

CR16UD-02FP
CR16UD-04FP
CR16UD-08FP

DUAL, COMMON CATHODE
ULTRA FAST RECOVERY RECTIFIERS
16 AMP, 200 THRU 800 VOLT



TO-220FP CASE



www.centralemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CR16UD-02FP series devices are dual, ultra fast recovery silicon rectifiers designed for ultra fast switching applications requiring a low forward voltage drop.

MARKING: FULL PART NUMBER

FEATURES:

- High reliability
- High current capability
- UL flammability classification 94V-O
- Ultra fast recovery time
- Low forward voltage
- High surge capacity
- High voltage

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

| | SYMBOL | CR16UD -02FP | CR16UD -04FP | CR16UD -08FP | 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 ($T_C=100^\circ\text{C}$) | I_O | | 16 | | A |
| Peak Forward Surge Current ($t_p=8.3\text{ms}$) | I_{FSM} | | 125 | | A |
| Operating and Storage Junction Temperature | T_J, T_{stg} | | -65 to +150 | | $^\circ\text{C}$ |
| Typical Thermal Resistance | θ_{JA} | | 30 | | $^\circ\text{C/W}$ |
| Typical Thermal Resistance | θ_{JC} | | 3.0 | | $^\circ\text{C/W}$ |

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

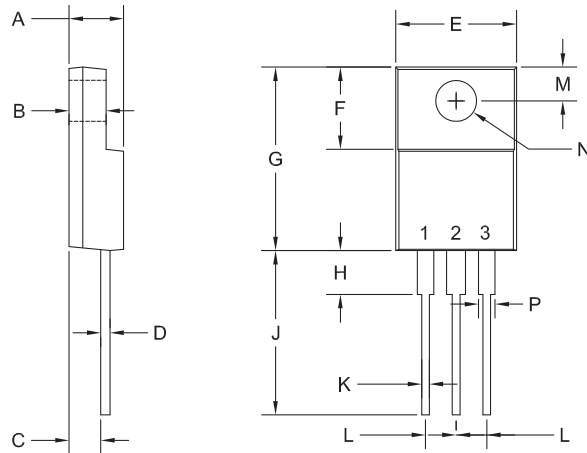
| SYMBOL | TEST CONDITIONS | CR16UD-02FP | | CR16UD-04FP | | CR16UD-08FP | | UNITS |
|----------|---|-------------|-------|-------------|-----|-------------|-----|---------------|
| | | TYP | MAX | TYP | MAX | TYP | MAX | |
| I_R | $V_R=\text{Rated } V_{RRM}$ | - | 5.0 | - | 10 | - | 10 | μA |
| I_R | $V_R=\text{Rated } V_{RRM}, T_C=150^\circ\text{C}$ | - | 250 | - | 500 | - | 500 | μA |
| V_F | $I_F=8.0\text{A}$ | - | 1.0 | - | 1.3 | - | 1.7 | V |
| V_F | $I_F=8.0\text{A}, T_C=150^\circ\text{C}$ | - | 0.895 | - | 1.1 | - | 1.2 | V |
| t_{rr} | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ | 35 | 50 | 35 | 50 | 95 | 100 | ns |
| C_J | $V_R=4.0\text{V}, f=1.0\text{MHz}$ | 170 | - | 170 | - | 130 | - | pF |

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TO-220FP CASE - MECHANICAL OUTLINE

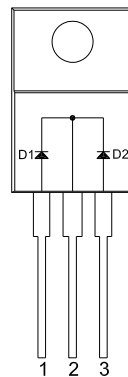


| SYMBOL | INCHES | | MILLIMETERS | |
|---------|--------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.165 | 0.202 | 4.20 | 5.12 |
| B | 0.090 | 0.130 | 2.30 | 3.30 |
| C | 0.098 | 0.122 | 2.50 | 3.10 |
| D | - | 0.031 | - | 0.80 |
| E | 0.382 | 0.418 | 9.70 | 10.63 |
| F | 0.238 | 0.276 | 6.06 | 7.00 |
| G | 0.583 | 0.640 | 14.80 | 16.25 |
| H | - | 0.161 | - | 4.10 |
| J | 0.506 | 0.543 | 12.85 | 13.80 |
| K | 0.020 | 0.031 | 0.50 | 0.79 |
| L | 0.100 | | 2.54 | |
| M | 0.120 | 0.140 | 3.05 | 3.55 |
| N (DIA) | 0.116 | 0.134 | 2.95 | 3.40 |
| P | 0.039 | 0.058 | 1.00 | 1.47 |

TO-220FP (REV: R4)

R4

PIN CONFIGURATION



LEAD CODE:

- 1) Anode D1
- 2) Cathode D1, D2
- 3) Anode D2

MARKING:

FULL PART NUMBER

R4 (20-May 2015)

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SERVICES

- Bonded Inventory
- Custom Electrical Screening
- Custom Electrical Characteristic Curves
- SPICE Models
- Custom Packaging
- Package Base Options
- Custom Device Development/ Multi Discrete Modules (MDM™)
- Bare Die Available for Hybrid Applications

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R4 (20-May 2015)