

**CBRHD SERIES**  
**SURFACE MOUNT SILICON**  
**HIGH DENSITY**  
**0.5 AMP**  
**BRIDGE RECTIFIER**



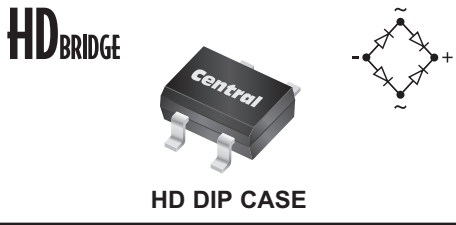
[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CBRHD series devices are silicon full wave bridge rectifiers mounted in a durable epoxy surface mount molded case, utilizing glass passivated chips.

**MARKING CODES:**

**CBRHD-02: CBD2      CBRHD-04: CBD4**  
**CBRHD-06: CBD6      CBRHD-10: CBD10**



**HD DIP CASE**

**FEATURES:**

- Efficient use of board space: requires only 42mm<sup>2</sup> of board space vs. 120mm<sup>2</sup> of board space needed for industry standard 1.0 Amp surface mount bridge rectifier.
- 50% higher density (Amps/mm<sup>2</sup>) than the industry standard 1.0 Amp surface mount bridge rectifier.
- Glass passivated chips for high reliability.

**MAXIMUM RATINGS:** (T<sub>A</sub>=25°C unless otherwise noted)

|                                                         |                                   | <b>CBRHD</b> |             |            |             |              |
|---------------------------------------------------------|-----------------------------------|--------------|-------------|------------|-------------|--------------|
|                                                         | <b>SYMBOL</b>                     | <b>-02</b>   | <b>-04</b>  | <b>-06</b> | <b>-10*</b> | <b>UNITS</b> |
| Peak Repetitive Reverse Voltage                         | V <sub>RRM</sub>                  | 200          | 400         | 600        | 1000        | V            |
| DC Blocking Voltage                                     | V <sub>R</sub>                    | 200          | 400         | 600        | 1000        | V            |
| RMS Reverse Voltage                                     | V <sub>R(RMS)</sub>               | 140          | 280         | 420        | 700         | V            |
| Average Forward Current (T <sub>A</sub> =40°C) (Note 1) | I <sub>O</sub>                    |              |             | 0.5        |             | A            |
| Average Forward Current (T <sub>A</sub> =40°C) (Note 2) | I <sub>O</sub>                    |              |             | 0.8        |             | A            |
| Peak Forward Surge Current                              | I <sub>FSM</sub>                  |              |             | 30         |             | A            |
| Operating & Storage Junction Temperature                | T <sub>J</sub> , T <sub>stg</sub> |              | -65 to +150 |            |             | °C           |

**ELECTRICAL CHARACTERISTICS PER DIODE:** (T<sub>A</sub>=25°C unless otherwise noted)

| <b>SYMBOL</b>  | <b>TEST CONDITIONS</b>                                         | <b>TYP</b> | <b>MAX</b> | <b>UNITS</b> |
|----------------|----------------------------------------------------------------|------------|------------|--------------|
| I <sub>R</sub> | V <sub>R</sub> =Rated V <sub>RRM</sub>                         |            | 5.0        | μA           |
| I <sub>R</sub> | V <sub>R</sub> =Rated V <sub>RRM</sub> , T <sub>A</sub> =125°C |            | 500        | μA           |
| V <sub>F</sub> | I <sub>F</sub> =400mA                                          |            | 1.0        | V            |
| C <sub>J</sub> | V <sub>R</sub> =4.0V, f=1.0MHz                                 | 20         |            | pF           |

Notes: (1) Mounted on Glass-Epoxy PCB.  
(2) Mounted on Ceramic PCB.

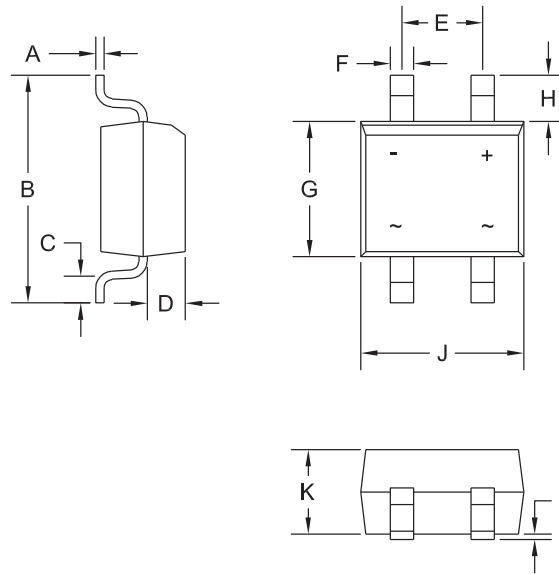
\* Available on special order, please consult factory.

R5 (18-February 2016)

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**HD DIP CASE - MECHANICAL OUTLINE**



R2

**MARKING CODES:**  
**CBRHD-02: CBD2**  
**CBRHD-04: CBD4**  
**CBRHD-06: CBD6**  
**CBRHD-10: CBD10**

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.006  | 0.014 | 0.15        | 0.35 |
| B      | -      | 0.275 | -           | 7.00 |
| C      | 0.027  | 0.043 | 0.70        | 1.10 |
| D      | 0.035  | 0.051 | 0.90        | 1.30 |
| E      | 0.090  | 0.106 | 2.30        | 2.70 |
| F      | 0.019  | 0.031 | 0.50        | 0.80 |
| G      | 0.150  | 0.165 | 3.80        | 4.20 |
| H      | 0.051  | 0.067 | 1.30        | 1.70 |
| J      | 0.177  | 0.193 | 4.50        | 4.90 |
| K      | 0.090  | 0.106 | 2.30        | 2.70 |
| L      | 0.000  | 0.008 | 0.00        | 0.20 |

HD DIP (REV: R2)

R5 (18-February 2016)

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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### 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

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### 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).

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### CONTACT US

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