

## 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
- AEC-Q101 Qualified

## Maximum Ratings

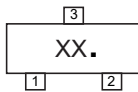
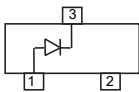
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 625°C/W Junction to Ambient

Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	200mW	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.

2. Mounted on 5.0mm<sup>2</sup> (0.013mm thick) Land Areas.

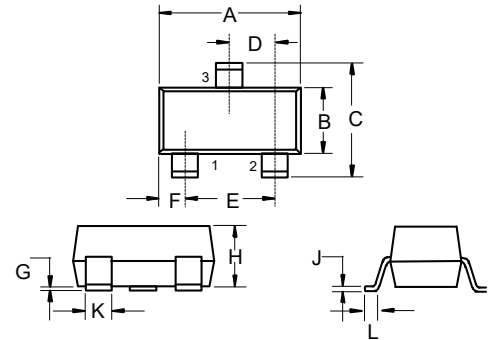
## Internal Structure and Marking Code



XX:Marking Code

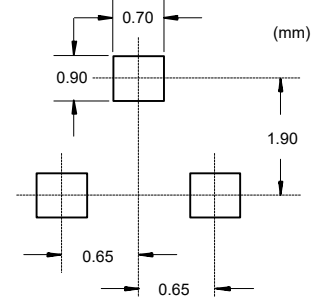
# 200 mWatt Zener Diodes 2.4V to 39 Volts

## SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026		0.65		TYP.
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.044	0.90	1.10	
J	0.002	0.010	0.05	0.25	
K	0.006	0.016	0.15	0.40	
L	0.010	0.018	0.26	0.46	

## Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage <sup>(3,4)</sup>			Maximum Zener Impedance <sup>(5)</sup>				Maximum Reverse Current $I_R @ V_R$		Typical Temperature Coefficient mV/°C		Marking Code
	$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_{ZK}$	$Z_{ZK} @ I_{ZK}$	$I_R$	$V_R$	$T_C @ I_{ZTC}$		
	Min.(V)	Nom(V)	Max.(V)	mA	$\Omega$	mA	$\Omega$	$\mu A$	V	min.	max.	
BZX84C2V4WHE3	2.28	2.4	2.56	5	100	1	600	50	1	-3.5	0	KRB
BZX84C2V7WHE3	2.5	2.7	2.9	5	100	1	600	20	1	-3.5	0	KRC
BZX84C3V0WHE3	2.8	3	3.2	5	95	1	600	10	1	-3.5	0	KRD
BZX84C3V3WHE3	3.1	3.3	3.5	5	95	1	600	5.0	1	-3.5	0	KRE
BZX84C3V6WHE3	3.4	3.6	3.8	5	90	1	600	5.0	1	-3.5	0	KRF
BZX84C3V9WHE3	3.7	3.9	4.1	5	90	1	600	3.0	1	-3.5	0	KRG
BZX84C4V3WHE3	4	4.3	4.6	5	90	1	600	3.0	1	-3.5	0	KRH
BZX84C4V7WHE3	4.4	4.7	5	5	80	1	500	3.0	2	-3.5	0.2	KR1
BZX84C5V1WHE3	4.8	5.1	5.4	5	60	1	480	2.0	2.0	-2.7	1.2	KR2
BZX84C5V6WHE3	5.2	5.6	6	5	40	1	400	1.0	2.0	-2.0	2.5	KR3
BZX84C6V2WHE3	5.8	6.2	6.6	5	10	1	150	3.0	4.0	0.4	3.7	KR4
BZX84C6V8WHE3	6.4	6.8	7.2	5	15	1	80	2.0	4.0	1.2	4.5	KR5
BZX84C7V5WHE3	7	7.5	7.9	5	15	1	80	1.0	5	2.5	5.3	KR6
BZX84C8V2WHE3	7.7	8.2	8.7	5	15	1	80	0.7	5	3.2	6.2	KR7
BZX84C9V1WHE3	8.5	9.1	9.6	5	15	1	100	0.5	6	3.8	7.0	KR8
BZX84C10WHE3	9.4	10	10.6	5	20	1	150	0.2	7.0	4.5	8.0	KR9
BZX84C11WHE3	10.4	11	11.6	5	20	1	150	0.1	8.0	5.4	9.0	KP1
BZX84C12WHE3	11.4	12	12.7	5	25	1	150	0.1	8.0	6.0	10.0	KP2
BZX84C13WHE3	12.4	13	14.1	5	30	1	170	0.1	8.0	7.0	11.0	KP3
BZX84C15WHE3	13.8	15	15.6	5	30	1	200	0.1	10.5	9.2	13.0	KP4
BZX84C16WHE3	15.3	16	17.1	5	40	1	200	0.1	11.2	10.4	14.0	KP5
BZX84C18WHE3	16.8	18	19.1	5	45	1	225	0.1	12.6	12.4	16.0	KP6
BZX84C20WHE3	18.8	20	21.2	5	55	1	225	0.1	14.0	14.4	18.0	KP7
BZX84C22WHE3	20.8	22	23.3	5	55	1	250	0.1	15.4	16.4	20.0	KP8
BZX84C24WHE3	22.8	24	25.6	5	70	1	250	0.1	16.8	18.4	22.0	KP9
BZX84C27WHE3	25.1	27	28.9	2	80	0.5	300	0.1	18.9	21.4	25.3	KPA
BZX84C30WHE3	28	30	32	2	80	0.5	300	0.1	21.0	24.4	29.4	KPB
BZX84C33WHE3	31	33	35	2	80	0.5	325	0.1	23.1	27.4	33.4	KPC
BZX84C36WHE3	34	36	38	2	90	0.5	350	0.1	25.2	30.4	37.4	KPD
BZX84C39WHE3	37	39	41	2	130	0.5	350	0.1	27.3	33.4	41.2	KPE

Note:

- Zener Voltage (VZ) Measurement. Guarantess the Zener Voltage When Measured at 90 Seconds While Maintaining The Lead Temperature (TL) at 25°C , from The Diode Body.
- Zener Impedance (ZZ) 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 (IZT or IZK) is Superimposed on IZT or IZK.

**Curve Characteristics**

Fig. 1 - Power Derating Curve

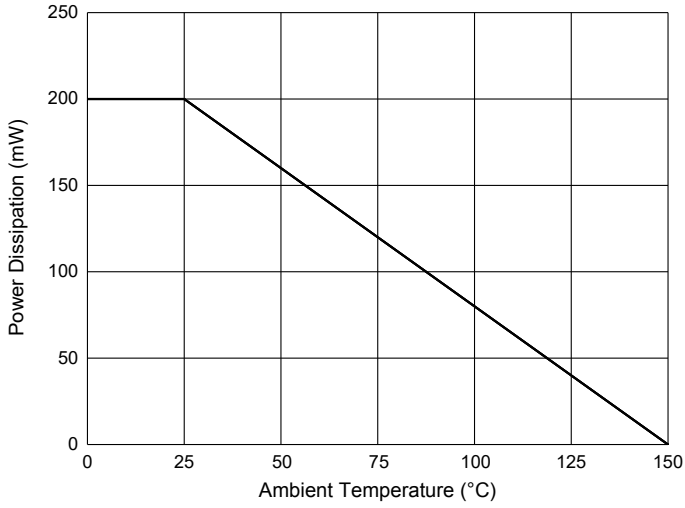


Fig. 2 - Typical Forward Characteristics

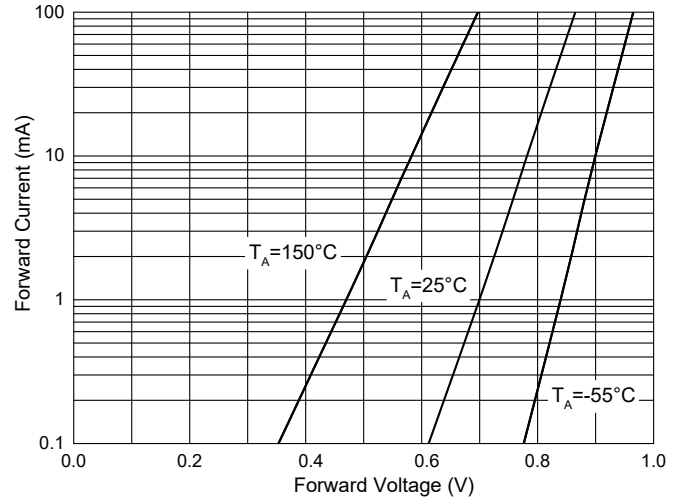


Fig. 3 - Typical Zener Breakdown Characteristics

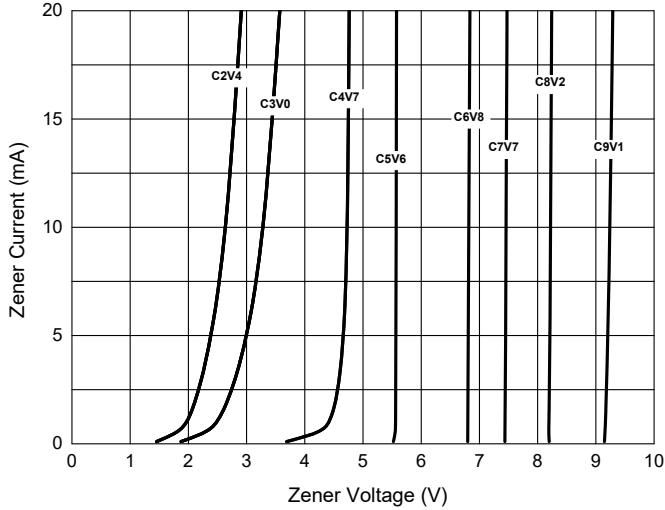
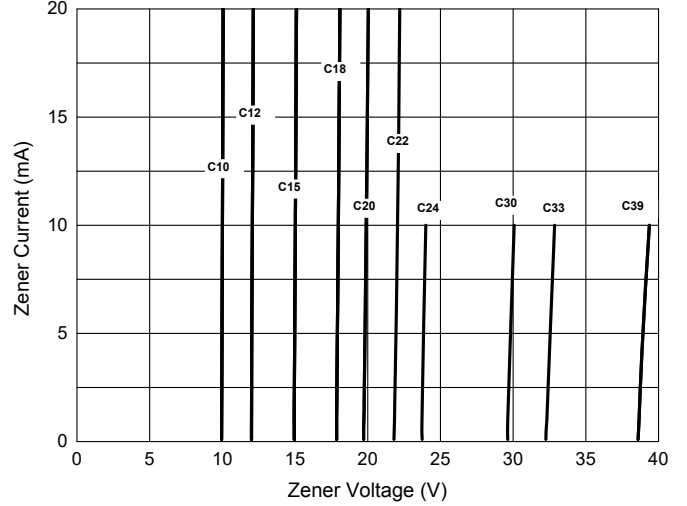


Fig. 4 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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