

FCC/ISED

RF  
TEST REPORT

ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
VILLA

ISSUED TO  
BRAVEN, LLC

6001 Oak Canyon, Irvine CA 92618, USA



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Date

Apr. 11, 2018

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Date

Apr. 11, 2018



Report No.: BL-SZ1810248-604  
EUT Name: VILLA  
Model Name: VILLA  
Brand Name: BRAVEN  
Test Standard: 47 CFR Part 15 Subpart E  
RSS-Gen (Issue 4, November 2014)  
RSS-247 (Issue 2, February 2017)  
FCC ID: Z7RBVILLA  
ISED Number: 10013A-BVILLA  
Test conclusion: Pass  
Test Date: Mar. 06, 2018 ~ Mar. 11, 2018  
Date of Issue: Apr. 11, 2018

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**Revision History**

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Mar. 23, 2018</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Apr. 11, 2018</u>	<u>Revise the limit of PSD test data on page 33.</u>

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# 1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

## 1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025. The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

## 1.3 Laboratory Condition

Ambient Temperature	20 to 25°C
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

## 1.4 Announce

- (1) The test report reference to the report template version v4.1.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

## 2 PRODUCT INFORMATION

### 2.1 Applicant

Applicant	BRAVEN, LLC
Address	6001 Oak Canyon, Irvine CA 92618, USA

### 2.2 Manufacturer

Manufacturer	BRAVEN, LLC
Address	6001 Oak Canyon, Irvine CA 92618, USA

### 2.3 Factory

Factory	Hansong (Nanjing) Technology Co,LTD.
Address	8 Kangping Road Jiangning Economy and Technology Decelopment Zone Nanjing

### 2.4 General Description for Equipment under Test (EUT)

EUT Type	VILLA
Model Name Under Test	VILLA
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	VP2.0
Software Version	p8404.134.3702
Network and Wireless connectivity	Bluetooth 4.0 (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n(HT20/40) and 802.11ac

### 2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	LG
	Model No.	ASH-05
	Serial No.	N/A
	Capacity	4300 mAh
	Rated Voltage	7.3 V
	Limit Charge Voltage	8.4 V
Ancillary Equipment 2	Adapter	
	Brand Name	N/A
	Model No.	DYS650-165270W-K
	Serial No.	N/A
	Rated Input	100-240 V~, 1.3 A, 50/60 Hz
	Rated Output	16.5 V⎓ 2.7 A

## 2.6 Technical Information

Frequency Range	Band I: 5150 MHz to 5250 MHz, Band IV: 5725 MHz to 5850 MHz
Product Type	<input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Modulation technology	OFDM
Modulation Type	256QAM, 64QAM, 16QAM, BPSK, QPSK
Product Type	Indoor for IC standard Mobile and portable for FCC standard
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36 / 24 / 18/12 / 9/ 6 Mbps 802.11n: up to 150 Mbps 802.11ac: up to VHT-MCS9
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz 802.11ac: 20 MHz, 40 MHz, 80 MHz
Maximum Output Power	Band I: 18.82 dBm Band IV: 19.65 dBm
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
Antenna Type	PIFA Antenna
Antenna Gain	Band I: 5150 MHz to 5250 MHz: 0 dBi Band IV: 5725 MHz to 5850 MHz: 0 dBi
About the Product	The intended for used with information technology equipment.

## 2.7 Additional Instructions

Mode	<input checked="" type="checkbox"/> Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.
------	--

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.

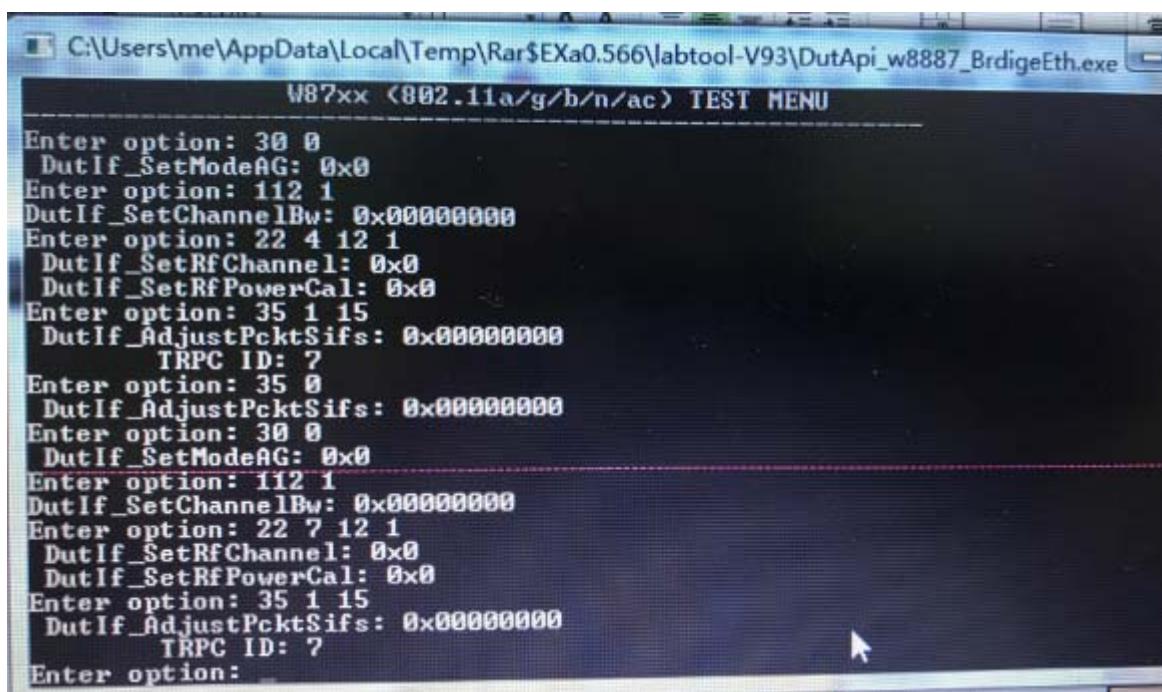
### EUT Software Settings:

Test Software Version	LABTOOL
-----------------------	---------

Band I (5150 - 5250 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	36	5180	13.00
	40	5200	13.00
	48	5240	12.00
11n (HT20)	36	5180	12.00
	40	5200	12.00
	48	5240	12.00
11n (HT40)	38	5190	10.00
	46	5230	12.00
11ac (HT20)	36	5180	12.00
	40	5200	12.00
	48	5240	12.00
11ac (HT40)	38	5190	10.00
	46	5230	12.00
11ac (HT80)	42	5210	11.00

Band IV (5725 - 5850 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	149	5745	13.00
	157	5785	13.00
	165	5825	12.00
11n (HT20)	149	5745	12.00
	157	5785	12.00
	165	5825	12.00
11n (HT40)	151	5755	10.00
	159	5795	12.00
11ac (HT20)	149	5745	12.00
	157	5785	12.00
	165	5825	12.00
11ac (HT40)	151	5755	10.00
	159	5795	12.00
11ac (HT80)	155	5775	11.00

## Run Software



The screenshot shows a terminal window with the following text:

```
C:\Users\me\AppData\Local\Temp\Rar$EXa0.566\labtool-V93\DtApi_w8887_BrdigeEth.exe
W87xx <802.11a/g/b/n/ac> TEST MENU

Enter option: 30 0
DutIf_SetModeAG: 0x0
Enter option: 112 1
DutIf_SetChannelBw: 0x00000000
Enter option: 22 4 12 1
DutIf_SetRFChannel: 0x0
DutIf_SetRfPowerCal: 0x0
Enter option: 35 1 15
DutIf_AdjustPcktSifs: 0x00000000
    TRPC ID: 7
Enter option: 35 0
DutIf_AdjustPcktSifs: 0x00000000
Enter option: 30 0
DutIf_SetModeAG: 0x0
Enter option: 112 1
DutIf_SetChannelBw: 0x00000000
Enter option: 22 7 12 1
DutIf_SetRFChannel: 0x0
DutIf_SetRfPowerCal: 0x0
Enter option: 35 1 15
DutIf_AdjustPcktSifs: 0x00000000
    TRPC ID: 7
Enter option:
```

## 2.8 Channel List

20 MHz		40 MHz		80 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
<b>36</b>	<b>5180</b>	<b>38</b>	<b>5190</b>	<b>42</b>	<b>5210</b>
40	5200	<b>46</b>	<b>5230</b>	<b>58</b>	<b>5290</b>
<b>44</b>	<b>5220</b>	<b>54</b>	<b>5270</b>	<b>106</b>	<b>5530</b>
<b>48</b>	<b>5240</b>	<b>62</b>	<b>5310</b>	<b>155</b>	<b>5775</b>
<b>52</b>	<b>5260</b>	<b>102</b>	<b>5510</b>		
56	5280	110	5550		
<b>60</b>	<b>5300</b>	<b>134</b>	<b>5670</b>		
<b>64</b>	<b>5320</b>	<b>151</b>	<b>5755</b>		
<b>100</b>	<b>5500</b>	<b>159</b>	<b>5795</b>		
104	5520				
108	5540				
112	5560				
<b>116</b>	<b>5580</b>				
132	5660				
136	5680				
<b>140</b>	<b>5700</b>				
<b>149</b>	<b>5745</b>				
153	5765				
<b>157</b>	<b>5785</b>				
161	5805				
<b>165</b>	<b>5825</b>				

Note: Until further notice, devices subject to this section shall not be capable of transmitting in the band 5600-5650 MHz. This restriction is for the protection of weather radars operating in this band.

The Lowest frequency, the middle frequency and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n(HT20)/ac(HT20)

Band I (5150 - 5250 MHz)			Band IV (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
36	Low	5180	149	Low	5745
44	Mid	5220	157	Mid	5785
48	High	5240	165	High	5825

For 802.11n(HT40)/ac(HT40)

Band I (5150 - 5250 MHz)			Band IV (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
38	Low	5190	151	Low	5755
46	High	5230	159	High	5795

For 802.11ac(HT80)

Band I (5150 - 5250 MHz)			Band IV (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
42	Low	5210	155	Low	5775

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Modulation Type	Band I	Band IV
				Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	VHT-MCS0		42	155
6 dB bandwidth	11a	6	BPSK	N/A	165/157/149
	11n(20 MHz)	6.5		N/A	165/157/149
	11n(40 MHz)	13.5		N/A	159/151
	11ac(80 MHz)	MCS0		N/A	155
Power Spectral Density	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Conducted Spurious Emission and Band Edge (Authorized-band)	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Band Edge (Restricted-band)	11a	6	BPSK	48/36	165/149
	11n(20 MHz)	6.5		48/36	165/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	MCS0		42	155
Frequency Stability	Unmodulated	N/A	N/A	N/A	N/A

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E (10-1-16 Edition)	Unlicensed National Information Infrastructure Devices
2	KDB Publication 789033 D02v01r04	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
3	RSS-Gen (Issue 4, Nov. 2014)	General Requirements for Compliance of Radio Apparatus
4	RSS-247 (Issue 2, February 2017)	Digital Transmission Systems (DTSS), Frequency Hopping Systems(FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
5	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

#### 3.2 Verdict

No.	Description	FCC Part No.	RSS Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	RSS-247, 6.2	--	Pass <sup>Note1</sup>
2	RF Output Power	15.407(a)	RSS-247, 6.2	ANNEX A.1	Pass
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	RSS-247, 6.2	ANNEX A.2	Pass
4	6 dB bandwidth	15.407(e)	RSS-247, 6.2	ANNEX A.3	Pass
5	Power Spectral Density	15.407(a)	RSS-247, 6.2	ANNEX A.4	Pass
6	Conducted Emission	15.207	RSS-GEN, 8.8	ANNEX A.5	Pass
7	Conducted Spurious Emission and Band Edge (Authorized-band)	15.407(b) 15.209	RSS-247, 6.2	ANNEX A.6	Pass
8	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	RSS-247, 6.2	ANNEX A.7	Pass
9	Frequency Stability	15.407(g)	--	ANNEX A.8	Pass
10	Receiver Spurious Emissions	--	RSS-Gen, 7.1.2	--	N/A <sup>Note2</sup>

Note <sup>1</sup>: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

Note <sup>2</sup>: Only radio communication receivers operating in stand-alone mode within the band 30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% - 55%		
Atmospheric Pressure	100 kPa - 102 kPa		
Temperature	NT (Normal Temperature)	+22°C to +25°C	
	LT (Low Temperature)	0°C	
	HT (High Temperature)	+40°C	
Working Voltage of the EUT	NV (Normal Voltage)	16.5 V	
	LV (Low Voltage)	16 V	
	HV (High Voltage)	18 V	

### 4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2017.06.12	2018.06.11
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2017.06.12	2018.06.11
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2017.09.07	2018.09.06
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2017.06.22	2018.06.21
LISN	SCHWARZBECK	NSLK 8127	8127-687	2017.06.22	2018.06.21
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2017.06.12	2018.06.11
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2017.06.12	2018.06.11
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2017.06.22	2018.06.21
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2017.06.22	2018.06.21
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2017.06.22	2018.06.21
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2017.11.07	2019.11.08
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2017.07.22	2019.07.21
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2016.07.12	2018.07.11
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400KF	J211060273	2017.01.06	2019.01.05
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2019.02.20
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2016.08.09	2018.08.08
Shielded Enclosure	ChangNing	CN-130701	130703	--	--
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2017.06.12	2018.06.11

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Power Amplifier	OPHIR RF	5225F	1037	2018.02.16	2019.02.15
Power Amplifier	OPHIR RF	5273F	1016	2018.02.16	2019.02.15
Directional Coupler	Werlantone	C5982-10	109275	N/A	N/A
Directional Coupler	Werlantone	CHP-273E	S00801z-01	N/A	N/A
Feld Strength Meter	Narda	EP601	511WX51129	2017.05.22	2018.05.21
Mouth Simulator	B&K	4227	2423931	2017.11.16	2018.11.15
Sound Calibrator	B&K	4231	2430337	2017.11.16	2018.11.15
Sound Level Meter	B&K	NL-20	00844023	2017.11.16	2018.11.15
Ear Simulator	B&K	4185	2409449	2017.11.16	2018.11.15
Ear Simulator	B&K	4195	2418189	2017.11.16	2018.11.15
Audio analyzer	B&K	UPL 16	100129	2017.11.16	2018.11.15

#### 4.3 Measurement Uncertainty

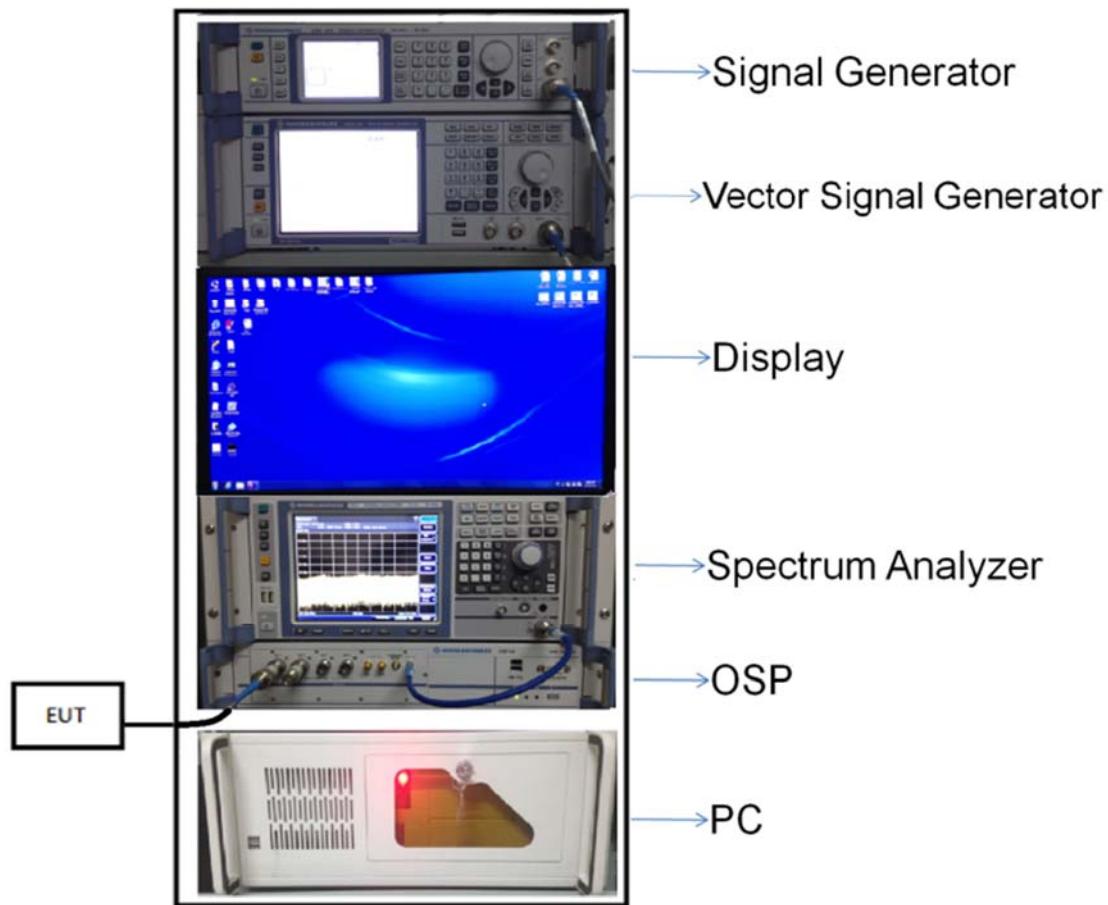
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Occupied Channel Bandwidth	±4%
RF output power, conducted	±1.4 dB
Power Spectral Density, conducted	±2.5 dB
Unwanted Emissions, conducted	±2.8 dB
All emissions, radiated	±5.4 dB
Temperature	±1°C
Humidity	±4%

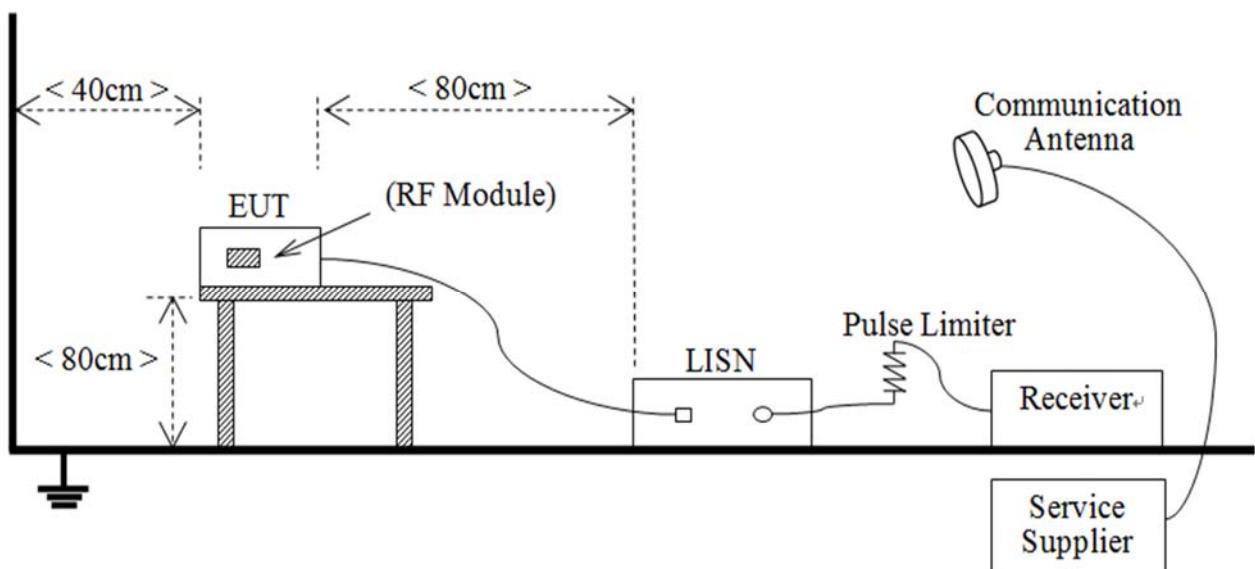
## 4.4 Description of Test Setup

### 4.4.1 For Antenna Port Test



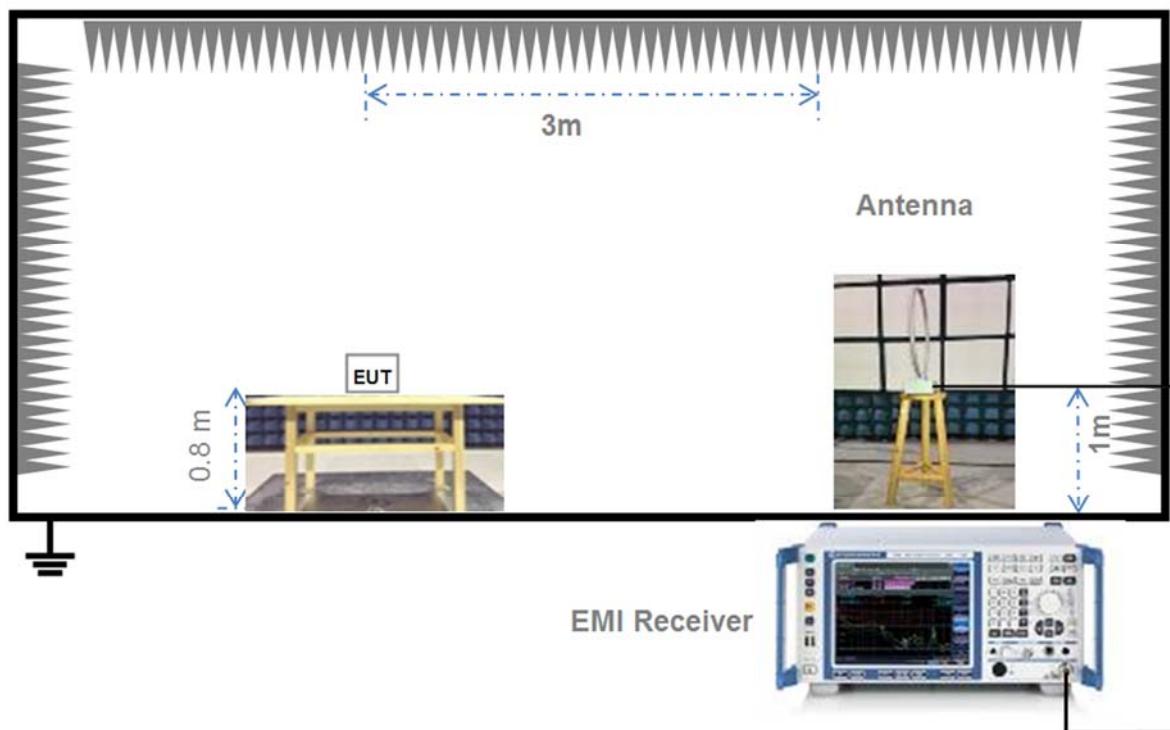
(Diagram 1)

### 4.4.2 For AC Power Supply Port Test



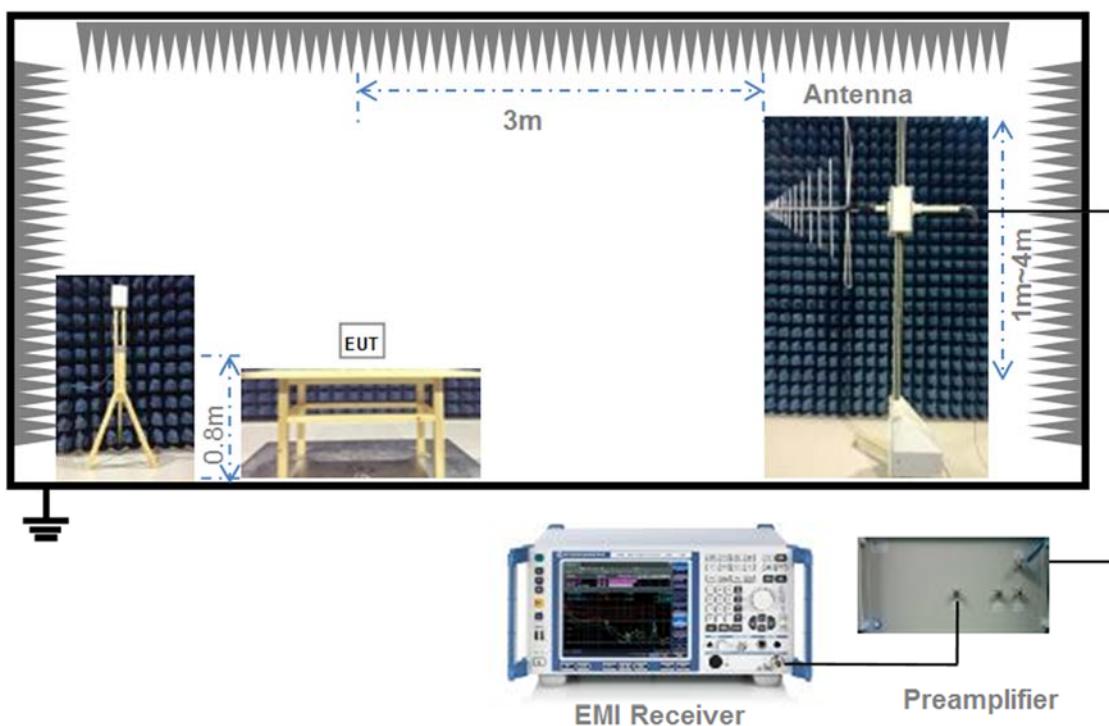
(Diagram 2)

#### 4.4.3 For Radiated Test (Below 30 MHz)



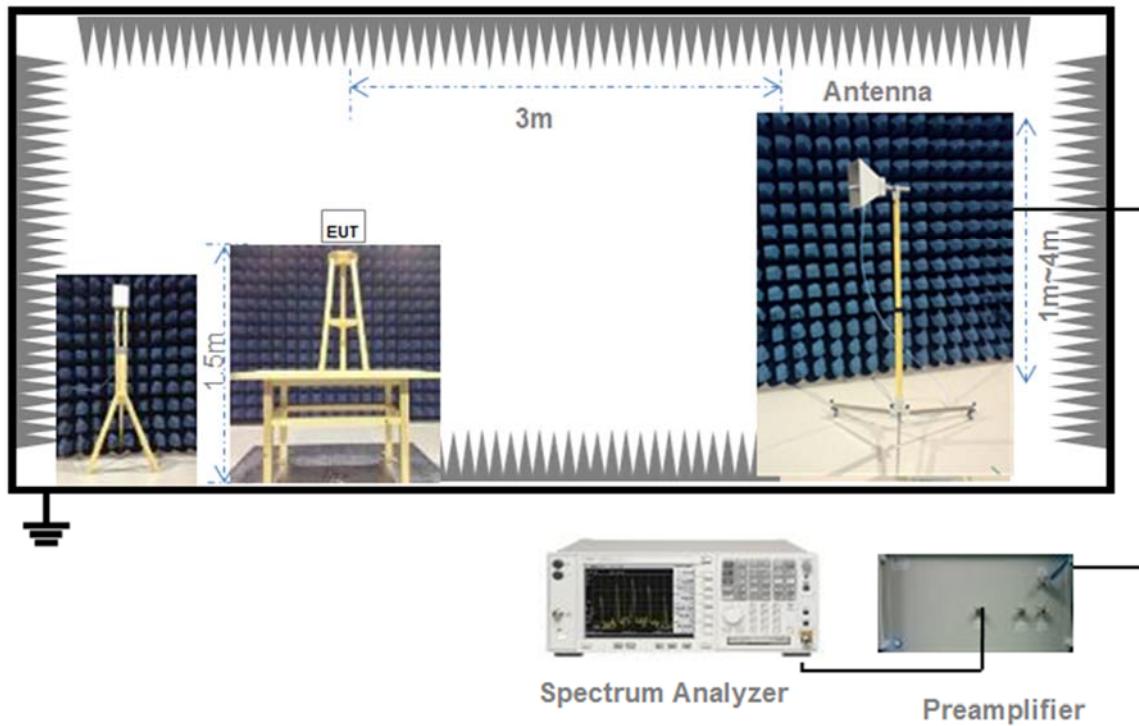
(Diagram 3)

#### 4.4.4 For Radiated Test (30 MHz-1 GHz)



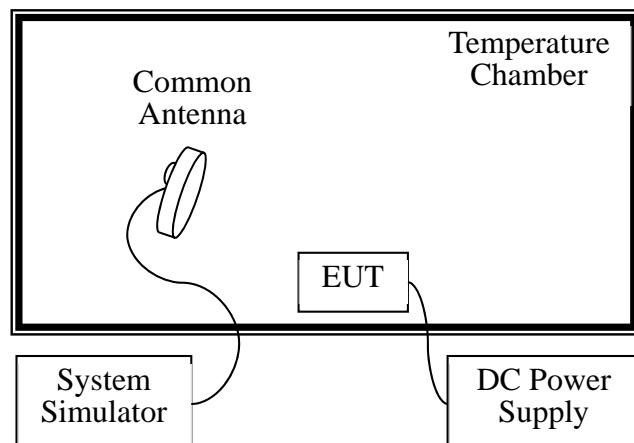
(Diagram 4)

#### 4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

#### 4.4.6 For Frequency Stability Test



(Diagram 6)

## 5 TEST ITEMS

### 5.1 RF Output Power

#### 5.1.1 Test Limit

FCC §15.407(a)

The maximum conducted output power should not exceed:

Frequency Band (MHz)	Limit
5150-5250	250 mW
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W

Note: Where "B" is the 26 dB emissions bandwidth in MHz.

RSS-247, 6.2

The maximum conducted output power shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W

Note: Where "B" is the 99% emissions bandwidth in MHz.

The maximum e.i.r.p. shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	200 mW or 10 dBm + 10log B, whichever is less.
5250-5350	1W or 17 dBm + 10log B, whichever is less.
5470-5725	1W or 17 dBm + 10log B, whichever is less.
5725-5850	N/A

Note: Where "B" is the 99% emissions bandwidth in MHz.

#### 5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

#### 5.1.3 Test Procedure

The maximum peak conducted output power may be measured using a broadband Average RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector.

The E.I.R.P used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

#### 5.1.4 Test Result

Please refer to ANNEX A.1.

## 5.2 Emission Bandwidth and 6 dB Bandwidth

### 5.2.1 Limit

FCC §15.407(a), RSS-247, 6.2

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

### 5.2.2 Test Setup

The test setup photo please refer to 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.2.3 Test Procedure

#### Emission bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set VBW  $\geq$  3\*RBW,
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

#### Occupied Bandwidth

1. Set Span = 1.5 times to 5.0 times the OBW
2. Set RBW = 1% to 5% of the OBW.
3. Set VBW  $\geq$  3\*RBW, Detector = Peak.
4. Trace mode = Max hold.
5. Use the 99% power bandwidth function of the instrument.

#### 6 dB bandwidth

1. Set RBW = 100 kHz, VBW = 300 kHz.
2. Detector = Peak. Trace mode = Max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 5.2.4 Test Result

Please refer to ANNEX A.2 and ANNEX A.3.

## 5.3 Power Spectral density (PSD)

### 5.3.1 Limit

FCC §15.407(a)

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	11 dBm/MHz
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

RSS-247, 6.2

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

The e.i.r.p. spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	10 dBm/MHz
5250-5350	N/A
5470-5725	N/A
5725-5850	N/A

### 5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.3.3 Test Procedure

Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

1. Set RBW = 510 kHz/1 MHz, VBW  $\geq 3 \times$  RBW, Sweep time = Auto, Detector = RMS.
2. Allow the sweeps to continue until the trace stabilizes.
3. Use the peak marker function to determine the maximum amplitude level.
4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

### 5.3.4 Test Result

Please refer to ANNEX A.4.

## 5.4 Conducted Emission

### 5.4.1 Limit

FCC §15.207, RSS-GEN, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

### 5.4.2 Test Setup

The section 4.4.2 (Diagram 2) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.4.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

### 5.4.4 Test Result

Please refer to ANNEX A.5.

## 5.5 Conducted Spurious Emission and Band Edge (Authorized-band)

### 5.5.1 Limit

FCC §15.407(b)

Un-restricted band emissions	
Frequency Band (MHz)	Limit
5150 - 5250	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm
5250 - 5350	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm
5470 - 5725	Outside of the 5.47-5.725 GHz band: e.i.r.p. -27 dBm
5725 - 5850	<p>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.</p> <p>The graph illustrates the power spectral density limits for the U-NII-3 band (5725-5850 MHz). The EIRP (dBm/MHz) is plotted against Frequency (MHz). The curve starts at -27 dBm/MHz, remains flat until approximately 5650 MHz, then rises linearly to 10 dBm/MHz at 5700 MHz. It continues to rise linearly to 15.6 dBm/MHz at 5750 MHz, then jumps to 27 dBm/MHz at the band edge (5725-5850 MHz). After the band edge, it decreases linearly back to -27 dBm/MHz by 5950 MHz.</p>

RSS-247, 6.2

Un-restricted band emissions	
Frequency Band (MHz)	Limit
5150 - 5250	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm, However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz.
5250 - 5350	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm. And any emissions within the band 5150-5250 MHz shall meet the power spectral density limits of 10 dBm/MHz, The device shall be labelled “for indoor use only.”
5470 - 5725	Outside of the 5.47-5.725 GHz band: e.i.r.p. -27 dBm
5725 - 5850	5715 -5725 MHz: e.i.r.p. -17 dBm 5850 -5860 MHz: e.i.r.p. -17 dBm Other un-restricted band: e.i.r.p. -27 dBm

### 5.5.2 Test Setup

See section 4.4.2 (Diagram 2) for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

### 5.5.3 Test Procedure

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize

### 5.5.4 Test Result

Please refer to ANNEX A.6.

## 5.6 Radiated Spurious Emissions and Band Edge (Restricted-band)

### 5.6.1 Limit

FCC §15.209 & 15.407(b), RSS-247, 6.2

Frequency (MHz)	Field Strength ( $\mu$ V/m)	Measurement Distance (m)
0.009 - 0.490	$2400/F(\text{kHz})$	300
0.490 - 1.705	$24000/F(\text{kHz})$	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note <sup>1</sup>: The Limit for radiated test was performed according to FCC Part 15C

Note <sup>2</sup>: The tighter limit applies at the band edge.

Un-restricted band emissions	
Out Operating Band (MHz)	Limit
5150 - 5250	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5250 - 5350	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5470 - 5725	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5725 - 5850	<p>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.</p> <p>The graph plots EIRP (dBm/MHz) on the y-axis (from -40 to 70) against Frequency (MHz) on the x-axis (from 5600 to 5950). A blue line represents the emission profile. It remains flat at -27 dBm/MHz until approximately 5650 MHz, then rises to 10 dBm/MHz at 5700 MHz. It continues to rise linearly to 15.6 dBm/MHz at 5750 MHz, then to 27 dBm/MHz at 5850 MHz, and finally drops back to -27 dBm/MHz at 5950 MHz.</p>

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength.

### 5.6.2 Test Setup

The section 4.4.3-4.4.5 (Diagram 3 - Diagram 5) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.6.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

### General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies  $\leq$  30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies  $>$  1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in  $\text{dB}\mu\text{V/m}$ ,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- f) Compare the resultant electric field strength level to the applicable limit.

- g) Perform radiated spurious emission test.

### Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

### Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 1.
- b) VBW  $\geq$  3 x RBW.
- c) Detector = Peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle  $\geq$  98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than  $\pm 2$  percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle,  $x$ , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW  $\geq 3 \times$  RBW.
- e) Detector = RMS, if span/(# of points in sweep)  $\leq$  (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
  - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
  - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
  - 1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is  $10 \log(1/x)$ , where  $x$  is the duty cycle.
  - 2) If linear voltage averaging mode was used in step f), then the applicable correction factor is  $20 \log(1/x)$ , where  $x$  is the duty cycle.
  - 3) If a specific emission is demonstrated to be continuous ( $\geq$  98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

#### Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak

Trace = max hold

#### 5.6.4 Test Result

Please refer to ANNEX A.7 and Please refer to ANNEX A.9

## 5.7 Frequency Stability

### 5.7.1 Limit

FCC §15.407(g)

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 5.7.2 Test Setup

The section 4.4.6 (Diagram 6) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.7.3 Test Procedure

The EUT is installed in an environment test chamber with external power source.

Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.

A sufficient stabilization period at each temperatures is used prior to each frequency measurement.

When temperature is stabled, measure the frequency stability.

The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage.

Change setting of chamber and external power source to complete all conditions.

### 5.7.4 Test Result

Please refer to ANNEX A.8.

## ANNEX A TEST RESULT

### A.1 RF Output Power

Note <sup>1</sup>: For FCC standard, if transmitting antennas of directional gain greater than 6 dBi are used, all band maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note <sup>2</sup>: For IC standard, the band IV (5725 - 5850 MHz) maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### Test Data

##### Conducted Power

Band I (5150 - 5250 MHz )						
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power Total (mW)	FCC Limit (mW)	Verdict
11a	CH36	5180	18.82	76.21	250.00	Pass
11a	CH44	5220	17.77	59.84	250.00	Pass
11a	CH48	5240	18.32	67.92	250.00	Pass
11n (HT20)	CH36	5180	17.85	60.95	250.00	Pass
11n (HT20)	CH44	5220	16.94	49.43	250.00	Pass
11n (HT20)	CH48	5240	17.46	55.72	250.00	Pass
11n (HT40)	CH38	5190	16.25	42.17	250.00	Pass
11n (HT40)	CH46	5230	17.53	56.62	250.00	Pass
11ac (HT20)	CH36	5180	17.96	62.52	250.00	Pass
11ac (HT20)	CH44	5220	16.95	49.55	250.00	Pass
11ac (HT20)	CH48	5240	17.77	59.84	250.00	Pass
11ac (HT40)	CH38	5190	15.52	35.65	250.00	Pass
11ac (HT40)	CH46	5230	17.44	55.46	250.00	Pass
11ac (HT80)	CH42	5210	16.60	45.71	250.00	Pass

Band IV (5725 - 5850 MHz )						
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power Total (mW)	FCC/IC Limit (W)	Verdict
11a	CH149	5745	19.65	92.26	1.00	Pass
11a	CH157	5785	19.60	91.20	1.00	Pass
11a	CH165	5825	17.91	61.80	1.00	Pass
11n (HT20)	CH149	5745	18.87	77.09	1.00	Pass
11n (HT20)	CH157	5785	18.90	77.62	1.00	Pass
11n (HT20)	CH165	5825	18.19	65.92	1.00	Pass
11n (HT40)	CH151	5755	16.67	46.45	1.00	Pass
11n (HT40)	CH159	5795	18.93	78.16	1.00	Pass
11ac (HT20)	CH149	5745	18.80	75.86	1.00	Pass
11ac (HT20)	CH157	5785	18.89	77.45	1.00	Pass
11ac (HT20)	CH165	5825	17.83	60.67	1.00	Pass
11ac (HT40)	CH151	5755	18.64	73.11	1.00	Pass
11ac (HT40)	CH159	5795	19.04	80.17	1.00	Pass
11ac (HT80)	CH155	5775	18.09	64.42	1.00	Pass

#### EIRP Power

Mode	Channel	Frequency (MHz)	EIRP Power Total (dBm)	EIRP Power Total (mW)	IC Limit (mW)	Verdict
11a	CH36	5180	18.82	76.21	164	Pass
11a	CH44	5220	17.77	59.84	165	Pass
11a	CH48	5240	18.32	67.92	166	Pass
11n (HT20)	CH36	5180	17.85	60.95	176	Pass
11n (HT20)	CH44	5220	16.94	49.43	176	Pass
11n (HT20)	CH48	5240	17.46	55.72	176	Pass
11n (HT40)	CH38	5190	16.25	42.17	200	Pass
11n (HT40)	CH46	5230	17.53	56.62	200	Pass
11ac (HT20)	CH36	5180	17.96	62.52	176	Pass
11ac (HT20)	CH44	5220	16.95	49.55	176	Pass
11ac (HT20)	CH48	5240	17.77	59.84	176	Pass
11ac (HT40)	CH38	5190	15.52	35.65	200	Pass
11ac (HT40)	CH46	5230	17.44	55.46	200	Pass
11ac (HT80)	CH42	5210	16.60	45.71	200	Pass

## A.2 Emission Bandwidth & 99% Bandwidth

Note: Test plots please refer to the document "Annex No.: BL-SZ1810248-604 Data Part 1.pdf".

### Test Data

Band I (5150 - 5250 MHz )				
Mode	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	5180	19.24	17.19
11a	CH44	5220	19.56	17.19
11a	CH48	5240	19.36	17.19
11n (HT20)	CH36	5180	19.68	17.88
11n (HT20)	CH44	5220	19.72	17.94
11n (HT20)	CH48	5240	19.84	18.00
11n (HT40)	CH38	5190	38.20	36.35
11n (HT40)	CH46	5230	38.56	36.35
11ac (HT20)	CH36	5180	19.88	17.94
11ac (HT20)	CH44	5220	19.88	18.00
11ac (HT20)	CH48	5240	19.64	18.00
11ac (HT40)	CH38	5190	40.40	36.35
11ac (HT40)	CH46	5230	40.30	36.35
11ac (HT80)	CH42	5210	81.30	76.87

Band IV (5725 - 5850 MHz )				
Mode	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	5745	/	17.25
11a	CH157	5785	/	17.13
11a	CH165	5825	/	17.25
11n (HT20)	CH149	5745	/	17.95
11n (HT20)	CH157	5785	/	18.00
11n (HT20)	CH165	5825	/	18.06
11n (HT40)	CH151	5755	/	36.35
11n (HT40)	CH159	5795	/	36.23
11ac (HT20)	CH149	5745	/	17.95
11ac (HT20)	CH157	5785	/	17.95
11ac (HT20)	CH165	5825	/	17.95
11ac (HT40)	CH151	5755	/	36.35
11ac (HT40)	CH159	5795	/	36.24
11ac (HT80)	CH155	5775	/	76.18

### A.3 6 dB Bandwidth

Note: Test plots please refer to the document "Annex No.: BL-SZ1810248-604 Data Part 2.pdf".

#### Test Data

Band IV (5725 - 5850 MHz)					
Mode	Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	5745	16.62	500	Pass
11a	CH157	5785	16.42	500	Pass
11a	CH165	5825	16.62	500	Pass
11n (HT20)	CH149	5745	17.67	500	Pass
11n (HT20)	CH157	5785	17.77	500	Pass
11n (HT20)	CH165	5825	17.27	500	Pass
11n (HT40)	CH151	5755	35.17	500	Pass
11n (HT40)	CH159	5795	35.27	500	Pass
11ac (HT20)	CH149	5745	17.42	500	Pass
11ac (HT20)	CH157	5785	17.72	500	Pass
11ac (HT20)	CH165	5825	17.67	500	Pass
11ac (HT40)	CH151	5755	34.57	500	Pass
11ac (HT40)	CH159	5795	34.22	500	Pass
11ac (HT80)	CH155	5775	76.47	500	Pass

## A.4 Power Spectral Density

Note: Test plots please refer to the document "Annex No.: BL-SZ1810248-604 Data Part 3.pdf".

### Test Data

Note<sup>1</sup>: The RBW used in Band IV is 1 MHz, and the PSD factor is:  $10 \log (500 \text{ kHz}/\text{RBW}) = -3 \text{ dBm}$ .

Band I (5150 - 5250 MHz)					
Mode	Channel	Frequency (MHz)	PSD at ant (dBm/MHz)	FCC Limit(dBm/MHz)	Verdict
11a	CH36	5180	8.09	11.0	Pass
11a	CH44	5220	6.63	11.0	Pass
11a	CH48	5240	6.56	11.0	Pass
11n (HT20)	CH36	5180	7.17	11.0	Pass
11n (HT20)	CH44	5220	5.26	11.0	Pass
11n (HT20)	CH48	5240	5.32	11.0	Pass
11n (HT40)	CH38	5190	0.76	11.0	Pass
11n (HT40)	CH46	5230	3.22	11.0	Pass
11ac (HT20)	CH36	5180	7.06	11.0	Pass
11ac (HT20)	CH44	5220	5.73	11.0	Pass
11ac (HT20)	CH48	5240	6.57	11.0	Pass
11ac (HT40)	CH38	5190	1.10	11.0	Pass
11ac (HT40)	CH46	5230	2.63	11.0	Pass
11ac (HT80)	CH42	5210	-1.89	11.0	Pass

Band IV (5725 - 5850 MHz)					
Mode	Channel	Frequency (MHz)	PSD at ant (dBm/MHz)	FCC/IC Limit(dBm/ 500 kHz)	Verdict
11a	CH149	5745	3.07	30	Pass
11a	CH157	5785	3.59	30	Pass
11a	CH165	5825	1.98	30	Pass
11n (HT20)	CH149	5745	1.98	30	Pass
11n (HT20)	CH157	5785	2.12	30	Pass
11n (HT20)	CH165	5825	1.43	30	Pass
11n (HT40)	CH151	5755	-10.49	30	Pass
11n (HT40)	CH159	5795	-8.14	30	Pass
11ac (HT20)	CH149	5745	1.91	30	Pass
11ac (HT20)	CH157	5785	2.20	30	Pass
11ac (HT20)	CH165	5825	1.13	30	Pass
11ac (HT40)	CH151	5755	-9.40	30	Pass
11ac (HT40)	CH159	5795	-6.72	30	Pass
11ac (HT80)	CH155	5775	-5.71	30	Pass

## EIRP PSD

Band I (5150 - 5250 MHz)					
Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	IC Limit (dBm/MHz)	Verdict
11a	CH36	5180	8.09	10	Pass
11a	CH44	5220	6.63	10	Pass
11a	CH48	5240	6.56	10	Pass
11n (HT20)	CH36	5180	7.17	10	Pass
11n (HT20)	CH44	5220	5.26	10	Pass
11n (HT20)	CH48	5240	5.32	10	Pass
11n (HT40)	CH38	5190	0.76	10	Pass
11n (HT40)	CH46	5230	3.22	10	Pass
11ac (HT20)	CH36	5180	7.06	10	Pass
11ac (HT20)	CH44	5220	5.73	10	Pass
11ac (HT20)	CH48	5240	6.57	10	Pass
11ac (HT40)	CH38	5190	1.10	10	Pass
11ac (HT40)	CH46	5230	2.63	10	Pass
11ac (HT80)	CH42	5210	-1.89	10	Pass

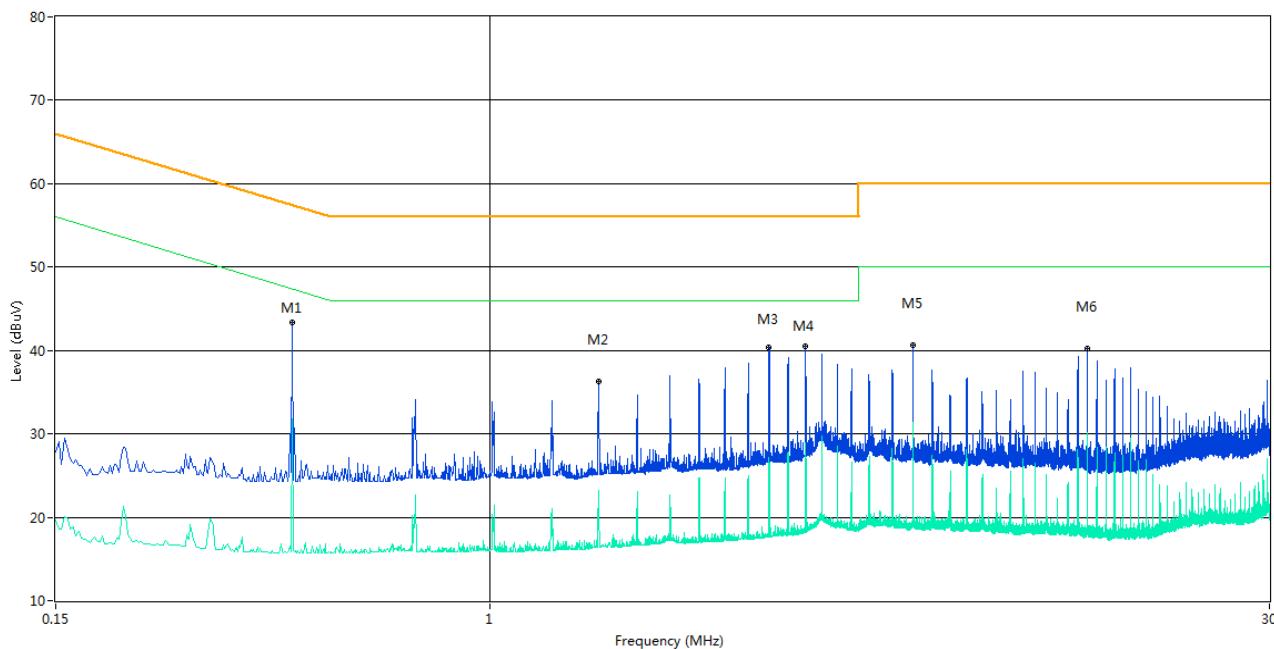
## A.5 Conducted Emissions

Note<sup>1</sup>: The EUT is working in the Normal link mode.

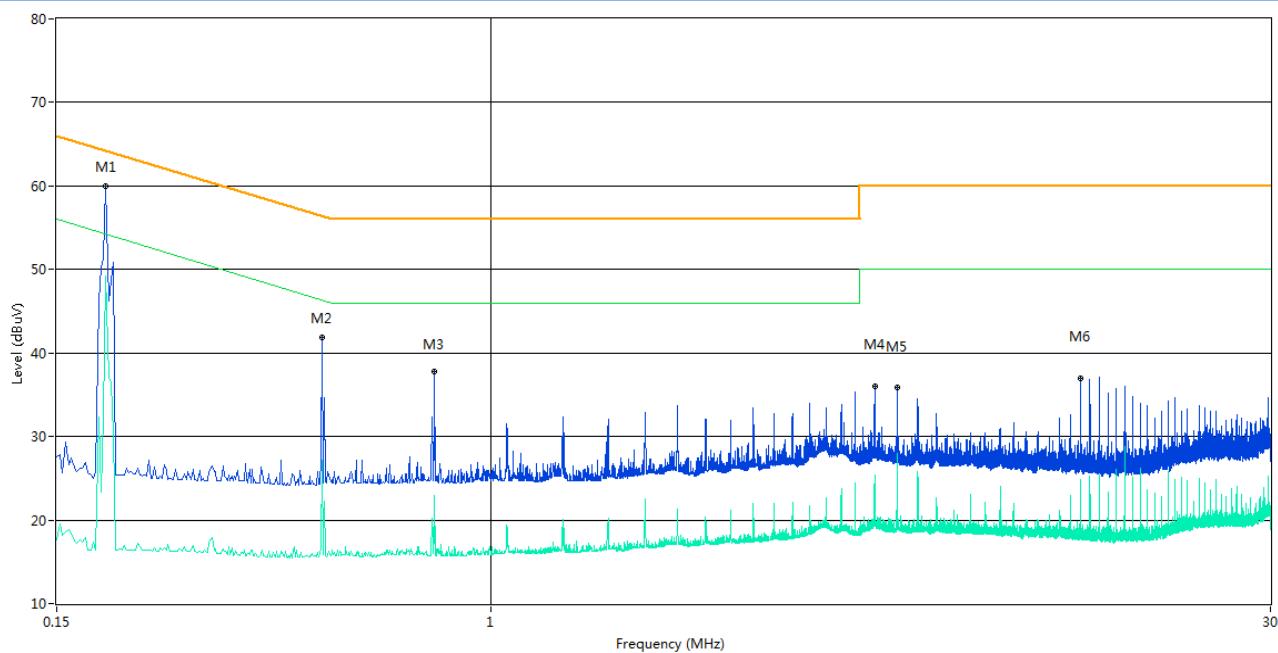
Note<sup>2</sup>: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

### Test Data and Plots

#### PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.422	43.3	10.04	57.4	14.10	Peak	L Line	Pass
1**	0.422	31.8	10.04	47.4	15.60	AV	L Line	Pass
2	1.606	36.2	10.08	56.0	19.80	Peak	L Line	Pass
2**	1.606	23.3	10.08	46.0	22.70	AV	L Line	Pass
3	3.378	40.3	10.13	56.0	15.70	Peak	L Line	Pass
3**	3.378	26.6	10.13	46.0	19.40	AV	L Line	Pass
4	3.960	40.6	10.14	56.0	15.40	Peak	L Line	Pass
4**	3.960	28.9	10.14	46.0	17.10	AV	L Line	Pass
5	6.332	40.7	10.21	60.0	19.30	Peak	L Line	Pass
5**	6.332	31.3	10.21	50.0	18.70	AV	L Line	Pass
6	13.560	40.2	10.41	60.0	19.80	Peak	L Line	Pass
6**	13.560	30.2	10.41	50.0	19.80	AV	L Line	Pass

**PHASE N**


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.186	60.0	10.04	64.2	4.20	Peak	N Line	Pass
1**	0.186	49.2	10.04	54.2	5.00	AV	N Line	Pass
2	0.478	41.9	10.05	56.4	14.50	Peak	N Line	Pass
2**	0.478	27.2	10.05	46.4	19.20	AV	N Line	Pass
3	0.780	37.8	10.05	56.0	18.20	Peak	N Line	Pass
3**	0.780	23.0	10.05	46.0	23.00	AV	N Line	Pass
4	5.342	36.0	10.18	60.0	24.00	Peak	N Line	Pass
4**	5.342	25.2	10.18	50.0	24.80	AV	N Line	Pass
5	5.884	35.9	10.20	60.0	24.10	Peak	N Line	Pass
5**	5.884	27.9	10.20	50.0	22.10	AV	N Line	Pass
6	13.076	36.9	10.40	60.0	23.10	Peak	N Line	Pass
6**	13.076	24.9	10.40	50.0	25.10	AV	N Line	Pass

## A.6 Conducted Spurious Emission and Band Edge (Authorized-band)

Note: Test plots please refer to the document "Annex No.: BL-SZ1810248-604 Data Part 4.pdf".

Test Band	Mode	Channel	Verdict
Band I	802.11a	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(HT20)	Low	Pass
		Middle	Pass
		High	Pass
	802.11ac(HT40)	Low	Pass
		High	Pass
	802.11ac(HT80)	Low	Pass
Band IV	802.11a	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(HT20)	Low	Pass
		Middle	Pass
		High	Pass
	802.11ac(HT40)	Low	Pass
		High	Pass
	802.11ac(HT80)	Low	Pass

## A.7 Radiated Spurious Emissions and Band Edge (Restricted-band)

### A.7.1 Radiated spurious emission

Note <sup>1</sup>: The symbol of “--” in the table which means not application.

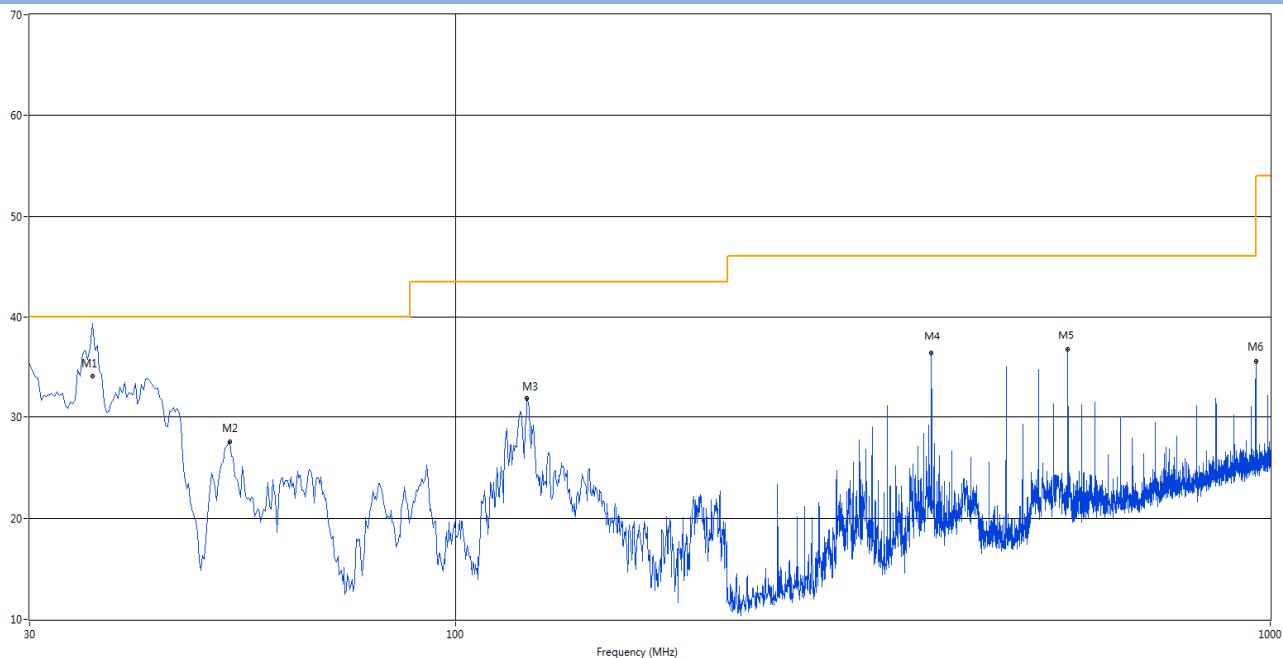
Note <sup>2</sup>: For the test data above 1 GHz, According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note <sup>3</sup>: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note <sup>4</sup>: The EUT is working in the Normal link mode below 1 GHz.

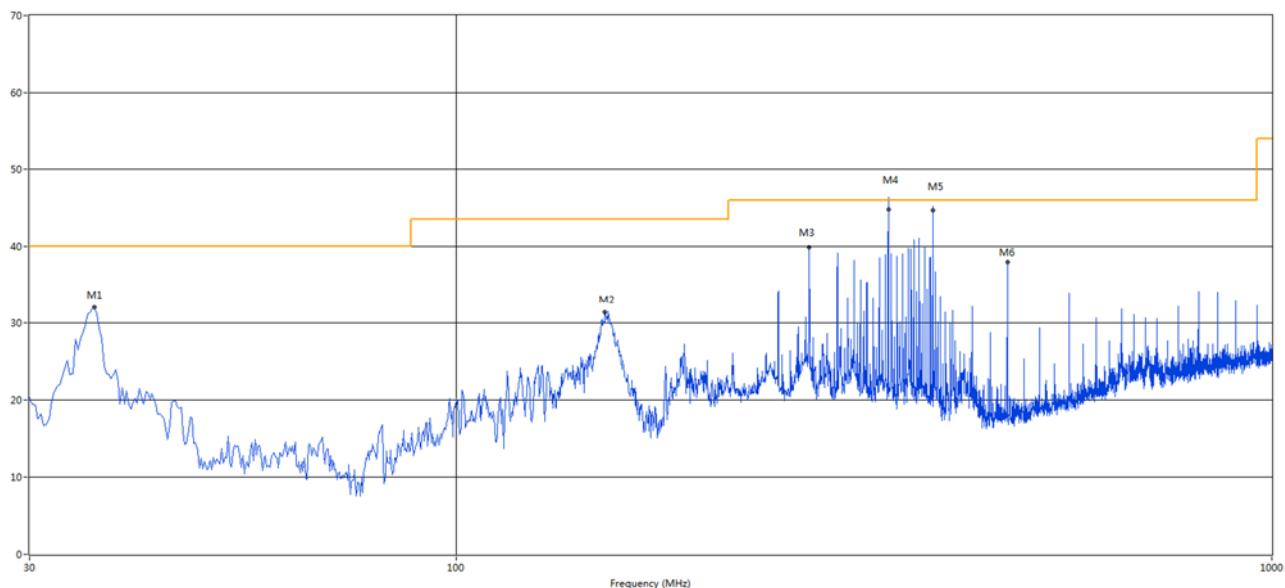
#### Test Data

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	35.700	39.33	-25.04	40.0	0.67	Peak	158.50	120	Vertical	N/A
1*	35.700	34.03	-25.04	40.0	5.97	QP	158.50	120	Vertical	Pass
2	52.795	27.54	-22.23	40.0	12.46	Peak	220.90	100	Vertical	Pass
3	122.393	31.90	-25.98	43.5	11.60	Peak	109.30	100	Vertical	Pass
4	383.807	36.35	-18.56	46.0	9.65	Peak	53.80	100	Vertical	Pass
5	564.470	36.73	-14.65	46.0	9.27	Peak	334.30	100	Vertical	Pass
6	959.987	35.56	-9.13	46.0	10.44	Peak	5.60	100	Vertical	Pass

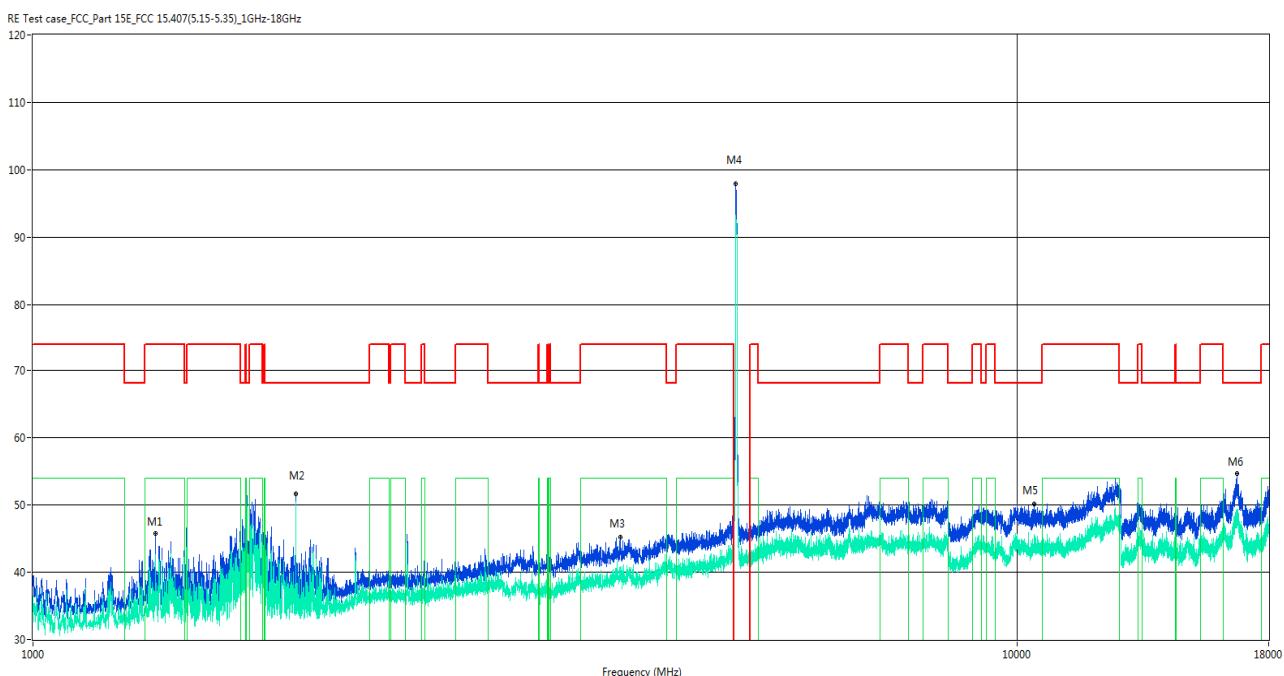
## 30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	36.062	32.00	-24.96	40.0	8.00	Peak	117.30	100	Horizontal	Pass
2	152.220	31.40	-26.88	43.5	12.10	Peak	279.20	100	Horizontal	Pass
3	271.045	39.93	-21.77	46.0	6.07	Peak	31.40	100	Horizontal	Pass
4	338.678	47.03	-19.50	46.0	-1.03	Peak	0.70	103	Horizontal	N/A
4*	338.678	44.62	-19.50	46.0	1.38	QP	0.70	103	Horizontal	Pass
5	383.807	45.47	-18.56	46.0	0.53	Peak	17.60	120	Horizontal	N/A
5*	383.807	44.44	-18.56	46.0	1.56	QP	17.60	120	Horizontal	Pass
6	474.260	38.00	-16.99	46.0	8.00	Peak	14.20	100	Horizontal	Pass

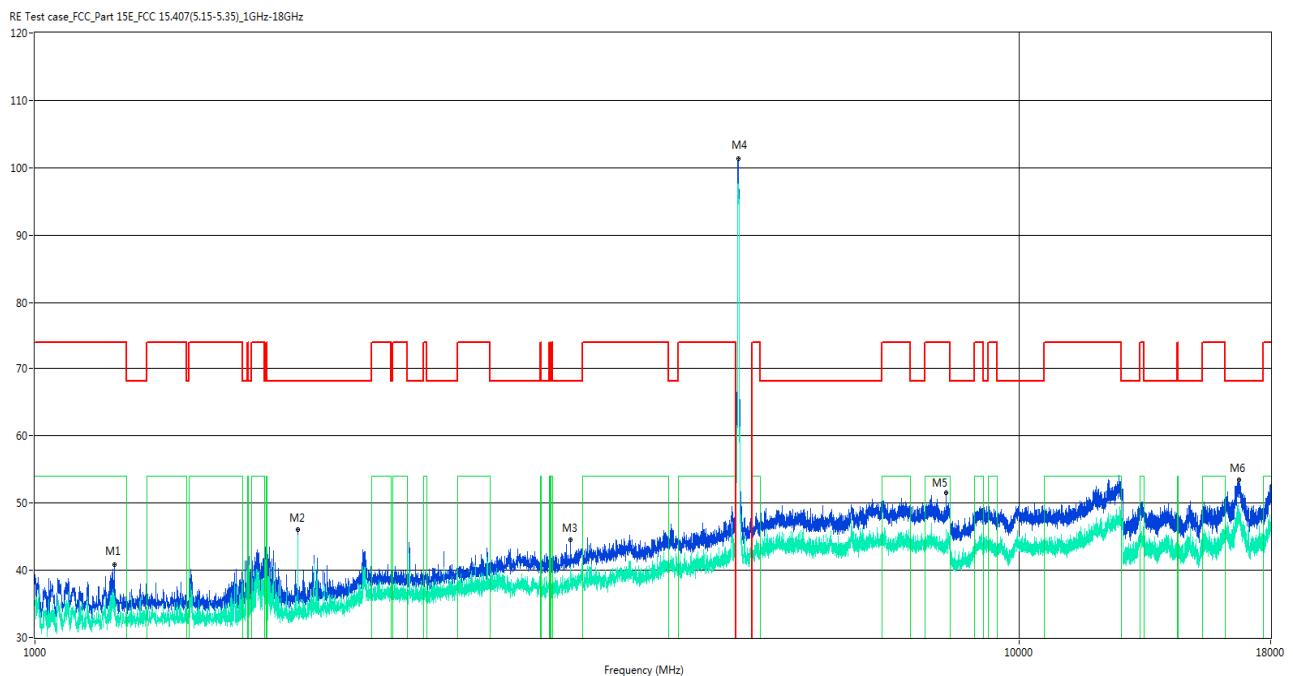
Note: The spurious above 18G is noise only, do not show on the report.

1 GHz to 18 GHz, ANT V Band I 11a Low channel



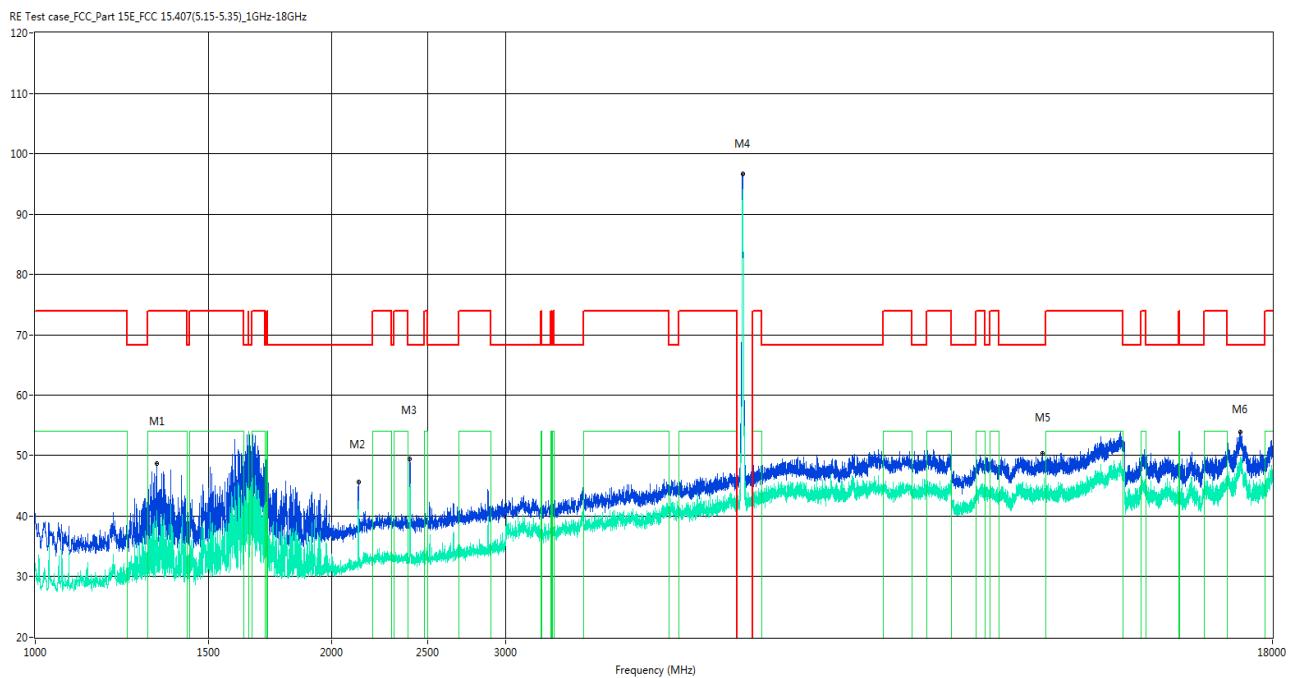
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1331.500	42.6	-14.63	54.0	11.40	AV	48.70	150	Vertical	Pass
1	1331.500	45.73	-14.63	74.0	28.27	Peak	48.70	150	Vertical	Pass
2**	1850.000	50.5	-14.73	--	-50.50	AV	44.50	150	Vertical	N/A
2	1850.000	51.68	-14.73	68.2	16.52	Peak	44.50	150	Vertical	Pass
3**	3953.000	40.8	-3.66	54.0	13.20	AV	112.50	150	Vertical	Pass
3	3953.000	45.24	-3.66	74.0	28.76	Peak	112.50	150	Vertical	Pass
4**	5178.000	92.6	-1.14	--	-92.60	AV	147.90	150	Vertical	N/A
4	5178.000	97.87	-1.14	--	50.03	Peak	147.90	150	Vertical	Pass
5**	10404.000	44.9	15.68	--	-44.90	AV	275.30	150	Vertical	N/A
5	10404.000	50.19	15.68	68.2	18.01	Peak	275.30	150	Vertical	Pass
6**	16708.500	49.0	21.18	--	-49.00	AV	52.30	150	Vertical	N/A
6	16708.500	54.72	21.18	68.2	13.48	Peak	52.30	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11a Low channel



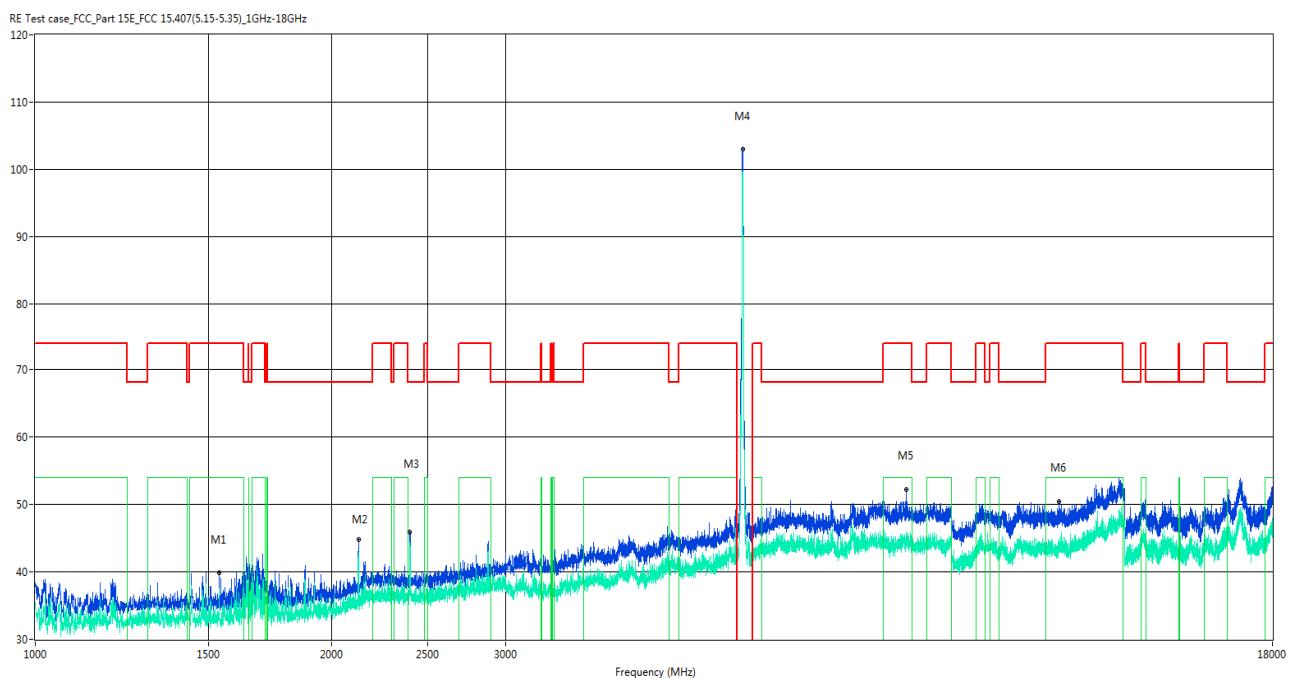
No.	Frequency (MHz)	Results (dB <sub>BV</sub> /m)	Factor (dB)	Limit (dB <sub>BV</sub> /m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1204.500	36.1	-14.58	54.0	17.90	AV	99.20	150	Horizontal	Pass
1	1204.500	40.90	-14.58	74.0	33.10	Peak	99.20	150	Horizontal	Pass
2**	1850.000	45.2	-14.73	--	-45.20	AV	166.40	150	Horizontal	N/A
2	1850.000	46.03	-14.73	68.2	22.17	Peak	166.40	150	Horizontal	Pass
3**	3499.000	37.7	-6.27	--	-37.70	AV	223.30	150	Horizontal	N/A
3	3499.000	44.51	-6.27	68.2	23.69	Peak	223.30	150	Horizontal	Pass
4**	5179.000	96.6	-1.16	--	-96.60	AV	26.90	150	Horizontal	N/A
4	5179.000	101.35	-1.16	--	-74.45	Peak	26.90	150	Horizontal	N/A
5**	8420.250	46.0	16.81	54.0	8.00	AV	299.90	150	Horizontal	Pass
5	8420.250	51.58	16.81	74.0	22.42	Peak	299.90	150	Horizontal	Pass
6**	16700.625	48.8	21.30	--	-48.80	AV	252.40	150	Horizontal	N/A
6	16700.625	53.43	21.30	68.2	14.77	Peak	252.40	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11a Middle channel



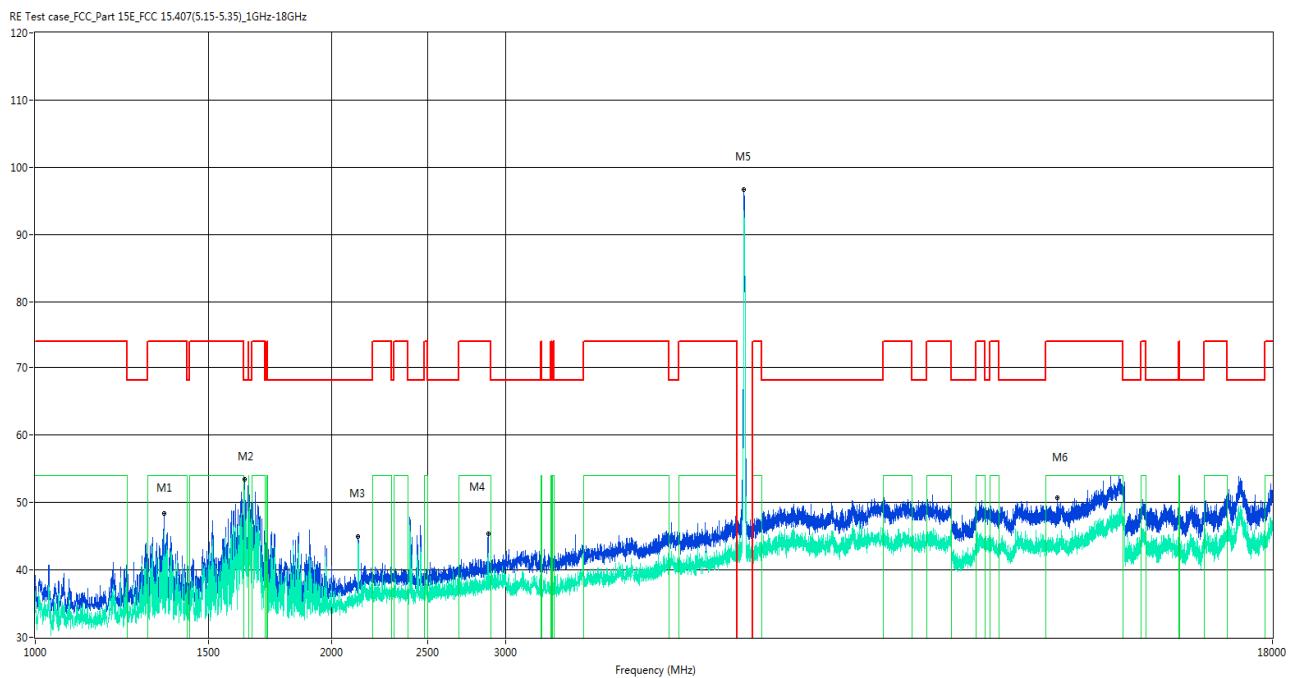
No.	Frequency (MHz)	Results (dB <sub>BuV/m</sub> )	Factor (dB)	Limit (dB <sub>BuV/m</sub> )	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1328.500	32.2	-14.55	54.0	21.80	AV	63.00	150	Vertical	Pass
1	1328.500	48.67	-14.55	74.0	25.33	Peak	63.00	150	Vertical	Pass
2**	2128.500	40.3	-11.64	--	-40.30	AV	105.90	150	Vertical	N/A
2	2128.500	45.55	-11.64	68.2	22.65	Peak	105.90	150	Vertical	Pass
3**	2400.000	44.1	-10.59	--	-44.10	AV	82.40	150	Vertical	N/A
3	2400.000	49.36	-10.59	68.2	18.84	Peak	82.40	150	Vertical	Pass
4**	5223.000	91.7	-0.79	--	-91.70	AV	78.10	150	Vertical	N/A
4	5223.000	96.60	-0.79	--	-18.50	Peak	78.10	150	Vertical	N/A
5**	10511.813	45.2	15.43	--	-45.20	AV	217.40	150	Vertical	N/A
5	10511.813	50.34	15.43	68.2	17.86	Peak	217.40	150	Vertical	Pass
6**	16700.625	48.5	21.30	--	-48.50	AV	12.00	150	Vertical	N/A
6	16700.625	53.82	21.30	68.2	14.38	Peak	12.00	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11a Middle channel



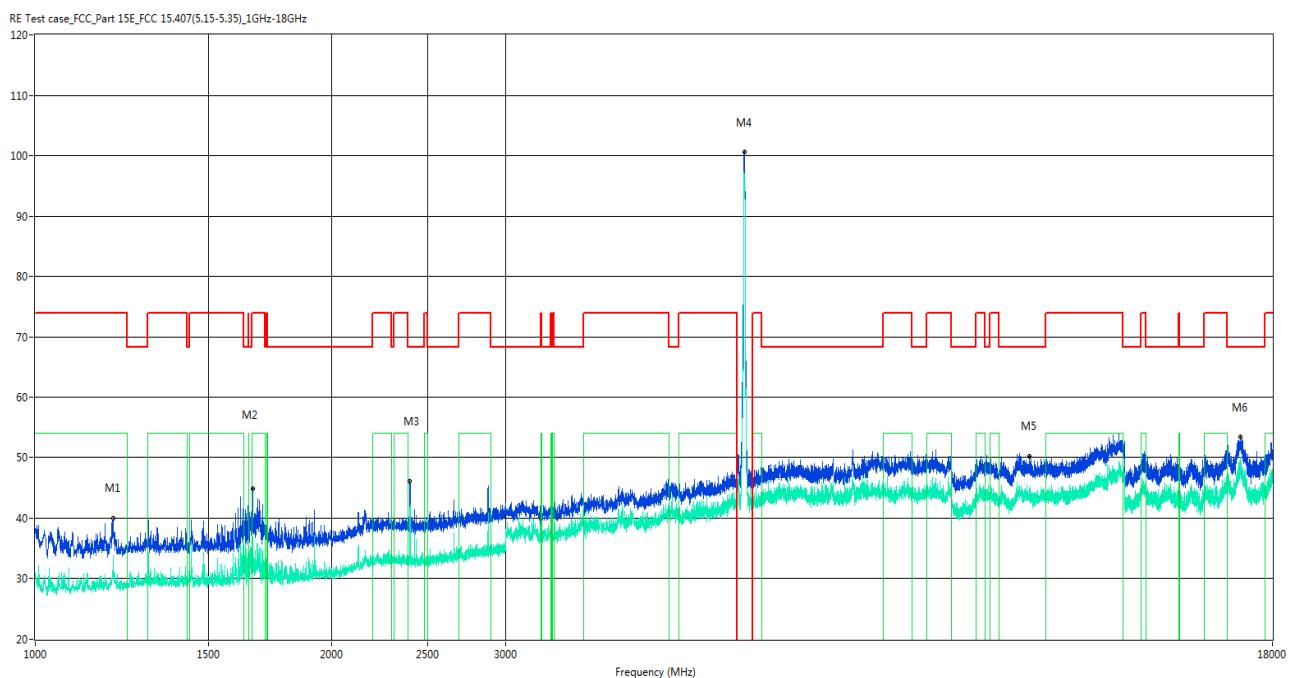
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1536.000	37.0	-15.14	54.0	17.00	AV	106.60	150	Horizontal	Pass
1	1536.000	39.88	-15.14	74.0	34.12	Peak	106.60	150	Horizontal	Pass
2**	2129.000	42.3	-11.52	--	-42.30	AV	27.70	150	Horizontal	N/A
2	2129.000	44.82	-11.52	68.2	23.38	Peak	27.70	150	Horizontal	Pass
3**	2400.000	44.4	-10.59	--	-44.40	AV	94.60	150	Horizontal	N/A
3	2400.000	45.94	-10.59	68.2	22.26	Peak	94.60	150	Horizontal	Pass
4**	5223.000	98.9	-0.79	--	-98.90	AV	2.40	150	Horizontal	N/A
4	5223.000	103.02	-0.79	--	-100.62	Peak	2.40	150	Horizontal	N/A
5**	7645.437	44.1	16.13	54.0	9.90	AV	52.10	150	Horizontal	Pass
5	7645.437	52.22	16.13	74.0	21.78	Peak	52.10	150	Horizontal	Pass
6**	10922.937	43.4	15.49	54.0	10.60	AV	342.40	150	Horizontal	Pass
6	10922.937	50.43	15.49	74.0	23.57	Peak	342.40	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11a High channel



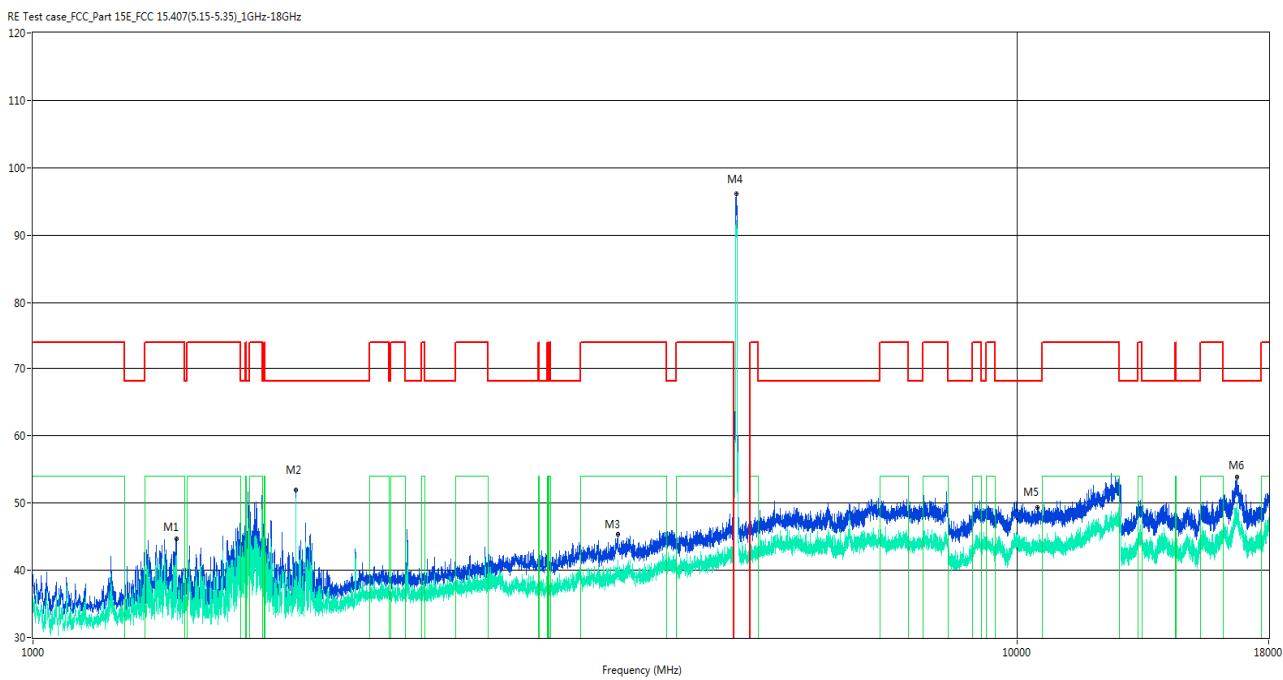
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1350.500	45.8	-14.49	54.0	8.20	AV	52.30	150	Vertical	Pass
1	1350.500	48.33	-14.49	74.0	25.67	Peak	52.30	150	Vertical	Pass
2**	1632.000	50.0	-15.34	--	-50.00	AV	56.00	150	Vertical	N/A
2	1632.000	53.47	-15.34	68.2	14.73	Peak	56.00	150	Vertical	Pass
3**	2124.500	44.1	-11.70	--	-44.10	AV	99.30	150	Vertical	N/A
3	2124.500	45.00	-11.70	68.2	23.20	Peak	99.30	150	Vertical	Pass
4**	2880.000	42.5	-7.72	54.0	11.50	AV	357.80	150	Vertical	Pass
4	2880.000	45.41	-7.72	74.0	28.59	Peak	357.80	150	Vertical	Pass
5**	5237.000	91.6	-1.09	--	-91.60	AV	82.60	150	Vertical	N/A
5	5237.000	96.64	-1.09	--	-14.04	Peak	82.60	150	Vertical	N/A
6**	10898.500	43.3	15.52	54.0	10.70	AV	331.10	150	Vertical	Pass
6	10898.500	50.68	15.52	74.0	23.32	Peak	331.10	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11a High channel



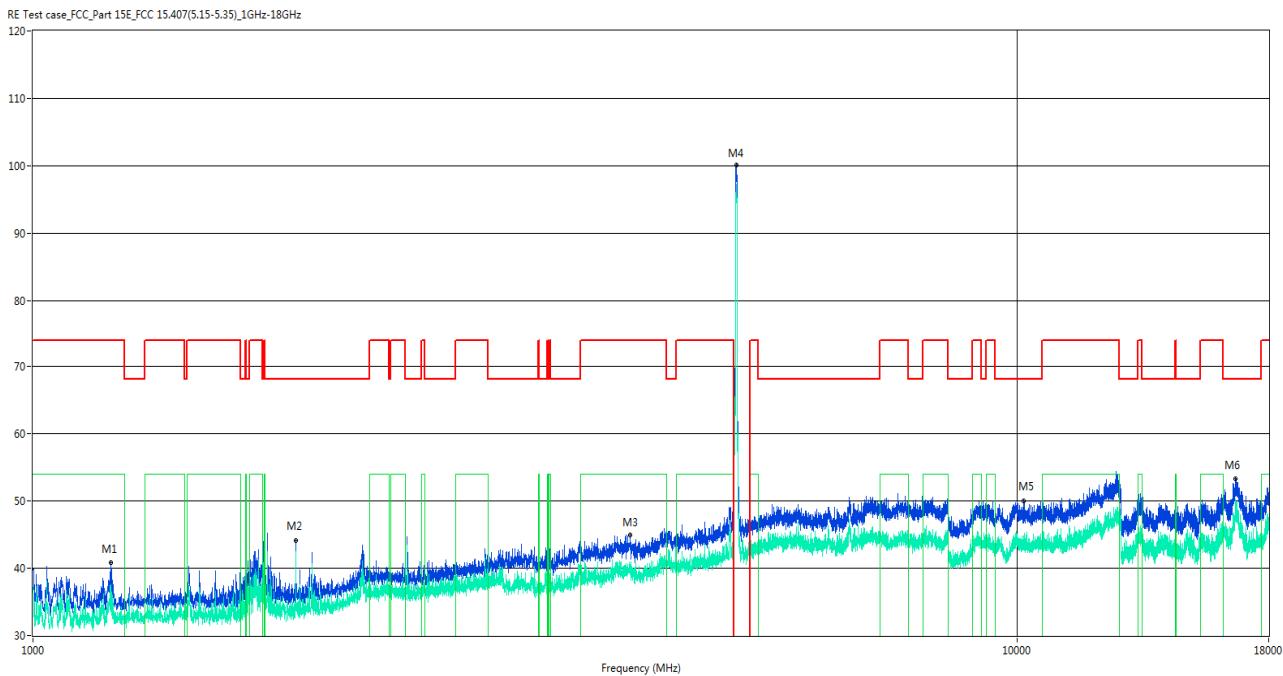
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1200.500	33.9	-14.58	54.0	20.10	AV	95.60	150	Horizontal	Pass
1	1200.500	40.03	-14.58	74.0	33.97	Peak	95.60	150	Horizontal	Pass
2**	1662.500	36.5	-15.74	54.0	17.50	AV	161.70	150	Horizontal	Pass
2	1662.500	44.89	-15.74	74.0	29.11	Peak	161.70	150	Horizontal	Pass
3**	2400.000	41.6	-10.59	--	-41.60	AV	95.60	150	Horizontal	N/A
3	2400.000	46.00	-10.59	68.2	22.20	Peak	95.60	150	Horizontal	Pass
4**	5241.000	94.8	-1.15	--	-94.80	AV	7.60	150	Horizontal	N/A
4	5241.000	100.58	-1.15	--	-92.98	Peak	7.60	150	Horizontal	N/A
5**	10195.562	43.6	15.56	--	-43.60	AV	258.30	150	Horizontal	N/A
5	10195.562	50.13	15.56	68.2	18.07	Peak	258.30	150	Horizontal	Pass
6**	16699.312	48.3	21.28	--	-48.30	AV	5.20	150	Horizontal	N/A
6	16699.312	53.32	21.28	68.2	14.88	Peak	5.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11n20 Low channel



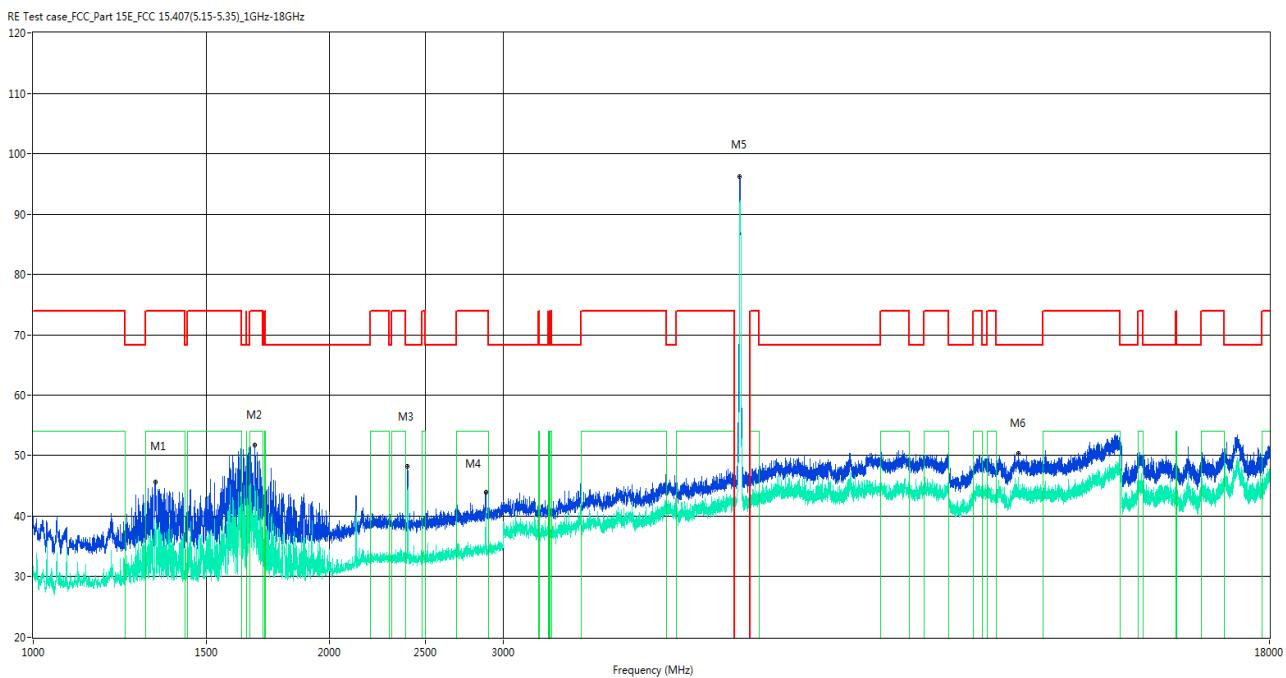
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1398.000	41.8	-14.72	54.0	12.20	AV	71.60	150	Vertical	Pass
1	1398.000	44.72	-14.72	74.0	29.28	Peak	71.60	150	Vertical	Pass
2**	1850.000	50.6	-14.73	--	-50.60	AV	44.70	150	Vertical	N/A
2	1850.000	51.92	-14.73	68.2	16.28	Peak	44.70	150	Vertical	Pass
3**	3928.000	41.6	-4.39	54.0	12.40	AV	359.40	150	Vertical	Pass
3	3928.000	45.31	-4.39	74.0	28.69	Peak	359.40	150	Vertical	Pass
4**	5188.000	92.1	-1.13	--	-92.10	AV	145.90	150	Vertical	N/A
4	5188.000	96.09	-1.13	--	49.81	Peak	145.90	150	Vertical	Pass
5**	10485.937	43.4	15.67	--	-43.40	AV	342.30	150	Vertical	N/A
5	10485.937	49.38	15.67	68.2	18.82	Peak	342.30	150	Vertical	Pass
6**	16704.562	48.3	21.24	--	-48.30	AV	154.70	150	Vertical	N/A
6	16704.562	53.84	21.24	68.2	14.36	Peak	154.70	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11n20 Low channel



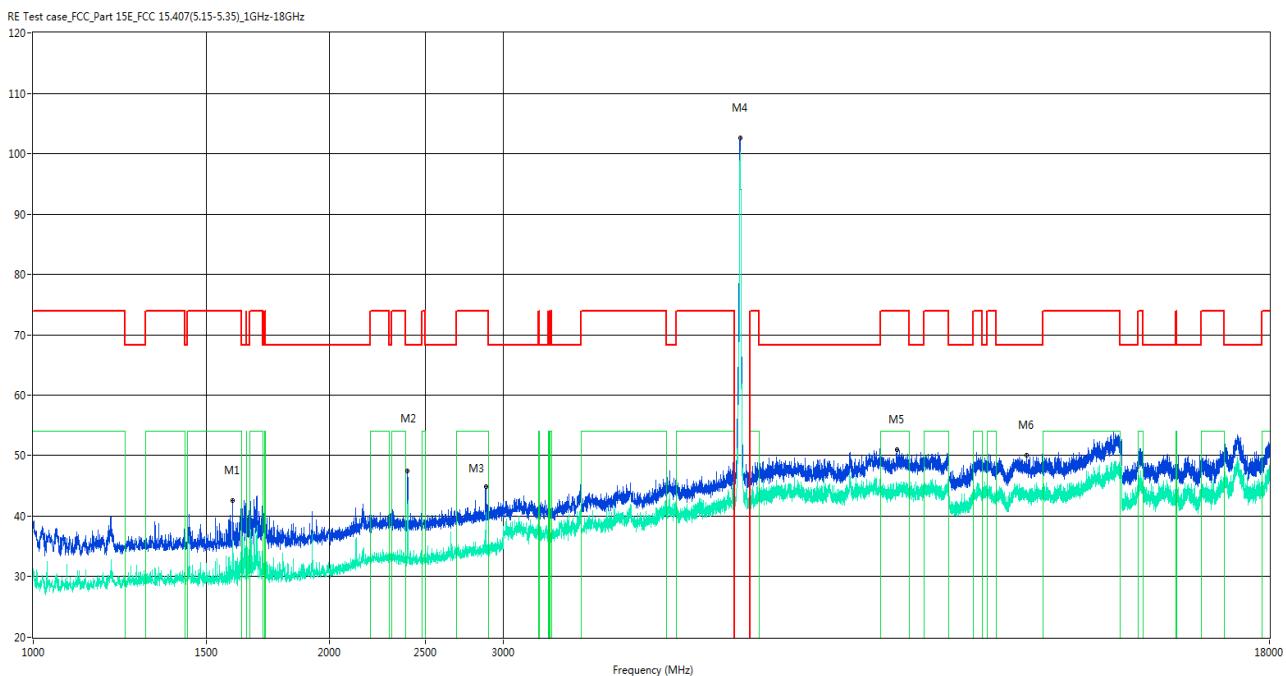
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1200.500	37.6	-14.58	54.0	16.40	AV	94.70	150	Horizontal	Pass
1	1200.500	40.82	-14.58	74.0	33.18	Peak	94.70	150	Horizontal	Pass
2**	1850.000	42.5	-14.73	--	-42.50	AV	169.20	150	Horizontal	N/A
2	1850.000	44.12	-14.73	68.2	24.08	Peak	169.20	150	Horizontal	Pass
3**	4044.000	39.3	-3.76	54.0	14.70	AV	233.20	150	Horizontal	Pass
3	4044.000	44.91	-3.76	74.0	29.09	Peak	233.20	150	Horizontal	Pass
4**	5182.000	96.1	-1.07	--	-96.10	AV	24.00	150	Horizontal	N/A
4	5182.000	100.14	-1.07	--	-76.14	Peak	24.00	150	Horizontal	N/A
5**	10140.937	44.5	15.45	--	-44.50	AV	59.30	150	Horizontal	N/A
5	10140.937	50.05	15.45	68.2	18.15	Peak	59.30	150	Horizontal	Pass
6**	16645.500	47.3	20.67	--	-47.30	AV	240.60	150	Horizontal	N/A
6	16645.500	53.38	20.67	68.2	14.82	Peak	240.60	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11n20 Middle channel



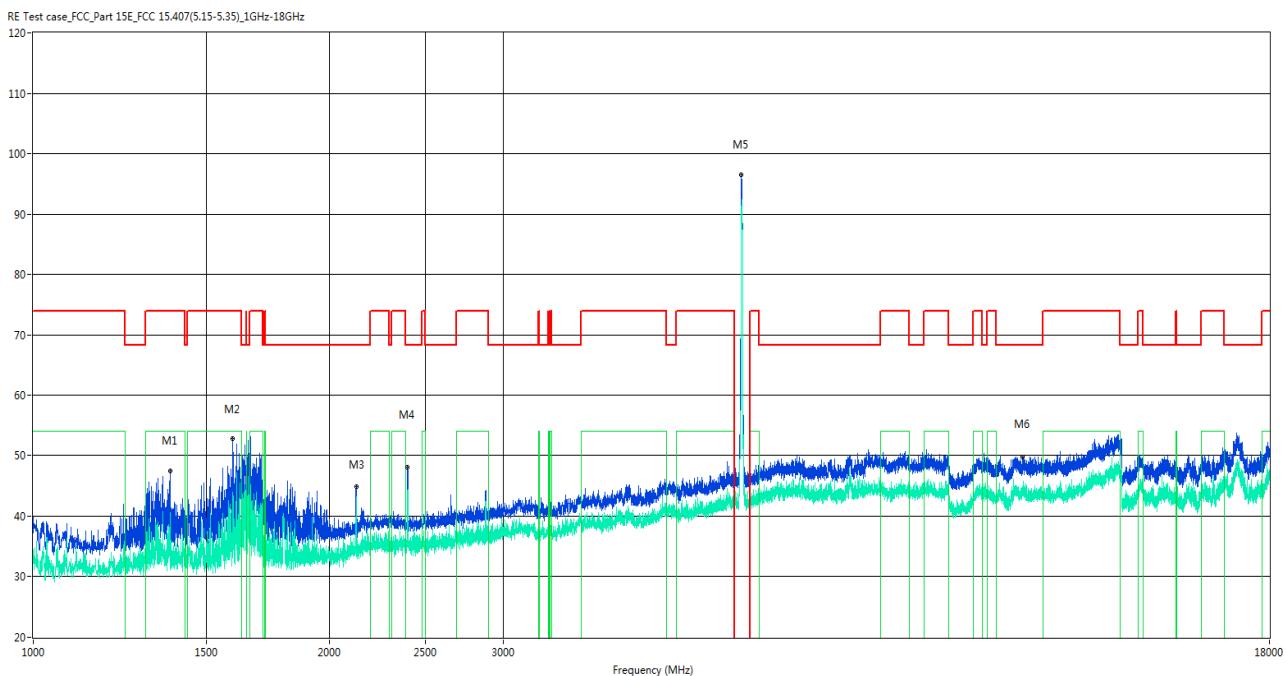
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1330.000	37.7	-14.67	54.0	16.30	AV	55.30	150	Vertical	Pass
1	1330.000	45.56	-14.67	74.0	28.44	Peak	55.30	150	Vertical	Pass
2**	1678.000	36.7	-15.55	54.0	17.30	AV	71.00	150	Vertical	Pass
2	1678.000	51.72	-15.55	74.0	22.28	Peak	71.00	150	Vertical	Pass
3**	2400.000	43.9	-10.59	--	-43.90	AV	243.10	150	Vertical	N/A
3	2400.000	48.23	-10.59	68.2	19.97	Peak	243.10	150	Vertical	Pass
4**	2880.000	39.7	-7.72	54.0	14.30	AV	356.60	150	Vertical	Pass
4	2880.000	43.90	-7.72	74.0	30.10	Peak	356.60	150	Vertical	Pass
5**	5217.000	91.8	-1.10	--	-91.80	AV	73.30	150	Vertical	N/A
5	5217.000	96.28	-1.10	--	-22.98	Peak	73.30	150	Vertical	N/A
6**	10002.938	43.0	16.26	--	-43.00	AV	0.60	150	Vertical	N/A
6	10002.938	50.40	16.26	68.2	17.80	Peak	0.60	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11n20 Middle channel



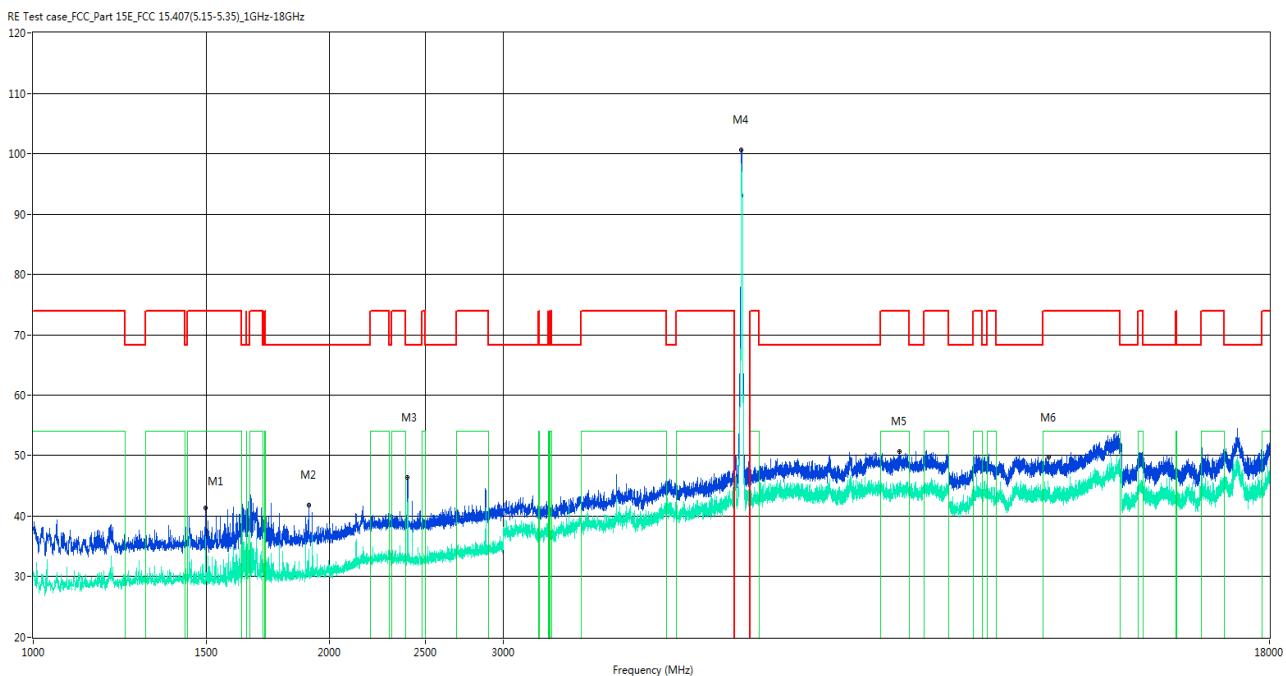
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1594.500	35.6	-15.21	54.0	18.40	AV	84.30	150	Horizontal	Pass
1	1594.500	42.52	-15.21	74.0	31.48	Peak	84.30	150	Horizontal	Pass
2**	2400.000	41.5	-10.59	--	-41.50	AV	107.30	150	Horizontal	N/A
2	2400.000	47.51	-10.59	68.2	20.69	Peak	107.30	150	Horizontal	Pass
3**	2880.000	39.4	-7.72	54.0	14.60	AV	184.20	150	Horizontal	Pass
3	2880.000	44.89	-7.72	74.0	29.11	Peak	184.20	150	Horizontal	Pass
4**	5223.000	98.7	-0.79	--	-98.70	AV	0.30	150	Horizontal	N/A
4	5223.000	102.67	-0.79	--	-102.37	Peak	0.30	150	Horizontal	N/A
5**	7533.313	45.3	16.12	54.0	8.70	AV	93.50	150	Horizontal	Pass
5	7533.313	50.96	16.12	74.0	23.04	Peak	93.50	150	Horizontal	Pass
6**	10202.750	44.0	15.56	--	-44.00	AV	165.20	150	Horizontal	N/A
6	10202.750	50.09	15.56	68.2	18.11	Peak	165.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11n20 High channel



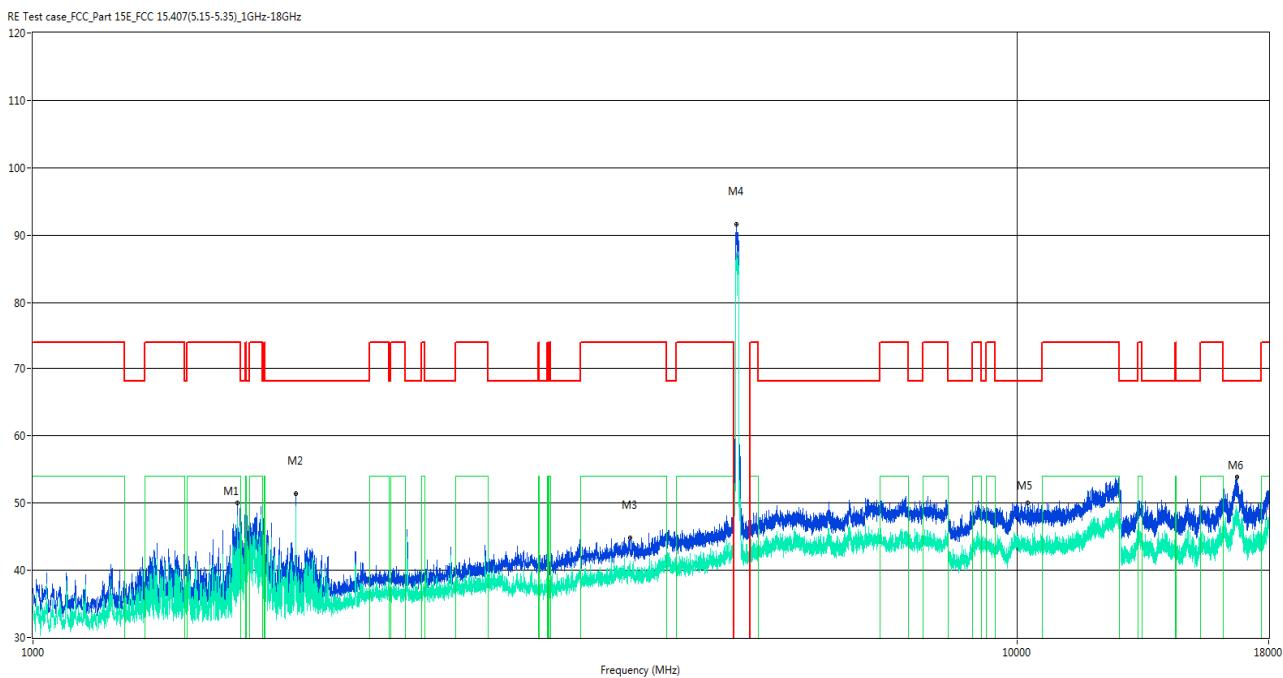
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1377.500	40.5	-14.66	54.0	13.50	AV	68.70	150	Vertical	Pass
1	1377.500	47.41	-14.66	74.0	26.59	Peak	68.70	150	Vertical	Pass
2**	1595.000	43.3	-15.25	54.0	10.70	AV	80.50	150	Vertical	Pass
2	1595.000	52.71	-15.25	74.0	21.29	Peak	80.50	150	Vertical	Pass
3**	2128.500	40.0	-11.64	--	-40.00	AV	96.10	150	Vertical	N/A
3	2128.500	44.89	-11.64	68.2	23.31	Peak	96.10	150	Vertical	Pass
4**	2400.000	44.1	-10.59	--	-44.10	AV	243.20	150	Vertical	N/A
4	2400.000	48.11	-10.59	68.2	20.09	Peak	243.20	150	Vertical	Pass
5**	5238.000	90.4	-1.10	--	-90.40	AV	76.60	150	Vertical	N/A
5	5238.000	96.58	-1.10	--	-19.98	Peak	76.60	150	Vertical	N/A
6**	10109.312	43.4	15.68	--	-43.40	AV	47.40	150	Vertical	N/A
6	10109.312	49.74	15.68	68.2	18.46	Peak	47.40	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11n20 High channel



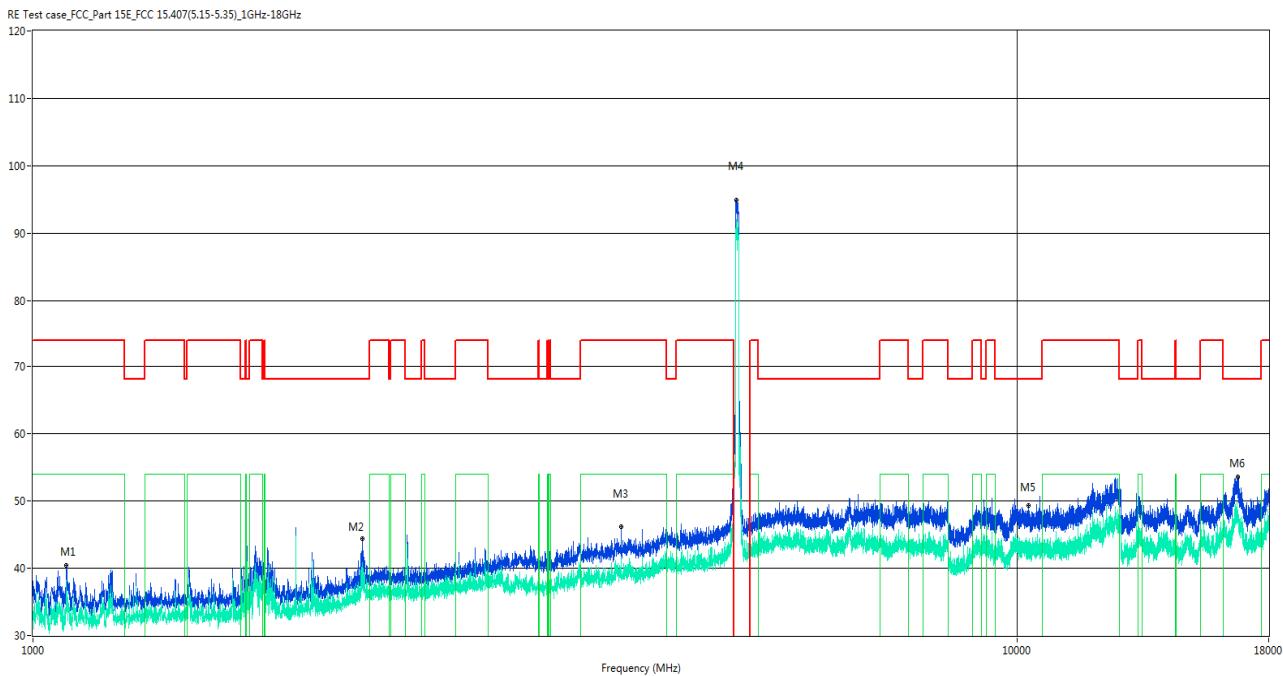
No.	Frequency (MHz)	Results (dB <sub>UV</sub> /m)	Factor (dB)	Limit (dB <sub>UV</sub> /m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1495.000	29.2	-15.38	54.0	24.80	AV	214.50	150	Horizontal	Pass
1	1495.000	41.32	-15.38	74.0	32.68	Peak	214.50	150	Horizontal	Pass
2**	1905.500	30.9	-14.00	--	-30.90	AV	117.50	150	Horizontal	N/A
2	1905.500	41.77	-14.00	68.2	26.43	Peak	117.50	150	Horizontal	Pass
3**	2400.000	41.8	-10.59	--	-41.80	AV	94.00	150	Horizontal	N/A
3	2400.000	46.36	-10.59	68.2	21.84	Peak	94.00	150	Horizontal	Pass
4**	5237.000	96.5	-1.09	--	-96.50	AV	1.40	150	Horizontal	N/A
4	5237.000	100.58	-1.09	--	-99.18	Peak	1.40	150	Horizontal	N/A
5**	7577.875	44.7	16.19	54.0	9.30	AV	132.10	150	Horizontal	Pass
5	7577.875	50.62	16.19	74.0	23.38	Peak	132.10	150	Horizontal	Pass
6**	10741.812	44.7	15.90	54.0	9.30	AV	173.20	150	Horizontal	Pass
6	10741.812	49.79	15.90	74.0	24.21	Peak	173.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11n40 Low channel



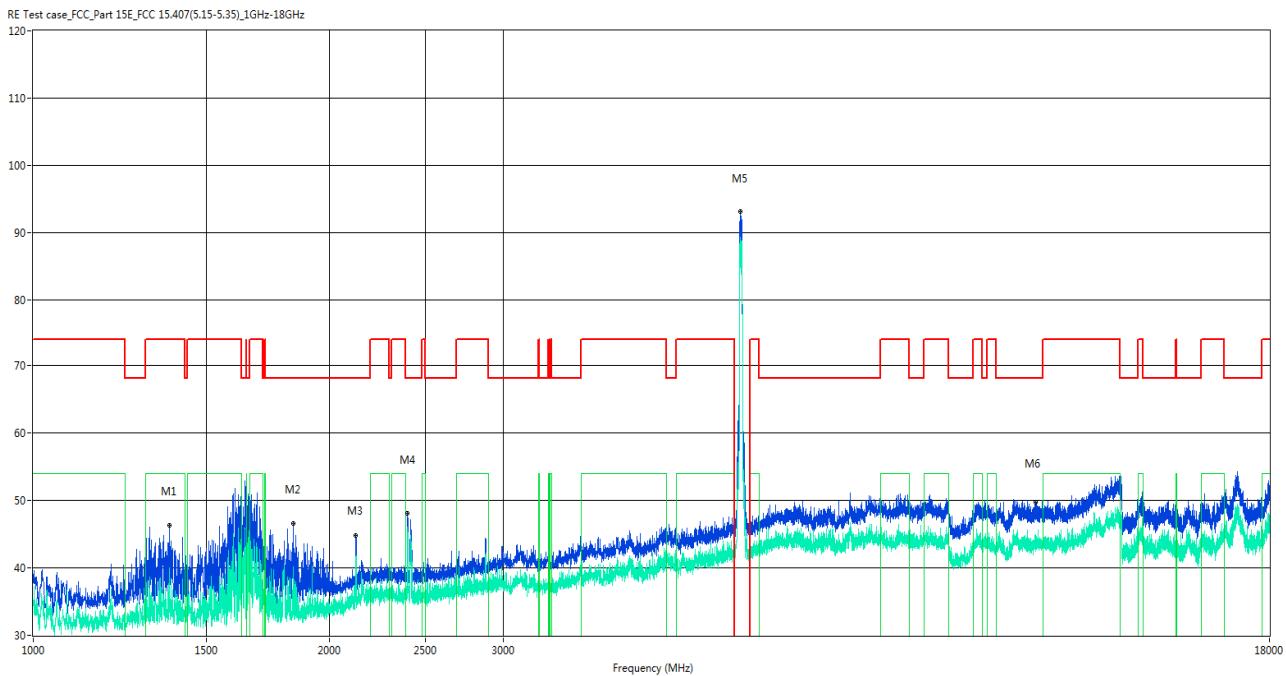
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1613.500	48.2	-15.41	54.0	5.80	AV	71.40	150	Vertical	Pass
1	1613.500	49.99	-15.41	74.0	24.01	Peak	71.40	150	Vertical	Pass
2**	1850.000	49.5	-14.73	--	-49.50	AV	41.00	150	Vertical	N/A
2	1850.000	51.33	-14.73	68.2	16.87	Peak	41.00	150	Vertical	Pass
3**	4039.000	39.5	-3.70	54.0	14.50	AV	155.80	150	Vertical	Pass
3	4039.000	44.82	-3.70	74.0	29.18	Peak	155.80	150	Vertical	Pass
4**	5188.000	87.3	-1.13	--	-87.30	AV	146.80	150	Vertical	N/A
4	5188.000	91.55	-1.13	--	55.25	Peak	146.80	150	Vertical	Pass
5**	10237.250	43.5	15.46	--	-43.50	AV	344.00	150	Vertical	N/A
5	10237.250	50.01	15.46	68.2	18.19	Peak	344.00	150	Vertical	Pass
6**	16704.562	48.0	21.24	--	-48.00	AV	310.90	150	Vertical	N/A
6	16704.562	53.86	21.24	68.2	14.34	Peak	310.90	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11n40 Low channel



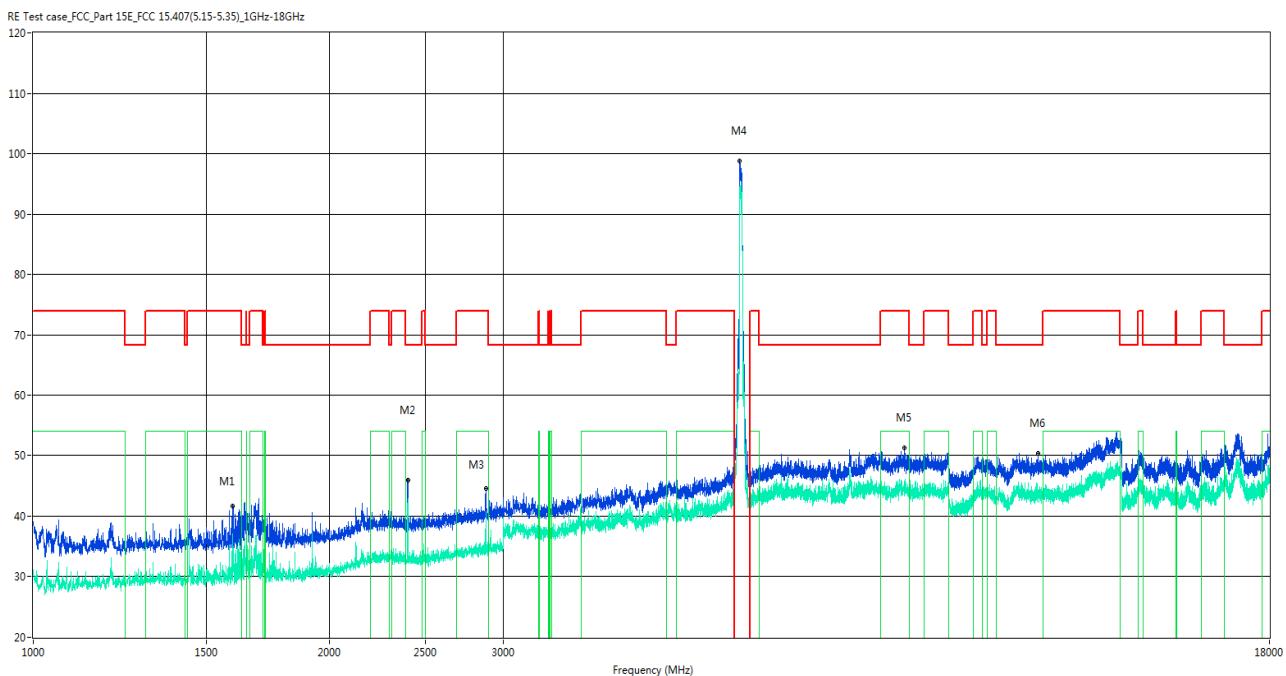
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1081.500	38.2	-14.49	54.0	15.80	AV	30.60	150	Horizontal	Pass
1	1081.500	40.42	-14.49	74.0	33.58	Peak	30.60	150	Horizontal	Pass
2**	2160.500	40.8	-11.64	--	-40.80	AV	67.60	150	Horizontal	N/A
2	2160.500	44.46	-11.64	68.2	23.74	Peak	67.60	150	Horizontal	Pass
3**	3958.000	38.8	-3.68	54.0	15.20	AV	0.60	150	Horizontal	Pass
3	3958.000	46.15	-3.68	74.0	27.85	Peak	0.60	150	Horizontal	Pass
4**	5183.000	91.1	-1.07	--	-91.10	AV	30.30	150	Horizontal	N/A
4	5183.000	94.96	-1.07	--	-64.66	Peak	30.30	150	Horizontal	N/A
5**	10261.687	43.4	15.49	--	-43.40	AV	308.20	150	Horizontal	N/A
5	10261.687	49.30	15.49	68.2	18.90	Peak	308.20	150	Horizontal	Pass
6**	16742.625	47.0	20.37	--	-47.00	AV	105.20	150	Horizontal	N/A
6	16742.625	53.53	20.37	68.2	14.67	Peak	105.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11n40 High channel



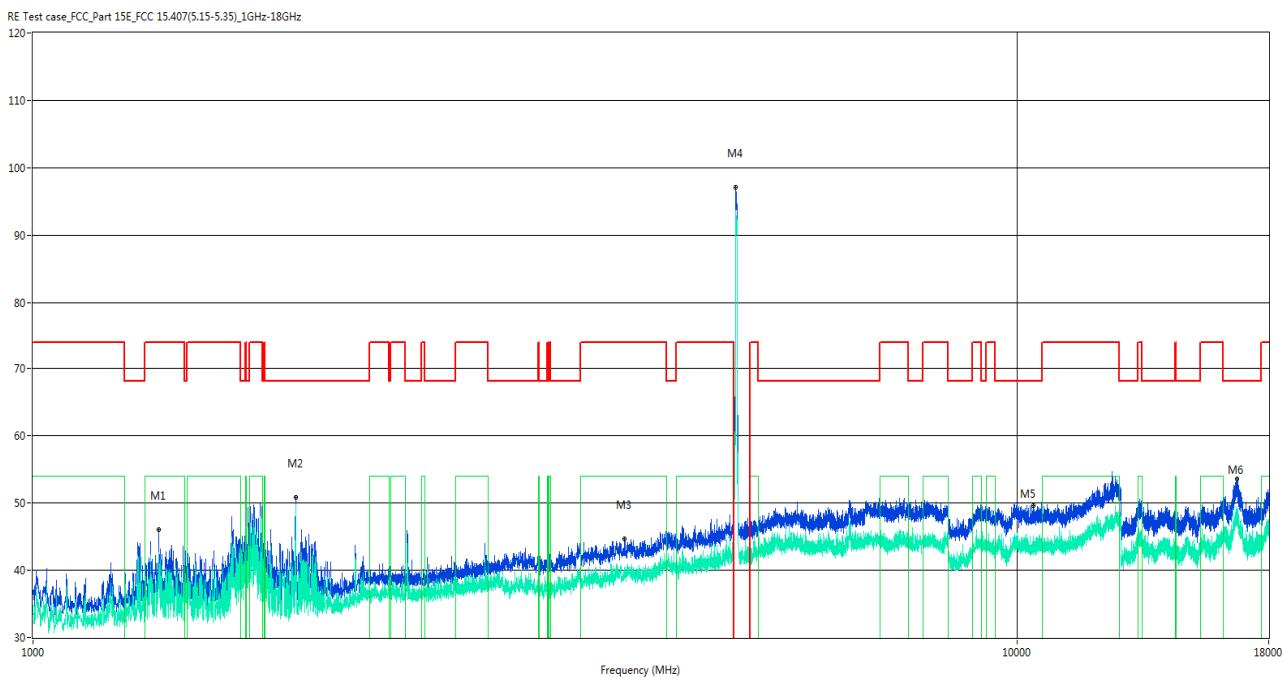
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1375.500	40.1	-14.87	54.0	13.90	AV	86.80	150	Vertical	Pass
1	1375.500	46.34	-14.87	74.0	27.66	Peak	86.80	150	Vertical	Pass
2**	1838.500	40.1	-14.88	--	-40.10	AV	63.00	150	Vertical	N/A
2	1838.500	46.67	-14.88	68.2	21.53	Peak	63.00	150	Vertical	Pass
3**	2124.500	39.8	-11.70	--	-39.80	AV	102.20	150	Vertical	N/A
3	2124.500	44.78	-11.70	68.2	23.42	Peak	102.20	150	Vertical	Pass
4**	2400.000	46.1	-10.59	--	-46.10	AV	79.00	150	Vertical	N/A
4	2400.000	48.17	-10.59	68.2	20.03	Peak	79.00	150	Vertical	Pass
5**	5227.000	87.1	-0.87	--	-87.10	AV	73.40	150	Vertical	N/A
5	5227.000	93.10	-0.87	--	-19.70	Peak	73.40	150	Vertical	N/A
6**	10424.125	43.7	15.78	--	-43.70	AV	1.80	150	Vertical	N/A
6	10424.125	49.69	15.78	68.2	18.51	Peak	1.80	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11n40 High channel



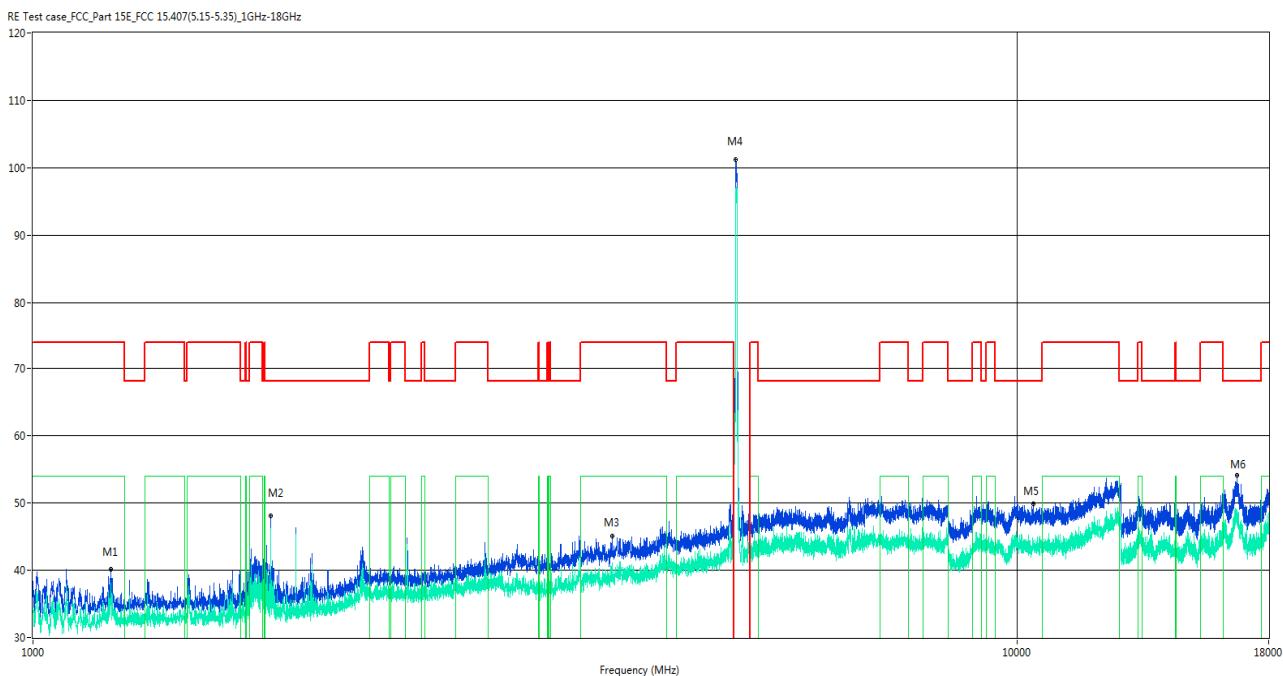
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1594.500	31.1	-15.21	54.0	22.90	AV	94.40	150	Horizontal	Pass
1	1594.500	41.72	-15.21	74.0	32.28	Peak	94.40	150	Horizontal	Pass
2**	2402.000	41.5	-10.48	--	-41.50	AV	26.70	150	Horizontal	N/A
2	2402.000	45.96	-10.48	68.2	22.24	Peak	26.70	150	Horizontal	Pass
3**	2880.500	40.8	-7.75	54.0	13.20	AV	187.00	150	Horizontal	Pass
3	2880.500	44.61	-7.75	74.0	29.39	Peak	187.00	150	Horizontal	Pass
4**	5217.000	94.3	-1.10	--	-94.30	AV	357.60	150	Horizontal	N/A
4	5217.000	98.77	-1.10	--	258.83	Peak	357.60	150	Horizontal	Pass
5**	7672.750	44.2	16.72	54.0	9.80	AV	175.70	150	Horizontal	Pass
5	7672.750	51.19	16.72	74.0	22.81	Peak	175.70	150	Horizontal	Pass
6**	10481.625	43.1	15.76	--	-43.10	AV	310.20	150	Horizontal	N/A
6	10481.625	50.33	15.76	68.2	17.87	Peak	310.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11ac20 Low channel



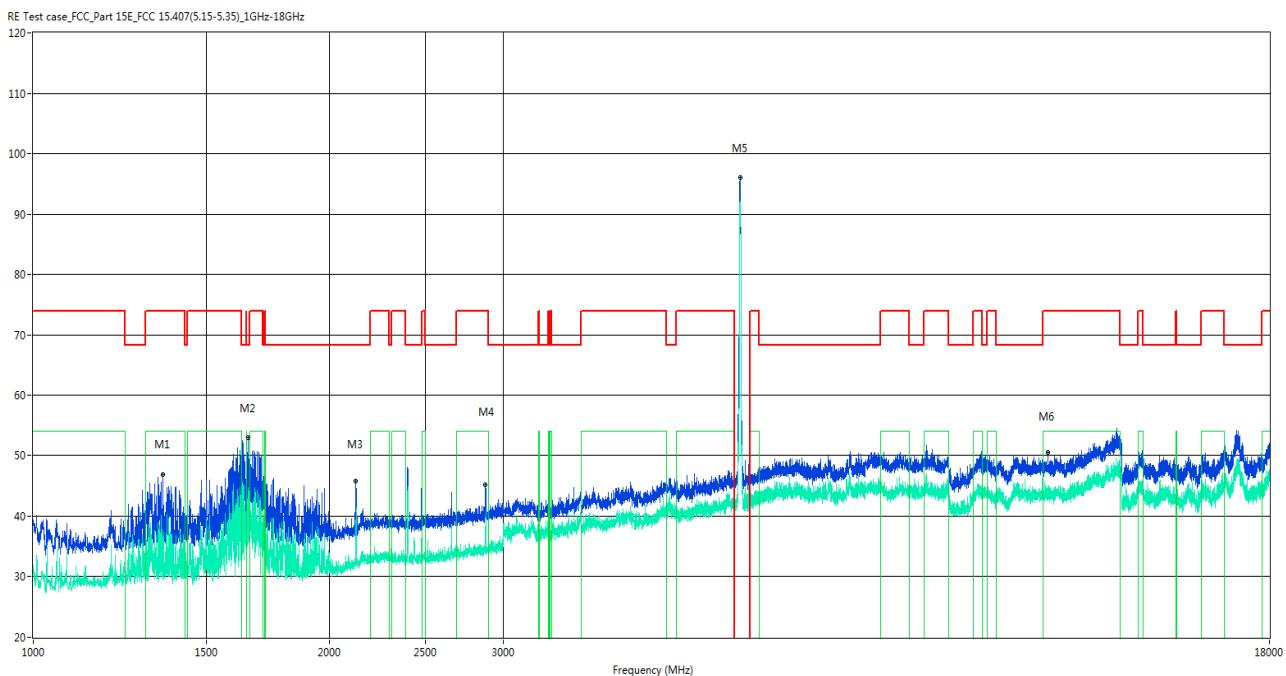
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1343.000	41.2	-14.58	54.0	12.80	AV	38.60	150	Vertical	Pass
1	1343.000	46.08	-14.58	74.0	27.92	Peak	38.60	150	Vertical	Pass
2**	1850.000	49.7	-14.73	--	-49.70	AV	42.50	150	Vertical	N/A
2	1850.000	50.88	-14.73	68.2	17.32	Peak	42.50	150	Vertical	Pass
3**	3991.000	40.4	-3.92	54.0	13.60	AV	118.70	150	Vertical	Pass
3	3991.000	44.70	-3.92	74.0	29.30	Peak	118.70	150	Vertical	Pass
4**	5177.000	92.3	-1.09	--	-92.30	AV	149.50	150	Vertical	N/A
4	5177.000	97.15	-1.09	--	52.35	Peak	149.50	150	Vertical	Pass
5**	10375.250	43.3	15.56	--	-43.30	AV	106.40	150	Vertical	N/A
5	10375.250	49.62	15.56	68.2	18.58	Peak	106.40	150	Vertical	Pass
6**	16711.125	49.0	21.09	--	-49.00	AV	0.00	150	Vertical	N/A
6	16711.125	53.53	21.09	68.2	14.67	Peak	0.00	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11ac20 Low channel



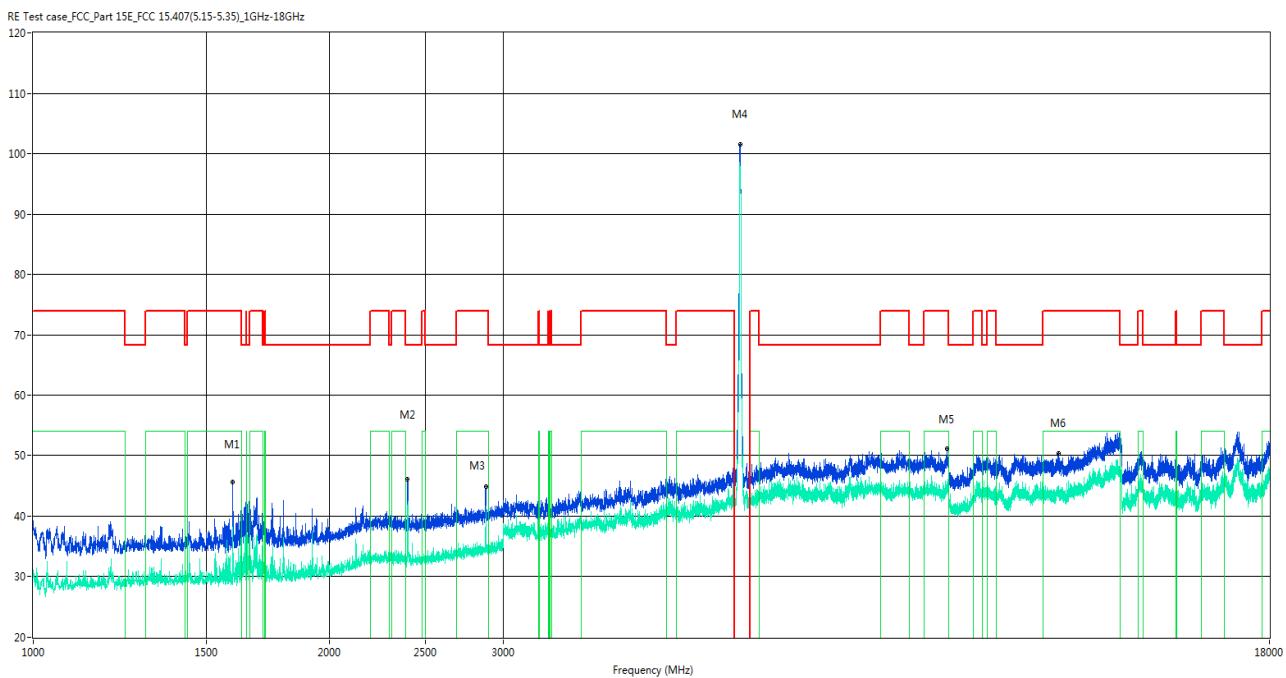
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1200.000	37.7	-14.55	54.0	16.30	AV	121.70	150	Horizontal	Pass
1	1200.000	40.11	-14.55	74.0	33.89	Peak	121.70	150	Horizontal	Pass
2**	1743.500	46.2	-15.39	--	-46.20	AV	308.30	150	Horizontal	N/A
2	1743.500	48.15	-15.39	68.2	20.05	Peak	308.30	150	Horizontal	Pass
3**	3878.000	38.4	-4.82	54.0	15.60	AV	159.10	150	Horizontal	Pass
3	3878.000	45.09	-4.82	74.0	28.91	Peak	159.10	150	Horizontal	Pass
4**	5177.000	95.8	-1.09	--	-95.80	AV	357.20	150	Horizontal	N/A
4	5177.000	101.21	-1.09	--	255.99	Peak	357.20	150	Horizontal	Pass
5**	10375.250	43.5	15.56	--	-43.50	AV	132.00	150	Horizontal	N/A
5	10375.250	49.89	15.56	68.2	18.31	Peak	132.00	150	Horizontal	Pass
6**	16701.938	48.8	21.28	--	-48.80	AV	268.40	150	Horizontal	N/A
6	16701.938	54.16	21.28	68.2	14.04	Peak	268.40	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11ac20 Middle channel



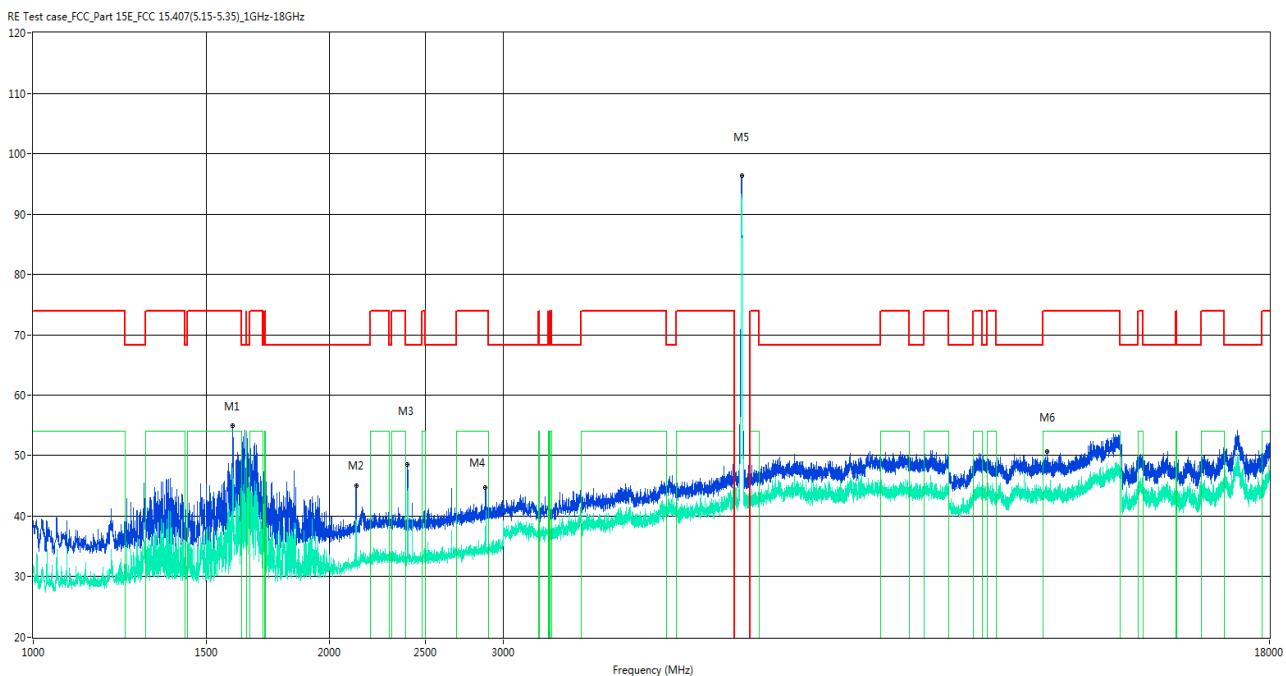
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1355.000	35.6	-14.56	54.0	18.40	AV	62.00	150	Vertical	Pass
1	1355.000	46.88	-14.56	74.0	27.12	Peak	62.00	150	Vertical	Pass
2**	1653.000	44.6	-15.85	--	-44.60	AV	62.00	150	Vertical	N/A
2	1653.000	52.87	-15.85	68.2	15.33	Peak	62.00	150	Vertical	Pass
3**	2127.000	36.3	-11.88	--	-36.30	AV	97.80	150	Vertical	N/A
3	2127.000	45.70	-11.88	68.2	22.50	Peak	97.80	150	Vertical	Pass
4**	2879.500	35.9	-7.69	54.0	18.10	AV	355.50	150	Vertical	Pass
4	2879.500	45.16	-7.69	74.0	28.84	Peak	355.50	150	Vertical	Pass
5**	5223.000	92.1	-0.79	--	-92.10	AV	73.80	150	Vertical	N/A
5	5223.000	96.02	-0.79	--	-22.22	Peak	73.80	150	Vertical	N/A
6**	10723.125	43.9	16.07	54.0	10.10	AV	172.50	150	Vertical	Pass
6	10723.125	50.47	16.07	74.0	23.53	Peak	172.50	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11ac20 Middle channel



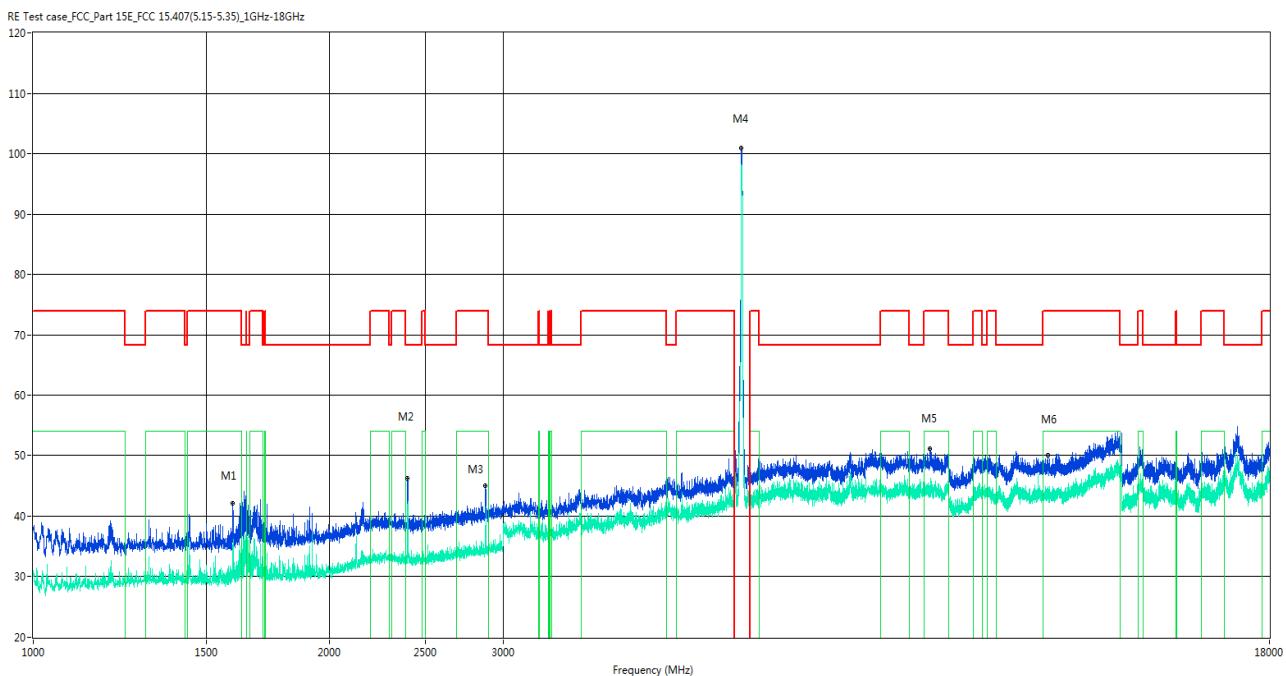
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1594.000	36.1	-15.18	54.0	17.90	AV	163.10	150	Horizontal	Pass
1	1594.000	45.54	-15.18	74.0	28.46	Peak	163.10	150	Horizontal	Pass
2**	2400.000	41.1	-10.59	--	-41.10	AV	104.30	150	Horizontal	N/A
2	2400.000	46.12	-10.59	68.2	22.08	Peak	104.30	150	Horizontal	Pass
3**	2880.500	41.6	-7.75	54.0	12.40	AV	187.30	150	Horizontal	Pass
3	2880.500	44.85	-7.75	74.0	29.15	Peak	187.30	150	Horizontal	Pass
4**	5223.000	97.9	-0.79	--	-97.90	AV	8.60	150	Horizontal	N/A
4	5223.000	101.52	-0.79	--	-92.92	Peak	8.60	150	Horizontal	N/A
5**	8466.250	45.4	17.82	54.0	8.60	AV	65.00	150	Horizontal	Pass
5	8466.250	51.03	17.82	74.0	22.97	Peak	65.00	150	Horizontal	Pass
6**	10984.750	43.8	16.08	54.0	10.20	AV	360.00	150	Horizontal	Pass
6	10984.750	50.29	16.08	74.0	23.71	Peak	360.00	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11ac20 High channel



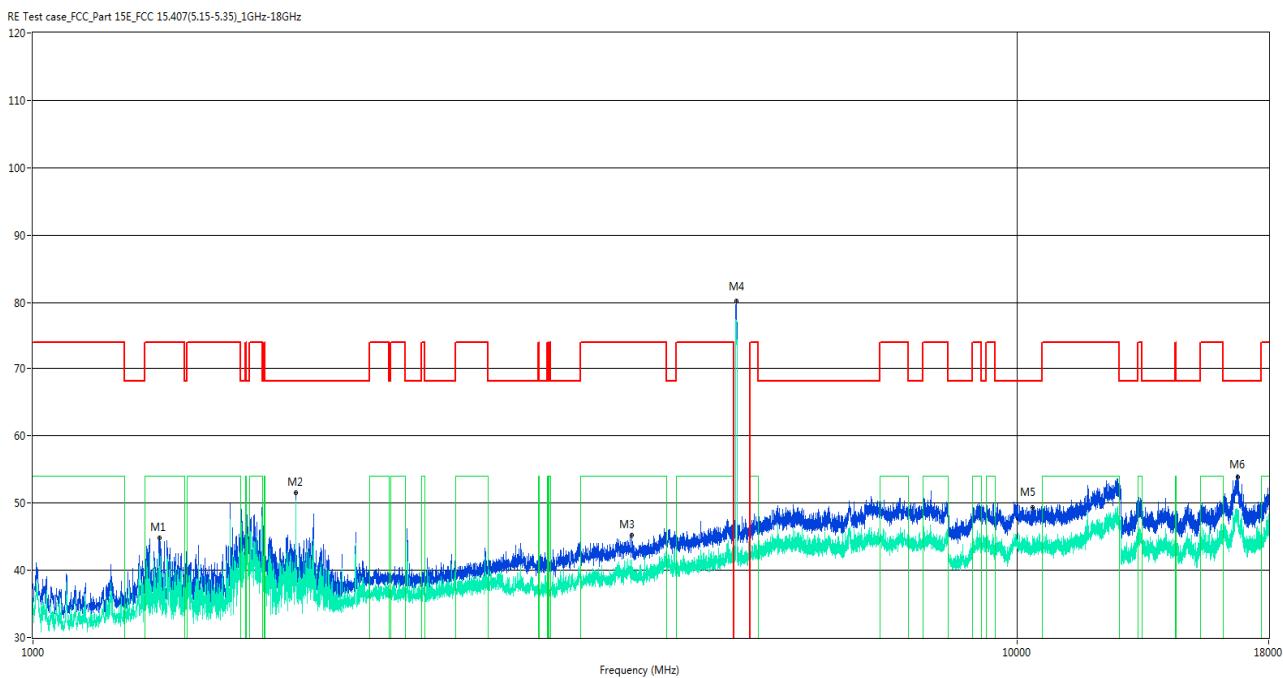
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1594.500	37.4	-15.21	54.0	16.60	AV	77.70	150	Vertical	Pass
1	1594.500	54.94	-15.21	74.0	19.06	Peak	77.70	150	Vertical	Pass
2**	2127.500	39.3	-11.89	--	-39.30	AV	92.60	150	Vertical	N/A
2	2127.500	44.99	-11.89	68.2	23.21	Peak	92.60	150	Vertical	Pass
3**	2400.000	43.8	-10.59	--	-43.80	AV	242.90	150	Vertical	N/A
3	2400.000	48.50	-10.59	68.2	19.70	Peak	242.90	150	Vertical	Pass
4**	2879.500	36.9	-7.69	54.0	17.10	AV	350.70	150	Vertical	Pass
4	2879.500	44.69	-7.69	74.0	29.31	Peak	350.70	150	Vertical	Pass
5**	5243.000	92.7	-1.11	--	-92.70	AV	74.50	150	Vertical	N/A
5	5243.000	96.30	-1.11	--	-21.80	Peak	74.50	150	Vertical	N/A
6**	10705.875	44.7	16.06	54.0	9.30	AV	157.80	150	Vertical	Pass
6	10705.875	50.66	16.06	74.0	23.34	Peak	157.80	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11ac20 High channel



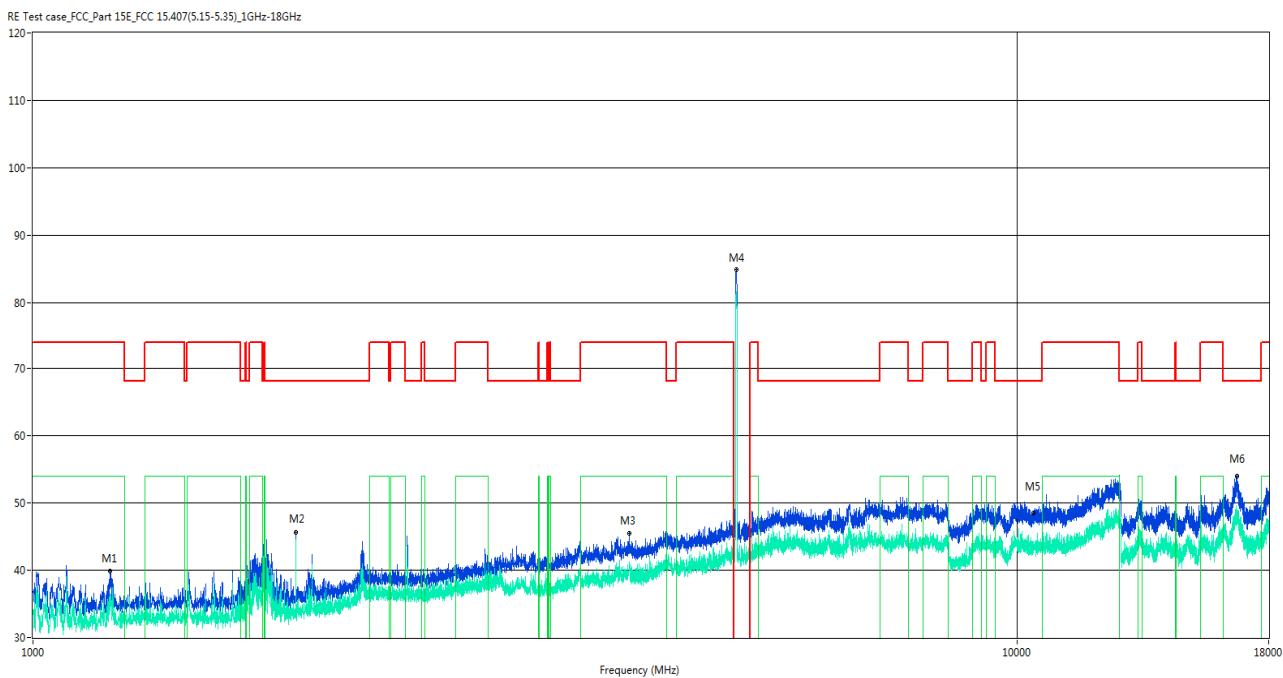
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1594.500	31.0	-15.21	54.0	23.00	AV	78.70	150	Horizontal	Pass
1	1594.500	42.12	-15.21	74.0	31.88	Peak	78.70	150	Horizontal	Pass
2**	2400.000	41.6	-10.59	--	-41.60	AV	105.90	150	Horizontal	N/A
2	2400.000	46.17	-10.59	68.2	22.03	Peak	105.90	150	Horizontal	Pass
3**	2879.500	36.9	-7.69	54.0	17.10	AV	190.70	150	Horizontal	Pass
3	2879.500	44.98	-7.69	74.0	29.02	Peak	190.70	150	Horizontal	Pass
4**	5239.000	97.0	-1.12	--	-97.00	AV	357.70	150	Horizontal	N/A
4	5239.000	100.88	-1.12	--	256.82	Peak	357.70	150	Horizontal	Pass
5**	8134.188	44.0	16.78	54.0	10.00	AV	57.40	150	Horizontal	Pass
5	8134.188	51.06	16.78	74.0	22.94	Peak	57.40	150	Horizontal	Pass
6**	10727.437	43.7	16.02	54.0	10.30	AV	135.50	150	Horizontal	Pass
6	10727.437	50.01	16.02	74.0	23.99	Peak	135.50	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11ac40 Low channel



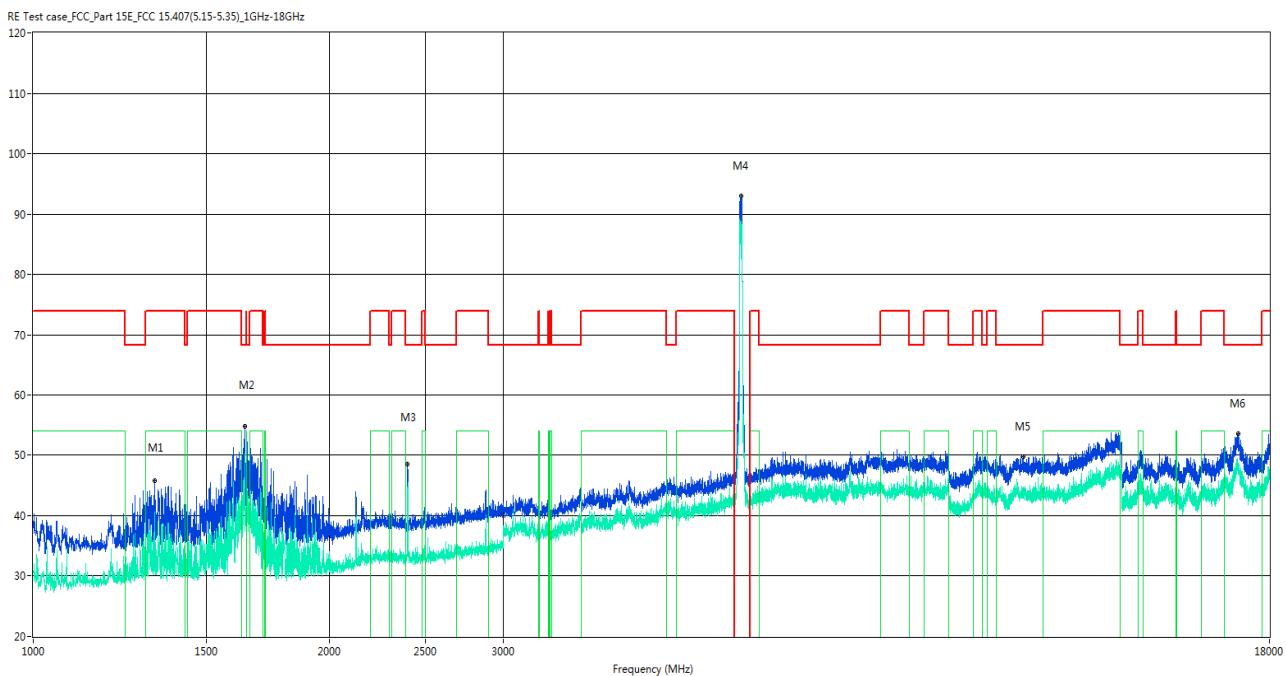
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1345.500	40.6	-14.58	54.0	13.40	AV	81.90	150	Vertical	Pass
1	1345.500	44.78	-14.58	74.0	29.22	Peak	81.90	150	Vertical	Pass
2**	1850.000	50.4	-14.73	--	-50.40	AV	43.20	150	Vertical	N/A
2	1850.000	51.56	-14.73	68.2	16.64	Peak	43.20	150	Vertical	Pass
3**	4059.000	39.7	-3.66	54.0	14.30	AV	247.70	150	Vertical	Pass
3	4059.000	45.19	-3.66	74.0	28.81	Peak	247.70	150	Vertical	Pass
4**	5182.000	75.8	-1.07	--	-75.80	AV	149.80	150	Vertical	N/A
4	5182.000	80.20	-1.07	--	69.60	Peak	149.80	150	Vertical	Pass
5**	10366.625	43.7	15.57	--	-43.70	AV	360.00	150	Vertical	N/A
5	10366.625	49.29	15.57	68.2	18.91	Peak	360.00	150	Vertical	Pass
6**	16734.750	47.7	20.44	--	-47.70	AV	203.90	150	Vertical	N/A
6	16734.750	53.92	20.44	68.2	14.28	Peak	203.90	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11ac40 Low channel



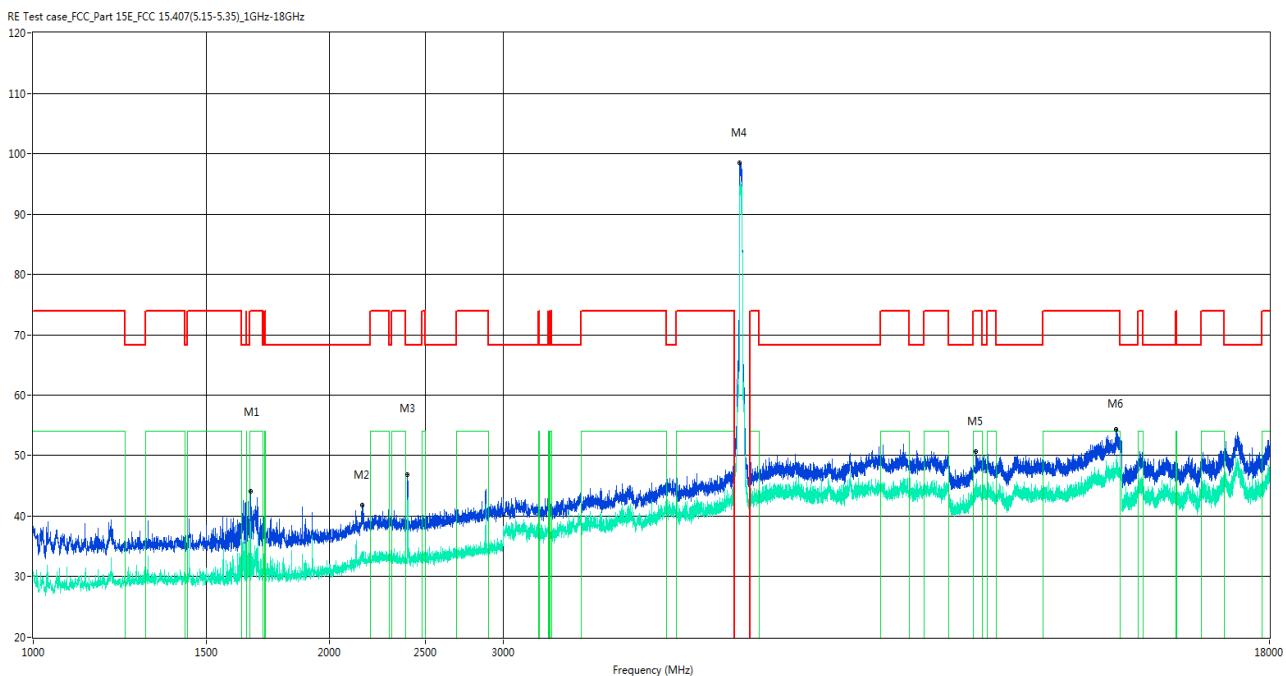
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1197.000	36.4	-14.52	54.0	17.60	AV	36.80	150	Horizontal	Pass
1	1197.000	39.82	-14.52	74.0	34.18	Peak	36.80	150	Horizontal	Pass
2**	1850.000	44.5	-14.73	--	-44.50	AV	205.80	150	Horizontal	N/A
2	1850.000	45.58	-14.73	68.2	22.62	Peak	205.80	150	Horizontal	Pass
3**	4032.000	40.5	-3.50	54.0	13.50	AV	34.60	150	Horizontal	Pass
3	4032.000	45.46	-3.50	74.0	28.54	Peak	34.60	150	Horizontal	Pass
4**	5182.000	81.1	-1.07	--	-81.10	AV	358.90	150	Horizontal	N/A
4	5182.000	84.83	-1.07	--	274.07	Peak	358.90	150	Horizontal	Pass
5**	10386.750	44.2	15.59	--	-44.20	AV	99.40	150	Horizontal	N/A
5	10386.750	48.51	15.59	68.2	19.69	Peak	99.40	150	Horizontal	Pass
6**	16704.562	48.2	21.24	--	-48.20	AV	2.20	150	Horizontal	N/A
6	16704.562	54.07	21.24	68.2	14.13	Peak	2.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11ac40 High channel



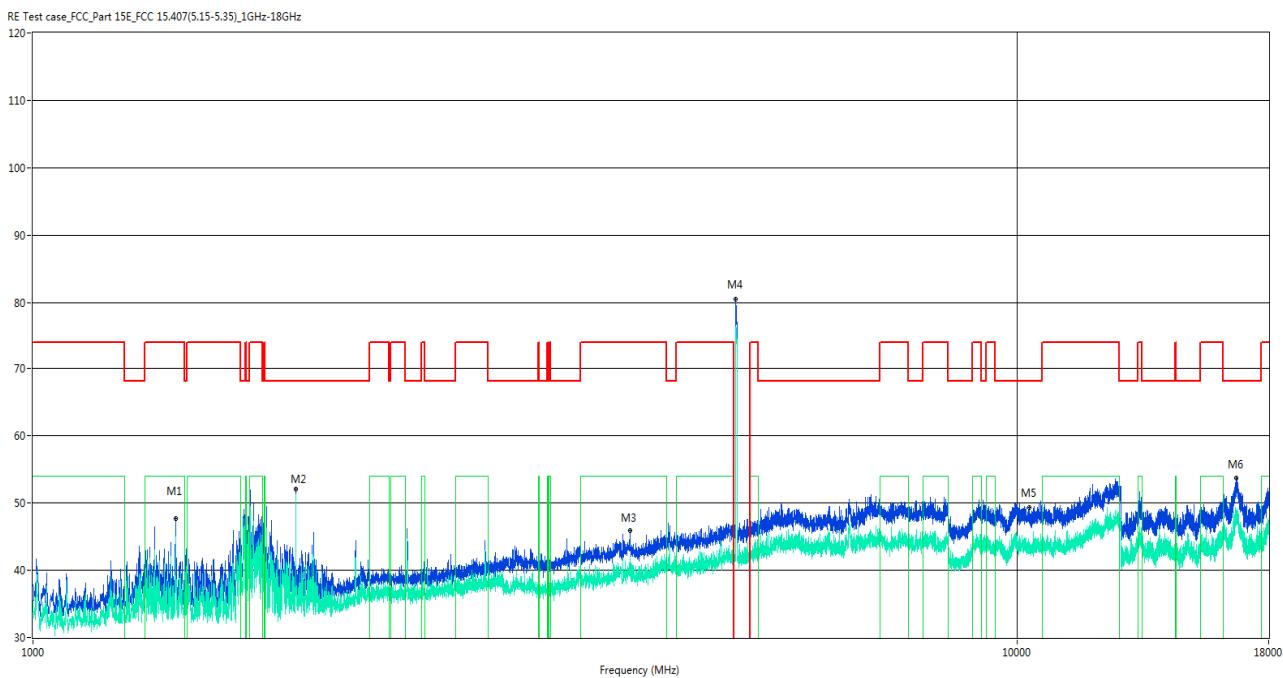
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1328.000	37.9	-14.56	54.0	16.10	AV	57.90	150	Vertical	Pass
1	1328.000	45.76	-14.56	74.0	28.24	Peak	57.90	150	Vertical	Pass
2**	1640.500	41.3	-15.44	--	-41.30	AV	73.60	150	Vertical	N/A
2	1640.500	54.76	-15.44	68.2	13.44	Peak	73.60	150	Vertical	Pass
3**	2400.000	44.1	-10.59	--	-44.10	AV	77.20	150	Vertical	N/A
3	2400.000	48.48	-10.59	68.2	19.72	Peak	77.20	150	Vertical	Pass
4**	5236.000	88.3	-1.07	--	-88.30	AV	73.20	150	Vertical	N/A
4	5236.000	93.03	-1.07	--	-19.83	Peak	73.20	150	Vertical	N/A
5**	10119.375	44.1	15.71	--	-44.10	AV	222.20	150	Vertical	N/A
5	10119.375	49.69	15.71	68.2	18.51	Peak	222.20	150	Vertical	Pass
6**	16750.500	48.4	20.45	--	-48.40	AV	108.50	150	Vertical	N/A
6	16750.500	53.52	20.45	68.2	14.68	Peak	108.50	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11ac40 High channel



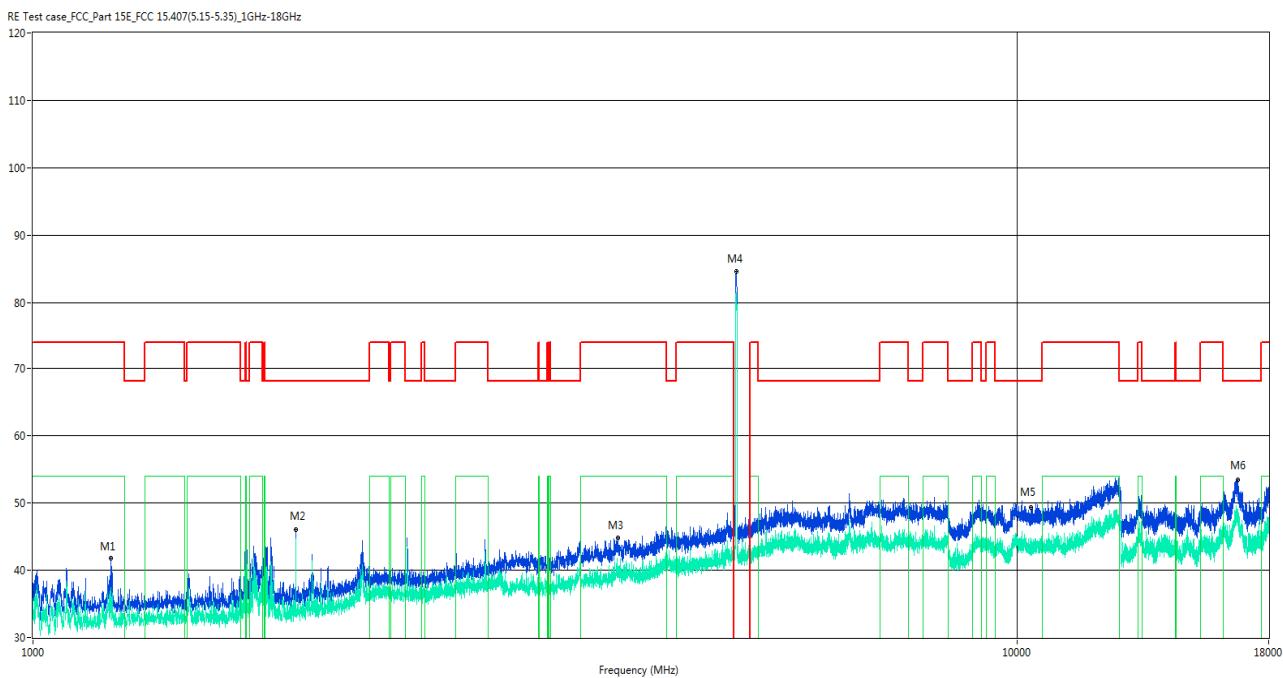
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1662.000	34.2	-15.77	54.0	19.80	AV	96.30	150	Horizontal	Pass
1	1662.000	44.08	-15.77	74.0	29.92	Peak	96.30	150	Horizontal	Pass
2**	2157.500	33.1	-11.62	--	-33.10	AV	61.40	150	Horizontal	N/A
2	2157.500	41.80	-11.62	68.2	26.40	Peak	61.40	150	Horizontal	Pass
3**	2399.500	37.4	-10.62	--	-37.40	AV	100.30	150	Horizontal	N/A
3	2399.500	46.90	-10.62	68.2	21.30	Peak	100.30	150	Horizontal	Pass
4**	5215.000	93.7	-1.13	--	-93.70	AV	0.20	150	Horizontal	N/A
4	5215.000	98.53	-1.13	--	-98.33	Peak	0.20	150	Horizontal	N/A
5**	9062.813	44.2	15.90	54.0	9.80	AV	54.80	150	Horizontal	Pass
5	9062.813	50.65	15.90	74.0	23.35	Peak	54.80	150	Horizontal	Pass
6**	12574.625	47.7	18.75	54.0	6.30	AV	1.90	150	Horizontal	Pass
6	12574.625	54.37	18.75	74.0	19.63	Peak	1.90	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band I 11ac80 Low channel



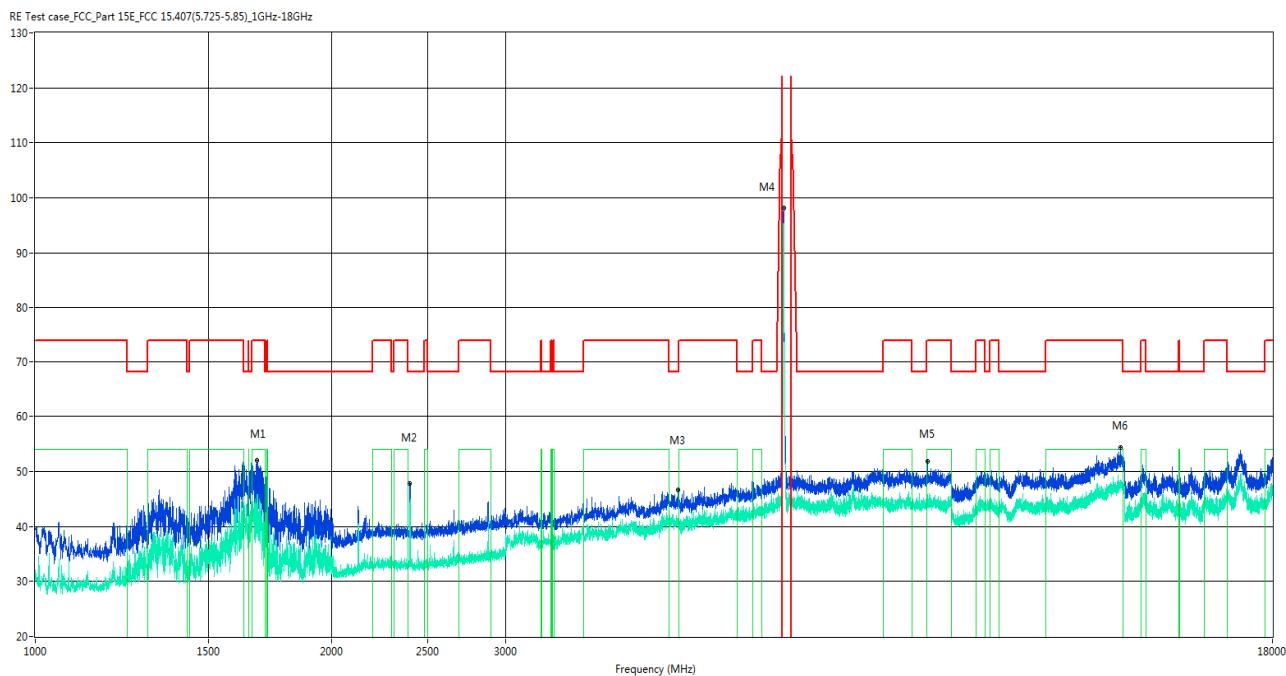
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1396.500	44.9	-14.66	54.0	9.10	AV	63.20	150	Vertical	Pass
1	1396.500	47.68	-14.66	74.0	26.32	Peak	63.20	150	Vertical	Pass
2**	1850.000	51.3	-14.73	--	-51.30	AV	43.70	150	Vertical	N/A
2	1850.000	52.15	-14.73	68.2	16.05	Peak	43.70	150	Vertical	Pass
3**	4040.000	42.0	-3.68	54.0	12.00	AV	226.60	150	Vertical	Pass
3	4040.000	45.91	-3.68	74.0	28.09	Peak	226.60	150	Vertical	Pass
4**	5176.000	73.9	-1.06	--	-73.90	AV	150.80	150	Vertical	N/A
4	5176.000	80.51	-1.06	--	70.29	Peak	150.80	150	Vertical	Pass
5**	10290.437	44.0	15.17	--	-44.00	AV	49.50	150	Vertical	N/A
5	10290.437	49.35	15.17	68.2	18.85	Peak	49.50	150	Vertical	Pass
6**	16695.375	49.0	21.11	--	-49.00	AV	102.20	150	Vertical	N/A
6	16695.375	53.77	21.11	68.2	14.43	Peak	102.20	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band I 11ac80 Low channel



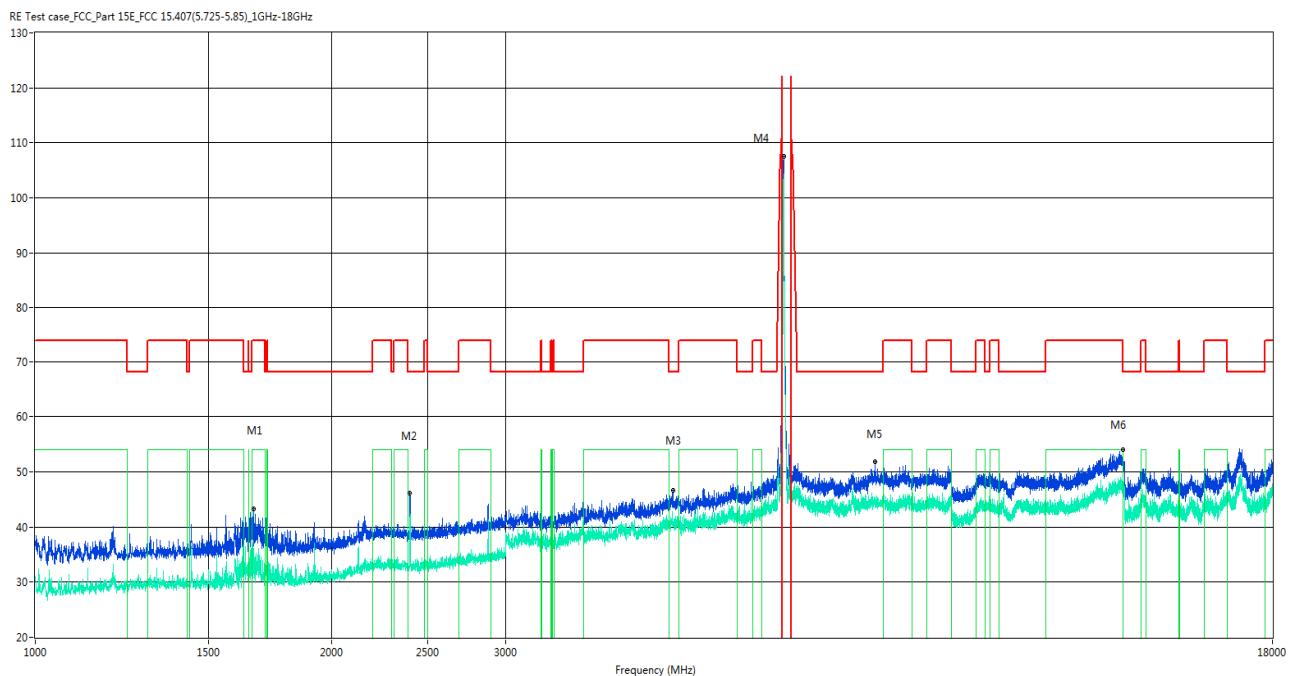
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1200.500	37.4	-14.58	54.0	16.60	AV	42.40	150	Horizontal	Pass
1	1200.500	41.74	-14.58	74.0	32.26	Peak	42.40	150	Horizontal	Pass
2**	1850.000	44.6	-14.73	--	-44.60	AV	329.30	150	Horizontal	N/A
2	1850.000	46.07	-14.73	68.2	22.13	Peak	329.30	150	Horizontal	Pass
3**	3931.000	39.1	-4.28	54.0	14.90	AV	86.40	150	Horizontal	Pass
3	3931.000	44.81	-4.28	74.0	29.19	Peak	86.40	150	Horizontal	Pass
4**	5179.000	80.0	-1.16	--	-80.00	AV	29.40	150	Horizontal	N/A
4	5179.000	84.56	-1.16	--	-55.16	Peak	29.40	150	Horizontal	N/A
5**	10326.375	42.4	15.16	--	-42.40	AV	231.00	150	Horizontal	N/A
5	10326.375	49.39	15.16	68.2	18.81	Peak	231.00	150	Horizontal	Pass
6**	16762.313	48.4	20.49	--	-48.40	AV	203.10	150	Horizontal	N/A
6	16762.313	53.44	20.49	68.2	14.76	Peak	203.10	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11a Low channel



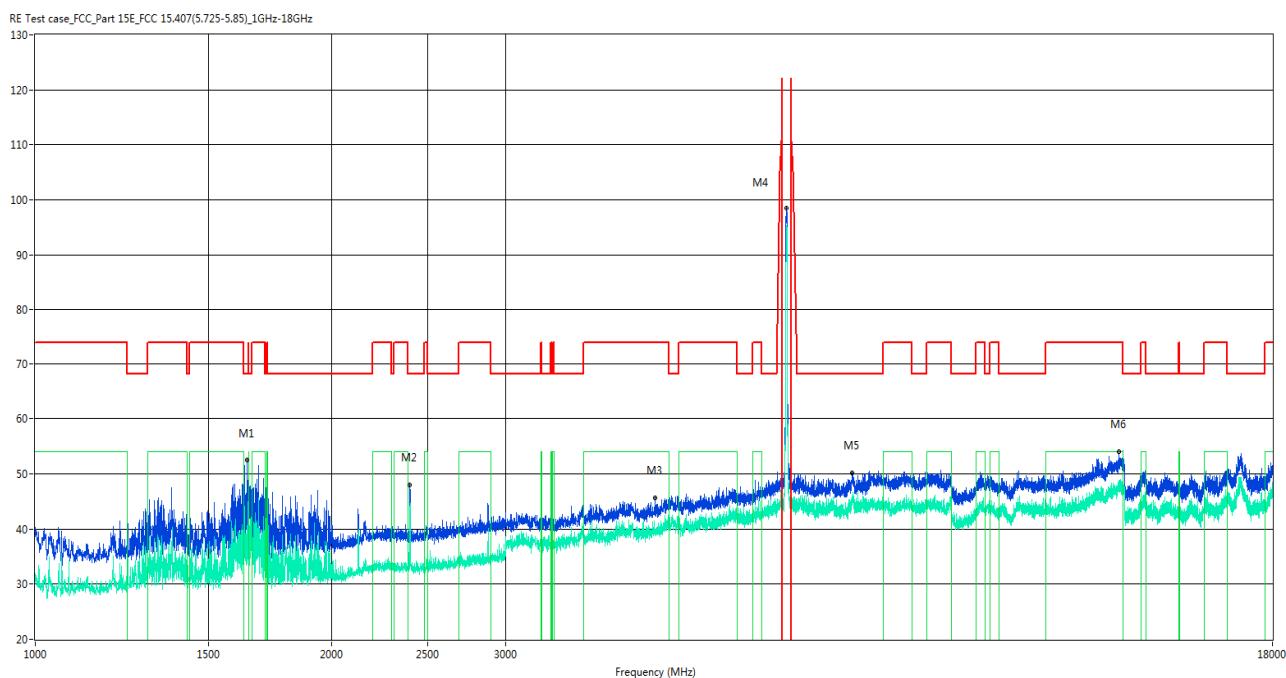
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1678.500	40.2	-15.57	54.0	13.80	AV	62.60	150	Vertical	Pass
1	1678.500	52.01	-15.57	74.0	21.99	Peak	62.60	150	Vertical	Pass
2**	2400.000	43.6	-10.59	--	-43.60	AV	74.10	150	Vertical	N/A
2	2400.000	47.84	-10.59	68.2	20.36	Peak	74.10	150	Vertical	Pass
3**	4490.000	41.4	-2.76	--	-41.40	AV	0.00	150	Vertical	N/A
3	4490.000	46.68	-2.76	68.2	21.52	Peak	0.00	150	Vertical	Pass
4**	5748.000	95.4	1.20	--	-95.40	AV	339.10	150	Vertical	N/A
4	5748.000	98.15	1.20	--	240.95	Peak	339.10	150	Vertical	Pass
5**	8047.938	45.9	16.53	54.0	8.10	AV	235.10	150	Vertical	Pass
5	8047.938	51.85	16.53	74.0	22.15	Peak	235.10	150	Vertical	Pass
6**	12620.625	48.0	18.65	54.0	6.00	AV	214.20	150	Vertical	Pass
6	12620.625	54.32	18.65	74.0	19.68	Peak	214.20	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11a Low channel



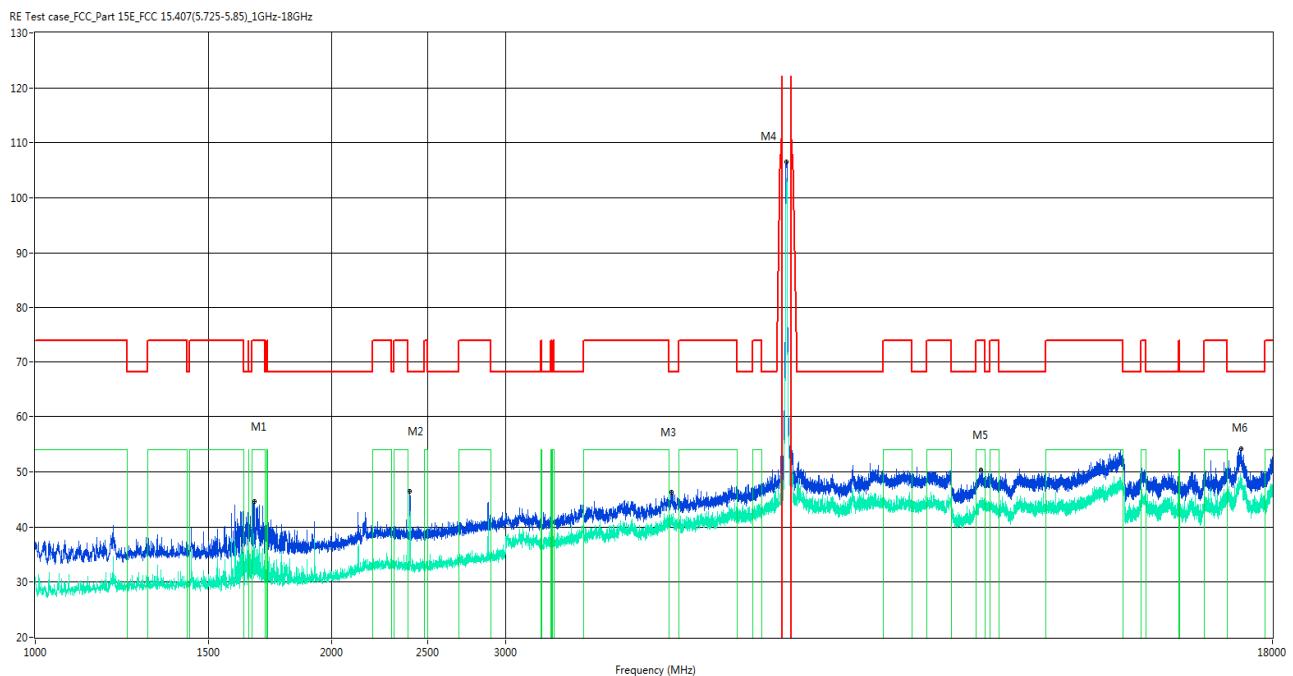
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1665.500	32.4	-15.45	54.0	21.60	AV	80.50	150	Horizontal	Pass
1	1665.500	43.27	-15.45	74.0	30.73	Peak	80.50	150	Horizontal	Pass
2**	2400.000	41.2	-10.59	--	-41.20	AV	103.90	150	Horizontal	N/A
2	2400.000	46.16	-10.59	68.2	22.04	Peak	103.90	150	Horizontal	Pass
3**	4435.000	40.3	-1.95	--	-40.30	AV	322.00	150	Horizontal	N/A
3	4435.000	46.72	-1.95	68.2	21.48	Peak	322.00	150	Horizontal	Pass
4**	5749.000	104.2	1.23	--	-104.20	AV	353.20	150	Horizontal	N/A
4	5749.000	107.45	1.23	--	245.75	Peak	353.20	150	Horizontal	Pass
5**	7109.250	43.9	16.13	--	-43.90	AV	10.50	150	Horizontal	N/A
5	7109.250	51.83	16.13	68.2	16.37	Peak	10.50	150	Horizontal	Pass
6**	12603.375	47.8	18.40	54.0	6.20	AV	228.80	150	Horizontal	Pass
6	12603.375	53.72	18.40	74.0	20.28	Peak	228.80	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11a Middle channel



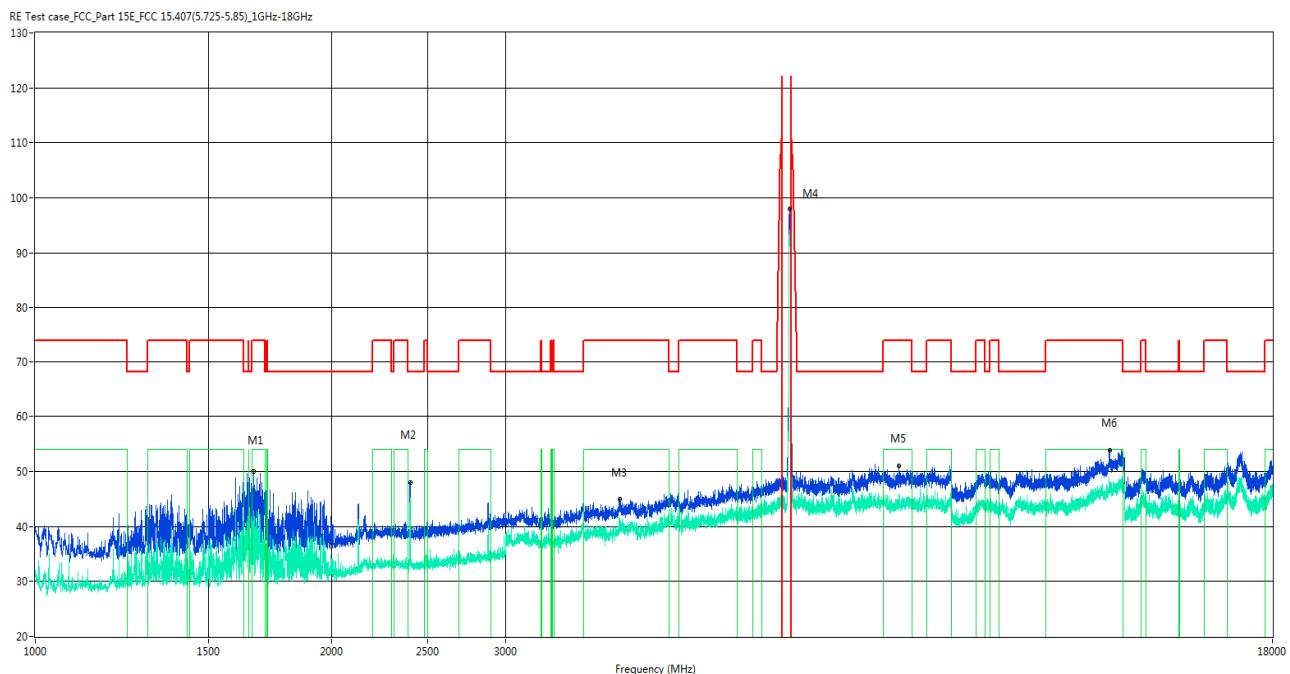
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1641.500	36.3	-15.55	--	-36.30	AV	69.70	150	Vertical	N/A
1	1641.500	52.47	-15.55	68.2	15.73	Peak	69.70	150	Vertical	Pass
2**	2400.000	43.8	-10.59	--	-43.80	AV	240.50	150	Vertical	N/A
2	2400.000	47.95	-10.59	68.2	20.25	Peak	240.50	150	Vertical	Pass
3**	4252.000	39.2	-3.77	54.0	14.80	AV	144.40	150	Vertical	Pass
3	4252.000	45.71	-3.77	74.0	28.29	Peak	144.40	150	Vertical	Pass
4**	5782.000	93.6	0.92	--	-93.60	AV	68.30	150	Vertical	N/A
4	5782.000	98.41	0.92	--	-30.11	Peak	68.30	150	Vertical	N/A
5**	6747.000	45.8	4.01	--	-45.80	AV	359.30	150	Vertical	N/A
5	6747.000	50.21	4.01	68.2	17.99	Peak	359.30	150	Vertical	Pass
6**	12574.625	47.0	18.75	54.0	7.00	AV	15.40	150	Vertical	Pass
6	12574.625	54.08	18.75	74.0	19.92	Peak	15.40	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11a Middle channel



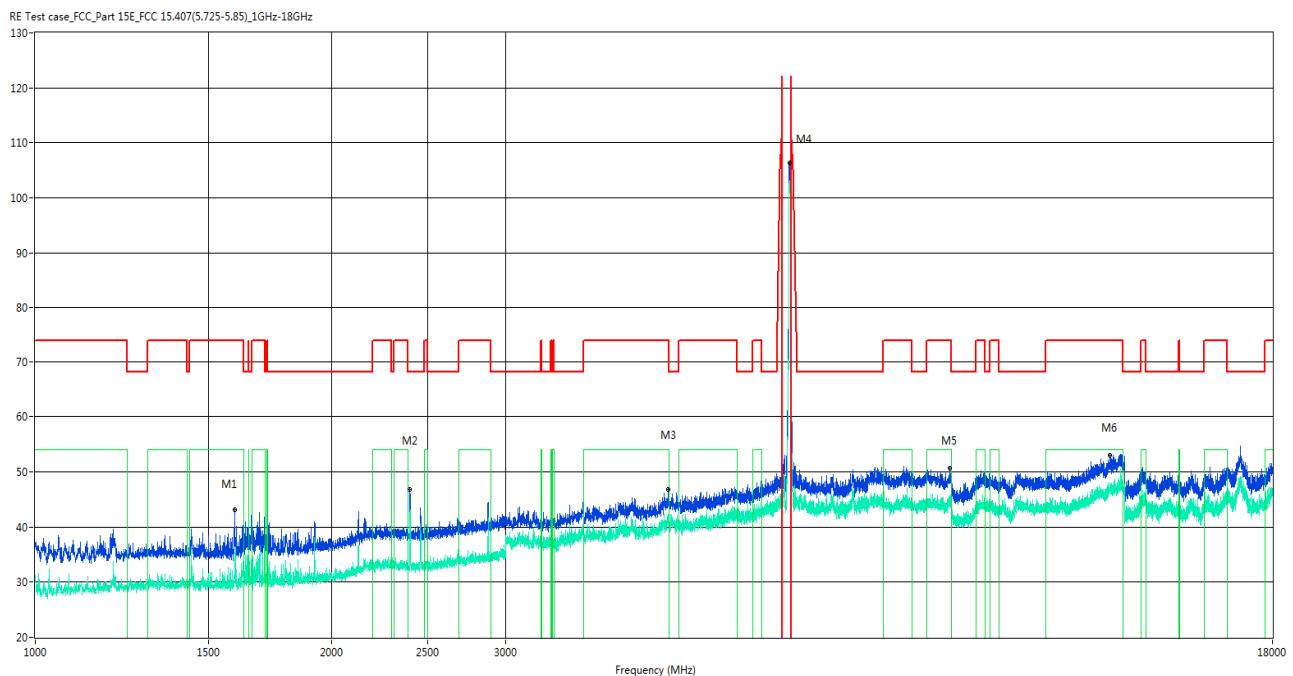
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1668.500	31.2	-15.49	54.0	22.80	AV	186.60	150	Horizontal	Pass
1	1668.500	44.69	-15.49	74.0	29.31	Peak	186.60	150	Horizontal	Pass
2**	2400.000	41.2	-10.59	--	-41.20	AV	109.20	150	Horizontal	N/A
2	2400.000	46.56	-10.59	68.2	21.64	Peak	109.20	150	Horizontal	Pass
3**	4424.000	42.3	-1.96	--	-42.30	AV	96.10	150	Horizontal	N/A
3	4424.000	46.33	-1.96	68.2	21.87	Peak	96.10	150	Horizontal	Pass
4**	5786.000	101.5	0.68	--	-101.50	AV	352.20	150	Horizontal	N/A
4	5786.000	106.50	0.68	--	245.70	Peak	352.20	150	Horizontal	Pass
5**	9103.062	43.8	16.20	54.0	10.20	AV	359.40	150	Horizontal	Pass
5	9103.062	50.29	16.20	74.0	23.71	Peak	359.40	150	Horizontal	Pass
6**	16733.438	47.4	20.47	--	-47.40	AV	16.90	150	Horizontal	N/A
6	16733.438	54.21	20.47	68.2	13.99	Peak	16.90	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11a High channel



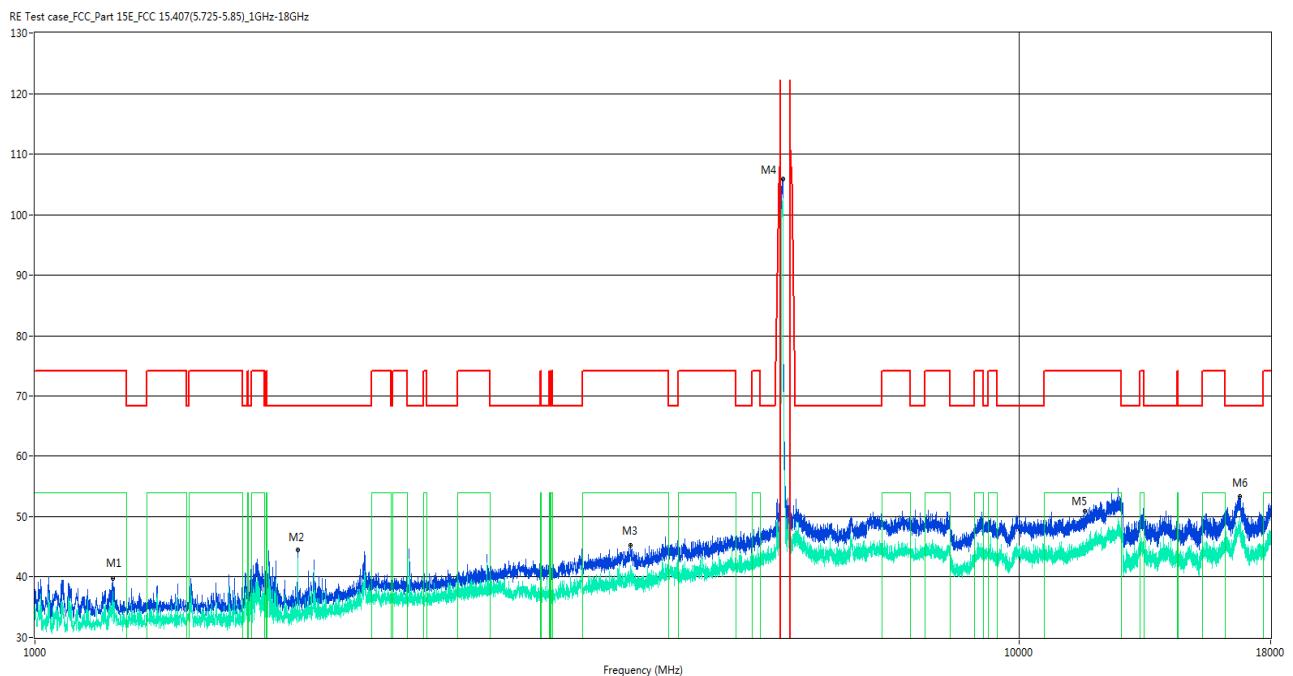
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1666.500	33.7	-15.37	54.0	20.30	AV	70.20	150	Vertical	Pass
1	1666.500	49.96	-15.37	74.0	24.04	Peak	70.20	150	Vertical	Pass
2**	2400.500	45.2	-10.55	--	-45.20	AV	77.80	150	Vertical	N/A
2	2400.500	48.09	-10.55	68.2	20.11	Peak	77.80	150	Vertical	Pass
3**	3921.000	40.0	-3.89	54.0	14.00	AV	24.70	150	Vertical	Pass
3	3921.000	45.01	-3.89	74.0	28.99	Peak	24.70	150	Vertical	Pass
4**	5828.000	93.2	0.44	--	-93.20	AV	69.30	150	Vertical	N/A
4	5828.000	97.98	0.44	--	-28.68	Peak	69.30	150	Vertical	N/A
5**	7526.125	46.0	16.28	54.0	8.00	AV	127.40	150	Vertical	Pass
5	7526.125	50.95	16.28	74.0	23.05	Peak	127.40	150	Vertical	Pass
6**	12317.312	47.0	18.18	54.0	7.00	AV	86.10	150	Vertical	Pass
6	12317.312	53.85	18.18	74.0	20.15	Peak	86.10	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11a High channel



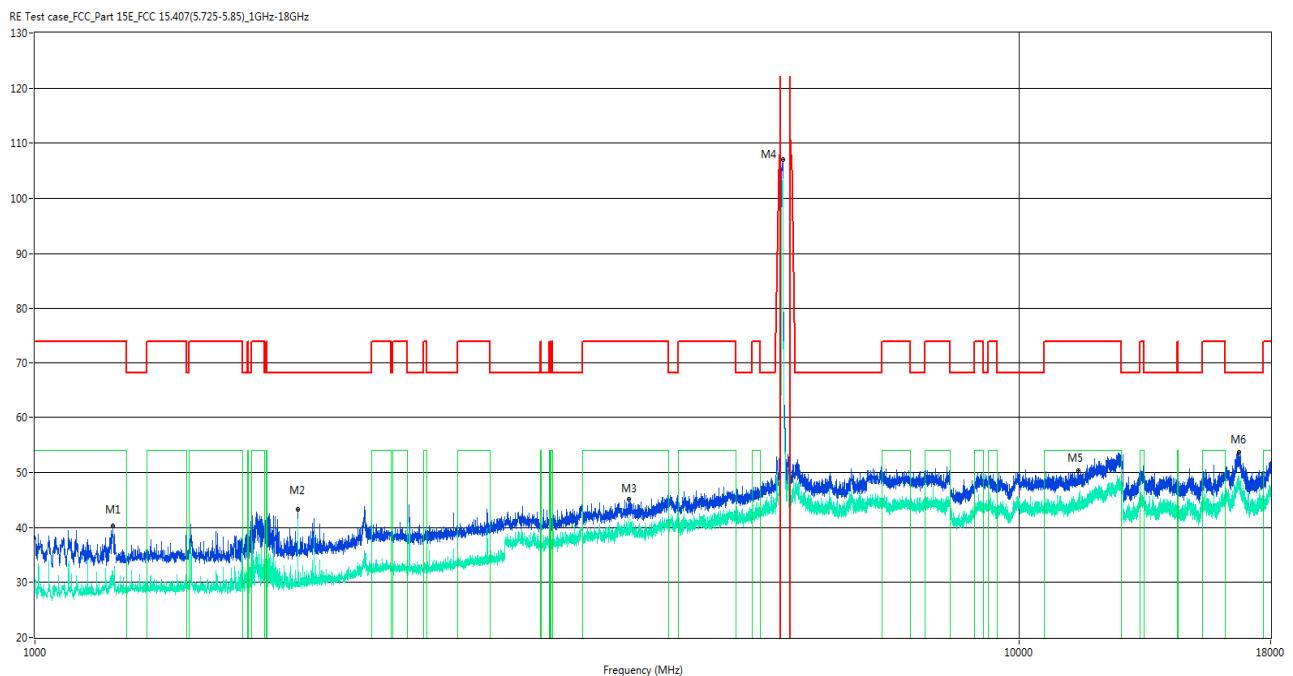
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1593.000	30.7	-15.29	54.0	23.30	AV	163.20	150	Horizontal	Pass
1	1593.000	43.16	-15.29	74.0	30.84	Peak	163.20	150	Horizontal	Pass
2**	2400.000	42.2	-10.59	--	-42.20	AV	81.50	150	Horizontal	N/A
2	2400.000	46.85	-10.59	68.2	21.35	Peak	81.50	150	Horizontal	Pass
3**	4388.000	40.6	-2.31	54.0	13.40	AV	92.40	150	Horizontal	Pass
3	4388.000	46.82	-2.31	74.0	27.18	Peak	92.40	150	Horizontal	Pass
4**	5833.000	102.6	0.79	--	-102.60	AV	0.00	150	Horizontal	N/A
4	5833.000	106.31	0.79	--	-106.31	Peak	0.00	150	Horizontal	N/A
5**	8476.313	44.2	17.68	54.0	9.80	AV	357.30	150	Horizontal	Pass
5	8476.313	50.62	17.68	74.0	23.38	Peak	357.30	150	Horizontal	Pass
6**	12323.063	46.7	18.18	54.0	7.30	AV	64.80	150	Horizontal	Pass
6	12323.063	53.02	18.18	74.0	20.98	Peak	64.80	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11n20 Low channel



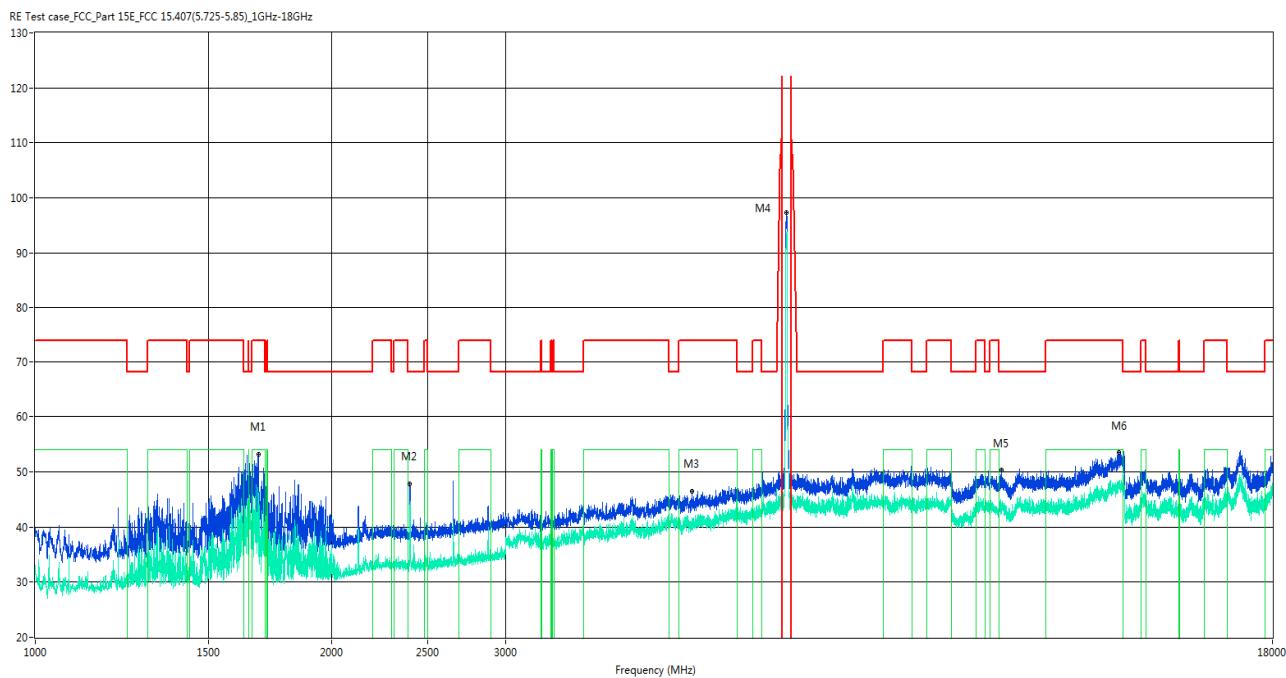
No.	Frequency (MHz)	Results (dB <sub>B1</sub> V/m)	Factor (dB)	Limit (dB <sub>B1</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1200.000	37.0	-14.55	54.0	17.00	AV	312.30	150	Vertical	Pass
1	1200.000	39.82	-14.55	74.0	34.18	Peak	312.30	150	Vertical	Pass
2**	1850.000	43.1	-14.73	--	-43.10	AV	168.30	150	Vertical	N/A
2	1850.000	44.53	-14.73	68.2	23.67	Peak	168.30	150	Vertical	Pass
3**	4028.000	41.9	-3.42	54.0	12.10	AV	18.20	150	Vertical	Pass
3	4028.000	45.23	-3.42	74.0	28.77	Peak	18.20	150	Vertical	Pass
4**	5753.000	102.7	1.16	--	-102.70	AV	356.00	150	Vertical	N/A
4	5753.000	105.84	1.16	--	250.16	Peak	356.00	150	Vertical	Pass
5**	11664.687	43.9	16.22	54.0	10.10	AV	0.60	150	Vertical	Pass
5	11664.687	50.90	16.22	74.0	23.10	Peak	0.60	150	Vertical	Pass
6**	16761.000	47.8	20.53	--	-47.80	AV	240.60	150	Vertical	N/A
6	16761.000	53.31	20.53	68.2	14.89	Peak	240.60	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11n20 Low channel



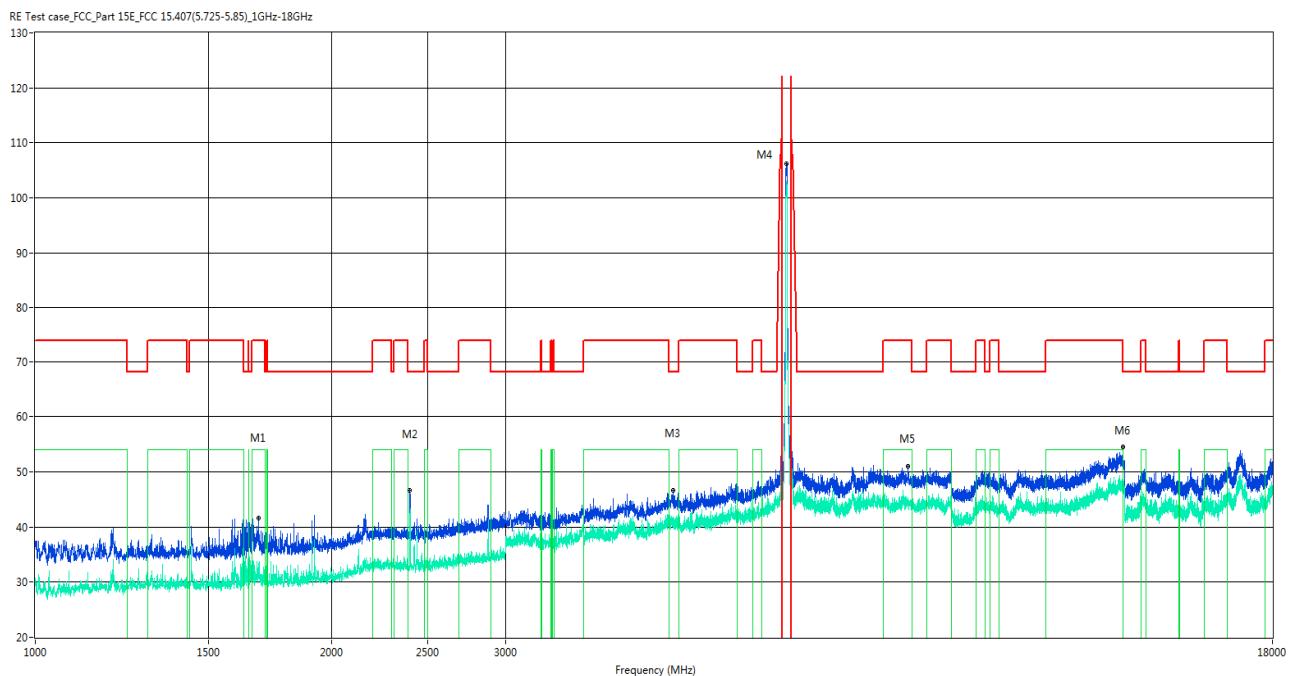
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1199.500	31.7	-14.52	54.0	22.30	AV	96.00	150	Horizontal	Pass
1	1199.500	40.22	-14.52	74.0	33.78	Peak	96.00	150	Horizontal	Pass
2**	1850.000	40.7	-14.73	--	-40.70	AV	205.60	150	Horizontal	N/A
2	1850.000	43.29	-14.73	68.2	24.91	Peak	205.60	150	Horizontal	Pass
3**	4014.000	39.3	-3.70	54.0	14.70	AV	233.00	150	Horizontal	Pass
3	4014.000	45.07	-3.70	74.0	28.93	Peak	233.00	150	Horizontal	Pass
4**	5748.000	103.5	1.20	--	-103.50	AV	360.00	150	Horizontal	N/A
4	5748.000	107.07	1.20	--	252.93	Peak	360.00	150	Horizontal	Pass
5**	11479.250	44.7	16.00	54.0	9.30	AV	213.10	150	Horizontal	Pass
5	11479.250	50.42	16.00	74.0	23.58	Peak	213.10	150	Horizontal	Pass
6**	16701.938	49.5	21.28	--	-49.50	AV	179.60	150	Horizontal	N/A
6	16701.938	53.68	21.28	68.2	14.52	Peak	179.60	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11n20 Middle channel



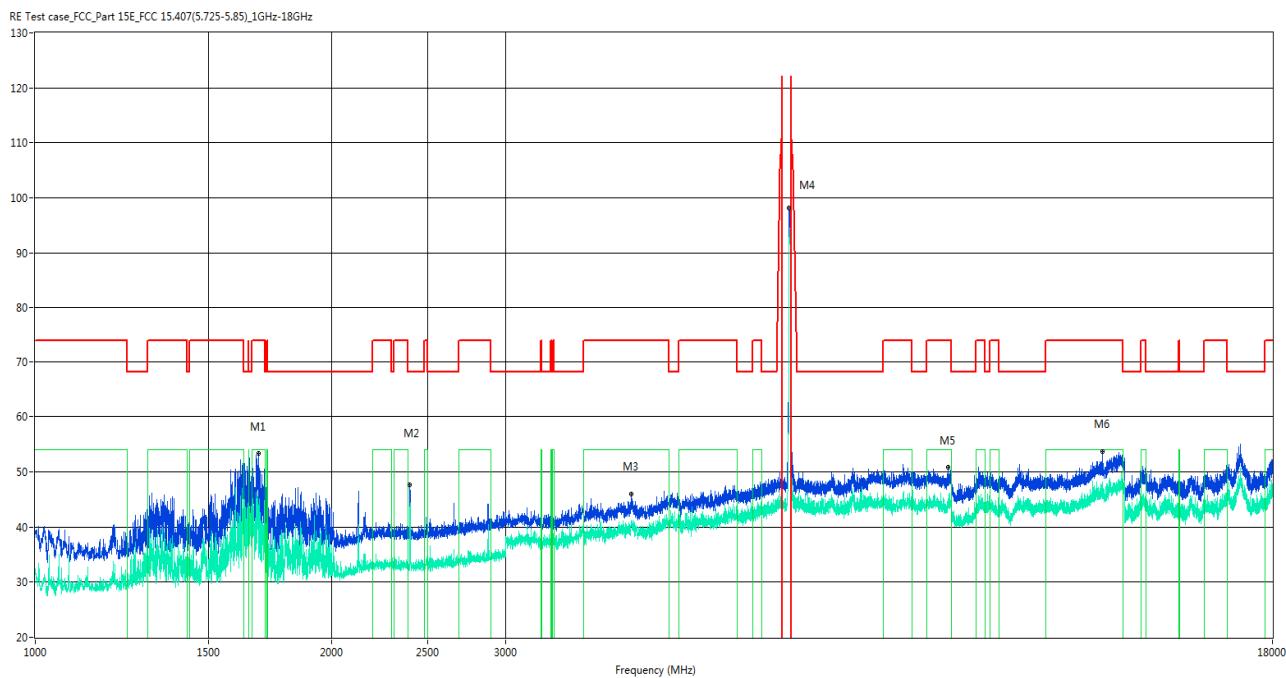
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1685.500	39.0	-15.52	54.0	15.00	AV	77.50	150	Vertical	Pass
1	1685.500	53.28	-15.52	74.0	20.72	Peak	77.50	150	Vertical	Pass
2**	2400.000	43.5	-10.59	--	-43.50	AV	77.50	150	Vertical	N/A
2	2400.000	47.85	-10.59	68.2	20.35	Peak	77.50	150	Vertical	Pass
3**	4636.000	40.9	-3.08	54.0	13.10	AV	360.00	150	Vertical	Pass
3	4636.000	46.50	-3.08	74.0	27.50	Peak	360.00	150	Vertical	Pass
4**	5787.000	92.3	0.68	--	-92.30	AV	70.00	150	Vertical	N/A
4	5787.000	97.36	0.68	--	-27.36	Peak	70.00	150	Vertical	N/A
5**	9567.375	44.3	15.71	--	-44.30	AV	290.50	150	Vertical	N/A
5	9567.375	50.29	15.71	68.2	17.91	Peak	290.50	150	Vertical	Pass
6**	12571.750	48.2	18.67	54.0	5.80	AV	171.50	150	Vertical	Pass
6	12571.750	53.55	18.67	74.0	20.45	Peak	171.50	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11n20 Middle channel



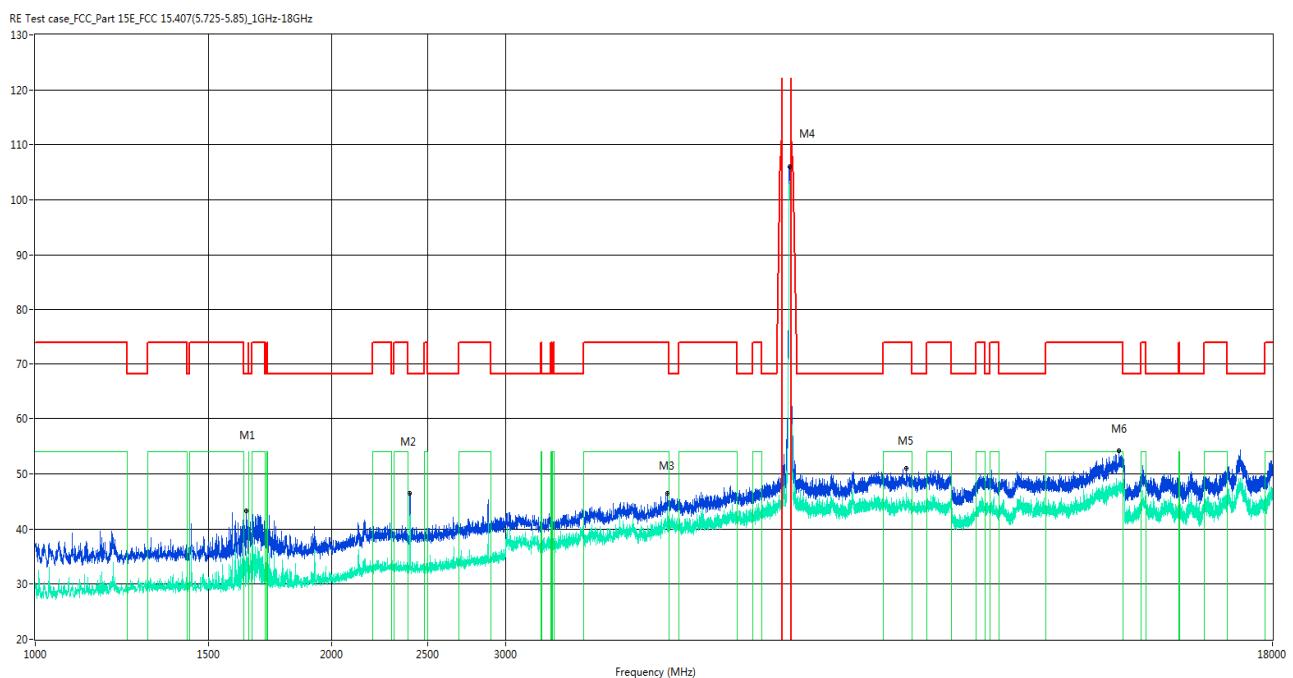
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1685.500	30.7	-15.52	54.0	23.30	AV	316.50	150	Horizontal	Pass
1	1685.500	41.60	-15.52	74.0	32.40	Peak	316.50	150	Horizontal	Pass
2**	2400.000	41.8	-10.59	--	-41.80	AV	105.40	150	Horizontal	N/A
2	2400.000	46.69	-10.59	68.2	21.51	Peak	105.40	150	Horizontal	Pass
3**	4434.000	41.6	-1.85	--	-41.60	AV	114.00	150	Horizontal	N/A
3	4434.000	46.63	-1.85	68.2	21.57	Peak	114.00	150	Horizontal	Pass
4**	5782.000	102.6	0.92	--	-102.60	AV	358.80	150	Horizontal	N/A
4	5782.000	106.24	0.92	--	252.56	Peak	358.80	150	Horizontal	Pass
5**	7684.250	44.5	16.81	54.0	9.50	AV	166.00	150	Horizontal	Pass
5	7684.250	51.01	16.81	74.0	22.99	Peak	166.00	150	Horizontal	Pass
6**	12692.500	47.3	18.01	54.0	6.70	AV	114.70	150	Horizontal	Pass
6	12692.500	54.55	18.01	74.0	19.45	Peak	114.70	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11n20 High channel



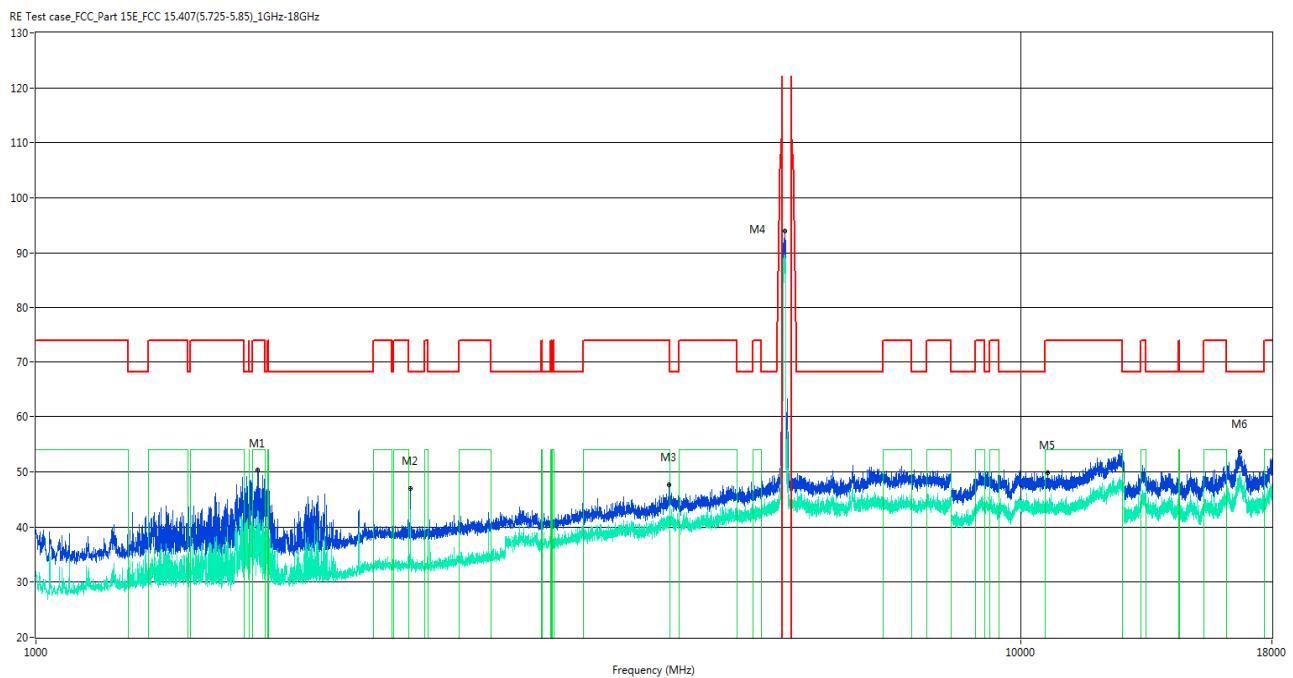
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1684.500	34.4	-15.46	54.0	19.60	AV	70.00	150	Vertical	Pass
1	1684.500	53.31	-15.46	74.0	20.69	Peak	70.00	150	Vertical	Pass
2**	2400.000	42.9	-10.59	--	-42.90	AV	78.10	150	Vertical	N/A
2	2400.000	47.69	-10.59	68.2	20.51	Peak	78.10	150	Vertical	Pass
3**	4028.000	41.1	-3.42	54.0	12.90	AV	81.70	150	Vertical	Pass
3	4028.000	45.92	-3.42	74.0	28.08	Peak	81.70	150	Vertical	Pass
4**	5822.000	91.9	0.74	--	-91.90	AV	81.70	150	Vertical	N/A
4	5822.000	98.12	0.74	--	-16.42	Peak	81.70	150	Vertical	N/A
5**	8441.812	45.1	17.36	54.0	8.90	AV	92.90	150	Vertical	Pass
5	8441.812	50.79	17.36	74.0	23.21	Peak	92.90	150	Vertical	Pass
6**	12093.062	45.4	17.24	54.0	8.60	AV	196.50	150	Vertical	Pass
6	12093.062	53.76	17.24	74.0	20.24	Peak	196.50	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11n20 High channel



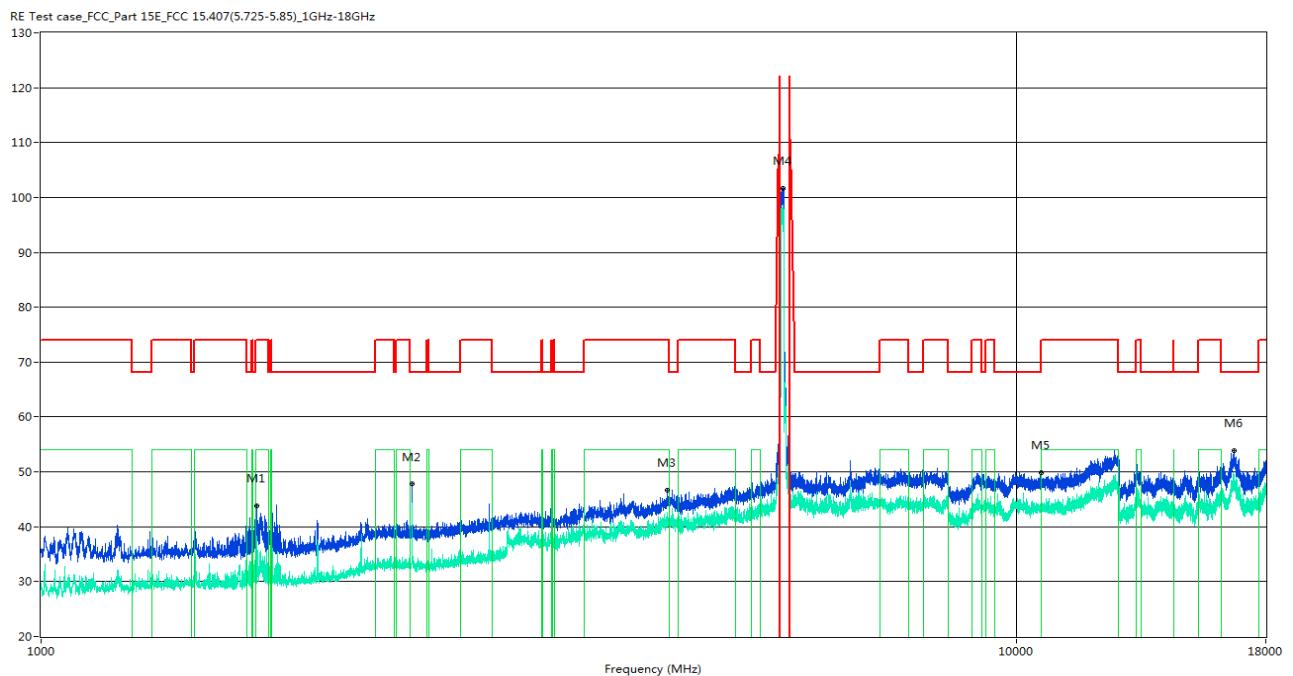
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1637.500	30.7	-15.32	--	-30.70	AV	176.10	150	Horizontal	N/A
1	1637.500	43.33	-15.32	68.2	24.87	Peak	176.10	150	Horizontal	Pass
2**	2400.000	42.0	-10.59	--	-42.00	AV	101.00	150	Horizontal	N/A
2	2400.000	46.56	-10.59	68.2	21.64	Peak	101.00	150	Horizontal	Pass
3**	4378.000	40.8	-2.94	54.0	13.20	AV	189.40	150	Horizontal	Pass
3	4378.000	46.52	-2.94	74.0	27.48	Peak	189.40	150	Horizontal	Pass
4**	5827.000	101.8	0.48	--	-101.80	AV	358.80	150	Horizontal	N/A
4	5827.000	106.08	0.48	--	252.72	Peak	358.80	150	Horizontal	Pass
5**	7655.500	44.0	16.23	54.0	10.00	AV	41.60	150	Horizontal	Pass
5	7655.500	50.97	16.23	74.0	23.03	Peak	41.60	150	Horizontal	Pass
6**	12580.375	47.6	18.89	54.0	6.40	AV	357.00	150	Horizontal	Pass
6	12580.375	54.14	18.89	74.0	19.86	Peak	357.00	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11n40 Low channel



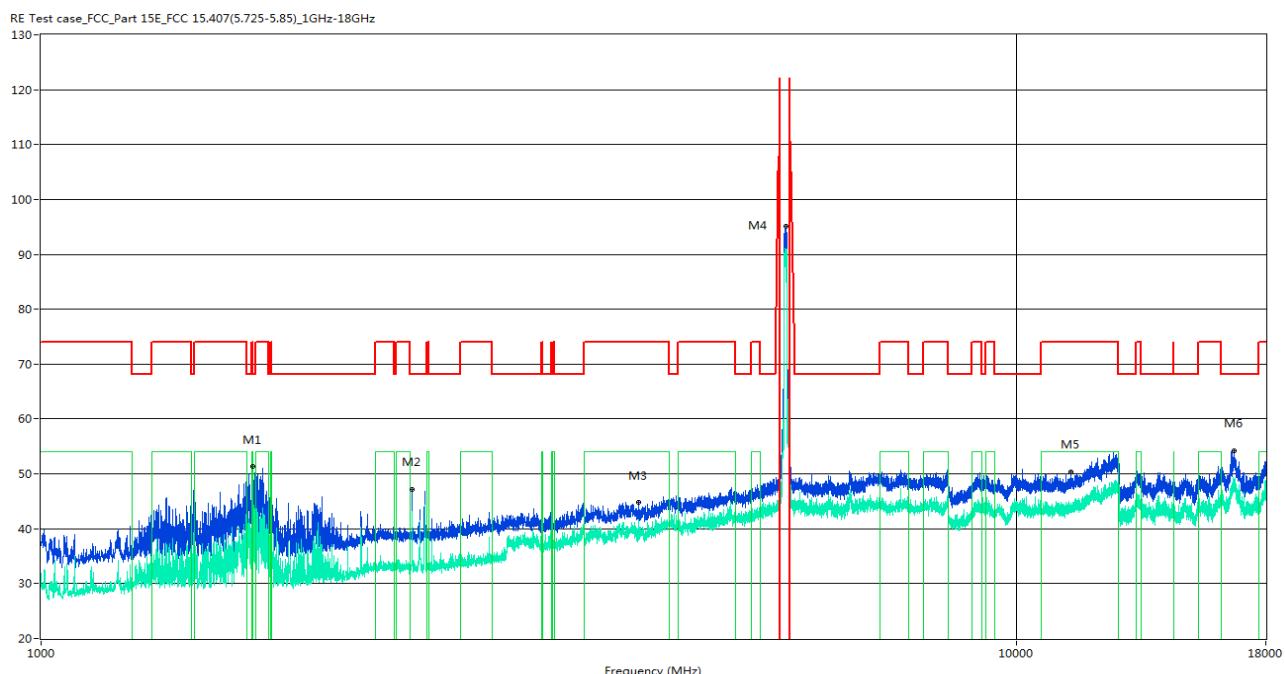
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1679.500	33.0	-15.50	54.0	21.00	AV	62.60	150	Vertical	Pass
1	1679.500	50.30	-15.50	74.0	23.70	Peak	62.60	150	Vertical	Pass
2**	2400.000	42.1	-10.59	--	-42.10	AV	236.70	150	Vertical	N/A
2	2400.000	47.07	-10.59	68.2	21.13	Peak	236.70	150	Vertical	Pass
3**	4396.000	41.8	-2.77	54.0	12.20	AV	116.90	150	Vertical	Pass
3	4396.000	47.63	-2.77	74.0	26.37	Peak	116.90	150	Vertical	Pass
4**	5761.000	89.6	0.88	--	-89.60	AV	147.50	150	Vertical	N/A
4	5761.000	93.94	0.88	--	53.56	Peak	147.50	150	Vertical	Pass
5**	10664.188	43.5	15.87	54.0	10.50	AV	52.40	150	Vertical	Pass
5	10664.188	49.88	15.87	74.0	24.12	Peak	52.40	150	Vertical	Pass
6**	16691.438	47.9	20.93	--	-47.90	AV	140.40	150	Vertical	N/A
6	16691.438	53.77	20.93	68.2	14.43	Peak	140.40	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11n40 Low channel



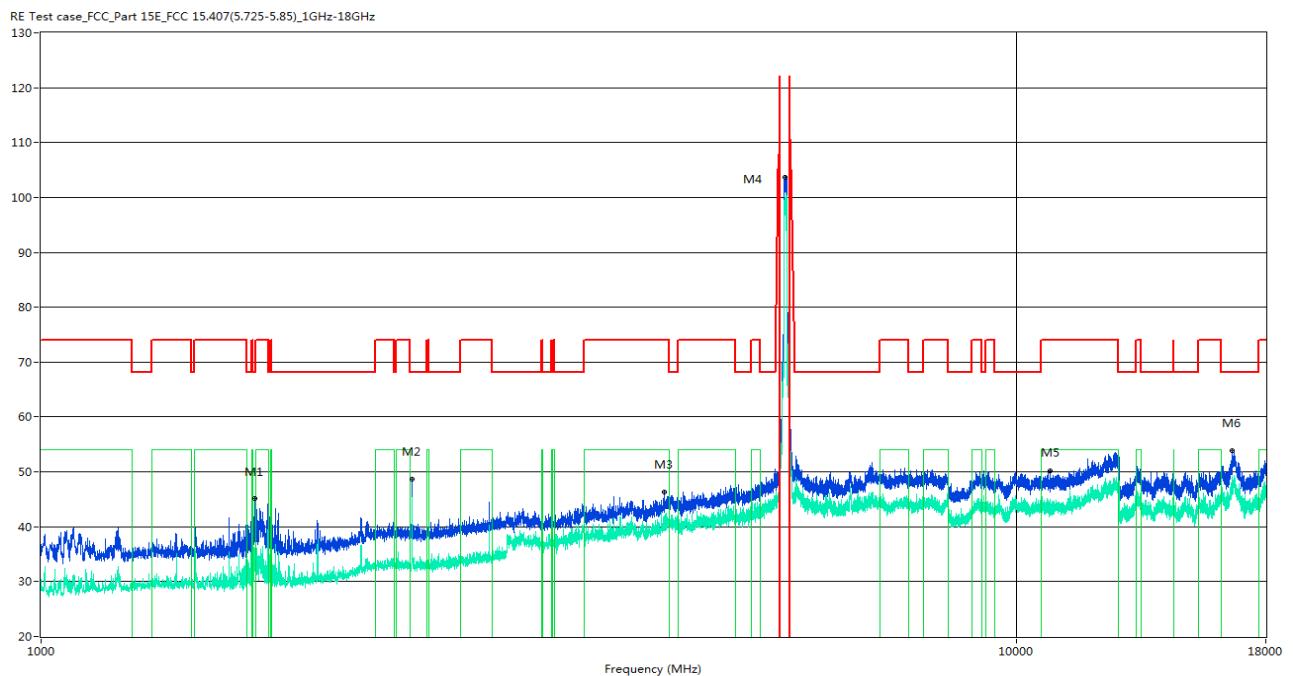
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1663.000	34.9	-15.70	54.0	19.10	AV	314.00	150	Horizontal	Pass
1	1663.000	43.86	-15.70	74.0	30.14	Peak	314.00	150	Horizontal	Pass
2**	2400.000	43.8	-10.59	--	-43.80	AV	198.60	150	Horizontal	N/A
2	2400.000	47.75	-10.59	68.2	20.45	Peak	198.60	150	Horizontal	Pass
3**	4379.000	40.0	-2.99	54.0	14.00	AV	272.20	150	Horizontal	Pass
3	4379.000	46.65	-2.99	74.0	27.35	Peak	272.20	150	Horizontal	Pass
4**	5760.000	97.5	0.97	--	-97.50	AV	343.50	150	Horizontal	N/A
4	5760.000	101.72	0.97	--	241.78	Peak	343.50	150	Horizontal	Pass
5**	10589.438	43.4	15.56	--	-43.40	AV	147.90	150	Horizontal	N/A
5	10589.438	49.82	15.56	68.2	18.38	Peak	147.90	150	Horizontal	Pass
6**	16707.188	48.2	21.20	--	-48.20	AV	14.10	150	Horizontal	N/A
6	16707.188	53.95	21.20	68.2	14.25	Peak	14.10	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11n40 High channel



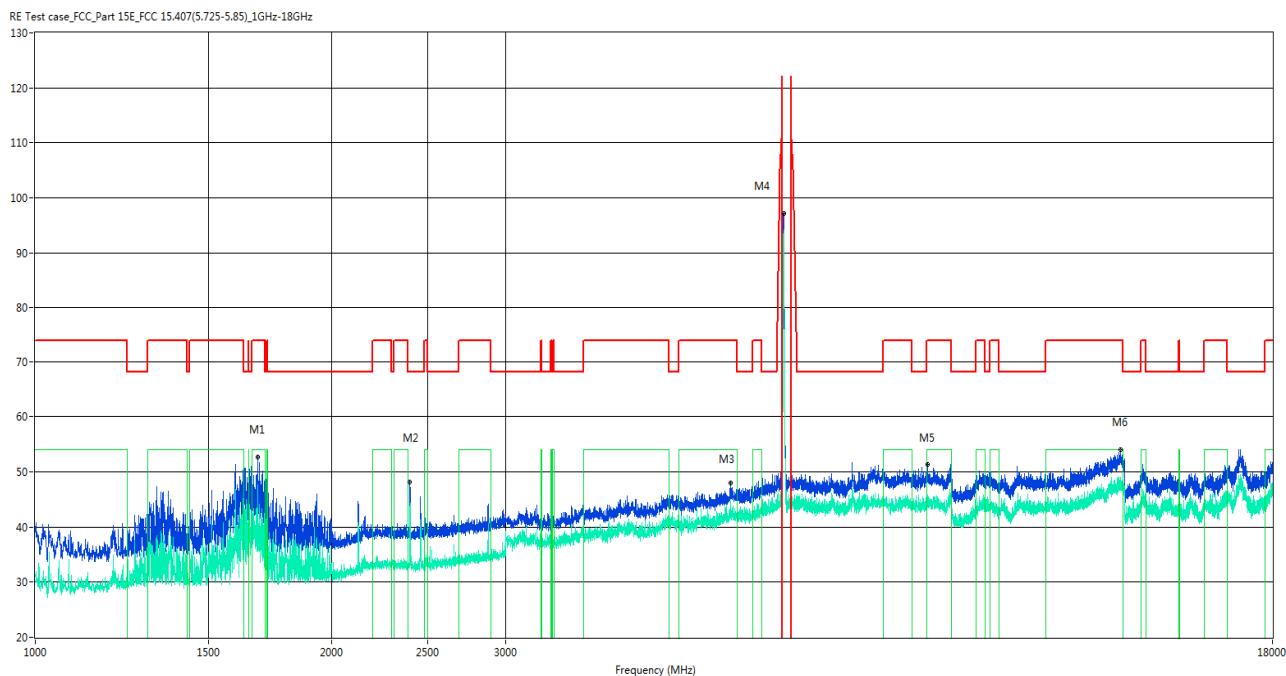
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1650.000	39.2	-15.74	--	-39.20	AV	73.70	150	Vertical	N/A
1	1650.000	51.30	-15.74	68.2	16.90	Peak	73.70	150	Vertical	Pass
2**	2400.000	42.7	-10.59	--	-42.70	AV	235.40	150	Vertical	N/A
2	2400.000	47.14	-10.59	68.2	21.06	Peak	235.40	150	Vertical	Pass
3**	4093.000	39.5	-4.50	54.0	14.50	AV	81.80	150	Vertical	Pass
3	4093.000	44.75	-4.50	74.0	29.25	Peak	81.80	150	Vertical	Pass
4**	5802.000	89.3	0.87	--	-89.30	AV	152.80	150	Vertical	N/A
4	5802.000	95.12	0.87	--	57.68	Peak	152.80	150	Vertical	Pass
5**	11365.687	43.4	16.19	54.0	10.60	AV	142.10	150	Vertical	Pass
5	11365.687	50.30	16.19	74.0	23.70	Peak	142.10	150	Vertical	Pass
6**	16704.562	47.8	21.24	--	-47.80	AV	308.00	150	Vertical	N/A
6	16704.562	54.26	21.24	68.2	13.94	Peak	308.00	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11n40 High channel



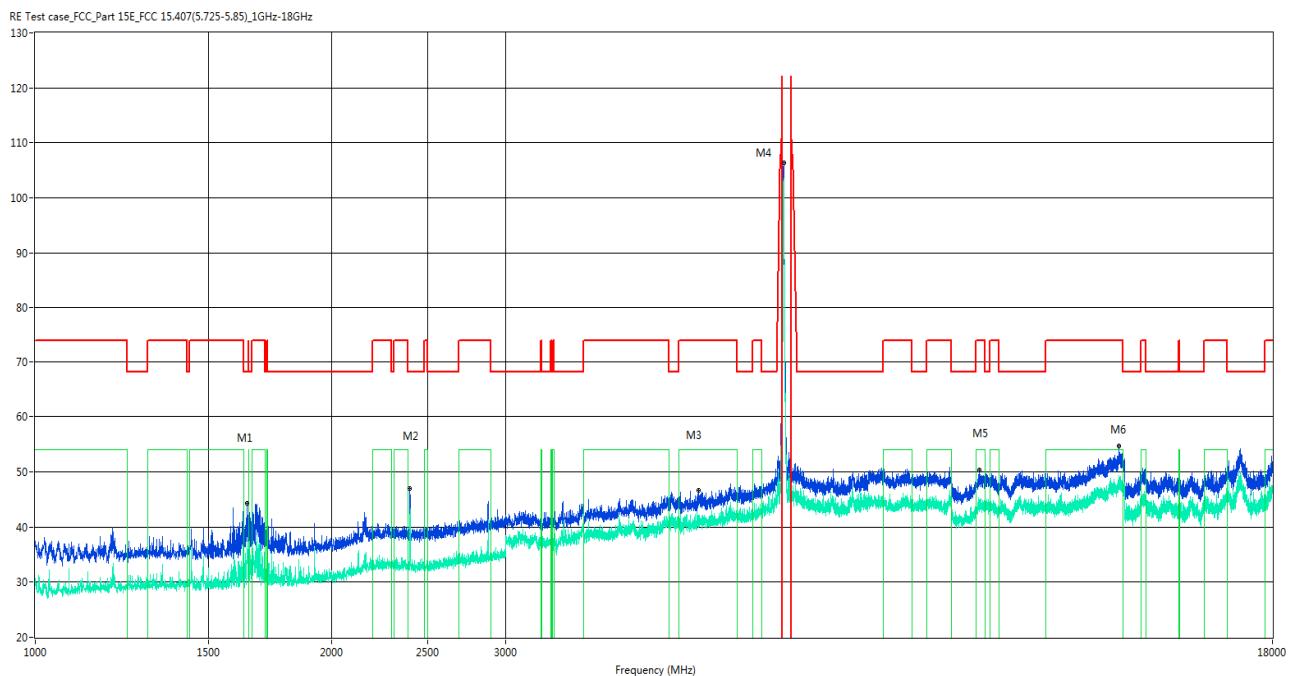
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1657.500	34.5	-15.63	--	-34.50	AV	317.00	150	Horizontal	N/A
1	1657.500	45.08	-15.63	68.2	23.12	Peak	317.00	150	Horizontal	Pass
2**	2400.000	44.2	-10.59	--	-44.20	AV	196.60	150	Horizontal	N/A
2	2400.000	48.63	-10.59	68.2	19.57	Peak	196.60	150	Horizontal	Pass
3**	4352.000	39.4	-3.03	54.0	14.60	AV	64.30	150	Horizontal	Pass
3	4352.000	46.36	-3.03	74.0	27.64	Peak	64.30	150	Horizontal	Pass
4**	5781.000	99.7	0.82	--	-99.70	AV	346.30	150	Horizontal	N/A
4	5781.000	103.65	0.82	--	242.65	Peak	346.30	150	Horizontal	N/A
5**	10829.500	42.8	15.73	54.0	11.20	AV	270.00	150	Horizontal	Pass
5	10829.500	50.26	15.73	74.0	23.74	Peak	270.00	150	Horizontal	Pass
6**	16638.937	47.4	20.68	--	-47.40	AV	55.40	150	Horizontal	N/A
6	16638.937	53.89	20.68	68.2	14.31	Peak	55.40	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11ac20 Low channel



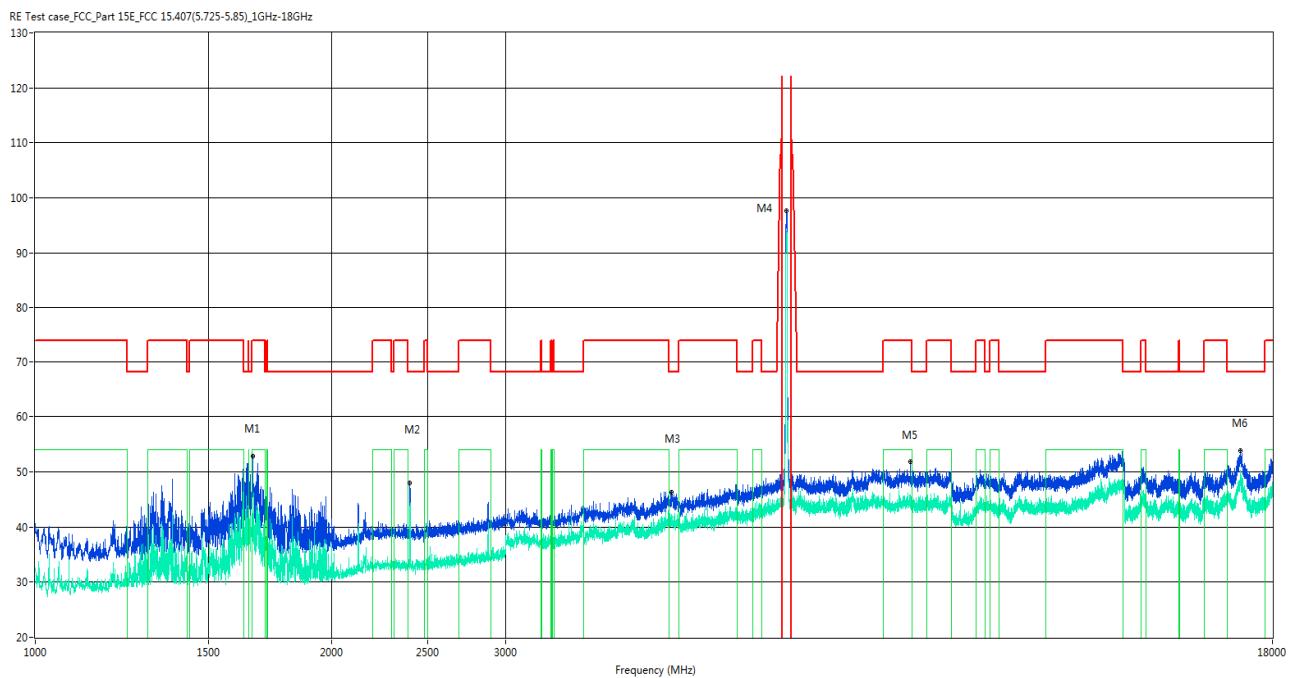
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1680.500	37.0	-15.33	54.0	17.00	AV	66.50	150	Vertical	Pass
1	1680.500	52.73	-15.33	74.0	21.27	Peak	66.50	150	Vertical	Pass
2**	2400.000	43.5	-10.59	--	-43.50	AV	78.30	150	Vertical	N/A
2	2400.000	48.19	-10.59	68.2	20.01	Peak	78.30	150	Vertical	Pass
3**	5072.000	42.0	-0.68	54.0	12.00	AV	127.30	150	Vertical	Pass
3	5072.000	48.05	-0.68	74.0	25.95	Peak	127.30	150	Vertical	Pass
4**	5748.000	93.6	1.20	--	-93.60	AV	326.00	150	Vertical	N/A
4	5748.000	97.16	1.20	--	228.84	Peak	326.00	150	Vertical	Pass
5**	8043.625	45.8	16.48	54.0	8.20	AV	166.40	150	Vertical	Pass
5	8043.625	51.30	16.48	74.0	22.70	Peak	166.40	150	Vertical	Pass
6**	12633.562	47.5	18.50	54.0	6.50	AV	218.00	150	Vertical	Pass
6	12633.562	54.01	18.50	74.0	19.99	Peak	218.00	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11ac20 Low channel



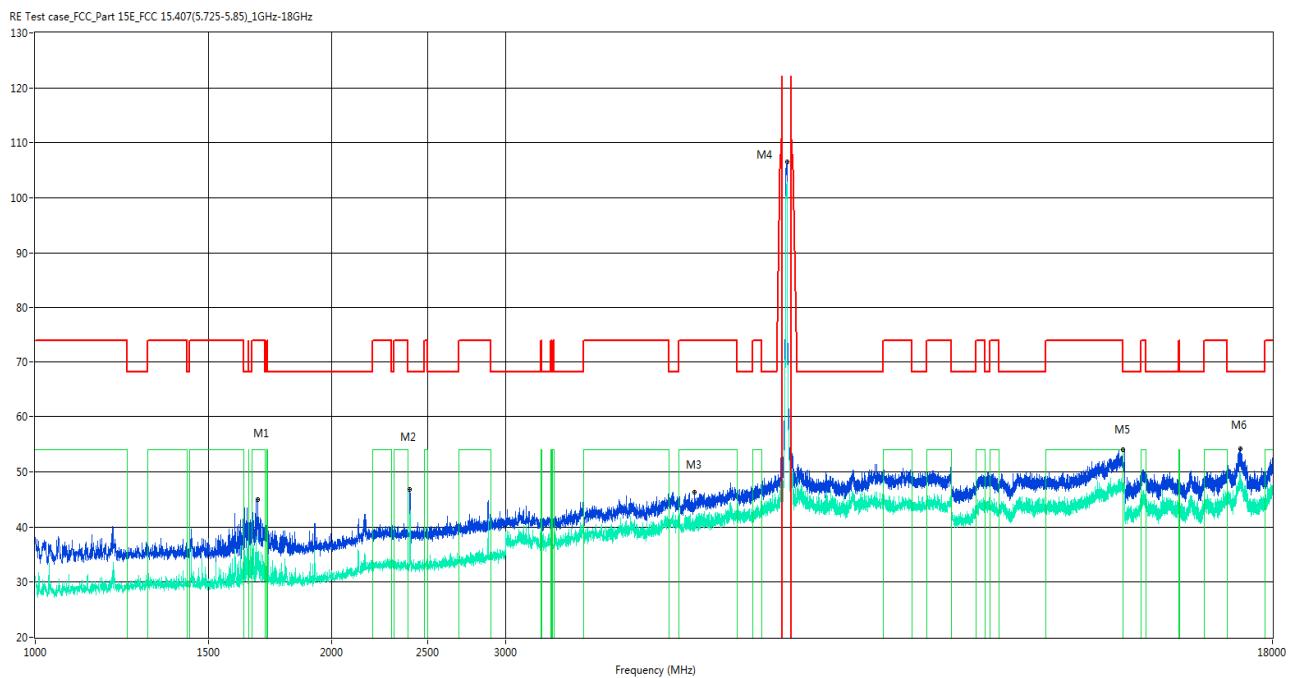
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1641.000	34.3	-15.48	--	-34.30	AV	171.40	150	Horizontal	N/A
1	1641.000	44.32	-15.48	68.2	23.88	Peak	171.40	150	Horizontal	Pass
2**	2400.000	41.4	-10.59	--	-41.40	AV	108.70	150	Horizontal	N/A
2	2400.000	46.92	-10.59	68.2	21.28	Peak	108.70	150	Horizontal	Pass
3**	4711.000	42.1	-2.93	54.0	11.90	AV	118.60	150	Horizontal	Pass
3	4711.000	46.73	-2.93	74.0	27.27	Peak	118.60	150	Horizontal	Pass
4**	5748.000	102.3	1.20	--	-102.30	AV	352.60	150	Horizontal	N/A
4	5748.000	106.36	1.20	--	246.24	Peak	352.60	150	Horizontal	Pass
5**	9081.500	44.6	16.32	54.0	9.40	AV	270.60	150	Horizontal	Pass
5	9081.500	50.27	16.32	74.0	23.73	Peak	270.60	150	Horizontal	Pass
6**	12581.812	48.1	18.85	54.0	5.90	AV	332.30	150	Horizontal	Pass
6	12581.812	54.72	18.85	74.0	19.28	Peak	332.30	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11ac20 Middle channel



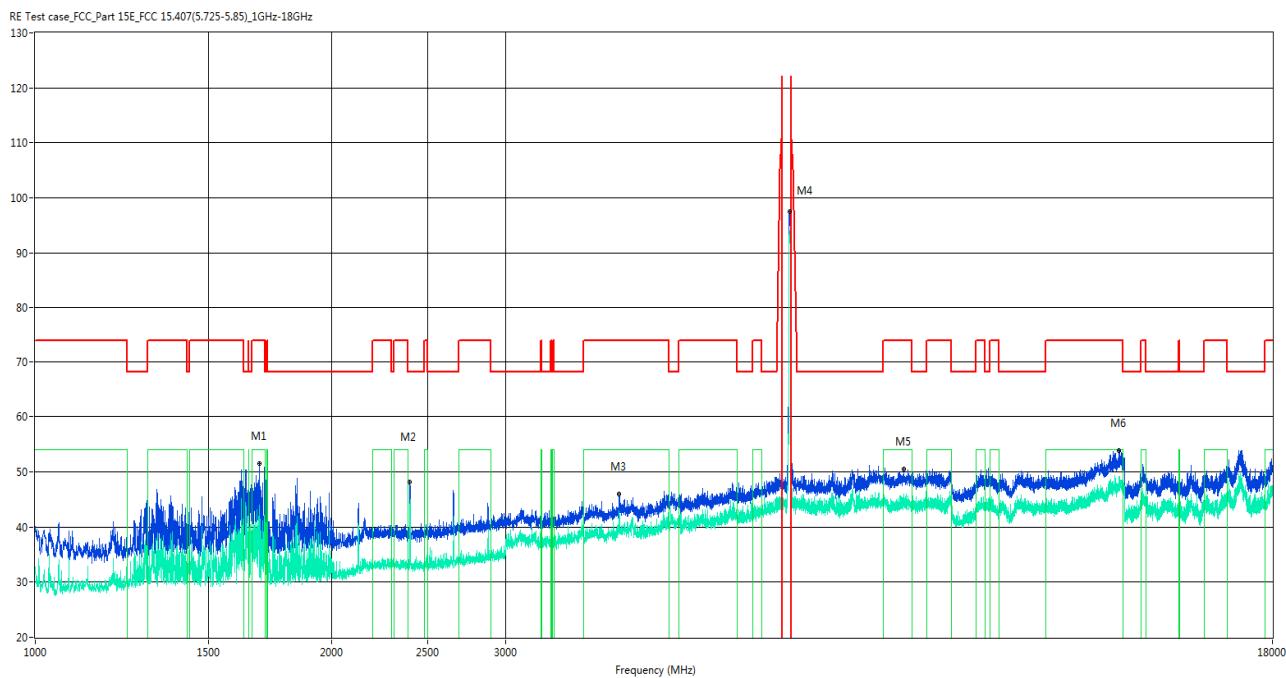
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1663.500	38.8	-15.67	54.0	15.20	AV	63.00	150	Vertical	Pass
1	1663.500	52.84	-15.67	74.0	21.16	Peak	63.00	150	Vertical	Pass
2**	2400.000	43.4	-10.59	--	-43.40	AV	78.70	150	Vertical	N/A
2	2400.000	48.08	-10.59	68.2	20.12	Peak	78.70	150	Vertical	Pass
3**	4421.000	41.4	-2.13	--	-41.40	AV	176.30	150	Vertical	N/A
3	4421.000	46.33	-2.13	68.2	21.87	Peak	176.30	150	Vertical	Pass
4**	5782.000	92.1	0.92	--	-92.10	AV	70.40	150	Vertical	N/A
4	5782.000	97.67	0.92	--	-27.27	Peak	70.40	150	Vertical	N/A
5**	7728.813	44.1	16.55	54.0	9.90	AV	268.90	150	Vertical	Pass
5	7728.813	51.92	16.55	74.0	22.08	Peak	268.90	150	Vertical	Pass
6**	16687.500	48.5	20.75	--	-48.50	AV	348.30	150	Vertical	N/A
6	16687.500	53.80	20.75	68.2	14.40	Peak	348.30	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11ac20 Middle channel



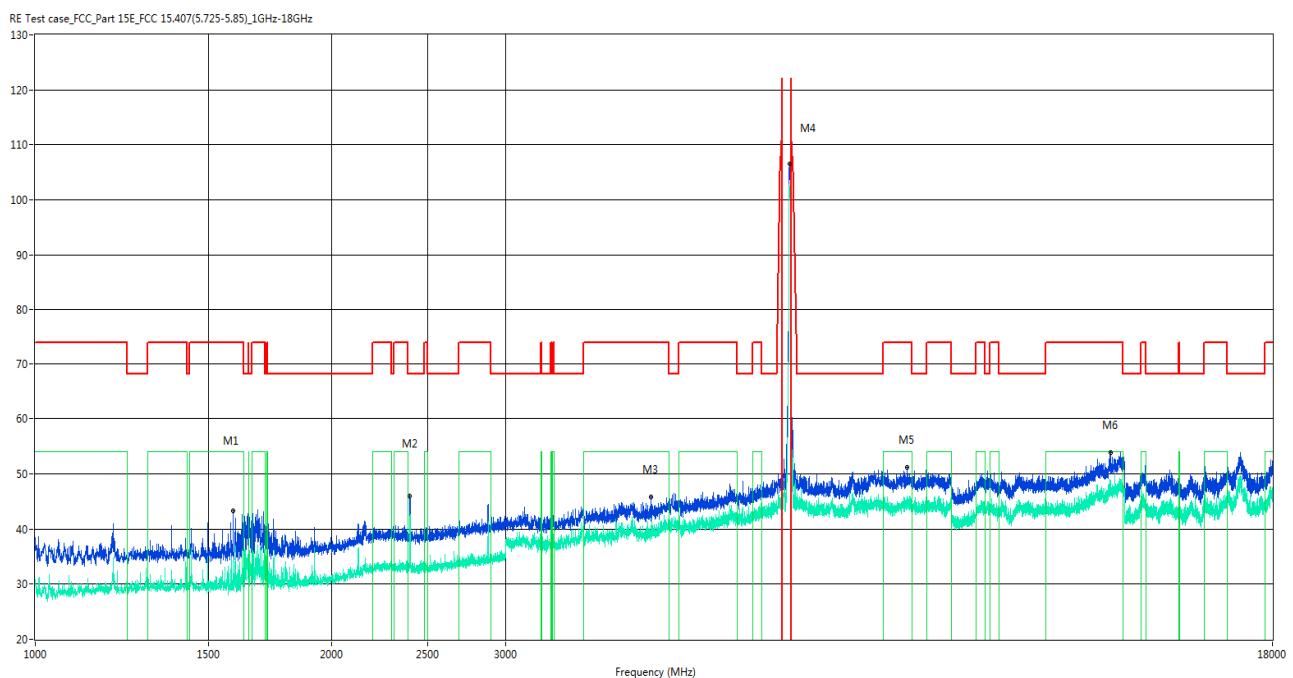
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1682.500	35.3	-15.31	54.0	18.70	AV	179.10	150	Horizontal	Pass
1	1682.500	45.03	-15.31	74.0	28.97	Peak	179.10	150	Horizontal	Pass
2**	2400.000	41.8	-10.59	--	-41.80	AV	104.80	150	Horizontal	N/A
2	2400.000	46.78	-10.59	68.2	21.42	Peak	104.80	150	Horizontal	Pass
3**	4668.000	40.8	-2.76	54.0	13.20	AV	127.40	150	Horizontal	Pass
3	4668.000	46.28	-2.76	74.0	27.72	Peak	127.40	150	Horizontal	Pass
4**	5793.000	102.4	0.78	--	-102.40	AV	348.20	150	Horizontal	N/A
4	5793.000	106.49	0.78	--	241.71	Peak	348.20	150	Horizontal	Pass
5**	12573.187	47.9	18.71	54.0	6.10	AV	209.90	150	Horizontal	Pass
5	12573.187	54.07	18.71	74.0	19.93	Peak	209.90	150	Horizontal	Pass
6**	16696.688	47.8	21.17	--	-47.80	AV	129.80	150	Horizontal	N/A
6	16696.688	54.27	21.17	68.2	13.93	Peak	129.80	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11ac20 High channel



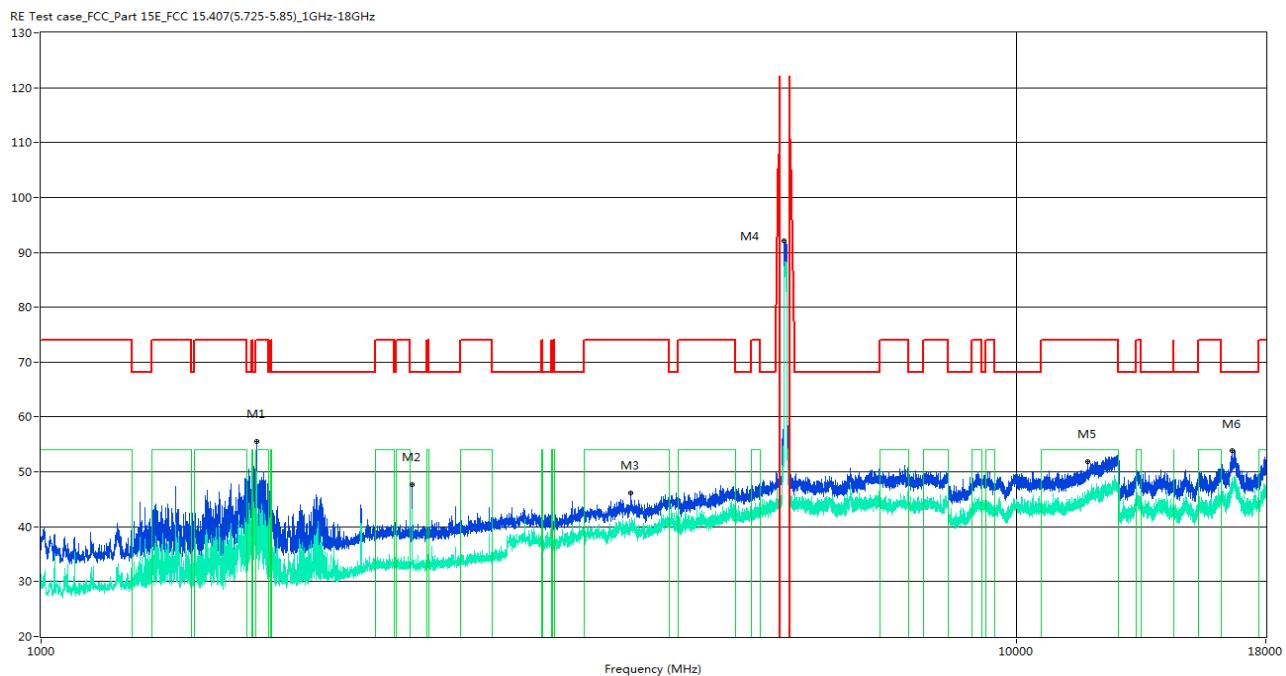
No.	Frequency (MHz)	Results (dB <sub>B</sub> V/m)	Factor (dB)	Limit (dB <sub>B</sub> V/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1687.000	33.7	-15.53	54.0	20.30	AV	62.50	150	Vertical	Pass
1	1687.000	51.50	-15.53	74.0	22.50	Peak	62.50	150	Vertical	Pass
2**	2400.000	43.3	-10.59	--	-43.30	AV	78.00	150	Vertical	N/A
2	2400.000	48.20	-10.59	68.2	20.00	Peak	78.00	150	Vertical	Pass
3**	3911.000	43.0	-3.86	54.0	11.00	AV	348.20	150	Vertical	Pass
3	3911.000	45.98	-3.86	74.0	28.02	Peak	348.20	150	Vertical	Pass
4**	5828.000	92.8	0.44	--	-92.80	AV	87.00	150	Vertical	N/A
4	5828.000	97.49	0.44	--	-10.49	Peak	87.00	150	Vertical	N/A
5**	7605.188	44.6	16.50	54.0	9.40	AV	180.80	150	Vertical	Pass
5	7605.188	50.49	16.50	74.0	23.51	Peak	180.80	150	Vertical	Pass
6**	12577.500	48.4	18.83	54.0	5.60	AV	0.00	150	Vertical	Pass
6	12577.500	53.81	18.83	74.0	20.19	Peak	0.00	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11ac20 High channel



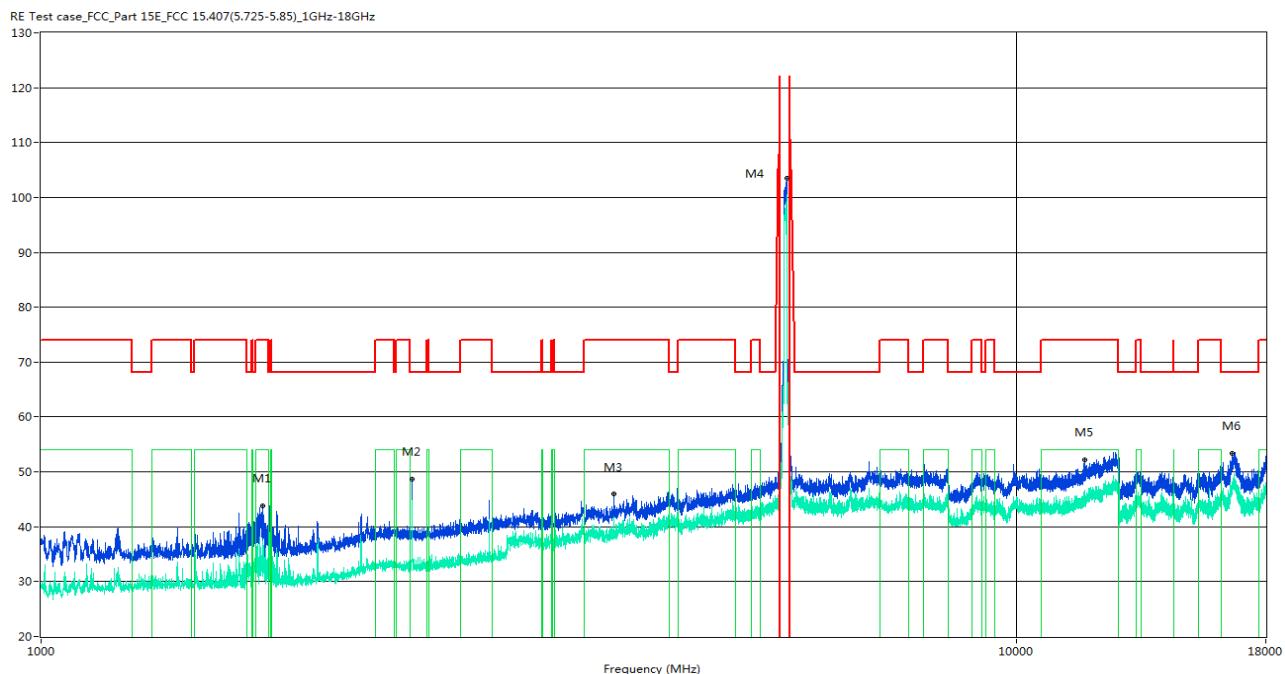
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1588.500	29.1	-15.54	54.0	24.90	AV	163.50	150	Horizontal	Pass
1	1588.500	43.23	-15.54	74.0	30.77	Peak	163.50	150	Horizontal	Pass
2**	2400.000	42.0	-10.59	--	-42.00	AV	100.10	150	Horizontal	N/A
2	2400.000	46.07	-10.59	68.2	22.13	Peak	100.10	150	Horizontal	Pass
3**	4214.000	39.5	-3.89	54.0	14.50	AV	202.10	150	Horizontal	Pass
3	4214.000	45.83	-3.89	74.0	28.17	Peak	202.10	150	Horizontal	Pass
4**	5827.000	101.5	0.48	--	-101.50	AV	357.70	150	Horizontal	N/A
4	5827.000	106.48	0.48	--	251.22	Peak	357.70	150	Horizontal	Pass
5**	7671.312	45.0	16.49	54.0	9.00	AV	217.60	150	Horizontal	Pass
5	7671.312	51.22	16.49	74.0	22.78	Peak	217.60	150	Horizontal	Pass
6**	12336.000	46.7	18.13	54.0	7.30	AV	1.20	150	Horizontal	Pass
6	12336.000	53.84	18.13	74.0	20.16	Peak	1.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11ac40 Low channel



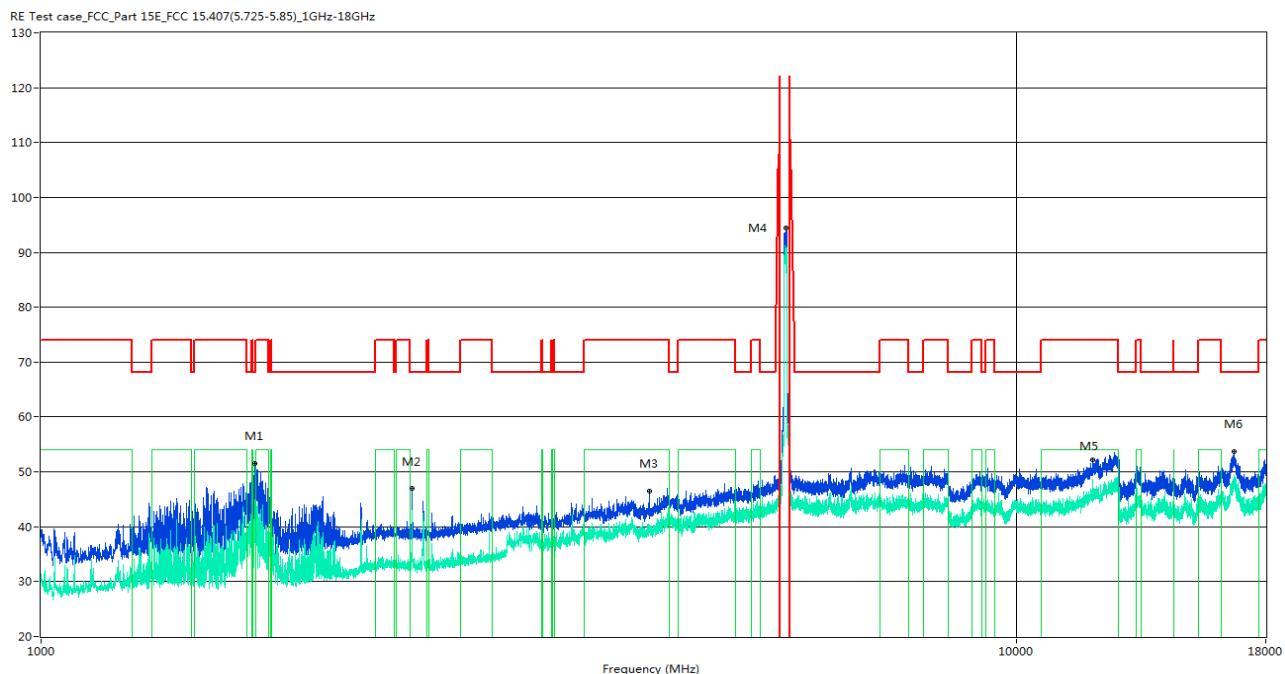
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1663.000	50.0	-15.70	54.0	4.00	AV	58.80	150	Vertical	Pass
1	1663.000	55.52	-15.70	74.0	18.48	Peak	58.80	150	Vertical	Pass
2**	2400.000	41.8	-10.59	--	-41.80	AV	236.40	150	Vertical	N/A
2	2400.000	47.73	-10.59	68.2	20.47	Peak	236.40	150	Vertical	Pass
3**	4025.000	39.3	-3.45	54.0	14.70	AV	359.20	150	Vertical	Pass
3	4025.000	46.12	-3.45	74.0	27.88	Peak	359.20	150	Vertical	Pass
4**	5780.000	87.2	0.72	--	-87.20	AV	148.40	150	Vertical	N/A
4	5780.000	92.02	0.72	--	56.38	Peak	148.40	150	Vertical	Pass
5**	11832.875	44.6	16.96	54.0	9.40	AV	360.50	150	Vertical	Pass
5	11832.875	51.87	16.96	74.0	22.13	Peak	360.50	150	Vertical	Pass
6**	16637.625	47.7	20.60	--	-47.70	AV	332.70	150	Vertical	N/A
6	16637.625	53.87	20.60	68.2	14.33	Peak	332.70	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11ac40 Low channel



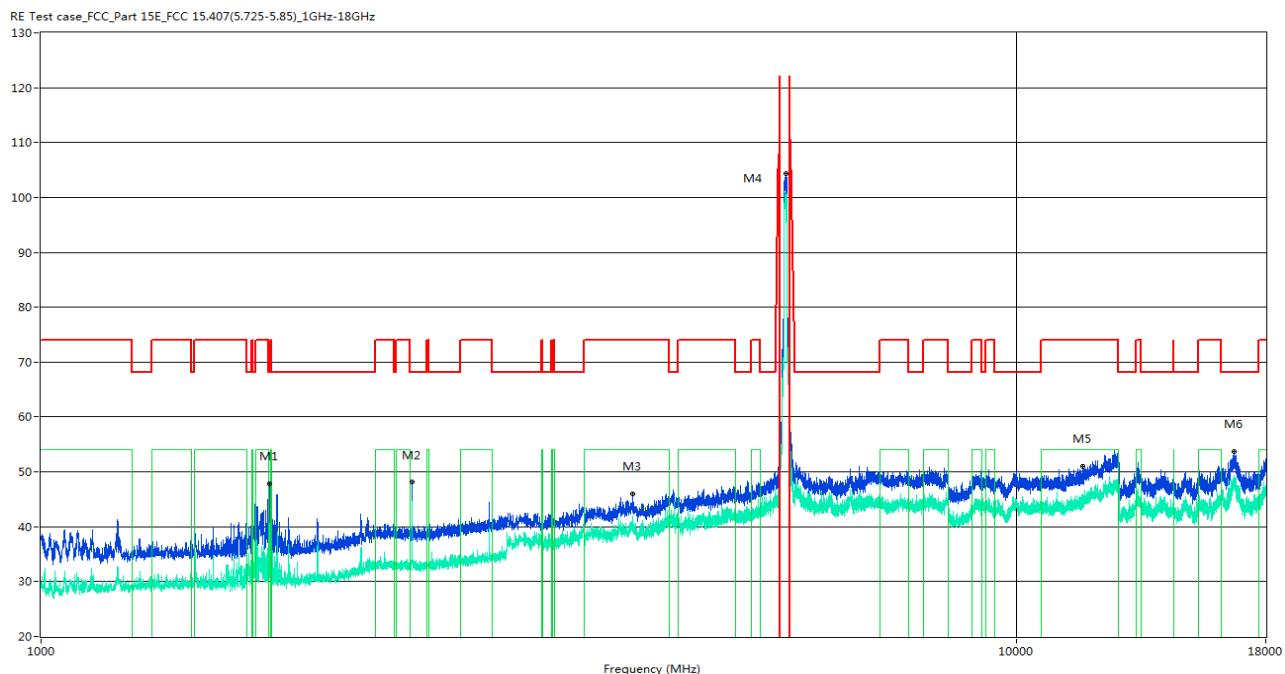
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1686.500	35.5	-15.53	54.0	18.50	AV	309.90	150	Horizontal	Pass
1	1686.500	43.86	-15.53	74.0	30.14	Peak	309.90	150	Horizontal	Pass
2**	2400.000	43.9	-10.59	--	-43.90	AV	195.40	150	Horizontal	N/A
2	2400.000	48.73	-10.59	68.2	19.47	Peak	195.40	150	Horizontal	Pass
3**	3863.000	39.3	-4.26	54.0	14.70	AV	325.30	150	Horizontal	Pass
3	3863.000	45.91	-4.26	74.0	28.09	Peak	325.30	150	Horizontal	Pass
4**	5811.000	97.9	1.14	--	-97.90	AV	343.20	150	Horizontal	N/A
4	5811.000	103.46	1.14	--	239.74	Peak	343.20	150	Horizontal	Pass
5**	11743.750	46.2	16.75	54.0	7.80	AV	182.90	150	Horizontal	Pass
5	11743.750	52.21	16.75	74.0	21.79	Peak	182.90	150	Horizontal	Pass
6**	16642.875	47.9	20.70	--	-47.90	AV	38.20	150	Horizontal	N/A
6	16642.875	53.29	20.70	68.2	14.91	Peak	38.20	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11ac40 High channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1654.500	38.3	-15.64	--	-38.30	AV	72.60	150	Vertical	N/A
1	1654.500	51.49	-15.64	68.2	16.71	Peak	72.60	150	Vertical	Pass
2**	2400.000	42.0	-10.59	--	-42.00	AV	232.30	150	Vertical	N/A
2	2400.000	46.94	-10.59	68.2	21.26	Peak	232.30	150	Vertical	Pass
3**	4199.000	39.2	-4.10	54.0	14.80	AV	205.50	150	Vertical	Pass
3	4199.000	46.52	-4.10	74.0	27.48	Peak	205.50	150	Vertical	Pass
4**	5801.000	90.4	0.86	--	-90.40	AV	112.30	150	Vertical	N/A
4	5801.000	94.48	0.86	--	17.82	Peak	112.30	150	Vertical	Pass
5**	11952.187	46.6	17.30	54.0	7.40	AV	1.50	150	Vertical	Pass
5	11952.187	52.16	17.30	74.0	21.84	Peak	1.50	150	Vertical	Pass
6**	16699.312	48.7	21.28	--	-48.70	AV	74.60	150	Vertical	N/A
6	16699.312	53.76	21.28	68.2	14.44	Peak	74.60	150	Vertical	Pass

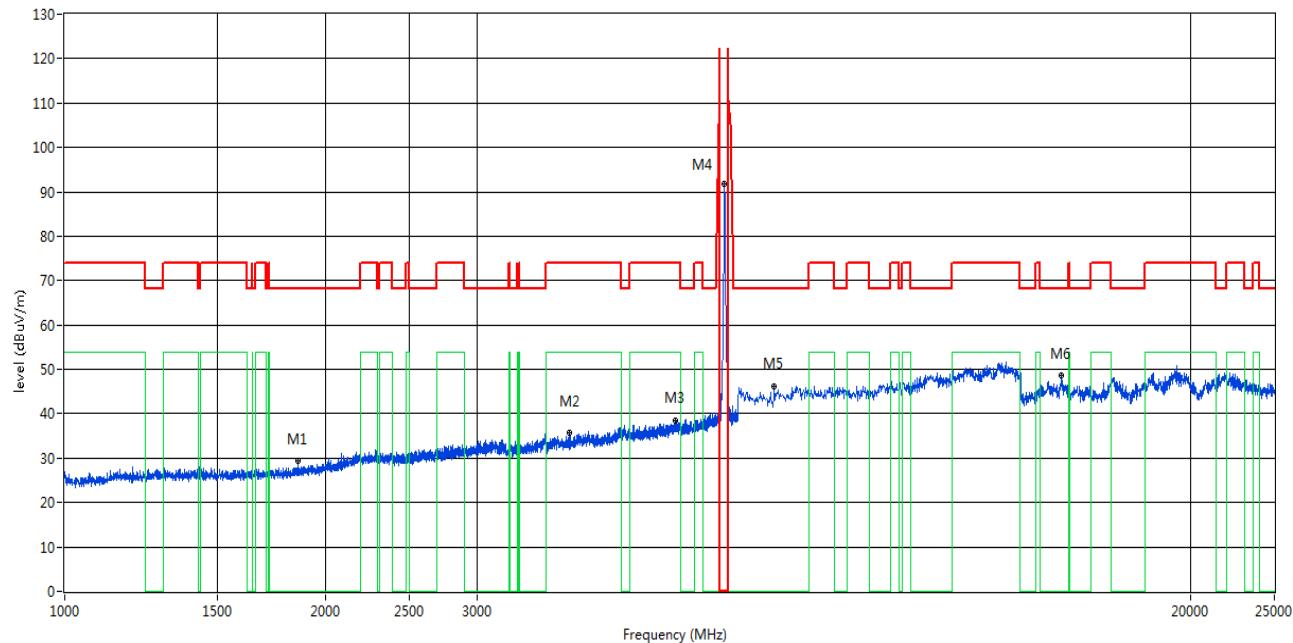
## 1 GHz to 18 GHz, ANT H Band IV 11ac40 High channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1713.000	32.4	-15.48	--	-32.40	AV	191.50	150	Horizontal	N/A
1	1713.000	47.82	-15.48	68.2	20.38	Peak	191.50	150	Horizontal	Pass
2**	2399.500	39.0	-10.62	--	-39.00	AV	191.50	150	Horizontal	N/A
2	2399.500	48.11	-10.62	68.2	20.09	Peak	191.50	150	Horizontal	Pass
3**	4038.000	40.3	-3.73	54.0	13.70	AV	121.70	150	Horizontal	Pass
3	4038.000	45.97	-3.73	74.0	28.03	Peak	121.70	150	Horizontal	Pass
4**	5798.000	100.2	0.88	--	-100.20	AV	355.00	150	Horizontal	N/A
4	5798.000	104.32	0.88	--	250.68	Peak	355.00	150	Horizontal	Pass
5**	11684.813	43.5	16.37	54.0	10.50	AV	352.60	150	Horizontal	Pass
5	11684.813	50.95	16.37	74.0	23.05	Peak	352.60	150	Horizontal	Pass
6**	16708.500	48.7	21.18	--	-48.70	AV	320.70	150	Horizontal	N/A
6	16708.500	53.66	21.18	68.2	14.54	Peak	320.70	150	Horizontal	Pass

## 1 GHz to 18 GHz, ANT V Band IV 11ac80 Low channel

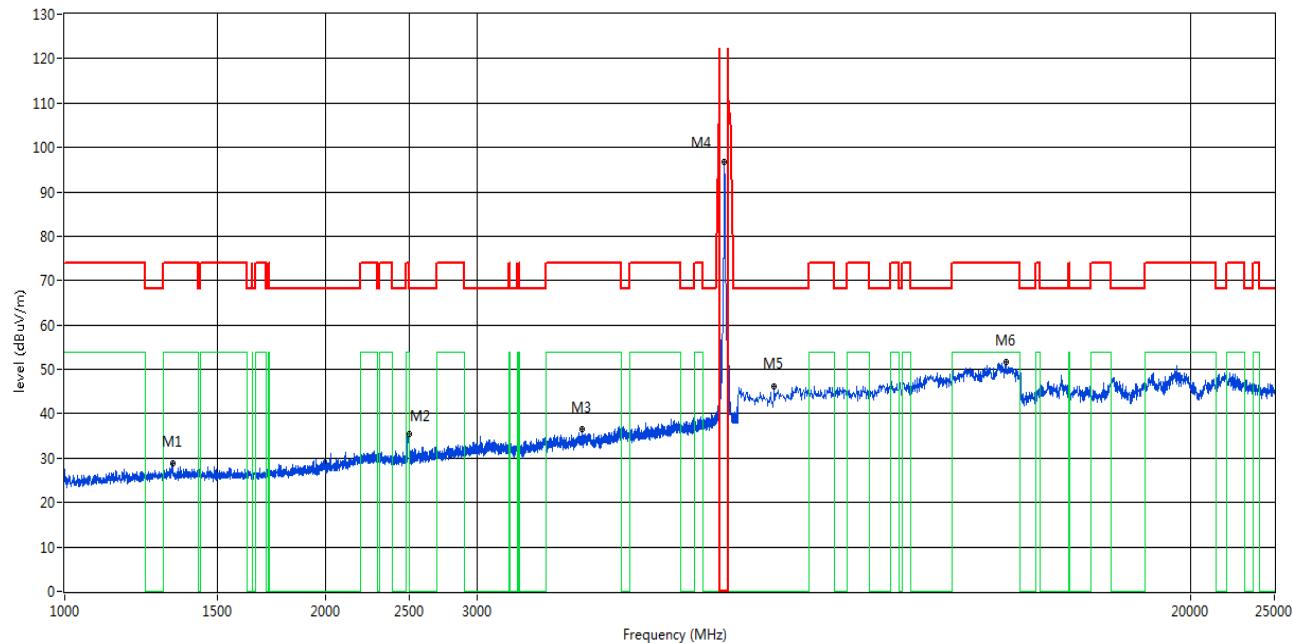
RE Test case\_FCC\_Part 15E\_FCC 15.407(5.725-5.85)\_1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1860.500	29.38	-14.42	68.2	38.82	Peak	195.00	150	Vertical	Pass
2	3827.000	35.86	-5.03	74.0	38.14	Peak	237.00	150	Vertical	Pass
3	5073.000	38.57	-0.67	74.0	35.43	Peak	62.40	150	Vertical	Pass
4	5771.000	91.87	0.81	--	180.43	Peak	272.30	150	Vertical	Pass
5	6606.489	46.49	13.76	68.2	21.71	Peak	97.30	150	Vertical	Pass
6	14195.507	47.73	9.62	68.2	20.47	Peak	359.30	150	Vertical	Pass

## 1 GHz to 18 GHz, ANT H Band IV 11ac80 Low channel

RE Test case\_FCC\_Part 15E\_FCC 15.407(5.725-5.85)\_1GHz-25GHz

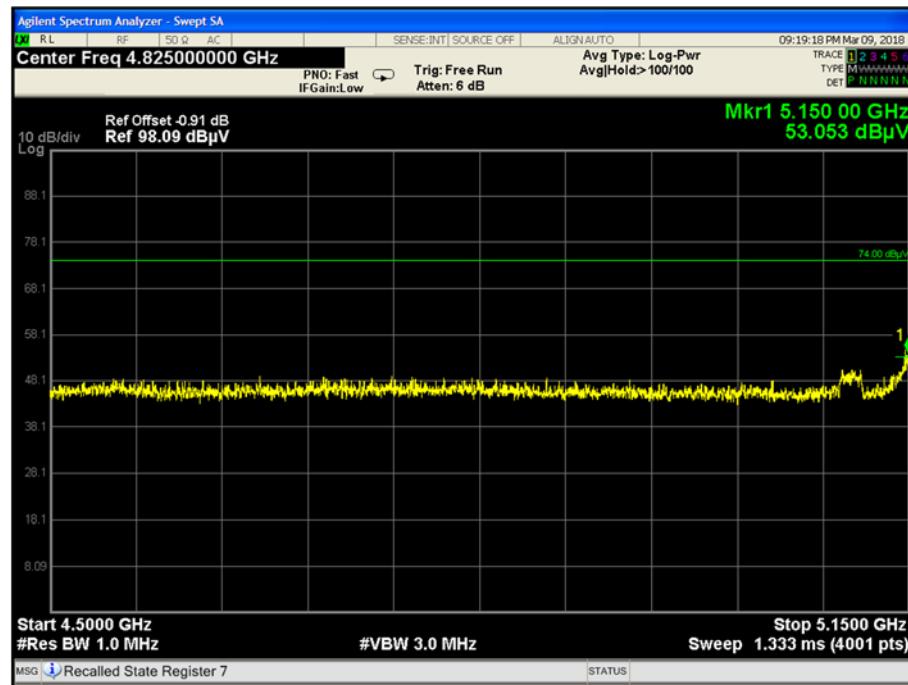


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1332.500	28.79	-14.54	74.0	45.21	Peak	156.10	150	Horizontal	Pass
2	2498.500	35.41	-9.97	74.0	38.59	Peak	148.80	150	Horizontal	Pass
3	3959.000	36.44	-3.81	74.0	37.56	Peak	17.50	150	Horizontal	Pass
4	5772.000	96.64	0.93	--	236.06	Peak	332.70	150	Horizontal	Pass
5	6606.489	46.23	13.76	68.2	21.97	Peak	97.30	150	Horizontal	Pass
6	12233.361	51.64	20.65	74.0	22.36	Peak	0.30	150	Horizontal	Pass

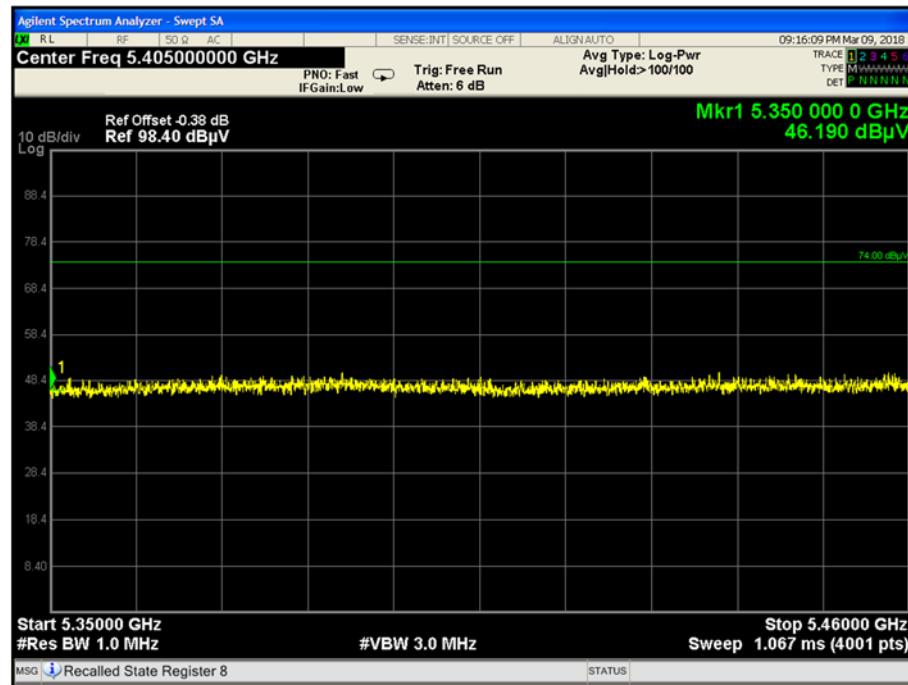
## A.7.2 Band Edge (Restricted-band)

Test Band	Mode	Channel	Verdict
Band I	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(HT20)	Low	Pass
		High	Pass
	802.11ac(HT40)	Low	Pass
		High	Pass
	802.11ac(HT80)	Low	Pass
Band IV	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(HT20)	Low	Pass
		High	Pass
	802.11ac(HT40)	Low	Pass
		High	Pass
	802.11ac(HT80)	Low	Pass

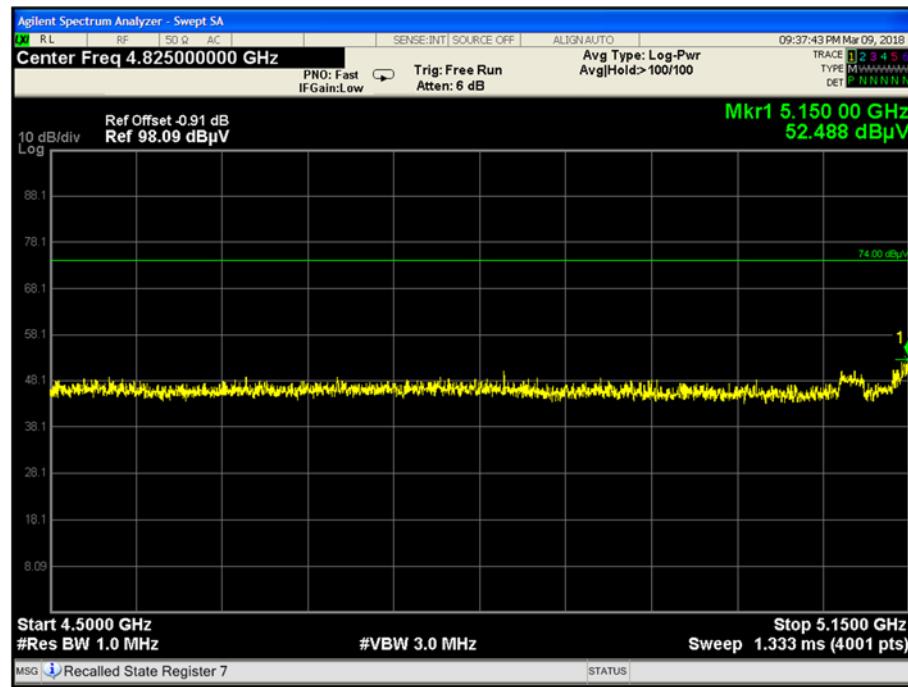
### Band I 11a Low channel



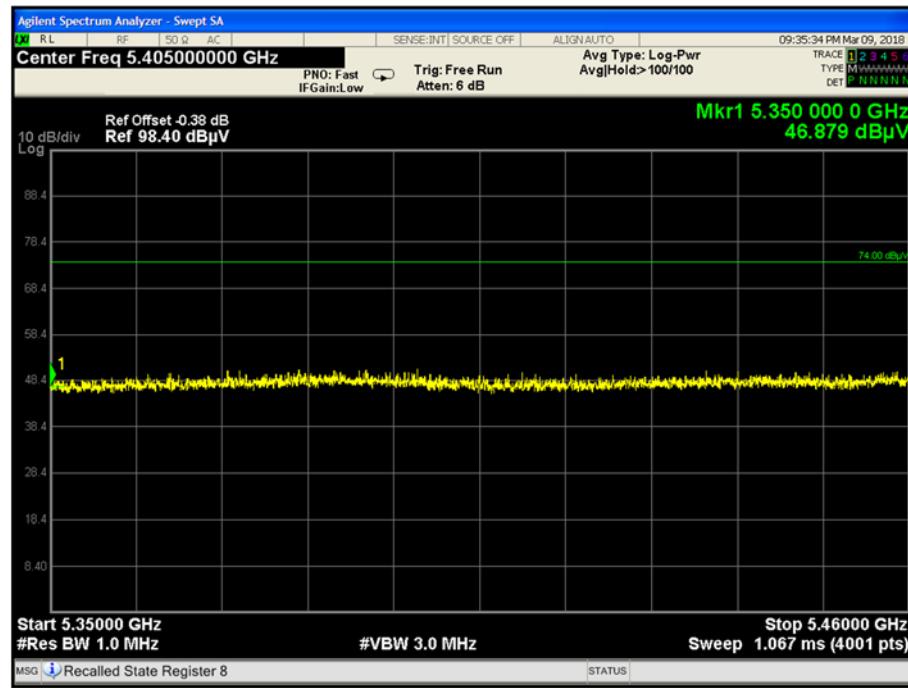
### Band I 11a High channel



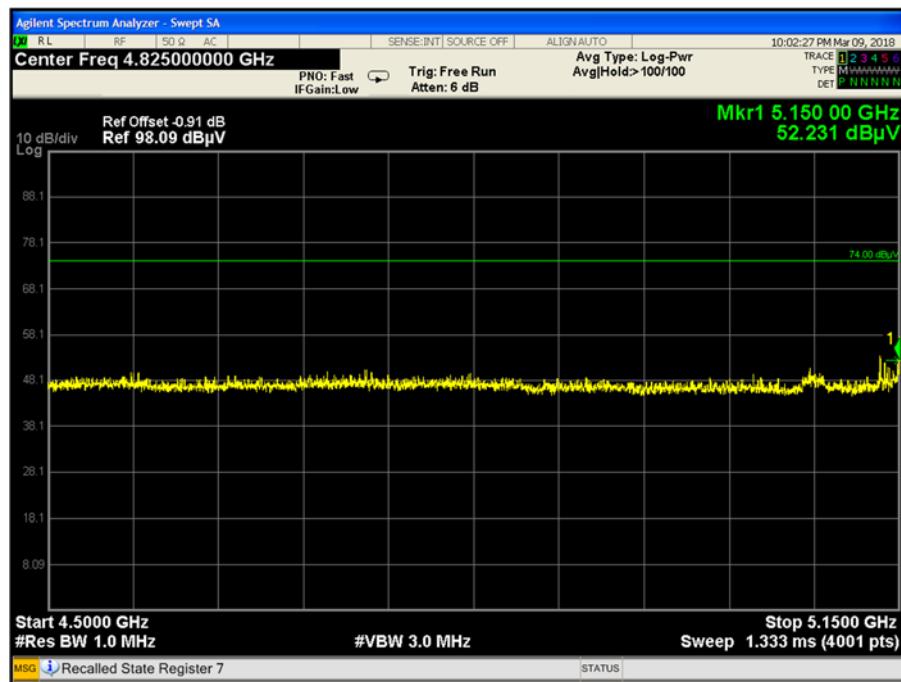
### Band I 11n20 Low channel



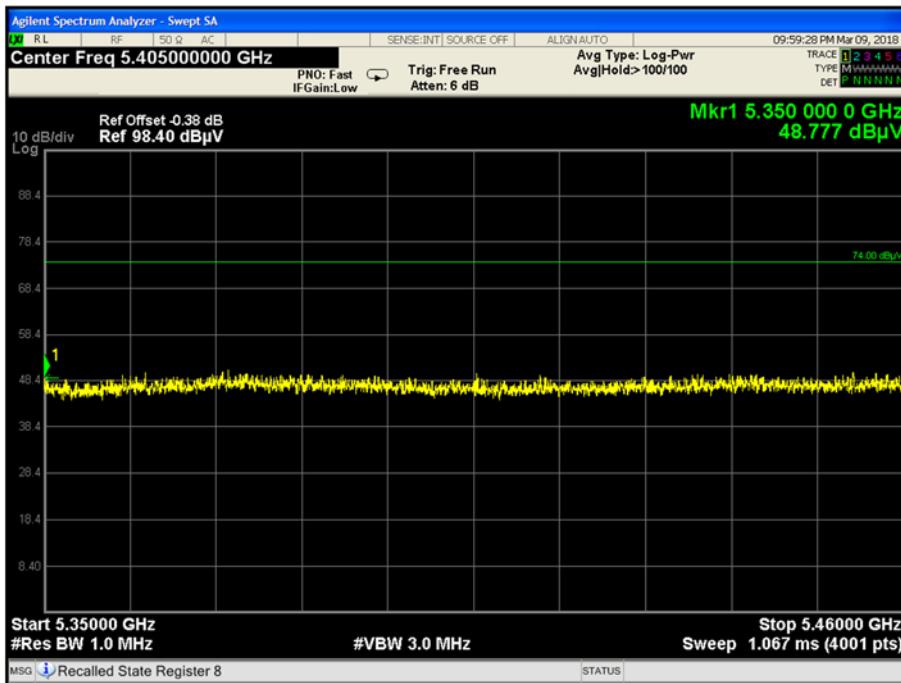
### Band I 11n20 High channel



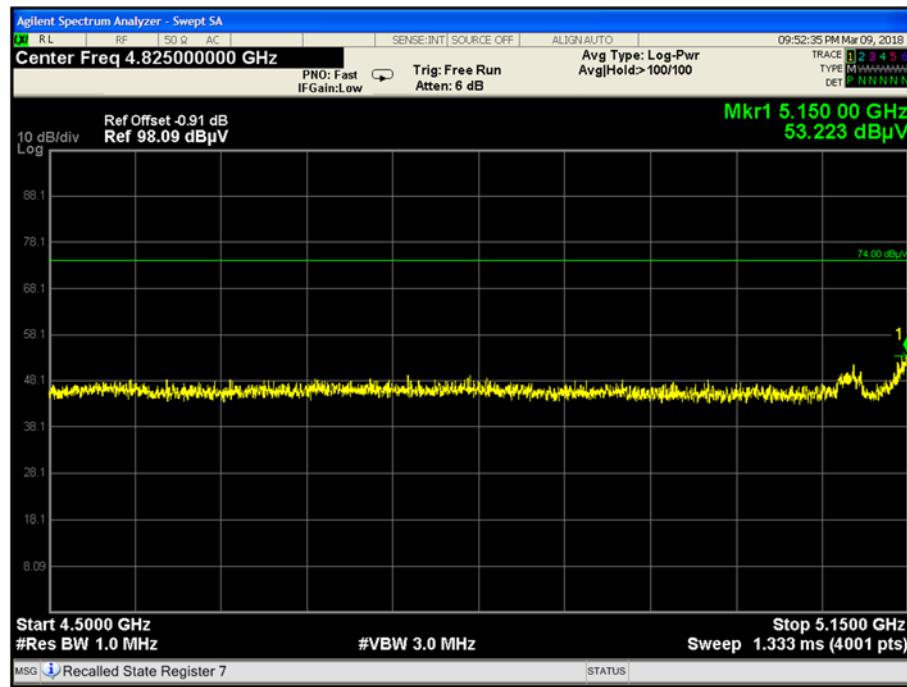
### Band I 11n40 Low channel



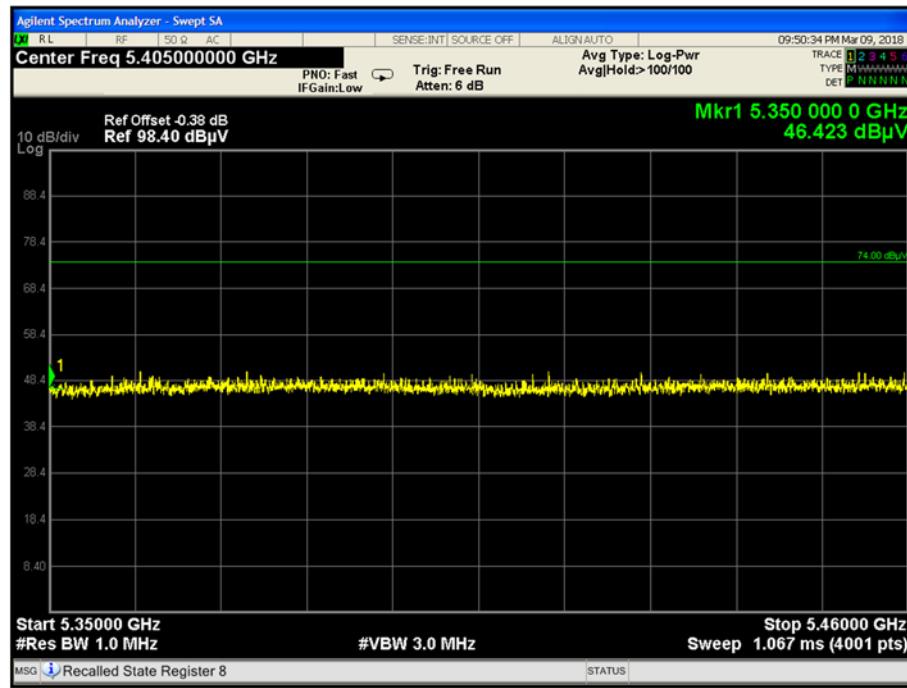
### Band I 11n40 High channel



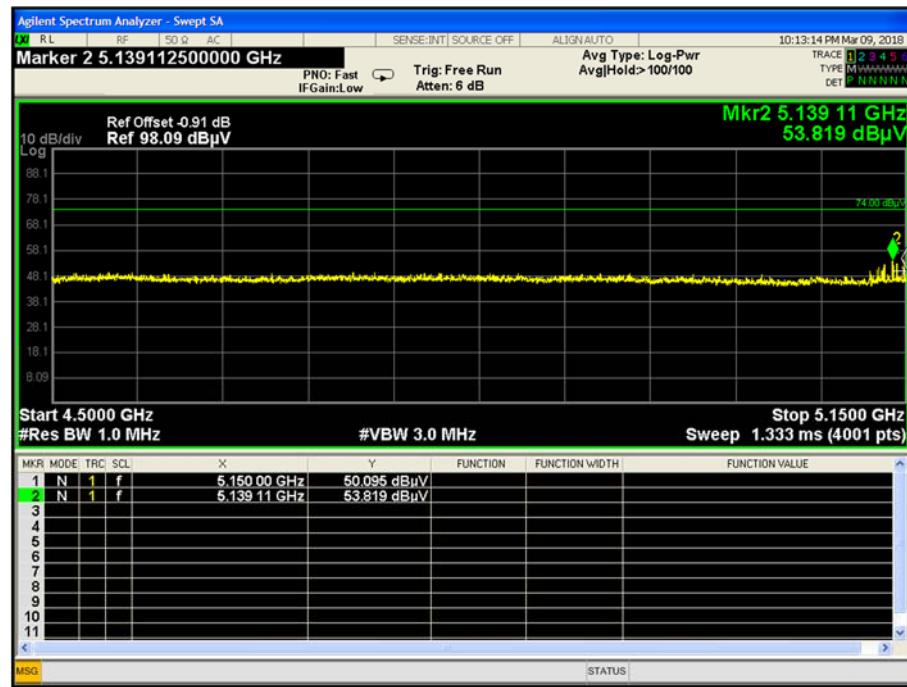
### Band I 11ac20 Low channel



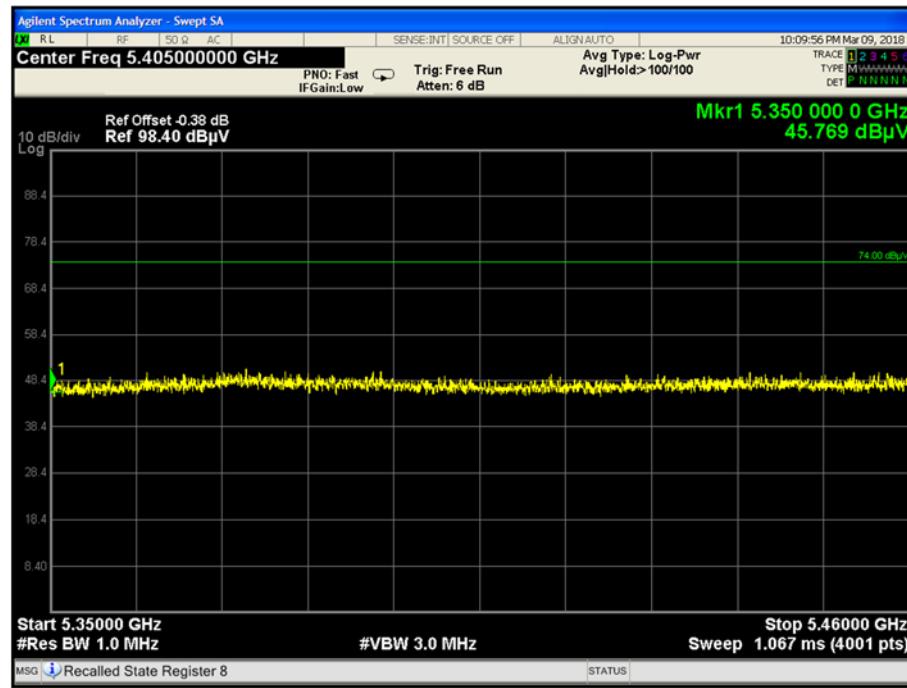
### Band I 11ac20 High channel



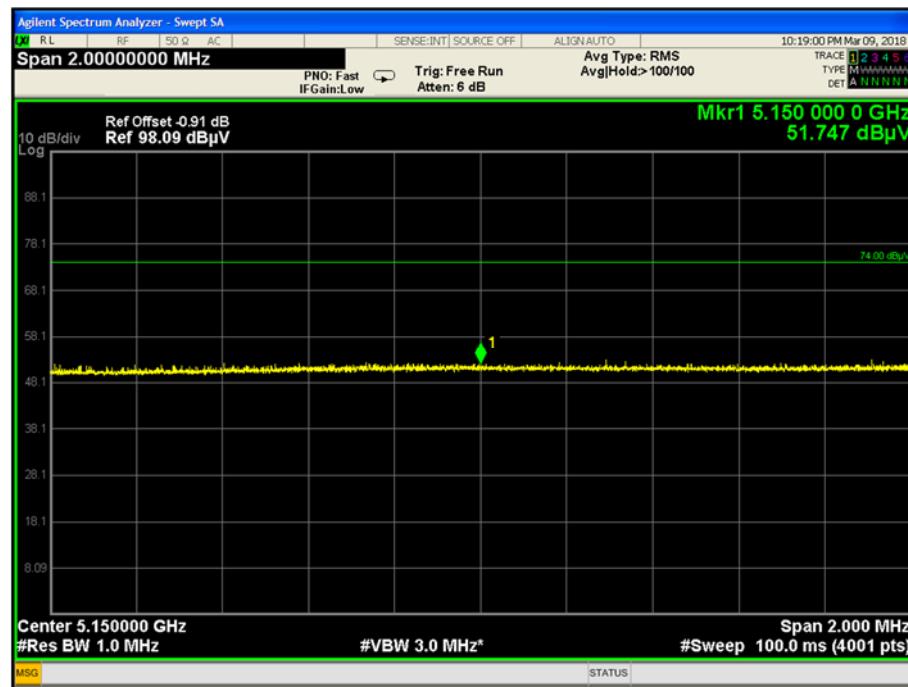
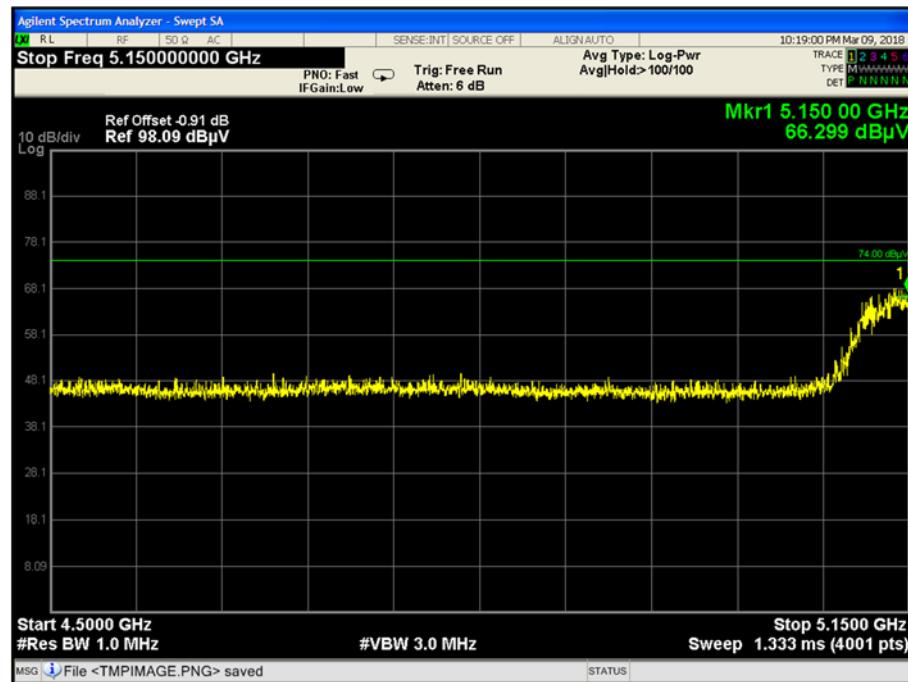
### Band I 11ac40 Low channel



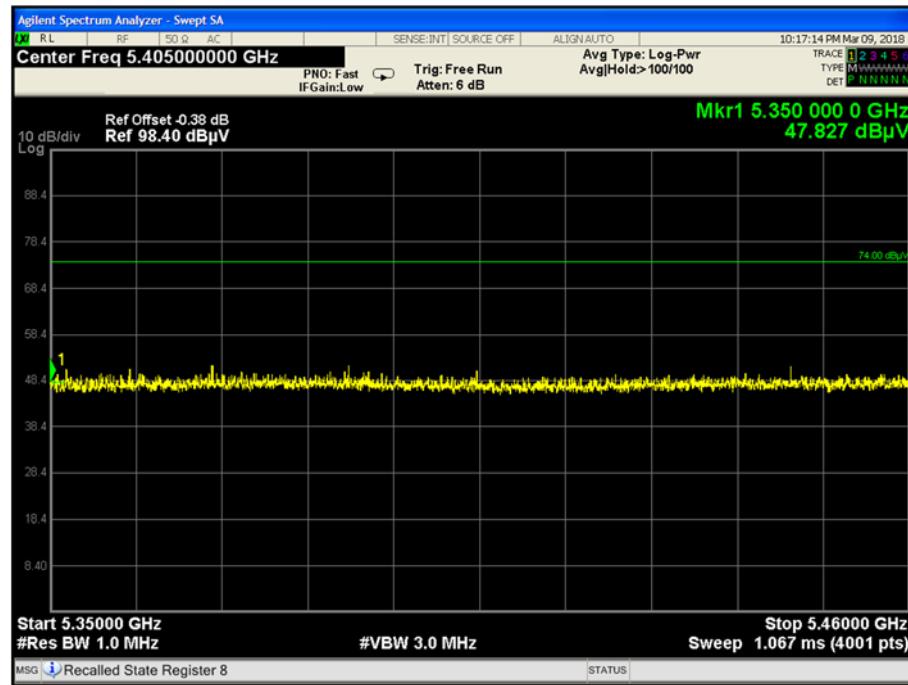
### Band I 11ac40 High channel



## Band I 11ac80 Low channel



## Band I 11ac80 Low channel



## Band IV 11a Low channel



## Band IV 11a High channel

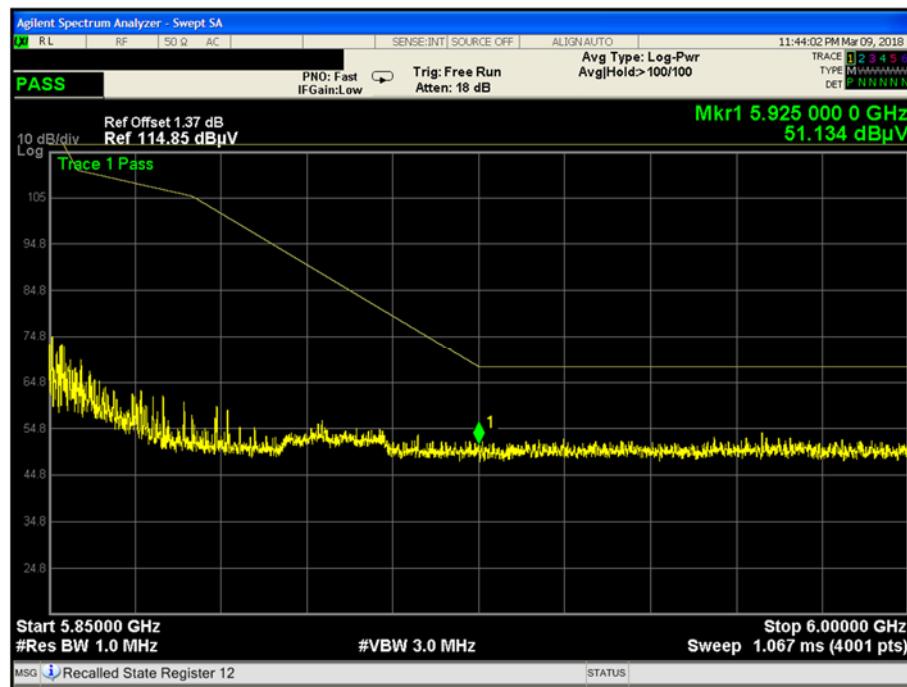


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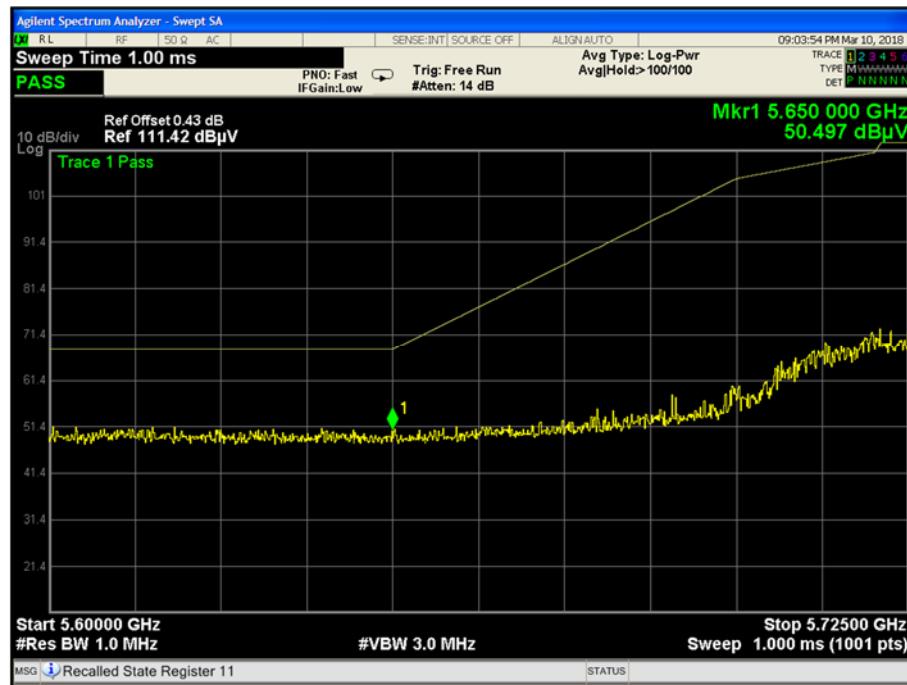
### Band IV 11n20 Low channel



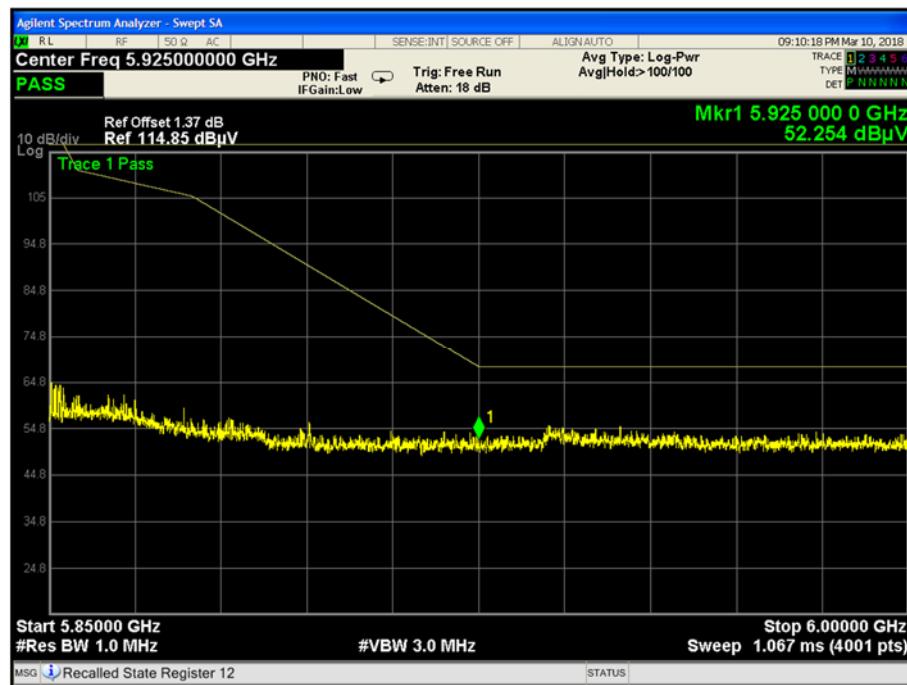
### Band IV 11n20 High channel



### Band IV 11n40 Low channel



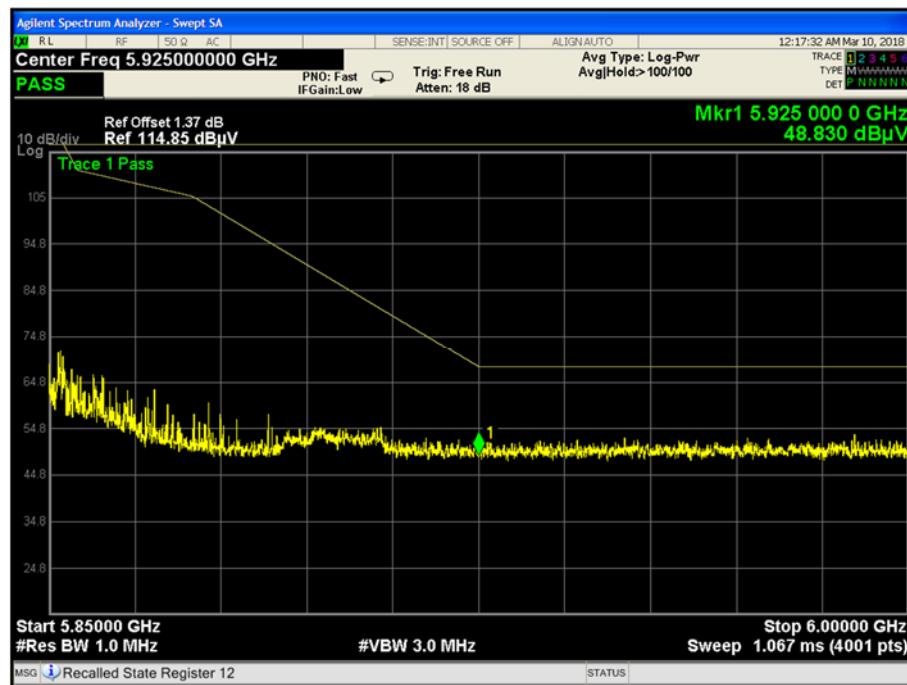
### Band IV 11n40 High channel



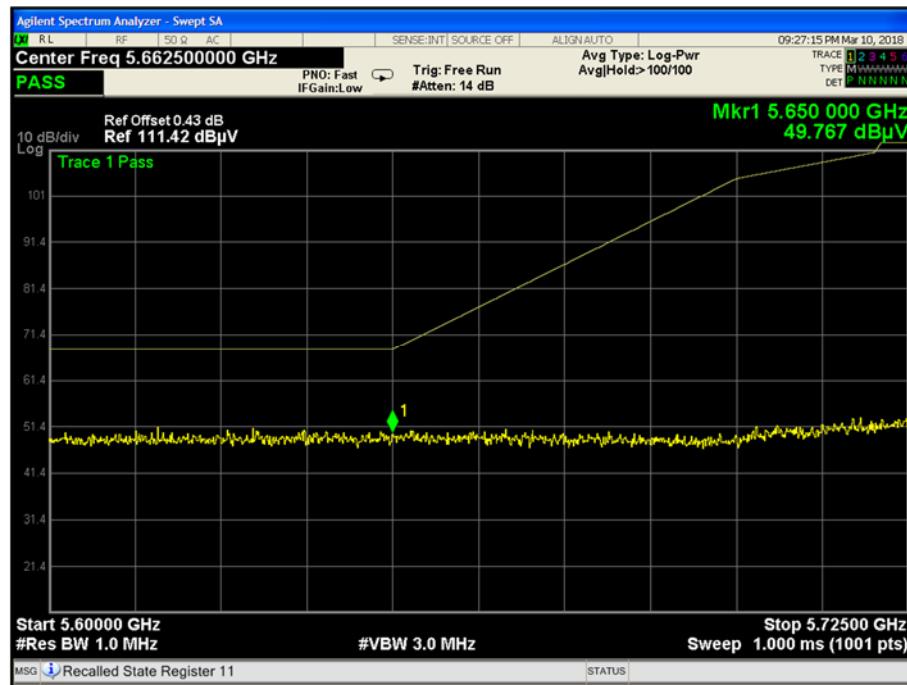
### Band IV 11ac20 Low channel



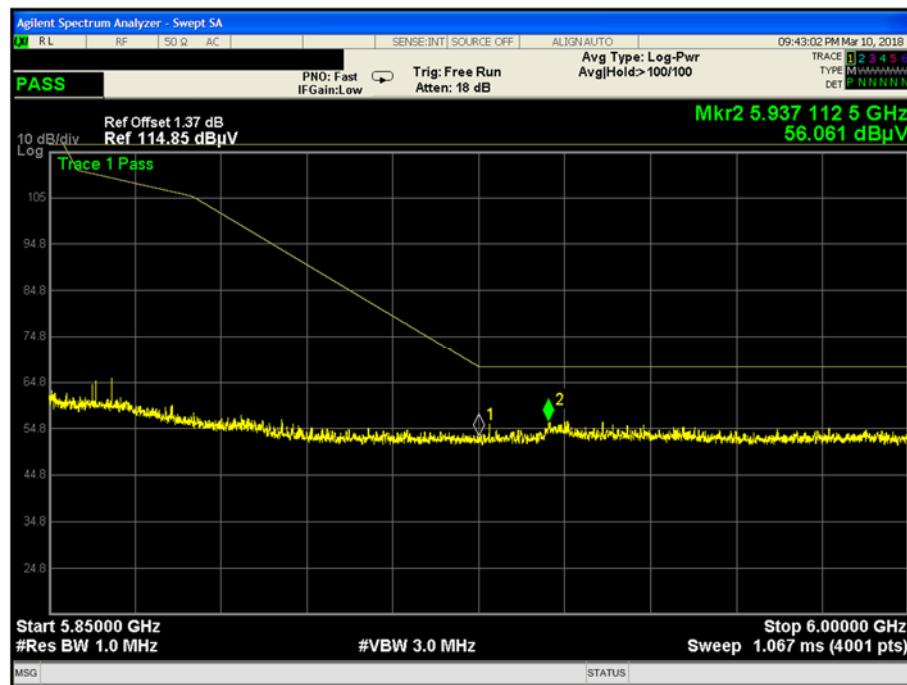
### Band IV 11ac20 High channel



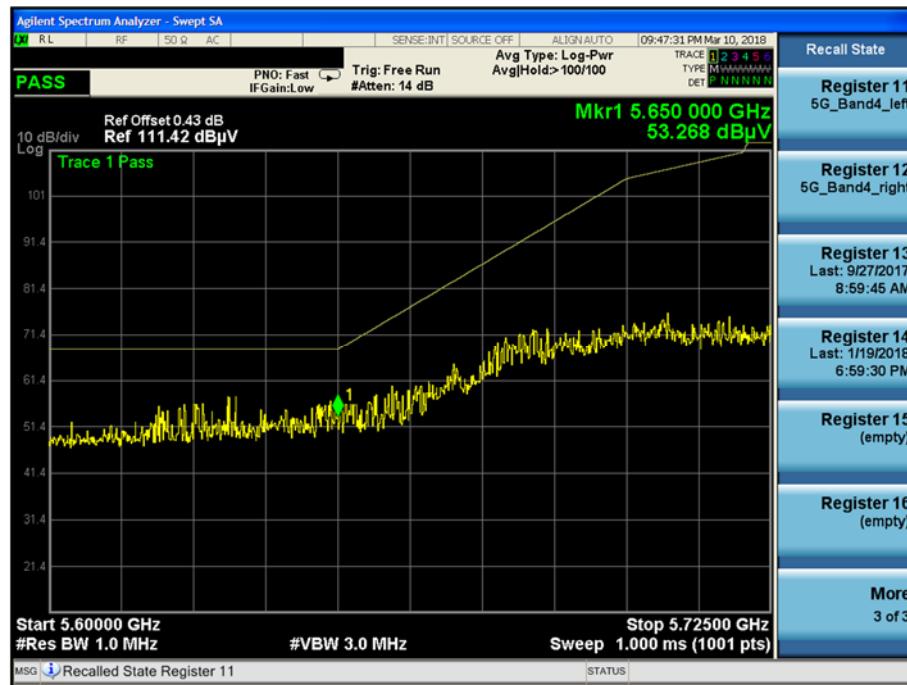
### Band IV 11ac40 Low channel



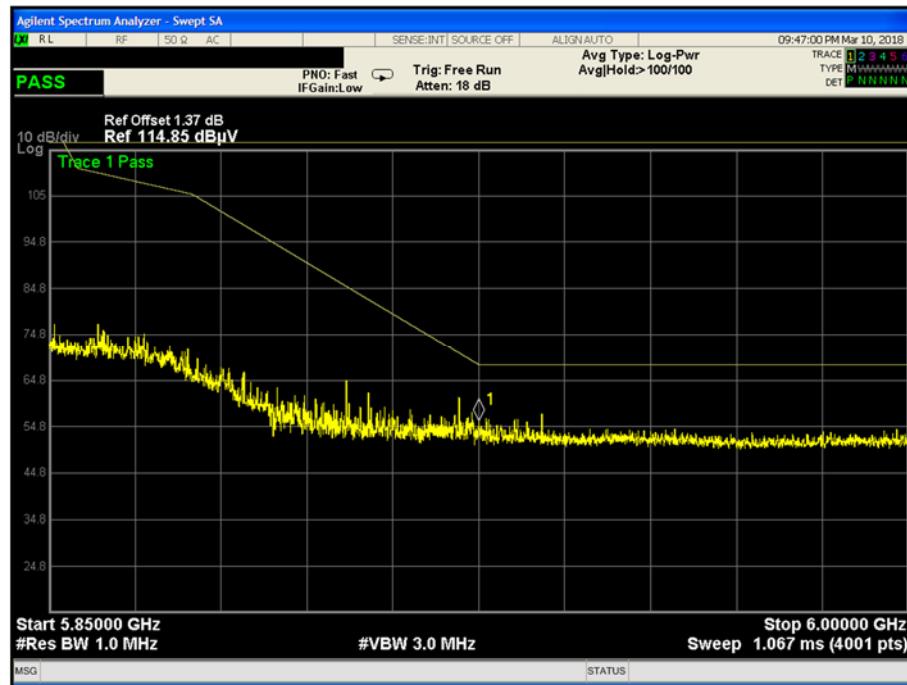
### Band IV 11ac40 High channel



### Band IV 11ac80 Low channel



### Band IV 11ac80 Low channel



## A.8 Frequency Stability

### Voltage vs. Frequency Stability (5180 MHz)

Test Conditions		Test Frequency (MHz)	0 Minute		2 Minute		5 Minute		10 Minute	
TEMP. (°C)	Voltage (VDC)		Measure ment Frequency (MHz)	Max. Deviation (ppm)	Measure ment Frequency (MHz)	Max. Deviation (ppm)	Measure ment Frequency (MHz)	Max. Deviation (ppm)	Measure ment Frequency (MHz)	Max. Deviation (ppm)
20	16	5180	5179.9687 19	-6.04	5179.984 771	-2.94	5179.987 758	-2.36	5179.984 663	-2.96
	16.5	5180	5180.0363 19	7.01	5180.015 455	2.98	5180.028 654	5.53	5180.024 475	4.72
	18	5180	5180.0392 41	7.58	5180.028 982	5.59	5180.043 978	8.49	5180.014 824	2.86

### Temperature vs. Frequency Stability (5180 MHz)

Test Conditions		Test Frequency (MHz)	0 Minute		2 Minute		5 Minute		10 Minute	
Voltage (VDC)	TEMP. (°C)		Measure ment Frequency (MHz)	Max. Deviation (ppm)	Measure ment Frequency (MHz)	Max. Deviation (ppm)	Measure ment Frequency (MHz)	Max. Deviation (ppm)	Measure ment Frequency (MHz)	Max. Deviation (ppm)
16.5	0	5180	5179.9645 26	-6.85	5179.968 61	-6.06	5179.988 802	-2.16	5179.992 128	-1.52
	10	5180	5180.0470 27	9.08	5180.012 78	2.47	5180.039 937	7.71	5180.035 551	6.86
	20	5180	5180.0181 64	3.51	5180.046 01	8.88	5180.037 084	7.16	5180.044 524	8.60
	30	5180	5180.0047 73	0.92	5180.015 618	3.02	5180.018 038	3.48	5180.023 864	4.61
	40	5180	5179.9878 65	-2.34	5179.971 383	-5.52	5179.973 23	-5.17	5179.997 334	-0.51

## ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ1810248-AR.PDF".

## ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ1810248-AW.PDF".

## ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-SZ1810248-AI.PDF".

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