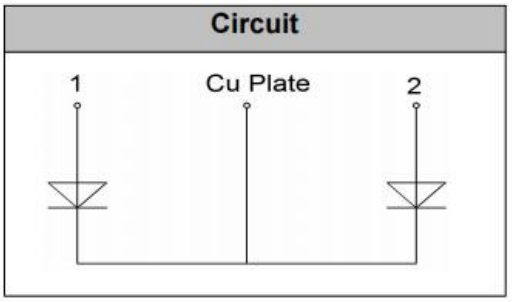


FRED Modules

V_{RRM} 400V
IFAV 200 A



Applications

- Inversion Welder
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Power Factor Correction (PFC) Circuit
- Converter & Chopper

Features

- Soft Reverse Recovery Characteristics
- Ultrafast Reverse Recovery Time
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability

Maximum Ratings

Symbol	Conditions	Values	Units
V_R		400	V
V_{RRM}		400	V
I_{FAV}	T_C=100°C, Per Leg	100	A
	T_C=100°C, Per Module	200	A
I_{FRMS}	T_C=100°C, Per Leg	140	A
I_{FSM}	t=10ms T_J=25℃	1500	A
I^2t	t=10ms T_J=25℃	11250	A^2s
P_D		520	W
T_J		-40 to +150	℃
Tstg		-40 to +125	℃
Mt	To Terminals(M6)	5±15%	N·m
Ms	To Heatsink(M6)	5±15%	N·m
Weight		70	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Junction to Case(Per Leg)	0.24	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
I_{RM}	V_R=400V	--	--	0.5	mA
	V_R=400V, T_J=125°C	--	--	5	mA
V_F	I_F=100A	--	1.15	1.35	V
	I_F=100A, T_J=125°C	--	1.05	1.25	V
trr	I_F=1A, V_R=30V, di_F/dt=-200A/μs	--	38	--	ns
trr	V_R=200V, I_F=100A, di_F/dt=-200A/μs, T_J=25°C	--	95	--	ns
I_{RRM}		--	9	--	A
trr	V_R=200V, I_F=100A, di_F/dt=-200A/μs, T_J=125°C	--	150	--	ns
I_{RRM}		--	14	--	A

Performance Curves

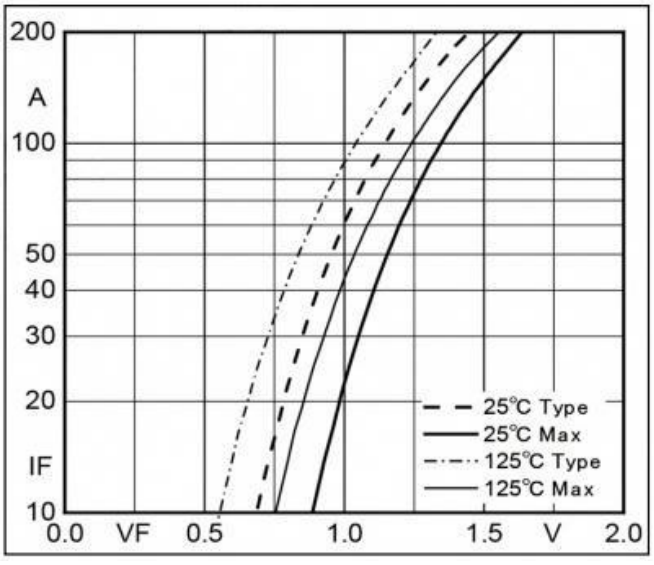


Fig1. Forward Characteristics

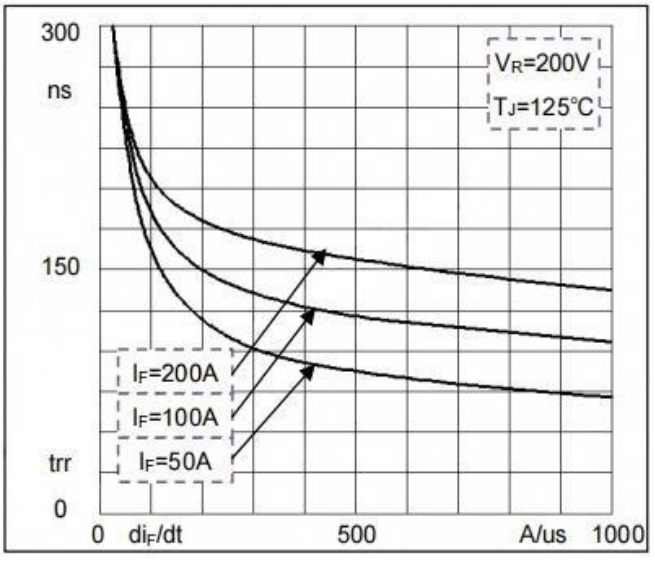


Fig2.Reverse Recovery Time vs di_F/dt

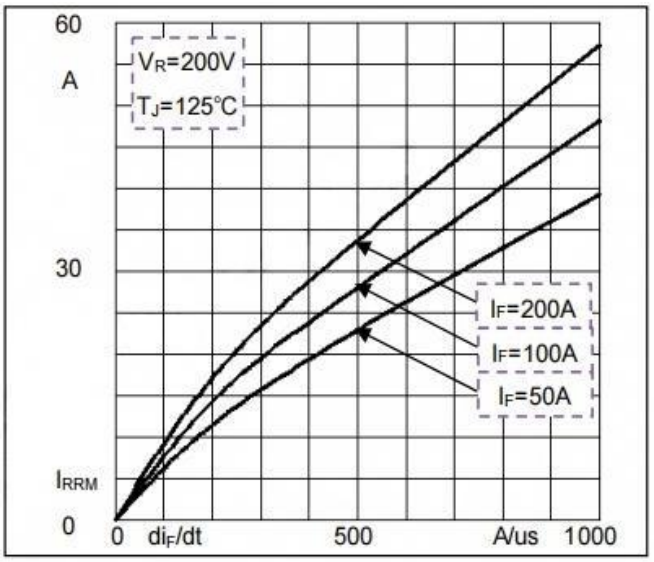


Fig3. Reverse Recovery Current vs di_F/dt

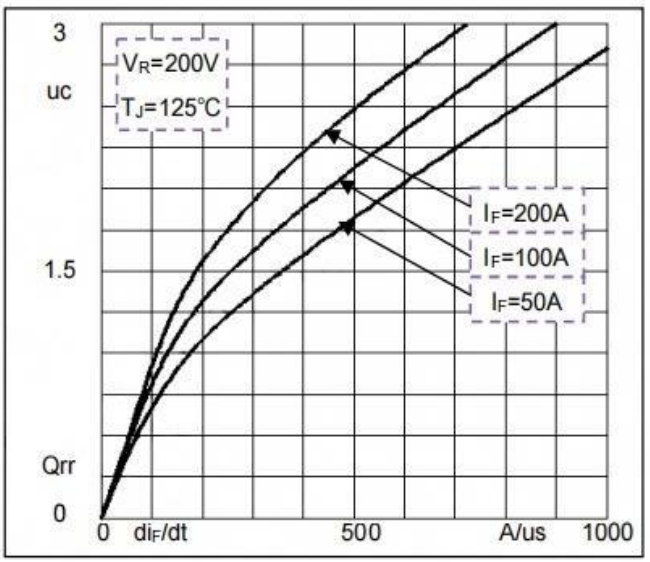
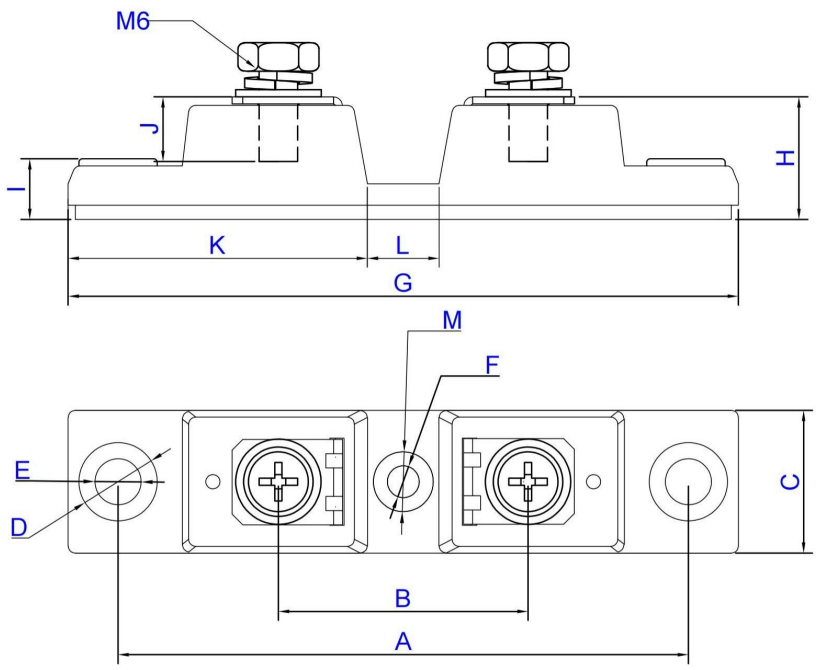


Fig4. Reverse Recovery Charge vs diF/dt

Package Outline Information

CASE: F4N



DIM	Min (mm)	Max (mm)	Note
A	79.5	80.5	
B	34.5	35.5	
C	19.5	20.5	
D	10.5	11.5	Ø
E	6	7	Ø
F	4	5	Ø
G	93	94	
H	16.5	17.5	
I	8	9	
J	8.5	9.5	
K	41.5	42.5	
L	9.5	10.5	
M	8.1	8.7	Ø

Packing Standard

Item	Length: A(mm)	Width: B(mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	40	12
Outer Carton	545	295	240	144

Notice

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