Diode Module (F.R.D)

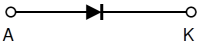
FRS300CA50

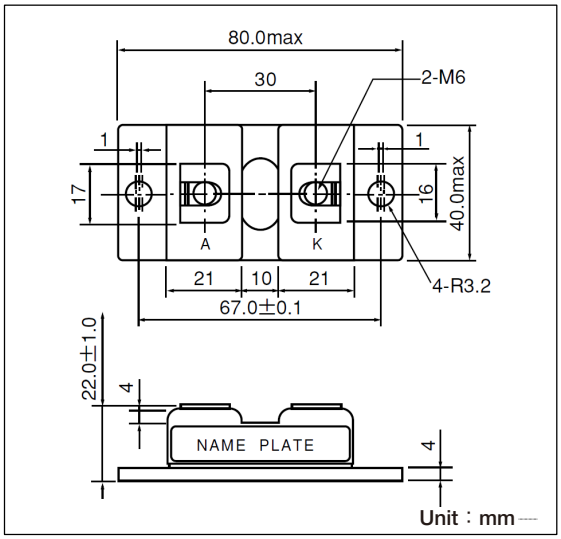
UL: E76102

《Features》
FRS300CA is a high speed (fast recovery) isolated diode module designed for high power switching application. FRS300CA is suitable for high frequency application requiring low loss and high speed control.

- High Speed trr≦200ns
- $I_{F\ (AV)}$ 300A
- 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)

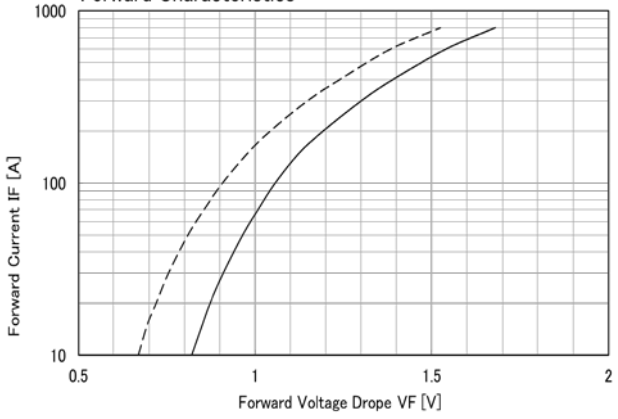
Item	Symbol	Unit	FRS300CA50
Repetitive Peak Reverse Voltage	V_{RRM}	V	500
Reverse D.C. Voltage	$V_{R(DC)}$	V	400

Item		Symbol	Unit	Ratings	Conditions
Forward Current		I_F	A	300	D.C.,T_C=116℃
Surge Forward Current		I_{FSM}	A	4000	1/2cycle, 60Hz, Peak value, non-repetitive
I^2t(for fusing)		I^2t	A^2s	66600	Value for one cycle of surge current
Junction Temperature		T_j	℃	−40 to +150	
Storage Temperature		T_{stg}	℃	−40 to +125	
Isolation Breakdown Voltage(R.M.S.)		V_{ISO}	V	2500	A.C. 1minute
Mounting torque	Mounting (M6)		N・m (kgf・cm)	4.7(48)	Recommended Value 2.5 to 3.9 (25 to 40)
	Terminal (M6)			4.7(48)	Recommended Value 2.5 to 3.9 (25 to 40)
Mass			g	170	Typical value

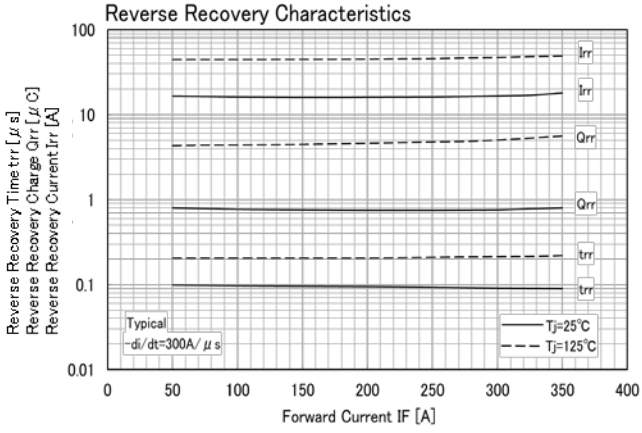
■ Electrical Characteristics (Tj=25℃ unless otherwise specified)

Item	Symbol	Unit	Ratings			Conditions
			Min.	Typ.	Max.	
Repetitive Peak Reverse Current	I_{RRM}	mA			300	V_R=V_{RRM}, T_j=125℃
Forward Voltage Drop	V_{FM}	V			1.30	I_F=300A, Inst. measurement
Reverse recovery Time	t_{rr}	ns			200	I_F=300A, −di/dt=300A/μs
Thermal Resistance	$R_{th(j-c)}$	℃/W			0.085	Junction to case

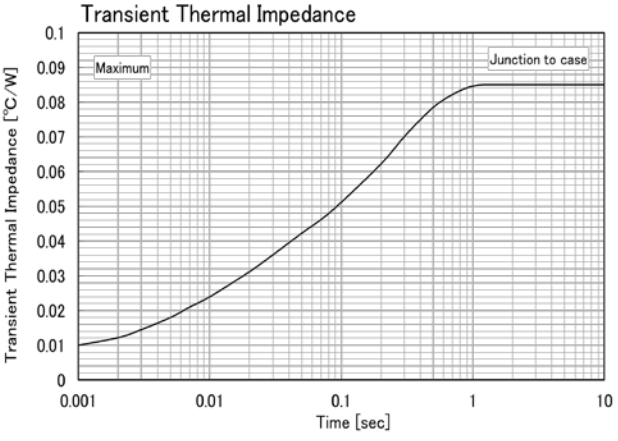
Forward Characteristics



Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics