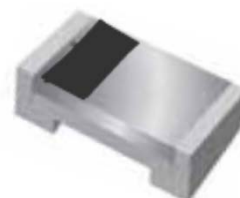


Small Signal Product

2% Tolerance SMD Zener Diode

FEATURES

- Wide zener voltage range selection: 2.4V to 36V
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- Pb free and RoHS compliant
- Halogen free



0805



MECHANICAL DATA

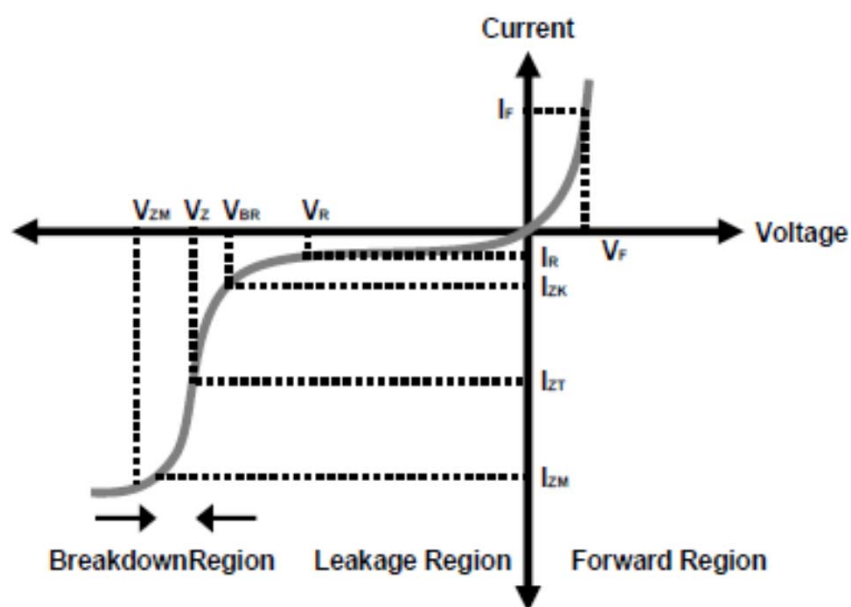
- Case: 0805
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by cathode band
- Weight : 0.006 grams (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P _D	500	mW
Forward Voltage	I _F = 10 mA	1.5	V
Thermal Resistance (Junction to Ambient)	(Note 1) R _{θJA}	300	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	- 55 to +150	°C

Note 1: Valid provided that electrodes are kept at ambient temperature

Zener I vs. V Characteristics



- V_{BR} : Voltage at I_{ZK}
- I_{ZK} : Test current for voltage V_{BR}
- Z_{ZK} : Dynamic impedance at I_{ZK}
- I_{ZT} : Test current for voltage V_Z
- V_Z : Voltage at current I_{ZT}
- Z_{ZT} : Dynamic impedance at I_{ZT}
- I_{ZM} : Maximum steady state current
- V_{ZM} : Voltage at I_{ZM}

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ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Part Number	Device Marking	$V_Z @ I_{ZT}$ (Volt)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (V)
		Nom	Min	Max						
BZY55B2V4	2V4	2.4	2.35	2.45	5	85	1	600	50	1.0
BZY55B2V7	2V7	2.7	2.65	2.75	5	85	1	600	10	1.0
BZY55B3V0	3	3.0	2.94	3.06	5	85	1	600	4	1.0
BZY55B3V3	3V3	3.3	3.23	3.37	5	85	1	600	2	1.0
BZY55B3V6	3V6	3.6	3.53	3.67	5	85	1	600	2	1.0
BZY55B3V9	3V9	3.9	3.82	3.98	5	85	1	600	2	1.0
BZY55B4V3	4V3	4.3	4.21	4.39	5	80	1	600	1	1.0
BZY55B4V7	4V7	4.7	4.61	4.79	5	70	1	600	0.5	1.0
BZY55B5V1	5V1	5.1	5.00	5.20	5	50	1	550	0.1	1.0
BZY55B5V6	5V6	5.6	5.49	5.71	5	30	1	450	0.1	1.0
BZY55B6V2	6V2	6.2	6.08	6.32	5	10	1	200	0.1	2.0
BZY55B6V8	6V8	6.8	6.66	6.94	5	8	1	150	0.1	3.0
BZY55B7V5	7V5	7.5	7.35	7.65	5	7	1	50	0.1	5.0
BZY55B8V2	8V2	8.2	8.04	8.36	5	7	1	50	0.1	6.2
BZY55B9V1	9V1	9.1	8.92	9.28	5	10	1	50	0.1	6.8
BZY55B10	10	10	9.80	10.20	5	15	1	70	0.1	7.5
BZY55B11	11	11	10.78	11.22	5	20	1	70	0.1	8.2
BZY55B12	12	12	11.76	12.24	5	20	1	90	0.1	9.1
BZY55B13	13	13	12.74	13.26	5	26	1	110	0.1	10.0
BZY55B15	15	15	14.70	15.30	5	30	1	110	0.1	11.0
BZY55B16	16	16	15.68	16.32	5	40	1	170	0.1	12.0
BZY55B18	18	18	17.64	18.36	5	50	1	170	0.1	13.0
BZY55B20	20	20	19.60	20.40	5	55	1	220	0.1	15.0
BZY55B22	22	22	21.56	22.44	5	55	1	220	0.1	16.0
BZY55B24	24	24	23.52	24.48	5	80	1	220	0.1	18.0
BZY55B27	27	27	26.46	27.54	5	80	1	220	0.1	20.0
BZY55B30	30	30	29.40	30.60	5	80	1	220	0.1	22.0
BZY55B33	33	33	32.34	33.66	5	80	1	220	0.1	24.0
BZY55B36	36	36	35.28	36.72	5	80	1	220	0.1	27.0

- Notes :
1. The Zener Voltage (V_Z) is tested under pulse condition of 10ms.
 2. The device numbers listed have optional standard tolerance on the nominal zener voltage of $\pm 5\%$.
 3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative.
 4. 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 to I_{ZT} or I_{ZK} .

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RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig. 1 Typical Forward Characteristics

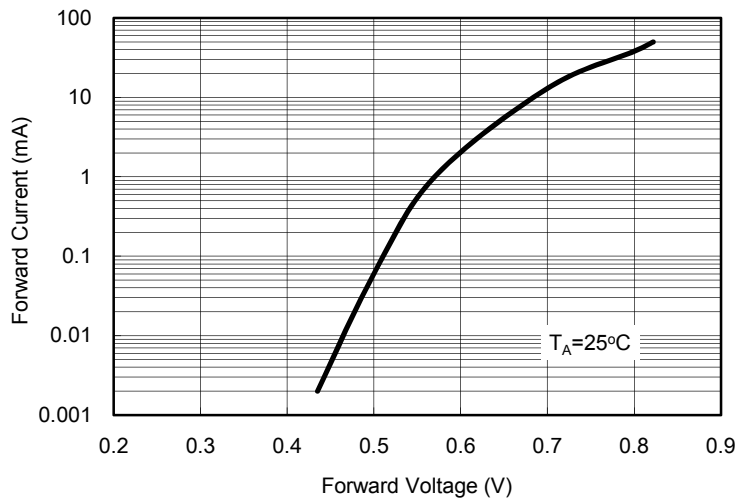


Fig. 2 Zener Breakdown Characteristics

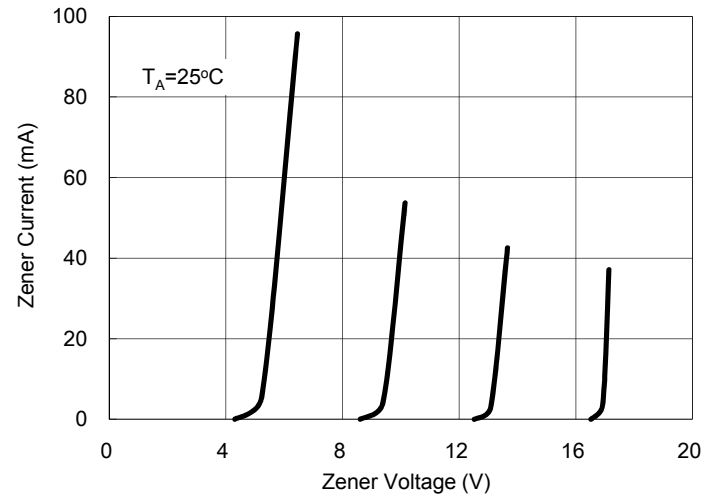


Fig. 3 Zener Breakdown

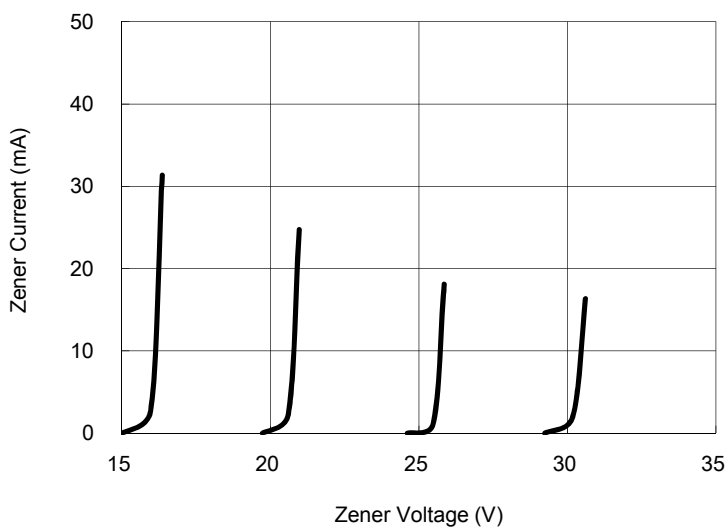


Fig. 4 Admissible Power Dissipation Curve

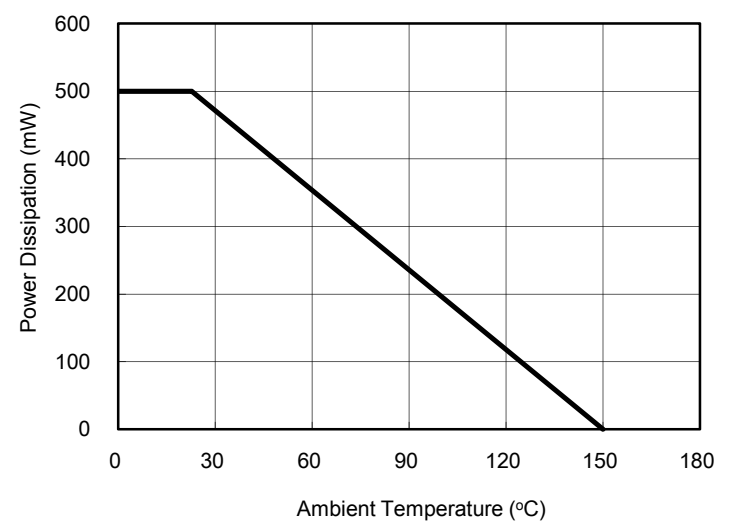
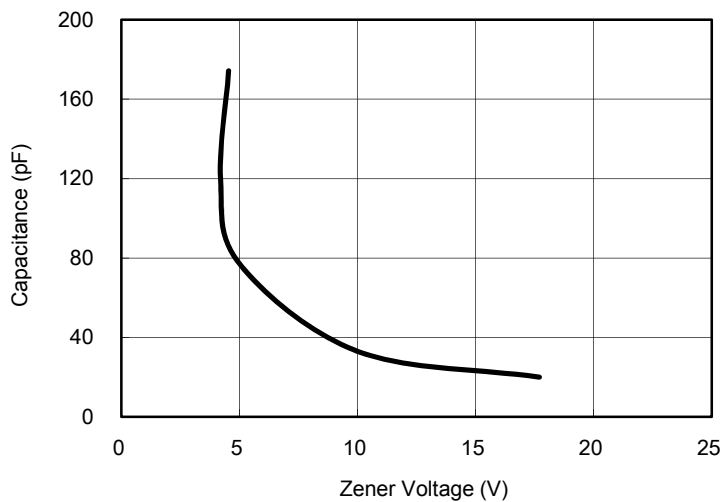


Fig. 5 Typical Capacitance



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ORDERING INFORMATION					
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
BZY55Bxxx (Note1, 3)	(Note 2)	RY	G	0805	5K / 7" Reel
		RB			10K / 13" Reel

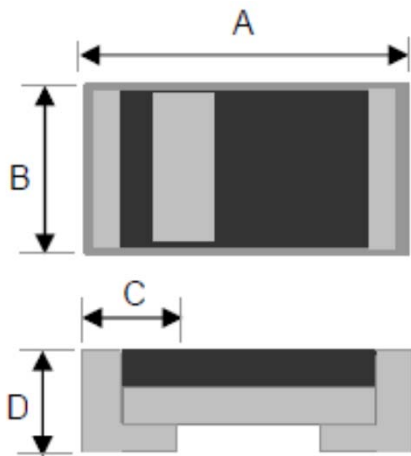
Note 1: "xxx" defines voltage from 2.4V (BZY55B2V4) to 36V (BZY55B36)

Note 2: Manufacture special control, if empty means no special control requirement.

Note 3: Whole series with green compound

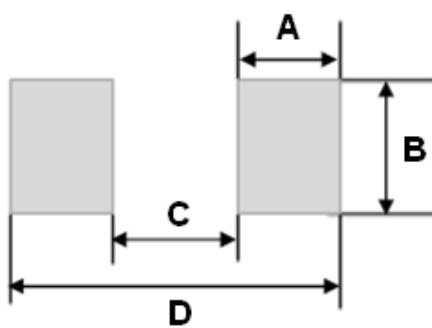
EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
BZY55B36 RYG	BZY55B36		RY	G	Green compound
BZY55B36-C0 RYG	BZY55B36	C0	RY	G	Green compound

PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.071	0.087
B	1.05	1.45	0.041	0.057
C	0.25	0.65	0.010	0.026
D	0.75	0.95	0.030	0.037

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	1.10	0.043
B	1.40	0.055
C	1.20	0.047
D	3.40	0.134

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