



S3AC THRU S3MC

3.0 AMP Surface Mount Passivated Rectifiers

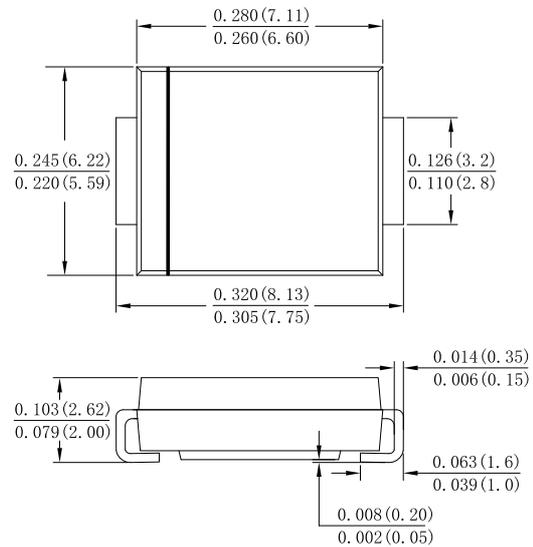
Features

- Glass Passivated Die Construction
- Low forward voltage drop
- High current capability
- High reliability
- Metal silicon junction, majority carrier conduction
- Plastic Case Material has UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded plastic SMC
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: as marked on case
- Mounting Position: Any
- Making: Type Number

Case: SMC(DO-214AB)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

| Type Number | Symbols | S3AC | S3BC | S3DC | S3GC | S3JC | S3KC | S3MC | Units |
|--|-----------------|-------------|------|------|------|------|------|------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Average Rectified Output Current @ $T_C=110^\circ C$ | $I_{F(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 110 | | | | | | | A |
| I^2t Rating for Fusing ($t < 8.3ms$) | I^2t | 50.2 | | | | | | | A ² S |
| Forward Voltage @ $I_F=1.5A$ @ $I_F=3.0A$ | V_F | 0.95 1.0 | | | | | | | V |
| Peak Reverse Current @ $T_A=25^\circ C$ | I_R | 5.0 | | | | | | | uA |
| At Rated DC Blocking Voltage @ $T_A=125^\circ C$ | | 100 | | | | | | | |
| Typical Junction Capacitance (Note 1) | C_J | 25 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 80 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | °C |

- Note:
1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
 2. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.15"×0.26" copper pad.



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FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

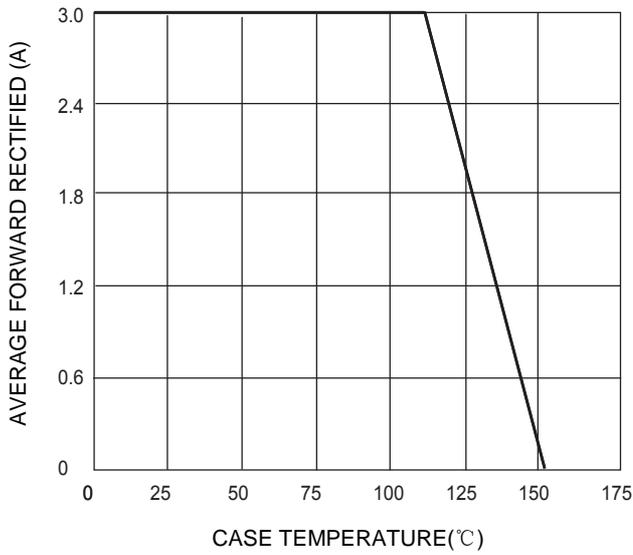


FIG.2 TYPICAL FORWARD CHARACTERISTICS

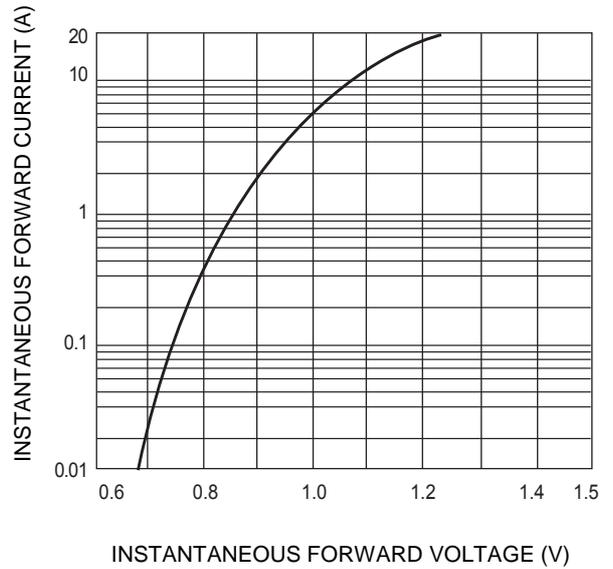


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

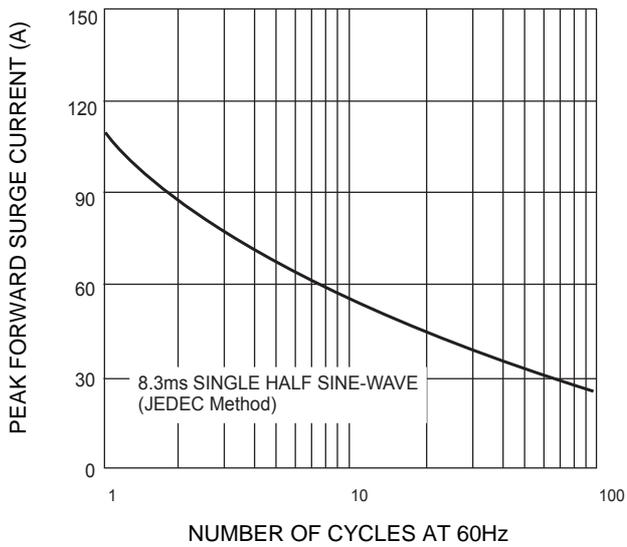


Fig. 4 TYPICAL REVERSE CHARACTERISTICS

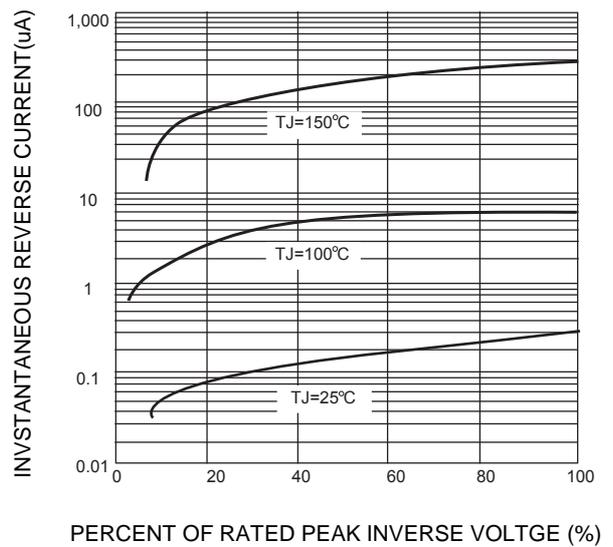
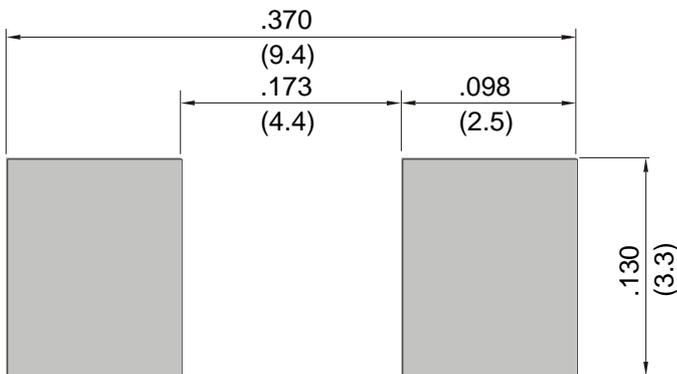


FIG.5 MOUNTING PAD LAYOUT





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