

- 1N3016B THRU 1N3045B AVAILABLE IN JANHC
PER MIL-PRF-19500/115
- 1 WATT CAPABILITY WITH PROPER HEAT SINKING
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES,
WITH THE EXCEPTION OF SOLDER REFLOW

CD3016B
thru
CD3045B

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
Forward Voltage @ 200mA: 1.2 volts maximum

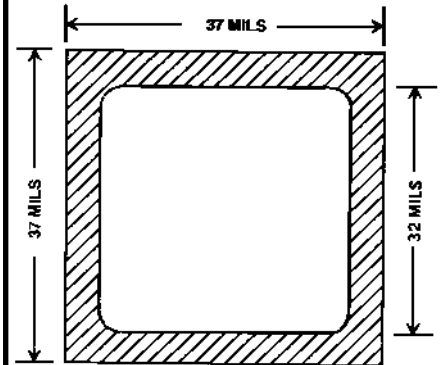
ELECTRICAL CHARACTERISTICS @ 25°C

| CDI TYPE NUMBER (NOTE 1) | NOMINAL ZENER VOLTAGE $V_Z @ 1Z_T$ (NOTE 2) | ZENER TEST CURRENT $1Z_T$ | MAXIMUM ZENER IMPEDANCE (NOTE 3) | | | MAX. DC ZENER CURRENT $1Z_M$ | MAX. REVERSE LEAKAGE CURRENT $I_R @ V_R$ | |
|---------------------------------------|---|------------------------------------|-------------------------------------|------|---------|---------------------------------------|--|------|
| | | | $Z_{ZT} @ 1Z_T$ | | μA | | VOLTS | |
| | | | OHMS | OHMS | | | | mA |
| CD3016B | 6.8 | 37 | 3.5 | 700 | 1.0 | 140 | 5.0 | 5.2 |
| CD3017B | 7.5 | 34 | 4.0 | 700 | .5 | 125 | 5.0 | 5.7 |
| CD3018B | 8.2 | 31 | 4.5 | 700 | .5 | 115 | 5.0 | 6.2 |
| CD3019B | 9.1 | 28 | 5 | 700 | .5 | 105 | 5.0 | 6.9 |
| CD3020B | 10 | 25 | 7 | 700 | .25 | 95 | 5.0 | 7.6 |
| CD3021B | 11 | 23 | 8 | 700 | .25 | 85 | 1.0 | 8.4 |
| CD3022B | 12 | 21 | 9 | 700 | .25 | 80 | 1.0 | 9.1 |
| CD3023B | 13 | 19 | 10 | 700 | .25 | 74 | 0.5 | 9.9 |
| CD3024B | 15 | 17 | 14 | 700 | .25 | 63 | 0.5 | 11.4 |
| CD3025B | 16 | 15.5 | 16 | 700 | .25 | 60 | 0.5 | 12.2 |
| CD3026B | 18 | 14 | 20 | 750 | .25 | 52 | 0.5 | 13.7 |
| CD3027B | 20 | 12.5 | 22 | 750 | .25 | 47 | 0.5 | 15.2 |
| CD3028B | 22 | 11.5 | 23 | 750 | .25 | 43 | 0.5 | 16.7 |
| CD3029B | 24 | 10.5 | 25 | 750 | .25 | 40 | 0.5 | 18.2 |
| CD3030B | 27 | 9.5 | 35 | 750 | .25 | 34 | 0.5 | 20.6 |
| CD3031B | 30 | 8.5 | 40 | 1000 | .25 | 31 | 0.5 | 22.8 |
| CD3032B | 33 | 7.5 | 45 | 1000 | .25 | 28 | 0.5 | 25.1 |
| CD3033B | 36 | 7.0 | 50 | 1000 | .25 | 26 | 0.5 | 27.4 |
| CD3034B | 39 | 6.5 | 60 | 1000 | .25 | 23 | 0.5 | 29.7 |
| CD3035B | 43 | 6.0 | 70 | 1500 | .25 | 21 | 0.5 | 32.7 |
| CD3036B | 47 | 5.5 | 80 | 1500 | .25 | 19 | 0.5 | 35.8 |
| CD3037B | 51 | 5.0 | 95 | 1500 | .25 | 18 | 0.5 | 38.8 |
| CD3038B | 56 | 4.5 | 110 | 2000 | .25 | 17 | 0.5 | 42.6 |
| CD3039B | 62 | 4.0 | 125 | 2000 | .25 | 15 | 0.5 | 47.1 |
| CD3040B | 68 | 3.7 | 150 | 2000 | .25 | 14 | 0.5 | 51.7 |
| CD3041B | 75 | 3.3 | 175 | 2000 | .25 | 12 | 0.5 | 56.0 |
| CD3042B | 82 | 3.0 | 200 | 3000 | .25 | 11 | 0.5 | 62.2 |
| CD3043B | 91 | 2.8 | 250 | 3000 | .25 | 10 | 0.5 | 69.2 |
| CD3044B | 100 | 2.5 | 350 | 3000 | .25 | 9.0 | 0.5 | 76.0 |
| CD3045B | 110 | 2.3 | 450 | 4000 | .25 | 8.3 | 0.5 | 83.6 |

NOTE 1 Zener voltage range equals nominal voltage $\pm 5\%$ for "B" Suffix. "A" Suffix denotes $\pm 10\%$, No Suffix denotes $\pm 20\%$, "C" suffix denotes $\pm 2\%$, "D" suffix denotes $\pm 1\%$.

NOTE 2 Zener voltage is read using a pulse measurement, 10 milliseconds maximum.

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



Backside is Cathode

FIGURE 1

DESIGN DATA

METALLIZATION:
Top: (Anode).....Al
Back: (Cathode).....Au

AL THICKNESS.....25,000 Å Min

GOLD THICKNESS.....4,000 Å Min

CHIP THICKNESS.....10 Mils

CIRCUIT LAYOUT DATA:
For Zener operation, cathode must be operated positive with respect to anode.

TOLERANCES: ALL
Dimensions ± 2 mils



COMPENSATED DEVICES INCORPORATED

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CD3016 thru CD3045B

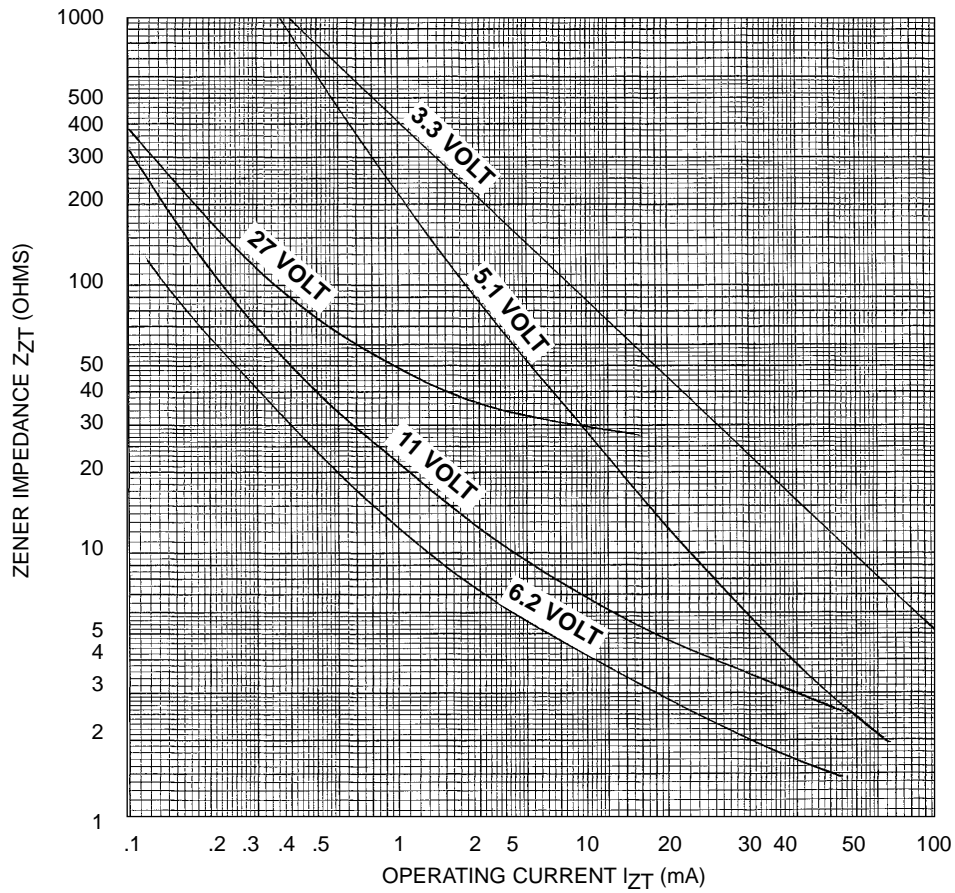


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT