

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 $T_L=90^{\circ}C$	$I_{F(AV)}$	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 $T_A=25^{\circ}C$ at rated DC blocking voltage $T_A=125^{\circ}C$	I_R	10 250	μA
Typical junction capacitance (Note 1)	C_J	35	pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	40	$^{\circ}C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}C$

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 7mm²) copper pad areas

FIG.1 – FORWARD DERATING CURVE

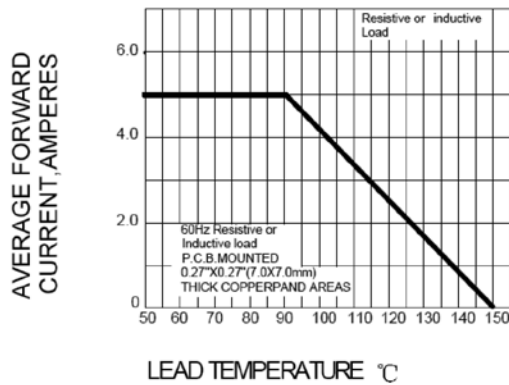


FIG.2 PEAK FORWARD SURGE CURRENT

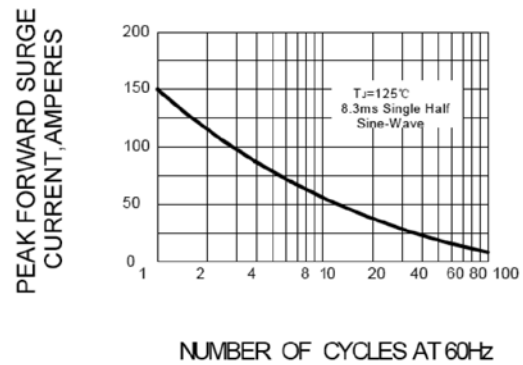


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

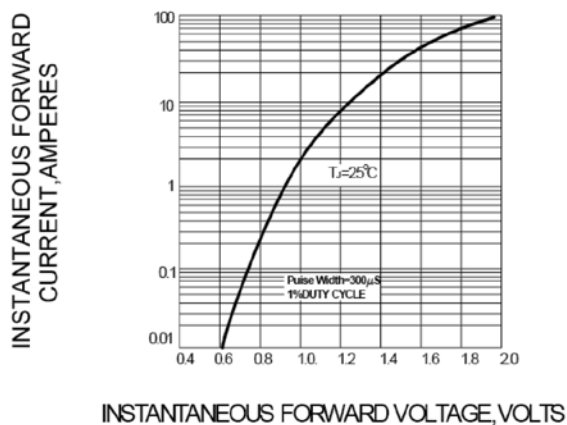


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

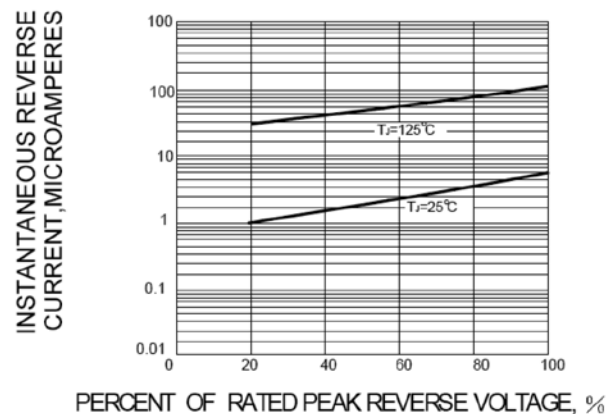
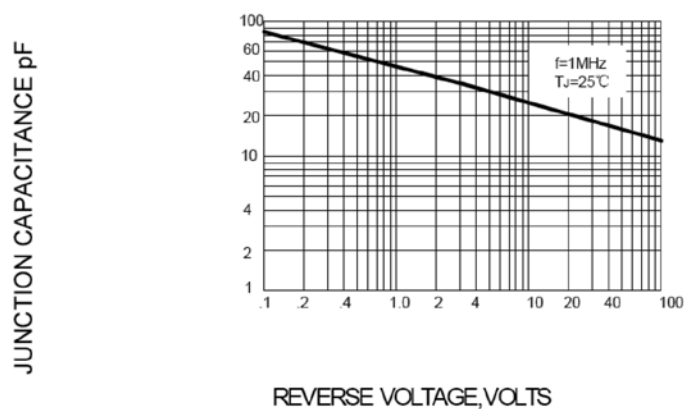


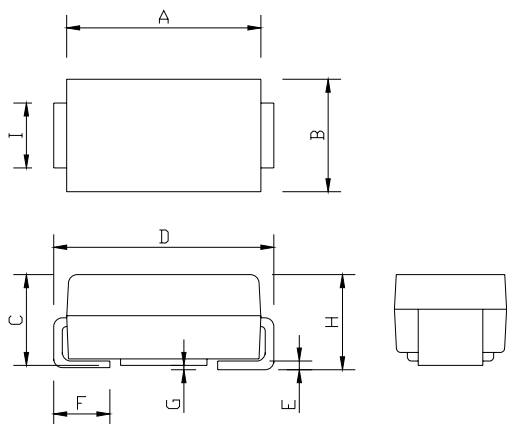
FIG.5-TYPICAL JUNCTION CAPACITANCE



Surface Mount Rectifier



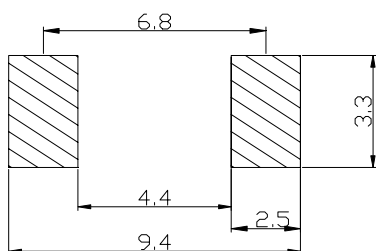
Package Outline Dimensions



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

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