

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)



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)

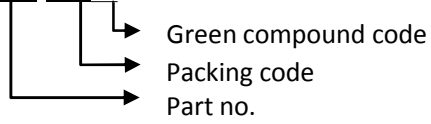
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)						
PARAMETER	SYMBOL	S8GC	S8JC	S8KC	S8MC	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	400	600	800	1000	V
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	200				A
	T _J =125°C					
Peak forward surge current 1.0 ms single half sine-wave	T _J =25°C	600				A
	T _J =125°C					
Maximum instantaneous forward voltage (Note 1) I _F = 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	R _{θJL}	12.5				°C/W
	R _{θJA}	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



RATINGS AND CHARACTERISTICS CURVES

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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

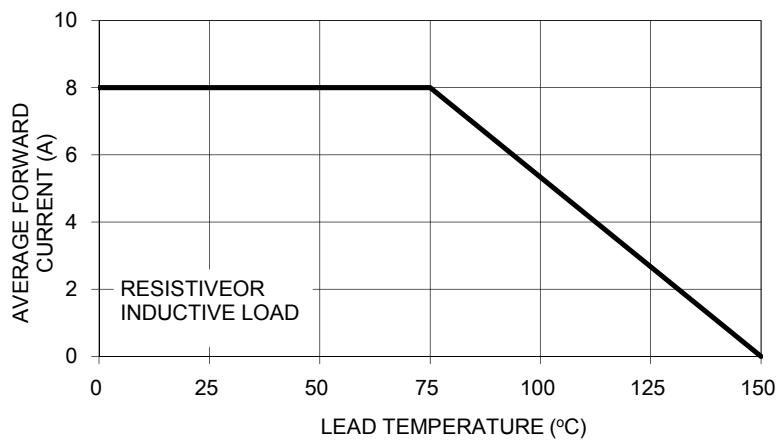


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

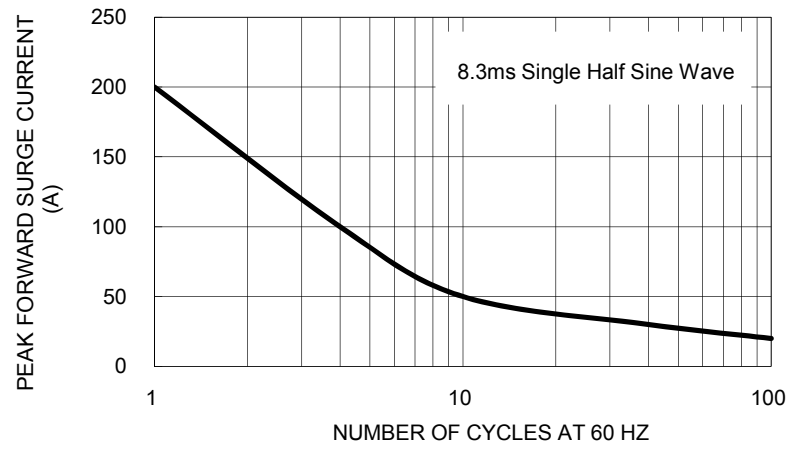


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

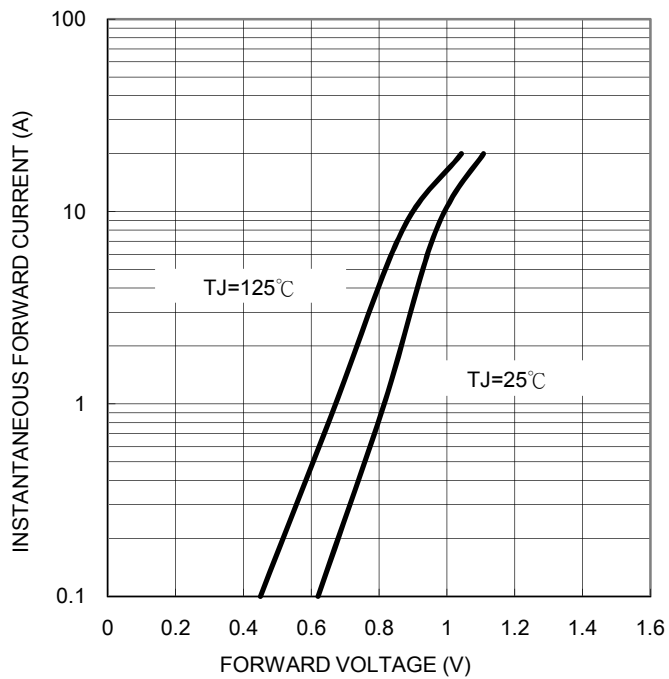
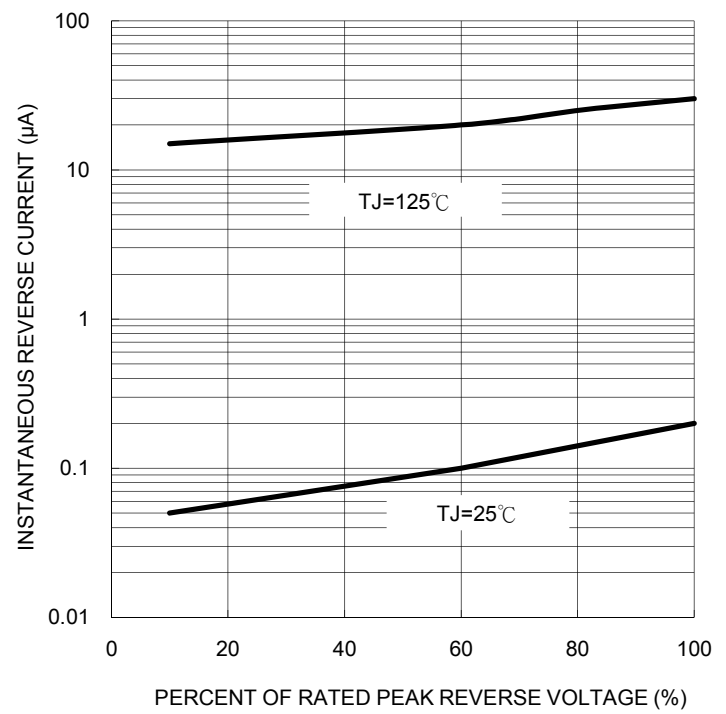
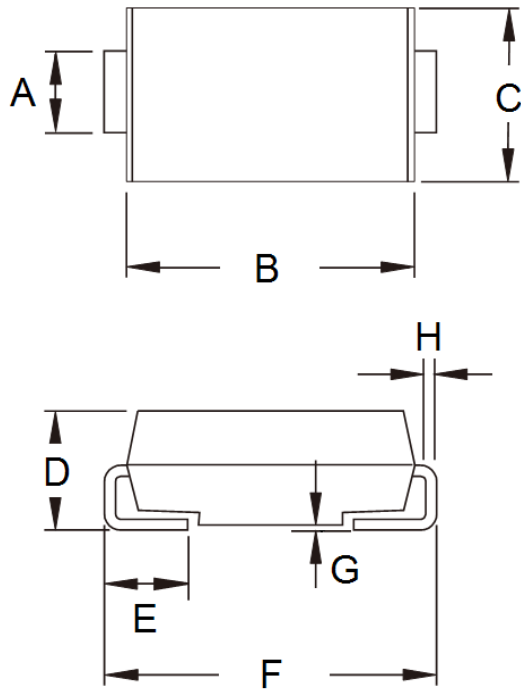


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

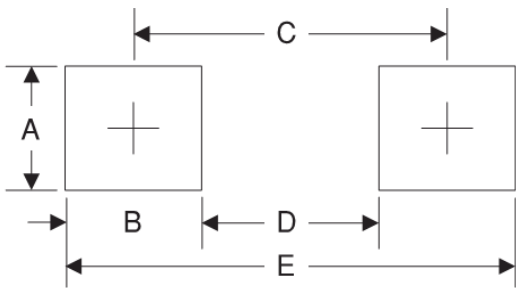


PACKAGE OUTLINE DIMENSIONS
DO-214AB (SMC)



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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.