

# DIODE MODULE (F.R.D.)

# FRS200CA100/120



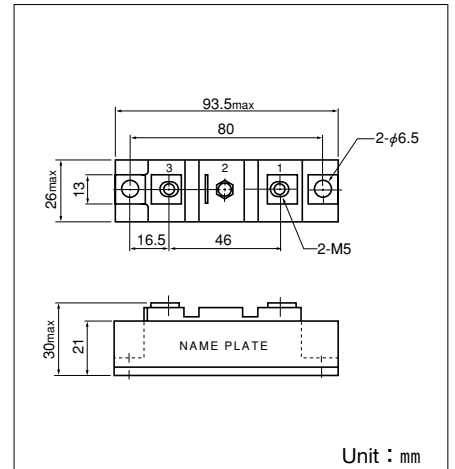
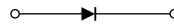
UL;E76102 (M)

FRS200CA is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS200CA is suitable for high frequency application requiring low loss and high speed control.

- High Speed  $t_{rr} \leq 350\text{ns}$
- $I_{F(AV)}$  200A
- Isolated Mounting base.
- High Surge Capability

**(Applications)**

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



**Maximum Ratings**

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

Symbol	Item	Ratings		Unit
		FRS200CA100	FRS200CA120	
$V_{RRM}$	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. $T_c : 78^\circ\text{C}$	200	A	
$I_{FSM}$	Surge Forward Current	$1/2$ cycle, 60Hz, peak value, non-repetitive	3300	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	45000	$\text{A}^2\text{S}$	
$T_j$	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	$T_j=150^\circ\text{C}$ at $V_{RRM}$			10	mA
$V_{FM}$	Forward Voltage Drop	$T_j=25^\circ\text{C}$ $I_F=200\text{A}$ , Inst. measurement			1.8	V
$t_{rr}$	Reverse Recovery Time	$I_F=200\text{A}$ , $-di/dt=200\text{A}/\mu\text{s}$			350	ns
$R_{th(j-c)}$	Thermal Impedance	Junction to case			0.2	$^\circ\text{C}/\text{W}$

