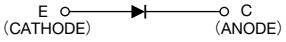
FRS400EA180/200

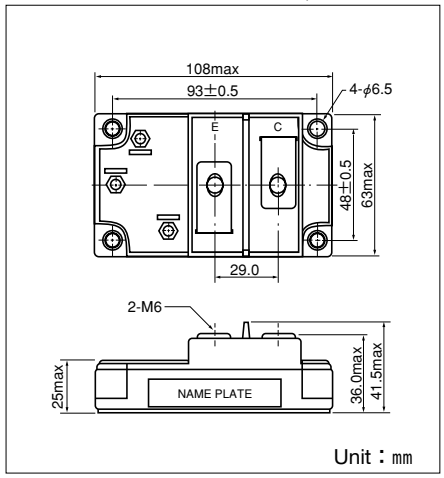
UL;E76102(M)

FRS400EA is a high speed isolated diode module designed for high power switching application. **FRS400EA** is suitable for high frequency application requiring low loss and high speed control.

- High Speed t_{rr}≦700ns
- $I_{F(AV)}$ 400A
- Isolated Mounting base.
- High Surge Capability

(Applications)
Inverter Welding Power Supply
Power Supply for Telecommunication
Various Switching Power Supply.





■Maximum Ratings

(Tj=25℃ unless otherwise specified)

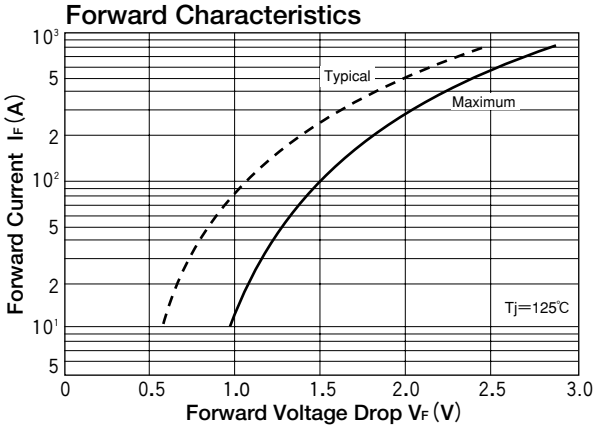
Symbol	Item	Ratings		Unit
		FRS400EA180	FRS400EA200	
V_{RRM}	Repetitive Peak Reverse Voltage	1800	2000	V
$V_{R(DC)}$	D.C. Reverse Voltage	1440	1600	V

Symbol	Item		Conditions	Ratings	Unit
$I_{F(AV)}$	Forward Current		D.C. T_C : 79℃	400	A
I_{FMS}	Surge Forward Current		½ cycle, 60Hz, peak value, non-repetitive	5000	A
I^2t	I^2t		Value for one cycle of surge current	104000	A^2S
Tj	Operating Junction Temperature			−40 to +150	℃
Tstg	Storage Temperature			−40 to +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

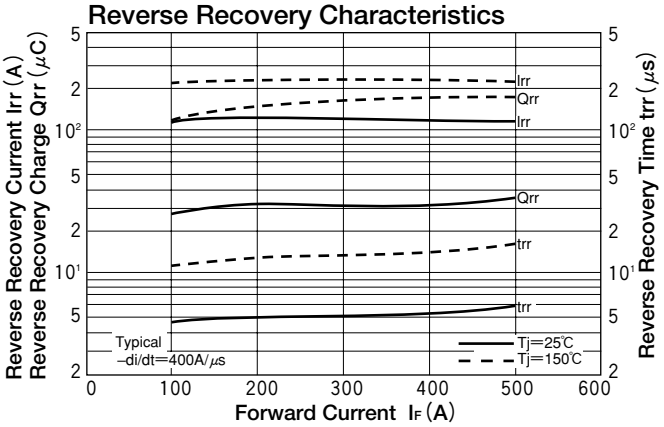
■Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	V_R=V_{RRM}, Tj=150℃			100	mA
V_{FM}	Forward Voltage Drop	Tj=125℃, I_F=400A, Inst. measurement			2.20	V
trr	Reverse Recovery Time	I_F=400A, −di/dt=400A/μs			700	ns
Rth(j-c)	Thermal Impedance	Junction to case			0.08	℃/W

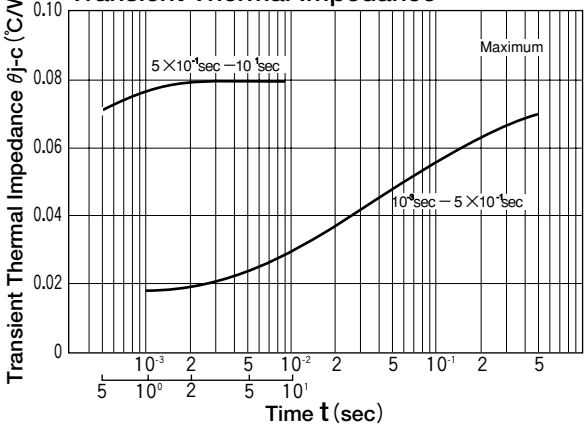
Forward Characteristics



Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics