

**Abstract:**

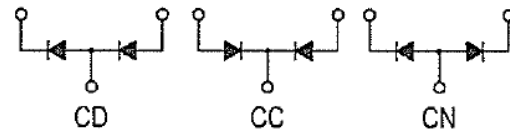
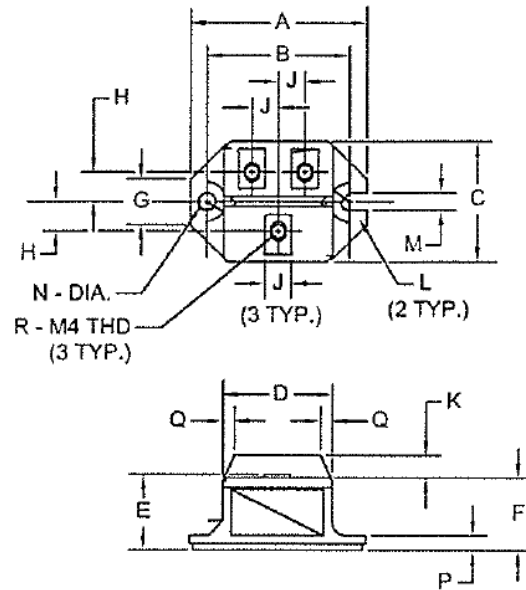
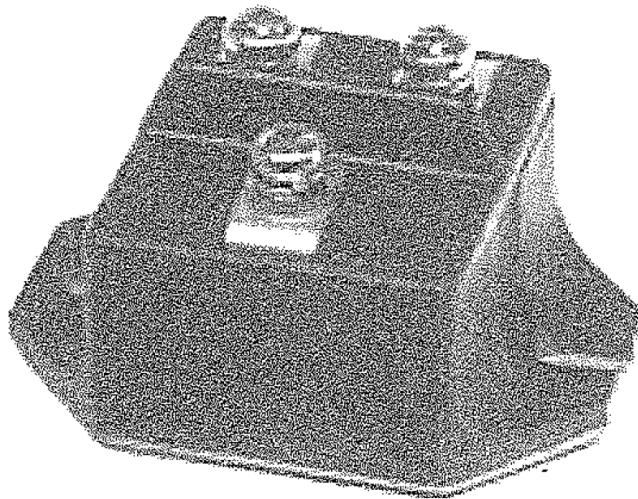
Fast Recovery Dual Diode Modules are designed for use in applications requiring fast switching. The modules are isolated for easy mounting with other components on common heatsinks.

**Features:**

- Isolated Mounting
- Planar Chips

**Applications:**

- Free Wheeling



CD - Dual Diode  
 CC - Common Cathode Diode Module  
 CN - Common Anode Diode Module

| Dimension | Inches      | Millimeters |
|-----------|-------------|-------------|
| A         | 2.106       | 53.5        |
| B         | 1.705±0.008 | 43.3±0.2    |
| C         | 1.437       | 36.5        |
| D         | 1.299       | 33          |
| E         | 0.925       | 23.5        |
| F         | 0.866       | 22          |
| G         | 0.551       | 14          |
| H         | 0.354       | 9           |
| J         | 0.315       | 8           |
| K         | 0.276       | 7           |
| L         | 0.236 R     | R6          |
| M         | 0.209       | 5.3         |
| N         | 0.209 Dia.  | Dia. 5.3    |
| P         | 0.177       | 4.5         |
| Q         | 0.138       | 3.5         |
| R         | M4 Metric   | M4          |

**Ordering Information:**

Select the complete eight digit module part number you desire from the table below.

Example: CN241250 is a 1200 Volt, 50 Ampere Fast Recovery Common Anode Diode Module.

| Type | Voltage Volts (x100) | Current Rating Amperes (50) |
|------|----------------------|-----------------------------|
| CN24 | 06                   | 50                          |
| CD24 | 12                   |                             |



# CN\* FAST RECOVERY DUAL DIODE MODULES

50 Amperes/600-1200 Volts



Advancing the Semiconductor Industry Since 1972

## Absolute Maximum Ratings

| Characteristics   | Symbol      | CN240650   | CN241250   | Units              |
|---|-------------|------------|------------|--------------------|
|   |             | CD240650   | CD241250   |                    |
|   |             | CC240650   | CC241250   |                    |
| Peak Reverse Blocking Voltage                                       | $V_{RRM}$   | 600        | 1200       | Volts              |
| Transient Peak Forward Blocking Voltage (Non-Repetitive), $t < 5ms$ | $V_{RSM}$   | 720        | 1350       | Volts              |
| DC Reverse Blocking Voltage   | $V_{R(DC)}$ | 480        | 960        | Volts              |
| DC Output Current, $T_C = 105^\circ C$                              | $I_{F(DC)}$ | 50         | 50         | Amperes            |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)       | $I_{FSM}$   | 1000       | 1000       | Amperes            |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)       | $I_{FSM}$   | 910        | 910        | Amperes            |
| $I^2t$ (for Fusing), 8.3 milliseconds                               | $I^2t$      | 4165       | 4165       | A <sup>2</sup> sec |
| Storage Temperature   | $T_{STG}$   | -40 to 125 | -40 to 125 | $^\circ C$         |
| Operating Temperature   | $T_j$       | -40 to 150 | -40 to 150 | $^\circ C$         |
| Maximum Mounting Torque M5 Mounting Screw                           | —           | 17         | 17         | in.-lb.            |
| Maximum Mounting Torque M4 Terminal Screw                           | —           | 12         | 12         | in.-lb.            |
| Module Weight (Typical)   | —           | 90         | 90         | Grams              |
| V Isolation   | $V_{RMS}$   | 2500       | 2500       | Volts              |

## Electrical and Thermal Characteristics, $T_j = 25^\circ C$ unless otherwise specified

| Characteristics                               | Symbol            | Test Conditions   | CN24_50 | Units           |
|---|-------------------|---|---------|-----------------|
|   |                   |   | CD24_50 |                 |
|   |                   |   | CC24_50 |                 |
| <b>Blocking State Maximums</b>                |                   |   |         |                 |
| Reverse Leakage Current, Peak                 | $I_{RRM}$         | $T_j = 150^\circ C, V_{RRM} = \text{Rated}$                                 | 10      | mA              |
| <b>Conducting State Maximums</b>              |                   |   |         |                 |
| Peak On-State Voltage                         | $V_{FM}$          | $I_{FM} = 50A$  | 1.5     | Volts           |
| <b>Switching Maximums</b>                     |                   |   |         |                 |
| Reverse Recovery Time                         | $t_{rr}$          | $I_{FM} = 50A, T_j = 150^\circ C$<br>$di/dt = -100A/\mu s, V_R = 1/2V_{RM}$ | 0.8     | $\mu s$         |
| Reverse Recovery Charge                       | $Q_{rr}$          | $I_{FM} = 50A, T_j = 150^\circ C$<br>$di/dt = -100A/\mu s, V_R = 1/2V_{RM}$ | 30      | $\mu C$         |
| <b>Thermal Maximums</b>                       |                   |   |         |                 |
| Thermal Resistance, Junction-to-Case          | $R_{\theta(J-C)}$ | Per Module  | 0.6     | $^\circ C/Watt$ |
| Thermal Resistance, Case-to-Sink (Lubricated) | $R_{\theta(C-S)}$ | Per Module  | 0.4     | $^\circ C/Watt$ |

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AS/EN/JISO9100:2009 Rev. C  
ISO9001:2008  
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