

$V_{RSM} = 40\text{ V}$, $I_{F(AV)} = 5.0\text{ A}$
Schottky Diode
SJPW-T4

Description

The SJPW-T4 is a 40 V, 5.0 A Schottky diode that has the improved characteristics of V_F and I_R . These characteristics realize the improvement of power supply efficiency and the high frequency system.

Features

- V_{RSM} ----- 40 V
- $I_{F(AV)}$ ----- 5.0 A
- V_F ($I_F = 5.0\text{ A}$) ----- 0.50 V typ.
- RoHS Compliant
- Suitable for High Reliability and Automotive Requirement

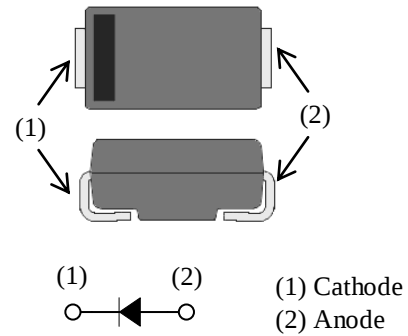
Applications

The high speed switching applications as follows:

- DC-DC Converter
- Adapter

Package

SJP



Not to scale

SJPW-T4

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	$I_{\text{F(AV)}}$	5.0	A	see Figure 1 and Figure 2
Surge Forward Current	I_{FSM}	80	A	Half cycle sine wave, positive side, 10 ms, 1 shot
I^2t Limiting Value	I^2t	32	A^2s	
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	$I_F = 5.0\text{ A}$	—	0.50	0.55	V
Reverse Leakage Current	I_R	$V_R = V_{\text{RM}}$	—	—	500	μA
Reverse Leakage Current Under High Temperature	$H \cdot I_R$	$V_R = V_{\text{RM}}, T_J = 150\text{ }^{\circ}\text{C}$	—	—	150	mA
Thermal Resistance ⁽¹⁾	$R_{\text{th(J-L)}}$		—	—	20	$^{\circ}\text{C/W}$

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

Rating and Characteristic Curves

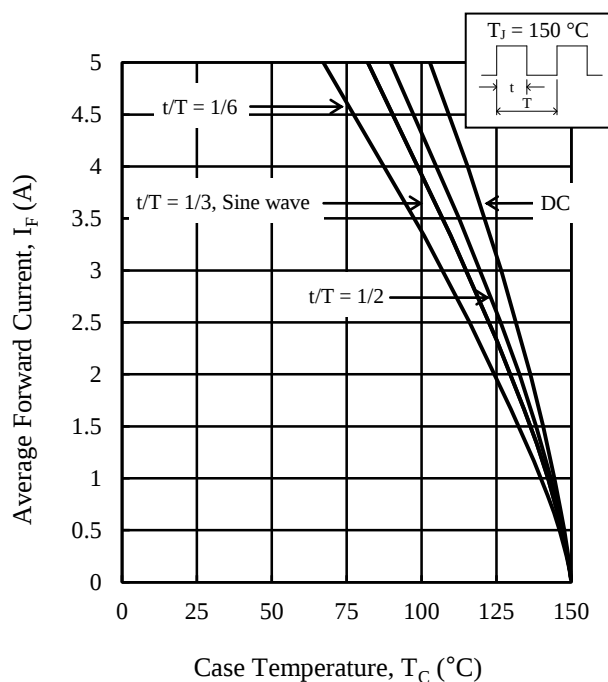


Figure 1. T_C vs. $I_{F(AV)}$ Typical Characteristics
($V_R = 0$ V)

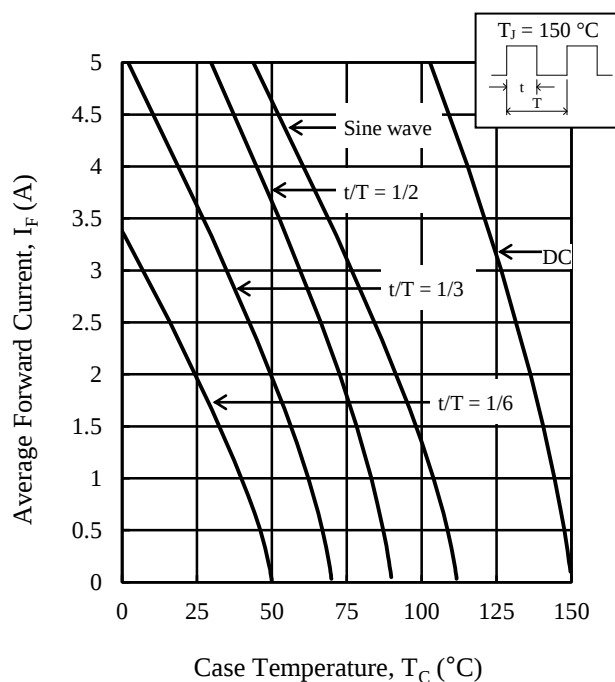


Figure 2. T_C vs. $I_{F(AV)}$ Typical Characteristics
($V_R = 40$ V)

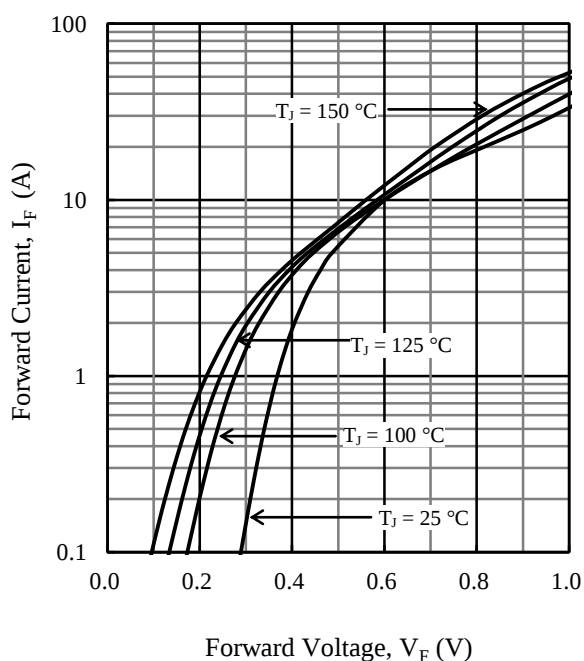


Figure 3. V_F vs. I_F Typical Characteristics

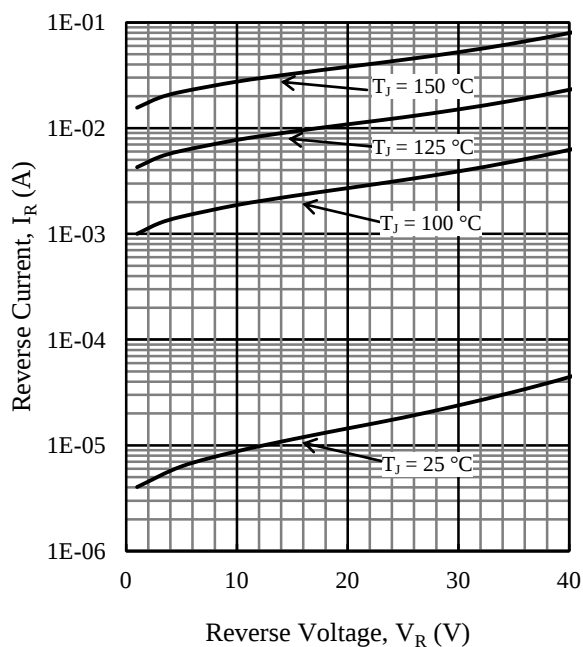
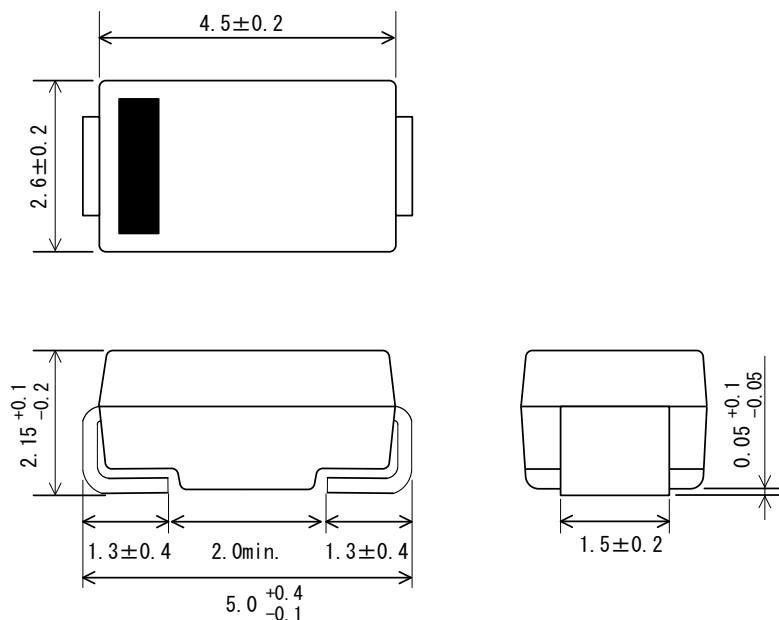


Figure 4. V_R vs. I_R Typical Characteristics

Physical Dimensions

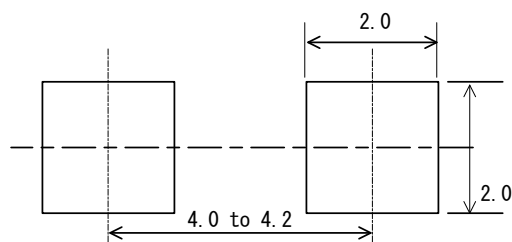
• SJP Package



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 (Soldering should be at a distance of at least 1.5 mm from the body of the products.)
- MSL: JEDEC LEVEL1

• SJP Land Pattern Example



NOTE: Dimensions in millimeters

Marking Diagram

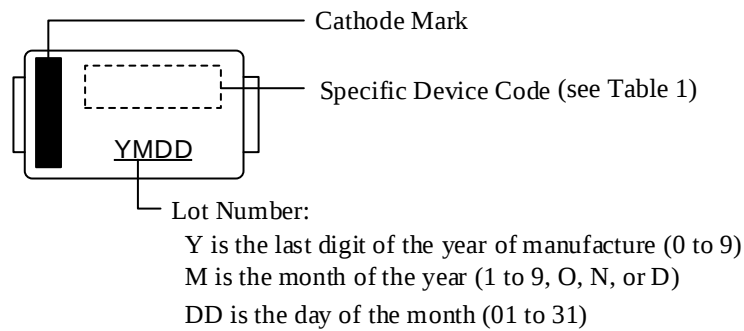


Table 1. Specific Device Code

Specific Device Code	Part Number
WT4	SJPW-T4

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