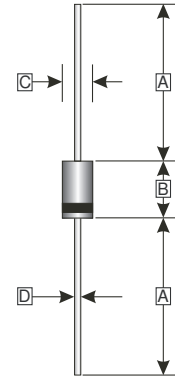


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Zener Voltage Range 2.0 to 75 Volts
- Through-Hole Device Type Mounting
- Compression Bonded Construction
- Cathode Indicated By Polarity Band
- Case: DO-35 (JEDEC)
- Hermetically Sealed Glass
- All External Surfaces Are Corrosion Resistant And Leads Are Readily Solderable

## DO-35



REF.	Millimeter	
	Min.	Max.
A	25.0	29.9
B	-	4.50
C	-	2.00
D	0.46	0.56



## MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	500	mW
Maximum Forward Voltage @ I <sub>F</sub> =100mA	V <sub>F</sub>	1	V
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	175 , -65~175	°C

Notes:

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

## ELECTRICAL RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

TYPE NUMBER <sup>1</sup>	ZENER VOLTAGE RANGE <sup>2</sup>			ZENER IMPEDANCE <sup>3</sup>			LEAKAGE CURRENT <sup>1</sup>	
	V <sub>Z</sub> @I <sub>ZT</sub>		I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	I <sub>ZK</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>R</sub> @V <sub>R</sub>	V <sub>R</sub>
	Min(V)	Max(V)	mA	Ω	mA	Ω	μA	V
BZX55C2V0	1.88	2.11	5	100	1	600	100	1
BZX55C2V2	2.08	2.33	5	100	1	600	100	1
BZX55C2V4	2.28	2.56	5	85	1	600	50	1
BZX55C2V7	2.51	2.89	5	85	1	600	10	1
BZX55C3V0	2.8	3.2	5	85	1	600	4	1
BZX55C3V3	3.1	3.5	5	85	1	600	2	1
BZX55C3V6	3.4	3.8	5	85	1	600	2	1
BZX55C3V9	3.7	4.1	5	85	1	600	2	1
BZX55C4V3	4	4.6	5	75	1	600	1	1
BZX55C4V7	4.4	5	5	60	1	600	0.5	1
BZX55C5V1	4.8	5.4	5	35	1	550	0.1	1

**ELECTRICAL RATINGS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

TYPE NUMBER <sup>1</sup>	ZENER VOLTAGE RANGE <sup>2</sup>			ZENER IMPEDANCE <sup>3</sup>			LEAKAGE CURRENT <sup>1</sup>	
	$V_Z @ I_{ZT}$		$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_{ZK}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	$V_R$
	Min(V)	Max(V)	mA	$\Omega$	mA	$\Omega$	$\mu\text{A}$	V
BZX55C5V6	5.2	6	5	25	1	450	0.1	1
BZX55C6V2	5.8	6.6	5	10	1	200	0.1	2
BZX55C6V8	6.4	7.2	5	8	1	150	0.1	3
BZX55C7V5	7.0	7.9	5	7	1	50	0.1	5
BZX55C8V2	7.7	8.7	5	7	1	50	0.1	6.2
BZX55C9V1	8.5	9.6	5	10	1	50	0.1	6.8
BZX55C10	9.4	10.6	5	15	1	70	0.1	7.5
BZX55C11	10.4	11.6	5	20	1	70	0.1	8.2
BZX55C12	11.4	12.7	5	20	1	90	0.1	9.1
BZX55C13	12.4	14.1	5	26	1	110	0.1	10
BZX55C15	13.8	15.6	5	30	1	110	0.1	11
BZX55C16	15.3	17.1	5	40	1	170	0.1	12
BZX55C18	16.8	19.1	5	50	1	170	0.1	13
BZX55C20	18.8	21.1	5	55	1	220	0.1	15
BZX55C22	20.8	23.3	5	55	1	220	0.1	16
BZX55C24	22.8	25.6	5	80	1	220	0.1	18
BZX55C27	25.1	28.9	5	80	1	220	0.1	20
BZX55C30	28	32	5	80	1	220	0.1	22
BZX55C33	31	35	5	80	1	220	0.1	24
BZX55C36	34	38	5	80	1	220	0.1	27
BZX55C39	37	41	2.5	90	0.5	500	0.1	28
BZX55C43	40	46	2.5	90	0.5	600	0.1	32
BZX55C47	44	50	2.5	110	0.5	700	0.1	35
BZX55C51	48	54	2.5	125	0.5	700	0.1	38
BZX55C56	52	60	2.5	135	0.5	1000	0.1	42
BZX55C62	58	66	2.5	150	0.5	1000	0.1	47
BZX55C68	64	72	2.5	160	0.5	1000	0.1	51
BZX55C75	70	80	2.5	170	0.5	1000	0.1	56

$V_F$  Forward Voltage=1.0V Maximum @  $I_F=100\text{mA}$  for all types.

Notes:

1. TOLERANCE AND VOLTAGE DESIGNATION

The type numbers listed have zener voltage as shown.

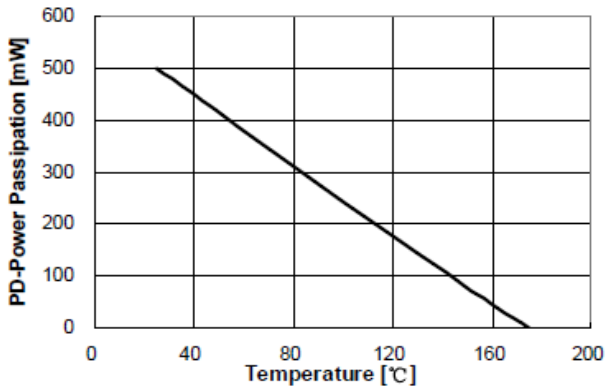
2. ZENER VOLTAGE ( $V_Z$ ) MEASUREMENT

The zener voltage is measured under pulse conditions such that  $T_J$  is no more than  $2^\circ\text{C}$  above  $T_A$ .

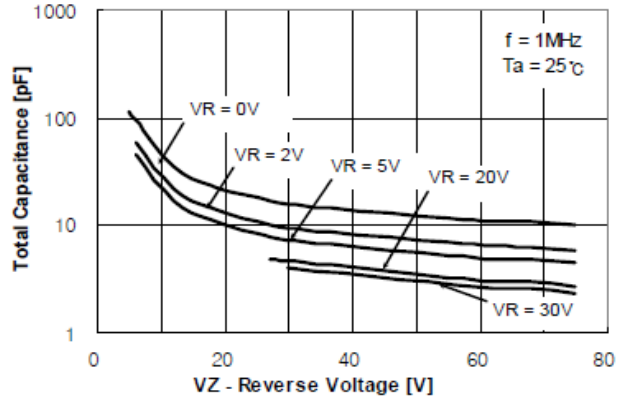
3. ZENER IMPEDANCE ( $Z_Z$ ) DERIVATION

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 ( $I_{ZT}$ ) is superimposed to  $I_{ZT}$ .

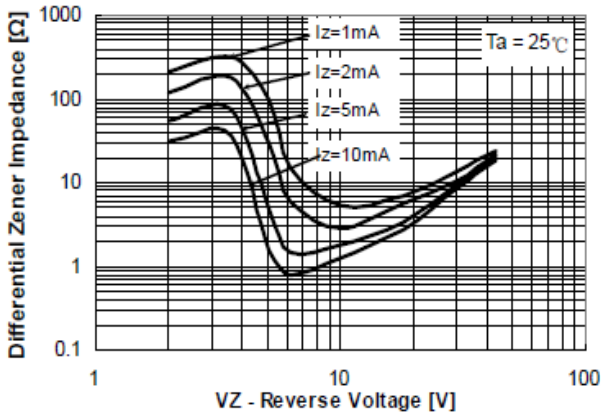
**RATINGS AND CHARACTERISTIC CURVES**



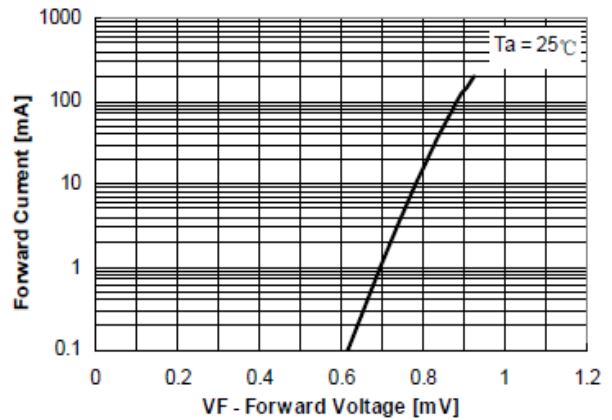
**Figure 1. Power Dissipation vs Ambient Temperature**  
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature



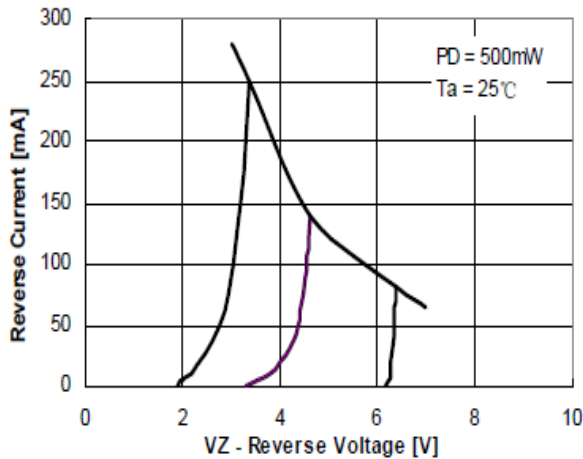
**Figure 2. Total Capacitance**



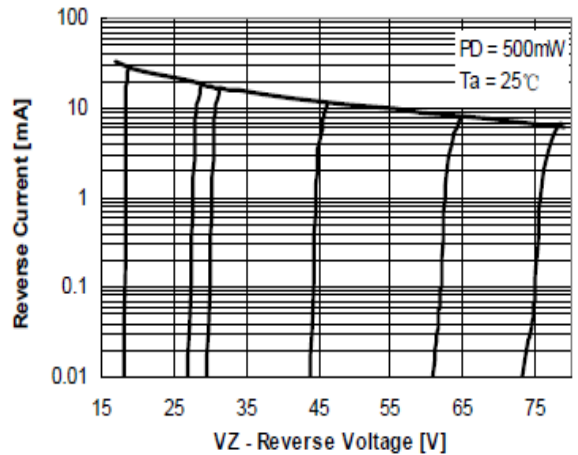
**Figure 3. Differential Impedance vs. Zener Voltage**



**Figure 4. Forward Current vs. Forward Voltage**



**Figure 5. Reverse Current vs. Reverse Voltage**



**Figure 6. Reverse Current vs. Reverse Voltage**