

**$V_{RSM} = 400\text{ V}$ ,  $I_{F(AV)} = 2.0\text{ A}$**   
**General-purpose Rectifier Diode**  
**SJPM-H4**

**Description**

The SJPM-H4 is a 400 V, 2.0 A general-purpose rectifier diode with low loss characteristics. This rectifier diode is for a commercial power supply.

**Features**

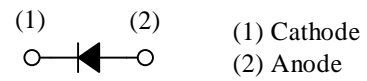
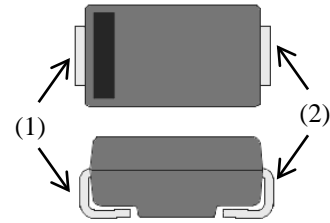
- $V_{RSM}$  ----- 400 V
- $I_{F(AV)}$  ----- 2.0 A
- $V_F (I_F = 2.0\text{ A})$  ----- 0.94 V typ.
- Bare Lead Frame: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0
- Suitable for High Reliability and Automotive Requirement

**Applications**

- Rectification Circuit
- Reverse Battery Protection Circuit

**Package**

SJP



Not to scale

## SJPM-H4

### Absolute Maximum Ratings

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

Parameter	Symbol	Conditions	Rating	Unit
Nonrepetitive Peak Reverse Voltage	$V_{RSM}$		400	V
Repetitive Peak Reverse Voltage	$V_{RM}$		400	V
Average Forward Current	$I_{F(AV)}$	See Figure 1 and Figure 2	2.0	A
Surge Forward Current	$I_{FSM}$	Half cycle sine wave, positive side, 10 ms, 1 shot	45	A
$I^2t$ Limiting Value	$I^2t$	$1\text{ ms} \leq t \leq 10\text{ms}$	10.1	$\text{A}^2\text{s}$
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	$V_F$	$I_F = 2.0\text{ A}$	—	0.94	1.10	V
Reverse Leakage Current	$I_R$	$V_R = V_{RM}$	—	—	10	$\mu\text{A}$
Reverse Leakage Current under High Temperature	$H \cdot I_R$	$V_R = V_{RM}, T_J = 150\text{ }^\circ\text{C}$	—	—	50	$\mu\text{A}$
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

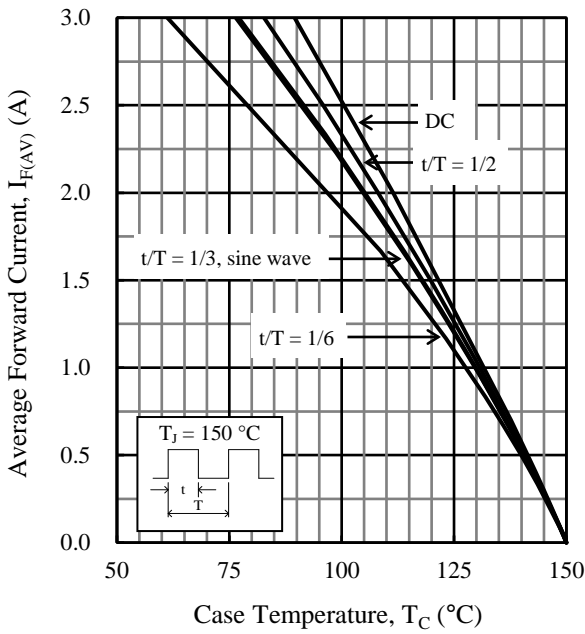


Figure 1. Typical Characteristics:  $I_{F(AV)}$  vs.  $T_C$  ( $V_R = 0\text{ V}$ )

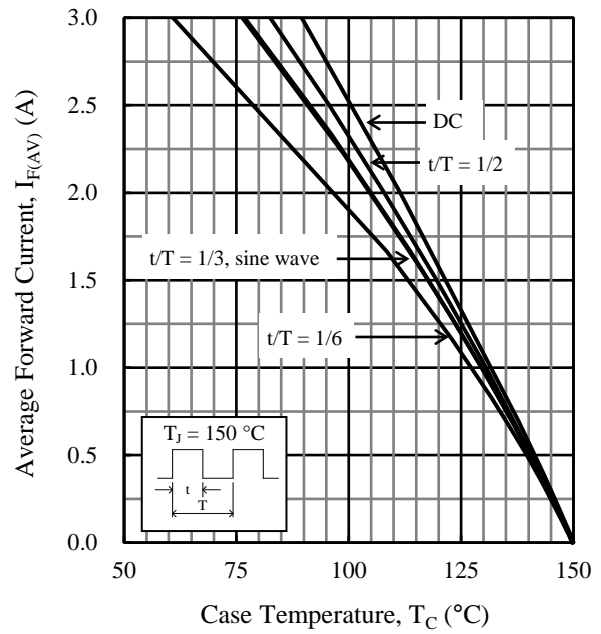


Figure 2. Typical Characteristics:  $I_{F(AV)}$  vs.  $T_C$  ( $V_R = 400\text{ V}$ )

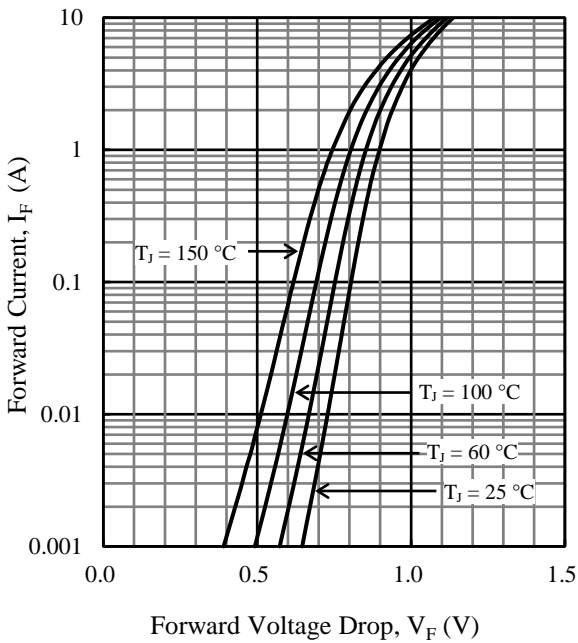


Figure 3. Typical Characteristics:  $I_F$  vs.  $V_F$

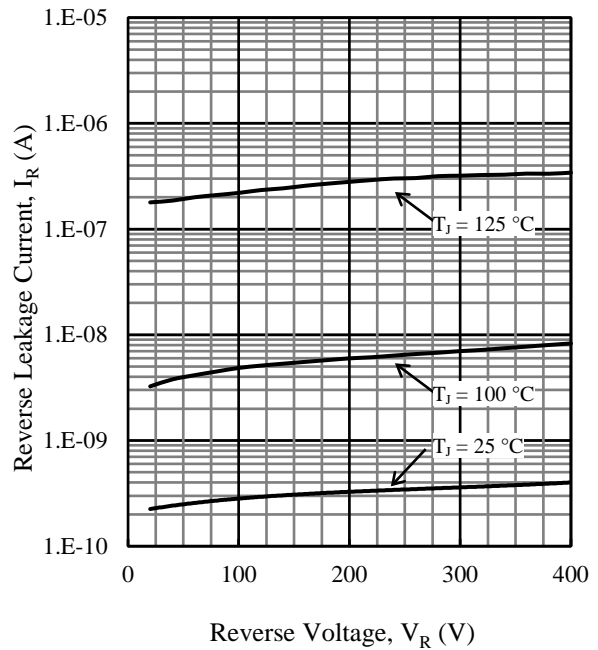
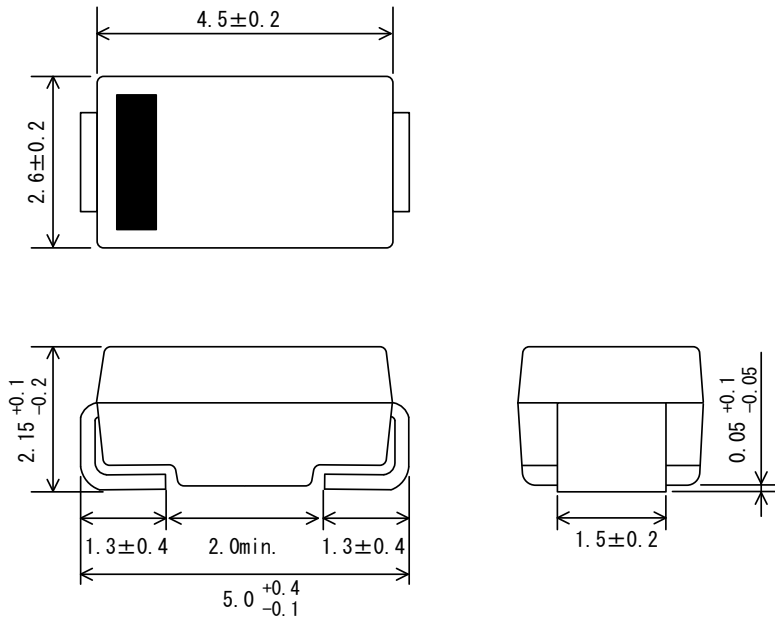


Figure 4. Typical Characteristics:  $I_R$  vs.  $V_R$

# SJPM-H4

## Physical Dimensions

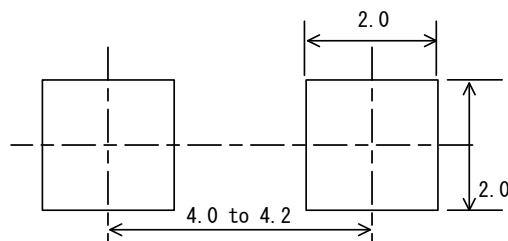
### • SJP Package



### 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

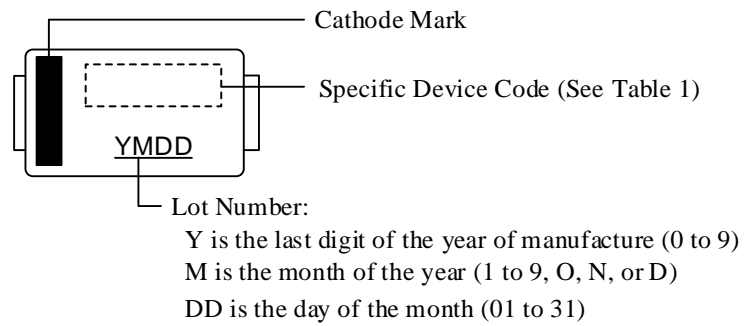


Table 1. Specific Device Code

Specific Device Code	Part Number
MH4	SJPM-H4

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