

**$V_{RSM} = 40\text{ V}$ ,  $I_{F(AV)} = 3.0\text{ A}$**   
**Schottky Diode**  
**SJPB-L4**

**Description**

The SJPB-L4 is a 40 V, 3.0 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**

- $V_{RSM}$  ----- 40 V
- $I_{F(AV)}$  ----- 3.0 A
- $V_F$  ( $I_F = 3.0\text{ A}$ ) ----- 0.50 V typ.
- Bare Lead Frame: Pb-free (RoHS Compliant)
- Suitable for High Reliability and Automotive Requirement

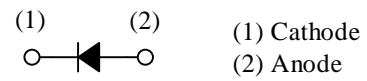
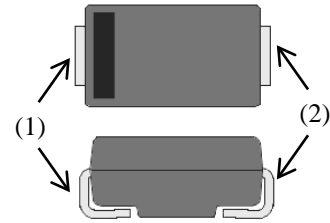
**Applications**

The high speed switching applications as follows:

- DC-DC Converter
- Adapter

**Package**

SJP



Not to scale

## SJPB-L4

### Absolute Maximum Ratings

Unless otherwise specified,  $T_A = 25\text{ }^\circ\text{C}$ .

Parameter	Symbol	Rating	Unit	Conditions
Peak Repetitive Reverse Voltage	$V_{RSM}$	40	V	
Repetitive Reverse Voltage	$V_{RM}$	40	V	
Average Forward Current	$I_{F(AV)}$	3.0	A	See Figure 1 and Figure 2
Surge Forward Current	$I_{FSM}$	60	A	Half cycle sine wave, positive side, 10 ms, 1 shot
$I^2t$ Limiting Value	$I^2t$	18	$A^2s$	$1\text{ ms} \leq t \leq 10\text{ms}$
Junction Temperature	$T_J$	-40 to 150	$^\circ\text{C}$	
Storage Temperature	$T_{STG}$	-40 to 150	$^\circ\text{C}$	

### Electrical Characteristics

Unless otherwise specified,  $T_A = 25\text{ }^\circ\text{C}$ .

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	$V_F$	$I_F = 3.0\text{ A}$	—	0.50	0.55	V
Reverse Leakage Current	$I_R$	$V_R = V_{RM}$	—	—	300	$\mu\text{A}$
Reverse Leakage Current Under High Temperature	$H \cdot I_R$	$V_R = V_{RM}, T_J = 150\text{ }^\circ\text{C}$	—	—	100	mA
Thermal Resistance <sup>(1)</sup>	$R_{th(J-L)}$		—	—	20	$^\circ\text{C/W}$

<sup>(1)</sup>  $R_{th(J-L)}$  is thermal resistance between junction and lead.

Rating and Characteristic Curves

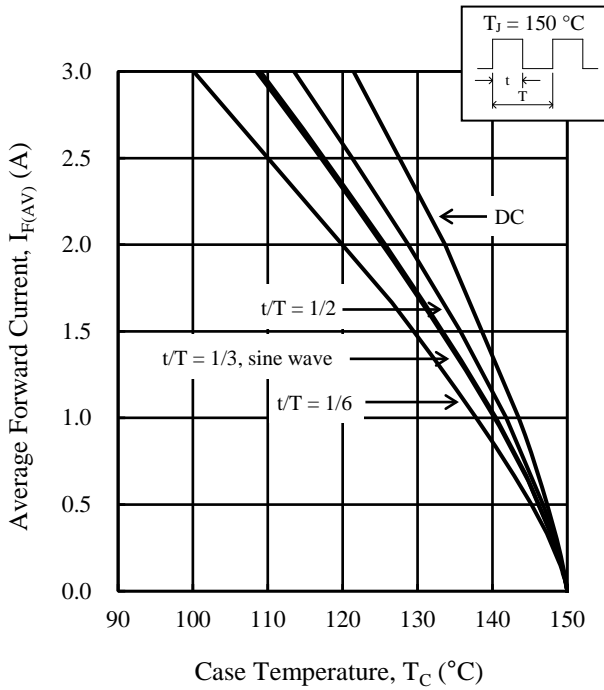


Figure 1.  $T_C$  vs.  $I_{F(AV)}$  Typical Characteristics ( $V_R = 0$  V)

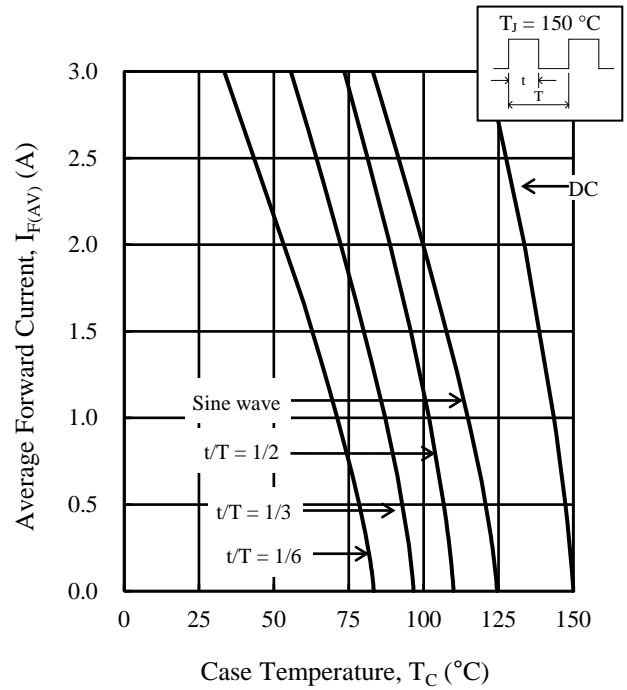


Figure 2.  $T_C$  vs.  $I_{F(AV)}$  Typical Characteristics ( $V_R = 40$  V)

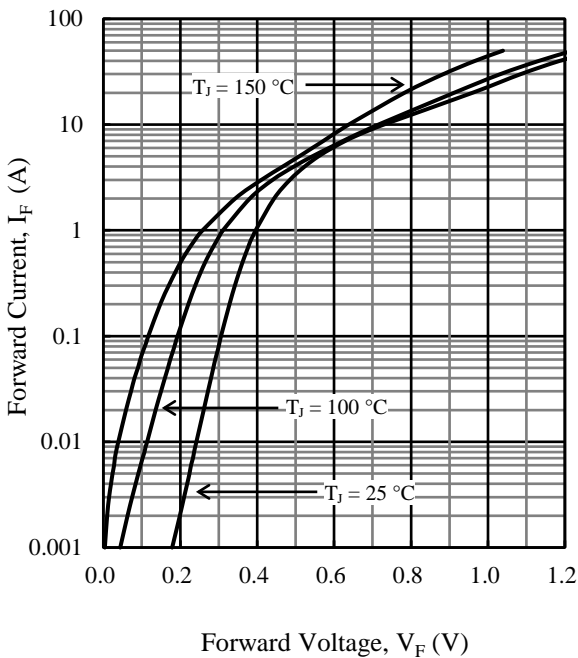


Figure 3.  $V_F$  vs.  $I_F$  Typical Characteristics

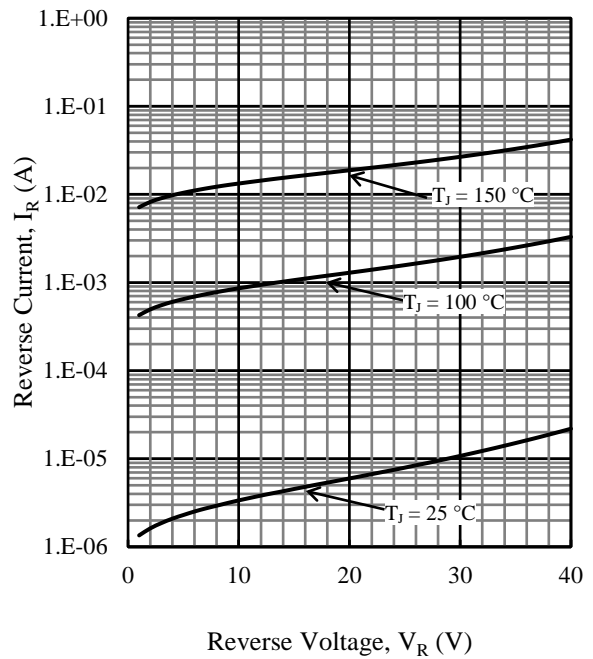
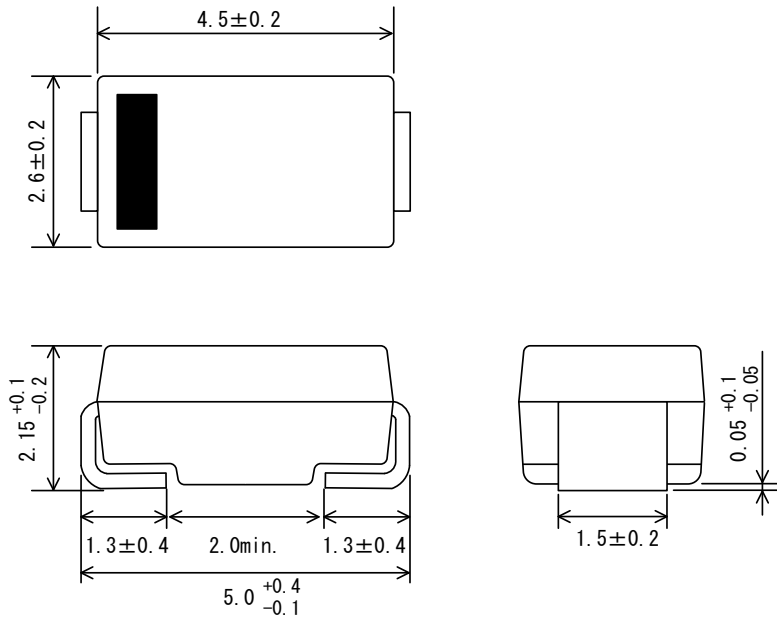


Figure 4.  $V_R$  vs.  $I_R$  Typical Characteristics

## SJPB-L4

### Physical Dimensions

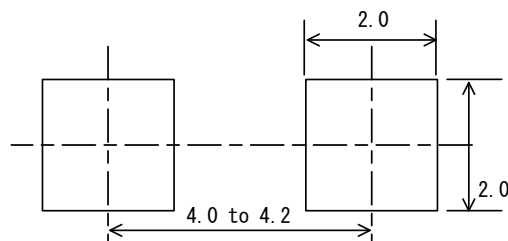
#### • SJP Package



#### 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:  $260 \pm 5$  °C /  $10 \pm 1$  s, 2 times
  - Soldering Iron:  $380 \pm 10$  °C /  $3.5 \pm 0.5$  s, 1 time
- MSL: JEDEC LEVEL1

#### • SJP Land Pattern Example



#### NOTE:

- Dimensions in millimeters

## Marking Diagram

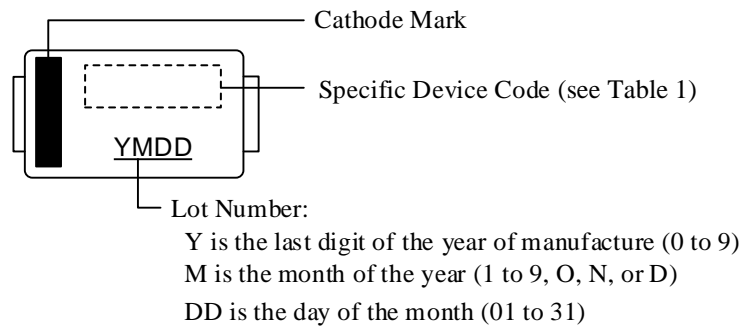


Table 1. Specific Device Code

Specific Device Code	Part Number
BL4	SJPB-L4

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