S5AC - S5MC

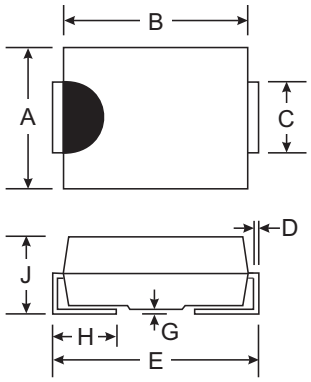
5.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly
- **Lead Free Finish/RoHS Compliant (Note 3)**

Mechanical Data

- Case: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number & Date Code, See Page 2
- Ordering Information: See Page 2
- Weight: 0.21 grams (approximate)



SMC		
Dim	**Min**	**Max**
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics T_A = @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_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_T = 75°C	I_O	5.0							A
Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Forward Voltage @ I_F = 5.0A	V_{FM}	1.15							V
Peak Reverse Current @T_A = 25°C at Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	10 250							μA
Typical Total Capacitance (Note 1)	C_T	40							pF
Typical Thermal Resistance, Junction to Terminal (Note 2)	$R_{\theta JT}$	10							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-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^2 (0.013mm thick) copper pads as Heat Sink.
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7.*

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Ordering Information (Note 4)

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

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
*x = Device type, e.g. S5AC-13-F.

Marking Information

XXXX = Product type marking code, ex. S5KC
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52

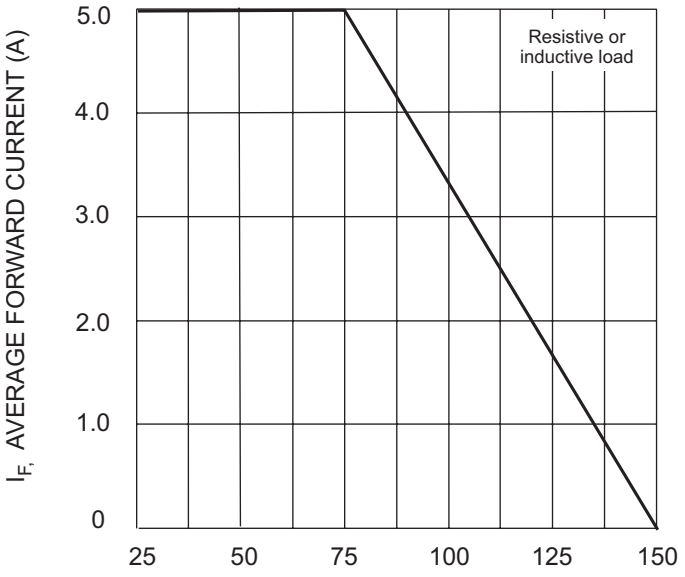

Fig. 1 Forward Current Derating Curve

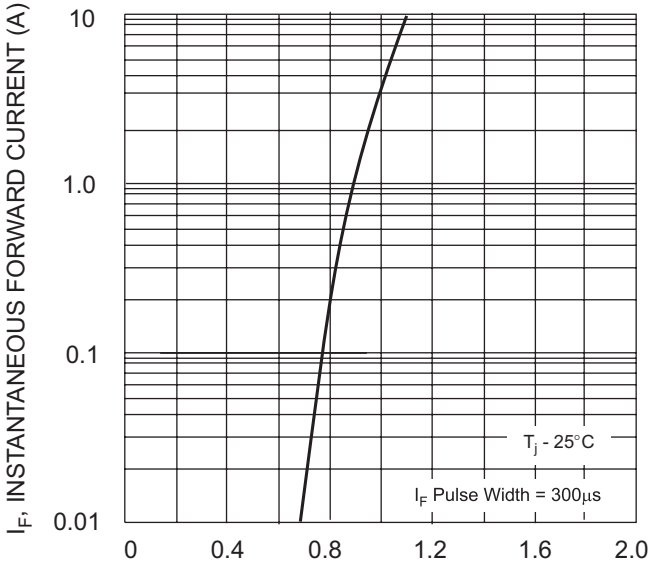

Fig. 2 Typical Forward Characteristics

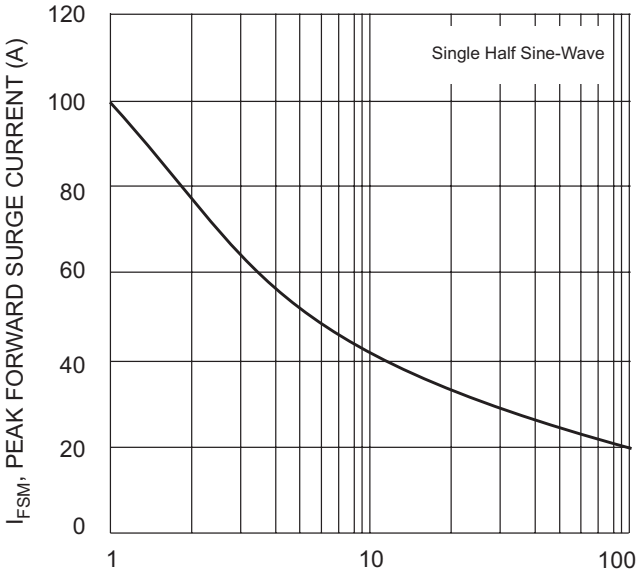

Fig. 3 Forward Surge Current Derating Curve

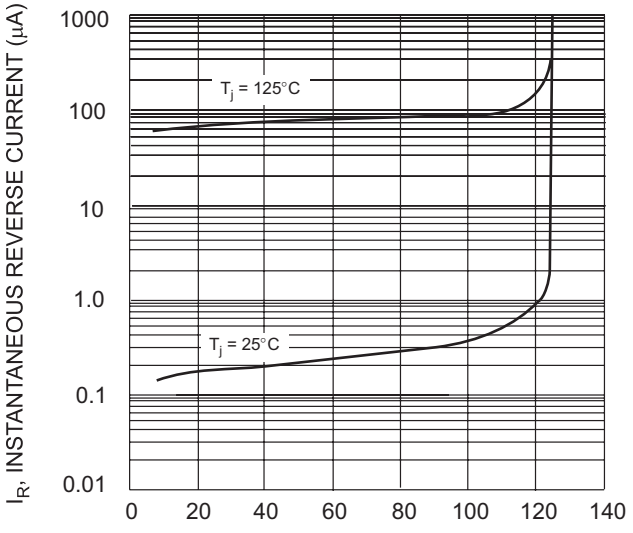

Fig. 4 Typical Reverse Characteristics

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