FRS200CA100/120

UL;E76102 (M)

FRS200CA is a high speed isolated diode module designed for high power switching application. **FRS200CA** is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leqq 350$ns
- $I_{F(AV)}$ 200A
- Isolated Mounting base.
- High Surge Capability

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

■Maximum Ratings

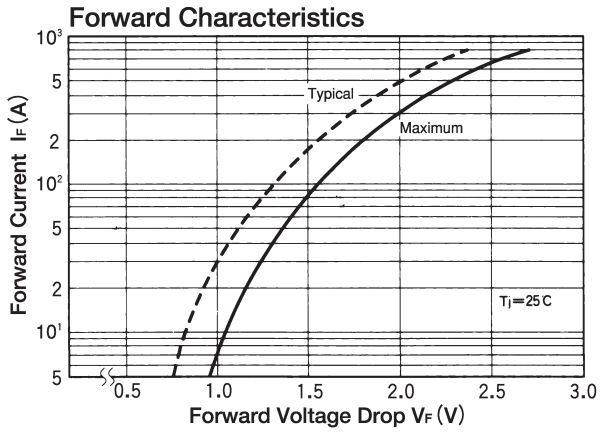
(Tj=25℃)

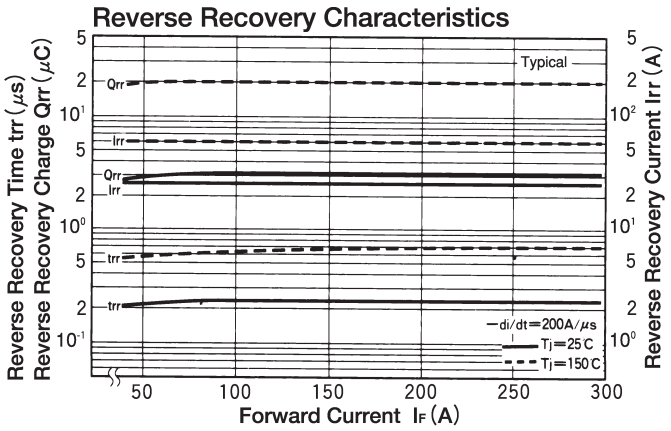
Symbol	Item	Ratings		Unit
		FRS200CA100	FRS200CA120	
V_{RRM}	Repetitive Peak Reverse Voltage	1000	1200	V
$V_{R(DC)}$	D.C. Reverse Voltage	800	960	V

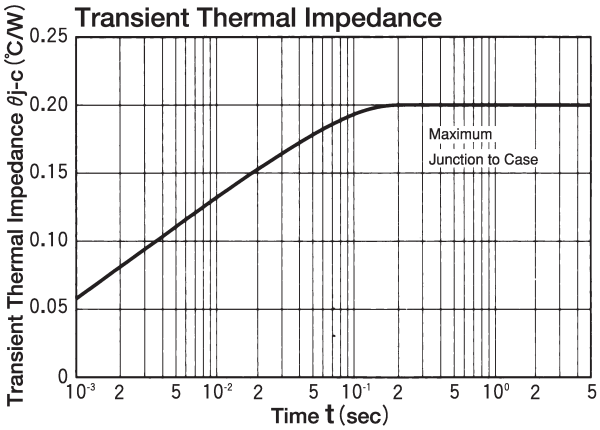
Symbol	Item		Conditions	Ratings	Unit
I_F	Forward Current		D.C. T_C : 85℃	200	A
I_{FSM}	Surge Forward Current		1/2 cycle, 60Hz, peak value, non-repetitive	3300	A
I^2t	I^2t		Value for one cycle of surge current	45000	A^2S
Tj	Operating Junction Temperature			−40～+150	℃
Tstg	Storage Temperature			−40～+125	℃
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 (M5)	Recommended Value 1.5 ～2.5 (25～40)	2.7 (28)	
	Mass		Typical Value	170	g

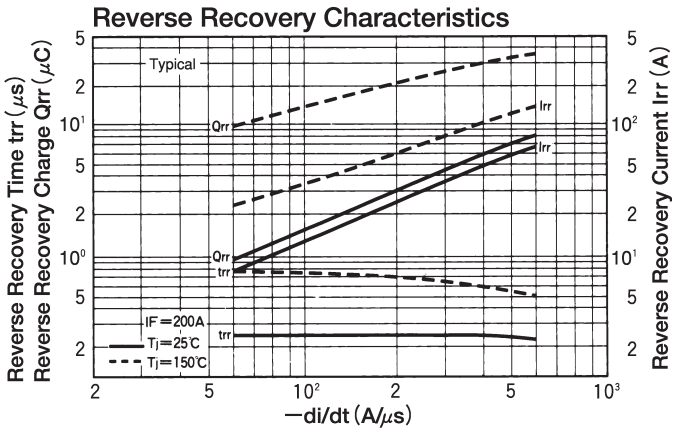
■Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min,	Typ,	Max.	
I_{RRM}	Repetitive Peak Reverse Current	T_j=150℃ at V_{RRM}=500V			10	mA
V_{FM}	Forward Voltage Drop	T_j=25℃ I_{FM}=200A, Inst. measurement			1.8	V
trr	Reverse Recovery Time	I_F=200A, −di/dt=200A/μs			350	ns
Rth (j-c)	Thermal Impedance	Junction to case			0.2	℃/W


Forward Characteristics
Forward Current IF (A)
Typical
Maximum
Tj=25℃
Forward Voltage Drop VF (V)


Reverse Recovery Characteristics
Reverse Recovery Time trr (μs)
Reverse Recovery Charge Qrr (μC)
Reverse Recovery Current Irr (A)
Typical
Qrr
Irr
trr
−di/dt=200A/μs
Tj=25℃
Tj=150℃
Forward Current IF (A)


Transient Thermal Impedance
Transient Thermal Impedance θj-c (℃/W)
Maximum
Junction to Case
Time t (sec)


Reverse Recovery Characteristics
Reverse Recovery Time trr (μs)
Reverse Recovery Charge Qrr (μC)
Reverse Recovery Current Irr (A)
Typical
Qrr
Irr
trr
IF=200A
Tj=25℃
Tj=150℃
−di/dt (A/μs)