

- 1N5283-1 THRU 1N5314-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS
- PER MIL-PRF-19500/463
- CURRENT REGULATOR DIODES
- HIGH SOURCE IMPEDANCE
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N5283 thru 1N5314  
and  
1N5283-1 thru 1N5314-1

#### MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C

Storage Temperature: -65°C to +175°C

DC Power Dissipation: 500mW @  $T_L = +50^\circ\text{C}$ ,  $L = 3/8"$

Power Derating: 4 mW / °C above +50°C

Peak Operating Voltage: 100 Volts

#### ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

| TYPE<br>NUMBER | REGULATOR CURRENT<br>$I_p$ (mA) @ $V_S = 25V$ |       |       | MINIMUM<br>DYNAMIC<br>IMPEDANCE<br>@ $V_S = 25V$<br>$Z_S$ (MΩ)<br>(Note 1) | MINIMUM<br>KNEE<br>IMPEDANCE<br>@ $V_K = 6.0V$<br>$Z_K$ (MΩ)<br>(Note 2) | MAXIMUM<br>LIMITING<br>VOLTAGE<br>@ $I_L = 0.8 I_p$ (min)<br>$V_L$ (VOLTS) |
|----------------|---|-------|-------|--|--|--|
|                | NOM   | MIN   | MAX   |  |  |  |
| 1N5283         | 0.22  | 0.198 | 0.242 | 25.0   | 2.75   | 1.00   |
| 1N5284         | 0.24  | 0.216 | 0.264 | 19.0   | 2.35   | 1.00   |
| 1N5285         | 0.27  | 0.243 | 0.297 | 14.0   | 1.95   | 1.00   |
| 1N5286         | 0.30  | 0.270 | 0.330 | 9.0  | 1.60   | 1.00   |
| 1N5287         | 0.33  | 0.297 | 0.363 | 6.6  | 1.35   | 1.00   |
| 1N5288         | 0.39  | 0.351 | 0.429 | 4.10   | 1.00   | 1.05   |
| 1N5289         | 0.43  | 0.387 | 0.473 | 3.30   | 0.870  | 1.05   |
| 1N5290         | 0.47  | 0.423 | 0.517 | 2.70   | 0.750  | 1.05   |
| 1N5291         | 0.56  | 0.504 | 0.616 | 1.90   | 0.560  | 1.10   |
| 1N5292         | 0.62  | 0.558 | 0.682 | 1.55   | 0.470  | 1.13   |
| 1N5293         | 0.68  | 0.612 | 0.748 | 1.35   | 0.400  | 1.15   |
| 1N5294         | 0.75  | 0.675 | 0.825 | 1.15   | 0.335  | 1.20   |
| 1N5295         | 0.82  | 0.738 | 0.902 | 1.00   | 0.290  | 1.25   |
| 1N5296         | 0.91  | 0.819 | 1.001 | 0.880  | 0.240  | 1.29   |
| 1N5297         | 1.00  | 0.900 | 1.100 | 0.800  | 0.205  | 1.35   |
| 1N5298         | 1.10  | 0.990 | 1.210 | 0.700  | 0.180  | 1.40   |
| 1N5299         | 1.20  | 1.08  | 1.32  | 0.640  | 0.155  | 1.45   |
| 1N5300         | 1.30  | 1.17  | 1.43  | 0.580  | 0.135  | 1.50   |
| 1N5301         | 1.40  | 1.26  | 1.54  | 0.540  | 0.115  | 1.55   |
| 1N5302         | 1.50  | 1.35  | 1.65  | 0.510  | 0.105  | 1.60   |
| 1N5303         | 1.60  | 1.44  | 1.76  | 0.475  | 0.092  | 1.65   |
| 1N5304         | 1.80  | 1.62  | 1.98  | 0.420  | 0.074  | 1.75   |
| 1N5305         | 2.00  | 1.80  | 2.20  | 0.395  | 0.061  | 1.85   |
| 1N5306         | 2.20  | 1.98  | 2.42  | 0.370  | 0.052  | 1.95   |
| 1N5307         | 2.40  | 2.16  | 2.64  | 0.345  | 0.044  | 2.00   |
| 1N5308         | 2.70  | 2.43  | 2.97  | 0.320  | 0.035  | 2.15   |
| 1N5309         | 3.00  | 2.70  | 3.30  | 0.300  | 0.029  | 2.25   |
| 1N5310         | 3.30  | 2.97  | 3.63  | 0.280  | 0.024  | 2.35   |
| 1N5311         | 3.60  | 3.24  | 3.96  | 0.265  | 0.020  | 2.50   |
| 1N5312         | 3.90  | 3.51  | 4.29  | 0.255  | 0.017  | 2.60   |
| 1N5313         | 4.30  | 3.87  | 4.73  | 0.245  | 0.014  | 2.75   |
| 1N5314         | 4.70  | 4.23  | 5.17  | 0.235  | 0.012  | 2.90   |

NOTE 1  $Z_S$  is derived by superimposing A 90Hz RMS signal equal to 10% of  $V_S$  on  $V_S$

NOTE 2  $Z_K$  is derived by superimposing A 90Hz RMS signal equal to 10% of  $V_K$  on  $V_K$

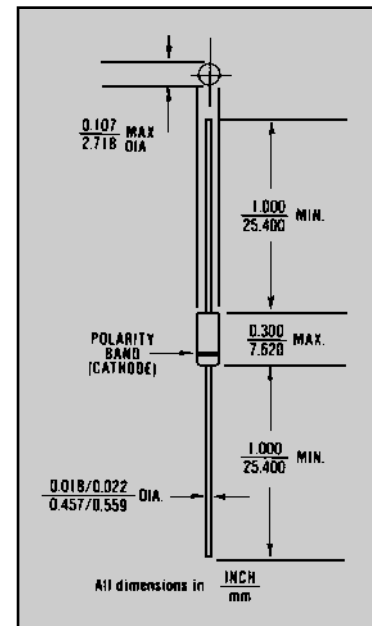


FIGURE 1

#### DESIGN DATA

**CASE:** Hermetically sealed glass case. DO - 7 outline.

**LEAD MATERIAL:** Copper clad steel.

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta JC}$ ): 250 °C/W maximum at  $L = .375$  inch

**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 25 °C/W maximum

**POLARITY:** Diode to be operated with the banded (Cathode) end negative.

**WEIGHT:** 0.2 grams.

**MOUNTING POSITION:** Any.



**COMPENSATED DEVICES INCORPORATED**

22 COREY STREET, MELROSE, MASSACHUSETTS 02176

PHONE (781) 665-1071

WEBSITE: <http://www.cdi-diodes.com>

FAX (781) 665-7379

E-mail: [mail@cdi-diodes.com](mailto:mail@cdi-diodes.com)

# 1N5283 thru 1N5314 INCLUDING -1 VERSIONS

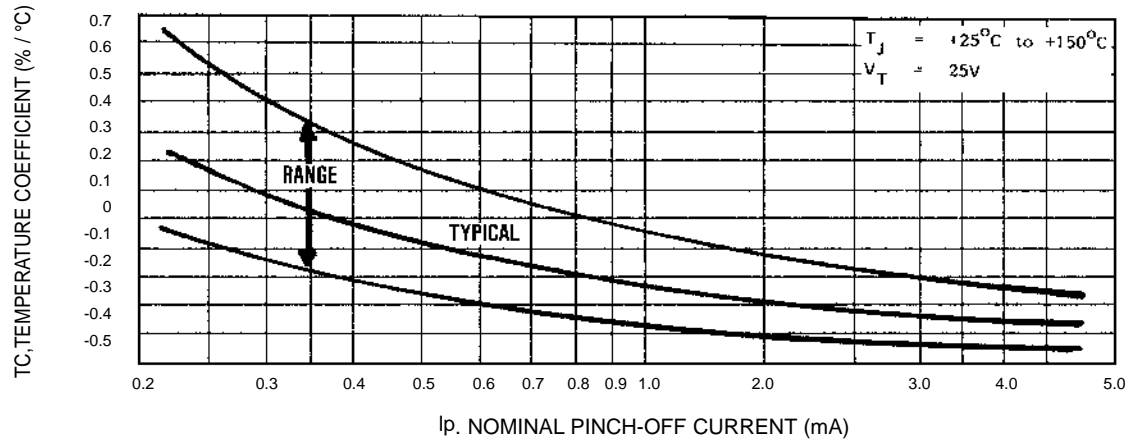


FIGURE 2 TEMPERATURE COEFFICIENT

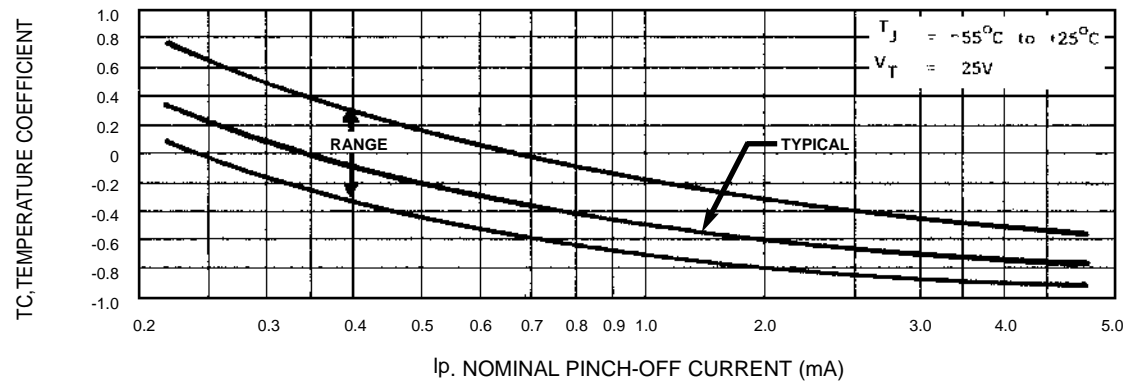


FIGURE 3 TEMPERATURE COEFFICIENT

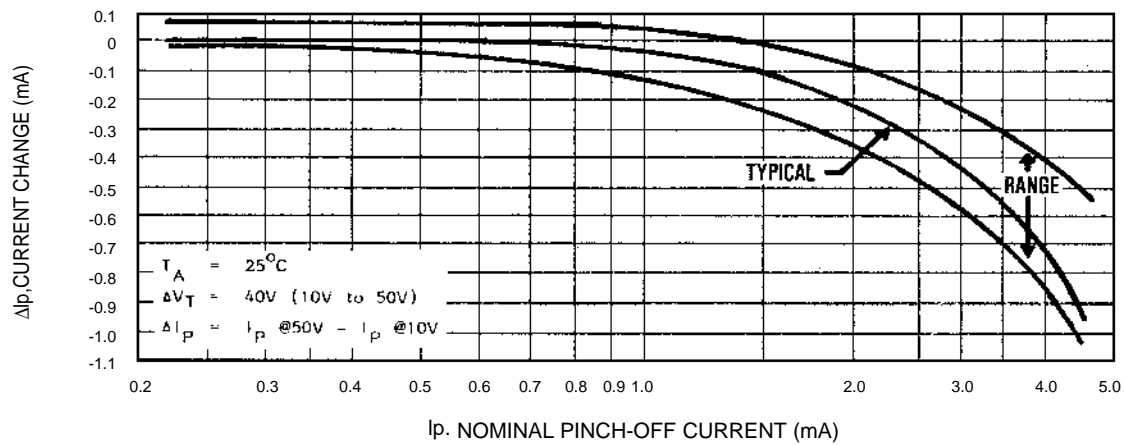


FIGURE 4 CURRENT REGULATION FACTOR