

# SAC1157-R

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

Rev 1.1

### Features

- Frequency: 2~4GHz
- Gain: 28dB
- OP<sub>-1dB</sub>: 10dBm
- Noise Figure: 0.6dB
- Supply Current: 30mA
- Hermetic Laser Sealing
- Size: 17.8mm×20×8.35mm

### Typical Applications

- Microwave radio
- Telecommunication
- Test instrumentation

### General Description

SAC1157-R is a low noise amplifier module with a typical small signal gain of 28dB and a nominal OP<sub>-1dB</sub> of +10dBm across the frequency range of 2 to 4GHz

SAC1157-R 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<sub>A</sub>=25°C, I<sub>D</sub>=30mA, Z<sub>0</sub>=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 <sub>-1dB</sub> )	9	10	–	dBm
Output IP <sub>3</sub>	20	22	–	dBm
Input VSWR	–	1.4	1.7	:1
Output VSWR	–	1.4	1.7	:1
Supply Voltage	7	–	15	V
Supply Current	–	30	40	mA

### Mechanical Specifications

Parameter	
Input/Output	SMA(F) Field-replaceable
Bias	Pin/Case ground
Case Material	7050 Aluminum alloy
Weight	25g

#### SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA  
Tel: 1-847-505-8319, 1-847-573-9866  
E-mail: sales@superapexco.com  
Website: www.superapexco.com

# SAC1157-R



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

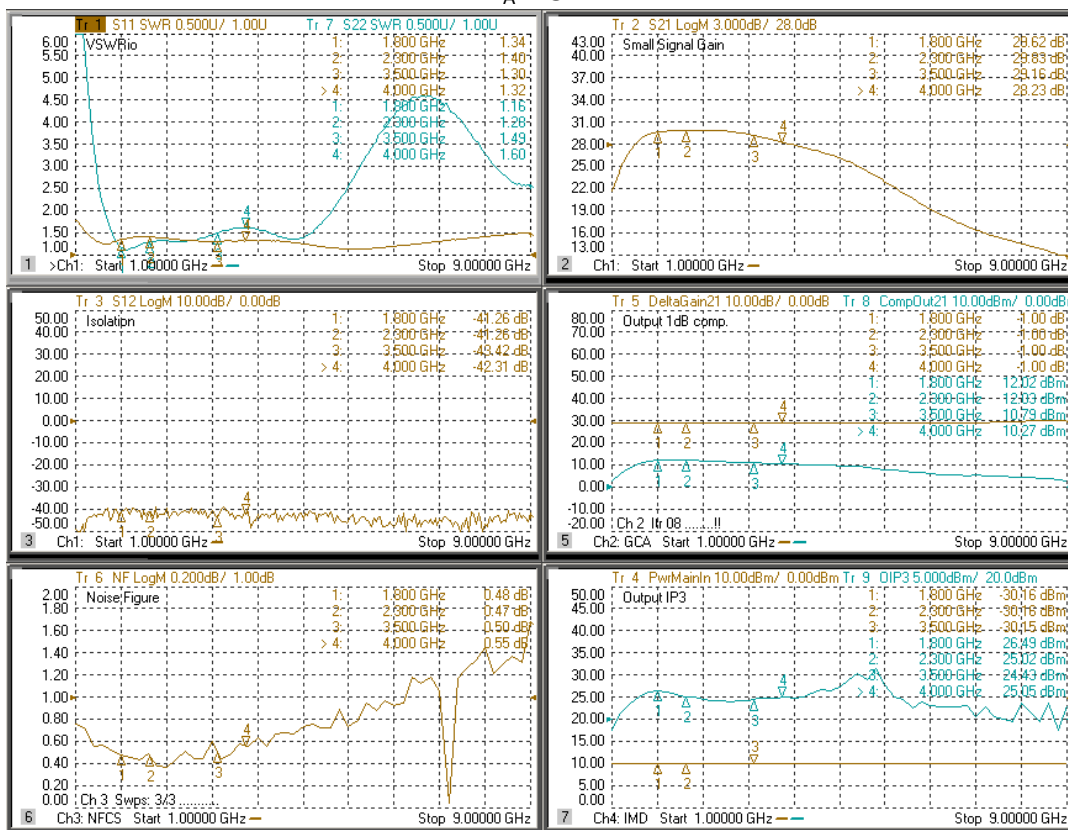
Rev 1.1

## 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<sub>DC</sub>=12V, I<sub>D</sub>=30mA, Noise measurement by cold source method  
T<sub>A</sub>=25°C



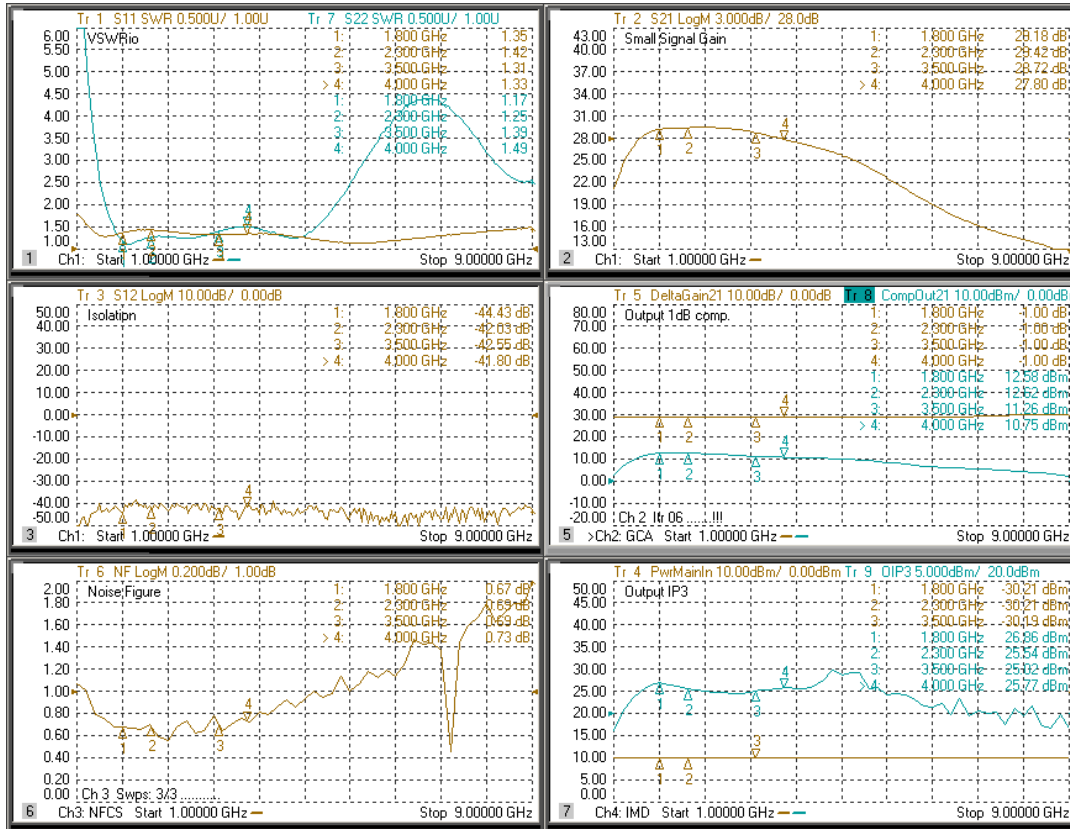
# SAC1157-R



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

Rev 1.1

$T_A = +70^\circ\text{C}$



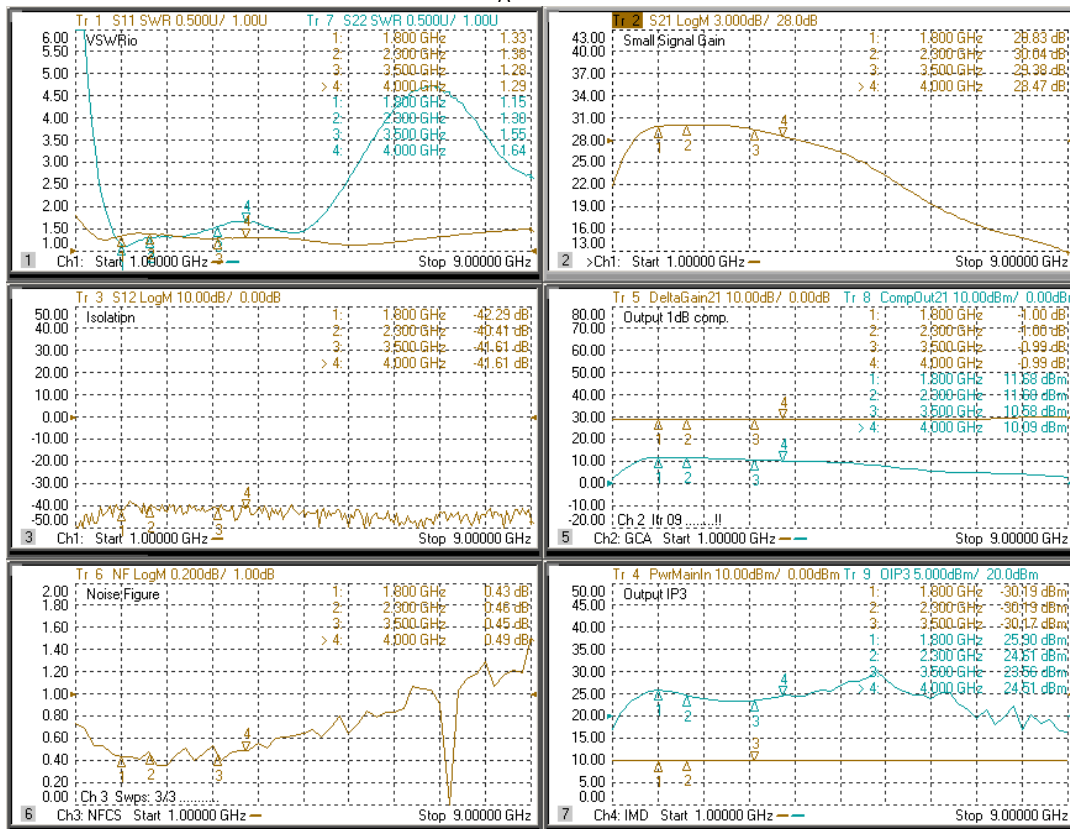
# SAC1157-R



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

Rev 1.1

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



**SuperApex, LLC**

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA  
 Tel: 1-847-505-8319, 1-847-573-9866  
 E-mail: sales@superapexco.com  
 Website: www.superapexco.com

# SAC1157-R

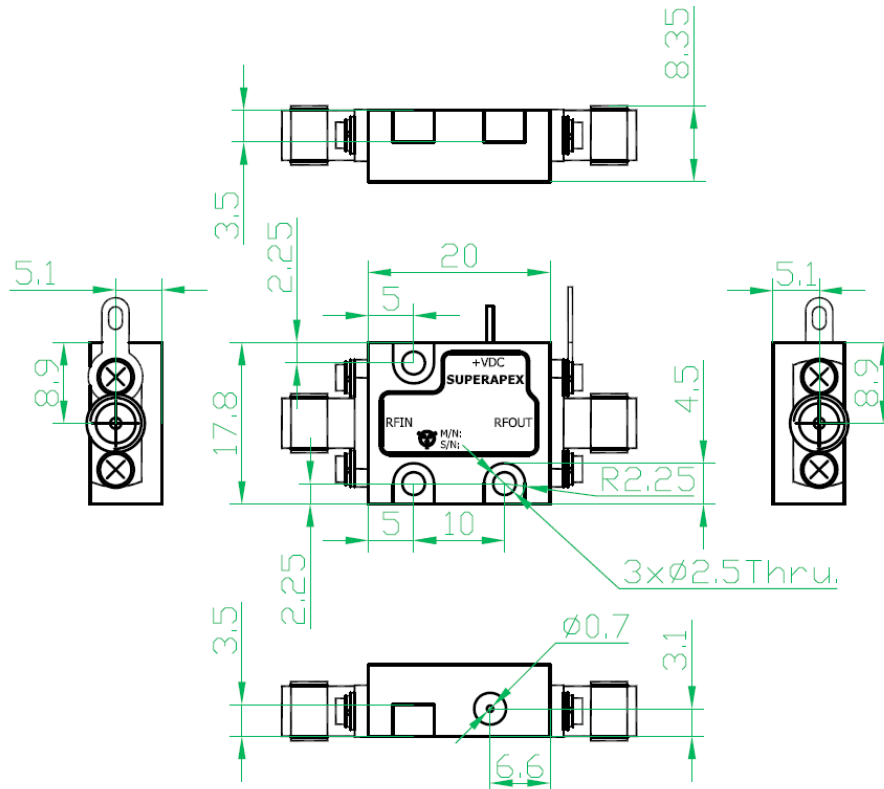


S-band Low Noise Amplifier Module  
2~4GHz NF 0.6dB

Rev 1.1

## Mechanical Outline

All dimensions are in millimeters



### SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA  
Tel: 1-847-505-8319, 1-847-573-9866  
E-mail: sales@superapexco.com  
Website: www.superapexco.com