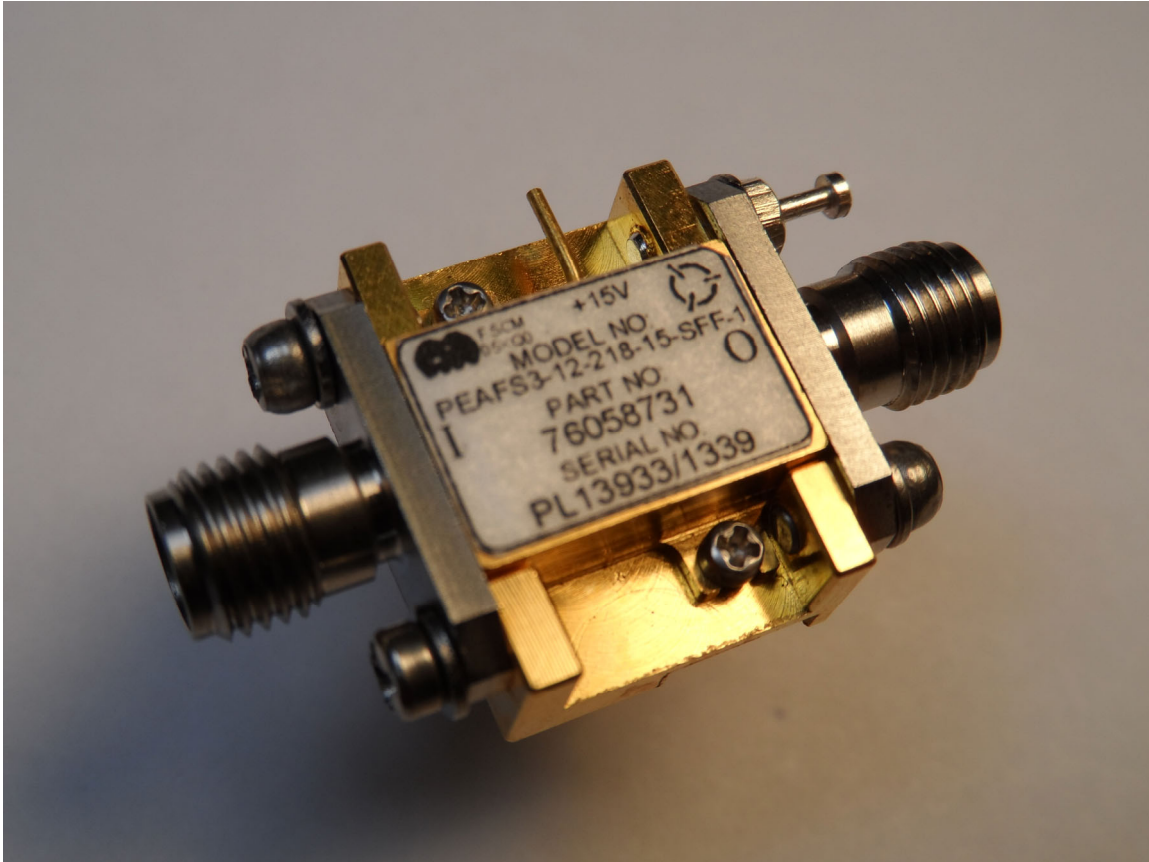




**Typical Characteristics  
On  
PEAFS3-12-218-15-SFF-1**

PL13933/1339

**Model Number: PEAFS3-12-218-15-SFF-1 is a 2 to 18 GHz  
low noise amplifier.**



**September, 20 2013  
Designed By: Kevin Mason**

**Reported & Tested By  
Hugo Gonzales**





## Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 GHz – 18 GHz	2 GHz – 18 GHz See Plot	
2	*Gain:	+15 dB Min. +22 dB Max	18.86dB -54°C 18.12dB +25°C 17.17dB +95°C See Plots	
3	Gain Flatness:	± 2.0 dB Max. (2-18GHz) ±0.75 dB Max (500 MHz BW @ Any Frequency)	± 1.14dB -54°C ± 1.28dB +25°C ± 1.37dB +95°C See Plot	
4	Return Loss: (Input/Output)	9.5 dB Min.	Input 13.41dB +25°C Output 11.59dB +25°C See Plot	
5	Noise Figure:	5.0 dB Max (2 – 4 GHz) 4.1 dB Max (4 – 18 GHz)	(2 – 4 GHz) 4.25dB +95°C (4 – 18 GHz) 3.71dB +95°C See Plot	
6	OP1dB:	+9dBm Min.	>9dBm @ 2 GHz +25°C >9dBm @ 10 GHz +25°C >9dBm @ 18 GHz +25°C	
7	Max Input Power:	+5dBm CW	+5dBm	
8	DC Supply:	+15VDC ±5% @ 180mA Max	+15VDC ±5% @ 168mA Max -54°C +15VDC ±5% @ 173mA Max +25°C +15VDC ±5% @ 173mA Max +95°C	

\*Unit To Unit Gain Tracking vs. Temperature Shall Be Per Figure 2.

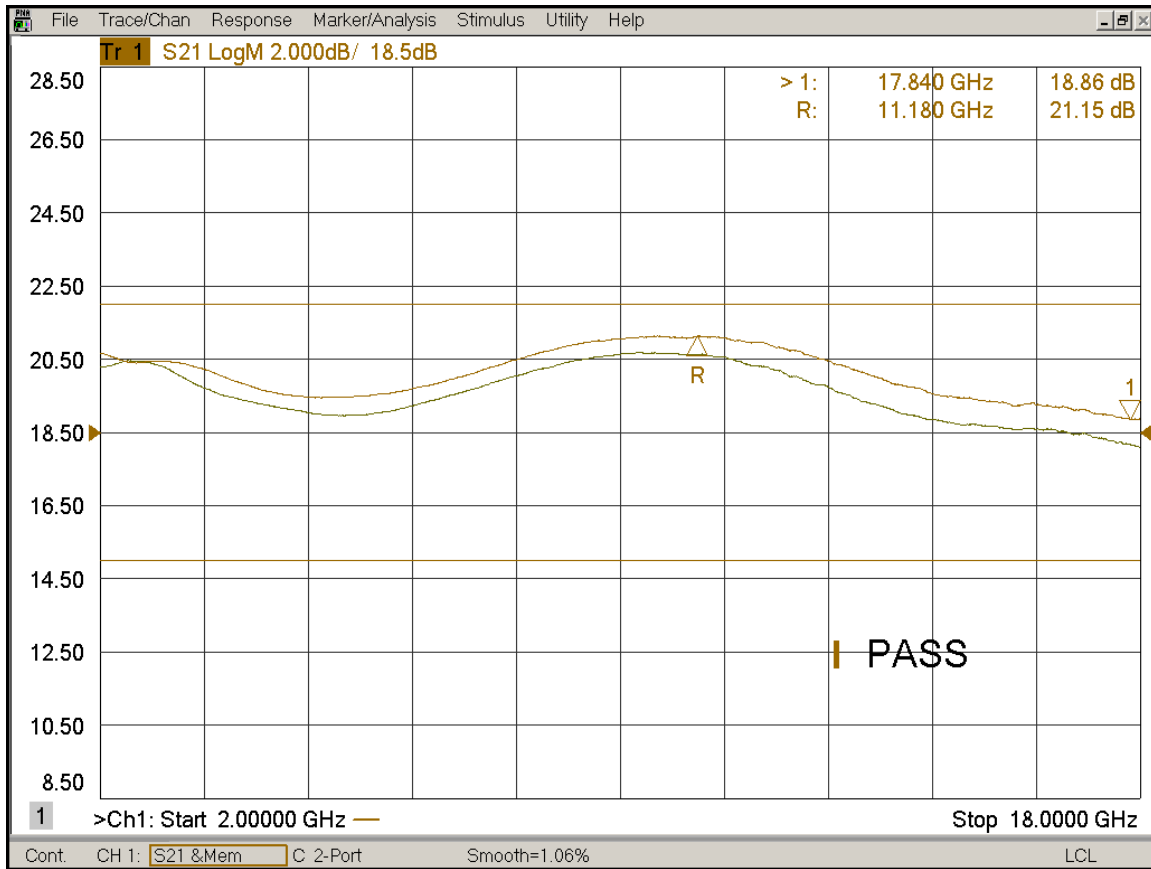
\*Refer to Outline Drawing For Figure 2.



# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## Gain -54°C

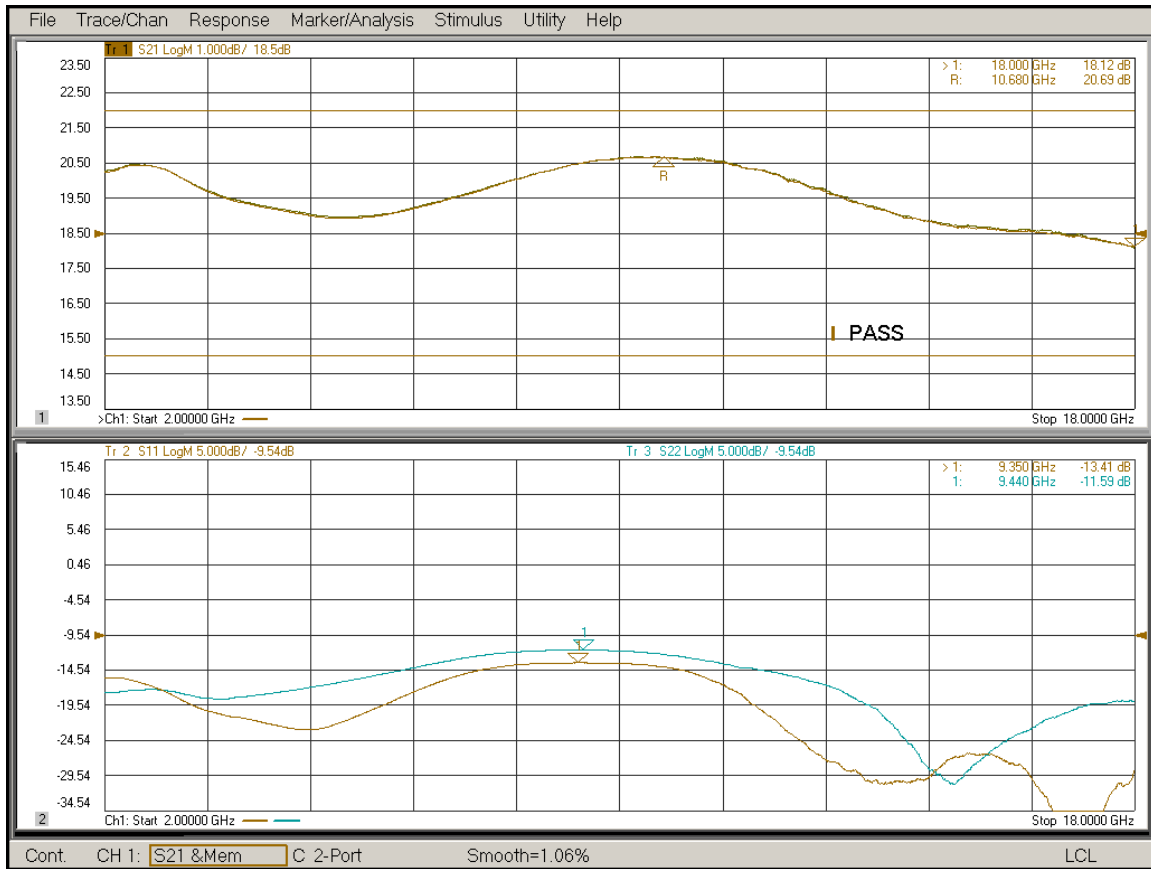




# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## Gain & Return Loss +25°C

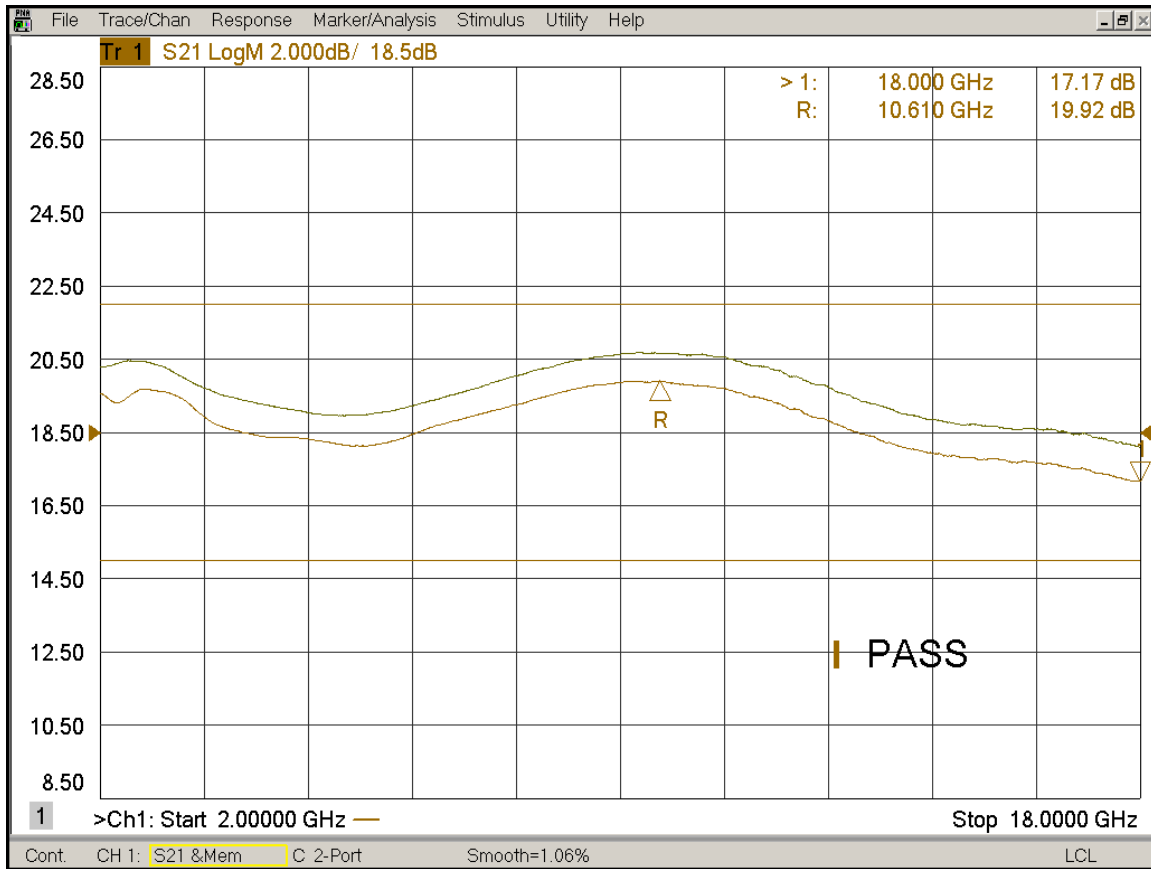




# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## Gain +95°C

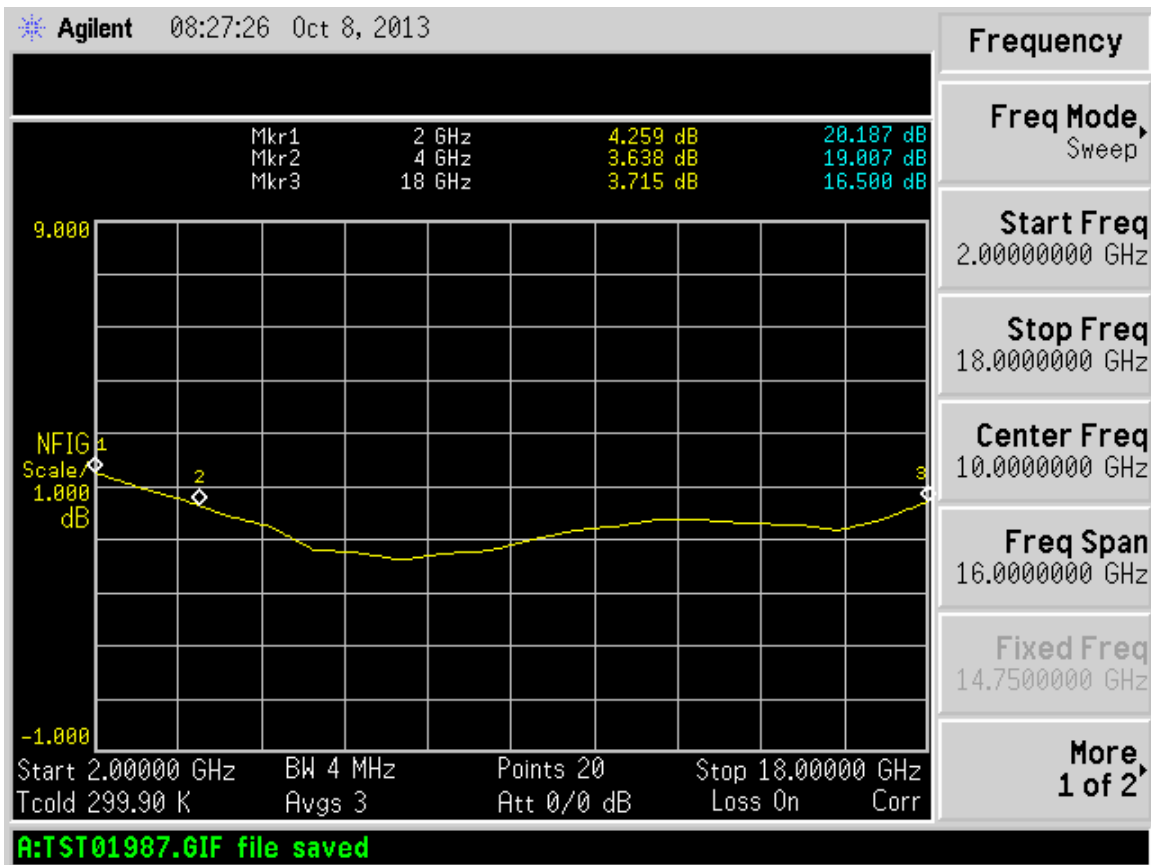




# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## Noise Figure Plot +95°C

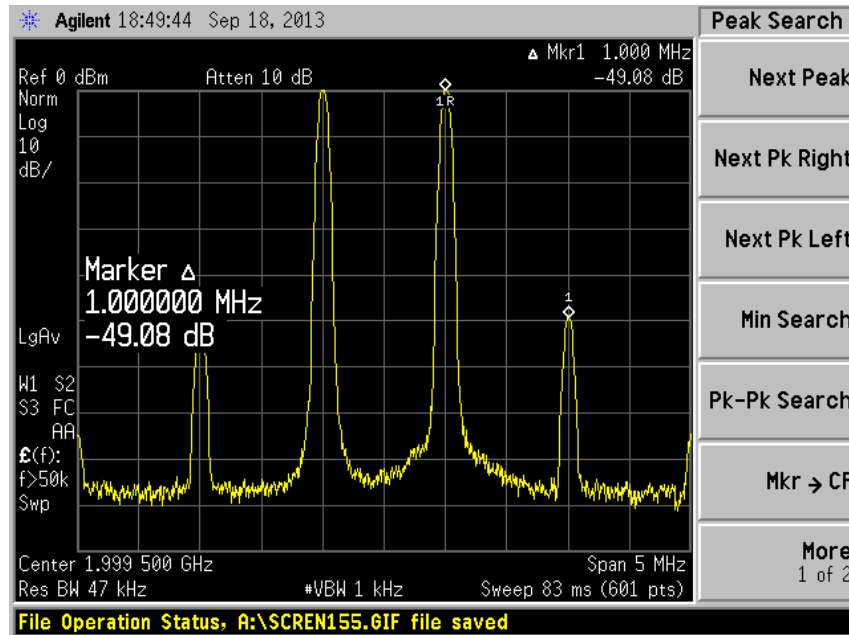




# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## OIP3 @ 2 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ +24.54\text{dBm} &= 0 + (49.08/2) \end{aligned}$$

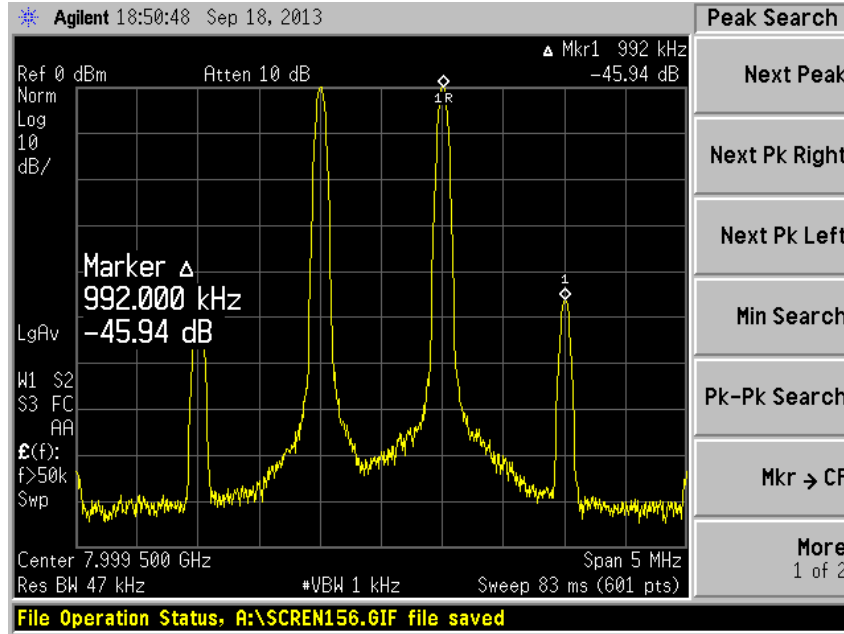




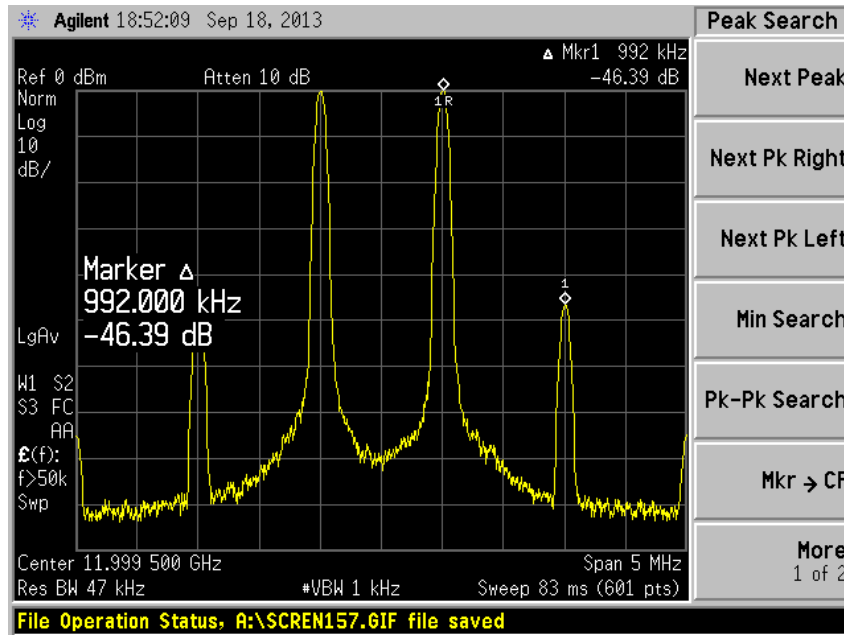
# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## OIP3 @ 8 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 22.97\text{dBm} = 0 + (45.94/2) \\ \text{OIP3} &@ 12 \text{ GHz} \end{aligned}$$



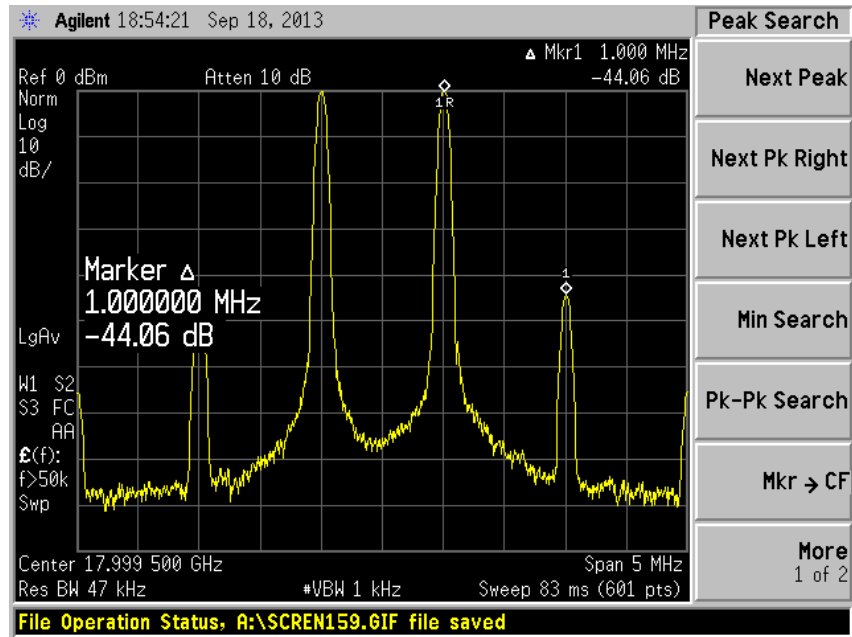
$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 23.19\text{dBm} = 0 + (46.39/2) \end{aligned}$$



# Typical Characteristics On PEAFS3-12-218-15-SFF-1

PL13933/1339

## OIP3 @ 18 GHz



$$\begin{aligned} \text{OIP3} &= \text{Pout} + \text{dBc}/2 \\ &+ 20.03\text{dBm} = 0 + (44.06/2) \end{aligned}$$