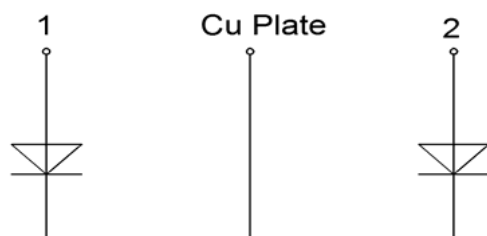


## Features

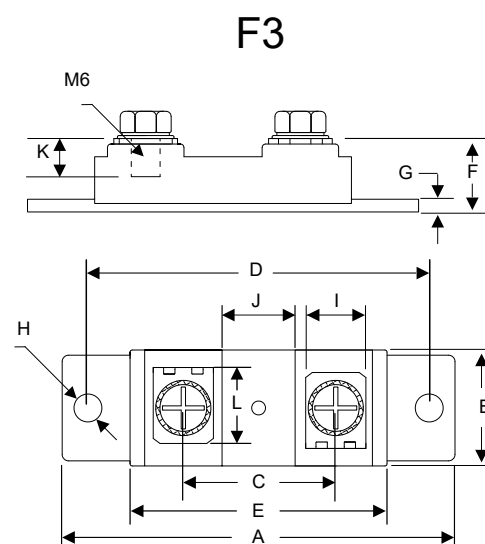
- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- Soft Reverse Recovery Characteristics
- Ultrafast Reverse Recovery Time
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package

## Applications

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



**200 Amp  
FRED Modules  
400 Volts**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	3.602	3.642	91.50	92.50	
B	1.043	1.083	26.50	27.50	
C	1.358	1.398	34.50	35.50	
D	3.130	3.169	79.50	80.50	
E	2.343	2.382	59.50	60.50	
F	0.650	0.689	16.50	17.50	
G	0.110	0.126	2.80	3.20	
H	0.244	0.268	6.20	6.80	Ø
I	0.543	0.559	13.80	14.20	
J	0.650	0.689	16.50	17.50	
K	0.335	0.374	8.50	9.50	
L	0.717	0.740	18.20	18.80	

Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## Maximum Ratings

Symbol	Conditions	Values	Units
$V_R$		400	V
$V_{RRM}$		400	V
$I_{F(AV)}$	$T_C=125^{\circ}\text{C}$ , Per Diode	100	A
	$T_C=125^{\circ}\text{C}$ , Per Moudle	200	A
	$T_C=125^{\circ}\text{C}$ , 20KHz, Per Moudle	150	A
$I_{F(RMS)}$	$T_C=125^{\circ}\text{C}$ , Per Diode	150	A
$I_{FSM}$	1/2 Cycle , 50Hz, Sine	1500	A
	1/2 Cycle , 60Hz, Sine	1800	A
$I^2t$	$T_J=45^{\circ}\text{C}$ , $t=10\text{ms}$ , 50Hz, Sine	11250	$\text{A}^2\text{s}$
	$T_J=45^{\circ}\text{C}$ , $t=8.3\text{ms}$ , 60Hz, Sine	16200	$\text{A}^2\text{s}$
$P_D$		833	W
$T_J$		-40 to +150	$^{\circ}\text{C}$
$T_{STG}$		-40 to +125	$^{\circ}\text{C}$
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	0.15	$^{\circ}\text{C/W}$

## Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$I_{RM}$	$V_R=400\text{V}$	--	--	0.5	mA
	$V_R=400\text{V}$ , $T_J=125^{\circ}\text{C}$	--	--	1	mA
$V_F$	$I_F=100\text{A}$	--	1.1	1.35	V
	$I_F=100\text{A}$ , $T_J=125^{\circ}\text{C}$	--	1.0	1.25	V
$t_{rr}$	$I_F=1\text{A}$ , $V_R=30\text{V}$ , $di_F/dt=-200\text{A}/\mu\text{s}$	--	38	--	ns
$t_{rr}$	$V_R=200\text{V}$ , $I_F=100\text{A}$ , $di_F/dt=-200\text{A}/\mu\text{s}$ , $T_J=25^{\circ}\text{C}$	--	95	--	ns
$I_{RRM}$		--	8.5	--	A
$t_{rr}$	$V_R=200\text{V}$ , $I_F=100\text{A}$ , $di_F/dt=-200\text{A}/\mu\text{s}$ , $T_J=125^{\circ}\text{C}$	--	150	--	ns
$I_{RRM}$		--	14	--	A

## Performance Curves

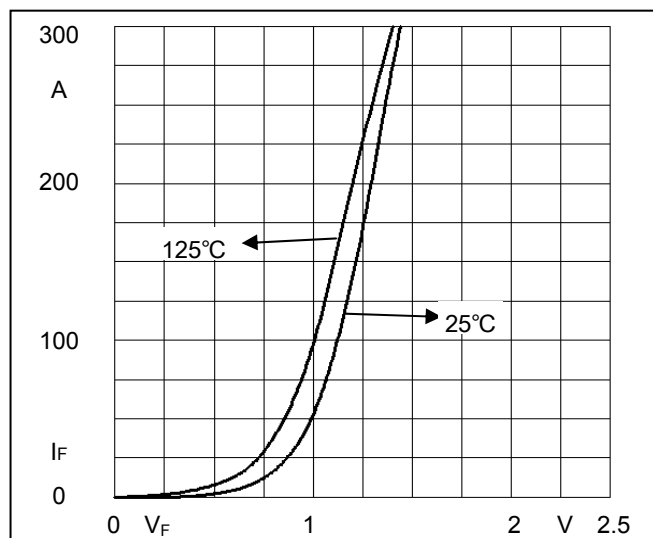


Fig1. Forward Voltage Drop vs Forward Current

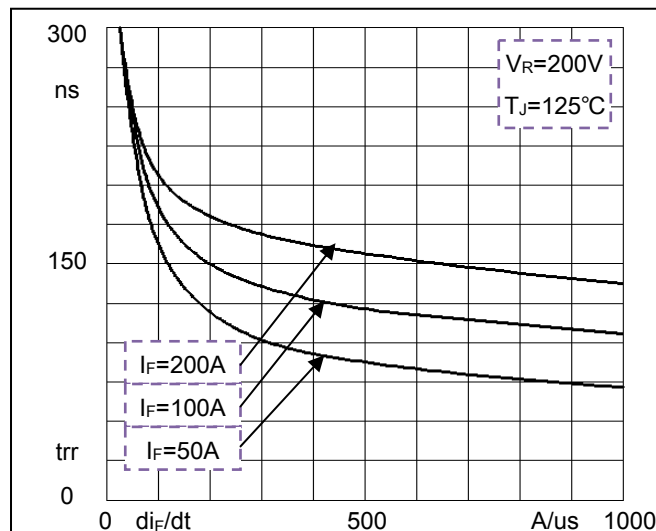


Fig2. Reverse Recovery Time vs  $di_F/dt$

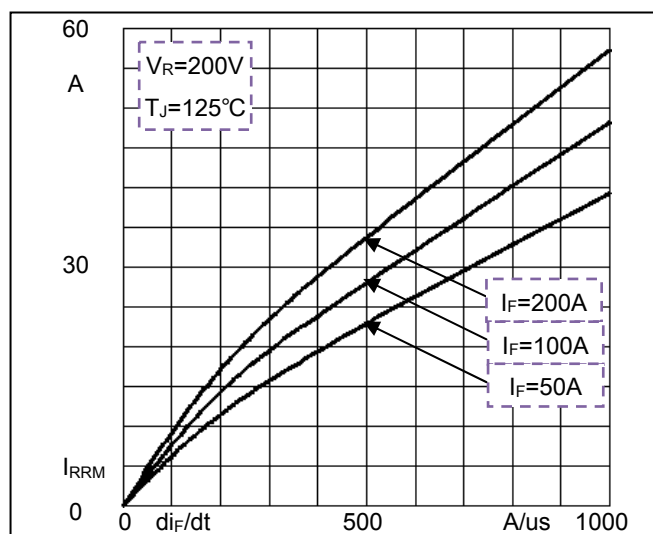


Fig3. Reverse Recovery Current vs  $di_F/dt$

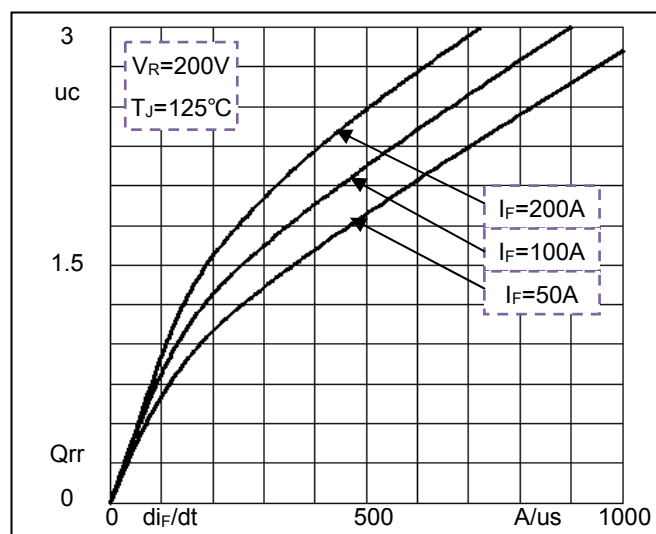


Fig4. Reverse Recovery Charge vs  $di_F/dt$

## Ordering Information

Device	Packing
Part Number-BP	Bulk: 10PCS/BOX ;100PCS/CTN

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