

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Power Dissipation (Note 7)	P _{PK}	40	W

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 8)	P _D	225	mW
Thermal Resistance, Junction to Ambient Air (Note 8)	R _{ΘJA}	556	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

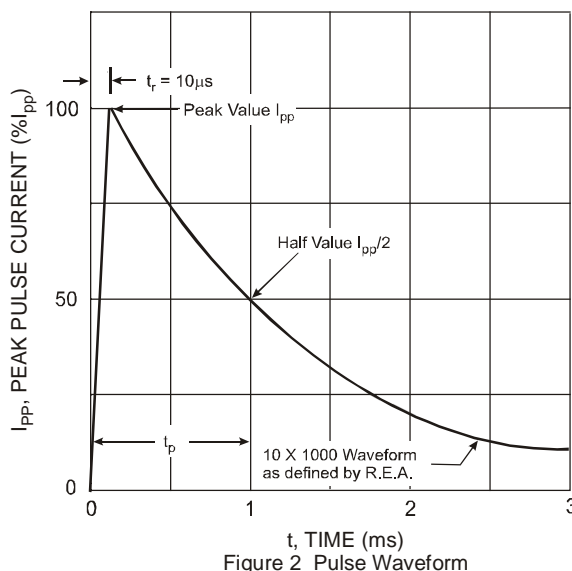
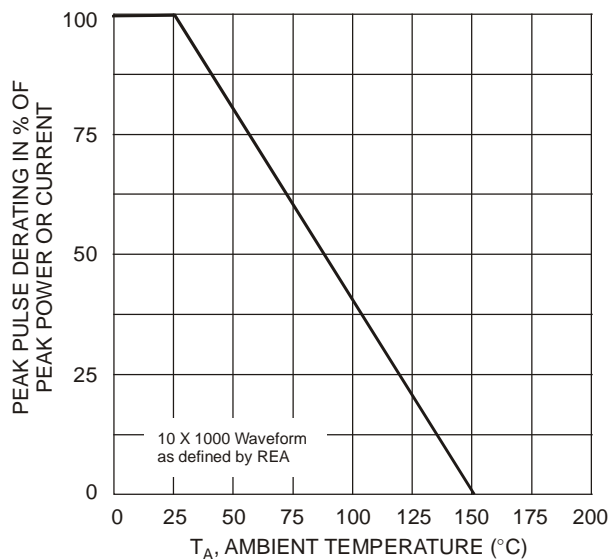
V_F = 0.9V max @ I_F = 10mA

Type Number	Marking Code	V _{RWM}	Max Reverse Leakage I _R @ V _{RWM} (Note 9)	Breakdown Voltage				Max. Clamping Voltage V _C @ I _{PP} (Note 7)		Typical Temperature Coefficient
				V _{BR} (Note 9) (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	+0.080

V_F = 1.1V max @ I_F = 200mA

Type Number	Marking Code	V _{RWM}	Max Reverse Leakage I _R @ V _{RWM} (Note 9)	Breakdown Voltage				Max. Clamping Voltage V _C @ I _{PP} (Note 7)		Typical Temperature Coefficient
				V _{BR} (Note 9) (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

- Notes:
- Non-repetitive current pulse per Figure 2 and derate above T_A = +25°C per Figure 1.
 - Device mounted on FR-5 PCB 1.0 × 0.75 × 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>. 200mW per element must not be exceeded.
 - Short duration pulse test used to minimize self-heating effect.



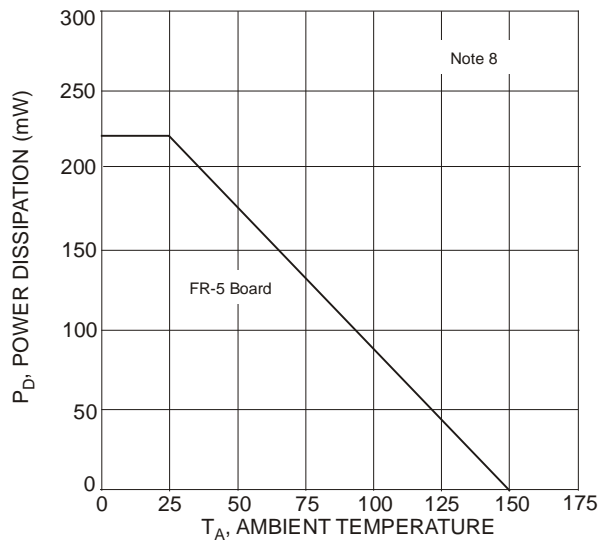


Figure 3 Steady State Power Derating Curve

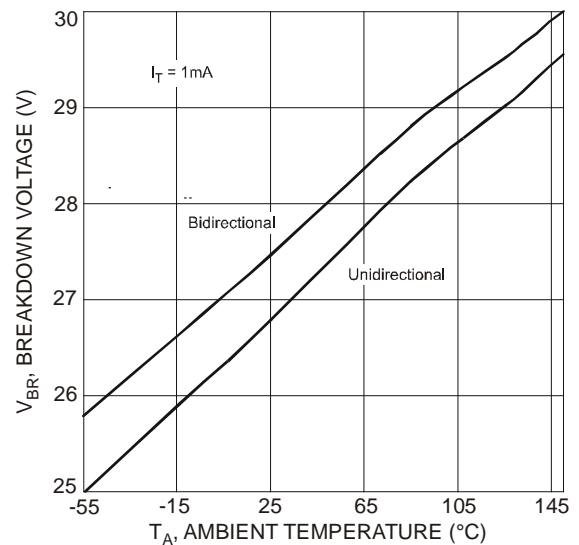


Figure 4 Typical Breakdown Voltage vs. Temperature (MMBZ27VCL)

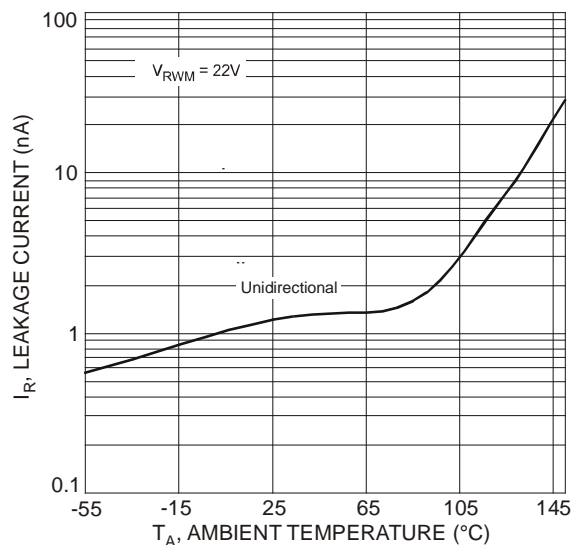


Figure 5 Typical Leakage Current vs. Temperature (MMBZ27VCL)

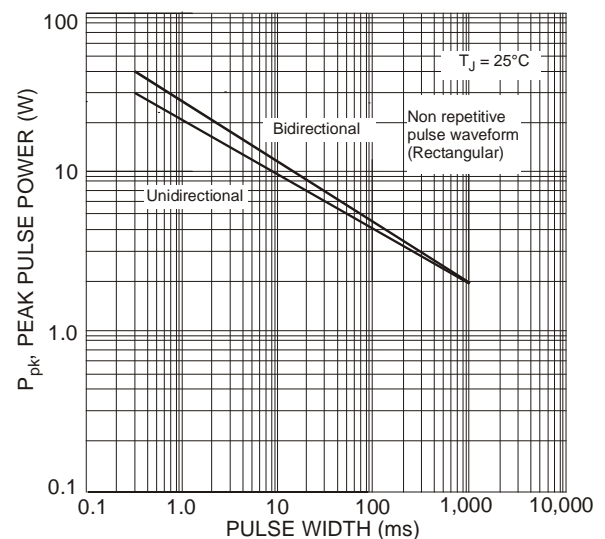


Figure 6 Pulse Rating Curve, P_{pk} (W) vs. Pulse Width (ms)
Power is defined as $P_{pk} = V_C \times I_{pp}$

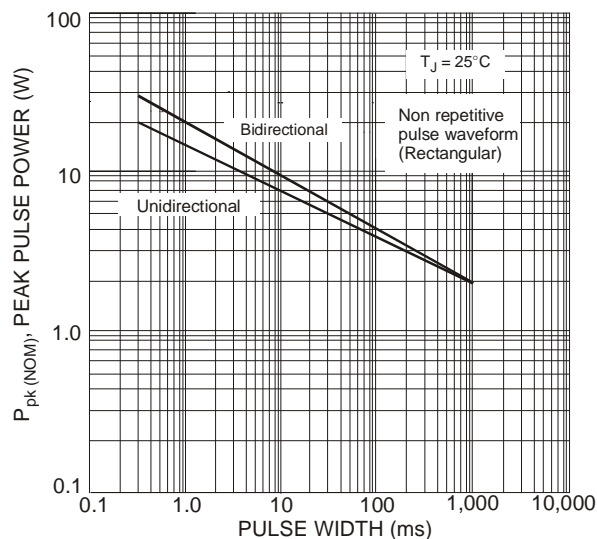
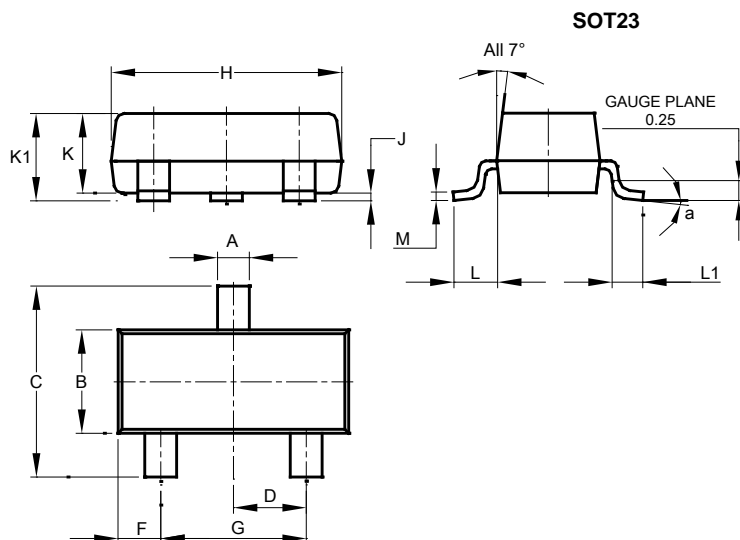


Figure 7 Pulse Rating Curve, $P_{pk(NOM)}$ (W) vs. Pulse Width (ms)

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

Package Outline Dimensions

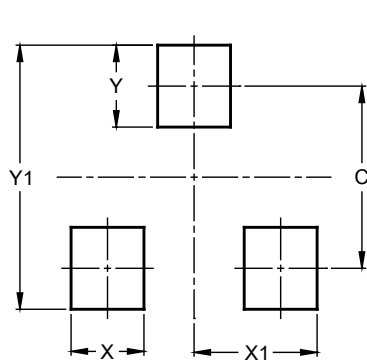
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	—
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9

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