



**THE DATASHEET OF  
BZT52B75-TP**



## Features

- Standard Vz Tolerance is  $\pm 2\%$
- Planar Die Construction
- Ideally Suited for Automated Assembly Processes
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Thermal Resistance :  $304^{\circ}\text{C/W}$  Junction to Ambient (Note2)
- Thermal Resistance :  $250^{\circ}\text{C/W}$  Junction to Ambient (Note3)

Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	410mW	Diode on Ceramic Substrate 0.7 mm, 2.5 mm <sup>2</sup> Pad Areas
Power Dissipation	$P_D$	500mW	Diode on Ceramic Substrate 0.7 mm, 5 mm <sup>2</sup> Pad Areas
Maximum Forward Voltage	$V_F$	0.9V	$I_F=10\text{mA}$

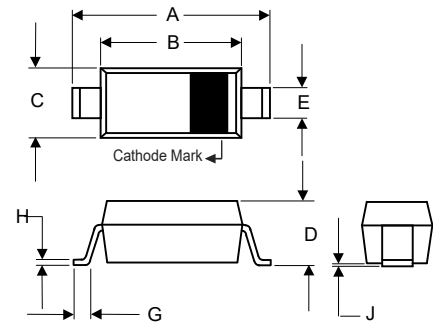
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2. Diode on Ceramic Substrate 0.7 mm, 2.5 mm<sup>2</sup> Pad Areas.

Note: 3. Diode on Ceramic Substrate 0.7 mm, 5 mm<sup>2</sup> Pad Areas.

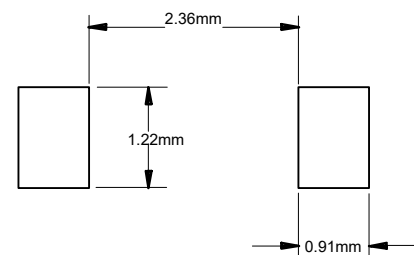
**500 mW  
Zener Diode  
2.4 to 75 Volts**

## SOD-123



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.006	----	0.15	

## SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage			Maximum Zener Impedance <sup>(4)</sup>				Reverse Current		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> (Max)	V <sub>R</sub>	
	Min.(V)	Nom(V)	Max.(V)	Ω	mA	Ω	mA	μA	V	
BZT52B2V4	2.35	2.4	2.45	85	5	600	1	100	1.0	2WX
BZT52B2V7	2.64	2.7	2.75	83	5	600	1	75	1.0	2W1
BZT52B3V0	2.94	3.0	3.06	95	5	600	1	50	1.0	2W2
BZT52B3V3	3.23	3.3	3.37	95	5	600	1	25	1.0	2W3
BZT52B3V6	3.52	3.6	3.67	95	5	600	1	15	1.0	2W4
BZT52B3V9	3.82	3.9	3.98	95	5	600	1	10	1.0	2W5
BZT52B4V3	4.21	4.3	4.39	95	5	600	1	5	1.0	2W6
BZT52B4V7	4.61	4.7	4.79	78	5	500	1	5	2.0	2W7
BZT52B5V1	5.0	5.1	5.2	60	5	480	1	0.1	0.8	2W8
BZT52B5V6	5.49	5.6	5.71	40	5	400	1	0.1	1.0	2W9
BZT52B6V2	6.08	6.2	6.32	10	5	150	1	0.1	2.0	2WA
BZT52B6V8	6.66	6.8	6.94	8	5	80	1	0.1	3.0	2WB
BZT52B7V5	7.35	7.5	7.65	7	5	80	1	0.1	5.0	2WC
BZT52B8V2	8.04	8.2	8.36	7	5	80	1	0.1	6.0	2WD
BZT52B9V1	8.92	9.1	9.28	10	5	100	1	0.1	7.0	2WE
BZT52B10	9.80	10	10.2	15	5	150	1	0.1	7.5	2WF
BZT52B11	10.78	11	11.22	20	5	150	1	0.1	8.5	2WG
BZT52B12	11.76	12	12.24	20	5	150	1	0.1	9.0	2WH
BZT52B13	12.74	13	13.3	25	5	170	1	0.1	10.0	2WI
BZT52B15	14.7	15	15.3	30	5	200	1	0.1	11.0	2WJ
BZT52B16	15.68	16	16.3	40	5	200	1	0.1	12.0	2WK
BZT52B18	17.6	18	18.4	50	5	225	1	0.1	14.0	2WL
BZT52B20	19.6	20	20.4	50	5	225	1	0.1	15.0	2WM
BZT52B22	21.56	22	22.44	55	5	250	1	0.1	17.0	2WN
BZT52B24	23.52	24	24.5	70	5	250	1	0.1	18.0	WR
BZT52B27	26.46	27	27.54	80	2	300	1	0.1	20.0	2WP
BZT52B30	29.4	30	30.6	80	2	300	1	0.1	22.5	WT
BZT52B33	32.34	33	33.7	80	2	325	1	0.1	25.0	2WR
BZT52B36	35.28	36	36.72	90	2	350	1	0.1	27.0	2WS
BZT52B39	38.22	39	39.8	90	2	350	1	0.1	29.0	2WT
BZT52B43	42.14	43	43.86	100	2	375	1	0.1	32.0	2WU
BZT52B47	46.06	47	47.94	100	2	375	1	0.1	35.0	2WV
BZT52B51	49.98	51	52.02	100	2	400	1	0.1	38.0	2X1
BZT52B56	54.88	56	57.12	135	2	1000	1	0.1	42.0	2X2
BZT52B62	60.76	62	63.24	150	2	1000	1	0.1	46.0	X3
BZT52B68	66.64	68	69.36	200	2	1000	1	0.1	51.0	X4
BZT52B75	73.50	75	76.50	250	2	1000	1	0.1	56.0	2X5

Note : 4. f=1KHz

**Curve Characteristics**

Fig. 1 - Power Derating Curve

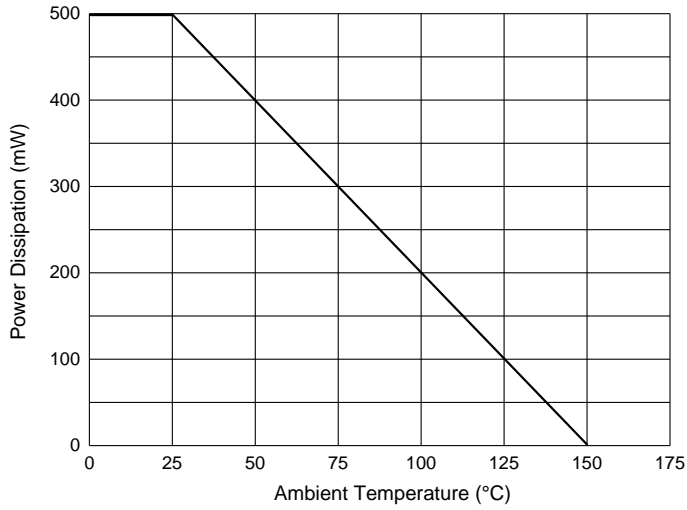


Fig. 2 - Typical Zener Breakdown Characteristics

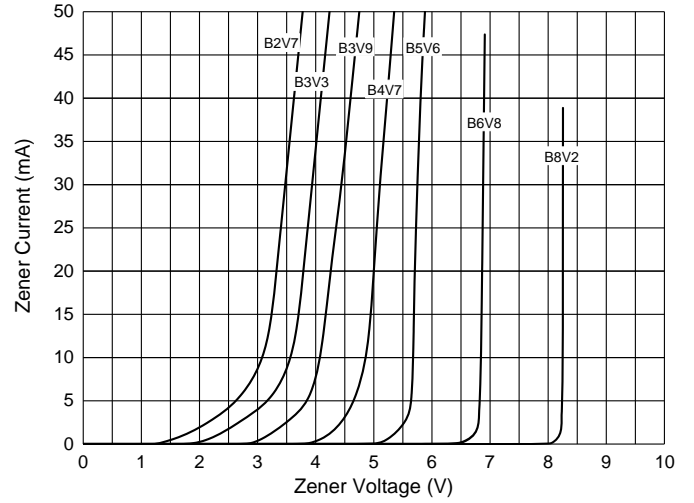


Fig. 3 - Typical Zener Breakdown Characteristics

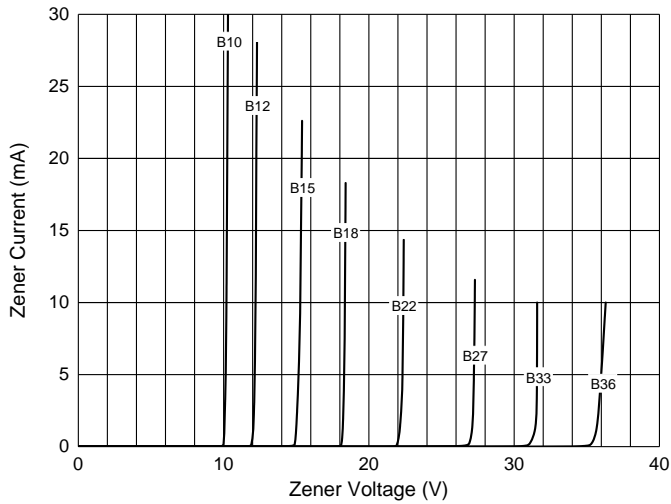
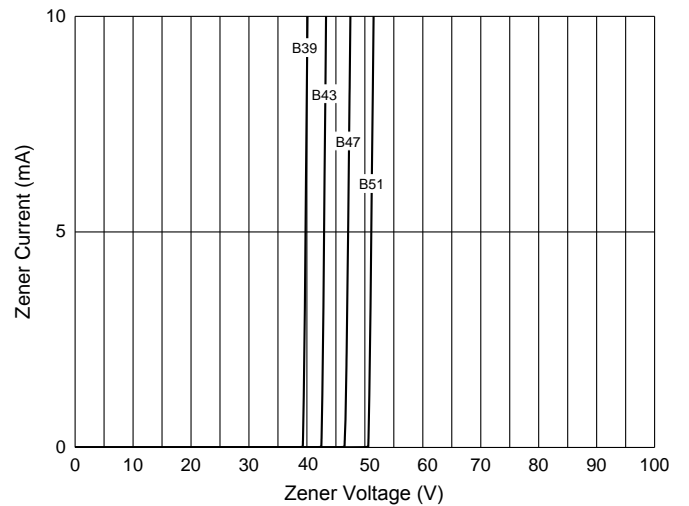


Fig. 4 - Typical Zener Breakdown Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages. **Micro Commercial Components Corp.** products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.