



# S3A THRU S3M

## Surface Mount Standard Rectifier

### Features

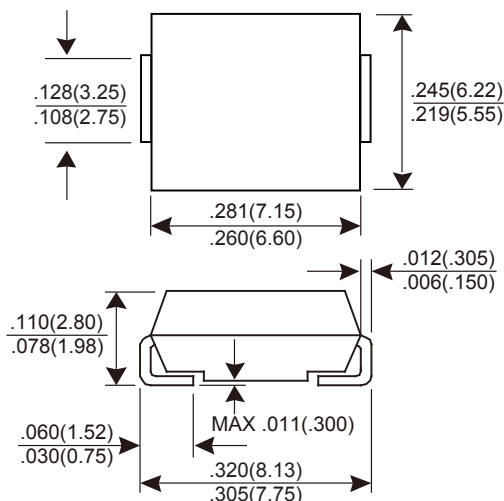
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

### Mechanical Data

- ★ Case: Molded plastic, SMC/DO-214AB
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-750, method 2026
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any

**Voltage Range 50 to 1000 V**  
**Current 3.0 Ampere**

### 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%.

PARAMETER	SYMBOL	S3A	S3B	S3D	S3G	S3J	S3K	S3M	UNIT
Maximum repetitive 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
Maximum average forward rectified current @ $T_L=103^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	100							A
Maximum instantaneous forward voltage @ $I_F=3.0\text{A}$	$V_F$	1.15							V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$	10 250							$\mu\text{A}$
Typical junction capacitance (Note 1)	$C_J$	60							pF
Typical thermal resistance from junction to ambient (Note 2)	$R_{\theta JA}$	47							$^\circ\text{C/W}$
Typical thermal resistance from junction to lead (Note 2)	$R_{\theta JL}$	13							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(2) Mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas.

# RATINGS AND CHARACTERISTICS CURVES S3A THRU S3M

Fig.1 - Forward Current Derating Curve

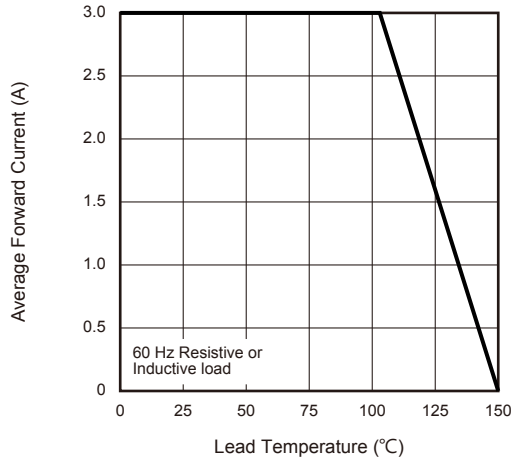


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

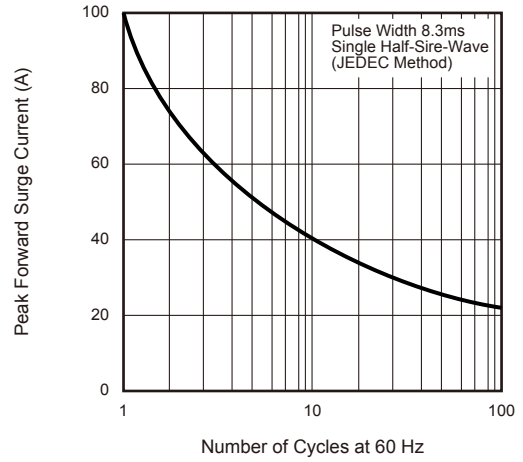


Fig.3 - Typical Instantaneous Forward Characteristics

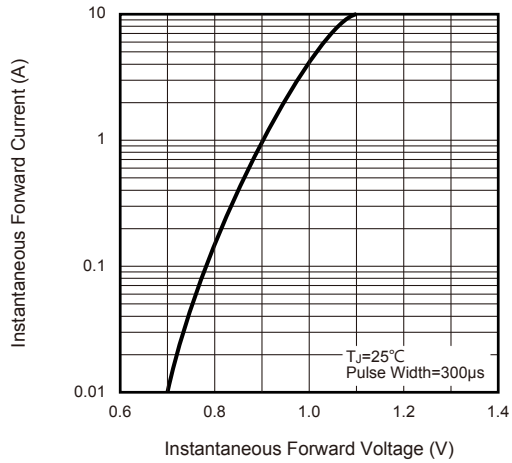


Fig.4 - Typical Reverse Leakage Characteristics

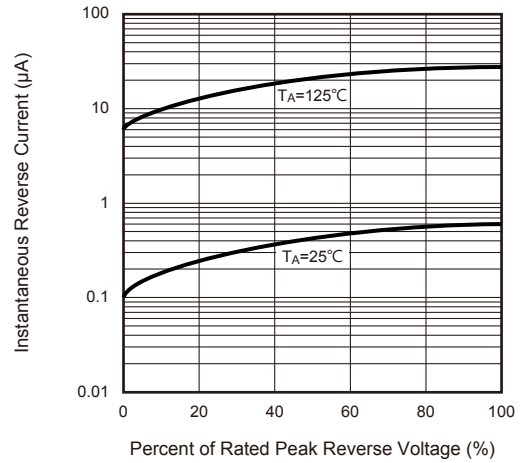


Fig.5 - Typical Junction Capacitance

