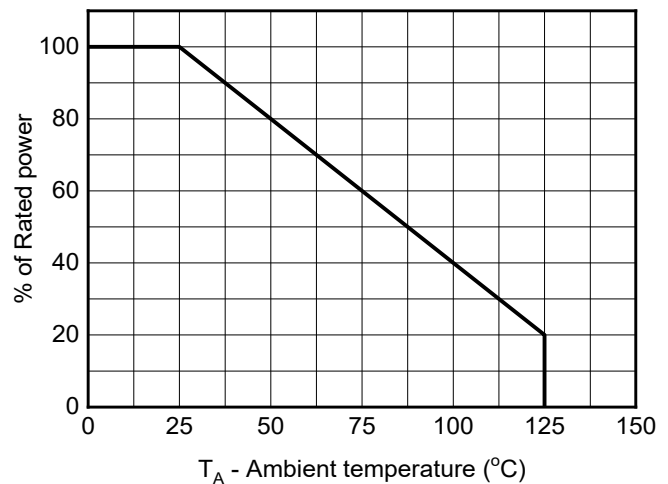
Capacitance vs. Reverse voltage



Non-repetitive peak pulse power vs. Pulse time



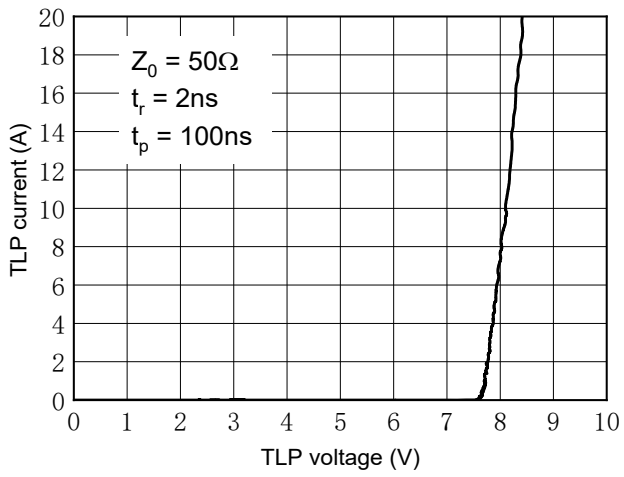
Power derating vs. Ambient temperature





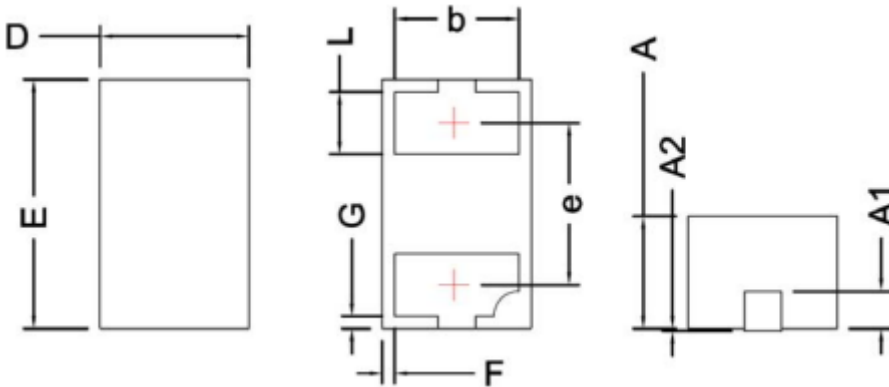
# ESD6V3LA2

TLP Measurement



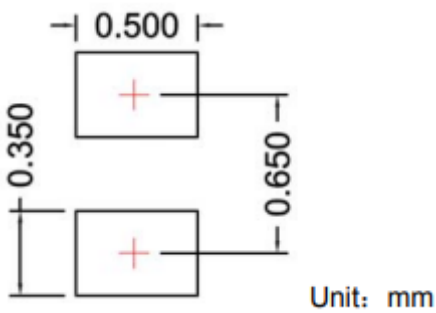


## ■ Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	0.50	0.60	0.70
E	0.90	1.00	1.10
A	0.35	0.45	0.55
A1	0.15 BSC		
A2			0.10
F	0.005		
G	0.005		
L	0.15	0.25	0.35
b	0.41	0.50	0.59
e	0.65 BSC		

## ■ 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



## ESD6V3LA2

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