

DIODE MODULE (F.R.D.)

FRS150BA50

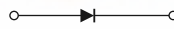
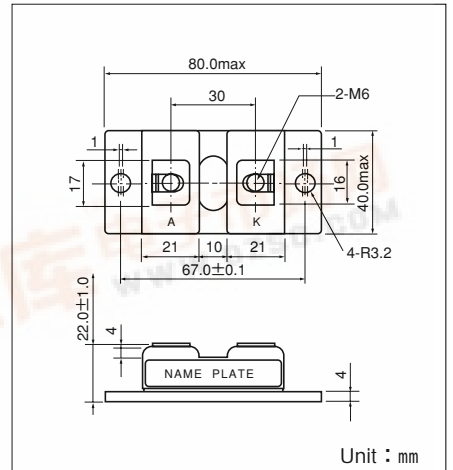
UL:E76102(M)

FRS150BA50 is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS150BA50 is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leq 200\text{ns}$
- $I_F (AV)$ 150A
- Isolated Mounting base.
- High Surge Capability

(Applications)

Inverter Welding Power Supply
 Power Supply for Telecommunication
 Various Switching Power Supply.



(Tj=25°C unless otherwise specified)

Maximum Ratings

| Symbol | Item | Ratings | | Unit |
|--------------------|---------------------------------|------------|--|------|
| | | FRS150BA50 | | |
| V _{RRM} | Repetitive Peak Reverse Voltage | 500 | | V |
| V _{R(DC)} | D.C. Reverse Voltage | 400 | | V |

| Symbol | Item | Conditions | Ratings | Unit | |
|--------------------|--------------------------------------|---|-----------------------------------|------------------|-----------------|
| I _{F(AV)} | Forward Current | D.C. T _c : 85°C | 150 | A | |
| I _{FMS} | Surge Forward Current | 1/2 cycle, 60Hz, peak value, non-repetitive | 3000 | A | |
| I ² t | I ² t | Value for one cycle of surge current | 37500 | A ² S | |
| T _j | Operating Junction Temperature | | -40 to +150 | °C | |
| T _{stg} | Storage Temperature | | -40 to +125 | °C | |
| V _{iso} | 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) | N·m (kgf·cm) |
| | | Terminal (M6) | Recommended Value 2.5-3.9 (25-40) | 4.7 (48) | |
| | Mass | Typical Value | 170 | g | |

Electrical Characteristics

| Symbol | Item | Conditions | Ratings | | | Unit |
|----------------------|---------------------------------|---|---------|------|------|------|
| | | | Min. | Typ. | Max. | |
| I _{RRM} | Repetitive Peak Reverse Current | V _{RRM} =500V, T _j =125°C | | | 150 | mA |
| V _{FM} | Forward Voltage Drop | I _F =150A, Inst. measurement | | | 1.30 | V |
| t _{rr} | Reverse Recovery Time | I _F =150A, -di/dt=150A/μs | | | 200 | ns |
| R _{th(j-c)} | Thermal Impedance | Junction to case | | | 0.33 | °C/W |



