

1N4158B THRU 1N4186B

**SILICON ZENER DIODES
1.0 WATT, 6.8 THRU 100 VOLT
5% TOLERANCE**

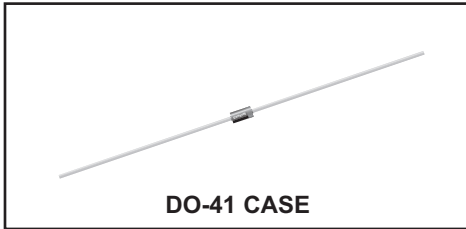


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DESCRIPTION:

The CENTRAL SEMICONDUCTOR 1N4158B series silicon Zener diode is a highly reliable voltage regulator designed for use in industrial, commercial, entertainment and computer applications.

MARKING: FULL PART NUMBER



DO-41 CASE

MAXIMUM RATINGS:

Power Dissipation ($T_A=50^\circ\text{C}$)
Operating and Storage Temperature

SYMBOL

P_D 1.0
 T_J, T_{stg} -65 to +200

UNITS

W
 $^\circ\text{C}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$) $V_F=1.2\text{V MAX @ } I_F=200\text{mA}$ (for all types)

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM DC CURRENT	MAXIMUM TEMPERATURE COEFFICIENT $@ I_{ZT}$
	MIN	NOM	MAX	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	I_{ZM}	θV_Z		
	V	V	V	mA	Ω	Ω	μA	V	mA	% / $^\circ\text{C}$	
1N4158B	6.460	6.8	7.140	37	3.5	700	1.0	10	4.0	660	+0.015 to +0.06
1N4159B	7.125	7.5	7.875	34	4.0	700	0.5	10	5.0	605	+0.02 to +0.065
1N4160B	7.790	8.2	8.610	31	4.5	700	0.5	10	6.0	550	+0.03 to +0.07
1N4161B	8.645	9.1	9.555	28	5.0	700	0.5	10	7.0	500	+0.035 to +0.075
1N4162B	9.500	10	10.50	25	7.0	700	0.25	10	7.6	454	+0.04 to +0.08
1N4163B	10.45	11	11.55	23	8.0	700	0.25	5.0	8.4	414	+0.045 to +0.08
1N4164B	11.40	12	12.60	21	9.0	700	0.25	5.0	9.1	380	+0.045 to +0.085
1N4165B	12.35	13	13.65	19	10	700	0.25	5.0	9.9	344	+0.05 to +0.085
1N4166B	14.25	15	15.75	17	14	700	0.25	5.0	11.4	304	+0.055 to +0.09
1N4167B	15.20	16	16.80	15.5	16	700	0.25	5.0	12.2	285	+0.055 to +0.09
1N4168B	17.10	18	18.90	14	20	750	0.25	5.0	13.7	250	+0.06 to +0.09
1N4169B	19.00	20	21.00	12.5	22	750	0.25	5.0	15.2	225	+0.06 to +0.09
1N4170B	20.90	22	23.10	11.5	23	750	0.25	5.0	16.7	205	+0.06 to +0.095
1N4171B	22.80	24	25.20	10.5	25	750	0.25	5.0	18.2	190	+0.06 to +0.095
1N4172B	25.65	27	28.35	9.5	35	750	0.25	5.0	20.6	170	+0.06 to +0.095
1N4173B	28.50	30	31.50	8.5	40	1.0K	0.25	5.0	22.8	150	+0.06 to +0.095
1N4174B	31.35	33	34.65	7.5	45	1.0K	0.25	5.0	25.1	135	+0.06 to +0.095
1N4175B	34.20	36	37.80	7.0	50	1.0K	0.25	5.0	27.4	125	+0.06 to +0.095
1N4176B	37.05	39	40.95	6.5	60	1.0K	0.25	5.0	29.7	115	+0.06 to +0.095
1N4177B	40.85	43	45.15	6.0	70	1.5K	0.25	5.0	32.7	110	+0.06 to +0.095
1N4178B	44.65	47	49.35	5.5	80	1.5K	0.25	5.0	35.8	95	+0.06 to +0.095
1N4179B	48.45	51	53.55	5.0	95	1.5K	0.25	5.0	38.8	90	+0.06 to +0.095
1N4180B	53.20	56	58.80	4.5	110	2.0K	0.25	5.0	42.6	80	+0.06 to +0.095

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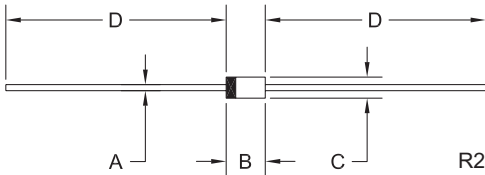
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$) $V_F=1.2\text{V MAX @ } I_F=200\text{mA}$ (for all types)

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM DC CURRENT	MAXIMUM TEMPERATURE COEFFICIENT @ I_{ZT}
	MIN	NOM	MAX	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	I_{ZM}	ΔV_Z		
	V	V	V	mA	Ω	Ω mA	μA V	mA	% / $^\circ\text{C}$		
1N4181B	58.90	62	65.10	4.0	125	2.0K 0.25	5.0 47.1	70	+0.06 to +0.095		
1N4182B	64.60	68	71.40	3.7	150	2.0K 0.25	5.0 51.7	65	+0.06 to +0.095		
1N4183B	71.25	75	78.75	3.3	175	2.0K 0.25	5.0 56.0	60	+0.06 to +0.095		
1N4184B	77.90	82	86.10	3.0	200	3.0K 0.25	5.0 62.2	55	+0.06 to +0.095		
1N4185B	86.45	91	95.55	2.8	250	3.0K 0.25	5.0 69.2	50	+0.06 to +0.095		
1N4186B	95.00	100	105.0	2.5	350	3.0K 0.25	5.0 76.0	45	+0.06 to +0.095		

DO-41 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.026	0.034	0.65	0.86
B	0.138	0.205	3.50	5.21
C	0.079	0.107	2.00	2.72
D	1.000	-	25.40	-

DO-41 (REV: R2)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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