

# DIODE MODULE (F.R.D.)

# FRS200BA50/60

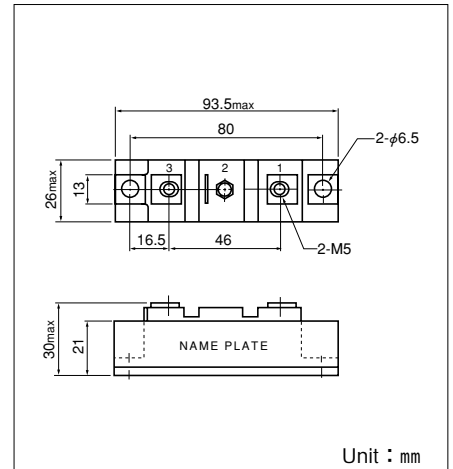
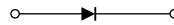
UL;E76102 (M)

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.



Unit : mm

### 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	$\text{A}^2\text{S}$	
$T_j$	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)	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )
		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

