


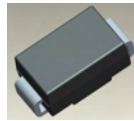
5.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

Features

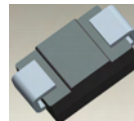
- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly
- **Lead Free Finish/RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 2)**

Mechanical Data

- Case: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams (approximate)



Top View



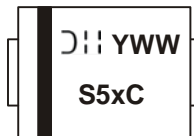
Bottom View

Ordering Information (Note 3)

Part Number	Case	Packaging
S5xC-13-F	SMC	3000/Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
 2. Product manufactured with Data Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.
 3. For packaging details, go to our website at <http://www.diodes.com>.

Marking Information



S5xC = Product type marking code, Ex. S5KC
 DII = Manufacturers' code marking
 YWW = Date code marking
 Y = Last digit of year (ex: 2 for 2002)
 WW = Week code (01 to 53)

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	S5AC	S5BC	S5DC	S5GC	S5JC	S5KC	S5MC	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_T = 75^\circ\text{C}$	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

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Terminal (Note 4)	$R_{\theta JT}$	10	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 5.0\text{A}$	V_{FM}	1.15	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_{RM}	10	μA
at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$		250	
Typical Total Capacitance (Note 3)	C_T	40	pF

Notes: 4. Thermal Resistance Junction to Terminal, unit mounted on PC board with 5.0mm² (0.013mm thick) copper pads as Heat Sink.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

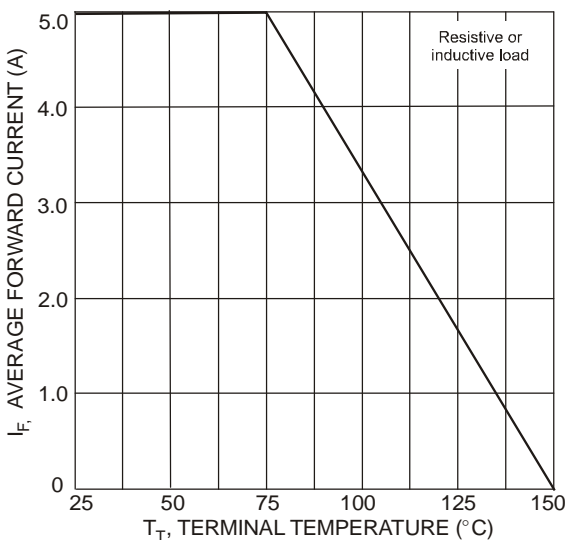


Fig. 1 Forward Current Derating Curve

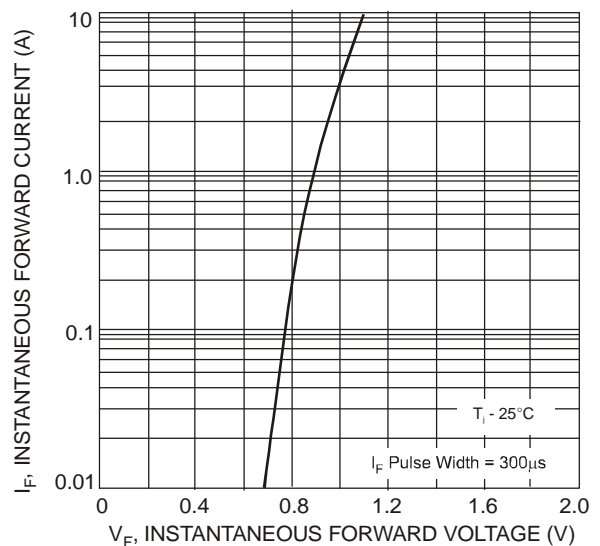


Fig. 2 Typical Forward Characteristics

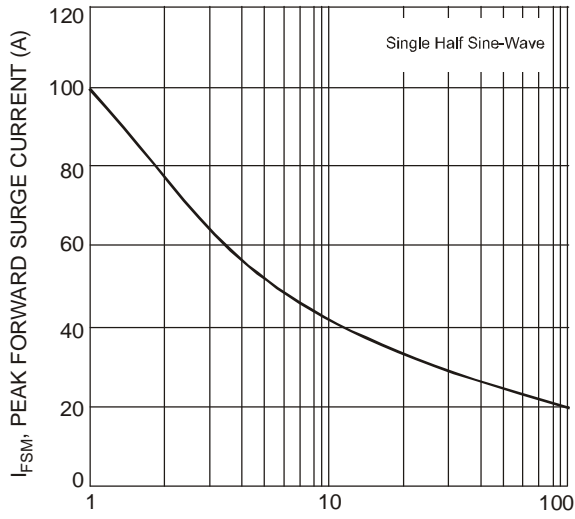


Fig. 3 Forward Surge Current Derating Curve

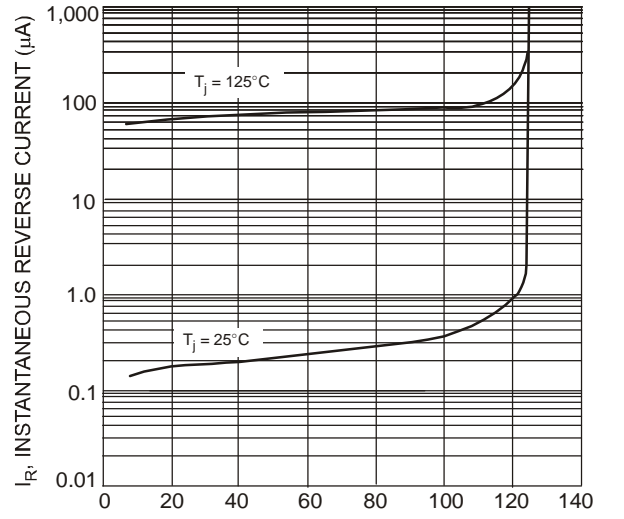
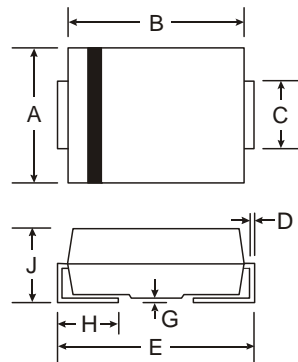


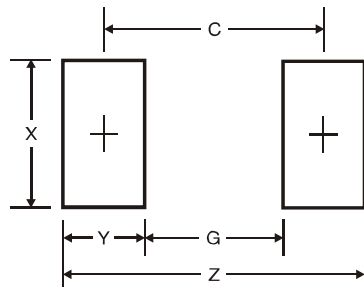
Fig. 4 Typical Reverse Characteristics

Package Outline Dimensions



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	2.50
All Dimensions in mm		

Suggested Pad Layout



SMC Dimensions	Value (in mm)
Z	9.3
G	4.4
X	3.3
Y	2.5
C	6.8

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