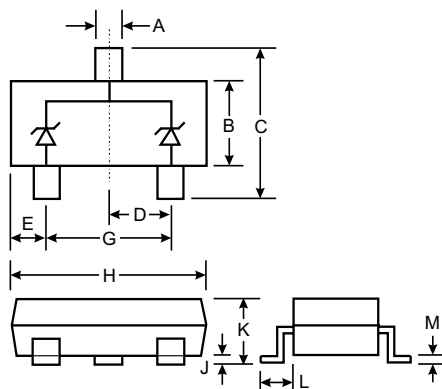


Features

- Dual TVS in Common Cathode Configuration for ESD Protection
- 40 Watt Peak Power Dissipation @ 1.0ms (Unidirectional)
- 225 mW Power Dissipation
- Ideally Suited for Automatic Insertion
- Low Leakage
- ESD Rating of Class N (>16kV) per Human Body Model

Mechanical Data

- Case: SOT-23, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: See Table Below
- Approx. Weight: 0.008 grams



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P _d	225	mW
Peak Power Dissipation (Note 2)	P _{PK}	40	W
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{θJA}	420	K/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise noted

V_F = 0.9V max @ I_F = 10mA

Type Number	Marking Code	V _{RWM}	I _R @ V _{RWM}	Breakdown Voltage				V _C @ I _{PP} (Note 2)		Typical Temperature Coefficient
				V _{BR} (Note 3) (V)			@ I _T	V _C	I _{PP}	
		Volts	nA	Min	Nom	Max	mA	V	A	T _C (%/°C)
MMBZ15VDL	KVJ	12.8	100	14.3	15	15.8	1.0	21.2	1.9	+0.090

V_F = 1.1V max @ I_F = 200mA

Type Number	Marking Code	V _{RWM}	I _R @ V _{RWM}	Breakdown Voltage				V _C @ I _{PP} (Note 2)		Typical Temperature Coefficient
				V _{BR} (Note 3) (V)			@ I _T	V _C	I _{PP}	
		Volts	nA	Min	Nom	Max	mA	V	A	T _C (%/°C)
MMBZ27VCL	KVP	22	50	25.65	27	28.35	1.0	38	1.0	+0.090

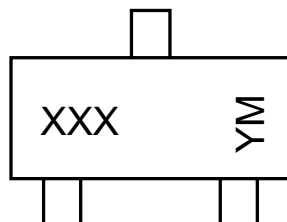
- Note:
1. Device mounted on FR-5 PCB 1.0 x 0.75 x 0.062 inch pad layout as shown on Diodes Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>. 200mW per element must not be exceeded.
 2. Non-repetitive current pulse per Figure 2 and derate above T_A = 25°C per Figure 1.
 3. Short duration test pulse used to minimize self-heating effect.

Ordering Information (Note 4)

Device	Packaging	Shipping
MMBZ15VDL-7 MMBZ27VCL-7	SOT-23	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



XXX = Product Type Marking Code, ex: KVP = MMBZ27VCL
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004
Code	J	K	L	M	N	O	P

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

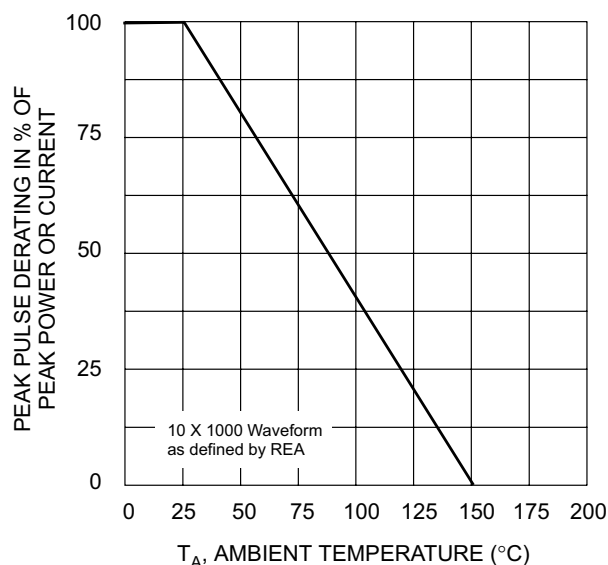


Fig. 1 Pulse Derating Curve

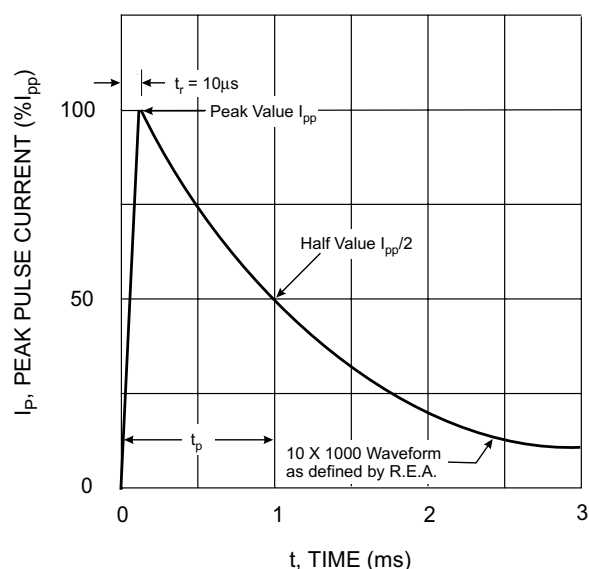


Fig. 2 Pulse Waveform

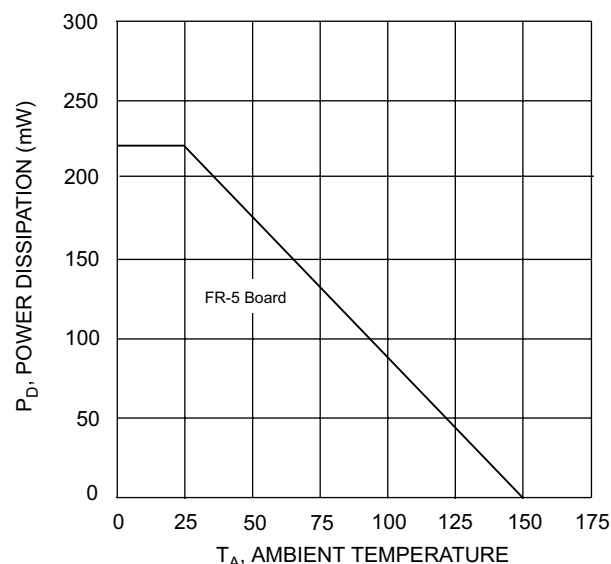


Fig. 3 Steady State Power Derating Curve

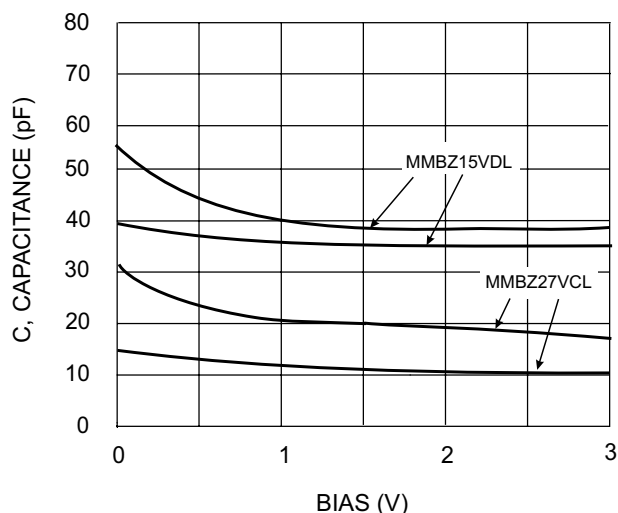


Fig. 4 Typical Capacitance vs. Bias Voltage
 (Lower curve is Bidirectional mode,
 Upper curve is Unidirectional mode)

MMBZ15VDL, MMBZ27VCL

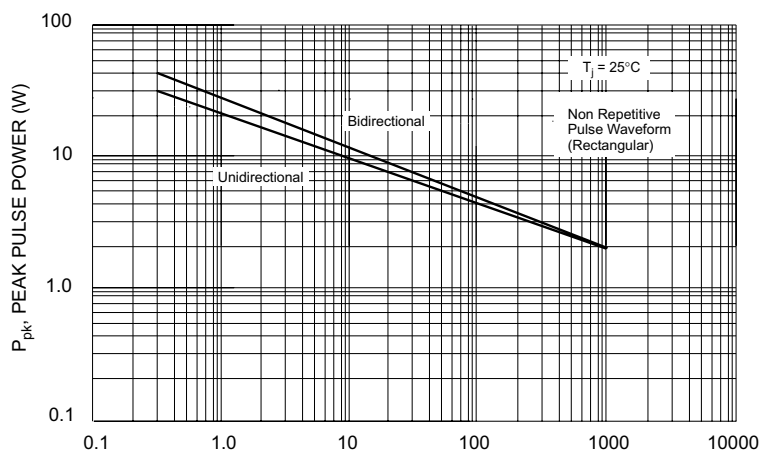


Fig. 5 Pulse Rating Curve,
 P_{pk} (W) vs. Pulse Width (ms)

Power is defined as $P_{pk} = V_c \times I_{pp}$

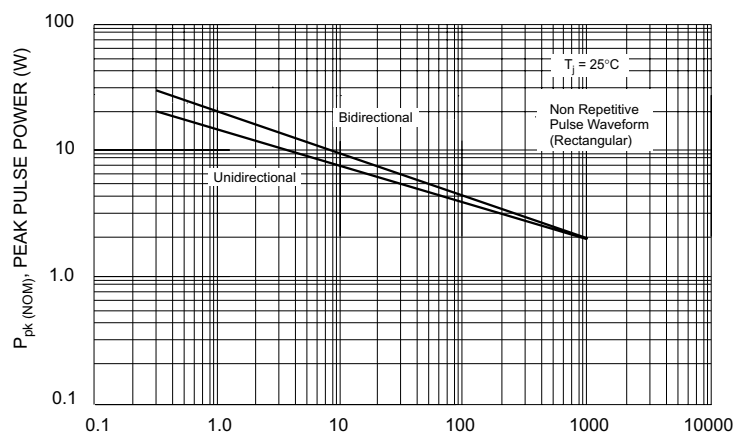


Fig. 6 Pulse Rating Curve,
 $P_{pk(NOM)}$ (W) vs. Pulse Width (ms)

Power is defined as $P_{pk(NOM)} = V_{BR(NOM)} \times I_{pp}$
where $V_{BR(NOM)}$ is the nominal breakdown voltage