

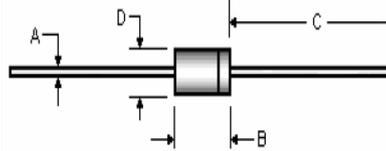
**DO-35 Hermetically Sealed Glass Zener Voltage Regulators**

**REVERSE VOLTAGE – 2.0 to 75 Volts  
POWER DISSIPATION – 0.5 Watts**

**FEATURES**

- Zener voltage range 2.0 to 75 volts
- DO-35 package (JEDEC)
- Through-hole device type mounting
- Hermetically sealed glass
- Compression bonded construction
- All external surfaces are corrosion resistant and terminals are readily solderable
- RoHS compliant
- Solder hot dip tin (Sn) terminal finish
- Color band indicates negative polarity

**DO-35**



DO-35		
DIM.	MIN.	MAX.
A	0.46	0.55
B	3.05	5.08
C	25.40	38.10
D	1.53	2.28

All Dimensions in millimeter

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**MAXIMUM RATINGS**

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	$P_D$	500	mW
Storage temperature range	$T_{STG}$	-65 ~ +175	°C
Operating junction temperature	$T_{OPR}$	+175	°C

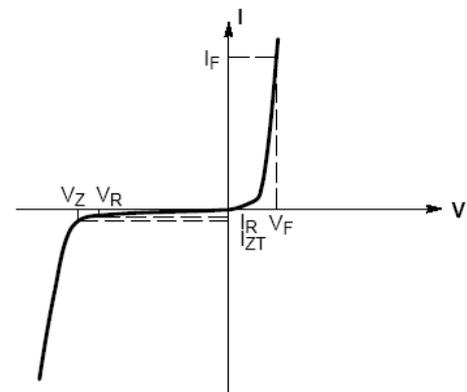
These ratings are limiting values above which the serviceability of the diode may be impaired

**DEVICE MARKING**

P/N	MARKING	PIN DIAGRAM	EQUIVALENT CIRCUIT DIAGRAM
BZX55Cxxx	Device code : 55Cxxx C: $V_Z$ tolerance		

**ELECTRICAL CHARACTERISTICS**

SYMBOL	PARAMETER
$V_Z$	Reverse zener voltage @ $I_{ZT}$
$I_{ZT}$	Reverse current
$Z_{ZT}$	Maximum zener impedance @ $I_{ZT}$
$I_{ZK}$	Reverse current
$Z_{ZK}$	Maximum zener impedance @ $I_{ZK}$
$I_R$	Reverse leakage current @ $V_R$
$V_R$	Reverse voltage
$I_F$	Forward current
$V_F$	Forward voltage @ $I_F$



**ELECTRICAL CHARACTERISTICS**  $T_A = 25^\circ\text{C}$  unless otherwise noted


P/N	$V_Z@I_Z(\text{V})$		$I_{ZT}(\text{mA})$	MAX.				$V_R(\text{V})$
	MIN.	MAX.		$Z_{ZV}@I_{ZT}(\Omega)$	$I_{ZK}(\text{mA})$	$Z_{ZK}@I_{ZK}(\Omega)$	$I_R@V_R(\mu\text{A})$	
BZX55C 2V0	1.88	2.11	5	100	1	600	100	1
BZX55C 2V2	2.08	2.33	5	100	1	600	100	1
BZX55C 2V4	2.28	2.56	5	85	1	600	50	1
BZX55C 2V7	2.51	2.89	5	85	1	600	10	1
BZX55C 3V0	2.8	3.2	5	85	1	600	4	1
BZX55C 3V3	3.1	3.5	5	85	1	600	2	1
BZX55C 3V6	3.4	3.8	5	85	1	600	2	1
BZX55C 3V9	3.7	4.1	5	85	1	600	2	1
BZX55C 4V3	4.0	4.6	5	75	1	600	1	1
BZX55C 4V7	4.4	5.0	5	60	1	600	0.5	1
BZX55C 5V1	4.8	5.4	5	35	1	550	0.1	1
BZX55C 5V6	5.2	6.0	5	25	1	450	0.1	1
BZX55C 6V2	5.8	6.6	5	10	1	200	0.1	2
BZX55C 6V8	6.4	7.2	5	8	1	150	0.1	3
BZX55C 7V5	7.0	7.9	5	7	1	50	0.1	5
BZX55C 8V2	7.7	8.7	5	7	1	50	0.1	6.2
BZX55C 9V1	8.5	9.6	5	10	1	50	0.1	6.8
BZX55C 10	9.4	10.6	5	15	1	70	0.1	7.5
BZX55C 11	10.4	11.6	5	20	1	70	0.1	8.2
BZX55C 12	11.4	12.7	5	20	1	90	0.1	9.1
BZX55C 13	12.4	14.1	5	26	1	110	0.1	10
BZX55C 15	13.8	15.6	5	30	1	110	0.1	11
BZX55C 16	15.3	17.1	5	40	1	170	0.1	12
BZX55C 18	16.8	19.1	5	50	1	170	0.1	13
BZX55C 20	18.8	21.1	5	55	1	220	0.1	15
BZX55C 22	20.8	23.3	5	55	1	220	0.1	16
BZX55C 24	22.8	25.6	5	80	1	220	0.1	18
BZX55C 27	25.1	28.9	5	80	1	220	0.1	20
BZX55C 30	28	32	5	80	1	220	0.1	22
BZX55C 33	31	35	5	80	1	220	0.1	24
BZX55C 36	34	38	5	80	1	220	0.1	27
BZX55C 39	37	41	2.5	90	0.5	500	0.1	28
BZX55C 43	40	46	2.5	90	0.5	600	0.1	32
BZX55C 47	44	50	2.5	110	0.5	700	0.1	35
BZX55C 51	48	54	2.5	125	0.5	700	0.1	38
BZX55C 56	52	60	2.5	135	0.5	1000	0.1	42
BZX55C 62	58	66	2.5	150	0.5	1000	0.1	47
BZX55C 68	64	72	2.5	160	0.5	1000	0.1	51
BZX55C 75	70	80	2.5	170	0.5	1000	0.1	56

$V_F$  (Forward Voltage) = 1.0 V Maximum @  $I_F = 100$  mA for all types

**Notes:**
**1. TOLERANCE AND VOLTAGE DESIGNATION**

The type numbers listed have zener voltage as shown.

**2. SPECIALS AVAILABLE INCLUDE**

Nominal zener voltages between the voltages shown and tighter voltage, for detailed information on price, availability and delivery, contact you nearest Liteon Semiconductor Corp. representative.

**3. ZENER VOLTAGE ( $V_Z$ ) MEASUREMENT**

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

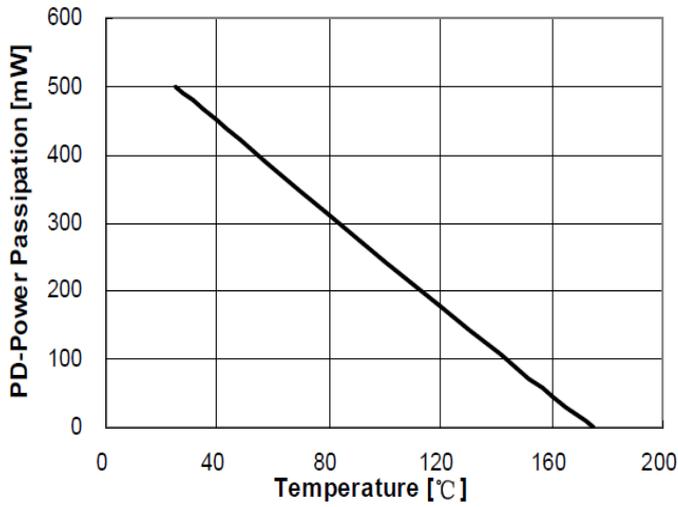
**4. ZENER IMPEDANCE ( $Z_Z$ ) DERIVATION**

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  $I_{ZT}$ .

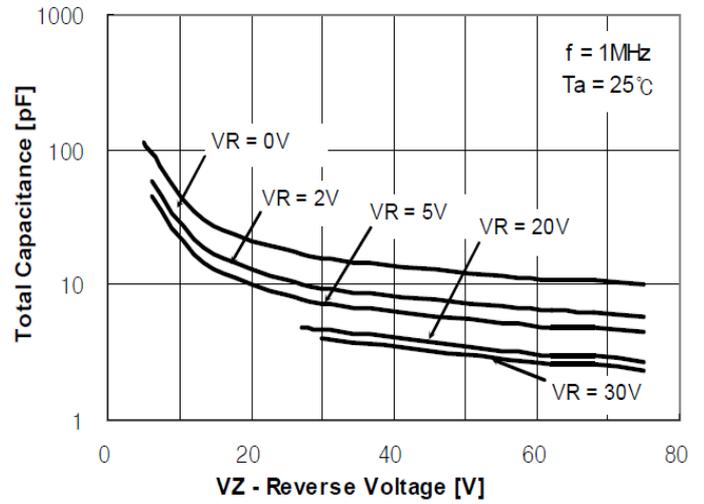
**RATING AND CHARACTERISTIC CURVES**  
**BZX55C2V0 thru BZX55C75**



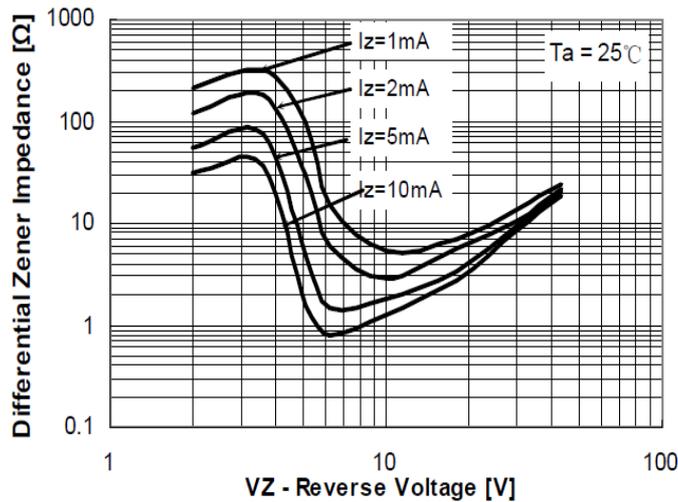
**Figure 1. Power Dissipation vs Ambient Temperature**  
 Valid provided leads at a distance of 0.8mm  
 from case are kept at ambient temperature



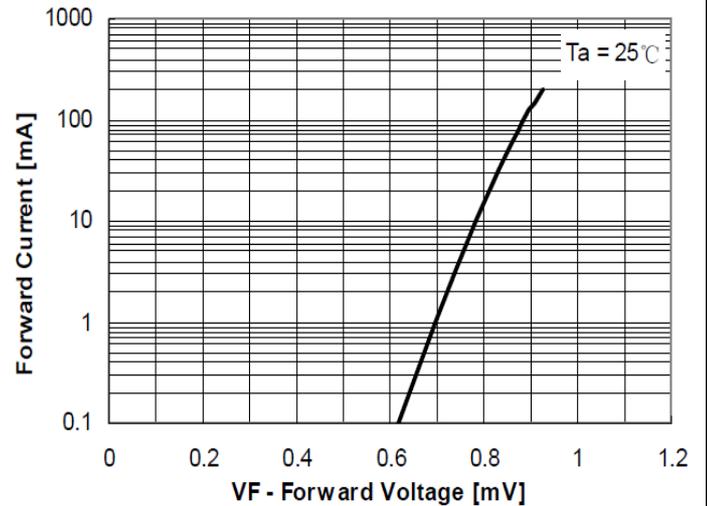
**Figure 2. Total Capacitance**



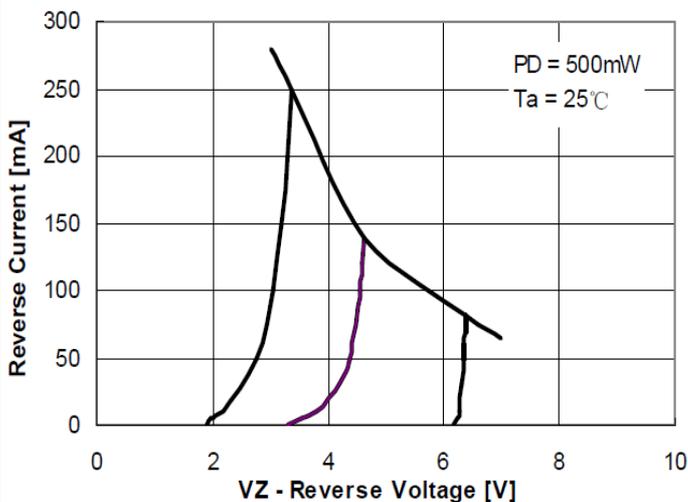
**Figure 3. Differential Impedance vs. Zener Voltage**



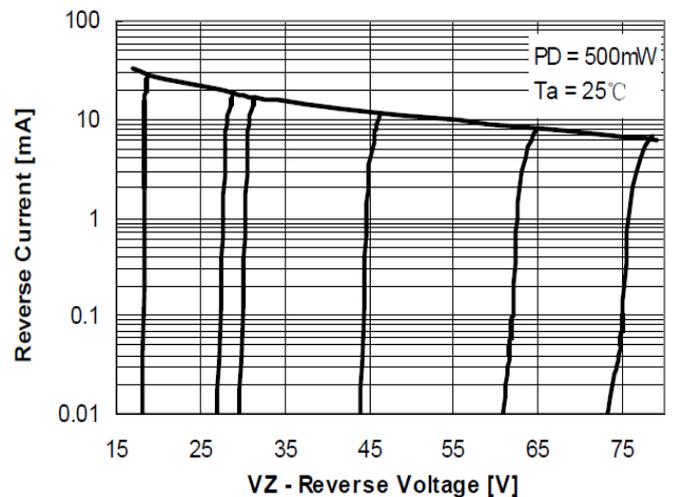
**Figure 4. Forward Current vs. Forward Voltage**



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



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



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