



SURFACEMOUNTRECTIFIERS

S3A--S3M

FEATURES

- Low profile package
- For surface mounted applications
- High current capability
- Built-in strain relief, ideal for automated placement
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering: 250°C/10 seconds at terminals



Lead-free



MECHANICAL DATA

- Case: JEDEC DO-214AB, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD- 750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

Maximum Ratings (@TA = 25°C unless otherwise specified)

| Characteristic | Symbol | S3A | S3B | S3C | S3D | S3G | S3J | S3K | S3M | UNITS |
|---|-------------|-----|-----|-----|-----|-----|-----|-----|------|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RWS} | 35 | 70 | 105 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current at $T_L=100^\circ\text{C}$ | $I_{F(AV)}$ | 3.0 | | | | | | | | A |
| Peak forward surge current @ $T_L = 110^\circ\text{C}$ 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 100 | | | | | | | | A |

Thermal Characteristics

| Characteristic | Symbol | S3A | S3B | S3C | S3D | S3G | S3J | S3K | S3M | UNITS |
|--|-----------------|--------------|-----|-----|-----|-----|-----|-----|-----|---------------------------|
| Typical junction capacitance (NOTE 1) | C_J | 30 | | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 53.0 | | | | | | | | $^\circ\text{C}/\text{W}$ |
| | $R_{\theta JL}$ | 16.0 | | | | | | | | |
| Operating junction and storage temperature range | $T_J T_{STG}$ | -55-----+150 | | | | | | | | $^\circ\text{C}$ |

Electrical Characteristics (@TA = 25°C unless otherwise specified)

| Characteristic | Symbol | S3A | S3B | S3C | S3D | S3G | S3J | S3K | S3M | UNITS |
|---|--------|------|-----|-----|-----|-----|-----|-----|-----|---------------|
| Maximum Instantaneous Forward Voltage at 3.0A | V_F | 1.15 | | | | | | | | V |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$ | I_R | 10.0 | | | | | | | | μA |
| | | 125 | | | | | | | | |

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts

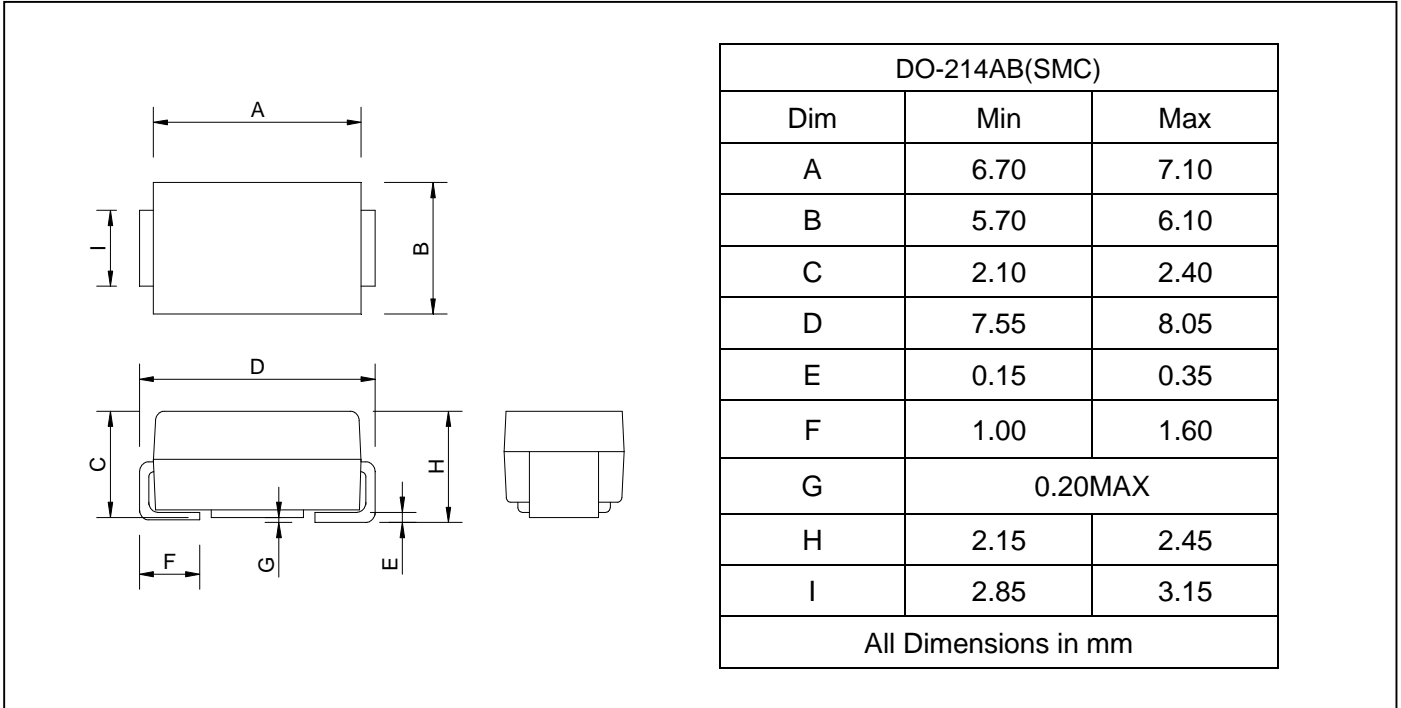
2. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.27"X0.27"(7.0X7.0mm2) copper pad areas



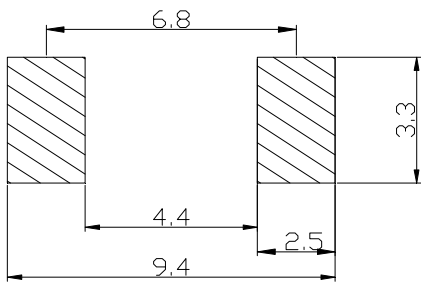
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PACKAGE OUTLINE DIMENSIONS



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

| Device | Package | Shipping |
|----------|---------------|----------------|
| S3A--S3M | DO-214AB(SMC) | 3000/Tape&Reel |



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FIG.1 -- FORWARD DERATING CURVE

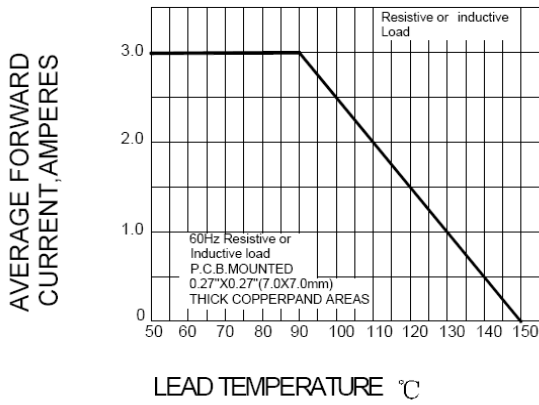


FIG.2 PEAK FORWARD SURGE CURRENT

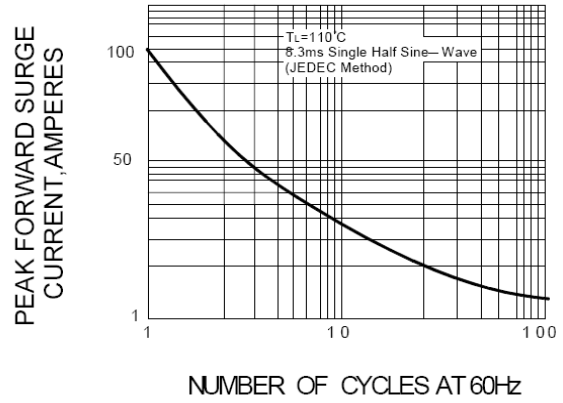


FIG.3 -- TYPICAL FORWARD CHARACTERISTICS

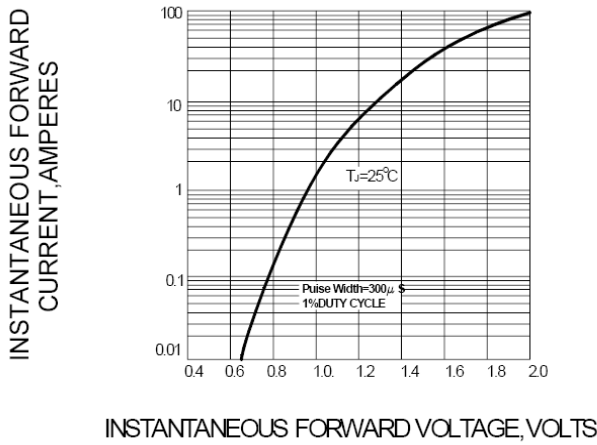


FIG.4 -- TYPICAL REVERSE CHARACTERISTICS

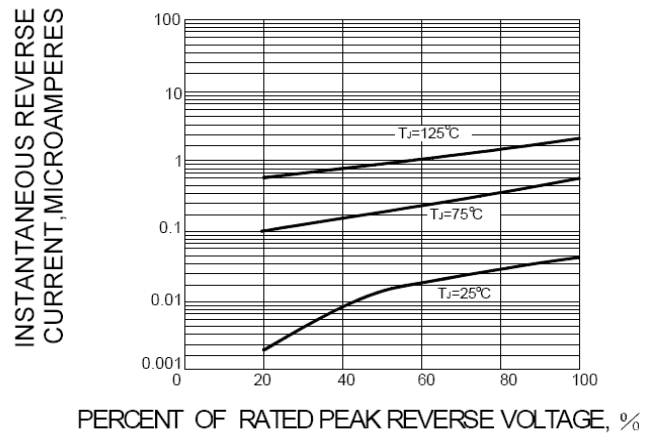


FIG.5 TYPICAL JUNCTION CAPACITANCE

