

# Central<sup>TM</sup> Semiconductor Corp.

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

Manufacturers of World Class Discrete Semiconductors

## CR5U-010 SERIES

ULTRA FAST RECOVERY RECTIFIER  
5.0 AMP, 100 THRU 1000 VOLTS

JEDEC DO-201AD CASE

### DESCRIPTION

The CENTRAL SEMICONDUCTOR CR5U-010 Series types are 5.0 Amp Silicon Ultra Fast Recovery Rectifiers manufactured using the epitaxial process designed for those applications requiring extremely fast recovery times.

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

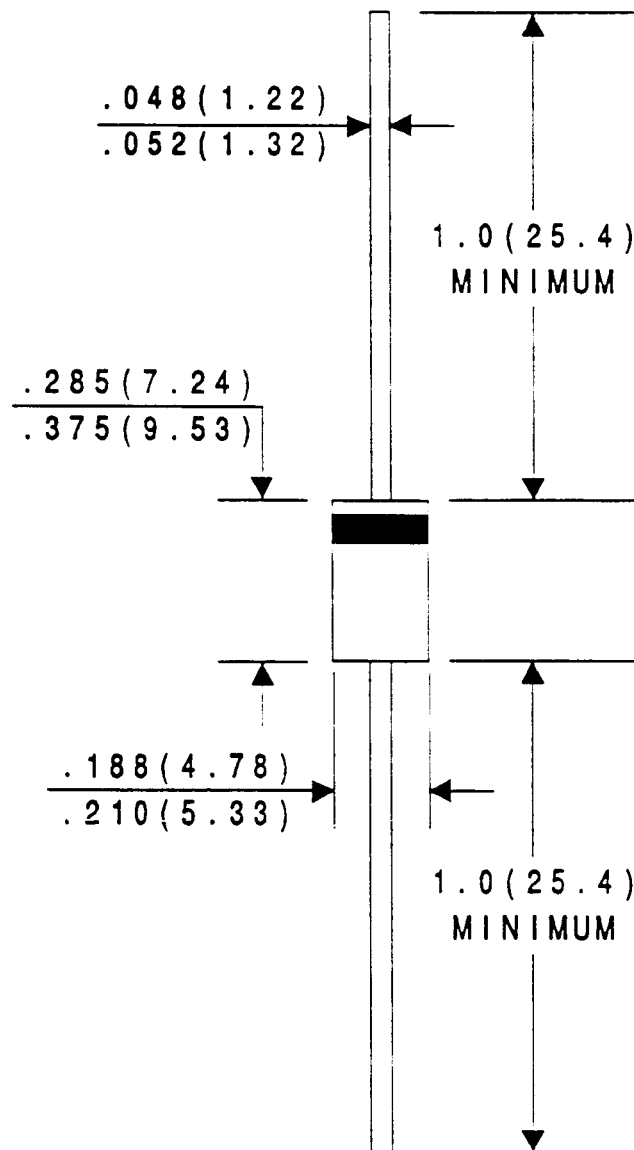
|                                                      | SYMBOL         | CR5U<br>-010 | CR5U<br>-020 | CR5U<br>-040 | CR5U<br>-060 | CR5U<br>-080 | CR5U<br>-100 | UNITS              |
|------------------------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| Peak Repetitive Reverse Voltage                      | $V_{RRM}$      | 100          | 200          | 400          | 600          | 800          | 1000         | V                  |
| DC Blocking Voltage                                  | $V_R$          | 100          | 200          | 400          | 600          | 800          | 1000         | V                  |
| RMS Reverse Voltage                                  | $V_{R(RMS)}$   | 70           | 140          | 280          | 420          | 560          | 700          | V                  |
| Average Forward Current ( $T_A=55^{\circ}\text{C}$ ) | $I_O$          |              |              |              | 5.0          |              |              | A                  |
| Peak Forward Surge Current                           | $I_{FSM}$      |              |              |              | 175          |              |              | A                  |
| Operating and Storage                                |                |              |              |              |              |              |              |                    |
| Junction Temperature                                 | $T_J, T_{stg}$ |              |              | -65 to +150  |              |              |              | $^{\circ}\text{C}$ |

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

| SYMBOL   | TEST CONDITIONS                                                                  | MIN | TYP | MAX | UNITS         |
|----------|----------------------------------------------------------------------------------|-----|-----|-----|---------------|
| $I_R$    | $V_R=\text{Rated } V_{RRM}$                                                      |     |     | 10  | $\mu\text{A}$ |
| $I_R$    | $V_R=\text{Rated } V_{RRM}, T_A=100^{\circ}\text{C}$                             |     |     | 100 | $\mu\text{A}$ |
| $V_F$    | $I_F=5.0\text{A}$ (CR5U-010 & CR5U-020)                                          |     |     | 1.0 | V             |
| $V_F$    | $I_F=5.0\text{A}$ (CR5U-040)                                                     |     |     | 1.3 | V             |
| $V_F$    | $I_F=5.0\text{A}$ (CR5U-060 THRU CR5U-100)                                       |     |     | 1.7 | V             |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ (CR5U-010 THRU CR5U-040) |     |     | 50  | ns            |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ (CR5U-060 THRU CR5U-100) |     |     | 100 | ns            |

(SEE REVERSE FOR MECHANICAL OUTLINE)

# JEDEC DO-201AD CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).