

SURFACE MOUNT ZENER DIODE

VOLTAGE RANGE 2.4 to 39Volts POWER RATING 200 mWatts

FEATURES

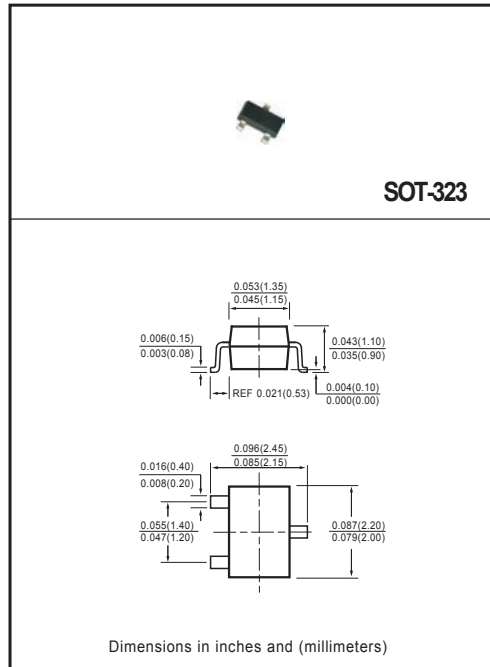
- * Power dissipation
PD: 200 mW (Tamb=25°C)
- * Zener Voltages
- * Operating and storage junction temperature range
T_J, T_{stg}: -55°C to +150°C

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.006 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



MAXIMUM RATINGS (@ TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Max. Steady State Power Dissipation @TA=25°C	P _D	200	mW
Max. Operating Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (@ TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Thermal Resistance Junction to Ambient	R θ _{JA}	-	-	625	°C/W
Max. Instantaneous Forward Voltage at I _F = 10mA	V _F	-	-	0.9	Volts

ELECTRICAL CHARACTERISTICS (@TA=25°C unless otherwise specified)

TYPE	Zener voltage Range (Note 1)				Maximum Zener impedance (Note 2)			Maximum Reverse current		Temperature Coefficient of Zener Voltage	
	Vz (V) @ IZT			IZT □ (mA)	ZZT at IZT (Ω)	ZZK (Ω)	at IZK (mA)	IR (uA)	at VR (V)	@ IZT=5mA(mV/°C)	
	Nom(V)	Min(V)	Max(V)							Min	Max
BZX84C2V4W	2.4	2.2	2.6	5.0	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7W	2.7	2.7	2.9	5.0	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0W	3.0	2.8	3.2	5.0	95	600	1.0	20	1.0	-3.5	0
BZX84C3V3W	3.3	3.1	3.5	5.0	95	600	1.0	5.0	1.0	-3.5	0
BZX84C3V6W	3.6	3.4	3.8	5.0	90	600	1.0	5.0	1.0	-3.5	0
BZX84C3V9W	3.9	3.7	4.1	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V3W	4.3	4.0	4.6	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V7W	4.7	4.4	5.0	5.0	80	600	1.0	3.0	2.0	-3.5	0.2
BZX84C5V1W	5.1	4.8	5.4	5.0	60	500	1.0	2.0	2.0	-2.7	1.2
BZX84C5V6W	5.6	5.2	6.0	5.0	40	480	1.0	1.0	2.0	-2.0	2.5
BZX84C6V2W	6.2	5.8	6.6	5.0	10	400	1.0	3.0	4.0	0.4	3.7
BZX84C6V8W	6.8	6.4	7.2	5.0	15	150	1.0	2.0	4.0	1.2	4.5
BZX84C7V5W	7.5	7.0	7.9	5.0	15	80	1.0	1.0	5.0	2.5	5.3
BZX84C8V2W	8.2	7.7	8.7	5.0	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1W	9.1	8.5	9.6	5.0	15	80	1.0	0.5	6.0	3.8	7.0
BZX84C10W	10	9.4	10.6	5.0	20	100	1.0	0.2	7.0	4.5	8.0
BZX84C11W	11	10.4	11.6	5.0	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12W	12	11.4	12.7	5.0	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13W	13	12.4	14.1	5.0	30	150	1.0	0.1	8.0	7.0	11.0
BZX84C15W	15	13.8	15.6	5.0	30	170	1.0	0.1	10.5	9.2	13.0
BZX84C16W	16	15.3	17.1	5.0	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18W	18	16.8	19.1	5.0	45	200	1.0	0.1	12.6	12.4	16.0
BZX84C20W	20	18.8	21.2	5.0	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22W	22	20.8	23.3	5.0	55	225	1.0	0.1	15.4	16.4	20.0
BZX84C24W	24	22.8	25.6	5.0	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27W	27	25.1	28.9	2.0	80	250	0.5	0.1	18.9	21.4	25.3
BZX84C30W	30	28.0	32	2.0	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33W	33	31.0	35	2.0	80	300	0.5	0.1	23.1	27.4	33.4
BZX84C36W	36	34.0	38	2.0	90	325	0.5	0.1	25.2	30.4	37.4
BZX84C39W	39	37.0	41	2.0	130	350	0.5	0.1	27.3	33.4	41.2

Notes 1. Tested with pulses, 300µs pulse width, 2% duty cycle.
2. f = 1KHz.

RATING AND CHARACTERISTICS CURVES (BZX84C2V4W-BZX84C39W)

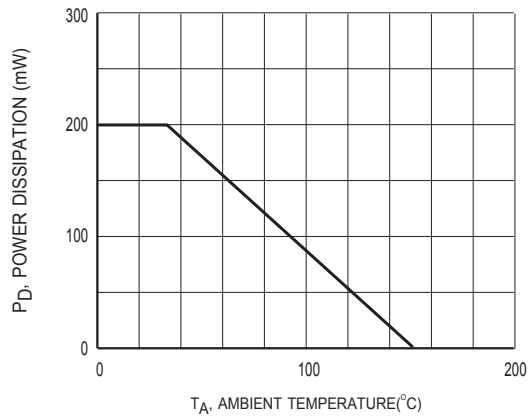


Figure1 Power Dissipation Curve

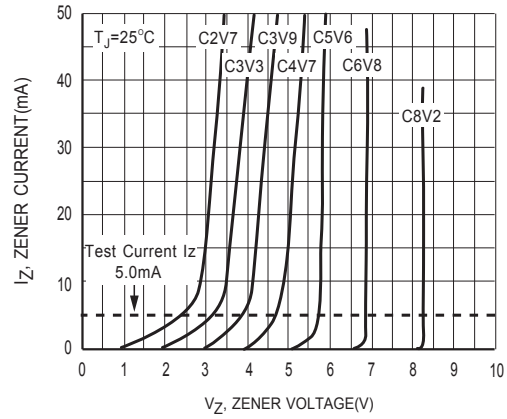


Figure2 Zener Breakdown Characteristics

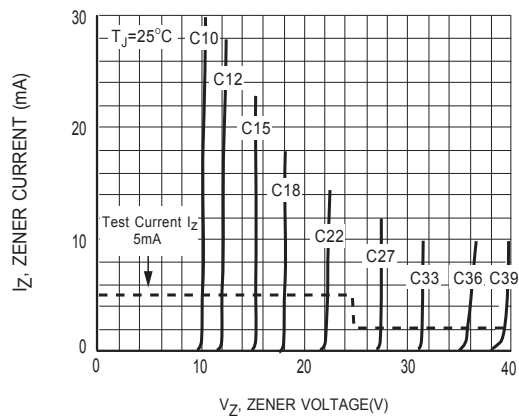


Figure3 Zener Breakdown Characteristics

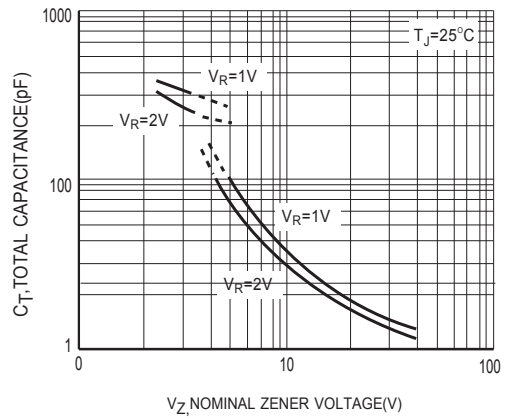


Figure4 Total Capacitance vs Nominal Zener Voltage

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