

# 2A, 100V Schottky Barrier Surface Mount Rectifier

#### **FEATURES**

- AEC-Q101 qualified
- Low power loss, high efficiency
- Ideal for automated placement
- Guard ring for overvoltage 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**

- Low voltage, high freq. inverter
- DC/DC converter
- Freewheeling diodes
- Reverse battery protection
- Car lighting

#### **MECHANICAL DATA**

- Case: DO-214AA (SMB)
- 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: 0.090g (approximately)

KEY PARAMETERS			
PARAMETER	VALUE	UNIT	
l <sub>F</sub>	2	Α	
$V_{RRM}$	100	V	
I <sub>FSM</sub>	75	Α	
T <sub>J MAX</sub>	175	°C	
Package	DO-214AA (SMB)		
Configuration	Single die		









DO-214AA (SMB)



PARAMETER	SYMBOL	SSH210H	UNIT
Marking code on the device		SSH210	
Repetitive peak reverse voltage	V <sub>RRM</sub>	100	V
Reverse voltage, total rms value	V <sub>R(RMS)</sub>	70	V
Forward current	I <sub>F</sub>	2	А
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	75	А
Junction temperature	T <sub>J</sub>	- 55 to +175	°C
Storage temperature	T <sub>STG</sub>	- 55 to +175	°C

1



# Taiwan Semiconductor

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	24	°C/W

ELECTRICAL SPECIFICATIONS (T <sub>A</sub> = 25°C unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage <sup>(1)</sup>	$I_F = 2A, T_J = 25^{\circ}C$	V <sub>F</sub>	-	0.79	V
	I <sub>F</sub> = 2A, T <sub>J</sub> = 125°C		-	0.65	V
Reverse current @ rated V <sub>R</sub> <sup>(2)</sup>	T <sub>J</sub> = 25°C	I <sub>R</sub>	-	1	μΑ
	T <sub>J</sub> = 125°C		-	1	mA

#### Notes:

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

ORDERING INFORMATION			
ORDERING CODE	PACKAGE	PACKING	
SSH210H	DO-214AA (SMB)	3,000 / Tape & Reel	



#### **CHARACTERISTICS CURVES**

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

**Fig.1 Forward Current Derating Curve** 

Fig.2 Typical Junction Capacitance

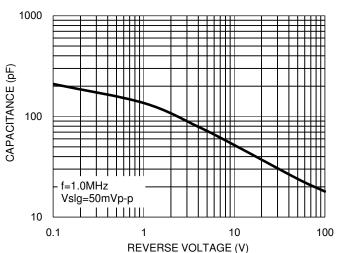
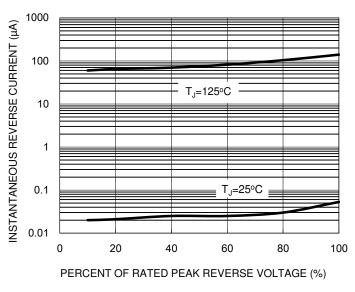
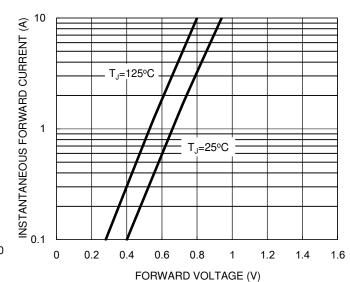


Fig.3 Typical Reverse Characteristics

LEAD TEMPERATURE (°C)



**Fig.4 Typical Forward Characteristics** 

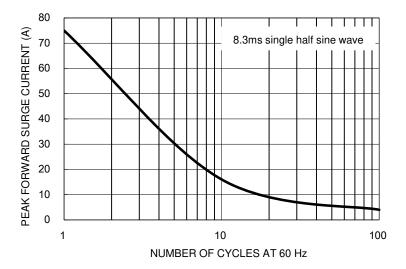




## **CHARACTERISTICS CURVES**

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

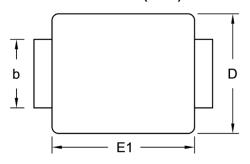
Fig.5 Maximum Non-repetitive Forward Surge Current

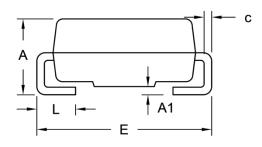




## **PACKAGE OUTLINE DIMENSIONS**

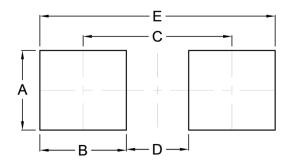
## DO-214AA (SMB)





DIM.	Unit (mm)		Unit	(inch)
Dilvi.	Min.	Max.	Min.	Max.
Α	1.95	2.65	0.077	0.104
A1	0.05	0.20	0.002	0.008
b	1.95	2.20	0.077	0.087
С	0.15	0.31	0.006	0.012
D	3.30	3.95	0.130	0.156
E	5.10	5.60	0.201	0.220
E1	4.05	4.60	0.159	0.181
L	0.75	1.60	0.030	0.063

## **SUGGESTED PAD LAYOUT**



Symbol	Unit (mm)	Unit (inch)
Α	2.30	0.091
В	2.50	0.098
С	4.30	0.169
D	1.80	0.071
E	6.80	0.268

## **MARKING DIAGRAM**



P/N = Marking Code G = Green Compound

YW = Date Code F = Factory Code



#### **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.