Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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SANKEN ELECTRIC

FMX-4206S

Fast Recovery Diode

Jan. 2010

General Description

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

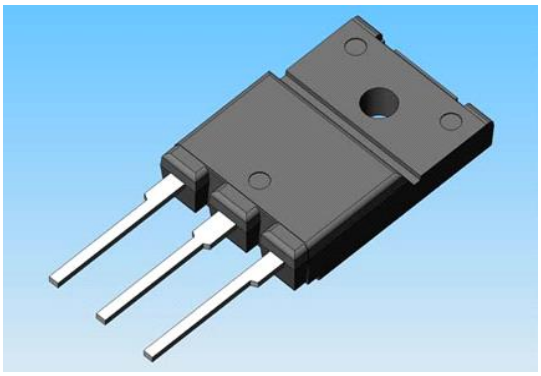
Applications

- DCM or CCM type PFC circuit
  (Power factor improvement circuit)
- DC-DC converters.
  (Forward type/ flyback type/ current resonance type)

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.

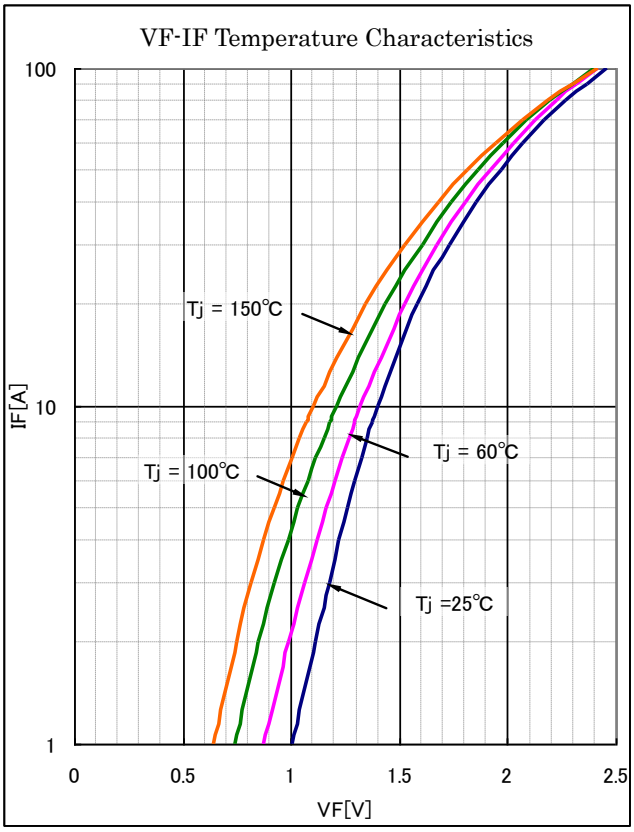
Package (TO-3PF 3pin)

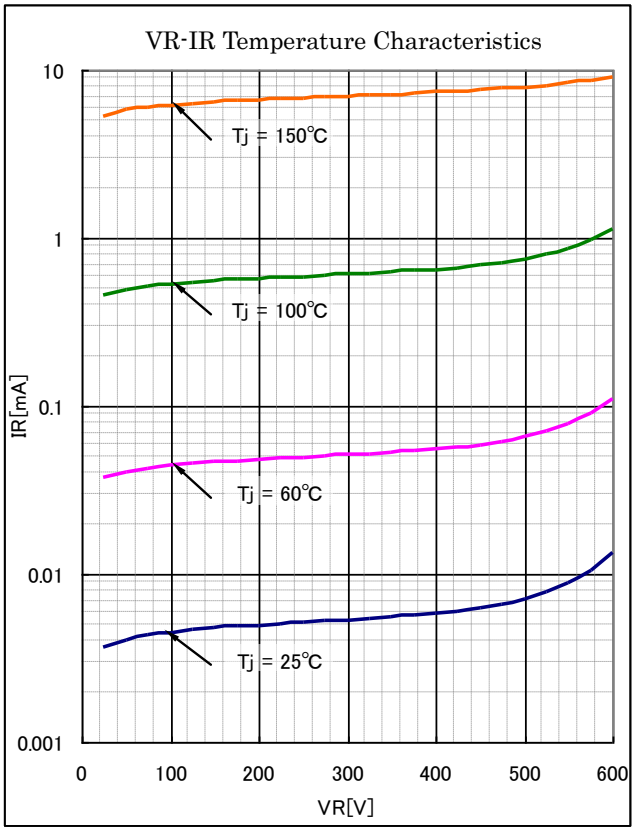


Key Specifications

Item	Unit	Rating	Conditions
V_{RM}	V	600	
V_F	V	1.5	I_F=10A
$I_{F(AV)}$	A	20	
$t_{rr}1$	ns	30	
$t_{rr}2$	ns	—	

Typical Characteristics





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

✶ **Absolute maximum ratings**

No.	Item	Symbol	Unit	Rating	Conditions
1	Transient Peak Reverse Voltage	V_{RSM}	V	600	
2	Peak Reverse Voltage	V_{RM}	V	600	
3	Average Forward Current	$I_{F(AV)}$	A	20	Refer to Derating (Page4)
4	Peak Surge Forward Current	I_{FSM}	A	100	10msec. Half sinewave, one shot
5	I^2t Limiting Value	I^2t	A^2s	50	1msec≦t≦10msec
6	Junction Temperature	T_j	℃	-40～+150	
7	Storage Temperature	T_{stg}	℃	-40～+150	

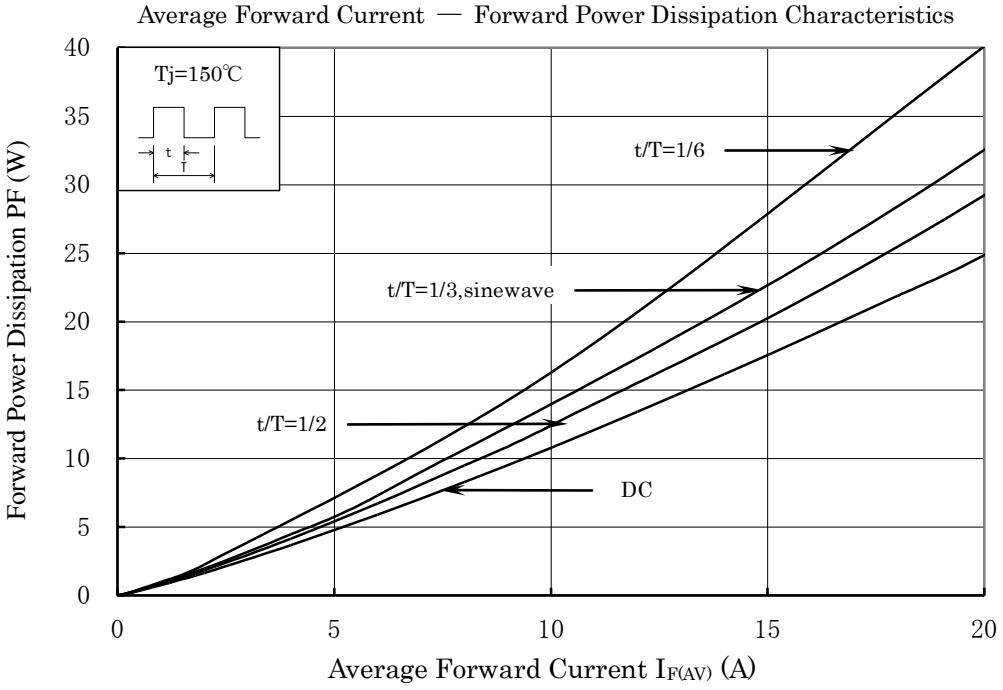
No.1,2,4&5 show characteristics per one chip.

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

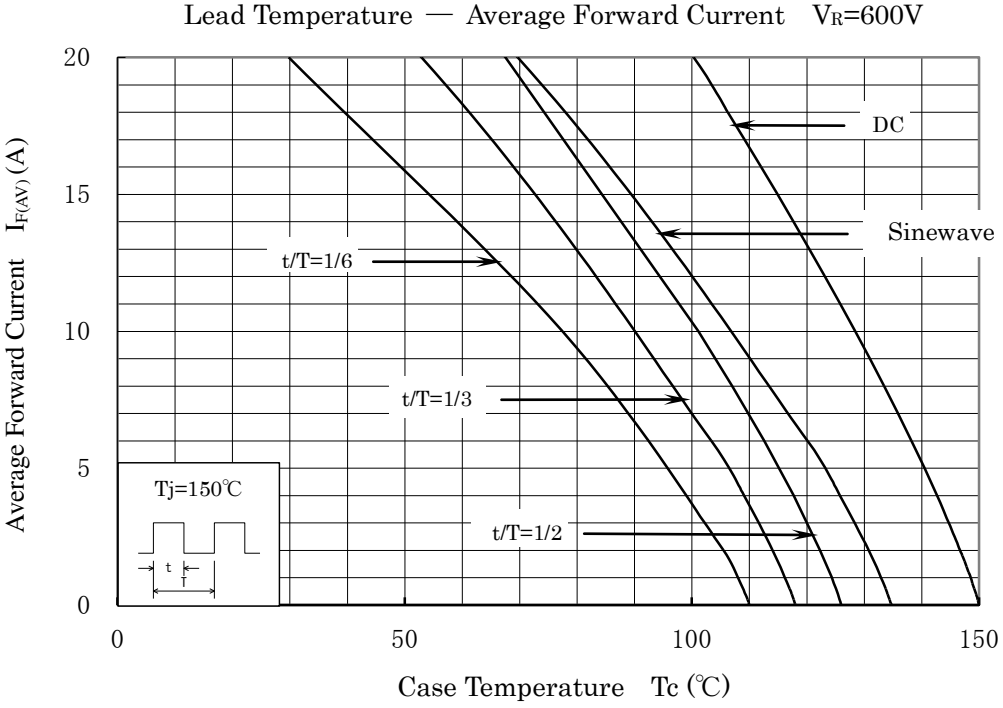
No.	Item	Symbol	Unit	Value	Conditions
1	Forward Voltage Drop	V_F	V	1.5 max.	I_F=10A
2	Reverse Leakage Current	I_R	uA	100 max.	$V_R=V_{RM}$
3	Reverse Leakage Current Under High Temperature	$H\cdot I_R$	mA	20 max.	$V_R=V_{RM}$, T_j=150℃
4	Reverse Recovery Time	t_{rr}	ns	30 max.	$I_F=I_{RP}$=500mA 90% Recovery point, T_j=25℃
		$H\cdot t_{rr}$	ns	102 typ .	$I_F=I_{RP}$=500mA 90% Recovery point, T_j=150℃
5	Forward Voltage Drop	$R_{th(j-c)}$	℃/W	2.0 max.	Between Junction and case

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

★ **Characteristics**



★ **Derating**



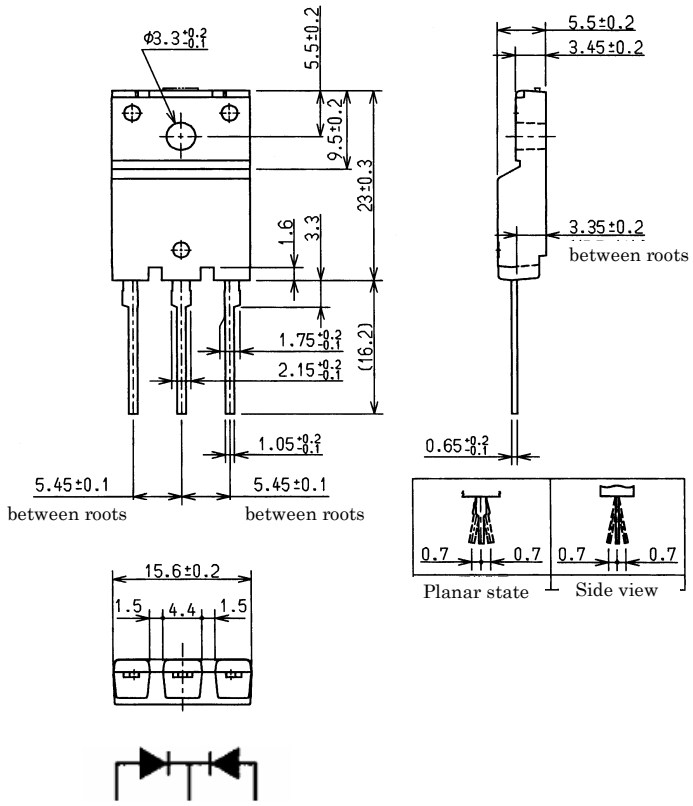
SANKEN ELECTRIC

FMX-4206S

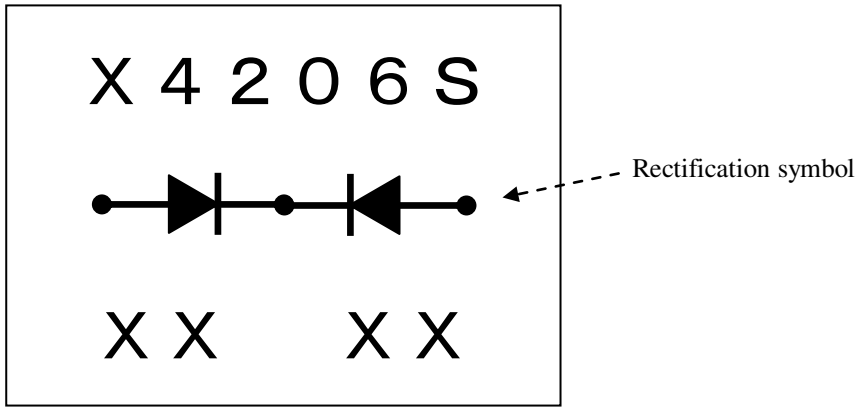
Jan. 2010

Fast Recovery Diode

★ **Package information (mm)**



★ **Marking**



X4206S: Part number FMX-4206S is described “X4206S”.

XXXX: Lot number (manufacture year, month, day) is described 4-digit numbers.