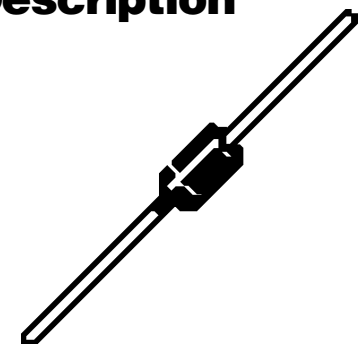
FCI Semiconductor

Data Sheet

½ Watt ZENER DIODES (2.4V to 200V)

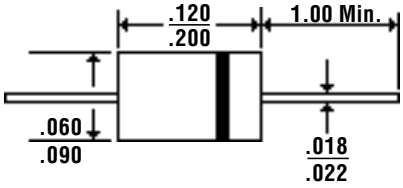
1N5221...5281 Series

Description



Mechanical Dimensions

JEDEC DO-35

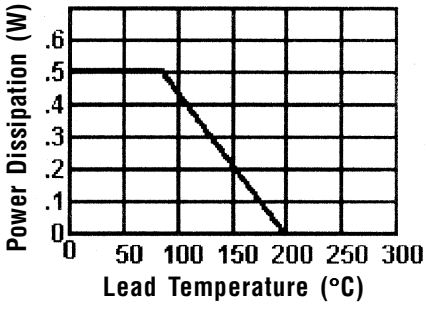


Features

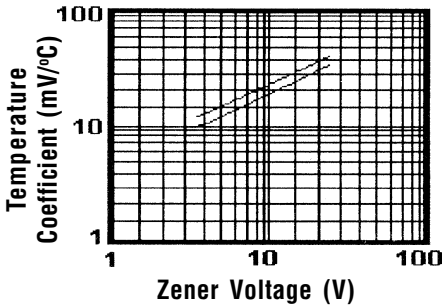
- **5 & 10% VOLTAGE TOLERANCES AVAILABLE**
- **WIDE VOLTAGE RANGE**
- **MEETS UL SPECIFICATION 94V-0**

Maximum Ratings	*1N5221...5281 Series*	Units
DC Power Dissipation with T_L = > = 75°C ...P_D	500	mW
Lead Length = .375 Inches Derate Above 50 °C	4	mW / °C
Operating & Storage Temperature Range...T_J, T_{STRG}	-65 to 100	°C

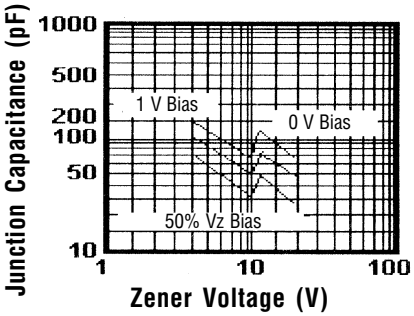
Steady State Power Derating



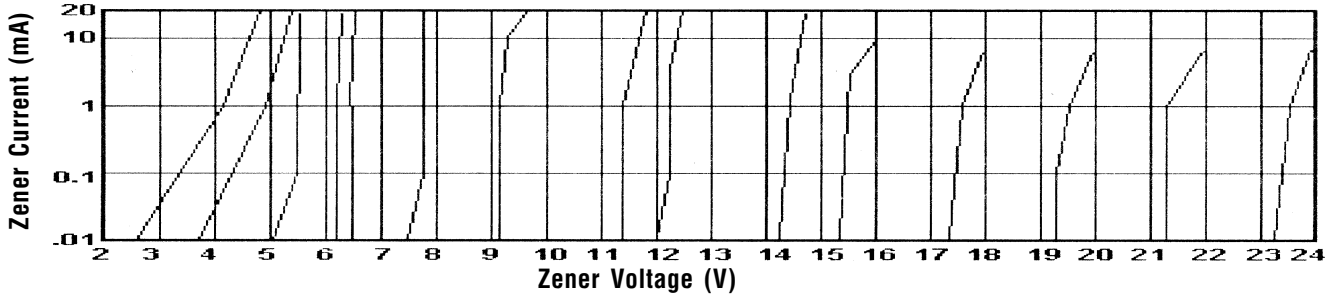
Temperature Coefficients vs. Voltage



Typical Junction Capacitance



Zener Current vs. Zener Voltage



½ Watt ZENER DIODES (2.4V to 200V)

NOTES: 1. For 10% Tolerance on Zener Voltage, Specify Suffix "A". For 5% Tolerance, Specify Suffix "B". (Example: 1N5230B = 4.7V +/- 5%)
2. T_A = 25°C unless otherwise specified. Measurements made at Thermal Equilibrium.
Lead Length = .375". Thermal Resistance of Heat Sink = 30°C / W, V_F = 1.1V Max. @ I_F = 200mA

Electrical Characteristics @ 25°C.

Part # Jedec Type #	Nominal Zener Voltage, V_Z(V)	Test Current I_{ZT} (mA)	Max. Zener Impedance Z_{ZT} @ I_{ZT} (Ω)	Max. Zener Impedance Z_{ZK} @ I_{ZK} = 0.25mA (Ω)	Max. Reverse Leakage Current @ V_R I_R (μA)	Max. Reverse Leakage Current @ V_R V_R (V)	Max. Zener Voltage Temp. Coeff. (%/°C)
1N5221A or B	2.4	20	30	1200	100	1	-0.085
1N5222A or B	2.5	20	30	1250	100	1	-0.085
1N5223A or B	2.7	20	30	1300	75	1	-0.08
1N5224A or B	2.8	20	30	1400	75	1	-0.08
1N5225A or B	3.0	20	29	1600	50	1	-0.075
1N5226A or B	3.3	20	28	1600	25	1	-0.07
1N5227A or B	3.6	20	24	1700	15	1	-0.065
1N5228A or B	3.9	20	23	1900	10	1	-0.06
1N5229A or B	4.3	20	22	2000	5	1	+/- 0.055
1N5230A or B	4.7	20	19	1900	5	2	+/- 0.03
1N5231A or B	5.1	20	17	1600	5	2	+/- 0.03
1N5232A or B	5.6	20	11	1600	5	3	+ 0.038
1N5233A or B	6.0	20	7	1600	5	3.5	+ 0.038
1N5234A or B	6.2	20	7	1000	5	4	+ 0.045
1N5235A or B	6.8	20	5	750	5	5	+ 0.050
1N5236A or B	7.5	20	6	500	3	6	+ 0.058
1N5237A or B	8.2	20	8	500	3	6.5	+ 0.062
1N5238A or B	8.7	20	8	600	3	6.5	+ 0.065
1N5239A or B	9.1	20	10	600	3	7	+ 0.068
1N5240A or B	10	20	17	600	3	8	+ 0.075
1N5241A or B	11	20	22	600	2	8.4	+ 0.076
1N5242A or B	12	20	30	600	1	9.1	+ 0.077
1N5243A or B	13	9.5	13	600	.5	9.9	+ 0.079
1N5244A or B	14	9.0	15	600	.1	10	+ 0.082
1N5245A or B	15	8.5	16	600	.1	11	+ 0.082
1N5246A or B	16	7.8	17	600	.1	12	+ 0.083
1N5247A or B	17	7.4	19	600	.1	13	+ 0.084
1N5248A or B	18	7.0	21	600	.1	14	+ 0.085
1N5249A or B	19	6.6	23	600	.1	15	+ 0.086
1N5250A or B	20	6.2	25	600	.1	16	+ 0.086
1N5251A or B	22	5.6	29	600	.1	17	+ 0.087
1N5252A or B	24	5.2	33	600	.1	18	+ 0.088
1N5253A or B	25	5.0	35	600	.1	19	+ 0.089
1N5254A or B	27	4.6	41	600	.1	21	+ 0.090
1N5255A or B	28	4.5	44	600	.1	21	+ 0.091

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2. T_A = 25°C unless otherwise specified. Measurements made at Thermal Equilibrium.
Lead Length = .375". Thermal Resistance of Heat Sink = 30°C / W, V_F = 1.1V Max. @ I_F = 200mA

Electrical Characteristics @ 25°C.

Part # Jedec Type #	Nominal Zener Voltage, V_Z(V)	Test Current I_{ZT} (mA)	Max. Zener Impedance Z_{ZT} @ I_{ZT} (Ω)	Max. Zener Impedance Z_{ZK} @ I_{ZK} = 0.25mA (Ω)	Max. Reverse Leakage Current @ V_R I_R (μA)	Max. Reverse Leakage Current @ V_R V_R (V)	Max. Zener Voltage Temp. Coeff. (%/°C)
1N5256A or B	30	4.2	49	600	.1	23	+ 0.091
1N5257A or B	33	3.8	58	700	.1	25	+ 0.092
1N5258A or B	36	3.4	70	700	.1	27	+ 0.093
1N5259A or B	39	3.2	80	800	.1	30	+ 0.094
1N5260A or B	43	3.0	93	900	.1	33	+ 0.095
1N5261A or B	47	2.7	105	1000	.1	36	+ 0.095
1N5262A or B	51	2.5	125	1100	.1	39	+ 0.096
1N5263A or B	56	2.2	150	1300	.1	43	+ 0.096
1N5264A or B	60	2.1	170	1400	.1	46	+ 0.097
1N5265A or B	62	2.0	185	1400	.1	47	+ 0.097
1N5266A or B	68	1.8	230	1600	.1	52	+ 0.097
1N5267A or B	75	1.7	270	1700	.1	56	+ 0.098
1N5268A or B	82	1.5	330	2000	.1	62	+ 0.098
1N5269A or B	87	1.4	370	2200	.1	68	+ 0.099
1N5270A or B	91	1.4	400	2300	.1	69	+ 0.099
1N5271A or B	100	1.3	500	2600	.1	76	+ 0.11
1N5272A or B	110	1.1	750	3000	.1	84	+ 0.11
1N5273A or B	120	1.0	900	4000	.1	91	+ 0.11
1N5274A or B	130	0.95	1100	4500	.1	99	+ 0.11
1N5275A or B	140	0.9	1300	4500	.1	106	+ 0.11
1N5276A or B	150	0.85	1500	5000	.1	114	+ 0.11
1N5277A or B	160	0.8	1700	5500	.1	122	+ 0.11
1N5278A or B	170	0.74	1900	5500	.1	129	+ 0.11
1N5279A or B	180	0.68	2200	6000	.1	137	+ 0.11
1N5280A or B	190	0.66	2400	6500	.1	144	+ 0.11
1N5281A or B	200	0.65	2500	7000	.1	152	+ 0.11