

DIODE MODULE (F.R.D.)

FRS300CA50

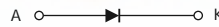
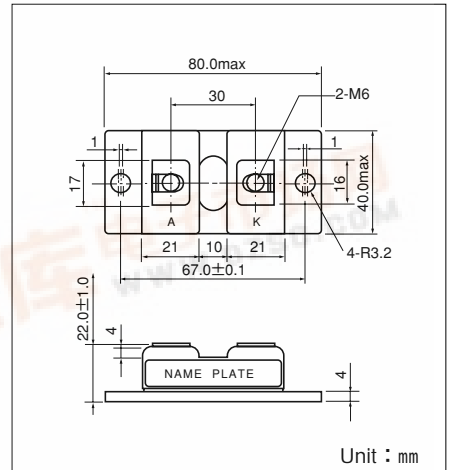
UL:E76102(M)

FRS300CA50 is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS300CA50 is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leq 200\text{ns}$
- $I_F (AV)$ 300A
- 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°C unless otherwise specified)

Symbol	Item	Ratings		Unit
		FRS300CA50		
V _{RRM}	Repetitive Peak Reverse Voltage	500		V
V _{R(DC)}	D.C. Reverse Voltage	400		V

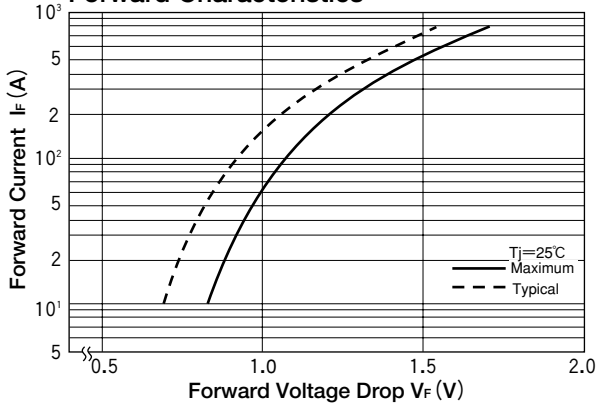
Symbol	Item	Conditions	Ratings	Unit	
I _{F(AV)}	Forward Current	D.C. T _c : 116°C	300	A	
I _{FMS}	Surge Forward Current	1/2 cycle, 60Hz, peak value, non-repetitive	4000	A	
I ² t	I ² t	Value for one cycle of surge current	66600	A ² S	
T _j	Operating Junction Temperature		-40 to +150	°C	
T _{stg}	Storage 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	170	g	

Electrical Characteristics

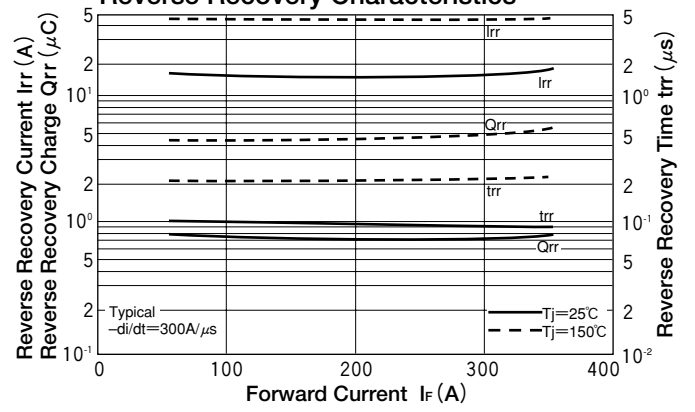
Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I _{RRM}	Repetitive Peak Reverse Current	V _{RRM} =500V, T _j =125°C			300	mA
V _{FM}	Forward Voltage Drop	I _F =300A, Inst. measurement			1.3	V
t _{rr}	Reverse Recovery Time	I _F =300A, -di/dt=300A/μs			200	ns
R _{th(j-c)}	Thermal Impedance	Junction to case			0.085	°C/W



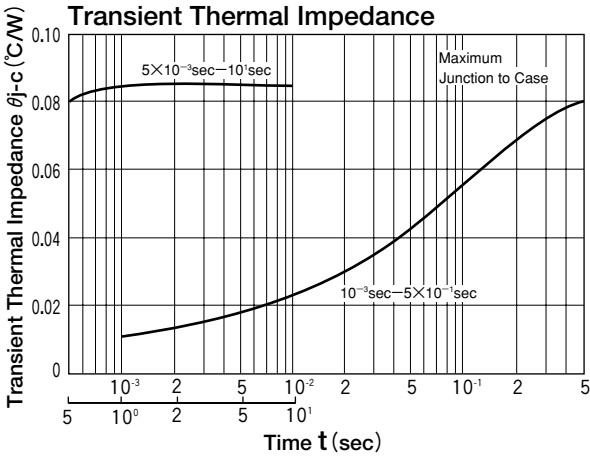
Forward Characteristics



Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics

