Micro Commercial Components
130 W Cochran St, Unit B
Simi Valley, CA 93065
USA
Tel:818-701-4933

MF400K04F3

400 Amp
FRED Modules
400 Volts

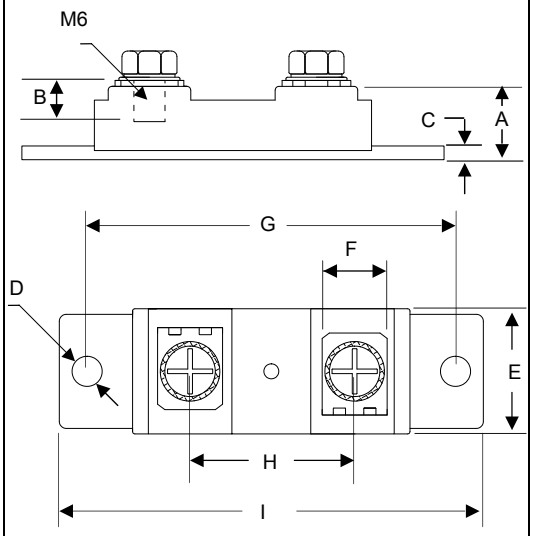
Features

- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- Soft Reverse Recovery Characteristics
- Ultrafast Reverse Recovery Time
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package

Applications

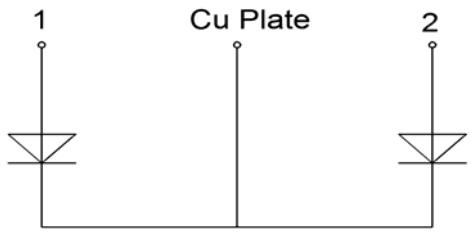
- Inversion Welder
- Uninterruptible Power Supply (UPS)
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Power Factor Correction (PFC) Circuit
- Converter & Chopper

F3



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.618	0.642	15.50	16.50	
B	0.343	0.366	8.50	9.50	
C	0.118	0.130	2.80	3.50	
D	0.256		6.50		∅
E	1.051	1.075	26.50	27.50	
F	0.539	0.563	13.50	14.50	
G	3.138	3.161	79.50	80.50	
H	1.366	1.390	34.50	35.50	
I	3.610	3.634	91.50	92.50	

Circuit



Maximum Ratings

Symbol	Conditions	Values	Units
V_R		400	V
V_{RRM}		400	V
$I_{F(AV)}$	T_C=125°C, Per Diode	200	A
	T_C=125°C, Per Moudle	400	A
	T_C=125°C, 20KHz, Per Moudle	300	A
$I_{F(RMS)}$	T_C=125°C, Per Diode	285	A
I_{FSM}	1/2 Cycle , 50Hz, Sine	4000	A
	1/2 Cycle , 60Hz, Sine	4500	A
I^2t	T_J=45°C, t=10ms, 50Hz, Sine	80000	A^2s
	T_J=45°C, t=8.3ms, 60Hz, Sine	101250	A^2s
P_D		2080	W
T_J		-40 to +150	°C
T_{STG}		-40 to +125	°C
Torque	Recommended（M6）	3～4.7	N·m
Torque	Recommended（M6）	3～4.7	N·m
Weight		92	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$		0.06	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
I_{RM}	V_R=400V	--	--	1	mA
	V_R=400V, T_J=125°C	--	--	2	mA
V_F	I_F=200A	--	1.1	1.35	V
	I_F=200A, T_J=125°C	--	1.0	1.25	V
trr	I_F=1A, V_R=30V, di_F/dt=-200A/μs	--	45	--	ns
trr	V_R=200V, I_F=200A,di_F/dt=-200A/μs, T_J=25°C	--	135	--	ns
I_{RRM}		--	12	--	A
trr	V_R=200V, I_F=200A,di_F/dt=-200A/μs, T_J=125°C	--	210	--	ns
I_{RRM}		--	20	--	A

Performance Curves

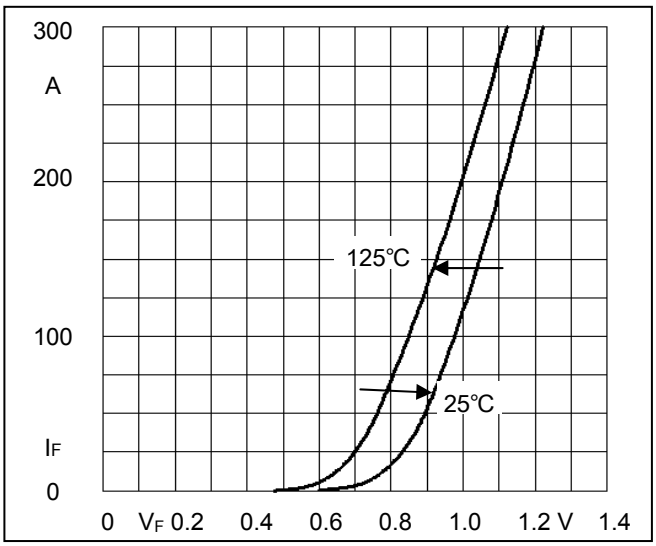


Fig1. Forward Voltage Drop vs Forward Current

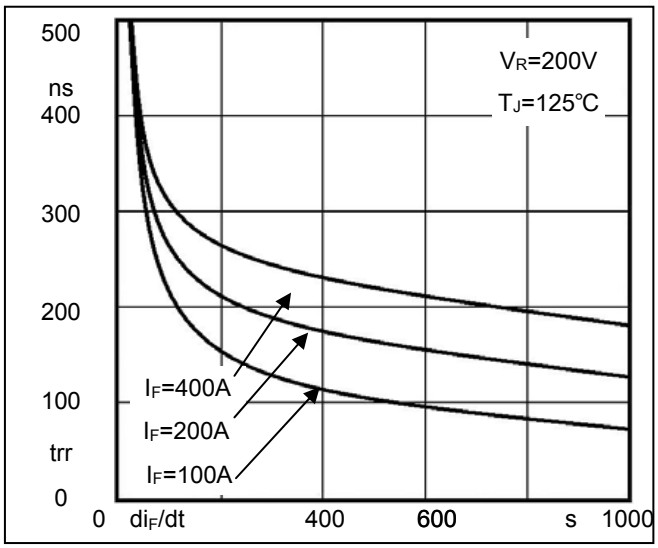


Fig2. Reverse Recovery Time vs di_F/dt

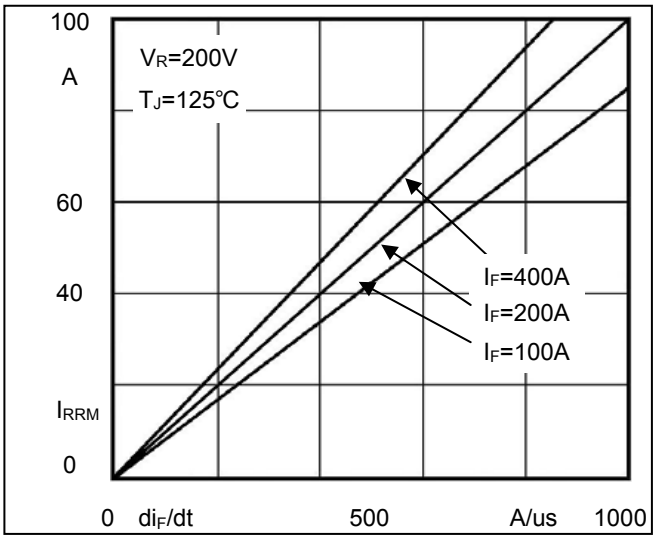


Fig3. Reverse Recovery Current vs di_F/dt

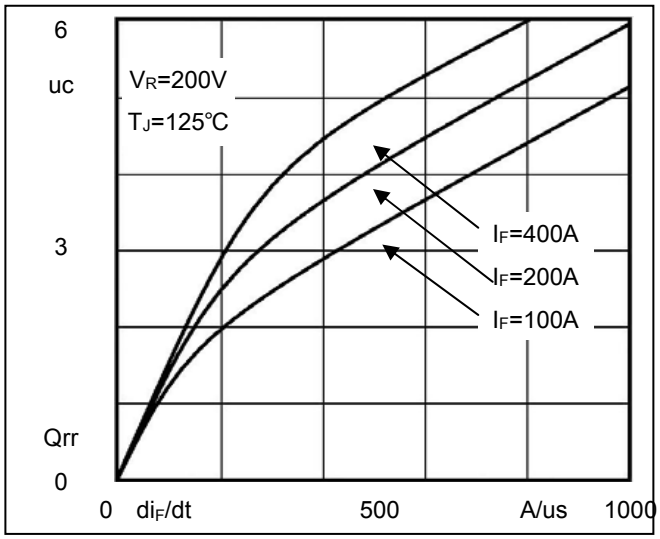


Fig4. Reverse Recovery Charge vs di_F/dt

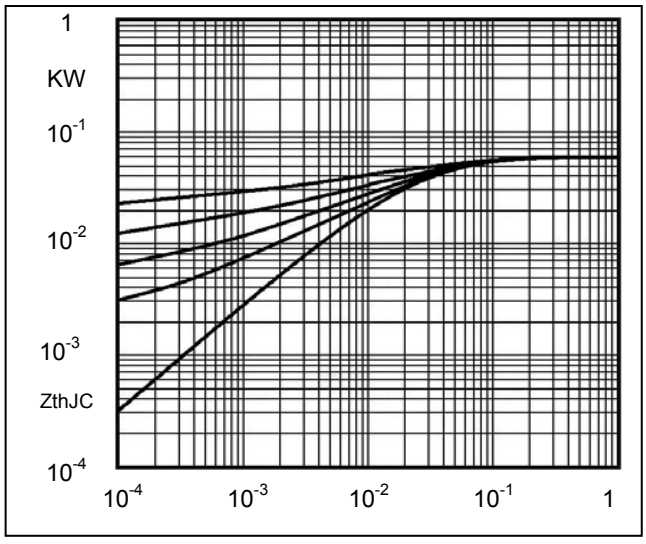


Fig5. Transient Thermal Impedance