V_{RSM} = 90 V, $I_{F(AV)}$ = 2.0 A
Schottky Diode

SJPB-H9

Data Sheet

Description

The SJPB-H9 is a 90 V, 2.0 A Schottky diode with allowing improvements in V_F and I_R characteristics.

These characteristic features contribute to improving power supply efficiency and to enabling high-frequency systems.

Features

- V_{RSM} ----------90 V
- $I_{F(AV)}$----------2.0 A
- V_F (I_F = 2.0 A) ---------- 0.76 V typ.
- Bare Lead Frame: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0
- Suitable for High Reliability and Automotive Requirement

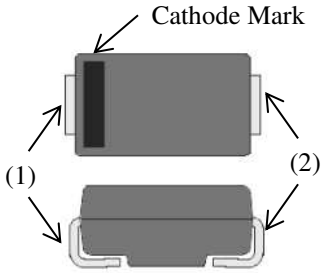
Applications

High speed switching applications as follows:

- DC-DC Converter
- Adapter

Package

SJP





(1) Cathode
(2) Anode

Not to scale

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Absolute Maximum Ratings

Unless otherwise specified, T_A = 25 °C.

Parameter	Symbol	Conditions	Rating	Unit
Nonrepetitive Peak Reverse Voltage	V_{RSM}		90	V
Repetitive Peak Reverse Voltage	V_{RM}		90	V
Average Forward Current	$I_{F(AV)}$	See Figure 2 and Figure 3	2.0	A
Surge Forward Current	I_{FSM}	Half cycle sine wave, positive side, 10 ms, 1 shot	40	A
I^2t Limiting Value	I^2t	1 ms ≤ t ≤ 10ms	8.0	A^2s
Junction Temperature	T_J		−40 to 150	°C
Storage Temperature	T_{STG}		−40 to 150	°C

Electrical Characteristics

Unless otherwise specified, T_A = 25 °C.

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	V_F	I_F = 2.0 A	—	0.76	0.85	V
Reverse Leakage Current	I_R	$V_R = V_{RM}$	—	—	2	mA
Reverse Leakage Current under High Temperature	$H \cdot I_R$	$V_R = V_{RM}$, T_J = 150 °C	—	—	55	mA
Thermal Resistance(1)	$R_{th(J-L)}$		—	—	20	°C/W

Mechanical Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
Package Weight		—	0.072	—	g

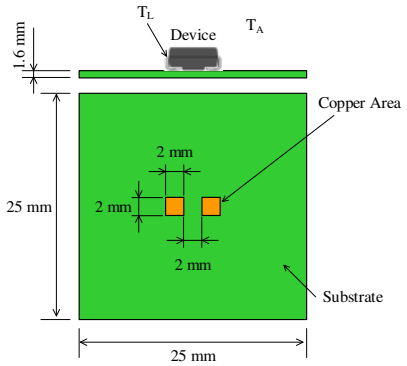


Figure 1. Lead Temperature Measurement Conditions

(1) $R_{th\ (J-L)}$ is thermal resistance between junction and lead. Lead temperature (T_L) is measured near the root of pin (see Figure 1).

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Derating Curves

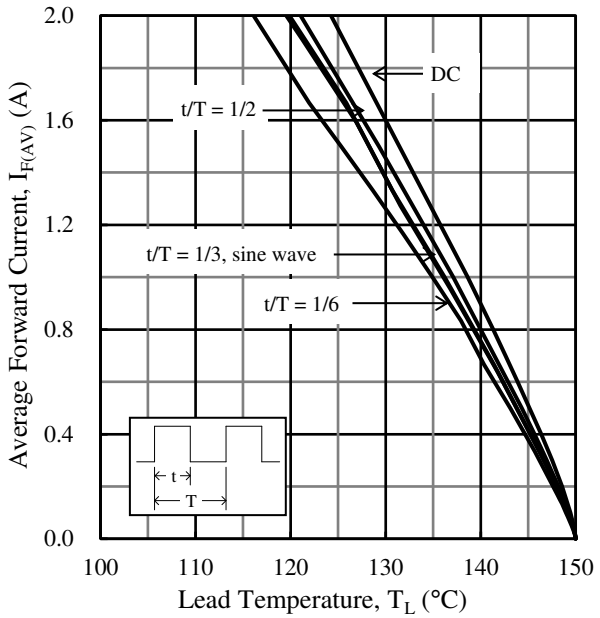


Figure 2. $I_{F(AV)}$ vs. T_L (T_J = 150 °C, V_R = 0 V)

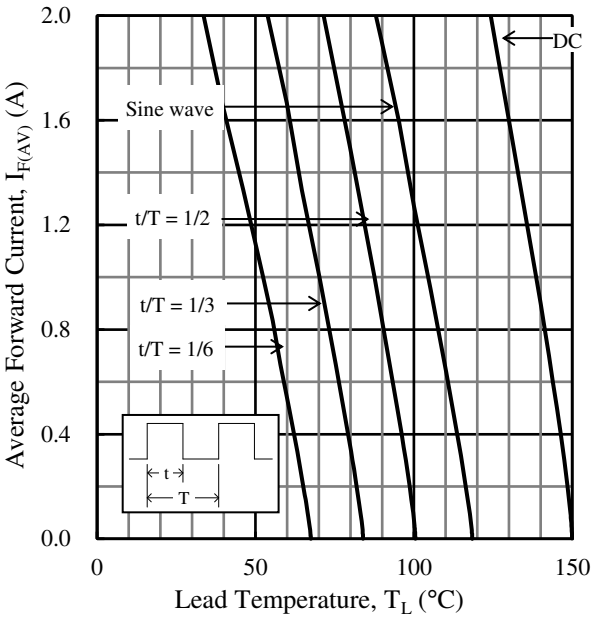


Figure 3. $I_{F(AV)}$ vs. T_L (T_J = 150 °C, V_R = 90 V)

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Characteristic Curves

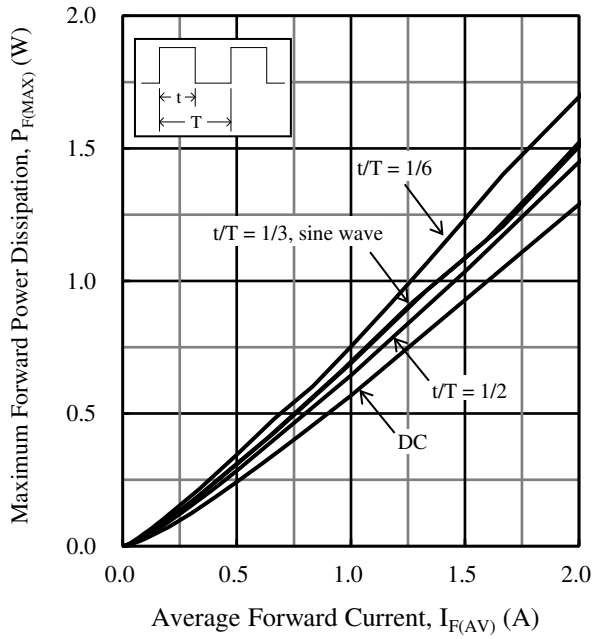


Figure 4. $P_{F(MAX)}$ vs. $I_{F(AV)}$ (T_J = 150 °C)

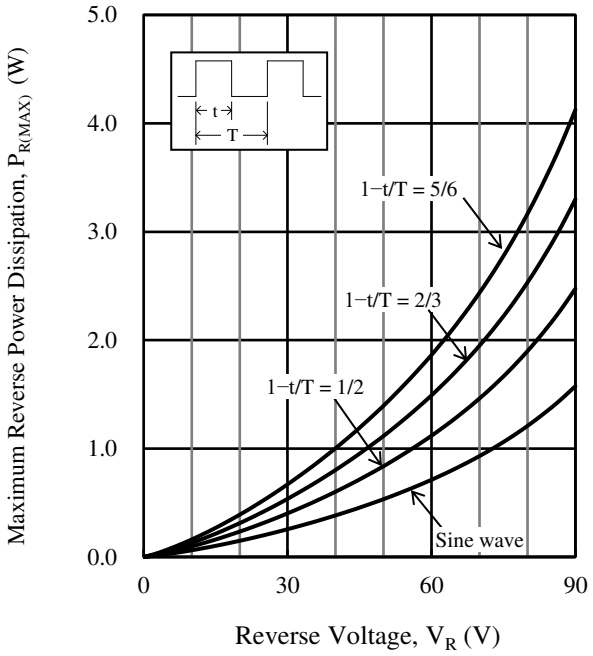


Figure 5. $P_{R(MAX)}$ vs. V_R (T_J = 150 °C)

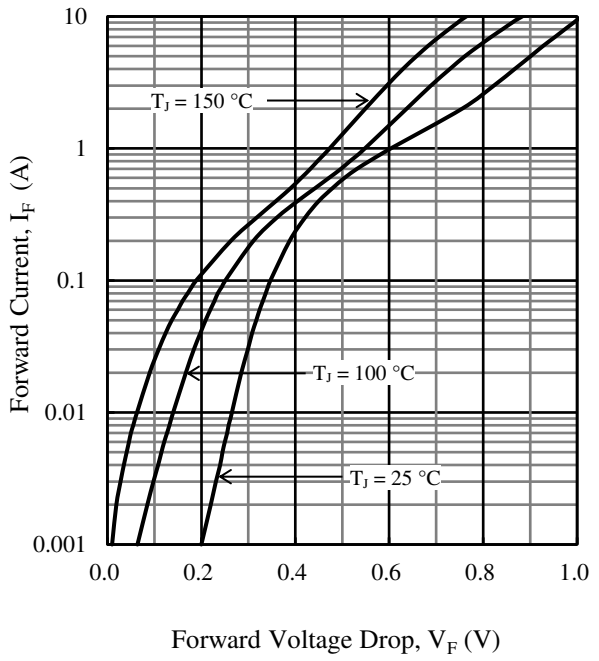


Figure 6. Typical Characteristics: I_F vs. V_F

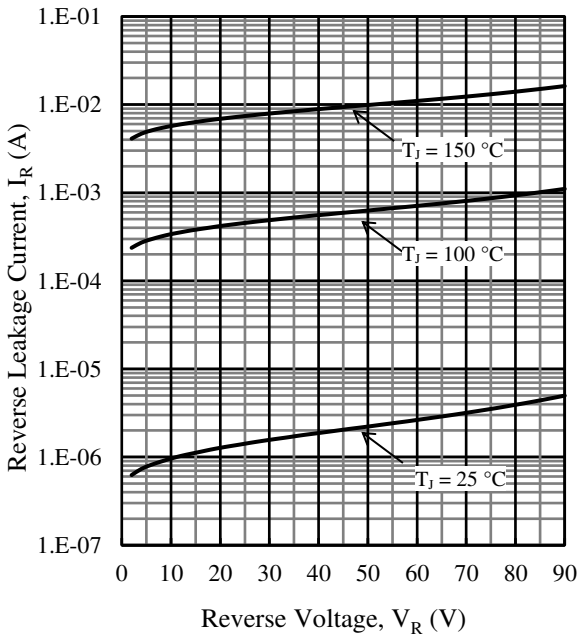


Figure 7. Typical Characteristics: I_R vs. V_R

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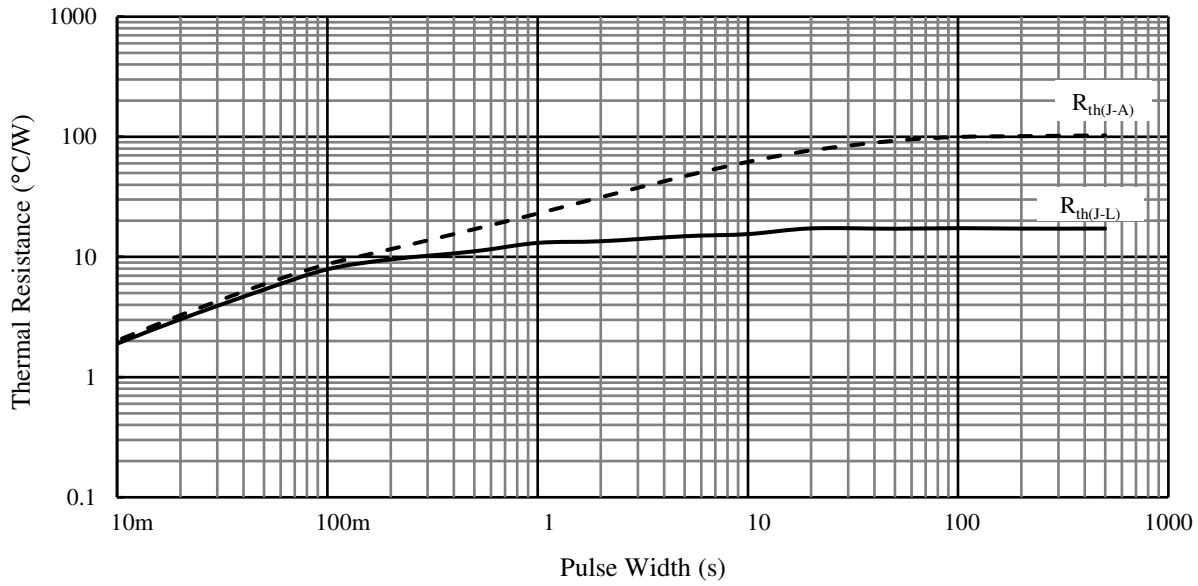
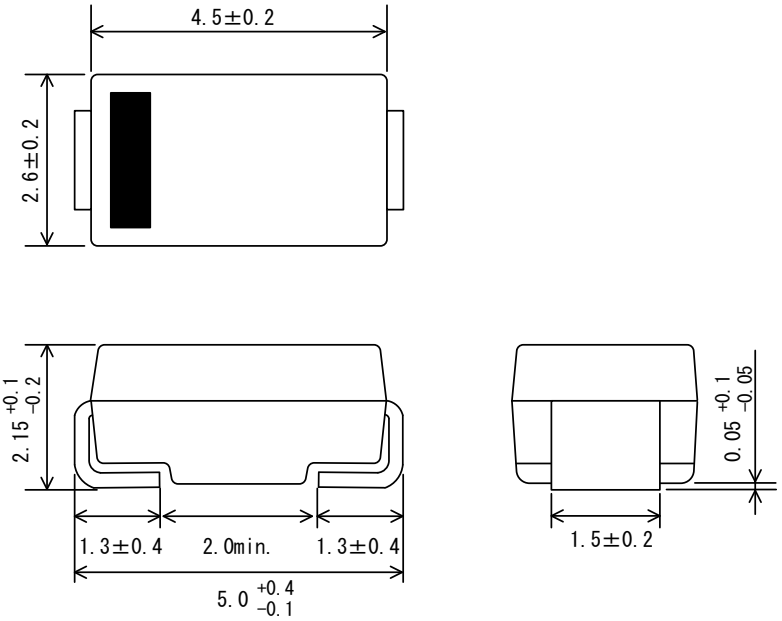


Figure 8. Typical Transient Thermal Resistance Characteristics

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Physical Dimensions

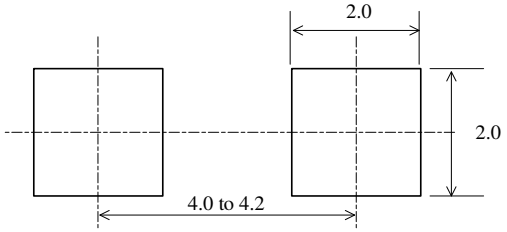
● **SJP Package**



NOTES:

- Dimensions in millimeters
- Bare lead frame: Pb-free (RoHS compliant)
- Moisture Sensitivity Level 1 (MSL 1)
- When soldering the products, be sure to minimize the working time within the following limits:
  Flow: 260 °C / 10 s, 1 time
  Reflow:
  Preheat: 150 °C to 200 °C / 60 s to 120 s
  Solder heating: 255 °C / 30s, 3 times (260 °C peak)
  Soldering Iron: 350 °C / 3.5 s, 1 time

● **SJP Land Pattern Example**

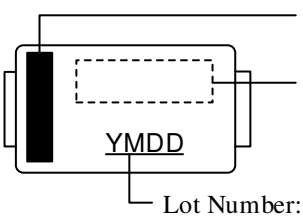


NOTE:

- Dimensions in millimeters

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Marking Diagram



Lot Number:
Y is the last digit of the year of manufacture (0 to 9)
M is the month of the year (1 to 9, O, N, or D)
DD is the day of the month (01 to 31)

Table 1. Specific Device Code

Specific Device Code	Part Number
BH9	SJPB-H9

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- No anti-radioactive ray design has been adopted for the Sanken Products.
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