

# BZX84C2V4W – BZX84C39W

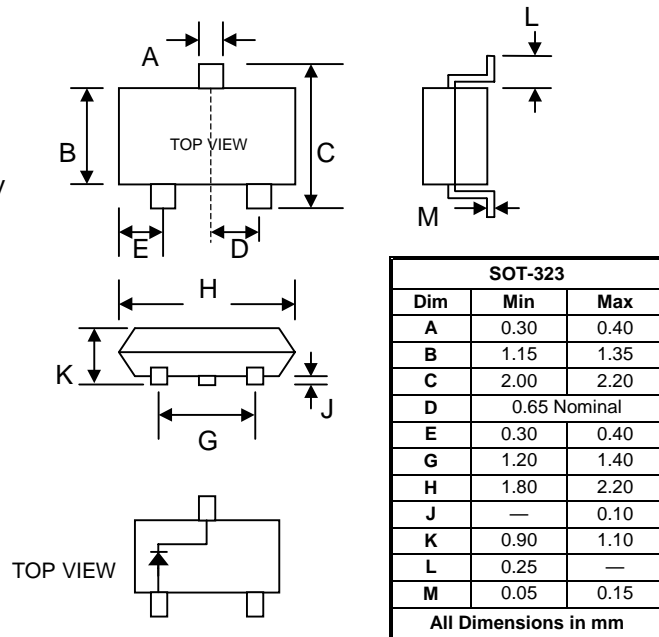
## 200mW SURFACE MOUNT ZENER DIODE

### Features

- Planar Die Construction
- 200mW Power Dissipation
- 2.4 – 39V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O

### Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Marking: Device Code (See Table Next Page)



### Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ (Note 1)	$P_d$	200	mW
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	625	K/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

Note: 1. Valid provided that device terminals are kept at ambient temperature.

**Electrical Characteristics** @T<sub>A</sub>=25°C unless otherwise specified

Type Number (Note 1)	Device Marking Code	Zener Voltage Range (Note 2)			Maximum Zener Impedance (Note 3)				Max Reverse Leakage Current		Temp. Coefficient of Zener Voltage @ I <sub>ZT</sub> mV / °C	
		V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub>	@ V <sub>R</sub>	Min	Max
		Nom (V)	Min (V)	Max (V)	(Ω)	(mA)	(Ω)	(mA)	(μA)	(V)		
BZX84C2V4W	W1	2.4	2.28	2.56	100	5.0	600	1.0	50	1.0	-3.5	0
BZX84C2V7W	W2	2.7	2.5	2.9	100	5.0	600	1.0	20	1.0	-3.5	0
BZX84C3W	W3	3.0	2.8	3.2	95	5.0	600	1.0	10	1.0	-3.5	0
BZX84C3V3W	W4	3.3	3.1	3.5	95	5.0	600	1.0	5.0	1.0	-3.5	0
BZX84C3V6W	W5	3.6	3.4	3.8	90	5.0	600	1.0	5.0	1.0	-3.5	0
BZX84C3V9W	W6	3.9	3.7	4.1	90	5.0	600	1.0	3.0	1.0	-3.5	0
BZX84C4V3W	W7	4.3	4.0	4.6	90	5.0	600	1.0	3.0	1.0	-3.5	0
BZX84C4V7W	W8	4.7	4.4	5.0	80	5.0	500	1.0	3.0	2.0	-3.5	0.2
BZX84C5V1W	W9	5.1	4.8	5.4	60	5.0	480	1.0	2.0	2.0	-2.7	1.2
BZX84C5V6W	WA	5.6	5.2	6.0	40	5.0	400	1.0	1.0	2.0	-2.0	2.5
BZX84C6V2W	WB	6.2	5.8	6.6	10	5.0	150	1.0	3.0	4.0	0.4	3.7
BZX84C6V8W	WC	6.8	6.4	7.2	15	5.0	80	1.0	2.0	4.0	1.2	4.5
BZX84C7V5W	WD	7.5	7.0	7.9	15	5.0	80	1.0	1.0	5.0	2.5	5.3
BZX84C8V2W	WE	8.2	7.7	8.7	15	5.0	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1W	WF	9.1	8.5	9.6	15	5.0	100	1.0	0.5	6.0	3.8	7.0
BZX84C10W	WG	10	9.4	10.6	20	5.0	150	1.0	0.2	7.0	4.5	8.0
BZX84C11W	WH	11	10.4	11.6	20	5.0	150	1.0	0.1	8.0	5.4	9.0
BZX84C12W	WI	12	11.4	12.7	25	5.0	150	1.0	0.1	8.0	6.0	10
BZX84C13W	WK	13	12.4	14.1	30	5.0	170	1.0	0.1	8.0	7.0	11
BZX84C15W	WL	15	13.8	15.6	30	5.0	200	1.0	0.1	10.5	9.2	13
BZX84C16W	WM	16	15.3	17.1	40	5.0	200	1.0	0.1	11.2	10.4	14
BZX84C18W	WN	18	16.8	19.1	45	5.0	225	1.0	0.1	12.6	12.4	16
BZX84C20W	WO	20	18.8	21.2	55	5.0	225	1.0	0.1	14	14.4	18
BZX84C22W	WP	22	20.8	23.3	55	5.0	250	1.0	0.1	15.4	16.4	20
BZX84C24W	WR	24	22.8	25.6	70	5.0	250	1.0	0.1	16.8	18.4	22
BZX84C27W	WS	27	25.1	28.9	80	2.0	300	0.5	0.1	18.9	21.4	25.3
BZX84C30W	WT	30	28	32	80	2.0	300	0.5	0.1	21	24.4	29.4
BZX84C33W	WU	33	31	35	80	2.0	325	0.5	0.1	23.1	27.4	33.4
BZX84C36W	WW	36	34	38	90	2.0	350	0.5	0.1	25.2	30.4	37.4
BZX84C39W	WX	39	37	41	130	2.0	350	0.5	0.1	27.3	33.4	41.2

Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.

2. Measured with pulses t<sub>p</sub> = 5ms.

3. f = 1KHz

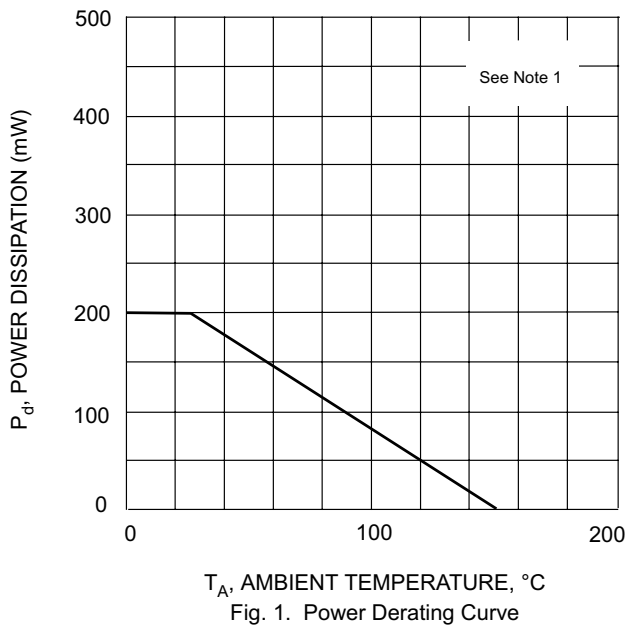


Fig. 1. Power Derating Curve

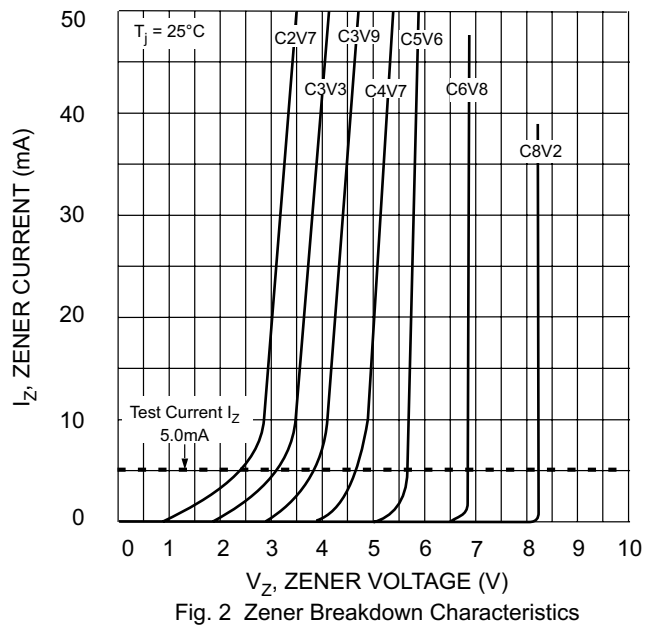


Fig. 2. Zener Breakdown Characteristics

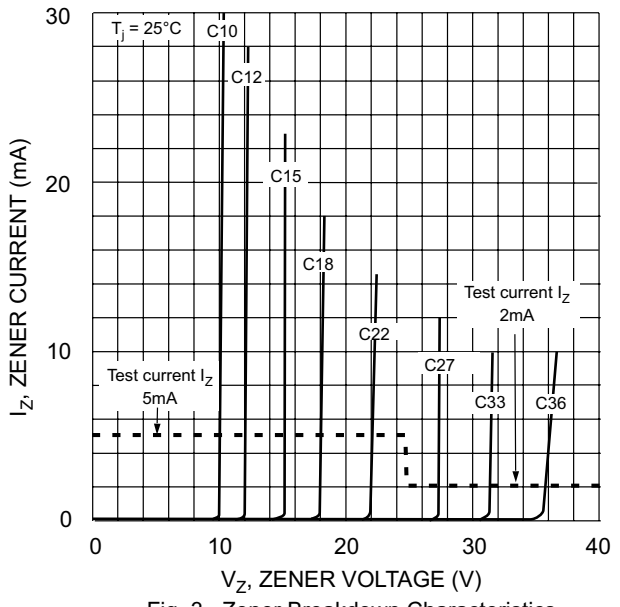


Fig. 3. Zener Breakdown Characteristics

## ORDERING INFORMATION

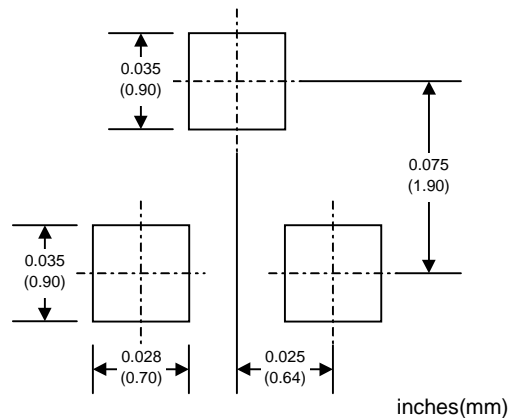
Product No.♦	Package Type	Shipping Quantity
<b>BZX84CxxW-T1</b>	SOT-323	3000/Tape & Reel
BZX84CxxW-T3	SOT-323	10000/Tape & Reel

Products listed in **bold** are WTE **Preferred** devices.

♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



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