

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

PC50F5

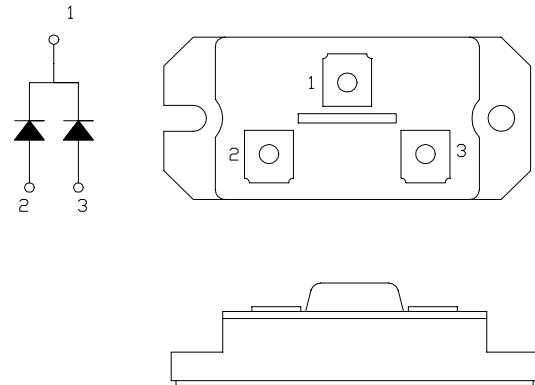
OUTLINE DRAWING

FEATURES

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

TYPICAL APPLICATIONS

- * High Frequency Rectification



Maximum Ratings

Approx Net Weight:105g

Voltage Rating	Symbol	PC50F5		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	V_{iso}	Base Plate to Terminal, AC 1min	2000	V
Mounting torque	F_{tor}	Case mounting(recommended)	2.6	$\text{N}\cdot\text{m}$
		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

PC50F5 OUTLINE DRAWING (Dimensions in mm)

