

# BZX55C SERIES

## 500mW Zener Diode

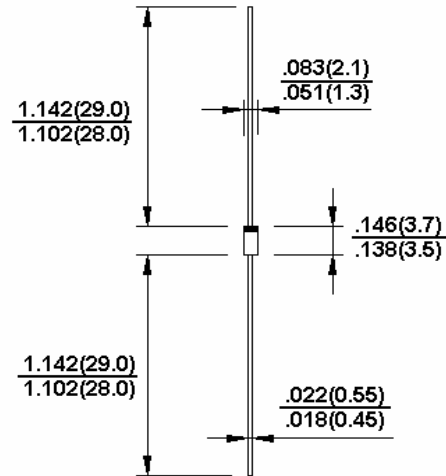
### DO-35

#### Features

- ◇ Fast switching speed
- ◇ General purpose rectification
- ◇ Silicon epitaxial planar construction

#### Mechanical Data

- ◇ Case: DO-35
- ◇ Leads: Solderable per MIL-STD-202, Method 208
- ◇ Polarity: Cathode band
- ◇ Marking: Type number
- ◇ Weight: 0.13 grams (approx.)



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

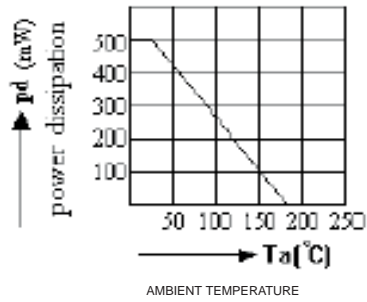
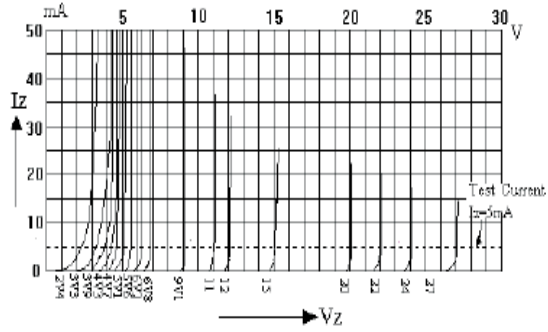
#### Maximum Ratings

Type Number	Symbol	Value	Units
Forward Voltage @ IF = 100mA	V <sub>F</sub>	1.0	V
Power Dissipation (Note 1)	P <sub>d</sub>	500	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R <sub>θJA</sub>	0.3	K/mW
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175	°C

- Notes: 1. Valid Provided that Lead are kept at ambient temperature at a distance of 8mm from case.  
 2. Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

### RATINGS AND CHARACTERISTIC CURVES (BZX55C SERIES)

CHANGES IN THE POWER DISSIPATION DUE TO THE AMBIENT TEMPERATURE



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

Device Type	Nominal Zener Voltage			Maximum Zener Impedance			Maximum Reverse Current		Maximum Regulator Current	Typical Temp. Coefficient
	Vz at Izt		IzT	ZzT @ IzT	ZzK @ IzK		IR	VR(suffix B)		
	Min (V)	Max (V)	mA		Ohms	Ohms			mA	uA
BZX55-C2V2	2.09	2.31	5.0	85	600	1.0	50	1.0	165.0	-0.070
BZX55-C2V4	2.28	2.56	5.0	85	600	1.0	50	1.0	150.0	-0.070
BZX55-C2V7	2.5	2.9	5.0	85	600	1.0	10	1.0	135.0	-0.070
BZX55-C3V0	2.8	3.2	5.0	85	600	1.0	4.0	1.0	125.0	-0.070
BZX55-C3V3	3.1	3.5	5.0	85	600	1.0	2.0	1.0	115.0	-0.065
BZX55-C3V6	3.4	3.8	5.0	85	600	1.0	2.0	1.0	105.0	-0.060
BZX55-C3V9	3.7	4.1	5.0	85	600	1.0	2.0	1.0	95.0	-0.050
BZX55-C4V3	4.0	4.6	5.0	75	600	1.0	1.0	1.0	90.0	-0.025
BZX55-C4V7	4.4	5.0	5.0	60	600	1.0	0.5	1.0	85.0	-0.010
BZX55-C5V1	4.8	5.4	5.0	35	550	1.0	0.1	1.0	80.0	+0.015
BZX55-C5V6	5.2	6.0	5.0	25	450	1.0	0.1	1.0	70.0	+0.025
BZX55-C6V2	5.8	6.6	5.0	10	200	1.0	0.1	2.0	64.0	+0.035
BZX55-C6V8	6.4	7.2	5.0	8	150	1.0	0.1	3.0	58.0	+0.045
BZX55-C7V5	7.0	7.9	5.0	7	50	1.0	0.1	5.0	53.0	+0.050
BZX55-C8V2	7.7	8.7	5.0	7	50	1.0	0.1	6.0	47.0	+0.050
BZX55-C9V1	8.5	9.6	5.0	10	50	1.0	0.1	7.0	43.0	+0.060
BZX55-C10	9.4	10.6	5.0	15	70	1.0	0.1	7.5	40.0	+0.070
BZX55-C11	10.4	11.6	5.0	20	70	1.0	0.1	8.5	36.0	+0.070
BZX55-C12	11.4	12.7	5.0	20	90	1.0	0.1	9.0	32.0	+0.070
BZX55-C13	12.4	14.1	5.0	26	110	1.0	0.1	10	29.0	+0.070
BZX55-C15	13.8	15.6	5.0	30	110	1.0	0.1	11	27.0	+0.070
BZX55-C16	15.3	17.1	5.0	40	170	1.0	0.1	12	24.0	+0.070
BZX55-C18	16.8	19.1	5.0	50	170	1.0	0.1	14	21.0	+0.070
BZX55-C20	18.8	21.2	5.0	55	220	1.0	0.1	15	20.0	+0.070
BZX55-C22	20.8	23.3	5.0	55	220	1.0	0.1	17	18.0	+0.070
BZX55-C24	22.8	25.6	5.0	80	220	1.0	0.1	18	16.0	+0.080
BZX55-C27	25.1	28.9	5.0	80	220	1.0	0.1	20	14.0	+0.080
BZX55-C30	28	32	5.0	80	220	1.0	0.1	22	13.0	+0.080
BZX55-C33	31	35	5.0	80	220	1.0	0.1	24	12.0	+0.080
BZX55-C36	34	38	5.0	80	220	1.0	0.1	27	11.0	+0.080
BZX55-C39	37	41	2.5	90	500	1.0	0.1	30	10.0	+0.080
BZX55-C43	40	46	2.5	90	600	1.0	0.1	33	9.2	+0.080
BZX55-C47	44	50	2.5	110	700	1.0	0.1	36	8.5	+0.080
BZX55-C51	48	54	2.5	125	700	1.0	0.1	39	7.5	+0.080

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

2. Tested with pulses, 300us pulse width, period = 5ms.

3. f = 1KHz.