

Description

The SJPL-D2 is a fast recovery diode of 200 V / 1.0 A. The maximum $t_{\rm rr}$ of 50 ns is realized by optimizing a life-time control.

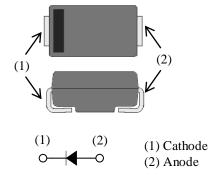
Features

•	V _{RM} 200	V
•	$I_{F(AV)} 1.0$	A
	V _F 0.98	
	t_{rr1} 50	

- Bare Lead Frame: Pb-free (RoHS Compliant)
- Suitable for High Reliability and Automotive Requirement.

Package

SJP



Not to scale

Applications

- White Goods
- Audiovisual Equipment
- Lighting Equipment
- Industrial Electronic Equipment (Communication Equipment and Factory Automation)
- Secondary Side Rectifier Diode (Flyback Converter, LLC Converter, etc.)
- Freewheel Diode (Offline Buck and Buck-boost Converter)

SJPL-D2

Absolute Maximum Ratings

Unless otherwise specified, $T_A = 25$ °C

Parameter	Symbol	Rating	Unit	Conditions	
Peak Repetitive Reverse Voltage	V _{RSM}	200	V		
Repetitive Reverse Voltage	V _{RM}	200	V		
Average Forward Current	I _{F(AV)}	1.0	A	See Figure 1 and Figure 2	
Surge Forward Current	I_{FSM}	25	A	Half cycle sine wave, positive side, 10 ms, 1 shot	
I ² t Limiting Value	I ² t	3.125	A^2s	$1 \text{ ms} \le t \le 10 \text{ ms}$	
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.	Тур.	Max.	Unit
Formand Waltons Drop	7.7	$T_J = 25 ^{\circ}\text{C}, I_F = 1.0 \text{A}$	_	_	0.98	V
Forward Voltage Drop	V_{F}	$T_J = 100 ^{\circ}\text{C}, I_F = 1.0 \text{A}$	_	0.75	_	V
Reverse Leakage Current	I_R	$V_R = V_{RM}$	_	_	25	μΑ
Reverse Leakage Current Under High Temperature	$H \cdot I_R$	$V_R = V_{RM}$, $T_J = 150$ °C		_	100	mA
	t_{rr1}	$I_F = I_{RP} = 100 \text{ mA}$ 90% recovery point, $T_J = 25 ^{\circ}\text{C}$	_		50	ns
Reverse Recovery Time	t _{rr2}	$I_F = 100 \text{ mA},$ $I_{RP} = 200 \text{ mA},$ $75\% \text{ recovery point},$ $T_J = 25 \text{ °C}$	_		35	ns
Thermal Resistance (1)	$R_{\text{th(J-L)}}$			_	20	°C/W

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

Rating and Characteristic Curves

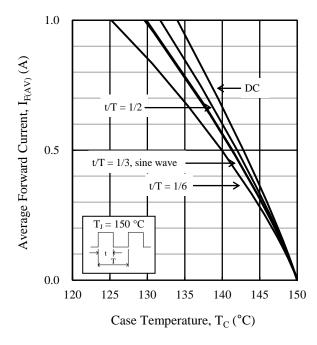


Figure 1. T_C vs. $I_{F(AV)}$ Typical Characteristics $(V_R=0\ V)$

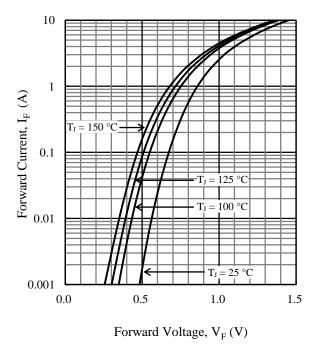


Figure 3. V_F vs. I_F Typical Characteristics

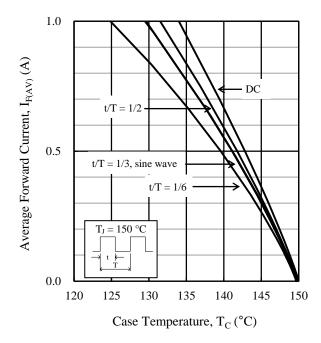


Figure 2. T_C vs. $I_{F(AV)}$ Typical Characteristics $(V_R = 200 \ V)$

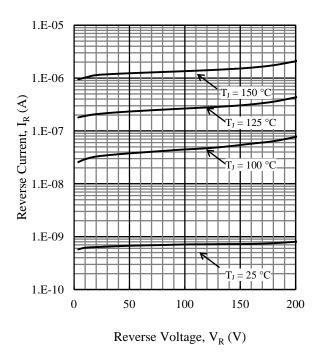
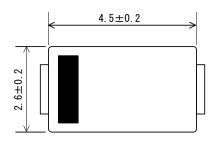
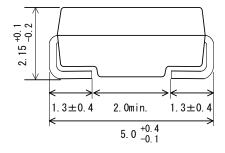


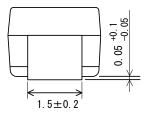
Figure 4. V_R vs. I_R Typical Characteristics

Physical Dimensions

• SJP Package







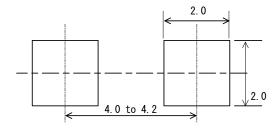
NOTES:

- 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

- MSL: JEDEC LEVEL1

• SJP Land Pattern Example



NOTE:

- Dimensions in millimeters

Marking Diagram

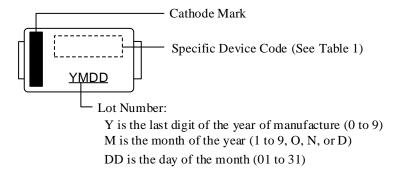


Table 1. Specific Device Code

Specific Device Code	Part Number
LD2	SJPL-D2

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