

**Features**

- For Sensitive ESD Protection
- Excellent Clamping Capability
- Low Leakage
- Low Reverse 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**

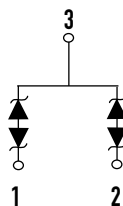
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
SM05BT	BL5E

IEC61000-4-2(ESD)	Air Contact	±25KV ±25KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	5A
Peak Pulse Power (8/20us)	P <sub>PK</sub>	60W

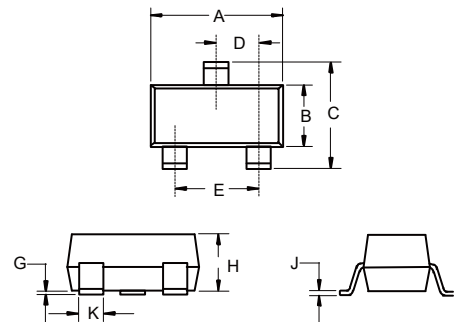
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



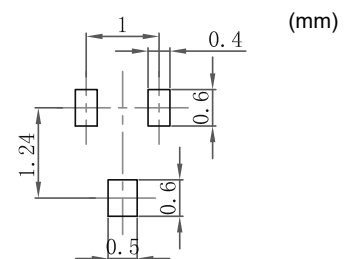
**ESD Protection Device**

**SOT-523**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.030	0.033	0.75	0.85	
C	0.057	0.069	1.45	1.75	
D	0.020		0.50		TYP.
E	0.035	0.043	0.90	1.10	
G	0.000	0.004	0.00	0.10	
H	0.024	0.031	0.60	0.80	
J	0.004	0.008	0.10	0.20	
K	0.006	0.014	0.15	0.35	

**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		8.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 100mA$	5			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V$			0.1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 5A, t_p = 8/20\mu s$			12	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$		10.5		pF

## Curve Characteristics

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

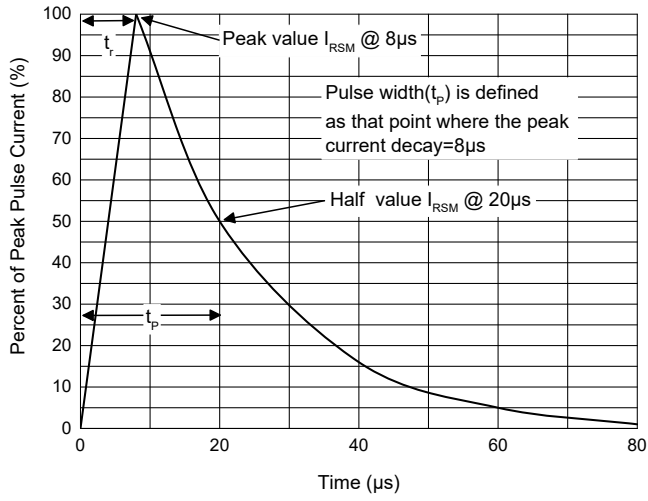


Fig. 2 - Pulse Derating Curve

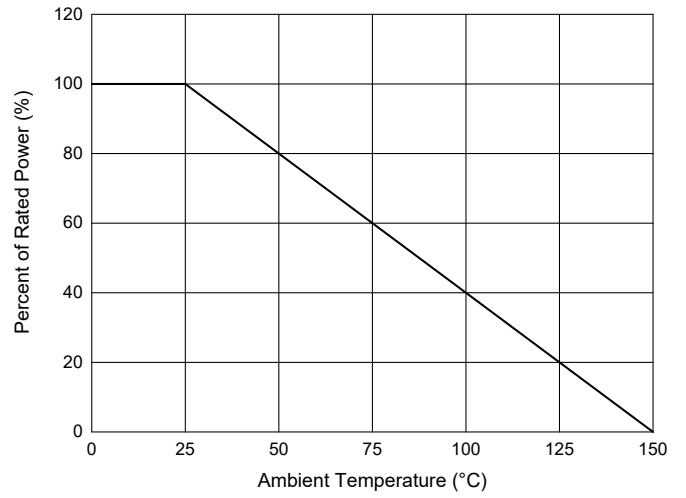


Fig. 3 - Capacitance Characteristics

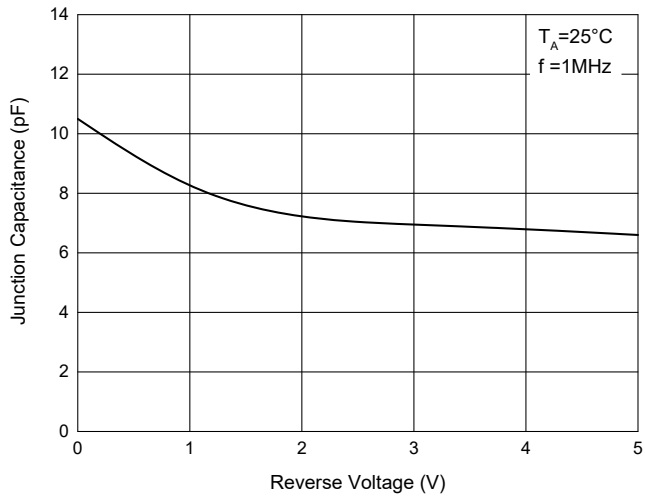
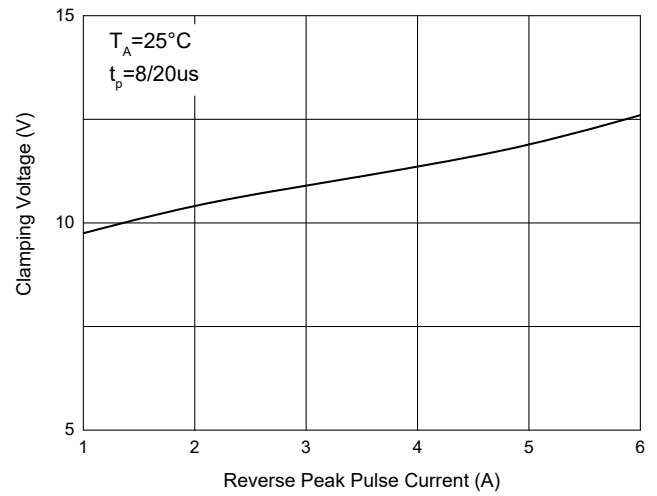


Fig. 4 - Clamping Voltage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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