

FAST RECOVERY DIODE MODULE

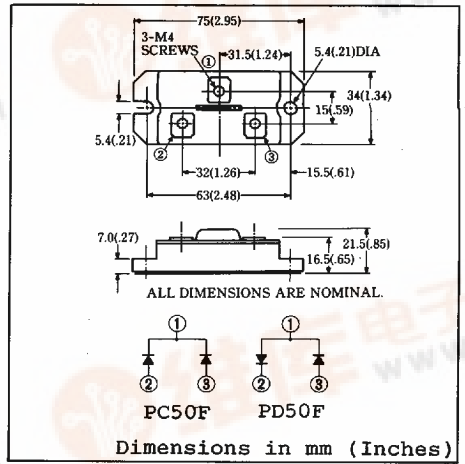
55.5A/300~400V/trr: 80nsec

加急出货

PC50F3 PC50F4
PD50F3 PD50F4

FEATURES

- Isolated Base
- Dual Diode Arms - Cathode Common and Doubler Circuit
- Ultra - Fast Recovery
- High Surge Capability
- 300 Volts thru 500 Volts Types Available



Approx. Net Weight : 105 Grams

MAXIMUM RATINGS

| Voltage Rating | TYPE Symbol | ◆PC50F3 | ◆PD50F3 | PC50F4 | PD50F4 | Unit |
|--------------------------------------|----------------|---|-----------|--------|------------|------------------|
| | | Repetitive Peak Reverse Voltage per Arm | V_{RRM} | 300 | | |
| Non-Repetitive Peak Reverse Voltage | V_{RSM} | 330 | | 440 | | V |
| Electrical Rating | Symbol | Condition | | | Rating | Unit |
| Average Rectified Output Current | I_O | 180° rectangular wave conduction per Arm $T_c = 77^\circ C$ | | | 55.5 | A |
| | | 180° sinusoidal wave conduction per Arm $T_c = 100^\circ C$ | | | 50 | |
| RMS Forward Current | $I_{F(RMS)}$ | per Arm | | | 78 | A |
| Peak One-cycle Forward Surge Current | I_{FSM} | 50Hz half sine wave, non-repetitive per Arm | | | 800 | A |
| I Squared t | I^2t | 2ms to 10ms per Arm | | | 3200 | A ² s |
| Operating Junction Temperature Range | T_{jw} | | | | -40 to 150 | °C |
| Storage Temperature Range | T_{stg} | | | | -40 to 125 | °C |
| Isolation Voltage | V_{ISO} | Base Plate to Terminal, AC 1min | | | 2000 | V |
| Mounting Torque | F_{tor} | Case mounting (recommend) | | | 2.6 (26.5) | N·m (kgf·cm) |
| | | Terminal Screw (recommend) | | | 1.4 (14.5) | |

ELECTRICAL & THERMAL CHARACTERISTICS

| Characteristics | Symbol | Test Condition | Max. | Unit |
|-----------------------|---------------|--|------|------|
| Peak Forward Voltage | V_{FM} | $I_{FM} = 50A$ $T_j = 25^\circ C$ per Arm | 1.20 | V |
| Peak Reverse Current | I_{RM} | $V_{RM} = V_{RRM}$ $T_j = 150^\circ C$ | 10 | mA |
| Reverse Recovery Time | t_{rr} | $I_{FM}=10A$ $-di/dt=50A/\mu s$ $T_j=25^\circ C$ per Arm | 80 | ns |
| Thermal Resistance | $R_{th(j-c)}$ | Junction to Case per Arm | 0.8 | °C/W |
| | $R_{th(c-f)}$ | Case to Fin with thermal compound | 0.1 | |



FIG.1-FORWARD VOLTAGE VS. FORWARD CURRENT

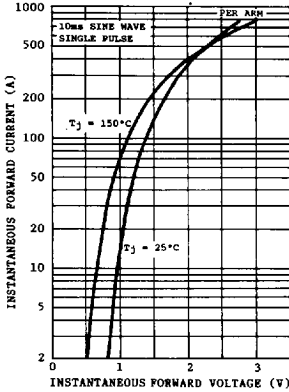


FIG.2-AVERAGE FORWARD POWER DISSIPATION

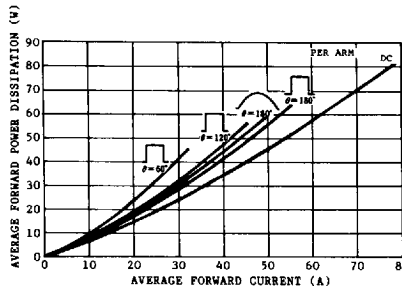


FIG.3-AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

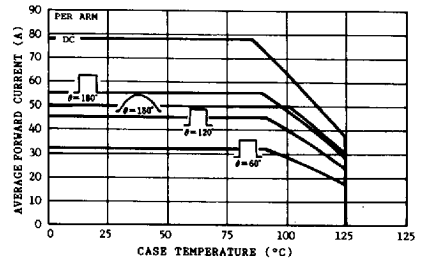


FIG.4-TRANSIENT THERMAL IMPEDANCE

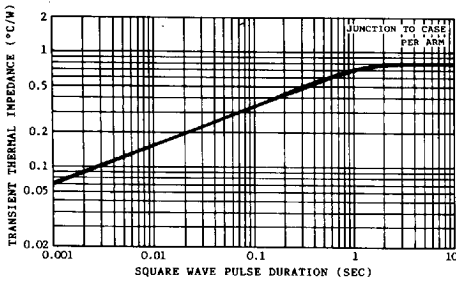


FIG.5-SURGE CURRENT RATINGS

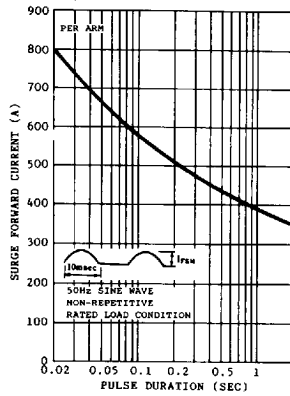


FIG.6-REVERSE RECOVERY CHARACTERISTICS

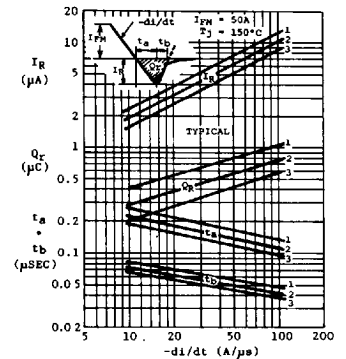


FIG.7-REVERSE RECOVERY CHARACTERISTICS

