

## Surface Mount Glass Passivated Rectifier

### FEATURES

- Low forward voltage drop
- Ideal for automated placement
- High surge current capability
- Moisture sensitivity: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**DO-214AB(SMC)**

### MECHANICAL DATA

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

Molding compound, UL flammability classification rating 94V-0  
Base P/N with suffix "G" on packing code - halogen-free, RoHS compliant

**Terminal :** Matte tin plated leads, solderable per JESD22-B102  
Meet JESD 201 class 1A whisker test

**Polarity :** Indicated by cathode band

**Weight :** 0.27 gram (approximately)

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) IF= 8 A	V <sub>F</sub>	0.985				V
Maximum reverse current @ rated VR T <sub>A</sub> =25 °C T <sub>A</sub> =125 °C	I <sub>R</sub>	10				μA
		250				
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	48				pF
Typical thermal resistance (Note 3)	R <sub>θJA</sub>	44				°C/W
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=300u sec, 1% duty cycle

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

Note 3: Mount on Cu pad size 16mm x 16mm on PCB

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING
S8xC (Note 1)	R7	Suffix "G"	SMC	850 / 7" Plastic reel
	R6		SMC	3000 / 13" Paper reel
	M6		SMC	3000 / 13" Plastic reel

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

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
S8MC R7	SS36	R7		
SMC R7G	SS36	R7	G	Green compound

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

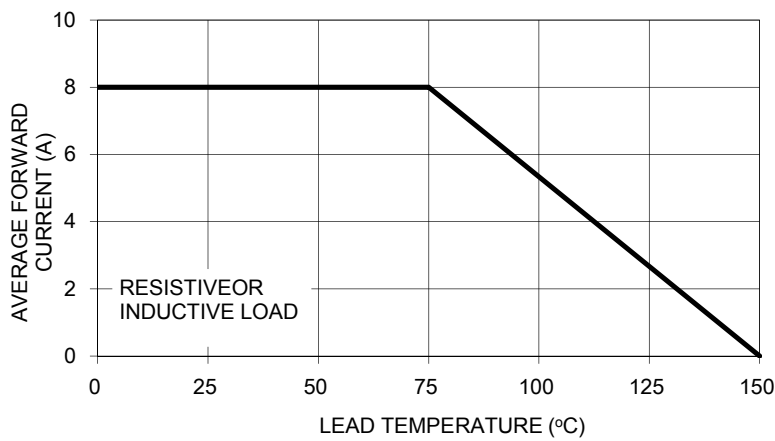


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

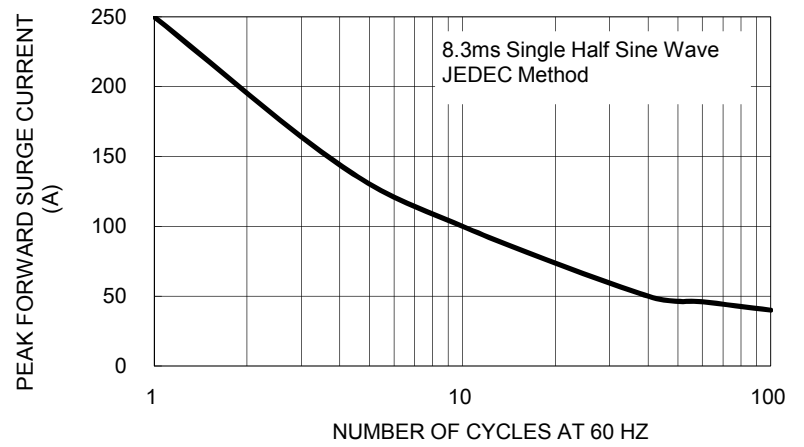


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

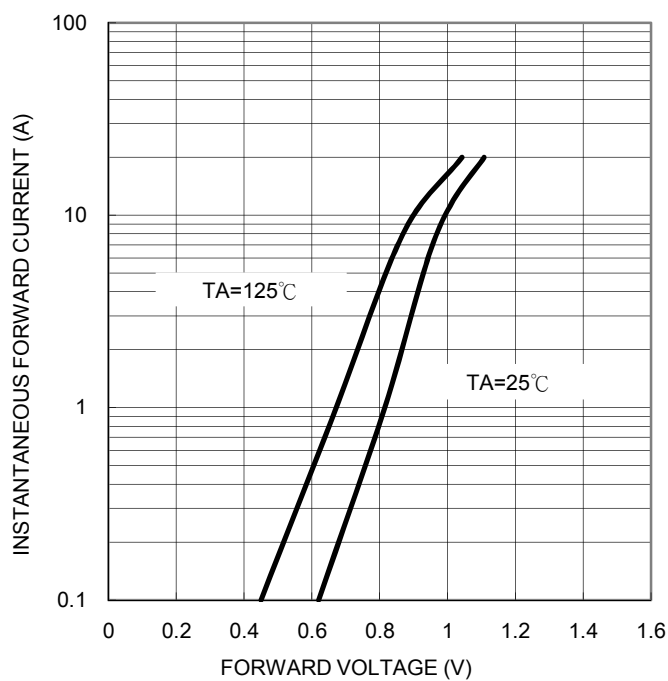
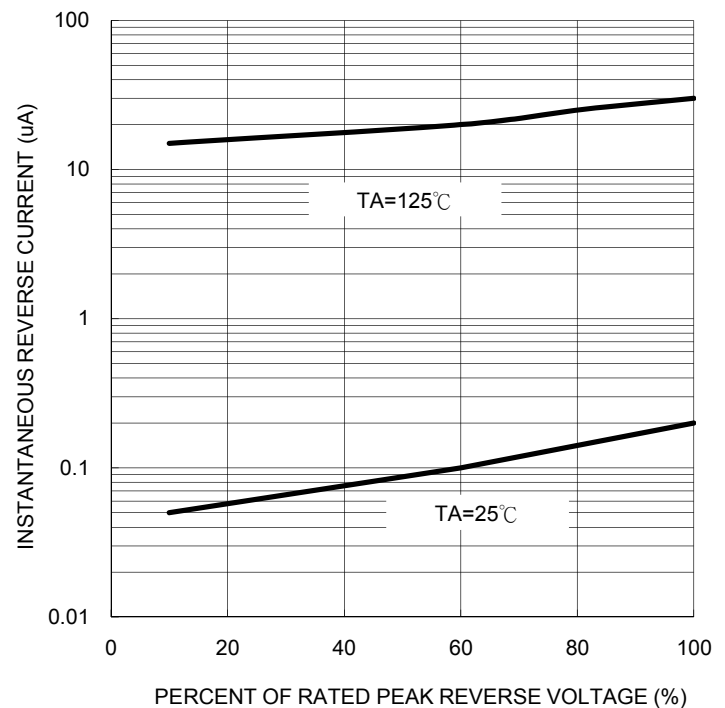
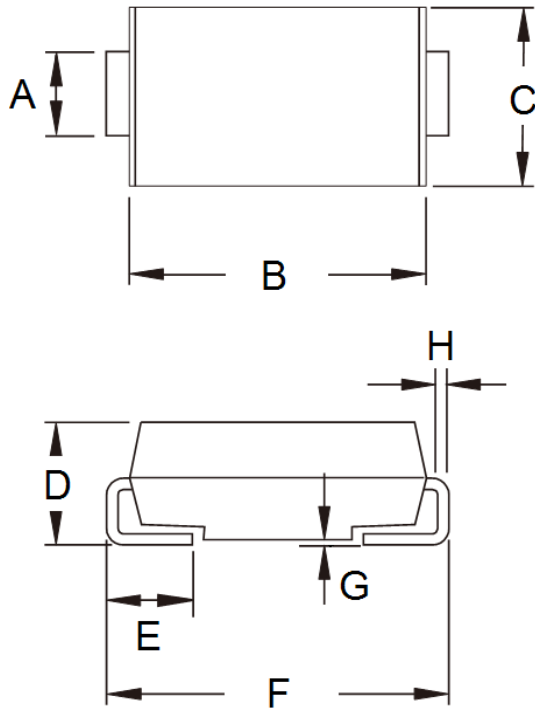


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

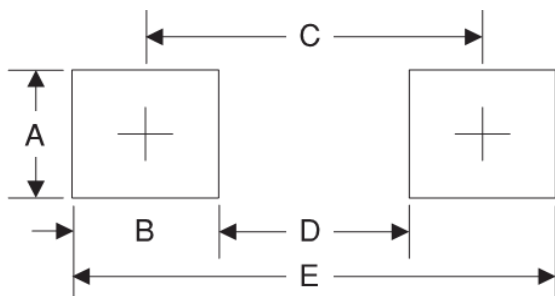


PACKAGE OUTLINE DIMENSIONS



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)
A	3.3
B	2.5
C	6.8
D	4.4
E	9.4

MARKING DIAGRAM



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