Nihon Inter Electronics Corporation

# FRD MODULE 50A/600V/trr:100nsec PC50F6



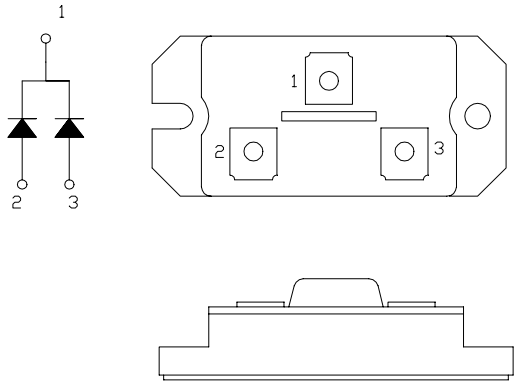
OUTLINE DRAWING

## FEATURES

* Isolated Base
* Dual Diode Cathode Common
* Ultra Fast Recovery
* High Surge Capability
* UL Recognized, File No. E187184

## TYPICAL APPLICATIONS

* High Frequency Rectification




Approx Net Weight:105g

## Maximum Ratings

| **Voltage Rating** | Symbol | PC50F6 | | Unit |
|---|---|---|---|---|
| Repetitive Peak Reverse Voltage per Arm | $V_{RRM}$ | 600 | | V |
| **Electrical Rating** | | **Condition** | **Rating** | |
| Average Rectified Output Current | $I_O$ | 50Hz Half Sine Wave condition per Arm Tc=89℃ | 50 | A |
| RMS Forward Current | $I_{F(RMS)}$ | per Arm | 78 | A |
| Surge Forward Current | $I_{FSM}$ | 50 Hz Half Sine Wave,1cycle Non-repetitive per Arm | 800 | A |
| I Squared t | $I^2t$ | 2 msec to 10 msec per Arm | 3200 | $A^2s$ |
| Operating JunctionTemperature Range | Tjw | | -40 to +150 | ℃ |
| Storage Temperature Range | Tstg | | -40 to +125 | ℃ |
| Isoration 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 | $V_{FM}$ | $I_{FM}$= 50A, Tj=25℃, per Arm | 1.50 | V |
| Peak Reverse Current | $I_{RM}$ | $V_{RM}$= $V_{RRM}$, Tj= 150℃, per Arm | 10 | mA |
| Reverse Recovery Time | trr | $I_{FM}$= 10A, -di/dt= 50 A/μs, Ta= 25℃ Per Arm | 100 | ns |
| Thermal Resistance | Rth(j-c) | Junction to Case per Arm | 0.8 | ℃/W |
| | Rth(c-f) | Base Plate to Heat Sink with Thermal Compound | 0.1 | |
| Internal Lead Inductance | Ls | Anode Terminal to Cathode Terminal Per Element | 30 | nH |

# PC50F6 OUTLINE DRAWING (Dimensions in mm)