FCC TEST REPORT

(Part 15, Subpart E)

Applicant:	PAX Technology Limited
Address:	Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Hong Kong, China

Manufacturer or Supplier:	PAX Computer Technology (Shenzhen) Co., Ltd.
Address:	4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.
Product:	IM10 Unattended Payment Terminal
Brand Name:	PAX
Model Name:	IM10
FCC ID:	V5PIM10BW
Date of tests:	Feb. 22, 2020 ~ Apr. 29, 2020

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart E, Section 15.407**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Alex Chen	Approved by Luke Lu
Engineer / Mobile Department	Manager / Mobile Department
Alex	Luke Lu
Date: May. 06, 2020	Date: May. 06, 2020

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF200221W006-3	Original release	May. 06, 2020

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E		
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**
15.407(b)(6)	AC Power Conducted Emission	Compliance
15.407(b) (1/2/3/4/5)	Radiated Emission & Band Edge Measurement	Compliance
15.407(b) (1/2/3/4/5)	Out of Band Emission Measurement	Compliance
15.407(a/1/2/3)	Maximum conducted output Power	Compliance
15.407(a/1/2/3)	Peak Power Spectral Density	Compliance
15.403(i)	26 dB Bandwidth	Compliance
15.407(e)	6 dB Bandwidth	Compliance
15.203	Antenna Requirement	Compliance

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	±2.70dB
Radiated emissions (30MHz~1GMHz)	±4.98dB
Radiated emissions (1GMHz ~6GMHz)	±4.70dB
Radiated emissions (6GMHz ~18GMHz)	±4.60dB
Radiated emissions (18GMHz ~40GMHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Power Spectral Density	±0.85 dB

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

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	IM10 Unattended Payment Terminal
BRAND NAME	PAX
MODEL NAME	IM10
NOMINAL VOLTAGE	DC 12 V~48V
MODULATION	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to MCS7 802.11ac: up to 390.0Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5720MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n/11ac (20MHz) 2 for 802.11n/11ac (40MHz) 1 for 802.11ac (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n/11ac (20MHz) 2 for 802.11n/11ac (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5720MHz: 12 for 802.11a, 802.11n, 802.11ac(20MHz) 6 for 802.11n, 802.11ac (40MHz) 3 for 802.11ac (80MHz) 5745 ~ 5825MHz: 6 for 802.11a, 802.11n/11ac (20MHz) 3 for 802.11n/11ac (40MHz) 2 for 802.11ac (80MHz)
AVERAGE POWER	37.50mW for 5180 ~ 5240MHz 38.55mW for 5260 ~ 5320MHz 41.40mW for 5500 ~ 5720MHz 35.89mW for 5745 ~ 5825MHz
ANTENNA TYPE	5180 ~ 5240MHz: FPC Antenna with 3dBi gain 5260 ~ 5320MHz: FPC Antenna with 3dBi gain 5500 ~ 5720MHz: FPC Antenna with 3dBi gain 5745 ~ 5825MHz: FPC Antenna with 3dBi gain
HW VERSION	IM10-0BA-R65-0xLx
SW VERSION	5.00.xx
I/O PORTS	Refer to user's manual

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11a	1TX/1RX
802.11n/802.11ac (20MHz)	1TX/1RX
802.11n/802.11ac (40MHz)	1TX/1RX
802.11ac (80MHz)	1TX/1RX

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

4. The device will automatically discontinue transmission in case of either absence of information to transmit or operational failure.

2.2 DESCRIPTION OF TEST MODES

FOR 5150 ~ 5250MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

FOR 5250 ~ 5350MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		

FOR 5470 ~ 5725MHz

12 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620MHz
104	5520 MHz	128	5640MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	126	5630MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530 MHz	122	5610 MHz
138	5690 MHz		

FOR 5725 ~ 5825MHz

5 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745 MHz	157	5785 MHz
153	5765 MHz	165	5825 MHz
144	5720 MHz		

3 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755 MHz	159	5795 MHz
142	5710 MHz		

2 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
155	5775 MHz	138	5690 MHz

2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	**Powered by Adapter with wifi(5G) link**

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

NOTE:
The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane.**
NOTE: "-"means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
A	802.11n (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11n (40MHz)		102 to 142	102, 110, 134, 142	OFDM	MCS0
A	802.11ac (80MHz)		106 to 138	106, 122, 138	OFDM	MCS0
A	802.11a	5745-5825	144 to 165	144, 149, 157,165	OFDM	6.0
A	802.11n (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11n (40MHz)		142 to 159	142, 151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138 to 155	138, 155	OFDM	MCS0

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11n40	5180-5240	38 to 46	38	OFDM	MCS0

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11n40	5180-5240	38 to 46	38	OFDM	MCS0

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
A	802.11n (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11n (40MHz)		102 to 142	102, 110, 134, 142	OFDM	MCS0
A	802.11ac (80MHz)		106 to 138	106, 122, 138	OFDM	MCS0
A	802.11a	5745-5825	144 to 165	144, 149, 157,165	OFDM	6.0
A	802.11n (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11n (40MHz)		142 to 159	142, 151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138 to 155	138, 155	OFDM	MCS0

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
A	802.11n (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11n (40MHz)		102 to 142	102, 110, 134, 142	OFDM	MCS0
A	802.11ac (80MHz)		106 to 138	106, 122, 138	OFDM	MCS0
A	802.11a	5745-5825	144 to 165	144, 149, 157,165	OFDM	6.0
A	802.11n (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11n (40MHz)		142 to 159	142, 151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138 to 155	138, 155	OFDM	MCS0

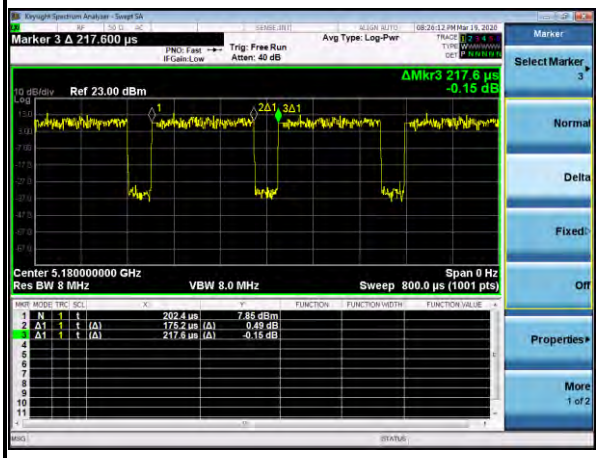
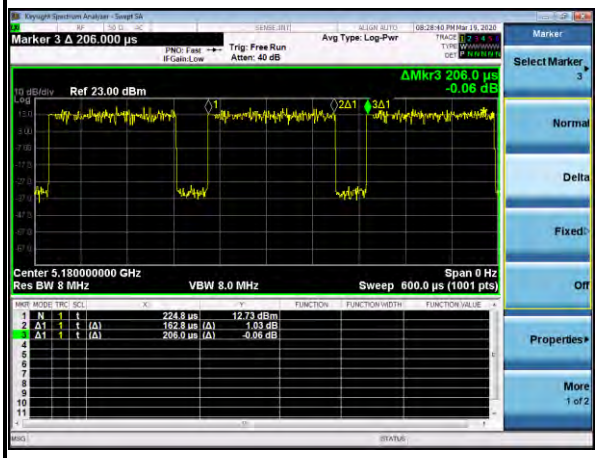
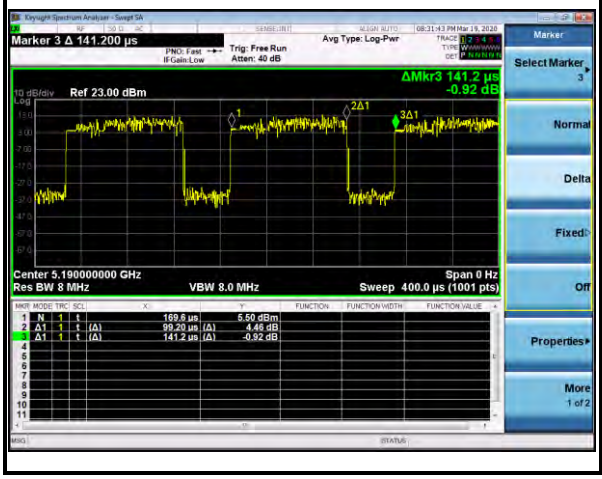
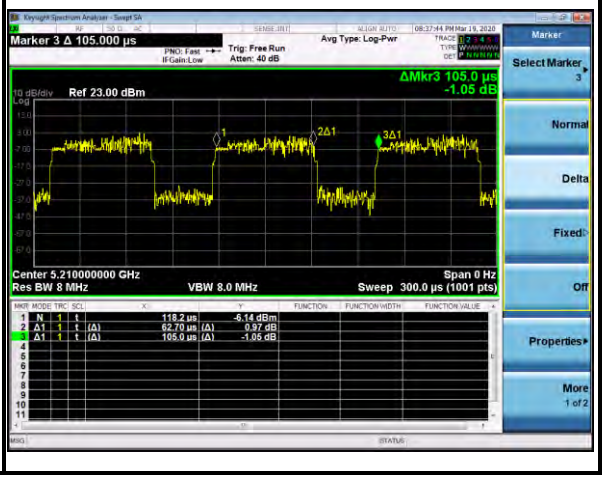
TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 70%RH	DC 12V	Jacky Liu
RE≥1G	23deg. C, 70%RH	DC 12V	Jacky Liu
PLC	25deg. C, 52%RH	DC 12V	Chase Zhou
APCM	25deg. C, 60%RH	DC 12V	Harris Wang

2.3 DUTY CYCLE OF TEST SIGNAL

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

802.11a: Duty cycle = 175.2/217.6 = 0.805, Duty factor = 10 * log(1/ 0.805) = 0.941.
802.11n (20MHz): Duty cycle = 162.8/206.0 = 0.790, Duty factor = 10 * log(1/ 0.790) =1.022.
802.11n (40MHz): Duty cycle =99.20/141.2 = 0.703, Duty factor = 10 * log(1/ 0.703) = 1.533
802.11ac (80MHz): Duty cycle =62.70/105.0 = 0.597, Duty factor = 10 * log(1/0.597) = 2.239

802.11a	802.11n (20MHz)
	
802.11n (40MHz)	**802.11ac (80MHz)**
	

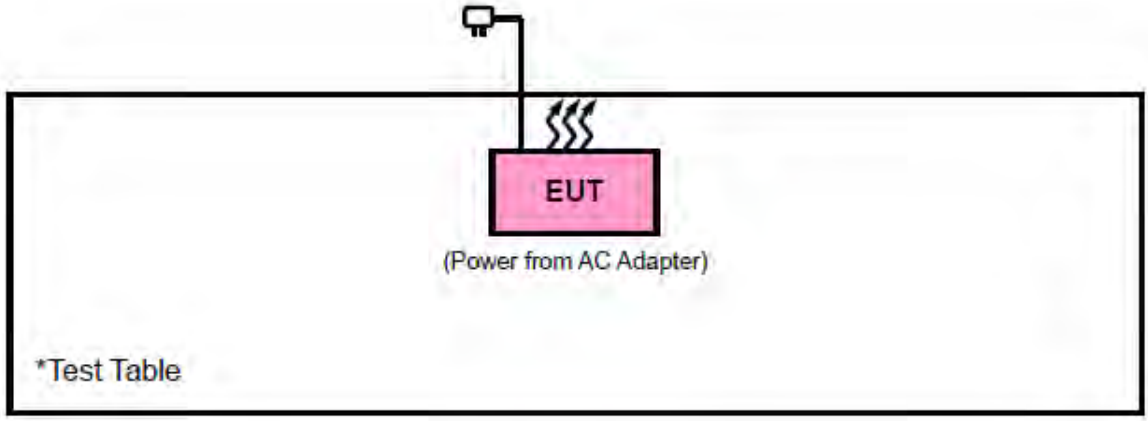
2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Desktop	Lenovo	M73 SFF	PC04GRQV	N/A
2	Desktop	Lenovo	M73 SFF	PC06CS27	N/A
3	Laptop	Lenovo	Thnikpad L440	R90FTFKN	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m
2	AC Line: Unshielded, Detachable 1.5m
3	AC Line: Unshielded, Detachable 1.5m

2.4.1 CONFIGURATION OF SYSTEM UNDER TEST



2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (sDoC) (Certification). The test report has been issued separately.

3 TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

3.1.2 LIMITS OF UNWANTED EMISSION

<table>
<tr><td rowspan="2">RESTRICTED BANDS</td><td>APPLICABLE TO</td><td colspan="2">LIMIT</td></tr>
<tr><td rowspan="2">789033 D02 General UNII Test Procedures New Rules v02r01</td><td colspan="2">FIELD STRENGTH AT 3m (dBµV/m)</td></tr>
<tr><td>PK : 74</td><td>AV : 54</td></tr>
<tr><td rowspan="5">OUT OF THE RESTRICTED BANDS</td><td>APPLICABLE TO</td><td>EIRP LIMIT (dBm/MHz)</td><td>EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m)</td></tr>
<tr><td>15.407(b)(1)</td><td rowspan="3">PK : -27</td><td rowspan="3">PK : 68.3</td></tr>
<tr><td>15.407(b)(2)</td></tr>
<tr><td>15.407(b)(3)</td></tr>
<tr><td>15.407(b)(4)</td><td colspan="2">See note 2 (FCC 16-24)</td></tr>
</table>

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

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

2. All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	Feb. 28,20	Feb. 27,21
Bilog Antenna	ETS-LINDGREN	3143B	00165965	Feb. 28,20	Feb. 27,21
Horn Antenna	ETS-LINDGREN	3117	00168728	Mar. 03,20	Mar. 02,21
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Nov. 22, 19	Nov. 21, 20
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 24,19	Jun. 23,20
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 28,20	Feb. 27,21
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 24,19	Jun. 23,20
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 24,19	Jun. 23,20
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Jun. 24,19	Jun. 23,20

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.
3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

3.1.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

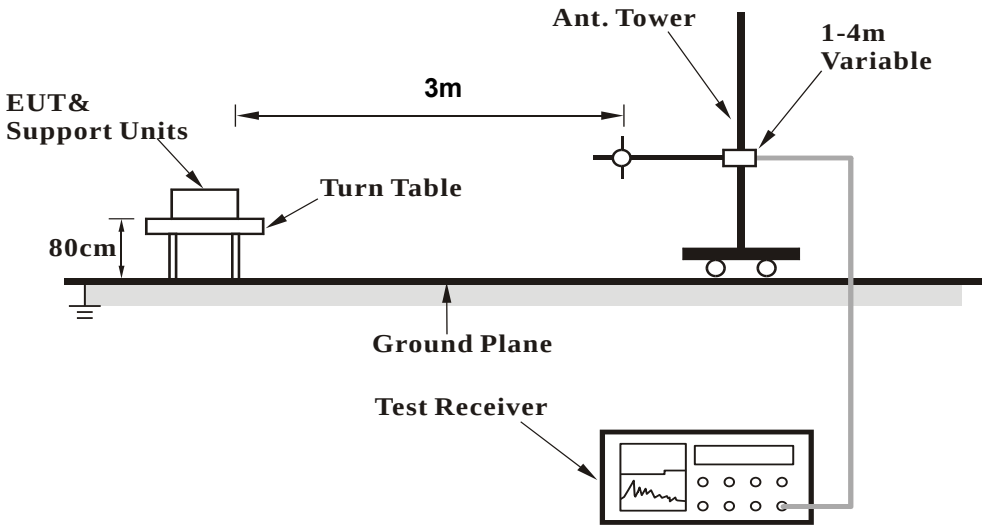
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

3.1.5 DEVIATION FROM TEST STANDARD

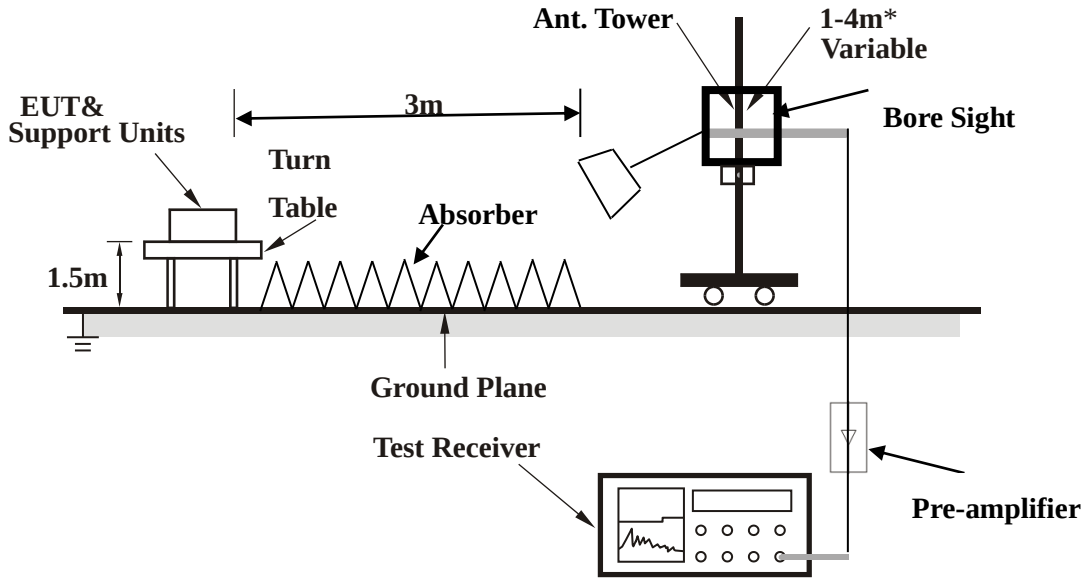
No deviation.

3.1.6 TEST SETUP

< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.7 EUT OPERATING CONDITION

a. Set the EUT under full load condition and placed them on a testing table.

b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.

c. The necessary accessories enable the EUT in full functions.

3.1.8 TEST RESULTS

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

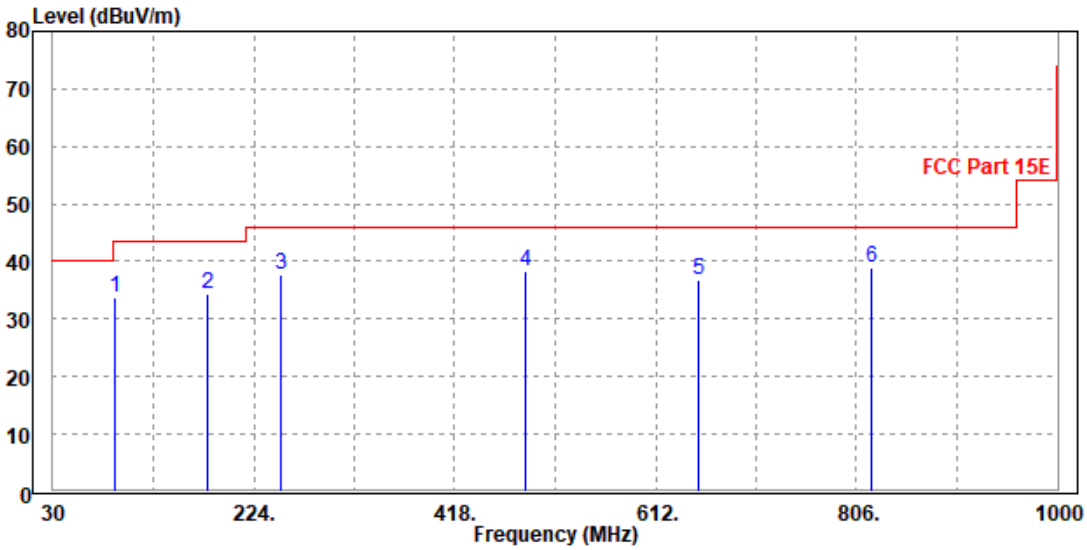
802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
90.35	33.73	61.16	43.5	-9.77	8.54	1.28	37.25	200	360	Peak
179.36	34.5	59.13	43.5	-9	10.31	1.7	36.64	200	360	Peak
249.56	37.58	59.21	46	-8.42	12.98	2.04	36.65	200	360	Peak
486.25	38.39	54.11	46	-7.61	18.32	2.94	36.98	200	360	Peak
653.47	36.69	49.14	46	-9.31	21.65	3.36	37.46	200	360	Peak
820.11	38.93	49.33	46	-7.07	23.4	3.92	37.72	200	360	Peak

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

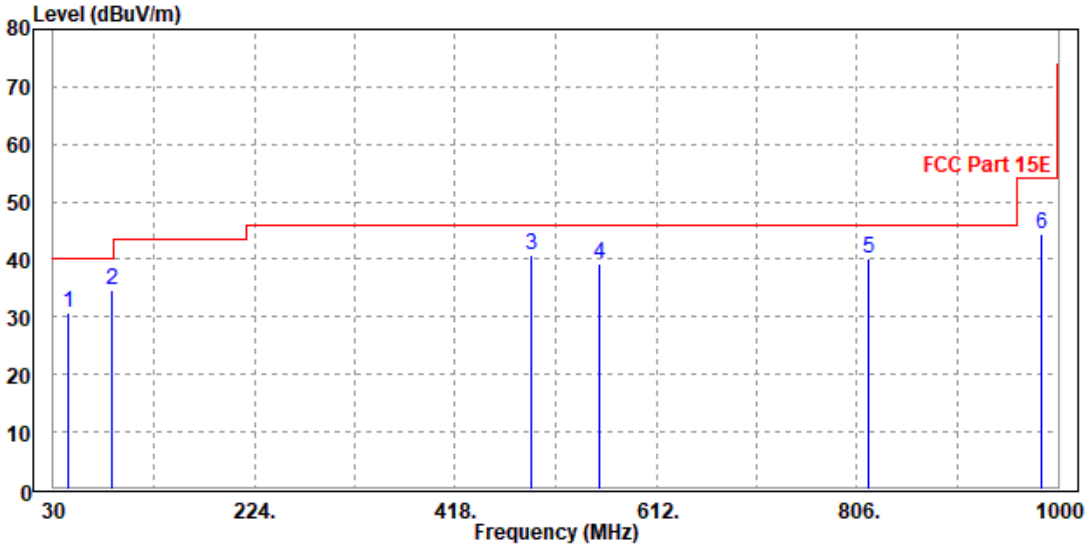


CHANNEL	Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
44.1	30.62	58.33	40	-9.38	8.7	1.02	37.43	100	0	Peak
86.14	34.78	62.33	40	-5.22	8.48	1.25	37.28	100	0	Peak
492.14	40.88	56.32	46	-5.12	18.59	2.96	36.99	100	0	Peak
556.74	39.22	53.85	46	-6.78	19.49	3.09	37.21	100	0	Peak
817.33	40.21	50.6	46	-5.79	23.42	3.91	37.72	100	0	Peak
984.63	44.42	53.11	54	-9.58	24.6	4.41	37.7	100	0	Peak

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



ABOVE 1GHz WORST-CASE DATA:

Note: For higher frequency, the emission is too low to be detected.

Band 1

802.11a

CHANNEL	TX Channel 36	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5150	57.67	60.65	74	-16.33	35.95	7.42	46.35	100	290	Peak
5150	45.03	48.01	54	-8.97	35.95	7.42	46.35	100	290	Average
5180	102.09	105.03			35.98	7.43	46.35	100	290	Peak
5180	86.94	89.88			35.98	7.43	46.35	100	290	Average
5350	56.39	59.07	74	-17.61	36.15	7.47	46.3	100	290	Peak
5350	43.77	46.45	54	-10.23	36.15	7.47	46.3	100	290	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**PREAMP FACTOR (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
5150	58.76	61.4	74	-15.24	36.29	7.42	46.35	100	0	Peak
5150	44.94	47.58	54	-9.06	36.29	7.42	46.35	100	0	Average
5180	99.8	102.41			36.31	7.43	46.35	100	0	Peak
5180	84.84	87.45			36.31	7.43	46.35	100	0	Average
5350	56.49	58.91	74	-17.51	36.41	7.47	46.3	100	0	Peak
5350	43.6	46.02	54	-10.4	36.41	7.47	46.3	100	0	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5180MHz: Fundamental frequency.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.57	60.55	74	-16.43	35.95	7.42	46.35	100	290	Peak
5150	44.41	47.39	54	-9.59	35.95	7.42	46.35	100	290	Average
5200	100.02	102.93			36	7.43	46.34	100	290	Peak
5200	85.87	88.78			36	7.43	46.34	100	290	Average
5350	58.55	61.23	74	-15.45	36.15	7.47	46.3	100	290	Peak
5350	45.24	47.92	54	-8.76	36.15	7.47	46.3	100	290	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.2	59.84	74	-16.8	36.29	7.42	46.35	100	360	Peak
5150	44.54	47.18	54	-9.46	36.29	7.42	46.35	100	360	Average
5200	100.17	102.76			36.32	7.43	46.34	100	360	Peak
5200	86.11	88.7			36.32	7.43	46.34	100	360	Average
5350	56.04	58.46	74	-17.96	36.41	7.47	46.3	100	360	Peak
5350	43.54	45.96	54	-10.46	36.41	7.47	46.3	100	360	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5200MHz: Fundamental frequency.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.15	60.13	74	-16.85	35.95	7.42	46.35	200	288	Peak
5150	44.71	47.69	54	-9.29	35.95	7.42	46.35	200	288	Average
5240	99.69	102.54			36.04	7.44	46.33	200	288	Peak
5240	85.98	88.83			36.04	7.44	46.33	200	288	Average
5350	57.21	59.89	74	-16.79	36.15	7.47	46.3	200	288	Peak
5350	44.78	47.46	54	-9.22	36.15	7.47	46.3	200	288	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.58	60.22	74	-16.42	36.29	7.42	46.35	100	30	Peak
5150	45.59	48.23	54	-8.41	36.29	7.42	46.35	100	30	Average
5240	100.82	103.37			36.34	7.44	46.33	100	30	Peak
5240	86.29	88.84			36.34	7.44	46.33	100	30	Average
5350	57.47	59.89	74	-16.53	36.41	7.47	46.3	100	30	Peak
5350	45.5	47.92	54	-8.5	36.41	7.47	46.3	100	30	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5240MHz: Fundamental frequency.

802.11n (20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.71	60.69	74	-16.29	35.95	7.42	46.35	100	290	Peak
5150	44.35	47.33	54	-9.65	35.95	7.42	46.35	100	290	Average
5180	98.11	101.05			35.98	7.43	46.35	100	290	Peak
5180	83.63	86.57			35.98	7.43	46.35	100	290	Average
5350	57.51	60.19	74	-16.49	36.15	7.47	46.3	100	290	Peak
5350	43.97	46.65	54	-10.03	36.15	7.47	46.3	100	290	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	58.67	61.31	74	-15.33	36.29	7.42	46.35	100	230	Peak
5150	45.21	47.85	54	-8.79	36.29	7.42	46.35	100	230	Average
5180	98.62	101.23			36.31	7.43	46.35	100	230	Peak
5180	84.08	86.69			36.31	7.43	46.35	100	230	Average
5350	57.43	59.85	74	-16.57	36.41	7.47	46.3	100	230	Peak
5350	44.13	46.55	54	-9.87	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5180MHz: Fundamental frequency.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.48	60.46	74	-16.52	35.95	7.42	46.35	100	288	Peak
5150	44.2	47.18	54	-9.8	35.95	7.42	46.35	100	288	Average
5200	96.97	99.88			36	7.43	46.34	100	288	Peak
5200	82.7	85.61			36	7.43	46.34	100	288	Average
5350	57.57	60.25	74	-16.43	36.15	7.47	46.3	100	288	Peak
5350	43.86	46.54	54	-10.14	36.15	7.47	46.3	100	288	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	58.06	60.7	74	-15.94	36.29	7.42	46.35	100	230	Peak
5150	44.68	47.32	54	-9.32	36.29	7.42	46.35	100	230	Average
5200	99.01	101.6			36.32	7.43	46.34	100	230	Peak
5200	84.48	87.07			36.32	7.43	46.34	100	230	Average
5350	57.01	59.43	74	-16.99	36.41	7.47	46.3	100	230	Peak
5350	44.03	46.45	54	-9.97	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5200MHz: Fundamental frequency.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.67	59.65	74	-17.33	35.95	7.42	46.35	100	290	Peak
5150	43.78	46.76	54	-10.22	35.95	7.42	46.35	100	290	Average
5240	94.72	97.57			36.04	7.44	46.33	100	290	Peak
5240	80.05	82.9			36.04	7.44	46.33	100	290	Average
5350	56.19	58.87	74	-17.81	36.15	7.47	46.3	100	290	Peak
5350	43.7	46.38	54	-10.3	36.15	7.47	46.3	100	290	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.27	59.91	74	-16.73	36.29	7.42	46.35	100	225	Peak
5150	44.16	46.8	54	-9.84	36.29	7.42	46.35	100	225	Average
5240	97.6	100.15			36.34	7.44	46.33	100	225	Peak
5240	83.66	86.21			36.34	7.44	46.33	100	225	Average
5350	56.71	59.13	74	-17.29	36.41	7.47	46.3	100	225	Peak
5350	43.78	46.2	54	-10.22	36.41	7.47	46.3	100	225	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5240MHz: Fundamental frequency.

802.11n (40MHz)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	58.63	61.61	74	-15.37	35.95	7.42	46.35	100	290	Peak
5150	44.46	47.44	54	-9.54	35.95	7.42	46.35	100	290	Average
5190	93.18	96.1			35.99	7.43	46.34	100	290	Peak
5190	80.37	83.29			35.99	7.43	46.34	100	290	Average
5350	56.82	59.5	74	-17.18	36.15	7.47	46.3	100	290	Peak
5350	43.6	46.28	54	-10.4	36.15	7.47	46.3	100	290	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.65	60.29	74	-16.35	36.29	7.42	46.35	100	225	Peak
5150	44.33	46.97	54	-9.67	36.29	7.42	46.35	100	225	Average
5190	92.94	95.54			36.31	7.43	46.34	100	225	Peak
5190	80.93	83.53			36.31	7.43	46.34	100	225	Average
5350	57.18	59.6	74	-16.82	36.41	7.47	46.3	100	225	Peak
5350	43.73	46.15	54	-10.27	36.41	7.47	46.3	100	225	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5190MHz: Fundamental frequency.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.1	59.08	74	-17.9	35.95	7.42	46.35	100	288	Peak
5150	43.18	46.16	54	-10.82	35.95	7.42	46.35	100	288	Average
5230	90.41	93.27			36.03	7.44	46.33	100	288	Peak
5230	78.72	81.58			36.03	7.44	46.33	100	288	Average
5350	55.67	58.35	74	-18.33	36.15	7.47	46.3	100	288	Peak
5350	42.88	45.56	54	-11.12	36.15	7.47	46.3	100	288	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.86	59.5	74	-17.14	36.29	7.42	46.35	100	230	Peak
5150	44.14	46.78	54	-9.86	36.29	7.42	46.35	100	230	Average
5230	94.52	97.07			36.34	7.44	46.33	100	230	Peak
5230	83.03	85.58			36.34	7.44	46.33	100	230	Average
5350	55.94	58.36	74	-18.06	36.41	7.47	46.3	100	230	Peak
5350	43.79	46.21	54	-10.21	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5230MHz: Fundamental frequency.

802.11ac (80MHz)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.24	60.22	74	-16.76	35.95	7.42	46.35	100	280	Peak
5150	43.68	46.66	54	-10.32	35.95	7.42	46.35	100	280	Average
5210	84.48	87.37			36.01	7.44	46.34	100	280	Peak
5210	72.4	75.29			36.01	7.44	46.34	100	280	Average
5350	55.13	57.81	74	-18.87	36.15	7.47	46.3	100	280	Peak
5350	42.96	45.64	54	-11.04	36.15	7.47	46.3	100	280	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.19	59.83	74	-16.81	36.29	7.42	46.35	100	230	Peak
5150	43.78	46.42	54	-10.22	36.29	7.42	46.35	100	230	Average
5210	86.78	89.35			36.33	7.44	46.34	100	230	Peak
5210	68.53	71.1			36.33	7.44	46.34	100	230	Average
5350	55.63	58.05	74	-18.37	36.41	7.47	46.3	100	230	Peak
5350	42.96	45.38	54	-11.04	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5210MHz: Fundamental frequency.

Band 2

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.13	59.11	74	-17.87	35.95	7.42	46.35	100	280	Peak
5150	43.67	46.65	54	-10.33	35.95	7.42	46.35	100	280	Average
5260	99.29	102.1			36.06	7.45	46.32	100	280	Peak
5260	88.92	91.73			36.06	7.45	46.32	100	280	Average
5350	55.2	57.88	74	-18.8	36.15	7.47	46.3	100	280	Peak
5350	42.81	45.49	54	-11.19	36.15	7.47	46.3	100	280	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.86	59.5	74	-17.14	36.29	7.42	46.35	100	230	Peak
5150	44.06	46.7	54	-9.94	36.29	7.42	46.35	100	230	Average
5260	100.77	103.28			36.36	7.45	46.32	100	230	Peak
5260	90.07	92.58			36.36	7.45	46.32	100	230	Average
5350	56.55	58.97	74	-17.45	36.41	7.47	46.3	100	230	Peak
5350	43.3	45.72	54	-10.7	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5260MHz: Fundamental frequency.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.83	59.81	74	-17.17	35.95	7.42	46.35	100	290	Peak
5150	43.46	46.44	54	-10.54	35.95	7.42	46.35	100	290	Average
5300	98.61	101.36			36.1	7.46	46.31	100	290	Peak
5300	86.88	89.63			36.1	7.46	46.31	100	290	Average
5350	55.32	58	74	-18.68	36.15	7.47	46.3	100	290	Peak
5350	42.85	45.53	54	-11.15	36.15	7.47	46.3	100	290	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.1	58.74	74	-17.9	36.29	7.42	46.35	100	230	Peak
5150	43.52	46.16	54	-10.48	36.29	7.42	46.35	100	230	Average
5300	100.29	102.76			36.38	7.46	46.31	100	230	Peak
5300	89.23	91.7			36.38	7.46	46.31	100	230	Average
5350	55.76	58.18	74	-18.24	36.41	7.47	46.3	100	230	Peak
5350	43.1	45.52	54	-10.9	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5300MHz: Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.3	59.28	74	-17.7	35.95	7.42	46.35	100	288	Peak
5150	43.33	46.31	54	-10.67	35.95	7.42	46.35	100	288	Average
5320	98.26	100.98			36.12	7.46	46.3	100	288	Peak
5320	86.41	89.13			36.12	7.46	46.3	100	288	Average
5350	56.36	59.04	74	-17.64	36.15	7.47	46.3	100	288	Peak
5350	43.4	46.08	54	-10.6	36.15	7.47	46.3	100	288	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56	58.64	74	-18	36.29	7.42	46.35	100	235	Peak
5150	43.46	46.1	54	-10.54	36.29	7.42	46.35	100	235	Average
5320	99.32	101.77			36.39	7.46	46.3	100	235	Peak
5320	87.58	90.03			36.39	7.46	46.3	100	235	Average
5350	58.25	60.67	74	-15.75	36.41	7.47	46.3	100	235	Peak
5350	43.52	45.94	54	-10.48	36.41	7.47	46.3	100	235	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5320MHz: Fundamental frequency.

802.11n (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.36	60.34	74	-16.64	35.95	7.42	46.35	100	220	Peak
5150	44.29	47.27	54	-9.71	35.95	7.42	46.35	100	220	Average
5260	95.84	98.65			36.06	7.45	46.32	100	220	Peak
5260	83.54	86.35			36.06	7.45	46.32	100	220	Average
5350	56.06	58.74	74	-17.94	36.15	7.47	46.3	100	220	Peak
5350	43.62	46.3	54	-10.38	36.15	7.47	46.3	100	220	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.41	60.05	74	-16.59	36.29	7.42	46.35	100	230	Peak
5150	44.17	46.81	54	-9.83	36.29	7.42	46.35	100	230	Average
5260	98.49	101			36.36	7.45	46.32	100	230	Peak
5260	85.35	87.86			36.36	7.45	46.32	100	230	Average
5350	56.42	58.84	74	-17.58	36.41	7.47	46.3	100	230	Peak
5350	43.85	46.27	54	-10.15	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5260MHz: Fundamental frequency.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.49	58.47	74	-18.51	35.95	7.42	46.35	100	220	Peak
5150	42.72	45.7	54	-11.28	35.95	7.42	46.35	100	220	Average
5300	94.39	97.14			36.1	7.46	46.31	100	220	Peak
5300	81.16	83.91			36.1	7.46	46.31	100	220	Average
5350	55.52	58.2	74	-18.48	36.15	7.47	46.3	100	220	Peak
5350	42.49	45.17	54	-11.51	36.15	7.47	46.3	100	220	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.71	60.35	74	-16.29	36.29	7.42	46.35	100	230	Peak
5150	43.99	46.63	54	-10.01	36.29	7.42	46.35	100	230	Average
5300	96.06	98.53			36.38	7.46	46.31	100	230	Peak
5300	84.91	87.38			36.38	7.46	46.31	100	230	Average
5350	56.56	58.98	74	-17.44	36.41	7.47	46.3	100	230	Peak
5350	43.82	46.24	54	-10.18	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5300MHz: Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.18	59.16	74	-17.82	35.95	7.42	46.35	100	220	Peak
5150	43.28	46.26	54	-10.72	35.95	7.42	46.35	100	220	Average
5320	95.34	98.06			36.12	7.46	46.3	100	220	Peak
5320	82.33	85.05			36.12	7.46	46.3	100	220	Average
5350	55.81	58.49	74	-18.19	36.15	7.47	46.3	100	220	Peak
5350	42.98	45.66	54	-11.02	36.15	7.47	46.3	100	220	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.86	59.5	74	-17.14	36.29	7.42	46.35	100	230	Peak
5150	43.98	46.62	54	-10.02	36.29	7.42	46.35	100	230	Average
5320	97.44	99.89			36.39	7.46	46.3	100	230	Peak
5320	85.41	87.86			36.39	7.46	46.3	100	230	Average
5350	57.19	59.61	74	-16.81	36.41	7.47	46.3	100	230	Peak
5350	43.51	45.93	54	-10.49	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5320MHz: Fundamental frequency.

802.11n (40MHz)

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.26	59.24	74	-17.74	35.95	7.42	46.35	100	220	Peak
5150	43.29	46.27	54	-10.71	35.95	7.42	46.35	100	220	Average
5270	93.04	95.84			36.07	7.45	46.32	100	220	Peak
5270	78.95	81.75			36.07	7.45	46.32	100	220	Average
5350	55.81	58.49	74	-18.19	36.15	7.47	46.3	100	220	Peak
5350	43.47	46.15	54	-10.53	36.15	7.47	46.3	100	220	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.32	58.96	74	-17.68	36.29	7.42	46.35	100	230	Peak
5150	43.62	46.26	54	-10.38	36.29	7.42	46.35	100	230	Average
5270	93.74	96.25			36.36	7.45	46.32	100	230	Peak
5270	81.05	83.56			36.36	7.45	46.32	100	230	Average
5350	56.24	58.66	74	-17.76	36.41	7.47	46.3	100	230	Peak
5350	43.78	46.2	54	-10.22	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5270MHz: Fundamental frequency.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.89	58.87	74	-18.11	35.95	7.42	46.35	100	300	Peak
5150	43.09	46.07	54	-10.91	35.95	7.42	46.35	100	300	Average
5310	91.17	93.91			36.11	7.46	46.31	100	300	Peak
5310	79.05	81.79			36.11	7.46	46.31	100	300	Average
5350	56.07	58.75	74	-17.93	36.15	7.47	46.3	100	300	Peak
5350	42.88	45.56	54	-11.12	36.15	7.47	46.3	100	300	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.94	58.58	74	-18.06	36.29	7.42	46.35	100	220	Peak
5150	42.98	45.62	54	-11.02	36.29	7.42	46.35	100	220	Average
5310	92.13	94.59			36.39	7.46	46.31	100	220	Peak
5310	81.15	83.61			36.39	7.46	46.31	100	220	Average
5350	56.41	58.83	74	-17.59	36.41	7.47	46.3	100	220	Peak
5350	43.1	45.52	54	-10.9	36.41	7.47	46.3	100	220	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5310MHz: Fundamental frequency.

802.11ac (80MHz)

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.95	58.93	74	-18.05	35.95	7.42	46.35	100	300	Peak
5150	43.19	46.17	54	-10.81	35.95	7.42	46.35	100	300	Average
5290	84.81	87.58			36.09	7.45	46.31	100	300	Peak
5290	69.53	72.3			36.09	7.45	46.31	100	300	Average
5350	55.88	58.56	74	-18.12	36.15	7.47	46.3	100	300	Peak
5350	42.86	45.54	54	-11.14	36.15	7.47	46.3	100	300	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.88	59.52	74	-17.12	36.29	7.42	46.35	100	230	Peak
5150	43.32	45.96	54	-10.68	36.29	7.42	46.35	100	230	Average
5290	87.7	90.19			36.37	7.45	46.31	100	230	Peak
5290	74.51	77			36.37	7.45	46.31	100	230	Average
5350	55.7	58.12	74	-18.3	36.41	7.47	46.3	100	230	Peak
5350	43.08	45.5	54	-10.92	36.41	7.47	46.3	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5290MHz: Fundamental frequency.

Band 3

802.11a

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	56.74	59.25	74	-17.26	36.26	7.49	46.26	100	250	Peak
5460	43.31	45.82	54	-10.69	36.26	7.49	46.26	100	250	Average
#5470	57.91	60.41	68.3	-10.39	36.27	7.49	46.26	100	250	Peak
5500	99.27	101.72			36.3	7.5	46.25	100	250	Peak
5500	85.01	87.46			36.3	7.5	46.25	100	250	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	59.13	61.42	74	-14.87	36.48	7.49	46.26	100	210	Peak
5460	44.8	47.09	54	-9.2	36.48	7.49	46.26	100	210	Average
#5470	61.1	63.39	68.3	-7.2	36.48	7.49	46.26	100	210	Peak
5500	104.58	106.83			36.5	7.5	46.25	100	210	Peak
5500	93.56	95.81			36.5	7.5	46.25	100	210	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5500MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.4	57.91	74	-18.6	36.26	7.49	46.26	100	280	Peak
5460	42.66	45.17	54	-11.34	36.26	7.49	46.26	100	280	Average
#5470	55.67	58.17	68.3	-12.63	36.27	7.49	46.26	100	280	Peak
5580	97.53	99.85			36.33	7.58	46.23	100	280	Peak
5580	86.12	88.44			36.33	7.58	46.23	100	280	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	56.36	58.65	74	-17.64	36.48	7.49	46.26	100	220	Peak
5460	42.86	45.15	54	-11.14	36.48	7.49	46.26	100	220	Average
#5470	55.26	57.55	68.3	-13.04	36.48	7.49	46.26	100	220	Peak
5580	100.93	103.03			36.55	7.58	46.23	100	220	Peak
5580	90.49	92.59			36.55	7.58	46.23	100	220	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5580MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	99.16	101.27			36.38	7.7	46.19	100	240	Peak
5700	86.49	88.6			36.38	7.7	46.19	100	240	Average
#5725	57.26	59.33	68.3	-11.04	36.39	7.73	46.19	100	240	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	101.33	103.2			36.62	7.7	46.19	100	220	Peak
5700	91.09	92.96			36.62	7.7	46.19	100	220	Average
#5725	58.24	60.07	68.3	-10.06	36.63	7.73	46.19	100	220	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5700MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	56.48	58.98	68.3	-11.82	36.27	7.49	46.26	200	0	Peak
5720	89.05	91.13			36.39	7.72	46.19	200	0	Peak
5720	76.82	78.9			36.39	7.72	46.19	200	0	Average
#5850	58.99	60.84	68.3	-9.31	36.44	7.86	46.15	200	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	59.22	61.51	68.3	-9.08	36.48	7.49	46.26	100	0	Peak
5720	91.95	93.79			36.63	7.72	46.19	100	0	Peak
5720	81.39	83.23			36.63	7.72	46.19	100	0	Average
#5850	61.62	63.2	68.3	-6.68	36.71	7.86	46.15	100	0	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5720MHz: Fundamental frequency.
3. #: Out of restricted band.

802.11n (20MHz)

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.77	58.28	74	-18.23	36.26	7.49	46.26	100	280	Peak
5460	42.69	45.2	54	-11.31	36.26	7.49	46.26	100	280	Average
#5470	56.52	59.02	68.3	-11.78	36.27	7.49	46.26	100	280	Peak
5500	92.84	95.29			36.3	7.5	46.25	100	280	Peak
5500	80.41	82.86			36.3	7.5	46.25	100	280	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.62	57.91	74	-18.38	36.48	7.49	46.26	100	220	Peak
5460	42.76	45.05	54	-11.24	36.48	7.49	46.26	100	220	Average
#5470	55.71	58	68.3	-12.59	36.48	7.49	46.26	100	220	Peak
5500	97.84	100.09			36.5	7.5	46.25	100	220	Peak
5500	84.75	87			36.5	7.5	46.25	100	220	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5500MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	54.56	57.07	74	-19.44	36.26	7.49	46.26	100	280	Peak
5460	42.11	44.62	54	-11.89	36.26	7.49	46.26	100	280	Average
#5470	55.96	58.46	68.3	-12.34	36.27	7.49	46.26	100	280	Peak
5580	92.77	95.09			36.33	7.58	46.23	100	280	Peak
5580	79.55	81.87			36.33	7.58	46.23	100	280	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.38	57.67	74	-18.62	36.48	7.49	46.26	100	220	Peak
5460	42.72	45.01	54	-11.28	36.48	7.49	46.26	100	220	Average
#5470	55.52	57.81	68.3	-12.78	36.48	7.49	46.26	100	220	Peak
5580	96.27	98.37			36.55	7.58	46.23	100	220	Peak
5580	85.27	87.37			36.55	7.58	46.23	100	220	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5580MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	96.28	98.39			36.38	7.7	46.19	100	285	Peak
5700	83.2	85.31			36.38	7.7	46.19	100	285	Average
#5725	57.5	59.57	68.3	-10.8	36.39	7.73	46.19	100	285	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	95.82	97.69			36.62	7.7	46.19	100	200	Peak
5700	82.65	84.52			36.62	7.7	46.19	100	200	Average
#5725	58.3	60.13	68.3	-10	36.63	7.73	46.19	100	200	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5700MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	55.66	58.16	68.3	-12.64	36.27	7.49	46.26	200	0	Peak
5720	87.39	89.47			36.39	7.72	46.19	200	0	Peak
5720	74.13	76.21			36.39	7.72	46.19	200	0	Average
#5850	57.91	59.76	68.3	-10.39	36.44	7.86	46.15	200	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	56.98	59.27	68.3	-11.32	36.48	7.49	46.26	100	360	Peak
5720	89.28	91.12			36.63	7.72	46.19	100	360	Peak
5720	79.61	81.45			36.63	7.72	46.19	100	360	Average
#5850	60.31	61.89	68.3	-7.99	36.71	7.86	46.15	100	360	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5720MHz: Fundamental frequency.
3. #: Out of restricted band.

802.11n (40MHz)

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	56.41	58.92	74	-17.59	36.26	7.49	46.26	100	340	Peak
5460	43.48	45.99	54	-10.52	36.26	7.49	46.26	100	340	Average
#5470	55.88	58.38	68.3	-12.42	36.27	7.49	46.26	100	340	Peak
5510	89.6	92.04			36.3	7.51	46.25	100	340	Peak
5510	76.55	78.99			36.3	7.51	46.25	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	56.81	59.1	74	-17.19	36.48	7.49	46.26	100	230	Peak
5460	43.88	46.17	54	-10.12	36.48	7.49	46.26	100	230	Average
#5470	56.24	58.53	68.3	-12.06	36.48	7.49	46.26	100	230	Peak
5510	92.69	94.92			36.51	7.51	46.25	100	230	Peak
5510	80.16	82.39			36.51	7.51	46.25	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5510MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	56.26	58.77	74	-17.74	36.26	7.49	46.26	100	335	Peak
5460	43.33	45.84	54	-10.67	36.26	7.49	46.26	100	335	Average
#5470	55.94	58.44	68.3	-12.36	36.27	7.49	46.26	100	335	Peak
5550	89.4	91.77			36.32	7.55	46.24	100	335	Peak
5550	78.25	80.62			36.32	7.55	46.24	100	335	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	57.19	59.48	74	-16.81	36.48	7.49	46.26	100	230	Peak
5460	43.65	45.94	54	-10.35	36.48	7.49	46.26	100	230	Average
#5470	55.86	58.15	68.3	-12.44	36.48	7.49	46.26	100	230	Peak
5550	93.61	95.77			36.53	7.55	46.24	100	230	Peak
5550	83.53	85.69			36.53	7.55	46.24	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5550MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5670	90.42	92.58			36.37	7.67	46.2	100	340	Peak
5670	80.39	82.55			36.37	7.67	46.2	100	340	Average
#5725	58.3	60.37	68.3	-10	36.39	7.73	46.19	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5670	92.58	94.51			36.6	7.67	46.2	100	230	Peak
5670	81.58	83.51			36.6	7.67	46.2	100	230	Average
#5725	58.49	60.32	68.3	-9.81	36.63	7.73	46.19	100	230	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5670MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	55.76	58.26	68.3	-12.54	36.27	7.49	46.26	200	0	Peak
5710	86.78	88.88			36.38	7.71	46.19	200	0	Peak
5710	74.4	76.5			36.38	7.71	46.19	200	0	Average
#5850	57.82	59.67	68.3	-10.48	36.44	7.86	46.15	200	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	56.17	58.46	68.3	-12.13	36.48	7.49	46.26	100	360	Peak
5710	87.28	89.13			36.63	7.71	46.19	100	360	Peak
5710	78.18	80.03			36.63	7.71	46.19	100	360	Average
#5850	58.21	59.79	68.3	-10.09	36.71	7.86	46.15	100	360	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5710MHz: Fundamental frequency.
3. #: Out of restricted band.

802.11ac (80MHz)

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.68	58.19	74	-18.32	36.26	7.49	46.26	100	340	Peak
5460	42.96	45.47	54	-11.04	36.26	7.49	46.26	100	340	Average
#5470	55.41	57.91	68.3	-12.89	36.27	7.49	46.26	100	340	Peak
5530	82.19	84.59			36.31	7.53	46.24	100	340	Peak
5530	69.54	71.94			36.31	7.53	46.24	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	56.29	58.58	74	-17.71	36.48	7.49	46.26	100	230	Peak
5460	43.24	45.53	54	-10.76	36.48	7.49	46.26	100	230	Average
#5470	55.63	57.92	74	-18.37	36.48	7.49	46.26	100	230	Peak
5530	87.44	89.63			36.52	7.53	46.24	100	230	Peak
5530	74.58	76.77			36.52	7.53	46.24	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5530MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 122	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5610	82.81	85.08			36.34	7.61	46.22	100	340	Peak
5610	71.53	73.8			36.34	7.61	46.22	100	340	Average
#5725	58.7	60.77	68.3	-9.6	36.39	7.73	46.19	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5610	84.28	86.32			36.57	7.61	46.22	100	230	Peak
5610	70.94	72.98			36.57	7.61	46.22	100	230	Average
#5725	58.62	60.45	68.3	-9.68	36.63	7.73	46.19	100	230	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5610MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 138	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	53.8	58.87	68.3	-14.5	33.7	7.49	46.26	200	0	Peak
5690	85.35	89.93			33.93	7.69	46.2	200	0	Peak
5690	71.58	76.16			33.93	7.69	46.2	200	0	Average
#5850	55.5	59.67	68.3	-12.8	34.12	7.86	46.15	200	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
#5470	57.37	59.66	68.3	-10.93	36.48	7.49	46.26	100	0	Peak
5690	88.59	90.49			36.61	7.69	46.2	100	0	Peak
5690	79.22	81.12			36.61	7.69	46.2	100	0	Average
#5850	58.61	60.19	68.3	-9.69	36.71	7.86	46.15	100	0	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5690MHz: Fundamental frequency.
3. #: Out of restricted band.

Band 4:

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	98.91	100.94			36.4	7.75	46.18	100	340	Peak
5745	88.4	90.43			36.4	7.75	46.18	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	103.12	104.9			36.65	7.75	46.18	100	230	Peak
5745	92.15	93.93			36.65	7.75	46.18	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.

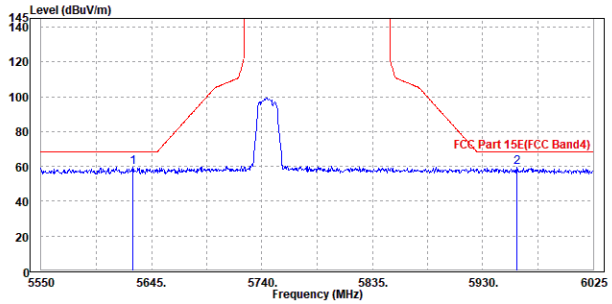
OOBE DATA

802.11a

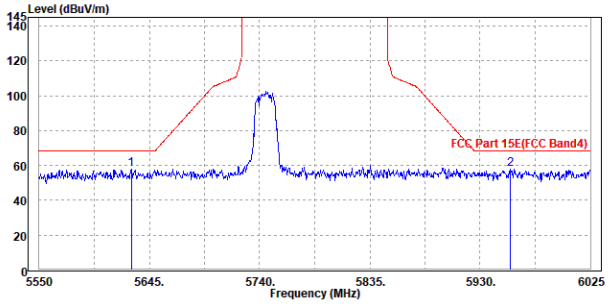
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5628.85	59.62	61.85	68.3	-8.68	36.35	7.63	46.21	100	340	Peak
5958.975	59.81	61.48	68.3	-8.49	36.48	7.97	46.12	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5629.325	57.65	59.65	68.3	-10.65	36.58	7.63	46.21	100	230	Peak
5956.125	57.83	59.21	68.3	-10.47	36.77	7.97	46.12	100	230	Peak

CH 149

Horiontal



Vertical



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	100.93	102.9			36.41	7.79	46.17	100	340	Peak
5785	89.31	91.28			36.41	7.79	46.17	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	104.93	106.64			36.67	7.79	46.17	100	230	Peak
5785	92.65	94.36			36.67	7.79	46.17	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

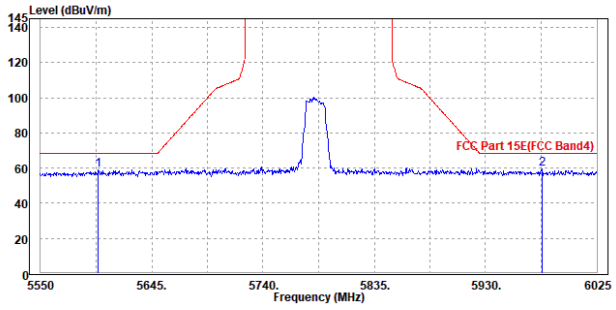
OOBE DATA

802.11a

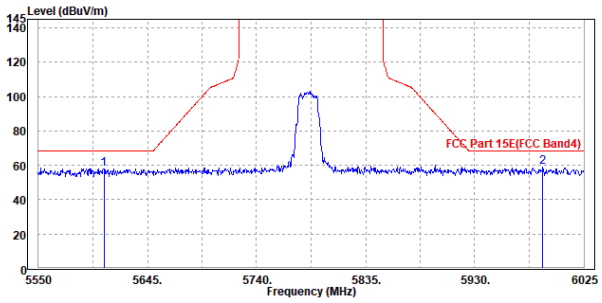
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5599.4	58.93	61.21	68.3	-9.37	36.34	7.6	46.22	100	340	Peak
5977.975	59.78	61.42	68.3	-8.52	36.49	7.99	46.12	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5607	58.15	60.2	68.3	-10.15	36.56	7.61	46.22	100	230	Peak
5989.375	58.72	60.04	68.3	-9.58	36.79	8	46.11	100	230	Peak

CH 157

Horiontal



Vertical



CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5825	86.93	91.17			34.09	7.83	46.16	100	0	Peak
5825	75.99	80.23			34.09	7.83	46.16	100	0	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5825	93.53	95.17			36.69	7.83	46.16	100	360	Peak
5825	81.66	83.3			36.69	7.83	46.16	100	360	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

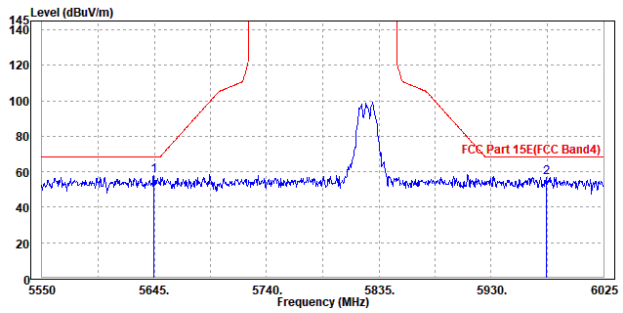
OOBE DATA

802.11a

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5644.525	57.87	60.07	68.3	-10.43	36.36	7.65	46.21	100	320	Peak
5977.025	57.06	58.7	68.3	-11.24	36.49	7.99	46.12	100	320	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5628.375	58.95	60.95	68.3	-9.35	36.58	7.63	46.21	100	350	Peak
5976.075	60.05	61.39	68.3	-8.25	36.79	7.99	46.12	100	350	Peak

CH 165

Horiontal



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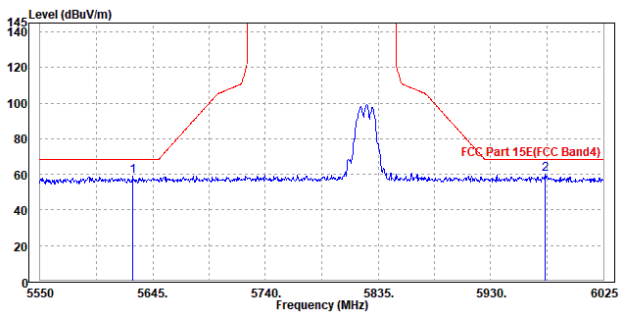


802.11n (20MHz)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	96.81	98.84			36.4	7.75	46.18	100	340	Peak
5745	85.6	87.63			36.4	7.75	46.18	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	100.2	101.98			36.65	7.75	46.18	100	230	Peak
5745	89.25	91.03			36.65	7.75	46.18	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.

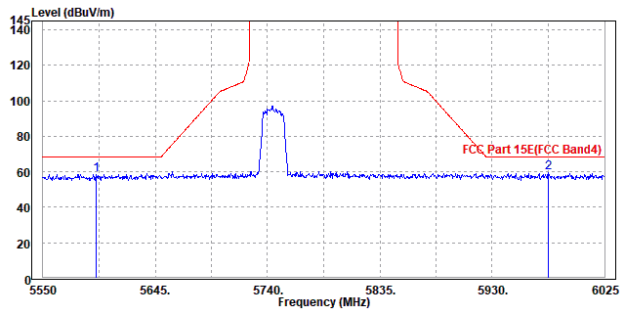
OOBE DATA

802.11n (20MHZ)

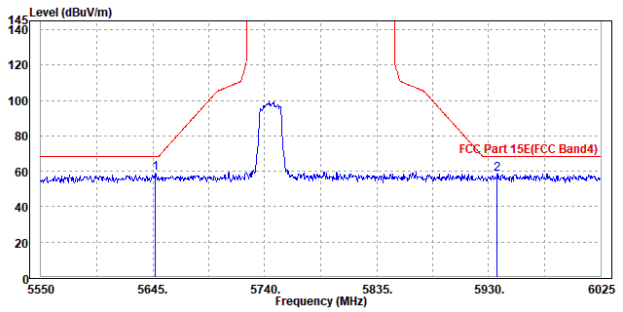
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5595.125	58.48	60.76	68.3	-9.82	36.34	7.6	46.22	100	340	Peak
5977.5	59.46	61.1	68.3	-8.84	36.49	7.99	46.12	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5647.375	58.8	60.77	68.3	-9.5	36.59	7.65	46.21	100	230	Peak
5937.125	58.61	60.03	68.3	-9.69	36.76	7.95	46.13	100	230	Peak

CH 149

Horiontal



Vertical



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	95.96	97.93			36.41	7.79	46.17	100	340	Peak
5785	85.54	87.51			36.41	7.79	46.17	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	100.4	102.11			36.67	7.79	46.17	100	230	Peak
5785	88.22	89.93			36.67	7.79	46.17	100	230	Average

REMARKS:

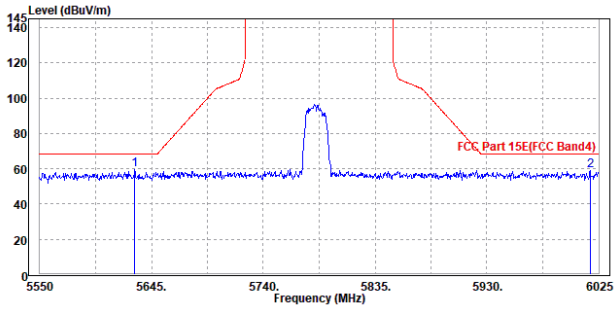
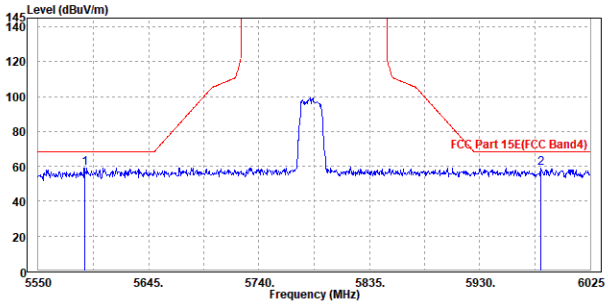
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

OOBE DATA

802.11n (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5630.75	59.39	61.62	68.3	-8.91	36.35	7.63	46.21	100	340	Peak
6017.875	58.78	60.39	68.3	-9.52	36.51	7.98	46.1	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5589.9	59.19	61.27	68.3	-9.11	36.55	7.59	46.22	100	230	Peak
5982.25	59.2	60.53	68.3	-9.1	36.79	7.99	46.11	100	230	Peak

CH 157

Horiontal	Vertical
	

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5825	85.92	90.16			34.09	7.83	46.16	100	0	Peak
5825	75.74	79.98			34.09	7.83	46.16	100	0	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5825	93.59	95.23			36.69	7.83	46.16	200	360	Peak
5825	81.54	83.18			36.69	7.83	46.16	200	360	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

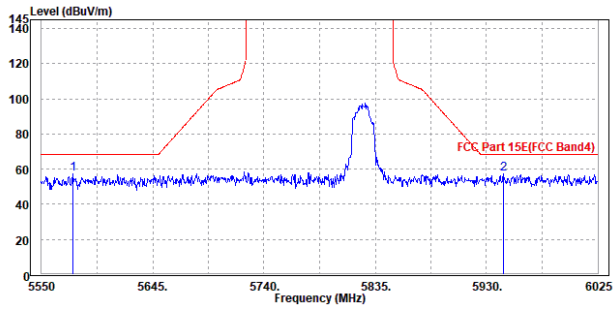
OOBE DATA

802.11n (20MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5576.6	57.18	59.5	68.3	-11.12	36.33	7.58	46.23	100	320	Peak
5944.25	57.36	59.06	68.3	-10.94	36.48	7.95	46.13	100	320	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5629.325	59.19	61.19	68.3	-9.11	36.58	7.63	46.21	100	350	Peak
5954.7	59.79	61.18	68.3	-8.51	36.77	7.96	46.12	100	350	Peak

CH 165

Horiontal



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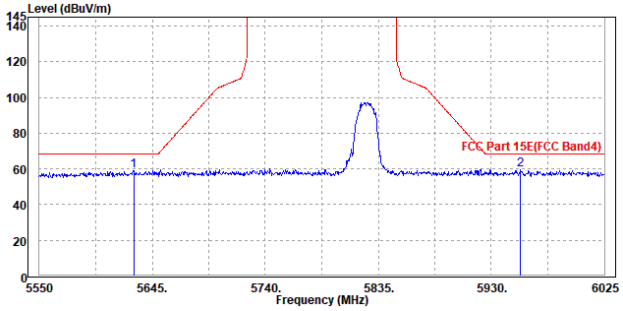


802.11n (40MHz)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	90.34	92.36			36.4	7.76	46.18	100	340	Peak
5755	79.95	81.97			36.4	7.76	46.18	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	95.56	97.33			36.65	7.76	46.18	100	230	Peak
5755	84.96	86.73			36.65	7.76	46.18	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5755MHz: Fundamental frequency.

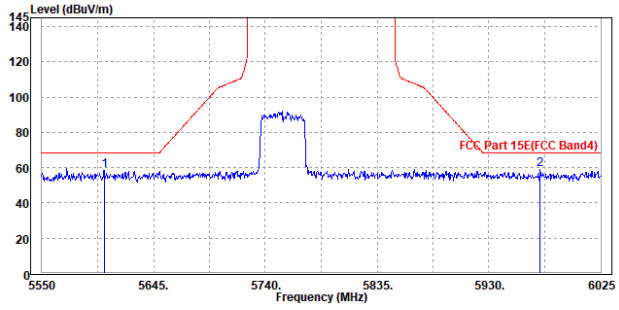
OOBE DATA

802.11n (40MHZ)

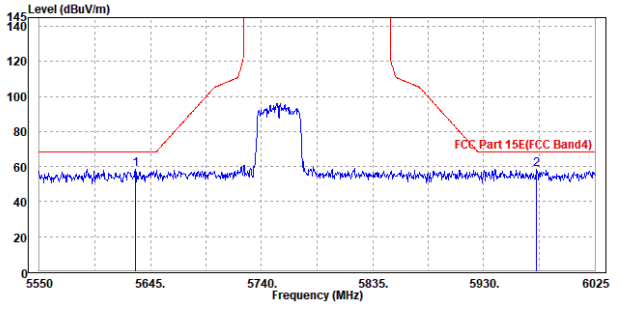
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5603.2	58.36	60.63	68.3	-9.94	36.34	7.61	46.22	100	340	Peak
5973.7	59.15	60.8	68.3	-9.15	36.49	7.98	46.12	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5632.175	58.28	60.28	68.3	-10.02	36.58	7.63	46.21	100	230	Peak
5975.125	58.19	59.54	68.3	-10.11	36.79	7.98	46.12	100	230	Peak

CH 151

Horiontal



Vertical



CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5795	90.48	92.43			36.42	7.8	46.17	100	340	Peak
5795	79.62	81.57			36.42	7.8	46.17	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5795	94.59	96.28			36.68	7.8	46.17	100	230	Peak
5795	82.63	84.32			36.68	7.8	46.17	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5795MHz: Fundamental frequency.

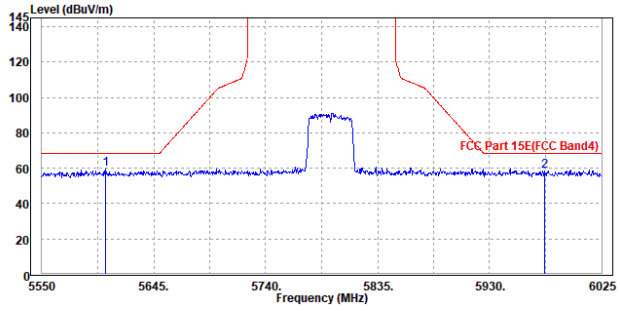
OOBE DATA

802.11n (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5604.15	59.46	61.73	68.3	-8.84	36.34	7.61	46.22	100	340	Peak
5976.55	58.49	60.13	68.3	-9.81	36.49	7.99	46.12	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5638.825	58.99	60.98	68.3	-9.31	36.58	7.64	46.21	100	230	Peak
5984.15	58.45	59.78	68.3	-9.85	36.79	7.99	46.11	100	230	Peak

CH 159

Horiontal



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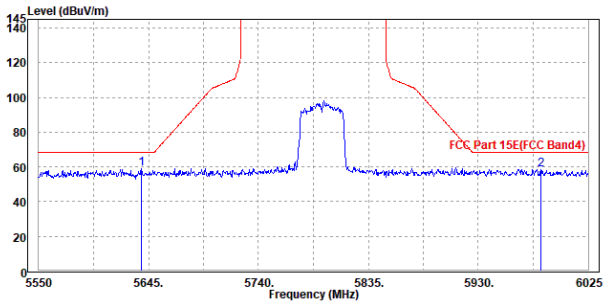


802.11ac (80MHz)

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5775	84.8	86.78			36.41	7.78	46.17	100	340	Peak
5775	73.64	75.62			36.41	7.78	46.17	100	340	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5775	89.44	91.16			36.67	7.78	46.17	100	230	Peak
5775	78.55	80.27			36.67	7.78	46.17	100	230	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5775MHz: Fundamental frequency.

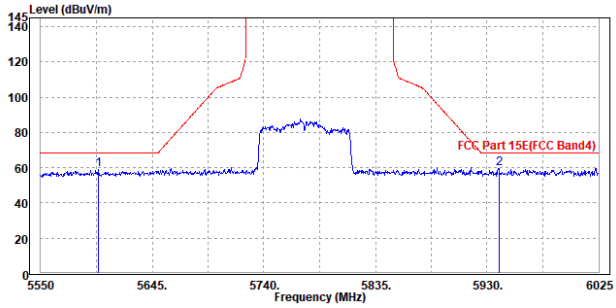
OOBE DATA

802.11ac (80MHZ)

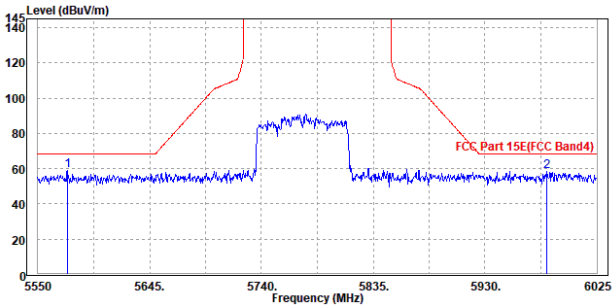
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5599.4	58.99	61.27	68.3	-9.31	36.34	7.6	46.22	100	340	Peak
5939.97	59.46	61.16	68.3	-8.84	36.48	7.95	46.13	100	340	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5575.17	58.88	60.98	68.3	-9.42	36.55	7.58	46.23	100	230	Peak
5982.72	58.29	59.62	68.3	-10.01	36.79	7.99	46.11	100	230	Peak

CH 155

Horiontal



Vertical



3.2 OUT OF BAND EMISSION MEASUREMENT

3.2.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

	APPLICABLE TO	EIRP LIMIT (dBm/MHz)
OUT OF THE RESTRICTED BANDS	15.407(b)(1)	-27
	15.407(b)(2)	
	15.407(b)(3)	
	15.407(b)(4)	See note

NOTE:

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

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

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

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

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 24,19	Jun. 23,20
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 24,19	Jun. 23,20

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF OVEN ROOM.
3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

3.2.3 TEST PROCEDURES

a. Cheak the calibration of the measurement instrument using either an internal calibrator or a known signal from an external generator.

b. The resolution bandwidth is set to 1MHzThe Video bandwidth is set to ≥1MHz, report the peak value out of oprating band.

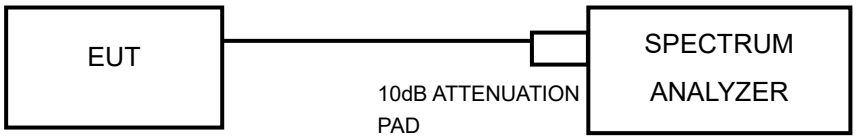
c. Repeat above procedures until all frequencies measured wre complete.

NOTE: All modes of operation were investigated and the worst-case emissions are reported,antenna gain was added into the test result.

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



3.2.6 EUT OPERATING CONDITION

a. Set the EUT under full load condition and placed them on a testing table.

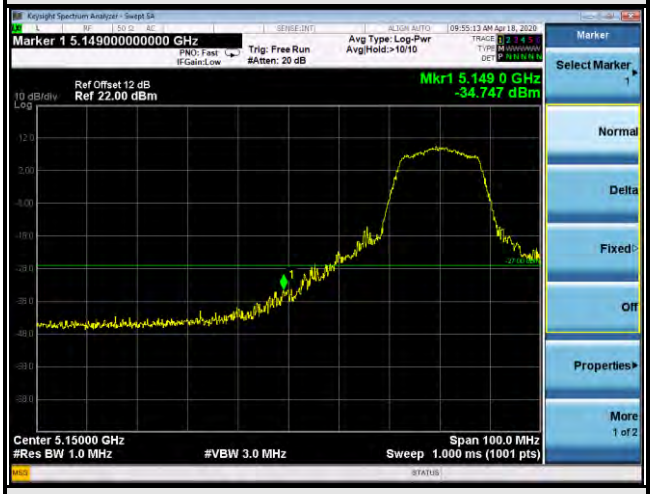
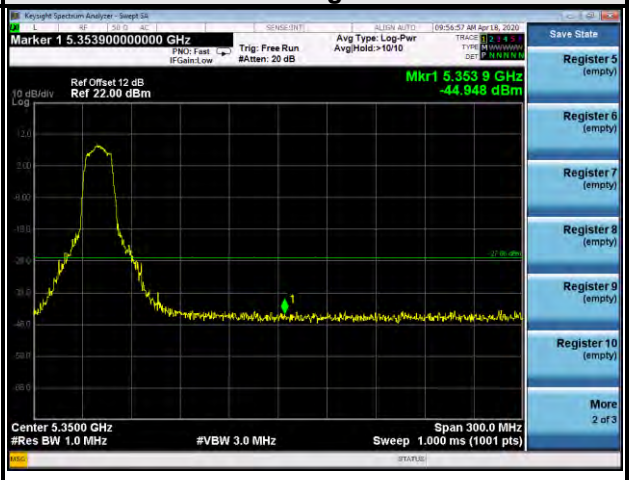
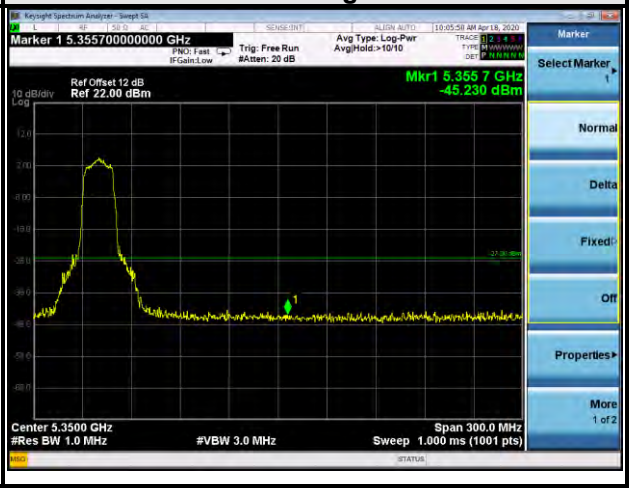
b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.

c. The necessary accessories enable the EUT in full functions.

++

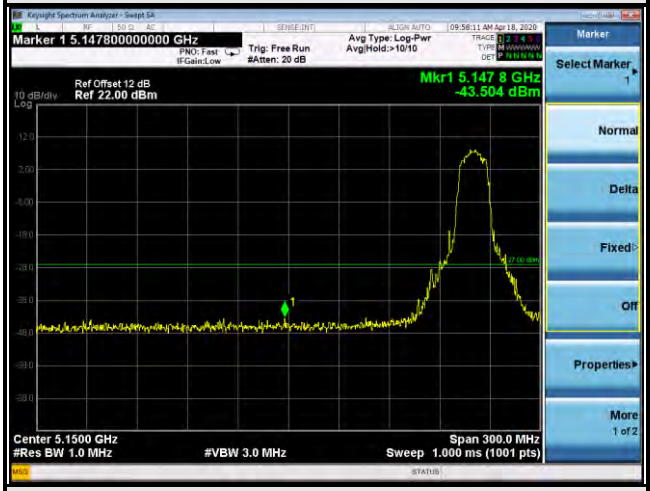
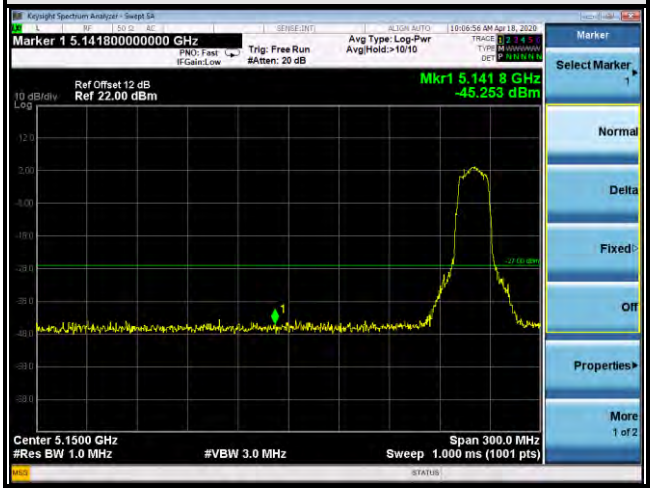
3.2.7 TEST RESULTS

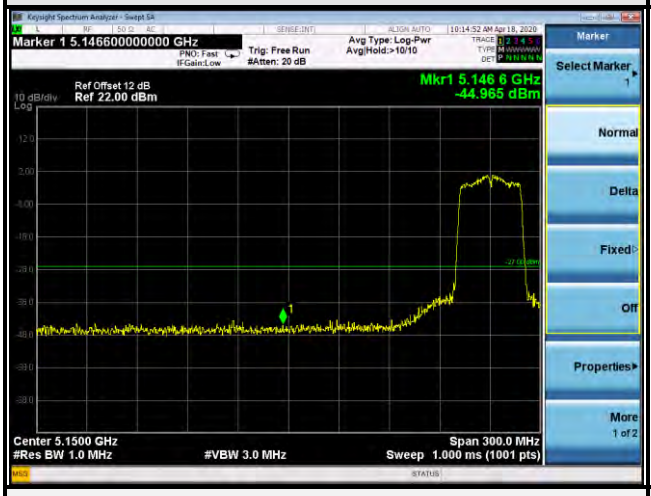
For U-NII-1:

SPECTRUM PLOT OF BANDEDGE	
802.11a Left Side	802.11a Right Side
	
802.11n20 Left Side	802.11n20 Right Side
	

802.11n40 Left Side	802.11n40 Right Side
	
802.11ac80 Left Side	**802.11ac80 Right Side**
	

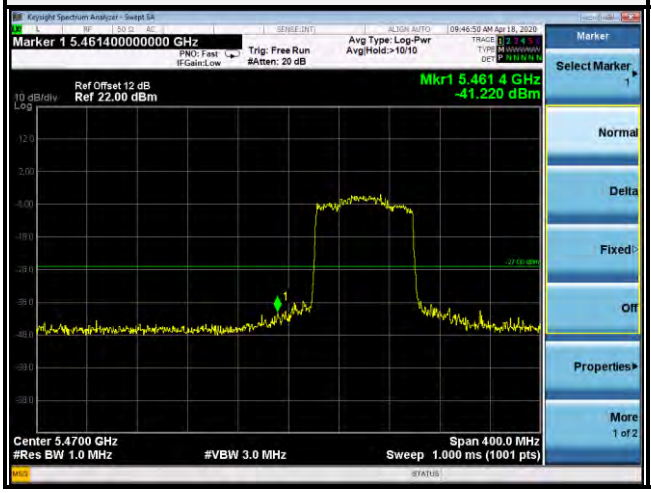
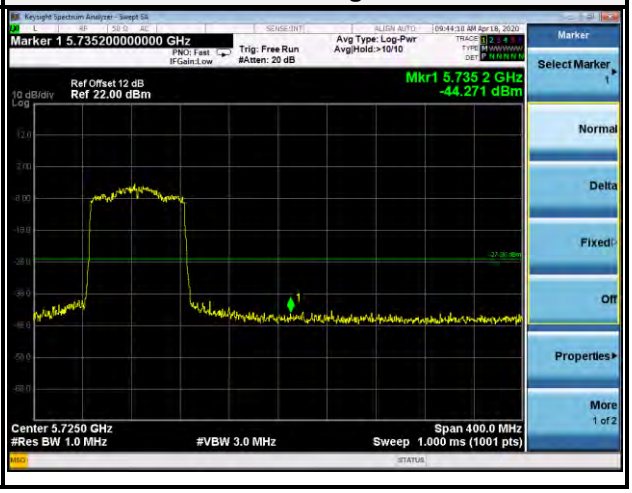
For U-NII-2A:

SPECTRUM PLOT OF BANDEDGE	
802.11a Left Side	802.11a Right Side
	
802.11n20 Left Side	802.11n20 Right Side
	

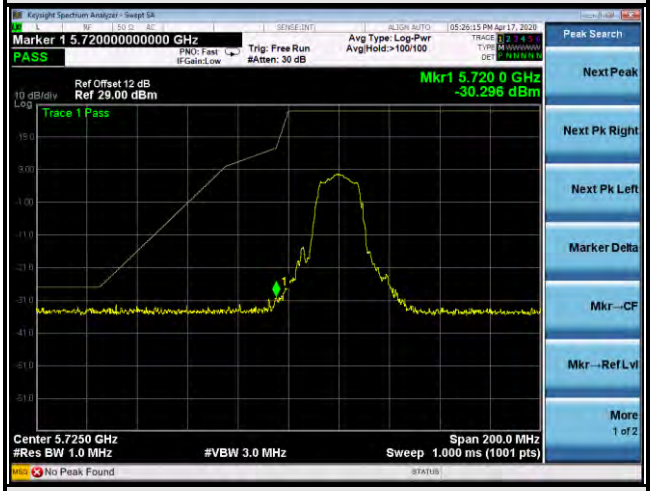
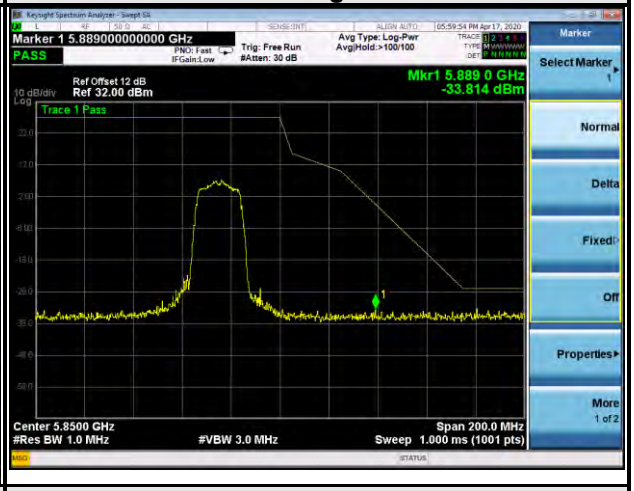
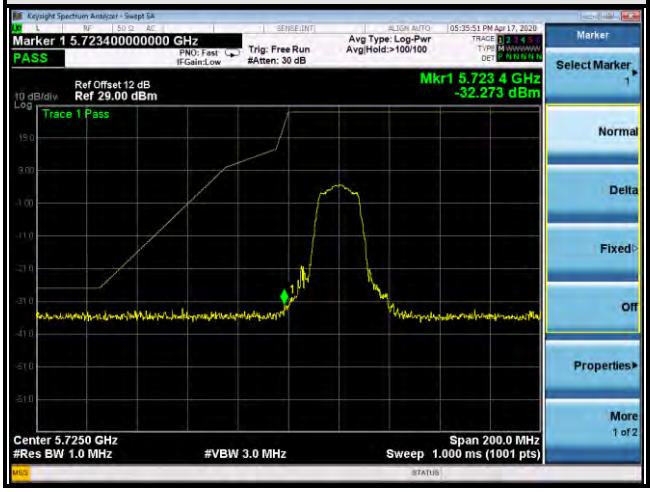
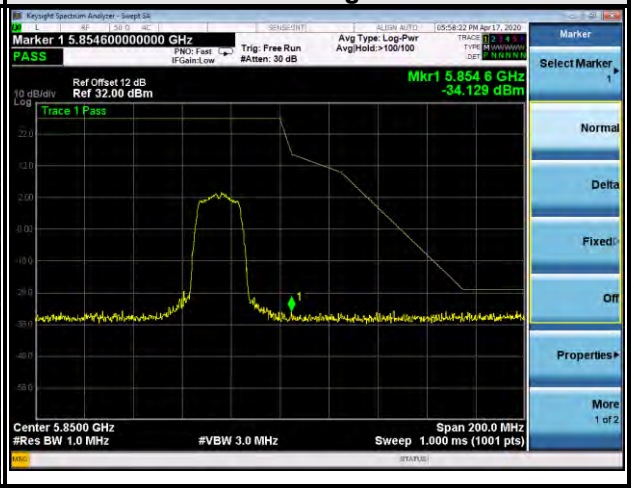
802.11n40 Left Side	802.11n40 Right Side
	
802.11ac80 Left Side	**802.11ac80 Right Side**
	

For U-NII-2C:

SPECTRUM PLOT OF BANDEDGE	
802.11a Left Side	802.11a Right Side
	
802.11n20 Left Side	802.11n20 Right Side
	

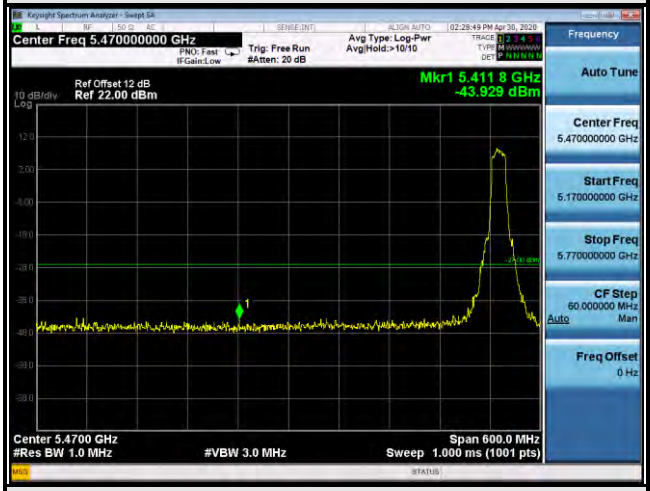
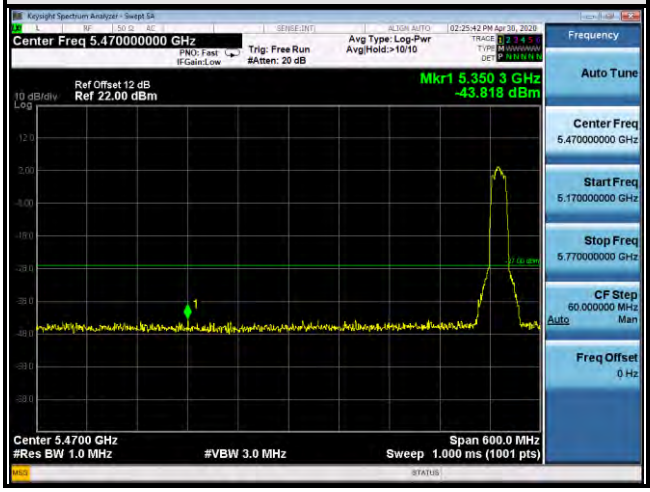
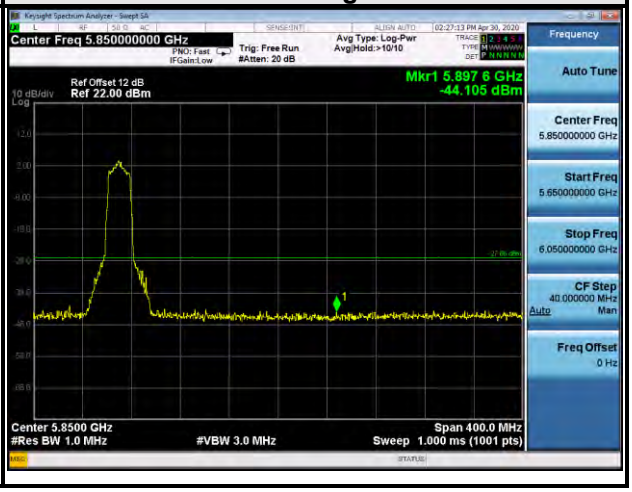
802.11n40 Left Side	802.11n40 Right Side
	
802.11ac80 Left Side	**802.11ac80 Right Side**
	

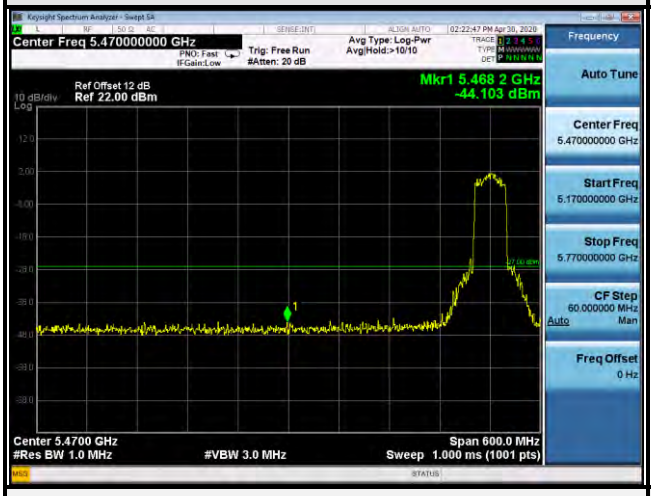
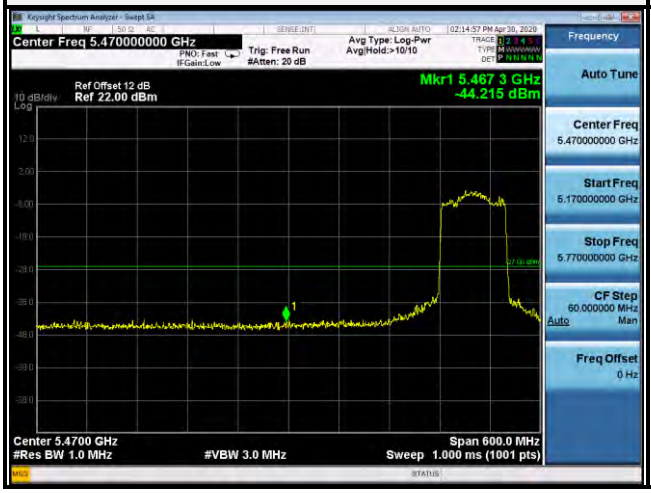
For U-NII-3:

SPECTRUM PLOT OF BANDEDGE	
802.11a Left Side	802.11a Right Side
	
802.11n20 Left Side	802.11n20 Right Side
	

802.11n40 Left Side	802.11n40 Right Side
	
802.11ac80 Left Side	**802.11ac80 Right Side**
	

For CH 144 142 138:

SPECTRUM PLOT OF BANDEDGE	
802.11a Left Side	802.11a Right Side
	
802.11n20 Left Side	802.11n20 Right Side
	

802.11n40 Left Side	802.11n40 Right Side
	
802.11ac80 Left Side	**802.11ac80 Right Side**
	

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Feb. 28,20	Feb. 27,21
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Feb. 28,20	Feb. 27,21

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.3.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

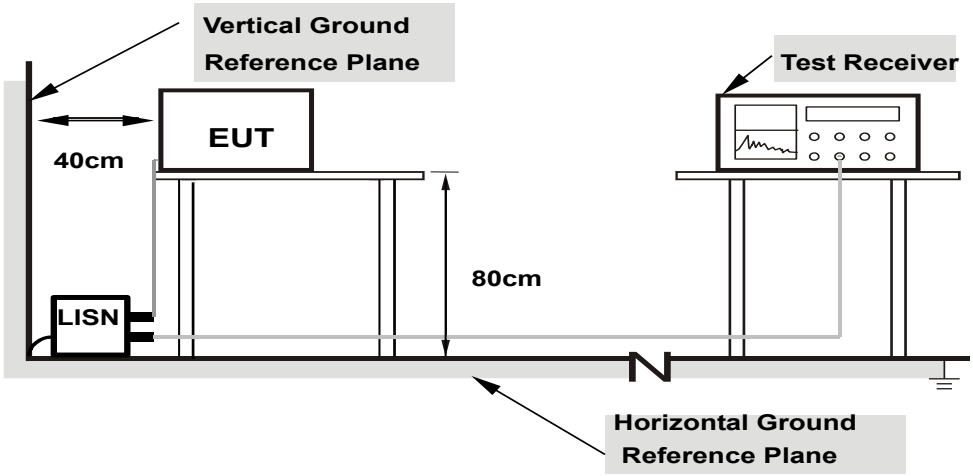
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.3.4 DEVIATION FROM TEST STANDARD

No deviation.

3.3.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.3.6 EUT OPERATING CONDITIONS

Same as 3.1.7.

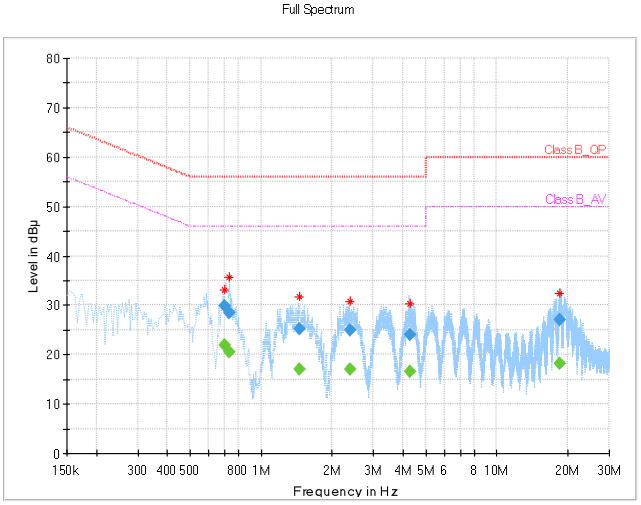
3.3.7 TEST RESULTS

CONDUCTED WORST-CASE DATA :

Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23deg. C, 52RH
Tested By	Chase Zhou		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.704000	29.94	---	56.00	-26.06	L	ON	9.7
0.704000	---	21.90	46.00	-24.10	L	ON	9.7
0.736000	28.56	---	56.00	-27.44	L	ON	9.7
0.736000	---	20.58	46.00	-25.42	L	ON	9.7
1.452000	---	17.09	46.00	-28.91	L	ON	9.7
1.452000	25.11	---	56.00	-30.89	L	ON	9.7
2.380000	---	17.11	46.00	-28.89	L	ON	9.8
2.380000	24.95	---	56.00	-31.05	L	ON	9.8
4.268000	---	16.55	46.00	-29.45	L	ON	9.8
4.268000	24.06	---	56.00	-31.94	L	ON	9.8
18.532000	---	18.18	50.00	-31.82	L	ON	10.0
18.532000	27.08	---	60.00	-32.92	L	ON	10.0

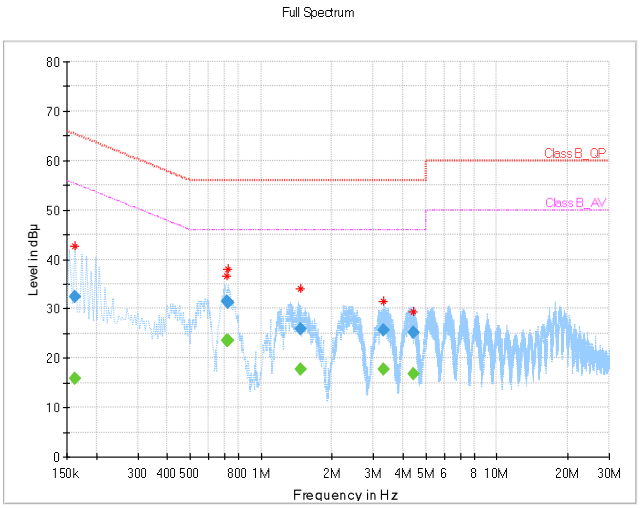
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	23deg. C, 52RH
Tested By	Chase Zhou		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.162000	32.38	---	65.36	-32.98	N	ON	9.8
0.162000	---	15.92	55.36	-39.44	N	ON	9.8
0.720000	31.58	---	56.00	-24.42	N	ON	9.8
0.720000	**---**	**23.59**	**46.00**	**-22.41**	**N**	**ON**	**9.8**
0.724000	31.30	---	56.00	-24.70	N	ON	9.8
0.724000	---	23.58	46.00	-22.42	N	ON	9.8
1.472000	25.88	---	56.00	-30.12	N	ON	9.8
1.472000	---	17.79	46.00	-28.21	N	ON	9.8
3.296000	25.75	---	56.00	-30.25	N	ON	9.8
3.296000	---	17.77	46.00	-28.23	N	ON	9.8
4.448000	25.20	---	56.00	-30.80	N	ON	9.8
4.448000	---	16.85	46.00	-29.15	N	ON	9.8

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



3.4 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

3.4.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

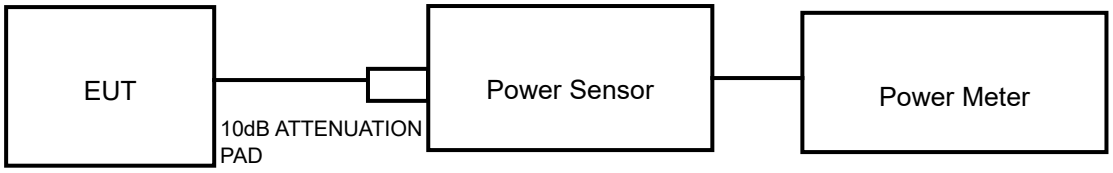
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client devices	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

NOTE: Where B is the 26dB emission bandwidth in MHz.

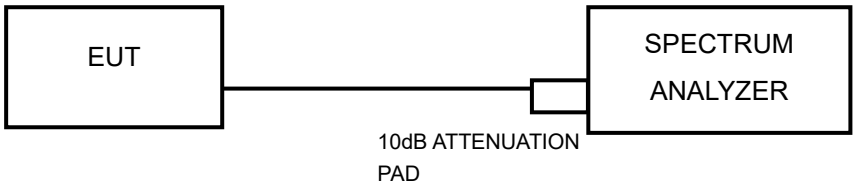
3.4.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

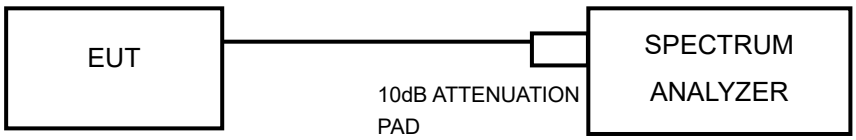
802.11a, 802.11n (20MHz), 802.11n (40MHz) TEST CONFIGURATION



11ac TEST CONFIGURATION



FOR 26dB BANDWIDTH



3.4.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	Feb. 28,20	Feb. 27,21
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Feb. 28,20	Feb. 27,21
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Feb. 28,20	Feb. 27,21
Power Sensor	ANRITSU	MA2411B	1339352	Feb. 28,20	Feb. 27,21

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

3.4.4 TEST PROCEDURE

FOR POWER MEASUREMENT

For 802.11a, 802.11n (20MHz), 802.11n (40MHz)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

For 802.11ac (80MHz)

1. Measure the duty cycle, x, of the transmitter output signal as described in II.B.
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1 MHz.
4. Set VBW ≥ 3 MHz.
5. Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto.
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
8. Do not use sweep triggering. Allow the sweep to “free run.”
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
10. Add 10 log (1/x), where x is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10 log (1/0.25) = 6 dB if the duty cycle is 25%.

FOR 99 PERCENT OCCUPIED BANDWIDTH

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

FOR 26dB BANDWIDTH

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

FOR 6dB BANDWIDTH

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

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

3.4.7 TEST RESULTS

OUTPUT POWER:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	Duty Factor	FINAL AVERAGE POWER (dBm)	FINAL AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	14.64	0.94	15.58	36.14	24	PASS
40	5200	14.80	0.94	15.74	**37.50**	24	PASS
48	5240	14.28	0.94	15.22	33.27	24	PASS
52	5260	14.57	0.94	15.51	35.56	24	PASS
60	5300	14.92	0.94	15.86	**38.55**	24	PASS
64	5320	14.80	0.94	15.74	37.50	24	PASS
100	5500	14.65	0.94	15.59	36.22	24	PASS
116	5580	15.23	0.94	16.17	**41.40**	24	PASS
140	5700	14.92	0.94	15.86	38.55	24	PASS
144	5720	13.58	0.94	14.52	28.31	24	PASS
144	5720	13.58	0.94	14.52	28.31	30	PASS
149	5745	14.25	0.94	15.19	33.04	30	PASS
157	5785	14.61	0.94	15.55	**35.89**	30	PASS
165	5825	14.52	0.94	15.46	35.16	30	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	Duty Factor	FINAL AVERAGE POWER (dBm)	FINAL AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	12.09	1.02	13.11	20.46	24	PASS
40	5200	12.34	1.02	13.36	21.68	24	PASS
48	5240	12.34	1.02	13.36	21.68	24	PASS
52	5260	11.34	1.02	12.36	17.22	24	PASS
60	5300	11.37	1.02	12.39	17.34	24	PASS
64	5320	11.59	1.02	12.61	18.24	24	PASS
100	5500	11.11	1.02	12.13	16.33	24	PASS
116	5580	12.01	1.02	13.03	20.09	24	PASS
140	5700	11.79	1.02	12.81	19.10	24	PASS
144	5720	11.57	1.02	12.59	18.16	24	PASS
144	5720	11.57	1.02	12.59	18.16	30	PASS
149	5745	12.38	1.02	13.40	21.88	30	PASS
157	5785	12.21	1.02	13.23	21.04	30	PASS
165	5825	12.23	1.02	13.25	21.13	30	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	Duty Factor	FINAL AVERAGE POWER (dBm)	FINAL AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	11.24	1.55	12.79	19.01	24	PASS
46	5230	11.07	1.55	12.62	18.28	24	PASS
54	5270	12.21	1.55	13.76	23.77	24	PASS
62	5310	11.11	1.55	12.66	18.45	24	PASS
102	5510	11.28	1.55	12.83	19.19	24	PASS
110	5550	12.21	1.55	13.76	23.77	24	PASS
134	5670	12.39	1.55	13.94	24.77	24	PASS
142	5710	11.63	1.55	13.18	20.80	24	PASS
142	5710	11.63	1.55	13.18	20.80	30	PASS
151	5755	11.66	1.55	13.21	20.94	30	PASS
159	5798	11.55	1.55	13.10	20.42	30	PASS

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	Duty Factor	FINAL AVERAGE POWER (dBm)	FINAL AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	8.10	2.24	10.34	10.81	24	PASS
58	5290	8.07	2.24	10.31	10.74	24	PASS
106	5530	8.24	2.24	10.48	11.17	24	PASS
122	5610	8.57	2.24	10.81	12.05	24	PASS
138	5690	8.21	2.24	10.45	11.09	24	PASS
138	5690	8.21	2.24	10.45	11.09	30	PASS
155	5775	8.17	2.24	10.41	10.99	30	PASS

99% OCCUPIED BANDWIDTH & 26dB BANDWIDTH/6dB BANDWIDTH DATA FROM:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
36	5180	16.56	20.77	PASS
40	5200	16.56	20.91	PASS
48	5240	16.56	20.86	PASS
52	5260	16.56	20.91	PASS
60	5300	16.56	20.80	PASS
64	5320	16.56	20.85	PASS
100	5500	16.56	20.89	PASS
116	5580	16.56	20.93	PASS
140	5700	16.56	20.91	PASS
144	5720	16.98	23.44	PASS
CHANNEL	**CHANNEL FREQUENCY**	**99% OCCUPIED BANDWIDTH**	**6dB BANDWIDTH**	**PASS/FAIL**
144	5720	16.98	17.29	PASS
149	5745	16.92	16.31	PASS
157	5785	16.86	16.31	PASS
165	5825	16.86	16.32	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
36	5180	18.06	21.94	PASS
40	5200	18.12	21.66	PASS
48	5240	18.06	21.76	PASS
52	5260	18.06	22.06	PASS
60	5300	17.94	21.55	PASS
64	5320	18.06	22.00	PASS
100	5500	18.00	21.99	PASS
116	5580	18.06	21.92	PASS
140	5700	18.12	21.93	PASS
144	5720	16.86	21.67	PASS
CHANNEL	**CHANNEL FREQUENCY**	**99% OCCUPIED BANDWIDTH**	**6dB BANDWIDTH**	**PASS/FAIL**
144	5720	16.86	17.33	PASS
149	5745	18.06	17.15	PASS
157	5785	18.12	17.14	PASS
165	5825	18.06	17.31	PASS

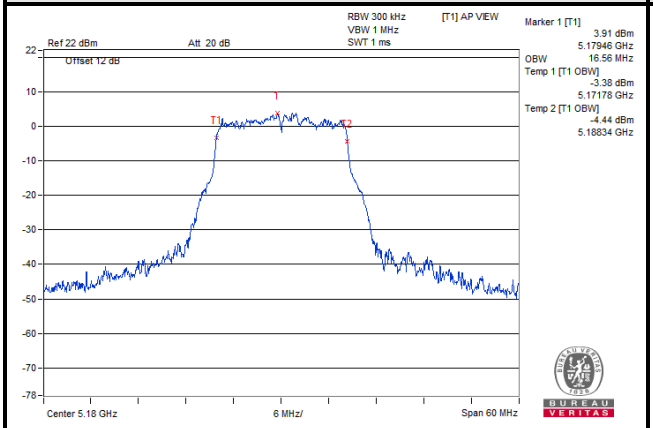
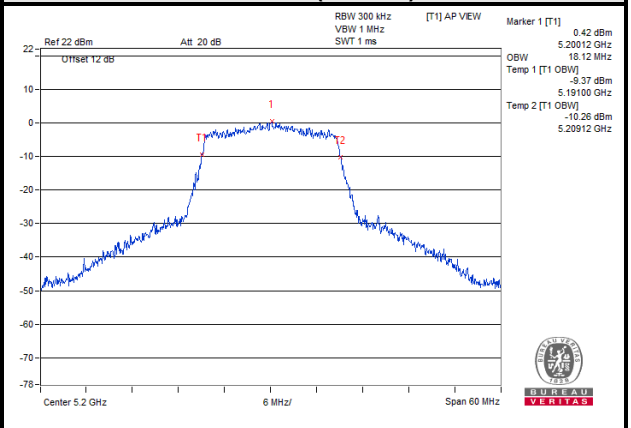
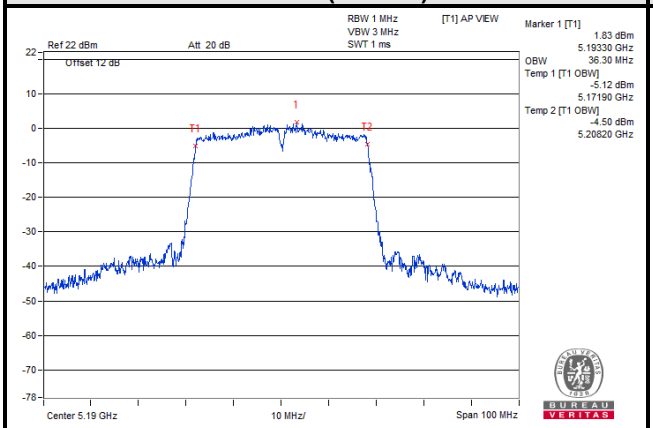
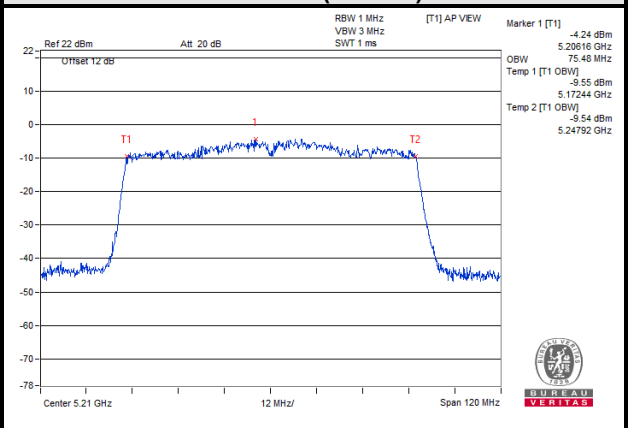
802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
38	5190	36.30	40.54	PASS
46	5230	36.30	40.43	PASS
54	5270	36.20	40.39	PASS
62	5310	36.30	40.34	PASS
102	5510	36.30	40.41	PASS
110	5550	36.20	40.58	PASS
134	5670	36.40	40.46	PASS
142	5710	36.36	40.62	PASS
CHANNEL	**CHANNEL FREQUENCY**	**99% OCCUPIED BANDWIDTH**	**6dB BANDWIDTH**	**PASS/FAIL**
142	5710	36.36	35.74	PASS
151	5755	36.48	35.76	PASS
159	5795	36.48	35.77	PASS

802.11ac (80MHz)

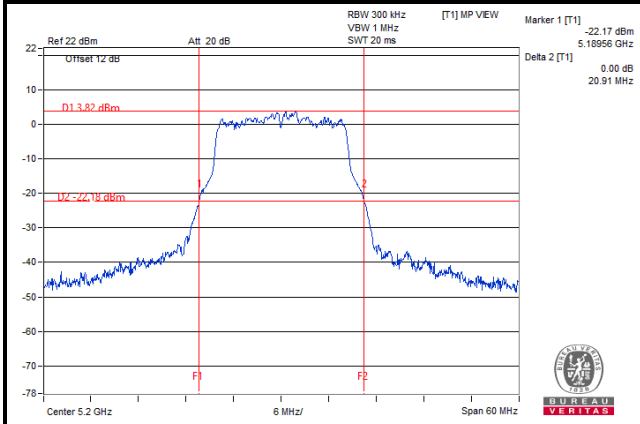
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
42	5210	75.48	80.99	PASS
58	5290	75.48	80.54	PASS
106	5530	75.48	80.90	PASS
122	5610	75.48	77.84	PASS
138	5690	75.60	80.55	PASS
CHANNEL	**CHANNEL FREQUENCY**	**99% OCCUPIED BANDWIDTH**	**6dB BANDWIDTH**	**PASS/FAIL**
138	5690	75.6	75.52	PASS
155	5775	75.6	75.55	PASS

For U-NII-1:

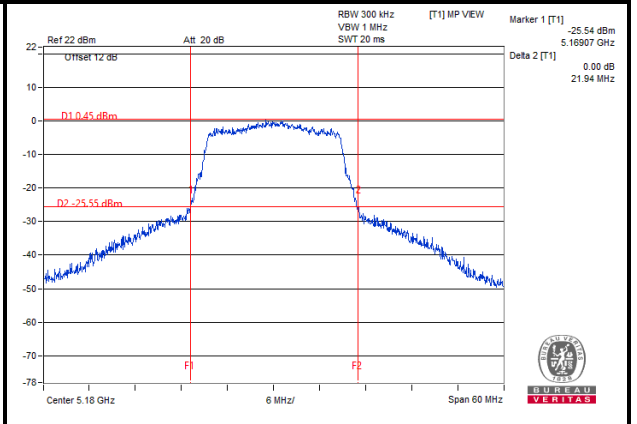
SPECTRUM PLOT OF WORST VALUE of 99% OCCUPIED BANDWIDTH	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

SPECTRUM PLOT OF WORST VALUE of 26dB Bandwidth

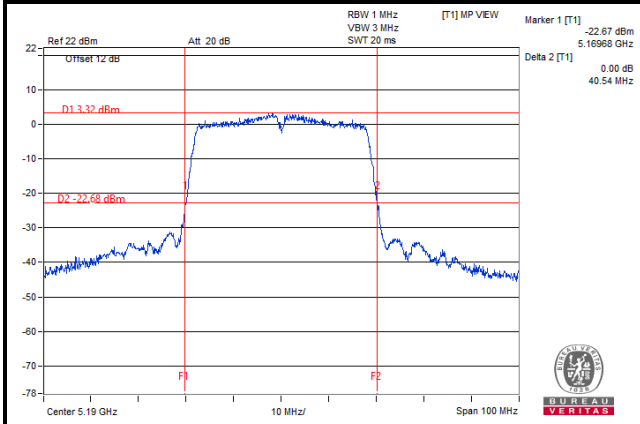
802.11a



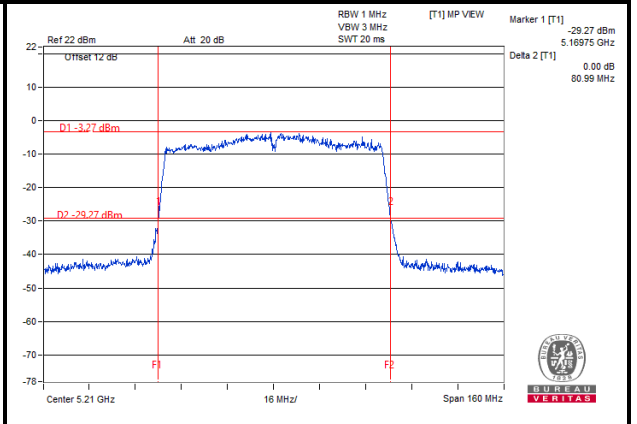
802.11n (20MHz)



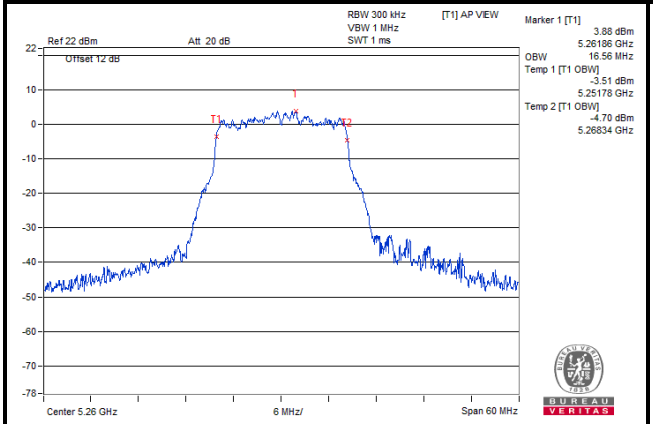
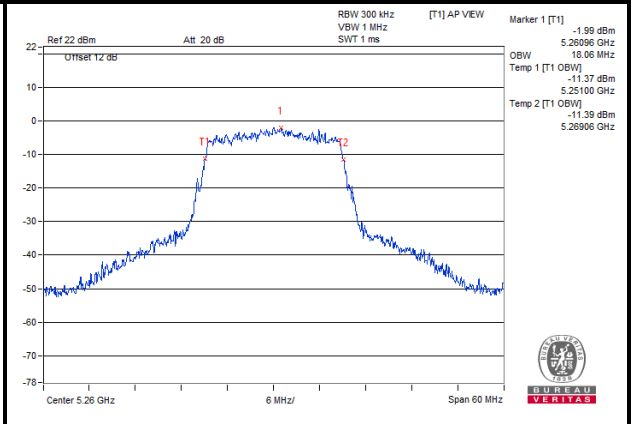
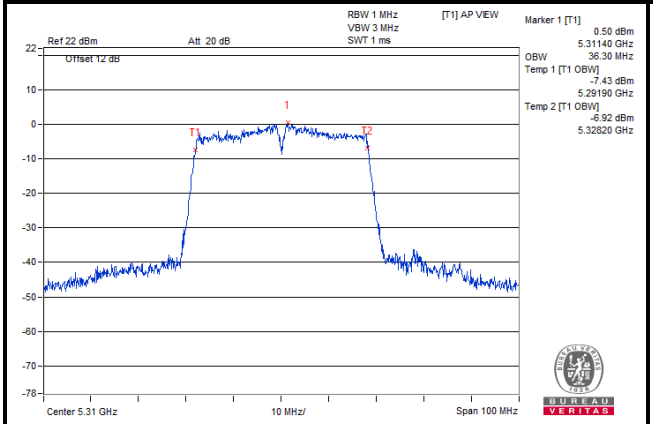
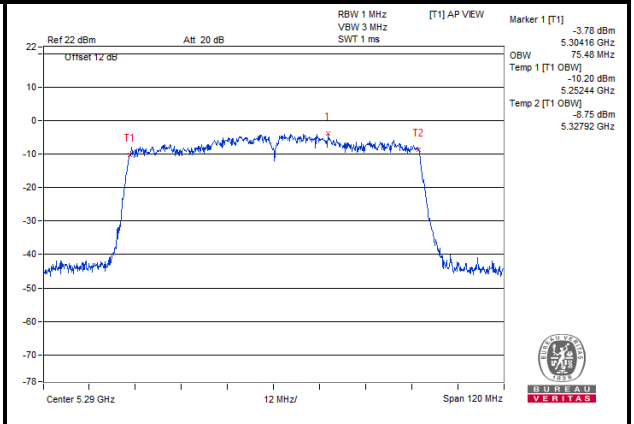
802.11n (40MHz)



802.11ac (80MHz)

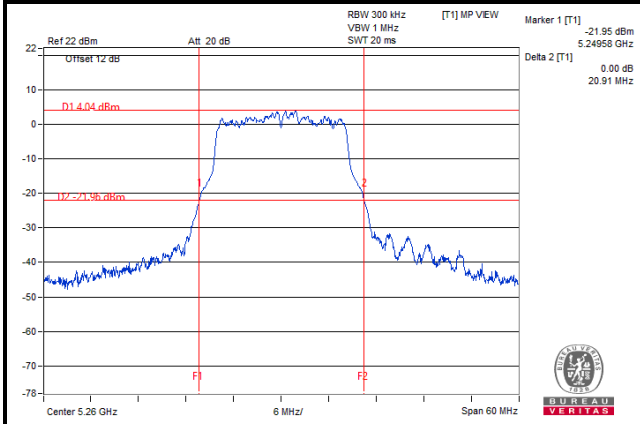


For U-NII-2A:

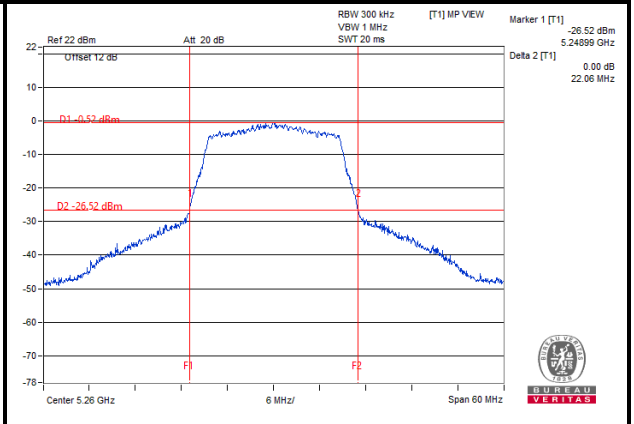
SPECTRUM PLOT OF WORST VALUE of 99% OCCUPIED BANDWIDTH	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

SPECTRUM PLOT OF WORST VALUE of 26dB Bandwidth

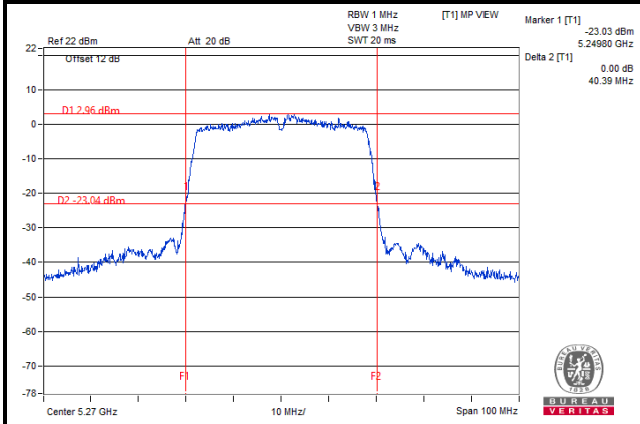
802.11a



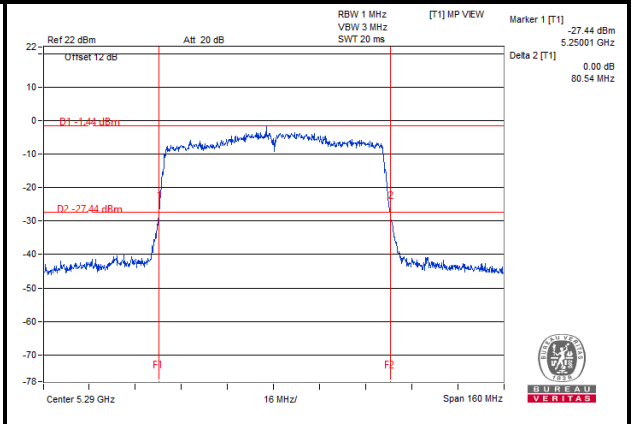
802.11n (20MHz)



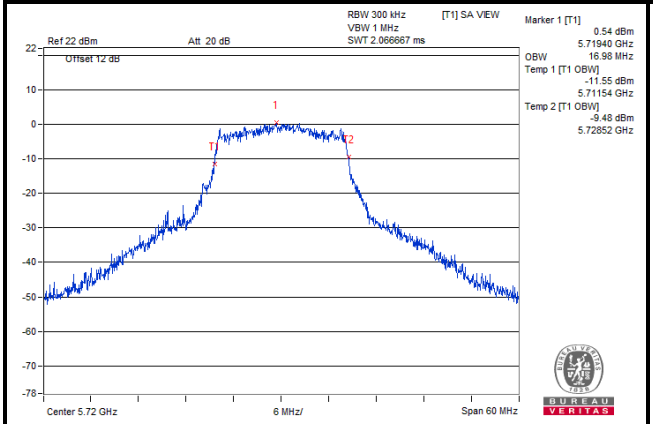
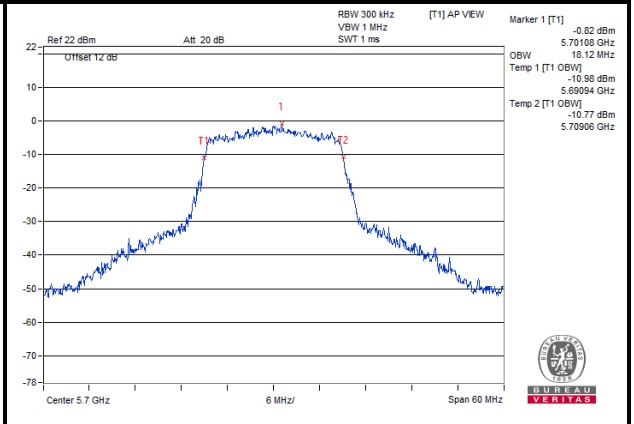
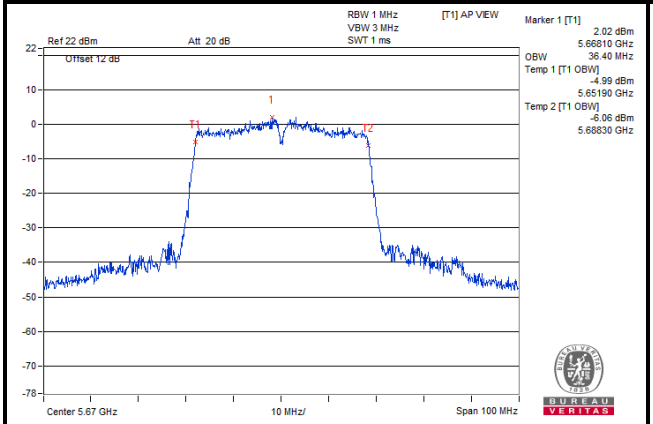
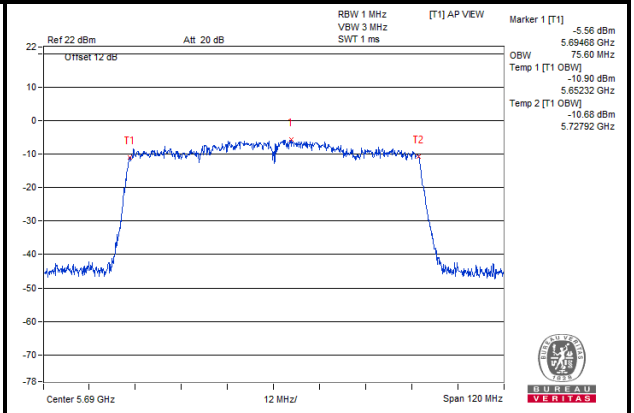
802.11n (40MHz)



802.11ac (80MHz)

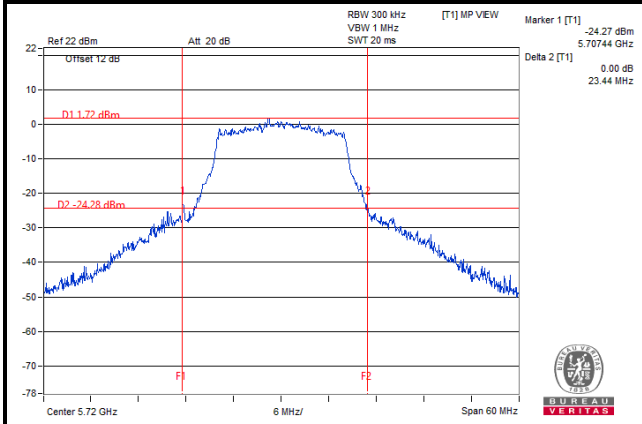


For U-NII-2C:

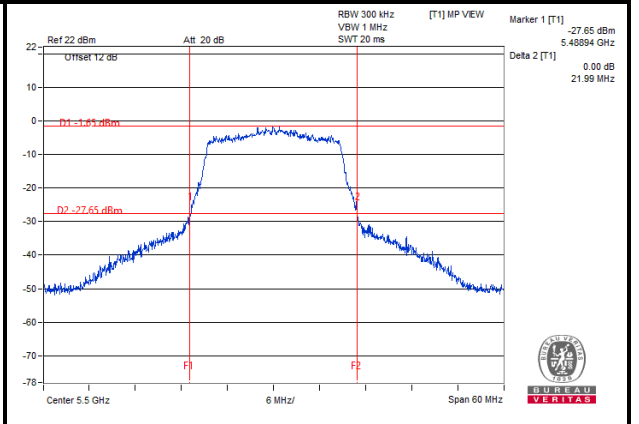
SPECTRUM PLOT OF WORST VALUE of 99% OCCUPIED BANDWIDTH	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

SPECTRUM PLOT OF WORST VALUE of 26dB Bandwidth

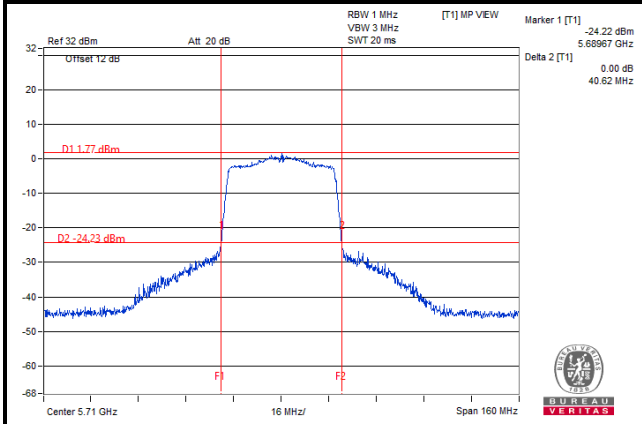
802.11a



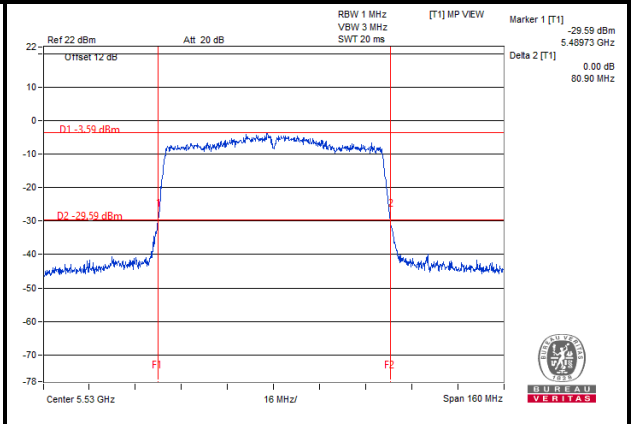
802.11n (20MHz)



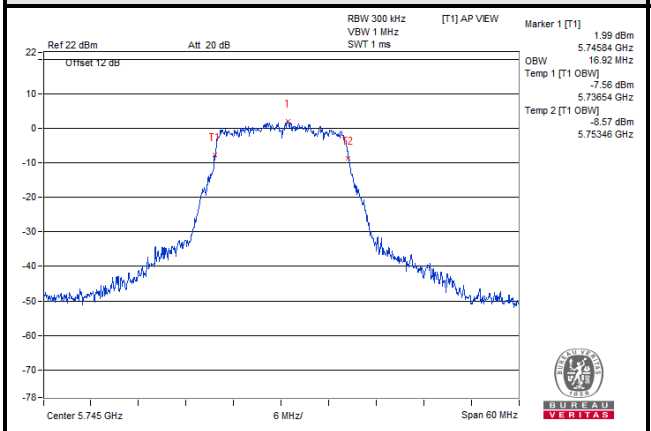
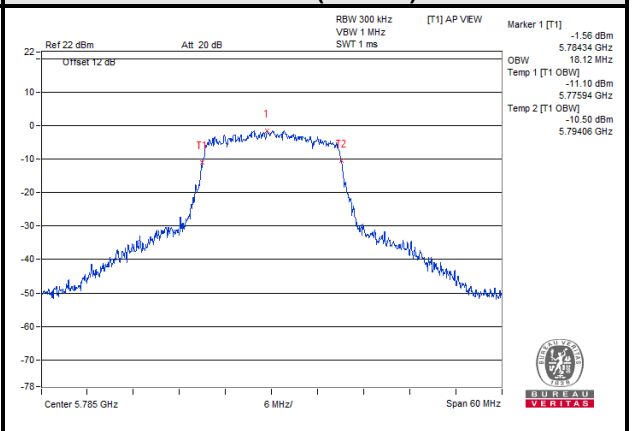
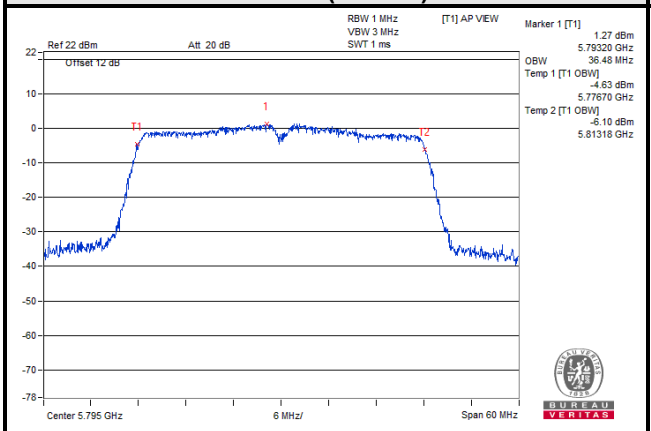
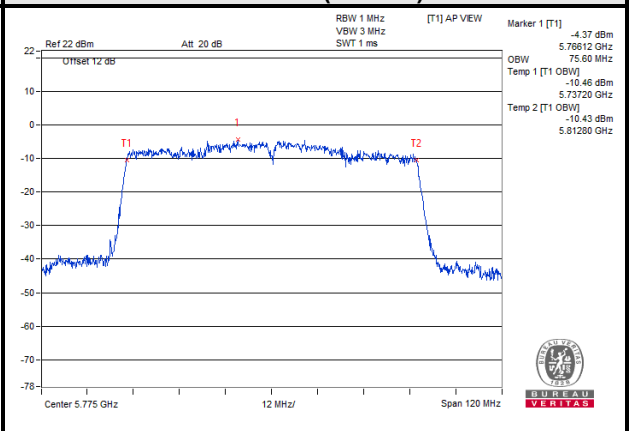
802.11n (40MHz)

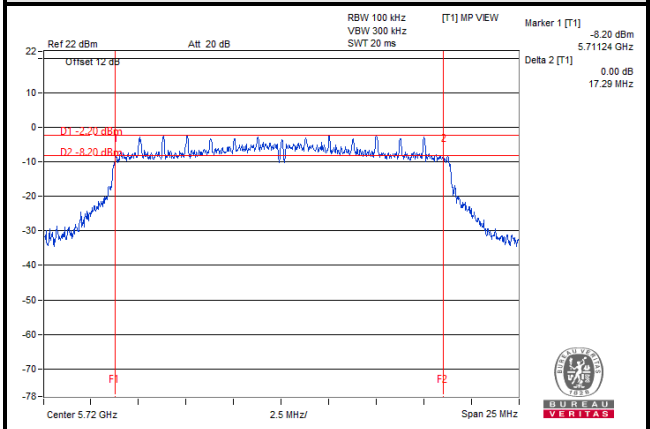
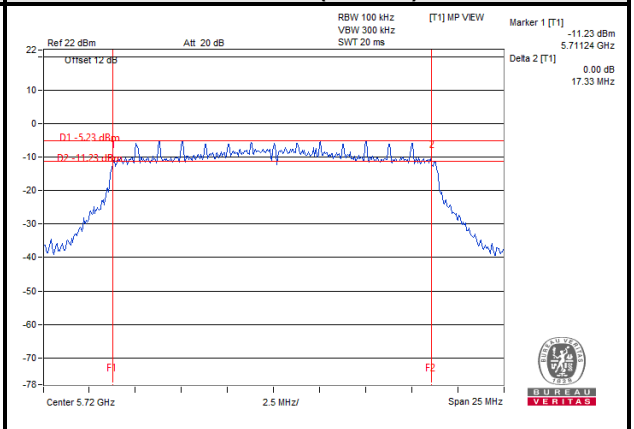
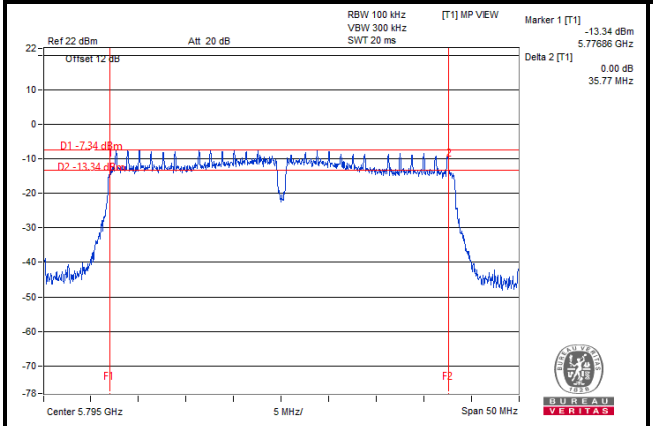
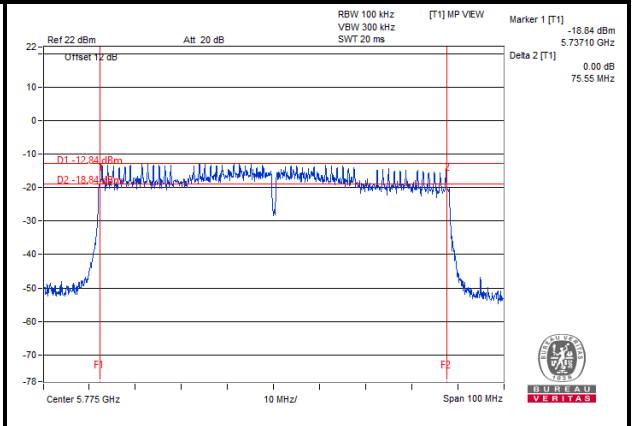


802.11ac (80MHz)



For U-NII-3:

SPECTRUM PLOT OF WORST VALUE of 99% OCCUPIED BANDWIDTH	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

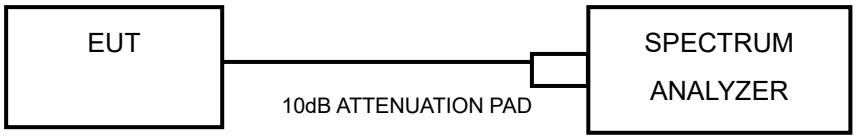
SPECTRUM PLOT OF WORST VALUE of 6dB Bandwidth	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

3.5 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

3.5.1 LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Client devices	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

3.5.2 TEST SETUP



3.5.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.5.4 TEST PROCEDURES

Using method SA-2

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission).
7) Record the max value

3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

3.5.6 EUT OPERATING CONDITIONS

Same as 3.1.6.

3.5.7 TEST RESULTS

For U-NII-1 & U-NII-2A& U-NII-2C:

802.11a

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
36	5180	5.48	0.94	6.42	11	PASS
40	5200	5.23	0.94	6.17	11	PASS
48	5240	5.36	0.94	6.30	11	PASS
52	5260	4.81	0.94	5.75	11	PASS
60	5300	5.26	0.94	6.20	11	PASS
64	5320	5.09	0.94	6.03	11	PASS
100	5500	5.44	0.94	6.38	11	PASS
116	5580	5.42	0.94	6.36	11	PASS
140	5700	5.64	0.94	6.58	11	PASS
144	5720	5.15	0.94	6.09	11	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
36	5180	3.14	1.02	4.16	11	PASS
40	5200	2.31	1.02	3.33	11	PASS
48	5240	1.27	1.02	2.29	11	PASS
52	5260	0.95	1.02	1.97	11	PASS
60	5300	1.03	1.02	2.05	11	PASS
64	5320	1.30	1.02	2.32	11	PASS
100	5500	0.54	1.02	1.56	11	PASS
116	5580	2.80	1.02	3.82	11	PASS
140	5700	2.83	1.02	3.85	11	PASS
144	5720	2.03	1.02	3.05	11	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
38	5190	-0.90	1.55	0.65	11	PASS
46	5230	-1.07	1.55	0.48	11	PASS
54	5270	-2.51	1.55	-0.96	11	PASS
62	5310	-3.21	1.55	-1.66	11	PASS
102	5510	-2.21	1.55	-0.66	11	PASS
110	5550	-1.39	1.55	0.16	11	PASS
134	5670	-1.13	1.55	0.42	11	PASS
142	5710	-1.59	1.55	-0.038	11	PASS

802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
42	5210	-15.33	2.24	-13.09	11	PASS
58	5290	-14.75	2.24	-12.51	11	PASS
106	5530	-15.45	2.24	-13.21	11	PASS
122	5610	-14.89	2.24	-12.65	11	PASS
138	5690	-13.1	2.24	-10.86	11	PASS

For U-NII-3:

Note: dBm/500kHz= dBm/MHz+10*log(0.5/1)= dBm/MHz-3.01

802.11a

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
144	5720	-6.25	-4.03	0.94	-3.09	30	PASS
149	5745	-5.82	-3.60	0.94	-2.66	30	PASS
157	5785	-5.19	-2.97	0.94	-2.03	30	PASS
165	5825	-5.36	-3.14	0.94	-2.20	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
144	5720	-8.98	-6.76	1.02	-5.74	30	PASS
149	5745	-7.91	-5.69	1.02	-4.67	30	PASS
157	5785	-8.34	-6.12	1.02	-5.10	30	PASS
165	5825	-8.85	-6.63	1.02	-5.61	30	PASS

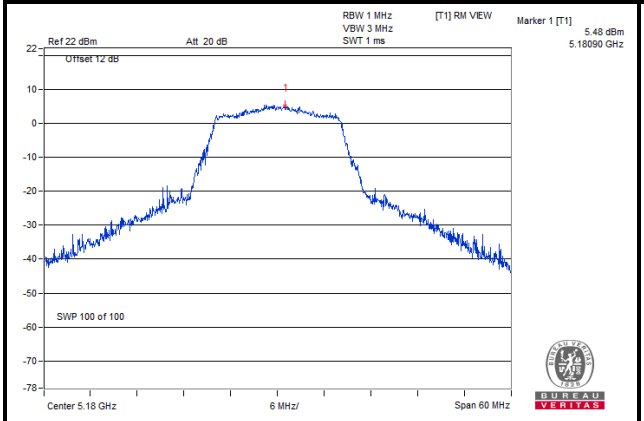
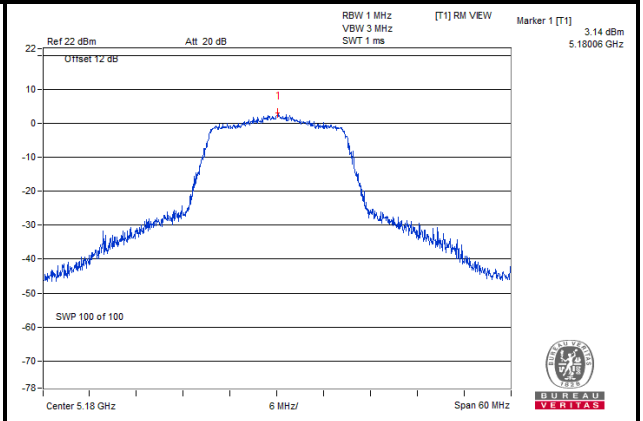
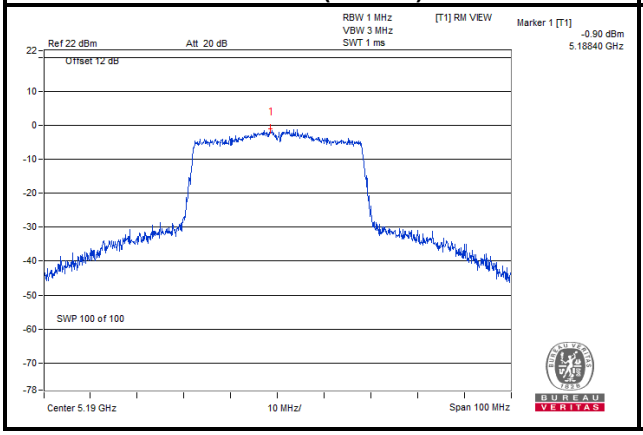
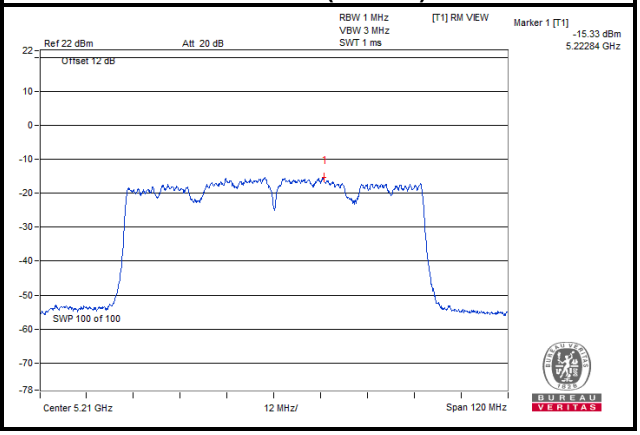
802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
142	5710	-10.07	-7.85	1.55	-6.3	30	PASS
151	5755	-9.26	-7.04	1.55	-5.49	30	PASS
159	5795	-12.82	-10.60	1.55	-9.05	30	PASS

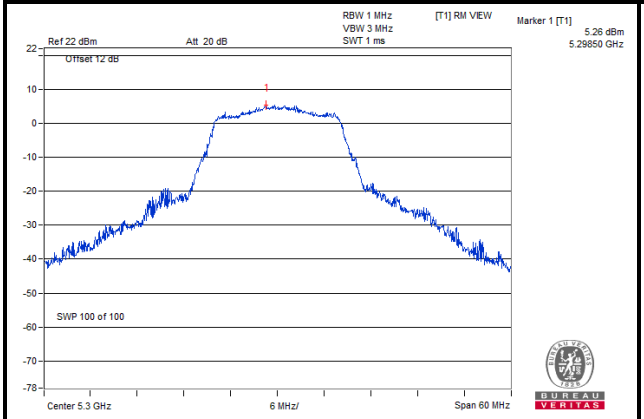
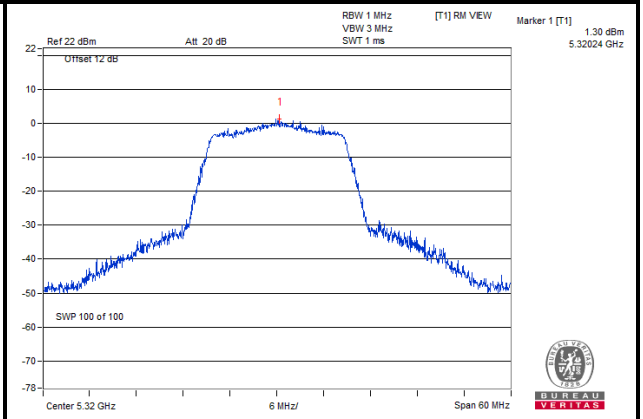
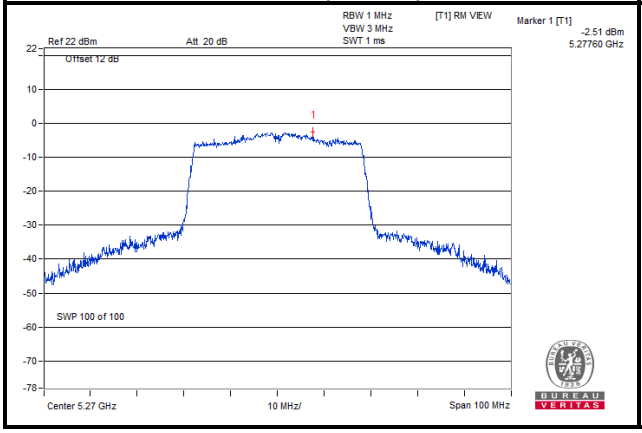
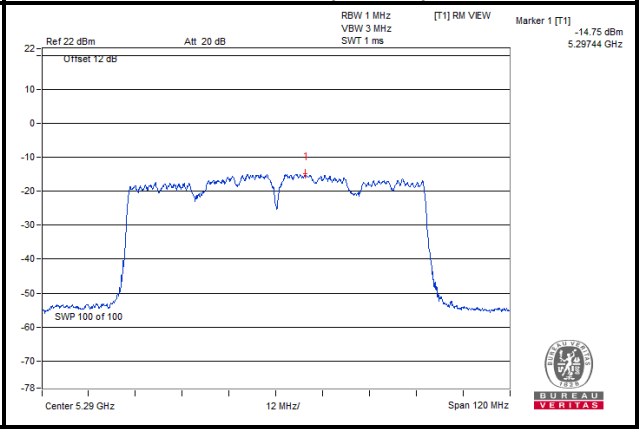
802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
138	5690	-16.08	-13.86	2.4	-11.46	30	PASS
155	5775	-19.46	-17.24	2.4	-14.84	30	PASS

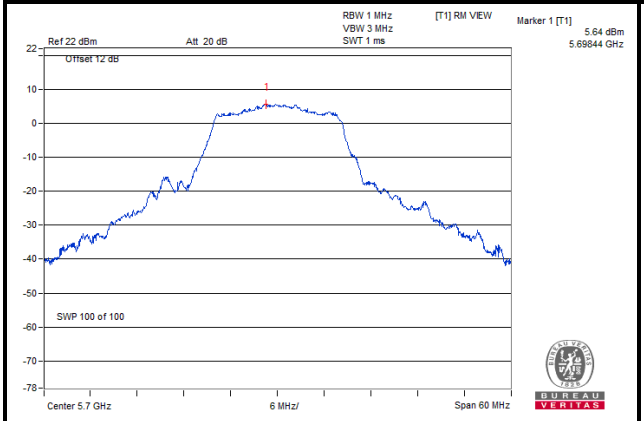
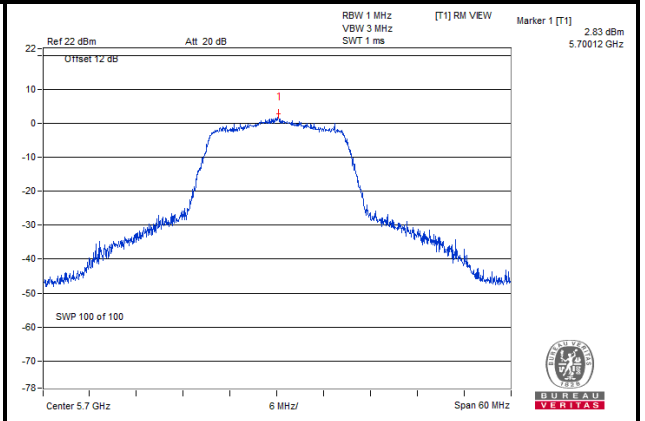
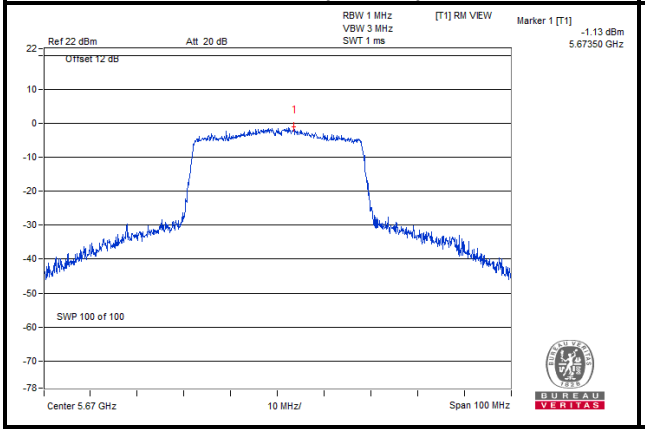
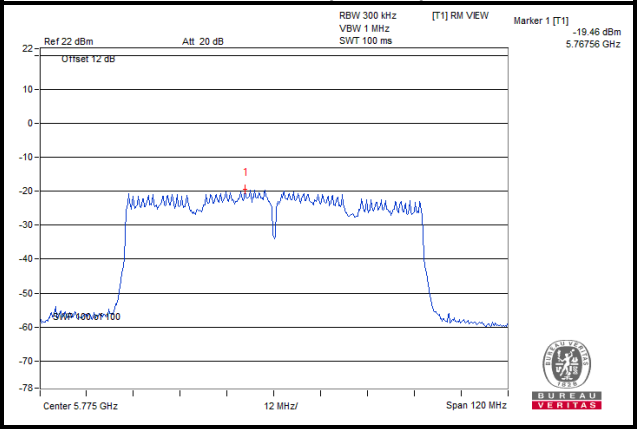
For 5180~5240MHz

PSD w/o Duty Factor	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

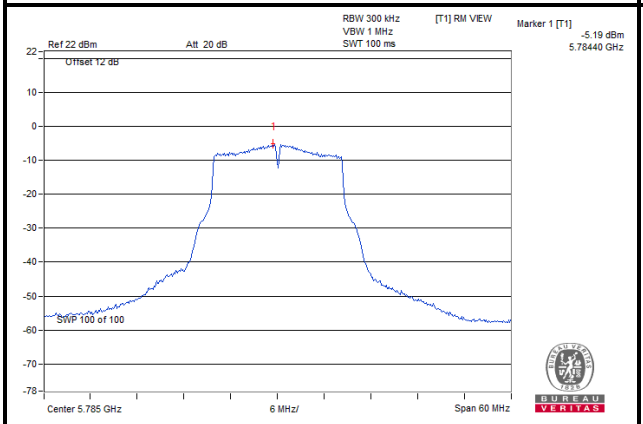
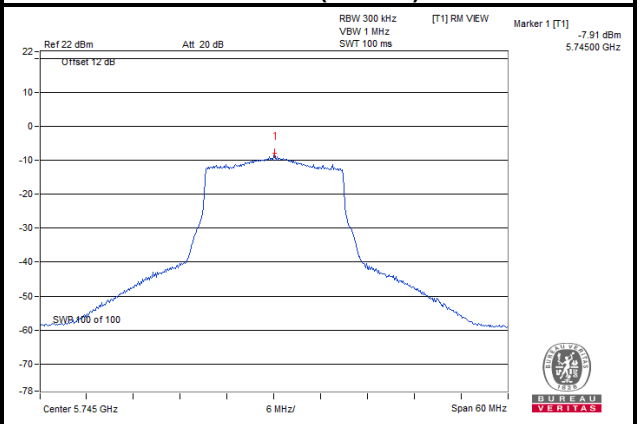
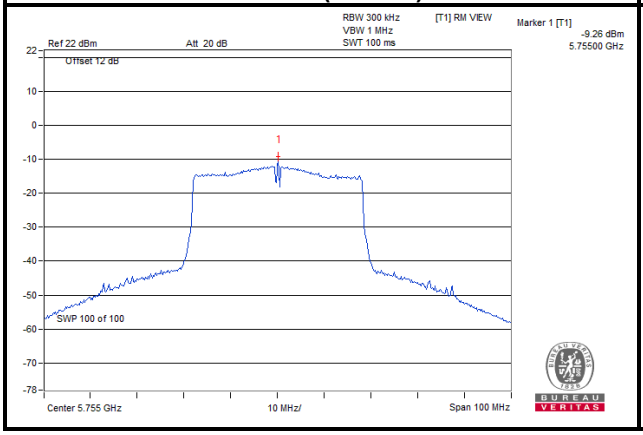
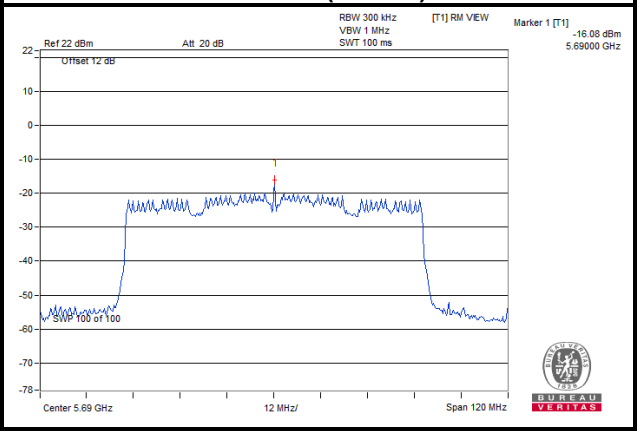
For 5260~5320MHz

PSD w/o Duty Factor	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

For 5470 ~ 5725MHz

PSD w/o Duty Factor	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

For 5745~5825MHz

PSD w/o Duty Factor	
802.11a	802.11n (20MHz)
	
802.11n (40MHz)	802.11ac (80MHz)
	

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

---END---