V_{RSM} = 90 V, $I_{F(AV)}$ = 1.0 A
Schottky Diode

SJPB-D9

Data Sheet

Description

The SJPB-D9 is a 90 V, 1.0 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
- $I_{F(AV)}$ ---------- 1.0 A
- V_F (I_F = 1.0 A) ---------- 0.75 V typ.
- Bare Lead Frame: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0
- Suitable for High Reliability and Automotive Requirement

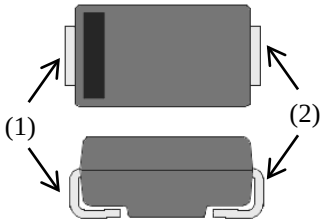
Applications

High speed switching applications as follows:

- DC-DC Converter
- Adapter

Package

SJP



(1) Cathode
(2) Anode

Not to scale

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 1 and Figure 2	1.0	A
Surge Forward Current	I_{FSM}	Half cycle sine wave, positive side, 10 ms, 1 shot	20	A
I^2t Limiting Value	I^2t	1 ms ≤ t ≤ 10ms	2.0	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 = 1.0 A	—	0.75	0.85	V
Reverse Leakage Current	I_R	$V_R = V_{RM}$	—	—	100	μA
Reverse Leakage Current under High Temperature	$H \cdot I_R$	$V_R = V_{RM}$, T_J = 150 °C	—	—	30	mA
Thermal Resistance[(1)]	$R_{th(J-L)}$		—	—	20	°C/W

[(1)] $R_{th\ (J-L)}$ is thermal resistance between junction and lead.

Rating and Characteristic Curves

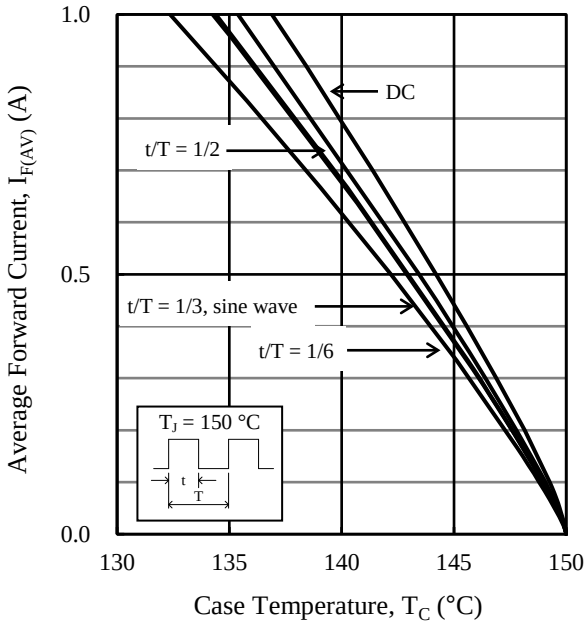


Figure 1. Typical Characteristics: $I_{F(AV)}$ vs. T_C (V_R = 0 V)

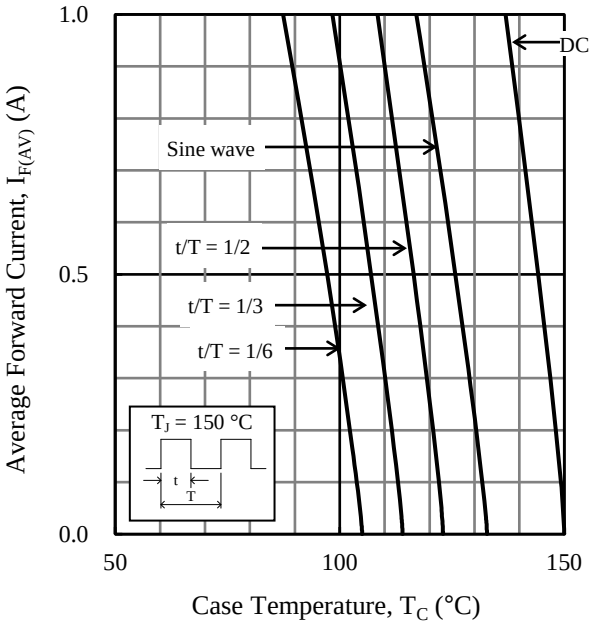


Figure 2. Typical Characteristics: $I_{F(AV)}$ vs. T_C (V_R = 90 V)

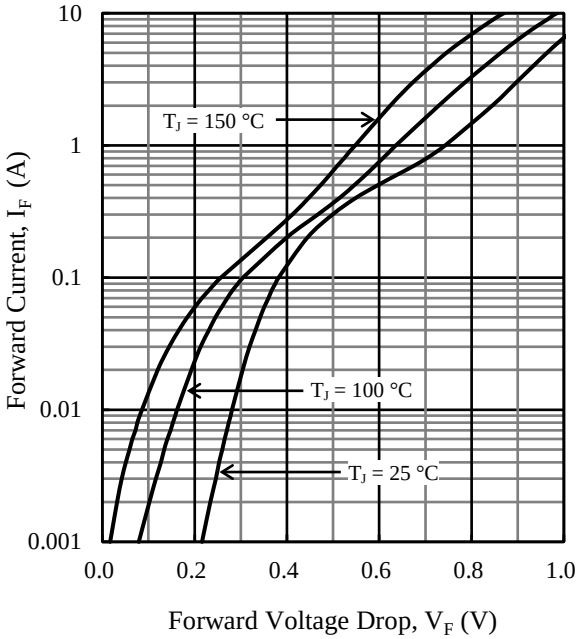


Figure 3. Typical Characteristics: I_F vs. V_F

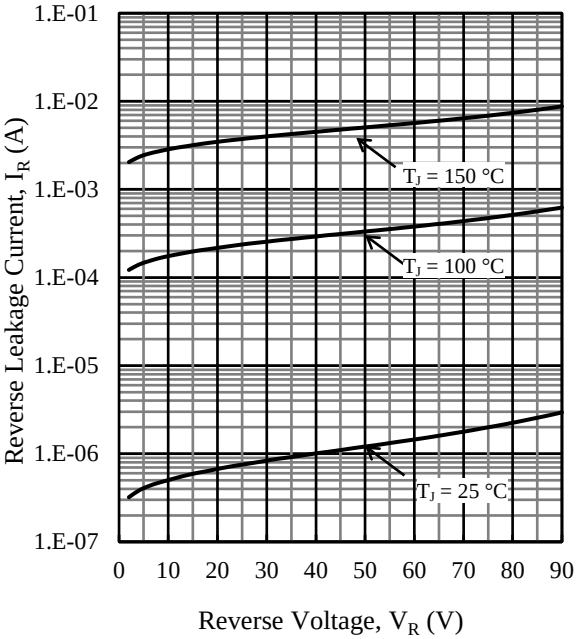
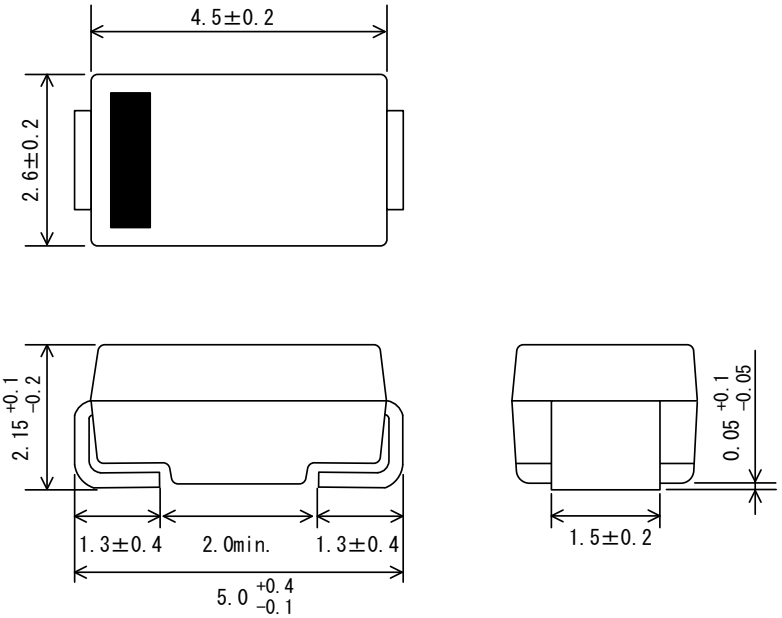


Figure 4. Typical Characteristics: I_R vs. V_R

Physical Dimensions

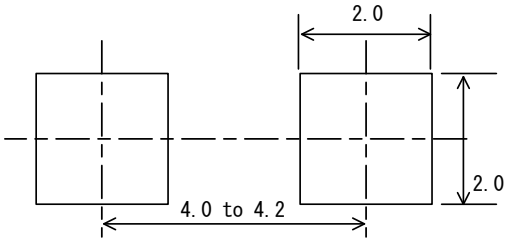
● **SJP Package**



NOTES:

- Dimensions in millimeters
- Bare lead frame: Pb-free (RoHS compliant)
- When soldering the products, be sure to minimize the working time within the following limits:
  Flow: 260 ± 5 °C / 10 ± 1 s, 2 times
  Soldering Iron: 380 ± 10 °C / 3.5 ± 0.5 s, 1 time
- MSL: JEDEC LEVEL1

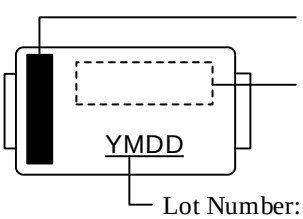
● **SJP Land Pattern Example**



NOTE:

- Dimensions in millimeters

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
BD9	SJPB-D9

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