



RS3A THRU RS3M

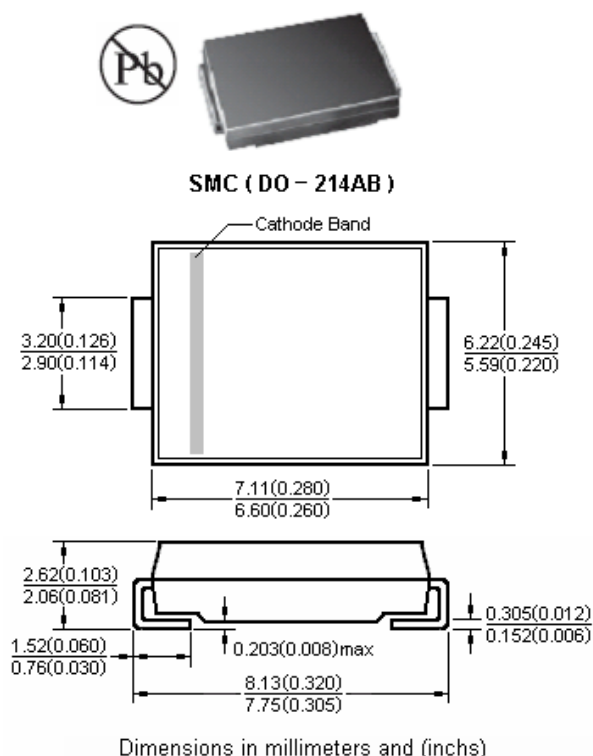
Surface Mount Fast Recovery Rectifiers

Features

- Glass passivated chip junctions
- Ideal for automated placement
- Ultrafast reverse recovery time for high efficiency
- Low profile package
- High forward surge capability
- High temperature soldering: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Data

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



Maximum Ratings and Electrical Characteristics

Rating at 25 °C

ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

Parameter	Symbols	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	Units	
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 Forward Voltage at 3 A	V _F	1.3							V	
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5 100							μA	
Typical Junction Capacitance at V _R =4V, f=1MHz	C _j	40							pF	
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	150				250		500		ns
Typical Thermal Resistance ⁽²⁾	R _{θJA} R _{θJC}	45 15							°C/W	
Operating and Storage Temperature Range	T _J , T _{stg}	-55 ~ +150							°C	

(1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $t_r = 0.25\text{ A}$.

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Maximum Average Forward Current Rating

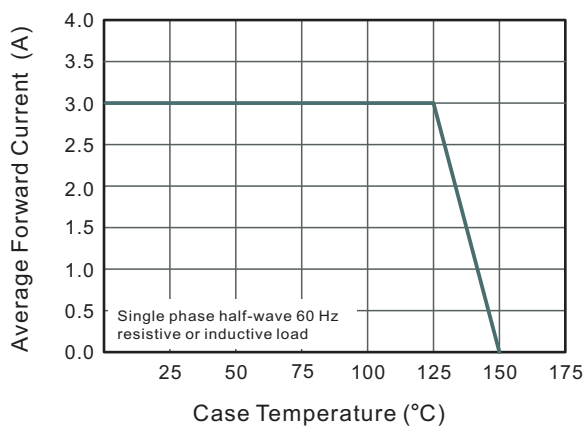


Fig.2 Typical Reverse Characteristics

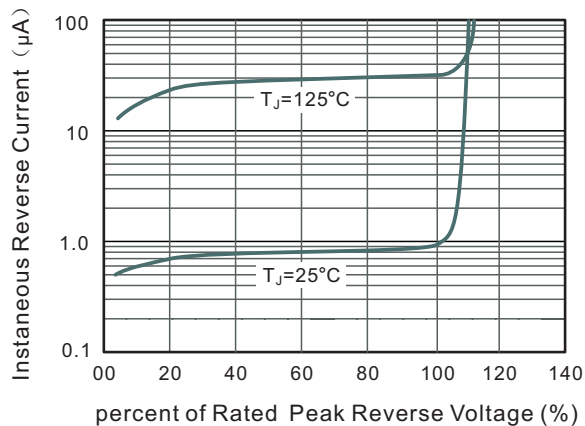


Fig.3 Typical Instantaneous Forward Characteristics

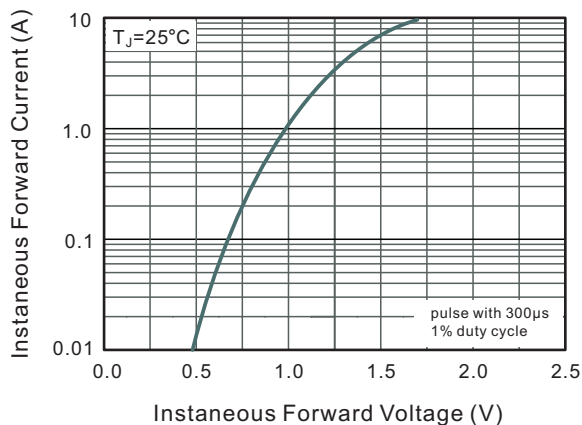


Fig.4 Typical Junction Capacitance

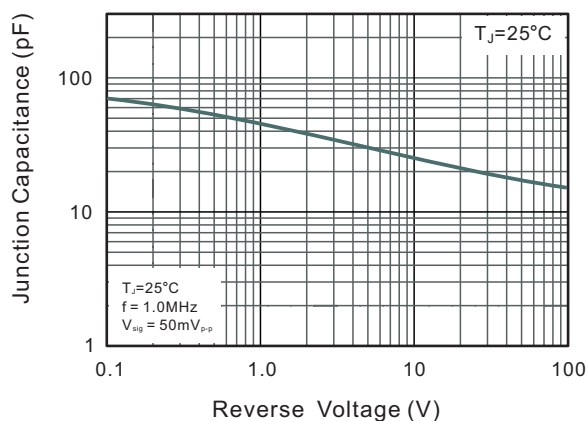


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

