



**THE DATASHEET OF  
CSHD3-40 TR13 PBFREE**



CSHD3-40

**SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIER  
3.0 AMP, 40 VOLT**



**DPAK CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSHD3-40 is a highly reliable silicon Schottky rectifier designed for use in all types of commercial, industrial, entertainment, computer and automotive applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

|   | <b>SYMBOL</b>  |             | <b>UNITS</b>       |
|---|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage                               | $V_{RRM}$      | 40          | V                  |
| Average Rectified Forward Current ( $T_C=120^\circ\text{C}$ ) | $I_O$          | 3.0         | A                  |
| Peak Forward Surge Current, $t_p=10\text{ms}$                 | $I_{FSM}$      | 75          | A                  |
| Peak Repetitive Reverse Surge Current, $t_p=2.0\mu\text{s}$   | $I_{RRM}$      | 1.0         | A                  |
| Critical Rate of Rise of Reverse Voltage                      | $dv/dt$        | 10,000      | V/ $\mu\text{s}$   |
| Operating and Storage Junction Temperature                    | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance  | $\theta_{JC}$  | 5.5         | $^\circ\text{C/W}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

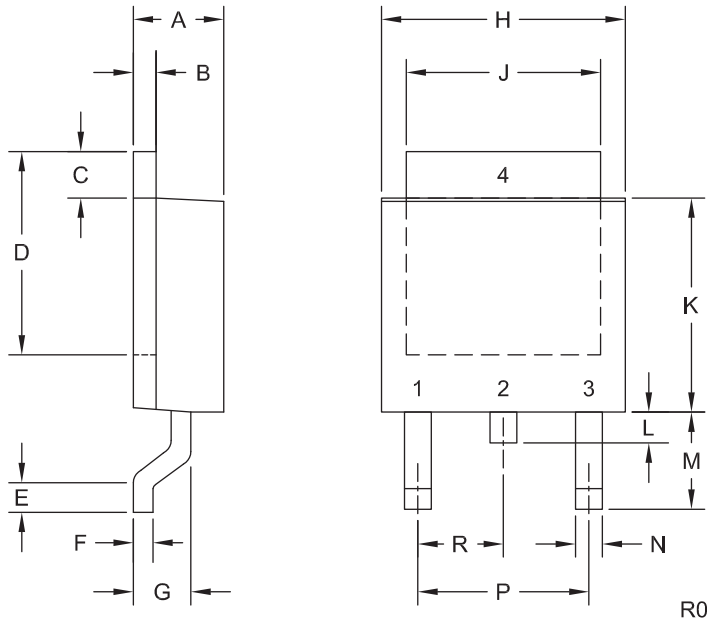
| <b>SYMBOL</b> | <b>TEST CONDITIONS</b>                   | <b>TYP</b> | <b>MAX</b> | <b>UNITS</b>  |
|---------------|--|------------|------------|---------------|
| $I_R$         | $V_R=40\text{V}$                         | 9.0        | 100        | $\mu\text{A}$ |
| $I_R$         | $V_R=40\text{V}, T_C=125^\circ\text{C}$  | 7.6        | 10         | mA            |
| $V_F$         | $I_F=3.0\text{A}$                        | 0.48       | 0.65       | V             |
| $V_F$         | $I_F=3.0\text{A}, T_C=125^\circ\text{C}$ | 0.41       | 0.60       | V             |
| $C_J$         | $V_R=0, f=1.0\text{MHz}$                 | 476        |            | pF            |

CSHD3-40

**SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIER  
3.0 AMP, 40 VOLT**



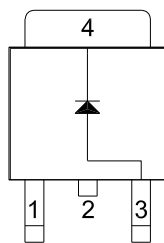
**DPAK CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) No Connection
  - 2) Cathode
  - 3) Anode
  - 4) Cathode
- Pin 2 is common to the tab (4)

**MARKING: FULL PART NUMBER**



| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.083      | 0.108 | 2.10        | 2.75 |
| B      | 0.016      | 0.032 | 0.40        | 0.81 |
| C      | 0.035      | 0.063 | 0.89        | 1.60 |
| D      | 0.203      | 0.228 | 5.15        | 5.79 |
| E      | 0.020      | -     | 0.51        | -    |
| F      | 0.018      | 0.024 | 0.45        | 0.60 |
| G      | 0.051      | 0.071 | 1.30        | 1.80 |
| H      | 0.248      | 0.268 | 6.30        | 6.81 |
| J      | 0.197      | 0.217 | 5.00        | 5.50 |
| K      | 0.209      | 0.245 | 5.30        | 6.22 |
| L      | 0.025      | 0.040 | 0.64        | 1.02 |
| M      | 0.090      | 0.115 | 2.30        | 2.91 |
| N      | 0.012      | 0.045 | 0.30        | 1.14 |
| P      | 0.180      |       | 4.60        |      |
| R      | 0.090      |       | 2.30        |      |

DPAK (REV: R0)

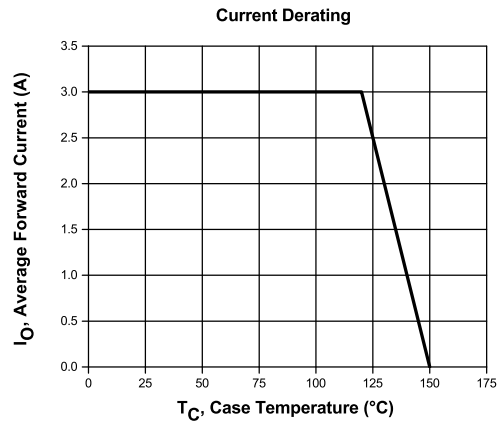
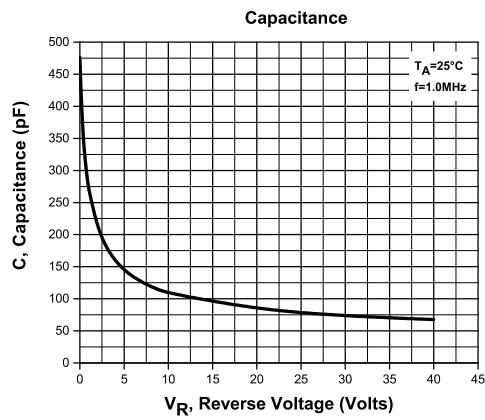
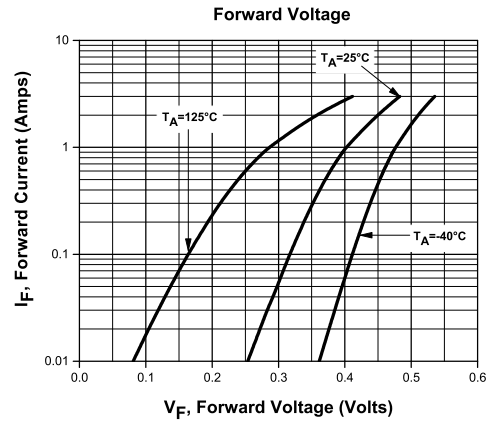
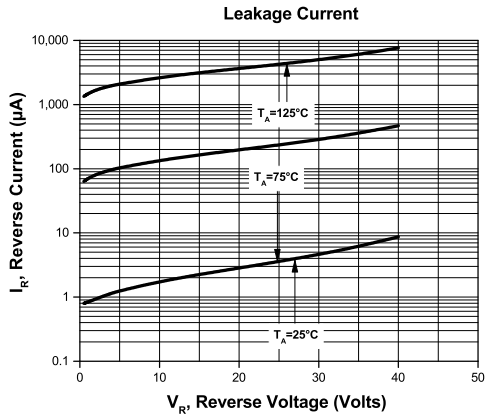
R10 (26-February 2016)

CSHD3-40

SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIER  
3.0 AMP, 40 VOLT



TYPICAL ELECTRICAL CHARACTERISTICS



R10 (26-February 2016)

## 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)

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [View CSHD3-40 TR13 PBFREE on WIN SOURCE](#)
- [Central Semiconductor Corp Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management