

## 8A, 400V - 1000V Surface Mount Glass Passivated Rectifiers

### FEATURES

- Low forward voltage drop
- Ideal for automated placement
- 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



### MECHANICAL DATA

**Case:** DO-214AB (SMC)

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 0.27 g (approximately)

**DO-214AB (SMC)**

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)						
PARAMETER	SYMBOL	S8GC	S8JC	S8KC	S8MC	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	8				A
Peak forward surge current 8.3 ms single half sine-wave	T <sub>J</sub> = 25°C	200				A
	T <sub>J</sub> = 125°C					
Peak forward surge current 1.0 ms single half sine-wave	T <sub>J</sub> = 25°C	600				A
	T <sub>J</sub> = 125°C					
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 8 A	V <sub>F</sub>	0.985				V
Maximum reverse current @ rated V <sub>R</sub>	T <sub>J</sub> = 25°C	10				μA
	T <sub>J</sub> = 125°C					
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	48				pF
Typical thermal resistance	R <sub>θJL</sub>	12.5				°C/W
	R <sub>θJA</sub>	44				
Operating junction temperature range	T <sub>J</sub>	- 55 to +150				°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150				°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Measured at 1.0MHz and applied reverse voltage of 4.0V DC

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
S8xC (Note 1)	H	R7	G	SMC	850 / 7" Plastic reel
		R6		SMC	3,000 / 13" Paper reel
		M6		SMC	3,000 / 13" Plastic reel

Note 1: "xx" defines voltage from 400V (S8GC) to 1000V (S8MC)

\*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
S8MCHR7G	S8MC	H	R7	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

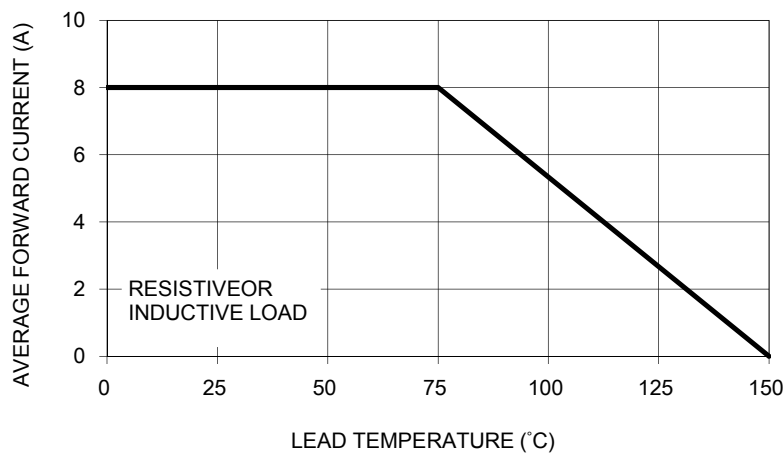


FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



FIG. 3 TYPICAL FORWARD CHARACTERISTICS

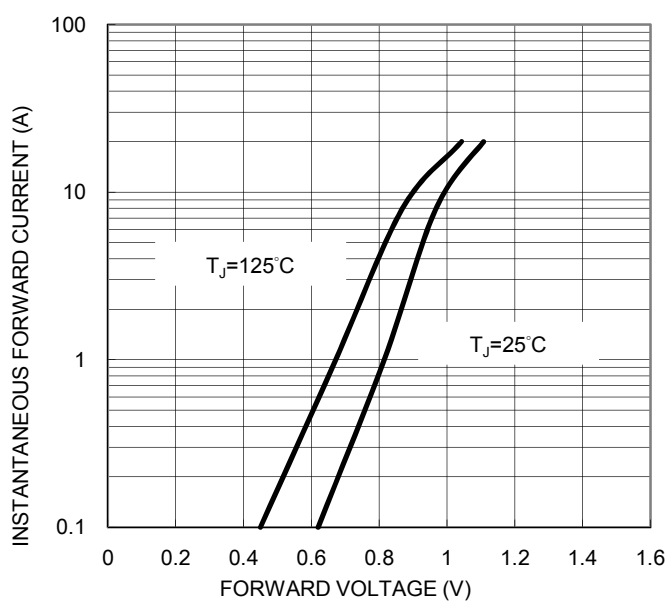
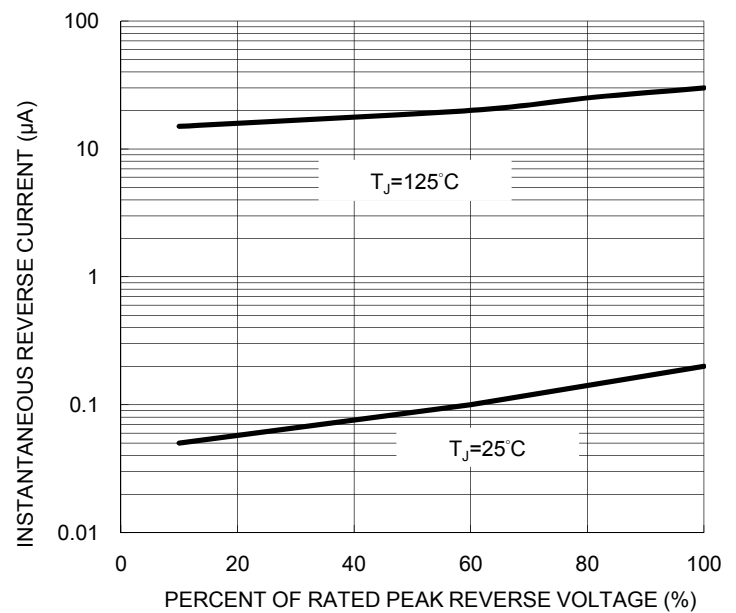
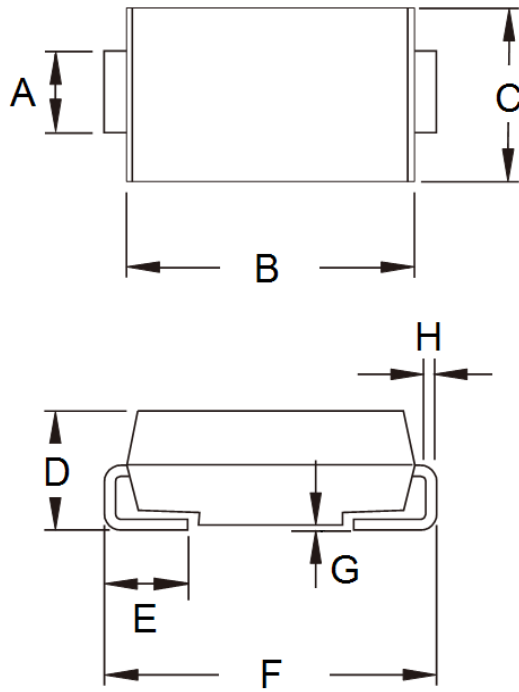


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

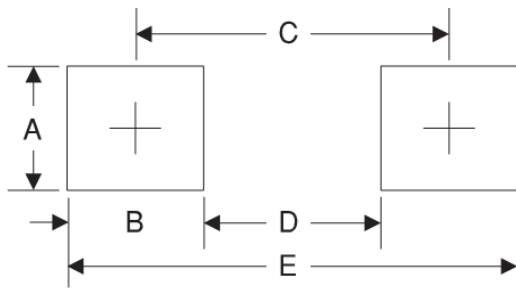


PACKAGE OUTLINE DIMENSIONS  
**DO-214AB (SMC)**



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	3.3	0.130
B	2.5	0.098
C	6.8	0.268
D	4.4	0.173
E	9.4	0.370

MARKING DIAGRAM



- P/N = Specific Device Code
- G = Green Compound
- YW = Date Code
- F = Factory Code

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