

## FMXS-4202S

June, 2011

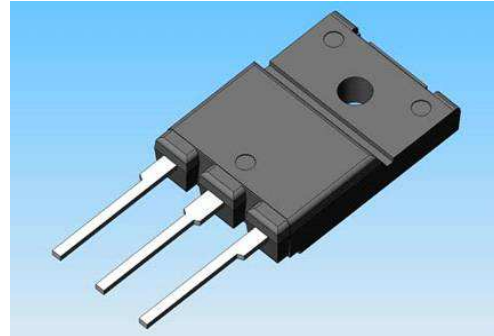
Fast Recovery Diode

### General Description

FRD that has excellent high speed performance is incorporated into the TO-3PF at high current package. It achieved a balance between high speed at high temperature operates and low-VF.

### Package

(TO-3PF 3pin)



### Applications

- A DC-DC converters.
- A high current secondary rectifier.
- A high frequencies rectifier circuit, etc.

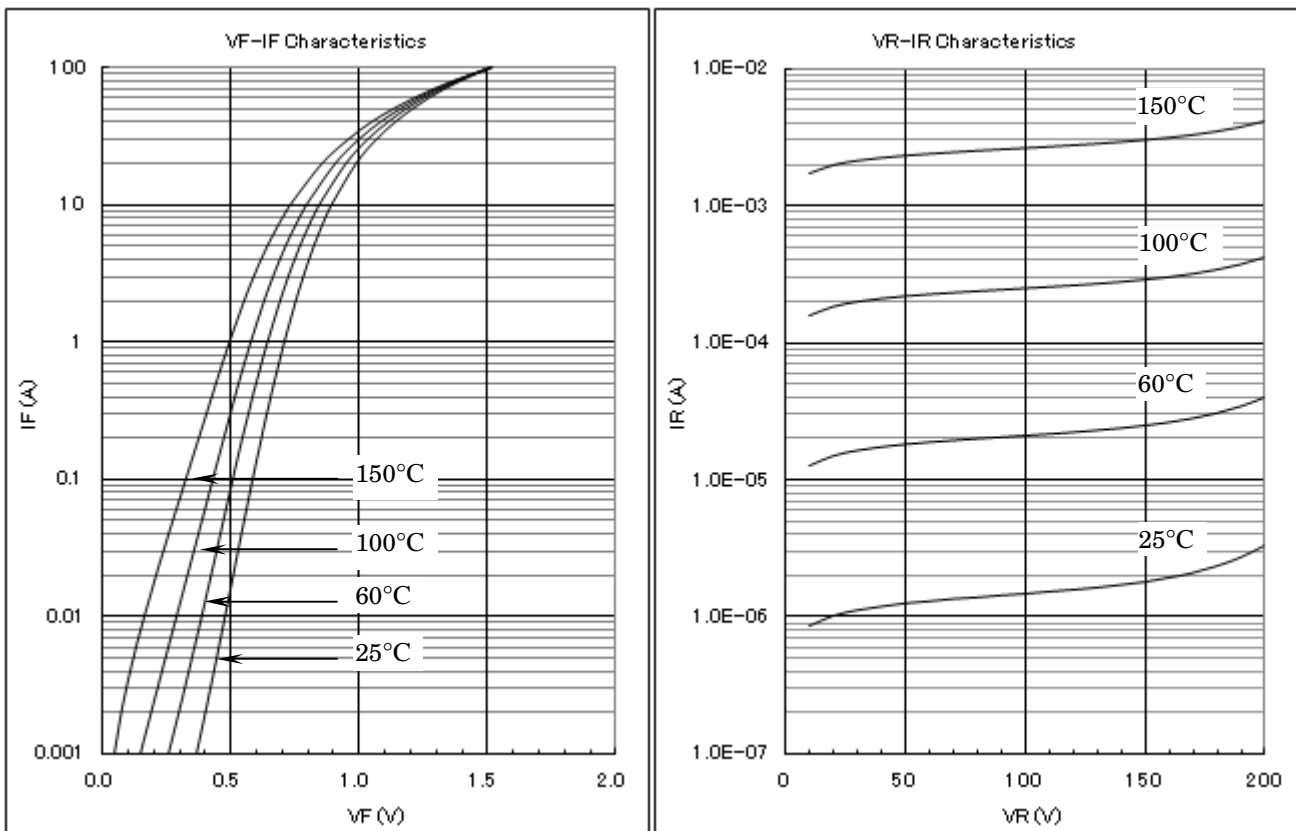
### Features

- An ultrafast recovery diode.
- A balance low-VF and high speed performance at high temperature.
- A great radiation performance due to high-current package.
- A great isolation performance due to full mold package.

### Key Specifications

Item	Unit	Rating	Conditions
$V_{RM}$	V	200	
$V_F$	V	1.05	$I_F=10A$
$I_{F(AV)}$	A	20	
$t_{rr}$	ns	30	

### Typical Characteristics



VF-IF&VR-IR show ratings per one chip.

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★ **Absolute maximum ratings**

No.	Item	Symbol	Unit	Rating	Conditions
1	Transient Peak Reverse Voltage	$V_{RSM}$	V	200	
2	Peak Reverse Voltage	$V_{RM}$	V	200	
3	Average Forward Current	$I_{F(AV)}$	A	20	
4	Peak Surge Forward Current	$I_{FSM}$	A	150	10msec. Half sinewave, one shot
5	$I^2t$ Limiting Value	$I^2t$	A <sup>2</sup> s	112.5	1msec ≤ t ≤ 10msec
6	Junction Temperature	$T_j$	°C	-40~ +150	
7	Storage Temperature	$T_{stg}$	°C	-40~ +150	

No.1,2,4&5 show ratings per one chip.

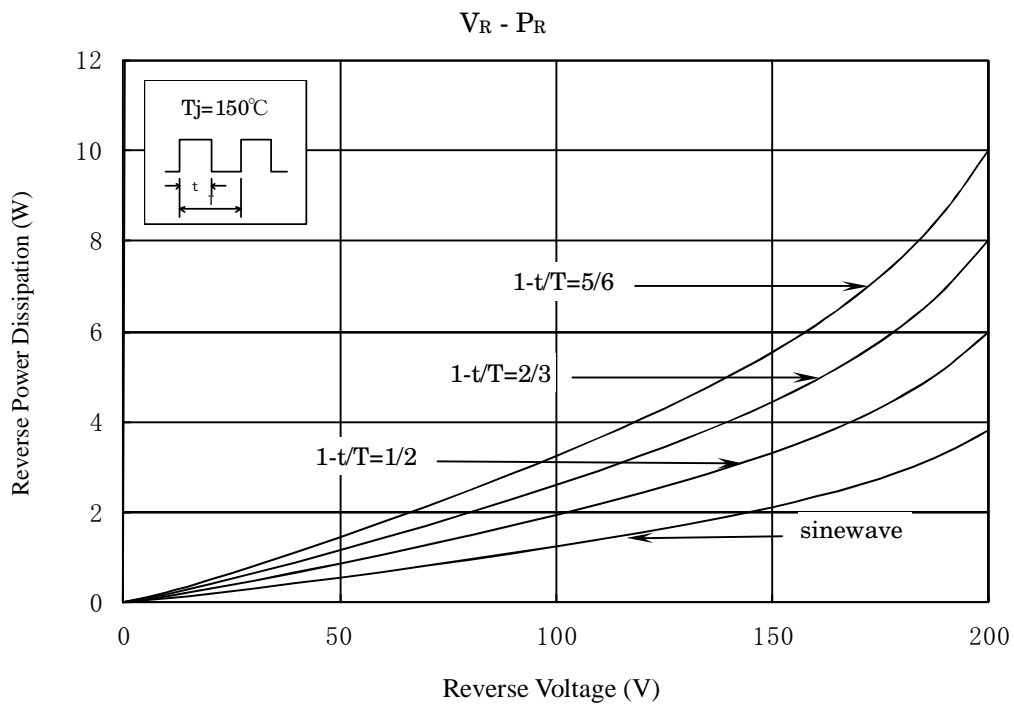
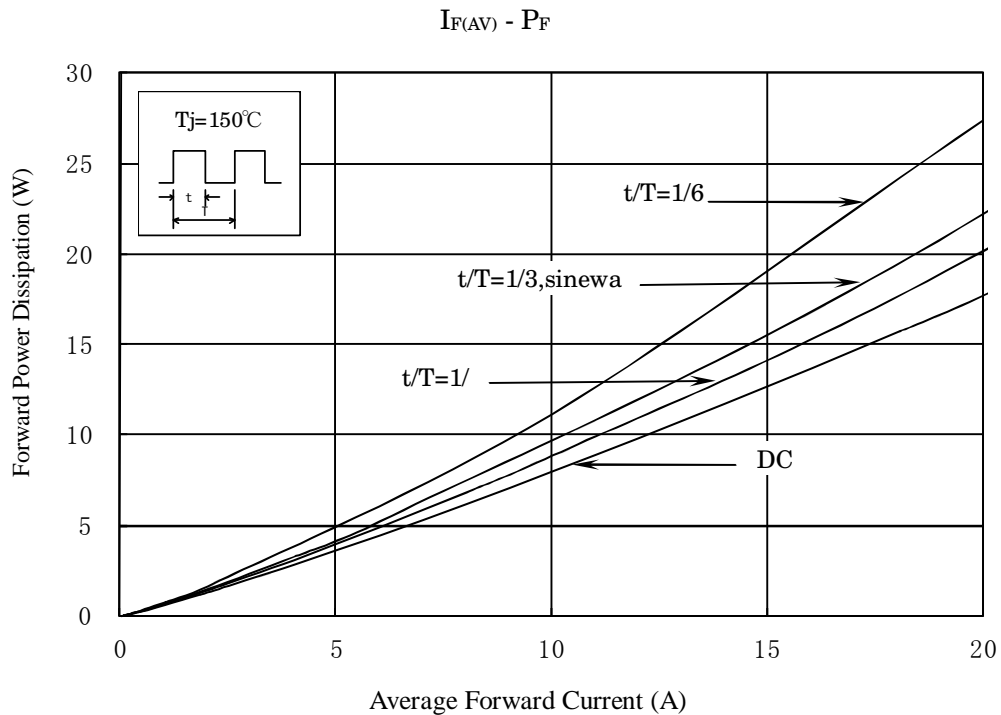
★ **Electrical characteristics (Ta=25°C, unless otherwise specified)**

No.	Item	Symbol	Unit	Value	Conditions
1	Forward Voltage Drop	$V_F$	V	1.05 max.	$I_F=10A$
2	Reverse Leakage Current	$I_R$	uA	50 max.	$V_R=V_{RM}$
3	Reverse Leakage Current Under High Temperature	$H \cdot I_R$	mA	30 max.	$V_R=V_{RM}, T_j=150^\circ C$
4	Reverse Recovery Time	trr1	ns	30 max.	$I_F=I_{RP}=500mA,$ $T_j=25^\circ C, 90\%$ Recovery point
		trr2	ns	25 max.	$I_F=500mA, I_{RP}=1A,$ $T_j=25^\circ C, 75\%$ Recovery point
5	Thermal Resistance	$R_{th(j-l)}$	°C /W	2.0 max.	Between Junction and case

No.1,2,3&4 show characteristics per one chip.

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★ Characteristics



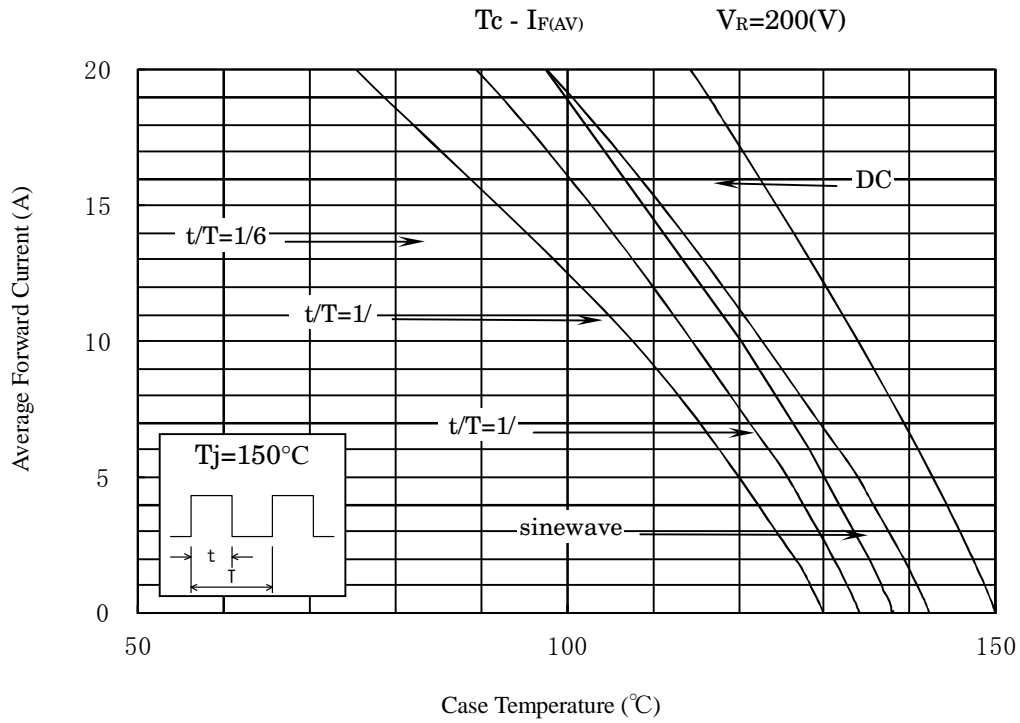
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★ Derating



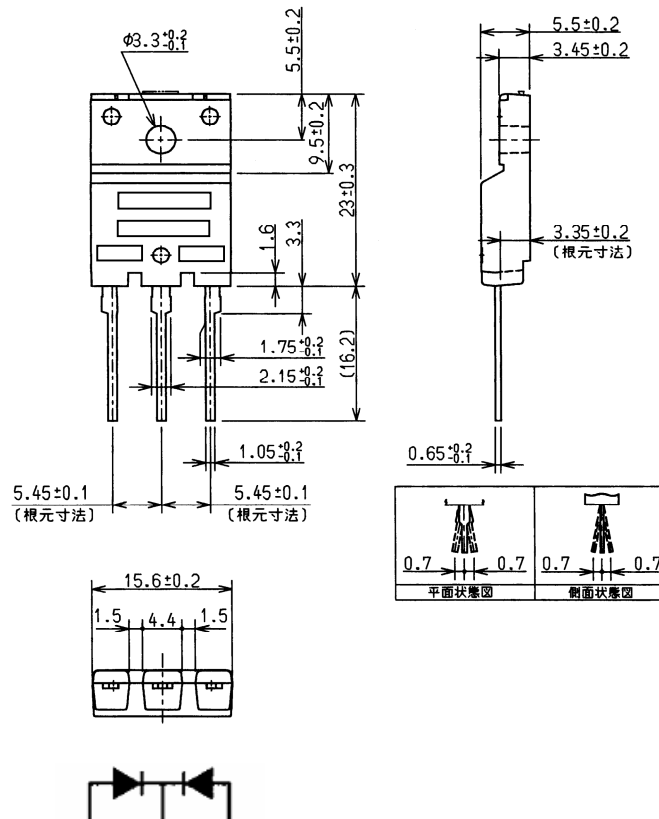
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★ Package information (mm)



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