

FRD MODULE 300A/1200V/trr:250nsec

PD300F12

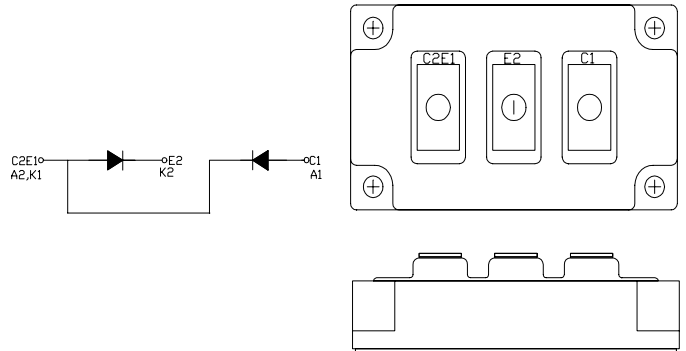
OUTLINE DRAWING

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:450g

Voltage Rating	Symbol	PD300F12		Unit
Repetitive Peak Reverse Voltage per Arm	V_{RRM}	1200		V
Electrical Rating		Condition	Rating	
Direct Forward Current	$I_{F(DC)}$	per Arm $T_c=81^{\circ}\text{C}$	300	A
RMS Forward Current	$I_{F(RMS)}$	per Arm	300	A
Surge Forward Current	I_{FSM}	50 Hz Half Sine Wave, 1 cycle Non-repetitive per Arm	3000	A
I Squared t	I^2t	2 msec to 10 msec per Arm	45000	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	2500	V
Mounting torque	F_{tor}	Case mounting(recommended)	2.8	N.m
		Terminal Screw(recommended)	2.8	

Electrical • Thermal Characteristics

Characteristics	Symbol	Test Conditions	Max.	Unit
Peak Forward Voltage	V_{FM}	$I_{FM}= 300\text{A}$, $T_j=25^{\circ}\text{C}$, per Arm	2.60	V
Peak Reverse Current	I_{RM}	$V_{RM}= V_{RRM}$, $T_j= 150^{\circ}\text{C}$, per Arm	60	mA
Reverse Recovery Time	t_{rr}	$I_{FM}= 10\text{A}$, $-di/dt= 50 \text{ A}/\mu\text{s}$, $T_a= 25^{\circ}\text{C}$ Per Arm	250	ns
Thermal Resistance	$R_{th(j-c)}$	Junction to Case per Arm	0.1	$^{\circ}\text{C}/\text{W}$
	$R_{th(c-f)}$	Base Plate to Heat Sink with Thermal Compound	0.06	
Internal Lead Inductance	L_s	Anode Terminal to Cathode Terminal Per Element	30	nH

PD300F12 OUTLINE DRAWING (Dimensions in mm)

