

DIODE MODULE (F.R.D.)

FRS200BA50/60



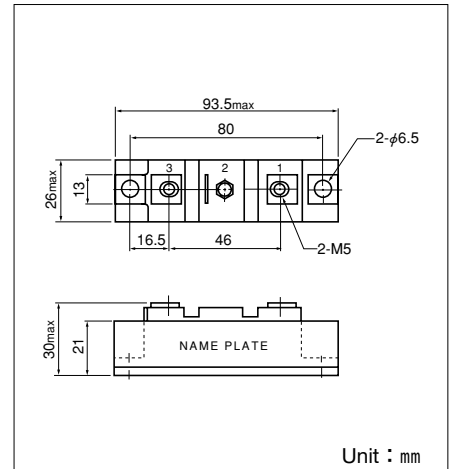
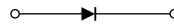
UL;E76102 (M)

FRS200BA is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS200BA is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leq 100\text{ns}$
- $I_F (AV)$ 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
		FRS200BA50	FRS200BA60	
V_{RRM}	Repetitive Peak Reverse Voltage	500	600	V
$V_{R(DC)}$	D.C. Reverse Voltage	400	480	V

Symbol	Item	Conditions	Ratings	Unit	
$I_F (AV)$	Forward Current	D.C. $T_c : 94^\circ\text{C}$	200	A	
I_{FMS}	Surge Forward Current	$\frac{1}{2}$ 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 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)	$\text{N}\cdot\text{m}$ ($\text{kgf}\cdot\text{cm}$)
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	170	g	

Electrical Characteristics

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

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current (max.)	at V_{RRM} , $T_j = 150^\circ\text{C}$			200	mA
V_{FM}	Forward Voltage Drop (max.)	Forward current 200A, Inst. measurement		1.15	1.3	V
$R_{th(j-c)}$	Thermal Impedance (max.)	Junction to case			0.2	$^\circ\text{C}/\text{W}$
t_{rr}	Reverse Recovery Time (max.)	$I_F = 200\text{A}$, $di/dt = -200\text{A}/\mu\text{s}$		85	100	ns

