

FRD MODULE 50A/500V/trr:90nsec

PD50F5

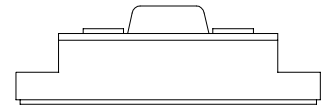
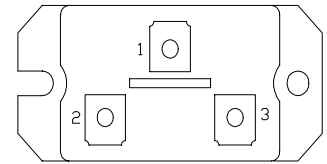
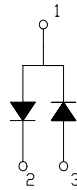
OUTLINE DRAWING

FEATURES

- * Isolated Base
- * Dual Diode Doubler Circuit
- * Ultra Fast Recovery
- * High Surge Capability
- * UL Recognized, File No. E187184

TYPICAL APPLICATIONS

- * High Frequency Rectification



Maximum Ratings

Approx Net Weight:105g

| Voltage Rating | Symbol | PD50F5 | | Unit |
|---|--------------|--|-------------|----------------------|
| Repetitive Peak Reverse Voltage per Arm | V_{RRM} | 500 | | V |
| Electrical Rating | | Condition | Rating | |
| Average Rectified Output Current | I_o | 50Hz Half Sine Wave condition per Arm $T_c=90^\circ\text{C}$ | 50 | A |
| RMS Forward Current | $I_{F(RMS)}$ | per Arm | 78 | A |
| Surge Forward Current | I_{FSM} | 50 Hz Half Sine Wave, 1 cycle Non-repetitive per Arm | 800 | A |
| I Squared t | I^2t | 2 msec to 10 msec per Arm | 3200 | A^2s |
| Operating Junction Temperature Range | T_{jw} | | -40 to +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | | -40 to +125 | $^\circ\text{C}$ |
| Isolation Voltage | Viso | Base Plate to Terminal, AC1min | 2000 | V |
| Mounting torque | Ftor | Case mounting(recommended) | 2.6 | N.m |
| | | Terminal Screw(recommended) | 1.4 | |

Electrical • Thermal Characteristics

| Characteristics | Symbol | Test Conditions | Max. | Unit |
|--------------------------|---------------|---|------|---------------------------|
| Peak Forward Voltage | V_{FM} | $I_{FM}= 50\text{A}$, $T_j=25^\circ\text{C}$, per Arm | 1.35 | V |
| Peak Reverse Current | I_{RM} | $V_{RM}= V_{RRM}$, $T_j= 150^\circ\text{C}$, per Arm | 10 | mA |
| Reverse Recovery Time | trr | $I_{FM}= 10\text{A}$, $-di/dt= 50 \text{ A}/\mu\text{s}$, $T_a= 25^\circ\text{C}$ Per Arm | 90 | ns |
| Thermal Resistance | $R_{th(j-c)}$ | Junction to Case per Arm | 0.8 | $^\circ\text{C}/\text{W}$ |
| | $R_{th(c-f)}$ | Base Plate to Heat Sink with Thermal Compound | 0.1 | |
| Internal Lead Inductance | L_s | Anode Terminal to Cathode Terminal Per Element | 30 | nH |

PD50F5 OUTLINE DRAWING (Dimensions in mm)

