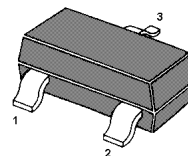
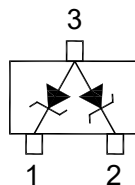


MMBZ...CA Series

Zener Transient Voltage Suppressors

Features

- Low leakage



1. Cathode 2. Cathode 3. Anode
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

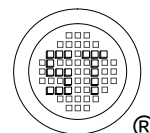
Parameter	Symbol	Value	Unit
Peak Power Dissipation (1 ms) ¹⁾ MMBZ5V6CA - MMBZ10CA MMBZ12CA – MMBZ27CA	P_{PK}	24 40	W
Total Power Dissipation	P_D	225	mW
Thermal Resistance Junction-to-Ambient ²⁾	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Junction And Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 0.9\text{ V Max @ } I_F = 10\text{ mA}$)

Type	Marking Code	Reverse Stand-off Voltage	Reverse Current	Breakdown Voltage		Clamping Voltage		Peak Power Dissipation ¹⁾ $P_{PK}(W)$	Typical Temperature Coefficient	
		V_{RWM}	I_R at V_{RWM}	V_{BR}		V_C	at I_{PP}		T_C	
		(V)	Max. (μA)	Min. (V)	Max. (V)	(mA)	Max. (V)		(A)	mV/ $^\circ\text{C}$
MMBZ5V6CA	1U	3	5	5.32	5.88	20	8	24	1.26	
MMBZ6V2CA	2U	3	0.5	5.89	6.51	1	8.7		2.76	2.8
MMBZ6V8CA	3U	4.5	0.5	6.46	7.14	1	9.6		2.5	3.4
MMBZ9V1CA	4U	6	0.3	8.6	9.56	1	14		1.7	7.5
MMBZ10CA	5U	6.5	0.3	9.5	10.5	1	14.2		1.7	7.5
MMBZ12CA	6U	8.5	0.2	11.4	12.6	1	17	2.35	40	7.5
MMBZ15CA	7U	12	0.05	14	15.75	1	21	1.9		12.3
MMBZ18CA	8U	14.5	0.05	17.1	18.9	1	25	1.6		15.3
MMBZ27CA	0U	22	0.05	25.65	28.35	1	40	1		24.3

¹⁾ Non-repetitive current pulse Waveform per Figure 6 .

²⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



MMBZ...CA Series

Electrical Characteristic Curves

Fig 1. Junction Capacitance

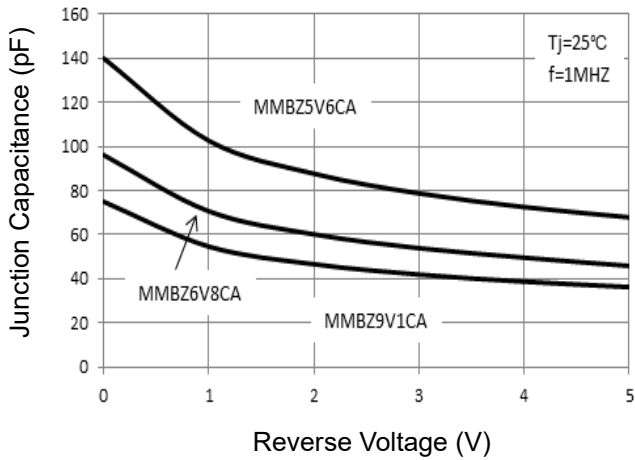


Fig 2. Junction Capacitance

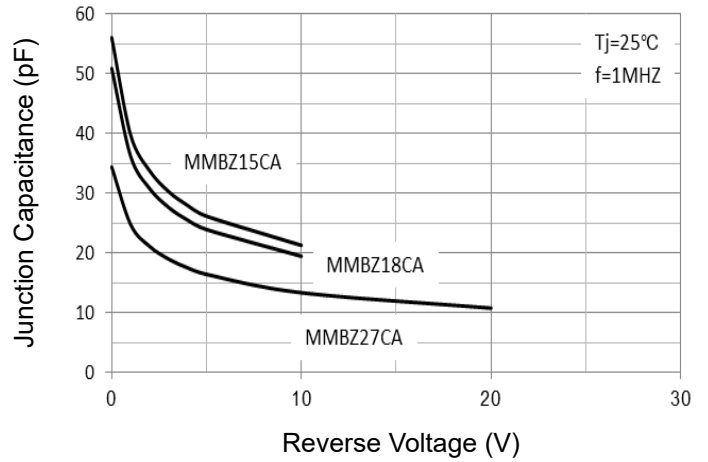


Fig 3. Clamping Voltage Curve

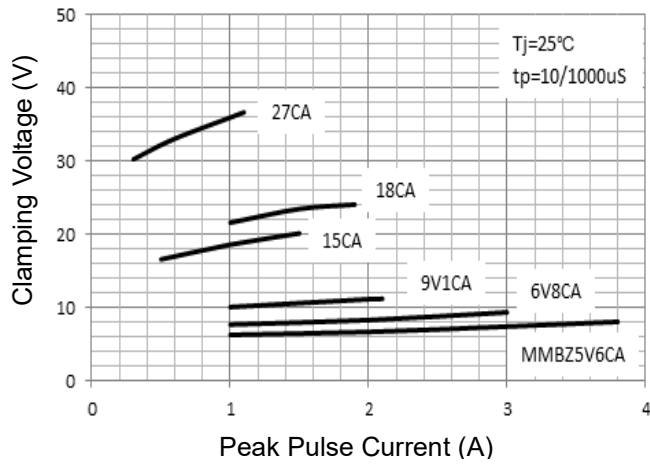


Fig 4. Breakdown Voltage vs. Temperature

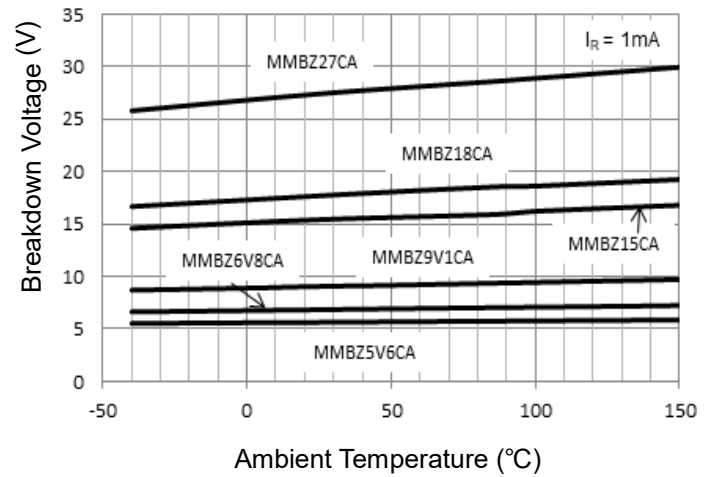


Fig 5. Reverse Leakage Current vs. Temperature

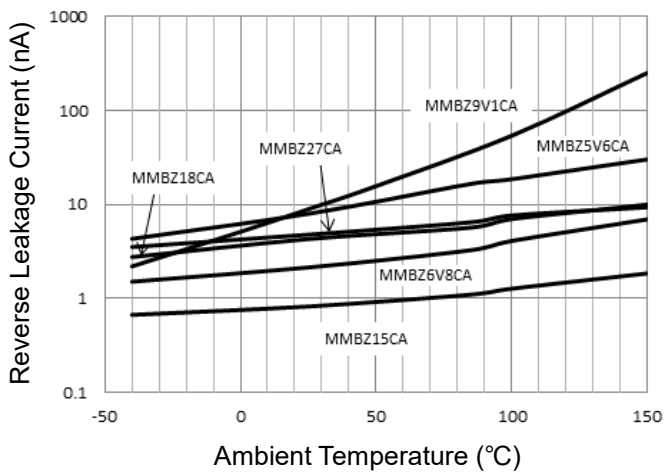
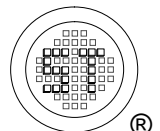
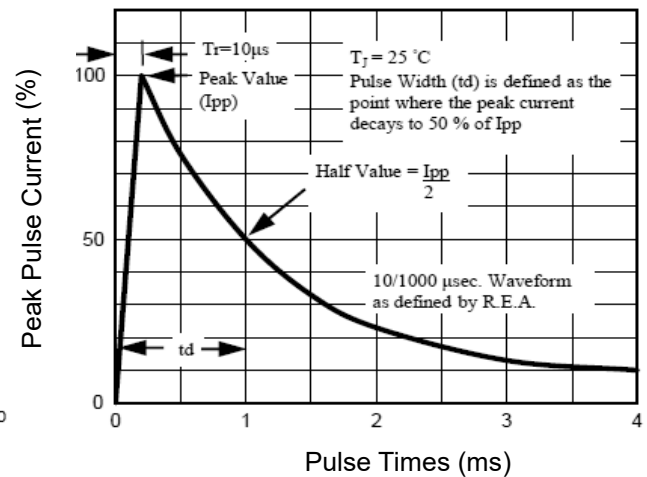


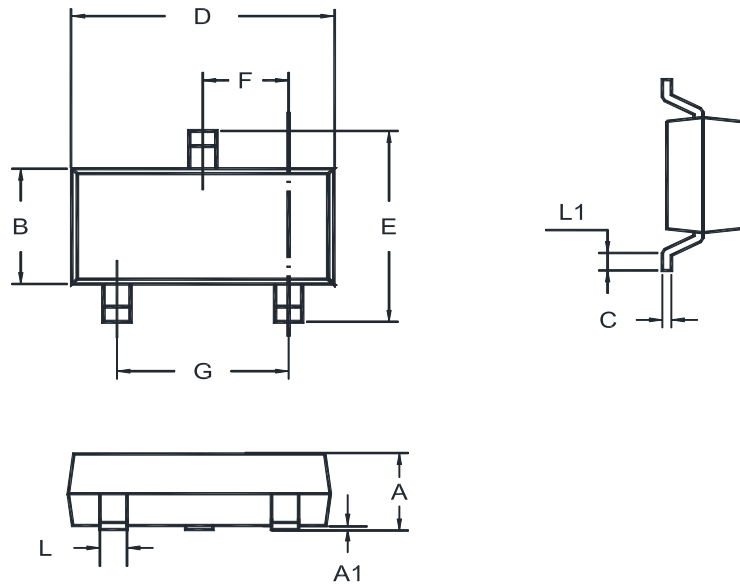
Fig 6. Pulse Waveform



MMBZ...CA Series

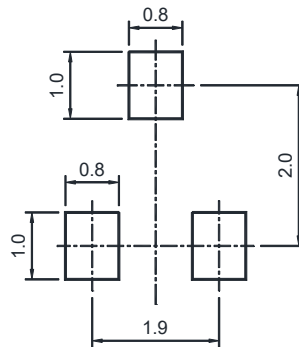
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

- " ** " = Part No.
 - " YM " = Date Code Marking
 - " Y " = Year
 - " M " = Month
- Font type: Arial

