

1N957B THRU 1N992B

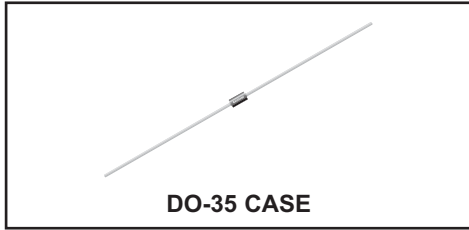
SILICON ZENER DIODE  
6.8 VOLTS THRU 200 VOLTS  
500mW, 5% TOLERANCE



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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 1N957B Series Silicon Zener Diode is a high quality voltage regulator designed for use in industrial, commercial, entertainment and computer applications.



DO-35 CASE

**MAXIMUM RATINGS:** ( $T_L=75^\circ\text{C}$ )

Power Dissipation  
Operating and Storage Junction Temperature  
 $V_Z$  Tolerance: Part number with "B" suffix  
 $V_Z$  Tolerance: Part number with "C" suffix  
 $V_Z$  Tolerance: Part number with "D" suffix

**SYMBOL**

$P_D$  500  
 $T_J, T_{stg}$  -65 to +200  
 $\pm 5$   
 $\pm 2$   
 $\pm 1$

**UNITS**

mW  
 $^\circ\text{C}$   
%  
%  
%

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$  (for all types)

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT $I_{ZT}$ mA	MAXIMUM ZENER IMPEDANCE		MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT $I_{ZM}$ mA	
	MIN	NOM	MAX		$Z_{ZT} @ I_{ZT}$ $\Omega$	$Z_{ZK} @ I_{ZK}$ $\Omega$	$I_R @ V_R$			
	V	V	V				$\mu\text{A}$	V		
1N957B	6.460	6.8	7.140	18.5	4.5	700	1.00	150	5.2	47
1N958B	7.125	7.5	7.875	16.5	5.5	700	0.50	75	5.7	42
1N959B	7.790	8.2	8.610	15.0	6.5	700	0.50	50	6.2	38
1N960B	8.645	9.1	9.555	14.0	7.5	700	0.50	25	6.9	35
1N961B	9.500	10	10.50	12.5	8.5	700	0.25	10	7.6	32
1N962B	10.45	11	11.55	11.5	9.5	700	0.25	5.0	8.4	28
1N963B	11.40	12	12.60	10.5	11.5	700	0.25	5.0	9.1	26
1N964B	12.35	13	13.65	9.5	13.0	700	0.25	5.0	9.9	24
1N965B	14.25	15	15.75	8.5	16.0	700	0.25	5.0	11.4	21
1N966B	15.20	16	16.80	7.8	17.0	700	0.25	5.0	12.2	19
1N967B	17.10	18	18.90	7.0	21.0	750	0.25	5.0	13.7	17
1N968B	19.00	20	21.00	6.2	25.0	750	0.25	5.0	15.2	15
1N969B	20.90	22	23.10	5.6	29.0	750	0.25	5.0	16.7	14
1N970B	22.80	24	25.20	5.2	33.0	750	0.25	5.0	18.2	13
1N971B	25.65	27	28.35	4.6	41.0	750	0.25	5.0	20.6	11
1N972B	28.50	30	31.50	4.2	49.0	1000	0.25	5.0	22.8	10
1N973B	31.35	33	34.65	3.8	58.0	1000	0.25	5.0	25.1	9.2
1N974B	34.20	36	37.80	3.4	70.0	1000	0.25	5.0	27.4	8.5
1N975B	37.05	39	40.95	3.2	80.0	1000	0.25	5.0	29.7	7.8
1N976B	40.85	43	45.15	3.0	93.0	1500	0.25	5.0	32.7	7.0
1N977B	44.65	47	49.35	2.7	105	1500	0.25	5.0	35.8	6.4
1N978B	48.45	51	53.55	2.5	125	2000	0.25	5.0	38.8	5.9
1N979B	53.20	56	58.80	2.2	150	2000	0.25	5.0	42.6	5.4
1N980B	58.90	62	65.10	2.0	185	2000	0.25	5.0	47.1	4.9
1N981B	64.60	68	71.40	1.8	230	2000	0.25	5.0	51.7	4.5
1N982B	71.25	75	78.75	1.7	270	2000	0.25	5.0	56.0	4.0

R1 (27-October 2011)

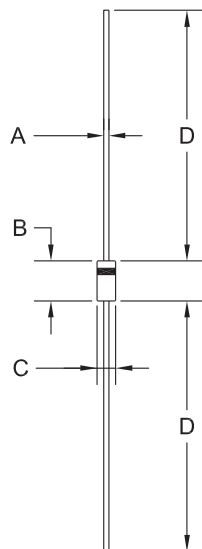
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$  (for all types)

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	$V_R$	$I_{ZM}$	
	V	V	V	mA	$\Omega$	mA	$\mu\text{A}$			
1N983B	77.90	82	86.10	1.5	330	3000	0.25	5.0	62.2	3.7
1N984B	86.45	91	95.55	1.4	400	3000	0.25	5.0	69.2	3.3
1N985B	95.00	100	105.0	1.3	500	3000	0.25	5.0	76.0	3.0
1N986B	104.5	110	115.5	1.1	750	4000	0.25	5.0	83.6	2.7
1N987B	114.0	120	126.0	1.0	900	4500	0.25	5.0	91.2	2.5
1N988B	123.5	130	136.5	0.95	1100	5000	0.25	5.0	98.8	2.3
1N989B	142.5	150	157.5	0.85	1500	6000	0.25	5.0	114.0	2.0
1N990B	152.0	160	168.0	0.80	1700	6500	0.25	5.0	121.6	1.9
1N991B	171.0	180	189.0	0.68	2200	7100	0.25	5.0	136.8	1.7
1N992B	190.0	200	210.0	0.65	2500	8000	0.25	5.0	152.0	1.5

**DO-35 CASE - MECHANICAL OUTLINE**



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.018	0.022	0.46	0.56
B	0.120	0.200	3.05	5.08
C	0.060	0.090	1.52	2.29
D	1.000	-	25.40	-

DO-35 (REV: R1)

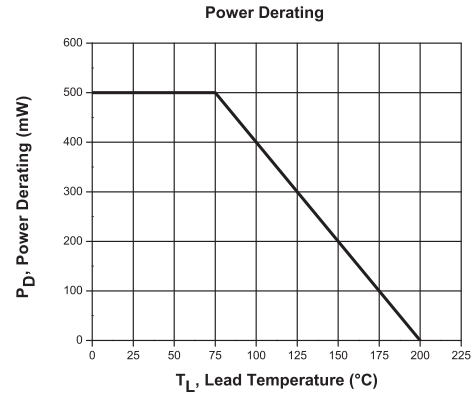
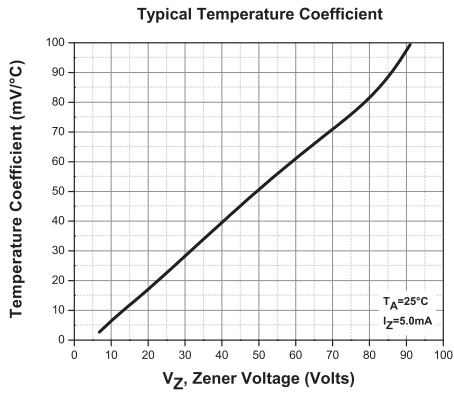
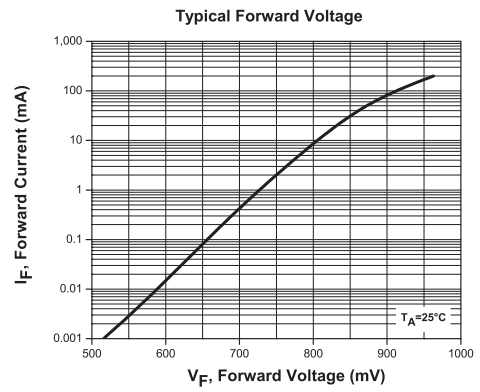
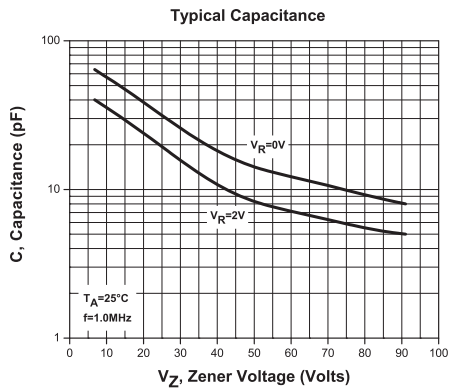
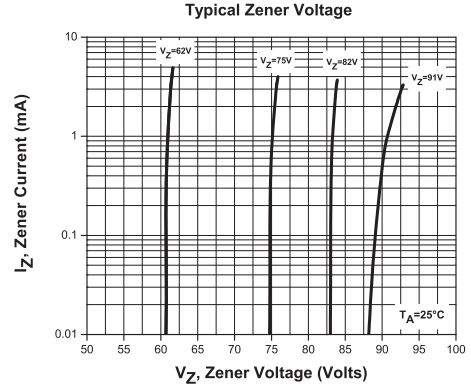
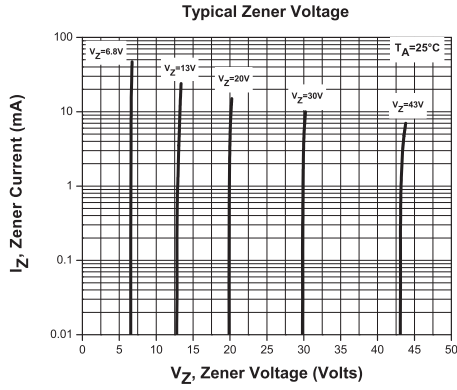
R1

R1 (27-October 2011)

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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (27-October 2011)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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