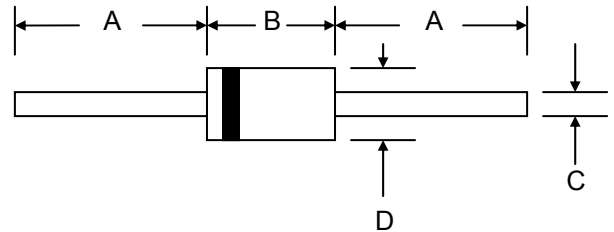


## Features

- Glass Passivated Die Construction
- 3.0W Power Dissipation
- 3.3V – 200V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Low Inductance
- For Use in Voltage Regulator or Reference
- Plastic Case Material has UL Flammability Classification Rating 94V-0



## Mechanical Data

- Case: DO-15, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.40 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 6**

DO-15		
Dim	Min	Max
A	25.4	—
B	5.50	7.62
C	0.71	0.864
D	2.60	3.60
All Dimensions in mm		

## Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation at $T_L = 50^\circ\text{C}$ (Note 1)	$P_D$	3.0	W
Forward Voltage @ $I_F = 200\text{mA}$	$V_F$	1.5	V
Thermal Resistance, Junction to Ambient (Note 2)	$R_{JA}$	100	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead (Note 1)	$R_{JL}$	40	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

- Note: 1. Measured at lead length 3/8" (9.5mm) from body.  
 2. Mounted on FR-4 PCB with 2.0 x 2.0mm copper pads and track width 1.0mm, length 25mm.

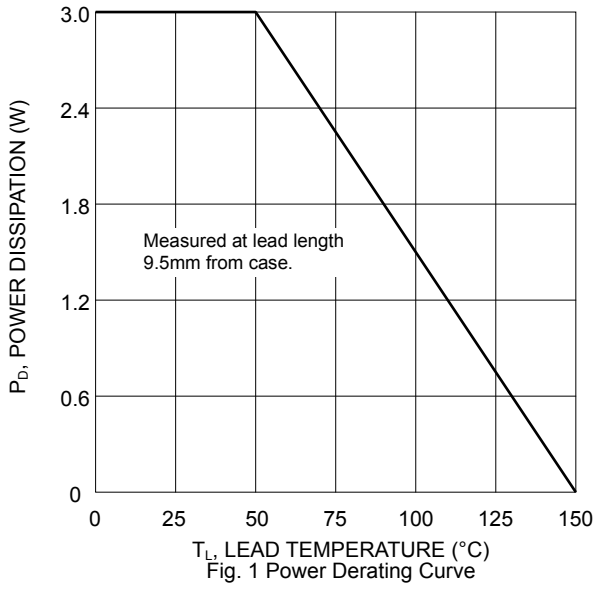


Fig. 1 Power Derating Curve

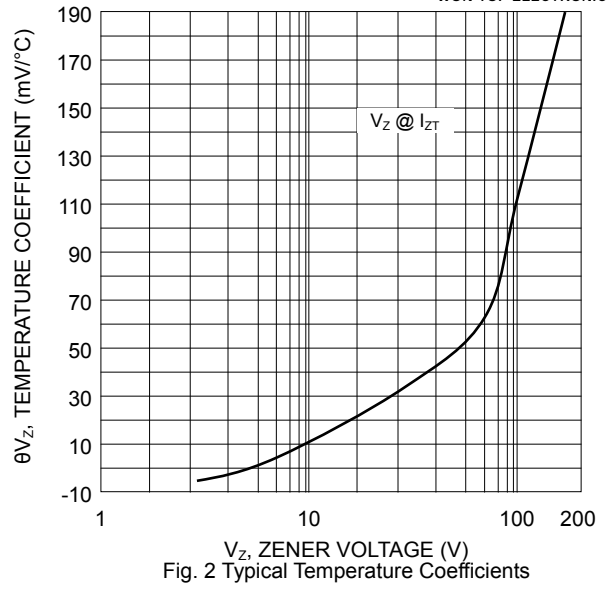


Fig. 2 Typical Temperature Coefficients

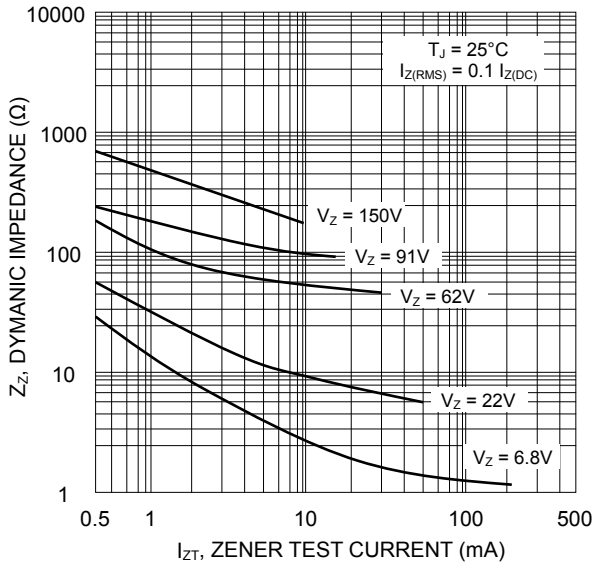


Fig. 3 Dynamic Resistance vs. Zener Current

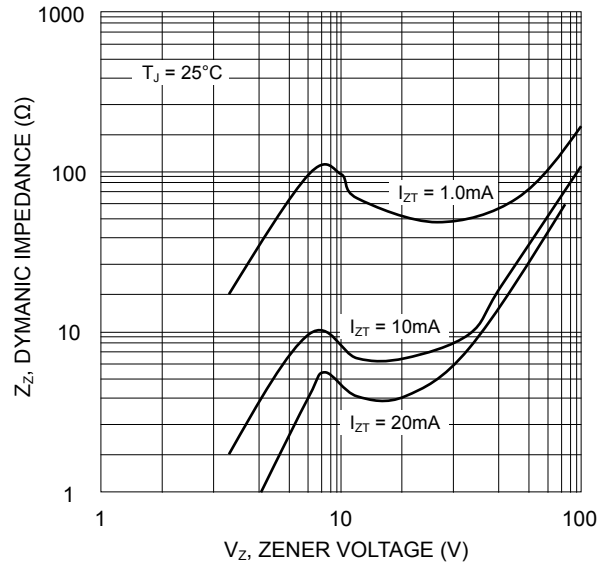


Fig. 3 Dynamic Resistance vs. Zener Voltage

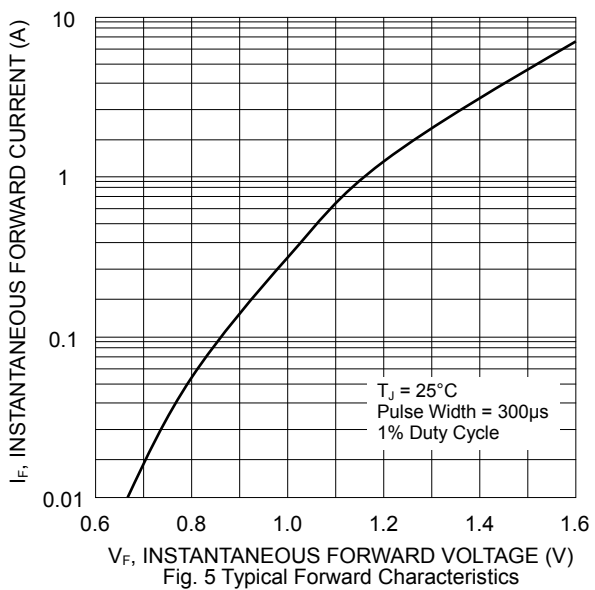


Fig. 5 Typical Forward Characteristics

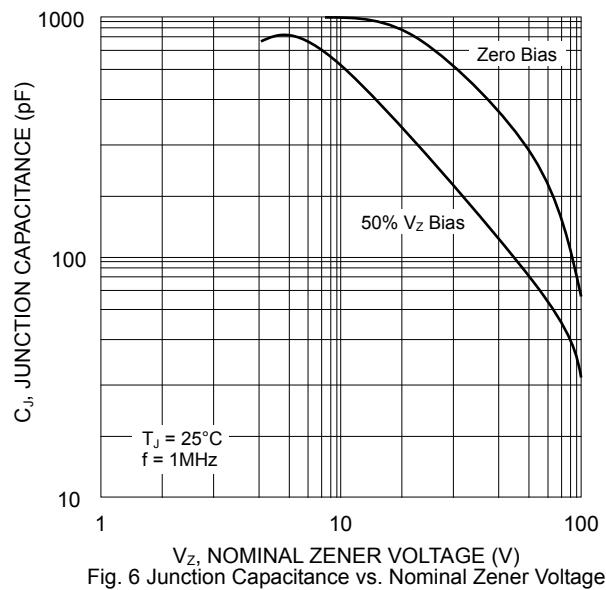


Fig. 6 Junction Capacitance vs. Nominal Zener Voltage

**Electrical Characteristics (@T<sub>A</sub>=25°C unless otherwise specified) Table 1**

Type Number (Note 1)	Nominal Zener Voltage (Note 2)	Test Current	Maximum Zener Impedance (Note 3)			Maximum Leakage Current		Max DC Zener Current
	V <sub>Z</sub> @ I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>
	(V)	(mA)	( )	( )	(mA)	(μA)	(V)	(mA)
3EZ3.3D5	3.3	113.6	10.0	500	1.00	100	1.0	817
3EZ3.6D5	3.6	104.2	9.0	500	1.00	75	1.0	749
3EZ3.9D5	3.9	192.0	4.5	400	1.00	80	1.0	630
3EZ4.3D5	4.3	174.0	4.5	400	1.00	30	1.0	590
3EZ4.7D5	4.7	160.0	4.0	500	1.00	20	1.0	550
3EZ5.1D5	5.1	147.0	3.5	550	1.00	5.0	1.0	520
3EZ5.6D5	5.6	134.0	2.5	600	1.00	5.0	2.0	480
3EZ6.2D5	6.2	121.0	1.5	700	1.00	5.0	3.0	435
3EZ6.8D5	6.8	110.0	2.0	700	1.00	5.0	4.0	393
3EZ7.5D5	7.5	100.0	2.0	700	0.50	5.0	5.0	360
3EZ8.2D5	8.2	91.0	2.3	700	0.50	5.0	6.0	330
3EZ9.1D5	9.1	82.0	2.5	700	0.50	3.0	7.0	297
3EZ10D5	10	75.0	3.5	700	0.25	3.0	7.6	270
3EZ11D5	11	68.0	4.0	700	0.25	1.0	8.4	225
3EZ12D5	12	63.0	4.5	700	0.25	1.0	9.1	246
3EZ13D5	13	58.0	4.5	700	0.25	0.5	9.9	208
3EZ14D5	14	53.0	5.0	700	0.25	0.5	10.6	193
3EZ15D5	15	50.0	5.5	700	0.25	0.5	11.4	180
3EZ16D5	16	47.0	5.5	700	0.25	0.5	12.2	169
3EZ17D5	17	44.0	6.0	750	0.25	0.5	13.0	159
3EZ18D5	18	42.0	6.0	750	0.25	0.5	13.7	150
3EZ19D5	19	40.0	7.0	750	0.25	0.5	14.4	142
3EZ20D5	20	37.0	7.0	750	0.25	0.5	15.2	135
3EZ22D5	22	34.0	8.0	750	0.25	0.5	16.7	123
3EZ24D5	24	31.0	9.0	750	0.25	0.5	18.2	112
3EZ27D5	27	28.0	10.0	750	0.25	0.5	20.6	100
3EZ28D5	28	27.0	12.0	750	0.25	0.5	21.0	96
3EZ30D5	30	25.0	16.0	1000	0.25	0.5	22.5	90
3EZ33D5	33	23.0	20.0	1000	0.25	0.5	25.1	82
3EZ36D5	36	21.0	22.0	1000	0.25	0.5	27.4	75
3EZ39D5	39	19.0	28.0	1000	0.25	0.5	29.7	69
3EZ43D5	43	17.0	33.0	1500	0.25	0.5	32.7	63
3EZ47D5	47	16.0	38.0	1500	0.25	0.5	35.6	57
3EZ51D5	51	15.0	45.0	1500	0.25	0.5	38.8	53
3EZ56D5	56	13.0	50.0	2000	0.25	0.5	42.6	48
3EZ62D5	62	12.0	55.0	2000	0.25	0.5	47.1	44
3EZ68D5	68	11.0	70.0	2000	0.25	0.5	51.7	40
3EZ75D5	75	10.0	85.0	2000	0.25	0.5	56.0	36
3EZ82D5	82	9.1	95.0	3000	0.25	0.5	62.2	33
3EZ91D5	91	8.2	115.0	3000	0.25	0.5	69.2	30

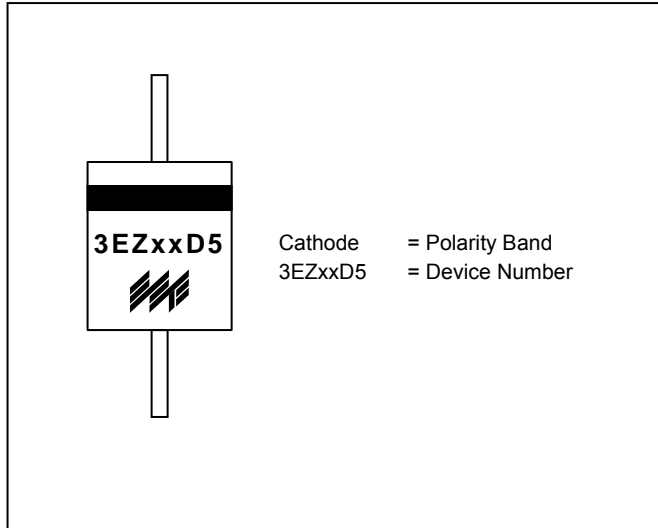
- Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.  
 2. Measured under thermal equilibrium and DC (I<sub>ZT</sub>) test conditions.  
 3. The Zener impedance is derived from the 60Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

**Electrical Characteristics (@T<sub>A</sub>=25°C unless otherwise specified) Table 1 (Cont'd)**

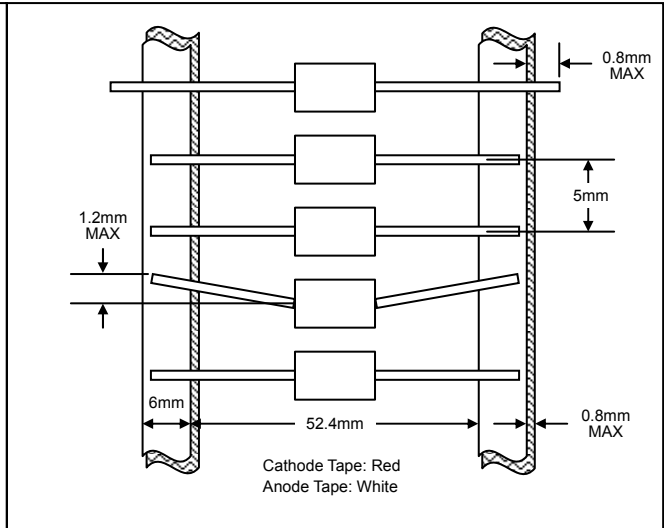
Type Number (Note 1)	Nominal Zener Voltage (Note 2)	Test Current	Maximum Zener Impedance (Note 3)			Maximum Leakage Current		Max DC Zener Current
	V <sub>Z</sub> @ I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>		I <sub>ZM</sub>
	(V)	(mA)	( )	( )	(mA)	(μA)	(V)	(mA)
3EZ100D5	100	7.5	160.0	3000	0.25	0.5	76.0	27
3EZ110D5	110	6.8	225.0	4000	0.25	0.5	83.6	25
3EZ120D5	120	6.3	300.0	4500	0.25	0.5	91.2	22
3EZ130D5	130	5.8	375.0	5000	0.25	0.5	98.8	21
3EZ140D5	140	5.3	475.0	5000	0.25	0.5	106.4	19
3EZ150D5	150	5.0	550.0	6000	0.25	0.5	114.0	18
3EZ160D5	160	4.7	625.0	6500	0.25	0.5	121.6	17
3EZ170D5	170	4.4	650.0	7000	0.25	0.5	130.4	16
3EZ180D5	180	4.2	700.0	7000	0.25	0.5	136.8	15
3EZ190D5	190	4.0	800.0	8000	0.25	0.5	144.8	14
3EZ200D5	200	3.7	875.0	8000	0.25	0.5	152.0	13

- Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.  
 2. Measured under thermal equilibrium and DC (I<sub>ZT</sub>) test conditions.  
 3. The Zener impedance is derived from the 60Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

## MARKING INFORMATION

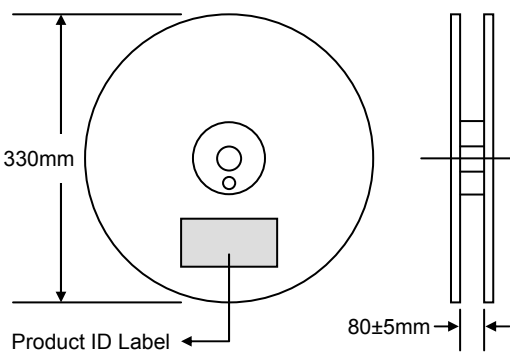


## TAPING SPECIFICATIONS



## PACKAGING INFORMATION

### TAPE & REEL

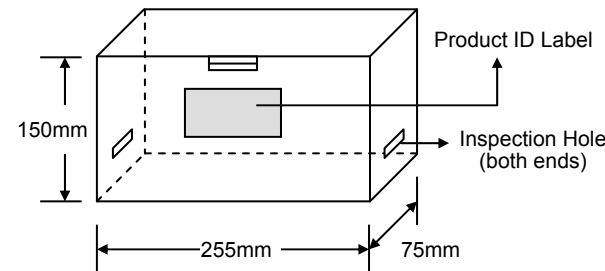


330mm

Product ID Label

80±5mm

### TAPE & BOX



150mm

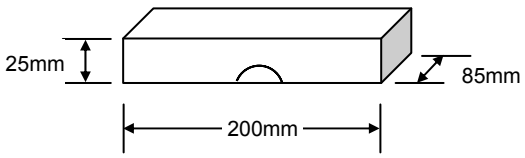
255mm

75mm

Product ID Label

Inspection Hole (both ends)

### BULK



25mm

200mm

85mm


Packaging	Reel Diameter / Box Size (mm)	Quantity (PCS)	Carton Size (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
<b>TAPE &amp; REEL</b>	330	4,000	370 x 370 x 420	20,000	12.0
<b>TAPE &amp; BOX</b>	255 x 75 x 150	3,000	400 x 273 x 415	30,000	15.0
<b>BULK</b>	200 x 85 x 25	1,000	459 x 214 x 256	40,000	17.5

**Note:** 1. Paper reel, white or gray color. Core material: plastic or metal.  
2. Components are packed in accordance with EIA standard RS-296-E.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
3EZxxD5-T3	DO-15	4000/Tape & Reel
<b>3EZxxD5-TB</b>	DO-15	3000/Tape & Box
3EZxxD5	DO-15	1000 Units/Box

1. Products listed in **bold** are WTE **Preferred** Devices.
2. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
3. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, 3EZ3.3D5-TB-LF.**

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**Email:** sales@wontop.com  
**Internet:** <http://www.wontop.com>

*We power your everyday.*