

# DIODE MODULE (F.R.D.)

# FRS200BA50/60



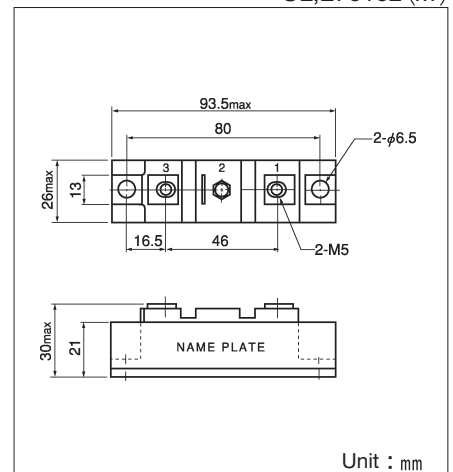
UL;E76102 (M)

FRS200BA is a high speed 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

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

Symbol	Item	Ratings	Unit
$V_{RRM}$	Repetitive Peak Reverse Voltage	600	V
$V_R (DC)$	D.C. Reverse Voltage	480	V

Symbol	Item	Conditions	Ratings	Unit	
$I_F$	Forward Current	D.C. $T_c : 94^\circ\text{C}$	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		$-40 \sim +150$	$^\circ\text{C}$	
$T_{stg}$	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)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5~2.5 (15~25)	2.7 (28)	
	Mass	Typical Value	170	g	

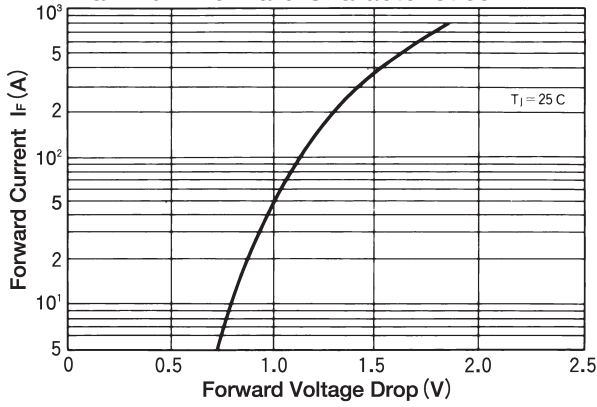
### Electrical Characteristics

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

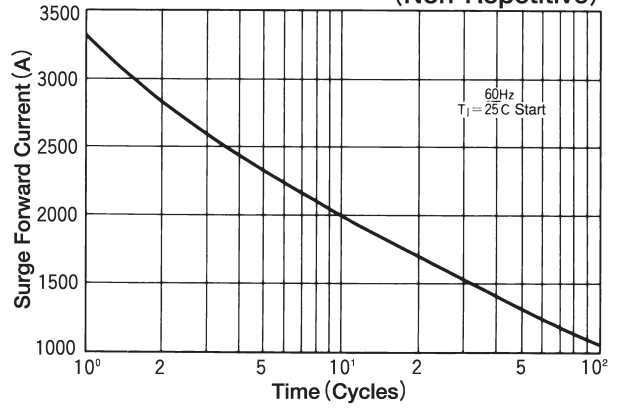
Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max	at $V_{RRM}$ , single phase, half wave. $T_j = 150^\circ\text{C}$	200	mA
$V_{FM}$	Forward Voltage Drop, max	Forward current 200A, Inst. measurement	1.3	V
$R_{th(j-c)}$	Thermal Impedance, max	Junction to case	0.2	$^\circ\text{C}/\text{W}$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



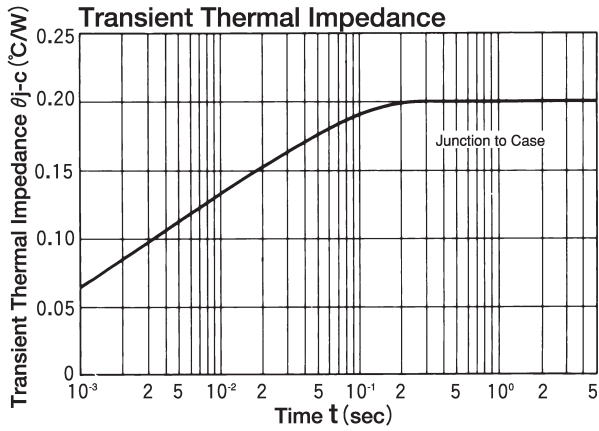
Maximum Forward Characteristics



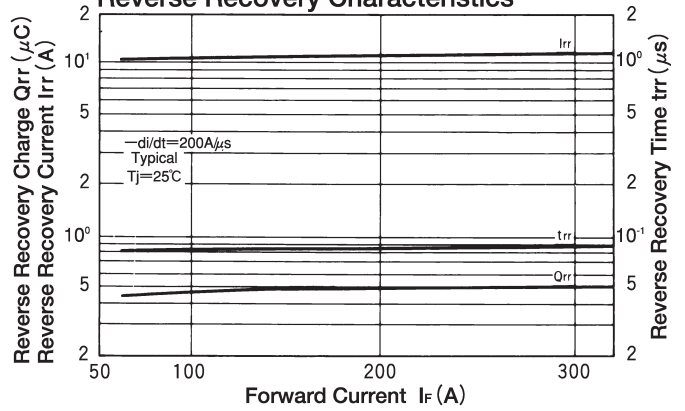
Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance



Reverse Recovery Characteristics



Reverse Recovery Characteristics  $-di/dt$

