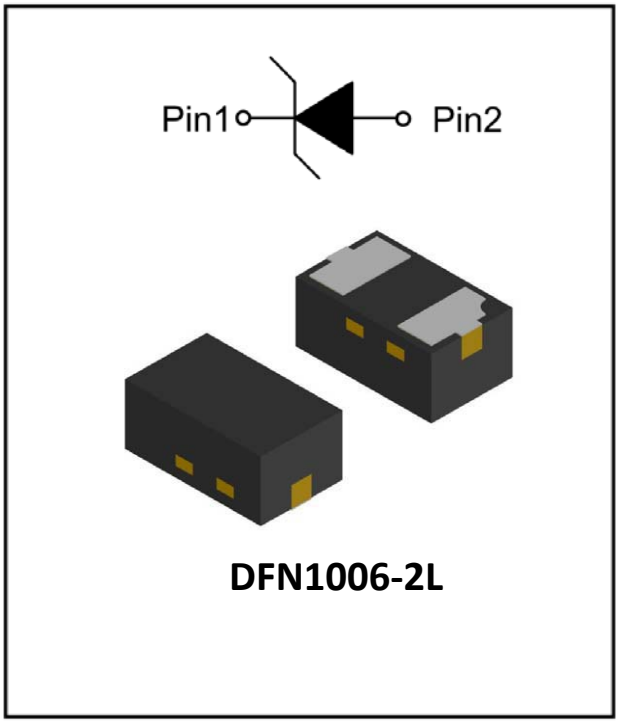
# 1- Line, Uni-directional, Transient Voltage Suppressor




## Features

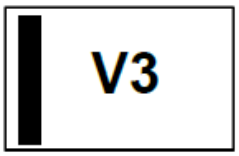
- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 10A (8/20μs)
- Low leakage current:
- Ultra low clamping voltage
- RoHS Compliant

## Applications

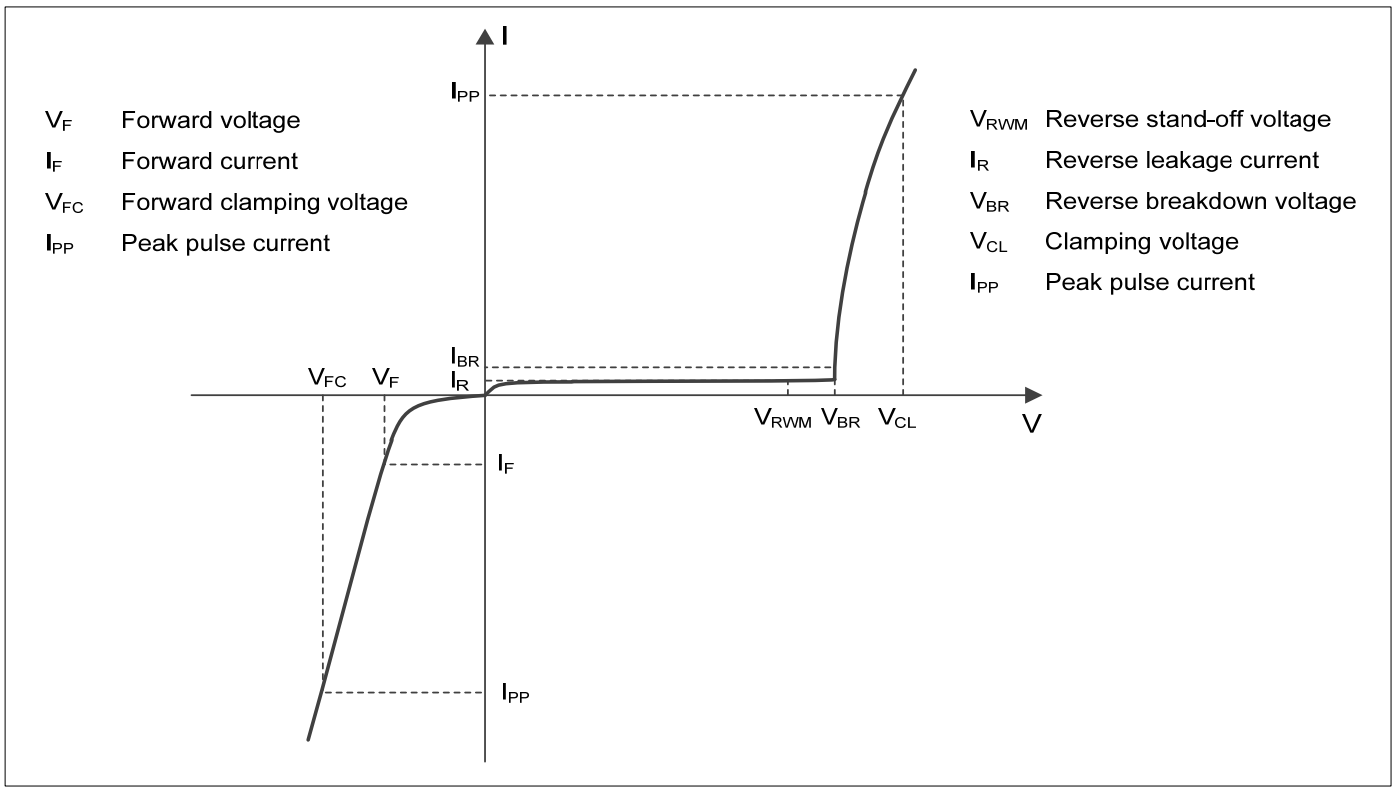
- Cellular Handsets and Accessories
- Display Ports
- MDDI Ports
- USB Ports
- Digital Visual Interface (DVI)
- PCI Express and Serial SATA Ports

## Mechanical Data

- Package: DFN1006-2L
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below




## ■Definitions of electrical characteristics



## ■Maximum Ratings

| PARAMETER | SYMBOL | LIMITS | UNIT |
|---|---|---|---|
| Peak pulse power ($t_p$ = 8/20μs) | $P_{pk}$ | 130 | W |
| Peak pulse current ($t_p$ = 8/20μs) | $I_{PP}$ | 10 | A |
| ESD according to IEC61000-4-2 air discharge | $V_{ESD}$ | ±30 | KV |
| ESD according to IEC61000-4-2 contact discharge | | ±30 | |
| Junction temperature | $T_J$ | 125 | °C |
| Operating temperature | $T_{OP}$ | -40~85 | °C |
| Storage temperature | $T_{STG}$ | -55~150 | °C |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | Symbol | UNIT | Conditions | Min | Typ | Max |
|---|---|---|---|---|---|---|
| Reverse maximum working voltage | $V_{RWM}$ | V | | | | 3.3 |
| Reverse leakage current | $I_R$ | μA | $V_{RWM}$ = 3.3V | | | 1 |
| Forward voltage | $V_F$ | V | $I_T$ = 10mA | | | 1.2 |
| Reverse breakdown voltage | $V_{BR}$ | V | $I_{BR}$ = 1mA | 5 | | 7.5 |
| Clamping voltage [2] | $V_{CL}$ | V | $I_{PP}$ = 1A, $t_p$ = 8/20μs | | | 8 |
| | | V | $I_{PP}$ = 5A, $t_p$ = 8/20μs | | 8.5 | |
| | | V | $I_{PP}$ = 10A, $t_p$ = 8/20μs | | 10 | 13 |
| Junction capacitance | $C_J$ | pF | $V_R$ = 0V, f = 1MHz | | 0.75 | 1 |

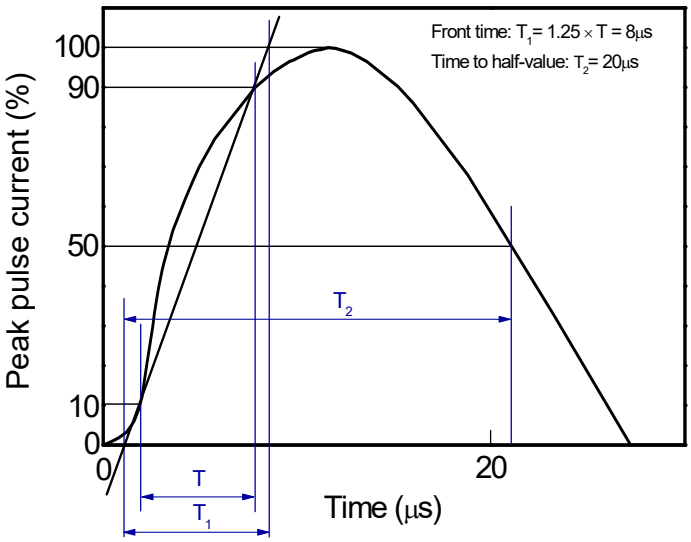
Notes:
(1). TLP parameter: $Z_0$ = 50Ω, $t_p$ = 100ns, $t_r$ = 2ns, averaging window from 60ns to 80ns. $R_{DYN}$ is calculated from 4A to 16A.
(2). Non-repetitive current pulse, according to IEC61000-4-5.

## ■Ordering Information (Example)

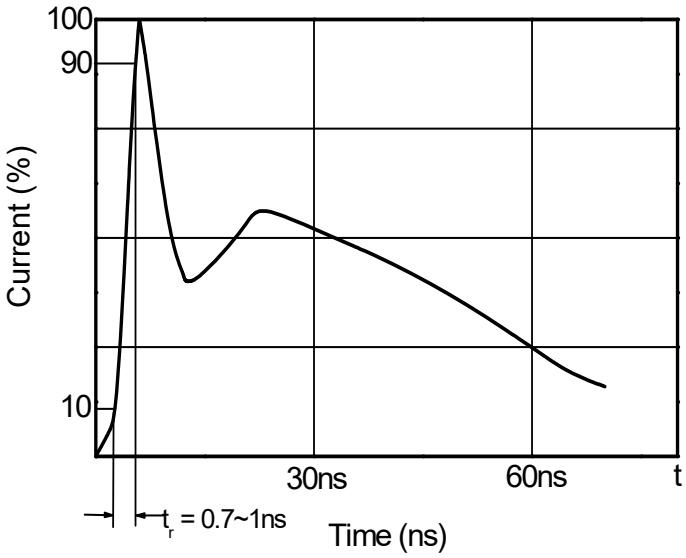
| PREFERED P/N | PACKING CODE | UNIT WEIGHT(mg) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|---|
| ESDSLC3V3LA | F3 | Approximate 0.9 | 10000 | 40000 | 400000 | 7” reel |

## ■ Characteristics (Typical)

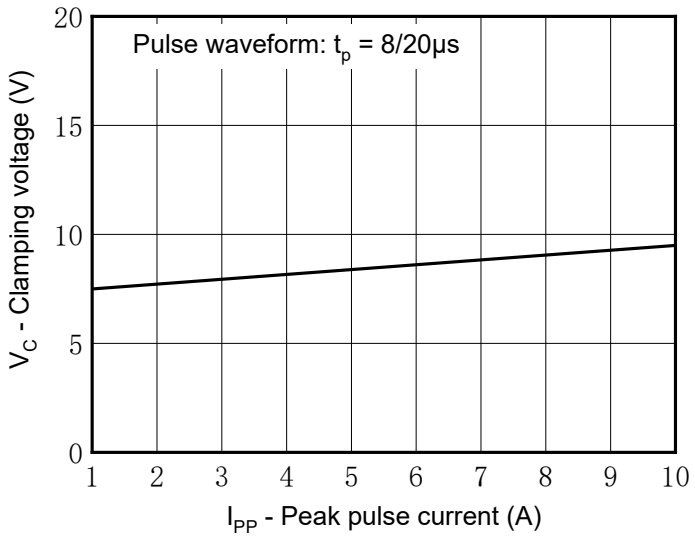
**8/20μs waveform per IEC61000-4-5**



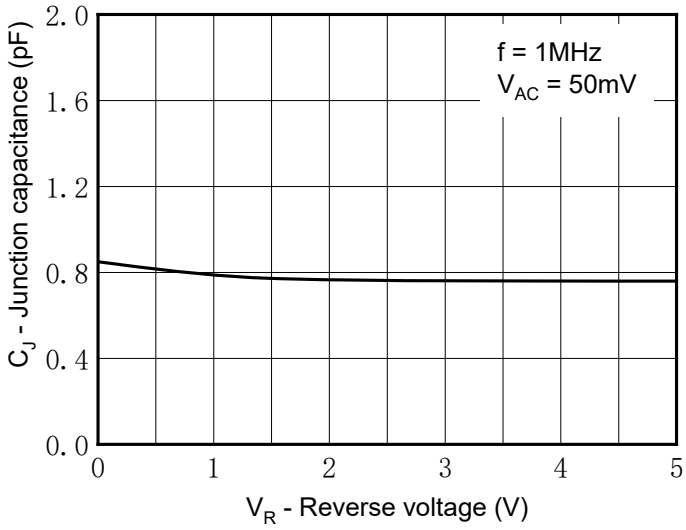

**Contact discharge current waveform per IEC61000-4-2**



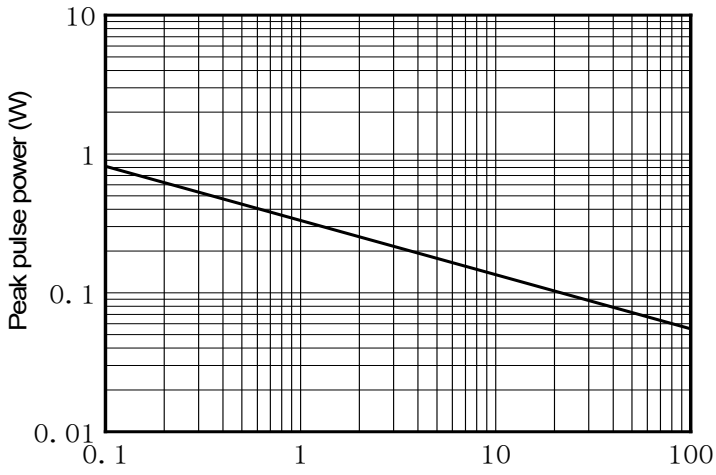

**Clamping voltage vs. Peak pulse current**



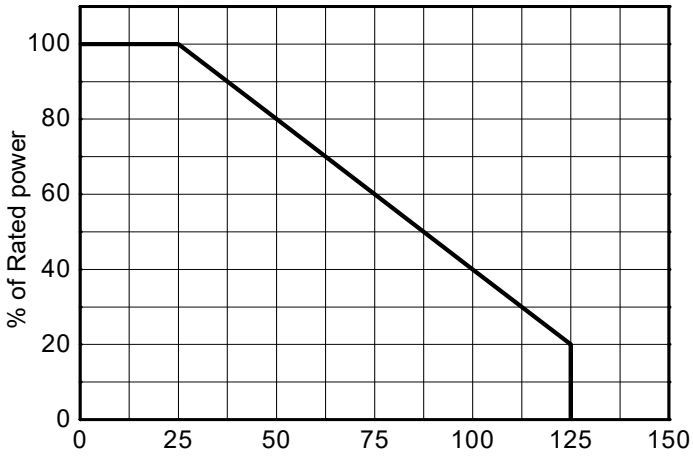

**Capacitance vs. Reverse voltage**



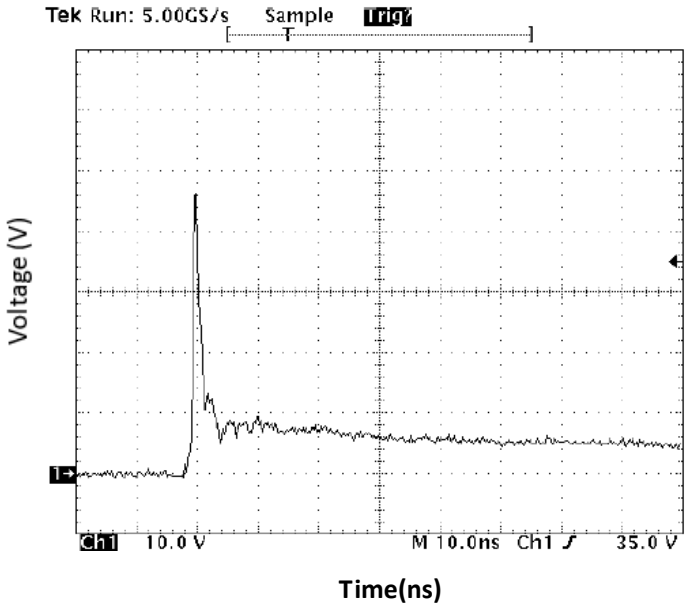

**Non-repetitive peak pulse power vs. Pulse time**



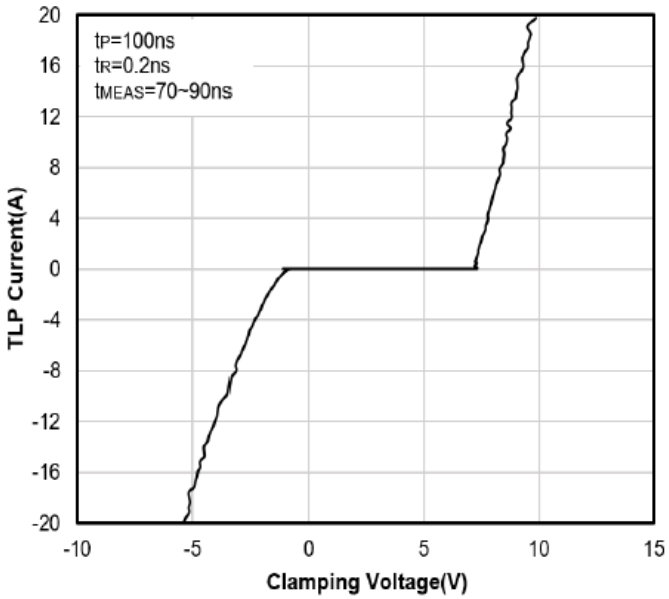

**Power derating vs. Ambient temperature**



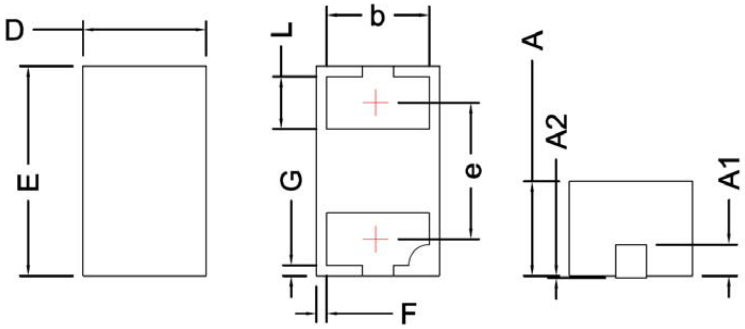
**ESD Clamping Voltage**
**8KV Contact per IEC61000-4-2**




**TLP Measurement**

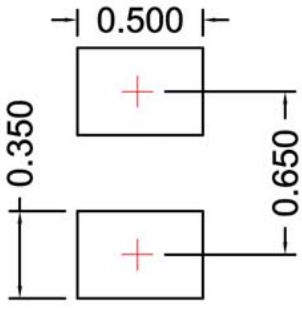



## ■ Outline Dimensions




| SYMBOL | MILLIMETER | | |
|---|---|---|---|
| | MIN | NOM | MAX |
| E | 0.90 | 1.00 | 1.10 |
| D | 0.50 | 0.60 | 0.70 |
| 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

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