

# 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:

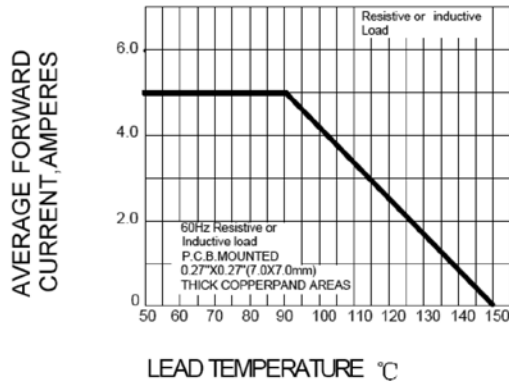
(1) Measured at 1MHz and applied reverse voltage of 4V

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

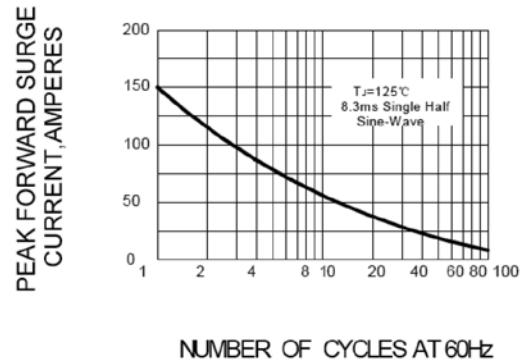
# Surface Mount Rectifier



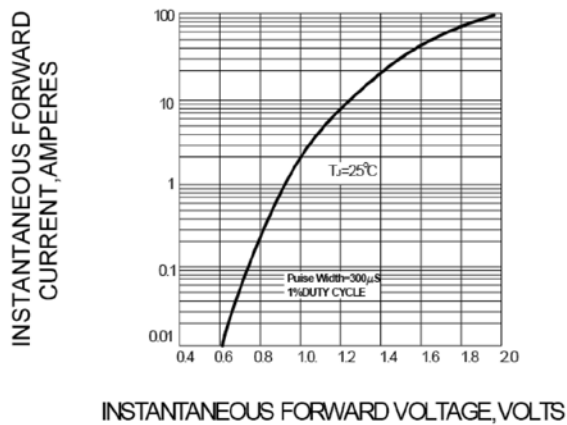
**FIG.1 – FORWARD DERATING CURVE**



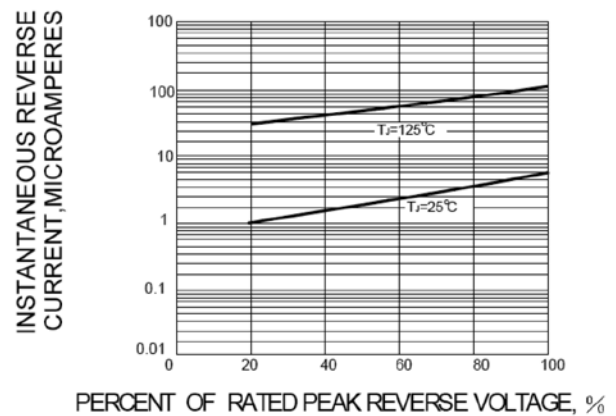
**FIG.2 PEAK FORWARD SURGE CURRENT**



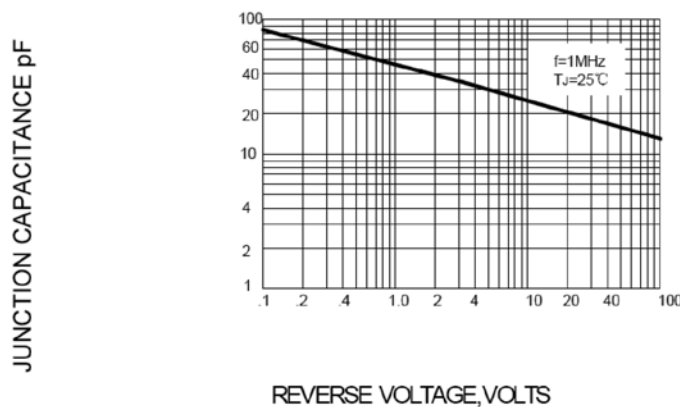
**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



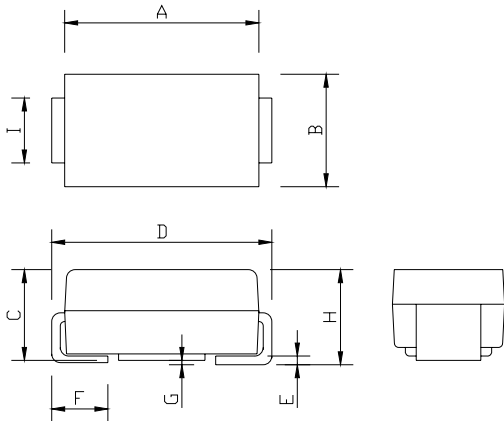
**FIG.5-TYPICAL JUNCTION CAPACITANCE**



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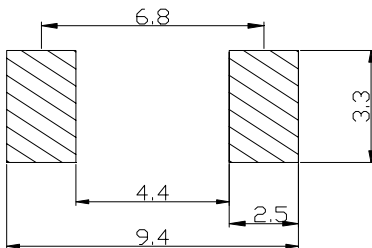
## Package Outline Dimensions



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

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