VARIANT FCC TEST REPORT

(Part 15, Subpart E)

Applicant:	Lenovo (Shanghai) Electronics Technology Co., Ltd.
Address:	Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone

Manufacturer or Supplier:	Lenovo PC HK Limited
Address:	23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong, China
Product:	Portable Tablet Computer
Brand Name:	Lenovo
Model Name:	TB132FU
FCC ID:	O57TB132FU
Date of tests:	Mar. 21, 2022 ~ May. 24, 2022

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 Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
Simon Date: May. 24, 2022	Luke Lu Date: May. 24, 2022

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P22030011RF04	Original release	Apr. 06, 2022
W7L-P22030011-1RF04	Based on the original report W7L-P22030011RF04 add to 2nd the antenna, Verify the RSE worst case.	May. 24, 2022

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(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

NOTE:

1. Except the data of RSE and Band Edge Measurement, other data of 802.11a & 802.11n/ac/ax (20/40) & 802.11ac/ax 80 please refer to the appendix A/B.

2. WLAN(normal mode& RU-OFDMA)5G supports SISO&MIMO mode，the whole testing have assessed the MIMO mode by referring to their maximum conducted power

3.For 11n HT20/ac VHT20 ax HE20 and HT40 /ac VHT40ax HE40 and ac VHT80/ax HE80 mode ,the whole testing have assessed only 11n HT20/HT40/ac VHT80 by referring to their maximum conducted power.

4. Only the worse data were report

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	Portable Tablet Computer
BRAND NAME	Lenovo
MODEL NAME	TB132FU
NOMINAL VOLTAGE	3.87Vdc (Li-ion, battery) 10Vdc (adapter)
MODULATION	OFDM, OFDMA
TRANSFER RATE	802.11a: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 1083.3Mbps 802.11ax: up to 1201.0Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5720MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n/ac/ax (20MHz) 2 for 802.11n/ac/ ax (40MHz) 1 for 802. 802.11ac/ ax (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n/ac/ ax (20MHz) 2 for 802.11n/ac/ ax (40MHz) 1 for 802.11ac/ ax (80MHz) 5500 ~ 5720MHz: 12 for 802.11a, 802.11n/ac/ ax (20MHz)/ 6 for 802.11n/ac/ ax (40MHz) 3 for 802.11ac/ ax (80MHz) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n/ac/ ax (20MHz) 3 for 802.11n/ac/ ax (40MHz) 2 for 802.11ac/ ax (80MHz)
AVERAGE POWER	88.51mW for 5180 ~ 5240MHz 84.14mW for 5260 ~ 5320MHz 82.99mW for 5500 ~ 5720MHz 82.79mW for 5745 ~ 5825MHz
ANTENNA TYPE	PIFA Antenna
ANTENNA GAIN	ANT 0: -0.5 dBi for 5180 ~ 5240MHz -0.5 dBi for 5260 ~ 5320MHz -1.5 dBi for 5500 ~ 5720MHz -1.0 dBi for 5745 ~ 5825MHz ANT 1: -1.0 dBi for 5180 ~ 5240MHz

	-1.0 dBi for 5260 ~ 5320MHz 1.0 dBi for 5500 ~ 5720MHz -1.0 dBi for 5745 ~ 5825MHz
HW VERSION	Lenovo Tablet TB132FU
SW VERSION	Lenovo TB132FU_RF01_220315
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB cable 1: non-shielded cable, with w/o ferrite core, 1.5 meter USB cable 2: non-shielded cable, with w/o ferrite core, 1.5 mete

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 MIMO function. Physically, the EUT provides two completed transmitter and two receiver.

MODULATION MODE	TX FUNCTION
802.11a	2TX/2RX
802.11n/802.11ac/802.11ax (20MHz)	2TX/2RX
802.11n/802.11ac/802.11ax (40MHz)	2TX/2RX
802.11ac/802.11ax (80MHz)	2TX/2RX

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

List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
AC Adapter 1	Chengyang	MC-201	I/P: 100-240Vac, 0.7A, O/P: 10.0Vdc, 2.0A
AC Adapter 2	Acbel	MC-201	I/P: 100-240Vac, 0.7A, O/P: 10.0Vdc, 2.0A
USB Cable 1	Jieye	JY-C03-408	Signal Line, 1.5meter
USB Cable 2	Saibao	SLQ-A195A	Signal Line, 1.5meter
Keyboard	Lenovo	KB686U	/
Stylus Pen	Lenovo	Lenovo BTP-131	/
Battery 1	Lenovo/SCUD	L22D2P31	3.87VDC,8200 mAh
Battery 2	Lenovo/Sunwoda	L22D2P31	3.87VDC,8200 mAh
Type C audio line	Saibao	SLQ-A197A	0.1m

2.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz) / 802.11ax (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) / 802.11ax (40MHz) :

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz) / 802.11ax (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) / 802.11ax (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		

FOR 5500 ~ 5720MHz

12 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz) / 802.11ax (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) / 802.11ax (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)/ 802.11ax (80MHz) :

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

FOR 5745 ~ 5825MHz

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

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

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
138	5690MHz	155	5775 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**
B	-	-	-	√	Powered by Battery with wifi(5G) link
C	-	-	-	-	Powered by USB 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 (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	802.11ac (80MHz)	5180-5240	42	42	OFDM	MCS0

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, 48	OFDM	6.0
A	802.11an (20MHz)		36 to 48	36, 48	OFDM	MCS0
A	802.11an (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	802.11an (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11an (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	802.11an (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11an (40MHz)		102 to 142	102, 110, 134, 142	OFDM	MCS0
A	802.11ac (80MHz)		106 to 138	106, 138	OFDM	MCS0
A	802.11a	5745-5825	144 to 165	144, 149, 157,165	OFDM	6.0
A	802.11an (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11an (40MHz)		142 to 159	142, 151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138,155	138, 155	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	802.11ac (80MHz)	5180-5240	42	42	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, 48	OFDM	6.0
A	802.11an (20MHz)		36 to 48	36, 48	OFDM	MCS0
A	802.11an (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	802.11an (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11an (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	802.11ac/ax/an (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11ac/ax/an (40MHz)		102 to 142	102, 110, 134, 142	OFDM	MCS0
A	802.11ac/ax(80MHz))		106 to 138	106, 138	OFDM	MCS0
A	802.11a	5745-5825	144 to 165	144, 149, 157,165	OFDM	6.0
A	802.11an (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11an (40MHz)		142 to 159	142, 151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138,155	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, 48	OFDM	6.0
A	802.11an (20MHz)		36 to 48	36, 48	OFDM	MCS0
A	802.11an (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	802.11an (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11an (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	802.11an (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11an (40MHz)		102 to 142	102, 110, 134, 142	OFDM	MCS0
A	802.11ac (80MHz)		106 to 138	106, 138	OFDM	MCS0
A	802.11a	5745-5825	144 to 165	144, 149, 157,165	OFDM	6.0
A	802.11an (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11an (40MHz)		142 to 159	142, 151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138,155	138, 155	OFDM	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 70%RH	DC10V By Adapter	Star Le
RE≥1G	23deg. C, 70%RH	DC10V By Adapter	Star Le
PLC	25deg. C, 52%RH	DC10V By Adapter	James Fu
APCM	25deg. C, 60%RH	DC 3.87V By Battery	James Fu

2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix A/B. Of this test report.

WORST-CASE DATA:

Measured Duty Cycle		
Mode		Duty Cycle [%]
		ANT0
5GHZ	11a	100.00
	11n20	100.00
	11n40	100.00
	11ac80	100.00

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

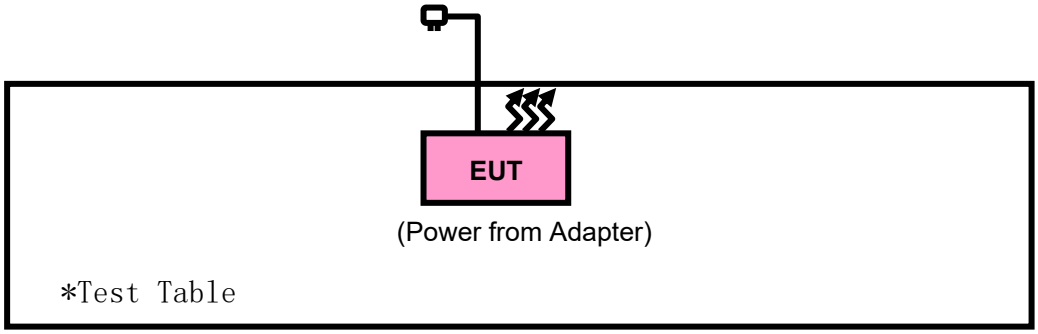
2.4 DESCRIPTION OF SUPPORT UNITS

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
4	DC source	Kikusui/JP	PMX18-5A	0000001	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
4	DC Line: Unshielded, Detachable 1.0m

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 (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 : 68.2</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	May. 19,20	May. 18,23
Bilog Antenna	ETS-LINDGREN	3143B	00161964	Feb. 24,22	Feb. 23,23
Horn Antenna	ETS-LINDGREN	3117	00168692	Mar. 06,22	Mar. 05,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
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. 03,21	Jun. 02,22
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 27,21	Apr. 26,22
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 26,22	Apr. 25,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 30,21	Apr. 29,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 29,22	Apr. 28,23
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 25,21	Aug. 24,22
Power Meter	Anritsu	ML2495A	1506002	Feb. 22,22	Feb. 21,23
Power Sensor	Anritsu	MA2411B	1339352	May. 07,21	May. 06,22
Power Sensor	Anritsu	MA2411B	1339352	May. 06,22	May. 05,23
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.05,21	Sep.04,22

NOTE: 1. The calibration interval of the above test instruments is 12 months or 36 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:

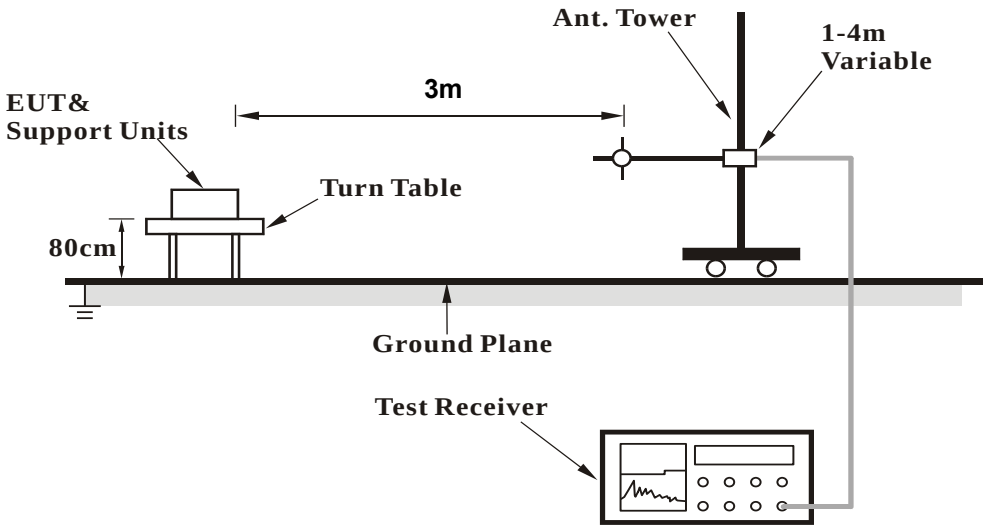
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency 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

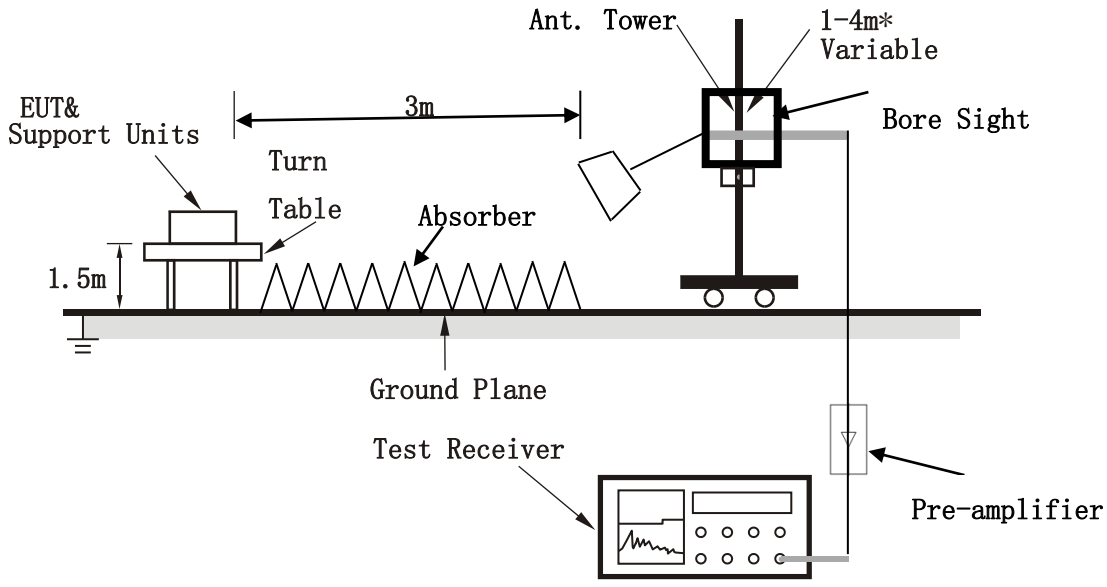
No deviation.

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:

Band 1

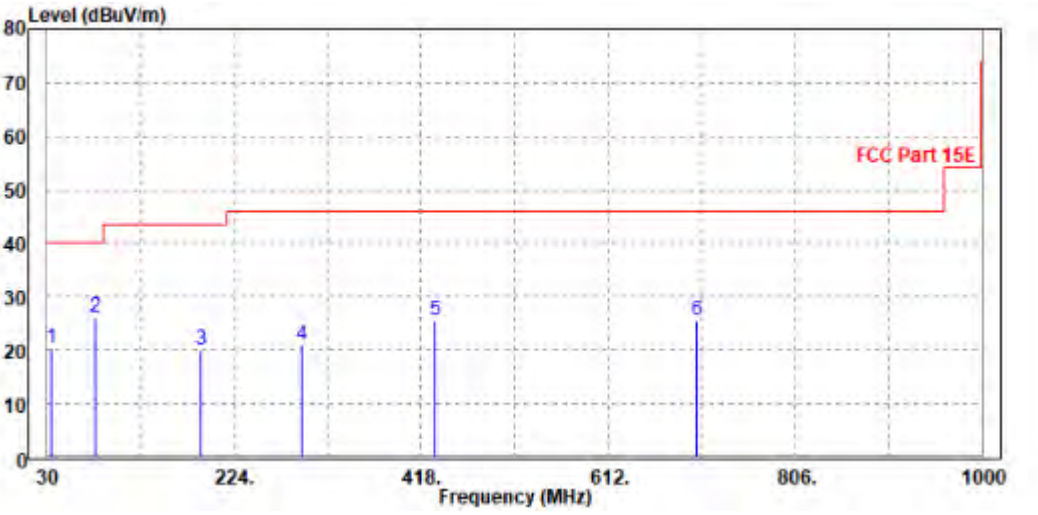
802.11ac (80MHz)

CHANNEL	TX Channel 42	**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
33.88	20.31	38.98	40	-19.69	19.07	0.33	38.07	300	0	QP
79.47	26.14	55.6	40	-13.86	7.7	0.49	37.65	300	0	QP
189.08	20	45.37	43.5	-23.5	11.35	0.72	37.44	300	0	QP
294.81	20.87	43.24	46	-25.13	13.95	0.9	37.22	300	0	QP
432.55	25.48	44.94	46	-20.52	16.82	1.12	37.4	300	0	QP
703.18	25.44	40.51	46	-20.56	21.63	1.48	38.18	300	0	QP

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.

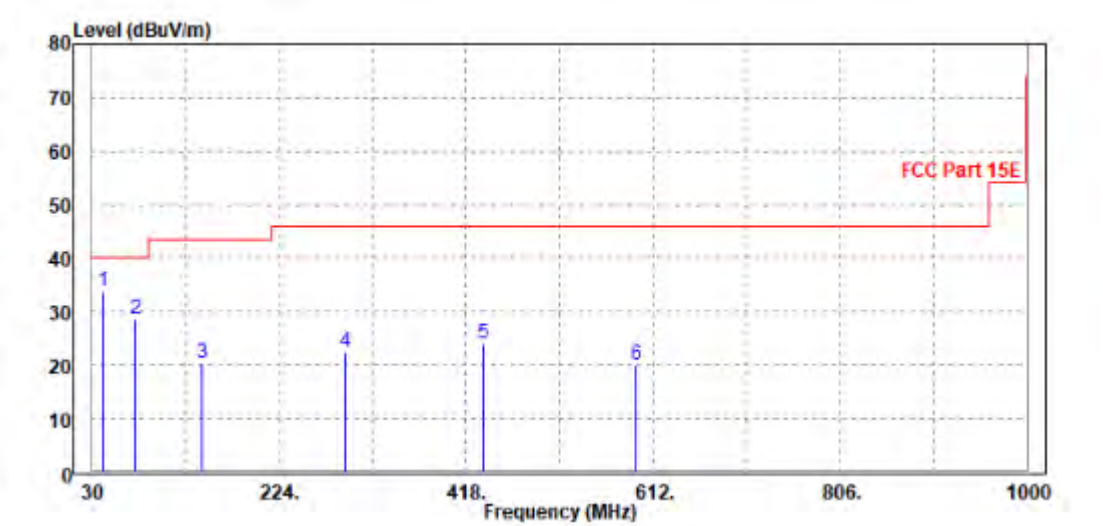


CHANNEL	Channel 42	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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
41.64	33.75	59.65	40	-6.25	11.97	0.37	38.24	200	360	QP
74.62	28.47	57.77	40	-11.53	7.87	0.48	37.65	200	360	QP
143.49	20.27	47.87	43.5	-23.23	9.46	0.64	37.7	200	360	QP
292.87	22.53	45.05	46	-23.47	13.8	0.9	37.22	200	360	QP
436.43	24.13	43.64	46	-21.87	16.77	1.13	37.41	200	360	QP
594.54	20.19	37.16	46	-25.81	19.49	1.35	37.81	200	360	QP

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	53.95	56.26	74	-20.05	34.52	9.52	46.35	135	200	Peak
5150	50.01	52.32	54	-3.99	34.52	9.52	46.35	135	200	Average
5180	106.55	108.78	/	/	34.54	9.58	46.35	135	200	Peak
5180	99.12	101.35	/	/	34.54	9.58	46.35	135	200	Average
5350	53.61	55.29	74	-20.39	34.68	9.94	46.3	135	200	Peak
5350	48.14	49.82	54	-5.86	34.68	9.94	46.3	135	200	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	55.4	57.63	74	-18.6	34.6	9.52	46.35	100	110	Peak
5150	49.99	52.22	54	-4.01	34.6	9.52	46.35	100	110	Average
5180	102.91	105.08	/	/	34.6	9.58	46.35	100	110	Peak
5180	96.5	98.67	/	/	34.6	9.58	46.35	100	110	Average
5350	54.74	56.5	74	-19.26	34.6	9.94	46.3	100	110	Peak
5350	47.99	49.75	54	-6.01	34.6	9.94	46.3	100	110	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	54.71	57.02	74	-19.29	34.52	9.52	46.35	235	200	Peak
5150	49.38	51.69	54	-4.62	34.52	9.52	46.35	235	200	Average
5200	107.24	109.4	/	/	34.56	9.62	46.34	235	200	Peak
5200	99.87	102.03	/	/	34.56	9.62	46.34	235	200	Average
5350	55.55	57.23	74	-18.45	34.68	9.94	46.3	235	200	Peak
5350	48.44	50.12	54	-5.56	34.68	9.94	46.3	235	200	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	55.5	57.73	74	-18.5	34.6	9.52	46.35	100	110	Peak
5150	49.39	51.62	54	-4.61	34.6	9.52	46.35	100	110	Average
5200	104.04	106.16	/	/	34.6	9.62	46.34	100	110	Peak
5200	96.76	98.88	/	/	34.6	9.62	46.34	100	110	Average
5350	55.29	57.05	74	-18.71	34.6	9.94	46.3	100	110	Peak
5350	48.19	49.95	54	-5.81	34.6	9.94	46.3	100	110	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)
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	56.64	58.95	74	-17.36	34.52	9.52	46.35	120	190	Peak
5150	49.06	51.37	54	-4.94	34.52	9.52	46.35	120	190	Average
5240	106.29	108.32	/	/	34.59	9.71	46.33	120	190	Peak
5240	99.55	101.58	/	/	34.59	9.71	46.33	120	190	Average
5350	56.35	58.03	74	-17.65	34.68	9.94	46.3	120	190	Peak
5350	48.92	50.6	54	-5.08	34.68	9.94	46.3	120	190	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	56.22	58.45	74	-17.78	34.6	9.52	46.35	100	85	Peak
5150	49.61	51.84	54	-4.39	34.6	9.52	46.35	100	85	Average
5240	105.28	107.3	/	/	34.6	9.71	46.33	100	85	Peak
5240	98.56	100.58	/	/	34.6	9.71	46.33	100	85	Average
5350	54.72	56.48	74	-19.28	34.6	9.94	46.3	100	85	Peak
5350	48.83	50.59	54	-5.17	34.6	9.94	46.3	100	85	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	56.03	58.34	74	-17.97	34.52	9.52	46.35	135	200	Peak
5150	49.83	52.14	54	-4.17	34.52	9.52	46.35	135	200	Average
5180	104.05	106.28	/	/	34.54	9.58	46.35	135	200	Peak
5180	96.84	99.07	/	/	34.54	9.58	46.35	135	200	Average
5350	54.11	55.79	74	-19.89	34.68	9.94	46.3	135	200	Peak
5350	48.31	49.99	54	-5.69	34.68	9.94	46.3	135	200	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	53.91	56.14	74	-20.09	34.6	9.52	46.35	100	100	Peak
5150	49.89	52.12	54	-4.11	34.6	9.52	46.35	100	100	Average
5180	102.64	104.81	/	/	34.6	9.58	46.35	100	100	Peak
5180	95.52	97.69	/	/	34.6	9.58	46.35	100	100	Average
5350	54.4	56.16	74	-19.6	34.6	9.94	46.3	100	100	Peak
5350	48.3	50.06	54	-5.7	34.6	9.94	46.3	100	100	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)
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	55.82	58.13	74	-18.18	34.52	9.52	46.35	135	200	Peak
5150	49.75	52.06	54	-4.25	34.52	9.52	46.35	135	200	Average
5200	104.51	106.67	/	/	34.56	9.62	46.34	135	200	Peak
5200	98.08	100.24	/	/	34.56	9.62	46.34	135	200	Average
5350	55.12	56.8	74	-18.88	34.68	9.94	46.3	135	200	Peak
5350	48.67	50.35	54	-5.33	34.68	9.94	46.3	135	200	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	57.15	59.38	74	-16.85	34.6	9.52	46.35	100	100	Peak
5150	49.5	51.73	54	-4.5	34.6	9.52	46.35	100	100	Average
5200	102.25	104.37	/	/	34.6	9.62	46.34	100	100	Peak
5200	95.22	97.34	/	/	34.6	9.62	46.34	100	100	Average
5350	56.04	57.8	74	-17.96	34.6	9.94	46.3	100	100	Peak
5350	48.27	50.03	54	-5.73	34.6	9.94	46.3	100	100	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)
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	53.89	56.2	74	-20.11	34.52	9.52	46.35	135	200	Peak
5150	49.62	51.93	54	-4.38	34.52	9.52	46.35	135	200	Average
5240	104.49	106.52	/	/	34.59	9.71	46.33	135	200	Peak
5240	98.48	100.51	/	/	34.59	9.71	46.33	135	200	Average
5350	54.8	56.48	74	-19.2	34.68	9.94	46.3	135	200	Peak
5350	48.64	50.32	54	-5.36	34.68	9.94	46.3	135	200	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	54.11	56.34	74	-19.89	34.6	9.52	46.35	100	100	Peak
5150	49.29	51.52	54	-4.71	34.6	9.52	46.35	100	100	Average
5240	103.39	105.41	/	/	34.6	9.71	46.33	100	100	Peak
5240	96.51	98.53	/	/	34.6	9.71	46.33	100	100	Average
5350	54.7	56.46	74	-19.3	34.6	9.94	46.3	100	100	Peak
5350	48.65	50.41	54	-5.35	34.6	9.94	46.3	100	100	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	55.88	58.19	74	-18.12	34.52	9.52	46.35	135	200	Peak
5150	50.85	53.16	54	-3.15	34.52	9.52	46.35	135	200	Average
5190	100.63	102.82	/	/	34.55	9.6	46.34	135	200	Peak
5190	94.42	96.61	/	/	34.55	9.6	46.34	135	200	Average
5350	54.88	56.56	74	-19.12	34.68	9.94	46.3	135	200	Peak
5350	48.42	50.1	54	-5.58	34.68	9.94	46.3	135	200	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	56.18	58.41	74	-17.82	34.6	9.52	46.35	100	100	Peak
5150	50.07	52.3	54	-3.93	34.6	9.52	46.35	100	100	Average
5190	98.16	100.3	/	/	34.6	9.6	46.34	100	100	Peak
5190	91.87	94.01	/	/	34.6	9.6	46.34	100	100	Average
5350	55.1	56.86	74	-18.9	34.6	9.94	46.3	100	100	Peak
5350	48.93	50.69	54	-5.07	34.6	9.94	46.3	100	100	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)
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	54.2	56.51	74	-19.8	34.52	9.52	46.35	135	200	Peak
5150	49.58	51.89	54	-4.42	34.52	9.52	46.35	135	200	Average
5230	100.66	102.72	/	/	34.58	9.69	46.33	135	200	Peak
5230	95.21	97.27	/	/	34.58	9.69	46.33	135	200	Average
5350	54.13	55.81	74	-19.87	34.68	9.94	46.3	135	200	Peak
5350	48.72	50.4	54	-5.28	34.68	9.94	46.3	135	200	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	55.92	58.15	74	-18.08	34.6	9.52	46.35	100	100	Peak
5150	50.03	52.26	54	-3.97	34.6	9.52	46.35	100	100	Average
5230	98.81	100.85	/	/	34.6	9.69	46.33	100	100	Peak
5230	92.85	94.89	/	/	34.6	9.69	46.33	100	100	Average
5350	54.83	56.59	74	-19.17	34.6	9.94	46.3	100	100	Peak
5350	48.61	50.37	54	-5.39	34.6	9.94	46.3	100	100	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)
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	53.98	56.29	74	-20.02	34.52	9.52	46.35	120	85	Peak
5150	49.05	51.36	54	-4.95	34.52	9.52	46.35	120	85	Average
5210	91.48	93.61	/	/	34.57	9.64	46.34	120	85	Peak
5210	84.22	86.35	/	/	34.57	9.64	46.34	120	85	Average
5350	53.86	55.54	74	-20.14	34.68	9.94	46.3	120	85	Peak
5350	48.01	49.69	54	-5.99	34.68	9.94	46.3	120	85	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	54.04	56.27	74	-19.96	34.6	9.52	46.35	100	110	Peak
5150	48.57	50.8	54	-5.43	34.6	9.52	46.35	100	110	Average
5210	89.69	91.79	/	/	34.6	9.64	46.34	100	110	Peak
5210	83.27	85.37	/	/	34.6	9.64	46.34	100	110	Average
5350	52.08	53.84	74	-21.92	34.6	9.94	46.3	100	110	Peak
5350	46.4	48.16	54	-7.6	34.6	9.94	46.3	100	110	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	54.88	57.19	74	-19.12	34.52	9.52	46.35	200	190	Peak
5150	49.46	51.77	54	-4.54	34.52	9.52	46.35	200	190	Average
5260	105.91	107.87	/	/	34.61	9.75	46.32	200	190	Peak
5260	99.09	101.05	/	/	34.61	9.75	46.32	200	190	Average
5350	54.03	55.71	74	-19.97	34.68	9.94	46.3	200	190	Peak
5350	48.34	50.02	54	-5.66	34.68	9.94	46.3	200	190	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	54.43	56.66	74	-19.57	34.6	9.52	46.35	100	85	Peak
5150	49.25	51.48	54	-4.75	34.6	9.52	46.35	100	85	Average
5260	105.02	106.99	/	/	34.6	9.75	46.32	100	85	Peak
5260	98.4	100.37	/	/	34.6	9.75	46.32	100	85	Average
5350	54.01	55.77	74	-19.99	34.6	9.94	46.3	100	85	Peak
5350	48.8	50.56	54	-5.2	34.6	9.94	46.3	100	85	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)
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	55.06	57.37	74	-18.94	34.52	9.52	46.35	200	200	Peak
5150	49.61	51.92	54	-4.39	34.52	9.52	46.35	200	200	Average
5300	105.26	107.1	/	/	34.64	9.83	46.31	200	200	Peak
5300	98.94	100.78	/	/	34.64	9.83	46.31	200	200	Average
5350	55.16	56.84	74	-18.84	34.68	9.94	46.3	200	200	Peak
5350	48.74	50.42	54	-5.26	34.68	9.94	46.3	200	200	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	54.71	56.94	74	-19.29	34.6	9.52	46.35	100	108	Peak
5150	50.24	52.47	54	-3.76	34.6	9.52	46.35	100	108	Average
5300	102.99	104.87	/	/	34.6	9.83	46.31	100	108	Peak
5300	96.41	98.29	/	/	34.6	9.83	46.31	100	108	Average
5350	44.59	46.35	74	-29.41	34.6	9.94	46.3	100	108	Peak
5350	48.52	50.28	54	-5.48	34.6	9.94	46.3	100	108	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)
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	54.09	56.4	74	-19.91	34.52	9.52	46.35	200	190	Peak
5150	48.74	51.05	54	-5.26	34.52	9.52	46.35	200	190	Average
5320	104.99	106.75	/	/	34.66	9.88	46.3	200	190	Peak
5320	98.5	100.26	/	/	34.66	9.88	46.3	200	190	Average
5350	54.66	56.34	74	-19.34	34.68	9.94	46.3	200	190	Peak
5350	48.81	50.49	54	-5.19	34.68	9.94	46.3	200	190	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	55.13	57.36	74	-18.87	34.6	9.52	46.35	100	85	Peak
5150	48.99	51.22	54	-5.01	34.6	9.52	46.35	100	85	Average
5320	104.34	106.16	/	/	34.6	9.88	46.3	100	85	Peak
5320	97.42	99.24	/	/	34.6	9.88	46.3	100	85	Average
5350	53.98	55.74	74	-20.02	34.6	9.94	46.3	100	85	Peak
5350	48.61	50.37	54	-5.39	34.6	9.94	46.3	100	85	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)
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	53.62	55.93	74	-20.38	34.52	9.52	46.35	200	200	Peak
5150	49.37	51.68	54	-4.63	34.52	9.52	46.35	200	200	Average
5260	103.49	105.45	/	/	34.61	9.75	46.32	200	200	Peak
5260	96.92	98.88	/	/	34.61	9.75	46.32	200	200	Average
5350	54.16	55.84	74	-19.84	34.68	9.94	46.3	200	200	Peak
5350	48.38	50.06	54	-5.62	34.68	9.94	46.3	200	200	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	56.47	58.7	74	-17.53	34.6	9.52	46.35	100	85	Peak
5150	49.37	51.6	54	-4.63	34.6	9.52	46.35	100	85	Average
5260	103.64	105.61	/	/	34.6	9.75	46.32	100	85	Peak
5260	96.81	98.78	/	/	34.6	9.75	46.32	100	85	Average
5350	57	58.76	74	-17	34.6	9.94	46.3	100	85	Peak
5350	48.31	50.07	54	-5.69	34.6	9.94	46.3	100	85	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)
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	53.75	56.06	74	-20.25	34.52	9.52	46.35	258	200	Peak
5150	48.51	50.82	54	-5.49	34.52	9.52	46.35	258	200	Average
5300	102.93	104.77	/	/	34.64	9.83	46.31	258	200	Peak
5300	96.66	98.5	/	/	34.64	9.83	46.31	258	200	Average
5350	53.24	54.92	74	-20.76	34.68	9.94	46.3	258	200	Peak
5350	47.46	49.14	54	-6.54	34.68	9.94	46.3	258	200	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	55.87	58.1	74	-18.13	34.6	9.52	46.35	100	85	Peak
5150	49.87	52.1	54	-4.13	34.6	9.52	46.35	100	85	Average
5300	102.12	104	/	/	34.6	9.83	46.31	100	85	Peak
5300	94.63	96.51	/	/	34.6	9.83	46.31	100	85	Average
5350	53.51	55.27	74	-20.49	34.6	9.94	46.3	100	85	Peak
5350	48.74	50.5	54	-5.26	34.6	9.94	46.3	100	85	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)
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	57.29	59.6	74	-16.71	34.52	9.52	46.35	118	60	Peak
5150	48.86	51.17	54	-5.14	34.52	9.52	46.35	118	60	Average
5320	102.4	104.16	/	/	34.66	9.88	46.3	118	60	Peak
5320	95.3	97.06	/	/	34.66	9.88	46.3	118	60	Average
5350	55.26	56.94	74	-18.74	34.68	9.94	46.3	118	60	Peak
5350	48.07	49.75	54	-5.93	34.68	9.94	46.3	118	60	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	54.23	56.46	74	-19.77	34.6	9.52	46.35	100	95	Peak
5150	48.61	50.84	54	-5.39	34.6	9.52	46.35	100	95	Average
5320	100.08	101.9	/	/	34.6	9.88	46.3	100	95	Peak
5320	93.85	95.67	/	/	34.6	9.88	46.3	100	95	Average
5350	53.11	54.87	74	-20.89	34.6	9.94	46.3	100	95	Peak
5350	48.24	50	54	-5.76	34.6	9.94	46.3	100	95	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)
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	53.13	55.44	74	-20.87	34.52	9.52	46.35	118	60	Peak
5150	49.57	51.88	54	-4.43	34.52	9.52	46.35	118	60	Average
5270	98.55	100.48	/	/	34.62	9.77	46.32	118	60	Peak
5270	92.29	94.22	/	/	34.62	9.77	46.32	118	60	Average
5350	53.97	55.65	74	-20.03	34.68	9.94	46.3	118	60	Peak
5350	48.18	49.86	54	-5.82	34.68	9.94	46.3	118	60	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	53.8	56.03	74	-20.2	34.6	9.52	46.35	100	95	Peak
5150	48.88	51.11	54	-5.12	34.6	9.52	46.35	100	95	Average
5270	96.68	98.63	/	/	34.6	9.77	46.32	100	95	Peak
5270	91.53	93.48	/	/	34.6	9.77	46.32	100	95	Average
5350	55.11	56.87	74	-18.89	34.6	9.94	46.3	100	95	Peak
5350	48.25	50.01	54	-5.75	34.6	9.94	46.3	100	95	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)
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	53.56	55.87	74	-20.44	34.52	9.52	46.35	118	60	Peak
5150	48.9	51.21	54	-5.1	34.52	9.52	46.35	118	60	Average
5310	99.06	100.87	/	/	34.65	9.85	46.31	118	60	Peak
5310	92.57	94.38	/	/	34.65	9.85	46.31	118	60	Average
5350	53.87	55.55	74	-20.13	34.68	9.94	46.3	118	60	Peak
5350	48.99	50.67	54	-5.01	34.68	9.94	46.3	118	60	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	54.71	56.94	74	-19.29	34.6	9.52	46.35	100	95	Peak
5150	48.74	50.97	54	-5.26	34.6	9.52	46.35	100	95	Average
5310	96.88	98.74	/	/	34.6	9.85	46.31	100	95	Peak
5310	92.29	94.15	/	/	34.6	9.85	46.31	100	95	Average
5350	54.19	55.95	74	-19.81	34.6	9.94	46.3	100	95	Peak
5350	48.4	50.16	54	-5.6	34.6	9.94	46.3	100	95	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	55.56	57.87	74	-18.44	34.52	9.52	46.35	118	60	Peak
5150	49.25	51.56	54	-4.75	34.52	9.52	46.35	118	60	Average
5290	93.15	95.02	/	/	34.63	9.81	46.31	118	60	Peak
5290	87.61	89.48	/	/	34.63	9.81	46.31	118	60	Average
5350	54.13	55.81	74	-19.87	34.68	9.94	46.3	118	60	Peak
5350	49.76	51.44	54	-4.24	34.68	9.94	46.3	118	60	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	54.74	56.97	74	-19.26	34.6	9.52	46.35	100	95	Peak
5150	49.15	51.38	54	-4.85	34.6	9.52	46.35	100	95	Average
5290	91.96	93.87	/	/	34.6	9.81	46.31	100	95	Peak
5290	86.64	88.54	/	/	34.6	9.81	46.31	100	95	Average
5350	54.94	56.7	74	-19.06	34.6	9.94	46.3	100	95	Peak
5350	48.76	50.52	54	-5.24	34.6	9.94	46.3	100	95	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	54.75	56.07	74	-19.25	34.77	10.17	46.26	125	195	Peak
5460	48.91	50.23	54	-5.09	34.77	10.17	46.26	125	195	Average
5470	54.74	56.03	68.2	-13.46	34.78	10.19	46.26	125	195	Peak
5500	104.47	105.66	/	/	34.8	10.26	46.25	125	195	Peak
5500	97.71	98.9	/	/	34.8	10.26	46.25	125	195	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	53.81	55.3	74	-20.19	34.6	10.17	46.26	100	105	Peak
5460	48.42	49.91	54	-5.58	34.6	10.17	46.26	100	105	Average
5470	54.62	56.09	68.2	-13.58	34.6	10.19	46.26	100	105	Peak
5500	101.59	102.98	/	/	34.6	10.26	46.25	100	105	Peak
5500	95.22	96.61	/	/	34.6	10.26	46.25	100	105	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	55.13	56.45	74	-18.87	34.77	10.17	46.26	125	195	Peak
5460	48.86	50.18	54	-5.14	34.77	10.17	46.26	125	195	Average
5470	55.36	56.65	68.2	-12.84	34.78	10.19	46.26	125	195	Peak
5580	104.3	105.04	/	/	34.9	10.59	46.23	125	195	Peak
5580	98.54	99.28	/	/	34.9	10.59	46.23	125	195	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	54.35	55.84	74	-19.65	34.6	10.17	46.26	100	105	Peak
5460	48.63	50.12	54	-5.37	34.6	10.17	46.26	100	105	Average
5470	53.56	55.03	68.2	-14.64	34.6	10.19	46.26	100	105	Peak
5580	102.99	103.93	/	/	34.7	10.59	46.23	100	105	Peak
5580	96.77	97.71	/	/	34.7	10.59	46.23	100	105	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	107.62	107.68	/	/	35.04	11.09	46.19	125	195	Peak
5700	100.95	101.01	/	/	35.04	11.09	46.19	125	195	Average
5725	61.52	61.44	68.2	-6.68	35.07	11.2	46.19	125	195	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	105.28	105.54	/	/	34.84	11.09	46.19	100	105	Peak
5700	99.1	99.36	/	/	34.84	11.09	46.19	100	105	Average
5725	58.16	58.28	68.2	-10.04	34.87	11.2	46.19	100	105	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	54.47	55.76	74	-19.53	34.78	10.19	46.26	100	65	Peak
5720	106.89	106.84	/	/	35.06	11.18	46.19	100	65	Peak
5720	100.89	100.84	/	/	35.06	11.18	46.19	100	65	Average
5850	58.27	57.48	68.2	-9.93	35.22	11.72	46.15	100	65	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	54.16	55.63	74	-19.84	34.6	10.19	46.26	100	120	Peak
5720	105.04	105.19	/	/	34.86	11.18	46.19	100	120	Peak
5720	98.62	98.77	/	/	34.86	11.18	46.19	100	120	Average
5850	57.81	57.22	68.2	-10.39	35.02	11.72	46.15	100	120	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)
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	53.74	55.06	74	-20.26	34.77	10.17	46.26	100	60	Peak
5460	48.87	50.19	54	-5.13	34.77	10.17	46.26	100	60	Average
5470	54.71	56	68.2	-13.49	34.78	10.19	46.26	100	60	Peak
5500	101.36	102.55	/	/	34.8	10.26	46.25	100	60	Peak
5500	94.48	95.67	/	/	34.8	10.26	46.25	100	60	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	55.21	56.7	74	-18.79	34.6	10.17	46.26	100	105	Peak
5460	49.07	50.56	54	-4.93	34.6	10.17	46.26	100	105	Average
5470	54.11	55.58	68.2	-14.09	34.6	10.19	46.26	100	105	Peak
5500	99.7	101.09	/	/	34.6	10.26	46.25	100	105	Peak
5500	93.03	94.42	/	/	34.6	10.26	46.25	100	105	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	53.92	55.24	74	-20.08	34.77	10.17	46.26	100	60	Peak
5460	48.07	49.39	54	-5.93	34.77	10.17	46.26	100	60	Average
5470	54.91	56.2	68.2	-13.29	34.78	10.19	46.26	100	60	Peak
5580	103.44	104.18	/	/	34.9	10.59	46.23	100	60	Peak
5580	96.08	96.82	/	/	34.9	10.59	46.23	100	60	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	54.19	55.68	74	-19.81	34.6	10.17	46.26	100	105	Peak
5460	48.68	50.17	54	-5.32	34.6	10.17	46.26	100	105	Average
5470	53.97	55.44	68.2	-14.23	34.6	10.19	46.26	100	105	Peak
5580	100.86	101.8	/	/	34.7	10.59	46.23	100	105	Peak
5580	94.09	95.03	/	/	34.7	10.59	46.23	100	105	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	106.44	106.5	/	/	35.04	11.09	46.19	100	60	Peak
5700	98.64	98.7	/	/	35.04	11.09	46.19	100	60	Average
5725	56.24	56.16	68.2	-11.96	35.07	11.2	46.19	100	60	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	102.71	102.97	/	/	34.84	11.09	46.19	100	105	Peak
5700	96.86	97.12	/	/	34.84	11.09	46.19	100	105	Average
5725	56.94	57.06	68.2	-11.26	34.87	11.2	46.19	100	105	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	54.72	56.01	74	-19.28	34.78	10.19	46.26	100	60	Peak
5720	106.36	106.31	/	/	35.06	11.18	46.19	100	60	Peak
5720	99.31	99.26	/	/	35.06	11.18	46.19	100	60	Average
5850	57.37	56.58	68.2	-10.83	35.22	11.72	46.15	100	60	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	54.11	55.58	74	-19.89	34.6	10.19	46.26	100	105	Peak
5720	104.52	104.67	/	/	34.86	11.18	46.19	100	105	Peak
5720	97.64	97.79	/	/	34.86	11.18	46.19	100	105	Average
5850	57.55	56.96	68.2	-10.65	35.02	11.72	46.15	100	105	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	56.22	57.54	74	-17.78	34.77	10.17	46.26	100	60	Peak
5460	48.39	49.71	54	-5.61	34.77	10.17	46.26	100	60	Average
5470	54.54	55.83	68.2	-13.66	34.78	10.19	46.26	100	60	Peak
5510	96.53	97.67	/	/	34.81	10.3	46.25	100	60	Peak
5510	91.34	92.48	/	/	34.81	10.3	46.25	100	60	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	54.11	55.6	74	-19.89	34.6	10.17	46.26	100	105	Peak
5460	48.76	50.25	54	-5.24	34.6	10.17	46.26	100	105	Average
5470	54.88	56.35	68.2	-13.32	34.6	10.19	46.26	100	105	Peak
5510	93.89	95.23	/	/	34.61	10.3	46.25	100	105	Peak
5510	89.44	90.78	/	/	34.61	10.3	46.25	100	105	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	54.98	56.3	74	-19.02	34.77	10.17	46.26	100	60	Peak
5460	48.79	50.11	54	-5.21	34.77	10.17	46.26	100	60	Average
5470	53.89	55.18	68.2	-14.31	34.78	10.19	46.26	100	60	Peak
5550	97.15	98.06	/	/	34.86	10.47	46.24	100	60	Peak
5550	91.86	92.77	/	/	34.86	10.47	46.24	100	60	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	55.03	56.52	74	-18.97	34.6	10.17	46.26	100	105	Peak
5460	48.24	49.73	54	-5.76	34.6	10.17	46.26	100	105	Average
5470	53.89	55.36	68.2	-14.31	34.6	10.19	46.26	100	105	Peak
5550	94.98	96.09	/	/	34.66	10.47	46.24	100	105	Peak
5550	90.57	91.68	/	/	34.66	10.47	46.24	100	105	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 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	100.5	100.73	/	/	35	10.97	46.2	100	60	Peak
5670	95.48	95.71	/	/	35	10.97	46.2	100	60	Average
5725	57.33	57.25	68.2	-10.87	35.07	11.2	46.19	100	60	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	97.71	98.14	/	/	34.8	10.97	46.2	100	105	Peak
5670	94.19	94.62	/	/	34.8	10.97	46.2	100	105	Average
5725	58.1	58.22	68.2	-10.1	34.87	11.2	46.19	100	105	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	53.98	55.27	74	-20.02	34.78	10.19	46.26	100	60	Peak
5710	102.07	102.07	/	/	35.05	11.14	46.19	100	60	Peak
5710	96.97	96.97	/	/	35.05	11.14	46.19	100	60	Average
5850	57.58	56.79	68.2	-10.62	35.22	11.72	46.15	100	60	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	53.3	54.77	74	-20.7	34.6	10.19	46.26	100	105	Peak
5710	98.82	99.02	/	/	34.85	11.14	46.19	100	105	Peak
5710	94.49	94.69	/	/	34.85	11.14	46.19	100	105	Average
5850	57.56	56.97	68.2	-10.64	35.02	11.72	46.15	100	105	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)
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	55.73	57.05	74	-18.27	34.77	10.17	46.26	100	60	Peak
5460	48.5	49.82	54	-5.5	34.77	10.17	46.26	100	60	Average
5470	53.75	55.04	68.2	-14.45	34.78	10.19	46.26	100	60	Peak
5530	91.91	92.93	/	/	34.84	10.38	46.24	100	60	Peak
5530	86.78	87.8	/	/	34.84	10.38	46.24	100	60	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	54.36	55.85	74	-19.64	34.6	10.17	46.26	10	105	Peak
5460	48.83	50.32	54	-5.17	34.6	10.17	46.26	10	105	Average
5470	53.35	54.82	68.2	-14.85	34.6	10.19	46.26	10	105	Peak
5530	90	91.22	/	/	34.64	10.38	46.24	10	105	Peak
5530	85.41	86.63	/	/	34.64	10.38	46.24	10	105	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	93.51	94.08	/	/	34.93	10.72	46.22	100	60	Peak
5610	88.99	89.56	/	/	34.93	10.72	46.22	100	60	Average
5725	55.35	55.27	68.2	-12.85	35.07	11.2	46.19	100	60	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	90.93	91.7	/	/	34.73	10.72	46.22	100	195	Peak
5610	87.32	88.09	/	/	34.73	10.72	46.22	100	195	Average
5725	56.26	56.38	68.2	-11.94	34.87	11.2	46.19	100	195	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	55.24	56.53	74	-18.76	34.78	10.19	46.26	100	60	Peak
5690	95.65	95.77	/	/	35.03	11.05	46.2	100	60	Peak
5690	90.89	91.01	/	/	35.03	11.05	46.2	100	60	Average
5850	56.71	55.92	68.2	-11.49	35.22	11.72	46.15	100	60	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	52.82	54.29	74	-21.18	34.6	10.19	46.26	100	105	Peak
5690	92.4	92.72	/	/	34.83	11.05	46.2	100	105	Peak
5690	89.13	89.45	/	/	34.83	11.05	46.2	100	105	Average
5850	55.67	55.08	68.2	-12.53	35.02	11.72	46.15	100	105	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	107.2	107.01	/	/	35.09	11.28	46.18	100	50	Peak
5745	100.96	100.77	/	/	35.09	11.28	46.18	100	50	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	105.52	105.53	/	/	34.89	11.28	46.18	100	105	Peak
5745	100.03	100.04	/	/	34.89	11.28	46.18	100	105	Average

REMARKS:

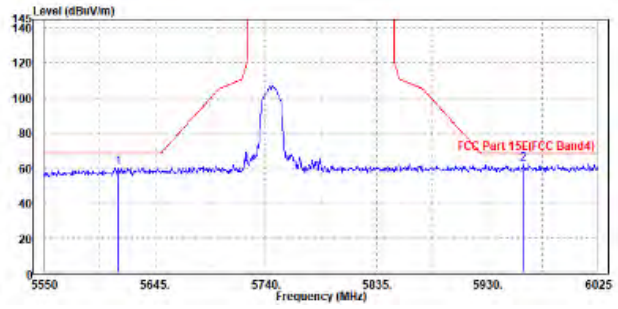
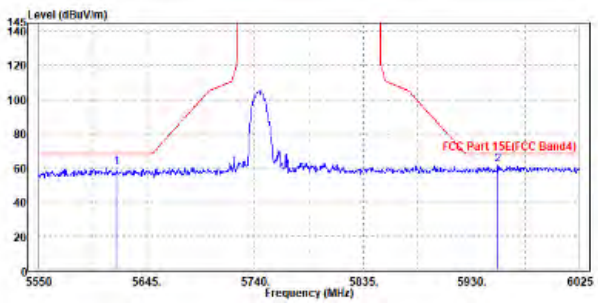
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.

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
5613.175	60.03	60.58	68.2	-8.17	34.94	10.73	46.22	200	50	Peak
5961.35	62.52	61.1	68.2	-5.68	35.35	12.19	46.12	200	50	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
5618.4	60.11	60.84	68.2	-8.09	34.74	10.75	46.22	200	105	Peak
5953.75	61.74	60.56	68.2	-6.46	35.14	12.16	46.12	200	105	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	106.99	106.57	/	/	35.14	11.45	46.17	130	60	Peak
5785	99.96	99.54	/	/	35.14	11.45	46.17	130	60	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	104.84	104.62	/	/	34.94	11.45	46.17	100	120	Peak
5785	98.98	98.76	/	/	34.94	11.45	46.17	100	120	Average

REMARKS:

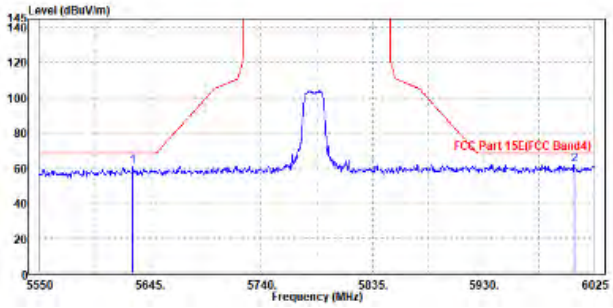
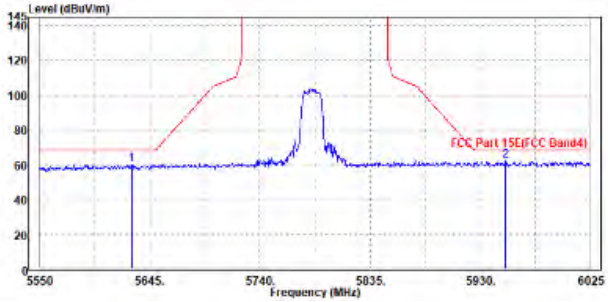
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

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
5629.8	60.52	60.97	68.2	-7.68	34.96	10.8	46.21	200	50	Peak
6007.9	61.64	60	68.2	-6.56	35.4	12.35	46.11	200	50	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	60.22	60.87	68.2	-7.98	34.76	10.8	46.21	200	200	Peak
5951.85	62.08	60.91	68.2	-6.12	35.14	12.15	46.12	200	200	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	107.45	106.8	/	/	35.19	11.62	46.16	130	60	Peak
5825	100.79	100.14	/	/	35.19	11.62	46.16	130	60	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	105.87	105.42	/	/	34.99	11.62	46.16	100	120	Peak
5825	99.49	99.04	/	/	34.99	11.62	46.16	100	120	Average

REMARKS:

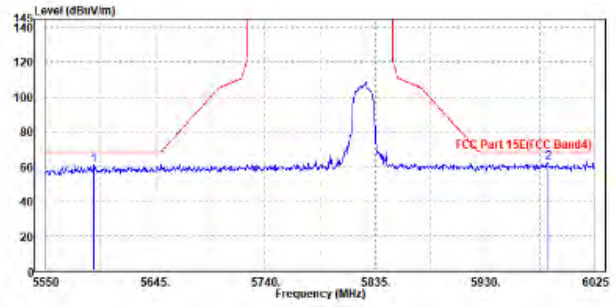
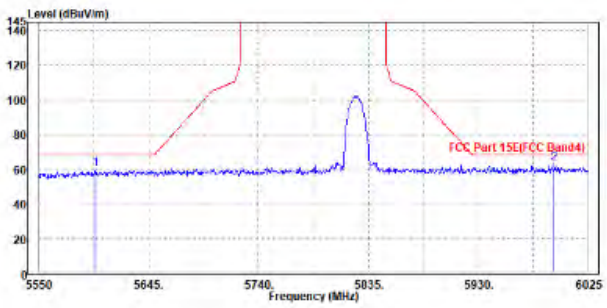
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

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
5591.8	60.37	61.04	68.2	-7.83	34.91	10.64	46.22	230	60	Peak
5984.625	62.57	61.01	68.2	-5.63	35.38	12.29	46.11	230	60	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
5599.4	60.16	60.99	68.2	-8.04	34.72	10.67	46.22	230	120	Peak
5996.025	63.18	61.76	68.2	-5.02	35.2	12.33	46.11	230	120	Peak

CH 165

Horiontal	Vertical
	

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	106.97	106.78	/	/	35.09	11.28	46.18	130	60	Peak
5745	99.42	99.23	/	/	35.09	11.28	46.18	130	60	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	103.88	103.89	/	/	34.89	11.28	46.18	100	105	Peak
5745	97.64	97.65	/	/	34.89	11.28	46.18	100	105	Average

REMARKS:

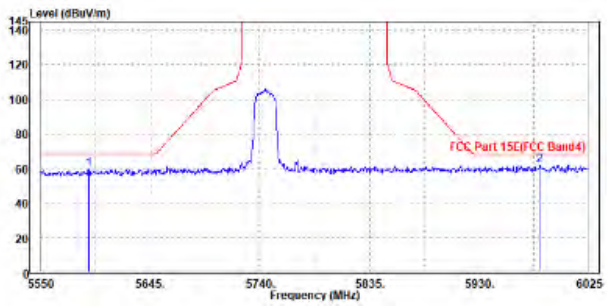
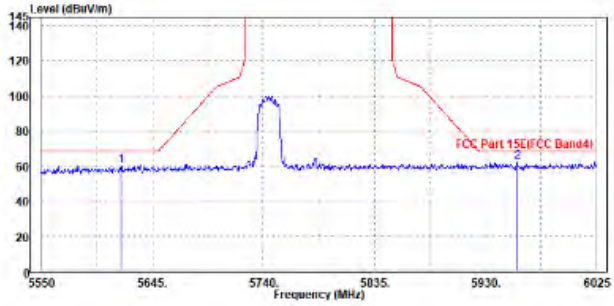
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.

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
5591.8	59.34	60.01	68.2	-8.86	34.91	10.64	46.22	230	60	Peak
5982.725	61.58	60.03	68.2	-6.62	35.38	12.28	46.11	230	60	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
5618.4	60.08	60.81	68.2	-8.12	34.74	10.75	46.22	230	105	Peak
5957.55	62.34	61.14	68.2	-5.86	35.15	12.17	46.12	230	105	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	107.32	106.9	/	/	35.14	11.45	46.17	100	60	Peak
5785	99.42	99	/	/	35.14	11.45	46.17	100	60	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	104.45	104.23	/	/	34.94	11.45	46.17	100	105	Peak
5785	98.17	97.95	/	/	34.94	11.45	46.17	100	105	Average

REMARKS:

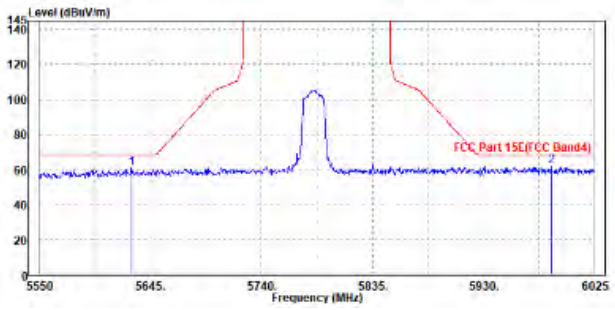
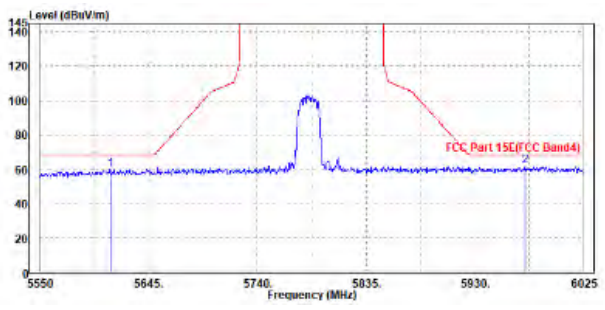
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.

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
5628.85	60.87	61.33	68.2	-7.33	34.95	10.8	46.21	200	60	Peak
5987.95	61.64	60.06	68.2	-6.56	35.39	12.3	46.11	200	60	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
5611.275	59.61	60.38	68.2	-8.59	34.73	10.72	46.22	200	105	Peak
5974.175	61.93	60.64	68.2	-6.27	35.17	12.24	46.12	200	105	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	107.95	107.3	/	/	35.19	11.62	46.16	100	60	Peak
5825	99.95	99.3	/	/	35.19	11.62	46.16	100	60	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	104.55	104.1	/	/	34.99	11.62	46.16	100	105	Peak
5825	98.27	97.82	/	/	34.99	11.62	46.16	100	105	Average

REMARKS:

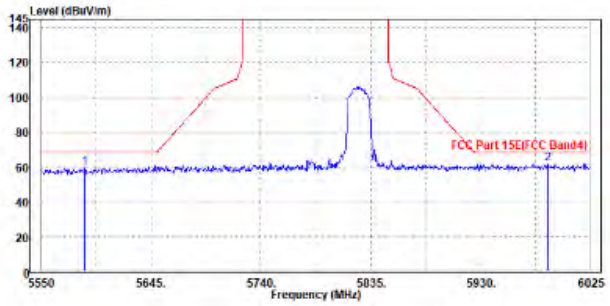
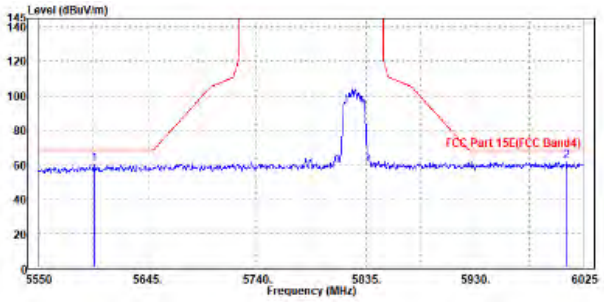
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.

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
5588	59.45	60.15	68.2	-8.75	34.91	10.62	46.23	200	60	Peak
5987.95	61.9	60.32	68.2	-6.3	35.39	12.3	46.11	200	60	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
5598.45	59.86	60.69	68.2	-8.34	34.72	10.67	46.22	200	105	Peak
6009.8	61.74	60.28	68.2	-6.46	35.21	12.36	46.11	200	105	Peak

CH 165

Horiontal	Vertical
	

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	102.27	102.02	/	/	35.11	11.32	46.18	100	60	Peak
5755	96.82	96.57	/	/	35.11	11.32	46.18	100	60	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	99.07	99.02	/	/	34.91	11.32	46.18	100	105	Peak
5755	94.77	94.72	/	/	34.91	11.32	46.18	100	105	Average

REMARKS:

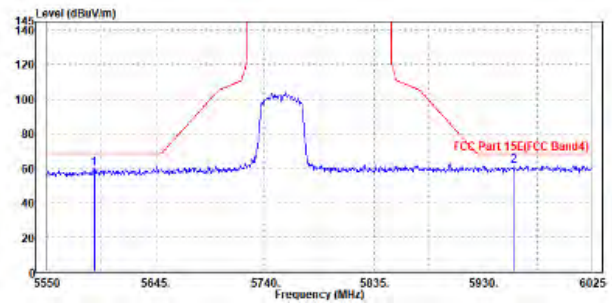
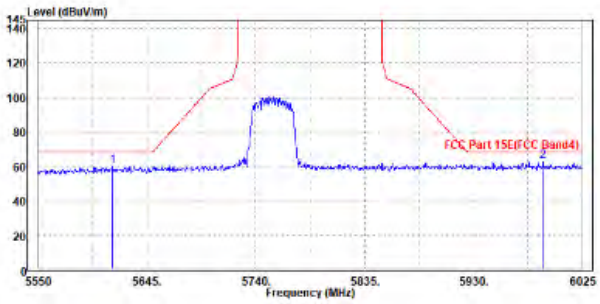
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5755MHz: Fundamental frequency.

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
5591.325	59.62	60.29	68.2	-8.58	34.91	10.64	46.22	200	60	Peak
5956.6	61.07	59.67	68.2	-7.13	35.35	12.17	46.12	200	60	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
5614.6	59.86	60.6	68.2	-8.34	34.74	10.74	46.22	200	105	Peak
5990.8	62.68	61.29	68.2	-5.52	35.19	12.31	46.11	200	105	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	103	102.53	/	/	35.15	11.49	46.17	100	60	Peak
5795	97.71	97.24	/	/	35.15	11.49	46.17	100	60	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	100.31	100.04	/	/	34.95	11.49	46.17	100	105	Peak
5795	95.7	95.43	/	/	34.95	11.49	46.17	100	105	Average

REMARKS:

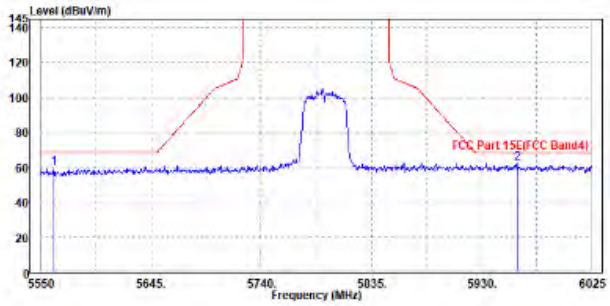
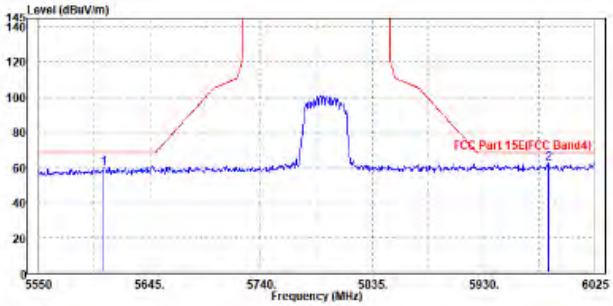
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5795MHz: Fundamental frequency.

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
5560.925	59.51	60.36	68.2	-8.69	34.87	10.51	46.23	200	60	Peak
5960.875	62.03	60.61	68.2	-6.17	35.35	12.19	46.12	200	60	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
5606.05	59.45	60.24	68.2	-8.75	34.73	10.7	46.22	200	105	Peak
5985.575	62.25	60.89	68.2	-5.95	35.18	12.29	46.11	200	105	Peak

CH 159

Horiontal	Vertical
	

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	95.9	95.53	/	/	35.13	11.41	46.17	100	60	Peak
5775	91.79	91.42	/	/	35.13	11.41	46.17	100	60	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	93.31	93.14	/	/	34.93	11.41	46.17	100	105	Peak
5775	89.58	89.41	/	/	34.93	11.41	46.17	100	105	Average

REMARKS:

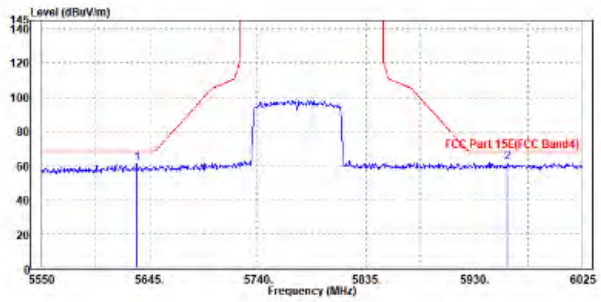
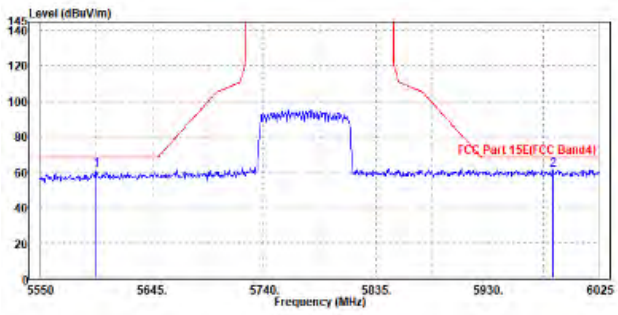
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5775MHz: Fundamental frequency.

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
5633.6	61	61.43	68.2	-7.2	34.96	10.82	46.21	200	60	Peak
5959.45	61.9	60.49	68.2	-6.3	35.35	12.18	46.12	200	60	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
5597.5	61.07	61.91	68.2	-7.13	34.72	10.66	46.22	200	105	Peak
5985.575	61.26	59.9	68.2	-6.94	35.18	12.29	46.11	200	105	Peak

CH 155

Horiontal	Vertical
	

WIFI 5G 11ac80_TX_CH 42 - BT 2.0 TX_8DPSK_Ch 39

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

Band 1

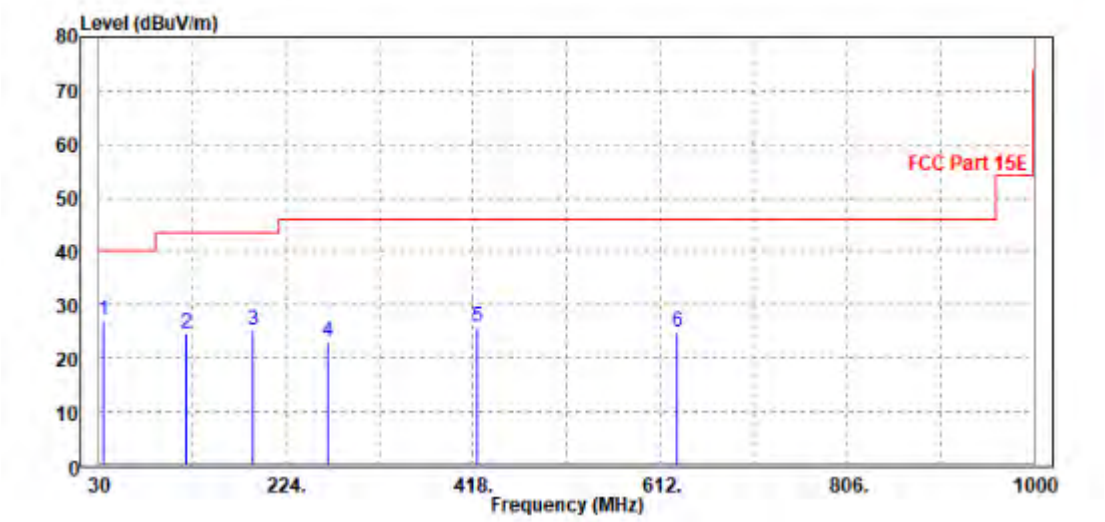
802.11ac (80MHz)

CHANNEL	TX Channel 42	**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
34.82	27.17	45.58	40	-12.83	18.85	0.33	37.59	300	0	Peak
120.287	24.76	53.37	43.5	-18.74	7.89	0.58	37.08	300	0	Peak
189.348	25.24	50.55	43.5	-18.26	10.57	0.72	36.6	300	0	Peak
267.34	23	45.34	46	-23	13.48	0.86	36.68	300	0	Peak
422.85	25.77	44.22	46	-20.23	17.31	1.11	36.87	300	0	Peak
630.48	24.94	39.65	46	-21.06	21.31	1.4	37.42	300	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.

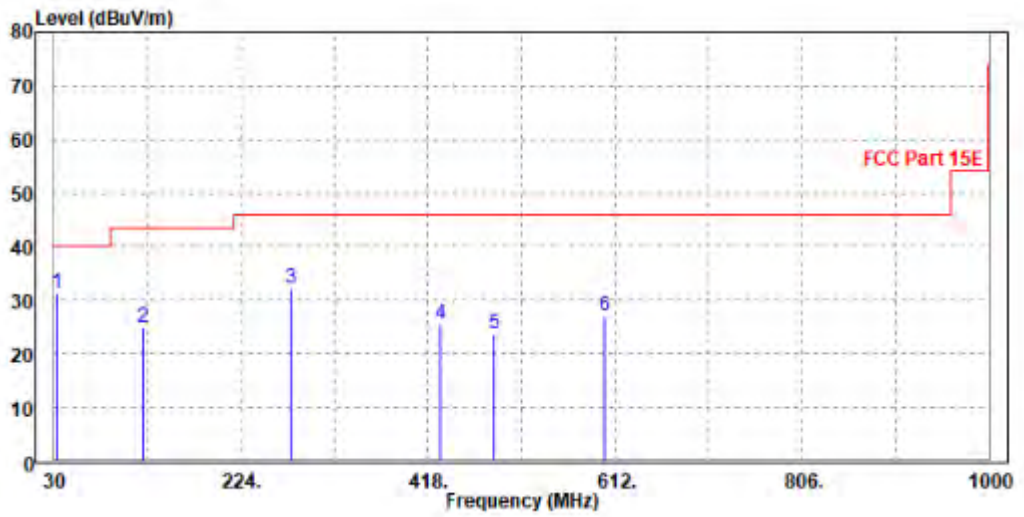


CHANNEL	Channel 42	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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
32.91	31.42	49.65	40	-8.58	18.92	0.32	37.47	200	0	Peak
122.648	25	53.48	43.5	-18.5	7.99	0.59	37.06	200	0	Peak
275.948	32.14	53.55	46	-13.86	14.42	0.87	36.7	200	0	Peak
430.858	25.57	43.54	46	-20.43	17.79	1.12	36.88	200	0	Peak
486.87	23.72	40.65	46	-22.28	18.85	1.2	36.98	200	0	Peak
600.34	27.12	42.23	46	-18.88	20.9	1.36	37.37	200	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.



802.11ac (80MHz)

CHANNEL	TX Channel 42	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	54.23	56.54	74	-19.77	34.52	9.52	46.35	100	180	Peak
5150	50.3	52.61	54	-3.7	34.52	9.52	46.35	100	180	Average
5210	92.06	94.19	/	/	34.57	9.64	46.34	100	180	Peak
5210	84.8	86.93	/	/	34.57	9.64	46.34	100	180	Average
5350	53.97	55.65	74	-20.03	34.68	9.94	46.3	180	110	Peak
5350	48.51	50.19	54	-5.49	34.68	9.94	46.3	180	110	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	54.71	56.94	74	-19.29	34.6	9.52	46.35	100	110	Peak
5150	49.94	52.17	54	-4.06	34.6	9.52	46.35	100	110	Average
5210	90.39	92.49	/	/	34.6	9.64	46.34	100	110	Peak
5210	84.22	86.32	/	/	34.6	9.64	46.34	100	110	Average
5350	53.46	55.22	74	-20.54	34.6	9.94	46.3	100	110	Peak
5350	48.59	50.35	54	-5.41	34.6	9.94	46.3	100	110	Average

REMARKS:

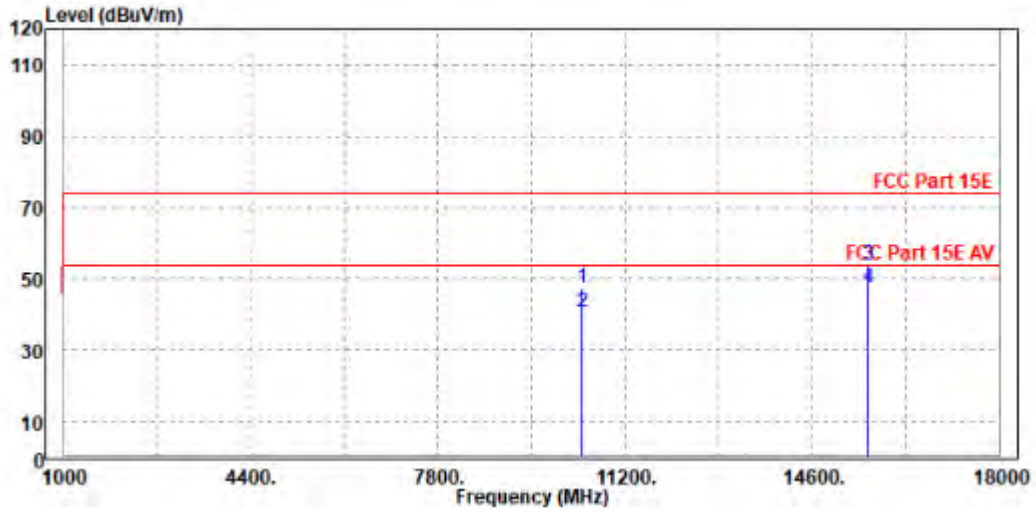
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 5210MHz: Fundamental frequency.

Worst case harmonic:

CHANNEL	TX Channel 42	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

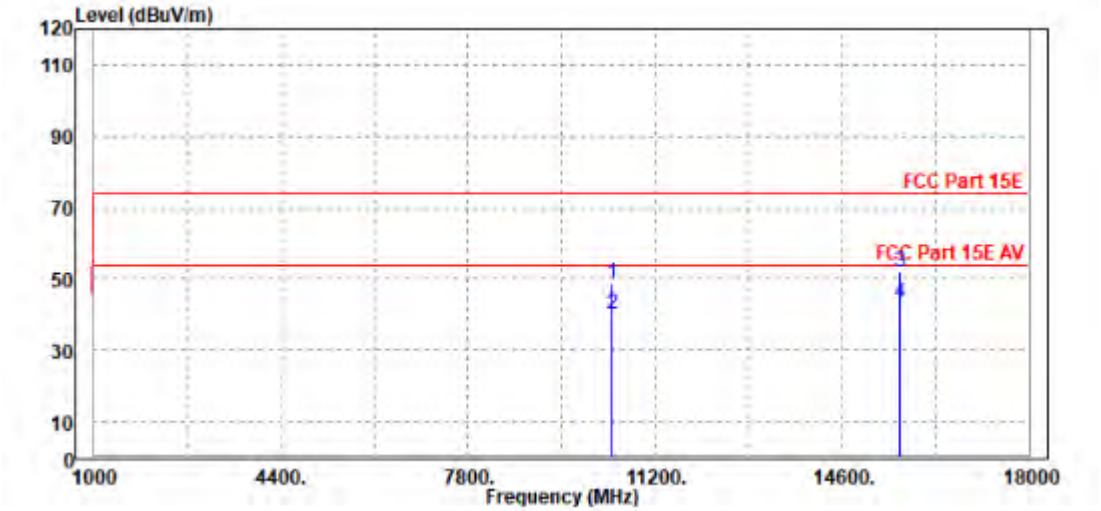
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	10418.000	47.59	43.73	74.00	-26.41	3.86	Peak	Horizontal
2	10418.000	40.40	36.54	54.00	-13.60	3.86	Average	Horizontal
3	PK15630.000	53.99	39.64	74.00	-20.01	14.35	Peak	Horizontal
4	PP15630.000	47.30	32.95	54.00	-6.70	14.35	Average	Horizontal



ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	10420.000	48.83	43.75	74.00	-25.17	5.08	Peak	Vertical
2	10420.000	39.98	34.90	54.00	-14.02	5.08	Average	Vertical
3	PK15637.000	52.00	38.73	74.00	-22.00	13.27	Peak	Vertical
4	PP15637.000	43.50	30.23	54.00	-10.50	13.27	Average	Vertical



REMARKS:

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

3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 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.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Feb. 15,22	Feb. 14,23
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Mar. 04,22	Mar. 03,23

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.

3.2.3 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.

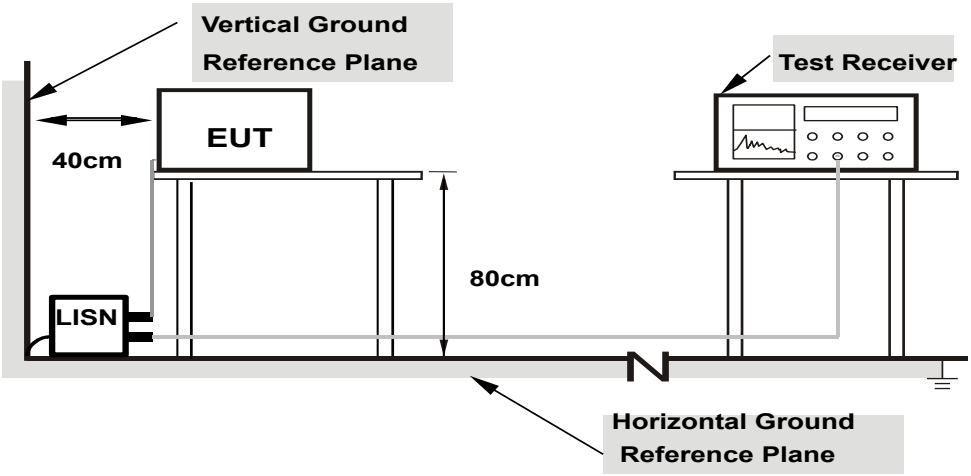
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 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).

3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.6.

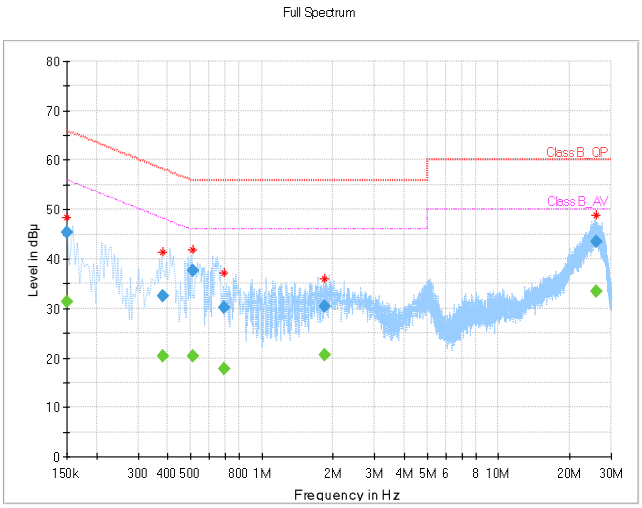
3.2.7 TEST RESULTS

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**	24deg. C, 55%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	31.38	56.00	24.62	L1	ON	9.7
0.150000	45.48	---	66.00	20.52	L1	ON	9.7
0.380000	---	20.37	48.28	27.91	L1	ON	9.7
0.380000	32.49	---	58.28	25.79	L1	ON	9.7
0.512000	---	20.45	46.00	25.55	L1	ON	9.7
0.512000	37.63	---	56.00	18.37	L1	ON	9.7
0.696000	---	17.79	46.00	28.21	L1	ON	9.7
0.696000	30.22	---	56.00	25.78	L1	ON	9.7
1.848000	---	20.66	46.00	25.34	L1	ON	9.7
1.848000	30.36	---	56.00	25.64	L1	ON	9.7
25.792000	---	33.41	50.00	16.59	L1	ON	9.8
25.792000	43.48	---	60.00	16.52	L1	ON	9.8

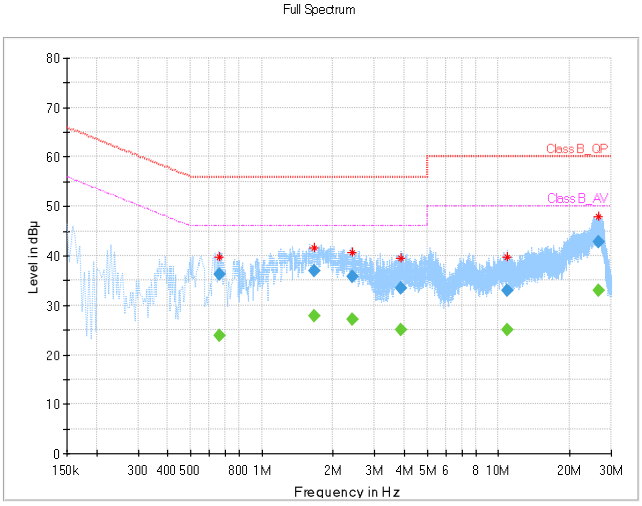
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Limit value - Emission level
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	24deg. C, 55%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.660000	---	23.80	46.00	22.20	N	ON	9.7
0.660000	36.34	---	56.00	19.66	N	ON	9.7
1.668000	---	27.83	46.00	18.17	N	ON	9.8
1.668000	37.07	---	56.00	18.93	N	ON	9.8
2.404000	---	27.06	46.00	18.94	N	ON	9.8
2.404000	35.77	---	56.00	20.23	N	ON	9.8
3.888000	---	24.97	46.00	21.03	N	ON	9.8
3.888000	33.39	---	56.00	22.61	N	ON	9.8
10.928000	---	24.97	50.00	25.03	N	ON	9.8
10.928000	33.09	---	60.00	26.91	N	ON	9.8
26.524000	---	32.95	50.00	17.05	N	ON	9.9
26.524000	42.77	---	60.00	17.23	N	ON	9.9

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 = Limit value - Emission level
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



3.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

3.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

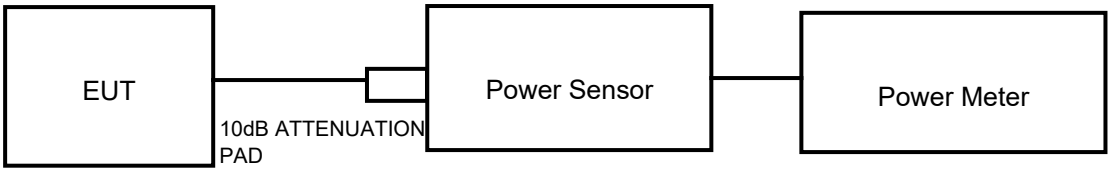
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	B	Indoor Access Point	1 Watt (30 dBm)
	√	Client devices	250mW (24 dBm)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

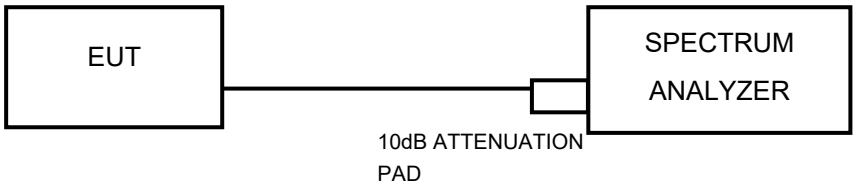
3.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

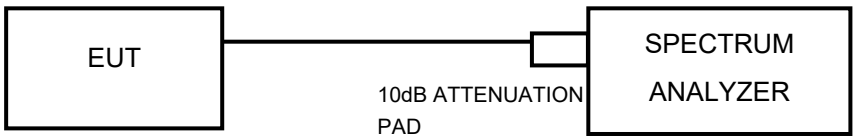
802.11a, 802.11n/ac/ax (20MHz), 802.11 n/ac/ax (40MHz) TEST CONFIGURATION



11ac TEST CONFIGURATION



FOR 26dB BANDWIDTH



3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	Feb. 22,22	Feb. 21,23
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Apr. 26,21	Apr. 25,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Feb. 24,22	Feb. 23,23
Power Sensor	ANRITSU	MA2411B	1339352	May. 07,22	May. 06,23

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.

3.3.4 TEST PROCEDURE

FOR POWER MEASUREMENT

For 802.11a, 802.11 n/ac/ax (20MHz), 802.11 n/ac/ax (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/ax (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.

3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

3.3.6 EUT OPERATING CONDITIONS

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

3.3.7 TEST RESULTS

Please Refer to Appendix A/B. Of this test report.

3.4 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

3.4.1 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

3.4.2 TEST SETUP

3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.4.4 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

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

Same as 3.1.6.

3.4.7 TEST RESULTS

Please Refer to Appendix A/B. Of this test report.

NOTE: Power setting

MODE	CHANNEL	POWER SETTING	MODE	CHANNEL	POWER SETTING
11A	36	17	11AN20	36	16
	40	17		40	16
	48	17		48	16
	52	17		52	16
	60	17		60	16
	64	17		64	16
	100	17		100	16
	116	17		116	16
	140	17		140	16
	144	17		144	16
	144(Band4)	17		144(Band4)	16
	149	17		149	16
	157	17		157	16
	165	17		165	16
11AC20	36	15.5	11AX20	36	13
	40	15.5		40	13
	48	15.5		48	13
	52	15.5		52	13
	60	15.5		60	13
	64	15.5		64	13
	100	15.5		100	13
	116	15.5		116	13
	140	15.5		140	13
	144	15.5		144	13

	144(Band4)	15.5		144(Band4)	13
	149	15.5		149	13
	157	15.5		157	13
	165	15.5		165	13

MODE	CHANNEL	POWER SETTING	MODE	CHANNEL	POWER SETTING
11AN40	38	16	11AC40	38	15
	46	16		46	15
	54	16		54	15
	62	16		62	15
	102	16		102	15
	110	16		110	15
	134	16		134	15
	142	16		142	15
	142(Band4)	16		142(Band4)	15
	151	16		151	15
	159	16		159	15
11AX40	38	13			
	46	13			
	54	13			
	62	13			
	102	13			
	110	13			
	134	13			
	142	13			
	142(Band4)	13			
	151	13			
	159	13			

MODE	CHANNEL	POWER SETTING	MODE	CHANNEL	POWER SETTING
11AC80	42	13.5	11AX80	42	13
	58	15.5		58	13
	106	15.5		106	13
	122	15.5		122	13
	138	15.5		138	13
	138(Band4)	15		138(Band4)	13
	155	15		155	13

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

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

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

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

6 APPENDIX A

EMISSION BANDWIDTH

TEST RESULT

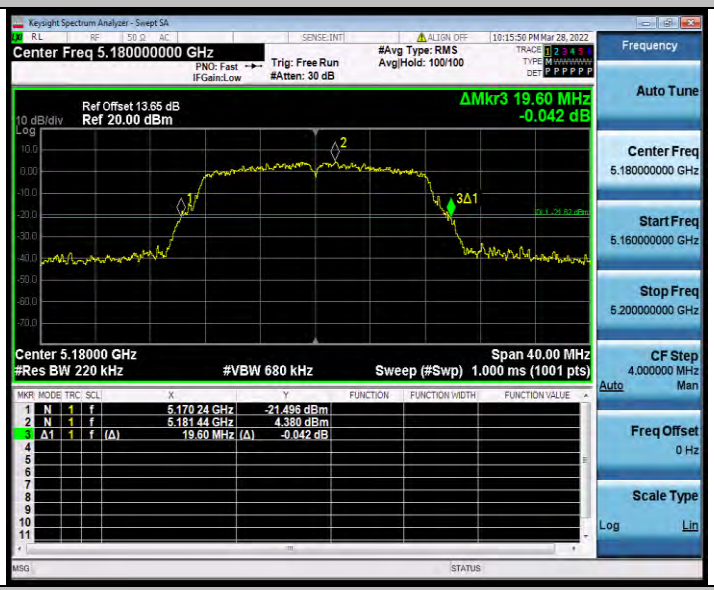
TestMode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant0	5180	19.600	5170.240	5189.840	---	---
	Ant1	5180	19.280	5170.400	5189.680	---	---
	Ant0	5200	19.600	5190.320	5209.920	---	---
	Ant1	5200	19.040	5190.520	5209.560	---	---
	Ant0	5240	19.600	5230.280	5249.880	---	---
	Ant1	5240	19.640	5230.400	5250.040	---	---
	Ant0	5260	19.200	5250.400	5269.600	---	---
	Ant1	5260	19.560	5250.120	5269.680	---	---
	Ant0	5300	21.440	5288.920	5310.360	---	---
	Ant1	5300	19.680	5290.200	5309.880	---	---
	Ant0	5320	19.600	5310.200	5329.800	---	---
	Ant1	5320	21.680	5308.080	5329.760	---	---
	Ant0	5500	19.840	5490.040	5509.880	---	---
	Ant1	5500	22.320	5488.440	5510.760	---	---
	Ant0	5580	19.720	5570.200	5589.920	---	---
	Ant1	5580	19.440	5570.440	5589.880	---	---
	Ant0	5700	19.520	5690.160	5709.680	---	---
	Ant1	5700	21.200	5689.040	5710.240	---	---
	Ant0	5745	19.560	5735.200	5754.760	---	---
	Ant1	5745	19.440	5735.240	5754.680	---	---
	Ant0	5785	19.440	5775.200	5794.640	---	---
	Ant1	5785	19.440	5775.160	5794.600	---	---
	Ant0	5825	19.680	5815.160	5834.840	---	---
	Ant1	5825	24.120	5812.400	5836.520	---	---
11N20MIMO	Ant0	5180	19.680	5170.160	5189.840	---	---
	Ant1	5180	20.360	5169.640	5190.000	---	---
	Ant0	5200	19.800	5190.040	5209.840	---	---

	Ant1	5200	19.840	5189.920	5209.760	---	---
	Ant0	5240	19.880	5230.120	5250.000	---	---
	Ant1	5240	20.040	5230.080	5250.120	---	---
	Ant0	5260	20.040	5250.000	5270.040	---	---
	Ant1	5260	20.040	5249.880	5269.920	---	---
	Ant0	5280	20.040	5269.960	5290.000	---	---
	Ant1	5280	19.840	5270.000	5289.840	---	---
	Ant0	5300	19.960	5290.160	5310.120	---	---
	Ant1	5300	19.640	5290.160	5309.800	---	---
	Ant0	5320	20.000	5309.960	5329.960	---	---
	Ant1	5320	21.600	5308.560	5330.160	---	---
	Ant0	5500	19.960	5489.960	5509.920	---	---
	Ant1	5500	22.080	5487.960	5510.040	---	---
	Ant0	5580	19.840	5570.120	5589.960	---	---
	Ant1	5580	19.720	5570.240	5589.960	---	---
	Ant0	5700	19.800	5690.080	5709.880	---	---
	Ant1	5700	19.720	5690.240	5709.960	---	---
	Ant0	5745	20.240	5734.880	5755.120	---	---
	Ant1	5745	19.600	5735.200	5754.800	---	---
	Ant0	5785	20.320	5774.760	5795.080	---	---
	Ant1	5785	19.680	5775.040	5794.720	---	---
	Ant0	5825	20.360	5814.800	5835.160	---	---
	Ant1	5825	21.680	5813.720	5835.400	---	---
11N40MIMO	Ant0	5190	40.240	5169.760	5210.000	---	---
	Ant1	5190	40.320	5169.520	5209.840	---	---
	Ant0	5230	40.000	5210.160	5250.160	---	---
	Ant1	5230	39.760	5210.160	5249.920	---	---
	Ant0	5270	40.080	5250.080	5290.160	---	---
	Ant1	5270	39.120	5250.480	5289.600	---	---
	Ant0	5310	40.400	5289.680	5330.080	---	---
	Ant1	5310	39.600	5289.920	5329.520	---	---
	Ant0	5510	39.920	5489.920	5529.840	---	---
	Ant1	5510	40.240	5489.680	5529.920	---	---
	Ant0	5550	40.160	5530.000	5570.160	---	---
	Ant1	5550	39.440	5530.480	5569.920	---	---

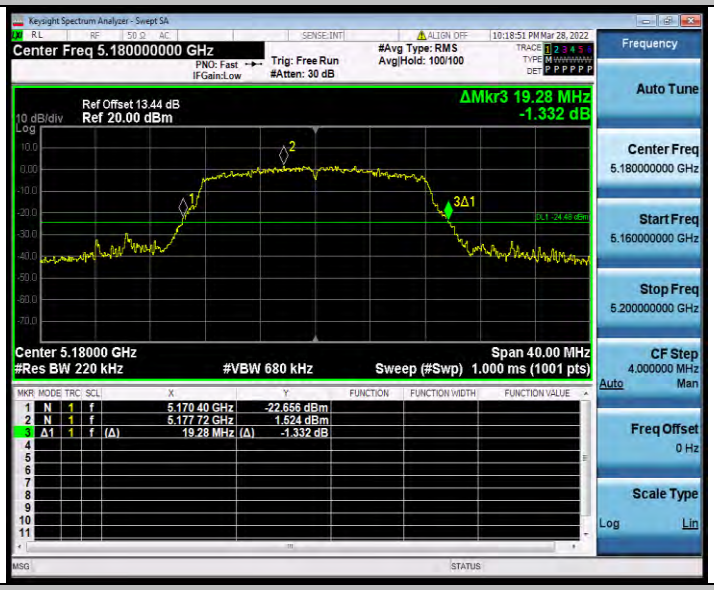
	Ant0	5670	39.600	5650.000	5689.600	---	---
	Ant1	5670	39.920	5650.080	5690.000	---	---
	Ant0	5755	39.840	5735.160	5775.000	---	---
	Ant1	5755	39.360	5735.320	5774.680	---	---
	Ant0	5795	40.320	5774.840	5815.160	---	---
	Ant1	5795	39.040	5775.160	5814.200	---	---
11AC80MIMO	Ant0	5210	79.680	5170.160	5249.840	---	---
	Ant1	5210	79.360	5170.320	5249.680	---	---
	Ant0	5290	79.520	5250.320	5329.840	---	---
	Ant1	5290	79.520	5250.160	5329.680	---	---
	Ant0	5530	79.520	5490.320	5569.840	---	---
	Ant1	5530	79.520	5490.320	5569.840	---	---
	Ant0	5610	79.680	5570.160	5649.840	---	---
	Ant1	5610	79.200	5570.480	5649.680	---	---
	Ant0	5775	79.680	5735.160	5814.840	---	---
	Ant1	5775	79.360	5735.320	5814.680	---	---

TEST GRAPHS

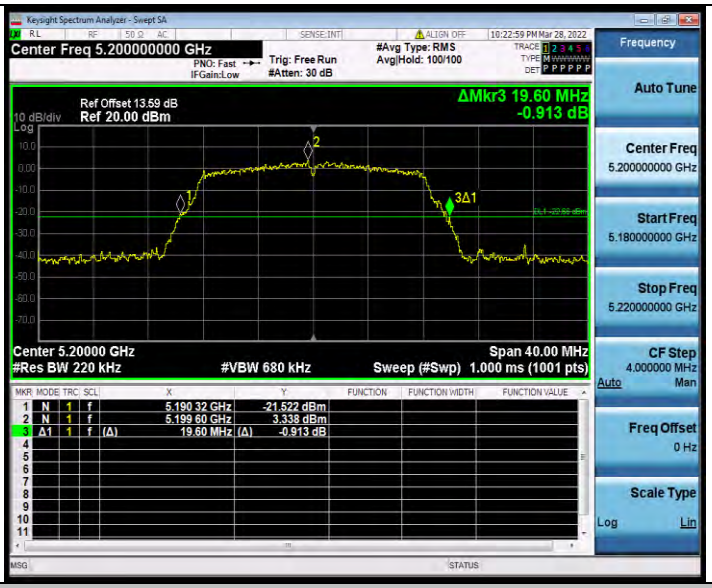
11A-CDD_Ant0_5180



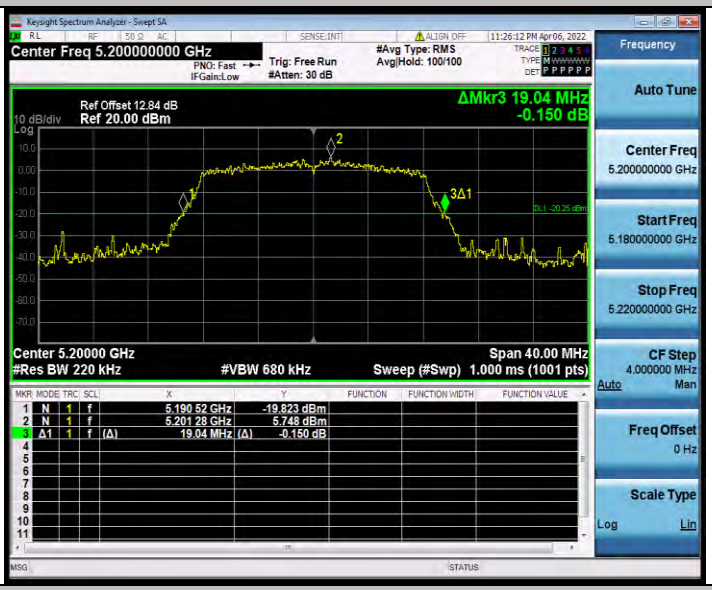
11A-CDD_Ant1_5180



11A-CDD_Ant0_5200



11A-CDD_Ant1_5200



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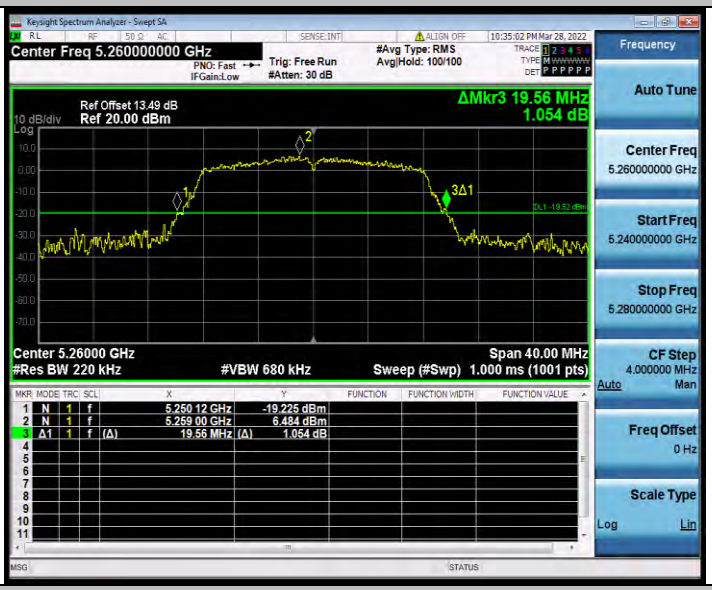
11A-CDD_Ant1_5240

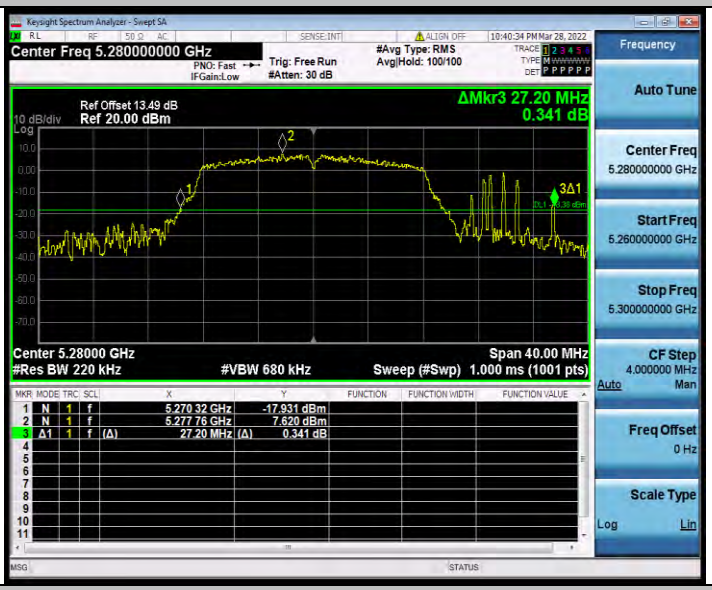
11A-CDD_Ant0_5260

11A-CDD_Ant1_5260

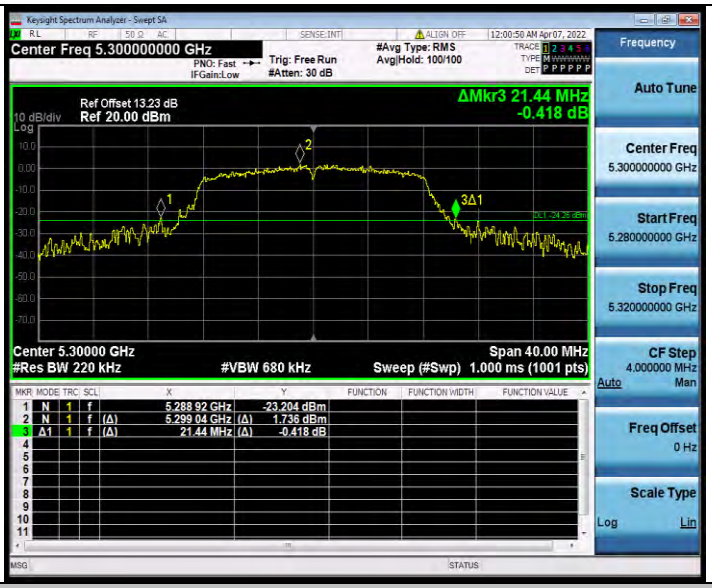


11A-CDD_Ant0_5280

11A-CDD_Ant1_5280

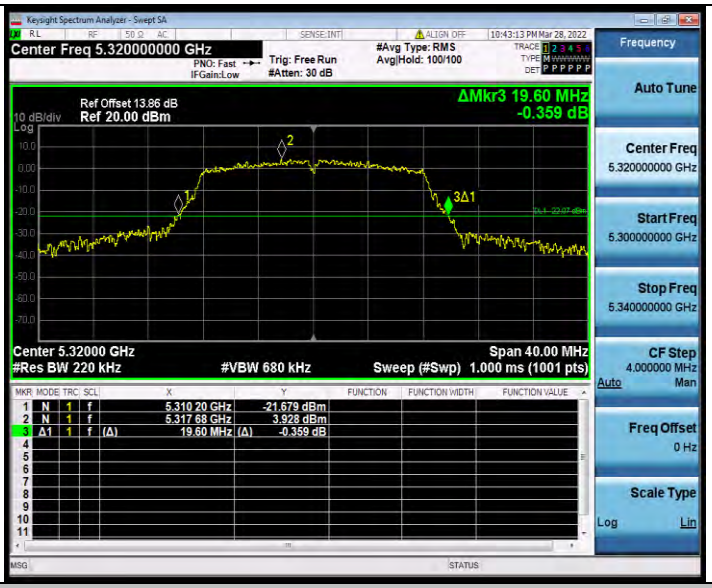


11A-CDD_Ant0_5300



11A-CDD_Ant1_5300

11A-CDD_Ant0_5320



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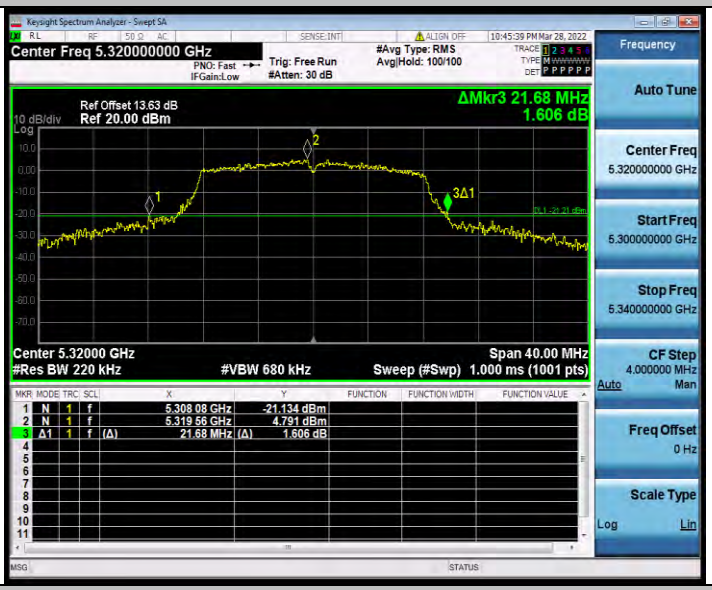
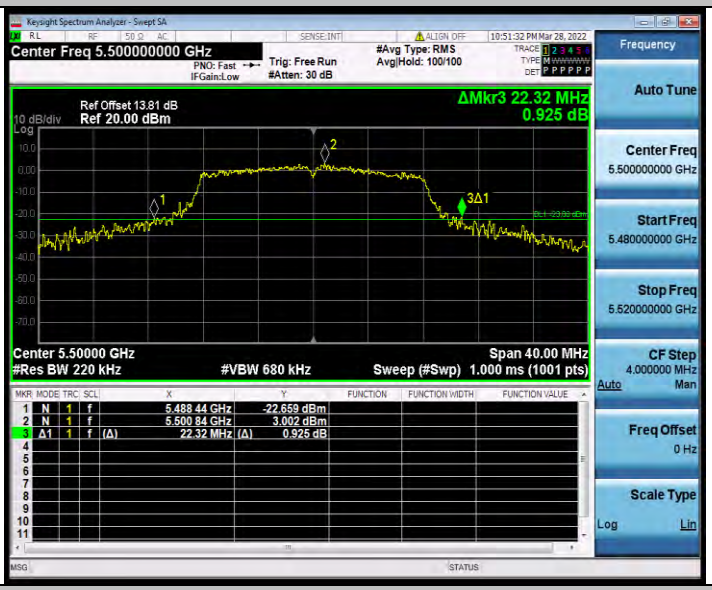


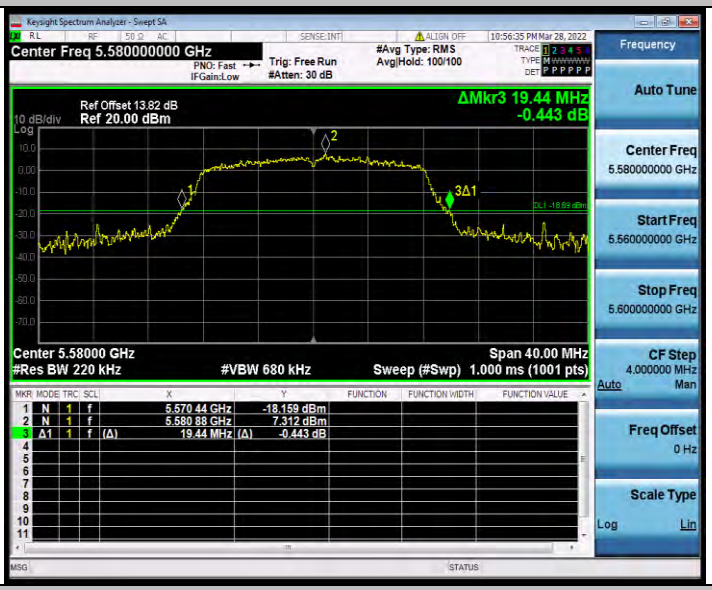
11A-CDD_Ant0_5500

11A-CDD_Ant1_5500



11A-CDD_Ant0_5580

11A-CDD_Ant1_5580

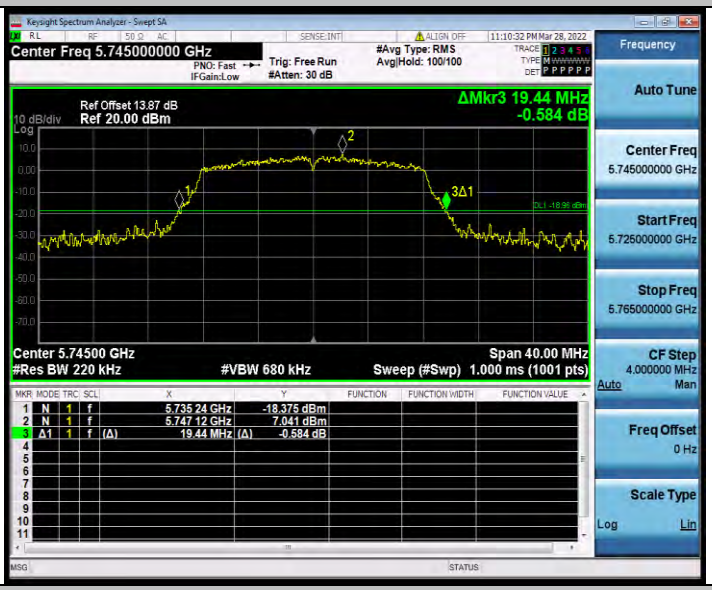


11A-CDD_Ant0_5700

11A-CDD_Ant1_5700

11A-CDD_Ant0_5745

11A-CDD_Ant1_5745



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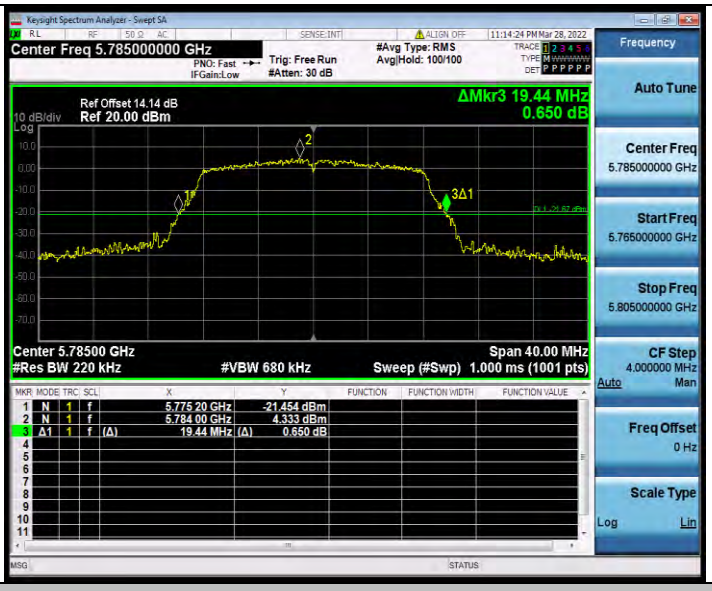
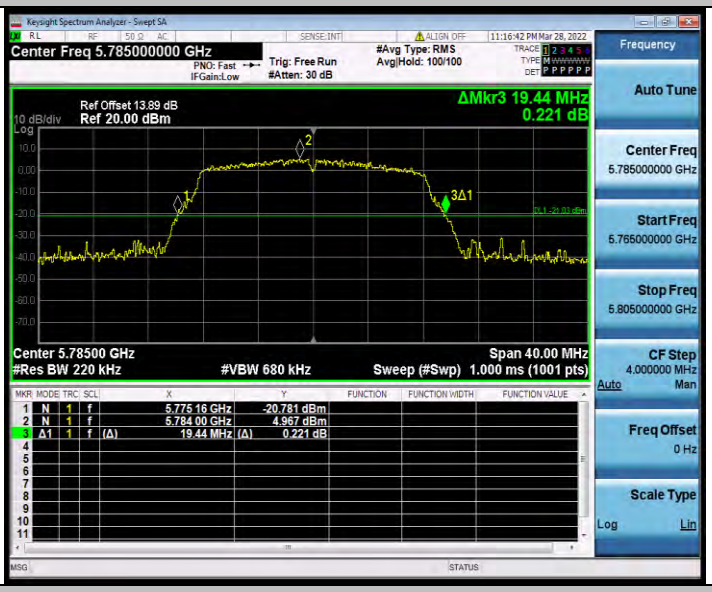
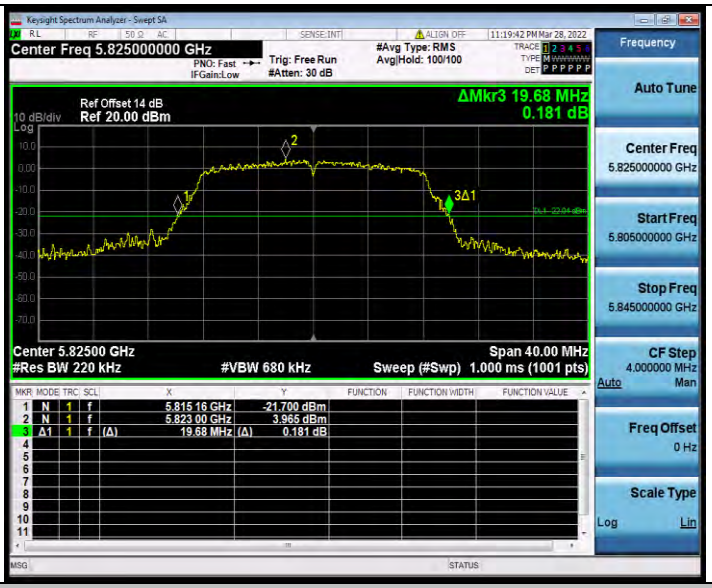


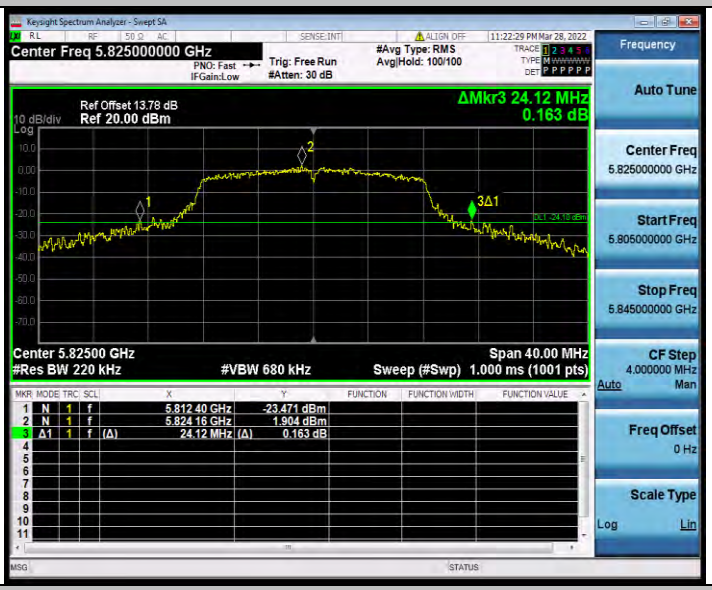
11A-CDD_Ant1_5785



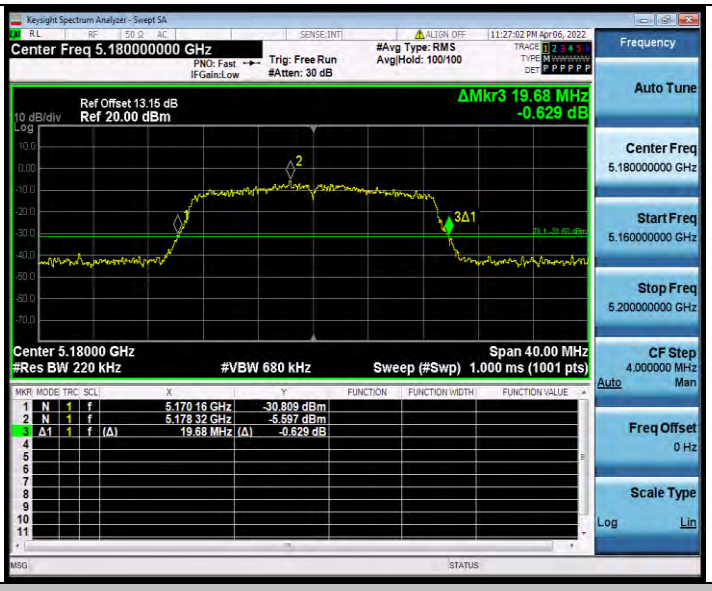
11A-CDD_Ant0_5825



11A-CDD_Ant1_5825

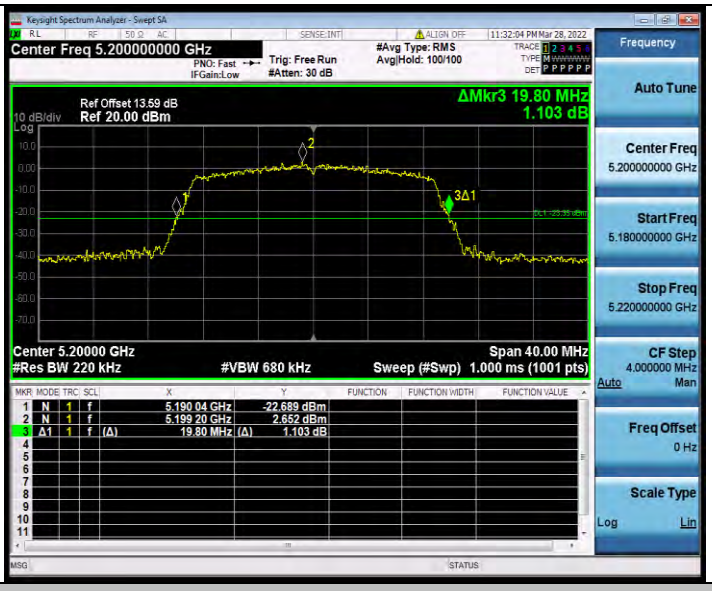


11N20MIMO_Ant0_5180



11N20MIMO_Ant1_5180

11N20MIMO_Ant0_5200



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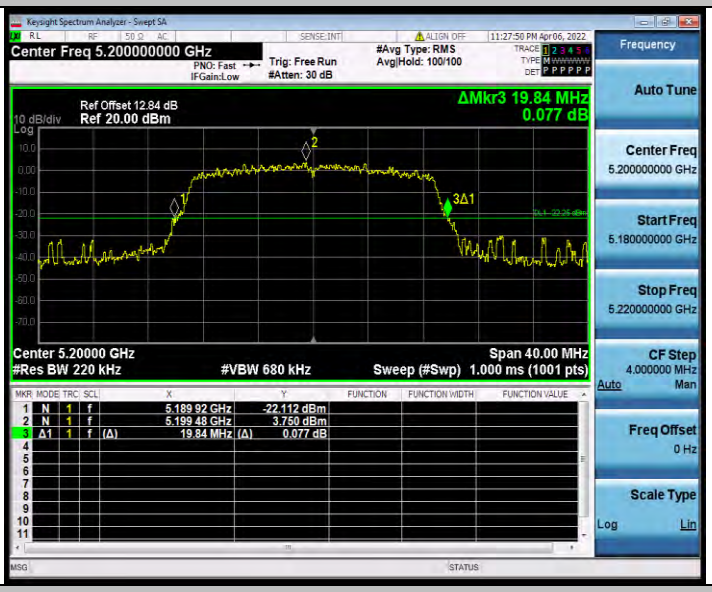

11N20MIMO_Ant0_5240