



**THE DATASHEET OF  
BZT52C5V1S-TP**



**Features**

- Planar Die Construction
- Ideally Suited for Automated Assembly Processes
- General Purpose Medium Current
- 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)

**200 mW  
Zener Diode  
2.4 to 56 Volts**

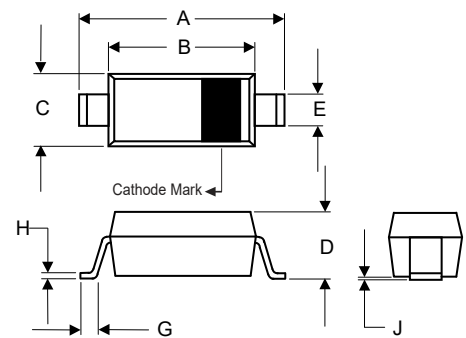
**Maximum Ratings**

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance :625°C/W Junction to Ambient

Parameter	Symbol	Rating	Conditions
Power Dissipation	P <sub>D</sub>	200mW	
Maximum Forward Voltage	V <sub>F</sub>	0.9V	I <sub>F</sub> =10mA

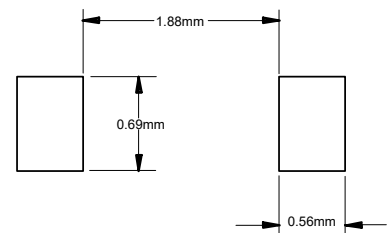
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**SOD-323**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	-----	0.006	-----	0.15	

**Suggested Solder Pad Layout**



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

MCC Part Number	Zener Voltage <sup>(2)</sup>			Maximum Zener Impedance <sup>(3)</sup>		Maximum Zener Impedance <sup>(3)</sup>		Reverse Current		Typical Temperature Coefficient @ I <sub>ZTC</sub>		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub>	I <sub>ZK</sub>	Z <sub>ZK</sub>	I <sub>R</sub> (Max)	V <sub>R</sub>	Min.	Max.	
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	μA	V	mV/°C		
BZT52C2V4S	2.28	2.4	2.56	5	100	1.0	600	50	1.0	-3.5	0	WX
BZT52C2V7S	2.5	2.7	2.9	5	100	1.0	600	20	1.0	-3.5	0	W1
BZT52C3V0S	2.8	3.0	3.2	5	95	1.0	600	10	1.0	-3.5	0	W2
BZT52C3V3S	3.1	3.3	3.5	5	95	1.0	600	5	1.0	-3.5	0	W3
BZT52C3V6S	3.4	3.6	3.8	5	90	1.0	600	5	1.0	-3.5	0	W4
BZT52C3V9S	3.7	3.9	4.1	5	90	1.0	600	3	1.0	-3.5	0	W5
BZT52C4V3S	4.0	4.3	4.6	5	90	1.0	600	3	1.0	-3.5	0	W6
BZT52C4V7S	4.4	4.7	5.0	5	80	1.0	500	3	2.0	-3.5	0.2	W7
BZT52C5V1S	4.8	5.1	5.4	5	60	1.0	480	2	2.0	-2.7	1.2	W8
BZT52C5V6S	5.2	5.6	6.0	5	40	1.0	400	1	2.0	-2.0	2.5	W9
BZT52C6V2S	5.8	6.2	6.6	5	10	1.0	150	3	4.0	0.4	3.7	WA
BZT52C6V8S	6.4	6.8	7.2	5	15	1.0	80	2	4.0	1.2	4.5	WB
BZT52C7V5S	7.0	7.5	7.9	5	15	1.0	80	1	5.0	2.5	5.3	WC
BZT52C8V2S	7.7	8.2	8.7	5	15	1.0	80	0.7	5.0	3.2	6.2	WD
BZT52C9V1S	8.5	9.1	9.6	5	15	1.0	100	0.5	6.0	3.8	7.0	WE
BZT52C10S	9.4	10	10.6	5	20	1.0	150	0.2	7.0	4.5	8.0	WF
BZT52C11S	10.4	11	11.6	5	20	1.0	150	0.1	8.0	5.4	9.0	WG
BZT52C12S	11.4	12	12.7	5	25	1.0	150	0.1	8.0	6.0	10.0	WH
BZT52C13S	12.4	13	14.1	5	30	1.0	170	0.1	8.0	7.0	11.0	WI
BZT52C15S	13.8	15	15.6	5	30	1.0	200	0.1	10.5	9.2	13.0	WJ
BZT52C16S	15.3	16	17.1	5	40	1.0	200	0.1	11.2	10.4	14.0	WK
BZT52C18S	16.8	18	19.1	5	45	1.0	225	0.1	12.6	12.4	16.0	WL
BZT52C20S	18.8	20	21.2	5	55	1.0	225	0.1	14.0	14.4	18.0	WM
BZT52C22S	20.8	22	23.3	5	55	1.0	250	0.1	15.4	16.4	20.0	WN
BZT52C24S	22.8	24	25.6	5	70	1.0	250	0.1	16.8	18.4	22.0	WO
BZT52C27S	25.1	27	28.9	2	80	0.5	300	0.1	18.9	21.4	25.3	WP
BZT52C30S	28	30	32	2	80	0.5	300	0.1	21.0	24.4	29.4	WQ
BZT52C33S	31	33	35	2	80	0.5	325	0.1	23.1	27.4	33.4	WR
BZT52C36S	34	36	38	2	90	0.5	350	0.1	25.2	30.4	37.4	WS
BZT52C39S	37	39	41	2	130	0.5	350	0.1	27.3	33.4	41.2	WT
BZT52C43S	40	43	46	2	100	0.5	700	0.1	32.0	10.0	12.0	WU
BZT52C47S	44	47	50	2	100	0.5	750	0.1	35.0	10.0	12.0	WV
BZT52C51S	48	51	54	2	100	0.5	750	0.1	38.0	10.0	12.0	WW
BZT52C56S	53	56	59	2	200	0.5	400	0.05	39.2	10.0	12.0	X1

Note : 2. Standard Zener voltage tolerance is ±5%  
3.f=1KHz

**Curve Characteristics**

Fig. 1 - Power Derating Curve

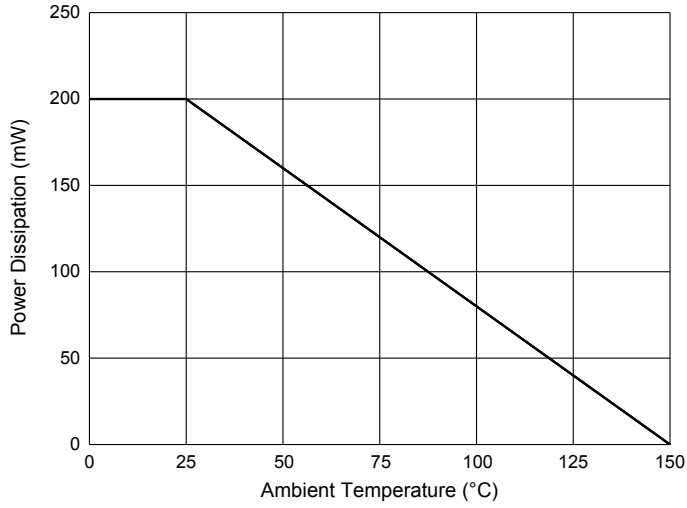


Fig. 2 - Typical Zener Breakdown Characteristics

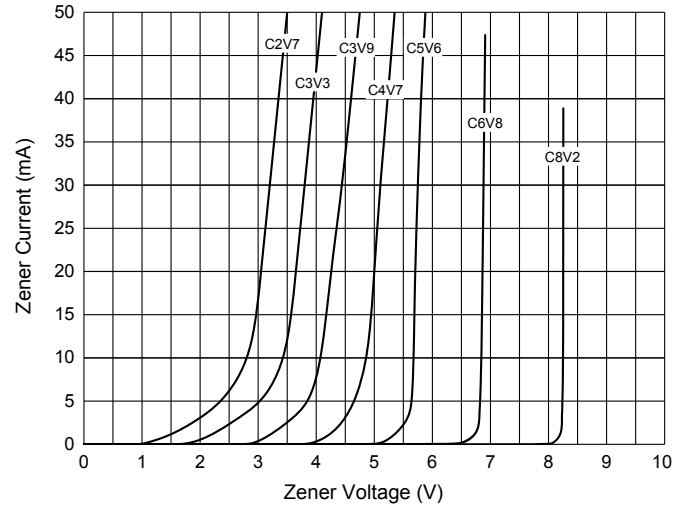
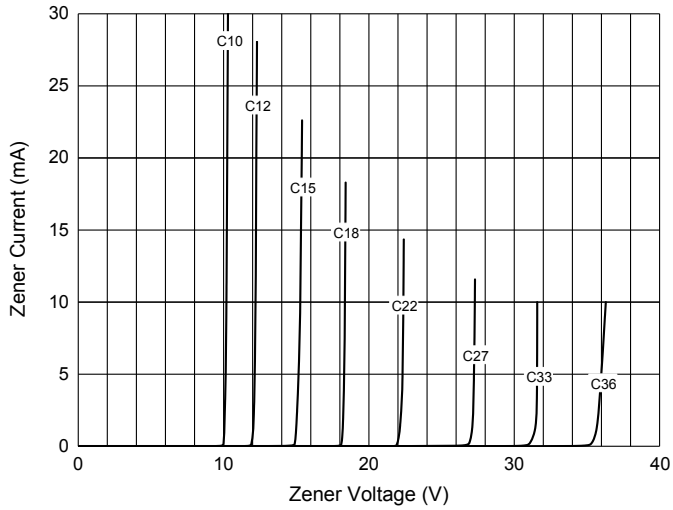


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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