

# DIODE MODULE (F.R.D.)

# FRD100CA100/120



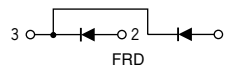
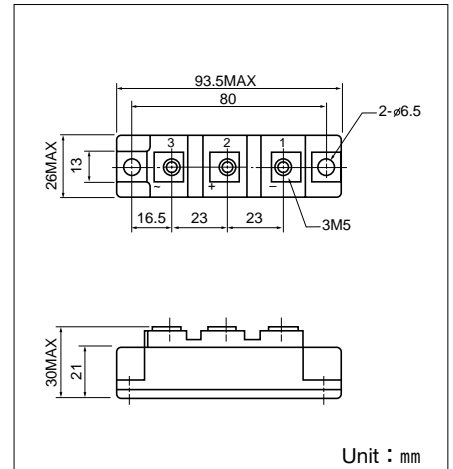
UL;E76102 (M)

FRD100CA is a high speed (fast recovery) dual diode module designed for high power switching application. FRD100CA is suitable for high frequency application requiring low loss and high speed control.

- High Speed  $t_{rr} \leq 300\text{ns}$
- $I_{F(AV)}$  100A (each device)
- Isolated mounting construction.
- High Surge Capability

### (Applications)

Switching Power Supply. Inverter Welding Power Supply  
Power Supply for Telecommunication



### Maximum Ratings

( $T_j = 25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		FRD100CA100	FRD100CA120	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1000	1200	V
$V_{R(DC)}$	D.C. Reverse Voltage	800	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_F$	Forward Current	D.C. $T_c = 78^\circ\text{C}$	100	A	
$I_{FSM}$	Surge Forward Current	$\frac{1}{2}$ cycle, 60Hz, peak value, non-repetitive	2000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	16600	$\text{A}^2\text{S}$	
$T_j$	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature		-40 to +125	$^\circ\text{C}$	
$V_{iso}$	Isolation Breakdown Voltage (R.M.S.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	170	g	

### Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$V_R = V_{RRM}$ , $T_j = 150^\circ\text{C}$			5.0	mA
$V_{FM}$	Forward Voltage Drop	$I_F = 100\text{A}$ , Inst. measurement			1.8	V
$t_{rr}$	Reverse Recovery Time	$I_F = 100\text{A}$ , $-di/dt = 100\text{A}/\mu\text{s}$			300	ns
$R_{th(j-c)}$	Thermal Impedance	Junction to case			0.4	$^\circ\text{C}/\text{W}$

