

### Features

- Solid-state Silicon technology
- Ultra Low Capacitance
- Ultra Low Clamping Voltage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

### Maximum Ratings

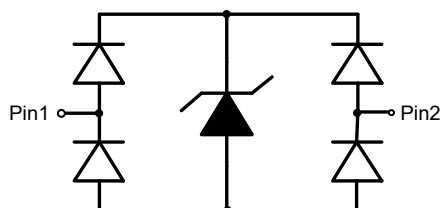
- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
ESDSBSLC3V3LB	3U

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	4A
Peak Pulse Power (8/20µs)	P <sub>PK</sub>	34W

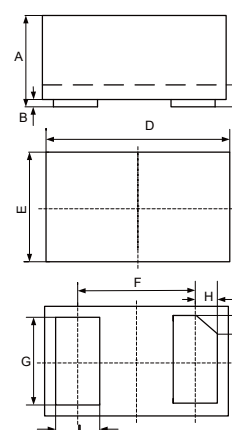
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

### Internal Structure



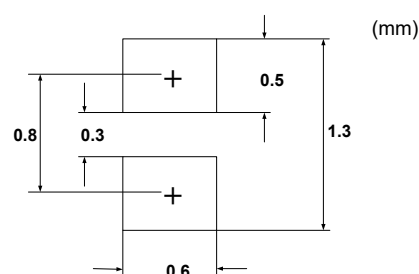
# Snap Back ESD Protection Device

## DFN1006-2



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
B	0.000	0.002	0.00	0.05	
C	0.005	0.007	0.12	0.18	
D	0.037	0.041	0.95	1.05	
E	0.022	0.026	0.55	0.65	
F	0.026		0.650		TYP.
G	0.018	0.022	0.45	0.55	
H	0.003	0.007	0.07	0.17	
L	0.008	0.012	0.20	0.30	

### SUGGESTED SOLDER PAD LAYOUT



**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	$V_{BR}$	$I_T = 1mA$	7	10		V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V$		<1	50	nA
Clamping Voltage <sup>(Note 2)</sup>	$V_C$	$I_{PP}=16A, t_p=100ns$		9		V
Dynamic Resistance <sup>(Note2)</sup>	$R_{DYN}$			0.25		$\Omega$
Clamping Voltage <sup>(Note 3)</sup>	$V_C$	$V_{ESD}=8KV$		9		V
Clamping Voltage <sup>(Note 4)</sup>	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$		4.5	5.5	V
Clamping Voltage <sup>(Note 4)</sup>	$V_C$	$I_{PP}=4A, t_p=8/20\mu s$		7	8.5	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		0.35	0.5	pF

Note:

2. TLP Parameter:  $Z_0=50\Omega, t_p=100ns, t_r=2ns$ , Averaging Window from 60ns to 80ns.  $R_{DYN}$  is Calculated from 4A to 16A.
3. Contact Discharge Mode, According to IEC61000-4-2.
4. Non-repetitive Current Pulse, According to IEC61000-4-5.

**Curve Characteristics**

Fig. 1 - 8 X 20µs Pulse Waveform

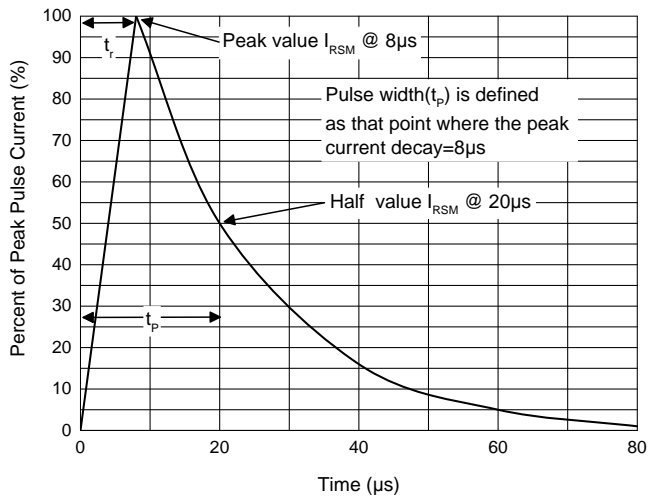


Fig. 2 - Non-Repetitive Peak Pulse Power

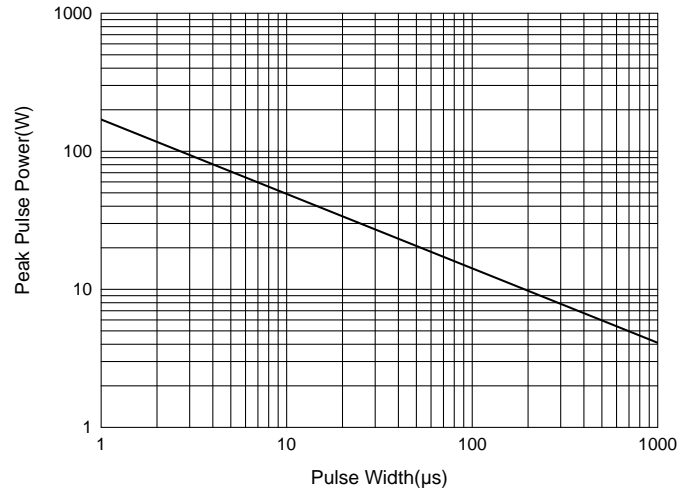


Fig. 3 - Capacitance Characteristics

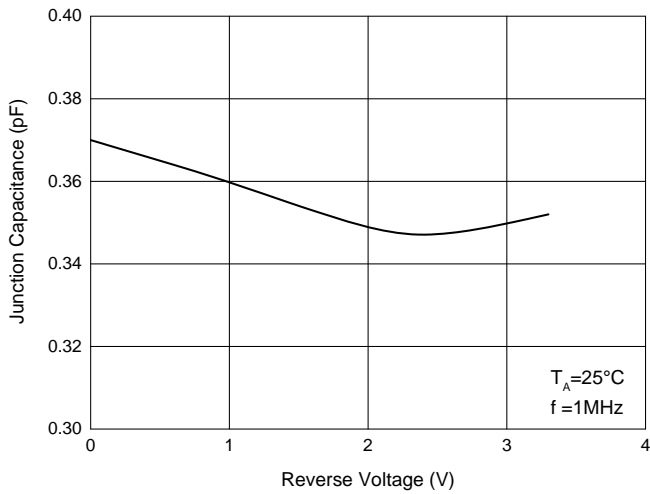


Fig. 4 - Clamping Voltage Characteristics

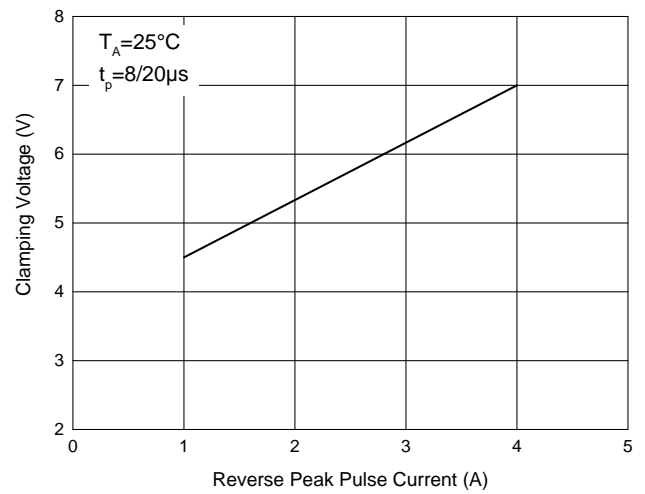


Fig. 5 - Pulse Derating Curve

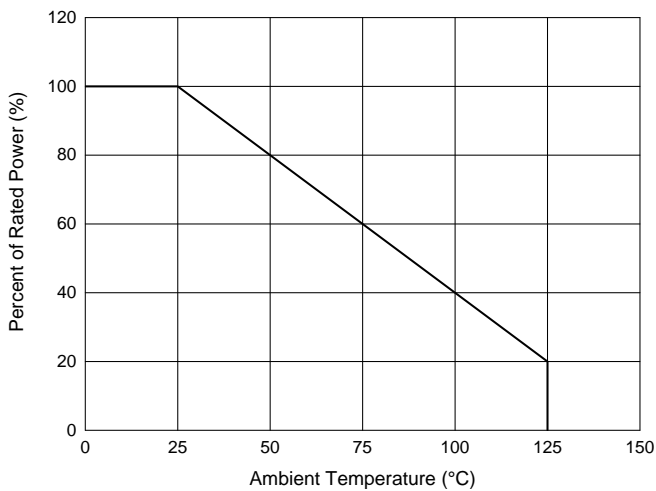
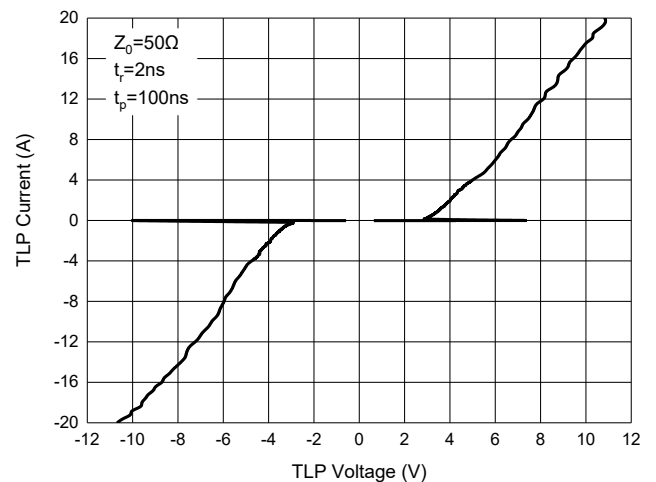


Fig. 6 - TLP Measurement



## Ordering Information

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

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