



# FS3A THRU FS3J

## Surface Mount Super Fast Recovery Rectifier

### Features

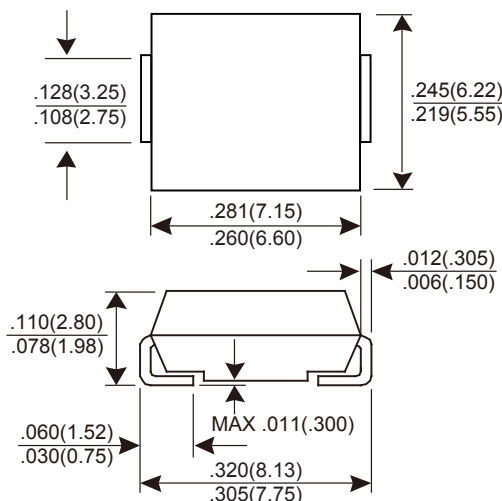
- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

### 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 600 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	FS3A	FS3B	FS3D	FS3G	FS3J	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	V
Maximum average forward rectified current @ $T_L=100^\circ\text{C}$	$I_{F(AV)}$	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 @ $I_F=3.0\text{A}$	$V_F$	0.95		1.3		1.7	V
Maximum DC reverse current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=100^\circ\text{C}$	$I_R$	1 200					$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	35					ns
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)	$R_{\theta JL}$	12					$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150					$^\circ\text{C}$

NOTES : (1) Reverse recovery test conditions  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .

(2) Mounted on PCB with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas.

# RATINGS AND CHARACTERISTICS CURVES FS3A THRU FS3J

Fig.1 - Forward Current Derating Curve

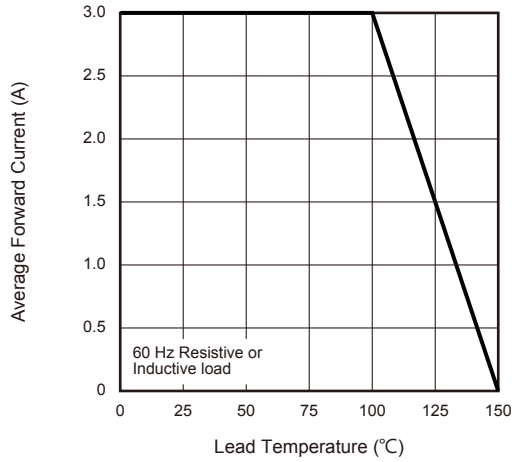


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

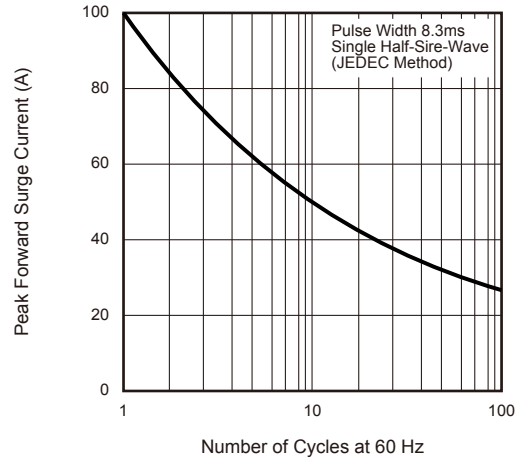


Fig.3 - Typical Instantaneous Forward Characteristics

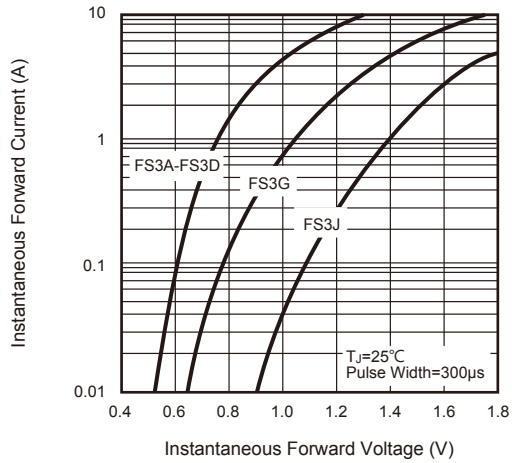


Fig.4 - Typical Reverse Leakage Characteristics

