FCC TEST REPORT

For

Wearable Data Terminal

Model Number: U2

FCC ID: SWSU2

Report Number : WT178005938

Test Laboratory	:	Shenzhen Academy of Metrology and Quality Inspection National Digital Electronic Product Testing Center
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TEST REPORT DECLARATION

Applicant	:	Shenzhen Urovo Technology Co., Ltd
Address	:	A7, Zondy Cyber Building, Nanshan, Shenzhen, China
Manufacturer	:	Shenzhen Urovo Technology Co., Ltd
Address	:	A7, Zondy Cyber Building, Nanshan, Shenzhen, China
EUT Description	:	Wearable Data Terminal
Model No	:	U2
Trade mark	:	UROVO
Serial Number	:	/
FCC ID	:	SWSU2

Test Standards:

FCC Part 15 15.207, 15.209, 15.407(2016)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with FCC Rules Part 15.207, 15.209 and 15.407.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:	陈司林	Date:	Oct.27, 2017
	(Chen Silin 陈司林)		
Checked by:	林奕翔	Date:	Oct.27, 2017
	(Lin Yixiang 林奕翔)		
Approved by:	林斌	Date:	Oct.27, 2017
	(Lin Bin 林斌)		

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1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
6dB Bandwidth	FCC §15.407 (e)	Pass
26dB Bandwidth	FCC §15.407 (a)	Pass
Maximum Peak Conducted Power	FCC §15.407 (a)	Pass
Maximum Power Spectral Density Level	FCC §15.407 (a)	Pass
Radiated Bandedge and Spurious	15.407 (b) 15.209 15.205	Pass
Conducted emission test for AC power port	15.207	Pass
Frequency Stability	15.407(g)	Pass
Antenna Requirment	15.203	Pass

Remark: “N/A” means “Not applicable.”

2. GENERAL INFORMATION

2.1. Report information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at Bldg. of Metrology & Quality Inspection, Longzhu Road, Nanshan District, Shenzhen, Guangdong, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 582918.

The Laboratory is registered to perform emission tests with Industry Canada (IC), and the registration number is 11177A-1 11177A-2.

TUV Rhineland accredits the Laboratory for conformance to IEC and EN standards, the registration number is E2024086Z02.

Measurement Uncertainty

Conducted Emission
9kHz~30MHz 3.5dB

Radiated Emission
30MHz~1000MHz 4.5dB
1GHz~26.5GHz 4.6dB

PRODUCT DESCRIPTION

EUT Description

Description	:	Wearable Data Terminal
Manufacturer	:	Shenzhen Urovo Technology Co., Ltd
Model Number	:	U2
Operate Frequency	:	U-NII 1(5150~5250MHz) U-NII 2A(5250~5350MHz) U-NII 2C(5470~5725MHz) U-NII 3(5725~5850MHz)
Antenna Designation	:	PIFA Antenna -2.5dBi

Remark: /

Table 2 Working Frequency List U-NII 1 (802.11a, 802.11n HT20)

Channel	Frequency	Channel	Frequency
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz

Table 3 Working Frequency List U-NII 1,(802.11n HT40)

Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz

Table 4 Working Frequency List U-NII 2A (802.11a, 802.11n HT20)

Channel	Frequency	Channel	Frequency
52	5260MHz	60	5300MHz
56	5280MHz	64	5320MHz

Table 5 Working Frequency List U-NII 2A (802.11a, 802.11n HT40)

Channel	Frequency	Channel	Frequency
54	5280MHz	62	5310MHz

Table 6 Working Frequency List U-NII 2C (802.11a, 802.11n HT20)

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600		

Table 7 Working Frequency List U-NII 2C,(802.11n HT40)

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

Table 8 Working Frequency List U-NII 3 (802.11a, 802.11n HT20)

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz	---	---

Table 9 Working Frequency List U-NII 3,(802.11n HT40)

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **SWSU2** filing to comply with Section 15.207，15.209，15.407 of the FCC Part 15, Subpart E .

Block Diagram of EUT Configuration

Figure 1 EUT setup

Operating Condition of EUT

The Radiated spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission (X plane).
Worst-case mode and channel used for 30-1000 MHz radiated and power line conducted emissions was the mode and channel with the highest output power.
Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0
802.11a operates in SISO mode. For SISO conducted measurements, the modes tested in this report will be considered as a worst case mode.
802.11n operate in SISO mode. For SISO conducted measurements, the modes tested in this report will be considered as a worst case mode.
802.11ac operate in SISO mode. For SISO conducted measurements, the modes tested in this report will be considered as a worst case mode.

Directional Antenna Gain

The EUT does NOT support a WIFI MIMO function.
Directional gain need NOT to be considered.

Support Equipment List

Table 10 Support Equipment List

Name	Model No	S/N	Manufacturer
Adaptor for EUT	ZAC-A050150A-02	--	SHEN ZHEN ZHONG LIN TECHNOLOGY CO.,LTD
Battery for EUT	HBLU2	--	ICON ENERGY SYSTEM(SHEN ZHEN) CO.,LTD
Notebook	T400	---	Lenovo

Test Conditions

Date of test：Sep.21, 2017 – Oct.20, 2017
Date of EUT Receive：Sep.21, 2017
Temperature: -30 ~ 50 ℃
Relative Humidity: 38-59 %

Special Accessories

Not available for this EUT intended for grant.

Equipment Modifications

Not available for this EUT intended for grant.

TEST EQUIPMENT USED

Table 11 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB3319	EMI Test Receiver	Rohde & Schwarz	ESCS30	Nov.29, 2016	1 Year
SB4357	AMN	Rohde & Schwarz	ESH2-Z5	Sep.29, 2016	1 Year
SB3436	EMI Test Receiver	Rohde & Schwarz	ESI26	Nov.29, 2016	1 Year
SB8501/09	EMI Test Receiver	Rohde & Schwarz	ESU40	Mar.21, 2017	1 Year
SB8501/04	Bilog Antenna	Schwarzbeck	VULB9163	Mar.21, 2017	1 Year
SB3955	Bilog Antenna	Schwarzbeck	VULB9163	Mar.22 ,2017	1 Year
SB3435	Horn Antenna	Rohde & Schwarz	HF906	Jan.03, 2017	1 Year
SB8501/01	Horn Antenna	Rohde & Schwarz	HF907	Mar.22, 2017	1 Year
SB8501/11	Horn Antenna	ETS-Lindgren	3160-09	Mar.1,2017	1 Year
SB8501/12	Horn Antenna	ETS-Lindgren	3160-10	Mar.1,2017	1 Year
SB3345	Loop Antenna	Schwarzbeck	FMZB1516	Mar.22, 2017	2 Years
SB8501/14	Preamplifier	Rohde & Schwarz	SCU-03	Mar.19, 2017	1 Year
SB8501/16	Preamplifier	Rohde & Schwarz	SCU-26	Mar.06, 2017	1 Year
SB8501/17	Preamplifier	Rohde & Schwarz	SCU-18	Mar.06, 2017	1 Year
SB9059	Preamplifier	Rohde & Schwarz	SCU-40	Mar.06, 2017	1 Year
SB12827/01	Power Sensor	Rohde & Schwarz	NRP-Z22	Jun.19, 2017	1 Year
SB11873/01	Power Sensor	Rohde & Schwarz	OSP120+OSP-B157	Mar.13, 2017	1 Year
--	Test Software	Rohde & Schwarz	Power Viewer Plus	--	--
SB9060	Signal Analyzer	Rohde & Schwarz	FSQ40	Mar.31,2017	1 Year
SB11818	Temperature&Humidity Test chamber	Espec	EH-010U	Mar.24, 2017	1 Year

DUTY CYCLE

LIMITS OF DUTY CYCLE

None; for reporting purposes only

TEST PROCEDURE

1. Set span = Zero
2. RBW = 20MHz
3. VBW = 30MHz,
4. Detector = Peak

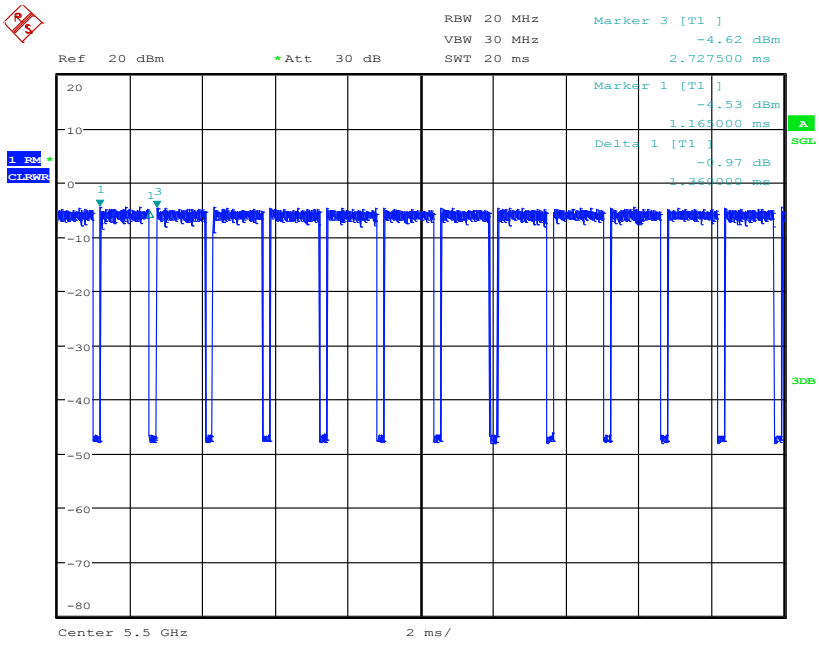
TEST SETUP

TEST DATA

Table 12 Duty Cycle Test Data

Test Mode	On Time (ms)	Duty Cycle(%)	Duty Factor	1/T Minimum VBW (kHz)
802.11a	1.36	87.04	0.60	1
802.11n HT20	1.27	86.1	0.65	1
802.11n HT40	0.63	75.45	1.22	1.5

802.11a



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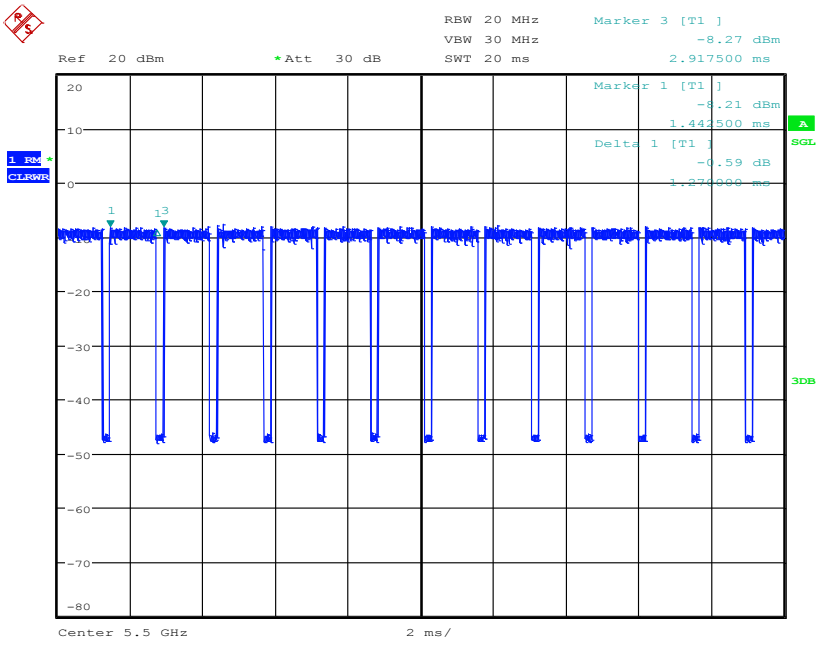
802.11n HT20



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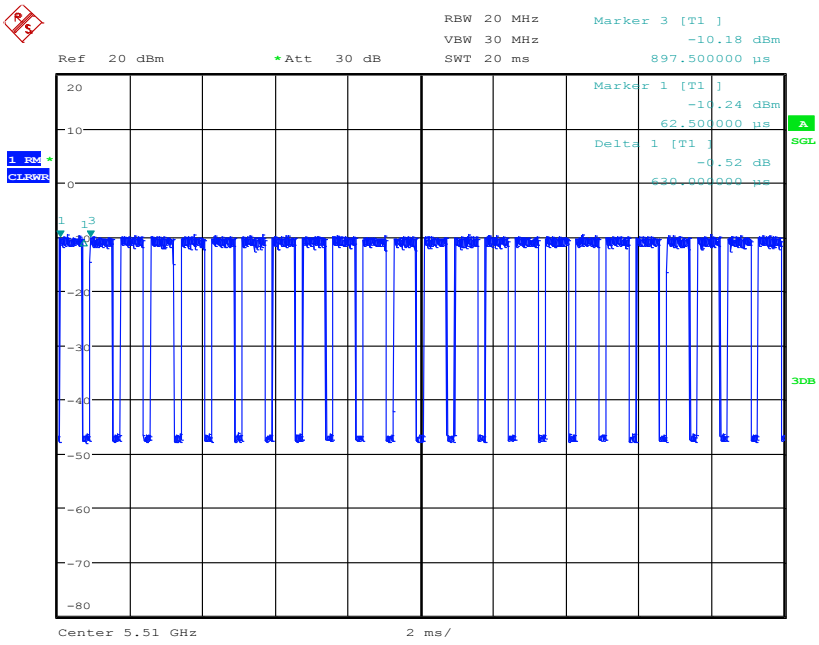
802.11n HT40



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6DB BANDWIDTH MEASUREMENT

LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum 6 dB emission bandwidth of at least 500 kHz for the band 5.725-5.85 GHz.

TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.
a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 x 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.

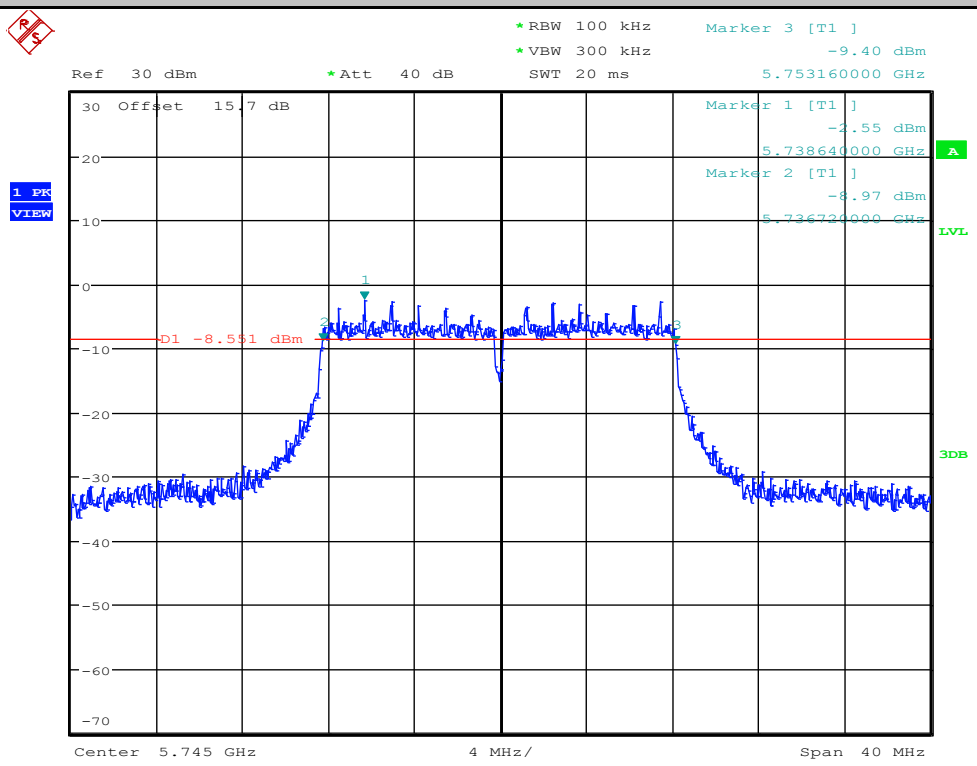
TEST SETUP

Test Data

Table 13 6dB Bandwidth Test Data

Test Mode	Test Channel	6dB Bandwidth [MHz]	Limit[MHz]	Verdict
802.11a	5745	16.440	0.5	PASS
802.11a	5785	16.400	0.5	PASS
802.11a	5825	16.400	0.5	PASS
802.11n HT20	5745	17.640	0.5	PASS
802.11n HT20	5785	17.640	0.5	PASS
802.11n HT20	5825	17.680	0.5	PASS
802.11n HT40	5755	35.360	0.5	PASS
802.11n HT40	5795	35.440	0.5	PASS

6dB Bandwidth Measurement_11A_5745



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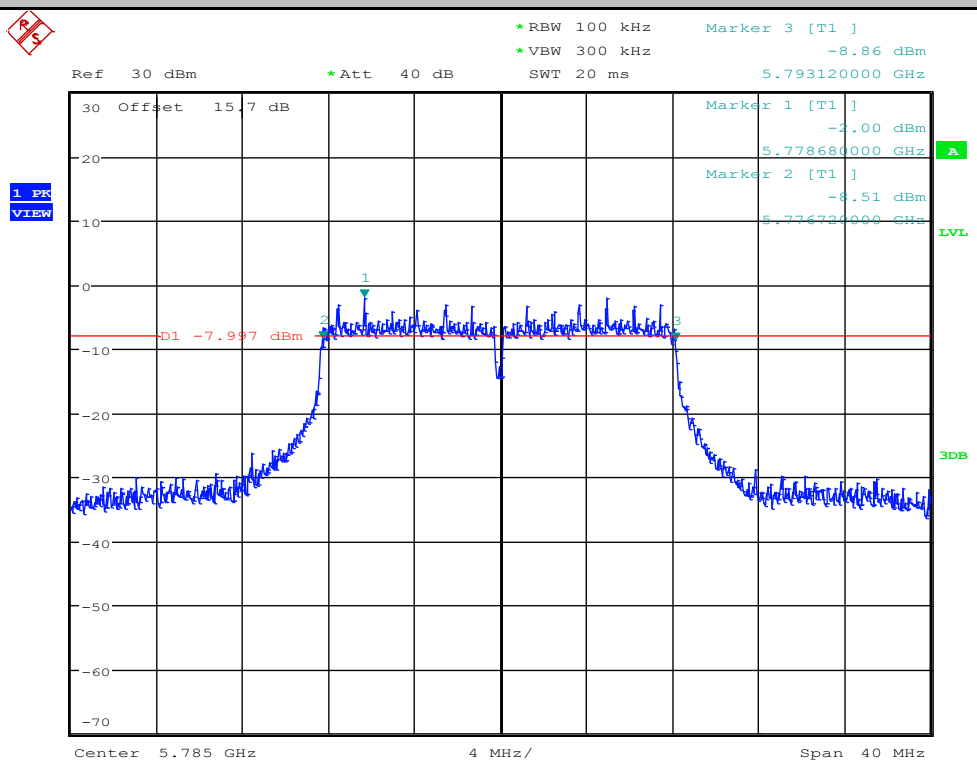
6dB Bandwidth Measurement_11A_5785



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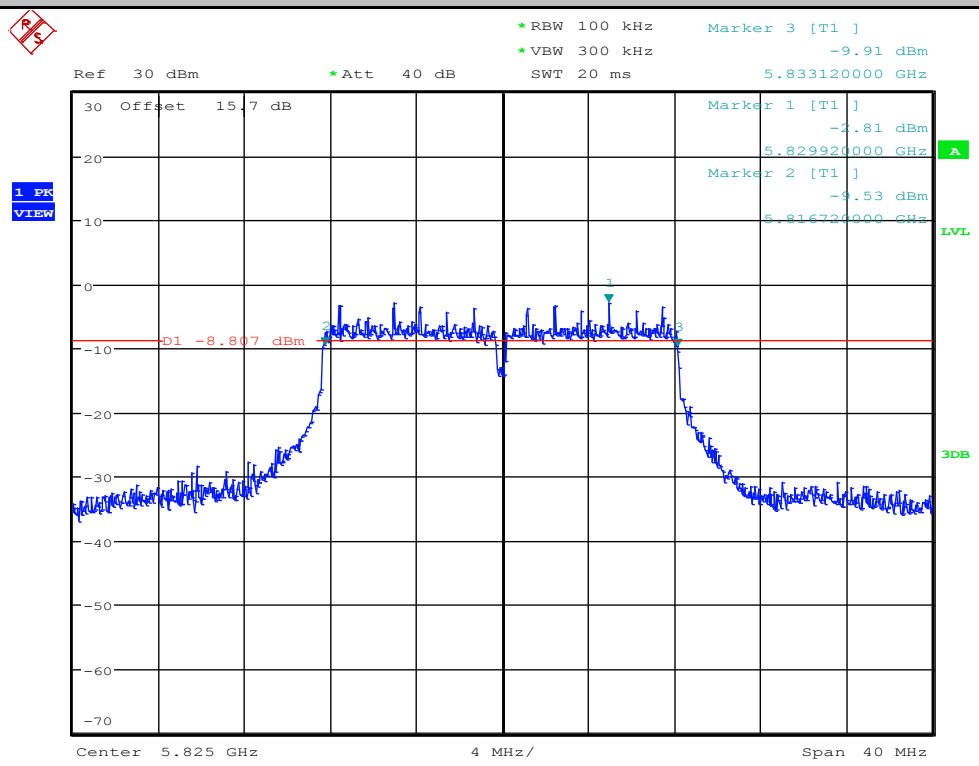
6dB Bandwidth Measurement_11A_5825



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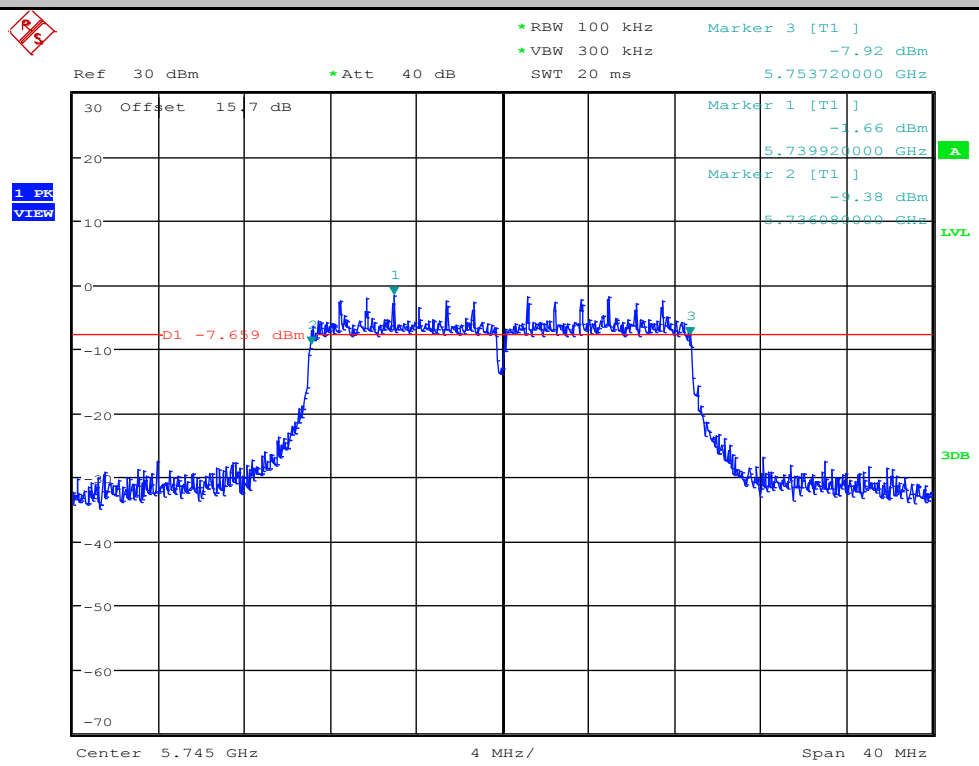
6dB Bandwidth Measurement_11N20SISO_5745



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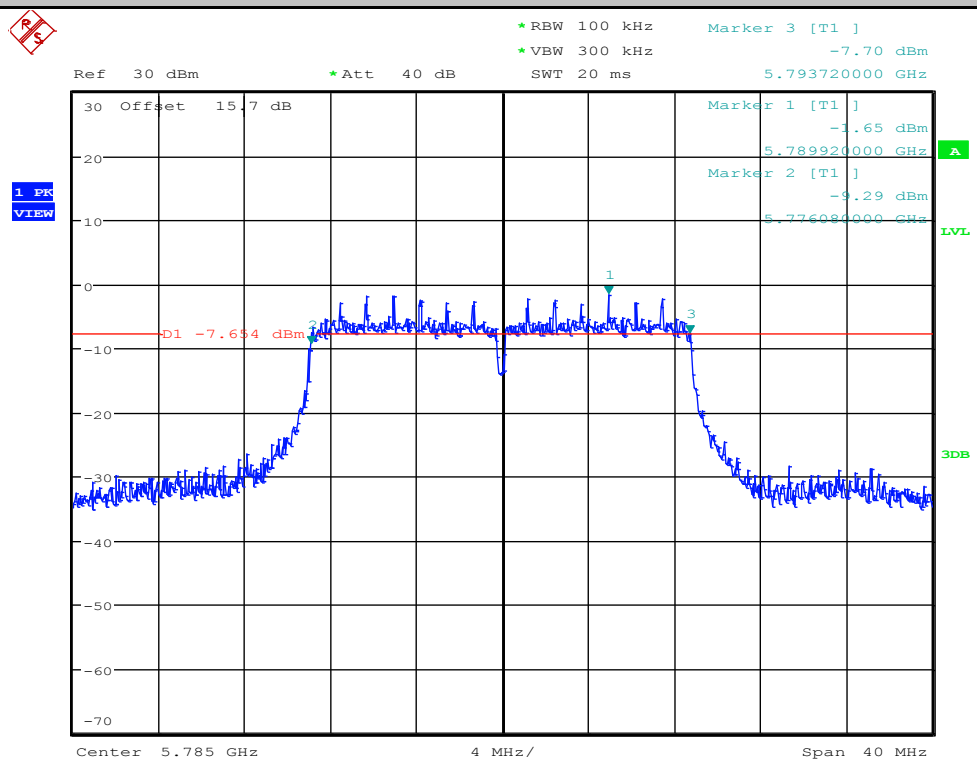
6dB Bandwidth Measurement_11N20SISO_5785



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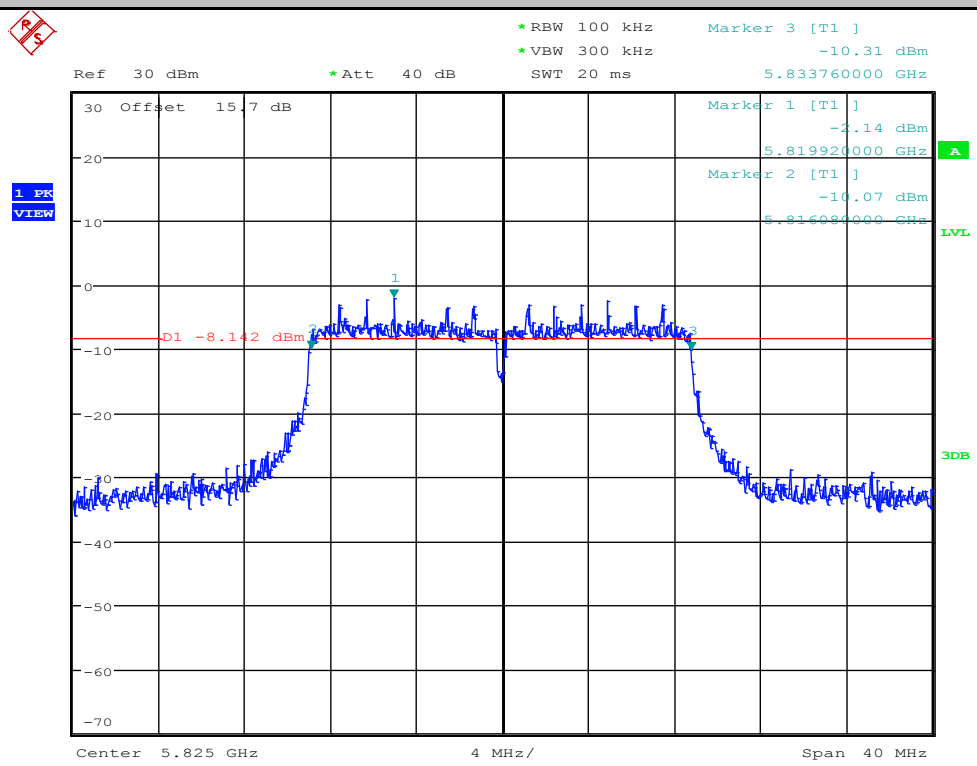
6dB Bandwidth Measurement_11N20SISO_5825



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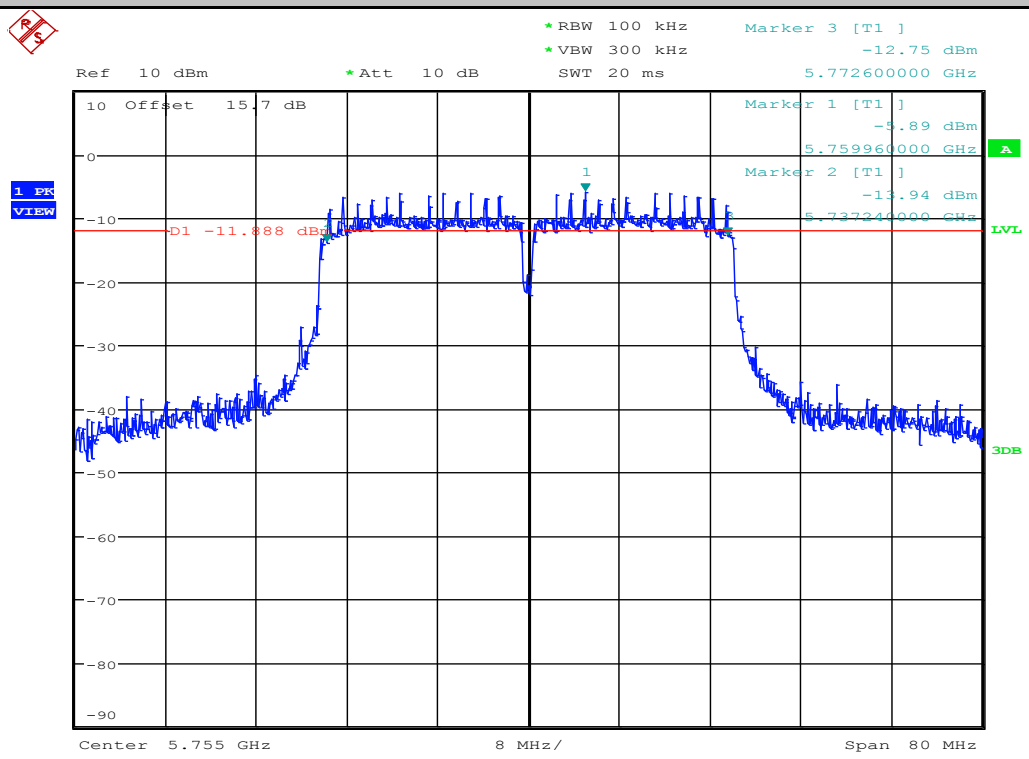
6dB Bandwidth Measurement_11N40SISO_5755



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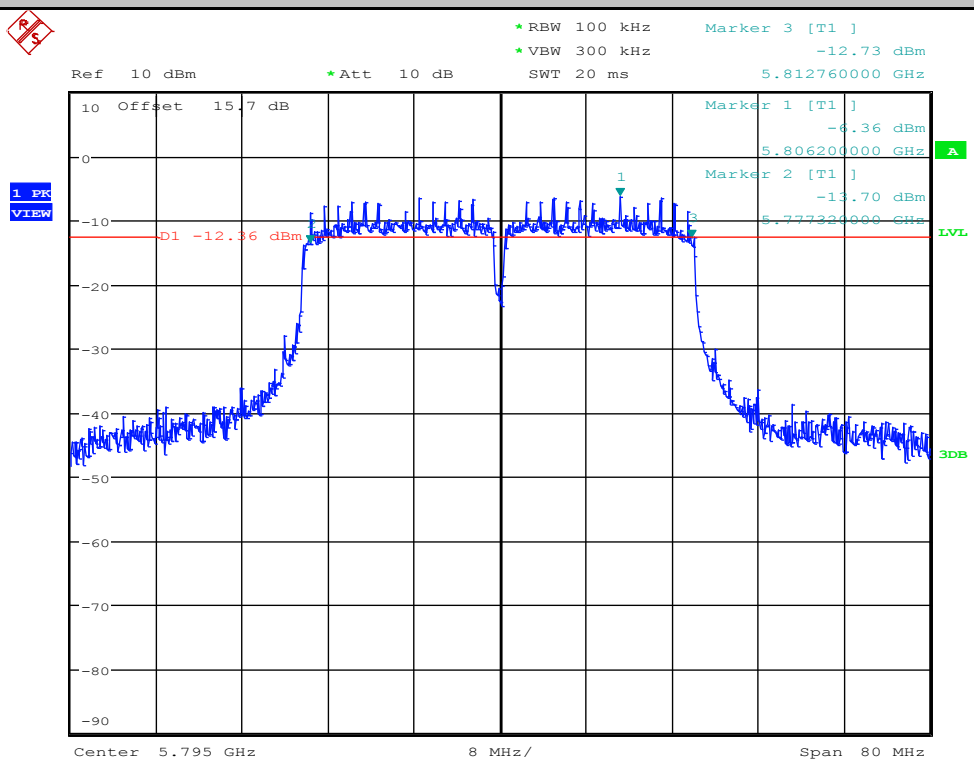
6dB Bandwidth Measurement_11N40SISO_5795



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26DB BANDWIDTH MEASUREMENT

LIMITS OF 26dB BANDWIDTH MEASUREMENT

None; for reporting purposes only..

TEST PROCEDURE

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the
emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

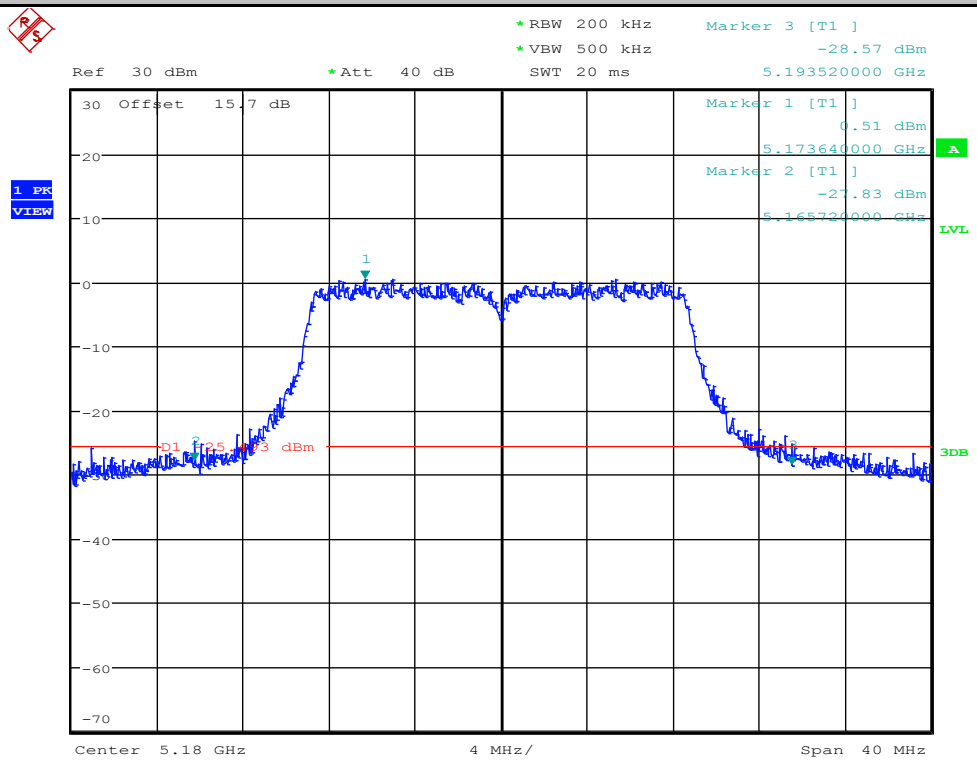
TEST SETUP

Test Data

Table 14 26dB Bandwidth Test Data

Test Mode	Test Channel	26dB Bandwidth [MHz]	Limit[MHz]	Verdict
802.11a	5180	27.800	---	PASS
802.11a	5200	27.240	---	PASS
802.11a	5240	27.440	---	PASS
802.11a	5260	23.840	---	PASS
802.11a	5280	24.640	---	PASS
802.11a	5320	25.000	---	PASS
802.11a	5500	27.480	---	PASS
802.11a	5580	27.080	---	PASS
802.11a	5700	26.160	---	PASS
802.11n HT20	5180	24.760	---	PASS
802.11n HT20	5200	27.080	---	PASS
802.11n HT20	5200	27.080	---	PASS
802.11n HT20	5260	23.280	---	PASS
802.11n HT20	5280	23.320	---	PASS
802.11n HT20	5320	24.360	---	PASS
802.11n HT20	5320	24.360	---	PASS
802.11n HT20	5500	24.440	---	PASS
802.11n HT20	5580	26.520	---	PASS
802.11n HT20	5700	23.520	---	PASS
802.11n HT40	5190	43.680	---	PASS
802.11n HT40	5230	44.960	---	PASS
802.11n HT40	5270	44.400	---	PASS
802.11n HT40	5310	43.840	---	PASS
802.11n HT40	5510	44.800	---	PASS
802.11n HT40	5550	44.960	---	PASS
802.11n HT40	5670	44.640	---	PASS

26dB Bandwidth Measurement_11A_5180



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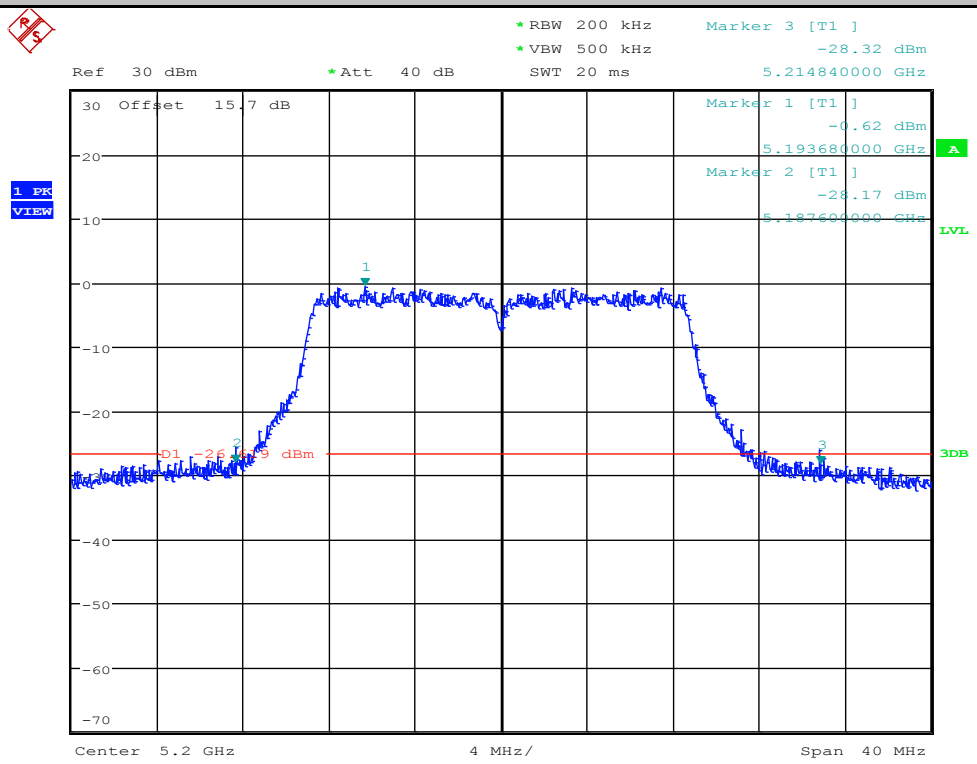
26dB Bandwidth Measurement_11A_5200



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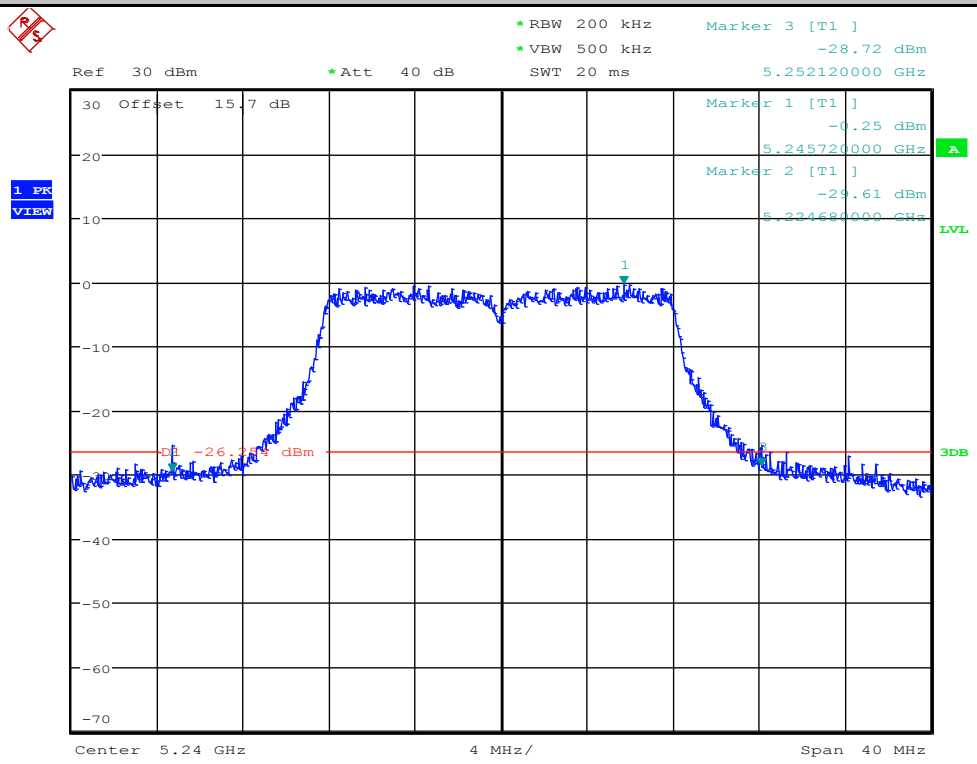
26dB Bandwidth Measurement_11A_524



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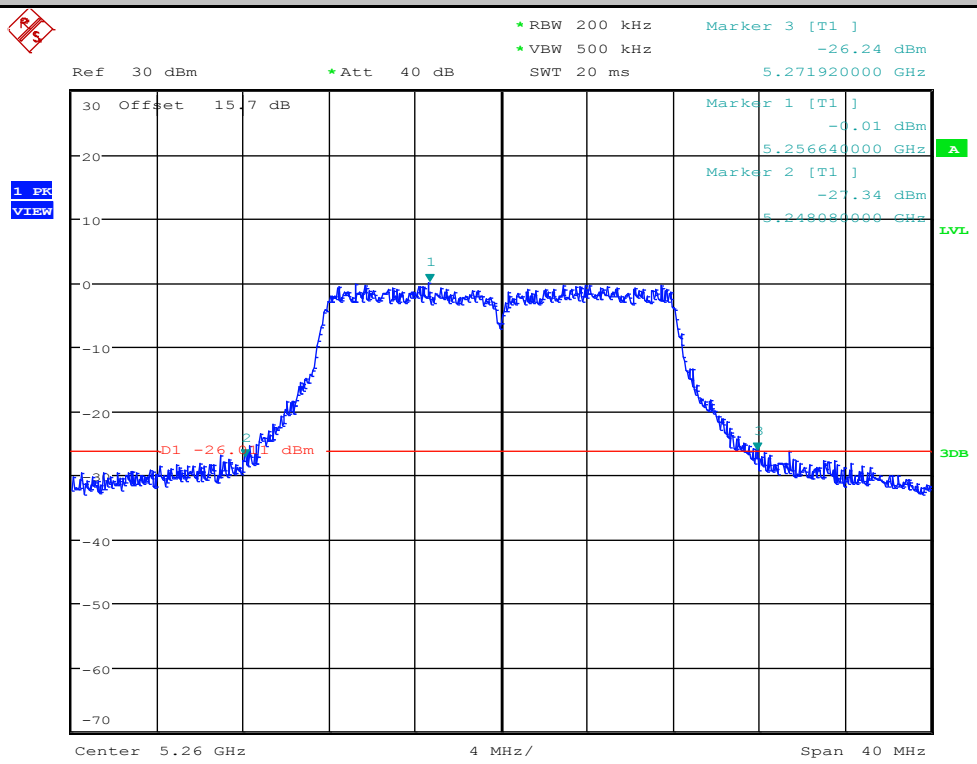
26dB Bandwidth Measurement_11A_5260



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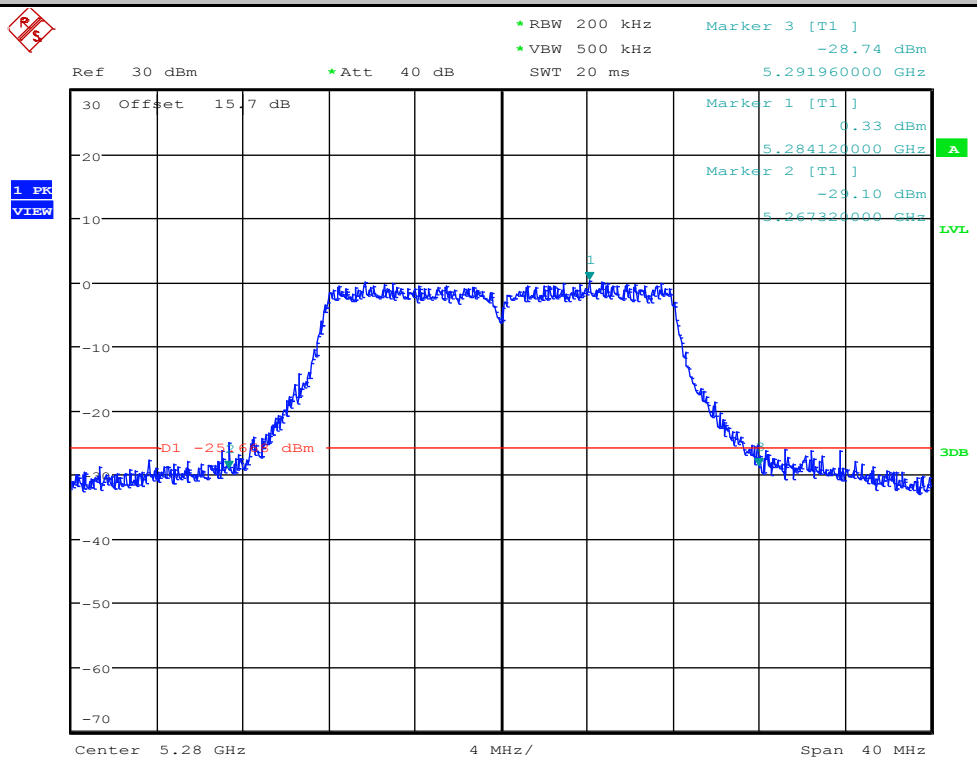
26dB Bandwidth Measurement_11A_5280



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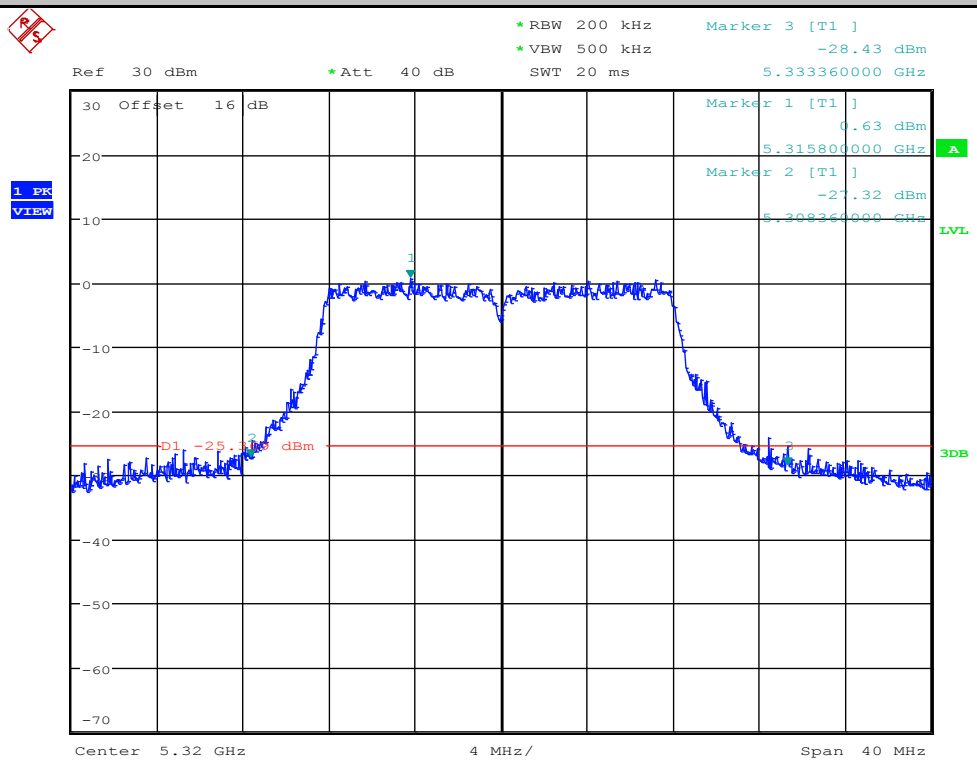
26dB Bandwidth Measurement_11A_5320



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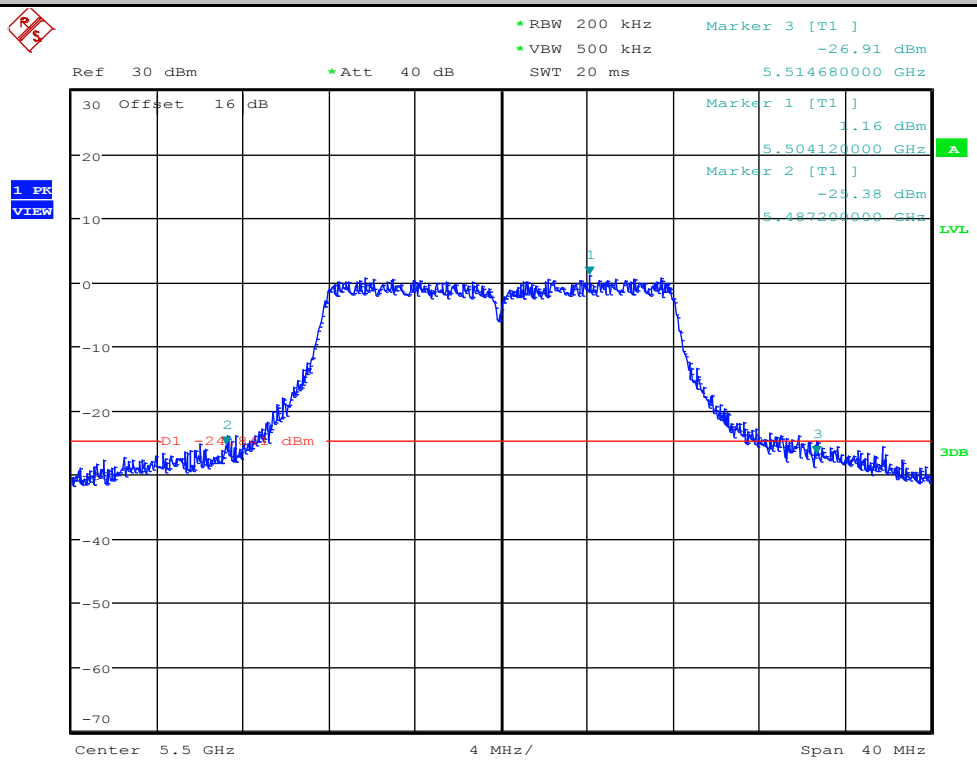
26dB Bandwidth Measurement_11A_5500



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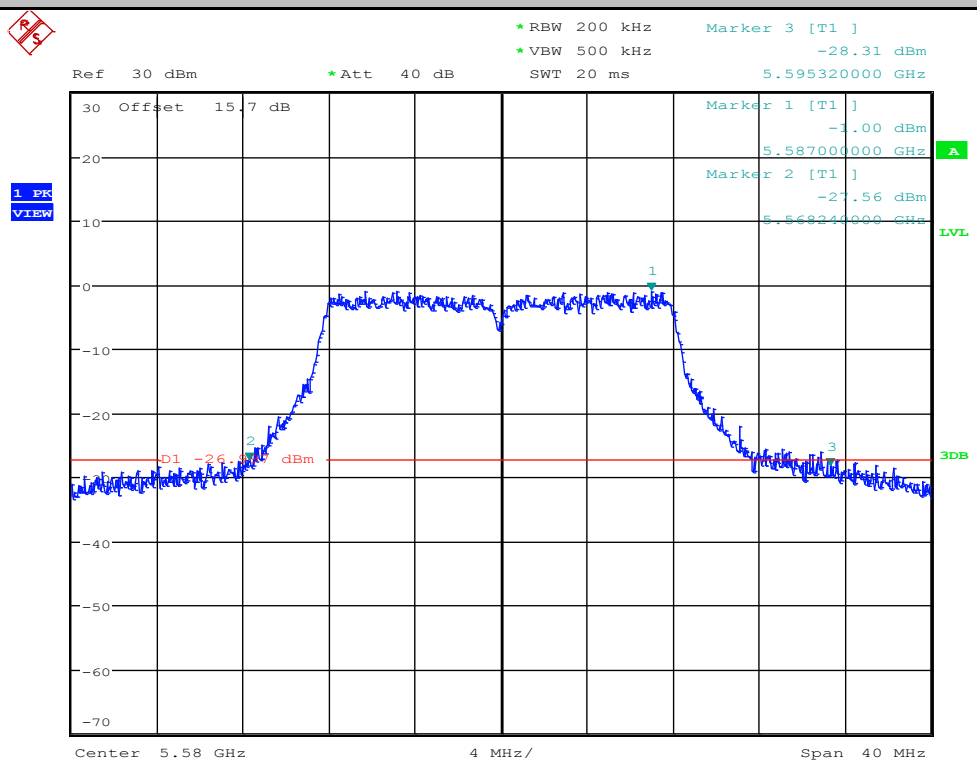
26dB Bandwidth Measurement_11A_5580



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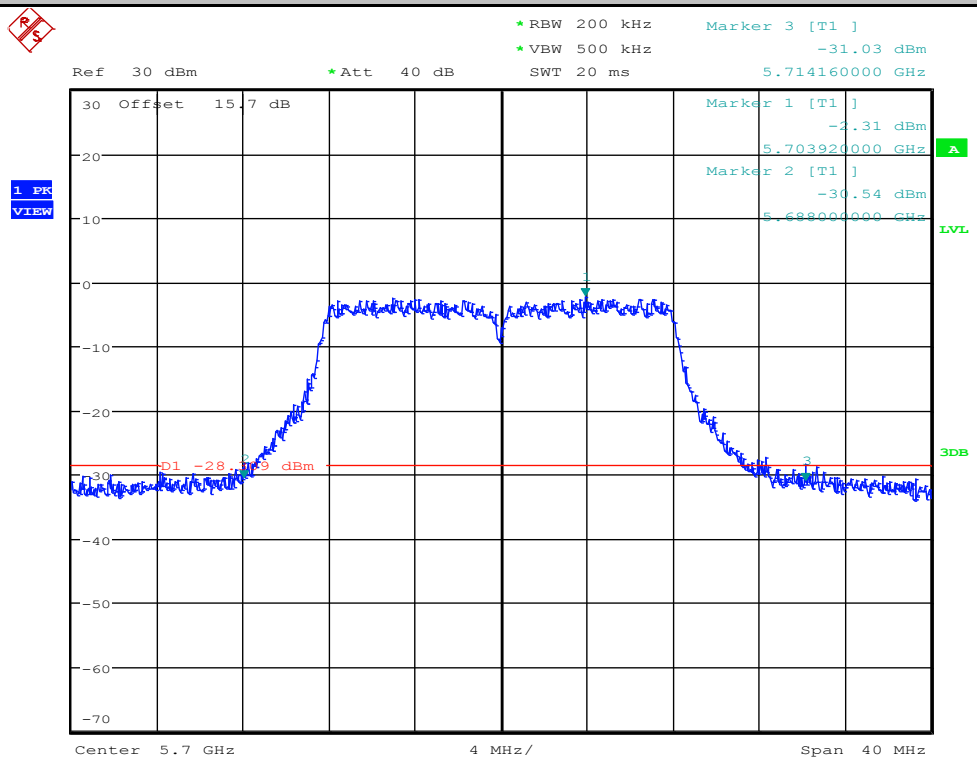
26dB Bandwidth Measurement_11A_5700



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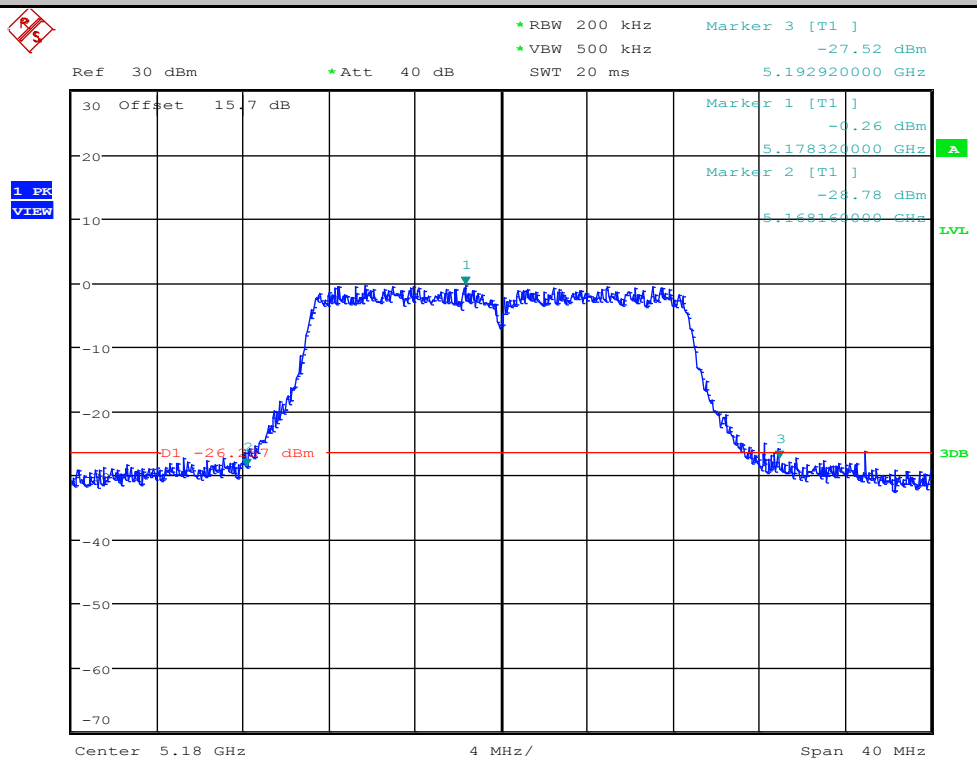
26dB Bandwidth Measurement_11N20SISO_5180



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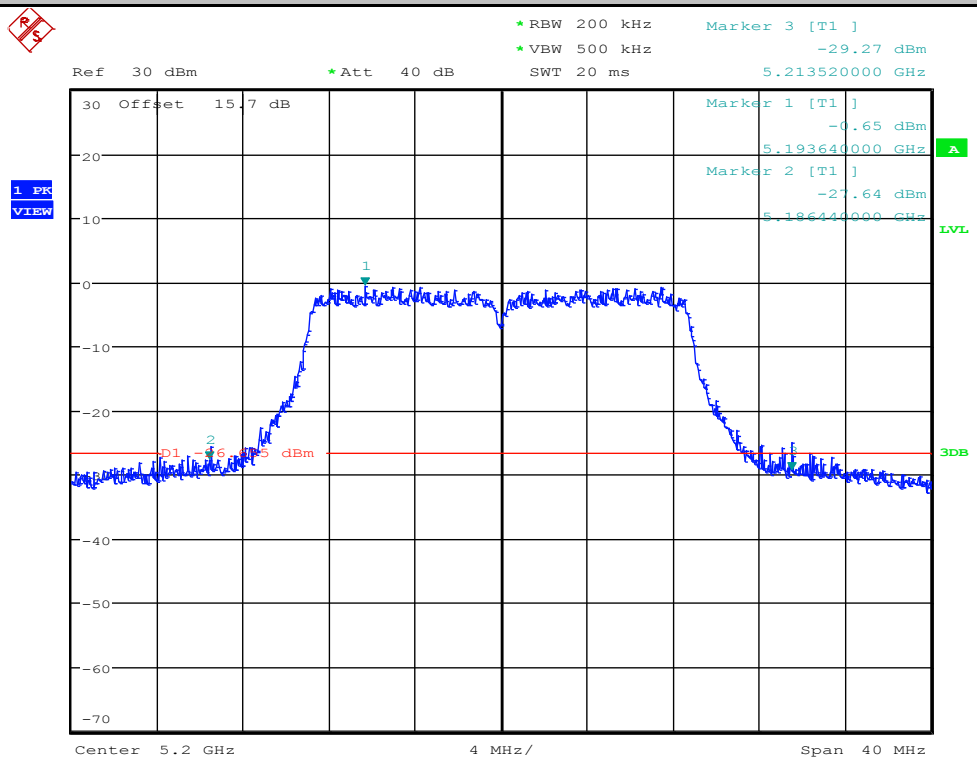
26dB Bandwidth Measurement_11N20SISO_5200



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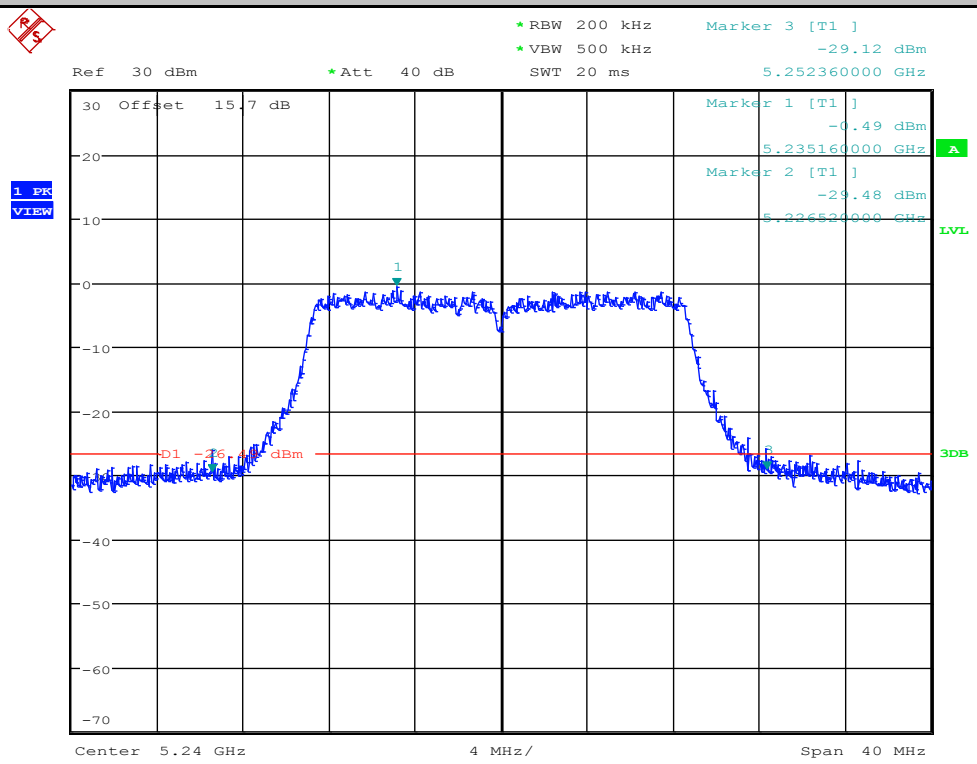
26dB Bandwidth Measurement_11N20SISO_5240



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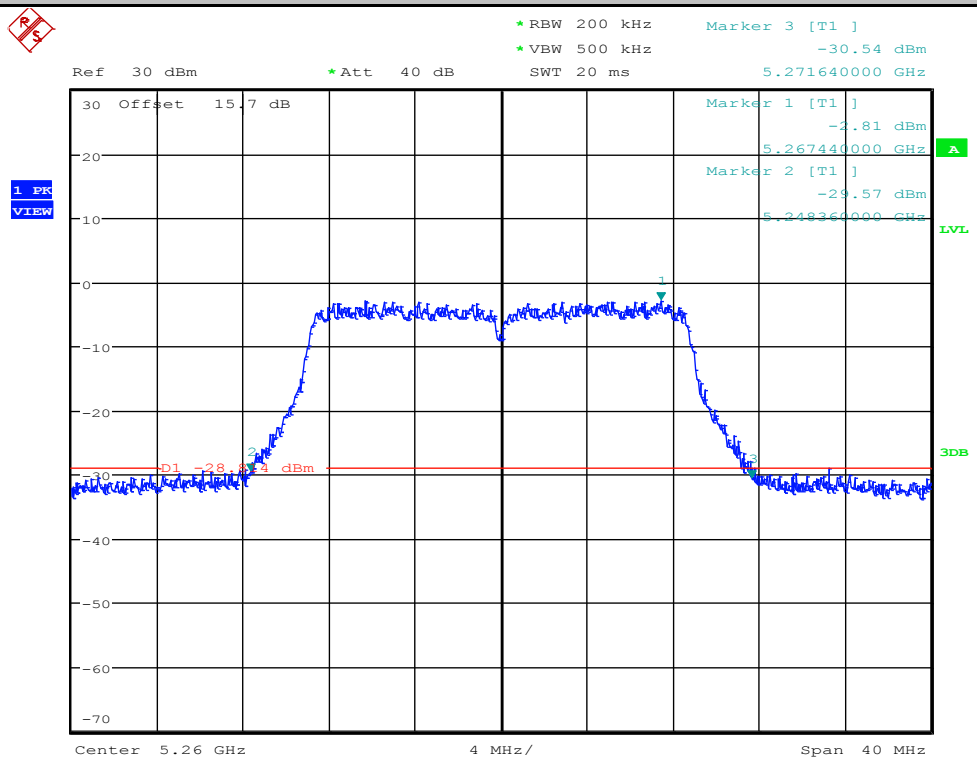
26dB Bandwidth Measurement_11N20SISO_5260



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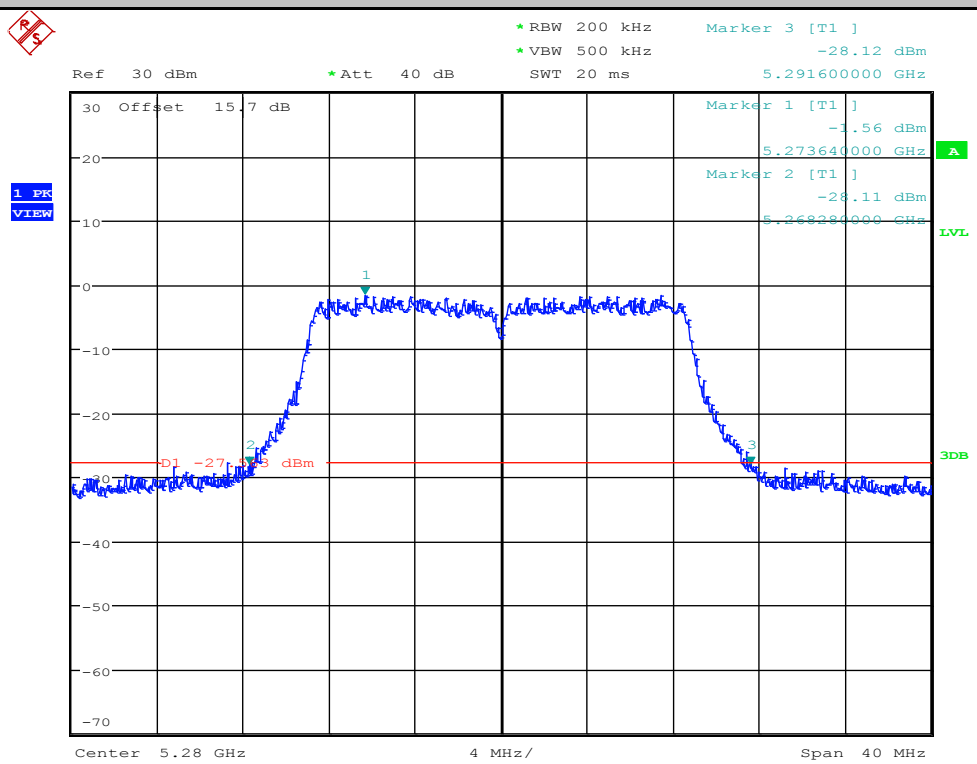

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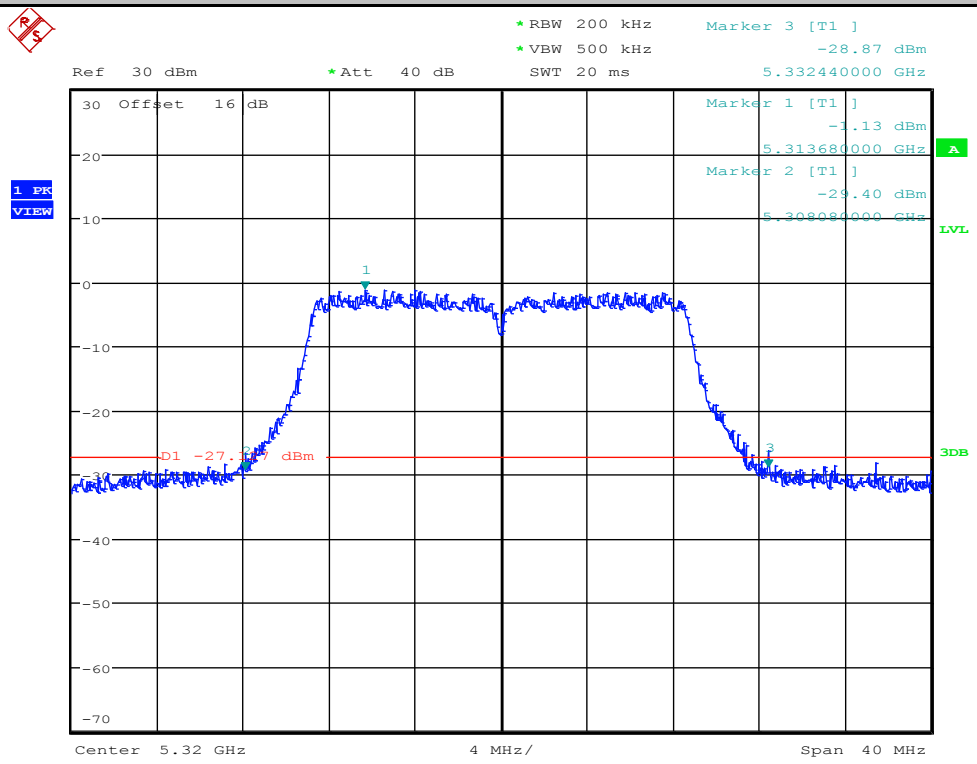
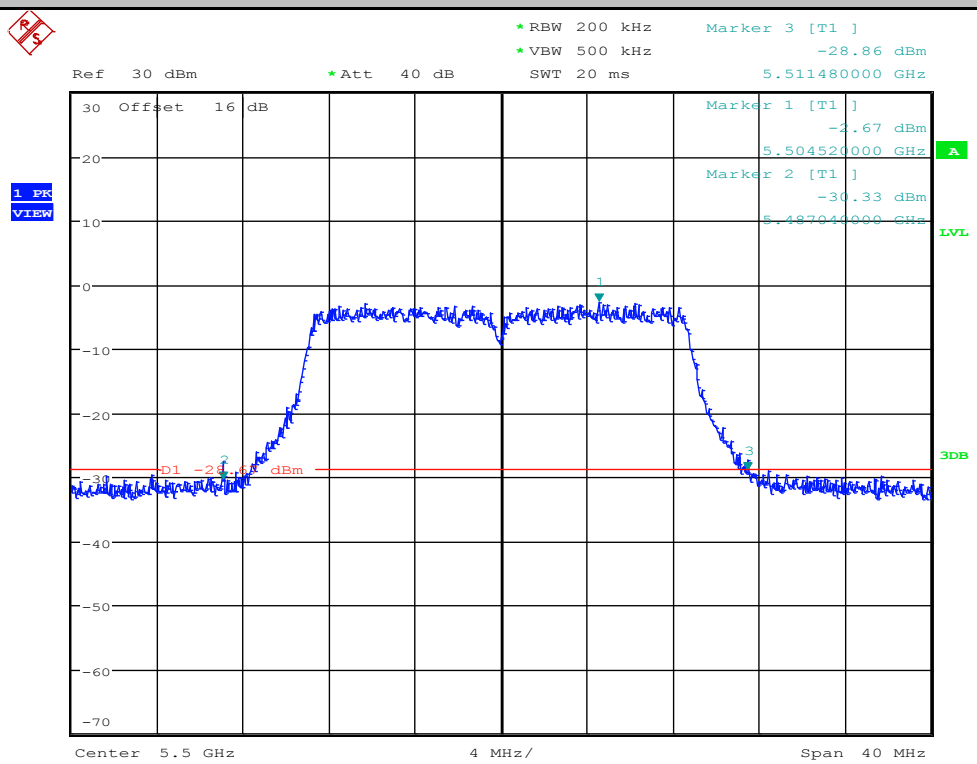
26dB Bandwidth Measurement_11N20SISO_5320



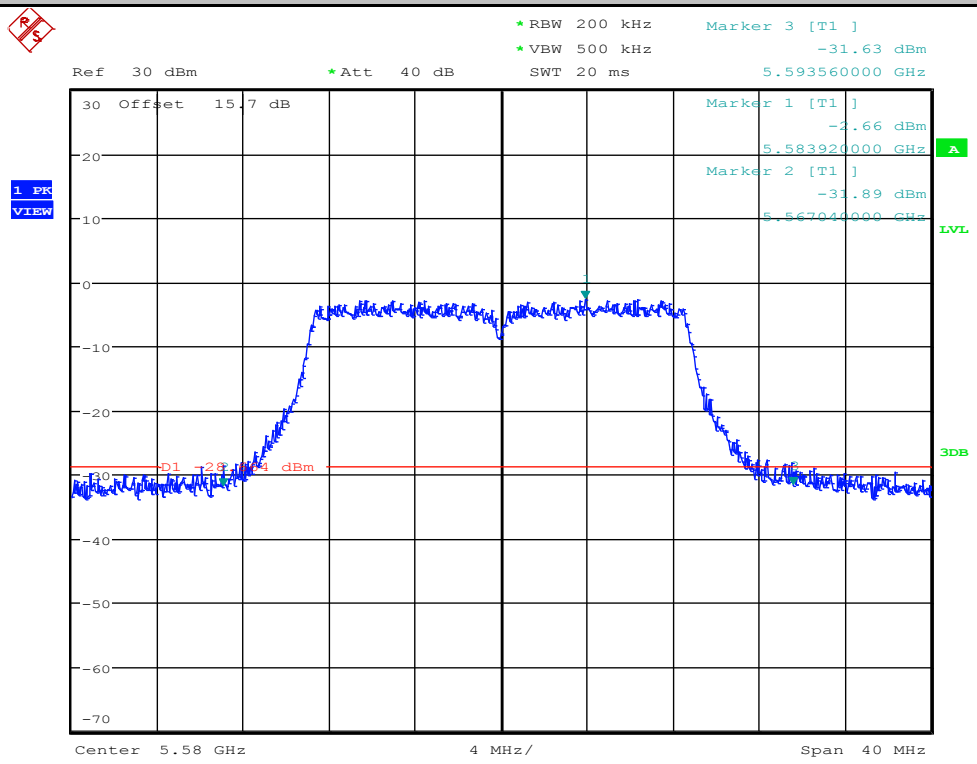
Date: 18.OCT.2017 14:54:23

26dB Bandwidth Measurement_11N20SISO_5500



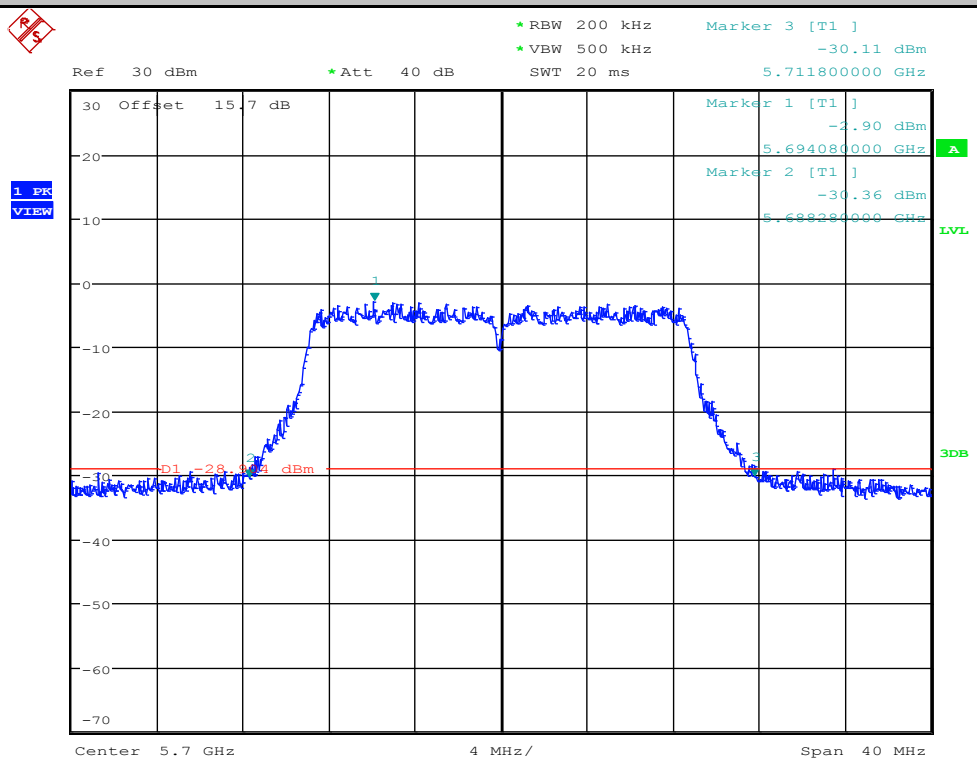
Date: 18.OCT.2017 15:00:03

26dB Bandwidth Measurement_11N20SISO_5580



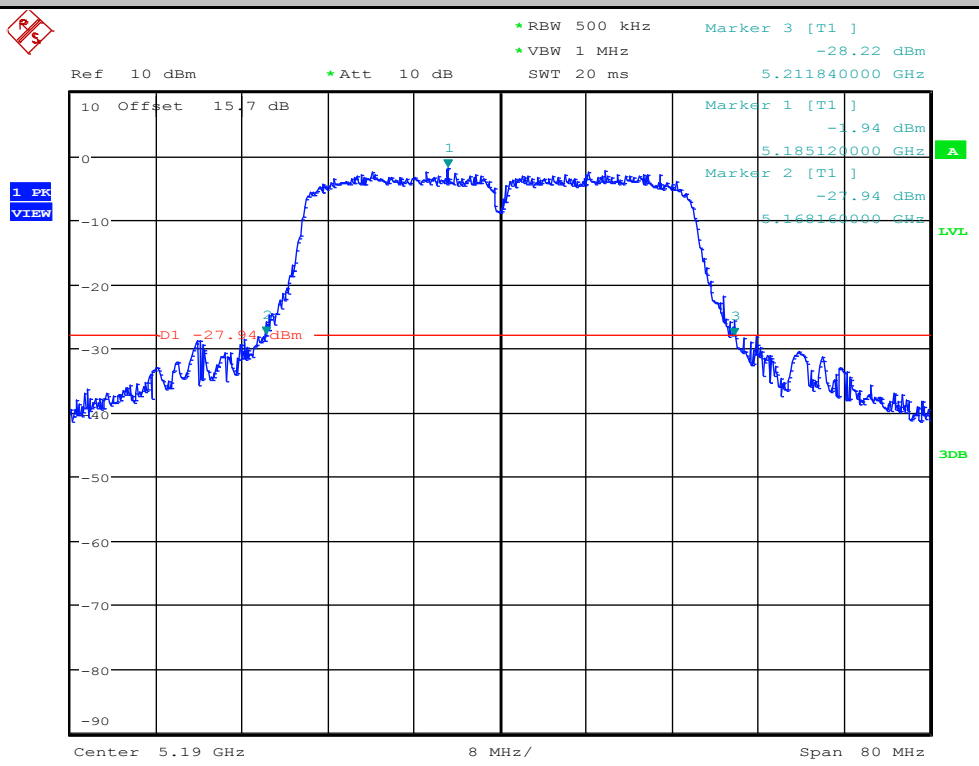
Date: 18.OCT.2017 15:04:49

26dB Bandwidth Measurement_11N20SISO_5700



Date: 18.OCT.2017 15:11:37

26dB Bandwidth Measurement_11N40SISO_5190



Date: 18.OCT.2017 16:12:46

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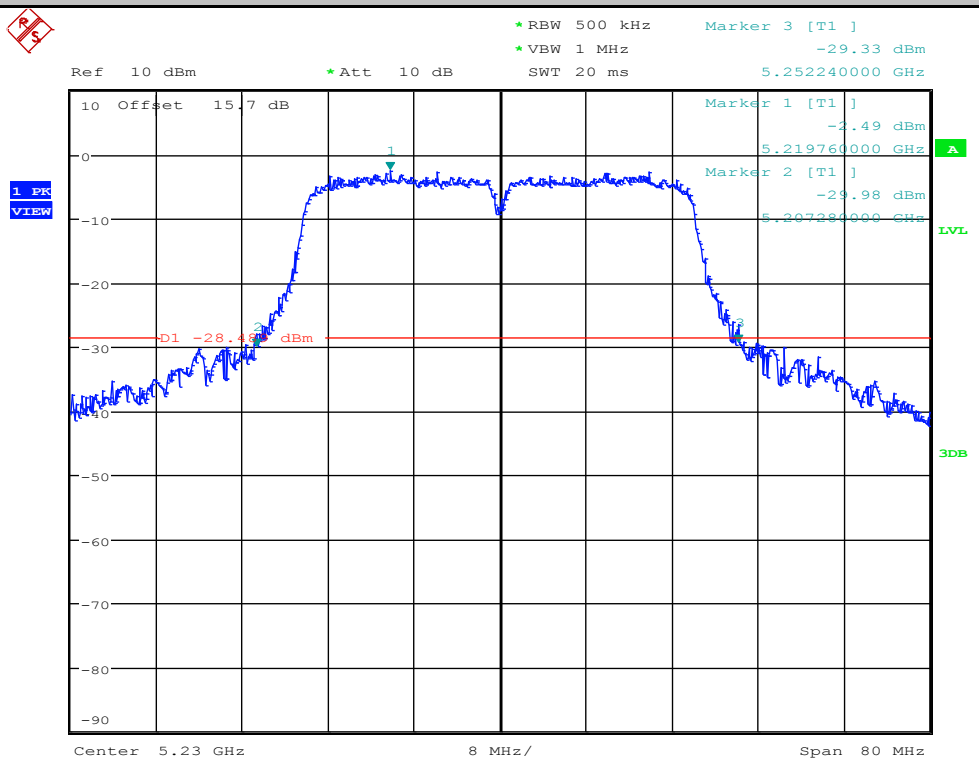

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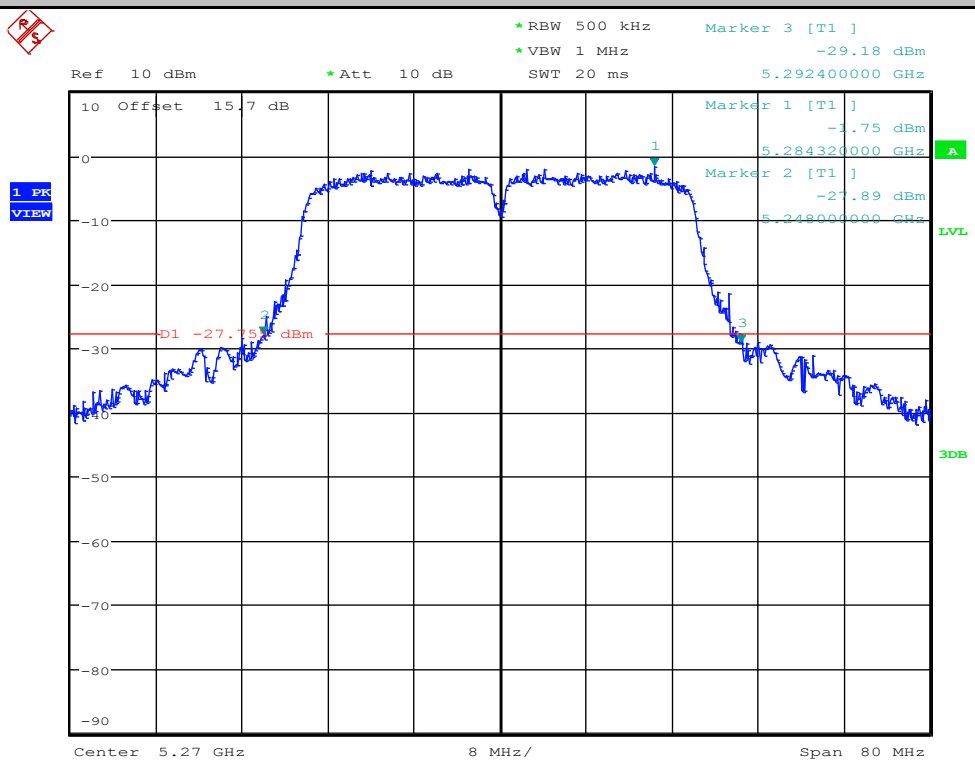
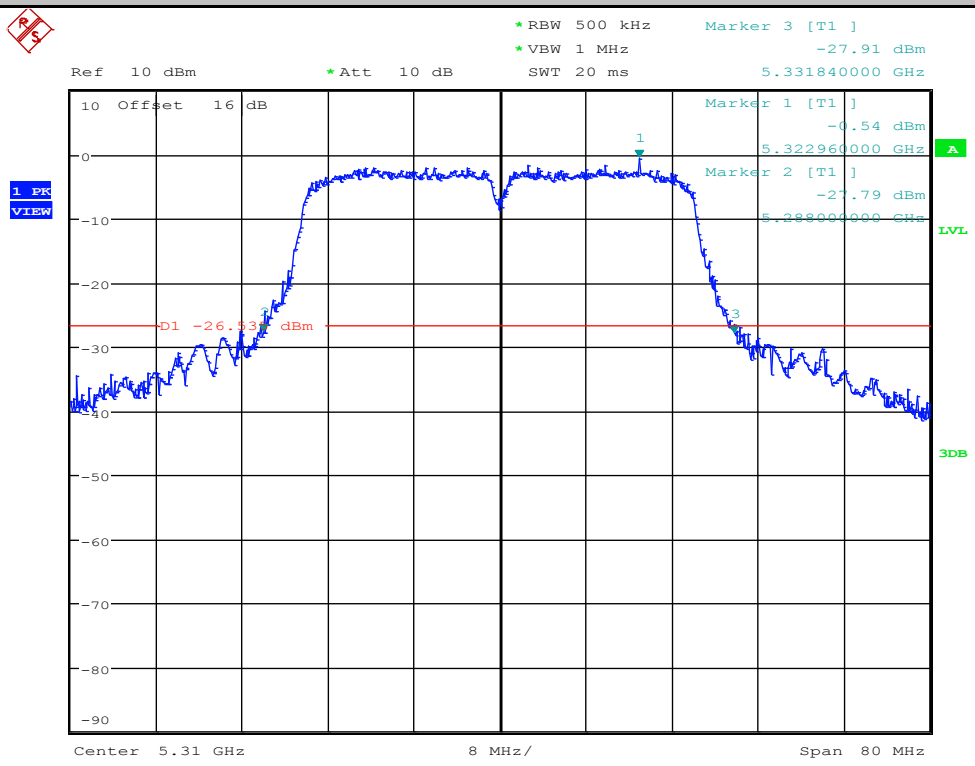
26dB Bandwidth Measurement_11N40SISO_5270



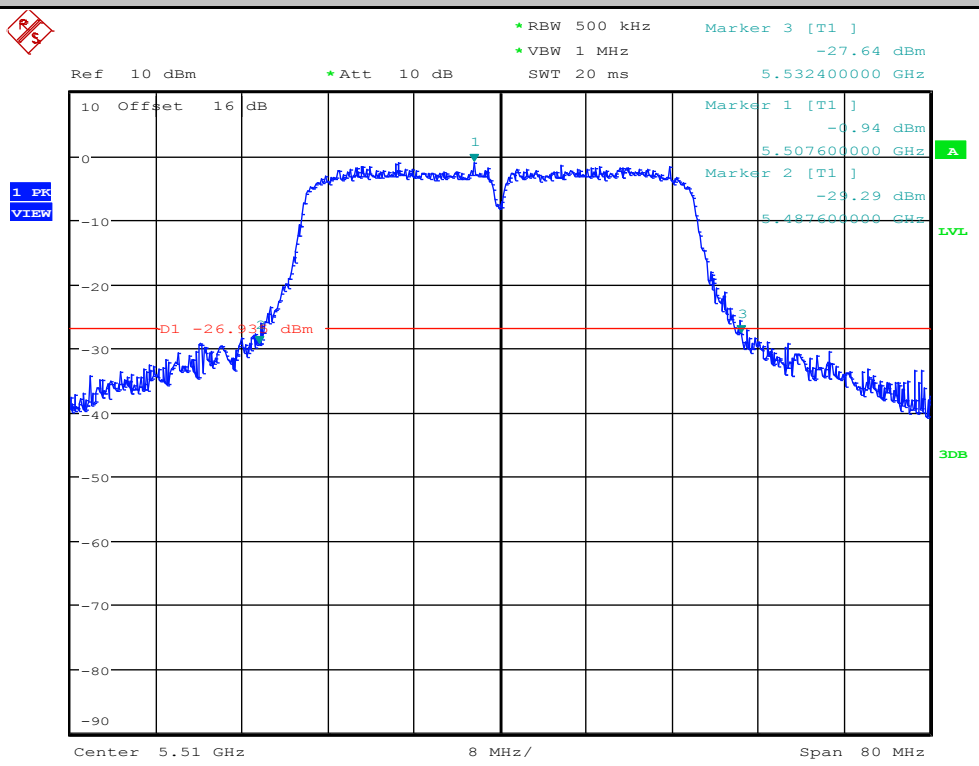
Date: 18.OCT.2017 16:16:59

26dB Bandwidth Measurement_11N40SISO_5310



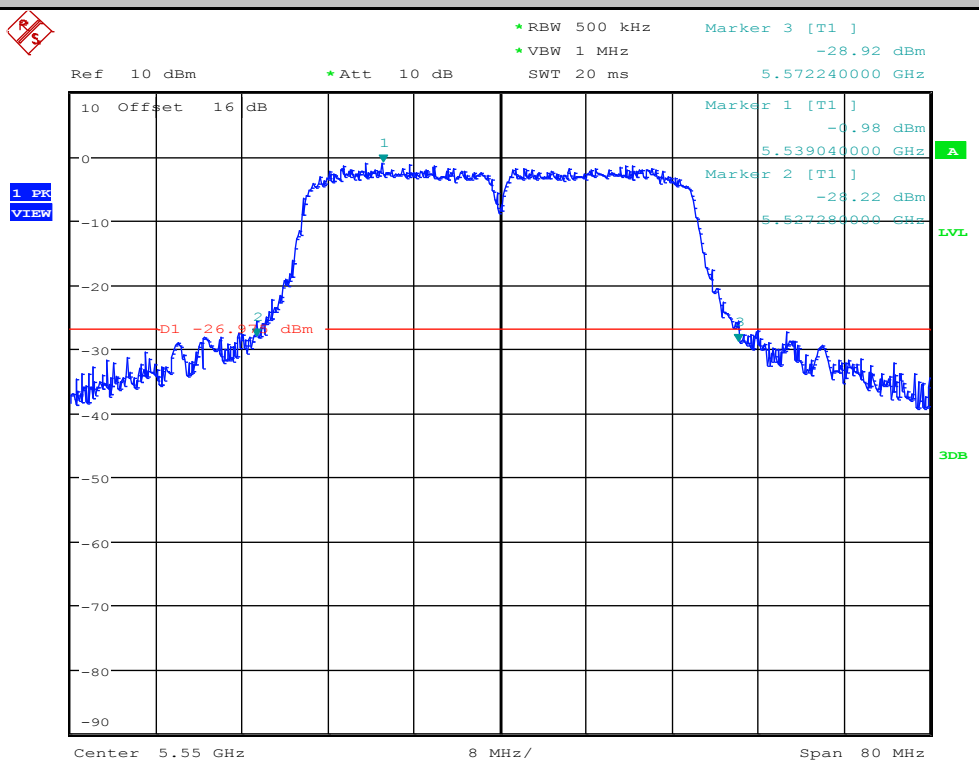
Date: 18.OCT.2017 16:22:56

26dB Bandwidth Measurement_11N40SISO_5510



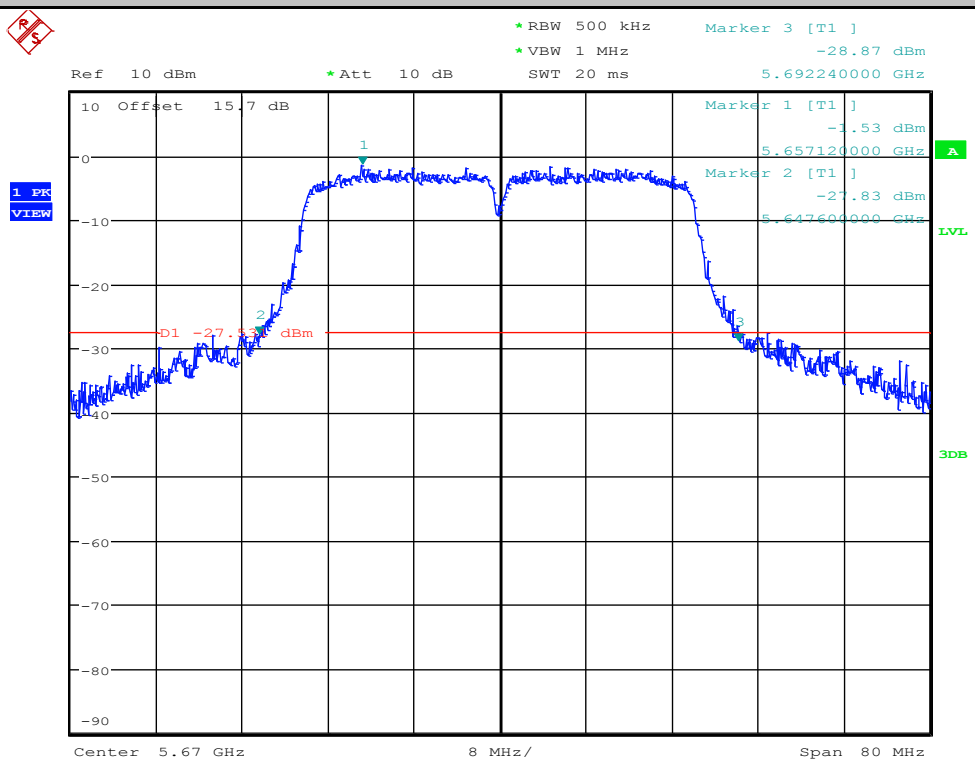
Date: 18.OCT.2017 16:28:44

26dB Bandwidth Measurement_11N40SISO_5550



Date: 18.OCT.2017 16:33:27

26dB Bandwidth Measurement_11N40SISO_5670



Date: 18.OCT.2017 16:37:21

MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

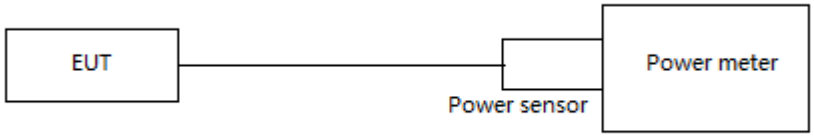
LIMITS OF Maximum Conducted Output Power Measurement

CFR 47 (FCC) part 15.2407 (a)
For the band 5.15–5.25 GHz.
For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the max-imum antenna gain does not exceed 6 dBi.
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz, provided the maximum antenna gain does not exceed 6 dBi.
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W

TEST PROCEDURE

(i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.
The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
(ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section II.B.
(iii) Measure the average power of the transmitter. This measurement is an average overboth the on and off periods of the transmitter.
(iv) Adjust the measurement in dBm by adding 10 log (1/x) where x is the duty cycle (e.g.,10 log (1/0.25) if the duty cycle is 25%).the measurement result.

TEST SETUP



TEST DATA

Table 15 Maximum Conducted Output Power Test Data

Test Mode	Test Channel	Level [dBm]	10log(1/x) Factor [dB]	Power [dBm]	Limit [dBm]	Verdict
802.11a	5180	10.89	0.60	11.49	23.98	PASS
802.11a	5200	9.81	0.60	10.41	23.98	PASS
802.11a	5240	9.73	0.60	10.33	23.98	PASS
802.11a	5260	10.01	0.60	10.61	23.98	PASS
802.11a	5280	10.27	0.60	10.87	23.98	PASS
802.11a	5320	10.65	0.60	11.25	23.98	PASS
802.11a	5500	11.02	0.60	11.62	23.98	PASS
802.11a	5580	9.35	0.60	9.95	23.98	PASS
802.11a	5700	8.1	0.60	8.70	23.98	PASS
802.11a	5745	9.19	0.60	9.79	30.00	PASS
802.11a	5785	9.43	0.60	10.03	30.00	PASS
802.11a	5825	8.69	0.60	9.29	30.00	PASS
802.11n HT20	5180	10.01	0.65	10.66	23.98	PASS
802.11n HT20	5200	9.81	0.65	10.46	23.98	PASS
802.11n HT20	5240	9.31	0.65	9.96	23.98	PASS
802.11n HT20	5260	7.66	0.65	8.31	23.98	PASS
802.11n HT20	5280	8.86	0.65	9.51	23.98	PASS
802.11n HT20	5320	9.19	0.65	9.84	23.98	PASS
802.11n HT20	5500	7.64	0.65	8.29	23.98	PASS
802.11n HT20	5580	7.85	0.65	8.49	23.98	PASS
802.11n HT20	5700	7.45	0.65	8.10	23.98	PASS
802.11n HT20	5745	9.88	0.65	10.53	30.00	PASS
802.11n HT20	5785	9.86	0.65	10.51	30.00	PASS
802.11n HT20	5825	9.29	0.65	9.94	30.00	PASS
802.11n HT40	5190	7.82	1.22	9.04	23.98	PASS
802.11n HT20	5230	7.49	1.22	8.71	23.98	PASS
802.11n HT20	5270	7.97	1.22	9.19	23.98	PASS
802.11n HT20	5310	8.45	1.22	9.67	23.98	PASS
802.11n HT20	5510	8.79	1.22	10.01	23.98	PASS
802.11n HT20	5550	8.79	1.22	10.01	23.98	PASS
802.11n HT20	5670	8.38	1.22	9.60	23.98	PASS
802.11n HT20	5755	8.71	1.22	9.93	30.00	PASS
802.11n HT20	5795	8.48	1.22	9.70	30.00	PASS

MAXIMUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT

LIMITS OF Maximum Power Spectral Density Level Measurement

CFR 47 (FCC) part 15.407 (a)
For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both
the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both
the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

1.Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power….” (This procedure is required even if the maximum conducted output power measurement was performed
using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
a) If Method SA-2 or SA-2 Alternative was used, add 10 log (1/x), where x is the duty cycle, to the peak of the spectrum.
b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the
above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or
500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1

MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and 789033 D02 General UNII Test Procedures New Rules v01r02 Page 10 integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.l.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

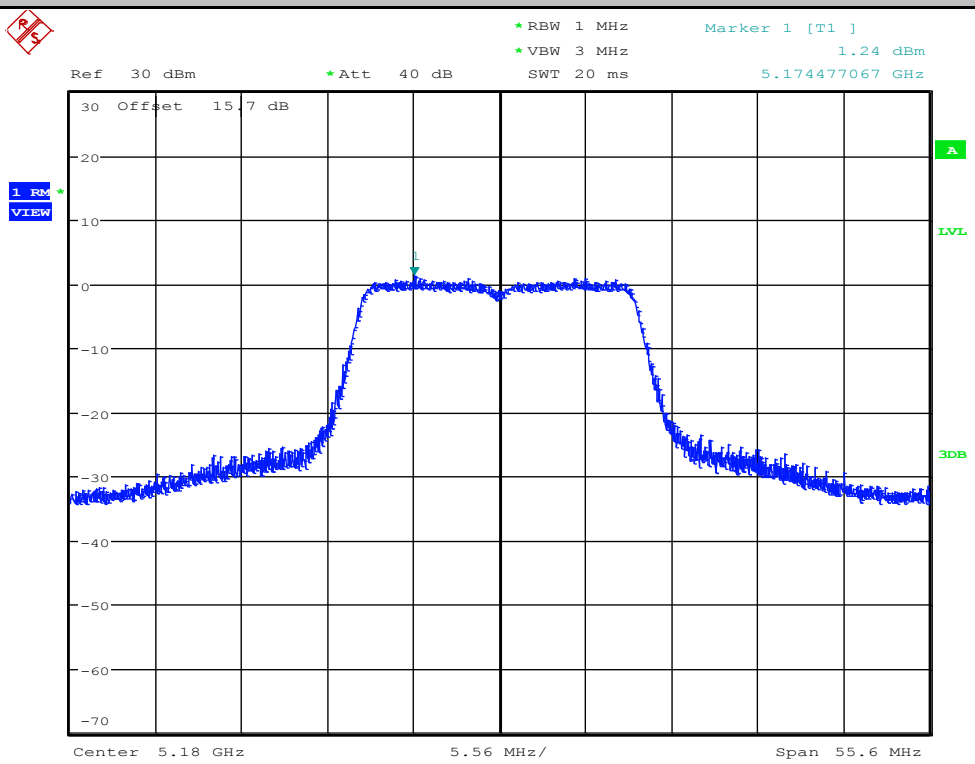
TEST DATA

Table 16 Maximum Power Spectral Density Level Test Data

Test Mode	Test Channel	Level [dBm/MHz]	10log(1/x) Factor [dB]	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
802.11a	5180	1.24	0.60	1.84	11.00	PASS
802.11a	5200	-0.25	0.60	0.35	11.00	PASS
802.11a	5240	1.63	0.60	2.23	11.00	PASS
802.11a	5260	2.41	0.60	3.01	11.00	PASS
802.11a	5280	2.24	0.60	2.84	11.00	PASS
802.11a	5320	2.45	0.60	3.05	11.00	PASS
802.11a	5500	3.06	0.60	3.66	11.00	PASS
802.11a	5580	0.70	0.60	1.30	11.00	PASS
802.11a	5700	-0.49	0.60	0.11	11.00	PASS
802.11n HT20	5180	-0.04	0.65	0.61	11.00	PASS
802.11n HT20	5200	-0.16	0.65	0.49	11.00	PASS
802.11n HT20	5240	-0.72	0.65	-0.07	11.00	PASS
802.11n HT20	5260	-2.19	0.65	-1.54	11.00	PASS
802.11n HT20	5280	-0.95	0.65	-0.30	11.00	PASS
802.11n HT20	5320	-0.64	0.65	0.01	11.00	PASS
802.11n HT20	5500	-1.82	0.65	-1.17	11.00	PASS
802.11n HT20	5580	-1.84	0.65	-1.19	11.00	PASS
802.11n HT20	5700	-2.59	0.65	-1.94	11.00	PASS
802.11n HT40	5190	-5.15	1.22	-3.93	11.00	PASS
802.11n HT40	5230	-5.40	1.22	-4.18	11.00	PASS
802.11n HT40	5270	-4.95	1.22	-3.73	11.00	PASS
802.11n HT40	5310	-4.40	1.22	-3.18	11.00	PASS
802.11n HT40	5510	-4.20	1.22	-2.98	11.00	PASS
802.11n HT40	5550	-4.06	1.22	-2.84	11.00	PASS
802.11n HT40	5670	-4.54	1.22	-3.32	11.00	PASS

Test Mode	Test Channel	Level [dBm/500kHz]	10log(1/x) Factor[dB]	PSD [dBm/500kHz]	Limit [dBm/500kHz]	Verdict
802.11a	5745	0.1	0.60	0.70	30.00	PASS
802.11a	5785	-0.99	0.60	-0.33	30.00	PASS
802.11a	5825	-1.64	0.60	-1.04	30.00	PASS
802.11n HT20	5745	-0.78	0.65	-0.13	30.00	PASS
802.11n HT20	5785	-0.77	0.65	-0.12	30.00	PASS
802.11n HT20	5825	-1.23	0.65	-0.58	30.00	PASS
802.11n HT40	5755	-4.73	1.22	-3.61	30.00	PASS
802.11n HT40	5795	-5.12	1.22	-3.90	30.00	PASS

Maximum Power Spectral Density _11A_5180



Date: 18.OCT.2017 11:54:01

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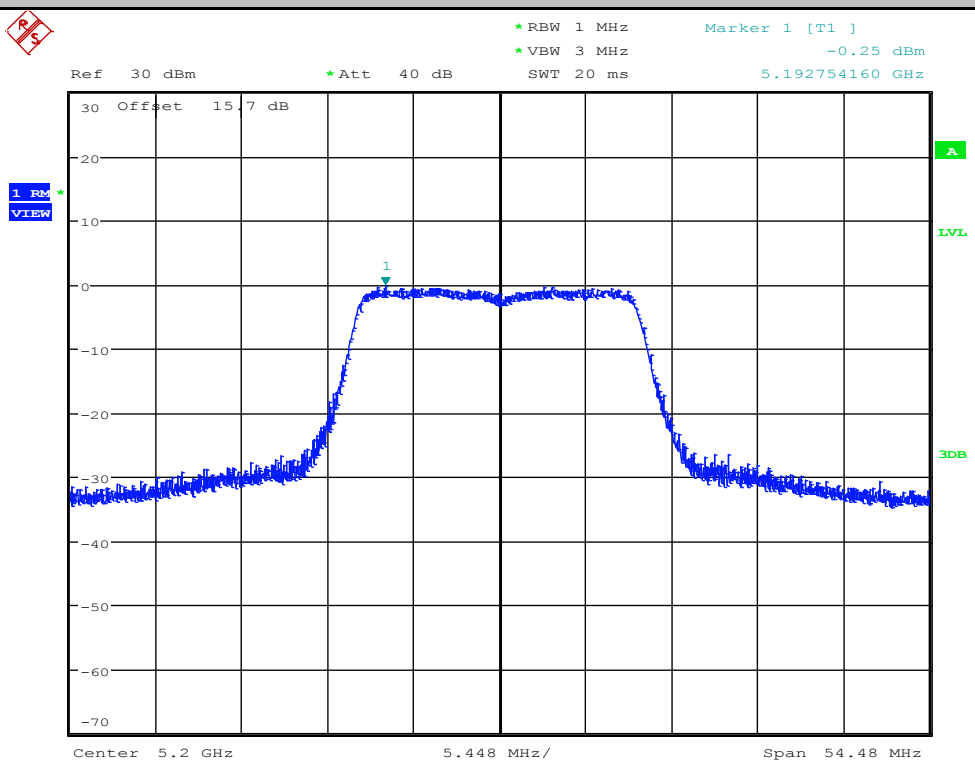

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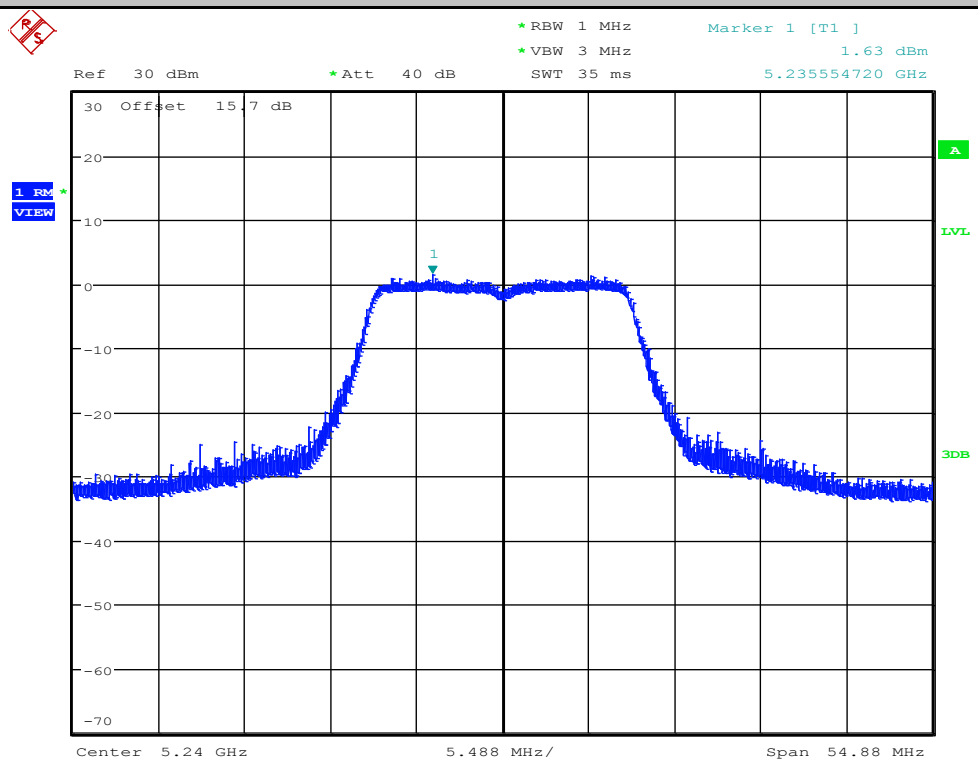
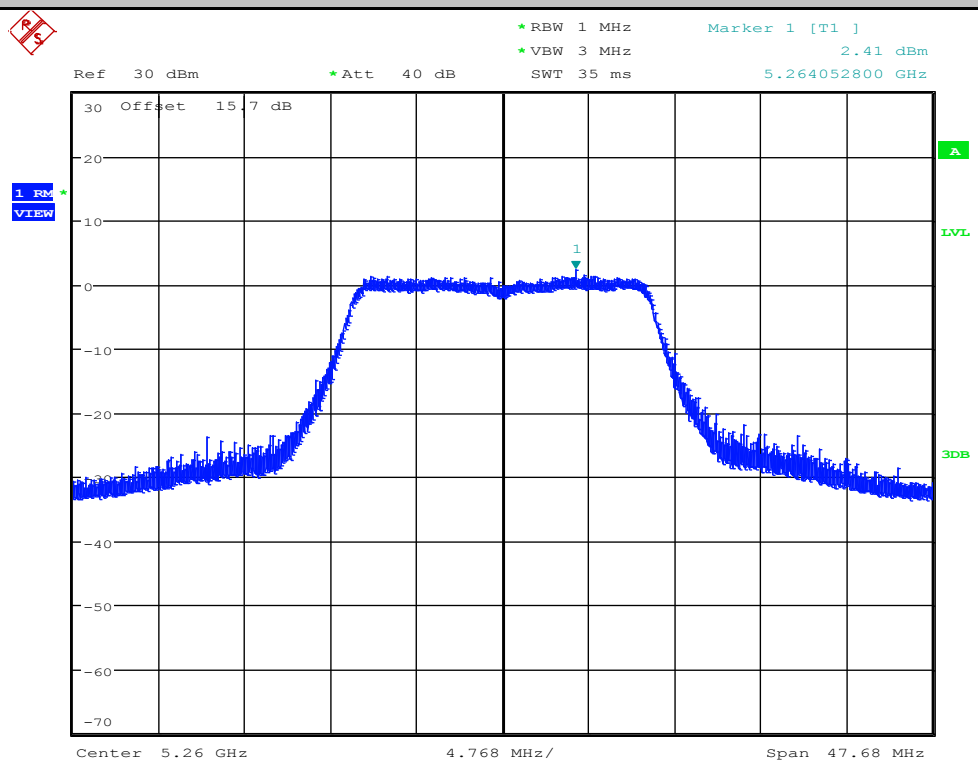
Maximum Power Spectral Density _11A_5240



Date: 18.OCT.2017 10:36:45

Maximum Power Spectral Density _11A_5260_Ant1



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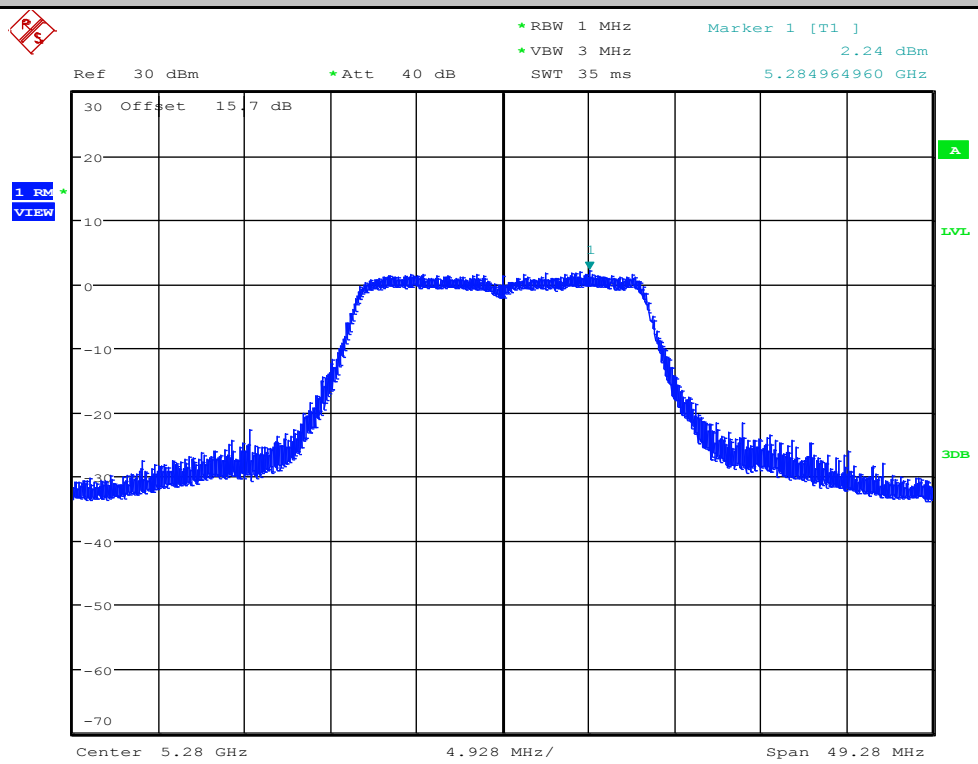
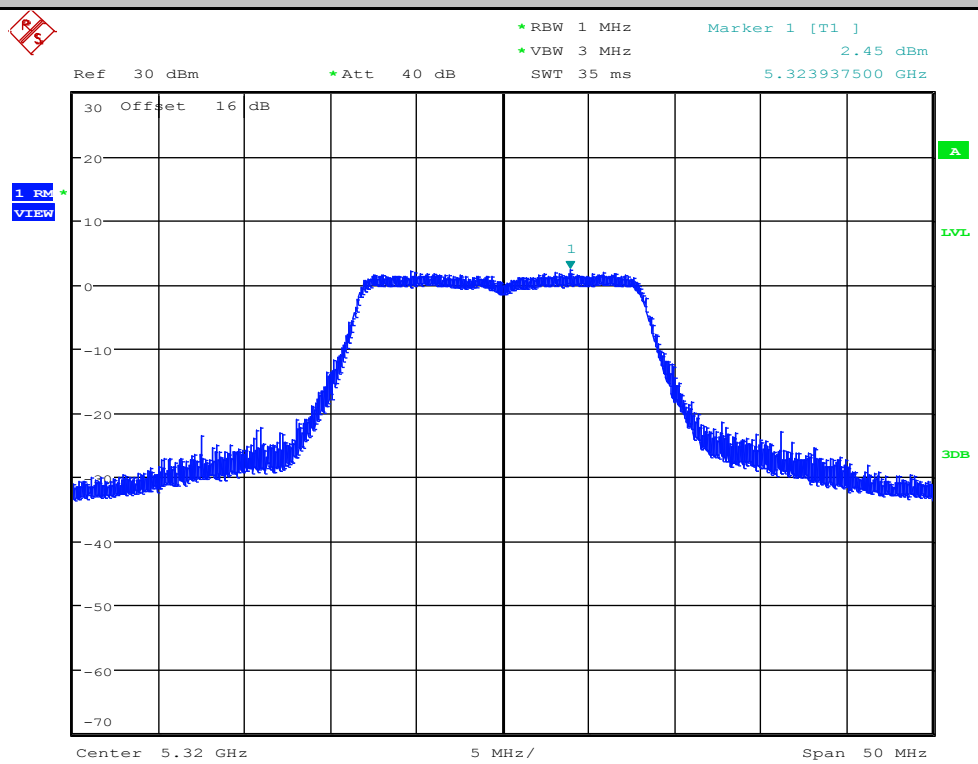
Maximum Power Spectral Density _11A_5280



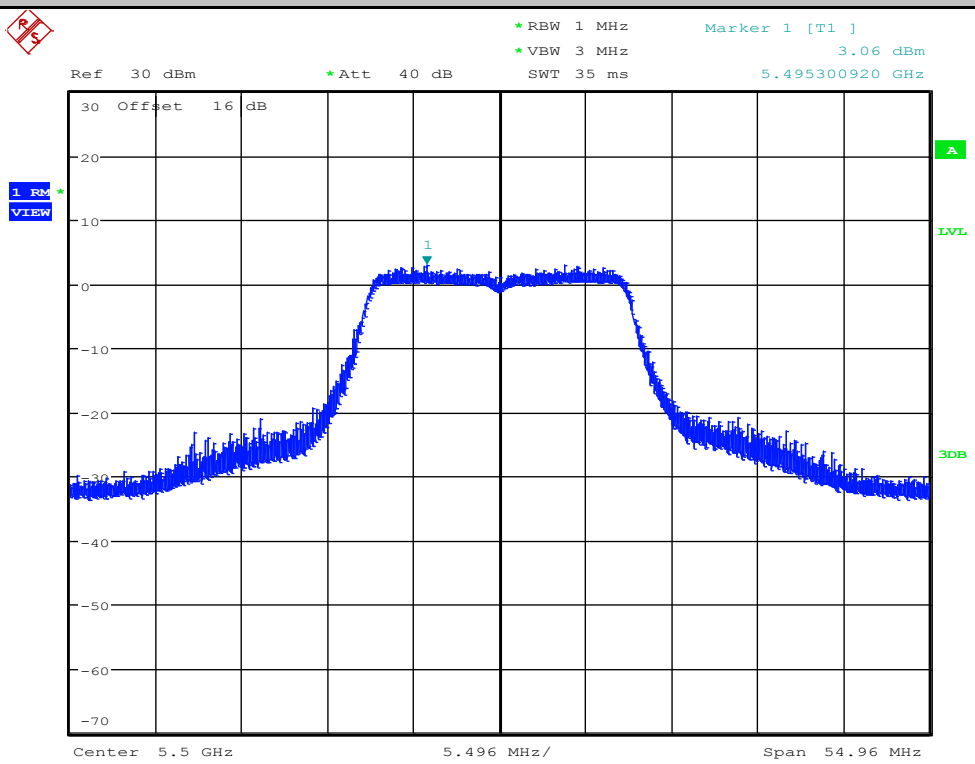
Date: 18.OCT.2017 10:49:44

Maximum Power Spectral Density _11A_5320



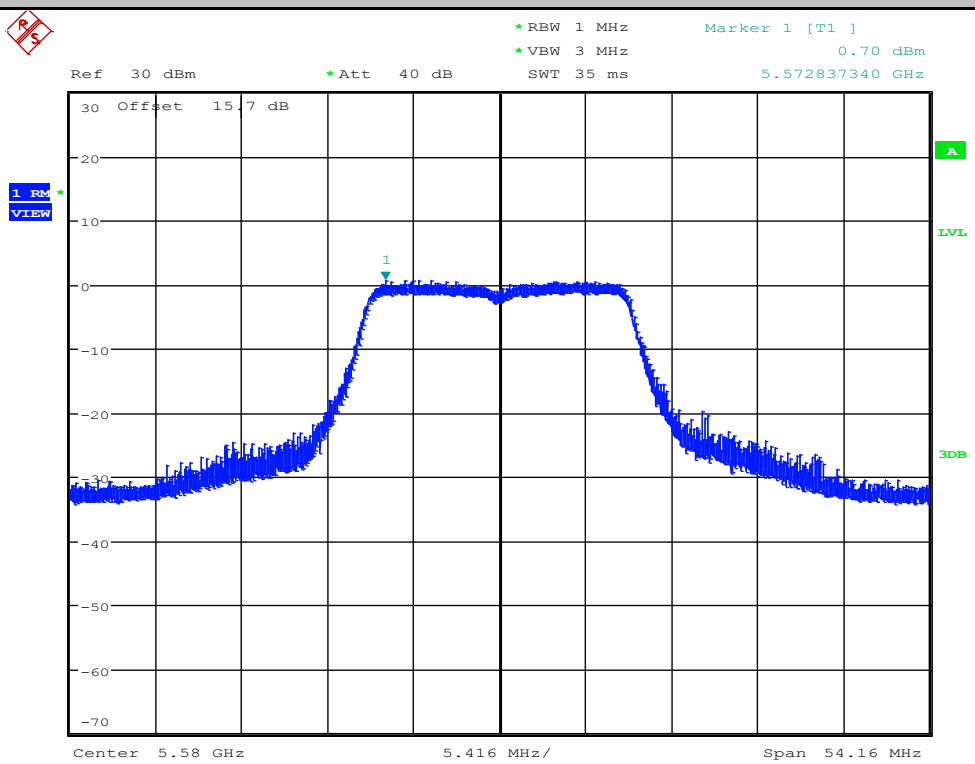
Date: 18.OCT.2017 10:54:15

Maximum Power Spectral Density _11A_5500



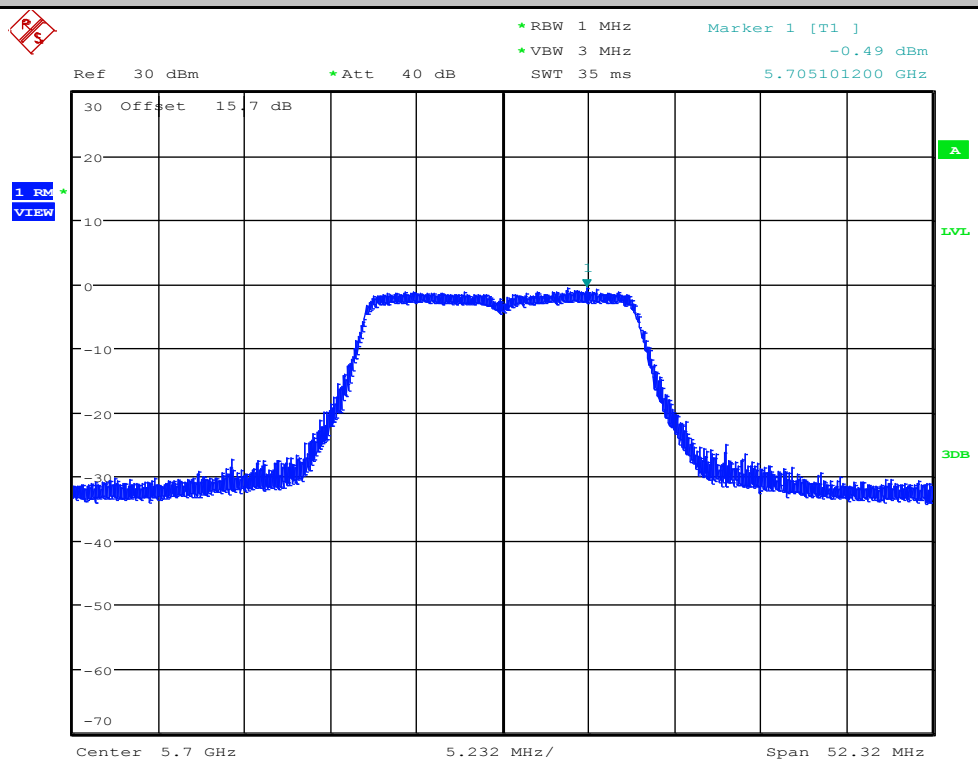
Date: 18.OCT.2017 10:59:52

Maximum Power Spectral Density _11A_5580



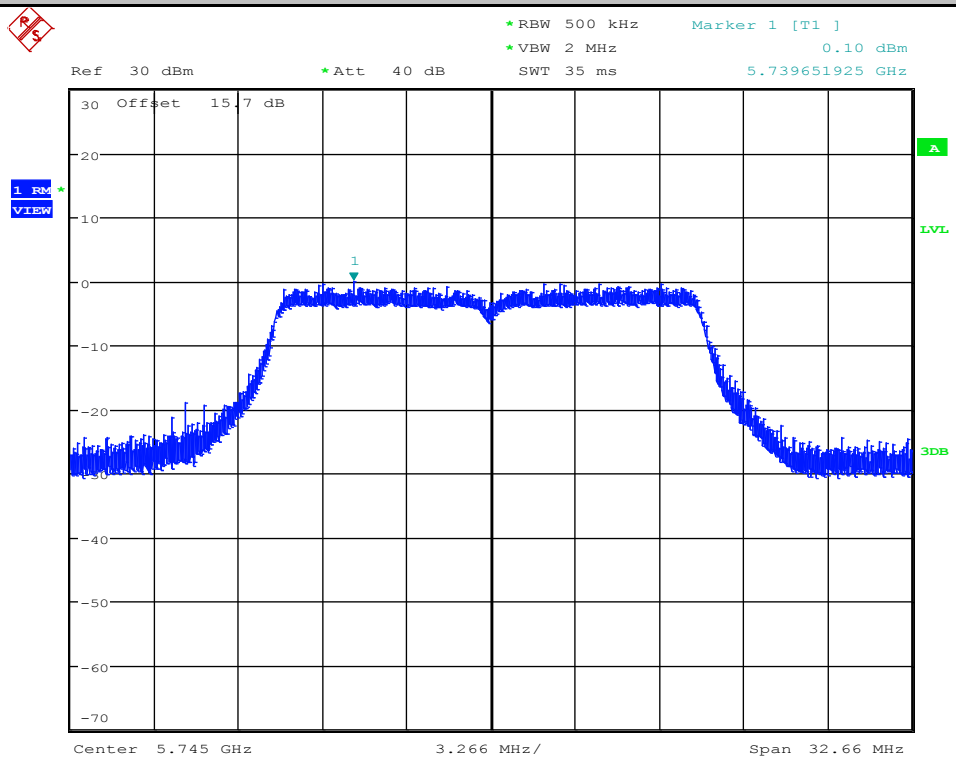
Date: 18.OCT.2017 11:05:45

Maximum Power Spectral Density _11A_5700



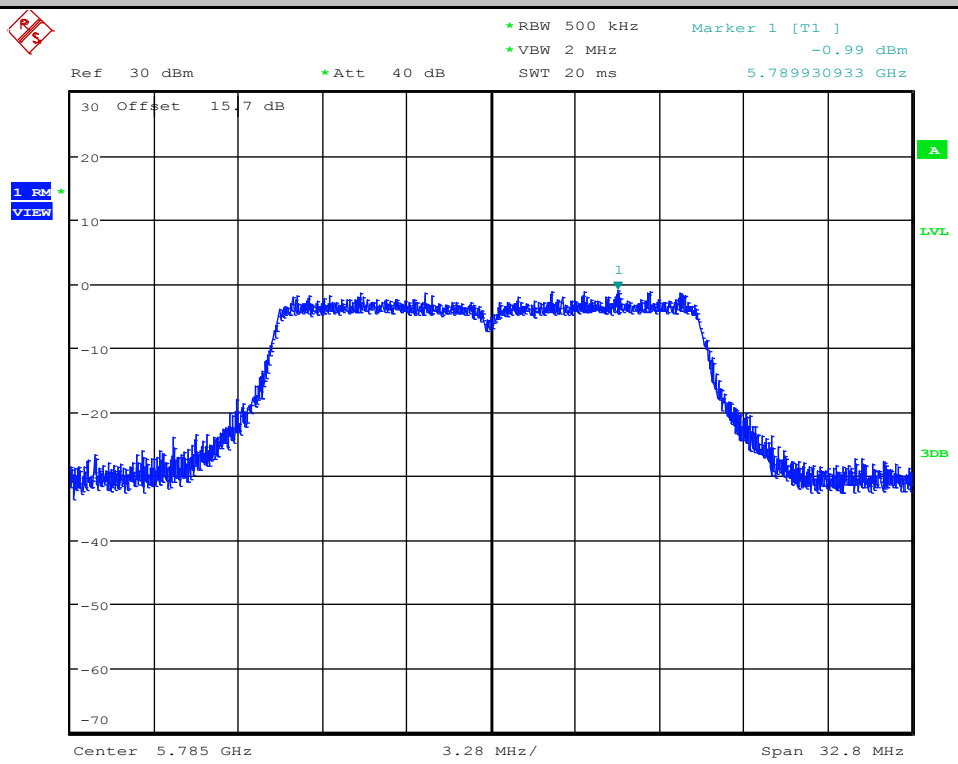
Date: 18.OCT.2017 11:10:28

Maximum Power Spectral Density _11A_5745



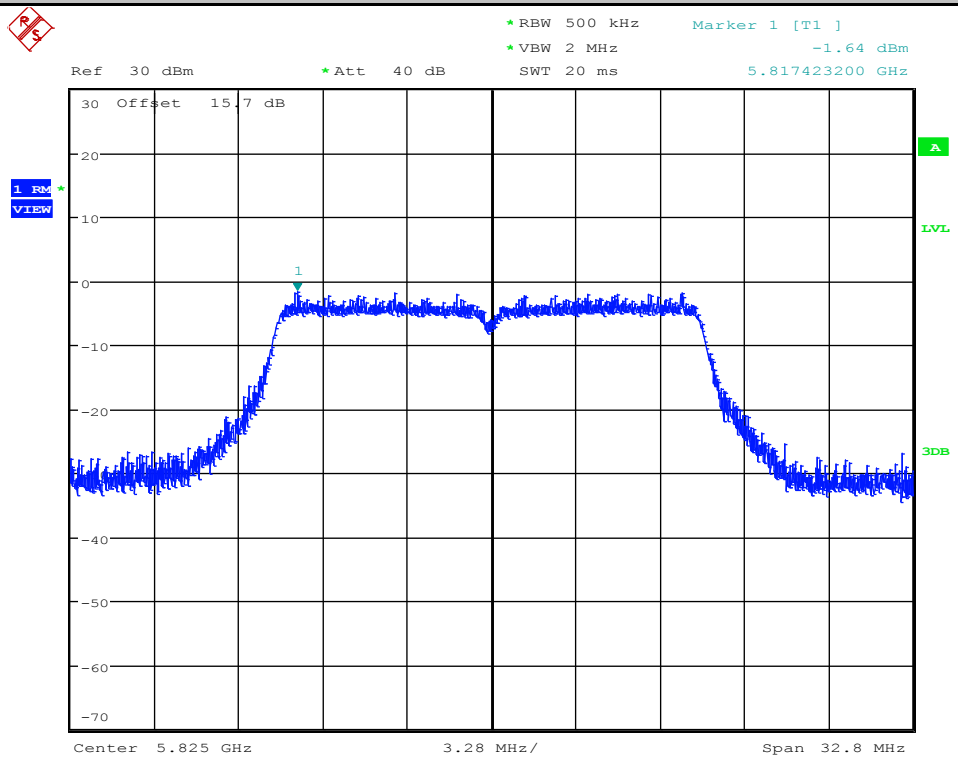
Date: 18.OCT.2017 14:32:11

Maximum Power Spectral Density _11A_5785



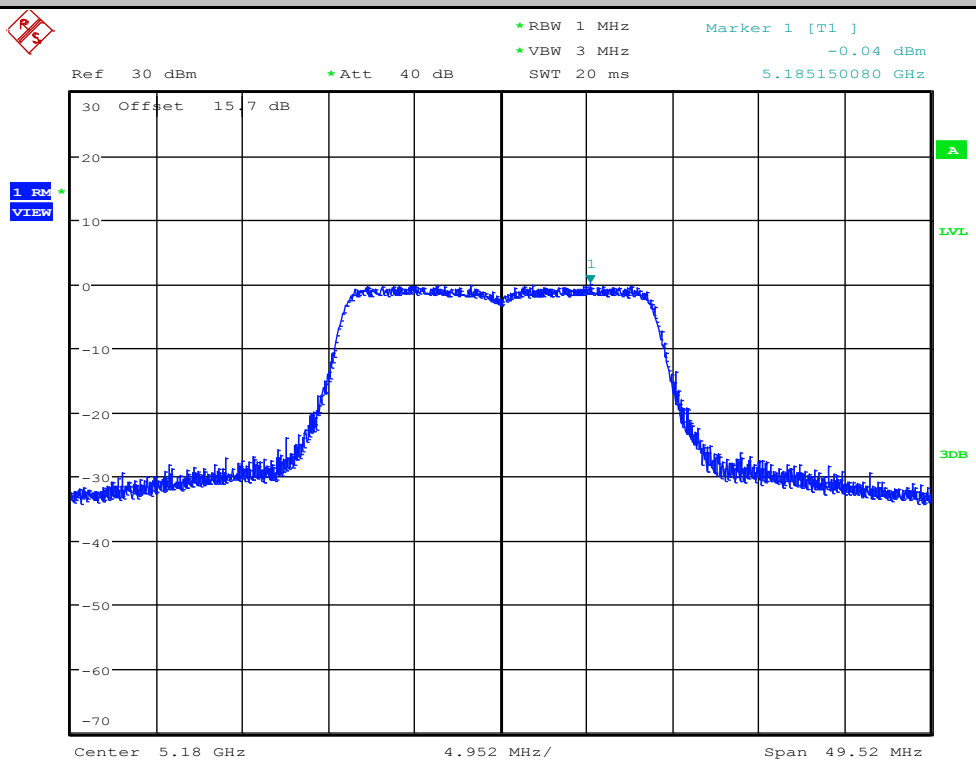
Date: 18.OCT.2017 14:36:23

Maximum Power Spectral Density _11A_5825



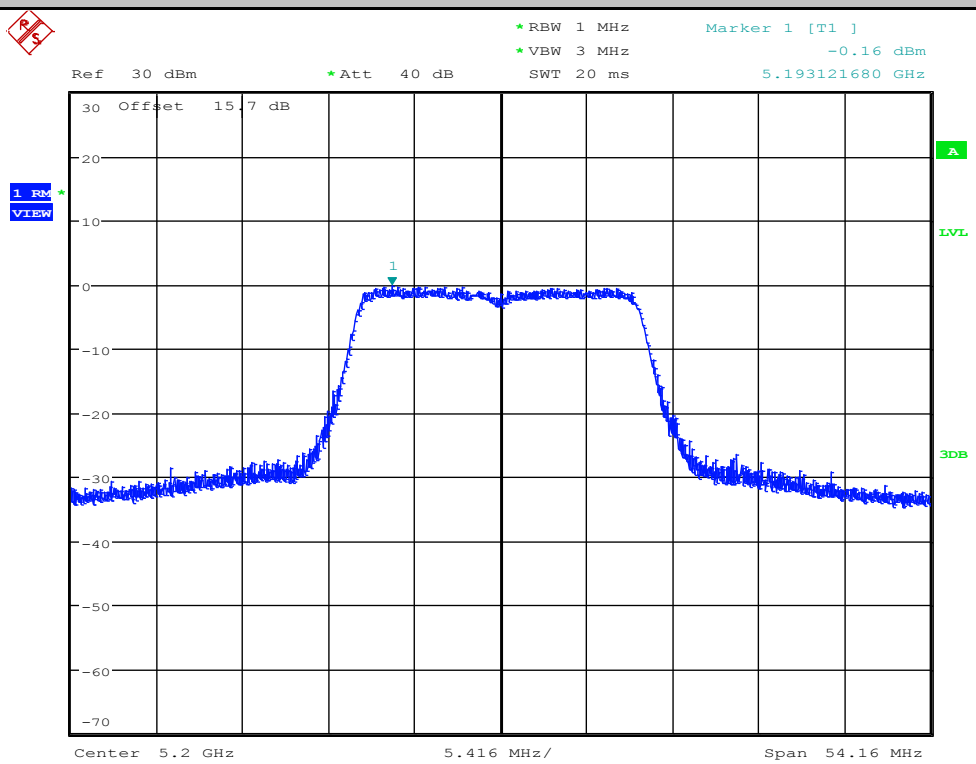
Date: 18.OCT.2017 14:38:46

Maximum Power Spectral Density _11N20SISO_5180



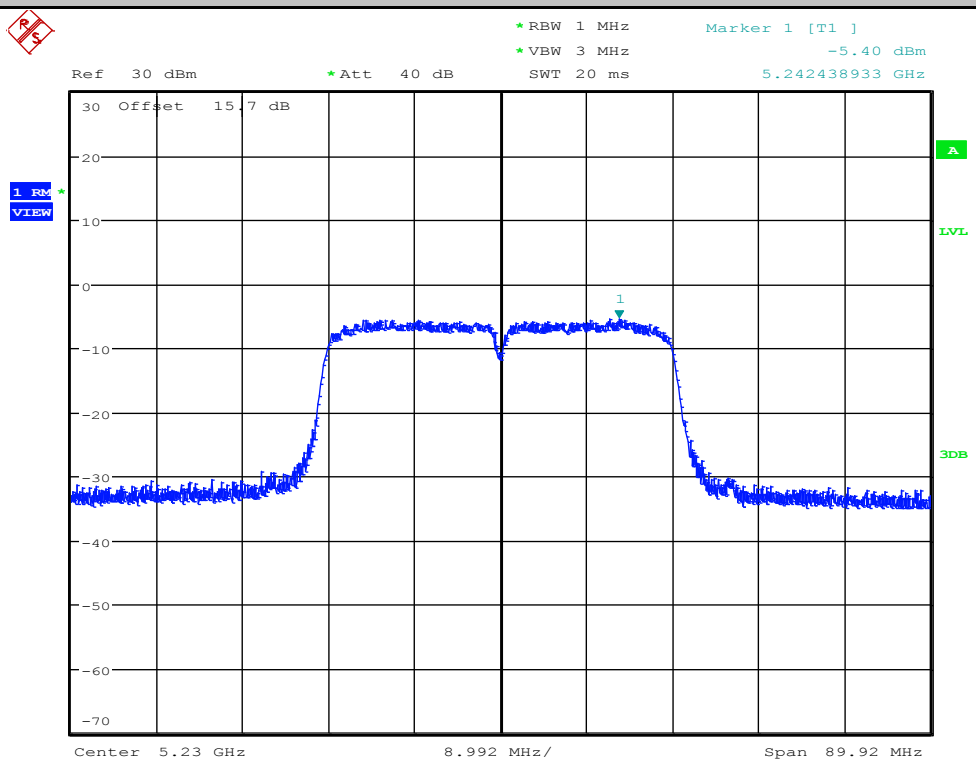
Date: 18.OCT.2017 12:11:44

Maximum Power Spectral Density _11N20SISO_5200



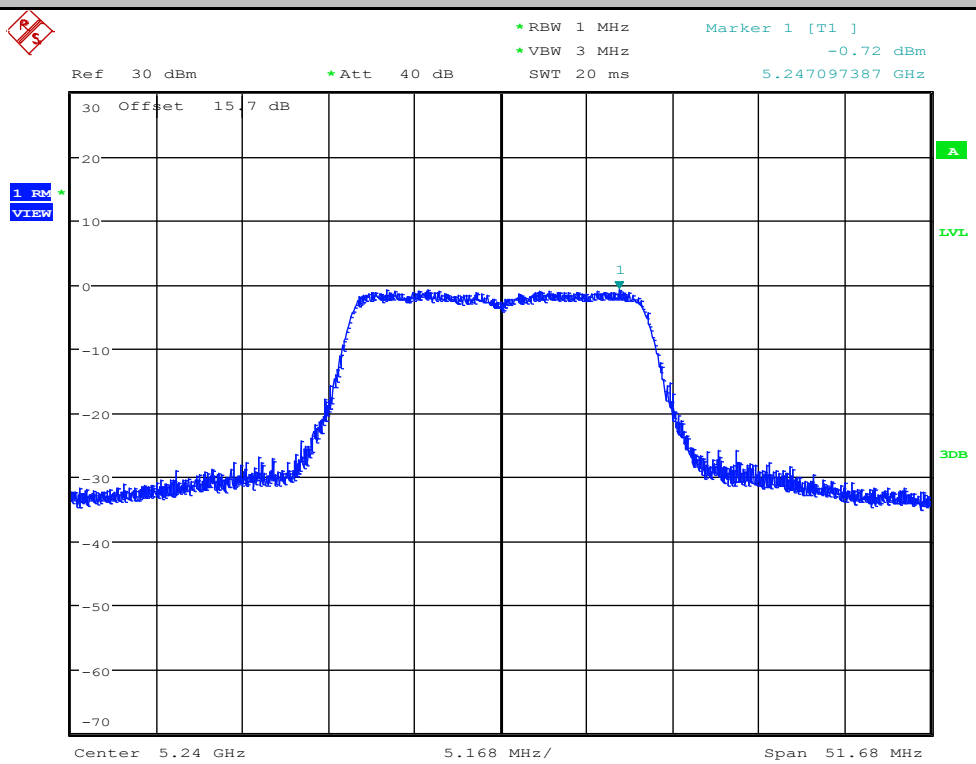
Date: 18.OCT.2017 12:15:49

Maximum Power Spectral Density _11N40SISO_5230



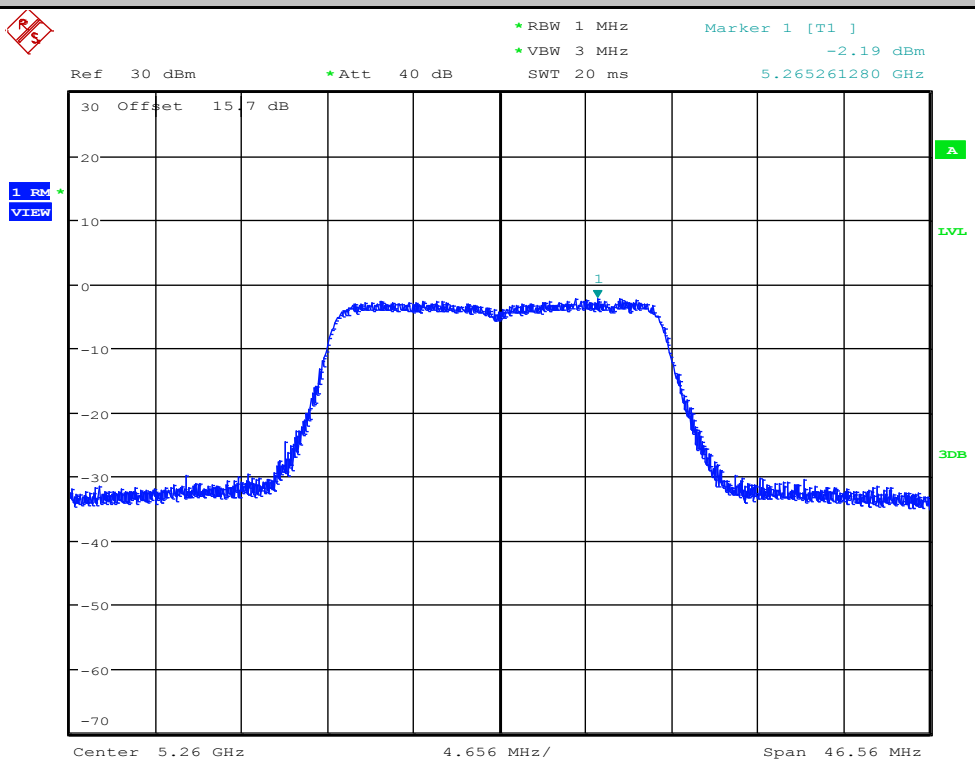
Date: 18.OCT.2017 16:10:06

Maximum Power Spectral Density _11N20SISO_5240



Date: 18.OCT.2017 14:42:27

Maximum Power Spectral Density _11N20SISO_5260



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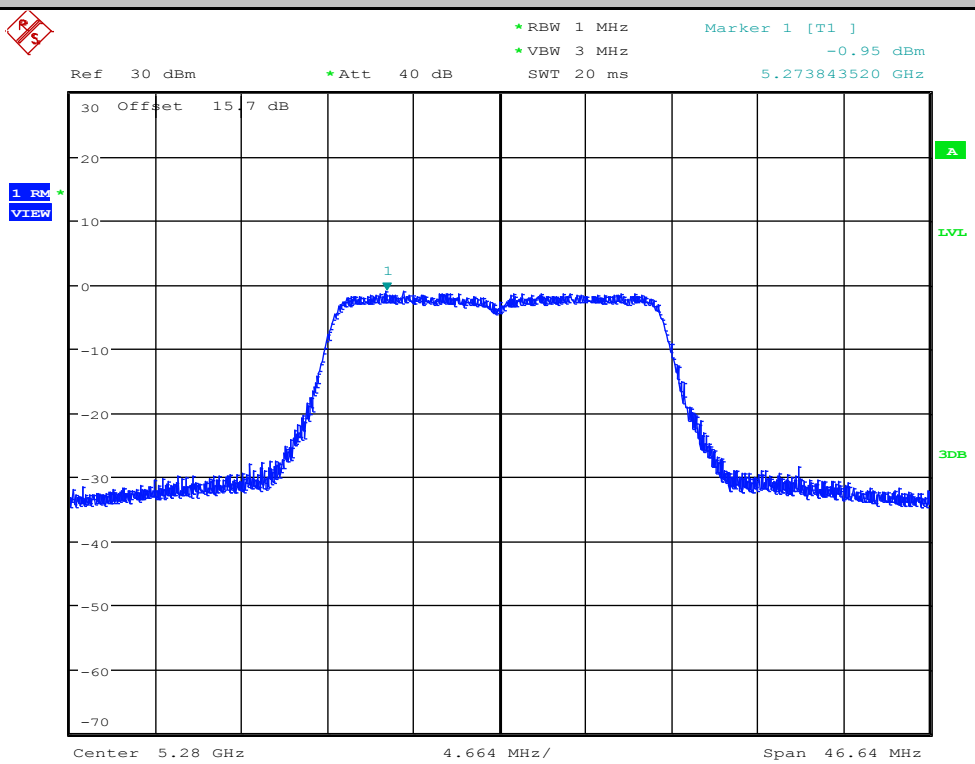
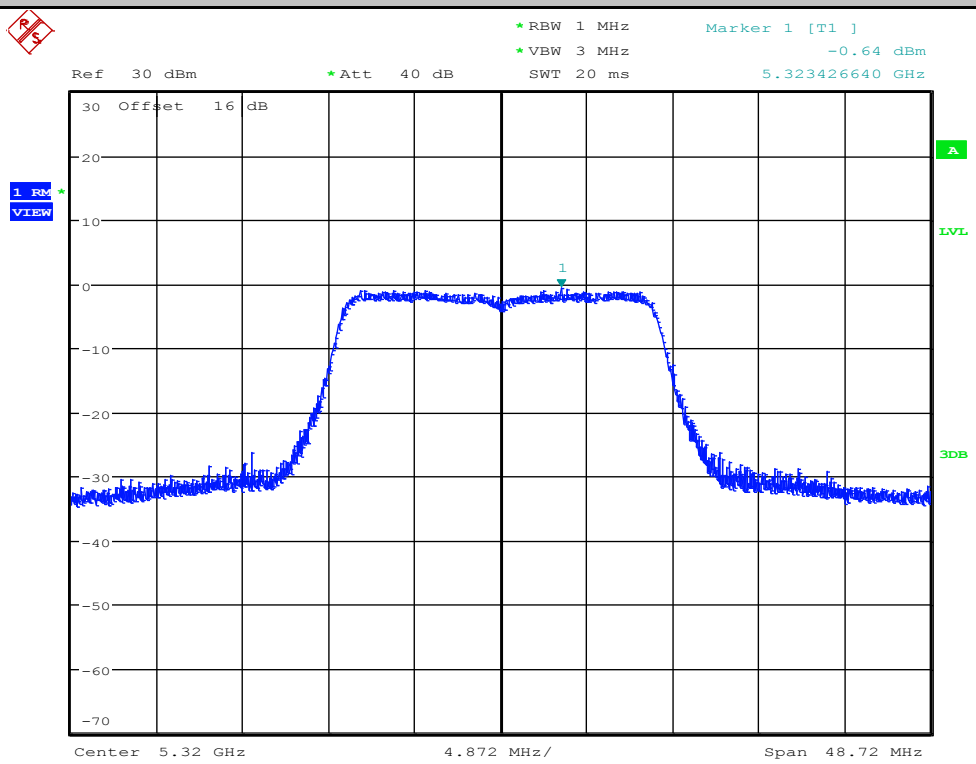
Maximum Power Spectral Density_ 11N20SISO_5280



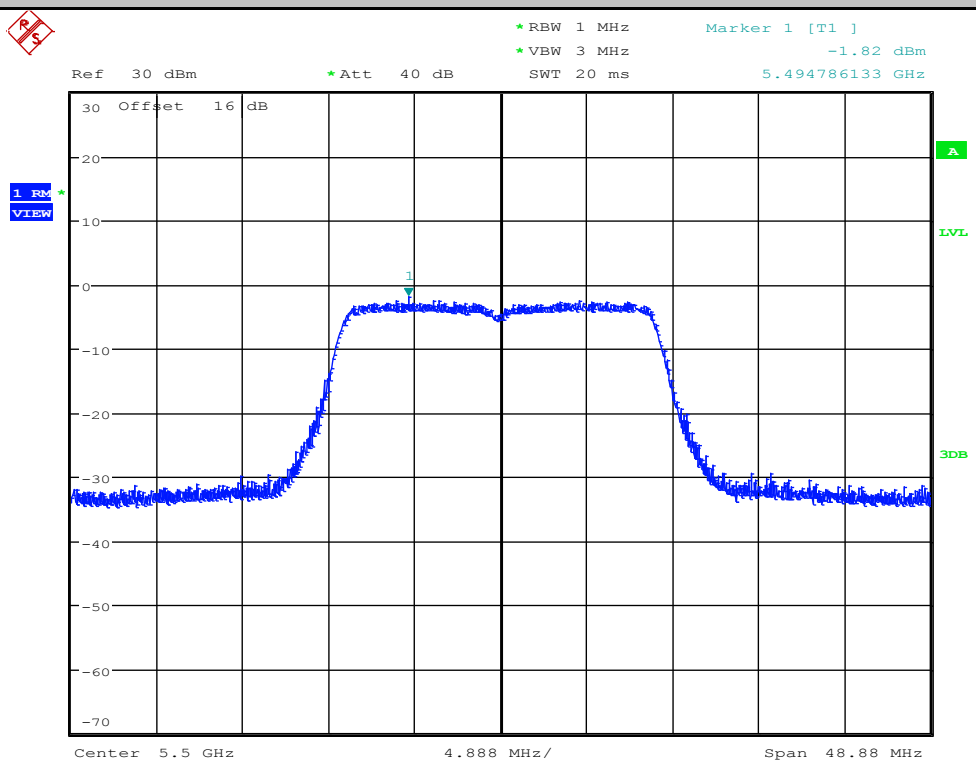
Date: 18.OCT.2017 14:51:26

Maximum Power Spectral Density _11N20SISO_5320



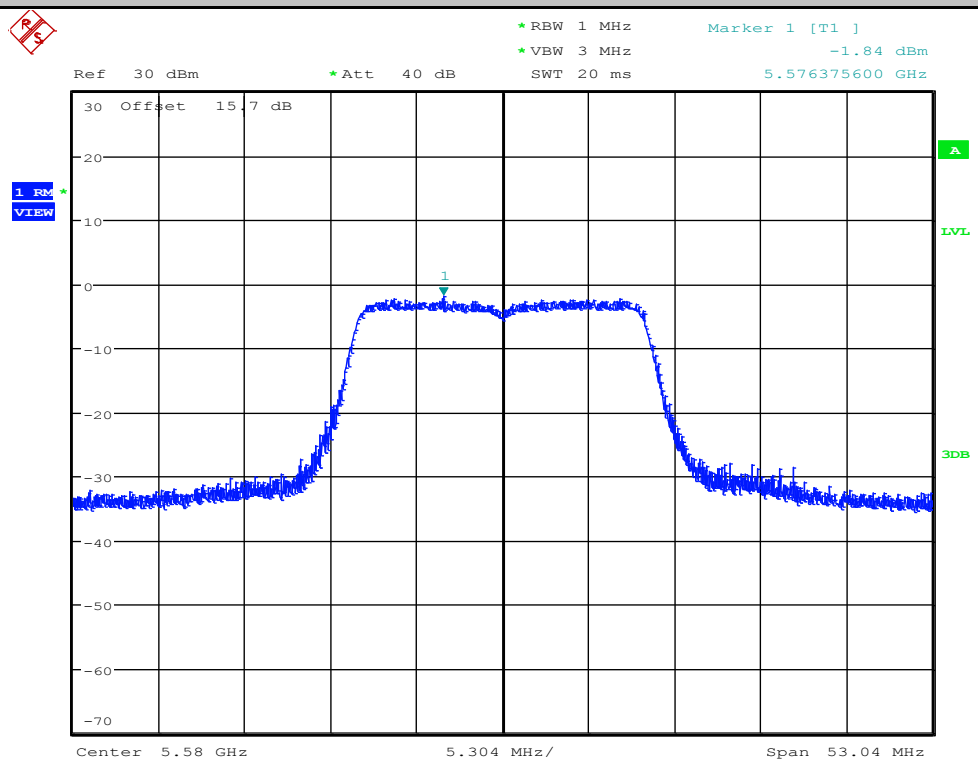
Date: 18.OCT.2017 14:55:30

Maximum Power Spectral Density_ 11N20SISO_5500



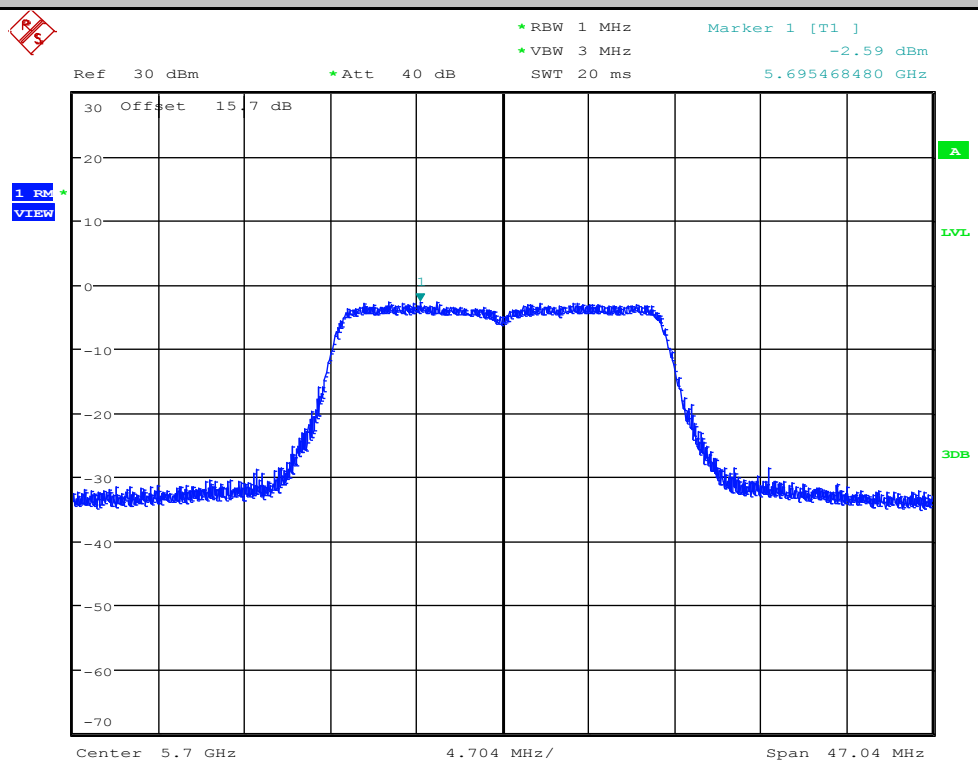
Date: 18.OCT.2017 15:01:10

Maximum Power Spectral Density _11N20SISO_5580



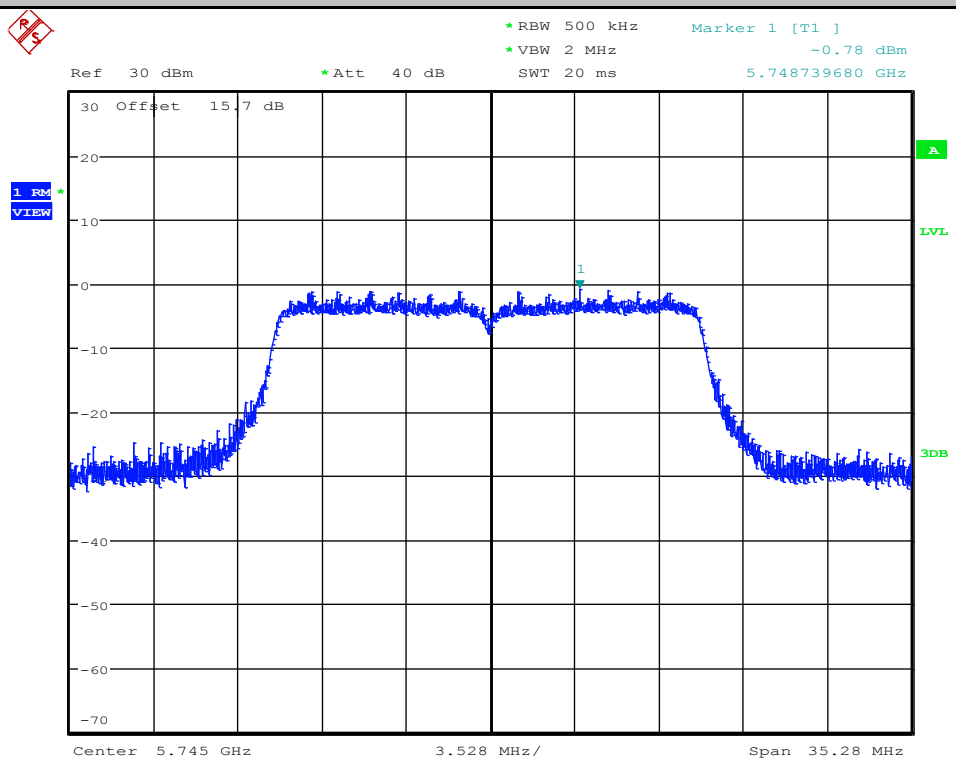
Date: 18.OCT.2017 15:05:56

Maximum Power Spectral Density _11N20SISO_5700



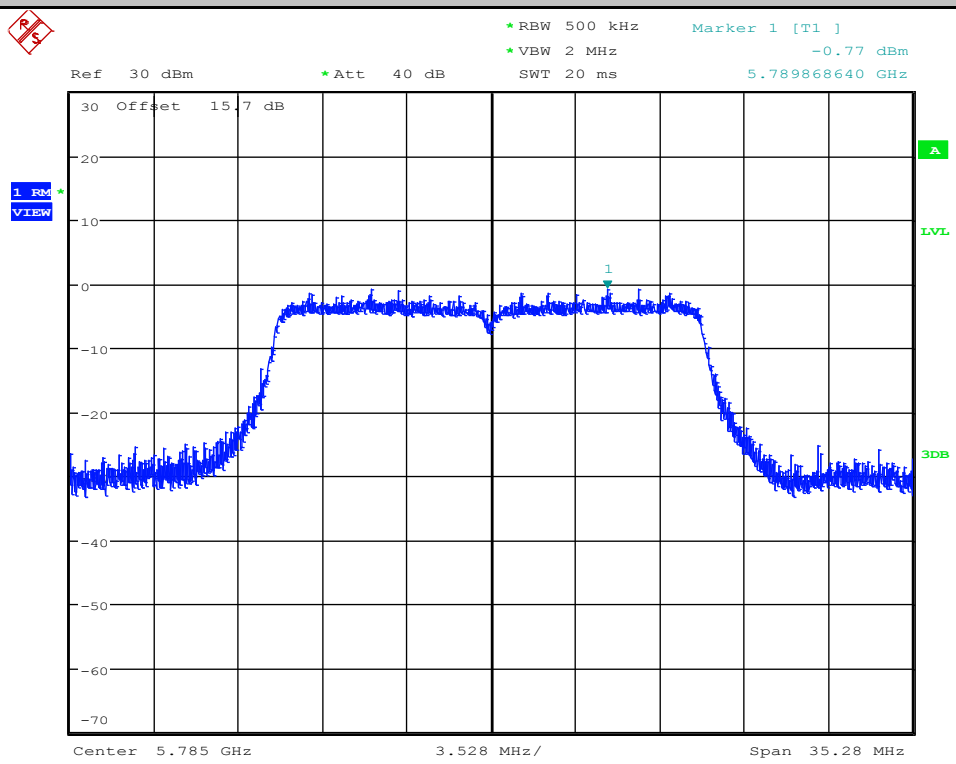
Date: 18.OCT.2017 15:12:45

Maximum Power Spectral Density_ 11N20SISO_5745



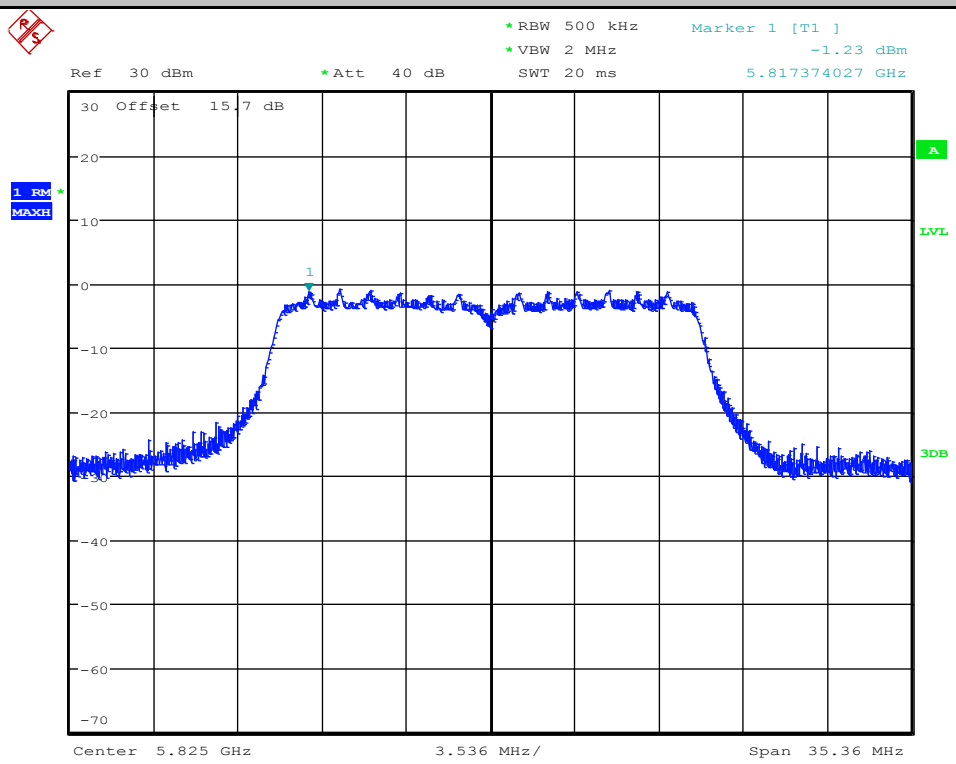
Date: 18.OCT.2017 15:19:26

Maximum Power Spectral Density _11N20SISO_5785



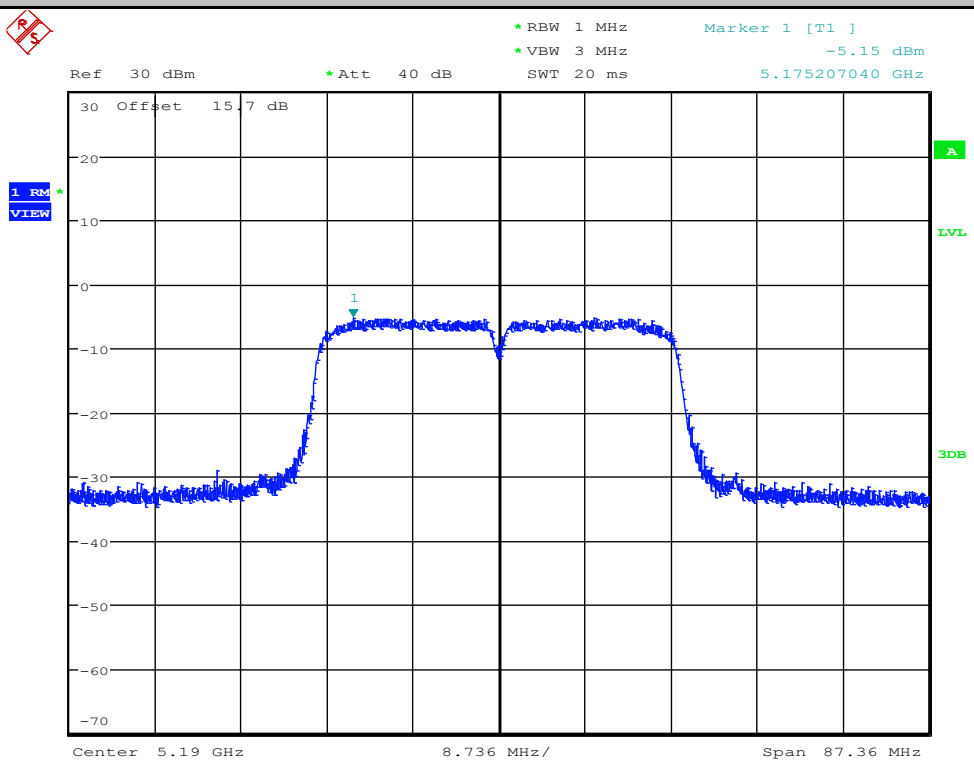
Date: 18.OCT.2017 15:23:11

Maximum Power Spectral Density _11N20SISO_5825



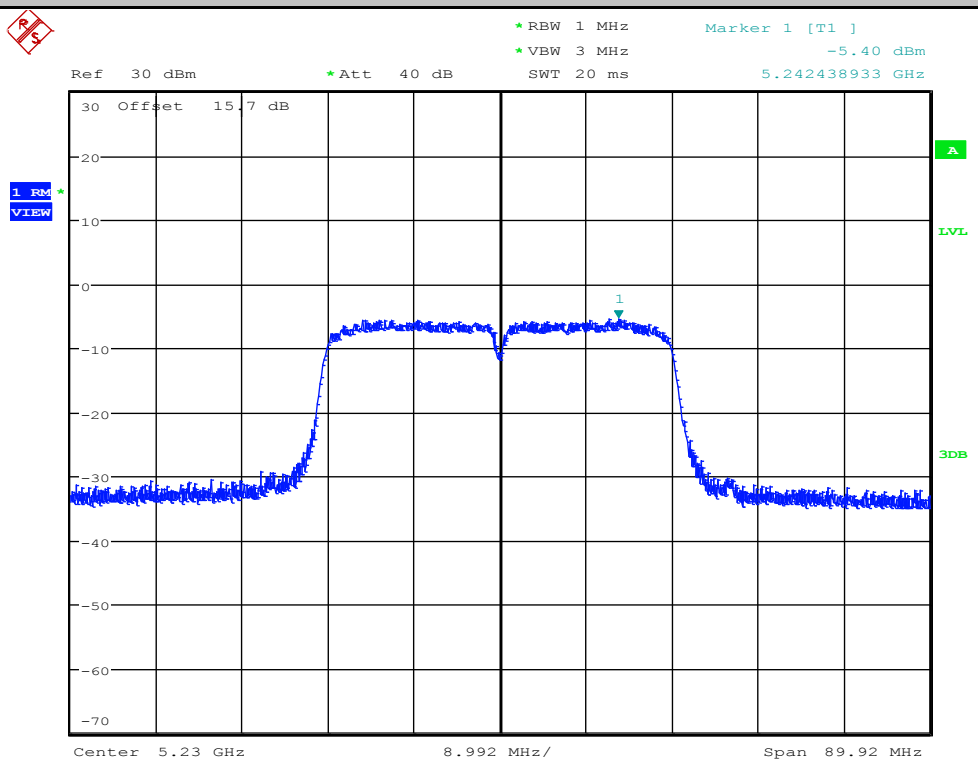
Date: 18.OCT.2017 15:30:56

Maximum Power Spectral Density _11N40SISO_5190



Date: 18.OCT.2017 16:13:54

Maximum Power Spectral Density _11N40SISO_5230



Date: 18.OCT.2017 16:10:06

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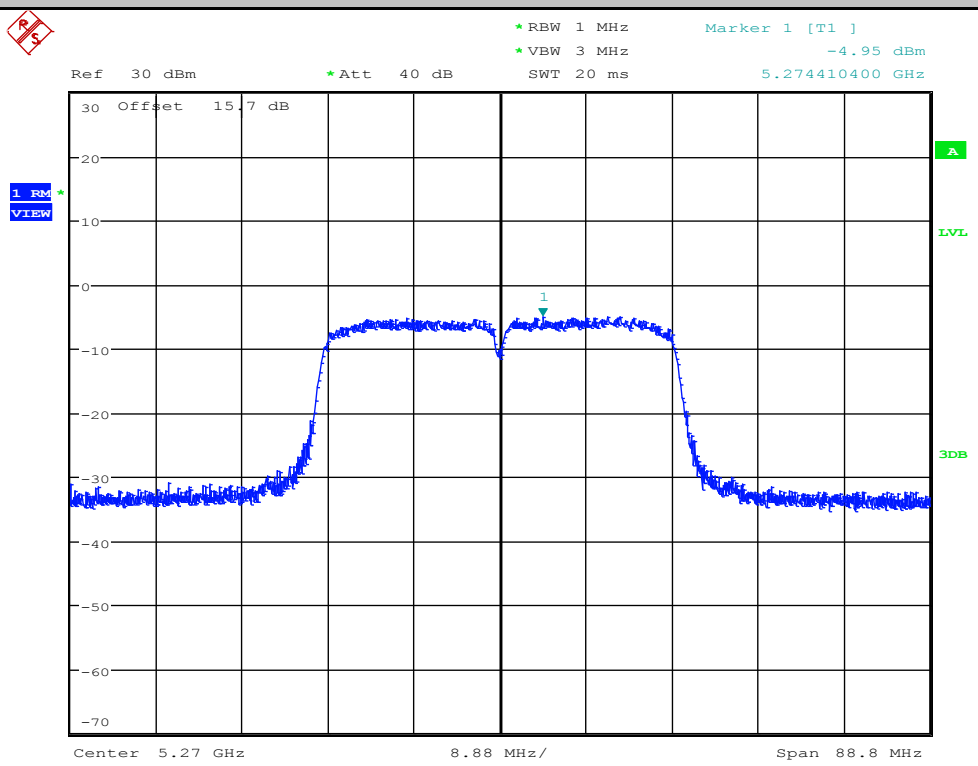
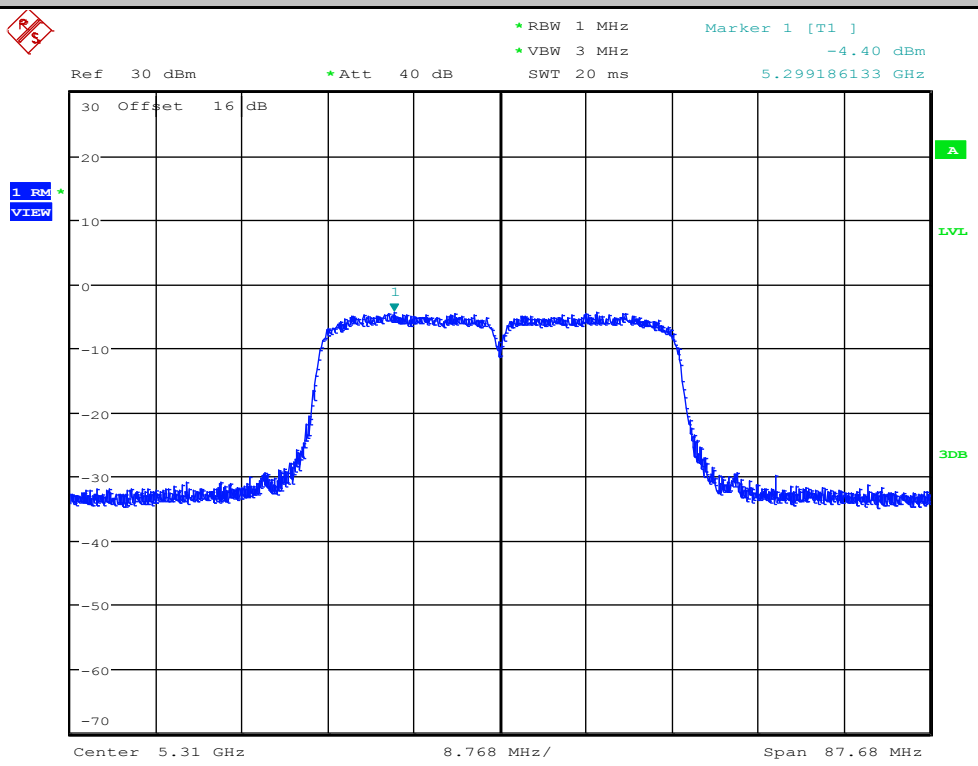


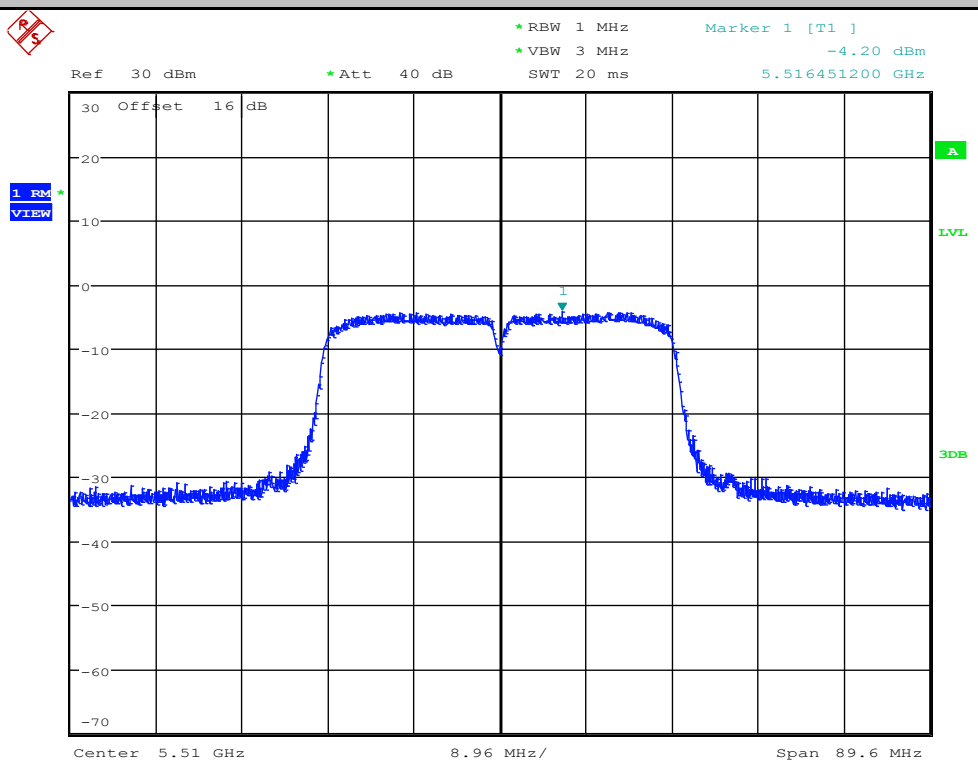
Date: 18.OCT.2017 16:18:07

Maximum Power Spectral Density_11N40SISO_5310



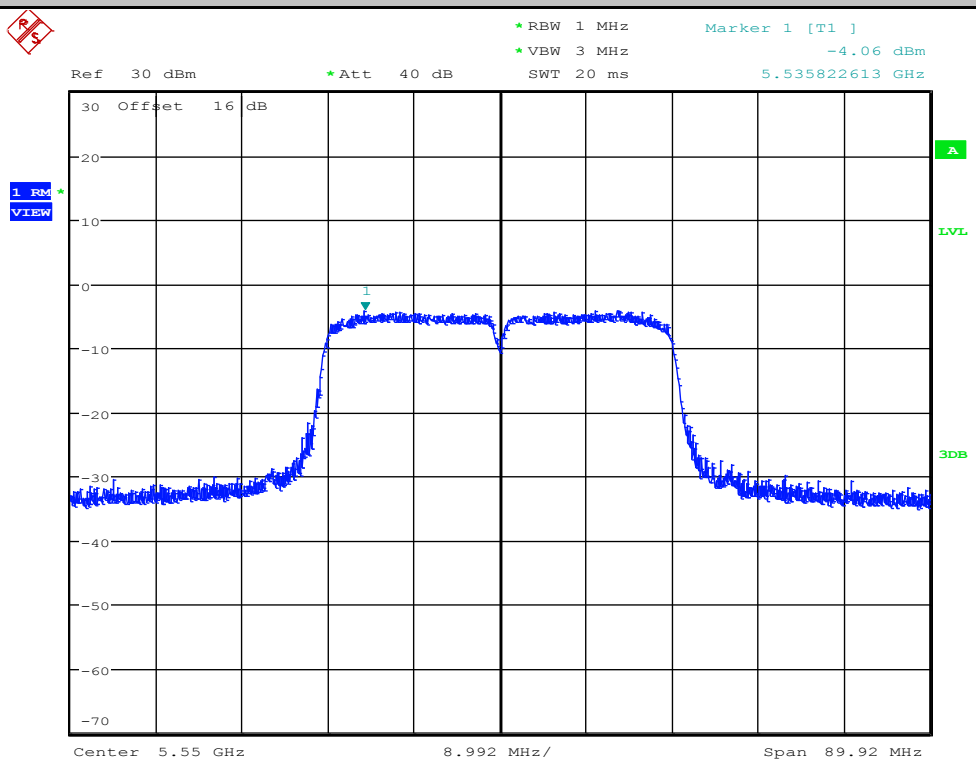
Date: 18.OCT.2017 16:24:04

Maximum Power Spectral Density _11N40SISO_5510



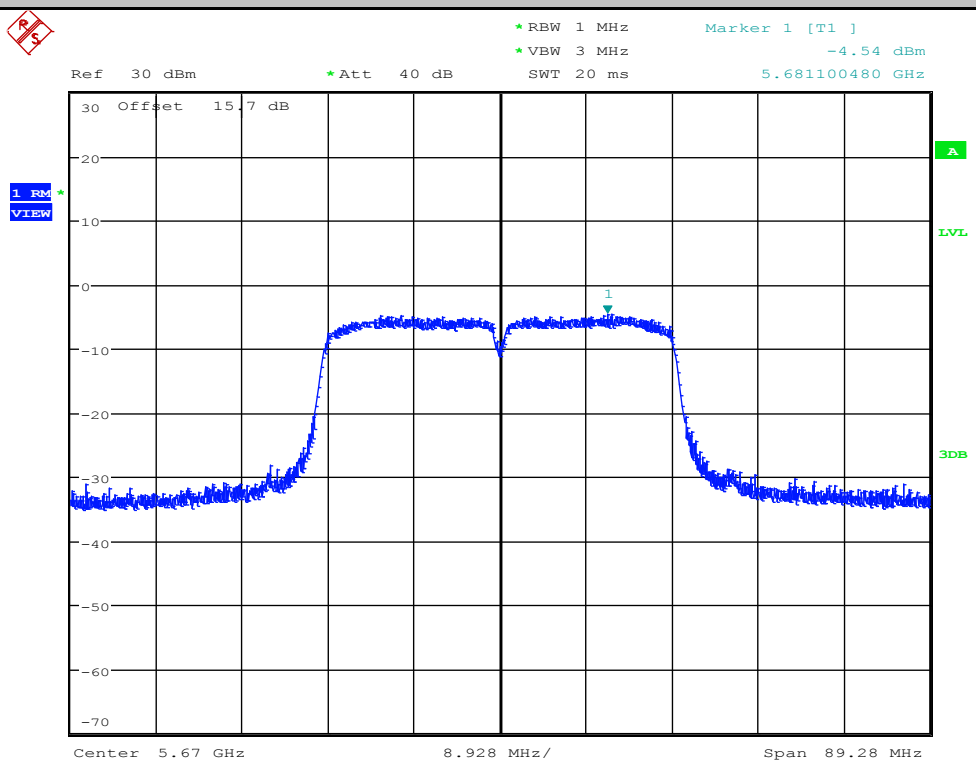
Date: 18.OCT.2017 16:29:51

Maximum Power Spectral Density _11N40SISO_5550



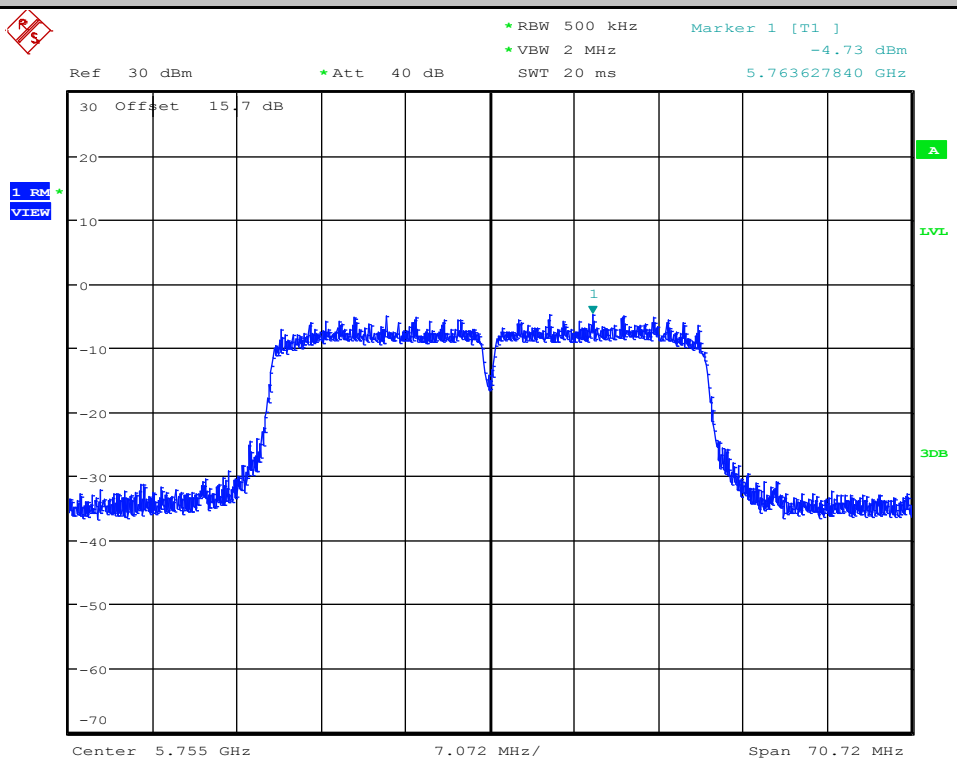
Date: 18.OCT.2017 16:34:34

Maximum Power Spectral Density _11N40SISO_5670



Date: 18.OCT.2017 16:38:28

Maximum Power Spectral Density _11N40SISO_5755



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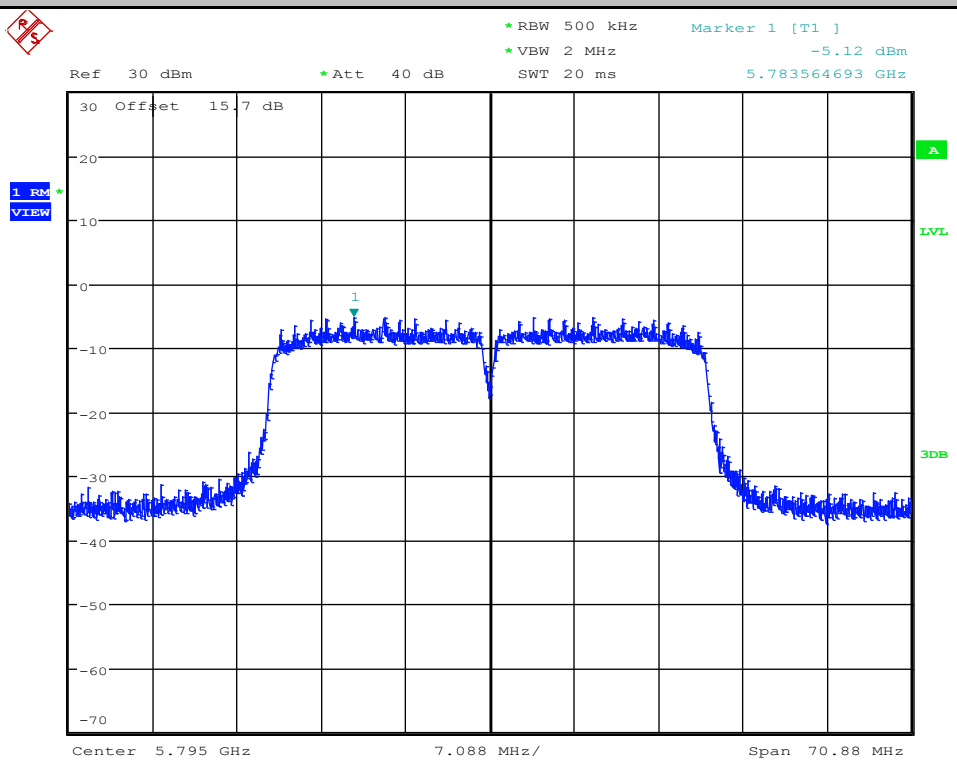
Maximum Power Spectral Density _11N40SISO_5795



Date: 18.OCT.2017 16:51:11

RADIATED BANDEDGE AND SPURIOUS MEASUREMENT

LIMITS OF Radiated Bandedge and Spurious Measurement

FCC Part 15.205 and 15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

FCC Part 15.407(b)

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

TEST PROCEDURE

1. The testing follows the guidelines in ANSI C63.10-2013.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. For measurement below 1GHz, the EUT was placed on a turntable with 0.8 meter,above ground. For measurement above 1 GHz, test at FAR, the EUT is placed on a non-conductive table, which is 1.5 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
(1) Span shall wide enough to fully capture the emission being measured;
(2) Set RBW=100 kHz for f < 1 GHz; VBW >= RBW; Sweep = auto; Detector function = peak; Trace = max hold;
(3) Set RBW = 1 MHz, VBW= 3MHz for f > 1 GHz for peak measurement.
Set RBW = 1 MHz, and 1/T (on time) for average measurement.

TEST DATA

9KHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result whi ch was 20dB lower than the limit line per 15.31(o) was not reported.

Table 17 Radiated Emission Test Data 9k Hz-30MHz

Frequency MHz	Cable Loss(dB)	Antenna Factor(dB)	Readings(dBμV/m)	Level(dBμV/m)	Polarity(H/V)	Turntable Angle(deg)	Antenna Height(m)	Limits(dBμV/m)	Margin(dB)
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

30MHz-1GHz

Worst case is shown below for 30MHz-1GHz only.

The emissions don't show in following result tables are more than 20dB below the limits.

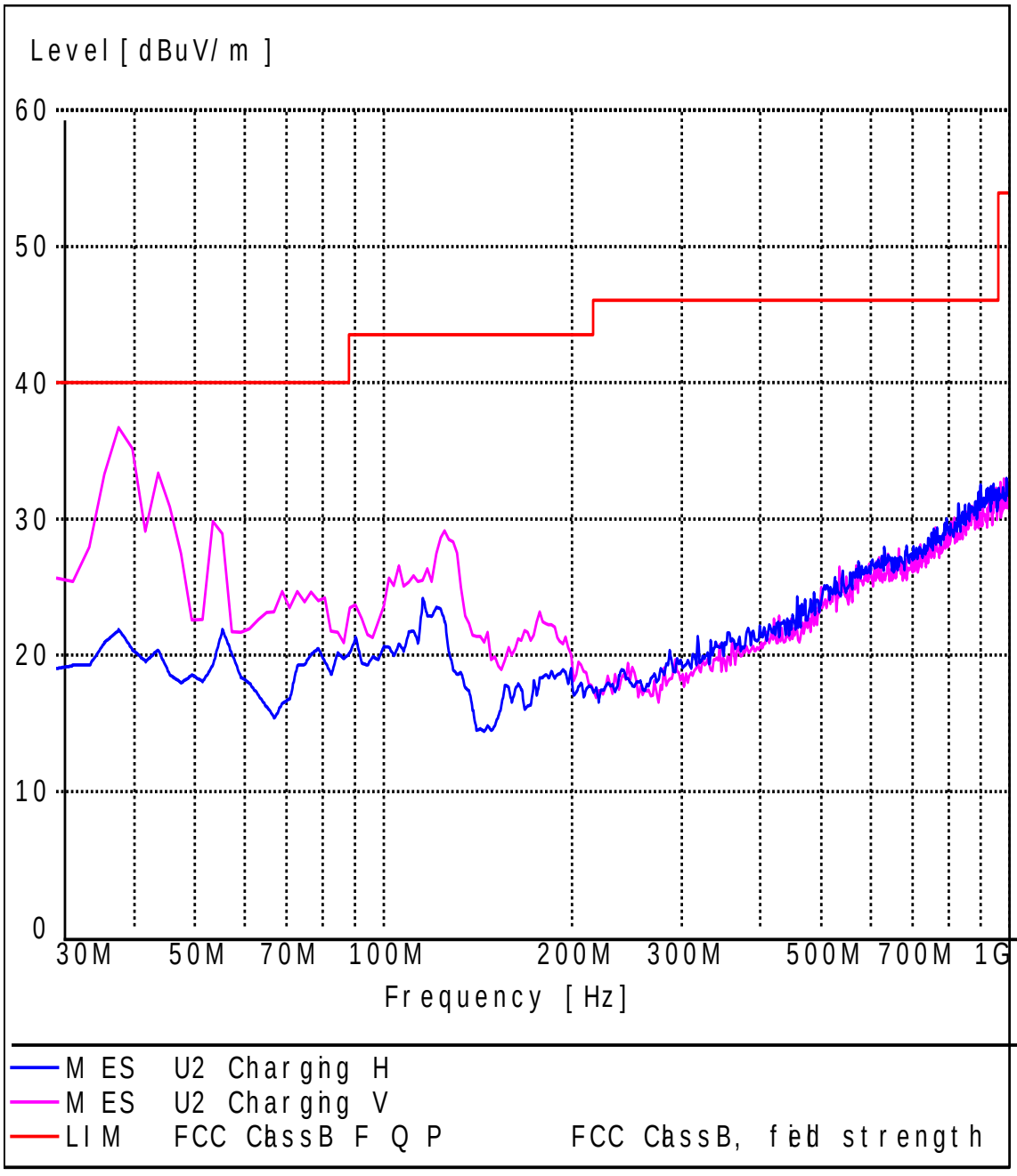
Table 18 Radiated Emission Test Data 30MHz-1GHz

Frequency MHz	Cable Loss(dB)	Antenna Factor(dB)	Readings(dBμV/m)	Level(dBμV/m)	Polarity(H/V)	Turntable Angle(deg)	Antenna Height(m)	Limits(dBμV/m)	Margin(dB)
30.026	0.6	12.3	9.8	22.7	V	30	100	40	17.3
37.966	0.7	12.3	20.9	33.9	V	20	100	40	6.1
43.686	0.7	13.6	16.1	30.4	V	50	100	40	9.6
53.326	0.7	13.3	12.7	26.7	V	30	100	40	13.3
105.811	1.2	13.2	9.2	23.6	V	50	100	43.5	19.9
125.251	1.2	10.5	15.3	27.0	V	60	100	43.5	16.5
37.563	0.6	12.3	5.2	18.1	H	50	100	40	21.9
55.331	0.8	13.0	4.7	18.5	H	30	100	40	21.5
78.597	1.0	7.8	8.8	17.6	H	30	100	40	22.4
109.699	1.2	13.2	3.6	18.0	H	50	100	43.5	25.5
115.661	1.2	12.3	8.0	21.5	H	50	100	43.5	22.0
121.362	1.3	10.5	8.5	20.3	H	60	100	43.5	23.2

REMARK: Emission level(dBuV)=Read Value(dBuV/m) + Antenna Factor(dB)+ Cable Loss +preamp(dB)

Radiated Emission

EUT Name: U2
Operating Condition: Charging and Transmitting
Test site: SMQ NETC EMC Lab.
Antenna Position: Vertical & Horizontal
Comment: 120V/60Hz



1-18G

11a IN THE 5.2GHz BAND

Ch36

Radiated Emission

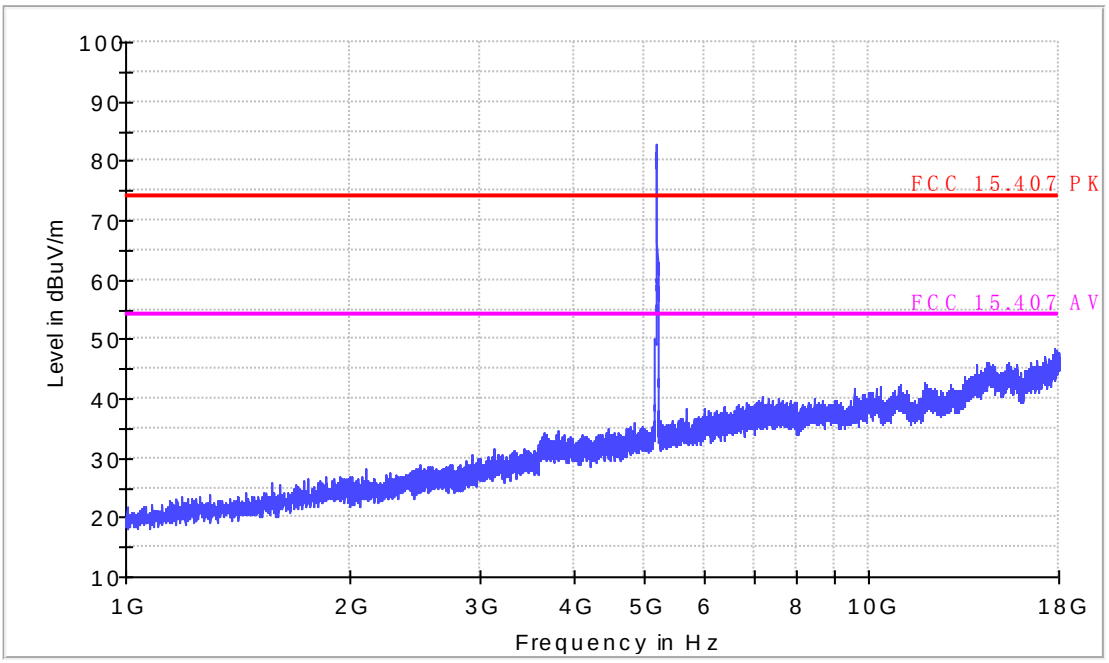
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



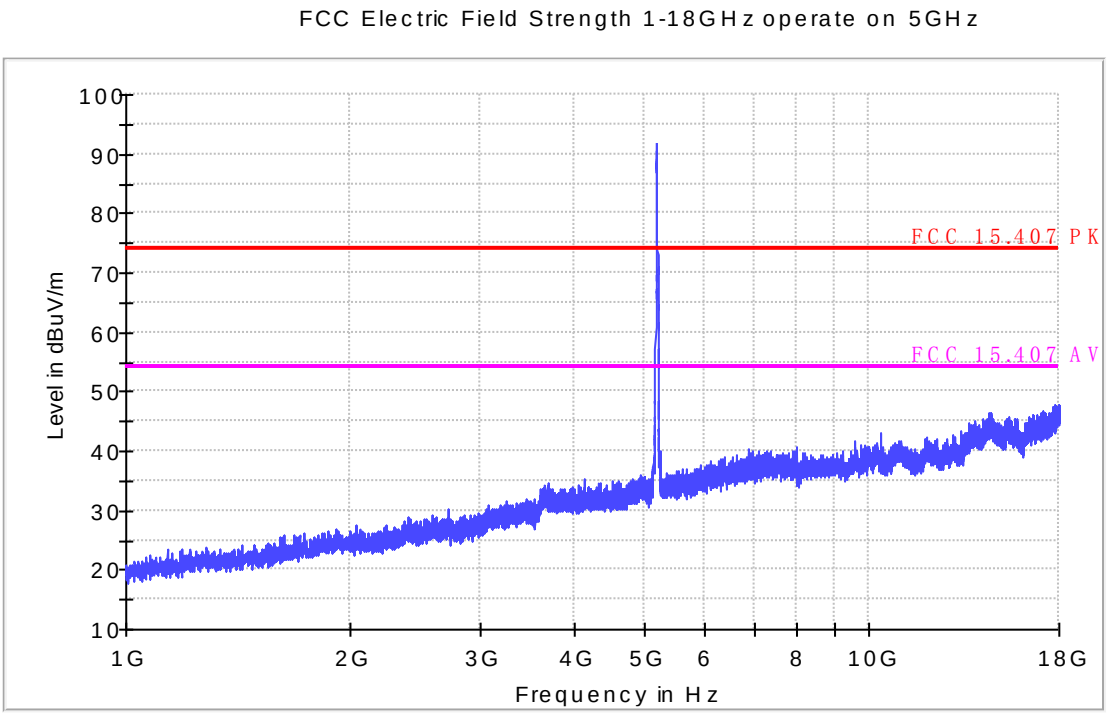
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



1-18G

11a IN THE 5.2GHz BAND

CH40

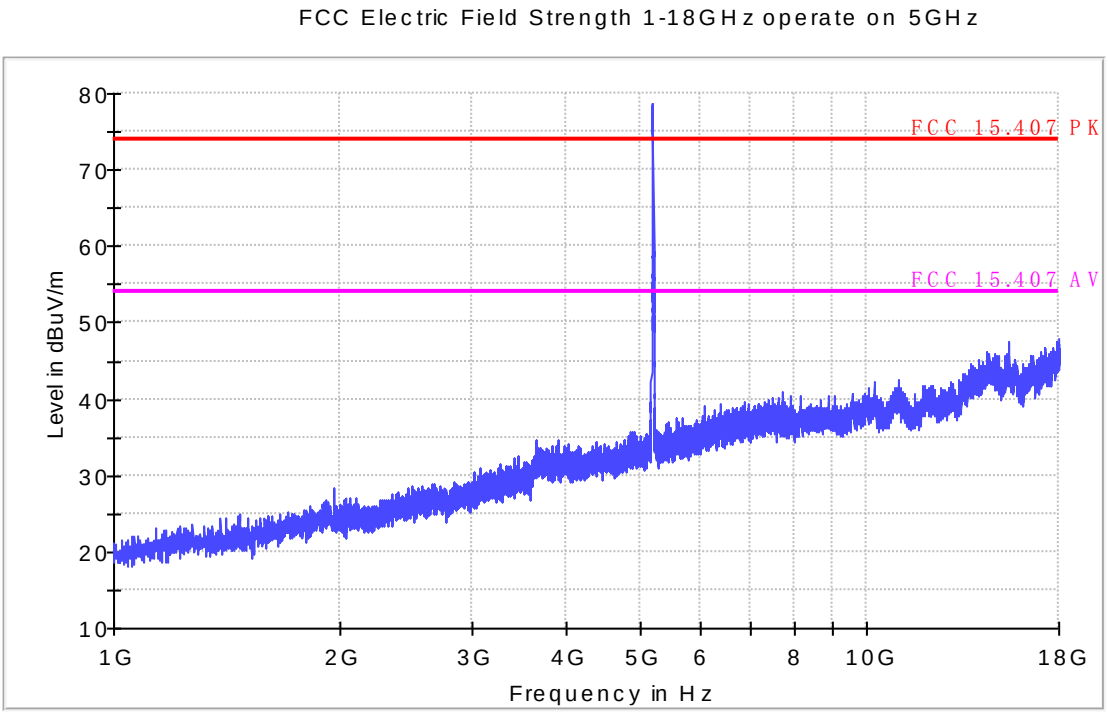
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH40
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

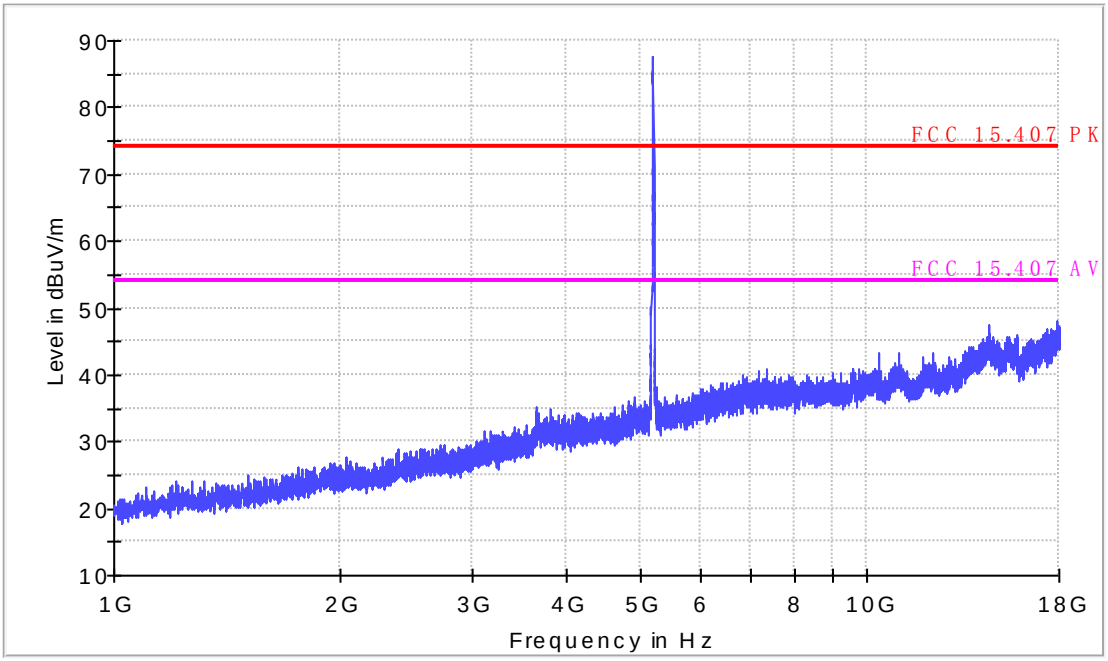
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH40
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.2GHz BAND

CH48

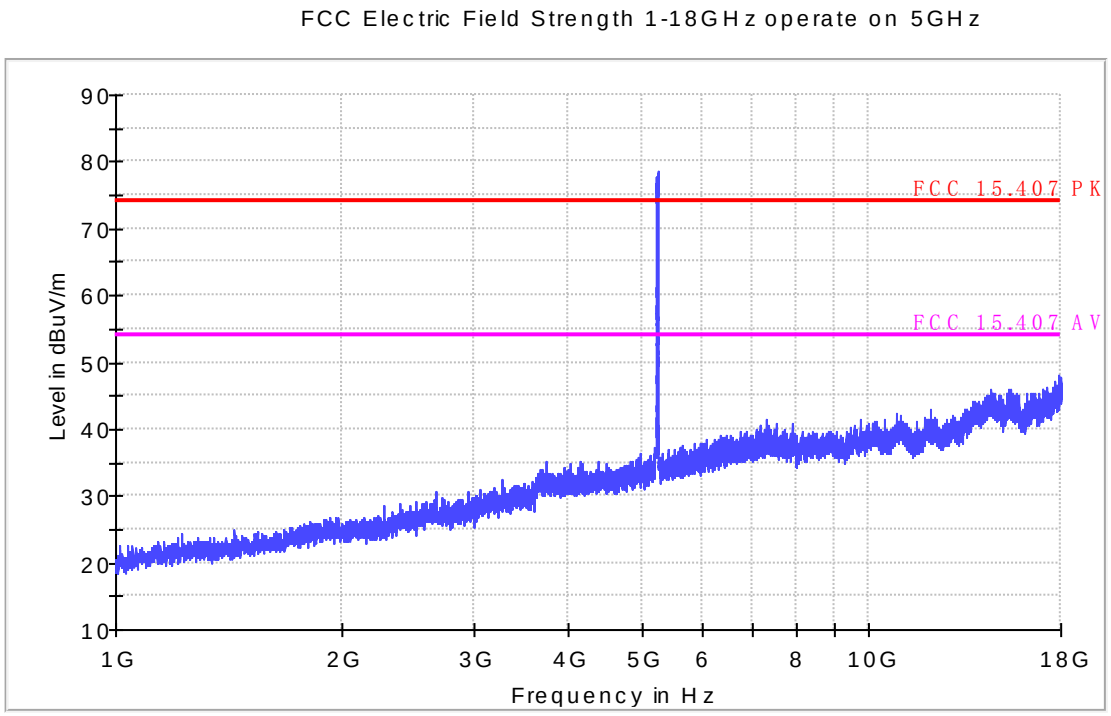
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH48
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

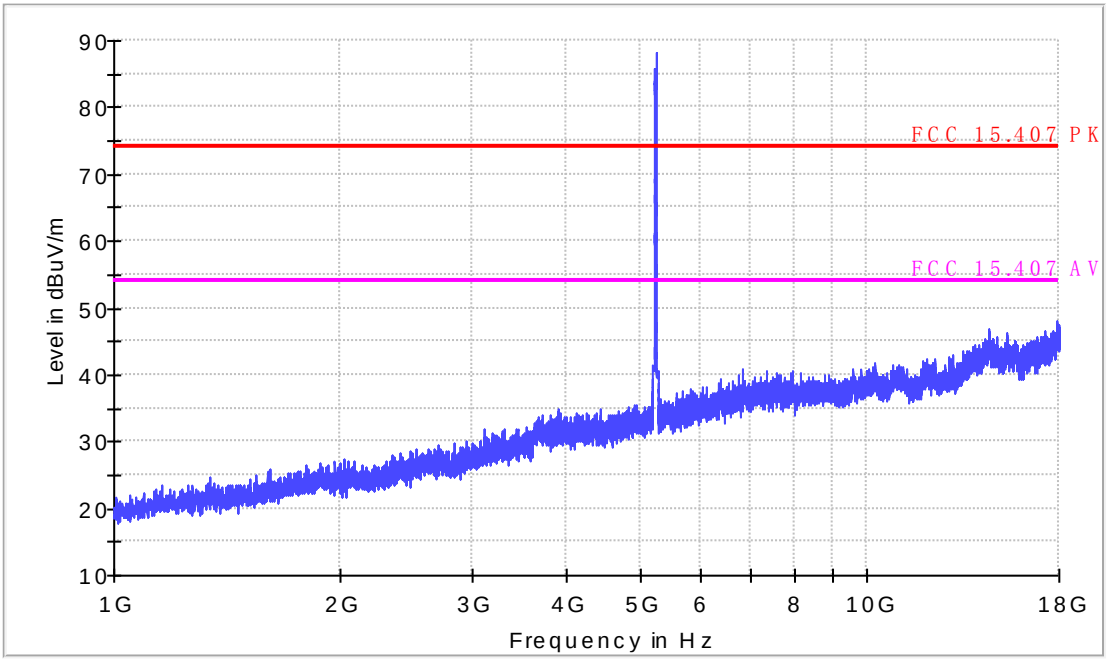
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH48
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.2GHz BAND

CH36

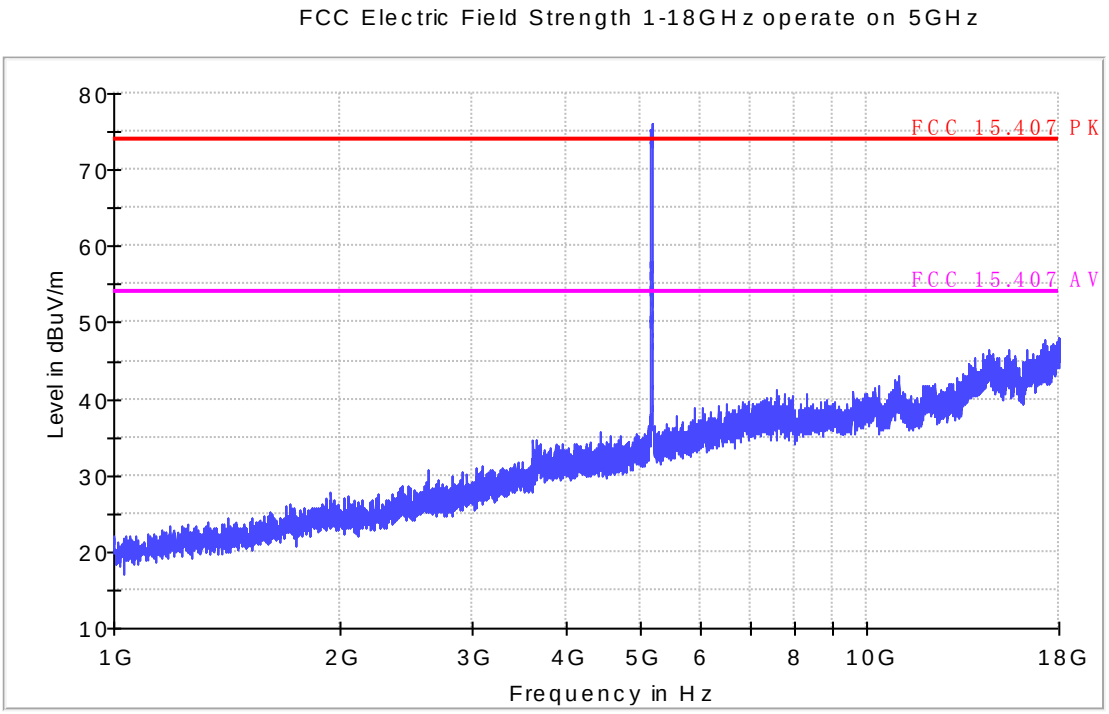
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

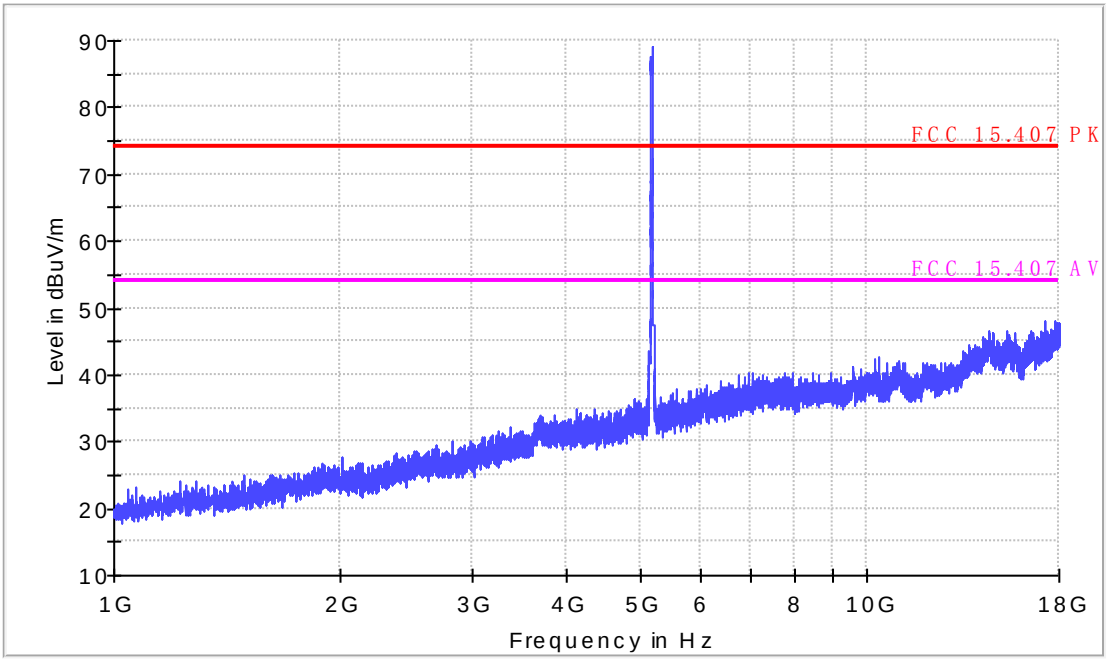
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.2GHz BAND

CH40

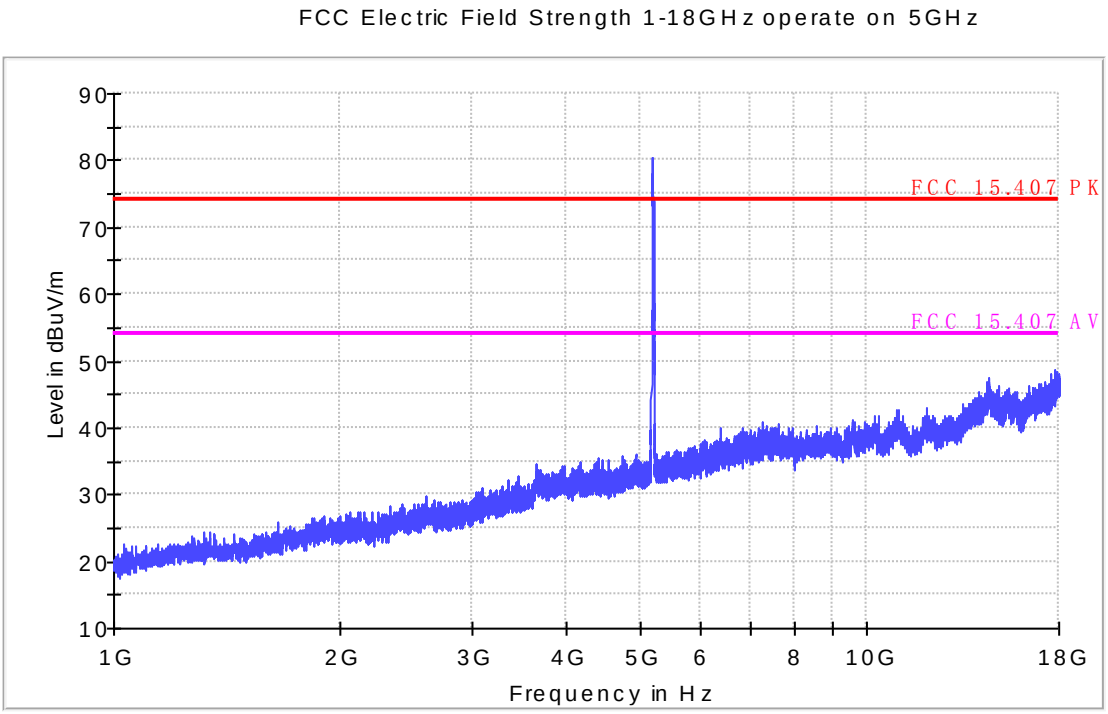
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH40
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

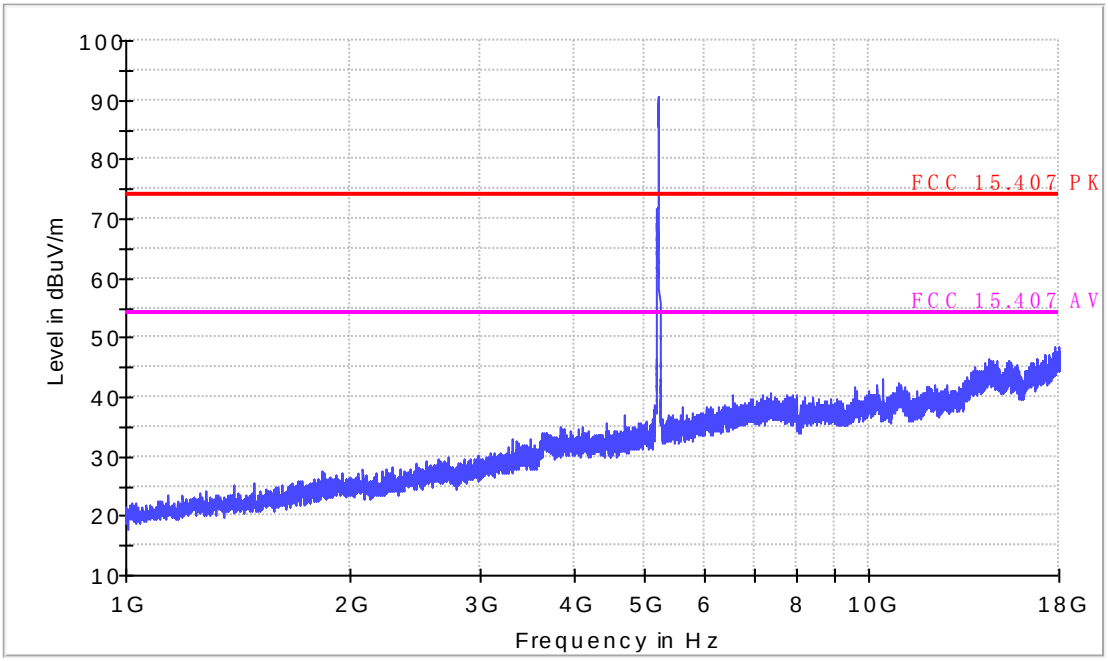
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH40
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.2GHz BAND

CH48

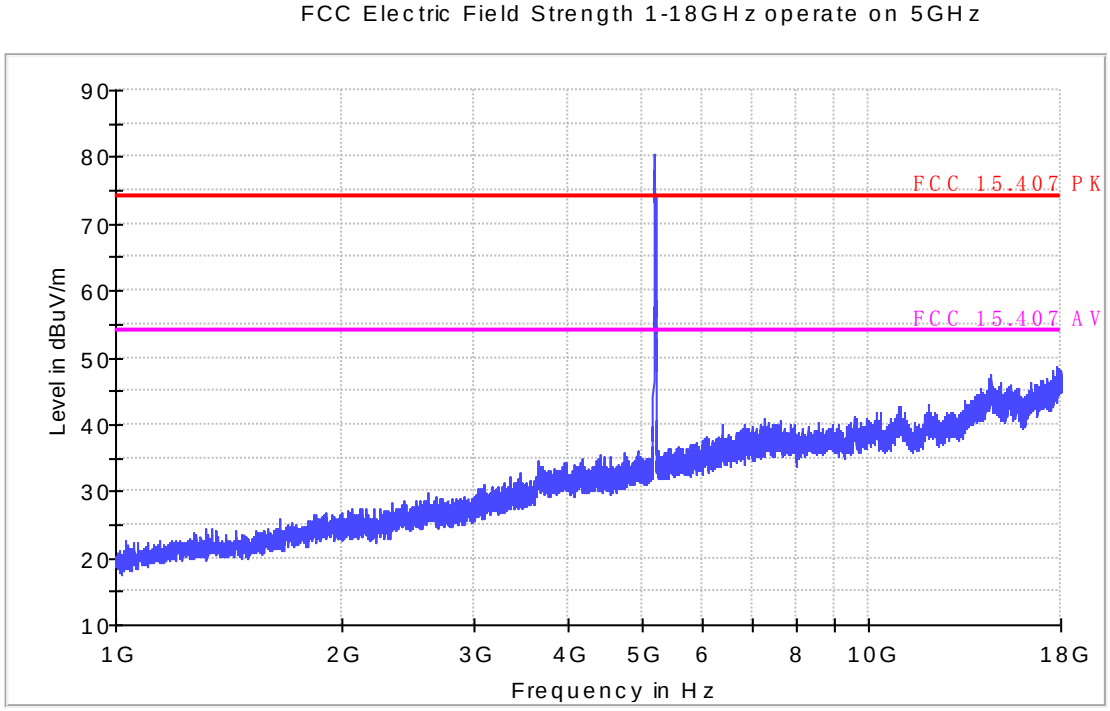
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH48
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

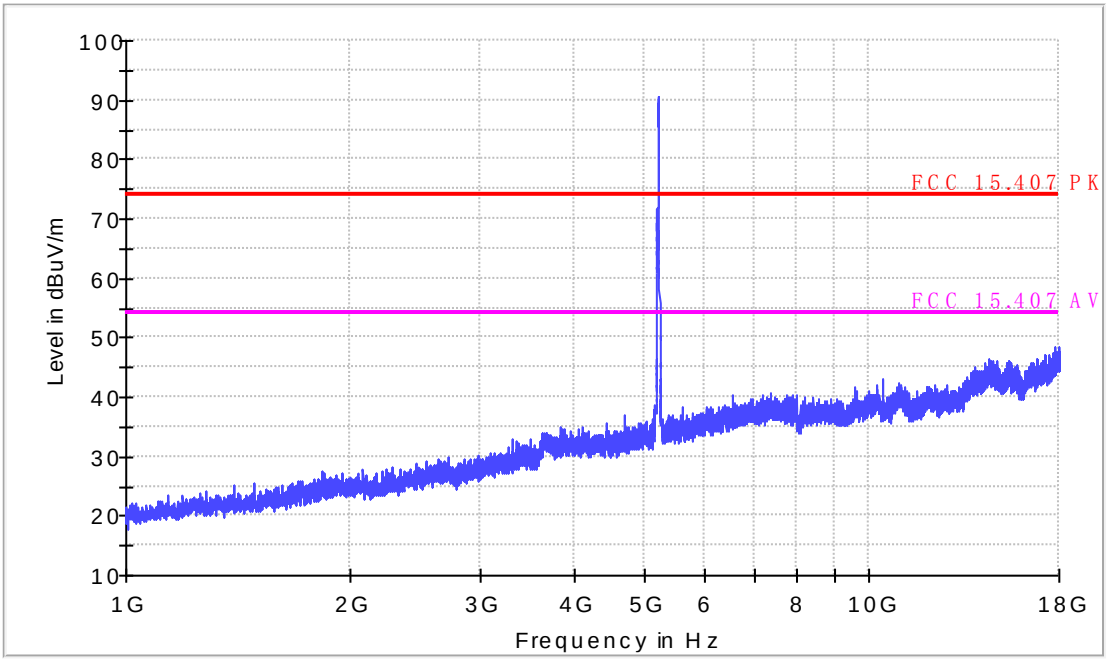
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH48
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.2GHz BAND

CH38

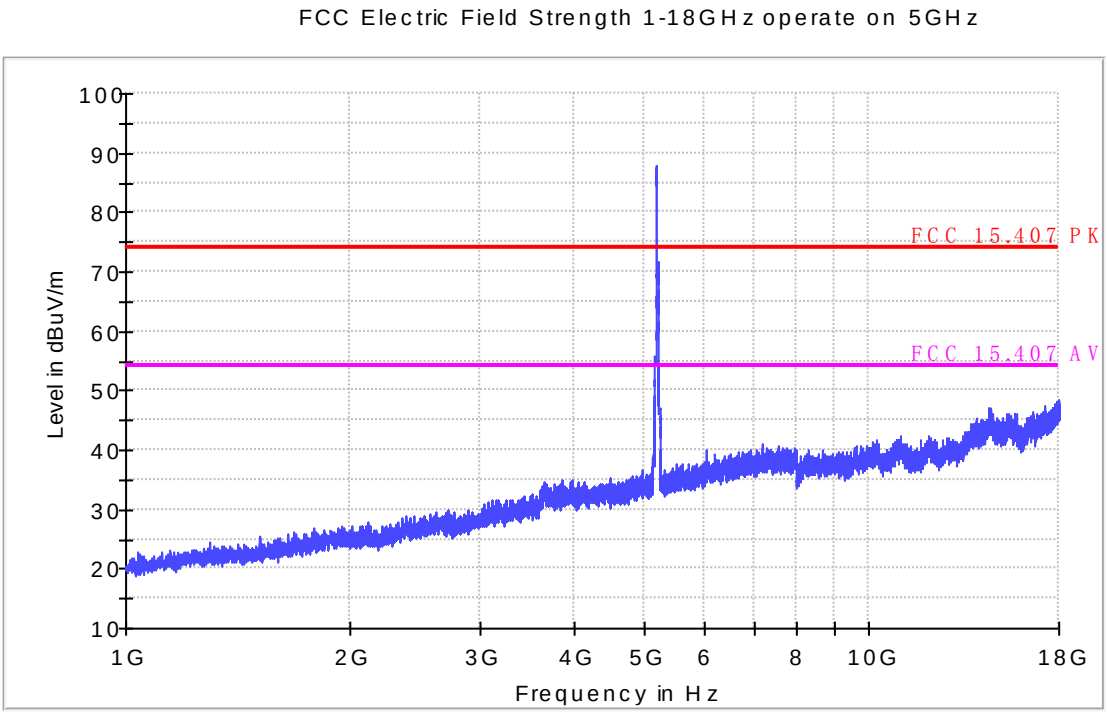
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH38
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

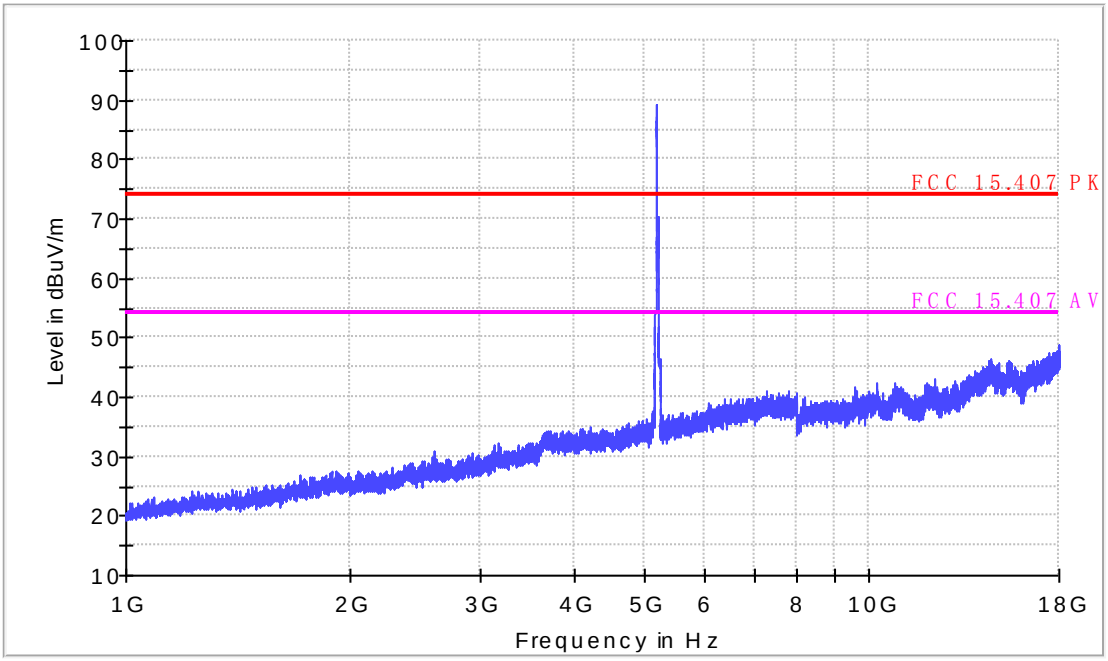
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH38
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.2GHz BAND

CH46

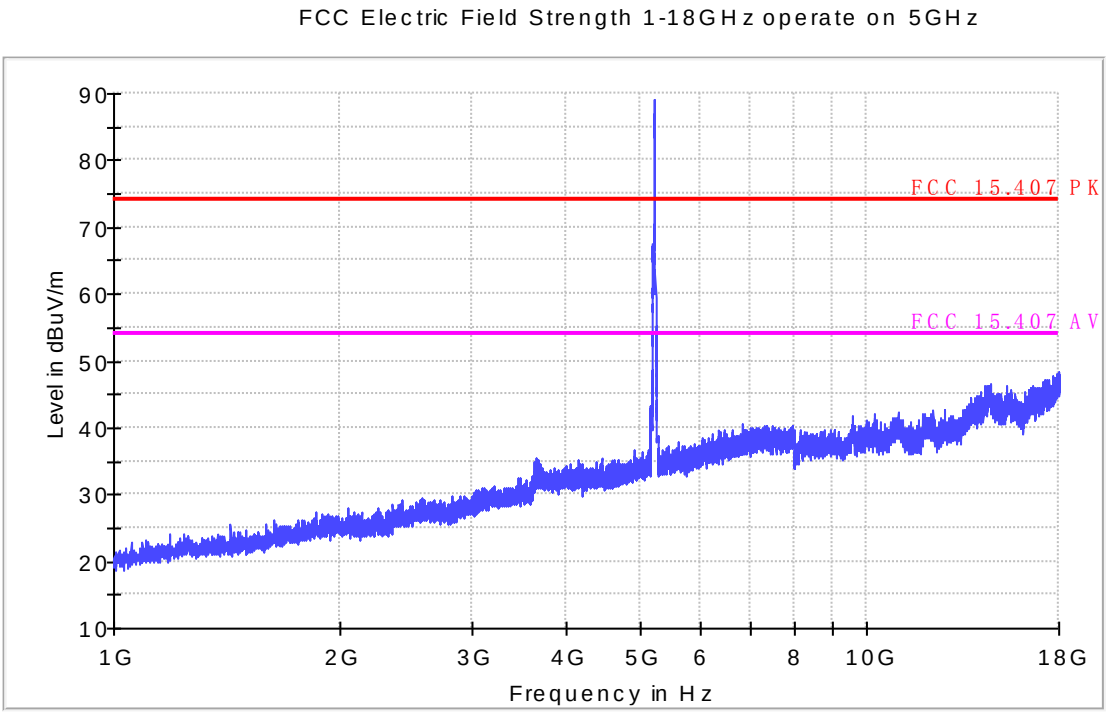
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH46
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

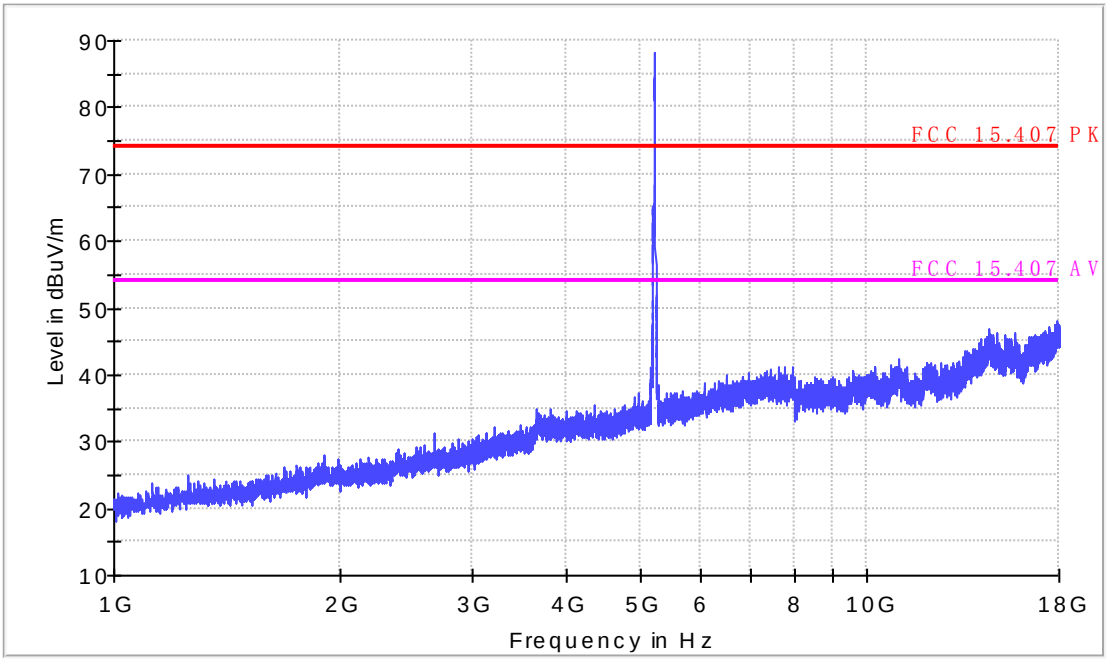
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH46
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.3GHz BAND

Ch52

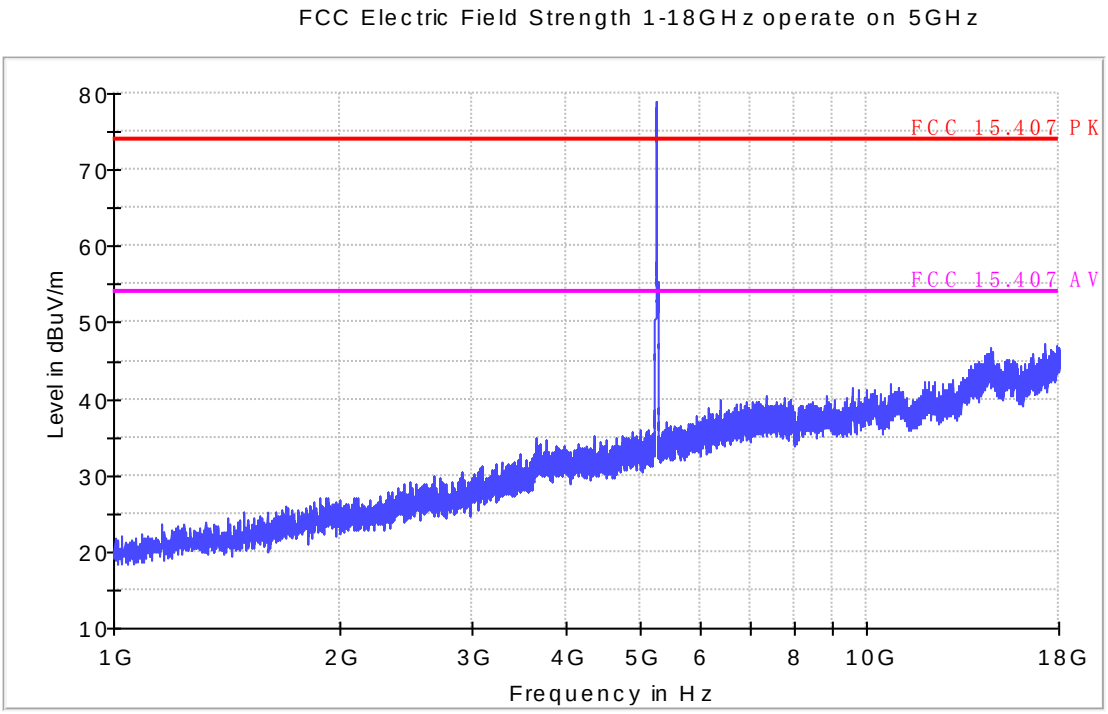
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH52
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

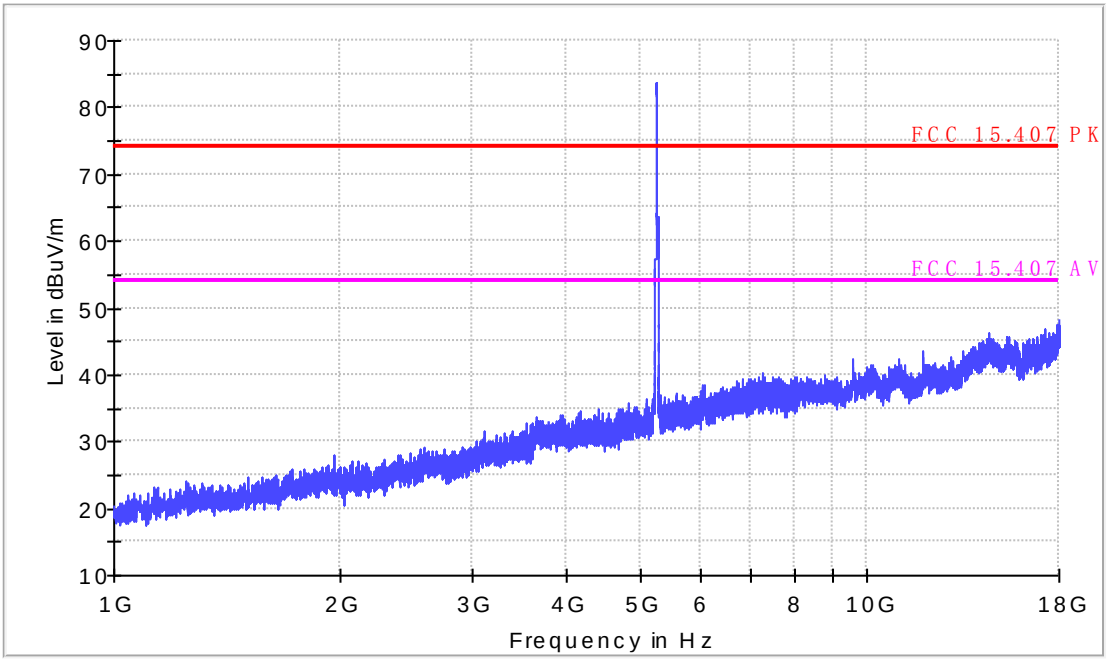
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH52
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.3GHz BAND

Ch56

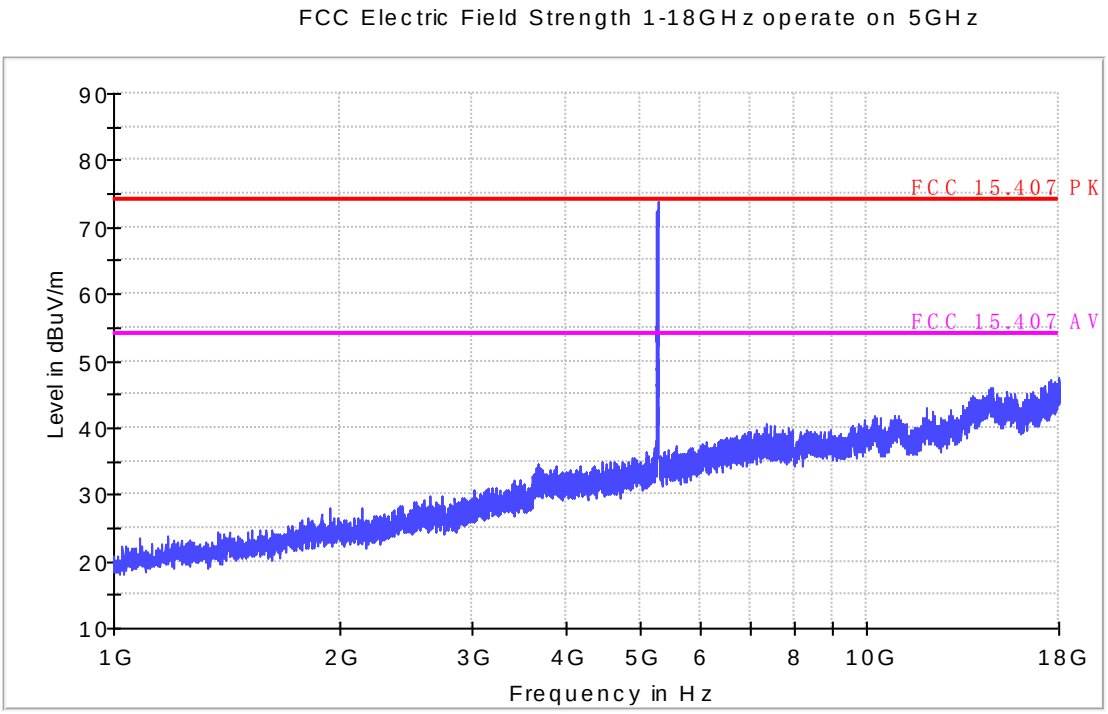
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH56
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

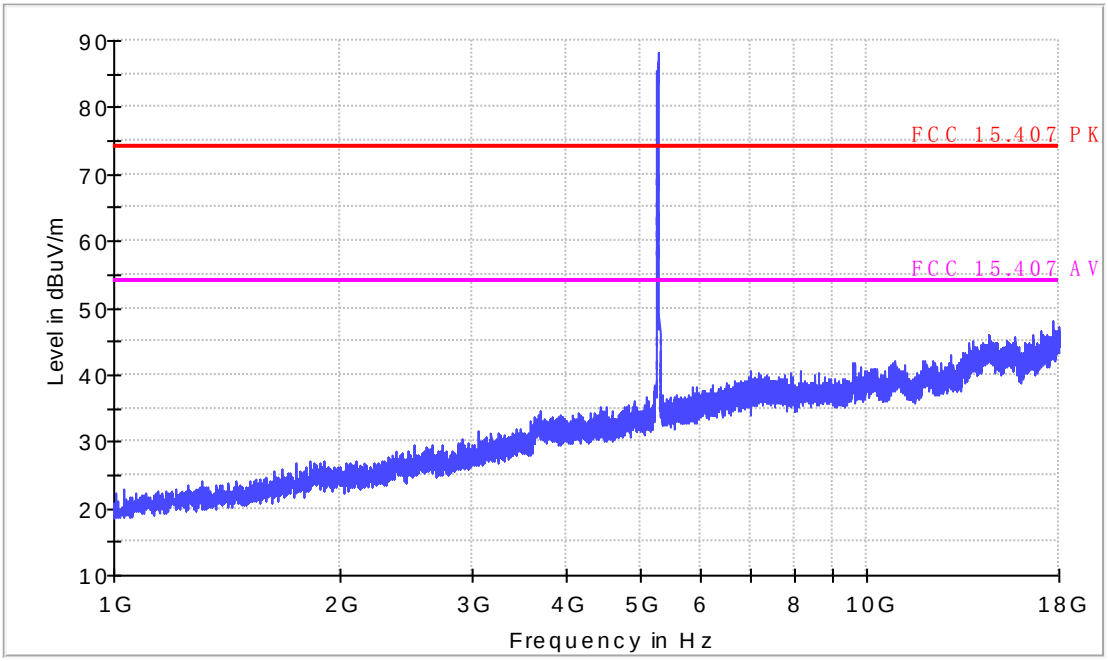
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH56
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.3GHz BAND

Ch64

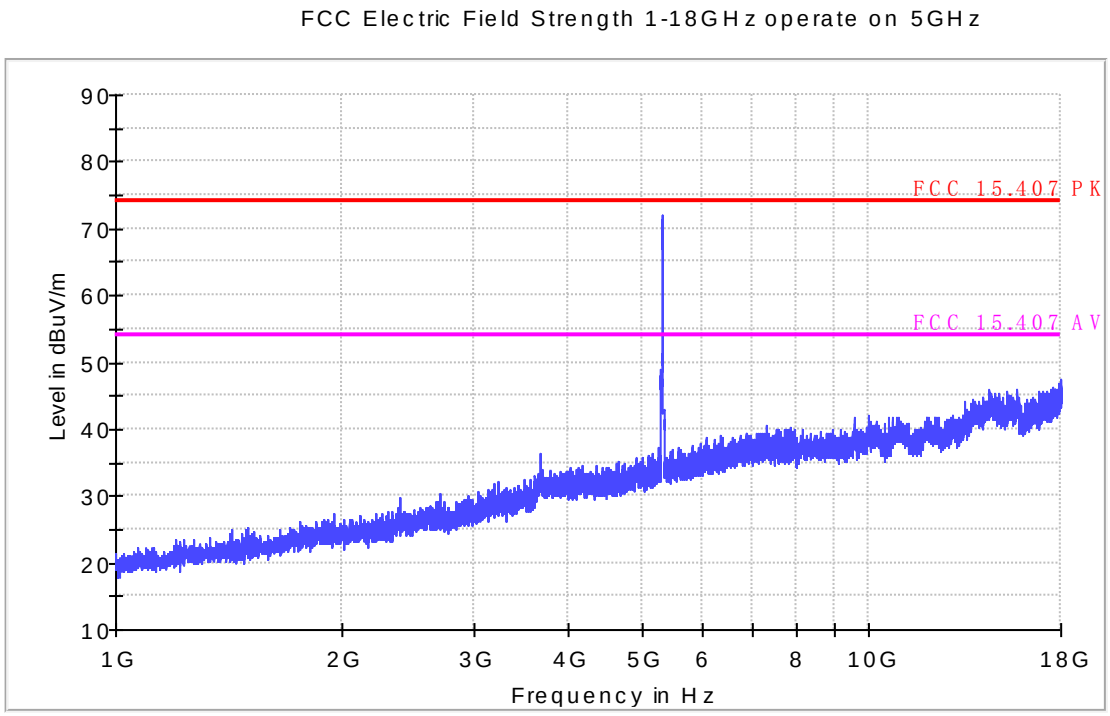
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

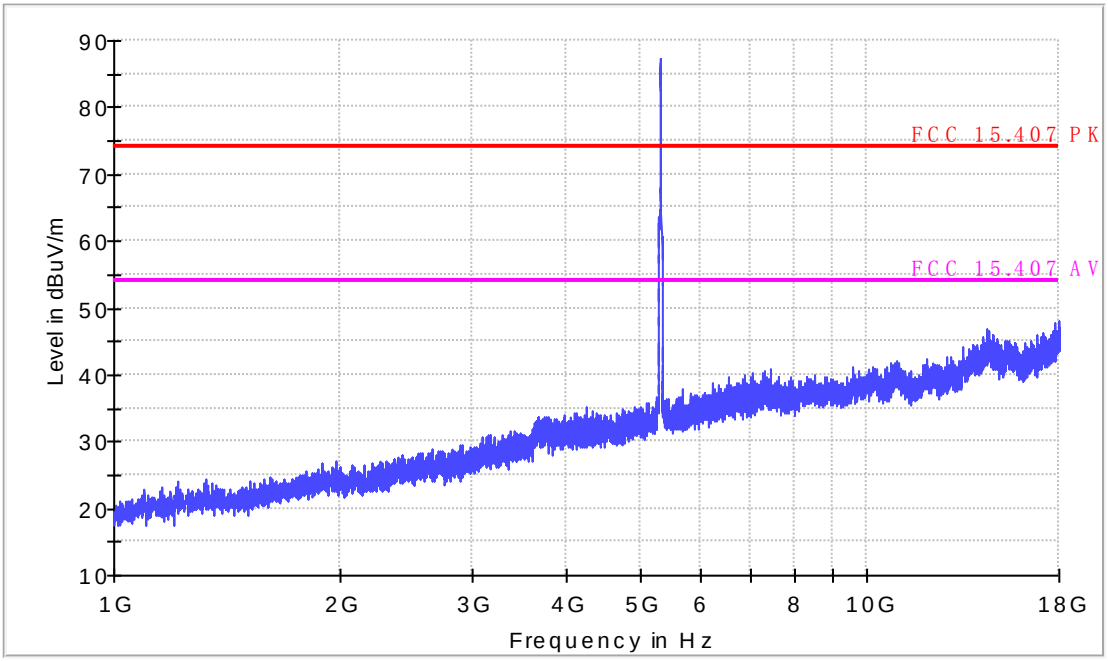
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch52

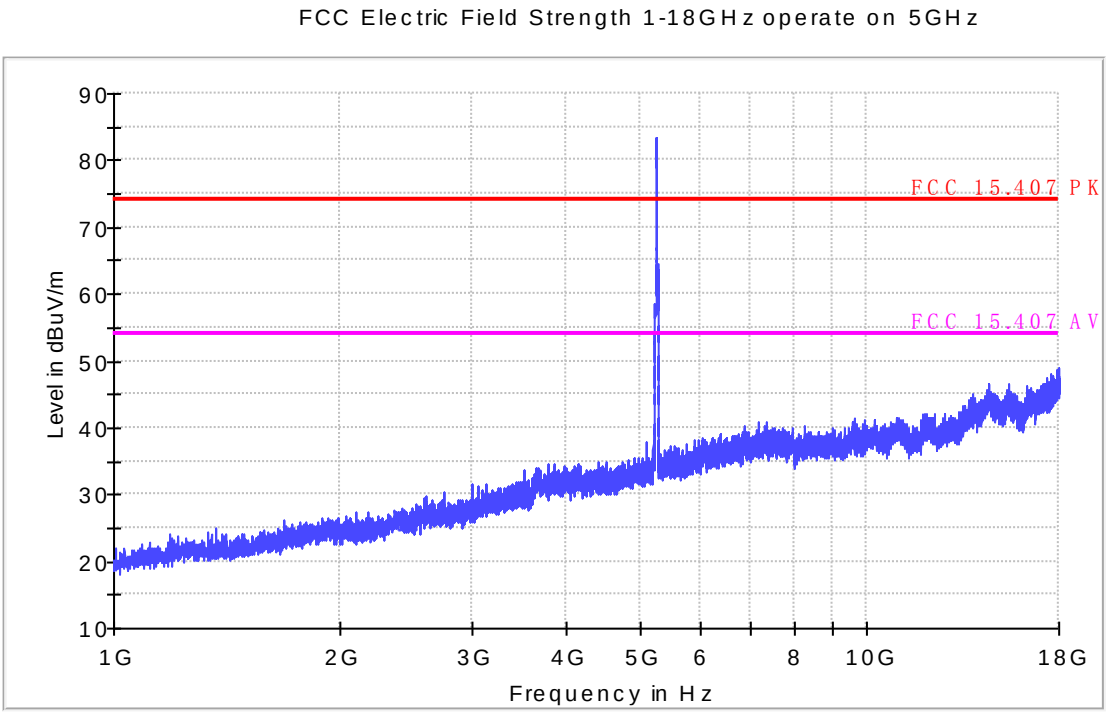
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH52
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

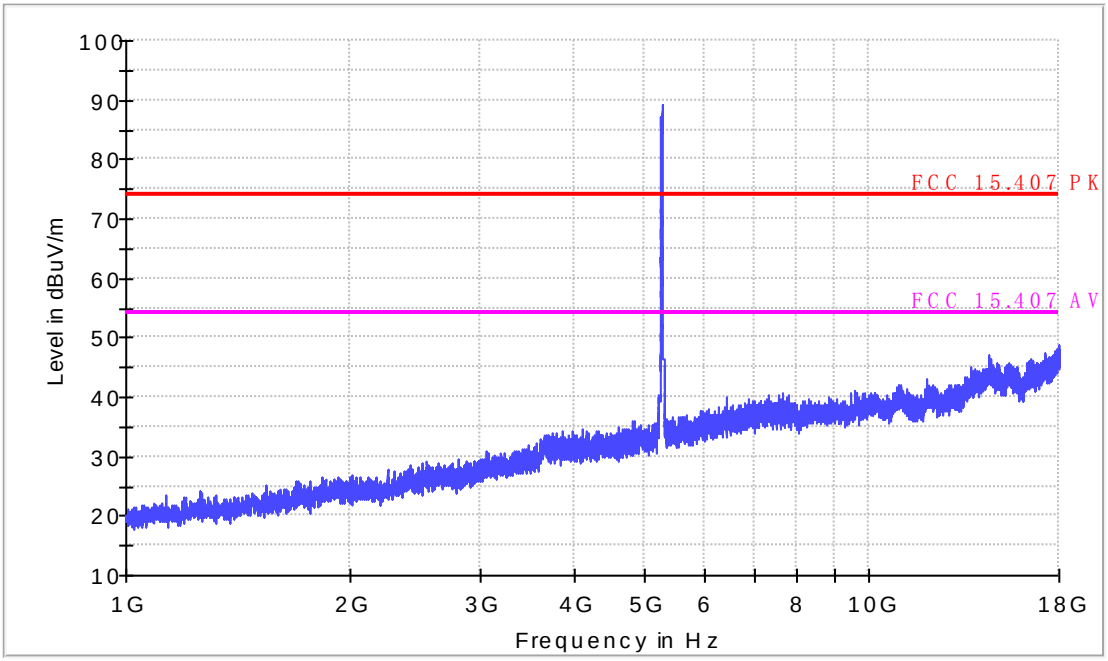
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH52
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch56

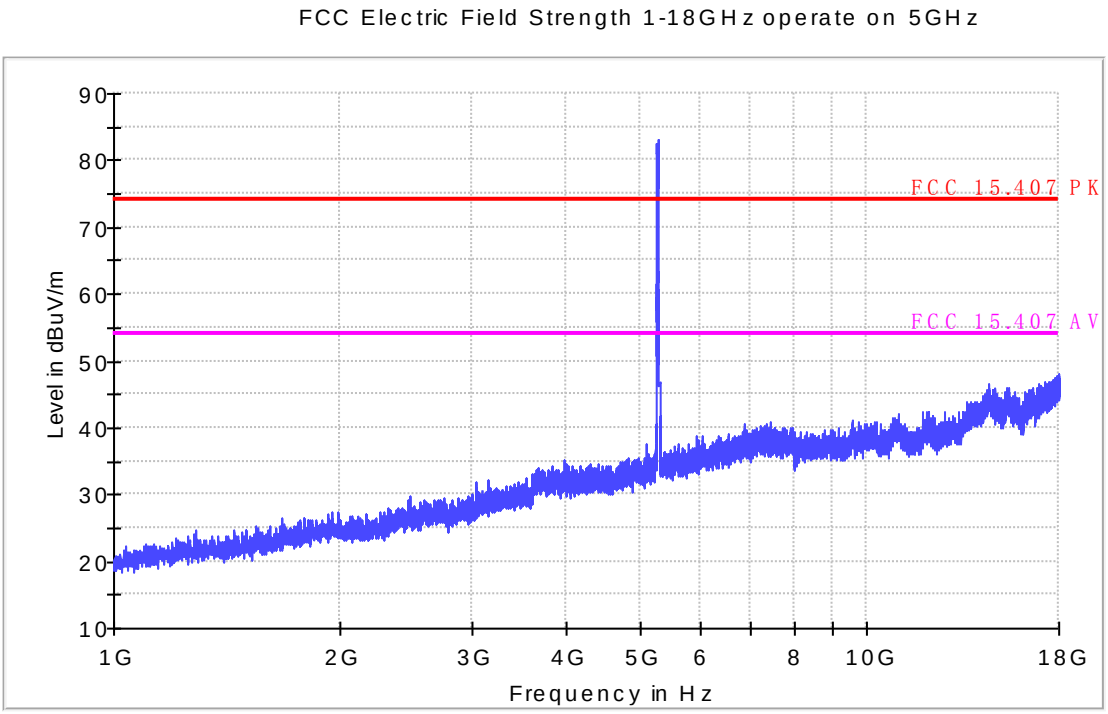
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH56
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

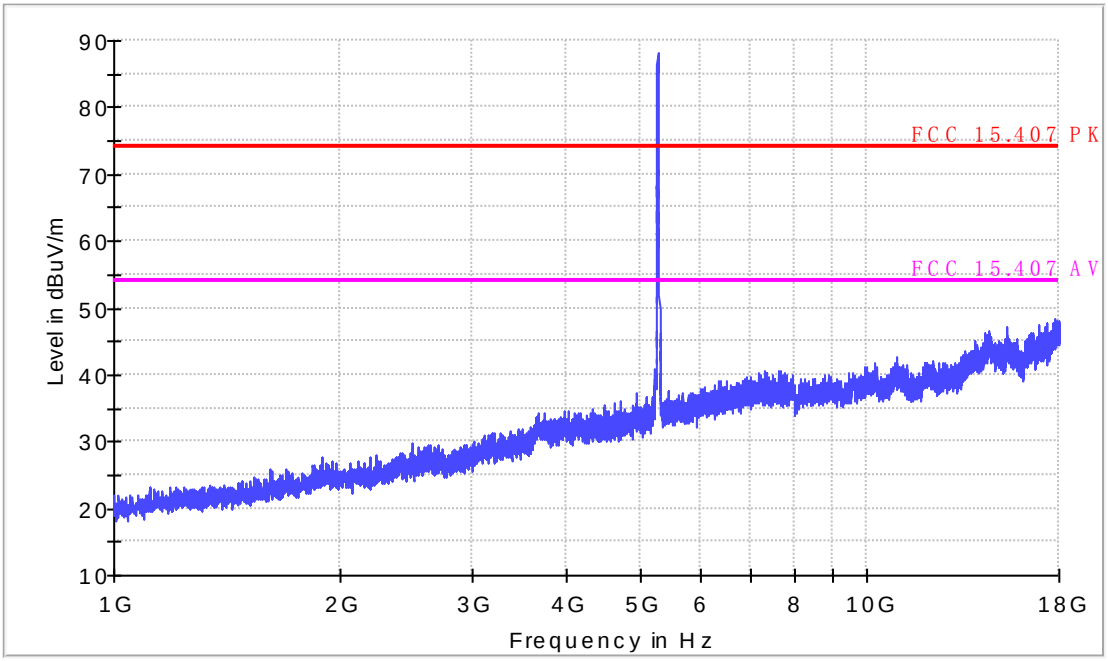
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH56
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch64

Radiated Emission

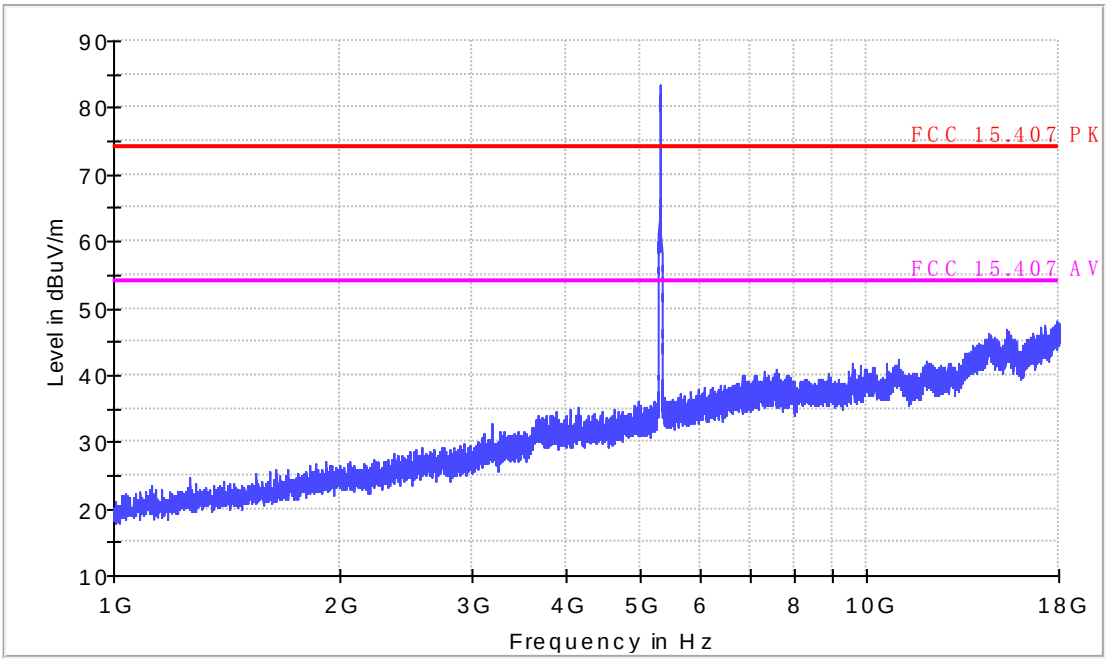
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



Radiated Emission

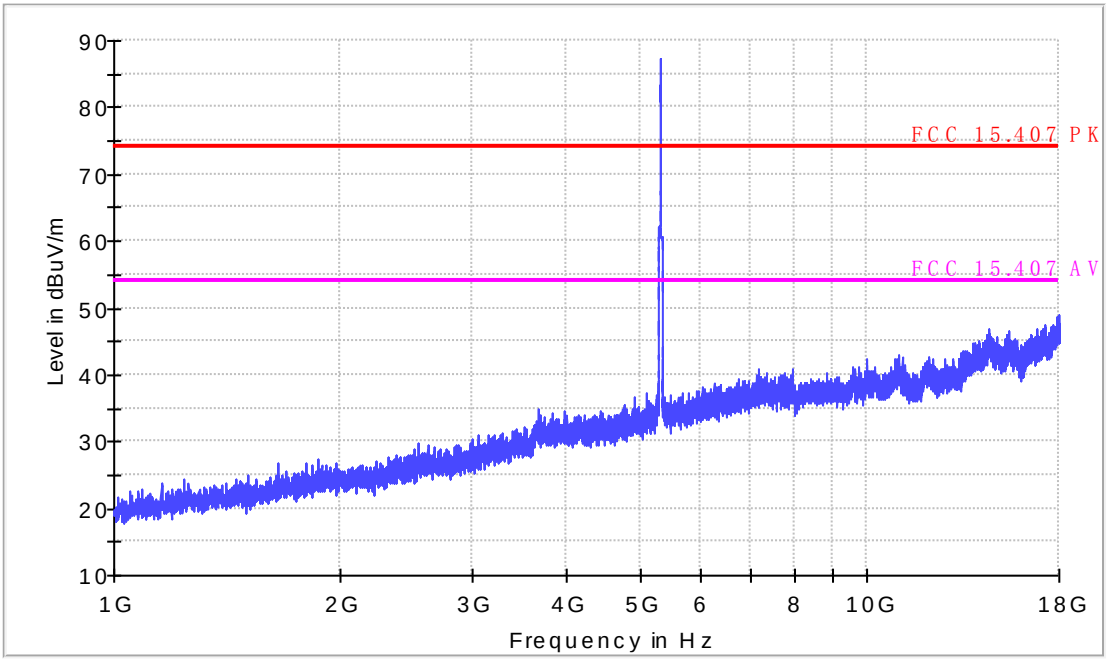
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.3GHz BAND

Ch54

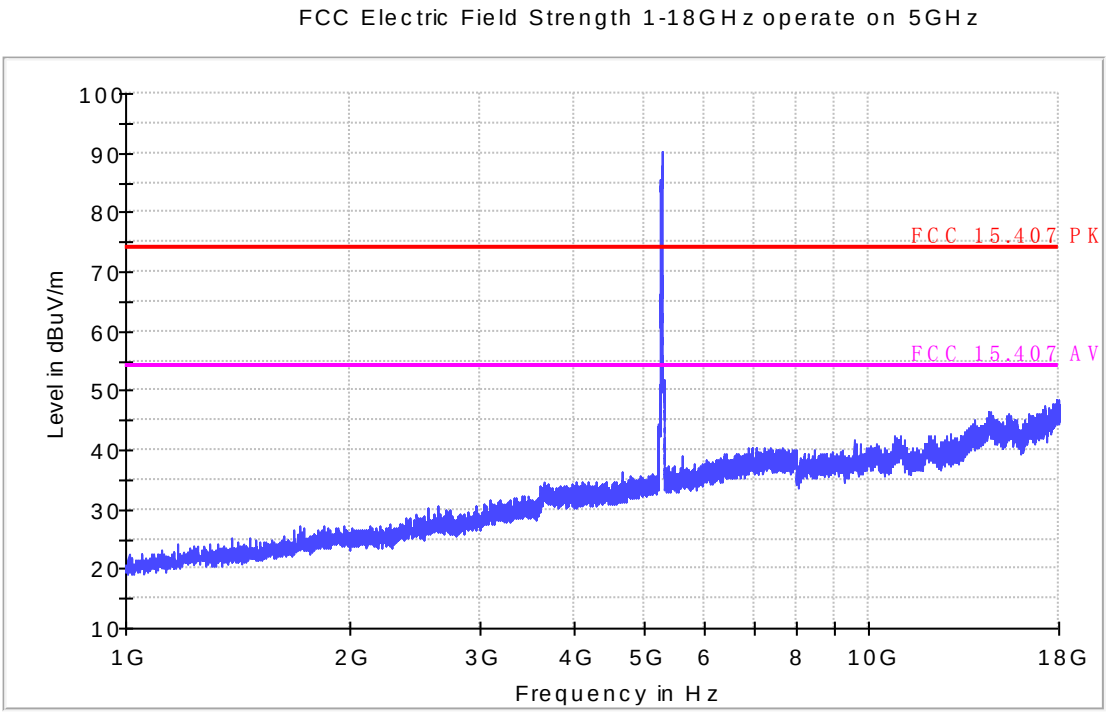
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH54
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

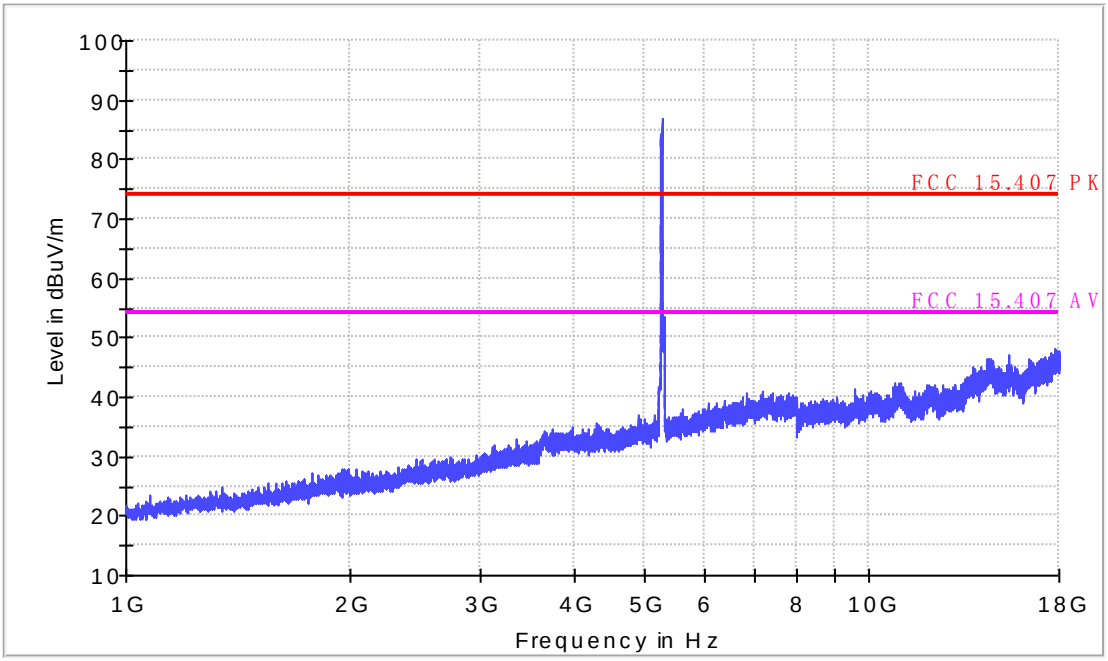
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH54
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch62

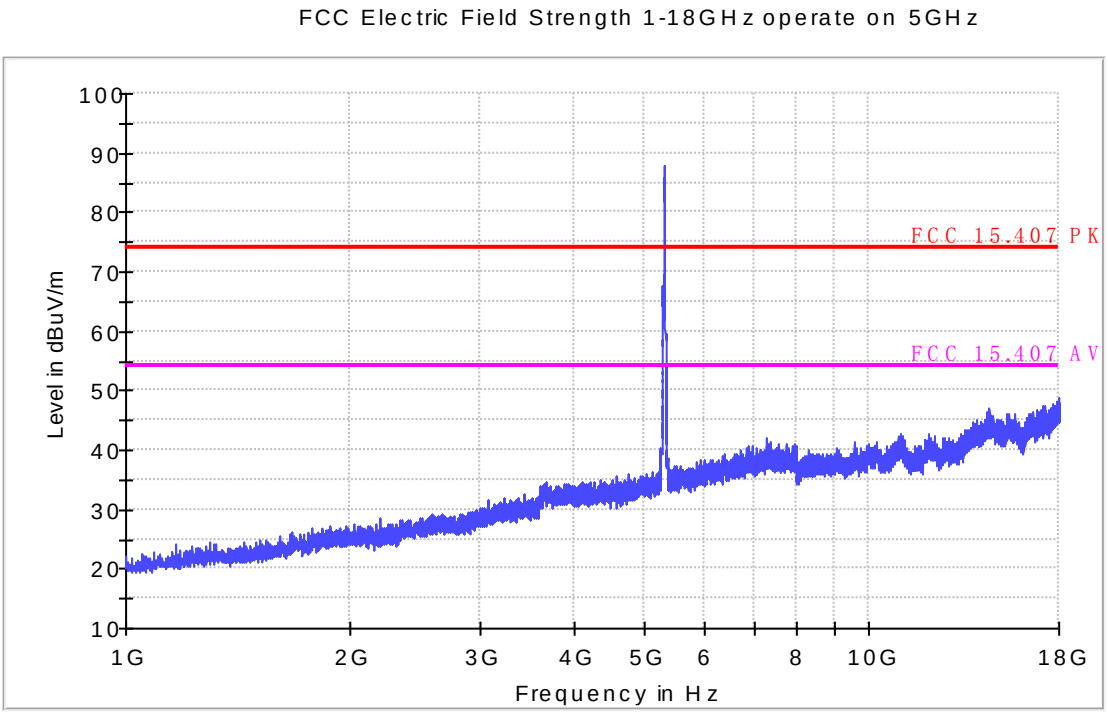
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH62
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

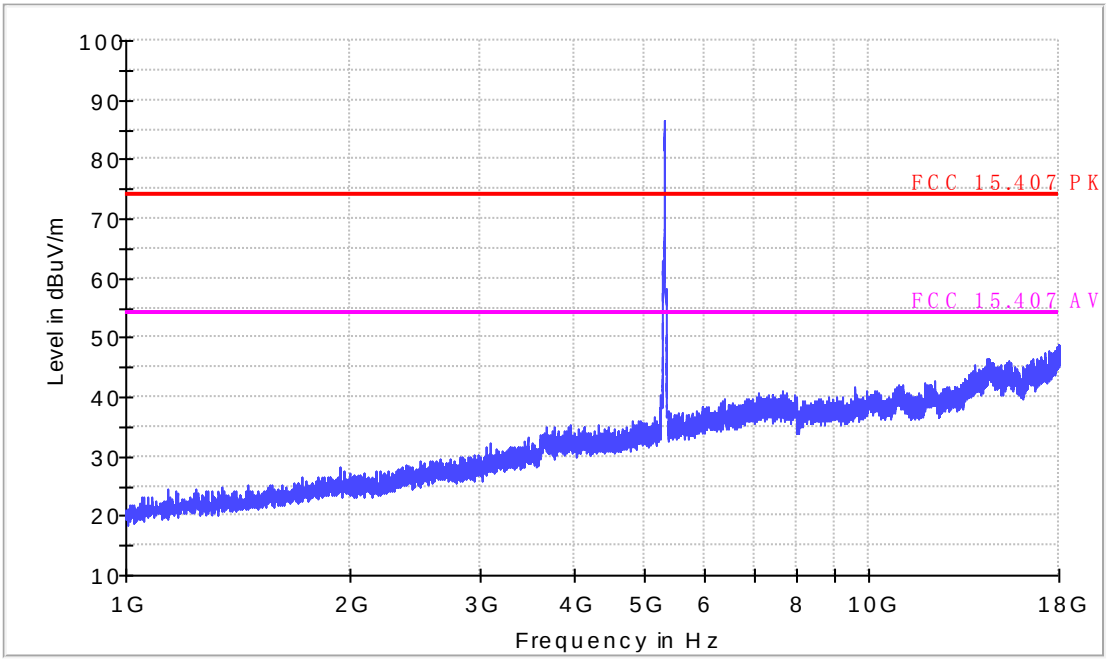
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH62
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.6GHz BAND

CH100

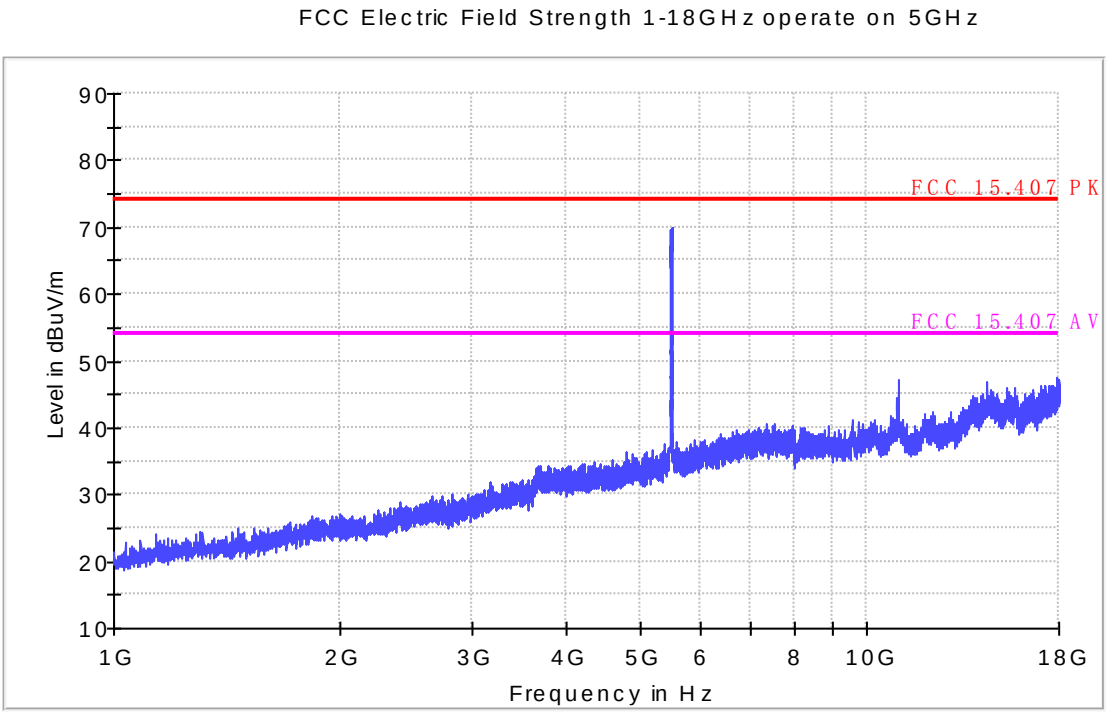
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH100
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

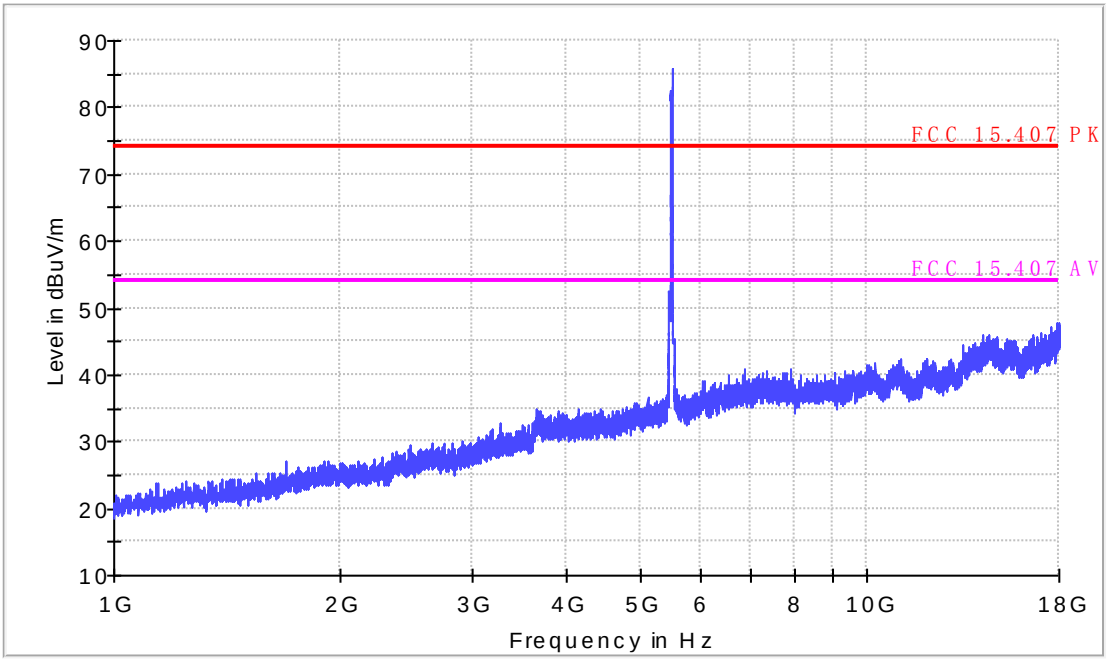
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH100
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.6GHz BAND

CH116

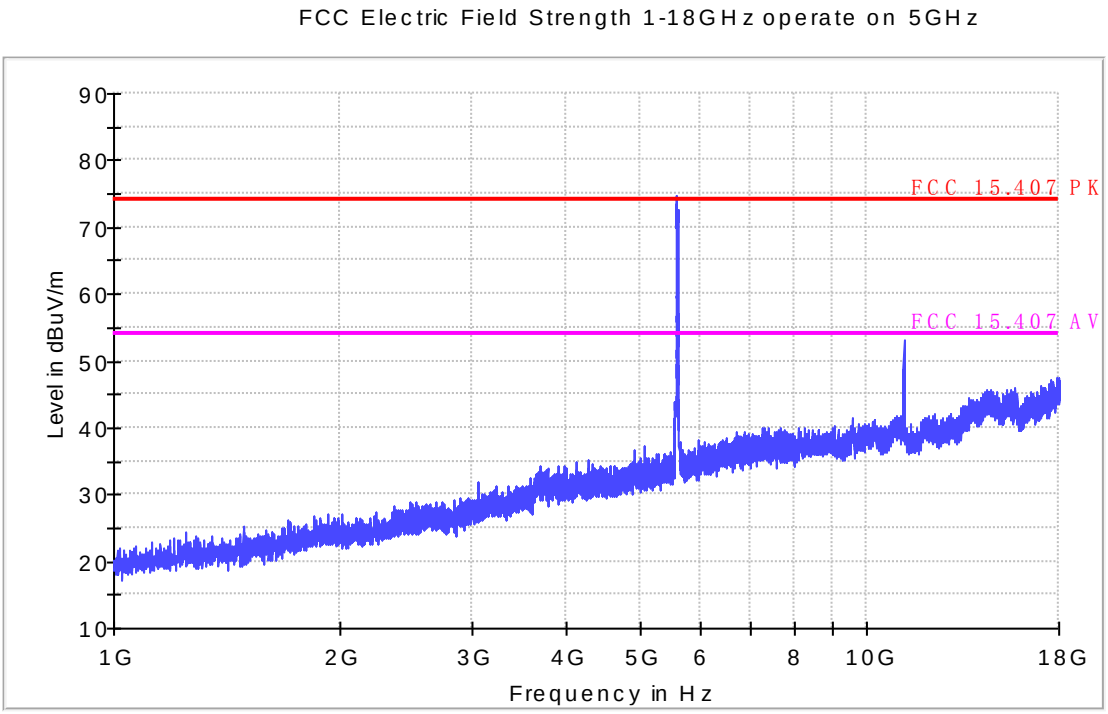
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH116
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

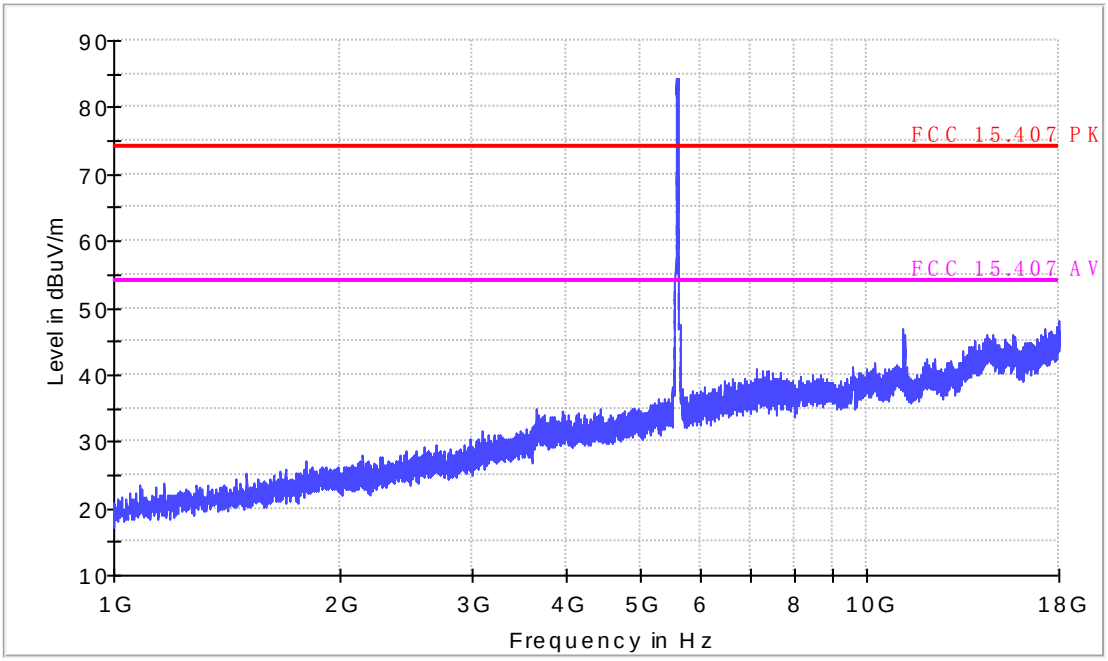
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH116
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.6GHz BAND

CH140

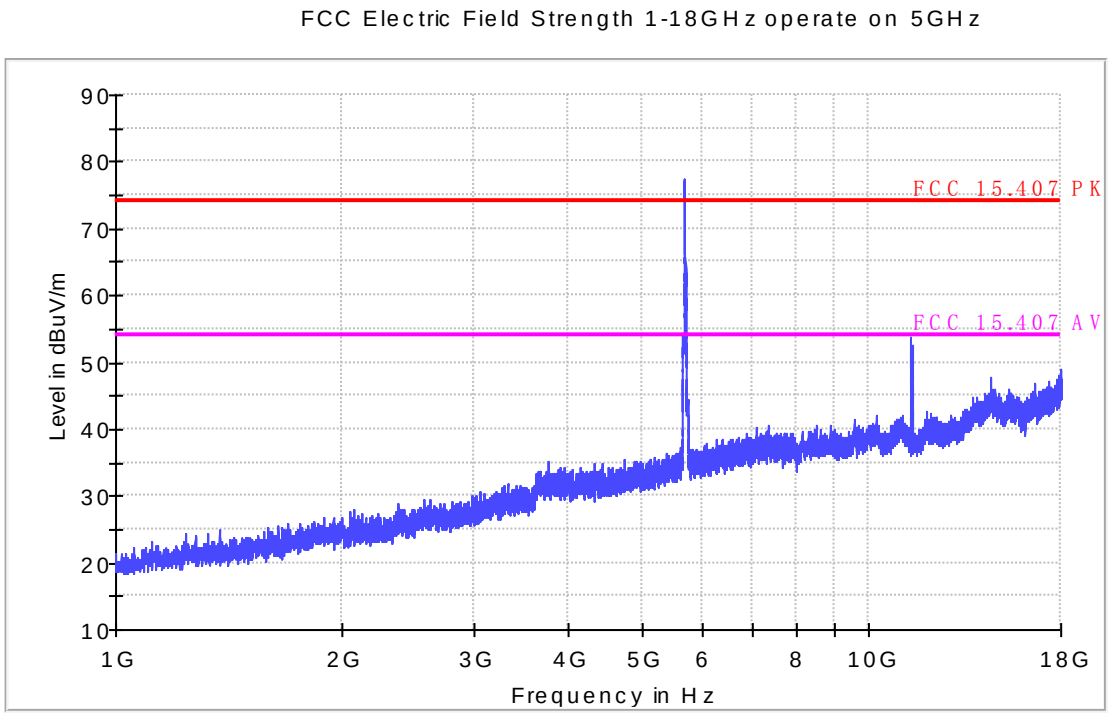
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH140
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

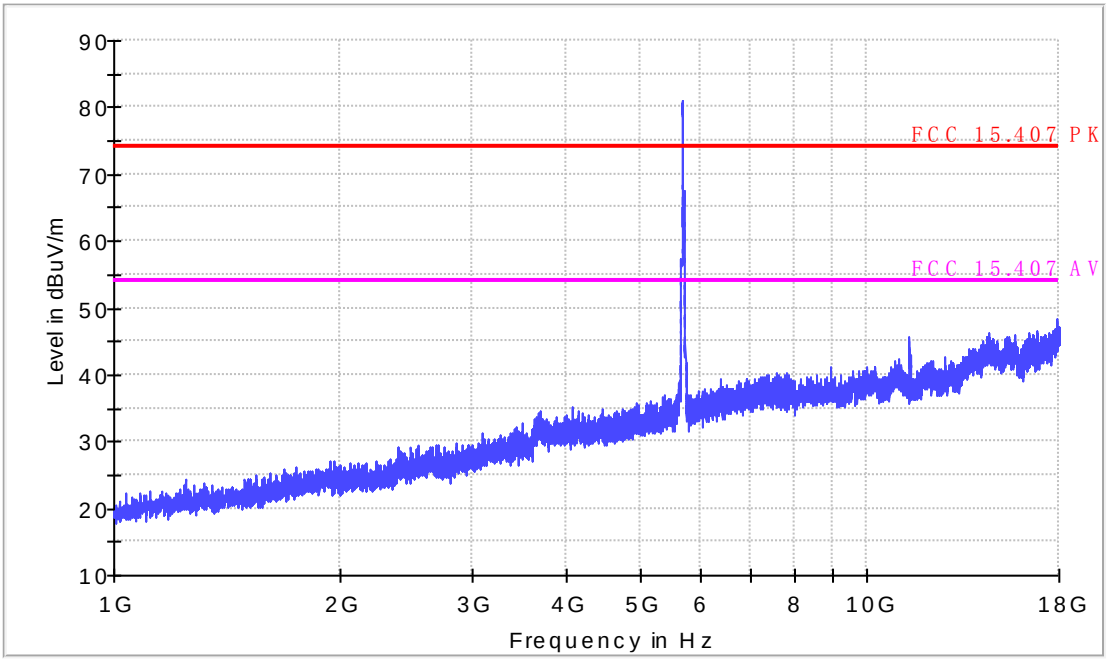
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH140
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.6GHz BAND

CH100

Radiated Emission

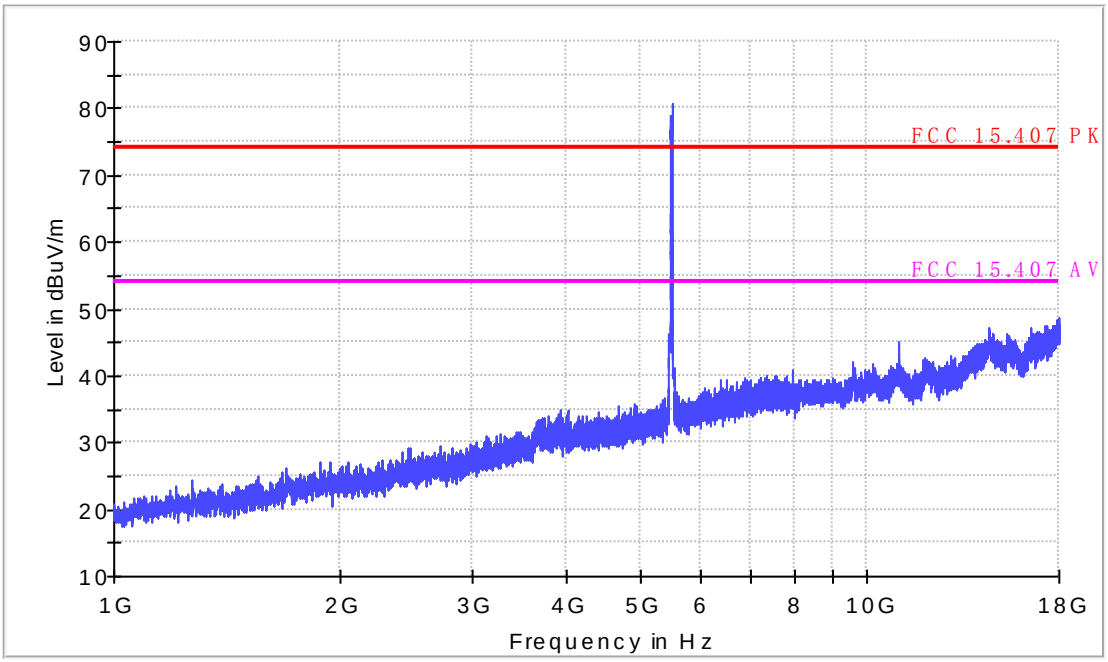
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH100
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



Radiated Emission

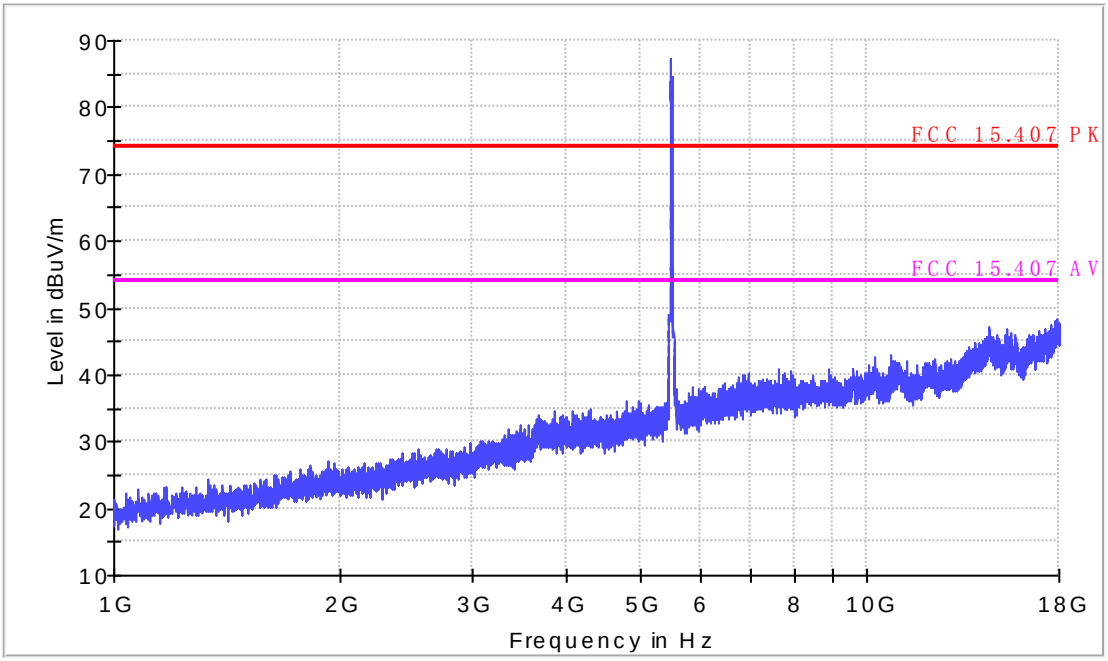
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH100
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.6GHz BAND

CH116

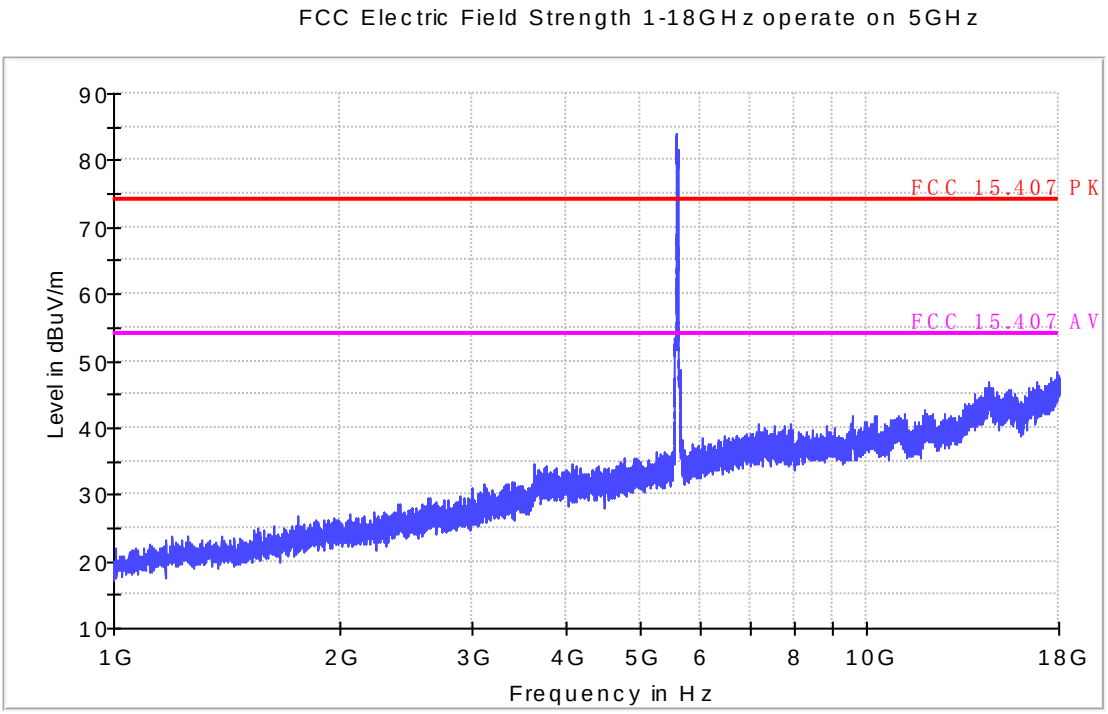
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH116
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

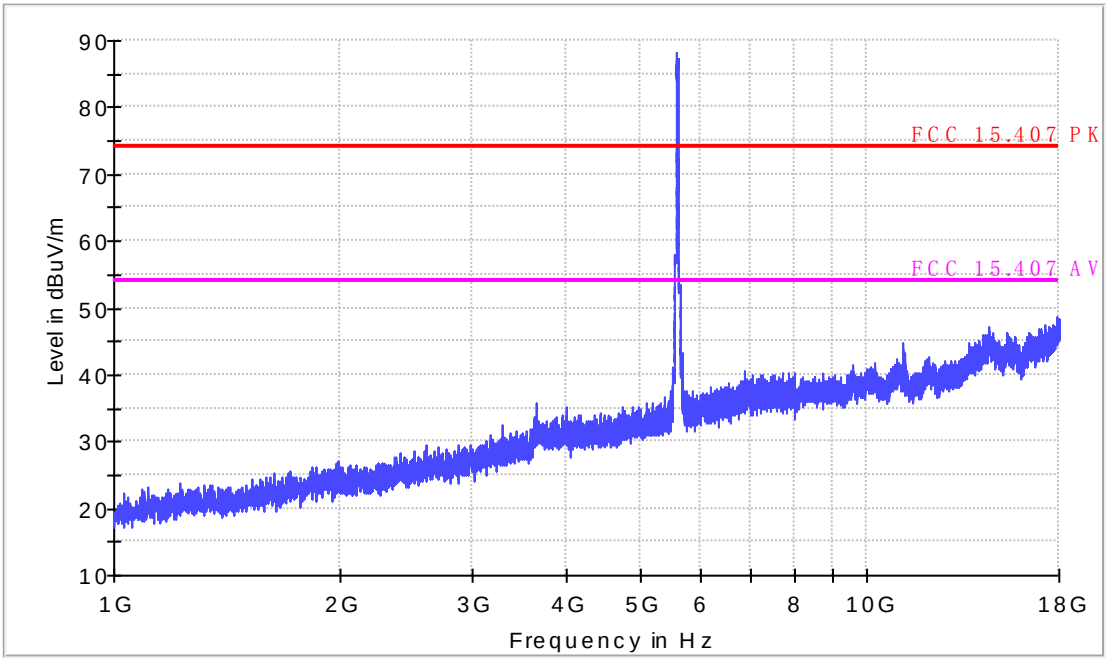
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH116
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.6GHz BAND

CH140

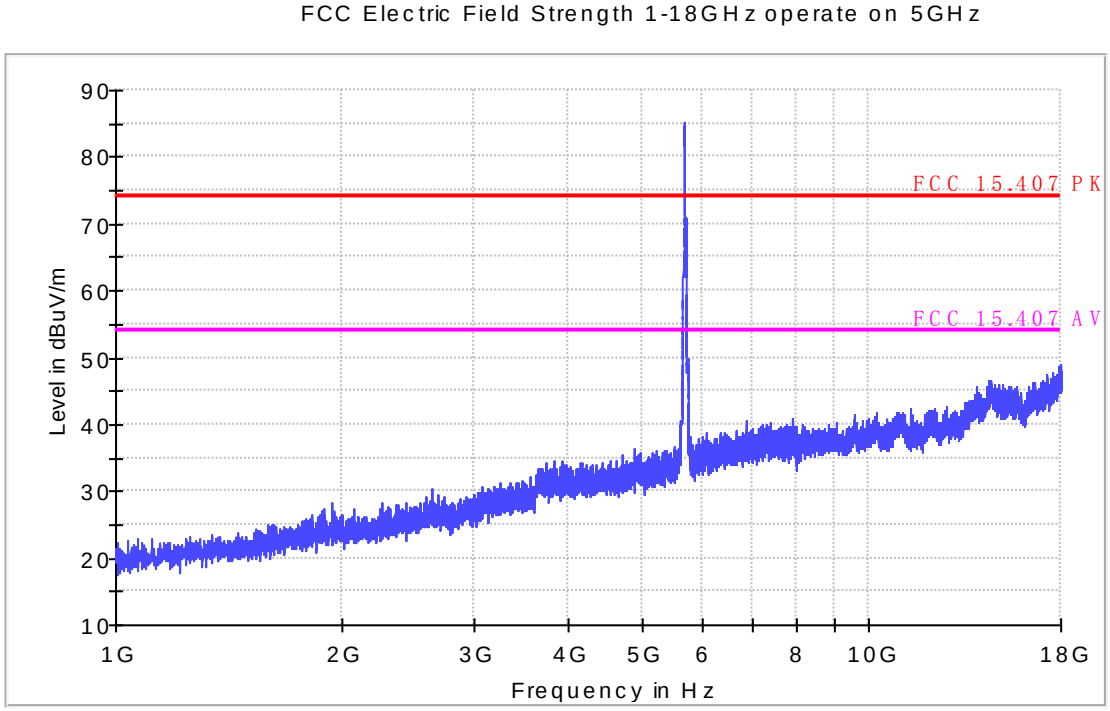
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH140
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

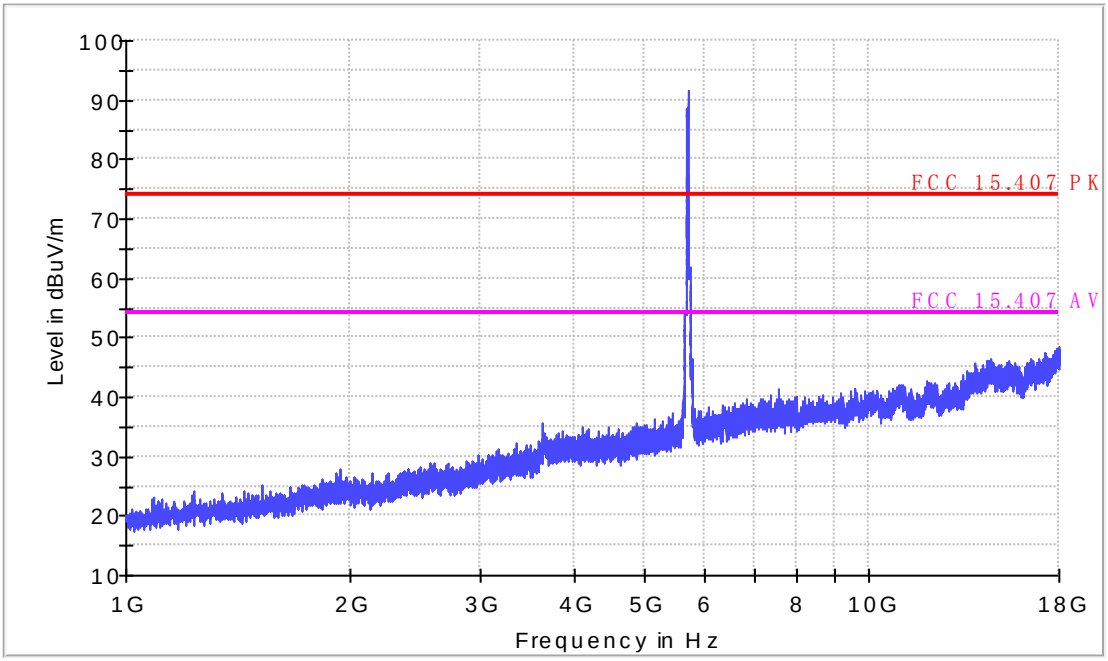
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH140
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.6GHz BAND

CH102

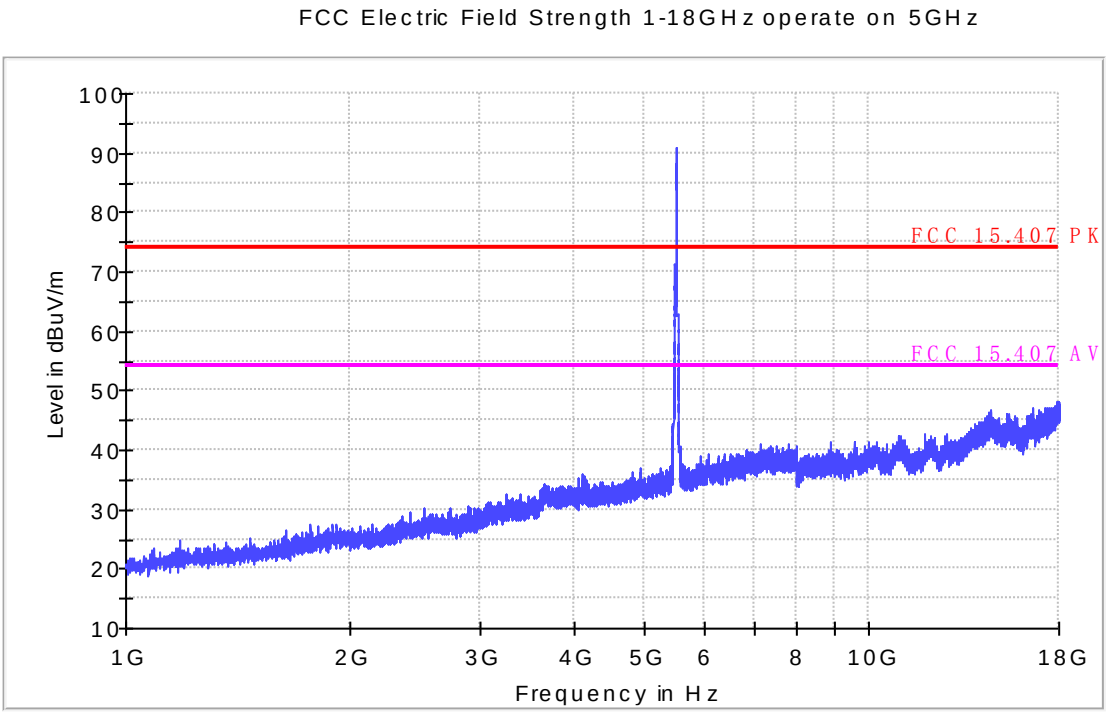
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH102
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

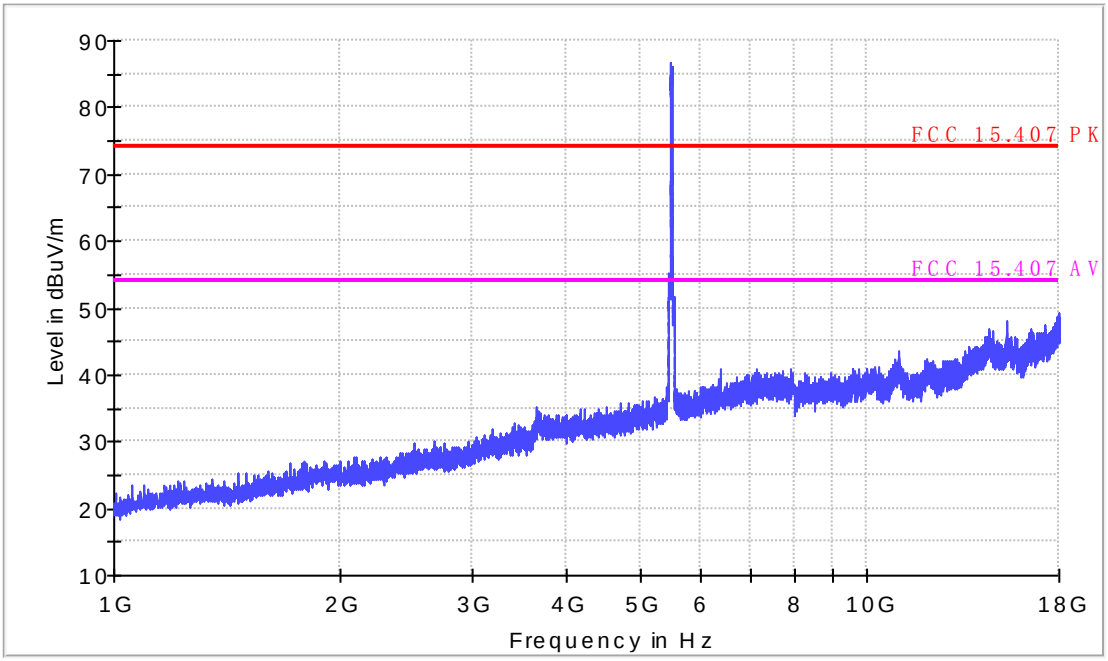
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH102
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.6GHz BAND

CH110

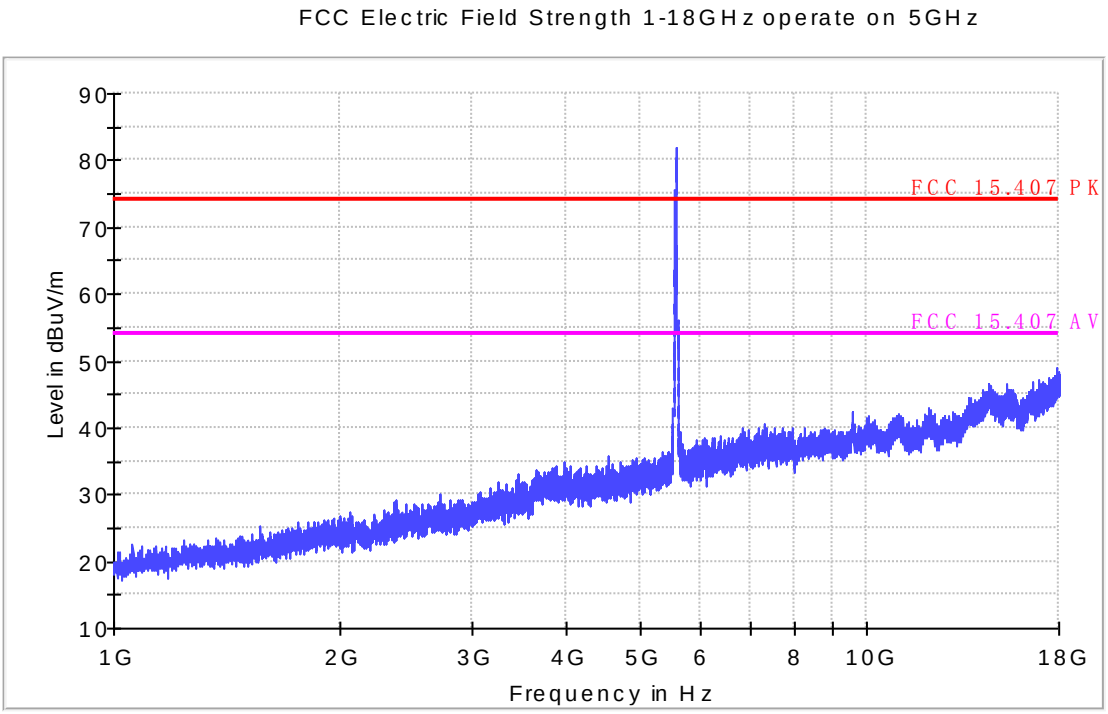
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH110
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

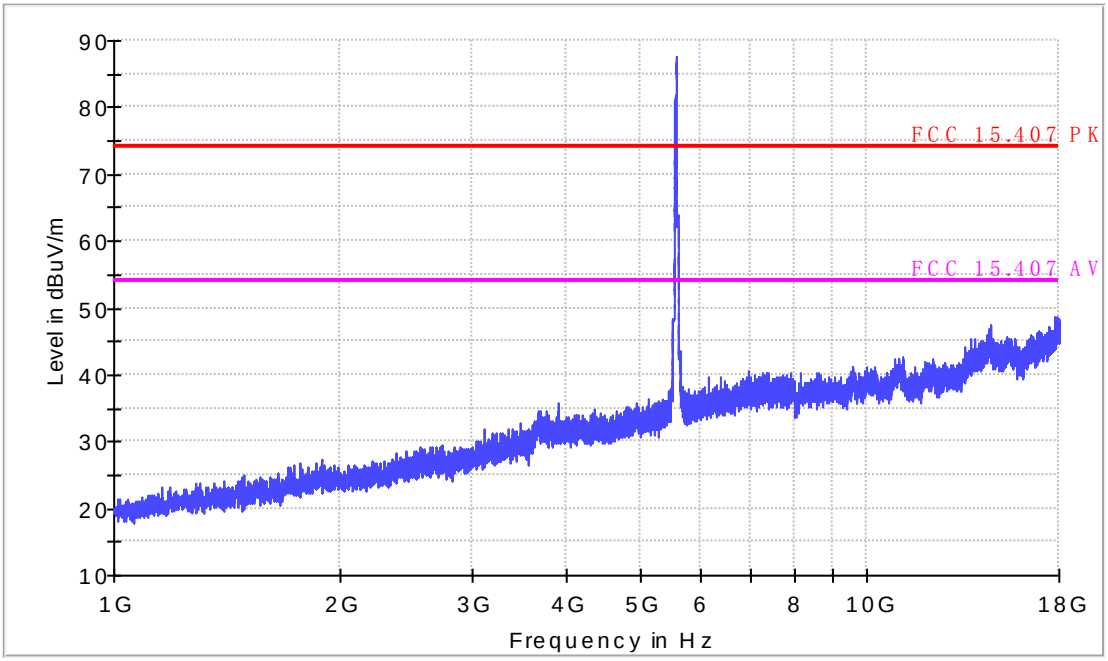
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH110
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.6GHz BAND

CH134

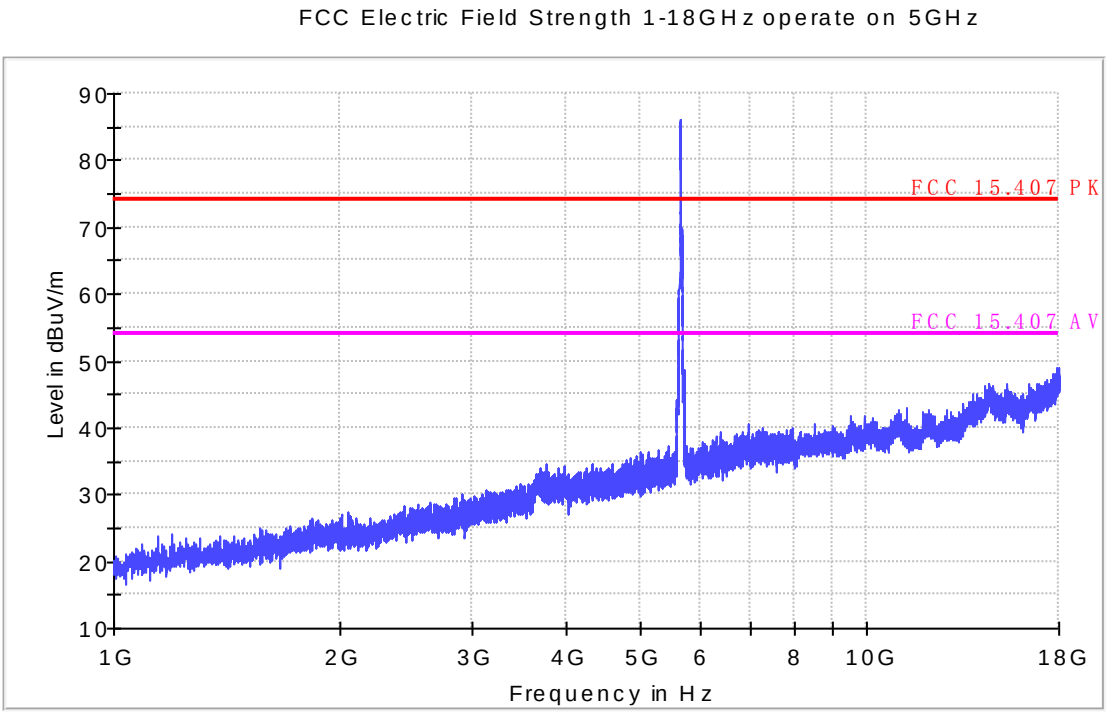
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH134
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

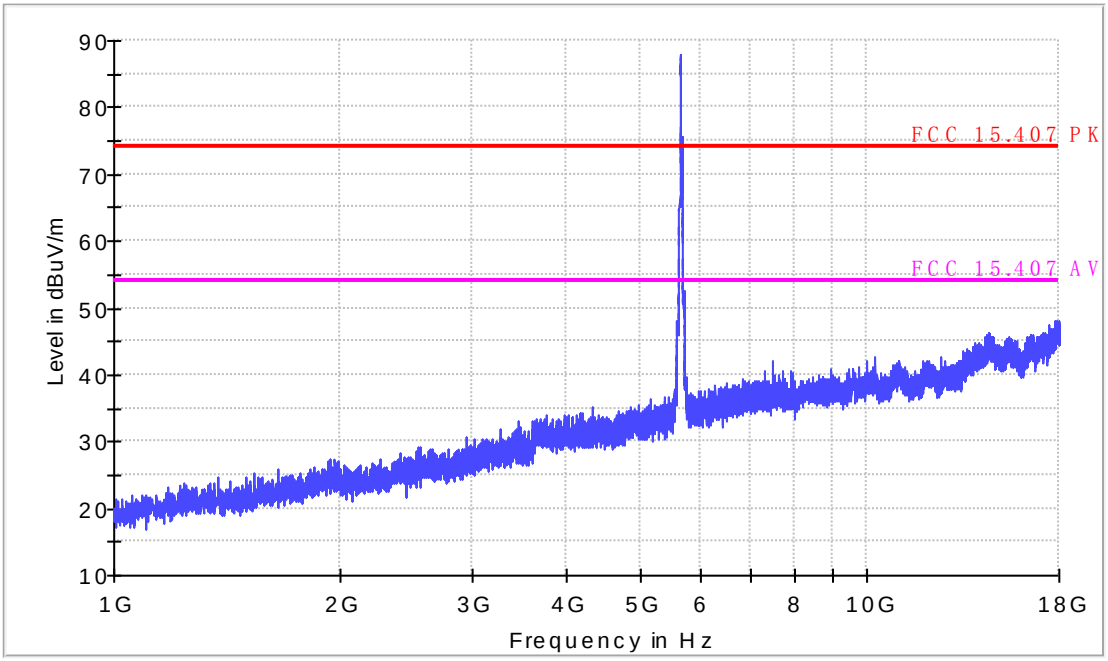
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH134
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.8GHz BAND

CH149

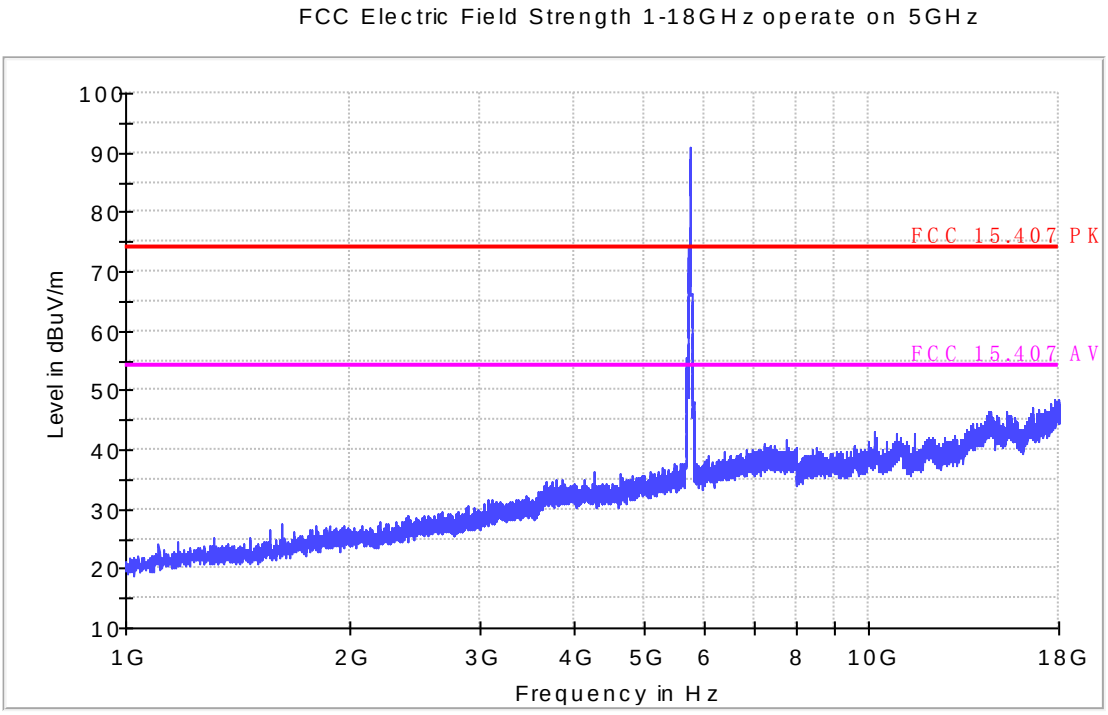
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH149
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

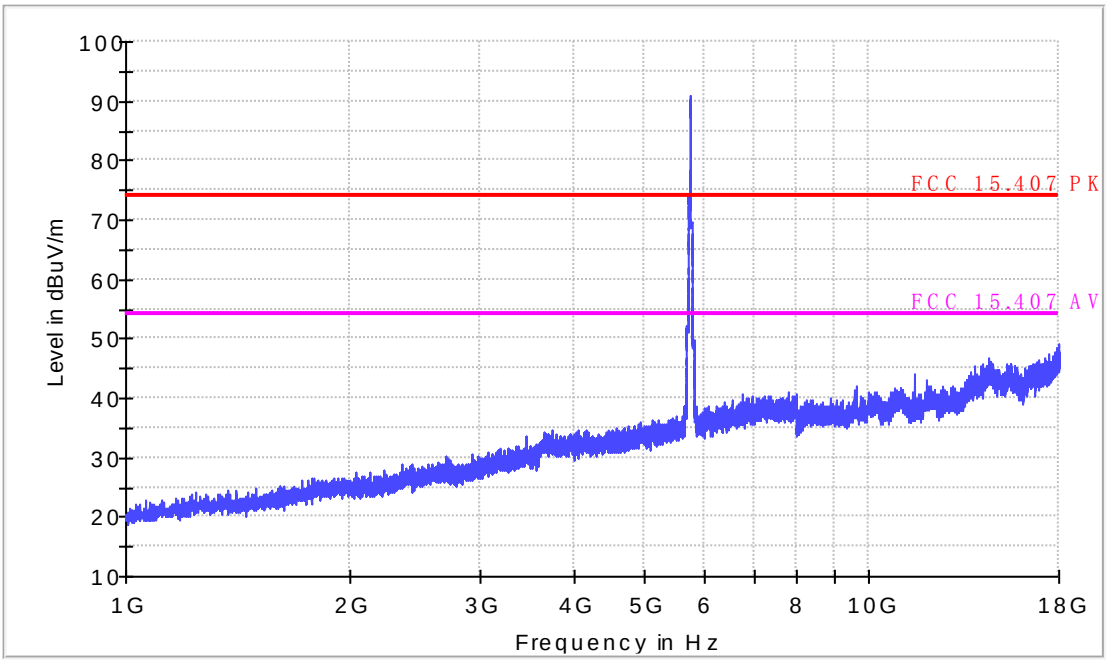
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH149
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.8GHz BAND

CH157

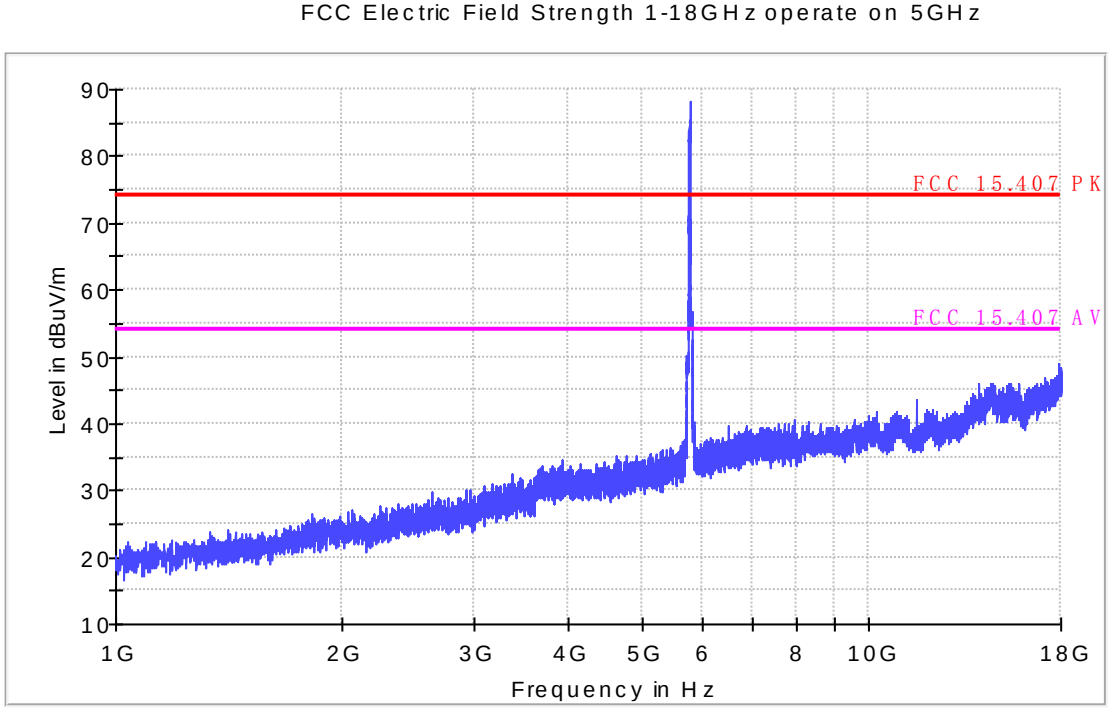
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH157
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

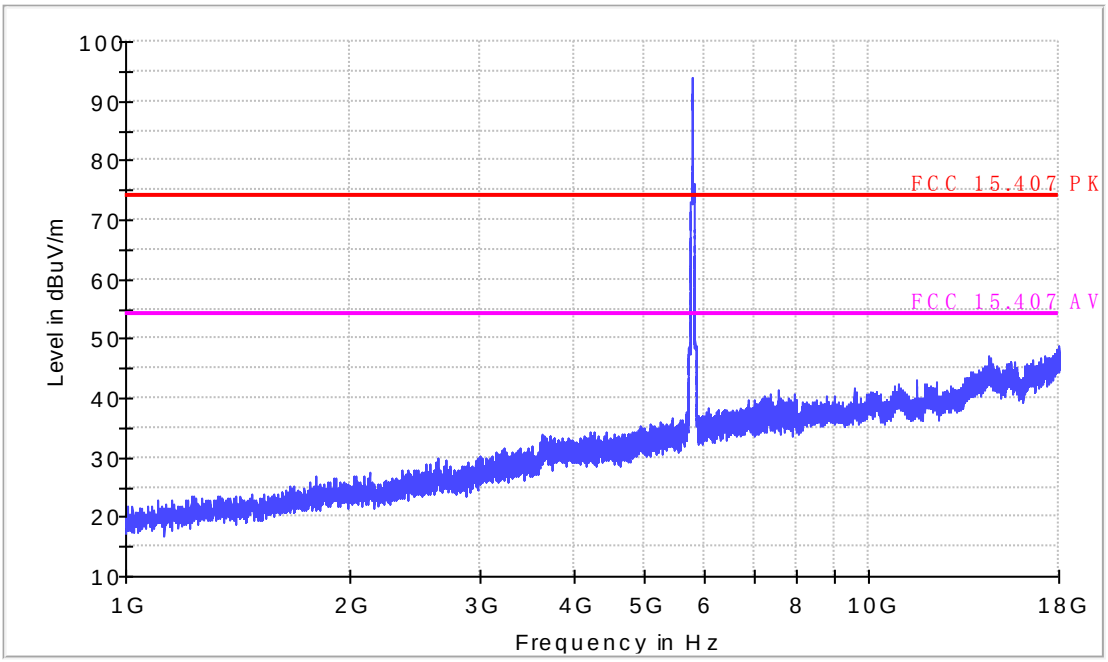
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH157
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11a IN THE 5.8GHz BAND

CH165

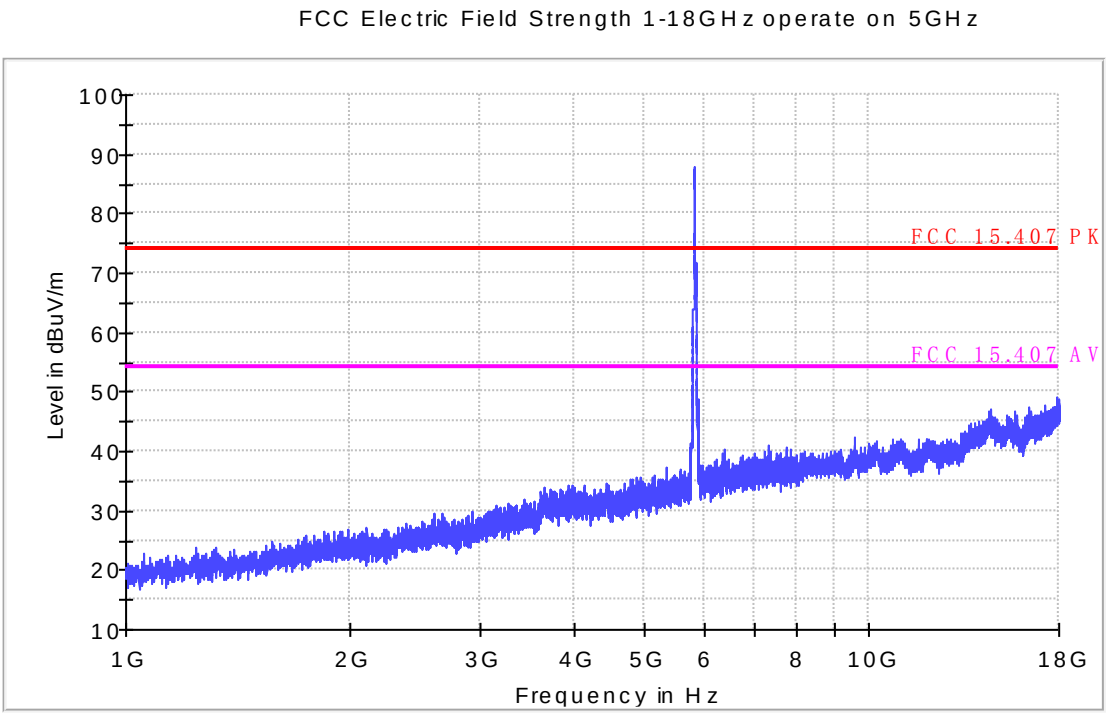
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11a CH165
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

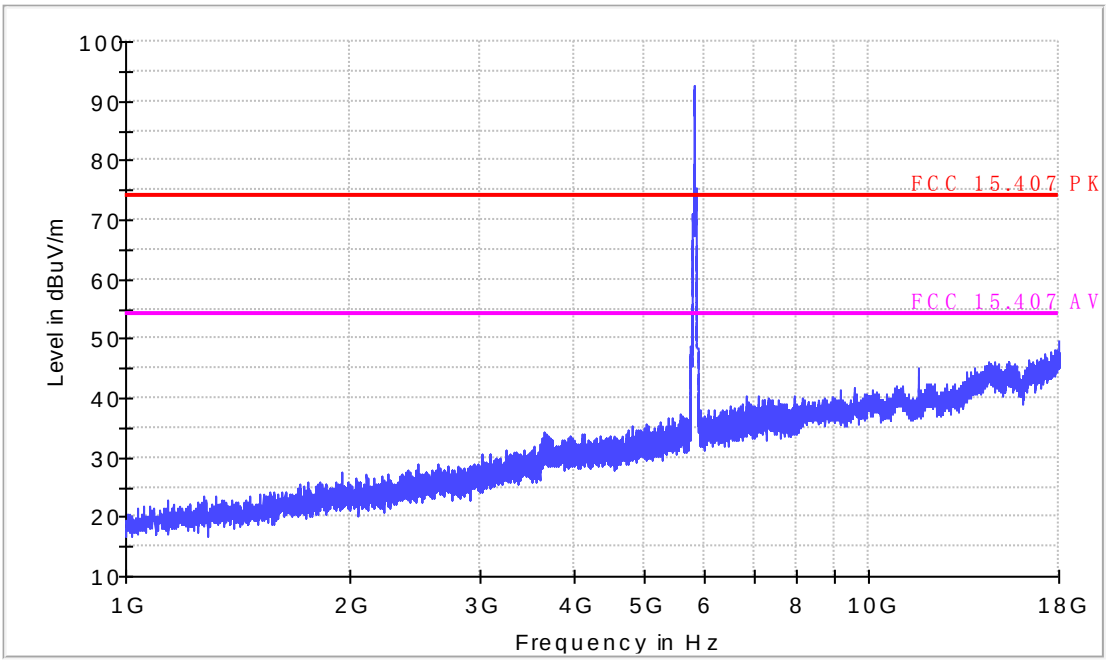
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH165
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.8GHz BAND

CH149

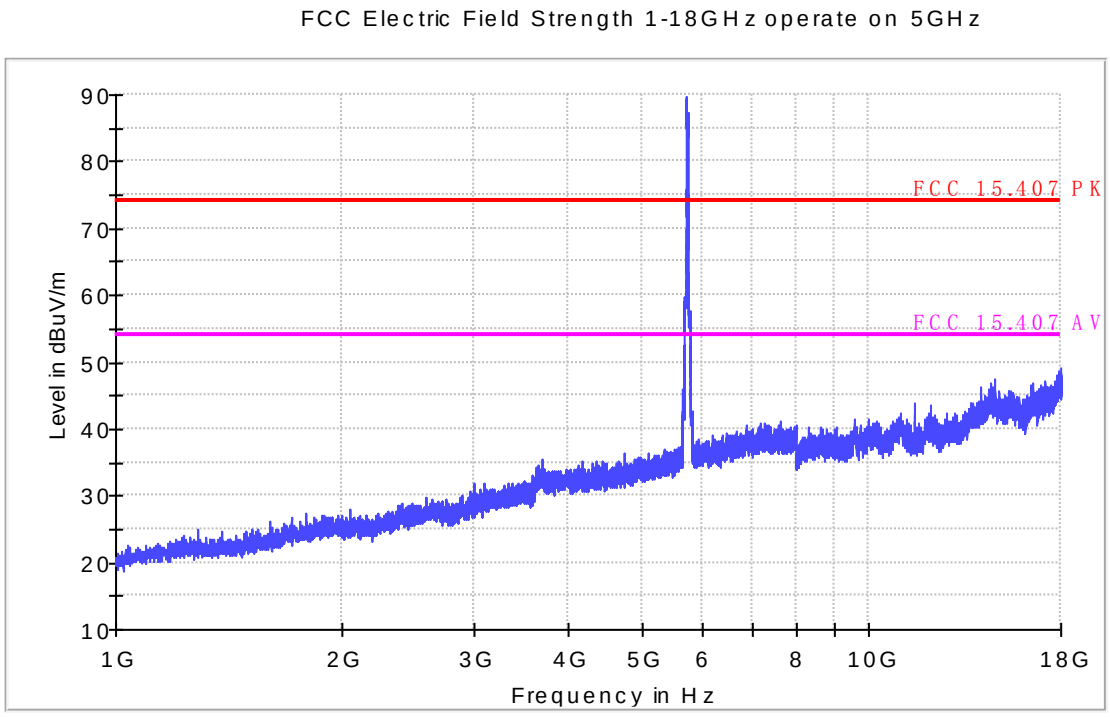
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH149
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

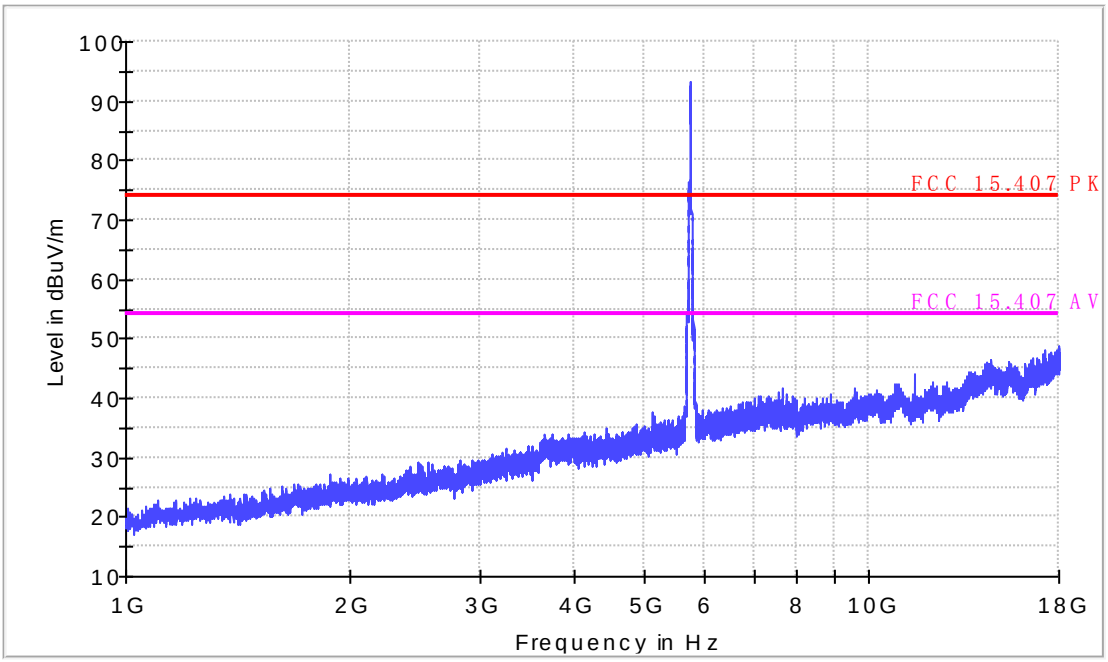
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH149
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.8GHz BAND

CH157

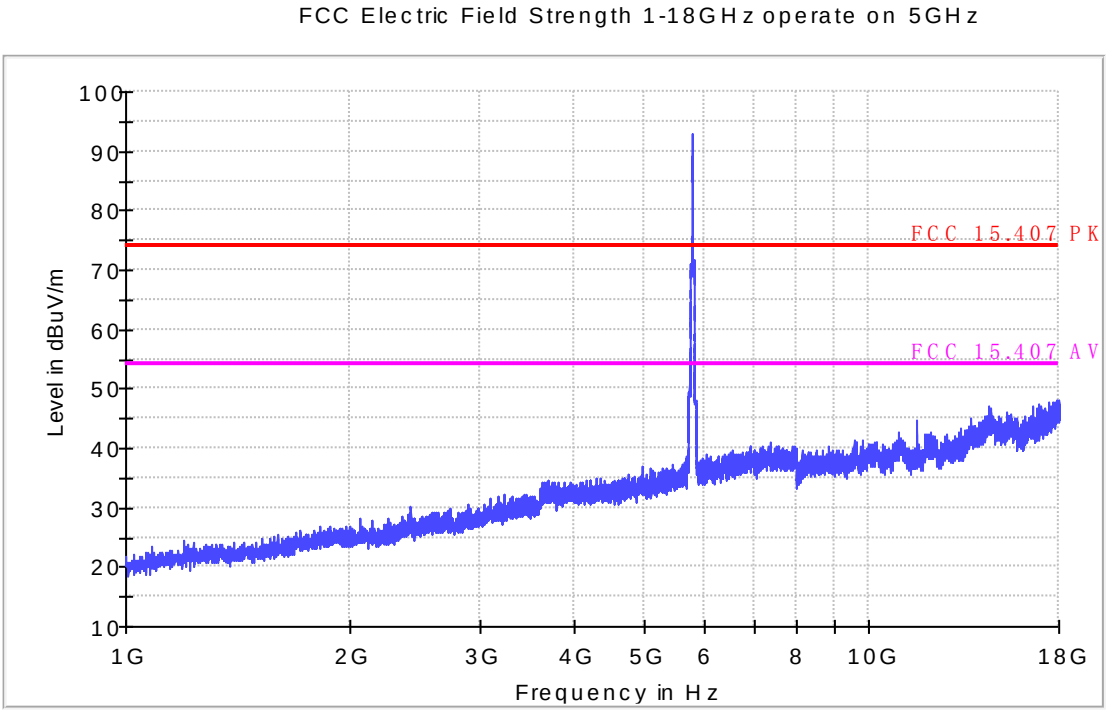
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH157
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

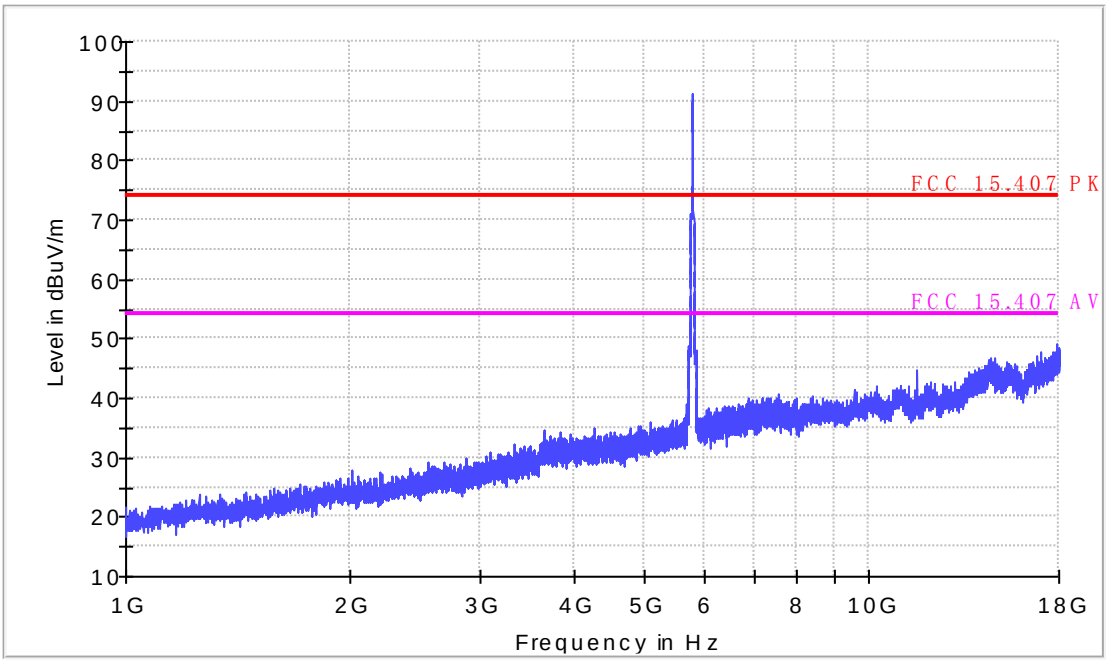
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH157
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT20 IN THE 5.8GHz BAND

CH165

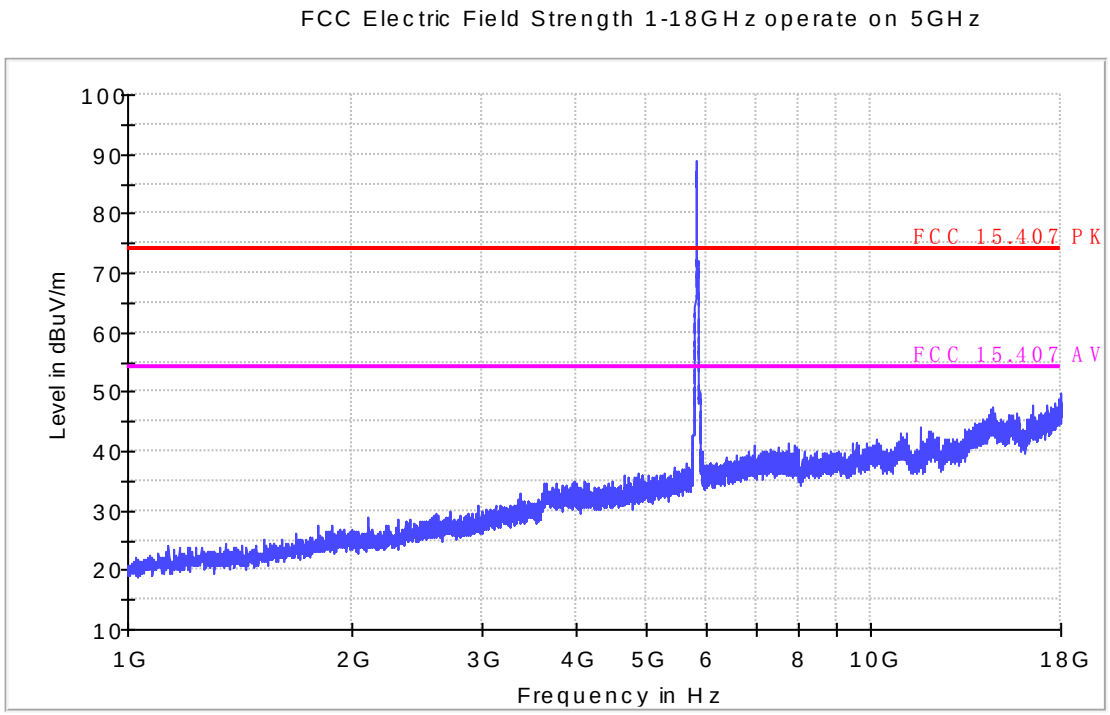
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH165
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

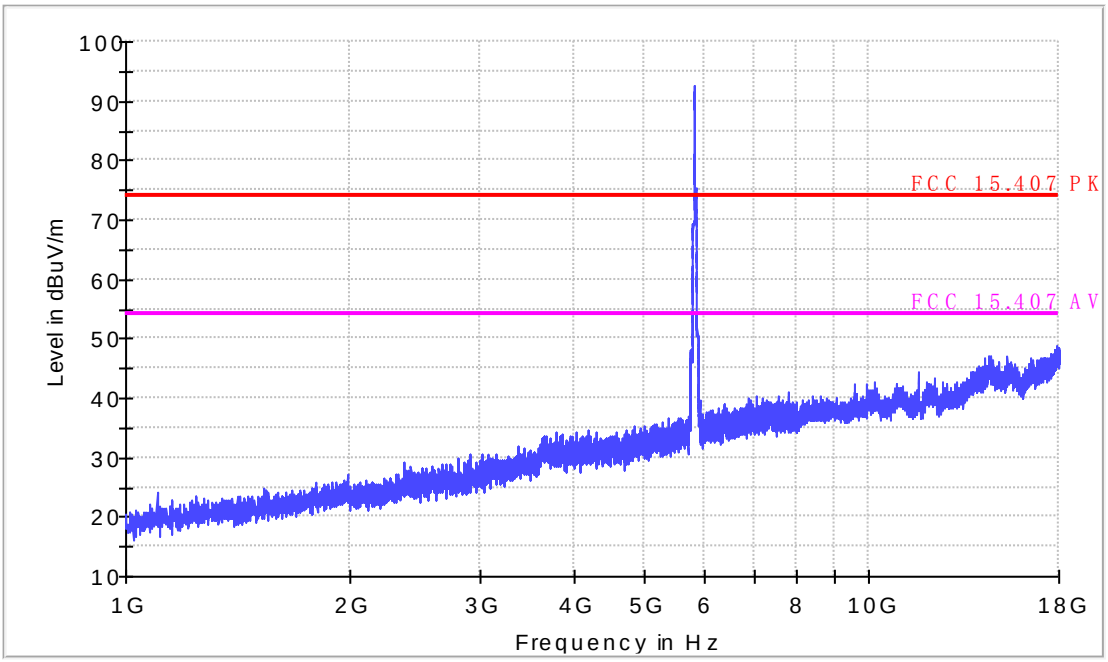
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH165
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.8GHz BAND

CH151

Radiated Emission

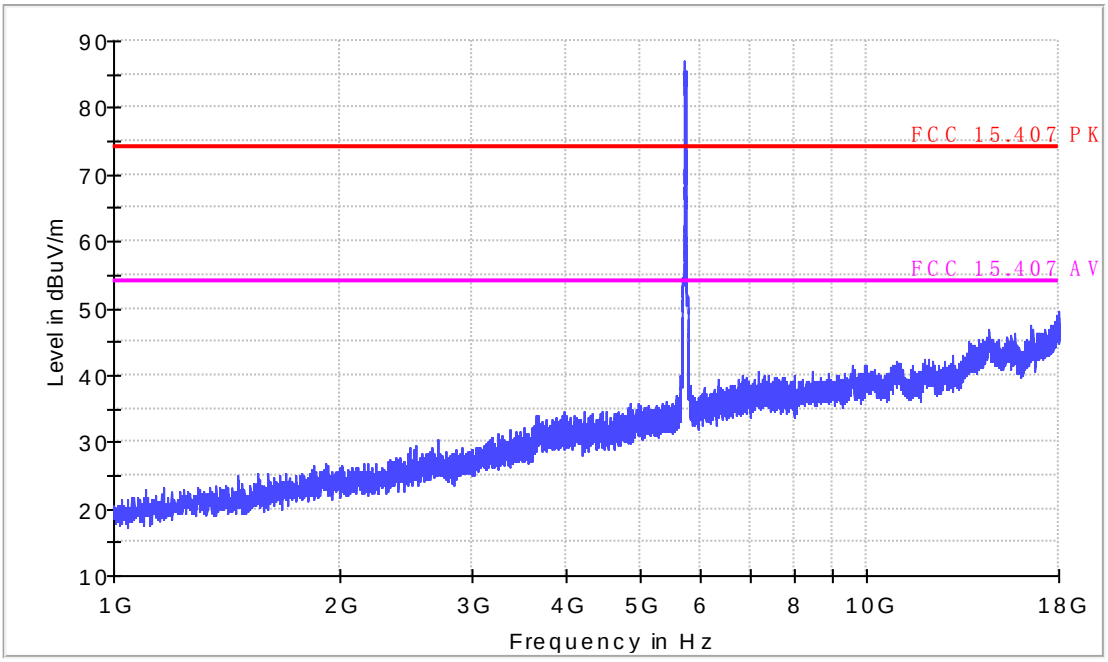
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH151
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



Radiated Emission

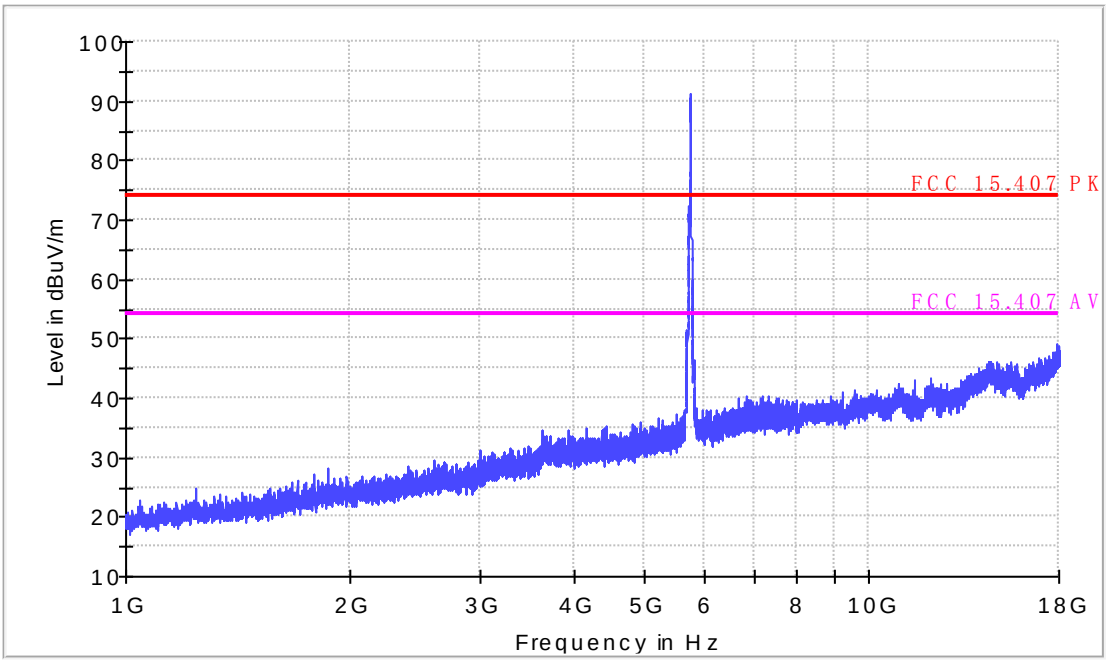
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH151
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



1-18G

11n HT40 IN THE 5.8GHz BAND

CH159

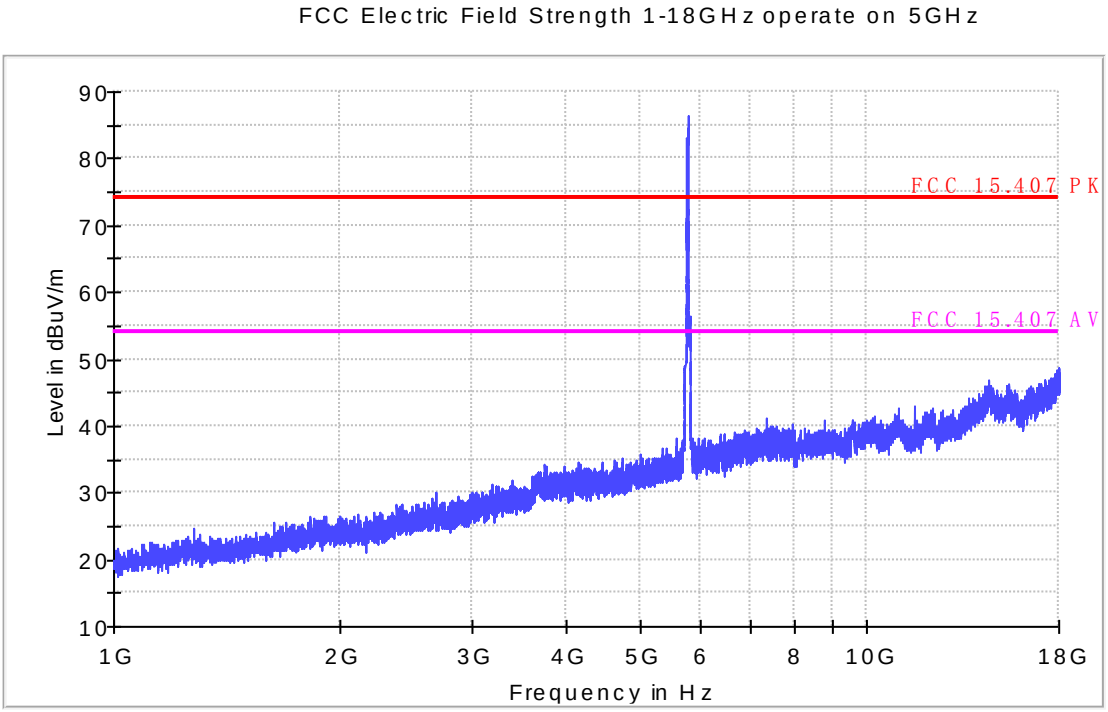
Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH159
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



Radiated Emission

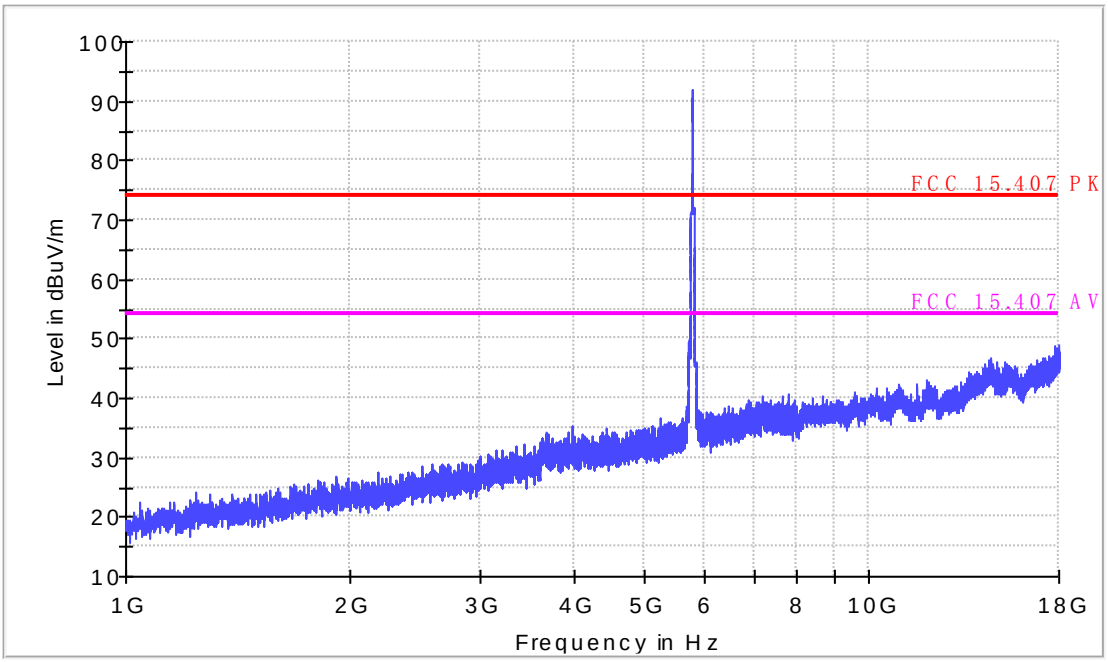
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH159
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz



18-26.5G

No Peak found in pre-scan, only worst case result is listed in this report.

Radiated Emission

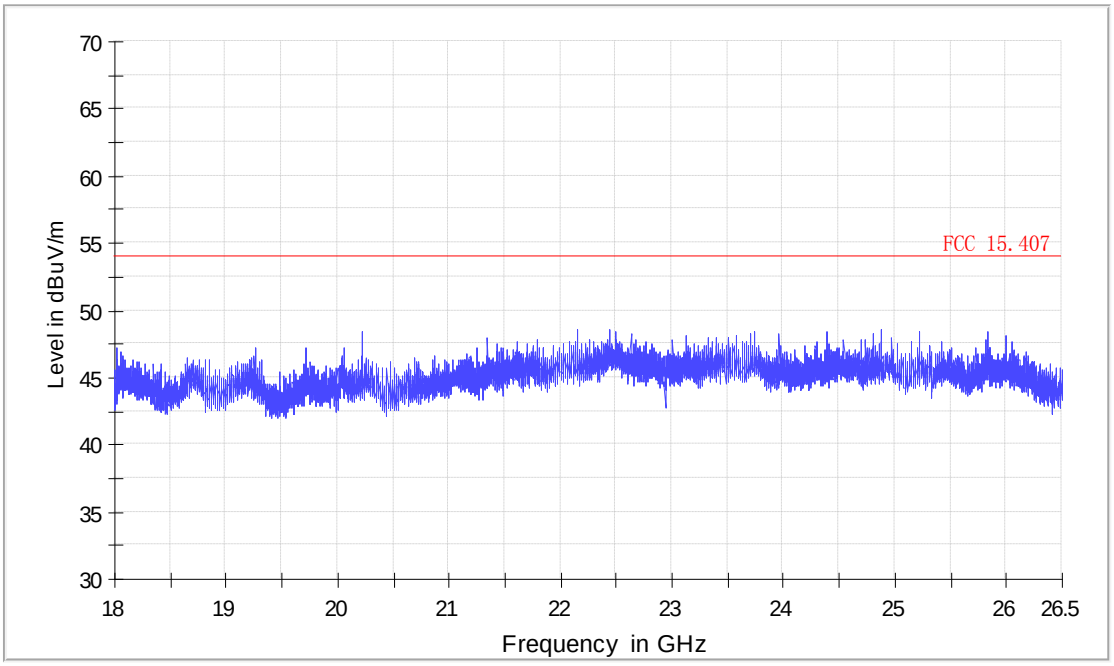
EUT Information

EUT Model Name:	U2
Operation mode:	Transmitting
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 18-26.5GHz



Radiated Emission

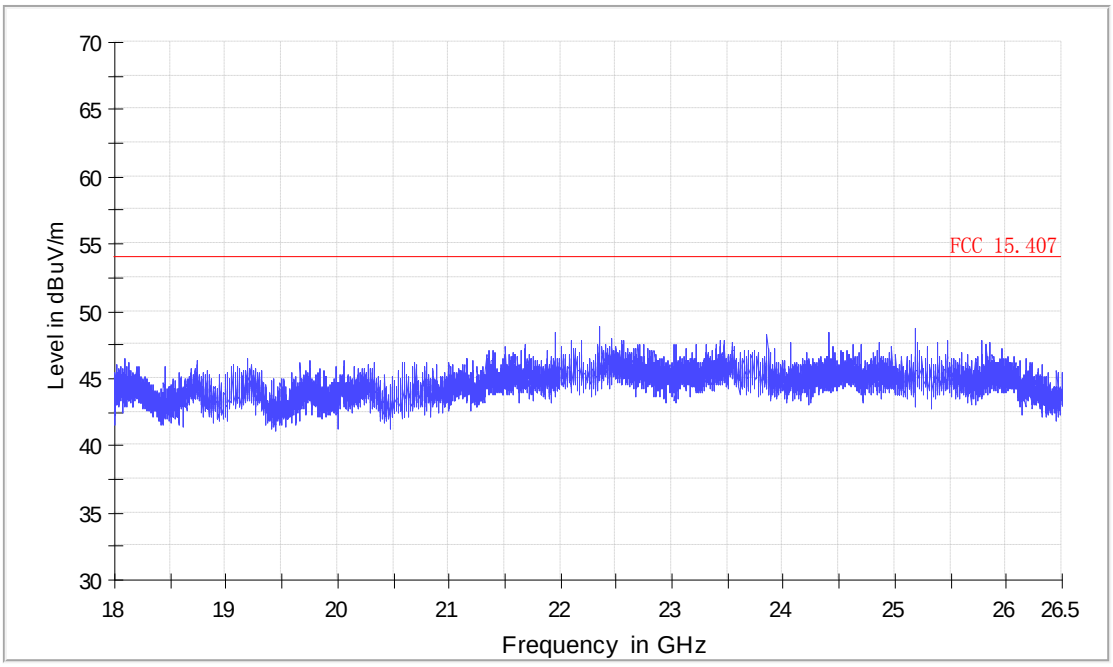
EUT Information

EUT Model Name:	U2
Operation mode:	Transmitting
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 18-26.5GHz



26.5-40G

No Peak found in pre-scan, only worst case result is listed in this report.

Radiated Emission

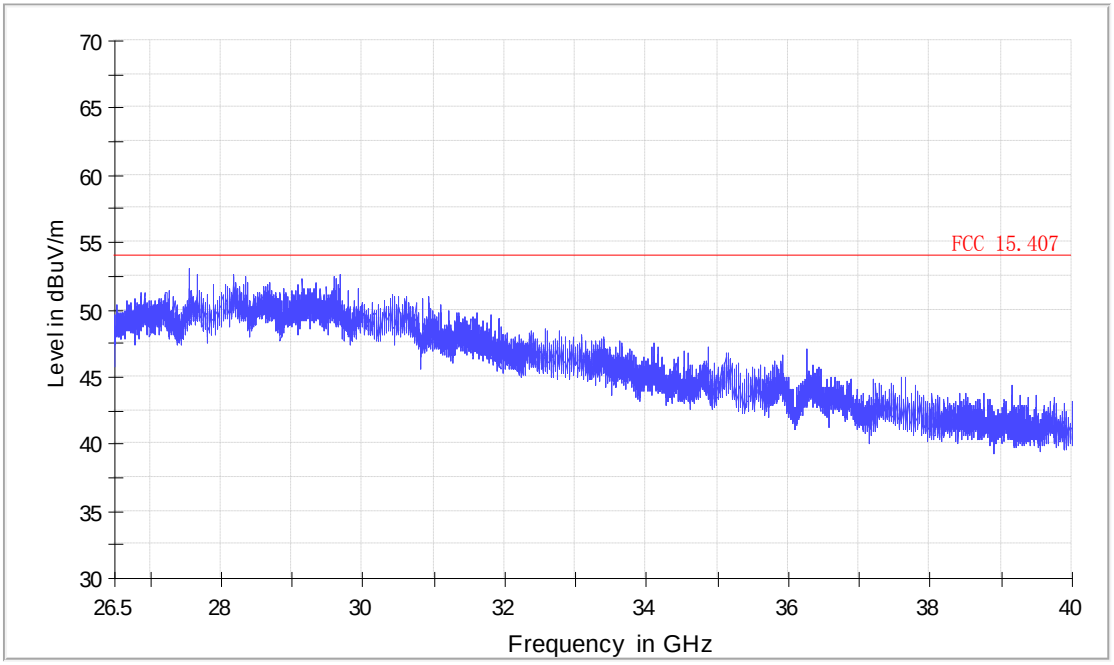
EUT Information

EUT Model Name:	U2
Operation mode:	Transmitting
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 26.5-40GHz



Radiated Emission

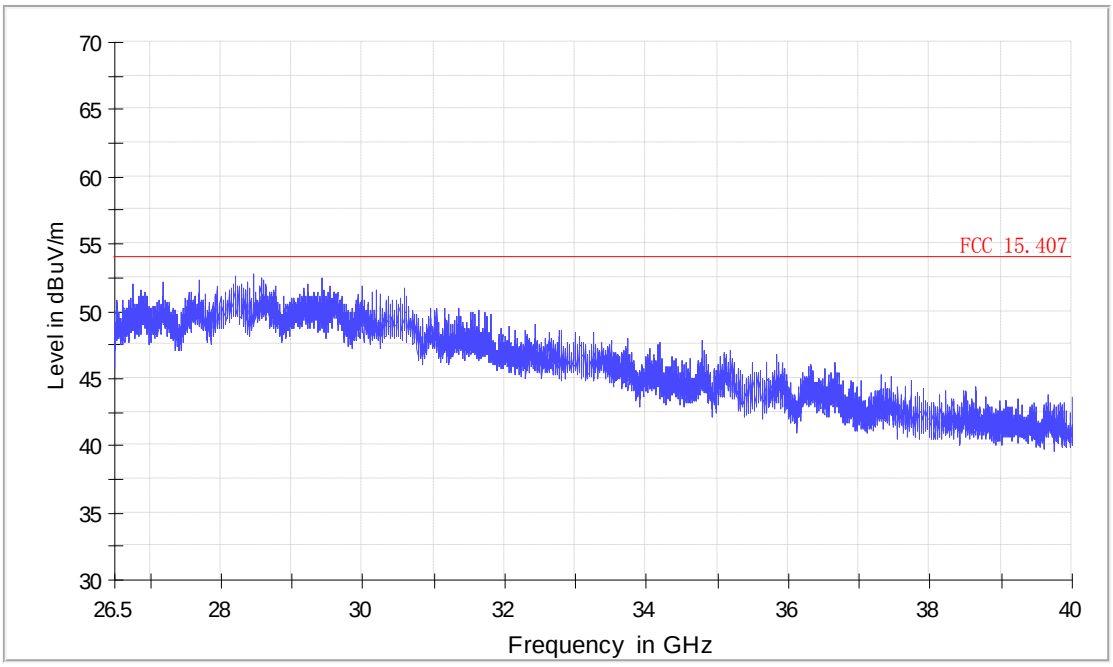
EUT Information

EUT Model Name:	U2
Operation mode:	Transmitting
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 26.5-40GHz



Band edge

11a IN THE 5.2GHz BAND

CH36

Radiated Emission

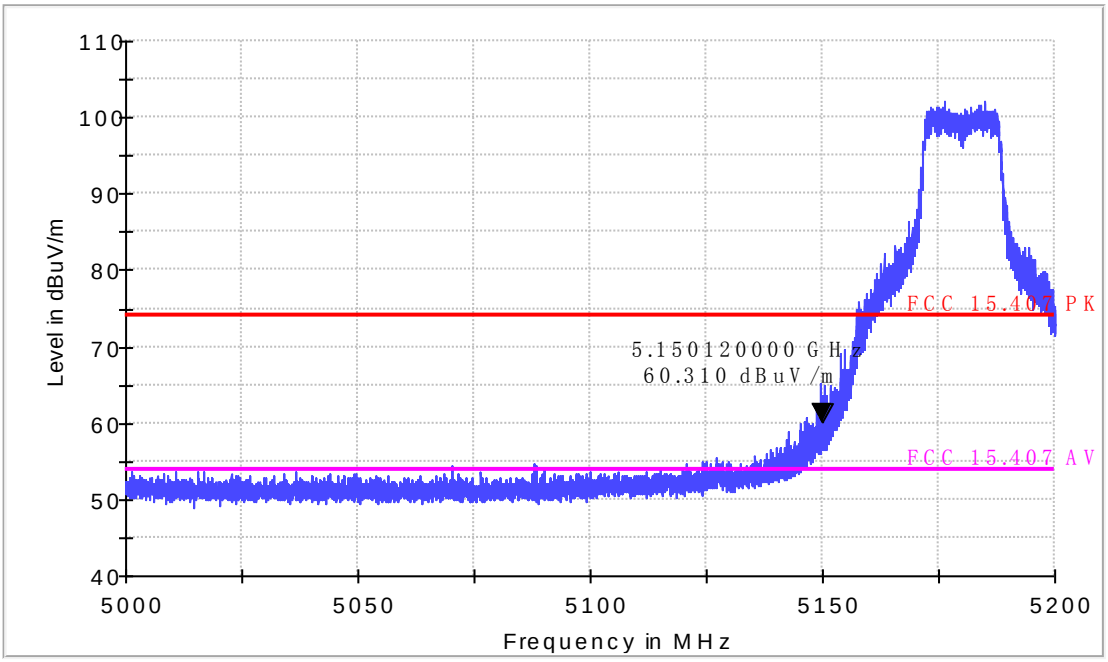
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

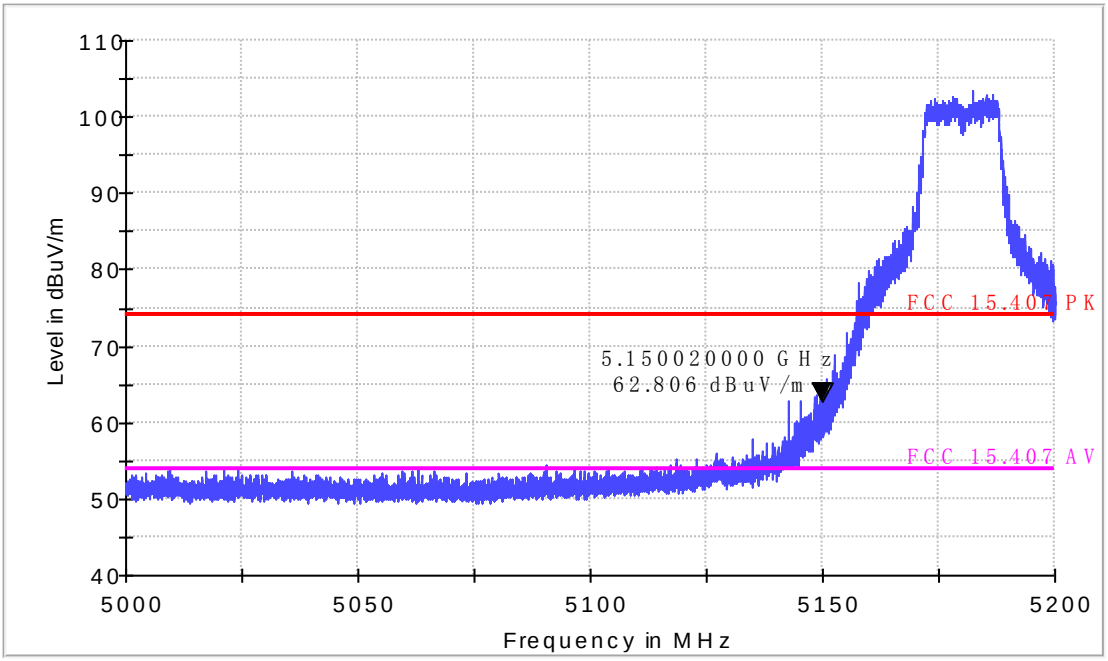
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

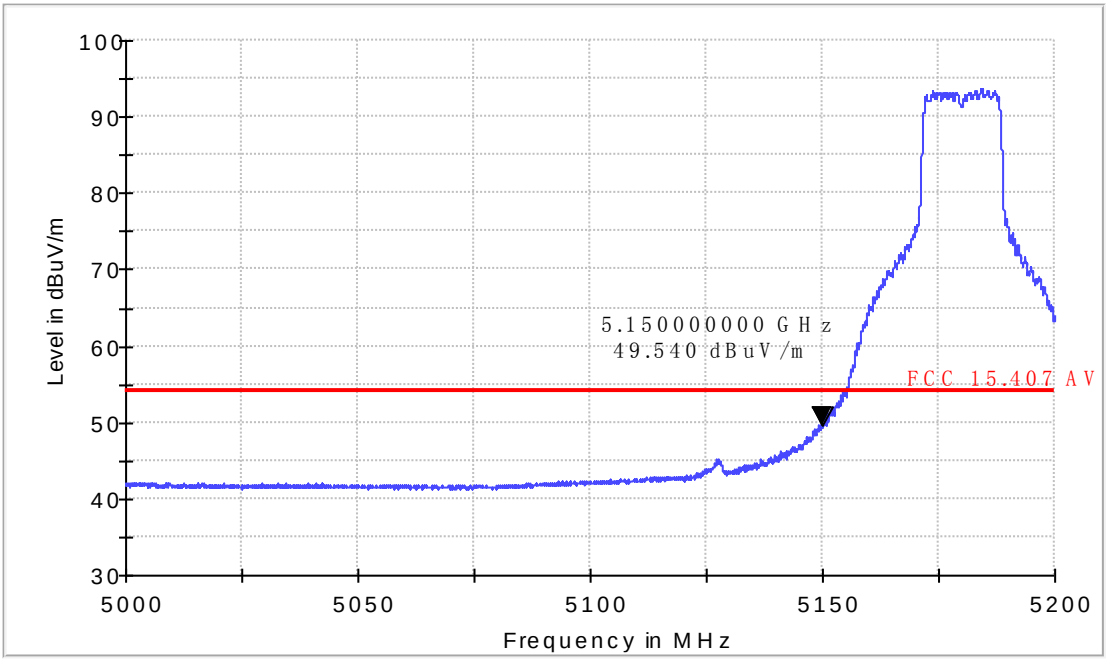
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Radiated Emission

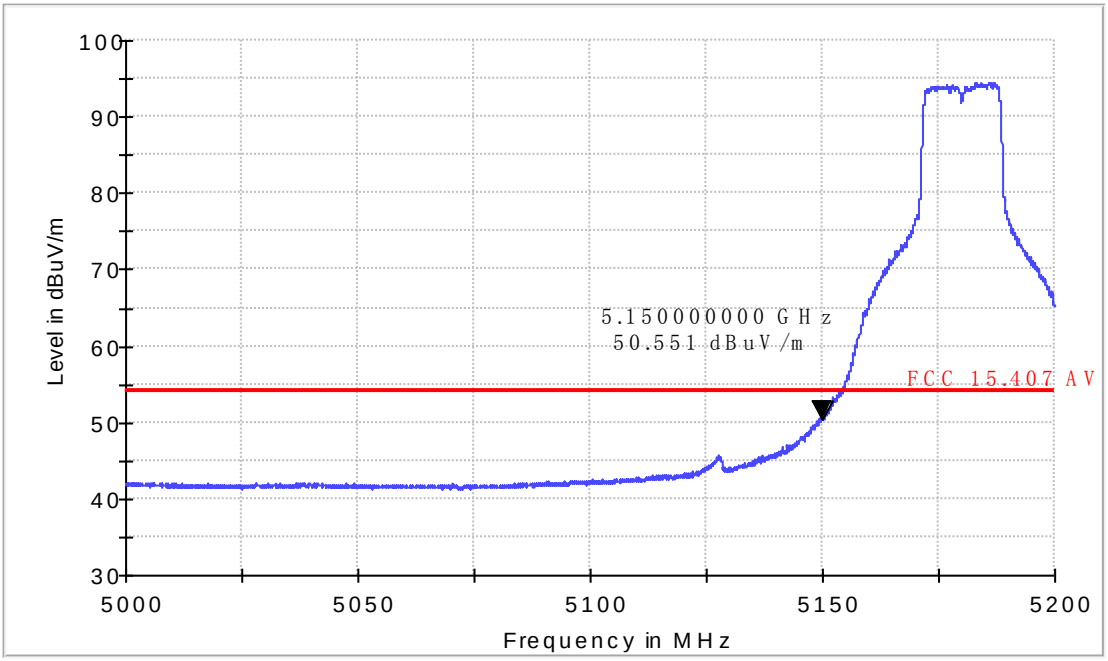
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Band edge

11n HT20 IN THE 5.2GHz BAND

CH36

Radiated Emission

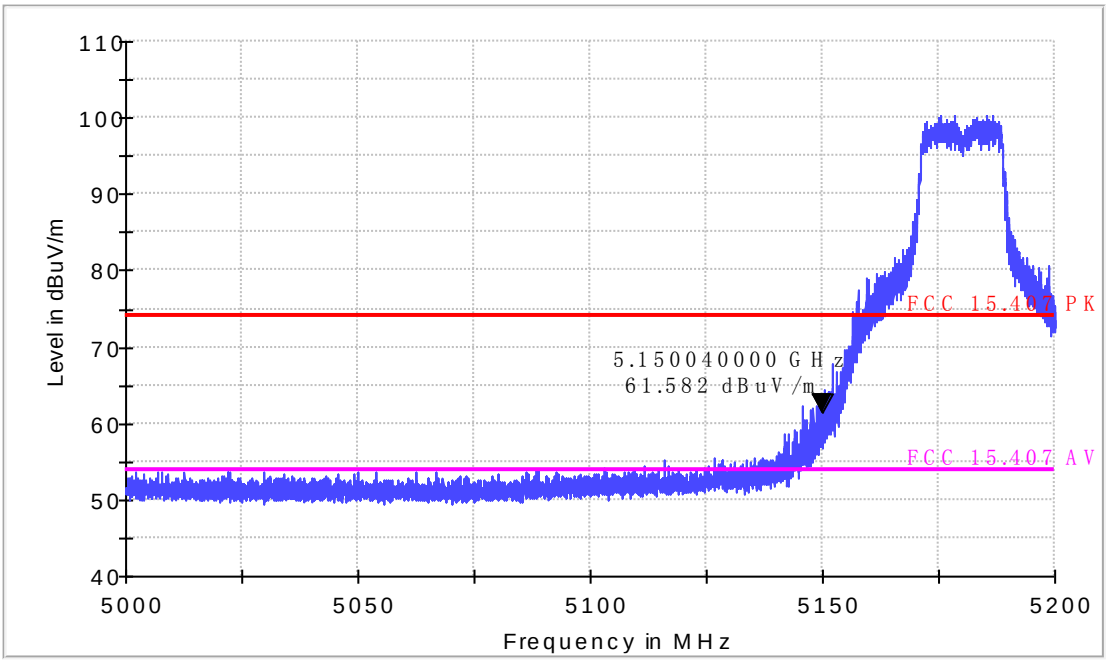
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

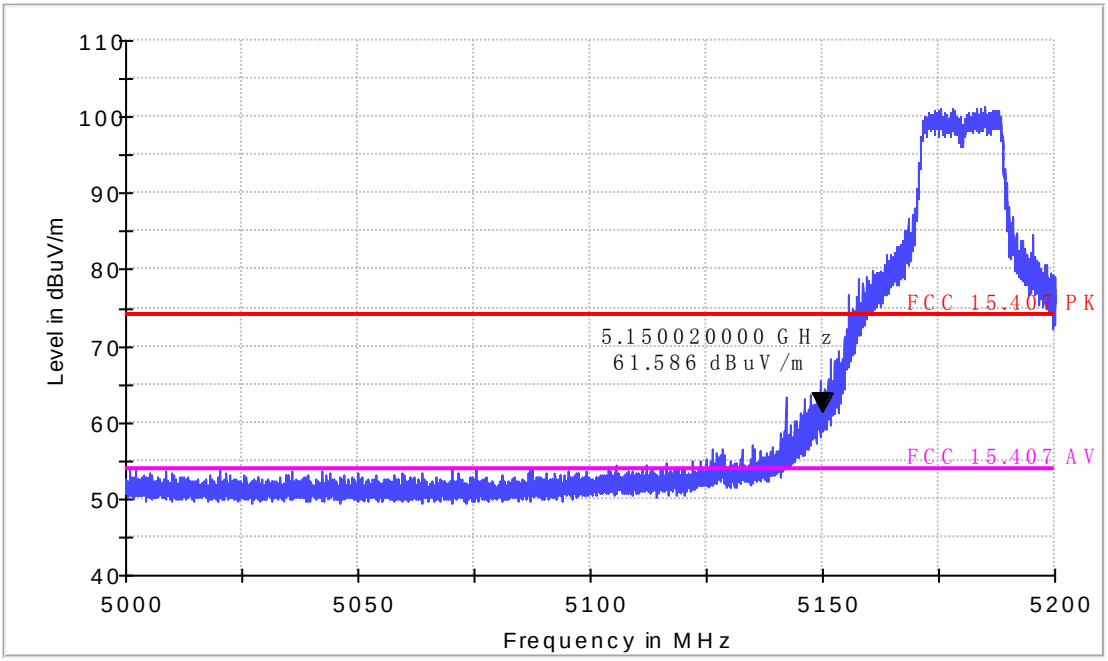
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

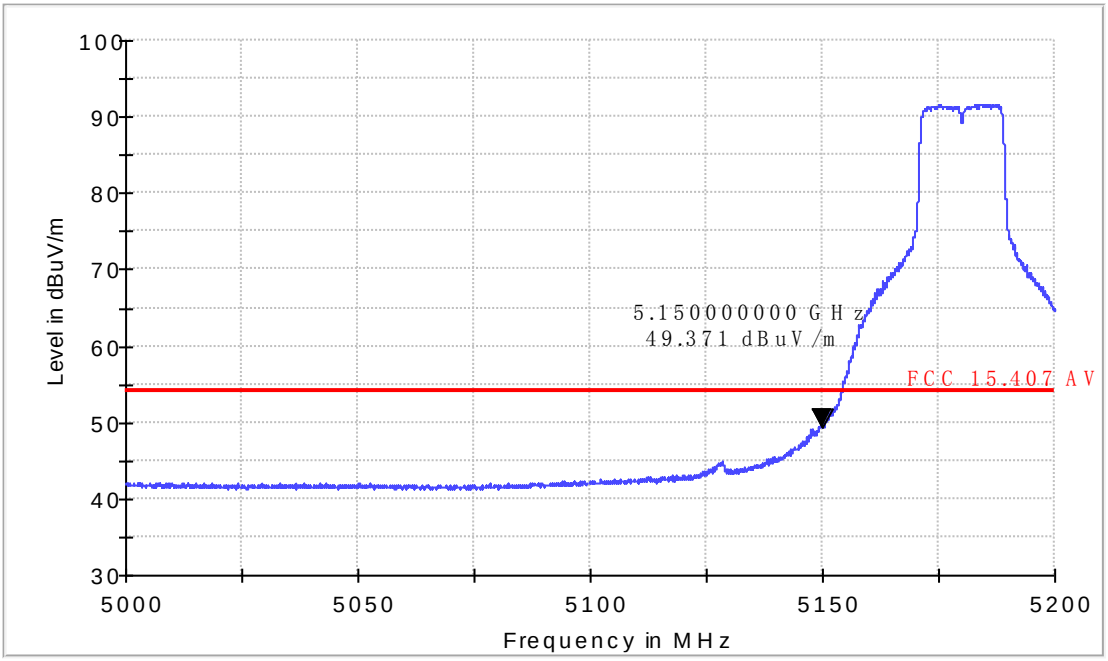
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Radiated Emission

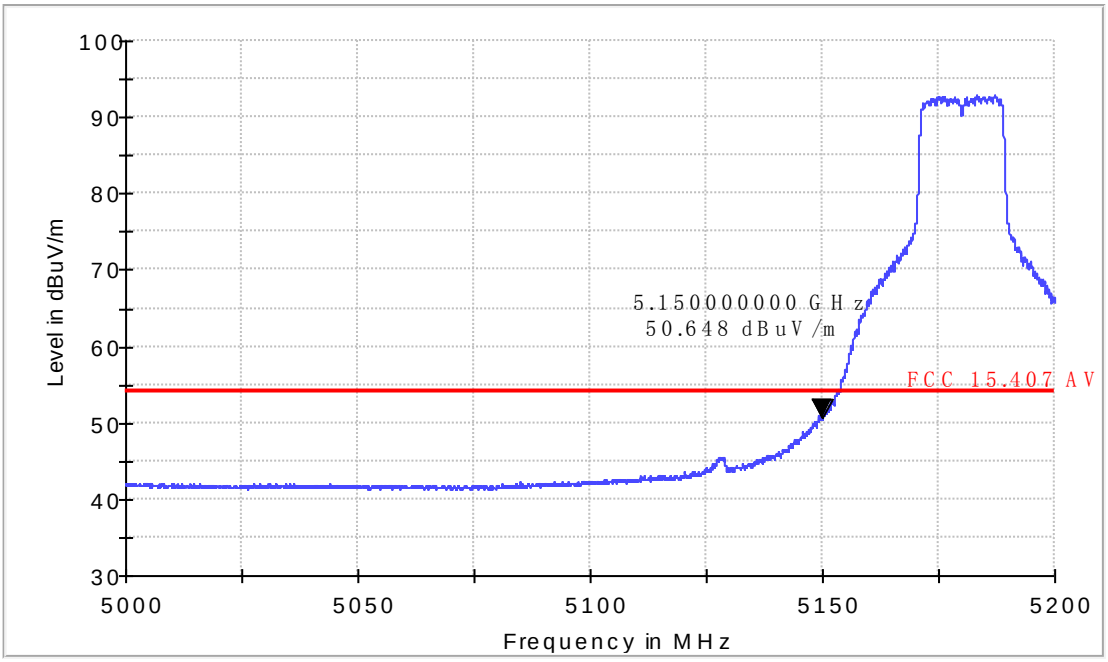
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH36
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Band edge

11n HT40 IN THE 5.2GHz BAND

CH38

Radiated Emission

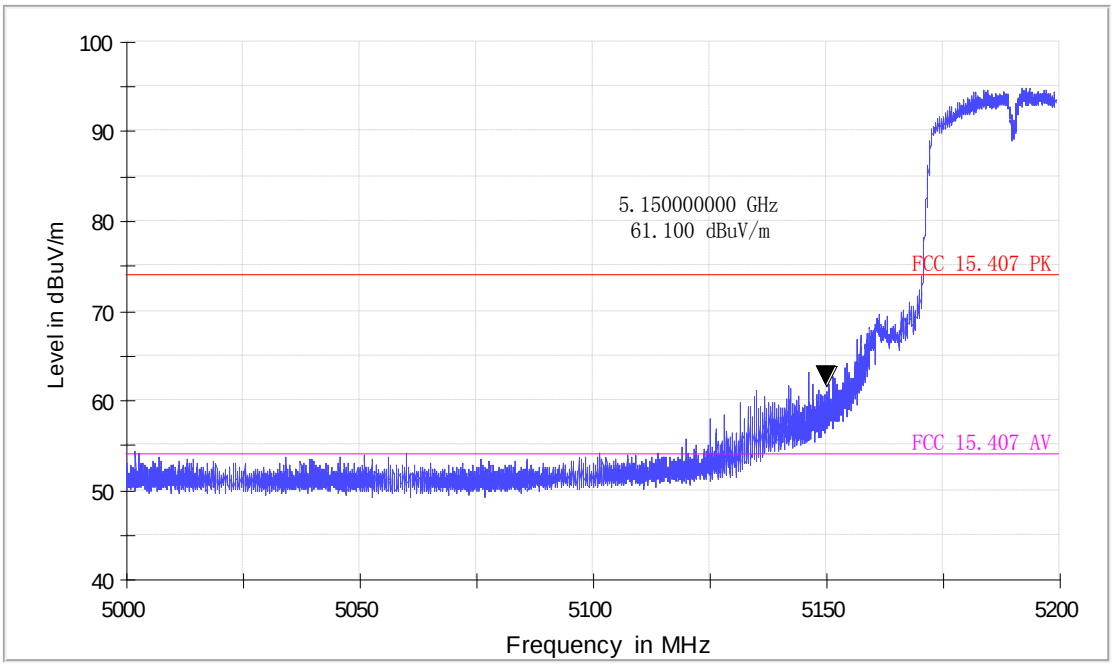
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH38
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

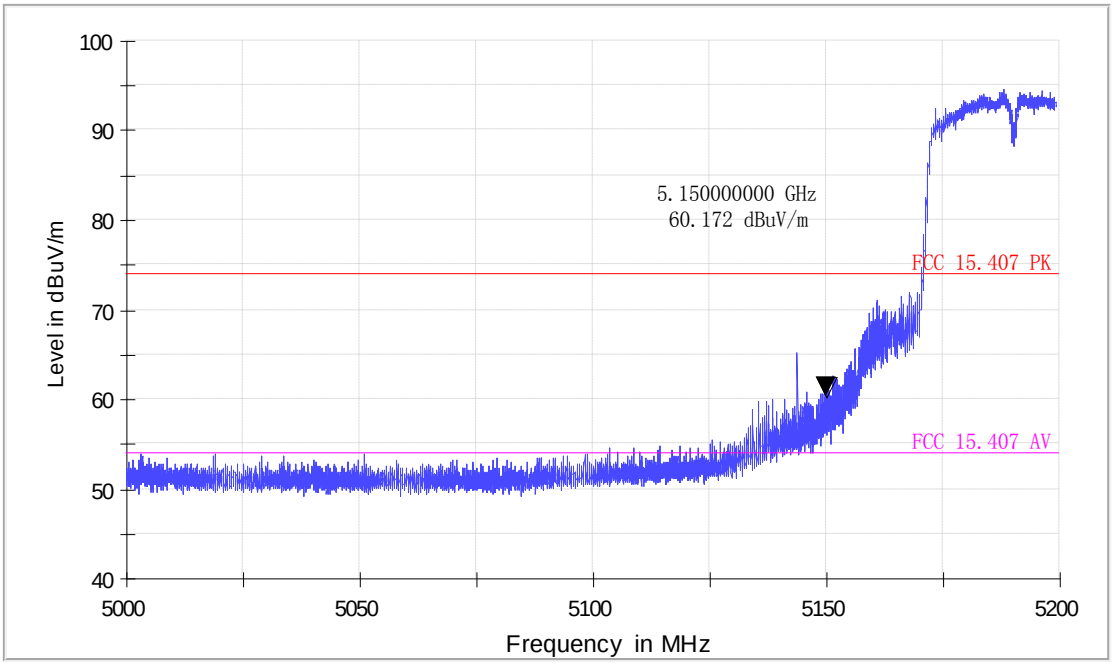
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH38
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

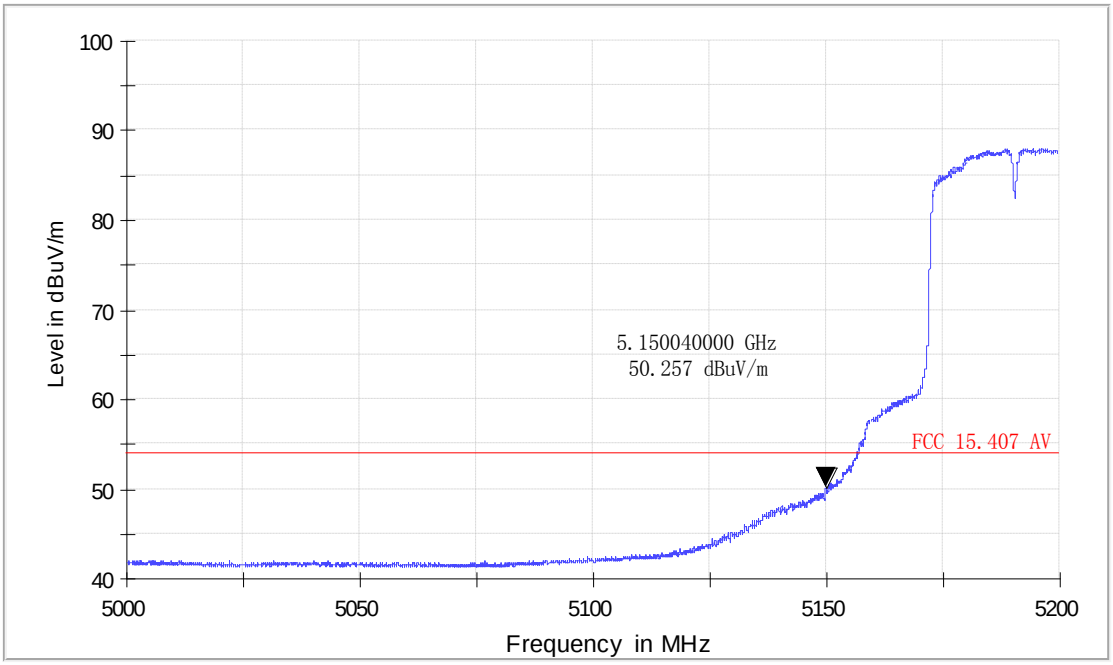
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH38
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Radiated Emission

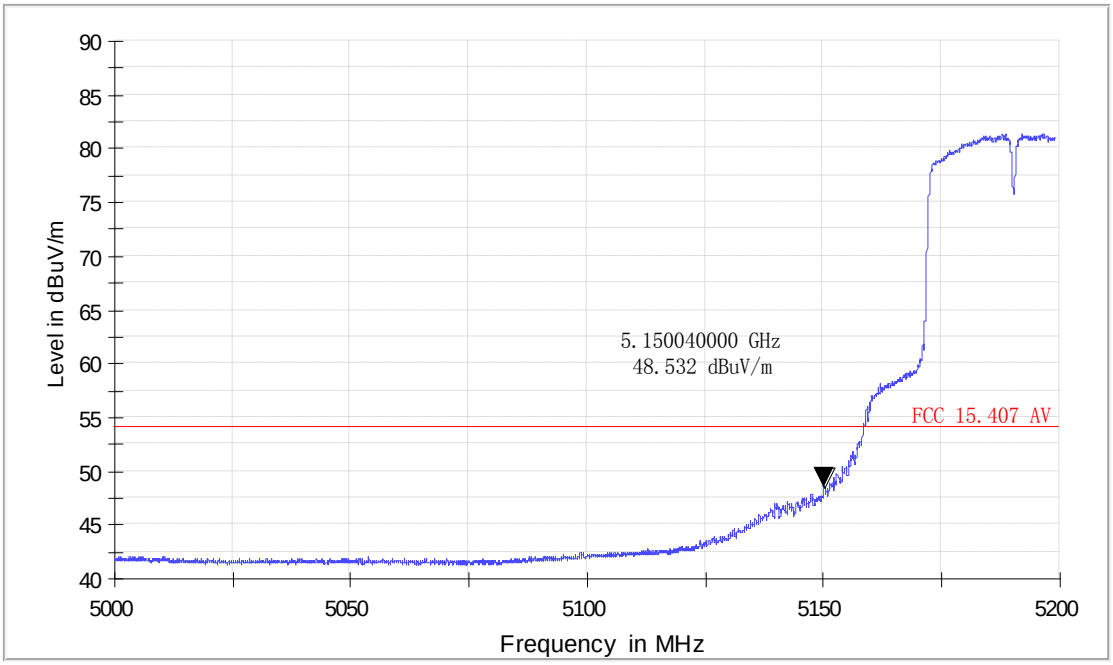
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT40 CH38
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Band edge

11a IN THE 5.3GHz BAND

CH64

Radiated Emission

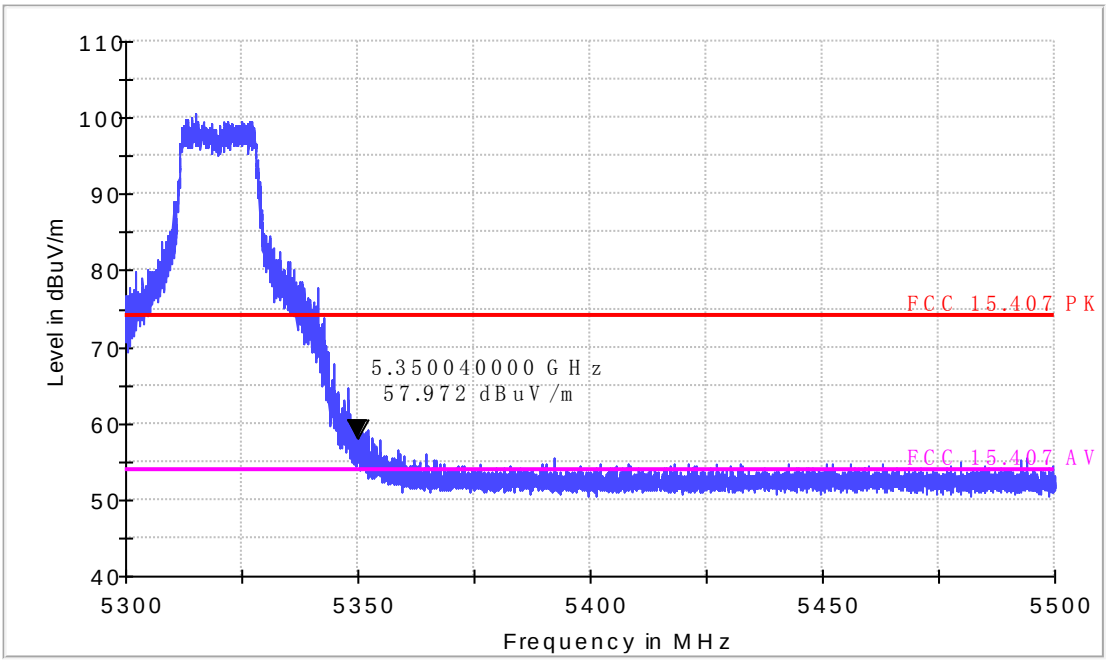
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

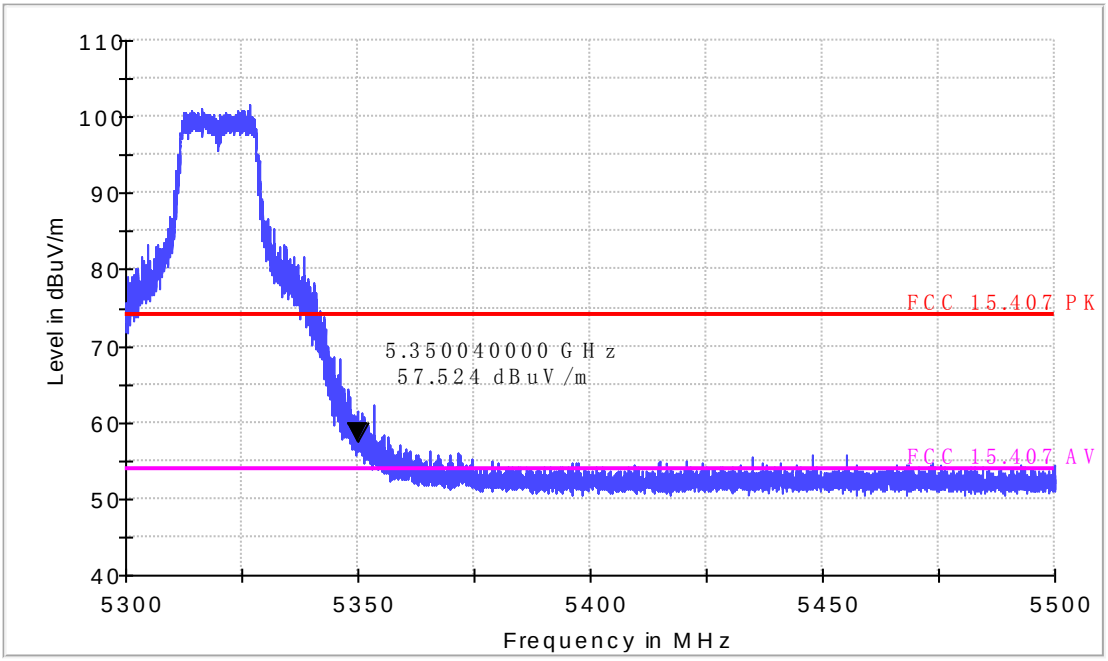
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

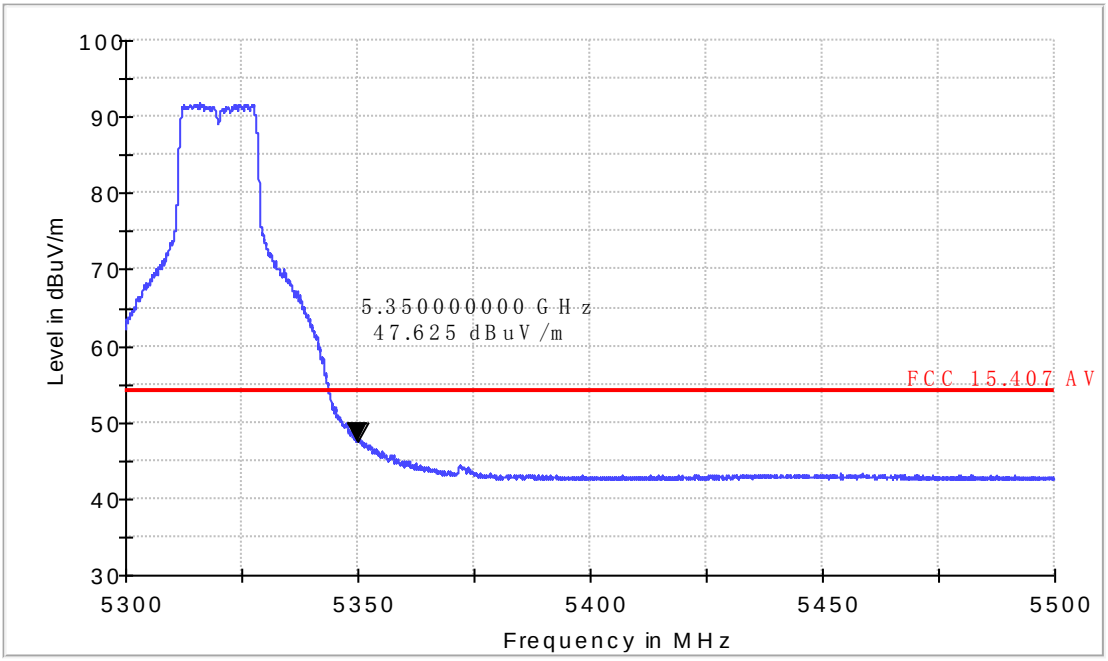
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Radiated Emission

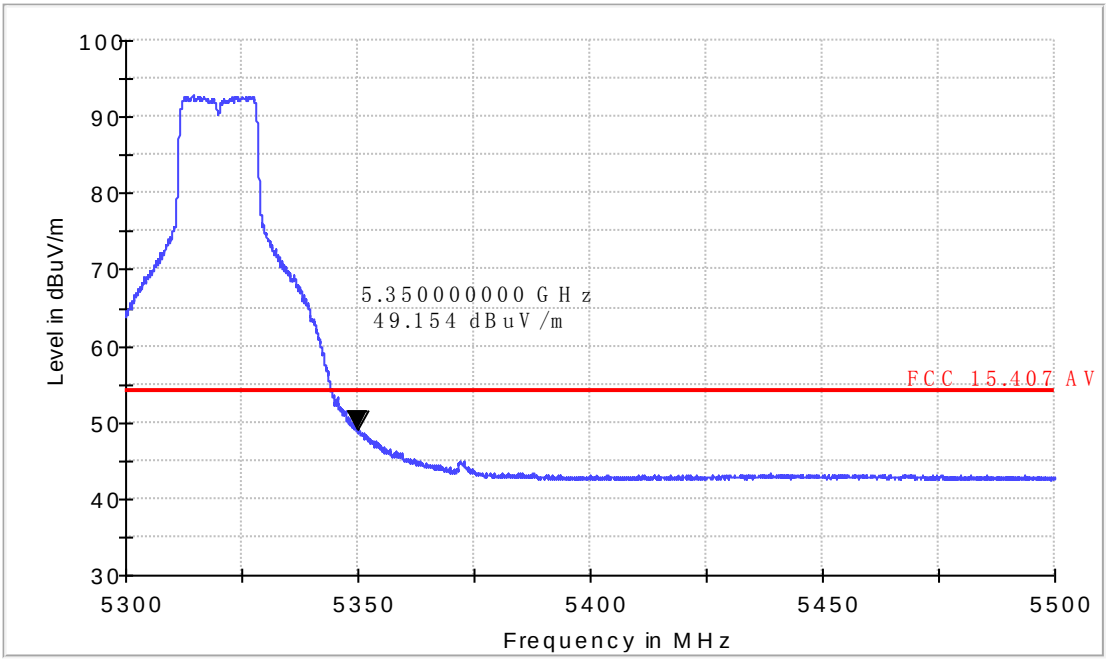
EUT Information

EUT Model Name:	U2
Operation mode:	11a CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV



Band edge

11n HT20 IN THE 5.3GHz BAND

CH64

Radiated Emission

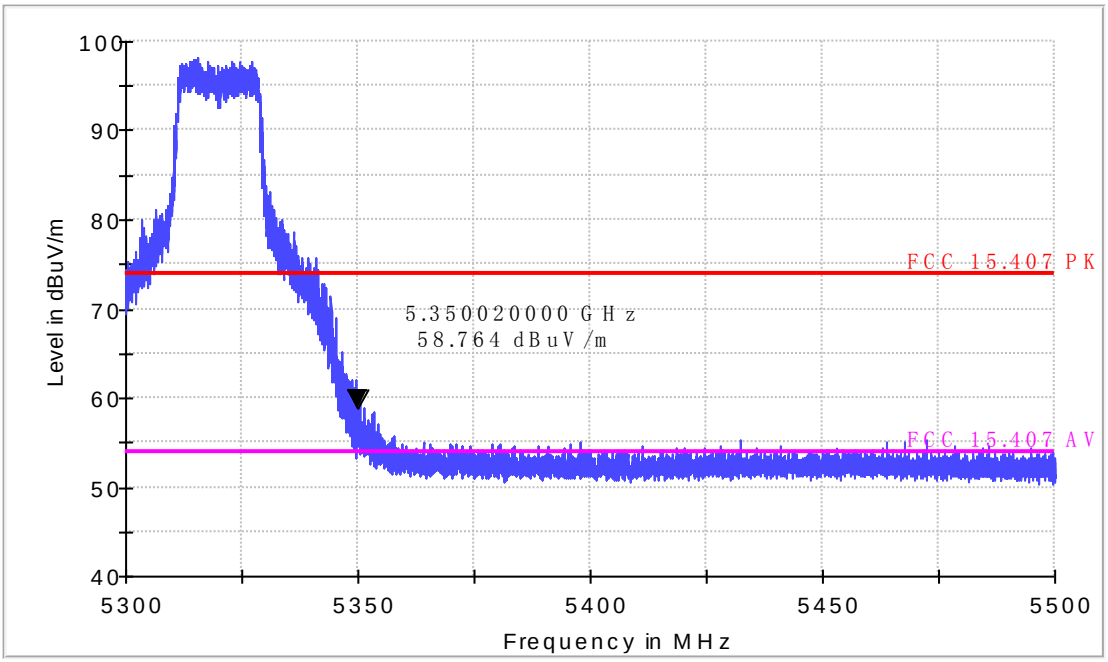
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

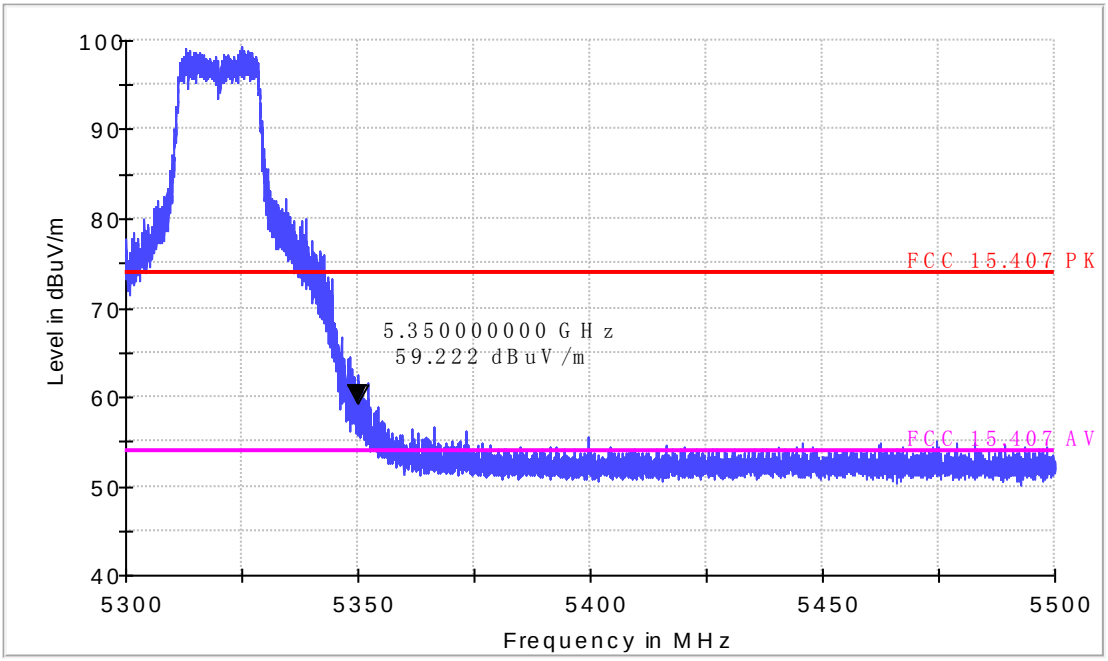
EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-PK



Radiated Emission

EUT Information

EUT Model Name:	U2
Operation mode:	11n HT20 CH64
Test Voltage:	
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment Conditions:	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	

FCC Electric Field Strength 1-18GHz operate on 5GHz Bandedge-AV