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# SanKen SANKEN ELECTRIC

### SJPX-H3

Fast Recovery Diode

May. 2016

#### **General Description** Package SJPX-H3 has the characteristics of low VF and superior SJP trr at high temperature. High efficiency is achieved by reducing the loss of circuit at high temperature. **Applications** (2)(1)·DC-DC converters · AC adapter ·High frequency rectification circuit (1) Cathode (2) Anode Not to Scale **Key Specifications** Item Rating Unit Conditions Features Super-high speed FRD V<sub>RM</sub> 300 V Low leakage current at high temperature v V<sub>F</sub> 1.3 $I_F = 2.0A$ I<sub>F(AV)</sub> 2.0A 25 100mA/200mA t<sub>rr</sub> ns **Typical Characteristics** SJPX-H3 VR-IR Characteristics SJPX-H3 IF-VF Characteristics 100 1.E-02 150°C 1.E-03 10 100°C 1.E-04 1 IF [A] 60°C ₩ 2 1.E-05 0.1 150°C .25°C 1.E-06 100°C 0.01 60°C 1.E-07 25°C 0.001 1.E-08 0.5 1.0 1.5 2.0 0.0 0 50 100 150 200 250 300 VR[V] VF [V]

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### Absolute maximum ratings

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

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

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

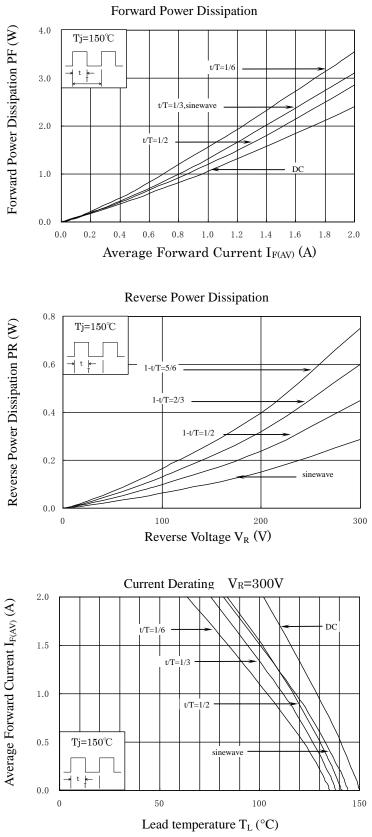
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#### Characteristics



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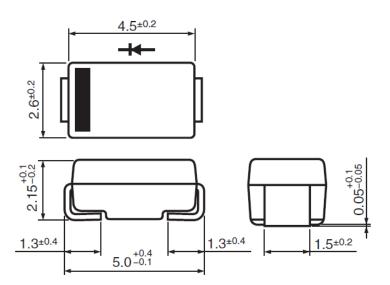
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### **External Dimensions**

SJP



#### NOTES:

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

### **Connection Diagram**



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