

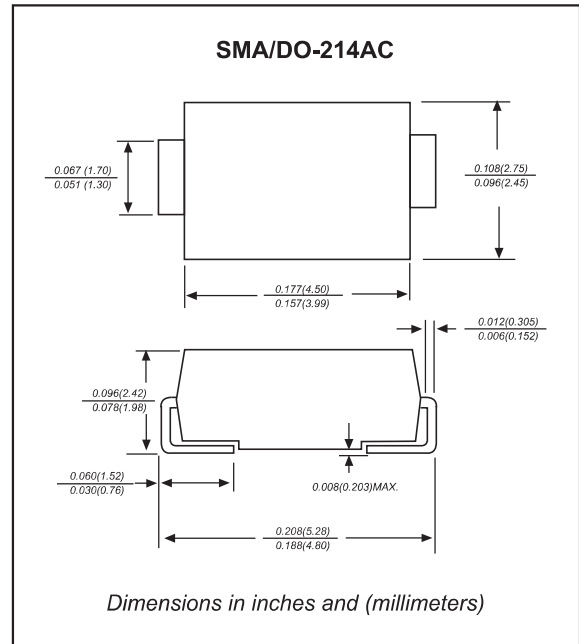
### Features

- ◆ 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 SMA 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                                     | $I_O$           |      |      | 3.0  | A                  |
| Forward surge current      | 8.3ms single half sine-wave (JEDEC methode)   | $I_{FSM}$       |      |      | 80   | A                  |
| Reverse current            | $V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$  | $I_R$           |      |      | 0.5  | mA                 |
|                            | $V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$ |                 |      |      | 10   |                    |
| Thermal resistance         | Junction to ambient<br>NOTE 1                 | $R_{\theta JA}$ |      | 55   |      | $^\circ\text{C/W}$ |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage      | $C_J$           |      | 500  |      | pF                 |
| Storage temperature        |                                               | $T_{STG}$       | -65  |      | +150 | $^\circ\text{C}$   |

**Note:** 1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

| SYMBOLS | $V_{RRM}^{*1}$<br>(V) | $V_{RMS}^{*2}$<br>(V) | $V_R^{*3}$<br>(V) | $V_F^{*4}$<br>(V) | Operating temperature<br>$T_J$ ( $^\circ\text{C}$ ) |
|---------|-----------------------|-----------------------|-------------------|-------------------|-----------------------------------------------------|
| SU310-A | 100                   | 70                    | 100               | 0.60              | -55 to +150                                         |

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

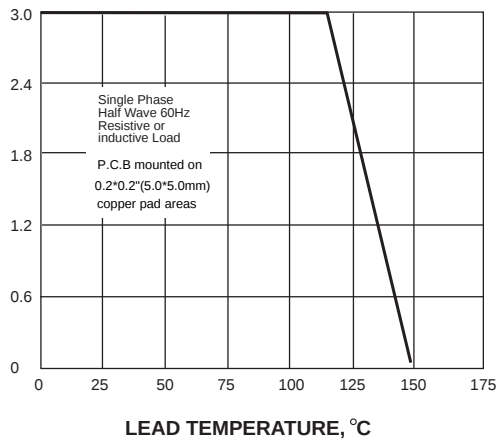
\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=3.0\text{A}$

### Rating and characteristic curves

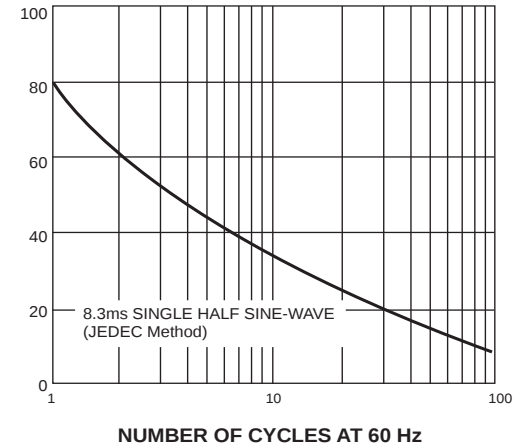
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



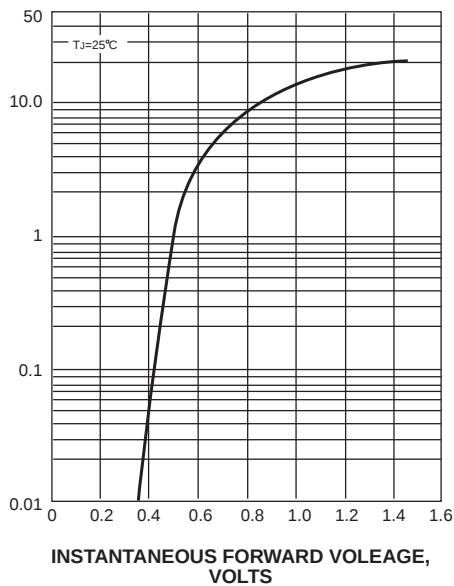
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



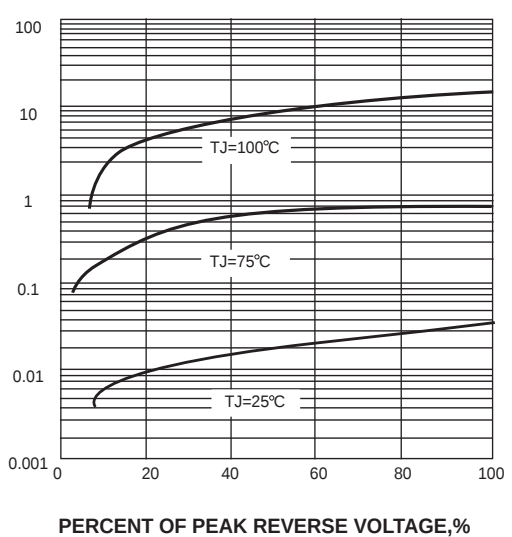
INSTANTANEOUS FORWARD  
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



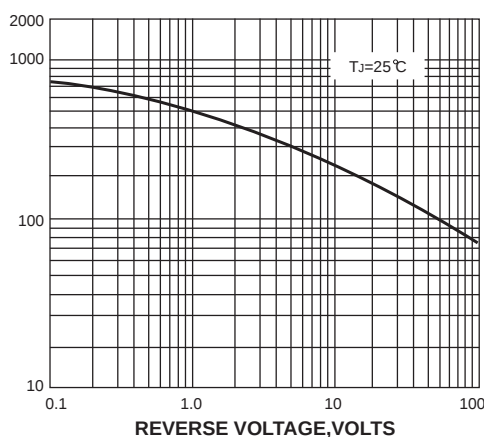
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



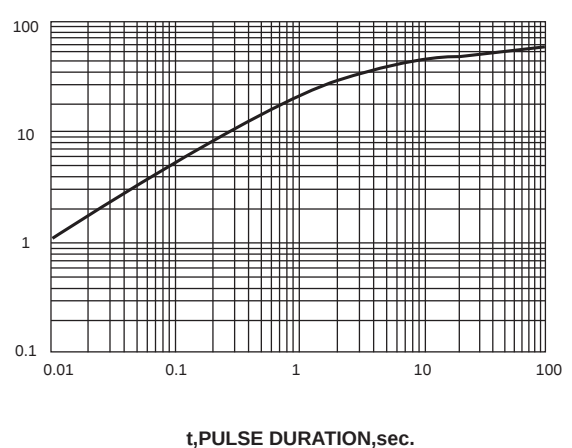
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

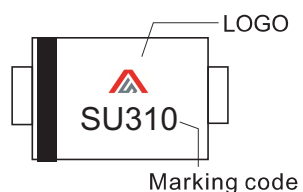
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



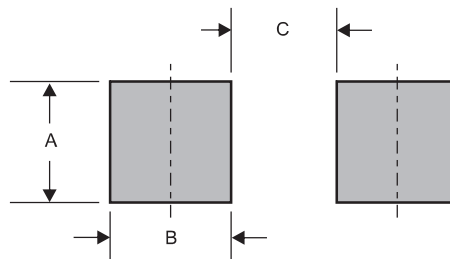
### Pinning information

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

### Marking

| Type number | Marking code | Example                                                                              |
|-------------|--------------|--------------------------------------------------------------------------------------|
| SU310-A     | SU310        |  |

### 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) |