

- 1N4614-1THRU 1N4627-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/435
- LOW CURRENT OPERATION AT 250 μ A
- LOW REVERSE LEAKAGE AND LOW NOISE CHARACTERISTICS
- DOUBLE PLUG CONSTRUCTION
- METALLURGICALLY BONDED

1N4614 thru 1N4627
and
1N4614-1 thru 1N4627-1

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
DC Power Dissipation: 500mW @ +50°C
Power Derating: 4 mW / °C above +50°C
Forward Voltage @ 200 mA: 1.1 Volts maximum

* ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| JEDEC TYPE NUMBER | NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (Note 1) | ZENER TEST CURRENT I_{ZT} | MAXIMUM ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ (Note 2) | MAXIMUM REVERSE LEAKAGE CURRENT $I_R @ V_R$ | | MAXIMUM DC ZENER CURRENT I_{ZM} | MAXIMUM NOISE DENSITY N_D |
|-------------------|--|-----------------------------|---|---|-------|-----------------------------------|-----------------------------|
| | | | | μ A | VOLTS | | |
| 1N4614 | 1.8 | 250 | 1200 | 7.5 | 1 | 120 | 1 |
| 1N4615 | 2.0 | 250 | 1250 | 5.0 | 1 | 110 | 1 |
| 1N4616 | 2.2 | 250 | 1300 | 4.0 | 1 | 100 | 1 |
| 1N4617 | 2.4 | 250 | 1400 | 2.0 | 1 | 95 | 1 |
| 1N4618 | 2.7 | 250 | 1500 | 1.0 | 1 | 90 | 1 |
| 1N4619 | 3.0 | 250 | 1600 | 0.8 | 1 | 87 | 1 |
| 1N4620 | 3.3 | 250 | 1650 | 7.5 | 1.5 | 85 | 1 |
| 1N4621 | 3.6 | 250 | 1700 | 7.5 | 2 | 83 | 1 |
| 1N4622 | 3.9 | 250 | 1650 | 5.0 | 2 | 80 | 1 |
| 1N4623 | 4.3 | 250 | 1600 | 4.0 | 2 | 77 | 1 |
| 1N4624 | 4.7 | 250 | 1550 | 10.0 | 3 | 75 | 1 |
| 1N4625 | 5.1 | 250 | 1500 | 10.0 | 3 | 70 | 2 |
| 1N4626 | 5.6 | 250 | 1400 | 10.0 | 4 | 65 | 4 |
| 1N4627 | 6.2 | 250 | 1200 | 10.0 | 5 | 61 | 5 |

* JEDEC Registered Data.

NOTE 1 The JEDEC type numbers shown above have a Zener voltage tolerance of $\pm 5\%$ of the nominal Zener voltage. V_Z is measured with the device junction in thermal equilibrium at an ambient temperature of $25^\circ\text{C} \pm 3^\circ\text{C}$. A "C" suffix denotes a $\pm 2\%$ tolerance and a "D" suffix denotes a $\pm 1\%$ tolerance.

NOTE 2 Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT} (25 μ A a.c.)

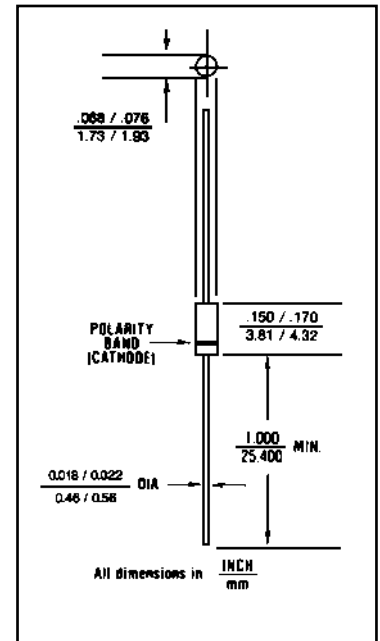


FIGURE 1

DESIGN DATA

CASE: Hermetically sealed glass case. DO – 35 outline.

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JEC}$): 250 $^\circ\text{C}/\text{W}$ maximum at $L = .375$ inch

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 35 $^\circ\text{C}/\text{W}$ maximum

POLARITY: Diode to be operated with the banded (cathode) end positive.

MOUNTING POSITION: ANY.



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1N4614 thru 1N4627 INCLUDING -1 VERSIONS

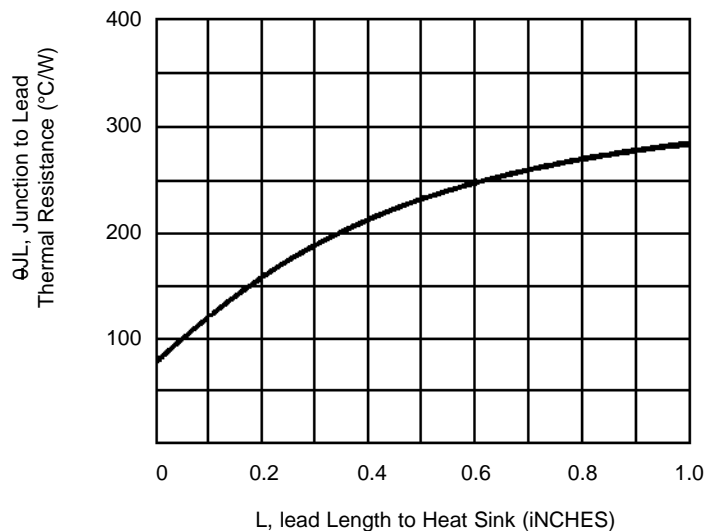


FIGURE 2

TYPICAL THERMAL RESISTANCE

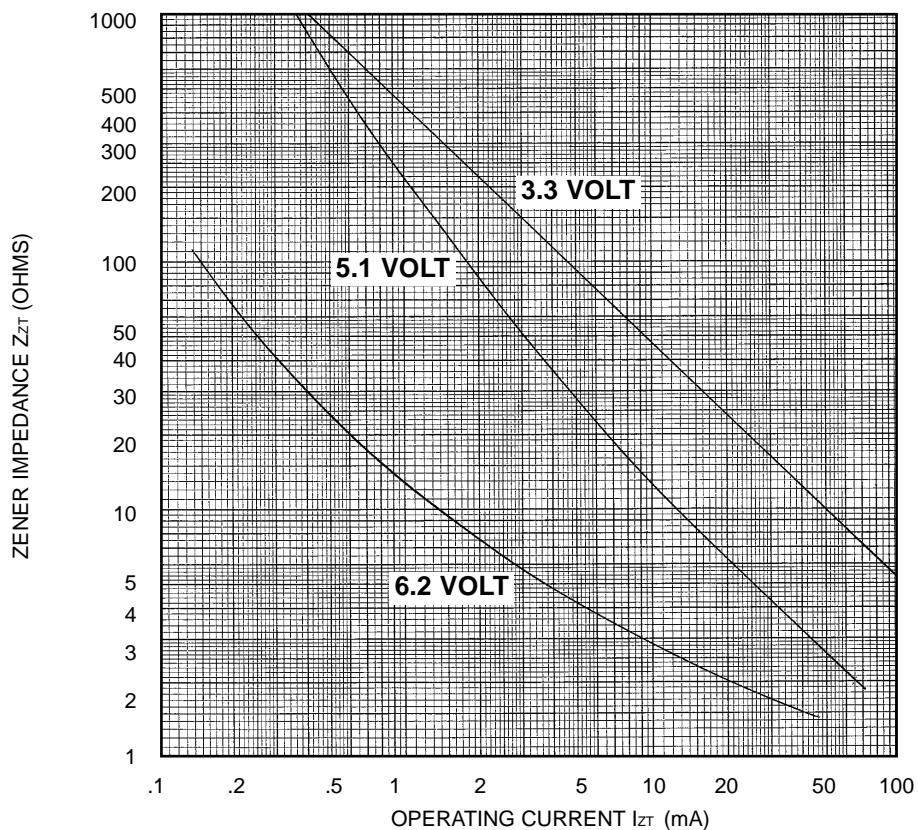


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT