FAIRCHILD
SEMICONDUCTOR®

Zeners
1N5221B - 1N5279B

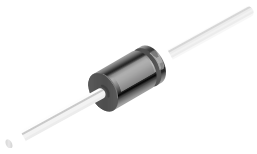
Absolute Maximum Ratings *

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation Derate above 50°C	500 4.0	mW mW°C
T_{STG}	Storage Temperature Range	-65 to +200	°C
T_J	Maximum Junction Operating Temperature	+200	°C
	Lead Temperature (1/16" from case for 10 seconds)	+230	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.
** Non-recurrent square wave PW = 8.3ms, Ta = 50 degrees C.

Tolerance = 5%



DO-35 Glass case
COLOR BAND DENOTES CATHODE

Electrical Characteristics

T_A=25°C unless otherwise noted

Device	V_Z (V) @ I_Z (Note 1)			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	2.28	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
1N5224B	2.66	2.8	2.94	30	20	1,400	0.25	75	1.0	-0.080
1N5225B	2.85	3	3.15	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	-0.07
1N5227B	3.42	3.6	3.78	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	-0.06
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	2.0	1.0	+/-0.03
1N5231B	4.845	5.1	5.355	17	20	1,600	0.25	5.0	2.0	+/-0.03
1N5232B	5.32	5.6	5.88	11	20	1,600	0.25	5.0	3.0	0.038
1N5233B	5.7	6	6.3	7.0	20	1,600	0.25	5.0	3.5	0.038
1N5234B	5.89	6.2	6.51	7.0	20	1,000	0.25	5.0	4.0	0.045
1N5235B	6.46	6.8	7.14	5.0	20	750	0.25	3.0	5.0	0.05
1N5236B	7.125	7.5	7.875	6.0	20	500	0.25	3.0	6.0	0.058
1N5237B	7.79	8.2	8.61	8.0	20	500	0.25	3.0	6.5	0.062
1N5238B	8.265	8.7	9.135	8.0	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	9.5	10	10.5	17	20	600	0.25	3.0	8.0	0.075
1N5241B	10.45	11	11.55	22	20	600	0.25	2.0	8.4	0.076
1N5242B	11.4	12	12.6	30	20	600	0.25	0.1	9.1	0.077
1N5243B	12.35	13	13.65	13	9.5	600	0.25	0.1	9.9	0.079
1N5244B	13.3	14	14.7	15	9.0	600	0.25	0.1	10	0.080
1N5245B	14.25	15	15.75	16	8.5	600	0.25	0.1	11	0.082
1N5246B	15.2	16	16.8	17	7.8	600	0.25	0.1	12	0.083
1N5247B	16.15	17	17.85	19	7.4	600	0.25	0.1	13	0.084
1N5248B	17.1	18	18.9	21	7.0	600	0.25	0.1	14	0.085
1N5247B	18.05	19	19.95	23	6.6	600	0.25	0.1	14	0.085
1N5250B	19	20	21	25	6.2	600	0.25	0.1	15	0.086

Electrical Characteristics (Continued) T_A=25°C unless otherwise noted

Device	V_Z (V) @ I_Z (Note 1)			Z_Z (Ω) @ I_Z (mA)		Z_{ZK} (Ω) @ I_{ZK} (mA)		I_R (μA) @ V_R (V)		T_C (%/°C)
	Min.	Typ.	Max.							
1N5251B	20.9	22	23.1	29	5.6	600	0.25	0.1	17	0.087
1N5252B	22.8	24	25.2	33	5.2	600	0.25	0.1	18	0.088
1N5253B	23.75	25	26.25	35	5.0	600	0.25	0.1	19	0.088
1N5254B	25.65	27	28.35	41	4.6	600	0.25	0.1	21	0.089
1N5255B	26.6	28	29.4	44	4.5	600	0.25	0.1	21	0.090
1N5256B	28.5	30	31.5	49	4.2	600	0.25	0.1	23	0.09
1N5257B	31.35	33	34.65	58	3.8	700	0.25	0.1	25	0.092
1N5258B	34.2	36	37.8	70	3.4	700	0.25	0.1	27	0.093
1N5259B	37.05	39	40.95	80	3.2	800	0.25	0.1	30	0.094
1N5260B	40.85	43	45.15	93	3.0	900	0.25	0.1	33	0.095
1N5261B	44.65	47	49.35	105	2.7	1000	0.25	0.1	36	0.095
1N5262B	48.45	51	53.55	125	2.5	1100	0.25	0.1	39	0.096
1N5263B	53.2	56	58.8	150	2.2	1300	0.25	0.1	43	0.096
1N5264B	57	60	63	170	2.1	1400	0.25	0.1	46	0.097
1N5265B	58.9	62	65.1	185	2.0	1400	0.25	0.1	47	0.097
1N5266B	64.6	68	71.4	230	1.8	1600	0.25	0.1	52	0.097
1N5267B	71.25	75	78.75	270	1.7	1700	0.25	0.1	56	0.098
1N5268B	80.75	85	89.25	330	1.5	2000	0.25	0.1	62	0.098
1N5269B	82.65	87	91.35	370	1.4	2200	0.25	0.1	68	0.099
1N5270B	96.45	91	95.55	400	1.4	2300	0.25	0.1	69	0.099
1N5271B	95	100	105	500	1.3	2600	0.25	0.1	76	0.099
1N5272B	104.5	110	115.5	750	1.1	3000	0.25	0.1	84	0.11
1N5273B	114	120	126	900	1.0	4000	0.25	0.1	91	0.11
1N5274B	123.5	130	136.5	1100	0.95	4500	0.25	0.1	99	0.11
1N5275B	133	140	147	1300	0.90	4500	0.25	0.1	106	0.11
1N5276B	142.5	150	157.5	1500	0.85	5000	0.25	0.1	114	0.11
1N5277B	152	160	168	1700	0.80	5500	0.25	0.1	122	0.11
1N5278B	161.5	170	178.5	1900	0.74	5500	0.25	0.1	129	0.11
1N5279B	171	180	189	2200	0.68	6000	0.25	0.1	137	0.11

V_F Forward Voltage = 1.2V Max. @ I_F = 200mA

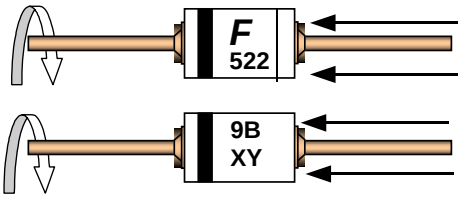
Notes:

1. 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 Mark Information

Device	Line 1	Line 2	Line 3	Line 4
1N5221B	LOGO	522	1B	XY
1N5222B	LOGO	522	2B	XY
1N5223B	LOGO	522	3B	XY
1N5224B	LOGO	522	4B	XY
1N5225B	LOGO	522	5B	XY
1N5226B	LOGO	522	6B	XY
1N5227B	LOGO	522	7B	XY
1N5228B	LOGO	522	8B	XY
1N5229B	LOGO	522	9B	XY
1N5230B	LOGO	523	0B	XY
1N5231B	LOGO	523	1B	XY
1N5232B	LOGO	523	2B	XY
1N5233B	LOGO	523	3B	XY
1N5234B	LOGO	523	4B	XY
1N5235B	LOGO	523	5B	XY
1N5236B	LOGO	523	6B	XY
1N5237B	LOGO	523	7B	XY
1N5238B	LOGO	523	8B	XY
1N5239B	LOGO	523	9B	XY
1N5240B	LOGO	524	0B	XY
1N5241B	LOGO	524	1B	XY
1N5242B	LOGO	524	2B	XY
1N5243B	LOGO	524	3B	XY
1N5244B	LOGO	524	4B	XY
1N5245B	LOGO	524	5B	XY
1N5246B	LOGO	524	6B	XY
1N5247B	LOGO	524	7B	XY
1N5248B	LOGO	524	8B	XY
1N5247B	LOGO	524	9B	XY
1N5250B	LOGO	525	0B	XY
1N5251B	LOGO	525	1B	XY
1N5252B	LOGO	525	2B	XY
1N5253B	LOGO	525	3B	XY
1N5254B	LOGO	525	4B	XY
1N5255B	LOGO	525	5B	XY
1N5256B	LOGO	525	6B	XY
1N5257B	LOGO	525	7B	XY
1N5258B	LOGO	525	8B	XY
1N5259B	LOGO	525	9B	XY
1N5260B	LOGO	526	0B	XY
1N5261B	LOGO	526	1B	XY
1N5262B	LOGO	526	2B	XY
1N5263B	LOGO	526	3B	XY
1N5264B	LOGO	526	4B	XY
1N5265B	LOGO	526	5B	XY
1N5266B	LOGO	526	6B	XY
1N5267B	LOGO	526	7B	XY
1N5268B	LOGO	526	8B	XY
1N5269B	LOGO	526	9B	XY
1N5270B	LOGO	526	0B	XY
1N5271B	LOGO	527	1B	XY
1N5272B	LOGO	527	2B	XY
1N5273B	LOGO	527	3B	XY
1N5274B	LOGO	527	4B	XY
1N5275B	LOGO	527	5B	XY
1N5276B	LOGO	527	6B	XY
1N5277B	LOGO	527	7B	XY
1N5278B	LOGO	527	8B	XY
1N5279B	LOGO	527	9B	XY

Top Mark Information (Continued)



1st line: F - Fairchild Logo

2nd line: Device Name - 3rd to 5th characters of the device name.
or 4th to 6th characters for BZXyy series

3rd line: Device Name - 6th to 7th characters of the device name.
or Voltage rating for BZXyy series

4th line: Device Code or - Two Digit - Six Weeks Date Code.
Date code plus or Two Digit - Six Weeks Date Code
Large die identification plus Large die identification, "L"

General Requirements:

1.0 Cathod Band

2.0 First Line: F - Fairchild Logo

3.0 Second Line: Device name - For 1Nxx series: 3rd to 5th characters of the device name.
For BZxx series: 4th to 6th characters of the device name.

4.0 Third Line: Device name - For 1Nxx series: 6th to 7th characters of the device name.
For BZXyy series: Voltage rating

5.0 Fourth Line: XY or XYL - Two Digit - Six Weeks Date Code
Where: X represents the last digit of the calendar year
Y represents the Six weeks numeric code
L represents the Large die identification

6.0 Devices shall be marked as required in the device specification (PID or FSC Test Spec).

7.0 Maximum no. of marking lines: 4

8.0 Maximum no. of digits per line: 3

9.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.

10.0 Marking Font: Arial (Except FSC Logo)

11.0 First character of each marking line must be aligned vertically

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FACT™	ImpliedDisconnect™	OCXPro™	RapidConnect™	UHC™
FACT Quiet Series™		OPTOLOGIC®	µSerDes™	UltraFET®
Across the board. Around the world.™		OPTOPLANAR™	SILENT SWITCHER®	VCX™
The Power Franchise®		PACMAN™	SMART START™	
Programmable Active Droop™		POP™	SPM™	

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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