

Description

The SJPB-H6 is a 60 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} 60 V
	$I_{F(AV)}$
	$V_F (I_F = 2.0 \text{ A})$ 0.58 V typ
	Para I and Engage Planta (Paul Consultant)

- Bare Lead Frame: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0
- Suitable for High Reliability and Automotive Requirement

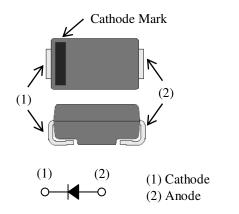
Applications

High speed switching applications as follows:

- DC-DC Converter
- Adapter

Package

SJP



Not to scale

Absolute Maximum Ratings

Unless otherwise specified, $T_A = 25$ °C.

Parameter	Symbol	Conditions	Rating	Unit
Nonrepetitive Peak Reverse Voltage	V_{RSM}		60	V
Repetitive Peak Reverse Voltage	V_{RM}		60	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 ² t Limiting Value	I^2t	$1 \text{ ms} \le t \le 10 \text{ ms}$	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}	$I_F = 2.0 A$	_	0.58	0.69	V
Reverse Leakage Current	I_R	$V_R = V_{RM}$		_	200	μΑ
Reverse Leakage Current under High Temperature	$H \cdot I_R$	$V_R = V_{RM}$, $T_J = 150$ °C	_		55	mA
Thermal Resistance ⁽¹⁾	$R_{\text{th(J-L)}}$		_	_	20	°C/W

Mechanical Characteristics

Parameter	Conditions	Min.	Тур.	Max.	Unit
Package Weight		_	0.072		g

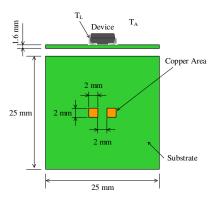
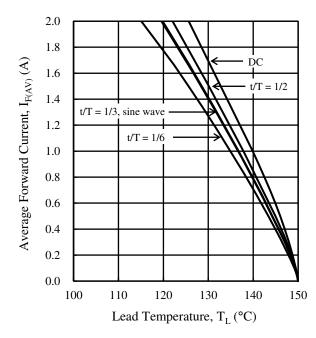


Figure 1. Lead Temperature Measurement Conditions

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

Derating Curves





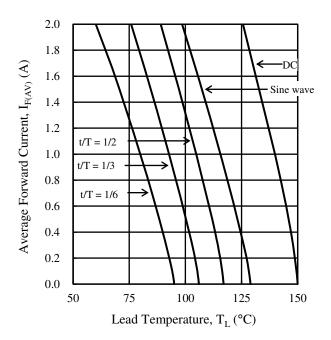


Figure 3. $I_{F(AV)}$ vs. T_L ($T_J = 150$ °C, $V_R = 60$ V)

Characteristic Curves

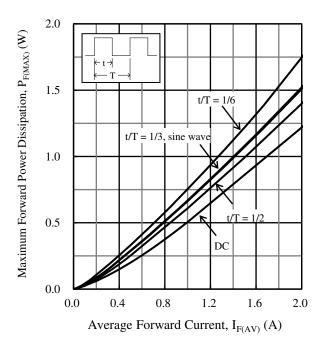


Figure 4. $P_{F(MAX)}$ vs. $I_{F(AV)}$ ($T_J = 150$ °C)

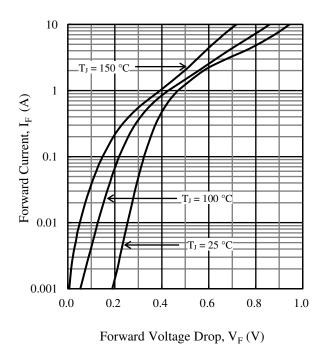


Figure 6. Typical Characteristics: I_F vs. V_F

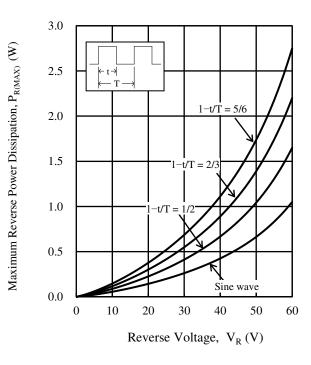


Figure 5. $P_{R(MAX)}$ vs. V_R ($T_J = 150$ °C)

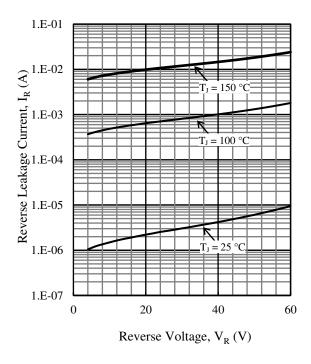


Figure 7. Typical Characteristics: I_R vs. V_R

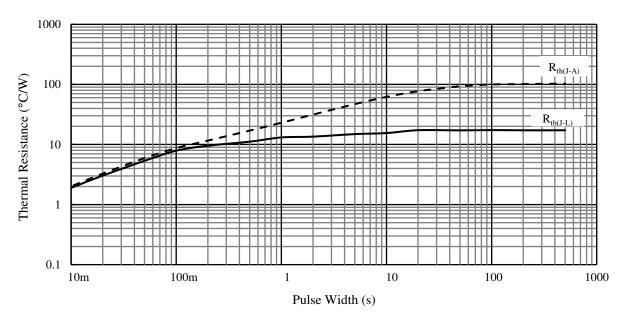
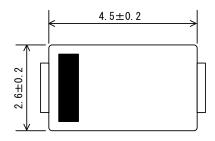
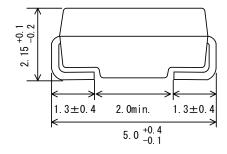


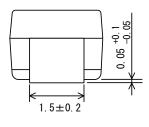
Figure 8. Typical Transient Thermal Resistance Characteristics

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, it is required to minimize the working time within the following limits:

Flow: 260 °C / 10 s, 1 time

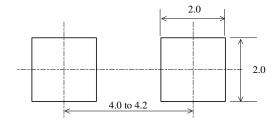
Reflow:

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

Marking Diagram

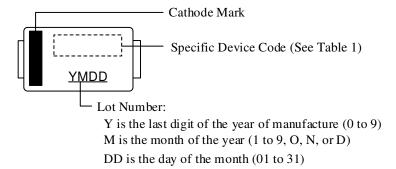


Table 1. Specific Device Code

Specific Device Code	Part Number
ВН6	SJPB-H6

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DSGN-AEZ-16003