

# FRD MODULE 50A/400V/trr:80nsec

# PD50F4

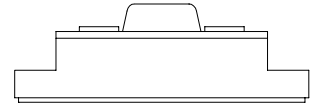
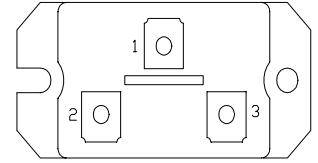
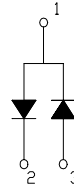
## OUTLINE DRAWING

### 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

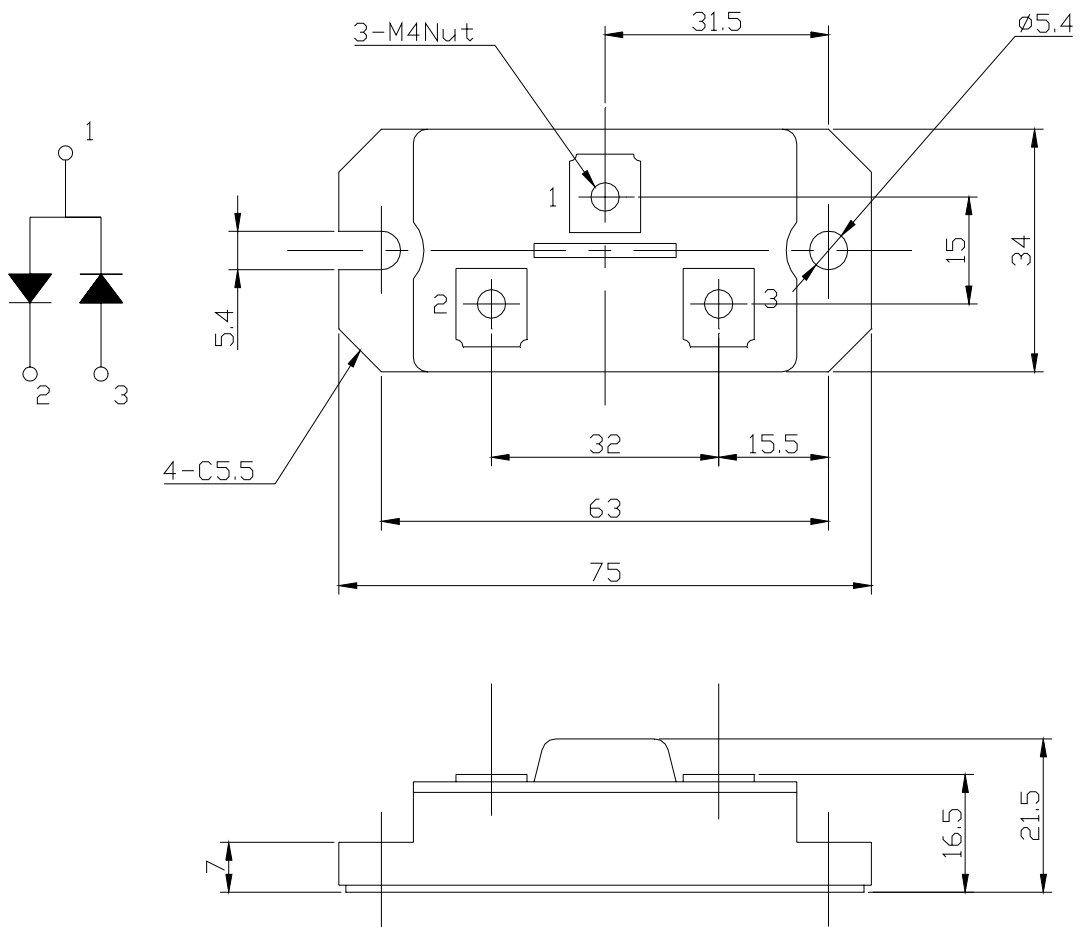
Approx Net Weight:105g

Voltage Rating	Symbol	PD50F4		Unit
Repetitive Peak Reverse Voltage per Arm	$V_{RRM}$	400		V
Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	440		V
Electrical Rating		Condition	Rating	
Average Rectified Output Current	$I_o$	50Hz Half Sine Wave condition per Arm $T_c=100^\circ\text{C}$	50	A
RMS Forward Current	$I_{F(RMS)}$	per Arm	78	A
Surge Forward Current	$I_{FSM}$	50 Hz Half Sine Wave, 1cycle Non-repetitive per Arm	800	A
I Squared t	$I^2t$	2 msec to 10 msec per Arm	3200	$\text{A}^2\text{s}$
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	1.20	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	80	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

PD50F4 OUTLINE DRAWING (Dimensions in mm)



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