FRS400BA is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS400BA is suitable for high frequency application requiring low loss and high speed control.

- High Speed \( \tau_{rr} \approx 200 \text{ ns} \)
- \( I_{F(AV)} \) 400A
- Isolated Mounting base.
- High Surge Capability

**Applications**
- Inverter Welding Power Supply
- Power Supply for Telecommunication
- Various Switching Power Supply.

### Maximum Ratings

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Item</th>
<th>Conditions</th>
<th>Ratings</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_{RRM}</td>
<td>Repetitive Peak Reverse Voltage</td>
<td></td>
<td>500</td>
<td>V</td>
</tr>
<tr>
<td>V_{R(DC)}</td>
<td>D.C. Reverse Voltage</td>
<td></td>
<td>400</td>
<td>V</td>
</tr>
<tr>
<td>( I_F )</td>
<td>Forward Current</td>
<td>D.C. ( T_c ) : 94°C</td>
<td>400</td>
<td>A</td>
</tr>
<tr>
<td>( I_{FMS} )</td>
<td>Surge Forward Current</td>
<td>( \frac{1}{2} ) cycle, 60Hz, peak value, non-repetitive</td>
<td>4000</td>
<td>A</td>
</tr>
<tr>
<td>( I_t )</td>
<td>Value for one cycle of surge current</td>
<td></td>
<td>66640</td>
<td>A*S</td>
</tr>
<tr>
<td>Tj</td>
<td>Operating Junction Temperature</td>
<td>(-40 \text{ to } +150 ) °C</td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Tstg</td>
<td>Storage Temperature</td>
<td>(-40 \text{ to } +125 ) °C</td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>V_{ISO}</td>
<td>Isolation Breakdown Voltage (R.M.S.)</td>
<td>A.C. 1 minute</td>
<td>2500</td>
<td>V</td>
</tr>
<tr>
<td>( I_{M,T} )</td>
<td>Mounting Torque</td>
<td>Mounting (M6)</td>
<td>4.7 (48)</td>
<td>N·m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminal (M6)</td>
<td>4.7 (48)</td>
<td>N·m</td>
</tr>
<tr>
<td>Mass</td>
<td>Typical Value</td>
<td></td>
<td>460</td>
<td>g</td>
</tr>
</tbody>
</table>

### Electrical Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Item</th>
<th>Conditions</th>
<th>Ratings</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>( I_{RRM} )</td>
<td>Repetitive Peak Reverse Current</td>
<td>( V_R = V_{RRM}, \ T_j = 125 ) °C</td>
<td>400</td>
<td>mA</td>
</tr>
<tr>
<td>( V_{FM} )</td>
<td>Forward Voltage Drop</td>
<td>( I_F = 400A, ) Inst. measurement</td>
<td>1.3</td>
<td>V</td>
</tr>
<tr>
<td>( \tau_{tr} )</td>
<td>Reverse Recovery Time</td>
<td>( I_F = 400A, ) ( -di/dt = 400A/\mu s )</td>
<td>130</td>
<td>ns</td>
</tr>
<tr>
<td>R_{th(j-c)}</td>
<td>Thermal Impedance</td>
<td>Junction to case</td>
<td>0.1</td>
<td>°C/W</td>
</tr>
</tbody>
</table>