

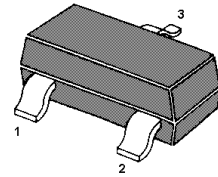
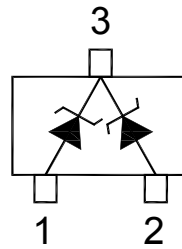
MMBZ27CC-AH

Transient Voltage Suppressors

for ESD Protection

Features

- Low leakage
- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant



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

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

Parameter	Symbol	Value	Unit
Peak Power Dissipation @ 1ms ¹⁾	P_{PK}	40	W
Total Power Dissipation	P_D	225	mW
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance - Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$

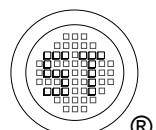
¹⁾ Non-repetitive current pulse per Figure 1 and derate above $T_a = 25^\circ\text{C}$ per Figure 2.

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

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	22	V
Reverse Breakdown Voltage at $I_R = 1 \text{ mA}$	V_{BR}	25.65	-	28.35	V
Reverse Current at $V_{RWM} = 22 \text{ V}$	I_R	-	-	50	nA
Forward Voltage at $I_F = 200 \text{ mA}$	V_F	-	-	1.1	V
Clamping Voltage at $I_{PP} = 1 \text{ A}$, $t_p = 10 / 1000 \mu\text{s}$	V_C	-	-	40	V
ESD Clamping Voltage at $I_{TLP} = 4 \text{ A}$, $t_p = 0.2/100 \text{ ns}$ at $I_{TLP} = 16 \text{ A}$, $t_p = 0.2/100 \text{ ns}$	V_{CL}	-	27.3 29.5	-	V
Junction Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_J	-	-	70	pF
Dynamic Resistance ¹⁾	R_{dyn}	-	0.18	-	Ω

¹⁾ Dynamic Resistance calculated from $I_{TLP} = 4 \text{ A}$ to $I_{TLP} = 16 \text{ A}$.



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Electrical Characteristics Curves

Fig 1. Pulse Waveform

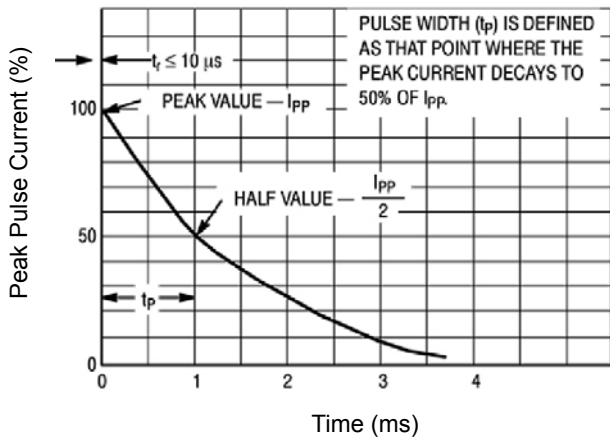


Fig 2. Pulse Derating Curve

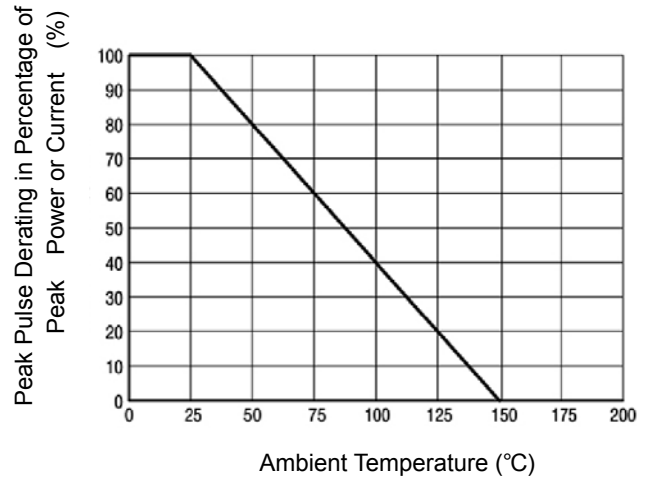


Fig 3. Clamping Voltage Curve

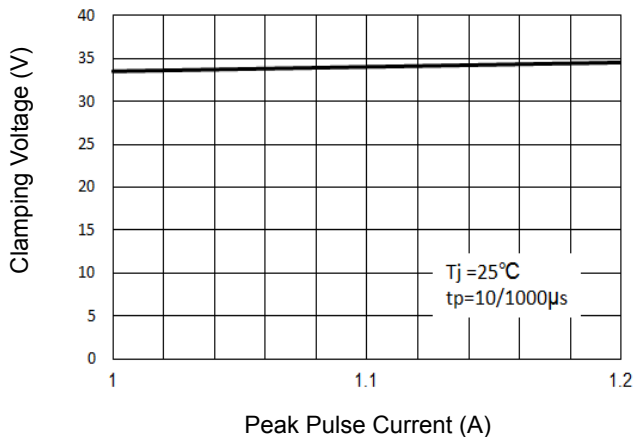


Fig 4. Junction Capacitance

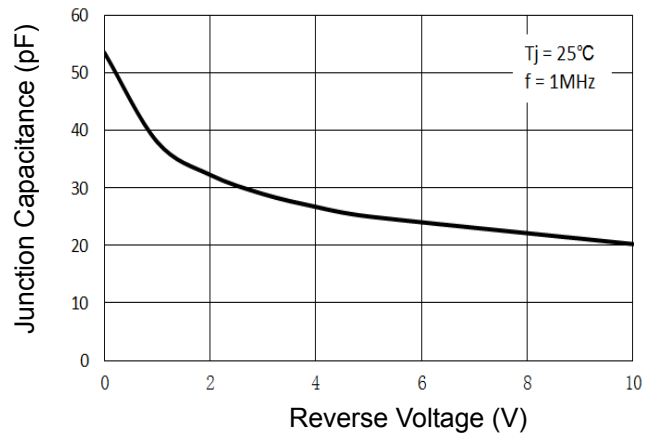
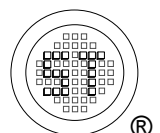
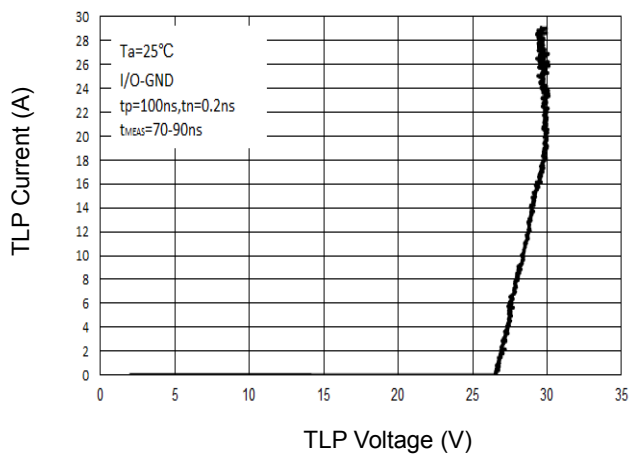


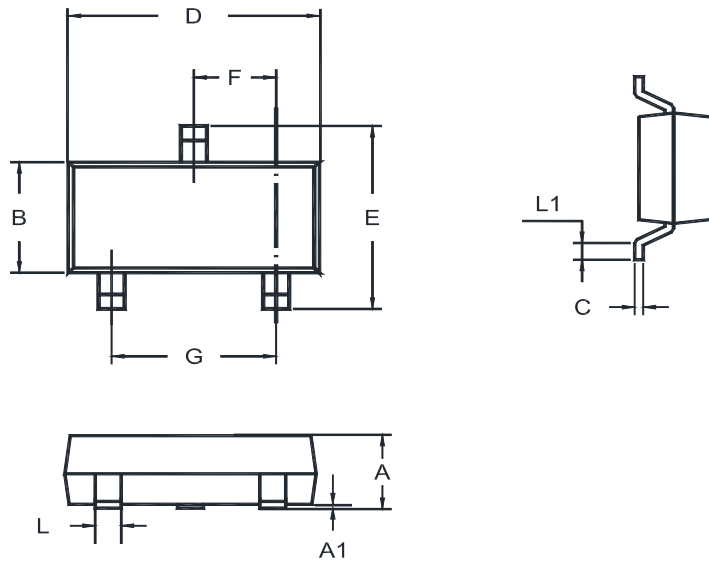
Fig 5. TLP Curve



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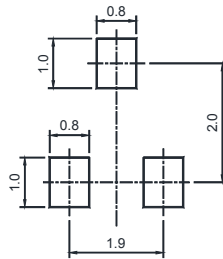
Package Outline (Dimensions in mm)

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



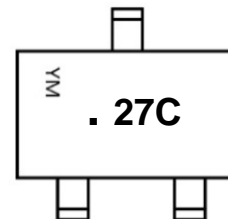
Packing information

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

- " 27C " = Part No.
- " • " = HAF (Halogen and Antimony Free)
- " YM " = Date Code Marking
- " Y " = Year
- " M " = Month

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