

### Features

- ◆ 230 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- ◆ Transient protection for high speed data lines to IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 12V
- ◆ Protects one bidirectional line or two unidirectional lines
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology

### Mechanical Characteristics

- ◆ Package: SOT23
- ◆ Lead Finish: Matte Tin
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Pb-Free, Halogen Free, RoHS/WEEE Compliant

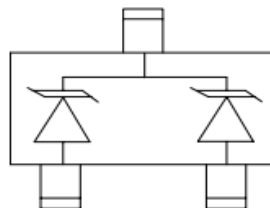
### Applications

- ◆ USB Power & Data Line Protection
- ◆ Monitors and Flat Panel Displays
- ◆ I<sup>2</sup>C Bus Protection
- ◆ Portable Instrumentation
- ◆ Set Top Box

### Ordering Information

Part Number	Qty per Reel	Reel Size
MMBZ15VDLT1G	3000	7"

### Dimensions and Pin Configuration



**Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	$P_{pk}$	230	W
ESD per IEC61000-4-2 (Air)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

**Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	$V_{RWM}$			12.0	V	
Breakdown Voltage	$V_{BR}$	13	15	17	V	$I_T=1\text{mA}$
Leakage Current	$I_{Leak}$			200	nA	$V_{RWM}=12.0\text{V}$
Clamping Voltage	$V_C$			18	V	$I_{PP}=1\text{A}, T_p=8/20\mu\text{s}$
Clamping Voltage	$V_C$			25	V	$I_{PP}=9\text{A}, T_p=8/20\mu\text{s}$
Junction Capacitance	$C_J$		45		pF	$V_R=0\text{V}, f=1\text{MHz}$

PROTECTION PRODUCTS  
Typical characteristics

Fig1. 8/20 $\mu$ s Pulse Waveform

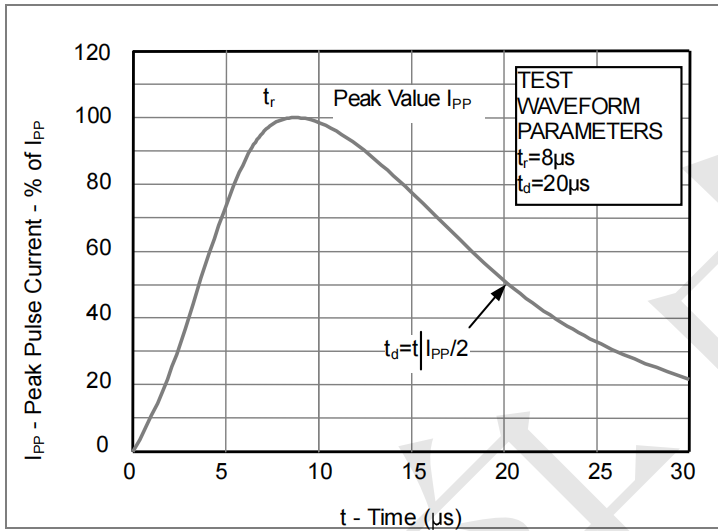


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

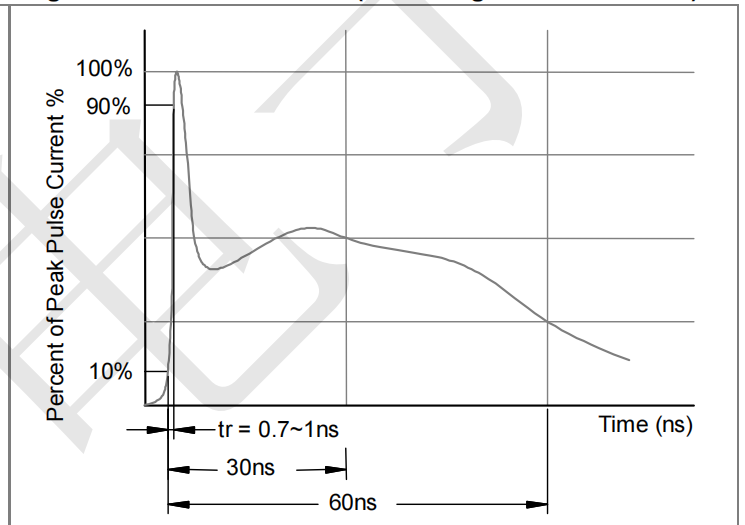
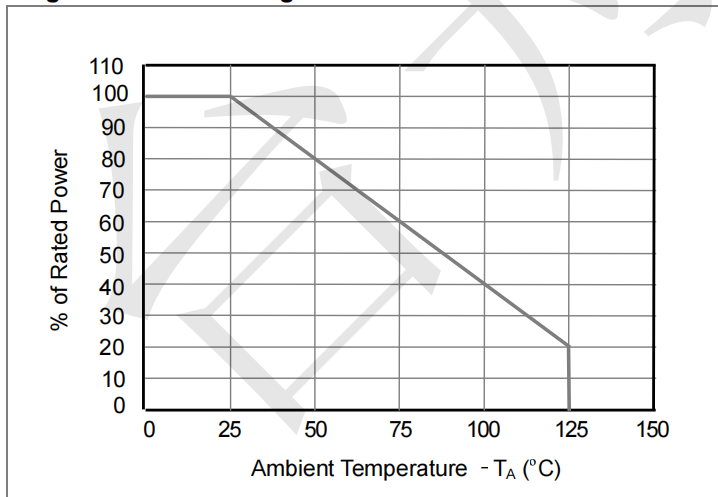
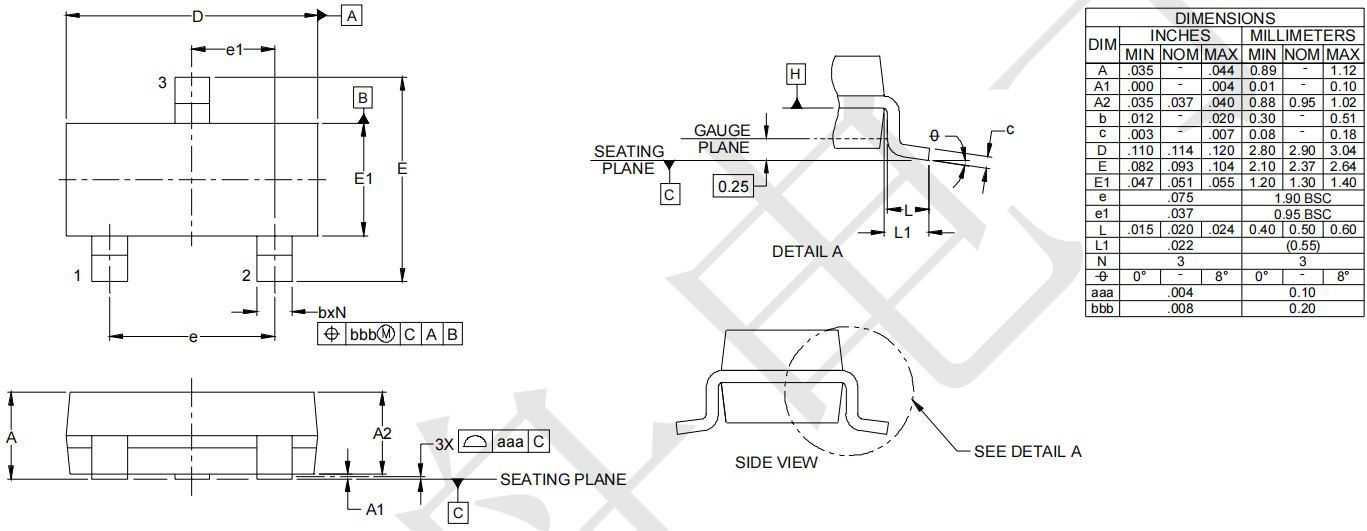


Fig3. Power Derating Curve



### Outline Drawing - SOT23



### Land Pattern - SOT23

