



Surface Mount Rectifiers

Reverse Voltage 50 to 1000 Volts Forward Current 5.0 Amperes

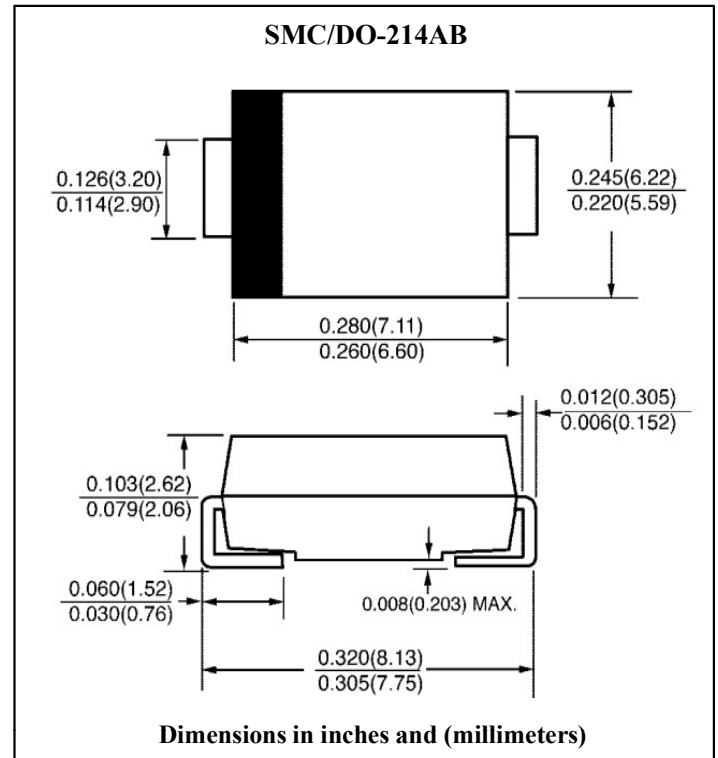
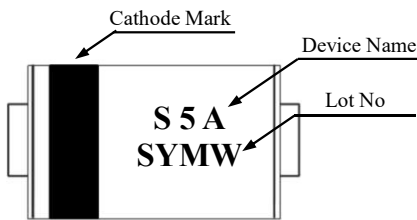
Features

- For surface mounted application
- Glass passivated junction chip
- Low forward voltage drop
- High current capability
- Easy pick and place
- High surge current capability
- Plastic material used carries underwriters laboratory classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals

Mechanical Data

- Case : SMC (DO-214AB) Molded plastic
- Terminals : Solder plated, solderable per J-STD-002, and JESD22-A102
- Polarity : Indicated by cathode band
- Weight : 0.21 gram

Marking



Maximum Ratings & Electrical Characteristics

Ratings 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	Symbol	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Unit	Remark	
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	$I_F(AV)$	5.0								A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	120								A	
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	1.0								V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0								uA	Ta=25°C
		100								uA	Ta=125°C
Typical Thermal Resistance	$R_{th(j-c)}$	13								°C/W	Note 1
	$R_{th(j-a)}$	35								°C/W	
Typical Reverse Recovery Time	t_{rr}	2.5								us	Note 2
Typical Junction Capacitance	C_J	50								pF	Note 3
Operation Junction Temperature Range	T_J	-55 to +150								°C	
Storage Temperature Range	T_{STG}	-55 to +150								°C	

Note 1. P.C.B mounted with 2.0'×2.0' (5×5 cm) copper pad areas.

Note 2. Reverse Recovery Test Conditions : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Note 3. Measured at 1MHz and applied reverse voltage of 4V D.C

Ratings and Characteristics Curves ($T_a=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

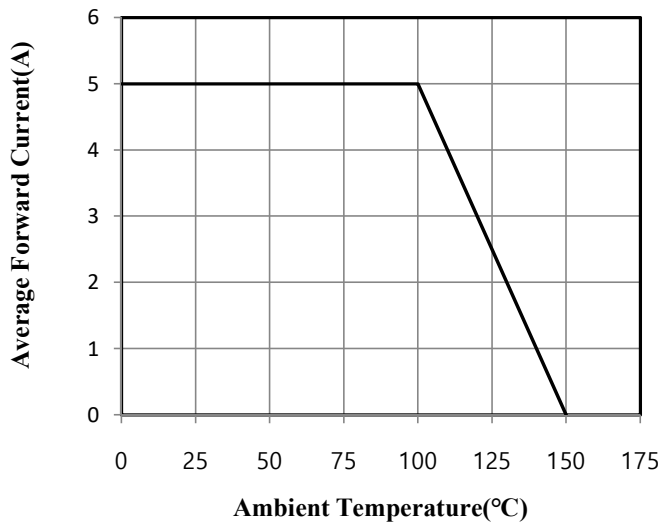


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

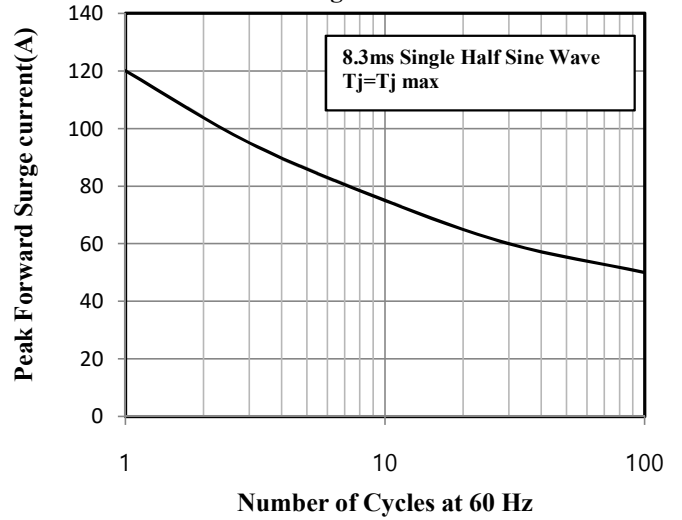


Fig.3 Typical Instantaneous Forward Characteristics

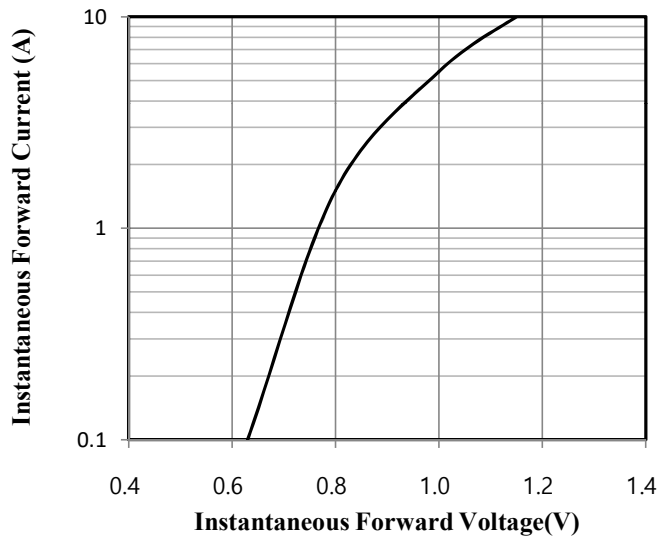


Fig.4 Typical Junction Capacitance

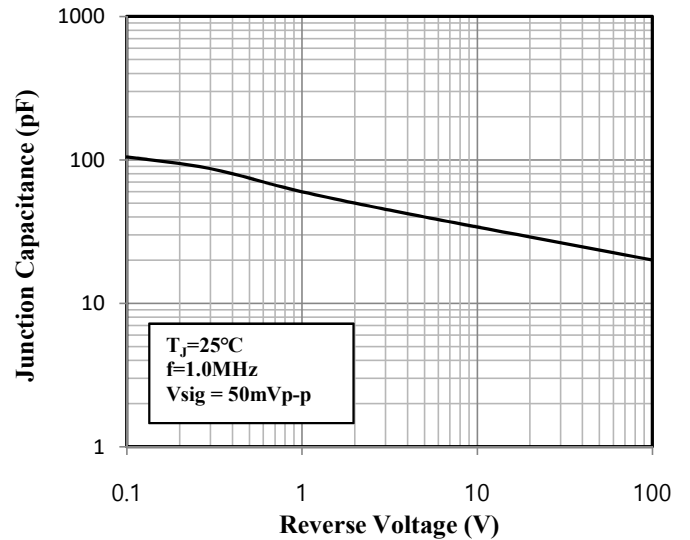


Fig.5 Typical Reverse Characteristics

