SANKEN ELECTRIC

SJPX-H3

Fast Recovery Diode

May. 2016

General Description

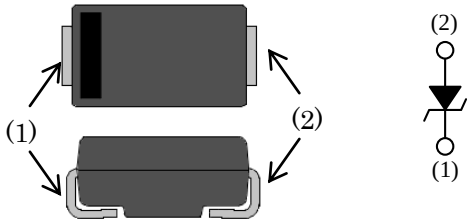
SJPX-H3 has the characteristics of low VF and superior trr at high temperature. High efficiency is achieved by reducing the loss of circuit at high temperature.

Applications

- DC-DC converters
- AC adapter
- High frequency rectification circuit

Package

SJP



(1) Cathode
(2) Anode
Not to Scale

Features

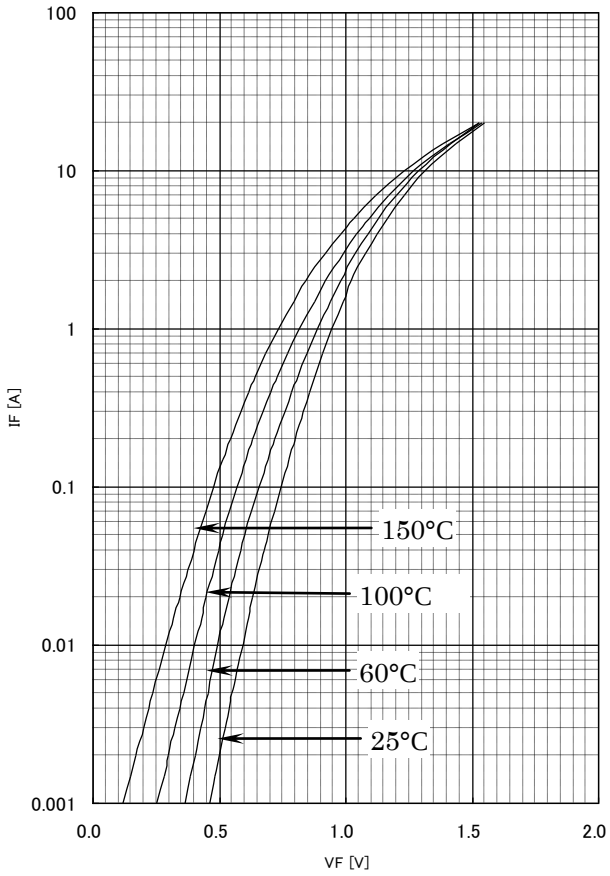
- Super-high speed FRD
- Low leakage current at high temperature

Key Specifications

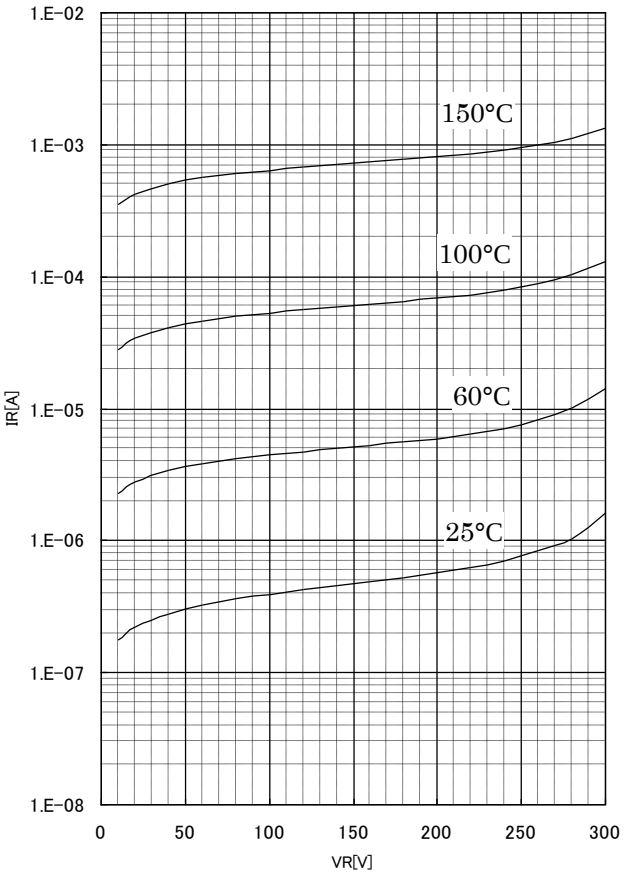
Item	Rating	Unit	Conditions
V_{RM}	300	V	
V_F	1.3	V	I_F=2.0A
$I_{F(AV)}$	2.0	A	
t_{rr}	25	ns	100mA/200mA

Typical Characteristics

SJPX-H3 IF-VF Characteristics



SJPX-H3 VR-IR Characteristics



Absolute maximum ratings

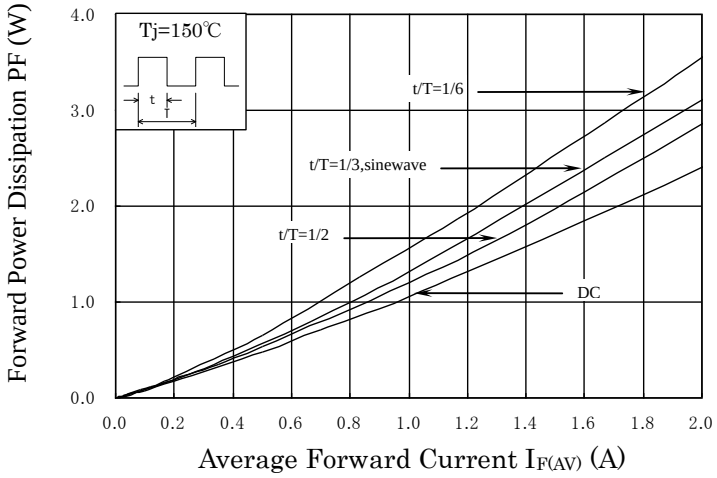
No.	Item	Symbol	Unit	Rating	Conditions
1	Transient Peak Reverse Voltage	V_{RSM}	V	300	
2	Peak Reverse Voltage	V_{RM}	V	300	
3	Average Forward Current	$I_{F(AV)}$	A	2.0	
4	Peak Surge Forward Current	I_{FSM}	A	20	Half sine-wave, one shot
5	I^2t Limiting Value	I^2t	A^2s	2.0	$1ms \leq t \leq 10ms$
6	Junction Temperature	T_j	°C	-40 to 150	
7	Storage Temperature	T_{stg}	°C	-40 to 150	

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

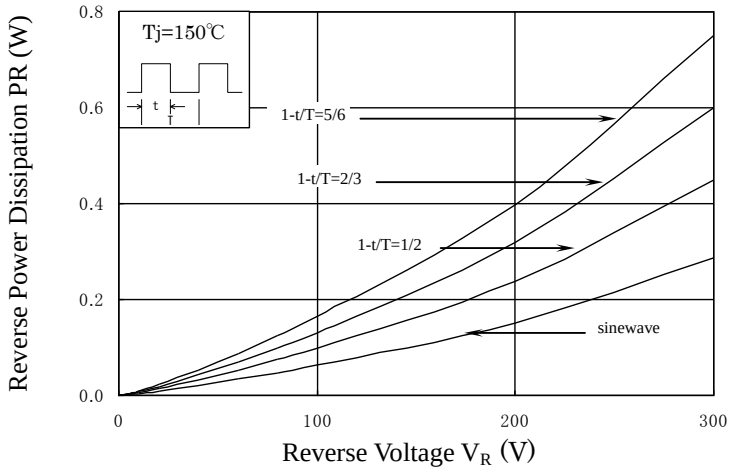
No.	Item	Symbol	Unit	Value	Conditions
1	Forward Voltage Drop	V_F	V	1.3 max.	I_F=2.0A
2	Reverse Leakage Current	I_R	μA	50 max.	$V_R=V_{RM}$
3	Reverse Leakage Current Under High Temperature	$H \cdot I_R$	mA	3.0 max.	$V_R=V_{RM}$, T_j=150°C
4	Reverse Recovery Time	$t_{rr}1$	ns	30 max.	$I_F=I_{RP}$=100mA 90% Recovery point, T_j=25°C
		$t_{rr}2$	ns	25 max.	I_F=100mA, I_{RP}=200mA 75% Recovery point, T_j=25°C
5	Thermal Resistance	$R_{th(j-c)}$	c /W	20 max.	Between Junction and Lead

Characteristics

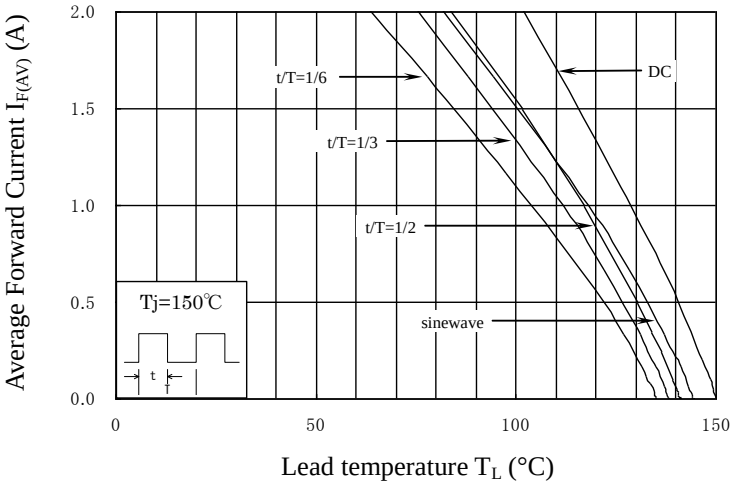
Forward Power Dissipation



Reverse Power Dissipation

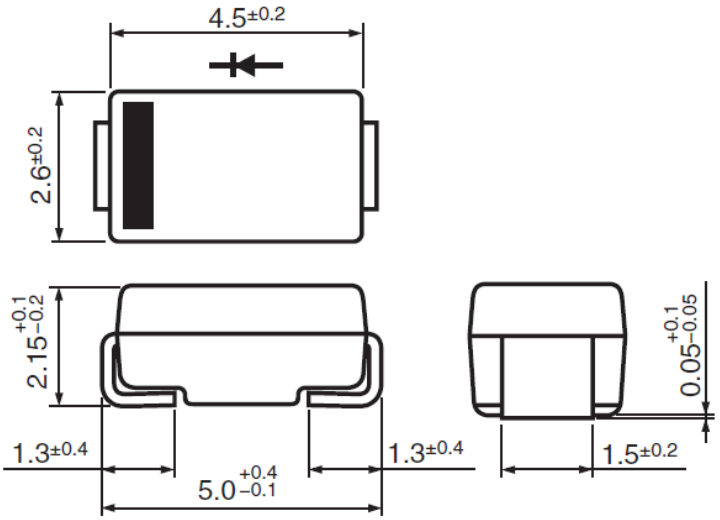


Current Derating VR=300V



External Dimensions

SJP



NOTES:

- Dimension is in millimeters.
- Lead treatment Pb-free. Device composition compliant with the RoHS directive.

Connection Diagram

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