

## Features

- Standard Vz Tolerance is  $\pm 2\%$
- Planar Die Construction
- Zener Voltages from 2.4V - 39V
- 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 t ("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(Note 2) :  $833^{\circ}\text{C/W}$  Junction to Ambient

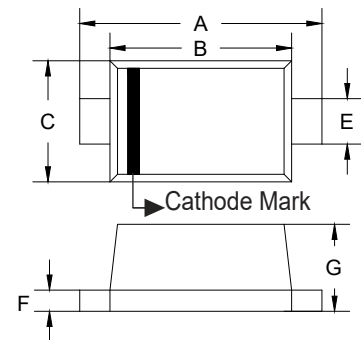
Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	150mW	Note 1
Maximum Forward Voltage	$V_F$	0.9V	$I_F=10\text{mA}$

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. Valid provided that device terminals are kept at ambient temperature and mounted on Suggested Pad Layout.

# 150 mWatt Zener Diodes 2.4 to 39 Volts

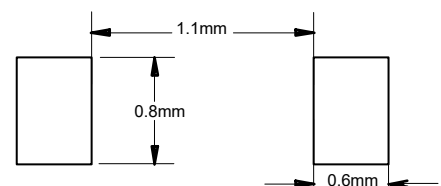
## SOD-523



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.043	0.051	1.10	1.30	
C	0.030	0.033	0.75	0.85	
E	0.010	0.014	0.25	0.35	
F	0.003	0.008	0.08	0.20	
G	0.020	0.026	0.50	0.65	

### Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage <sup>(3)</sup>			Maximum Zener Impedance <sup>(4)</sup>		Maximum Zener Impedance <sup>(4)</sup>		Maximum Reverse Current		Typical Temperature Coefficient			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>	V <sub>R</sub>	Min	Max.	I <sub>ZTC</sub>	
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	Max.(μA)	V	mV/°C		mA	
BZX584B2V4	2.35	2.4	2.45	5	100	1.0	600	50	1.0	-3.5	0	5	2V1
BZX584B2V7	2.65	2.7	2.75	5	100	1.0	600	20	1.0	-3.5	0	5	2V2
BZX584B3V0	2.94	3	3.06	5	95	1.0	600	10	1.0	-3.5	0	5	2V3
BZX584B3V3	3.23	3.3	3.37	5	95	1.0	600	5	1.0	-3.5	0	5	2V4
BZX584B3V6	3.53	3.6	3.67	5	90	1.0	600	5	1.0	-3.5	0	5	2V5
BZX584B3V9	3.82	3.9	3.98	5	90	1.0	600	3	1.0	-3.5	0	5	2V6
BZX584B4V3	4.21	4.3	4.39	5	90	1.0	600	3	1.0	-3.5	0	5	2V7
BZX584B4V7	4.61	4.7	4.79	5	80	1.0	500	3	2.0	-3.5	0.2	5	2Z1
BZX584B5V1	5.00	5.1	5.20	5	60	1.0	480	2	2.0	-2.7	1.2	5	2Z2
BZX584B5V6	5.49	5.6	5.71	5	40	1.0	400	1	2.0	-2.0	2.5	5	2Z3
BZX584B6V2	6.08	6.2	6.32	5	10	1.0	150	3	4.0	0.4	3.7	5	2Z4
BZX584B6V8	6.66	6.8	6.94	5	15	1.0	80	2	4.0	1.2	4.5	5	2Z5
BZX584B7V5	7.35	7.5	7.65	5	15	1.0	80	1	5.0	2.5	5.3	5	2Z6
BZX584B8V2	8.04	8.2	8.36	5	15	1.0	80	0.7	5.0	3.2	6.2	5	2Z7
BZX584B9V1	8.92	9.1	9.28	5	15	1.0	100	0.5	6.0	3.8	7.0	5	2Z8
BZX584B10	9.80	10	10.20	5	20	1.0	150	0.2	7.0	4.5	8.0	5	2Z9
BZX584B11	10.78	11	11.22	5	20	1.0	150	0.1	8.0	5.4	9.0	5	2Y1
BZX584B12	11.76	12	12.24	5	25	1.0	150	0.1	8.0	6.0	10.0	5	2Y2
BZX584B13	12.74	13	13.26	5	30	1.0	170	0.1	8.0	7.0	11.0	5	2Y3
BZX584B15	14.70	15	15.30	5	30	1.0	200	0.1	10.5	9.2	13.0	5	2Y4
BZX584B16	15.68	16	16.32	5	40	1.0	200	0.1	11.2	10.4	14.0	5	2Y5
BZX584B18	17.64	18	18.36	5	45	1.0	225	0.1	12.6	12.4	16.0	5	2Y6
BZX584B20	19.60	20	20.40	5	55	1.0	225	0.1	14.0	14.4	18.0	5	2Y7
BZX584B22	21.56	22	22.44	5	55	1.0	250	0.1	15.4	16.4	20.0	5	2Y8
BZX584B24	23.52	24	24.48	5	70	1.0	250	0.1	16.8	18.4	22.0	5	2Y9
BZX584B27	26.46	27	27.54	2	80	0.5	300	0.1	18.9	21.4	25.3	5	S5
BZX584B30	29.40	30	30.60	2	80	0.5	300	0.1	21.0	24.4	29.4	5	2X2
BZX584B33	32.34	33	33.66	2	80	0.5	325	0.1	23.1	27.4	33.4	5	2X3
BZX584B36	35.28	36	36.72	2	90	0.5	350	0.1	25.2	30.4	37.4	5	2X4
BZX584B39	38.22	39	39.78	2	130	0.5	350	0.1	27.3	33.4	41.2	5	2X5

Note : 3. Tested with pulses, period = 5ms, pulse width=300us

Note : 4. f=1KHz

**Curve Characteristics**

Fig. 1 - Power Derating Curve

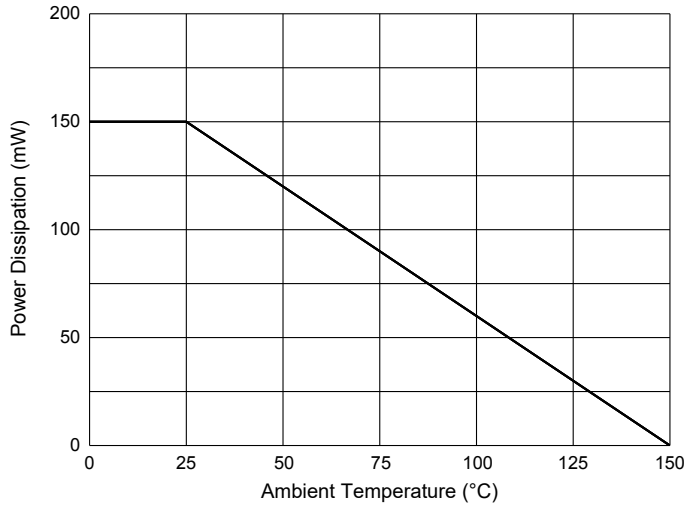


Fig. 2 - Typical Zener Breakdown Characteristics

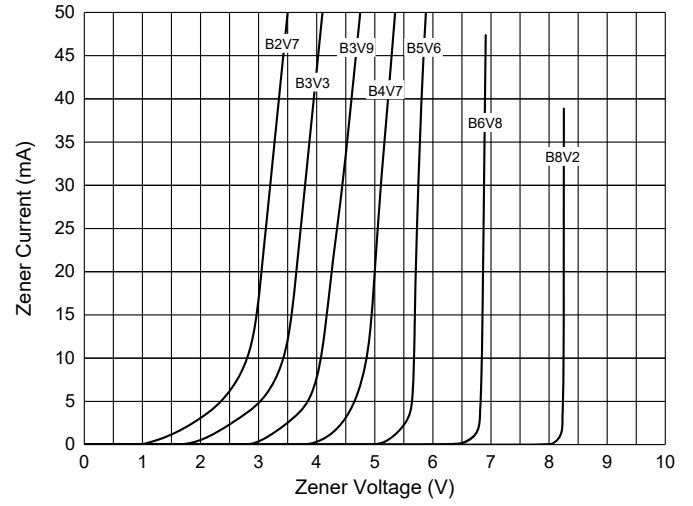
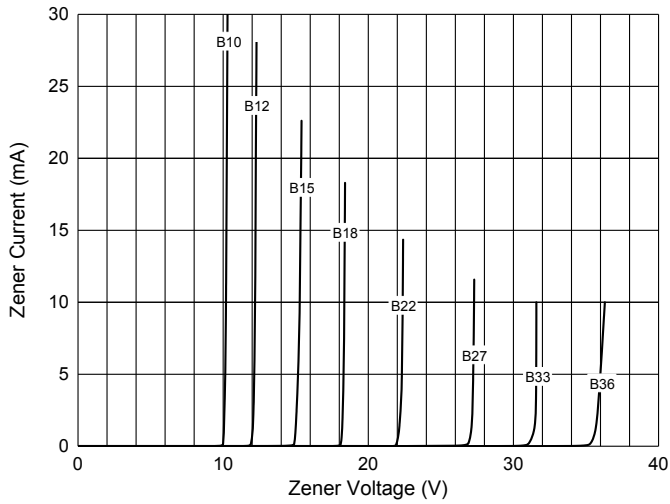


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:8Kpcs/Reel

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