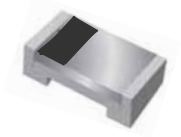
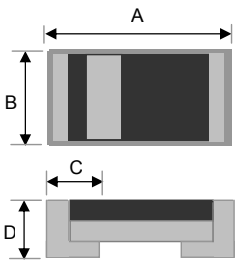
TAIWAN SEMICONDUCTOR

BZY55C2V4~BZY55C36
500mW,5% Tolerance SMD Zener Diode

Small Signal Diode



0805



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 version and RoHS compliant
- ✧Halogen free

Mechanical Data

- ✧Case :0805 standard package, molded plastic
- ✧Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧High temperature soldering guaranteed:260°C/10s
- ✧Polarity : Indicated by cathode band
- ✧Weight :0.006 gram (approximately)

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.071	0.086
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

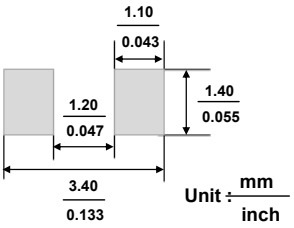
Ordering Information

Part No.	Package code	Package	Packing
BZY55C2V4~BZY55C36	RYG	0805	5K / 7" Reel

Pin Configutation



Suggested PAD Layout



Maximum Ratings and Electrical Characteristics

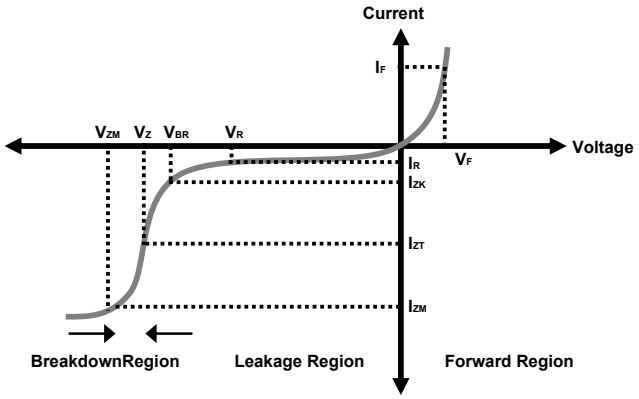
Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P_D	500	mW
Forward Voltage I_F=10mA	V_F	1.5	V
Thermal Resistance (Junction to Ambient) (Note 1)	RθJA	300	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	°C

Notes: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}

TAIWAN SEMICONDUCTOR

BZY55C2V4~BZY55C36
500mW,5% Tolerance SMD Zener Diode

Small Signal Diode

Electrical Characteristics

Ta = 25°C unless otherwise noted

V_F Forward Voltage = 1.5V Maximum @ I_F = 200 mA for all part numbers

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						
BZY55C2V4	2V4	2.4	2.28	2.52	5	85	1.0	600	50	1.0
BZY55C2V7	2V7	2.7	2.57	2.84	5	85	1.0	600	10	1.0
BZY55C3V0	3	3.0	2.85	3.15	5	85	1.0	600	4	1.0
BZY55C3V3	3V3	3.3	3.14	3.47	5	85	1.0	600	2	1.0
BZY55C3V6	3V6	3.6	3.42	3.78	5	85	1.0	600	2	1.0
BZY55C3V9	3V9	3.9	3.71	4.10	5	85	1.0	600	2	1.0
BZY55C4V3	4V3	4.3	4.09	4.52	5	80	1.0	600	1	1.0
BZY55C4V7	4V7	4.7	4.47	4.94	5	70	1.0	600	0.5	1.0
BZY55C5V1	5V1	5.1	4.85	5.36	5	50	1.0	550	0.1	1.0
BZY55C5V6	5V6	5.6	5.32	5.88	5	30	1.0	450	0.1	1.0
BZY55C6V2	6V2	6.2	5.89	6.51	5	10	1.0	200	0.1	2.0
BZY55C6V8	6V8	6.8	6.46	7.14	5	8	1.0	150	0.1	3.0
BZY55C7V5	7V5	7.5	7.13	7.88	5	7	1.0	50	0.1	5.0
BZY55C8V2	8V2	8.2	7.79	8.61	5	7	1.0	50	0.1	6.2
BZY55C9V1	9V1	9.1	8.65	9.56	5	10	1.0	50	0.1	6.8
BZY55C10	10	10	9.50	10.50	5	15	1.0	70	0.1	7.5
BZY55C11	11	11	10.45	11.55	5	20	1.0	70	0.1	8.2
BZY55C12	12	12	11.40	12.60	5	20	1.0	90	0.1	9.1
BZY55C13	13	13	12.35	13.65	5	26	1.0	110	0.1	10.0
BZY55C15	15	15	14.25	15.75	5	30	1.0	110	0.1	11.0
BZY55C16	16	16	15.20	16.80	5	40	1.0	170	0.1	12.0
BZY55C18	18	18	17.10	18.90	5	50	1.0	170	0.1	13.0
BZY55C20	20	20	19.00	21.00	5	55	1.0	220	0.1	15.0
BZY55C22	22	22	20.90	23.10	5	55	1.0	220	0.1	16.0
BZY55C24	24	24	22.80	25.20	5	80	1.0	220	0.1	18.0
BZY55C27	27	27	25.65	28.35	5	80	1.0	220	0.1	20.0
BZY55C30	30	30	28.50	31.50	5	80	1.0	220	0.1	22.0
BZY55C33	33	33	31.35	34.65	5	80	1.0	220	0.1	24.0
BZY55C36	36	36	34.20	37.80	5	80	1.0	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 ±2%.
3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances,
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

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

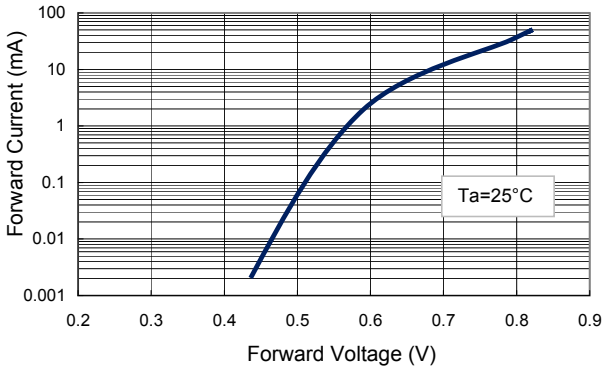


FIG 2 Zener Breakdown Characteristics

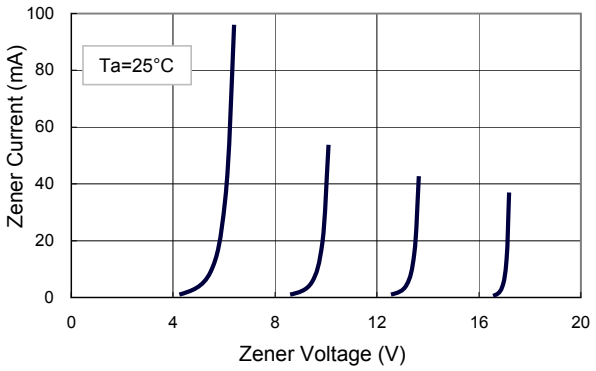


FIG 3 Zener Breakdown

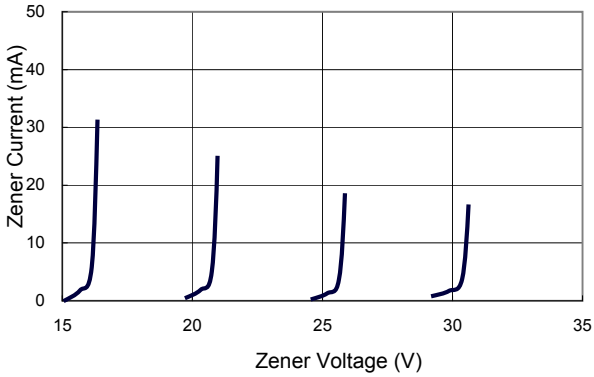


FIG 4 Admissible Power Disspation Curve

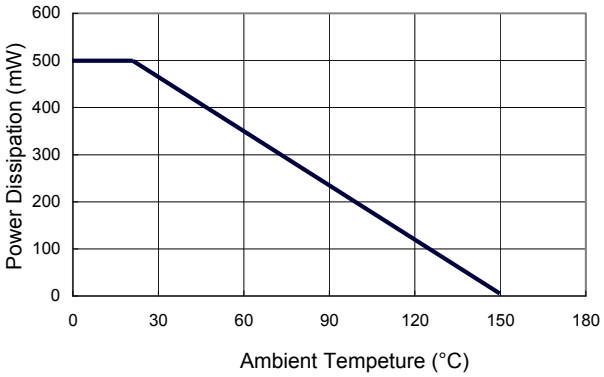


FIG 5 Typical Capacitance

