

## 2A, 20V - 40V 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

### 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: 0.093g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	2	A
$V_{RRM}$	20 - 40	V
$I_{FSM}$	80	A
$T_{J\ MAX}$	125	°C
Package	DO-214AA (SMB)	
Configuration	Single die	



DO-214AA (SMB)



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SSL22H	SSL23H	SSL24H	UNIT
Marking code on the device		SL22	SL23	SL24	
Repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Reverse voltage, total rms value	$V_{R(RMS)}$	14	21	28	V
Forward current	$I_F$	2			A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	80			A
Junction temperature	$T_J$	- 55 to +125			°C
Storage temperature	$T_{STG}$	- 55 to +150			°C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>UNIT</b>
Junction-to-ambient thermal resistance	$R_{\theta JA}$	70	°C/W
Junction-to-lead thermal resistance	$R_{\theta JL}$	25	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage <sup>(1)</sup>	$I_F = 2\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	0.41	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	400	$\mu\text{A}$
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 100^\circ\text{C}$	$I_R$	-	50	mA
			-	60	mA
			-	-	-

**Notes:**

1. Pulse test with  $PW = 0.3\text{ms}$
2. Pulse test with  $PW = 30\text{ms}$

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE<sup>(1)</sup></b>	<b>PACKAGE</b>	<b>PACKING</b>
SSL2xH	DO-214AA (SMB)	3,000 / Tape & Reel

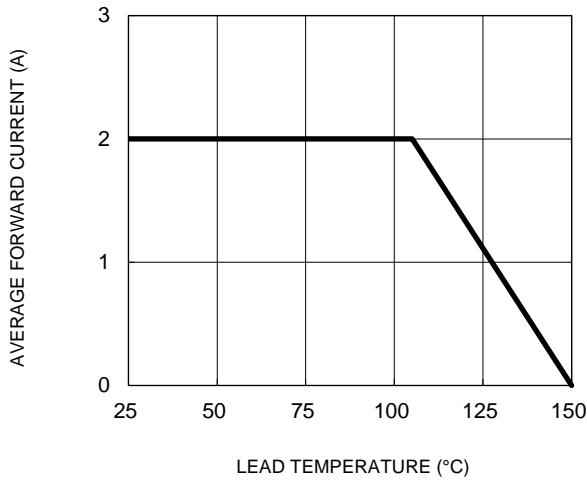
**Notes:**

1. "x" defines voltage from 20V(SSL22H) to 40V(SSL24H)

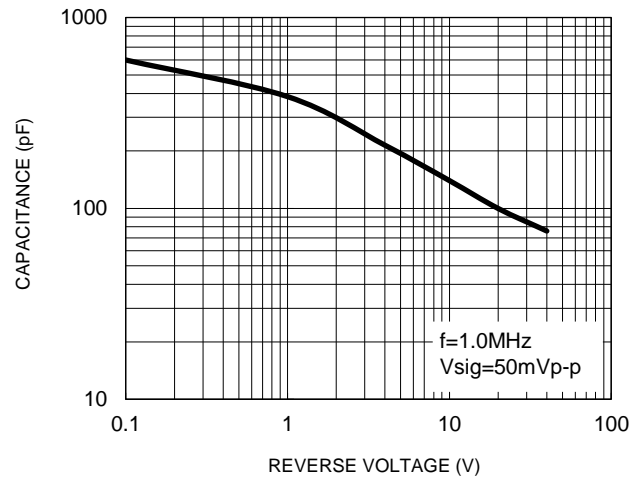
**CHARACTERISTICS CURVES**

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

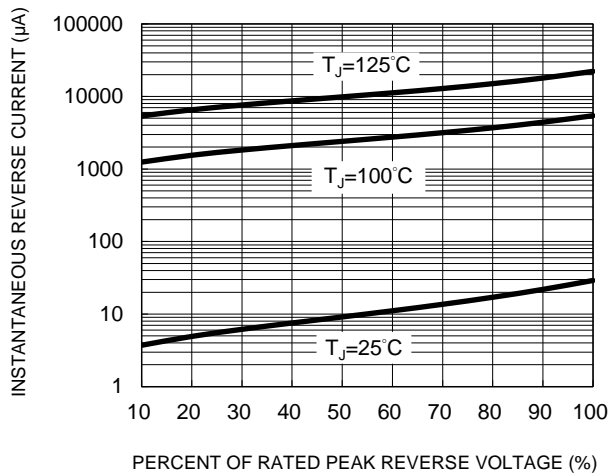
**Fig.1 Forward Current Derating Curve**



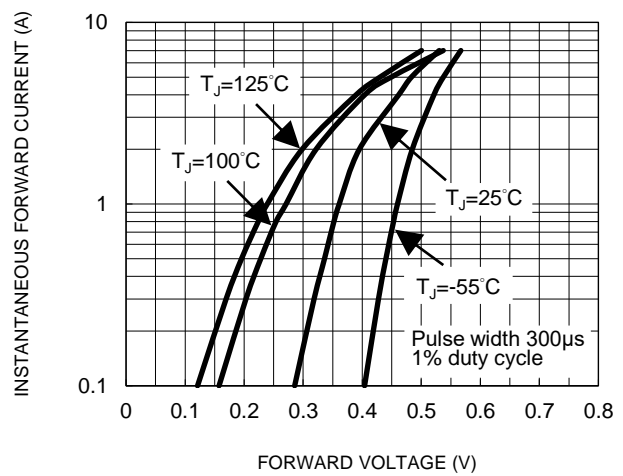
**Fig.2 Typical Junction Capacitance**



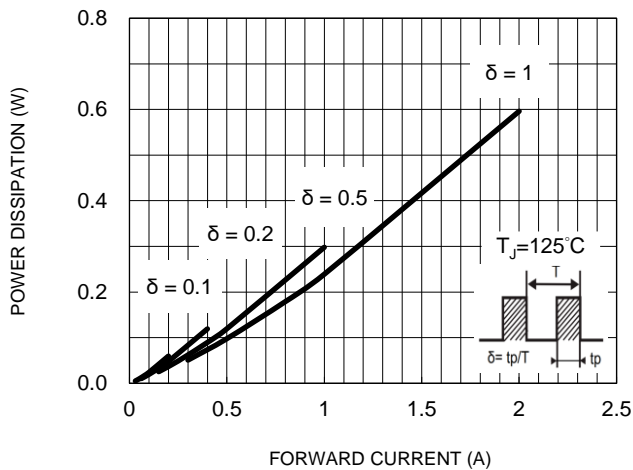
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



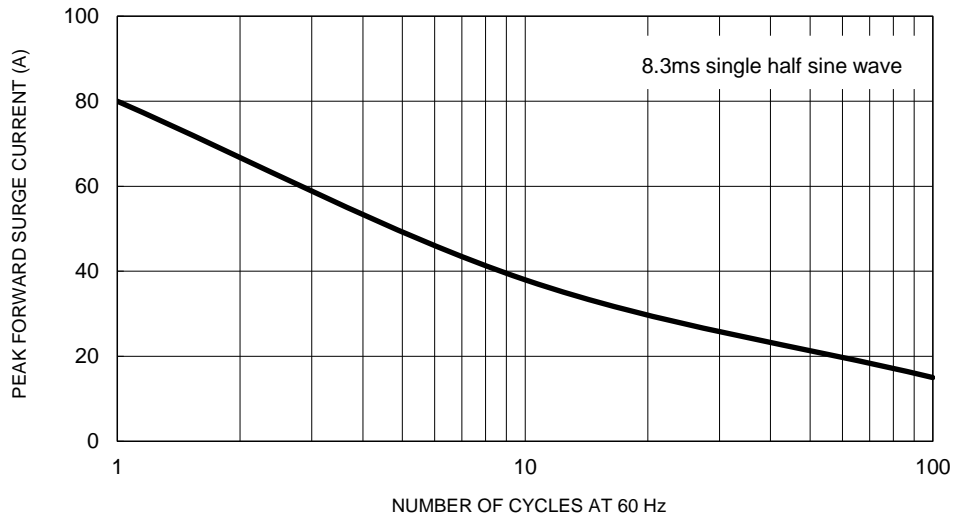
**Fig.5 Typical Forward Power Dissipation vs. Forward Current**



**CHARACTERISTICS CURVES**

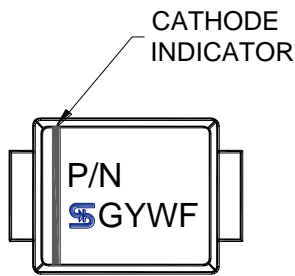
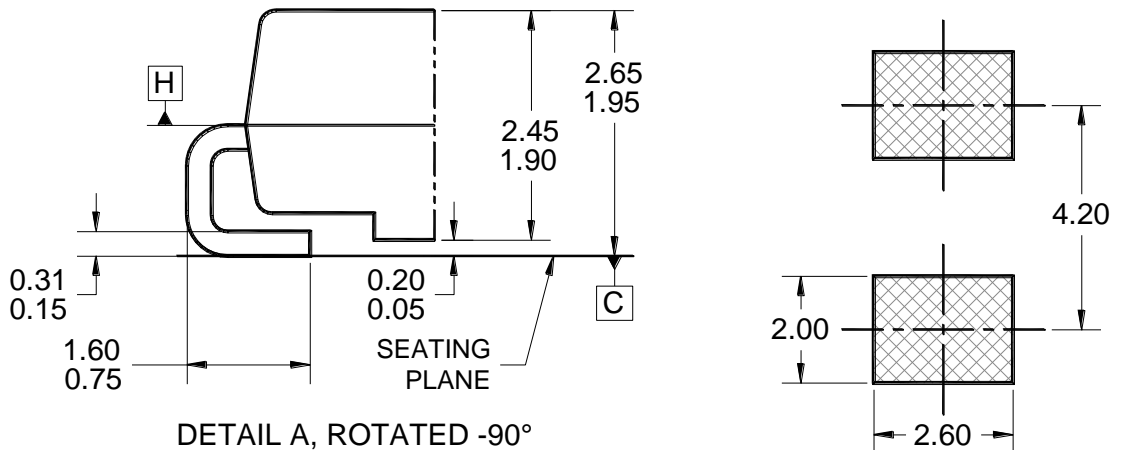
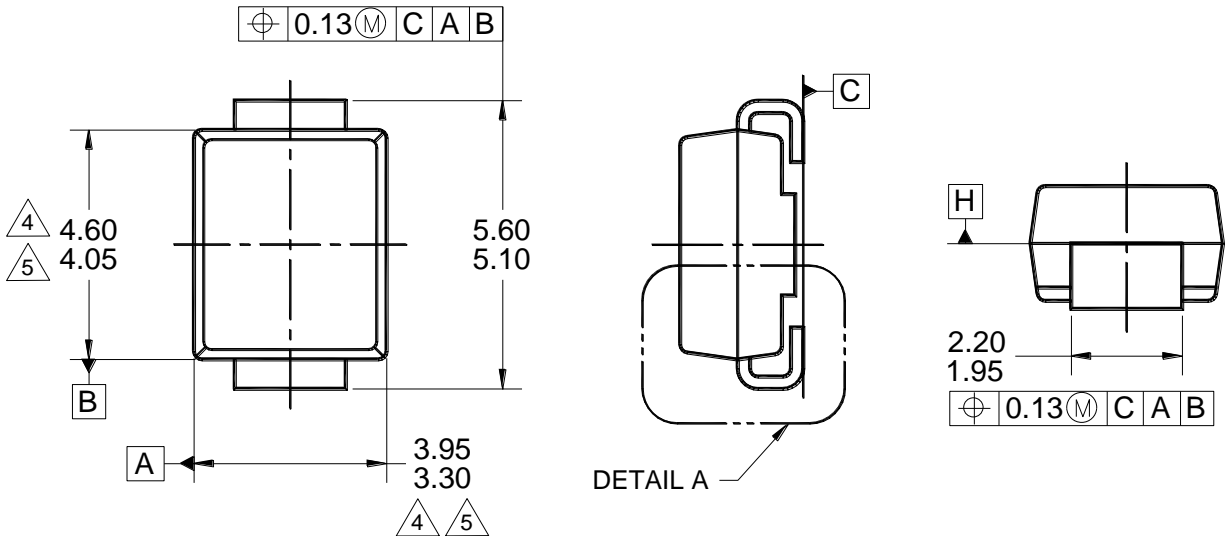
(T<sub>A</sub> = 25°C unless otherwise noted)

**Fig.6 Maximum Non-Repetitive Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**

**DO-214AA (SMB)**



**MARKING DIAGRAM**

P/N = MARKING CODE  
G = GREEN COMPOUND  
YW = DATE CODE  
F = FACTORY CODE

**NOTES: UNLESS OTHERWISE SPECIFIED**

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-214, VARIATION AA, ISSUE D.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.
6. DWG NO. REF: HQ2SD07-DO214SMB-035 REV A.

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