

# Surface Mount Rectifier



## Features:

- Low Profile Package
- For Surface Mounted Applications
- Plastic Package
- Built-In Strain Relief, Ideal for Automated Placement
- High Temperature Soldering : 250°C/10 seconds at Terminals
- High Current Capability

## Mechanical Data

- Case : JEDEC DO-214AB, molded plastic over passivated chip
- Terminals : Solder plated, solderable per MIL-STD-750, method 2026
- Polarity : Colour band denotes cathode end
- Weight : 0.007oz, 0.021g

## Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Characteristic	Symbol	S5GC-13-F	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	V
Maximum RMS voltage	$V_{RWS}$	280	V
Maximum DC blocking voltage	$V_{DC}$	400	V
Maximum average forward rectified current at $T_L=90^{\circ}\text{C}$	$I_{F(AV)}$	5	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load(JEDEC Method)	$I_{FSM}$	150	A
Maximum instantaneous forward voltage at 5A	$V_F$	1.15	V
Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=125^{\circ}\text{C}$	$I_R$	10 250	$\mu\text{A}$
Typical junction capacitance (Note 1)	$C_J$	35	pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	40	$^{\circ}\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	$^{\circ}\text{C}$

### Note:

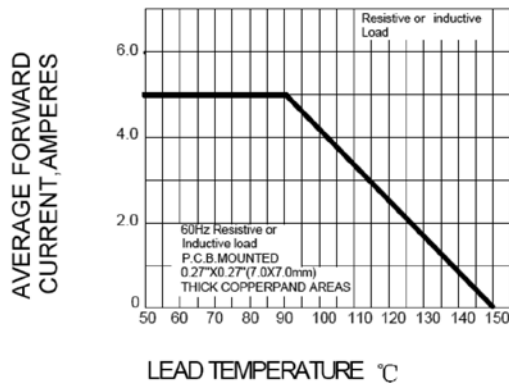
(1) Measured at 1MHz and applied reverse voltage of 4V

(2) Thermal resistance from junction to ambient and junction to lead PCB mounted on 0.27" × 0.27" (7 × 7mm<sup>2</sup>) copper pad areas

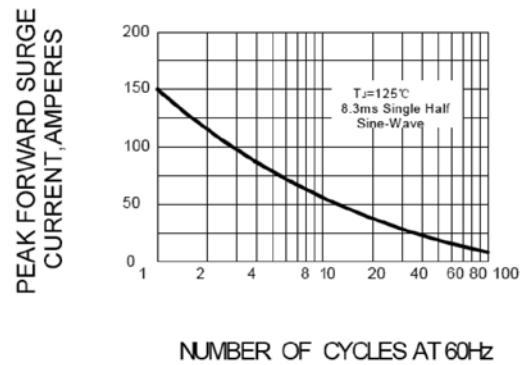
# Surface Mount Rectifier



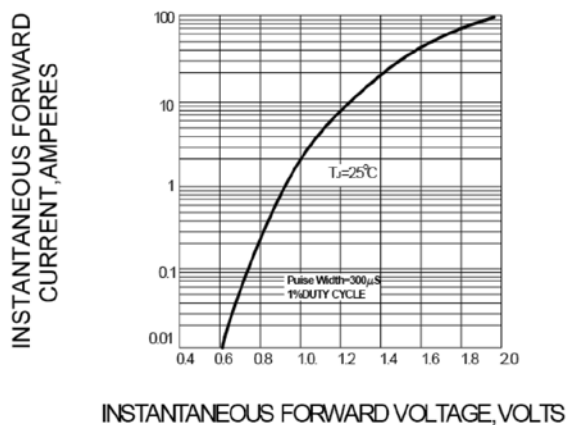
**FIG.1 – FORWARD DERATING CURVE**



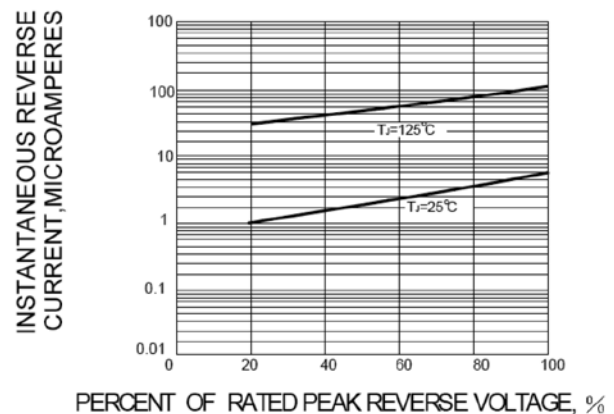
**FIG.2 PEAK FORWARD SURGE CURRENT**



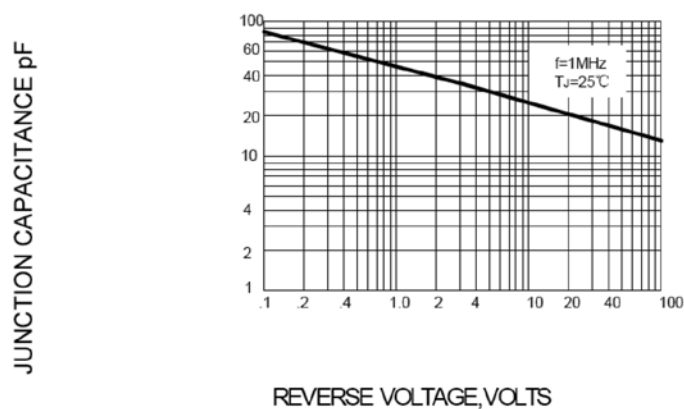
**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



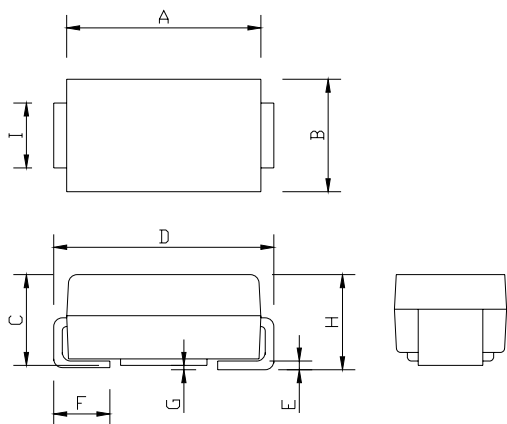
**FIG.5-TYPICAL JUNCTION CAPACITANCE**



# Surface Mount Rectifier



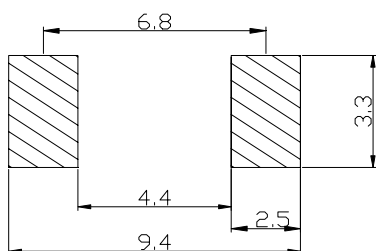
## Package Outline Dimensions



DO-214AB(SMC)		
Dim.	Min.	Max.
A	6.7	7.1
B	5.7	6.1
C	2.1	2.4
D	7.55	8.05
E	0.25 Typ.	
F	1	1.6
G	0.2 Max.	
H	2.15	2.45
I	2.85	3.15

Dimensions : Millimetres

## Soldering Footprint



Dimensions : Millimetres

## Package Information

Device	Package	Shipping
S5GC-13-F	DO-214AB(SMC)	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
Surface Mount Rectifier	S5GC-13-F

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.

www.element14.com  
www.farnell.com  
www.newark.com

