

DIODE MODULE (F.R.D.)

FRS400CA120

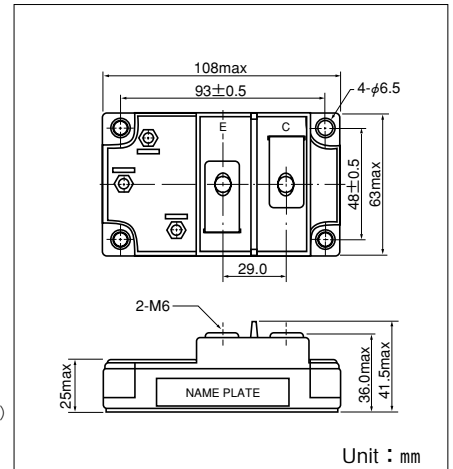
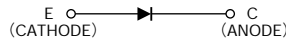
UL;E76102 (M)

FRS400CA120 is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS400CA120 is suitable for high frequency application requiring low loss and high speed control.

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

(Applications)

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



Maximum Ratings

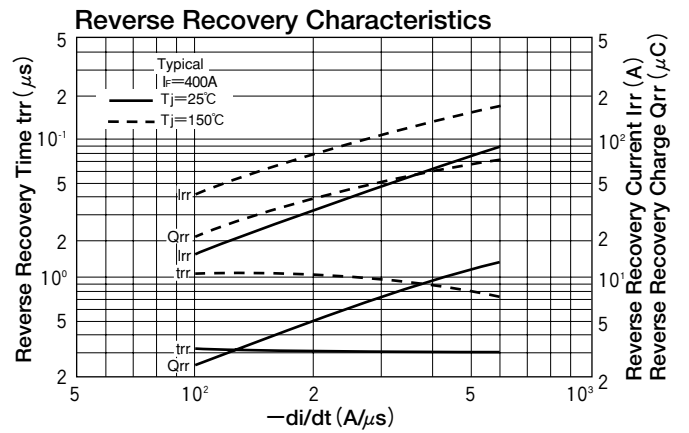
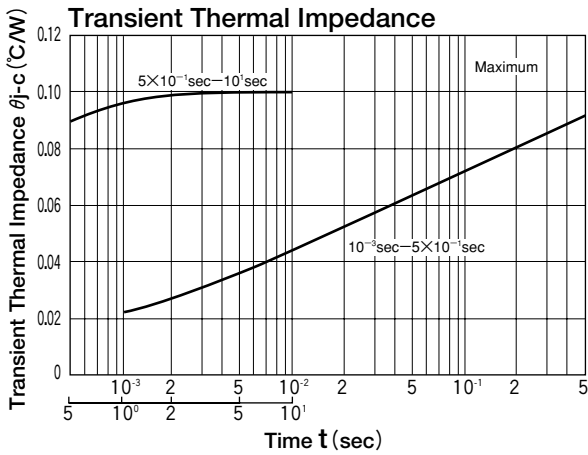
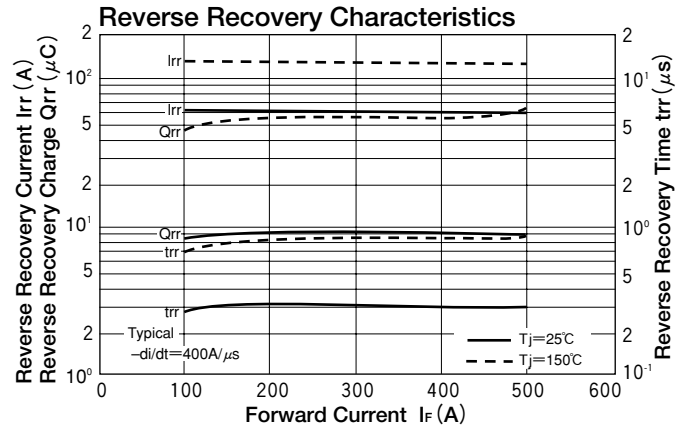
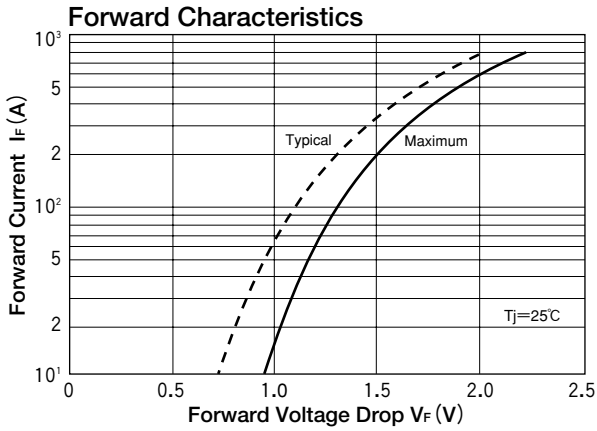
(T_j=25°C unless otherwise specified)

Symbol	Item	Ratings	Unit
		FRS400CA120	
V _{RRM}	Repetitive Peak Reverse Voltage	1200	V
V _{R(DC)}	D.C. Reverse Voltage	960	V

Symbol	Item	Conditions	Ratings	Unit	
I _{F(AV)}	Forward Current	D.C. T _c : 78°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 =150°C			20	mA
V _{FM}	Forward Voltage Drop	I _F =400A, Inst. measurement			1.8	V
t _{rr}	Reverse Recovery Time	I _F =400A, -di/dt=400A/μs			400	ns
R _{th(j-c)}	Thermal Impedance	Junction to case			0.1	°C/W



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