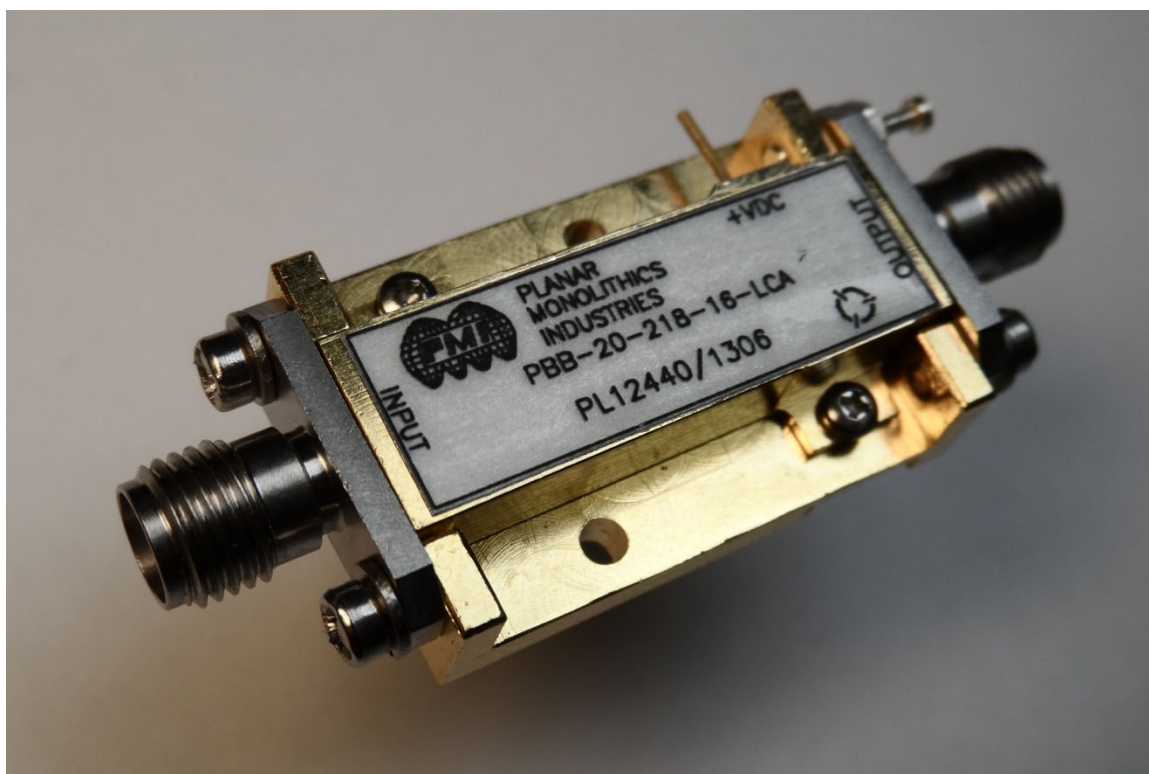




PL12440/1306

Typical Characteristics On PBB-20-218-16-LCA



February 8, 2013
Tested By: Hugo Gonzales
Reported by: Hugo Gonzales



PL12440/1306

Description:

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

Specifications:

Frequency Range:	2 to 18 GHz
Gain:	+20dB Typ.
Gain Flatness:	+/- 2.0dB Max.
Noise Figure:	4.0dB Typ.
OP1dB:	+14dBm Min.
VSWR Input/Output:	2.0:1 Max.
DC Voltage Supply:	+12 to +15VDC
DC Current Draw:	150mA Max.
Connectors In/Out:	SMA Female
Finish:	Gold Plated

Features:

Internal Voltage Regulation
Unconditional Stability

Available Options:

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

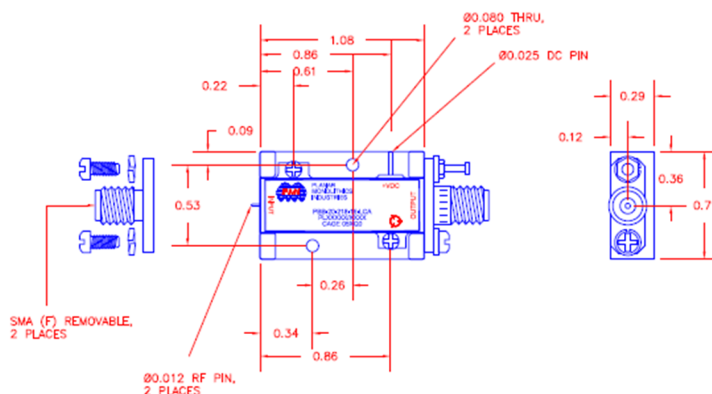
Environmental Ratings:

Temperature:	-20°C to + 70°C (Operating) -55°C to +125°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

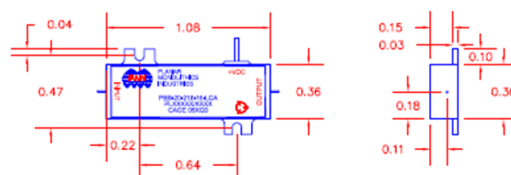
Note: The above specifications are subject to change or revision.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A1		ORIGINAL RELEASE	02/21/08	
A2		ECN # 13-0092	07/29/13	

PE2 HOUSING WITH CARRIER



PE2 HOUSING WITHOUT CARRIER (SURFACE MOUNT)



PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED



ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX .0050
X.XXX .0010

APPROVALS		DATE		TITLE	
DRAWN	K.M.	02/21/08		PRODUCT FEATURE	
CHECKED				PBB-20-218-16-LCA	
ISSUED					
SIZE	FSOM NO.	DWG NO.	REV.		
A	05XQ0	PBB-20-218-16-LCA	A2		
SCALE	N:S		SHEET	1 OF 1	

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



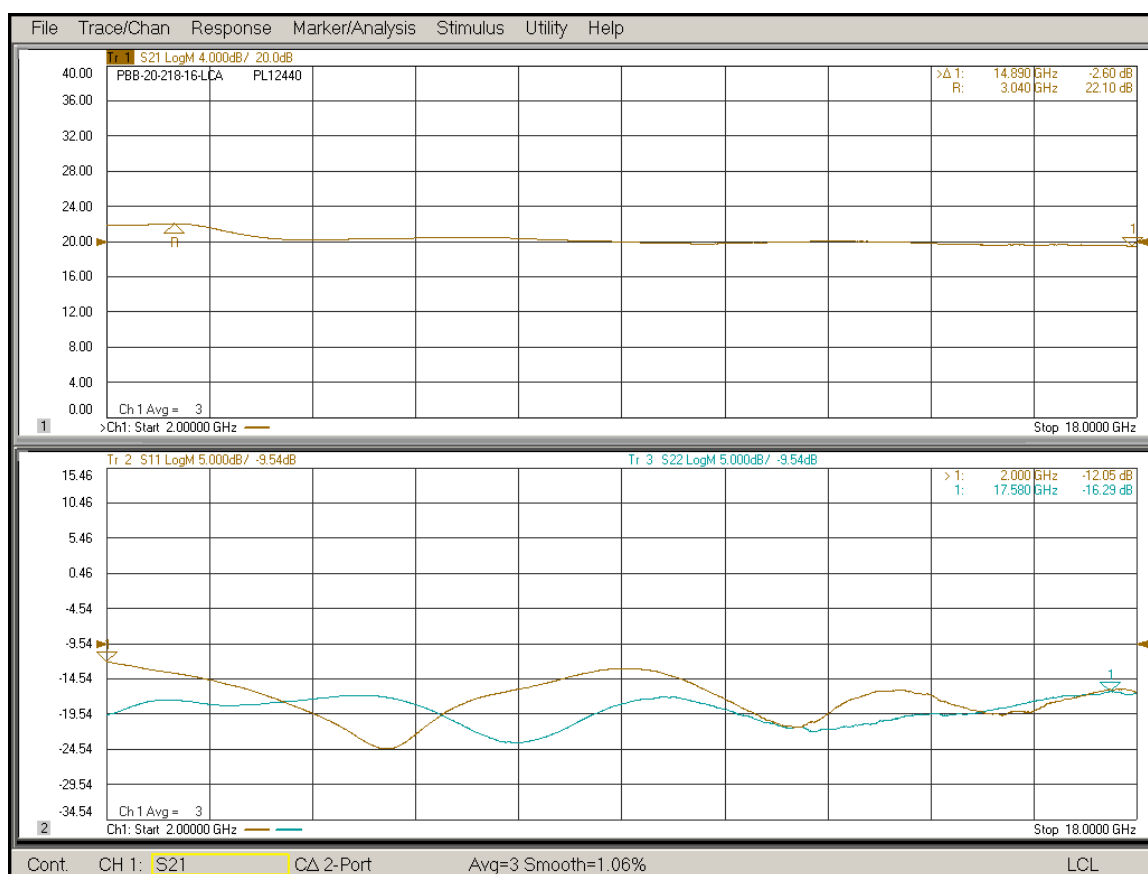
PL12440/1306

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range:	2 – 18 GHz	2 – 18 GHz See Plot	
2	Gain:	+20dB Typ.	19.54dB See Plot	
3	Gain Flatness:	±2.0dB Max.	± 1.3dB See Plot	
4	Noise Figure:	4.0dB Typ.	6.0dB See Plot	
5	Pout @ 1dB Compression:	+14dBm Min.	+14dBm	
6	VSWR In/Out:	2.0:1 Max.	Input 1.67:1 Output 1.37:1 See Plot	
7	DC Supply:	+12 TO +15VDC @ 150mA Max.	150mA	



PL12440/1306

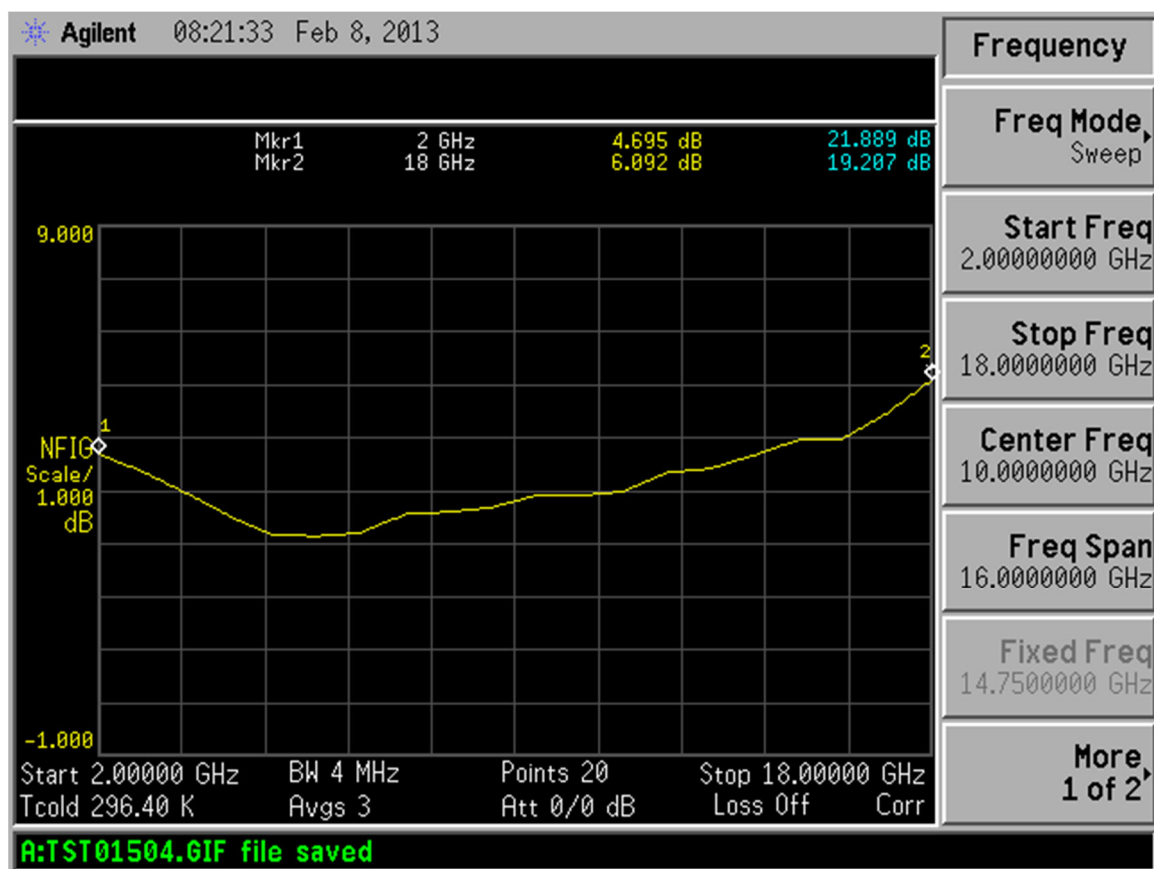
Gain & Return Loss





PL12440/1306

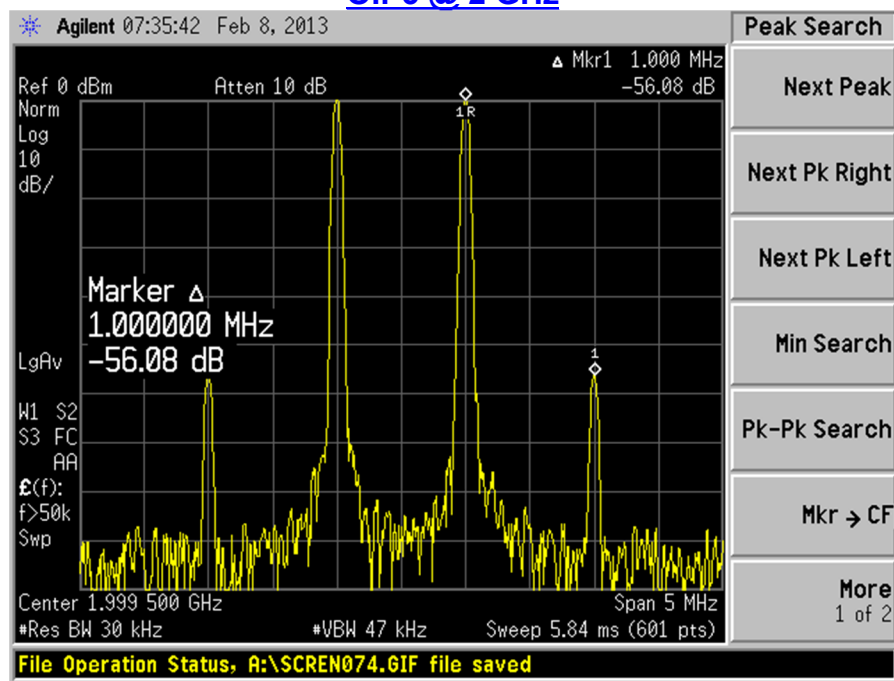
Noise Figure Plot





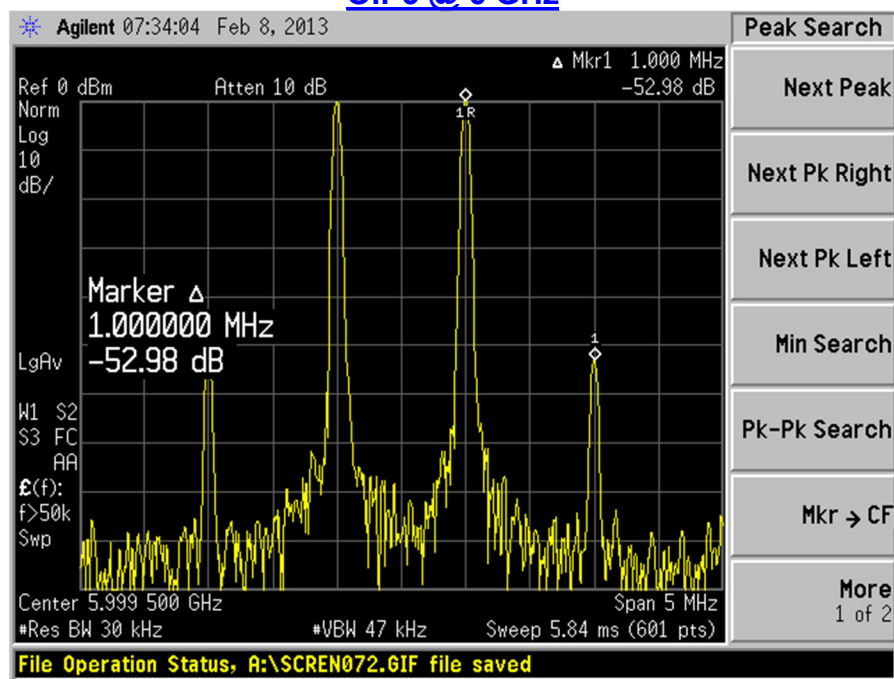
PL12440/1306

OIP3 @ 2 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ +28.04\text{dBm} &= 0 + (56.08/2) \end{aligned}$$

OIP3 @ 6 GHz

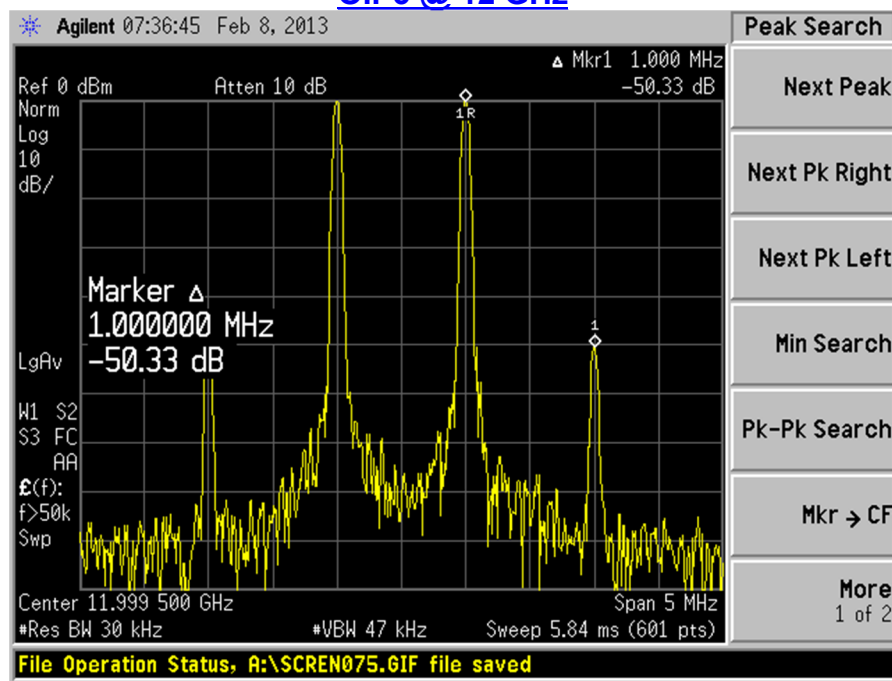


$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ +26.49\text{dBm} &= 0 + (52.98/2) \end{aligned}$$



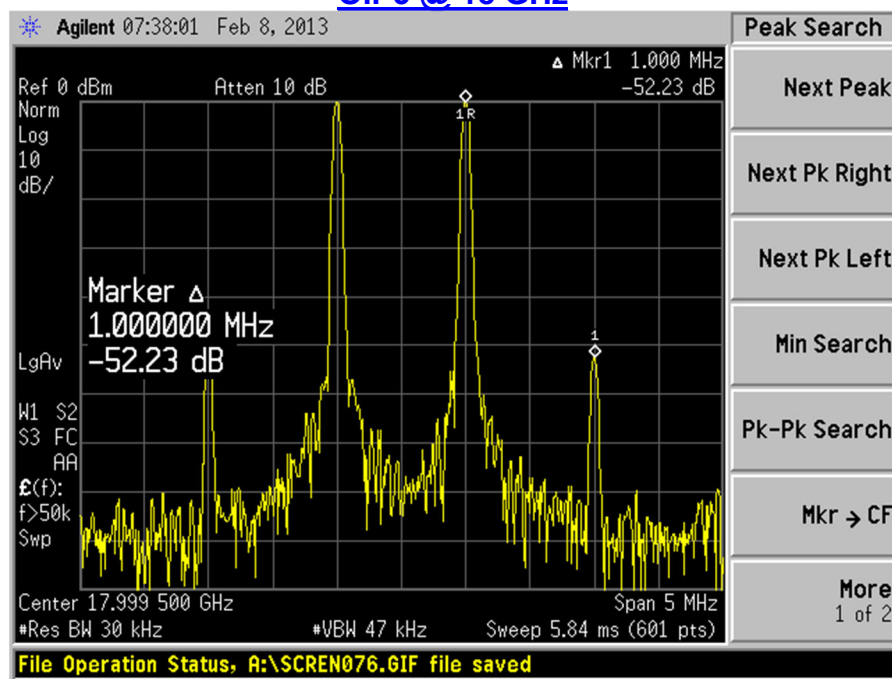
PL12440/1306

OIP3 @ 12 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 25.16 \text{ dBm} = 0 + (50.33/2) \end{aligned}$$

OIP3 @ 18 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 26.11 \text{ dBm} = 0 + (52.23/2) \end{aligned}$$