



**TYPICAL CHARACTERISTICS
ON
PFS-618-CD-2**

PMI MODEL NUMBER PFS-618-CD-2 IS A FREQUENCY SYNTHESIZER THAT OPERATES OVER THE 6.0 TO 18.0 GHz FREQUENCY RANGE. THIS UNIT FEATURES HIGH SPEED, HIGH ACCURACY, AND LOW PHASE NOISE.



January 30, 2014

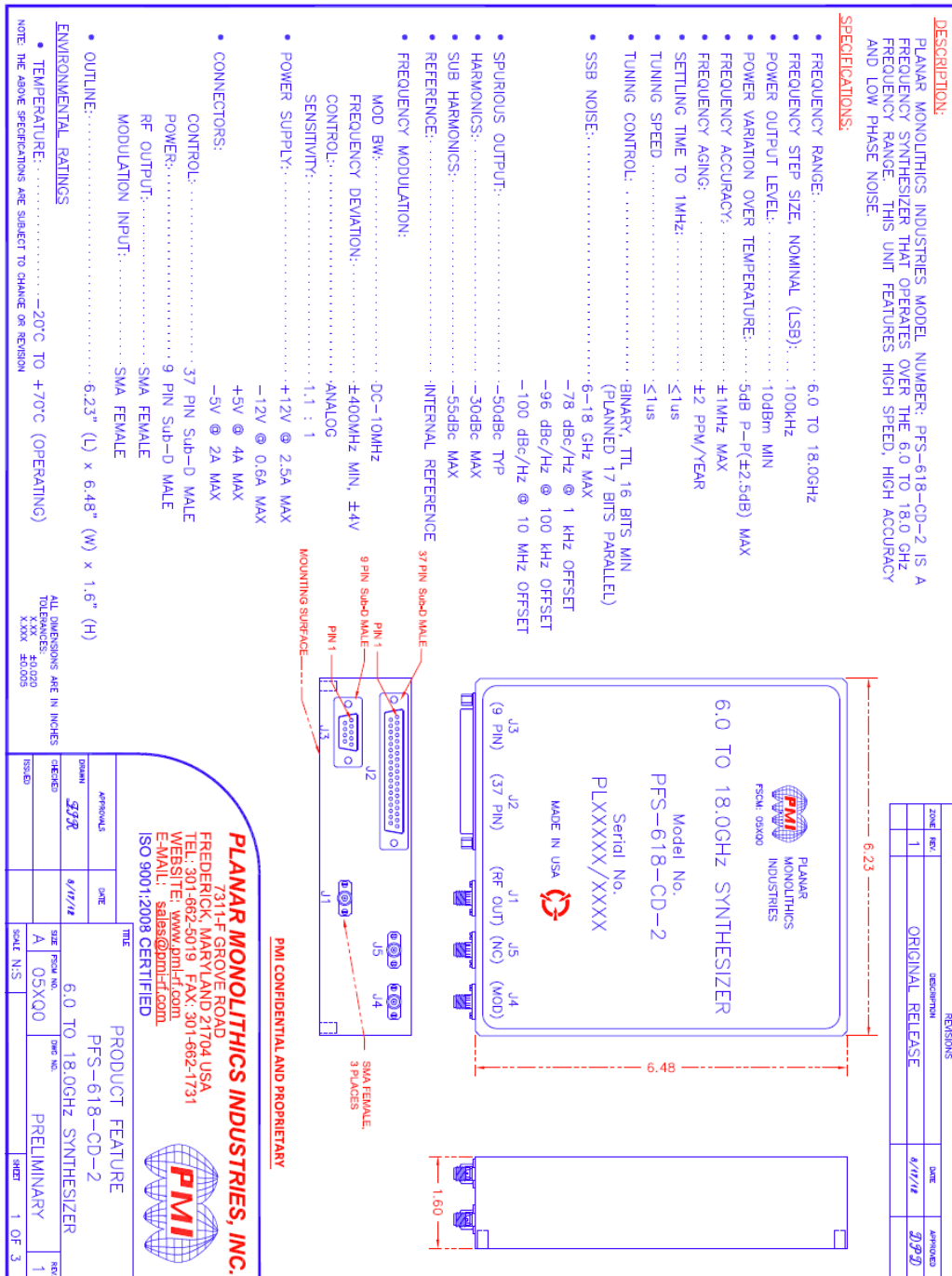
Project Engineer: Dave Durbin

Tested By:
Dave Durbin, George Stauffer, Sebastian Palacio



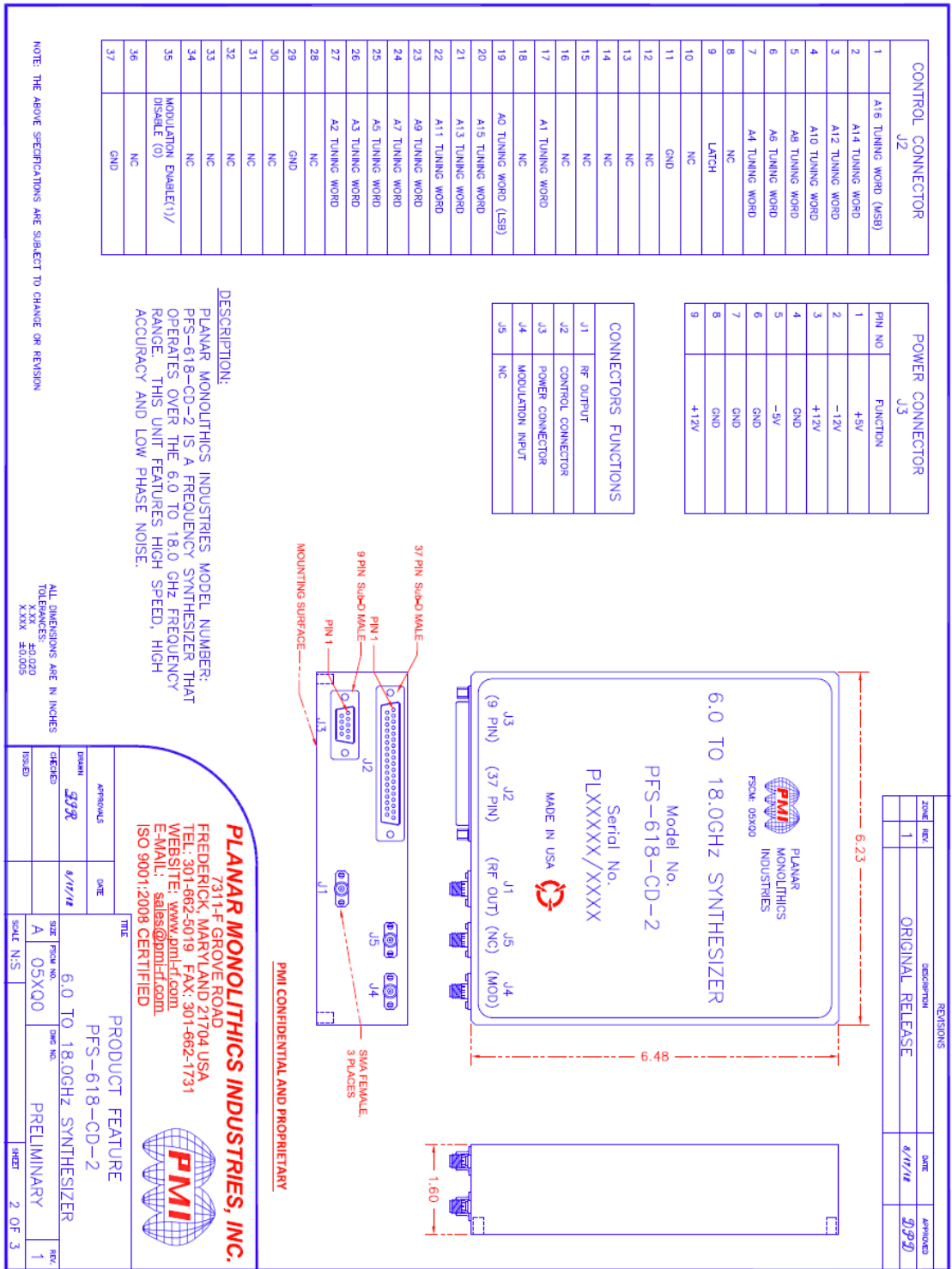
TYPICAL CHARACTERISTICS ON PFS-618-CD-2

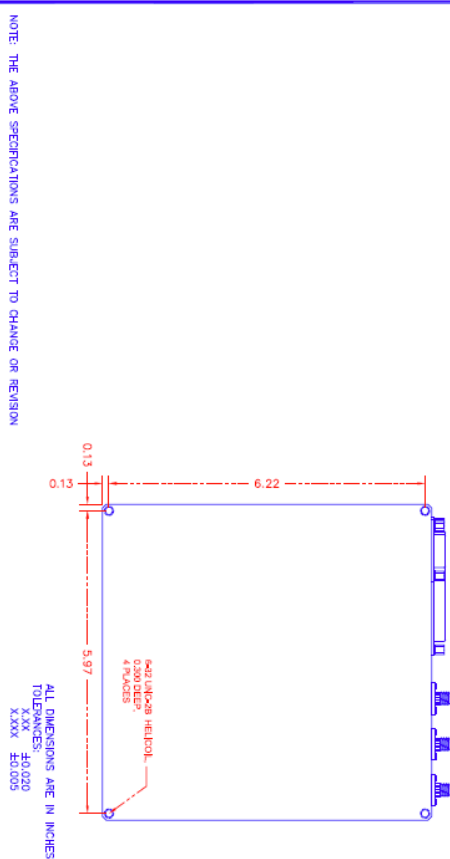
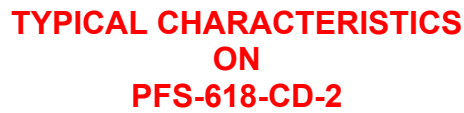
OUTLINE DRAWING





TYPICAL CHARACTERISTICS ON PFS-618-CD-2





REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	8/11/12	<i>[Signature]</i>

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MATHONTHICS INDUSTRIES, INC.
7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: www.pmi-f.com
E-MAIL: sales@pmi-f.com
ISO 9001:2008 CERTIFIED



APPROVALS		DATE		TITLE	
DESIGN		DATE		PRODUCT FEATURE	
CHECKED		DATE		PFS-618-CD-2	
ISSUED		DATE		6.0 TO 18.0GHZ SYNTHESIZER	
SCALE		SHEET		REV	
A		PRELIMINARY		1	
N/S		3 OF 3			



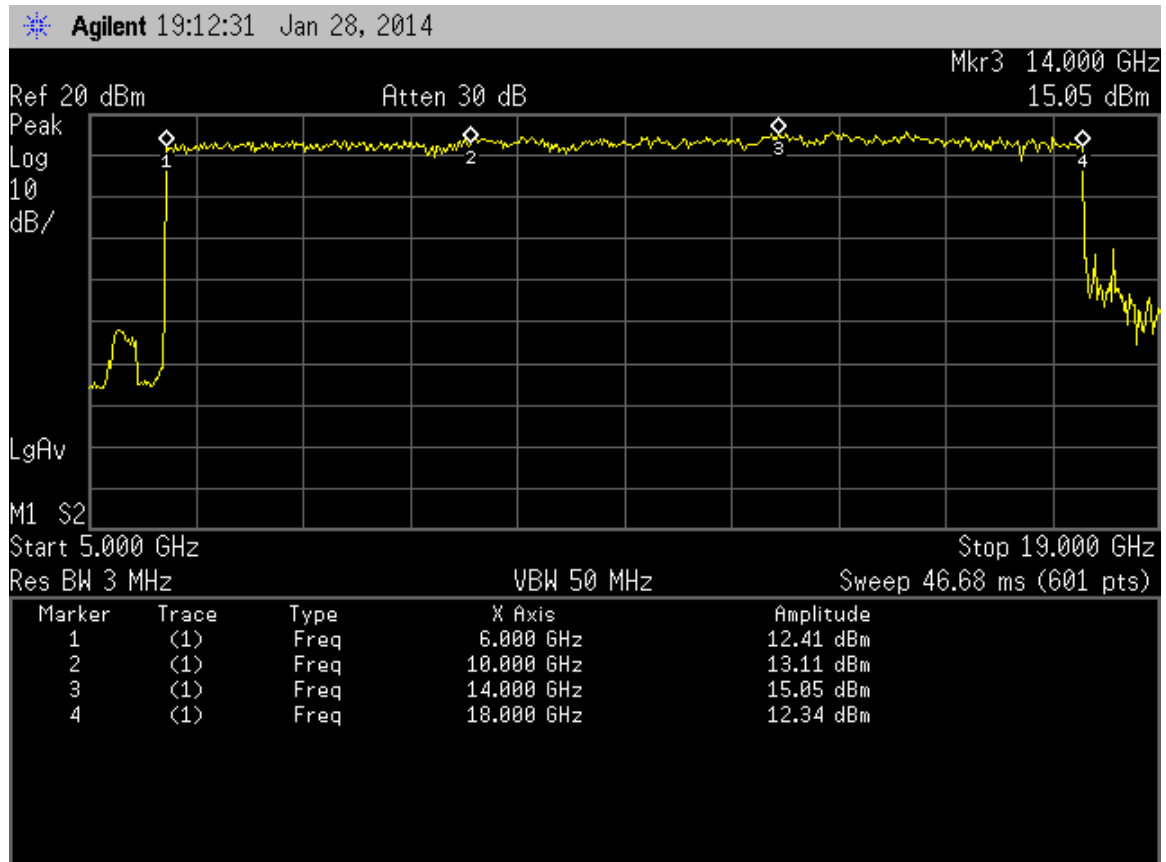
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TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	6.0GHz–18.0GHz	6.0GHz-18.0GHz	
2	Frequency Step Size, Nominal (LSB)	100kHz	100kHz	
3	Power Output Level	10dBm Min.	12.91 ± 1.41 dBm	
4	Power Variation over Temperature	5dB P-P(±2.5dB) Max.	± 2.38 dB	
5	Frequency Accuracy	±1MHz Max.	33 kHz	
6	Settling Time to 1 MHz	≤1μs	See Typical Characteristics	
7	Tuning Speed	≤1μs	See Typical Characteristics	
8	SSB Noise	6-18 GHz Max. -78dBc/Hz@1kHz offset -96dBc/Hz@100kHz offset -100dBc/Hz@1-MHz offset	-79.79dBc/Hz@1kHz -101.48dBc/Hz@100kHz -109.15dBc/Hz@10MHz	
9	Spurious Output	-50dBc Typ.	See Typical Characteristics	
10	Harmonics	-30dBc Max.	-34.24 dBc	
11	Sub-Harmonics	-55dBc Max.	See Typical Characteristics	
12	Frequency Modulation Bandwidth	DC-10MHz	DC-10 MHz	
13	Frequency Modulation Frequency Deviation	±400MHz Min., ±4V	±400 MHz, ±4V	
14	Frequency Modulation Sensitivity	1.1:1	1:1	
15	Power Supply	+12V@2.5A Max. -12V@0.6A Max. +5V@4A Max. -5V@2A Max.	1.3 A 0.07 A 1.52 A 0.03 A	



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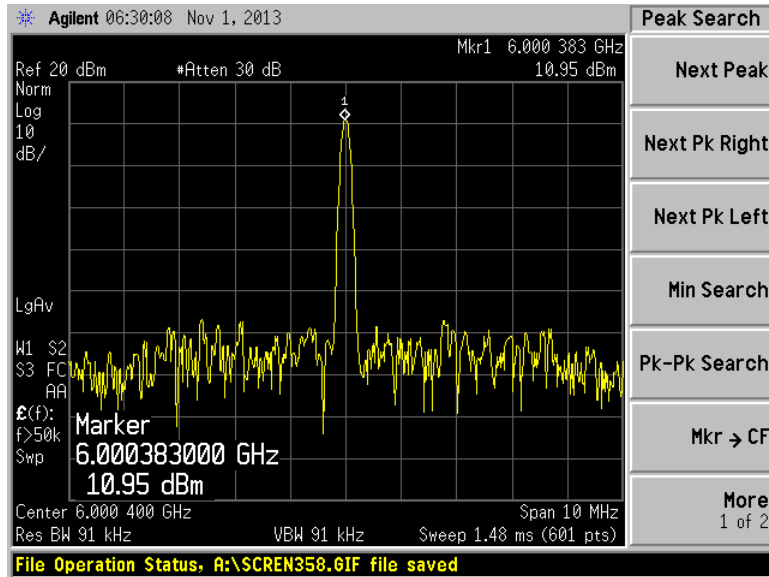
Typical Output Power



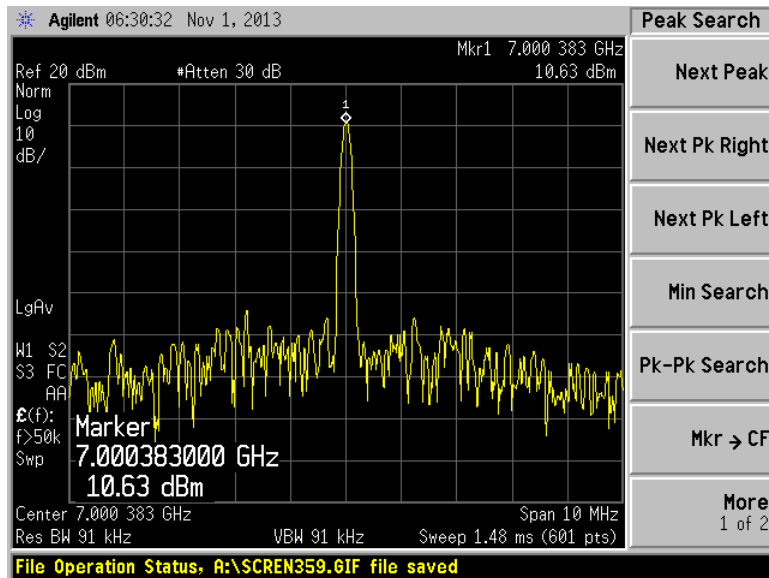


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Frequency Accuracy @ 6 GHz



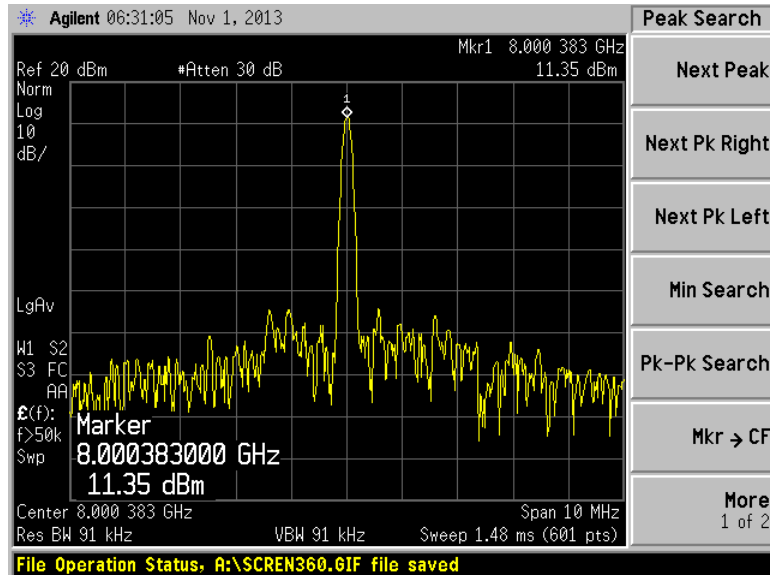
Frequency Accuracy @ 7 GHz



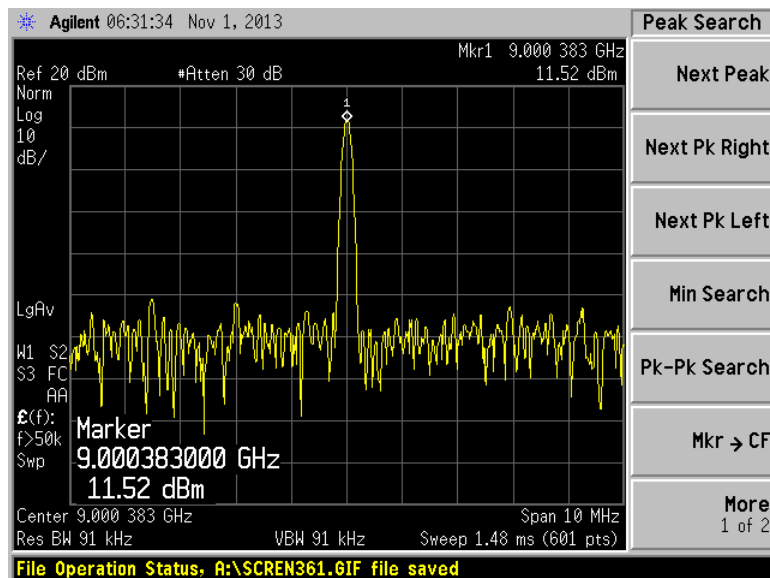


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Frequency Accuracy @ 8 GHz



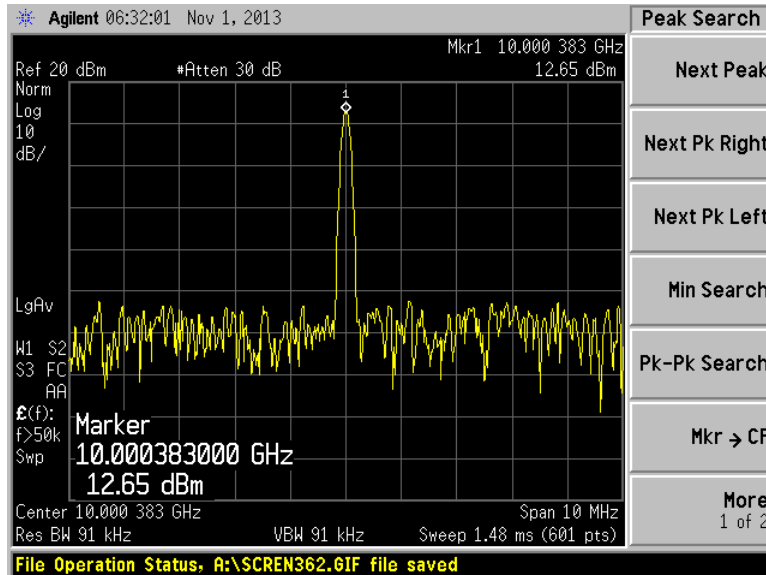
Frequency Accuracy @ 9 GHz



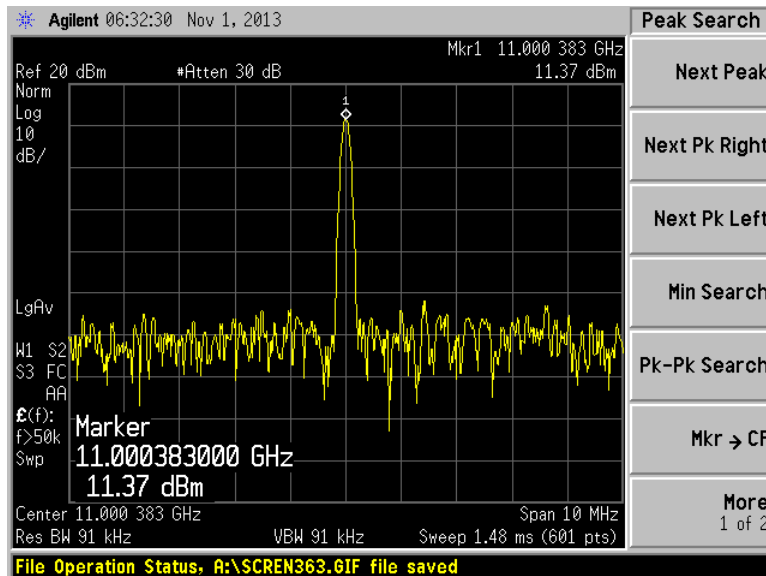


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Frequency Accuracy @ 10 GHz



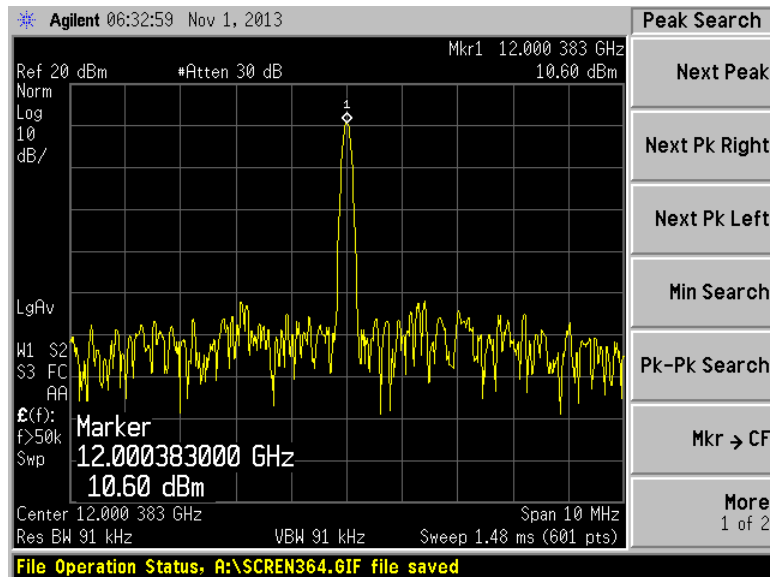
Frequency Accuracy @ 11 GHz



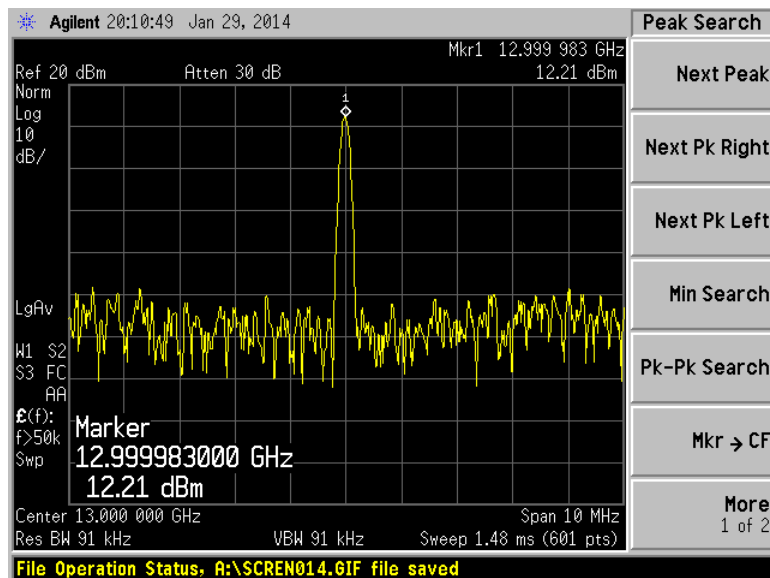


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Frequency Accuracy @ 12 GHz



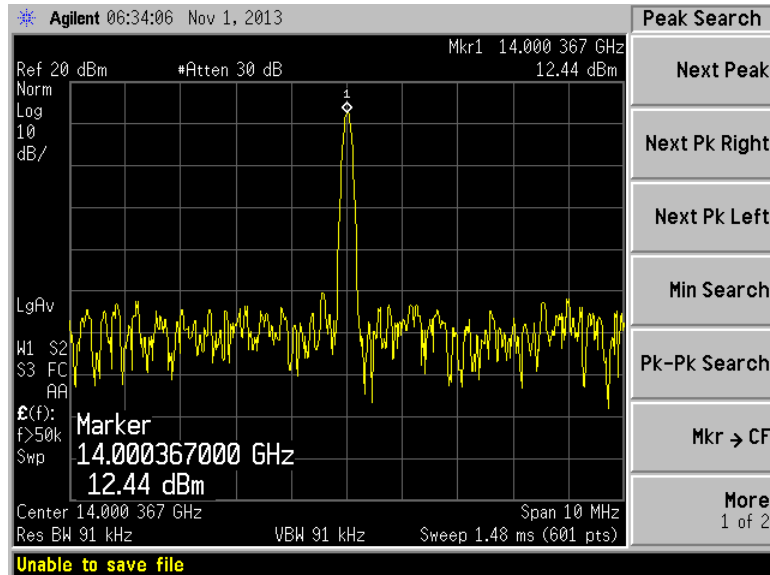
Frequency Accuracy @ 13 GHz



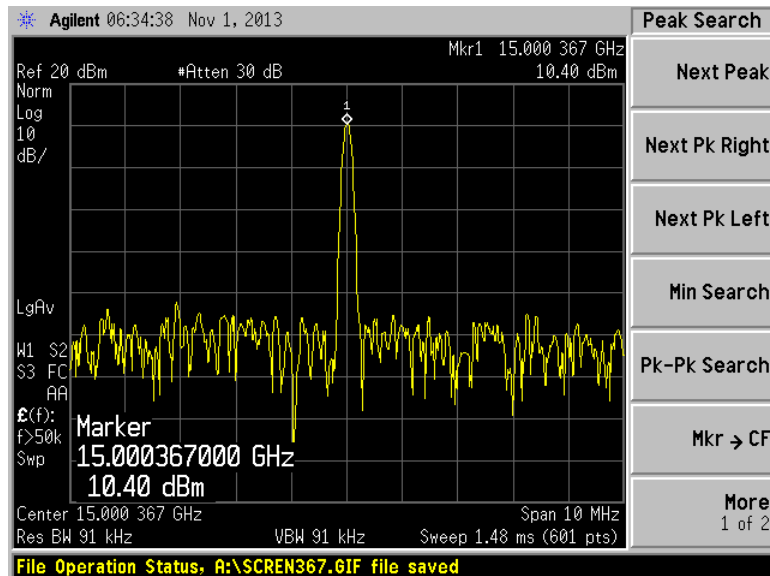


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Frequency Accuracy @ 14 GHz



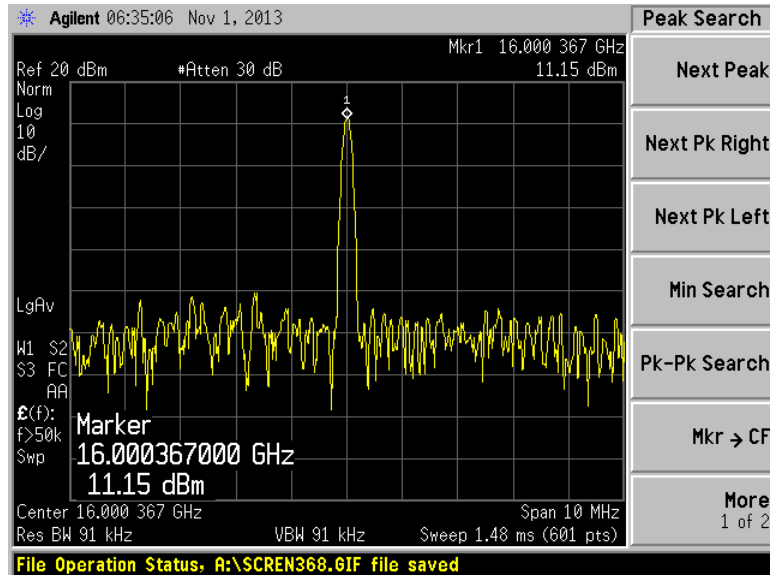
Frequency Accuracy @ 15 GHz





TYPICAL CHARACTERISTICS ON PFS-618-CD-2

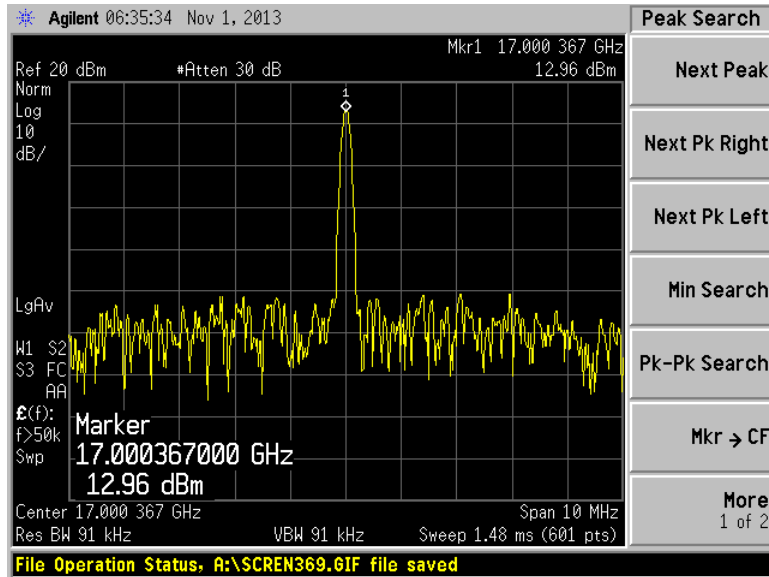
Frequency Accuracy @ 16 GHz



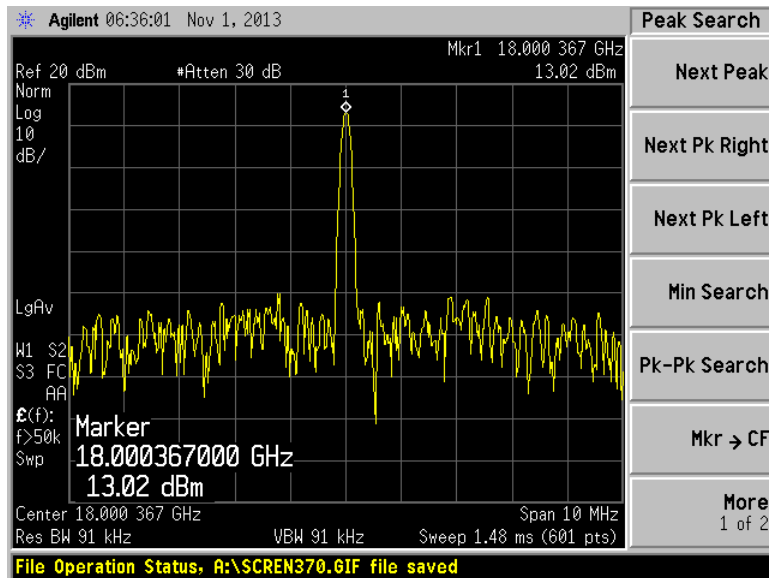


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Frequency Accuracy @ 17 GHz



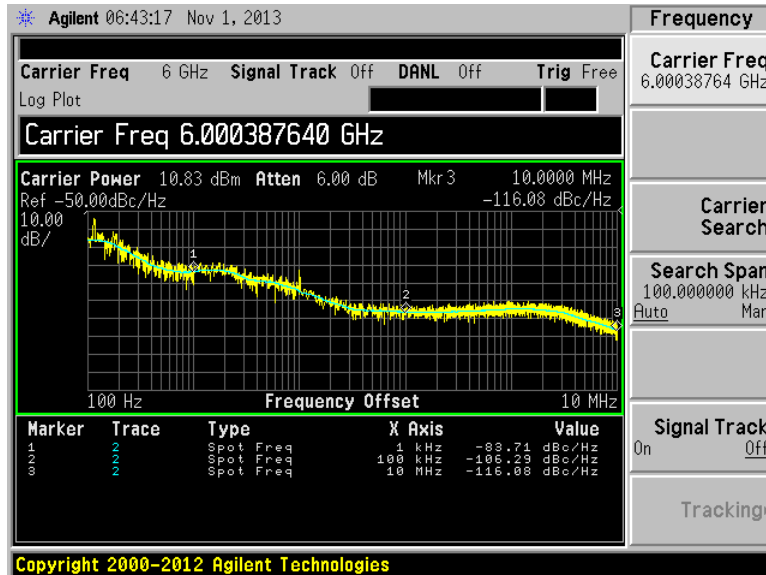
Frequency Accuracy @ 18 GHz



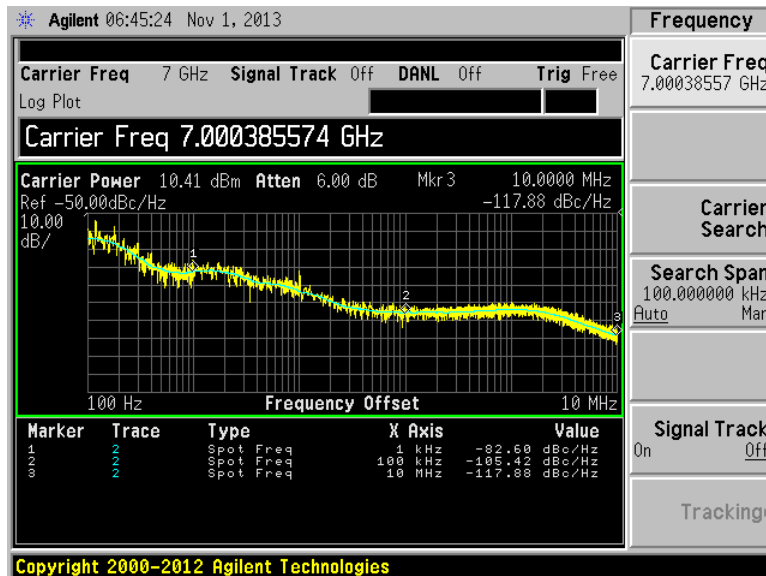


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 6 GHz



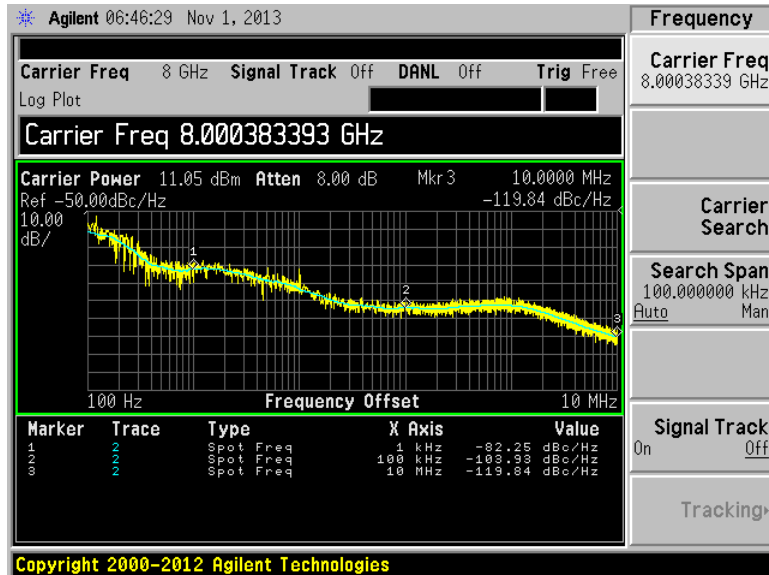
Phase Noise @ 7 GHz



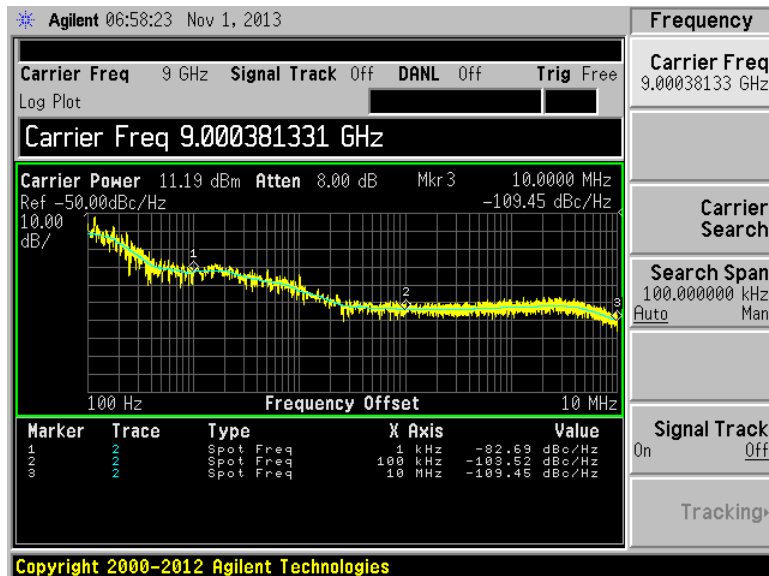


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 8 GHz



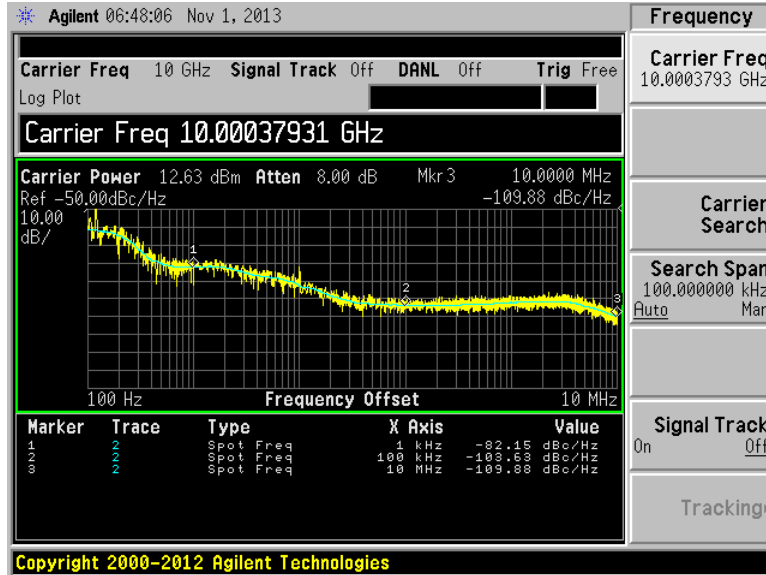
Phase Noise @ 9 GHz



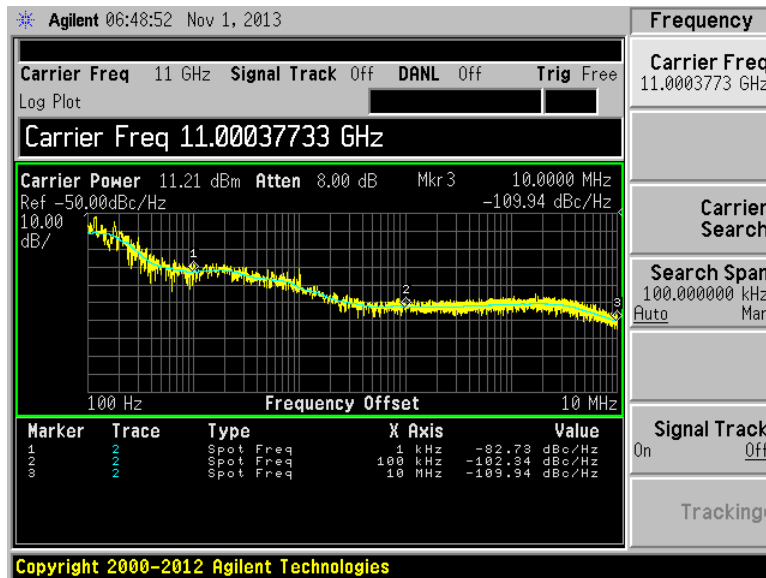


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 10 GHz



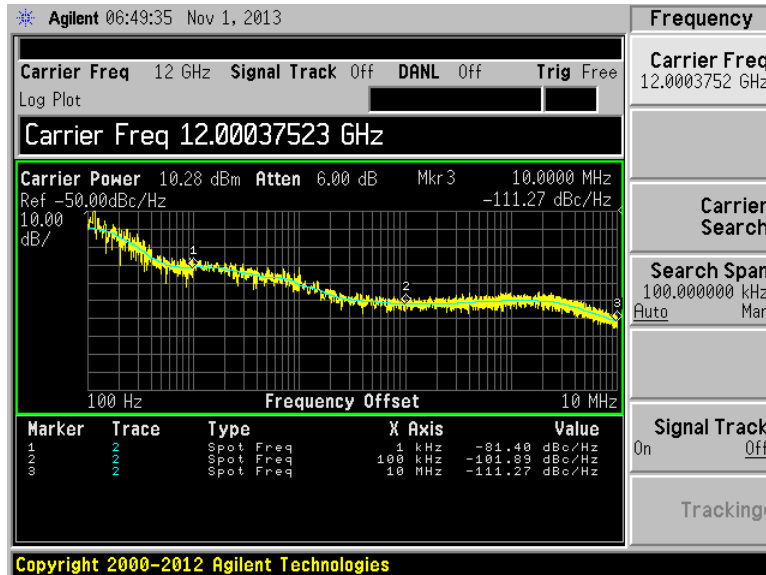
Phase Noise @ 11 GHz



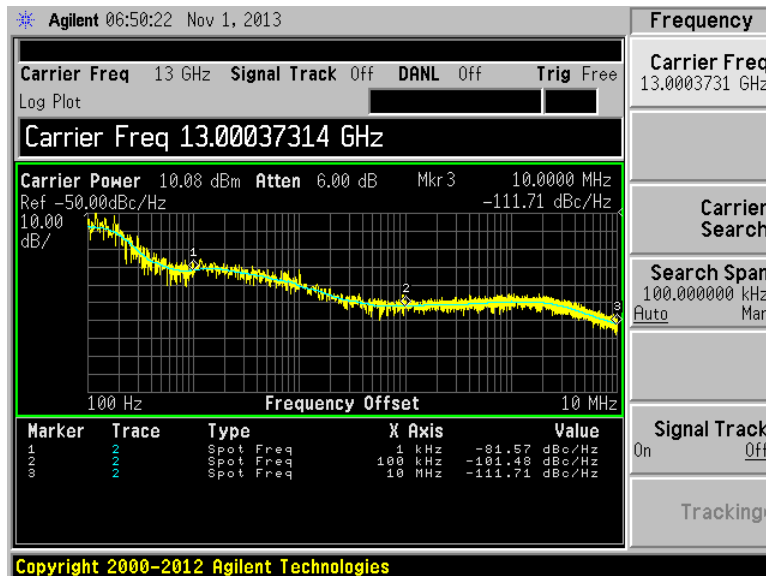


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 12 GHz



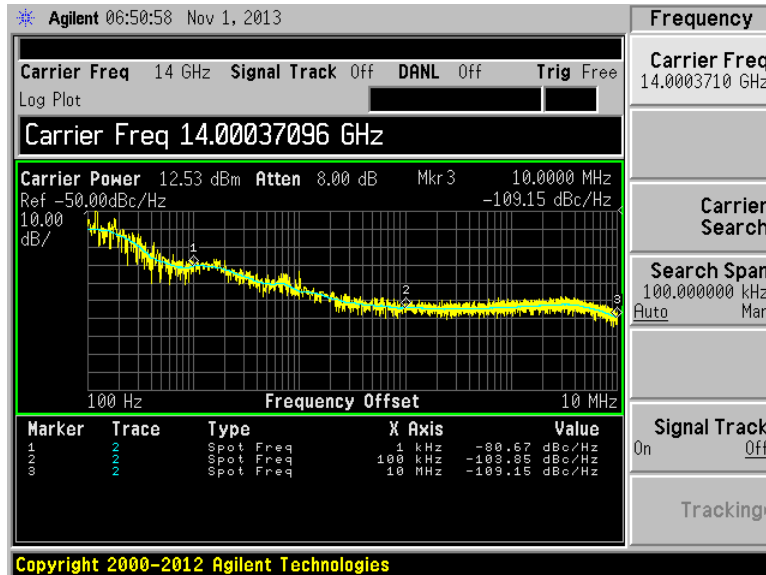
Phase Noise @ 13 GHz



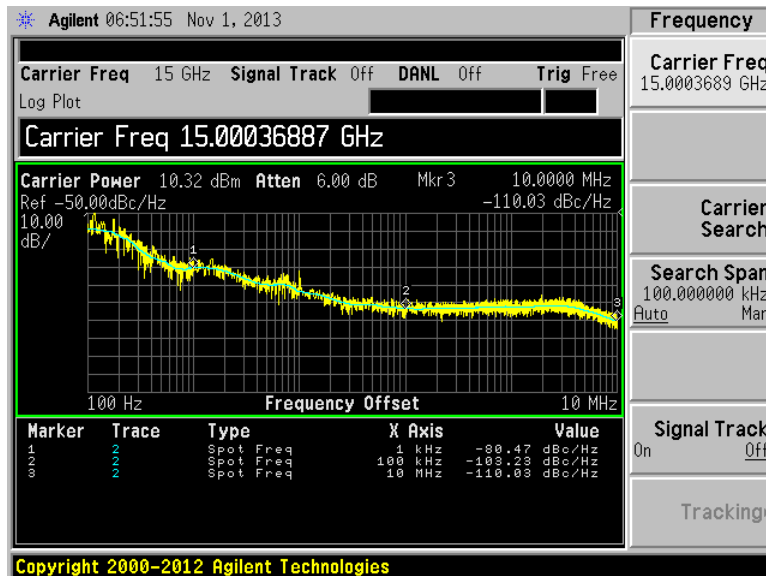


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 14 GHz



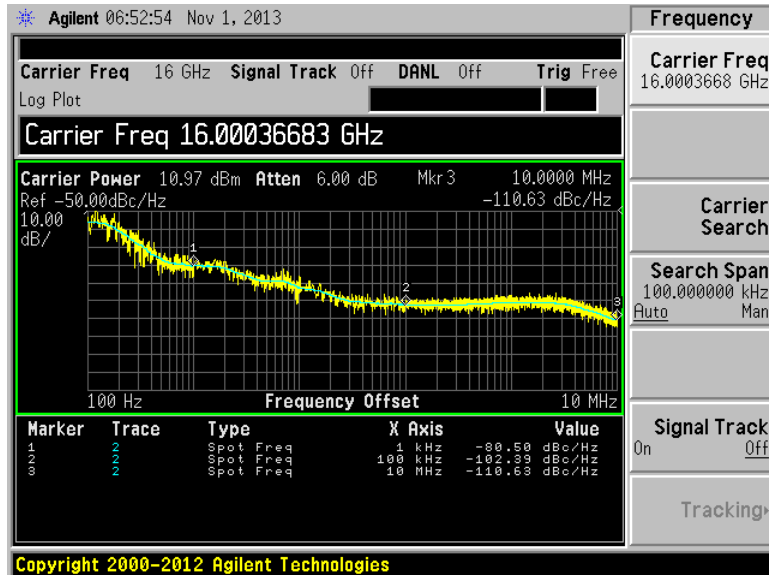
Phase Noise @ 15 GHz



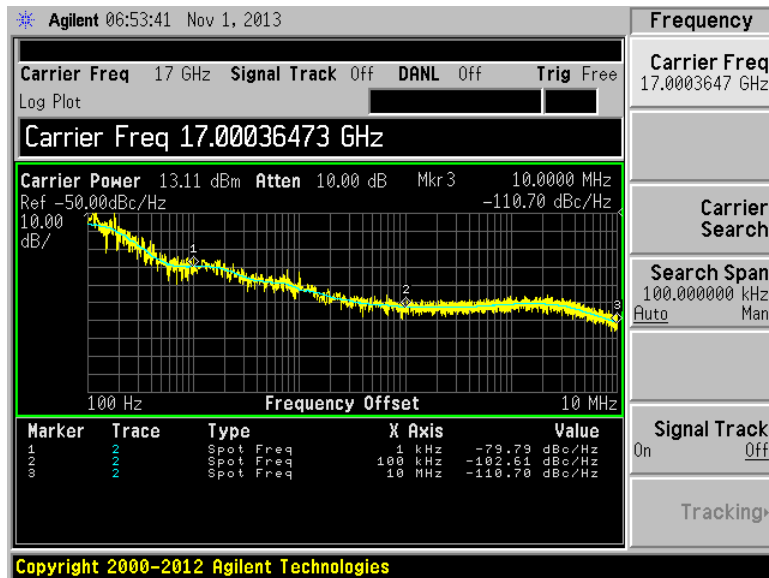


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 16 GHz



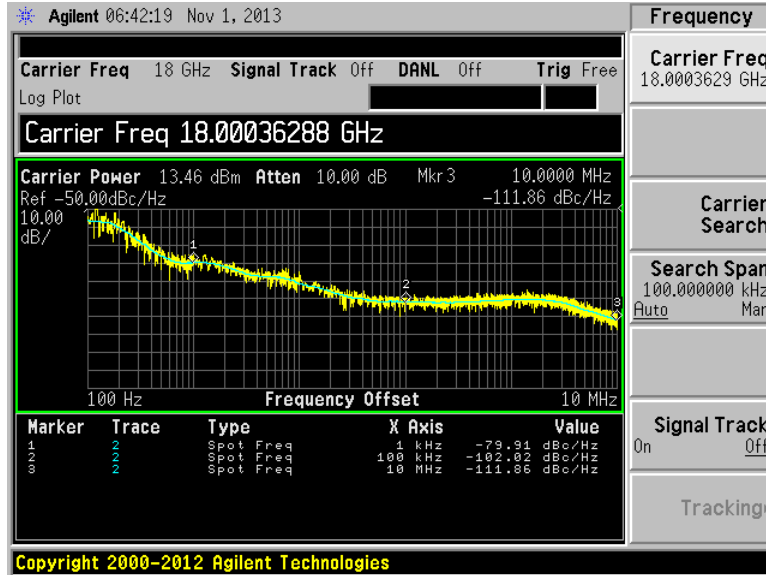
Phase Noise @ 17 GHz



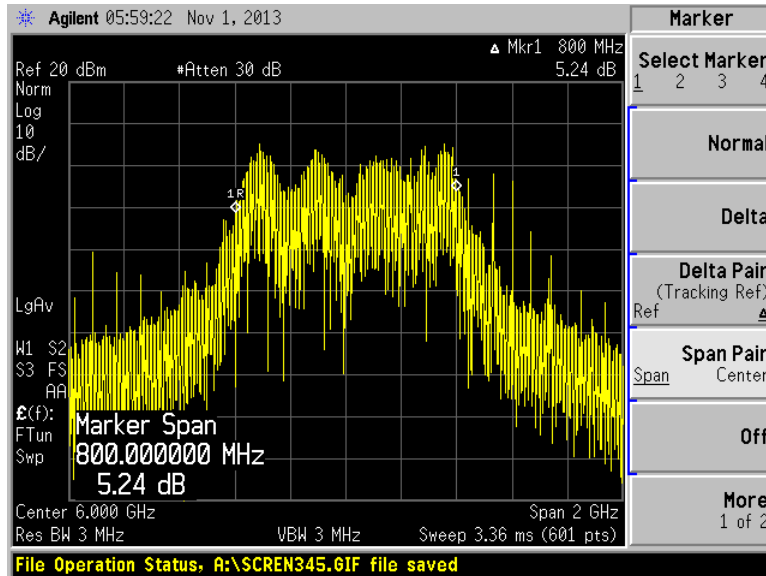


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Phase Noise @ 18 GHz



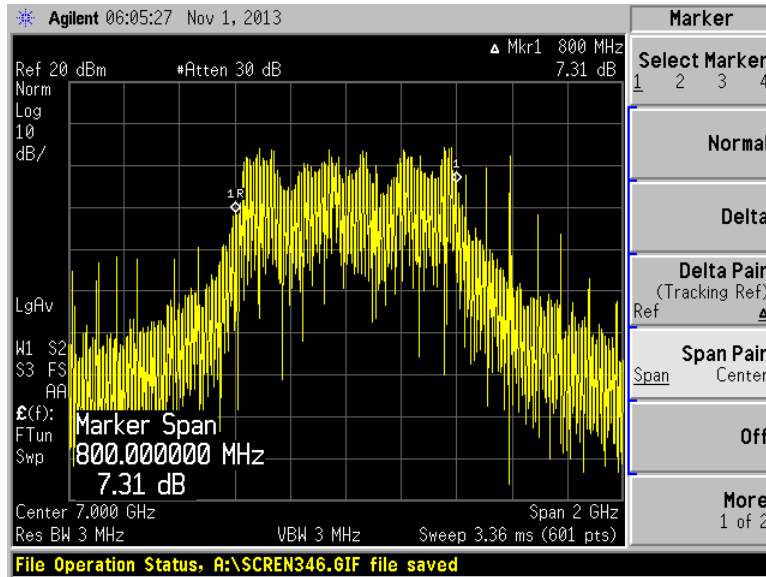
8 V P-P 10 MHz Modulation @ 6 GHz



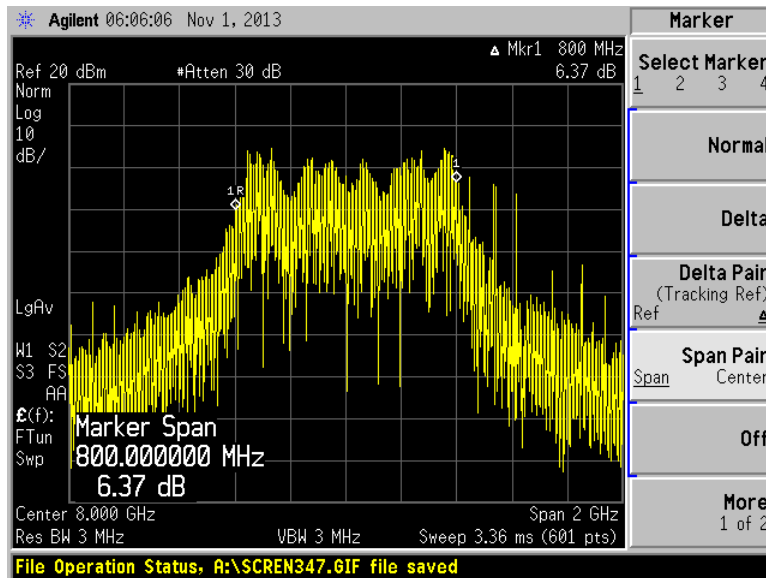


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8 V P-P 10 MHz Modulation @ 7 GHz



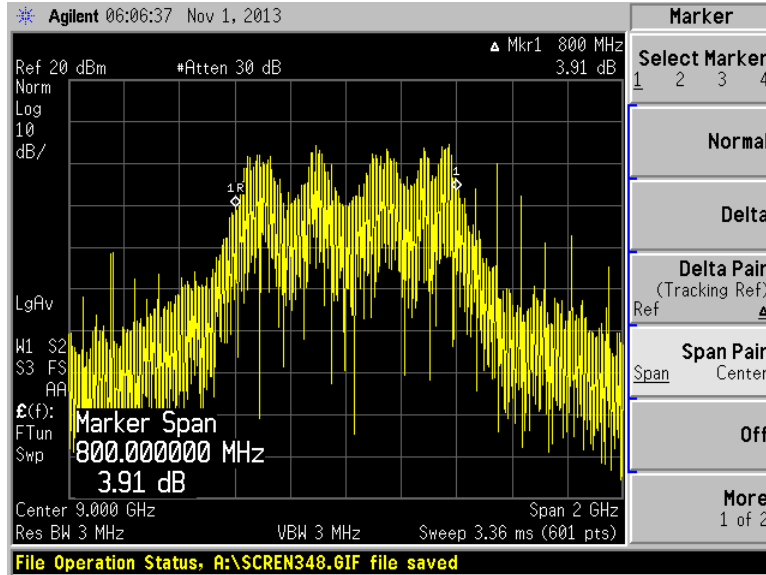
8 V P-P 10 MHz Modulation @ 8 GHz



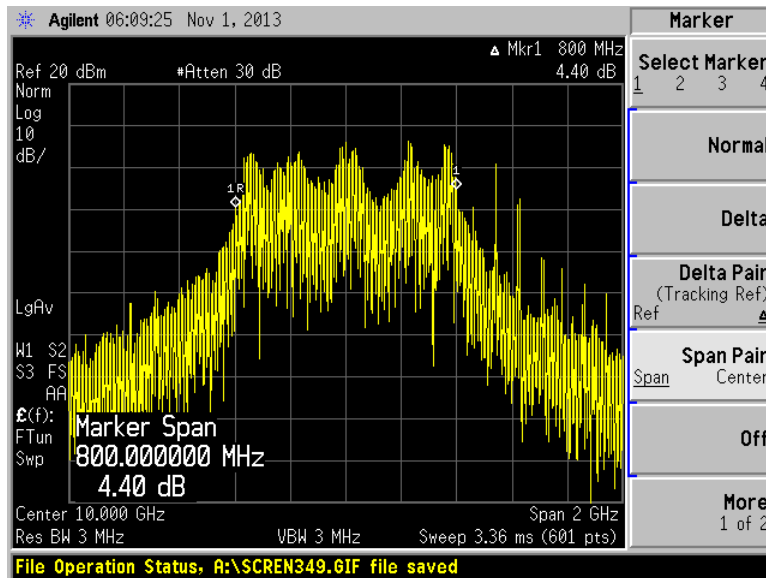


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8 V P-P 10 MHz Modulation @ 9 GHz



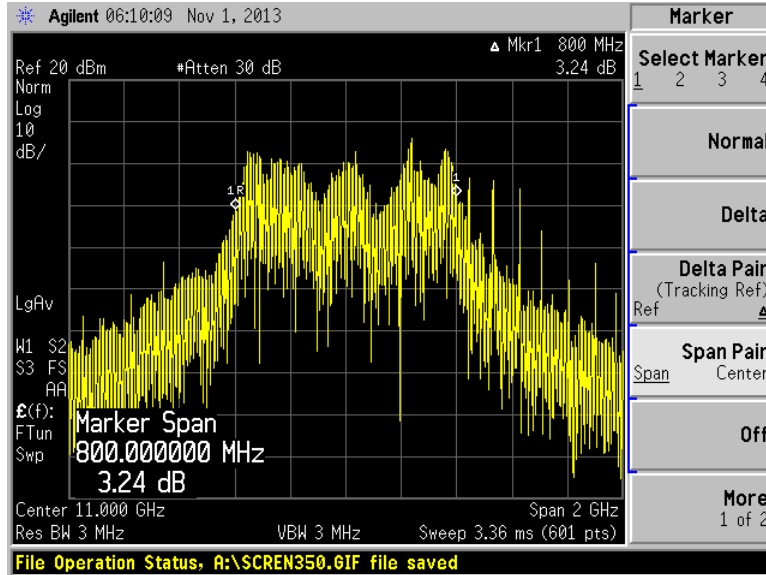
8 V P-P 10 MHz Modulation @ 10 GHz



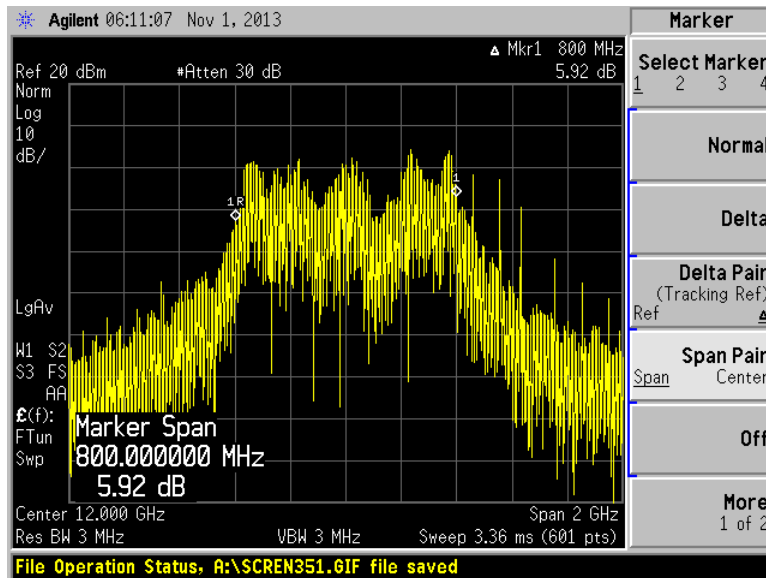


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

8 V P-P 10 MHz Modulation @ 11 GHz



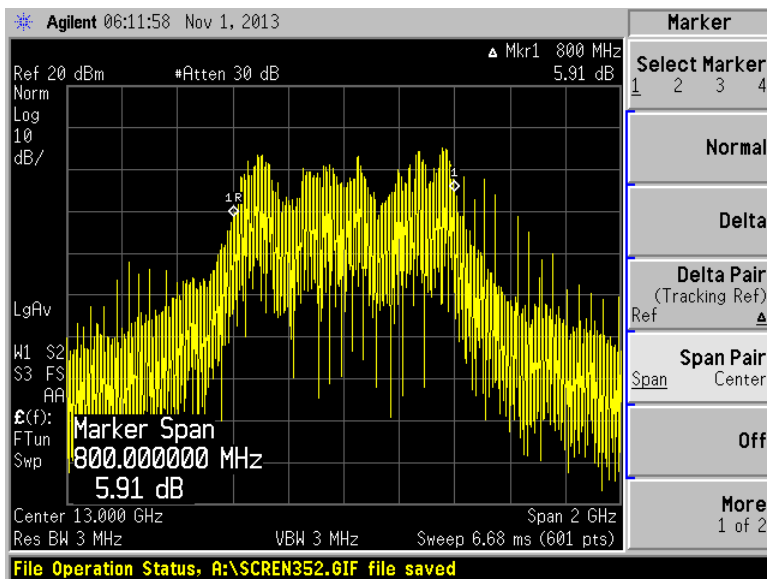
8 V P-P 10 MHz Modulation @ 12 GHz



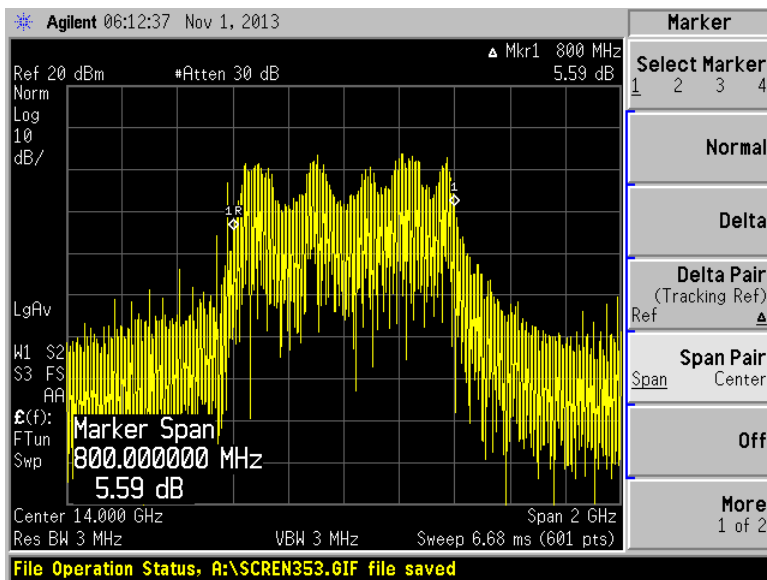


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

8 V P-P 10 MHz Modulation @ 13 GHz



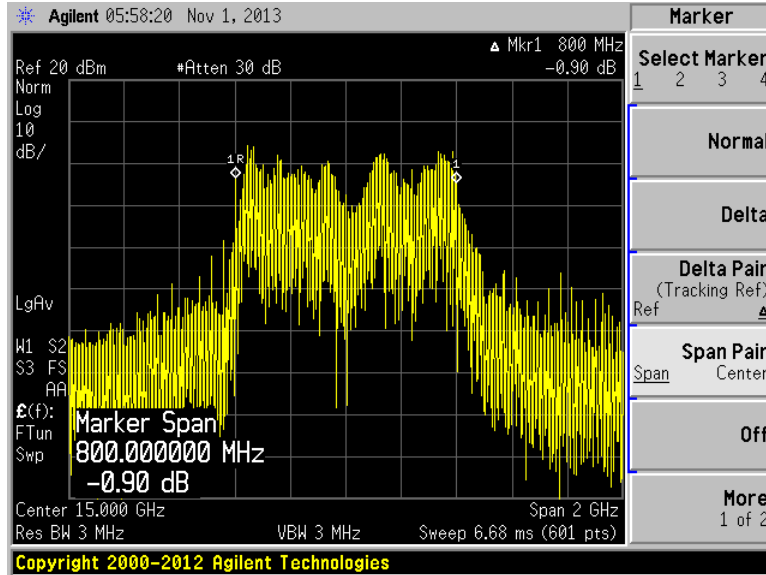
8 V P-P 10 MHz Modulation @ 14 GHz



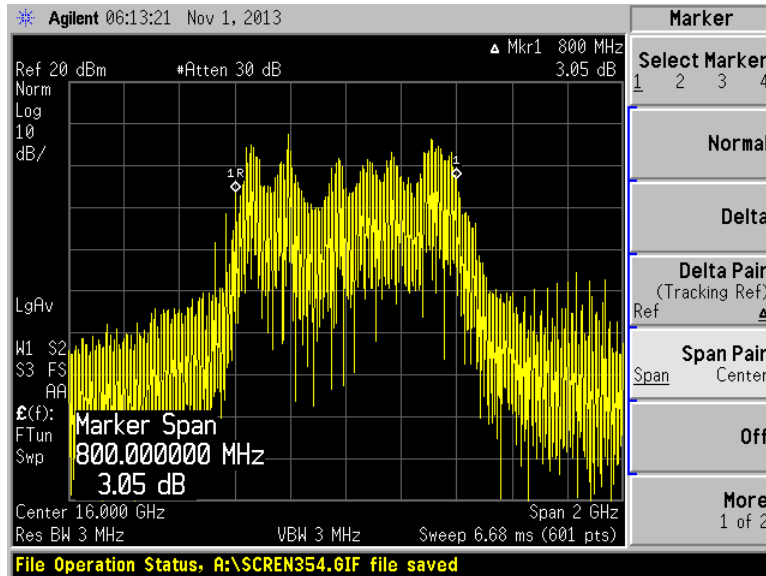


**TYPICAL CHARACTERISTICS
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8 V P-P 10 MHz Modulation @ 15 GHz



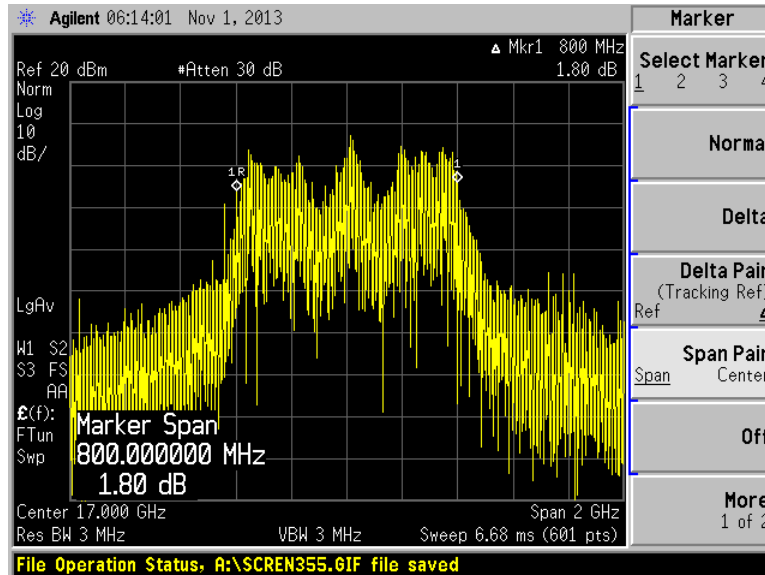
8 V P-P 10 MHz Modulation @ 16 GHz



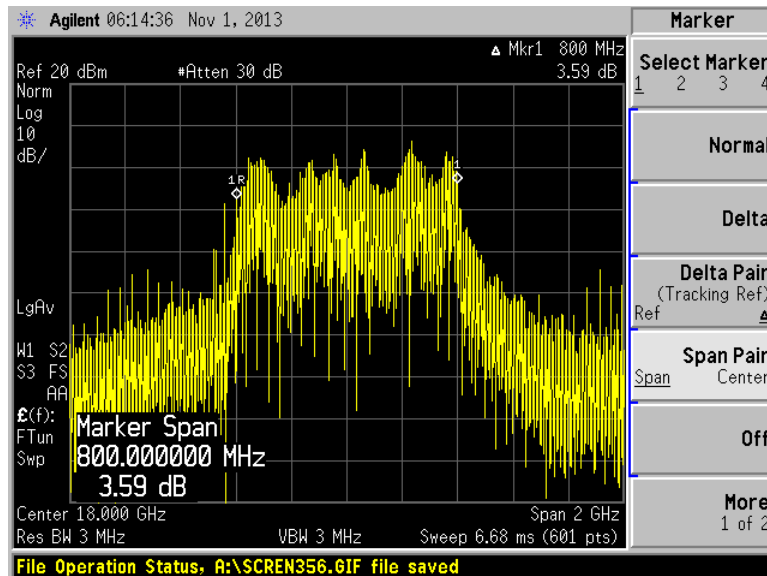


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

8 V P-P 10 MHz Modulation @ 17 GHz



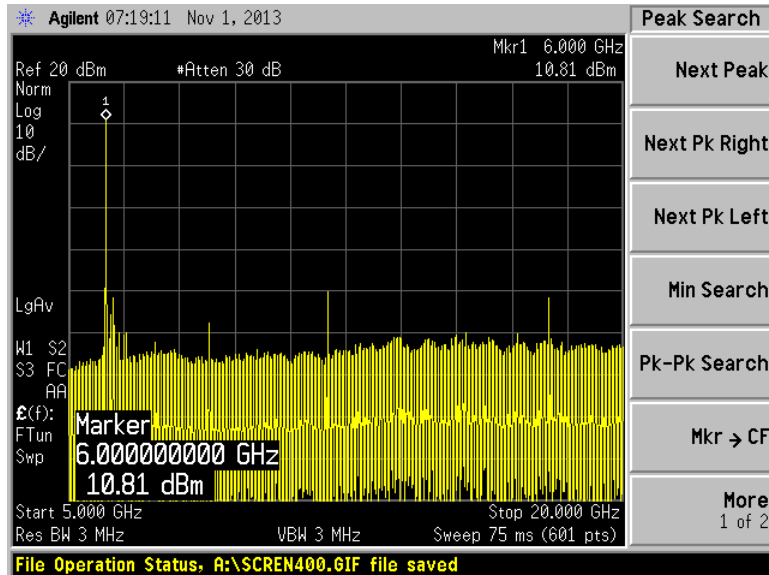
8 V P-P 10 MHz Modulation @ 18 GHz



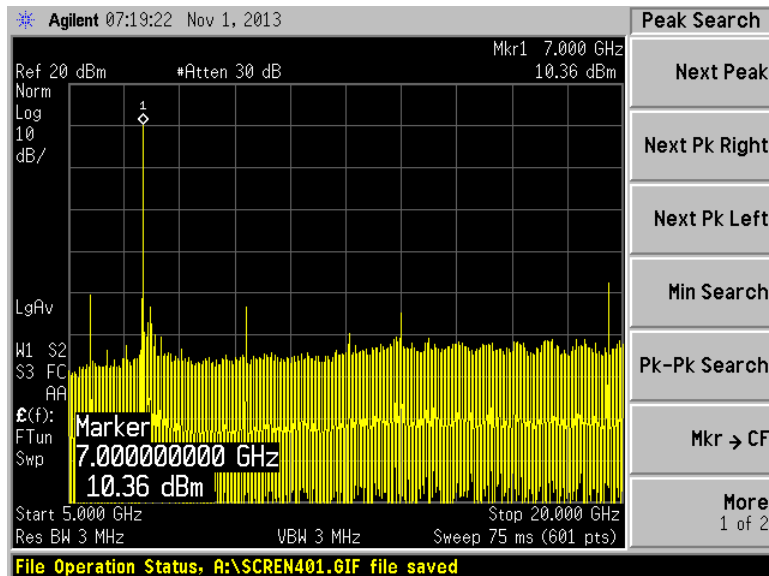


**TYPICAL CHARACTERISTICS
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Full Frequency Range Carrier @ 6 GHz



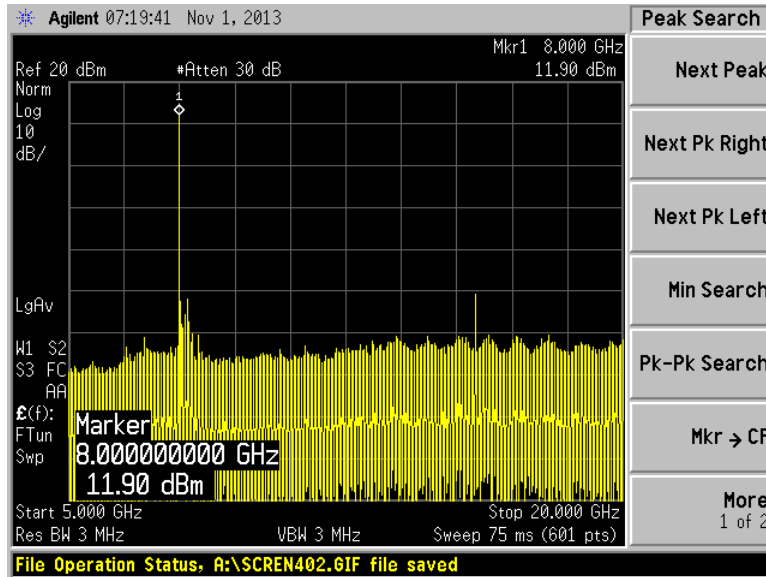
Full Frequency Range Carrier @ 7 GHz



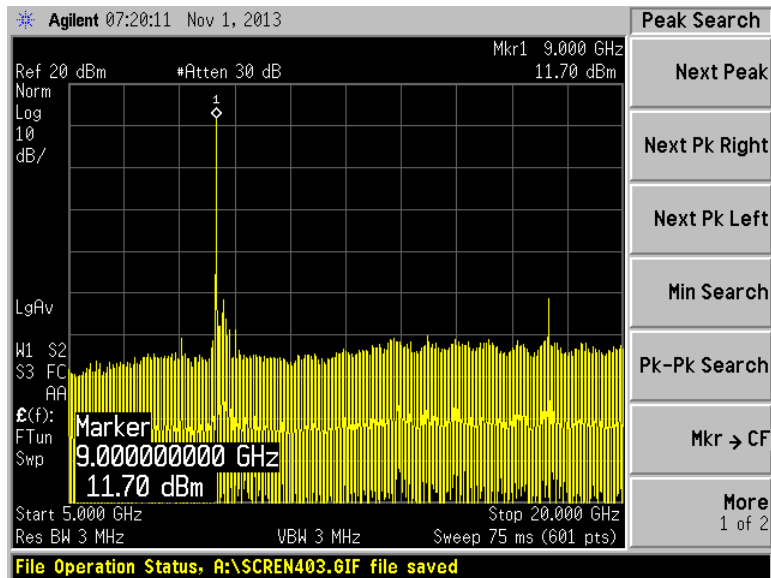


**TYPICAL CHARACTERISTICS
ON
PFS-618-CD-2**

Full Frequency Range Carrier @ 8 GHz



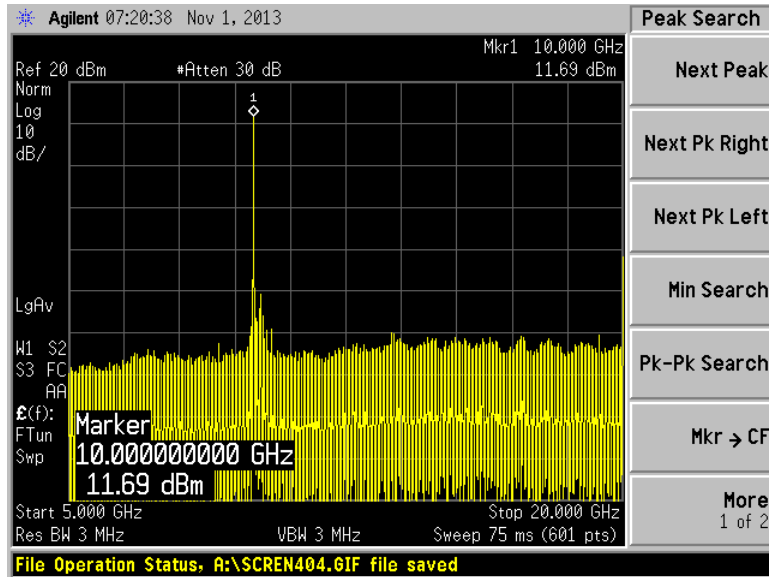
Full Frequency Range Carrier @ 9 GHz



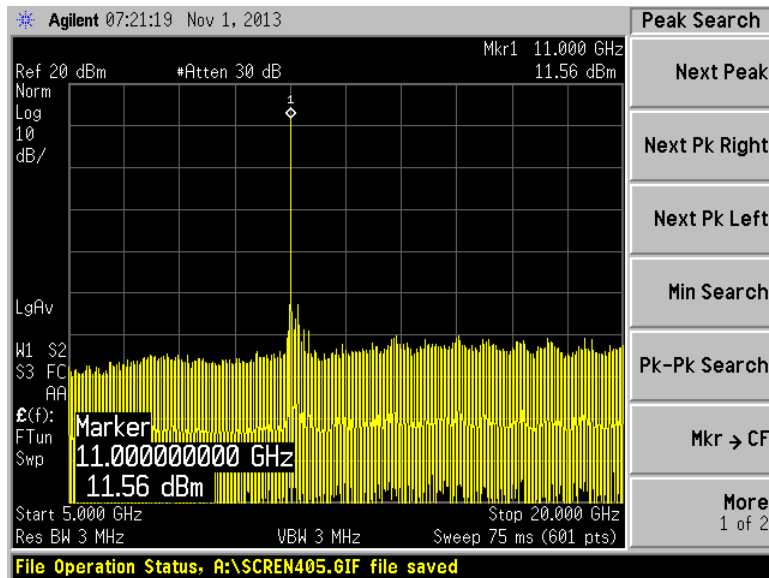


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Full Frequency Range Carrier @ 10 GHz



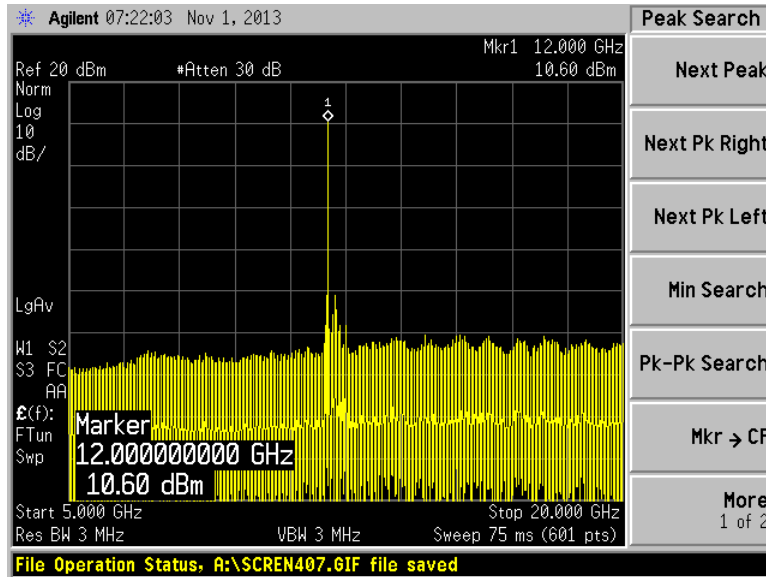
Full Frequency Range Carrier @ 11 GHz



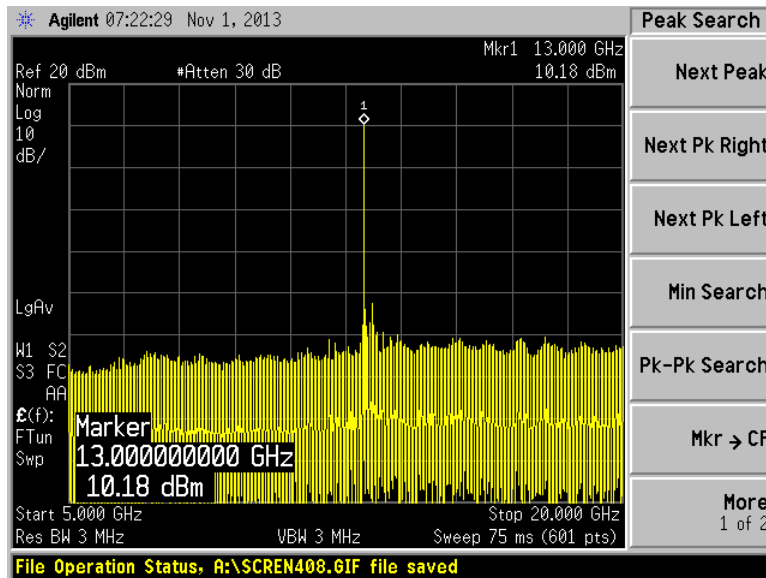


**TYPICAL CHARACTERISTICS
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Full Frequency Range Carrier @ 12 GHz



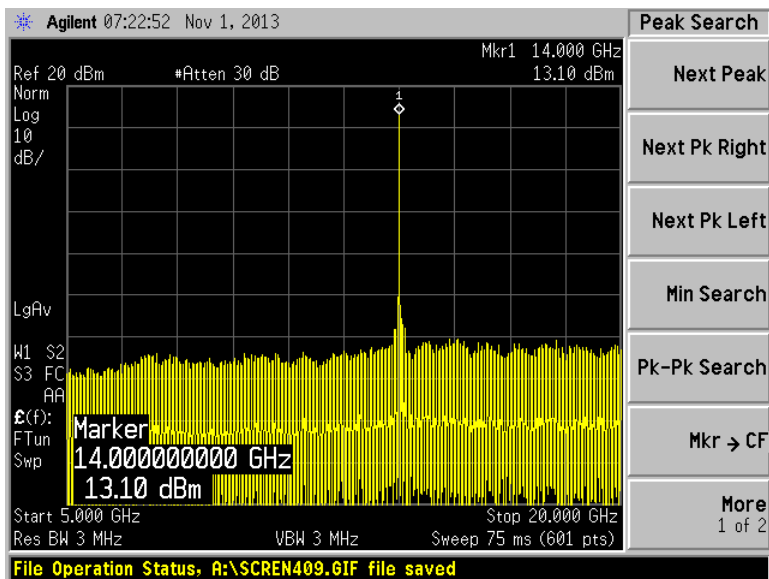
Full Frequency Range Carrier @ 13 GHz



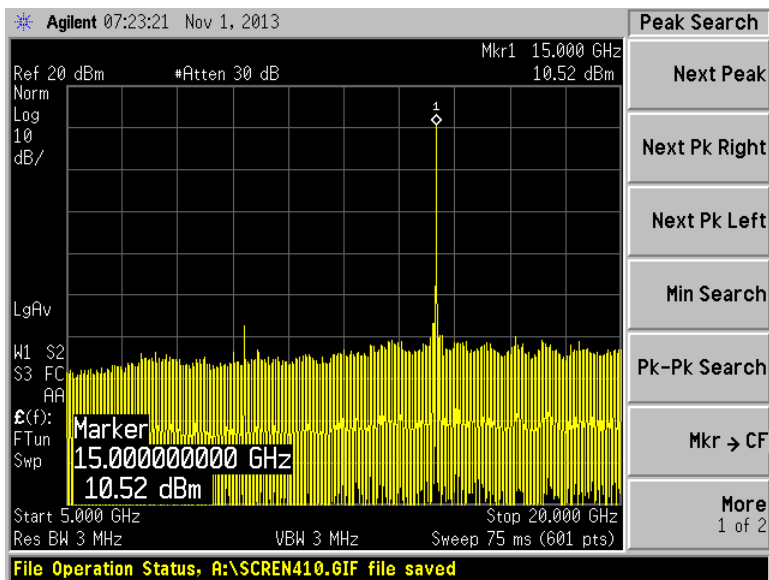


**TYPICAL CHARACTERISTICS
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Full Frequency Range Carrier @ 14 GHz



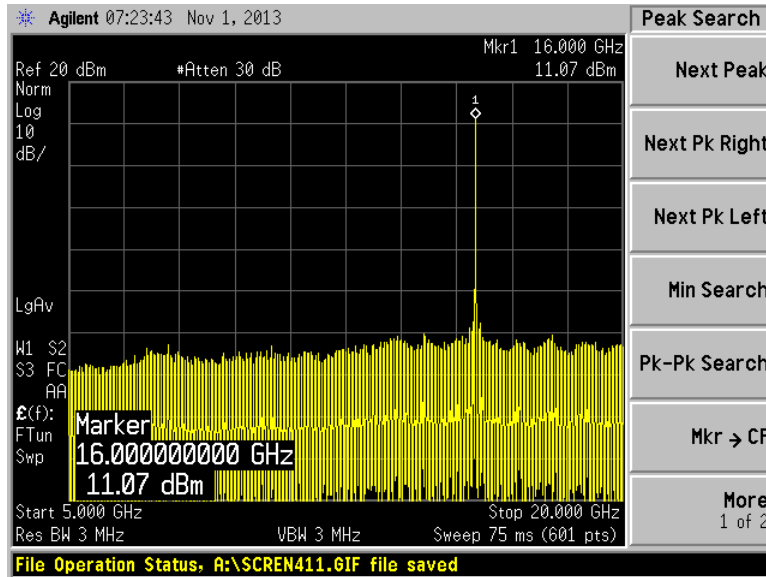
Full Frequency Range Carrier @ 15 GHz



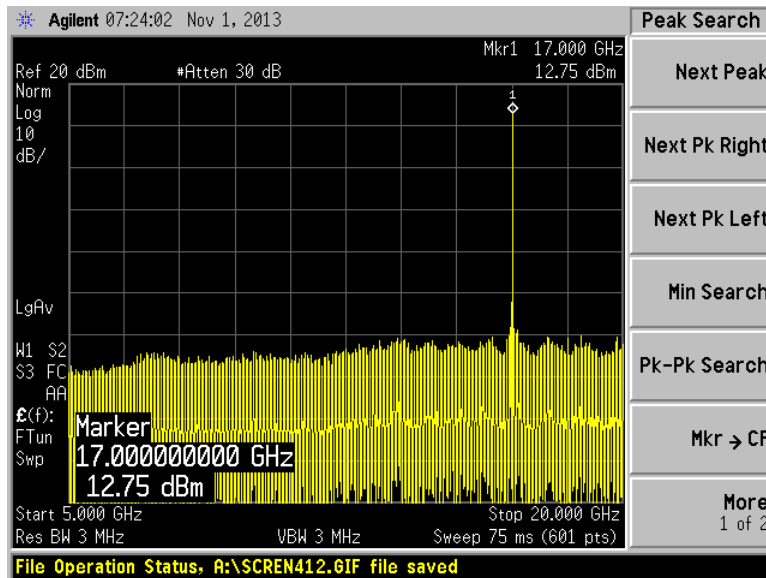


**TYPICAL CHARACTERISTICS
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Full Frequency Range Carrier @ 16 GHz



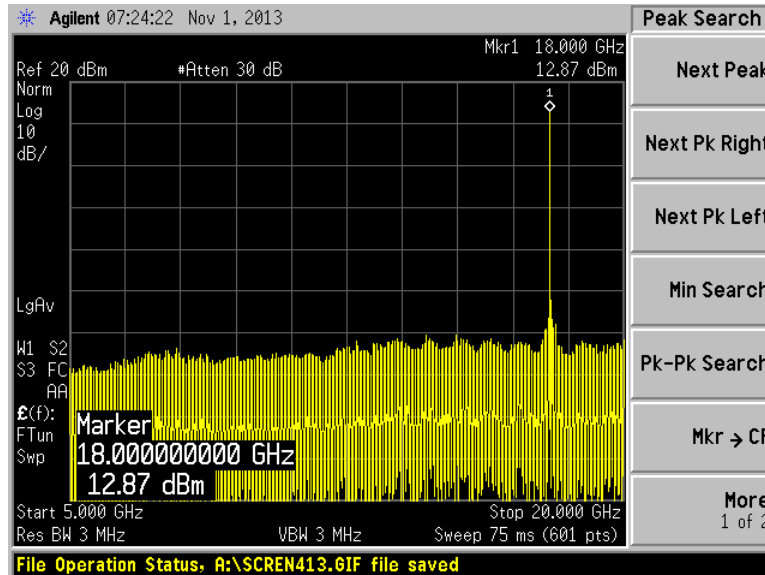
Full Frequency Range Carrier @ 17 GHz



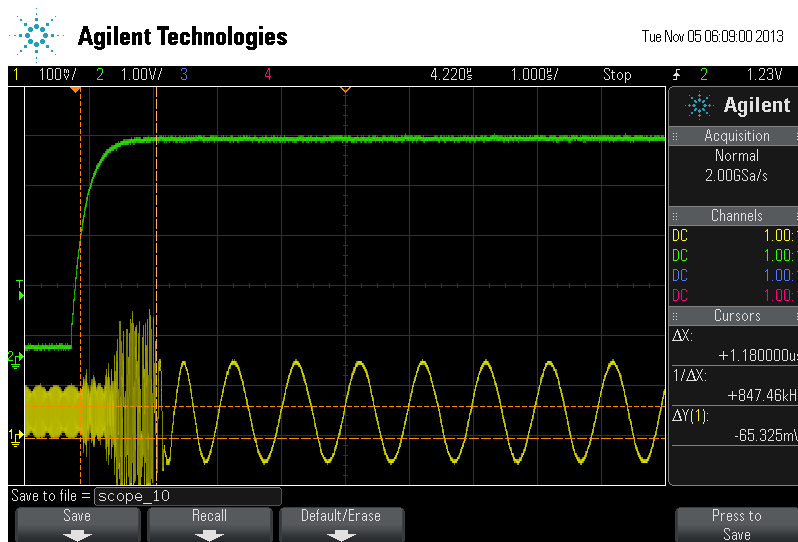


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Full Frequency Range Carrier @ 18 GHz



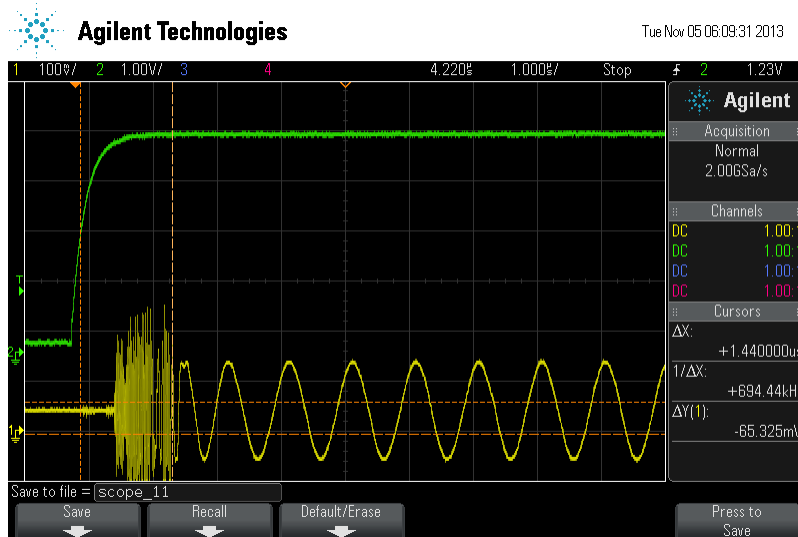
Tuning Speed + Settling Time to 6 GHz (100 MHz Step)



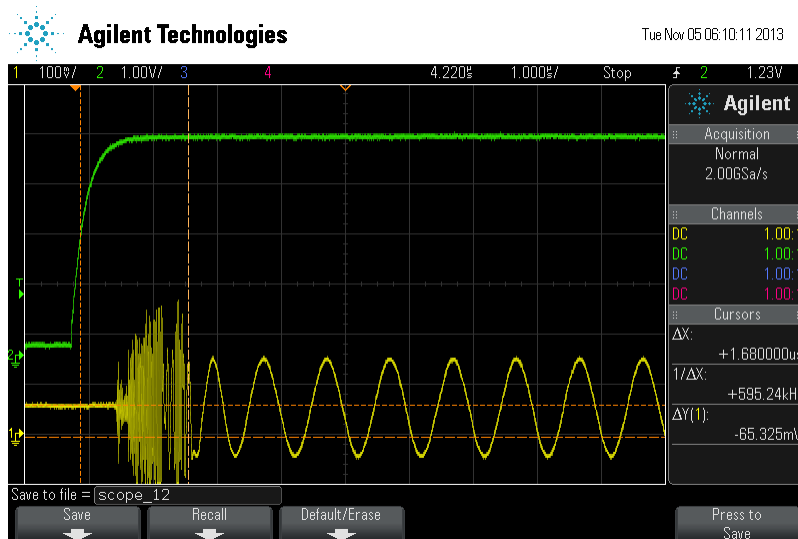


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (500 MHz Step)



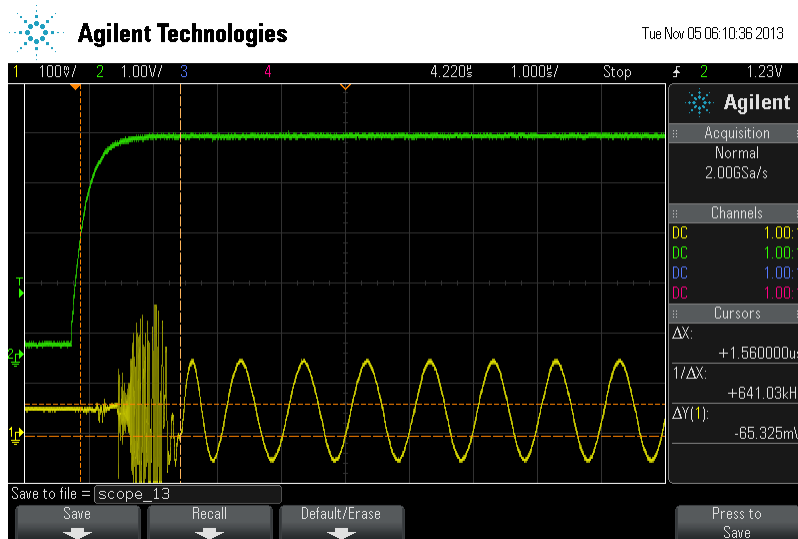
Tuning Speed + Settling Time to 6 GHz (1 GHz Step)



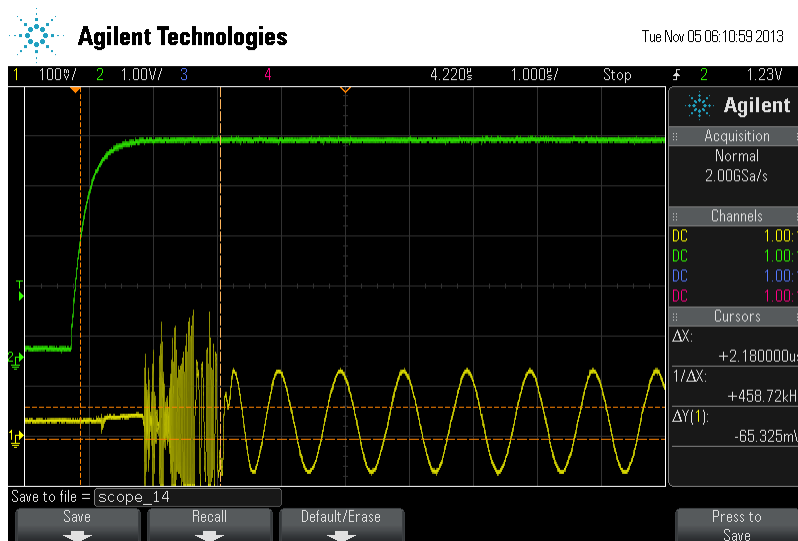


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (2 GHz Step)



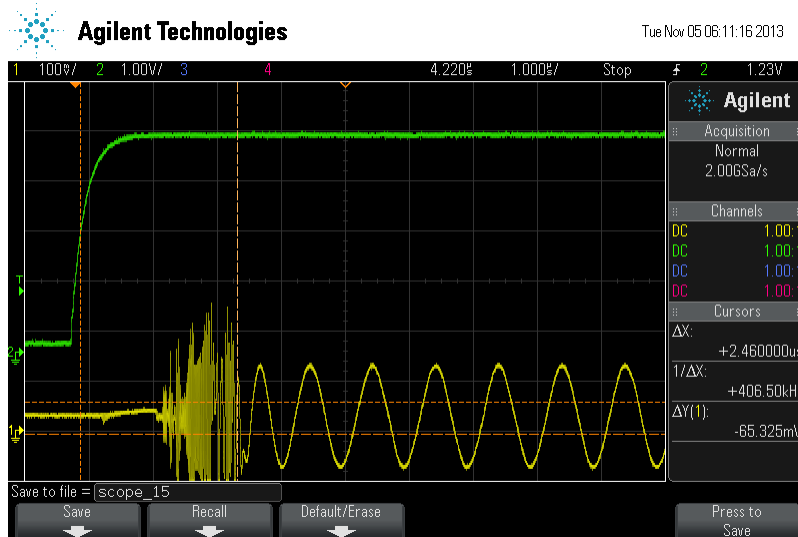
Tuning Speed + Settling Time to 6 GHz (3 GHz Step)



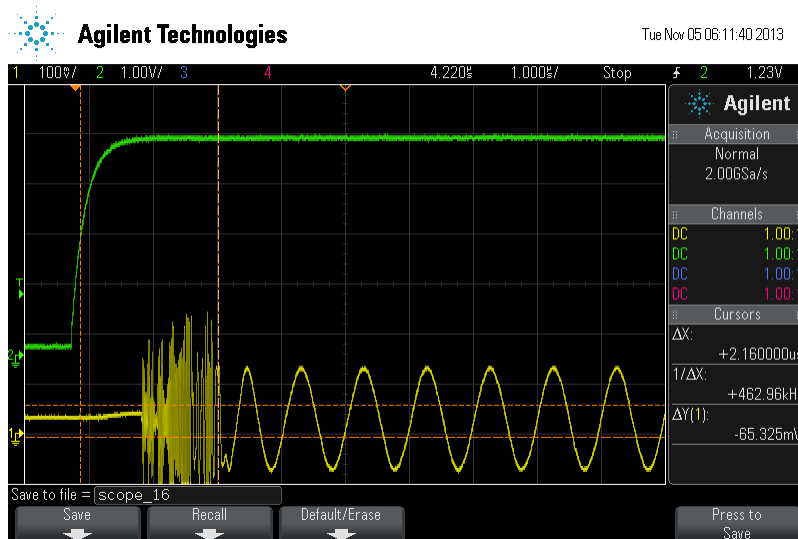


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (4 GHz Step)



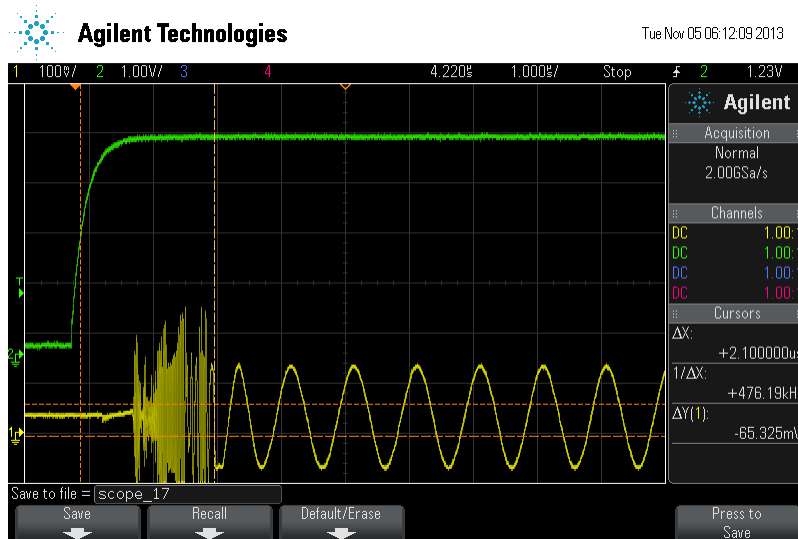
Tuning Speed + Settling Time to 6 GHz (5 GHz Step)



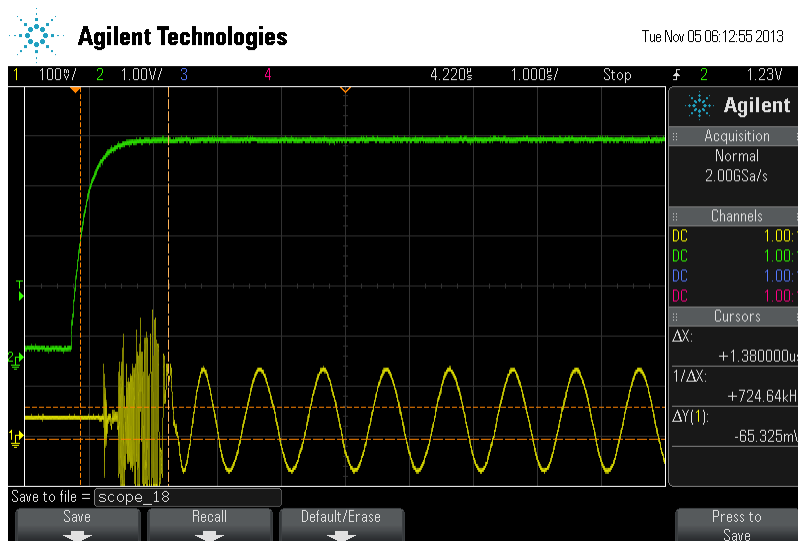


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (6 GHz Step)



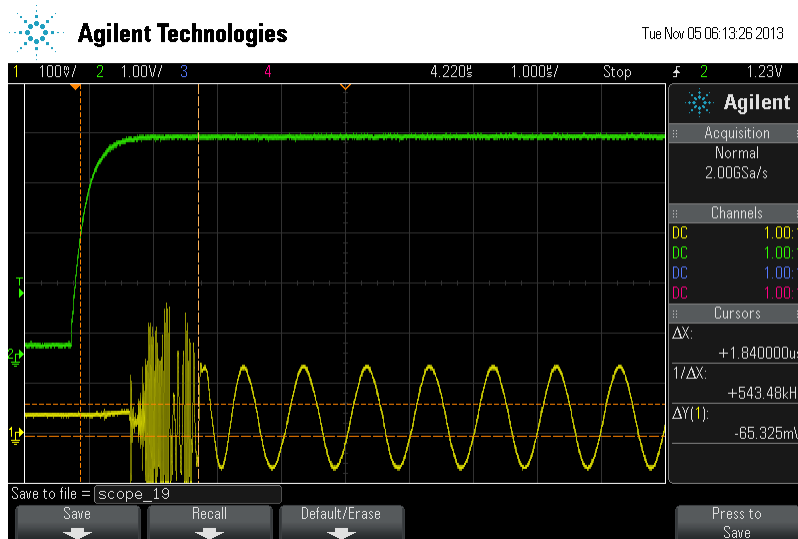
Tuning Speed + Settling Time to 6 GHz (7 GHz Step)



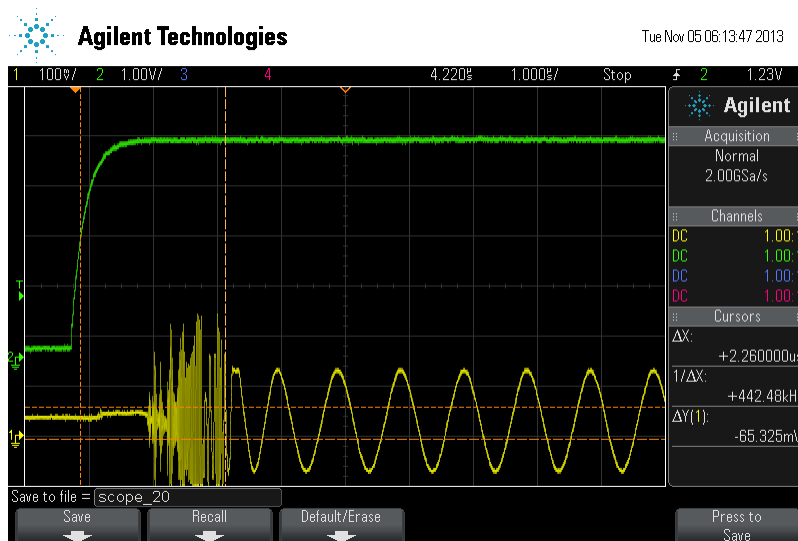


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (8 GHz Step)



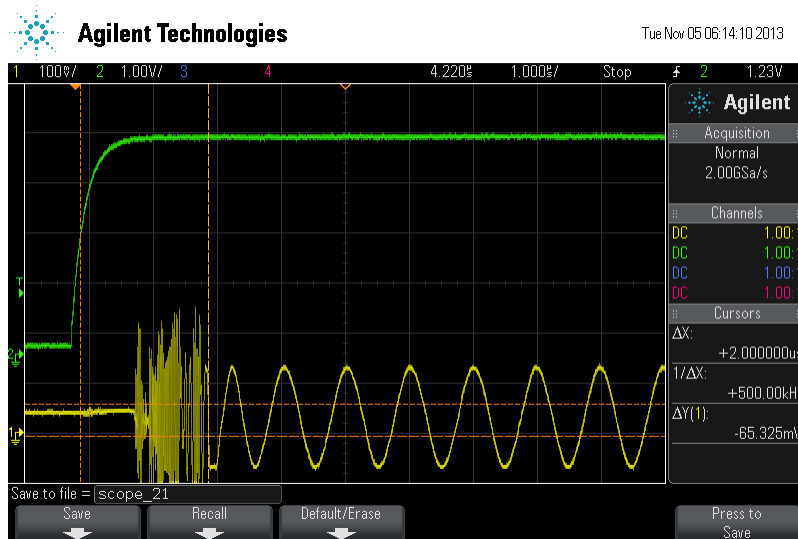
Tuning Speed + Settling Time to 6 GHz (9 GHz Step)



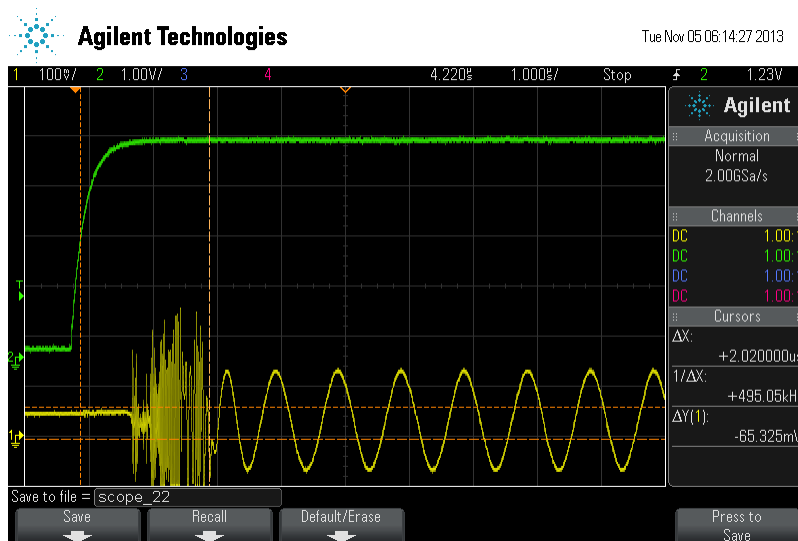


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (10 GHz Step)



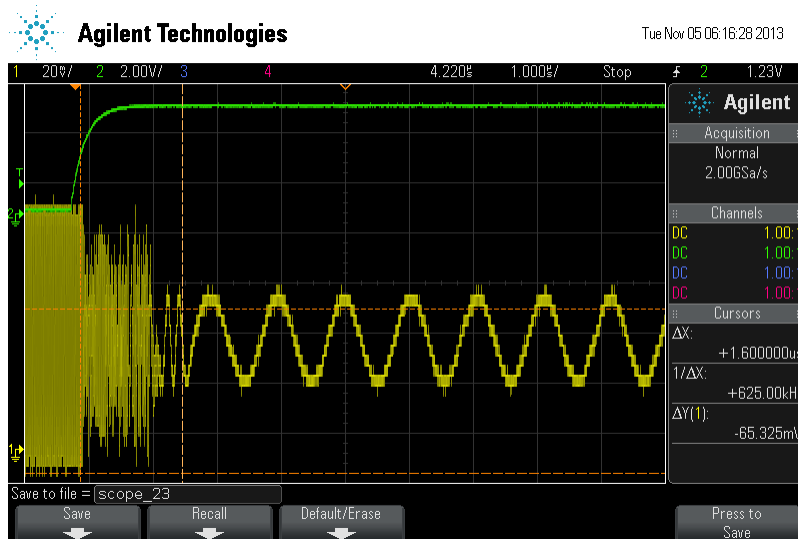
Tuning Speed + Settling Time to 6 GHz (11 GHz Step)



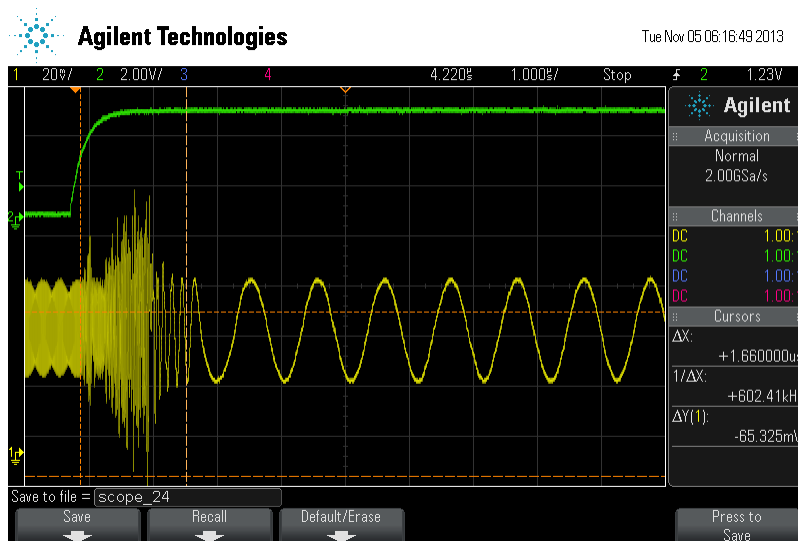


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 6 GHz (12 GHz Step)



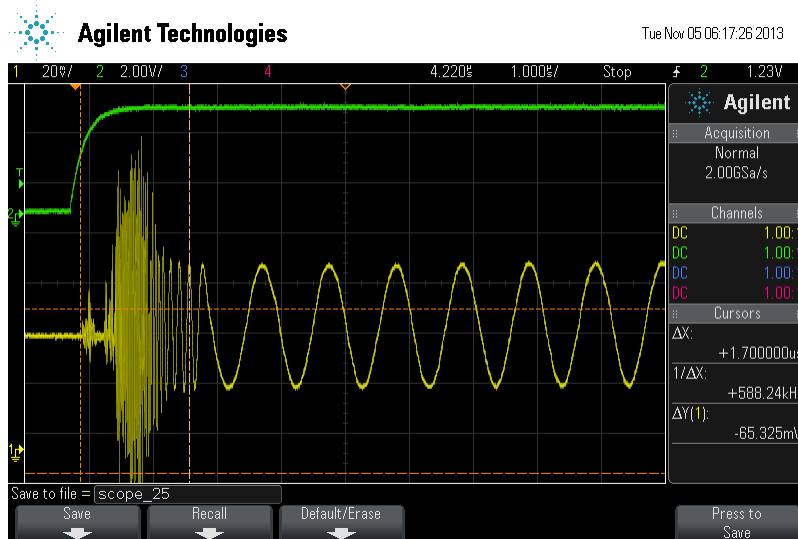
Tuning Speed + Settling Time to 18 GHz (100 MHz Step)



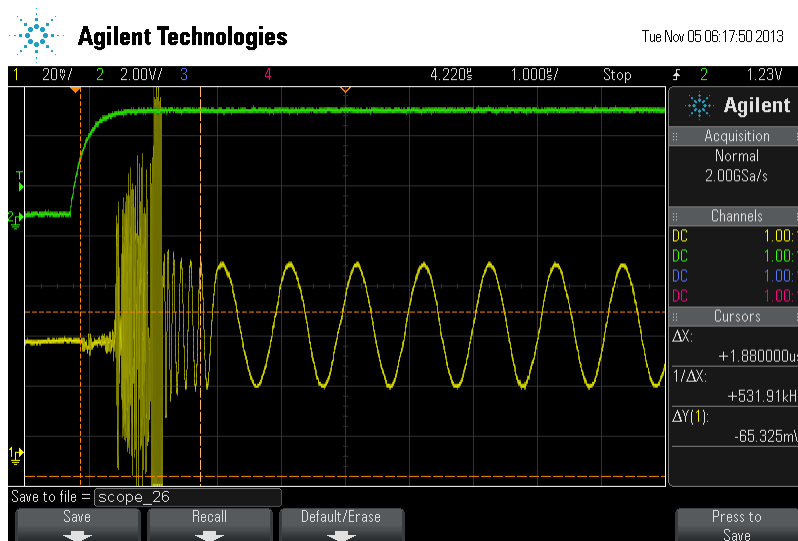


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (500 MHz Step)



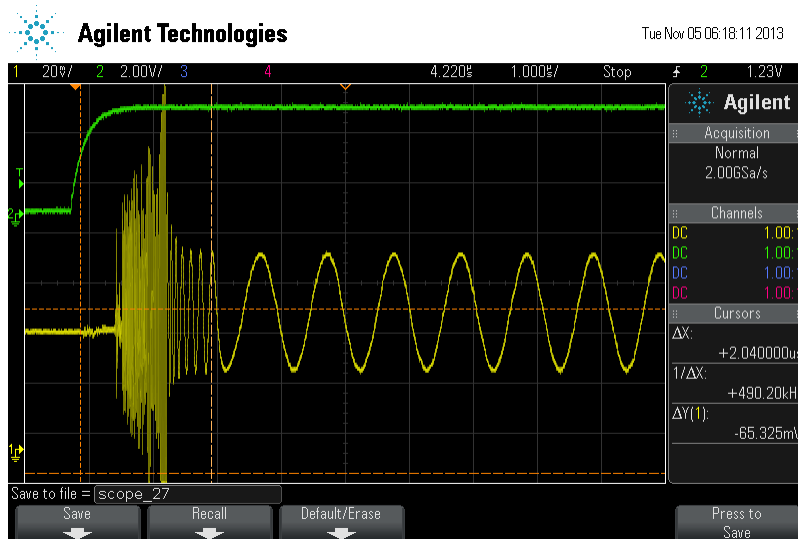
Tuning Speed + Settling Time to 18 GHz (1 GHz Step)



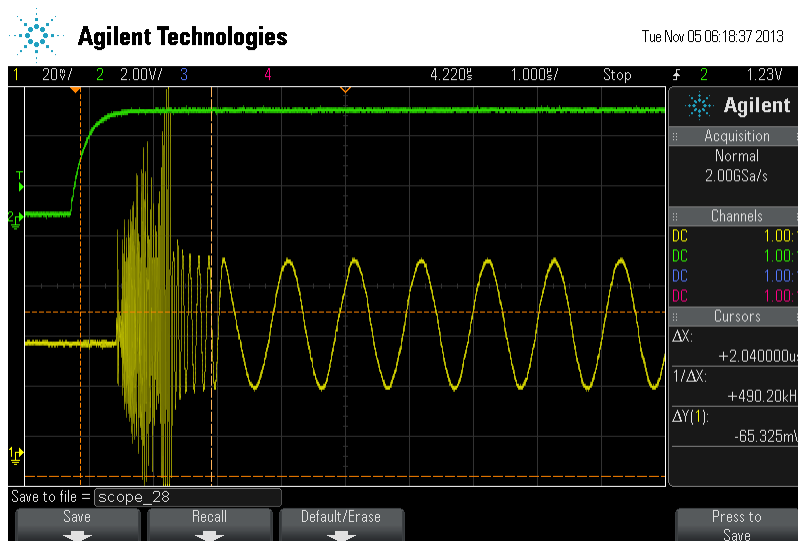


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (2 GHz Step)



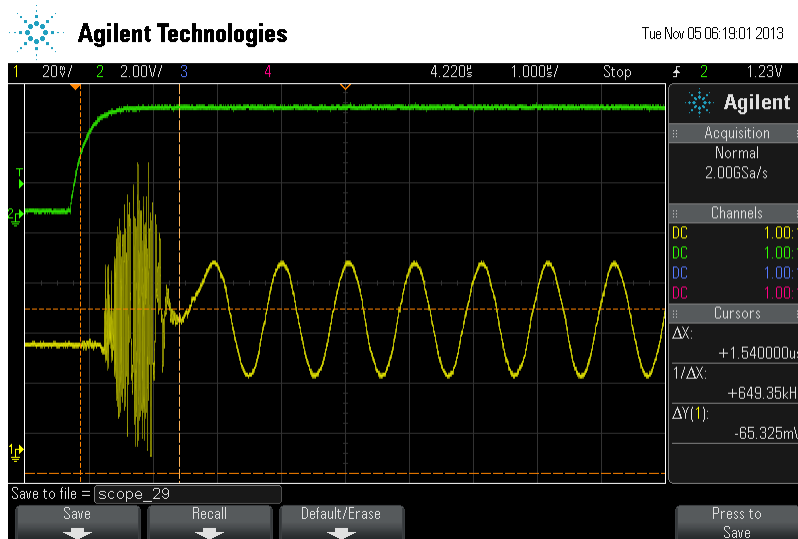
Tuning Speed + Settling Time to 18 GHz (3 GHz Step)



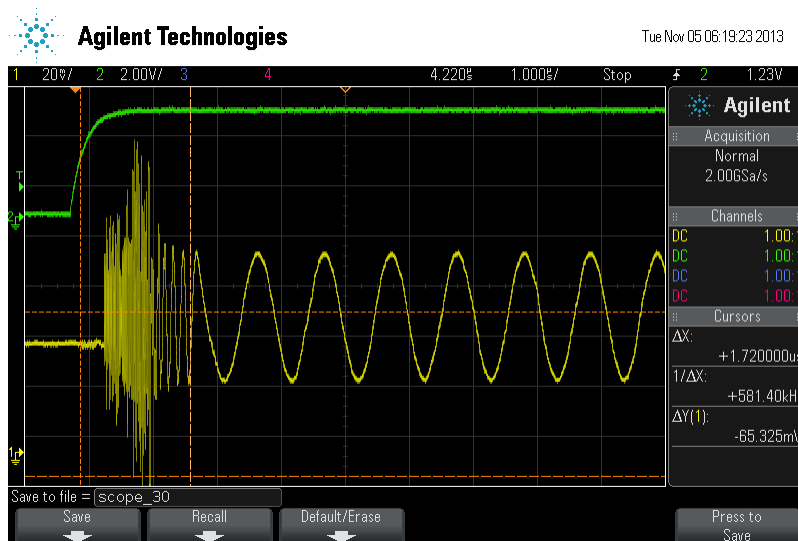


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (4 GHz Step)



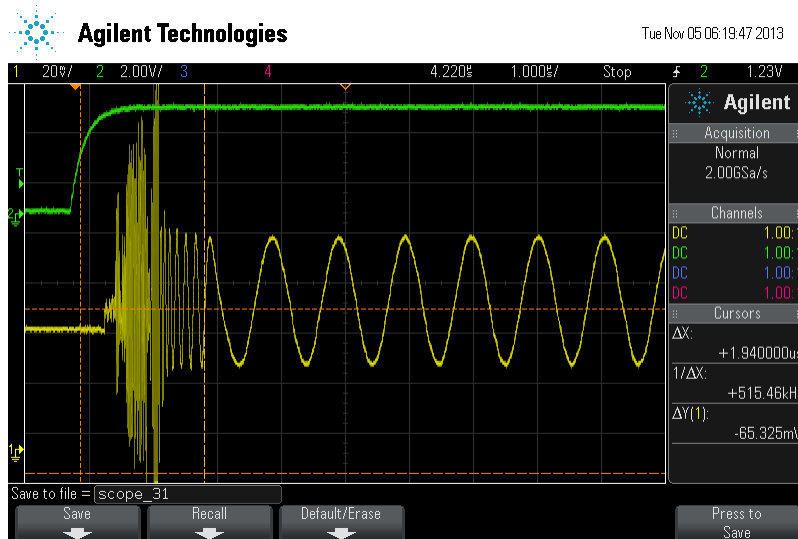
Tuning Speed + Settling Time to 18 GHz (5 GHz Step)



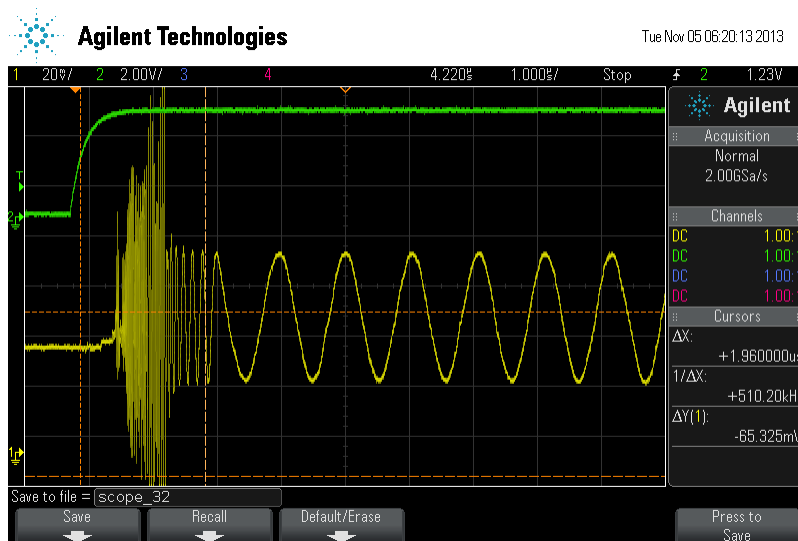


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (6 GHz Step)



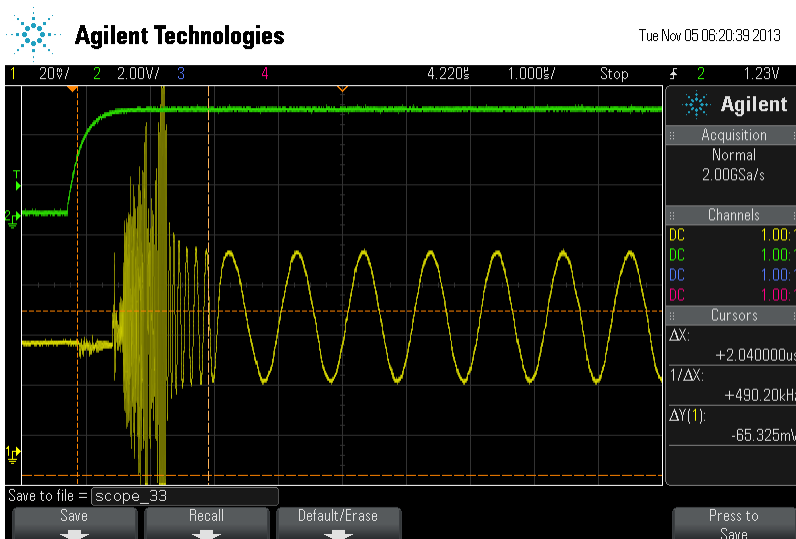
Tuning Speed + Settling Time to 18 GHz (7 GHz Step)



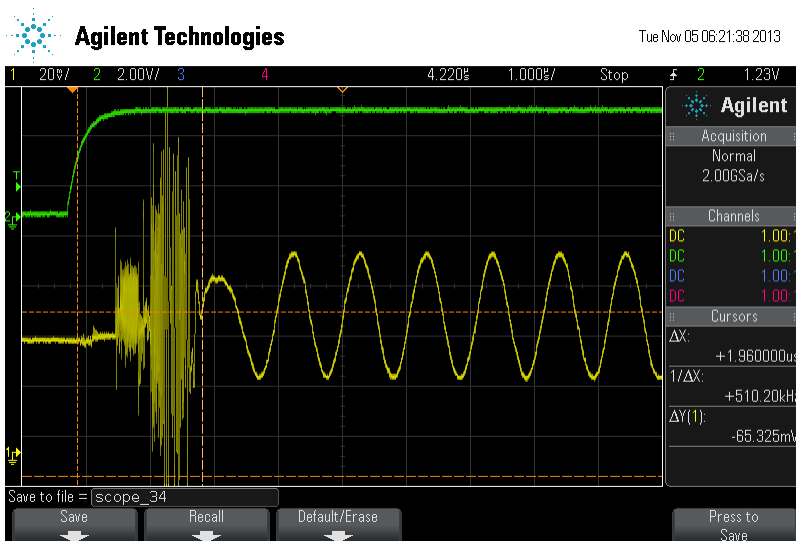


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (8 GHz Step)



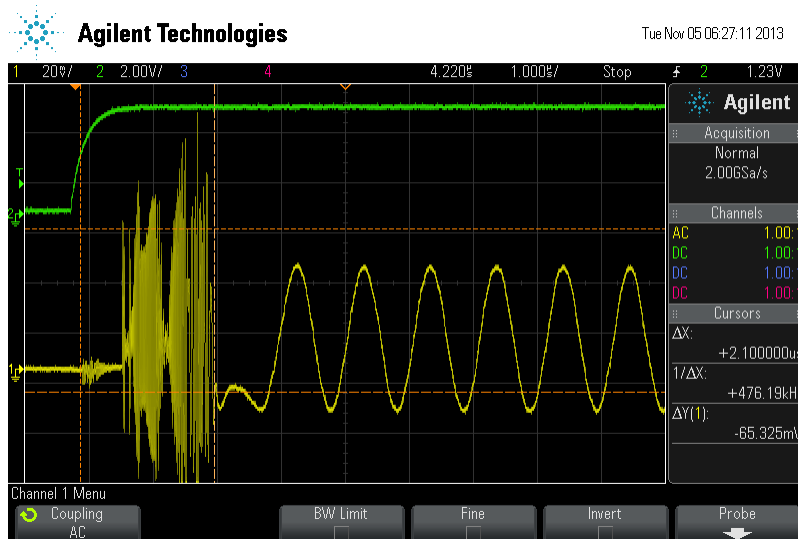
Tuning Speed + Settling Time to 18 GHz (9 GHz Step)



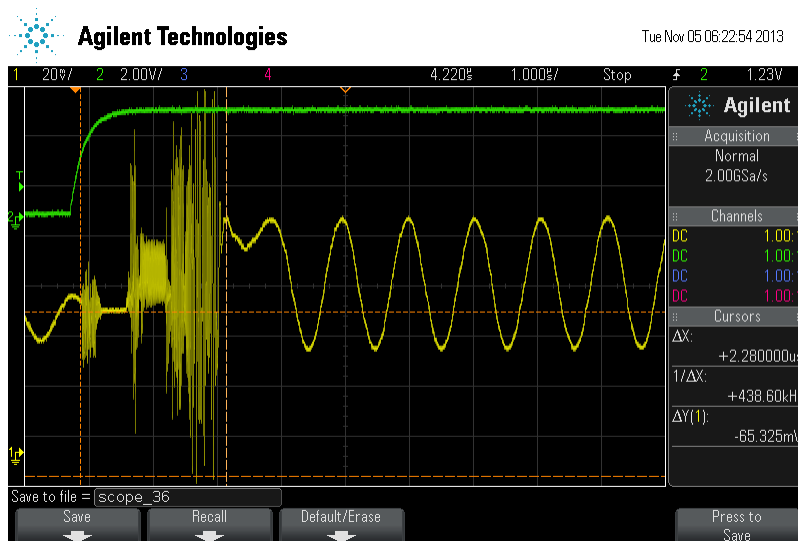


TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (10 GHz Step)



Tuning Speed + Settling Time to 18 GHz (11 GHz Step)





TYPICAL CHARACTERISTICS ON PFS-618-CD-2

Tuning Speed + Settling Time to 18 GHz (12 GHz Step)

