

• 1N5518-1 THRU 1N5546B-1 AVAILABLE IN JAN, JANTX AND JANTXV
PER MIL-PRF-19500/437

- LOW REVERSE LEAKAGE CHARACTERISTICS
- LOW NOISE CHARACTERISTICS
- DOUBLE PLUG CONSTRUCTION
- METALLURGICALLY BONDED

1N5518 thru 1N5546D
and
1N5518B-1 thru 1N5546B-1

MAXIMUM RATINGS

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

ELECTRICAL CHARACTERISTICS @ 25°C

| JEDEC TYPE NUMBER (NOTE 1) | NOMINAL ZENER VOLTAGE V _Z @ 1ZT (NOTE 2) | ZENER TEST CURRENT 1ZT | MAX. ZENER IMPEDANCE B-C-D SUFFIX Z _{ZT} @ 1ZT (NOTE 3) | MAXIMUM REVERSE LEAKAGE CURRENT | | | B-C-D SUFFIX MAXIMUM DC ZENER CURRENT 1ZM | B-C-D SUFFIX MAX. NOISE DENSITY @ 1Z=250μ A N _D | REGULATION FACTOR %V _Z (NOTE 5) | LOW V _Z CURRENT 1ZL |
|-------------------------------------|---|---------------------------------|--|------------------------------------|--------------------|------------------|---|--|---|---|
| | | | | V _R = VOLTS | | | | | | |
| | | | | I _R (NOTE 4) | NON & A- SUFFIX | B-C-D- SUFFIX | | | | |
| | | | | μ Adc | | | mAdc | μ V / √HZ | VOLTS | mAdc |
| | | | | | | | | | | |
| 1N5518B | 3.3 | 20 | 26 | 5.0 | 0.90 | 1.0 | 115 | 0.5 | 0.90 | 2.0 |
| 1N5519B | 3.6 | 20 | 24 | 3.0 | 0.90 | 1.0 | 105 | 0.5 | 0.90 | 2.0 |
| 1N5520B | 3.9 | 20 | 22 | 1.0 | 0.90 | 1.0 | 98 | 0.5 | 0.85 | 2.0 |
| 1N5521B | 4.3 | 20 | 18 | 3.0 | 1.0 | 1.5 | 88 | 0.5 | 0.75 | 2.0 |
| 1N5522B | 4.7 | 10 | 22 | 2.0 | 1.5 | 2.0 | 81 | 0.5 | 0.60 | 1.0 |
| 1N5523B | 5.1 | 5.0 | 26 | 2.0 | 2.0 | 2.5 | 75 | 0.5 | 0.65 | 0.25 |
| 1N5524B | 5.6 | 3.0 | 30 | 2.0 | 3.0 | 3.5 | 68 | 1.0 | 0.30 | 0.25 |
| 1N5525B | 6.2 | 1.0 | 30 | 1.0 | 4.5 | 5.0 | 61 | 1.0 | 0.20 | 0.01 |
| 1N5526B | 6.8 | 1.0 | 30 | 1.0 | 5.5 | 6.2 | 56 | 1.0 | 0.10 | 0.01 |
| 1N5527B | 7.5 | 1.0 | 35 | 0.5 | 6.0 | 6.8 | 51 | 2.0 | 0.05 | 0.01 |
| 1N5528B | 8.2 | 1.0 | 40 | 0.5 | 6.5 | 7.5 | 46 | 4.0 | 0.05 | 0.01 |
| 1N5529B | 9.1 | 1.0 | 45 | 0.1 | 7.0 | 8.2 | 42 | 4.0 | 0.05 | 0.01 |
| 1N5530B | 10.0 | 1.0 | 60 | 0.05 | 8.0 | 9.1 | 38 | 4.0 | 0.10 | 0.01 |
| 1N5531B | 11.0 | 1.0 | 80 | 0.05 | 9.0 | 9.9 | 35 | 5.0 | 0.20 | 0.01 |
| 1N5532B | 12.0 | 1.0 | 90 | 0.05 | 9.5 | 10.8 | 32 | 10 | 0.20 | 0.01 |
| 1N5533B | 13.0 | 1.0 | 90 | 0.01 | 10.5 | 11.7 | 29 | 15 | 0.20 | 0.01 |
| 1N5534B | 14.0 | 1.0 | 100 | 0.01 | 11.5 | 12.6 | 27 | 20 | 0.20 | 0.01 |
| 1N5535B | 15.0 | 1.0 | 100 | 0.01 | 12.5 | 13.5 | 25 | 20 | 0.20 | 0.01 |
| 1N5536B | 16.0 | 1.0 | 100 | 0.01 | 13.0 | 14.4 | 24 | 20 | 0.20 | 0.01 |
| 1N5537B | 17.0 | 1.0 | 100 | 0.01 | 14.0 | 15.3 | 22 | 20 | 0.20 | 0.01 |
| 1N5538B | 18.0 | 1.0 | 100 | 0.01 | 15.0 | 16.2 | 21 | 20 | 0.20 | 0.01 |
| 1N5539B | 19.0 | 1.0 | 100 | 0.01 | 16.0 | 17.1 | 20 | 20 | 0.20 | 0.01 |
| 1N5540B | 20.0 | 1.0 | 100 | 0.01 | 17.0 | 18.0 | 19 | 20 | 0.20 | 0.01 |
| 1N5541B | 22.0 | 1.0 | 100 | 0.01 | 18.0 | 19.8 | 17 | 20 | 0.25 | 0.01 |
| 1N5542B | 24.0 | 1.0 | 100 | 0.01 | 20.0 | 21.6 | 16 | 20 | 0.30 | 0.01 |
| 1N5543B | 25.0 | 1.0 | 100 | 0.01 | 21.0 | 22.4 | 15 | 20 | 0.35 | 0.01 |
| 1N5544B | 28.0 | 1.0 | 100 | 0.01 | 23.0 | 25.2 | 14 | 20 | 0.40 | 0.01 |
| 1N5545B | 30.0 | 1.0 | 100 | 0.01 | 24.0 | 27.0 | 13 | 20 | 0.45 | 0.01 |
| 1N5546B | 33.0 | 1.0 | 100 | 0.01 | 28.0 | 29.7 | 12 | 20 | 0.50 | 0.01 |

NOTE 1 No Suffix type numbers are ±20% with guaranteed limits for only V_Z, I_R, and V_F. Units with "A" suffix are ±10% with guaranteed limits for V_Z, I_R, and V_F. Units with guaranteed limits for all six parameters are indicated by a "B" suffix for ±5.0% units, "C" suffix for ±2.0% and "D" suffix for ±1.0%.

NOTE 2 Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of 25°C ± 3°C.

NOTE 3 Zener impedance is derived by superimposing on 1ZT A 60Hz rms a.c. current equal to 10% of 1ZT.

NOTE 4 Reverse leakage currents are measured at V_R as shown on the table.

NOTE 5 %V_Z is the maximum difference between V_Z at 1ZT and V_Z at 1ZL measured with the device junction in thermal equilibrium at the ambient temperature of +25°C ± 3°C.

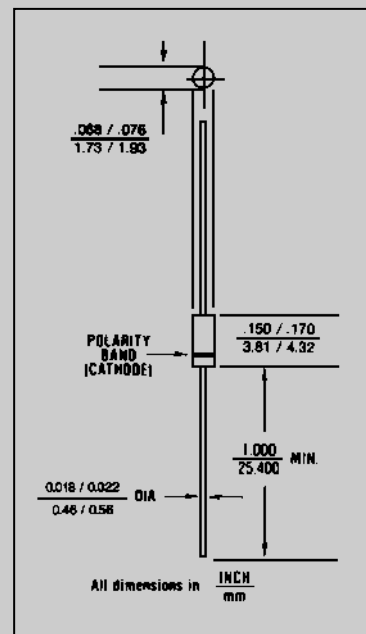


FIGURE 1

DESIGN DATA

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

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: (R_{ΘJEC}): 250 °C/W maximum at L = .375 inch

THERMAL IMPEDANCE: (Z_{ΘJX}): 35 °C/W maximum

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

MOUNTING POSITION: Any.



6 LAKE STREET, LAWRENCE, MASSACHUSETTS 01841
PHONE (978) 620-2600
WEBSITE: <http://www.microsemi.com>

FAX (978) 689-0803

1N5518 thru 1N5546D INCLUDING -1 VERSIONS

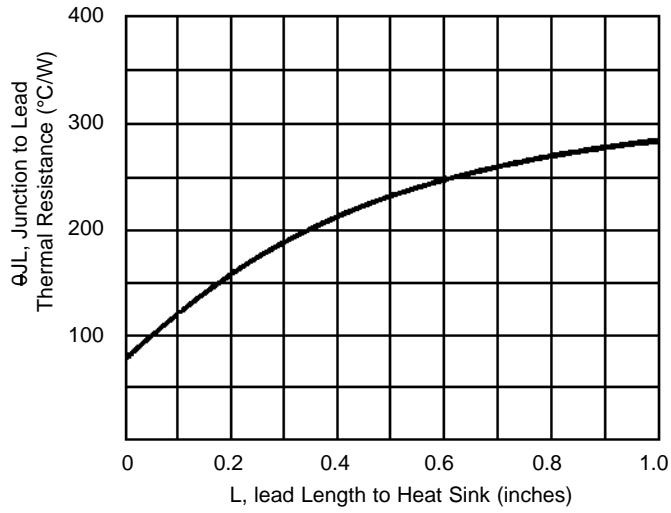


FIGURE 2
TYPICAL THERMAL RESISTANCE

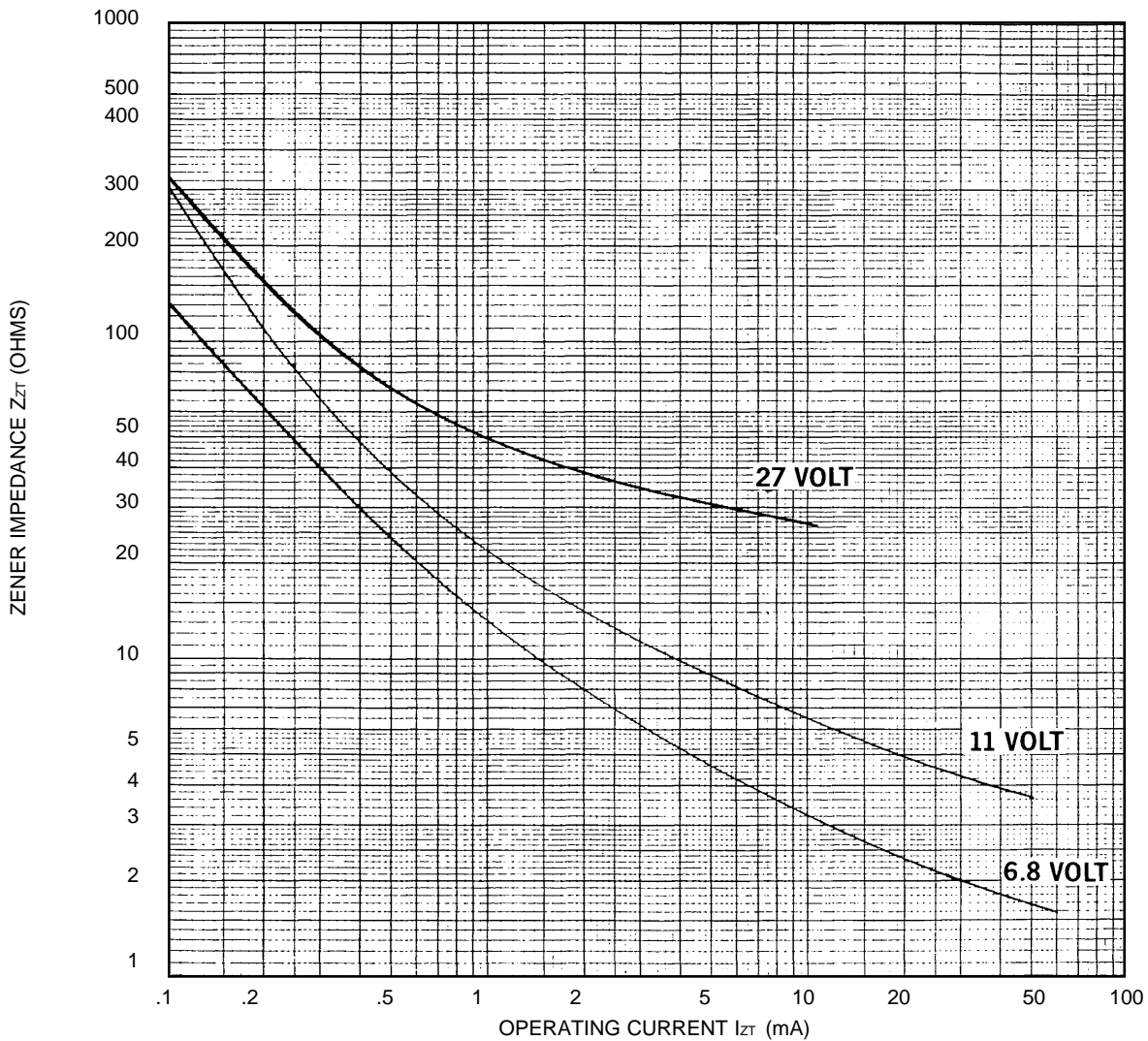


FIGURE 3
ZENER IMPEDANCE VS. OPERATING CURRENT

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Zener Diodes](#) category:

Click to view products by [Microsemi](#) manufacturer:

Other Similar products are found below :

[MMSZ5245BS-7-F](#) [RKZ13B2KG#P1](#) [RKZ5.6B2KJ#R1](#) [EDZTE6113B](#) [EDZTE6116B](#) [EDZTE616.8B](#) [1N747A](#) [1N966B](#) [NTE5116A](#)
[NTE5121A](#) [NTE5139A](#) [NTE5147A](#) [NTE5152A](#) [NTE5155A](#) [NTE5156A](#) [NTE5164A](#) [JANS1N4974US](#) [SMAJ4764A-TP](#) [RKZ5.1BKU#P6](#)
[3SMAJ5946B-TP](#) [3SMAJ5950B-TP](#) [3SMBJ5920B-TP](#) [3SMBJ5925B-TP](#) [TDZTR24](#) [441774C](#) [MMSZ4678-TP](#) [MMSZ5232BQ-13-F](#)
[BZG04-36](#) [BZG05C9V1-HE3-TR](#) [HZM30NBTR-E](#) [UDZTE-175.1B](#) [3SMAJ5945B-TP](#) [3SMAJ5947B-TP](#) [3SMBJ5941B-TP](#) [DL4746A-TP](#)
[RKZ18B2KK#R1](#) [RKZ10B2KL#R1](#) [RKZ6.8B2KL#R1](#) [RKZ8.2B2KL#R1](#) [DZ2S240M0L](#) [SMAZ27-TP](#) [SMBZ5920B-E3/52](#) [ZMM3.0](#)
[RD16UM-T1-A](#) [RD39S-T1-A](#) [RD9.1S-T1-A](#) [RD10S-T1-A](#) [RD20S-T1-A](#) [RD2.2S-T1-A](#) [RD2.7UM-T1-A](#)