

SAC1157

S-band Low Noise Amplifier Module 2~4GHz NF 0.6dB

Rev 1.1

Features

- Frequency: 2~4GHz
- Gain: 28dB
- OP_{-1dB}: 10dBm
- Noise Figure: 0.6dB
- Supply Current: 30mA
- Hermetic Laser Sealing
- Size: 17.8mm×20mm×8.35mm

Typical Applications

- Microwave radio
- Telecommunication
- Test instrumentation

General Description

SAC1157 is a low noise amplifier module with a typical small signal gain of 28dB and a nominal OP_{-1dB} of +10dBm across the frequency range of 2 to 4GHz.

SAC1157 is integrated with SUPERAPEX proprietary low noise GaAs MMIC amplifier chip, high frequency microelectronic assembly techniques, and high reliability design to realize optimum low noise figure, wideband operation.

Picture



Electrical Performance (T_A=25°C, I_D=30mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2~4			GHz
Gain	26	28	–	dB
Gain Flatness	–	±1.0	±1.5	dB
Noise Figure	–	0.6	0.7	dB
Output Power for 1 dB Compression (OP _{-1dB})	9	10	–	dBm
Output IP ₃	20	22	–	dBm
Input VSWR	–	1.4	1.7	:1
Output VSWR	–	1.4	1.7	:1
Supply Voltage	4.85	5	6	V
Supply Current	–	30	40	mA

Mechanical Specifications

Parameter	
Input/Output	SMA(F) Field-replaceable
Bias	Pin/Case ground
Case Material	4047 Aluminum alloy
Weight	11g

SuperApex, LLC

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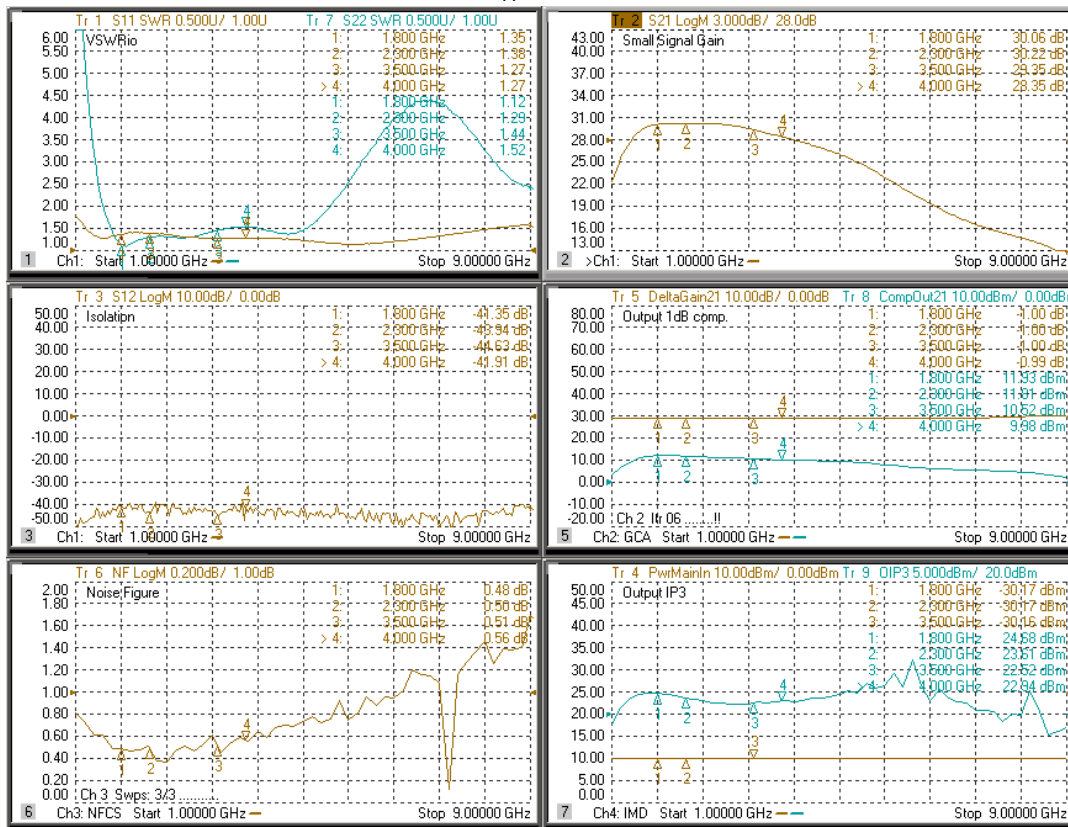
Absolute Maximum Ratings

Maximum Input Power	+15dBm	Operating Temperature	-40°C~+70°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

Typical Performance Curve

+V_{DC}=5V, I_D=30mA, Noise measurement by cold source method

T_A=25°C



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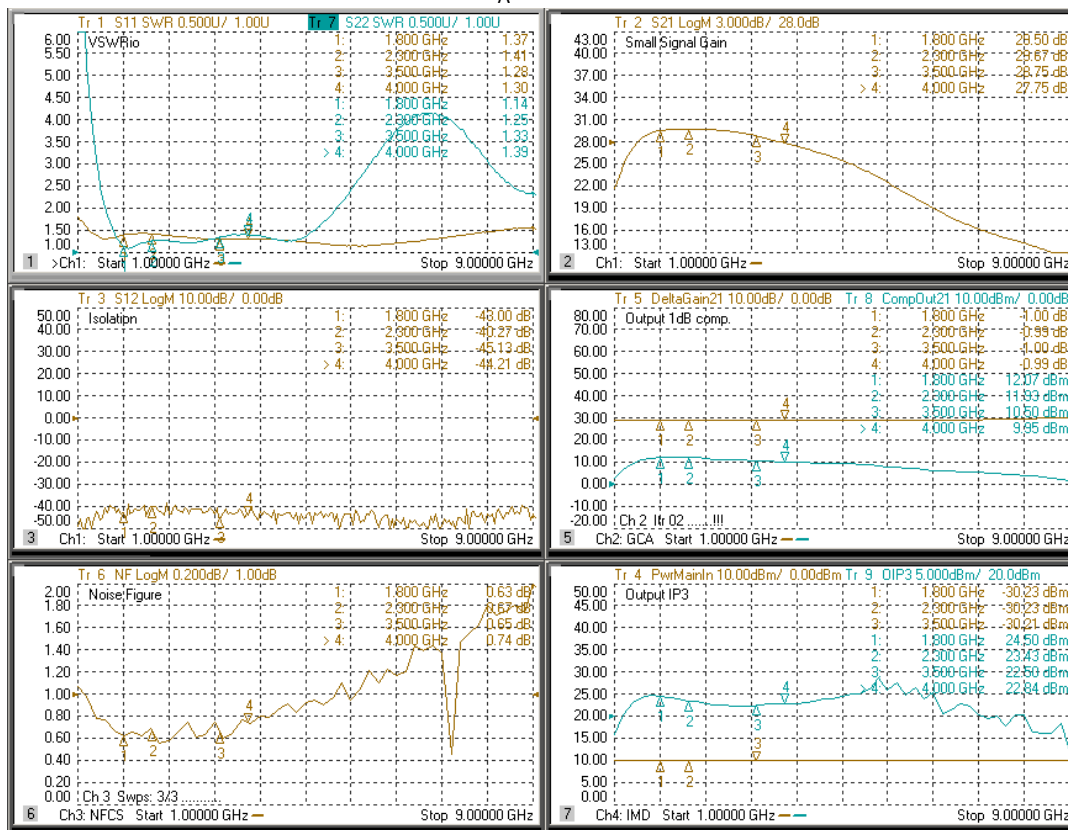
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T_A=+70°C



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$T_A = -55^\circ\text{C}$

