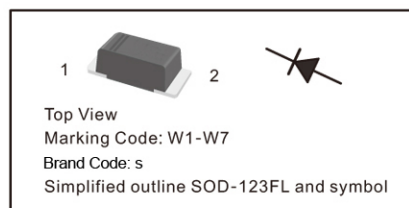


# SKR1AWA-SKR1MWA

● Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A



● 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         | SKR1AWA         | SKR1BWA | SKR1DWA | SKR1GWA | SKR1JWA | SKR1KWA | SKR1MWA | 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 $T_a = 65\text{ }^{\circ}\text{C}$                                                   | $I_{F(AV)}$     | 1               |         |         |         |         |         |         | A                    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)                                 | $I_{FSM}$       | 30              |         |         |         |         |         |         | A                    |
| Maximum Instantaneous Forward Voltage at 1 A                                                                                      | $V_F$           | 1.1             |         |         |         |         |         |         | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$ | $I_R$           | 5<br>50         |         |         |         |         |         |         | $\mu\text{A}$        |
| Typical Junction Capacitance <sup>1)</sup>                                                                                        | $C_j$           | 4               |         |         |         |         |         |         | pF                   |
| Typical Thermal Resistance <sup>2)</sup>                                                                                          | $R_{\theta JA}$ | 180             |         |         |         |         |         |         | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range                                                                                           | $T_j, T_{stg}$  | $-55 \sim +150$ |         |         |         |         |         |         | $^{\circ}\text{C}$   |

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

2) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

# SKR1AWA-SKR1MWA

Fig.1 Forward Current Derating Curve

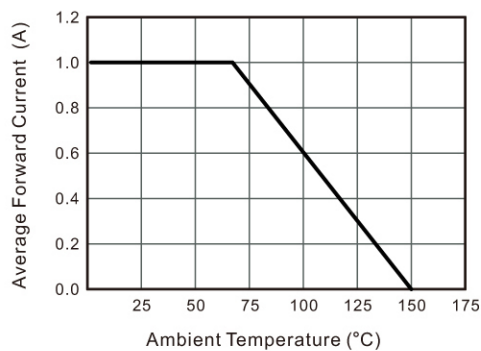


Fig.2 Typical Instantaneous Reverse Characteristics

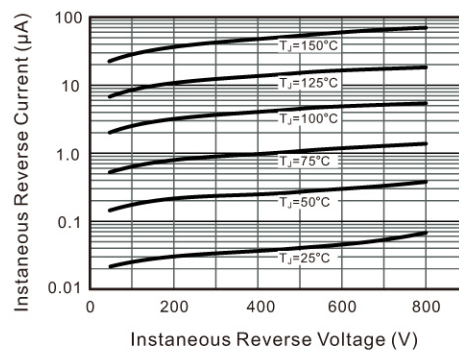


Fig.3 Typical Forward Characteristic

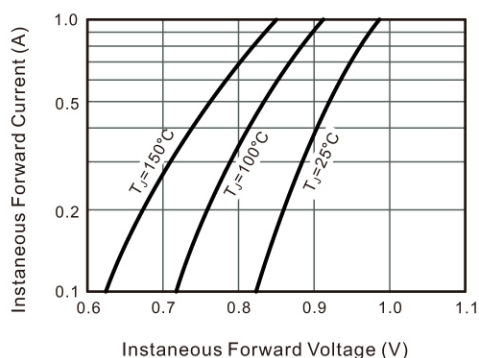


Fig.4 Typical Junction Capacitance

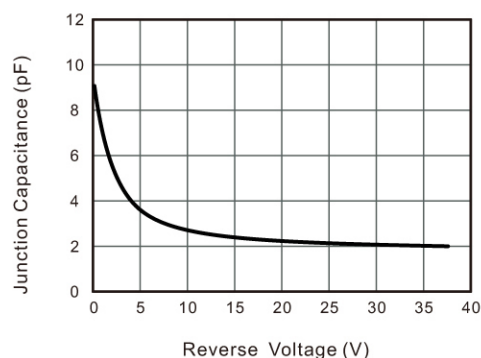
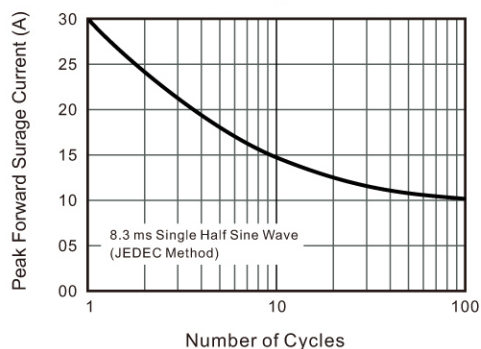


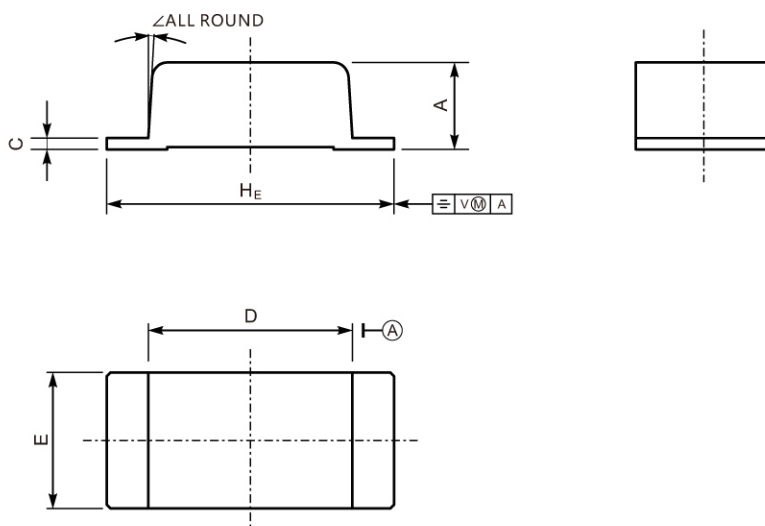
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



# SKR1AWA-SKR1MWA

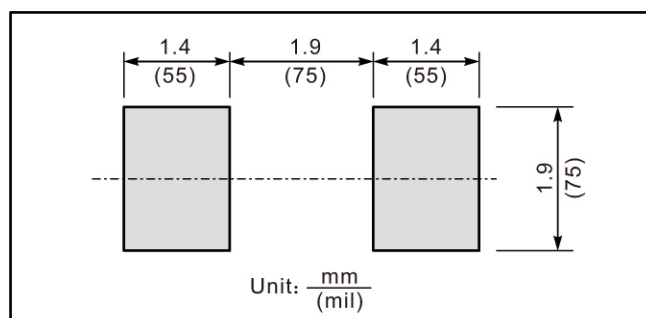
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



| UNIT |     | A    | C    | D   | E    | H <sub>E</sub> | V   | ∠  |
|------|-----|------|------|-----|------|----------------|-----|----|
| mm   | max | 1.25 | 0.16 | 2.9 | 1.9  | 3.9            | 0.2 | 5° |
|      | min | 0.95 | 0.14 | 2.6 | 1.6  | 3.5            |     |    |
| mil  | max | 49.2 | 6.3  | 114 | 74.8 | 154            | 7.9 |    |
|      | min | 37.4 | 5.5  | 102 | 63.0 | 138            |     |    |

The recommended mounting pad size

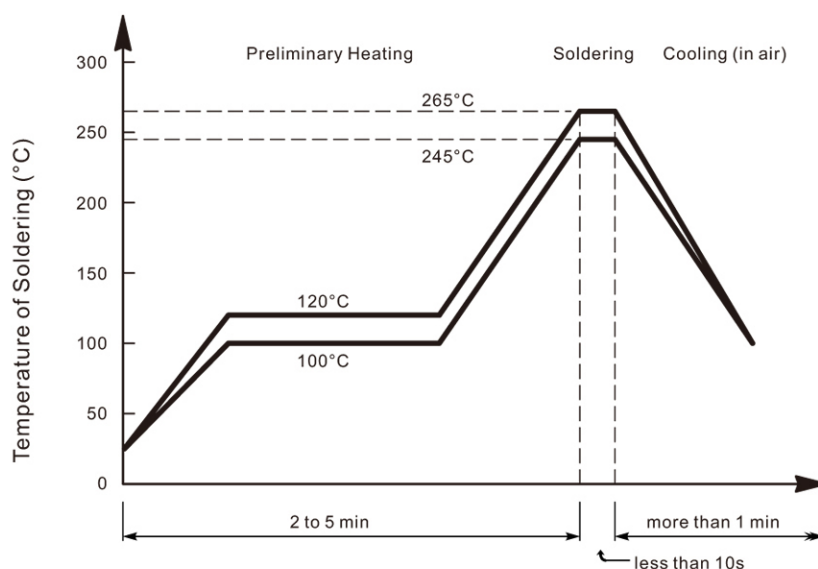


Marking

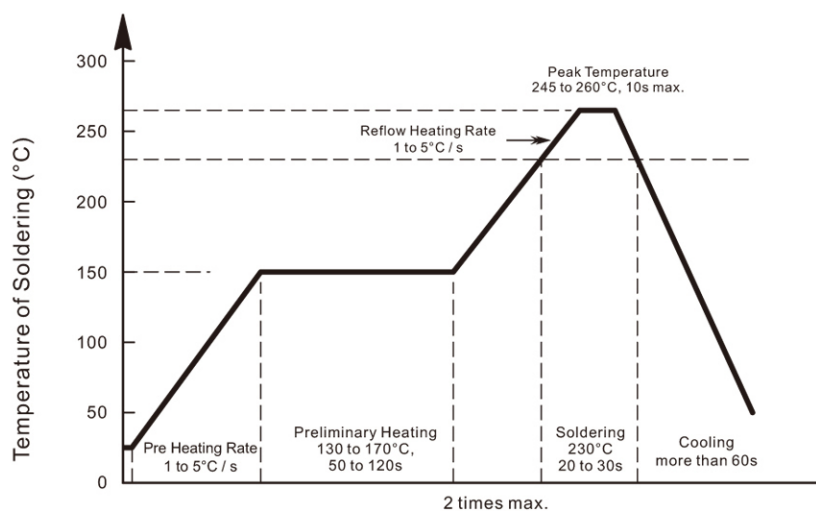
| Type number | Marking code |
|-------------|--------------|
| DSR1AW      | W1           |
| DSR1BW      | W2           |
| DSR1DW      | W3           |
| DSR1GW      | W4           |
| DSR1JW      | W5           |
| DSR1KW      | W6           |
| DSR1MW      | W7           |

# SKR1AWA-SKR1MWA

## • Recommended condition of flow soldering



## • Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)

## • Condition of hand soldering

Temperature: 370°C

Time: 3s max.

Times: one time

## • Remark:

Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)