FRS400DA100/120

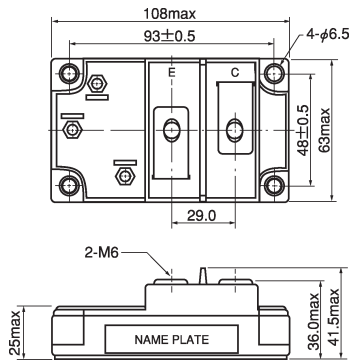
UL;E76102 (M)

FRS400DA is a high speed isolated diode module designed for high power switching application. **FRS400DA** is suitable for high frequency application requiring low loss and high speed control.

- High Speed t_{rr}≦200ns
- $I_{F\ (AV)}$ 400A
- Isolated Mounting base.
- High Surge Capability

(Applications)

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



Unit : mm

■Maximum Ratings

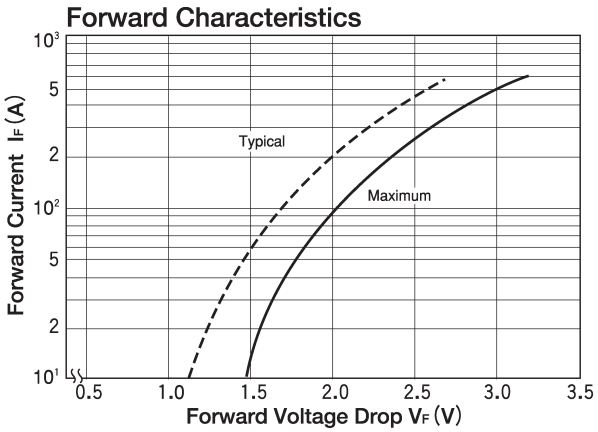
(Tj=25℃)

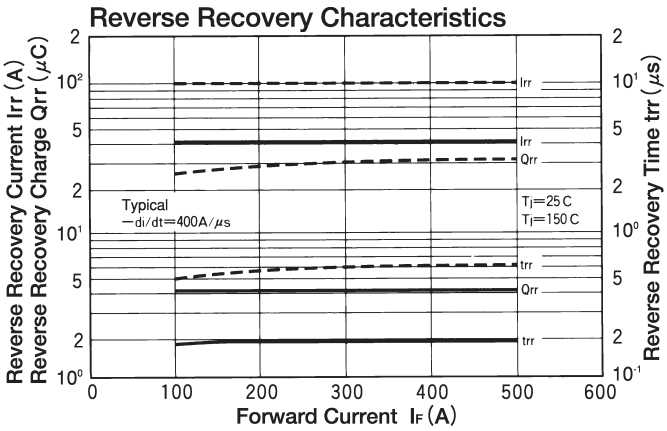
Symbol	Item	Ratings		Unit
		FRS400DA100	FRS400DA120	
V_{RRM}	Repetitive Peak Reverse Voltage	1000	1200	V
$V_{R\ (DC)}$	D.C. Reverse Voltage	800	960	V

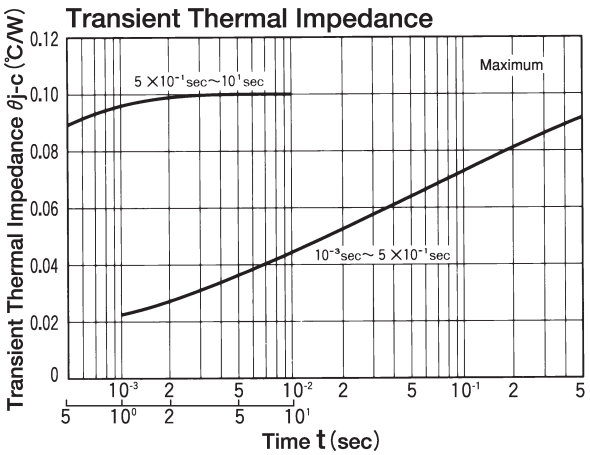
Symbol	Item		Conditions	Ratings	Unit
I_F	Forward Current		D.C. Tc : 38℃	400	A
I_{FSM}	Surge Forward Current		1/2 cycle, 60Hz, peak value, non-repetitive	4000	A
I^2t	I^2t		Value for one cycle of surge current	66640	A^2S
Tj	Operating Junction Temperature			−40～+150	℃
Tstg	Storage Temperature			−40～+125	℃
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

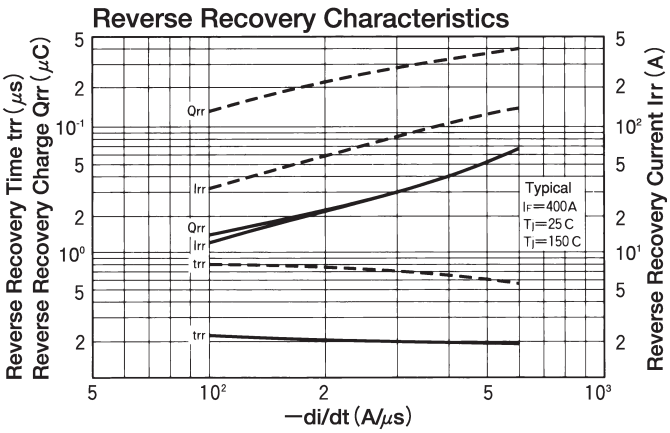
■Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	V_R=V_{RRM}, T_j=150℃			20	mA
V_{FM}	Forward Voltage Drop	I_F=400A, Inst, measurement		2.4	2.8	V
trr	Reverse Recovery Time	I_F=400A, −di/dt=400A/μs		180	200	ns
Rth (j-c)	Thermal Impedance	Junction to case			0.1	℃/W


Forward Characteristics
Forward Current IF (A)
Typical
Maximum
Forward Voltage Drop VF (V)


Reverse Recovery Characteristics
Reverse Recovery Current Irr (A)
Reverse Recovery Charge Qrr (μC)
Reverse Recovery Time trr (μs)
Typical
−di/dt=400A/μs
Tj=25 C
Tj=150 C
Forward Current IF (A)


Transient Thermal Impedance
Transient Thermal Impedance θj-c (°C/W)
Maximum
Time t (sec)


Reverse Recovery Characteristics
Reverse Recovery Time trr (μs)
Reverse Recovery Charge Qrr (μC)
Reverse Recovery Current Irr (A)
Typical
IF=400A
Tj=25 C
Tj=150 C
−di/dt (A/μs)