

## Features

- Bi-Directional ESD Protection of One Line
- Low Clamping Voltage
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

IEC61000-4-2 (ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Current (8/20µs)	I <sub>PP</sub>	14A
Peak Pulse Power (8/20µs) <sup>(Note2)</sup>	P <sub>PK</sub>	140W
Junction Temperature Range	T <sub>J</sub>	-55°C to +150°C
Storage Temperature Range	T <sub>STG</sub>	-55°C to +150°C

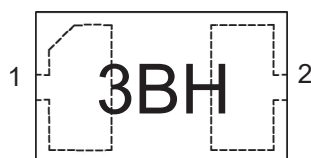
Note :

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC610 00-4-5.

## Internal Structure

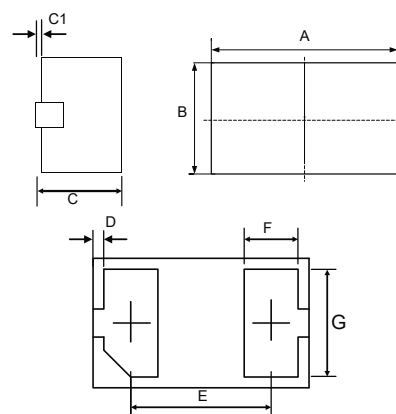


## Marking Code



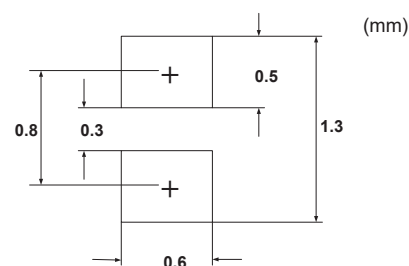
# Snap Back ESD Protection Device

## DFN1006-2L



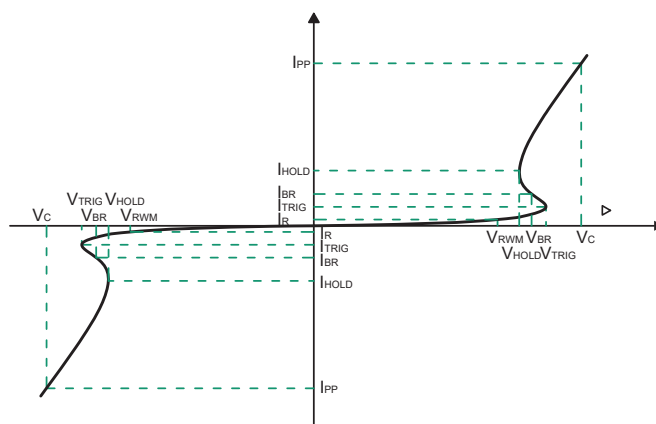
DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.037	0.041	0.95	1.05	
B	0.022	0.026	0.55	0.65	
C	0.016	0.022	0.40	0.50	
C1	----	0.004	----	0.05	
D	0.001	0.003	0.02	0.08	
E	0.026		0.65		TYP.
F	0.008	0.012	0.20	0.30	
G	0.018	0.022	0.45	0.55	

## SUGGESTED SOLDER PAD LAYOUT



**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{TRIG}$	Reverse Trigger Voltage
$I_{TRIG}$	Reverse Trigger Current
$V_{HOLD}$	Reverse Holding Voltage
$I_{HOLD}$	Reverse Holding Current
$C_J$	Junction Capacitance



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1\text{mA}$	3.7		5	V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3\text{V}$			1	$\mu\text{A}$
Clamping Voltage <sup>Note1</sup>	$V_C$	$I_{PP}=14\text{A}$ , $t_p=8/20\mu\text{s}$		8.8	10	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$		29	50	pF
Dynamic Resistance <sup>Note2</sup>	$R_{DYN}$	TLP, $t_p=100\text{ns}$		0.38		$\Omega$

Note :

1.Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5.

2.TLP parameter:  $Z_0=50\Omega$ ,  $t_p=100\text{ns}$ ,  $t_r=2\text{ns}$ , averaging window from 60ns to 80ns.  $R_{DYN}$  is calculated from 4A to 16A.

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

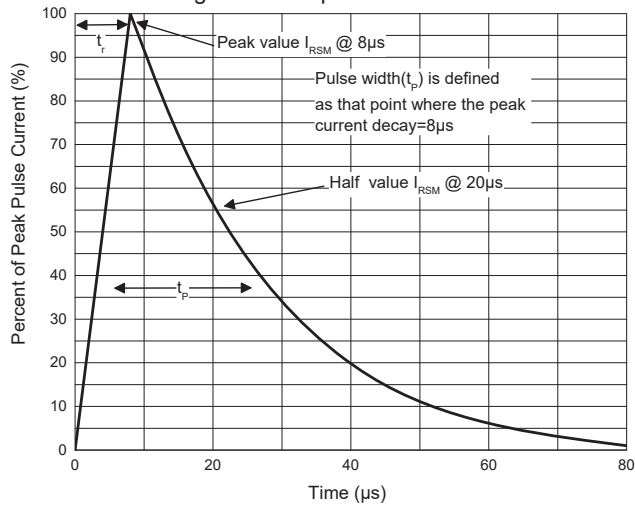


Fig. 2 - Non-Repetitive Peak Pulse Power

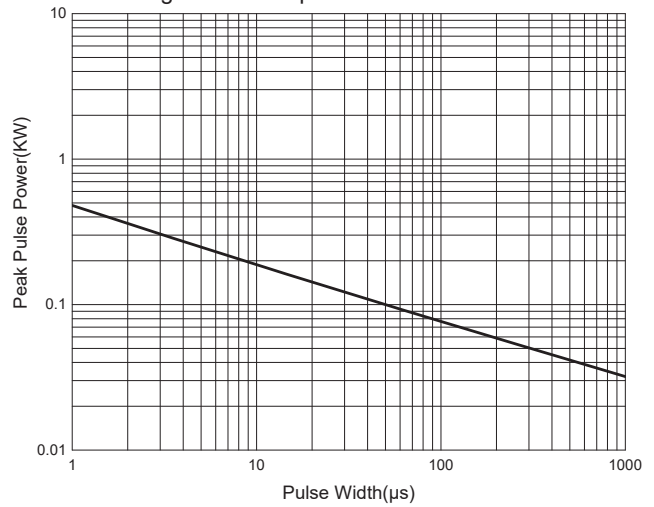


Fig. 3 - Capacitance Characteristics

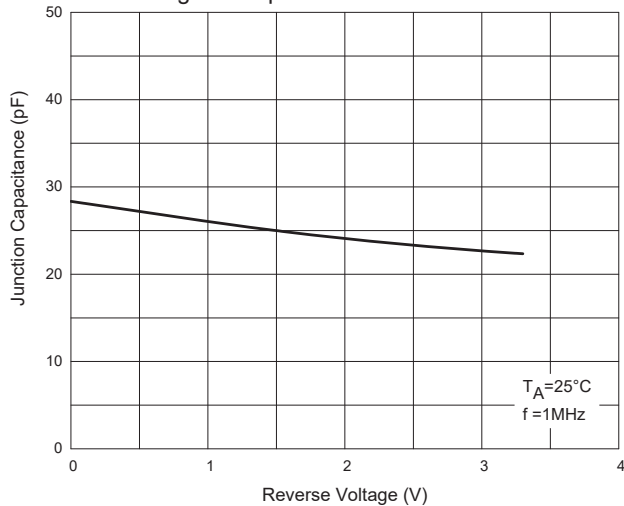


Fig. 4 - Clamping Voltage Characteristics

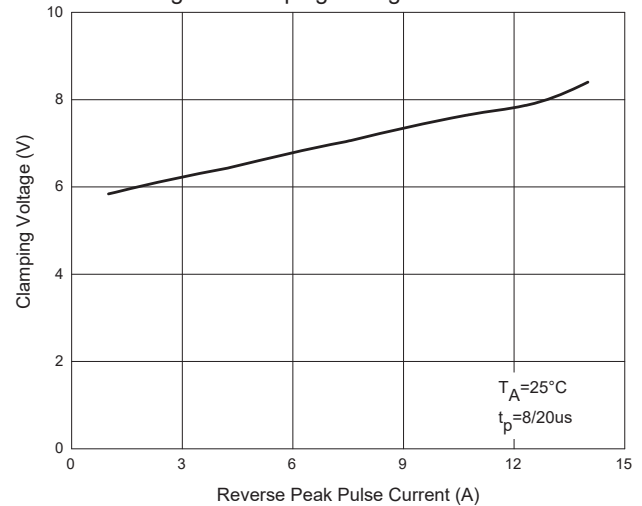


Fig. 5 - TLP Curve

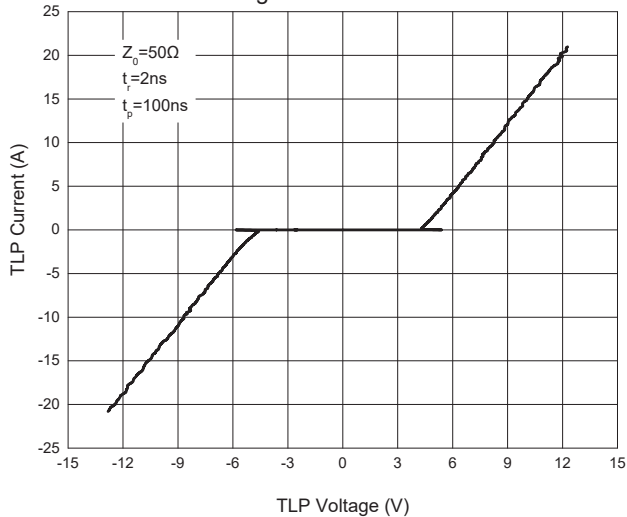
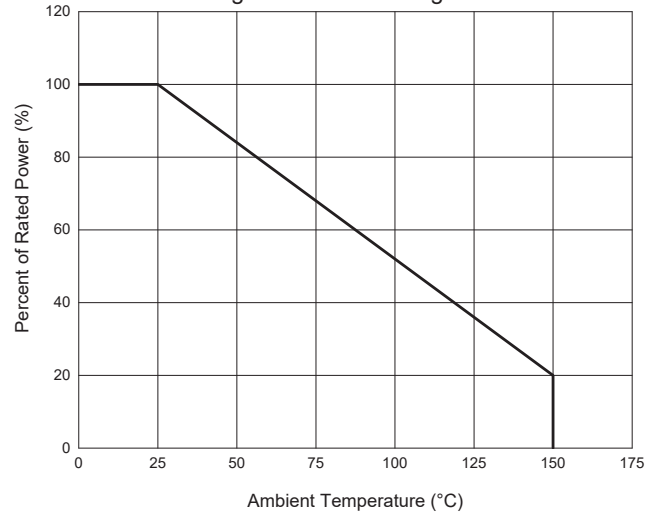


Fig. 6 - Pulse Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

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