

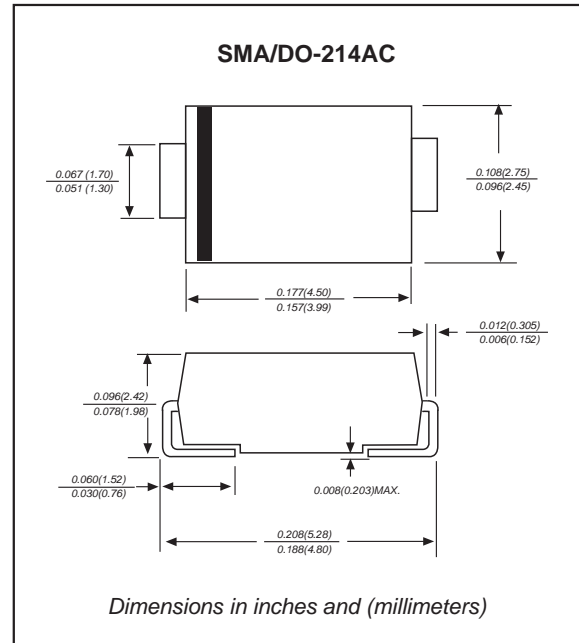
Features

- ▶ 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: 260°C/10 seconds at terminals
- ▶ Compliant to RoHS 2.0
- ▶ Suffix "-H" indicates Halogen-free part, ex. SS34A-H

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)

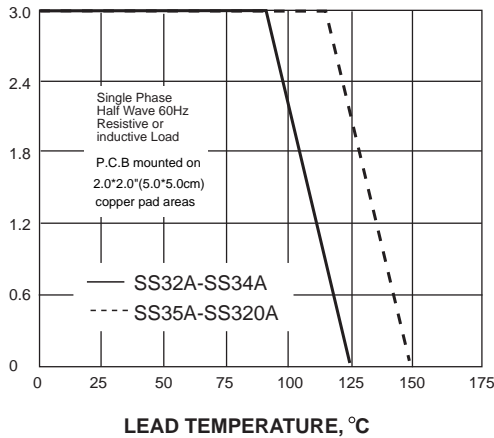
| PARAMETER | SYMBOLS | SS32A | SS33A | SS34A | SS35A | SS36A | SS38A | SS310A | SS315A | SS320A | UNITS |
|--|-----------------|-------------|-------|-------|-------------|-------|-------|--------|--------|--------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum average forward rectified current at T_L (see fig.1) | $I_{(AV)}$ | 3.0 | | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 80.0 | | | | | | | | | A |
| Maximum instantaneous forward voltage at 3.0A | V_F | 0.55 | | | 0.70 | | 0.85 | | 0.95 | | V |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 0.5 | | | 10.0 | | 5.0 | | 2.0 | | mA |
| Typical junction capacitance (NOTE 1) | C_J | 450 | | | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 70 | | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +125 | | | -55 to +150 | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | | | $^\circ\text{C}$ |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. P.C.B. mounted with 2.0x2.0" (5.0x5.0cm) copper pad areas

Rating and characteristic curves

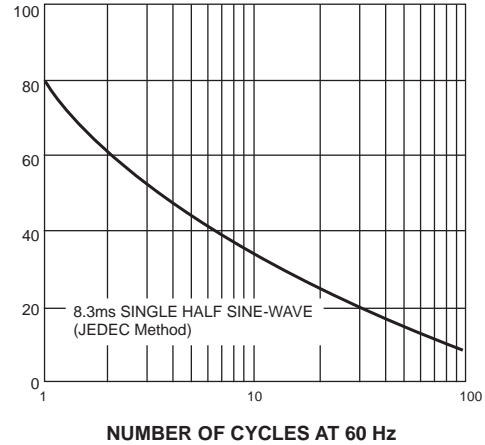
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



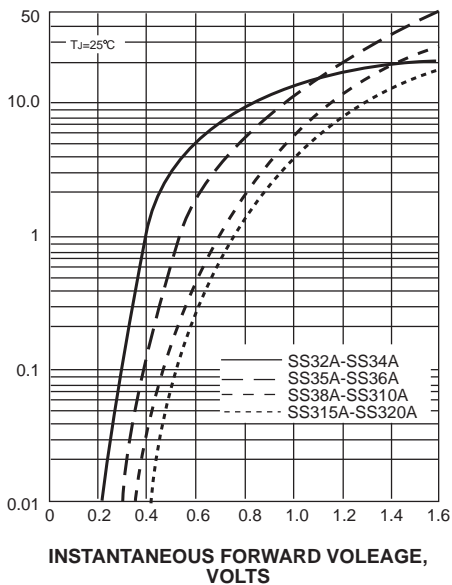
PEAK FORWARD SURGE CURRENT, AMPERES

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



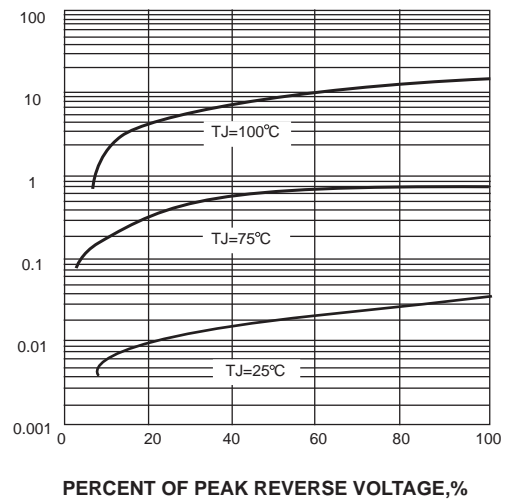
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



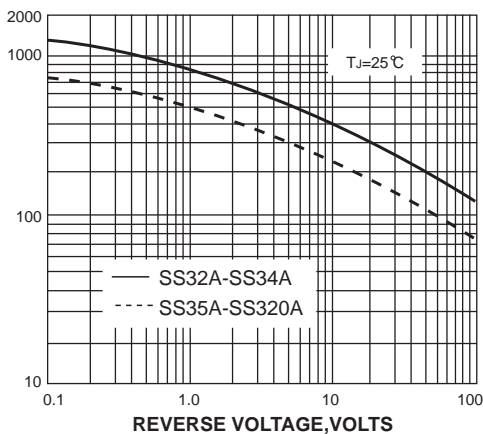
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



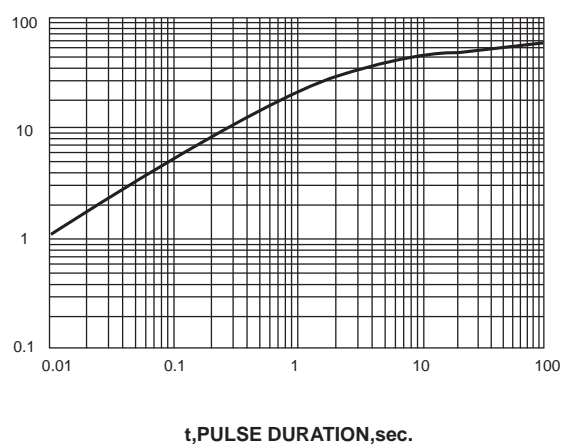
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



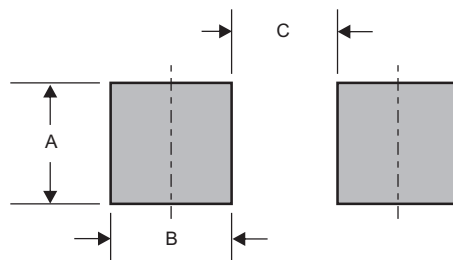
Pinning information

| Pin | Simplified outline | Symbol |
|----------------------------|--------------------|--------|
| Pin1 cathode Pin2 anode | | |

Marking

| Type number | Marking code | Example |
|-------------|--------------|---------|
| SS32A | SS32 | |
| SS33A | SS33 | |
| SS34A | SS34 | |
| SS35A | SS35 | |
| SS36A | SS36 | |
| SS38A | SS38 | |
| SS310A | SS310 | |
| SS315A | SS315 | |
| SS320A | SS320 | |

Suggested solder pad layout

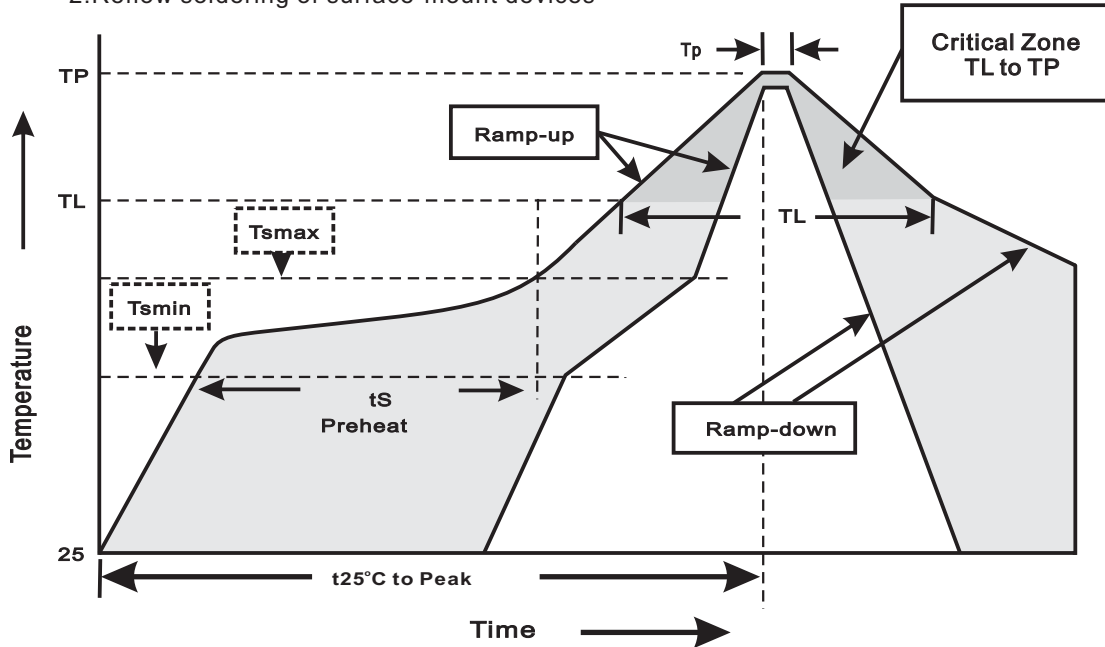


Dimensions in inches and (millimeters)

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

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

| Profile Feature | Soldering Condition |
|--|-----------------------------|
| Average ramp-up rate(TL to TP) | <3°C/sec |
| Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts) | 150°C 200°C 60~120sec |
| Tsmax to TL -Ramp-upRate | <3°C/sec |
| Time maintained above: -Temperature(TL) -Time(tL) | 217°C 60~260sec |
| Peak Temperature(TP) | 255°C-0/+5°C |
| Time within 5°C of actual Peak Temperature(tp) | 10~30sec |
| Ramp-down Rate | <6°C/sec |
| Time 25°C to Peak Temperature | <6minutes |

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