



## FRED Modules

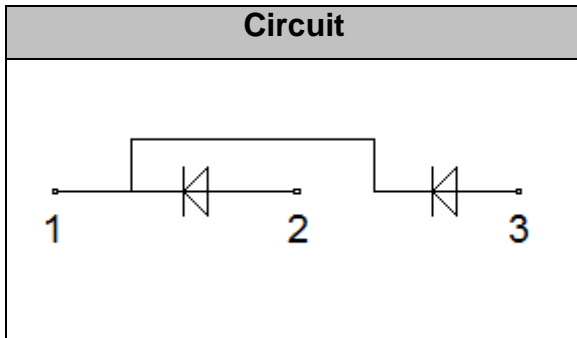
**V<sub>RRM</sub>** 600V  
**I<sub>FAV</sub>** 300 A

### 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
$I_{F(AV)}$	$T_C=110^{\circ}\text{C}$ , Per Diode	300	A
	$T_C=120^{\circ}\text{C}$ , 20KHz, Per Module	400	A
$I_{F(RMS)}$	$T_C=110^{\circ}\text{C}$ , Per Diode	420	A
$I_{FSM}$	1/2 Cycle , 50Hz, Sine	3000	A
	1/2 Cycle , 60Hz, Sine	3200	A
$I^2t$	$T_J=45^{\circ}\text{C}$ , $t=10\text{ms}$ , 50Hz, Sine	45000	$\text{A}^2\text{s}$
	$T_J=45^{\circ}\text{C}$ , $t=8.3\text{ms}$ , 60Hz, Sine	51200	$\text{A}^2\text{s}$
$P_D$		890	W
Visol	AC, $T_{on}=1\text{min}$	3000	V
$T_J$		-40 to +150	$^{\circ}\text{C}$
$T_{STG}$		-40 to +125	$^{\circ}\text{C}$
Torque	Recommended (M6)	$4\pm 15\%$	N·m
Torque	Recommended (M6)	$4\pm 15\%$	N·m
Weight		160	g

## Thermal Characteristics

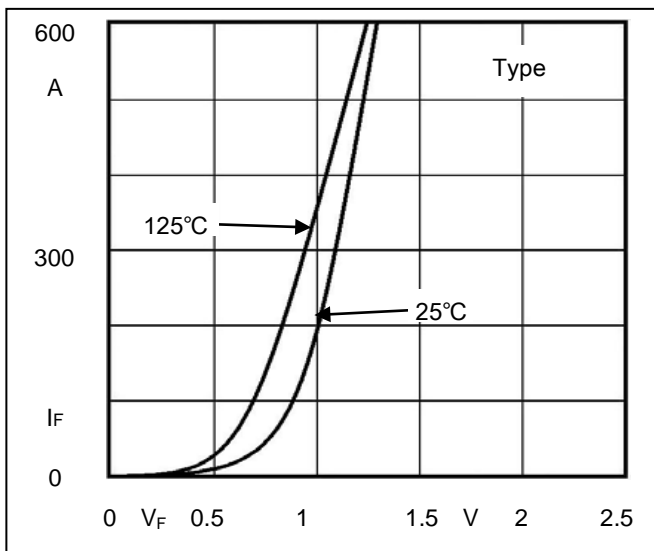
Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per Module	0.14	$^{\circ}\text{C/W}$



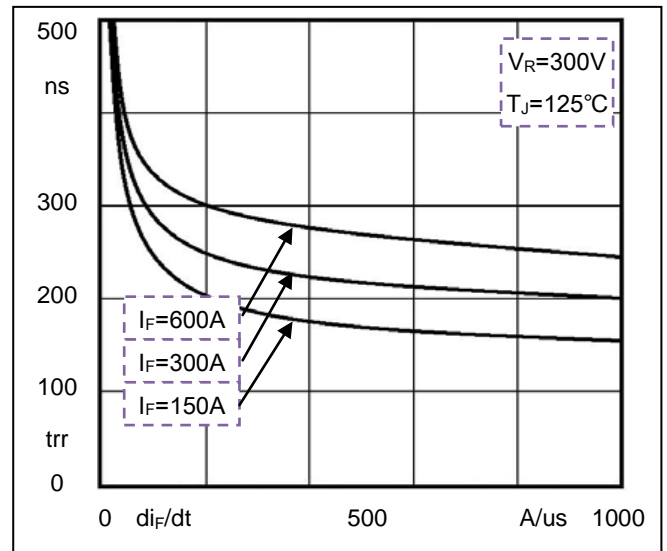
**Electrical Characteristics**

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$I_{RM}$	$V_R=600V$	--	--	0.5	mA
	$V_R=600V, T_J=125^\circ C$	--	--	5	mA
$V_F$	$I_F=300A$	--	1.15	1.65	V
	$I_F=300A, T_J=125^\circ C$	--	0.9	1.45	V
trr	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	--	55	--	ns
trr	$V_R=300V, I_F=300A, di_F/dt=-200A/\mu s, T_J=25^\circ C$	--	145	--	ns
$I_{RRM}$		--	17	--	A
trr	$V_R=300V, I_F=300A, di_F/dt=-200A/\mu s, T_J=125^\circ C$	--	240	--	ns
$I_{RRM}$		--	30	--	A

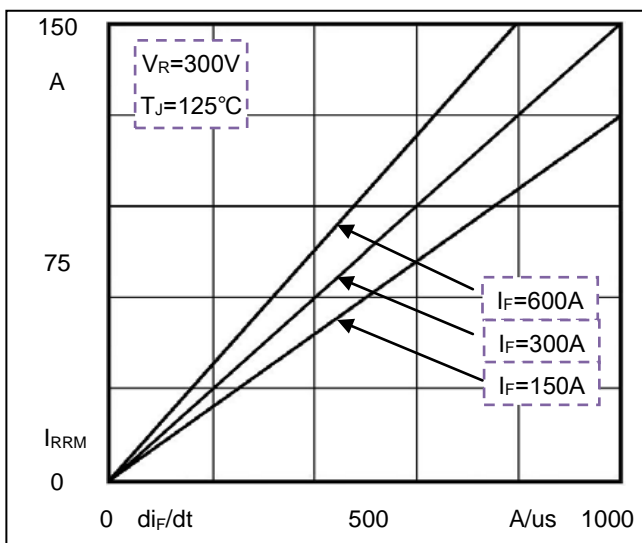
**Performance Curves**



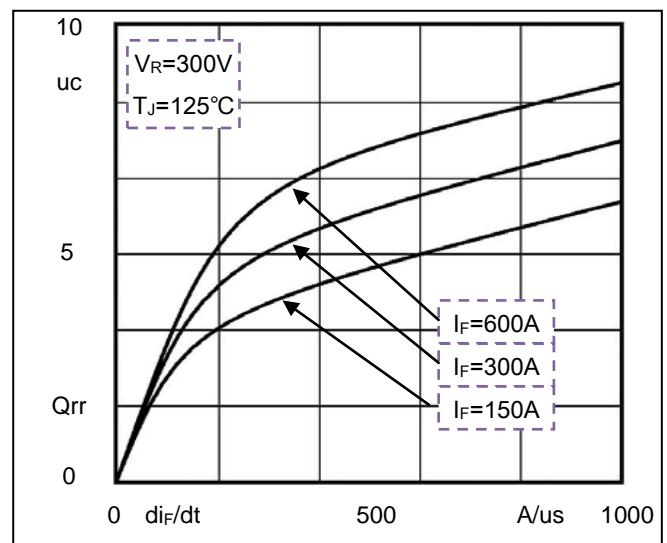
**Fig1. Forward Voltage Drop vs Forward Current**



**Fig2. Reverse Recovery Time vs  $di_F/dt$**



**Fig3. Reverse Recovery Current vs  $di_F/dt$**

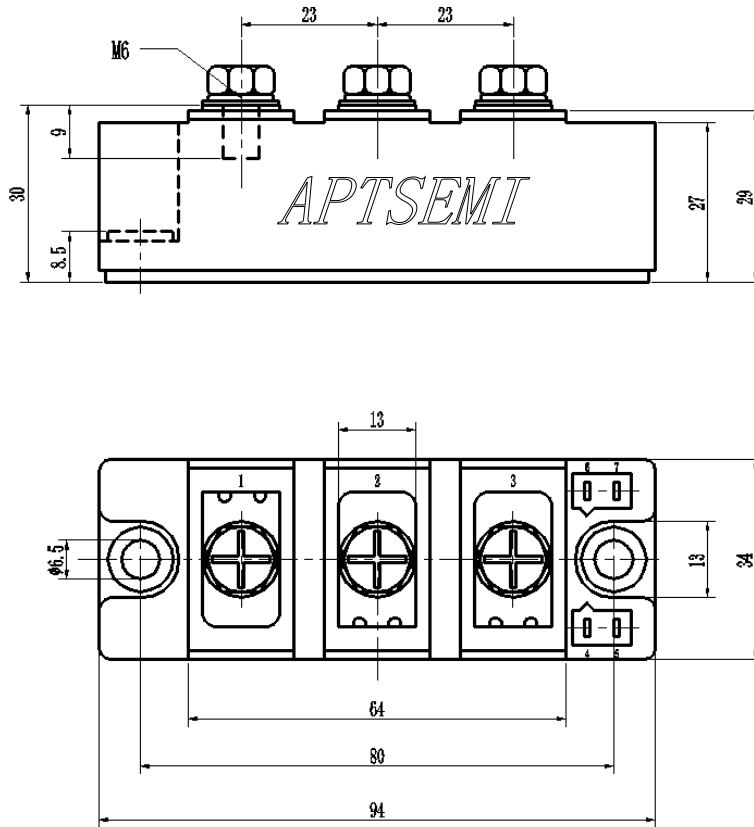


**Fig4. Reverse Recovery Charge vs  $di_F/dt$**



**Package Outline Information**

**CASE: F2**



**Dimensions in mm**

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Schottky Diodes & Rectifiers](#) category:*

*Click to view products by [Yangjie](#) manufacturer:*

Other Similar products are found below :

[CUS06\(Te85L,Q,M\)](#) [MA4E2508M-1112](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR30H100MFST1G](#) [MMBD301M3T5G](#)  
[PMAD1103-LF](#) [PMAD1108-LF](#) [RB160M-50TR](#) [RB520S-30](#) [RB551V-30](#) [D83C](#) [DD350N18K](#) [DZ435N40K](#) [DZ600N16K](#)  
[BAS16E6433HTMA1](#) [BAS 3010S-02LRH E6327](#) [BAT 15-099R E6327](#) [BAT 54-02LRH E6327](#) [NRVBAF360T3G](#) [NRVTS10100MFST1G](#)  
[NRVTS12100EMFST1G](#) [NSR05F40QNXT5G](#) [NSVR05F40NXT5G](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SBAT54CWT1G](#)  
[SK32A-LTP](#) [SK33A-TP](#) [SK34A-TP](#) [SK34B-TP](#) [SMD1200PL-TP](#) [ACDBN160-HF](#) [SS3003CH-TL-E](#) [STPS3045CPIRG](#) [STPS30S45CW](#)  
[PDS3100Q-7](#) [GA01SHT18](#) [CRS10I30A\(Te85L,QM\)](#) [CRS10I30B\(Te85L,QM\)](#) [MBR1240MFST1G](#) [MBR20100CT-BP](#) [MBRB30H30CT-1G](#)  
[BAS28E6433HTMA1](#) [BAS 70-02L E6327](#) [BYS11-90-E3TR3](#) [JANTX1N5712-1](#) [VS-STPS40L45CW-N3](#)