

DIODE MODULE (F.R.D.)

FRS400BA50/60

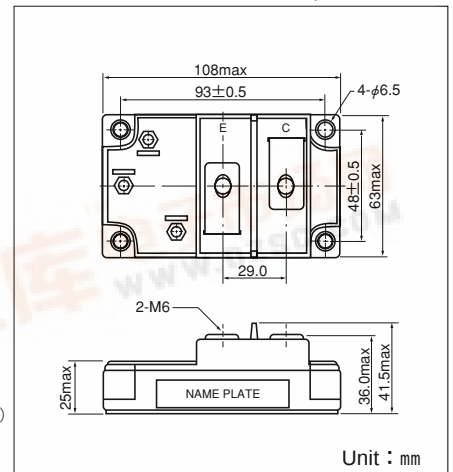
UL:E76102 (M)

FRS400BA is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS400BA is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leq 200\text{ns}$
- $I_F(AV)$ 400A
- Isolated Mounting base.
- High Surge Capability

(Applications)

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



Maximum Ratings

(T_j = 25°C unless otherwise specified)

Symbol	Item	Ratings		Unit
		FRS400BA50	FRS400BA60	
V _{RRM}	Repetitive Peak Reverse Voltage	500	600	V
V _{R(DC)}	D.C. Reverse Voltage	400	480	V

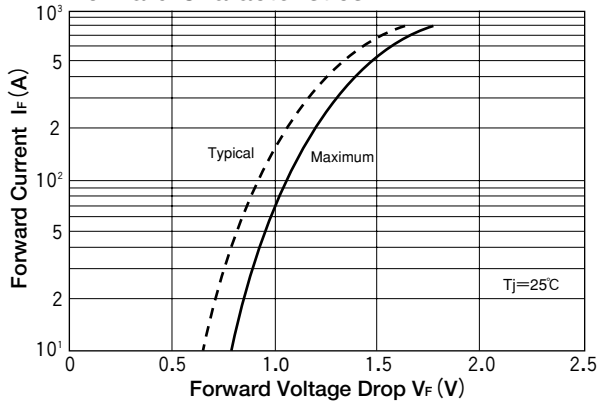
Symbol	Item		Conditions	Ratings	Unit
I _{F(AV)}	Forward Current		D.C. T _c : 94°C	400	A
I _{FMS}	Surge Forward Current		1/2 cycle, 60Hz, peak value, non-repetitive	4000	A
I ² t	I ² t		Value for one cycle of surge current	66640	A ² S
T _j	Operating Junction Temperature			-40 to +150	°C
T _{stg}	Storage Temperature			-40 to +125	°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 (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	
	Mass		Typical Value	460	g

Electrical Characteristics

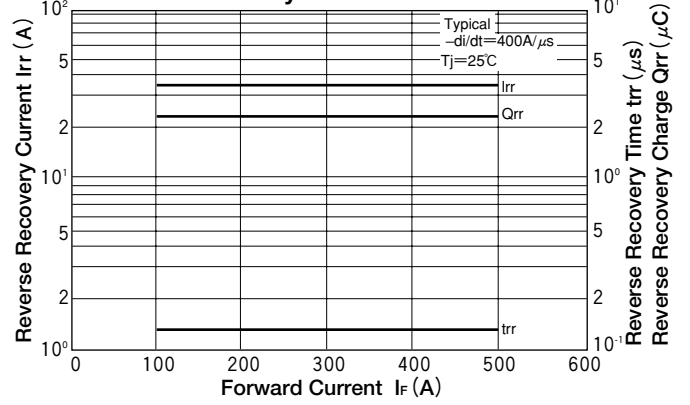
Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I _{RRM}	Repetitive Peak Reverse Current	V _R = V _{RRM} , T _j = 125°C			400	mA
V _{FM}	Forward Voltage Drop	I _F = 400A, Inst. measurement		1.3	1.4	V
t _{rr}	Reverse Recovery Time	I _F = 400A, -di/dt = 400A/μs		130	200	ns
R _{th(j-c)}	Thermal Impedance	Junction to case			0.1	°C/W

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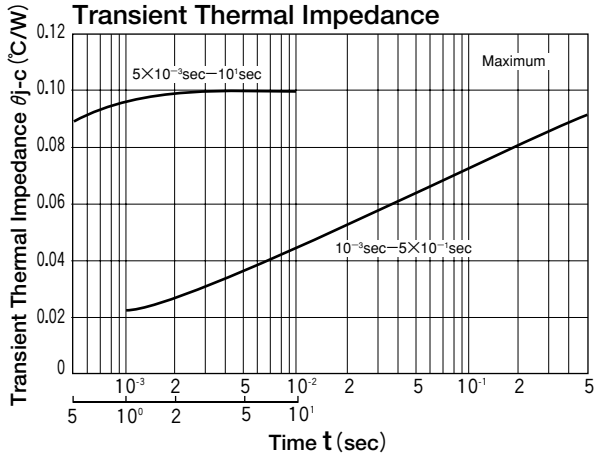
Forward Characteristics



Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics

