MF200K06F2

RoHS COMPLIANT

FRED Modules

V_{RRM} 600V
I_{FAV} 200 A

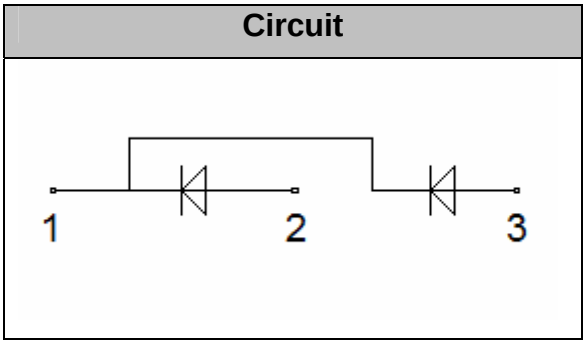
Applications

Inversion Welder
Uninterruptible Power Supply (UPS)
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
Low Inductance Package

Circuit



Maximum Ratings

Symbol	Conditions	Values	Units
V_R		600	V
V_{RRM}		600	V
$I_{F(AV)}$	T_C=110°C, Per Diode	200	A
	T_C=120°C, 20KHz, Per Module	300	A
$I_{F(RMS)}$	T_C=110°C, Per Diode	280	A
I_{FSM}	1/2 Cycle , 50Hz, Sine	2000	A
	1/2 Cycle , 60Hz, Sine	2200	A
I^2t	T_J=45°C, t=10ms, 50Hz, Sine	20000	A^2s
	T_J=45°C, t=8.3ms, 60Hz, Sine	24200	A^2s
P_D		690	W
Visol	AC, Ton=1min	3000	V
T_J		-40 to +150	°C
T_{STG}		-40 to +125	°C
Torque	Recommended M6	5±15%	N·m
Torque	Recommended M6	5±15%	N·m
Weight		160	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per Module	0.18	/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
I_{RM}	V_R=600V	--	--	0.5	mA
	V_R=600V, T_J=125°C	--	--	3	mA
V_F	I_F=200A	--	1.15	1.6	V
	I_F=200A, T_J=125°C	--	0.9	1.25	V
trr	I_F=1A, V_R=30V, di_F/dt=-200A/				

Performance Curves

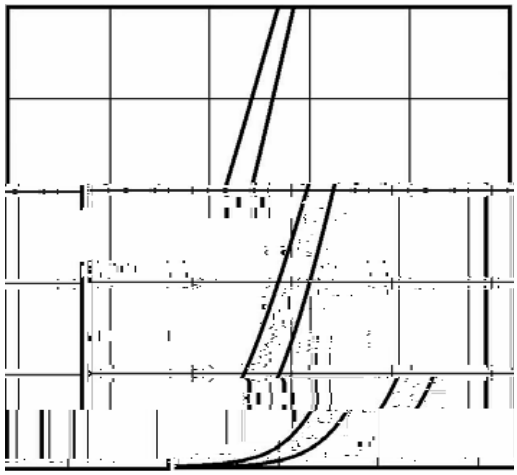


Fig1. Forward Voltage Drop vs Forward Current

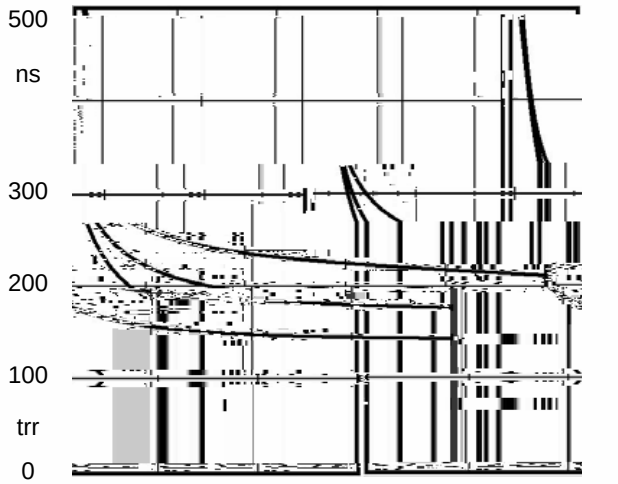


Fig2. Reverse Recovery Time vs di_F/dt

Fig3. Reverse Recovery Current vs di_F/dt

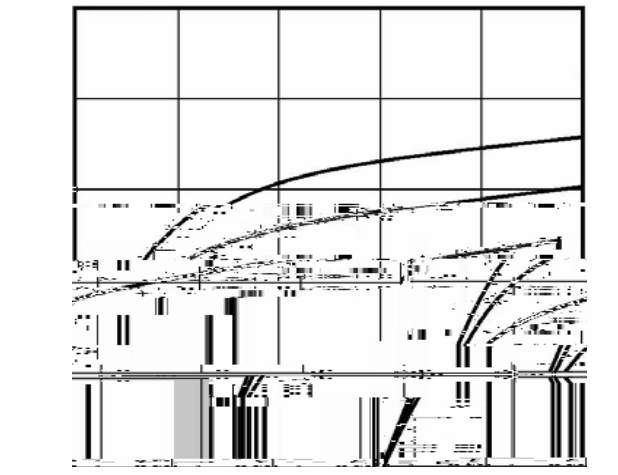
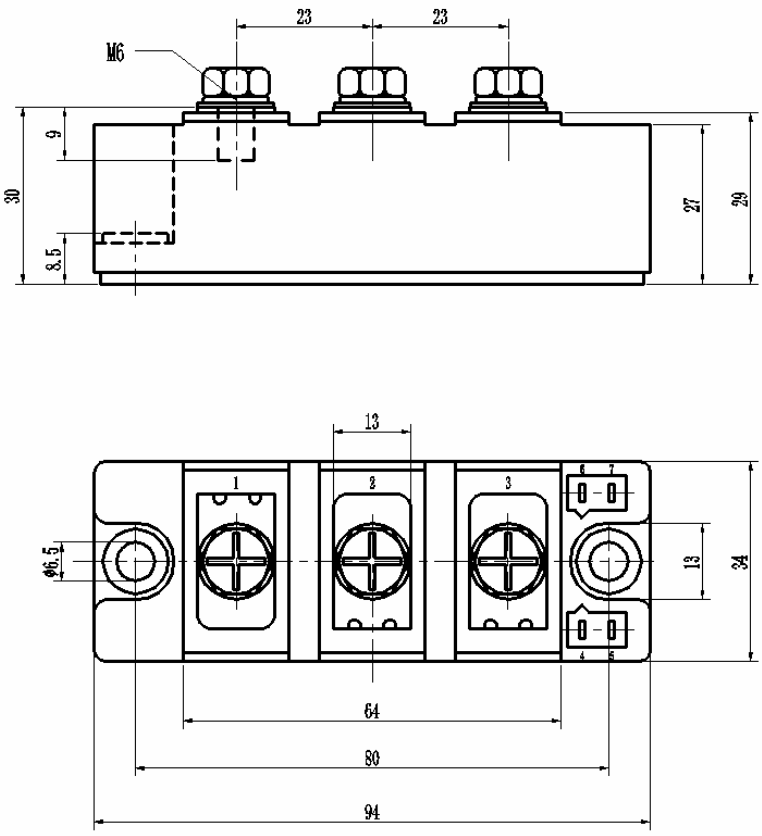


Fig4. Reverse Recovery Charge vs di_F/dt

Package Outline Information

CASE: F2



Dimensions in mm