

RS1AG THRU RS1MG

Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V Forward Current - 1 A

FEATURES

- For surface mounted applications
- · Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

· Case: SMA

• Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.055g / 0.002oz

Absolute Maximum Ratings and Characteristics

| Ratings at 25 °C ambient temperature unless For capacitive load, derate current by 20%. | 1 | ., | | , , | | , | | | |
|---|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Parameter | Symbols | RS1AG | RS1BG | RS1DG | RS1GG | RS1JG | RS1KG | RS1MG | Units |
| 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 at Tc = 125 °C | I _{F(AV)} | 1 | | | | Α | | | |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I _{FSM} | 30 | | | | Α | | | |
| Maximum Forward Voltage at 1 A | V _F | 1.3 | | | | V | | | |
| Maximum DC Reverse Current T _a = 25 °C | | 5 | | | | | | | |

 I_{R}

 C_i

 $R_{\theta JA}$

 T_j , T_{stg}

T_a =125 °C

Operating and Storage Temperature Range

at Rated DC Blocking Voltage

Typical Junction Capacitance

Typical Thermal Resistance (2)

Maximum Reverse Recovery Time (1)

at V_R=4V, f=1MHz

150

50

15

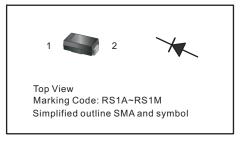
75

-55 ~ +150

250

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



μΑ

pF

ns

°C/W

°С

500

⁽¹⁾ Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$.

⁽²⁾ P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas.



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Fig.1 Forward Current Derating Curve

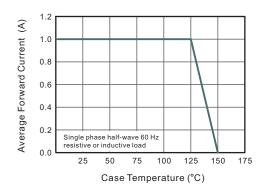


Fig.2 Typical Reverse Characteristics

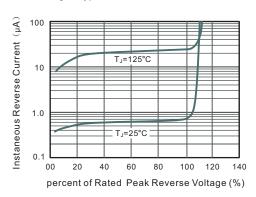


Fig.3 Typical Instaneous Forward Characteristics

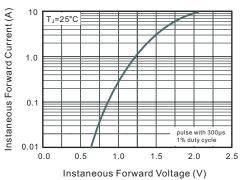


Fig.4 Typical Junction Capacitance

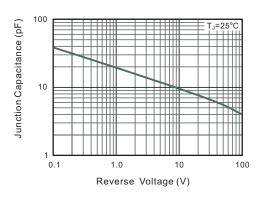
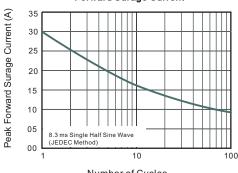


Fig.5 Maximum Non-Repetitive Peak **Forward Surage Current**



Number of Cycles

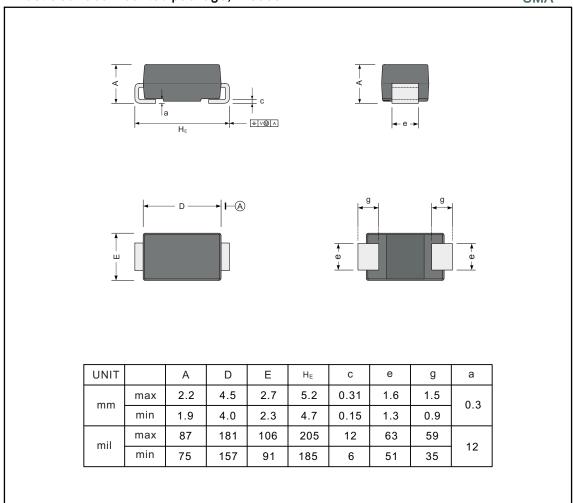


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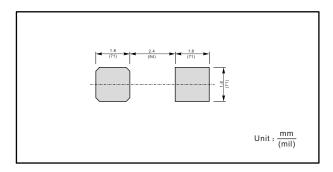
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMA



The recommended mounting pad size



Marking

| Type number | Marking code | | | |
|-------------|--------------|--|--|--|
| RS1AG | RS1A | | | |
| RS1BG | RS1B | | | |
| RS1DG | RS1D | | | |
| RS1GG | RS1G | | | |
| RS1JG | RS1J | | | |
| RS1KG | RS1K | | | |
| RS1MG | RS1M | | | |

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