

DIODE MODULE (F.R.D.)

FRD100CA100/120

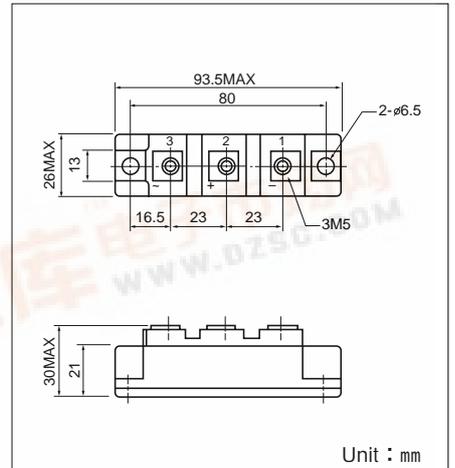
UL;E76102 (M)

FRD100CA is a high speed (fast recovery) dual diode module designed for high power switching application. FRD100CA is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leq 300\text{ns}$
- $I_{F(AV)}$ 100A (each device)
- Isolated mounting construction.
- High Surge Capability

(Applications)

Switching Power Supply. Inverter Welding Power Supply
Power Supply for Telecommunication



Unit : mm

(T_j = 25°C unless otherwise specified)

Maximum Ratings

Symbol	Item	Ratings		Unit
		FRD100CA100	FRD100CA120	
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 = 78°C	100	A	
I _{FSM}	Surge Forward Current	1/2 cycle, 60Hz, peak value, non-repetitive	2000	A	
I ² t	I ² t	Value for one cycle of surge current	16600	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 (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	170	g	

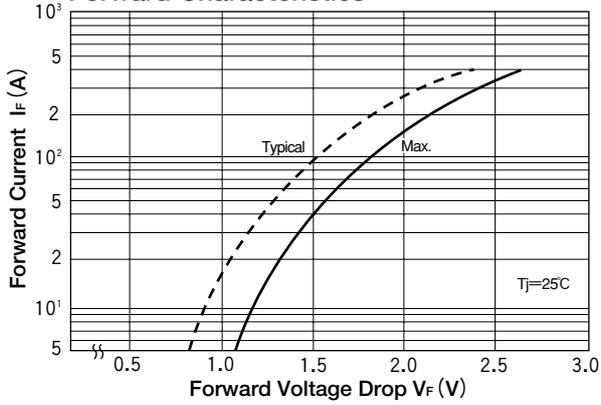
Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I _{RRM}	Repetitive Peak Reverse Current	V _R = V _{RRM} , T _j = 150°C			5.0	mA
V _{FM}	Forward Voltage Drop	I _F = 100A, Inst. measurement			1.8	V
t _{rr}	Reverse Recovery Time	I _F = 100A, -di/dt = 100A/μs			300	ns
R _{th(j-c)}	Thermal Impedance	Junction to case			0.4	°C/W

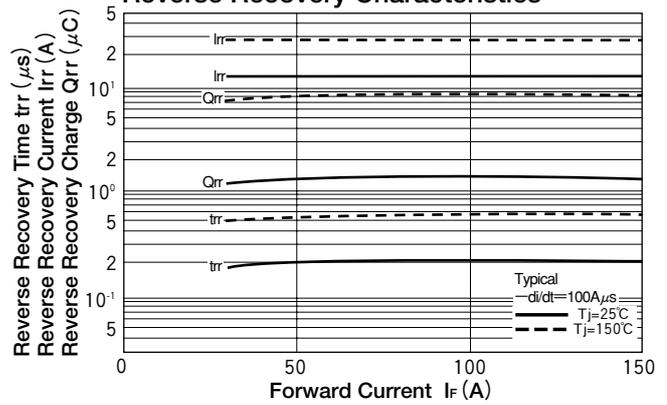


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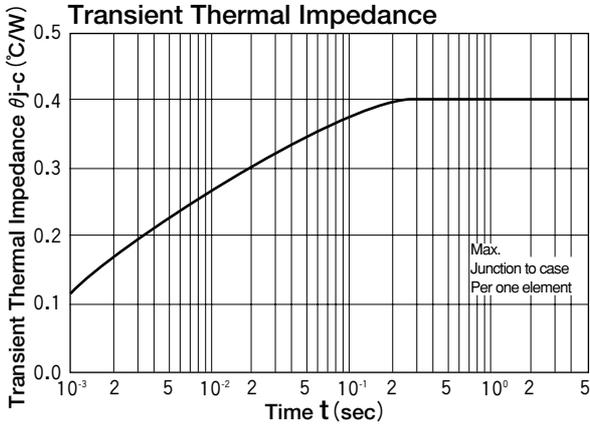
Forward Characteristics



Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics

