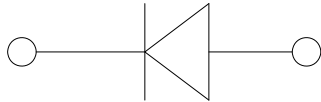
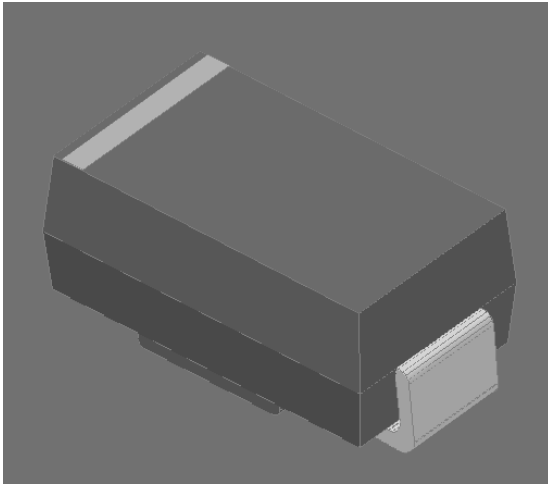


## Surface Mount General Purpose Rectifier



### Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.

### Mechanical Data

- **Package:** DO-214AC (SMA)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■Maximum Ratings (T<sub>a</sub>=25 Unless otherwise specified

| PARAMETER                                                                                   | SYMBOL           | UNIT             | S1A | S1B        | S1D | S1G | S1J | S1K | S1M  |
|---------------------------------------------------------------------------------------------|------------------|------------------|-----|------------|-----|-----|-----|-----|------|
| Device marking code                                                                         |                  |                  | S1A | S1B        | S1D | S1G | S1J | S1K | S1M  |
| Maximum Repetitive Peak Reverse Voltage                                                     | VRRM             | V                | 50  | 100        | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage                                                                         | VRMS             | V                | 35  | 70         | 140 | 280 | 420 | 560 | 700  |
| Maximum DC blocking Voltage                                                                 | VDC              | V                | 50  | 100        | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current<br>@60Hz sine wave, Resistance load, TL (FIG.1)            | I <sub>O</sub>   | A                |     | 1.0        |     |     |     |     |      |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25 | I <sub>FSM</sub> | A                |     | 30         |     |     |     |     |      |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25    |                  |                  |     | 60         |     |     |     |     |      |
| Current squared time<br>@1ms ≤ t ≤ 8.3ms T <sub>j</sub> =25                                 | I <sup>2</sup> t | A <sup>2</sup> s |     | 3.735      |     |     |     |     |      |
| Storage temperature                                                                         | T <sub>stg</sub> |                  |     | -55 ~ +150 |     |     |     |     |      |
| Junction temperature                                                                        | T <sub>j</sub>   |                  |     | -55 ~ +150 |     |     |     |     |      |

### ■Electrical Characteristics T<sub>a</sub>=25 Unless otherwise specified

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS |
|-----------|--------|------|-----------------|
|-----------|--------|------|-----------------|

|                              |                |    |                                                           |   |
|------------------------------|----------------|----|-----------------------------------------------------------|---|
| Typical junction capacitance | C <sub>j</sub> | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 7 |
|------------------------------|----------------|----|-----------------------------------------------------------|---|



## S1A THRU S1M

### ■ Thermal Characteristics $T_a=25$ Unless otherwise specified

| PARAMETER                  | SYMBOL              | UNIT | S1A | S1B | S1D | S1G | S1J | S1K | S1M |
|----------------------------|---------------------|------|-----|-----|-----|-----|-----|-----|-----|
| Typical Thermal Resistance | $R_{\theta J-A(1)}$ | /W   | 70  |     |     |     |     |     |     |
|                            | $R_{\theta J-A(1)}$ |      | 22  |     |     |     |     |     |     |
|                            | $R_{\theta J-L(1)}$ |      | 20  |     |     |     |     |     |     |

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper per



### ■ Outline Dimensions

| DO-214AC(SMA) |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 1.25 | 1.58 |
| B             | 2.40 | 2.83 |
| C             | 4.00 | 4.75 |
| D             | 1.90 | 2.30 |
| E             | 4.93 | 5.28 |
| F             | 0.76 | 1.41 |

### ySuggested Pad Layout



### Disclaimer

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