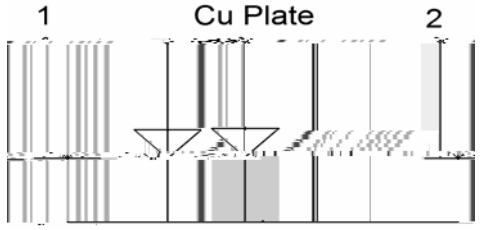
MF200K06F3

RoHS COMPLIANT

FRED Modules

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

Circuit



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

Maximum Ratings

Symbol	Conditions	Values	Units
V_R		600	V
V_{RRM}		600	V
$I_{F(AV)}$	T_C=125°C, Per Diode	100	A
	T_C=125°C, Per Module	200	A
$I_{F(RMS)}$	T_C=125°C, Per Diode	141	A
I_{FSM}	1/2 Cycle , 50Hz, Sine	2100	A
	1/2 Cycle , 60Hz, Sine	2350	A
I^2t	T_J=45°C, t=10ms, 50Hz, Sine	22000	A^2s
	T_J=45°C, t=8.3ms, 60Hz, Sine	27600	A^2s
P_D		1400	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
$R_{th(j-c)}$	Per diode	0.09	/W

Electrical Characteristics

Symbol	Conditions	Values			Units
I_{RM}	V_R=600V	--	--	0.5	mA
	V_R=600V, T_J=125°C	--	--	1	mA
V_F	I_F=100A	--	1.15		V
	I_F=100A, T_J=125°C	--	1.0		V
trr	V_R=300V, I_F=100A, di_F/dt=-200A/ s, T_J=25°C	--	105F		

Performance Curves

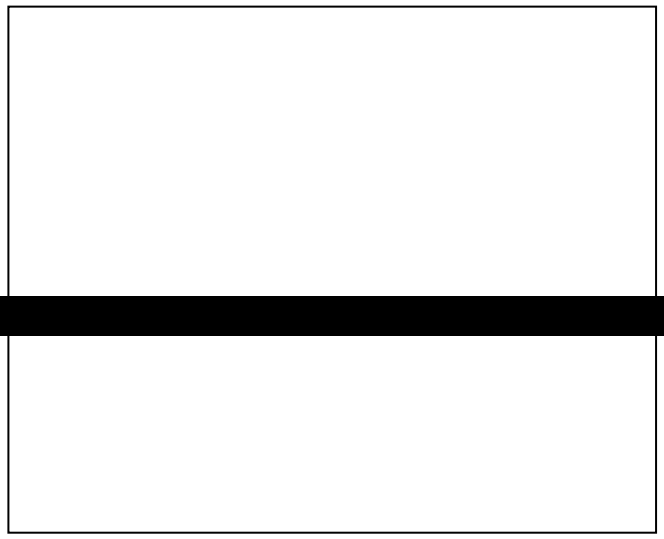


Fig1. Forward Voltage Drop vs Forward Current

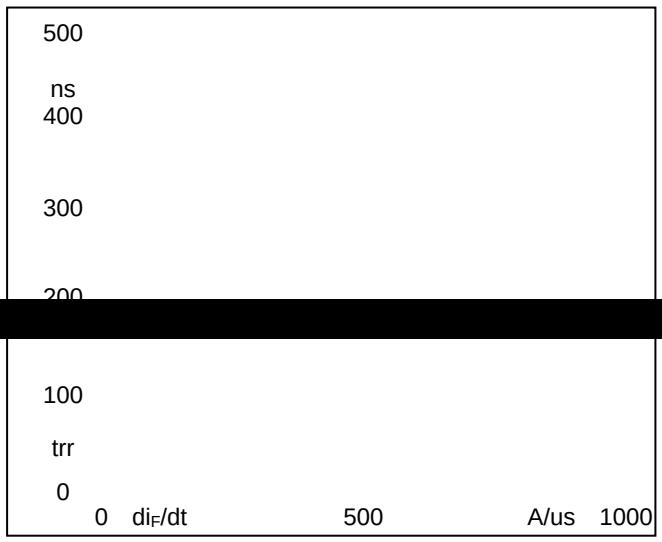


Fig2. Reverse Recovery Time vs di_F/dt

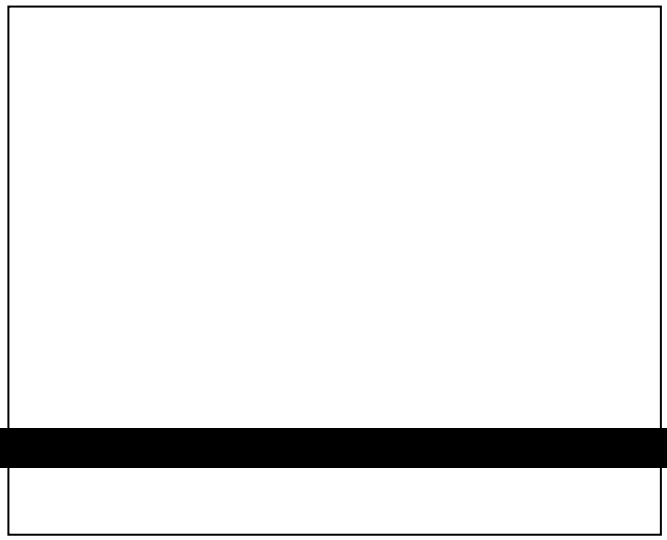


Fig3. Reverse Recovery Current vs di_F/dt

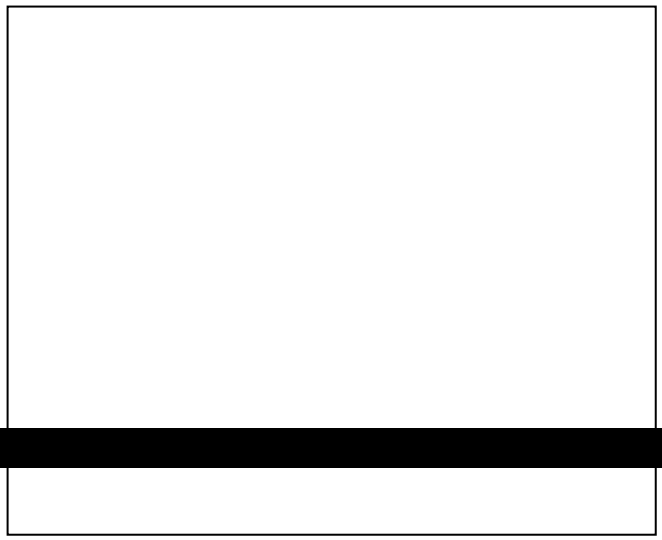


Fig4. Reverse Recovery Charge vs di_F/dt

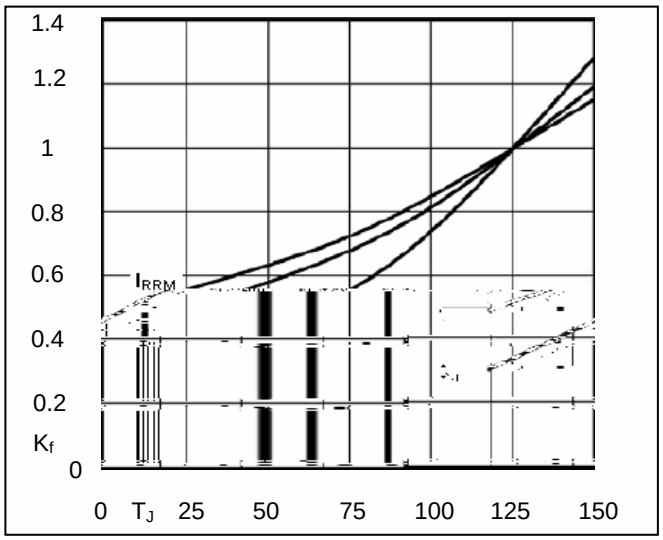


Fig5. Dynamic Parameters vs Junction Temperature

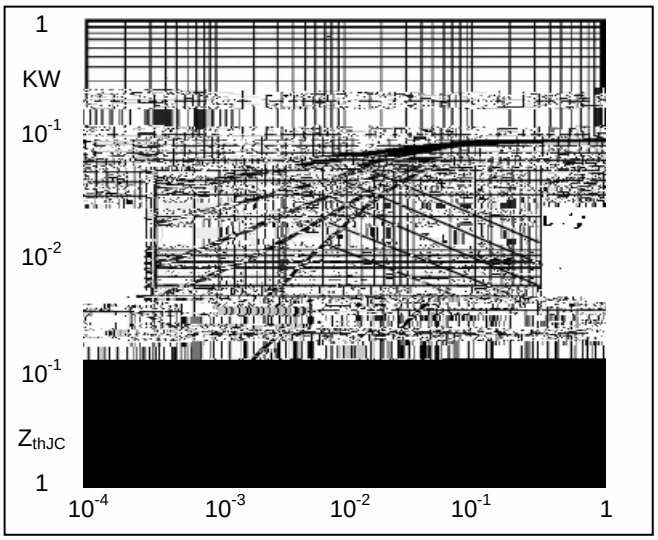
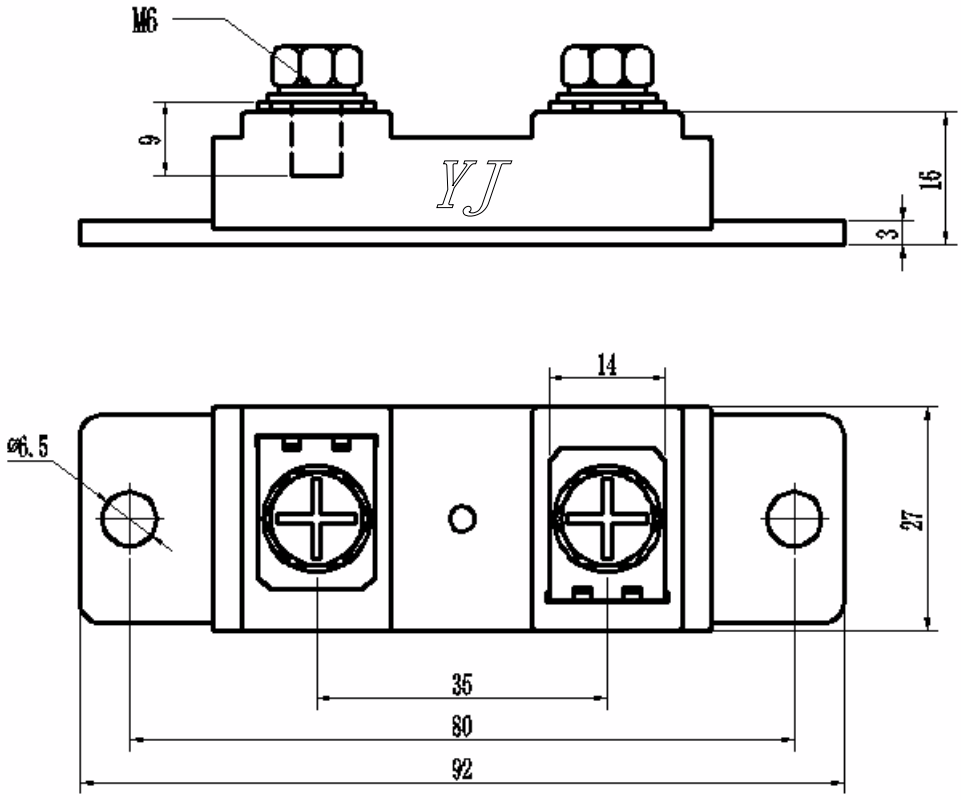


Fig6. Transient Thermal Impedance

Package Outline Information

CASE: F3



Dimensions in mm