

## 1A, 20V - 40V Schottky Barrier Surface Mount Rectifier

### FEATURES

- 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

- Switching mode power supply (SMPS)
- Adapters
- Monitor
- DC/DC converters
- TV

### MECHANICAL DATA

- Case: DO-214AC (SMA)
- 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: 0.066g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	1	A
$V_{RRM}$	20 - 40	V
$I_{FSM}$	50	A
$T_{J\ MAX}$	125	°C
Package	DO-214AC (SMA)	
Configuration	Single die	



**DO-214AC (SMA)**



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SSL12	SSL13	SSL14	UNIT
Marking code on the device		SL12	SL13	SL14	
Repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Reverse voltage, total rms value	$V_{R(RMS)}$	14	21	28	V
Forward current	$I_F$	1			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50			A
Junction temperature	$T_J$	- 55 to +125			°C
Storage temperature	$T_{STG}$	- 55 to +150			°C

**THERMAL PERFORMANCE**

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	28	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	88	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage <sup>(1)</sup>	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	0.39	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	200	$\mu\text{A}$
	$T_J = 100^\circ\text{C}$		-	50	mA

**Notes:**

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

**ORDERING INFORMATION**

ORDERING CODE <sup>(1)</sup>	PACKAGE	PACKING
SSL1x	DO-214AC (SMA)	7,500 / Tape & Reel

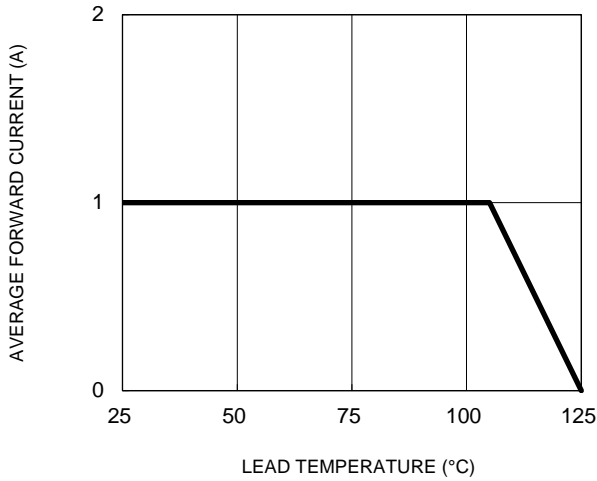
**Notes:**

1. "x" defines voltage from 20V(SSL12) to 40V(SSL14)

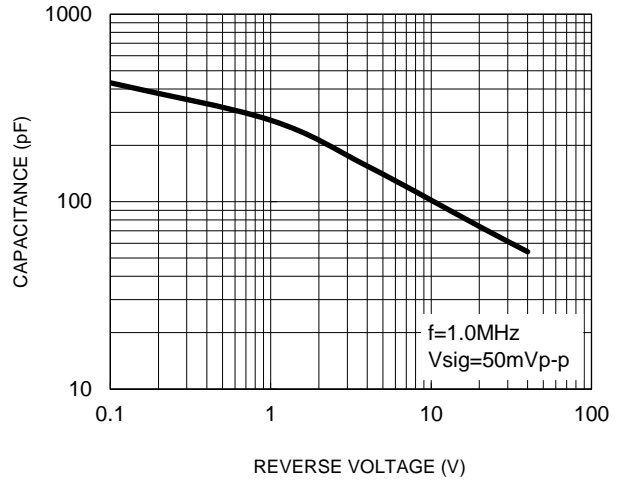
**CHARACTERISTICS CURVES**

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

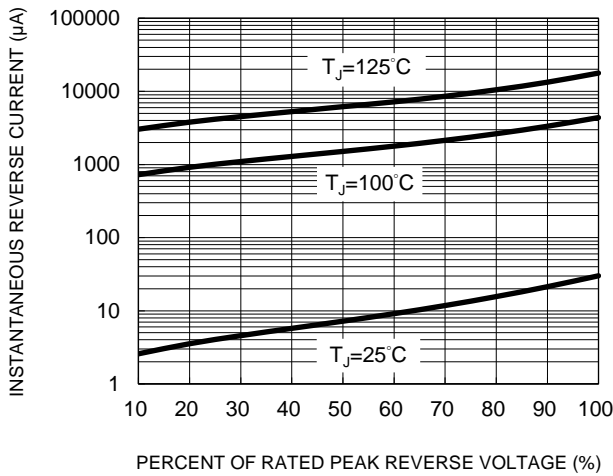
**Fig.1 Forward Current Derating Curve**



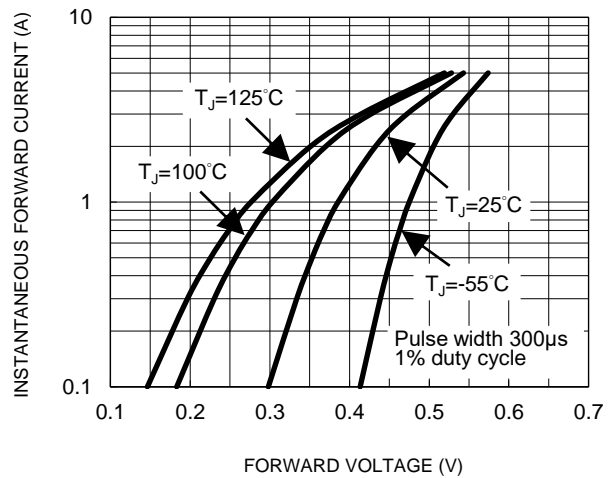
**Fig.2 Typical Junction Capacitance**



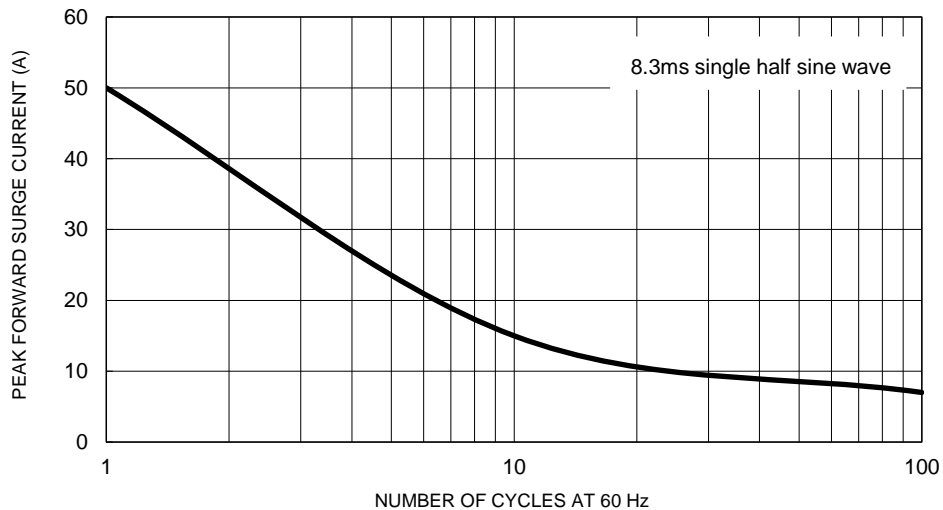
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

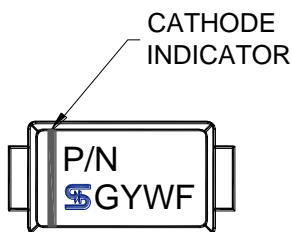
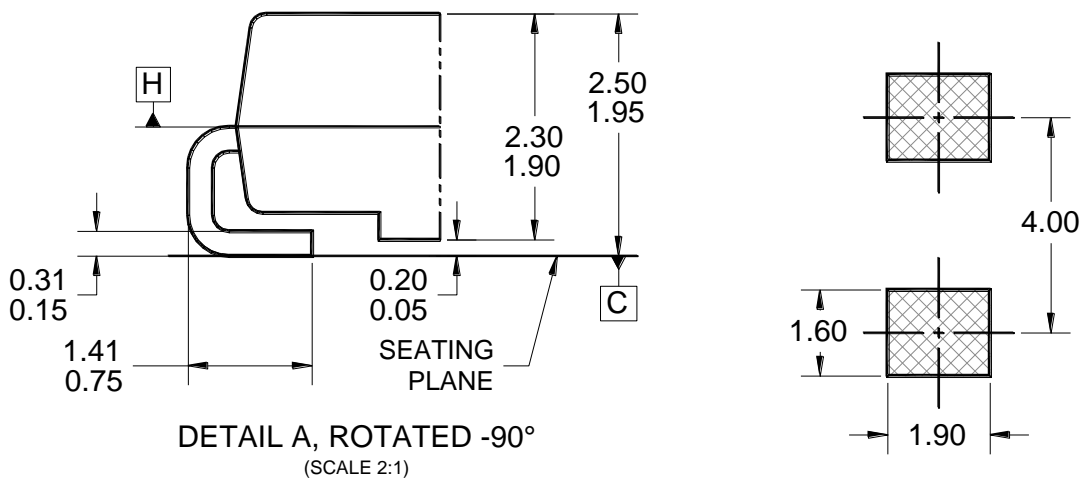
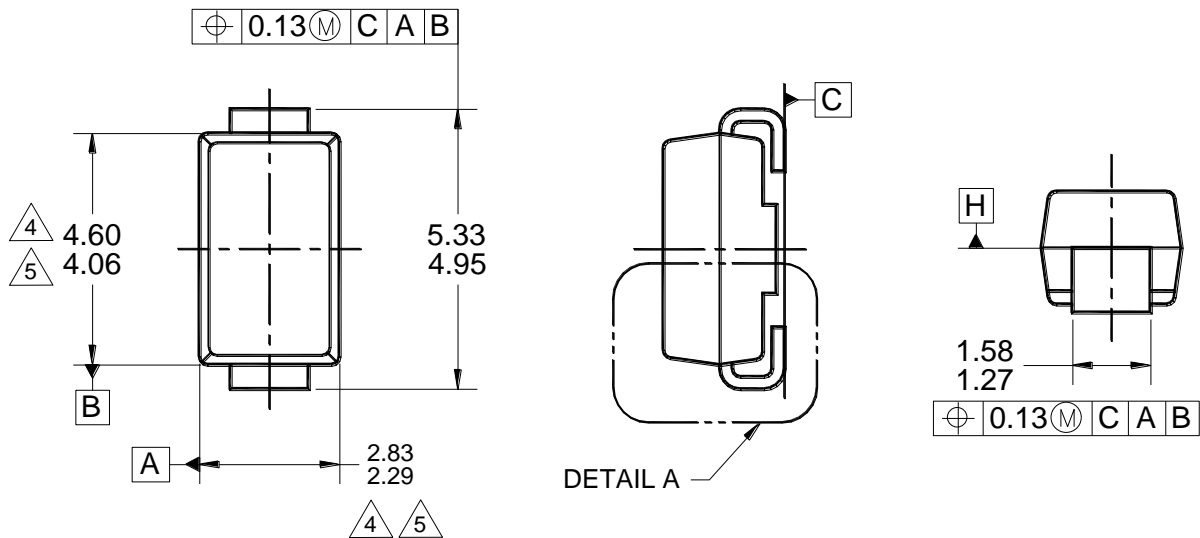


**Fig.5 Maximum Non-Repetitive Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**

**DO-214AC (SMA)**



**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 AC, 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-DO214SMC-034 REV A.

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