DIODE MODULE (F.R.D.)

FRS300BA50

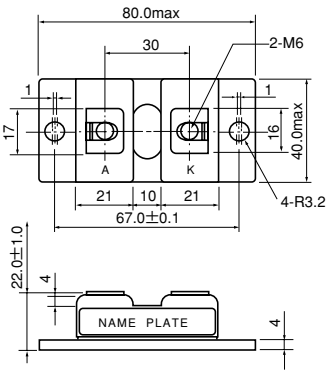
UL;E76102(M)

FRS300BA is a high speed (fast recovery) isolated diode module designed for high power switching application. **FRS300BA** is suitable for high frequency application requiring low loss and high speed control.

- High Speed t_{rr}≦200ns
- $I_{F(AV)}$ 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℃ unless otherwise specified)

Symbol	Item	Ratings	Unit
		FRS300BA50	
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 : 85℃	300	A
I_{FMS}	Surge Forward Current		1/2 cycle, 60Hz, peak value, non-repetitive	4000	A
I^2t	I^2t		Value for one cycle of surge current	66600	A^2S
Tj	Operating Junction Temperature			−40 to +150	℃
Tstg	Storage Temperature			−40 to +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 (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	
	Mass		Typical Value	170	g

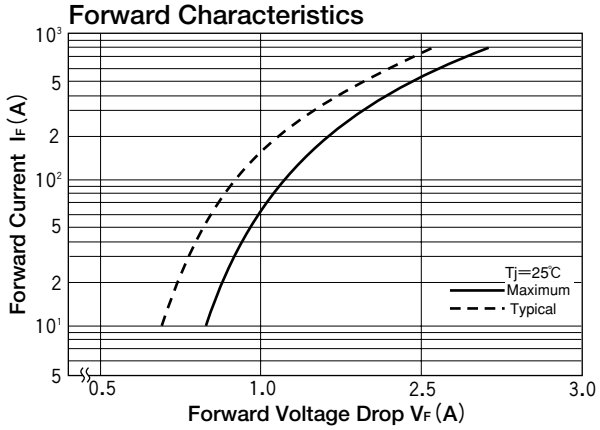
■Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	T_j=125℃, V_{RRM}=500V			300	mA
V_{FM}	Forward Voltage Drop	T_j=25℃, I_{FM}=300A, Inst. measurement			1.3	V
trr	Reverse Recovery Time	I_F=300A, −di/dt=300A/μs			200	ns
Rth(j-c)	Thermal Impedance	Junction to case			0.165	℃/W

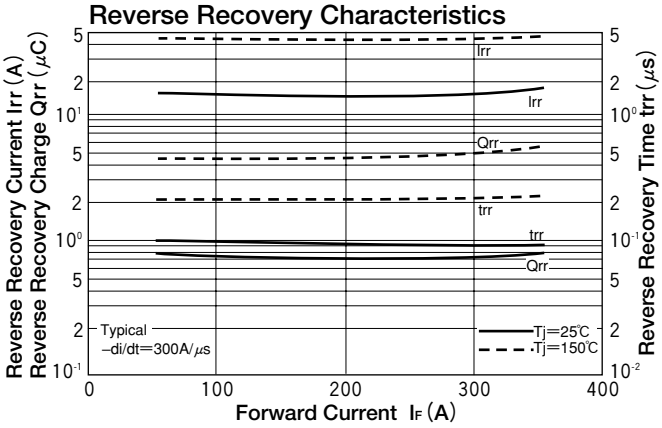
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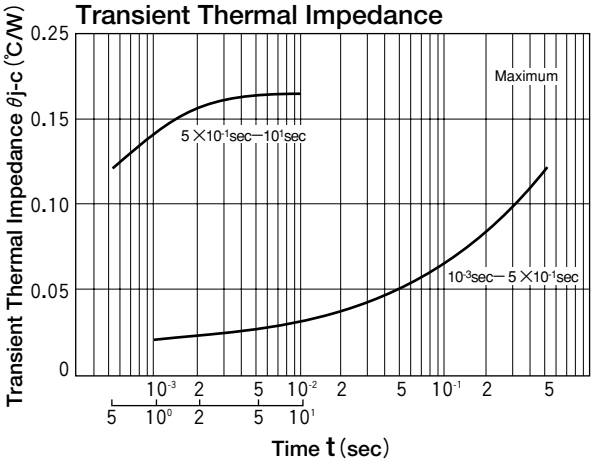
Forward Characteristics



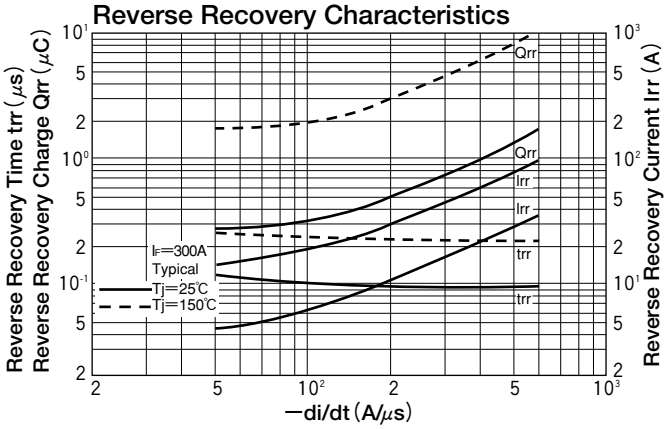
Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics



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