RS3A~RS3M SMC

Fast Recovery rectifiers

Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
V_{RRM}	50 to 1000V
I_{FSM}	100 A
t_{rr}	150nS,250S,500S
V_F	1.3 V
T_j max.	150 °C

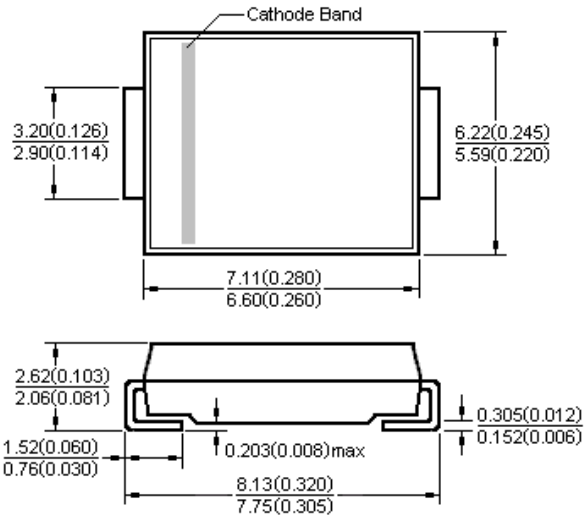


SMC (DO－214AB)

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Fast switching for high efficiency
- High forward surge capability
- High temperature soldering：
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

SMC (DO－214AB)



Dimentsions in millimeters and (inchs)

Mechanical Date

- Case: JEDEC DO-214AB molded plastic over glass passivated chip
- Terminals: Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Laser band denotes cathode end

Maximum Ratings & Thermal Characteristics & Electrical Characteristics

(T_A = 25 °C unless otherwise noted)

	Symbol	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	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	$I_{F(AV)}$	3							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.3							V
Maximum DC reverse current T_A = 25 ℃ at Rated DC blocking voltage T_A = 125℃	I_R	5.0 50							μA
Maximum reverse recovery time at I_F = 0.5 A , I_R = 1.0 A , I_{rr} = 0.25 A	t_{rr}	150				250	500		nS
Typical junction capacitance at 4.0 V ,1MHz	C_J	30							pF
Thermal resistance from junction to Lead	$R_{\theta JL}$	35							℃/ W
Operating junction and storage temperature range	T_J,T_{STG}	–55 to +150							℃

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

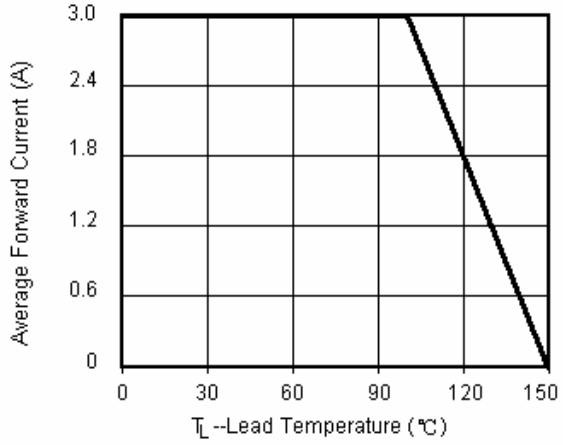


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

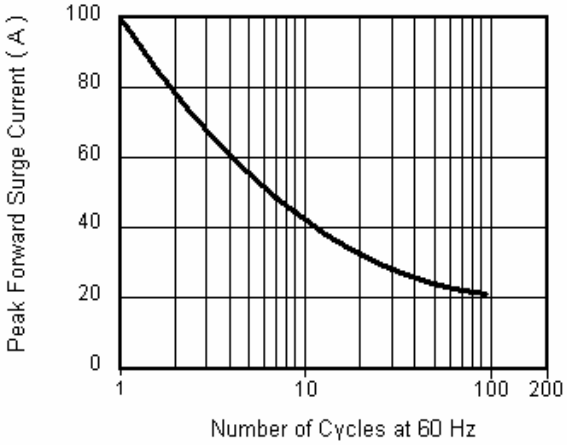


Fig.3 Typical Instantaneous Forward Characteristics

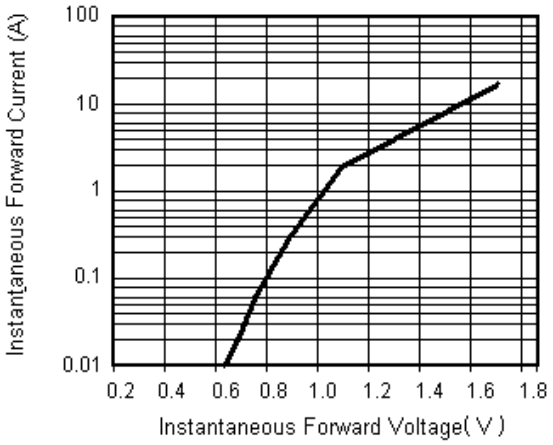


Fig.4 Typical Reverse Leakage Characteristics

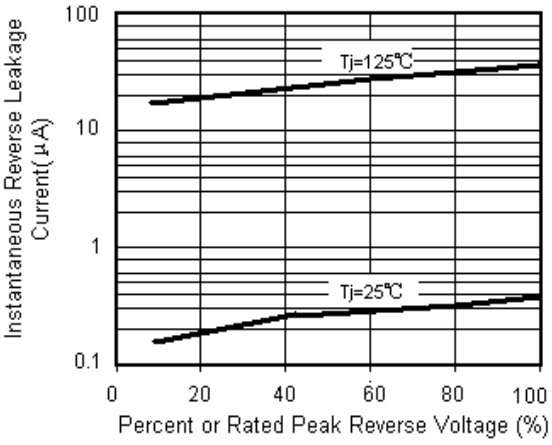


Fig.5 Typical Junction Capacitance

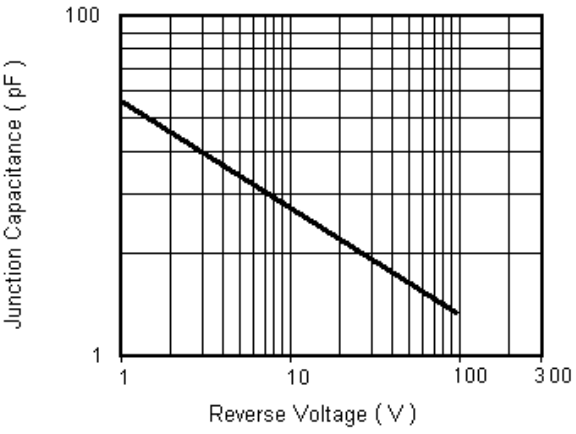


Fig.6 Transient Thermal Impedance

