

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Planar Die Construction
- Ideally Suited for Automated Assembly Processes
- 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 : 357°C/W Junction to Ambient

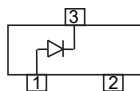
Parameter	Symbol	Rating	Conditions
Power Dissipation	P_D	350mW	Note 2
Peak Forward Surge Current	I_{FSM}	2.0A	Note 3
Maximum Forward Voltage	V_F	0.9V	$I_F=10mA$

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 5.0mm² (.013mm thick) Land Areas.

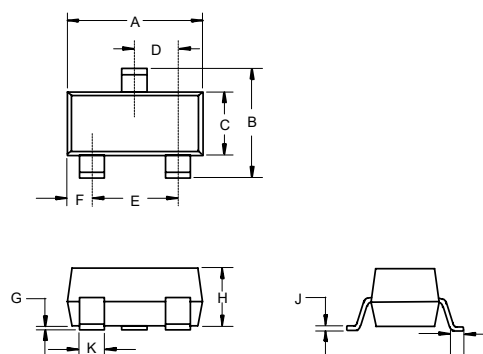
3. Measured on 8.3ms, Single Half Sine-wave or Equivalent Square Wave

Internal Structure



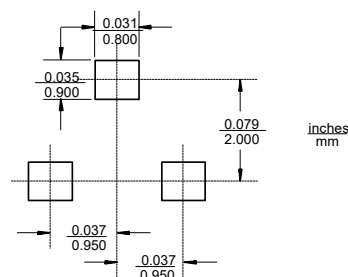
350 mWatt Zener Diodes 2.4 to 47 Volts

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	Zener Voltage ^(4,5)			Maximum Zener Impedance ⁽⁶⁾				Maximum Reverse Current I _R @ V _R		Typical Temperature Coefficient		Marking Code
	V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	I _{ZK}	Z _{ZK} @ I _{ZK}	I _R	V _R	@I _{ZT}		
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	mA	Ω	μA	V	Min.(mV/°C)	Max.(mV/°C)	
BZX84C2V4HE3	2.28	2.40	2.52	5	100	1	600	50	1.0	-3.5	0	Z11
BZX84C2V7HE3	2.50	2.70	2.90	5	100	1	600	20	1.0	-3.5	0	Z12
BZX84C3V0HE3	2.80	3.00	3.20	5	95	1	600	10	1.0	-3.5	0	Z13
BZX84C3V3HE3	3.10	3.30	3.50	5	95	1	600	5	1.0	-3.5	0	Z14
BZX84C3V6HE3	3.40	3.60	3.80	5	90	1	600	5	1.0	-3.5	0	Z15
BZX84C3V9HE3	3.70	3.90	4.10	5	90	1	600	3	1.0	-3.5	0	Z16
BZX84C4V3HE3	4.00	4.30	4.60	5	90	1	600	3	1.0	-3.5	0	Z17
BZX84C4V7HE3	4.40	4.70	5.00	5	80	1	500	3	2.0	-3.5	0.2	Z1
BZX84C5V1HE3	4.80	5.10	5.40	5	60	1	480	2	2.0	-2.7	1.2	Z2
BZX84C5V6HE3	5.20	5.60	6.00	5	40	1	400	1	2.0	-2	2.5	Z3
BZX84C6V2HE3	5.80	6.20	6.60	5	10	1	150	3	4.0	0.4	3.7	Z4
BZX84C6V8HE3	6.40	6.80	7.20	5	15	1	80	2	4.0	1.2	4.5	Z5
BZX84C7V5HE3	7.00	7.50	7.90	5	15	1	80	1	5.0	2.5	5.3	Z6
BZX84C8V2HE3	7.70	8.20	8.70	5	15	1	80	0.7	5.0	3.2	6.2	Z7
BZX84C9V1HE3	8.50	9.10	9.60	5	15	1	100	0.5	6.0	3.8	7.0	Z8
BZX84C10HE3	9.40	10.00	10.60	5	20	1	150	0.2	7.0	4.5	8.0	Z9
BZX84C11HE3	10.40	11.00	11.60	5	20	1	150	0.1	8.0	5.4	9.0	Y1
BZX84C12HE3	11.40	12.00	12.70	5	25	1	150	0.1	8.0	6.0	10	Y2
BZX84C13HE3	12.40	13.00	14.10	5	30	1	170	0.1	8.0	7.0	11	Y3
BZX84C15HE3	13.80	15.00	15.60	5	30	1	200	0.1	10.5	9.2	13	Y4
BZX84C16HE3	15.30	16.00	17.10	5	40	1	200	0.1	11.2	10.4	14	Y5
BZX84C18HE3	16.80	18.00	19.10	5	45	1	225	0.1	12.6	12.4	16	Y6
BZX84C20HE3	18.80	20.00	21.20	5	55	1	225	0.1	14.0	14.4	18	Y7
BZX84C22HE3	20.80	22.00	23.30	5	55	1	250	0.1	15.4	16.4	20	Y8
BZX84C24HE3	22.80	24.00	25.60	5	70	1	250	0.1	16.8	18.4	22	Y9
BZX84C27HE3	25.10	27.00	28.90	2	80	1	300	0.1	18.9	21.4	25.3	Y10
BZX84C30HE3	28.00	30.00	32.00	2	80	1	300	0.1	21.0	24.4	29.4	Y11
BZX84C33HE3	31.00	33.00	35.00	2	80	1	325	0.1	23.1	27.4	33.4	Y12
BZX84C36HE3	34.00	36.00	38.00	2	90	1	350	0.1	25.2	30.4	37.4	Y13
BZX84C39HE3	37.00	39.00	41.00	2	130	1	350	0.1	27.3	33.4	41.2	Y14
BZX84C43HE3	40.85	43.00	45.15	5	150	1	375	0.1	30.10	37.6	50.6	Y15
BZX84C47HE3	44.65	47.00	49.35	5	170	1	375	0.1	32.90	42	55.8	Y16

Note :

4. Standard zener voltage tolerance is +/- 5% with a 'C' suffix from BZX84C2V4HE3~BZX84C47HE3

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

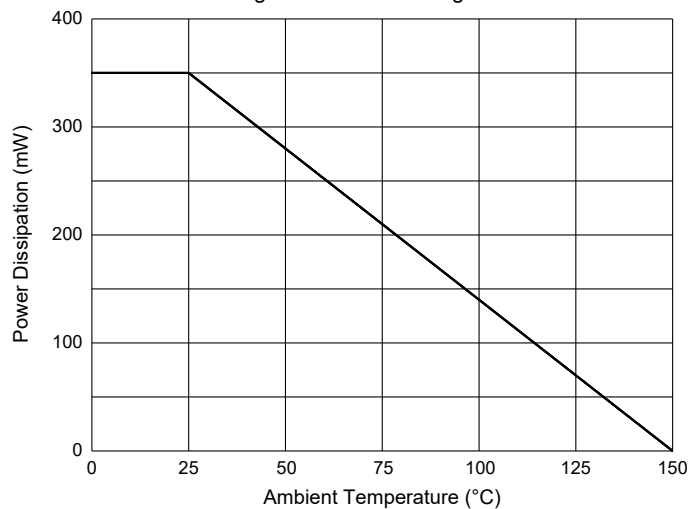


Fig. 2 - Typical Zener Breakdown Characteristics

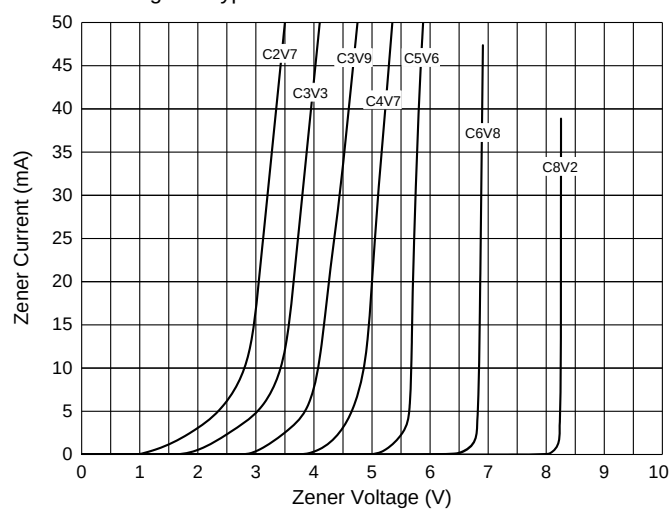
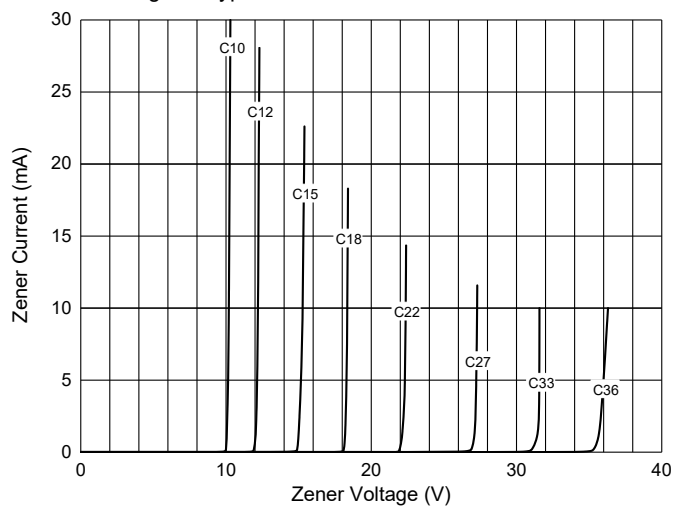


Fig. 3 - Typical Zener Breakdown Characteristics



Ordering Information

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

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