

# DIODE MODULE (F.R.D.)

# DD250GB

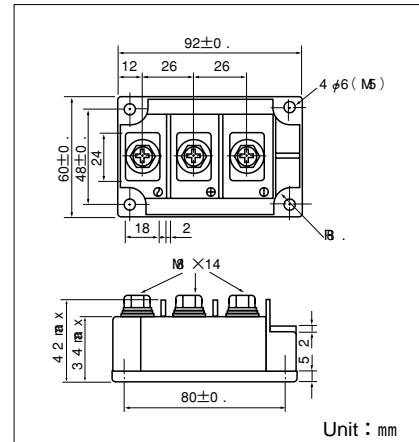
UL;E76102(M)

Power Diode Module DD250GB series are designed for various rectifier circuits. DD250GB has two diode chips connected in series in a package and the mounting base is electrically isolated from elements for simple heatsink construction. Wide voltage rating up to 800V is available for various input voltage.

- Isolated mounting base
- Two elements in a package for simple (single and three phase) bridge connections
- Highly reliable glass passivated chips
- High surge current capability

**(Applications)**

Various rectifiers, Battery chargers, DC motor drives



**Maximum Ratings**

(T<sub>j</sub>=25°C unless otherwise specified)

| Symbol           | Symbol                              | Ratings   |           | Unit |
|------------------|-------------------------------------|-----------|-----------|------|
|                  |                                     | DD250GB40 | DD250GB80 |      |
| V <sub>RRM</sub> | Repetitive Peak Reverse Voltage     | 400       | 800       | V    |
| V <sub>RSM</sub> | Non-Repetitive Peak Reverse Voltage | 480       | 960       | V    |

| Symbol              | Symbol                               | Conditions   | Ratings                           | Unit             |                 |
|---------------------|--------------------------------------|--|-----------------------------------|------------------|-----------------|
| I <sub>F(AV)</sub>  | Average Forward Current              | Single phase, half wave, 180°C conduction, T <sub>c</sub> : 98°C | 250                               | A                |                 |
| I <sub>F(RMS)</sub> | R.M.S. Forward Current               | Single phase, half wave, 180°C conduction, T <sub>c</sub> : 98°C | 390                               | A                |                 |
| I <sub>FSM</sub>    | Surge Forward Current                | 1/2 cycle, 50/60Hz, peak value, non-repetitive                   | 5000/5500                         | A                |                 |
| I <sup>2</sup> t    | I <sup>2</sup> t                     | Value for one cycle of surge current                             | 125000                            | A <sup>2</sup> S |                 |
| T <sub>j</sub>      | Operating Junction Temperature       |  | -40 to +150                       | °C               |                 |
| T <sub>stg</sub>    | Storage Temperature                  |  | -40 to +125                       | °C               |                 |
| Viso                | Isolation Breakdown Voltage (R.M.S.) | A.C. 1 minute  | 2500                              | V                |                 |
|                     | Mounting Torque                      | Mounting (M5)  | Recommended Value 1.5-2.5 (15-25) | 2.7 (28)         | N·m<br>(kgf·cm) |
|                     |                                      | Terminal (M8)  | Recommended Value 8.8-10 (90-105) | 11 (115)         |                 |
|                     | Mass                                 | Typical Value  | 510                               | g                |                 |

**Electrical Characteristics**

| Symbol               | Symbol                          | Conditions   | Ratings |      |      | Unit |
|----------------------|---------------------------------|--|---------|------|------|------|
|                      |                                 |  | Min.    | Typ. | Max. |      |
| I <sub>RRM</sub>     | Repetitive Peak Reverse Current | T <sub>j</sub> =150°C at V <sub>RRM</sub>                      |         |      | 50   | mA   |
| V <sub>FM</sub>      | Forward Voltage Drop            | T <sub>j</sub> =25°C, I <sub>FM</sub> =750A, Inst. measurement |         |      | 1.45 | V    |
| R <sub>th(j-c)</sub> | Thermal Impedance               | Junction to case   |         |      | 0.14 | °C/W |

