

Dual Zener Diodes

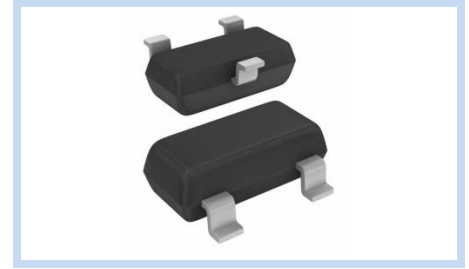
225mW SOT-23 Common Anode

MMBZ-CA Series

MERITEK

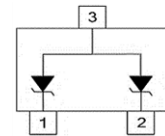
FEATURE

- Breakdown Voltage Range: 5.6V to 33V
- Power Dissipation: 225mW
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications
- Application: Power Management Systems, Voltage Regulation



MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable Per MIL-STD-750, Method 2026



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbols	Value	Unit
Peak Power Dissipation (1 ms)	MMBZ5V6CA~MMBZ10CA	P _{PK}	24	W
	MMBZ12CA~MMBZ33CA		40	
Power Dissipation		P _D	225	mW
Maximum Forward Voltage at I _F =10mA		V _F	0.9	V
Resistance Junction to Ambient		R _{θJA}	556	°C/W
Junction and Storage Temperature Range,		T _J , T _{STG}	-55~+150	°C

Note:

1. T_A =25°C unless otherwise noted.
2. Non-repetitive current pulse waveform shown as Fig. Pulse Waveform
3. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

ELECTRICAL CHARACTERISTICS

Part Number	Reverse Stand-off Voltage	Reverse Current	Breakdown Voltage			Clamping Voltage	
	V _{RWN}	I _R at V _{RWN}	V _{BR} at I _T		I _T	V _C at I _{PP}	I _{PP}
	(V)	(μA)	Min (V)	Max (V)	(mA)	(V)	(A)
MMBZ5V6CA	3.0	5.0	5.32	5.88	20	8.0	3.00
MMBZ6V2CA	3.0	0.5	5.89	6.51	1	8.7	2.76
MMBZ6V8CA	4.5	0.5	6.46	7.14	1	9.6	2.50
MMBZ9V1CA	6.0	0.5	8.60	9.56	1	14.0	1.70
MMBZ10CA	6.5	0.5	9.50	10.50	1	14.2	1.70
MMBZ12CA	8.5	0.5	11.40	12.60	1	17.0	2.35
MMBZ15CA	12.0	0.5	14.25	15.75	1	21.0	1.90
MMBZ18CA	14.5	0.5	17.10	18.90	1	25.0	1.60
MMBZ20CA	17.0	0.5	19.00	21.00	1	28.0	1.40
MMBZ27CA	22.0	0.5	25.65	28.35	1	40.0	1.00
MMBZ33CA	26.0	0.5	31.35	34.65	1	46.0	0.87

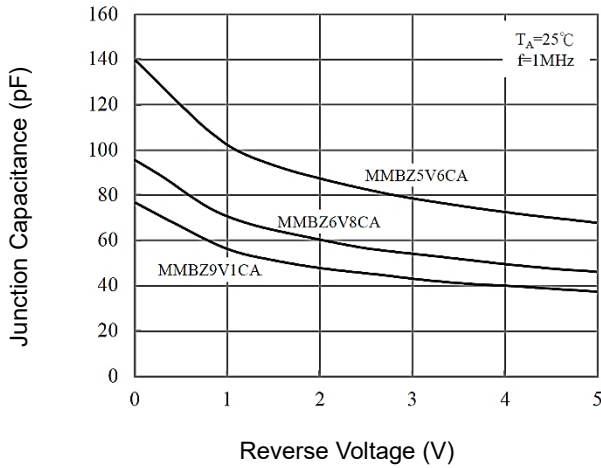
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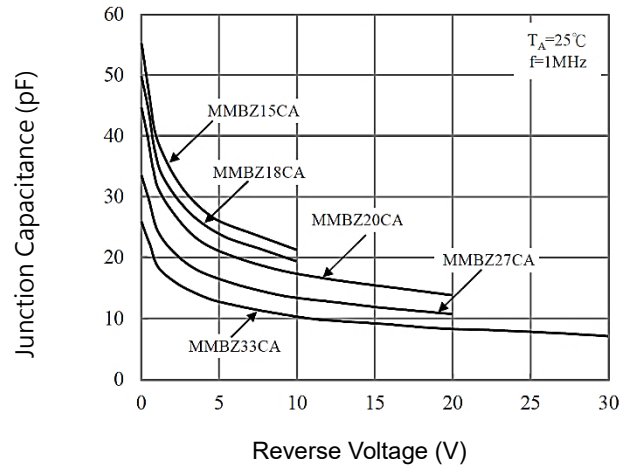
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CHARACTERISTIC CURVES

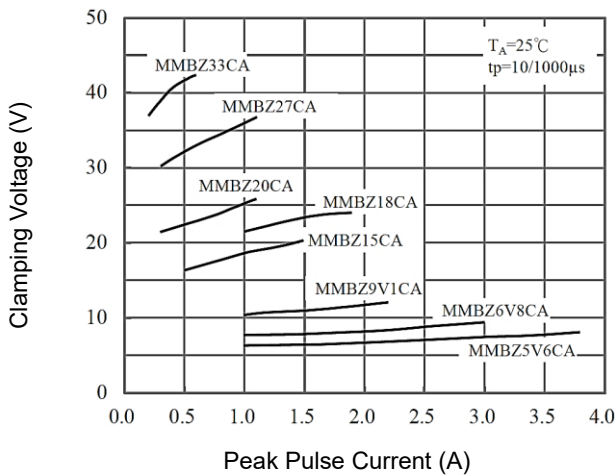
Junction Capacitance at lower Breakdown Voltage



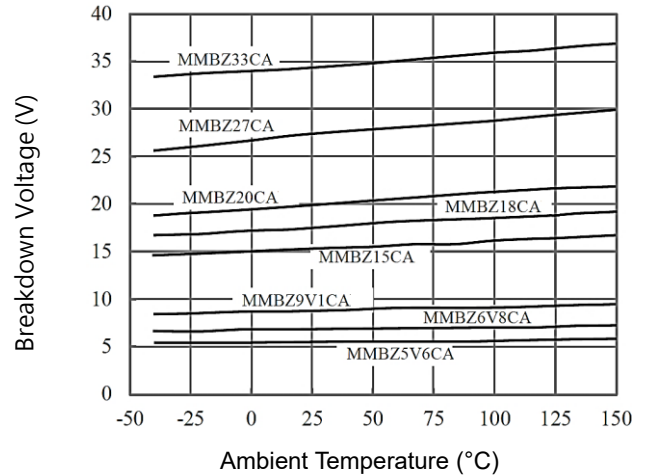
Junction Capacitance at higher Breakdown Voltage



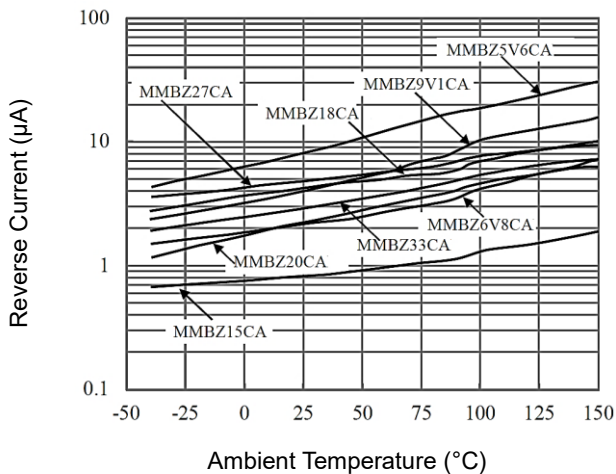
Clamping Voltage Curve



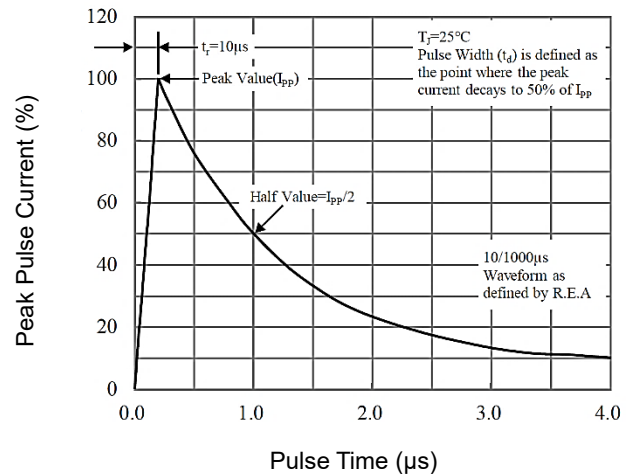
On-Resistance vs. Junction Temperature



Reverse Current vs. Temperature



Pulse Waveform



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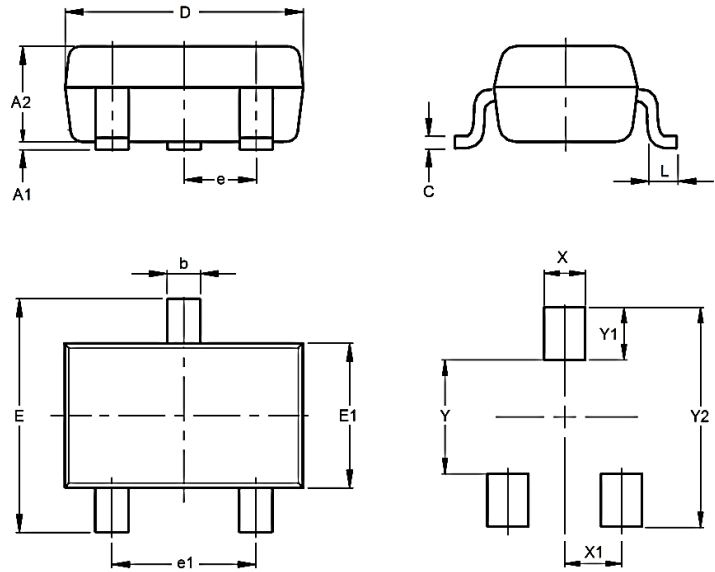
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.79	1.40
b	0.30	0.50
C	0.05	0.20
D	2.70	3.10
e	0.85	1.05
e1	1.70	2.10
E	2.10	2.80
E1	1.20	1.60
L	0.15	-
X	0.80	
X1	0.95	
Y	1.00	
Y1	1.00	
Y2	3.00	



*Specifications subject to change without notice.