LD25N45SJS6

45V Trench MOS Barrier Schottky VF 0.52V@25A, 25℃

Features

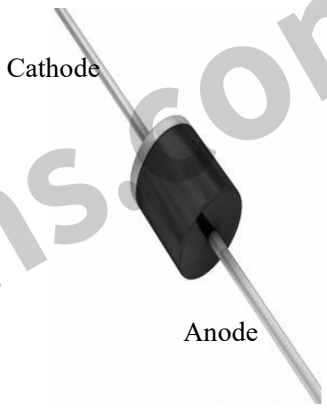
- Trench MOS Barrier Schottky technology
- Low stored charge Majority Carrier Conduction
- Ultra low forward voltage drop
- Low leakage current
- Low power loss and high efficiency
- High forward surge capacity

Application

- Schottky rectifier design for high frequency switched mode power supplies, such as adaptors and on board DC/DC converters.

PRIMRY CHARACTERISTICS	
Dioxide variation	Common cathode
I_F(AV)	25A
V_{RRM}	45V
$V_{F\ typ@IF=25A}$	0.52V
T_j(max)	150℃
Package	轴封 R6

R6



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Major Rating and Characteristics(per diode) (TA=25°C unless otherwise noted)

Item	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		45	V
Maximum average forward current 50 % duty cycle, rectangular waveform	I_F(AV)	Tc=25℃	25	A
Surge(Non-repetitive)Forward Current	I_{FSM}	Peak forward surge current 8.3 ms single sine-wave superimposed on rated load per diode	280	
Current Squared Time	I^2t	1ms≤t<8.3ms Tj=25℃	350	A^2s
Storage Temperature	T_{stg}		-55~150	℃
Junction Temperature	T_j	IN DC Forward Mode-Forward Operations，without reverse bias, t ≤1h (Fig. 1)①	-55 ~ 200	

Noted:

① Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

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Electrical Characteristic (at TA = 25 °C, unless otherwise note, per diode)

Parameter	Symbol	Test Condition		Value			Unit
				min.	typ.	max.	
		I_F=3A	T_A=25℃	-	0.38	-	
		I_F=8A		-	0.43	-	
		I_F=15A		-	0.47	-	
		I_F=20A			0.5	0.56	
		I_F=25A		-	0.52	0.58	
Reverse leakage current	$I_R^{(2)}$	V_R=45V	T_A=125℃	-	-	45	mA
			T_A=25℃	-	-	100	uA
		V_R=36V		-	-	80	
		V_R=5V		-	-	60	
Junction capacitance	C_j	V_R=5V_{DC}, 25℃(1MHz)		-	600	-	pF
Reverse Recovery Time	Trr	I_F=3A, dI/dt=100A/μs		-	-	30	ns

Noted:

(1) Pulse test: 300us pulse width,2% duty cycle

(2) Pulse test: 300us pulse width,2% duty cycle

RATINGS AND CHARACTERISTICS CURVES (TA=25°C unless otherwise noted)

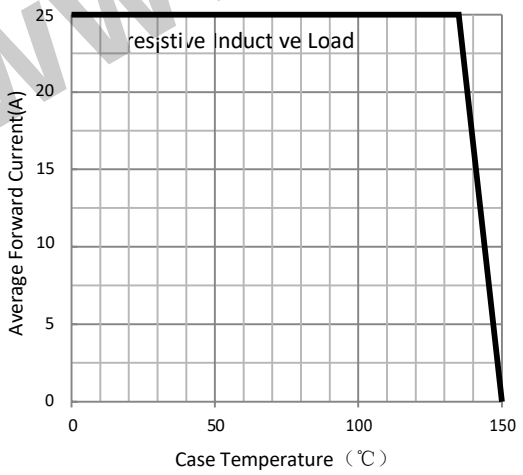

Fig.1-Forward Current Derating Curve

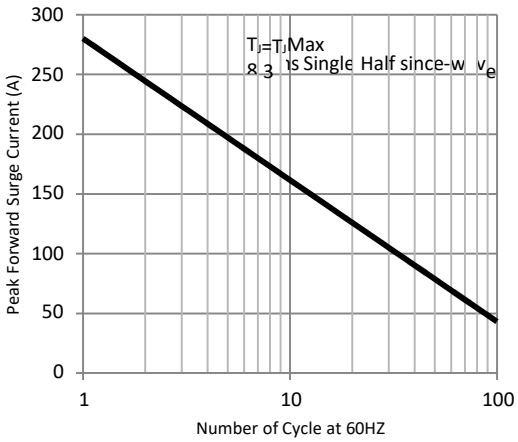

Fig.2-Max.Non-Repetive Peak Forward Surge Current Per Diode

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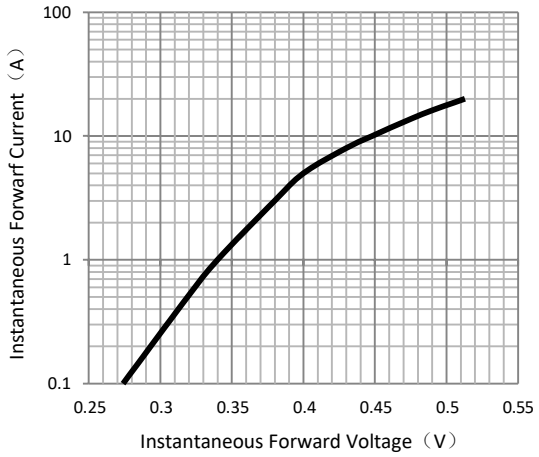

Fig.3-Typical instantaneous Forward characteristics Per Diode（T=25℃）

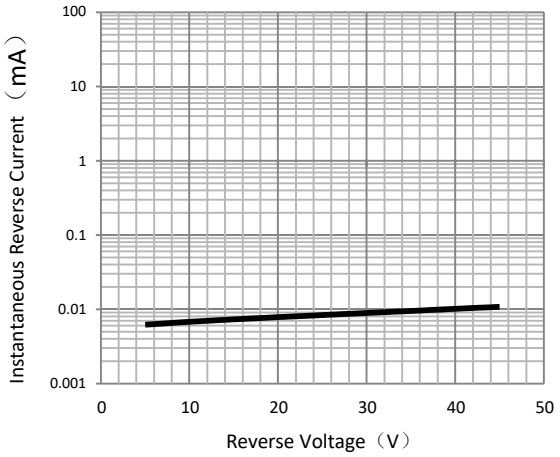

Fig.4-Typicla Reverse Characteristics Per Diode（T=25℃）

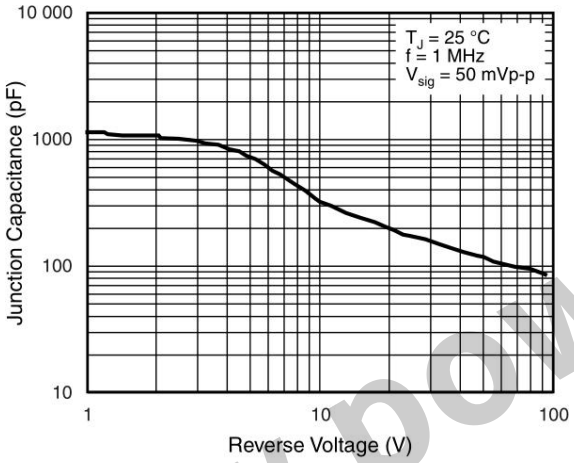

Fig. 5 - Typical Junction Capacitance Per Diode

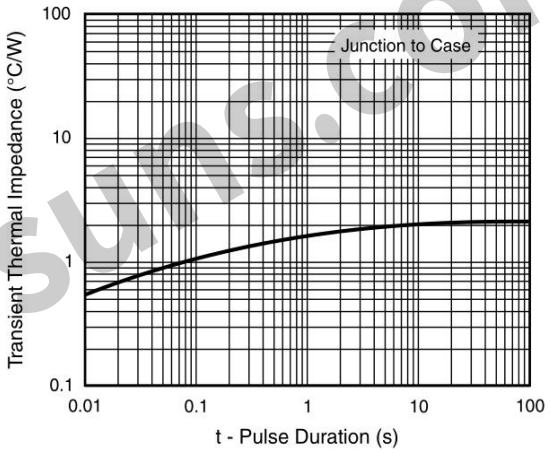

Fig. 6 - Typical Transient Thermal Impedance Per Diode

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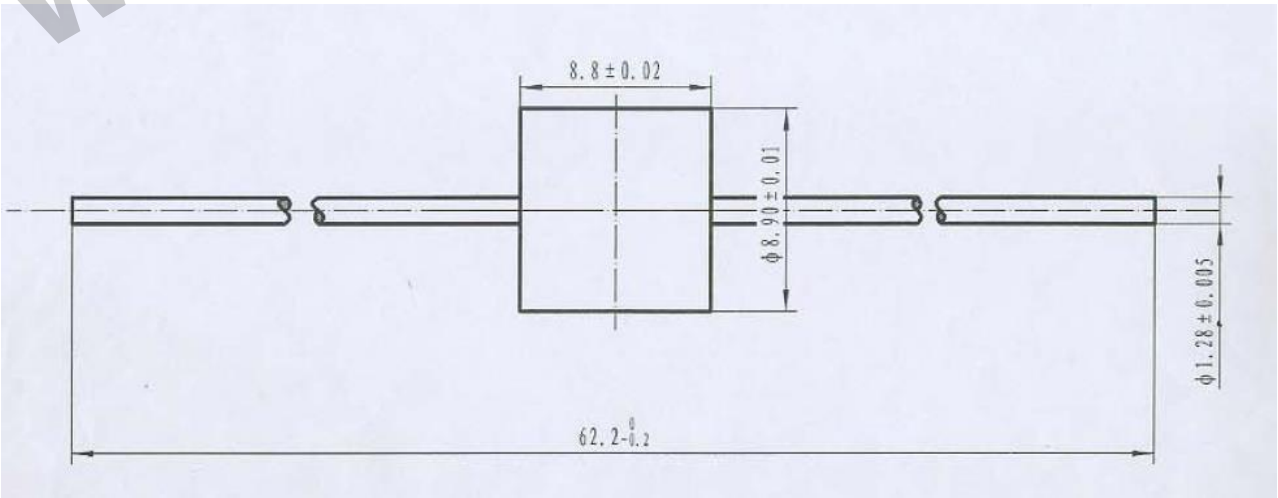
PACKAGE OUTLINE DIMENSIONS



Unite：inches（mm）

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Revision History

Revision	Date	Major changes
0.0	2020/2/24	Preliminary Revision
1.0	2022/6/1	Product Name Modification

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