

## Features

- Standard Vz Tolerance is  $\pm 2\%$
- Surface Mount Package
- 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)

**350 mW  
Zener Diode  
4.3 to 51 Volts**

## Maximum Ratings

- Operating Junction Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Maximum Thermal Resistance:  $357^{\circ}\text{C/W}$  Junction to Ambient

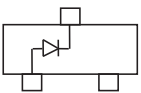
Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	350mW	Note 2
Peak Forward Surge Current	$I_{FSM}$	4.0A	Note 3
Maximum Forward Voltage	$V_F$	0.9V	$I_F=10\text{mA}$

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

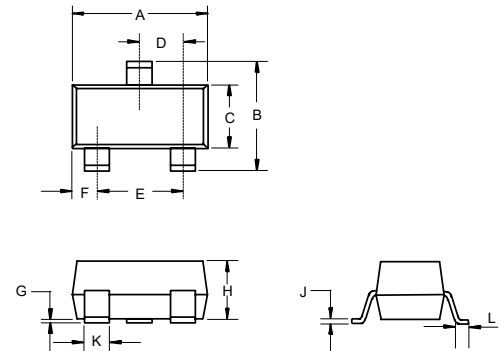
2. Mounted on FR4 PC Board With Our Suggested Solder Pad Layout

3. Measured on 8.3ms, Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minute Maximum.

## Internal Structure

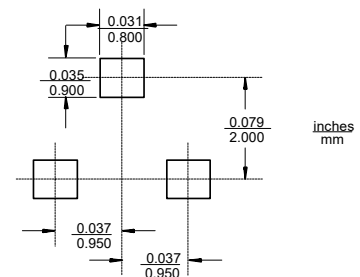


## SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

## Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Zener Voltage			Maximum Zener Impedance		Maximum Zener Impedance		Maximum Reverse Current $I_R @ V_R$		Marking Code
	$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_{ZK}$	$Z_{ZK} @ I_{ZK}$	$I_R$	$V_R$	
	Min.(V)	Nom(V)	Max.(V)	mA	$\Omega$	mA	$\Omega$	$\mu A$	V	
MMBZ5229C	4.21	4.3	4.39	20.0	22	0.25	2000	5.0	1.0	2KD4
MMBZ5230C	4.61	4.7	4.79	20.0	19	0.25	1900	5.0	2.0	2KD5
MMBZ5231C	5.00	5.1	5.20	20.0	17	0.25	1600	5.0	2.0	2KE1
MMBZ5232C	5.49	5.6	5.71	20.0	11	0.25	1600	5.0	3.0	2KE2
MMBZ5233C	5.88	6.0	6.12	20.0	7	0.25	1600	5.0	3.5	2KE3
MMBZ5234C	6.08	6.2	6.32	20.0	7	0.25	1000	5.0	4.0	2KE4
MMBZ5235C	6.66	6.8	6.94	20.0	5	0.25	750	3.0	5.0	2KE5
MMBZ5236C	7.35	7.5	7.65	20.0	6	0.25	500	3.0	6.0	2KF1
MMBZ5237C	8.04	8.2	8.36	20.0	8	0.25	500	3.0	6.0	2KF2
MMBZ5238C	8.53	8.7	8.87	20.0	8	0.25	600	3.0	6.5	2KF3
MMBZ5239C	8.92	9.1	9.28	20.0	10	0.25	600	3.0	6.5	2KF4
MMBZ5240C	9.80	10	10.20	20.0	17	0.25	600	3.0	8.0	2KF5
MMBZ5241C	10.78	11	11.22	20.0	22	0.25	600	2.0	8.4	2KH1
MMBZ5242C	11.76	12	12.24	20.0	30	0.25	600	1.0	9.1	2KH2
MMBZ5243C	12.74	13	13.26	9.5	13	0.25	600	0.5	9.9	2KH3
MMBZ5244C	13.72	14	14.28	9.0	15	0.25	600	0.1	10.5	2KH4
MMBZ5245C	14.70	15	15.30	8.5	16	0.25	600	0.1	11.0	2KH5
MMBZ5246C	15.68	16	16.32	7.8	17	0.25	600	0.1	12.0	2KJ1
MMBZ5247C	16.66	17	17.34	7.5	19	0.25	600	0.1	13.0	2KJ2
MMBZ5248C	17.64	18	18.36	7.0	21	0.25	600	0.1	14.0	2KJ3
MMBZ5249C	18.62	19	19.38	6.6	23	0.25	600	0.1	14.0	2KJ4
MMBZ5250C	19.60	20	20.40	6.2	25	0.25	600	0.1	15.0	2KJ5
MMBZ5251C	21.56	22	22.44	5.6	29	0.25	600	0.1	17.0	2KK1
MMBZ5252C	23.52	24	24.48	5.2	33	0.25	600	0.1	18.0	2KK2
MMBZ5253C	24.50	25	25.50	5.0	35	0.25	600	0.1	19.0	K3
MMBZ5254C	26.46	27	27.54	5.0	41	0.25	600	0.1	21.0	2KK4
MMBZ5255C	27.44	28	28.56	4.5	44	0.25	600	0.1	21.0	2KK5
MMBZ5256C	29.40	30	30.60	4.2	49	0.25	600	0.1	23.0	2KM1
MMBZ5257C	32.34	33	33.66	3.8	58	0.25	700	0.1	25.0	2KM2
MMBZ5258C	35.28	36	36.72	3.4	70	0.25	700	0.1	27.0	2KM3
MMBZ5259C	38.22	39	39.78	3.2	80	0.25	800	0.1	30.0	2KM4
MMBZ5260C	42.14	43	43.86	3	93	0.25	900	0.1	33.0	2KM5
MMBZ5261C	46.06	47	47.94	2.7	105	0.25	1000	0.1	36.0	2KN1
MMBZ5262C	49.98	51	52.02	2.5	125	0.25	1100	0.1	39.0	2KN2

**Curve Characteristics**

Fig. 1 - Power Derating Curve

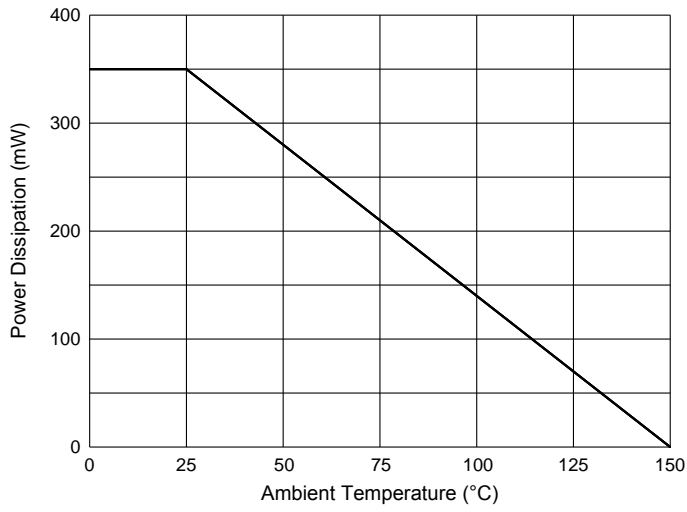


Fig. 2 - Typical Zener Breakdown Characteristics

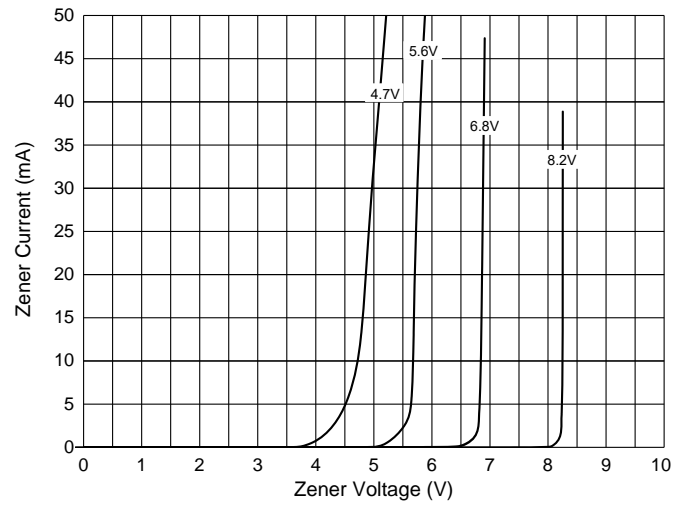
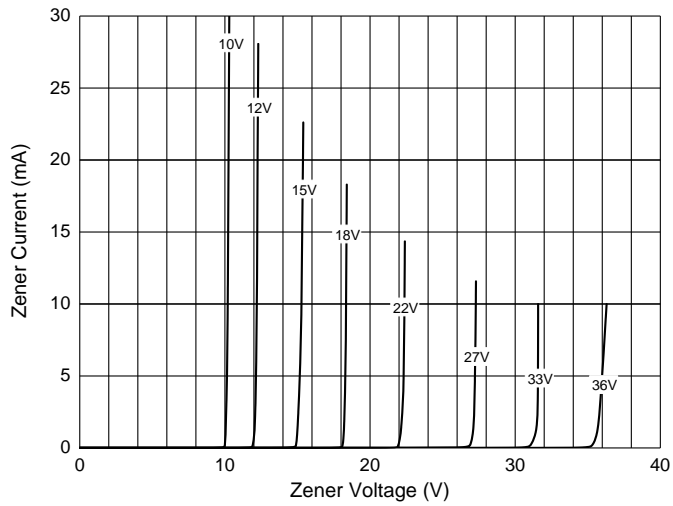


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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