

## Features

- 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 ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance :833°C/W Junction to Ambient

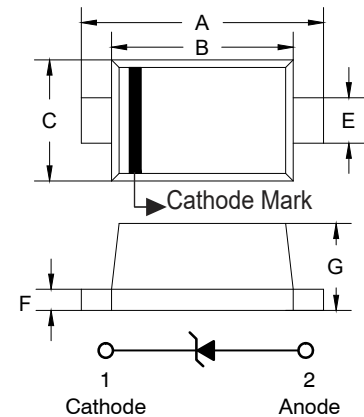
Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	150mW	Note 2
Maximum Forward Voltage	$V_F$	0.9V	$I_F=10mA$

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

⊃ ⚠ Valid Provided That Device Terminals are Kept at Ambient Temperature.

# 150 mWatt Zener Diodes 2.4 to 39 Volts

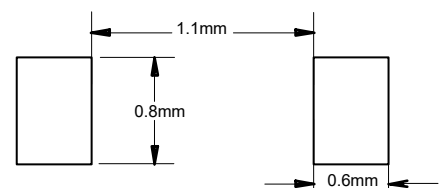
## SOD-523



### 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 @ I <sub>ZT</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>	V <sub>R</sub>	Min	Max.	
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	Max.(μA)	V	mV/°C		
BZX584C2V4	2.20	2.4	2.60	5	100	1.0	600	50	1.0	-3.5	0	Z11
BZX584C2V7	2.5	2.7	2.9	5	100	1.0	600	20	1.0	-3.5	0	Z12
BZX584C3V0	2.8	3.0	3.2	5	95	1.0	600	10	1.0	-3.5	0	Z13
BZX584C3V3	3.1	3.3	3.5	5	95	1.0	600	5	1.0	-3.5	0	Z14
BZX584C3V6	3.4	3.6	3.8	5	90	1.0	600	5	1.0	-3.5	0	Z15
BZX584C3V9	3.7	3.9	4.1	5	90	1.0	600	3	1.0	-3.5	0	Z16
BZX584C4V3	4.0	4.3	4.6	5	90	1.0	600	3	1.0	-3.5	0	Z17
BZX584C4V7	4.4	4.7	5.0	5	80	1.0	500	3	2.0	-3.5	0.2	Z1
BZX584C5V1	4.8	5.1	5.4	5	60	1.0	480	2	2.0	-2.7	1.2	Z2
BZX584C5V6	5.2	5.6	6.0	5	40	1.0	400	1	2.0	-2.0	2.5	Z3
BZX584C6V2	5.8	6.2	6.6	5	10	1.0	150	3	4.0	0.4	3.7	Z4
BZX584C6V8	6.4	6.8	7.2	5	15	1.0	80	2	4.0	1.2	4.5	Z5
BZX584C7V5	7.0	7.5	7.9	5	15	1.0	80	1	5.0	2.5	5.3	Z6
BZX584C8V2	7.7	8.2	8.7	5	15	1.0	80	0.7	5.0	3.2	6.2	Z7
BZX584C9V1	8.5	9.1	9.6	5	15	1.0	100	0.5	6.0	3.8	7.0	Z8
BZX584C10	9.4	10	10.6	5	20	1.0	150	0.2	7.0	4.5	8.0	Z9
BZX584C11	10.4	11	11.6	5	20	1.0	150	0.1	8.0	5.4	9.0	Y1
BZX584C12	11.4	12	12.7	5	25	1.0	150	0.1	8.0	6.0	10.0	Y2
BZX584C13	12.4	13	14.1	5	30	1.0	170	0.1	8.0	7.0	11.0	Y3
BZX584C15	13.8	15	15.8	5	30	1.0	200	0.1	10.5	9.2	13.0	Y4
BZX584C16	15.3	16	17.1	5	40	1.0	200	0.1	11.2	10.4	14.0	Y5
BZX584C18	16.8	18	19.1	5	45	1.0	225	0.1	12.6	12.4	16.0	Y6
BZX584C20	18.8	20	21.2	5	55	1.0	225	0.1	14.0	14.4	18.0	Y7
BZX584C22	20.8	22	23.3	5	55	1.0	250	0.1	15.4	16.4	20.0	Y8
BZX584C24	22.8	24	25.6	5	70	1.0	250	0.1	16.8	18.4	22.0	Y9
BZX584C27	25.1	27	28.9	2	80	0.5	300	0.1	18.9	21.4	25.3	Y10
BZX584C30	28.0	30	32.0	2	80	0.5	300	0.1	21.0	24.4	29.4	Y11
BZX584C33	31.0	33	35.0	2	80	0.5	325	0.1	23.1	27.4	33.4	Y12
BZX584C36	34.0	36	38.0	2	90	0.5	350	0.1	25.2	30.4	37.4	Y13
BZX584C39	37.0	39	41.0	2	130	0.5	350	0.1	27.3	33.4	41.2	Y14

Note : 3. Tested with pulses, period = 5ms, pulse width=300us  
4. f=1KHz

**Curve Characteristics**

Fig. 1 - Power Derating Curve

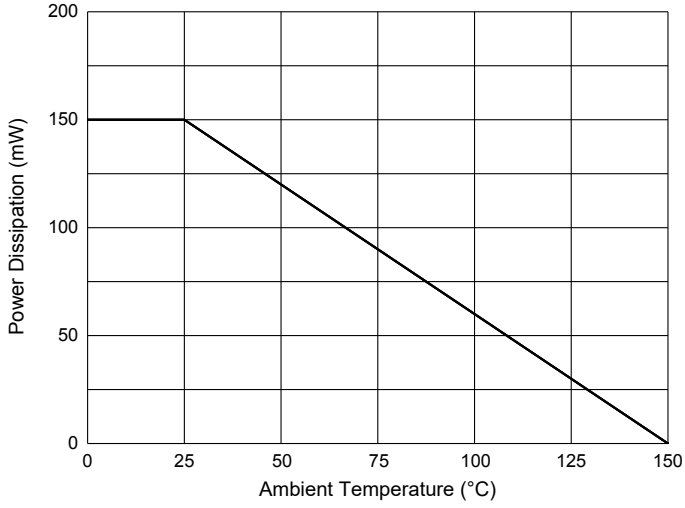


Fig. 2 - Typical Zener Breakdown Characteristics

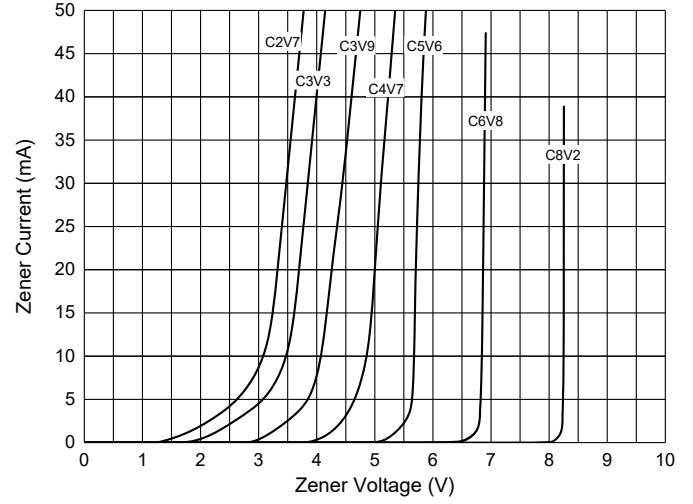
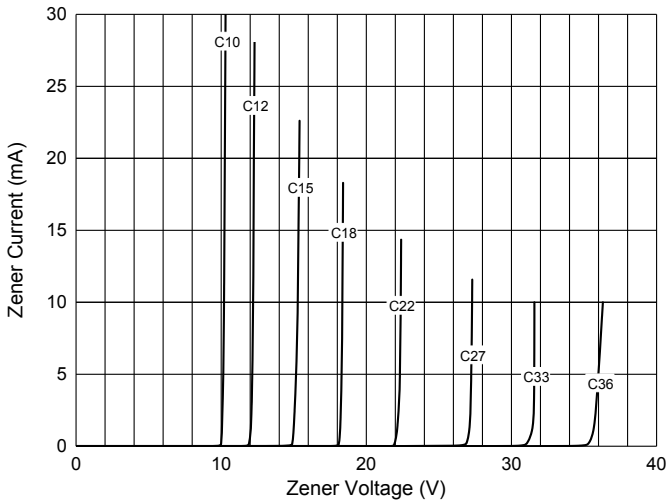


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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