

1N4916-1N4932A

19.2V LOW NOISE TEMPERATURE COMPENSATED ZENER REFERENCE DIODE

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

Characteristics	Values
Junction and storage temperatures	-65 to +175°C
DC power dissipation	500mW @ 50°C
Power derating	4 mW/°C above 50°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Part number	Test current	Maximum voltage change with temperature	Temperature range	Effective temperature coefficient	Maximum dynamic impedance	Maximum noise density
	I _{ZT}	ΔV _{ZT}		α _{VZ}	Z _{ZT}	N _D
	Note 1	Note 2		Note 3	Note 4	
	mA	Volts		°C	±%/°C	Ohms
1N4916	0.5	0.144	25 to +100	0.01	600	1.0
1N4916A	0.5	0.298	-55 to +100	0.01	600	1.0
1N4917	0.5	0.072	25 to +100	0.005	600	1.0
1N4917A	0.5	0.149	-55 to +100	0.005	600	1.0
1N4918	0.5	0.029	25 to +100	0.002	600	1.0
1N4918A	0.5	0.060	-55 to +100	0.002	600	1.0
1N4919	1.0	0.144	25 to +100	0.01	300	0.5
1N4919A	1.0	0.298	-55 to +100	0.01	300	0.5
1N4920	1.0	0.072	25 to +100	0.005	300	0.5
1N4920A	1.0	0.149	-55 to +100	0.005	300	0.5
1N4921	1.0	0.029	25 to +100	0.002	300	0.5
1N4921A	1.0	0.060	-55 to +100	0.002	300	0.5
1N4922	2.0	0.144	25 to +100	0.01	150	0.25
1N4922A	2.0	0.298	-55 to +100	0.01	150	0.25
1N4923	2.0	0.072	25 to +100	0.005	150	0.25
1N4923A	2.0	0.149	-55 to +100	0.005	150	0.25
1N4924	2.0	0.029	25 to +100	0.002	150	0.25
1N4924A	2.0	0.060	-55 to +100	0.002	150	0.25
1N4925	4.0	0.144	25 to +100	0.01	75	0.22
1N4925A	4.0	0.298	-55 to +100	0.01	75	0.22
1N4926	4.0	0.072	25 to +100	0.005	75	0.22
1N4926A	4.0	0.149	-55 to +100	0.005	75	0.22
1N4927	4.0	0.029	25 to +100	0.002	75	0.22
1N4927A	4.0	0.060	-55 to +100	0.002	75	0.22
1N4928	4.0	0.014	25 to +100	0.001	75	0.22

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Part number	Test current	Maximum voltage change with temperature	Temperature range	Effective temperature coefficient	Maximum dynamic impedance	Maximum noise density
	I_{ZT}	ΔV_{ZT}		α_{VZ}	Z_{ZT}	N_D
	Note 1	Note 2		Note 3	Note 4	
	mA	Volts	°C	±%/°C	Ohms	μV/√Hz
1N4928A	4.0	0.030	-55 to +100	0.001	75	0.22
1N4929	7.5	0.144	25 to +100	0.01	36	0.20
1N4929A	7.5	0.298	-55 to +100	0.01	36	0.20
1N4930	7.5	0.072	25 to +100	0.005	36	0.20
1N4930A	7.5	0.149	-55 to +100	0.005	36	0.20
1N4931	7.5	0.029	25 to +100	0.002	36	0.20
1N4931A	7.5	0.060	-55 to +100	0.002	36	0.20
1N4932	7.5	0.014	25 to +100	0.001	36	0.20
1N4932A	7.5	0.030	-55 to +100	0.001	36	0.20

Note 1. Nominal voltage for all types is 19.2 volts ±5%

Note 2. Referred to as the "box" measurement method, the ΔV_{ZT} is the maximum voltage variance that will occur as the voltage is scanned through all temperatures between the temperature range limits.

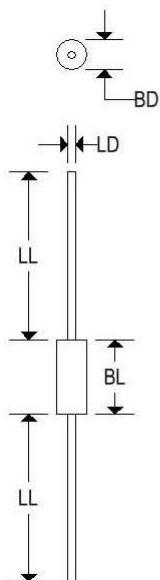
Note 3. The effective temperature coefficients are tabulated in %/°C primarily for information only because temperature compensated diodes inherently have a non-linear voltage temperature relationship.

Note 4. The dynamic zener impedance Z_{ZT} is derived from the resulting ac voltage developed when a 60Hz, rms, ac current equal to 10% of the dc zener current I_{ZT} is superimposed on I_{ZT} .

Note 5. To specify radiation hardened devices, use "RH" prefix instead of "1N".

MECHANICAL CHARACTERISTICS

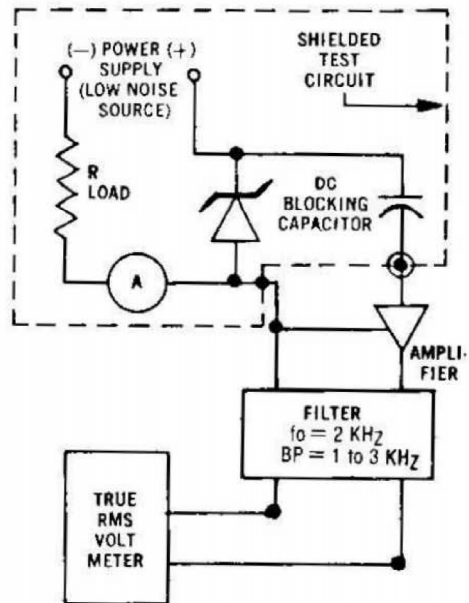
Case	DO-35 hermetically sealed glass
Marking	Body painted, alpha numeric
Polarity	Cathode band



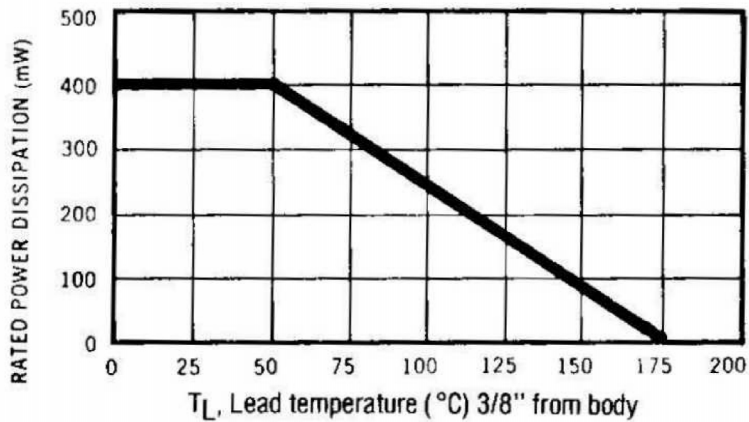
	DO-35			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.055	0.090	1.400	2.290
BL	0.120	0.200	3.050	5.080
LD	0.018	0.022	0.460	0.560
LL	1.000	1.500	25.400	38.100

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NOISE DENSITY MEASUREMENT CIRCUIT



POWER DERATING CURVE