FCC TEST REPORT

(Part 15, Subpart E)

Applicant:	Thundercomm Technology Co., Ltd
Address:	No. 107, Middle Datagu Road, Xiantao Street, Yubei District, Chongqing, China, 401122

Manufacturer or Supplier:	Thundercomm Technology Co., Ltd
Address:	No. 107, Middle Datagu Road, Xiantao Street, Yubei District, Chongqing, China, 401122
Product:	TurboX CM2290-NA
Brand Name:	TURBOX
Model Name:	TurboX CM2290-NA
FCC ID:	2AOHHCM2290NA
Date of tests:	Apr. 07, 2023 ~ Apr. 26, 2023

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	Approved by Luke Lu
Engineer / Mobile Department	Manager / Mobile Department
Simon Wang	Luke Lu
Date: Apr. 26, 2023	Date: Apr. 26, 2023

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P23030025RF03	Original release	Apr. 26, 2023

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
15.407(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 please refer to the appendix.

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 (9KHz~30MHz)	±2.68dB
Radiated emissions (30MHz~1GHz)	±4.98dB
Radiated emissions (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±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	TurboX CM2290-NA
BRAND NAME	TURBOX
MODEL NAME	TurboX CM2290-NA
NOMINAL VOLTAGE	EUT 4.0V
MODULATION	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150.0Mbps 802.11ac: up to 433.3Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5720MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n, 802.11ac (20MHz) 2 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n, 802.11ac (20MHz) 2 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5720MHz: 12 for 802.11a, 802.11n, 802.11ac(20MHz) 6 for 802.11n, 802.11ac (40MHz) 3 for 802.11ac (80MHz) 5745 ~ 5825MHz: 4 for 802.11a, 802.11n, 802.11ac (20MHz) 2 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz)
AVERAGE POWER	21.23 mW for 5180 ~ 5240MHz 19.91 mW for 5260 ~ 5320MHz 21.09 mW for 5500 ~ 5720MHz 19.54 mW for 5745 ~ 5825MHz
ANTENNA TYPE	Flex Antenna
ANTENNA GAIN	4dBi for 5180 ~ 5240MHz 4dBi for 5260 ~ 5320MHz 4dBi for 5500 ~ 5720MHz 4dBi for 5745 ~ 5825MHz
HW VERSION	V06
SW VERSION	FlatBuild_Turbox-CM2290_cm2290_la1.0.1.v.userdebug.20230301.1952
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

NOTE:

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

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

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

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

2.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

FOR 5260 ~ 5320MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		

FOR 5500 ~ 5720MHz

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

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

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

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

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

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

FOR 5745 ~ 5825MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

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

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

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

CHANNEL	FREQUENCY
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	802.11a	5745-5825	144 to 165	149	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/ac (20MHz)		36 to 48	36, 48	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		144 to 165	144,149, 157,165	OFDM	MCS0
A	802.11an/ac (40MHz)		142 to 159	142,151, 159	OFDM	MCS0
A	802.11ac (80MHz)		138 to 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	802.11a	5745-5825	144 to 165	149	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/ac (20MHz)		36 to 48	36, 48	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11an/ac/ (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/ac (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		36 to 48	36, 48	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		100 to 144	100, 116, 140, 144	OFDM	MCS0
A	802.11an/ac (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/ac (20MHz)		144 to 165	144, 149, 157,165	OFDM	MCS0
A	802.11an/ac (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	EUT 4.0V	Jace Hu
RE≥1G	23deg. C, 70%RH	EUT 4.0V	Jace Hu
PLC	25deg. C, 52%RH	EUT 4.0V	James Fu
APCM	25deg. C, 60%RH	EUT 4.0V	James Fu

2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix A Of this test report.

WORST-CASE DATA:

Measured Duty Cycle		
Mode		Duty Cycle [%]
		ANT1
5GHZ	11a	98.54
	11n20	98.28
	11n40	96.55
	11ac20	98.28
	11ac40	96.55
	11ac80	93.33

Note:

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

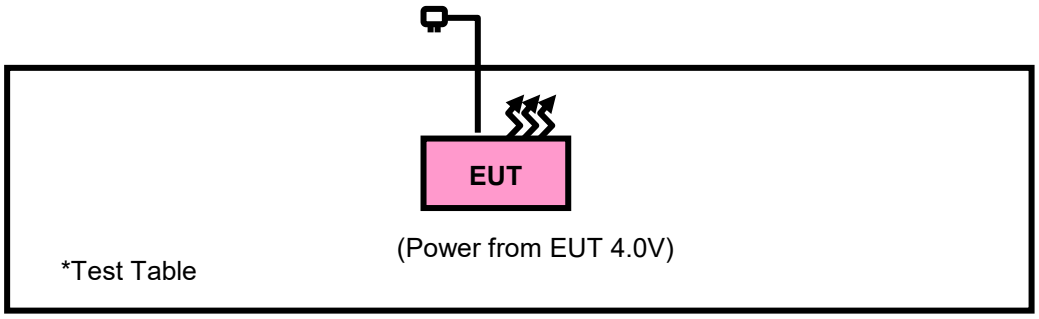
2.4 DESCRIPTION OF SUPPORT UNITS

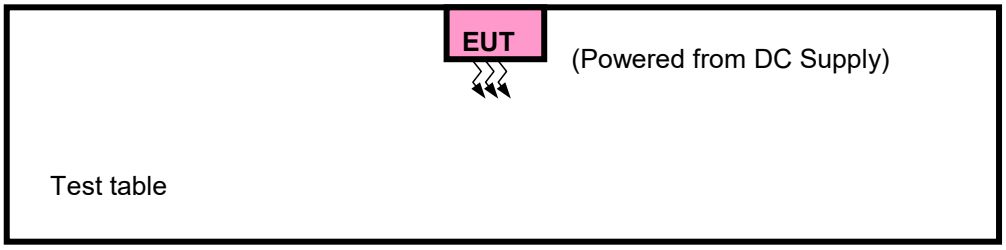
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

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	ThinkpadL440	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	00161965	Mar. 05,23	Mar. 04,24
Horn Antenna	ETS-LINDGREN	3117	00168692	Mar. 05,23	Mar. 04,24
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.04, 22	Sep.03, 23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120-3	3.2.06	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	N/A	May. 12,22	May. 11,23
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 20,23	Feb. 19,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 17,23	Feb. 16,24
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 12,22	Aug. 11,23
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.03,22	Sep.02,23

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:

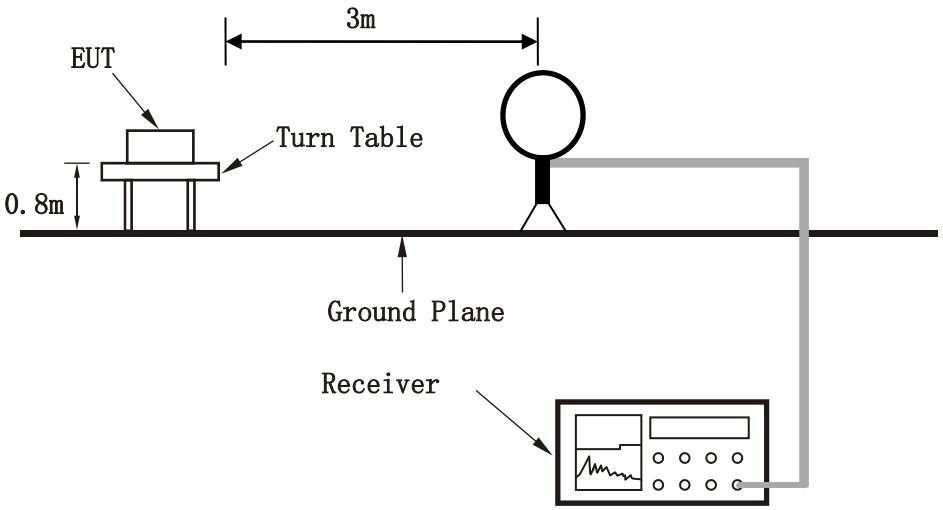
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency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

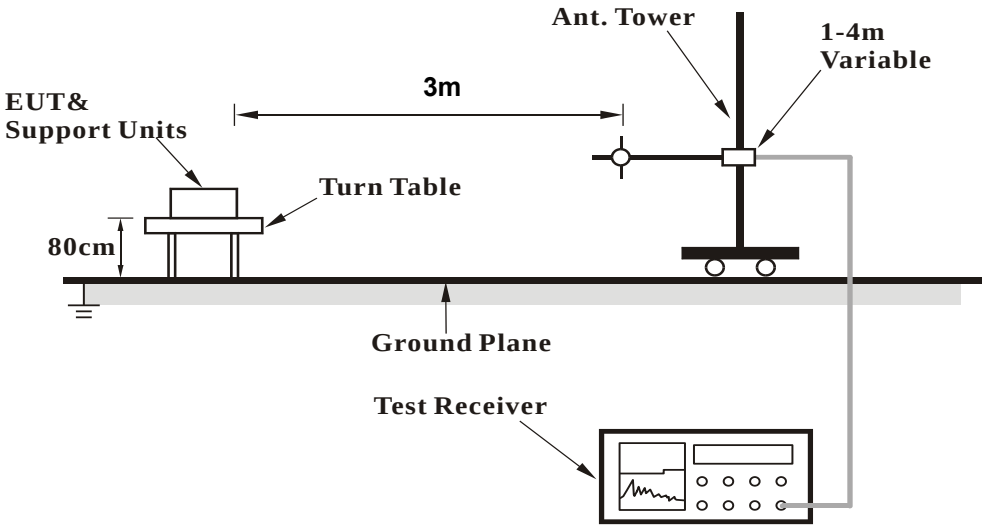
No deviation.

3.1.6 TEST SETUP

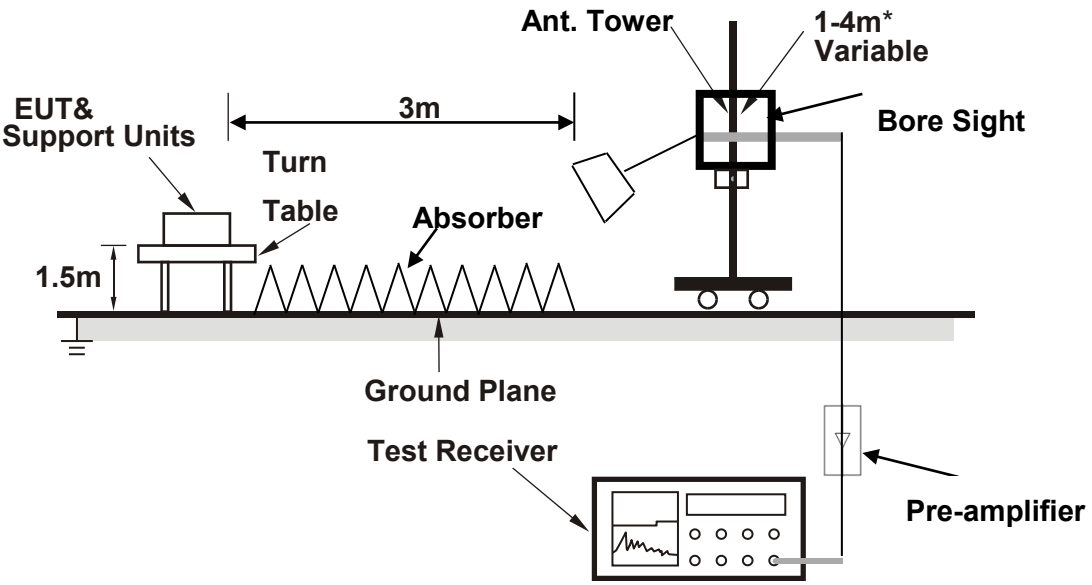
<Frequency Range 9KHz~30MHz >



< 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

NOTE ： The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

30 MHz – 1GHz data:

Band 4

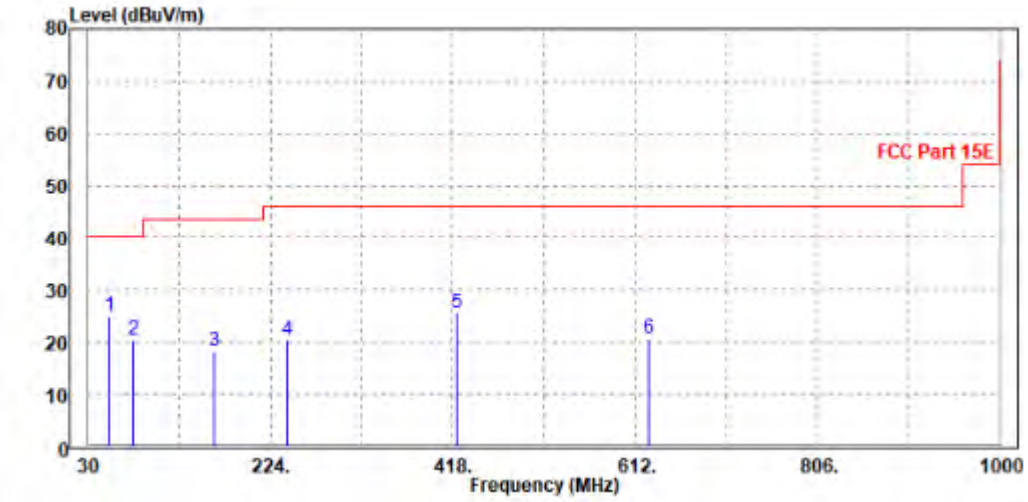
802.11a:

CHANNEL	TX Channel 149	**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
52.31	24.83	51.44	40	-15.17	9.97	0.41	36.99	163	273	QP
77.53	20.28	49.07	40	-19.72	7.7	0.49	36.98	173	45	QP
164.83	18.29	43.07	43.5	-25.21	11.02	0.68	36.48	161	34	QP
241.46	20.37	42.71	46	-25.63	13.12	0.82	36.28	159	313	QP
422.85	25.43	44.16	46	-20.57	16.63	1.11	36.47	177	2	QP
625.58	20.77	36.13	46	-25.23	20.19	1.39	36.94	177	78	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.

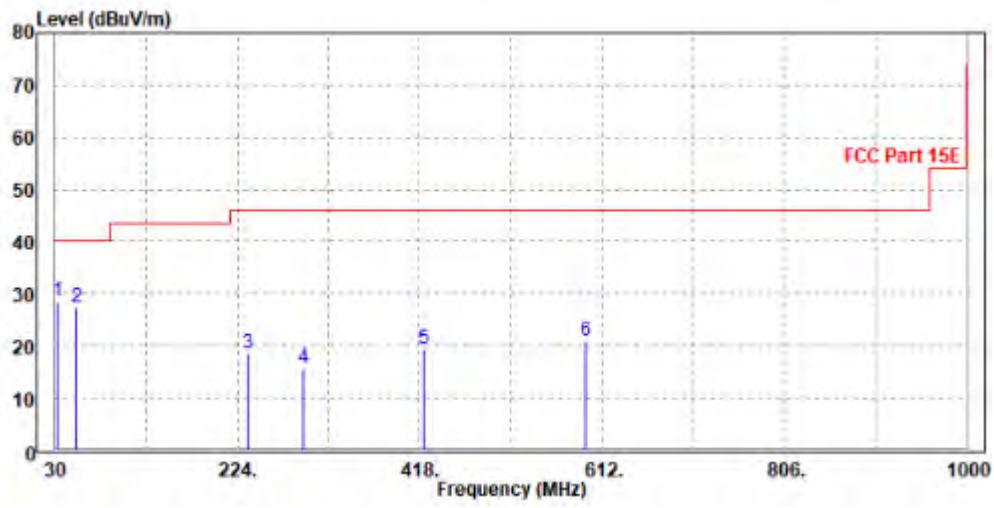


CHANNEL	Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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
31.94	28.66	46.44	40	-11.34	19.33	0.32	37.43	183	302	QP
53.28	27.38	54.6	40	-12.62	9.34	0.42	36.98	178	90	QP
234.67	18.63	41.85	46	-27.37	12.26	0.8	36.28	106	329	QP
294.81	15.83	37.34	46	-30.17	13.85	0.9	36.26	192	312	QP
422.85	19.35	38.11	46	-26.65	16.6	1.11	36.47	102	43	QP
594.54	20.86	36.86	46	-25.14	19.49	1.35	36.84	180	221	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	54.14	55.21	74	-19.86	34.52	9.92	45.51	200	180	Peak
5150	48.62	49.69	54	-5.38	34.52	9.92	45.51	200	180	Average
5180	101.1	102.16	/	/	34.54	9.91	45.51	200	180	Peak
5180	94.81	95.87	/	/	34.54	9.91	45.51	200	180	Average
5350	54.9	55.88	74	-19.1	34.68	9.85	45.51	200	180	Peak
5350	47.69	48.67	54	-6.31	34.68	9.85	45.51	200	180	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	54.62	55.61	74	-19.38	34.6	9.92	45.51	200	35	Peak
5150	48.86	49.85	54	-5.14	34.6	9.92	45.51	200	35	Average
5180	97.02	98.02	/	/	34.6	9.91	45.51	200	35	Peak
5180	91.15	92.15	/	/	34.6	9.91	45.51	200	35	Average
5350	53.21	54.27	74	-20.79	34.6	9.85	45.51	200	35	Peak
5350	47.78	48.84	54	-6.22	34.6	9.85	45.51	200	35	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	54.63	55.7	74	-19.37	34.52	9.92	45.51	200	170	Peak
5150	48.41	49.48	54	-5.59	34.52	9.92	45.51	200	170	Average
5200	101.61	102.66	/	/	34.56	9.9	45.51	200	170	Peak
5200	94.57	95.62	/	/	34.56	9.9	45.51	200	170	Average
5350	54.3	55.28	74	-19.7	34.68	9.85	45.51	200	170	Peak
5350	48.11	49.09	54	-5.89	34.68	9.85	45.51	200	170	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	53.48	54.47	74	-20.52	34.6	9.92	45.51	197	35	Peak
5150	48.71	49.7	54	-5.29	34.6	9.92	45.51	197	35	Average
5200	97.53	98.54	/	/	34.6	9.9	45.51	197	35	Peak
5200	90.47	91.48	/	/	34.6	9.9	45.51	197	35	Average
5350	53.36	54.42	74	-20.64	34.6	9.85	45.51	197	35	Peak
5350	48.12	49.18	54	-5.88	34.6	9.85	45.51	197	35	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.41	54.48	74	-20.59	34.52	9.92	45.51	200	170	Peak
5150	47.75	48.82	54	-6.25	34.52	9.92	45.51	200	170	Average
5240	101.1	102.13	/	/	34.59	9.89	45.51	200	170	Peak
5240	94.83	95.86	/	/	34.59	9.89	45.51	200	170	Average
5350	53.81	54.79	74	-20.19	34.68	9.85	45.51	200	170	Peak
5350	47.96	48.94	54	-6.04	34.68	9.85	45.51	200	170	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	53.56	54.55	74	-20.44	34.6	9.92	45.51	190	35	Peak
5150	48.42	49.41	54	-5.58	34.6	9.92	45.51	190	35	Average
5240	96.4	97.42	/	/	34.6	9.89	45.51	190	35	Peak
5240	90.15	91.17	/	/	34.6	9.89	45.51	190	35	Average
5350	54.32	55.38	74	-19.68	34.6	9.85	45.51	190	35	Peak
5350	47.87	48.93	54	-6.13	34.6	9.85	45.51	190	35	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	53.25	54.32	74	-20.75	34.52	9.92	45.51	200	170	Peak
5150	48.77	49.84	54	-5.23	34.52	9.92	45.51	200	170	Average
5180	100.8	101.86	/	/	34.54	9.91	45.51	200	170	Peak
5180	93.79	94.85	/	/	34.54	9.91	45.51	200	170	Average
5350	54.02	55	74	-19.98	34.68	9.85	45.51	200	170	Peak
5350	48.07	49.05	54	-5.93	34.68	9.85	45.51	200	170	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	54.56	55.55	74	-19.44	34.6	9.92	45.51	190	35	Peak
5150	49.08	50.07	54	-4.92	34.6	9.92	45.51	190	35	Average
5180	95.95	96.95	/	/	34.6	9.91	45.51	190	35	Peak
5180	88.72	89.72	/	/	34.6	9.91	45.51	190	35	Average
5350	54.65	55.71	74	-19.35	34.6	9.85	45.51	190	35	Peak
5350	47.74	48.8	54	-6.26	34.6	9.85	45.51	190	35	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	53.53	54.6	74	-20.47	34.52	9.92	45.51	200	170	Peak
5150	48.45	49.52	54	-5.55	34.52	9.92	45.51	200	170	Average
5200	100.57	101.62	/	/	34.56	9.9	45.51	200	170	Peak
5200	93.11	94.16	/	/	34.56	9.9	45.51	200	170	Average
5350	53.99	54.97	74	-20.01	34.68	9.85	45.51	200	170	Peak
5350	48.68	49.66	54	-5.32	34.68	9.85	45.51	200	170	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	53.69	54.68	74	-20.31	34.6	9.92	45.51	180	35	Peak
5150	48.74	49.73	54	-5.26	34.6	9.92	45.51	180	35	Average
5200	96.16	97.17	/	/	34.6	9.9	45.51	180	35	Peak
5200	88.58	89.59	/	/	34.6	9.9	45.51	180	35	Average
5350	54.48	55.54	74	-19.52	34.6	9.85	45.51	180	35	Peak
5350	47.82	48.88	54	-6.18	34.6	9.85	45.51	180	35	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.22	54.29	74	-20.78	34.52	9.92	45.51	200	170	Peak
5150	48.6	49.67	54	-5.4	34.52	9.92	45.51	200	170	Average
5240	100.55	101.58	/	/	34.59	9.89	45.51	200	170	Peak
5240	93.35	94.38	/	/	34.59	9.89	45.51	200	170	Average
5350	54.06	55.04	74	-19.94	34.68	9.85	45.51	200	170	Peak
5350	48.3	49.28	54	-5.7	34.68	9.85	45.51	200	170	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	55.48	56.47	74	-18.52	34.6	9.92	45.51	190	35	Peak
5150	47.74	48.73	54	-6.26	34.6	9.92	45.51	190	35	Average
5240	96.16	97.18	/	/	34.6	9.89	45.51	190	35	Peak
5240	88.41	89.43	/	/	34.6	9.89	45.51	190	35	Average
5350	53.34	54.4	74	-20.66	34.6	9.85	45.51	190	35	Peak
5350	47.86	48.92	54	-6.14	34.6	9.85	45.51	190	35	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	53.03	54.1	74	-20.97	34.52	9.92	45.51	200	170	Peak
5150	49.23	50.3	54	-4.77	34.52	9.92	45.51	200	170	Average
5190	97.89	98.94	/	/	34.55	9.91	45.51	200	170	Peak
5190	91.12	92.17	/	/	34.55	9.91	45.51	200	170	Average
5350	53.3	54.28	74	-20.7	34.68	9.85	45.51	200	170	Peak
5350	48.05	49.03	54	-5.95	34.68	9.85	45.51	200	170	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	53.88	54.87	74	-20.12	34.6	9.92	45.51	190	35	Peak
5150	48.75	49.74	54	-5.25	34.6	9.92	45.51	190	35	Average
5190	92.31	93.31	/	/	34.6	9.91	45.51	190	35	Peak
5190	86.17	87.17	/	/	34.6	9.91	45.51	190	35	Average
5350	53.65	54.71	74	-20.35	34.6	9.85	45.51	190	35	Peak
5350	47.89	48.95	54	-6.11	34.6	9.85	45.51	190	35	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.27	54.34	74	-20.73	34.52	9.92	45.51	200	170	Peak
5150	48.3	49.37	54	-5.7	34.52	9.92	45.51	200	170	Average
5230	96.72	97.76	/	/	34.58	9.89	45.51	200	170	Peak
5230	90.5	91.54	/	/	34.58	9.89	45.51	200	170	Average
5350	53.27	54.25	74	-20.73	34.68	9.85	45.51	200	170	Peak
5350	47.8	48.78	54	-6.2	34.68	9.85	45.51	200	170	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	54.48	55.47	74	-19.52	34.6	9.92	45.51	190	35	Peak
5150	48.61	49.6	54	-5.39	34.6	9.92	45.51	190	35	Average
5230	92.17	93.19	/	/	34.6	9.89	45.51	190	35	Peak
5230	85.98	87	/	/	34.6	9.89	45.51	190	35	Average
5350	53.61	54.67	74	-20.39	34.6	9.85	45.51	190	35	Peak
5350	48.04	49.1	54	-5.96	34.6	9.85	45.51	190	35	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 (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	53.44	54.51	74	-20.56	34.52	9.92	45.51	200	170	Peak
5150	49.37	50.44	54	-4.63	34.52	9.92	45.51	200	170	Average
5180	98.31	99.37	/	/	34.54	9.91	45.51	200	170	Peak
5180	91	92.06	/	/	34.54	9.91	45.51	200	170	Average
5350	53.43	54.41	74	-20.57	34.68	9.85	45.51	200	170	Peak
5350	47.74	48.72	54	-6.26	34.68	9.85	45.51	200	170	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	53.78	54.77	74	-20.22	34.6	9.92	45.51	200	35	Peak
5150	48.51	49.5	54	-5.49	34.6	9.92	45.51	200	35	Average
5180	95.26	96.26	/	/	34.6	9.91	45.51	200	35	Peak
5180	87.5	88.5	/	/	34.6	9.91	45.51	200	35	Average
5350	53.51	54.57	74	-20.49	34.6	9.85	45.51	200	35	Peak
5350	47.75	48.81	54	-6.25	34.6	9.85	45.51	200	35	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	53.58	54.65	74	-20.42	34.52	9.92	45.51	200	170	Peak
5150	48.54	49.61	54	-5.46	34.52	9.92	45.51	200	170	Average
5200	98.73	99.78	/	/	34.56	9.9	45.51	200	170	Peak
5200	90.97	92.02	/	/	34.56	9.9	45.51	200	170	Average
5350	54.77	55.75	74	-19.23	34.68	9.85	45.51	200	170	Peak
5350	48.04	49.02	54	-5.96	34.68	9.85	45.51	200	170	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	53.95	54.94	74	-20.05	34.6	9.92	45.51	190	35	Peak
5150	48.2	49.19	54	-5.8	34.6	9.92	45.51	190	35	Average
5200	94.18	95.19	/	/	34.6	9.9	45.51	190	35	Peak
5200	86.36	87.37	/	/	34.6	9.9	45.51	190	35	Average
5350	53.37	54.43	74	-20.63	34.6	9.85	45.51	190	35	Peak
5350	47.61	48.67	54	-6.39	34.6	9.85	45.51	190	35	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.59	54.66	74	-20.41	34.52	9.92	45.51	200	170	Peak
5150	48.15	49.22	54	-5.85	34.52	9.92	45.51	200	170	Average
5240	98.67	99.7	/	/	34.59	9.89	45.51	200	170	Peak
5240	91.44	92.47	/	/	34.59	9.89	45.51	200	170	Average
5350	54.07	55.05	74	-19.93	34.68	9.85	45.51	200	170	Peak
5350	48.03	49.01	54	-5.97	34.68	9.85	45.51	200	170	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	54.45	55.44	74	-19.55	34.6	9.92	45.51	190	35	Peak
5150	47.63	48.62	54	-6.37	34.6	9.92	45.51	190	35	Average
5240	94.39	95.41	/	/	34.6	9.89	45.51	190	35	Peak
5240	86.9	87.92	/	/	34.6	9.89	45.51	190	35	Average
5350	54.94	56	74	-19.06	34.6	9.85	45.51	190	35	Peak
5350	48	49.06	54	-6	34.6	9.85	45.51	190	35	Average

REMARKS:

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

802.11ac (40MHz)

CHANNEL	TX Channel 38	**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	54.03	55.1	74	-19.97	34.52	9.92	45.51	200	170	Peak
5150	49.03	50.1	54	-4.97	34.52	9.92	45.51	200	170	Average
5190	93.15	94.2	/	/	34.55	9.91	45.51	200	170	Peak
5190	87.61	88.66	/	/	34.55	9.91	45.51	200	170	Average
5350	53.68	54.66	74	-20.32	34.68	9.85	45.51	200	170	Peak
5350	48.37	49.35	54	-5.63	34.68	9.85	45.51	200	170	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	54.82	55.81	74	-19.18	34.6	9.92	45.51	190	35	Peak
5150	48.73	49.72	54	-5.27	34.6	9.92	45.51	190	35	Average
5190	88.85	89.85	/	/	34.6	9.91	45.51	190	35	Peak
5190	82.36	83.36	/	/	34.6	9.91	45.51	190	35	Average
5350	53.83	54.89	74	-20.17	34.6	9.85	45.51	190	35	Peak
5350	47.98	49.04	54	-6.02	34.6	9.85	45.51	190	35	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.38	54.45	74	-20.62	34.52	9.92	45.51	200	170	Peak
5150	48.28	49.35	54	-5.72	34.52	9.92	45.51	200	170	Average
5230	93.03	94.07	/	/	34.58	9.89	45.51	200	170	Peak
5230	86.43	87.47	/	/	34.58	9.89	45.51	200	170	Average
5350	54.02	55	74	-19.98	34.68	9.85	45.51	200	170	Peak
5350	48.1	49.08	54	-5.9	34.68	9.85	45.51	200	170	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	53.16	54.15	74	-20.84	34.6	9.92	45.51	190	35	Peak
5150	48.65	49.64	54	-5.35	34.6	9.92	45.51	190	35	Average
5230	88.38	89.4	/	/	34.6	9.89	45.51	190	35	Peak
5230	81.89	82.91	/	/	34.6	9.89	45.51	190	35	Average
5350	53.61	54.67	74	-20.39	34.6	9.85	45.51	190	35	Peak
5350	48.13	49.19	54	-5.87	34.6	9.85	45.51	190	35	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	53.47	54.54	74	-20.53	34.52	9.92	45.51	200	170	Peak
5150	49.9	50.97	54	-4.1	34.52	9.92	45.51	200	170	Average
5210	92.89	93.93	/	/	34.57	9.9	45.51	200	170	Peak
5210	86.55	87.59	/	/	34.57	9.9	45.51	200	170	Average
5350	53.53	54.51	74	-20.47	34.68	9.85	45.51	200	170	Peak
5350	48.33	49.31	54	-5.67	34.68	9.85	45.51	200	170	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	53.13	54.12	74	-20.87	34.6	9.92	45.51	190	35	Peak
5150	49.75	50.74	54	-4.25	34.6	9.92	45.51	190	35	Average
5210	87.02	88.03	/	/	34.6	9.9	45.51	190	35	Peak
5210	80.58	81.59	/	/	34.6	9.9	45.51	190	35	Average
5350	53.8	54.86	74	-20.2	34.6	9.85	45.51	190	35	Peak
5350	47.99	49.05	54	-6.01	34.6	9.85	45.51	190	35	Average

REMARKS:

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

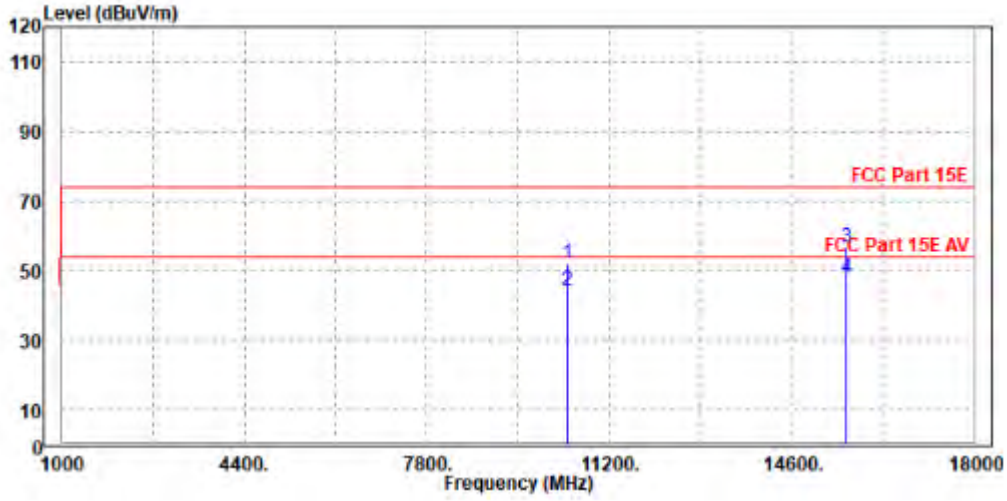
802.11ac (80MHz)

Worst case harmonic:

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

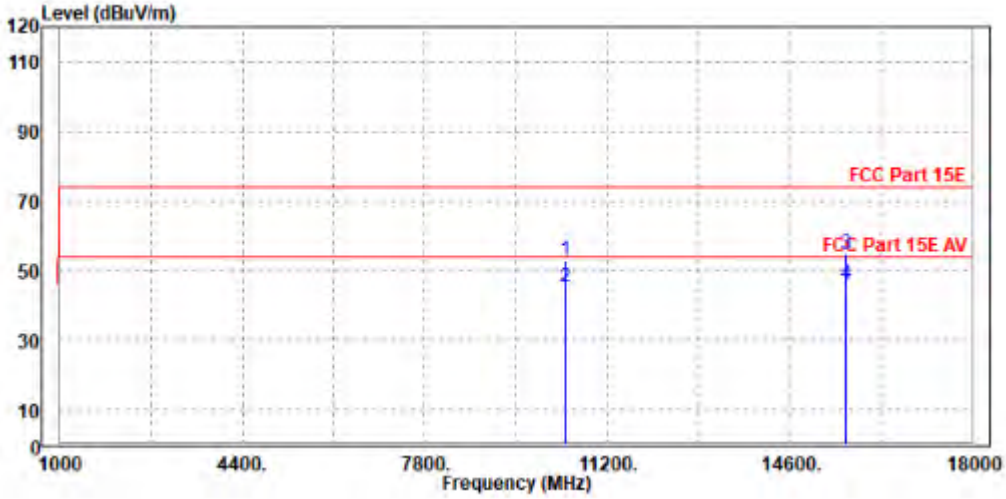
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	10418.000	52.14	45.24	74.00	-21.86	6.90	Peak	Horizontal
2	10418.000	44.47	37.57	54.00	-9.53	6.90	Average	Horizontal
3	PK15630.000	56.77	43.67	74.00	-17.23	13.10	Peak	Horizontal
4	PP15630.000	47.97	34.87	54.00	-6.03	13.10	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	53.00	44.88	74.00	-21.00	8.12	Peak	Vertical
2	10420.000	44.99	36.87	54.00	-9.01	8.12	Average	Vertical
3	PK15637.000	54.66	42.62	74.00	-19.34	12.04	Peak	Vertical
4	PP15637.000	46.22	34.18	54.00	-7.78	12.04	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. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.

Band 2

802.11a

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	54.82	55.89	74	-19.18	34.52	9.92	45.51	200	170	Peak
5150	48.75	49.82	54	-5.25	34.52	9.92	45.51	200	170	Average
5260	101.55	102.57	/	/	34.61	9.88	45.51	200	170	Peak
5260	95.12	96.14	/	/	34.61	9.88	45.51	200	170	Average
5350	53.2	54.18	74	-20.8	34.68	9.85	45.51	200	170	Peak
5350	47.53	48.51	54	-6.47	34.68	9.85	45.51	200	170	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	54.69	55.68	74	-19.31	34.6	9.92	45.51	200	47	Peak
5150	48.22	49.21	54	-5.78	34.6	9.92	45.51	200	47	Average
5260	97.43	98.46	/	/	34.6	9.88	45.51	200	47	Peak
5260	90.99	92.02	/	/	34.6	9.88	45.51	200	47	Average
5350	53	54.06	74	-21	34.6	9.85	45.51	200	47	Peak
5350	47.34	48.4	54	-6.66	34.6	9.85	45.51	200	47	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.43	54.5	74	-20.57	34.52	9.92	45.51	200	170	Peak
5150	47.88	48.95	54	-6.12	34.52	9.92	45.51	200	170	Average
5300	102.3	103.3	/	/	34.64	9.87	45.51	200	170	Peak
5300	95.68	96.68	/	/	34.64	9.87	45.51	200	170	Average
5350	53.69	54.67	74	-20.31	34.68	9.85	45.51	200	170	Peak
5350	48.04	49.02	54	-5.96	34.68	9.85	45.51	200	170	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	56.06	57.05	74	-17.94	34.6	9.92	45.51	200	47	Peak
5150	48.5	49.49	54	-5.5	34.6	9.92	45.51	200	47	Average
5300	97.12	98.16	/	/	34.6	9.87	45.51	200	47	Peak
5300	91.03	92.07	/	/	34.6	9.87	45.51	200	47	Average
5350	53.75	54.81	74	-20.25	34.6	9.85	45.51	200	47	Peak
5350	47.45	48.51	54	-6.55	34.6	9.85	45.51	200	47	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.81	54.88	74	-20.19	34.52	9.92	45.51	200	170	Peak
5150	47.65	48.72	54	-6.35	34.52	9.92	45.51	200	170	Average
5320	102.19	103.18	/	/	34.66	9.86	45.51	200	170	Peak
5320	95.88	96.87	/	/	34.66	9.86	45.51	200	170	Average
5350	54	54.98	74	-20	34.68	9.85	45.51	200	170	Peak
5350	48.99	49.97	54	-5.01	34.68	9.85	45.51	200	170	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	53.94	54.93	74	-20.06	34.6	9.92	45.51	200	47	Peak
5150	48.09	49.08	54	-5.91	34.6	9.92	45.51	200	47	Average
5320	96.09	97.14	/	/	34.6	9.86	45.51	200	47	Peak
5320	90.1	91.15	/	/	34.6	9.86	45.51	200	47	Average
5350	53.56	54.62	74	-20.44	34.6	9.85	45.51	200	47	Peak
5350	48.25	49.31	54	-5.75	34.6	9.85	45.51	200	47	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	53.69	54.76	74	-20.31	34.52	9.92	45.51	200	170	Peak
5150	47.86	48.93	54	-6.14	34.52	9.92	45.51	200	170	Average
5260	101.42	102.44	/	/	34.61	9.88	45.51	200	170	Peak
5260	94.01	95.03	/	/	34.61	9.88	45.51	200	170	Average
5350	54.87	55.85	74	-19.13	34.68	9.85	45.51	200	170	Peak
5350	47.93	48.91	54	-6.07	34.68	9.85	45.51	200	170	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	55.1	74	-19.89	34.6	9.92	45.51	200	47	Peak
5150	48.53	49.52	54	-5.47	34.6	9.92	45.51	200	47	Average
5260	97.3	98.33	/	/	34.6	9.88	45.51	200	47	Peak
5260	90.33	91.36	/	/	34.6	9.88	45.51	200	47	Average
5350	55.49	56.55	74	-18.51	34.6	9.85	45.51	200	47	Peak
5350	47.53	48.59	54	-6.47	34.6	9.85	45.51	200	47	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.41	55.48	74	-19.59	34.52	9.92	45.51	200	170	Peak
5150	48.2	49.27	54	-5.8	34.52	9.92	45.51	200	170	Average
5300	102.42	103.42	/	/	34.64	9.87	45.51	200	170	Peak
5300	95.11	96.11	/	/	34.64	9.87	45.51	200	170	Average
5350	53.75	54.73	74	-20.25	34.68	9.85	45.51	200	170	Peak
5350	48	48.98	54	-6	34.68	9.85	45.51	200	170	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	55.43	56.42	74	-18.57	34.6	9.92	45.51	200	47	Peak
5150	48.75	49.74	54	-5.25	34.6	9.92	45.51	200	47	Average
5300	97.44	98.48	/	/	34.6	9.87	45.51	200	47	Peak
5300	90.45	91.49	/	/	34.6	9.87	45.51	200	47	Average
5350	54.36	55.42	74	-19.64	34.6	9.85	45.51	200	47	Peak
5350	47.98	49.04	54	-6.02	34.6	9.85	45.51	200	47	Average

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.41	55.48	74	-19.59	34.52	9.92	45.51	200	170	Peak
5150	48	49.07	54	-6	34.52	9.92	45.51	200	170	Average
5320	102.97	103.96	/	/	34.66	9.86	45.51	200	170	Peak
5320	94.91	95.9	/	/	34.66	9.86	45.51	200	170	Average
5350	55.29	56.27	74	-18.71	34.68	9.85	45.51	200	170	Peak
5350	48.75	49.73	54	-5.25	34.68	9.85	45.51	200	170	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	54.55	55.54	74	-19.45	34.6	9.92	45.51	200	47	Peak
5150	48.4	49.39	54	-5.6	34.6	9.92	45.51	200	47	Average
5320	96.3	97.35	/	/	34.6	9.86	45.51	200	47	Peak
5320	89.33	90.38	/	/	34.6	9.86	45.51	200	47	Average
5350	53.34	54.4	74	-20.66	34.6	9.85	45.51	200	47	Peak
5350	48.39	49.45	54	-5.61	34.6	9.85	45.51	200	47	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	53.79	54.86	74	-20.21	34.52	9.92	45.51	200	170	Peak
5150	48.43	49.5	54	-5.57	34.52	9.92	45.51	200	170	Average
5270	96.65	97.66	/	/	34.62	9.88	45.51	200	170	Peak
5270	91.21	92.22	/	/	34.62	9.88	45.51	200	170	Average
5350	53.69	54.67	74	-20.31	34.68	9.85	45.51	200	170	Peak
5350	48.13	49.11	54	-5.87	34.68	9.85	45.51	200	170	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	53.9	54.89	74	-20.1	34.6	9.92	45.51	200	47	Peak
5150	48.42	49.41	54	-5.58	34.6	9.92	45.51	200	47	Average
5270	92.17	93.2	/	/	34.6	9.88	45.51	200	47	Peak
5270	86.07	87.1	/	/	34.6	9.88	45.51	200	47	Average
5350	53.88	54.94	74	-20.12	34.6	9.85	45.51	200	47	Peak
5350	48.24	49.3	54	-5.76	34.6	9.85	45.51	200	47	Average

REMARKS:

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