BZX55C SERIES

500mW Zener Diode

DO-35

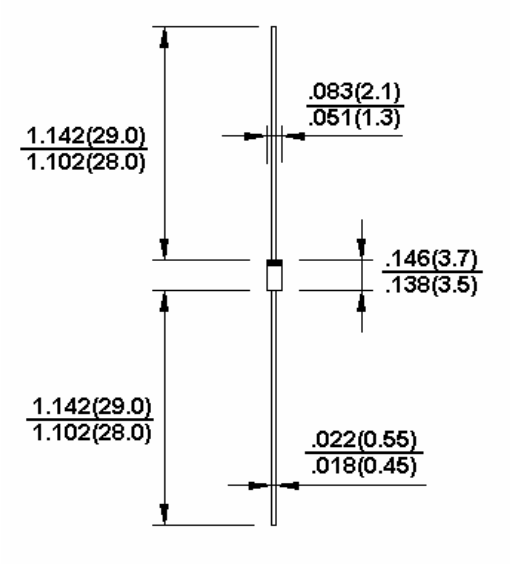


Features

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

Mechanical Data

- ✧ Case: DO-35
- ✧ Leads:Solderableper 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.

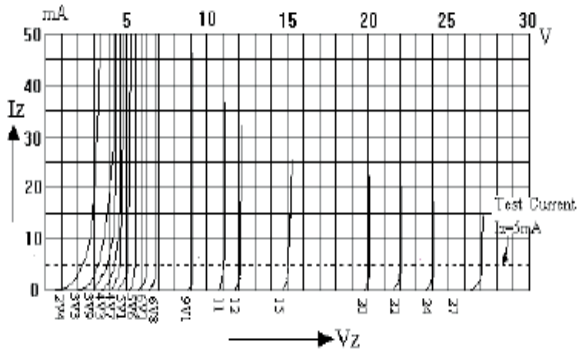
Maximum Ratings

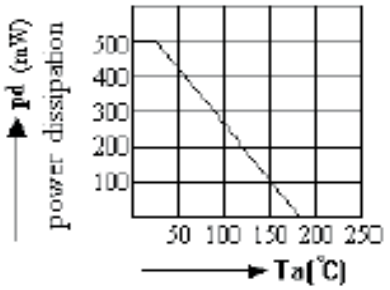
Type Number	Symbol	Value	Units
Forward Voltage @ IF = 100mA	V_F	1.0	V
Power Dissipation (Note 1)	Pd	500	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	0.3	K /mW
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175	°C

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





AMBIENT TEMPERATURE

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

Device Type	Nominal Zener Voltage Vz at Izt		Izt	Maximum Zener Impedance			Maximum Reverse Current		Maximum Regulator Current	Typical Temp. Coefficient
				Zzt @ Izt	Zzk @ Izk		Ir	VR(suffix B)	IzM	
	Min (V)	Max (V)	mA	Ohms	Ohms	mA	uA	V	mA	% / °C
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
BXZ55-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.