



# SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

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Report No.: SHEM170100040503  
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## 1 Cover Page

# FCC Part 15E TEST REPORT

<b>Application No.:</b>	SHEM1701000405CR
<b>Applicant:</b>	Zhejiang Dahua Vision Technology Co., Ltd.
<b>FCC ID:</b>	SVNDH-PFM889
<b>Equipment Under Test (EUT):</b> <b>NOTE:</b> The following sample(s) was/were submitted and identified by the client as	
<b>Product Name:</b>	Wireless Transmission Device
<b>Model No.:</b>	DH-PFM889-IM
<b>Add Model No.:</b>	PFM889-IM, DH-PFM889-I, PFM889-I, DH-PFM889-O, PFM889-O, DH-PFM889-OM, PFM889-OM, DH-PFM889-OA, PFM889-OA
<b>Standards:</b>	FCC PART 15 Subpart E: 2016
<b>Date of Receipt:</b>	2017-01-27
<b>Date of Test:</b>	2016-02-27 to 2017-05-23
<b>Date of Issue:</b>	2017-06-07
<b>Test Result:</b>	<b>Pass*</b>

\*In the configuration tested, the EUT detailed in this report complied with the standards specified above.





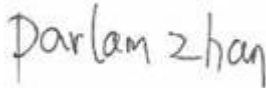
The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	2017-06-07	/	Original

<b>Authorized for issue by:</b>			
<b>Engineer</b>	Eddy Zong		
	<b>Print Name</b>		
<b>Clerk</b>	Susie Liu		
	<b>Print Name</b>		
<b>Reviewer</b>	Parlam Zhan		
	<b>Print Name</b>		

### 3 Test Summary

Test Item	FCC Requirement	Test method	Result
Antenna Requirement	15.203 & 15.407 a(1)&(3)	-	PASS
AC Power Line Conducted Emission	15.407 b(6)	ANSI C63.10 (2013) Clause 6.2	PASS
99% Occupied bandwidth	15.403 i	KDB 789033 D02 KDB 644545 KDB662911 D01	PASS
Minimum 6 dB bandwidth (5.725-5.85 GHz band )	15.407 (e)		PASS
Maximum Conducted output power	15.407 a(1)&(3)		PASS
Transmitter Power Control	15.407 (h)(1)		N/A
Peak Power spectrum density	15.407 a(1)&(3)		PASS
Radiated Spurious emissions and Band-edge	15.209 & 15.407		PASS
Transmission in the Absence of Data	15.407 (c)		PASS
Frequency Stability	15.407 (g)		PASS
Dynamic Frequency Selection	15.407 (h)(2)		KDB 905462 D02 KDB 905462 D03

Note1: N/A: The device no DFS Band.

Note2: There are series models mentioned in this report, and they are the identical in electrical and electronic characters. Only the model DH-PFM889-IM was tested since their differences were the model number, pixels and sales area.

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## 5 General Information

### 5.1 Client Information

Applicant:	Zhejiang Dahua Vision Technology Co., Ltd.
Address of Applicant:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Manufacturer:	Zhejiang Dahua Vision Technology Co., Ltd.
Address of Manufacturer:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Factory:	Zhejiang Dahua Vision Technology Co., Ltd.
Address of Factory:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

### 5.2 General Description of E.U.T.

Product Description:	Fixed product with 5.8GHz WiFi function
Power Supply:	48V 0.25A by POE or DC 48V 1A
Test Voltage:	AC 120V 60Hz

### 5.3 Technical Specifications

Operation Frequency:	802.11a/n(HT20)/ac(HT20): 5745MHz-5825MHz 802.11n(HT40)/ac(HT40): 5755MHz-5795MHz 802.11ac(HT80): 5775MHz
Modulation Technique:	OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK) Remark: 256QAM for 802.11 ac only
Data Rate:	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: MCS0-7 802.11ac: MCS0-9
Number of Channel:	802.11 a/n(HT20) /ac(HT20): 5 Channel 149, 153, 157, 161, 165 802.11 n(HT40) /ac(HT40): 2 Channel 151, 159 802.11 ac(HT80): 1 Channel 155
<b>Antenna Type</b>	Antenna 1:PCB Antenna Antenna 2:PCB Antenna
<b>Antenna Gain</b>	Antenna 1: 3 dBi Antenna 2: 3 dBi

### 5.4 Test Mode

Test Mode	Description of Test Mode
Engineering mode	Using test software to control EUT working in continuous transmitting, and select channel and modulation type.

## 5.5 Test Channel

Preliminary tests were performed in all tests in different data rate and antenna configurations at lowest channel, the data rates of worse case as below were chosen for final test.

Band	802.11a			802.11 n(HT20)			802.11n(HT40)		
	Channel	Freq	Rate	Chan	Freq	Rate	Channel	Freq	Rate
U-NII 3	149	5745	6 Mbps	149	5745	MSC0	151	5755	MSC0
	157	5785	6 Mbps	157	5785	MSC0	-	-	-
	165	5825	6 Mbps	165	5825	MSC0	159	5795	MSC0
Band	802.11ac(HT20)			802.11 ac(HT40)			802.11ac(HT80)		
	Channel	Freq	Rate	Chan	Freq	Rate	Channel	Freq	Rate
U-NII 3	149	5745	MSC0	151	5755	MSC0	155	5775	MSC0
	157	5785	MSC0	-	-	-	-	-	-
	165	5825	MSC0	159	5795	MSC0	-	-	-

## 5.6 Description of Support Units

The EUT has been tested with support equipments as below.

Description	Manufacturer	Model No.	Supplied By
Laptop	Lenovo	ThinkPad X100e	SGS

Software name	Manufacturer	Version	Supplied By
Atheros Radio Test2	Atheros	V 2.3	SGS

## 5.7 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

No.588 West Jindu Road, Songjiang District, Shanghai, China.201612.

Tel: +86 21 6191 5666

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## 5.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868 and C-4336 respectively.

## 5.9 Measurement Uncertainty

No.	Parameter	Measurement Uncertainty
1	Radio Frequency	$< \pm 1 \times 10^{-5}$
2	Total RF power, conducted	$< \pm 1.5$ dB
3	RF power density, conducted	$< \pm 3$ dB
4	Spurious emissions, conducted	$< \pm 3$ dB
5	All emissions, radiated	$< \pm 6$ dB (30MHz – 1GHz) $< \pm 6$ dB (above 1GHz)
6	Temperature	$< \pm 1^{\circ}\text{C}$
7	Humidity	$< \pm 5$ %
8	DC and low frequency voltages	$< \pm 3$ %

## 6 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	Power meter	Rohde & Schwarz	NRP	101641	2017-01-14	2018-01-13
2	Power Sensor	Rohde & Schwarz	NRP-Z22	101096	2016-08-06	2017-08-05
3	Spectrum Analyzer	Rohde & Schwarz	FSP-30	2705121009	2017-01-14	2018-01-13
4	EMI test receiver	Rohde & Schwarz	ESU40	100109	2017-02-13	2018-01-15
5	Active Loop Antenna (9kHz to 30MHz)	Rohde & Schwarz	FMZB1519	1519-034	2017-02-13	2018-01-15
6	Broadband UHF-VHF ANTENNA (25MHz to 2GHz)	SCHWARZBECK	VULB9168	9168-313	2017-02-13	2018-01-15
7	Ultra broadband antenna (25MHz to 3GHz)	Rohde & Schwarz	HL562	100227	2016-08-30	2017-08-29
8	Horn Antenna (1GHz to 18GHz)	Rohde & Schwarz	HF906	100284	2017-02-13	2018-01-15
9	Horn Antenna (1GHz to 18GHz)	SCHWARZBECK	BBHA9120D	9120D-679	2017-02-13	2018-01-15
10	Horn Antenna(14GHz to 40GHz)	SCHWARZBECK	BBHA 9170	BBHA917-0373	2017-02-13	2018-01-15
11	Pre-amplifier (9KHz – 2GHz)	LNA6900	TESEQ	71033	/	/
12	Pre-amplifier (1GHz – 26.5GHz)	SCHWARZBECK	SCU-F0118-G40- BZ4-CSS(F)	10001	2017-01-14	2018-01-13
13	Pre-amplifier (14GHz – 40GHz)	SCHWARZBECK	SCU-F1840-G35- BZ3-CSS(F)	10001	2017-01-14	2018-01-13
14	Tunable Notch Filter	Wainwright instruments GmbH	WRCT800.0/880. 0-0.2/40-5SSK	170397 169777 169780 192507	/	/
15	High pass Filter	FSCW	HP 12/2800-5AA2	19A45-02	/	/
16	High-low temperature cabinet	Suzhou Zhihe	TL-40	50110050	2016-09-11	2017-09-10
17	AC power stabilizer	WOCEN	6100	51122	2017-01-14	2018-01-13
18	DC power	QJE	QJ30003SII	3573/4/3	2017-01-14	2018-01-13
19	Signal Generator (Interferer)	Rohde & Schwarz	SMR40	100555	2016-08-13	2017-08-12
20	Signal Generator (Blocker)	Rohde & Schwarz	SMJ100A	101394	2017-01-14	2018-01-13
21	Splitter	Anritsu	MA1612A	M12265	/	/
22	Coupler	e-meca	803-S-1	900-M01	/	/



## 7 Test Results

### 7.1 E.U.T. Test Conditions

**Test Voltage:** DC 3.8V

**Requirements:** 15.31(e) For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

**Operating Environment:**

Temperature:	20.0 -25.0 °C
Humidity:	35-75 % RH
Atmospheric Pressure:	99.2 -102.0 kPa

**Test frequencies:** According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

Pursuant to Part 15.31(c) For swept frequency equipment, measurements shall be made with the frequency sweep stopped at those frequencies chosen for the measurements to be reported

## 7.2 Antenna Requirement

### Standard requirement:

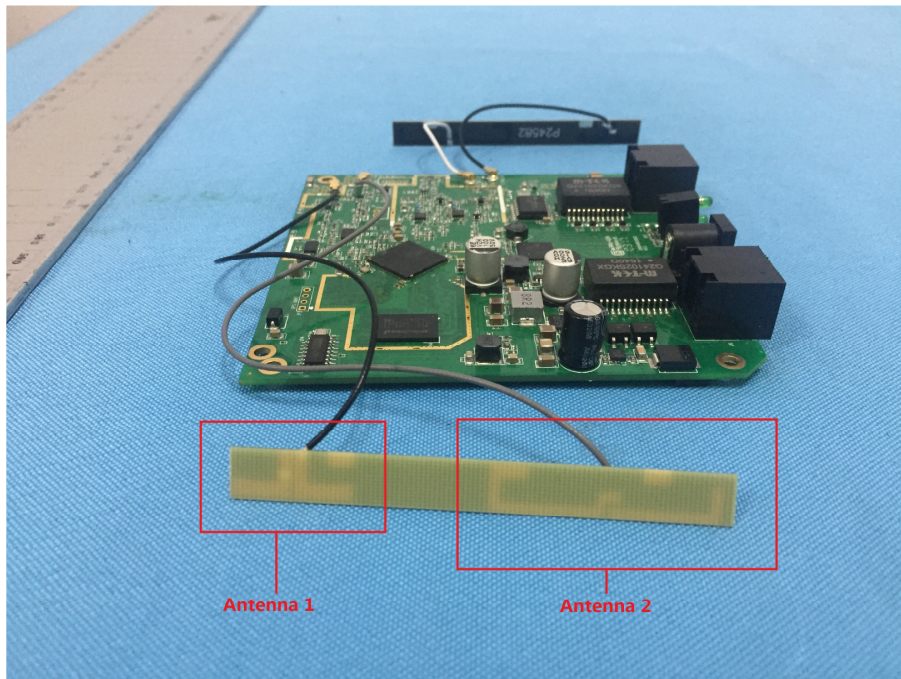
#### 15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited

This requirement does not apply to carrier current devices. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### EUT Antenna:

The antenna is PCB Antenna. The gain is less than 3.0dBi.



### 7.3 Conducted Emissions on Mains Terminals

**Frequency Range:** 150 KHz to 30 MHz

**Class/Severity:** Class B

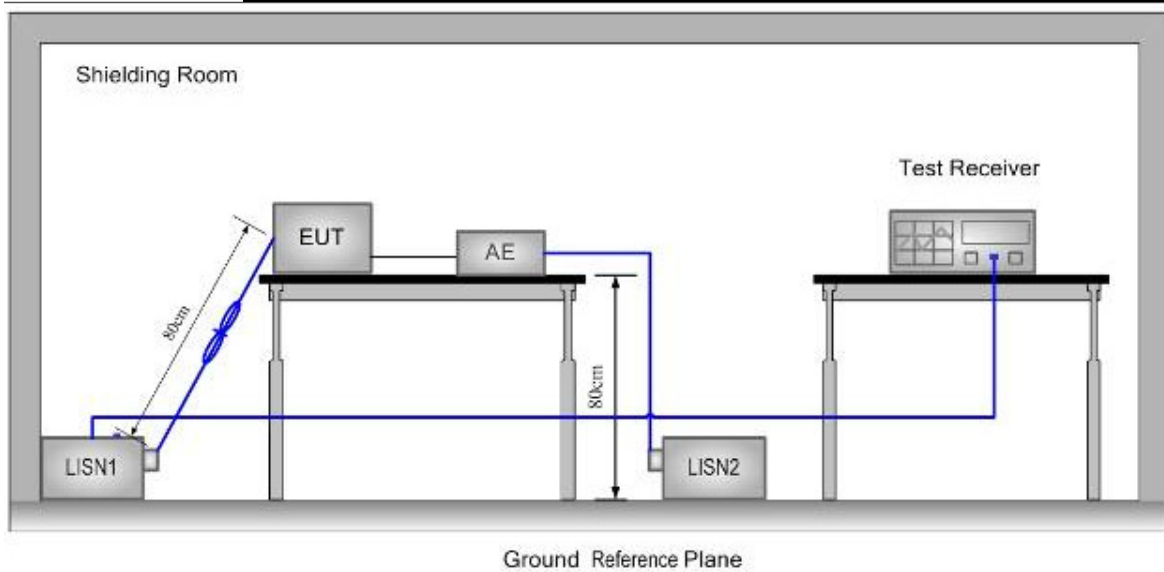
**Limit:**

Frequency range MHz	Class B Limits: dB (µV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Note1: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.  
Note2: The lower limit is applicable at the transition frequency.

**Test site/setup:** Test instrumentation set-up:

Frequency Range	Detector	RBW	VBW
9KHz to 150Hz	Quasi-peak	200Hz	500Hz
150KHz to 30MHz	Quasi-peak	9kHz	30kHz



#### Test Procedure:

- The mains terminal disturbance voltage was measured with the EUT in a shielded room.
- The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides  $50\Omega/50\mu\text{H} + 5\Omega$  linear impedance. The power cables of all other units of the EUT were connected to a second LISN, which was bonded to the ground reference plane in the same way as the LISN for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded
- The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to

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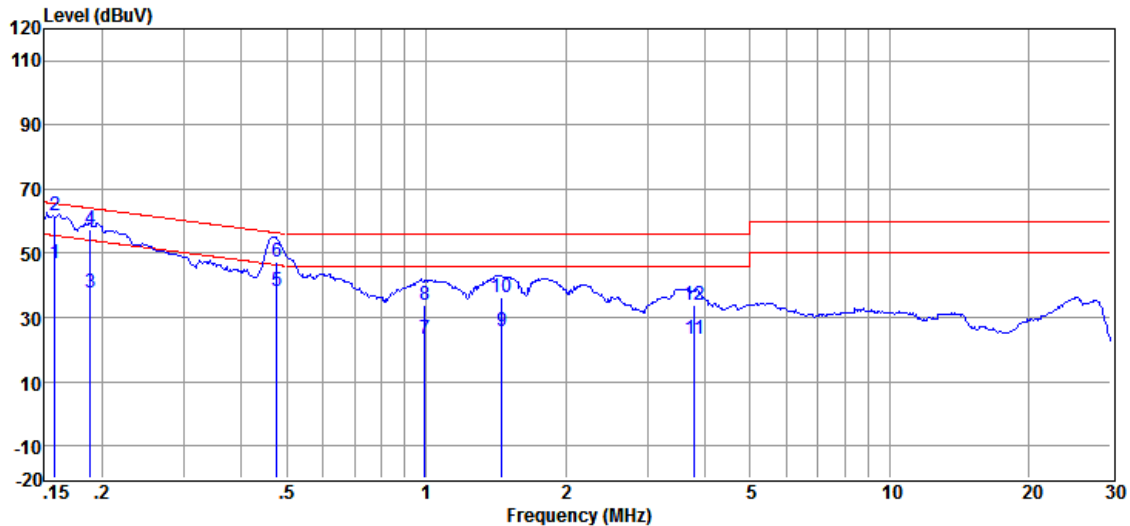
the horizontal ground reference plane. The LISN was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance was between the closest points of the LISN and the EUT. The mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m. All other units of the EUT and associated equipment were at least 0.8 m from the LISN.

Remark: Pre-scan was performed with peak detected on all ports, Quasi-peak & average measurements were performed at the frequencies at which maximum peak emission level were detected. Pretest under all modes; choose the worst case mode (802.11a in Middle channel) record on the report. Please see the attached Quasi-peak and Average test results.

**Test Result:** Pass

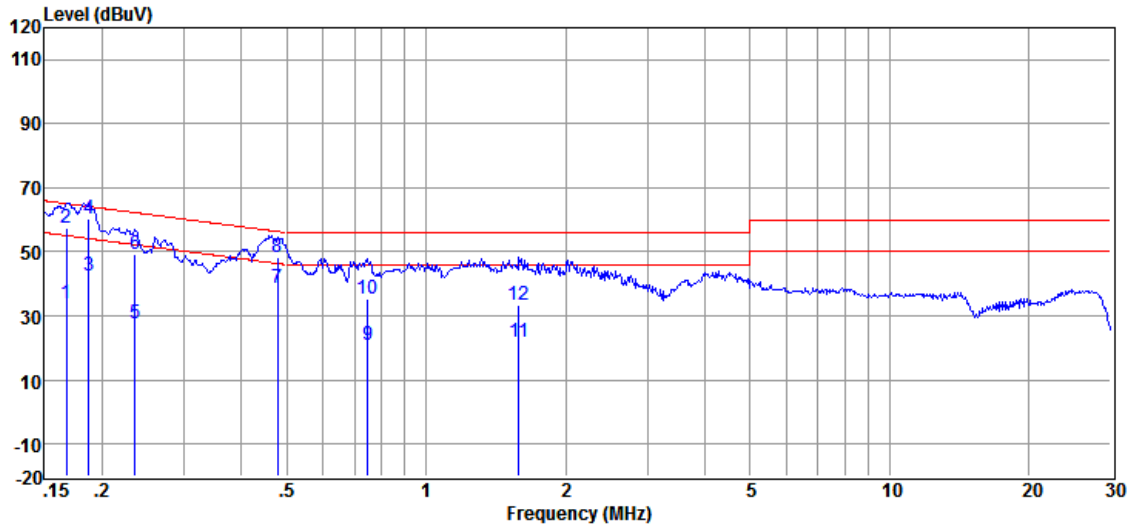
**Test Data:**

<b>Test Mode:</b>	802.11a	<b>Test Channel:</b>	Channel 157
<b>Test Port:</b>	AC Live Line		



Item	Freq.	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Detector
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)	
1	0.158	36.79	0.06	9.81	46.66	55.56	-8.90	Average
2	0.158	51.79	0.06	9.81	61.66	65.56	-3.90	QP
3	0.188	27.80	0.08	9.81	37.69	54.11	-16.42	Average
4	0.188	47.60	0.08	9.81	57.49	64.11	-6.62	QP
5	0.476	28.39	0.10	9.82	38.31	46.41	-8.10	Average
6	0.476	37.49	0.10	9.82	47.41	56.41	-9.00	QP
7	0.994	13.40	0.08	9.84	23.32	46.00	-22.68	Average
8	0.994	23.90	0.08	9.84	33.82	56.00	-22.18	QP
9	1.456	15.80	0.08	9.84	25.72	46.00	-20.28	Average
10	1.456	26.40	0.08	9.84	36.32	56.00	-19.68	QP
11	3.799	13.50	0.13	9.85	23.48	46.00	-22.52	Average
12	3.799	23.80	0.13	9.85	33.78	56.00	-22.22	QP

**Test Port:** AC Neutral Line



Item	Freq.	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Detector
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)	
1	0.168	24.00	0.05	9.81	33.86	55.08	-21.22	Average
2	0.168	47.50	0.05	9.81	57.36	65.08	-7.72	QP
3	0.187	32.69	0.05	9.81	42.55	54.15	-11.60	Average
4	0.187	50.65	0.05	9.81	60.51	64.15	-3.64	QP
5	0.235	17.59	0.05	9.81	27.45	52.26	-24.81	Average
6	0.235	39.49	0.05	9.81	49.35	62.26	-12.91	QP
7	0.479	28.88	0.04	9.82	38.74	46.36	-7.62	Average
8	0.479	38.28	0.04	9.82	48.14	56.36	-8.22	QP
9	0.747	10.97	0.05	9.83	20.85	46.00	-25.15	Average
10	0.747	25.57	0.05	9.83	35.45	56.00	-20.55	QP
11	1.585	11.90	0.06	9.84	21.80	46.00	-24.20	Average
12	1.585	23.60	0.06	9.84	33.50	56.00	-22.50	QP

Remark: Level = Read Level + LISN/ISN Factor + Cable Loss.

Note: The EUT is tested under two power of 48V 0.25A by POE and DC 48V 1A by adapter, only choose the worst case power of 48V 0.25A by POE in the report.

## 7.4 Duty Cycle

In order to assist with the determination of the average level of fundamental and spurious emissions field strength, measurements were made of duty cycle to determine the transmission duration and the silent period time of the transmitter. The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by using the following calculation:

Duty cycle = T on time / Period

Duty factor =  $10 * \log (1/\text{Duty cycle})$

If duty cycle of test signal is > 98%, duty factor is not required.

If duty cycle of test signal is < 98%, duty factor shall be considered.

### **Test Data:**

The detailed test data see: Appendix B for SHEM170100040503

## **7.5 Emission Bandwidth**

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

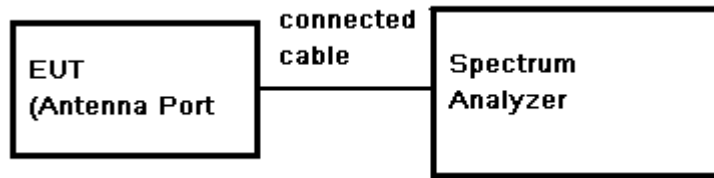
### **Test Data:**

The detailed test data see: Appendix B for SHEM170100040503



## 7.6 Maximum Conducted output power

### Test Setup:



### Test Procedure:

- Place the EUT on the table and set it in transmitting mode.
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum.
- Set the spectrum analyzer as RBW=1MHz, VBW≥3\* RBW, Span=40/80MHz, Sweep=auto, Detector = RMS
- Set the occur band to the entire emission 26dB bandwidth of the signal.
- Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 26dB occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges.
- Record the max. Power channel reading.
- Repeat above procedures until all the frequency measured were complete.

### Test Limit:

Frequency Band	EUT Category	Limit
U-NII-1	<input type="checkbox"/> Outdoor Access Point	1W(30dBm) The maximum e.i.r.p≤125 mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon.
	<input type="checkbox"/> Fixed Point-to-point Access Point	1W(30dBm)
	<input checked="" type="checkbox"/> Indoor Access Point	
	<input type="checkbox"/> Mobile and Portable client device	250mW (24dBm)
U-NII-2a	-	Lesser of 250mW (24dBm) or 11dBm + 10log B*
U-NII-2c		
U-NII-3		1W (30dBm)

**Note1:** \*Where B is the 26dB emission bandwidth in MHz.

### Test Result:

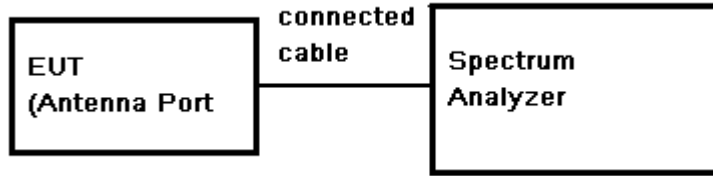
Pass

### Test Data:

The detailed test data see: Appendix B for SHEM170100040503

## 7.7 Peak Power Spectral Density

**Test Setup:**



**Test Procedure:**

- Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
- 5.15GHz-5.25GHz set span  $\geq 1.5 \cdot \text{OBW}$ ; RBW = 1 MHz; VBW  $\geq 3$  MHz, 5.725GHz-5.85GHz, set span  $\geq 1.5 \cdot \text{OBW}$ ; RBW = 0.51 MHz; VBW  $\geq 1.5$  MHz
- Number of points in sweep  $\geq 2 \text{ Span} / \text{RBW}$ ; Sweep time = auto.
- Detector = RMS, Trigger = Free run Record the marker level for the particular mode.
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Repeat these steps for other channel and device modes.

**Test Limit:**

Frequency Band	EUT Category	Limit
U-NII-1	<input type="checkbox"/> Outdoor Access Point	17dBm/MHz
	<input type="checkbox"/> Fixed Point-to-point Access Point	11 dBm/MHz
	<input checked="" type="checkbox"/> Indoor Access Point	
	<input type="checkbox"/> Mobile and Portable client device	11 dBm/MHz
U-NII-2a	-	11 dBm/MHz
U-NII-2c		
U-NII-3		30 dBm/500KHz

**Test Result:**

Pass

**Test Data:**

The detailed test data see: Appendix B for SHEM170100040503

### 7.8 Radiated Spurious Emissions and Band-edge

**Test site/setup:** Measurement Distance: 3m  
Test instrumentation set-up:

Frequency Range(MHz)	Detector	RBW	VBW
0.009-0.090	Peak	10kHz	30kHz
0.009-0.090	Average	10kHz	30kHz
0.090-0.110	Quasi-peak	10kHz	30kHz
0.110-0.490MHz	Peak	10kHz	30kHz
0.110-0.490	Average	10kHz	30kHz
0.490 -30	Quasi-peak	10kHz	30kHz
30-1000	Quasi-peak	100kHz	300kHz
Above 1000	Peak	RBW=1MHz	VBW≥RBW
	Average		VBW=10Hz

Sweep=Auto

**15.209 Limit:**

Frequency(MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)
0.009-0.490	2400/F(KHz)	128.5 ~ 93.8
0.490-1.705	24000/F(KHz)	73.8 ~63.0
1.705-30	30	69.5
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
960-1000	500	54.0
Above 1000	500	54.0

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

**15.407 Limit:**

Operation Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (dBμV/m)
5150-5250	-27	68.3
5250-5350		
5470-5725		
5725-5850	-27* <sup>1</sup>	68.3* <sup>1</sup>
	-17* <sup>2</sup>	78.3* <sup>2</sup>

Note: The following formula is used to convert the EIRP to field strength

$$E = \frac{1000000 \sqrt{30P}}{3} \text{ uV/m, where P is the EIRP (Watts).}$$

Remark: \*<sup>1</sup> Without 10MHz of band edge; \*<sup>2</sup> Within 10MHz of band edge

**Test Setup:**

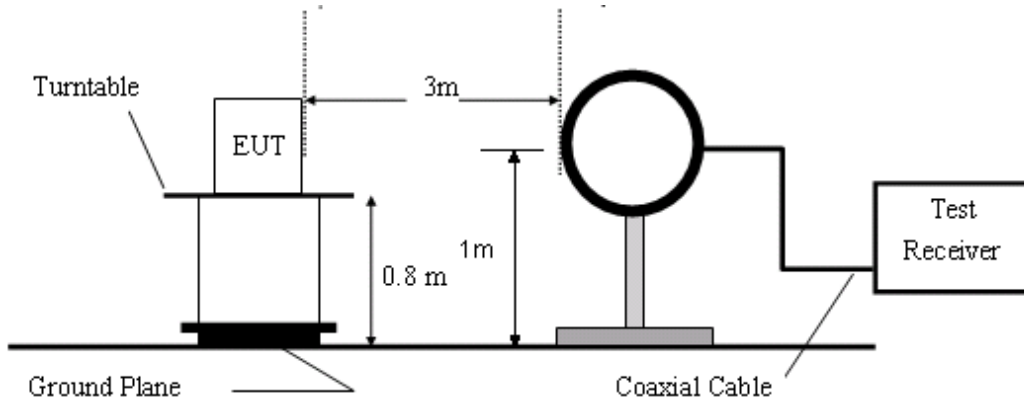


Figure1. Below 30MHz radiated emissions test configuration

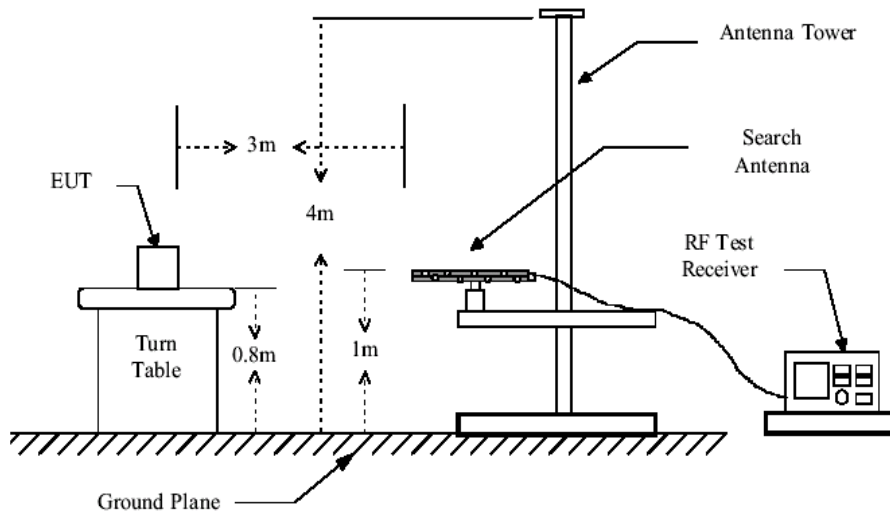


Figure2. 30MHz to 1GHz radiated emissions test configuration

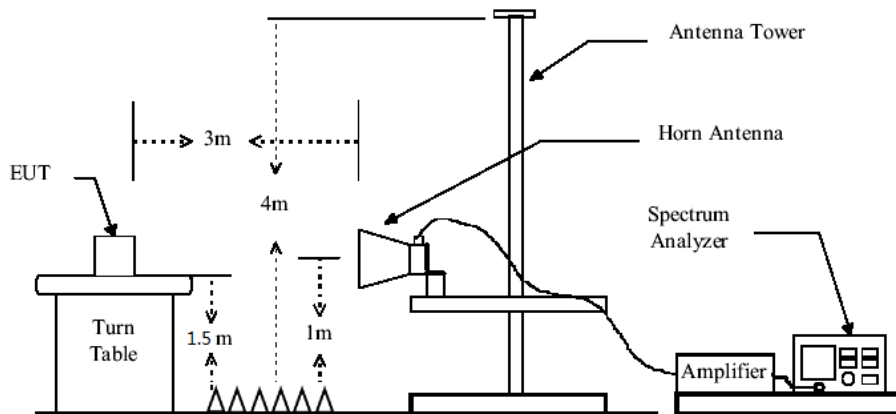


Figure3. Above 1GHz radiated emissions test configuration

- Test Procedure:**
- 1) The procedure used was ANSI Standard C63.10. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.
  - 2) Low noise amplifier was used below 1GHz, High pass Filter and amplifier was used above 3GHz. We did not use any amplifier or filter between 1G and 3GHz.
  - 3) Test were performed for their spatial orthogonal(X, Y, Z), the worst test data (X orthogonal) was submitted.
    - a) For this intentional radiator operates below 25 GHz. the spectrum shall be investigated to the tenth harmonic of the highest fundamental frequency. And above the third harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 5rd harmonic.
    - b) As shown in Section, for frequencies above 1000MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.
  - 4) Pretest under all modes during 30MHz to 1GHz; choose the worst case mode (Middle channel of 802.11a on band 1) record on the report.
  - 5) No spurious emissions were detected within 20dB of limit below 30MHz.

**Test Result:** Pass

### 7.8.1 Radiated Spurious Emissions

30MHz-1GHz:

802.11 a

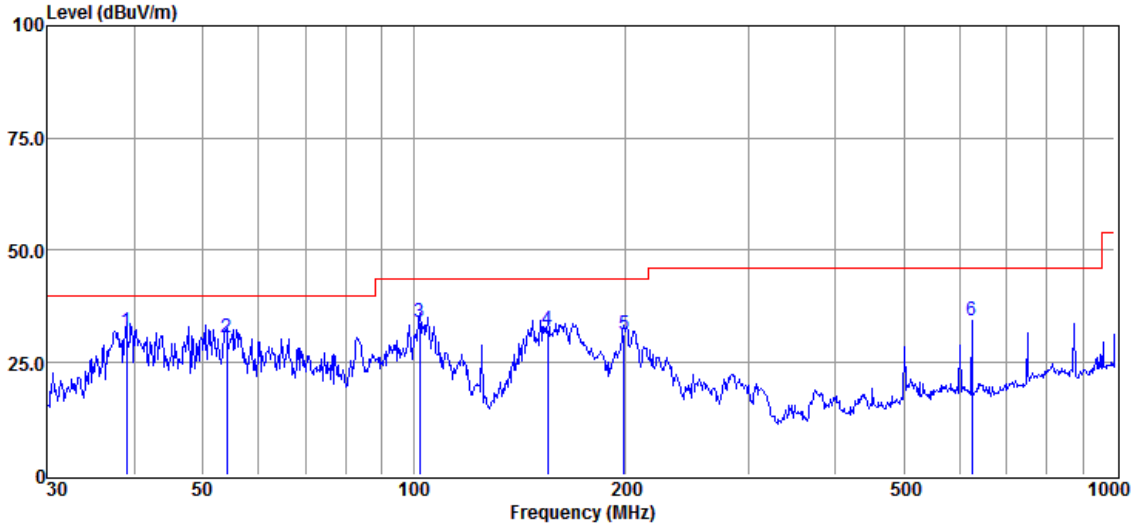
Channel: 149 of Antenna 1

Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
1	49.53	31.82	13.82	28.80	0.26	17.10	40.00	-22.90	QP	Horizontal
2	102.00	43.22	9.56	28.60	0.46	24.64	43.50	-18.86	QP	Horizontal
3	207.12	44.47	10.37	28.10	0.70	27.44	43.50	-16.06	QP	Horizontal
4	314.38	37.55	13.36	28.03	0.86	23.74	46.00	-22.26	QP	Horizontal
5	501.18	40.11	17.26	29.20	1.18	29.35	46.00	-16.65	QP	Horizontal
6	750.11	39.63	21.97	29.24	1.88	34.24	46.00	-11.76	QP	Horizontal
1	38.89	47.31	13.39	28.82	0.22	32.10	40.00	-7.90	QP	Vertical
2	54.07	45.93	13.32	28.80	0.28	30.73	40.00	-9.27	QP	Vertical
3	102.00	52.64	9.56	28.60	0.46	34.06	43.50	-9.44	QP	Vertical
4	155.36	47.76	12.41	28.40	0.63	32.40	43.50	-11.10	QP	Vertical
5	199.29	47.82	10.82	28.10	0.69	31.23	43.50	-12.27	QP	Vertical
6	625.08	41.93	20.15	29.26	1.41	34.23	46.00	-11.77	QP	Vertical

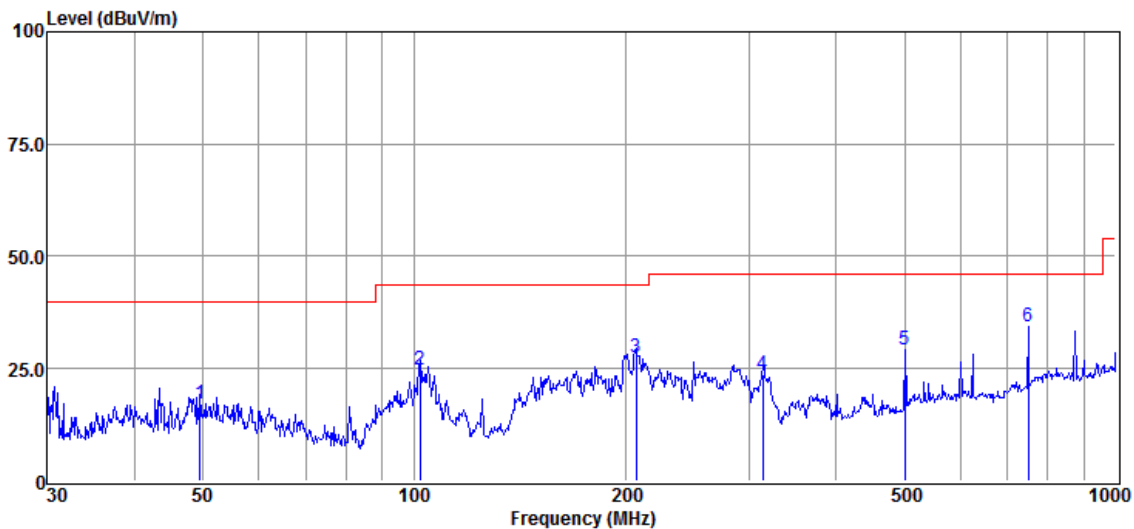
Remark: 1. Result Level = Read Level + Antenna Factor + Cable loss - Preamp Factor

Note: The EUT is tested under two power of 48V 0.25A by POE and DC 48V 1A by adapter, only choose the worst case in the report.

Below is the plot of worst case:  
Vertical:



Horizontal:







**802.11 n(HT20)**

**Antenna 1**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6342.4	44.15	7.84	51.99	54	-2.01	peak	Horizontal
2	9353.8	38.2	14.34	52.54	54	-1.46	peak	Horizontal
3	11490	33.25	14.41	47.66	54	-6.34	peak	Horizontal
4	8383.6	36.23	11.93	48.16	54	-5.84	peak	Vertical
5	11490	34.54	14.41	48.95	54	-5.05	peak	Vertical
6	11722.6	37.04	13.89	50.93	54	-3.07	peak	Vertical

**802.11 n(HT20)**

**Antenna 1**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7287.4	40.77	10.98	51.75	54	-2.25	peak	Horizontal
2	9668.8	37.71	14.36	52.07	54	-1.93	peak	Horizontal
3	11570	36.32	14.25	50.57	54	-3.43	peak	Horizontal
4	8484.4	40.21	12.12	52.33	54	-1.67	peak	Vertical
5	11570	36.34	14.25	50.59	54	-3.41	peak	Vertical
6	11735.2	34.88	13.87	48.75	54	-5.25	peak	Vertical

**802.11 n(HT20)**

**Antenna 1**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7438.6	38.62	11.64	50.26	54	-3.74	peak	Horizontal
2	9568	36.23	14.4	50.63	54	-3.37	peak	Horizontal
3	11650	32.79	14.06	46.85	54	-7.15	peak	Horizontal
4	6468.4	43.91	8.31	52.22	54	-1.78	peak	Vertical
5	7312.6	38.52	11.09	49.61	54	-4.39	peak	Vertical
6	11650	35.03	14.06	49.09	54	-4.91	peak	Vertical

**802.11 n(HT40)**

**Antenna 1**

**Channel: 151**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	9593.2	34.66	14.38	49.04	54	-4.96	peak	Horizontal
2	11510	35	14.4	49.4	54	-4.6	peak	Horizontal
3	11760.4	38.21	13.8	52.01	54	-1.99	peak	Horizontal
4	6342.4	45.02	7.84	52.86	54	-1.14	peak	Vertical
5	7879.6	38.68	12.39	51.07	54	-2.93	peak	Vertical
6	11510	32.87	14.4	47.27	54	-6.73	peak	Vertical

**802.11 n(HT40)**

**Antenna 1**

**Channel: 159**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6405.4	41.17	8.09	49.26	54	-4.74	peak	Horizontal
2	7665.4	37.07	12.07	49.14	54	-4.86	peak	Horizontal
3	11590	35.43	14.2	49.63	54	-4.37	peak	Horizontal
4	5422.6	44.3	7.25	51.55	54	-2.45	peak	Vertical
5	7867	37.56	12.37	49.93	54	-4.07	peak	Vertical
6	11590	34.71	14.2	48.91	54	-5.09	peak	Vertical

**802.11 ac(VHT20)**

**Antenna 1**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7930	38.33	12.3	50.63	54	-3.37	peak	Horizontal
2	11490	35.16	14.41	49.57	54	-4.43	peak	Horizontal
3	13121.2	37.52	15.38	52.9	54	-1.1	peak	Horizontal
4	7526.8	38.27	11.92	50.19	54	-3.81	peak	Vertical
5	9492.4	34.54	14.42	48.96	54	-5.04	peak	Vertical
6	11490	33.58	14.41	47.99	54	-6.01	peak	Vertical

**802.11 ac(VHT20)**

**Antenna 1**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7892.2	36.94	12.42	49.36	54	-4.64	peak	Horizontal
2	9530.2	38.07	14.4	52.47	54	-1.53	peak	Horizontal
3	11570	34.84	14.25	49.09	54	-4.91	peak	Horizontal
4	9542.8	35.12	14.41	49.53	54	-4.47	peak	Vertical
5	11570	34.54	14.25	48.79	54	-5.21	peak	Vertical
6	13133.8	34.68	15.4	50.08	54	-3.92	peak	Vertical

**802.11 ac(VHT20)**

**Antenna 1**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6468.4	43.12	8.31	51.43	54	-2.57	peak	Horizontal
2	9366.4	36.48	14.36	50.84	54	-3.16	peak	Horizontal
3	11650	33.09	14.06	47.15	54	-6.85	peak	Horizontal
4	9605.8	36.6	14.38	50.98	54	-3.02	peak	Vertical
5	11650	33.87	14.06	47.93	54	-6.07	peak	Vertical
6	13133.8	36.83	15.4	52.23	54	-1.77	peak	Vertical

**802.11 ac(VHT40)**

**Antenna 1**

**Channel: 151**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7791.4	37.82	12.26	50.08	54	-3.92	peak	Horizontal
2	9580.6	35.81	14.39	50.2	54	-3.8	peak	Horizontal
3	11510	33.81	14.4	48.21	54	-5.79	peak	Horizontal
4	6418	44.63	8.14	52.77	54	-1.23	peak	Vertical
5	7375.6	41.48	11.37	52.85	54	-1.15	peak	Vertical
6	11510	35.36	14.4	49.76	54	-4.24	peak	Vertical

**802.11 ac(VHT40)**

**Antenna 1**

**Channel: 159**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6392.8	44.77	8.05	52.82	54	-1.18	peak	Horizontal
2	7892.2	40.23	12.42	52.65	54	-1.35	peak	Horizontal
3	11590	31.88	14.2	46.08	54	-7.92	peak	Horizontal
4	9505	34.92	14.42	49.34	54	-4.66	peak	Vertical
5	10563.4	35.59	14.05	49.64	54	-4.36	peak	Vertical
6	11590	30.79	14.2	44.99	54	-9.01	peak	Vertical

**802.11 ac(VHT80)**

**Antenna 1**

**Channel: 155**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7753.6	39.99	12.21	52.2	54	-1.8	peak	Horizontal
2	9505	36.73	14.42	51.15	54	-2.85	peak	Horizontal
3	11550	36.2	14.3	50.5	54	-3.5	peak	Horizontal
4	7879.6	38.48	12.39	50.87	54	-3.13	peak	Vertical
5	9542.8	35.27	14.41	49.68	54	-4.32	peak	Vertical
6	11550	36.38	14.3	50.68	54	-3.32	peak	Vertical

**802.11a**

**Antenna 2**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	9505	33.66	14.42	48.08	54	-5.92	peak	Horizontal
2	11490	34.06	14.41	48.47	54	-5.53	peak	Horizontal
3	13096	36.62	15.33	51.95	54	-2.05	peak	Horizontal
4	6418	43.67	8.14	51.81	54	-2.19	peak	Vertical
5	7867	38.04	12.37	50.41	54	-3.59	peak	Vertical
6	11490	31.67	14.41	46.08	54	-7.92	peak	Vertical

**802.11a**

**Antenna 2**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6418	44.13	8.14	52.27	54	-1.73	peak	Horizontal
2	11570	32.32	14.25	46.57	54	-7.43	peak	Horizontal
3	13234.6	36.26	15.61	51.87	54	-2.13	peak	Horizontal
4	6518.8	39.12	8.45	47.57	54	-6.43	peak	Vertical
5	9580.6	37.36	14.39	51.75	54	-2.25	peak	Vertical
6	11570	34.03	14.25	48.28	54	-5.72	peak	Vertical

**802.11a**

**Antenna 2**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7816.6	37.74	12.29	50.03	54	-3.97	peak	Horizontal
2	11650	36.32	14.06	50.38	54	-3.62	peak	Horizontal
3	13259.8	33.29	15.66	48.95	54	-5.05	peak	Horizontal
4	6418	43.2	8.14	51.34	54	-2.66	peak	Vertical
5	9605.8	38.28	14.38	52.66	54	-1.34	peak	Vertical
6	11650	33.65	14.06	47.71	54	-6.29	peak	Vertical

**802.11 n(HT20)**

**Antenna 2**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6342.4	43.83	7.84	51.67	54	-2.33	peak	Horizontal
2	9353.8	37.06	14.34	51.4	54	-2.6	peak	Horizontal
3	11490	30.52	14.41	44.93	54	-9.07	peak	Horizontal
4	8383.6	39.91	11.93	51.84	54	-2.16	peak	Vertical
5	11490	35.05	14.41	49.46	54	-4.54	peak	Vertical
6	11722.6	36.58	13.89	50.47	54	-3.53	peak	Vertical

**802.11 n(HT20)**

**Antenna 2**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7287.4	38.49	10.98	49.47	54	-4.53	peak	Horizontal
2	9668.8	38	14.36	52.36	54	-1.64	peak	Horizontal
3	11570	33.02	14.25	47.27	54	-6.73	peak	Horizontal
4	8484.4	38.15	12.12	50.27	54	-3.73	peak	Vertical
5	11570	31.51	14.25	45.76	54	-8.24	peak	Vertical
6	11735.2	35.38	13.87	49.25	54	-4.75	peak	Vertical

**802.11 n(HT20)**

**Antenna 2**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7438.6	41.1	11.64	52.74	54	-1.26	peak	Horizontal
2	9568	38.36	14.4	52.76	54	-1.24	peak	Horizontal
3	11650	35.9	14.06	49.96	54	-4.04	peak	Horizontal
4	6468.4	43.92	8.31	52.23	54	-1.77	peak	Vertical
5	7312.6	37.56	11.09	48.65	54	-5.35	peak	Vertical
6	11650	31.49	14.06	45.55	54	-8.45	peak	Vertical

**802.11 n(HT40)**

**Antenna 2**

**Channel: 151**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	9593.2	36.77	14.38	51.15	54	-2.85	peak	Horizontal
2	11510	34	14.4	48.4	54	-5.6	peak	Horizontal
3	11760.4	35.64	13.8	49.44	54	-4.56	peak	Horizontal
4	6342.4	40.92	7.84	48.76	54	-5.24	peak	Vertical
5	7879.6	40.17	12.39	52.56	54	-1.44	peak	Vertical
6	11510	33.18	14.4	47.58	54	-6.42	peak	Vertical

**802.11 n(HT40)**

**Antenna 2**

**Channel: 159**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6405.4	42.25	8.09	50.34	54	-3.66	peak	Horizontal
2	7665.4	36.77	12.07	48.84	54	-5.16	peak	Horizontal
3	11590	32.73	14.2	46.93	54	-7.07	peak	Horizontal
4	5422.6	43.55	7.25	50.8	54	-3.2	peak	Vertical
5	7867	39.69	12.37	52.06	54	-1.94	peak	Vertical
6	11590	31.16	14.2	45.36	54	-8.64	peak	Vertical

**802.11 ac(VHT20)**

**Antenna 2**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7930	36.21	12.3	48.51	54	-5.49	peak	Horizontal
2	11490	32.6	14.41	47.01	54	-6.99	peak	Horizontal
3	13121.2	33.69	15.38	49.07	54	-4.93	peak	Horizontal
4	7526.8	37.91	11.92	49.83	54	-4.17	peak	Vertical
5	9492.4	37.54	14.42	51.96	54	-2.04	peak	Vertical
6	11490	33.88	14.41	48.29	54	-5.71	peak	Vertical

**802.11 ac(VHT20)**

**Antenna 2**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7892.2	36.33	12.42	48.75	54	-5.25	peak	Horizontal
2	9530.2	34.1	14.4	48.5	54	-5.5	peak	Horizontal
3	11570	32.34	14.25	46.59	54	-7.41	peak	Horizontal
4	9542.8	37.25	14.41	51.66	54	-2.34	peak	Vertical
5	11570	33.07	14.25	47.32	54	-6.68	peak	Vertical
6	13133.8	34.49	15.4	49.89	54	-4.11	peak	Vertical

**802.11 ac(VHT20)**

**Antenna 2**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6468.4	41.86	8.31	50.17	54	-3.83	peak	Horizontal
2	9366.4	37.27	14.36	51.63	54	-2.37	peak	Horizontal
3	11650	33.78	14.06	47.84	54	-6.16	peak	Horizontal
4	9605.8	36.49	14.38	50.87	54	-3.13	peak	Vertical
5	11650	33.48	14.06	47.54	54	-6.46	peak	Vertical
6	13133.8	37.44	15.4	52.84	54	-1.16	peak	Vertical



**802.11 ac(VHT40)**

**Antenna 2**

**Channel: 151**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7791.4	40.09	12.26	52.35	54	-1.65	peak	Horizontal
2	9580.6	36.31	14.39	50.7	54	-3.3	peak	Horizontal
3	11510	32.78	14.4	47.18	54	-6.82	peak	Horizontal
4	6418	41.94	8.14	50.08	54	-3.92	peak	Vertical
5	7375.6	39.49	11.37	50.86	54	-3.14	peak	Vertical
6	11510	36.08	14.4	50.48	54	-3.52	peak	Vertical

**802.11 ac(VHT40)**

**Antenna 2**

**Channel: 159**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6392.8	44.82	8.05	52.87	54	-1.13	peak	Horizontal
2	7892.2	36.72	12.42	49.14	54	-4.86	peak	Horizontal
3	11590	31.71	14.2	45.91	54	-8.09	peak	Horizontal
4	9505	35.01	14.42	49.43	54	-4.57	peak	Vertical
5	10563.4	33.67	14.05	47.72	54	-6.28	peak	Vertical
6	11590	33.23	14.2	47.43	54	-6.57	peak	Vertical

**802.11 ac(VHT80)**

**Antenna 2**

**Channel: 155**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7753.6	40.58	12.21	52.79	54	-1.21	peak	Horizontal
2	9505	37.47	14.42	51.89	54	-2.11	peak	Horizontal
3	11550	34.67	14.3	48.97	54	-5.03	peak	Horizontal
4	7879.6	36.07	12.39	48.46	54	-5.54	peak	Vertical
5	9542.8	37.39	14.41	51.8	54	-2.2	peak	Vertical
6	11550	36.47	14.3	50.77	54	-3.23	peak	Vertical

**802.11 n(HT20)**

**MIMO**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6342.4	40.78	7.84	48.62	54	-5.38	peak	Horizontal
2	9353.8	36.91	14.34	51.25	54	-2.75	peak	Horizontal
3	11490	33.65	14.41	48.06	54	-5.94	peak	Horizontal
4	8383.6	39.97	11.93	51.9	54	-2.1	peak	Vertical
5	11490	33.7	14.41	48.11	54	-5.89	peak	Vertical
6	11722.6	34.42	13.89	48.31	54	-5.69	peak	Vertical

**802.11 n(HT20)**

**MIMO**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7892.2	38.03	12.42	50.45	54	-3.55	peak	Horizontal
2	9530.2	34.09	14.4	48.49	54	-5.51	peak	Horizontal
3	11570	34.44	14.25	48.69	54	-5.31	peak	Horizontal
4	9542.8	34.44	14.41	48.85	54	-5.15	peak	Vertical
5	11570	33.34	14.25	47.59	54	-6.41	peak	Vertical
6	13133.8	36.07	15.4	51.47	54	-2.53	peak	Vertical

**802.11 n(HT20)**

**MIMO**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6468.4	40.5	8.31	48.81	54	-5.19	peak	Horizontal
2	9366.4	38.19	14.36	52.55	54	-1.45	peak	Horizontal
3	11650	33.25	14.06	47.31	54	-6.69	peak	Horizontal
4	9605.8	38.5	14.38	52.88	54	-1.12	peak	Vertical
5	11650	35.65	14.06	49.71	54	-4.29	peak	Vertical
6	13133.8	35.27	15.4	50.67	54	-3.33	peak	Vertical

**802.11 n(HT40)**

**MIMO**

**Channel: 151**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	9593.2	34.11	14.38	48.49	54	-5.51	peak	Horizontal
2	11510	32.16	14.4	46.56	54	-7.44	peak	Horizontal
3	11760.4	37.31	13.8	51.11	54	-2.89	peak	Horizontal
4	6342.4	43.92	7.84	51.76	54	-2.24	peak	Vertical
5	7879.6	40.31	12.39	52.7	54	-1.3	peak	Vertical
6	11510	34.81	14.4	49.21	54	-4.79	peak	Vertical

**802.11 n(HT40)**

**MIMO**

**Channel: 159**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6405.4	42.62	8.09	50.71	54	-3.29	peak	Horizontal
2	7665.4	39.58	12.07	51.65	54	-2.35	peak	Horizontal
3	11590	35.75	14.2	49.95	54	-4.05	peak	Horizontal
4	5422.6	44.56	7.25	51.81	54	-2.19	peak	Vertical
5	7867	39	12.37	51.37	54	-2.63	peak	Vertical
6	11590	35.23	14.2	49.43	54	-4.57	peak	Vertical

**802.11 ac(VHT20)**

**MIMO**

**Channel: 149**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7930	36.97	12.3	49.27	54	-4.73	peak	Horizontal
2	11490	30.81	14.41	45.22	54	-8.78	peak	Horizontal
3	13121.2	37.37	15.38	52.75	54	-1.25	peak	Horizontal
4	7526.8	37.02	11.92	48.94	54	-5.06	peak	Vertical
5	9492.4	37.95	14.42	52.37	54	-1.63	peak	Vertical
6	11490	33.25	14.41	47.66	54	-6.34	peak	Vertical

**802.11 ac(VHT20)**

**MIMO**

**Channel: 157**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7892.2	38.03	12.42	50.45	54	-3.55	peak	Horizontal
2	9530.2	34.09	14.4	48.49	54	-5.51	peak	Horizontal
3	11570	34.44	14.25	48.69	54	-5.31	peak	Horizontal
4	9542.8	34.44	14.41	48.85	54	-5.15	peak	Vertical
5	11570	33.34	14.25	47.59	54	-6.41	peak	Vertical
6	13133.8	36.07	15.4	51.47	54	-2.53	peak	Vertical

**802.11 ac(VHT20)**

**MIMO**

**Channel: 165**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6468.4	40.5	8.31	48.81	54	-5.19	peak	Horizontal
2	9366.4	38.19	14.36	52.55	54	-1.45	peak	Horizontal
3	11650	33.25	14.06	47.31	54	-6.69	peak	Horizontal
4	9605.8	38.5	14.38	52.88	54	-1.12	peak	Vertical
5	11650	35.65	14.06	49.71	54	-4.29	peak	Vertical
6	13133.8	35.27	15.4	50.67	54	-3.33	peak	Vertical

**802.11 ac(VHT40)**

**MIMO**

**Channel: 151**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7791.4	39.41	12.26	51.67	54	-2.33	peak	Horizontal
2	9580.6	37.59	14.39	51.98	54	-2.02	peak	Horizontal
3	11510	35.4	14.4	49.8	54	-4.2	peak	Horizontal
4	6418	41.71	8.14	49.85	54	-4.15	peak	Vertical
5	7375.6	38.12	11.37	49.49	54	-4.51	peak	Vertical
6	11510	32.52	14.4	46.92	54	-7.08	peak	Vertical

**802.11 ac(VHT40)**

**MIMO**

**Channel: 159**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6392.8	42.2	8.05	50.25	54	-3.75	peak	Horizontal
2	7892.2	39.99	12.42	52.41	54	-1.59	peak	Horizontal
3	11590	31.87	14.2	46.07	54	-7.93	peak	Horizontal
4	9505	34.53	14.42	48.95	54	-5.05	peak	Vertical
5	10563.4	36.15	14.05	50.2	54	-3.8	peak	Vertical
6	11590	30.95	14.2	45.15	54	-8.85	peak	Vertical

**802.11 ac(VHT80)**

**MIMO**

**Channel: 155**

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	7753.6	39.31	12.21	51.52	54	-2.48	peak	Horizontal
2	9505	36.71	14.42	51.13	54	-2.87	peak	Horizontal
3	11550	34.26	14.3	48.56	54	-5.44	peak	Horizontal
4	7879.6	40.48	12.39	52.87	54	-1.13	peak	Vertical
5	9542.8	35.45	14.41	49.86	54	-4.14	peak	Vertical
6	11550	32.49	14.3	46.79	54	-7.21	peak	Vertical

Remark: 1) Emission = Receiver Reading + Factor

2) Factor = Antenna Factor + Cable Loss + Pre-amplifier Factor.

3) If the Peak value below the AV Limit, the AV test doesn't perform for this submission.

Note: The EUT is tested under two power of 48V 0.25A by POE and DC 48V 1A by adapter, only choose the worst case power of 48V 0.25A by POE in the report.

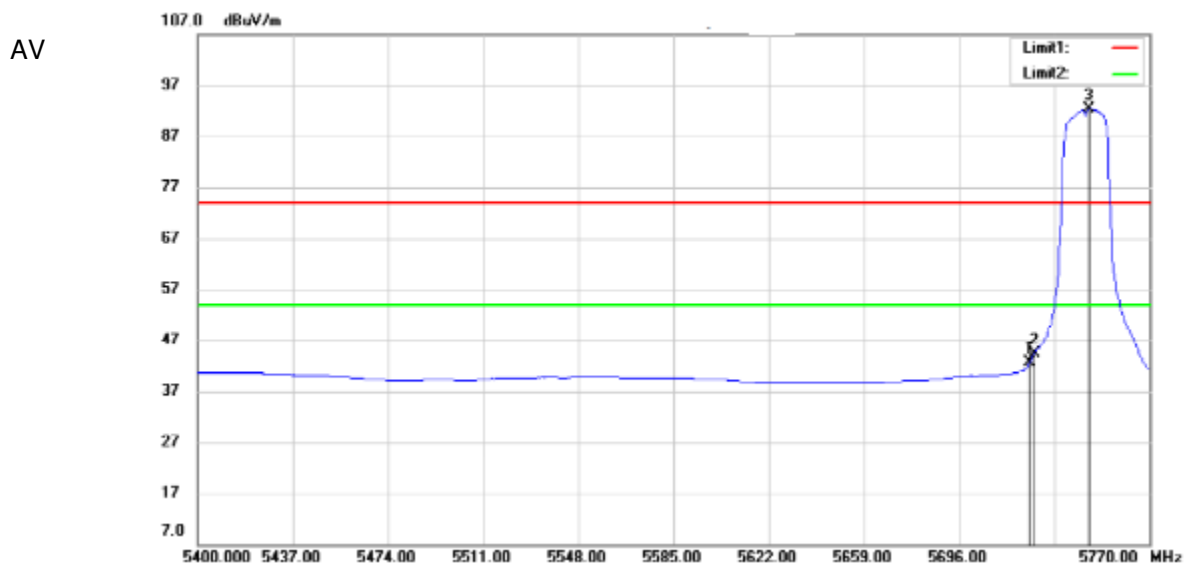
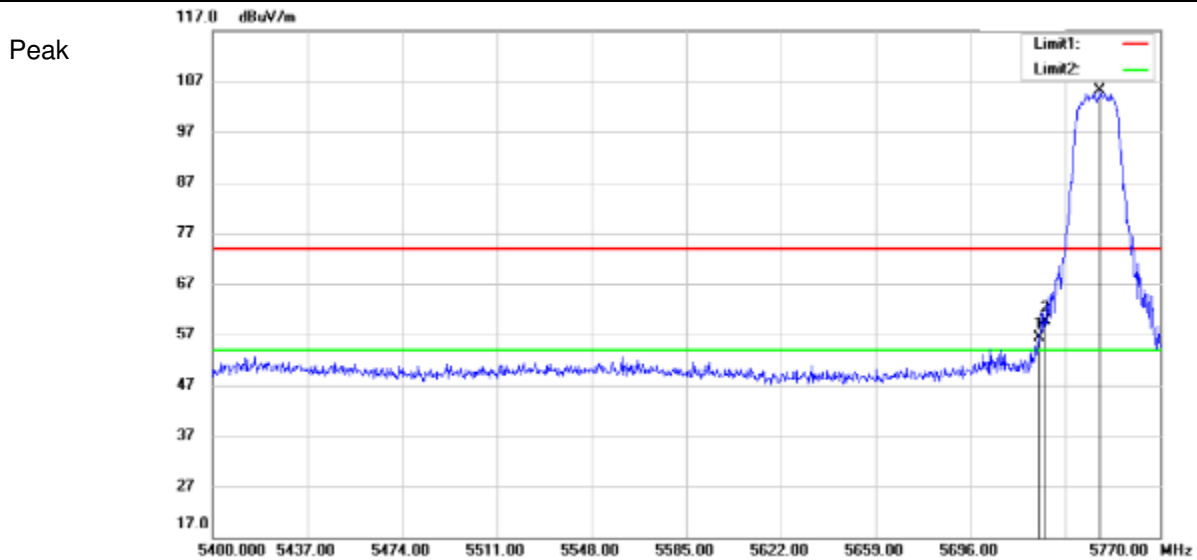
**7.8.2 Radiated Band-edge**

**802.11 a**

**Antenna 1**

**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.01	49.55	6.83	56.38	74	-17.62	Peak	Horizontal
2	5725	52.83	6.82	59.65	74	-14.35	Peak	Horizontal
3	5746.69	98.39	6.77	105.16	74	31.16	Peak	Horizontal
1	5723.38	35.69	6.83	42.52	54	-11.48	AV	Horizontal
2	5725	37.63	6.82	44.45	54	-9.55	AV	Horizontal
3	5746.69	85.73	6.77	92.5	54	38.5	AV	Horizontal

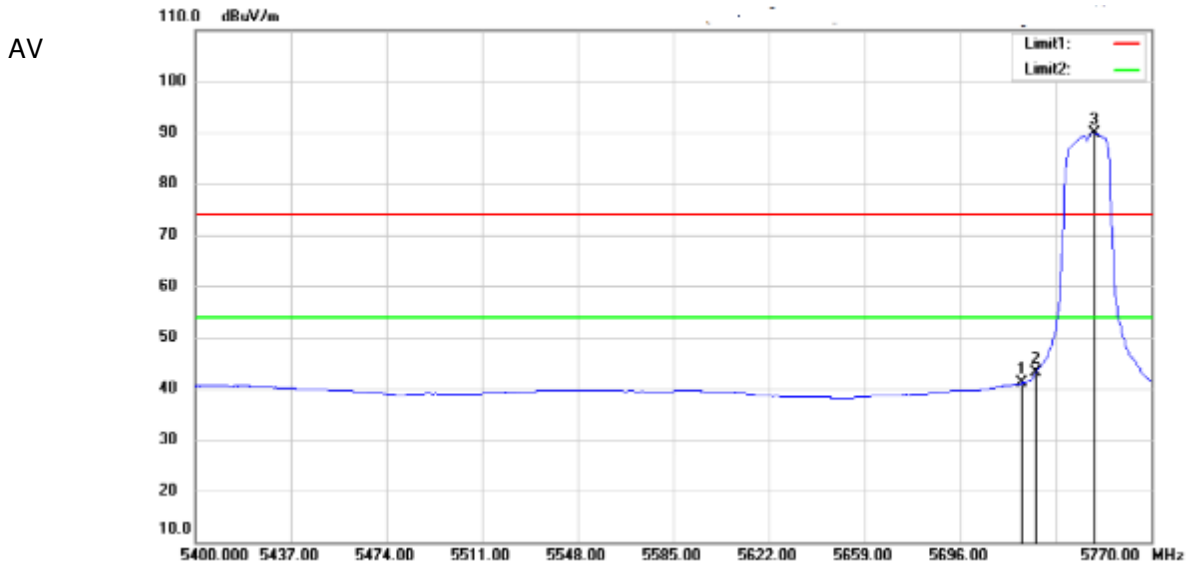
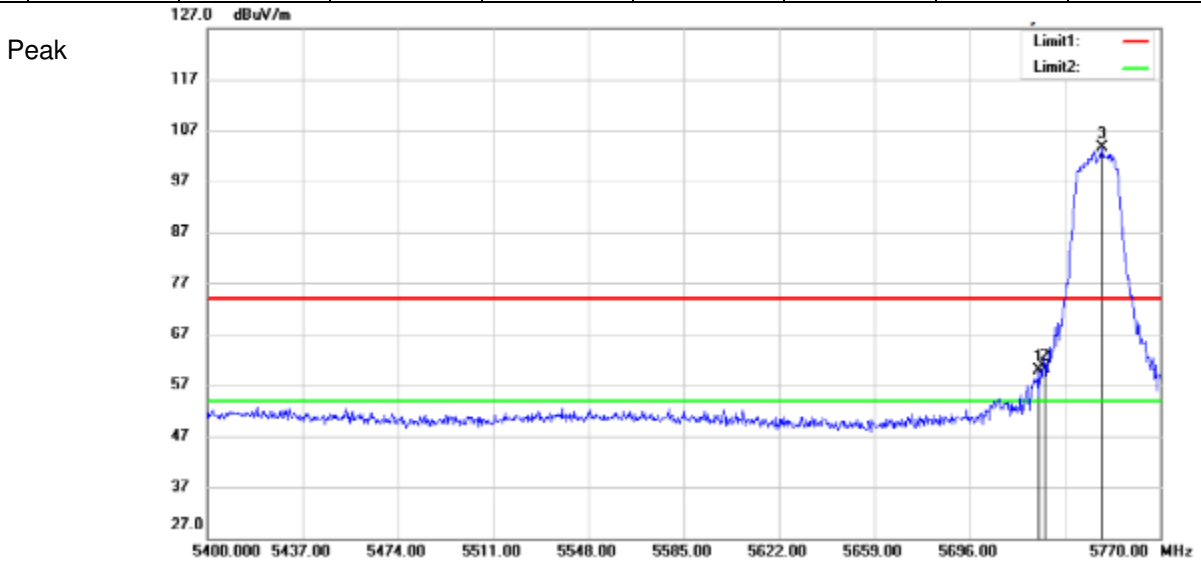


**802.11 a**

**Antenna 1**

**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.01	53.09	6.83	59.92	74	-14.08	Peak	Vertical
2	5725	53.24	6.82	60.06	74	-13.94	Peak	Vertical
3	5747.43	96.78	6.77	103.55	74	29.55	Peak	Vertical
1	5720.05	34.25	6.82	41.07	54	-12.93	AV	Vertical
2	5725	36.22	6.82	43.04	54	-10.96	AV	Vertical
3	5747.8	83.06	6.77	89.83	54	35.83	AV	Vertical



802.11 a

Antenna 1

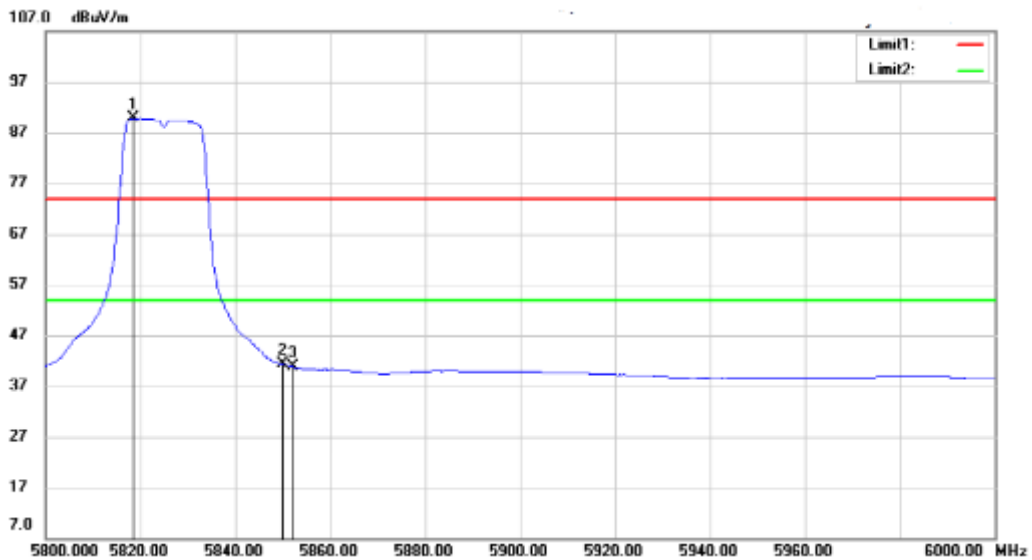
Channel: 165

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5831.4	95.29	6.65	101.94	74	27.94	Peak	Horizontal
2	5850	50.26	6.64	56.9	74	-17.1	Peak	Horizontal
3	5851.4	53.24	6.64	59.88	74	-14.12	Peak	Horizontal
1	5826.2	81.93	6.66	88.59	54	34.59	AV	Horizontal
2	5850	34.98	6.64	41.62	54	-12.38	AV	Horizontal
3	5852.6	34.48	6.64	41.12	54	-12.88	AV	Horizontal

PK



AV



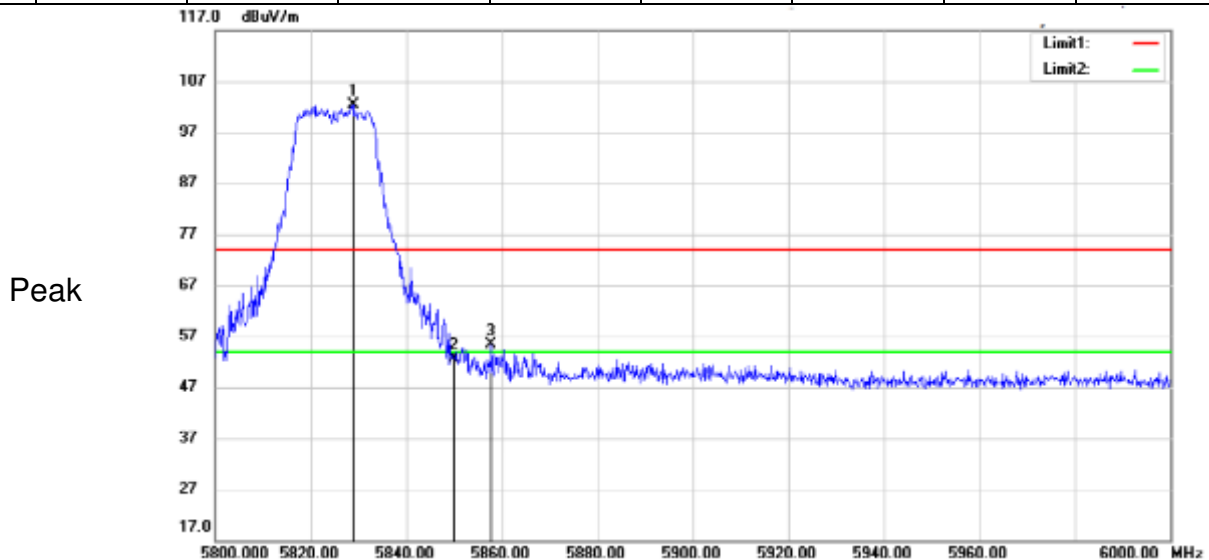


**802.11 a**

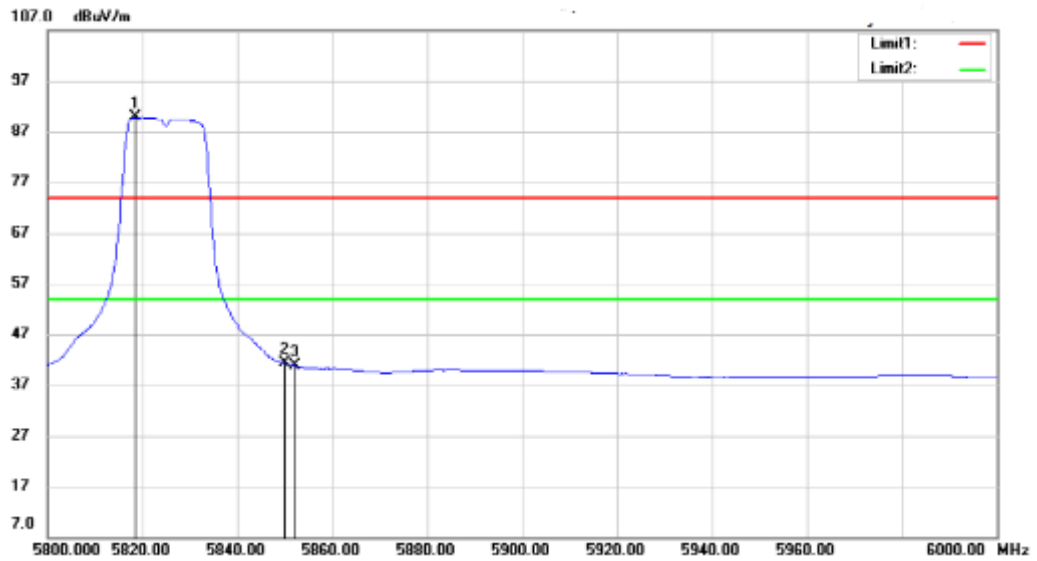
**Antenna 1**

**Channel: 165**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5828.8	95.76	6.66	102.42	74	28.42	Peak	Vertical
2	5850	45.98	6.64	52.62	74	-21.38	Peak	Vertical
3	5857.8	48.86	6.62	55.48	74	-18.52	Peak	Vertical
1	5818.4	83.1	6.66	89.76	54	35.76	AV	Vertical
2	5850	34.62	6.64	41.26	54	-12.74	AV	Vertical
3	5852.2	34.14	6.64	40.78	54	-13.22	AV	Vertical



AV



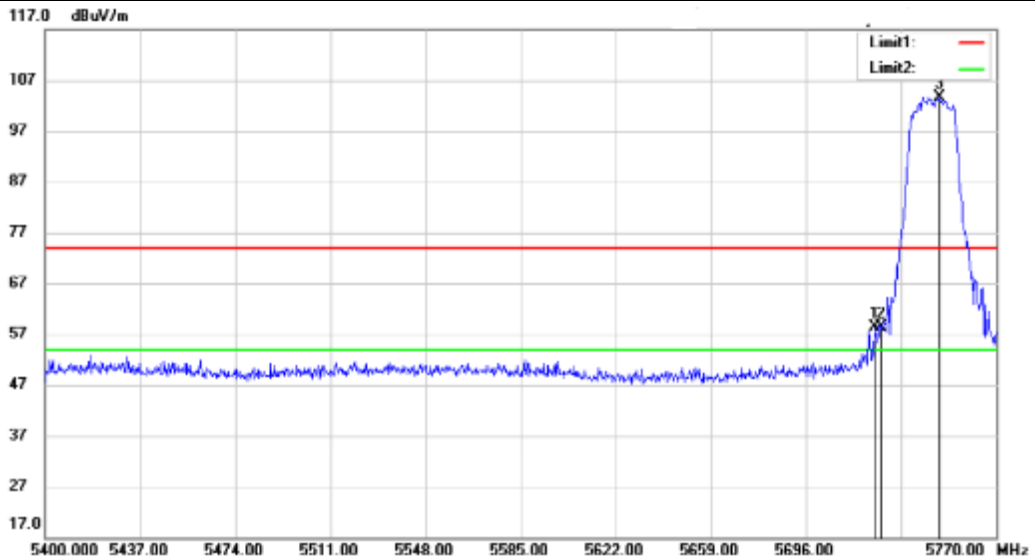
**802.11 n(HT20)**

**Antenna 1**

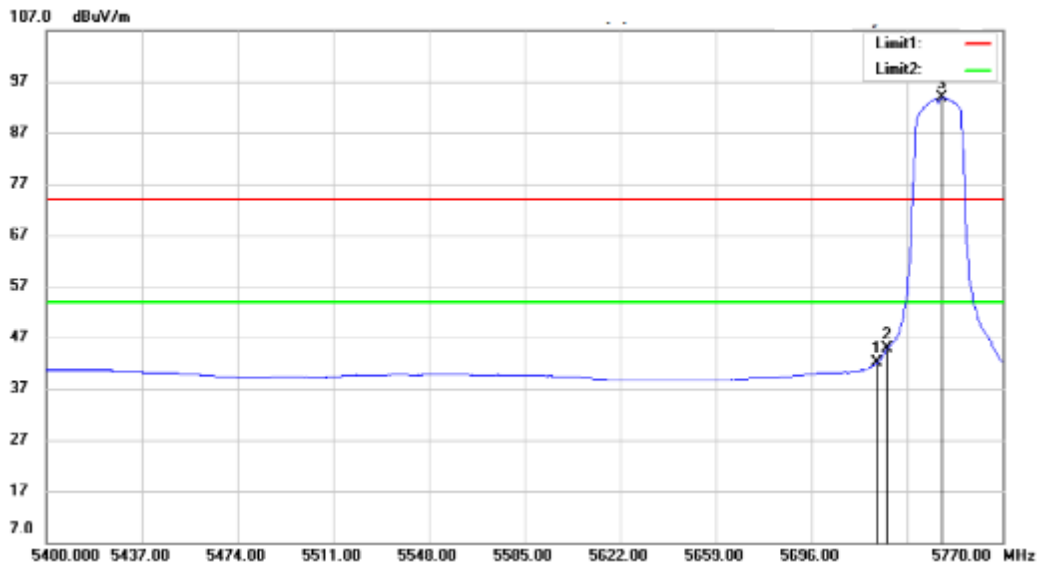
**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5722.64	51.59	6.83	58.42	74	-15.58	Peak	Horizontal
2	5725	51.48	6.82	58.3	74	-15.7	Peak	Horizontal
3	5748.17	96.89	6.77	103.66	74	29.66	Peak	Horizontal
1	5721.53	35.27	6.83	42.1	54	-11.9	AV	Horizontal
2	5725	38.02	6.82	44.84	54	-9.16	AV	Horizontal
3	5746.69	87.12	6.77	93.89	54	39.89	AV	Horizontal

Peak



AV



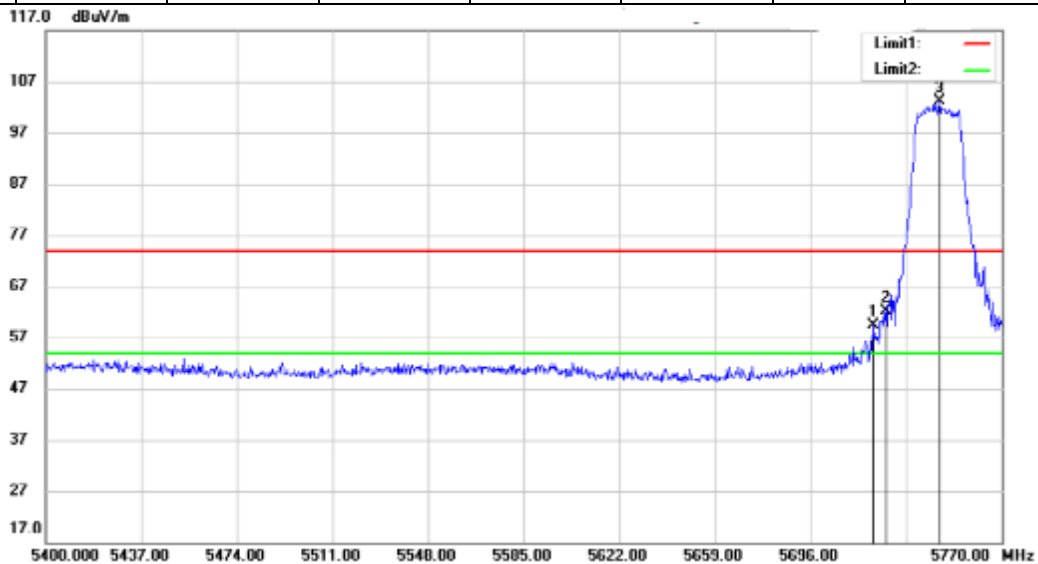
### 802.11 n(HT20)

### Antenna 1

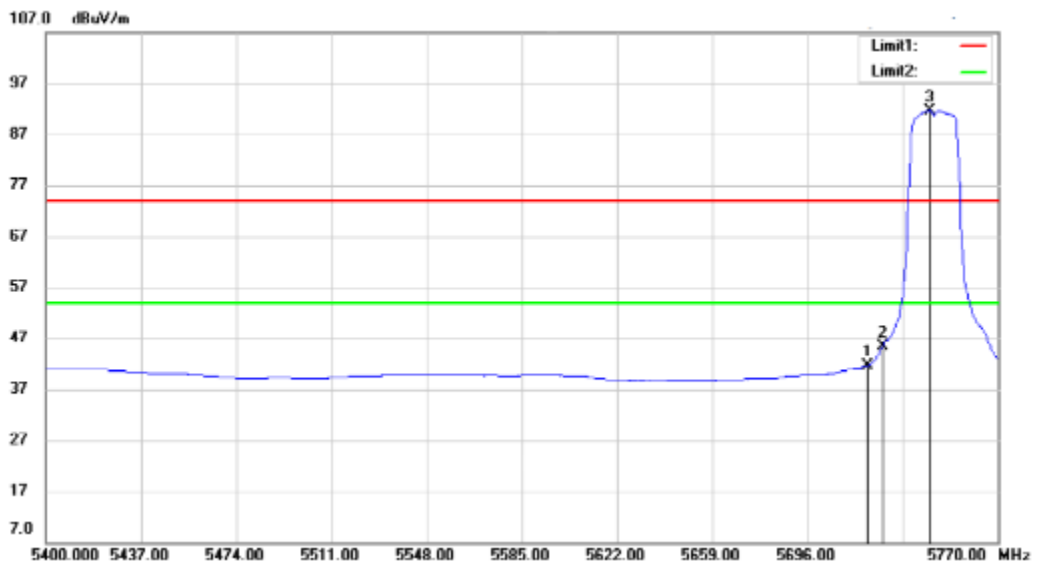
### Channel: 149

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5720.42	52.58	6.82	59.4	74	-14.6	Peak	Vertical
2	5725	55.25	6.82	62.07	74	-11.93	Peak	Vertical
3	5745.95	96.3	6.77	103.07	74	29.07	Peak	Vertical
1	5719.31	34.75	6.82	41.57	54	-12.43	AV	Vertical
2	5725	38.65	6.82	45.47	54	-8.53	AV	Vertical
3	5743.73	84.96	6.79	91.75	54	37.75	AV	Vertical

Peak



AV

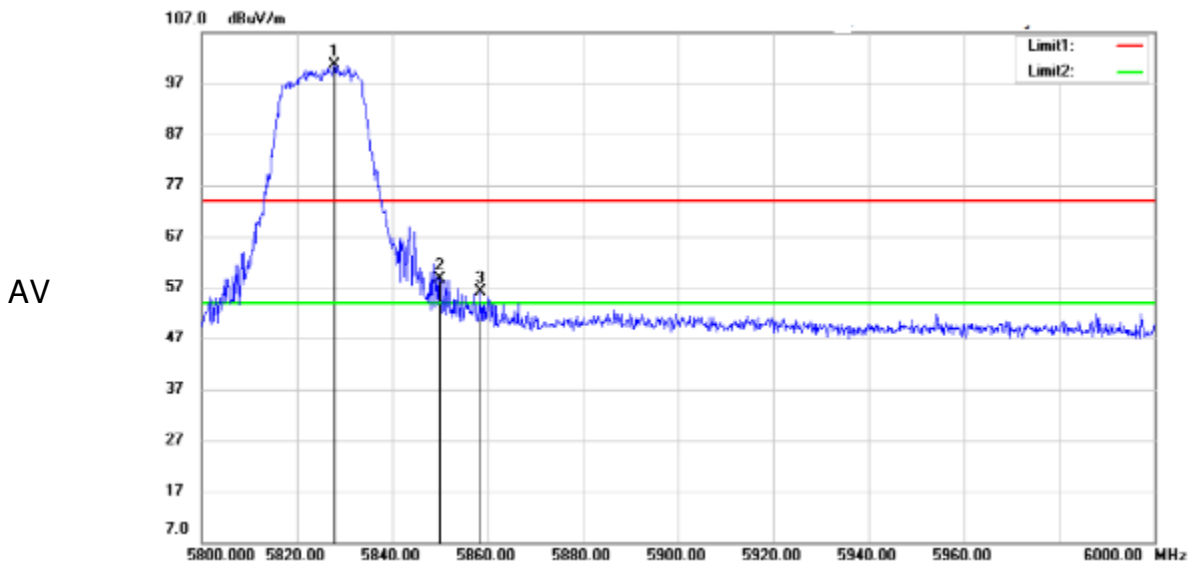
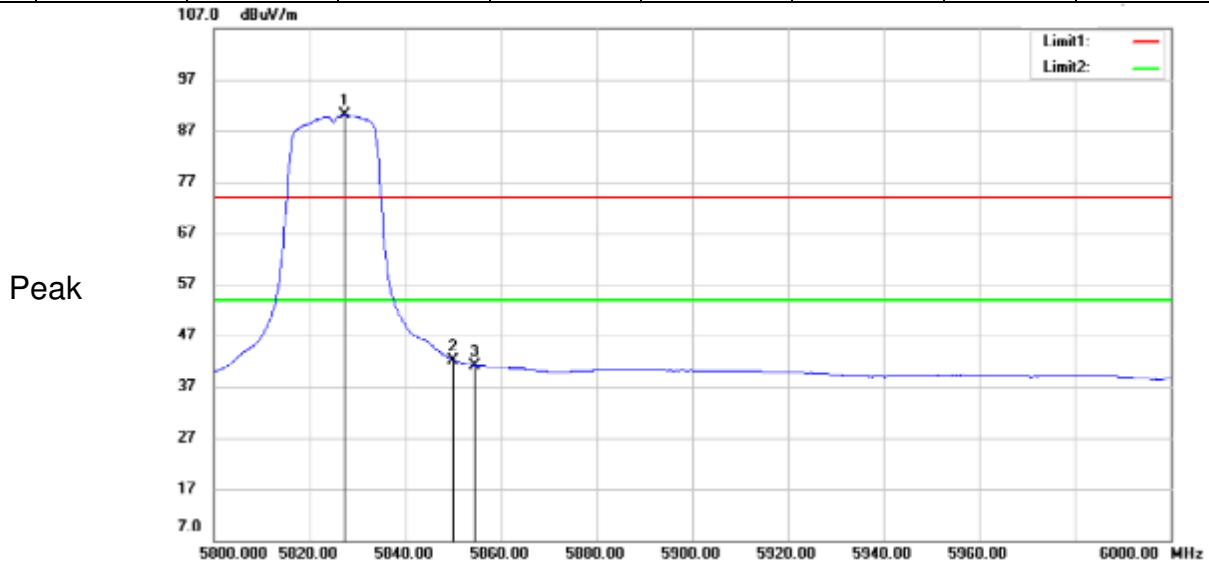


**802.11 n(HT20)**

**Antenna 1**

**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5827.8	94.02	6.66	100.68	74	26.68	Peak	Horizontal
2	5850	51.94	6.64	58.58	74	-15.42	Peak	Horizontal
3	5858.6	49.4	6.63	56.03	74	-17.97	Peak	Horizontal
1	5827.2	83.42	6.66	90.08	54	36.08	AV	Horizontal
2	5850	35.61	6.64	42.25	54	-11.75	AV	Horizontal
3	5854.6	34.52	6.64	41.16	54	-12.84	AV	Horizontal

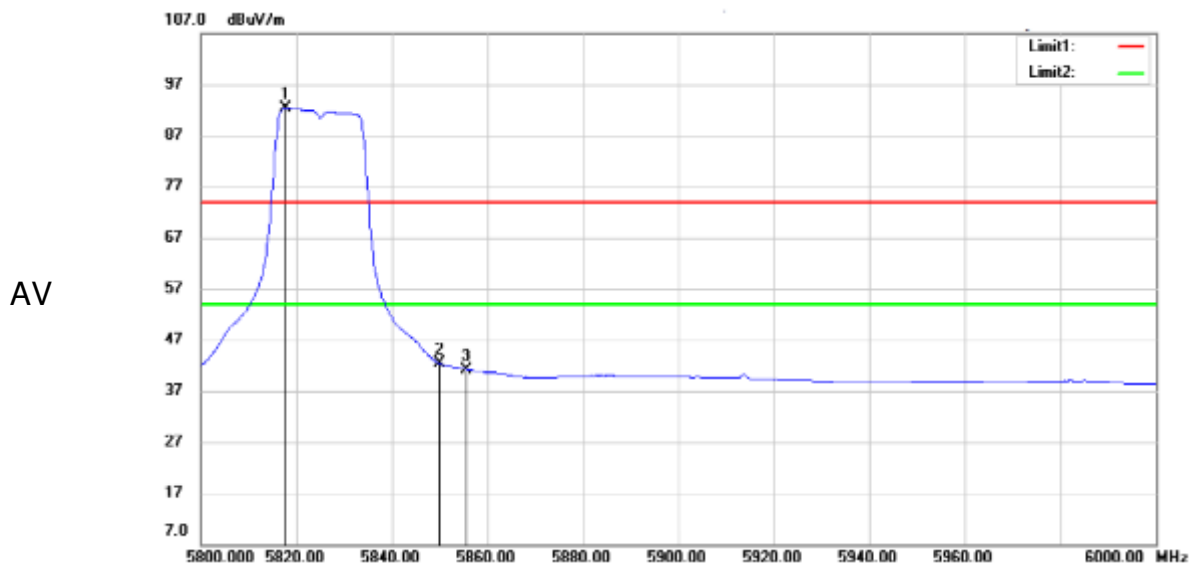
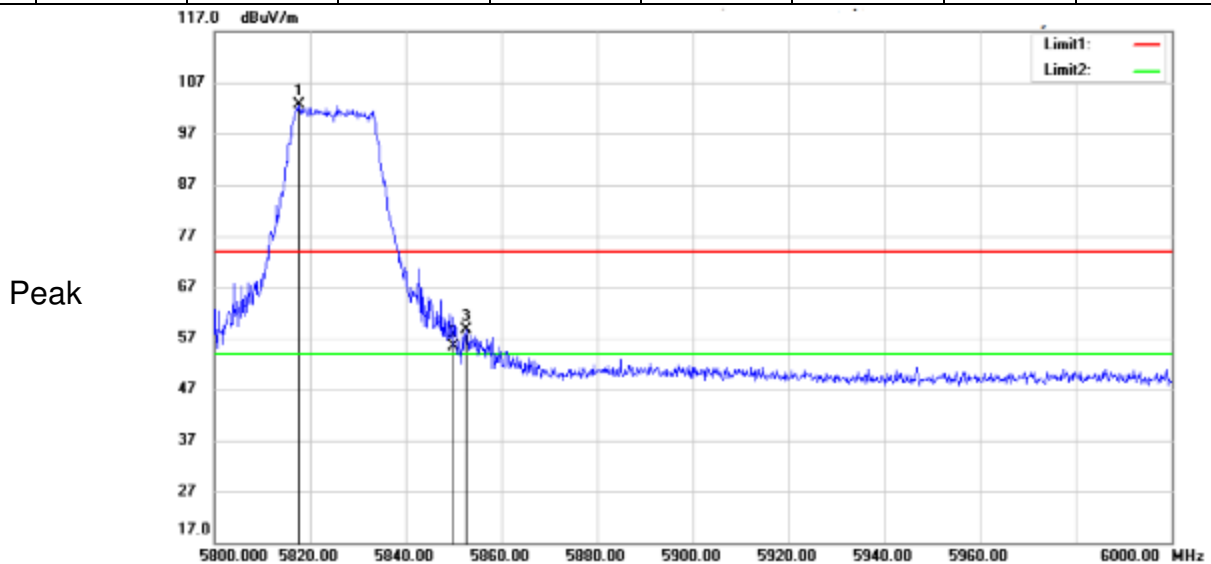


**802.11 n(HT20)**

**Antenna 1**

**Channel: 165**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5817.6	96.03	6.66	102.69	74	28.69	Peak	Vertical
2	5850	48.65	6.64	55.29	74	-18.71	Peak	Vertical
3	5852.6	51.98	6.64	58.62	74	-15.38	Peak	Vertical
1	5817.8	85.69	6.66	92.35	54	38.35	AV	Vertical
2	5850	35.73	6.64	42.37	54	-11.63	AV	Vertical
3	5855.6	34.6	6.64	41.24	54	-12.76	AV	Vertical



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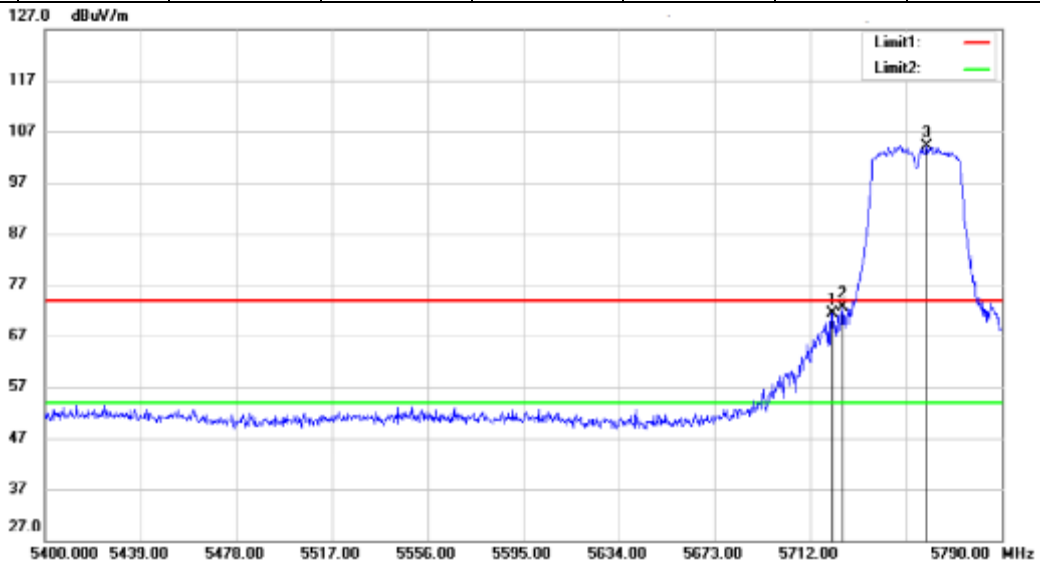
**802.11 n(HT40)**

**Antenna 1**

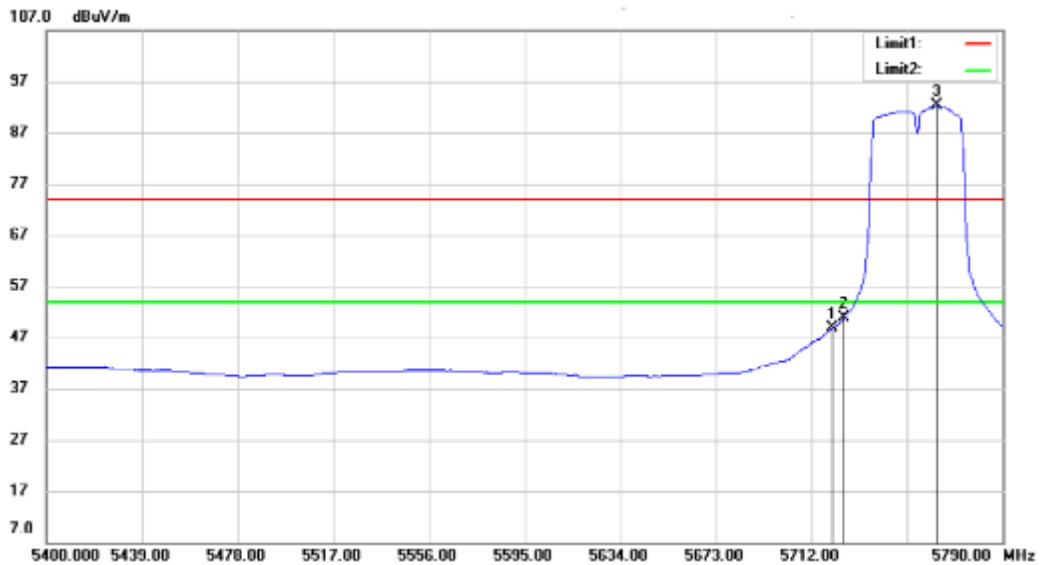
**Channel: 151**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5720.97	64.45	6.82	71.27	74	-2.73	Peak	Horizontal
2	5725	65.71	6.82	72.53	74	-1.47	Peak	Horizontal
3	5759.58	97.49	6.75	104.24	74	30.24	Peak	Horizontal
1	5720.58	42.05	6.82	48.87	54	-5.13	AV	Horizontal
2	5725	44	6.82	50.82	54	-3.18	AV	Horizontal
3	5763.09	85.54	6.74	92.28	54	38.28	AV	Horizontal

Peak



AV

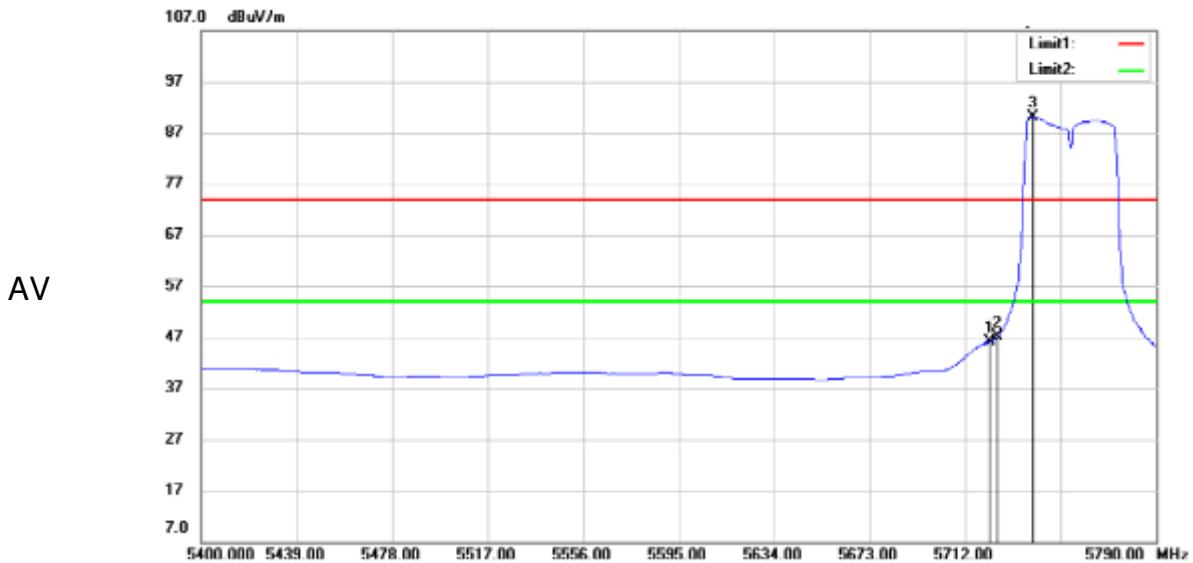
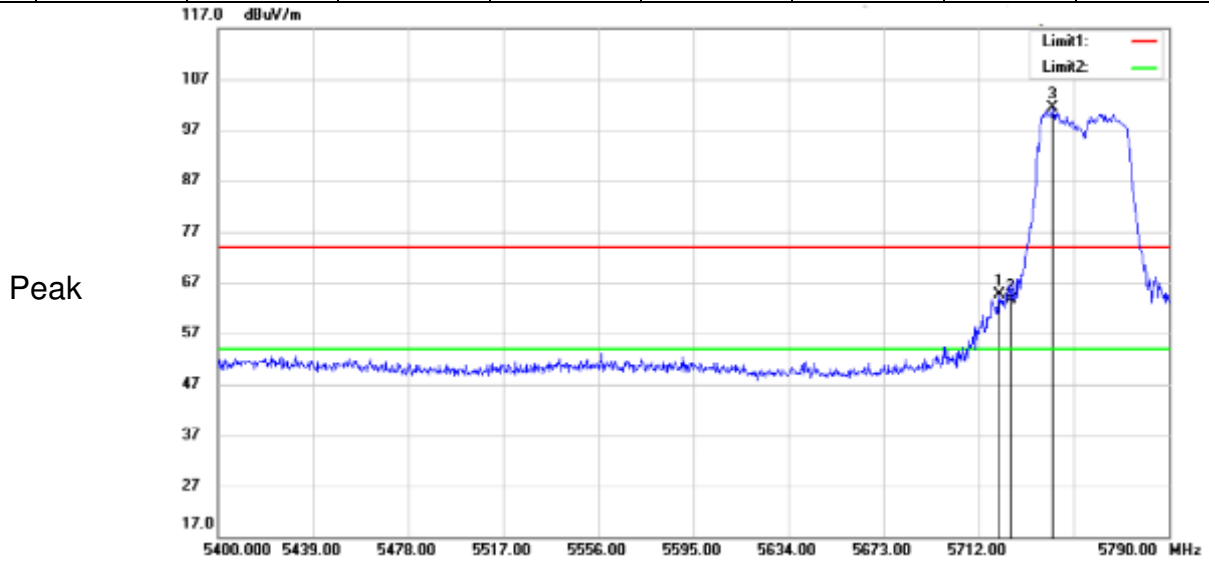


**802.11 n(HT40)**

**Antenna 1**

**Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5720.58	57.72	6.82	64.54	74	-9.46	Peak	Vertical
2	5725	56.75	6.82	63.57	74	-10.43	Peak	Vertical
3	5742.42	94.57	6.79	101.36	74	27.36	Peak	Vertical
1	5722.14	39.24	6.83	46.07	54	-7.93	AV	Vertical
2	5725	40.24	6.82	47.06	54	-6.94	AV	Vertical
3	5739.69	83.27	6.79	90.06	54	36.06	AV	Vertical



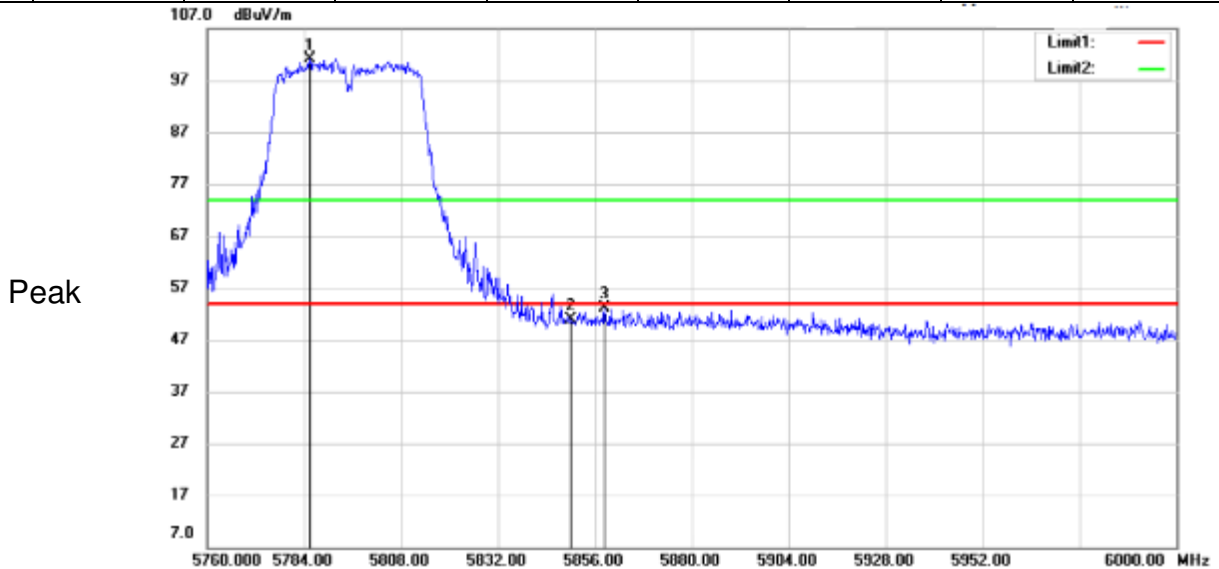


**802.11 n(HT40)**

**Antenna 1**

**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5785.44	94.44	6.7	101.14	54	47.14	Peak	Horizontal
2	5850	44.28	6.64	50.92	54	-3.08	Peak	Horizontal
3	5858.4	46.42	6.63	53.05	54	-0.95	Peak	Horizontal



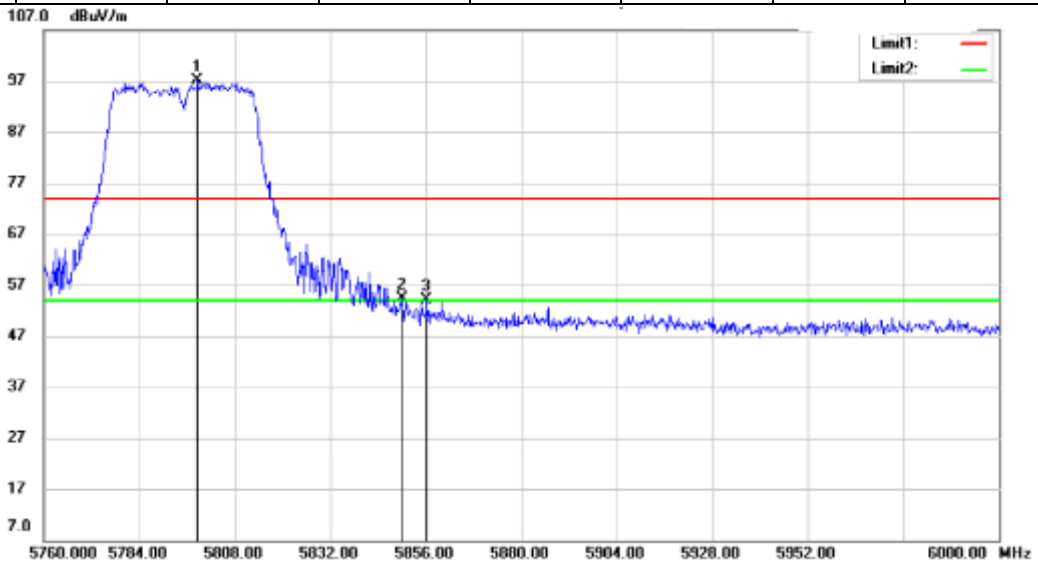
**802.11 n(HT40)**

**Antenna 1**

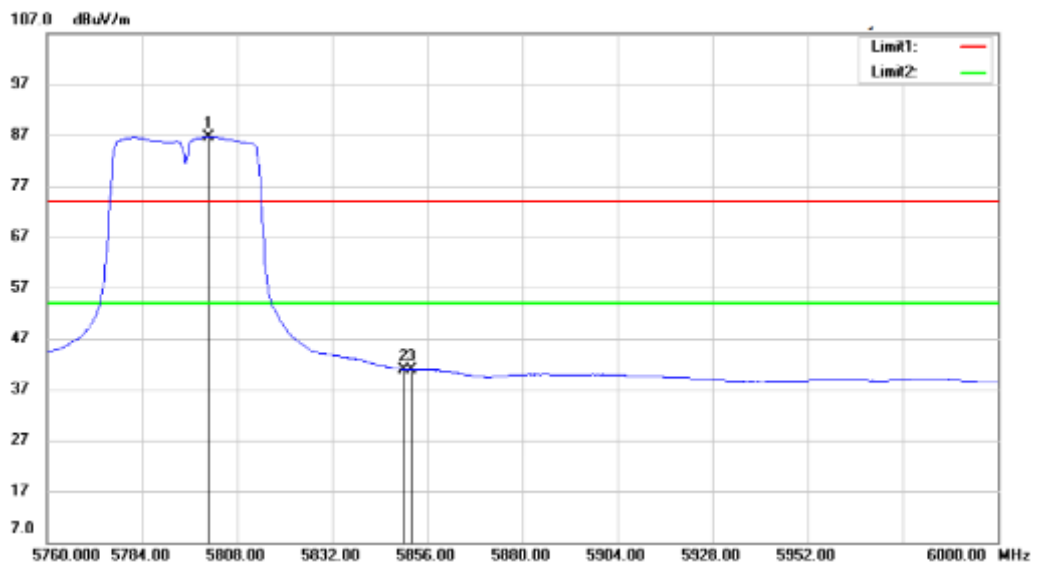
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5798.64	90.56	6.67	97.23	74	23.23	Peak	Vertical
2	5850	47.67	6.64	54.31	74	-19.69	Peak	Vertical
3	5856.24	47.5	6.64	54.14	74	-19.86	Peak	Vertical
1	5800.8	79.95	6.67	86.62	54	32.62	AV	Vertical
2	5850	34.3	6.64	40.94	54	-13.06	AV	Vertical
3	5851.92	34.24	6.64	40.88	54	-13.12	AV	Vertical

Peak



AV



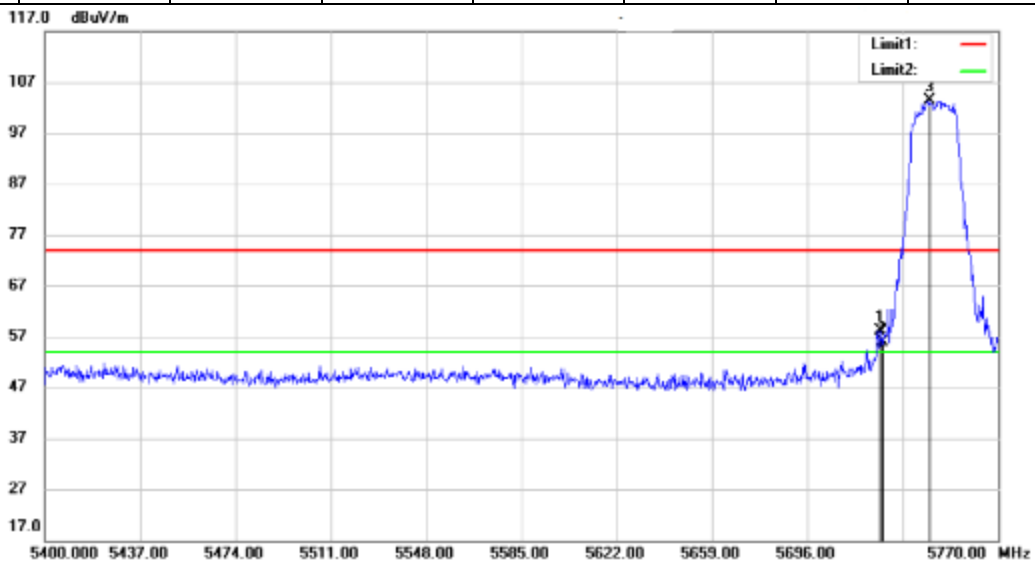
### 802.11 ac(VHT20)

### Antenna 1

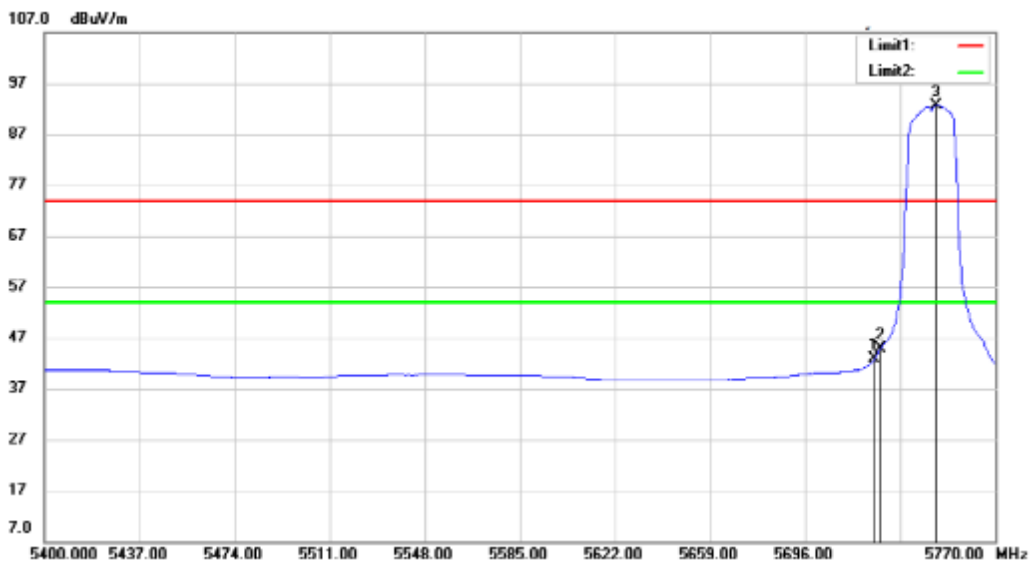
### Channel: 149

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5724.49	51.33	6.82	58.15	74	-15.85	Peak	Horizontal
2	5725	49.18	6.82	56	74	-18	Peak	Horizontal
3	5743.73	96.55	6.79	103.34	74	29.34	Peak	Horizontal
1	5723.01	36.03	6.83	42.86	54	-11.14	AV	Horizontal
2	5725	38.12	6.82	44.94	54	-9.06	AV	Horizontal
3	5747.06	85.97	6.77	92.74	54	38.74	AV	Horizontal

Peak



AV



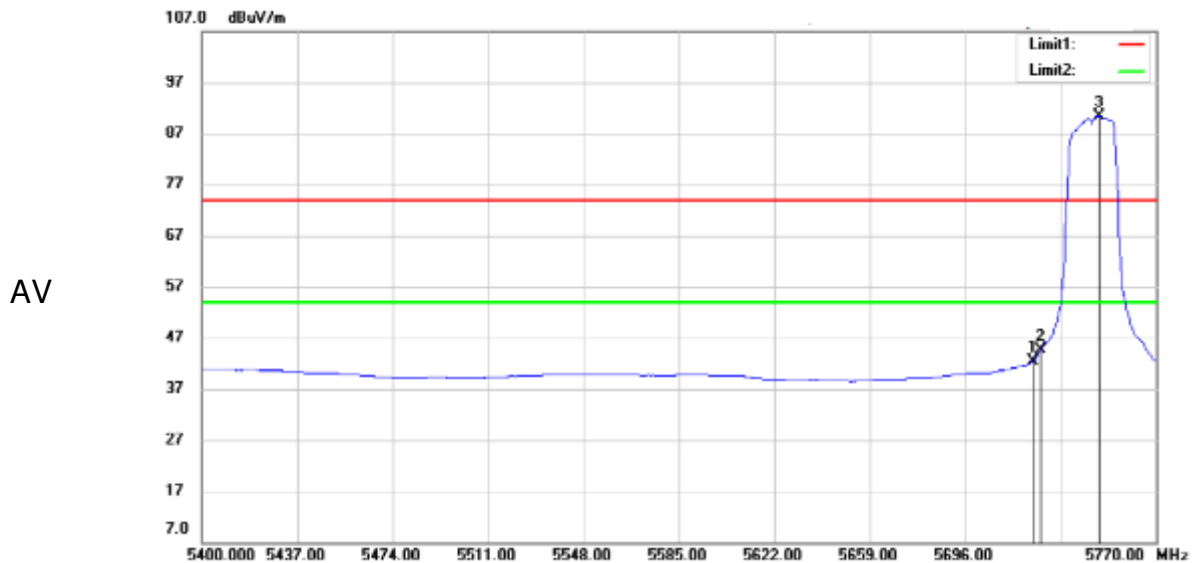
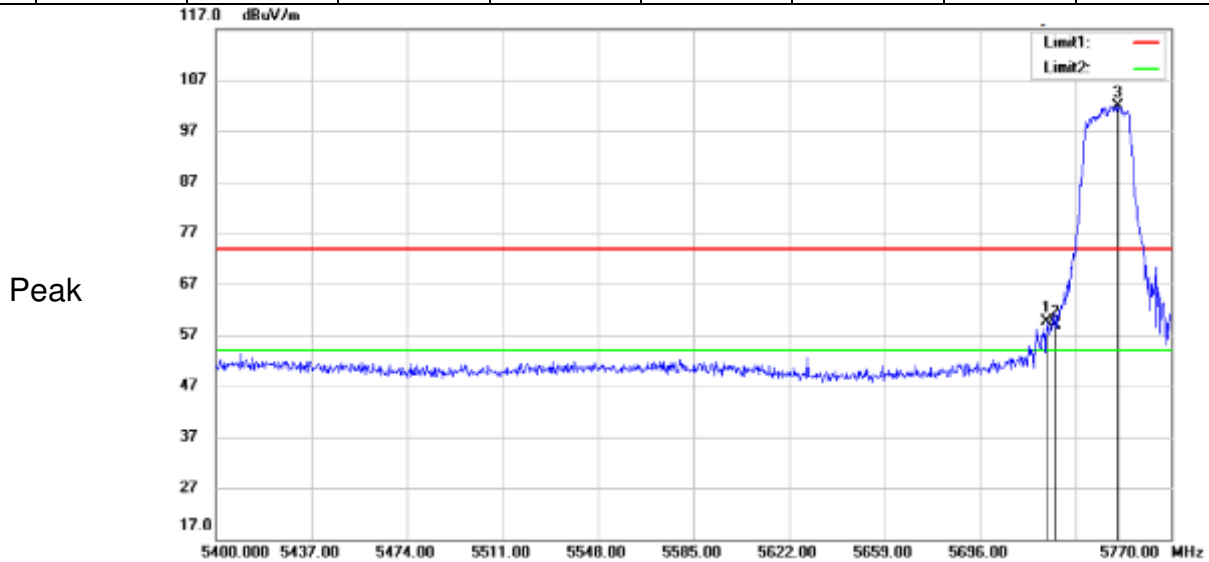
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**802.11 ac(VHT20)**

**Antenna 1**

**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5721.9	52.86	6.83	59.69	74	-14.31	Peak	Vertical
2	5725	52.18	6.82	59	74	-15	Peak	Vertical
3	5749.28	95.11	6.77	101.88	74	27.88	Peak	Vertical
1	5722.27	35.58	6.83	42.41	54	-11.59	AV	Vertical
2	5725	37.81	6.82	44.63	54	-9.37	AV	Vertical
3	5747.8	83.64	6.77	90.41	54	36.41	AV	Vertical



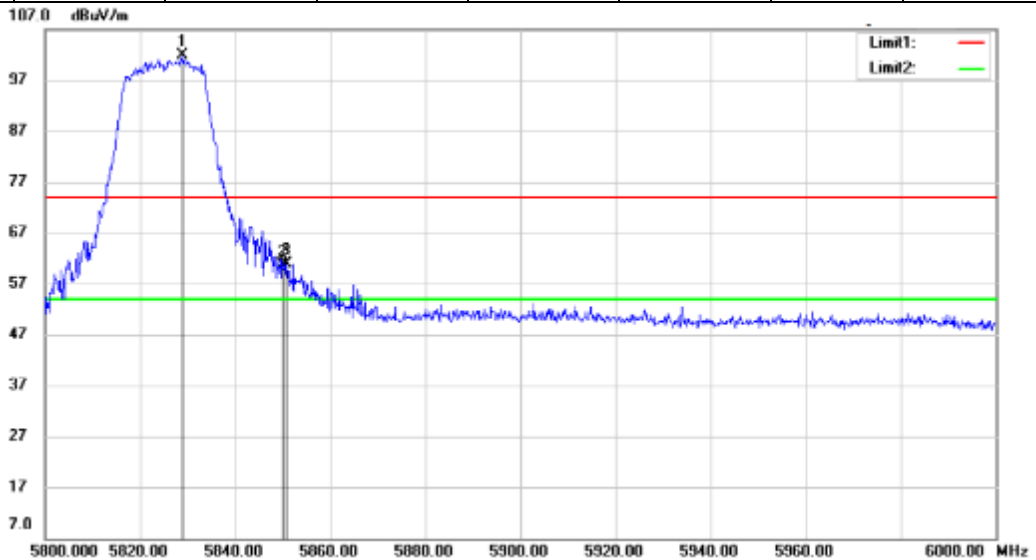
**802.11 ac(VHT20)**

**Antenna 1**

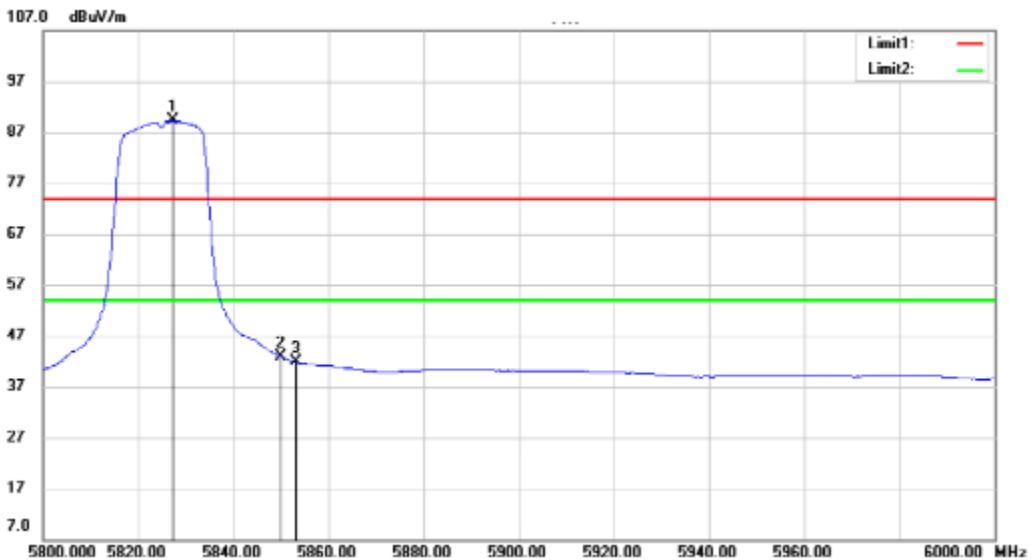
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5829	95.13	6.66	101.79	74	27.79	Peak	Horizontal
2	5850	53.88	6.64	60.52	74	-13.48	Peak	Horizontal
3	5850.8	54.24	6.64	60.88	74	-13.12	Peak	Horizontal
1	5827.2	82.6	6.66	89.26	54	35.26	AV	Horizontal
2	5850	36.24	6.64	42.88	54	-11.12	AV	Horizontal
3	5853.2	35.19	6.64	41.83	54	-12.17	AV	Horizontal

Peak



AV



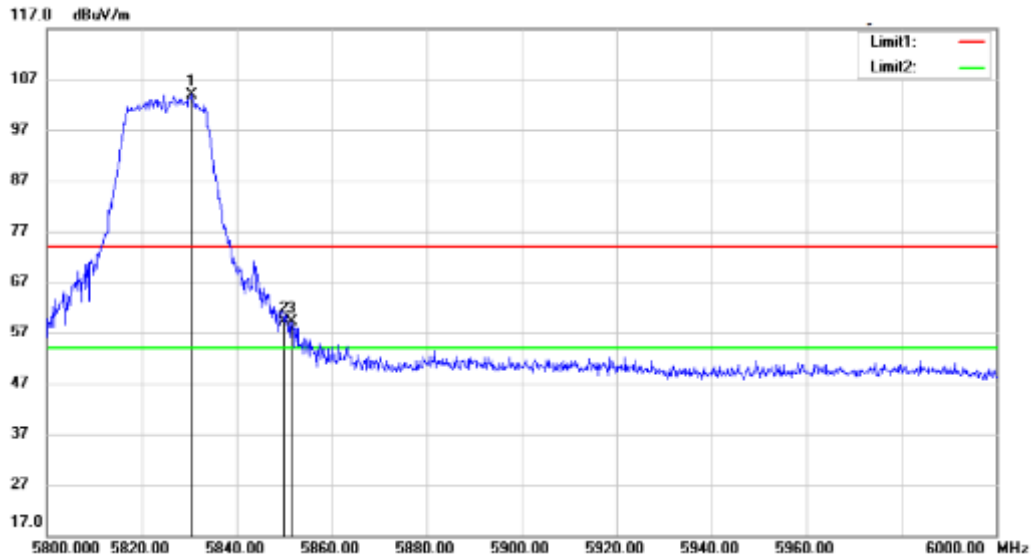
**802.11 ac(VHT20)**

**Antenna 1**

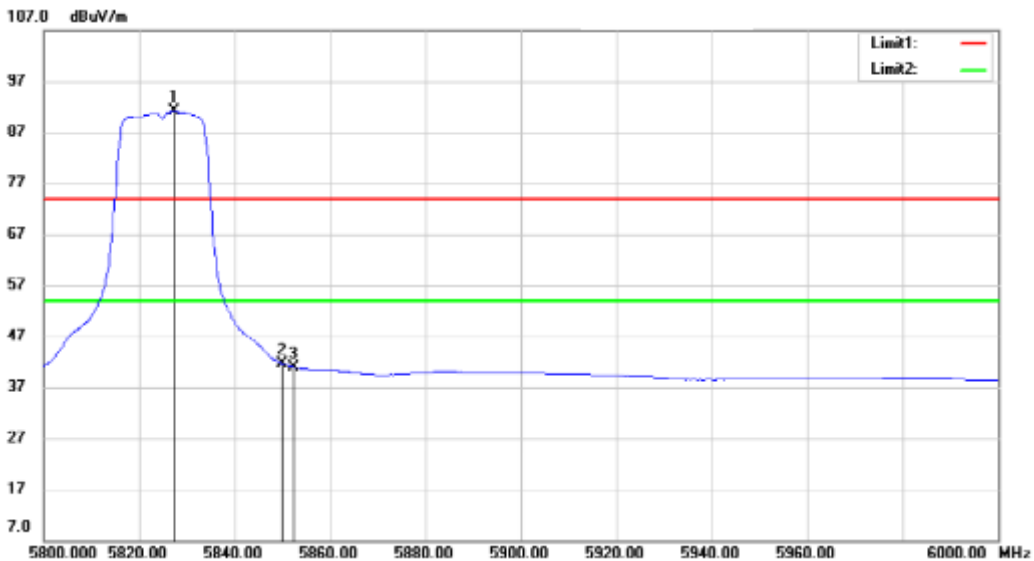
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5830.4	97.34	6.66	104	74	30	Peak	Vertical
2	5850	52.53	6.64	59.17	74	-14.83	Peak	Vertical
3	5851.6	52.42	6.64	59.06	74	-14.94	Peak	Vertical
1	5827.2	84.42	6.66	91.08	54	37.08	AV	Vertical
2	5850	35.01	6.64	41.65	54	-12.35	AV	Vertical
3	5852.4	34.34	6.64	40.98	54	-13.02	AV	Vertical

Peak



AV



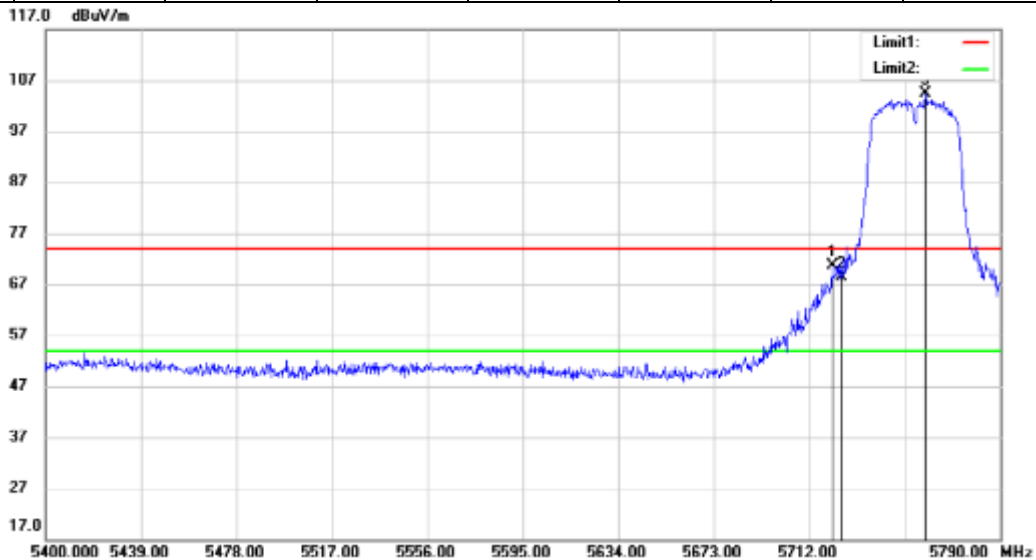
**802.11 ac(VHT40)**

**Antenna 1**

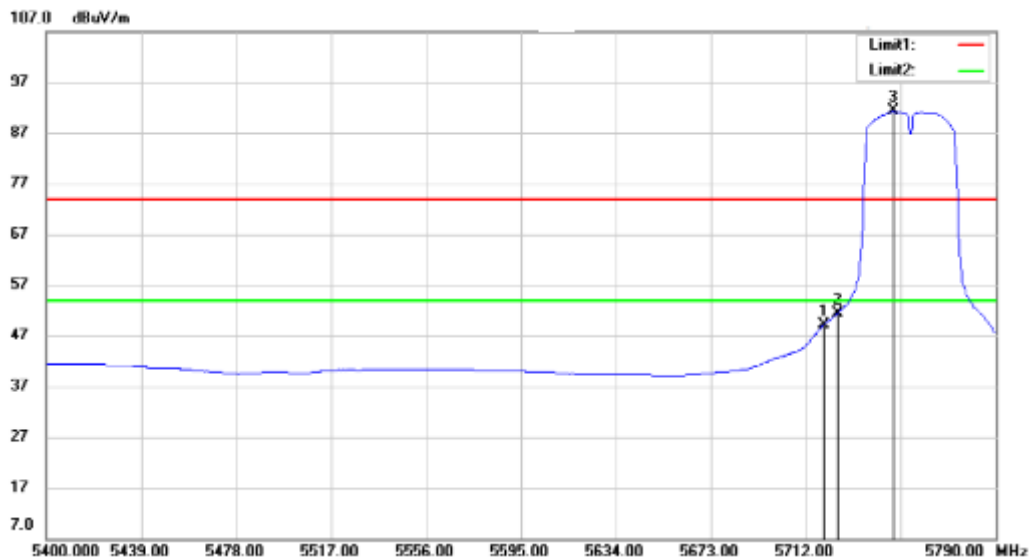
**Channel: 151**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5721.36	63.89	6.82	70.71	74	-3.29	Peak	Horizontal
2	5725	61.67	6.82	68.49	74	-5.51	Peak	Horizontal
3	5759.58	97.69	6.75	104.44	74	30.44	Peak	Horizontal
1	5719.41	42.34	6.82	49.16	54	-4.84	AV	Horizontal
2	5725	44.66	6.82	51.48	54	-2.52	AV	Horizontal
3	5747.88	84.51	6.77	91.28	54	37.28	AV	Horizontal

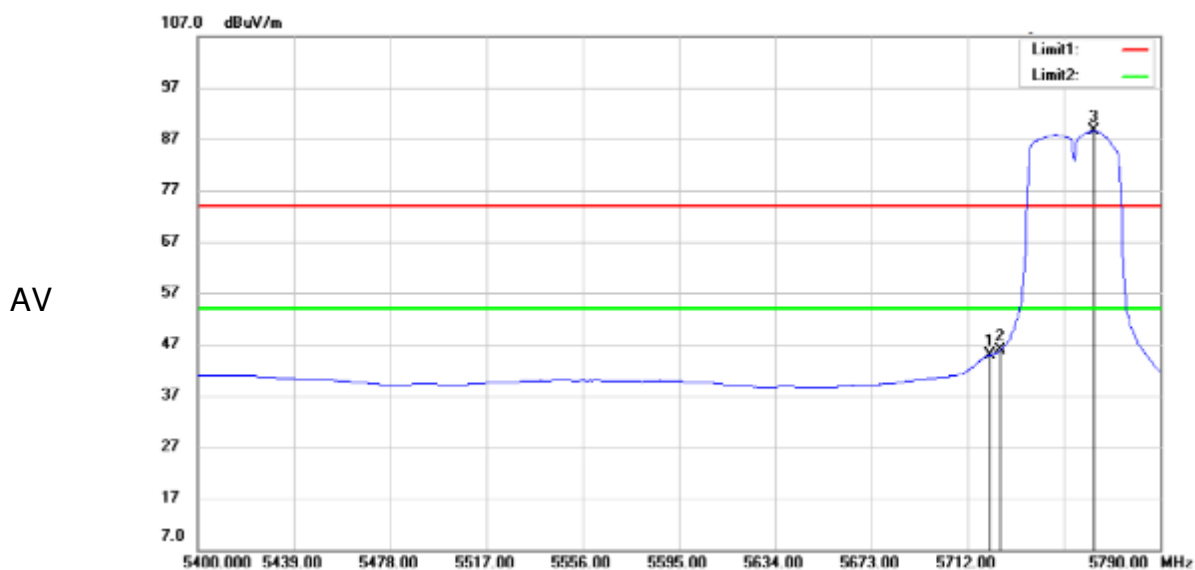
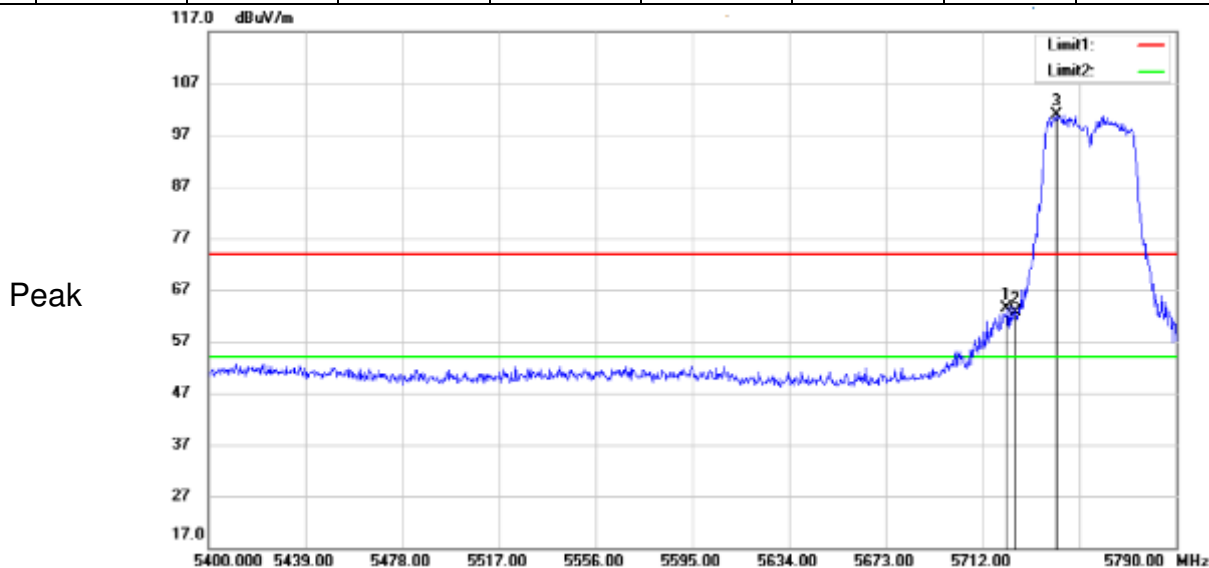
Peak



AV



802.11 ac(VHT40)		Antenna 1			Channel: 151			
MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5721.75	56.54	6.83	63.37	74	-10.63	Peak	Vertical
2	5725	55.76	6.82	62.58	74	-11.42	Peak	Vertical
3	5741.64	94.04	6.79	100.83	74	26.83	Peak	Vertical
1	5720.97	38.06	6.82	44.88	54	-9.12	AV	Vertical
2	5725	39.06	6.82	45.88	54	-8.12	AV	Vertical
3	5763.09	81.87	6.74	88.61	54	34.61	AV	Vertical



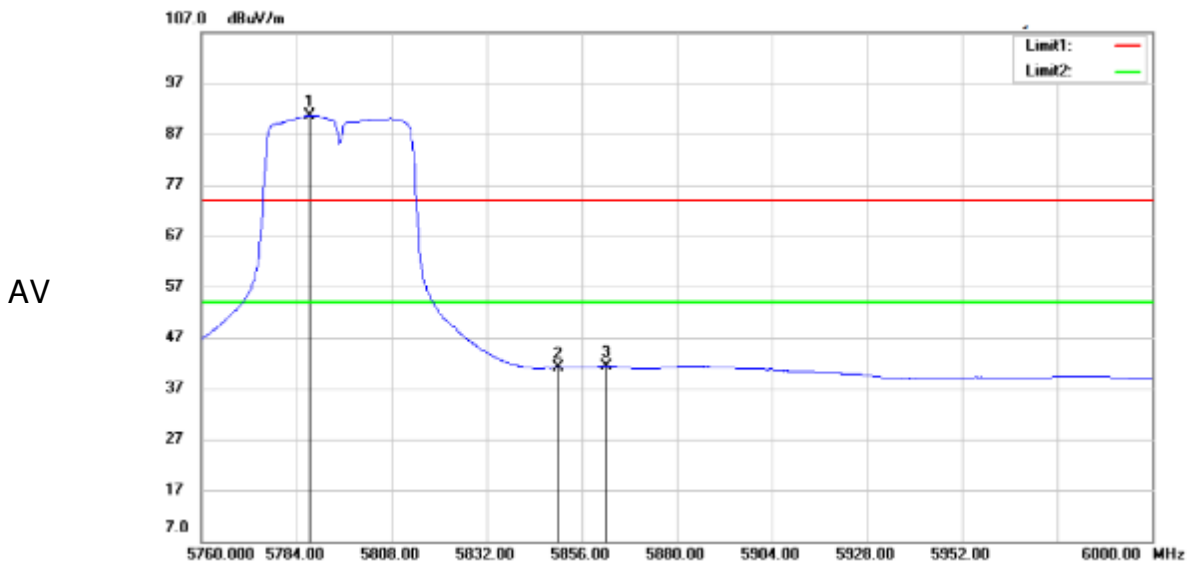
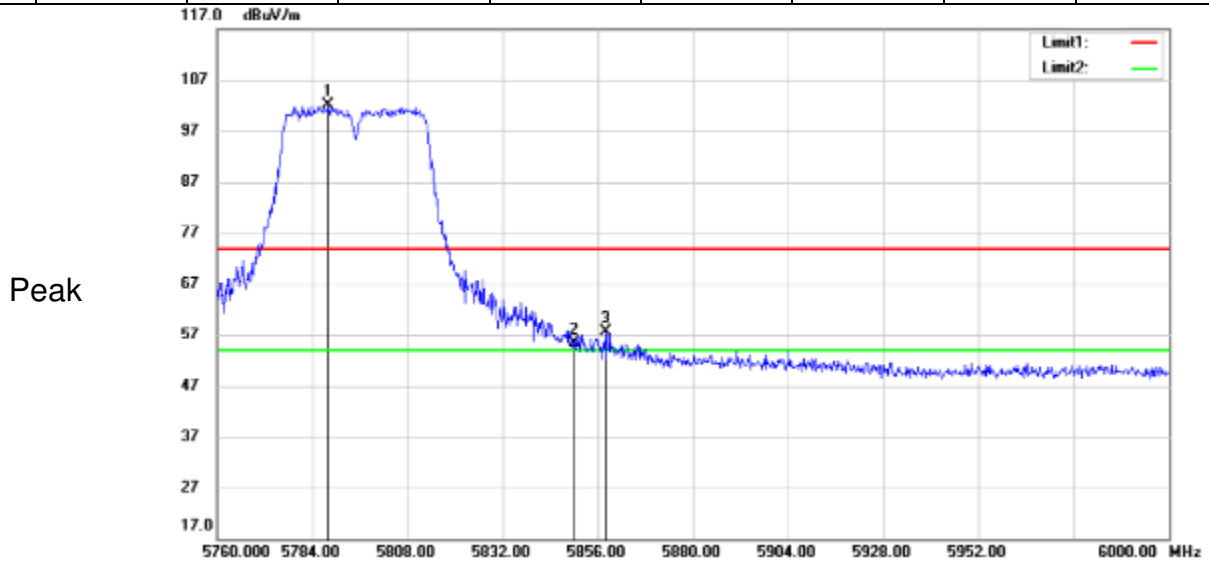


**802.11 ac(VHT40)**

**Antenna 1**

**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5787.84	95.45	6.69	102.14	74	28.14	Peak	Horizontal
2	5850	48.69	6.64	55.33	74	-18.67	Peak	Horizontal
3	5858.16	50.95	6.62	57.57	74	-16.43	Peak	Horizontal
1	5787.36	83.98	6.69	90.67	54	36.67	AV	Horizontal
2	5850	34.4	6.64	41.04	54	-12.96	AV	Horizontal
3	5862.24	34.77	6.63	41.4	54	-12.6	AV	Horizontal



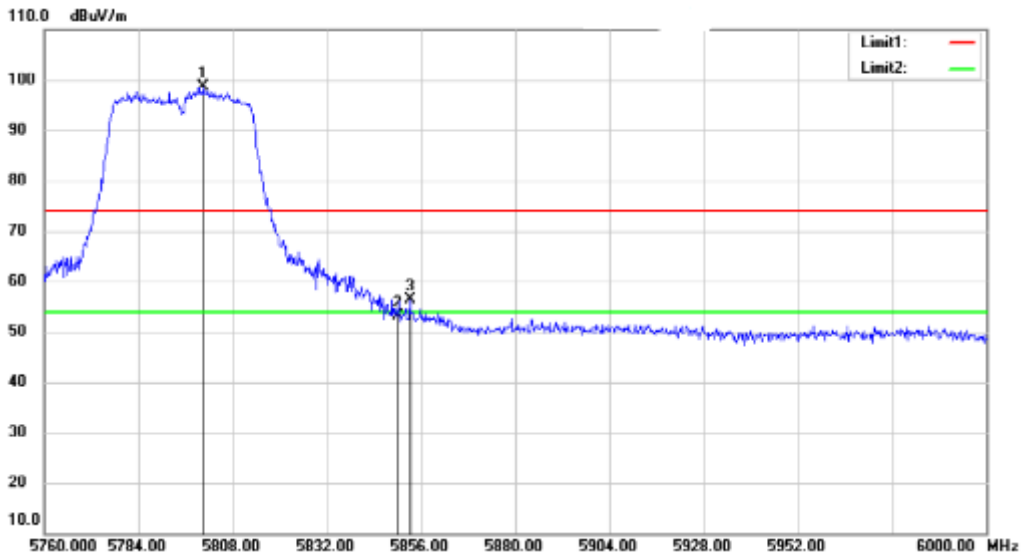
**802.11 ac(VHT40)**

**Antenna 1**

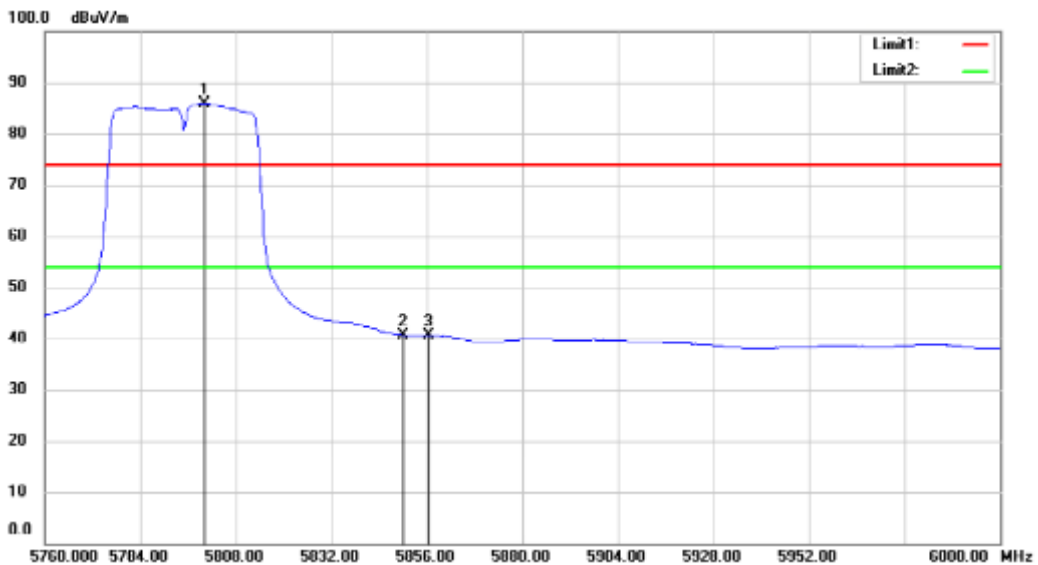
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5800.56	91.91	6.67	98.58	74	24.58	Peak	Vertical
2	5850	46.55	6.64	53.19	74	-20.81	Peak	Vertical
3	5853.12	49.82	6.64	56.46	74	-17.54	Peak	Vertical
1	5800.08	79.2	6.67	85.87	54	31.87	AV	Vertical
2	5850	34.06	6.64	40.7	54	-13.3	AV	Vertical
3	5856.48	33.98	6.63	40.61	54	-13.39	AV	Vertical

Peak



AV

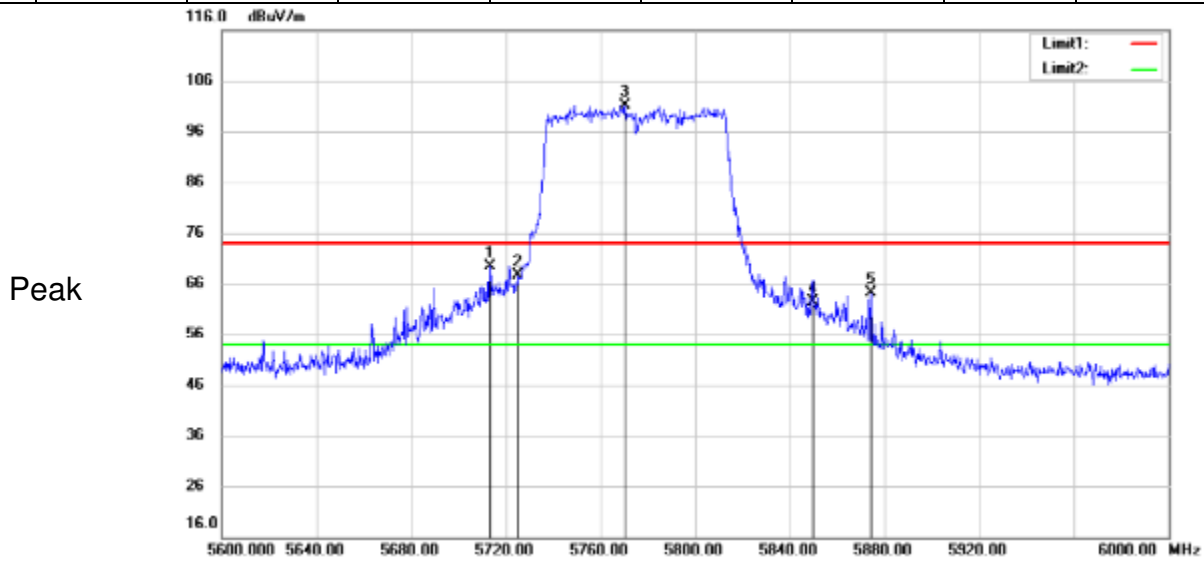


**802.11 ac(VHT80)**

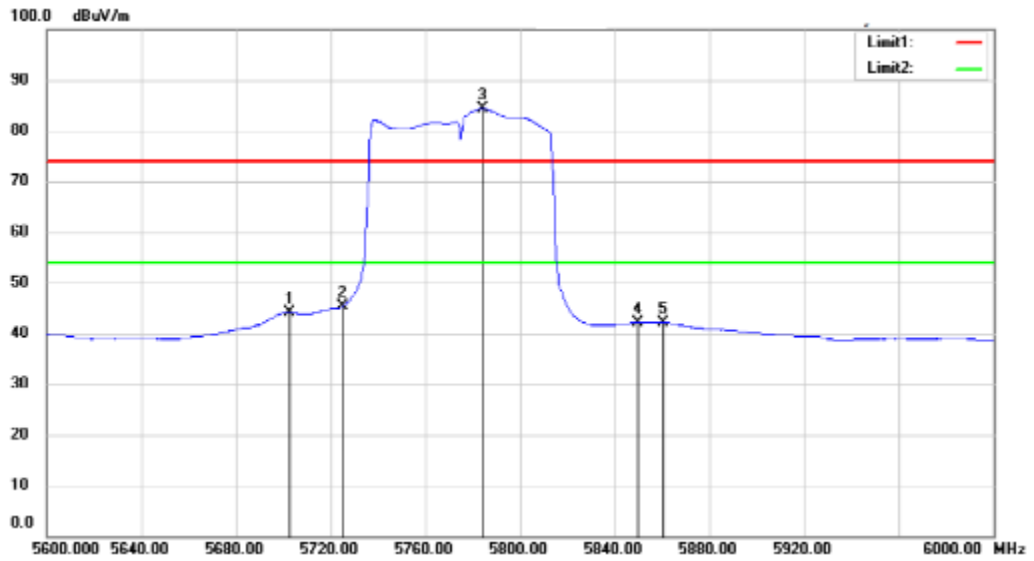
**Antenna 1**

**Channel: 155**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5713.2	62.45	6.84	69.29	74	-4.71	Peak	Horizontal
2	5725	60.82	6.82	67.64	74	-6.36	Peak	Horizontal
3	5770.4	94.47	6.73	101.2	74	27.2	Peak	Horizontal
4	5850	55.76	6.64	62.4	74	-11.6	Peak	Horizontal
5	5874.4	57.47	6.62	64.09	74	-9.91	Peak	Horizontal
1	5702.4	37.34	6.87	44.21	54	-9.79	AV	Horizontal
2	5725	38.55	6.82	45.37	54	-8.63	AV	Horizontal
3	5784	77.69	6.7	84.39	54	30.39	AV	Horizontal
4	5850	35.43	6.64	42.07	54	-11.93	AV	Horizontal
5	5860.4	35.52	6.63	42.15	54	-11.85	AV	Horizontal



AV

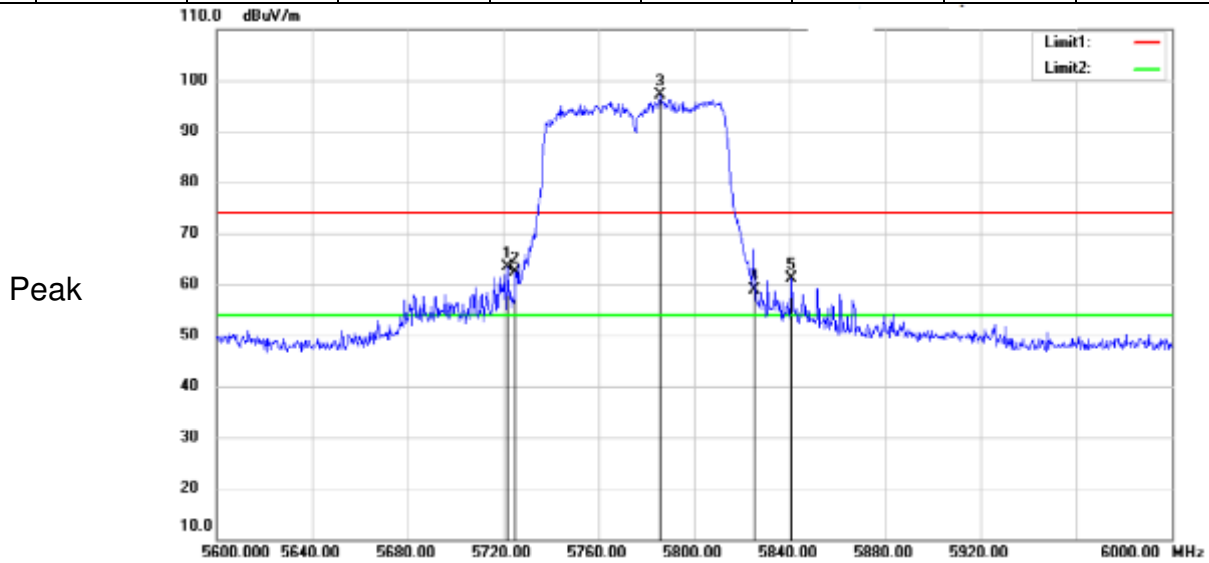


**802.11 ac(VHT80)**

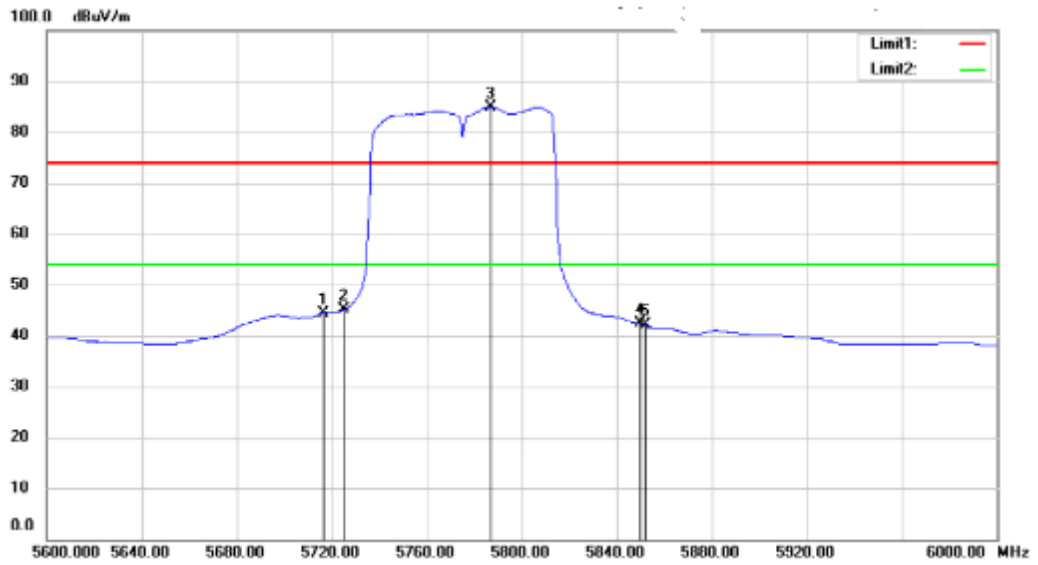
**Antenna 1**

**Channel: 155**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5722	56.57	6.83	63.4	74	-10.6	Peak	Vertical
2	5725	55.55	6.82	62.37	74	-11.63	Peak	Vertical
3	5786	90.38	6.7	97.08	74	23.08	Peak	Vertical
4	5825	52.13	6.65	58.78	74	-15.22	Peak	Vertical
5	5840.8	54.39	6.64	61.03	74	-12.97	Peak	Vertical
1	5716.4	37.66	6.84	44.5	54	-9.5	AV	Vertical
2	5725	38.27	6.82	45.09	54	-8.91	AV	Vertical
3	5786.8	78.28	6.7	84.98	54	30.98	AV	Vertical
4	5850	35.72	6.64	42.36	54	-11.64	AV	Vertical
5	5852	35.43	6.64	42.07	54	-11.93	AV	Vertical



AV



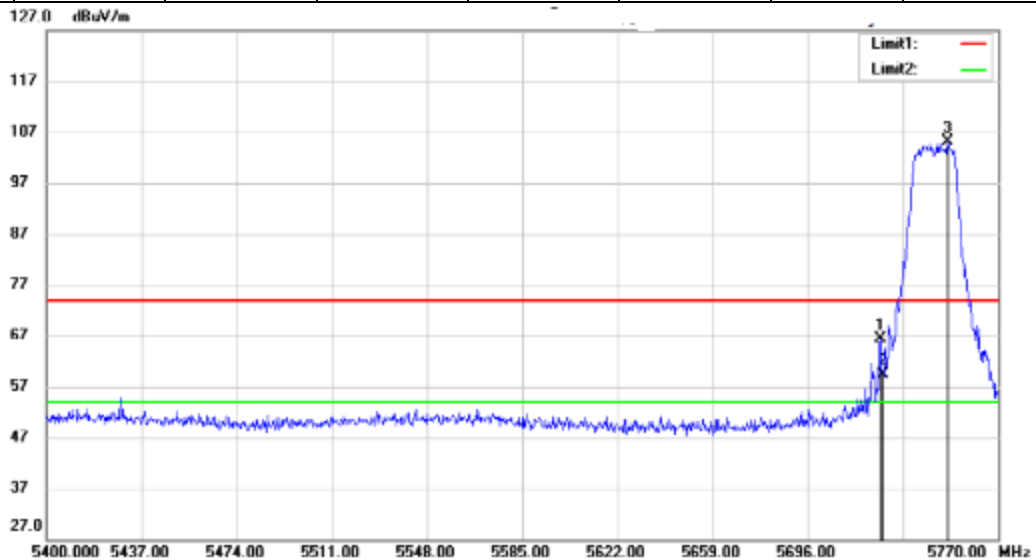
**802.11 a**

**Antenna 2**

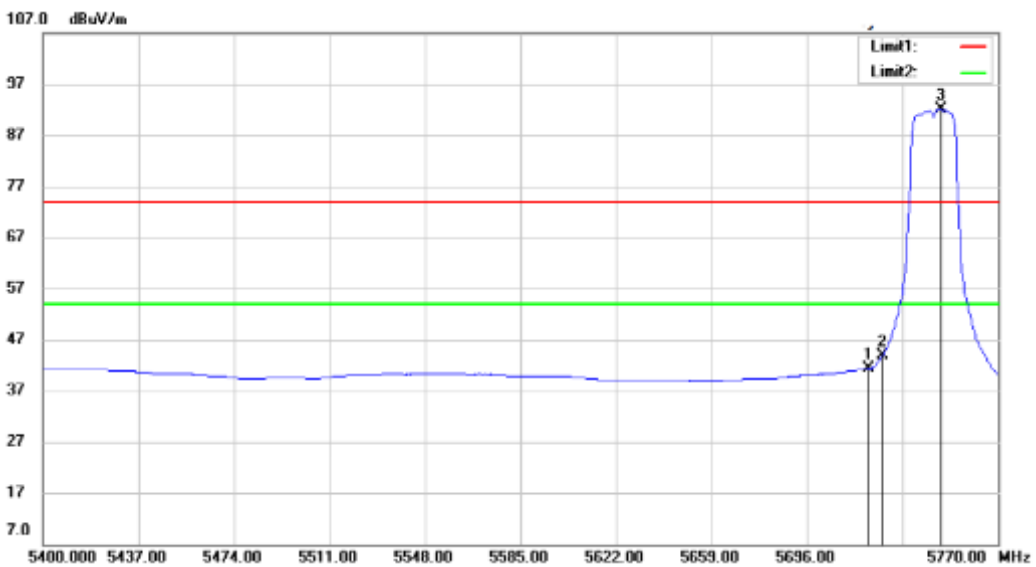
**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5724.12	59.46	6.82	66.28	74	-7.72	Peak	Horizontal
2	5725	52.48	6.82	59.3	74	-14.7	Peak	Horizontal
3	5750.39	98.34	6.77	105.11	74	31.11	Peak	Horizontal
1	5720.05	34.48	6.82	41.3	54	-12.7	AV	Horizontal
2	5725	37.07	6.82	43.89	54	-10.11	AV	Horizontal
3	5747.8	85.3	6.77	92.07	54	38.07	AV	Horizontal

Peak



AV

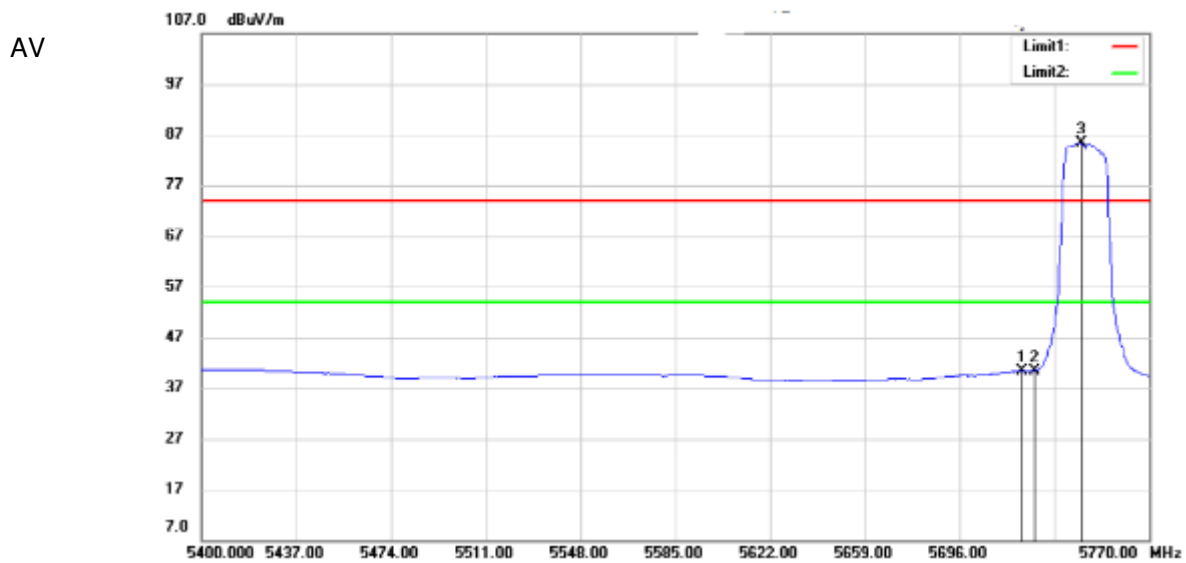
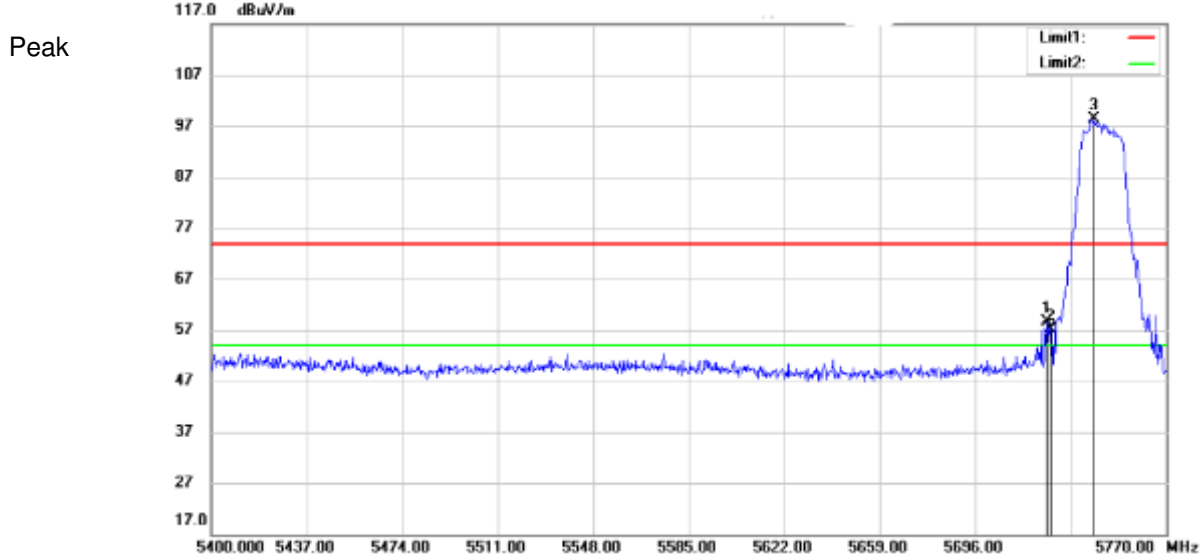


**802.11 a**

**Antenna 2**

**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.75	51.8	6.82	58.62	74	-15.38	Peak	Vertical
2	5725	50.29	6.82	57.11	74	-16.89	Peak	Vertical
3	5742.25	91.64	6.79	98.43	74	24.43	Peak	Vertical
1	5720.42	33.49	6.82	40.31	54	-13.69	AV	Vertical
2	5725	33.66	6.82	40.48	54	-13.52	AV	Vertical
3	5743.73	78.66	6.79	85.45	54	31.45	AV	Vertical





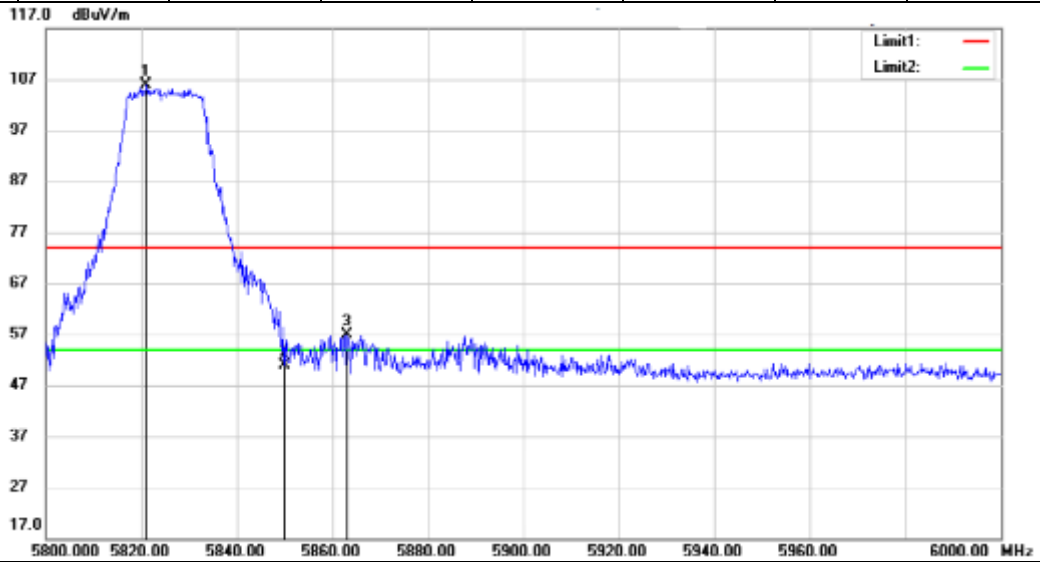
**802.11 a**

**Antenna 2**

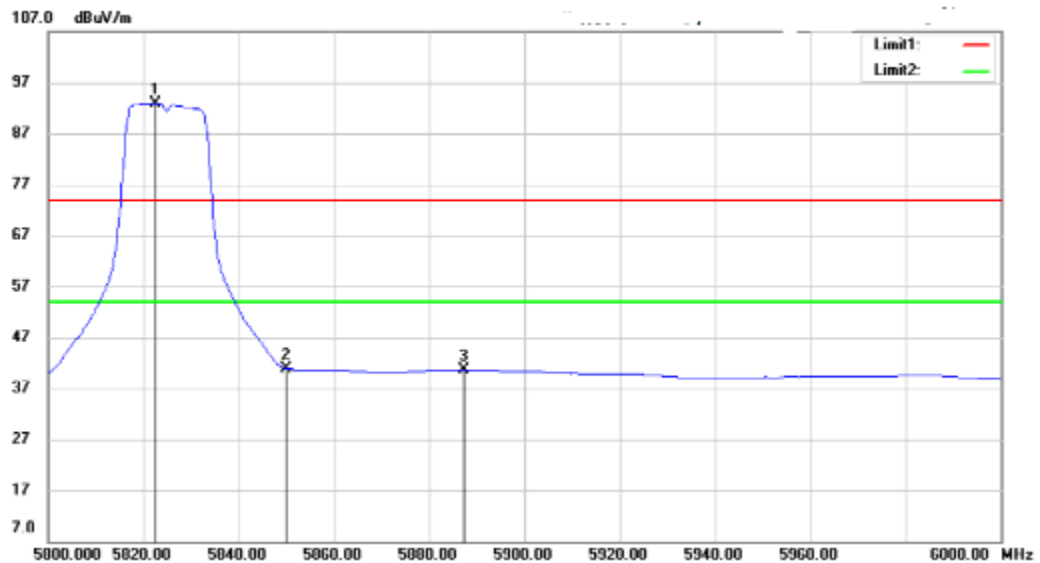
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5821	99.28	6.65	105.93	74	31.93	Peak	Horizontal
2	5850	44.34	6.64	50.98	74	-23.02	Peak	Horizontal
3	5863	50.13	6.63	56.76	74	-17.24	Peak	Horizontal
1	5822.4	86.32	6.65	92.97	54	38.97	AV	Horizontal
2	5850	34.18	6.64	40.82	54	-13.18	AV	Horizontal
3	5887.4	34.11	6.61	40.72	54	-13.28	AV	Horizontal

PK



AV

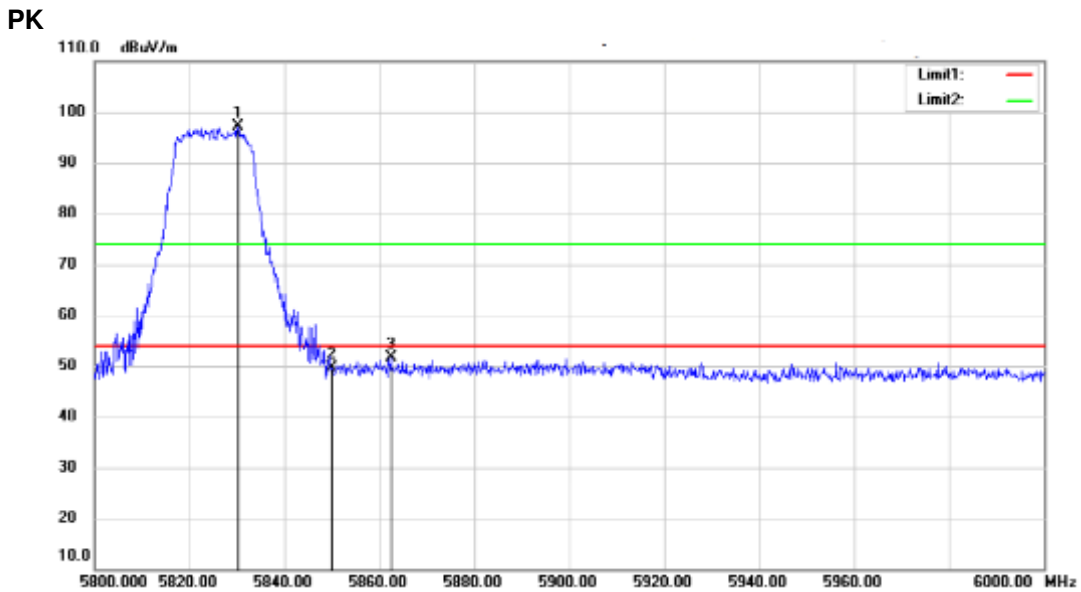


**802.11 a**

**Antenna 2**

**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5830.2	90.49	6.66	97.15	54	43.15	Peak	Vertical
2	5850	42.89	6.64	49.53	54	-4.47	Peak	Vertical
3	5862.4	44.89	6.63	51.52	54	-2.48	Peak	Vertical

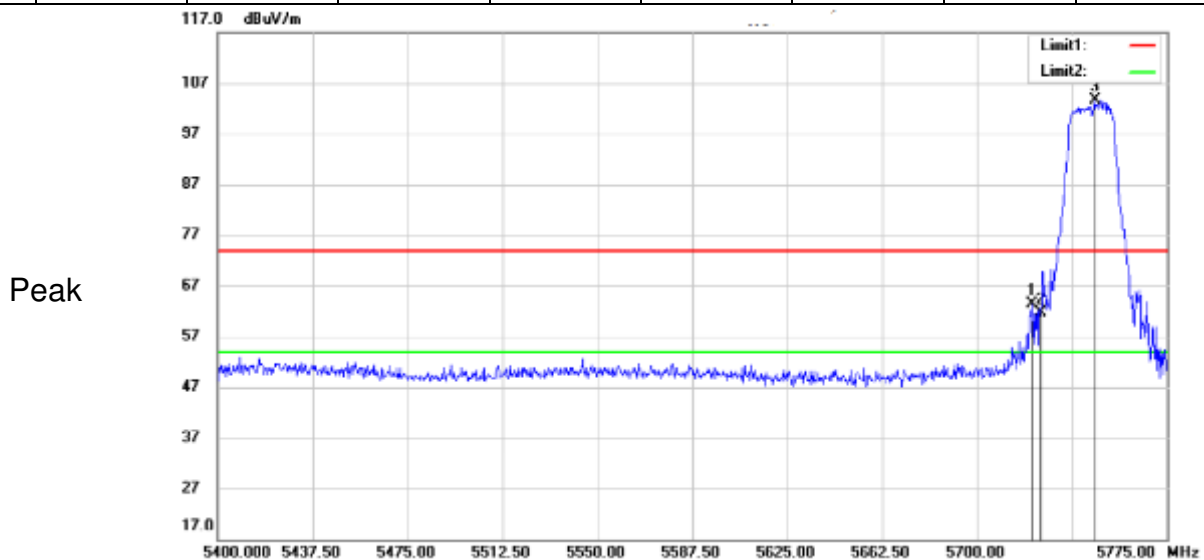


**802.11 n(HT20)**

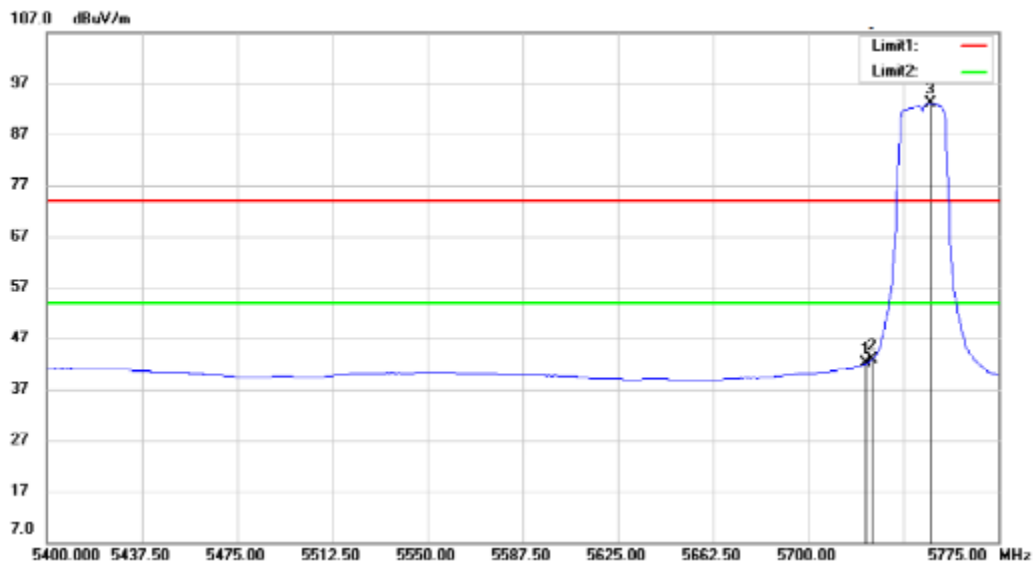
**Antenna 2**

**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5721.75	56.62	6.83	63.45	74	-10.55	Peak	Horizontal
2	5725	54.87	6.82	61.69	74	-12.31	Peak	Horizontal
3	5746.5	96.96	6.77	103.73	74	29.73	Peak	Horizontal
1	5722.875	35.23	6.83	42.06	54	-11.94	AV	Horizontal
2	5725	36.02	6.82	42.84	54	-11.16	AV	Horizontal
3	5748	86.41	6.77	93.18	54	39.18	AV	Horizontal



AV



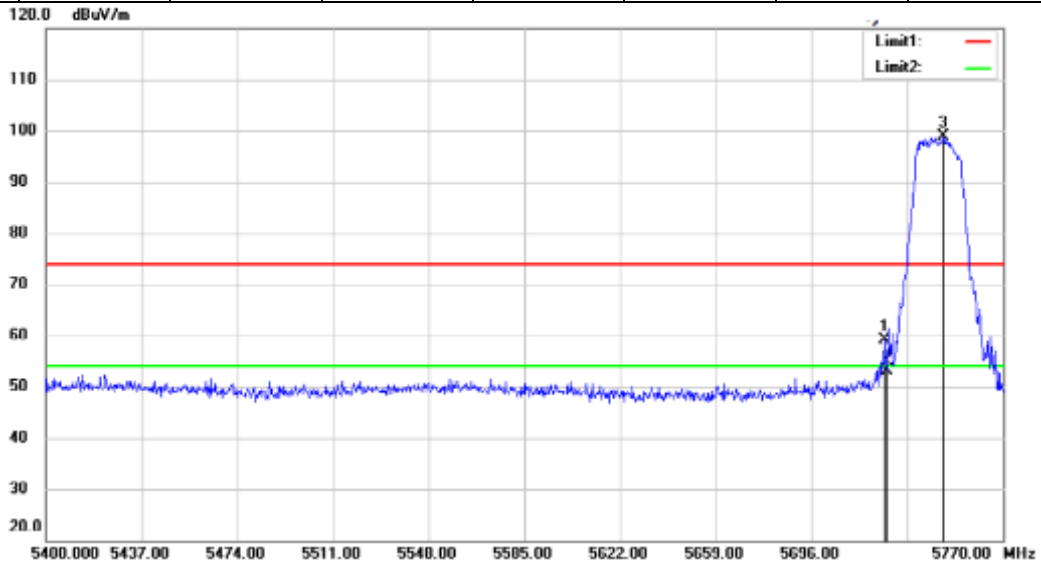
**802.11 n(HT20)**

**Antenna 2**

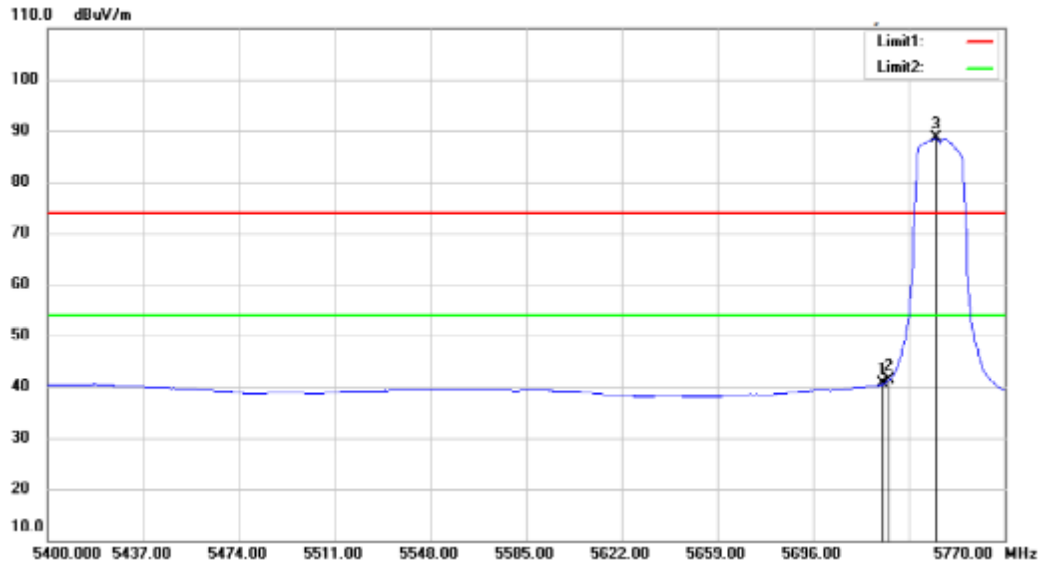
**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5724.12	52.22	6.82	59.04	74	-14.96	Peak	Vertical
2	5725	46.37	6.82	53.19	74	-20.81	Peak	Vertical
3	5747.06	92	6.77	98.77	74	24.77	Peak	Vertical
1	5723.01	33.73	6.83	40.56	54	-13.44	AV	Vertical
2	5725	34.45	6.82	41.27	54	-12.73	AV	Vertical
3	5743.73	81.74	6.79	88.53	54	34.53	AV	Vertical

Peak



AV



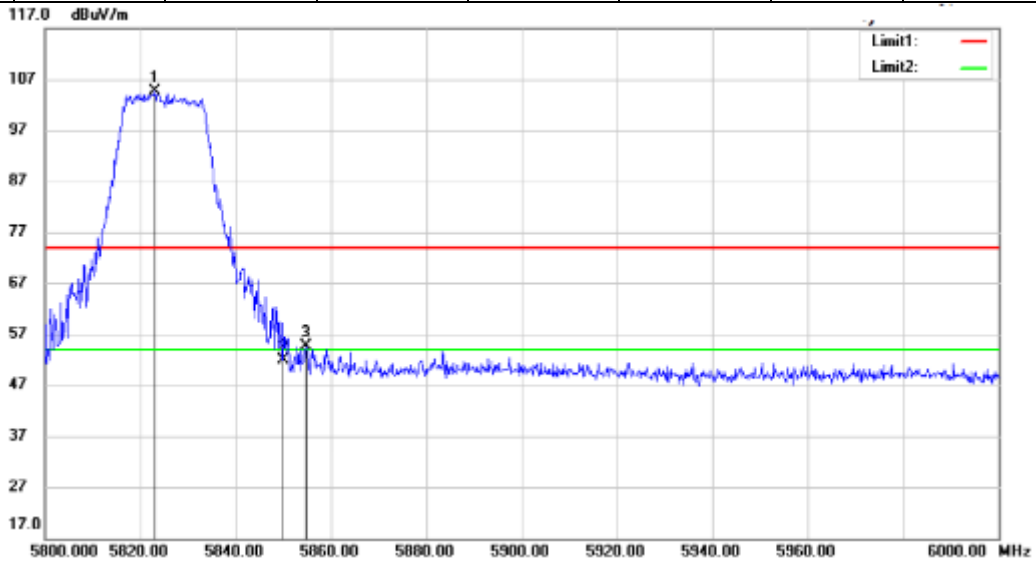
**802.11 n(HT20)**

**Antenna 2**

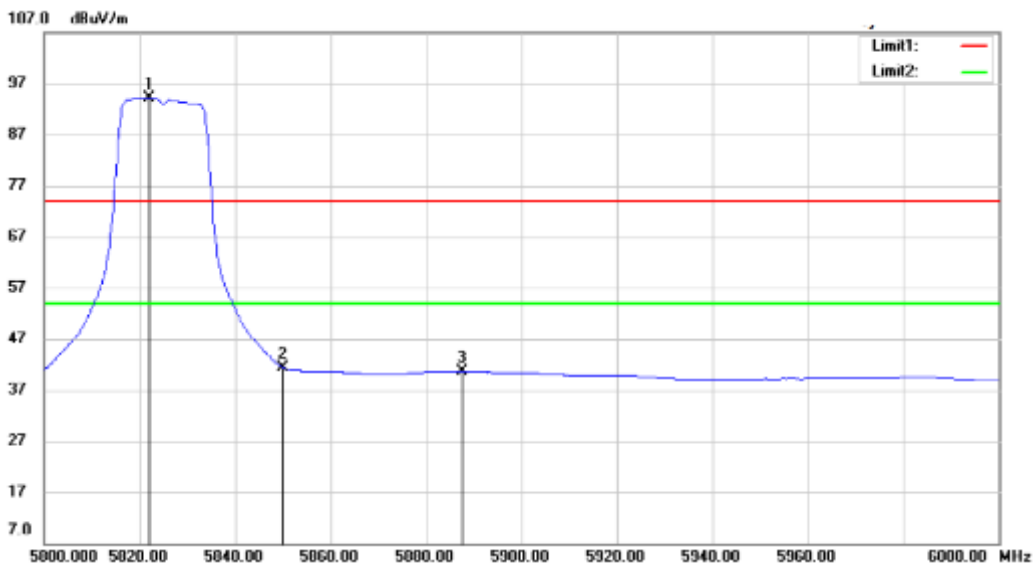
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5823	98.03	6.65	104.68	74	30.68	Peak	Horizontal
2	5850	45.23	6.64	51.87	74	-22.13	Peak	Horizontal
3	5854.8	47.87	6.64	54.51	74	-19.49	Peak	Horizontal
1	5822	87.58	6.65	94.23	54	40.23	AV	Horizontal
2	5850	34.77	6.64	41.41	54	-12.59	AV	Horizontal
3	5887.6	34.09	6.61	40.7	54	-13.3	AV	Horizontal

Peak



AV



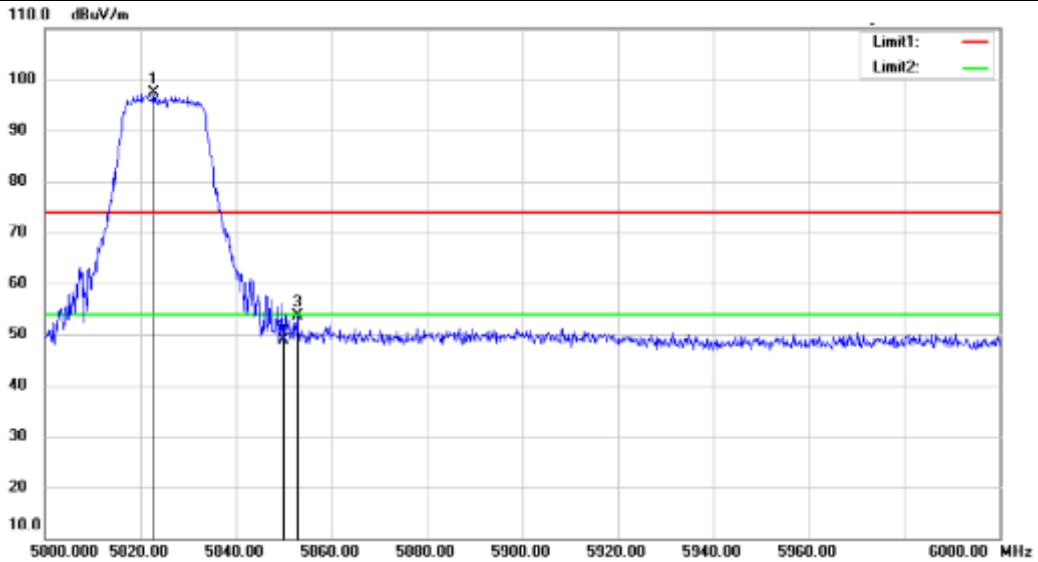
**802.11 n(HT20)**

**Antenna 2**

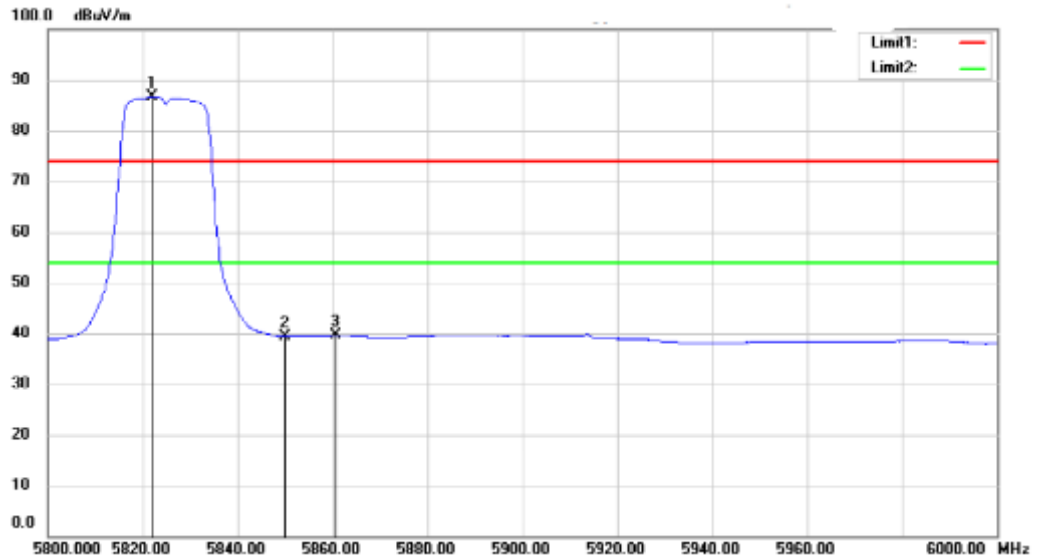
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5822.8	90.7	6.65	97.35	74	23.35	Peak	Vertical
2	5850	42.15	6.64	48.79	74	-25.21	Peak	Vertical
3	5852.8	47.05	6.64	53.69	74	-20.31	Peak	Vertical
1	5822	79.99	6.65	86.64	54	32.64	AV	Vertical
2	5850	32.71	6.64	39.35	54	-14.65	AV	Vertical
3	5860.6	32.95	6.63	39.58	54	-14.42	AV	Vertical

Peak



AV



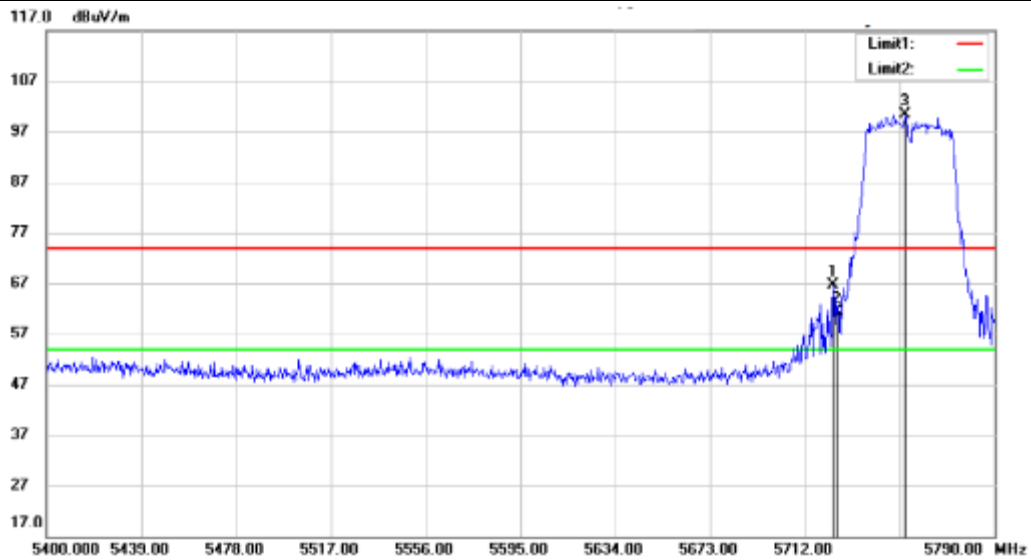
**802.11 n(HT40)**

**Antenna 2**

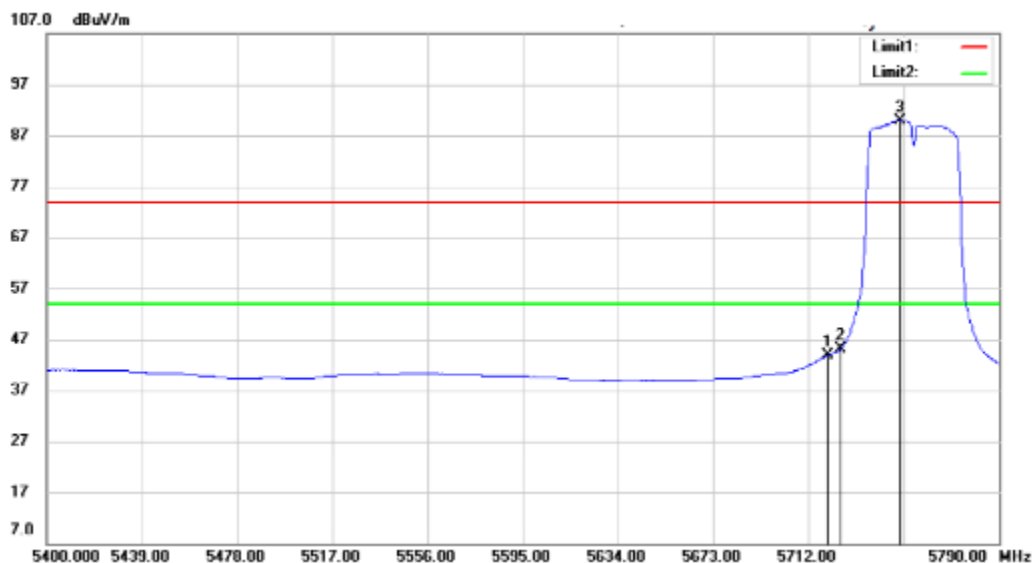
**Channel: 151**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5723.7	59.8	6.82	66.62	74	-7.38	Peak	Horizontal
2	5725	54.65	6.82	61.47	74	-12.53	Peak	Horizontal
3	5753.34	93.55	6.77	100.32	74	26.32	Peak	Horizontal
1	5720.19	37.14	6.82	43.96	54	-10.04	AV	Horizontal
2	5725	38.34	6.82	45.16	54	-8.84	AV	Horizontal
3	5749.83	83.23	6.77	90	54	36	AV	Horizontal

Peak



AV





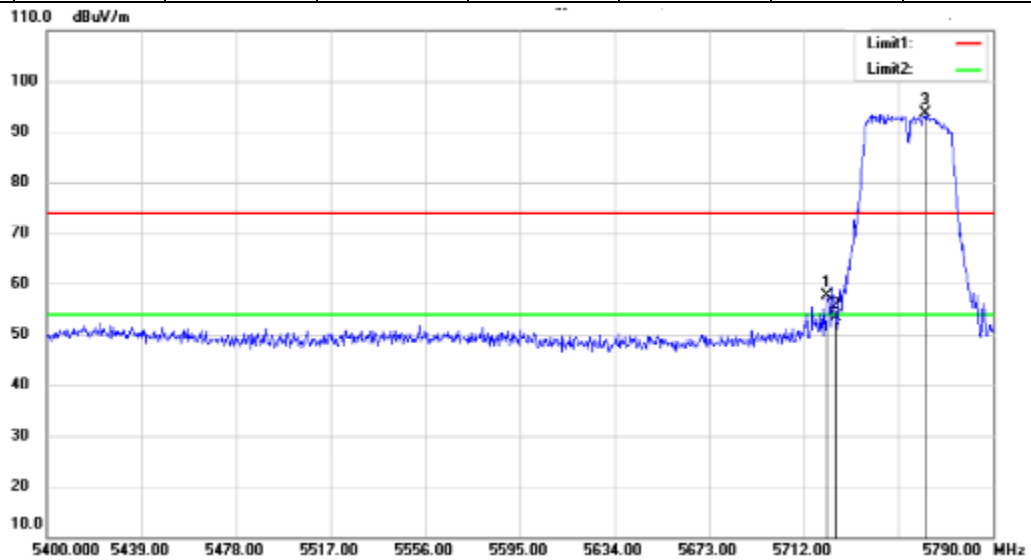
**802.11 n(HT40)**

**Antenna 2**

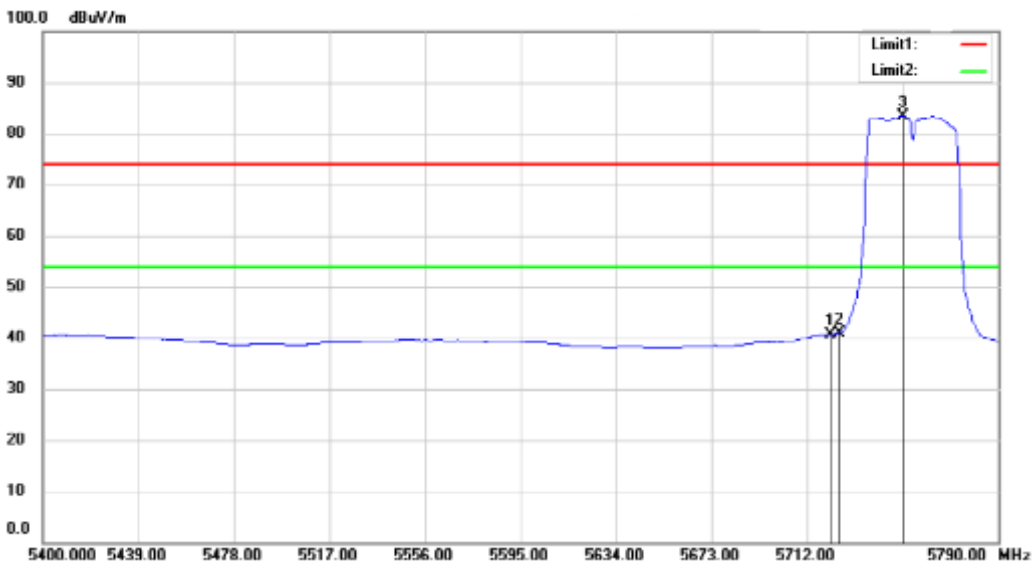
**Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5721.75	50.88	6.83	57.71	74	-16.29	Peak	Vertical
2	5725	46.66	6.82	53.48	74	-20.52	Peak	Vertical
3	5762.31	87	6.74	93.74	74	19.74	Peak	Vertical
1	5721.36	33.87	6.82	40.69	54	-13.31	AV	Vertical
2	5725	34.17	6.82	40.99	54	-13.01	AV	Vertical
3	5751.39	76.57	6.77	83.34	54	29.34	AV	Vertical

Peak



AV



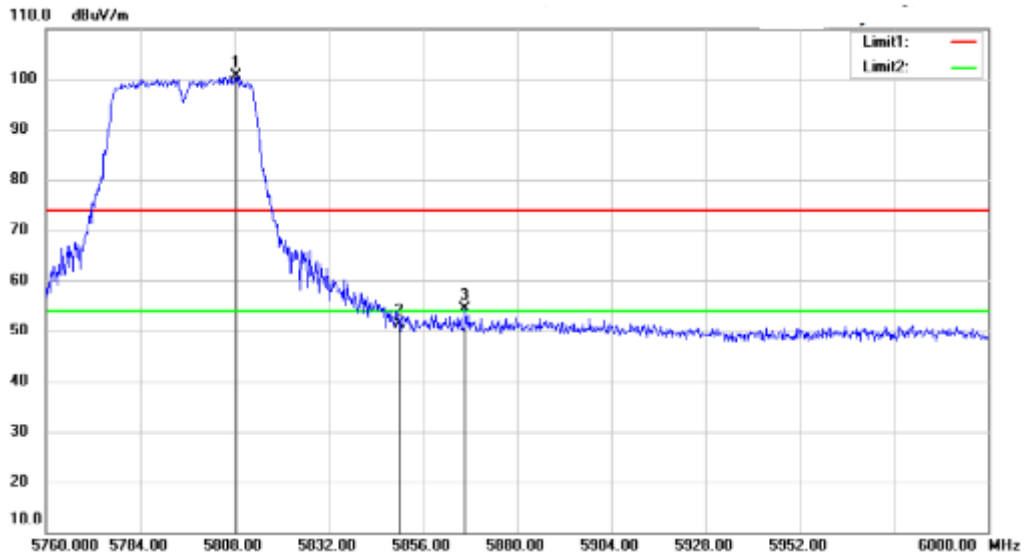
**802.11 n(HT40)**

**Antenna 2**

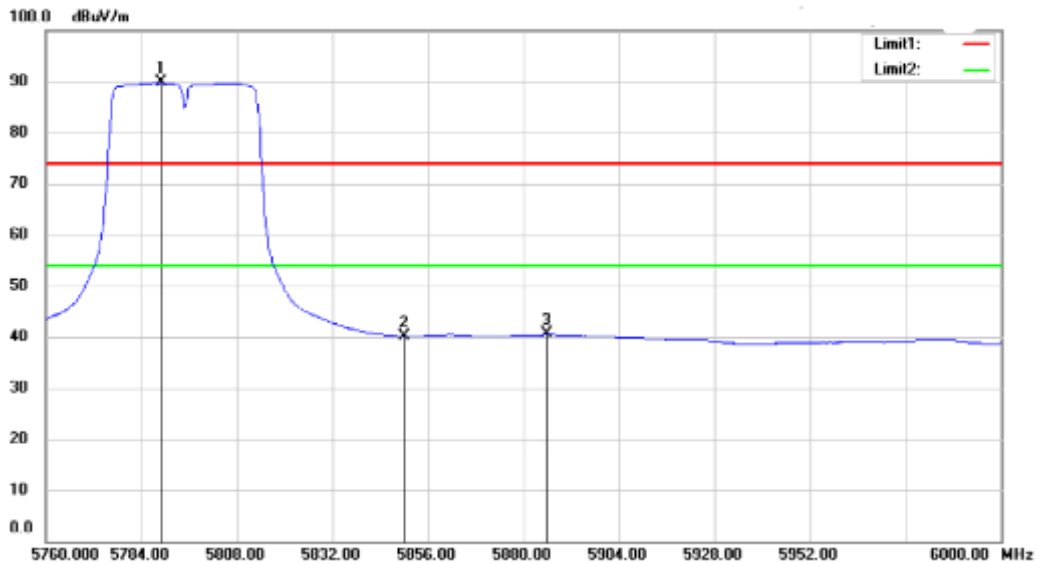
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5808.48	94	6.67	100.67	74	26.67	Peak	Horizontal
2	5850	44.76	6.64	51.4	74	-22.6	Peak	Horizontal
3	5866.8	47.84	6.63	54.47	74	-19.53	Peak	Horizontal
1	5789.04	83.08	6.69	89.77	54	35.77	AV	Horizontal
2	5850	33.54	6.64	40.18	54	-13.82	AV	Horizontal
3	5886	33.93	6.61	40.54	54	-13.46	AV	Horizontal

Peak



AV

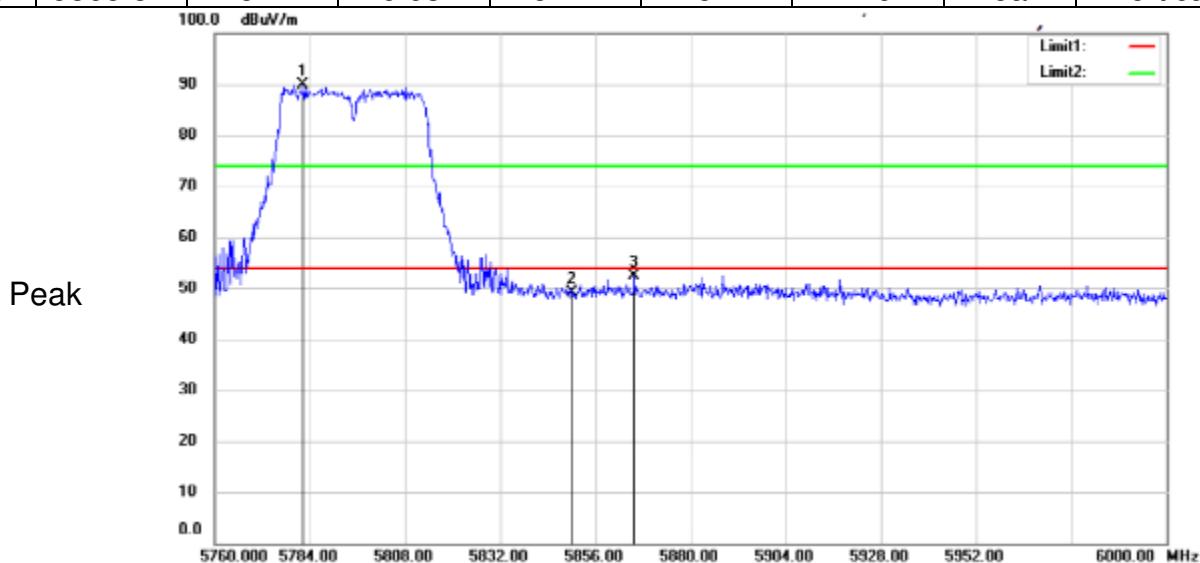


**802.11 n(HT40)**

**Antenna 2**

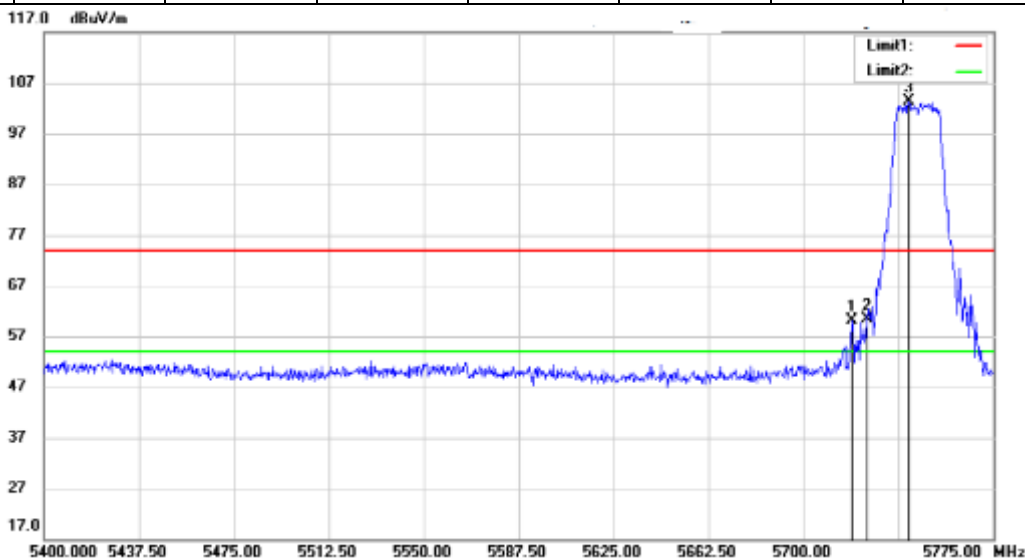
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5782.32	83.2	6.7	89.9	54	35.9	Peak	Vertical
2	5850	42.49	6.64	49.13	54	-4.87	Peak	Vertical
3	5865.84	45.77	6.63	52.4	54	-1.6	Peak	Vertical

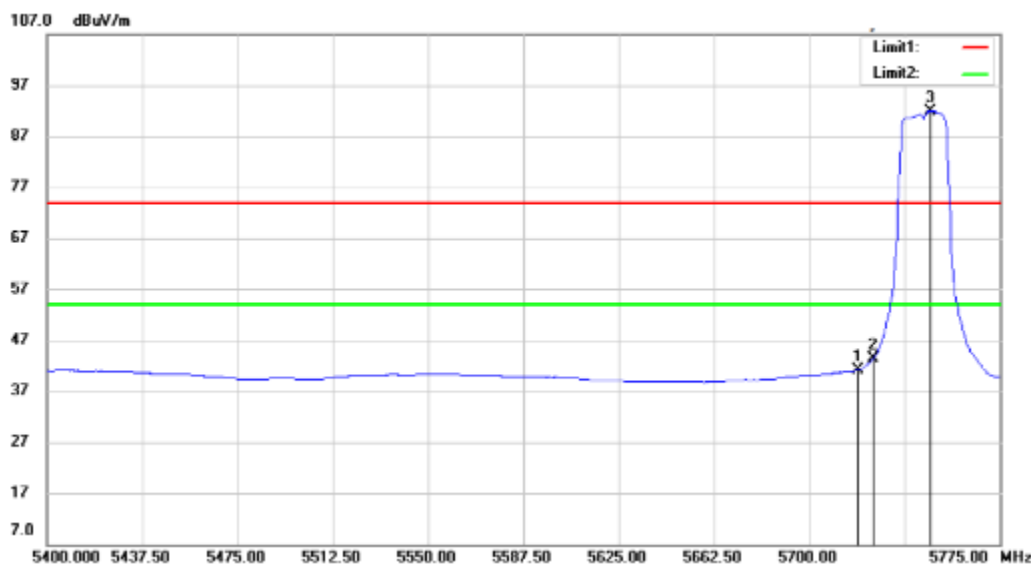


802.11 ac(VHT20)			Antenna 2			Channel: 149		
MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5719.125	53.19	6.82	60.01	74	-13.99	Peak	Horizontal
2	5725	53.52	6.82	60.34	74	-13.66	Peak	Horizontal
3	5741.625	96.61	6.79	103.4	74	29.4	Peak	Horizontal
1	5719.125	34.26	6.82	41.08	54	-12.92	AV	Horizontal
2	5725	36.59	6.82	43.41	54	-10.59	AV	Horizontal
3	5747.625	85.14	6.77	91.91	54	37.91	AV	Horizontal

Peak



AV

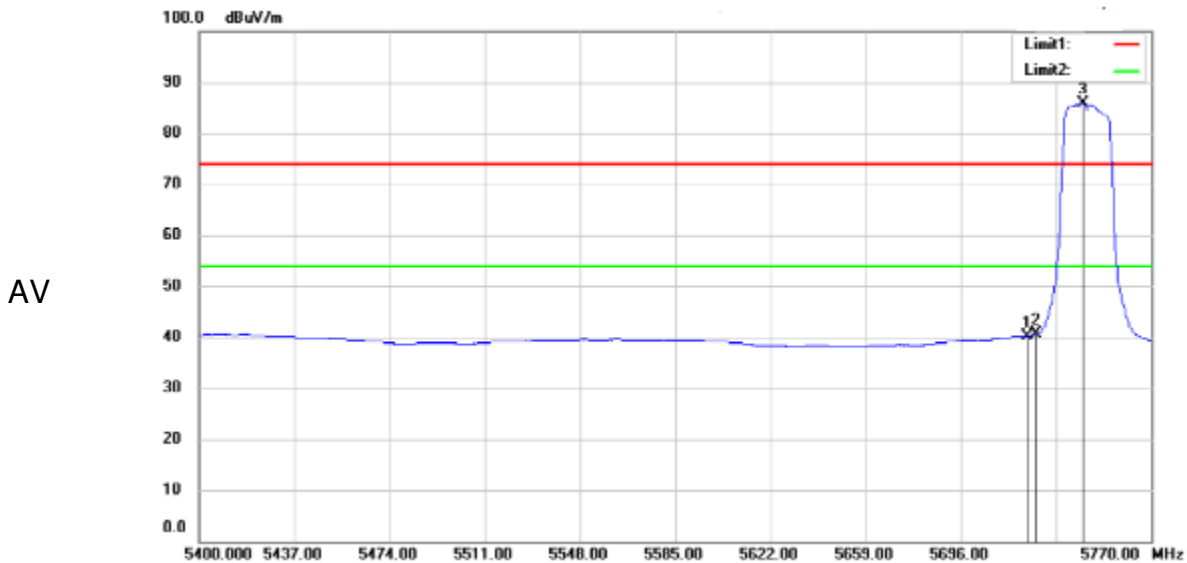
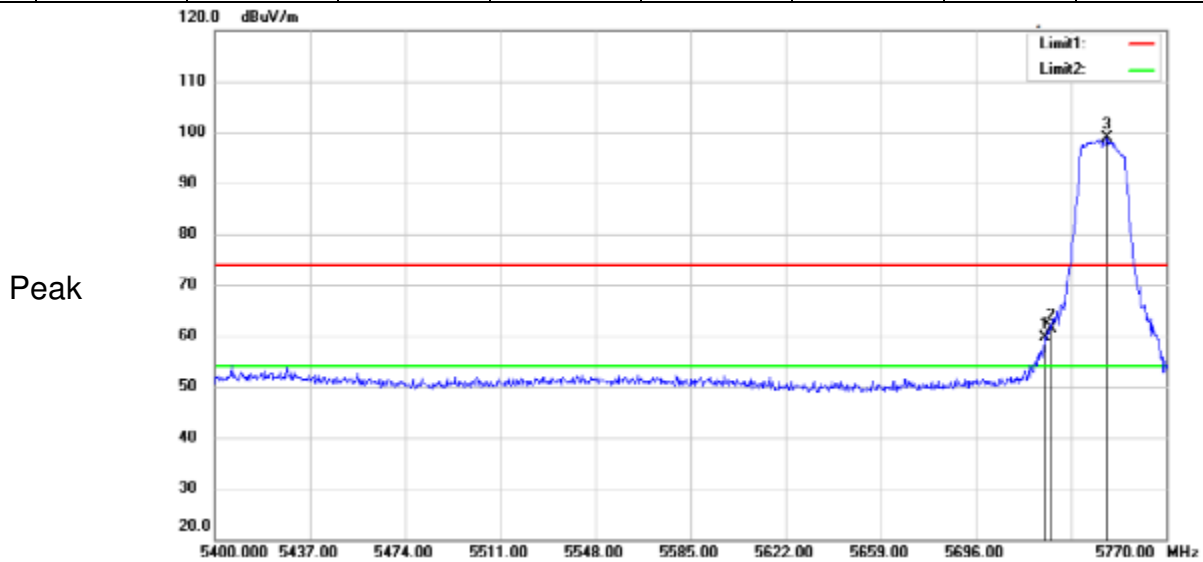


### 802.11 ac(VHT20)

### Antenna 2

### Channel: 149

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.01	52.91	6.83	59.74	74	-14.26	Peak	Vertical
2	5725	54.57	6.82	61.39	74	-12.61	Peak	Vertical
3	5747.06	92.05	6.77	98.82	74	24.82	Peak	Vertical
1	5721.9	33.32	6.83	40.15	54	-13.85	AV	Vertical
2	5725	33.7	6.82	40.52	54	-13.48	AV	Vertical
3	5743.36	79.08	6.79	85.87	54	31.87	AV	Vertical



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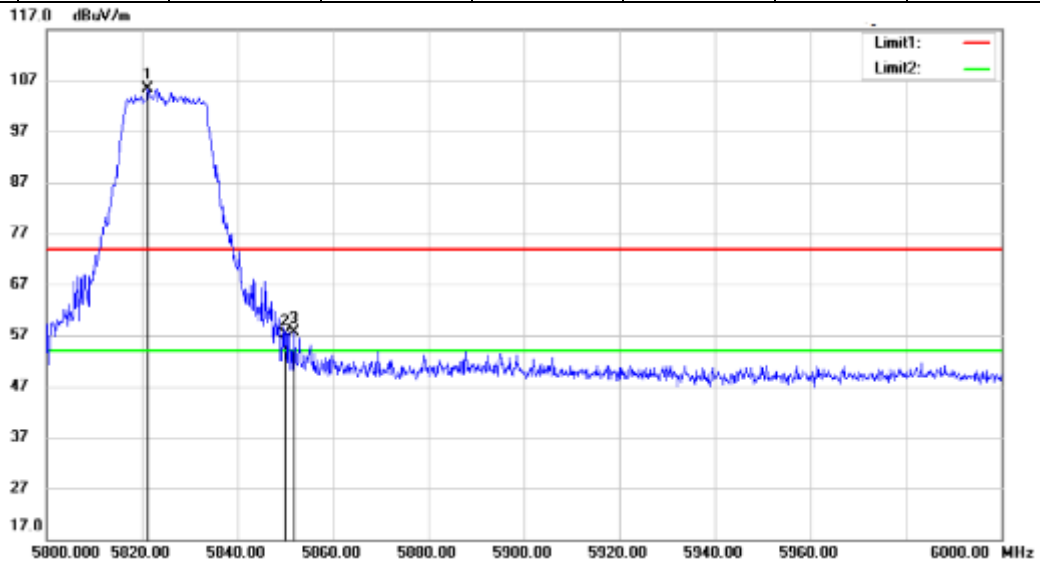
**802.11 ac(VHT20)**

**Antenna 2**

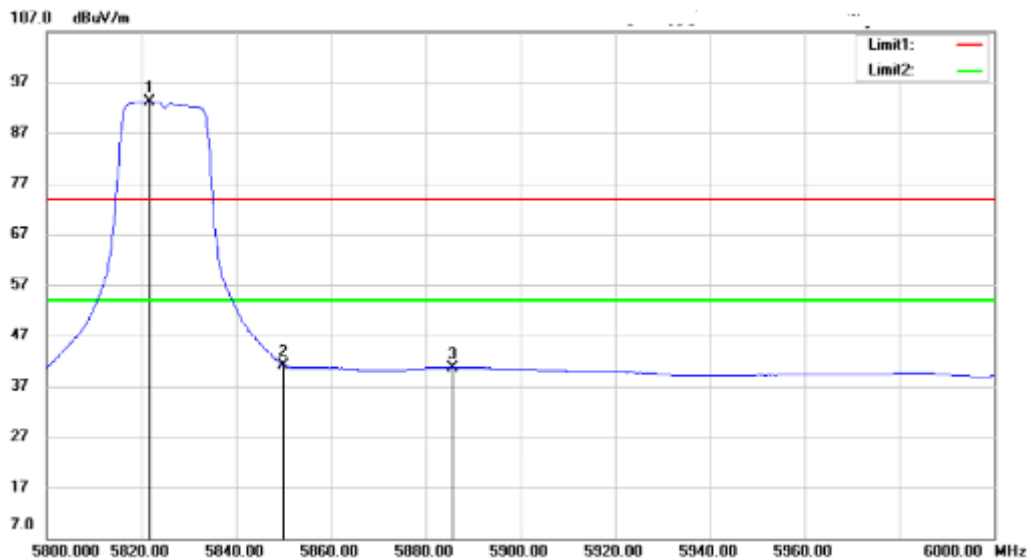
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5821.2	98.83	6.65	105.48	74	31.48	Peak	Horizontal
2	5850	50.61	6.64	57.25	74	-16.75	Peak	Horizontal
3	5851.8	50.97	6.64	57.61	74	-16.39	Peak	Horizontal
1	5821.8	86.55	6.65	93.2	54	39.2	AV	Horizontal
2	5850	34.53	6.64	41.17	54	-12.83	AV	Horizontal
3	5885.6	34.08	6.61	40.69	54	-13.31	AV	Horizontal

Peak



AV



### 802.11 ac(VHT20)

### Antenna 2

### Channel: 165

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5820.2	90.13	6.65	96.78	54	42.78	Peak	Vertical
2	5850	44.81	6.64	51.45	54	-2.55	Peak	Vertical
3	5851.2	46.55	6.64	53.19	54	-0.81	Peak	Vertical



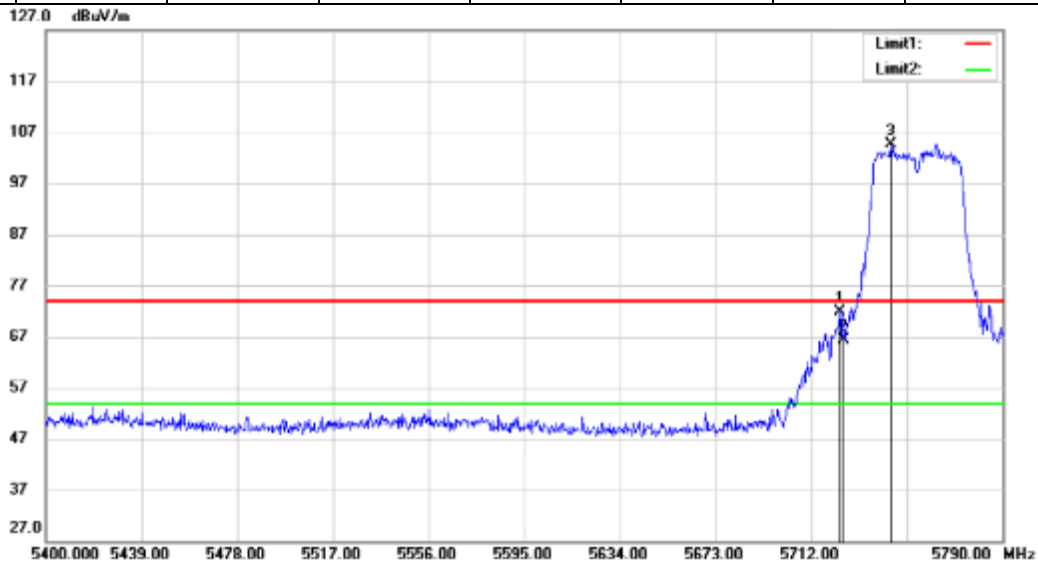
**802.11 ac(VHT40)**

**Antenna 2**

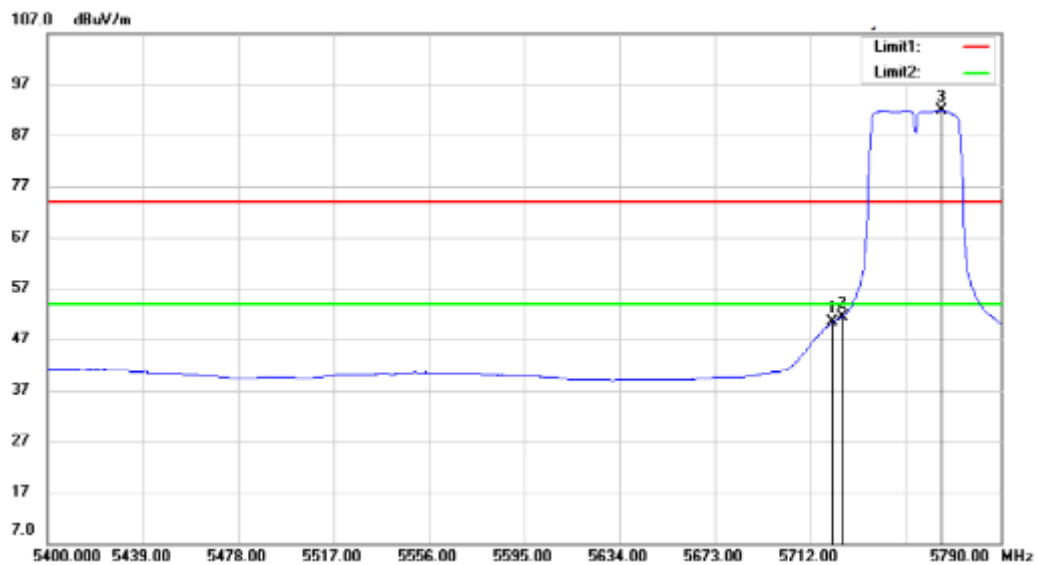
**Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.7	65.04	6.82	71.86	74	-2.14	Peak	Horizontal
2	5725	59.62	6.82	66.44	74	-7.56	Peak	Horizontal
3	5744.37	97.95	6.78	104.73	74	30.73	Peak	Horizontal
1	5720.97	43.45	6.82	50.27	54	-3.73	AV	Horizontal
2	5725	44.62	6.82	51.44	54	-2.56	AV	Horizontal
3	5765.82	85.12	6.74	91.86	54	37.86	AV	Horizontal

Peak



AV





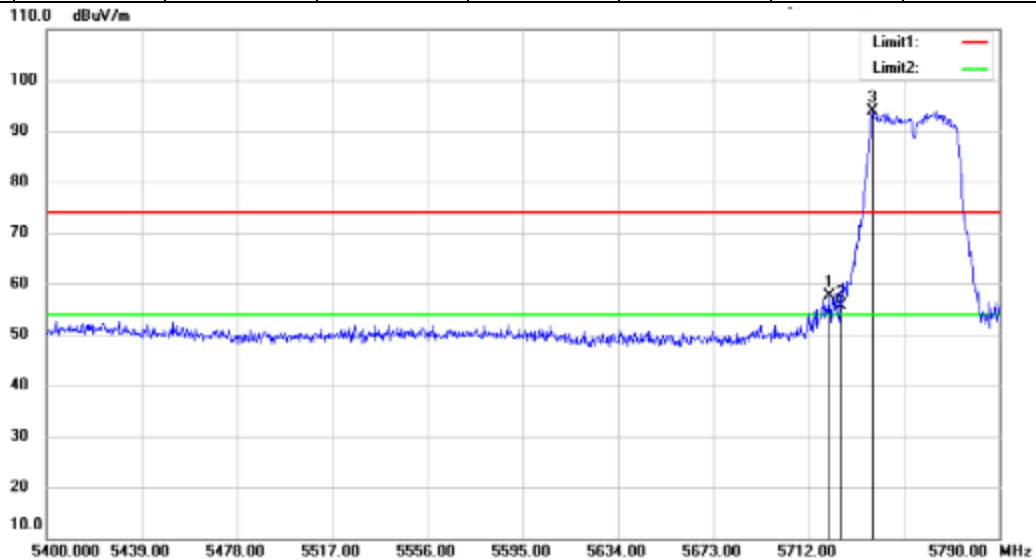
**802.11 ac(VHT40)**

**Antenna 2**

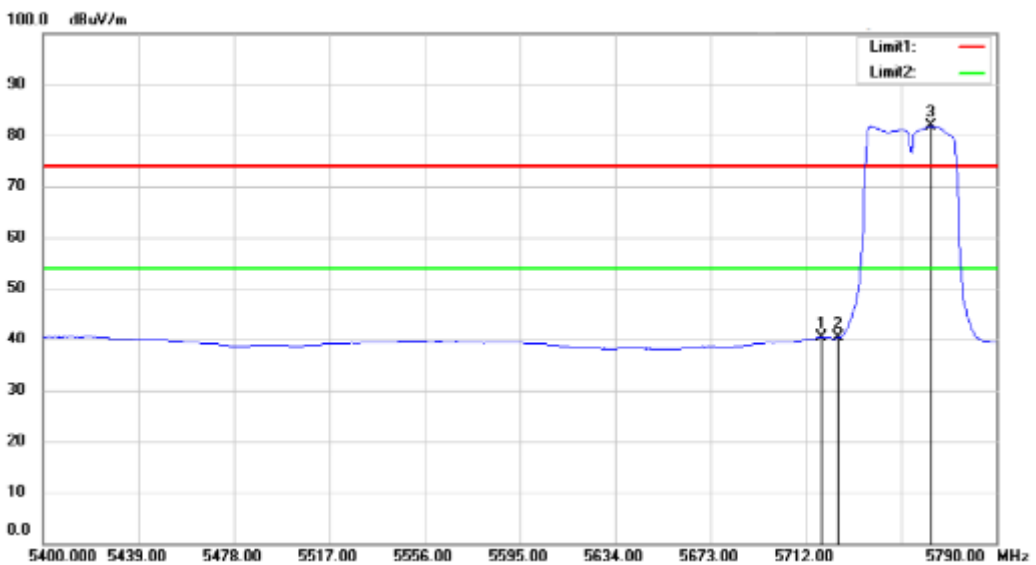
**Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5720.58	50.76	6.82	57.58	74	-16.42	Peak	Vertical
2	5725	48.92	6.82	55.74	74	-18.26	Peak	Vertical
3	5738.13	87.09	6.8	93.89	74	19.89	Peak	Vertical
1	5718.63	33.47	6.83	40.3	54	-13.7	AV	Vertical
2	5725	33.55	6.82	40.37	54	-13.63	AV	Vertical
3	5763.09	75.03	6.74	81.77	54	27.77	AV	Vertical

Peak



AV



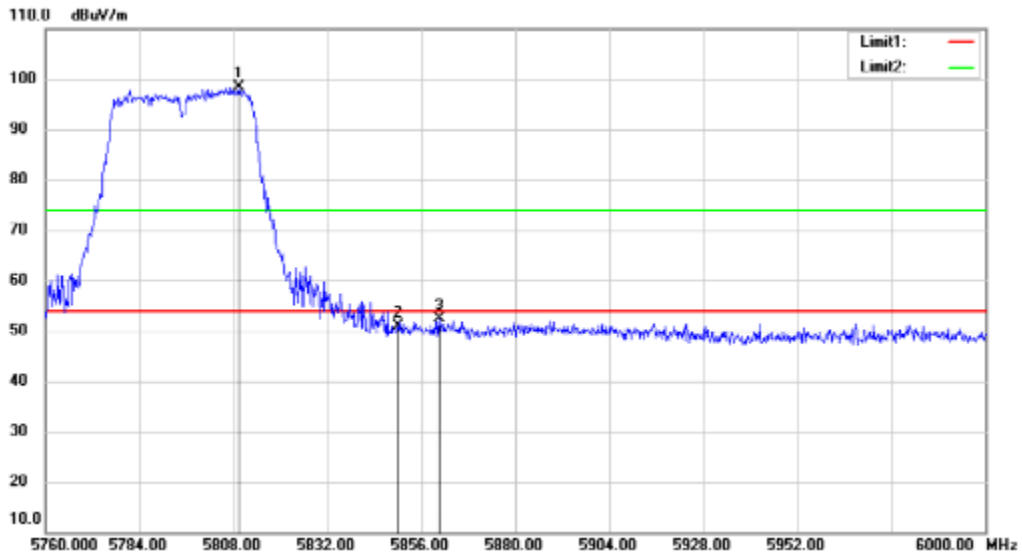
**802.11 ac(VHT40)**

**Antenna 2**

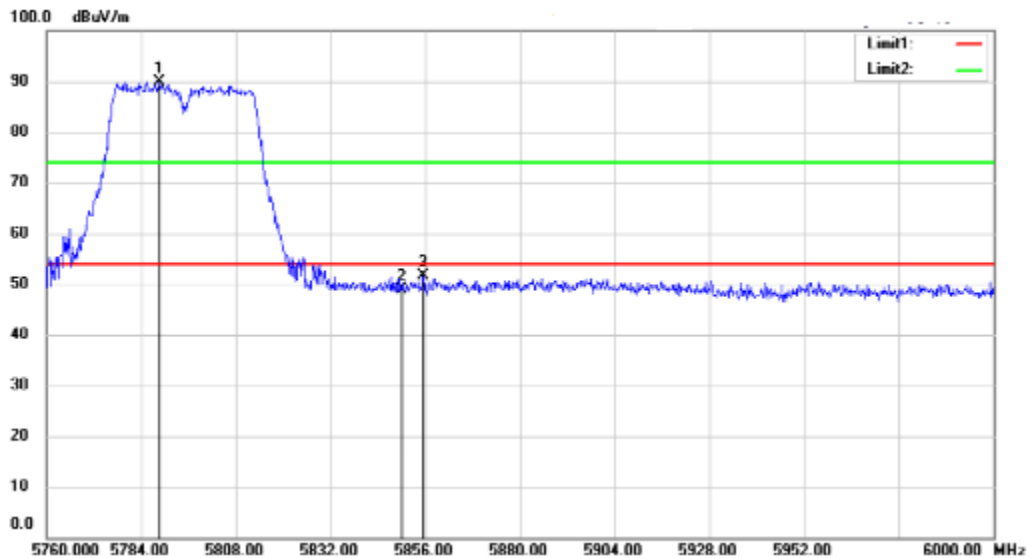
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5809.44	91.75	6.67	98.42	54	44.42	Peak	Horizontal
2	5850	44.35	6.64	50.99	54	-3.01	Peak	Horizontal
3	5860.56	45.76	6.63	52.39	54	-1.61	Peak	Horizontal
1	5788.56	83.18	6.69	89.87	54	35.87	Peak	Vertical
2	5850	42.12	6.64	48.76	54	-5.24	Peak	Vertical
3	5855.52	45.11	6.64	51.75	54	-2.25	Peak	Vertical

Horizontal



Vertical

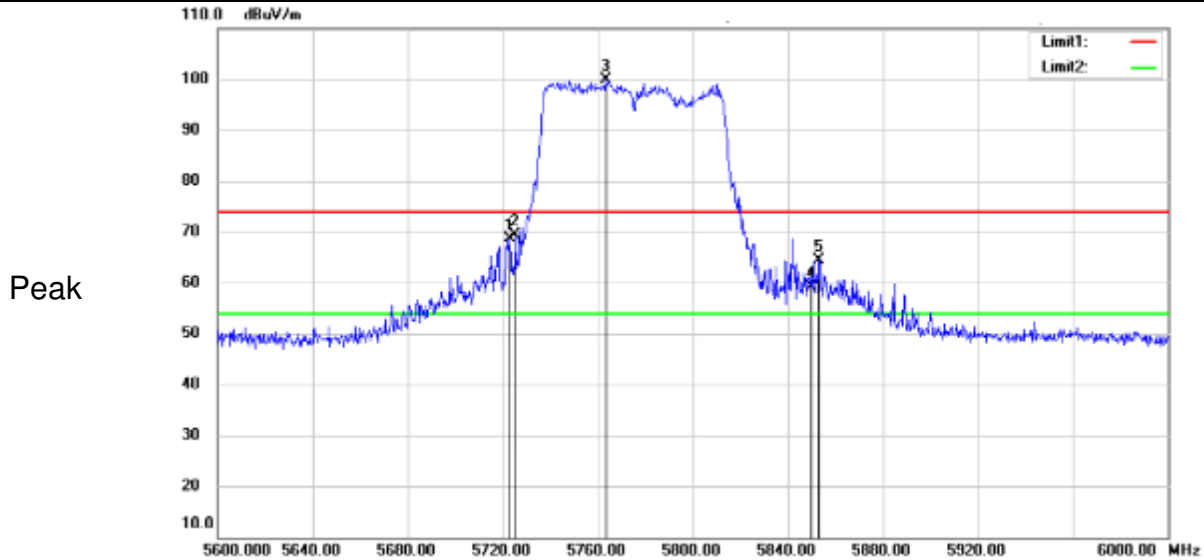


**802.11 ac(VHT80)**

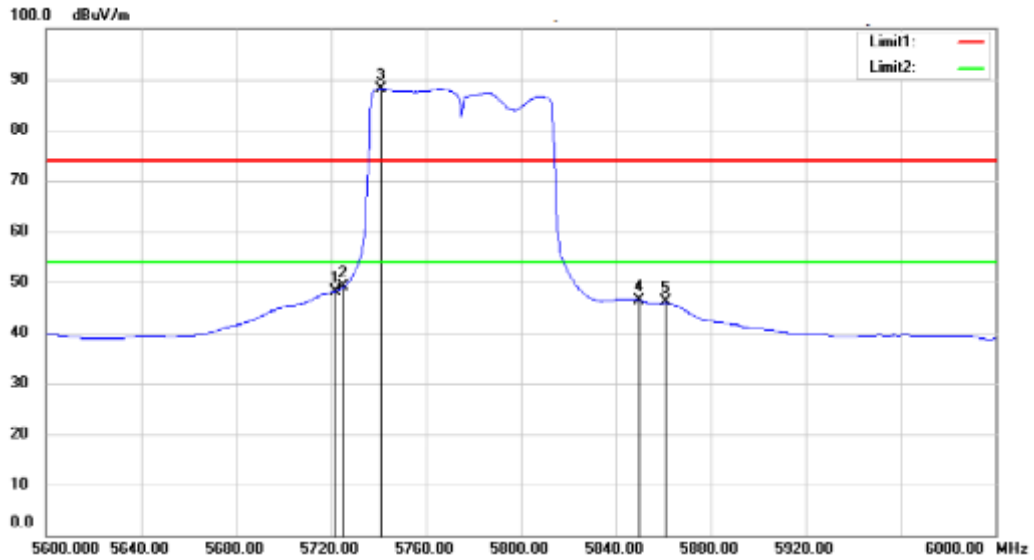
**Antenna 2**

**Channel: 155**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5722.8	61.87	6.83	68.7	74	-5.3	Peak	Horizontal
2	5725	62.45	6.82	69.27	74	-4.73	Peak	Horizontal
3	5763.2	93.24	6.74	99.98	74	25.98	Peak	Horizontal
4	5850	52.53	6.64	59.17	74	-14.83	Peak	Horizontal
5	5853.2	57.82	6.64	64.46	74	-9.54	Peak	Horizontal
1	5722	41.42	6.83	48.25	54	-5.75	AV	Horizontal
2	5725	42.24	6.82	49.06	54	-4.94	AV	Horizontal
3	5741.2	81.32	6.79	88.11	54	34.11	AV	Horizontal
4	5850	39.77	6.64	46.41	54	-7.59	AV	Horizontal
5	5860.8	39.38	6.63	46.01	54	-7.99	AV	Horizontal



AV

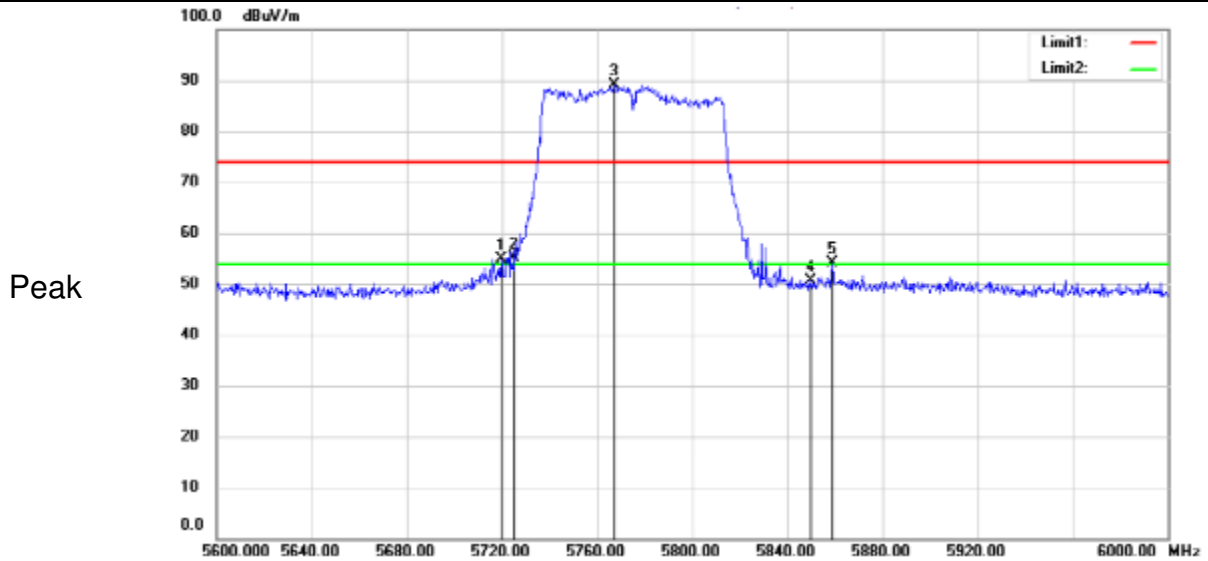


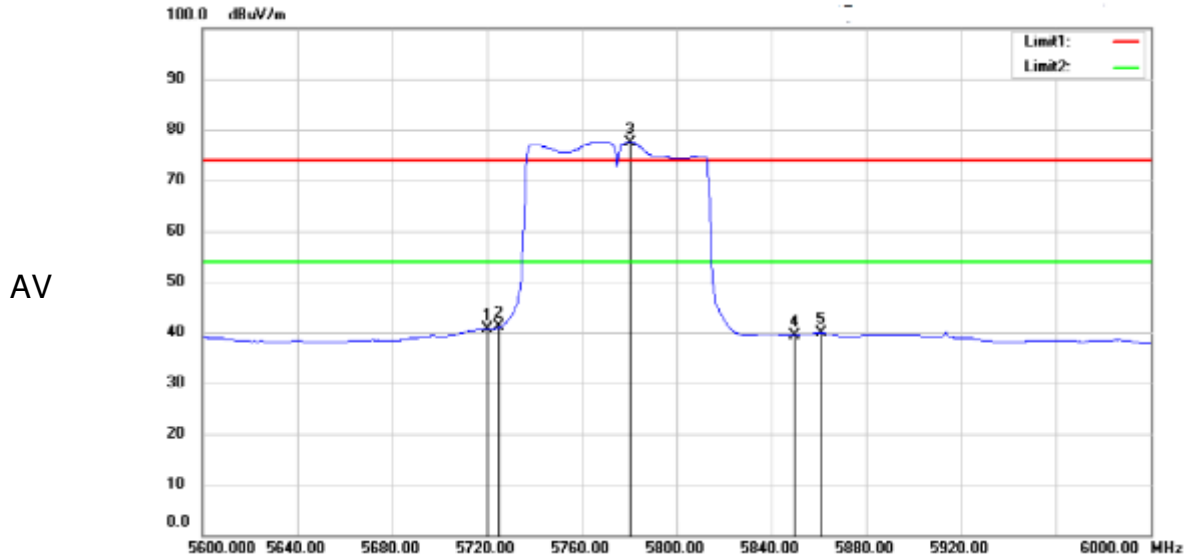
**802.11 ac(VHT80)**

**Antenna 2**

**Channel: 155**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5719.6	48.09	6.82	54.91	74	-19.09	Peak	Vertical
2	5725	48.23	6.82	55.05	74	-18.95	Peak	Vertical
3	5767.2	82.47	6.74	89.21	74	15.21	Peak	Vertical
4	5850	43.92	6.64	50.56	74	-23.44	Peak	Vertical
5	5858.8	47.41	6.63	54.04	74	-19.96	Peak	Vertical
1	5720	33.9	6.82	40.72	54	-13.28	AV	Vertical
2	5725	34.2	6.82	41.02	54	-12.98	AV	Vertical
3	5780.4	70.72	6.72	77.44	54	23.44	AV	Vertical
4	5850	32.83	6.64	39.47	54	-14.53	AV	Vertical
5	5860.8	33.22	6.63	39.85	54	-14.15	AV	Vertical





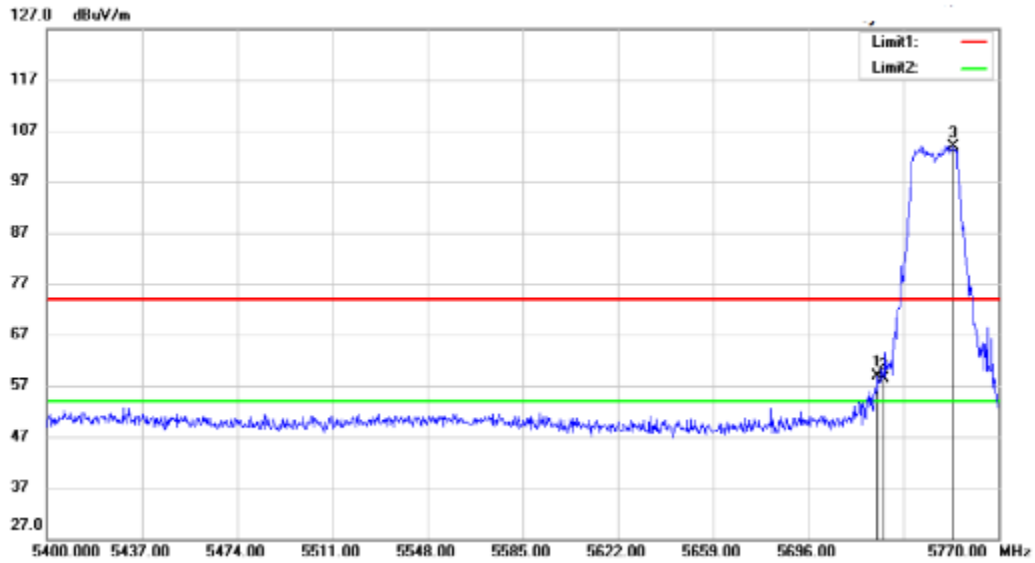
**802.11 n(HT20)**

**MIMO**

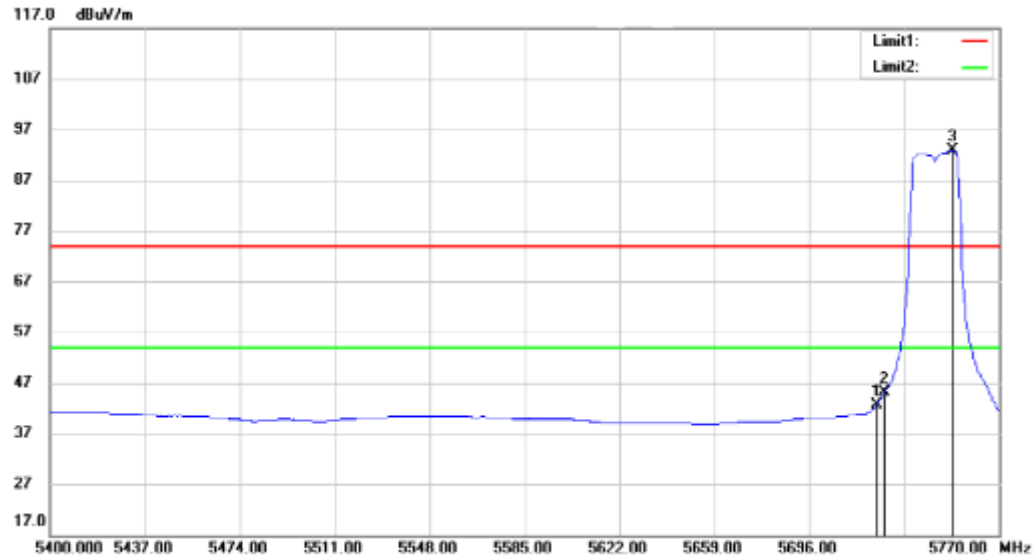
**Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.01	51.95	6.83	58.78	74	-15.22	Peak	Horizontal
2	5725	51.45	6.82	58.27	74	-15.73	Peak	Horizontal
3	5752.61	97.21	6.77	103.98	74	29.98	Peak	Horizontal
1	5722.27	35.87	6.83	42.7	54	-11.3	AV	Horizontal
2	5725	38.22	6.82	45.04	54	-8.96	AV	Horizontal
3	5751.87	86	6.77	92.77	54	38.77	AV	Horizontal

Peak

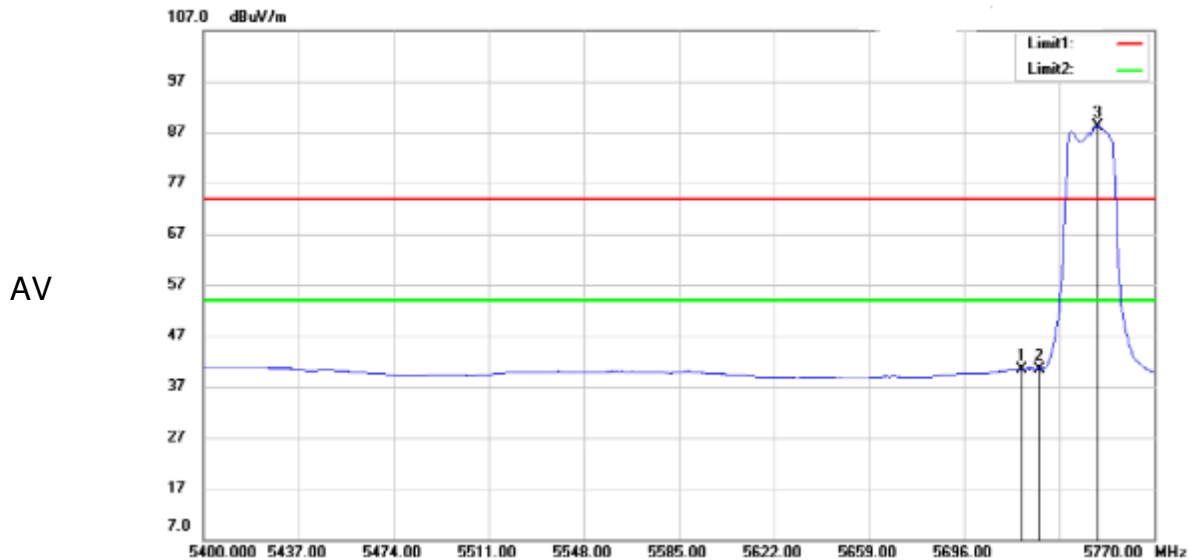
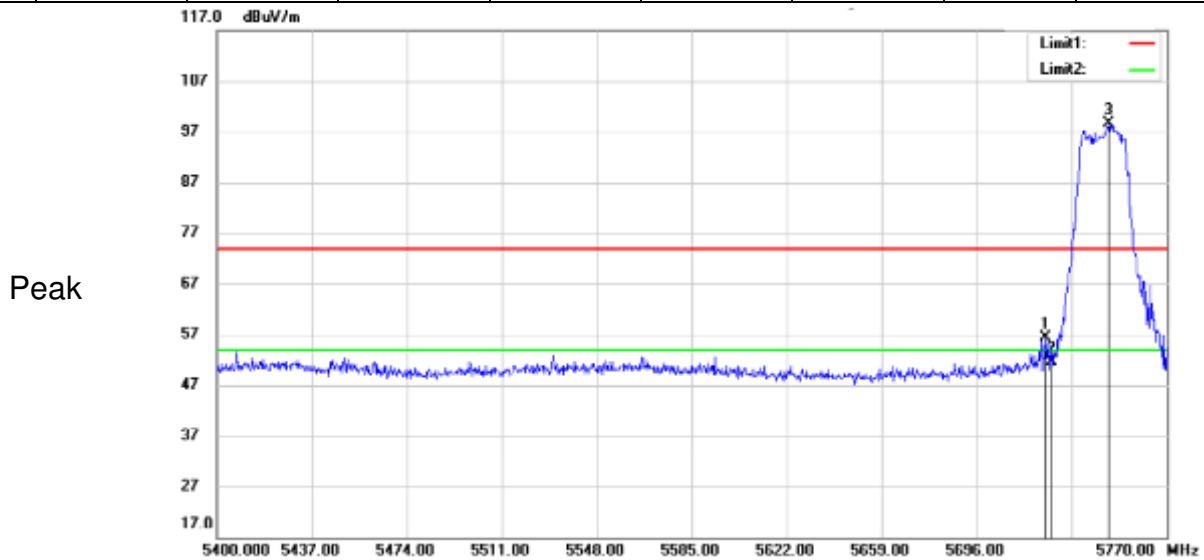


AV



**802.11 n(HT20) MIMO Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.01	49.54	6.83	56.37	74	-17.63	Peak	Vertical
2	5725	44.73	6.82	51.55	74	-22.45	Peak	Vertical
3	5747.43	91.8	6.77	98.57	74	24.57	Peak	Vertical
1	5718.2	33.64	6.84	40.48	54	-13.52	AV	Vertical
2	5725	33.65	6.82	40.47	54	-13.53	AV	Vertical
3	5747.8	81.45	6.77	88.22	54	34.22	AV	Vertical





**802.11 n(HT20)**

**MIMO**

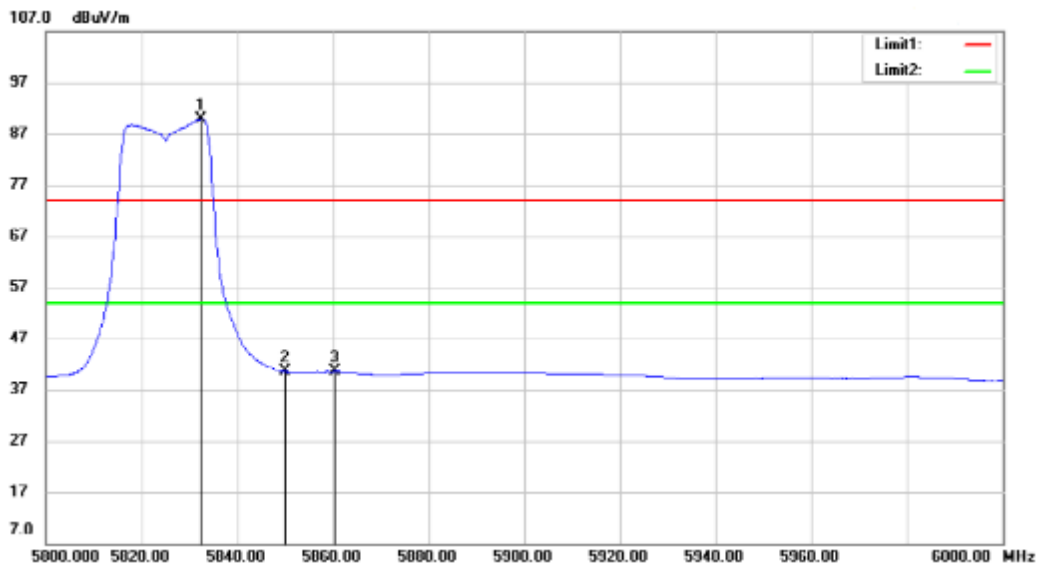
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5833	93.92	6.65	100.57	74	26.57	Peak	Horizontal
2	5850	49.75	6.64	56.39	74	-17.61	Peak	Horizontal
3	5851.8	49.19	6.64	55.83	74	-18.17	Peak	Horizontal
1	5832.4	83.21	6.65	89.86	54	35.86	AV	Horizontal
2	5850	33.89	6.64	40.53	54	-13.47	AV	Horizontal
3	5860.4	33.91	6.63	40.54	54	-13.46	AV	Horizontal

Peak



AV



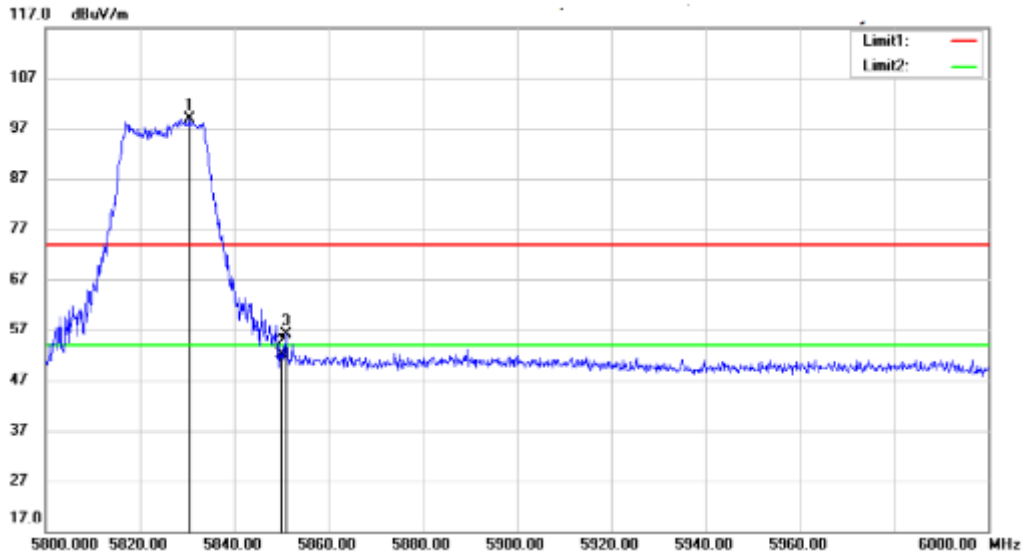
**802.11 n(HT20)**

**MIMO**

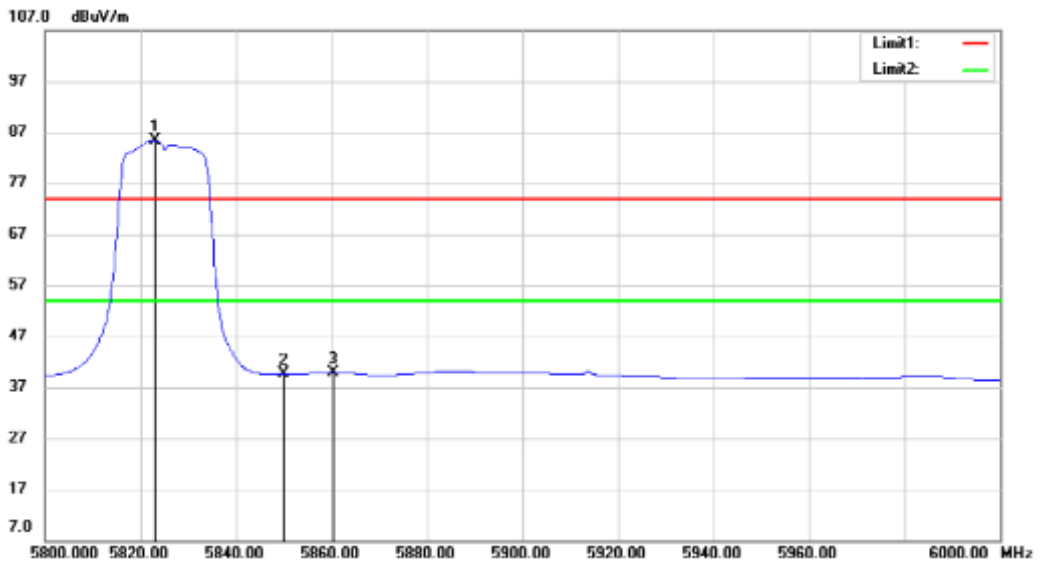
**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5830.4	92.18	6.66	98.84	74	24.84	Peak	Vertical
2	5850	45.53	6.64	52.17	74	-21.83	Peak	Vertical
3	5851	49.45	6.64	56.09	74	-17.91	Peak	Vertical
1	5823	78.73	6.65	85.38	54	31.38	AV	Vertical
2	5850	32.95	6.64	39.59	54	-14.41	AV	Vertical
3	5860.4	33.36	6.63	39.99	54	-14.01	AV	Vertical

Peak



AV

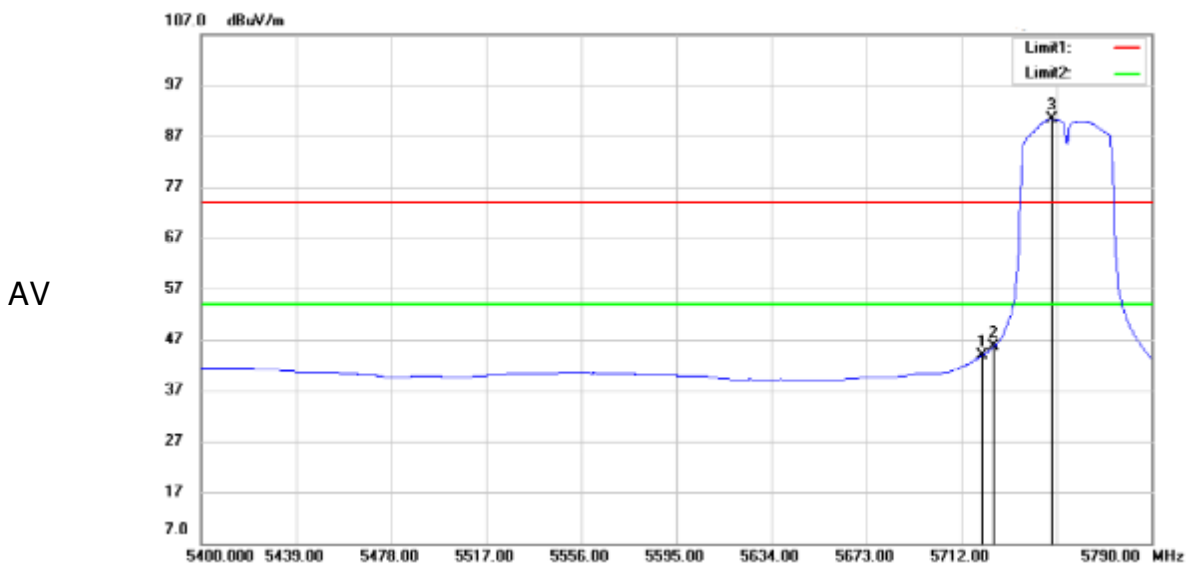
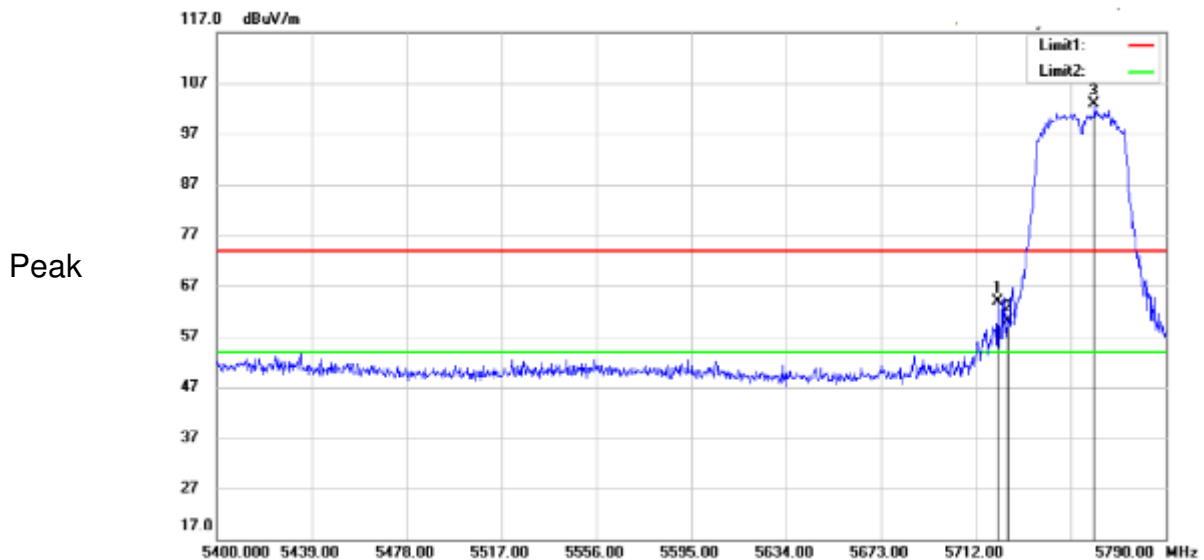


**802.11 n(HT40)**

**MIMO**

**Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5720.97	57.05	6.82	63.87	74	-10.13	Peak	Horizontal
2	5725	53.3	6.82	60.12	74	-13.88	Peak	Horizontal
3	5760.75	96.14	6.74	102.88	74	28.88	Peak	Horizontal
1	5720.58	37.12	6.82	43.94	54	-10.06	AV	Horizontal
2	5725	38.77	6.82	45.59	54	-8.41	AV	Horizontal
3	5749.05	83.61	6.77	90.38	54	36.38	AV	Horizontal

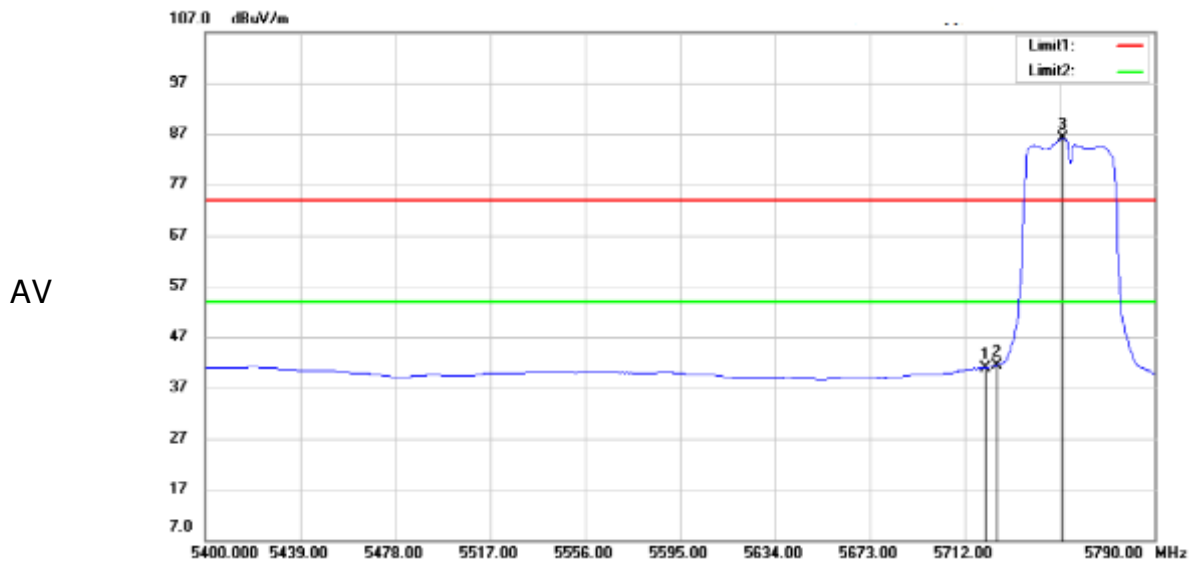
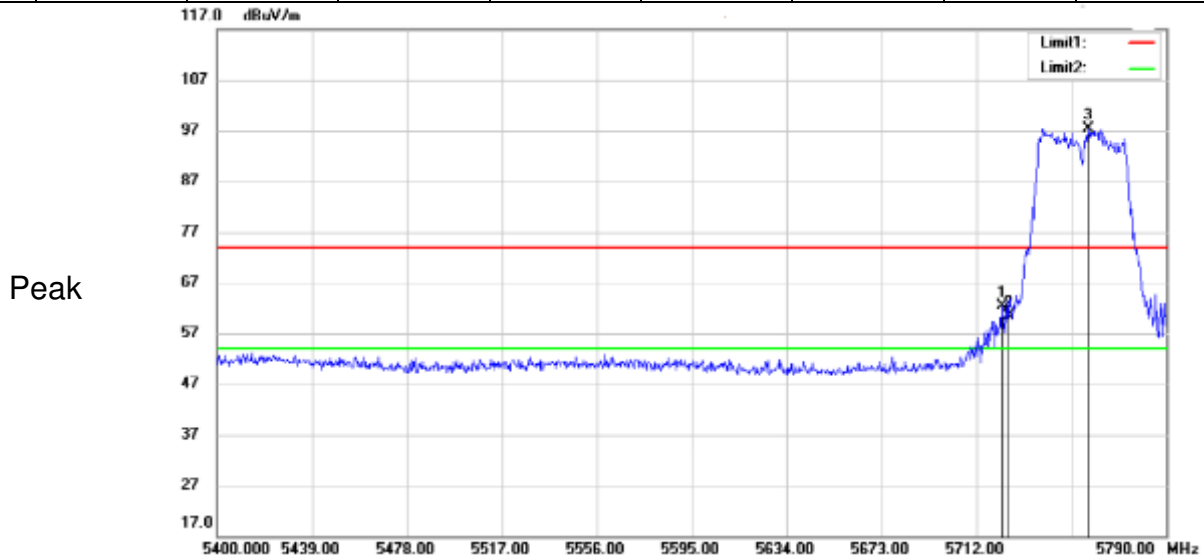


**802.11 n(HT40)**

**MIMO**

**Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5722.53	55.5	6.83	62.33	74	-11.67	Peak	Vertical
2	5725	53.54	6.82	60.36	74	-13.64	Peak	Vertical
3	5758.02	90.75	6.75	97.5	74	23.5	Peak	Vertical
1	5720.58	34.06	6.82	40.88	54	-13.12	AV	Vertical
2	5725	34.63	6.82	41.45	54	-12.55	AV	Vertical
3	5752.17	79.3	6.77	86.07	54	32.07	AV	Vertical



**802.11 n(HT40)**

**MIMO**

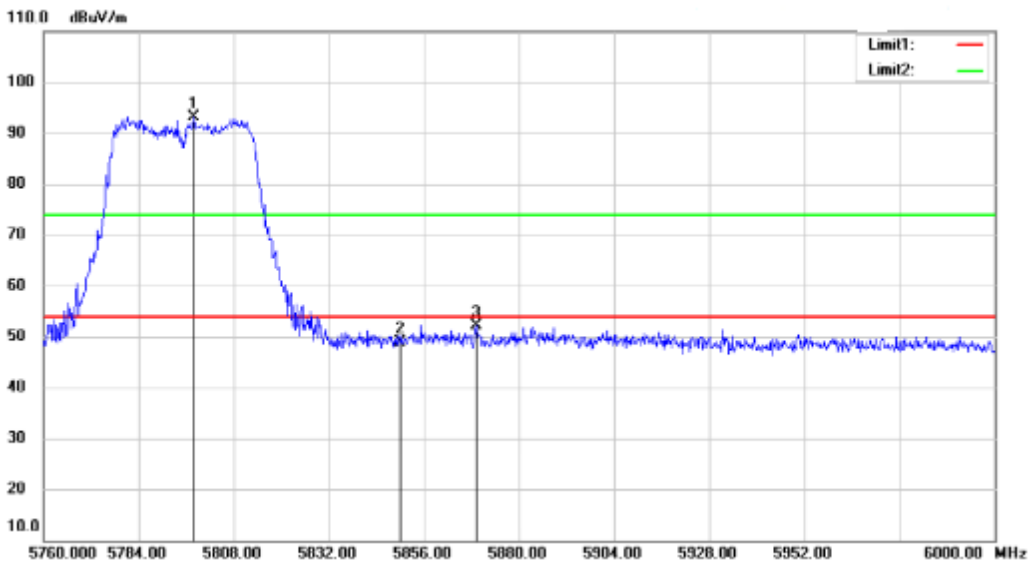
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5808.24	94.39	6.66	101.05	54	47.05	Peak	Horizontal
2	5850	43.73	6.64	50.37	54	-3.63	Peak	Horizontal
3	5875.68	45.17	6.63	51.8	54	-2.2	Peak	Horizontal
1	5797.92	86.37	6.67	93.04	54	39.04	Peak	Vertical
2	5850	42.16	6.64	48.8	54	-5.2	Peak	Vertical
3	5869.2	45.5	6.62	52.12	54	-1.88	Peak	Vertical

Horizontal



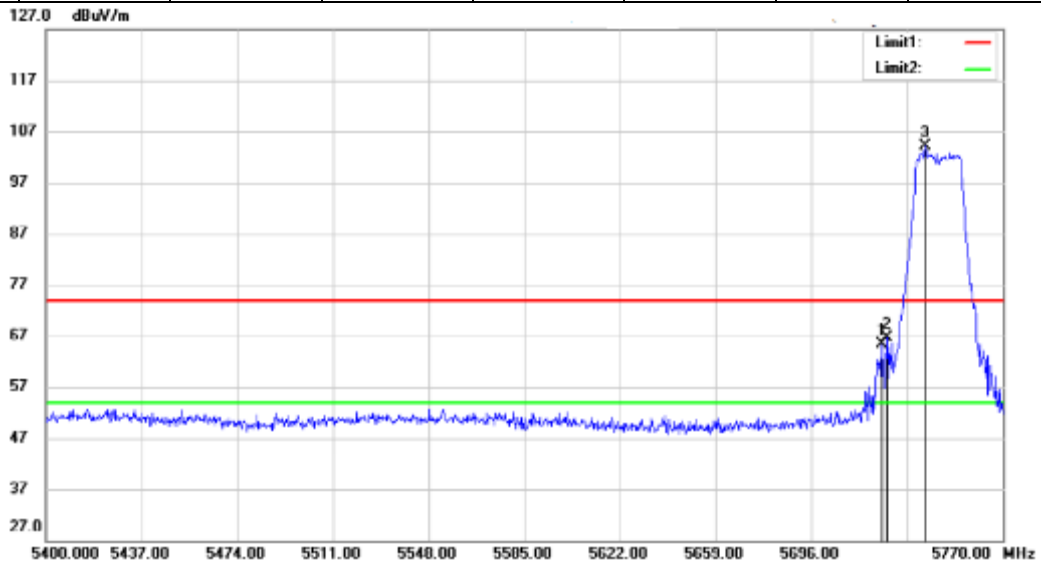
Vertical



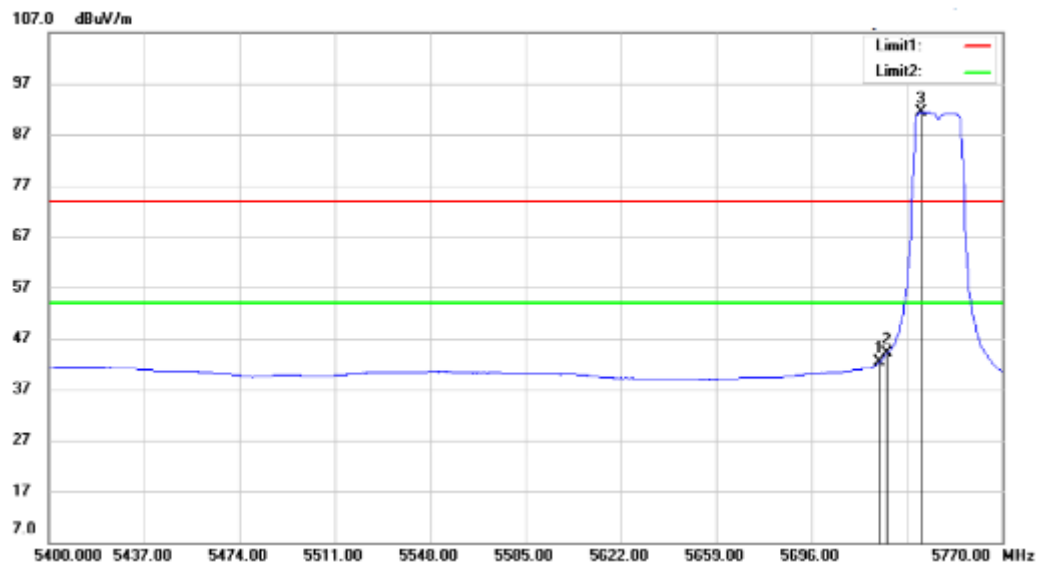
**802.11 ac(VHT20) MIMO Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.38	58.5	6.83	65.33	74	-8.67	Peak	Horizontal
2	5725	59.84	6.82	66.66	74	-7.34	Peak	Horizontal
3	5740.03	97.23	6.79	104.02	74	30.02	Peak	Horizontal
1	5722.27	35.44	6.83	42.27	54	-11.73	AV	Horizontal
2	5725	37.23	6.82	44.05	54	-9.95	AV	Horizontal
3	5738.55	84.67	6.8	91.47	54	37.47	AV	Horizontal

Peak

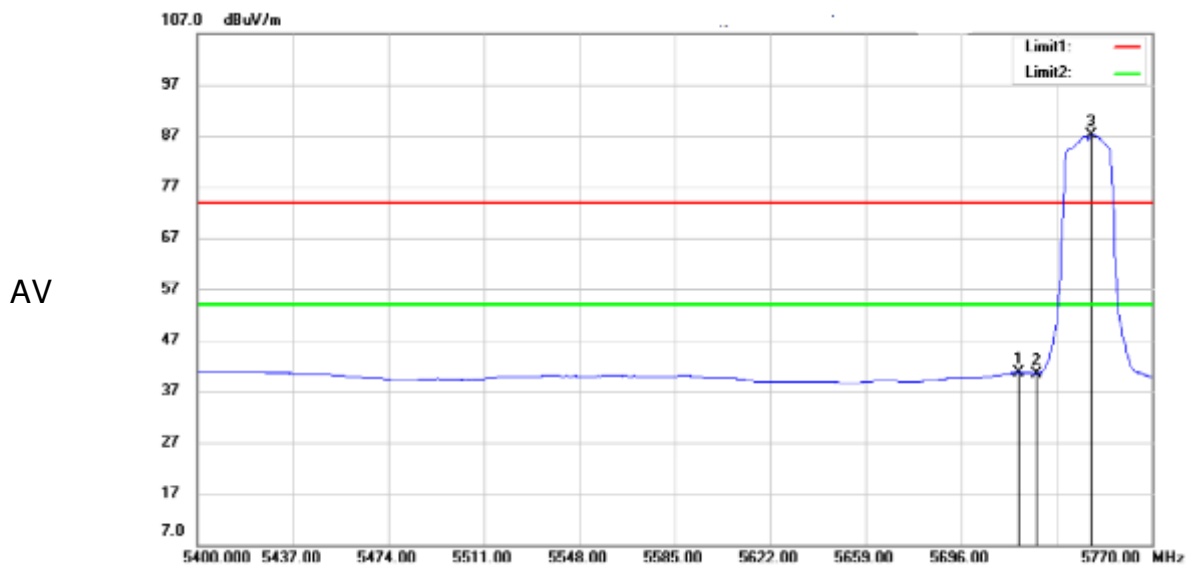
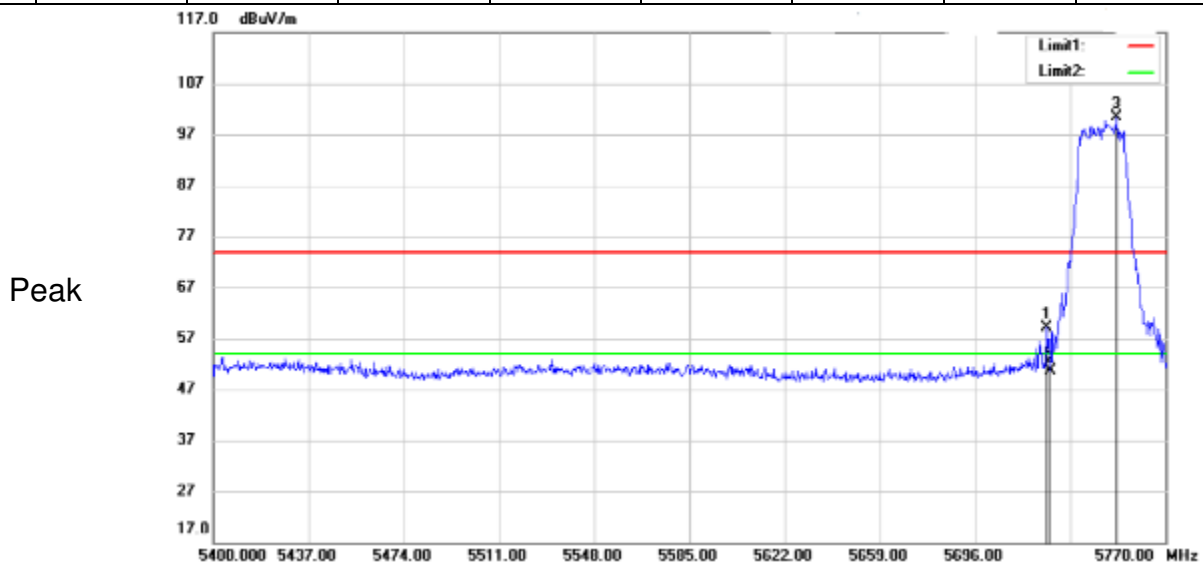


AV



**802.11 ac(VHT20) MIMO Channel: 149**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5723.75	52.22	6.82	59.04	74	-14.96	Peak	Vertical
2	5725	43.92	6.82	50.74	74	-23.26	Peak	Vertical
3	5751.13	93.67	6.77	100.44	74	26.44	Peak	Vertical
1	5718.2	33.77	6.84	40.61	54	-13.39	AV	Vertical
2	5725	33.63	6.82	40.45	54	-13.55	AV	Vertical
3	5746.69	80.47	6.77	87.24	54	33.24	AV	Vertical

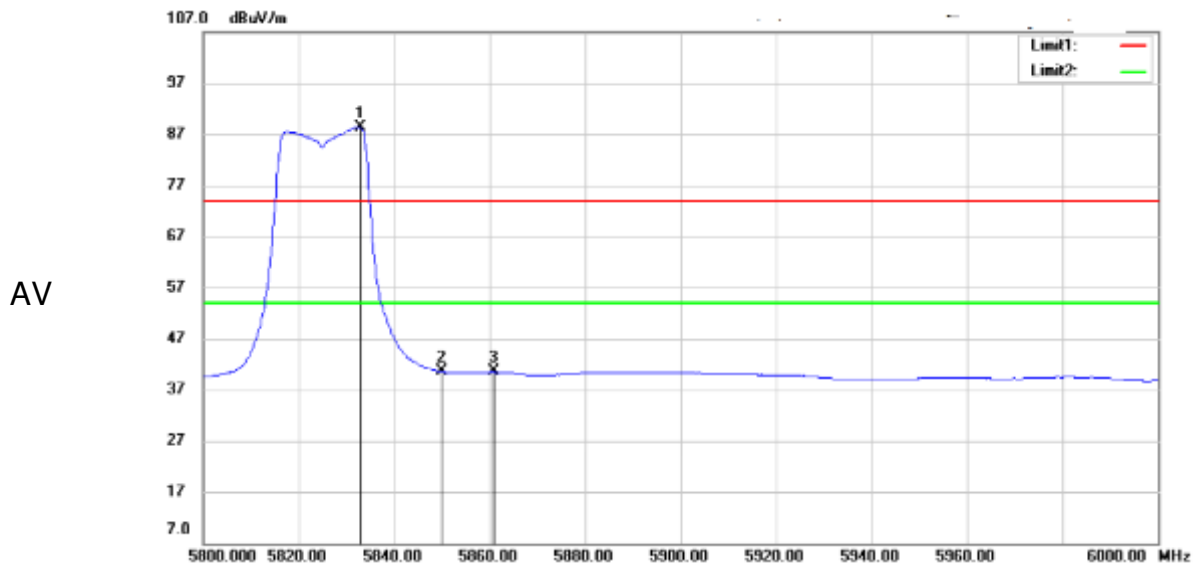
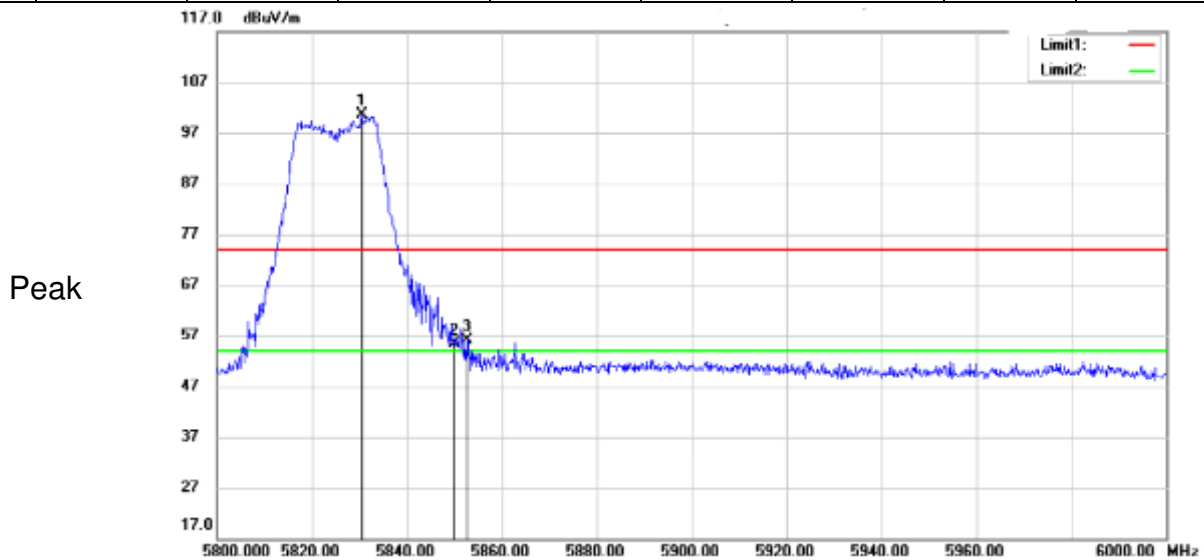


**802.11 ac(VHT20)**

**MIMO**

**Channel: 165**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5830.4	94	6.66	100.66	74	26.66	Peak	Horizontal
2	5850	48.74	6.64	55.38	74	-18.62	Peak	Horizontal
3	5852.6	49.48	6.64	56.12	74	-17.88	Peak	Horizontal
1	5832.8	81.81	6.65	88.46	54	34.46	AV	Horizontal
2	5850	33.91	6.64	40.55	54	-13.45	AV	Horizontal
3	5860.8	33.89	6.63	40.52	54	-13.48	AV	Horizontal



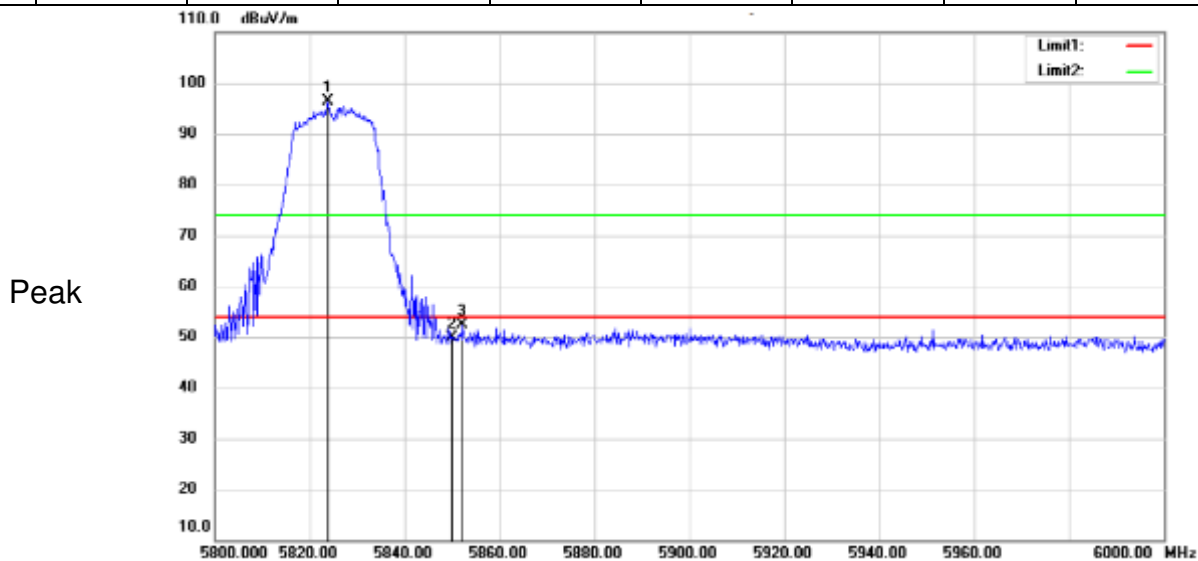


**802.11 ac(VHT20)**

**MIMO**

**Channel: 165**

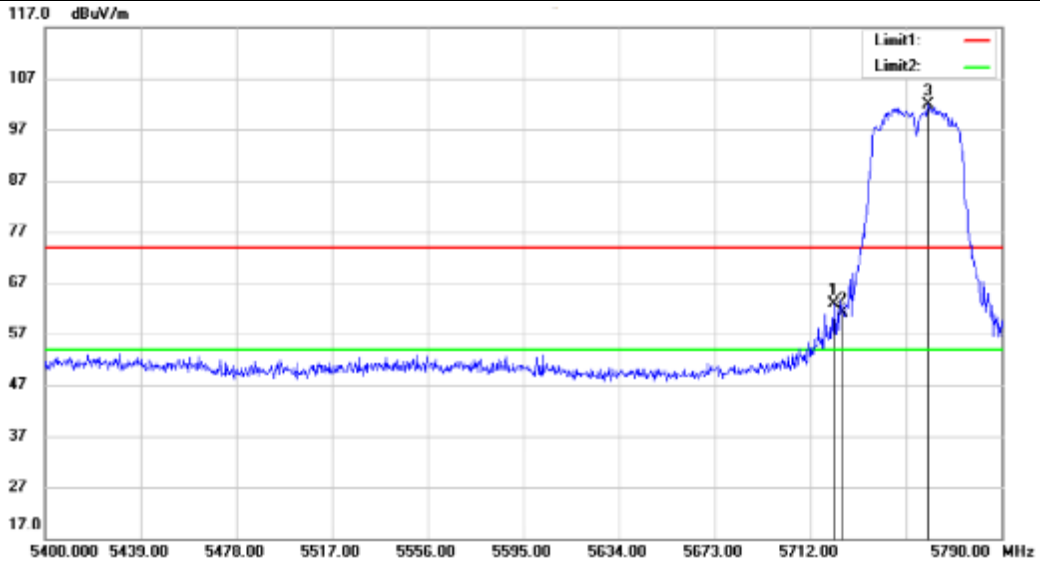
MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5823.8	89.8	6.65	96.45	54	42.45	Peak	Vertical
2	5850	43.22	6.64	49.86	54	-4.14	Peak	Vertical
3	5852.2	45.65	6.64	52.29	54	-1.71	Peak	Vertical



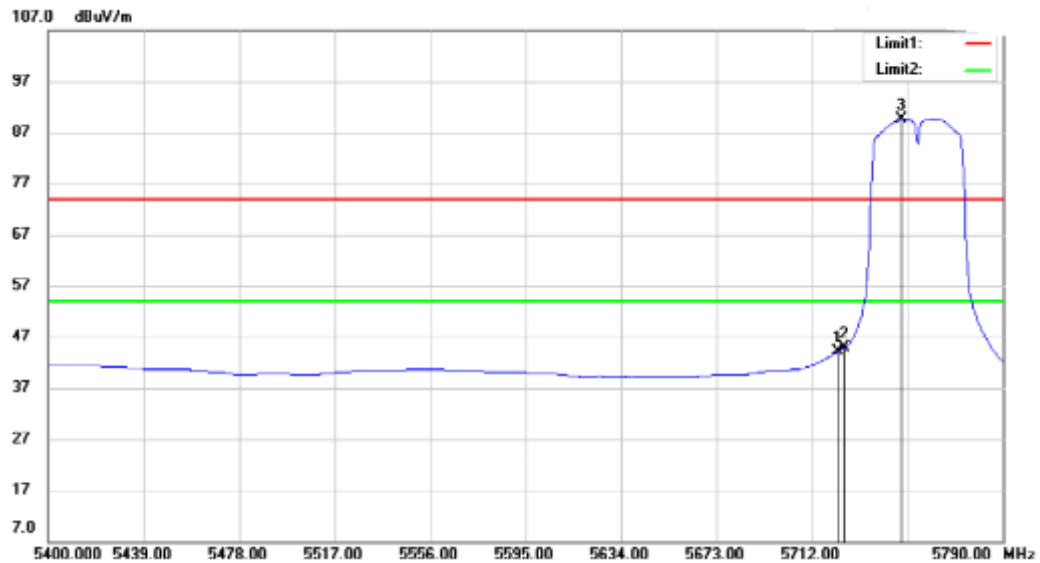
**802.11 ac(VHT40) MIMO Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5721.75	56.03	6.83	62.86	74	-11.14	Peak	Horizontal
2	5725	54.2	6.82	61.02	74	-12.98	Peak	Horizontal
3	5759.97	95.17	6.75	101.92	74	27.92	Peak	Horizontal
1	5722.53	37.25	6.83	44.08	54	-9.92	AV	Horizontal
2	5725	38.01	6.82	44.83	54	-9.17	AV	Horizontal
3	5748.66	82.9	6.77	89.67	54	35.67	AV	Horizontal

Peak



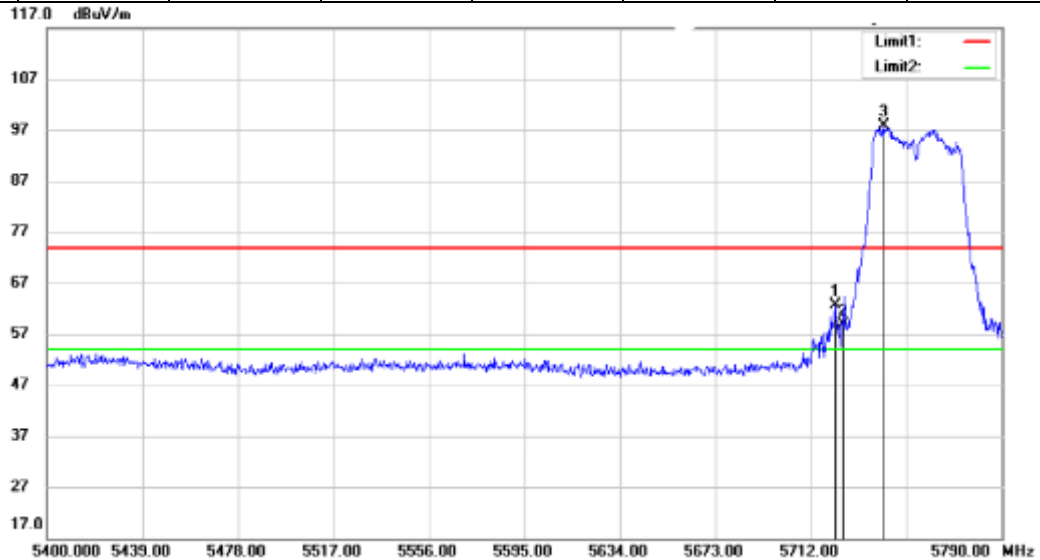
AV



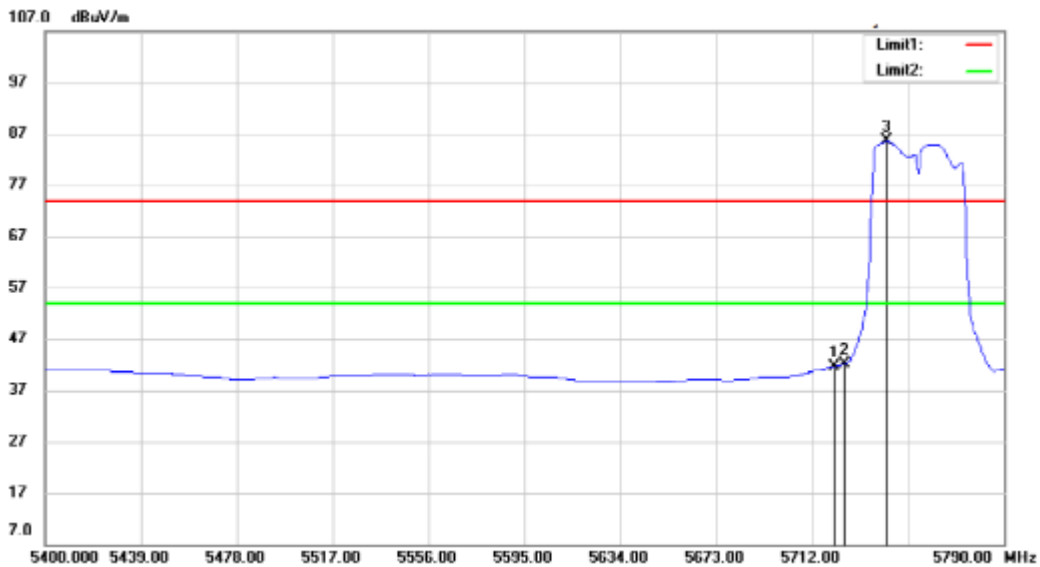
**802.11 ac(VHT40) MIMO Channel: 151**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5722.14	55.84	6.83	62.67	74	-11.33	Peak	Vertical
2	5725	52.02	6.82	58.84	74	-15.16	Peak	Vertical
3	5741.64	90.99	6.79	97.78	74	23.78	Peak	Vertical
1	5720.97	34.83	6.82	41.65	54	-12.35	AV	Vertical
2	5725	35.35	6.82	42.17	54	-11.83	AV	Vertical
3	5742.42	78.76	6.79	85.55	54	31.55	AV	Vertical

Peak



AV



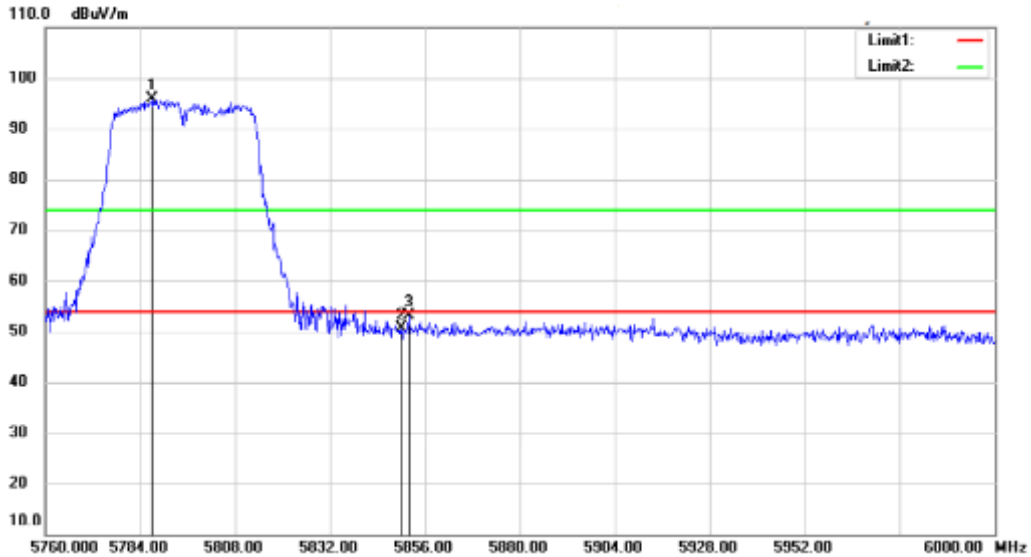
**802.11 ac(VHT40)**

**MIMI**

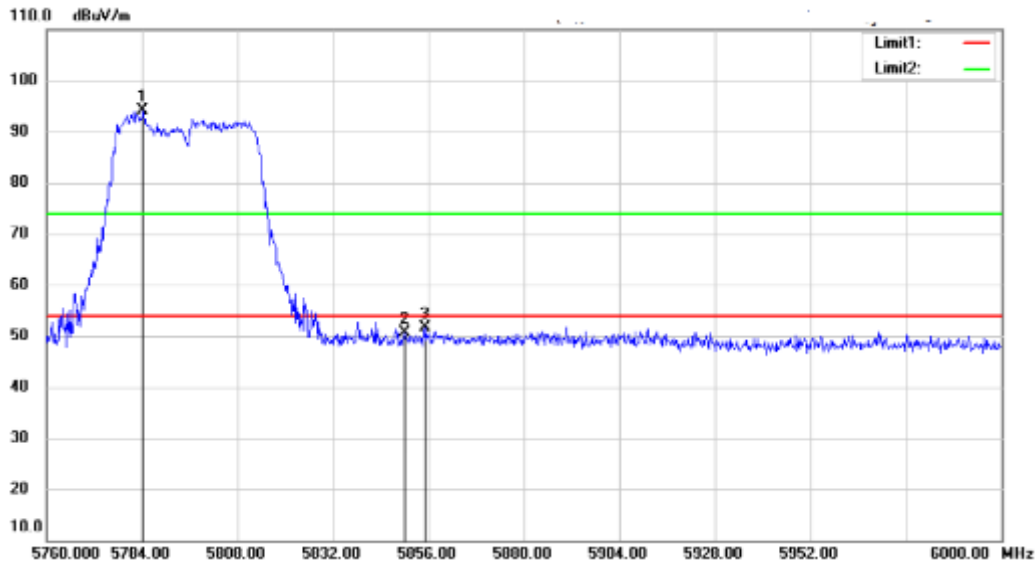
**Channel: 159**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5786.88	89.1	6.69	95.79	54	41.79	Peak	Horizontal
2	5850	44.03	6.64	50.67	54	-3.33	Peak	Horizontal
3	5851.92	46.6	6.64	53.24	54	-0.76	Peak	Horizontal
1	5784.24	87.52	6.7	94.22	54	40.22	Peak	Vertical
2	5850	43.93	6.64	50.57	54	-3.43	Peak	Vertical
3	5855.04	44.91	6.64	51.55	54	-2.45	Peak	Vertical

Horizontal



Vertical

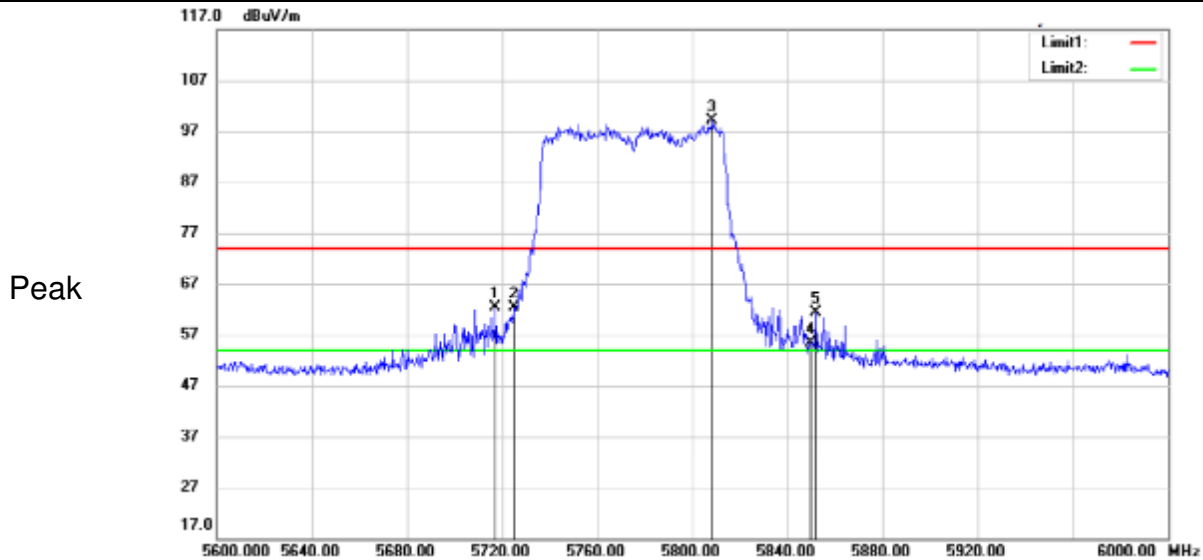


**802.11 ac(VHT80)**

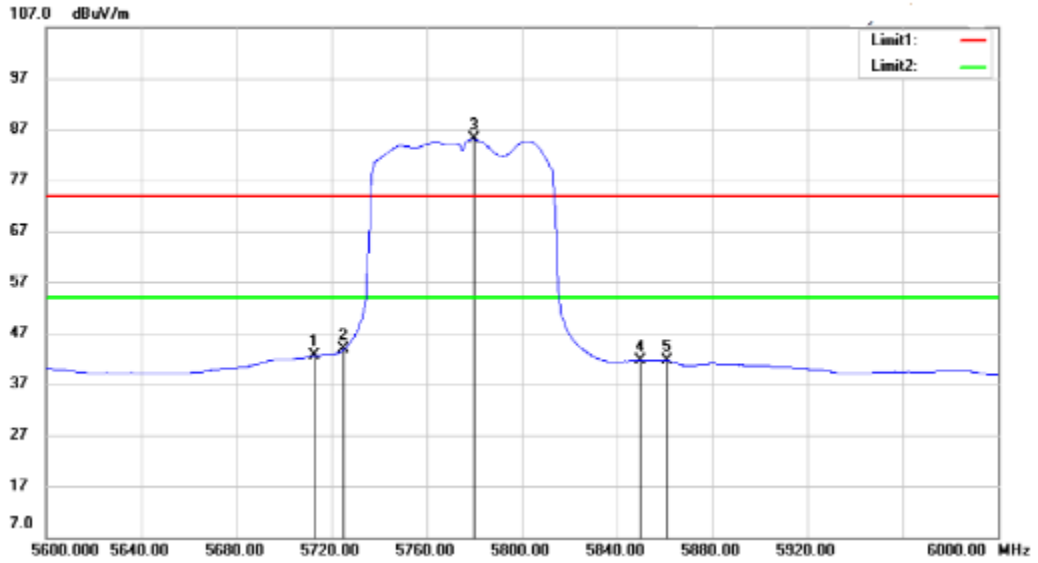
**MIMO**

**Channel: 155**

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5717.2	55.54	6.84	62.38	74	-11.62	Peak	Horizontal
2	5725	55.54	6.82	62.36	74	-11.64	Peak	Horizontal
3	5808.4	92.4	6.67	99.07	74	25.07	Peak	Horizontal
4	5850	48.66	6.64	55.3	74	-18.7	Peak	Horizontal
5	5852	54.74	6.64	61.38	74	-12.62	Peak	Horizontal
1	5712.8	35.73	6.85	42.58	54	-11.42	AV	Horizontal
2	5725	37.02	6.82	43.84	54	-10.16	AV	Horizontal
3	5780	78.29	6.72	85.01	54	31.01	AV	Horizontal
4	5850	34.9	6.64	41.54	54	-12.46	AV	Horizontal
5	5861.2	34.97	6.63	41.6	54	-12.4	AV	Horizontal



AV

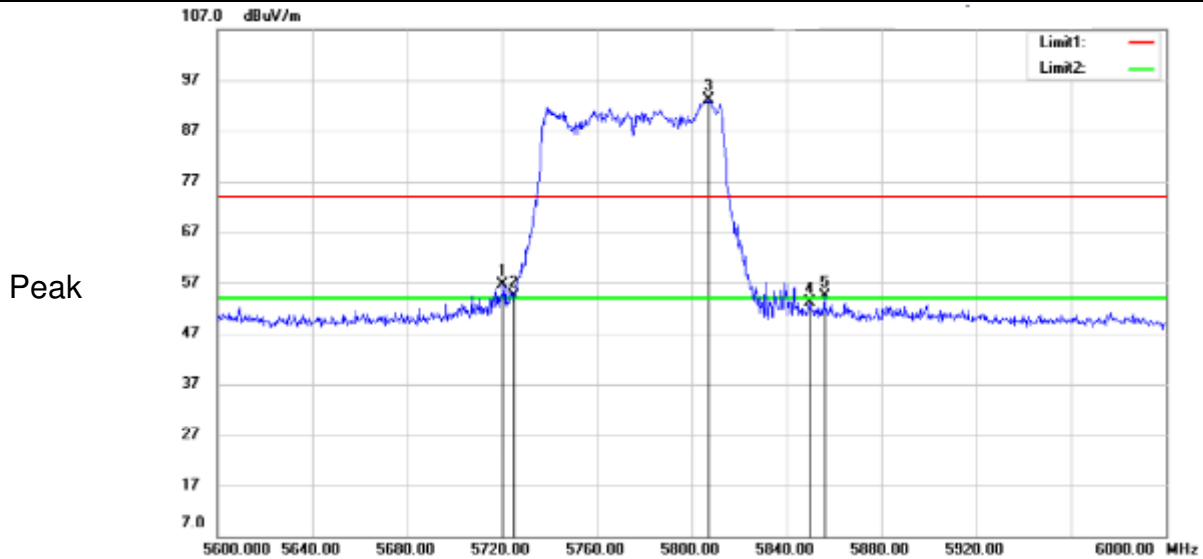


**802.11 ac(VHT80)**

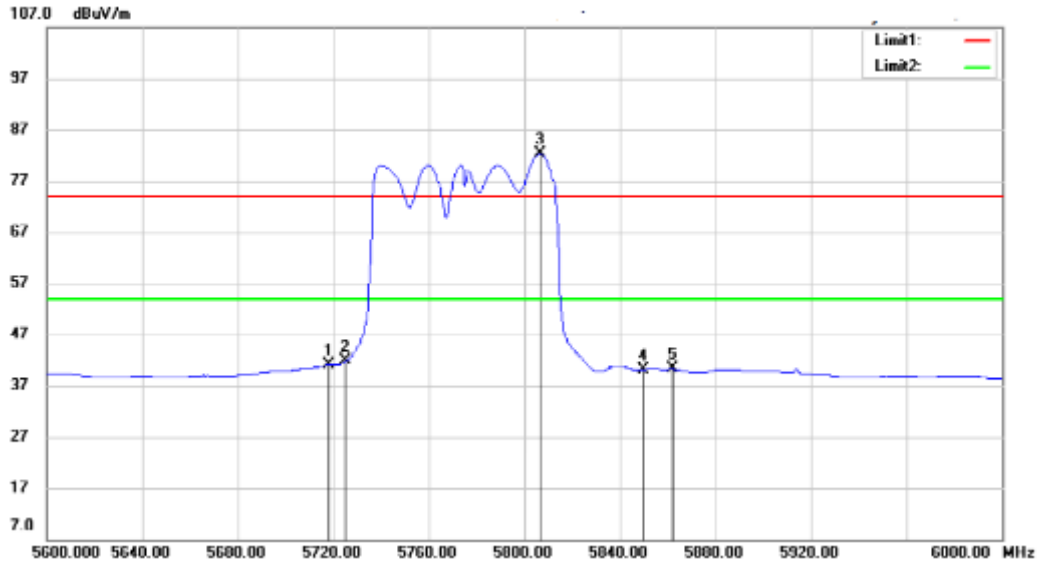
**Antenna 2**

**Channel: 155**

MK.	Frequency (MHz)	Reading (dBUV/m)	Corrected factor(dB)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	5720.4	49.8	6.82	56.62	74	-17.38	Peak	Vertical
2	5725	47.61	6.82	54.43	74	-19.57	Peak	Vertical
3	5807.2	86.5	6.66	93.16	74	19.16	Peak	Vertical
4	5850	46.37	6.64	53.01	74	-20.99	Peak	Vertical
5	5856	47.71	6.64	54.35	74	-19.65	Peak	Vertical
1	5718	34.22	6.84	41.06	54	-12.94	AV	Vertical
2	5725	34.96	6.82	41.78	54	-12.22	AV	Vertical
3	5806.4	75.68	6.66	82.34	54	28.34	AV	Vertical
4	5850	33.52	6.64	40.16	54	-13.84	AV	Vertical
5	5862	33.64	6.63	40.27	54	-13.73	AV	Vertical



AV





- Remark: 1. Test Level = Receiver Reading + Antenna Factor + Cable Loss- Preamplifier Factor  
 2. No any other emission which falls in restricted bands can be detected and be reported.  
 3. If the Peak value below the AV Limit, the AV test doesn't perform for this submission.

Note: The EUT is tested under two power of 48V 0.25A by POE and DC 48V 1A by adapter, only choose the worst case power of 48V 0.25A by POE in the report.

All frequencies within the "Restricted bands" have been evaluated to compliance. Section 15.205 Restricted bands of operation.

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
1.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.5 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	
13.36 - 13.41			

## **7.9 Transmission in the Absence of Data**

### **7.9.1 Standard Applicable**

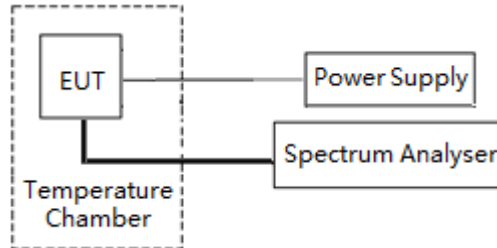
The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

### **7.9.2 Test Result**

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

### 7.10 Frequency stability

**Test setup:**



**Test Procedure:**

- a) The EUT was placed in the temperature chamber, the DC leads and RF output cable exited the chamber through an opening made for that purpose.
- b) After operating the equipment in standby conditions for 15 minutes before proceeding. The temperature was varied from -20°C to +55°C at intervals of not more than 10°C. The frequency stability was read from the spectrum analyzer and the frequency stability and input voltage was recorded.

**Test Limit:**

The frequency of carrier signal shall be maintained within the band of operation

**Test Data:**

Band	Test Conditions		Operation Frequency(MHz)	Test Frequency (MHz)	Freq. Dev. (MHz)	Limit (GHz)	Result
	Volt (V AC)	Temp (°C)					
Band U-NII 3	Normal(120)	Extreme(-20)	5825	5824.9792	0.0208	5.725-5.85	Pass
		Extreme(-10)		5824.9794	0.0206		Pass
		Extreme(0)		5824.9793	0.0207		Pass
		Extreme(+10)		5824.9800	0.02		Pass
		Extreme(+20)		5824.9792	0.0208		Pass
		Extreme(+30)		5824.9789	0.0211		Pass
		Extreme(+40)		5824.9785	0.0215		Pass
		Extreme(+55)		5824.9787	0.0213		Pass
	Extreme(102)	Norma(20)	5824.9781	0.0219	Pass		
	Extreme(138)		5824.9792	0.0208	Pass		

Remark: Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

## **8 Test Setup Photographs**

Refer to the < Test Setup photos-FCC>.

## **9 EUT Constructional Details**

Refer to the < External Photos > & < Internal Photos >.

**--End of the Report--**