

**1N5283 THRU 1N5314**  
**SILICON CURRENT LIMITING DIODES**



[www.centrasemi.com](http://www.centrasemi.com)



**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 1N5283 series types are silicon field effect current regulator diodes designed for applications requiring a constant current over a wide voltage range. These devices are manufactured in the cost effective DO-35 double plug case which provides many benefits to the user, including space savings and improved thermal characteristics. Special selections of  $I_p$  (regulator current) are available for critical applications.

**FEATURES:**

- High Reliability
- Superior Lot To Lot Consistency
- Special Selections Available
- Surface Mount Devices Available

**MAXIMUM RATINGS:** ( $T_L=75^\circ\text{C}$ )

Peak Operating Voltage  
Power Dissipation  
Operating and Storage Junction Temperature

**SYMBOL**

$P_{OV}$  100  
 $P_D$  600  
 $T_J, T_{stg}$  -65 to +200

**UNITS**

V  
mW  
 $^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ )

| Type   | Regulator Current (Note 1)<br>$I_p @ V_T=25\text{V}$ |        |        | Minimum Dynamic Impedance<br>$Z_T @ V_T=25\text{V}$ | Minimum Knee Impedance<br>$Z_K @ V_K=6.0\text{V}$ | Maximum Limiting Voltage<br>$V_L @ I_L=0.8 \times I_p \text{ MIN}$ |
|--------|--|--------|--------|---|---|--|
|        | MIN mA   | NOM mA | MAX mA | M $\Omega$  | M $\Omega$  | V  |
| 1N5283 | 0.187  | 0.22   | 0.253  | 25  | 2.75  | 1.0  |
| 1N5284 | 0.204  | 0.24   | 0.276  | 19  | 2.35  | 1.0  |
| 1N5285 | 0.230  | 0.27   | 0.311  | 14  | 1.95  | 1.0  |
| 1N5286 | 0.255  | 0.30   | 0.345  | 9.0   | 1.60  | 1.0  |
| 1N5287 | 0.281  | 0.33   | 0.380  | 6.6   | 1.35  | 1.0  |
| 1N5288 | 0.332  | 0.39   | 0.449  | 4.1   | 1.00  | 1.05   |
| 1N5289 | 0.366  | 0.43   | 0.495  | 3.3   | 0.87  | 1.05   |
| 1N5290 | 0.400  | 0.47   | 0.541  | 2.7   | 0.75  | 1.05   |
| 1N5291 | 0.476  | 0.56   | 0.644  | 1.90  | 0.56  | 1.10   |
| 1N5292 | 0.527  | 0.62   | 0.713  | 1.55  | 0.47  | 1.13   |
| 1N5293 | 0.578  | 0.68   | 0.782  | 1.35  | 0.40  | 1.15   |
| 1N5294 | 0.638  | 0.75   | 0.863  | 1.15  | 0.335   | 1.20   |
| 1N5295 | 0.697  | 0.82   | 0.943  | 1.00  | 0.29  | 1.25   |
| 1N5296 | 0.774  | 0.91   | 1.05   | 0.88  | 0.24  | 1.29   |
| 1N5297 | 0.850  | 1.00   | 1.15   | 0.80  | 0.205   | 1.35   |
| 1N5298 | 0.935  | 1.10   | 1.27   | 0.70  | 0.18  | 1.40   |

Notes: (1) Pulsed Method: Pulse Width (ms) = 27.5 divided by  $I_p$  NOM (mA)

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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )

| Type   | Regulator Current (Note 1)<br>$I_P @ V_T=25V$ |        |        | Minimum Dynamic Impedance<br>$Z_T @ V_T=25V$ | Minimum Knee Impedance<br>$Z_K @ V_K=6.0V$ | Maximum Limiting Voltage<br>$V_L @ I_L=0.8 \times I_P \text{ MIN}$ |
|--------|---|--------|--------|--|--|--|
|        | MIN mA  | NOM mA | MAX mA | $M\Omega$                                    | $M\Omega$                                  | V  |
| 1N5299 | 1.02  | 1.20   | 1.38   | 0.640  | 0.155                                      | 1.45   |
| 1N5300 | 1.11  | 1.30   | 1.50   | 0.580  | 0.135                                      | 1.50   |
| 1N5301 | 1.19  | 1.40   | 1.61   | 0.540  | 0.115                                      | 1.55   |
| 1N5302 | 1.28  | 1.50   | 1.73   | 0.510  | 0.105                                      | 1.60   |
| 1N5303 | 1.36  | 1.60   | 1.84   | 0.475  | 0.092                                      | 1.65   |
| 1N5304 | 1.53  | 1.80   | 2.07   | 0.420  | 0.074                                      | 1.75   |
| 1N5305 | 1.70  | 2.00   | 2.30   | 0.395  | 0.061                                      | 1.85   |
| 1N5306 | 1.87  | 2.20   | 2.53   | 0.370  | 0.052                                      | 1.95   |
| 1N5307 | 2.04  | 2.40   | 2.76   | 0.345  | 0.044                                      | 2.00   |
| 1N5308 | 2.30  | 2.70   | 3.11   | 0.320  | 0.035                                      | 2.15   |
| 1N5309 | 2.55  | 3.00   | 3.45   | 0.300  | 0.029                                      | 2.25   |
| 1N5310 | 2.81  | 3.30   | 3.80   | 0.280  | 0.024                                      | 2.35   |
| 1N5311 | 3.06  | 3.60   | 4.14   | 0.265  | 0.020                                      | 2.50   |
| 1N5312 | 3.32  | 3.90   | 4.49   | 0.255  | 0.017                                      | 2.60   |
| 1N5313 | 3.66  | 4.30   | 4.95   | 0.245  | 0.014                                      | 2.75   |
| 1N5314 | 4.00  | 4.70   | 5.41   | 0.235  | 0.012                                      | 2.90   |

**DO-35 CASE - MECHANICAL OUTLINE**



| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.018  | 0.022 | 0.46        | 0.56 |
| B          | 0.120  | 0.200 | 3.05        | 5.08 |
| C          | 0.060  | 0.090 | 1.52        | 2.29 |
| D          | 1.000  | -     | 25.40       | -    |

DO-35 (REV: R1)

R1

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