

## Features

- 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)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 357°C/W Junction to Ambient

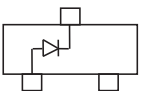
Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	350mW	Note 2
Peak Forward Surge Current	$I_{FSM}$	4.0A	Note 3
Maximum Forward Voltage	$V_F$	0.9V	$I_F=10mA$

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 FR4 PC Board With Our Suggested Solder Pad Layout

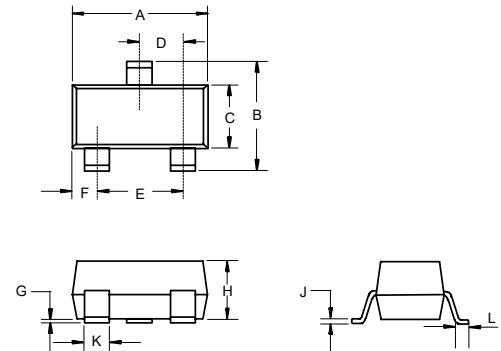
3. Measured on 8.3ms, Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minute Maximum.

## Internal Structure



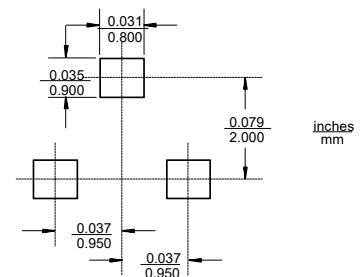
# 350 mW Zener Diode 2.4 to 39 Volts

## 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 <sup>(4)</sup>	Nominal Zener Voltage <sup>(5)</sup>	Test current	Maximum Zener Impedance <sup>(6)</sup>			Maximum Reverse Leakage Current		Marking Code
	$V_Z @ I_{ZT}$		$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R$	
	V	mA	$\Omega$	$\Omega$	mA	$\mu A(\text{Max.})$	V	
MMBZ5221B	2.4	20	30	1200	0.25	100	1.0	KC1
MMBZ5222B	2.5	20	30	1250	0.25	100	1.0	KC2
MMBZ5223B	2.7	20	30	1300	0.25	75	1.0	KC3
MMBZ5225B	3.0	20	29	1600	0.25	50	1.0	KC5
MMBZ5226B	3.3	20	28	1600	0.25	25	1.0	KG1
MMBZ5227B	3.6	20	24	1700	0.25	15	1.0	KG2
MMBZ5228B	3.9	20	23	1900	0.25	10	1.0	KG3
MMBZ5229B	4.3	20	22	2000	0.25	5.0	1.0	KG4
MMBZ5230B	4.7	20	19	1900	0.25	5.0	2.0	KG5
MMBZ5231B	5.1	20	17	1600	0.25	5.0	2.0	KE1
MMBZ5232B	5.6	20	11	1600	0.25	5.0	3.0	KE2
MMBZ5233B	6.0	20	7.0	1600	0.25	5.0	3.5	KE3
MMBZ5234B	6.2	20	7.0	1000	0.25	5.0	4.0	KE4
MMBZ5235B	6.8	20	5.0	750	0.25	3.0	5.0	KE5
MMBZ5236B	7.5	20	6.0	500	0.25	3.0	6.0	KF1
MMBZ5237B	8.2	20	8.0	500	0.25	3.0	6.5	KF2
MMBZ5238B	8.7	20	8.0	600	0.25	3.0	6.5	KF3
MMBZ5239B	9.1	20	10	600	0.25	3.0	7.0	KF4
MMBZ5240B	10	20	17	600	0.25	3.0	8.0	KF5
MMBZ5241B	11	20	22	600	0.25	2.0	8.4	KH1
MMBZ5242B	12	20	30	600	0.25	1.0	9.1	KH2
MMBZ5243B	13	9.5	13	600	0.25	0.5	9.9	KH3
MMBZ5244B	14	9.0	15	600	0.25	0.1	10	KH4
MMBZ5245B	15	8.5	16	600	0.25	0.1	11	KH5
MMBZ5246B	16	7.8	17	600	0.25	0.1	12	KJ1
MMBZ5248B	18	7.0	21	600	0.25	0.1	14	KJ3
MMBZ5250B	20	6.2	25	600	0.25	0.1	15	KJ5
MMBZ5251B	22	5.6	29	600	0.25	0.1	17	KK1
MMBZ5252B	24	5.2	33	600	0.25	0.1	18	KK2
MMBZ5254B	27	5.0	41	600	0.25	0.1	21	KK4
MMBZ5255B	28	4.5	44	600	0.25	0.1	21	KK5
MMBZ5256B	30	4.2	49	600	0.25	0.1	23	KM1
MMBZ5257B	33	3.8	58	700	0.25	0.1	25	KM2
MMBZ5258B	36	3.4	70	700	0.25	0.1	27	KM3
MMBZ5259B	39	3.2	80	800	0.25	0.1	30	KM4

Note:

4. Tolerance and Type Number Designation. The Type Numbers Listed Have a Standard Tolerance on The Nominal Zener Voltage of  $\pm 5\%$ .
5. Zener Voltage ( $V_Z$ ) Measurement. Guarantess The Zener Voltage When Measured at 90 Seconds While Maintaining The Lead Temperature ( $T_L$ ) at 25°C from The Diode Body.
6. Zener Impedance ( $Z_Z$ ) 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 ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ .

**Curve Characteristics**

Fig. 1 - Power Derating Curve

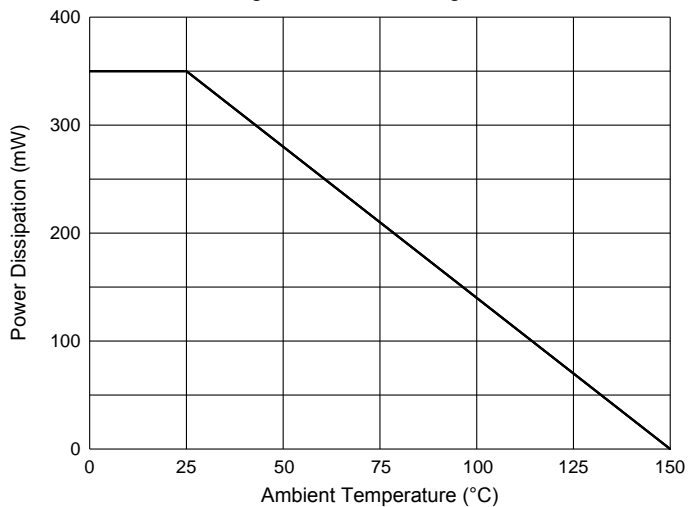


Fig. 2 - Typical Zener Breakdown Characteristics

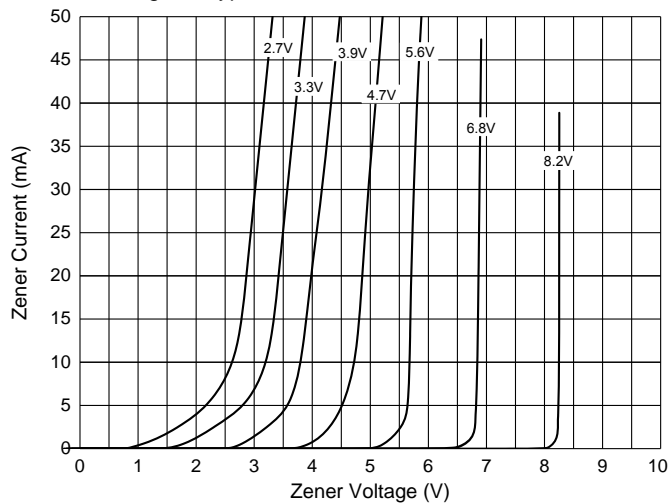
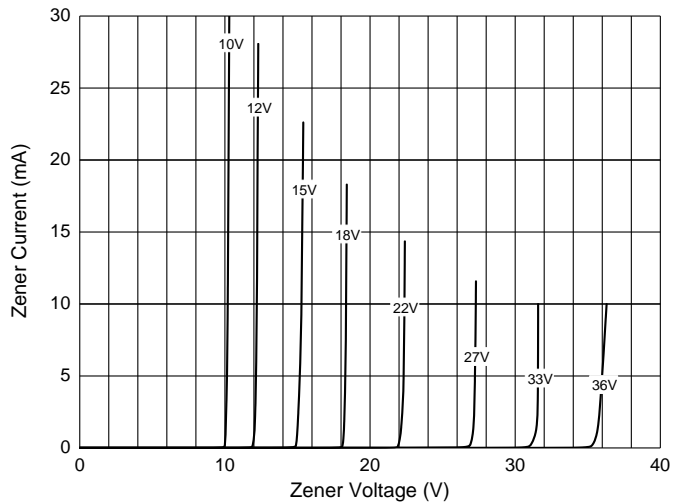


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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