

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Junction and Storage Temperatures:	-65°C to +175°C
DC Power Dissipation:	50 Watts @ $T_c < 75^\circ\text{C}$
Power Derating:	0.5W/°C above 75°C
Forward Voltage @ 10 A:	1.5 Volts
Thermal Resistance	2.0°C/W maximum junction to hexagonal base (1.5°C/W typical)
Solder Temperatures	260°C for 10 s maximum

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

Part Number	Nominal Zener Voltage $V_R @ I_{ZT}$ Volts	Zener Test Current (I_{ZT}) mA †	Maximum Dynamic Impedance (Note 3) †		Maximum DC Zener Current (I_{ZM}) mA	Maximum Reverse Leakage Current $I_{R(max)} @ V_Z$		Typical Temp. Coeff. ∞V_Z %/°C
			$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK} = 5\text{mA}$		μA	Volts	
			Ohms	Ohms				
1N4549B	3.9	3.200	0.16	400	11.900	150	0.5	-0.046
1N4550B	4.3	2.900	0.16	500	10.650	150	0.5	-0.033
1N4551B	4.7	2.650	0.12	600	9.700	100	1.0	-0.015
1N4552B	5.1	2.450	0.12	650	8.900	20	1.0	± 0.010
1N4553B	5.6	2.250	0.12	900	8.100	20	1.0	0.030
1N4554B	6.2	2.000	0.14	1000	7.300	20	2.0	0.049
1N4555B	6.8	1.850	0.16	200	6.650	10	2.0	0.053
1N4556B	7.5	1.650	0.24	100	6.050	10	3.0	0.057
1N3305B	6.8	1.850	0.20	70	6.600	300	4.5	0.040
1N3306B	7.5	1.700	0.30	70	5.900	125	5.0	0.045
1N3307B	8.2	1.500	0.40	70	5.200	50	5.4	0.048
1N3308B	9.1	1.370	0.50	70	4.800	25	6.1	0.050
1N3309B	10.0	1.200	0.60	80	4.300	25	6.7	0.055
1N3310B	11.0	1.100	0.80	80	3.900	10	8.4	0.060
1N3311B	12.0	1.000	1.00	80	3.800	10	9.1	0.065
1N3312B	13.0	960	1.10	80	3.300	10	9.9	0.065
1N3313B	14.0	890	1.20	80	3.000	10	11.4	0.070
1N3314B	15.0	830	1.40	80	2.800	10	11.4	0.070
1N3315B	16.0	780	1.60	80	2.650	10	12.2	0.070
1N3316B	17.0	740	1.80	80	2.500	10	13.0	0.075
1N3317B	18.0	700	2.00	80	2.300	10	13.7	0.075
1N3318B	19.0	660	2.20	80	2.200	10	13.7	0.075
1N3319B	20.0	630	2.40	80	2.100	10	15.2	0.075

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

Part Number	Nominal Zener Voltage $V_R @ I_{ZT}$ Volts (Note 2) †	Zener Test Current (I_{ZT}) mA †	Maximum Dynamic Impedance (Note 3) †		Maximum DC Zener Current (I_{ZM}) mA	Maximum Reverse Leakage Current $I_{R(max)} @ V_Z$		Typical Temp. Coeff. ∞V_Z %/°C
			$Z_{ZT} @ I_{ZT}$	$Z_{ZT} @ I_{ZT} = 5\text{mA}$		μA	Volts	
			Ohms	Ohms				
1N3320B	22.0	570	2.50	80	1.900	10	16.7	0.080
1N3321B	24.0	520	2.60	80	1.750	10	18.2	0.080
1N3322B	25.0	500	2.70	90	1.550	10	18.2	0.080
1N3323B	27.0	460	2.80	90	1.500	10	20.6	0.085
1N3324B	30.0	420	3.00	90	1.400	10	22.8	0.085
1N3325B	33.0	380	3.20	90	1.300	10	26.1	0.085
1N3326B	36.0	350	3.60	90	1.150	10	27.4	0.085
1N3327B	39.0	320	4.00	90	1.050	10	29.7	0.090
1N3328B	43.0	290	4.50	90	975	10	32.7	0.090
1N3329B	45.0	280	4.50	100	930	10	32.7	0.090
1N3330B	47.0	270	5.00	100	880	10	36.8	0.090
1N3331B	50.0	250	5.00	100	830	10	38.8	0.090
1N3332B	51.0	245	5.20	100	810	10	38.8	0.090
1N3333B	52.0	240	5.50	100	790	10	42.6	0.090
1N3334B	56.0	220	6.00	110	740	10	42.6	0.090
1N3335B	62.0	200	7.00	120	660	10	47.1	0.090
1N3336B	68.0	180	8.00	140	600	10	51.7	0.090
1N3337B	75.0	170	9.00	150	540	10	56.0	0.090
1N3338B	82.0	150	11.00	160	490	10	62.2	0.090
1N3339B	91.0	140	15.00	180	420	10	69.2	0.090
1N3340B	100.0	120	20.00	200	400	10	76.0	0.090
1N3341B	105.0	120	25.00	210	380	10	83.6	0.095
1N3342B	110.0	110	30.00	220	365	10	83.6	0.095
1N3343B	120.0	100	40.00	240	335	10	91.2	0.095
1N3344B	130.0	95	50.00	275	310	10	99.8	0.095
1N3345B	140.0	90	60.00	325	290	10	114.0	0.095
1N3346B	150.0	85	75.00	400	270	10	114.0	0.095
1N3347B	160.0	80	80.00	450	250	10	121.6	0.095
1N3348B	175.0	70	85.00	500	230	10	121.6	0.095
1N3349B	180.0	68	90.00	525	220	10	136.8	0.095
1N3350B	200.0	65	100.00	600	200	10	152.0	0.100

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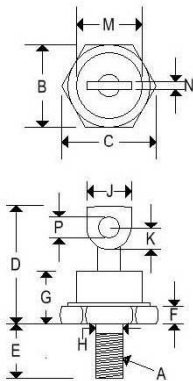
50 WATT ZENER DIODES

Notes:

1. "B" suffix indicates a $\pm 5\%$ tolerance. "A" suffix indicates a $\pm 10\%$ tolerance. "C" suffix indicates a $\pm 2\%$ tolerance and a "D" suffix indicates a $\pm 1\%$ tolerance. No suffix or "R" indicates a $\pm 20\%$ tolerance.
2. "R" indicates a reversed polarity.
3. Zener Voltage (V_z) is measured with junction in thermal equilibrium with a 30°C stud temperature.
4. The 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} or I_{zK}) is superimposed on I_{zT} or I_{zK} . Zener impedance is measured at 2 points to ensure a sharp knee on the breakdown curve and to eliminate unstable units. A curve showing the variation of Zener impedance vs. zener current for three representative types is shown in Figure 2.

MECHANICAL CHARACTERISTICS

Case:	DO-5
Marking:	Alpha-numeric
Polarity:	Cathode band



	DO-5			
	Inches		Millimeters	
	Min	Max	Min	Max
A	1/2-28 UNF2A threads			
B	0.669	0.688	16.990	17.480
C	-	0.794	-	20.160
D	-	1.000	-	25.400
E	0.422	0.453	10.720	11.510
F	0.115	0.200	2.920	5.080
G	-	0.450	-	11.430
H	0.220	0.249	5.580	6.320
J	0.250	0.375	6.350	9.530
K	0.156	-	3.960	-
M	-	0.667	-	16.940
N	0.030	0.080	0.760	2.030
P	0.140	0.175	3.560	4.450

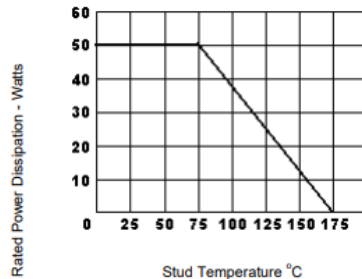


FIGURE 1
Power Derating Curve

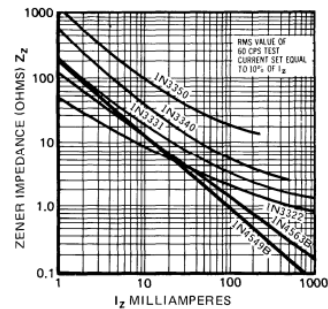


FIGURE 2
Typical Zener Impedance vs. Zener Current