

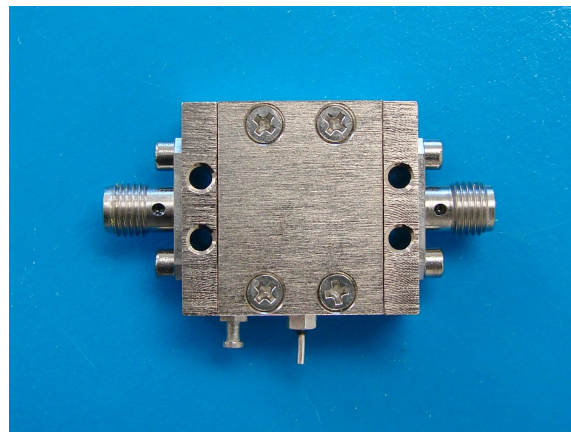
WNA Series

2 – 20GHz Low Noise Amplifier

Features

- Frequency Range: 2-20GHz
- Gain: 20dB
- P_{1dB}: +16dBm
- IP3: +25dBm
- Noise Figure: 2.2dB @ 11GHz
- DC Power: +12V @ 120mA
- Internally Voltage Regulated
- RF Connector: SMA-Female

Photo



Description

WNA-500 is a high performance Microwave Low Noise Amplifier, with standard frequency range of 2GHz to 20GHz.

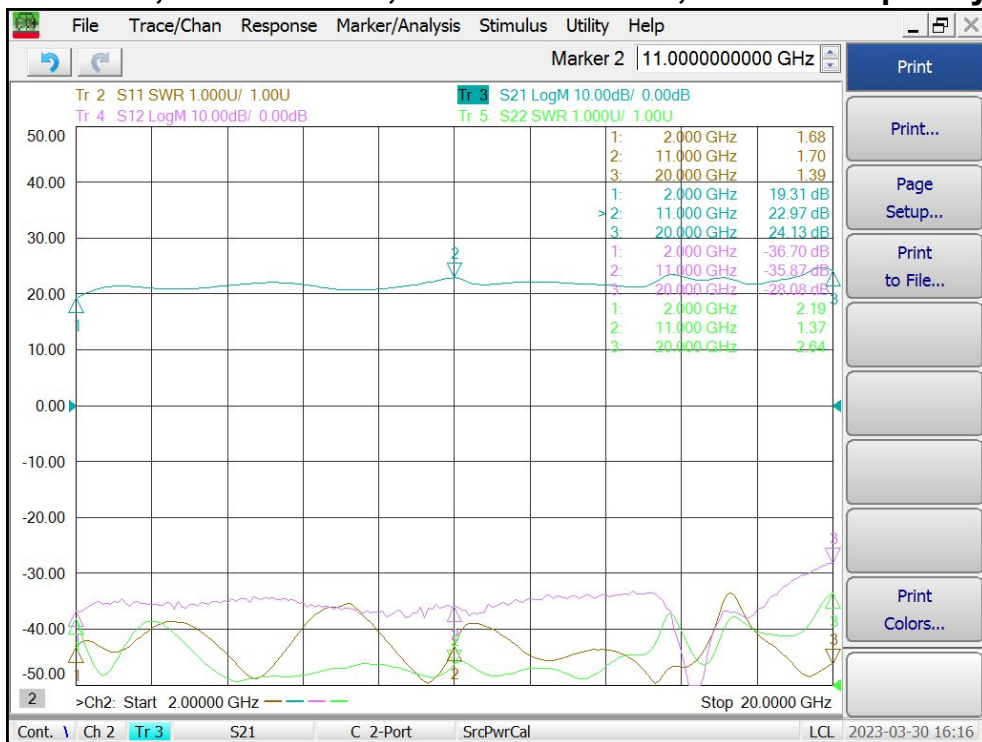
Electrical Specifications @+25°C, Z_{in}=Z_{out}= 50 Ω, V_{supply} = +12VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	2		20
Gain (S ₂₁)	f = 2GHz		19.5	
	f = 11GHz	20.0	22.0	
	f = 20GHz		24.0	
Gain Flatness	dB		± 2.5	± 3.5
Output Power P _{1dB}	f = 11GHz	+14	+16	
Output IP3	f = 11GHz	+23	+25	
Noise Figure	f = 11GHz		2.2	3.0
Reverse Isolation (S ₁₂)	f = 11GHz	-25	-35	
VSWR-Input (S ₁₁)	f = 11GHz		1.7:1	2.2:1
VSWR-Output (S ₂₂)	f = 11GHz		1.4:1	2.0:1
DC Power Supply - voltage	V	5	12	15
DC Power Supply - current	mA		120	140
Operating Temperature	°C	-40		+85
Size (RF/DC feedthru's excluded)	Inch	1.00 (L) x 0.90 (W) x 0.45 (H)		
Weight	Oz	0.6 (17 grams)		

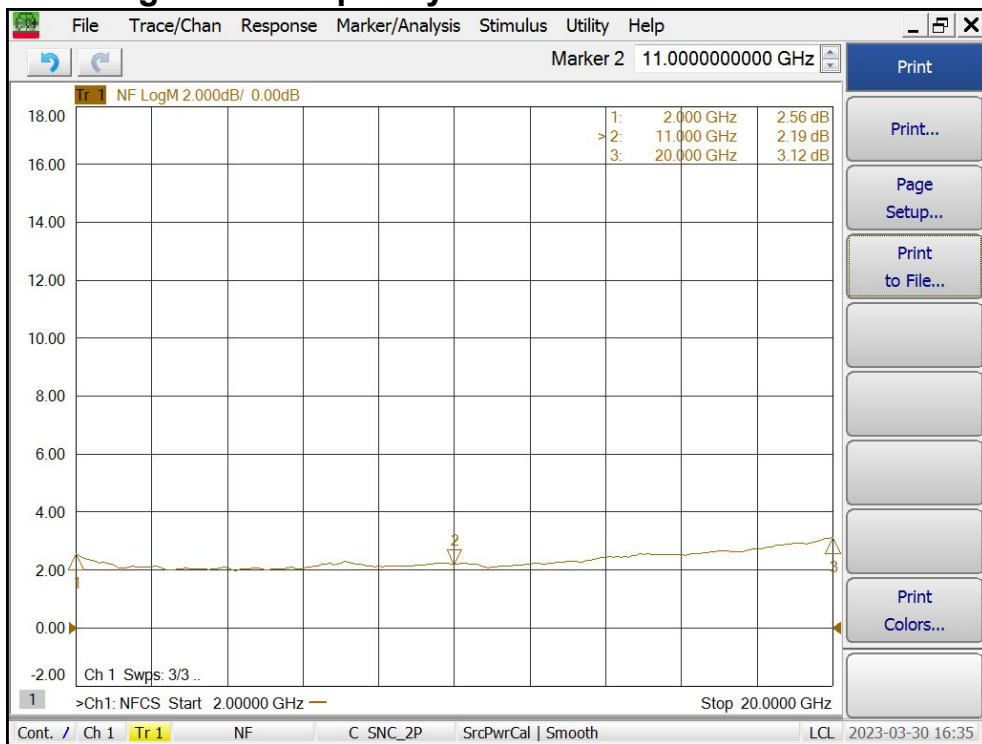
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Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



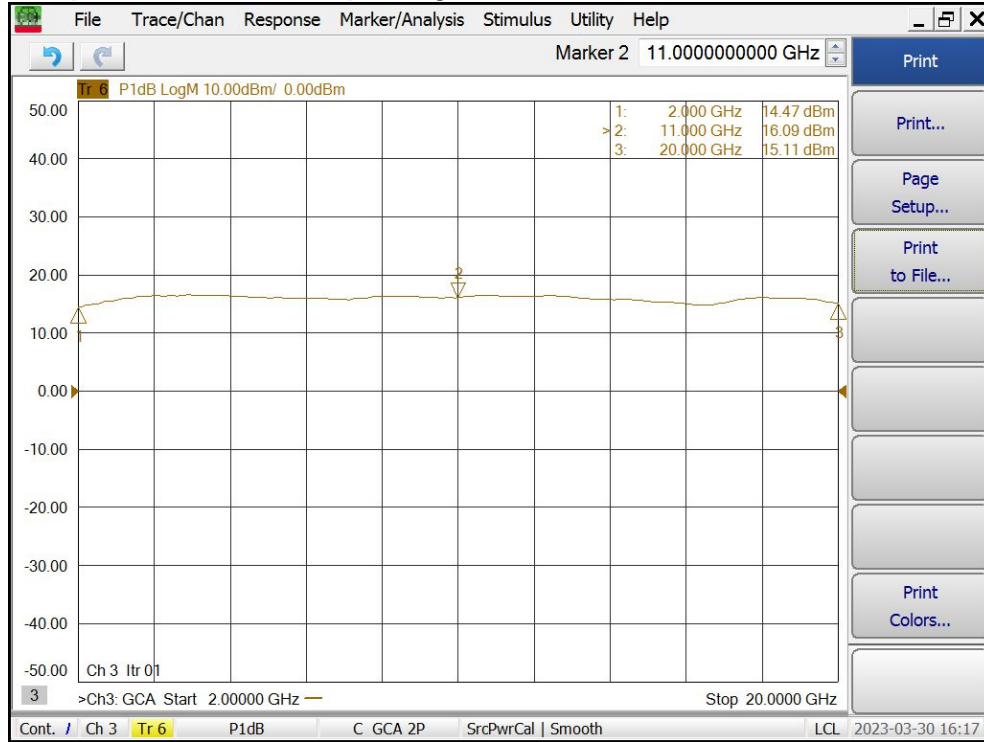
Noise Figure vs Frequency



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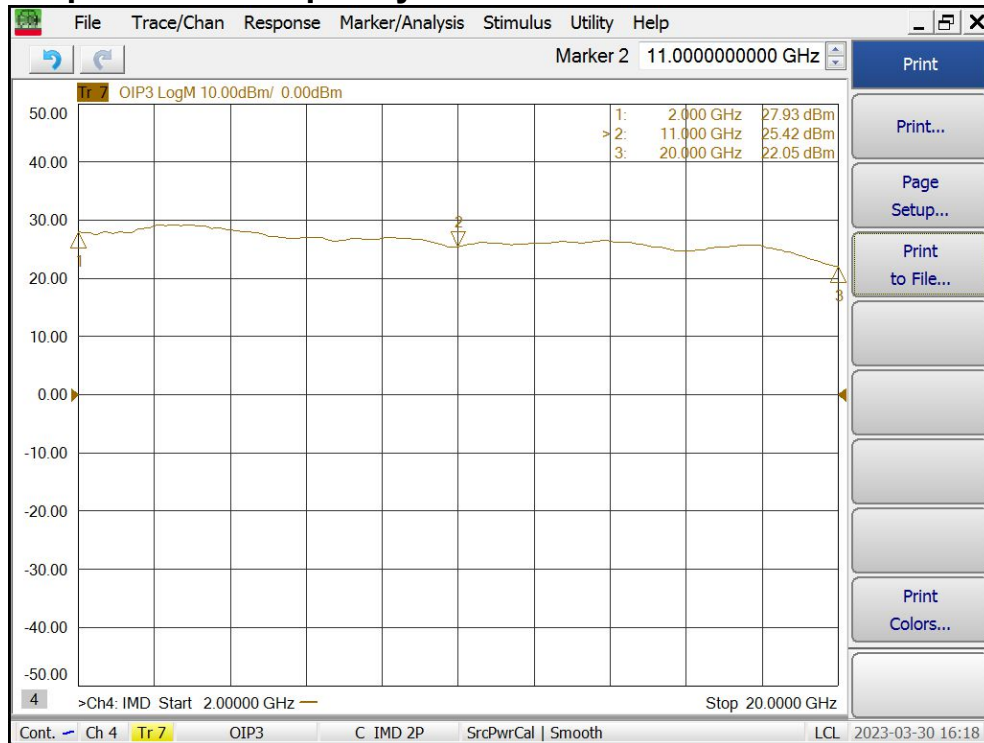
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Output P1dB vs Frequency



Absolute

Output IP3 vs Frequency



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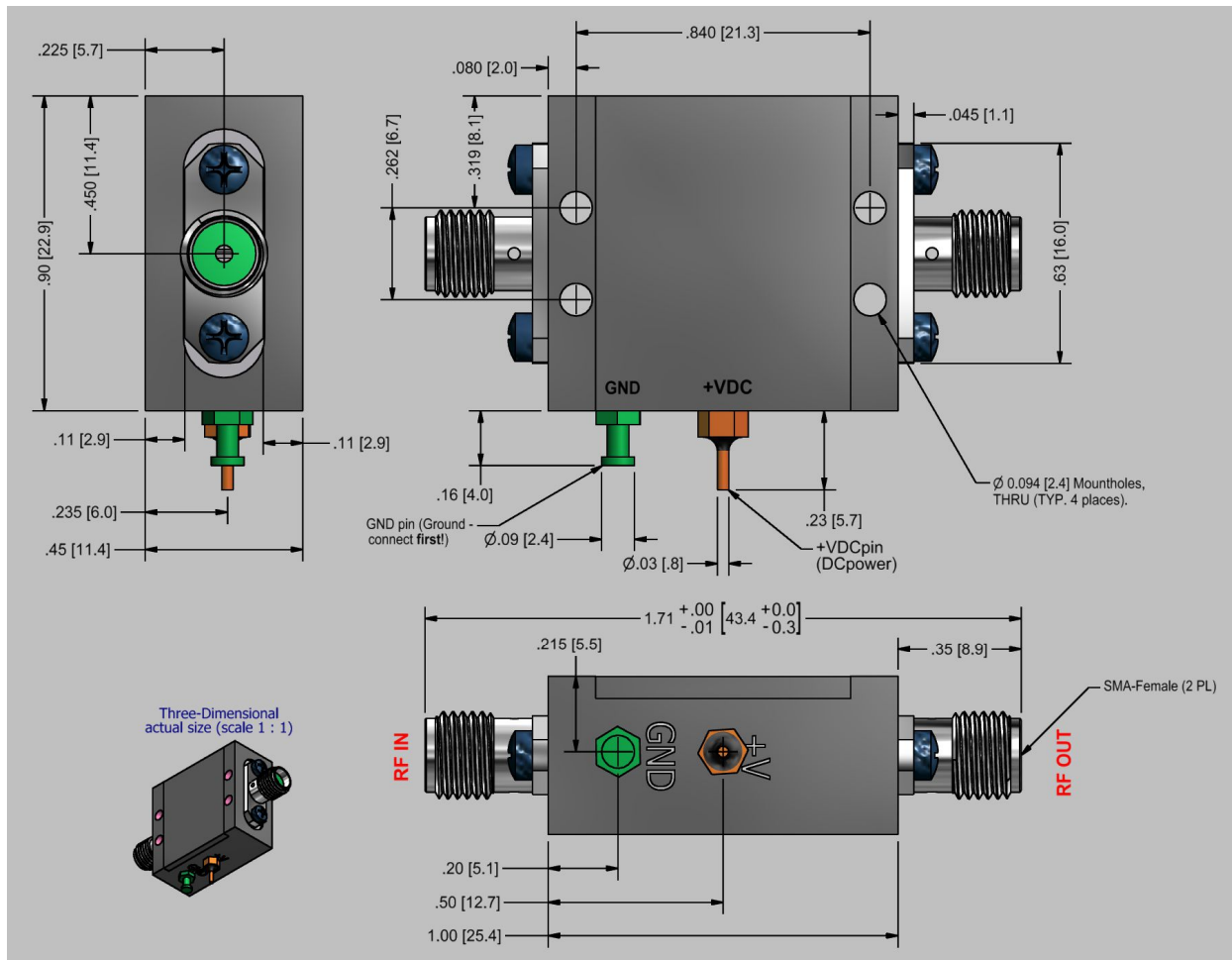
Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage (Survival)	+16V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline



WARNING: MUST USE HEAT SINK IF CASE TEMPERATURE EXCEEDS 50 °C