

3A, 40V - 200V Schottky Barrier Surface Mount Rectifier

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guard ring for over-voltage protection
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- DC to DC converters

MECHANICAL DATA

• Case: SOD-123W

• Molding compound meets UL 94V-0 flammability rating

• Terminal: Matte tin plated leads, solderable per J-STD-002

Meet JESD 201 class 2 whisker test

· Polarity: Indicated by cathode band

• Weight: 0.016g (approximately)

KEY PARAMETERS				
PARAMETER	VALUE	UNIT		
I _F	3	Α		
V_{RRM}	40 - 200	V		
I _{FSM}	80	Α		
T _{J MAX}	125, 150	°C		
Package	SOD-123W			
Configuration	Single die			









SOD-123W



DADAMETED	SYMBOL	SS34	SS36	SS310	SS315	SS320	
PARAMETER		LW	LW	LW	LW	LW	UNIT
Marking code on the device		34LW	36LW	30LW	3ALW	3BLW	
Repetitive peak reverse voltage	V_{RRM}	40	60	100	150	200	V
Reverse voltage, total rms value	V _{R(RMS)}	28	42	70	105	140	V
Forward current	I _F			3			Α
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	80		А			
Junction temperature	T_J	- 55 to +125 - 55 to +150		°C			
Storage temperature	T _{STG}	- 55 to +125 - 55 to +150			°C		

Taiwan Semiconductor

THERMAL PERFORMANCE				
PARAMETER	SYMBOL	TYP	UNIT	
Junction-to-lead thermal resistance	$R_{\Theta JL}$	20	°C/W	
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	75	°C/W	

ELECTRICAL SPECIFICATIONS (T _A = 25°C unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
	SS34LW	I _F = 3A, T _J = 25°C		-	0.55	V
Forward voltage ⁽¹⁾	SS36LW			-	0.70	V
	SS310LW		V_{F}	-	0.85	V
	SS315LW SS320LW			-	0.95	V
Reverse current @ rated V _R ⁽²⁾	SS34LW SS36LW	T _J = 25°C		-	200	μA
	SS310LW		I _R	-	20	μA
	SS315LW SS320LW			-	10	μA

Notes:

- 1. Pulse test with PW = 0.3ms
- 2. Pulse test with PW = 30ms

ORDERING INFORMATION			
ORDERING CODE ⁽¹⁾	PACKAGE	PACKING	
SS3xLW	SOD-123W	10,000 / Tape & Reel	

Notes:

1. "x" defines voltage from 40V(SS34LW) to 200V(SS320LW)



CHARACTERISTICS CURVES

 $(T_A = 25^{\circ}C \text{ unless otherwise noted})$

Fig.1 Forward Current Derating Curve

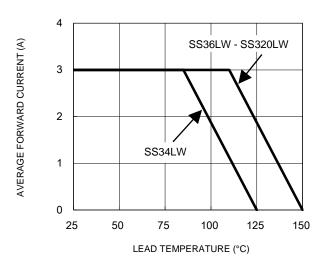


Fig.3 Typical Reverse Characteristics

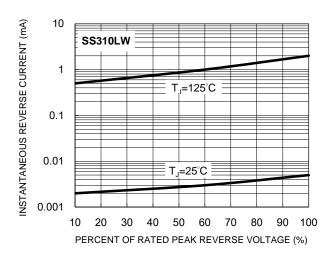


Fig.2 Typical Junction Capacitance

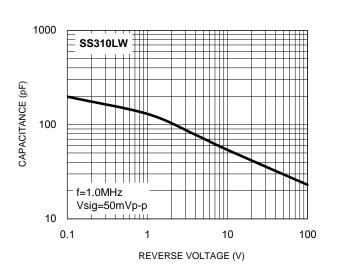


Fig.4 Typical Forward Characteristics

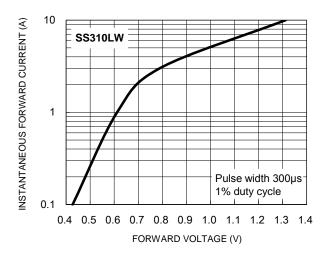
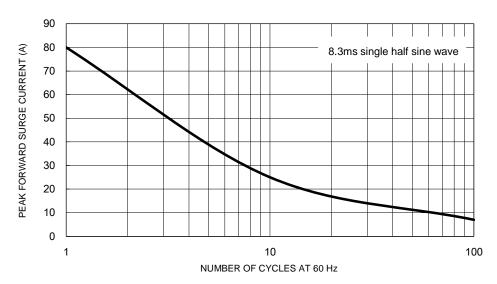


Fig.5 Maximum Non-Repetitive Forward Surge Current

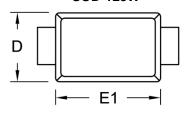


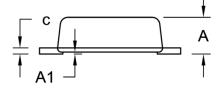


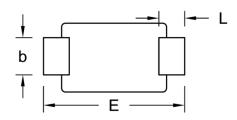
Taiwan Semiconductor

PACKAGE OUTLINE DIMENSIONS

SOD-123W

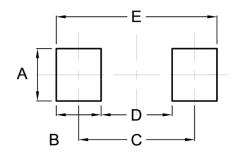






DIM.	Unit (mm)		Unit (inch)		
Diw.	Min.	Max.	Min.	Max.	
Α	0.90	1.02	0.035	0.040	
A1	0.00	0.10	0.000	0.004	
b	0.90	1.05	0.035	0.041	
С	0.10	0.22	0.004	0.009	
D	1.70	1.90	0.067	0.075	
E	3.60	3.80	0.142	0.150	
E1	2.60	2.90	0.102	0.114	
L	0.50	0.85	0.020	0.033	

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
Α	1.40	0.055
В	1.20	0.047
С	3.10	0.122
D	1.90	0.075
E	4.30	0.169

MARKING DIAGRAM



P/N = Marking Code YW = Date Code F = Factory Code



Taiwan Semiconductor

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.