

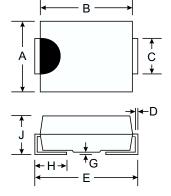
### 5.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

#### **Features**

- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly

#### **Mechanical Data**

- Case: Molded Plastic
- Case Material UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solder Plated Terminal Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams (approx.)
- Marking: Type Number & Date Code, See Page 2
- Ordering Information: See Page 2



SMC						
Dim	Min Max					
Α	5.59	6.22				
В	6.60	7.11				
С	2.75	3.18				
D	0.15	0.31				
E	7.75	8.13				
G	0.10	0.20				
Н	0.76	1.52				
J	2.00	2.62				
All Dimensions in mm						

# Maximum Ratings and Electrical Characteristics TA = @25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic		Symbol	S5AC	S5BC	S5DC	S5GC	S5JC	S5KC	S5MC	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V <sub>RRM</sub> V <sub>RWM</sub> VR	50	100	200	400	600	800	1000	٧
RMS Reverse Voltage		V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current	@ T <sub>T</sub> = 75°C	lo	5.0				Α			
Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I <sub>FSM</sub>	100					Α		
Forward Voltage	@ $I_F = 5.0A$	$V_{FM}$	1.15				V			
Peak Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C @T <sub>A</sub> = 125°C		10 250			μА				
Typical Total Capacitance (Note 1)		Ст	40					pF		
Typical Thermal Resistance, Junction to Terminal (Note 2)		$R_{ heta JT}$	10					°C/W		
Operating and Storage Temperature Range		T <sub>j,</sub> T <sub>STG</sub>	-65 to +150					°C		

Notes: 1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.

2. Thermal Resistance Junction to Terminal, unit mounted on PC board with 5.0mm<sup>2</sup> (0.013mm thick) copper pads as Heat Sink.

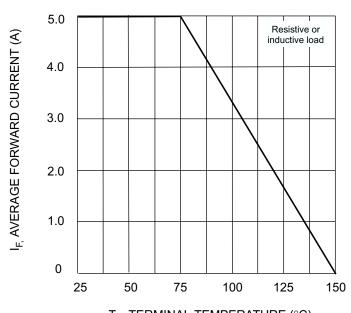
### Ordering Information (Note 3)

Device*	Packaging	Shipping			
S5xC-13	SMC	3000/Tape & Reel			

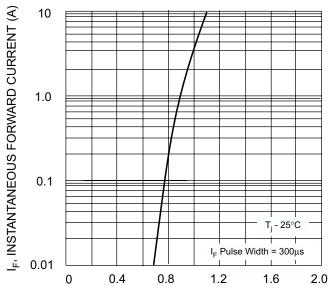
Notes: 3. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf. \*x = Device type, e.g. S5AC-13.

## **Marking Information**





T<sub>T</sub>, TERMINAL TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve



 $V_{\text{F}}$ , INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics

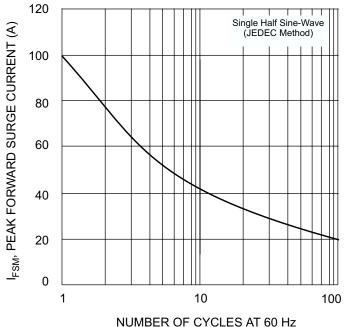
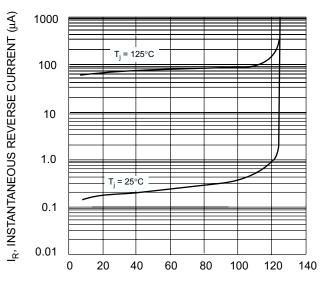


Fig. 3 Forward Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 4 Typical Reverse Characteristics