



**TYPICAL CHARACTERISTICS REPORT
FOR
LNA-46-17-5-SFF**

PMI Model No. LNA-46-17-5-SFF is a Low Noise Amplifier that operates over the frequency range 1.0 GHz to 7.0 GHz. It has a gain window of 46 dB minimum and 54 dB maximum with a gain flatness of ± 2.0 dB. This model has an output P1dB of 23 dB and a maximum noise figure of 5 dB. Outfitted with SMA female connectors this amplifier is a form, fit, function equivalent to Loral 342052.



May 14, 2020

Designed By:
J. Mattsson-Boze

Tested & Reported By:
J. Mattsson-Boze



TYPICAL CHARACTERISTICS REPORT FOR LNA-46-17-5-SFF

Product Feature

DESCRIPTION

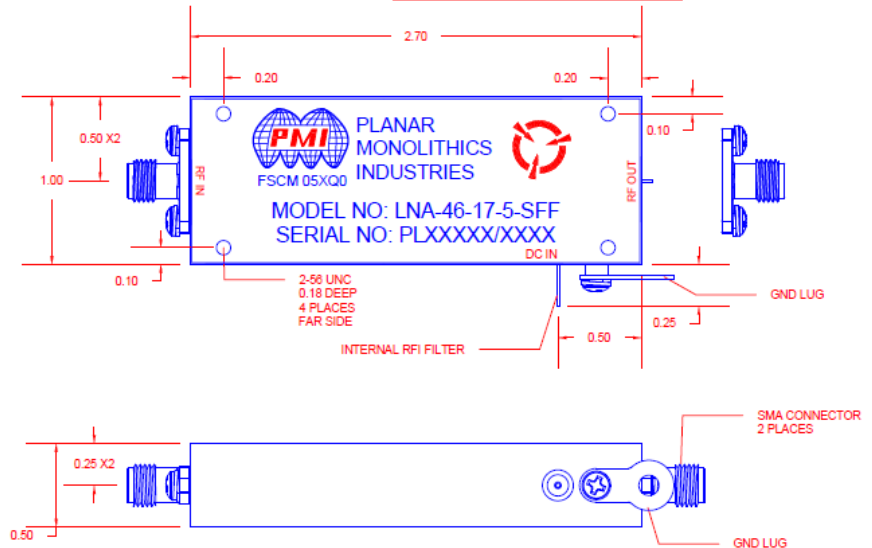
PMI MODEL NO. LNA-46-17-5-SFF IS A LOW NOISE AMPLIFIER OPERATING OVER THE FREQUENCY RANGE OF 1.0 TO 7.0 GHz. IT HAS A MINIMUM GAIN OF 46 dB AND A NOISE FIGURE OF 5 dB. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS. THIS IS A FORM, FIT, FUNCTION TO LORAL 342052.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	PRELIMINARY	12/12/2019	

SPECIFICATIONS

- FREQUENCY RANGE: 1.0 TO 7.0 GHz
- OUTPUT POWER P1dB: 23 dBm
- GAIN: 46 dB MIN, 54 dB MAX
- GAIN FLATNESS: ± 2 dB
- NOISE FIGURE: 5 dB
- VSWR IN/OUT: 2.0:1
- MINIMUM THIRD ORDER INTERCEPT POINT: 30 dBm
- TYPICAL SATURATED OUTPUT POWER: 25 dBm
- HARMONICS: -12 dBc
- NON-HARMONIC SPURIOUS: -50 dBc
- STABILITY: UNCONDITIONAL
- COOLING: CONVECTION
- DC VOLTAGE: 15 V
- DC CURRENT: 1100 mA
- FINISH: GOLD PLATED

MECHANICAL OUTLINE



ENVIRONMENTAL RATINGS

- TEMPERATURE: 0 °C TO +70 °C (OPERATING)
-65 °C TO +125 °C (STORAGE)
- HUMIDITY: MIL-STD-202, METHOD 103B COND. B
- SHOCK: MIL-STD-202, METHOD 213B COND. B
- VIBRATION: MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PMI CONFIDENTIAL AND PROPRIETARY

ALL DIMENSIONS
ARE IN INCHES (mm)
TOLERANCES:
X.XX ± 0.020
X.XXX ± 0.010

PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001 CERTIFIED



APPROVALS		DATE		TITLE	
DESIGN	GW	6/26/19		PRODUCT FEATURE LNA-46-17-5-SFF	
REWORK	JMB	12/12/19			
ISSUED				SIZE: A	FIG. NO. 05XQ0
				DWG. NO. 27037700	REV. 1
				SCALE: N:S	SHEET: 1 OF 1

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Page 2 of 6



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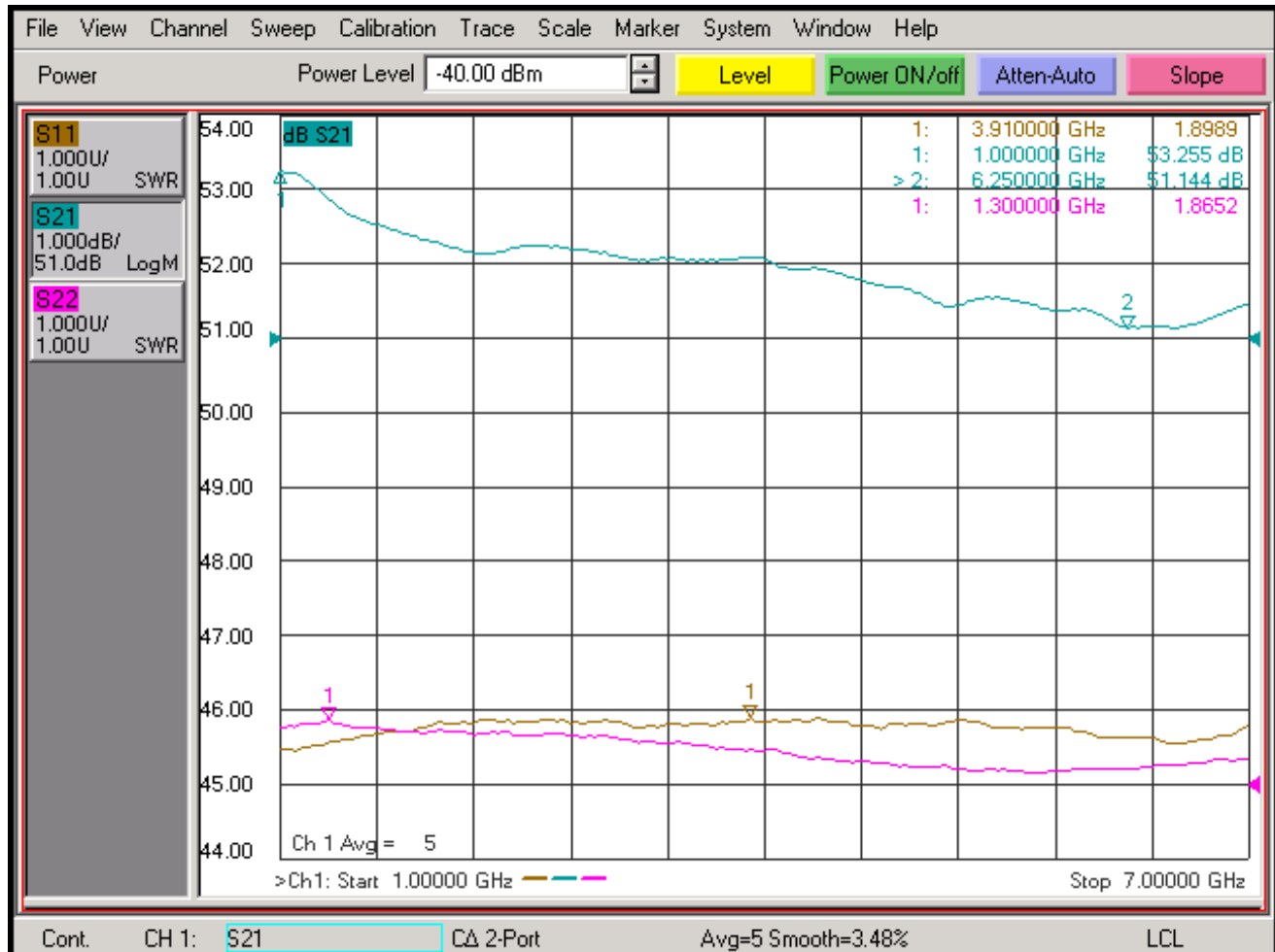
Technical Specifications @+25C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	Test Results	QA QC
1	Frequency Range:	1 GHz - 7 GHz	1 GHz - 7 GHz	
2	Gain:	46 dB Min, 54 dB Max	53.3 dB Max 51.1 dB Min See Plot	
3	Gain Flatness:	±2.0 dB Max	±1.1 dB See Plot	
4	Noise Figure:	5 dB Max	1.9 dB See Plot	
5	Third Order Intercept Point:	+30 dBm Min	+33.1 dBm Min See Plot	
6	Output Power P1dB:	+23 dBm Min	+23.9 dBm See Plot	
7	Saturated Output Power:	+25 dBm Min	+26.8 dBm See Plot	
8	Harmonics:	-12dBc Max	-32.7 dBc	
9	Non-Harmonic Spurious:	-50 dBc Max	<-60 dBc	
10	VSWR: (Input/Output)	2.0:1 Max	1.9:1 In 1.9:1 Out See Plot	
11	DC Supply:	+15 VDC @ 1100 mA Typ.	+15 VDC @ 650 mA	



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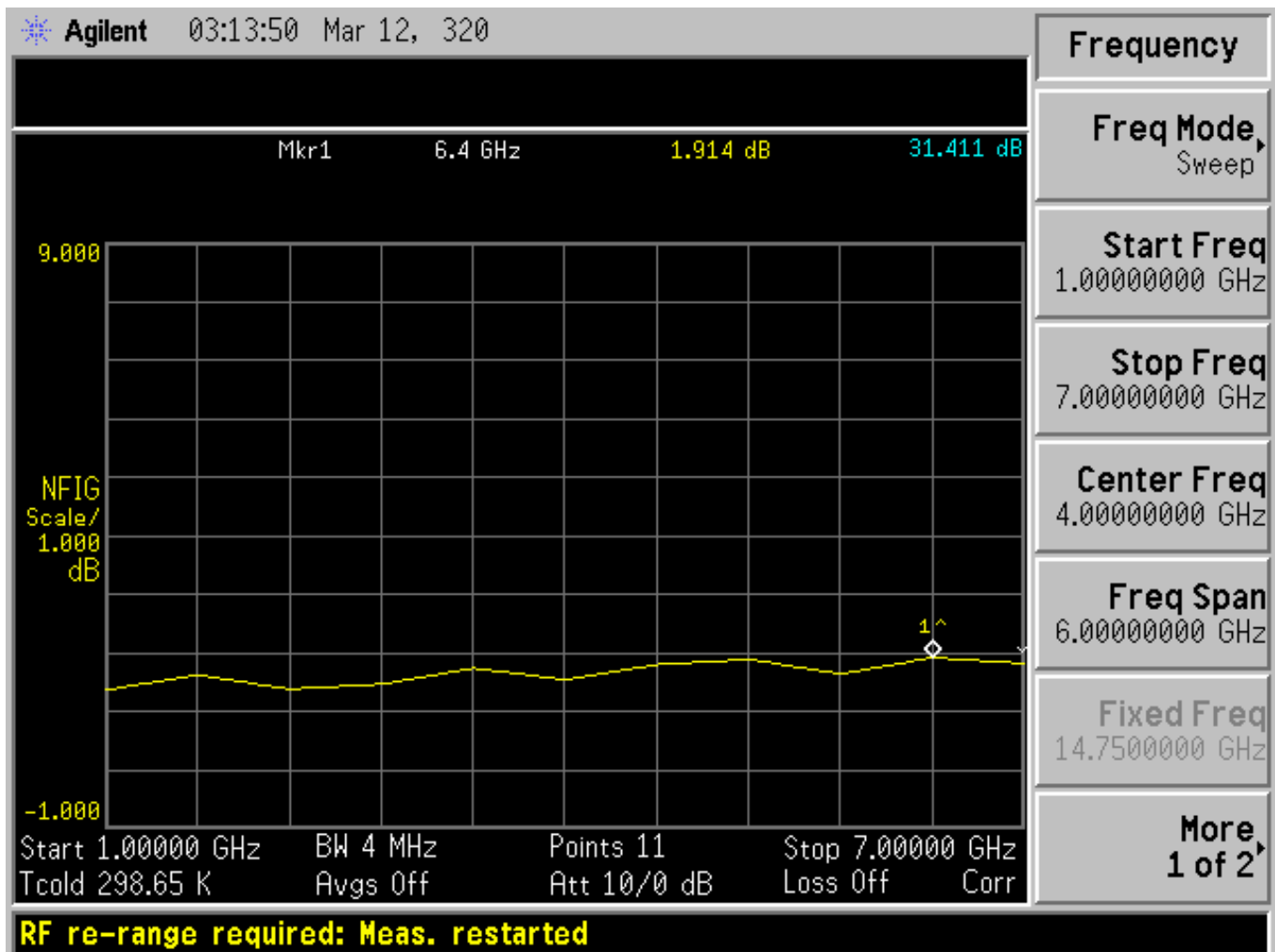
Gain and Flatness @+25C





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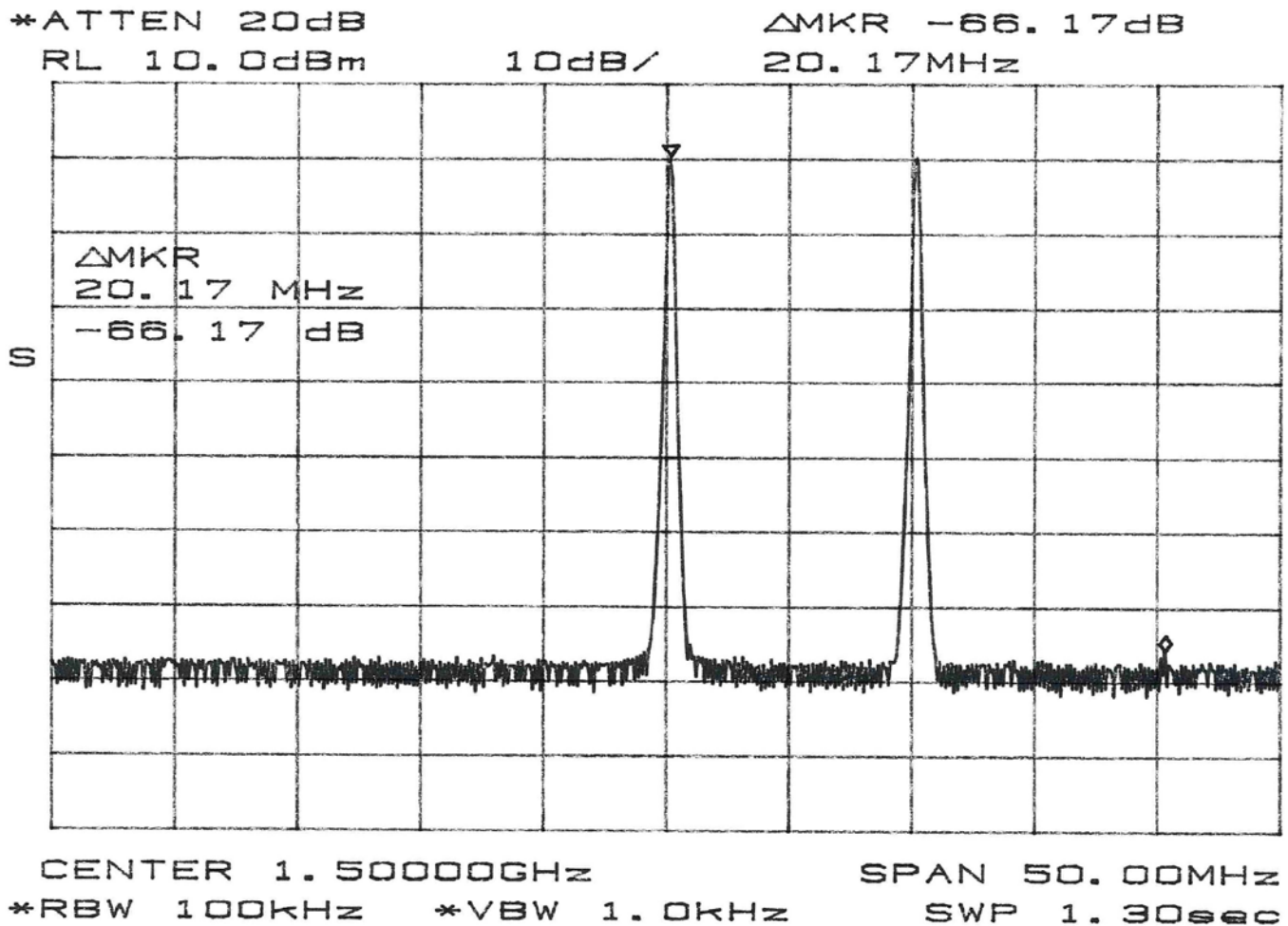
Noise Figure @+25C





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Third Order Intercept Point @+25C

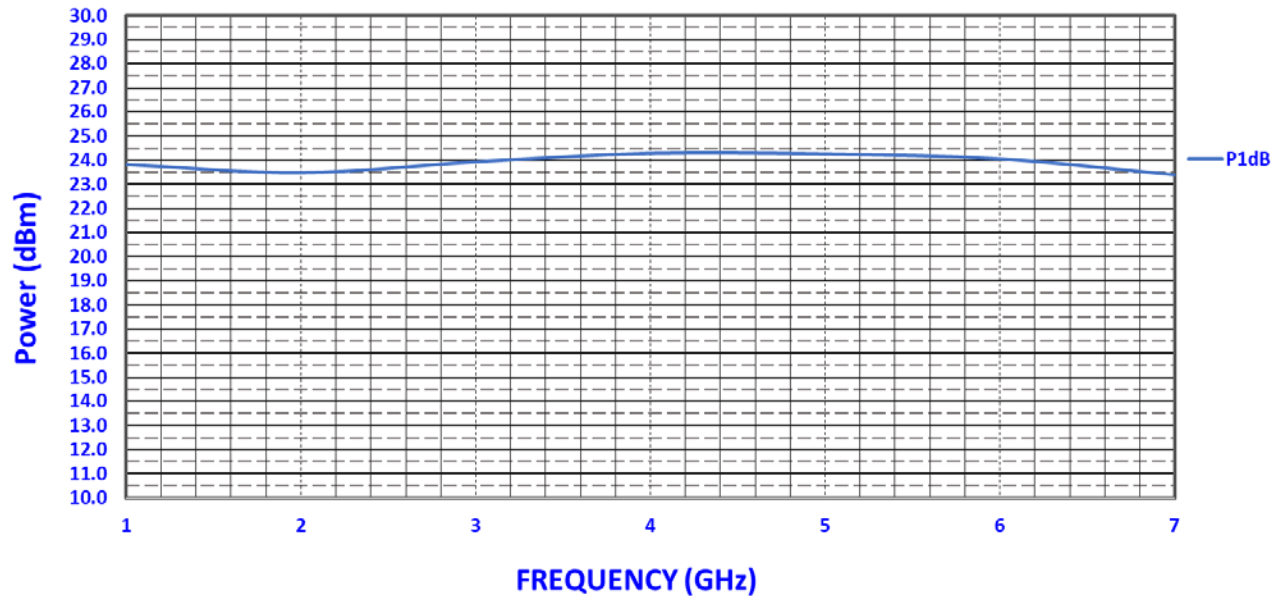




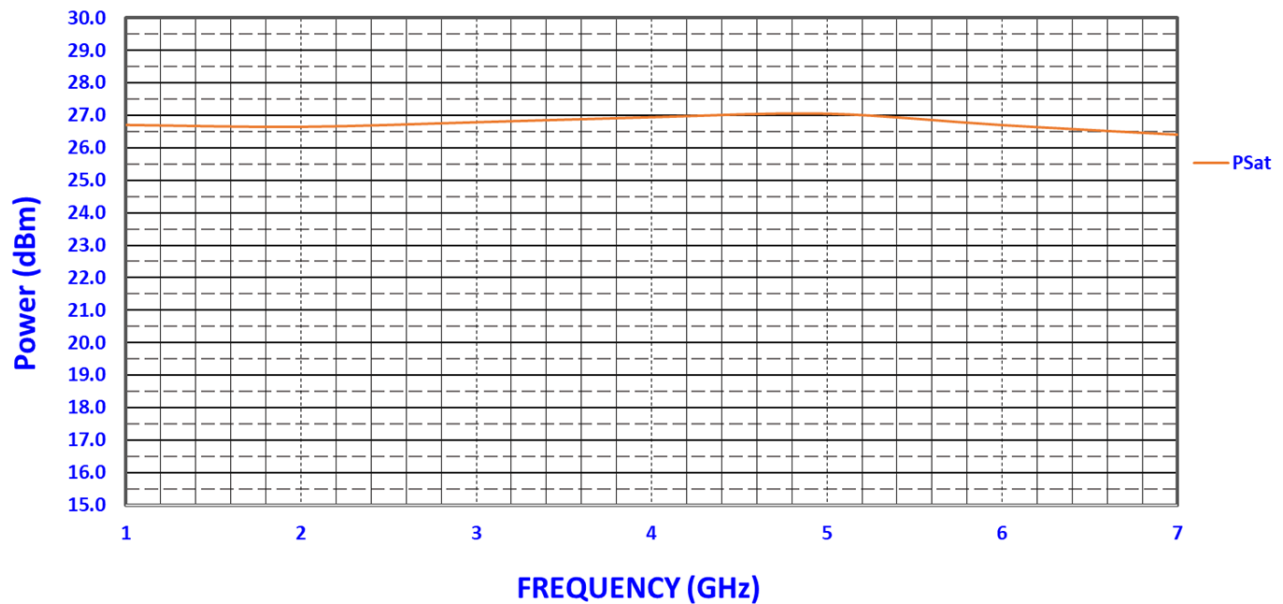
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OP1dB and PSAT @+25C

P1dB Vs Frequency



PSAT Vs Frequency



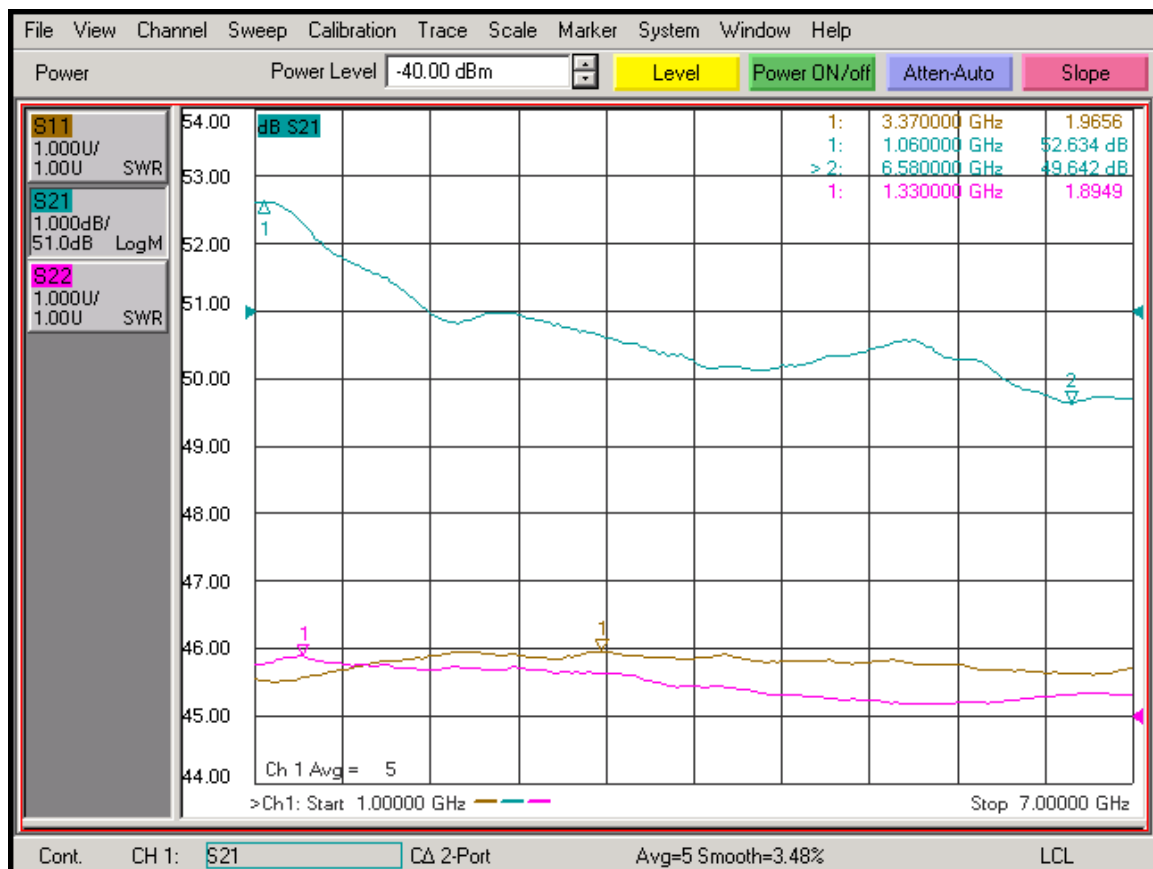


TYPICAL CHARACTERISTICS REPORT FOR LNA-46-17-5-SFF

Temperature Data +85°C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	Test Results	QA QC
1	Frequency Range:	1 GHz - 7 GHz	1 GHz - 7 GHz	
2	Gain:	46 dB Min, 54 dB Max	52.6 dB Max 49.6 dB Min See Plot	
10	VSWR: (Input/Output)	2.0:1 Max	2.0:1 In 1.9:1 Out See Plot	
6	Output Power P1dB:	+23 dBm Min	+24.2 dBm See Plot	

Gain and VSWR Plot +85°C

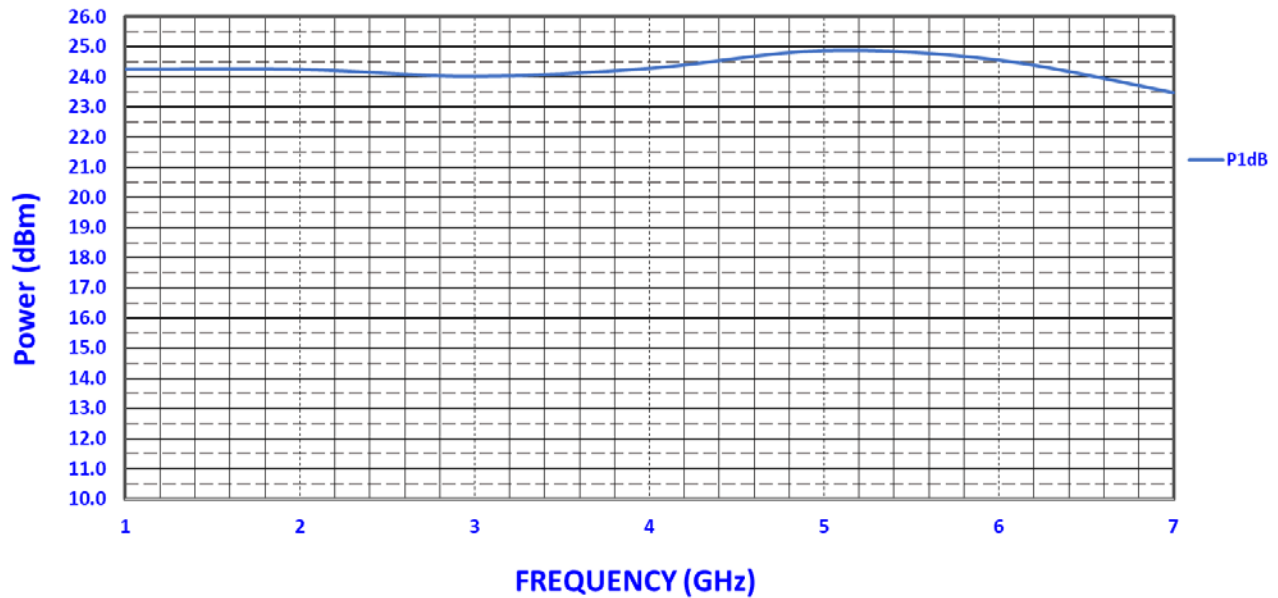




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+85°C

P1dB Vs Frequency



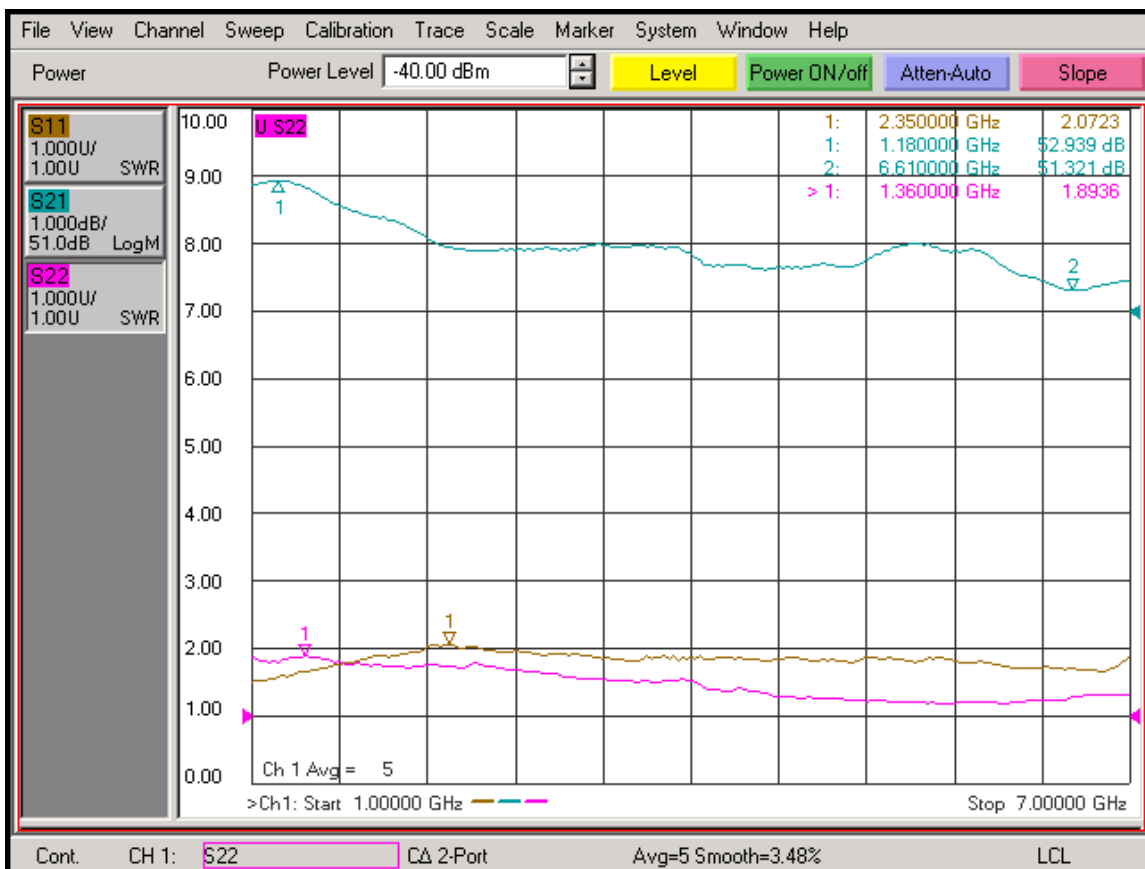


TYPICAL CHARACTERISTICS REPORT FOR LNA-46-17-5-SFF

Temperature Data -55°C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	Test Results	QA QC
1	Frequency Range:	1 GHz - 7 GHz	1 GHz - 7 GHz	
2	Gain:	46 dB Min, 54 dB Max	52.9 dB Max 51.3 dB Min See Plot	
10	VSWR: (Input/Output)	2.0:1 Max	2.1:1 In 1.9:1 Out See Plot	
6	Output Power P1dB:	+23 dBm Min	+23.4 dBm See Plot	

Gain and VSWR Plot -55°C





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Plot -55°C

P1dB Vs Frequency

