



## DSR0.3A THRU DSR0.3M Surface Mount Standard Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 0.3 A

### FEATURES

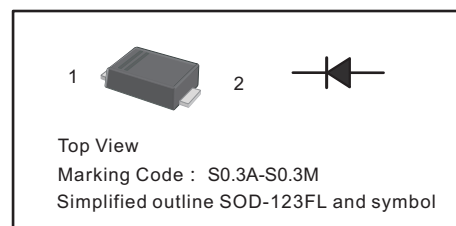
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

### PINNING

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



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                                     | Symbols         | DSR0.3A    | DSR0.3B | DSR0.3D | DSR0.3G | DSR0.3J | DSR0.3K | DSR0.3M | 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 $T_a = 65^\circ\text{C}$                                         | $I_{F(AV)}$     | 0.3        |         |         |         |         |         |         | A                  |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)             | $I_{FSM}$       | 15         |         |         |         |         |         |         | A                  |
| Maximum Instantaneous Forward Voltage at 0.3A                                                                 | $V_F$           | 1.1        |         |         |         |         |         |         | V                  |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$<br>at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$ | $I_R$           | 5<br>50    |         |         |         |         |         |         | $\mu\text{A}$      |
| Typical Junction Capacitance <sup>1)</sup>                                                                    | $C_j$           | 30         |         |         |         |         |         |         | pF                 |
| Typical Thermal Resistance <sup>2)</sup>                                                                      | $R_{\theta JA}$ | 90         |         |         |         |         |         |         | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range                                                                       | $T_j, T_{stg}$  | -55 ~ +150 |         |         |         |         |         |         | $^\circ\text{C}$   |

1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

2 ) P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas.





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### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

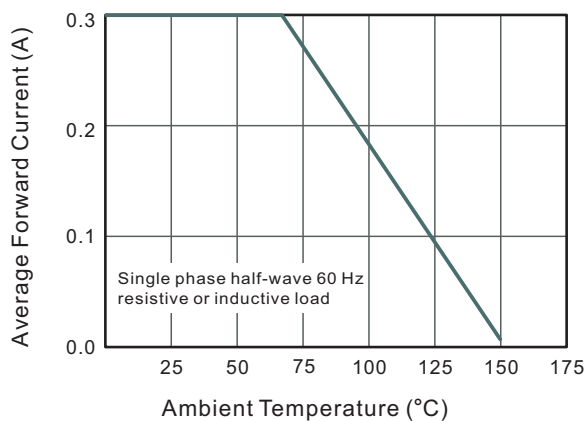


Fig.2 Typical Instantaneous Reverse Characteristics

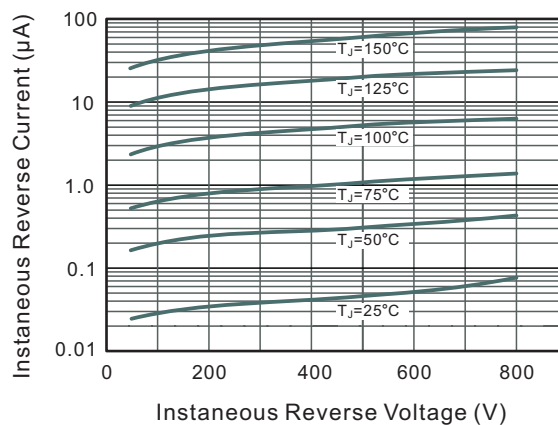


Fig.3 Typical Forward Characteristic

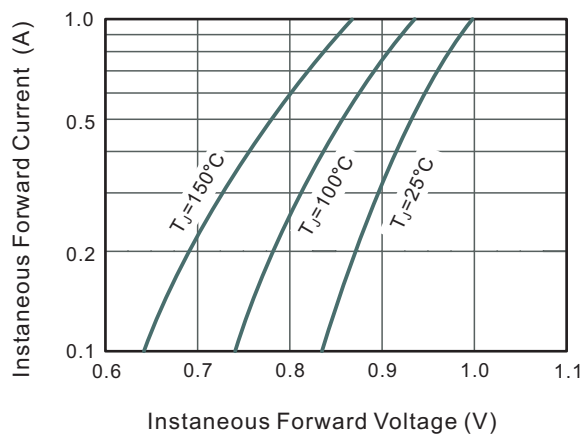
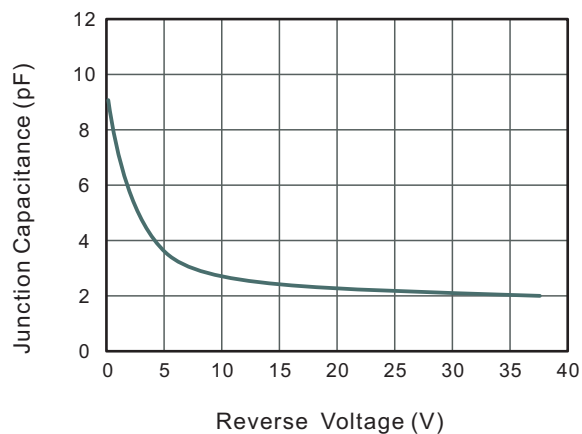


Fig.4 Typical Junction Capacitance





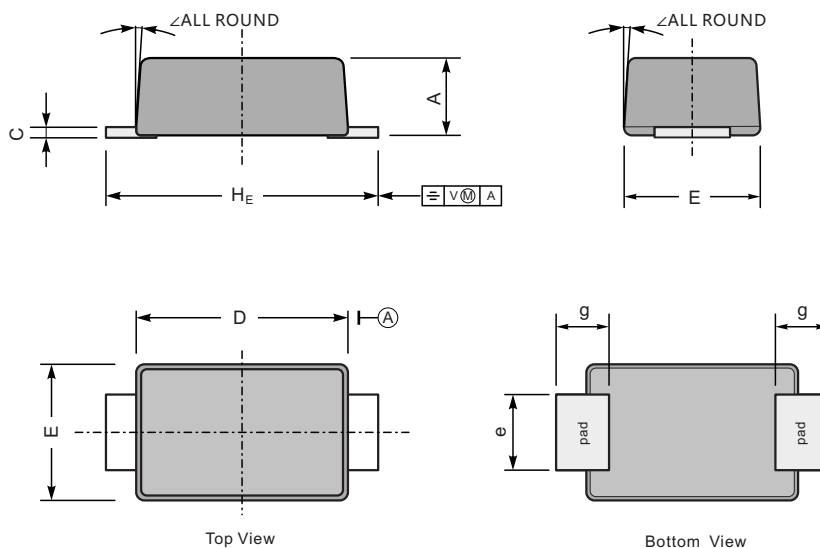
# DSR0.3A THRU DSR0.3M

## Surface Mount Standard Rectifiers

### PACKAGE OUTLINE

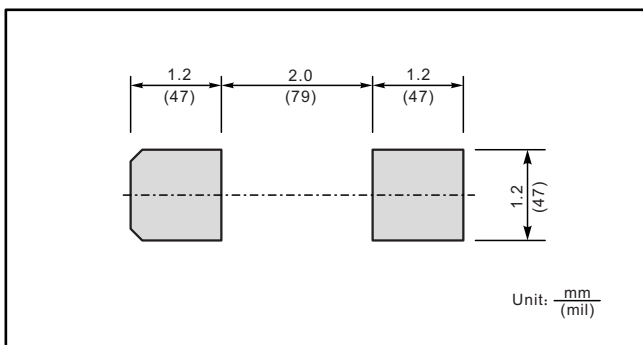
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT |     | A    | C    | D   | E    | e   | g   | H <sub>E</sub> | ∠  |
|------|-----|------|------|-----|------|-----|-----|----------------|----|
| mm   | max | 1.27 | 0.20 | 2.9 | 1.95 | 1.1 | 0.9 | 3.8            | 7° |
|      | min | 0.95 | 0.12 | 2.6 | 1.75 | 0.8 | 0.7 | 3.5            |    |
| mil  | max | 50   | 7.9  | 114 | 77   | 43  | 35  | 150            |    |
|      | min | 37   | 4.7  | 102 | 69   | 31  | 28  | 138            |    |

### The recommended mounting pad size



### Marking

| Type number | Marking code |
|-------------|--------------|
| DSR0.3A     | S0.3A        |
| DSR0.3B     | S0.3B        |
| DSR0.3D     | S0.3D        |
| DSR0.3G     | S0.3G        |
| DSR0.3J     | S0.3J        |
| DSR0.3K     | S0.3K        |
| DSR0.3M     | S0.3M        |

