



S3AC THRU S3MC

3.0 AMP Surface Mount Passivated Rectifiers

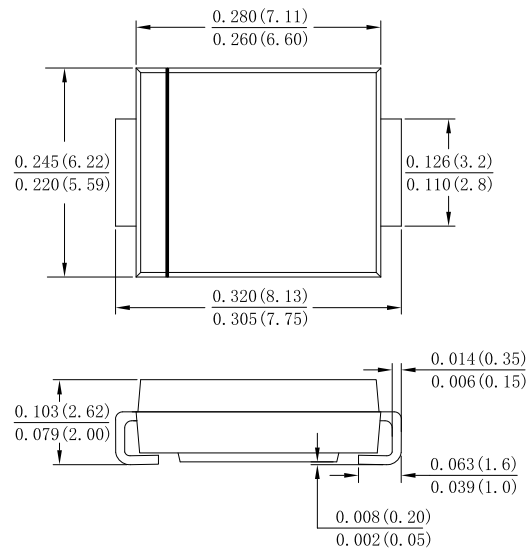
Features

- 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 @ $T_C=110^\circ\text{C}$	$I_{F(AV)}$	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 ($t < 8.3\text{ms}$)	I^2t	50.2							A^2S
Forward Voltage @ $I_F=1.5\text{A}$ @ $I_F=3.0\text{A}$	V_F	0.95 1.0							V
Peak Reverse Current @ $T_A=25^\circ\text{C}$	I_R	5.0							uA
At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$		100							
Typical Junction Capacitance (Note 1)	C_J	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

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



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FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

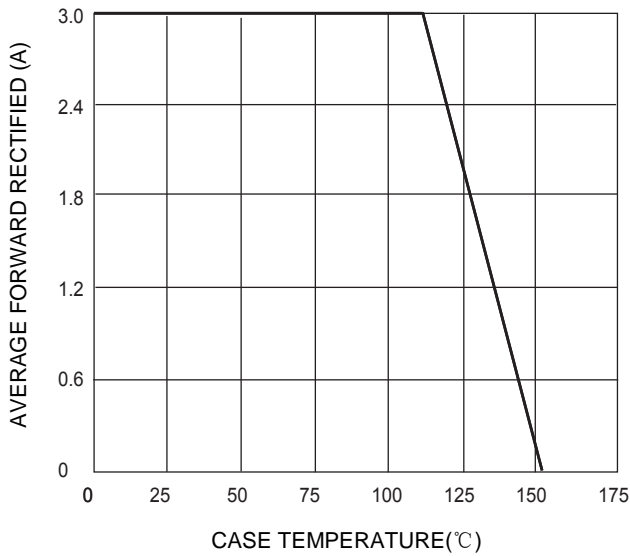


FIG.2 TYPICAL FORWARD CHARACTERISTICS

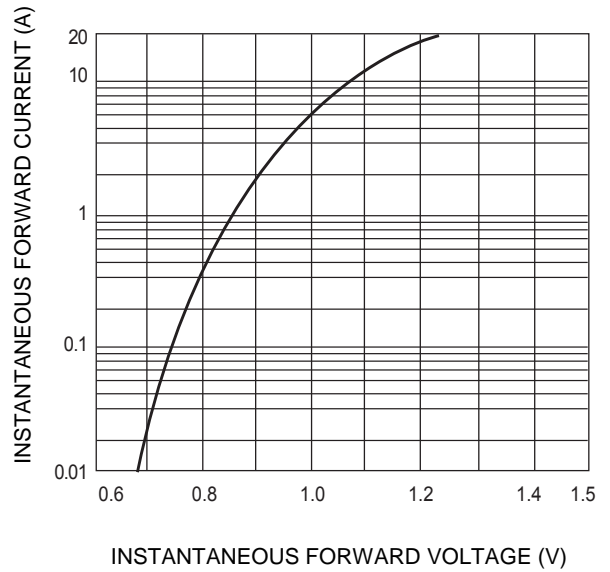


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

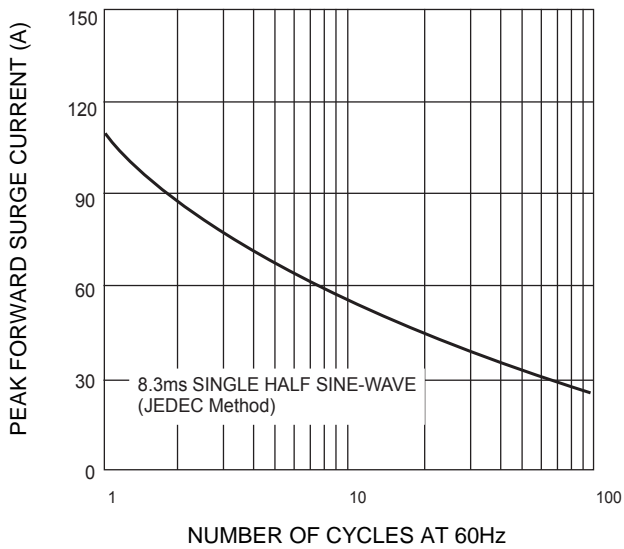


Fig. 4 TYPICAL REVERSE CHARACTERISTICS

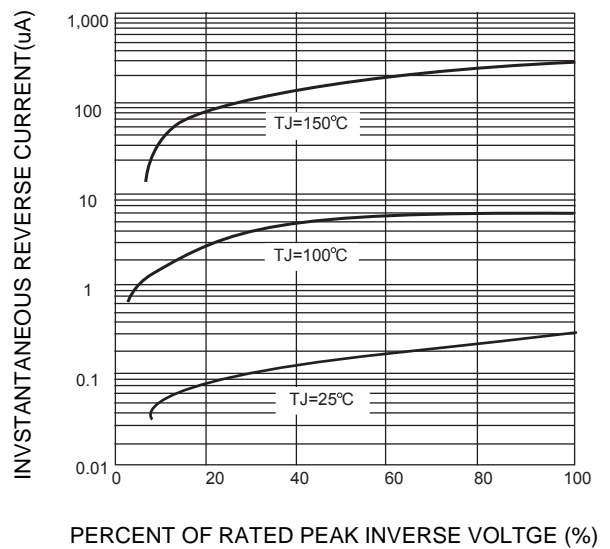
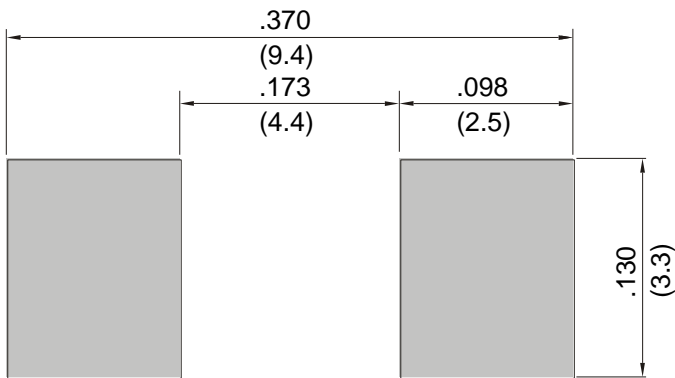


FIG.5 MOUNTING PAD LAYOUT





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