

FRS300CA50

UL;E76102 (M)

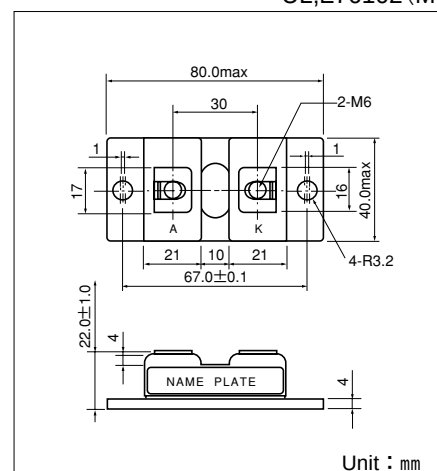
FRS300CA50 is a high speed (fast recovery) isolated diode module designed for high power switching application. **FRS300CA50** is suitable for high frequency application requiring low loss and high speed control.

- 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.

A $\circ \rightarrow$ $\rightarrow$ $\circ$ K



Maximum Ratings

(T_j=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
		Terminal (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	(kgf·cm)
	Mass		Typical Value	170	g

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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

