

## Features

- Solid-state Silicon technology
- Ultra Low Capacitance
- Low Leakage Current
- Low Clamping Voltage
- 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

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

MCC Part Number	Device Marking
ESDSB5V0LB	5B

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current(8/20μs)	I <sub>PP</sub>	20A
Peak Pulse Power (8/20μs)	P <sub>PK</sub>	260W

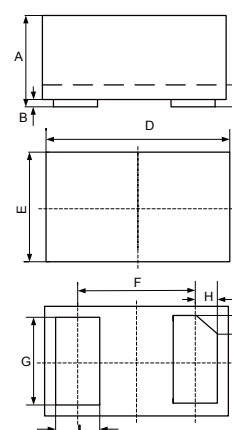
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure



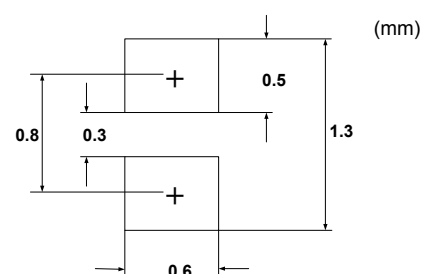
# Snap Back ESD Protection Device

## DFN1006-2



DIM	INCHES		MM		NOTE
	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	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	5.1			V
Reverse Holding Voltage	$V_{HOLD}$	$I_{HOLD}=50mA$	5.1			V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V$			100	nA
Clamping Voltage <sup>(Note 2)</sup>	$V_C$	$I_{PP}=16A, t_p=100ns$		8		V
Dynamic Resistance <sup>(Note 2)</sup>	$R_{DYN}$			0.08		$\Omega$
Clamping Voltage <sup>(Note 3)</sup>	$V_C$	$V_{ESD}=8KV$		8		V
Clamping Voltage <sup>(Note 4)</sup>	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$			9	V
Clamping Voltage <sup>(Note 4)</sup>	$V_C$	$I_{PP}=10A, t_p=8/20\mu s$			11	V
Clamping Voltage <sup>(Note 3)</sup>	$V_C$	$I_{PP}=20A, t_p=8/20\mu s$			13	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		35	42	pF
Junction Capacitance	$C_J$	$V_R=2.5V, f=1MHz$		23	30	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 20 $\mu$ s Pulse Waveform

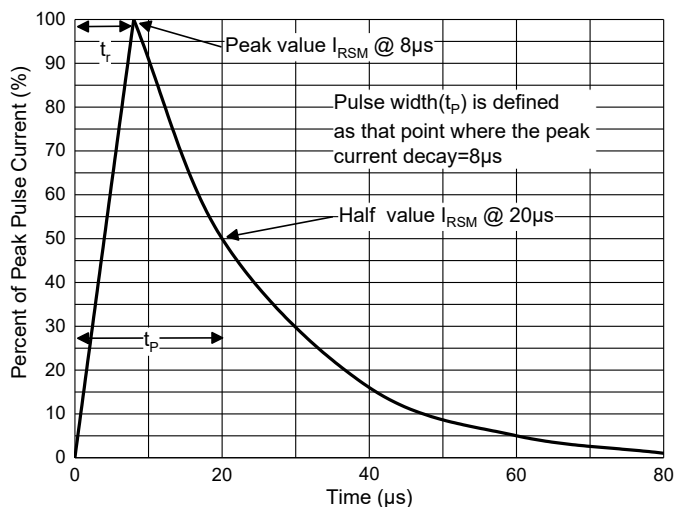


Fig. 2 - Clamping Voltage Characteristics

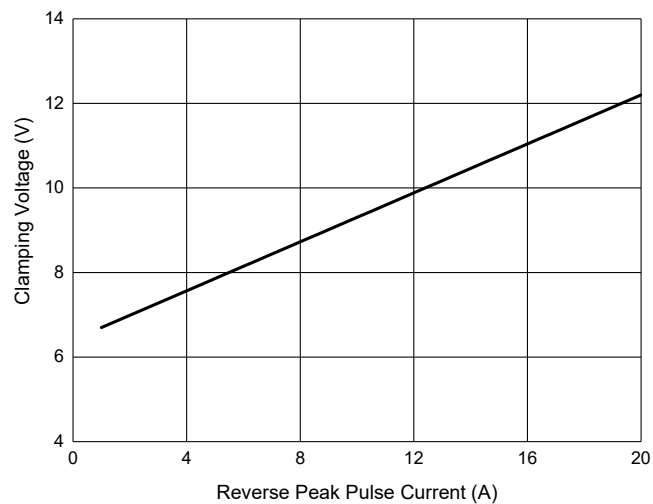


Fig. 3 - Capacitance Characteristics

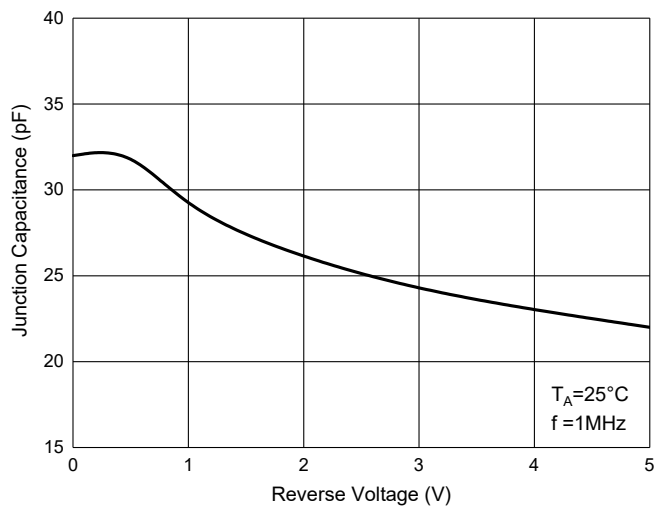


Fig. 4 - Pulse Derating Curve

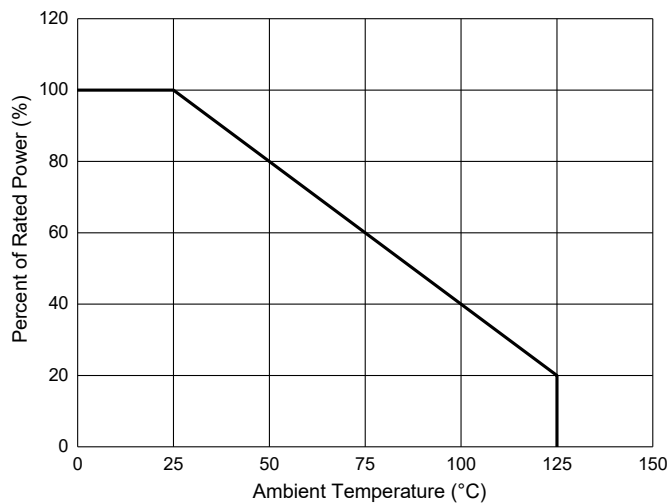
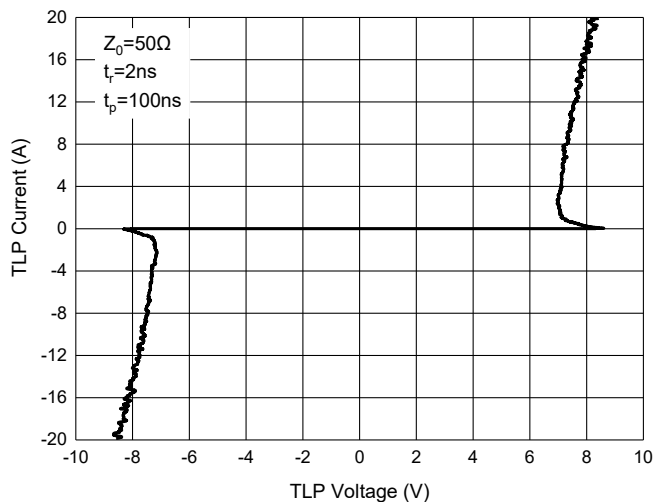


Fig. 5 - TLP Measurement



## Ordering Information

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

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