APPLICATION FOR CERTIFICATION
On Behalf of
Philips Lighting(China) Investment Co., Ltd.
LED Lamp

Model No. : 9290011369A
Brand : Philips
FCC ID : 2AGBW9290011369AX

Prepared for

Philips Lighting(China) Investment Co., Ltd.
Building 9, Lane 888, Tian Lin Road, Minhang district, Shanghai, China

Prepared by

Audix Technology (Wujiang) Co., Ltd. EMC Dept.
No. 1289 Jiangxing East Road, the Part of Wujiang Economic Development Zone
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Report Number : ACWE-F1603005A
Date of Test : Feb.27~Mar.05, 2016
Date of Report : Jun.21, 2016

TABLE OF CONTENTS

TEST REPORT CERTIFICATION

Applicant	:	Philips Lighting(China) Investment Co., Ltd.
Manufacturer	:	Philips Lighting(China) Investment Co., Ltd.
Factory#1	:	Changan Win Channel Electronics Company Limited
Factory#2	:	Arts Electronics Co., Ltd.
Factory#3	:	Honor Tone Ltd
EUT Description	:	LED Lamp
FCC ID	:	2AGBW9290011369AX
(A) Model No.	:	9290011369A
(B) Brand	:	Philips
(C) Power Supply	:	AC 110-130V, 60Hz
(D) Test Voltage	:	AC 120V, 60Hz

Applicable Standards:

FCC RULES AND REGULATIONS PART 15 SUBPART C, Oct. 2015
ANSI C63.10: 2013
KDB 558074 D01 DTS Meas Guidance v03r05

The device described above was tested by Audix Technology (Wujiang) Co., Ltd. EMC Dept. to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C section 15.207, 15.209&15.247 limits.

The measurement results are contained in this test report and Audix Technology (Wujiang) Co., Ltd. EMC Dept. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this test report shows that the EUT to be technically compliant with the FCC limits.

This test report applies to above tested sample only. This test report shall not be reproduced in part without written approval of Audix Technology (Wujiang) Co., Ltd. EMC Dept.

Date of Test: Feb.27~Mar.05, 2016 Date of Report: Jun.21, 2016

Prepared by : Emma Hu
(Emma Hu/Assistant Administrator)

Reviewer : Danny Sun
(Danny Sun/ Section Manager)

Approved & Authorized Signer : Ken Lu
(Ken Lu/Assistant General Manager)

1. DESCRIPTION OF VERSION

Edition No.	Date of Rev.	Summary	Report No.
0	Mar.15, 2016	Original Report.	ACWE-F1603005
Rev. A	Jun.21, 2016	Add a test channel, CH26.	ACWE- F1603005A

2. SUMMARY OF MEASUREMENTS AND RESULTS

The EUT has been tested according to the applicable standards and test results are referred as below.

Description of Test Item	Standard	Results	Remark
CONDUCTED EMISSION	FCC 47 CFR Part 15 Subpart C/ Section 15.207 And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	Minimum passing margin is 6.96 dB at 0.15MHz
RADIATED EMISSION	FCC 47 CFR Part 15 Subpart C/ Section 15.209& Section 15.205 And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	Minimum passing margin is 9.20 dB at 30.97MHz
6 dB BANDWIDTH	FCC 47 CFR Part 15 Subpart C/ Section 15.247(a)(2) And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	＞500kHz
OUTPUT POWER	FCC 47 CFR Part 15 Subpart C/ Section 15.247(b)(3) And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	Minimum passing margin is 25.31dB at CH 11
BAND EDGES	FCC 47 CFR Part 15 Subpart C/ Section 15.247(d) And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	---
POWER SPECTRAL DENSITY	FCC 47 CFR Part 15 Subpart C/ Section 15.247(e) And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	Minimum passing margin is 12.406dB at CH 11
EMISSION LIMITATIONS	FCC 47 CFR Part 15 Subpart C/ Section 15.247(d) And ANSI C63.10:2013 And KDB 558074 D01 DTS Meas Guidance v03r05	PASS	---

3. GENERAL INFORMATION

3.1. Description of Device (EUT)

Description	:	LED Lamp
Model No.	:	9290011369A
FCC ID	:	2AGBW9290011369AX
Brand	:	Philips
Applicant	:	Philips Lighting(China) Investment Co., Ltd. Building 9, Lane 888, Tian Lin Road, Minhang district, Shanghai, China
Manufacturer	:	Philips Lighting(China) Investment Co., Ltd. Building 9, Lane 888, Tian Lin Road, Minhang district, Shanghai, China
Factory#1	:	Changan Win Channel Electronics Company Limited No.85, Tong Gu Xia Lu, Shangjiao Community, Changan Town, Dongguan City, Guangdong Province, China
Factory#2	:	Arts Electronics Co., Ltd. Shangxing Lu, Shangjiao Community, Changan Town, Dongguan Guangdong523000 China
Factory#3	:	Honor Tone Ltd Mun Industrial Zone, Danshui, Huiyang, Huizhou Guangdong 516211 CN
Radio Technology	:	IEEE 802.15.4 (ZigBee®)
Antenna Gain	:	1.1dBi
Fundamental Range	:	2405 MHz -2475MHz
Tested Frequency	:	2405MHz (CH11) 2450MHz (CH20) 2475MHz (CH25) 2480MHz (CH26)
Channel Setting Method	:	Channel is changed according to EUT's power on or power off.
Highest Working Frequency	:	2.4GHz
Power Rating	:	9W

Modulation type	**:**	O-QPSK
Date of Receipt of Sample	**:**	Jan.20, 2016
Date of Test	**:**	Feb.27~Mar.05, 2016

Remarks for Rev.A:

1. This report is based on the original report ACWE-F1603005.

2. This report only adds a test channel CH26, so we retest the item that will be affected by CH26 and put the new data into the original report.

3.2. Description of Test Facility

Name of Firm	:	**Audix Technology (Wujiang) Co., Ltd. EMC Dept.**
Site Location	:	No. 1289 Jiangxing East Road, the Eastern Part of Wujiang Economic Development Zone Jiangsu China 215200
Test Facilities	:	**No.1 Conducted Shielding Enclosure** **No.1 3m Semi-anechoic Chamber** Date of Validity: Mar.30, 2018 FCC Registration No.**:** 897661 IC Registration No.:5183D-2 **RF Fully Chamber**
NVLAP Lab Code	:	200786-0 Valid until on Sep.30, 2016 (NVLAP is a signatory member of ILAC MRA) Remark: This report shall not be imply endorsement, certification or approval by NVLAP, NIST, or any agency of the U.S. Federal Government.

3.3. Measurement Uncertainty

Test Item	Range Frequency	Uncertainty
No.1 Conducted Disturbance Measurement	0.15MHz ~ 30MHz	± 2.65dB
Radiated Disturbance Measurement (At 3m Chamber)	30MHz ~ 300MHz	± 3.18dB
	300MHz ~ 1GHz	± 3.12dB
Radiated Disturbance Measurement (At 3m Chamber)	1GHz ~ 6GHz	± 4.56dB
	6GHz ~ 18GHz	± 5.03dB

Remark: Uncertainty = $ku_c(y)$

Test Item	Uncertainty
6 dB Bandwidth	± 0.16 MHz
Maximum Peak Output Power	± 0.12dB
Band Edges	± 0.38dB
Power Spectral Density	± 0.38dB
Emission Limitations	± 0.38dB

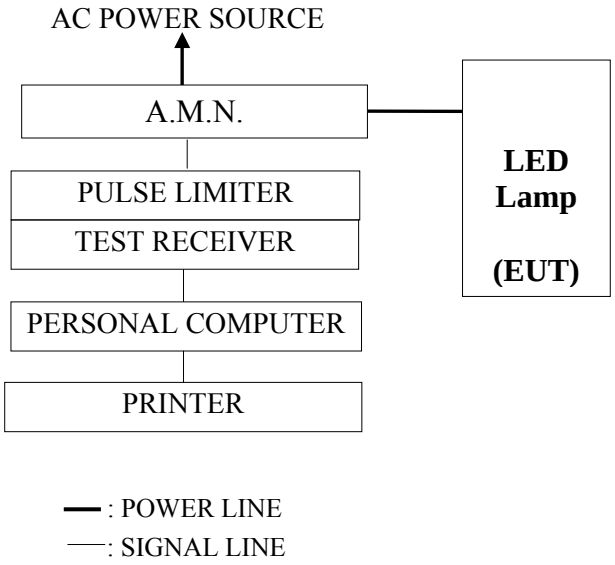
Remark: Uncertainty = $ku_c(y)$

4. CONDUCTED EMISSION MEASUREMET

4.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R & S	ESCI	100839	2016-01-05	2017-01-04
2.	A.M.N	R&S	ESH2-Z5	100153	2016-05-15	2017-05-14
3.	Pulse Limiter	R&S	ESH3-Z2	100605	2015-07-03	2016-07-02
4.	RF Cable	Harbour Industries	RG400	002	2016-01-05	2017-01-04
5.	Software	Audix/e3(6.7.0313)				

4.2. Block Diagram of Test Setup



4.3. Power line Conducted Emission Limit

(FCC Part 15, Section 15.207, Class B)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dBμV	56 ~ 46 dBμV
500kHz ~ 5MHz	56 dBμV	46 dBμV
5MHz ~ 30MHz	60 dBμV	50 dBμV

Remark1: If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2: The lower limit applies at the band edges.

4.4. Test Procedure

The measuring process is according to ANSI C63.10-2013 and laboratory internal procedure TKC-301-004. (For FCC Part15 Subpart C)

In the conducted emission measurement, the EUT and all peripheral devices were set up on a non-metallic table which was 0.8 meter height above the ground plane, and 0.4 meter far away from the vertical plane. The mains cable of the EUT connected to one Artificial Main Network(AMN). All other unit of the EUT and AE connected to a second Line Impedance Stabilization Network(L.I.S.N.). The telecommunication cable connected to the AE through a Impedance Stabilization Network(ISN) which terminated a 50Ω resistor. For the measurement, the A.M.N measuring port was terminated by a 50Ω measuring equipment and the second L.I.S.N measuring port was terminated by a 50Ω terminator. All measurements were done between the phase lead and the reference ground, and between the neutral lead and the reference ground. All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver was set at 9 kHz.

The required frequency band (0.15 MHz ~ 30 MHz) was pre-scanned with peak detector; the final measurement was measured with quasi-peak detector and average detector. (If the average limit is met when using a quasi-peak detector, the average detector is unnecessary).

The emission level is calculated automatically by the test system which uses the following equation:

Emission level (dBμV) = Reading (dBμV) + A.M.N factor (dB) + Cable loss (dB).
(Cable loss includes pulse limiter loss)

4.5. Conducted Emission Measurement Results

For FCC Part15 Subpart C

PASSED.

EUT was performed during this section testing and all the test results are attached in next pages.

Test Date：Mar.03, 2016 Temperature：22.1℃ Humidity：57%

Mode	Test Condition	Reference Test Data No.	
		Neutral	Line
1	**TX CH11 2405MHz**	**※# 4**	**# 3**
2	TX CH20 2450MHz	# 6	# 5
3	TX CH25 2475MHz	# 8	# 7

NOTE 1- '※'means the worst test mode**.**

NOTE 2- The worst emission is detected at 0.15 MHz with emission level of 59.04 dB (μV) and with QP detector (Limit is 66.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

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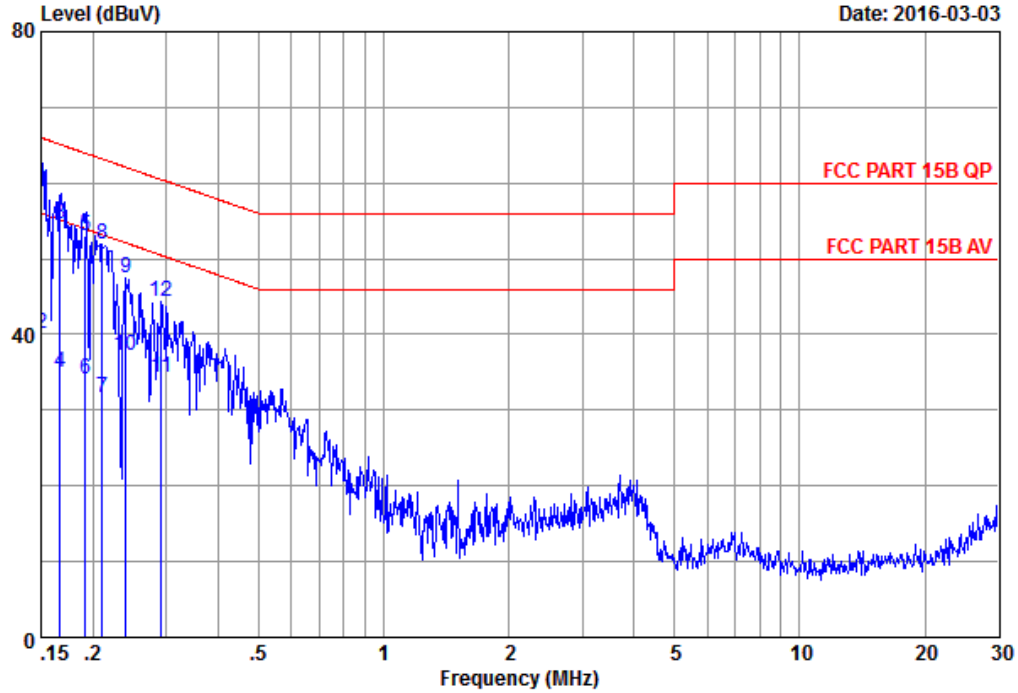

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 4
AMN/LISN	: ESH2-Z5-1505	Phase	: NEUTRAL
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290011369A		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH11 2405MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.15	9.89	49.00	59.04	66.00	6.96	QP
2	0.15	0.15	9.89	30.00	40.04	56.00	15.96	Average
3	0.17	0.15	9.89	44.50	54.54	65.11	10.57	QP
4	0.17	0.15	9.89	25.00	35.04	55.11	20.07	Average
5	0.19	0.15	9.89	43.00	53.04	63.95	10.91	QP
6	0.19	0.15	9.89	24.00	34.04	53.95	19.91	Average
7	0.21	0.15	9.89	21.54	31.58	53.18	21.60	Average
8	0.21	0.15	9.89	41.95	51.99	63.18	11.19	QP
9	0.24	0.15	9.89	37.49	47.53	62.08	14.55	QP
10	0.24	0.15	9.89	27.15	37.19	52.08	14.89	Average
11	0.29	0.15	9.89	24.21	34.25	50.46	16.21	Average
12	0.29	0.15	9.89	34.32	44.36	60.46	16.10	QP

Remarks:
1.Emission Level= AMN factor + Cable loss + Reading .

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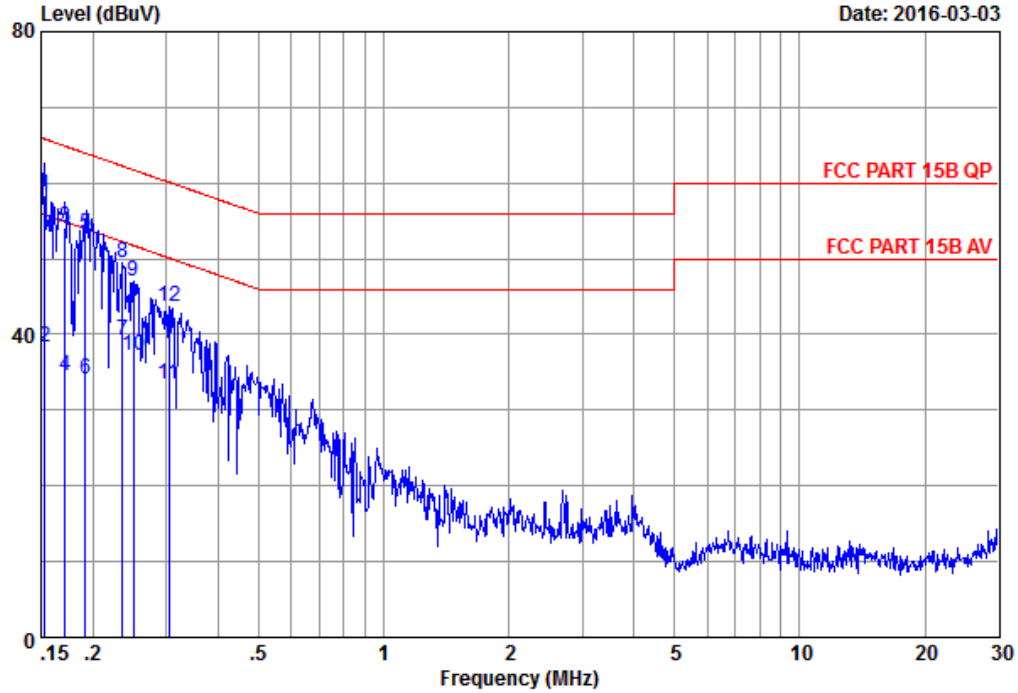

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 3
AMN/LISN	: ESH2-Z5-1505	Phase	: LINE
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290011369A		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH11 2405MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.16	9.89	48.30	58.35	65.84	7.49	QP
2	0.15	0.16	9.89	28.30	38.35	55.84	17.49	Average
3	0.17	0.16	9.89	44.20	54.25	64.91	10.66	QP
4	0.17	0.16	9.89	24.50	34.55	54.91	20.36	Average
5	0.19	0.15	9.89	43.30	53.34	63.95	10.61	QP
6	0.19	0.15	9.89	24.00	34.04	53.95	19.91	Average
7	0.24	0.15	9.89	29.20	39.24	52.26	13.02	Average
8	0.24	0.15	9.89	39.40	49.44	62.26	12.82	QP
9	0.25	0.15	9.89	37.03	47.07	61.73	14.66	QP
10	0.25	0.15	9.89	27.22	37.26	51.73	14.47	Average
11	0.31	0.16	9.90	23.45	33.51	50.10	16.59	Average
12	0.31	0.16	9.90	33.56	43.62	60.10	16.48	QP

Remarks:
1.Emission Level= AMN factor + Cable loss + Reading .

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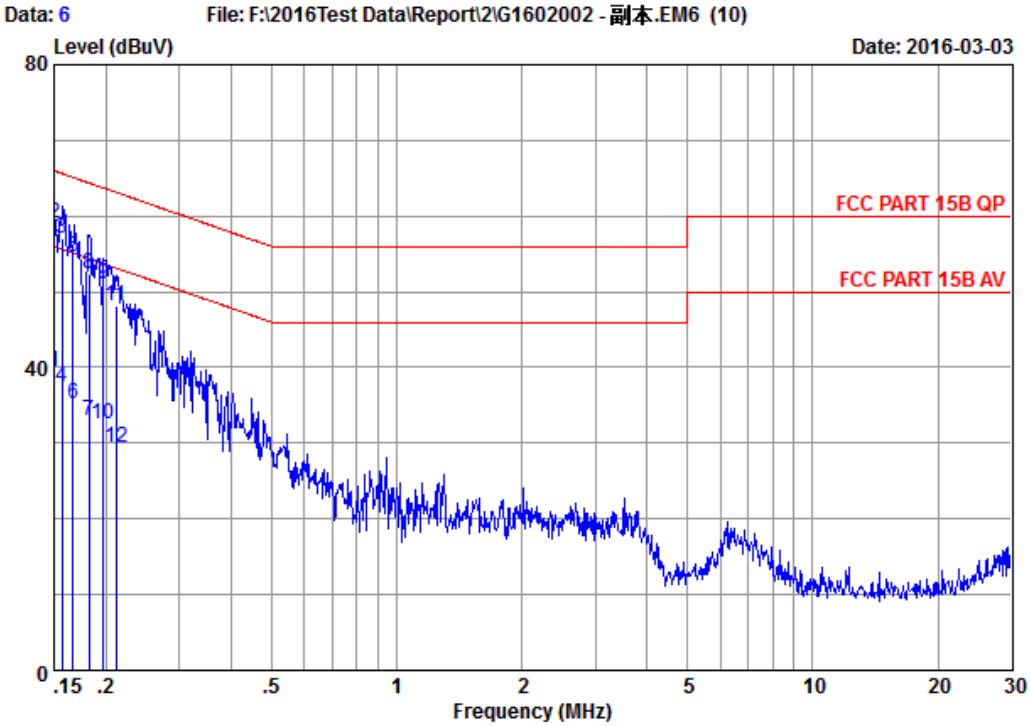

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 6
AMN/LISN	: ESH2-Z5-1505	Phase	: NEUTRAL
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290011369A		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH20 2450MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.15	9.89	29.30	39.34	56.00	16.66	Average
2	0.15	0.15	9.89	49.00	59.04	66.00	6.96	QP
3	0.16	0.15	9.89	47.00	57.04	65.62	8.58	QP
4	0.16	0.15	9.89	27.30	37.34	55.62	18.28	Average
5	0.17	0.15	9.89	44.50	54.54	65.11	10.57	QP
6	0.17	0.15	9.89	25.20	35.24	55.11	19.87	Average
7	0.18	0.15	9.89	23.00	33.04	54.39	21.35	Average
8	0.18	0.15	9.89	42.30	52.34	64.39	12.05	QP
9	0.20	0.15	9.89	41.00	51.04	63.74	12.70	QP
10	0.20	0.15	9.89	22.50	32.54	53.74	21.20	Average
11	0.21	0.15	9.89	38.00	48.04	63.17	15.13	QP
12	0.21	0.15	9.89	19.30	29.34	53.17	23.83	Average

Remarks:
1.Emission Level= AMN factor + Cable loss + Reading .

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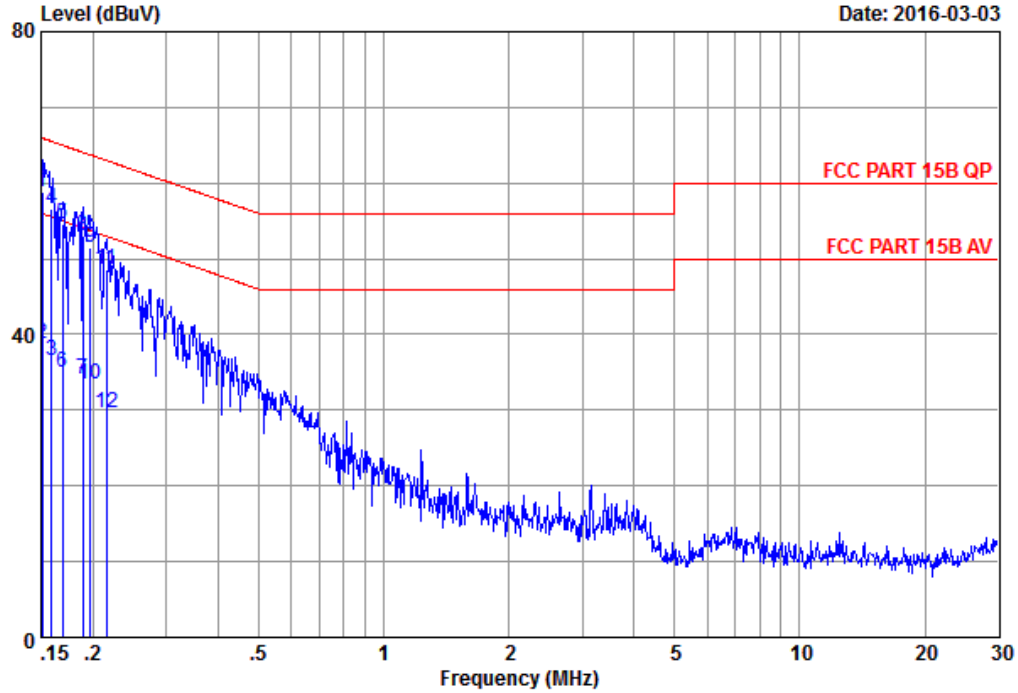

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 5
AMN/LISN	: ESH2-Z5-1505	Phase	: LINE
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290011369A		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH20 2450MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.16	9.89	48.80	58.85	65.94	7.09	QP
2	0.15	0.16	9.89	28.80	38.85	55.94	17.09	Average
3	0.16	0.16	9.89	26.50	36.55	55.52	18.97	Average
4	0.16	0.16	9.89	46.50	56.55	65.52	8.97	QP
5	0.17	0.16	9.89	44.50	54.55	65.01	10.46	QP
6	0.17	0.16	9.89	25.00	35.05	55.01	19.96	Average
7	0.19	0.15	9.89	24.00	34.04	54.08	20.04	Average
8	0.19	0.15	9.89	43.00	53.04	64.08	11.04	QP
9	0.20	0.15	9.89	41.50	51.54	63.74	12.20	QP
10	0.20	0.15	9.89	23.30	33.34	53.74	20.40	Average
11	0.22	0.15	9.89	38.50	48.54	63.01	14.47	QP
12	0.22	0.15	9.89	19.50	29.54	53.01	23.47	Average

Remarks:
1.Emission Level= AMN factor + Cable loss + Reading .

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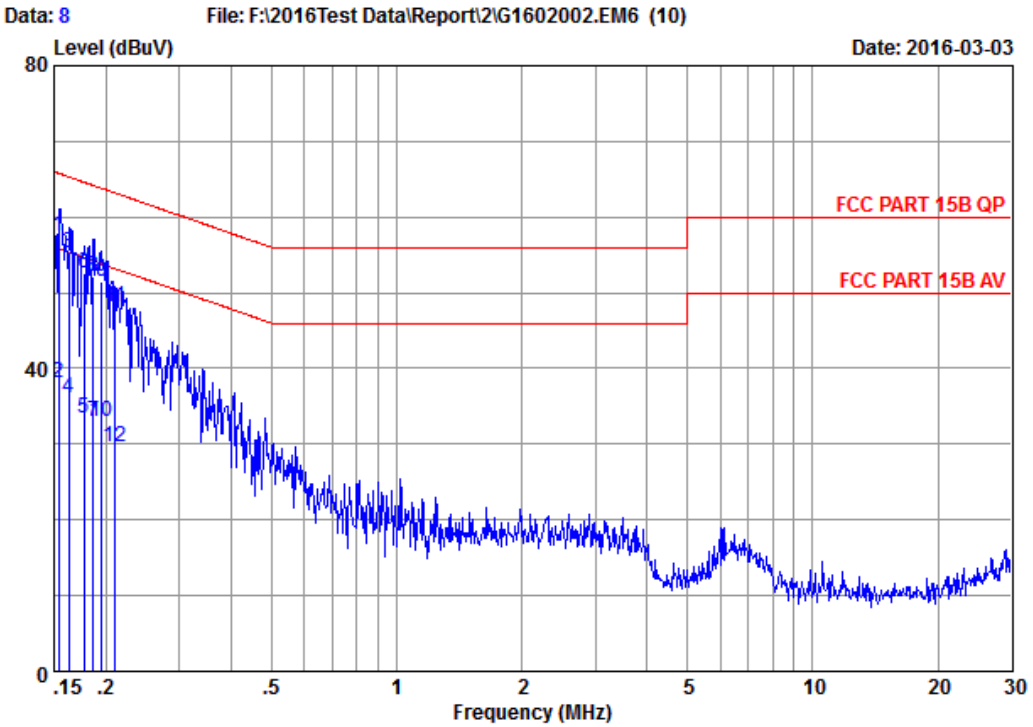

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 8
AMN/LISN	: ESH2-Z5-1505	Phase	: NEUTRAL
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290011369A		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH25 2475MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.15	9.89	47.50	57.54	65.78	8.24	QP
2	0.15	0.15	9.89	28.00	38.04	55.78	17.74	Average
3	0.16	0.15	9.89	45.30	55.34	65.31	9.97	QP
4	0.16	0.15	9.89	26.00	36.04	55.31	19.27	Average
5	0.18	0.15	9.89	23.30	33.34	54.63	21.29	Average
6	0.18	0.15	9.89	42.50	52.54	64.63	12.09	QP
7	0.19	0.15	9.89	23.00	33.04	54.21	21.17	Average
8	0.19	0.15	9.89	42.00	52.04	64.21	12.17	QP
9	0.20	0.15	9.89	41.50	51.54	63.82	12.28	QP
10	0.20	0.15	9.89	23.00	33.04	53.82	20.78	Average
11	0.21	0.15	9.89	38.00	48.04	63.21	15.17	QP
12	0.21	0.15	9.89	19.50	29.54	53.21	23.67	Average

Remarks:
1.Emission Level= AMN factor + Cable loss + Reading .

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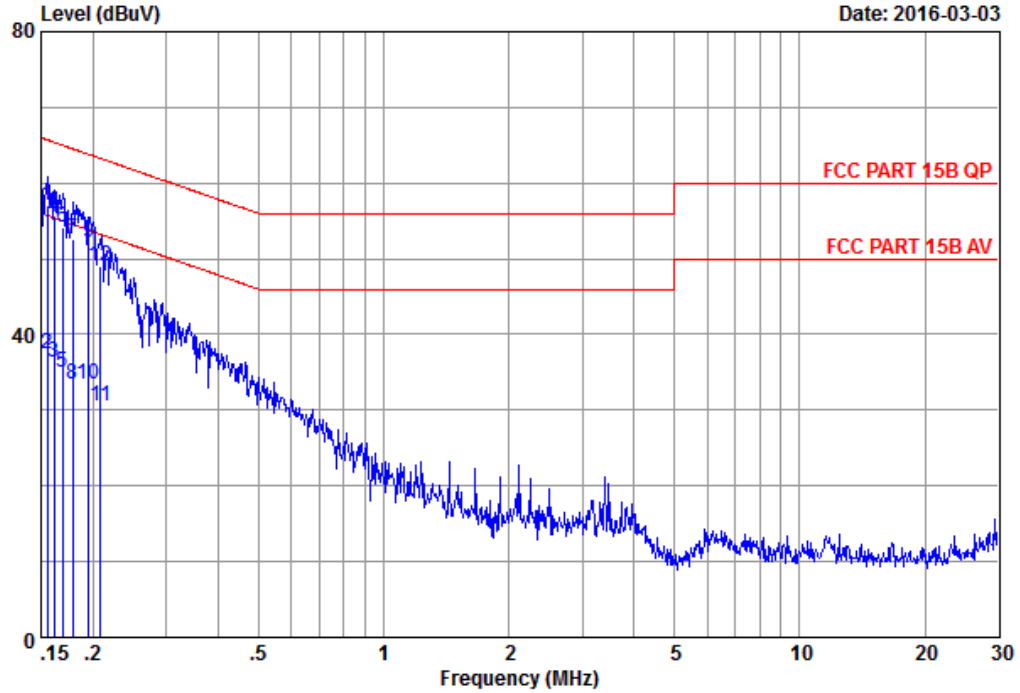


Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 7
AMN/LISN	: ESH2-Z5-1505	Phase	: LINE
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290011369A		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH25 2475MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16	0.16	9.89	47.00	57.05	65.73	8.68	QP
2	0.16	0.16	9.89	27.50	37.55	55.73	18.18	Average
3	0.16	0.16	9.89	26.30	36.35	55.41	19.06	Average
4	0.16	0.16	9.89	45.50	55.55	65.41	9.86	QP
5	0.17	0.16	9.89	25.00	35.05	55.01	19.96	Average
6	0.17	0.16	9.89	44.00	54.05	65.01	10.96	QP
7	0.18	0.15	9.89	42.50	52.54	64.53	11.99	QP
8	0.18	0.15	9.89	23.30	33.34	54.53	21.19	Average
9	0.20	0.15	9.89	42.00	52.04	63.82	11.78	QP
10	0.20	0.15	9.89	23.30	33.34	53.82	20.48	Average
11	0.21	0.15	9.89	20.50	30.54	53.24	22.70	Average
12	0.21	0.15	9.89	39.00	49.04	63.24	14.20	QP

Remarks:
1.Emission Level= AMN factor + Cable loss + Reading .

5. RADIATED EMISSION MEASUREMENT

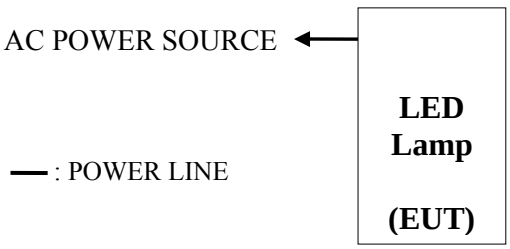
5.1. Test Equipment

The following test equipment was used during the radiated emission measurement:
At 3m Semi-Anechoic Chamber

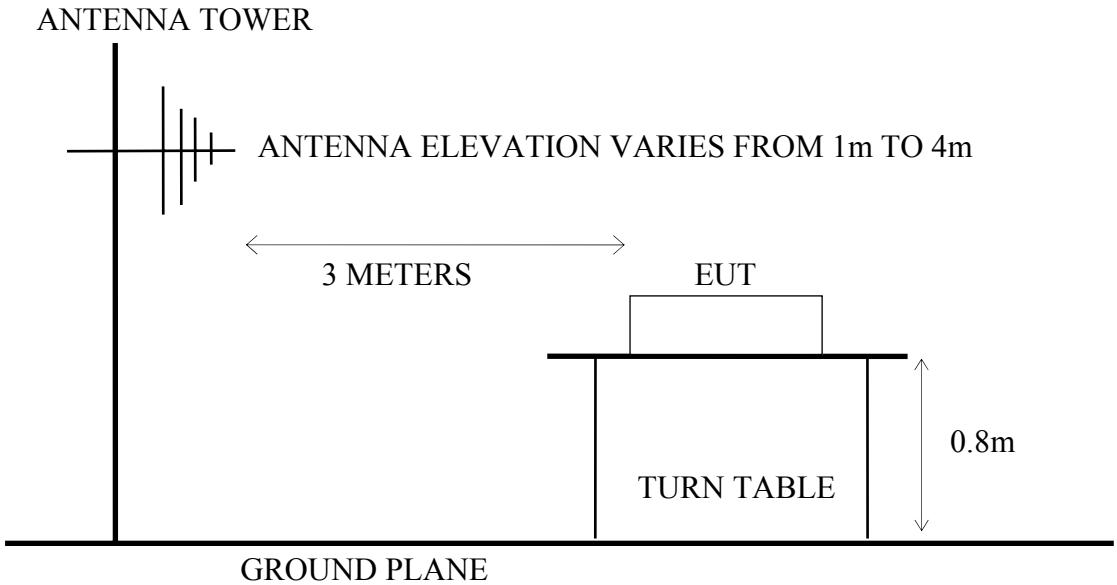
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8449B	3008A02233	2016-01-05	2017-01-04
2.	Preamplifier	Agilent	8447D	2944A10921	2015-07-03	2016-07-02
3.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22
4.	Test Receiver	R&S	ESCI	100361	2016-01-05	2017-01-04
5.	Bi-log Antenna	Schaffner	CBL6112D	22250	2015-09-02	2016-09-01
6.	Horn Antenna	EMCO	3115	62960	2015-06-30	2016-05-29
7.	RF Cable #1	Yuhang CSYH	cable-3m	001(0.5m)	2016-01-05	2017-01-04
8.	RF Cable #2	Yuhang CSYH	cable-3m	002(0.5m)	2016-01-05	2017-01-04
9.	RF Cable #3	Yuhang CSYH	cable-3m	003(3.0m)	2016-01-05	2017-01-04
10.	Software	Audix/e3(6.7.0313)				

5.2. Block Diagram of Test Setup

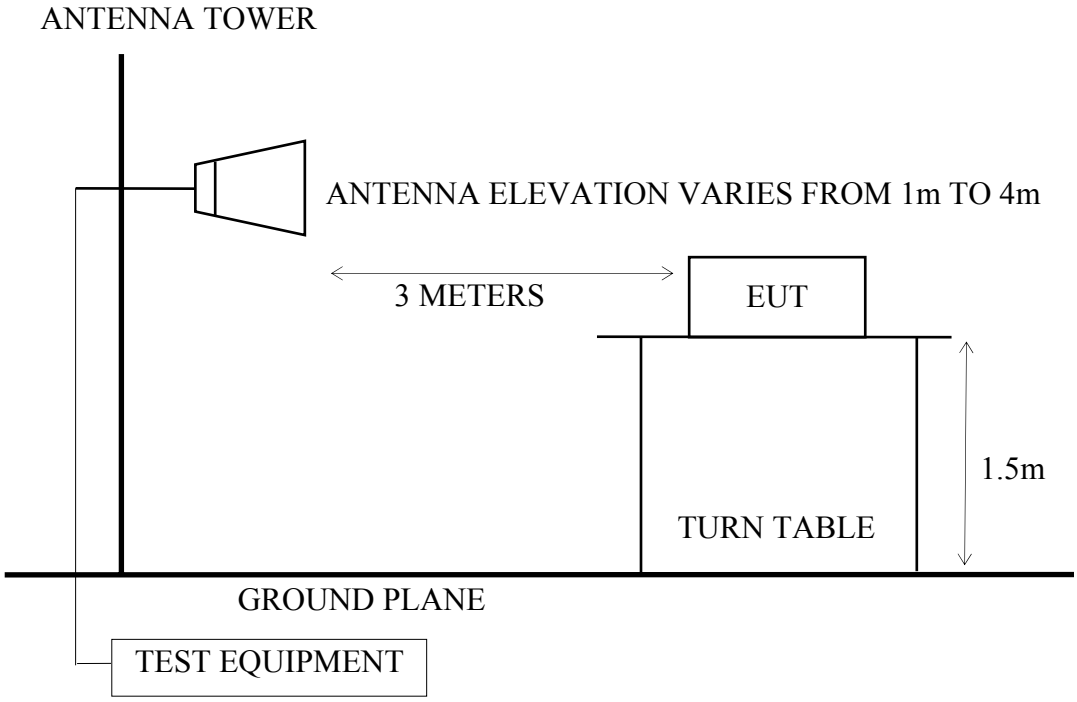
5.2.1. Block Diagram of Test Setup between EUT and simulators



5.2.2. No. 1 3m Semi-Anechoic Chamber Setup Diagram (Test distance:3m) for 30-1000MHz



5.2.3. No. 1 3m Semi-Anechoic Chamber Setup Diagram (Test distance: 3m) for above 1GHz



5.3. Radiated Emission Limits

Radiated Emission Limits (FCC Part15 C, section 15.209, CISPR22)

Frequency MHz	Distance Meters	Field Strengths Limits dBμV/m
30 ~ 230	10	30.0
230 ~ 1000	10	37.0
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)

Remark： (1) Emission level (dBμV/m) = 20 log Emission level (μV/m)
(2)The tighter limit applies at the edge between two frequency bands.

5.4. Test Procedure

The measuring process is according to ANSI C63.10-2013 and laboratory internal procedure TKC-301-001. (For FCC Part15 Subpart C)

In the radiated disturbance measurement, the EUT and all simulators were set up on a non-metallic turn table which was 0.8 meter above the ground plane. Measurement distance between EUT and receiving antennas was set at 10 meters at 30MHz~1GHz and 3 meters at 1GHz~6GHz. The measurement distance is the shortest horizontal distance between an imaginary circular periphery which consists of EUT periphery and cables and the reference point of the antenna. During the radiated measurement, the EUT was rotated 360° and receiving antennas were moved from 1 ~ 4 meters for finding maximum emission. Two receiving antennas were used for both horizontal and vertical polarization detection for 30MHz~1GHz, One receiving antennas was used for both horizontal and vertical polarization detection for 1GHz~6GHz (the absorbing material was added when testing of 1GHz~6GHz was done). All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver (or spectrum analyzer) was set to:

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz
RBW (1 MHz), VBW (1MHz) for Peak detector above 1GHz
RBW (1 MHz), VBW (10Hz) for AV detector above 1GHz

The frequency range from 30MHz to 10^{th} harmonic(25GHz) are checked, and no any emissions were found from 18GHz to 25GHz.

The emission level is calculated automatically by the test system which uses the following equation：

1. For 30MHz-1GHz measurement:
   Emission Level (dBμV/m) = Reading (dBμV)+Antenna Factor (dB/m)+Cable Loss (dB)
2. For Above 1GHz measurement:
   Emission Level (dBμV/m) = Reading (dBμV)+Antenna Factor (dB/m)+Cable Loss(dB)
   -Pre-amplifier factor (dB)

The three orthogonal planes have been all tested, and the data of the worst mode XY plan(in Horizontal) & YZ plan(in Vertical) is shown in the report.

5.5. Measurement Results

PASSED

5.5.1. For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 5.7 & 5.8. (The restricted bands defined in part 15.205(a))

For Frequency range：below 1GHz

No.	Test Mode and Frequency		Reference Test Data No.	
			Horizontal	Vertical
1.	Transmitting	2405MHz (Channel 11)	# 7	# 8
2.		2450MHz (Channel 20)	# 9	# 10
3.		2475MHz (Channel 25)	# 11	# 12

For Frequency range：above 1GHz

No.	Test Mode and Frequency		Reference Test Data No.	
			Horizontal	Vertical
1.	Transmitting	2405MHz (Channel 11)	# 13	# 14
2.		2450MHz (Channel 20)	# 15	# 16
3.		2475MHz (Channel 25)	# 17	# 18

5.5.2. For Band Edge Emission

The EUT was tested in restricted bands and all the test results are listed in section 5.9. The restricted bands defined in part 15.205(a)

No.	Test Mode and Frequency		Reference Test Data No.	
			Horizontal	Vertical
1.	Transmitting	2405MHz (Channel 11)	# 19, # 21	# 20, # 22
2.		2475MHz (Channel 25)	# 23, # 25	# 24, # 26
3.		2080MHz (Channel 26)	# 27, # 29	# 28, # 30

5.6. Restricted Bands Measurement Results (For Below 1GHz)

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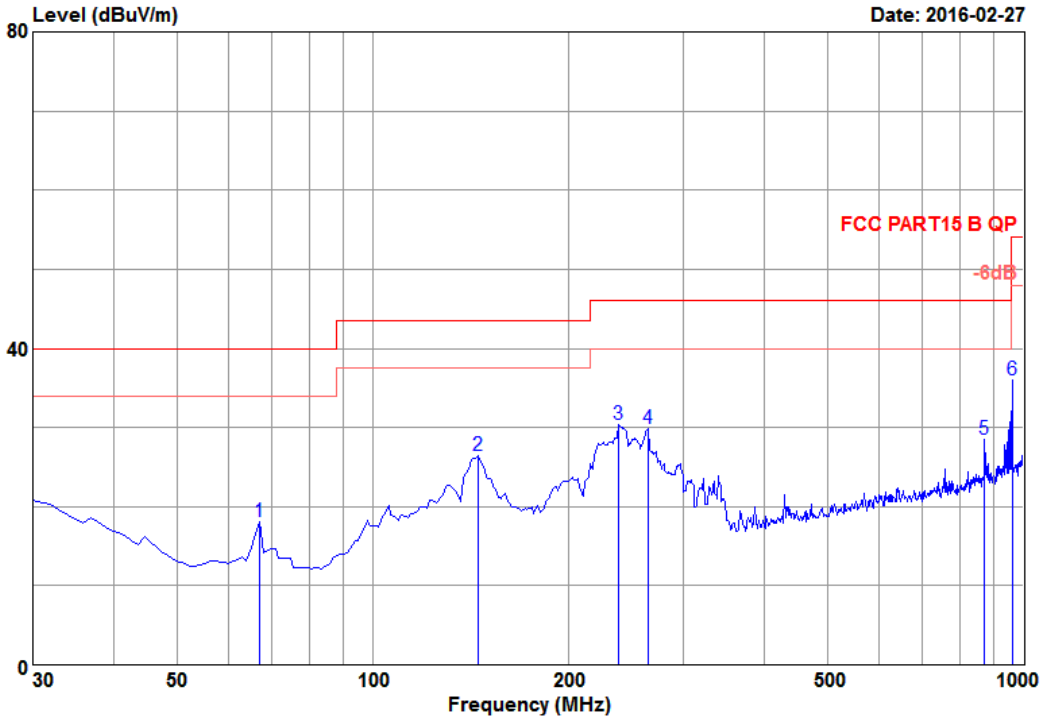
Data: 7 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22250)-1510
Limit : FCC PART15 B QP
Env. / Ins. : 16.2*C&48%/ESCI
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. :7
Ant. pol. : HORIZONTAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	66.86	8.95	0.70	35.73	18.11	40.00	21.89	QP
2	145.43	12.43	1.04	39.92	26.37	43.50	17.13	QP
3	238.55	12.22	1.39	43.56	30.45	46.00	15.55	QP
4	264.74	13.83	1.47	41.22	29.85	46.00	16.15	QP
5	870.99	21.47	2.96	31.46	28.52	46.00	17.48	QP
6	960.23	22.12	3.22	37.67	36.05	54.00	17.95	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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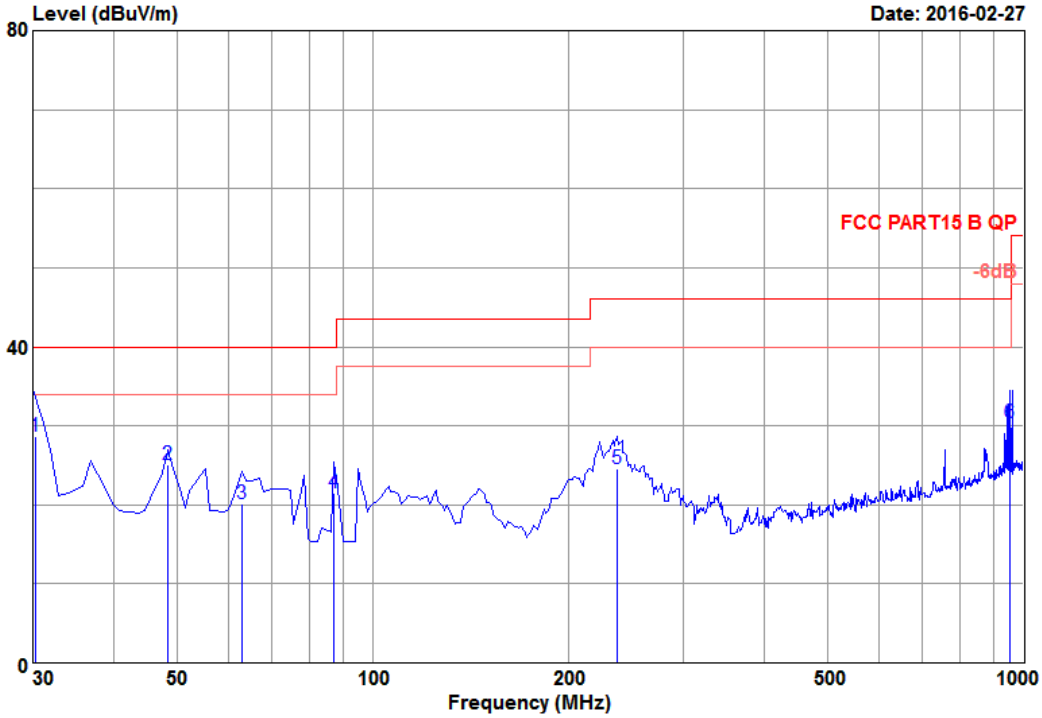
Data: 8 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22250)-1510
Limit : FCC PART15 B QP
Env. / Ins. : 16.2*C&48%/ESCI
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. :8
Ant. pol. : VERTICAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.25	21.30	0.47	34.23	28.65	40.00	11.35	QP
2	48.43	11.63	0.60	40.08	25.01	40.00	14.99	QP
3	62.98	8.35	0.68	38.45	20.21	40.00	19.79	QP
4	87.23	8.68	0.80	39.19	21.44	40.00	18.56	QP
5	237.58	12.14	1.38	37.80	24.60	46.00	21.40	QP
6	951.50	22.06	3.19	32.19	30.45	46.00	15.55	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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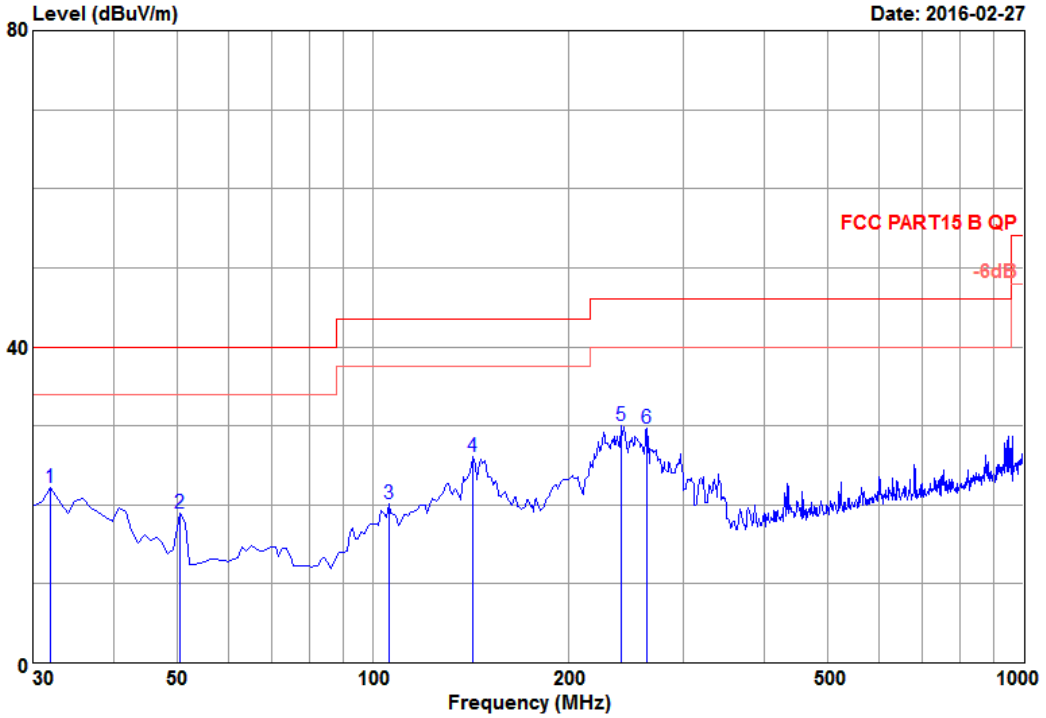
Data: 9 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22250)-1510
Limit : FCC PART15 B QP
Env. / Ins. : 16.2*C&48%/ESCI
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. :9
Ant. pol. : HORIZONTAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.94	20.20	0.48	28.90	22.23	40.00	17.77	QP
2	50.37	10.70	0.61	34.99	19.00	40.00	21.00	QP
3	105.66	11.59	0.88	34.77	20.06	43.50	23.44	QP
4	142.52	12.71	1.03	39.34	26.05	43.50	17.45	QP
5	240.49	12.38	1.39	42.95	30.00	46.00	16.00	QP
6	263.77	13.84	1.47	41.01	29.65	46.00	16.35	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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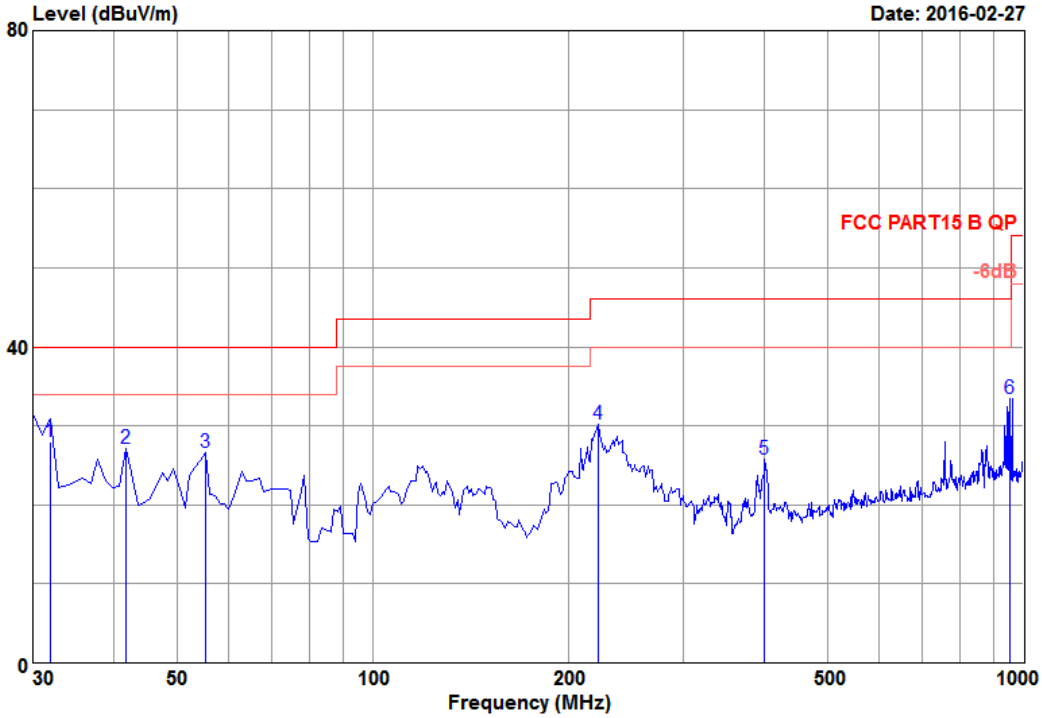
Data: 10 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22250)-1510
Limit : FCC PART15 B QP
Env. / Ins. : 16.2*C&48%/ESCI
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. :10
Ant. pol. : VERTICAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.94	20.20	0.48	34.62	27.95	40.00	12.05	QP
2	41.64	14.87	0.55	39.09	27.19	40.00	12.81	QP
3	55.22	9.30	0.64	43.94	26.59	40.00	13.41	QP
4	222.06	10.86	1.33	44.72	30.15	46.00	15.85	QP
5	399.57	16.80	1.87	34.40	25.77	46.00	20.23	QP
6	951.50	22.06	3.19	35.19	33.45	46.00	12.55	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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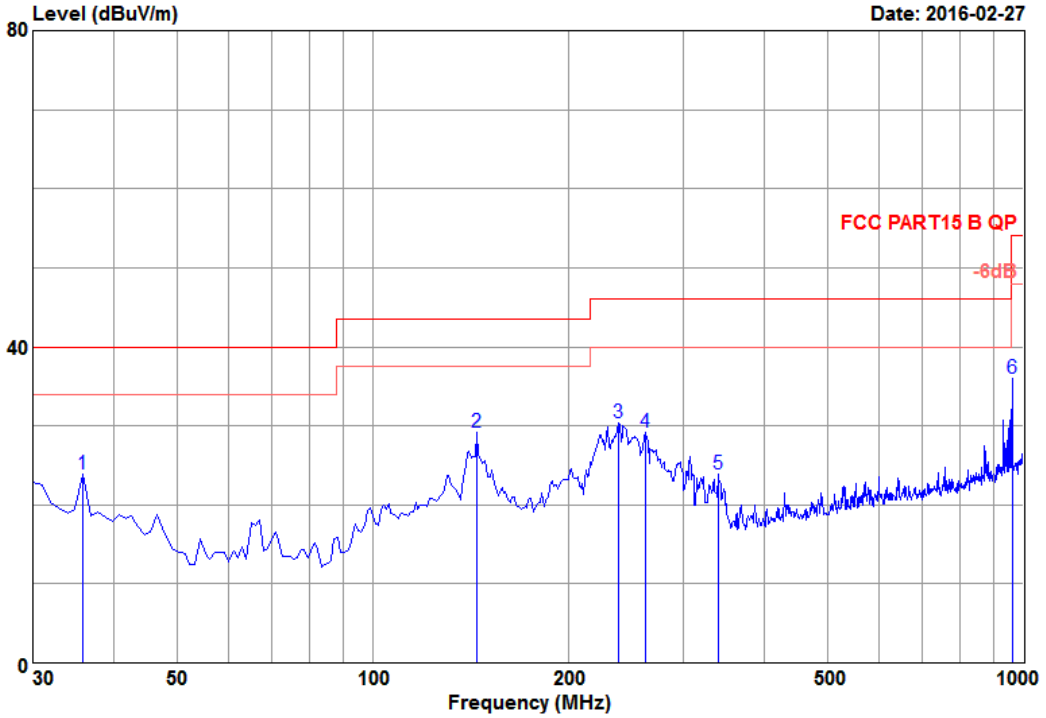
Data: 11 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22250)-1510
Limit : FCC PART15 B QP
Env. / Ins. : 16.2*C&48%/ESCI
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. :11
Ant. pol. : HORIZONTAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	35.82	18.00	0.51	32.71	23.88	40.00	16.12	QP
2	144.46	12.52	1.04	42.67	29.21	43.50	14.29	QP
3	238.55	12.22	1.39	43.56	30.45	46.00	15.55	QP
4	261.83	13.87	1.47	40.58	29.24	46.00	16.76	QP
5	339.43	15.05	1.70	33.99	23.86	46.00	22.14	QP
6	960.23	22.12	3.22	37.67	36.05	54.00	17.95	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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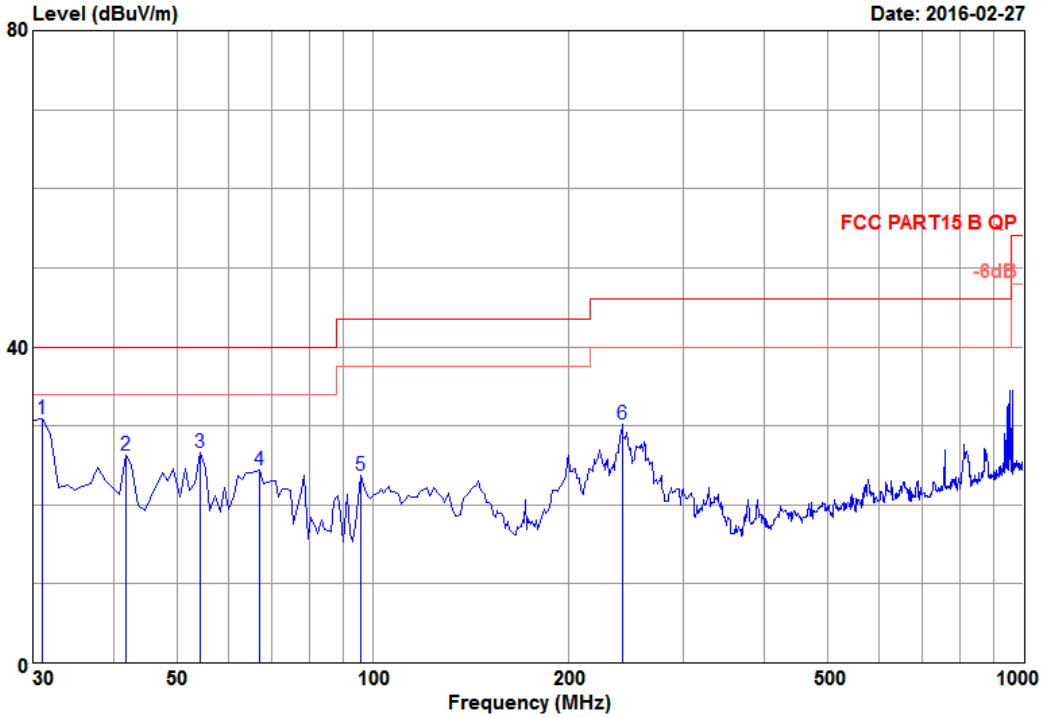
Data: 12 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22250)-1510
Limit : FCC PART15 B QP
Env. / Ins. : 16.2*C&48%/ESCI
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. :12
Ant. pol. : VERTICAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.97	20.75	0.48	36.92	30.80	40.00	9.20	QP
2	41.64	14.87	0.55	38.09	26.19	40.00	13.81	QP
3	54.25	9.58	0.63	43.73	26.65	40.00	13.35	QP
4	66.86	8.95	0.70	42.00	24.38	40.00	15.62	QP
5	95.96	10.18	0.84	39.96	23.77	43.50	19.73	QP
6	241.46	12.45	1.40	43.01	30.14	46.00	15.86	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5.7. Restricted Bands Measurement Results (For Above 1GHz)

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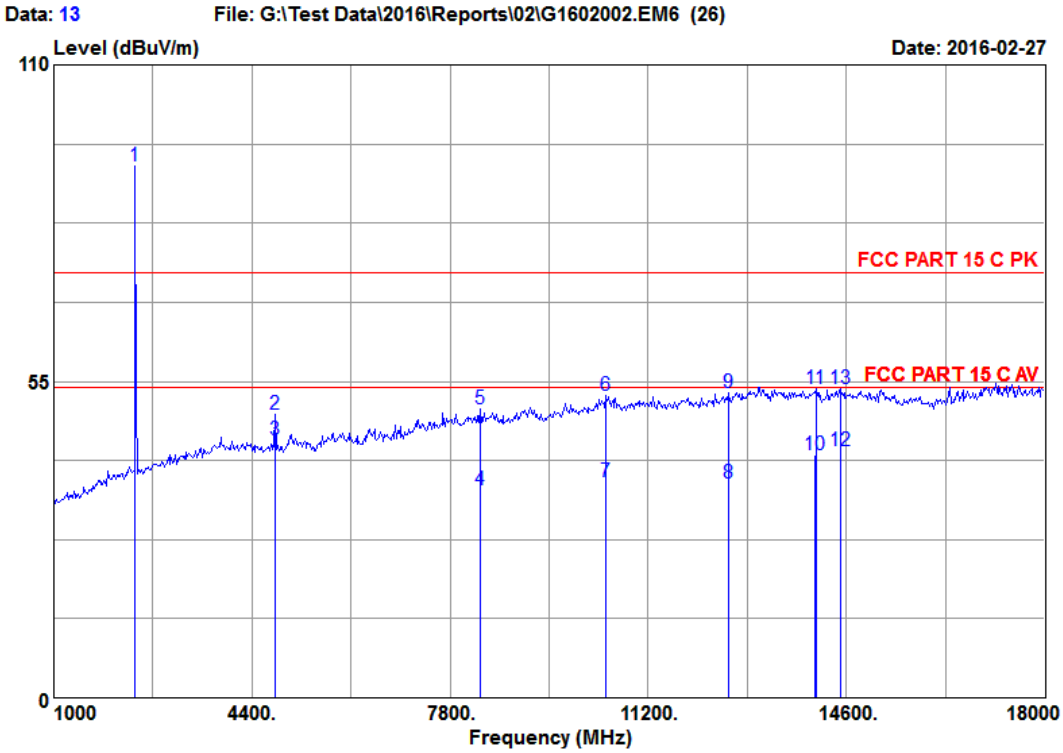

Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 13
Ant. pol. : HORIZONTAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m	Limits (dBuV/m)	Margin (dB)	Remark
1	2400.00	28.45	5.09	93.43	34.50	92.47	74.00	-18.47	Peak
2	4800.00	32.86	7.32	43.11	33.95	49.34	74.00	24.66	Peak
3	4808.94	32.86	7.32	38.64	33.95	44.87	54.00	9.13	Average
4	8318.98	37.39	9.71	23.15	34.21	36.04	54.00	17.96	Average
5	8320.00	37.39	9.71	37.24	34.21	50.13	74.00	23.87	Peak
6	10480.00	39.57	11.09	35.86	34.07	52.45	74.00	21.55	Peak
7	10481.94	39.57	11.09	20.90	34.07	37.49	54.00	16.51	Average
8	12578.94	38.98	11.97	19.38	33.03	37.30	54.00	16.70	Average
9	12580.00	38.98	11.97	35.14	33.03	53.06	74.00	20.94	Peak
10	14070.14	42.26	12.87	18.82	31.70	42.25	54.00	11.75	Average
11	14080.00	42.26	12.87	30.27	31.70	53.70	74.00	20.30	Peak
12	14492.78	42.60	13.01	19.51	32.28	42.84	54.00	11.16	Average
13	14500.00	42.60	13.01	30.31	32.28	53.64	74.00	20.36	Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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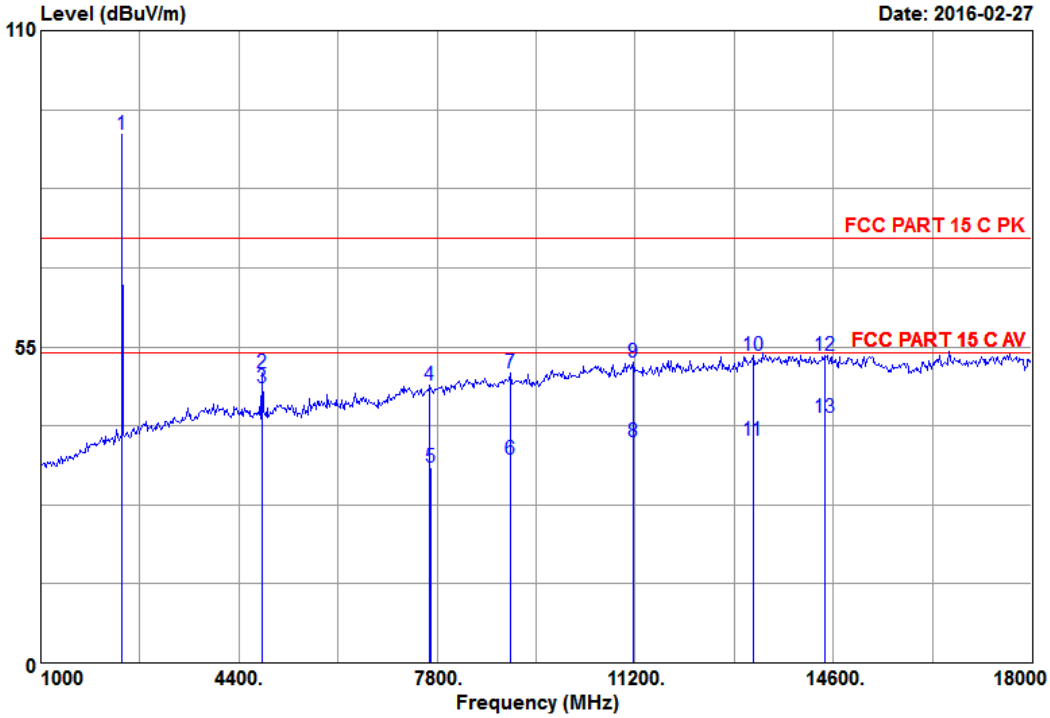
Data: 14 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 14
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2400.00	28.45	5.09	92.97	34.50	92.01	74.00	-18.01	Peak
2	4800.00	32.86	7.32	44.13	33.95	50.36	74.00	23.64	Peak
3	4808.94	32.86	7.32	41.52	33.95	47.75	54.00	6.25	Average
4	7680.00	36.87	9.34	36.13	34.08	48.26	74.00	25.74	Peak
5	7682.46	36.87	9.34	22.00	34.08	34.13	54.00	19.87	Average
6	9058.66	38.01	10.03	21.81	34.42	35.43	54.00	18.57	Average
7	9060.00	38.01	10.03	36.77	34.42	50.39	74.00	23.61	Peak
8	11157.22	39.19	11.37	21.57	33.67	38.46	54.00	15.54	Average
9	11160.00	39.20	11.37	35.30	33.67	52.20	74.00	21.80	Peak
10	13220.00	40.44	12.42	32.96	32.28	53.54	74.00	20.46	Peak
11	13220.66	40.44	12.42	18.22	32.28	38.80	54.00	15.20	Average
12	14460.00	42.57	13.00	30.23	32.24	53.56	74.00	20.44	Peak
13	14464.56	42.57	13.00	19.41	32.24	42.74	54.00	11.26	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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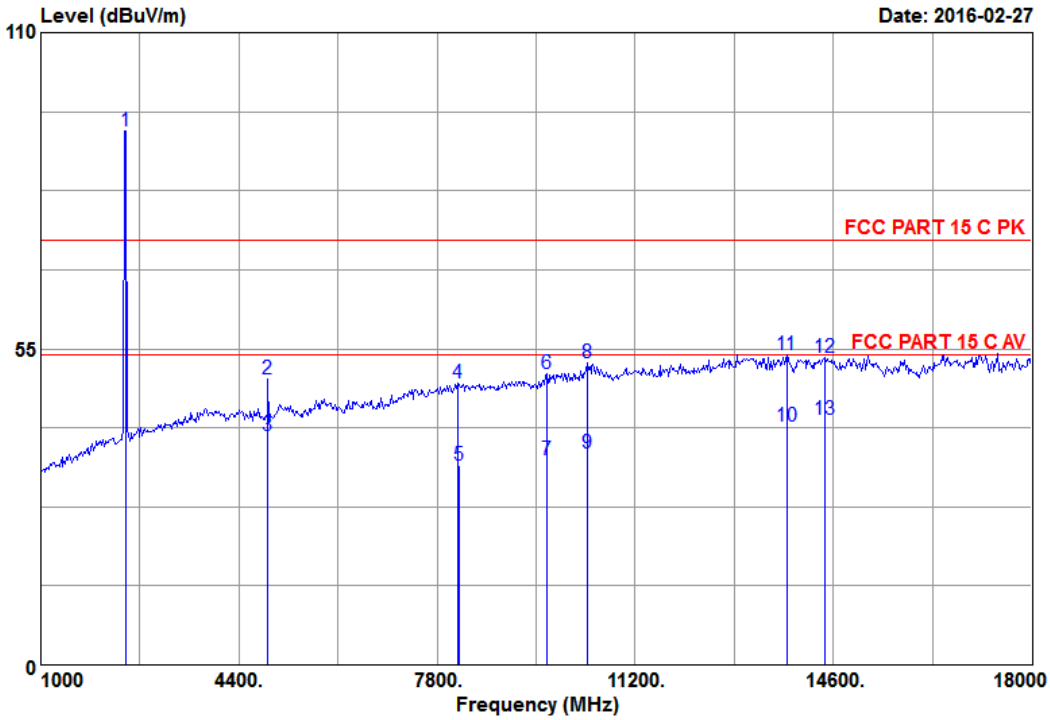
Data: 15 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. : 15
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.00	28.62	5.15	93.70	34.50	92.97	74.00	-18.97	Peak
2	4900.00	33.01	7.37	43.21	33.94	49.65	74.00	24.35	Peak
3	4900.85	33.01	7.37	33.44	33.94	39.88	54.00	14.12	Average
4	8160.00	37.19	9.65	36.29	34.16	48.97	74.00	25.03	Peak
5	8167.82	37.21	9.65	21.99	34.16	34.69	54.00	19.31	Average
6	9680.00	38.37	10.56	36.17	34.45	50.65	74.00	23.35	Peak
7	9689.62	38.37	10.59	21.24	34.45	35.75	54.00	18.25	Average
8	10380.00	39.41	11.04	36.26	34.15	52.56	74.00	21.44	Peak
9	10387.32	39.41	11.04	20.63	34.15	36.93	54.00	17.07	Average
10	13798.92	41.76	12.74	18.83	31.77	41.56	54.00	12.44	Average
11	13800.00	41.76	12.74	31.11	31.77	53.84	74.00	20.16	Peak
12	14460.00	42.57	13.00	30.05	32.24	53.38	74.00	20.62	Peak
13	14466.04	42.57	13.00	19.43	32.24	42.76	54.00	11.24	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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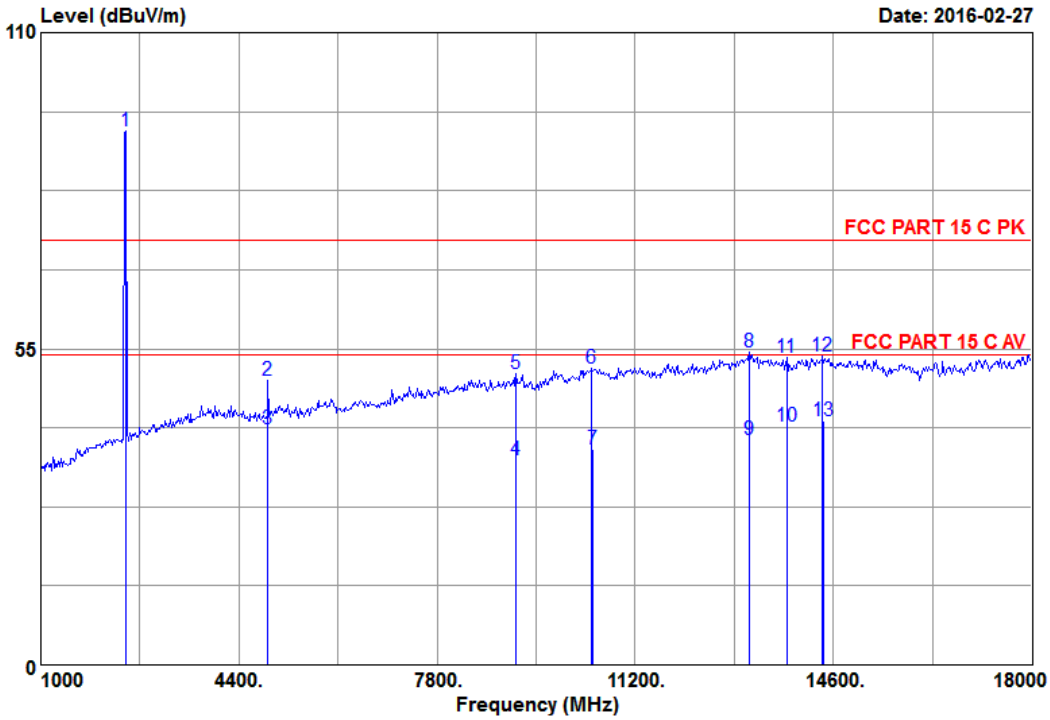
Data: 16 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. : 16
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.00	28.62	5.15	93.63	34.50	92.90	74.00	-18.90	Peak
2	4900.00	33.01	7.37	43.09	33.94	49.53	74.00	24.47	Peak
3	4900.09	33.01	7.37	34.59	33.94	41.03	54.00	12.97	Average
4	9155.50	38.03	10.12	21.89	34.43	35.61	54.00	18.39	Average
5	9160.00	38.03	10.12	36.97	34.43	50.69	74.00	23.31	Peak
6	10460.00	39.52	11.08	35.13	34.09	51.64	74.00	22.36	Peak
7	10461.98	39.55	11.08	20.88	34.09	37.42	54.00	16.58	Average
8	13160.00	40.27	12.39	34.05	32.33	54.38	74.00	19.62	Peak
9	13161.12	40.27	12.39	18.86	32.33	39.19	54.00	14.81	Average
10	13800.00	41.76	12.74	18.85	31.77	41.58	54.00	12.42	Average
11	13800.00	41.76	12.74	30.76	31.77	53.49	74.00	20.51	Peak
12	14420.00	42.53	12.98	30.49	32.17	53.83	74.00	20.17	Peak
13	14425.42	42.54	12.98	19.13	32.17	42.48	54.00	11.52	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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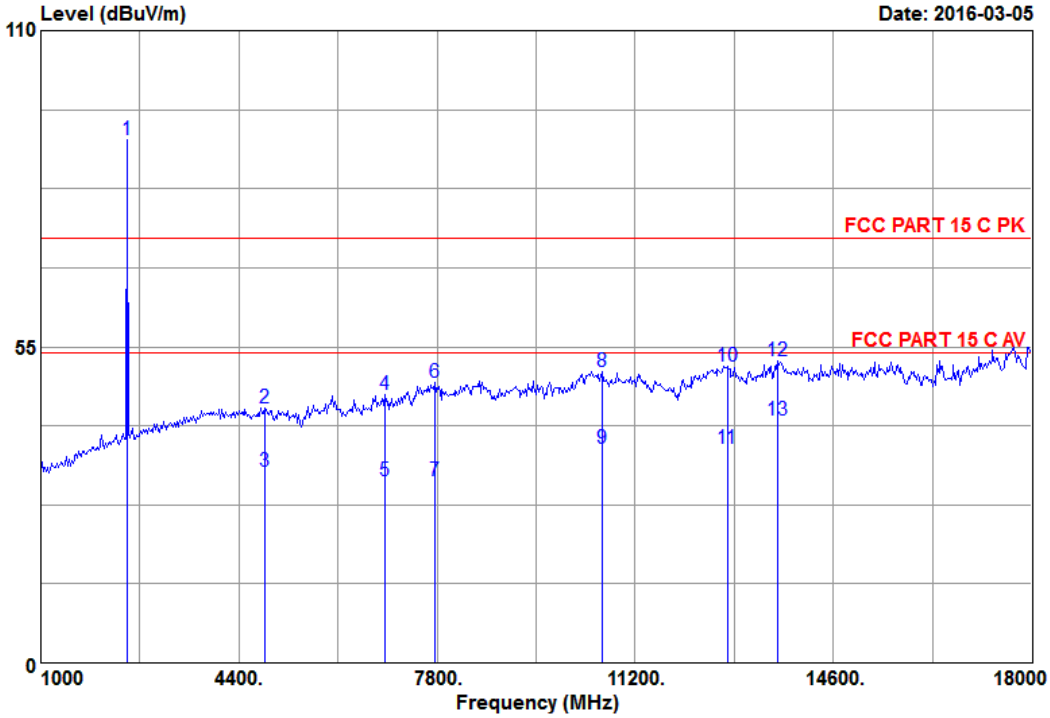
Data: 17 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 17
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2470.00	28.62	5.18	91.75	34.49	91.06	74.00	-17.06	Peak
2	4843.00	32.92	7.34	37.94	33.94	44.26	74.00	29.74	Peak
3	4844.25	32.92	7.34	26.90	33.94	33.22	54.00	20.78	Average
4	6901.00	35.37	8.80	36.47	34.01	46.63	74.00	27.37	Peak
5	6903.00	35.37	8.80	21.51	34.01	31.67	54.00	22.33	Average
6	7762.00	36.91	9.40	36.61	34.09	48.83	74.00	25.17	Peak
7	7763.25	36.91	9.40	19.50	34.09	31.72	54.00	22.28	Average
8	10639.00	39.46	11.16	33.95	33.94	50.63	74.00	23.37	Peak
9	10639.87	39.46	11.16	20.51	33.94	37.19	54.00	16.81	Average
10	12781.00	39.42	12.13	32.83	32.76	51.62	74.00	22.38	Peak
11	12782.14	39.42	12.13	18.40	32.76	37.19	54.00	16.81	Average
12	13642.00	41.43	12.66	30.38	31.90	52.57	74.00	21.43	Peak
13	13643.21	41.43	12.66	20.09	31.90	42.28	54.00	11.72	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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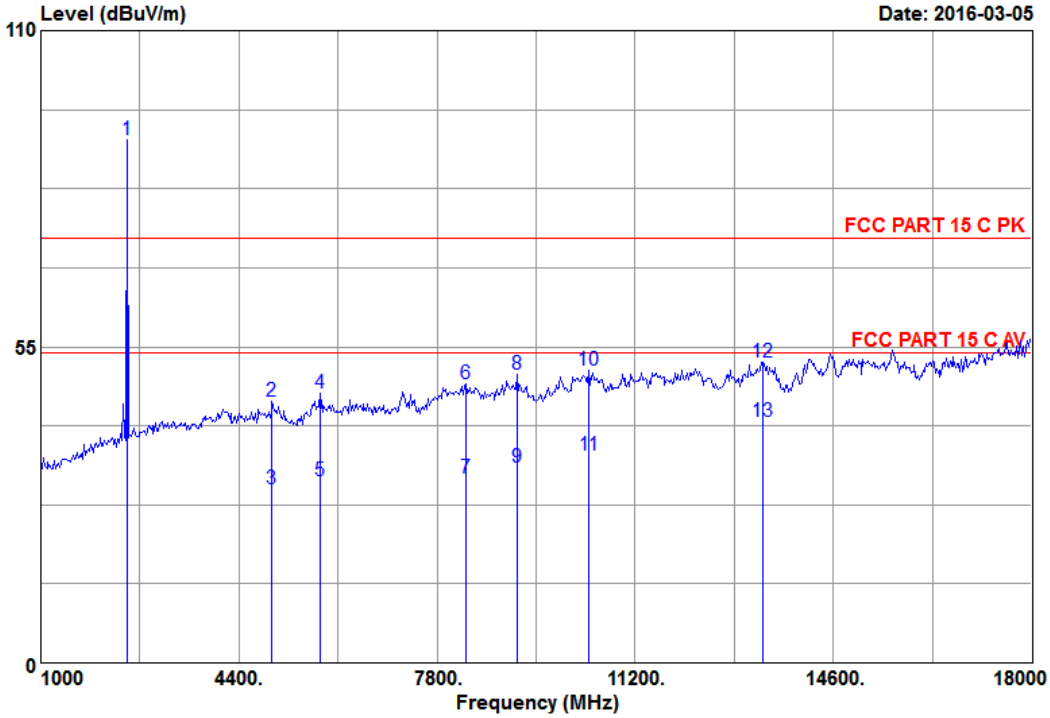
Data: 18 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 18
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2470.00	28.62	5.18	91.73	34.49	91.04	74.00	-17.04	Peak
2	4969.00	33.14	7.41	38.97	33.92	45.60	74.00	28.40	Peak
3	4969.87	33.17	7.41	23.59	33.92	30.25	54.00	23.75	Average
4	5788.00	34.12	8.32	38.27	33.90	46.81	74.00	27.19	Peak
5	5789.25	34.12	8.32	23.20	33.90	31.74	54.00	22.26	Average
6	8287.00	37.35	9.70	35.77	34.20	48.62	74.00	25.38	Peak
7	8288.15	37.35	9.70	19.31	34.20	32.16	54.00	21.84	Average
8	9169.00	38.03	10.12	36.58	34.43	50.30	74.00	23.70	Peak
9	9169.98	38.03	10.12	20.31	34.43	34.03	54.00	19.97	Average
10	10408.00	39.44	11.05	34.46	34.13	50.82	74.00	23.18	Peak
11	10409.25	39.44	11.05	19.80	34.13	36.16	54.00	17.84	Average
12	13390.00	40.85	12.52	31.08	32.13	52.32	74.00	21.68	Peak
13	13390.14	40.85	12.52	20.80	32.13	42.04	54.00	11.96	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

5.8. Spurious Emission Measurement Results in Band Edge Emission (FCC Part 15, 15.205)

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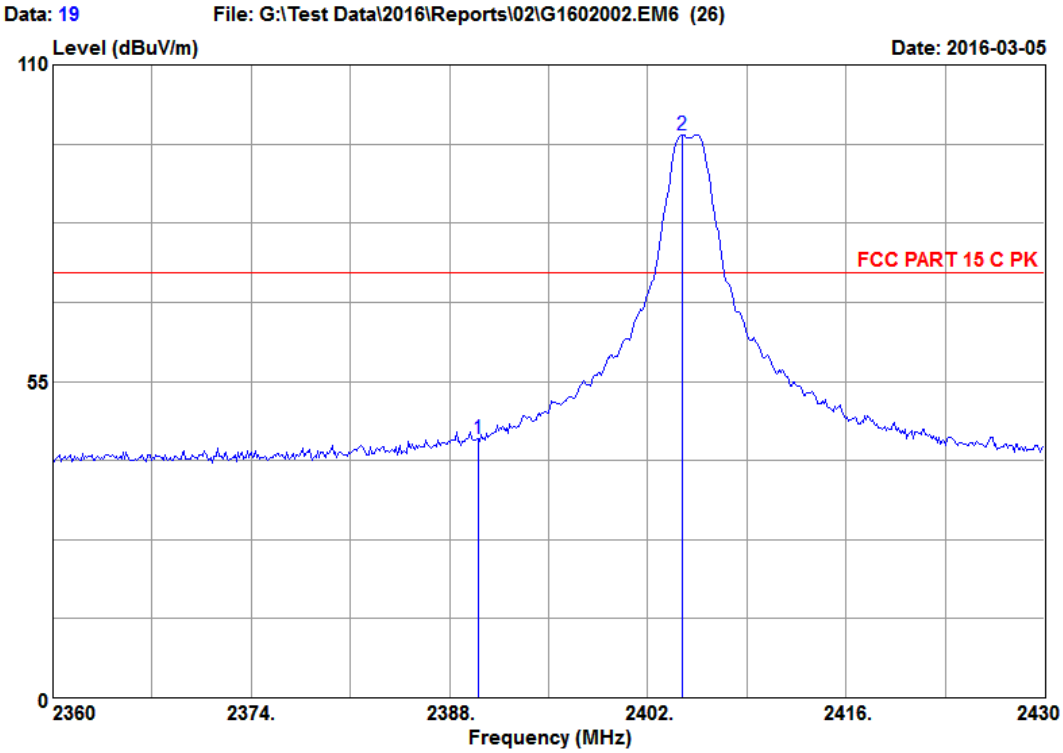

Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 19
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.45	5.09	45.95	34.50	44.99	74.00	29.01	Peak
2	2404.44	28.49	5.09	98.84	34.50	97.92	74.00	-23.92	Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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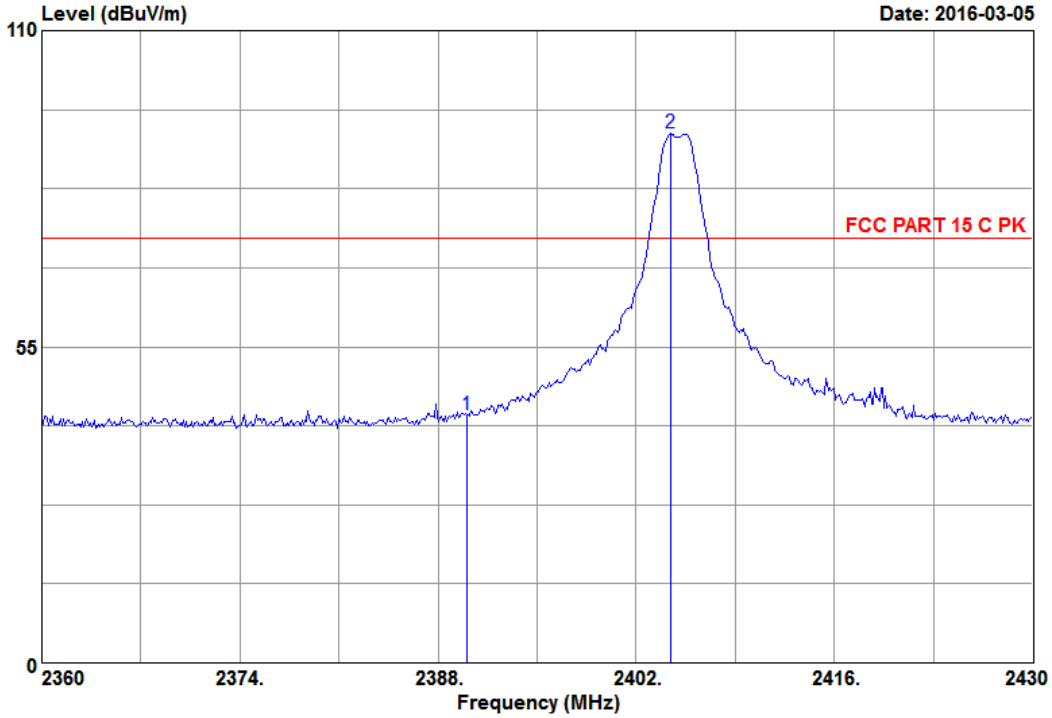
Data: 20 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 20
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.45	5.09	44.15	34.50	43.19	74.00	30.81	Peak
2	2404.44	28.49	5.09	93.00	34.50	92.08	74.00	-18.08	Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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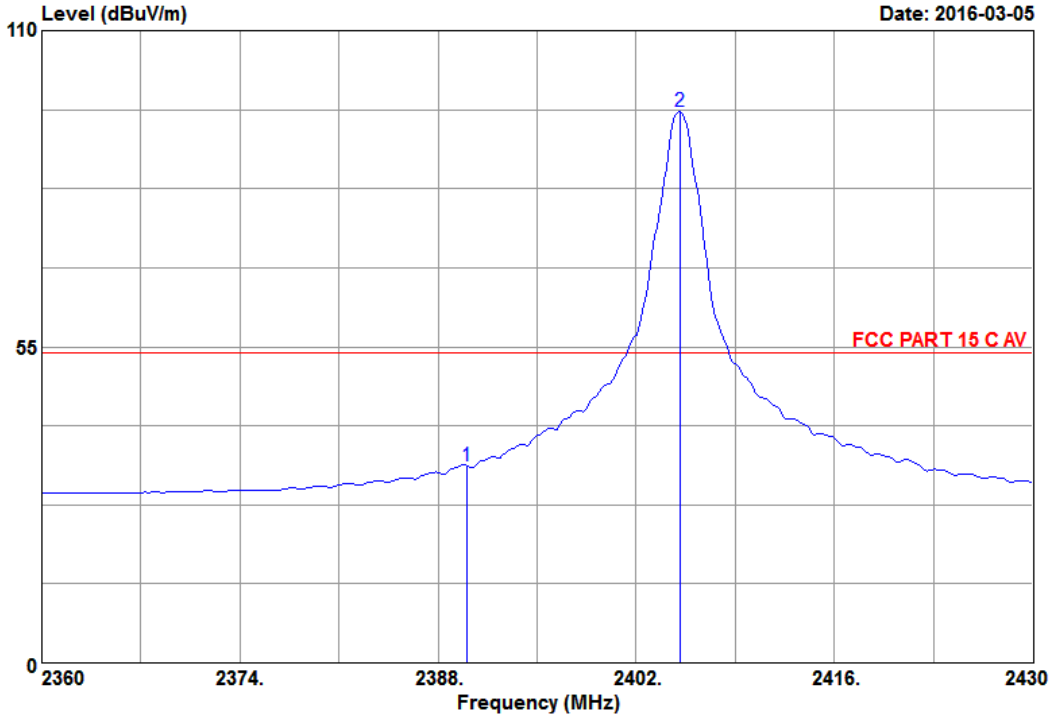
Data: 21 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C AV
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 21
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.45	5.09	35.30	34.50	34.34	54.00	19.66	Average
2	2405.10	28.49	5.09	96.78	34.50	95.86	54.00	-41.86	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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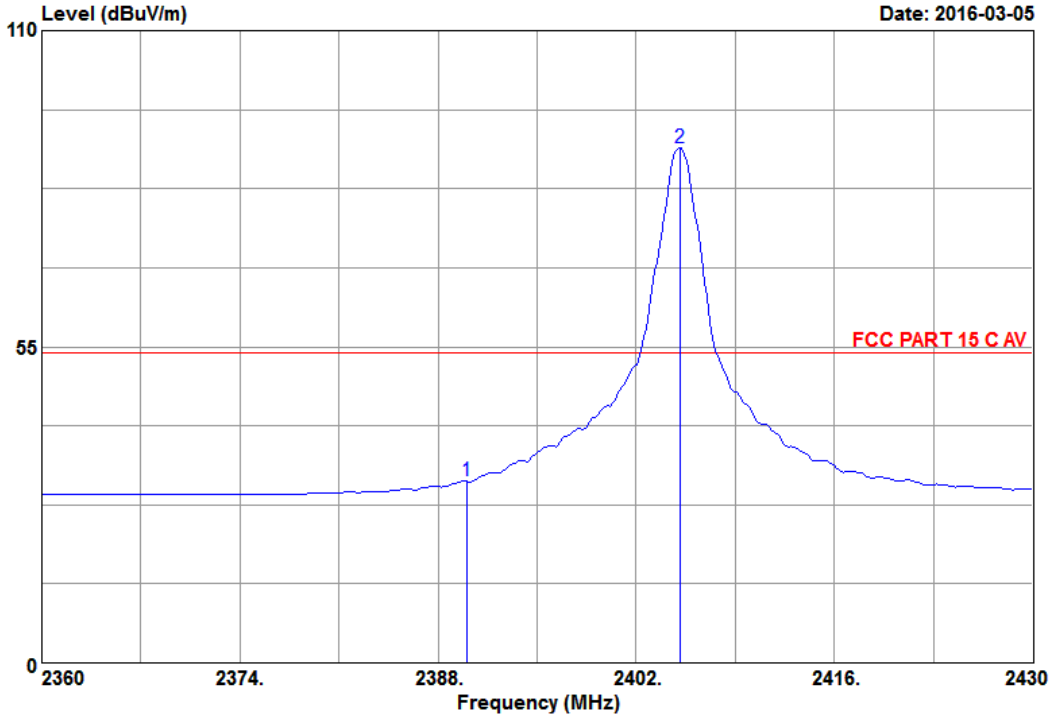
Data: 22 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C AV
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 22
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.45	5.09	32.56	34.50	31.60	54.00	22.40	Average
2	2405.10	28.49	5.09	90.56	34.50	89.64	54.00	-35.64	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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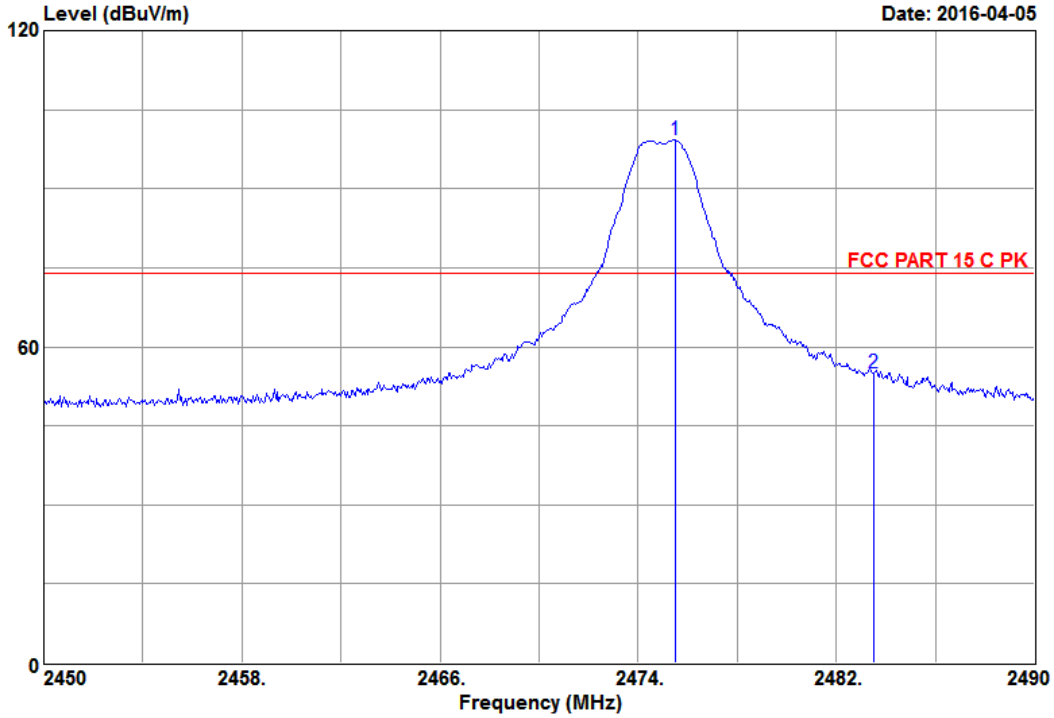
Data: 23 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 18.6*C&53%/N9030A
EUT : LED lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 23
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.50	28.66	5.18	99.84	34.49	99.19	74.00	-25.19	Peak
2	2483.50	28.66	5.18	55.62	34.49	54.97	74.00	19.03	Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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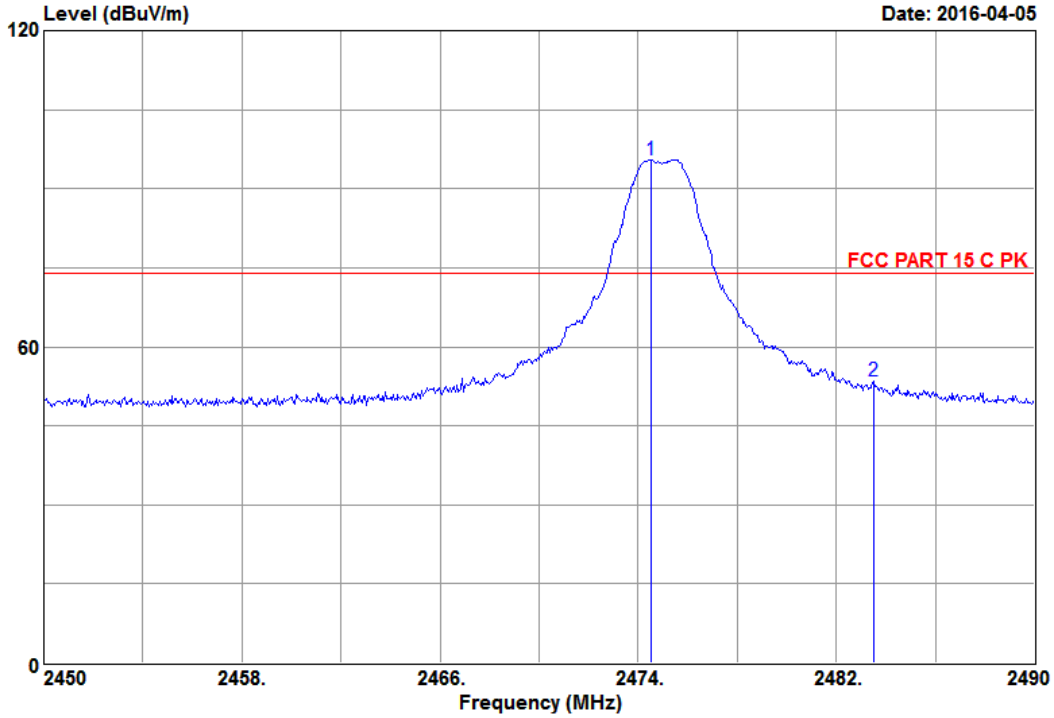
Data: 24 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 18.6*C&53%/N9030A
EUT : LED lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 24
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2474.50	28.66	5.18	96.22	34.49	95.57	74.00	-21.57	Peak
2	2483.50	28.66	5.18	54.03	34.49	53.38	74.00	20.62	Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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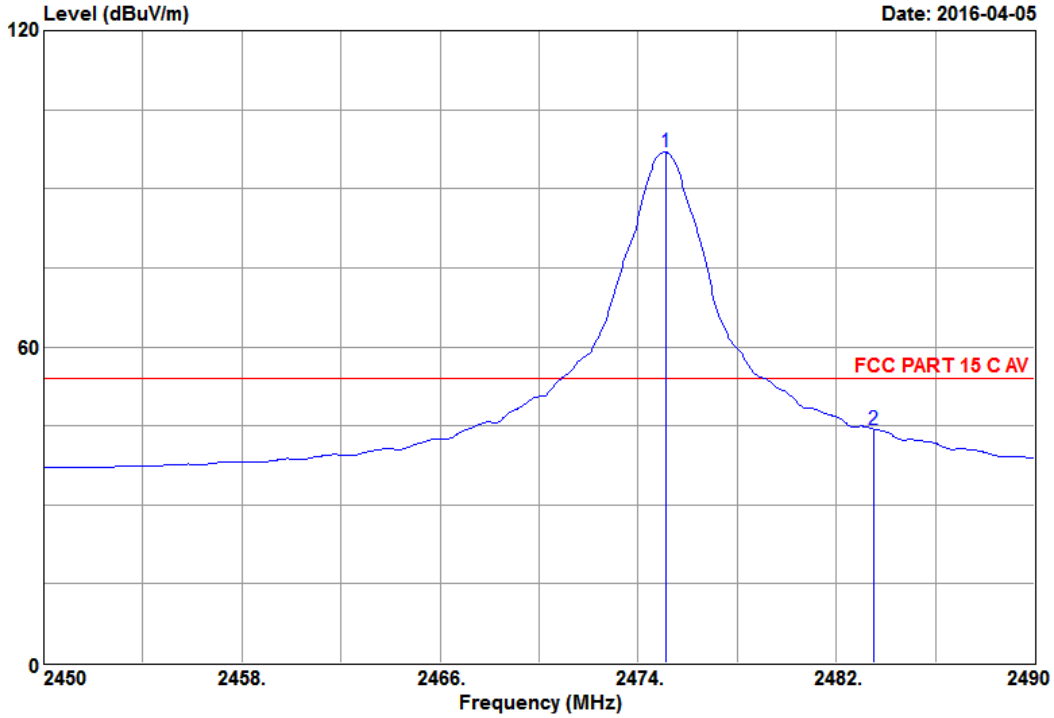
Data: 25 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C AV
Env. / Ins. : 18.6*C&53%/N9030A
EUT : LED lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 25
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.10	28.66	5.18	97.56	34.49	96.91	54.00	-42.91	Average
2	2483.50	28.66	5.18	45.04	34.49	44.39	54.00	9.61	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

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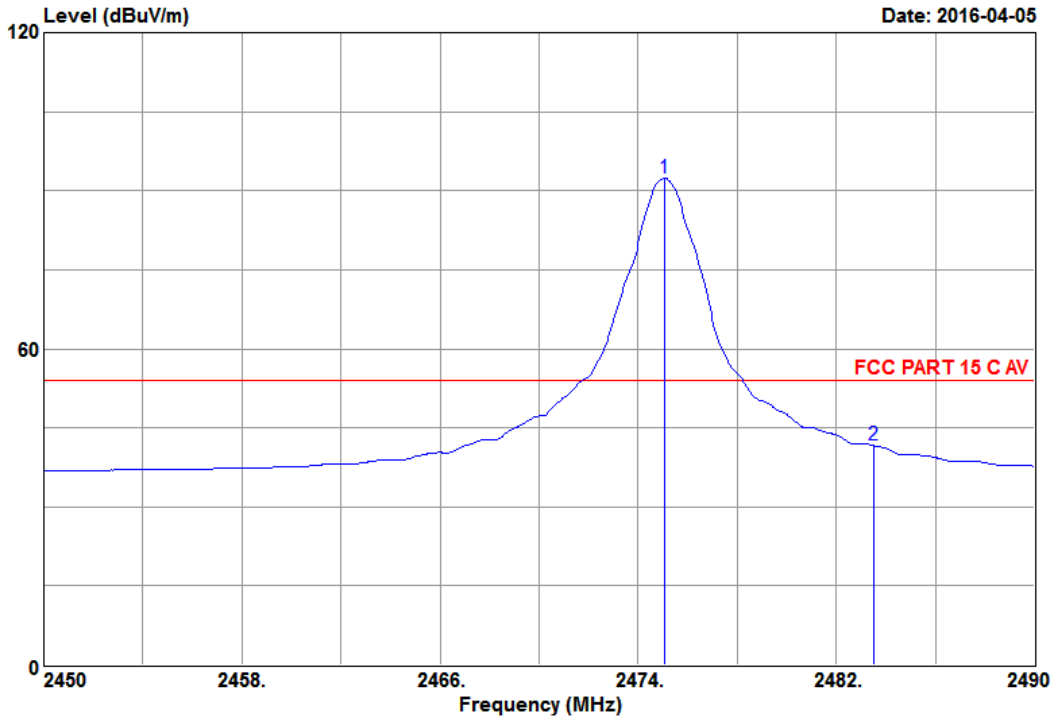
Data: 26 File: G:\Test Data\2016\Reports\02\G1602002.EM6 (26)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C AV
Env. / Ins. : 18.6*C&53%/N9030A
EUT : LED lamp
M/N : 9290011369A
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

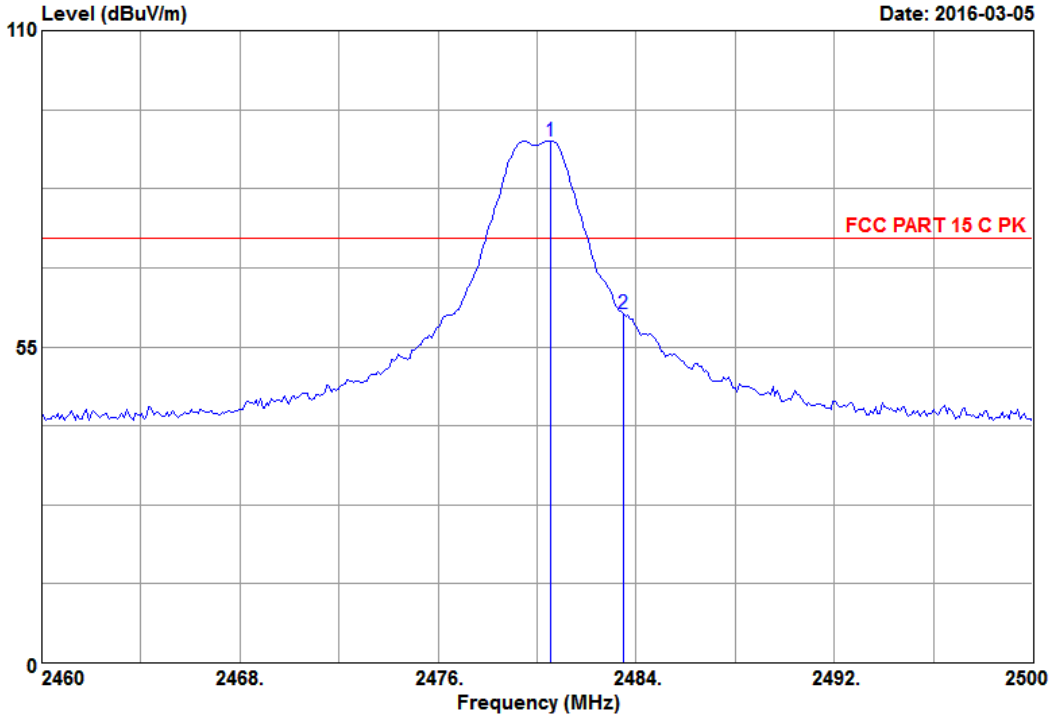
Data NO. : 26
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.05	28.66	5.18	92.97	34.49	92.32	54.00	-38.32	Average
2	2483.50	28.66	5.18	42.27	34.49	41.62	54.00	12.38	Average

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

Audix Technology(Wujiang)Co.,Ltd.
No.1289,Jiang Xing East Road,The Eastern Part of Wu Jiang
Economic Development Zone,JiangSu,China
Tel:(0512)63403993 Fax:(0512)63403993

Data: 27 File: G:\Test Data\2016\Reports\02\G1602002 - 副本.EM6 (30)



Site NO. : 3m chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

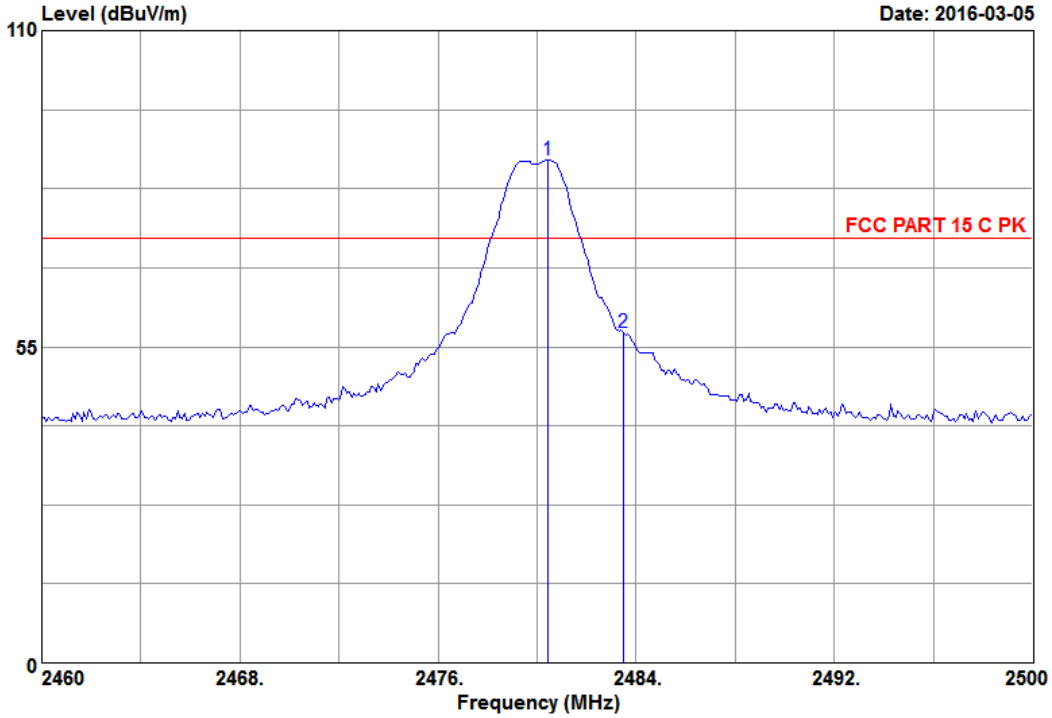
Data NO. :23
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.52	28.66	5.18	91.54	90.89	74.00	-16.89	Peak
2	2483.50	28.66	5.18	61.46	60.81	74.00	13.19	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Audix Technology(Wujiang)Co.,Ltd.
No.1289,Jiang Xing East Road,The Eastern Part of Wu Jiang
Economic Development Zone,JiangSu,China
Tel:(0512)63403993 Fax:(0512)63403993

Data: 28 File: G:\Test Data\2016\Reports\02\G1602002 - 副本.EM6 (30)



Site NO. : 3m chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C PK
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

Data NO. :24
Ant. pol. : VERTICAL

Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.43	28.66	5.18	88.17	87.52	74.00	-13.52	Peak
2	2483.50	28.66	5.18	58.11	57.46	74.00	16.54	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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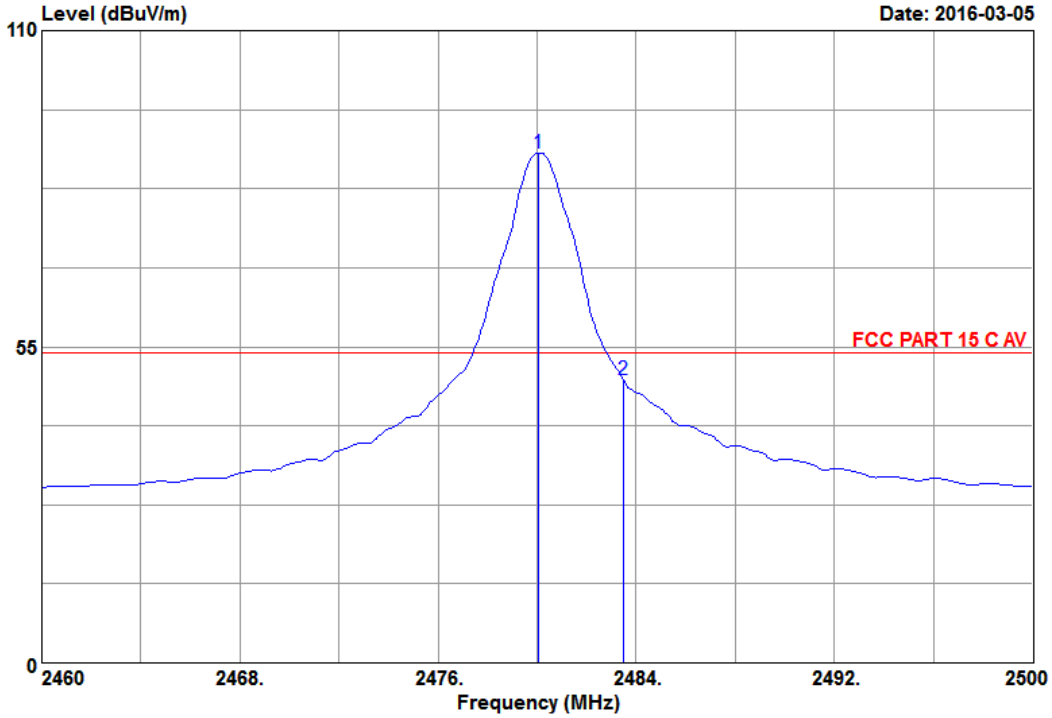
Tel:(0512)63403993 Fax:(0512)63403993

Data: 29 File: G:\Test Data\2016\Reports\02\G1602002 - 副本.EM6 (30)



Site NO. : 3m chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C AV
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

Data NO. :25
Ant. pol. : HORIZONTAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.07	28.66	5.18	89.41	88.76	54.00	-34.76	Average
2	2483.50	28.66	5.18	49.90	49.25	54.00	4.75	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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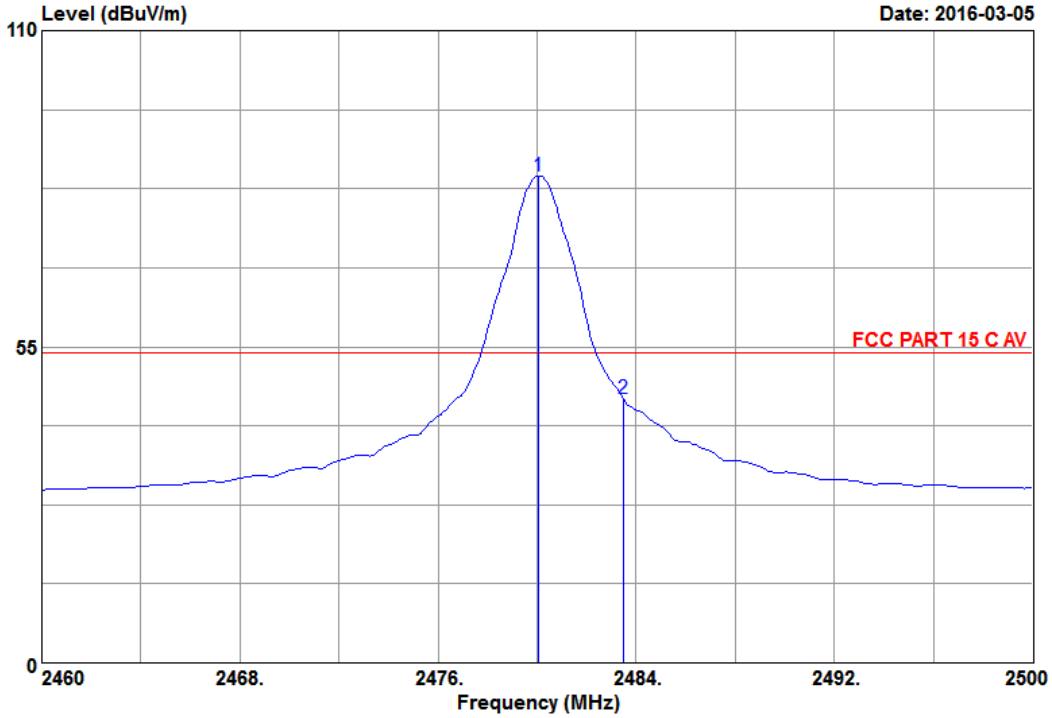
Economic Development Zone,JiangSu,China
Tel:(0512)63403993 Fax:(0512)63403993

Data: 30 File: G:\Test Data\2016\Reports\02\G1602002 - 副本.EM6 (30)



Site NO. : 3m chamber
Dis. / Ant. : 3m 3115-62960-150630
Limit : FCC PART 15 C AV
Env. / Ins. : 16.2*C&48%/N9030A
EUT : LED Lamp
M/N : 9290011369A
Power Rating : 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

Data NO. :26
Ant. pol. : VERTICAL
Engineer : Mickey

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.07	28.66	5.18	85.25	84.60	54.00	-30.60	Average
2	2483.50	28.66	5.18	46.57	45.92	54.00	8.08	Average

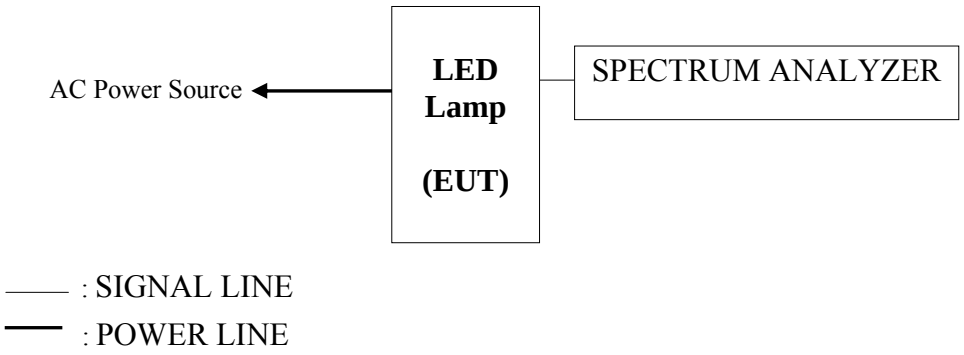
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

6. 6 dB BANDWIDTH MEASUREMENT

6.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22

6.2. Block Diagram of Test Setup



6.3. Specification Limits (§15.247(a)(2))

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500kHz.

6.4. Test Procedure

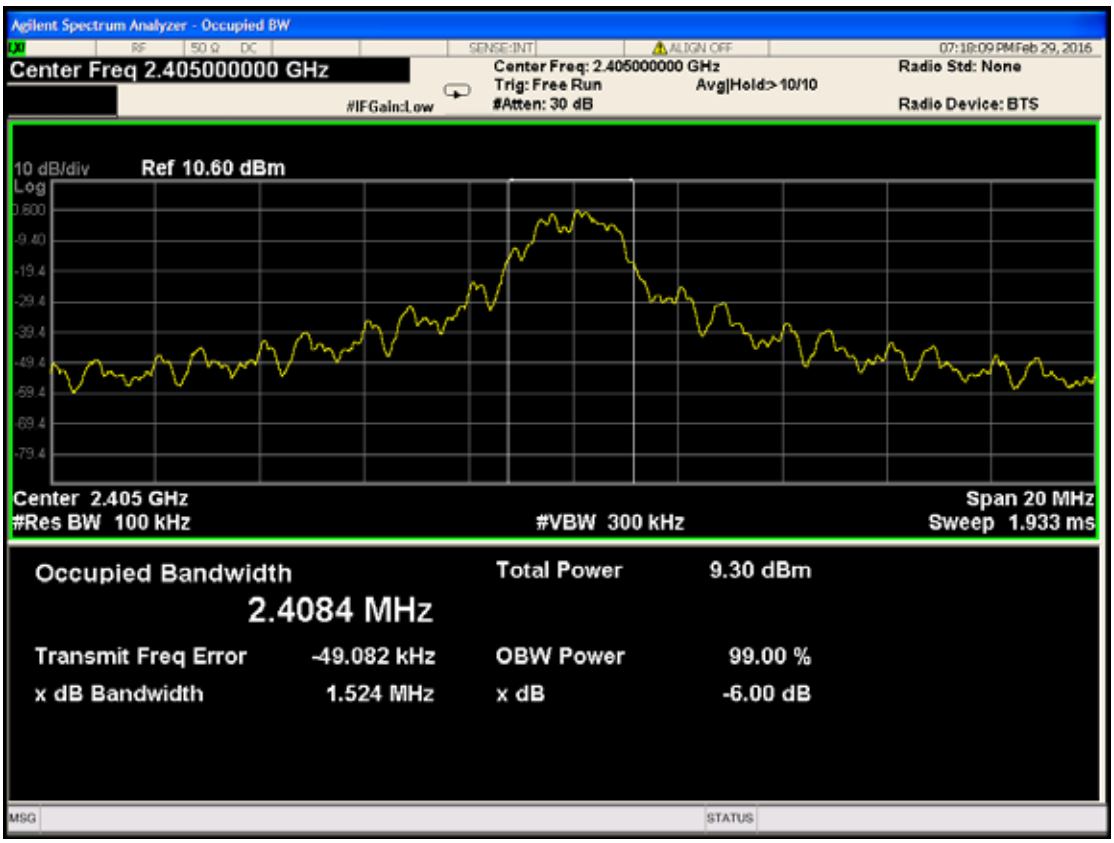
The transmitter output was connected to the test receiver / spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB. The measurement guideline was according to KDB558074 v03r05.

6.5. Test Results

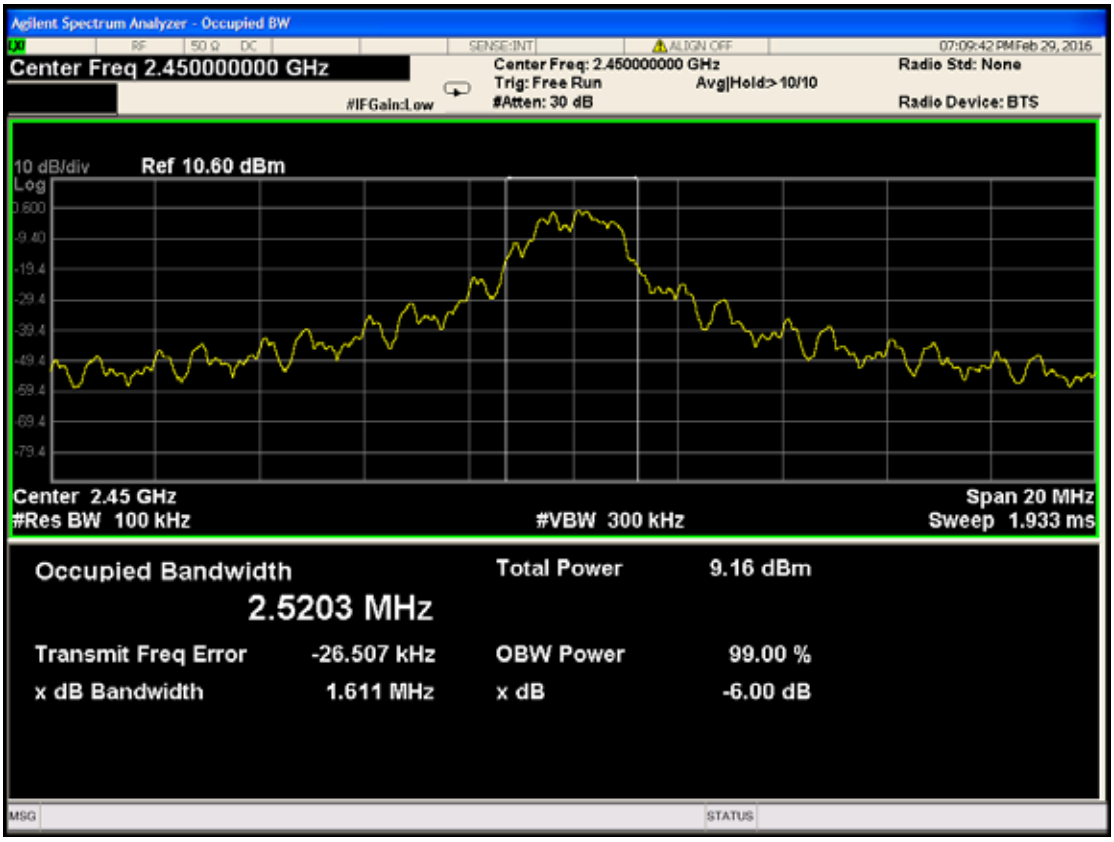
PASSED. All the test results are attached in next pages.

Channel	Center Frequency(MHz)	6 dB Bandwidth(MHz)
11	2405	**1.524**
20	2450	**1.611**
25	2475	**1.611**
26	2480	**1.605**

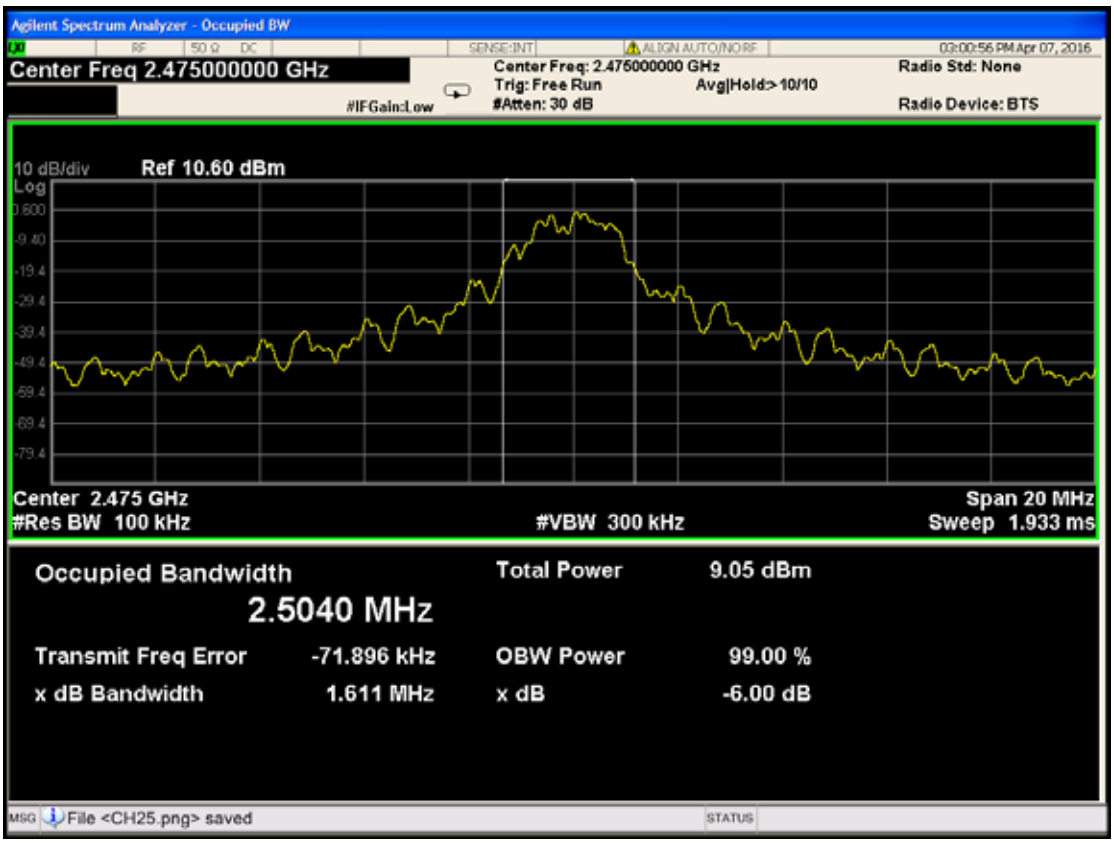
CH 11


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.405000000 GHz
Center Freq: 2.405000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
07:18:09 PM Feb 29, 2016
10 dB/div
Ref 10.60 dBm
Log
Center 2.405 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.4084 MHz
Total Power
9.30 dBm
Transmit Freq Error
-49.082 kHz
OBW Power
99.00 %
x dB Bandwidth
1.524 MHz
x dB
-6.00 dB
MSG
STATUS

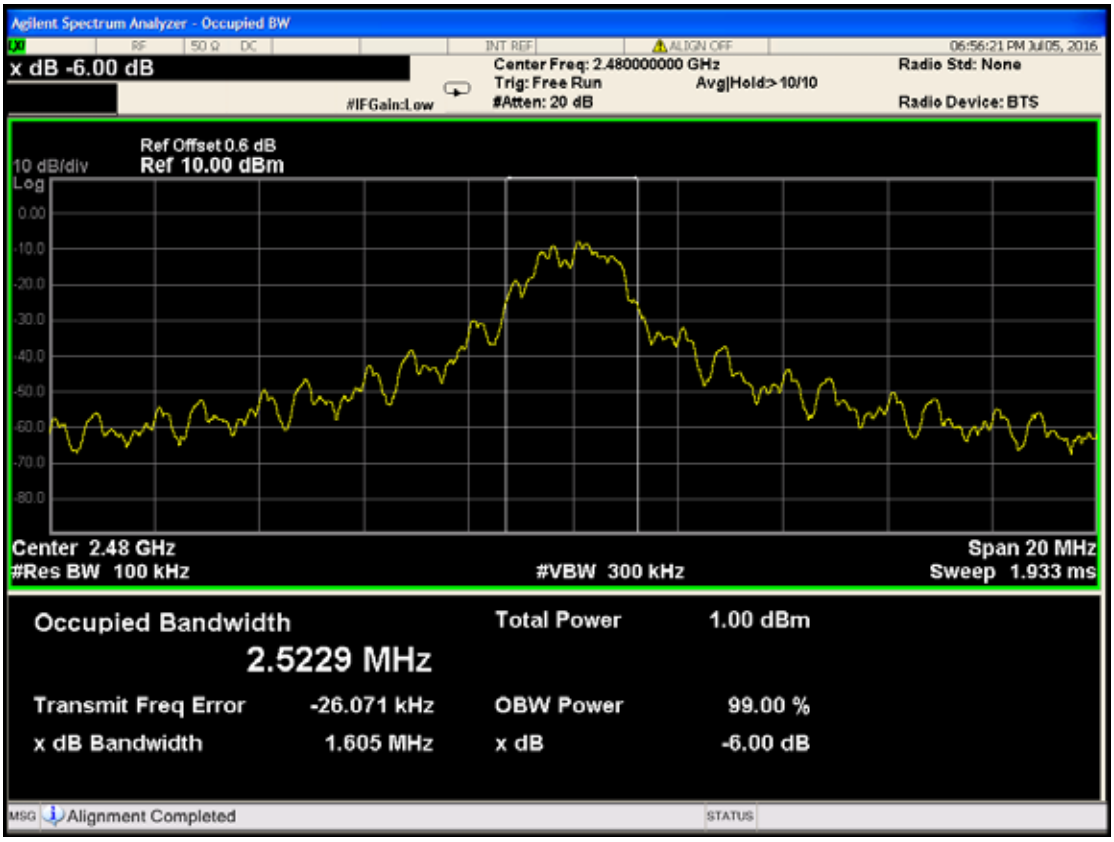
CH 20


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.450000000 GHz
Center Freq: 2.450000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
07:09:42 PM Feb 29, 2016
10 dB/div
Ref 10.60 dBm
Log
Center 2.45 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.5203 MHz
Total Power
9.16 dBm
Transmit Freq Error
-26.507 kHz
OBW Power
99.00 %
x dB Bandwidth
1.611 MHz
x dB
-6.00 dB
MSG
STATUS

CH 25


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.475000000 GHz
Center Freq: 2.475000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
10 dB/div
Ref 10.60 dBm
Log
Center 2.475 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.5040 MHz
Total Power
9.05 dBm
Transmit Freq Error
-71.896 kHz
OBW Power
99.00 %
x dB Bandwidth
1.611 MHz
x dB
-6.00 dB
File <CH25.png> saved

CH 26

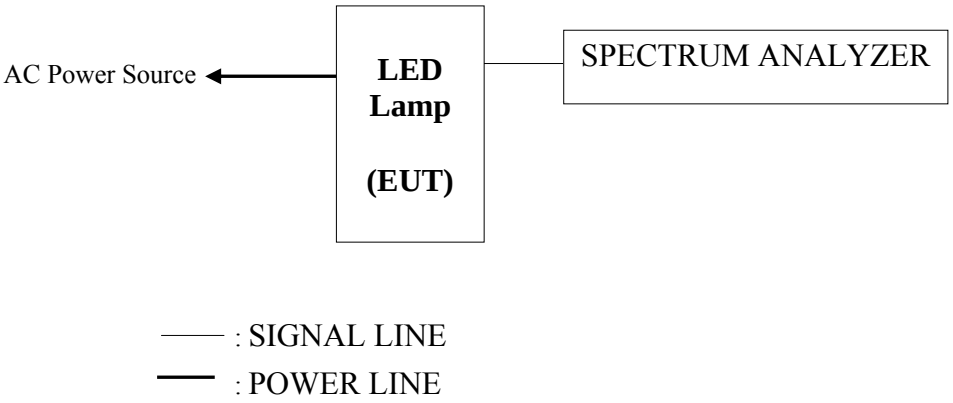

Agilent Spectrum Analyzer - Occupied BW
x dB -6.00 dB
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Center 2.48 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.5229 MHz
Total Power
1.00 dBm
Transmit Freq Error
-26.071 kHz
OBW Power
99.00 %
x dB Bandwidth
1.605 MHz
x dB
-6.00 dB
Alignment Completed

7. OUTPUT POWER MEASUREMENT

7.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22

7.2. Block Diagram of Test Setup



7.3. Specification Limits (§15.247(b)(3))

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

7.4. Test Procedure

a) Set span to at least 1.5 times the OBW.
b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
c) Set VBW ≥ 3 x RBW.
d) Number of points in sweep ≥ 2 × span / RBW. (This gives bin-to-bin spacing ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
e) Sweep time = auto.
f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
g) If transmit duty cycle < 98 %, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 %, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
h) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
i) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

7.5. Test Results

PASSED. All the test results are attached in next pages.

Channel	Frequency	Power(dBm)	Limit(dBm)
11	2405	4.69	30
20	2450	4.52	30
25	2475	4.31	30
26	2480	-3.56	30

8. BAND EDGES MEASUREMENT

8.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22

8.2. Block Diagram of Test Setup

The same as section 5.2.

8.3. Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

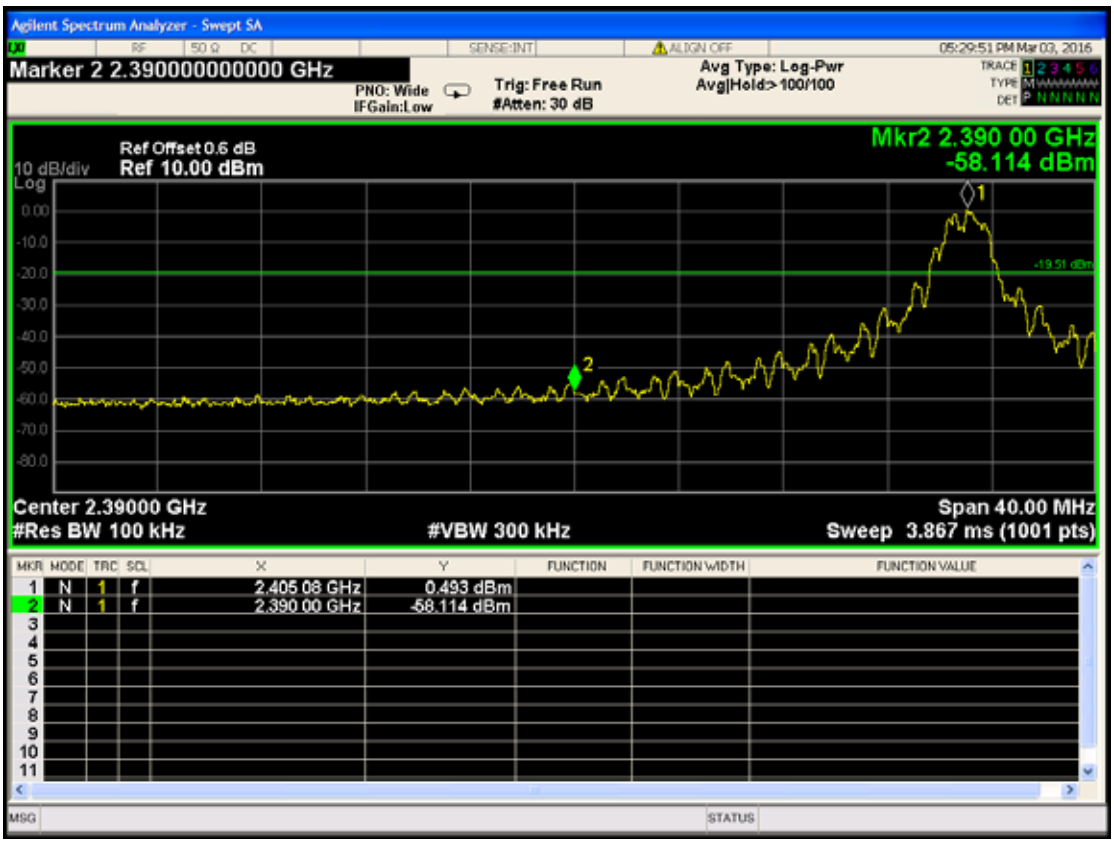
8.4. Test Procedure

The transmitter output was connected to the test receiver / spectrum analyzer. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz with suitable frequency span including 100kHz bandwidth from band edge.

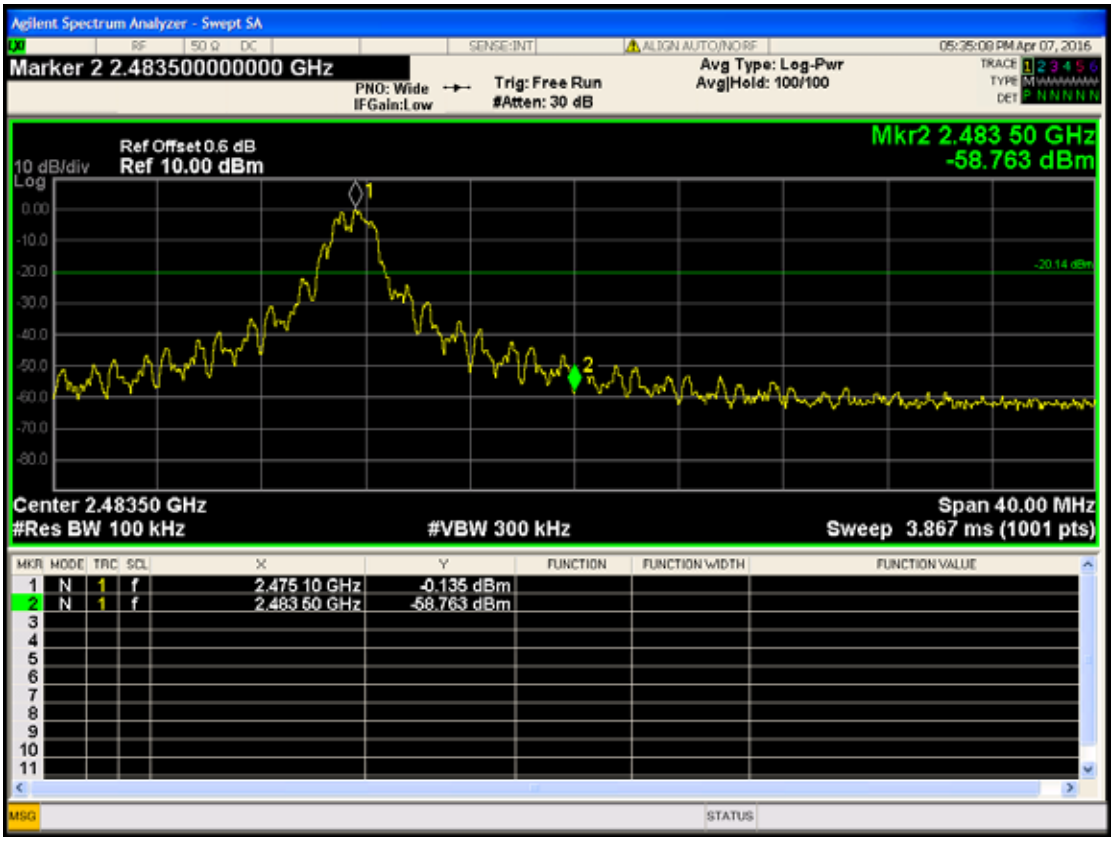
8.5. Test Results

PASSED. The testing data was attached in the next pages.

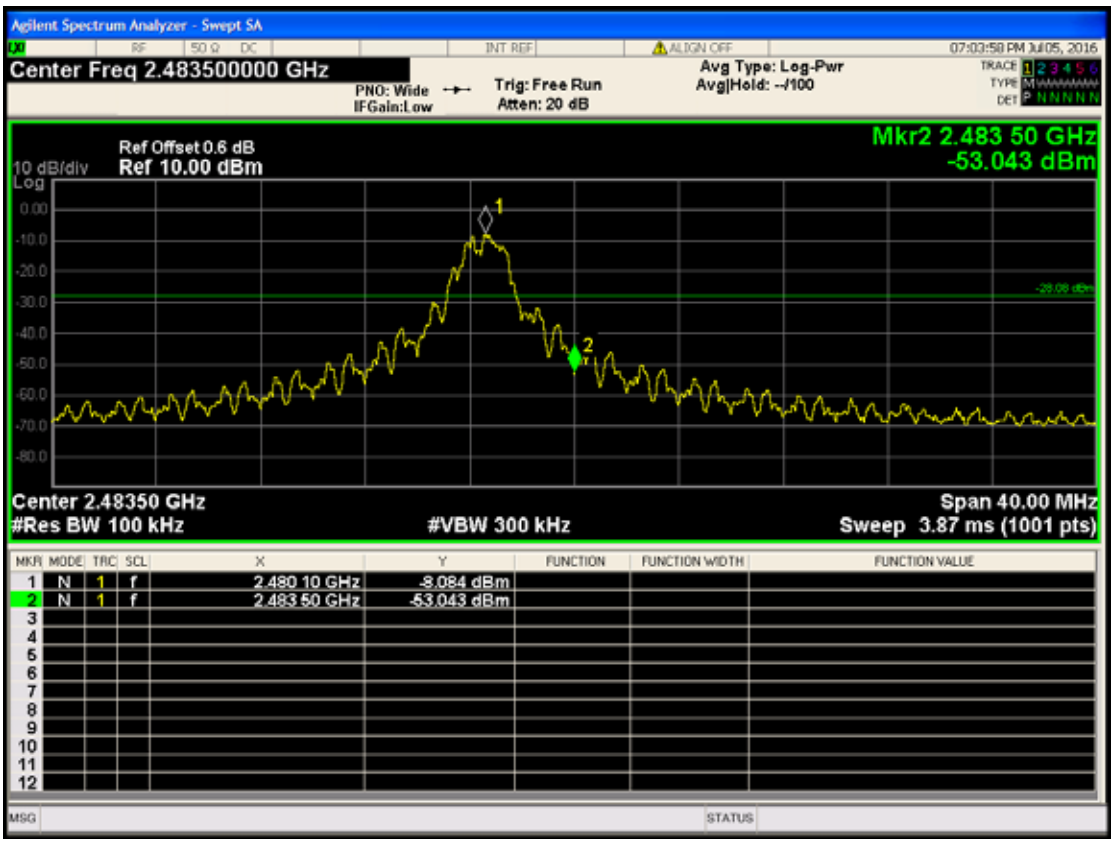
CH11


Agilent Spectrum Analyzer - Swept SA
Marker 2 2.390000000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:29:51 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 2.390 00 GHz
-58.114 dBm
-19.51 dBm
Center 2.39000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.867 ms (1001 pts)
1 N 1 f 2.405 08 GHz 0.493 dBm
2 N 1 f 2.390 00 GHz -58.114 dBm

CH25


Agilent Spectrum Analyzer - Swept SA
Marker 2 2.483500000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
05:35:08 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 2.483 50 GHz
-58.763 dBm
-20.14 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.867 ms (1001 pts)
1 N 1 f 2.475 10 GHz -0.135 dBm
2 N 1 f 2.483 50 GHz -58.763 dBm

CH26


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: --/100
07:03:58 PM Jul 05, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 2.483 50 GHz
-53.043 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.87 ms (1001 pts)
1 N 1 f 2.480 10 GHz -8.084 dBm
2 N 1 f 2.483 50 GHz -53.043 dBm

9. POWER SPECTRAL DENSITY MEASUREMENT

9.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22

9.2. Block Diagram of Test Setup

The same as section 5.2.

9.3. Specification Limits (§15.247(e))

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

9.4. Test Results

PASSED. All the test results are attached in next page.

Channel	Frequency(GHz)	Value(dBm/3kHz)
11	2.405	-4.162
20	2.450	-4.953
25	2.475	-5.315

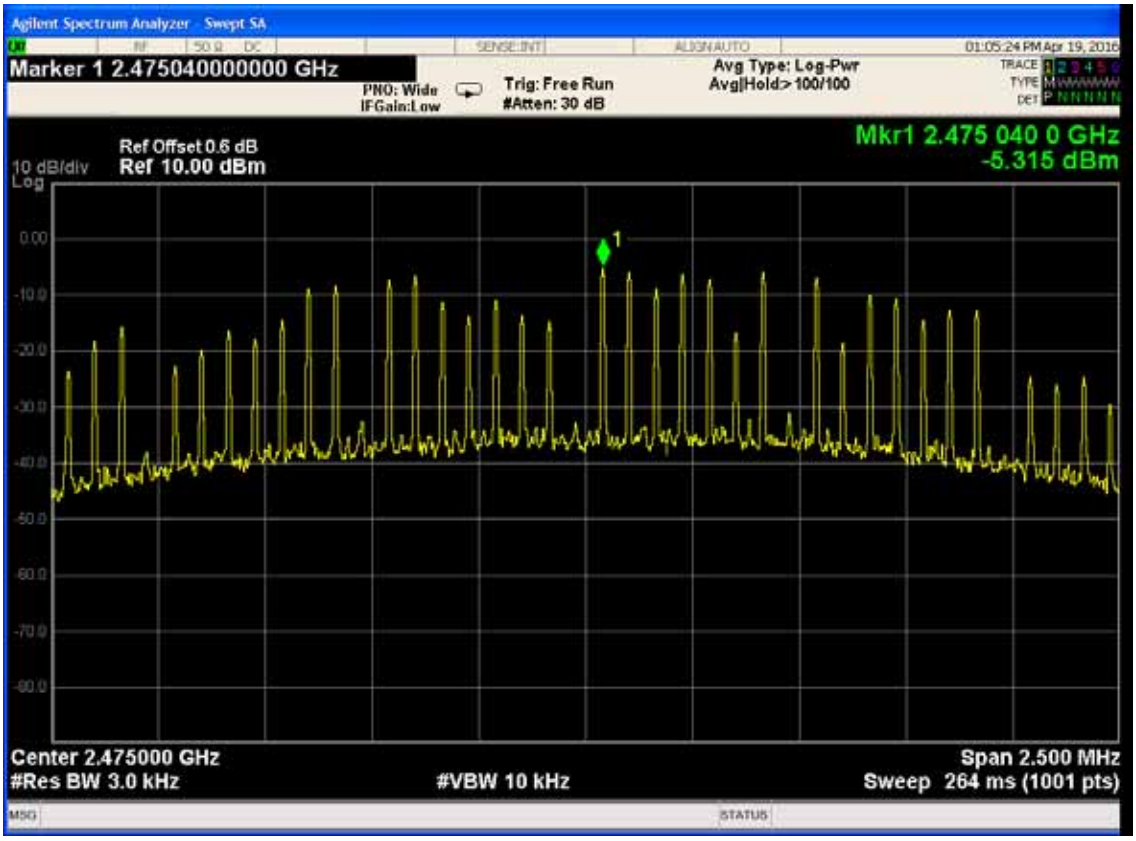
CH 11


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.405060000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
12:53:46 PM Apr 19, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.405 060 0 GHz
-4.162 dBm
Center 2.405000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 2.500 MHz
Sweep 264 ms (1001 pts)

CH 20


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.450052500000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
12:59:02 PM Apr 19, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.450 052 5 GHz
-4.953 dBm
Center 2.450000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 2.500 MHz
Sweep 264 ms (1001 pts)

CH 25


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.475040000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:05:24 PM Apr 19, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.475 040 0 GHz
-5.315 dBm
Center 2.475000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 2.500 MHz
Sweep 264 ms (1001 pts)

10. EMISSION LIMITATIONS MEASUREMENT

10.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22

10.2. Block Diagram of Test Setup

The same as section 5.2.

10.3. Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

10.4. Test Procedure

The transmitter output was connected to the spectrum analyzer. Set RBW = 100kHz, VBW ≥ 300 kHz, scan up through 10^{th} harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. The measurement guideline was according to KDB558074 v03r05.

10.5. Test Results

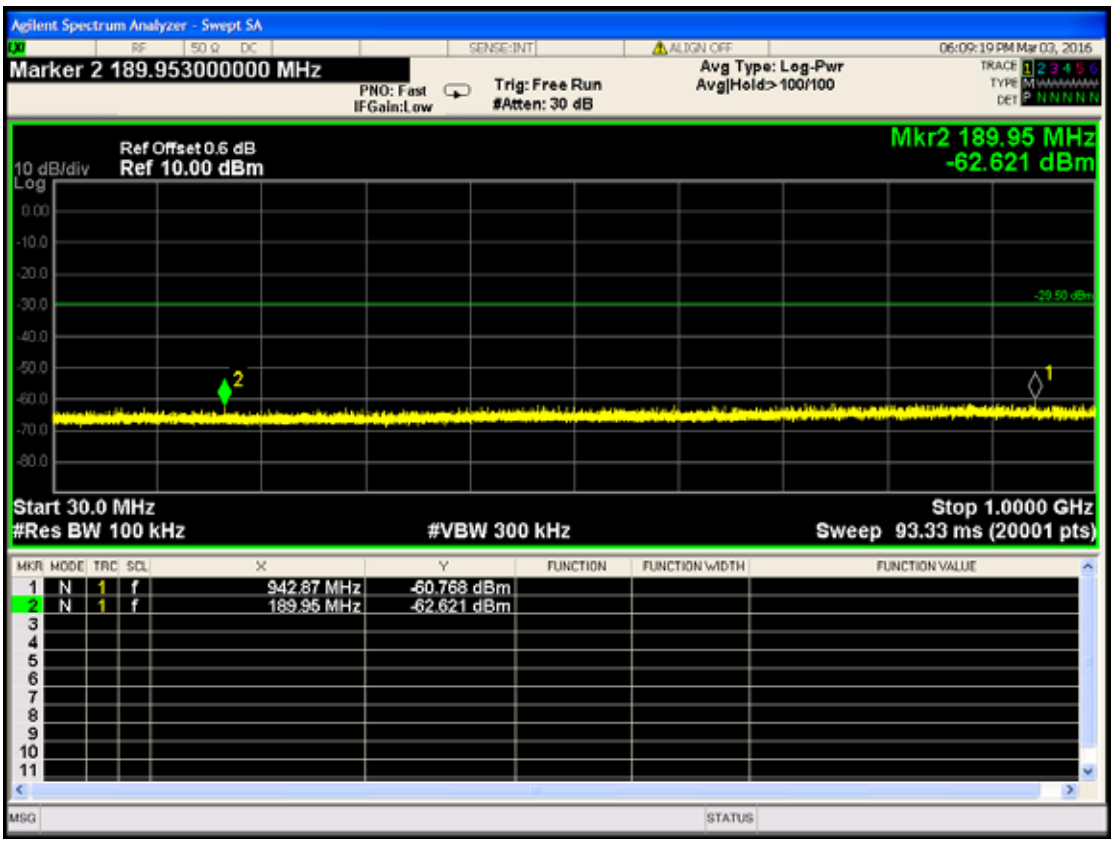
PASSED. All the test results are attached in next pages.

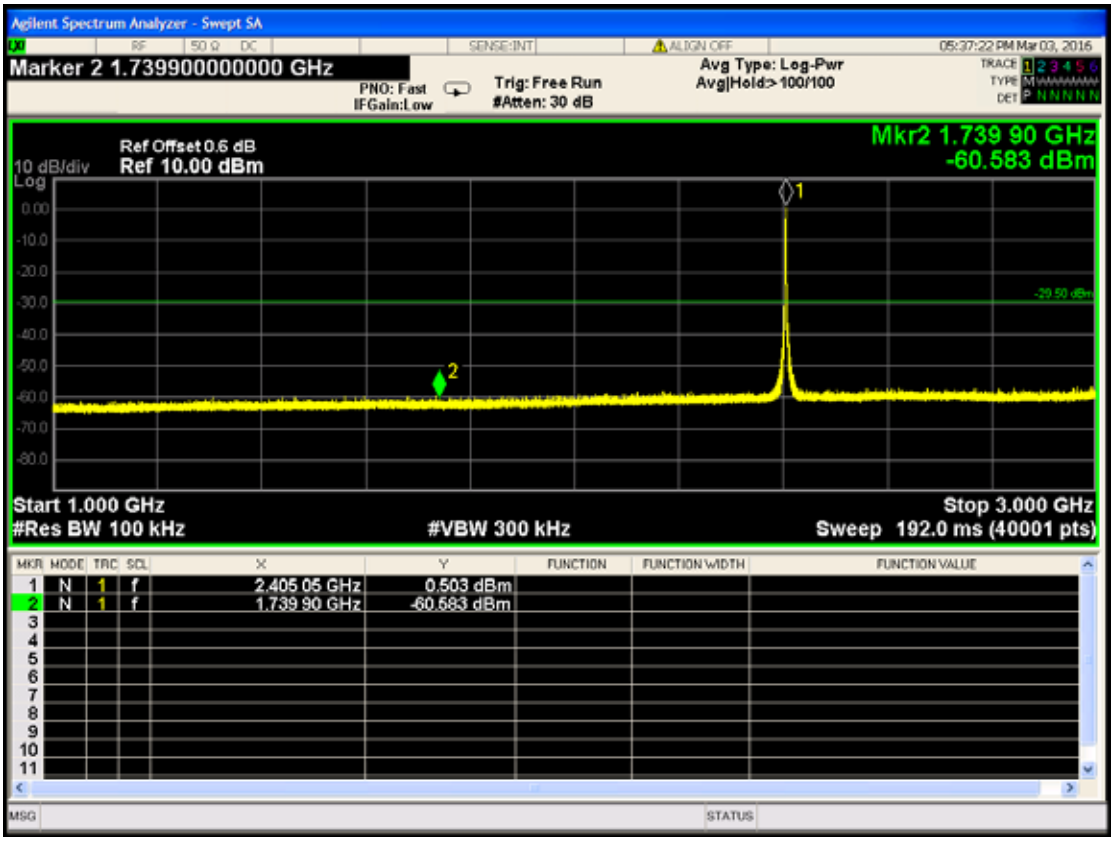
Channel	Frequency(MHz)	Amplitude(dBm)
11	942.87	-60.768
	189.95	-62.621
	2405.05	0.503
	1739.90	-60.583
	3774.65	-54.807
	4617.10	-56.243
	5088.05	-55.114
	6445.30	-56.667
	7216.10	-53.540
	8093.75	-56.251
	10631.80	-55.953
	9912.20	-56.125
	11007.25	-56.000
	11481.25	-56.522
	14602.35	-56.089
	14031.50	-56.222
	16663.60	-55.800
	15716.50	-56.176
	18968.20	-54.380
	17904.55	-55.487
	19780.35	-52.993
	20553.00	-56.412
	22012.35	-53.024
	22830.90	-53.184
	23876.85	-52.635
	24038.95	-52.791
20	760.56	-60.194
	308.92	-61.619
	2450.05	-0.075
	2121.80	-59.754
	3871.10	-55.136
	4900.90	-55.640

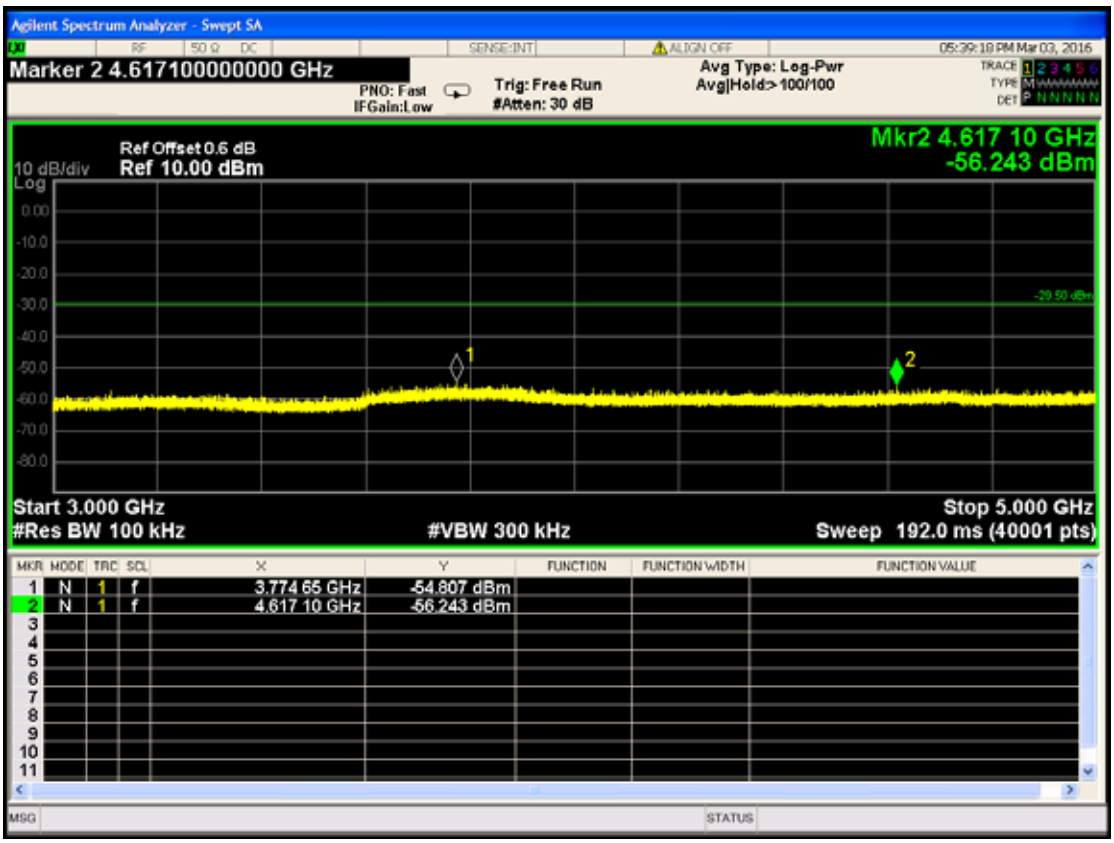
	5068.40	-55.000
	6041.00	-56.645
	7348.50	-54.683
	8167.80	-55.383
	9045.45	-55.667
	10706.55	-56.077
	11055.80	-56.923
	12011.90	-57.073
	13611.20	-55.269
	14041.55	-55.689
	15339.90	-56.104
	16146.65	-56.370
	18971.45	-53.742
	17351.45	-55.572
	19113.95	-53.894
	20758.80	-54.354
	22303.30	-53.751
	21575.90	-54.956
	23855.90	-53.139
	24363.85	-53.363
25	790.14	-60.666
	445.06	-61.683
	2475.05	-0.446
	2237.10	-61.179
	3777.65	-54.889
	4731.20	-56.062
	5164.65	-55.975
	6276.15	-57.351
	8923.40	-55.532
	7423.50	-56.496
	10687.60	-56.114
	10180.15	-56.192
	12722.25	-56.426
	11148.25	-56.657
	14618.45	-55.448
	13672.55	-55.766
	15327.55	-56.031

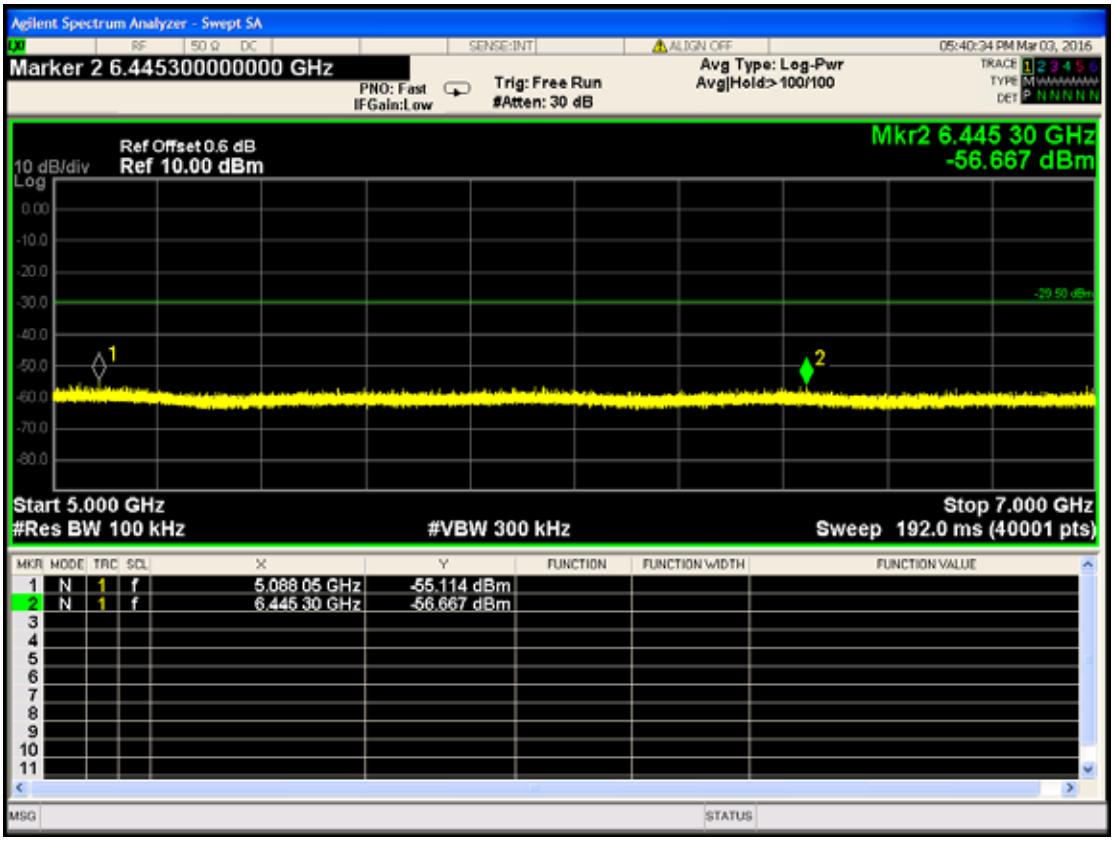
	16588.95	-56.575
	18637.20	-54.004
	17696.30	-55.490
	19232.85	-53.678
	20546.00	-55.215
	21903.25	-52.995
	22560.55	-53.109
	23645.85	-52.082
	24370.95	-53.149

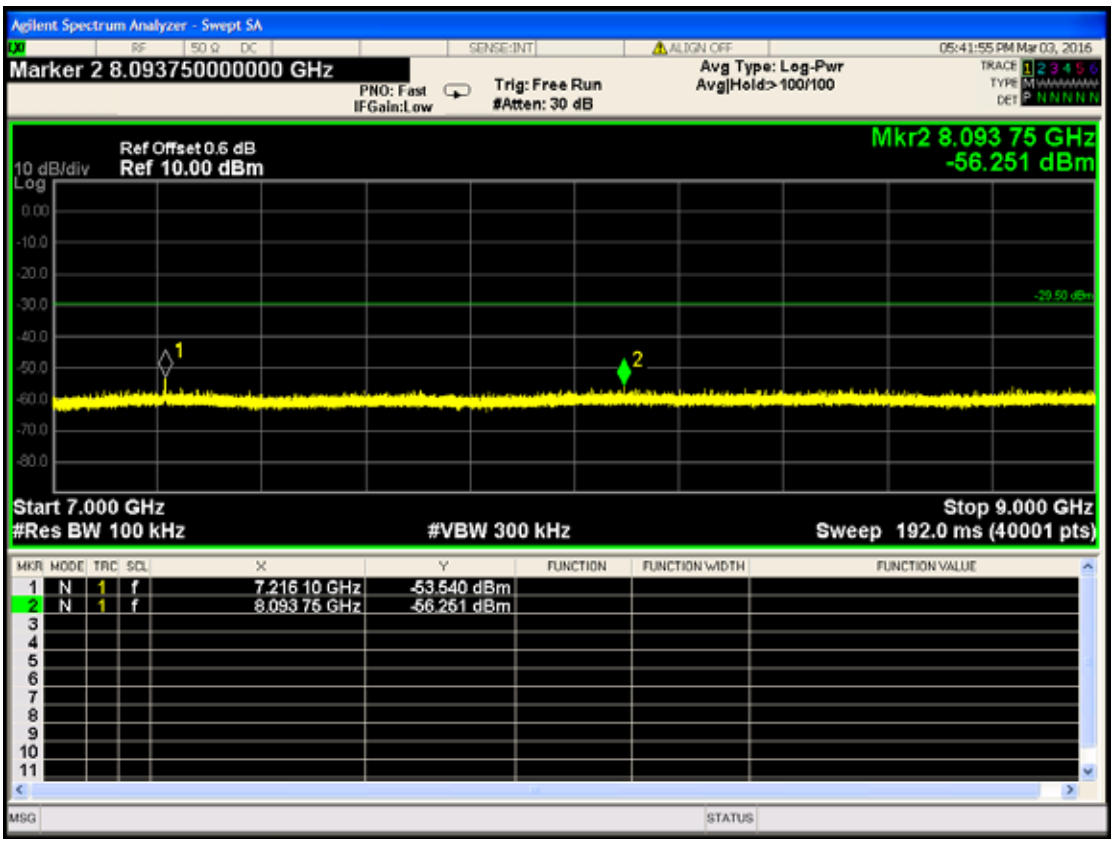
CH 11

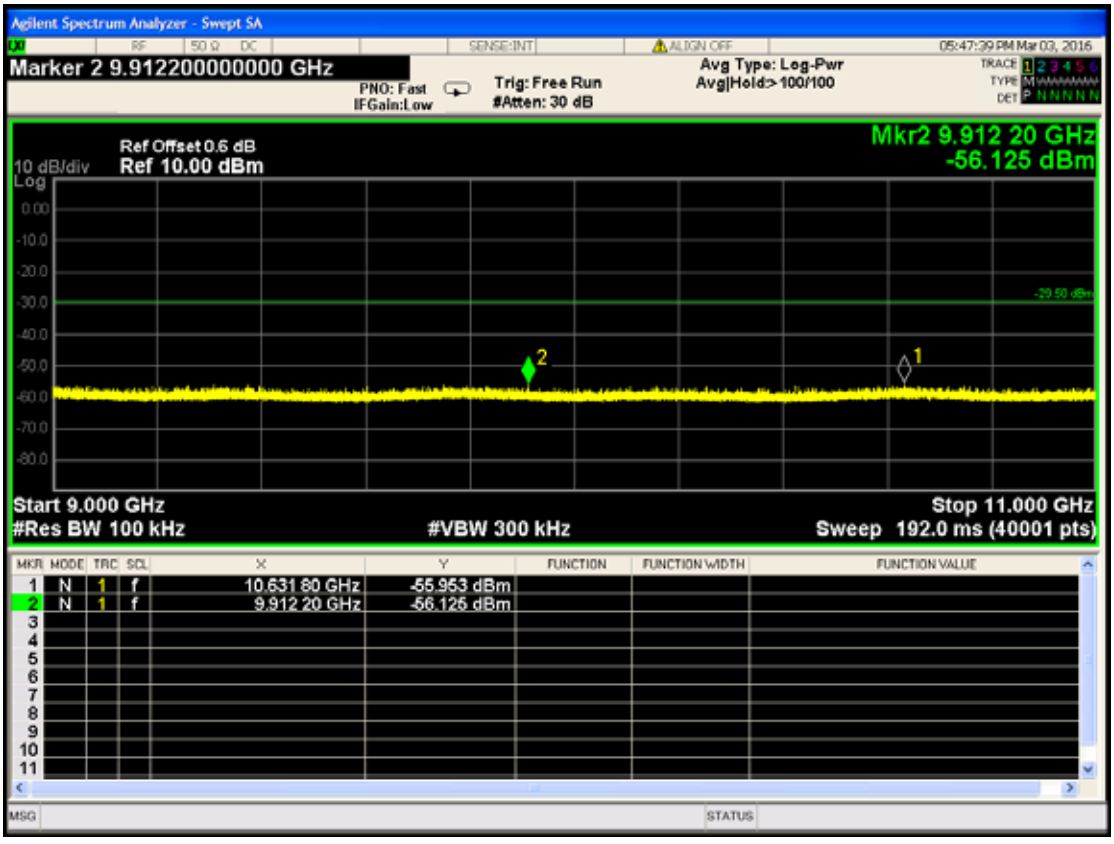

Agilent Spectrum Analyzer - Swept SA
Marker 2 189.953000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
06:09:19 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 189.95 MHz
-62.621 dBm
-29.50 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 93.33 ms (20001 pts)
1 N 1 f 942.87 MHz -60.768 dBm
2 N 1 f 189.95 MHz -62.621 dBm

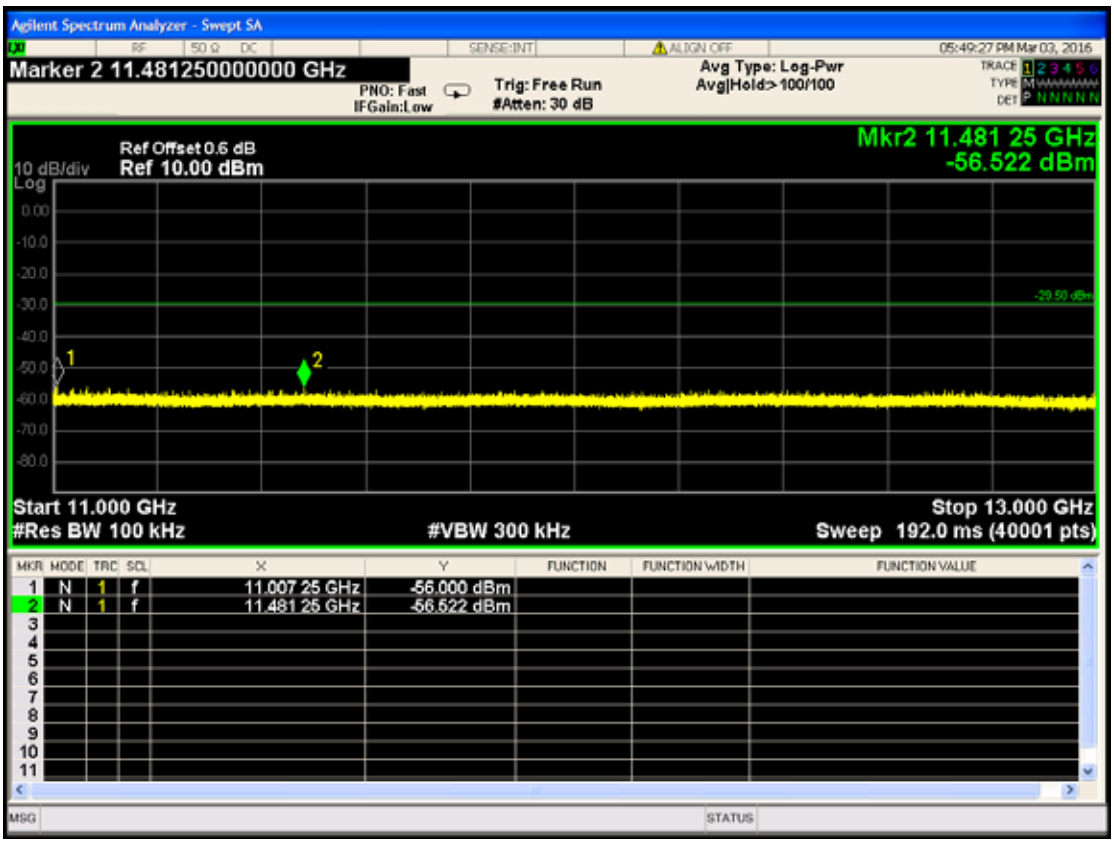

Agilent Spectrum Analyzer - Swept SA
Marker 2 1.739900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:37:22 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 1.739 90 GHz
-60.583 dBm
-29.50 dBm
Start 1.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 3.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 2.405 05 GHz 0.503 dBm
2 N 1 f 1.739 90 GHz -60.583 dBm

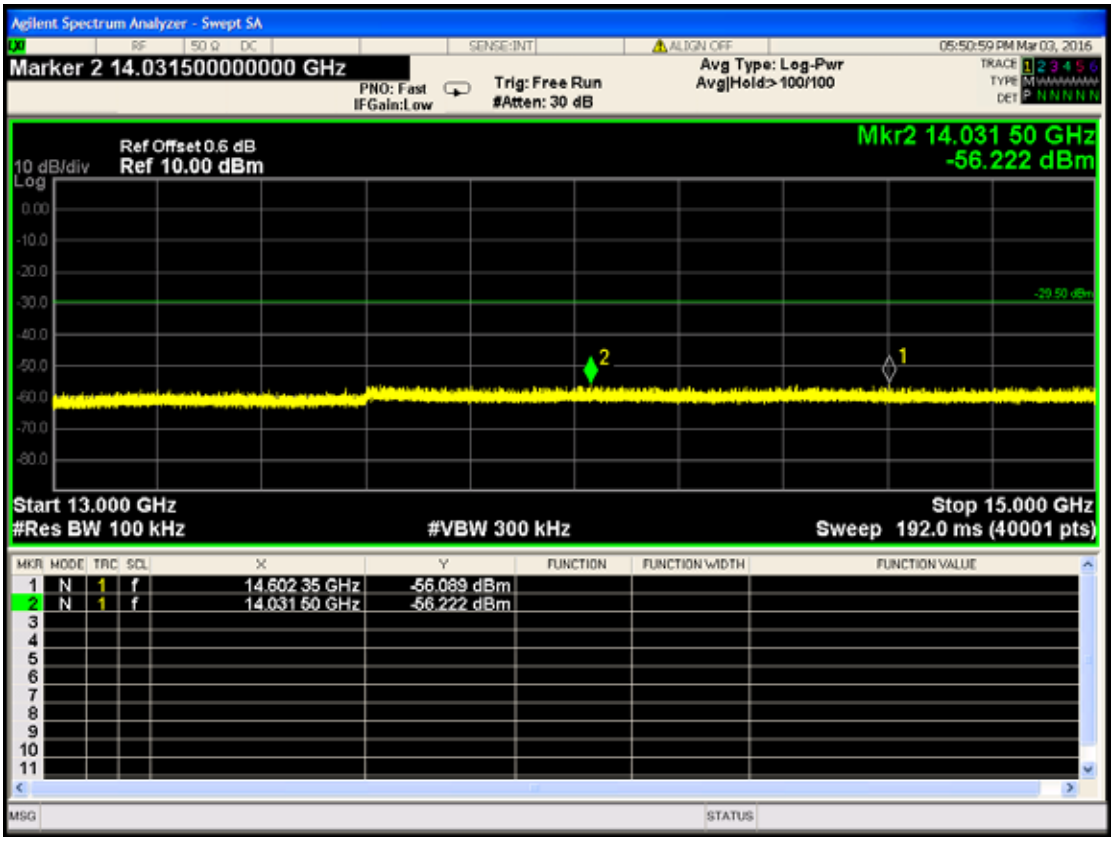

Agilent Spectrum Analyzer - Swept SA
Marker 2 4.617100000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:39:19 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 4.617 10 GHz
-56.243 dBm
-29.50 dBm
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 5.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 3.774 65 GHz -54.807 dBm
2 N 1 f 4.617 10 GHz -56.243 dBm

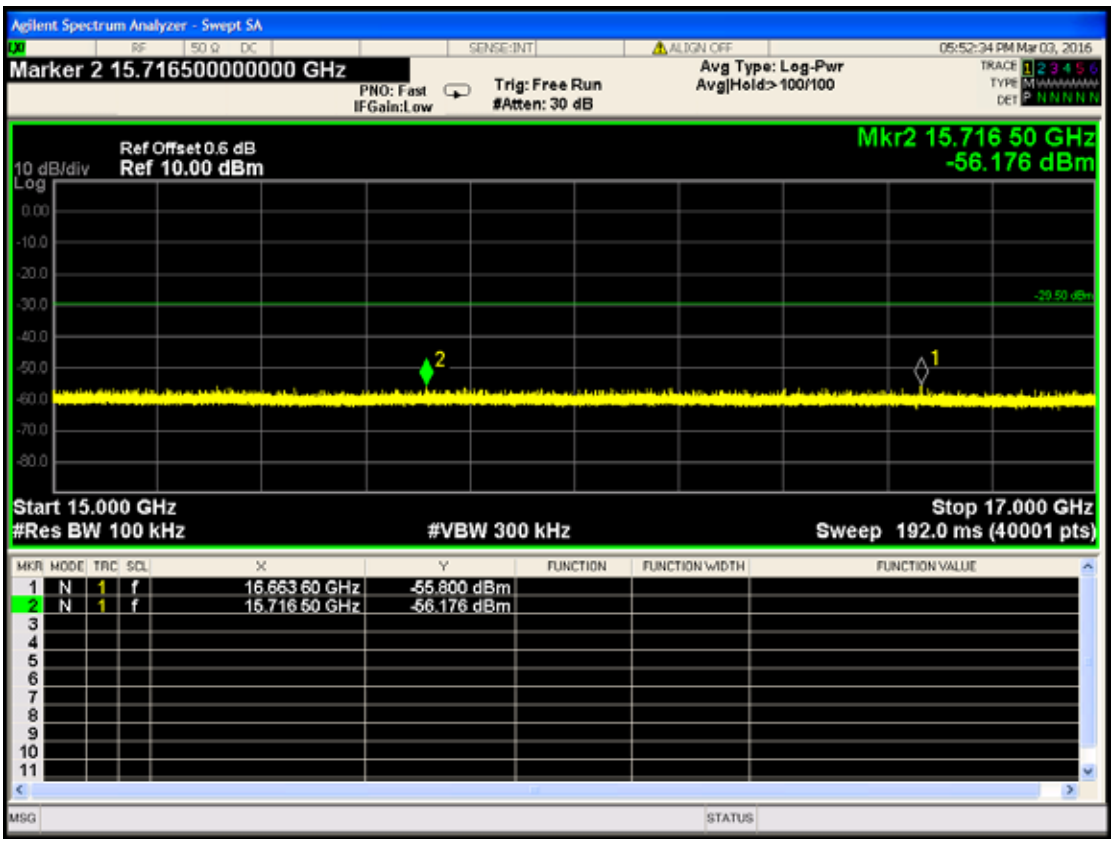

Agilent Spectrum Analyzer - Swept SA
Marker 2 6.445300000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:40:34 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 6.445 30 GHz
-56.667 dBm
-29.50 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 7.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 5.088 05 GHz -55.114 dBm
2 N 1 f 6.445 30 GHz -56.667 dBm

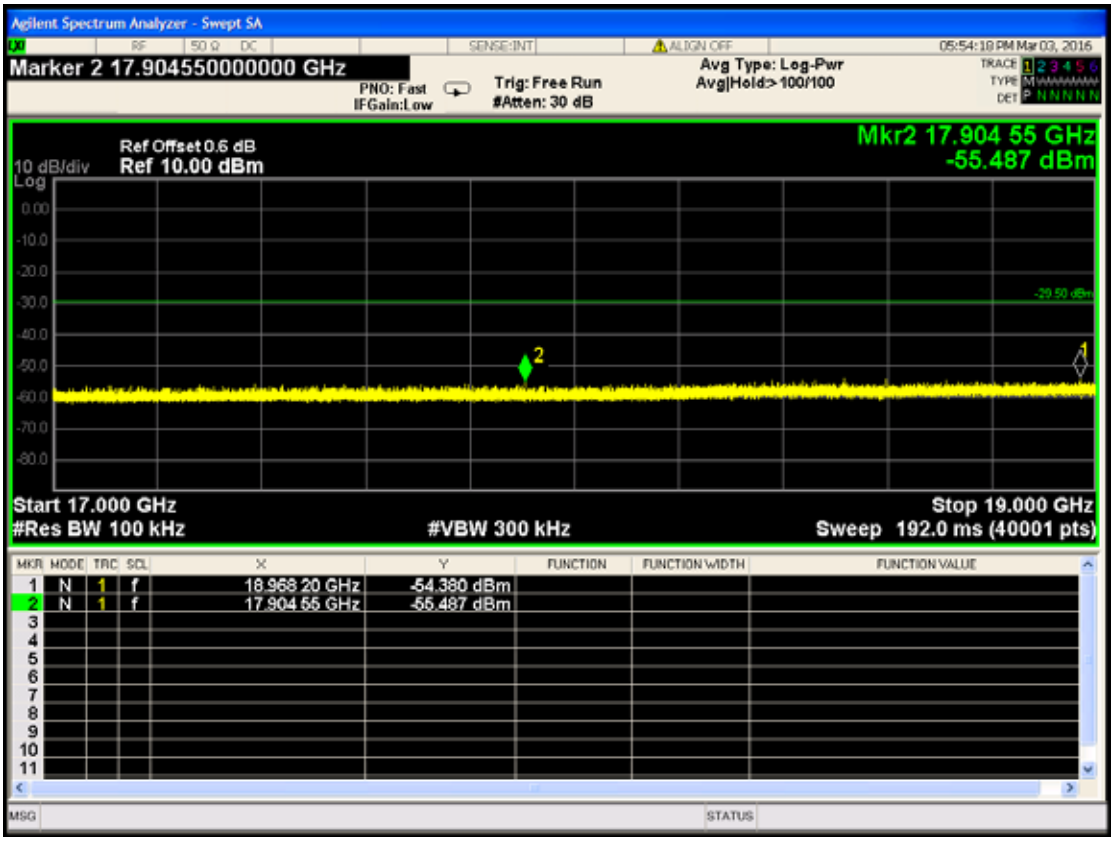

Agilent Spectrum Analyzer - Swept SA
Marker 2 8.093750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:41:55 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 8.093 75 GHz
-56.251 dBm
-29.50 dBm
Start 7.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 9.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 7.216 10 GHz -53.540 dBm
2 N 1 f 8.093 75 GHz -56.251 dBm

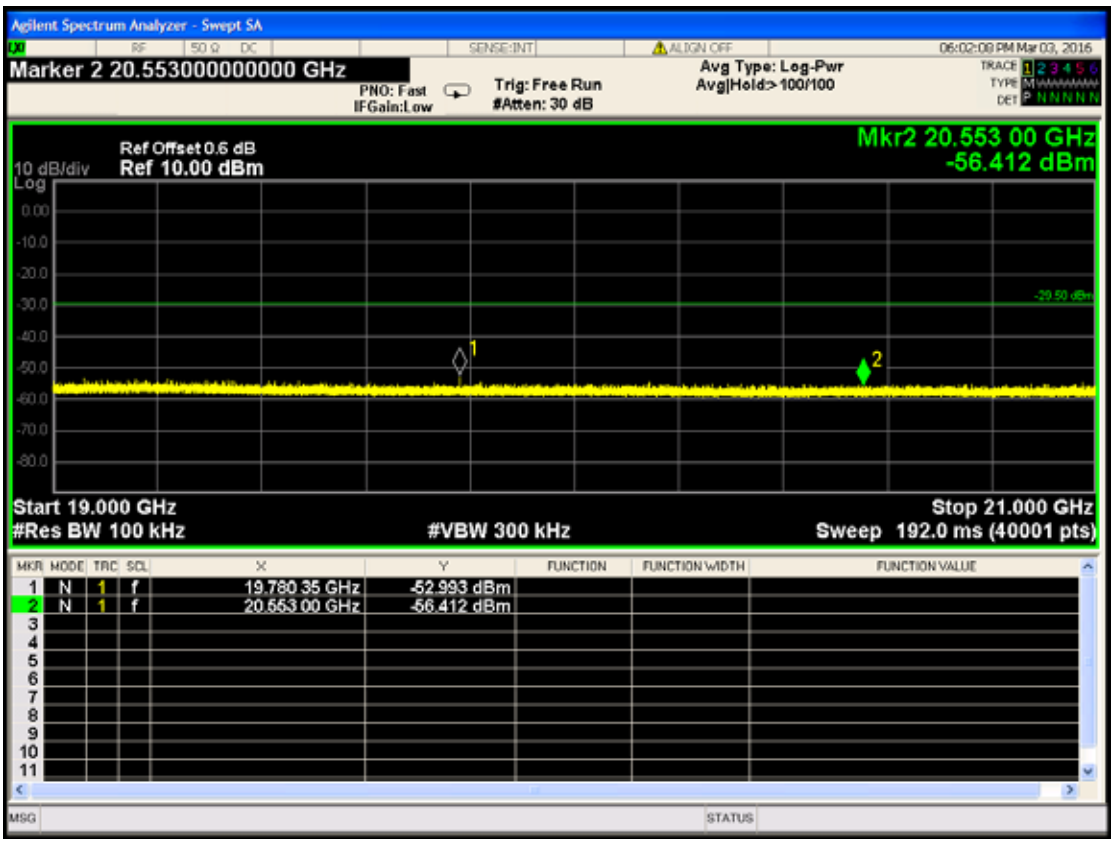

Agilent Spectrum Analyzer - Swept SA
Marker 2 9.912200000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:47:39 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 9.912 20 GHz
-56.125 dBm
-29.50 dBm
Start 9.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 11.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 10.631 80 GHz -55.953 dBm
2 N 1 f 9.912 20 GHz -56.125 dBm

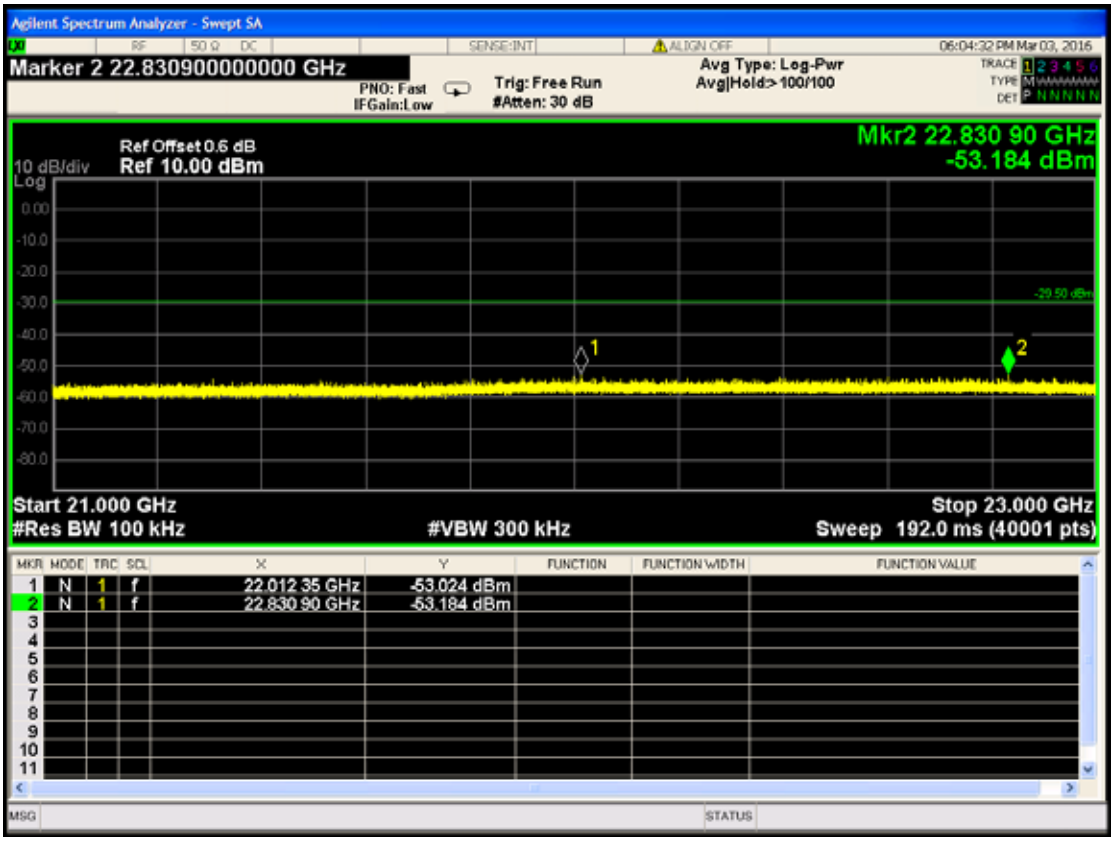

Agilent Spectrum Analyzer - Swept SA
Marker 2 11.481250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:49:27 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 11.481 25 GHz
-56.522 dBm
-29.50 dBm
Start 11.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 13.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 11.007 25 GHz -56.000 dBm
2 N 1 f 11.481 25 GHz -56.522 dBm

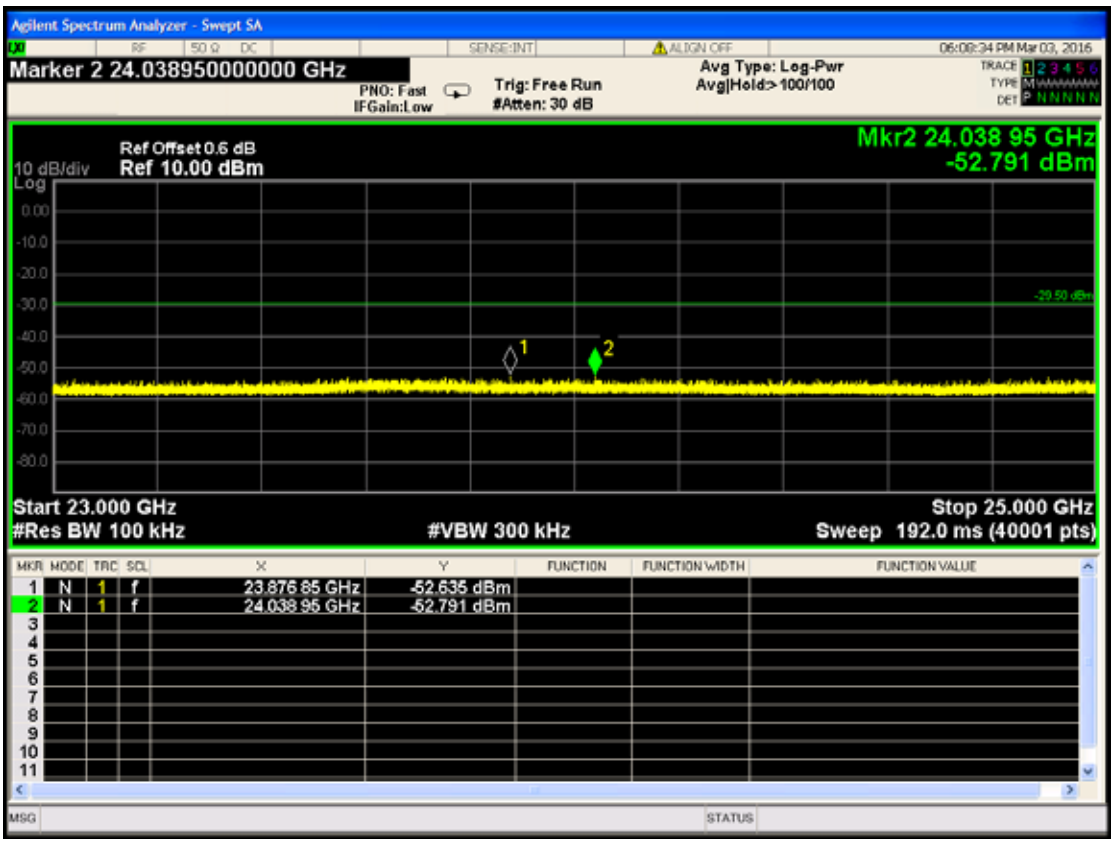

Agilent Spectrum Analyzer - Swept SA
Marker 2 14.031500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:50:59 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 14.031 50 GHz
-56.222 dBm
-29.50 dBm
Start 13.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 14.602 35 GHz -56.089 dBm
2 N 1 f 14.031 50 GHz -56.222 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 15.716500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:52:34 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 15.716 50 GHz
-56.176 dBm
-29.50 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 17.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 16.663 60 GHz -55.800 dBm
2 N 1 f 15.716 50 GHz -56.176 dBm

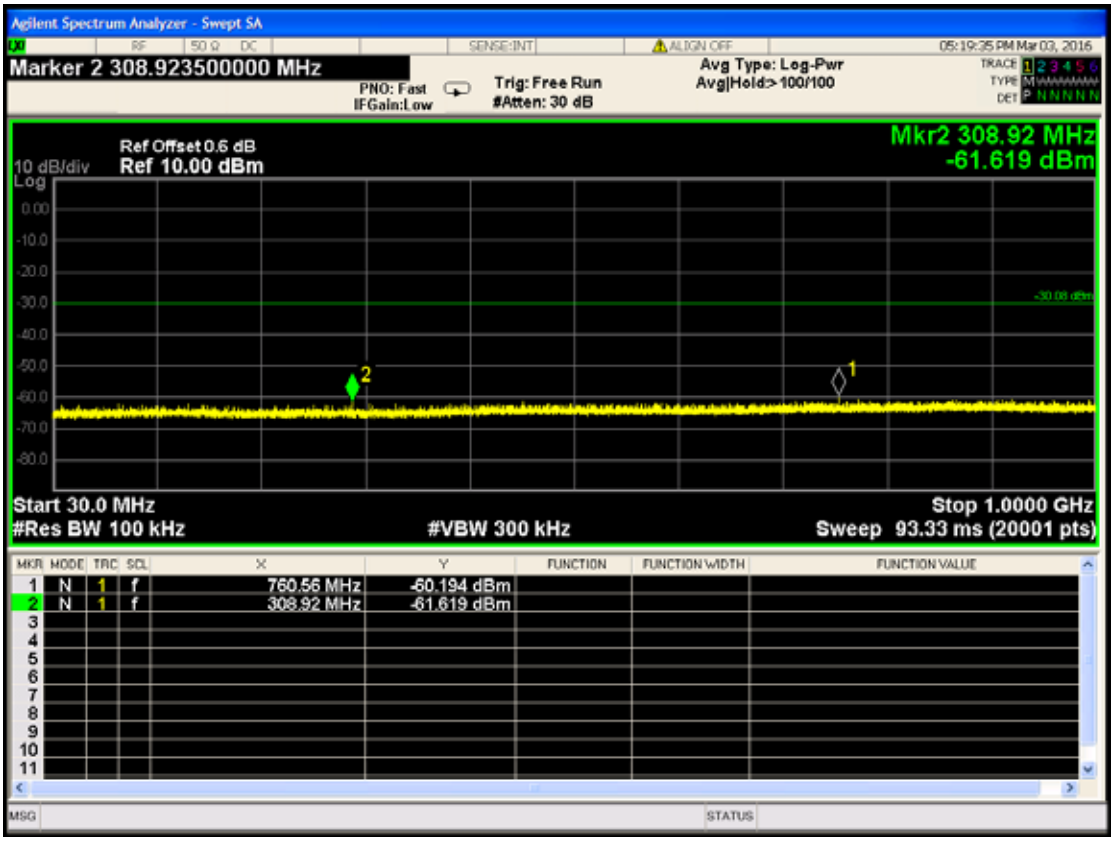

Agilent Spectrum Analyzer - Swept SA
Marker 2 17.904550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:54:18 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 17.904 55 GHz
-55.487 dBm
-29.50 dBm
Start 17.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 19.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 18.968 20 GHz -54.380 dBm
2 N 1 f 17.904 55 GHz -55.487 dBm

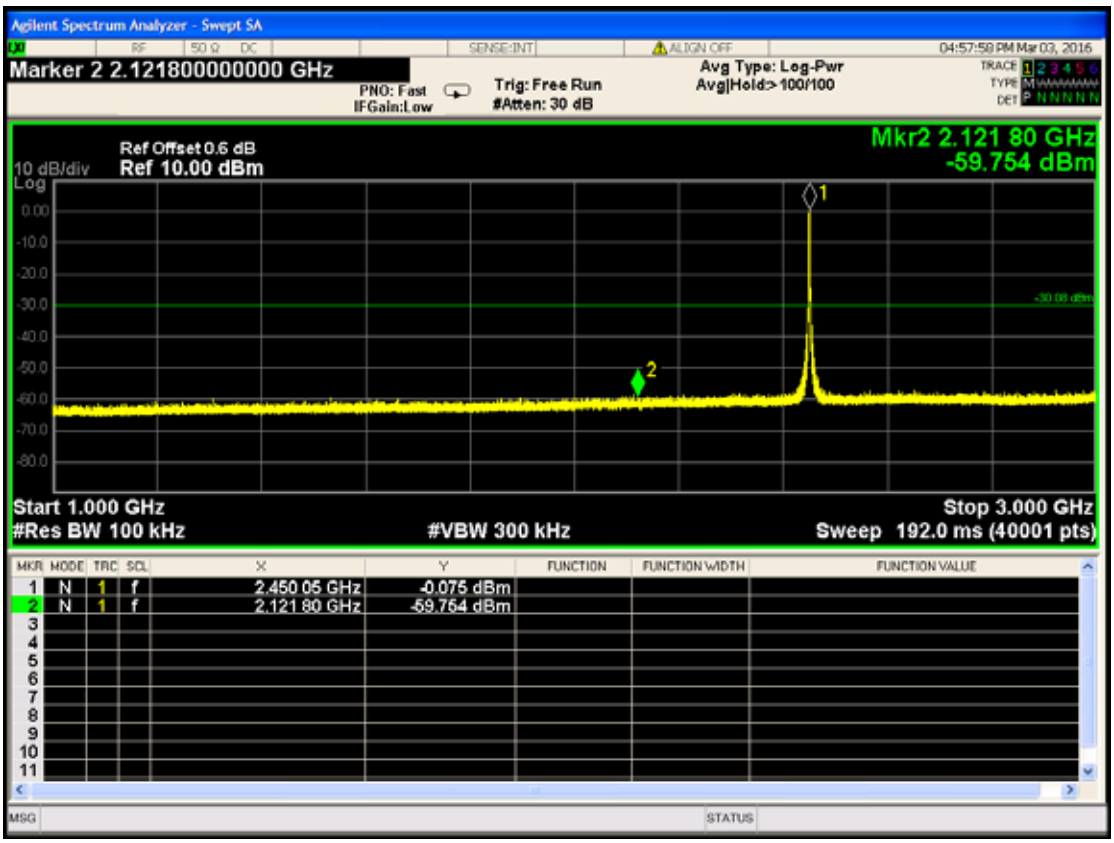

Agilent Spectrum Analyzer - Swept SA
Marker 2 20.553000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
06:02:09 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 20.553 00 GHz
-56.412 dBm
-29.50 dBm
Start 19.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 21.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 19.780 35 GHz -52.993 dBm
2 N 1 f 20.553 00 GHz -56.412 dBm

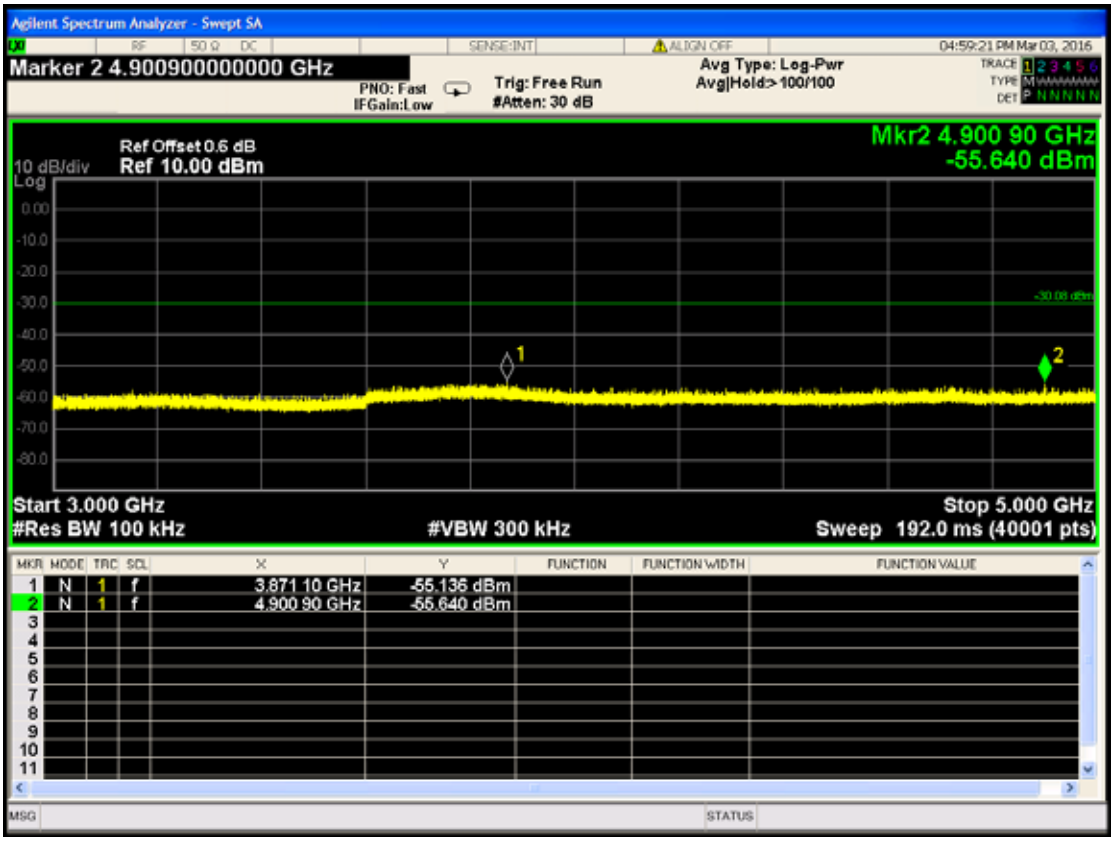

Agilent Spectrum Analyzer - Swept SA
Marker 2 22.830900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
06:04:32 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 22.830 90 GHz
-53.184 dBm
-29.50 dBm
Start 21.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 23.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 22.012 35 GHz -53.024 dBm
2 N 1 f 22.830 90 GHz -53.184 dBm

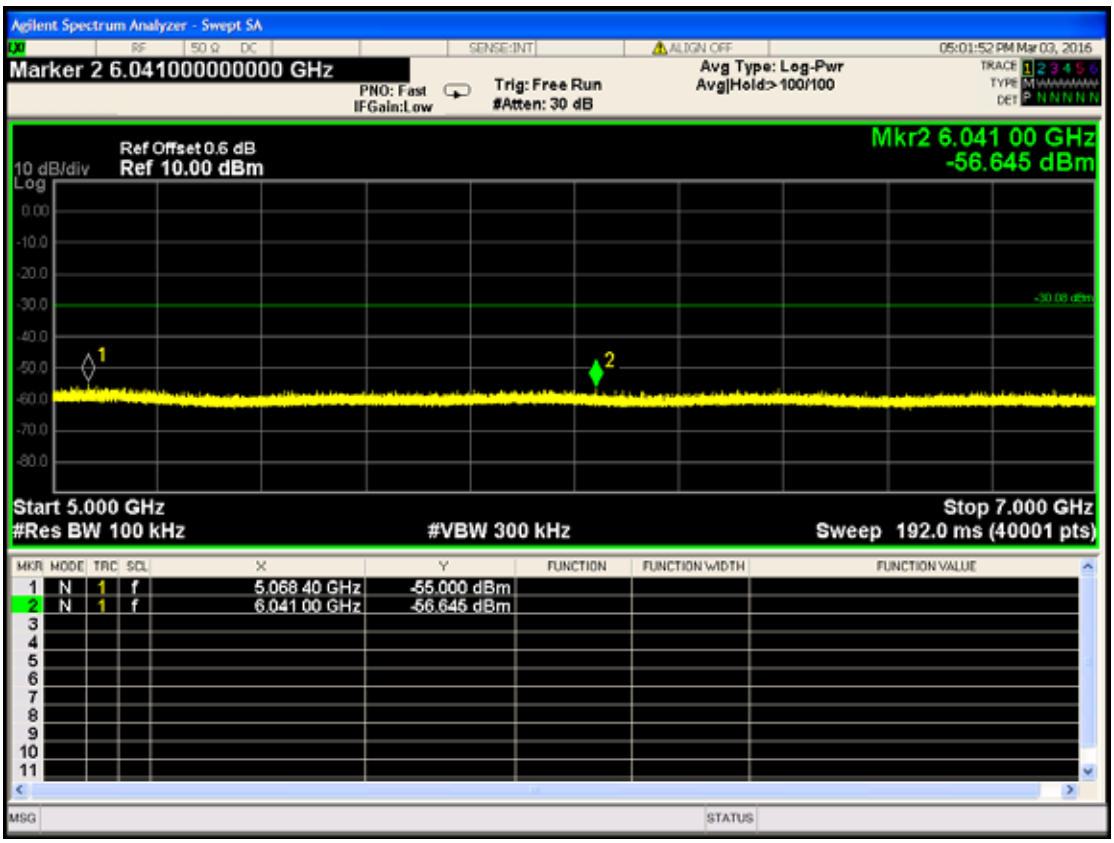

Agilent Spectrum Analyzer - Swept SA
Marker 2 24.038950000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 24.038 95 GHz
-52.791 dBm
Start 23.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 23.876 85 GHz -52.635 dBm
2 N 1 f 24.038 95 GHz -52.791 dBm

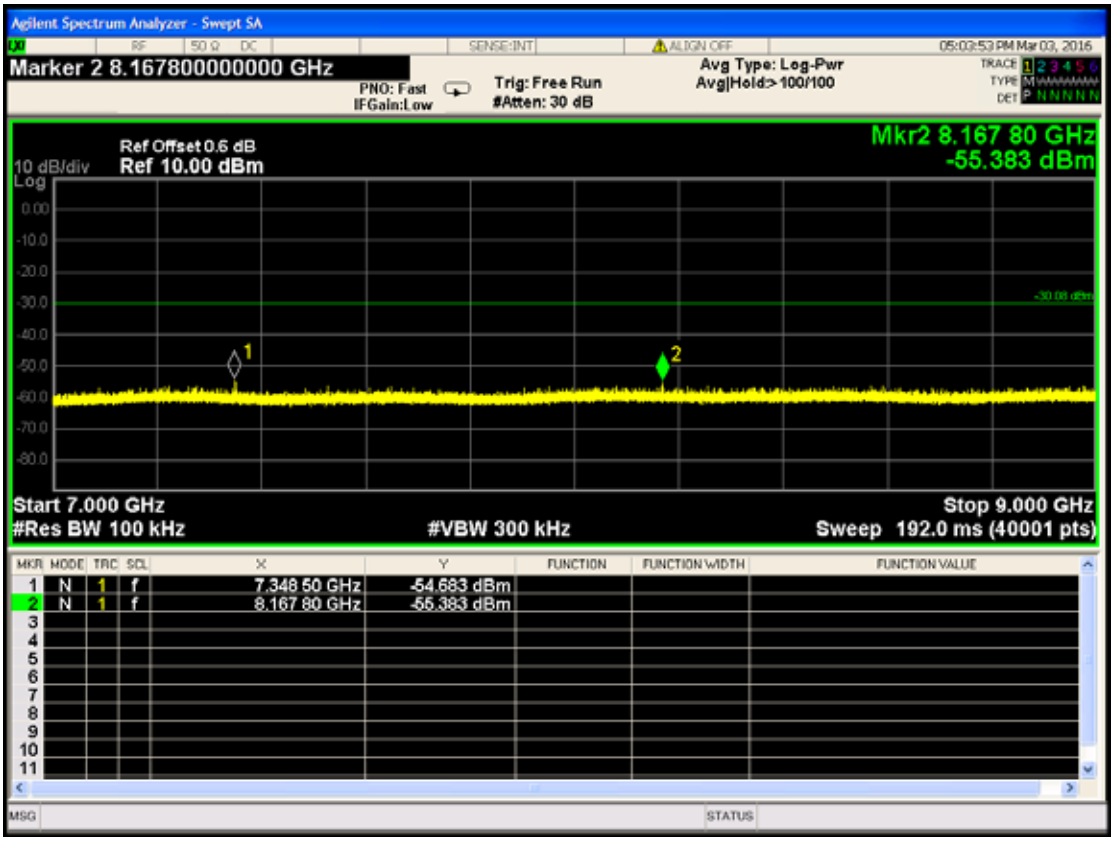
CH 20

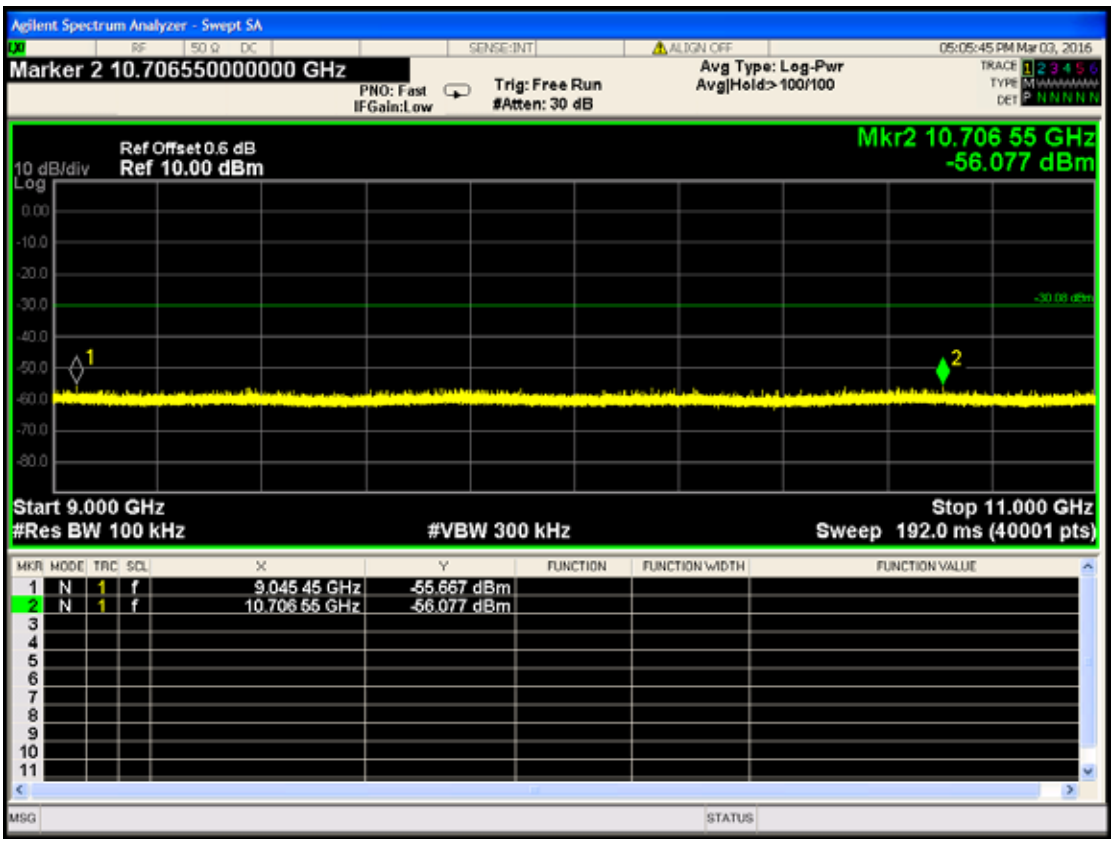

Agilent Spectrum Analyzer - Swept SA
Marker 2 308.923500000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 308.92 MHz
-61.619 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 93.33 ms (20001 pts)
1 N 1 f 760.56 MHz -60.194 dBm
2 N 1 f 308.92 MHz -61.619 dBm

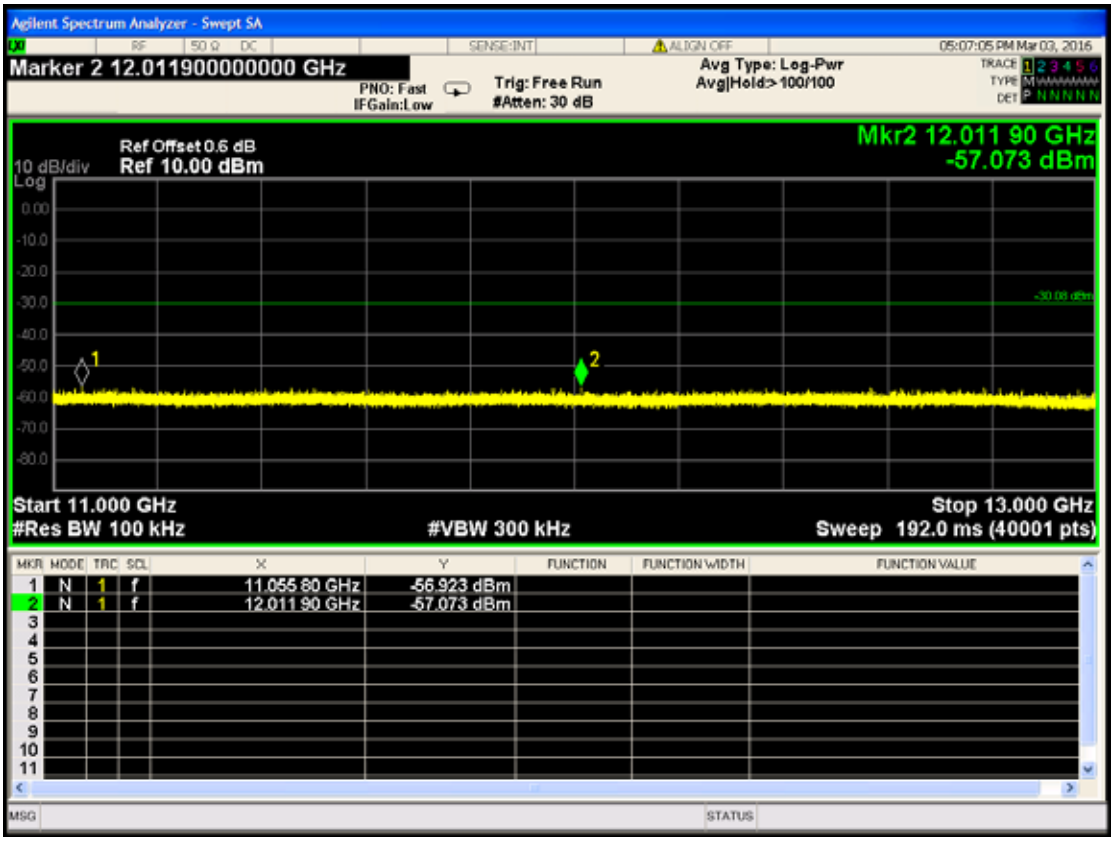

Agilent Spectrum Analyzer - Swept SA
Marker 2 2.121800000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:57:59 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 2.121 80 GHz
-59.754 dBm
Start 1.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 3.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 2.450 05 GHz -0.075 dBm
2 N 1 f 2.121 80 GHz -59.754 dBm

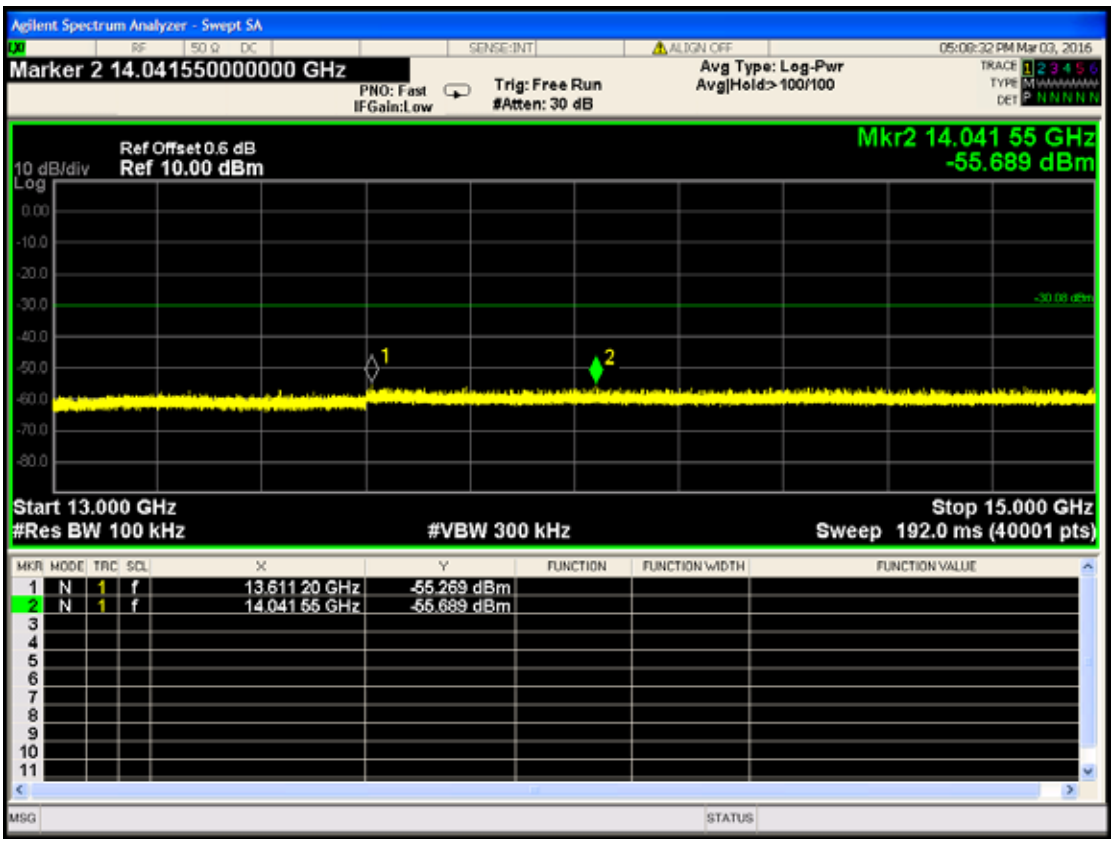

Agilent Spectrum Analyzer - Swept SA
Marker 2 4.900900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:59:21 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 4.900 90 GHz
-55.640 dBm
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 5.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 3.871 10 GHz -55.136 dBm
2 N 1 f 4.900 90 GHz -55.640 dBm

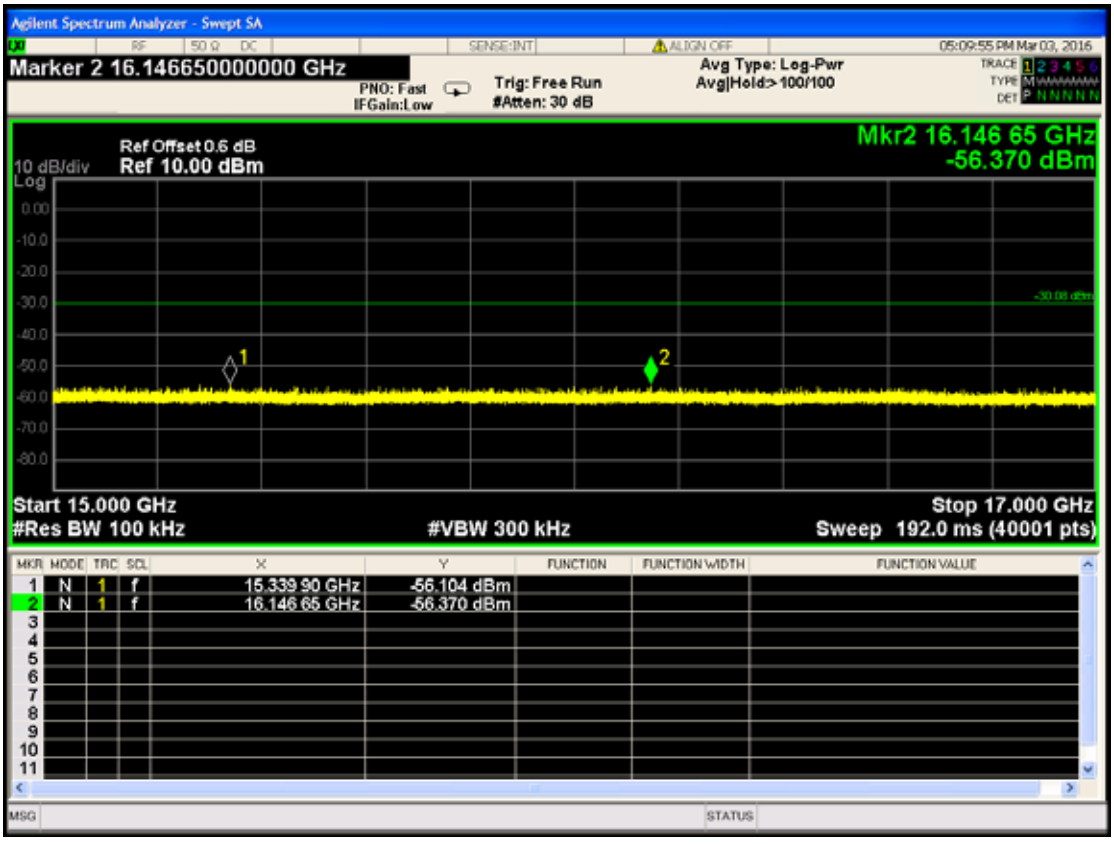

Agilent Spectrum Analyzer - Swept SA
Marker 2 6.041000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:01:52 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 6.041 00 GHz
-56.645 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 7.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 5.068 40 GHz -55.000 dBm
2 N 1 f 6.041 00 GHz -56.645 dBm

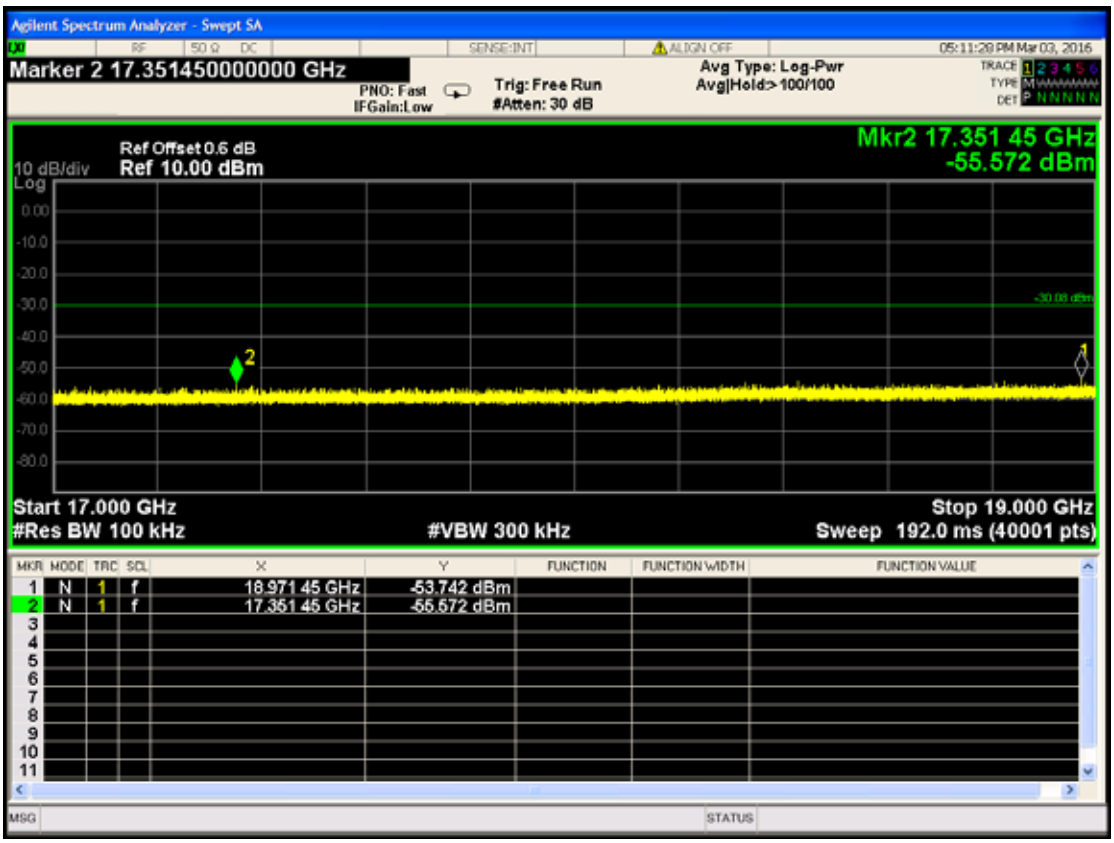

Agilent Spectrum Analyzer - Swept SA
Marker 2 8.167800000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:02:53 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 8.167 80 GHz
-55.383 dBm
Start 7.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 9.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 7.348 50 GHz -54.683 dBm
2 N 1 f 8.167 80 GHz -55.383 dBm

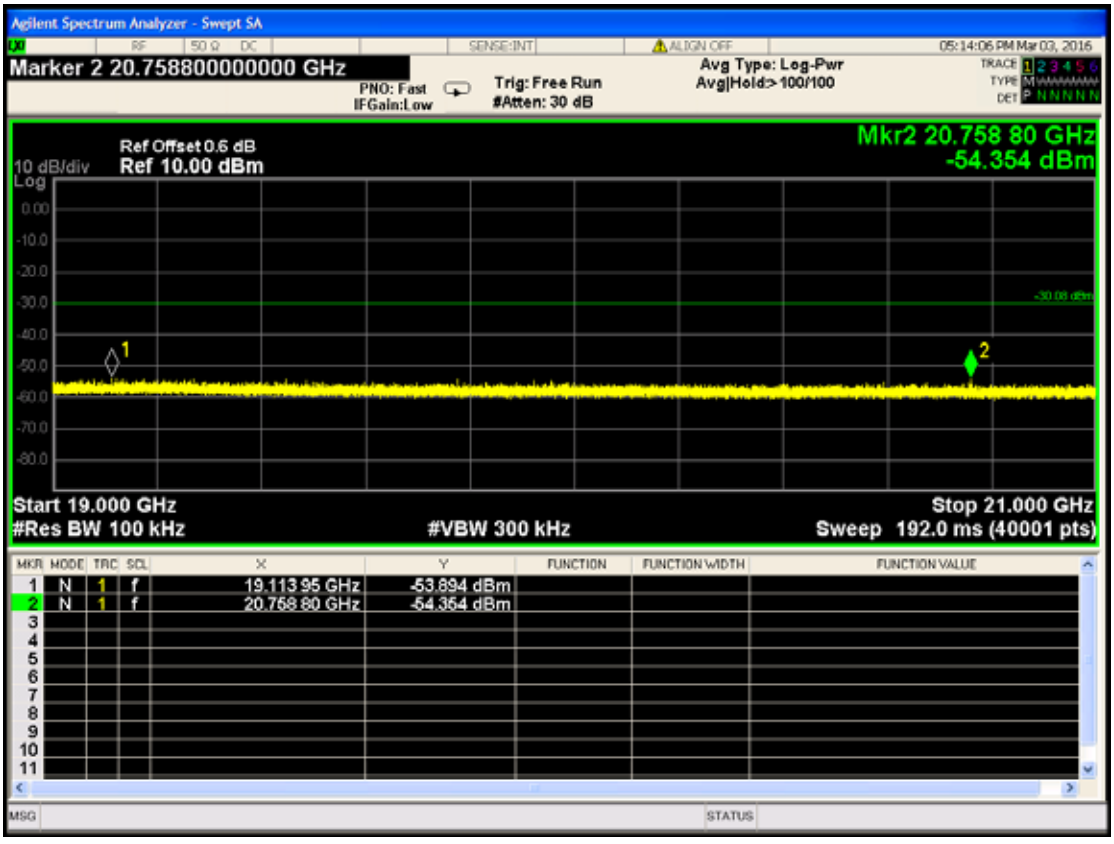

Agilent Spectrum Analyzer - Swept SA
Marker 2 10.706550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:05:45 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 10.706 55 GHz
-56.077 dBm
Start 9.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 11.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 9.045 45 GHz -55.667 dBm
2 N 1 f 10.706 55 GHz -56.077 dBm

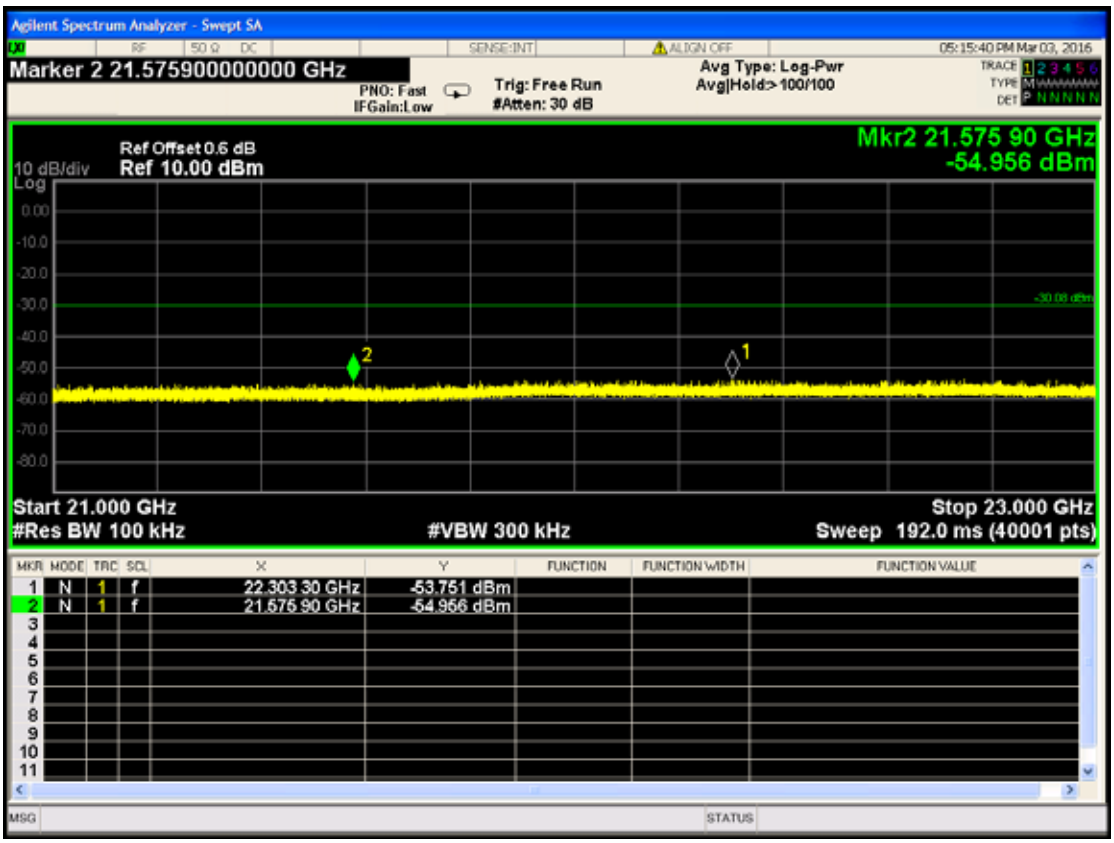

Agilent Spectrum Analyzer - Swept SA
Marker 2 12.011900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:07:05 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 12.011 90 GHz
-57.073 dBm
Start 11.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 13.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 11.055 80 GHz -56.923 dBm
2 N 1 f 12.011 90 GHz -57.073 dBm

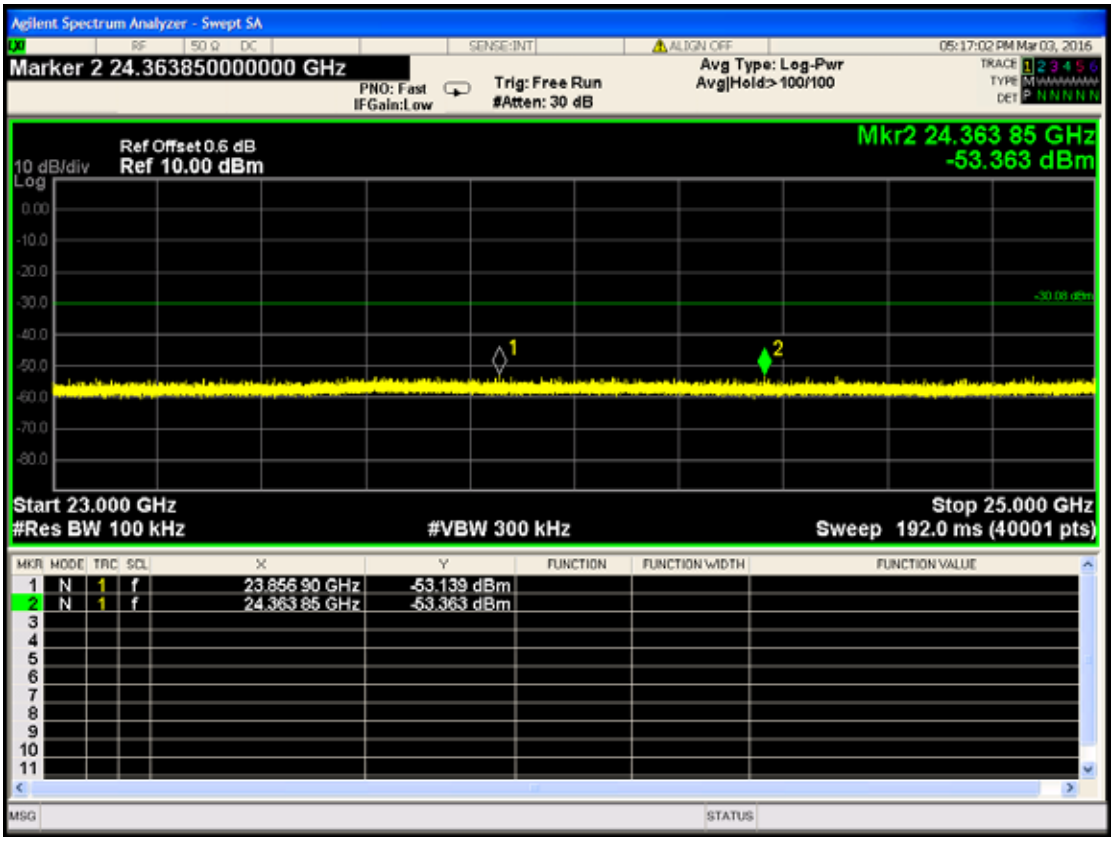

Agilent Spectrum Analyzer - Swept SA
Marker 2 14.041550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:09:32 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 14.041 55 GHz
-55.689 dBm
Start 13.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 13.611 20 GHz -55.269 dBm
2 N 1 f 14.041 55 GHz -55.689 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 16.146650000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:09:55 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 16.146 65 GHz
-56.370 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 17.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 15.339 90 GHz -56.104 dBm
2 N 1 f 16.146 65 GHz -56.370 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 17.351450000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:11:29 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 17.351 45 GHz
-55.572 dBm
Start 17.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 19.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 18.971 45 GHz -53.742 dBm
2 N 1 f 17.351 45 GHz -55.572 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 20.758800000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:14:06 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 20.758 80 GHz
-54.354 dBm
Start 19.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 21.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 19.113 95 GHz -53.894 dBm
2 N 1 f 20.758 80 GHz -54.354 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 21.575900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:15:40 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 21.575 90 GHz
-54.956 dBm
Start 21.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 23.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 22.303 30 GHz -53.751 dBm
2 N 1 f 21.575 90 GHz -54.956 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 24.363850000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:17:02 PM Mar 03, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 24.363 85 GHz
-53.363 dBm
Start 23.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 23.856 90 GHz -53.139 dBm
2 N 1 f 24.363 85 GHz -53.363 dBm

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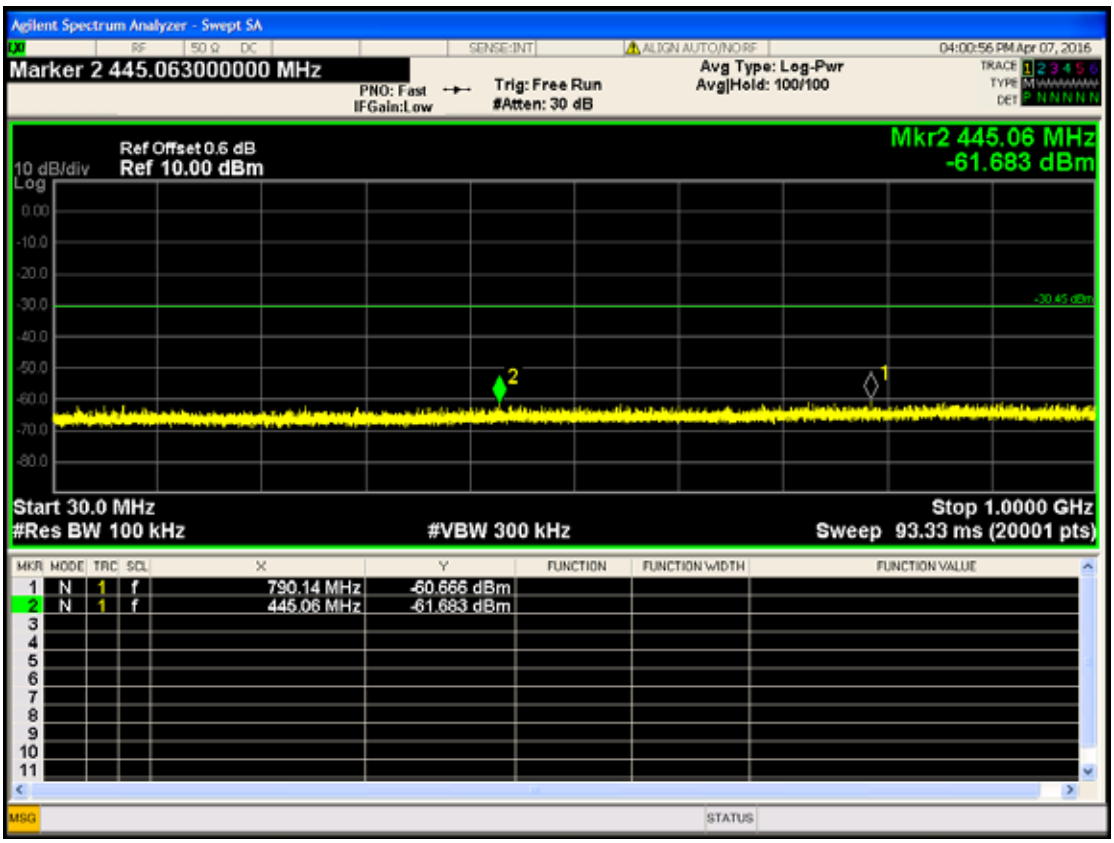
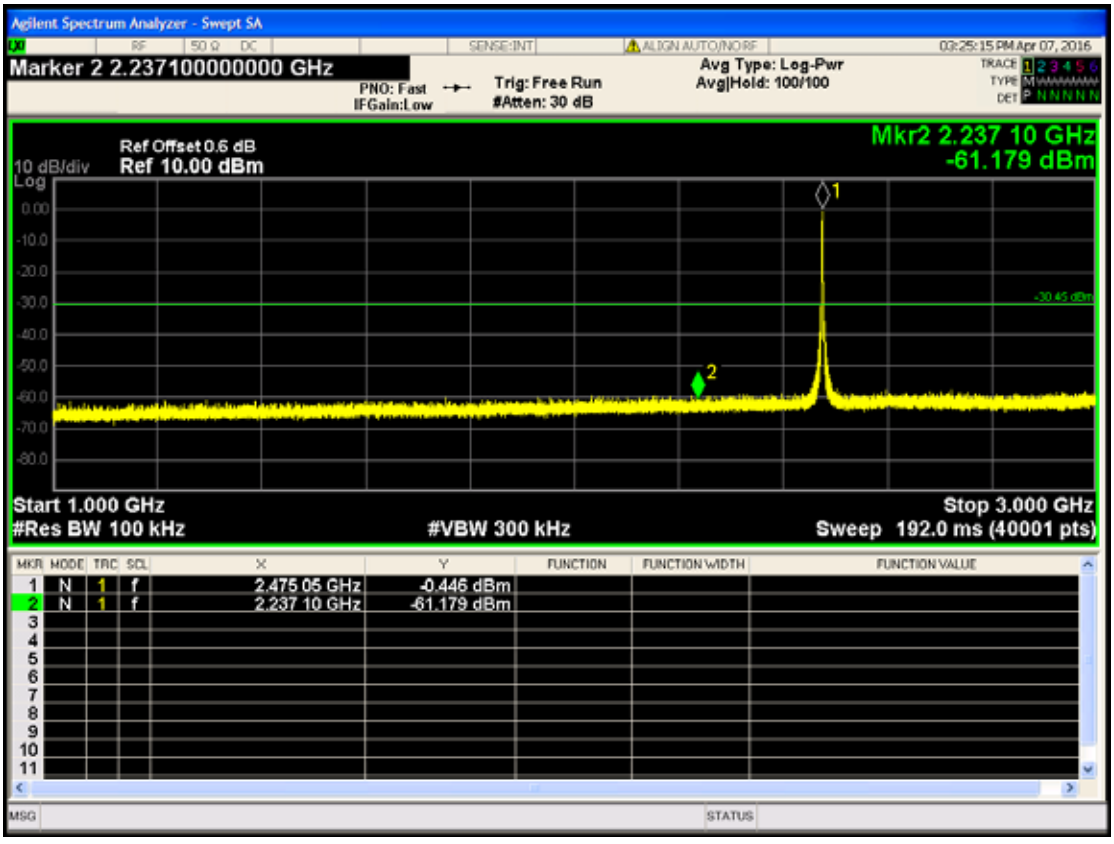
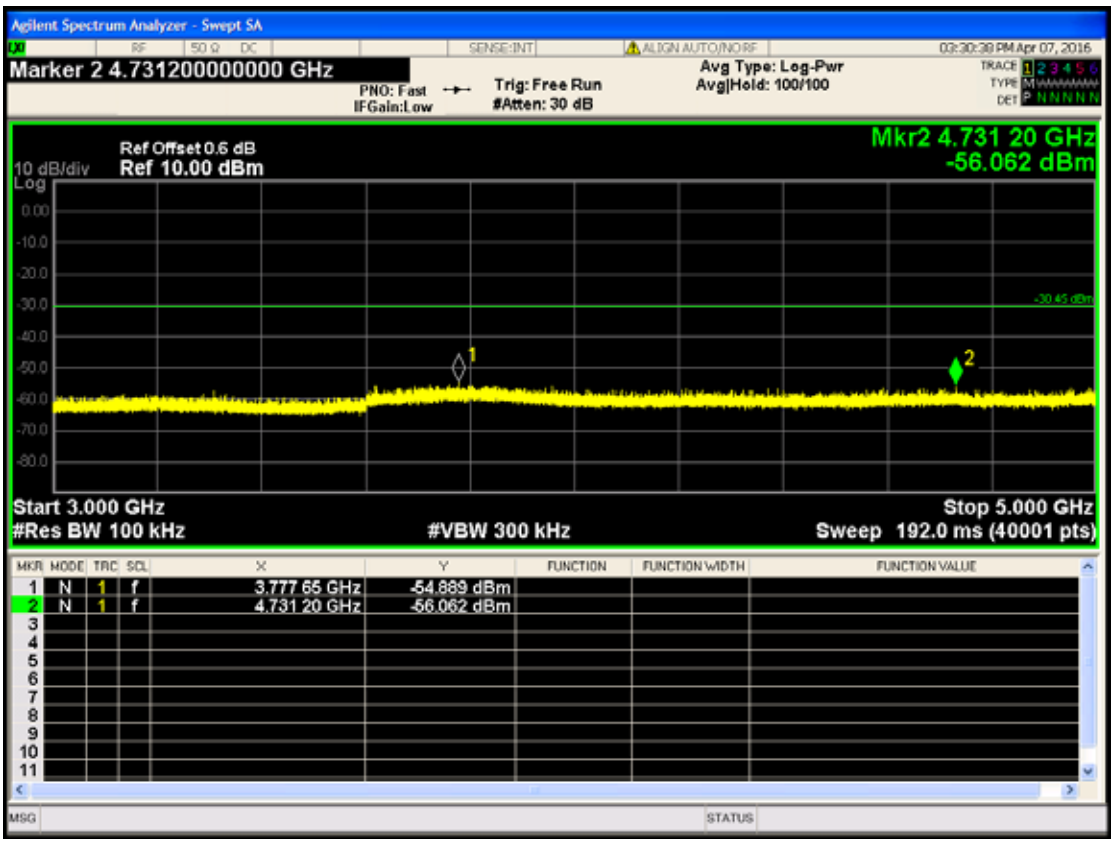
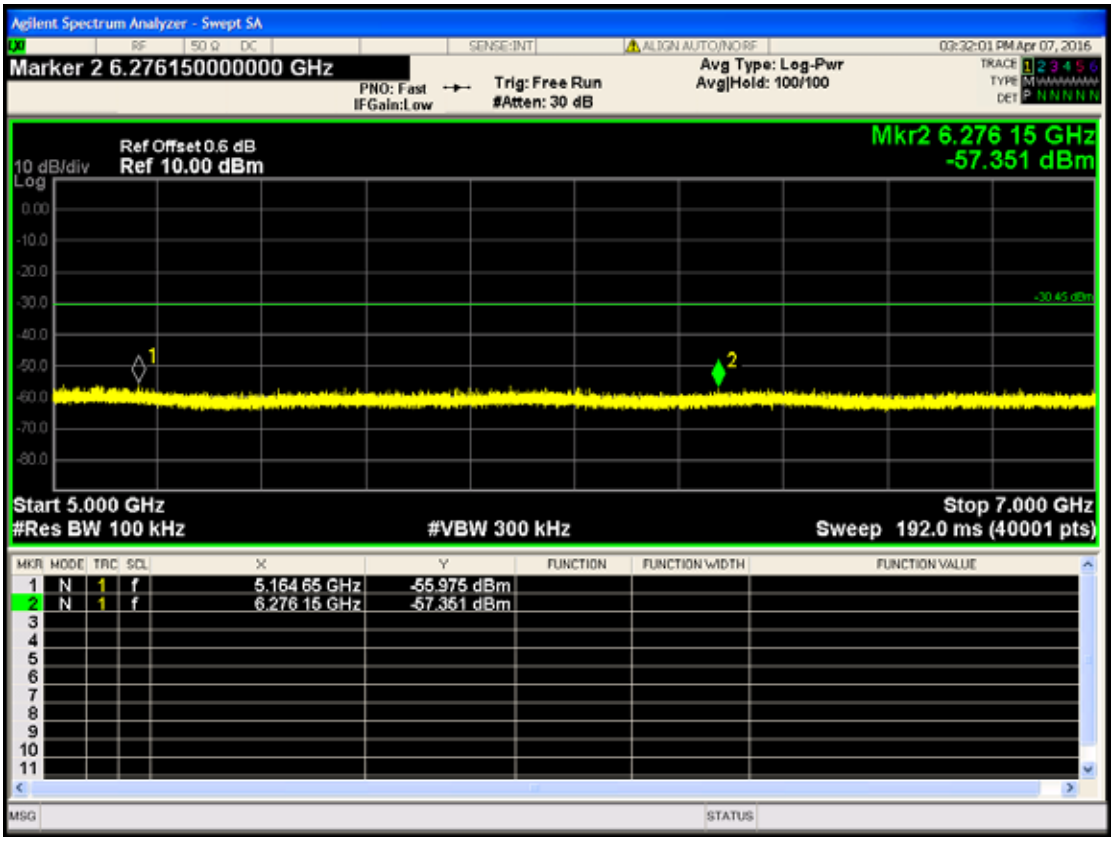
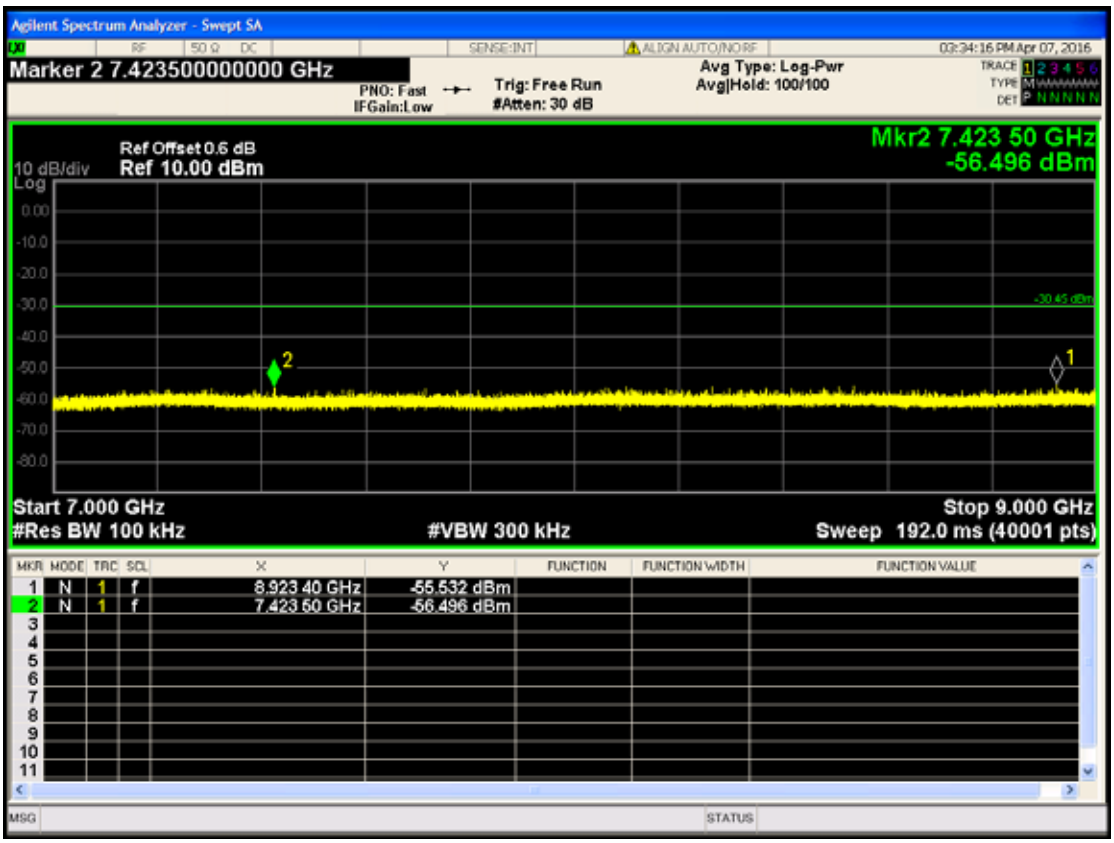
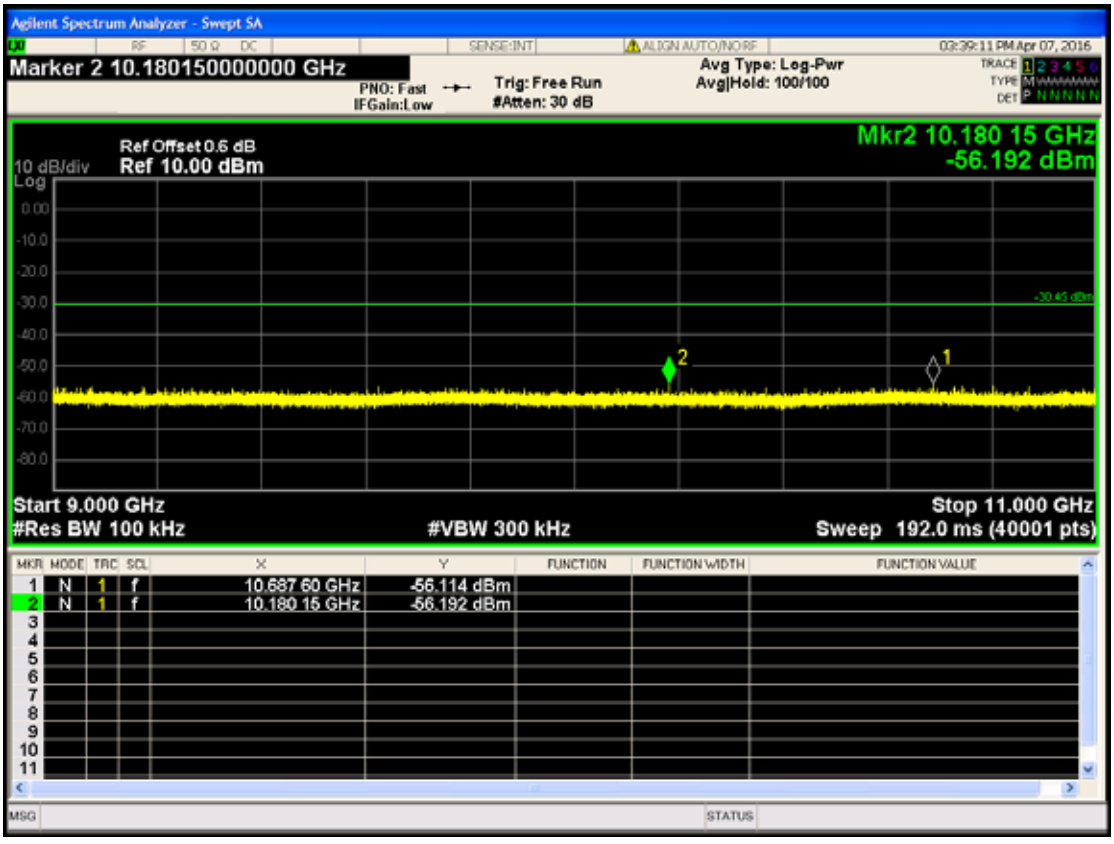

Agilent Spectrum Analyzer - Swept SA
Marker 2 445.063000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
04:00:56 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 445.06 MHz
-61.683 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 93.33 ms (20001 pts)
1 N 1 f 790.14 MHz -60.666 dBm
2 N 1 f 445.06 MHz -61.683 dBm

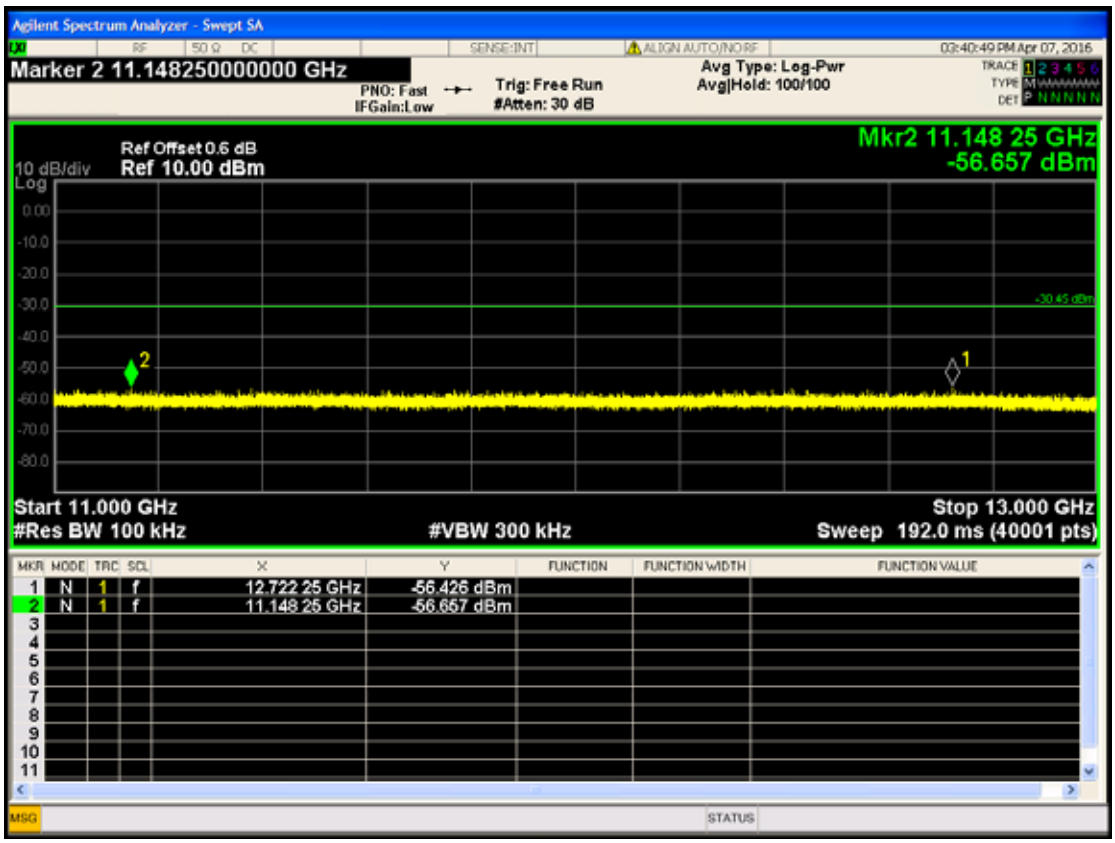

Agilent Spectrum Analyzer - Swept SA
Marker 2 2.237100000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:25:15 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 2.237 10 GHz
-61.179 dBm
Start 1.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 3.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 2.475 05 GHz -0.446 dBm
2 N 1 f 2.237 10 GHz -61.179 dBm

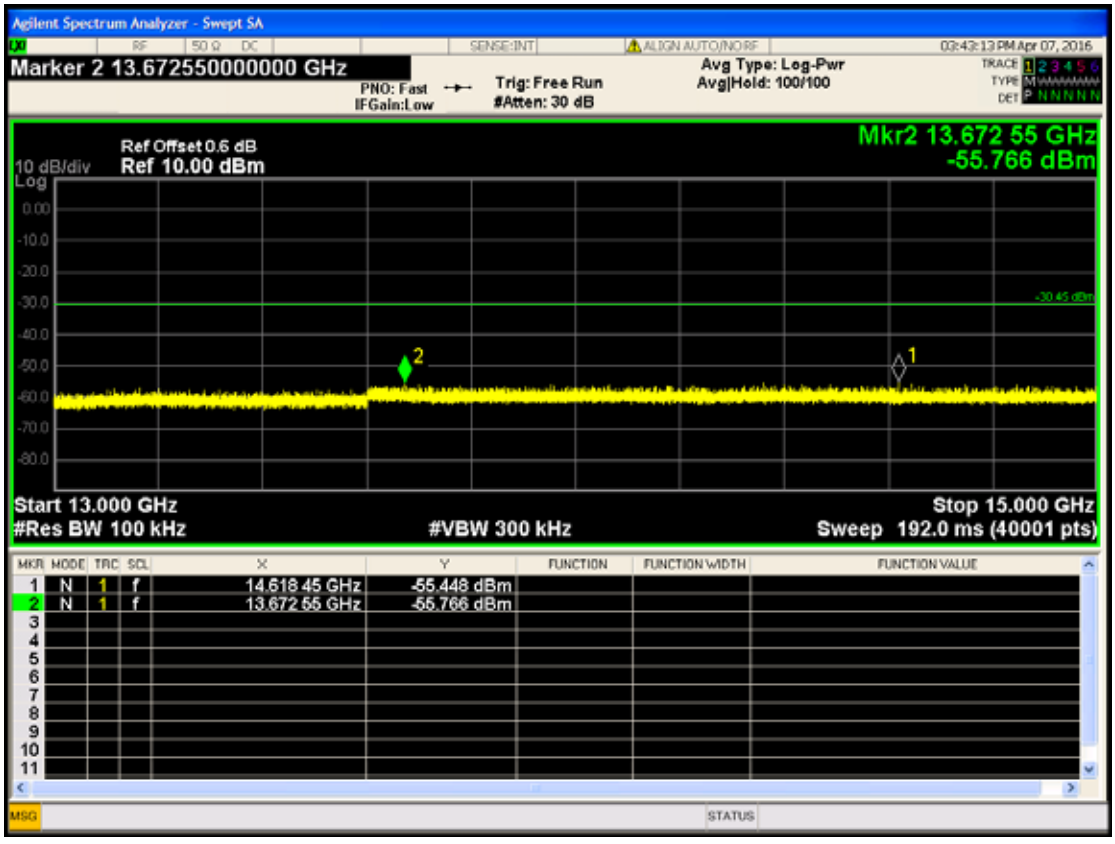

Agilent Spectrum Analyzer - Swept SA
Marker 2 4.731200000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:30:39 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 4.731 20 GHz
-56.062 dBm
-30.45 dBm
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 5.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 3.777 65 GHz -54.889 dBm
2 N 1 f 4.731 20 GHz -56.062 dBm

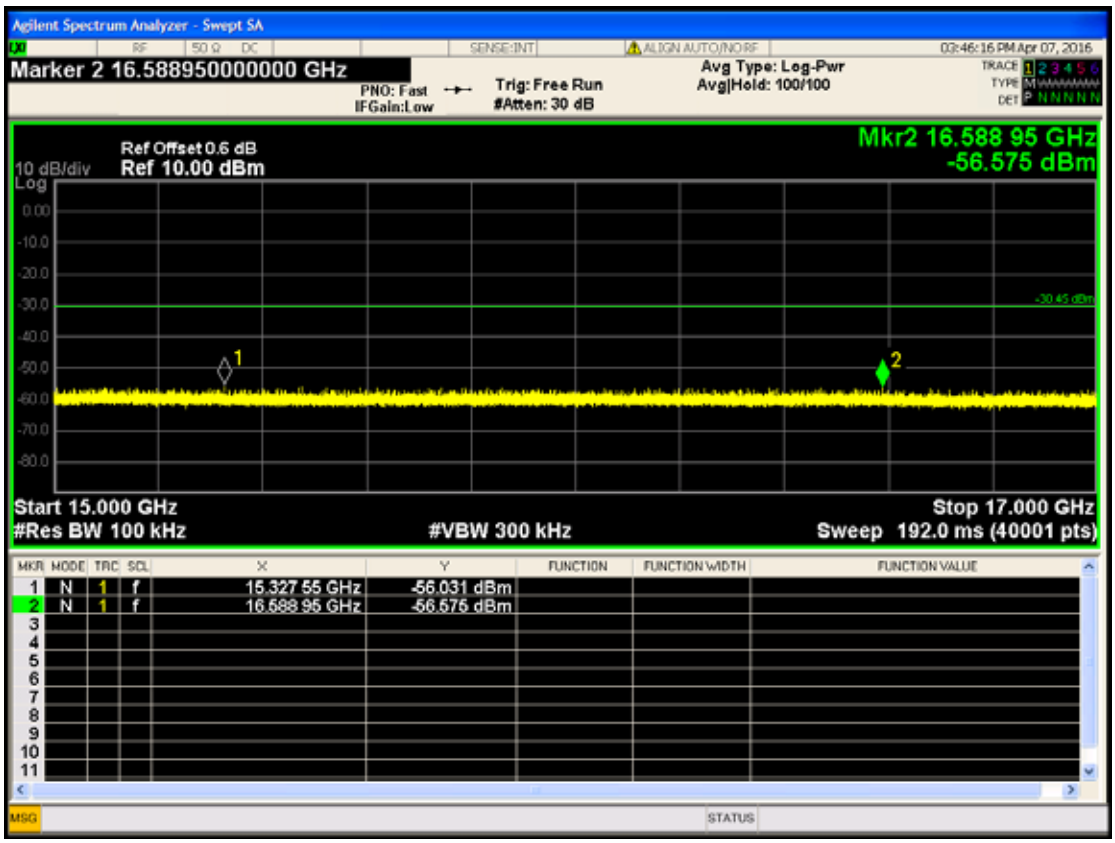

Agilent Spectrum Analyzer - Swept SA
Marker 2 6.276150000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:32:01 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 6.276 15 GHz
-57.351 dBm
-30.45 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 7.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 5.164 65 GHz -55.975 dBm
2 N 1 f 6.276 15 GHz -57.351 dBm

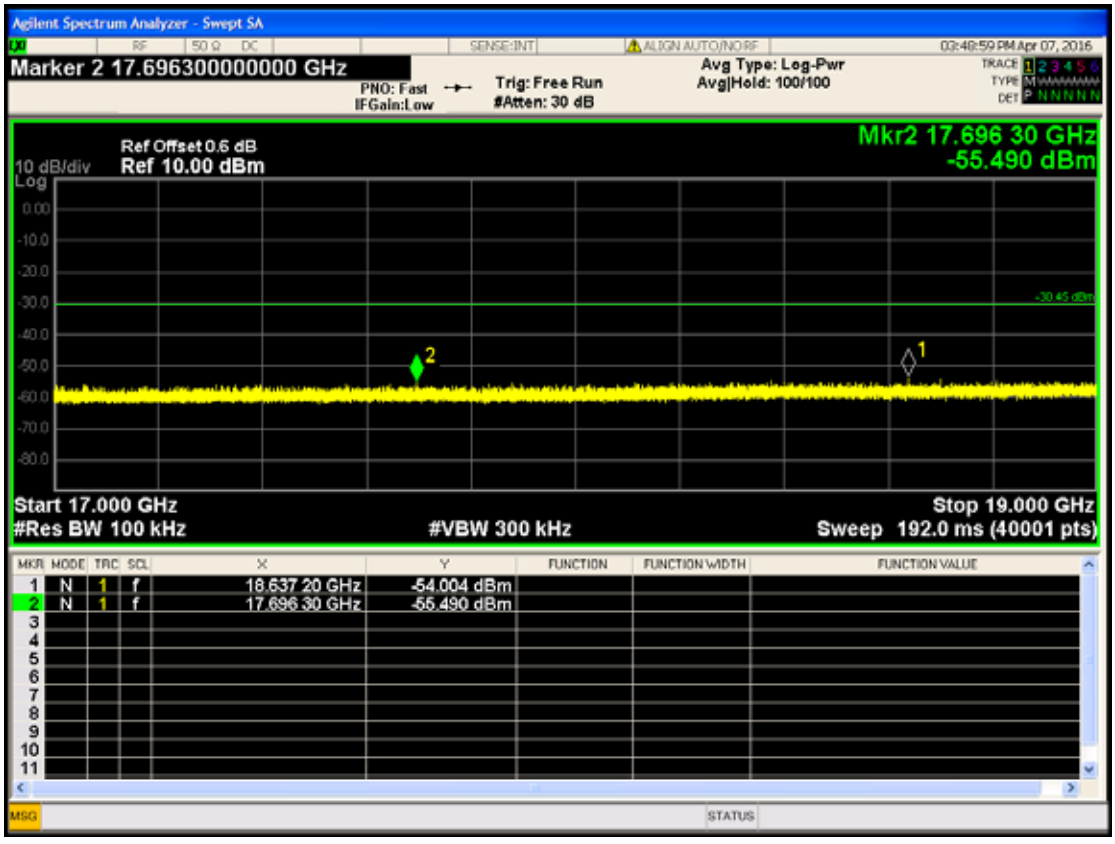

Agilent Spectrum Analyzer - Swept SA
Marker 2 7.423500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:34:16 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 7.423 50 GHz
-56.496 dBm
-30.45 dBm
Start 7.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 9.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 8.923 40 GHz -55.532 dBm
2 N 1 f 7.423 50 GHz -56.496 dBm

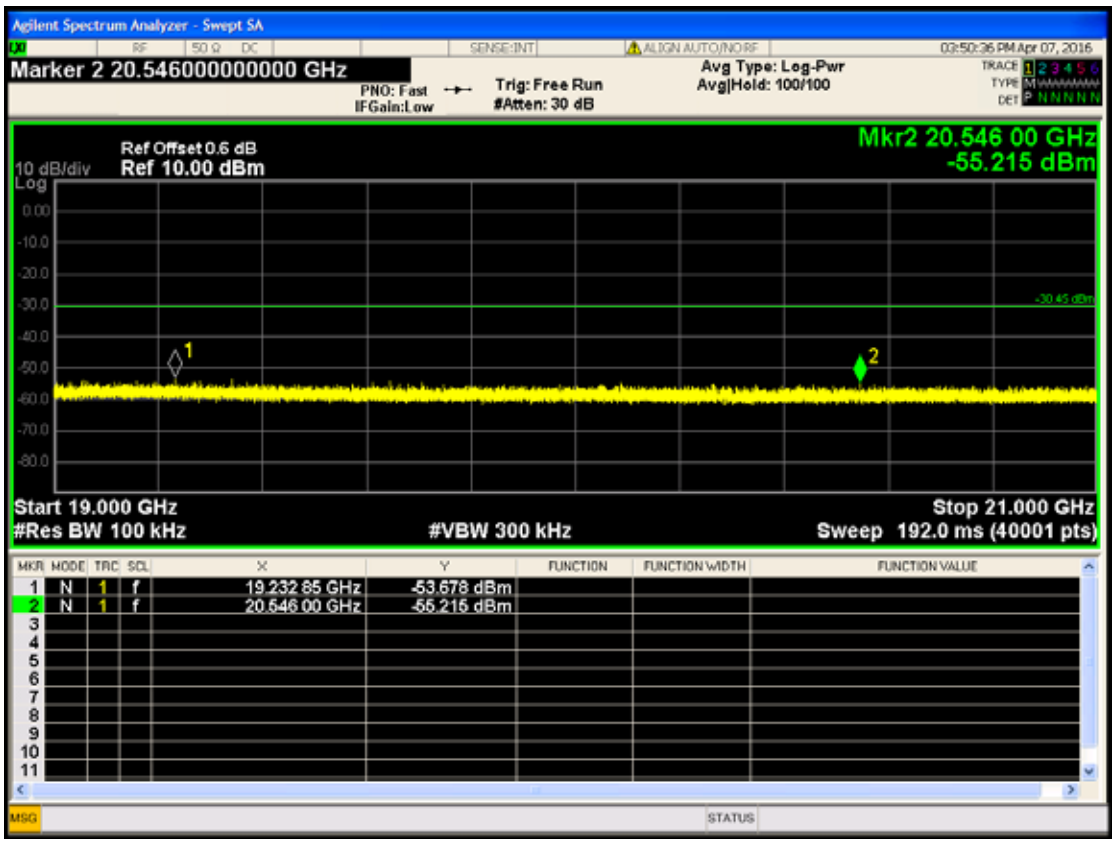

Agilent Spectrum Analyzer - Swept SA
Marker 2 10.180150000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:39:11 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 10.180 15 GHz
-56.192 dBm
-30.45 dBm
Start 9.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 11.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 10.687 60 GHz -56.114 dBm
2 N 1 f 10.180 15 GHz -56.192 dBm

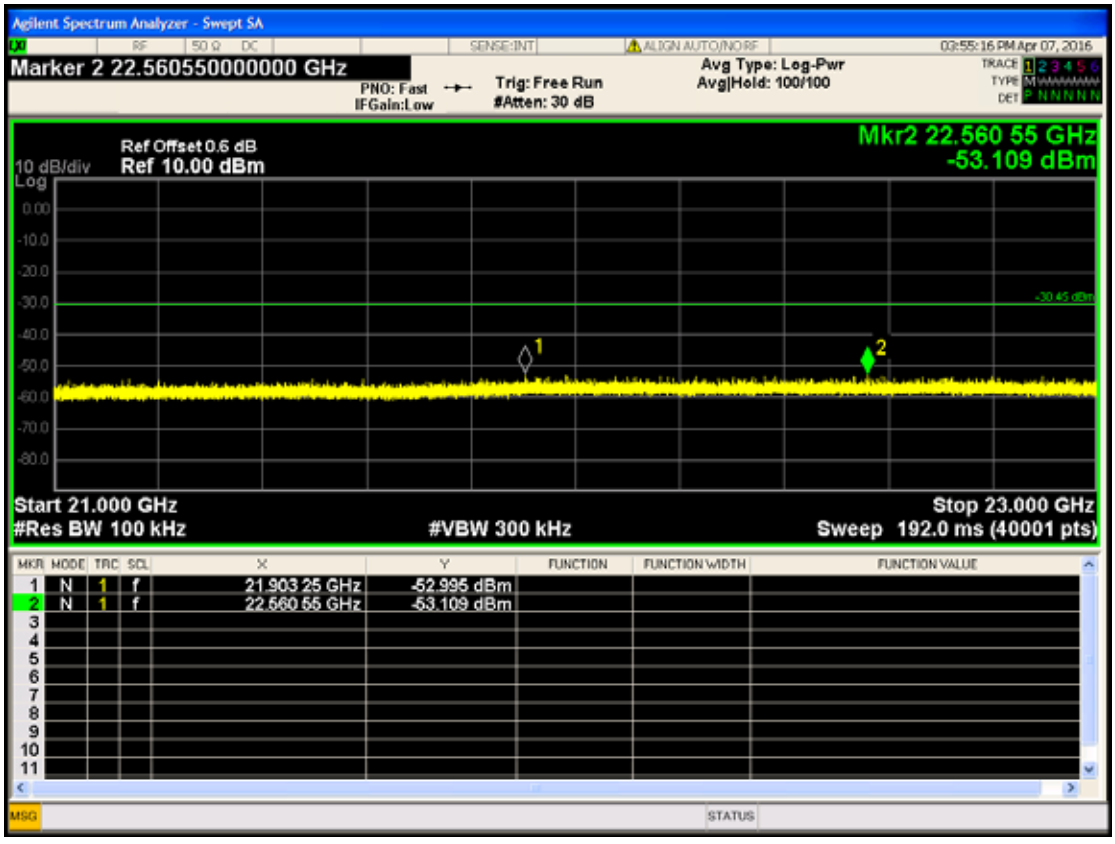

Agilent Spectrum Analyzer - Swept SA
Marker 2 11.148250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:40:49 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 11.148 25 GHz
-56.657 dBm
-30.45 dBm
Start 11.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 13.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 12.722 25 GHz -56.426 dBm
2 N 1 f 11.148 25 GHz -56.657 dBm

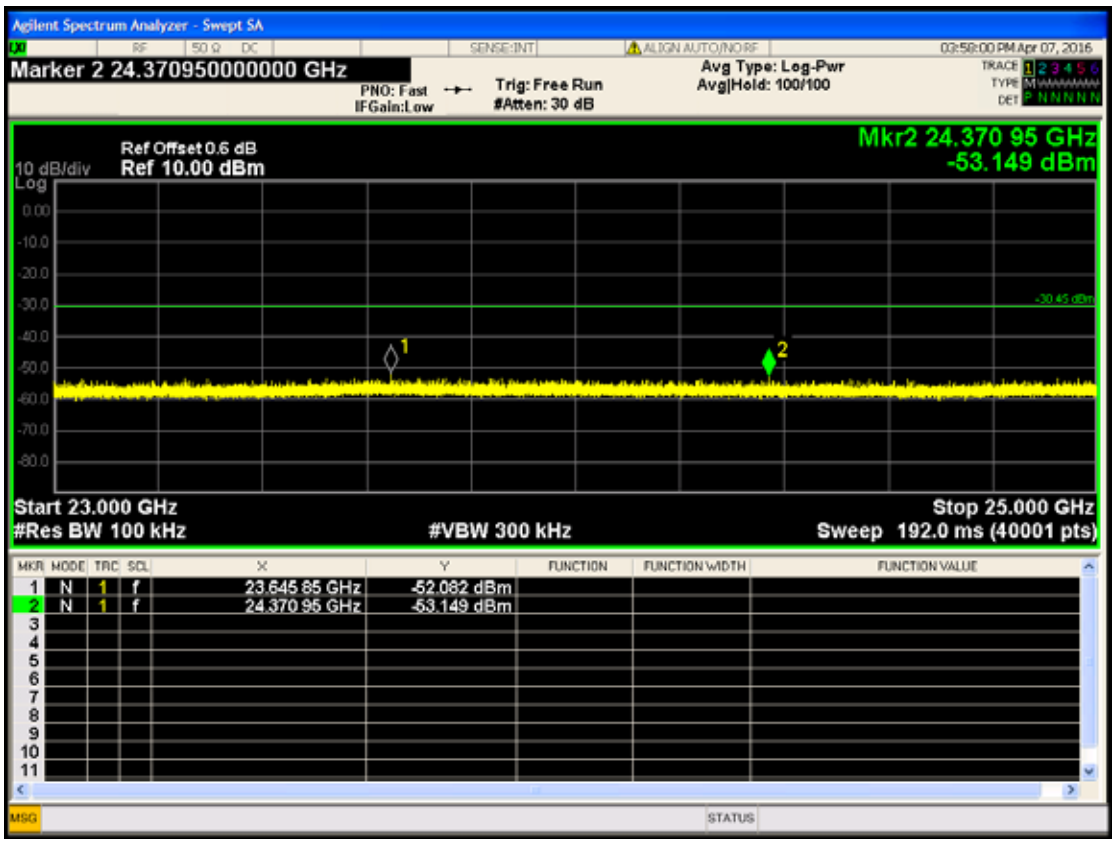

Agilent Spectrum Analyzer - Swept SA
Marker 2 13.672550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:43:13 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 13.672 55 GHz
-55.766 dBm
-30.45 dBm
Start 13.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 14.618 45 GHz -55.448 dBm
2 N 1 f 13.672 55 GHz -55.766 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 16.588950000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:46:16 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 16.588 95 GHz
-56.575 dBm
-30.45 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 17.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 15.327 55 GHz -56.031 dBm
2 N 1 f 16.588 95 GHz -56.575 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 17.696300000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:48:59 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 17.696 30 GHz
-55.490 dBm
-30.45 dBm
Start 17.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 19.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 18.637 20 GHz -54.004 dBm
2 N 1 f 17.696 30 GHz -55.490 dBm


Agilent Spectrum Analyzer - Swept SA
03:50:36 PM Apr 07, 2016
Marker 2 20.546000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 20.546 00 GHz
-55.215 dBm
-30.45 dBm
Start 19.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 21.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 19.232 85 GHz -53.678 dBm
2 N 1 f 20.546 00 GHz -55.215 dBm


Agilent Spectrum Analyzer - Swept SA
03:55:16 PM Apr 07, 2016
Marker 2 22.560550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 22.560 55 GHz
-53.109 dBm
-30.45 dBm
Start 21.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 23.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 21.903 25 GHz -52.995 dBm
2 N 1 f 22.560 55 GHz -53.109 dBm


Agilent Spectrum Analyzer - Swept SA
Marker 2 24.370950000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:59:00 PM Apr 07, 2016
Ref Offset 0.6 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr2 24.370 95 GHz
-53.149 dBm
-30.45 dBm
Start 23.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 192.0 ms (40001 pts)
1 N 1 f 23.645 85 GHz -52.082 dBm
2 N 1 f 24.370 95 GHz -53.149 dBm

11. DUTY CYCLE

11.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-06-23	2016-06-22

11.2. Test Results

The measurement of duty cycle is 100%.

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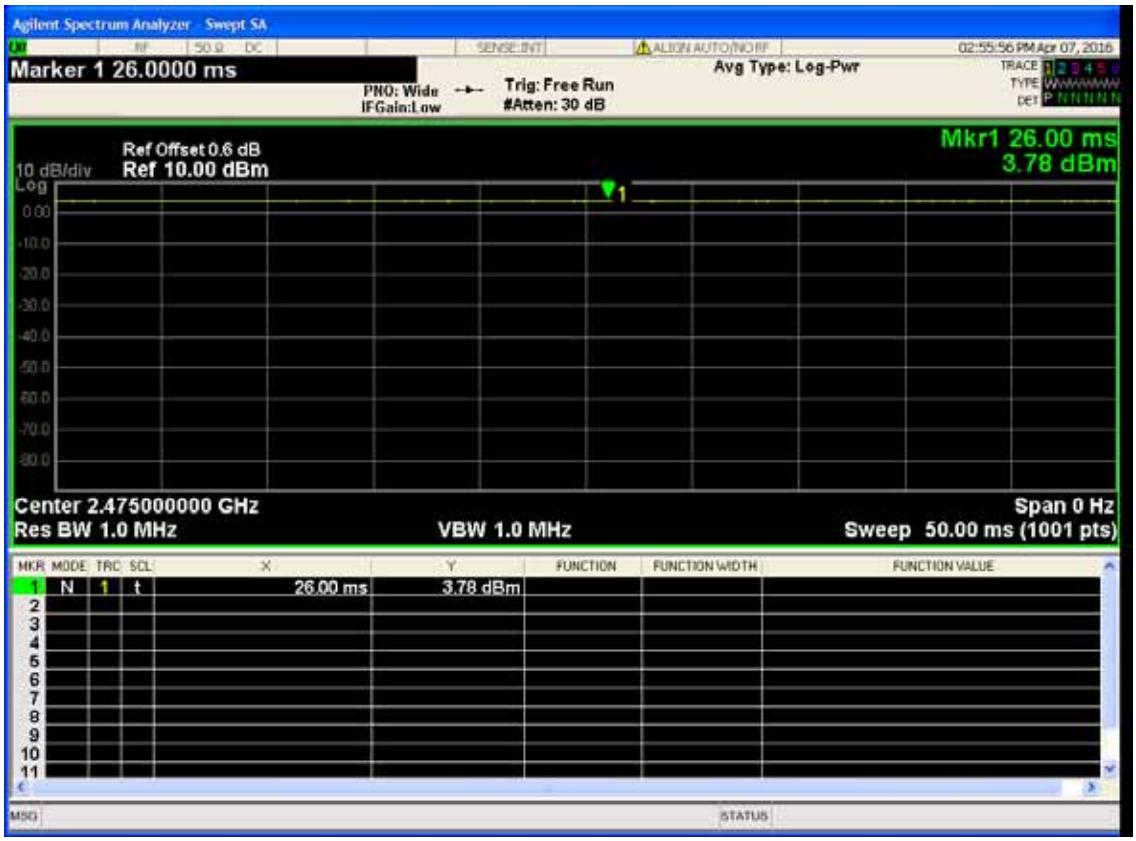

12. DEVIATION TO TEST SPECIFICATIONS

【NONE】