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 definition

DO-214AB (SMC)

RoHS COMPLIANT

Pb Pb-Free

MECHANICAL DATA

Case: DO-214AB (SMC)
Molding compound, UL flammability classification rating 94V-0
Moisture sensitivity: level 1, per J-STD-020
Packing code with suffix "G" means green compound (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)

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		I_R	10				μA
T_J=125 °C			250				
Typical Junction Capacitance (Note 2)		C_J	48				pF
Typical thermal resistance		$R_{\theta JL}$	12.5				°C/W
		$R_{\theta JA}$	44				
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

ORDER INFORMATION (EXAMPLE)

S8MC R7G

- R7G: Green compound code
- R7: Packing code
- S8MC: Part no.

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

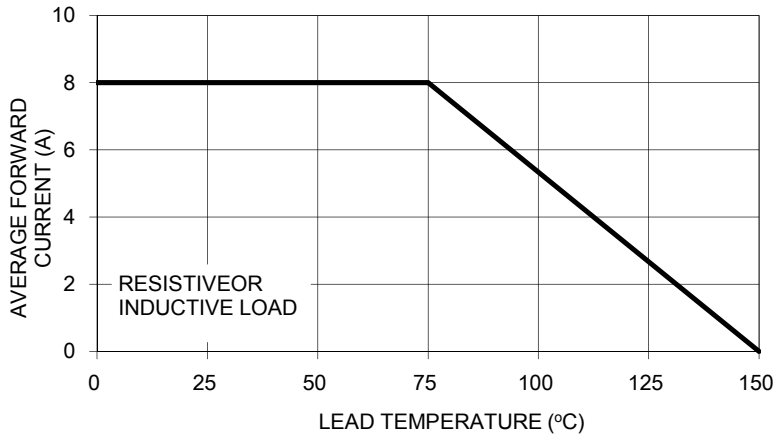


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

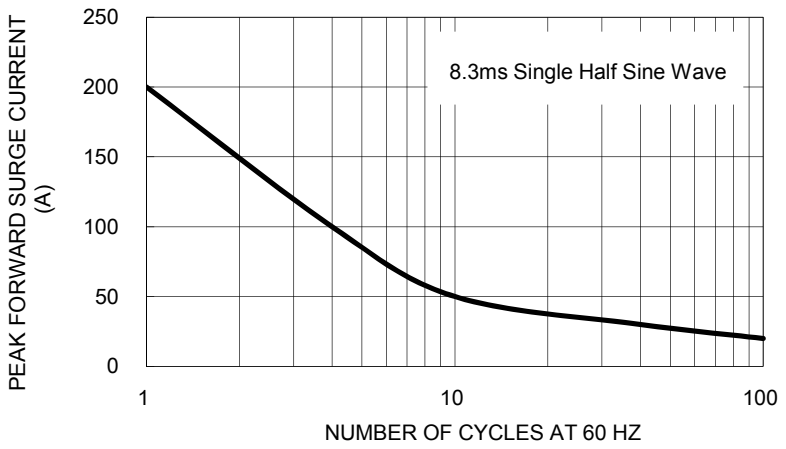


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

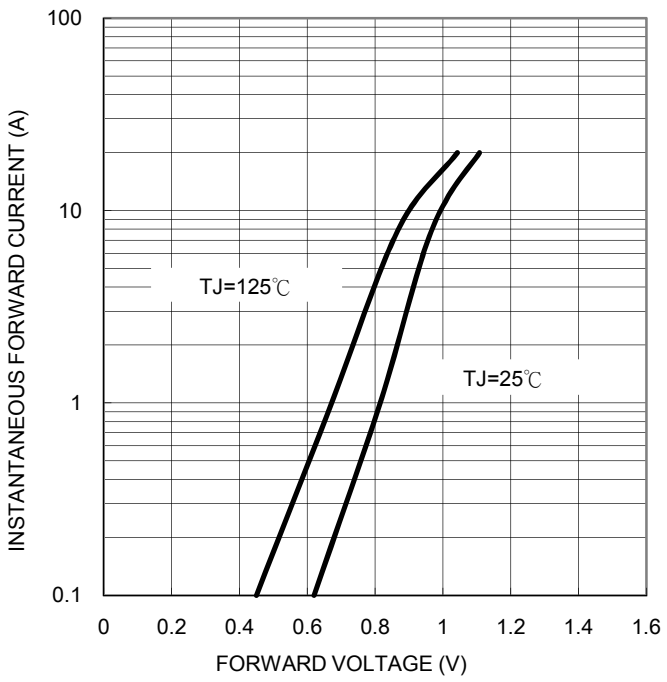
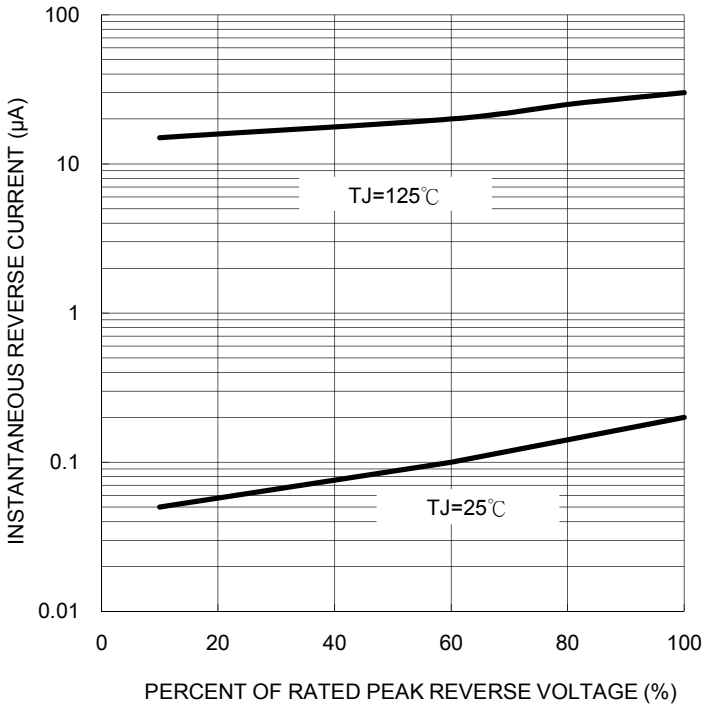
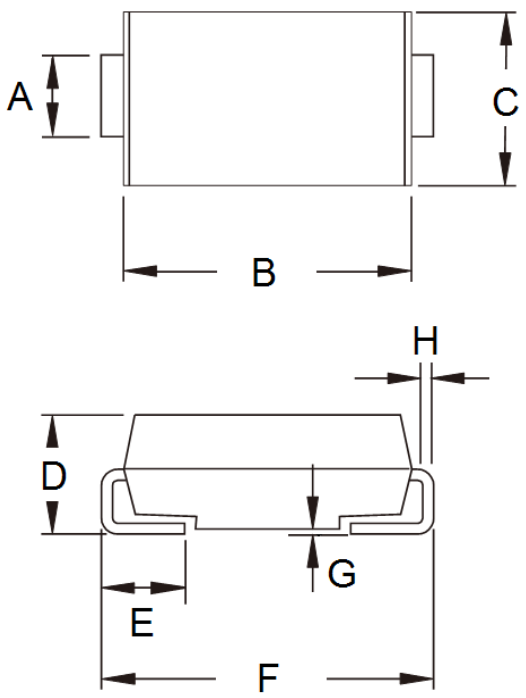


FIG. 4- TYPICAL REVERSE CHARACTERISTICS



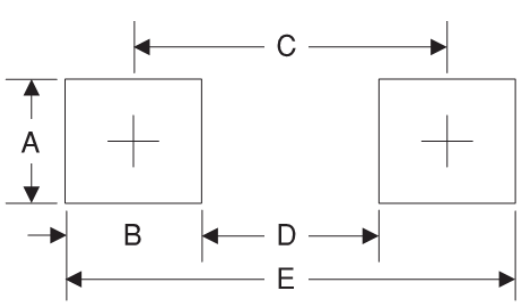
PACKAGE OUTLINE DIMENSIONS

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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Document Number: DS_D0000010 Version: B15