

CUD10-02
 CUD10-04
 CUD10-06
 SURFACE MOUNT SILICON
 ULTRA FAST
 RECOVERY RECTIFIERS
 10 AMP, 200 THRU 600 VOLT

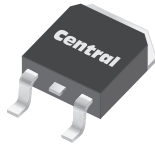


www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CUD10-02, CUD10-04 and CUD10-06 are silicon Ultra Fast Recovery rectifiers designed for ultra fast switching applications requiring a low forward voltage drop.

MARKING: FULL PART NUMBER



DPAK CASE

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: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| | SYMBOL | CUD10-02 | CUD10-04 | CUD10-06 | UNITS |
|---|----------------|----------|-------------|----------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 200 | 400 | 600 | V |
| DC Blocking Voltage | V_R | 200 | 400 | 600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 140 | 280 | 420 | V |
| Average Forward Current ($T_C=100^\circ\text{C}$) | I_O | | 10 | | A |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$ | I_{FSM} | | 100 | | A |
| Operating and Storage Junction Temperature | T_J, T_{stg} | | -65 to +150 | | $^\circ\text{C}$ |
| Typical Thermal Resistance | θ_{JC} | | 3.0 | | $^\circ\text{C/W}$ |

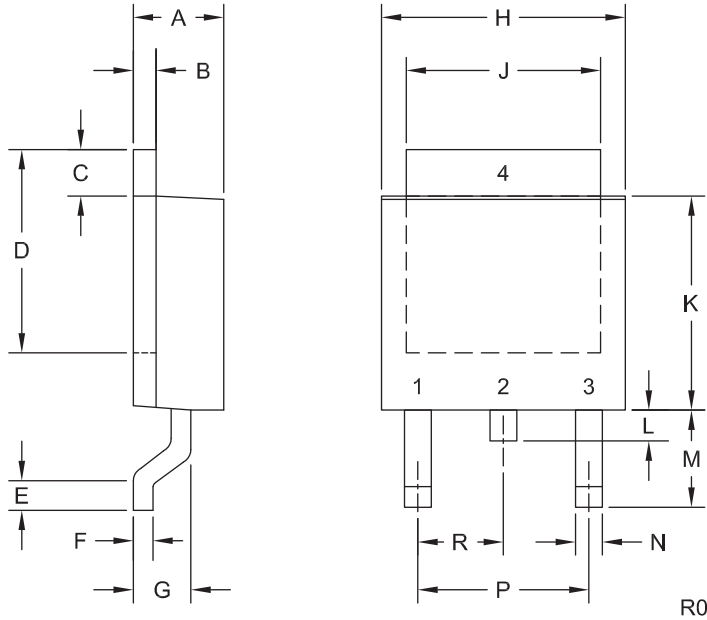
ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | CUD10-02 | | CUD10-04 | | CUD10-06 | | UNITS |
|----------|---|----------|------|----------|------|----------|------|---------------|
| | | TYP | MAX | TYP | MAX | TYP | MAX | |
| I_R | $V_R=\text{Rated } V_{RRM}$ | - | 10 | - | 10 | - | 10 | μA |
| I_R | $V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$ | - | 500 | - | 500 | - | 500 | μA |
| V_F | $I_F=10\text{A}$ | - | 0.95 | - | 1.30 | - | 1.70 | V |
| t_{rr} | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ | - | 35 | - | 35 | - | 35 | ns |
| C_J | $V_R=4.0\text{V}, f=1.0\text{MHz}$ | 62 | - | 62 | - | 62 | - | pF |

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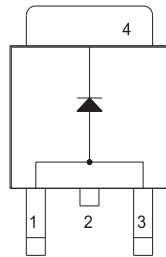
DPAK CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Anode
 - 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)

R3 (21-January 2013)