

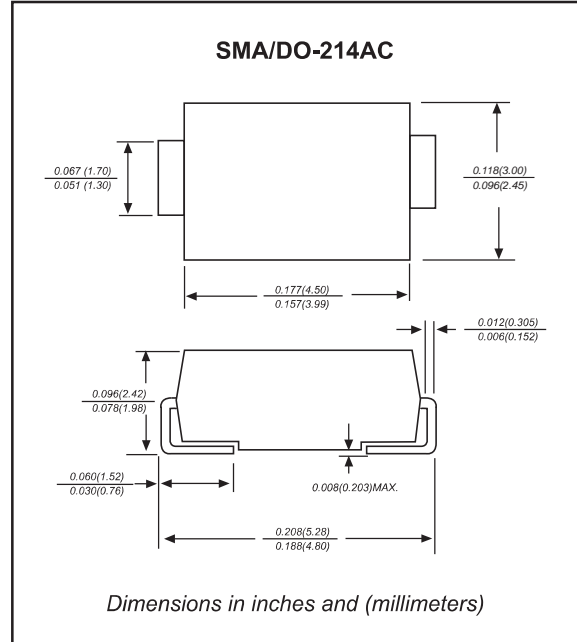
### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Compliant to RoHS Directive 2011/65/EU
- ◆ Compliant to Halogen-free

### Mechanical data

- ◆ **Case:** JEDEC DO-214AC molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                  | CONDITIONS                                 | Symbol          | MIN. | TYP. | MAX. | UNIT               |
|----------------------------|--|-----------------|------|------|------|--------------------|
| Forward rectified current  | See Fig.2                                  | $I_O$           |      |      | 1.0  | A                  |
| Forward surge current      | 8.3ms single half sine-wave (JEDEC method) | $I_{FSM}$       |      |      | 30   | A                  |
| Reverse current            | $V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$   | $I_R$           |      |      | 0.5  | mA                 |
|                            | $V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$  |                 |      |      | 10   |                    |
| Thermal resistance (1)     | Junction to Ambient                        | $R_{\theta JA}$ |      | 70   |      | $^\circ\text{C/W}$ |
|                            | Junction to Case                           | $R_{\theta JC}$ |      | 25   |      |                    |
|                            | Junction to Lead                           | $R_{\theta JL}$ |      | 30   |      |                    |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage   | $C_J$           |      | 110  |      | pF                 |
| Storage temperature        |  | $T_{STG}$       | -65  |      | +150 | $^\circ\text{C}$   |

**Note:** (1) Device mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area.

| SYMBOLS | $V_{RRM}$ <sup>*1</sup><br>(V) | $V_{RMS}$ <sup>*2</sup><br>(V) | $V_R$ <sup>*3</sup><br>(V) | $V_F$ <sup>*4</sup><br>(V) | Operating temperature<br>$T_J$ , ( $^\circ\text{C}$ ) |
|---------|--------------------------------|--------------------------------|----------------------------|----------------------------|---|
| SU14-A  | 40                             | 28                             | 40                         | 0.40                       | -55 to +125   |

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=1.0\text{A}$

### Rating and characteristic curves

Fig. 1 Forward Current Derating Curve

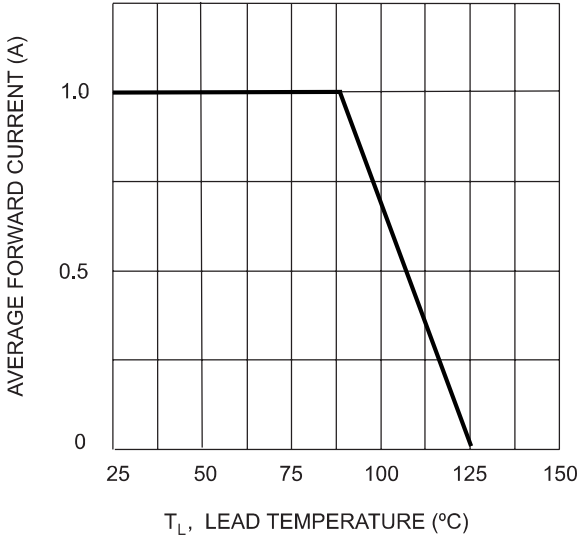


Fig. 2 Typ. Forward Characteristics

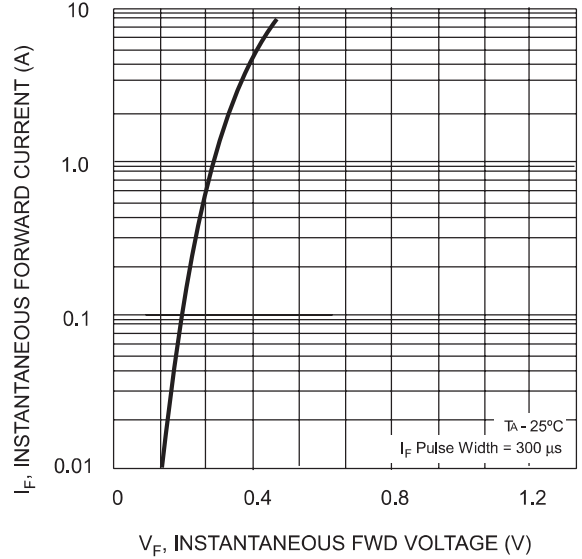


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

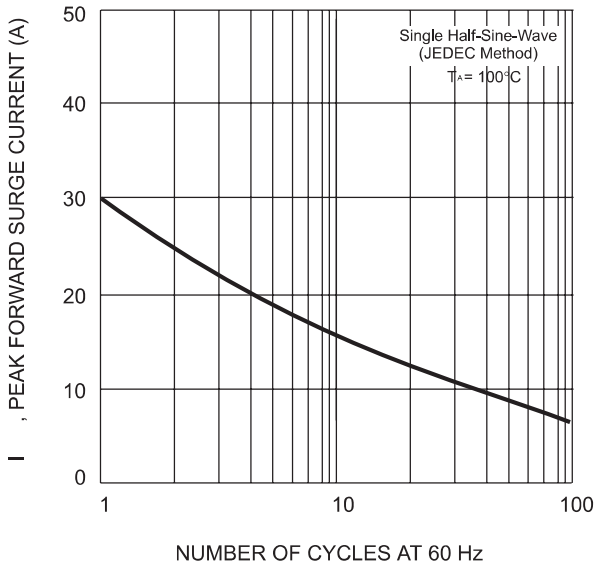
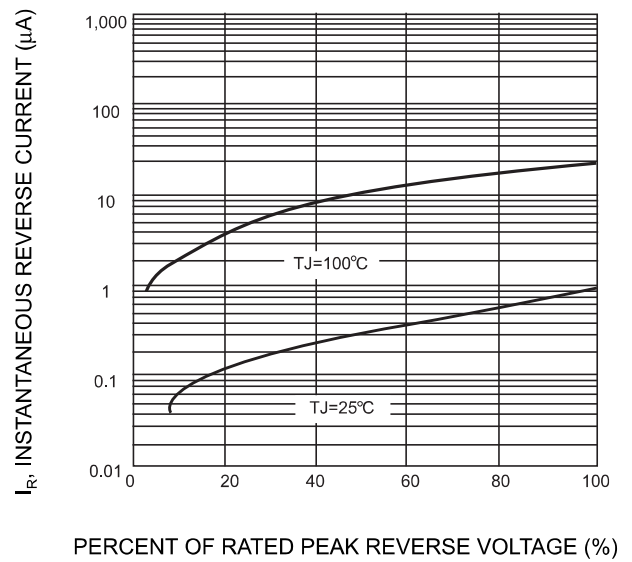




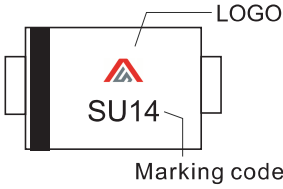
Fig. 4 Typical Reverse Characteristics (per element)



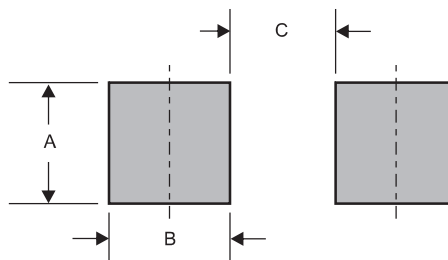
### Pinning information

| Pin                        | Simplified outline   | Symbol  |
|----------------------------|--|---|
| Pin1 cathode<br>Pin2 anode |  |  |

### Marking

| Type number | Marking code | Example   |
|-------------|--------------|---|
| SU14-A      | SU14         |  |

### Suggested solder pad layout



Dimensions in inches and (millimeters)

| PACKAGE | A            | B            | C            |
|---------|--------------|--------------|--------------|
| SMA     | 0.110 (2.80) | 0.063 (1.60) | 0.087 (2.20) |