

3A, 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
- Lighting application
- Converter

MECHANICAL DATA

- Case: DO-214AB (SMC)
- 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: 0.210g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	3	A
V_{RRM}	20 - 40	V
I_{FSM}	100	A
$T_J \text{ MAX}$	125	°C
Package	DO-214AB (SMC)	
Configuration	Single die	


**HALOGEN
FREE**

DO-214AB (SMC)


ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SSL32	SSL33	SSL34	UNIT
Marking code on the device		SL32	SL33	SL34	
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	3			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100			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	$R_{\theta JL}$	13	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	53	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	15	°C/W

Thermal Performance Note: Units mounted on PCB (16mm x 16mm Cu pad test board)

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

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾		I _F = 3A, T _J = 25°C	V _F	-	0.41	V
Reverse current @ rated V _R ⁽²⁾	SSL32	T _J = 25°C	I _R	-	200	µA
	SSL33			-	500	µA
	SSL34			-	50	mA
	SSL32	T _J = 100°C		-	100	mA
	SSL33			-	100	mA
	SSL34					

Notes:

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

ORDERING INFORMATION

ORDERING CODE ⁽¹⁾	PACKAGE	PACKING
SSL3x	DO-214AB (SMC)	3,000 / Tape & Reel

Notes:

1. "x" defines voltage from 20V(SSL32) to 40V(SSL34)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

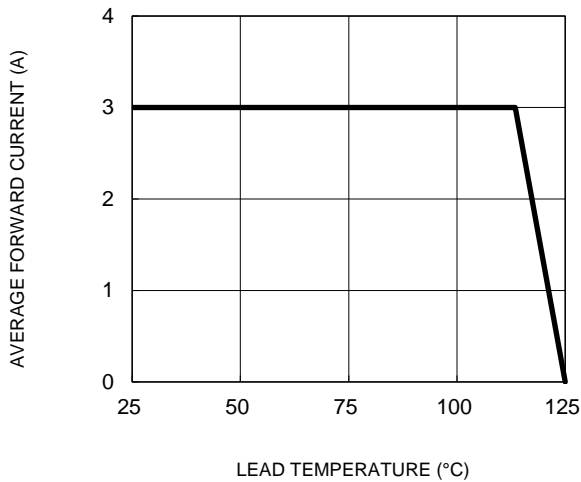


Fig.2 Typical Junction Capacitance

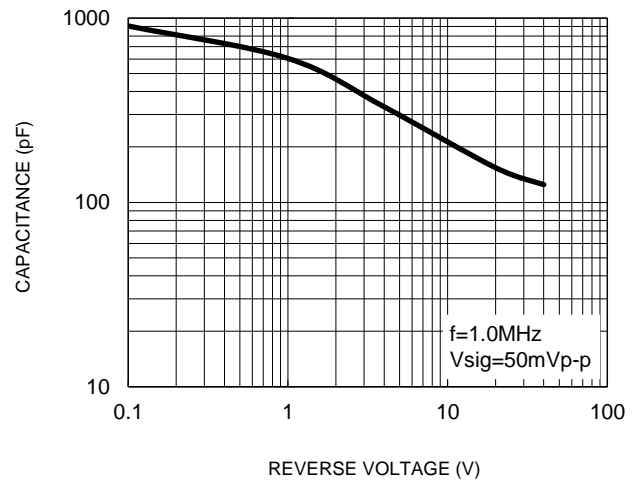


Fig.3 Typical Reverse Characteristics

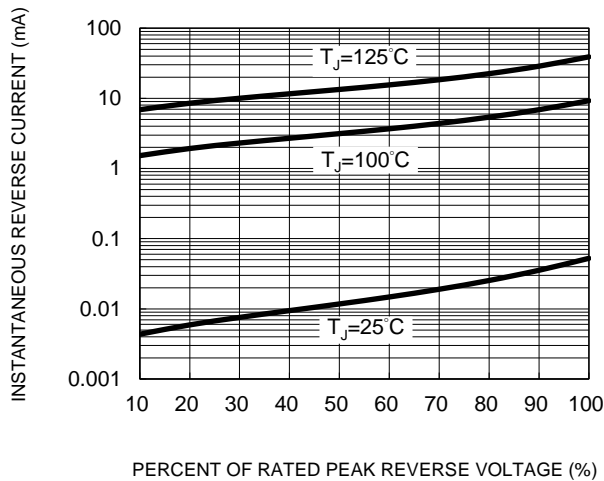


Fig.4 Typical Forward Characteristics

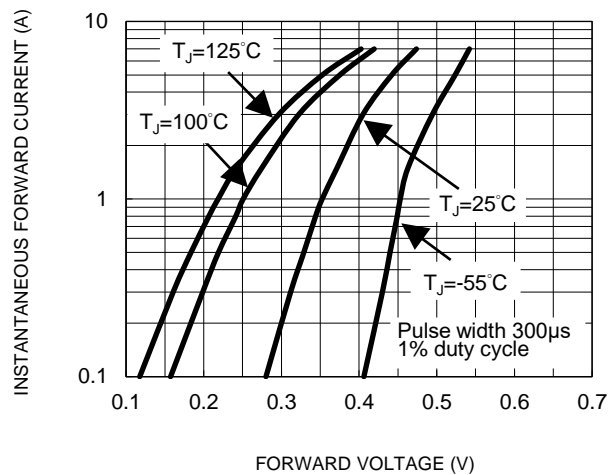
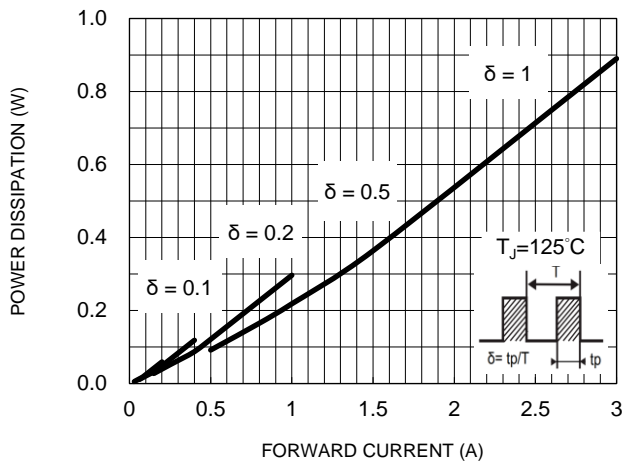


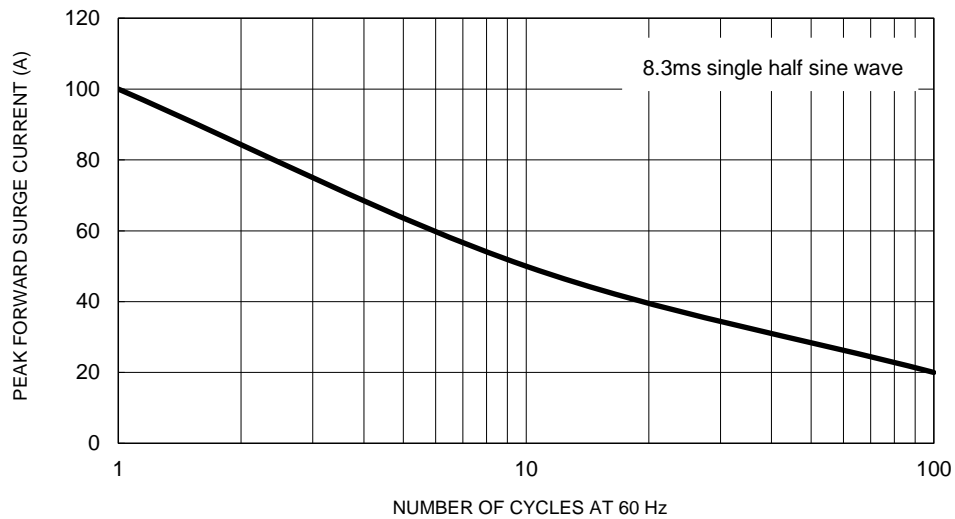
Fig.5 Typical Forward Power Dissipation vs. Forward Current



CHARACTERISTICS CURVES

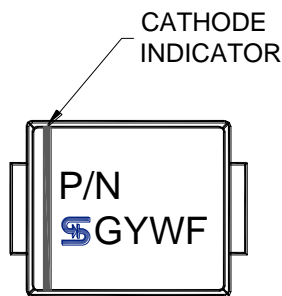
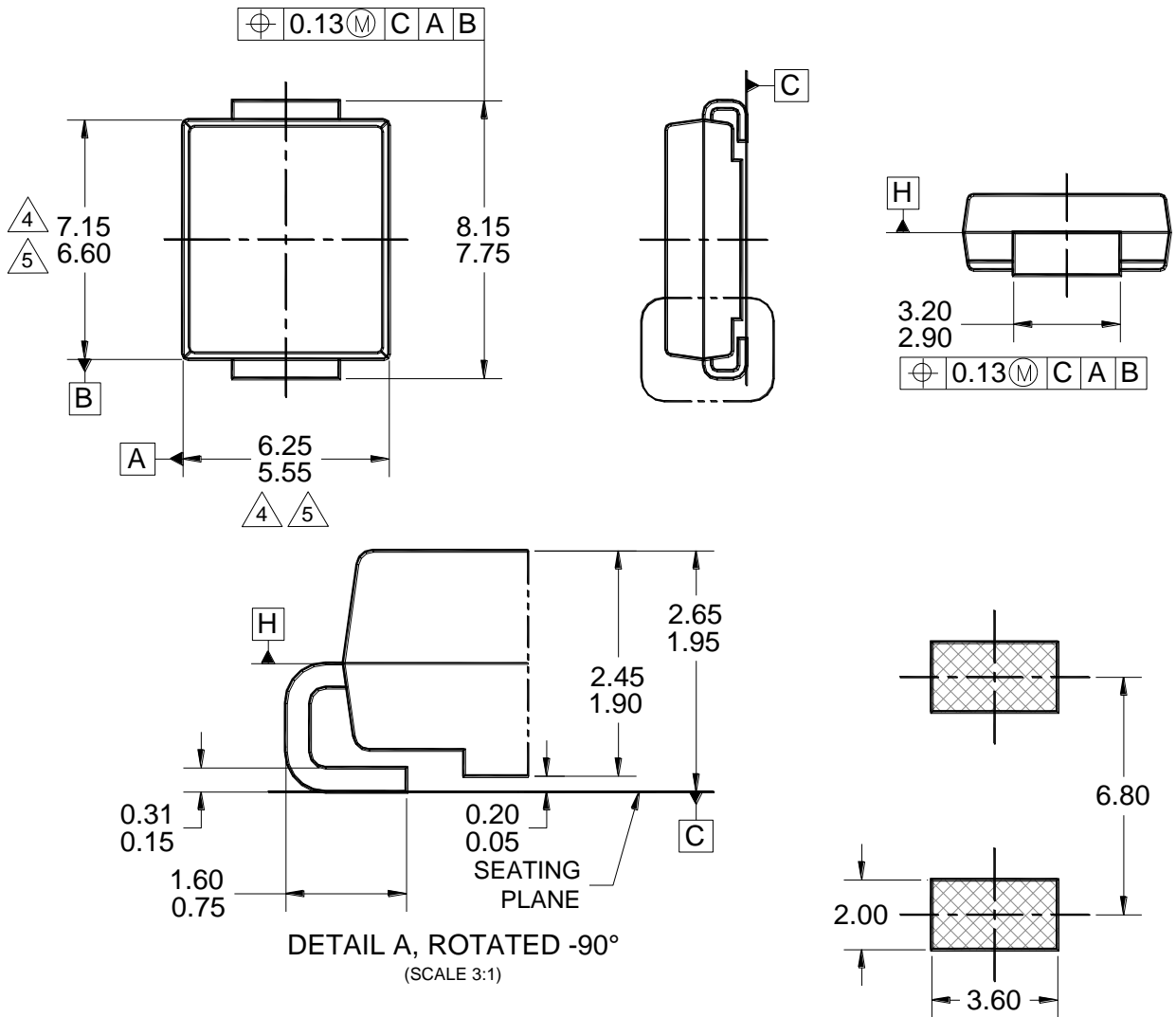
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.6 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

DO-214AB (SMC)



MARKING DIAGRAM

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

NOTES: UNLESS OTHERWISE SPECIFIED

- ALL DIMENSIONS ARE IN MILLIMETERS.
- DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
- PACKAGE OUTLINE REFERENCE: JEDEC DO-214, VARIATION AB, ISSUE D.
- MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.
- MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.
- DWG NO. REF: HQ2SD07-DO214SMC-036 REV A.

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