

1N5283 THRU 1N5314

**SILICON CURRENT LIMITING DIODES**



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.



**DO-35 CASE**

**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>$I_P @ V_T=25V$ |        |        | 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 | MΩ   | MΩ   | 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)

R4 (7-February 2013)

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



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

| Type   | Regulator Current<br>(Note 1)<br>$I_P @ V_T=25V$ |           |           | Minimum<br>Dynamic<br>Impedance<br>$Z_T @ V_T=25V$ | Minimum<br>Knee<br>Impedance<br>$Z_K @ V_K=6.0V$ | Maximum<br>Limiting<br>Voltage<br>$V_L @ I_L=0.8 \times I_P \text{ MIN}$ |
|--------|--|-----------|-----------|--|--|--|
|        | MIN<br>mA  | NOM<br>mA | MAX<br>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

R4 (7-February 2013)



## OUTSTANDING SUPPORT AND SUPERIOR SERVICES

---

### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

---

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

---

### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

---

### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Current Regulator Diodes](#) category:*

*Click to view products by [American Power](#) manufacturer:*

Other Similar products are found below :

[CMJH100 TR](#) [CDLL250](#) [1N5309](#) [CMJ3500 TR](#) [S-123T](#) [CMJ2000 TR](#) [CMJH150 TR](#) [1N5307 BK](#) [CMJ1000 TR](#) [JAN1N5308-1](#) [1N5298-1](#)  
[1N5287](#) [1N5296](#) [1N5297](#) [1N5310](#) [1N5311](#) [1N5312](#) [CMJ0300 TR](#) [CMJ0500 TR](#) [CMJ1500 TR](#) [PBFREE](#) [CMJ2700 TR](#) [CMJ5750 TR](#)  
[CMJH080 TR](#) [CMJ4500 TR](#) [ZXCT1009FTA](#) [JANTX1N5312UR-1/TR](#) [CDLL5314/TR](#) [E-101](#) [E-102](#) [E-103](#) [E-123](#) [E-152](#) [E-153](#) [E-183](#) [E-](#)  
[202](#) [E-272](#) [E-301](#) [E-352](#) [E-452](#) [E-501](#) [E-562](#) [E-701](#) [E-822](#) [S-101T](#) [S-102T](#) [S-152T](#) [S-153T](#) [S-183T](#) [S-272T](#) [S-301T](#)