

SAC1154

Wide-band Driver Amplifier Module 0.1~20GHz

Rev 1.2

Features

- Frequency: 0.1~20GHz
- Gain: 46dB
- OP_{-1dB}: 10dBm
- Noise Figure: 3.5dB Typ.
- Supply Current: 230mA
- Hermetic Laser Sealing
- Size: 40x20x9mm

Typical Applications

- Microwave radio
- Telecommunication
- Test instrumentation

General Description

SAC1154 is a driver amplifier module with a typical small signal gain of 46dB and a nominal OP_{-1dB} of +10dBm across the frequency range of 0.1 to 20GHz

SAC1154 is integrated with SUPERAPEX proprietary GaAs MMIC amplifier chip, high frequency microelectronic assembly techniques, and high reliability design to realize optimum low noise figure, wideband operation.

Functional Diagram



Electrical Performance (T_A=25°C, V_D=12V, I_D=230mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.1~20			GHz
Gain	43	46	–	dB
Gain Flatness	–	±1.5	±2	dB
Noise Figure*	–	3.5	4.5	dB
Output Power for 1 dB Compression (OP _{-1dB})	9	10	–	dBm
Output IP ₃	–	22	–	dBm
Input VSWR	–	1.4	1.8	:1
Output VSWR	–	1.4	1.8	:1
Supply Voltage	9	–	15	V
Supply Current	–	230	260	mA

*Frequency: 1~18GHz

Mechanical Specifications

Parameter	
Input/Output	SMA(F) Field-replaceable
Bias	Pin/Case ground
Case Material	4047 Aluminum alloy
Weight	35g

SuperApex, LLC

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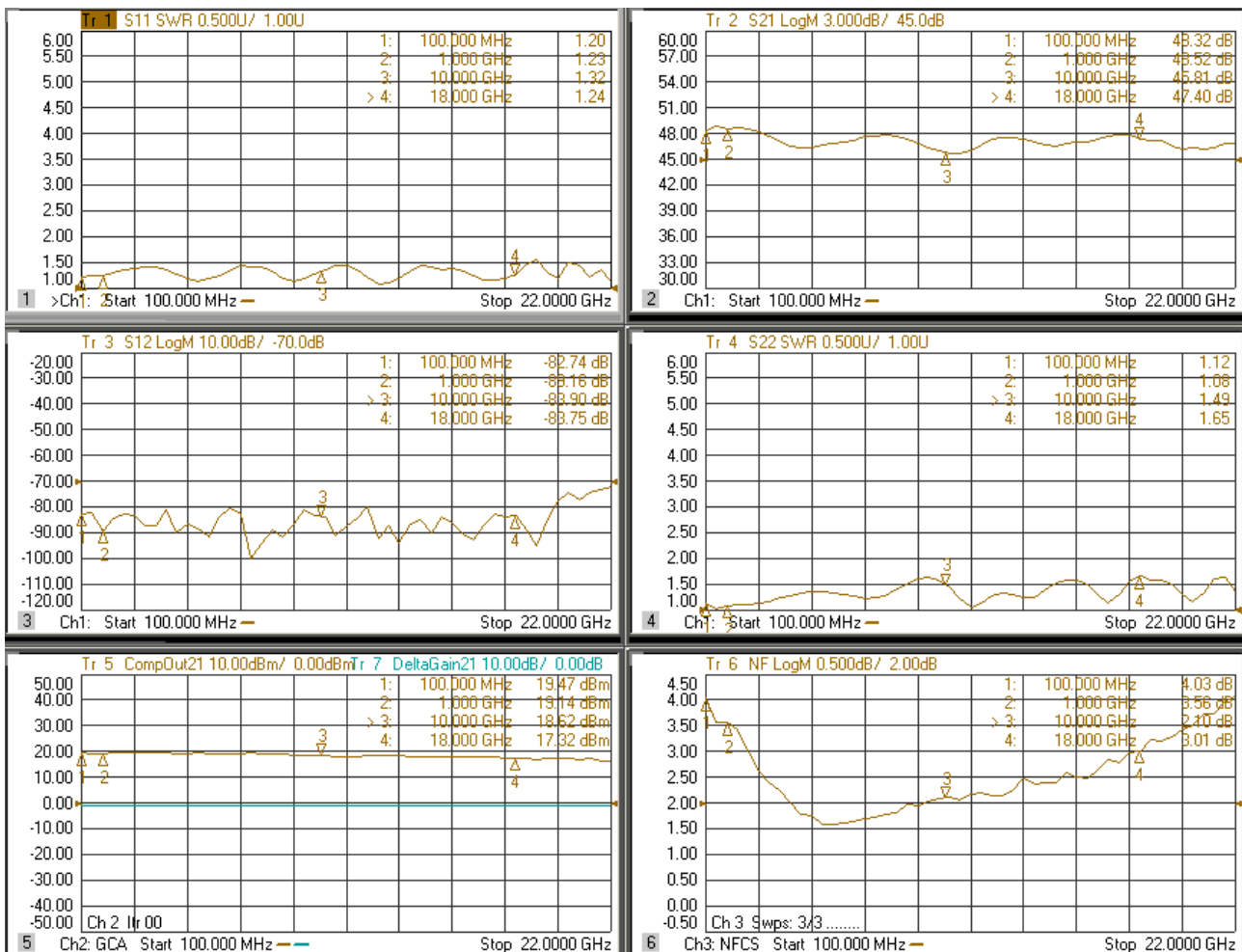
Absolute Maximum Ratings

Maximum Input Power	+10dBm	Operating Temperature	-40°C~+70°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

Typical Performance Curve

+V_{DC}=12V, I_D=230mA

T_A=25°C



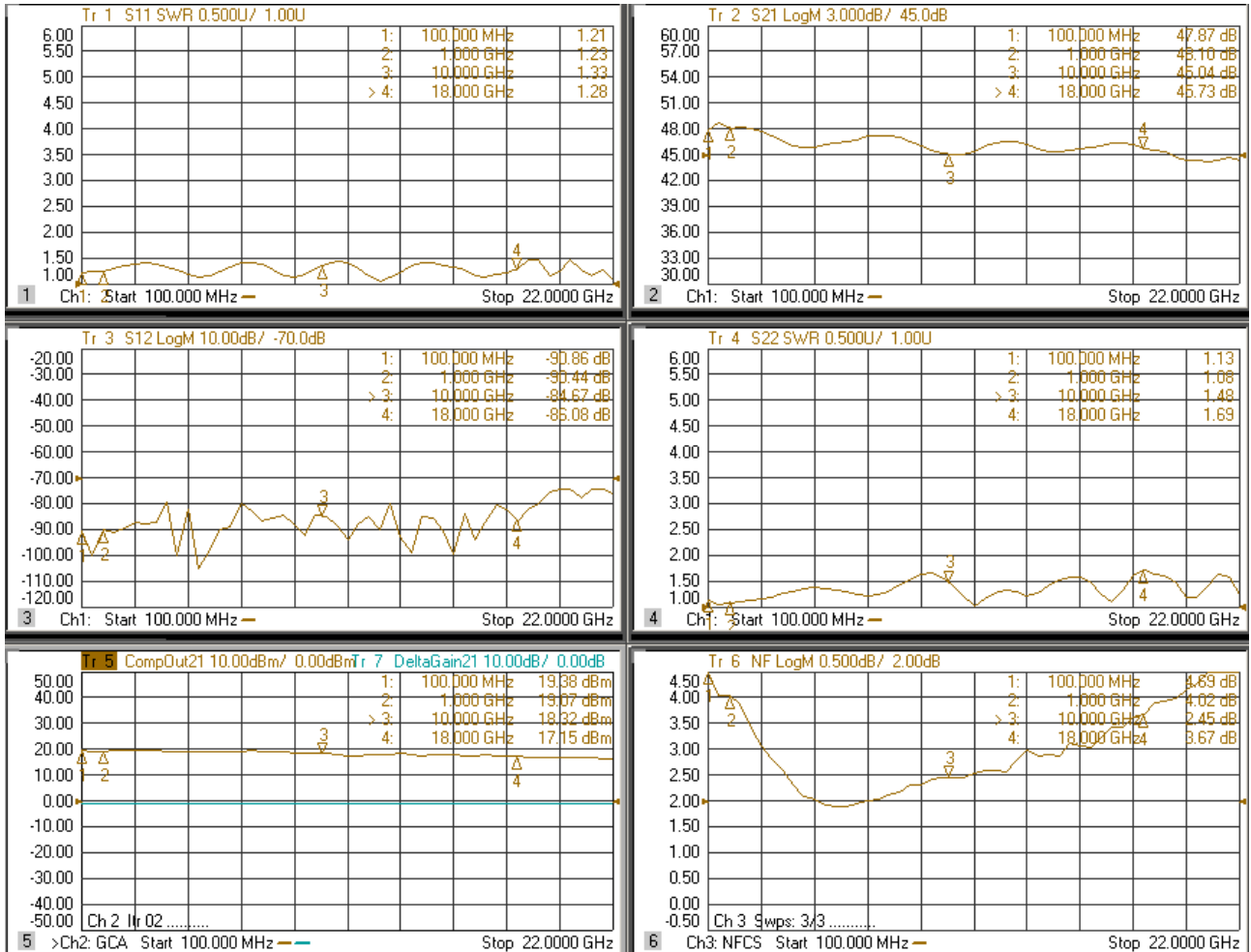
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T_A=+70°C



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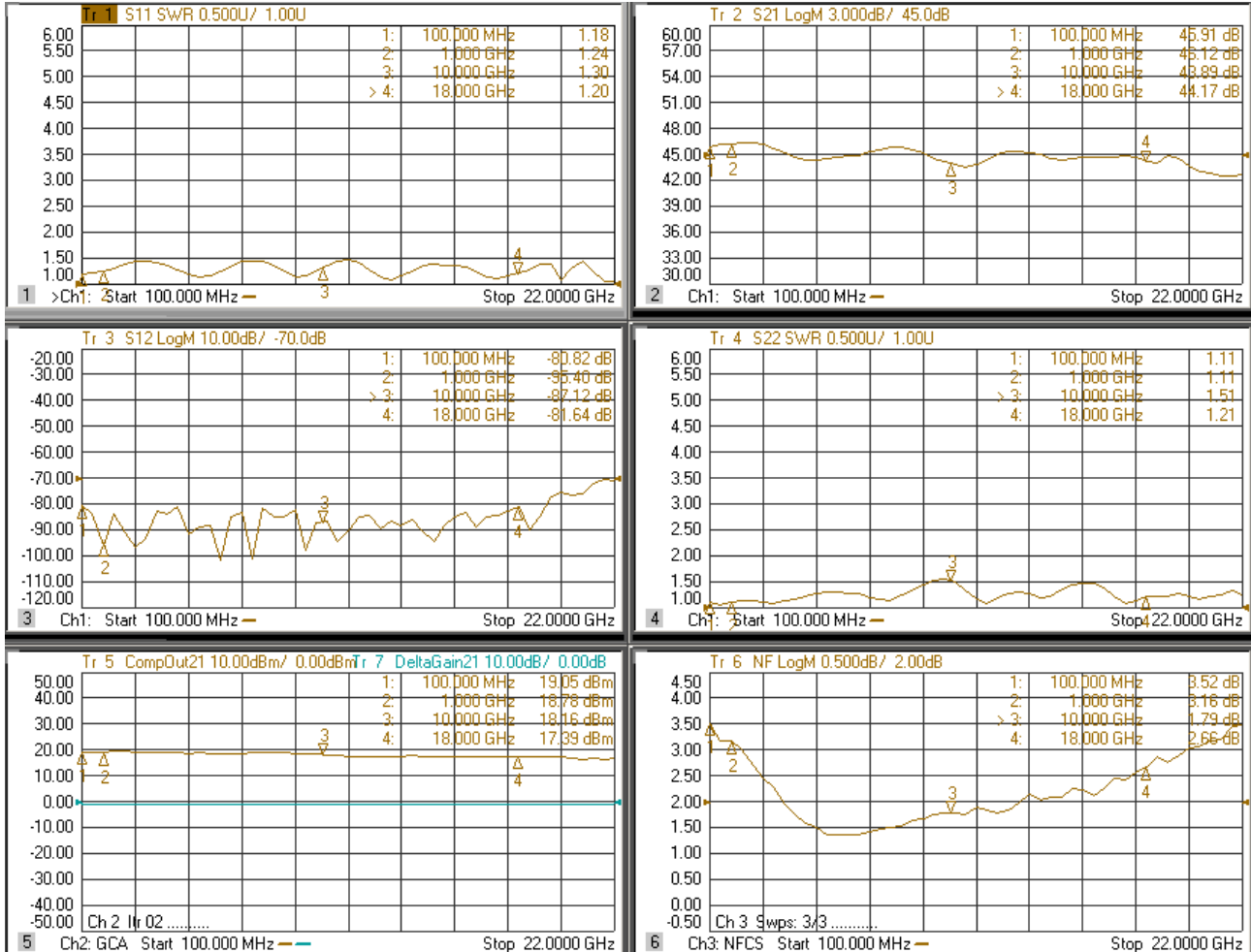
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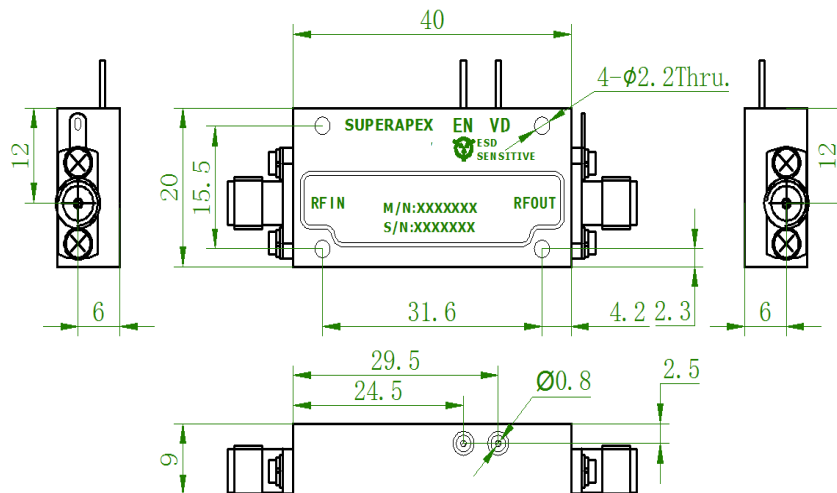
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T_A=-55°C



Mechanical Outline

All dimensions are in millimeters



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