

## DIODE MODULE (F.R.D.)

# FRD/FDS100BA60

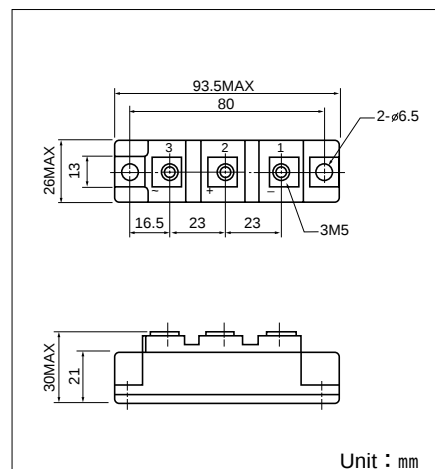
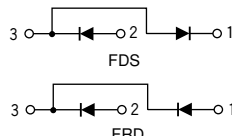
UL:E76102 (M)

FRD (FDS)100BA is a high speed (fast recovery) dual diode module designed for high power switching application. FRD ( FDS) 100BA is suitable for high frequency application requiring low loss and high speed control.

- High Speed  $t_{rr} \leq 100\text{ns}$
- $I_{F(AV)}$  100A (each device)
- Isolated mounting construction.
- High Surge Capability

### (Applications)

Switching Power Supply, Inverter Welding Power Supply  
Power Supply for Telecommunication



### Maximum Ratings

( $T_j = 25^\circ\text{C}$  unless otherwise specified)

| Symbol    | Item                            | Ratings | Unit |
|-----------|---------------------------------|---------|------|
| $V_{RRM}$ | Repetitive Peak Reverse Voltage | 600     | V    |
| $V_R(DC)$ | D.C. Reverse Voltage            | 480     | V    |

| Symbol           | Item                                 |               | Conditions                                | Ratings     | Unit           |
|------------------|--------------------------------------|---------------|-------------------------------------------|-------------|----------------|
| I <sub>F</sub>   | Forward Current                      |               | D.C. T <sub>c</sub> : 94℃                 | 100         | A              |
| I <sub>FSM</sub> | Surge Forward Current                |               | ½ cycle, 60Hz, peak value, non-repetitive | 2000        | A              |
| I <sup>2</sup> t | I <sup>2</sup> t                     |               | Value for One cycle of surge curent       | 16700       | A²S            |
| T <sub>j</sub>   | Operating Junction Temperature       |               |                                           | −40 to +150 | ℃              |
| T <sub>stg</sub> | Storage Temperature                  |               |                                           | −40 to +125 | ℃              |
| Viso             | Isolation Breakdown Voltage (R.M.S.) |               | A.C. 1 minute                             | 2500        | V              |
|                  | Mounting Torque                      | Mounting(M6)  | Recommended Value 2.5-3.9 (25-40)         | 4.7 (48)    | Nm<br>(kgf·cm) |
|                  |                                      | Terminal (M5) | Recommended Value 1.5-2.5 (15-25)         | 2.7 (28)    |                |
|                  | Mass                                 |               |                                           | 170         | g              |

### Electrical Characteristics

| Symbol        | Item                                  | Conditions                                               | Ratings |      | Unit                      |
|---------------|---------------------------------------|----------------------------------------------------------|---------|------|---------------------------|
|               |                                       |                                                          | Typ.    | Max. |                           |
| $I_{RRM}$     | Repetitive Peak Reverse Current, max. | $V_R = V_{RRM}$ , $T_j = 125^\circ\text{C}$              |         | 100  | mA                        |
| $V_{FM}$      | Forward Voltage Drop, max.            | Forward current 100A, Inst. measurement                  | 1.15    | 1.3  | V                         |
| $R_{th(j-c)}$ | Thermal Impedance, max.               | Junction to case                                         |         | 0.4  | $^\circ\text{C}/\text{W}$ |
| $t_{rr}$      | Reverse Recovery Time, max.           | $I_F = 100\text{A}$ , $di/dt = -100\text{A}/\mu\text{s}$ | 85      | 100  | ns                        |

