

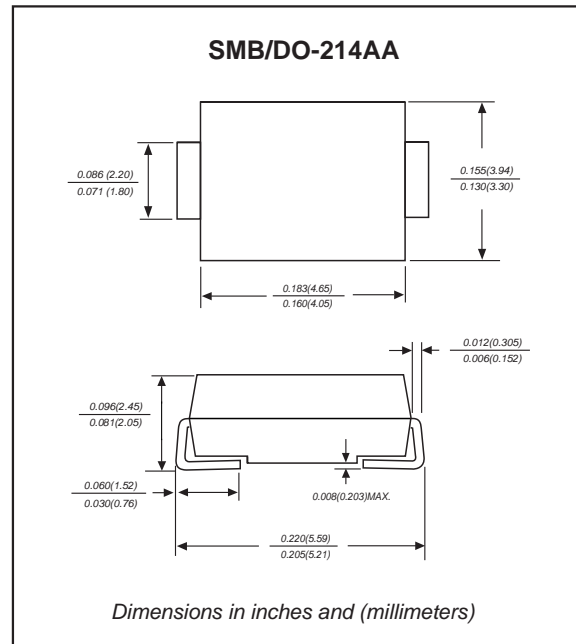
### Features

- ▶ 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-214AA 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                                   | $I_O$                            |      |      | 10.0 | A                         |
| Forward surge current      | 8.3ms single half sine-wave (JEDEC methode) | $I_{FSM}$                        |      |      | 200  | A                         |
| Reverse current            | $T_A = 25^\circ\text{C}$                    | $V_R = 20\text{V} - 60\text{V}$  |      |      | 0.5  | mA                        |
|                            |   | $V_R = 80\text{V} - 200\text{V}$ |      |      | 0.1  |                           |
| Reverse current            | $T_A = 100^\circ\text{C}$                   | $V_R = 20\text{V} - 60\text{V}$  |      |      | 10   | mA                        |
|                            |   | $V_R = 80\text{V} - 200\text{V}$ |      |      | 5    |                           |
| Thermal resistance         | Junction to case<br>NOTE 1                  | $R_{\theta JC}$                  |      | 2.0  |      | $^\circ\text{C}/\text{W}$ |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage    | $C_J$                            |      | 550  |      | pF                        |
| Storage temperature        |   | $T_{STG}$                        | -65  |      | +150 | $^\circ\text{C}$          |

**Note:** 1.P.C.B. mounted with 0.6x0.6" (16x16mm) copper pad areas

| SYMBOLS  | $V_{RM}^{*1}$<br>(V) | $V_{RMS}^{*2}$<br>(V) | $V_R^{*3}$<br>(V) | $V_F^{*4}$<br>(V) | Operating temperature<br>$T_J$ , ( $^\circ\text{C}$ ) |
|----------|----------------------|-----------------------|-------------------|-------------------|---|
| SS1020-B | 20                   | 14                    | 20                | 0.55              |   |
| SS1030-B | 30                   | 21                    | 30                |                   |   |
| SS1040-B | 40                   | 28                    | 40                |                   |   |
| SS1045-B | 45                   | 32                    | 45                |                   |   |
| SS1060-B | 60                   | 42                    | 60                | 0.75              |   |
| SS1080-B | 80                   | 56                    | 80                | 0.85              |   |
| SS10A0-B | 100                  | 70                    | 100               |                   |   |
| SS1015-B | 150                  | 105                   | 150               |                   |   |
| SS10B0-B | 200                  | 140                   | 200               |                   | 0.90  |

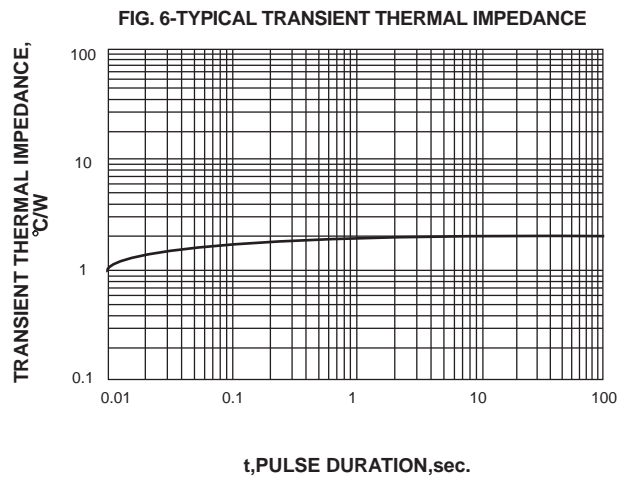
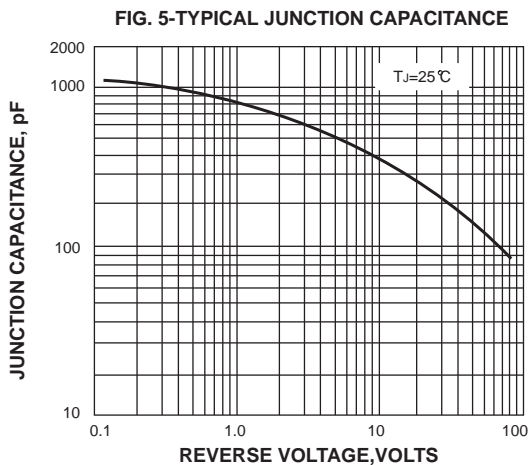
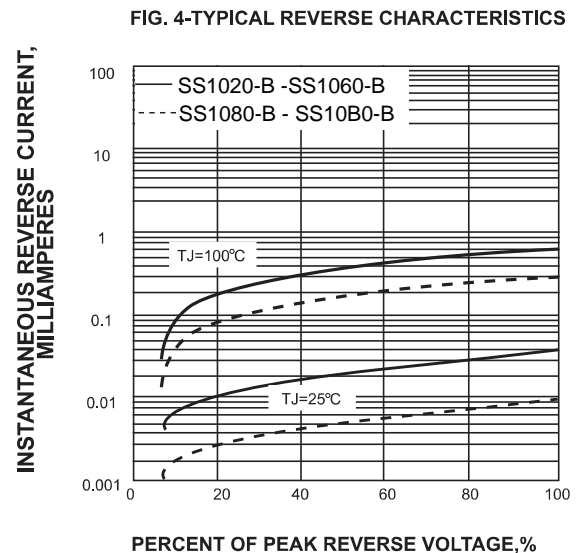
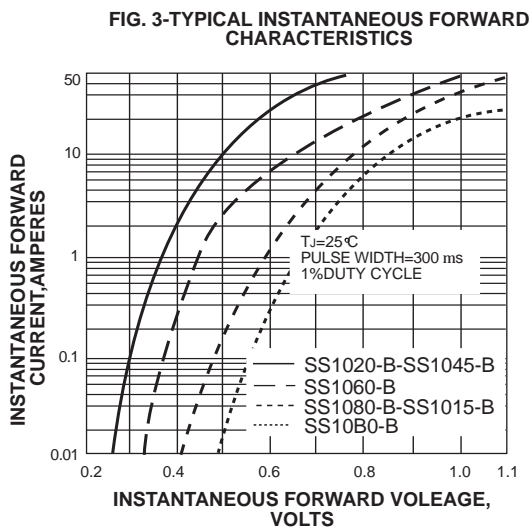
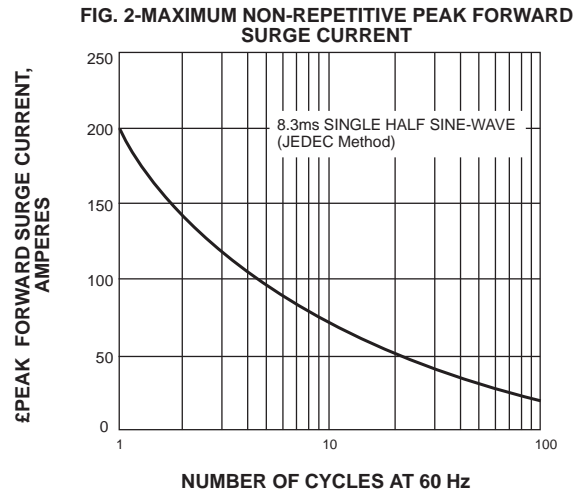
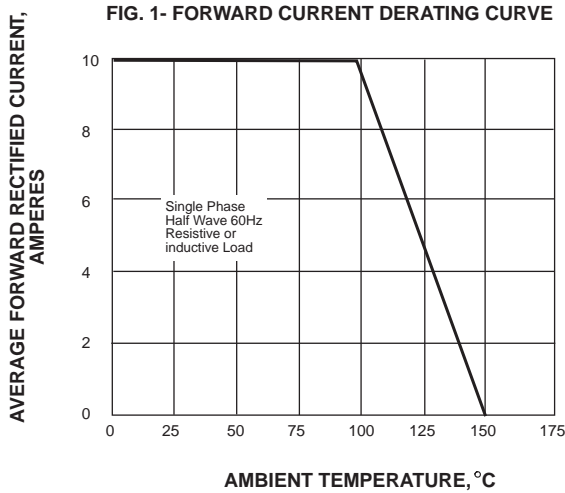
\*1 Repetitive peak reverse voltage

\*2 RMS voltage



\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=10.0\text{A}$

### Rating and characteristic curves



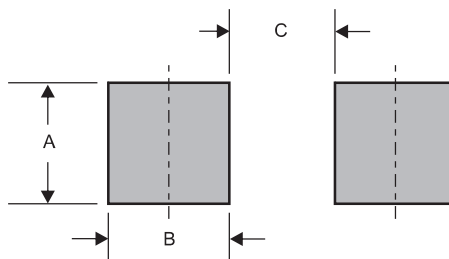
### Pinning information

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

### Marking

| Type number | Marking code |
|-------------|--------------|
| SS1020-B    | SS1020       |
| SS1030-B    | SS1030       |
| SS1040-B    | SS1040       |
| SS1045-B    | SS1045       |
| SS1060-B    | SS1060       |
| SS1080-B    | SS1080       |
| SS10A0-B    | SS10A0       |
| SS1015-B    | SS1015       |
| SS10B0-B    | SS10B0       |

### Suggested solder pad layout



Dimensions in inches and (millimeters)

| PACKAGE | A           | B           | C           |
|---------|-------------|-------------|-------------|
| SMB     | 0.090(2.30) | 0.098(2.50) | 0.070(1.80) |