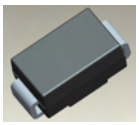
5.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

Features

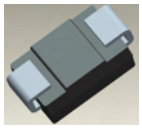
- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly
- **Lead Free Finish/RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 2)**

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 e3
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams (approximate)



Top View



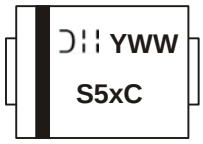
Bottom View

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
= 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°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 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

Thermal Characteristics

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

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
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 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.

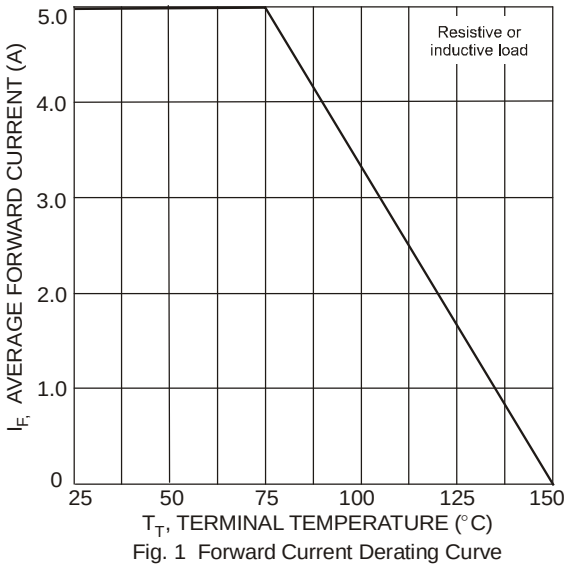


Fig. 1 Forward Current Derating Curve

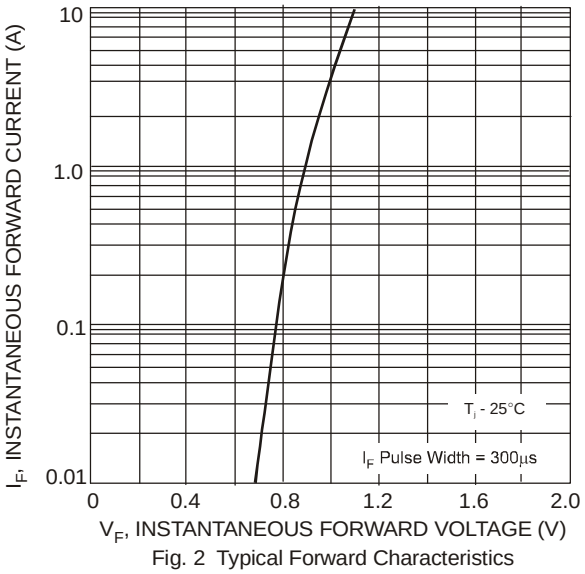


Fig. 2 Typical Forward Characteristics

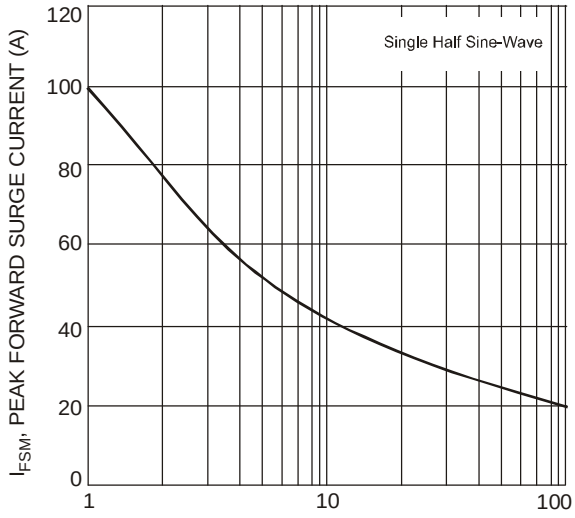


Fig. 3 Forward Surge Current Derating Curve

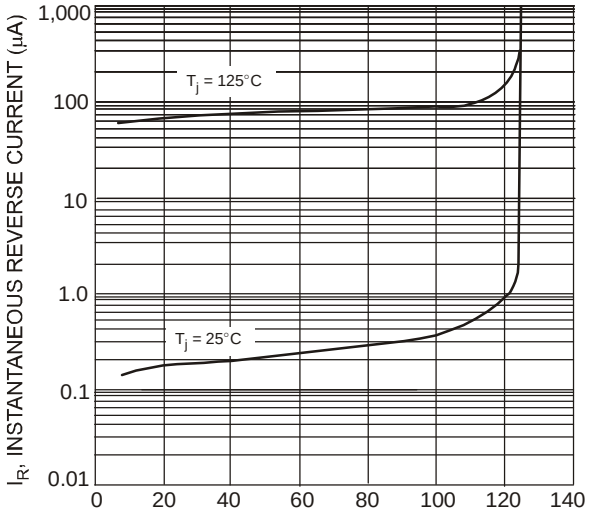
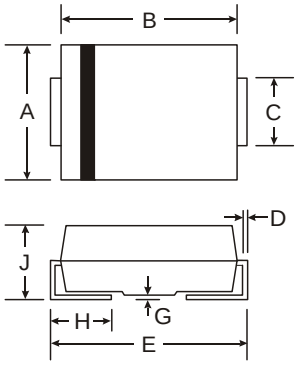


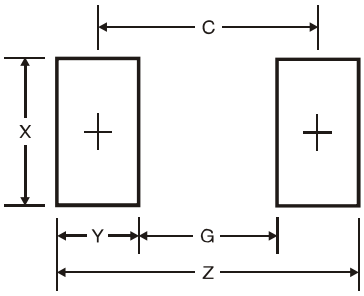
Fig. 4 Typical Reverse Characteristics

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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