



Features

- 350 watts peak pulse power ($t_p = 8/20\mu s$)
- Low Clamping Voltage
- Working Voltages: 15V
- Low Leakage Current
- Response Time is Typically $< 1\text{ ns}$

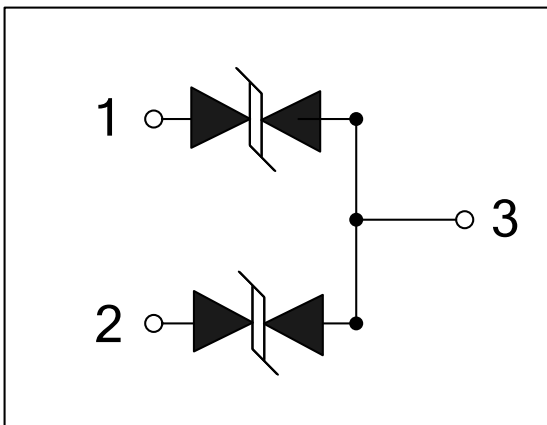
IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10A (8/20 μs)

Mechanical Characteristics

- JEDEC SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

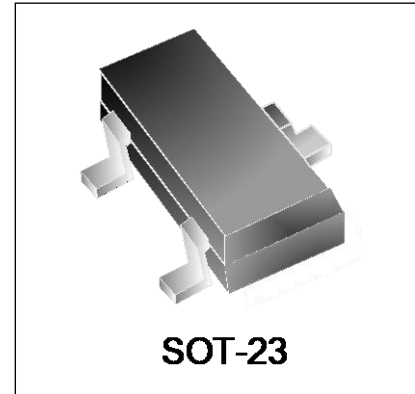
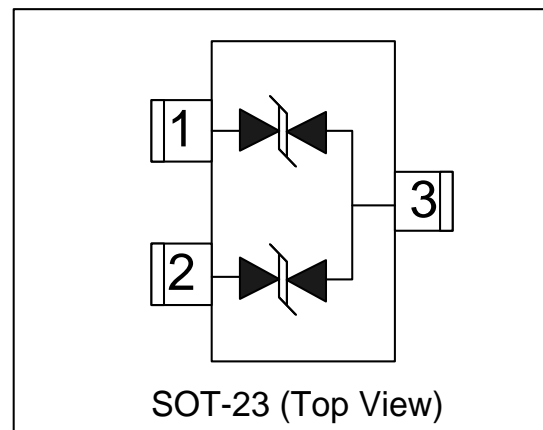
Circuit Diagram



Applications

- RS-232, RS-422 & RS-485
- Cellular Handsets and Accessories
- Control & Monitoring Systems
- Portable Electronics
- Set-Top Box
- Servers, Notebook, and Desktop PC
- Wireless Bus Protection

Schematic & PIN Configuration

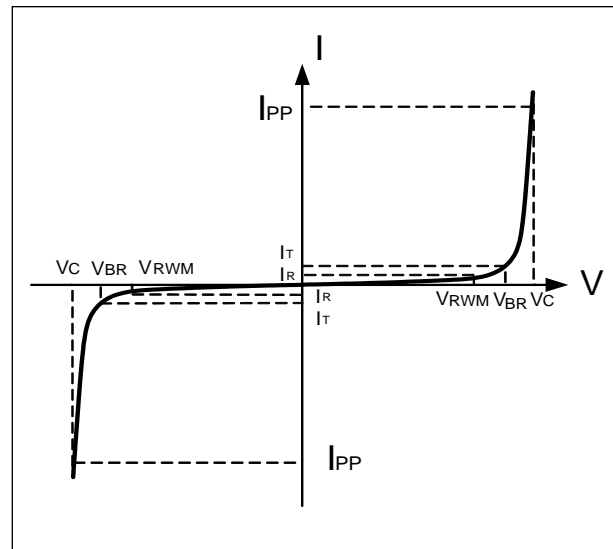




Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	350	Watts
Lead Soldering Temperature	T_L	260(10sec)	$^{\circ}C$
Operating Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Parameters (T=25 $^{\circ}C$)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

MMBZ15VALT1G						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	16.7			V
Reverse Leakage Current	I_R	$V_{RWM}=15V, T=25^{\circ}C$			1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			10	A
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			24	V
Maximum Clamping Voltage	V_C	$I_{PP}=10A, t_p=8/20\mu s$			35	V
Junction Capacitance	C_j	Pin 1 to 3 and Pin 2 to 3 $V_R = 0V, f = 1MHz$		25	28	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

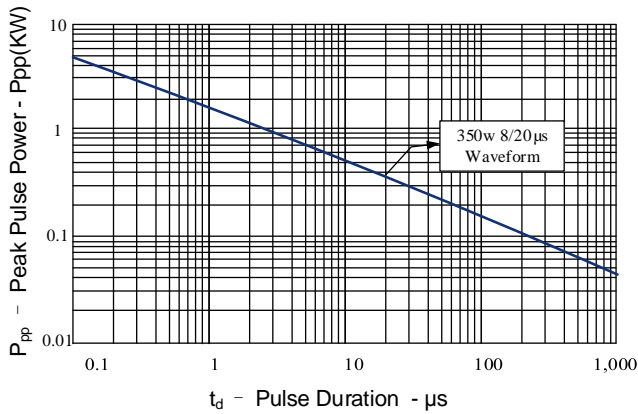


Figure 2: Power Derating Curve

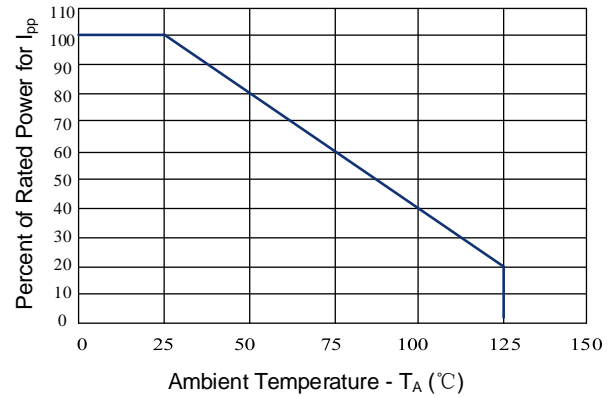


Figure 3: Clamping Voltage vs. Peak Pulse Current

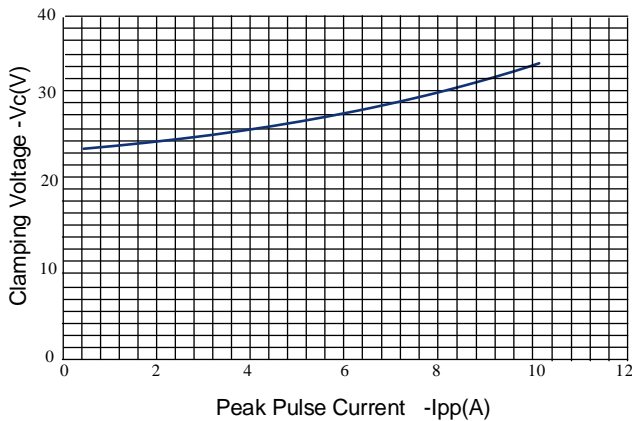


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

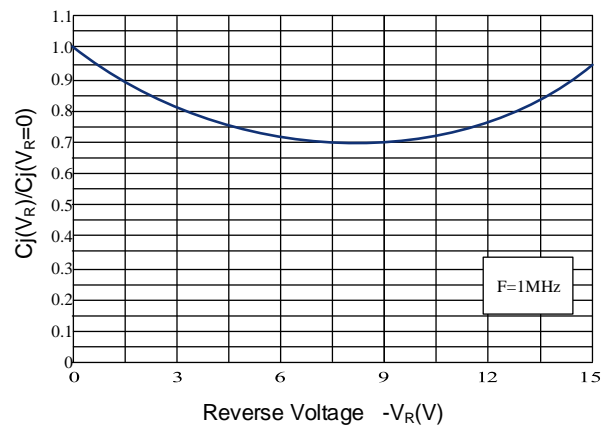
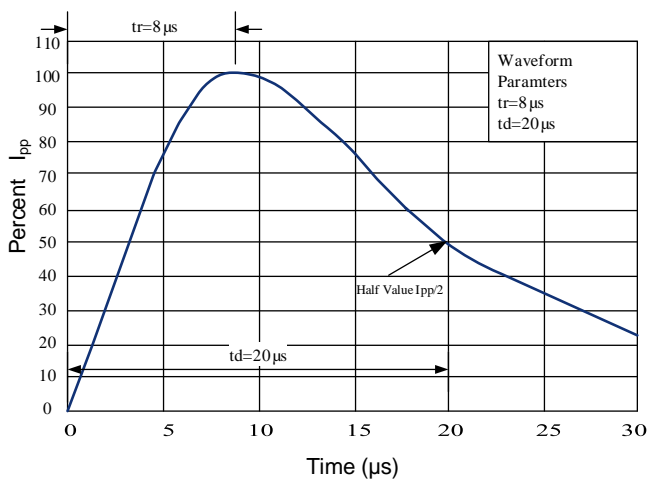
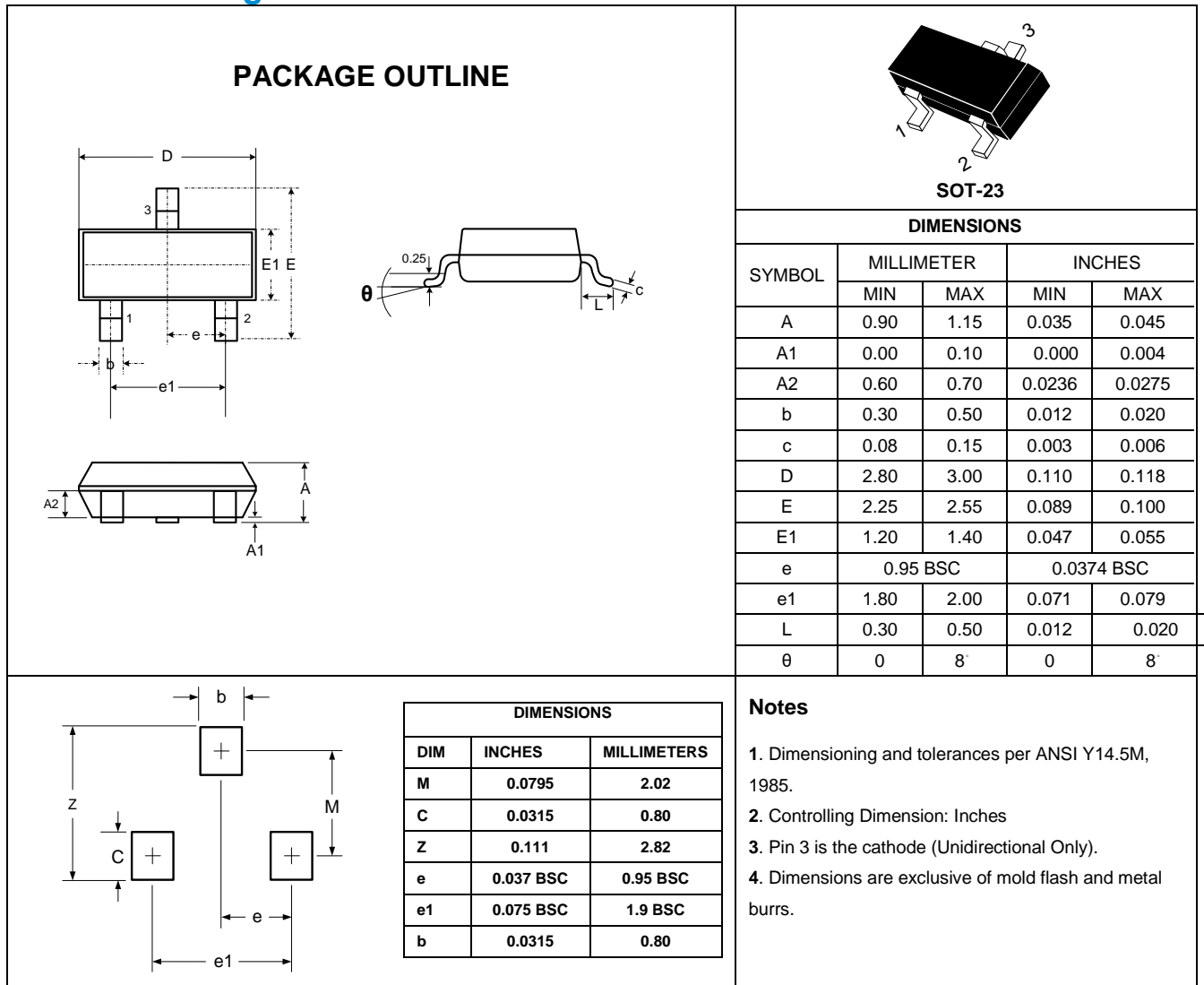


Figure 5: Pulse Waveform



Outline Drawing – SOT-23



Marking Codes

Part Number	MMBZ15VALT1G
Marking Code	BB2

Package Information

Qty: 3k/Reel

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