3A, 20V - 40V Surface Mount Schottky Barrier Rectifier

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guard ring for over-voltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- Converter

MECHANICAL DATA

- Case: DO-214AB (SMC)
- Molding compound meets UL 94V-0 flammability rating
- Part no. with suffix "H" means AEC-Q101 qualified
- Packing code with suffix "G" means green compound (halogen-free)
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.21 g (approximately)

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

Pb-Free RoHS COMPLIANT

DO-214AB (SMC)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°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
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Forward current	$I_{F(AV)}$	3			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	100			A
Junction temperature	T_J	- 55 to +125			°C
Storage temperature	T_{STG}	- 55 to +150			°C

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THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance per diode	$R_{\Theta JL}$	17	°C/W
Junction-to-ambient thermal resistance per diode	$R_{\Theta JA}$	55	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER		CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage per diode (1)		I_F = 3A, T_J = 25°C	V_F	-	0.41	V
Reverse current @ rated V_R per diode (2)	SSL32 SSL33	T_J = 25°C	I_R	-	0.2	mA
	SSL34			-	0.5	mA
	SSL32 SSL33	T_J = 100°C		-	50	mA
	SSL34			-	100	mA

Notes:

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

ORDERING INFORMATION

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SSL3x (Note 1,2)	H	R7	G	SMC	850 / 7" Plastic reel
		R6		SMC	3,000 / 13" Paper reel
		M6		SMC	3,000 / 13" Plastic reel
		V7		Matrix SMC	850 / 7" Plastic reel
		V6		Matrix SMC	3,000 / 13" Plastic reel

Note :

1. "x" defines voltage from 20V (SSL32) to 40V (SSL34)
2. Only V6 and V7 are all green compound (halogen free)

EXAMPLE

EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SSL32HR7G	SSL32	H	R7	G	AEC-Q101 qualified Green compound

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CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

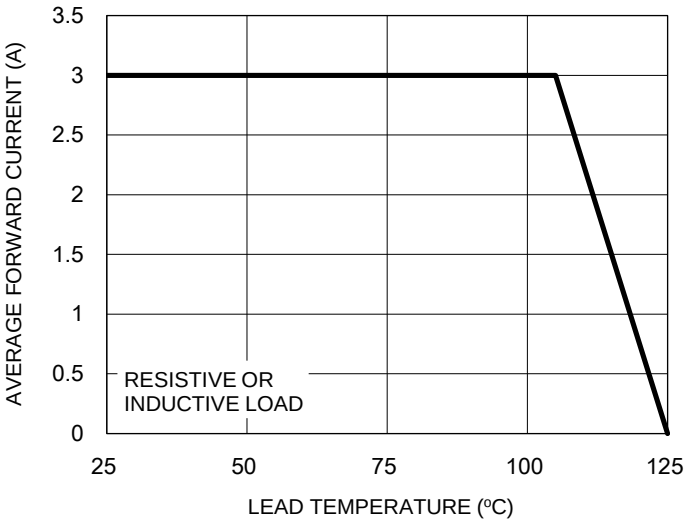


Fig.2 Typical Junction Capacitance

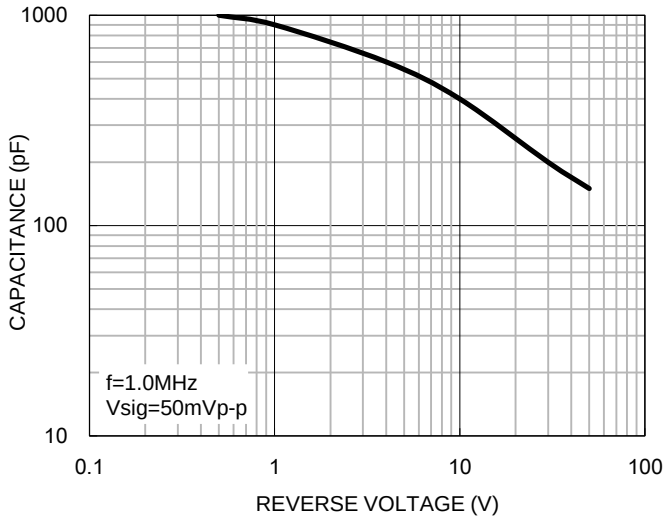


Fig.3 Typical Reverse Characteristics

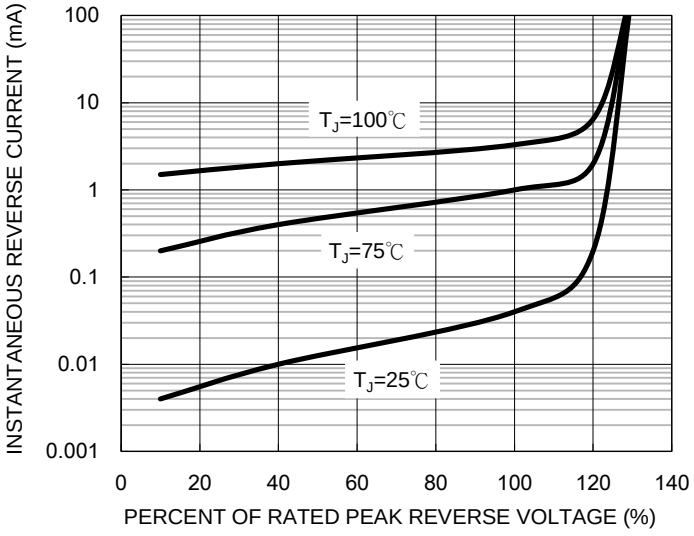
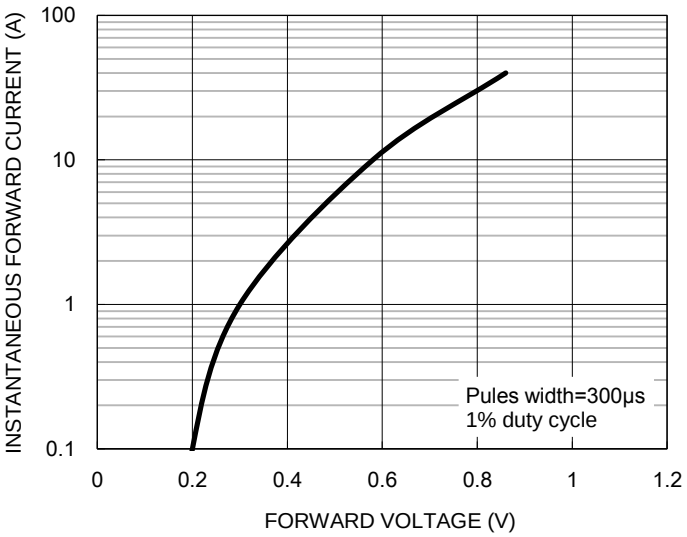


Fig.4 Typical Forward Characteristics



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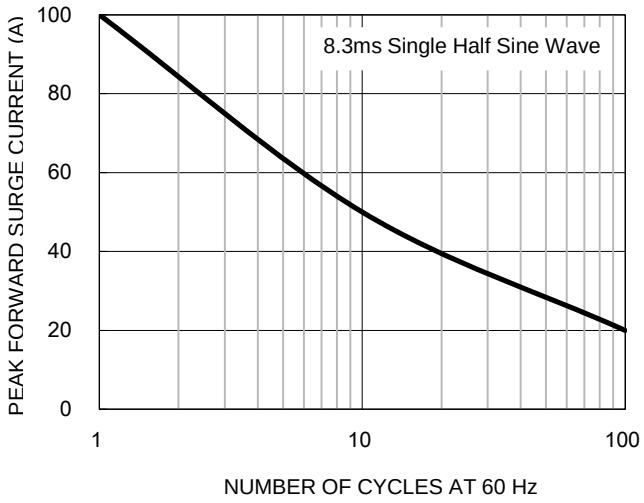
CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current



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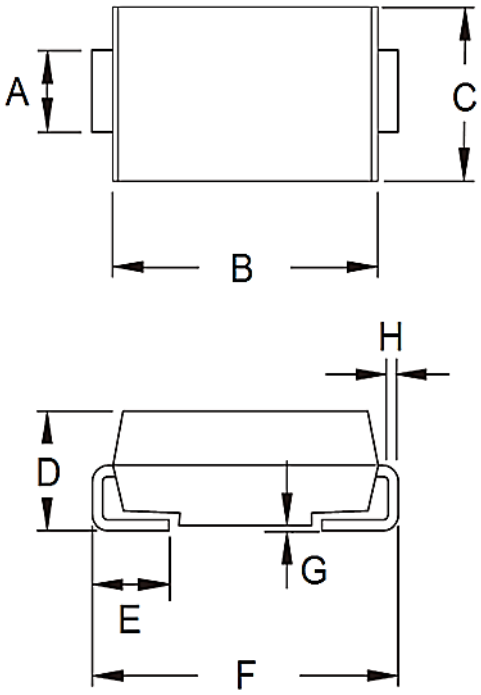
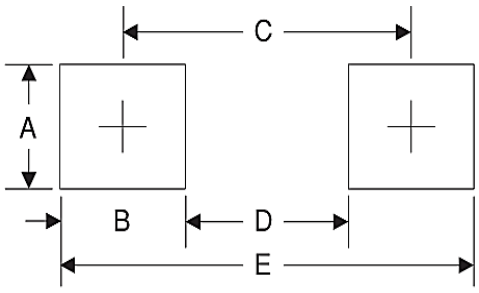
PACKAGE OUTLINE DIMENSIONS

DO-214AB (SMC)



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.00	2.62	0.079	0.103
E	1.00	1.60	0.039	0.063
F	7.75	8.13	0.305	0.320
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012

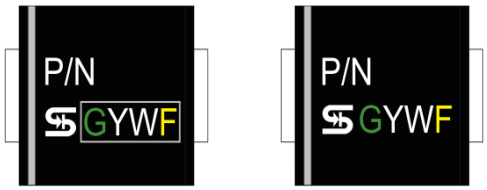
SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	3.30	0.130
B	2.50	0.098
C	6.80	0.268
D	4.40	0.173
E	9.40	0.370

MARKING DIAGRAM

Matrix SMC **SMC**



P/N =Marking Code
G =Green Compound
YW =Date Code
F =Factory Code

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