

- 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 NUMBER | REGULATOR CURRENT I_p (mA) @ $V_S = 25V$ | | | MINIMUM DYNAMIC IMPEDANCE @ $V_S = 25V$ Z_S (M Ω) (Note 1) | MINIMUM KNEE IMPEDANCE @ $V_K = 6.0 V$ Z_K (M Ω) (Note 2) | MAXIMUM LIMITING VOLTAGE @ $I_L = 0.8 I_p$ (min) 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

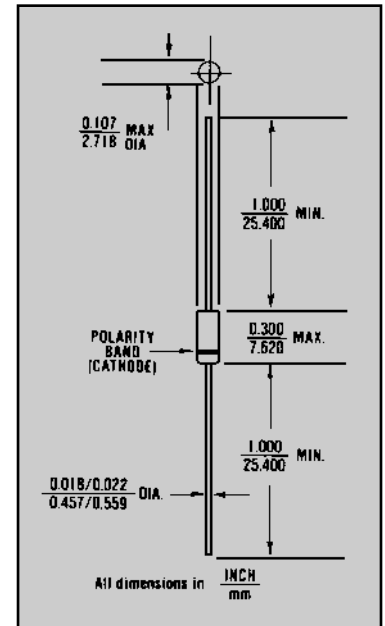


FIGURE 1

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 FAX (781) 665-7379
WEBSITE: <http://www.cdi-diodes.com> E-mail: mail@cdi-diodes.com

1N5283 thru 1N5314 INCLUDING -1 VERSIONS

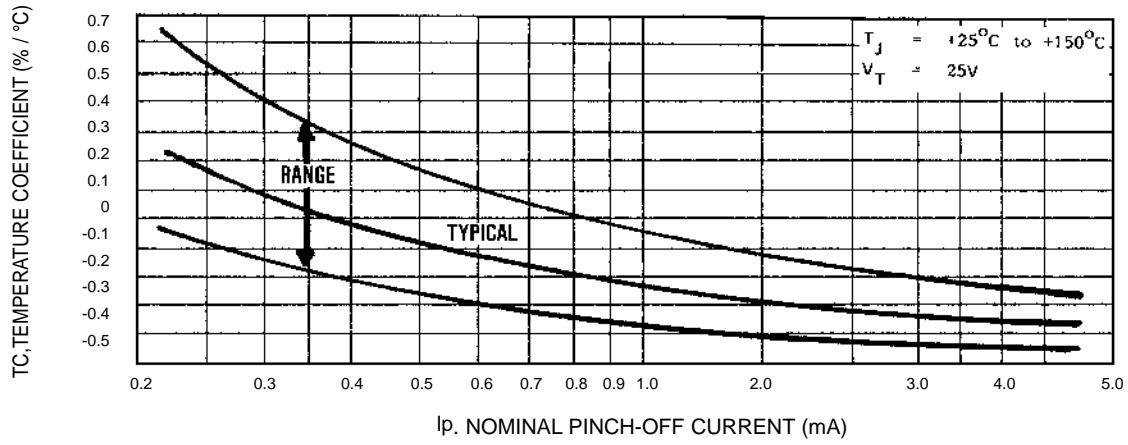


FIGURE 2 TEMPERATURE COEFFICIENT

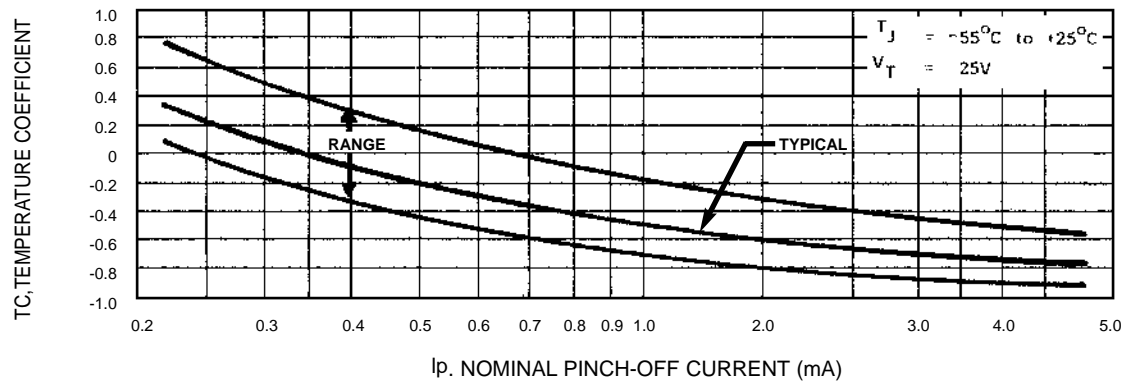


FIGURE 3 TEMPERATURE COEFFICIENT

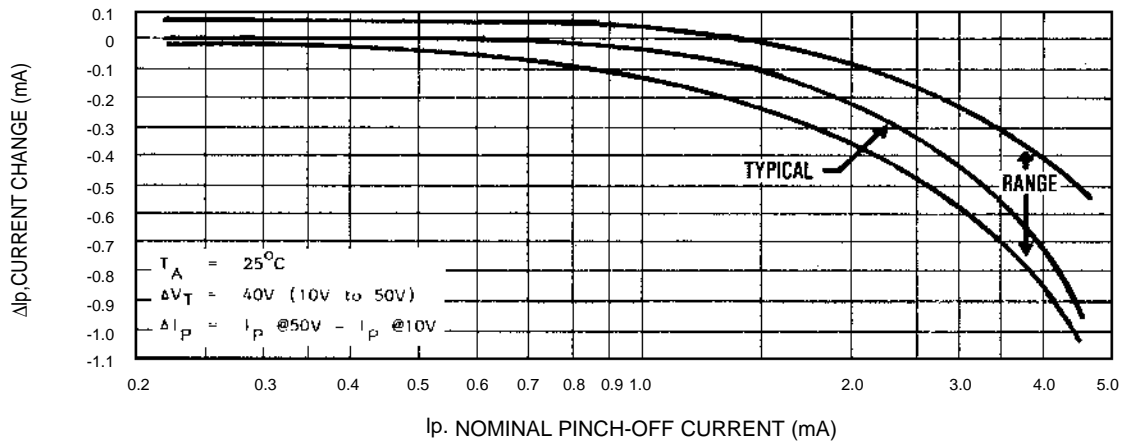


FIGURE 4 CURRENT REGULATION FACTOR