15A, 400V-1000V Surface Mount Glass Passivated Rectifiers

FEATURES

- AEC-Q101 qualified available
- Low forward voltage drop
- Ideal for automated placement
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	15	A
V_{RRM}	400-1000	V
I_{FSM}	350	A
$T_{J\ MAX}$	150	°C
Package	DO-214AB (SMC)	

APPLICATIONS

- Freewheeling application
- Switching mode converters and inverters, computer and telecommunication.

MECHANICAL DATA

- Case: DO-214AB (SMC)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.270 g (approximately)

DO-214AB (SMC)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)							
PARAMETER		**SYMBOL**	**S15GC**	**S15JC**	**S15KC**	**S15MC**	**UNIT**
Maximum repetitive peak reverse voltage		V_{RRM}	400	600	800	1000	V
Maximum RMS voltage		$V_{R(RMS)}$	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	400	600	800	1000	V
Forward current		I_F	15				A
Surge peak forward current, single half sine-wave superimposed on rated load	8.3ms at T_A = 25°C	I_{FSM}	350				A
Junction temperature		T_J	-55 to +150				°C
Storage temperature		T_{STG}	-55 to +150				°C

THERMAL PERFORMANCE			
PARAMETER	**SYMBOL**	**TYP**	**UNIT**
Junction-to-lead thermal resistance	$R_{\Theta JL}$	8	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	44	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**TYP**	**MAX**	**UNIT**
Forward voltage (1)	I_F = 15A, T_J = 25°C	V_F	-	1.10	V
Reverse current @ rated V_R (2)	T_J = 25°C	I_R	-	1	μA
	T_J = 125°C		-	250	μA
Junction capacitance	1 MHz, V_R=4.0V	C_J	93	-	pF

Notes:

(1) Pulse test with PW=0.3 ms

(2) Pulse test with PW=30 ms

ORDERING INFORMATION		
ORDERING CODE(1)(2)	**PACKAGE**	**PACKING**
S15xCHV7G	SMC	850 / 7” reel
S15xCHV6G	SMC	3,000 / 13” reel
S15xC V7G	SMC	850 / 7” reel
S15xC V6G	SMC	3,000 / 13” reel

Notes:

(1) “x” defines voltage from 400V(S15GC) to 1000V(S15MC)

(2) “H” mean AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

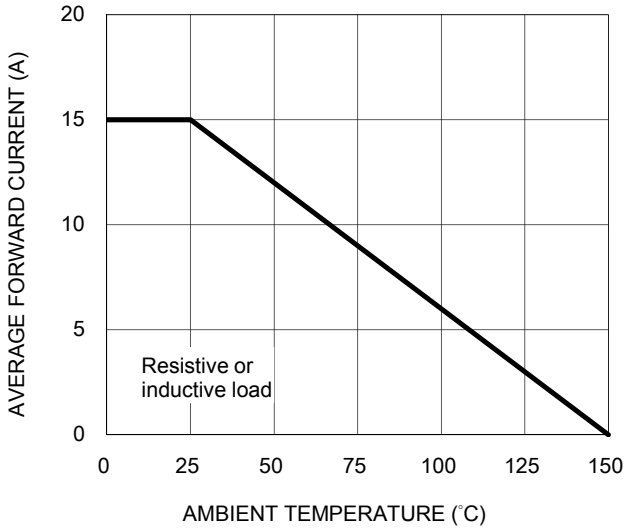


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

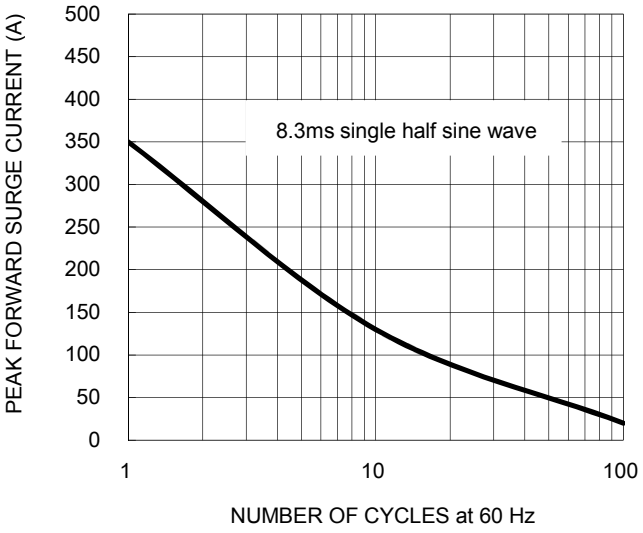


Fig.3 Typical Forward Characteristics

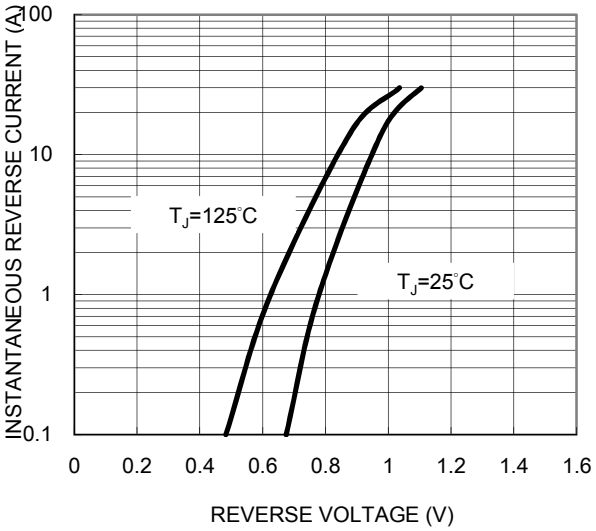
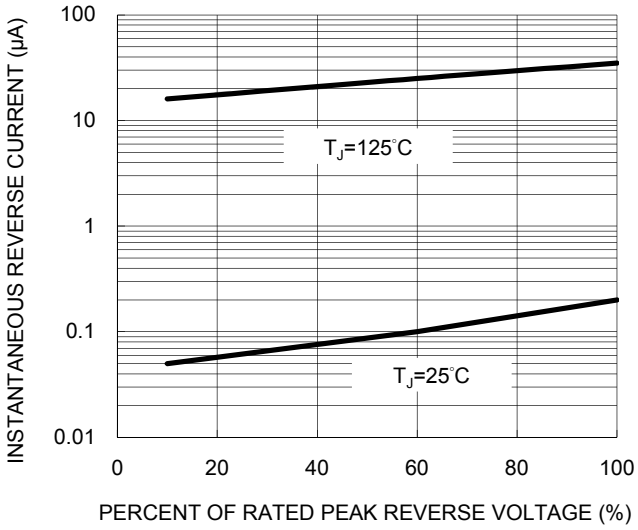
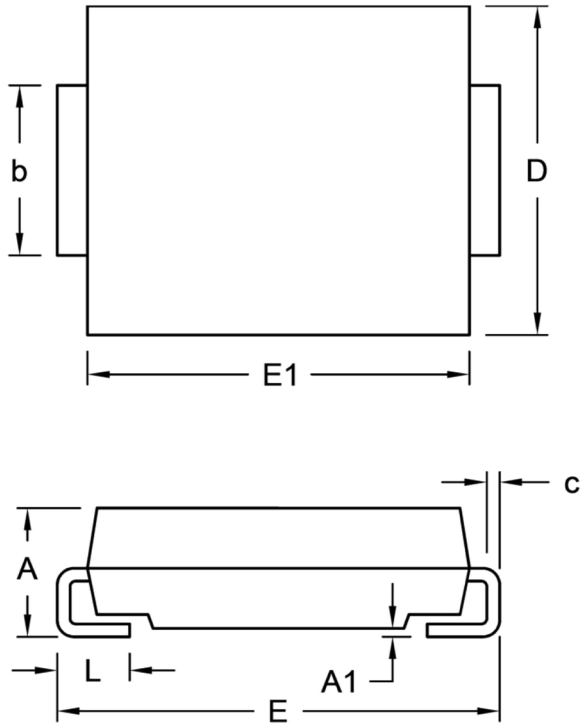


Fig.4 Typical Reverse Characteristics



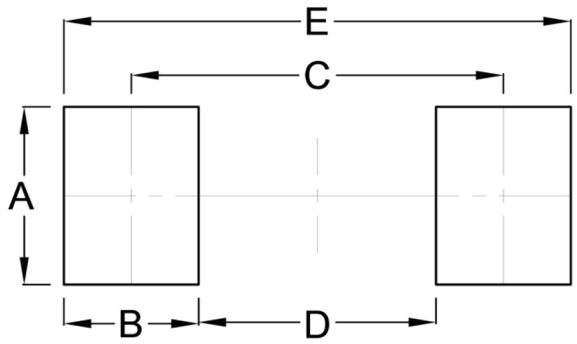
PACKAGE OUTLINE DIMENSIONS (Unit: Millimeters)

DO-214AB (SMC)



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.10	0.20	0.004	0.008
b	2.90	3.20	0.114	0.126
c	0.15	0.31	0.006	0.012
D	5.59	6.22	0.220	0.245
E	7.75	8.13	0.305	0.320
E1	6.60	7.11	0.260	0.280
L	1.00	1.60	0.039	0.063

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	3.30	0.130
B	2.50	0.098
C	6.90	0.272
D	4.40	0.173
E	9.40	0.370

MARKING DIAGRAM

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

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