

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



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

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

Meet JESD 201 class 1A whisker test

Polarity: Indicated by cathode band

Weight: 0.27 g (approximately)

DO-214AB (SMC)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERSTICS (T _A =25°C unless otherwise noted)							
PARAMETER		SYMBOL	S8GC	S8JC	S8KC	S8MC	Unit
Maximum repetitive peak reverse voltage		V _{RRM}	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	280	420	560	700	V
Maximum DC blocking voltage		V _{DC}	400	600	800	1000	V
Maximum average forward rectified current		I _{F(AV)}	8				A
Peak forward surge current 8.3 ms single half sine-wave	T _J =25°C	I _{FSM}	200				A
	T _J =125°C		170				
Peak forward surge current 1.0 ms single half sine-wave	T _J =25°C	I _{FSM}	600				A
	T _J =125°C		338				
Maximum instantaneous forward voltage (Note 1) IF= 8 A		V _F	0.985				V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C		I _R	10				μA
			250				
Typical Junction Capacitance (Note 2)		C _J	48				pF
Typical thermal resistance (Note 3)		R _{θJA}	44				°C/W
Operating junction temperature range		T _J	- 55 to +150				°C
Storage temperature range		T _{STG}	- 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

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	3,000 / 13" Paper reel
	M6		SMC	3,000 / 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	S8MC	R7		
S8MC R7G	S8MC	R7	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

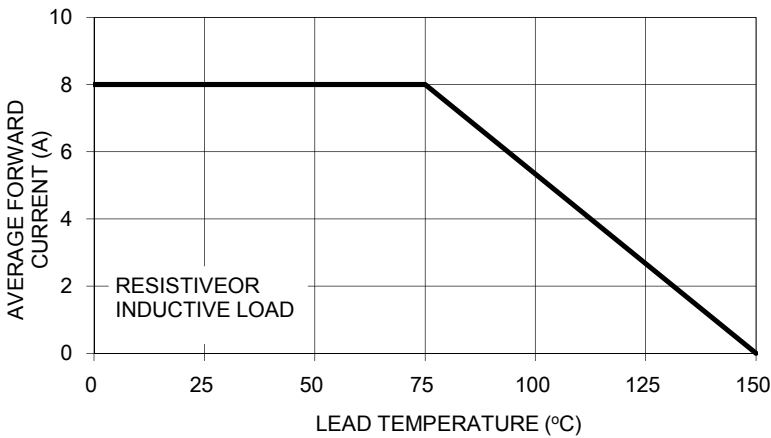


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

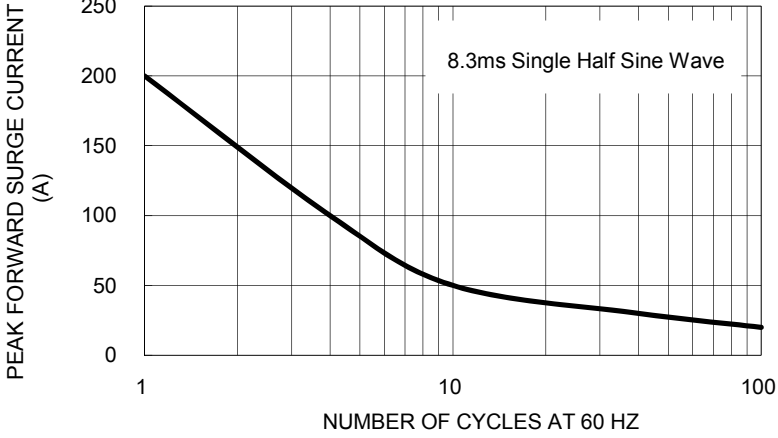


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

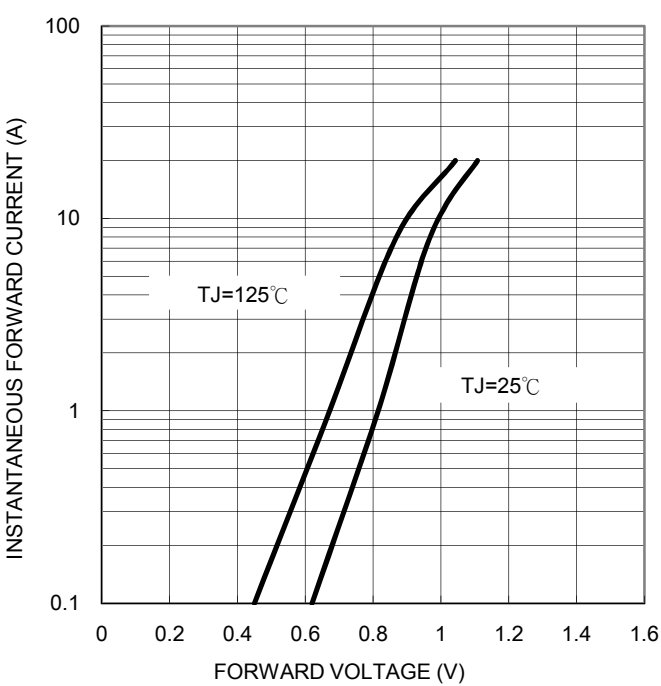
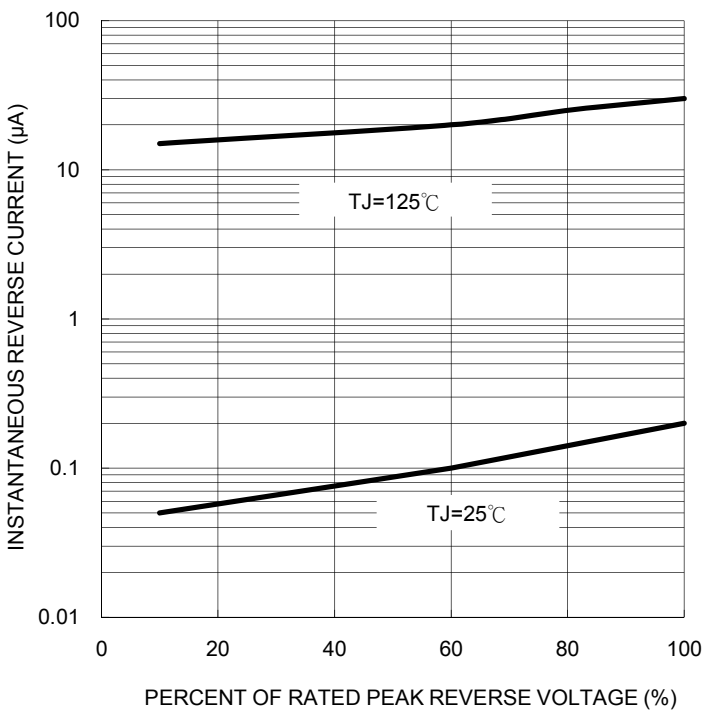
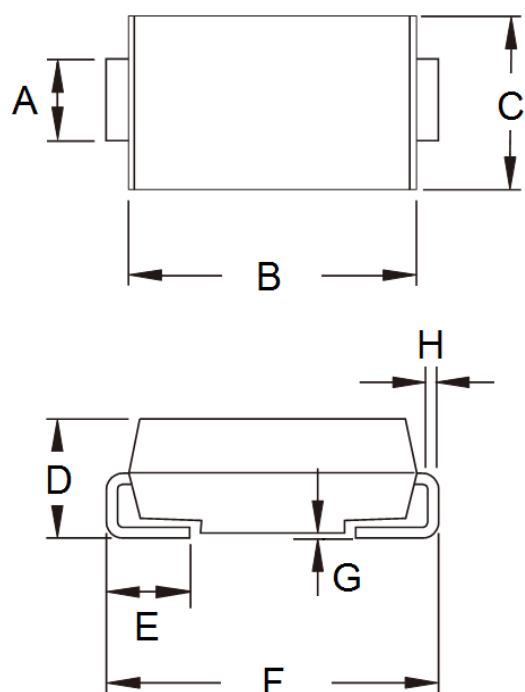


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

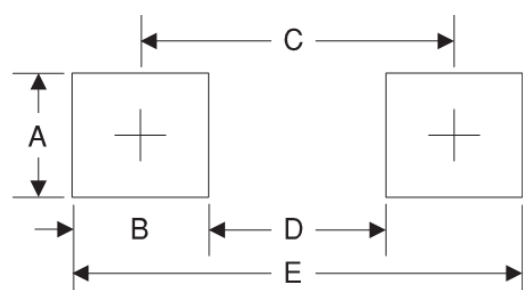


PACKAGE OUTLINE DIMENSIONS



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)	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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