Micro Commercial Components
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BZT52C2V4S THRU BZT52C39S

200 mW

Zener Diodes

2.4 to 39 Volts

Features

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes

Mechanical Data

- Case: SOD-323 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. Weight: 0.008 gram
- Mounting Position: Any
- Storage & Operating Junction Temperature: -55°C to +150°C

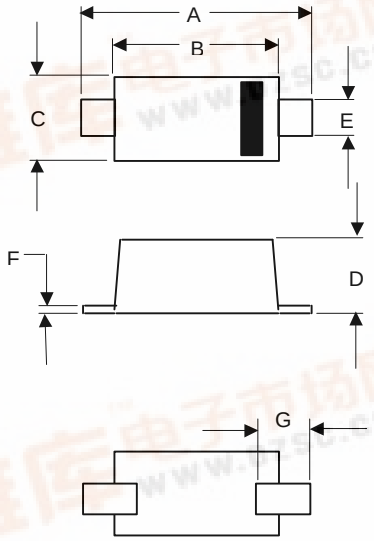
Maximum Ratings @ 25°C Unless Otherwise Specified

Zener Current	I_F	**100**	**mA**
Maximum Forward Voltage	V_F	**1.2**	**V**
Power Dissipation (Notes A)	$P_{(AV)}$	**200**	**mWatt**
Peak Forward Surge Current (Notes B)	I_{FSM}	**2.0**	**Amps**

NOTES:

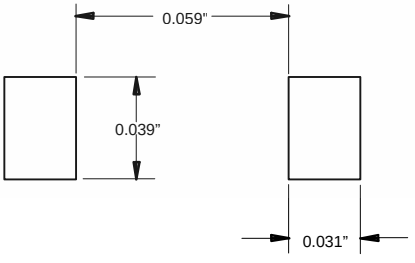
A. Mounted on 5.0mm2(.013mm thick) land areas.
B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

SOD323



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.068	.078	1.75	1.95	
C	.045	.054	1.15	1.35	
D	.027	.038	0.70	0.95	
E	.009	.014	0.25	0.35	
F	.002	.006	0.05	0.15	
G	.012	---	0.30	---	

SUGGESTED SOLDER PAD LAYOUT



BZT52C2V4S thru BZT52C39S

Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC PART NUMBER	Marking	NORMAL ZENER VOLTAGE Vz@ Izt	TEST CURRENT Izt	MAXIMUM ZENER IMPEDANCE 'B' SUFFIX ONLY Zzt @ Izt	Zzk @ Izk=0.25mA	MAXIMUM REVERSE LEAKAGE CURRENT Ir @ Vr		TYPICAL TEMP COEFFICIENT
		VOLTS	mA	OHMS	OHMS	uA	VOLTS	T_C
BZT52C2V4S	W1	2.4	5	85	600	100	1.0	-0.075
BZT52C2V7S	W2	2.7	5	83	500	75	1.0	-0.065
BZT52C3S	W3	3.0	5	95	500	50	1.0	-0.060
BZT52C3V3S	W4	3.3	5	95	500	25	1.0	-0.055
BZT52C3V6S	W5	3.6	5	95	500	15	1.0	-0.055
BZT52C3V9S	W6	3.9	5	95	500	10	1.0	-0.050
BZT52C4V3S	W7	4.3	5	95	500	5.0	1.0	-0.035
BZT52C4V7S	W8	4.7	5	78	500	5.0	2.0	-0.015
BZT52C5V1S	W9	5.1	5	60	480	0.1	0.8	+0.005
BZT52C5V6S	WA	5.6	5	40	400	0.1	1.0	+0.020
BZT52C6V2S	WB	6.2	5	10	200	0.1	2.0	+0.030
BZT52C6V8S	WC	6.8	5	8.0	150	0.1	3.0	+0.045
BZT52C7V5S	WD	7.5	5	7.0	50	0.1	5.0	+0.050
BZT52C8V2S	WE	8.2	5	7.0	50	0.1	6.0	+0.055
BZT52C9V1S	WF	9.1	5	10	50	0.1	7.0	+0.065
BZT52C10S	WG	10	5	15	70	0.1	7.5	+0.070
BZT52C11S	WH	11	5	20	70	0.1	8.5	+0.075
BZT52C12S	WI	12	5	20	90	0.1	9.0	+0.080
BZT52C13S	WK	13	5	25	110	0.1	10	+0.080
BZT52C15S	WL	15	5	30	110	0.1	11	+0.090
BZT52C16S	WM	16	5	40	170	0.1	12	+0.090
BZT52C18S	WN	18	5	50	170	0.1	14	+0.090
BZT52C20S	WO	20	5	50	220	0.1	15	+0.090
BZT52C22S	WP	22	5	55	220	0.1	17	+0.090
BZT52C24S	WR	24	5	80	220	0.1	18	+0.090
BZT52C27S	WS	27	5	80	250	0.1	20	+0.090
BZT52C30S	WT	30	5	80	250	0.1	22.5	+0.090
BZT52C33S	WU	33	5	80	250	0.1	25	+0.090
BZT52C36S	WW	36	5	90	250	0.1	27	+0.090
BZT52C39S	WX	39	5	90	300	0.1	29	+0.110

NOTE:

1. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
2. Specials Available Include:
   A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
   B. Matched sets.
3. Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30°C, from the diode body.
4. Zener Impedance (Z_Z) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.
5. Surge Current (I_R) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I_{ZT}, per JEDEC registration; however, actual device capability is as described in Figure 5.

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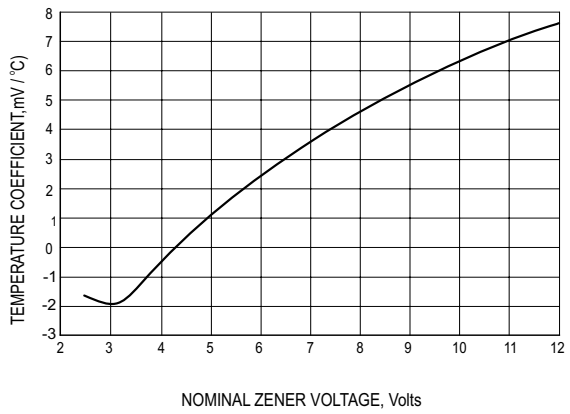
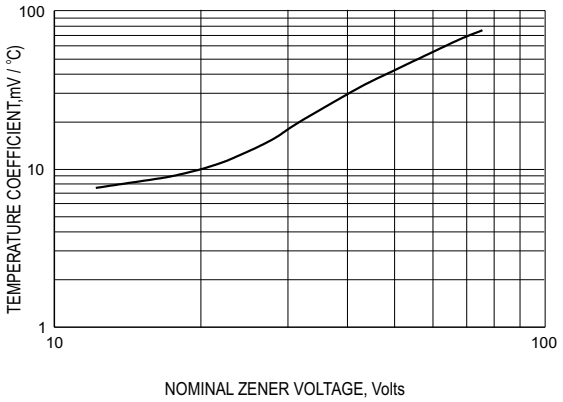
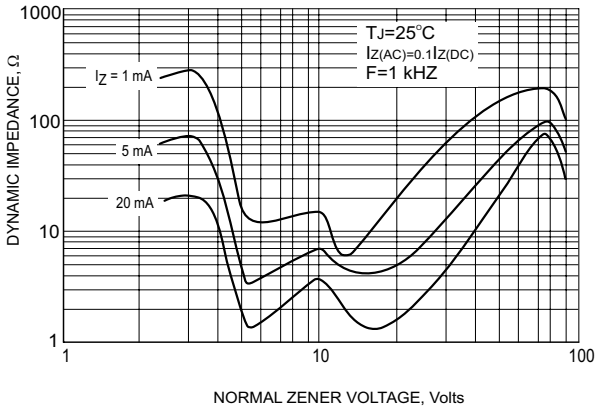


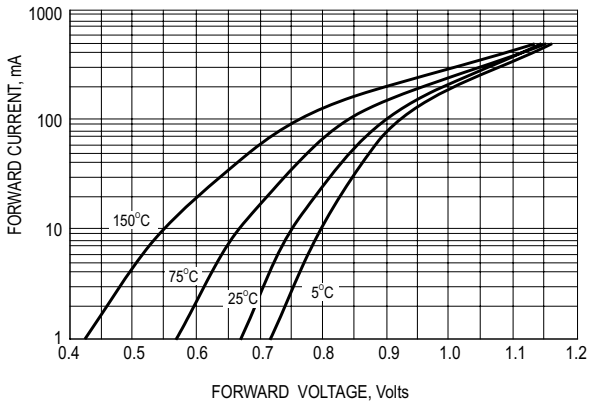
TYPICAL REVERSE CURRENT



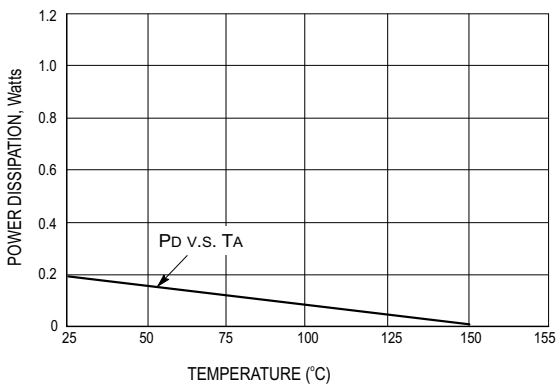
STEADY STATE POWER DERATING



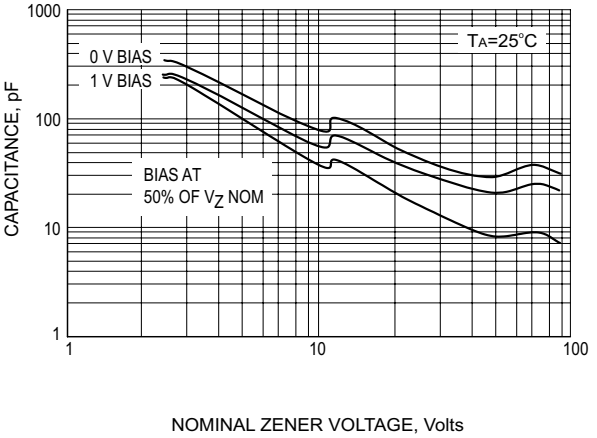
EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE



TYPICAL FORWARD VOLTAGE



STEADY STATE POWER DERATING



TYPICAL CAPACITANCE

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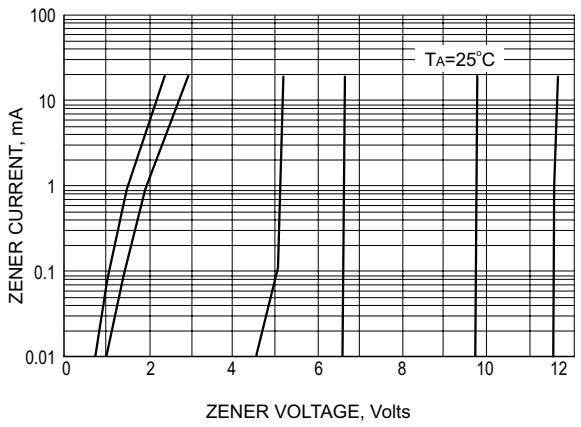
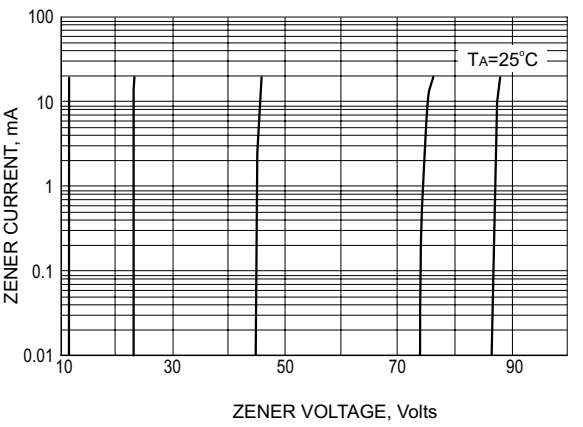
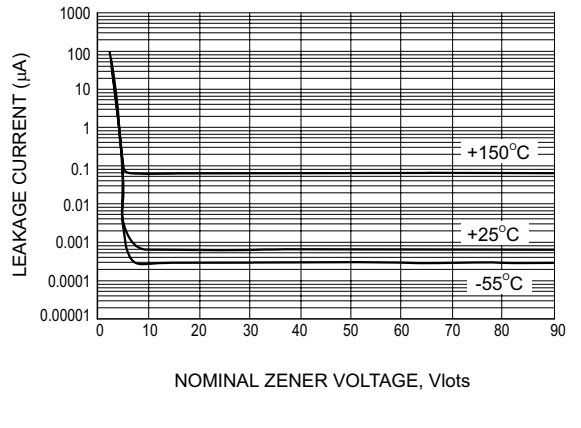


ZENER VOLTAGE V.S. ZENER CURRENT



ZENER VOLTAGE V.S. ZENER CURRENT



TYPICAL LEAKGE CURRENT