

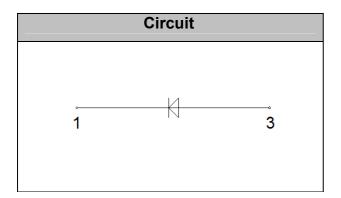
Features

- 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

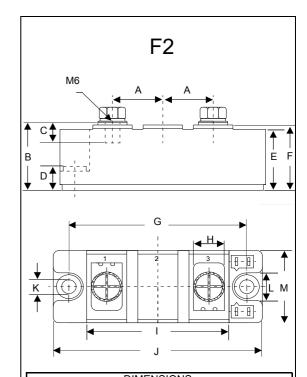
Applications

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





500 Amp FRED Modules 1200 Volts



DIMENSIONS						
DIM	INCHES		MM		NOTE	
	MIN	MAX	MIN	MAX	NOIL	
Α	0.886	0.925	22.50	23.50		
В	1.161	1.201	29.50	30.50		
С	0.335	0.374	8.50	9.50		
D	0.315	0.350	8.00	8.90		
Е	1.043	1.083	26.50	27.50		
F	1.122	1.161	28.50	29.50		
G	3.130	3.169	79.50	80.50		
Н	0.492	0.531	12.50	13.50		
- 1	2.500	2.539	63.50	64.50		
J	3.681	3.720	93.50	94.50		
K	0.2	256	6.50		Ø	
L	0.492	0.531	12.50	13.50		
М	1.319	1.358	33.50	34.50		



Maximum Ratings

Symbol	Conditions	Values	Units
V_R		1200	V
V_{RRM}		1200	V
I _{F(AV)}	T _C =90°C,	500	Α
I _{F(RMS)}	T _C =90°C,	T _C =90°C, 700 A	
1	1/2 Cycle , 50Hz, Sine	5000	Α
I _{FSM}	1/2 Cycle , 60Hz, Sine	5250	Α
l ² t	T _J =45°C, t=10ms, 50Hz, Sine	105000	A ² s
''	T _J =45°C, t=8.3ms, 60Hz, Sine	125000	AS
P _D		1200	W
T _J		-40 to +150	°C
T _{STG}		-40 to +125	°C
Torque	Module-to-Sink Recommended (M6) 4.5		N⋅m
Torque	Module Electrodes Recommended (M6)	4.5	N⋅m
Weight		160	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Junction-to-Case	0.10	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
Syllibol	Conditions		Тур.	Max.	Ullits
_	V _R =1200V			1	mA
I _{RM}	V _R =1200V, T _J =125°C			5	mA
V	I _F =500A		1.85	2	V
V_{F}	I _F =500A, T _J =125°C		1.7	1.8	V
trr	$I_F=1A$, $V_R=30V$, $di_F/dt=-200A/\mu s$		80		ns
trr	V COOV I FOOA di (di COOA);; T OF9C		200		ns
I _{RRM}	V_R =600V, I_F =500A, di_F/dt =-200A/ μ s, T_J =25°C		18		Α
trr	V_R =600V, I_F =500A, di_F/dt =-200A/ μ s, T_J =125°C		600		ns
I _{RRM}			40		Α



Performance Curves

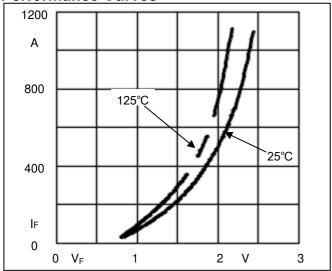


Fig1. Forward Voltage Drop vs Forward Current

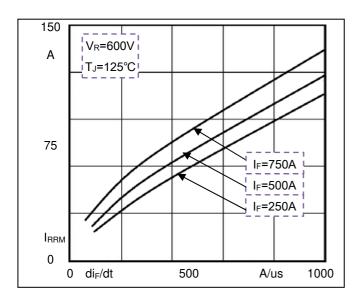


Fig3. Reverse Recovery Current vs di_F/dt

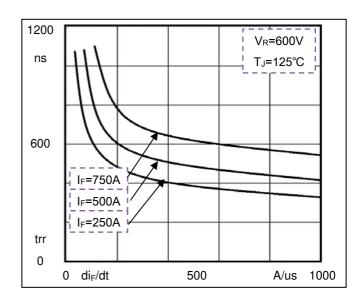


Fig2. Reverse Recovery Time vs di_F/dt

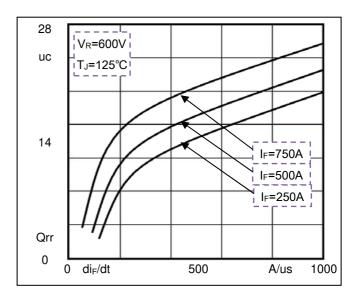


Fig4. Reverse Recovery Charge vs di_F/dt



Ordering Information

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

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