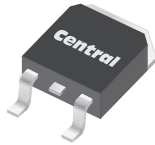


CUD3-02

**SURFACE MOUNT SILICON  
ULTRA FAST  
RECOVERY RECTIFIER  
4.0 AMP, 200 VOLT**



**DPAK CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CUD3-02 is a silicon Ultra Fast Recovery rectifier designed for ultra fast switching applications requiring a low forward voltage drop.

**MARKING: FULL PART NUMBER**

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

|   | SYMBOL            |             | UNITS                |
|---|-------------------|-------------|----------------------|
| Peak Repetitive Reverse Voltage                                 | $V_{RRM}$         | 200         | V                    |
| Peak Non Repetitive Surge Reverse Voltage                       | $V_{RSM}$         | 200         | V                    |
| Average Rectified Forward Current ( $T_C=130^{\circ}\text{C}$ ) | $I_O$             | 4.0         | A                    |
| Continuous Forward RMS Current                                  | $I_F(\text{RMS})$ | 10          | A                    |
| Peak Forward Surge Current, $t_p=10\text{ms}$                   | $I_{FSM}$         | 70          | 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  | $\theta_{JC}$     | 5.0         | $^{\circ}\text{C/W}$ |

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

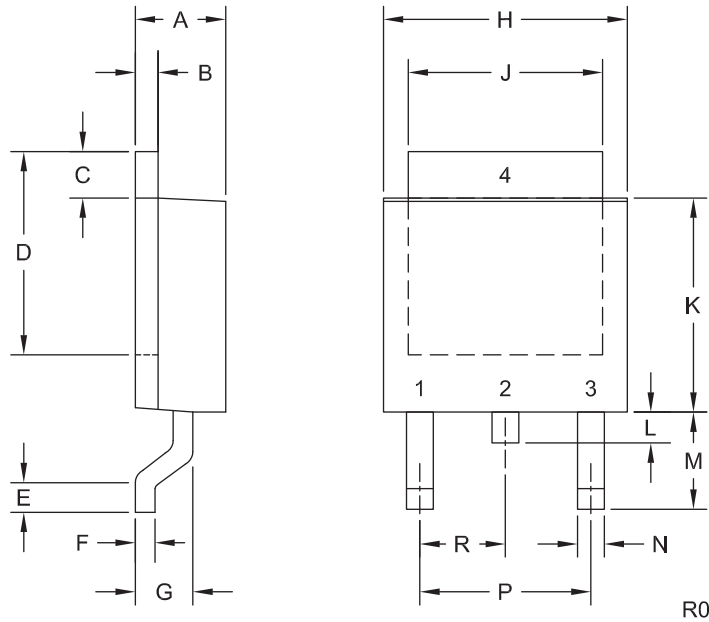
| SYMBOL   | TEST CONDITIONS   | MAX  | UNITS         |
|----------|---|------|---------------|
| $I_R$    | $V_R=200\text{V}$   | 20   | $\mu\text{A}$ |
| $I_R$    | $V_R=200\text{V}, T_C=100^{\circ}\text{C}$                      | 500  | $\mu\text{A}$ |
| $V_F$    | $I_F=12\text{A}$  | 1.25 | V             |
| $V_F$    | $I_F=4.0\text{A}, T_C=100^{\circ}\text{C}$                      | 0.85 | V             |
| $t_{rr}$ | $V_R=30\text{V}, I_F=1.0\text{A}, di/dt=50\text{A}/\mu\text{s}$ | 35   | ns            |

CUD3-02

**SURFACE MOUNT SILICON  
ULTRA FAST  
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4.0 AMP, 200 VOLT**



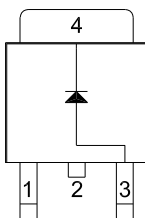
**DPAK CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING: FULL PART NUMBER**



| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | 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)

R8 (21-January 2013)

## 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

#### 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)

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