

Ku-band Power Amplifier Module 13.75GHz~14.5GHz 35.5dBm

Rev 1.1

Features

- Frequency: 13.75GHz~14.5GHz
- Gain: 26dB
- OP₁dB: 35.5dBm
- Supply Voltage: +7V
- PAE: 38%
- Size: 25.4mm×34mm×5.5mm

Typical Applications

- Microwave radio
- Telecommunication
- Test instrumentation

General Description

SAC1167 is a balanced Ku-band power amplifier manufactured using microwave hybrid integration technology. The operating frequency from 13.75GHz ~ 14.5GHz with 26 dB of gain typ. 38% PAE and 35.5dBm Output P₁dB from a +7V supply.

Picture



Electrical Performance (T_A=25°C, V_D=+7V, I_D=1.1A, Z_O=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	5.4 ~ 5.8			GHz
Small Signal Gain	24	26	—	dB
Small Signal Gain Flatness	—	±2	±3	dB
Reverse Isolation	—	-50	—	dB
Input VSWR	—	1.8	2	:1
Output VSWR	—	2	2.8	:1
PAE	—	38	—	%
Output P ₁ dB	35.5	—	—	dBm
Output IP ₃	—	42	—	dBm
Spurious	—	-65	—	dBc
Turn-on Time	—	2	—	μs
Turn-off Time	—	6	—	μs
Turn-ON Control level	4.2	—	5	V
Turn-OFF Control level	0	—	0.5	V
Supply Voltage(V _D)	7	—	8.0	V
Supply Current(I _D)	—	1.3	1.8	A

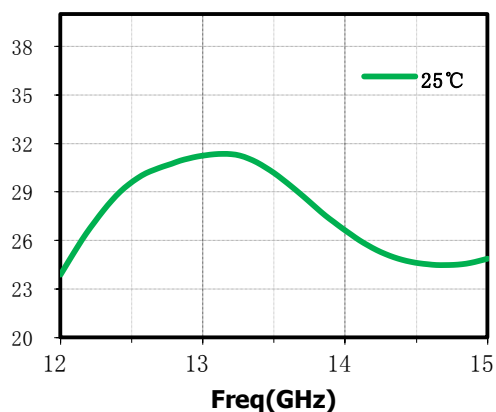
Absolute Maximum Ratings

Maximum Input Power	+16dBm	Operating Temperature	-40°C ~ +70°C
Channel Temperature	+150°C	Storage Temperature	-55°C ~ +125°C

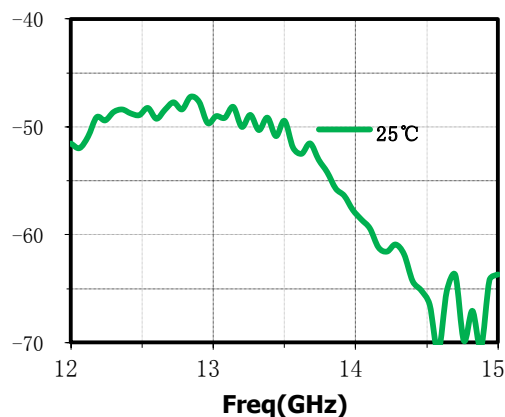
Typical Performance Curve

$V_D = +7V$

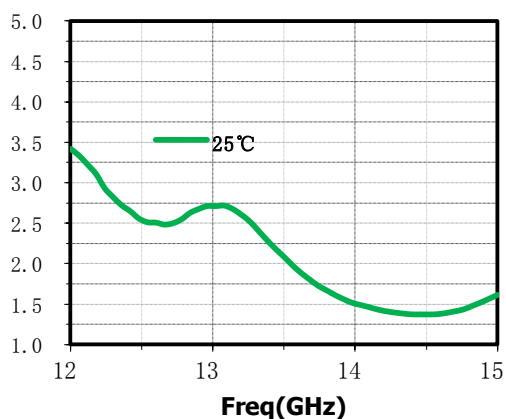
Small Signal Gain(dB)vs. Temperature



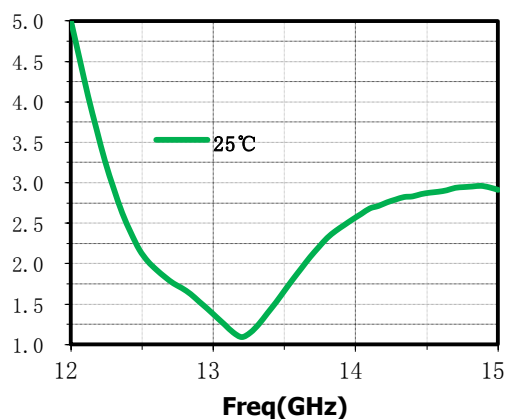
Reverse Isolation(dB)vs. Temperature

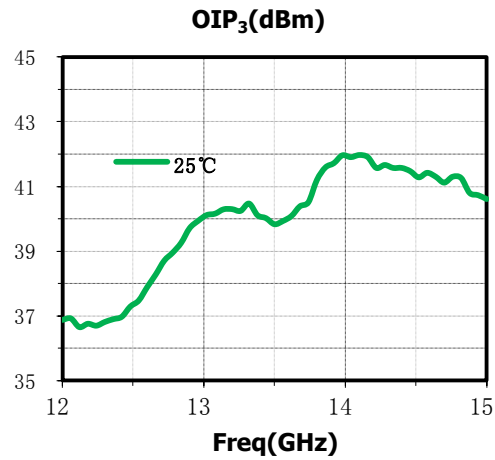
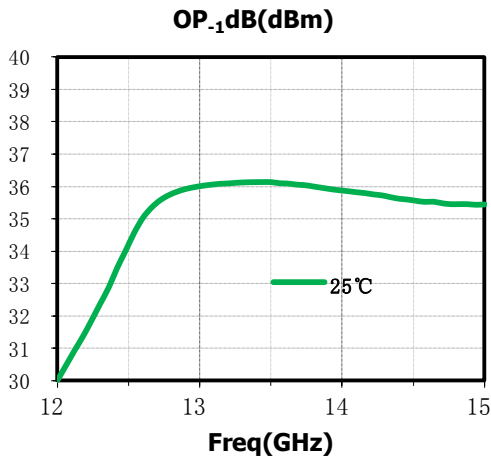


Input VSWR (:1)



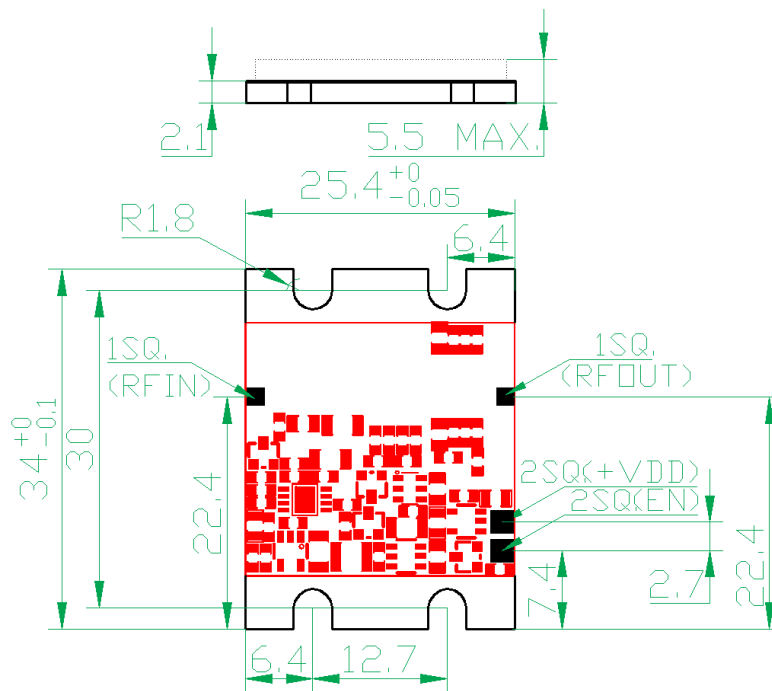
Output VSWR (:1)





Mechanical Outline

All dimensions are in millimeters



Note:

There are electrostatic sensitive GaAs devices inside the module, which is susceptible to damage from Electrostatic Discharge.