

5A, 50V - 1000V Surface Mount Rectifiers

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Low forward voltage drop
- High current capability
- 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
- AEC-Q101 qualified



DO-214AB (SMC)

MECHANICAL DATA

Case: DO-214AB (SMC)

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: 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 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.21 g (approximately)

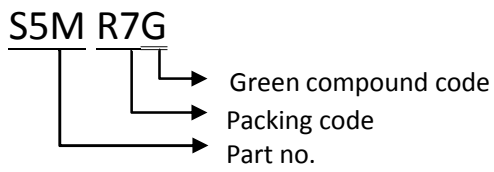
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)									
PARAMETER	SYMBOL	S5A	S5B	S5D	S5G	S5J	S5K	S5M	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	5							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100							A
Maximum instantaneous forward voltage (Note 1) I _F = 5 A	V _F	1.15							V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	10 250							μA
Typical reverse recovery time (Note 2)	t _{rr}	1.5							μs
Typical junction capacitance (Note 3)	C _J	60							pF
Typical thermal resistance	R _{θJL} R _{θJA}	13 47							°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: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDER INFORMATION (EXAMPLE)



RATINGS AND CHARACTERISTICS CURVES

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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

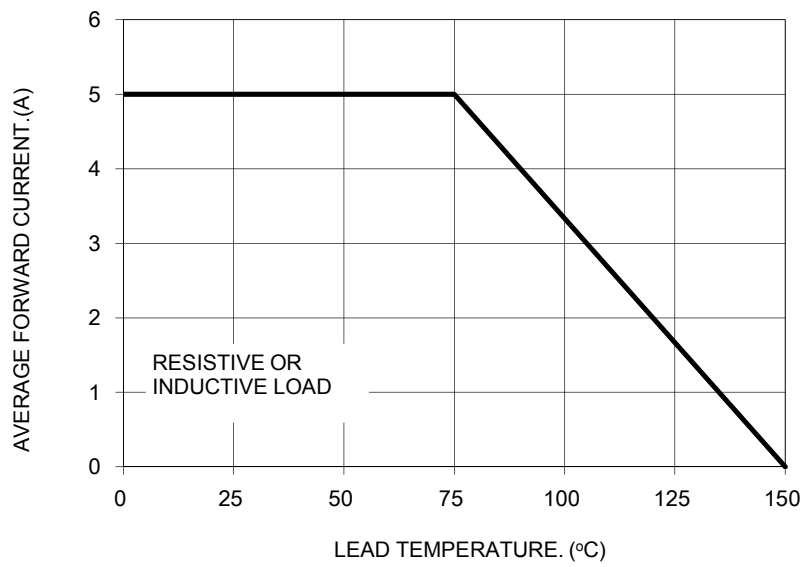


FIG.2- TYPICAL REVERSE CHARACTERISTICS

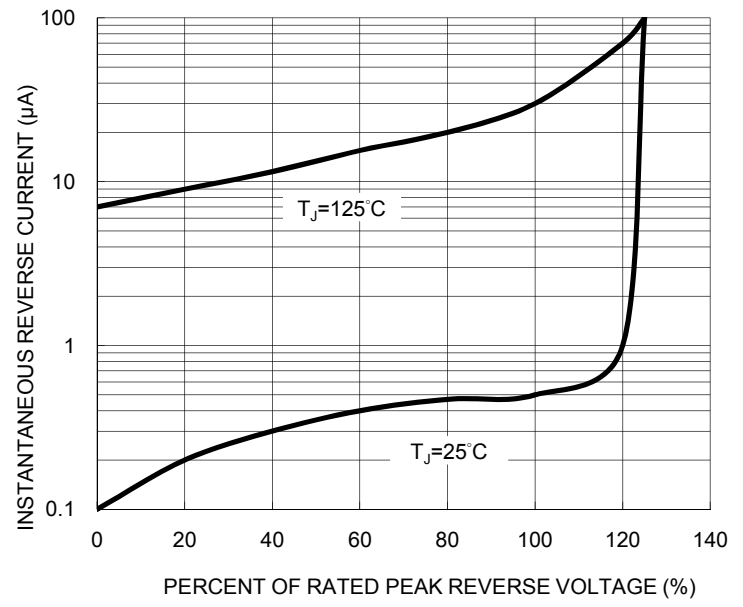


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

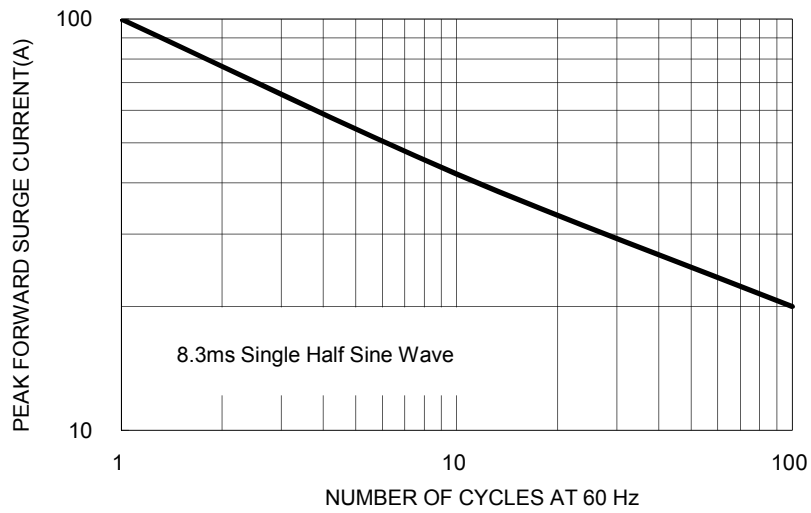


FIG.4 TYPICAL FORWARD CHARACTERISTICS

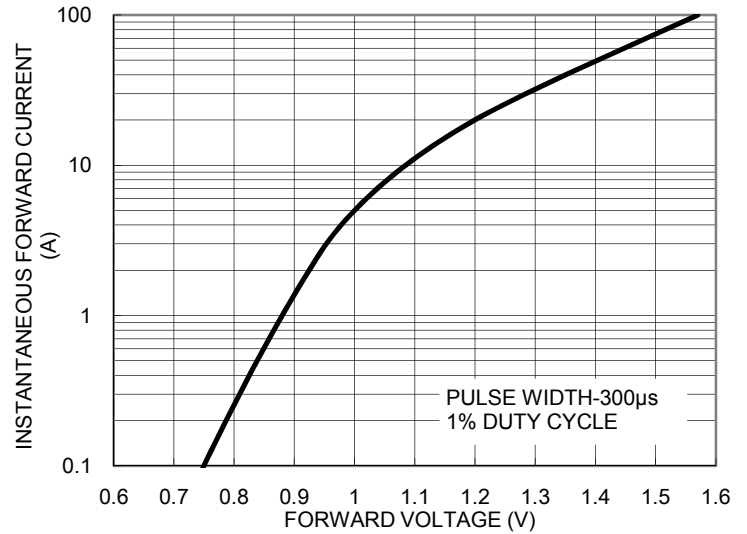


FIG.5 TYPICAL JUNCTION CAPACITANCE

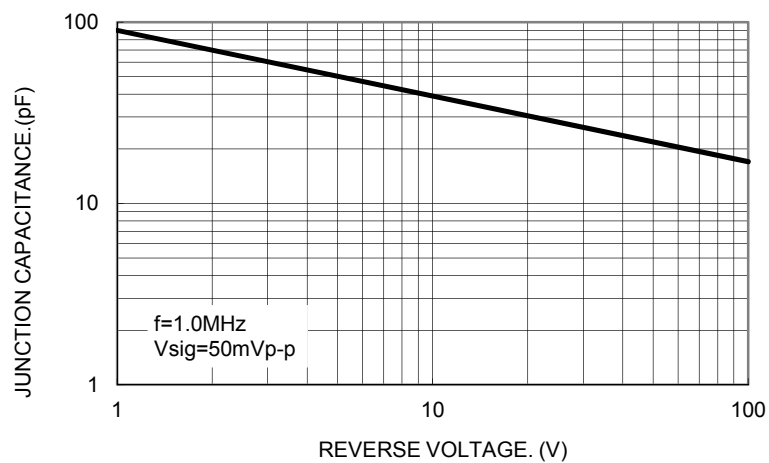
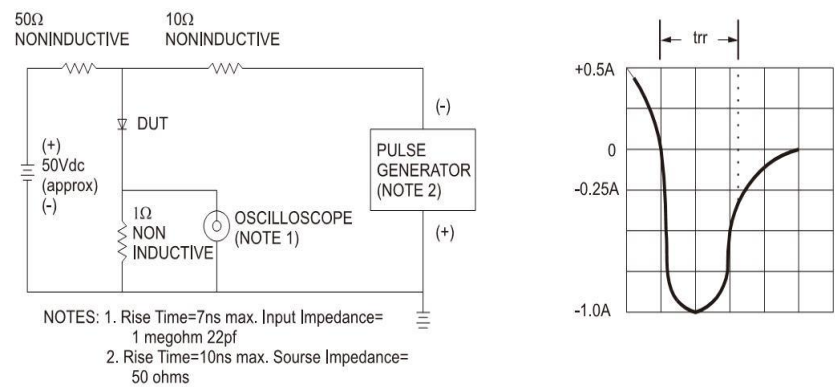
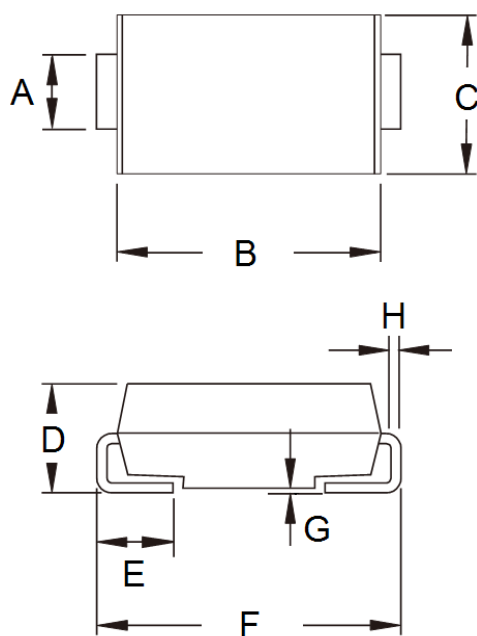


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



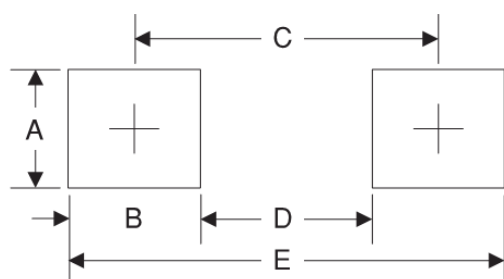
PACKAGE OUTLINE DIMENSIONS

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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