Typical Characteristics On PE2-42-5D6G18G-4R0-19-15-SFF

PL19827/1633

PE2-42-5D6G18G-4R0-19-15-SFF IS A 5.6 to 18.0GHz LOW NOISE AMPLIFIER WITH A NOMINAL GAIN OF 45 dB, +19.0 dBm COMPRESSION POINT AND A NOISE FIGURE OF 4.0 dB TYPICAL AT ROOM TEMPERATURE.

Designed by: PMI Engineering

August 23, 2016
Tested by: Harold Holvick
Reported by: Harold Holvick

7311-F Grove Road, Frederick, MD 21704 USA
Phone: (301) 662-5019 Fax: (301) 662-1731
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Description:

PMI Model No. PE2-42-5D6G18G-4R0-19-15-SFF is a Low Noise Amplifier designed for Military and Industrial applications. This amplifier is supplied in our standard PE2 housing that can be used as an SMA connectorized or a surface mount component. Other packages and connector types are available.

This model provides the following performance.

Specifications:

Frequency Range:	5.6 to 18.0 GHz
Gain:	42dB Min. / 48dB Max.
Gain Flatness:	+/- 2.5dB Max.
Noise Figure:	4.0dB Typ., 5.0dB Max.
OP1dB:	19dBm Min.
OIP3:	+27dBm Typ.
VSWR Input/Output:	2.0:1 / 2.0:1 Max.
Input Power:	+20dBm CW Max.
RF Leakage:	60dBc
DC Voltage Supply:	+12 to +15VDC
DC Current Draw:	400mA Typ.
Connectors In/Out	SMA Female
Finish	Gold Plated

Features:

Internal Voltage Regulation
Unconditional Stability

Available Options:

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

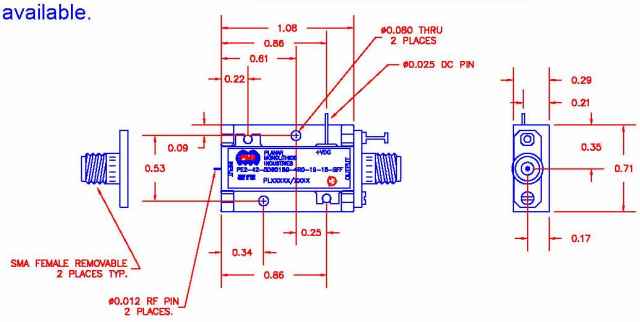
Environmental Ratings:

Temperature:	-40 to +85 Deg. C (Operating);
	-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

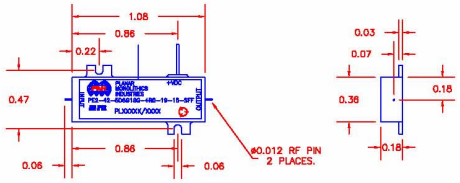
Note: The above specifications are subject to change or revision.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	07/22/16	

PE2 HOUSING WITH CARRIER



PE2 HOUSING WITHOUT CARRIER (SURFACE MOUNT)



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

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
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FREDERICK, MARYLAND 21704 USA
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E-MAIL: sales@pmi-rf.com
ISO 9001:2008 CERTIFIED

APPROVALS	DATE
DRAWN ANG	07/22/16
CHECKED	
ISSUED	

TITLE: PRODUCT FEATURE
PE2-42-5D6G18G-4R0-19-15-SFF

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27029731	1

SCALE N:S SHEET 1 OF 1

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TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	5.6 to 18.0GHz	**5.6 to 18.0GHz**	
2	Gain	42dB Min. / 48dB Max.	**44.2 dB**	
3	Gain Flatness	+/- 2.5dB Max.	**+/- 1.4 dB**	
4	Noise Figure	4.0dB Typ. 5.0 dB Max.	**4.23 dB Max (See Plot)**	
5	OP1dB	19dBm Min.	**+21.1 dBm Min**	
6	OIP3	+27dBm Typ.	**+30.8 dBm Min**	
7	VSWR Input/Output:	2.0:1 / 2.0:1 Max.	**1.89:1/1.84:1 (See Plot)**	
8	Input Power:	+20dBm CW Max.	**PASS**	
9	RF Leakage	60dBc	**≥60 dBc**	
10	Power Supply	+12 to +15VDC @ 400mA Typ.	**380 mA**	

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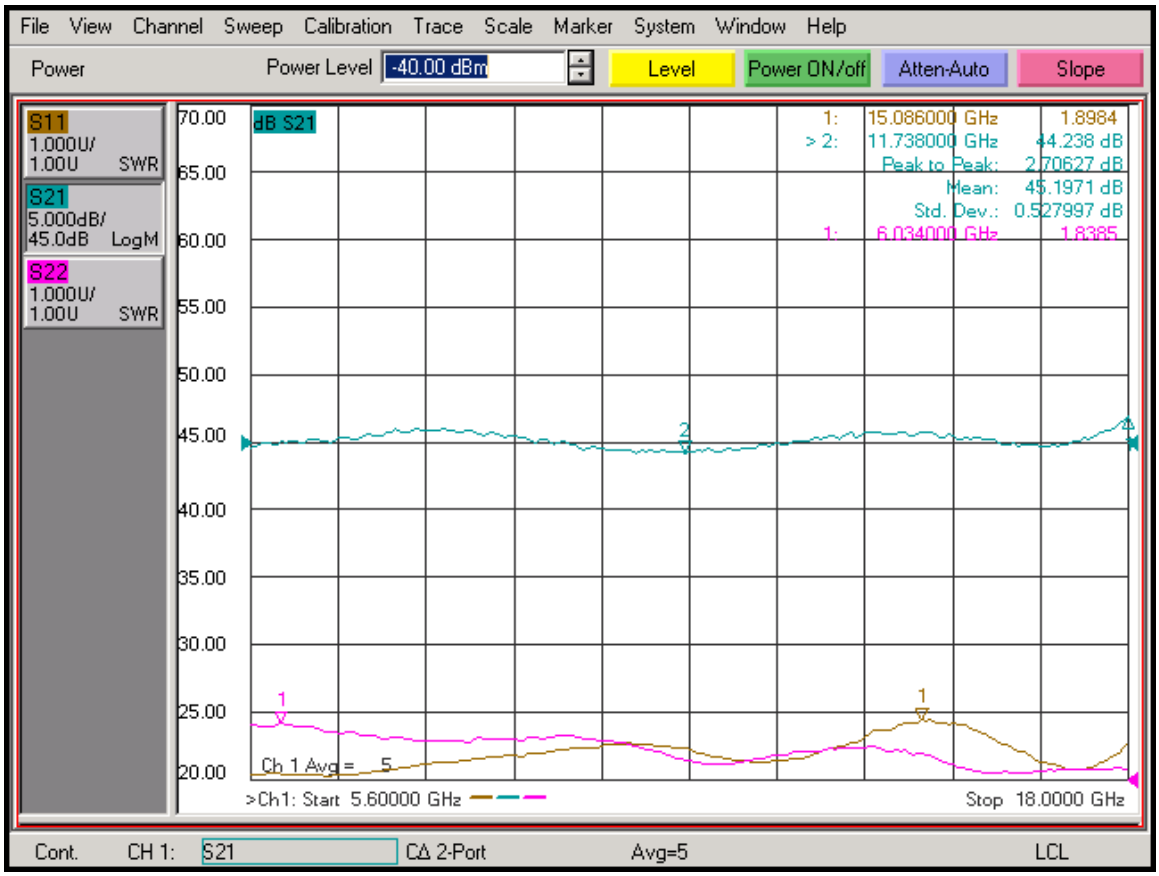
FREQUENCY, GAIN, FLATNESS & VSWR Plot



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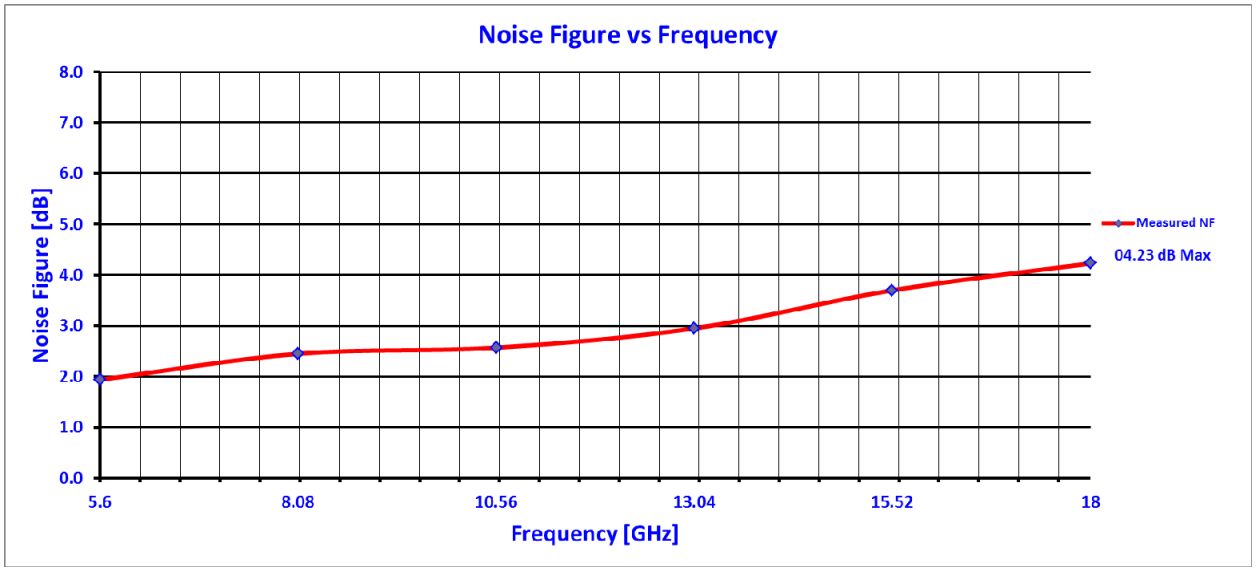

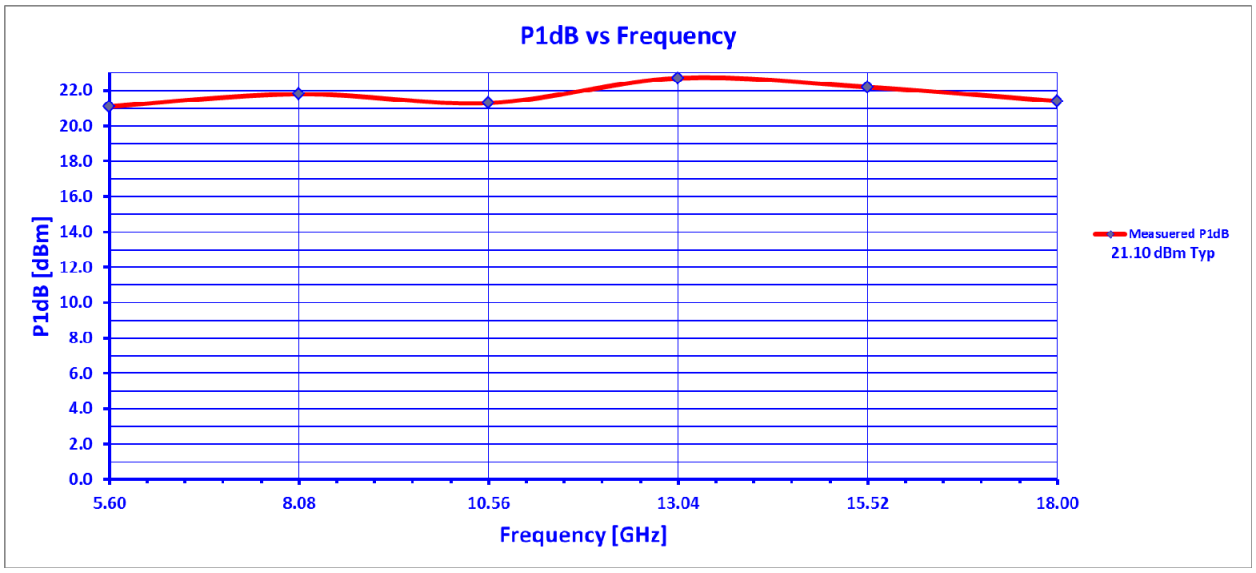

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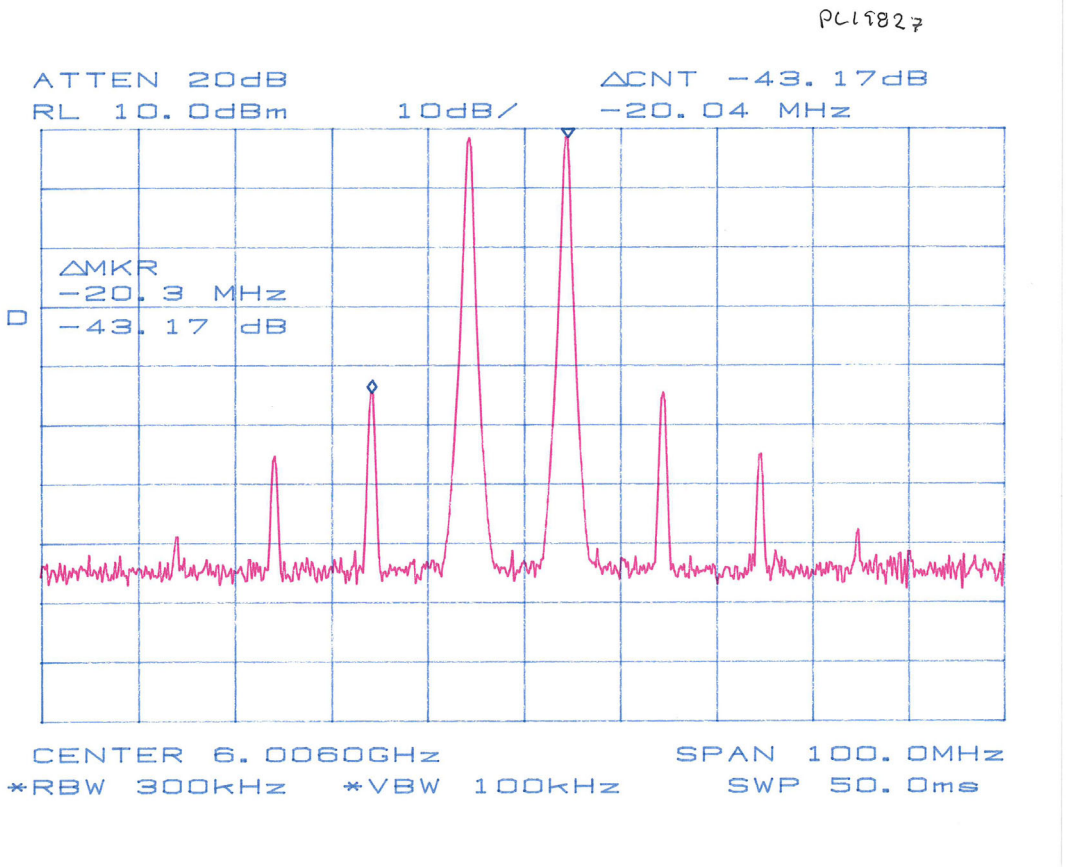
OIP3 @ 6 GHz



OIP3 = Pout + dBc/2
+31.6 dBm = 10 + (43.17/2)

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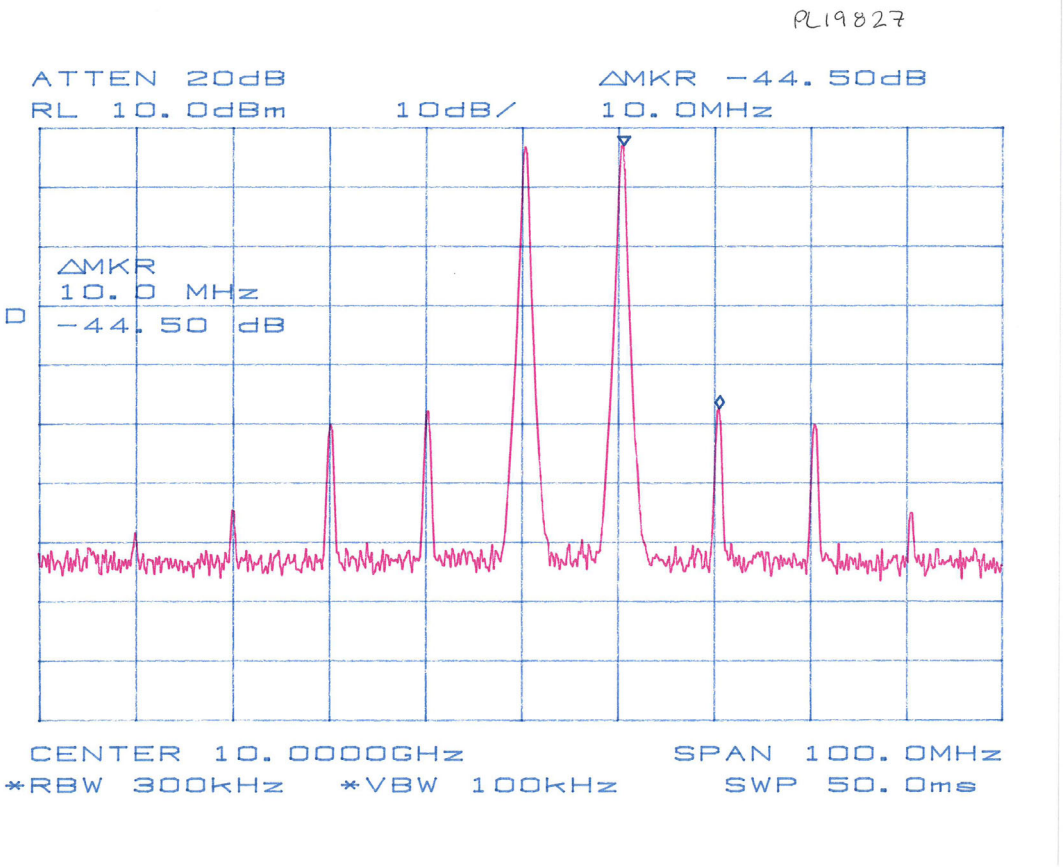
OIP3 @ 10 GHz



OIP3 = Pout + dBc/2
+32.3 dBm = 10 + (44.50/2)

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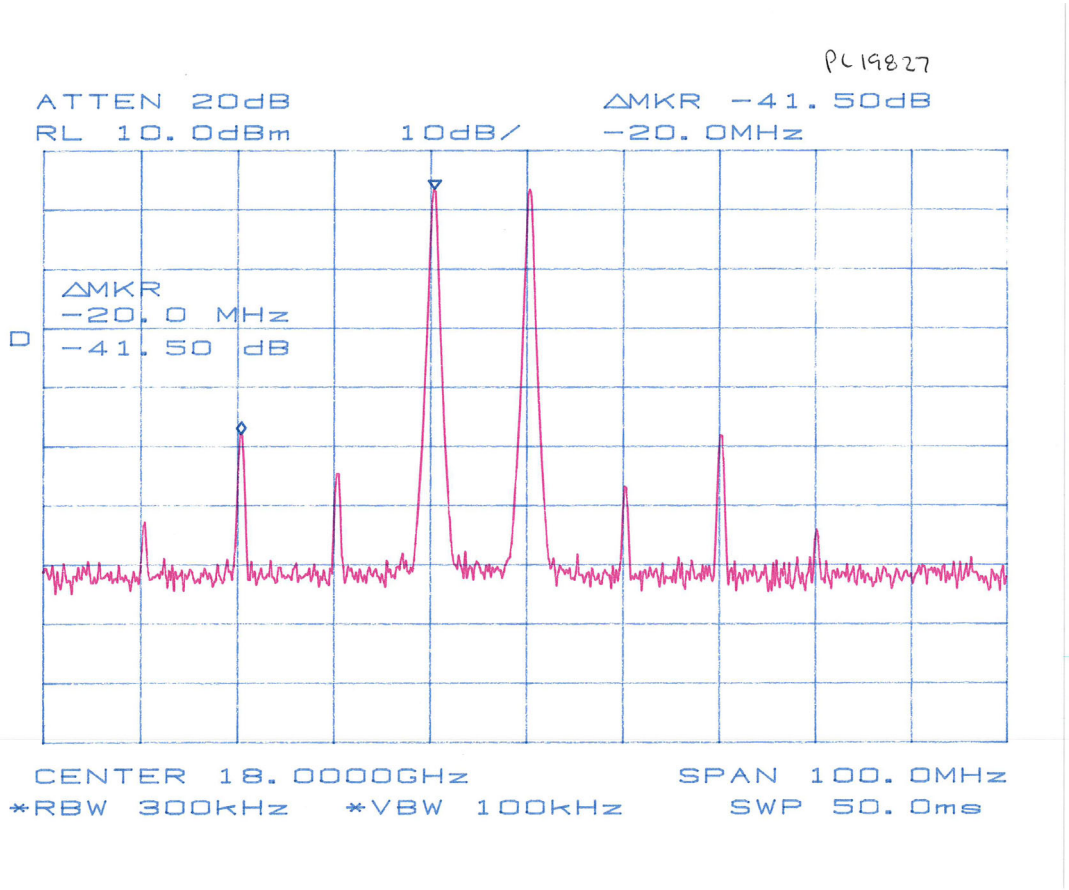
OIP3 @ 18 GHz



OIP3 = Pout + dBc/2
+30.8 dBm = 10 + (41.5/2)

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