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Sanken SANKEN ELECTRIC

http://www.sanken-ele.co.jp

SJPB-D4

May. 2016

Schottky Barrier Rectifier

General Description

SJPB-D4 is a Schottky Barrier Diode, and has achieved low leakage current and low VF by selecting the best barrier metal.

Applications

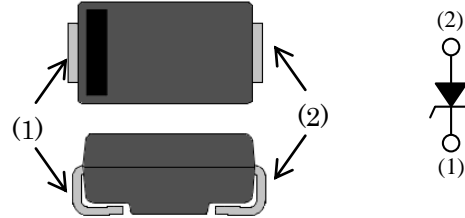
- DC-DC converters
- AC adapter
- High frequency rectification circuit

Features

- Super-high speed & low noise switching.
- Low forward voltage drop.

Package

SJP



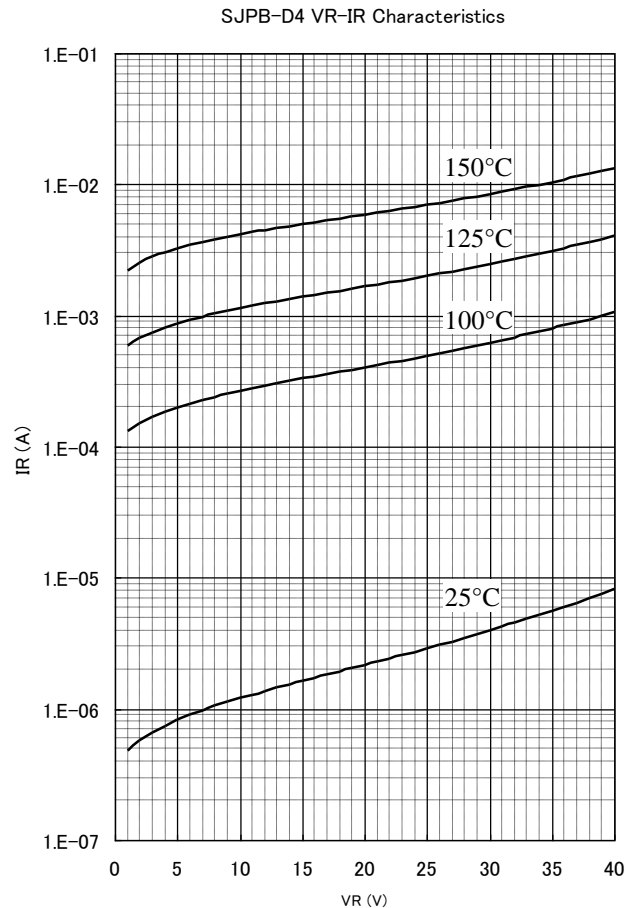
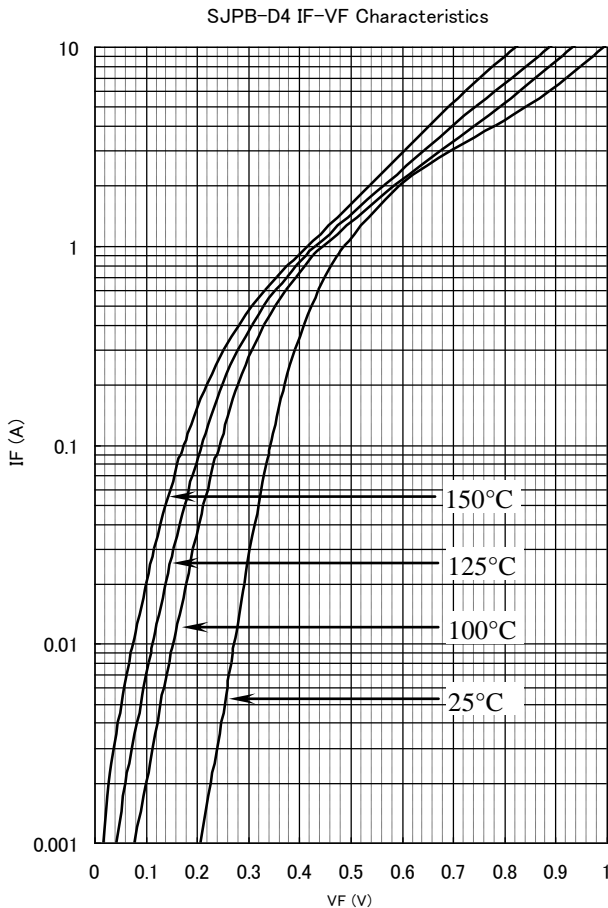
(1) Cathode
(2) Anode

Not to Scale

Key Specifications

Item	Rating	Unit	Conditions
V_{RM}	40	V	
V_F	0.55	V	$I_F=1.0A$
$I_{F(AV)}$	1.0	A	

Typical Characteristics



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Absolute maximum ratings

No.	Item	Symbol	Unit	Rating	Conditions
1	Transient Peak Reverse Voltage	V_{RSM}	V	40	
2	Peak Reverse Voltage	V_{RM}	V	40	
3	Average Forward Current	$I_{F(AV)}$	A	1.0	
4	Peak Surge Forward Current	I_{FSM}	A	30	Half sine-wave, one shot
5	I^2t Limiting Value	I^2t	A^2s	4.5	$1ms \leq t \leq 10ms$
6	Junction Temperature	T_j	$^{\circ}C$	-40 to 150	
7	Storage Temperature	T_{stg}	$^{\circ}C$	-40 to 150	

Electrical characteristics ($T_a=25^{\circ}C$, unless otherwise specified)

No.	Item	Symbol	Unit	Value	Conditions
1	Forward Voltage Drop	V_F	V	0.55 max.	$I_F=1.0A$
2	Reverse Leakage Current	I_R	μA	100 max.	$V_R=V_{RM}$
3	Reverse Leakage Current Under High Temperature	$H \cdot I_R$	mA	35 max.	$V_R=V_{RM}, T_j=150^{\circ}C$
4	Thermal Resistance	$R_{th(j-l)}$	$^{\circ}C/W$	20 max.	Between Junction and Lead

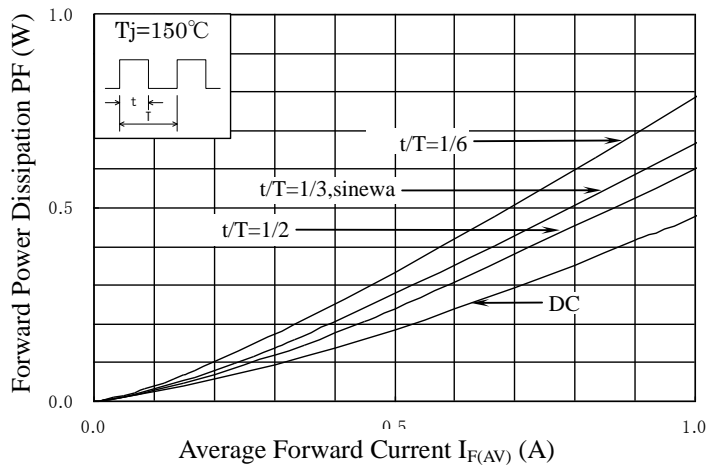
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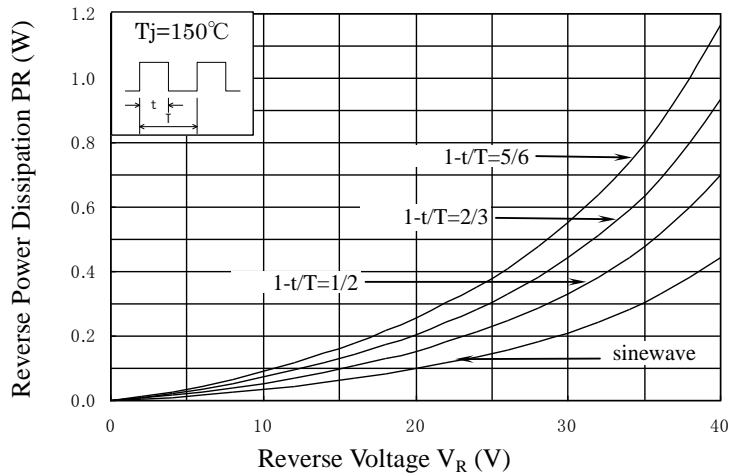
Schottky Barrier Rectifier

Characteristics

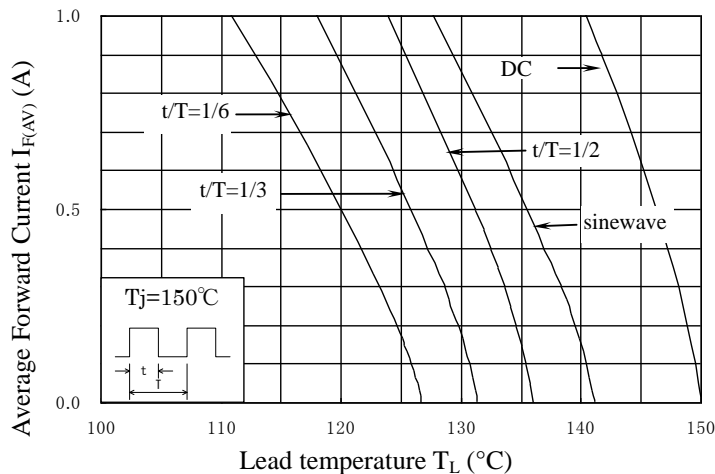
Forward Power Dissipation



Reverse Power Dissipation



Current Derating $V_R=40V$



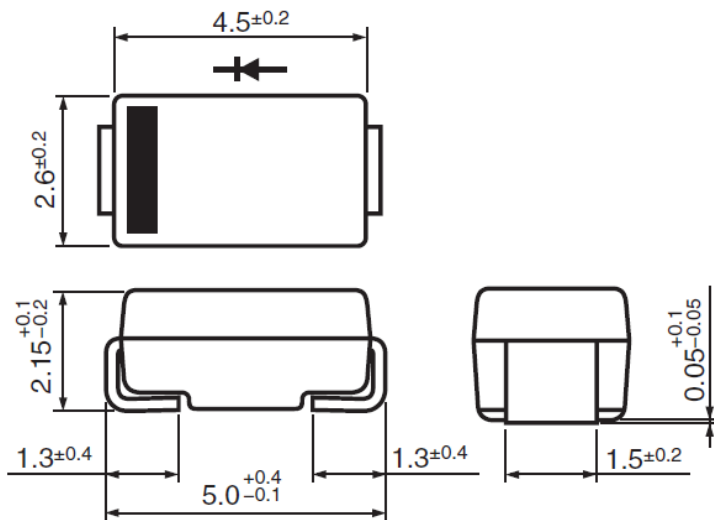
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Schottky Barrier Rectifier

Outline drawings

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NOTES:

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

Connection Diagram



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