

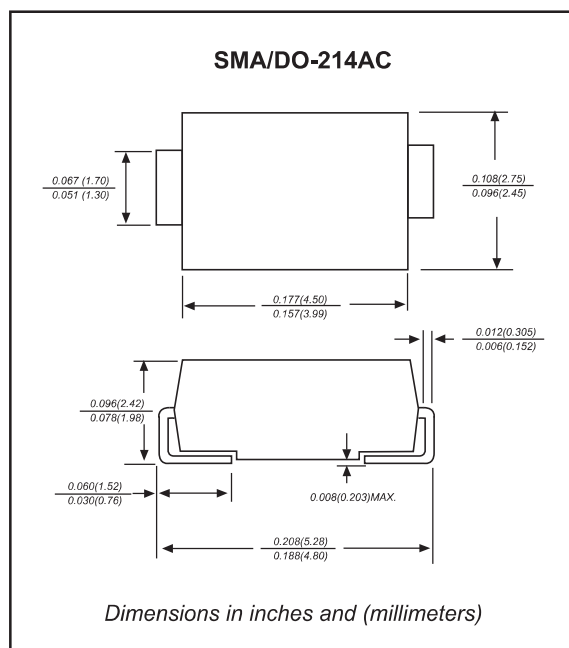
### Features

- ◆ 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.1                                         |                                  | $I_O$           |      |      | 2.0  | A                  |
| Forward surge current      | 8.3ms single half sine-wave (JEDEC methode)       |                                  | $I_{FSM}$       |      |      | 50   | A                  |
| Reverse current            | $T_A = 25^\circ\text{C}$                          | $V_R = 20\text{V} - 60\text{V}$  | $I_R$           |      |      | 0.5  | mA                 |
|                            |                                                   | $V_R = 80\text{V} - 200\text{V}$ |                 |      |      | 0.1  |                    |
| Reverse current            | $T_A = 100^\circ\text{C}$                         | $V_R = 20\text{V} - 60\text{V}$  | $I_R$           |      |      | 10   | mA                 |
|                            |                                                   | $V_R = 80\text{V} - 200\text{V}$ |                 |      |      | 5    |                    |
| 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 | $f=1\text{MHz}$ and applied 4V DC reverse voltage |                                  | $C_J$           |      | 220  |      | 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 <sub>RRM</sub> <sup>*1</sup><br>(V) | V <sub>RMS</sub> <sup>*2</sup><br>(V) | V <sub>R</sub> <sup>*3</sup><br>(V) | V <sub>F</sub> <sup>*4</sup><br>(V) | Operating temperature<br>T <sub>J</sub> , (°C) |  |
|---------|---------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------------|--|
| SS22-A  | 20                                    | 14                                    | 20                                  | 0.55                                | -55 to +125                                    |  |
| SS23-A  | 30                                    | 21                                    | 30                                  |                                     |                                                |  |
| SS24-A  | 40                                    | 28                                    | 40                                  |                                     |                                                |  |
| SS25-A  | 50                                    | 35                                    | 50                                  | 0.70                                | -55 to +150                                    |  |
| SS26-A  | 60                                    | 42                                    | 60                                  |                                     |                                                |  |
| SS28-A  | 80                                    | 56                                    | 80                                  | 0.85                                |                                                |  |
| SS210-A | 100                                   | 70                                    | 100                                 |                                     |                                                |  |
| SS215-A | 150                                   | 105                                   | 150                                 | 0.92                                |                                                |  |
| SS220-A | 200                                   | 140                                   | 200                                 |                                     |                                                |  |

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

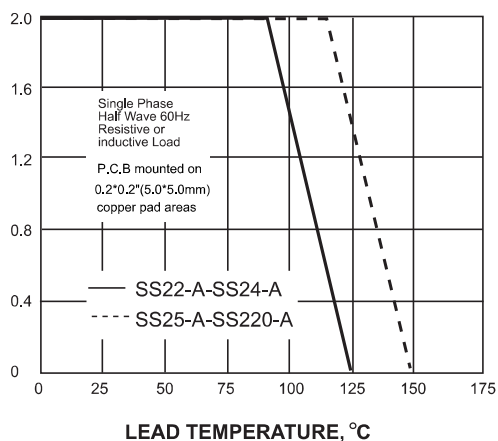
\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=2.0\text{A}$

### Rating and characteristic curves

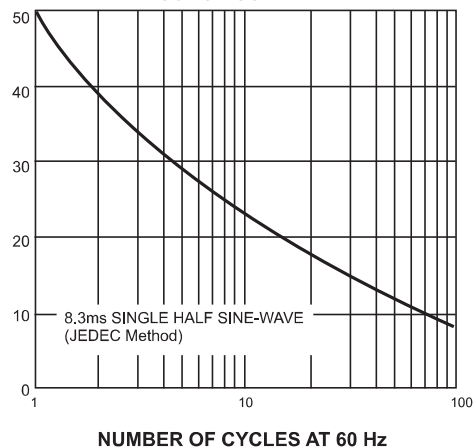
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



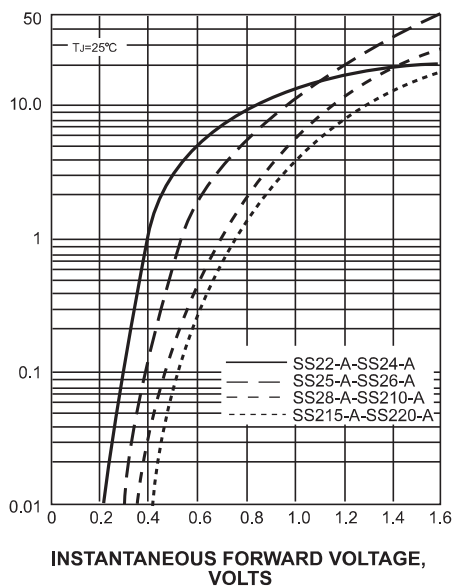
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



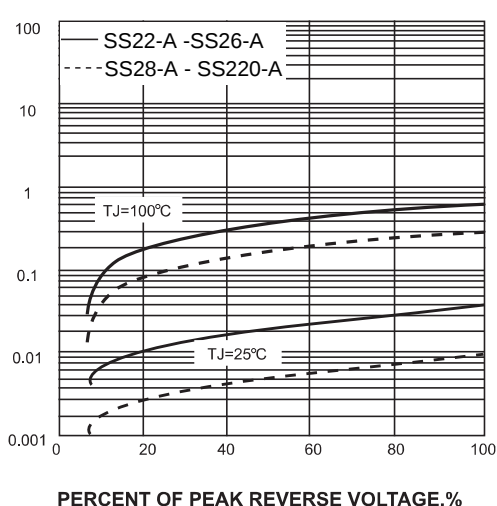
INSTANTANEOUS FORWARD CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



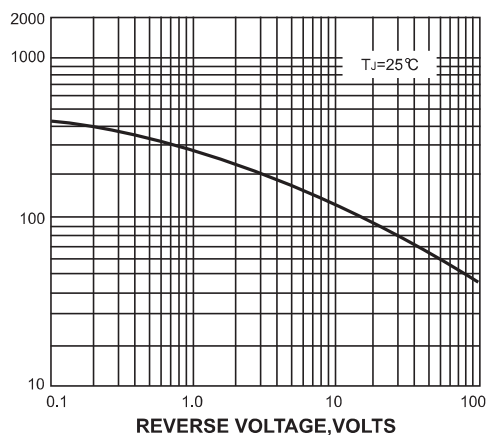
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



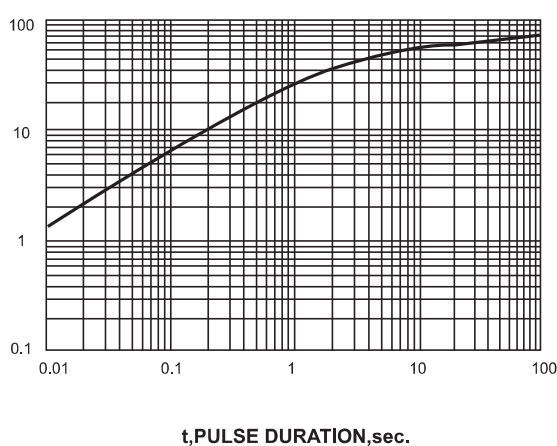
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

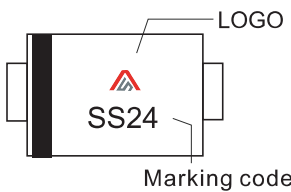
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



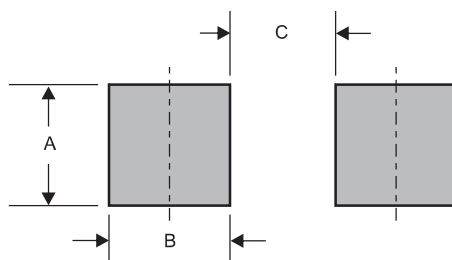
### Pinning information

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

### Marking

| Type number | Marking code | Example                                                                             |
|-------------|--------------|-------------------------------------------------------------------------------------|
| SS22-A      | SS22         |  |
| SS23-A      | SS23         |                                                                                     |
| SS24-A      | SS24         |                                                                                     |
| SS25-A      | SS25         |                                                                                     |
| SS26-A      | SS26         |                                                                                     |
| SS28-A      | SS28         |                                                                                     |
| SS210-A     | SS210        |                                                                                     |
| SS215-A     | SS215        |                                                                                     |
| SS220-A     | SS220        |                                                                                     |

### 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) |