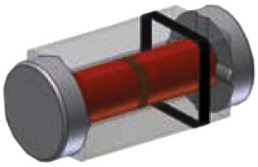
BZT55C- Series

RoHS Compliant



Features:

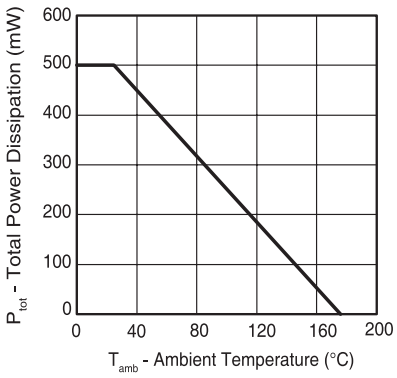
- Zener voltage range 2 to 75 Volts.
- Mini-MELF package.
- Surface device type mounting.
- Hermetically sealed glass.
- Compression Bonded Construction.
- All external surfaces are corrosion resistant and terminals are readily solderable.
- Matte Tin (Sn) lead finish.
- Blue color band indicates negative polarity.

Maximum Ratings and Electrical Characteristics

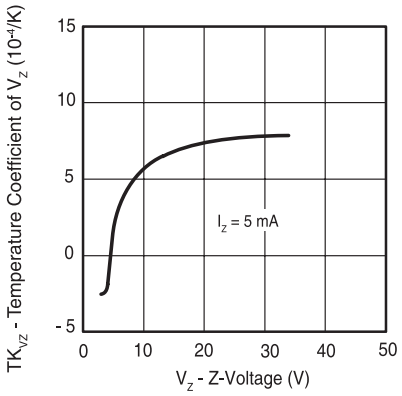
Type Number	Symbol	Value	Units
Power Dissipation	P_D	500	mW
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 200	°C

Notes : These ratings are limiting values above which the serviceability of the diode may be impaired.

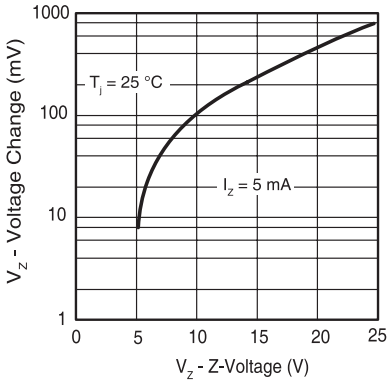
Ratings and Characteristic Curves



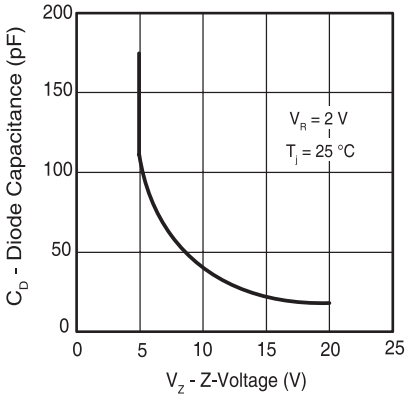
Total Power Dissipation vs. Ambient Temperature



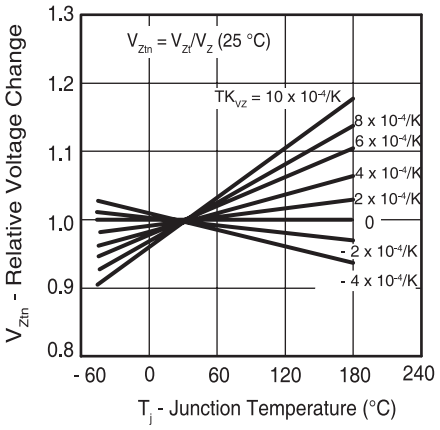
Temperature Coefficient of Vz vs. Z-Voltage



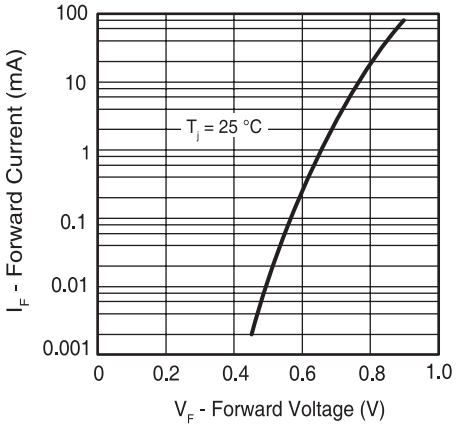
Typical Change of Working Voltage under Operating Conditions at T_{amb}=25°C



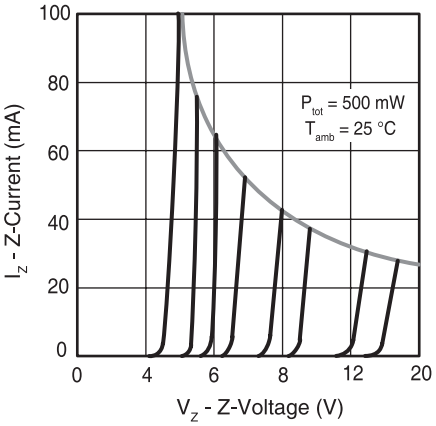
Diode Capacitance vs. Z-Voltage



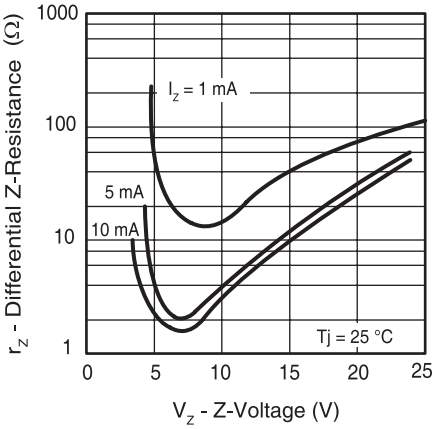
Typical Change of Working Voltage vs. Junction Temperature



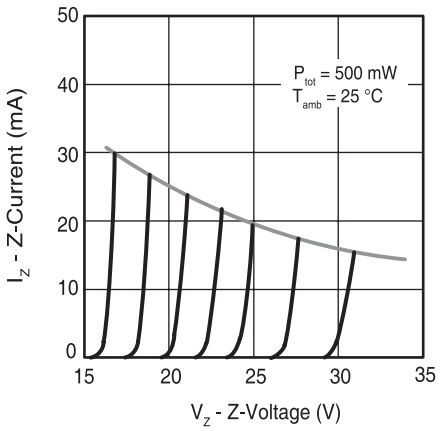
Forward Current vs. Forward Voltage



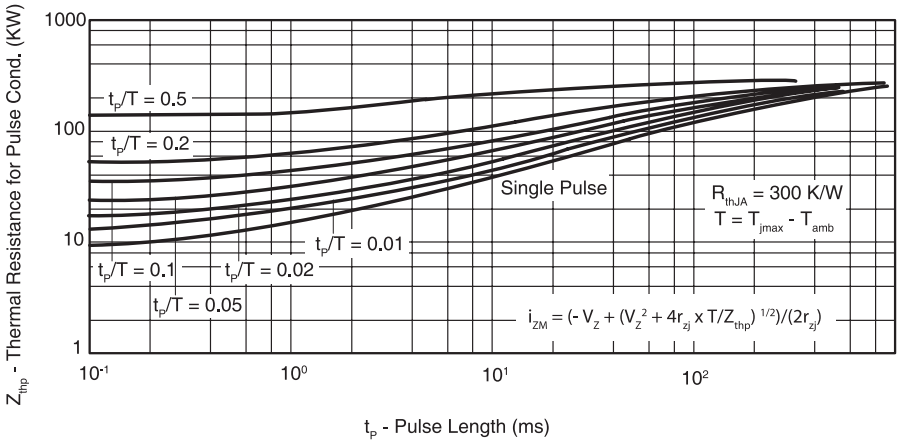
Z-Current vs. Z-Voltage



Differential Z-Resistance vs. Z-Voltage



Z-Current vs. Z-Voltage



Thermal Response

Electrical Characteristics (TA=25°C unless otherwise noted)

V_Z at I_{ZT} (Volts)		I_{ZT}	Z_{ZT} at I_{ZT}	I_{ZK}	Z_{ZK} at I_{ZK}	I_R at V_R	V_R	Part Number
Vz Minimum (V)	Vz Maximum (V)	mA	Ω Maximum	mA	Ohms	µA Maximum	V	
9.4	10.6	5	15	1	70	0.1	7.5	BZT55C10
10.4	11.6	5	20	1	70	0.1	8.2	BZT55C11
11.4	12.7	5	20	1	90	0.1	9.1	BZT55C12
12.4	14.1	5	26	1	110	0.1	10	BZT55C13
13.8	15.6	5	30	1	110	0.1	11	BZT55C15
15.3	17.1	5	40	1	170	0.1	12	BZT55C16
16.8	19.1	5	50	1	170	0.1	13	BZT55C18
18.8	21.1	5	55	1	220	0.1	15	BZT55C20
20.8	23.3	5	55	1	220	0.1	16	BZT55C22
22.8	25.6	5	80	1	220	0.1	18	BZT55C24
25.1	28.9	2	80	1	220	0.1	20	BZT55C27
1.88	2.11	5	100	1	600	50	1	BZT55C2V0
2.08	2.33	5	100	1	600	50	1	BZT55C2V2
2.28	2.56	5	85	1	600	50	1	BZT55C2V4
2.51	2.89	5	85	1	600	10	1	BZT55C2V7
28	32	2	80	1	220	0.1	22	BZT55C30
31	35	2	80	1	220	0.1	24	BZT55C33
34	38	2	80	1	220	0.1	27	BZT55C36
37	41	2	90	0.5	500	0.1	28	BZT55C39
2.8	3.2	5	85	1	600	4	1	BZT55C3V0
3.1	3.5	5	85	1	600	2	1	BZT55C3V3
3.4	3.8	5	85	1	600	2	1	BZT55C3V6

V_Z at I_{ZT} (Volts)		I_{ZT} mA	Z_{ZT} at I_{ZT} Ω Maximum	I_{ZK} mA	Z_{ZK} at I_{ZK} Ohms	I_R at V_R µA Maximum	V_R V	Part Number
Vz Minimum (V)	Vz Maximum (V)							
3.7	4.1	5	85	1	600	2	1	BZT55C3V9
40	46	2	90	0.5	600	0.1	35	BZT55C43
44	50	2	110	0.5	700	0.1	35	BZT55C47
4.0	4.6	5	75	1	600	2	1	BZT55C4V3
4.4	5	5	60	1	600	0.5	1	BZT55C4V7
48	54	2	125	0.5	700	0.1	38	BZT55C51
52	60	2	135	0.5	1,000	0.1	42	BZT55C56
4.8	5.4	5	35	1	550	0.1	1	BZT55C5V1
5.2	6.0	5	25	1	450	0.1	1	BZT55C5V6
58	66	2.5	150	0.5	1,000	0.1	47	BZT55C62
64	72	2.5	160	0.5	1,000	0.1	51	BZT55C68
5.8	6.6	5	10	1	200	0.1	2	BZT55C6V2
6.4	7.2	5	8	1	150	0.1	3	BZT55C6V8
70	80	2.5	170	0.5	1,000	0.1	56	BZT55C75
7.0	7.9	5	7	1	50	0.1	5	BZT55C7V5
7.7	8.7	5	7	1	50	0.1	6.2	BZT55C8V2
8.5	9.6	5	10	1	50	0.1	6.8	BZT55C9V1

VF Forward Voltage = 1V Maximum at I_F = 100mA for all types.

Notes : 1. The type numbers listed have zener voltage min/max limits as shown.

2. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rams value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.