

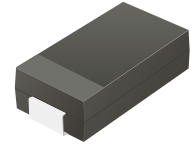
## RS1A-HF Thru. RS1M-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1 Amp

RoHS Device

Halogen Free

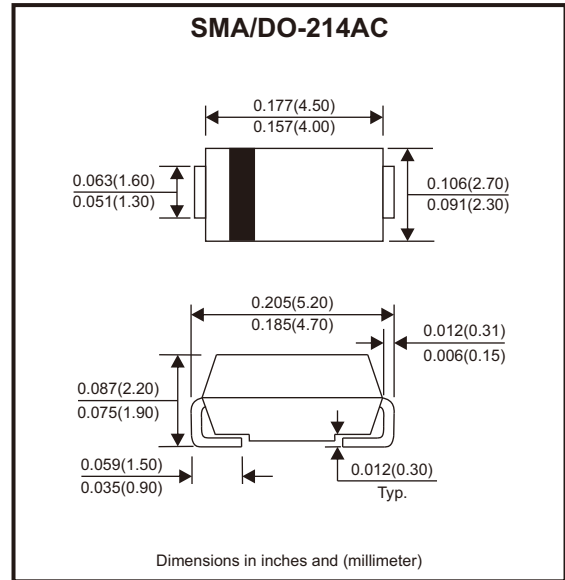


### Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Easy to pick and place.
- Fast reverse recovery time.

### Mechanical data

- Case: SMA
- Terminals: Solderable per MIL-STD-750, method 2026.



### Circuit Diagram



### Maximum Ratings and Electrical Characteristics

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

| Parameter  | Symbols                           | RS1A<br>-HF | RS1B<br>-HF | RS1D<br>-HF | RS1G<br>-HF | RS1J<br>-HF | RS1K<br>-HF | RS1M<br>-HF | Units |
|--|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>                  | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V     |
| Maximum RMS voltage  | V <sub>RMS</sub>                  | 35          | 70          | 140         | 280         | 420         | 560         | 700         | V     |
| Maximum DC blocking voltage  | V <sub>DC</sub>                   | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V     |
| Maximum average forward rectified current at T <sub>c</sub> = 125°C                | I <sub>F(AV)</sub>                | 1           |             |             |             |             |             |             | A     |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>                  | 30          |             |             |             |             |             |             | A     |
| Max. forward voltage at 1A   | V <sub>F</sub>                    | 1.3         |             |             |             |             |             |             | V     |
| Maximum DC reverse current at rated DC blocking voltage                            | I <sub>R</sub>                    | 5<br>50     |             |             |             |             |             |             | μA    |
| Typical junction capacitance at V <sub>R</sub> = 4V, f = 1MHz                      | C <sub>j</sub>                    | 15          |             |             |             |             |             |             | pF    |
| Maximum reverse recovery time (Note 1)   | t <sub>rr</sub>                   | 150         |             |             |             | 250         | 500         |             | ns    |
| Typical thermal resistance (Note 2)  | R <sub>θJA</sub>                  | 75          |             |             |             |             |             |             | °C/W  |
| Operating and storage temperature range  | T <sub>j</sub> , T <sub>stg</sub> | -55 ~ +150  |             |             |             |             |             |             | °C    |

Notes: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A, I<sub>rr</sub> = 0.25A.  
2. P.C.B. mounted with 1.0 x 1.0" (2.54 x 2.54 cm) copper pad areas.

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REV:A

## Rating and Characteristic Curves (RS1A-HF Thru. RS1M-HF)

Fig.1 - Forward Current Derating Curve

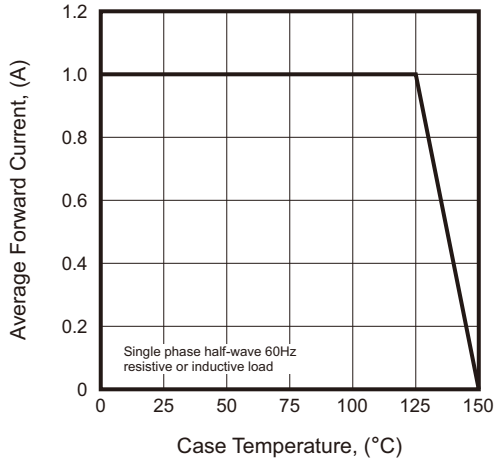


Fig.2 - Typical Reverse Characteristics

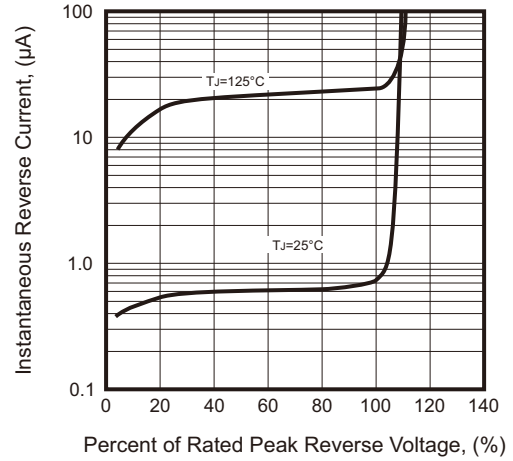


Fig.3 - Typical Instantaneous Forward Characteristic

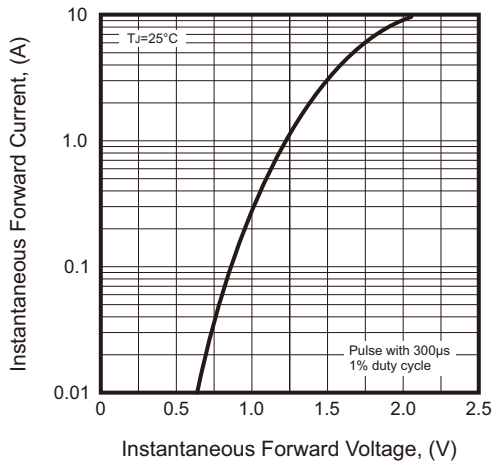


Fig.4 - Typical Junction Capacitance

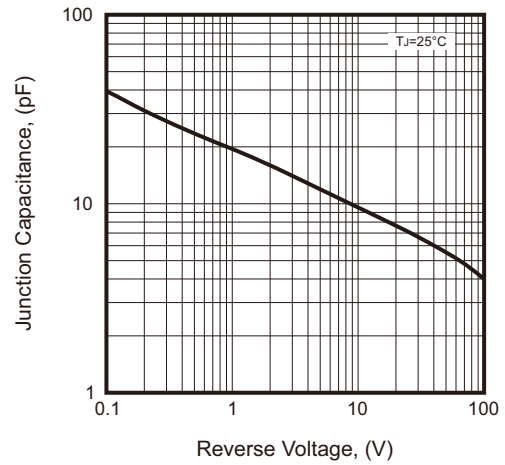
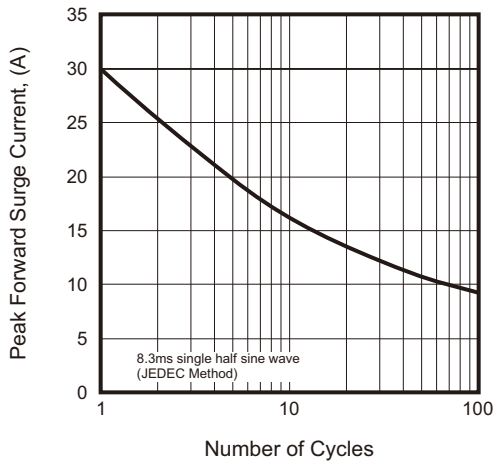
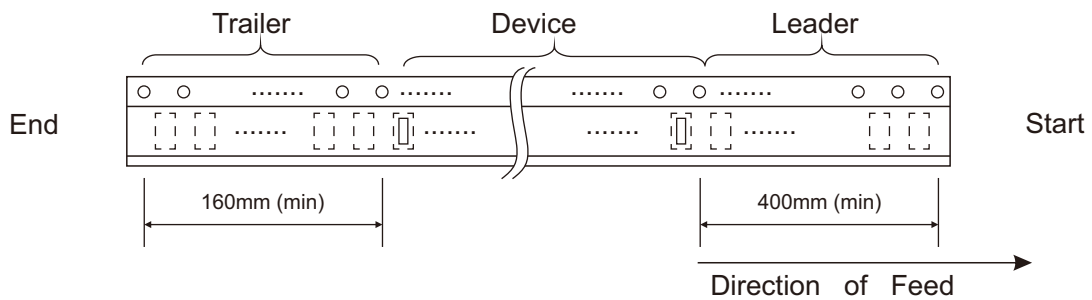
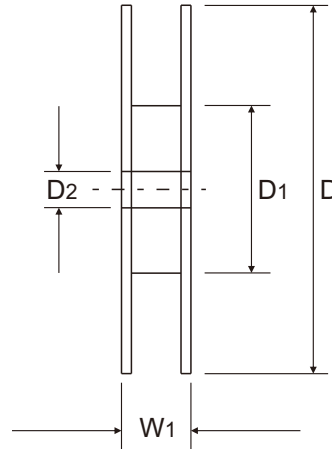
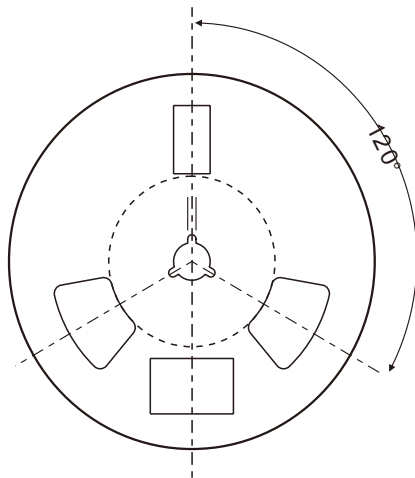
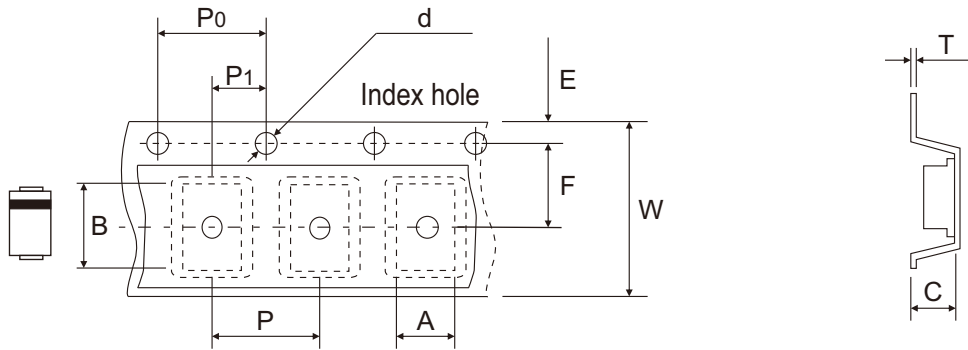


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current



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## Reel Taping Specification



| DO-214AC<br>(SMA) | SYMBOL | A             | B             | C             | d             | D              | D1            | D2            |
|-------------------|--------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|
|                   | (mm)   | 2.70 ± 0.10   | 5.33 ± 0.10   | 2.35 ± 0.10   | 1.55 ± 0.05   | 330 ± 2.00     | 75.00 ± 1.00  | 13.00 ± 0.20  |
|                   | (inch) | 0.106 ± 0.004 | 0.210 ± 0.004 | 0.093 ± 0.004 | 0.061 ± 0.002 | 12.992 ± 0.079 | 2.953 ± 0.039 | 0.512 ± 0.008 |

| DO-214AC<br>(SMA) | SYMBOL | E             | F             | P             | P0            | P1            | T             | W             | W1                       |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.10   | 0.20 ± 0.03   | 12.00 ± 0.30  | 14.70 + 2.00<br>- 1.00   |
|                   | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.008 ± 0.001 | 0.472 ± 0.012 | 0.579 + 0.079<br>- 0.039 |

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