

DIODE MODULE (F.R.D.)

FRS200CA100/120



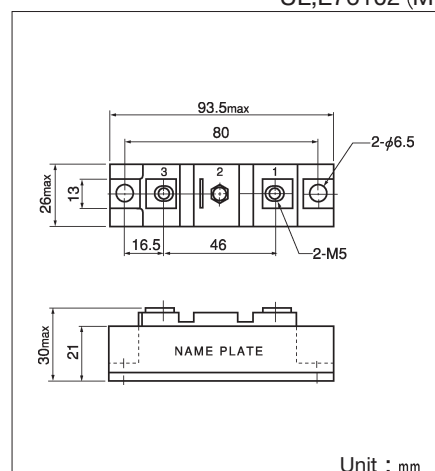
UL;E76102 (M)

FRS200CA is a high speed 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 $t_{rr} \leq 350\text{ns}$
- $I_F(\text{AV})$ 200A
- Isolated Mounting base.
- High Surge Capability

(Applications)

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



Maximum Ratings

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

Symbol	Item	Ratings		Unit
		FRS200CA100	FRS200CA120	
V_{RRM}	Repetitive Peak Reverse Voltage	1000	1200	V
$V_R(\text{DC})$	D.C. Reverse Voltage	800	960	V

Symbol	Item		Conditions	Ratings	Unit
I_F	Forward Current		D.C. $T_c : 85^\circ\text{C}$	200	A
I_{FSM}	Surge Forward Current		$1\frac{1}{2}$ cycle, 60Hz, peak value, non-repetitive	3300	A
I^2t	I^2t		Value for one cycle of surge current	45000	A^2S
T_j	Operating Junction Temperature			$-40 \sim +150$	$^\circ\text{C}$
T_{stg}	Storage Temperature			$-40 \sim +125$	$^\circ\text{C}$
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)	$\text{N} \cdot \text{m}$ ($\text{kgf} \cdot \text{cm}$)
		Terminal (M5)	Recommended Value 1.5 ~2.5 (25~40)	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 $V_{RRM} = 500\text{V}$			10	mA
V_{FM}	Forward Voltage Drop	$T_j = 25^\circ\text{C}$ $I_{FM} = 200\text{A}$, 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	$^\circ\text{C}/\text{W}$

