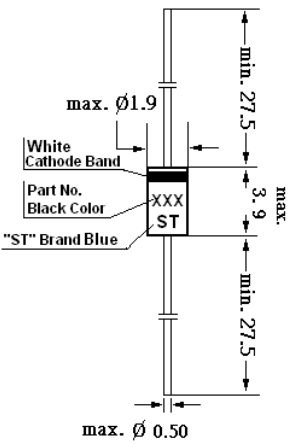


1N4099~1N4135

SILICON PLANAR LOW NOISE ZENER DIODES

FEATURES

- Low noise
- Low reverse leakage



Glass case JEDEC DO-35

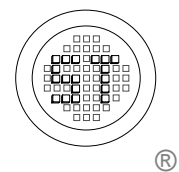
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^{\circ}\text{C}$)

	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation	P_{tot}	400	mW
Derate above 75°C		3.2	mW/ $^{\circ}\text{C}$
Junction Temperature	T_j	200	$^{\circ}\text{C}$
Storage Temperature Range	T_s	-65 to +200	$^{\circ}\text{C}$

Characteristics at $T_{\text{amb}} = 25^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 200\text{mA}$	V_F	-	-	1.1	V



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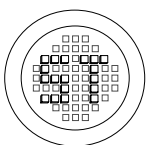


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1N4099~1N4135

TYPE	Zener Voltage Range		Maximum Zener Impedance Z_{ZT} Ω	Maximum Reverse Leakage Current		Maximum Noise Density	Maximum Zener Current	Typical Temperature Coefficient
	V_{Znom} V	I_{ZT} μA		I_R μA	V_R V	$N_D @ I_{ZT}$ $\mu V/\sqrt{Hz}$	I_{ZM} mA	α_{VZ} %/°C
1N4099	6.8	250	200	10	5.17	40	56	0.040
1N4100	7.5	250	200	10	5.70	40	51	0.045
1N4101	8.2	250	200	1	6.24	40	46	0.048
1N4102	8.7	250	200	1	6.61	40	44	0.049
1N4103	9.1	250	200	1	6.92	40	42	0.050
1N4104	10	250	200	1	7.60	40	38	0.055
1N4105	11	250	200	0.05	8.44	40	35	0.060
1N4106	12	250	200	0.05	9.12	40	32	0.065
1N4107	13	250	200	0.05	9.87	40	29	0.065
1N4108	14	250	200	0.05	10.65	40	27	0.070
1N4109	15	250	100	0.05	11.40	40	25	0.070
1N4110	16	250	100	0.05	12.15	40	24	0.070
1N4111	17	250	100	0.05	12.92	40	22	0.075
1N4112	18	250	100	0.05	13.67	40	21	0.075
1N4113	19	250	150	0.05	14.44	40	20	0.075
1N4114	20	250	150	0.01	15.20	40	19	0.075
1N4115	22	250	150	0.01	16.72	40	17	0.080
1N4116	24	250	150	0.01	18.25	40	16	0.080
1N4117	25	250	150	0.01	19.00	40	15	0.080
1N4118	27	250	150	0.01	20.45	40	14	0.085
1N4119	28	250	200	0.01	21.28	40	14	0.085
1N4120	30	250	200	0.01	22.80	40	13	0.085
1N4121	33	250	200	0.01	25.08	40	12	0.085
1N4122	36	250	200	0.01	27.38	40	11	0.09
1N4123	39	250	200	0.01	29.65	40	9.8	0.09
1N4124	43	250	250	0.01	32.65	40	8.9	0.09
1N4125	47	250	250	0.01	35.75	40	8.1	0.09
1N4126	51	250	300	0.01	38.76	40	7.5	0.09
1N4127	56	250	300	0.01	42.60	40	6.7	0.09
1N4128	60	250	400	0.01	45.60	40	6.4	0.09
1N4129	62	250	500	0.01	47.10	40	6.1	0.09
1N4130	68	250	700	0.01	51.68	40	5.6	0.095
1N4131	75	250	700	0.01	57.00	40	5.1	0.095
1N4132	82	250	800	0.01	62.32	40	4.6	0.095
1N4133	87	250	1000	0.01	66.12	40	4.4	0.095
1N4134	91	250	1200	0.01	69.16	40	4.2	0.095
1N4135	100	250	1500	0.01	76.00	40	3.8	0.095

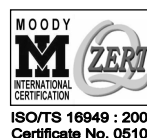
- Notes: 1. The JEDEC type numbers shown above have a standard tolerance of $\pm 5\%$ on the nominal Zener voltage. Also available in 2% and 1% tolerance, suffix C and D respectively. V_Z is measured with the diode in thermal equilibrium in 25°C still air.
2. Zener impedance is derived by superimposing on I_{ZT} , a 60 Hz rms a.c. current equal to 10% of I_{ZT} (25 μA a.c.).
3. Based upon 400mW maximum power dissipation at 75°C lead temperature, allowance has been made for the higher voltage associated with operation at higher currents.
4. Tested with pulses $t_p = 20$ ms.



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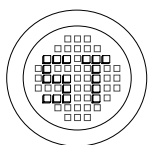
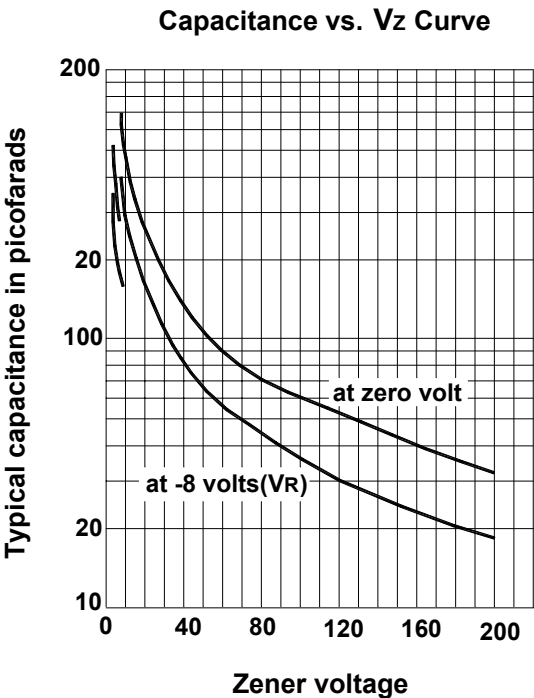
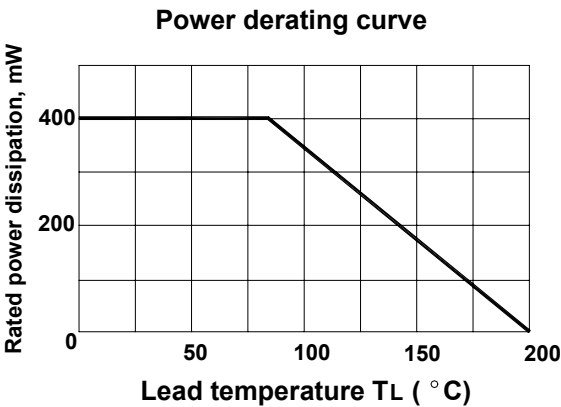
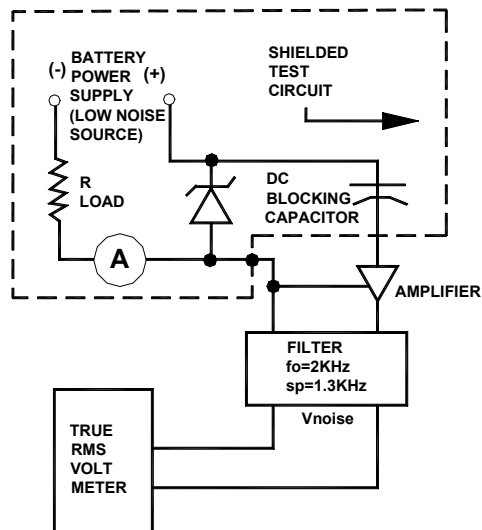
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Noise density, (N_D) is specified in microvolts-rms per square-root-hertz. Actual measurement is performed using a 1KHz to 8KHz frequency bandpass filter at a constant Zener test current(I_{ZT}) at 25 °C ambient temperature. N_D is calculated from the formula.



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