



Micro Commercial Components  
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# BZT52C2V4 THRU BZT52C39

## Features

- Planar Die construction
- 410mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes

## Mechanical Data

- Case: SOD-123 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. Weight: 0.008 gram
- Mounting Position: Any
- Storage & Operating Junction Temperature:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$

Maximum Ratings @  $25^{\circ}\text{C}$  Unless Otherwise Specified

<b>Zener Current</b>	<b><math>I_F</math></b>	<b>100</b>	<b>mA</b>
<b>Maximum Forward Voltage</b>	<b><math>V_F</math></b>	<b>1.2</b>	<b>V</b>
<b>Power Dissipation (Notes A)</b>	<b><math>P_{(AV)}</math></b>	<b>410</b>	<b>mWatt</b>
<b>Peak Forward Surge Current (Notes B)</b>	<b><math>I_{FSM}</math></b>	<b>2.0</b>	<b>Amps</b>

### NOTES:

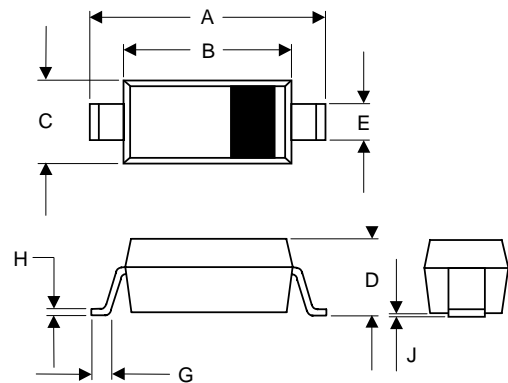
- A. Mounted on  $5.0\text{mm}^2$  (.013mm thick) land areas.  
B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

**410 mW**

**Zener Diodes**

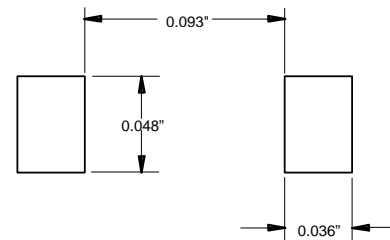
**2.4 to 39 Volts**

## SOD123



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	-----	.053	-----	1.35	
E	.012	.031	0.30	.78	
G	.006	-----	0.15	-----	
H	-----	.01	-----	.25	
J	-----	.006	-----	.15	

### SUGGESTED SOLDER PAD LAYOUT



# BZT52C2V4 thru BZT52C39

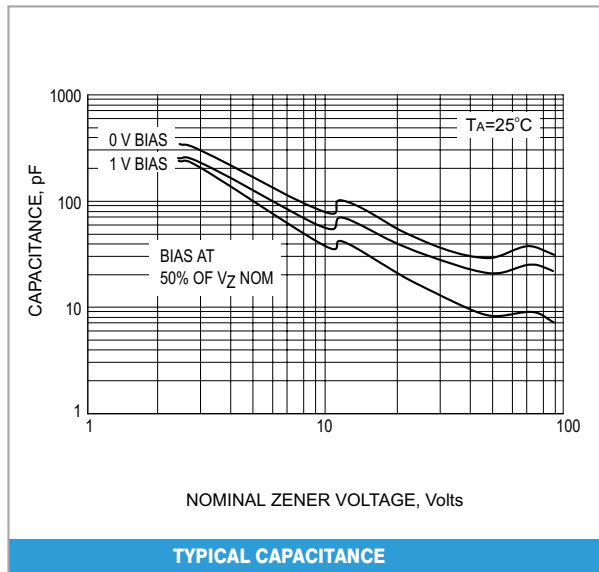
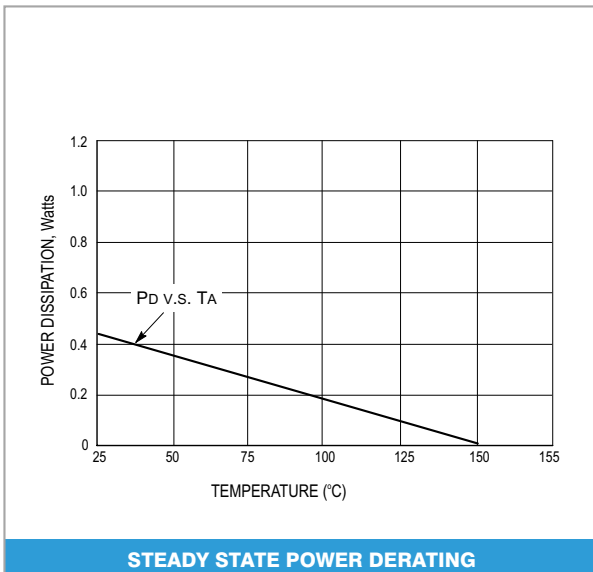
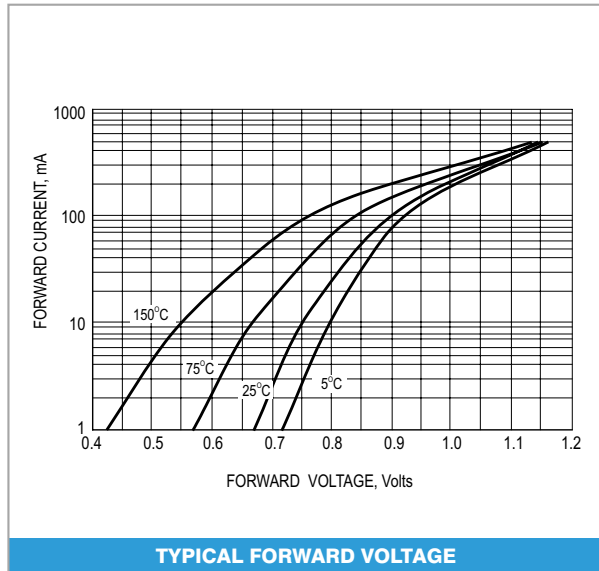
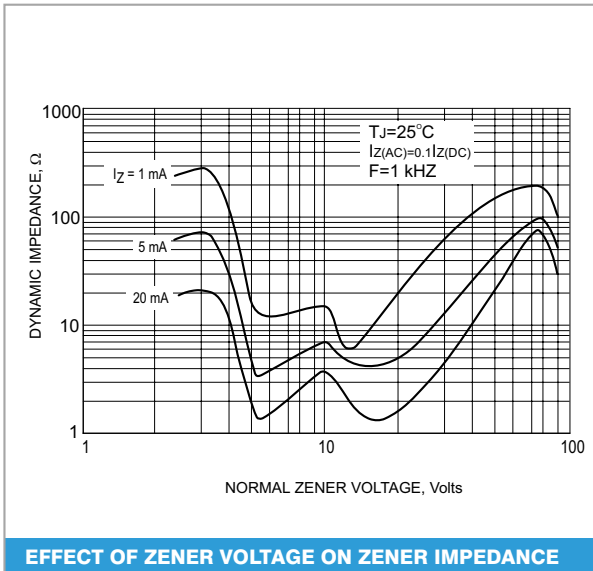
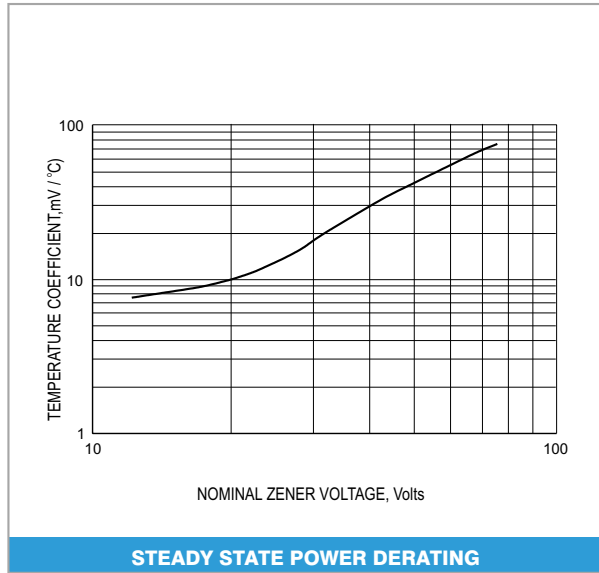
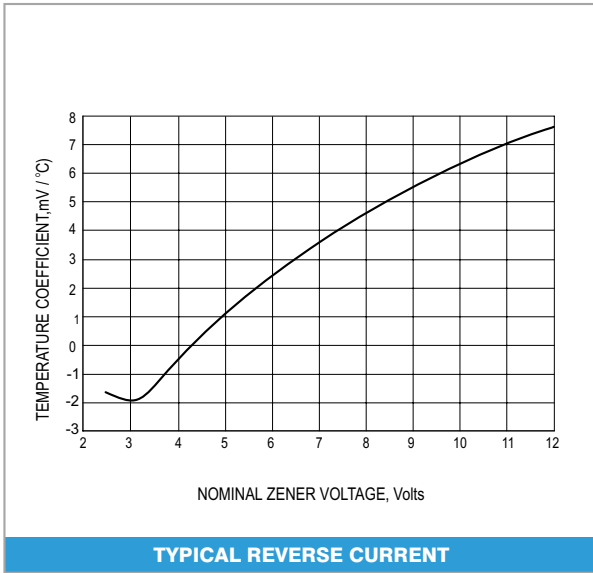
Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC PART NUMBER	Marking	NORMAL ZENER VOLTAGE	TEST CURRENT I <sub>zt</sub>	MAXIMUM ZENER IMPEDANCE 'B' SUFFIX ONLY		MAXIMUM REVERSE LEAKAGE CURRENT		Max. Zener Current
		V <sub>z</sub> @ I <sub>zt</sub>		Z <sub>zt</sub> @ I <sub>zt</sub>	Z <sub>zk</sub> @ I <sub>zk</sub> =1.0mA	I <sub>r</sub> @ V <sub>r</sub>	I <sub>zm</sub> @ T <sub>A</sub>	
		VOLTS	mA	OHMS	OHMS	nA	VOLTS	mA
BZT52C2V4	W1	2.4	5	85	600	100000	1.0	-
BZT52C2V7	W2	2.7	5	83	500	75000	1.0	134
BZT52C3	W3	3.0	5	95	500	50000	1.0	118
BZT52C3V3	W4	3.3	5	95	500	25000	1.0	109
BZT52C3V6	W5	3.6	5	95	500	15000	1.0	100
BZT52C3V9	W6	3.9	5	95	500	10000	1.0	92
BZT52C4V3	W7	4.3	5	95	500	5000	1.0	84
BZT52C4V7	W8	4.7	5	78	500	5000	1.0	76
BZT52C5V1	W9	5.1	5	60	480	100	0.8	67
BZT52C5V6	WA	5.6	5	40	400	100	1.0	59
BZT52C6V2	WB	6.2	5	10	200	100	2.0	54
BZT52C6V8	WC	6.8	5	8.0	150	100	3.0	49
BZT52C7V5	WD	7.5	5	7.0	50	100	5.0	44
BZT52C8V2	WE	8.2	5	7.0	50	100	6.0	40
BZT52C9V1	WF	9.1	5	10	50	100	7.0	36
BZT52C10	WG	10	5	15	70	100	7.5	33
BZT52C11	WH	11	5	20	70	100	8.5	30
BZT52C12	WI	12	5	20	90	100	9.0	28
BZT52C13	WK	13	5	25	110	100	10	25
BZT52C15	WL	15	5	30	110	100	11	23
BZT52C16	WM	16	5	40	170	100	12	20
BZT52C18	WN	18	5	50	170	100	14	18
BZT52C20	WO	20	5	50	220	100	15	17
BZT52C22	WP	22	5	55	220	100	17	16
BZT52C24	WR	24	5	80	220	100	18	13
BZT52C27	WS	27	5	80	250	100	20	12
BZT52C30	WT	30	5	80	250	100	22.5	10
BZT52C33	WU	33	5	80	250	100	25	9
BZT52C36	WW	36	5	90	250	100	27	9
BZT52C39	WX	39	5	90	300	100	29	8

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<sub>z</sub>) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T<sub>L</sub>) at 30°C, from the diode body.
4. Zener Impedance (Z<sub>z</sub>) 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<sub>zt</sub> or I<sub>zk</sub>) is superimposed on I<sub>zt</sub> or I<sub>zk</sub>.
5. Surge Current (I<sub>r</sub>) 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<sub>zt</sub>, per JEDEC registration; however, actual device capability is as described in Figure 5.

# BZT52C2V4 thru BZT52C39



BZT52C2V4 thru BZT52C39

