APPLICATION FOR CERTIFICATION

On Behalf of

Philips Lighting(China) Investment Co., Ltd.

LED Lamp

Model No. : 9290013012

Brand : Philips

FCC ID : 2AGBW9290013012X

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.
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Report Number : ACWE-F1611001

Date of Test : Nov.14~15, 2016

Date of Report : Nov.22, 2016

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Description Page

TEST REPORT CERTIFICATION

Applicant	:	Philips Lighting(China) Investment Co., Ltd.
Manufacturer	:	Philips Lighting(China) Investment Co., Ltd.
EUT Description	:	LED Lamp
FCC ID	:	2AGBW9290013012X
(A) Model No.	:	9290013012
(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

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.

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Date of Test: Nov.14~15, 2016 Date of Report: Nov.22, 2016

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

Reviewer : Danny Sun
(Danny Sun/ Deputy Manager)

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

1. 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
CONDUCTED EMISSION	FCC 47 CFR Part 15 Subpart C/ Section 15.207 And ANSI C63.10:2013	PASS
RADIATED EMISSION	FCC 47 CFR Part 15 Subpart C/ Section 15.209& Section 15.205 And ANSI C63.10:2013	PASS
6 dB BANDWIDTH	FCC 47 CFR Part 15 Subpart C/ Section 15.247(a)(2) And ANSI C63.10:2013	PASS
OUTPUT POWER	FCC 47 CFR Part 15 Subpart C/ Section 15.247(b)(3) And ANSI C63.10:2013	PASS
BAND EDGES	FCC 47 CFR Part 15 Subpart C/ Section 15.247(d) And ANSI C63.10:2013	PASS
POWER SPECTRAL DENSITY	FCC 47 CFR Part 15 Subpart C/ Section 15.247(e) And ANSI C63.10:2013	PASS
EMISSION LIMITATIONS	FCC 47 CFR Part 15 Subpart C/ Section 15.247(d) And ANSI C63.10:2013	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	LED Lamp
Model No.	:	9290013012
FCC ID	:	2AGBW9290013012X
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
Radio Technology	:	IEEE 802.15.4 (ZigBee®)
Antenna Gain	:	3.24dBi
Fundamental Range	:	2405 MHz -2480MHz
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
Modulation type	:	O-QPSK
Date of Receipt of Sample	:	Oct.28, 2016
Date of Test	:	Nov.14~15, 2016

2.2. 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, 2017 (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.

2.3. 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

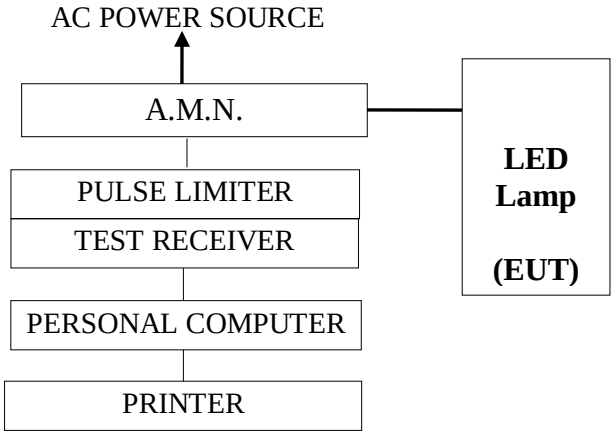
Remark: Uncertainty = $ku_c(y)$

3. CONDUCTED EMISSION MEASUREMET

3.1. 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	2016-01-05	2017-01-04
4.	RF Cable	Harbour Industries	RG400	002	2016-01-05	2017-01-04
5.	Software	Audix/e3(6.7.0313)				

3.2. Block Diagram of Test Setup



—— : POWER LINE
—— : SIGNAL LINE

3.3. 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.

3.4. 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)

3.5. 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：Nov.15, 2016 Temperature：22.1℃ Humidity：57%

Mode	Test Condition	Reference Test Data No.	
		Neutral	Line
1	**TX CH11 2405MHz**	**※# 5**	**# 6**
2	TX CH20 2450MHz	# 7	# 8
3	TX CH25 2475MHz	# 9	# 10

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

NOTE 2- The worst emission is detected at 0.15 MHz with emission level of 62.14 dB (μV) and with QP detector (Limit is 65.78 dB (μV)), when the Neutral of the EUT is connected to AMN.

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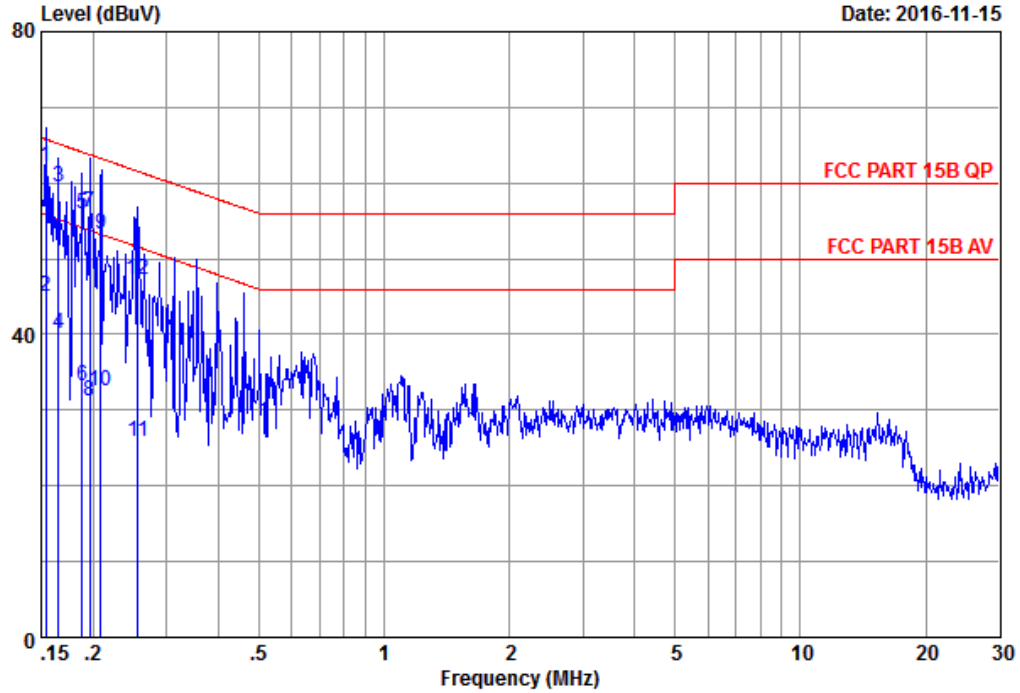
Data: 5 File: F:\2016Test Data\Report\11\G1611008.EM6 (10)



Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 5
AMN/LISN	: ESH2-Z5-1605	Phase	: NEUTRAL
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290013012		
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	52.10	62.14	65.78	3.64	QP
2	0.15	0.15	9.89	35.00	45.04	55.78	10.74	Average
3	0.17	0.15	9.89	49.40	59.44	65.21	5.77	QP
4	0.17	0.15	9.89	30.00	40.04	55.21	15.17	Average
5	0.19	0.15	9.89	46.00	56.04	64.12	8.08	QP
6	0.19	0.15	9.89	23.20	33.24	54.12	20.88	Average
7	0.20	0.15	9.89	46.10	56.14	63.78	7.64	QP
8	0.20	0.15	9.89	21.10	31.14	53.78	22.64	Average
9	0.21	0.15	9.89	43.30	53.34	63.24	9.90	QP
10	0.21	0.15	9.89	22.40	32.44	53.24	20.80	Average
11	0.26	0.15	9.89	15.81	25.85	51.56	25.71	Average
12	0.26	0.15	9.89	37.21	47.25	61.56	14.31	QP

Remarks:
1.Emission Level= AMN factor + Cable loss(Include Pulse Att) + Reading .

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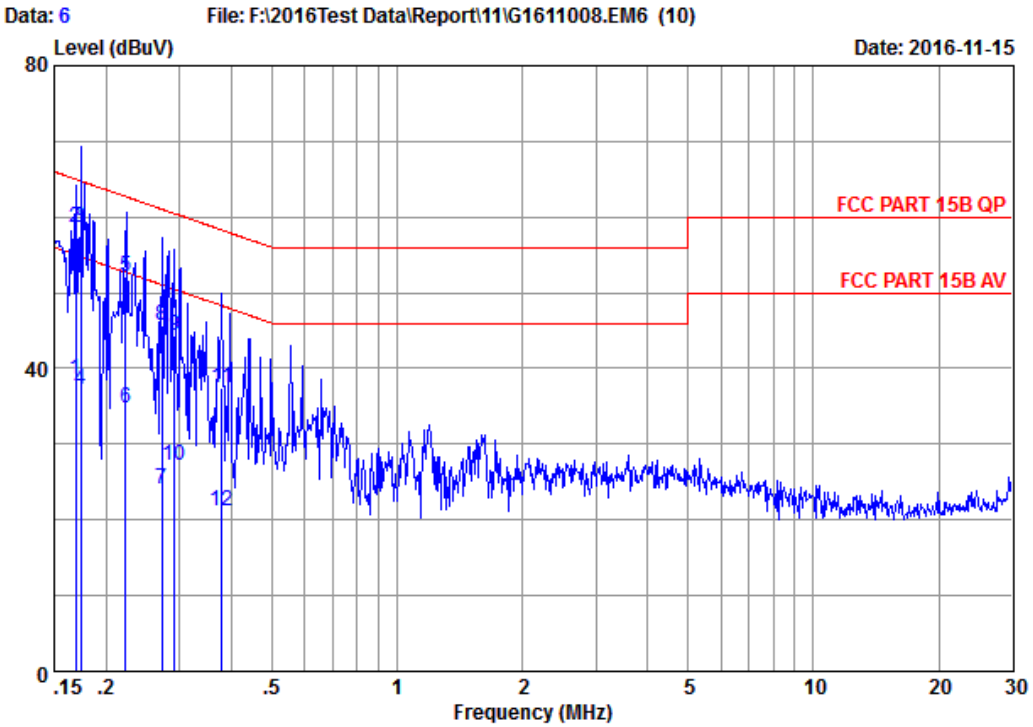

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 6
AMN/LISN	: ESH2-Z5-1605	Phase	: LINE
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290013012		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH11 2405MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17	0.16	9.89	28.50	38.55	55.01	16.46	Average
2	0.17	0.16	9.89	48.50	58.55	65.01	6.46	QP
3	0.17	0.16	9.89	48.50	58.55	64.77	6.22	QP
4	0.17	0.16	9.89	27.10	37.15	54.77	17.62	Average
5	0.22	0.16	9.89	42.10	52.15	62.71	10.56	QP
6	0.22	0.16	9.89	24.60	34.65	52.71	18.06	Average
7	0.27	0.16	9.89	14.01	24.06	51.06	27.00	Average
8	0.27	0.16	9.89	35.61	45.66	61.06	15.40	QP
9	0.29	0.16	9.89	34.21	44.26	60.47	16.21	QP
10	0.29	0.16	9.89	17.21	27.26	50.47	23.21	Average
11	0.38	0.17	9.90	27.29	37.36	58.30	20.94	QP
12	0.38	0.17	9.90	11.19	21.26	48.30	27.04	Average

Remarks:
1.Emission Level= AMN factor + Cable loss(Include Pulse Att) + Reading .

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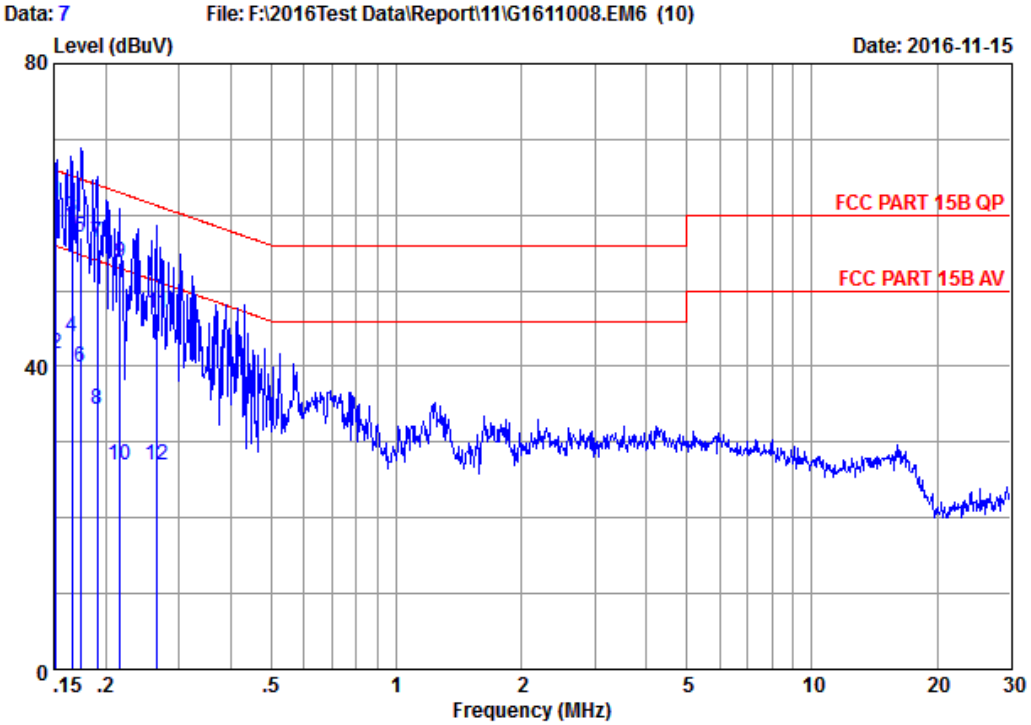

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 7
AMN/LISN	: ESH2-Z5-1605	Phase	: NEUTRAL
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290013012		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH20 2450MHz		
Memo	:		

	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	51.60	61.64	65.89	4.25	QP
2	0.15	0.15	9.89	31.60	41.64	55.89	14.25	Average
3	0.17	0.15	9.89	49.60	59.64	65.16	5.52	QP
4	0.17	0.15	9.89	33.90	43.94	55.16	11.22	Average
5	0.17	0.15	9.89	46.90	56.94	64.77	7.83	QP
6	0.17	0.15	9.89	29.90	39.94	54.77	14.83	Average
7	0.19	0.15	9.89	46.30	56.34	63.99	7.65	QP
8	0.19	0.15	9.89	24.30	34.34	53.99	19.65	Average
9	0.22	0.15	9.89	43.60	53.64	62.97	9.33	QP
10	0.22	0.15	9.89	16.90	26.94	52.97	26.03	Average
11	0.27	0.15	9.89	36.91	46.95	61.24	14.29	QP
12	0.27	0.15	9.89	16.91	26.95	51.24	24.29	Average

Remarks:
1.Emission Level= AMN factor + Cable loss(Include Pulse Att) + Reading .

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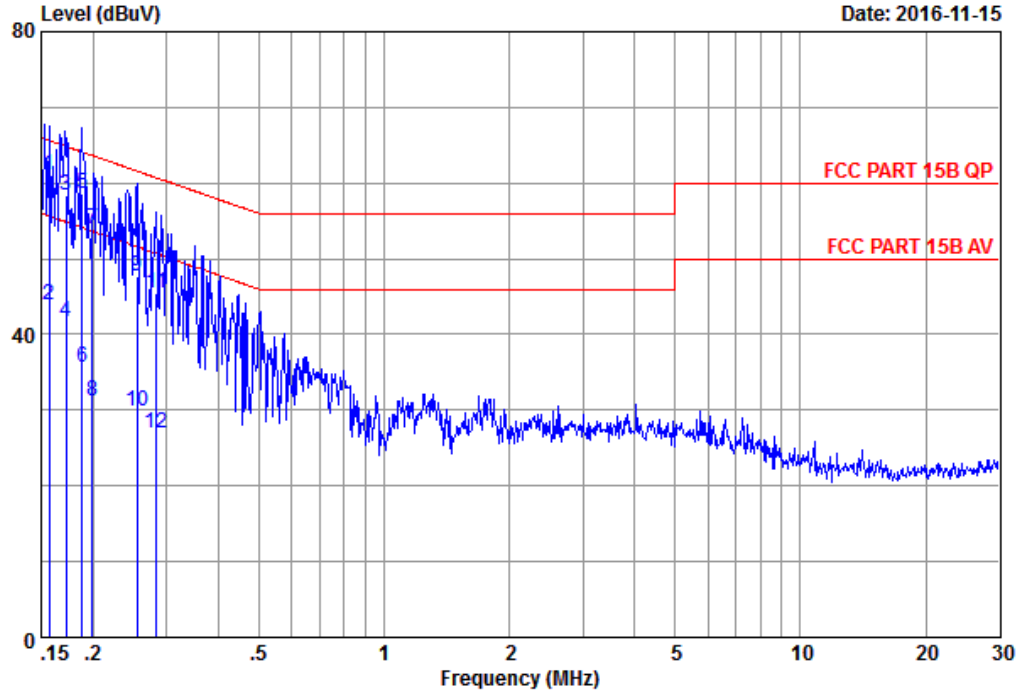

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 8
AMN/LISN	: ESH2-Z5-1605	Phase	: LINE
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290013012		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH20 2450MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16	0.16	9.89	50.90	60.95	65.62	4.67	QP
2	0.16	0.16	9.89	33.80	43.85	55.62	11.77	Average
3	0.17	0.16	9.89	48.30	58.35	64.86	6.51	QP
4	0.17	0.16	9.89	31.60	41.65	54.86	13.21	Average
5	0.19	0.16	9.89	48.50	58.55	64.12	5.57	QP
6	0.19	0.16	9.89	25.60	35.65	54.12	18.47	Average
7	0.20	0.16	9.89	43.90	53.95	63.65	9.70	QP
8	0.20	0.16	9.89	21.20	31.25	53.65	22.40	Average
9	0.26	0.16	9.89	37.61	47.66	61.59	13.93	QP
10	0.26	0.16	9.89	19.91	29.96	51.59	21.63	Average
11	0.28	0.16	9.89	35.51	45.56	60.70	15.14	QP
12	0.28	0.16	9.89	16.91	26.96	50.70	23.74	Average

Remarks:
1.Emission Level= AMN factor + Cable loss(Include Pulse Att) + Reading .

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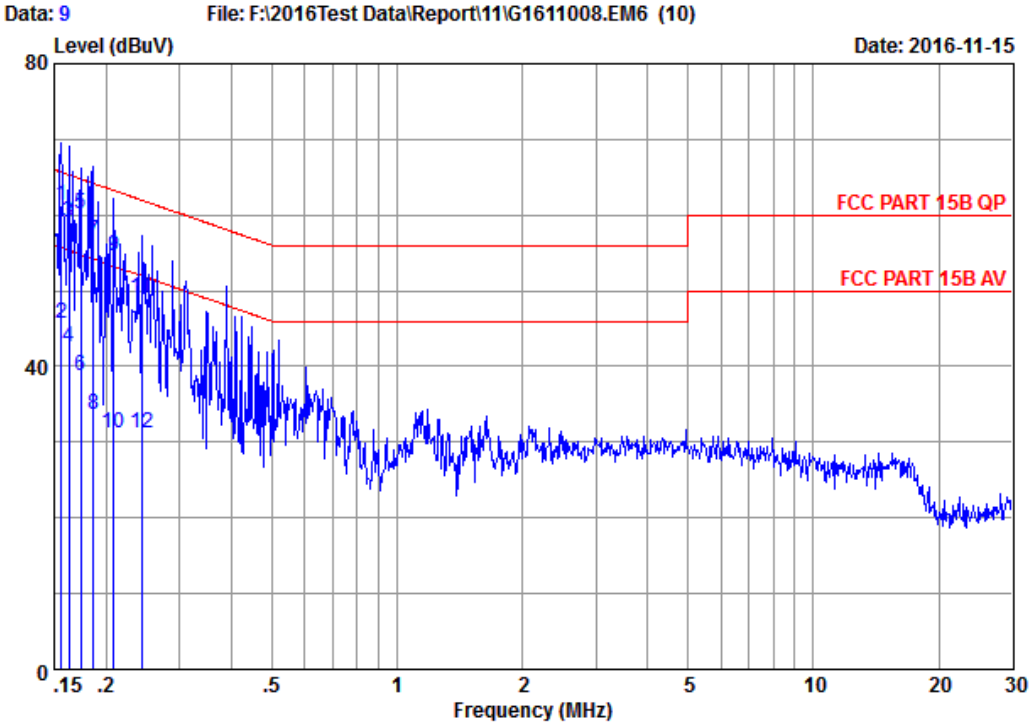

Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 9
AMN/LISN	: ESH2-Z5-1605	Phase	: NEUTRAL
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290013012		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH25 2475MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16	0.15	9.89	51.30	61.34	65.67	4.33	QP
2	0.16	0.15	9.89	35.60	45.64	55.67	10.03	Average
3	0.16	0.15	9.89	48.90	58.94	65.31	6.37	QP
4	0.16	0.15	9.89	32.60	42.64	55.31	12.67	Average
5	0.17	0.15	9.89	50.10	60.14	64.77	4.63	QP
6	0.17	0.15	9.89	28.80	38.84	54.77	15.93	Average
7	0.19	0.15	9.89	46.50	56.54	64.21	7.67	QP
8	0.19	0.15	9.89	23.60	33.64	54.21	20.57	Average
9	0.21	0.15	9.89	44.60	54.64	63.24	8.60	QP
10	0.21	0.15	9.89	21.20	31.24	53.24	22.00	Average
11	0.24	0.15	9.89	38.91	48.95	61.99	13.04	QP
12	0.24	0.15	9.89	21.21	31.25	51.99	20.74	Average

Remarks:
1.Emission Level= AMN factor + Cable loss(Include Pulse Att) + Reading .

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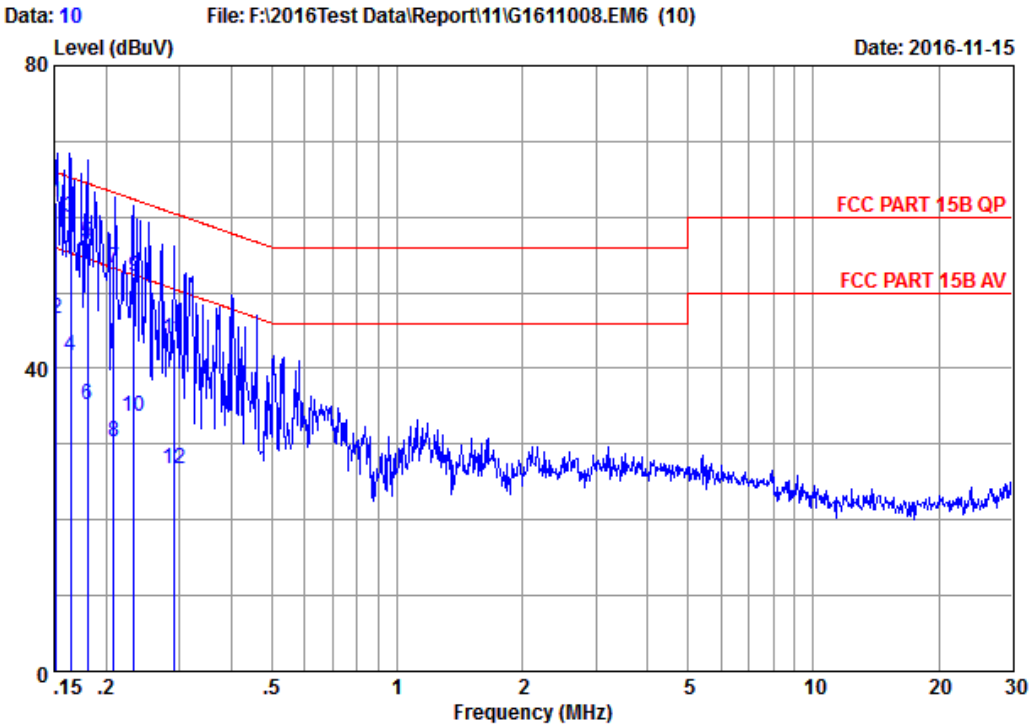


Site no.	: No.1 Conducted shielding Enclosure	Data no.	: 10
AMN/LISN	: ESH2-Z5-1605	Phase	: LINE
Limit	: FCC PART 15B QP		
Env. / Ins.	: 22.1*C&57%/ESCI	Engineer	: KM.Tong
EUT	: LED Lamp		
M/N	: 9290013012		
Power Rating	: 120Vac/60Hz		
Test mode	: TX CH25 2475MHz		
Memo	:		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.16	9.89	51.90	61.95	65.89	3.94	QP
2	0.15	0.16	9.89	36.60	46.65	55.89	9.24	Average
3	0.16	0.16	9.89	49.90	59.95	65.26	5.31	QP
4	0.16	0.16	9.89	31.60	41.65	55.26	13.61	Average
5	0.18	0.16	9.89	46.60	56.65	64.49	7.84	QP
6	0.18	0.16	9.89	25.20	35.25	54.49	19.24	Average
7	0.21	0.16	9.89	43.20	53.25	63.24	9.99	QP
8	0.21	0.16	9.89	20.30	30.35	53.24	22.89	Average
9	0.23	0.16	9.89	42.10	52.15	62.34	10.19	QP
10	0.23	0.16	9.89	23.60	33.65	52.34	18.69	Average
11	0.29	0.16	9.89	33.91	43.96	60.50	16.54	QP
12	0.29	0.16	9.89	16.61	26.66	50.50	23.84	Average

Remarks:
1.Emission Level= AMN factor + Cable loss(Include Pulse Att) + Reading .

4. RADIATED EMISSION MEASUREMENT

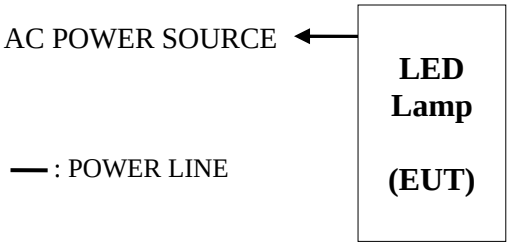
4.1. Test Equipment

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

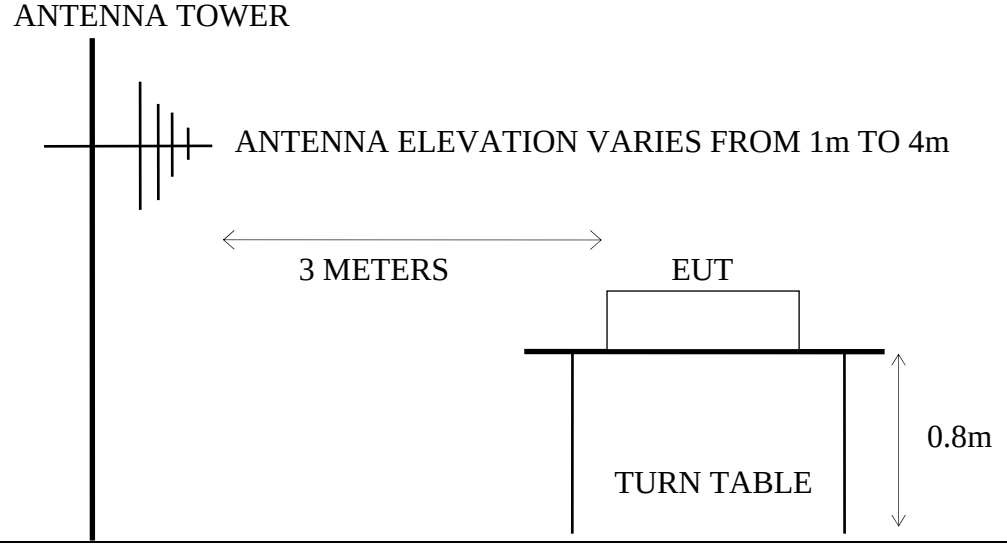
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8449B	3008A02233	2016-01-05	2017-01-04
2.	Preamplifier	Agilent	8447D	2944A10921	2016-07-03	2017-07-02
3.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2016-05-15	2017-05-14
4.	Test Receiver	R&S	ESCI	100361	2016-01-05	2017-01-04
5.	Bi-log Antenna	Schaffner	CBL6112D	22252	2016-02-02	2017-02-01
6.	Horn Antenna	EMCO	3115	62959	2016-06-20	2017-06-19
7.	Horn Antenna	ETS	3116	62641	2016-09-30	2017-09-29
8.	RF Cable #1	Yuhang CSYH	cable-3m	001(0.5m)	2016-01-05	2017-01-04
9.	RF Cable #2	Yuhang CSYH	cable-3m	002(0.5m)	2016-01-05	2017-01-04
10.	RF Cable #3	Yuhang CSYH	cable-3m	003(3.0m)	2016-01-05	2017-01-04
11.	Software	Audix/e3(6.7.0313)				

4.2. Block Diagram of Test Setup

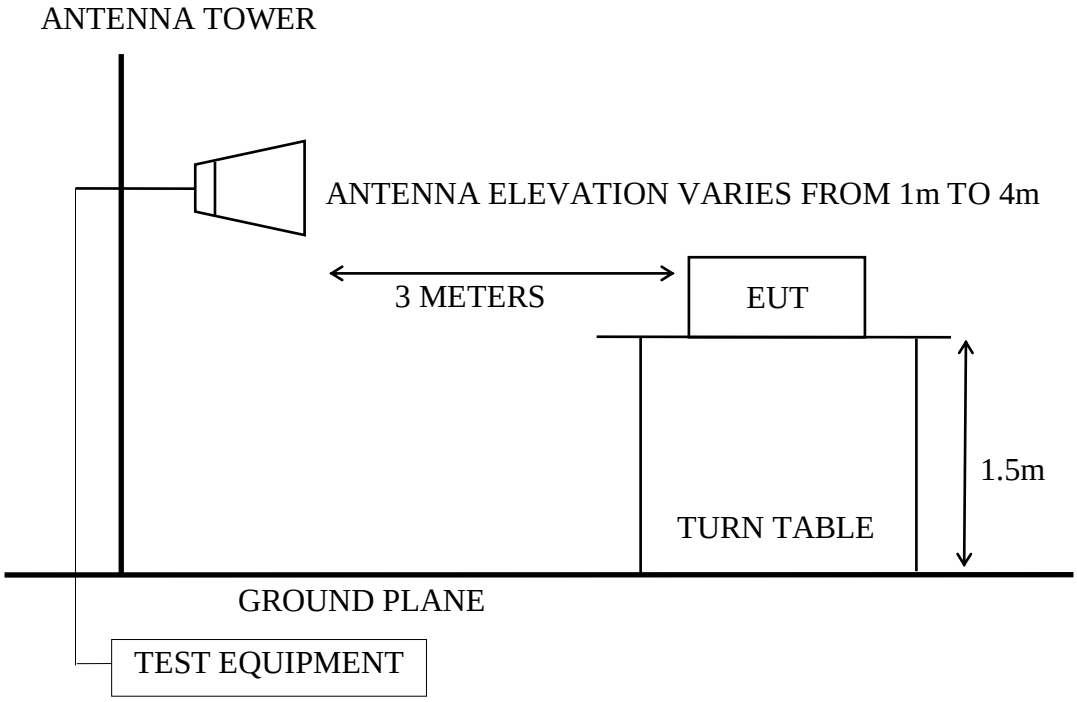
4.2.1. Block Diagram of Test Setup between EUT and simulators



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



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



4.3. Radiated Emission Limits

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

Frequency MHz	Distance Meters	Field Strengths Limits dBμV/m
30 ~ 88	3	40
88 ~ 216	3	43.5
216 ~ 960	3	46
Above 960	3	54
Above 1000	3	74 (Peak) 54 (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.

4.4. 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 YZ plan(in Horizontal) & XY plan(in Vertical) is shown in the report.

4.5. Measurement Results

PASSED

4.5.1. For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 4.6. & 4.7. (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

4.5.2. For Band Edge Emission

The EUT was tested in restricted bands and all the test results are listed in section 4.8. 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.		2480MHz (Channel 26)	# 27, # 29	# 28, # 30

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

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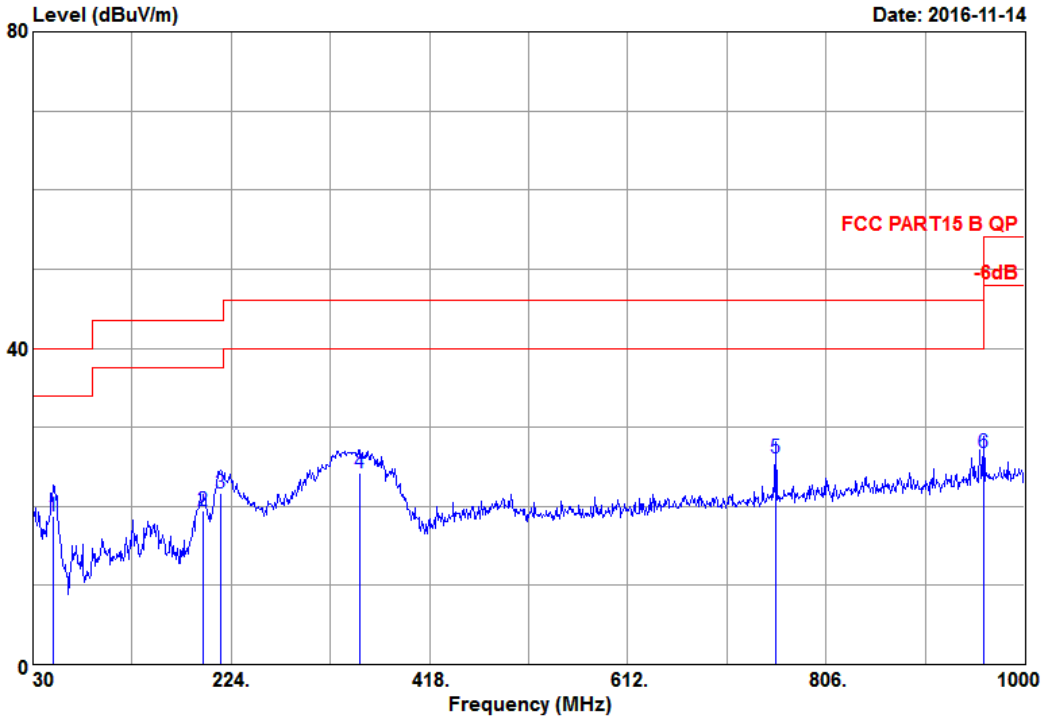
Data: 7 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22252)-1602
Limit : FCC PART15 B QP
Env. / Ins. : 19.8*C&58%/ESCI
EUT : LED Lamp
M/N : 9290013012
Power Rating : 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. :7
Ant. pol. : HORIZONTAL

Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	49.40	9.00	0.60	36.47	18.77	40.00	21.23	QP
2	196.84	10.26	1.25	34.83	19.52	43.50	23.98	QP
3	213.33	10.51	1.30	36.60	21.64	43.50	21.86	QP
4	350.10	15.22	1.73	34.18	24.18	46.00	21.82	QP
5	756.53	20.36	2.72	30.79	26.18	46.00	19.82	QP
6	960.23	22.22	3.22	28.38	26.80	54.00	27.20	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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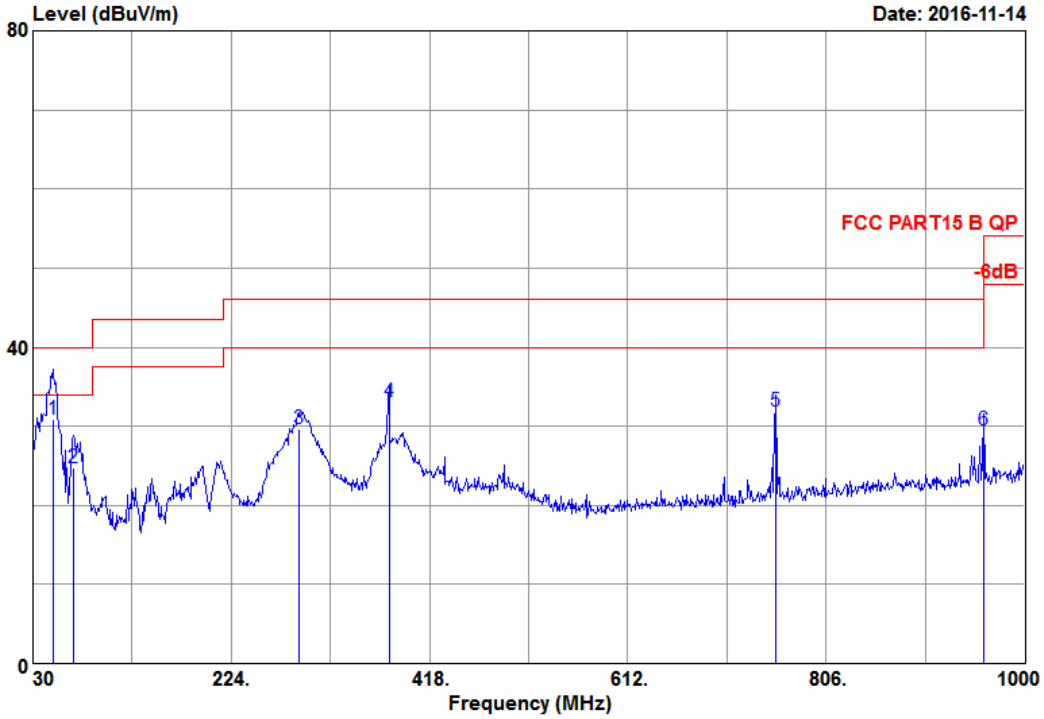
Data: 8 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22252)-1602
Limit : FCC PART15 B QP
Env. / Ins. : 19.8*C&58%/ESCI
EUT : LED Lamp
M/N : 9290013012
Power Rating : 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. :8
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	50.32	9.00	0.61	48.60	30.91	40.00	9.09	QP
2	69.77	6.50	0.71	44.83	24.78	40.00	15.22	QP
3	289.96	13.70	1.56	41.11	29.75	46.00	16.25	QP
4	378.23	15.78	1.81	42.70	33.14	46.00	12.86	QP
5	756.53	20.36	2.72	36.54	31.93	46.00	14.07	QP
6	960.23	22.22	3.22	31.15	29.57	54.00	24.43	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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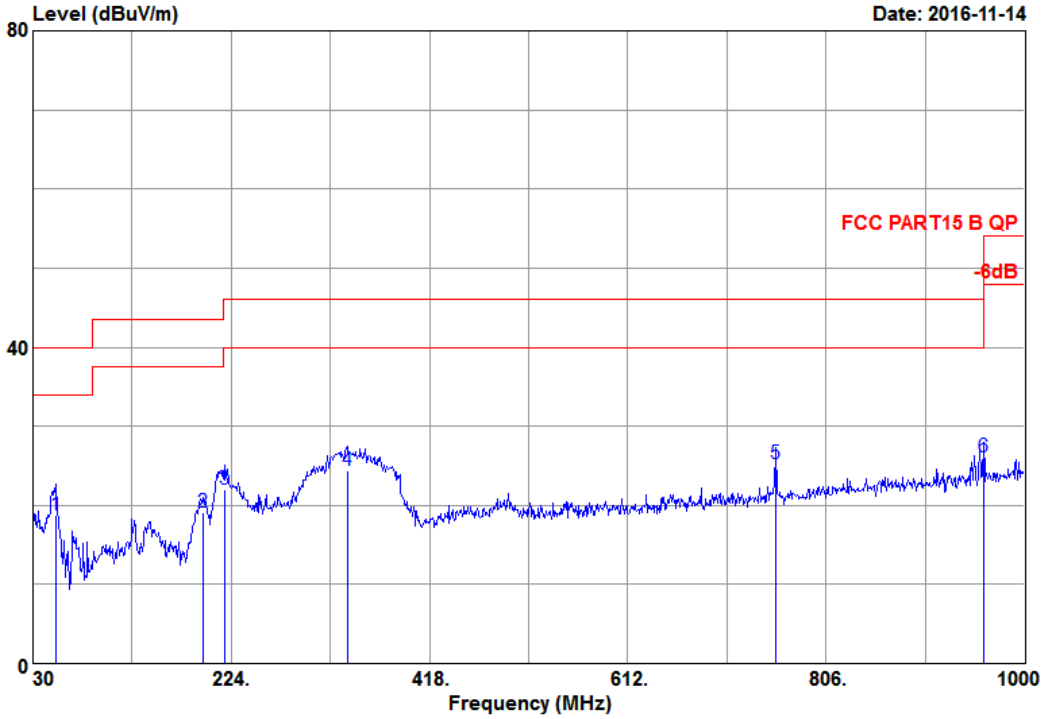
Data: 9 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22252)-1602
Limit : FCC PART15 B QP
Env. / Ins. : 19.8*C&58%/ESCI
EUT : LED Lamp
M/N : 9290013012
Power Rating : 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. :9
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	52.31	8.44	0.62	36.94	18.71	40.00	21.29	QP
2	195.87	10.22	1.24	34.41	19.05	43.50	24.45	QP
3	217.21	10.57	1.32	36.98	22.10	46.00	23.90	QP
4	337.49	14.84	1.70	34.74	24.42	46.00	21.58	QP
5	756.53	20.36	2.72	29.93	25.32	46.00	20.68	QP
6	960.23	22.22	3.22	27.61	26.03	54.00	27.97	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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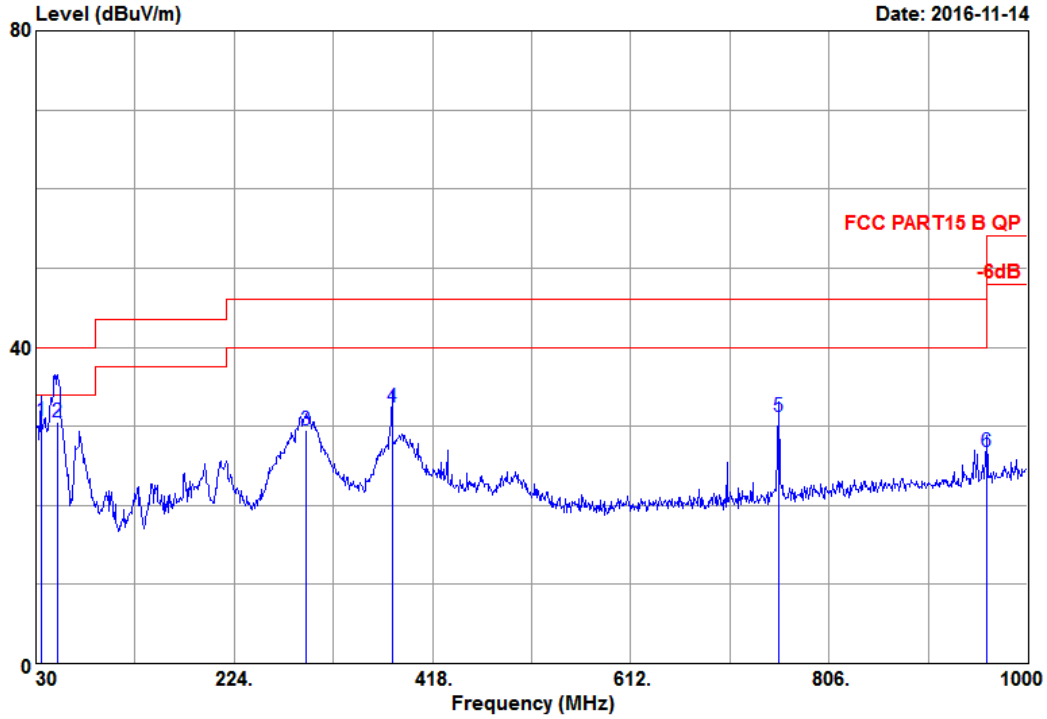
Data: 10 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22252)-1602
Limit : FCC PART15 B QP
Env. / Ins. : 19.8*C&58%/ESCI
EUT : LED Lamp
M/N : 9290013012
Power Rating : 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. :10
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	34.85	17.97	0.50	39.62	30.75	40.00	9.25	QP
2	51.34	8.44	0.62	48.79	30.55	40.00	9.45	QP
3	294.81	13.78	1.57	40.85	29.59	46.00	16.41	QP
4	378.23	15.78	1.81	41.99	32.43	46.00	13.57	QP
5	756.53	20.36	2.72	35.75	31.14	46.00	14.86	QP
6	960.23	22.22	3.22	28.36	26.78	54.00	27.22	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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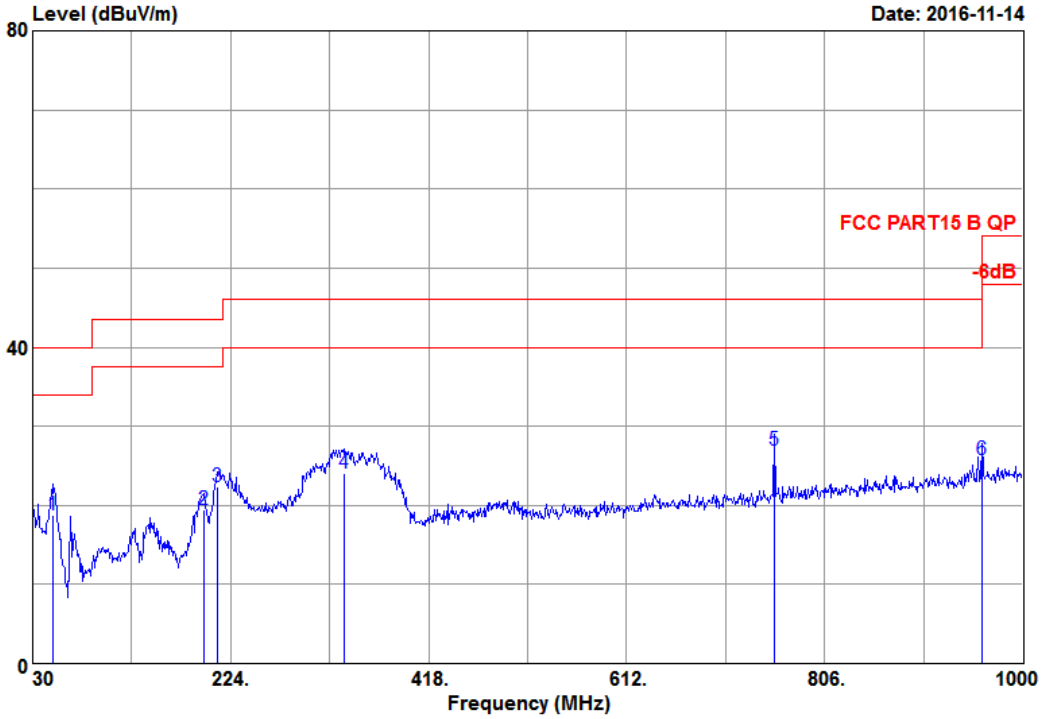
Data: 11 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22252)-1602
Limit : FCC PART15 B QP
Env. / Ins. : 19.8*C&58%/ESCI
EUT : LED Lamp
M/N : 9290013012
Power Rating : 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. :11
Ant. pol. : HORIZONTAL

Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	50.37	9.00	0.61	36.41	18.72	40.00	21.28	QP
2	197.81	10.26	1.25	34.81	19.51	43.50	23.99	QP
3	211.39	10.48	1.30	37.31	22.31	43.50	21.19	QP
4	335.55	14.78	1.69	34.42	24.04	46.00	21.96	QP
5	756.53	20.36	2.72	31.57	26.96	46.00	19.04	QP
6	960.23	22.22	3.22	27.37	25.79	54.00	28.21	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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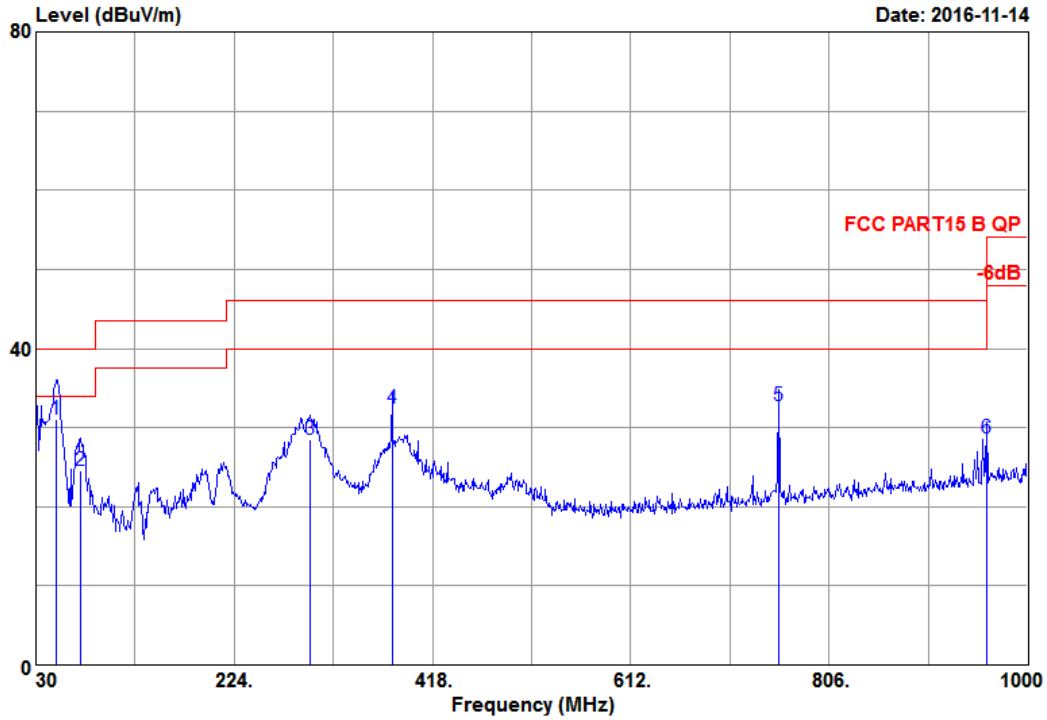
Data: 12 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m chamber
Dis. / Ant. : 3m 6112D(22252)-1602
Limit : FCC PART15 B QP
Env. / Ins. : 19.8*C&58%/ESCI
EUT : LED Lamp
M/N : 9290013012
Power Rating : 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. :12
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	49.40	9.00	0.60	48.76	31.06	40.00	8.94	QP
2	73.65	7.14	0.73	44.03	24.65	40.00	15.35	QP
3	297.72	13.86	1.58	39.72	28.55	46.00	17.45	QP
4	378.23	15.78	1.81	42.01	32.45	46.00	13.55	QP
5	756.53	20.36	2.72	37.43	32.82	46.00	13.18	QP
6	960.23	22.22	3.22	30.32	28.74	54.00	25.26	QP

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

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

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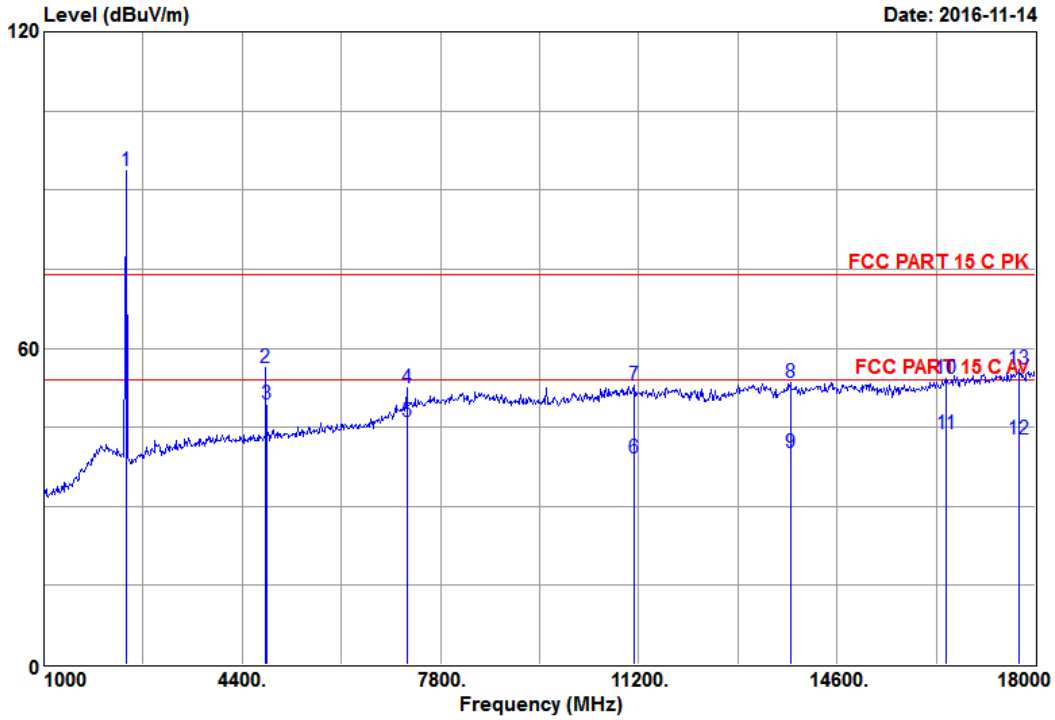
Data: 13 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 13
Ant. pol. : HORIZONTAL

Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m	Limits (dBuV/m)	Margin (dB)	Remark
1	2411.00	29.05	5.09	94.05	34.50	93.69	74.00	-19.69	Peak
2	4808.00	32.90	7.32	49.99	33.95	56.26	74.00	17.74	Peak
3	4810.94	32.90	7.32	43.18	33.95	49.45	54.00	4.55	Average
4	7222.00	36.08	9.00	41.32	34.04	52.36	74.00	21.64	Peak
5	7223.12	36.08	9.00	34.90	34.04	45.94	54.00	8.06	Average
6	11114.15	39.09	11.36	22.49	33.66	39.28	54.00	14.72	Average
7	11115.00	39.09	11.36	36.26	33.66	53.05	74.00	20.95	Peak
8	13801.00	41.94	12.74	30.55	31.77	53.46	74.00	20.54	Peak
9	13805.24	41.94	12.74	17.18	31.77	40.09	54.00	13.91	Average
10	16470.00	40.12	14.20	33.38	33.41	54.29	74.00	19.71	Peak
11	16472.84	40.12	14.20	22.83	33.41	43.74	54.00	10.26	Average
12	17725.96	45.24	13.82	16.46	32.89	42.63	54.00	11.37	Average
13	17728.00	45.24	13.82	29.82	32.89	55.99	74.00	18.01	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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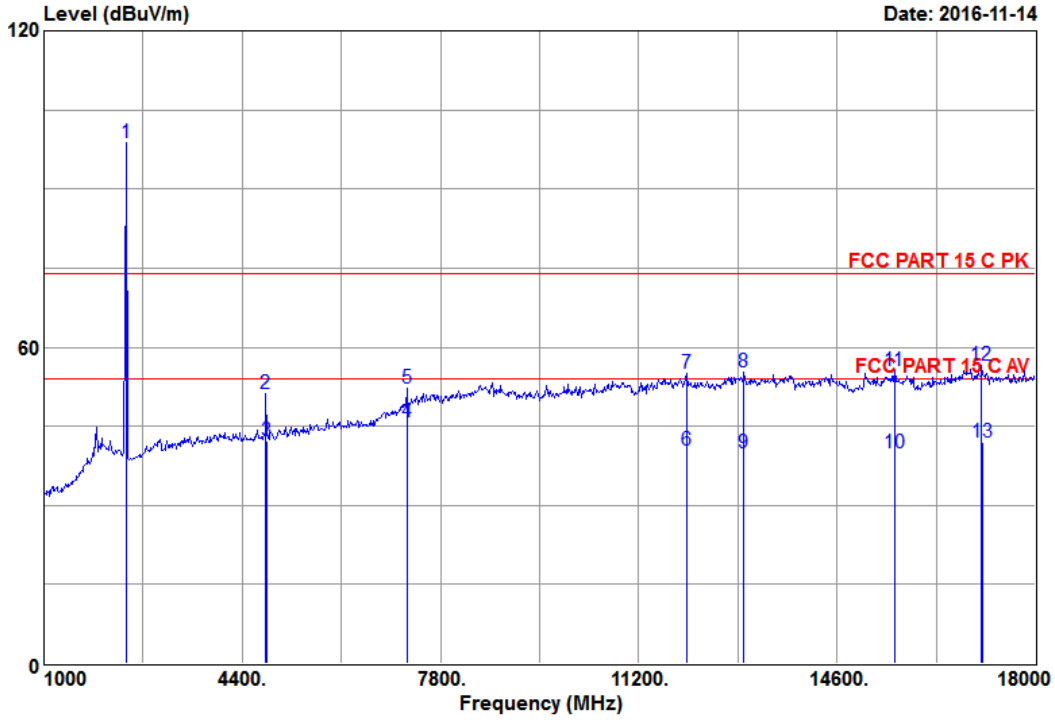
Data: 14 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 14
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2411.00	29.05	5.09	99.06	34.50	98.70	74.00	-24.70	Peak
2	4808.00	32.90	7.32	44.99	33.95	51.26	74.00	22.74	Peak
3	4810.94	32.90	7.32	35.85	33.95	42.12	54.00	11.88	Average
4	7221.25	36.08	9.00	34.80	34.04	45.84	54.00	8.16	Average
5	7222.00	36.08	9.00	41.29	34.04	52.33	74.00	21.67	Peak
6	12015.85	41.82	11.53	20.75	33.78	40.32	54.00	13.68	Average
7	12016.00	41.82	11.53	35.35	33.78	54.92	74.00	19.08	Peak
8	13002.00	40.30	12.31	35.10	32.46	55.25	74.00	18.75	Peak
9	13005.92	40.30	12.31	19.73	32.46	39.88	54.00	14.12	Average
10	15582.67	39.25	13.94	20.35	33.58	39.96	54.00	14.04	Average
11	15586.00	39.25	13.94	35.83	33.58	55.44	74.00	18.56	Peak
12	17082.00	42.13	13.91	33.44	32.83	56.65	74.00	17.35	Peak
13	17095.27	42.22	13.91	18.59	32.83	41.89	54.00	12.11	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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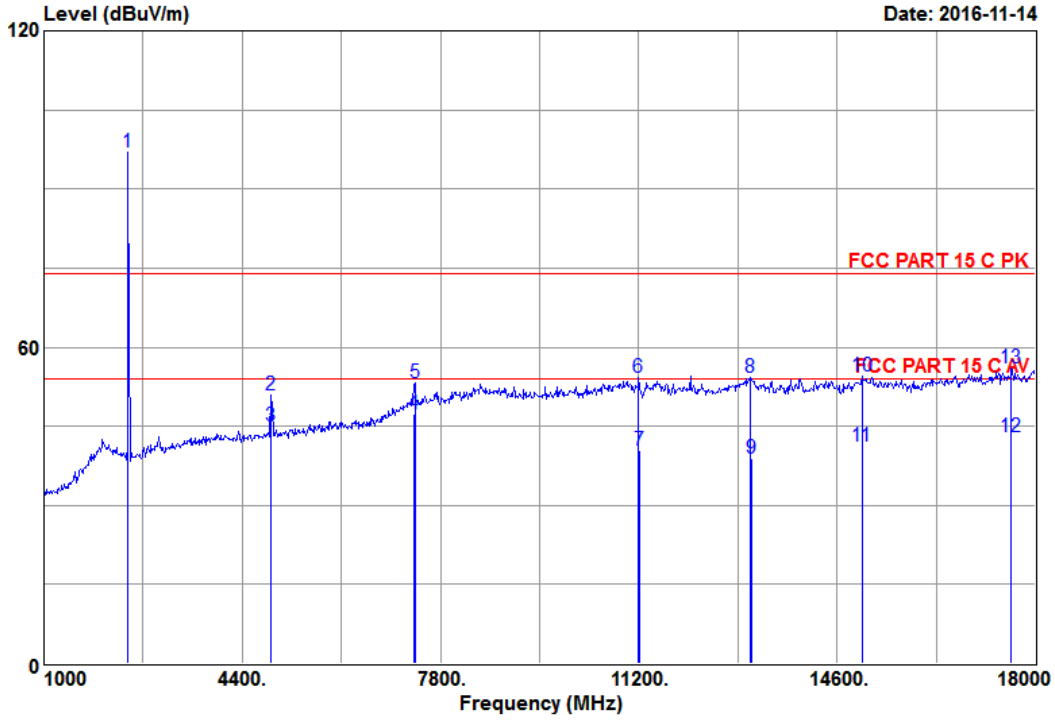
Data: 15 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. : 15
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2445.00	28.83	5.15	97.55	34.50	97.03	74.00	-23.03	Peak
2	4893.00	33.03	7.37	44.42	33.94	50.88	74.00	23.12	Peak
3	4900.86	33.03	7.37	38.48	33.94	44.94	54.00	9.06	Average
4	7351.22	36.44	9.10	35.79	34.05	47.28	54.00	6.72	Average
5	7358.00	36.44	9.10	41.79	34.05	53.28	74.00	20.72	Peak
6	11200.00	39.44	11.37	37.21	33.67	54.35	74.00	19.65	Peak
7	11205.35	39.44	11.37	23.18	33.67	40.32	54.00	13.68	Average
8	13121.00	40.49	12.37	33.75	32.37	54.24	74.00	19.76	Peak
9	13125.68	40.49	12.38	18.47	32.35	38.99	54.00	15.01	Average
10	15025.00	41.04	13.20	33.33	33.03	54.54	74.00	19.46	Peak
11	15028.67	41.04	13.20	19.93	33.03	41.14	54.00	12.86	Average
12	17590.24	44.66	13.84	17.41	32.88	43.03	54.00	10.97	Average
13	17592.00	44.66	13.84	30.32	32.88	55.94	74.00	18.06	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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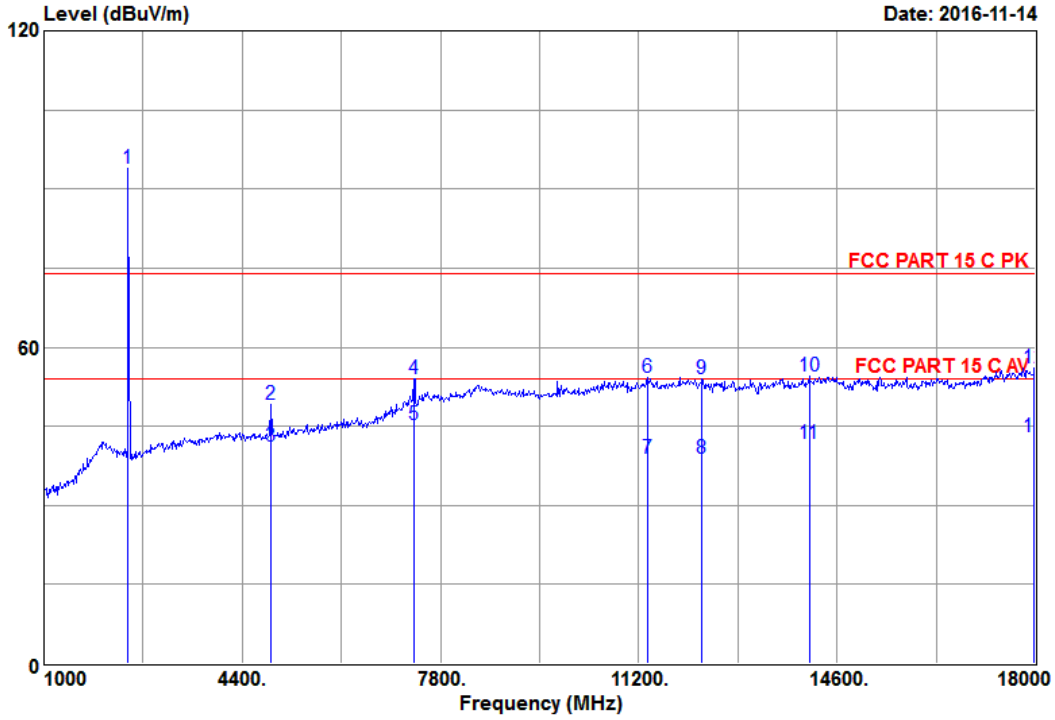
Data: 16 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH20 2450MHz
Memo :

Data NO. : 16
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2445.00	28.83	5.15	94.42	34.50	93.90	74.00	-19.90	Peak
2	4893.00	33.03	7.37	42.78	33.94	49.24	74.00	24.76	Peak
3	4900.95	33.03	7.37	34.74	33.94	41.20	54.00	12.80	Average
4	7341.00	36.40	9.10	42.50	34.05	53.95	74.00	20.05	Peak
5	7351.20	36.44	9.10	33.75	34.05	45.24	54.00	8.76	Average
6	11353.00	40.07	11.40	36.38	33.70	54.15	74.00	19.85	Peak
7	11355.52	40.07	11.40	21.25	33.70	39.02	54.00	14.98	Average
8	12284.17	40.49	11.75	19.95	33.40	38.79	54.00	15.21	Average
9	12288.00	40.49	11.75	35.15	33.40	53.99	74.00	20.01	Peak
10	14124.00	42.74	12.89	30.54	31.77	54.40	74.00	19.60	Peak
11	14125.36	42.74	12.89	17.78	31.77	41.64	54.00	12.36	Average
12	17983.00	46.33	13.78	28.92	32.92	56.11	74.00	17.89	Peak
13	17985.28	46.33	13.78	15.92	32.92	43.11	54.00	10.89	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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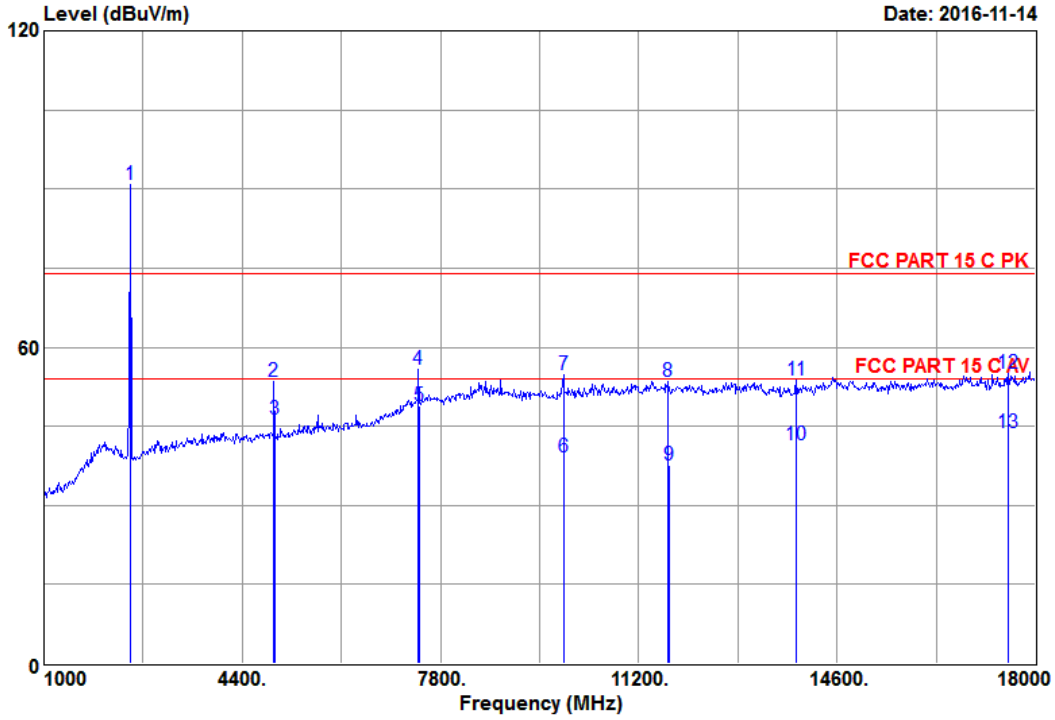
Data: 17 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 17
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.00	28.61	5.18	91.53	34.49	90.83	74.00	-16.83	Peak
2	4944.00	33.12	7.39	46.98	33.93	53.56	74.00	20.44	Peak
3	4950.93	33.12	7.39	39.85	33.93	46.43	54.00	7.57	Average
4	7426.00	36.62	9.15	44.02	34.06	55.73	74.00	18.27	Peak
5	7426.24	36.62	9.15	37.20	34.06	48.91	54.00	5.09	Average
6	9905.28	38.18	10.76	24.69	34.46	39.17	54.00	14.83	Average
7	9908.00	38.18	10.76	40.37	34.46	54.85	74.00	19.15	Peak
8	11710.00	41.20	11.46	34.64	33.76	53.54	74.00	20.46	Peak
9	11715.33	41.20	11.46	18.85	33.76	37.75	54.00	16.25	Average
10	13901.45	42.22	12.79	18.19	31.68	41.52	54.00	12.48	Average
11	13903.00	42.22	12.79	30.32	31.68	53.65	74.00	20.35	Peak
12	17541.00	44.44	13.84	29.63	32.88	55.03	74.00	18.97	Peak
13	17545.62	44.44	13.84	18.30	32.88	43.70	54.00	10.30	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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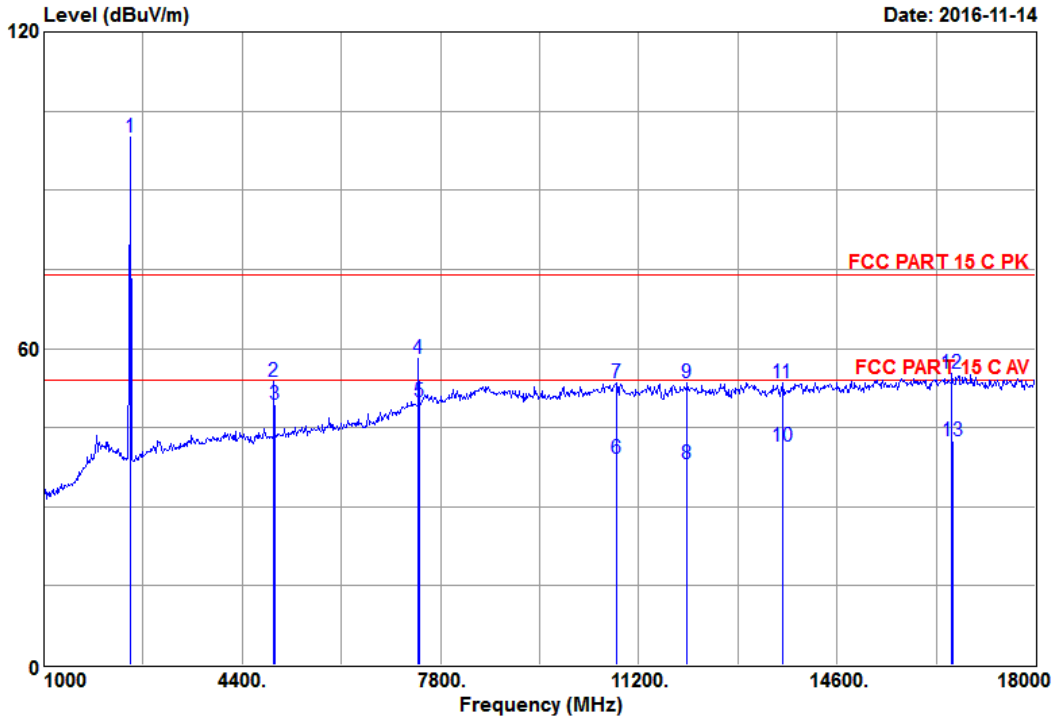
Data: 18 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 18
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.00	28.61	5.18	100.67	34.49	99.97	74.00	-25.97	Peak
2	4944.00	33.12	7.39	47.29	33.93	53.87	74.00	20.13	Peak
3	4950.93	33.12	7.39	42.91	33.93	49.49	54.00	4.51	Average
4	7426.00	36.62	9.15	46.36	34.06	58.07	74.00	15.93	Peak
5	7426.36	36.62	9.15	38.09	34.06	49.80	54.00	4.20	Average
6	10825.34	38.46	11.25	23.15	33.79	39.07	54.00	14.93	Average
7	10826.00	38.46	11.25	37.54	33.79	53.46	74.00	20.54	Peak
8	12030.95	41.73	11.55	18.52	33.74	38.06	54.00	15.94	Average
9	12033.00	41.73	11.55	33.86	33.74	53.40	74.00	20.60	Peak
10	13662.75	41.57	12.67	19.15	31.88	41.51	54.00	12.49	Average
11	13665.00	41.57	12.67	31.16	31.88	53.52	74.00	20.48	Peak
12	16572.00	40.41	14.15	34.00	33.30	55.26	74.00	18.74	Peak
13	16575.35	40.41	14.15	21.18	33.30	42.44	54.00	11.56	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.

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

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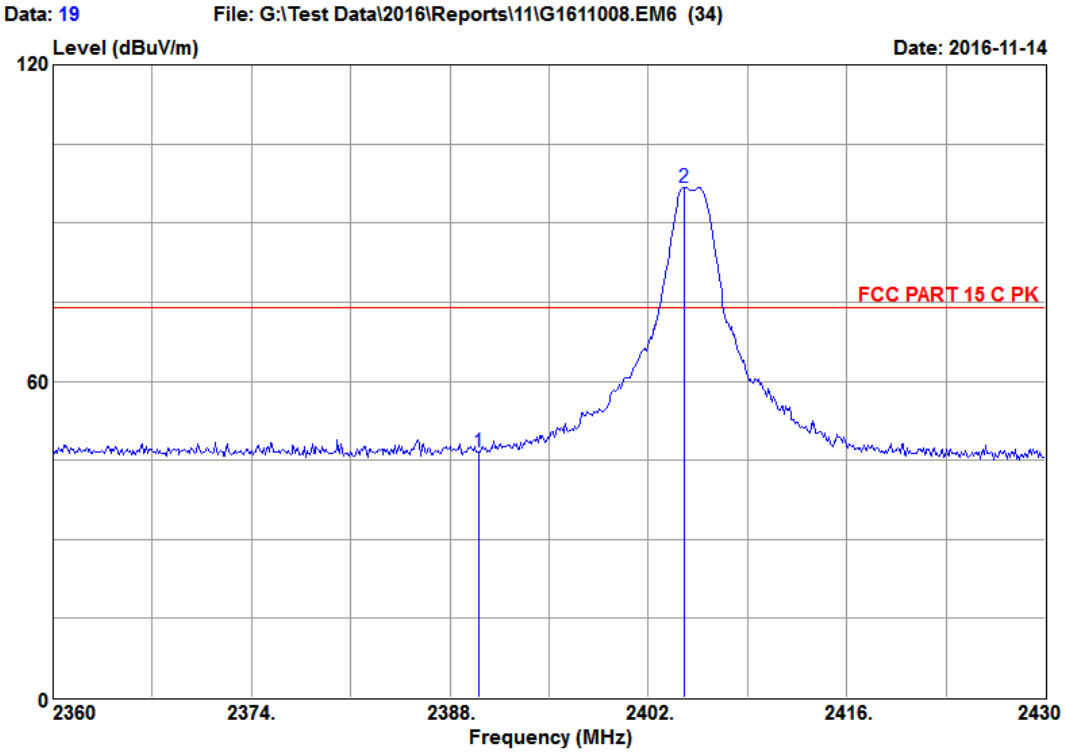

Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 19
Ant. pol. : HORIZONTAL

Engineer : KM Tong

	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	29.16	5.09	46.94	34.50	46.69	74.00	27.31	Peak
2	2404.55	29.05	5.09	97.15	34.50	96.79	74.00	-22.79	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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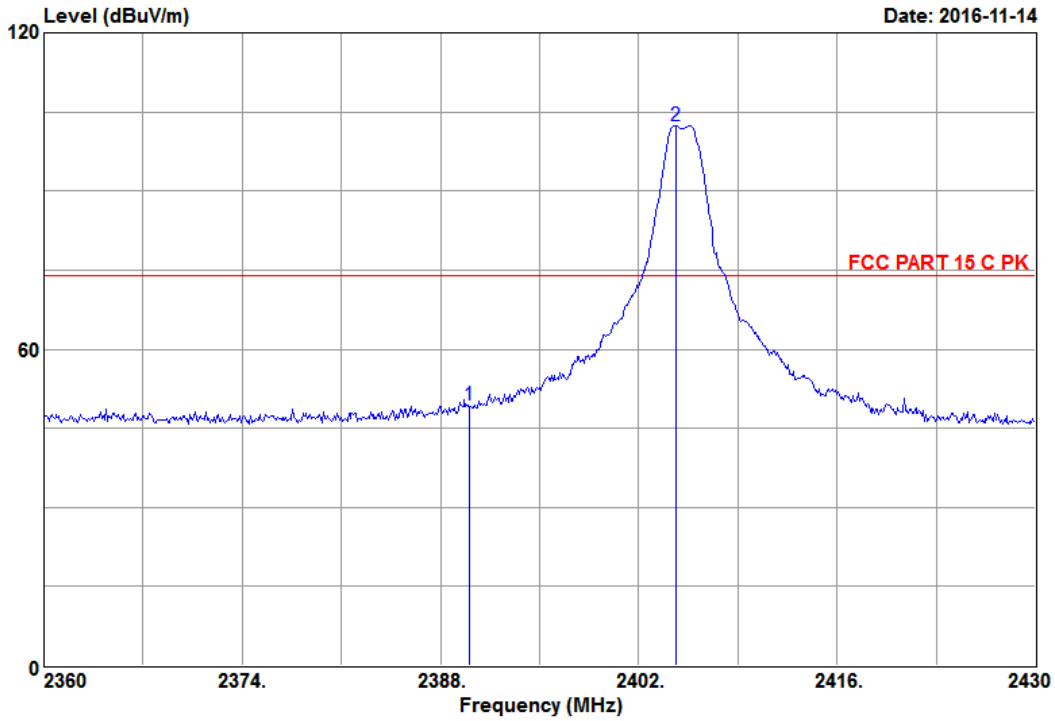
Data: 20 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 20
Ant. pol. : VERTICAL
Engineer : KM Tong

	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	29.16	5.09	49.73	34.50	49.48	74.00	24.52	Peak
2	2404.64	29.05	5.09	102.78	34.50	102.42	74.00	-28.42	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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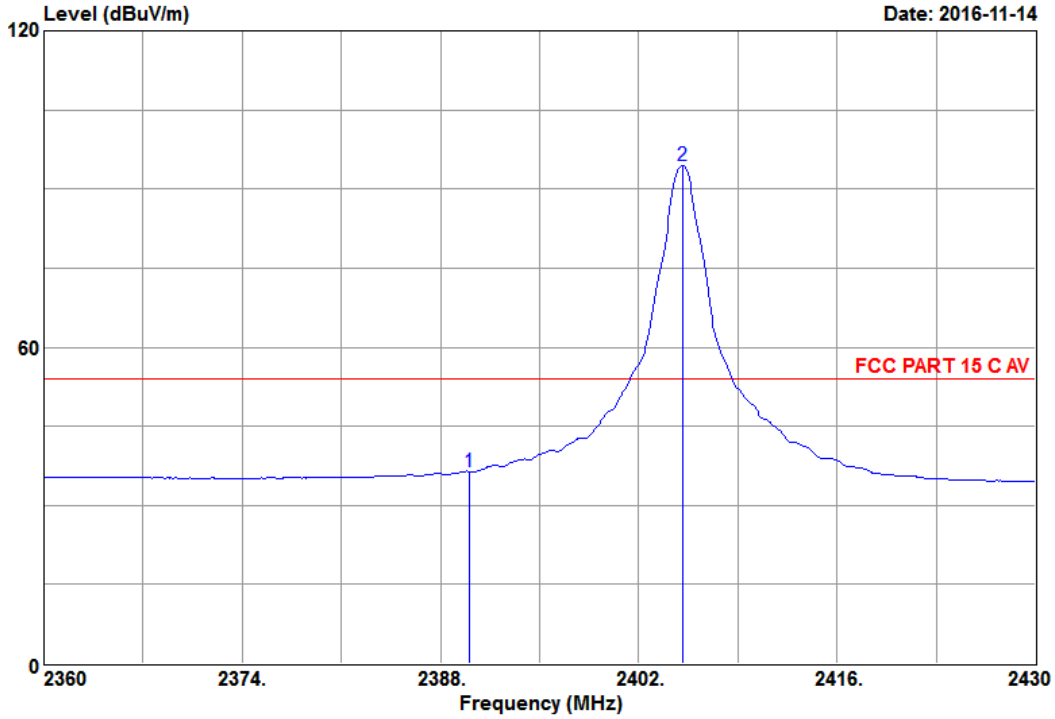
Data: 21 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C AV
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 21
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	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	29.16	5.09	36.72	34.50	36.47	54.00	17.53	Average
2	2405.09	29.05	5.09	94.74	34.50	94.38	54.00	-40.38	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.

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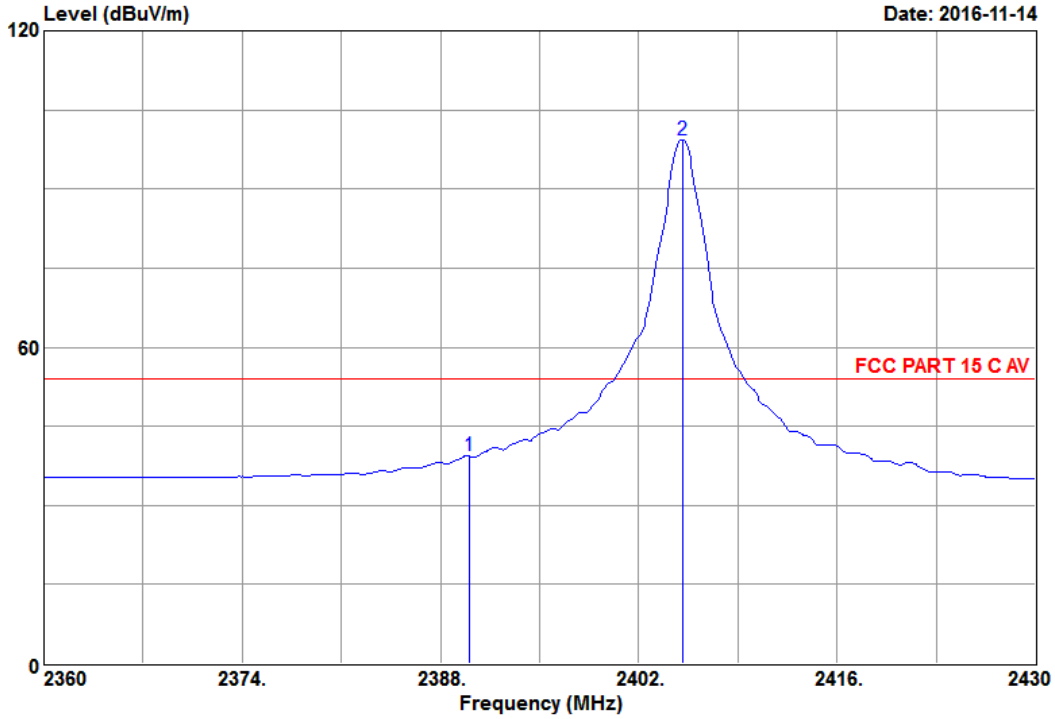
Data: 22 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C AV
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

Data NO. : 22
Ant. pol. : VERTICAL
Engineer : KM Tong

	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	29.16	5.09	39.60	34.50	39.35	54.00	14.65	Average
2	2405.09	29.05	5.09	99.70	34.50	99.34	54.00	-45.34	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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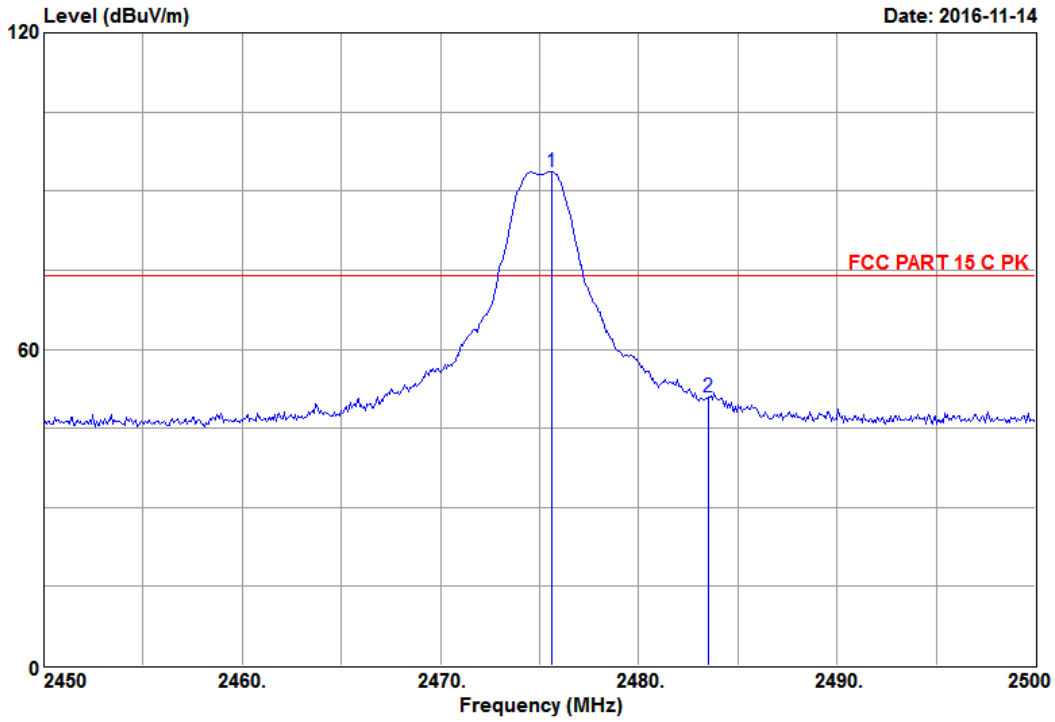
Data: 23 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 23
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.62	28.61	5.18	94.47	34.49	93.77	74.00	-19.77	Peak
2	2483.50	28.61	5.18	51.51	34.49	50.81	74.00	23.19	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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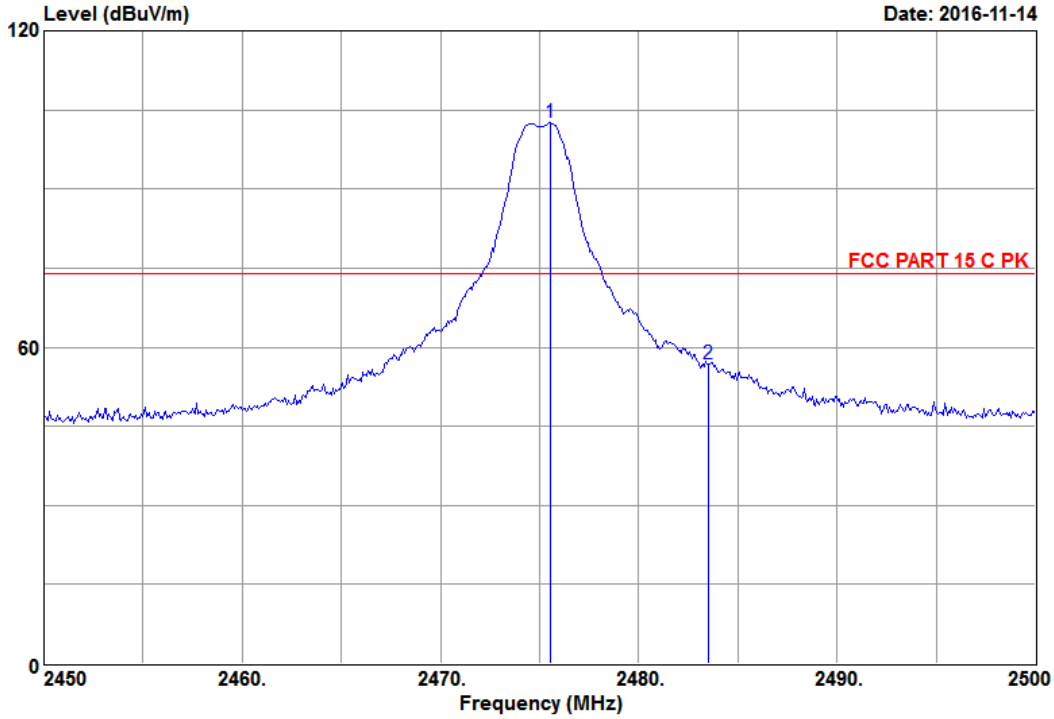
Data: 24 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 24
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.55	28.61	5.18	103.24	34.49	102.54	74.00	-28.54	Peak
2	2483.50	28.61	5.18	57.57	34.49	56.87	74.00	17.13	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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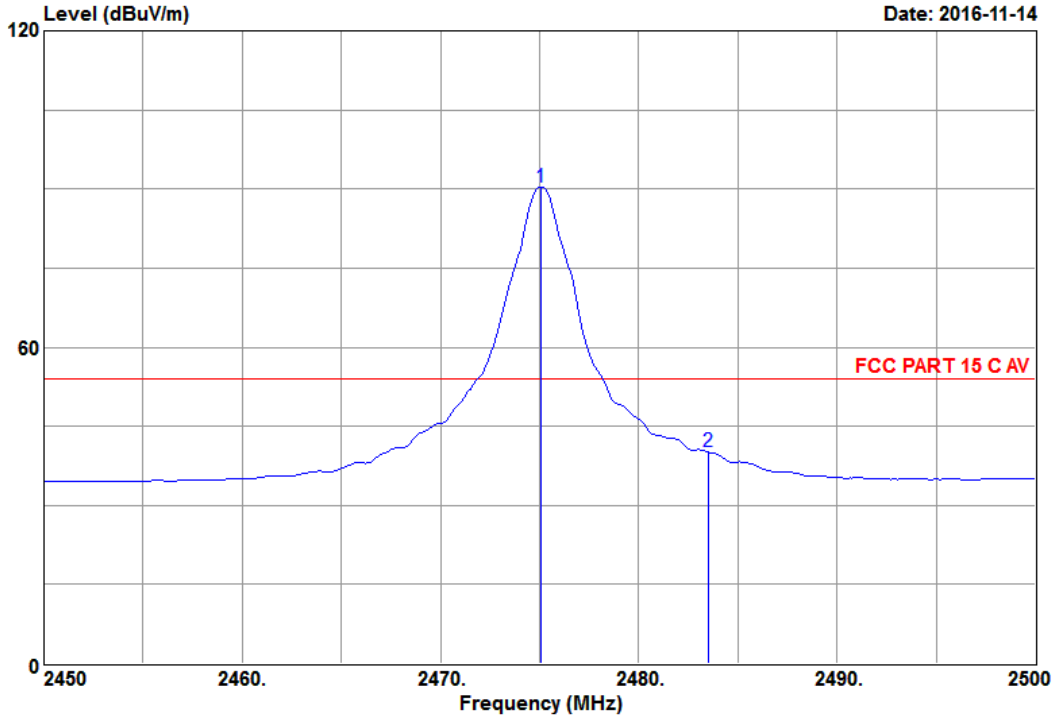
Data: 25 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C AV
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 25
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.06	28.61	5.18	91.15	34.49	90.45	54.00	-36.45	Average
2	2483.50	28.61	5.18	40.79	34.49	40.09	54.00	13.91	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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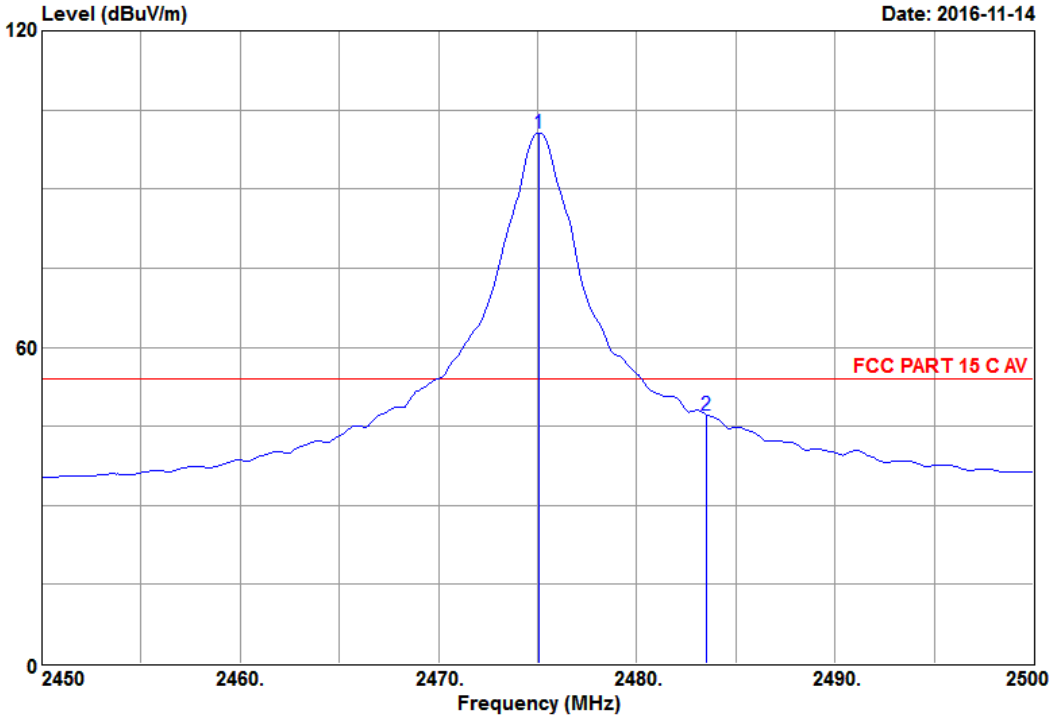
Data: 26 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C AV
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH25 2475MHz
Memo :

Data NO. : 26
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2475.06	28.61	5.18	101.33	34.49	100.63	54.00	-46.63	Average
2	2483.50	28.61	5.18	47.87	34.49	47.17	54.00	6.83	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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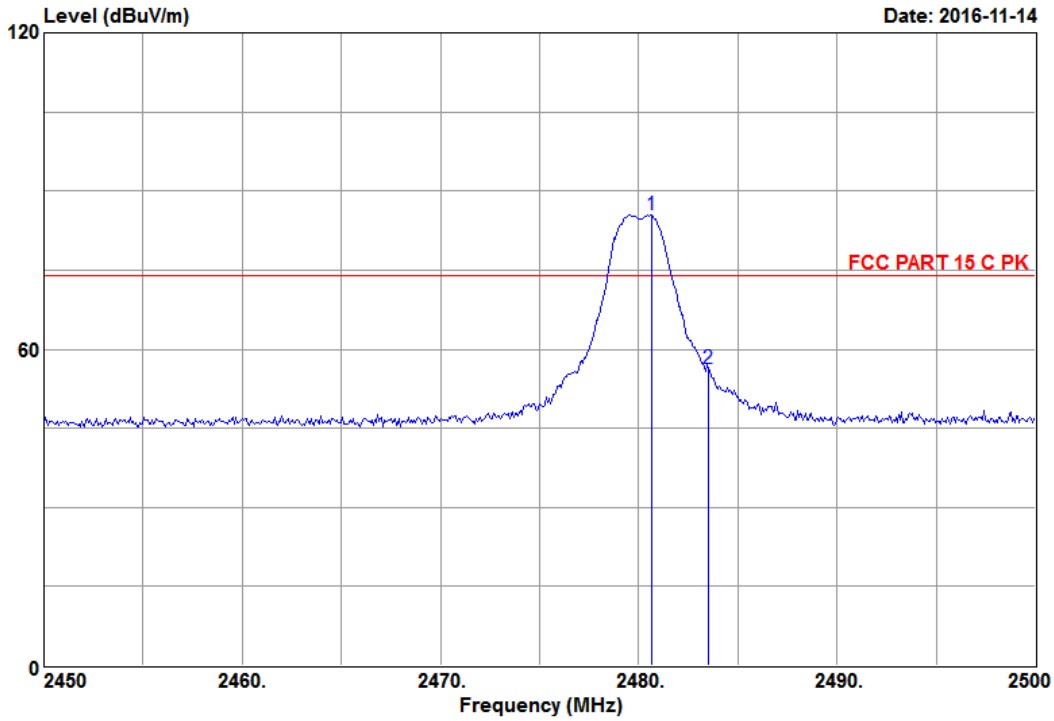
Data: 27 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

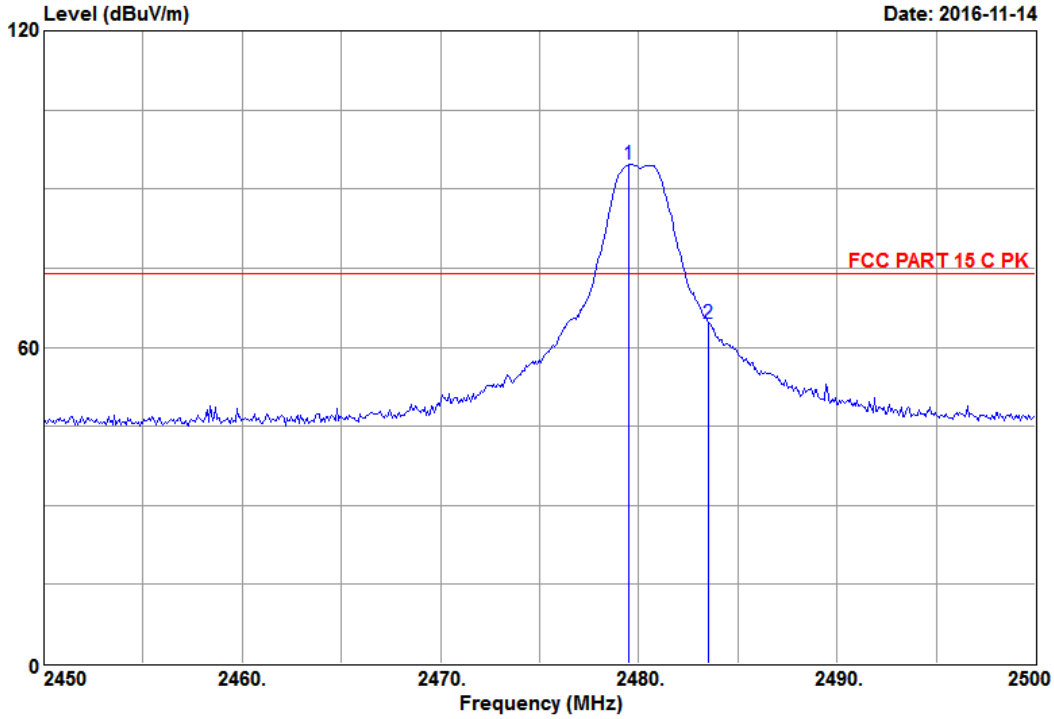
Data NO. : 27
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.66	28.61	5.18	86.13	34.49	85.43	74.00	-11.43	Peak
2	2483.50	28.61	5.18	57.09	34.49	56.39	74.00	17.61	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.

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\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C PK
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

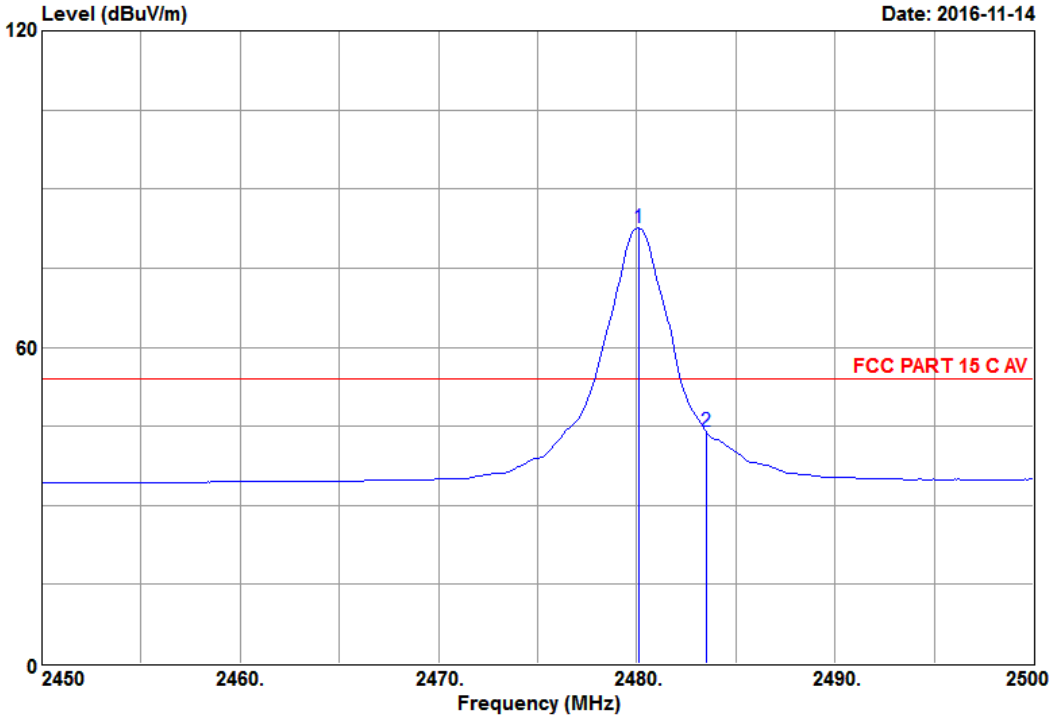
Data NO. : 28
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.47	28.61	5.18	95.27	34.49	94.57	74.00	-20.57	Peak
2	2483.50	28.61	5.18	65.27	34.49	64.57	74.00	9.43	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.

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: 29 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C AV
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

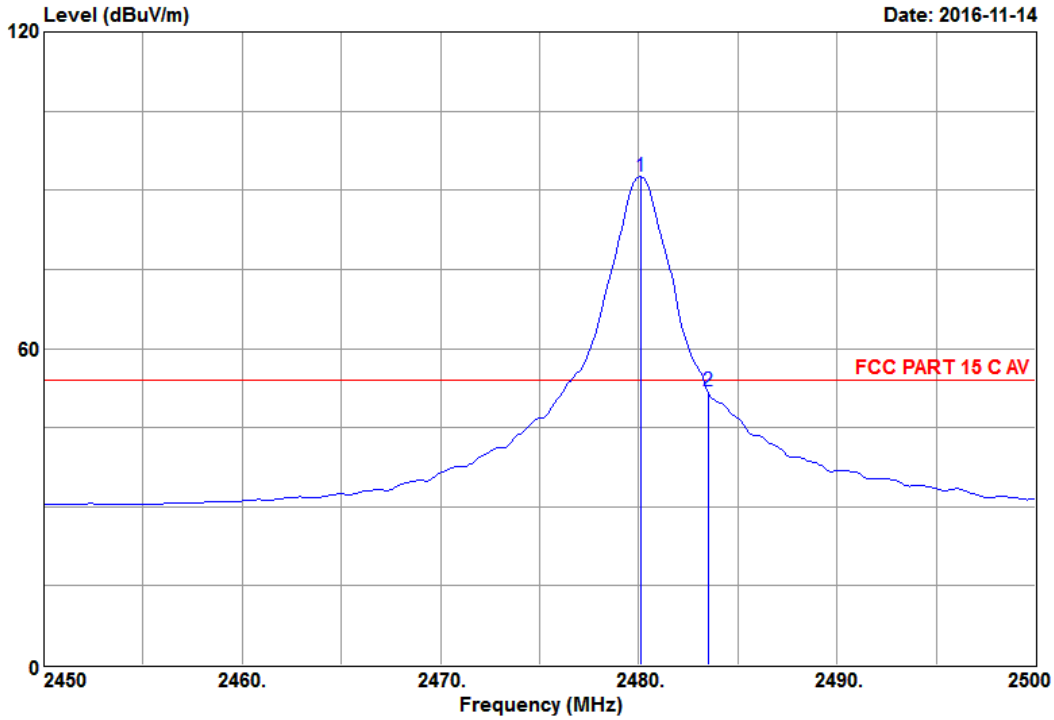
Data NO. : 29
Ant. pol. : HORIZONTAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.10	28.61	5.18	83.29	34.49	82.59	54.00	-28.59	Average
2	2483.50	28.61	5.18	44.63	34.49	43.93	54.00	10.07	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: 30 File: G:\Test Data\2016\Reports\11\G1611008.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62959-160620
Limit : FCC PART 15 C AV
Env. / Ins. : 19.8*C&58%/N9030A
EUT : LED Lamp
M/N : 9290013012
Power Rating: 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

Data NO. : 30
Ant. pol. : VERTICAL
Engineer : KM Tong

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.10	28.61	5.18	93.25	34.49	92.55	54.00	-38.55	Average
2	2483.50	28.61	5.18	52.71	34.49	52.01	54.00	1.99	Average

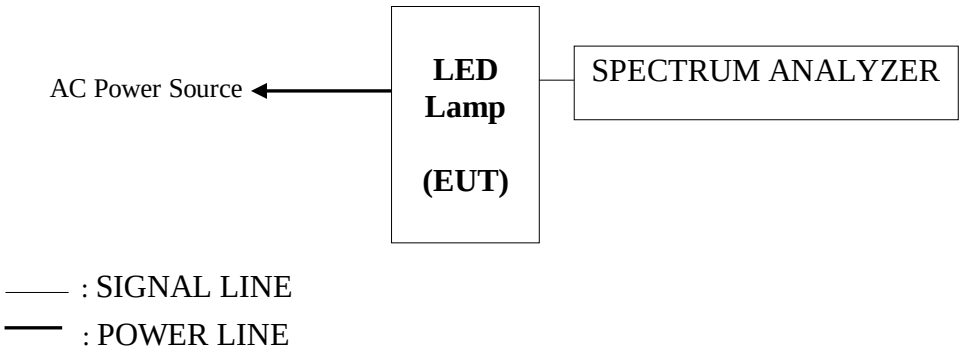
Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.
2. The emission levels that are 20dB below the official limit are not reported.

5. 6 dB BANDWIDTH MEASUREMENT

5.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2016-05-15	2017-05-14

5.2. Block Diagram of Test Setup



5.3. 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.

5.4. Test Procedure

The steps for the first option are as bellow:

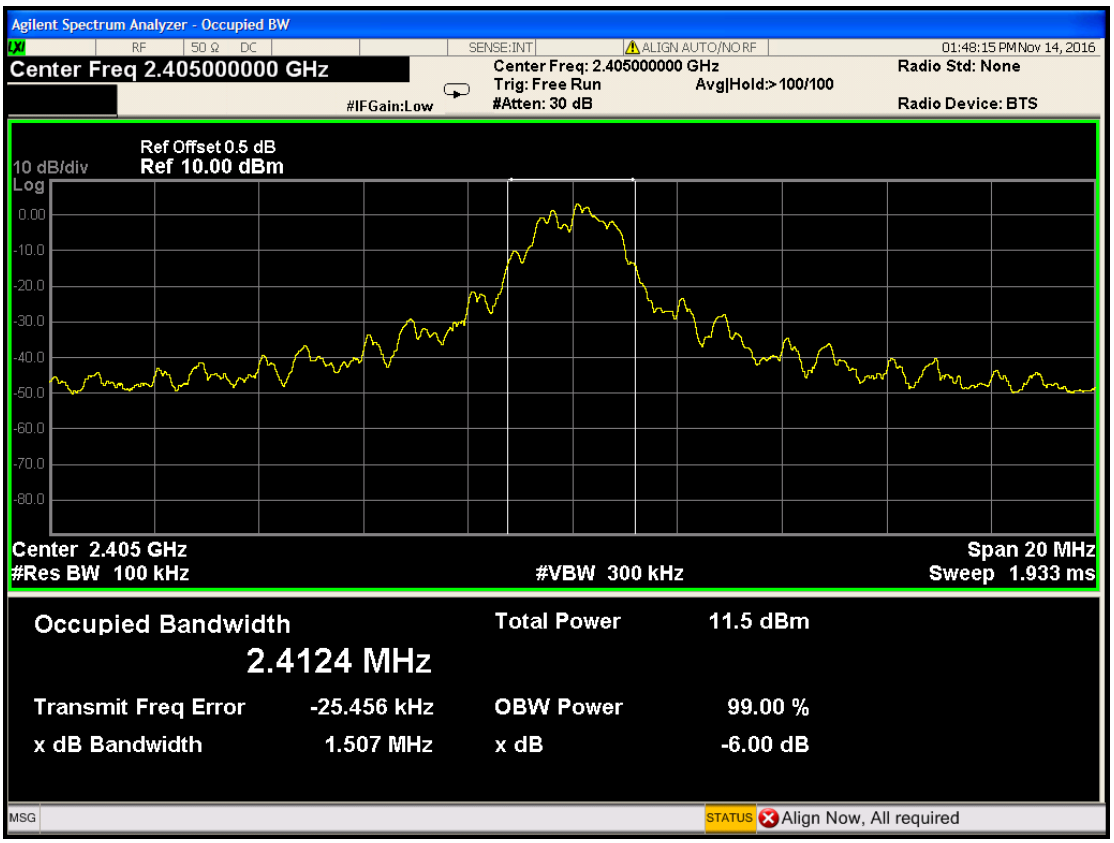
a) Set RBW = 100 kHz.
b) Set the VBW≥[3×RBW].
c) Detector = peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.5. Test Results

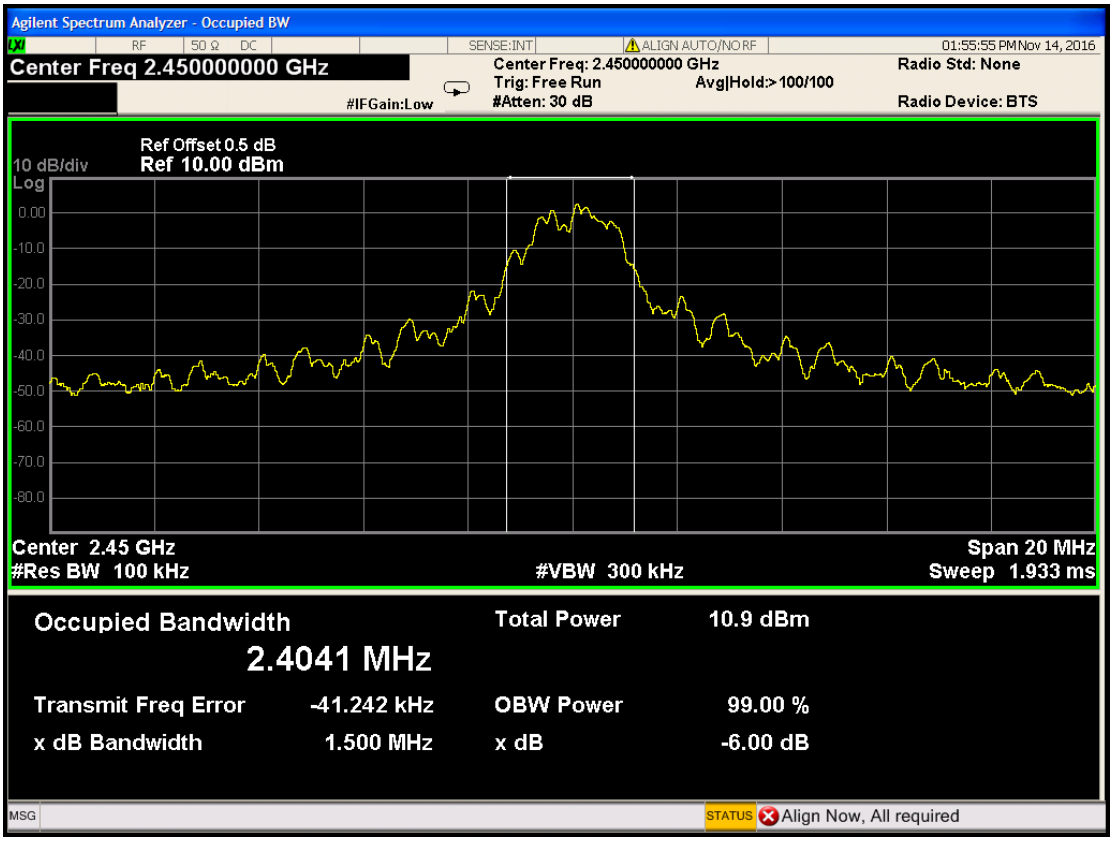
PASSED. All the test results are attached in next pages.

Channel	Center Frequency(MHz)	6 dB Bandwidth(MHz)
11	2405	**1.507**
20	2450	**1.500**
25	2475	**1.532**

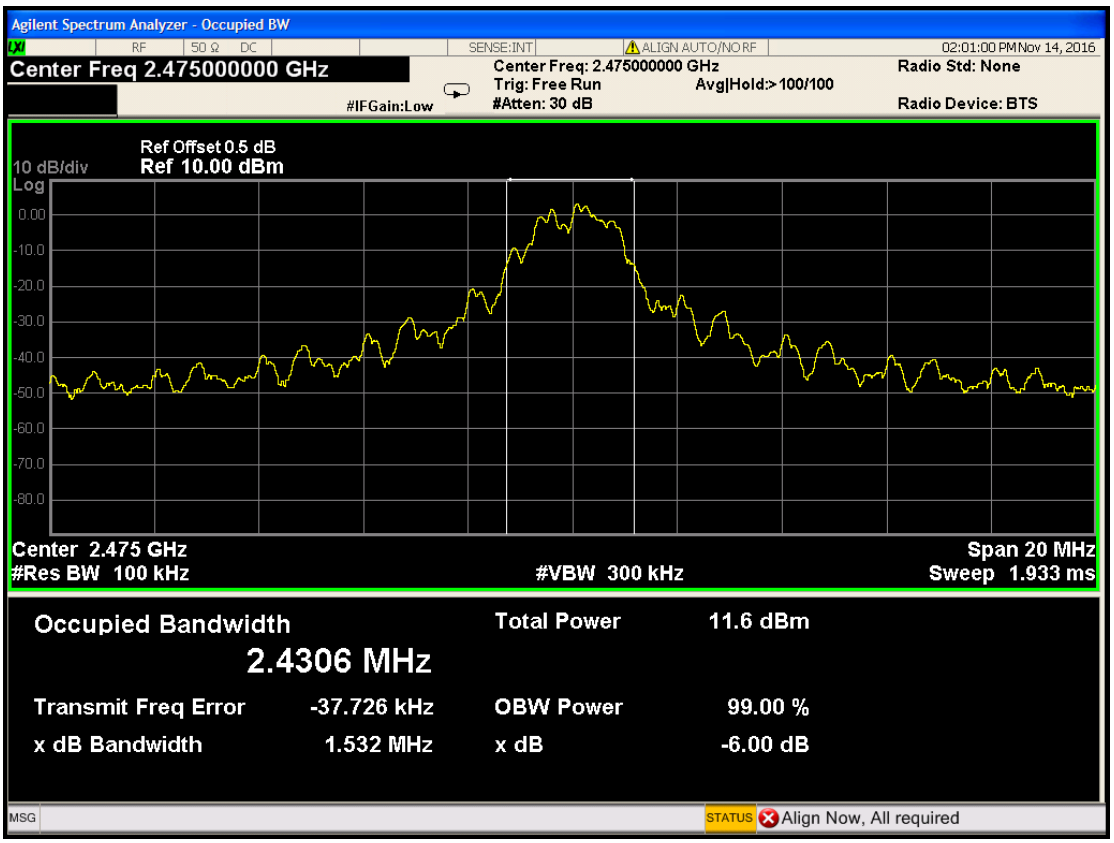
CH 11


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
01:48:15 PM Nov 14, 2016
Center Freq 2.405000000 GHz
Center Freq: 2.405000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.405 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.4124 MHz
Total Power
11.5 dBm
Transmit Freq Error
-25.456 kHz
OBW Power
99.00 %
x dB Bandwidth
1.507 MHz
x dB
-6.00 dB
MSG
STATUS
Align Now, All required

CH 20


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
01:55:55 PM Nov 14, 2016
Center Freq 2.450000000 GHz
Center Freq: 2.450000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.45 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.4041 MHz
Total Power
10.9 dBm
Transmit Freq Error
-41.242 kHz
OBW Power
99.00 %
x dB Bandwidth
1.500 MHz
x dB
-6.00 dB
MSG
STATUS
Align Now, All required

CH 25

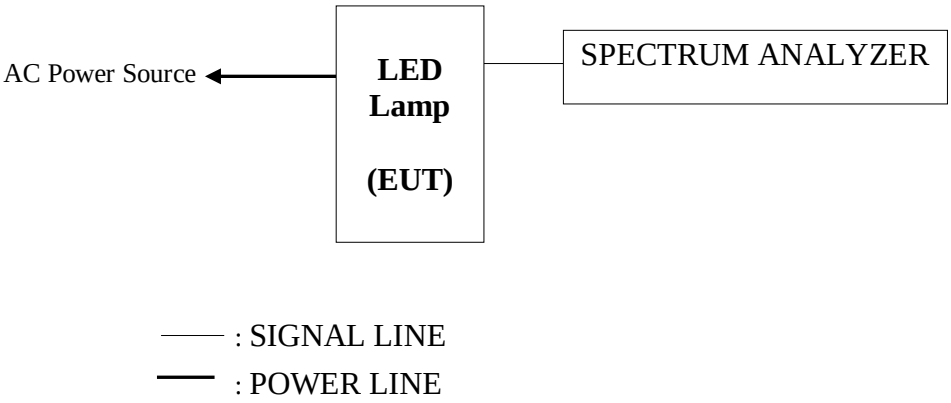

Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
02:01:00 PM Nov 14, 2016
Center Freq 2.475000000 GHz
Center Freq: 2.475000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.475 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
2.4306 MHz
Total Power
11.6 dBm
Transmit Freq Error
-37.726 kHz
OBW Power
99.00 %
x dB Bandwidth
1.532 MHz
x dB
-6.00 dB
MSG
STATUS
Align Now, All required

6. OUTPUT POWER MEASUREMENT

6.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2016-05-15	2017-05-14

6.2. Block Diagram of Test Setup



6.3. 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.

6.4. 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.

6.5. Test Results

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

Channel	Frequency	Power(dBm)	Limit(dBm)
11	2405	4.09	30
20	2450	4.26	30
25	2475	4.18	30
26	2480	-4.47	30

7. BAND EDGES MEASUREMENT

7.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2016-05-15	2017-05-14

7.2. Block Diagram of Test Setup

The same as section 5.2.

7.3. 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)).

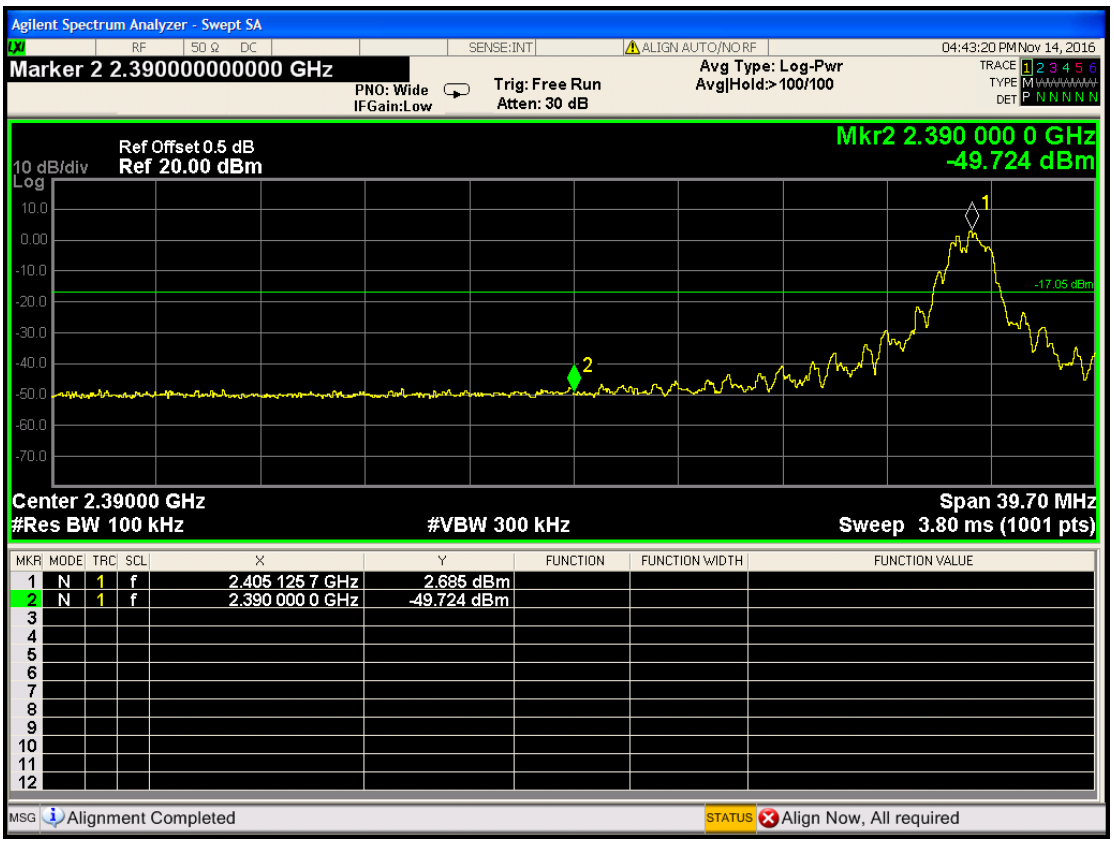
7.4. Test Procedure

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.

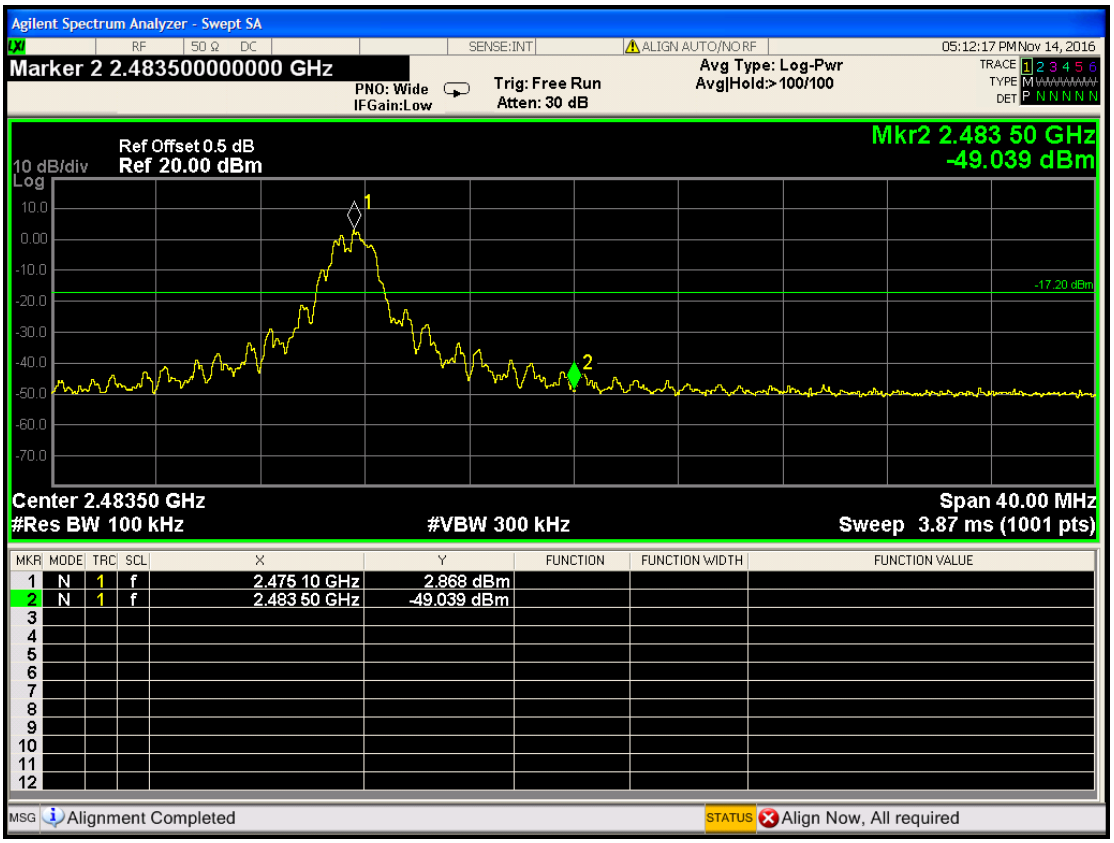
7.5. Test Results

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

CH11


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
04:43:20 PM Nov 14, 2016
Marker 2 2.390000000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 2.390 000 0 GHz
-49.724 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-17.05 dBm
Center 2.39000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 39.70 MHz
Sweep 3.80 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.405 125 7 GHz 2.685 dBm
2 N 1 f 2.390 000 0 GHz -49.724 dBm
MSG
Alignment Completed
STATUS
Align Now, All required

CH25


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:12:17 PM Nov 14, 2016
Marker 2 2.483500000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 2.483 50 GHz
-49.039 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-17.20 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.87 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.475 10 GHz 2.868 dBm
2 N 1 f 2.483 50 GHz -49.039 dBm
MSG
Alignment Completed
STATUS
Align Now, All required

8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2016-05-15	2017-05-14

8.2. Block Diagram of Test Setup

The same as section 5.2.

8.3. Specification Limits (§15.247(e))

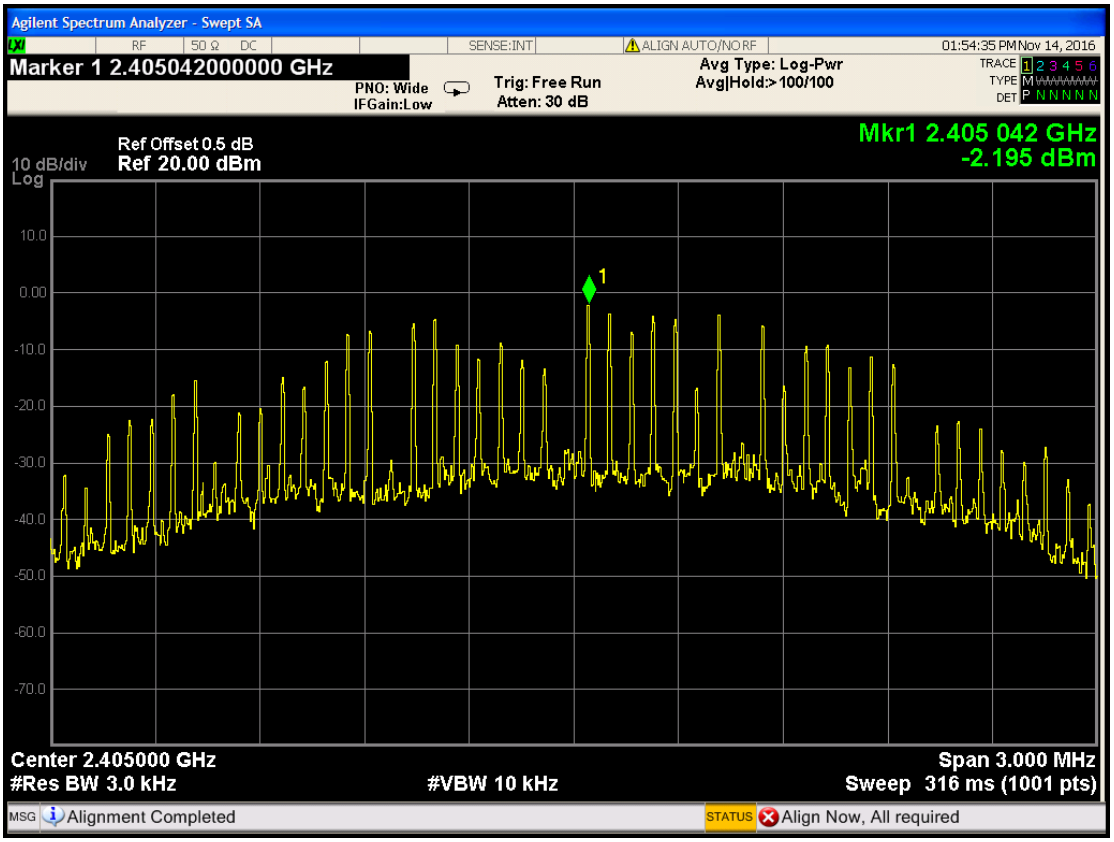
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.4. Test Results

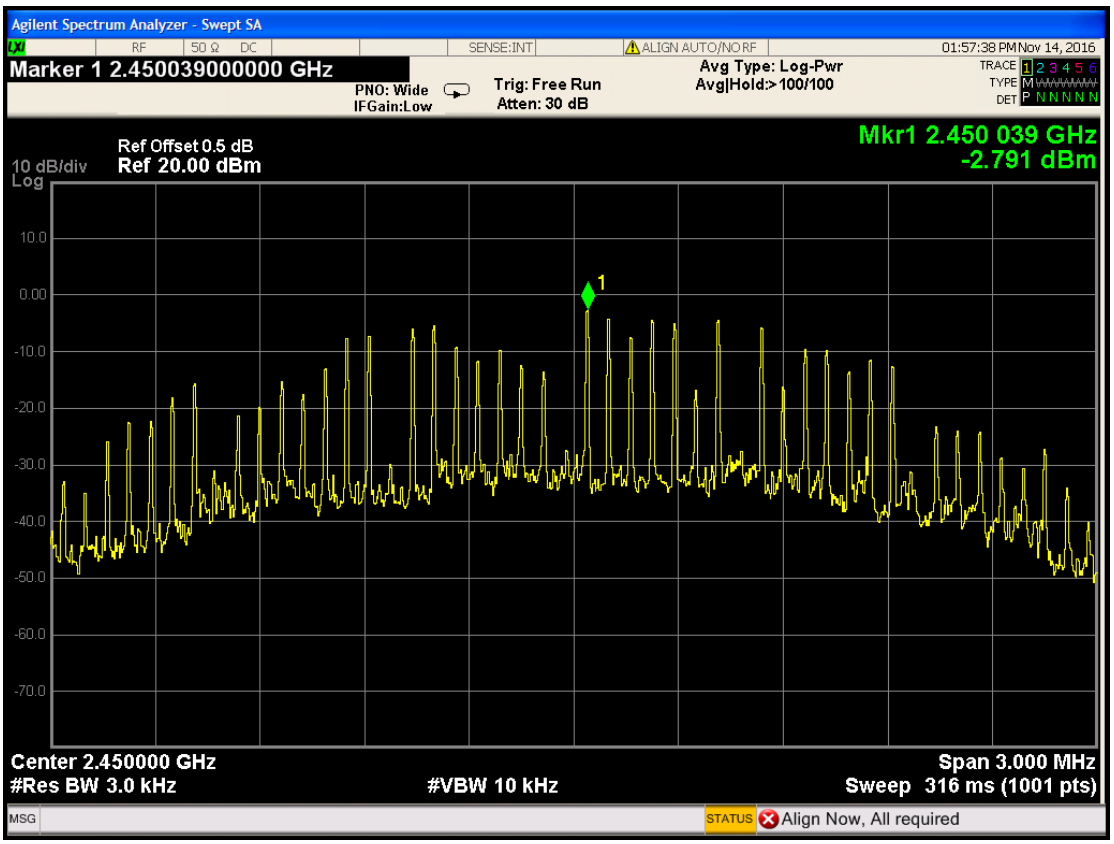
PASSED. All the test results are attached in next page.

Channel	Frequency(GHz)	Value(dBm/3kHz)
11	2.405	-2.195
20	2.450	-2.791
25	2.475	-2.089

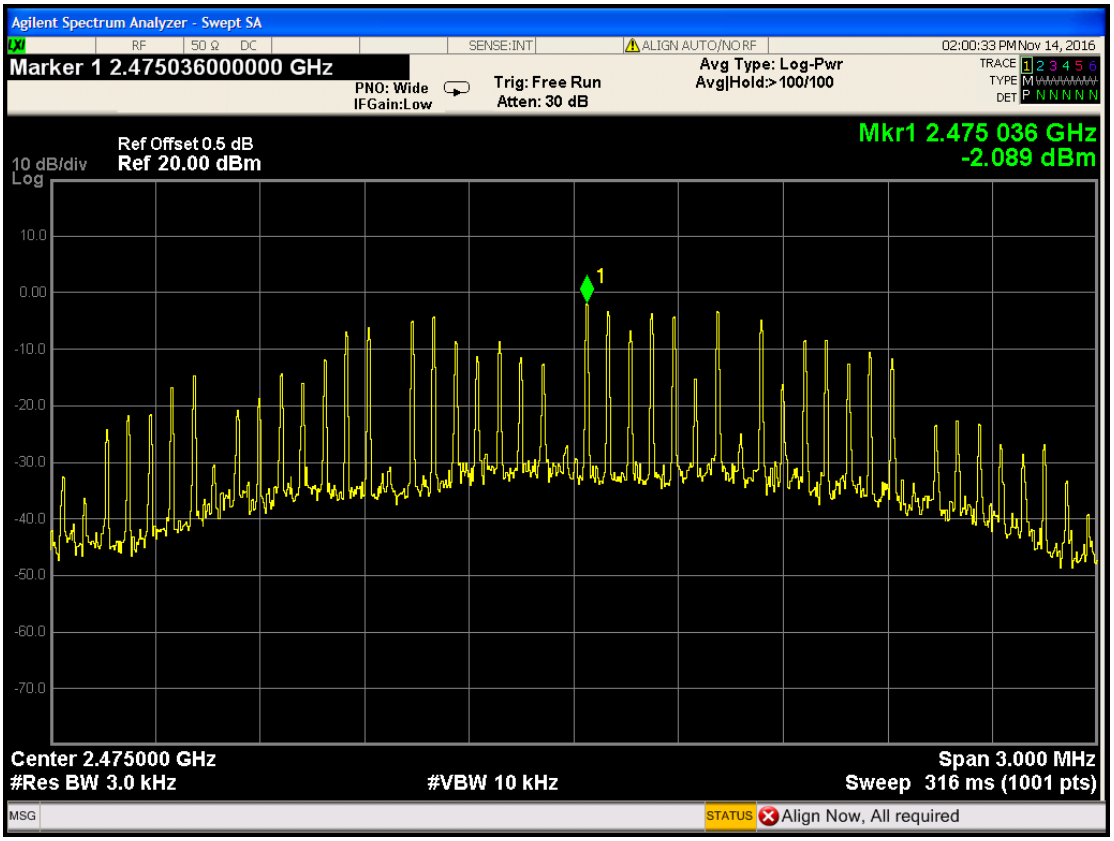
CH 11


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
01:54:35 PM Nov 14, 2016
Marker 1 2.405042000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.405 042 GHz
-2.195 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.405000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 3.000 MHz
Sweep 316 ms (1001 pts)
MSG
Alignment Completed
STATUS
Align Now, All required

CH 20


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
01:57:38 PM Nov 14, 2016
Marker 1 2.450039000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.450 039 GHz
-2.791 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.450000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 3.000 MHz
Sweep 316 ms (1001 pts)
MSG
STATUS
Align Now, All required

CH 25


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
02:00:33 PM Nov 14, 2016
Marker 1 2.475036000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.475 036 GHz
-2.089 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.475000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 3.000 MHz
Sweep 316 ms (1001 pts)
MSG
STATUS
Align Now, All required

9. EMISSION LIMITATIONS MEASUREMENT

9.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2015-05-15	2017-05-14

9.2. Block Diagram of Test Setup

The same as section 5.2.

9.3. 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)).

9.4. 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 30 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.

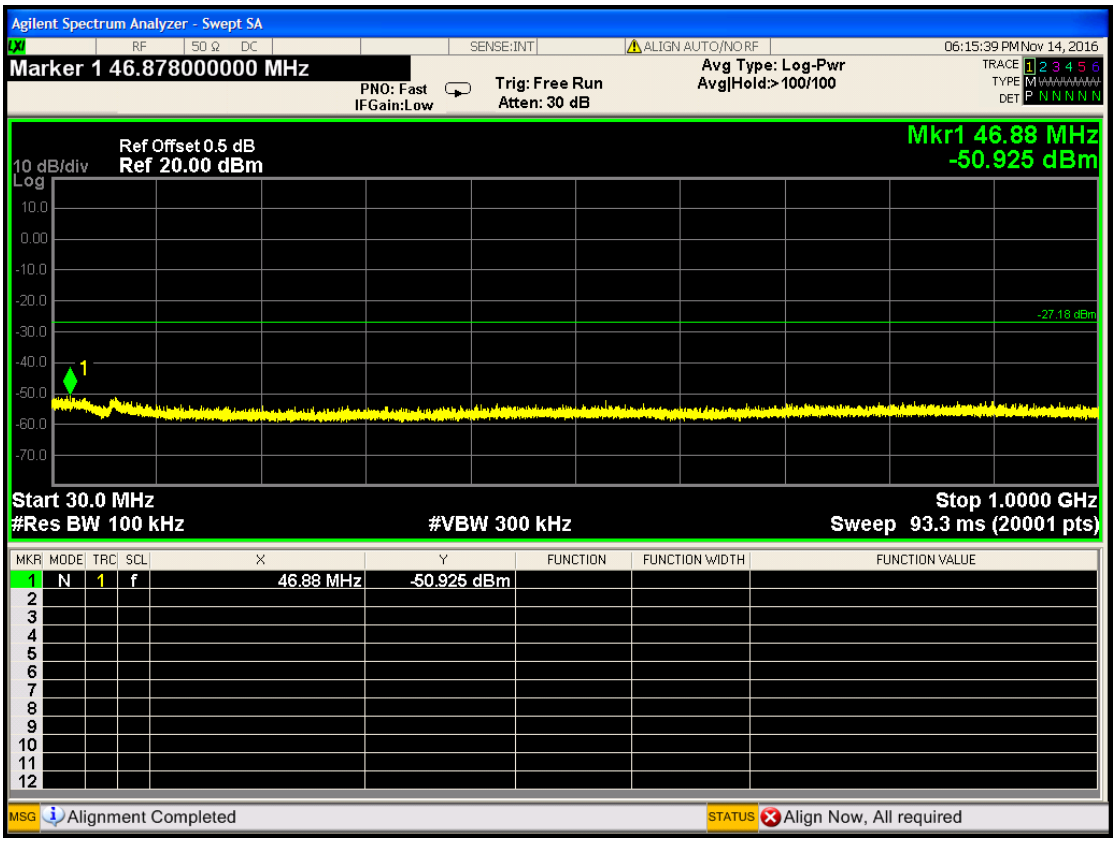
9.5. Test Results

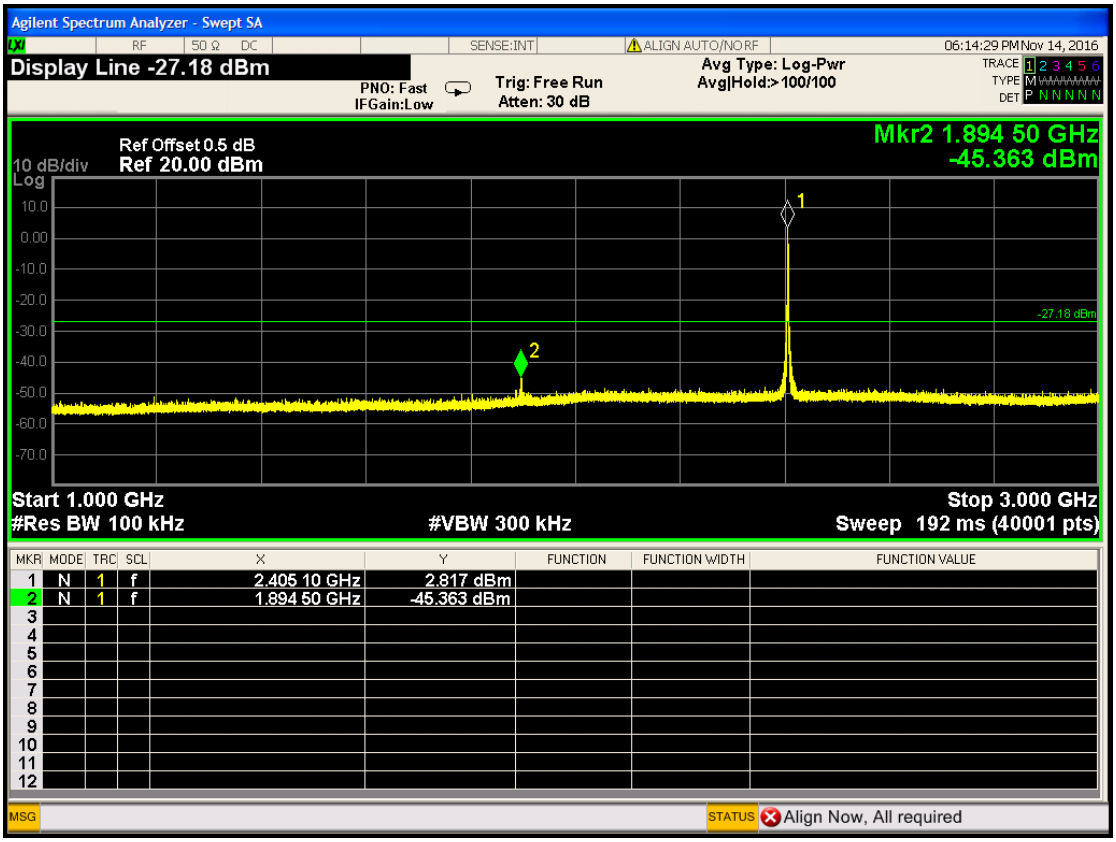
PASSED. All the test results are attached in next pages.

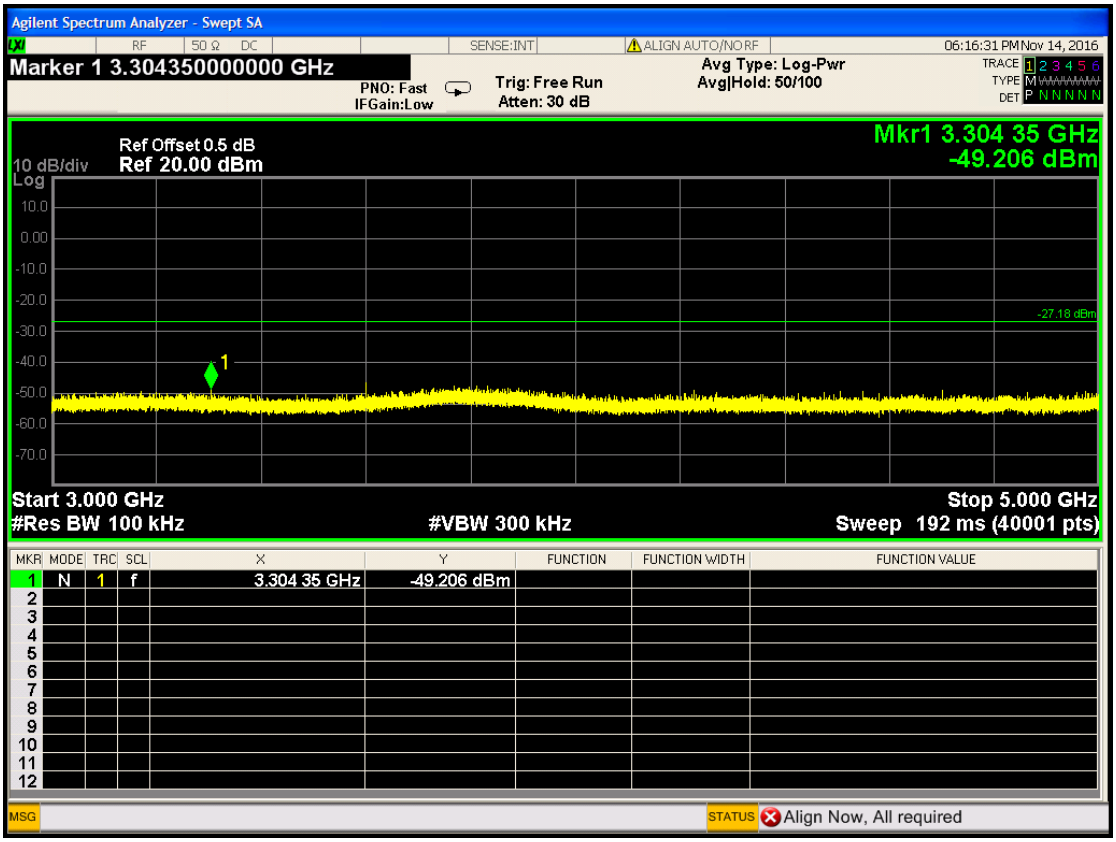
Channel	Frequency(MHz)	Amplitude(dBm)
11	46.88	-50.925
	2405.10	2.817
	1894.50	-45.363
	3304.35	-49.206
	5611.70	-55.329
	8974.80	-55.147
	9800.45	-56.193
	11593.05	-56.113
	14475.00	-54.679
	16383.55	-56.093
	18719.35	-54.533
	20222.00	-54.033
	22386.60	-53.120
	23992.90	-52.515
20	44.89	-50.154
	2450.10	2.151
	1895.60	-43.317
	3191.10	-49.343
	5031.75	-55.578
	7185.35	-55.856
	10719.65	-56.564
	11555.75	-56.898
	14505.55	-55.451
	15740.05	-56.248
	18933.75	-53.672
	19308.70	-53.500
	22234.60	-53.318
	24926.80	-51.860
25	542.40	-55.150
	86.79	-50.712
	2475.05	2.787
	2000.00	-52.895

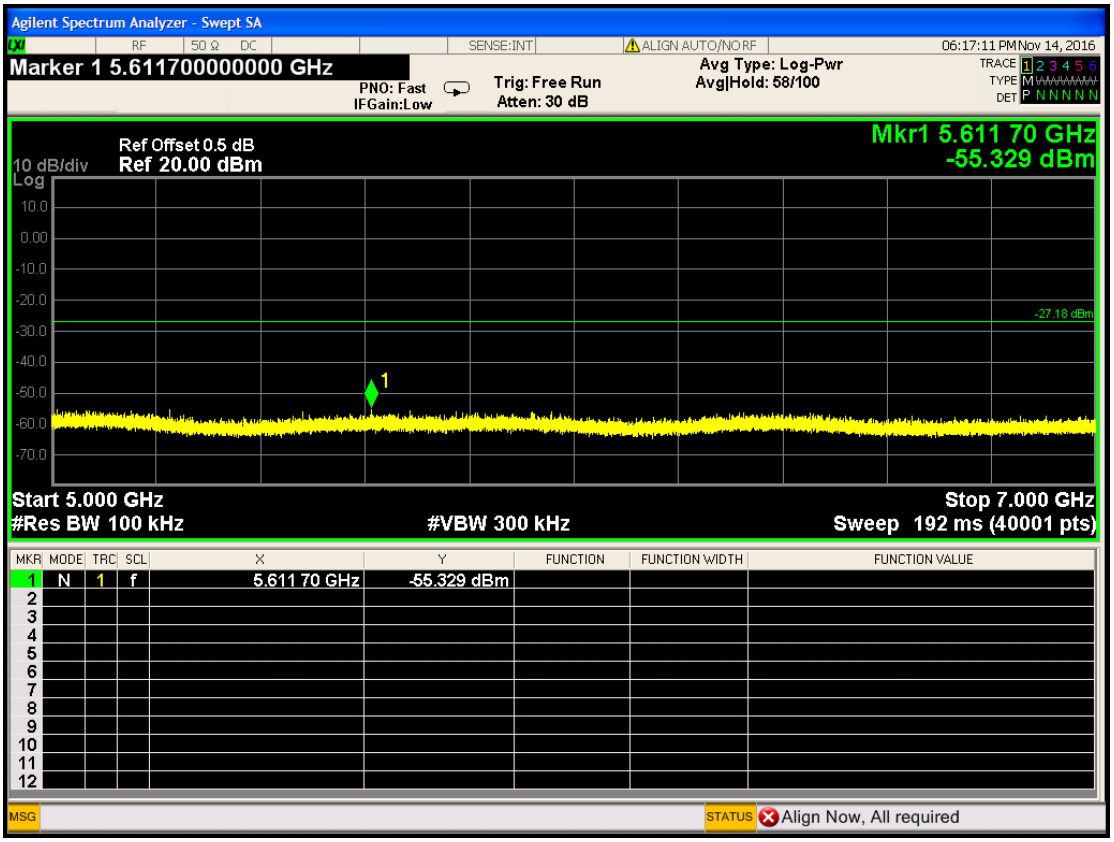
	3265.95	-49.216
	3834.30	-53.180
	6382.25	-53.086
	5666.10	-55.392
	7518.70	-56.440
	8950.80	-55.469
	10228.65	-56.399
	9901.90	-55.859
	11137.30	-57.812
	11446.75	-57.677
	14141.00	-55.763
	14266.45	-55.824
	15200.60	-56.380
	15818.75	-56.783
	18750.90	-55.222
	18284.90	-55.906
	19436.20	-54.577
	20173.95	-54.732
	22295.55	-53.710
	21512.50	-54.225
	23727.80	-52.855
	24146.05	-53.617

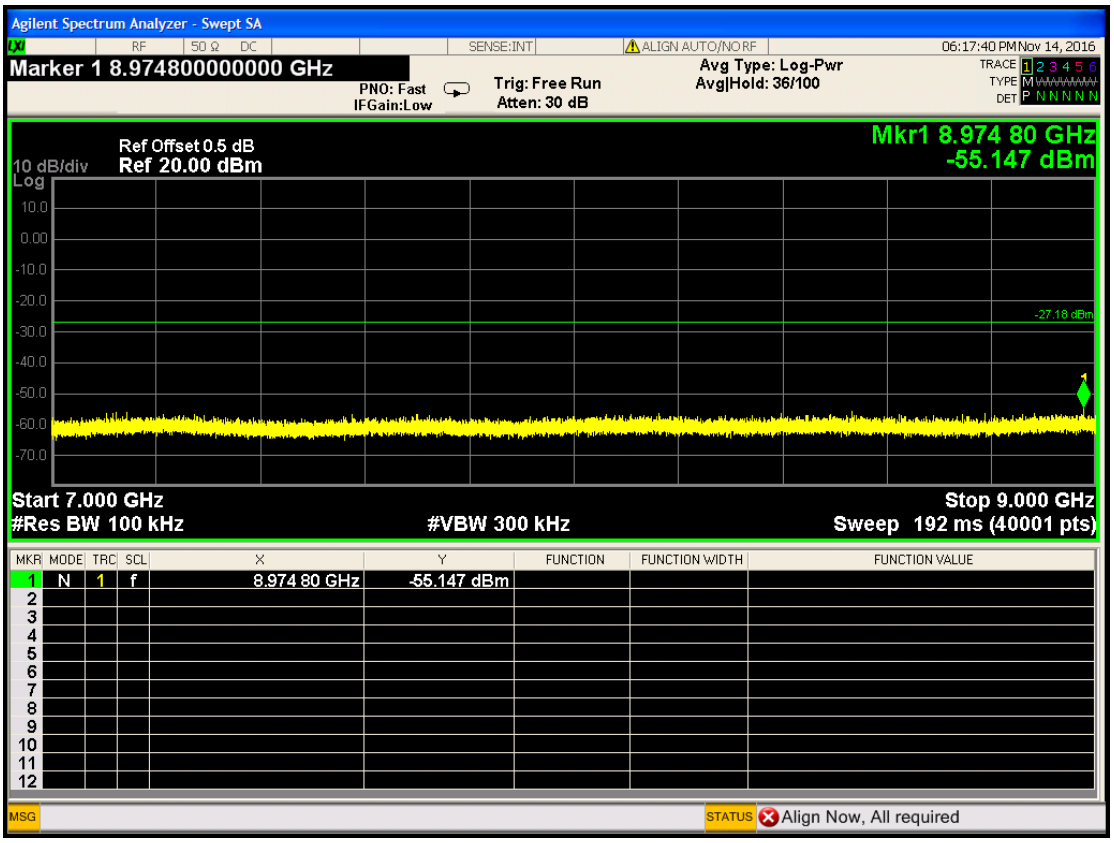
CH 11

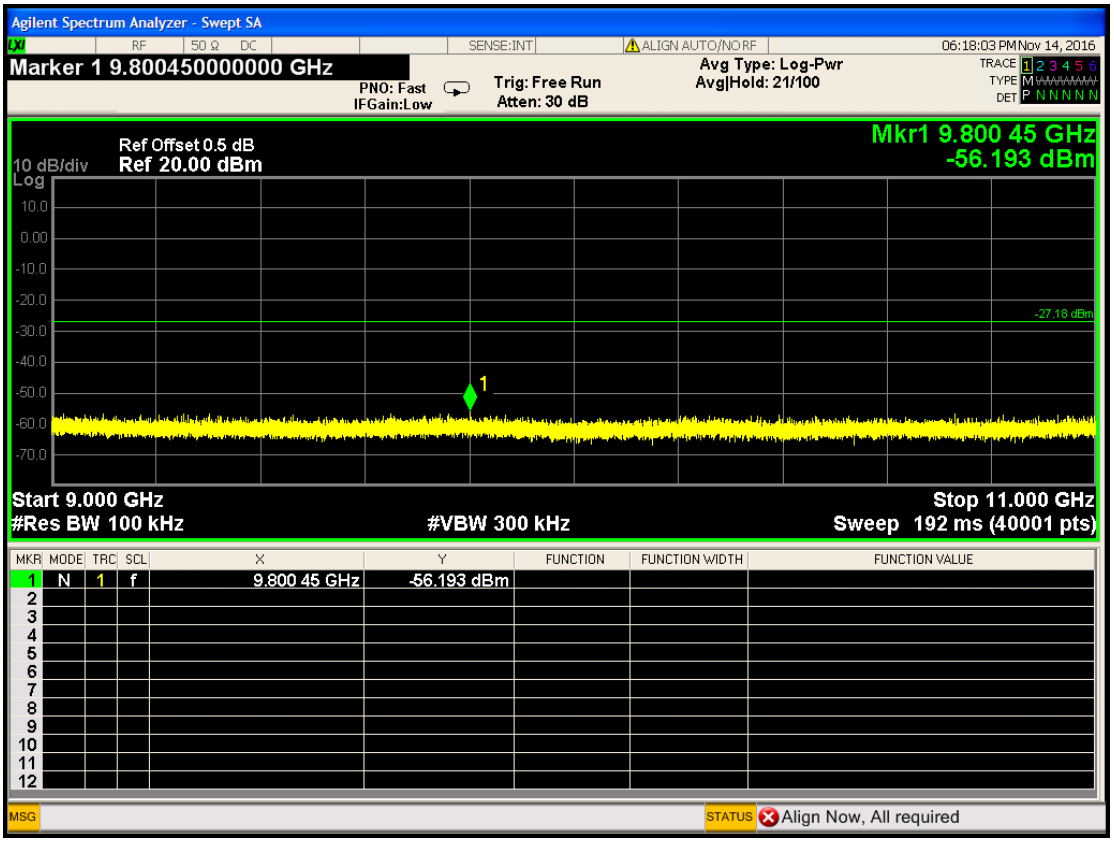

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:15:39 PM Nov 14, 2016
Marker 1 46.878000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 46.88 MHz
-50.925 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 93.3 ms (20001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 46.88 MHz -50.925 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
Alignment Completed
STATUS
Align Now, All required

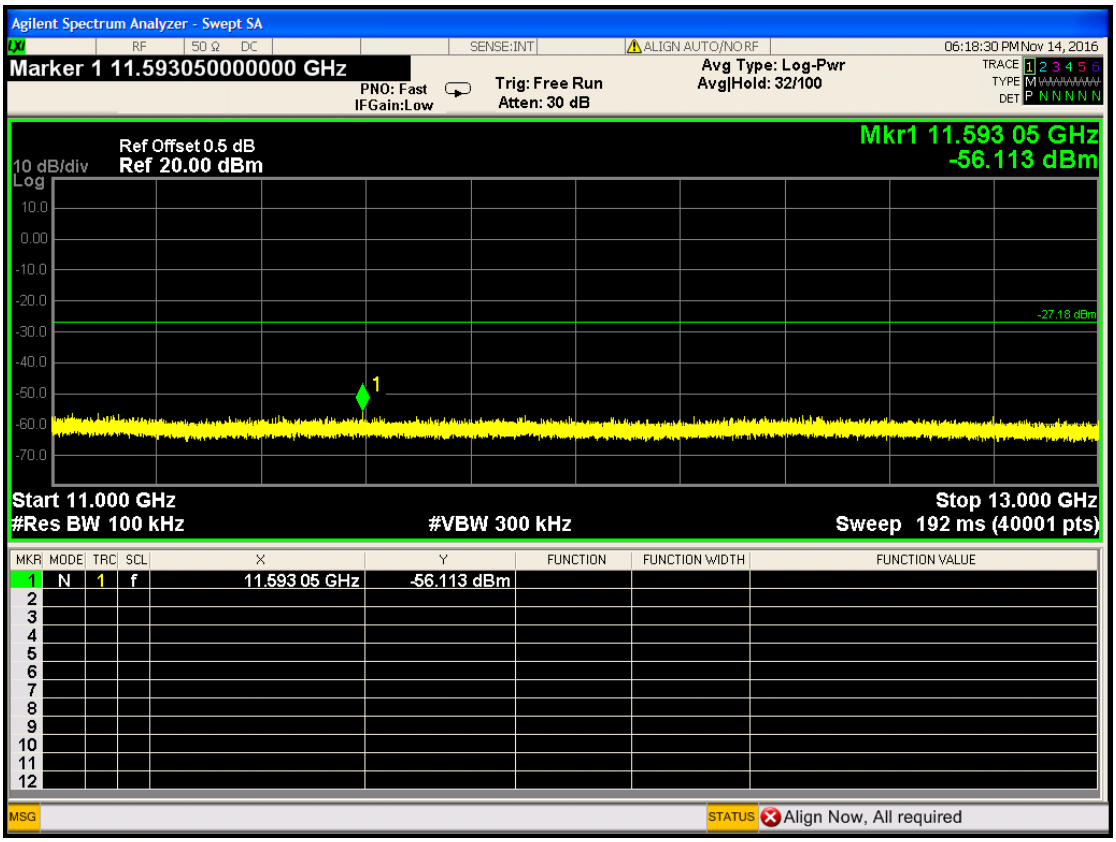

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:14:29 PM Nov 14, 2016
Display Line -27.18 dBm
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 1.894 50 GHz
-45.363 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
2
Start 1.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 3.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.405 10 GHz 2.817 dBm
2 N 1 f 1.894 50 GHz -45.363 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

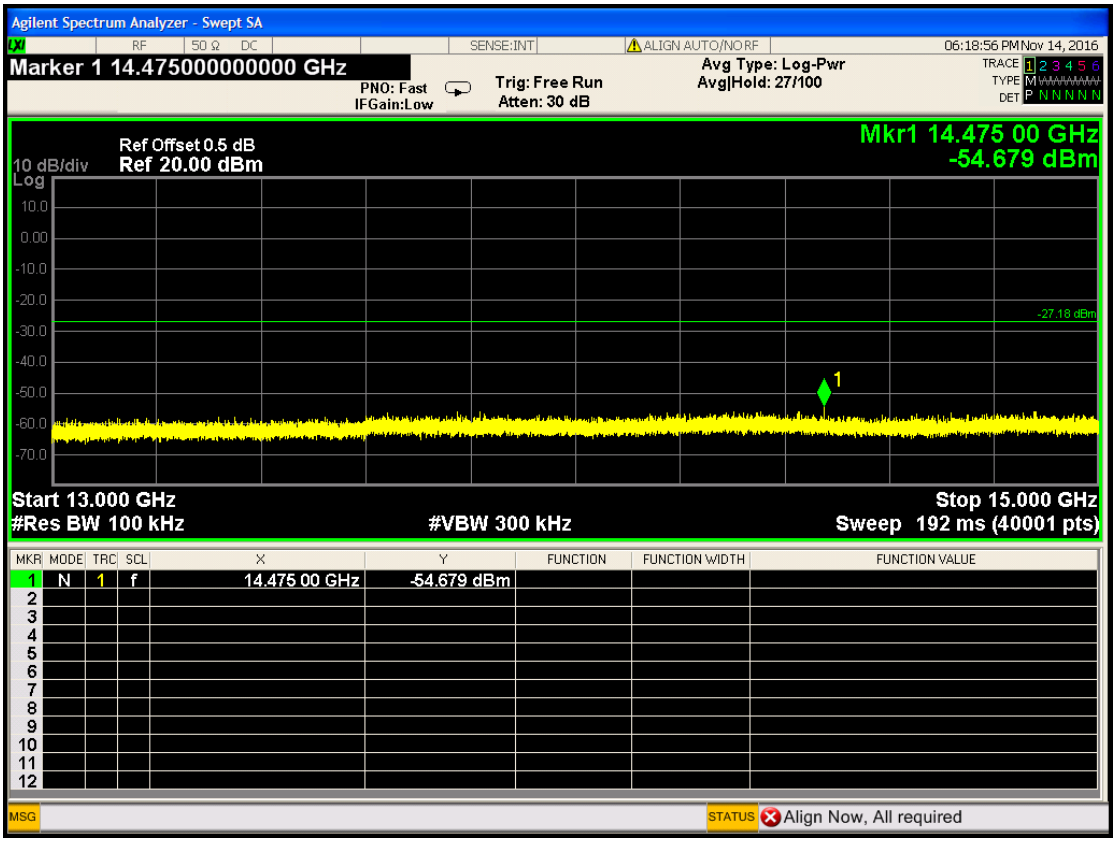

Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:16:31 PM Nov 14, 2016
Marker 1 3.304350000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 50/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 3.304 35 GHz
-49.206 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 5.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 3.304 35 GHz -49.206 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

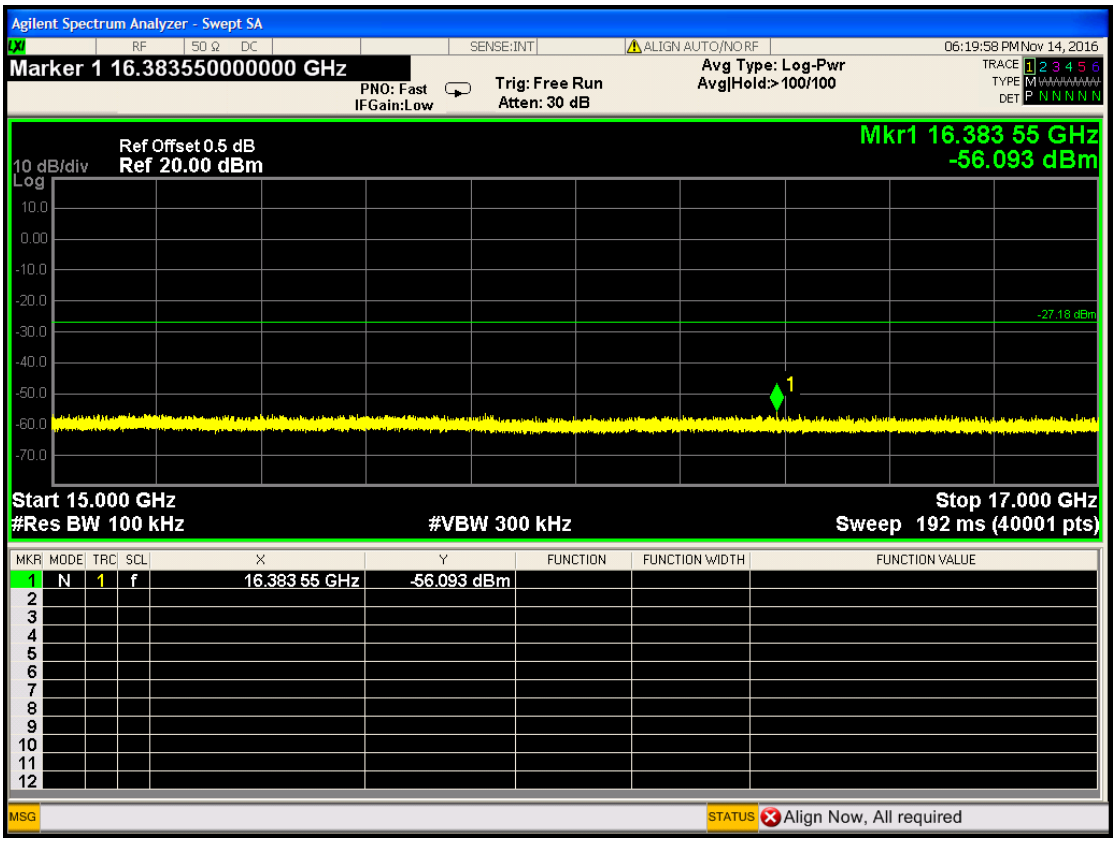

Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:17:11 PM Nov 14, 2016
Marker 1 5.611700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 58/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 5.611 70 GHz
-55.329 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 7.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 5.611 70 GHz -55.329 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

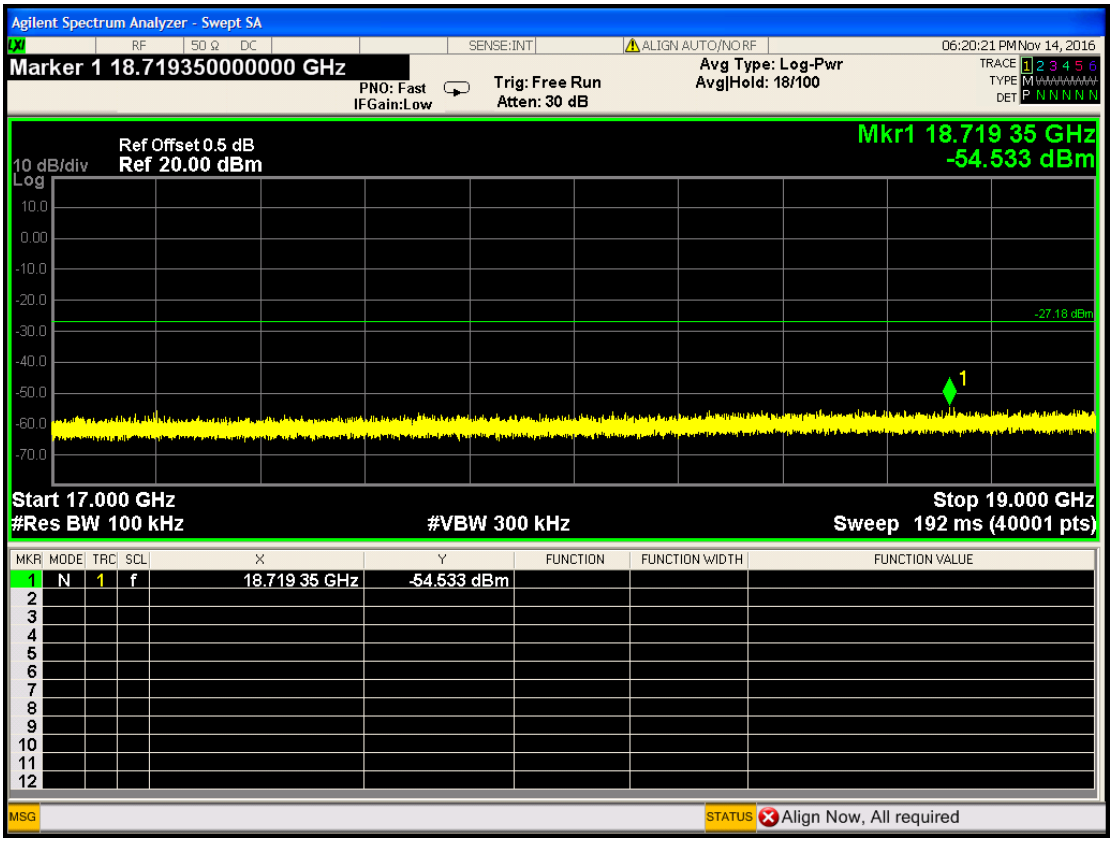

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:17:40 PM Nov 14, 2016
Marker 1 8.974800000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 36/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 8.974 80 GHz
-55.147 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
Start 7.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 9.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 8.974 80 GHz -55.147 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

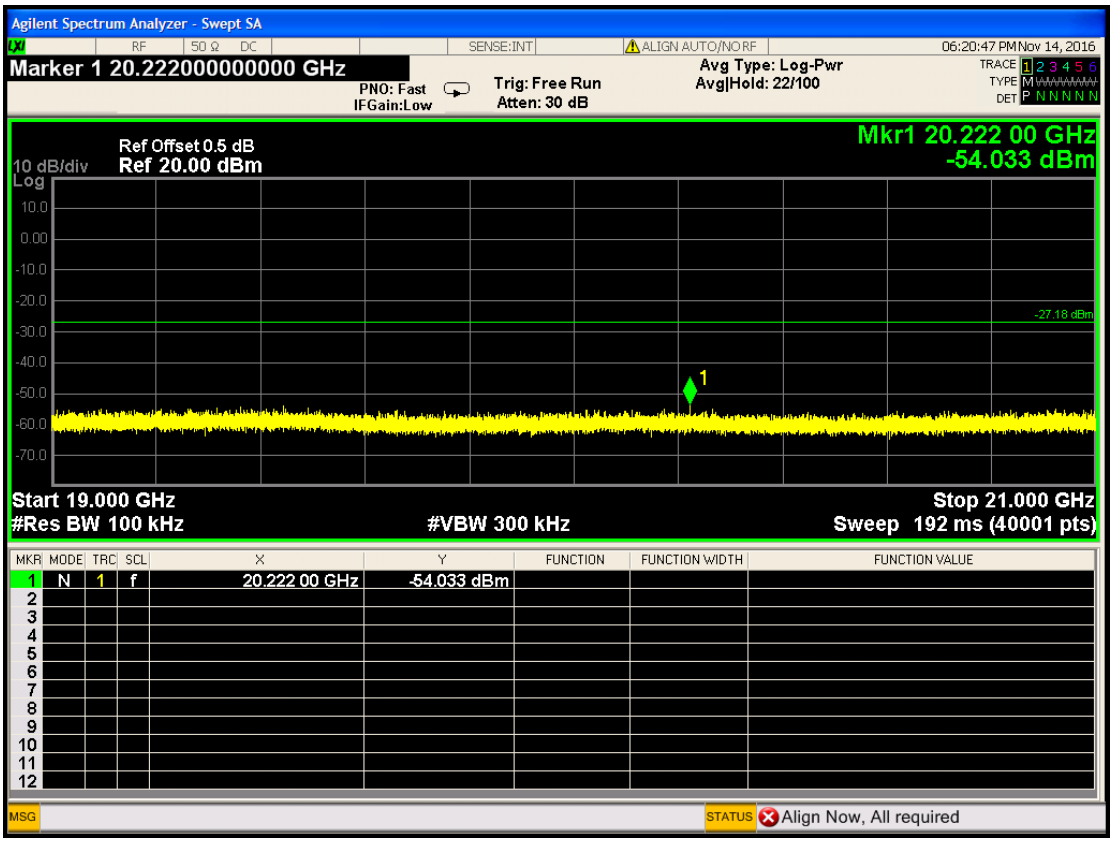

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:18:03 PM Nov 14, 2016
Marker 1 9.800450000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 21/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 9.800 45 GHz
-56.193 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
Start 9.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 11.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 9.800 45 GHz -56.193 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

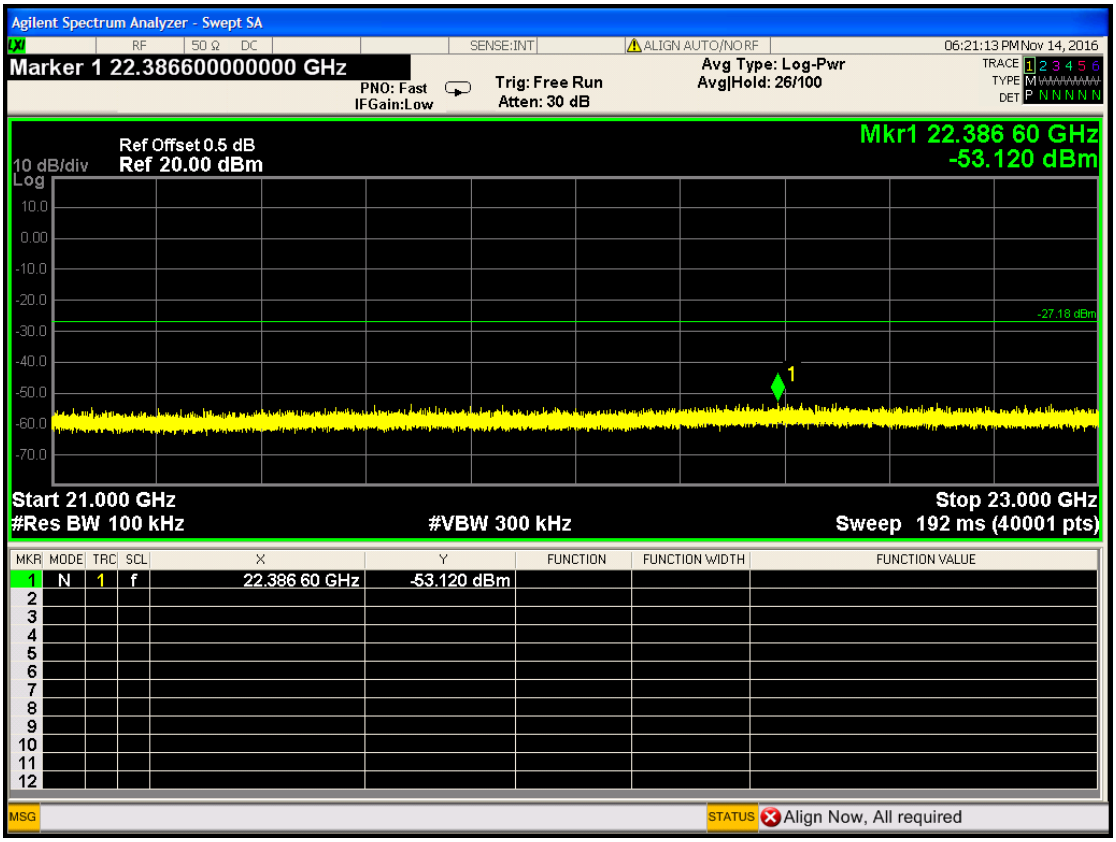

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:18:30 PM Nov 14, 2016
Marker 1 11.593050000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 32/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 11.593 05 GHz
-56.113 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 11.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 13.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 11.593 05 GHz -56.113 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:18:56 PM Nov 14, 2016
Marker 1 14.475000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 27/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 14.475 00 GHz
-54.679 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 13.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 14.475 00 GHz -54.679 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:19:58 PM Nov 14, 2016
Marker 1 16.383550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 16.383 55 GHz
-56.093 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 17.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 16.383 55 GHz -56.093 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:20:21 PM Nov 14, 2016
Marker 1 18.719350000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 18/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 18.719 35 GHz
-54.533 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 17.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 19.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 18.719 35 GHz -54.533 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:20:47 PM Nov 14, 2016
Marker 1 20.222000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 22/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 20.222 00 GHz
-54.033 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 19.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 21.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 20.222 00 GHz -54.033 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:21:13 PM Nov 14, 2016
Marker 1 22.386600000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 26/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 22.386 60 GHz
-53.120 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 21.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 23.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 22.386 60 GHz -53.120 dBm
2
3
4
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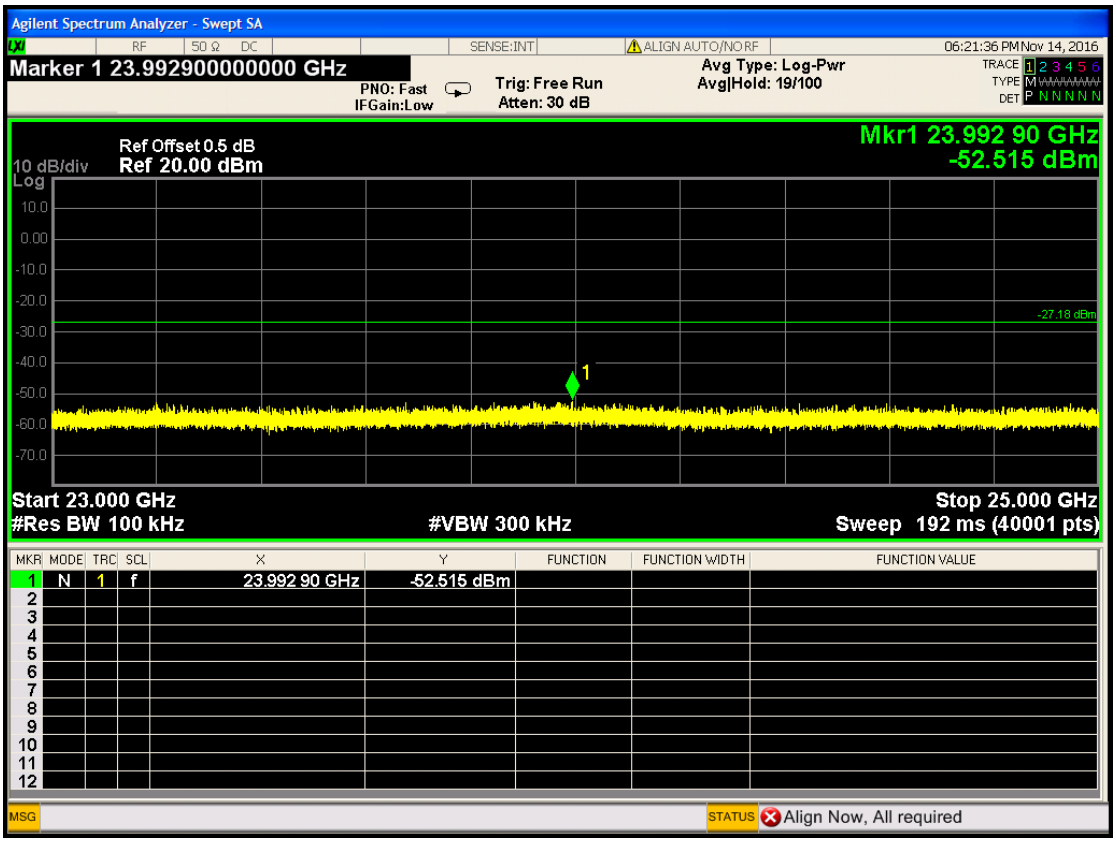
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:21:36 PM Nov 14, 2016
Marker 1 23.992900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 19/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 23.992 90 GHz
-52.515 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.18 dBm
1
Start 23.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 23.992 90 GHz -52.515 dBm
2
3
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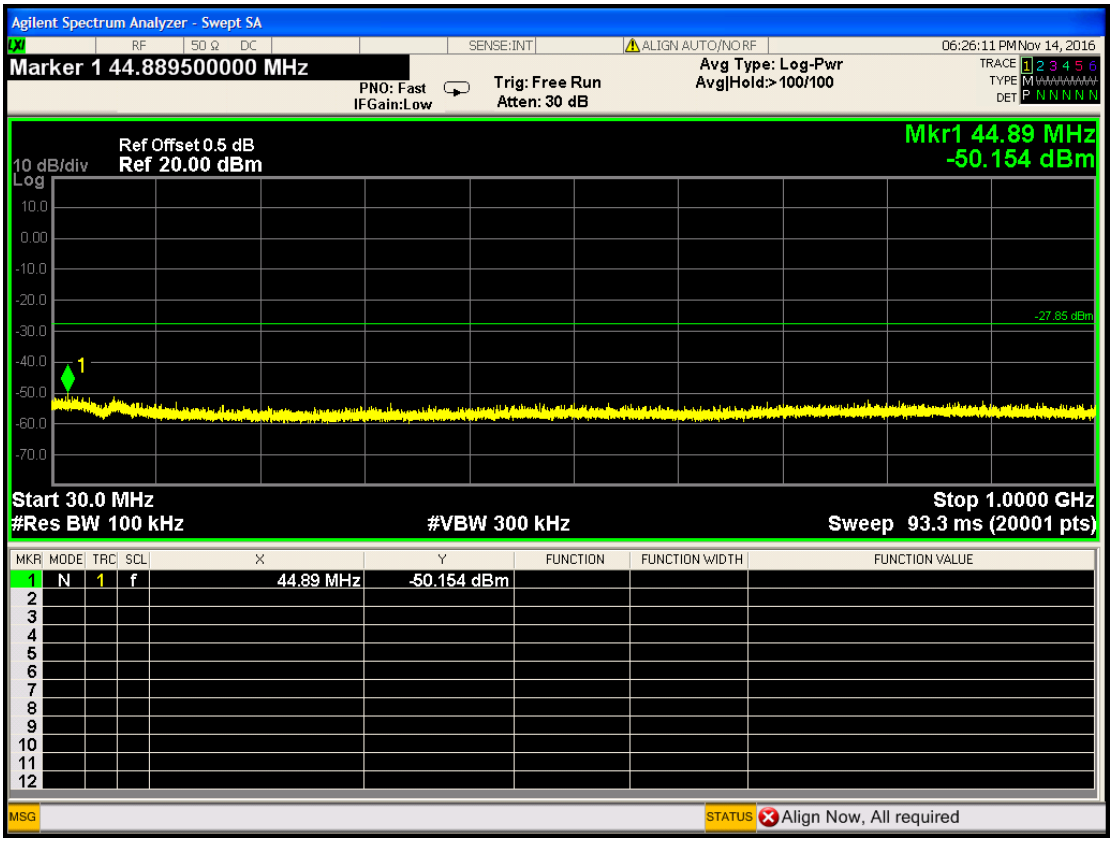
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

CH 20


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:26:11 PM Nov 14, 2016
Marker 1 44.889500000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 44.89 MHz
-50.154 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 93.3 ms (20001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 44.89 MHz -50.154 dBm
2
3
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6
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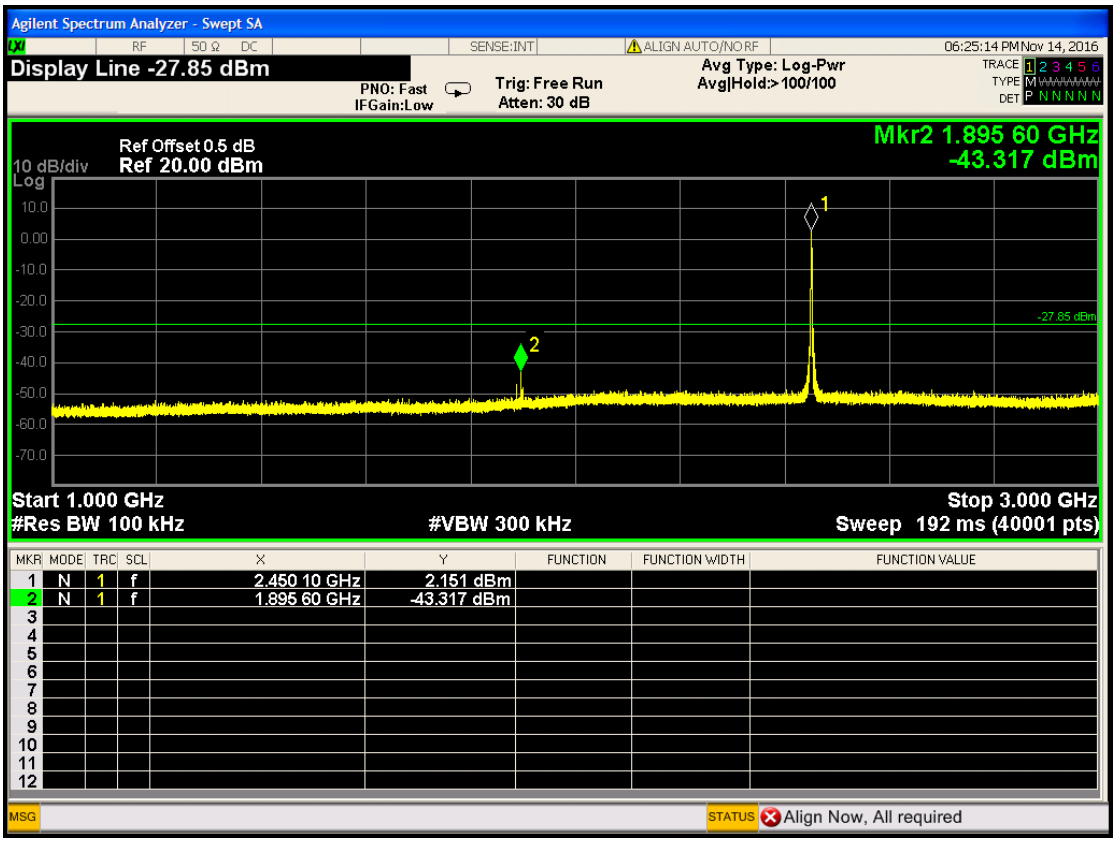
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:25:14 PM Nov 14, 2016
Display Line -27.85 dBm
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 1.895 60 GHz
-43.317 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
Start 1.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 3.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.450 10 GHz 2.151 dBm
2 N 1 f 1.895 60 GHz -43.317 dBm
3
4
5
6
7
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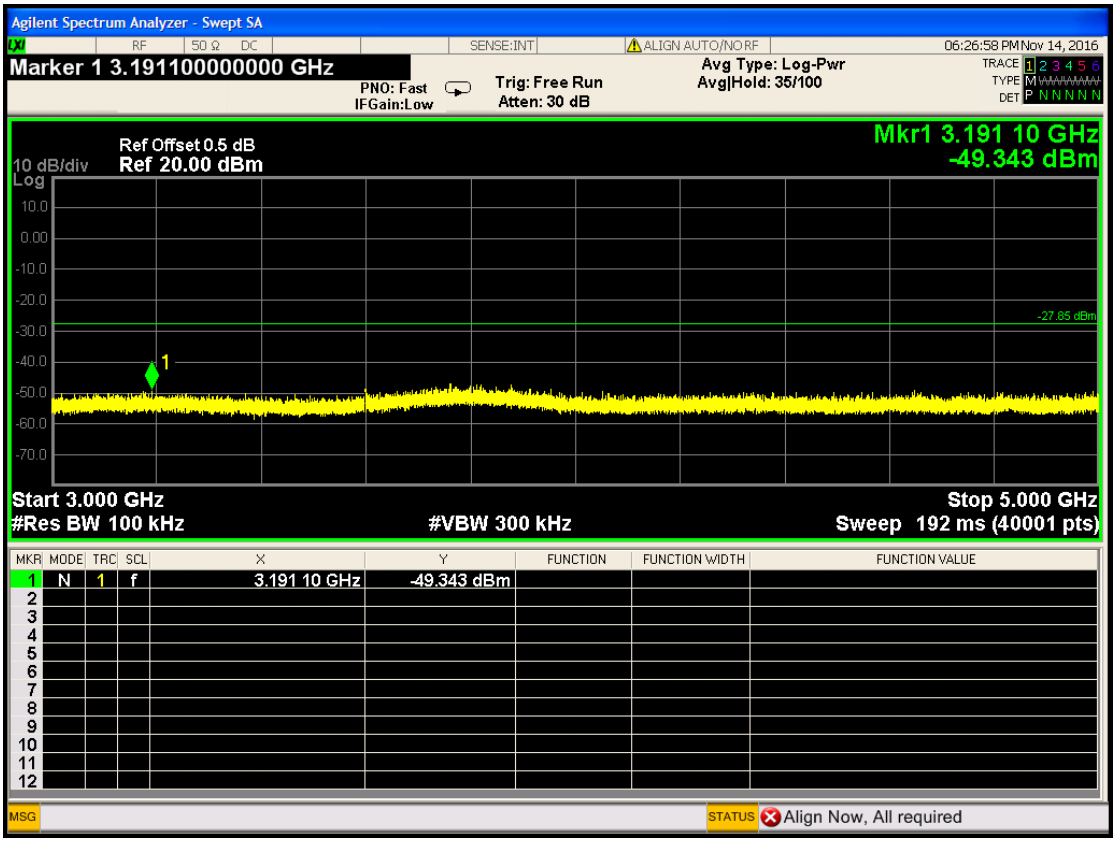
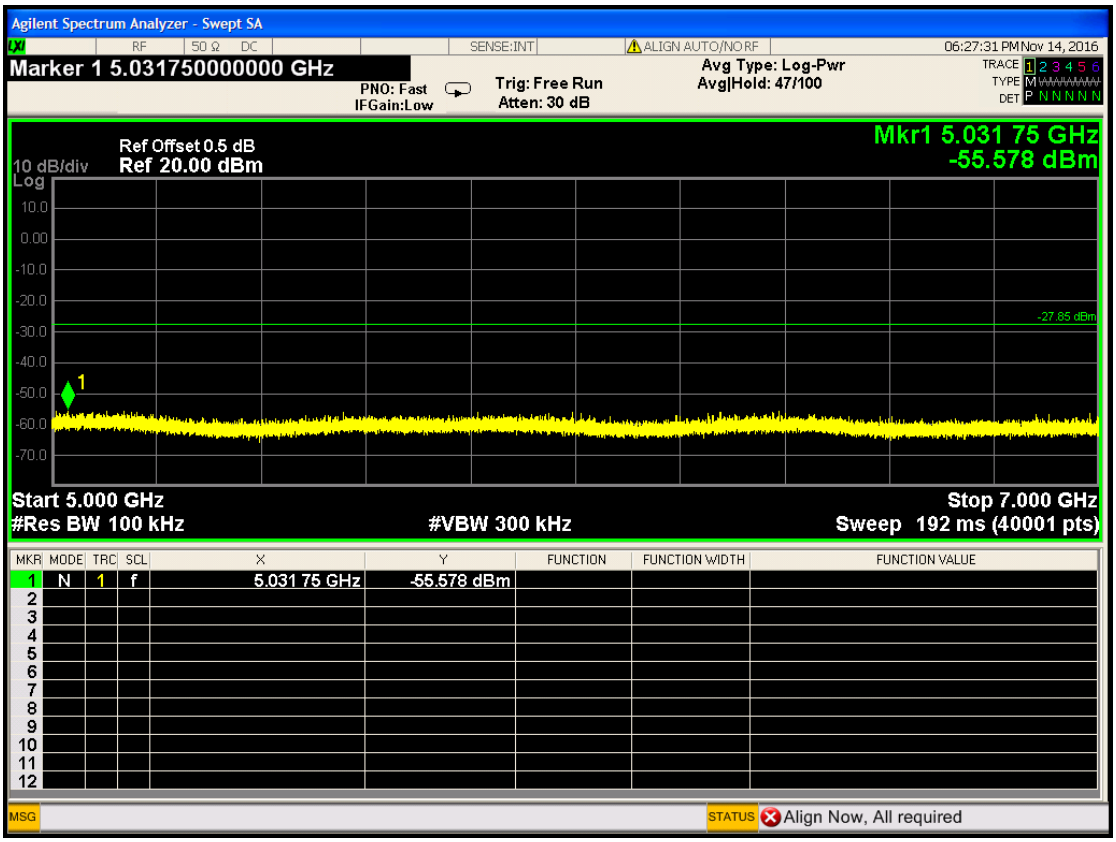
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:26:58 PM Nov 14, 2016
Marker 1 3.191100000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 35/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 3.191 10 GHz
-49.343 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 5.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 3.191 10 GHz -49.343 dBm
2
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:27:31 PM Nov 14, 2016
Marker 1 5.031750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 47/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 5.031 75 GHz
-55.578 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 7.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 5.031 75 GHz -55.578 dBm
2
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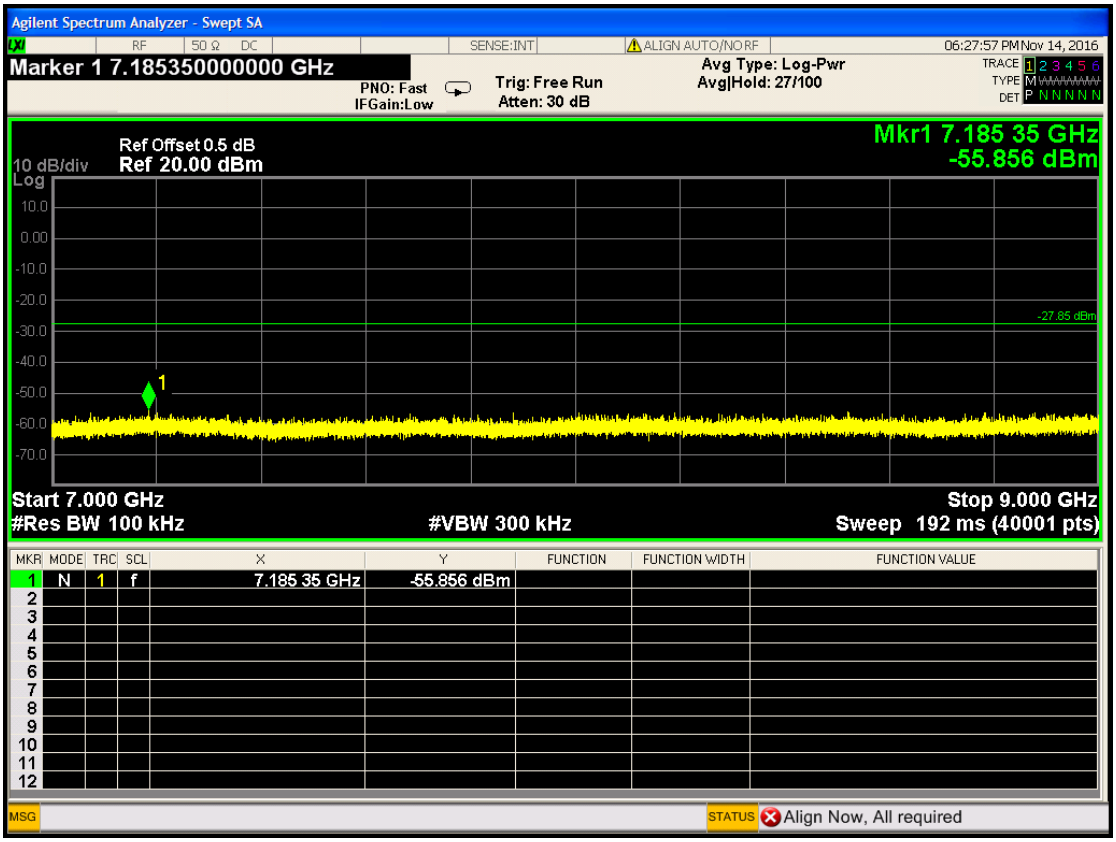
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:27:57 PM Nov 14, 2016
Marker 1 7.185350000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 27/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 7.185 35 GHz
-55.856 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 7.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 9.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 7.185 35 GHz -55.856 dBm
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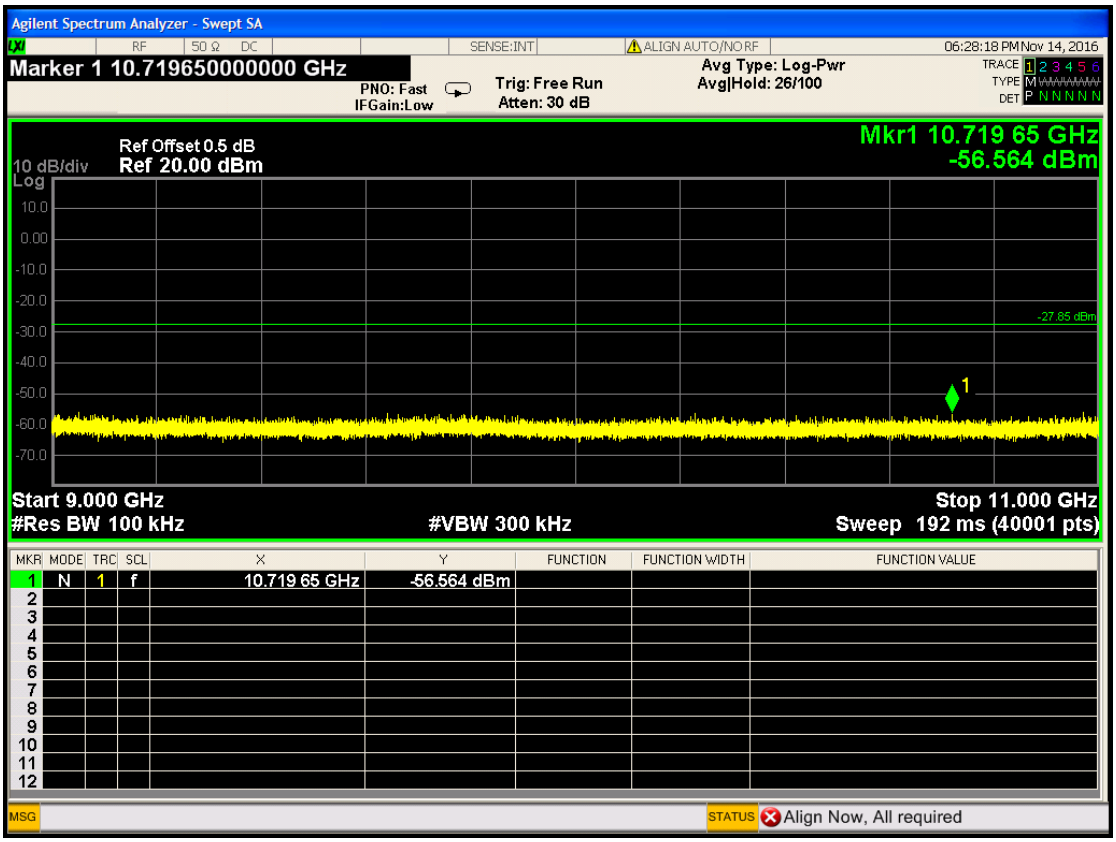
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:28:18 PM Nov 14, 2016
Marker 1 10.719650000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 26/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 10.719 65 GHz
-56.564 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 9.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 11.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 10.719 65 GHz -56.564 dBm
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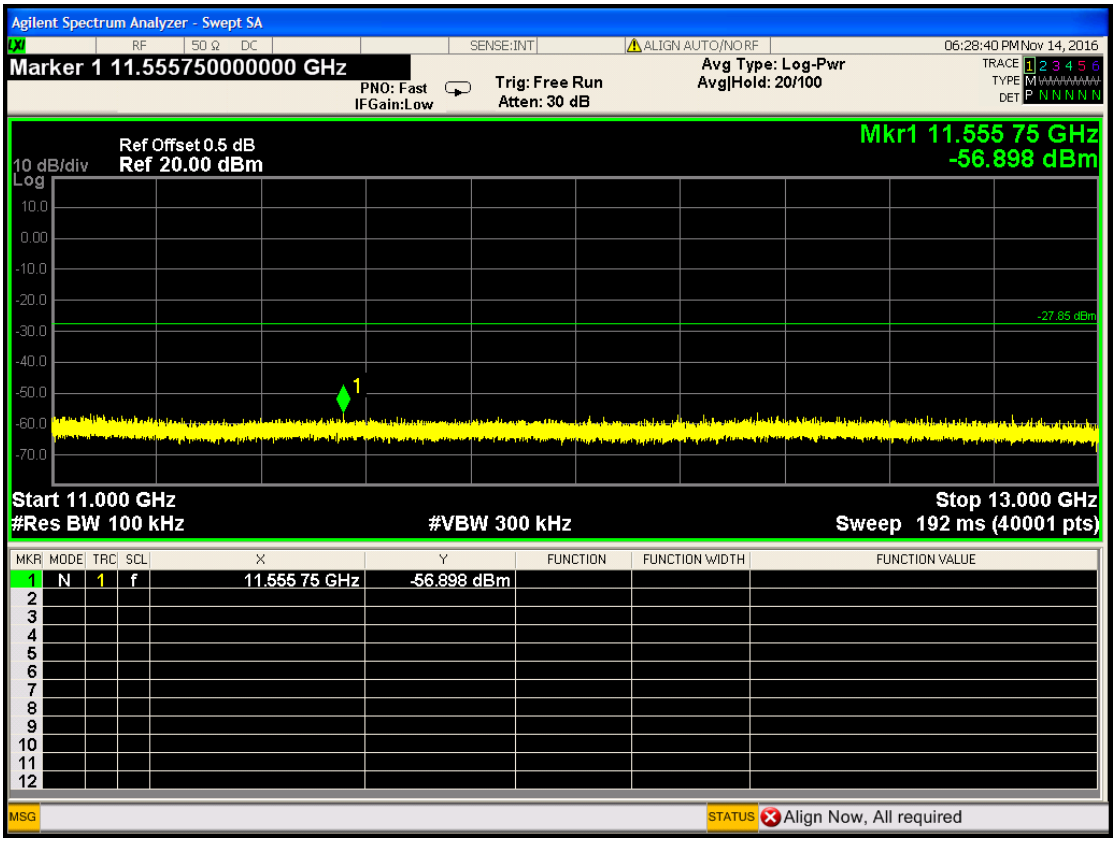
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:28:40 PM Nov 14, 2016
Marker 1 11.555750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 20/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 11.555 75 GHz
-56.898 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 11.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 13.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 11.555 75 GHz -56.898 dBm
2
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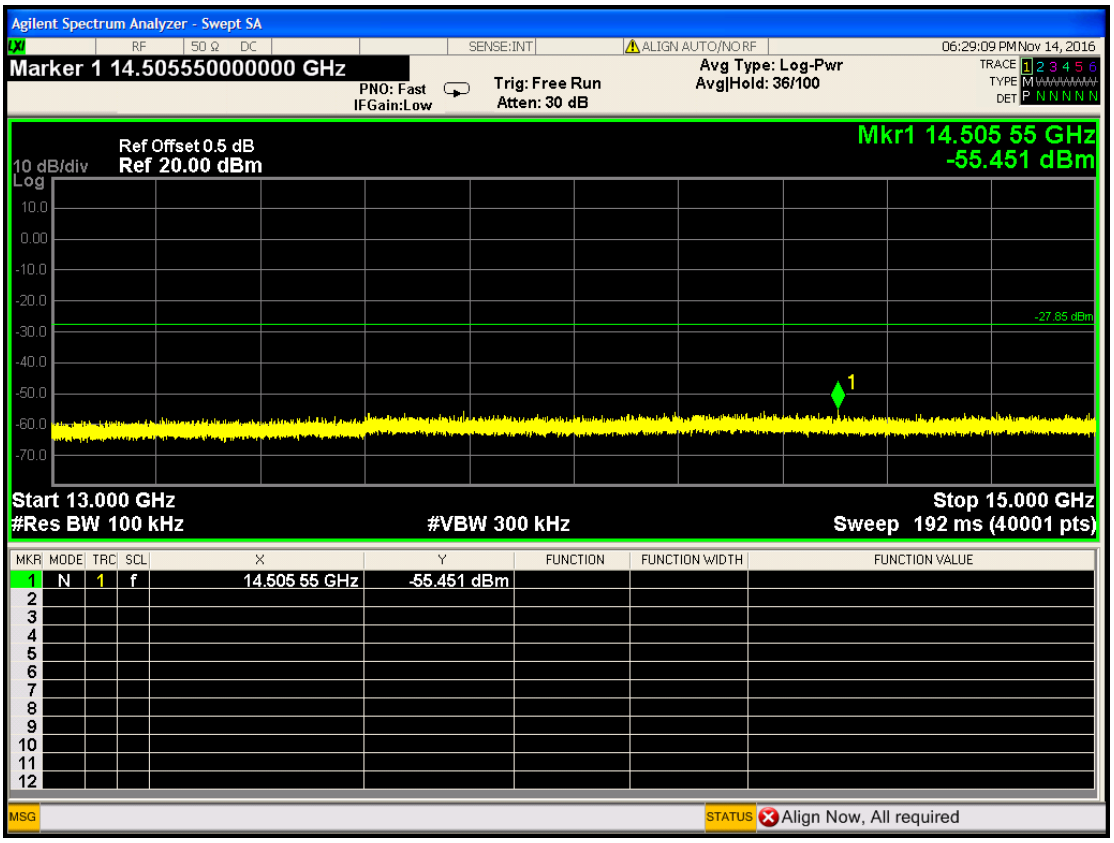
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:29:09 PM Nov 14, 2016
Marker 1 14.505550000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 36/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 14.505 55 GHz
-55.451 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 13.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 14.505 55 GHz -55.451 dBm
2
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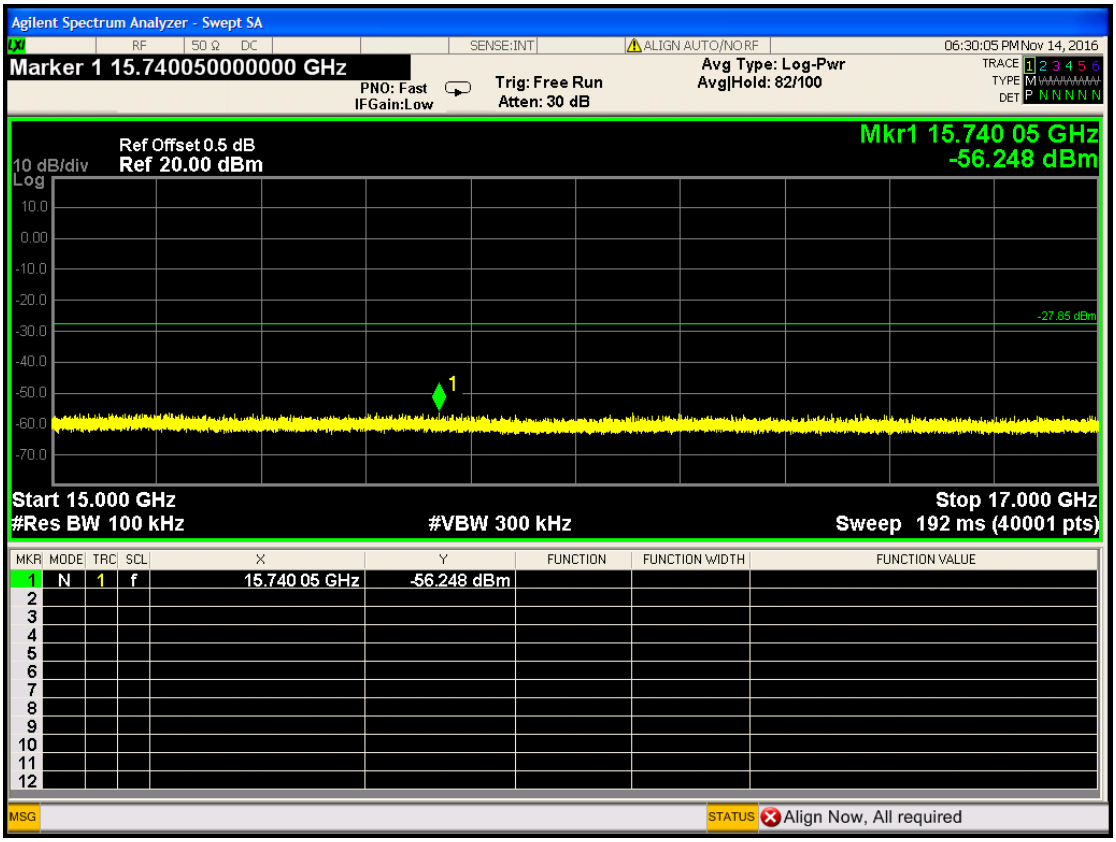
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:30:05 PM Nov 14, 2016
Marker 1 15.740050000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 82/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 15.740 05 GHz
-56.248 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 17.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 15.740 05 GHz -56.248 dBm
2
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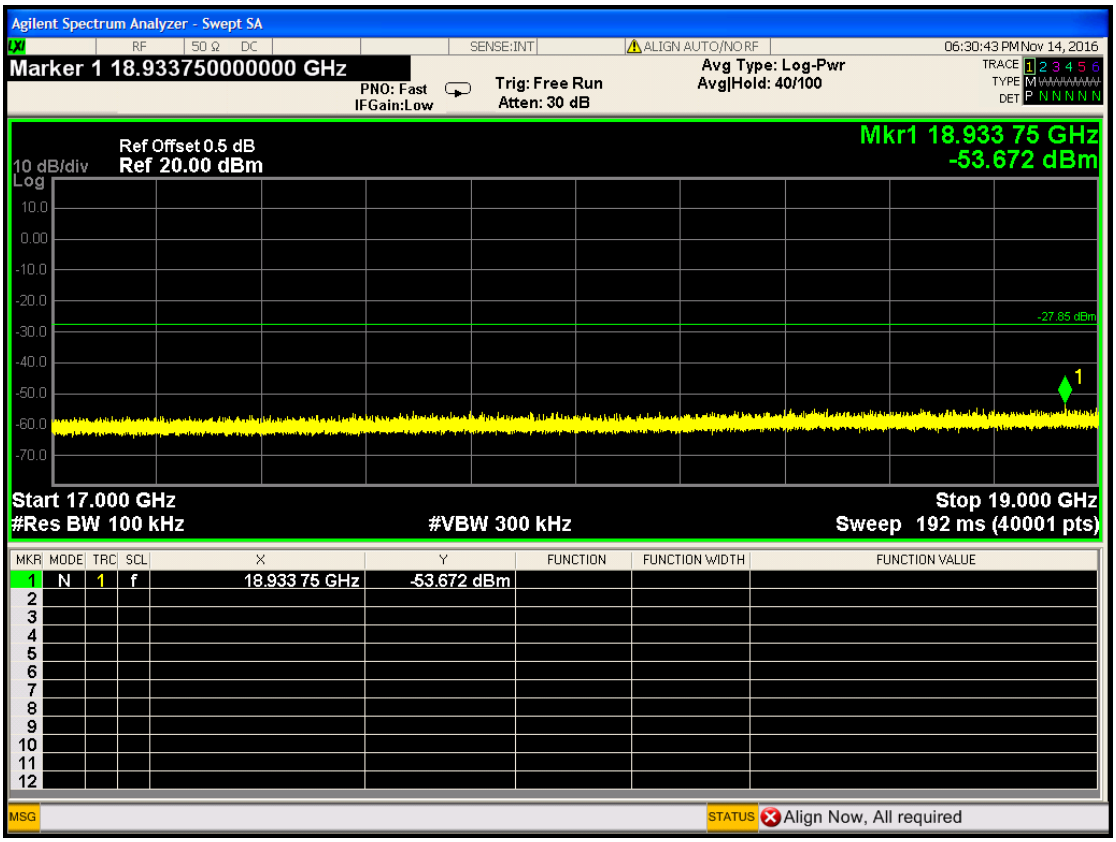
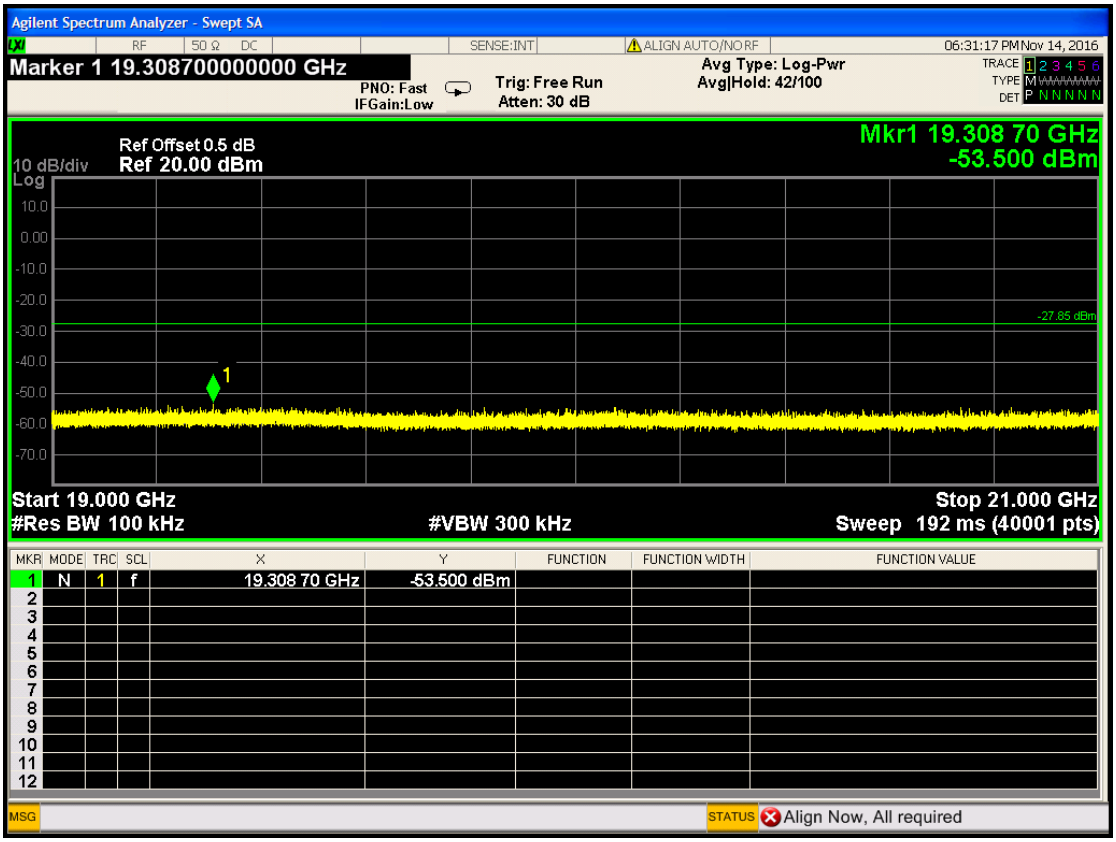
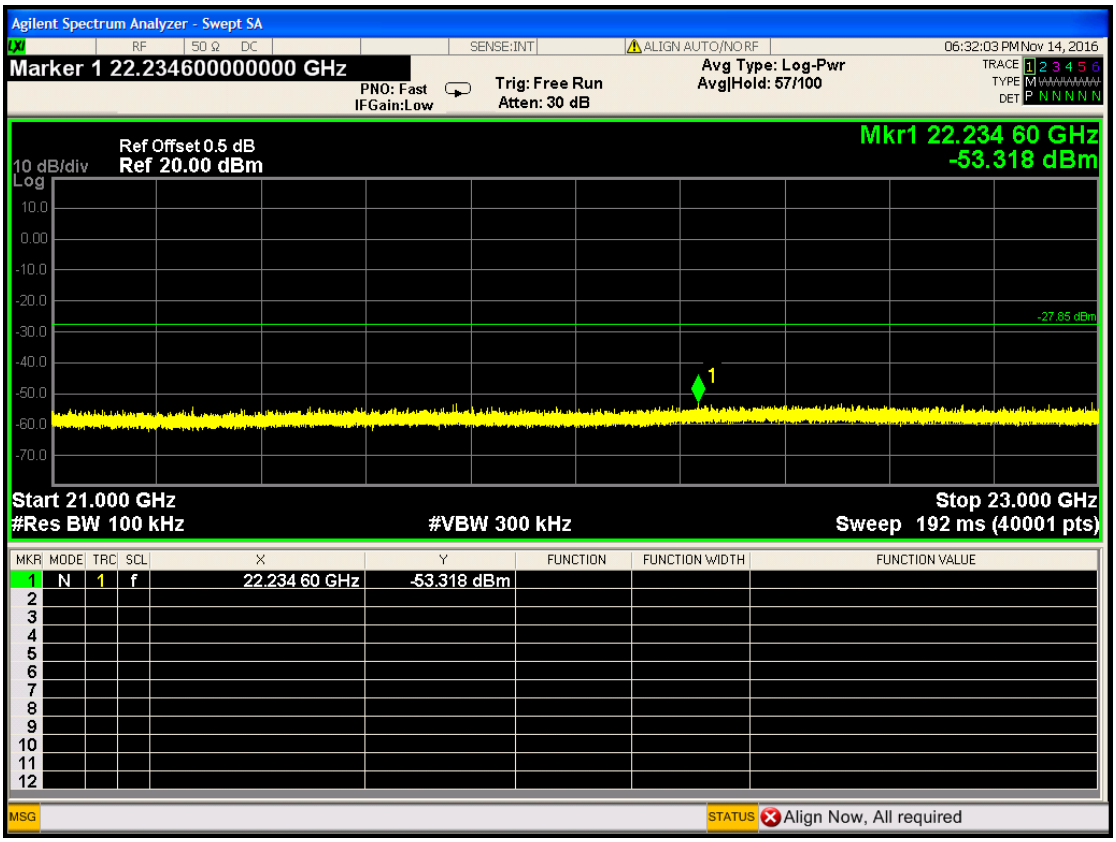
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:30:43 PM Nov 14, 2016
Marker 1 18.933750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 40/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 18.933 75 GHz
-53.672 dBm
10.0
0.00
-10.0
-20.0
-27.85 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
Start 17.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 19.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 18.933 75 GHz -53.672 dBm
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:31:17 PM Nov 14, 2016
Marker 1 19.308700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 42/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 19.308 70 GHz
-53.500 dBm
10.0
0.00
-10.0
-20.0
-27.85 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
Start 19.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 21.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 19.308 70 GHz -53.500 dBm
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:32:03 PM Nov 14, 2016
Marker 1 22.234600000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 57/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 22.234 60 GHz
-53.318 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 21.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 23.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 22.234 60 GHz -53.318 dBm
2
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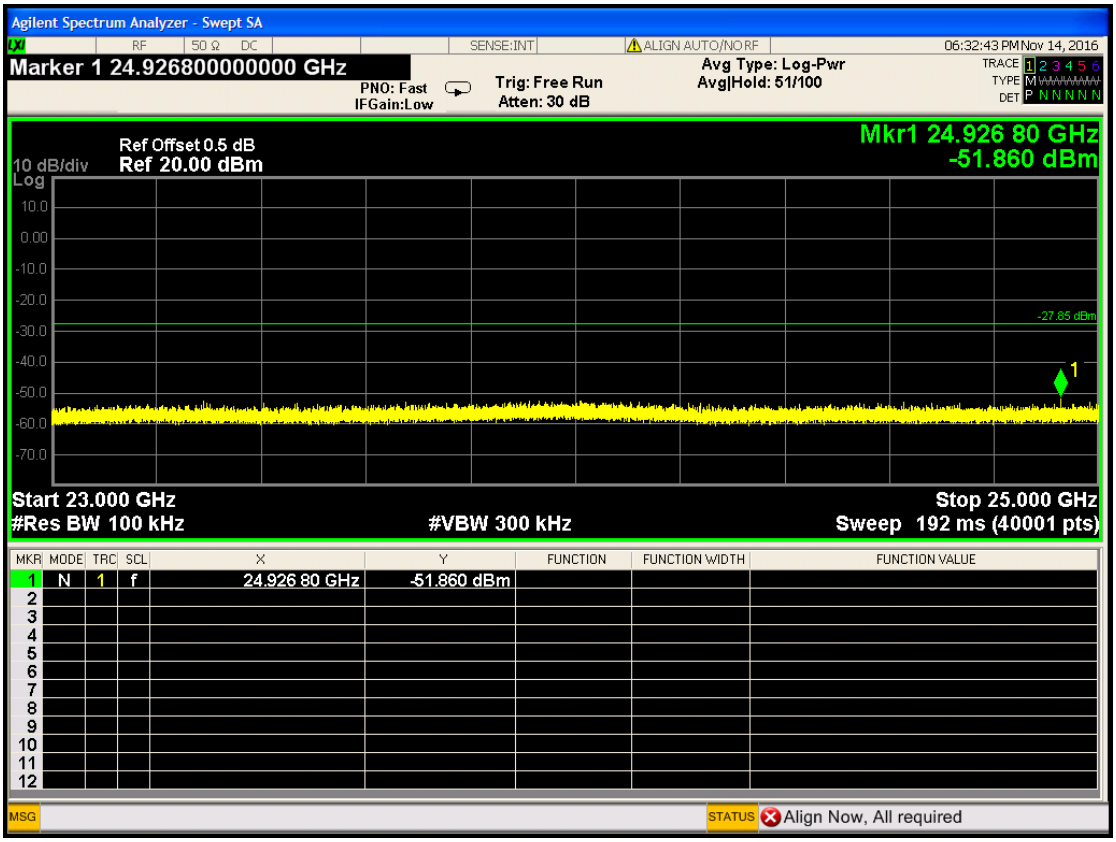
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
06:32:43 PM Nov 14, 2016
Marker 1 24.926800000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 51/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 24.926 80 GHz
-51.860 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.85 dBm
1
Start 23.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 24.926 80 GHz -51.860 dBm
2
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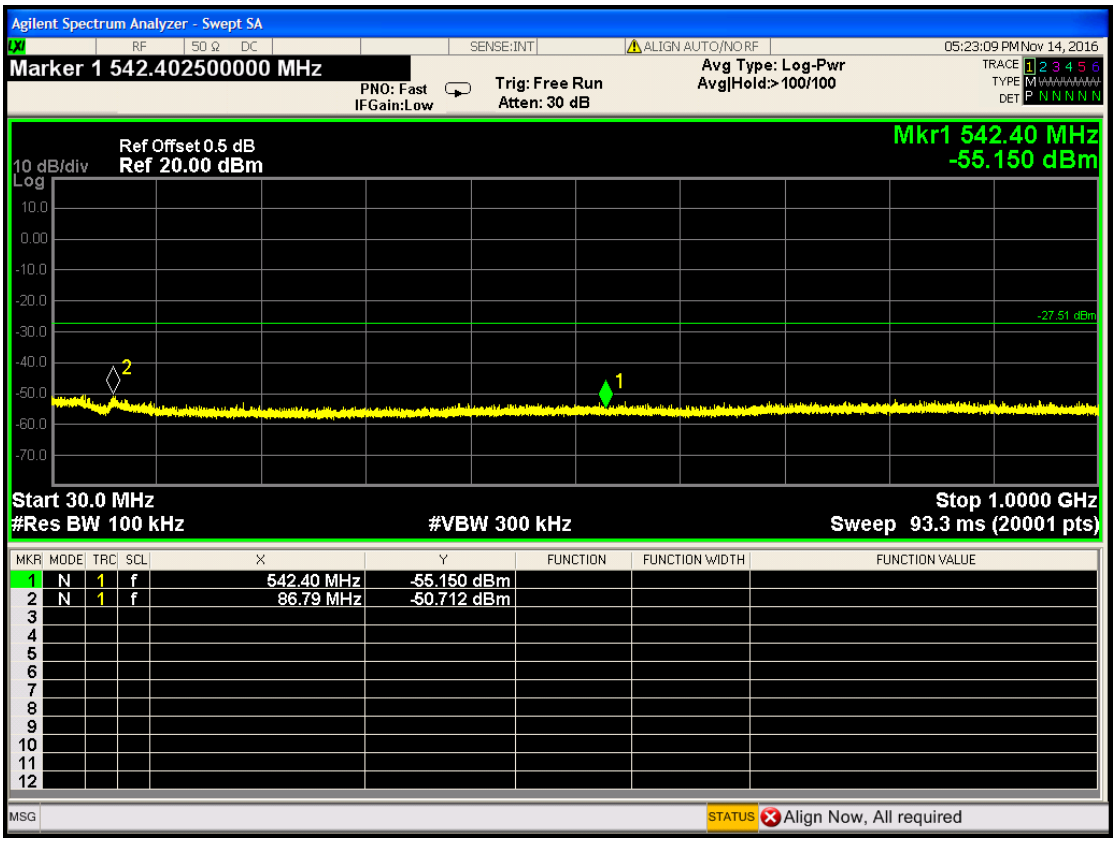
12
MSG
STATUS
Align Now, All required

CH 25


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:23:09 PM Nov 14, 2016
Marker 1 542.402500000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 542.40 MHz
-55.150 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 93.3 ms (20001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 542.40 MHz -55.150 dBm
2 N 1 f 86.79 MHz -50.712 dBm
3
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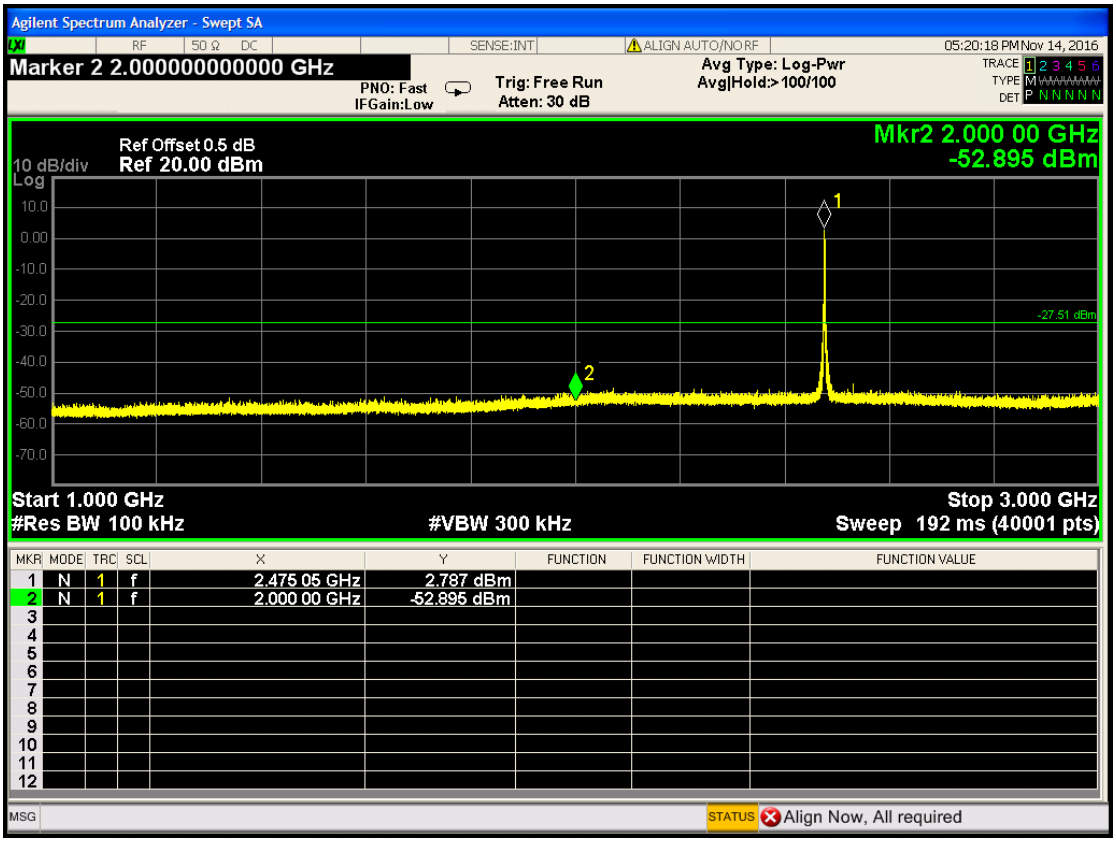
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:20:18 PM Nov 14, 2016
Marker 2 2.000000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 2.000 00 GHz
-52.895 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
Start 1.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 3.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.475 05 GHz 2.787 dBm
2 N 1 f 2.000 00 GHz -52.895 dBm
3
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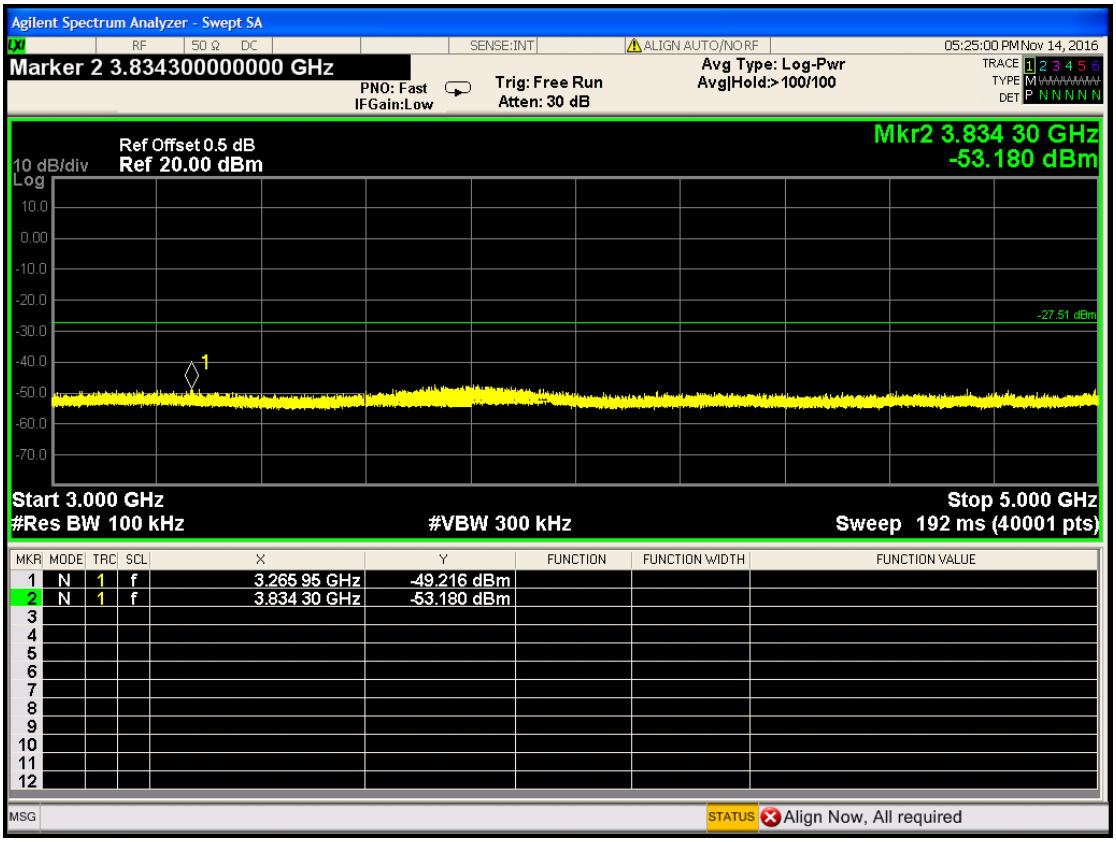
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:25:00 PM Nov 14, 2016
Marker 2 3.834300000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 3.834 30 GHz
-53.180 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 5.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 3.265 95 GHz -49.216 dBm
2 N 1 f 3.834 30 GHz -53.180 dBm
3
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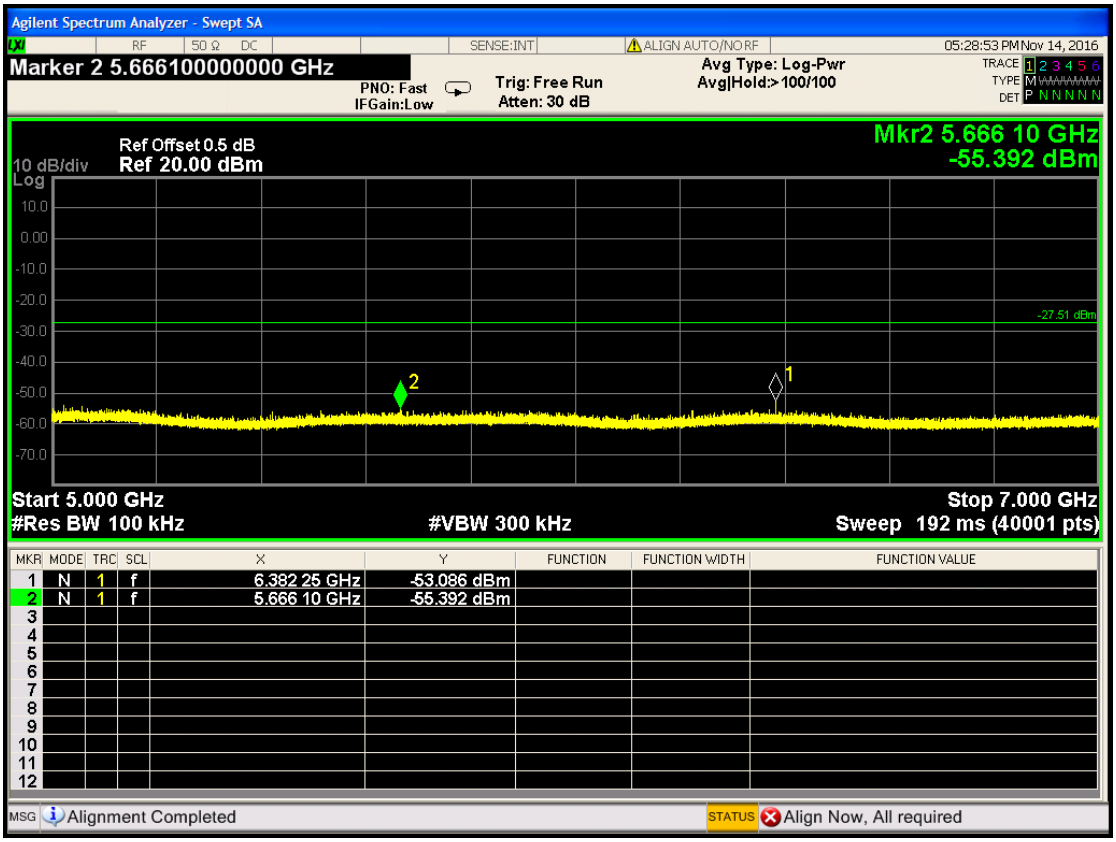
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:28:53 PM Nov 14, 2016
Marker 2 5.666100000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 5.666 10 GHz
-55.392 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
Start 5.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 7.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 6.382 25 GHz -53.086 dBm
2 N 1 f 5.666 10 GHz -55.392 dBm
3
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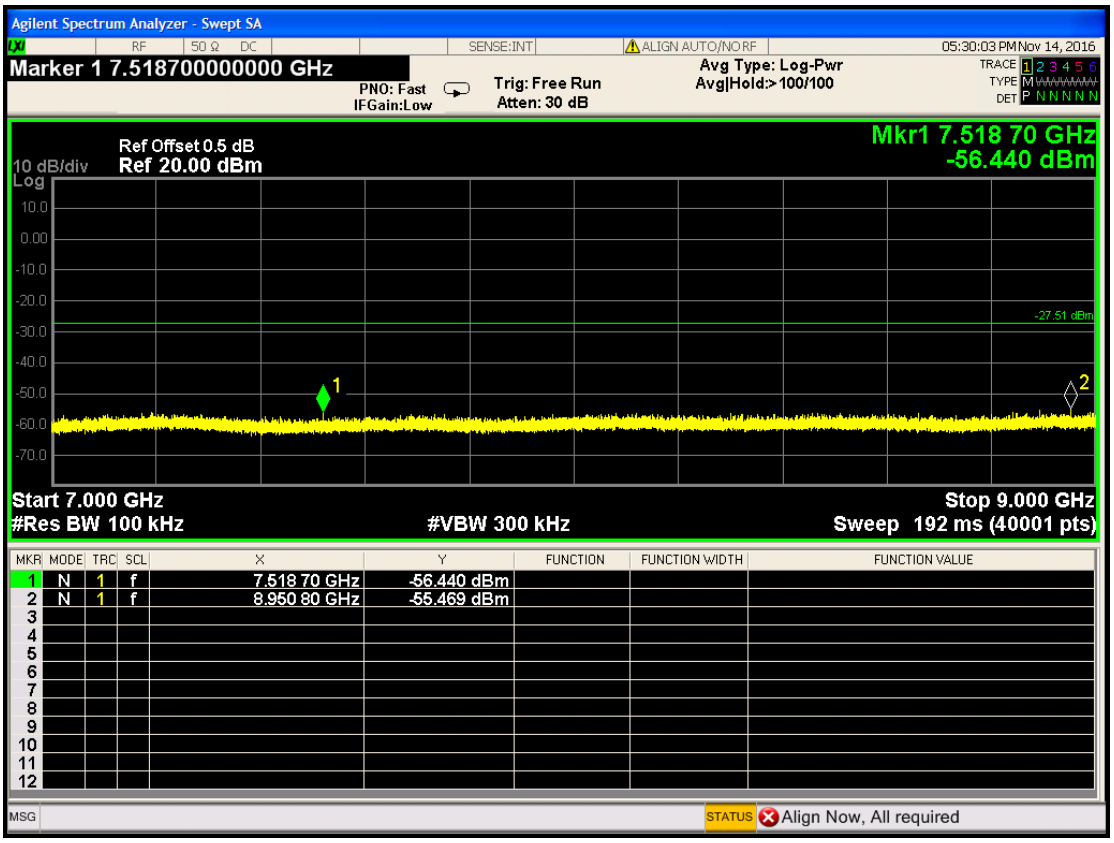
MSG
Alignment Completed
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:30:03 PM Nov 14, 2016
Marker 1 7.518700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 7.518 70 GHz
-56.440 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
1
2
Start 7.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 9.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 7.518 70 GHz -56.440 dBm
2 N 1 f 8.950 80 GHz -55.469 dBm
3
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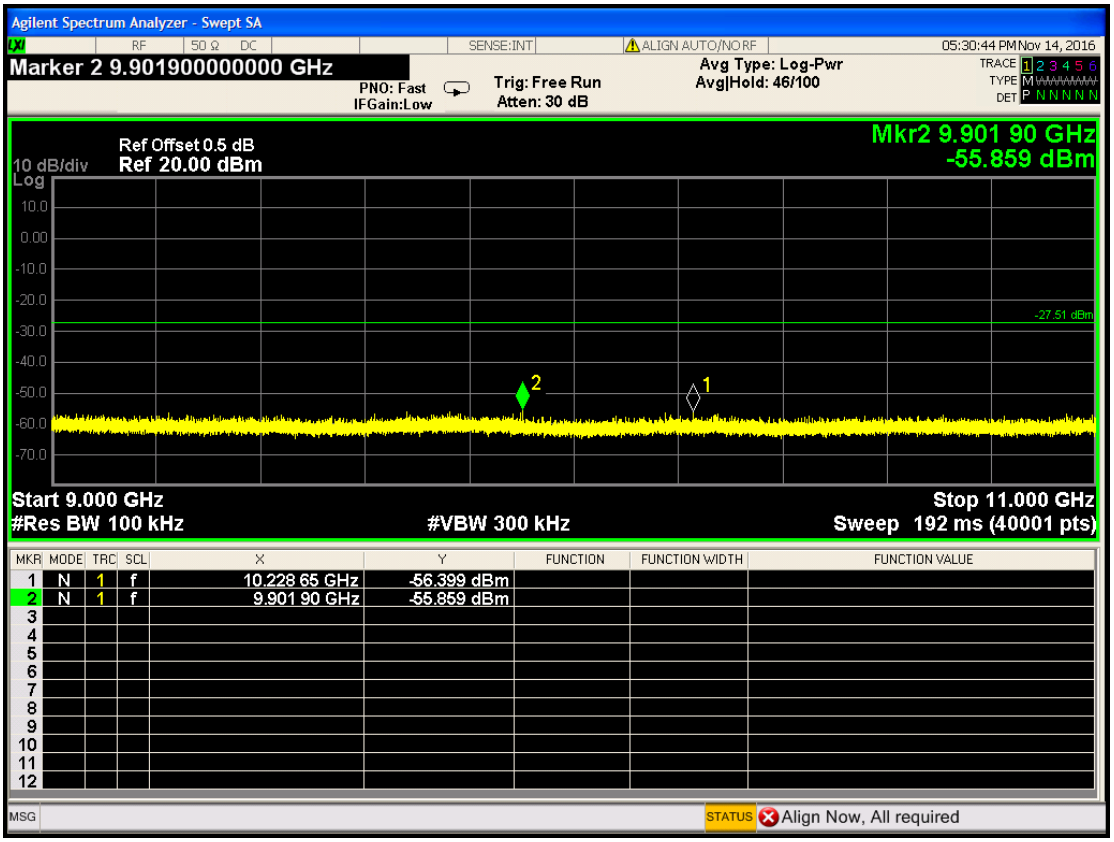
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:30:44 PM Nov 14, 2016
Marker 2 9.901900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 46/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 9.901 90 GHz
-55.859 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
2
1
Start 9.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 11.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 10.228 65 GHz -56.399 dBm
2 N 1 f 9.901 90 GHz -55.859 dBm
3
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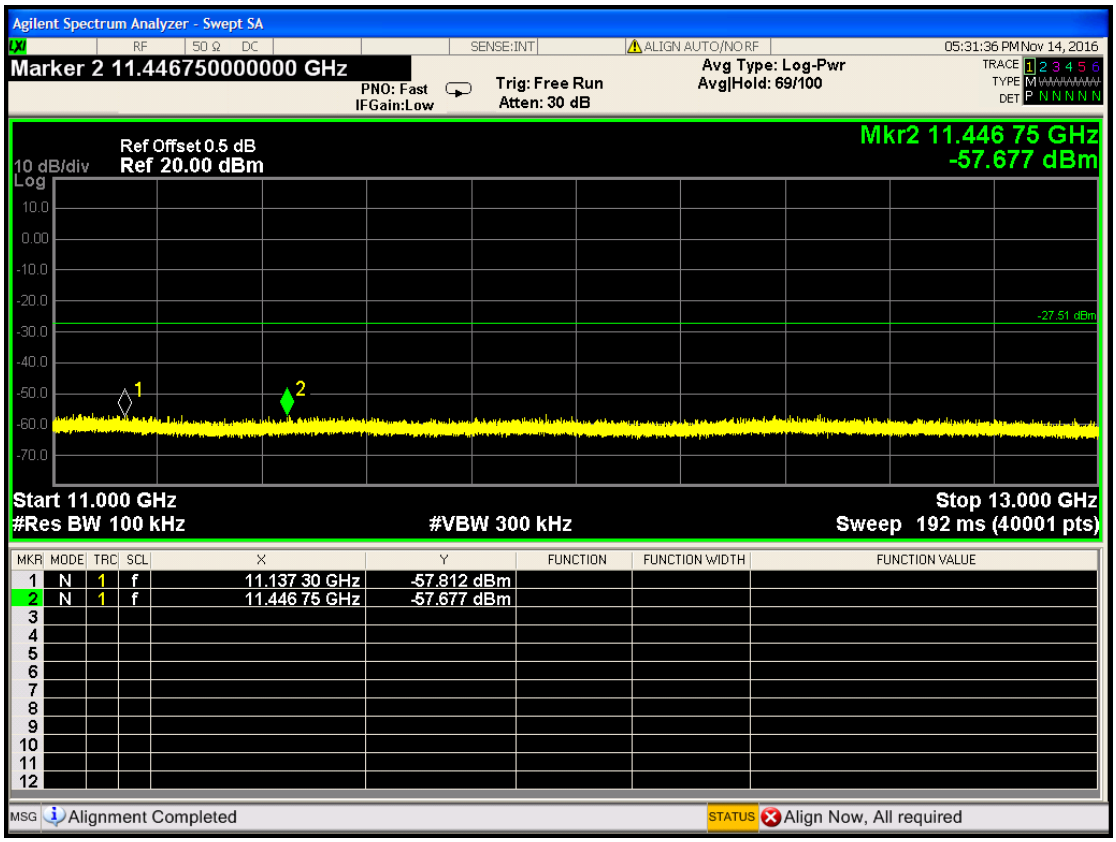
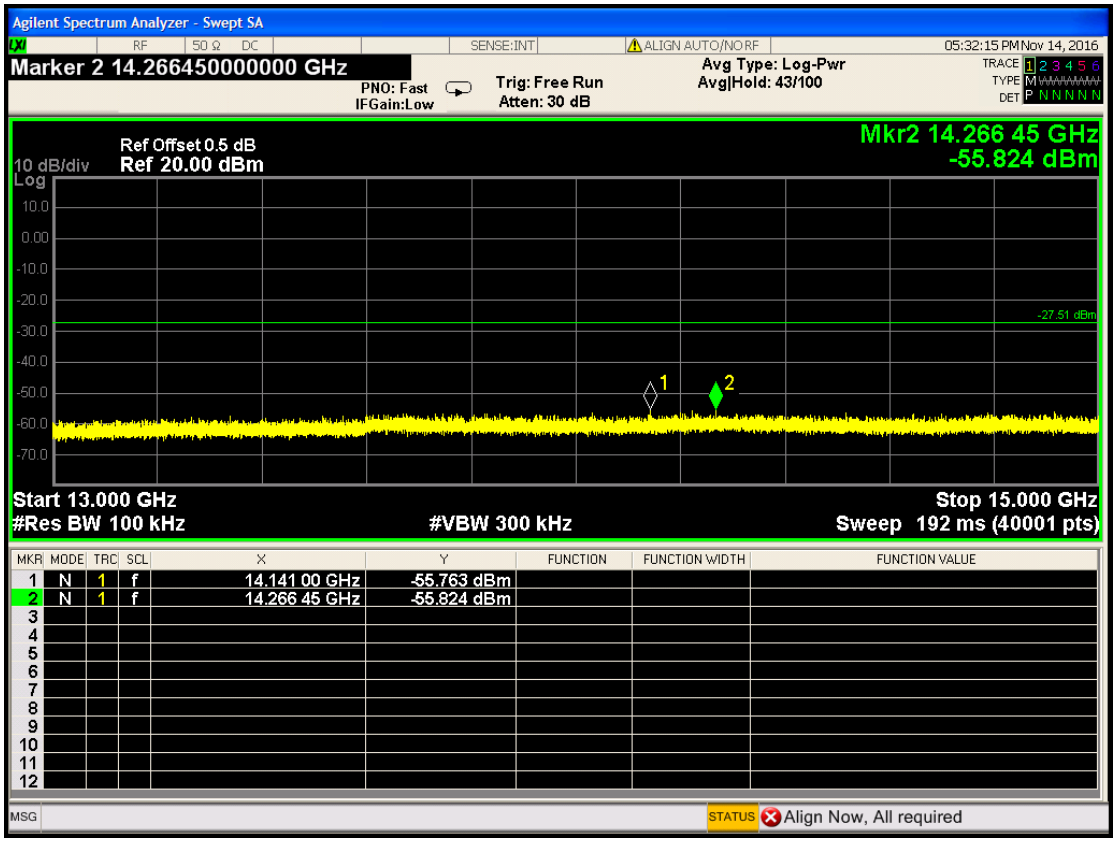
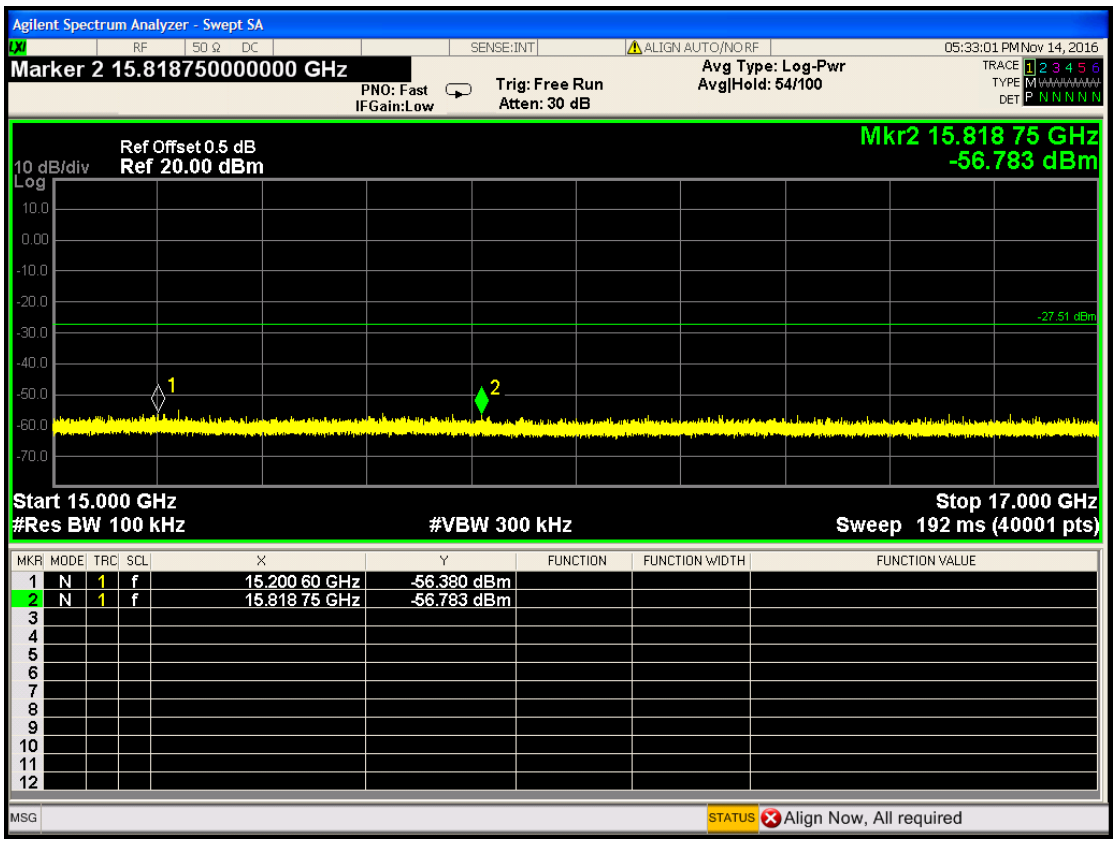
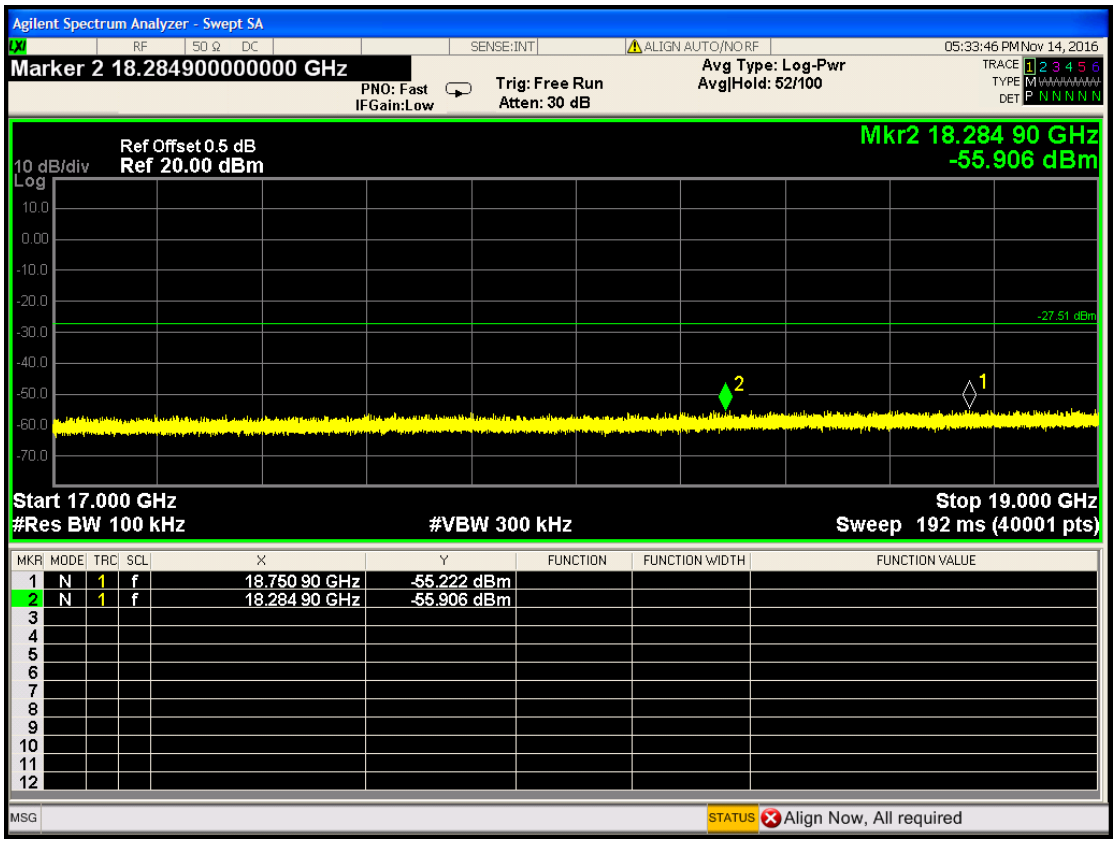
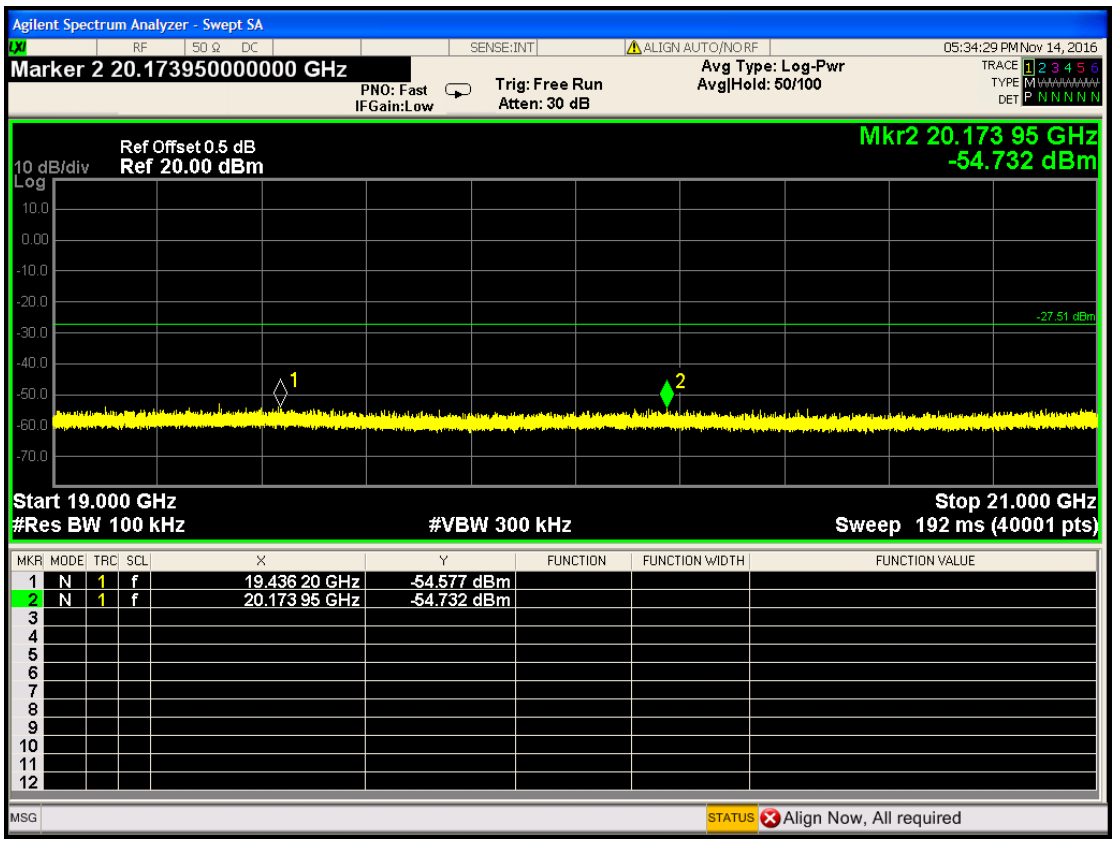
11
12
MSG
STATUS
Align Now, All required

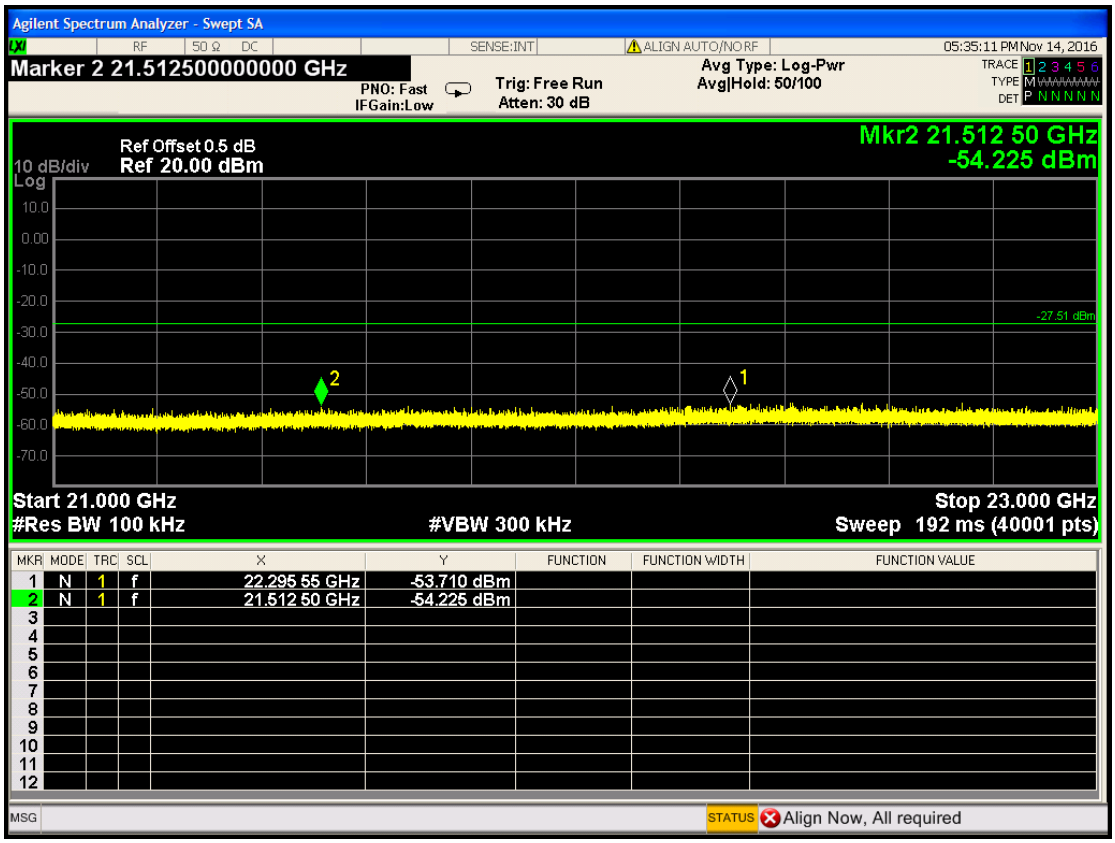

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:31:36 PM Nov 14, 2016
Marker 2 11.446750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 69/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 11.446 75 GHz
-57.677 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
1
2
Start 11.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 13.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 11.137 30 GHz -57.812 dBm
2 N 1 f 11.446 75 GHz -57.677 dBm
3
4
5
6
7
8
9
10
11
12
MSG
Alignment Completed
STATUS
Align Now, All required

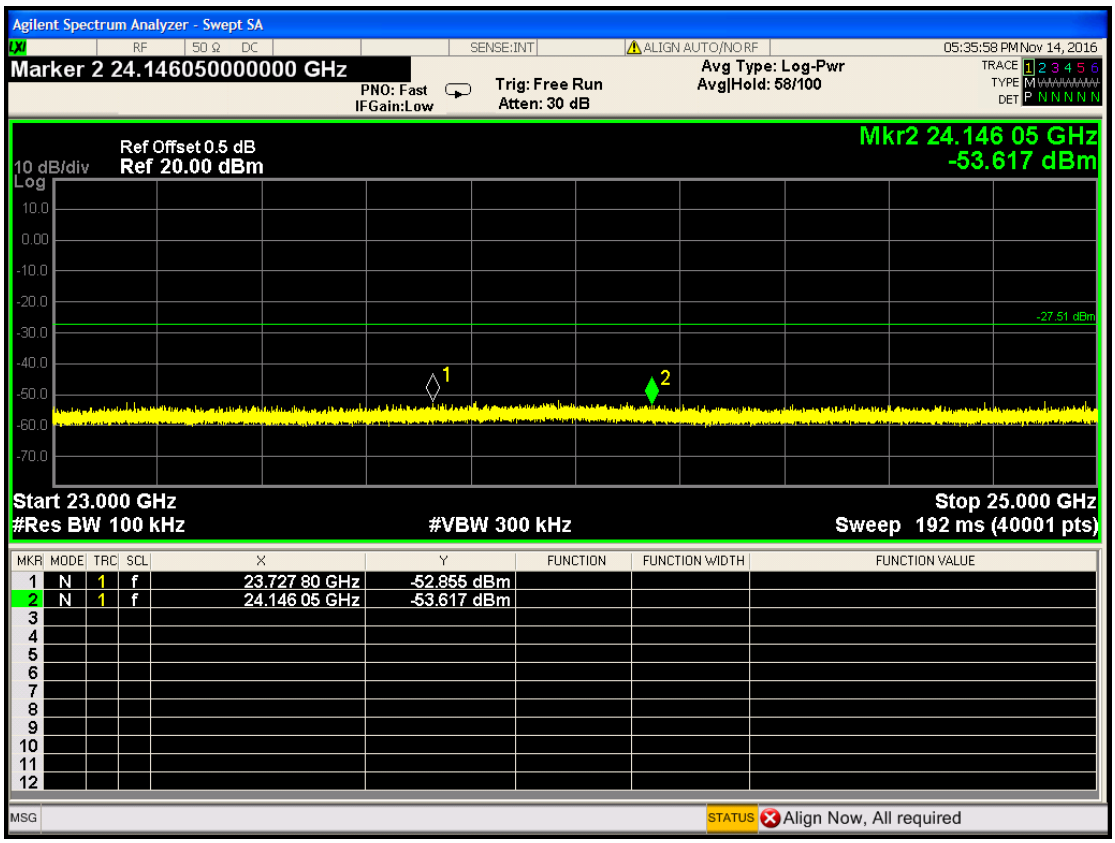

Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:32:15 PM Nov 14, 2016
Marker 2 14.266450000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 43/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 14.266 45 GHz
-55.824 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
1
2
Start 13.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 14.141 00 GHz -55.763 dBm
2 N 1 f 14.266 45 GHz -55.824 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:33:01 PM Nov 14, 2016
Marker 2 15.818750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 54/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 15.818 75 GHz
-56.783 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
1
2
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 17.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 15.200 60 GHz -56.380 dBm
2 N 1 f 15.818 75 GHz -56.783 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:33:46 PM Nov 14, 2016
Marker 2 18.284900000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 52/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 18.284 90 GHz
-55.906 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
2
1
Start 17.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 19.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 18.750 90 GHz -55.222 dBm
2 N 1 f 18.284 90 GHz -55.906 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:34:29 PM Nov 14, 2016
Marker 2 20.173950000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 50/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 20.173 95 GHz
-54.732 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
1
2
Start 19.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 21.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 19.436 20 GHz -54.577 dBm
2 N 1 f 20.173 95 GHz -54.732 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:35:11 PM Nov 14, 2016
Marker 2 21.512500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 50/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 21.512 50 GHz
-54.225 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
2
1
Start 21.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 23.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 22.295 55 GHz -53.710 dBm
2 N 1 f 21.512 50 GHz -54.225 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω DC
SENSE:INT
ALIGN AUTO/NO RF
05:35:58 PM Nov 14, 2016
Marker 2 24.146050000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 58/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr2 24.146 05 GHz
-53.617 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.51 dBm
1
2
Start 23.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.000 GHz
Sweep 192 ms (40001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 23.727 80 GHz -52.855 dBm
2 N 1 f 24.146 05 GHz -53.617 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Align Now, All required

10. DUTY CYCLE

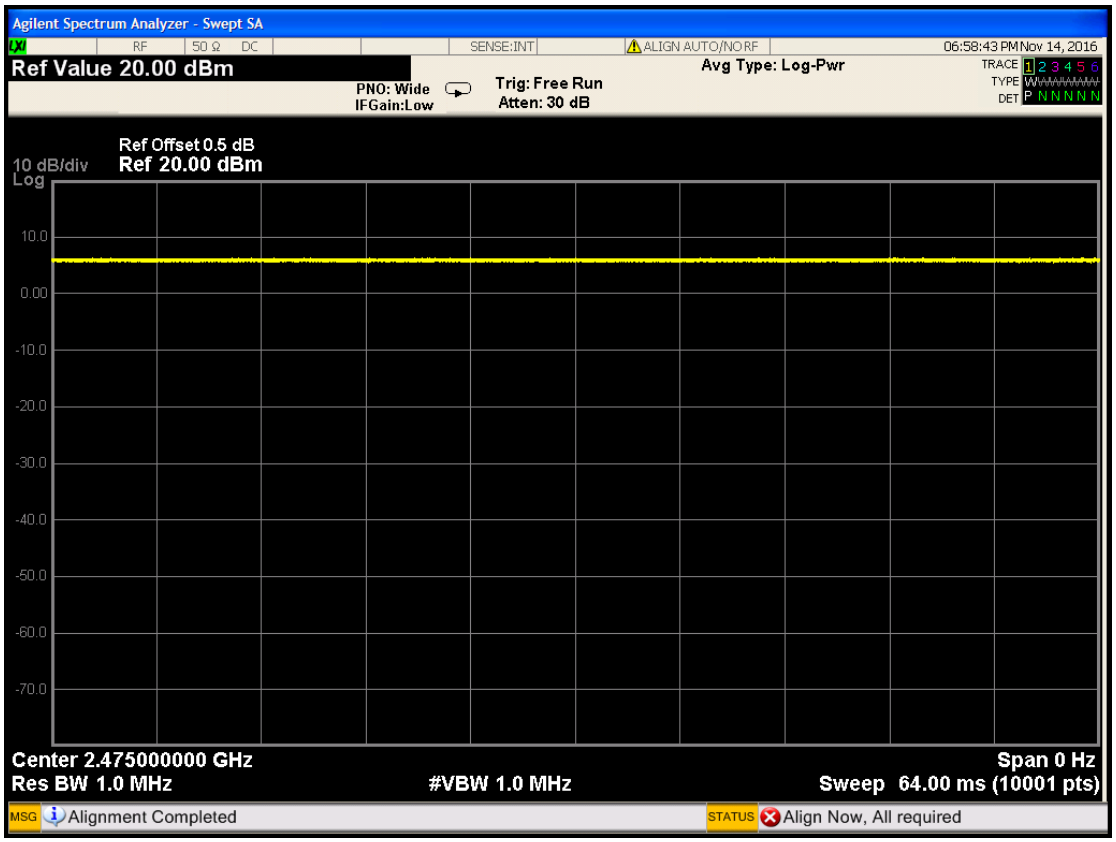
10.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2016-05-15	2017-05-14

10.2. Test Results

The measurement of duty cycle is 100%.

CH 20



11. DEVIATION TO TEST SPECIFICATIONS

【NONE】