

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

CR30U-010 SERIES

30 AMP ULTRA FAST
RECOVERY SILICON RECTIFIER
100 THRU 800 VOLTS

JEDEC DO-4 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CR30U-010 Series types are 30 Amp stud mounted ultra fast recovery silicon rectifiers which are high quality, well constructed, highly reliable components designed for use in all types of military, commercial, industrial, entertainment, computer, and automotive applications.

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

| | SYMBOL | CR30U -010 | CR30U -015 | CR30U -020 | CR30U -040 | CR30U -060 | CR30U -080 | UNITS |
|---|----------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 100 | 150 | 200 | 400 | 600 | 800 | V |
| DC Blocking Voltage | V_R | 100 | 150 | 200 | 400 | 600 | 800 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 70 | 105 | 140 | 280 | 420 | 560 | V |
| Average Forward Current ($T_C = 120^\circ\text{C}$) | I_O | 30 | 30 | 30 | 30 | 30 | 30 | A |
| Peak Forward Surge Current | I_{FSM} | 500 | 500 | 500 | - | - | - | A |
| Peak Forward Surge Current | I_{FSM} | - | - | - | 400 | - | - | A |
| Peak Forward Surge Current | I_{FSM} | - | - | - | - | 300 | 300 | A |
| Operating and Storage | | | | | | | | |
| Junction Temperature | T_J, T_{stg} | | | | -65 to +175 | | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JC} | | | | 1.8 | | | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | CR30U-010 | | CR30U-015 | | CR30U-020 | | CR30U-040 | | CR30U-060 | | UNITS |
|----------|---|-----------|-------|-----------|-----|-----------|-----|-----------|-----|-----------|------|---------------|
| | | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | |
| V_F | $I_F = 30\text{A}$ | | 0.975 | | | | | 1.20 | | | 1.30 | V |
| I_R | $V_R = \text{Rated } V_{RRM}$ | | 25 | | | | | 25 | | | 25 | μA |
| I_R | $V_R = \text{Rated } V_{RRM}, T_C = 125^\circ\text{C}$ | | 3.0 | | | | | 3.0 | | | 3.0 | mA |
| t_{rr} | $I_F = 0.5\text{A}, I_R = 1.0\text{A}, \text{Recov to } 0.25\text{A}$ | | 35 | | | | | 50 | | | 75 | ns |

NOTE: Normal Polarity: Cathode to Stud (Case)
For Reverse Polarity add "R" Suffix (Ex: CR30U-040R)