

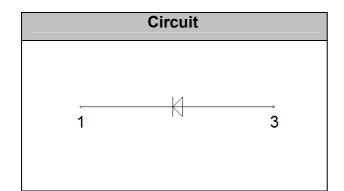
#### Features

- 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

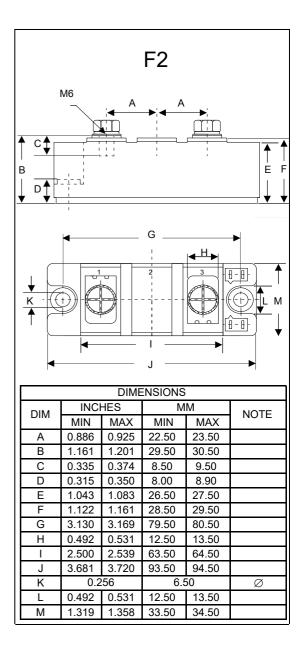
#### Applications

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





# 100 Amp FRED Modules 1200 Volts





## **Maximum Ratings**

Symbol	Conditions	Values	Units
V <sub>R</sub>		1200	V
V <sub>RRM</sub>		1200	V
I <sub>F(AV)</sub>	T <sub>C</sub> =110°C, Per Diode	100	A
I <sub>F(RMS)</sub>	T <sub>C</sub> =110°C, Per Diode	140	A
	1/2 Cycle , 50Hz, Sine	1100	A
I <sub>FSM</sub>	1/2 Cycle , 60Hz, Sine	1200	A
l <sup>2</sup> t	T <sub>J</sub> =45°C, t=10ms, 50Hz, Sine	6050	A <sup>2</sup> s
PD		140	W
Visol	AC, Ton=1min	3000	V
TJ		-40 to +150	°C
T <sub>STG</sub>		-40 to +125	°C
Torque	Recommended(M6)	4.5	N∙m
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Weight		140	g

## **Thermal Characteristics**

Symbol	Conditions	Values	Units
Rth(j-c)	Junction - to - Case	0.22	°C/W

# **Electrical Characteristics**

Symbol	Conditions	Values			Units
		Min.	Тур.	Max.	Units
I <sub>RM</sub>	V <sub>R</sub> =1200V			1	mA
	V <sub>R</sub> =1200V, T <sub>J</sub> =125°C			5	mA
V <sub>F</sub>	I <sub>F</sub> =100A		1.58		V
	I <sub>F</sub> =100A, T <sub>J</sub> =125°C		1.35		V
trr	I <sub>F</sub> =1A, V <sub>R</sub> =30V, di <sub>F</sub> /dt=-200A/μs		55		ns
trr	V <sub>R</sub> =600V, I <sub>F</sub> =100A, di <sub>F</sub> /dt=-200A/µs, T <sub>J</sub> =25°C		135		ns
I <sub>RRM</sub>			10		А
trr	V <sub>R</sub> =600V, I <sub>F</sub> =100A, di <sub>F</sub> /dt=-200A/µs, T <sub>J</sub> =125°C		380		ns
I <sub>RRM</sub>			21		А



## **Performance Curves**

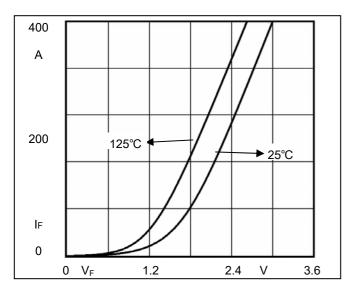


Fig1. Forward Voltage Drop vs Forward Current

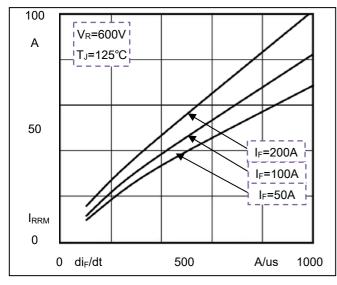


Fig3. Reverse Recovery Current vs di<sub>F</sub>/dt

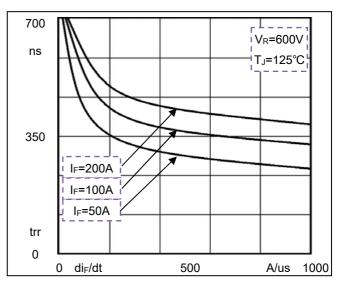


Fig2. Reverse Recovery Time vs di<sub>F</sub>/dt

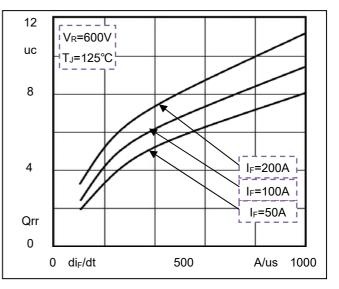


Fig4. Reverse Recovery Charge vs di<sub>F</sub>/dt



## **Ordering Information**

Device	Packing	
Part Number-BP	Bulk: 8PCS/BOX ;80PCS/CTN	

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