Zener Diodes

1N5221B - 1N5252B

ABSOLUTE MAXIMUM RATINGS (Note 1)
Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	500	mW
	Derate above 50°C	4.0	mW/°C
T_{STG}	Storage Temperature Range	−65 to +200	°C
T_J	Operating Junction Temperature Range	−65 to +200	°C
	Lead Temperature (1/16 inch from case for 10s	+230	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
   Non−recurrent square wave Pulse Width = 8.3 ms, T_A = 50°C.

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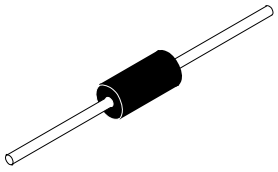
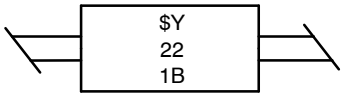


AXIAL LEAD
CASE 017AG

MARKING DIAGRAM



$Y = Logo
221B = Specific Device Code

ORDERING INFORMATION

See detailed ordering and shipping information on page 3 of this data sheet.

ELECTRICAL CHARACTERISTICS Values are at T_A = 25°C unless otherwise noted.

Device	V_Z (V) @ I_Z (Note 2)			Z_Z (Ω) @ I_Z (mA)		Z_{ZK} (Ω) @ I_{ZK} (mA)		I_R (μA) @ V_R (V)		T_C (%/°C)
	Min.	Typ.	Max.							
1N5221B	2.280	2.4	2.52	30	20	1,200	0.25	100	1.0	−0.085
1N5222B	2.375	2.5	2.625	30	20	1,250	0.25	100	1.0	−0.085
1N5223B	2.565	2.7	2.835	30	20	1,300	0.25	75	1.0	−0.080
1N5225B	2.850	3.0	3.150	29	20	1,600	0.25	50	1.0	−0.075
1N5226B	3.135	3.3	3.465	28	20	1,600	0.25	25	1.0	−0.070
1N5227B	3.420	3.6	3.780	24	20	1,700	0.25	15	1.0	−0.065
1N5228B	3.705	3.9	4.095	23	20	1,900	0.25	10	1.0	−0.060
1N5229B	4.085	4.3	4.515	22	20	2,000	0.25	5.0	1.0	±0.055
1N5230B	4.465	4.7	4.935	19	20	1,900	0.25	5.0	2.0	±0.030
1N5231B	4.845	5.1	5.355	17	20	1,600	0.25	5.0	2.0	±0.030
1N5232B	5.320	5.6	5.880	11	20	1,600	0.25	5.0	3.0	0.038
1N5233B	5.700	6.0	6.300	7	20	1,600	0.25	5.0	3.5	0.038
1N5234B	5.890	6.2	6.510	7	20	1,000	0.25	5.0	4.0	0.045
1N5235B	6.460	6.8	7.140	5	20	750	0.25	3.0	5.0	0.050
1N5236B	7.125	7.5	7.875	6	20	500	0.25	3.0	6.0	0.058
1N5237B	7.790	8.2	8.610	8	20	500	0.25	3.0	6.5	0.062
1N5238B	8.265	8.7	9.135	8	20	600	0.25	3.0	6.5	0.065
1N5239B	8.645	9.1	9.555	10	20	600	0.25	3.0	7.0	0.068
1N5240B	9.500	10.0	10.500	17	20	600	0.25	3.0	8.0	0.075
1N5241B	10.450	11.0	11.550	22	20	600	0.25	2.0	8.4	0.076
1N5242B	11.400	12.0	12.600	30	20	600	0.25	1.0	9.1	0.077
1N5243B	12.350	13.0	13.650	13	9.5	600	0.25	0.5	9.9	0.079
1N5244B	13.300	14.0	14.700	15	9.0	600	0.25	0.1	10.0	0.080
1N5245B	14.250	15.0	15.750	16	8.5	600	0.25	0.1	11.0	0.082
1N5246B	15.200	16.0	16.800	17	7.8	600	0.25	0.1	12.0	0.083
1N5247B	16.150	17.0	17.850	19	7.4	600	0.25	0.1	13.0	0.084
1N5248B	17.100	18.0	18.900	21	7.0	600	0.25	0.1	14.0	0.085
1N5249B	18.050	19.0	19.950	23	6.6	600	0.25	0.1	14.0	0.085
1N5250B	19.000	20.0	21.000	25	6.2	600	0.25	0.1	15.0	0.086
1N5251B	20.900	22.0	23.100	29	5.6	600	0.25	0.1	17.0	0.087
1N5252B	22.800	24.0	25.200	33	5.2	600	0.25	0.1	18.0	0.088
V_F Forward Voltage = 1.2 V Max. @ I_F = 200 mA										

2. Zener Voltage (V_Z). The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at 30°C ±1°C and 3/8″ lead length.

TOP MARKING AND ORDERING INFORMATION

Device	Top Marking			Package	Shipping†
	Line 1	Line 2	Line 3		
1N5221B	LOGO	22	1B	Axial Lead (Pb – Free / Halide Free)	5000 / Bulk Bag
1N5222B			2B		5000 / Bulk Bag
1N5223B			3B		5000 / Bulk Bag
1N5225B			5B		5000 / Bulk Bag
1N5226B			6B		5000 / Bulk Bag
1N5226BTR					5000 / Tape and Reel
1N5227B			7B		5000 / Bulk Bag
1N5227BTR					5000 / Tape and Reel
1N5228B			8B		5000 / Bulk Bag
1N5228BTR					5000 / Tape and Reel
1N5229B			9B		5000 / Bulk Bag
1N5229BTR					5000 / Tape and Reel
1N5230B		23	0B		5000 / Bulk Bag
1N5230BTR					5000 / Tape and Reel
1N5231B			1B		5000 / Bulk Bag
1N5231BTR					5000 / Tape and Reel
1N5232B			2B		5000 / Bulk Bag
1N5232BTR					5000 / Tape and Reel
1N5233B			3B		5000 / Bulk Bag
1N5233BTR					5000 / Tape and Reel
1N5234B			4B		5000 / Bulk Bag
1N5234BTR					5000 / Tape and Reel
1N5235B			5B		5000 / Bulk Bag
1N5235BTR					5000 / Tape and Reel
1N5236B			6B		5000 / Bulk Bag
1N5236BTR					5000 / Tape and Reel
1N5237B			7B		5000 / Bulk Bag
1N5237BTR					5000 / Tape and Reel
1N5238B			8B		5000 / Bulk Bag
1N5239B			9B		5000 / Bulk Bag
1N5239BTR					5000 / Tape and Reel
1N5240B		24	0B		5000 / Bulk Bag
1N5240BTR					5000 / Tape and Reel
1N5241B			1B		5000 / Bulk Bag
1N5241BTR					5000 / Tape and Reel
1N5242B			2B		5000 / Bulk Bag
1N5242BTR					5000 / Tape and Reel
1N5243B			3B		5000 / Bulk Bag
1N5243BTR					5000 / Tape and Reel

TOP MARKING AND ORDERING INFORMATION (continued)

Device	Top Marking			Package	Shipping†
	Line 1	Line 2	Line 3		
1N5244B	LOGO	24	4B	Axial Lead (Pb – Free / Halide Free)	5000 / Bulk Bag
1N5244BTR					5000 / Tape and Reel
1N5245B			5B		5000 / Bulk Bag
1N5245BTR					5000 / Tape and Reel
1N5246B			6B		5000 / Bulk Bag
1N5246BTR					5000 / Tape and Reel
1N5247B			7B		5000 / Bulk Bag
1N5247BTR					5000 / Tape and Reel
1N5248B			8B		5000 / Bulk Bag
1N5248BTR					5000 / Tape and Reel
1N5249BTR			9B		5000 / Tape and Reel
1N5250B		25	0B		5000 / Bulk Bag
1N5250BTR					5000 / Tape and Reel
1N5251B			1B		5000 / Bulk Bag
1N5251BTR					5000 / Tape and Reel
1N5252B			2B		5000 / Bulk Bag
1N5252BTR					5000 / Tape and Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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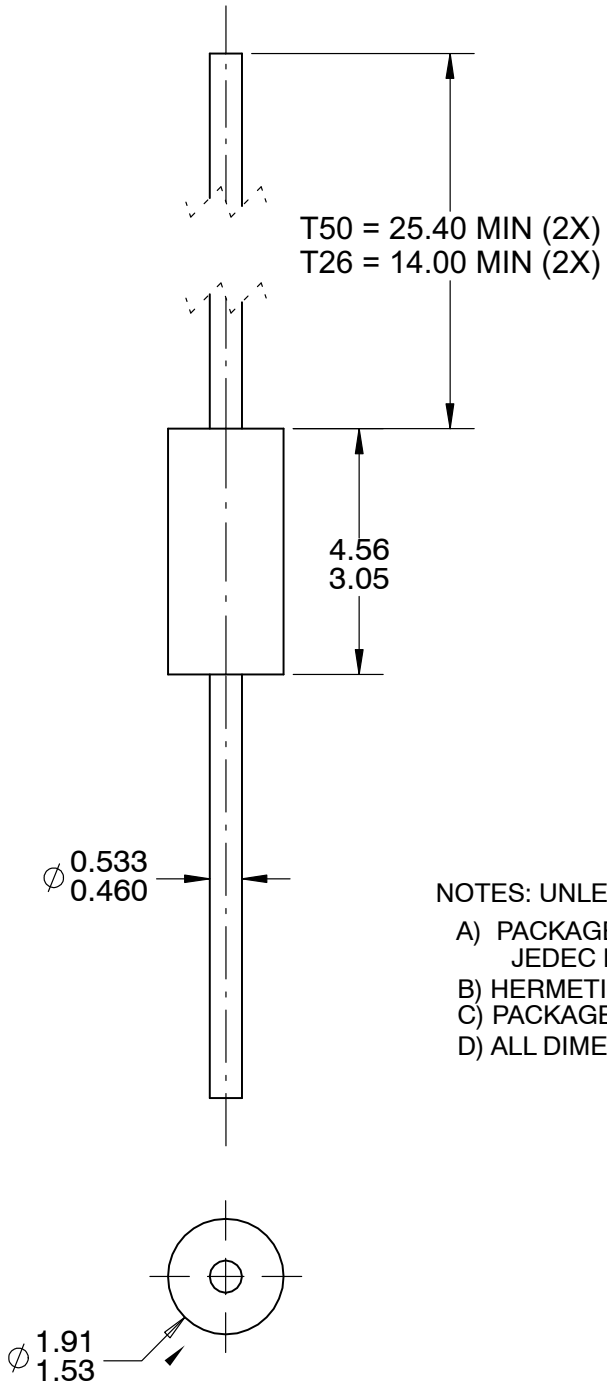
ISSUE O

DATE 31 AUG 2016



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE: JEDEC DO−204, VARIATION AH.
B) HERMETICALLY SEALED GLASS PACKAGE.
C) PACKAGE WEIGHT IS 0.137 GRAM.
D) ALL DIMENSIONS ARE IN MILLIMETERS.

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onsemi Website: www.onsemi.com

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