

- 1N4614-1THRU 1N4627-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/435
- LOW CURRENT OPERATION AT 250  $\mu$ 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 $V_Z @ I_{ZT}$	ZENER TEST CURRENT $I_{ZT}$	MAXIMUM ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$	MAXIMUM REVERSE LEAKAGE CURRENT $I_R @ V_R$		MAXIMUM DC ZENER CURRENT $I_{ZM}$	MAXIMUM NOISE DENSITY $N_D$
	(Note 1) VOLTS	$\mu$ A	(Note 2) OHMS	$\mu$ A	VOLTS	mA	$\mu$ V / Hz
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  $\mu$  A a.c.)

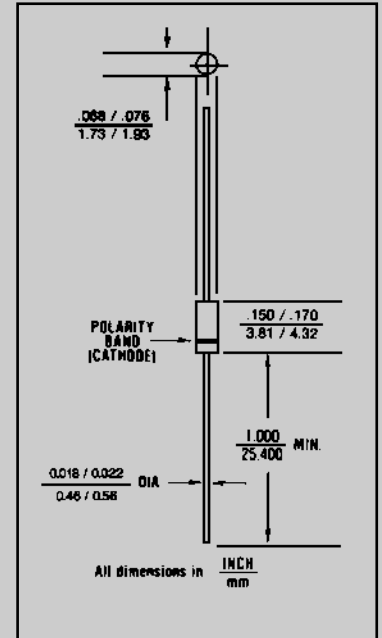


FIGURE 1

### 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 °C/W maximum at L = .375 inch

**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 35 °C/W maximum

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

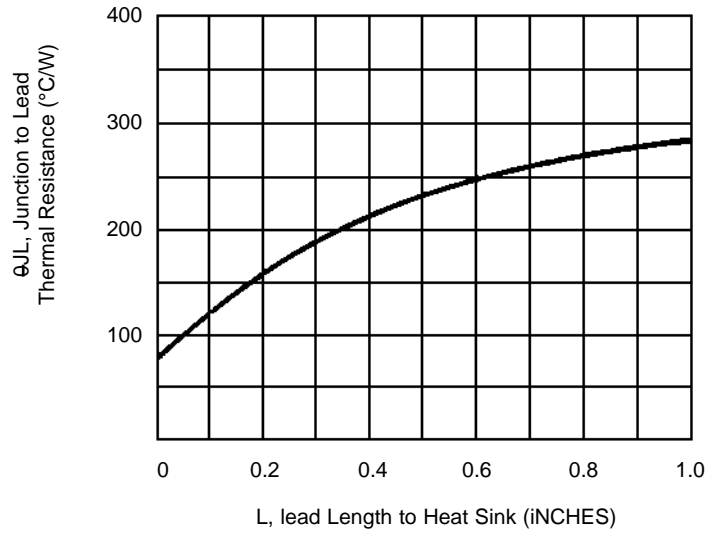
**MOUNTING POSITION:** ANY.



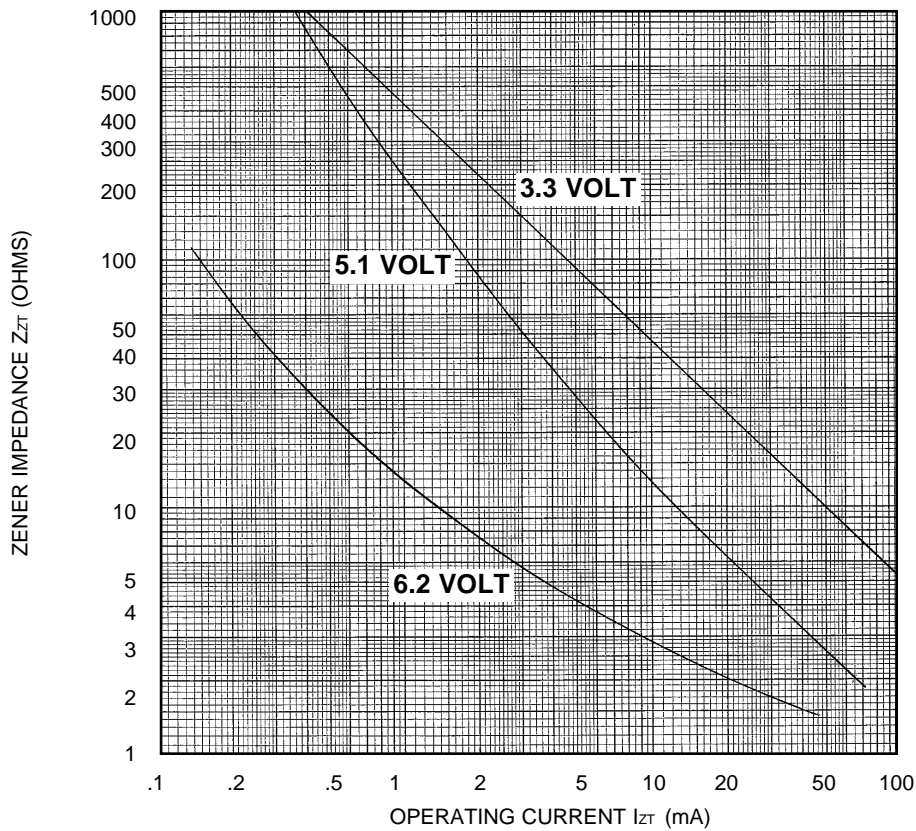
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# 1N4614 thru 1N4627 INCLUDING -1 VERSIONS



**FIGURE 2**  
**TYPICAL THERMAL RESISTANCE**



**FIGURE 3**  
**ZENER IMPEDANCE VS. OPERATING CURRENT**