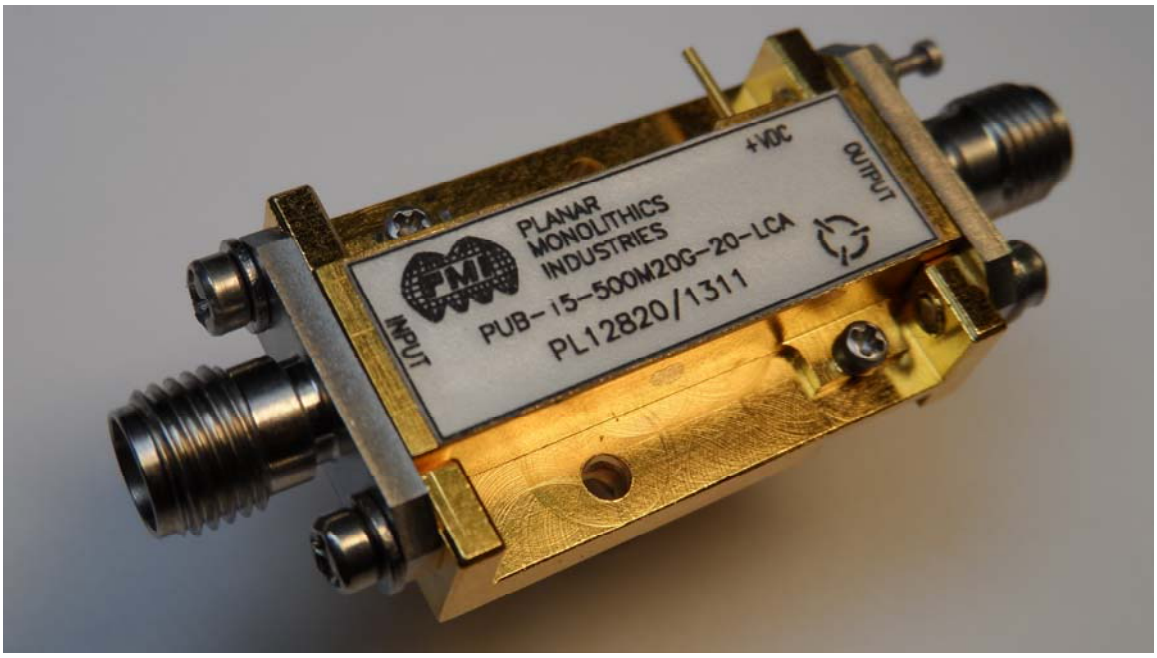
Typical Characteristics
On
PUB-15-500M20G-20-LCA

PL12820/1311

Lower Noise Amplifier designed for Military and Industrial applications. This amplifier is supplied in our standard PE2 housing that can be used as a SMA connectorized or a surface mount component. Other packages and connector types are available.



September 24, 2013
Designed By: Kevin Mason

Tested & Reported by:
Hugo Gonzales

7311-F Grove Road, Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
email: sales@pmi-rf.com

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PUB-15-500M20G-20-LCA

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Description:

Lower Noise Amplifier designed for Military and Industrial applications. This amplifier is supplied in our standard PE2 housing that can be used as a SMA connectorized or a surface mount component. Other packages and connector types are available.

This model provides the following performance. Data is available upon request.

Specifications:

Frequency Range:	0.50 to 20.0 GHz
Gain:	+15dB Typ.
Gain Flatness:	+/- 1.75dB Typ.
Noise Figure:	3.0dB Typ.
OP1dB:	+20dBm Typ.
VSWR Input/Output:	2.0:1 Typ.
DC Voltage Supply:	+12 to +15VDC
DC Current Draw:	180mA Typ.
Connectors In/Out	SMA Female
Finish	Gold Plated

Features:

Internal Voltage Regulation
Unconditional Stability
Standard Operating Temperature -20 to +70 Deg. C

Available Options:

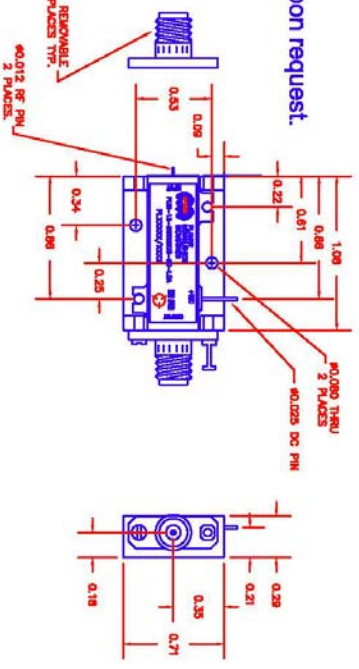
Various Package types
Various Connector types
Temperature Compensation
Hermetic Sealing
Gain and Phase Matching
MIL-STD-883 Screening Available

Environmental Ratings:

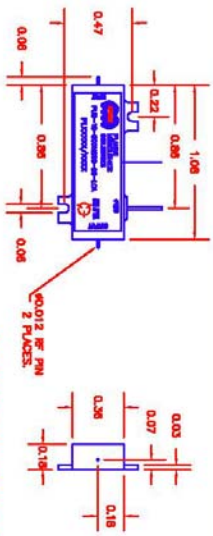
Temperature:	-20 to +70 Deg. C (Operating);
	-55 to +85 Deg C (Available)
	-55 to +125 Deg. C (Storage)
Humidity:	MIL-STD-202F, METHOD 103B COND B.
Shock:	MIL-STD-202F, METHOD 213B COND B.
Altitude:	MIL-STD-202F, METHOD 105C COND B.
Temperature Cycle:	MIL-STD-202F, METHOD 107D COND A

Note: The above specifications are subject to change or revision.

PE2 HOUSING WITH CARRIER



PE2 HOUSING WITHOUT CARRIER (SURFACE MOUNT)



REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	8/21/08	
	A2	ECN # 13-0004	05/16/13	
	A3	ECN # 13-0042	08/19/13	

PMI CONFIDENTIAL AND PROPRIETARY

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

PLANAR MONOLITHICS INDUSTRIES, INC.
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WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001:2008 CERTIFIED

APPROVALS	DATE
DRAWN: GKM	8/21/08
CHECKED:	
ISSUED:	

TITLE: PRODUCT FEATURE
PUB-15-500M20G-20-LCA

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	PUB-15-500M20G-20-LCA	A3
SCALE: N.S.		SHEET 1 OF 1	

Typical Characteristics On PUB-15-500M20G-20-LCA

PL12820/1311

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range:	500MHz to 20.0GHz	500MHz to 20.0GHz	
2	Gain:	+15dB Typ.	15.65dB See Plot	
3	Gain Flatness:	±1.75dB Typ.	± 1.05dB See Plot	
4	VSWR: (In/Out)	2.0:1 Typ.	Input 1.48:1 Output 1.66:1 See Plot	
5	Noise Figure:	3.0dB Typ.	500MHz:5.05dB 2GHz:4.47dB 10GHz:3.21dB 20GHz:5.35dB See Plot	
6	OP1dB:	+20dBm Typ.	+20dBm	
7	DC Supply:	+12 to +15 VDC @180mA Typ.	285mA @ +12 to +15 VDC	

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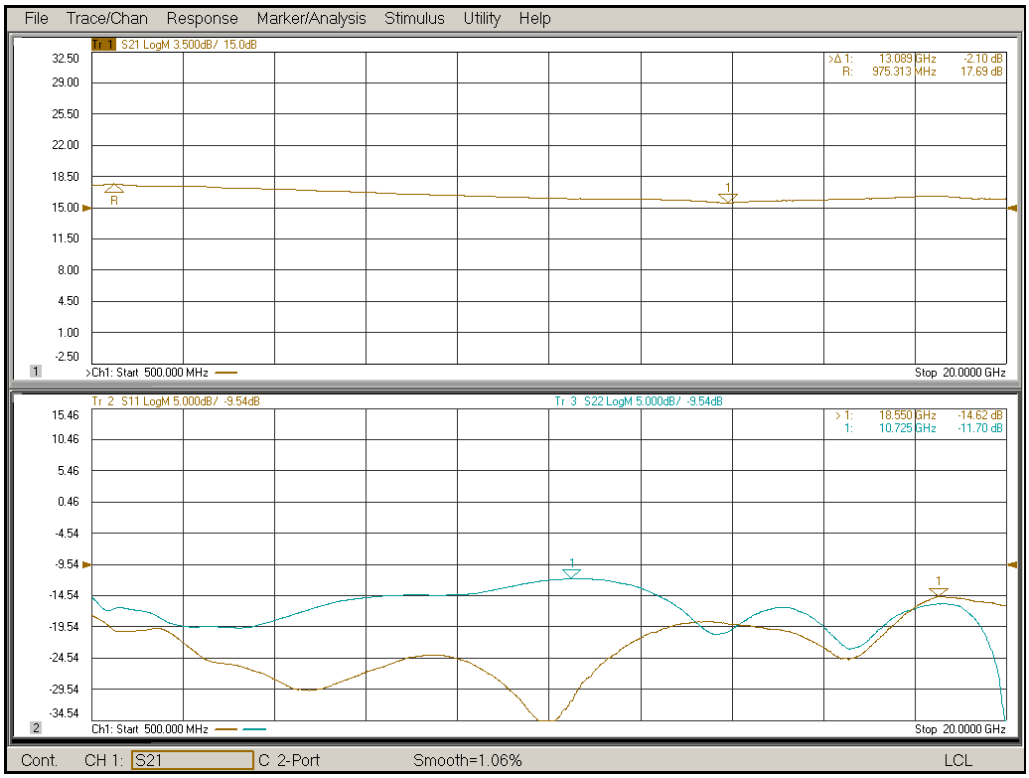
Gain & Return Loss



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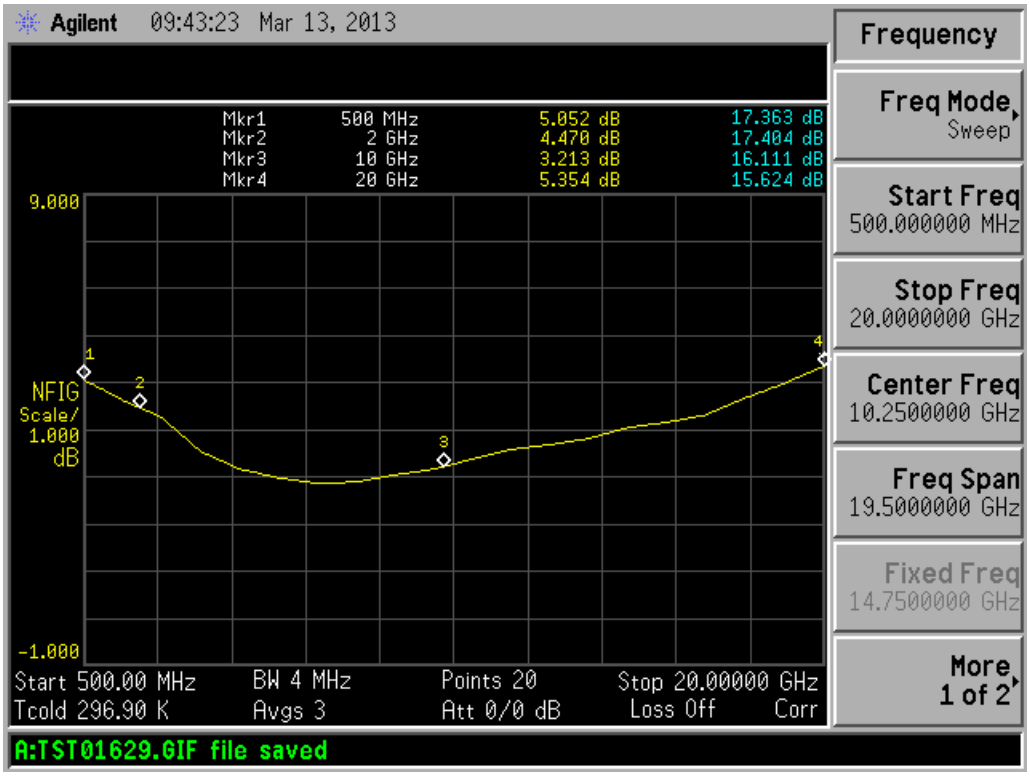
Noise Figure Plot (500MHz to 20GHz)



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Typical Characteristics
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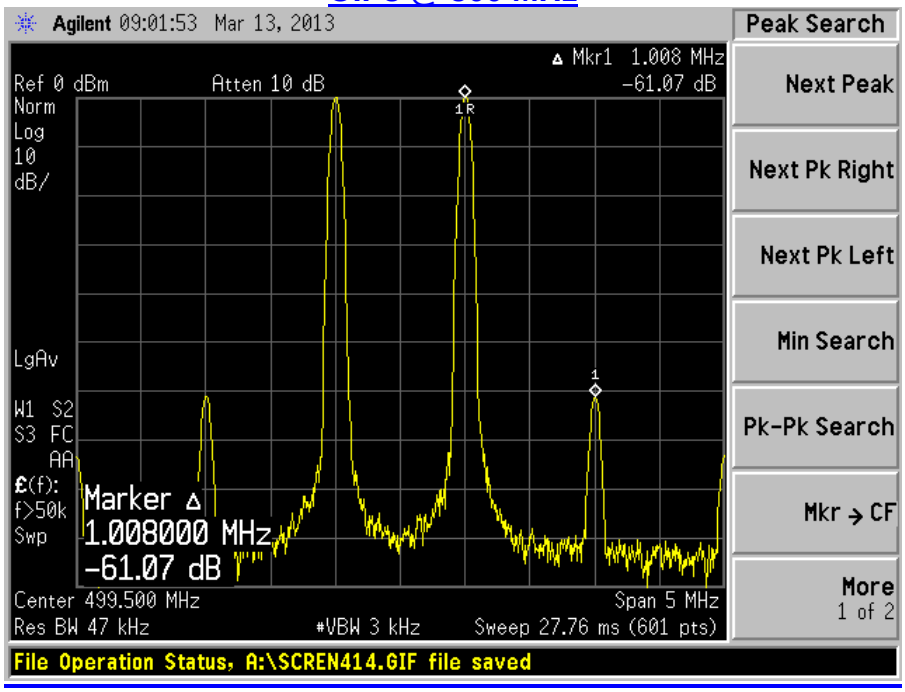
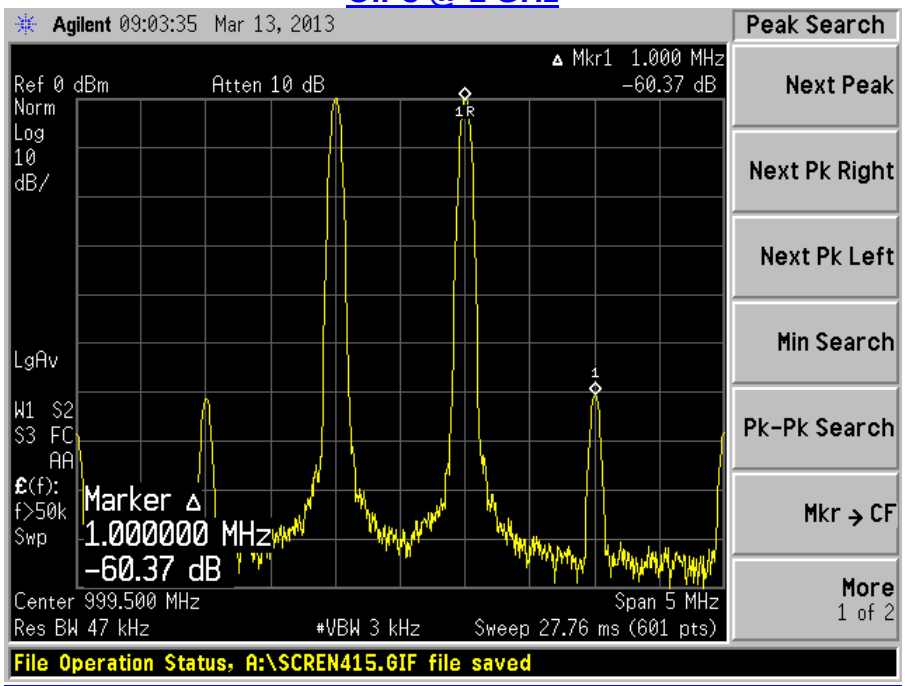
OIP3 @ 500 MHz



OIP3 = Pout + dBc/2
+30.53dBm = 0 + (61.07/2)

OIP3 @ 1 GHz



OIP3 = Pout + dBc/2
+30.18dBm = 0 + (60.37/2)

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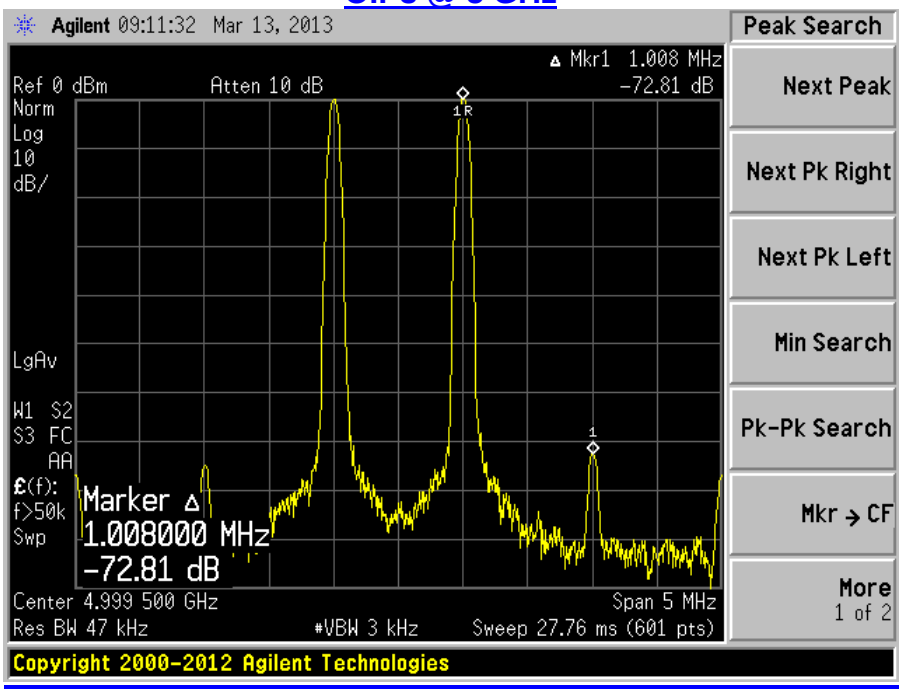
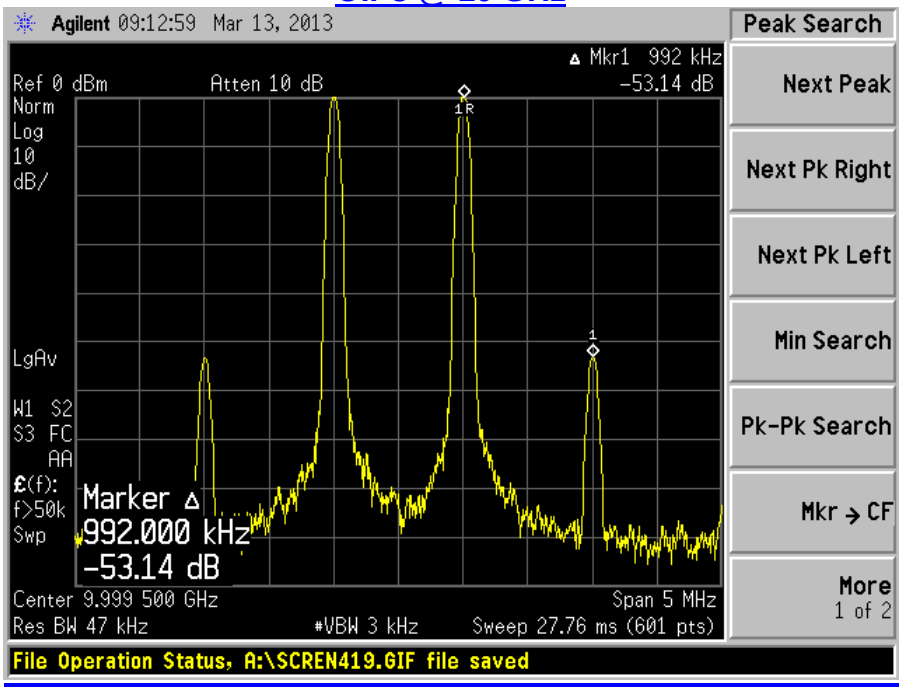
OIP3 @ 5 GHz



OIP3 = Pout + dBc/2
+36.40dBm = 0 + (72.81/2)

OIP3 @ 10 GHz



OIP3 = Pout + dBc/2
+26.57dBm = 0 + (53.14/2)

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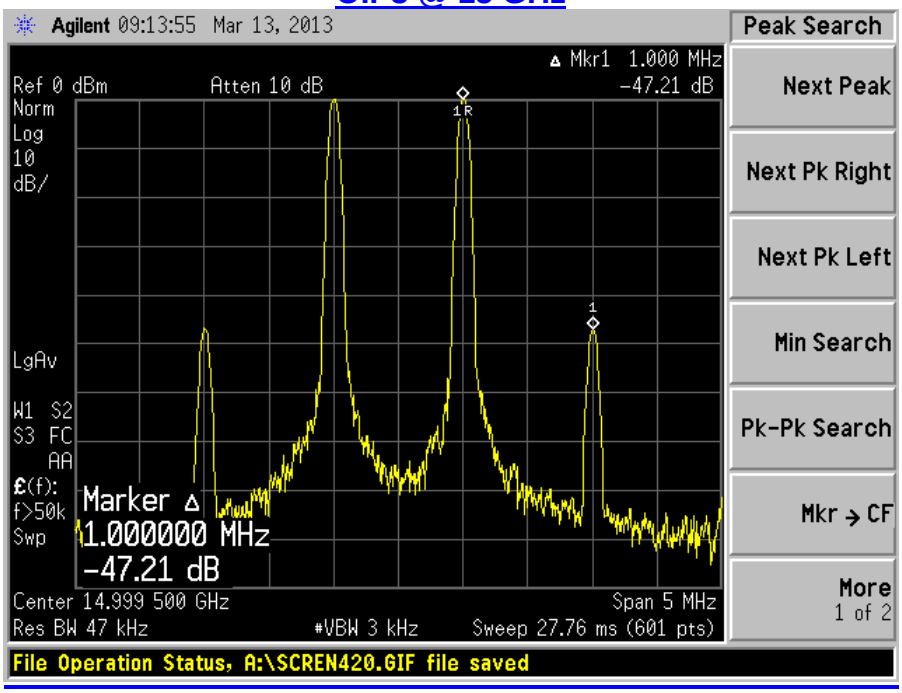
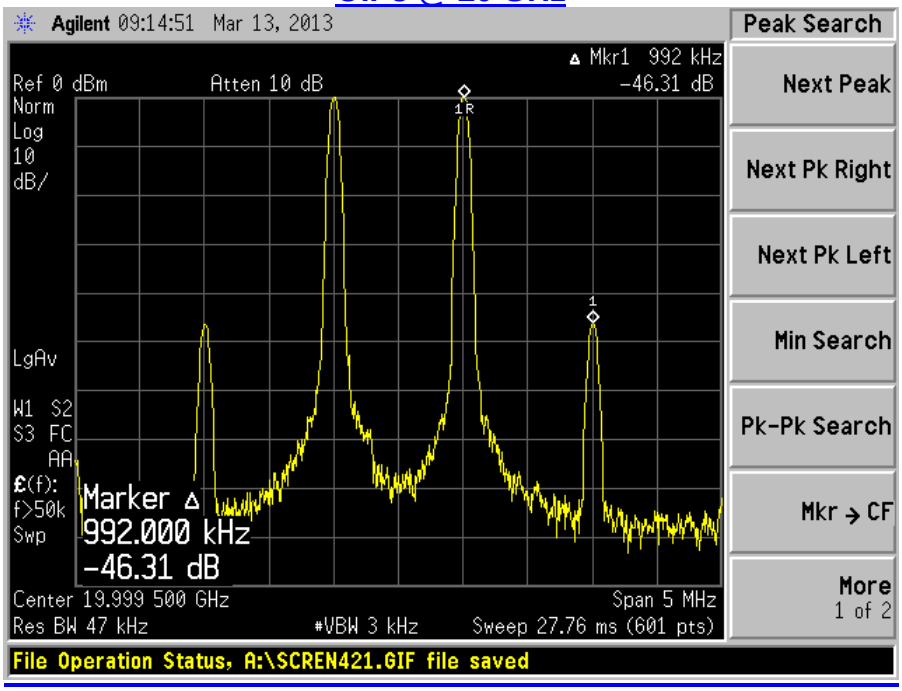
OIP3 @ 15 GHz



OIP3 = Pout + dBc/2
+23.60dBm = 0 + (47.21/2

OIP3 @ 20 GHz



OIP3 = Pout + dBc/2
+23.15dBm = 0 + (46.31/2

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