1A, 600V - 1000V Surface Mount Fast Recovery Rectifiers

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

SMAF

Case: SMAF

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 1A whisker test

Polarity: Indicated by cathode band

Weight: 35mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)					
PARAMETER	SYMBOL	RS1JF	RS1KF	RS1MF	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Maximum RMS voltage	V_{RMS}	420	560	700	V
Maximum DC blocking voltage	V_{DC}	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	1			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30			A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V_F	1.3			V
Maximum reverse current @ rated V_R T_J=25°C T_J=125°C	I_R	5 50			μA
Maximum reverse recovery time (Note 2)	t_{rr}	250	500		ns
Typical junction capacitance (Note 3)	C_J	11			pF
Typical thermal resistance	$R_{\theta JC}$ $R_{\theta JL}$	45 12			°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: 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

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
RS1xF (Note 1, 2)	R3	G	SMAF	3,000 / 7" Plastic reel
	R2		SMAF	10,000 / 13" Paper reel

Note 1: "x" defines voltage from 600V (RS1JF) to 1000V (RS1MF)

Note 2: Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
RS1JF R3G	RS1JF	R3	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

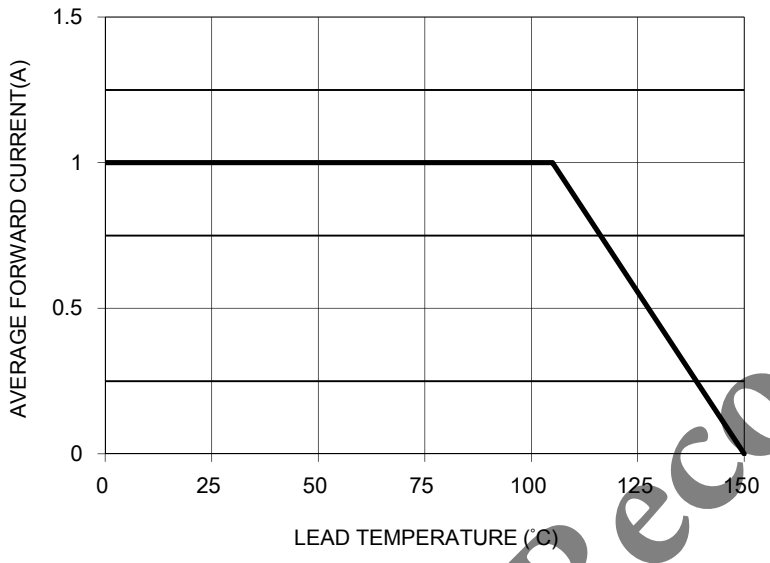


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

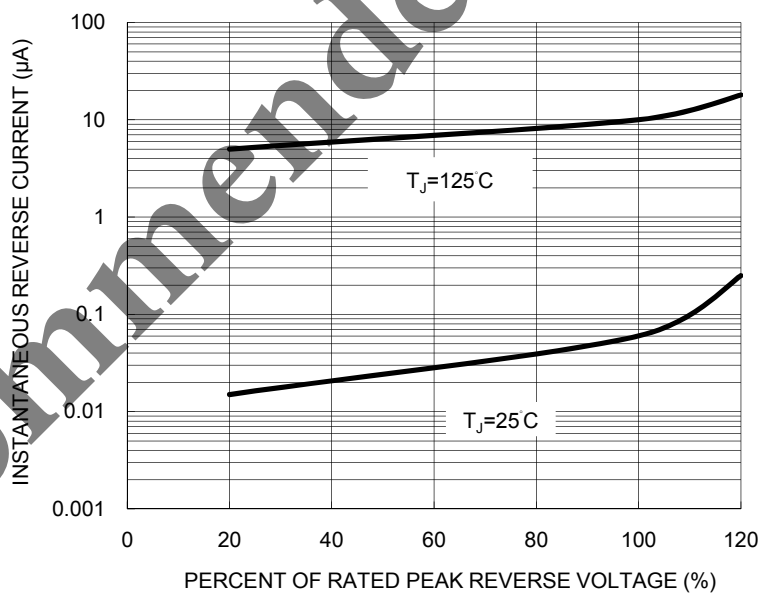


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

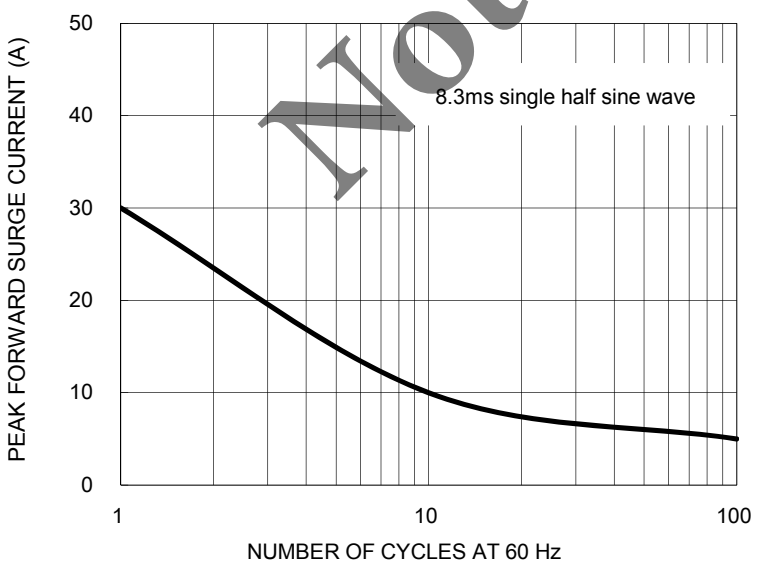
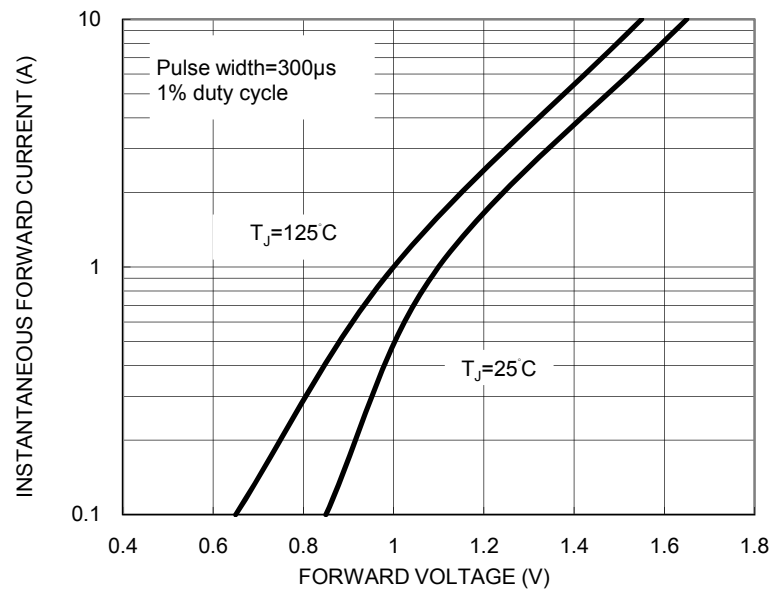
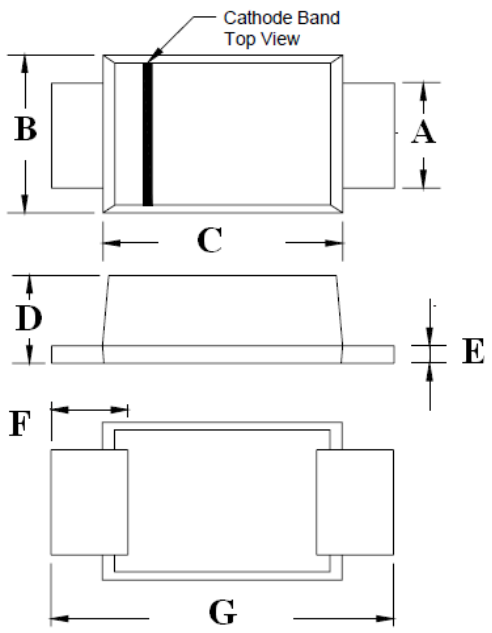


FIG. 4 TYPICAL FORWARD CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

SMAF



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.25	1.60	0.049	0.063
B	2.40	2.80	0.094	0.110
C	3.30	4.30	0.130	0.169
D	0.90	1.10	0.035	0.043
E	0.10	0.25	0.004	0.010
F	0.70	1.20	0.028	0.047
G	4.40	5.20	0.173	0.205

MARKING DIAGRAM

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

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