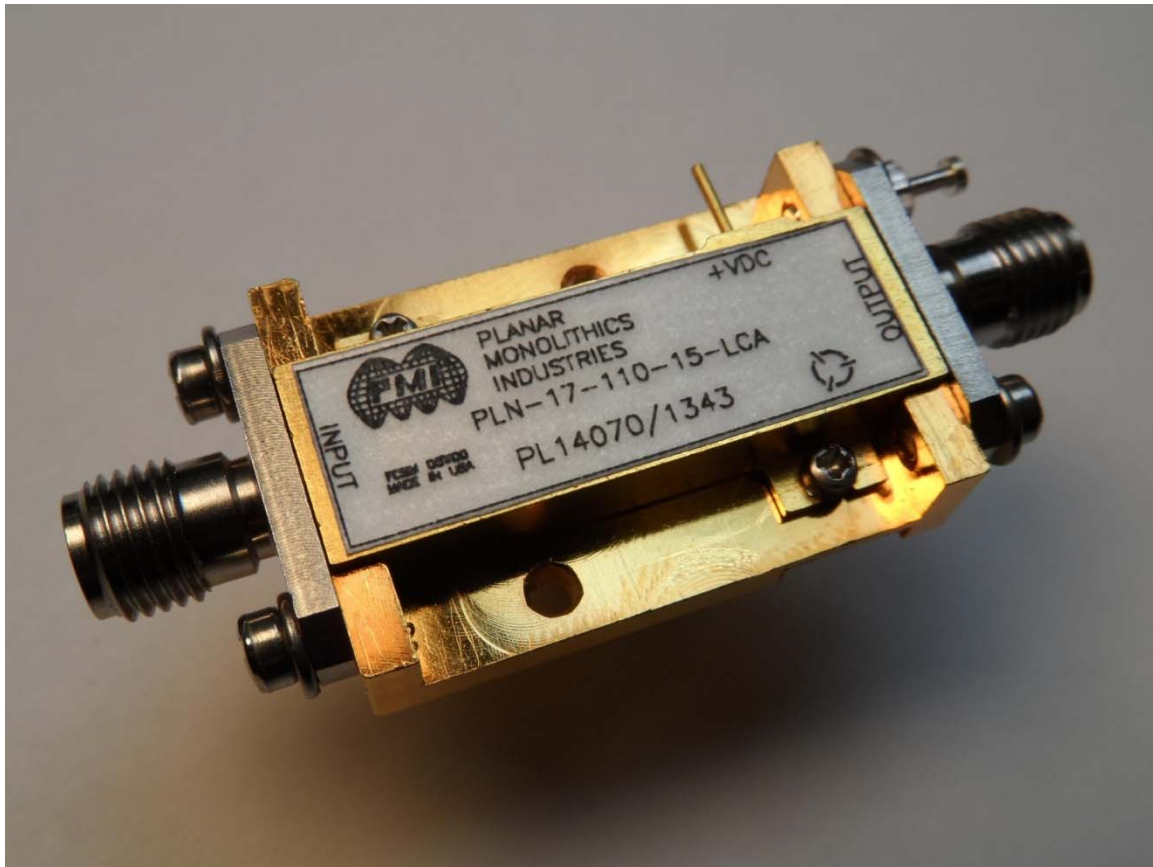




Typical Characteristics On PLN-17-110-15-LCA

PL14070/1343

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



October 11, 2013
Designed By: Kevin Mason

Tested & Reported by:
Hugo Gonzales



Typical Characteristics On PLN-17-110-15-LCA

PL14070/1343

Description:

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

Specifications:

Frequency Range: 1.0 to 10.0 GHz
 Gain: 17dB Typ.
 Gain Flatness: +/- 1.5dB Typ.
 Noise Figure: 2.0dB Typ.
 OP1dB: 13dBm Typ.
 VSWR Input/Output: 2.0:1 Typ.
 DC Voltage Supply: +12 to +15VDC
 DC Current Draw: 65mA 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:

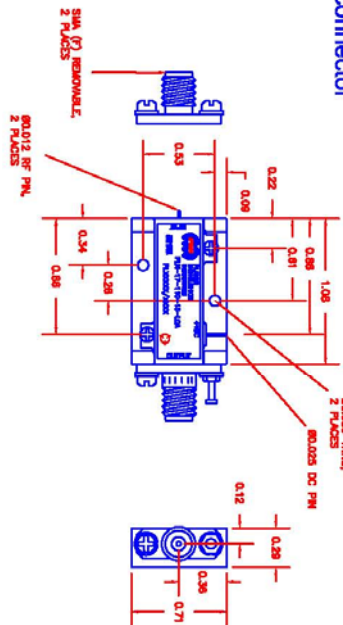
Various Package types
 Various Connector types
 Temperature Compensation
 Gain and Phase Matching
 MIL-STD-883 Screening Available

Environmental Ratings:

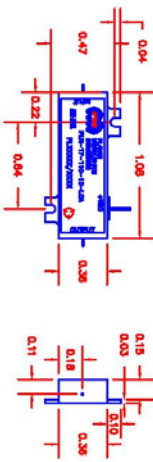
Temperature: -20°C to +70°C (Operating)
 -55°C to +125°C (Storage)
 Humidity: MIL-STD-202F, METHOD 1038 COND B
 Shock: MIL-STD-202F, METHOD 2138 COND B
 Altitude: MIL-STD-202F, METHOD 1055 COND B
 Temperature Cycle: MIL-STD-202F, METHOD 107D COND A

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

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	09/18/19	



PE2 HOUSING WITHOUT CARRIER (SURFACE MOUNT)



PMI CONFIDENTIAL AND PROPRIETARY

ALL DIMENSIONS ARE IN INCHES
 TOL. ENGRAVERS: 500
 CXX 24.00
 X2XX 24.75

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 9001:2008 CERTIFIED

PMI

APPROVALS

APPROVALS	DATE	TITLE
DESIGNED: <i>AMS</i>	09/14/19	PRODUCT FEATURE
CHECKED:		PLN-17-110-15-LCA
ISSUED:		PLN-17-110-15-LCA
SIZE: FROM NO. A	05X00	REV. NO. A1
QUANTITY: 1	OF 1	



Typical Characteristics On PLN-17-110-15-LCA

PL14070/1343

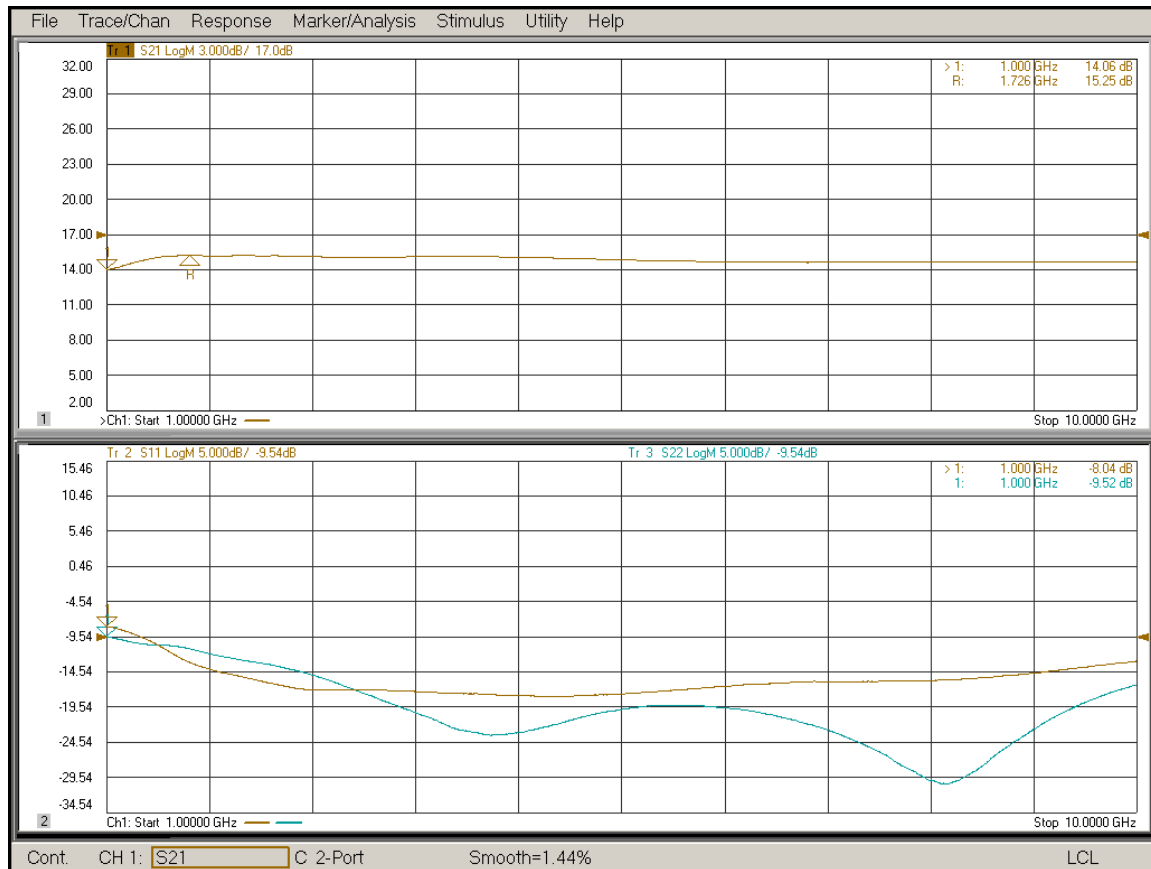
TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	1.0 to 10.0 GHz	1.0 to 10.0 GHz See Plot	
2	Gain:	17dB Typ.	14.06dB See Plot	
3	Gain Flatness:	± 1.5 dB Typ.	± 0.59 dB See Plot	
4	Noise Figure:	2.0dB Typ.	2.23dB @ 10GHz See Plot	
5	OP1dB:	13dBm Min.	> 13dBm	
6	VSWR In/Out:	2.0:1 Typ.	Input 2.31:1 Output 2.01:1 See Plot	
7	DC Supply:	65mA @+12 to +15 VDC Typ.	60mA	



Typical Characteristics On PLN-17-110-15-LCA

PL14070/1343

Gain & Return Loss Plot

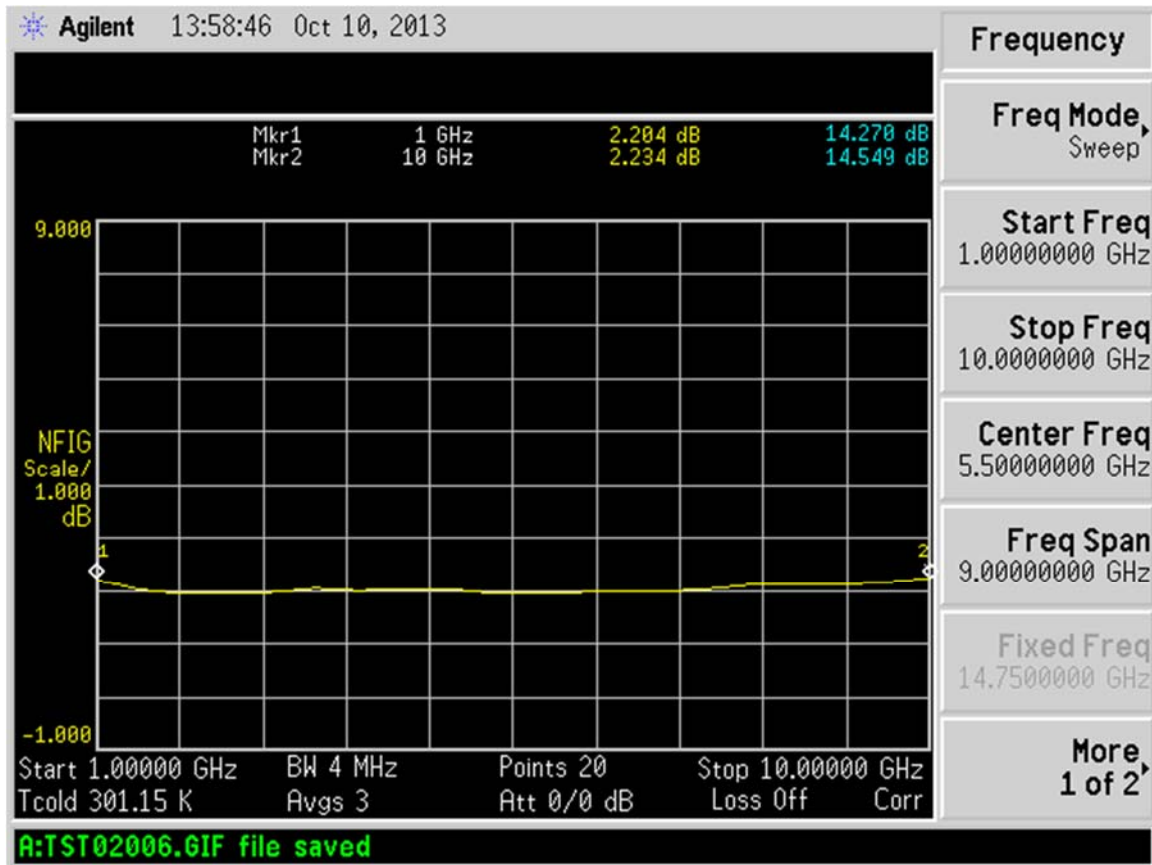




Typical Characteristics On PLN-17-110-15-LCA

PL14070/1343

Noise Figure Plot

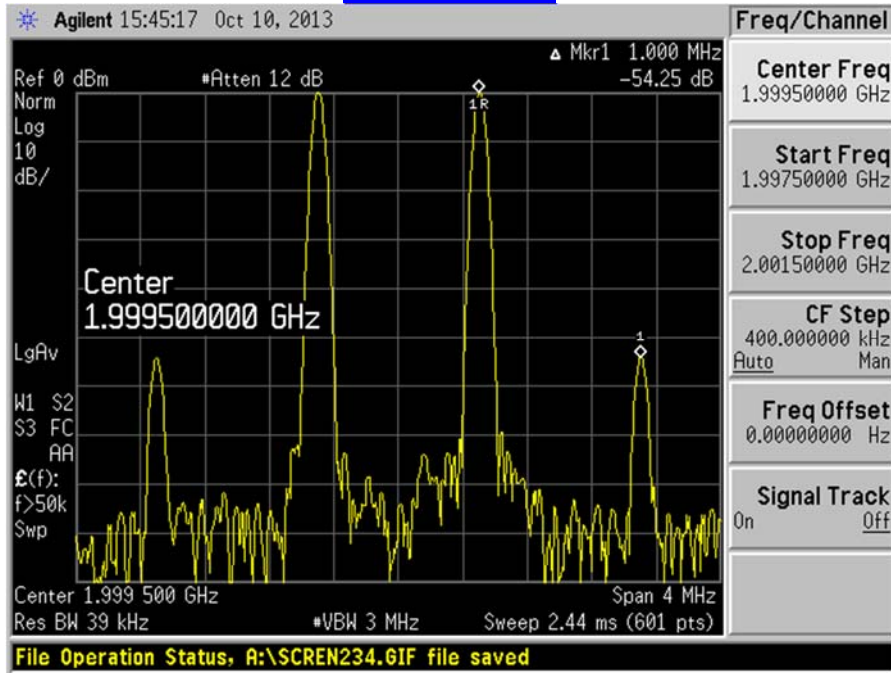




Typical Characteristics On PLN-17-110-15-LCA

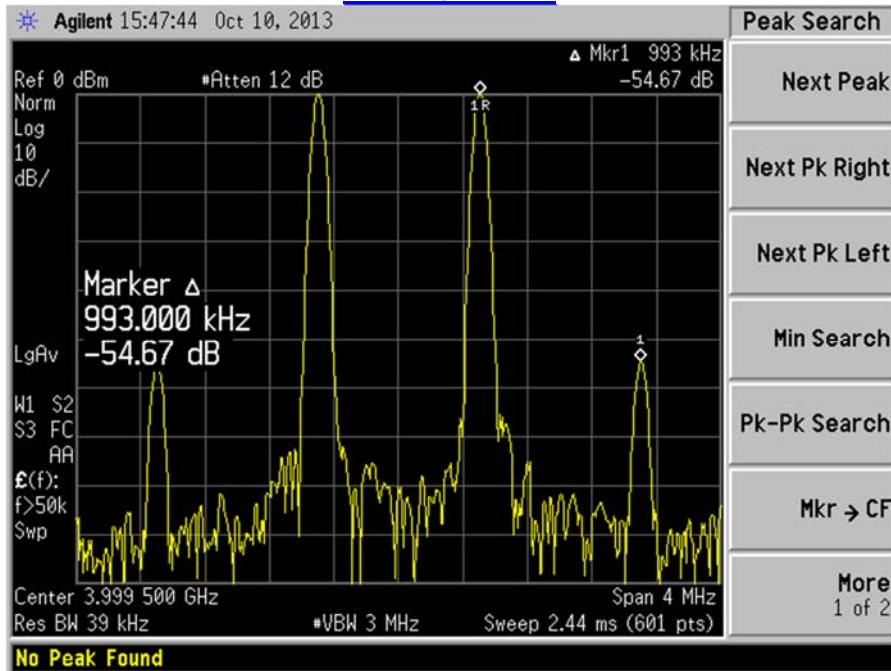
PL14070/1343

OIP3 @ 2 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 27.12\text{dBm} = 0 + (54.25/2) \end{aligned}$$

OIP3 @ 4 GHz



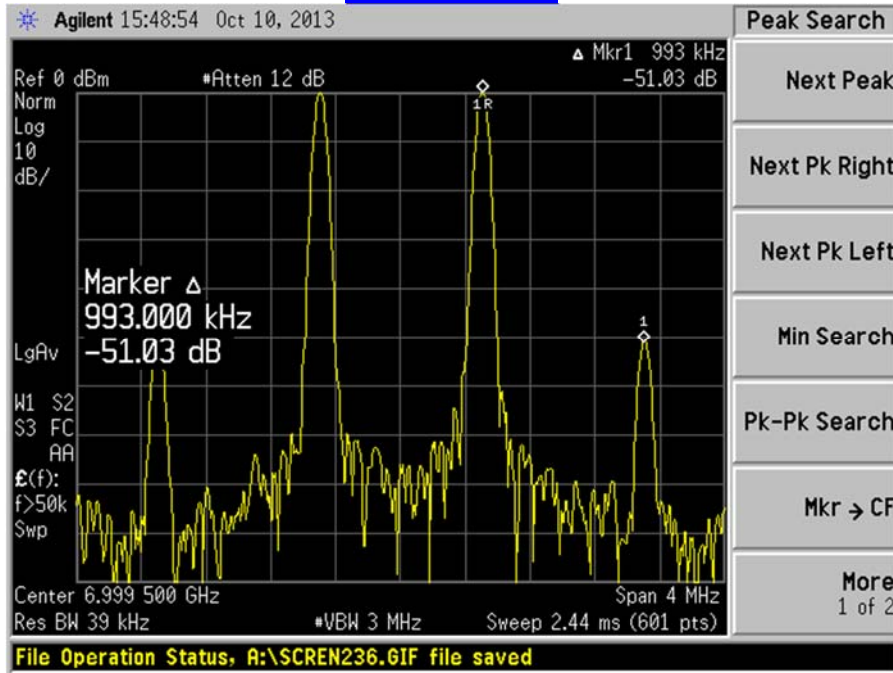
$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 27.33\text{dBm} = 0 + (54.67/2) \end{aligned}$$



Typical Characteristics On PLN-17-110-15-LCA

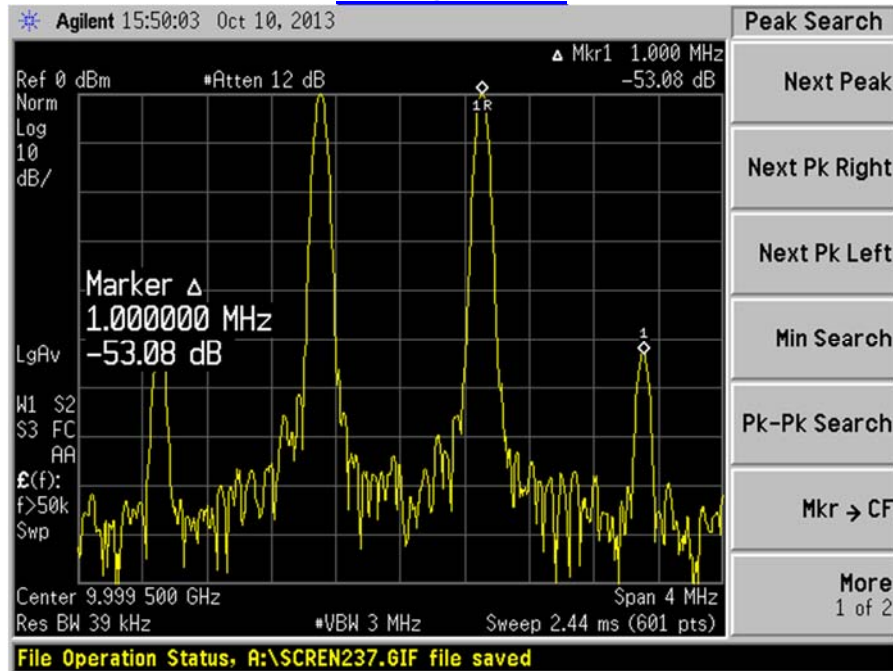
PL14070/1343

OIP3 @ 7 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 25.51 \text{ dBm} = 0 + (51.03/2) \end{aligned}$$

OIP3 @ 10 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 26.54 \text{ dBm} = 0 + (53.08/2) \end{aligned}$$