

# SAC1161

## Wide-band Low Noise Amplifier Module 0.4~6GHz NF 2dB

Rev 1.1

### Features

- Frequency: 0.4~6GHz
- Gain: 17dB
- OP<sub>-1dB</sub>: 17dBm
- Noise Figure: 1.2dB Typ. 2dB Max.
- Supply Current: 60mA
- Hermetic Laser Sealing
- Size: 17.8mm×20mm×8.35mm

### Typical Applications

- Microwave radio
- Telecommunication
- Test instrumentation

### General Description

SAC1161 is a low noise amplifier module with a typical small signal gain of 17dB and a nominal OP<sub>-1dB</sub> of +17dBm across the frequency range of 0.4 to 6GHz.

SAC1161 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>=60mA, Z<sub>0</sub>=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.4~6			GHz
Gain	15	17	–	dB
Gain Flatness	–	±1.0	±1.75	dB
Noise Figure	–	1.2	2	dB
Output Power for 1 dB Compression (OP <sub>-1dB</sub> )	15	17	–	dBm
Output IP <sub>3</sub>	25	27	–	dBm
Input VSWR	–	1.5	2	:1
Output VSWR	–	1.5	2	:1
Supply Voltage	4.85	5	5.5	V
Supply Current	–	60	75	mA

### Mechanical Specifications

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

#### 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

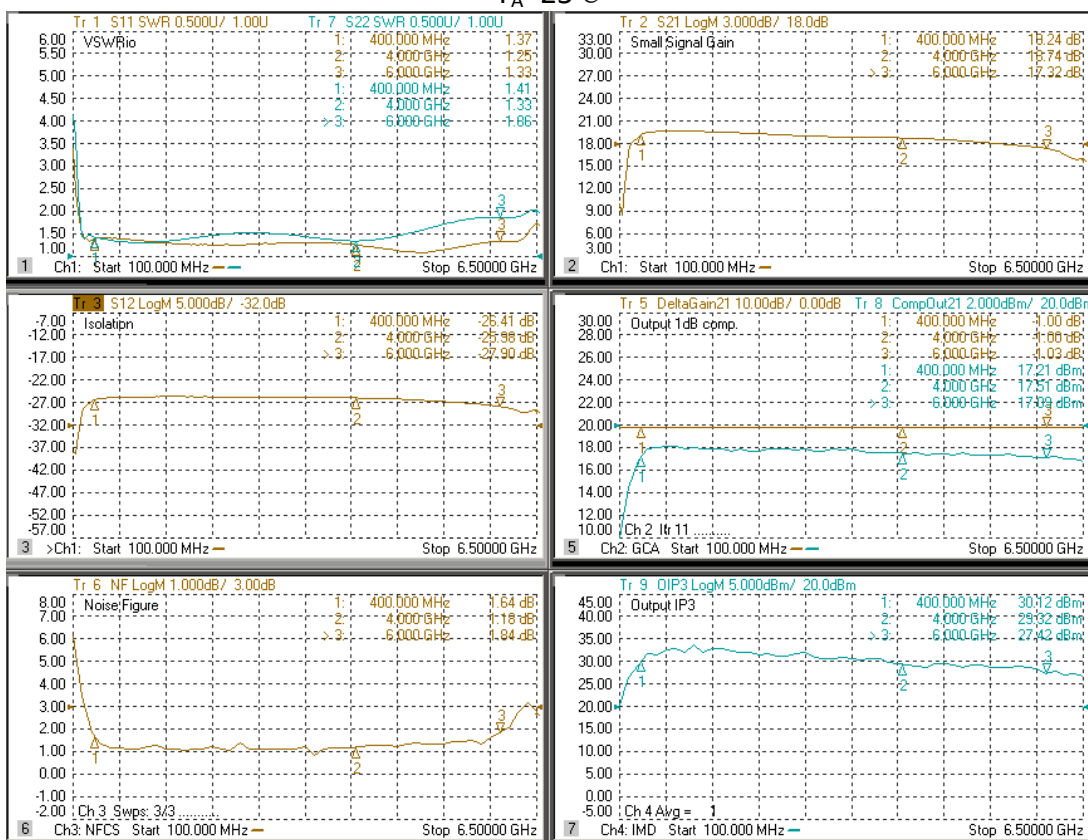
## Absolute Maximum Ratings

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>=5V, I<sub>D</sub>=60mA, Noise measurement by cold source method

T<sub>A</sub>=25°C



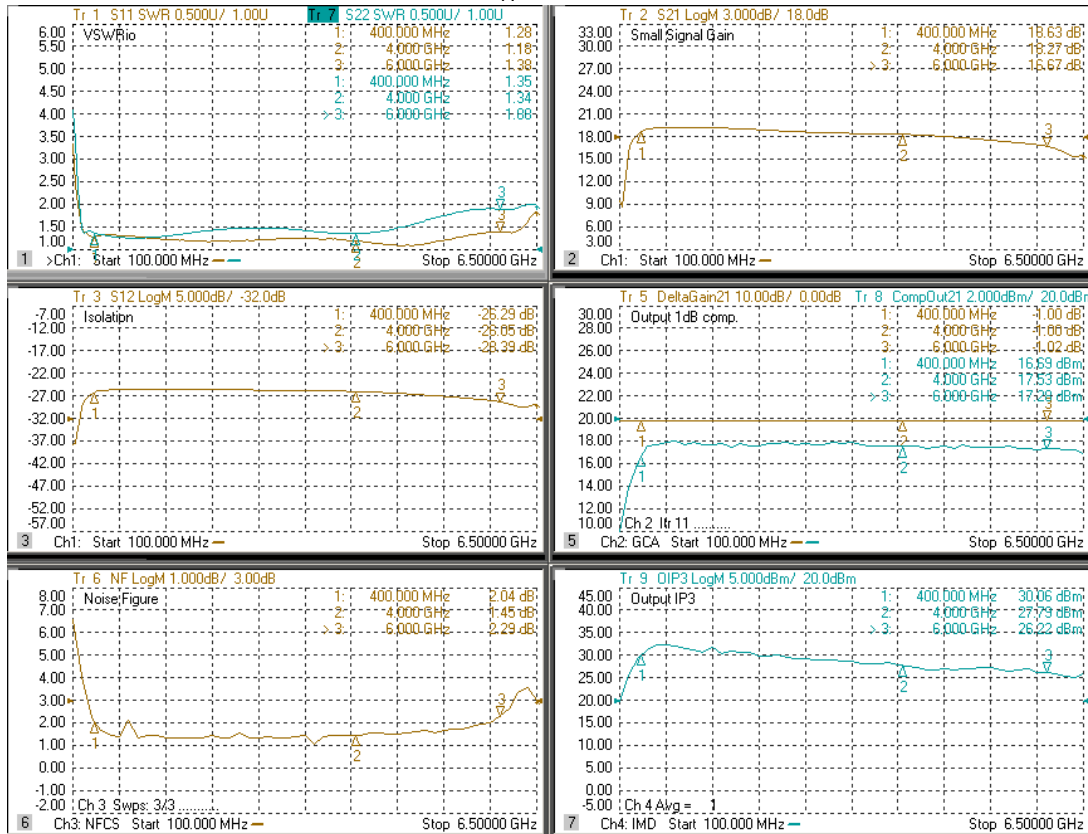
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## Wide-band Low Noise Amplifier Module 0.4~6GHz NF 2dB

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T<sub>A</sub>=+70°C



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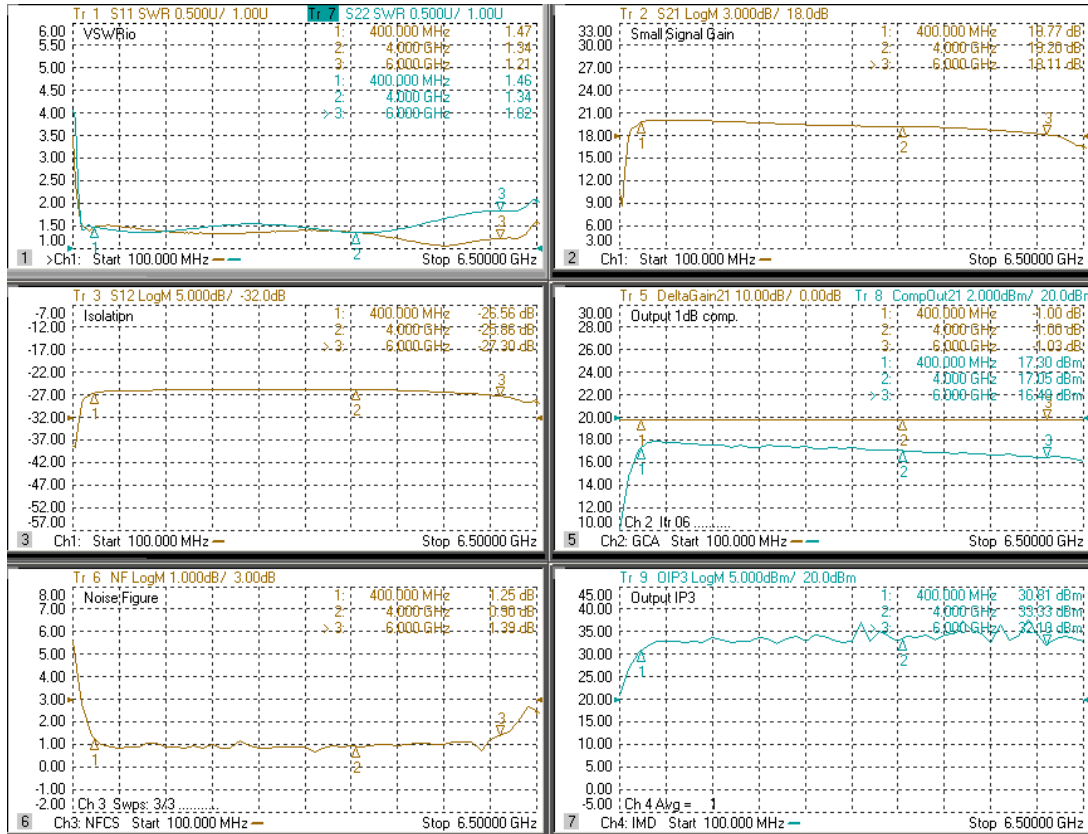
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## Wide-band Low Noise Amplifier Module 0.4~6GHz NF 2dB

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T<sub>A</sub>=-55°C



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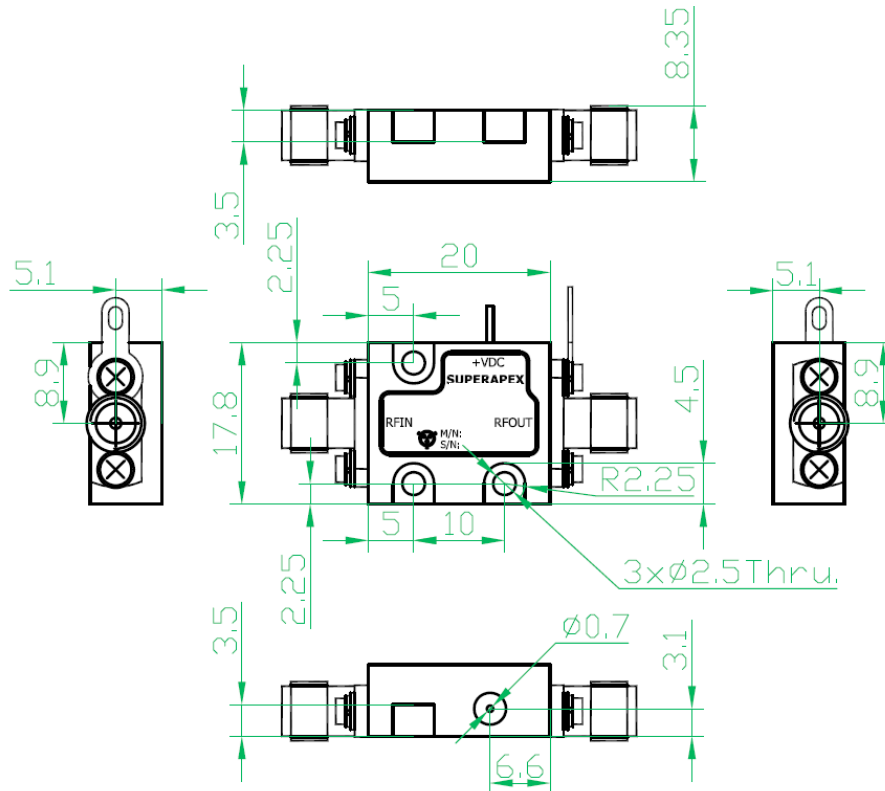


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## Mechanical Outline

All dimensions are in millimeters



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