TEST REPORT

For

JOYA TOUCH A6

Model Number: JTAWB GUN, JTAWB HH

FCC ID: U4GJTAWB

IC: 3862E-JTAWB

Report Number : WT178004082

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

Applicant	:	Datalogic S.r.l.
Address	:	Via S. Vitalino 13, Calderara di Reno, Italy 40012
Manufacturer	:	Datalogic S.r.l.
Address	:	Via S. Vitalino 13, Calderara di Reno, Italy 40012
EUT Description	:	JOYA TOUCH A6
Model No(HVIN)	:	JTAWB GUN, JTAWB HH
Trade mark	:	/
PMN	:	JOYA TOUCH A6
FCC ID	:	U4GJTAWB
IC	:	3862E-JTAWB

Test Standards:

FCC Part 15.209, 15.247(2016)

RSS-247 Issue 2(2017-02)

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 15.209, 15.247 and IC Rules RSS-247 Issue 2(2017-02).

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:	Jul.12, 2017
	(Chen Silin 陈司林)		
Checked by:	林奕翔	Date:	Jul.12, 2017
	(Lin Yixiang 林奕翔)		
Approved by:	林斌	Date:	Jul.12, 2017
	(Lin Bin 林斌)		

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1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	IC Rules	Test Results
Maximum Conducted Power	FCC §15.407 (a)	RSS-247 Clause 6.2	Pass
Maximum Power Spectral Density Level	FCC §15.407 (a)	RSS-247 Clause 6.2	Pass
Radiated Bandedge and Spurious	15.407 (b) 15.209 15.205	RSS-247 Clause 6.2	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 are 446246 806614 994606(semi anechoic chamber).

The Laboratory is listed in Voluntary Control Council for Interference by Information Technology Equipment (VCCI), and the registration number are R-1974(open area test site) , R-1966(semi anechoic chamber),C-2117(mains ports conducted interference measurement) and T-180(telecommunication ports conducted interference measurement).

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.

2.3. Measurement Uncertainty

For a 95% confidence level (k = 2), the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 as following:

Conducted Emission

9kHz~30MHz 3.5dB

Radiated Emission

30MHz~1000MHz 4.5dB

1GHz~26.5GHz 4.6dB

3. PRODUCT DESCRIPTION

3.1. EUT Description

Description	:	JOYA TOUCH A6
Manufacturer	:	Datalogic S.r.l.
Model Number	:	JTAWB GUN, JTAWB HH
Operate Frequency	:	U-NII 1(5150~5250MHz) U-NII 2(5250~5350MHz) U-NII 3(5470~5725MHz) U-NII 4(5725~5850MHz)
Antenna Designation	:	5GHz band: JOYA TOUCH A6 Handheld variants: 4.62dBi JOYA TOUCH A6 Gun variants: 4.57dBi

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 2 (802.11a, 802.11n HT20)

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

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

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

Table 5 Working Frequency List U-NII 4 (802.11a, 802.11n HT20)

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

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **U4GJTAWB** and IC: **3862E-JTAWB** filing to comply with Section 15.209，15.407 of the FCC Part 15, Subpart E and RSS-247 Issue 2(2017-02) Rules.

3.3. 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
802.11a 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.

3.4. Directional Antenna Gain

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

3.5. Support Equipment List

Table 6 Support Equipment List

Name	Model No	S/N	Manufacturer
Notebook	Inspiron 14z - 5423	--	DELL

3.6. Test Conditions

Date of test：Jun.19,2017- Jul.11, 2017
Date of EUT Receive：Jun.19,2017
Temperature: 16-25 ℃
Relative Humidity:48-62%

3.7. Special Accessories

Not available for this EUT intended for grant.

3.8. Equipment Modifications

Not available for this EUT intended for grant.

3.9. Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Test Software Vesion	CTA-WIFI TEST TOOL												
Mode	Test Frequency(MHz)												
	5180	5200	5220	5240	5260	5300	5320	5500	5580	5700	5745	5785	5825
802.11a	12.50												
802.11n HT20	12.50												

Unit: dBm

4. TEST EQUIPMENT USED

Table 7 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB8501/09	EMI Test Receiver	Rohde & Schwarz	ESU40	Mar.21, 2017	1 Year
SB8501/04	Bilog Antenna	Schwarzbeck	VULB9163	Mar.21, 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
SB8501/15	Preamplifier	Rohde & Schwarz	SCU-03	Mar.06, 2017	1 Year
SB8501/17	Preamplifier	Rohde & Schwarz	SCU-18	Mar.06, 2017	1 Year
SB8501/16	Preamplifier	Rohde & Schwarz	SCU-26	Mar.06, 2017	1 Year
SB12827/01	Power Sensor	Rohde & Schwarz	NRP-Z22	Jun.19, 2017	1 Year
--	Test Software	Rohde & Schwarz	Power Viewer Plus	--	--
--	Test Software	Rohde & Schwarz	EMC 32	--	--
SB9721/02	Signal Analyzer	Agilent	N9020A	Dec.5,2016	1 Year

5. DUTY CYCLE

5.1. LIMITS OF DUTY CYCLE

None; for reporting purposes only

5.2. TEST PROCEDURE

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

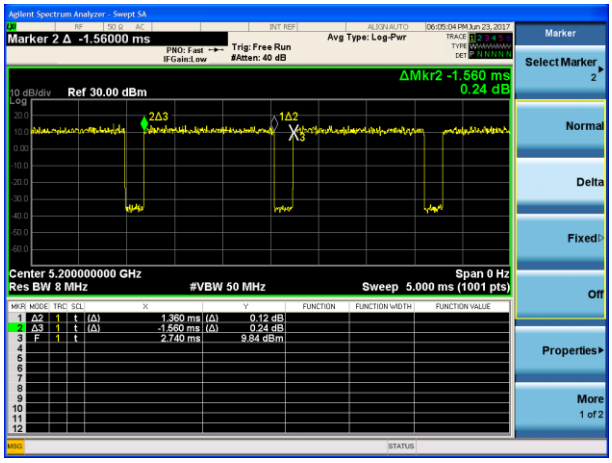
5.3. TEST SETUP

5.4. TEST DATA

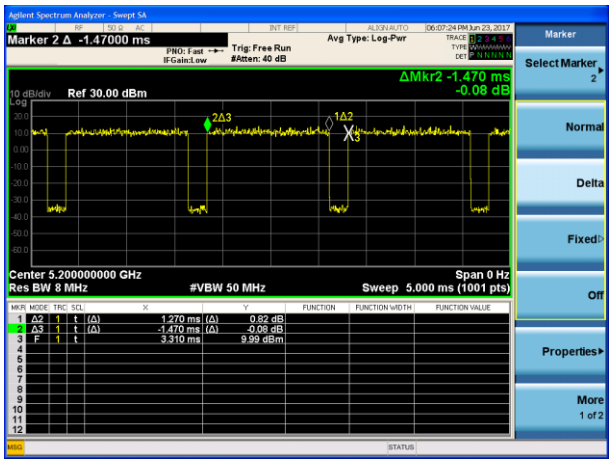
Table 8 Duty Cycle Test Data

Mode	On Time (ms)	Duty Cycle(%)	Duty Factor	1/T Minimum VBW (kHz)
802.11a	1.36	87.18	0.60	0.735
802.11n HT20	1.27	86.39	0.64	0.787

802.11a



802.11n HT20



6. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

6.1. 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 maximum 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

RSS-247 Clause 6.2
For the band 5.15–5.25 GHz.
The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log 10 B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz.

For the band 5.25–5.35 GHz.
The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz.

For the band 5.47–5.60 GHz and 5.65-5.725GHz.
The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz.

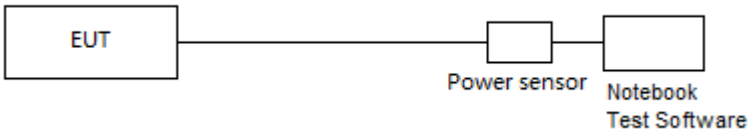
For the band 5.725-5.85 GHz, the maximum conducted output power shall not exceed 1 W.

6.2. 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.

6.3. TEST SETUP



6.4. TEST DATA

Maximum Conducted Output Powe(FCC)

Table 9 Maximum Conducted Output Power Test Data 802.11a

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Conducted Output Power(Average) [dBm]	Limit [dBm]	Result
5180	10.97	0.60	11.57	< 23.98	Pass
5200	10.77	0.60	11.37	< 23.98	Pass
5220	11.03	0.60	11.63	< 23.98	Pass
5240	10.93	0.60	11.53	< 23.98	Pass
5260	10.70	0.60	11.30	< 23.98 or < 11+10log(B)=25.77	Pass
5300	9.75	0.60	10.35	< 23.98 or < 11+10log(B)=25.77	Pass
5320	9.57	0.60	10.17	< 23.98 or < 11+10log(B)=25.77	Pass
5500	10.20	0.60	10.80	< 23.98 or < 11+10log(B)=25.72	Pass
5580	9.79	0.60	10.39	< 23.98 or < 11+10log(B)=25.72	Pass
5700	11.01	0.60	11.61	< 23.98 or < 11+10log(B)=25.77	Pass
5745	9.49	0.60	10.09	< 30	Pass
5785	9.49	0.60	10.09	< 30	Pass
5825	9.34	0.60	9.94	< 30	Pass

Table 10 Maximum Conducted Output Power Test Data 802.11n HT20

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Conducted Output Power(Average) [dBm]	Limit [dBm]	Result
5180	11.12	0.64	11.76	< 23.98	Pass
5200	10.88	0.64	11.52	< 23.98	Pass
5220	11.16	0.64	11.80	< 23.98	Pass
5240	10.96	0.64	11.60	< 23.98	Pass
5260	10.79	0.64	11.43	< 23.98 or < 11+10log(B)=25.77	Pass
5300	9.81	0.64	10.45	< 23.98 or < 11+10log(B)=25.75	Pass
5320	9.63	0.64	10.27	< 23.98 or < 11+10log(B)=25.77	Pass
5500	10.19	0.64	10.83	< 23.98 or < 11+10log(B)=25.77	Pass
5580	9.81	0.64	10.45	< 23.98 or < 11+10log(B)=25.72	Pass
5700	11.02	0.64	11.66	< 23.98 or < 11+10log(B)=25.76	Pass
5745	9.48	0.64	10.12	< 30	Pass
5785	9.51	0.64	10.15	< 30	Pass
5825	9.33	0.64	9.97	< 30	Pass

Maximum Conducted Output Powe(ISED)

Table 11 Maximum Conducted Output Power Test Data 802.11a

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Conducted Output Power(Average) [dBm]	Antenna Gain [dBm]	Maximum e.i.r.p [dBm]	Limit [dBm]	Result
5180	10.97	0.60	11.57	4.62	16.19	< 23 or < 10+10log(B)=22.210	Pass
5200	10.77	0.60	11.37	4.62	15.99	< 23 or < 10+10log(B)=22.260	Pass
5220	11.03	0.60	11.63	4.62	16.25	< 23 or < 10+10log(B)=22.260	Pass
5240	10.93	0.60	11.53	4.62	16.15	< 23 or < 10+10log(B)=22.210	Pass

Table 12 Maximum Conducted Output Power Test Data 802.11a

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Conducted Output Power(Average) [dBm]	Limit [dBm]	Result
5260	10.70	0.60	11.30	< 23.98 or < 11+10log(B)=23.29	Pass
5300	9.75	0.60	10.35	< 23.98 or < 11+10log(B)=23.22	Pass
5320	9.57	0.60	10.17	< 23.98 or < 11+10log(B)=23.21	Pass
5500	10.20	0.60	10.80	< 23.98 or < 11+10log(B)=23.17	Pass
5580	9.79	0.60	10.39	< 23.98 or < 11+10log(B)=23.17	Pass
5700	11.01	0.60	11.61	< 23.98 or < 11+10log(B)=23.21	Pass
5745	9.49	0.60	10.09	< 30	Pass
5785	9.49	0.60	10.09	< 30	Pass
5825	9.34	0.60	9.94	< 30	Pass

Table 13 Maximum Conducted Output Power Test Data 802.11n HT20

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Conducted Output Power(Average) [dBm]	Antenna Gain [dBm]	Maximum e.i.r.p [dBm]	Limit [dBm]	Result
5180	11.12	0.64	11.76	4.62	16.38	< 23 or < 10+10log(B)=22.520	Pass
5200	10.88	0.64	11.52	4.62	16.14	< 23 or < 10+10log(B)=22.190	Pass
5220	11.16	0.64	11.80	4.62	16.42	< 23 or < 10+10log(B)=22.190	Pass
5240	10.96	0.64	11.60	4.62	16.22	< 23 or < 10+10log(B)=22.510	Pass

Table 14 Maximum Conducted Output Power Test Data 802.11n HT20

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Conducted Output Power(Average) [dBm]	Limit [dBm]	Result
5260	10.79	0.64	11.43	< 23.98 or < 11+10log(B)=23.50	Pass
5300	9.81	0.64	10.45	< 23.98 or < 11+10log(B)=23.50	Pass
5320	9.63	0.64	10.27	< 23.98 or < 11+10log(B)=23.52	Pass
5500	10.19	0.64	10.83	< 23.98 or < 11+10log(B)=23.52	Pass
5580	9.81	0.64	10.45	< 23.98 or < 11+10log(B)=23.52	Pass
5700	11.02	0.64	11.66	< 23.98 or < 11+10log(B)=23.51	Pass
5745	9.48	0.64	10.12	< 30	Pass
5785	9.51	0.64	10.15	< 30	Pass
5825	9.33	0.64	9.97	< 30	Pass

Remark:

1. Measured output power at difference data rate for each mode and recorded worst case for each mode.
2. Test results including cable loss;
3. Worst case data at 6Mbps at IEEE 802.11a; MCS0 at IEEE 802.11n HT20。
4. 26B Bandwidth and 99% Bandwidth related Limits cited from test report for the Modular:
   FCC ID:UDV-20170406 IC:8460A-20170406
   Report No.:ER/2017/50038

7. MAXIMUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT

7.1. 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.

RSS-247 Clause 6.2
For the band 5.15-5.25 GHz the e.i.r.p. spectral density shall not exceed 10 dBm in any1.0 MHz band

For the band 5.47–5.60 GHz and 5.65-5.725GHz.The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For the band 5.725-5.85 GHz the power spectral density shall not exceed 30 dBm in any 500 kHz band.

7.2. 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.

7.3. TEST DATA

Remark:
1. Measured power spectrum density at difference data rate for each mode and recorded worst case for each mode.
2. Test results including cable loss;
3. Worst case data at 6Mbps at IEEE 802.11a; MCS0 at IEEE 802.11n HT20。

Table 15 Maximum Power Spectral Density Level Test Data 802.11a

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Power Spectral Density [dBm]	FCC Limit [dBm]	Result
5180	-3.989	0.60	-3.389	11	Pass
5200	-3.977	0.60	-3.377	11	Pass
5220	-4.262	0.60	-3.662	11	Pass
5240	-4.310	0.60	-3.710	11	Pass

Table 16 Maximum Power Spectral Density Level Test Data 802.11a

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Power Spectral Density [dBm]	Antenna Gain [dBi]	Maximum e.i.r.p [dBm]	ISED Limit [dBm]	Result
5180	-3.989	0.60	-3.389	4.62	1.231	10	Pass
5200	-3.977	0.60	-3.377	4.62	1.243	10	Pass
5220	-4.262	0.60	-3.662	4.62	0.958	10	Pass
5240	-4.310	0.60	-3.710	4.62	0.910	10	Pass

Table 17 Maximum Power Spectral Density Level Test Data 802.11a

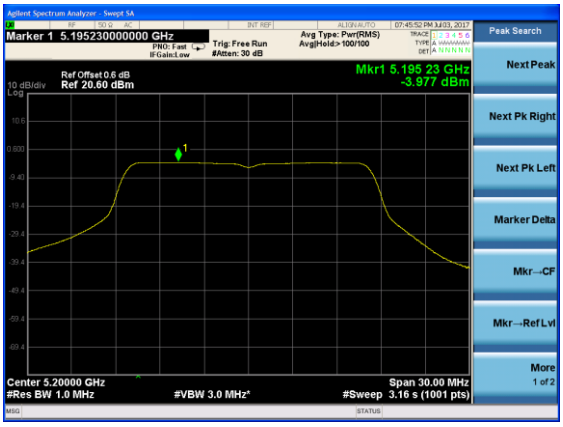
Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Power Spectral Density [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	Result
5260	-4.459	0.60	-3.859	11	11	Pass
5300	-5.274	0.60	-4.674	11	11	Pass
5320	-5.804	0.60	-5.204	11	11	Pass
5500	-6.881	0.60	-6.281	11	11	Pass
5580	-6.982	0.60	-6.382	11	11	Pass
5700	-4.772	0.60	-4.172	11	11	Pass

Table 18 Maximum Power Spectral Density Level Test Data 802.11a

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	RBW Factor	Maximum Power Spectral Density [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	Result
5745	-5.889	0.60	-3.01	-8.299	30	30	Pass
5785	-6.901	0.60	-3.01	-9.311	30	30	Pass
5825	-6.117	0.60	-3.01	-8.527	30	30	Pass

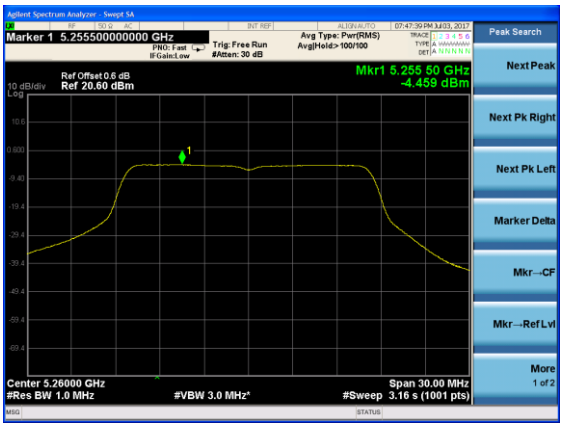
Remark: RBW Factor =10*log (500/RBW)

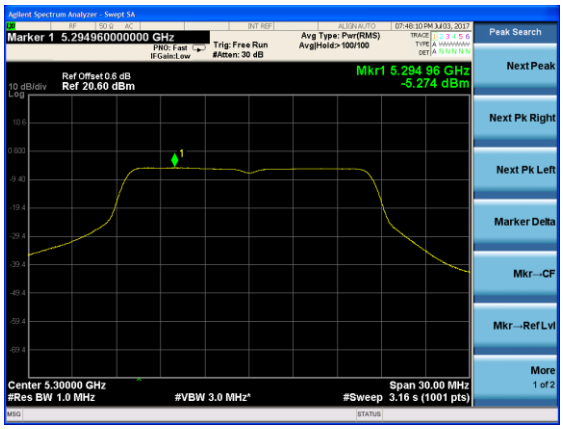
Agilent Spectrum Analyzer - Swept SA
Marker 1 5.174420000000 GHz
Mkr1 5.174 42 GHz
-3.989 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

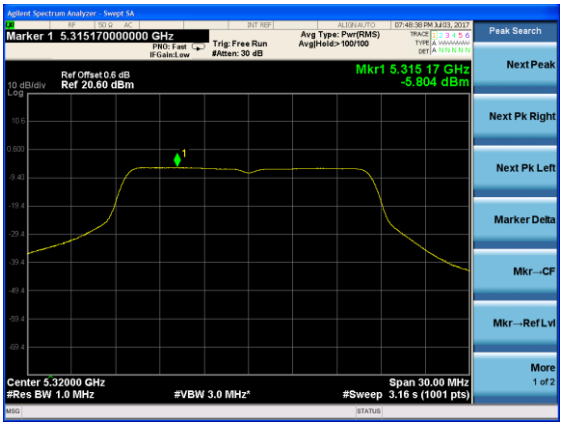

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.195230000000 GHz
Mkr1 5.195 23 GHz
-3.977 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.20000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

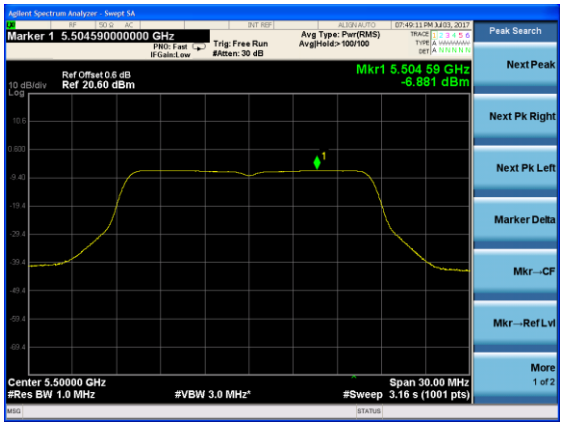
Agilent Spectrum Analyzer - Swept SA
Marker 1 5.214570000000 GHz
Mkr1 5.214 57 GHz
-4.262 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.22000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

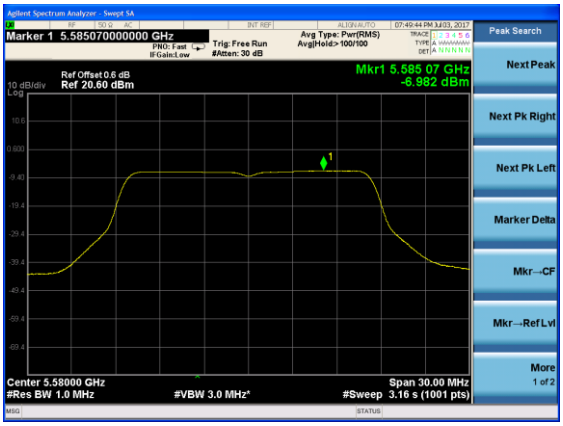
Agilent Spectrum Analyzer - Swept SA
Marker 1 5.234660000000 GHz
Mkr1 5.234 66 GHz
-4.310 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.24000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

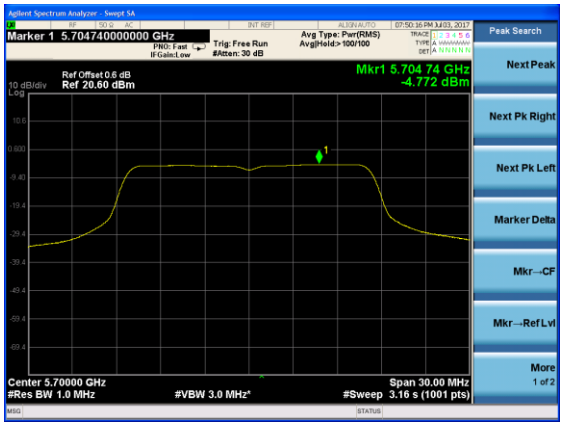

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.255500000000 GHz
Mkr1 5.255 50 GHz
-4.459 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.26000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

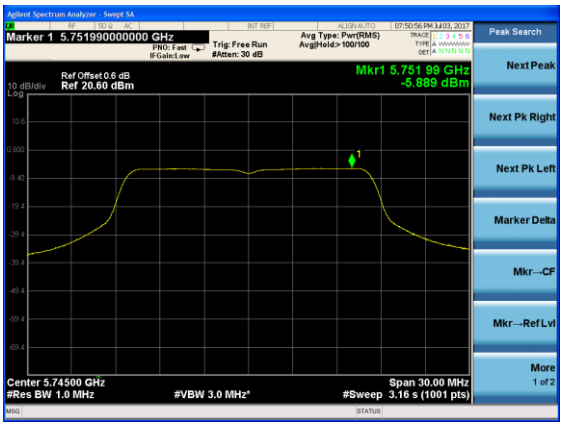

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.294960000000 GHz
Mkr1 5.294 96 GHz
-5.274 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.30000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

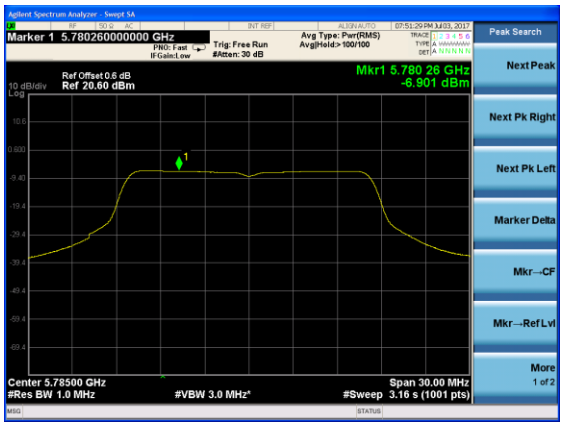

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.315170000000 GHz
Mkr1 5.315 17 GHz
-5.804 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.32000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.504590000000 GHz
Mkr1 5.504 59 GHz
-6.881 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.50000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.585070000000 GHz
Mkr1 5.585 07 GHz
-6.982 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.58000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.704740000000 GHz
Mkr1 5.704 74 GHz
-4.772 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.70000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.751990000000 GHz
Mkr1 5.751 99 GHz
-5.889 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.74500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.780260000000 GHz
Mkr1 5.780 26 GHz
-6.901 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.78500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

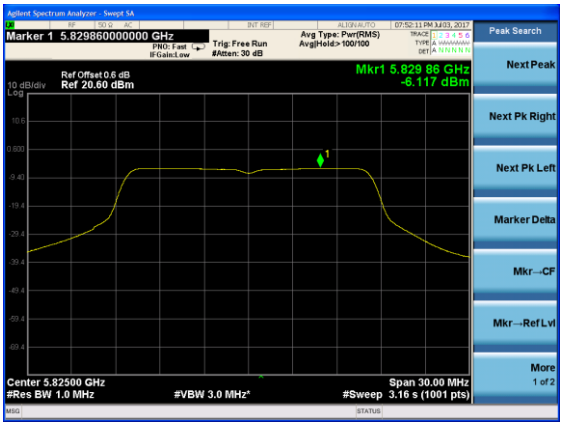

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.829860000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold:>100/100
07:52:11 PM Jul 03, 2017
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
Ref Offset 0.6 dB
10 dB/div
Log
Ref 20.60 dBm
Mkr1 5.829 86 GHz
-6.117 dBm
Center 5.82500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)

Table 19 Maximum Power Spectral Density Level Test Data 802.11n HT20

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Power Spectral Density [dBm]	FCC Limit [dBm]	Result
5180	-3.932	0.64	-3.292	11	Pass
5200	-4.222	0.64	-3.582	11	Pass
5220	-4.408	0.64	-3.768	11	Pass
5240	-4.580	0.64	-3.940	11	Pass

Table 20 Maximum Power Spectral Density Level Test Data 802.11n HT20

Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Power Spectral Density [dBm]	Antenna Gain [dBi]	Maximum e.i.r.p [dBm]	ISED Limit [dBm]	Result
5180	-3.932	0.64	-3.292	4.62	1.328	10	Pass
5200	-4.222	0.64	-3.582	4.62	1.038	10	Pass
5220	-4.408	0.64	-3.768	4.62	0.852	10	Pass
5240	-4.580	0.64	-3.940	4.62	0.680	10	Pass

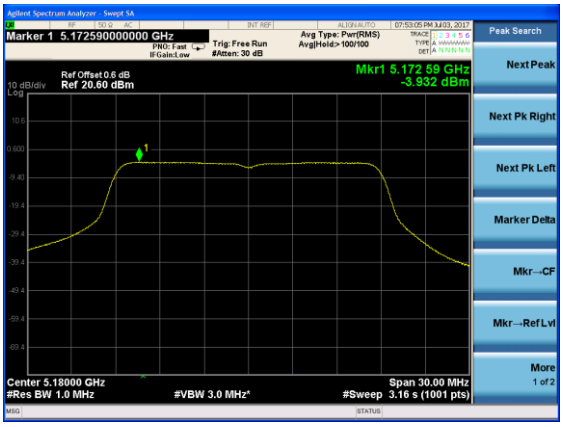
Table 21 Maximum Power Spectral Density Level Test Data 802.11n HT20

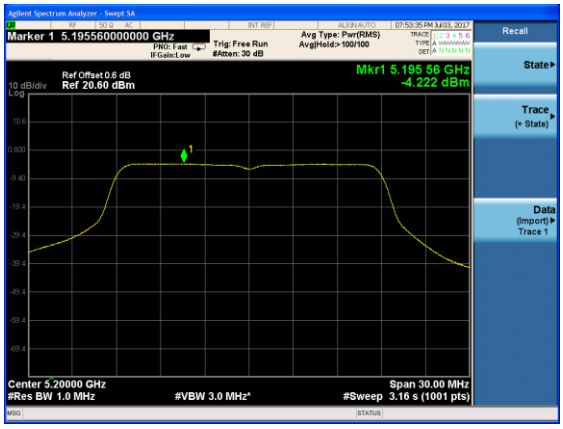
Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	Maximum Power Spectral Density [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	Result
5260	-4.637	0.64	-3.997	11	11	Pass
5300	-5.395	0.64	-4.755	11	11	Pass
5320	-5.899	0.64	-5.259	11	11	Pass
5500	-7.002	0.64	-6.362	11	11	Pass
5580	-7.334	0.64	-6.694	11	11	Pass
5700	-4.952	0.64	-4.312	11	11	Pass

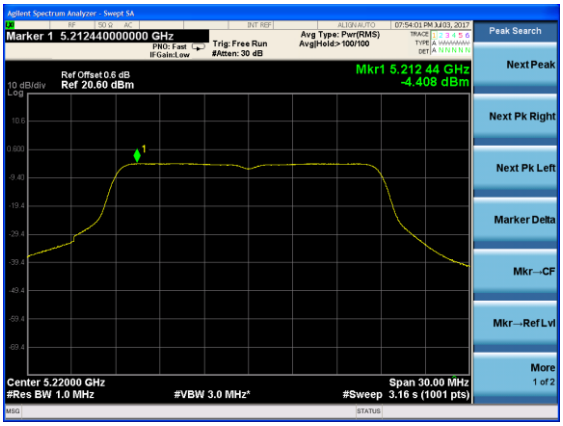
Table 22 Maximum Power Spectral Density Level Test Data 802.11n HT20

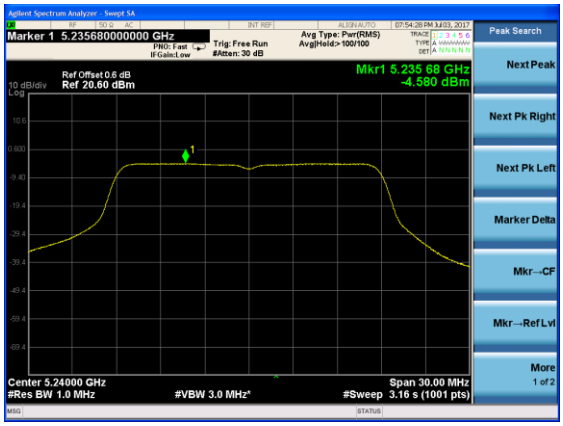
Center Freq.[MHz]	Meas. Level (Cond.) [dBm]	Duty Factor	RBW Factor	Maximum Power Spectral Density [dBm]	FCC Limit [dBm]	ISED Limit [dBm]	Result
5745	-6.312	0.64	-3.01	-8.682	30	30	Pass
5785	-7.295	0.64	-3.01	-9.665	30	30	Pass
5825	-5.861	0.64	-3.01	-8.231	30	30	Pass

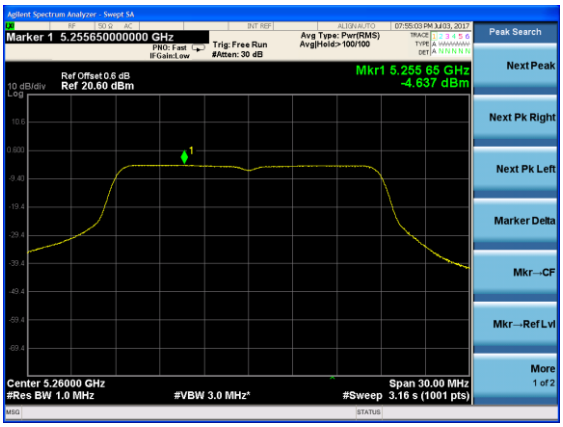
Remark: RBW Factor =10*log (500/RBW)

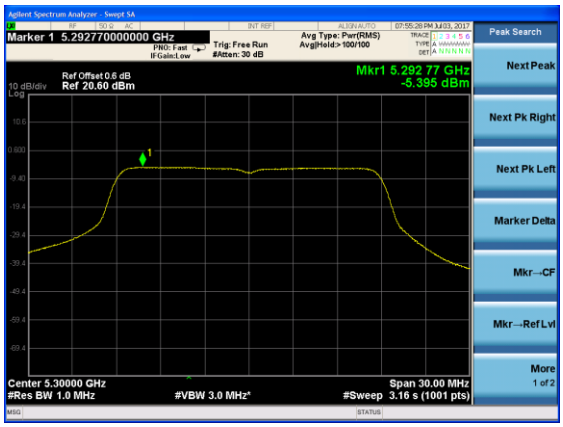

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.172590000000 GHz
Mkr1 5.172 59 GHz
-3.932 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

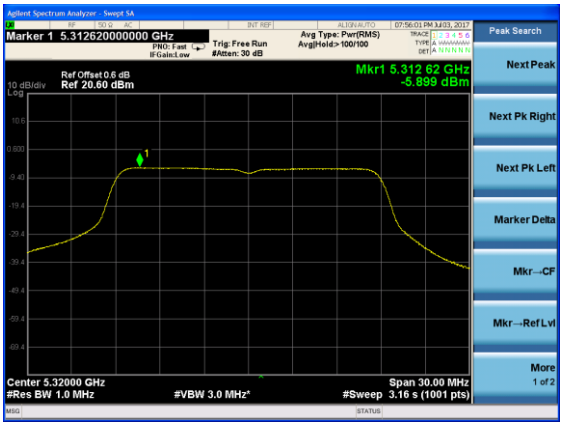

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.195560000000 GHz
Mkr1 5.195 56 GHz
-4.222 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.20000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Recall
State
Trace
(+ State)
Data
(Import)
Trace 1

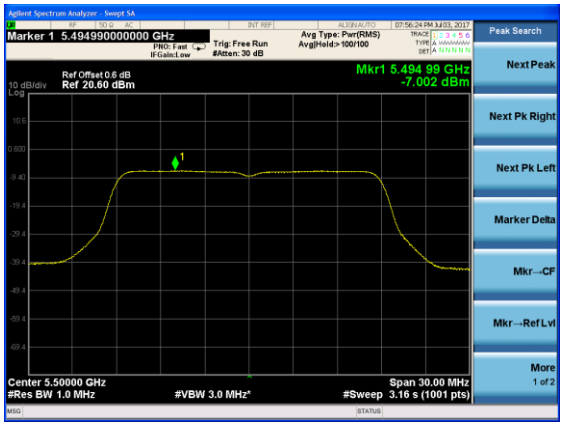

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.212440000000 GHz
Mkr1 5.212 44 GHz
-4.408 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.22000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

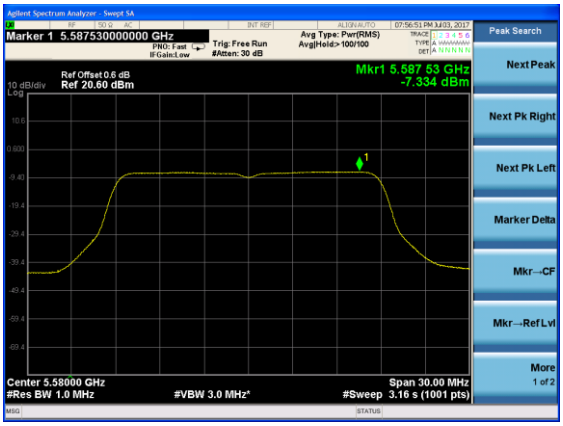

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.235680000000 GHz
Mkr1 5.235 68 GHz
-4.580 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.24000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

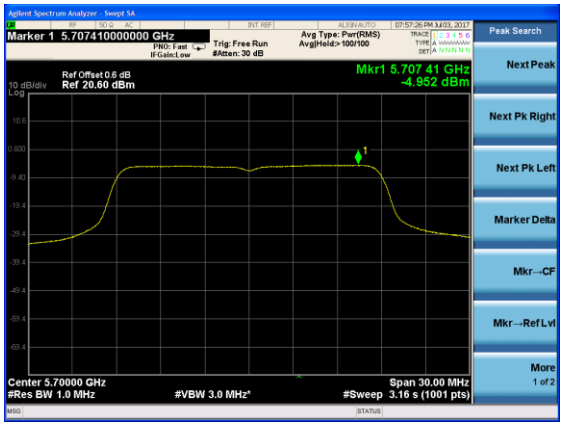

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.255650000000 GHz
Mkr1 5.255 65 GHz
-4.637 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.26000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

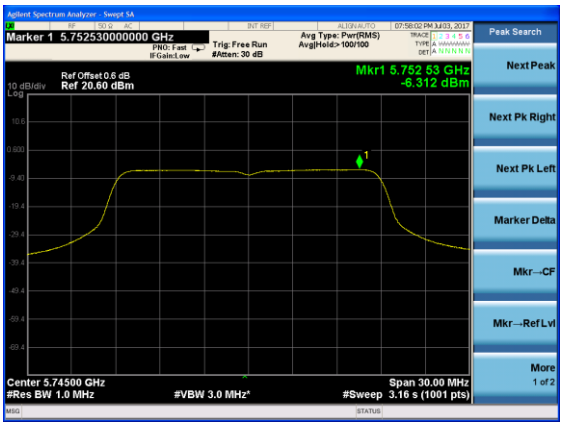

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.292770000000 GHz
Mkr1 5.292 77 GHz
-5.395 dBm
Ref Offset 0.6 dB
10 dB/div Ref 20.60 dBm
Center 5.30000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

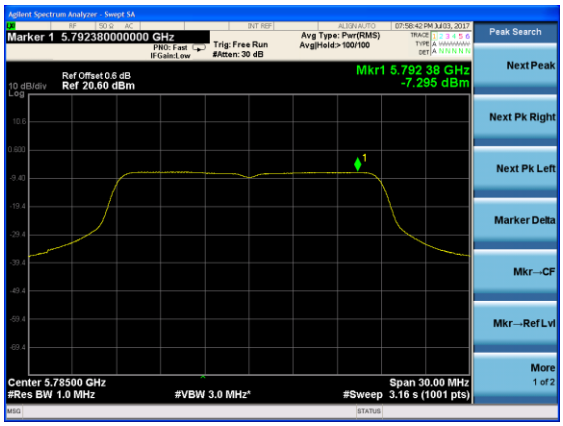

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.312620000000 GHz
Mkr1 5.312 62 GHz
-5.899 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.32000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

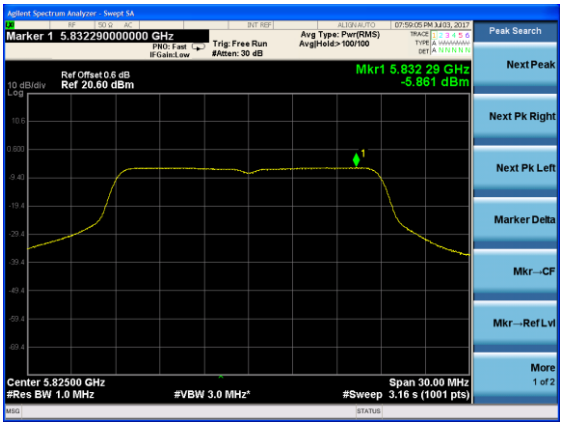

Agilent Spectrum Analyzer - Swept SA
Marker 1 5.494990000000 GHz
Mkr1 5.494 99 GHz
-7.002 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.50000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.587530000000 GHz
Mkr1 5.587 53 GHz
-7.334 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.58000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.707410000000 GHz
Mkr1 5.707 41 GHz
-4.952 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.70000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.752530000000 GHz
Mkr1 5.752 53 GHz
-6.312 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.74500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.792380000000 GHz
Mkr1 5.792 38 GHz
-7.295 dBm
Ref Offset 0.6 dB
Ref 20.60 dBm
Center 5.78500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
Marker 1 5.832290000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold:>100/100
07:59:05 PM Jul 03, 2017
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
Ref Offset 0.6 dB
10 dB/div
Ref 20.60 dBm
Log
Mkr1 5.832 29 GHz
-5.861 dBm
Center 5.82500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 30.00 MHz
#Sweep 3.16 s (1001 pts)

8. RADIATED BANDEDGE AND SPURIOUS MEASUREMENT

8.1. 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) and RSS-247 Clause 6.2

For transmitters operating in the 5.15-5.35 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 within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

8.2. TEST PROCEDURE

1) Sequence of testing 9 kHz to 30 MHz

Setup:
--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
--- If the EUT is a floor standing device, it is placed on the ground.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 3 meter.
--- The EUT was set into operation.

Premeasurement:
--- The turntable rotates from 0° to 315° using 45° steps.
--- The antenna height is 0.8 meter.
--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:
--- Identified emissions during the premeasurement the software maximizes by

rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).
--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:
--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 3 meter.
--- The EUT was set into operation.

Premeasurement:
--- The turntable rotates from 0° to 315° using 45° steps.
--- The antenna is polarized vertical and horizontal.
--- The antenna height changes from 1 to 3 meter.
--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:
--- The final measurement will be performed with minimum the six highest peaks.
--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.
--- The final measurement will be done with QP detector with an EMI receiver.
--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:
--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
--- If the EUT is a floor standing device, it is placed on the ground plane with

insulation between both.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 3 meter.
--- The EUT was set into operation.

Premeasurement:
--- The turntable rotates from 0° to 315° using 45° steps.
--- The antenna is polarized vertical and horizontal.
--- The antenna height scan range is 1 meter to 2.5 meter.
--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:
--- The final measurement will be performed with minimum the six highest peaks.
--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.
--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz

Setup:
--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 1 meter.
--- The EUT was set into operation.

Premeasurement:
--- The antenna is moved spherical over the EUT in different polarizations of the antenna.

Final measurement:
--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

8.3.TEST DATA

9KHz-30MHz

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

Table 23 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

Pre-scan all mode and recorded the worst case results in this report (802.11a(Channel 36).

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

Table 24 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)
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

Test Plot- for Handheld variants

(Complete full test)

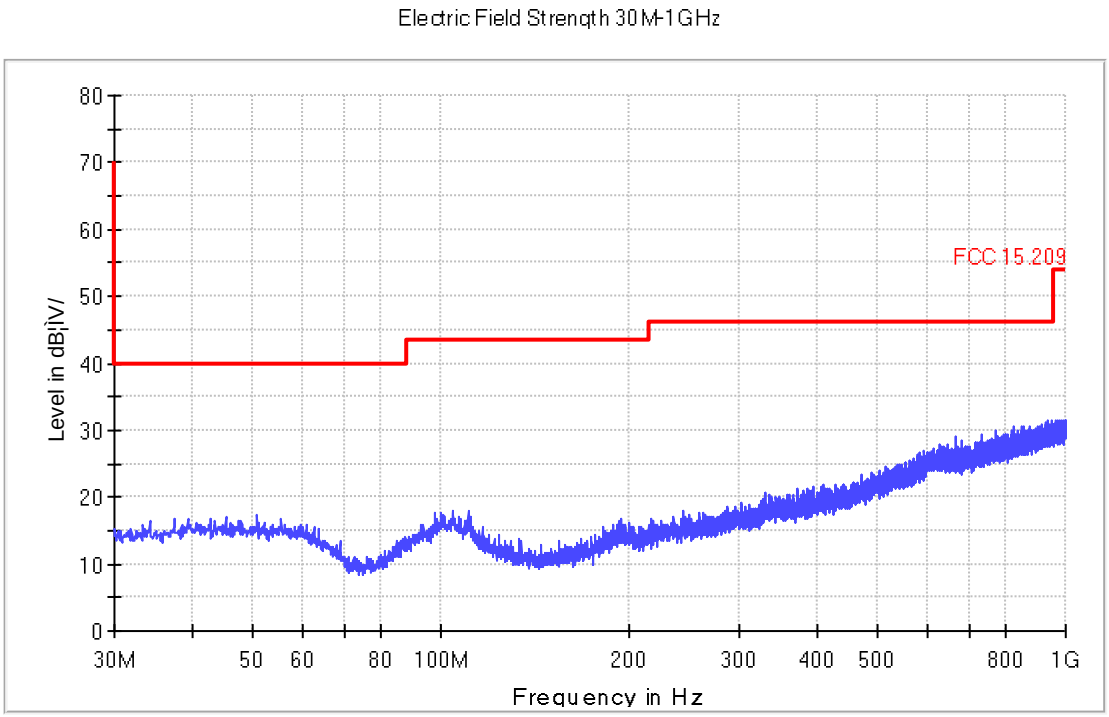
Radiated Emission

EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	Transmitting
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26



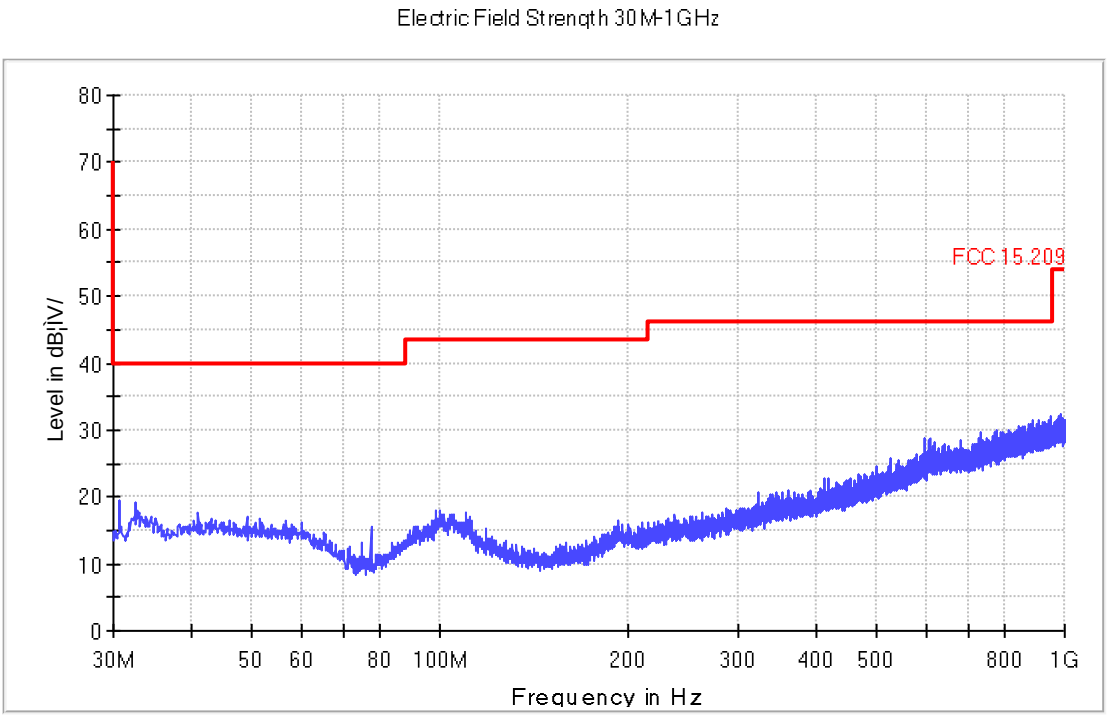
Radiated Emission

EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	Transmitting
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26



1-18G

11a IN THE 5.2GHz BAND

Ch36

Radiated Emission

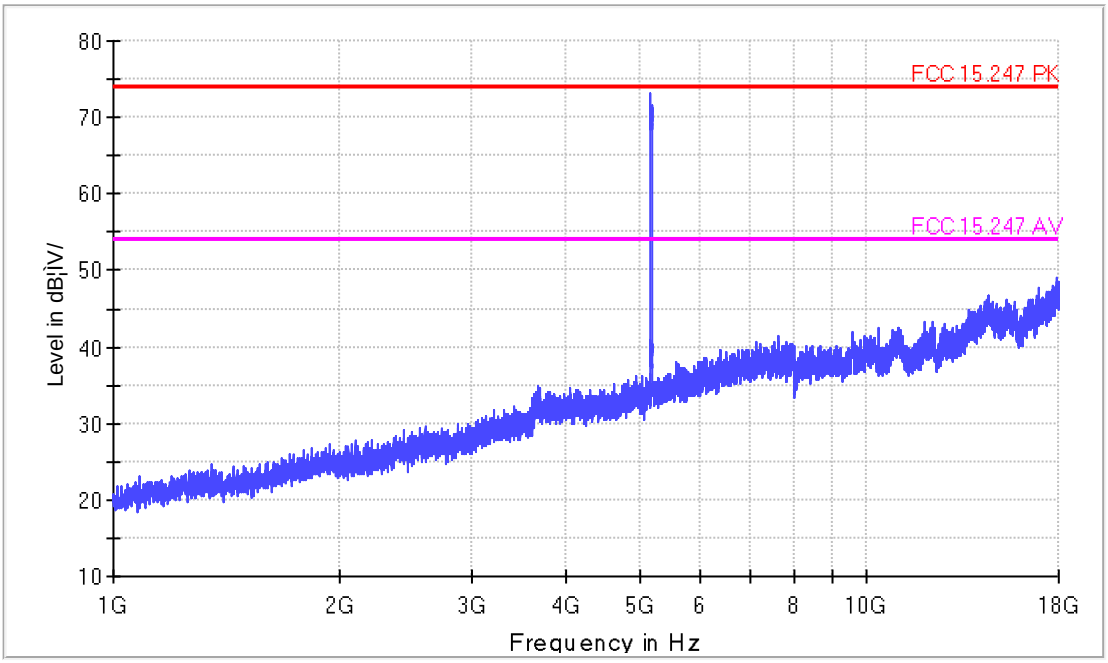
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH36
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

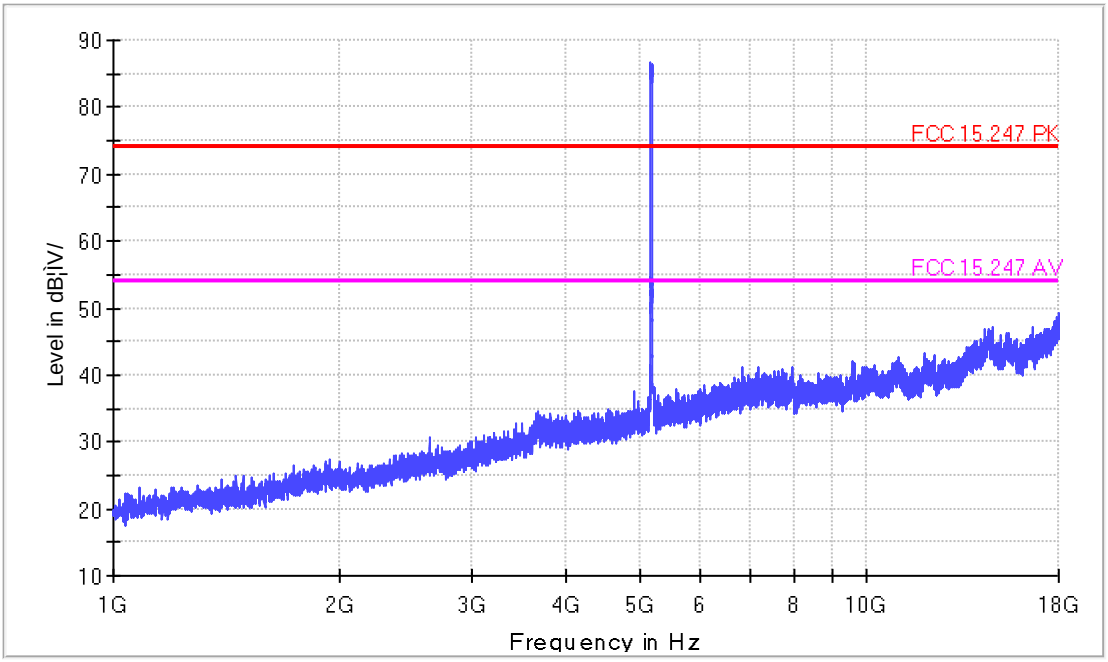
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH36
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11a IN THE 5.2GHz BAND

CH40

Radiated Emission

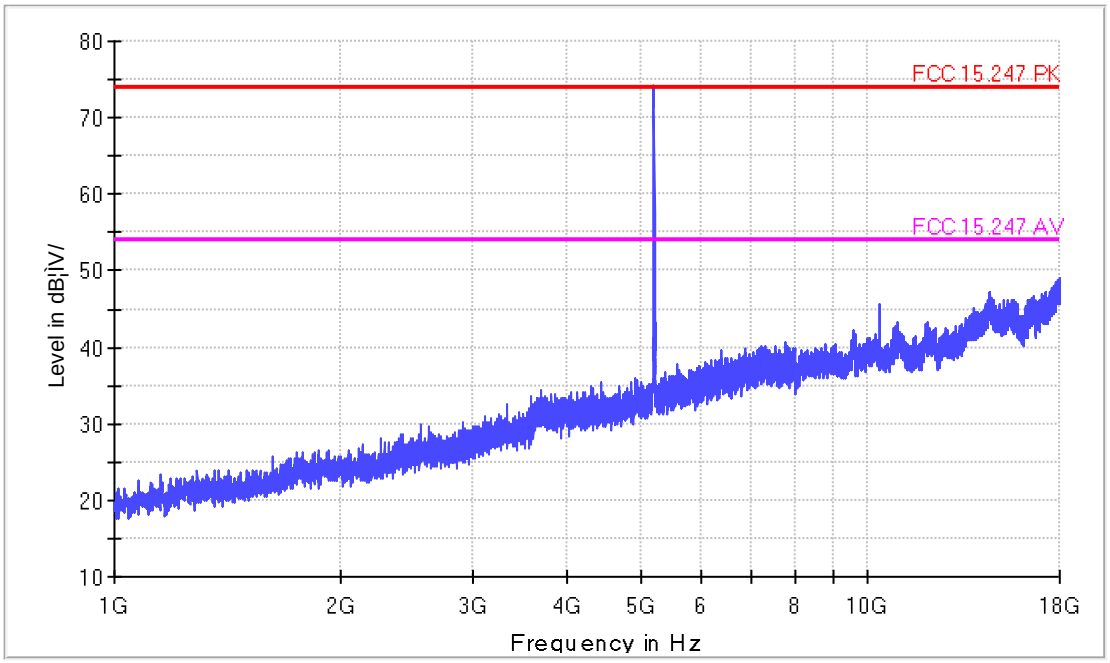
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH40
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

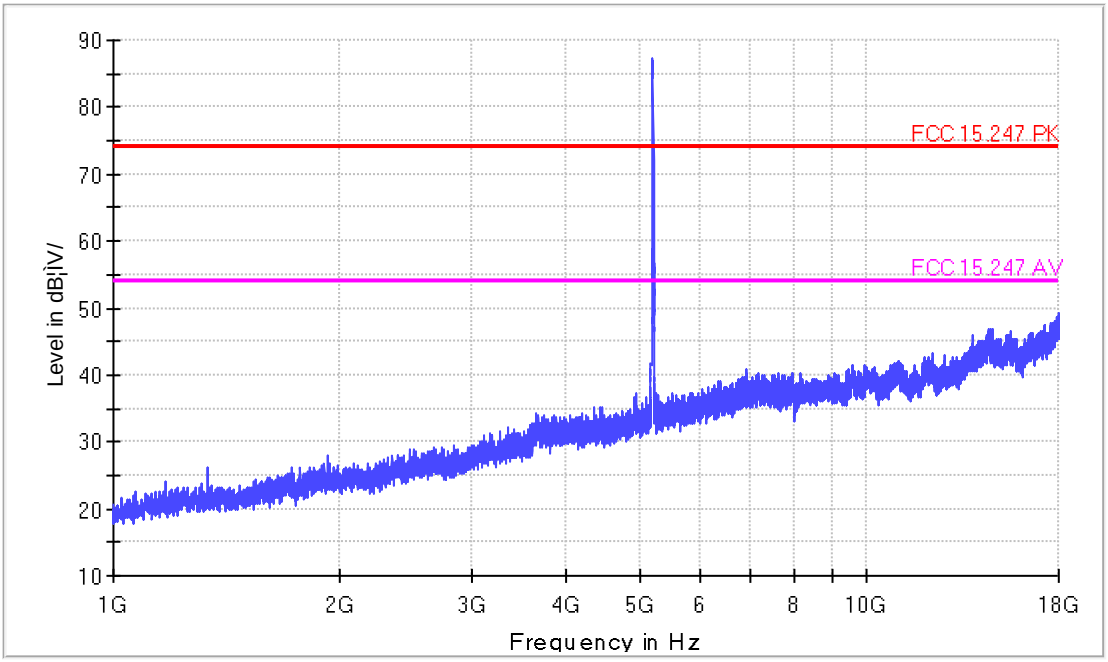
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH40
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11a IN THE 5.2GHz BAND

CH48

Radiated Emission

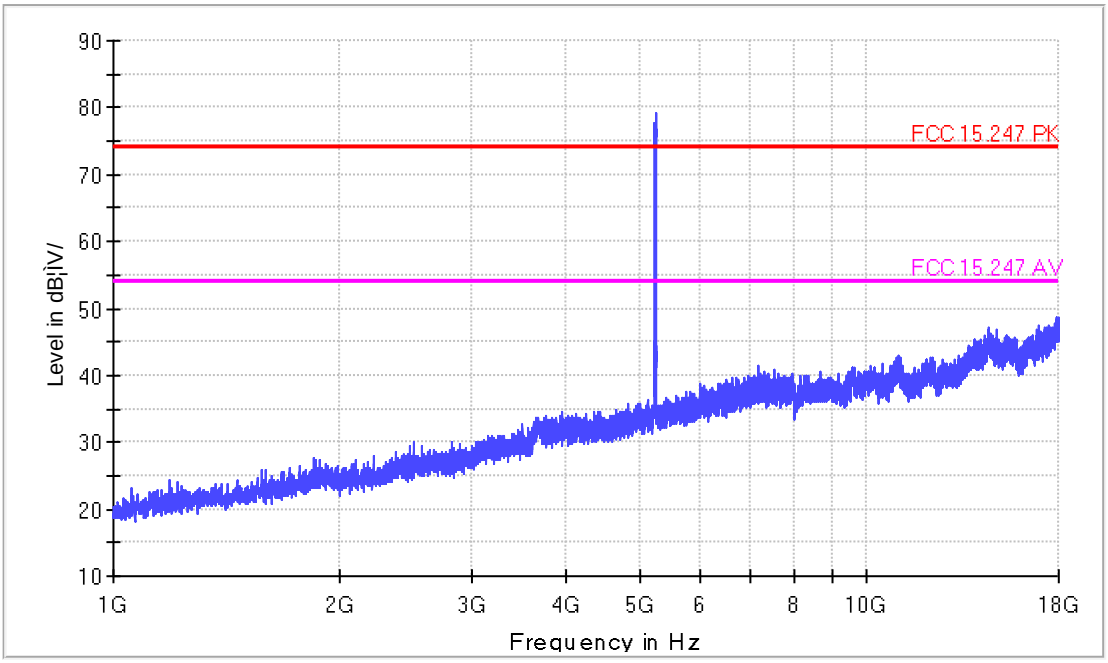
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH48
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

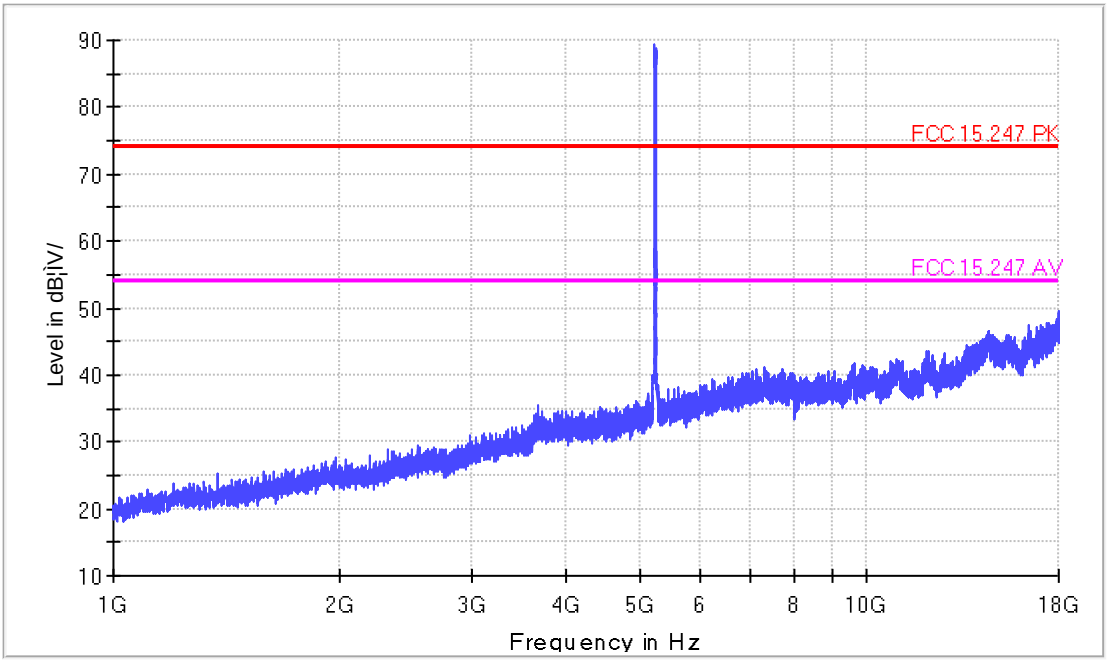
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH48
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11n HT20 IN THE 5.2GHz BAND

CH36

Radiated Emission

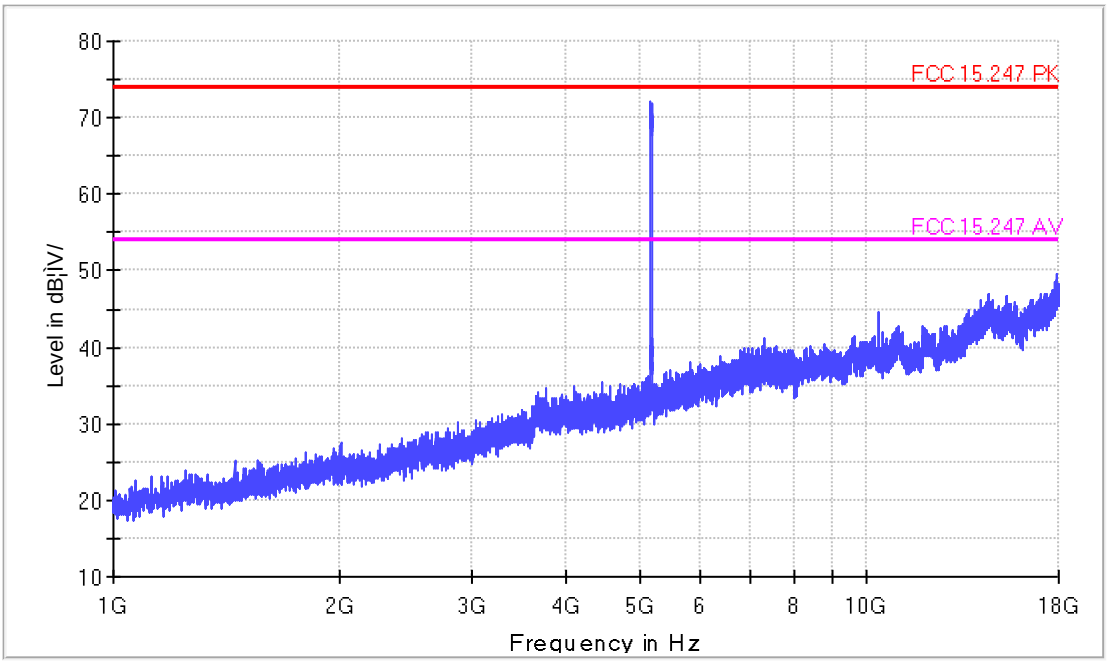
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11n HT20 CH36
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

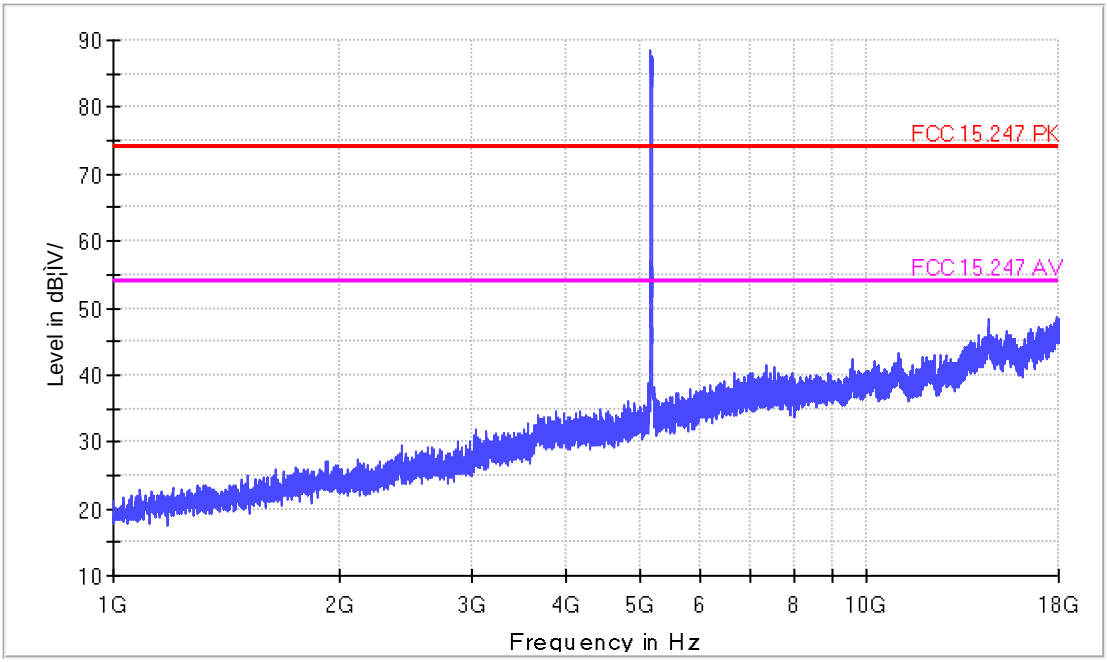
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11n HT20 CH36
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11n HT20 IN THE 5.2GHz BAND

CH40

Radiated Emission

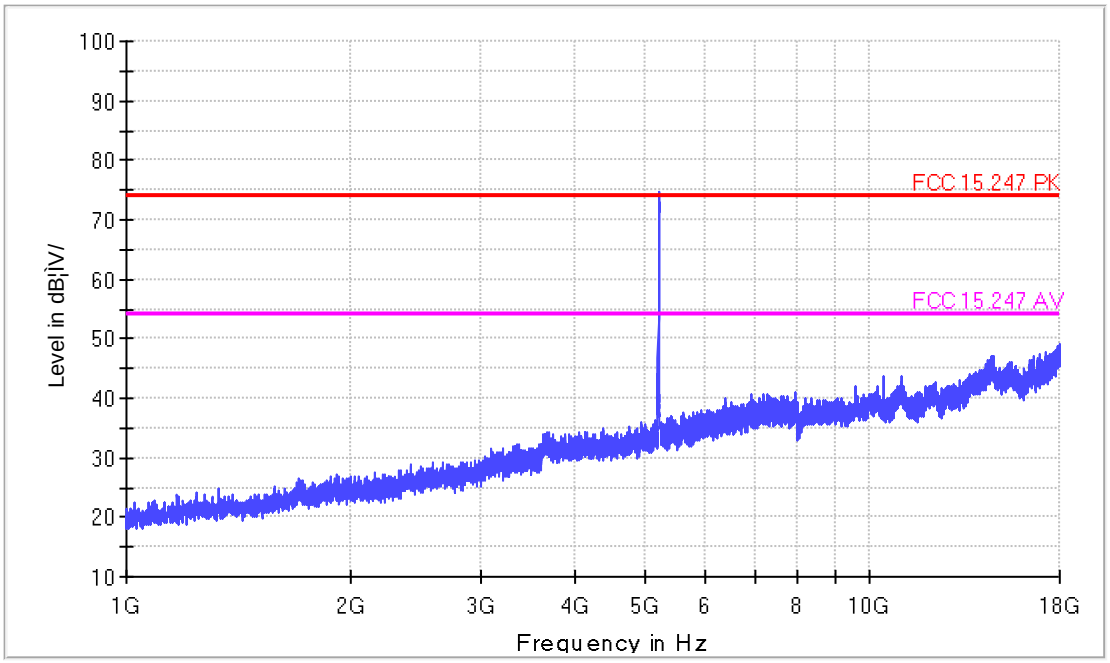
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11n HT20 CH40
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

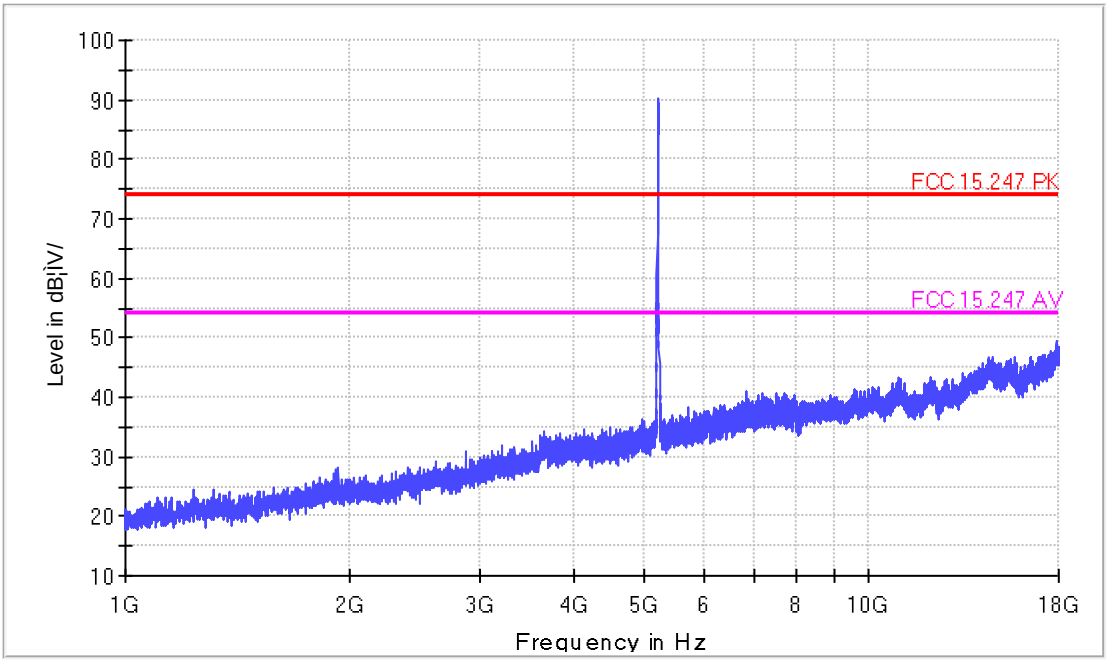
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11n HT20 CH40
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11n HT20 IN THE 5.2GHz BAND

CH48

Radiated Emission

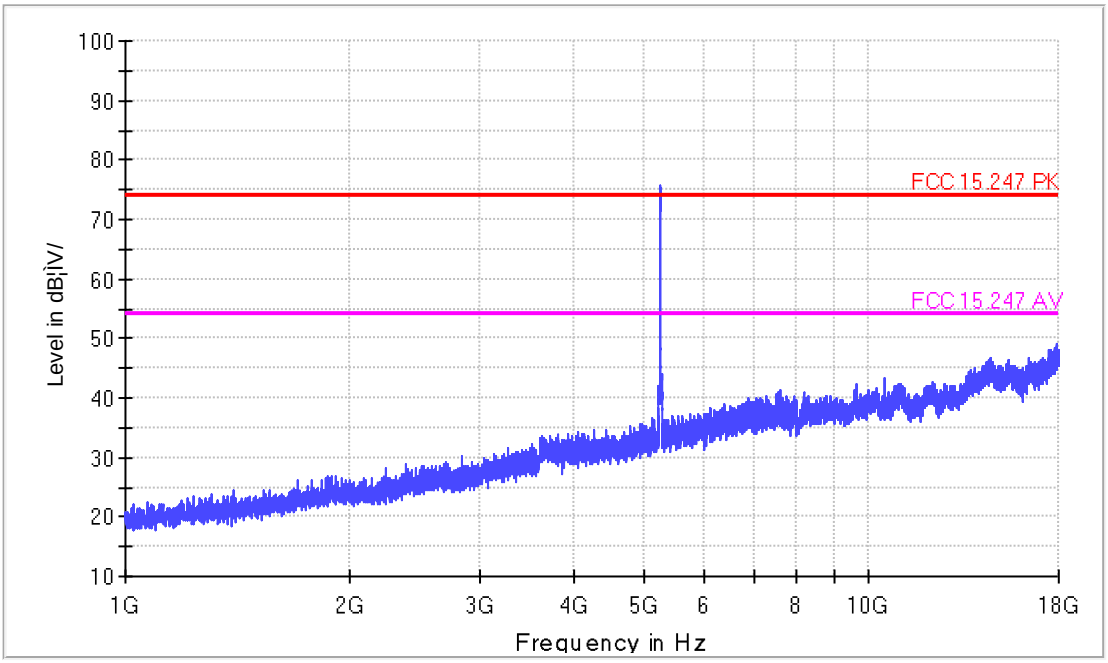
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11n HT20 CH48
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

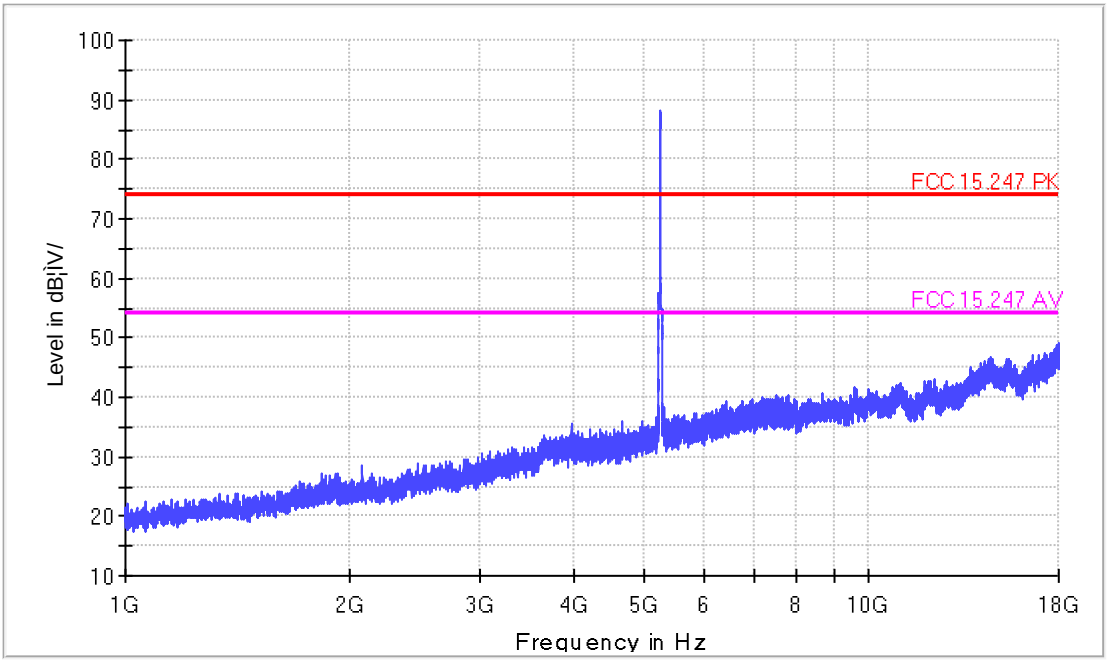
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11n HT20 CH48
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11a IN THE 5.3GHz BAND

Ch52

Radiated Emission

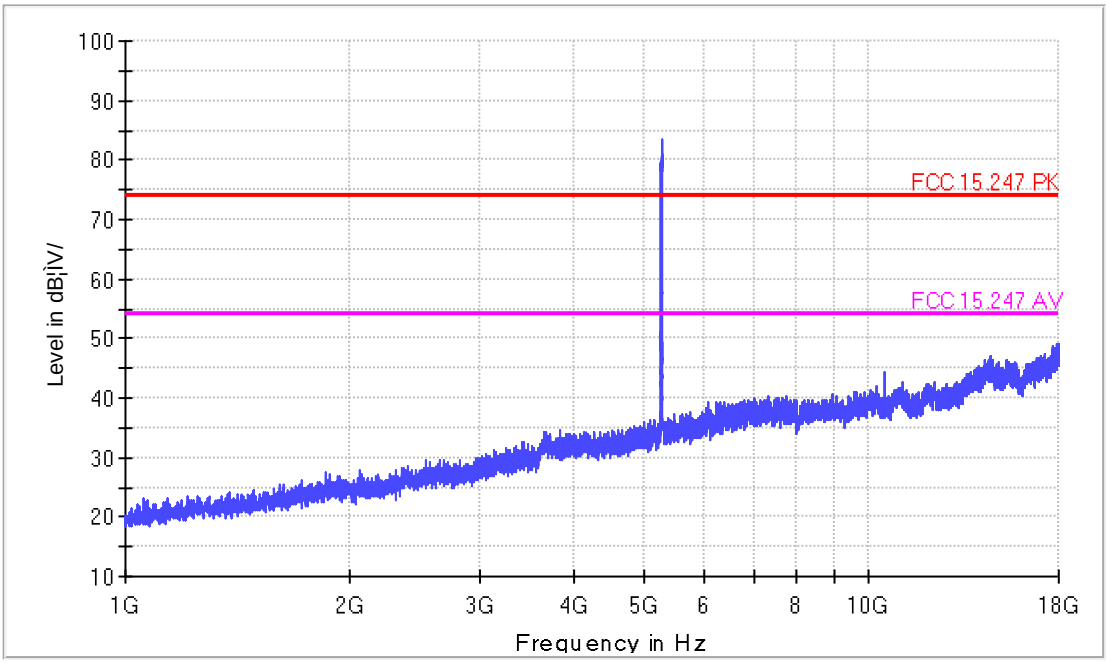
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH52
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

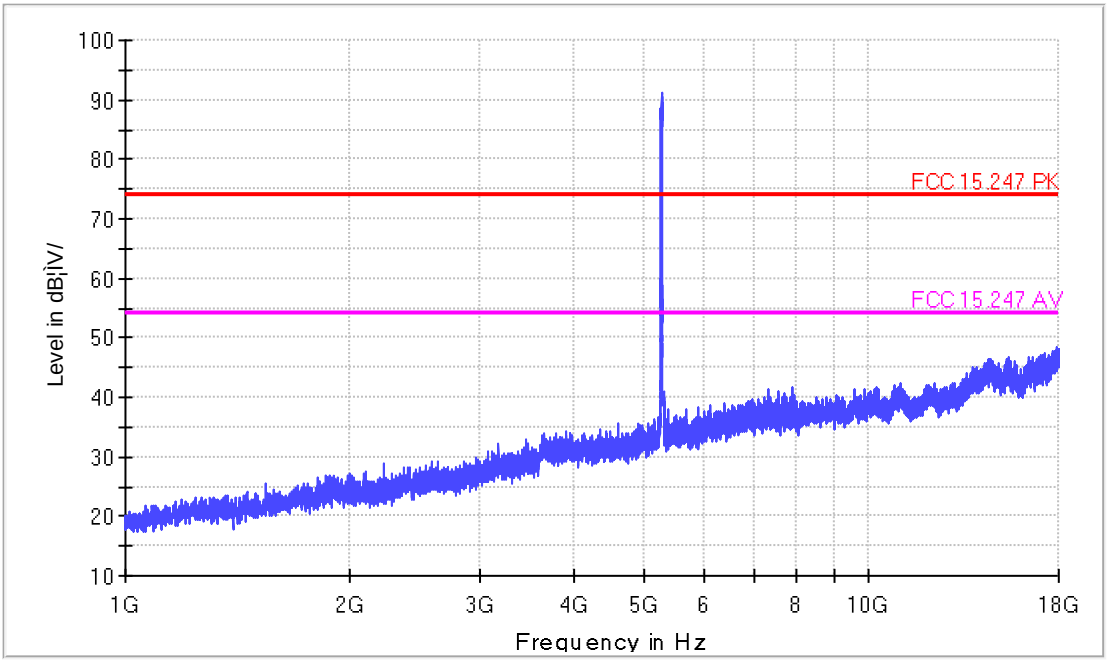
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH52
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11a IN THE 5.3GHz BAND

Ch60

Radiated Emission

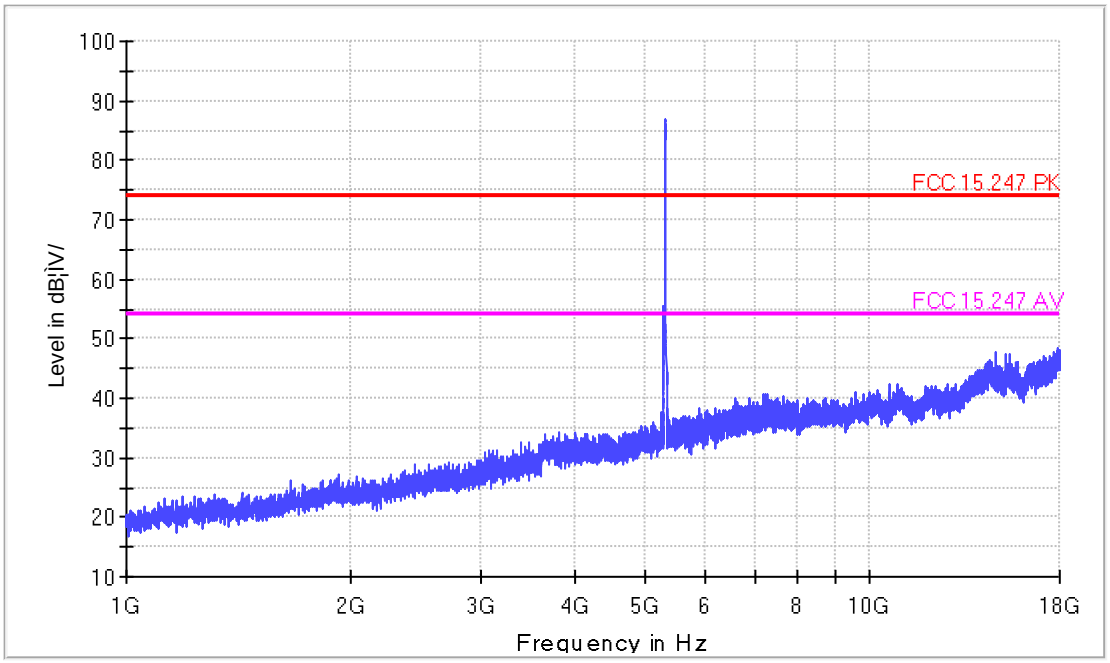
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH60
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

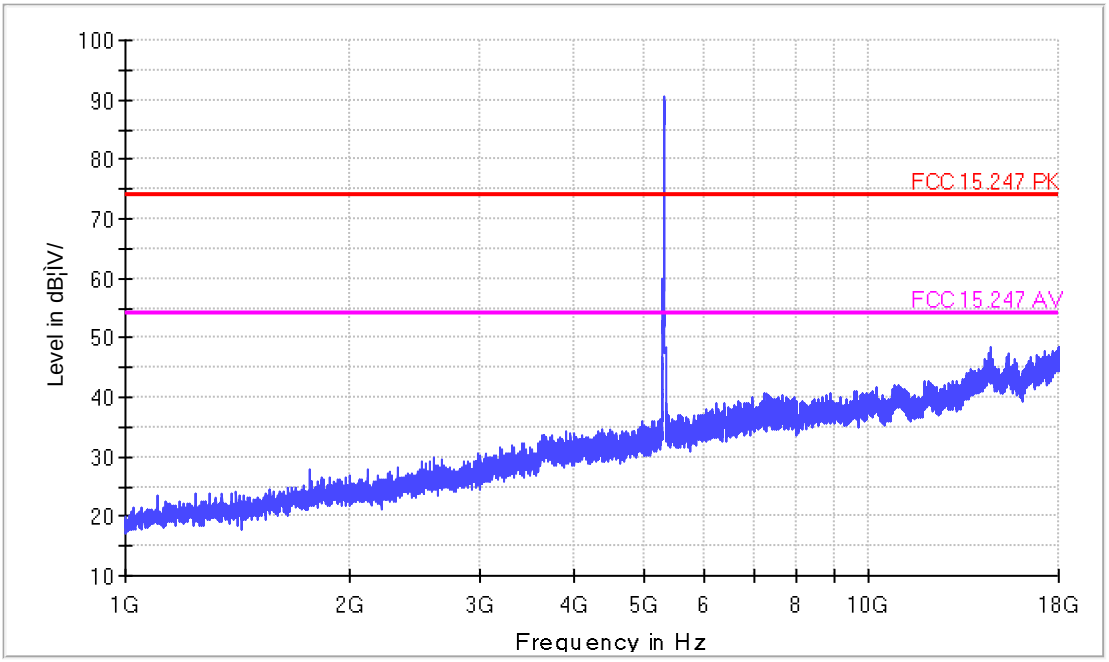
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH60
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11a IN THE 5.3GHz BAND

Ch64

Radiated Emission

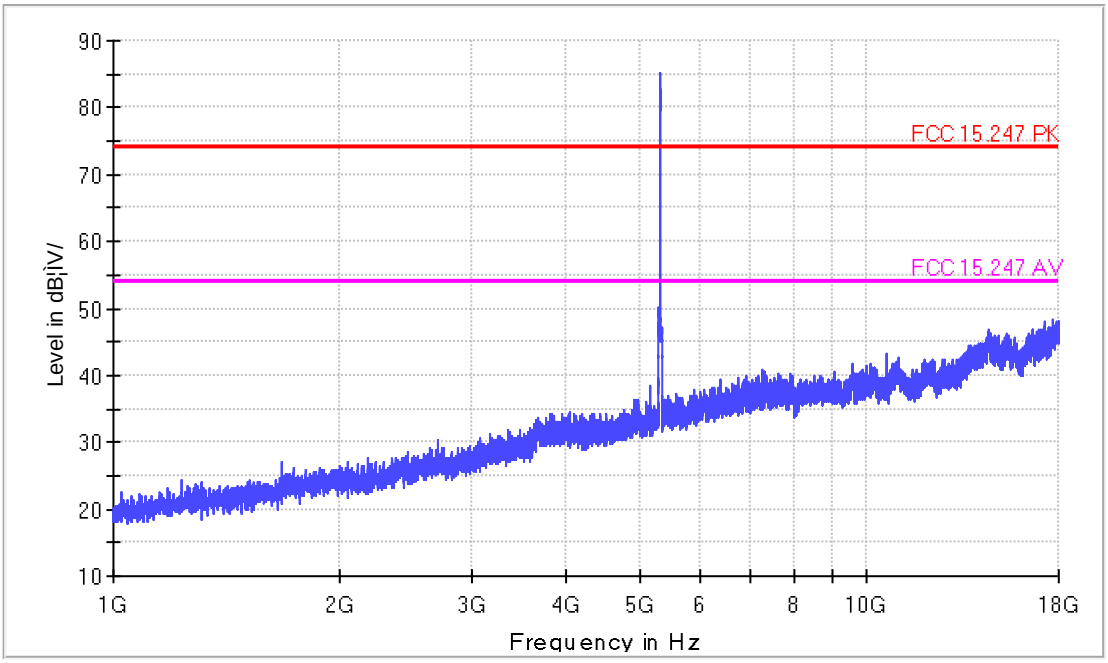
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH64
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

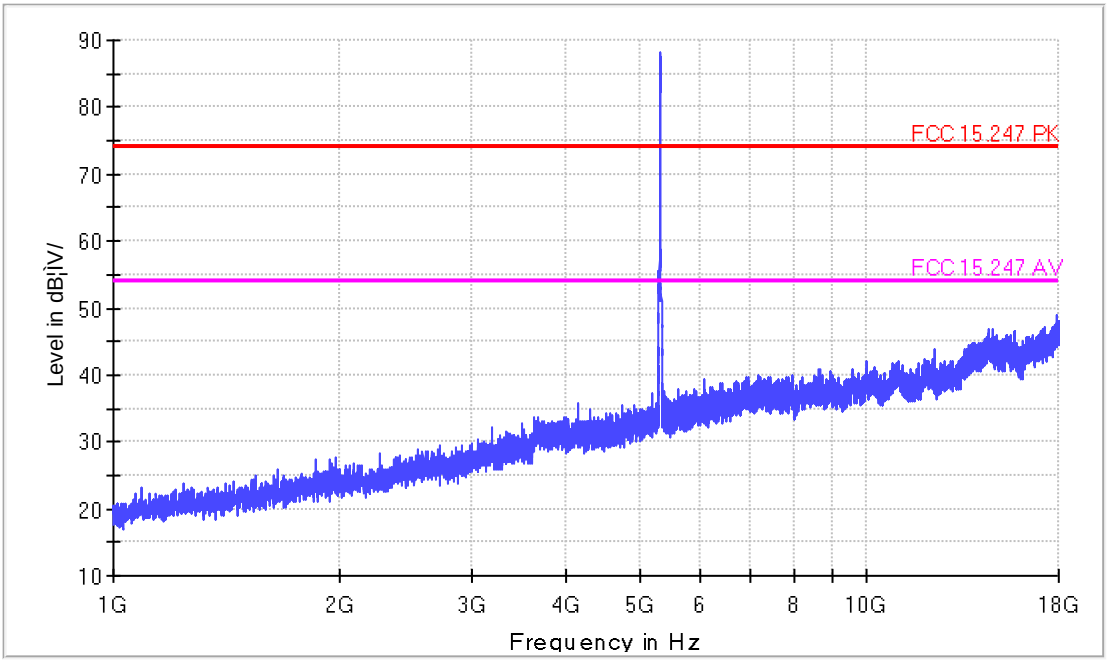
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH64
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch52

Radiated Emission

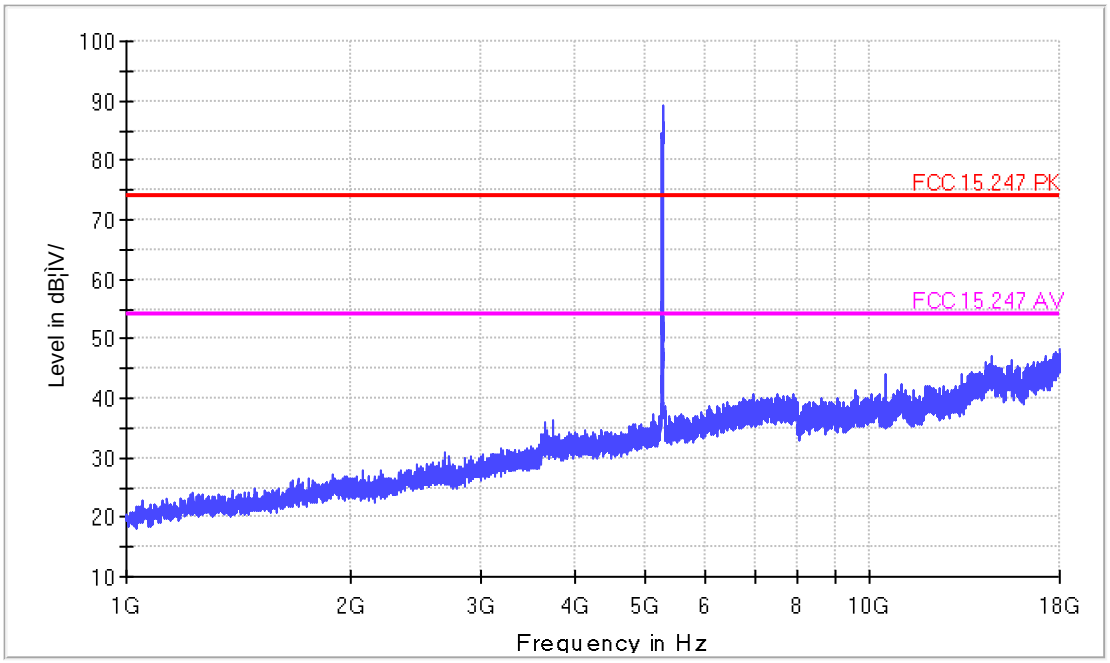
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH52
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

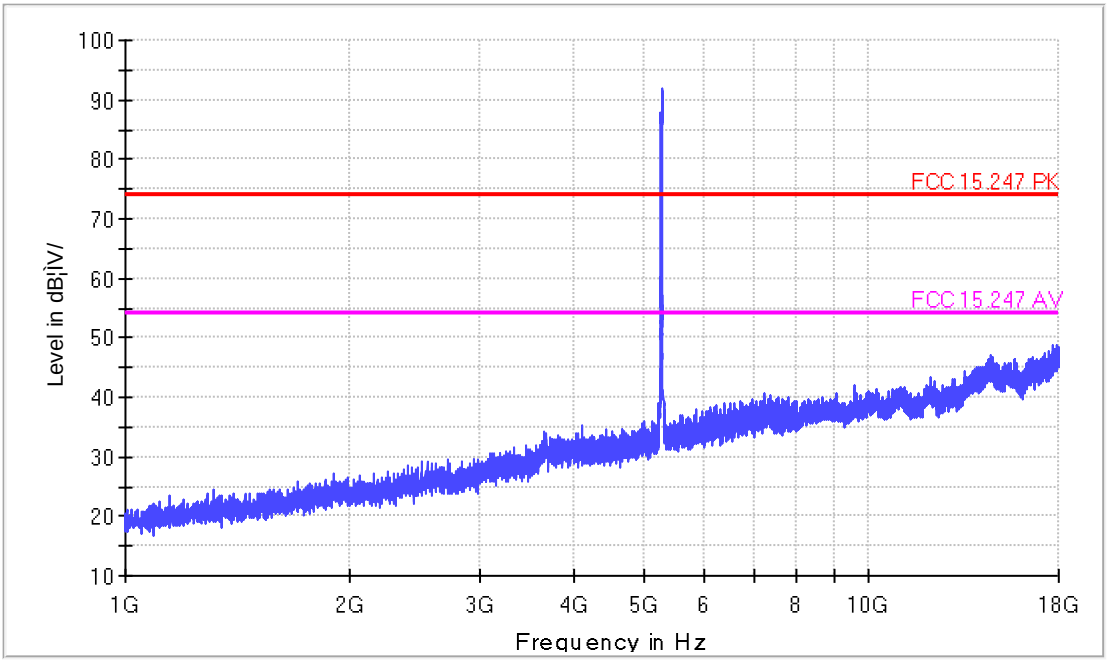
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH52
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch60

Radiated Emission

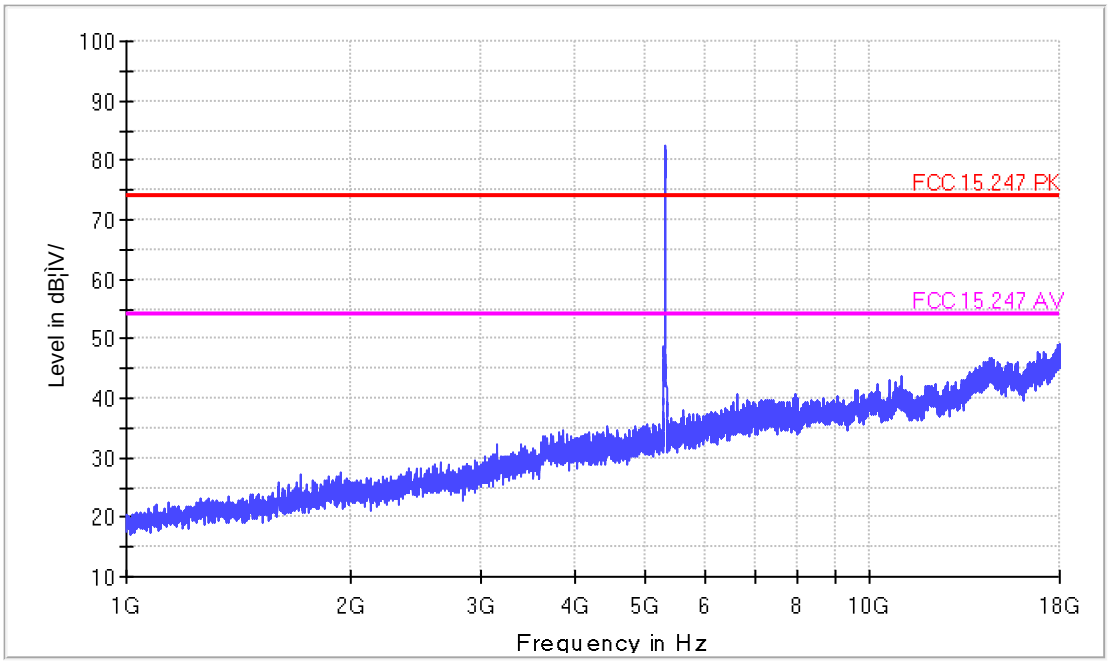
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH60
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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



Radiated Emission

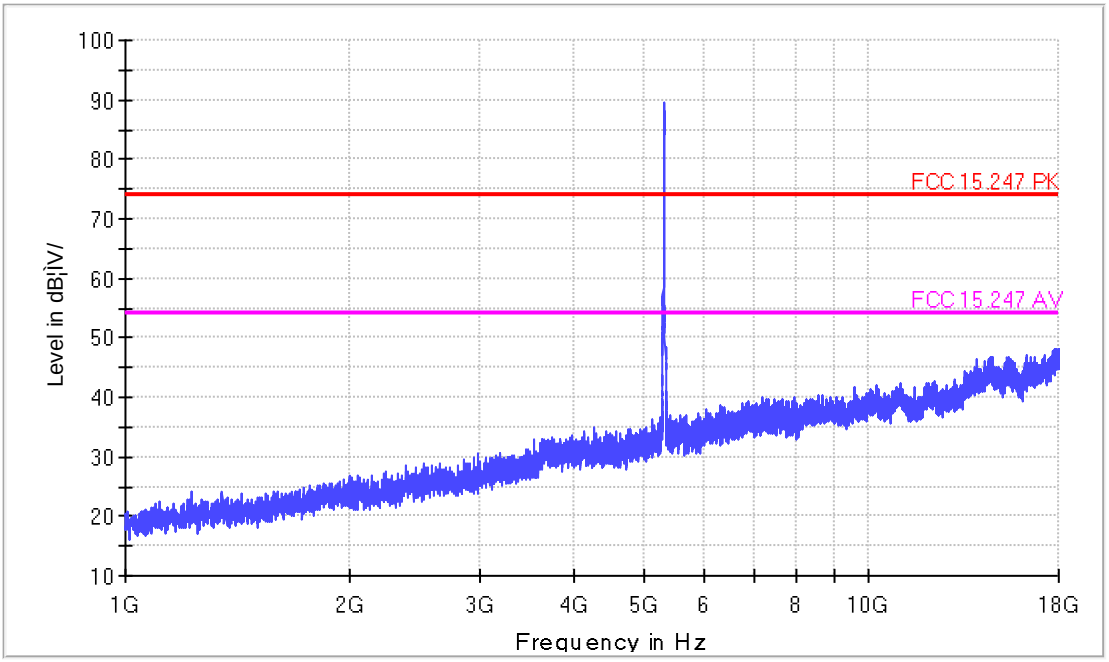
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH60
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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



1-18G

11n HT20 IN THE 5.3GHz BAND

Ch64

Radiated Emission

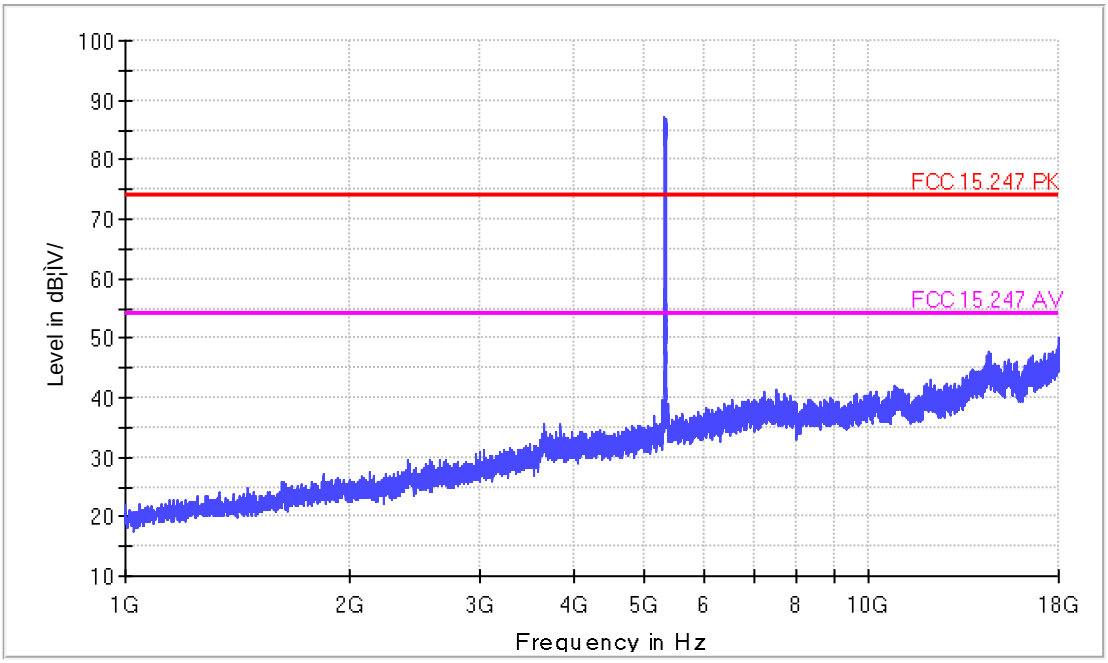
EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH64
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMQ EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Horizontal
Operator Name:	Belial.Lee
Date:	June 26

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

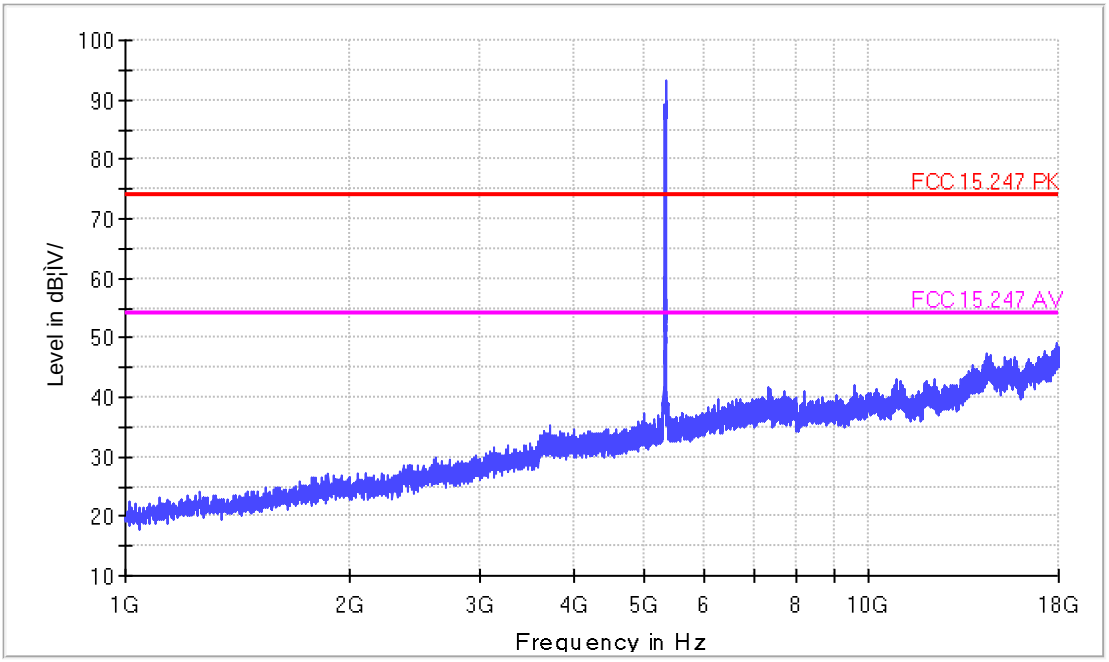


Radiated Emission

EUT Information

EUT Model Name:	JTAWB HH
Operation mode:	11a CH64
Test Voltage:	DC 3.75V
Comment:	

Common Information

Test Site:	SMO EMC Lab.
Environment	Temperature:24.1° Humidity:54.1
Antenna Polarization:	Vertical
Operator Name:	Belial.Lee
Date:	June 26

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