

MM3Z2V0B~MM3Z39B

SILICON PLANAR ZENER DIODES

Features

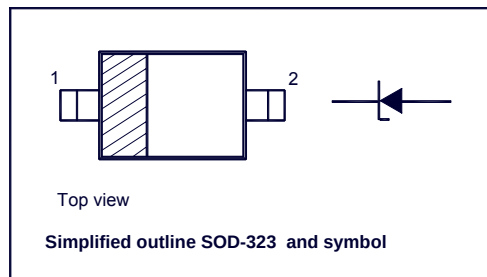
- Total power dissipation : max. 300 mW
- Small plastic package suitable for surface mounted design
- High reliability

Description

Silicon planar zener diode in a small plastic SMD SOD-323 package

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

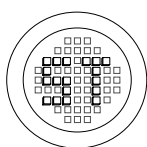


Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^{\circ}\text{C}$

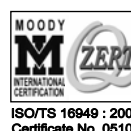
Characteristics at $T_{\text{amb}} = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	0.3	K/mW
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V



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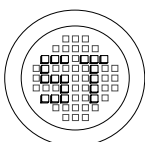
Dated : 02/08/2006

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Type	Marking Code	Zener Voltage Range ¹⁾			Dynamic Impedance ²⁾		Reverse Leakage Current		Temp. coefficient of Zener Voltage
		V _{znom} V	I _{zT} mA	for V _{zT} V	Z _z (Max) Ω	at I _z mA	I _R (Max) μA	at V _R V	
MM3Z2V0B	B0	2.0	5	1.8...2.15	100	5	120	0.5	-0.09...-0.06
MM3Z2V2B	MF	2.2	5	2.08...2.33	100	5	120	0.7	-0.09...-0.06
MM3Z2V4B	7C	2.4	5	2.3...2.65	100	5	120	1	-0.09...-0.06
MM3Z2V7B	7D	2.7	5	2.65...2.95	110	5	120	1	-0.09...-0.06
MM3Z3V0B	7E	3.0	5	2.95...3.25	120	5	50	1	-0.08...-0.05
MM3Z3V3B	7F	3.3	5	3.25...3.55	120	5	20	1	-0.08...-0.05
MM3Z3V6B	7H	3.6	5	3.6...3.845	100	5	10	1	-0.08...-0.05
MM3Z3V9B	7J	3.9	5	3.89...4.16	100	5	5	1	-0.08...-0.05
MM3Z4V3B	7K	4.3	5	4.17...4.43	100	5	5	1	-0.06...-0.03
MM3Z4V7B	7M	4.7	5	4.55...4.75	100	5	2	1	-0.05...+0.02
MM3Z5V1B	7N	5.1	5	4.98...5.2	80	5	2	1.5	-0.02...+0.02
MM3Z5V6B	7P	5.6	5	5.49...5.73	60	5	1	2.5	-0.05...+0.05
MM3Z6V2B	7R	6.2	5	6.06...6.33	60	5	1	3	0.03...0.06
MM3Z6V8B	7X	6.8	5	6.65...6.93	40	5	0.5	3.5	0.03...0.07
MM3Z7V5B	7Y	7.5	5	7.28...7.6	30	5	0.5	4	0.03...0.07
MM3Z8V2B	7Z	8.2	5	8.02...8.36	30	5	0.5	5	0.03...0.08
MM3Z9V1B	8A	9.1	5	8.85...9.23	30	5	0.5	6	0.03...0.09
MM3Z10B	8B	10	5	9.77...10.21	30	5	0.1	7	0.03...0.1
MM3Z11B	8C	11	5	10.76...11.22	30	5	0.1	8	0.03...0.11
MM3Z12B	8D	12	5	11.74...12.24	30	5	0.1	9	0.03...0.11
MM3Z13B	8E	13	5	12.91...13.49	37	5	0.1	10	0.03...0.11
MM3Z15B	8F	15	5	14.34...14.98	42	5	0.1	11	0.03...0.11
MM3Z16B	8H	16	5	15.85...16.51	50	5	0.1	12	0.03...0.11
MM3Z18B	8J	18	5	17.56...18.35	65	5	0.1	13	0.03...0.11
MM3Z20B	8K	20	5	19.52...20.39	85	5	0.1	15	0.03...0.11
MM3Z22B	8M	22	5	21.54...22.47	100	5	0.1	17	0.04...0.12
MM3Z24B	8N	24	5	23.72...24.78	120	5	0.1	19	0.04...0.12
MM3Z27B	8P	27	5	26.19...27.53	150	2	0.1	21	0.04...0.12
MM3Z30B	8R	30	5	29.19...30.69	200	2	0.1	23	0.04...0.12
MM3Z33B	8X	33	5	32.15...33.79	250	2	0.1	25	0.04...0.12
MM3Z36B	8Y	36	5	35.07...36.87	300	2	0.1	27	0.04...0.12
MM3Z39B	8Z	39	5	37...41	100	2	2	30	0.04...0.12

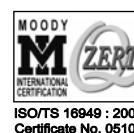
¹⁾ V_z is tested with pulses (20 ms).

²⁾ Z_z is measured at I_z by given a very small A.C. current signal.



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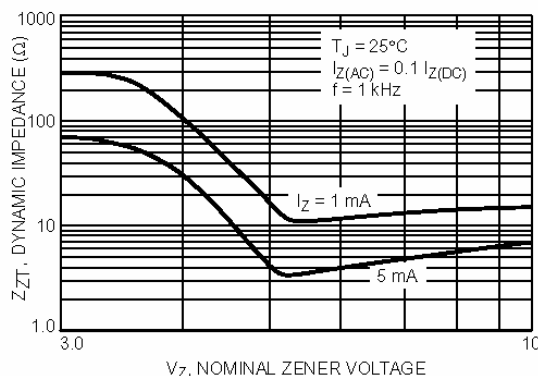


Figure 1. Effect of Zener Voltage on Zener Impedance

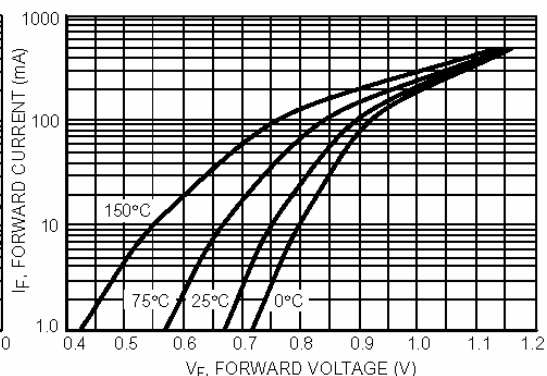


Figure 2. Typical Forward Voltage

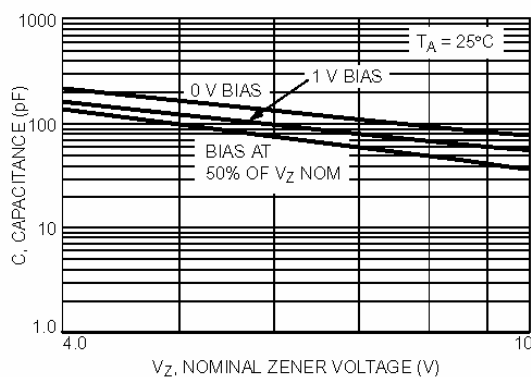


Figure 3. Typical Capacitance

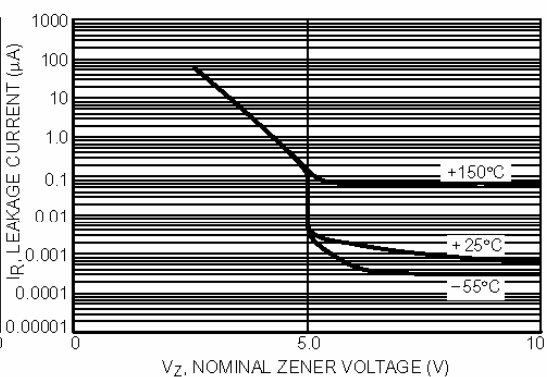


Figure 4. Typical Leakage Current

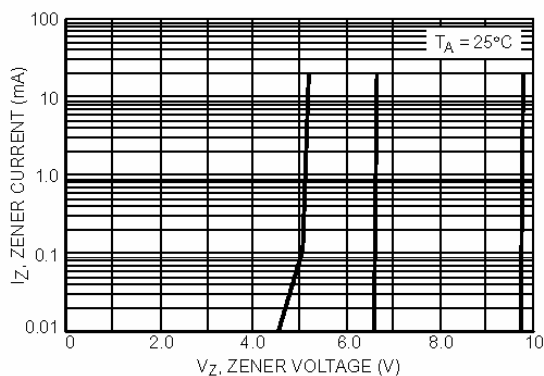
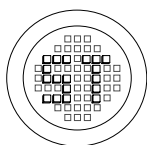
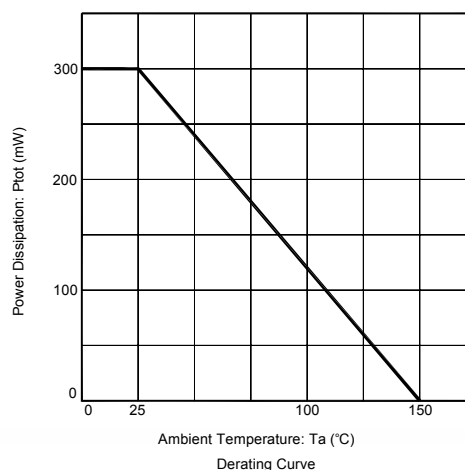


Figure 5. Zener Voltage versus Zener Current (V_Z Up to 9 V)



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ISO/TS 16949 : 2002
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ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

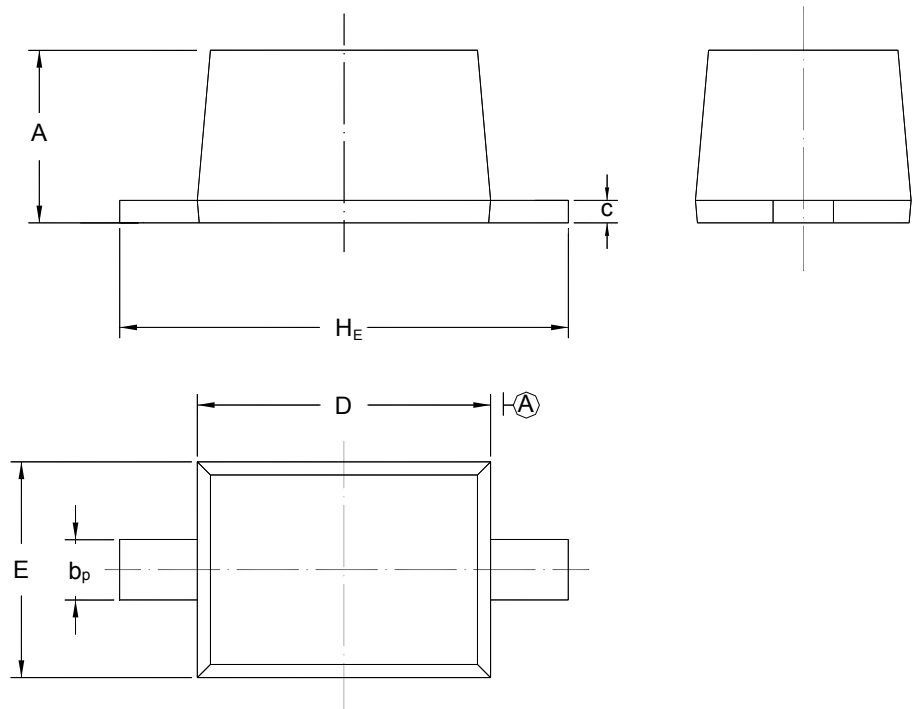
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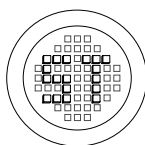
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E
mm	1.10 0.80	0.40 0.25	0.15 0.00	1.80 1.60	1.35 1.15	2.80 2.30



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