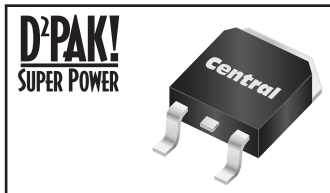
**CUDD16-02C**
**CUDD16-04C**
**CUDD16-08C**

**SURFACE MOUNT, DUAL COMMON CATHODE, ULTRA FAST RECOVERY SILICON RECTIFIERS 16 AMP, 200 THRU 800 VOLT**




**D²PAK CASE**

Central Semiconductor Corp.

www.centralsemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CUDD16-02C Series types are Silicon Ultra-Fast Recovery Rectifiers designed for surface mount ultra fast switching applications requiring a low forward voltage drop.

**MARKING: FULL PART NUMBER**

**FEATURES:**

- High Reliability
- Low Forward Voltage
- High Current Capability
- High Surge Capacity
- UL Flammability Classification 94V-O
- Superior Lot To Lot Consistency
- Ultra Fast Recovery Time
- High Voltage

**MAXIMUM RATINGS:** ($T_C$=25°C unless otherwise noted)

| | SYMBOL | CUDD16-02C | CUDD16-04C | CUDD16-08C | UNITS |
|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage | $V_{RRM}$ | 200 | 400 | 800 | V |
| DC Blocking Voltage | $V_R$ | 200 | 400 | 800 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 140 | 280 | 560 | V |
| Average Forward Current ($T_C$=100°C) | $I_O$ | | 16 | | A |
| Peak Forward Surge Current, tp=8.3ms | $I_{FSM}$ | | 125 | | A |
| Operating and Storage Junction Temperature | $T_J$, $T_{stg}$ | | -65 to +150 | | °C |
| Typical Thermal Resistance | $\Theta_{JC}$ | | 3.0 | | °C/W |
| Typical Thermal Resistance | $\Theta_{JA}$ | | 50 | | °C/W |

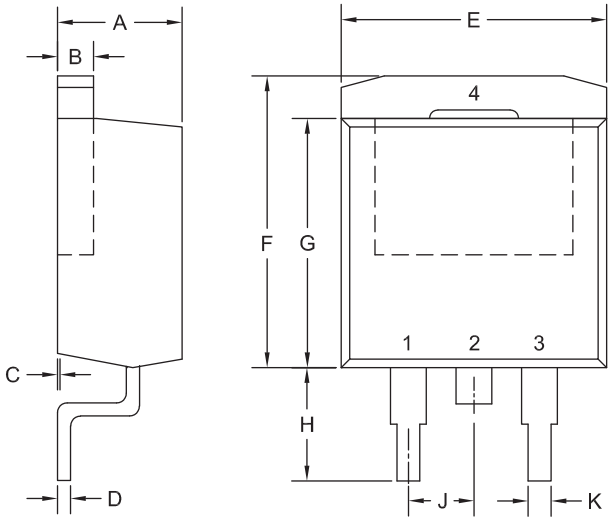
**ELECTRICAL CHARACTERISTICS PER DIODE:** ($T_C$=25°C unless otherwise noted)

| | | CUDD16-02C | | CUDD16-04C | | CUDD16-08C | | |
|---|---|---|---|---|---|---|---|---|
| SYMBOL | TEST CONDITIONS | TYP | MAX | TYP | MAX | TYP | MAX | UNITS |
| $I_R$ | $V_R$=Rated $V_{RRM}$ | - | 5.0 | - | 10 | - | 10 | μA |
| $I_R$ | $V_R$=Rated $V_{RRM}$, $T_C$= 150°C | - | 250 | - | 500 | - | 500 | μA |
| $V_F$ | $I_F$=8.0A | - | 0.975 | - | 1.3 | - | 1.5 | V |
| $V_F$ | $I_F$=8.0A, $T_C$= 150°C | - | 0.895 | - | 1.1 | - | 1.2 | V |
| $t_{rr}$ | $I_F$=0.5A, $I_R$=1.0A, $I_{rr}$=0.25A | - | 25 | - | 25 | - | 50 | ns |
| $C_J$ | $V_R$=4.0V, f=1.0MHz | 80 | - | 80 | - | 50 | - | pF |

**CUDD16-02C**
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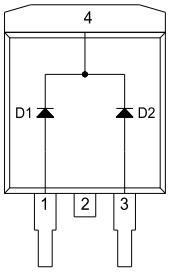
## D²PAK CASE - MECHANICAL OUTLINE




R3

**LEAD CODE:**
1) Anode D1
2) Cathode D1, D2
3) Anode D2
4) Cathode D1, D2
Pin 2 is common to the tab (4).

**MARKING:**
**FULL PART NUMBER**




| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | MIN | MAX | MIN | MAX |
| A | 0.163 | 0.189 | 4.14 | 4.80 |
| B | 0.045 | 0.055 | 1.14 | 1.40 |
| C | 0.000 | 0.010 | 0.00 | 0.25 |
| D | 0.012 | 0.028 | 0.30 | 0.70 |
| E | 0.386 | 0.415 | 9.80 | 10.55 |
| F | 0.378 | 0.417 | 9.60 | 10.60 |
| G | 0.335 | 0.358 | 8.50 | 9.10 |
| H | 0.188 | 0.236 | 4.78 | 6.00 |
| J | 0.093 | 0.108 | 2.35 | 2.75 |
| K | 0.030 | 0.035 | 0.75 | 0.90 |

D2PAK (REV: R3)

R5 (11-January 2018)

## 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 (2nd 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

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**Worldwide Distributors:**
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