

## 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

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View  
 Marking Code: RS1A~RS1M  
 Simplified outline SMA and symbol

**Absolute Maximum Ratings and Characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Parameter	Symbols	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	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 $T_a = 125$ °C	$I_{F(AV)}$	1						A					
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	30						A					
Maximum Forward Voltage at 1 A	$V_F$	1.3						V					
Maximum DC Reverse Current $T_a = 25$ °C at Rated DC Blocking Voltage $T_a = 125$ °C	$I_R$	5 50						$\mu A$					
Typical Junction Capacitance at $V_R = 4V$ , $f = 1MHz$	$C_j$	15						pF					
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	150		250		500		ns					
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	75						°C/W					
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150						°C					

(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.

Fig.1 Forward Current Derating Curve

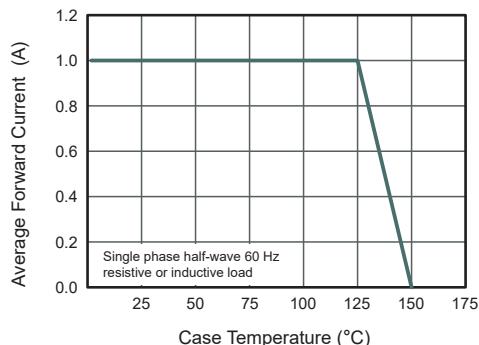


Fig.2 Typical Reverse Characteristics

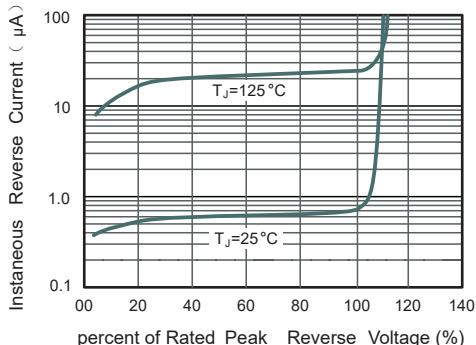


Fig.3 Typical Instantaneous Forward Characteristics

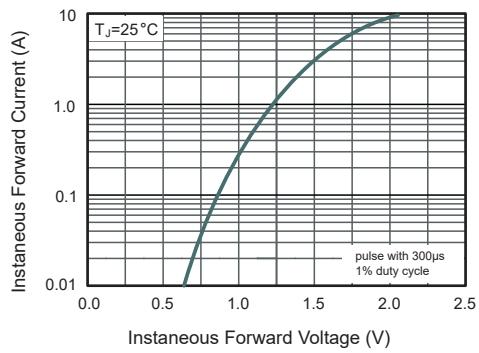


Fig.4 Typical Junction Capacitance

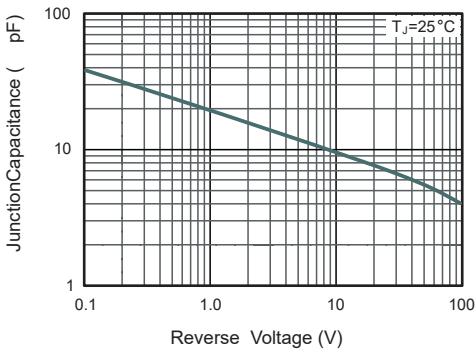
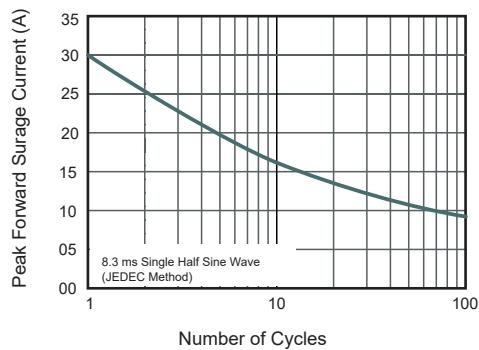


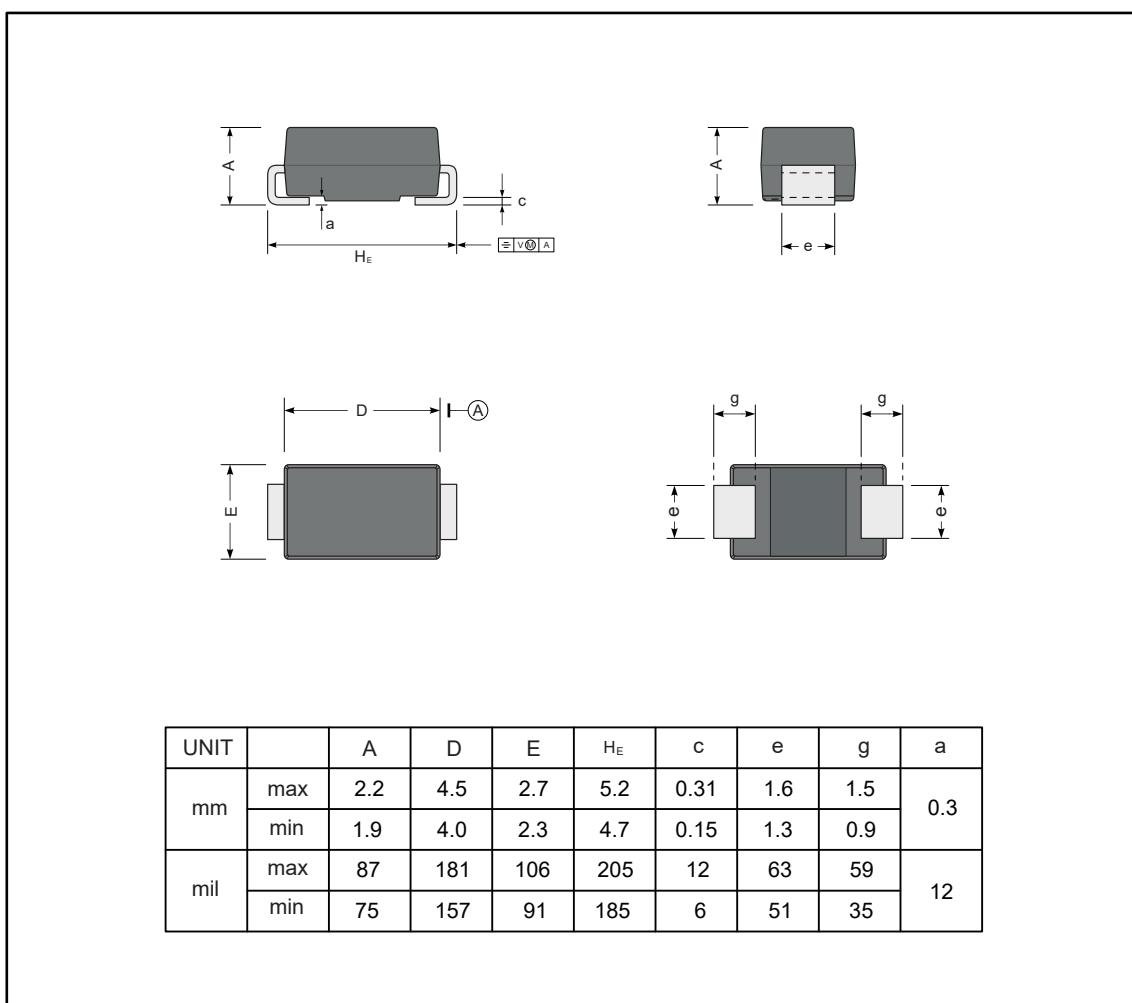
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



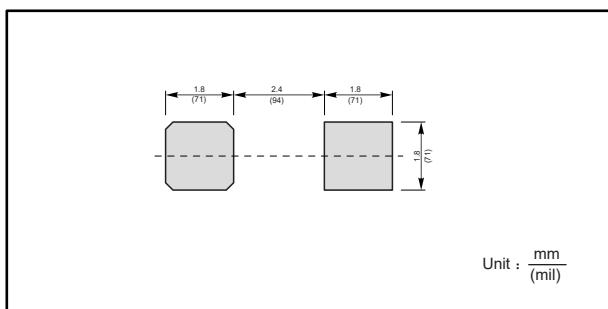
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMA



The recommended mounting pad size



Marking

Type number	Marking code
RS1A	RS1A
RS1B	RS1B
RS1D	RS1D
RS1G	RS1G
RS1J	RS1J
RS1K	RS1K
RS1M	RS1M