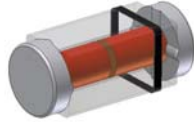


# BZT55C SERIES

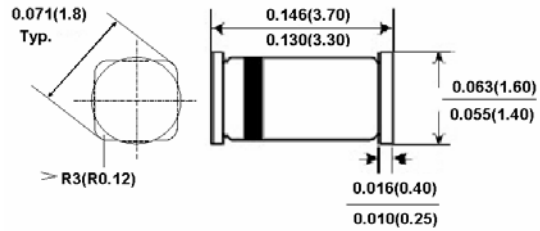
## 0.5 Watts Hermetically Sealed Glass Zener Voltage Regulators

### QUADRO MINI-MELF



### Features

- ✧ Zener voltage range 2.0 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
- ✧ RoHS compliant
- ✧ Matte Tin(Sn) lead finish
- ✧ Blue color band indicates negative polarity



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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 (BZT55C SERIES)

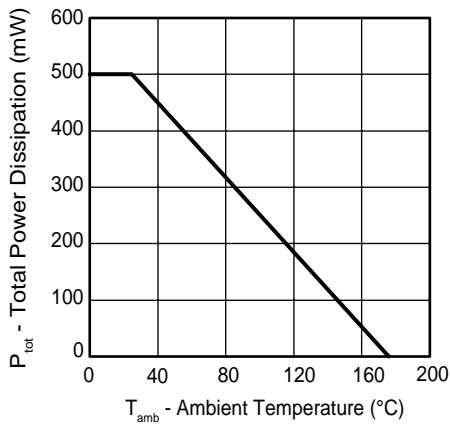


Figure 1. Total Power Dissipation vs. Ambient Temperature

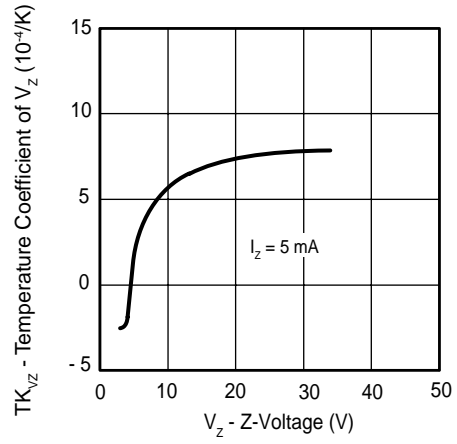


Figure 4. Temperature Coefficient of Vz vs. Z-Voltage

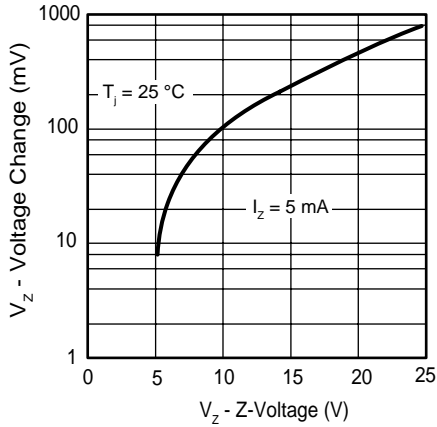


Figure 2. Typical Change of Working Voltage under Operating Conditions at  $T_{amb}=25^{\circ}C$

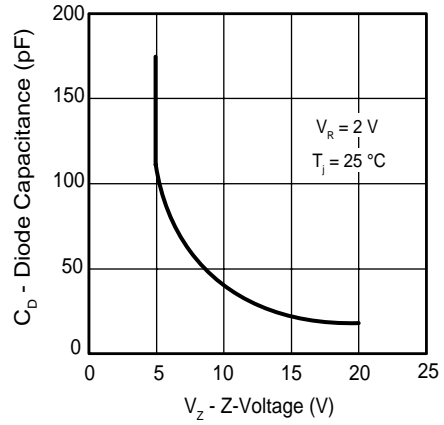


Figure 5. Diode Capacitance vs. Z-Voltage

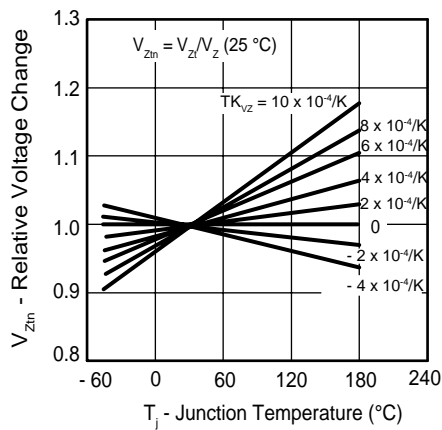


Figure 3. Typical Change of Working Voltage vs. Junction Temperature

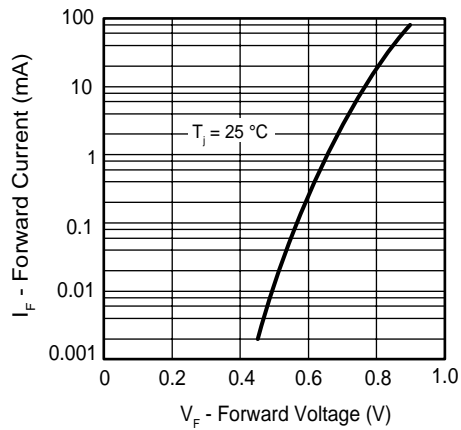


Figure 6. Forward Current vs. Forward Voltage

RATINGS AND CHARACTERISTIC CURVES (BZT55C SERIES)

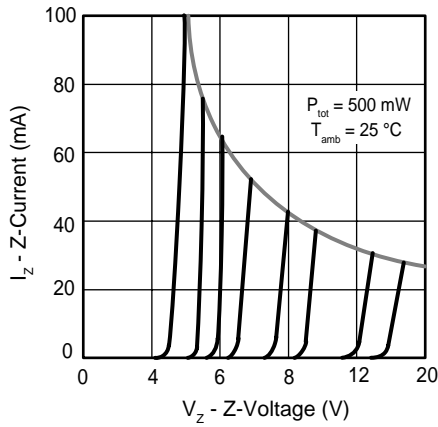


Figure 7. Z-Current vs. Z-Voltage

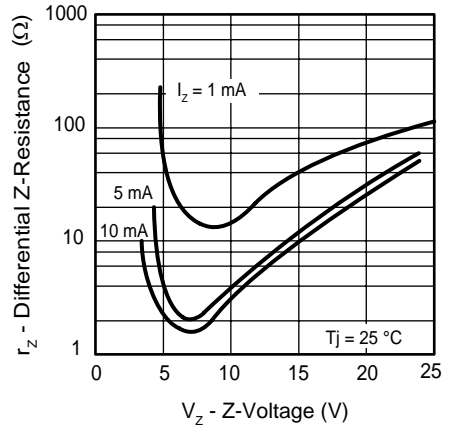


Figure 9. Differential Z-Resistance vs. Z-Voltage

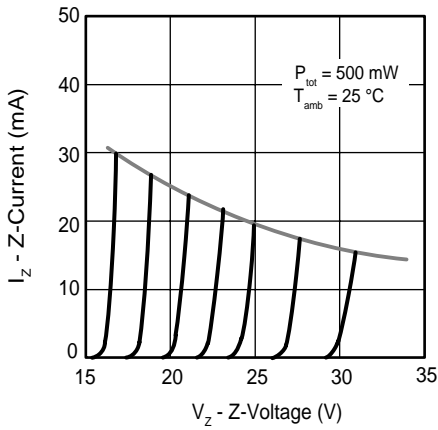


Figure 8. Z-Current vs. Z-Voltage

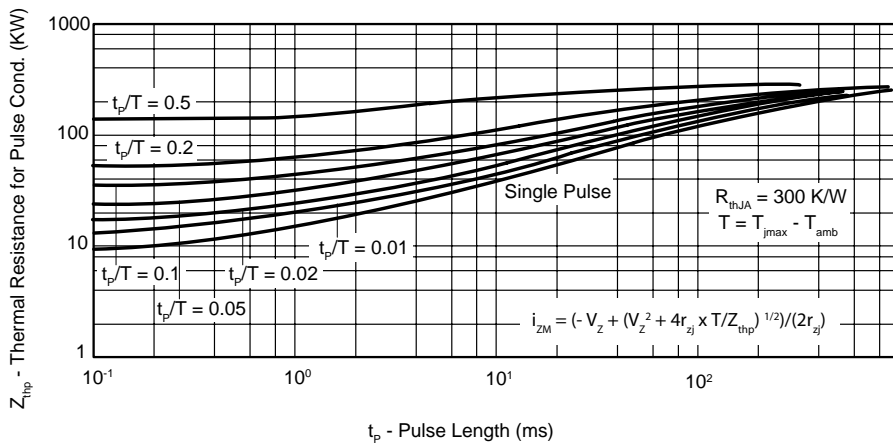


Figure 10. Thermal Response

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

Type Number	V <sub>Z</sub> @ I <sub>ZT</sub> (Volts)		I <sub>ZT</sub> mA	Z <sub>ZT</sub> @ I <sub>ZT</sub> Ohms Max	I <sub>ZK</sub> mA	Z <sub>ZK</sub> @ I <sub>ZK</sub> Ohms	I <sub>R</sub> @ V <sub>R</sub> uA Max	V <sub>R</sub> V
	V <sub>Z</sub> Min (V)	V <sub>Z</sub> Max (V)						
	BZT55C2V0	1.88						
BZT55C2V2	2.08	2.33	5	100	1.0	600	50	1.0
BZT55C2V4	2.28	2.56	5	85	1.0	600	50	1.0
BZT55C2V7	2.51	2.89	5	85	1.0	600	10	1.0
BZT55C3V0	2.8	3.2	5	85	1.0	600	4	1.0
BZT55C3V3	3.1	3.5	5	85	1.0	600	2	1.0
BZT55C3V6	3.4	3.8	5	85	1.0	600	2	1.0
BZT55C3V9	3.7	4.1	5	85	1.0	600	2	1.0
BZT55C4V3	4.0	4.6	5	75	1.0	600	1	1.0
BZT55C4V7	4.4	5.0	5	60	1.0	600	0.5	1.0
BZT55C5V1	4.8	5.4	5	35	1.0	550	0.1	1.0
BZT55C5V6	5.2	6.0	5	25	1.0	450	0.1	1.0
BZT55C6V2	5.8	6.6	5	10	1.0	200	0.1	2.0
BZT55C6V8	6.4	7.2	5	8	1.0	150	0.1	3.0
BZT55C7V5	7.0	7.9	5	7	1.0	50	0.1	5.0
BZT55C8V2	7.7	8.7	5	7	1.0	50	0.1	6.2
BZT55C9V1	8.5	9.6	5	10	1.0	50	0.1	6.8
BZT55C10	9.4	10.6	5	15	1.0	70	0.1	7.5
BZT55C11	10.4	11.6	5	20	1.0	70	0.1	8.2
BZT55C12	11.4	12.7	5	20	1.0	90	0.1	9.1
BZT55C13	12.4	14.1	5	26	1.0	110	0.1	10
BZT55C15	13.8	15.6	5	30	1.0	110	0.1	11
BZT55C16	15.3	17.1	5	40	1.0	170	0.1	12
BZT55C18	16.8	19.1	5	50	1.0	170	0.1	13
BZT55C20	18.8	21.1	5	55	1.0	220	0.1	15
BZT55C22	20.8	23.3	5	55	1.0	220	0.1	16
BZT55C24	22.8	25.6	5	80	1.0	220	0.1	18
BZT55C27	25.1	28.9	2	80	1.0	220	0.1	20
BZT55C30	28	32	2	80	1.0	220	0.1	22
BZT55C33	31	35	2	80	1.0	220	0.1	24
BZT55C36	34	38	2	80	1.0	220	0.1	27
BZT55C39	37	41	2	90	0.5	500	0.1	28
BZT55C43	40	46	2	90	0.5	600	0.1	32
BZT55C47	44	50	2	110	0.5	700	0.1	35
BZT55C51	48	54	2	125	0.5	700	0.1	38
BZT55C56	52	60	2	135	0.5	1000	0.1	42
BZT55C62	58	66	2.5	150	0.5	1000	0.1	47
BZT55C68	64	72	2.5	160	0.5	1000	0.1	51
BZT55C75	70	80	2.5	170	0.5	1000	0.1	56

VF Forward Voltage = 1.0v Maximum @ IF=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 rms value equal to 10% of the dc zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed to I<sub>ZT</sub> or I<sub>ZK</sub>.