



Test Report No.: W7L-P23080017RF03



# FCC TEST REPORT

## (Part 15, Subpart E)

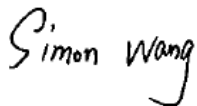
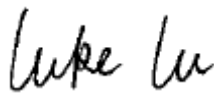
Applicant:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

Manufacturer or Supplier:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Product:	Mobile Phone
Brand Name:	POCO
Model Name:	2310FPCA4G
FCC ID:	2AFZZCA4G
Date of tests:	Aug. 07, 2023 ~ Sep. 18, 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 Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: Sep. 18, 2023	 Date: Sep. 18, 2023

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



# TABLE OF CONTENTS

**RELEASE CONTROL RECORD ..... 4**

1 SUMMARY OF TEST RESULTS ..... 5

1.1 MEASUREMENT UNCERTAINTY ..... 6

2 GENERAL INFORMATION..... 7

2.1 GENERAL DESCRIPTION OF EUT ..... 7

2.2 DESCRIPTION OF TEST MODES ..... 9

    2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL..... 12

2.3 DUTY CYCLE OF TEST SIGNAL ..... 17

2.4 DESCRIPTION OF SUPPORT UNITS ..... 18

    2.4.1 CONFIGURATION OF SYSTEM UNDER TEST ..... 19

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS ..... 20

**3 TEST TYPES AND RESULTS..... 21**

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT ..... 21

    3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT..... 21

    3.1.2 LIMITS OF UNWANTED EMISSION..... 21

    3.1.3 TEST INSTRUMENTS..... 22

    3.1.4 TEST PROCEDURES ..... 24

    3.1.5 DEVIATION FROM TEST STANDARD ..... 24

    3.1.6 TEST SETUP ..... 25

    3.1.7 EUT OPERATING CONDITION ..... 26

    3.1.8 TEST RESULTS ..... 27

3.2 CONDUCTED EMISSION MEASUREMENT ..... 110

    3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT ..... 110

    3.2.2 TEST INSTRUMENTS..... 110

    3.2.3 TEST PROCEDURES ..... 110

    3.2.4 DEVIATION FROM TEST STANDARD ..... 111

    3.2.5 TEST SETUP ..... 111

    3.2.6 EUT OPERATING CONDITIONS ..... 111

    3.2.7 TEST RESULTS ..... 112

3.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT ..... 114

    3.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT ..... 114

    3.3.2 TEST SETUP ..... 115

    3.3.3 TEST INSTRUMENTS..... 115



3.3.4	TEST PROCEDURE .....	116
3.3.5	DEVIATION FROM TEST STANDARD .....	117
3.3.6	EUT OPERATING CONDITIONS .....	117
3.3.7	TEST RESULTS .....	117
3.4	MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT .....	118
3.4.1	LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT .....	118
3.4.2	TEST SETUP .....	118
3.4.3	TEST INSTRUMENTS .....	118
3.4.4	TEST PROCEDURES .....	119
3.4.5	DEVIATION FROM TEST STANDARD .....	119
3.4.6	EUT OPERATING CONDITIONS .....	119
3.4.7	TEST RESULTS .....	120
3.5	AUTOMATICALLY DISCONTINUE TRANSMISSION .....	121
3.5.1	LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION .....	121
3.5.2	TEST INSTRUMENTS .....	121
3.5.3	TEST RESULT .....	121
3.6	ANTENNA REQUIREMENTS .....	122
3.6.1	STANDARD APPLICABLE .....	122
3.6.2	ANTENNA CONNECTED CONSTRUCTION .....	122
3.6.3	ANTENNA GAIN .....	122
<b>4</b>	<b>PHOTOGRAPHS OF THE TEST CONFIGURATION .....</b>	<b>123</b>
<b>5</b>	<b>MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB</b>	<b>124</b>
<b>6</b>	<b>APPENDIX: RLAN .....</b>	<b>125</b>



**BUREAU**  
**VERITAS**

Test Report No.: W7L-P23080017RF03

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P23080017RF03	Original release	Sep. 18, 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	LAB
15.407(b)(9)	AC Power Conducted Emission	Compliance	A
15.407(b) (1/2/3/4/5)	Radiated Emission & Band Edge Measurement	Compliance	A/B
15.407(a/1/2/3)	Maximum conducted output Power	Compliance	A
15.407(a/1/2/3)	Peak Power Spectral Density	Compliance	A
15.407(a)(2)(12)	26 dB Bandwidth	Compliance	A
15.407(e)	6 dB Bandwidth	Compliance	A
15.203	Antenna Requirement	Compliance	A

**NOTE:**

1. Except the data of RSE and Band Edge Measurement, other data please refer to the appendix.
2. This report refers to the data of W7L-P23080006RF03 (model: 23100RN82L), the difference of 23100RN82L and 2310FPCA4G is model and FCC-ID, 2310FPCA4G remove some components and LTE B13&26, add NFC function. This report verifies power and RSE worse case. The result of power is similar and lower. So this report only updates RSE worse case (11ac80 CH42) and add the power of Spot-Check worst case.

**Test Lab Information Reference:**

**Lab A**

BV 7Layers Communications Technology (Shenzhen) Co., Ltd

**Lab Address:**

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

**Accredited Test Lab Cert 3939.01**

**The FCC Site Registration No. is 525120; The Designation No. is CN1171.**

**Lab B:**

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

**Lab Address:**

Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province

**Accredited Test Lab Cert 6613.01**

**The FCC Site Registration No. is 434559; The Designation No. is CN1325.**



## 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

<b>PRODUCT</b>	Mobile Phone
<b>BRAND NAME</b>	POCO
<b>MODEL NAME</b>	2310FPCA4G
<b>MODULATION</b>	OFDM
<b>TRANSFER RATE</b>	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
<b>OPERATING FREQUENCY</b>	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz, 5745 ~ 5825MHz
<b>NUMBER OF CHANNEL</b>	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 ~ 5700MHz: 11 for 802.11a, 802.11n, 802.11ac(20MHz) 5 for 802.11n, 802.11ac (40MHz) 2 for 802.11ac (80MHz) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n, 802.11ac (20MHz) 3 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz)
<b>AVERAGE POWER</b>	27.8 mW for 5180 ~ 5240MHz 27.61 mW for 5260 ~ 5320MHz 39.17 mW for 5500 ~ 5700MHz 25.88 mW for 5745 ~ 5825MHz
<b>ANTENNA TYPE</b>	PIFA Antenna
<b>ANTENNA GAIN</b>	-0.5dBi for 5180 ~ 5240MHz -0.4dBi for 5260 ~ 5320MHz 0.6dBi for 5500 ~ 5700MHz -0.2dBi for 5745 ~ 5825MHz
<b>HW VERSION</b>	LLDM572
<b>SW VERSION</b>	MIUI 14
<b>IMEI</b>	863772060015765
<b>I/O PORTS</b>	Refer to user's manual
<b>CABLE SUPPLIED</b>	USB cable1: non-shielded cable, with w/o ferrite core, 1.0 meter USB cable2: non-shielded cable, with w/o ferrite core, 1.0 meter



**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.

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

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in the 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 ~ 5700MHz**

11 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		

5 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		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530 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).
- The 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).
- The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11an/ac (20MHz)		36 to 48	36, 40, 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	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11an/ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11an/ac (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		106 to 122	106, 122	OFDM	MCS0
A	802.11a	5745-5825	149 to 165	149, 157,165	OFDM	6.0
A	802.11an/ac (20MHz)		149 to 165	149, 157,165	OFDM	MCS0
A	802.11an/ac (40MHz)		151 to 159	151, 159	OFDM	MCS0
A	802.11ac (80MHz)		155	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, 40, 48	OFDM	6.0
A	802.11an/ac (20MHz)		36 to 48	36, 40, 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	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11an/ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11an/ac/ (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		106 to 122	106, 122	OFDM	MCS0
A	802.11a	5745-5825	149 to 165	149, 157,165	OFDM	6.0
A	802.11an/ac (20MHz)		149 to 165	149, 157,165	OFDM	MCS0
A	802.11an/ac (40MHz)		151 to 159	151, 159	OFDM	MCS0
A	802.11ac (80MHz)		155	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)
B	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
B	802.11an/ac (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
B	802.11an/ac (40MHz)		38 to 46	38, 46	OFDM	MCS0
B	802.11ac (80MHz)		42	42	OFDM	MCS0
B	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
B	802.11an/ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
B	802.11an/ac (40MHz)		54 to 62	54, 62	OFDM	MCS0
B	802.11ac (80MHz)		58	58	OFDM	MCS0
B	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
B	802.11an/ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
B	802.11an/ac (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
B	802.11ac (80MHz)		106 to 122	106, 122	OFDM	MCS0
B	802.11a	5745-5825	149 to 165	149, 157,165	OFDM	6.0
B	802.11an/ac (20MHz)		149 to 165	149, 157,165	OFDM	MCS0
B	802.11an/ac (40MHz)		151 to 159	151, 159	OFDM	MCS0
B	802.11ac (80MHz)		155	155	OFDM	MCS0



**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 70%RH	DC 5V By Adapter	Jace Hu
RE≥1G	23deg. C, 70%RH	DC 5V By Adapter	Jace Hu
PLC	25deg. C, 52%RH	DC 5V By Adapter	James Fu
APCM	25deg. C, 60%RH	DC 5V By Battery	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	97.22
	11n20	97.01
	11n40	94.20
	11ac20	97.06
	11ac40	94.29
	11ac80	89.19

Note:

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



## 2.4 DESCRIPTION OF SUPPORT UNITS

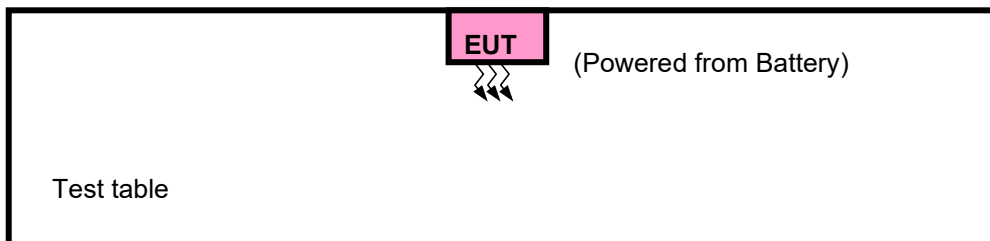
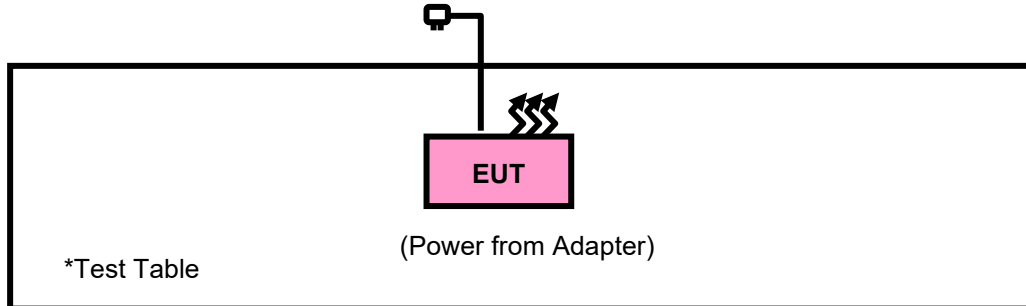
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

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 an 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

RESTRICTED BANDS	APPLICABLE TO	LIMIT	
	789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m (dBµV/m)	
	PK : 74	AV : 54	
OUT OF THE RESTRICTED BANDS	APPLICABLE TO	EIRP LIMIT (dBm/MHz)	EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m)
	15.407(b)(1)	PK : -27	PK : 68.2
	15.407(b)(2)		
	15.407(b)(3)		
15.407(b)(4)	See note 2 (FCC 16-24)		



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

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

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. 22, 23	May. 21,26
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGREN	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.04, 22	Sep.03, 23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.03, 23	Sep.02, 24
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. 06,23	May. 05,24
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 28,23	Mar. 27,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.10,23	May.09,24
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
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 11,23	Aug. 10,24
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
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,23	Sep.01,24



- 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 the 3m Chamber.
  3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Signal Generator	R&S	SMB100A	182185	Feb.16,22	Feb.15,24
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,22	Feb.24,24
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,22	Feb.27,24
Horn Antenna	ETS-LINDGREEN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.23,22	Feb.22,24
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,22	Feb.22,24
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.28,23	Oct.27,23
CABLE	R&S	W12.14	N/A	Apr.28,23	Oct.27,23

- NOTE:**
1. The calibration interval of the above test instruments is 6 months or 12 months or 36 months, and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
  2. The test was performed in the 3m Chamber.
  3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.



### 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 varies 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 ( $10 \log(1/\text{duty cycle})$ ).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle  $\geq$  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

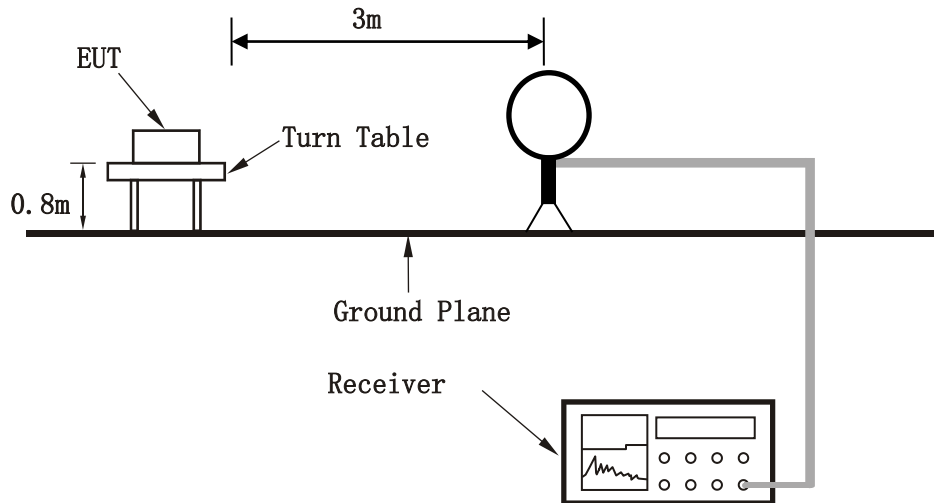
No deviation.



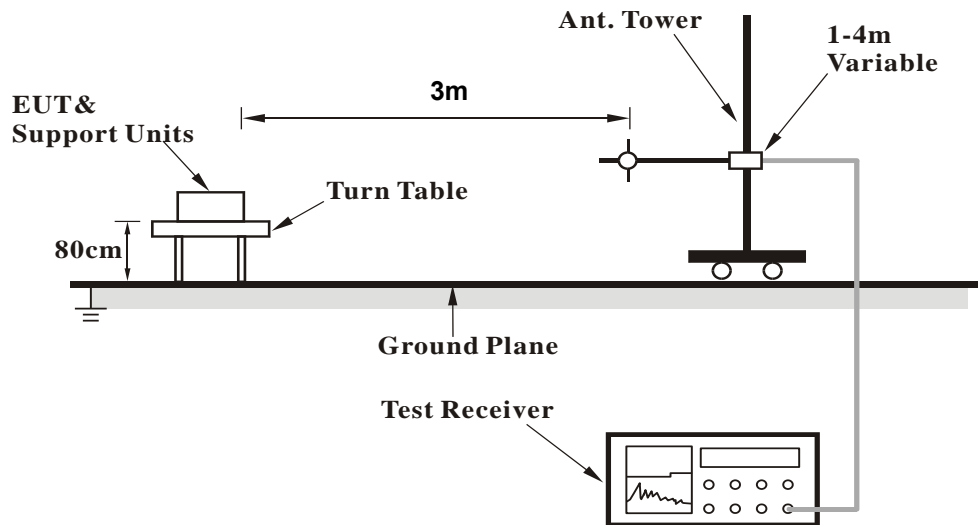


### 3.1.6 TEST SETUP

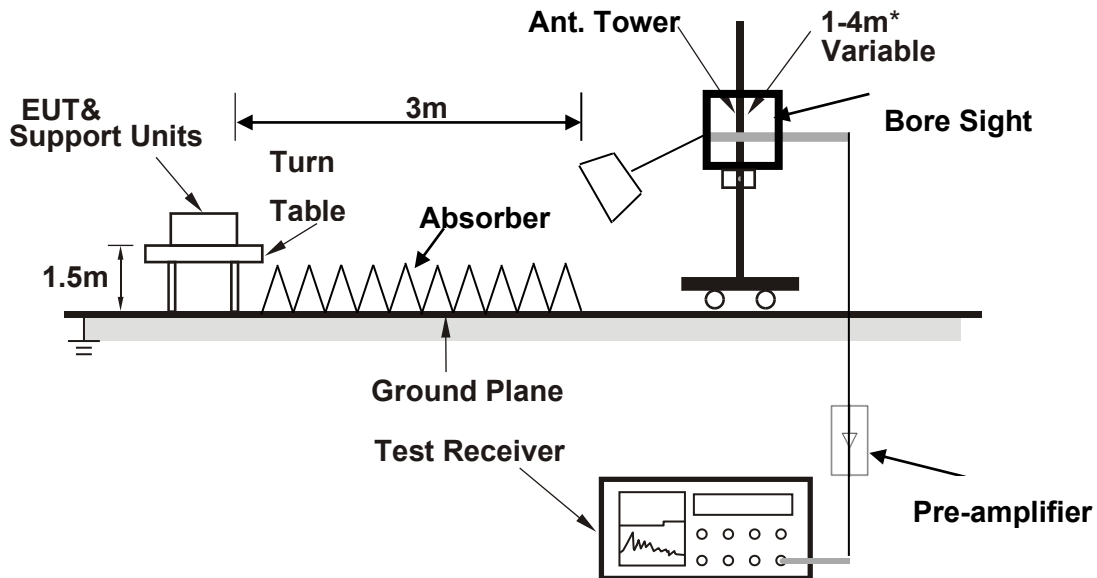
#### <Frequency Range 9KHz~30MHz >



#### < 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 it 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 1**

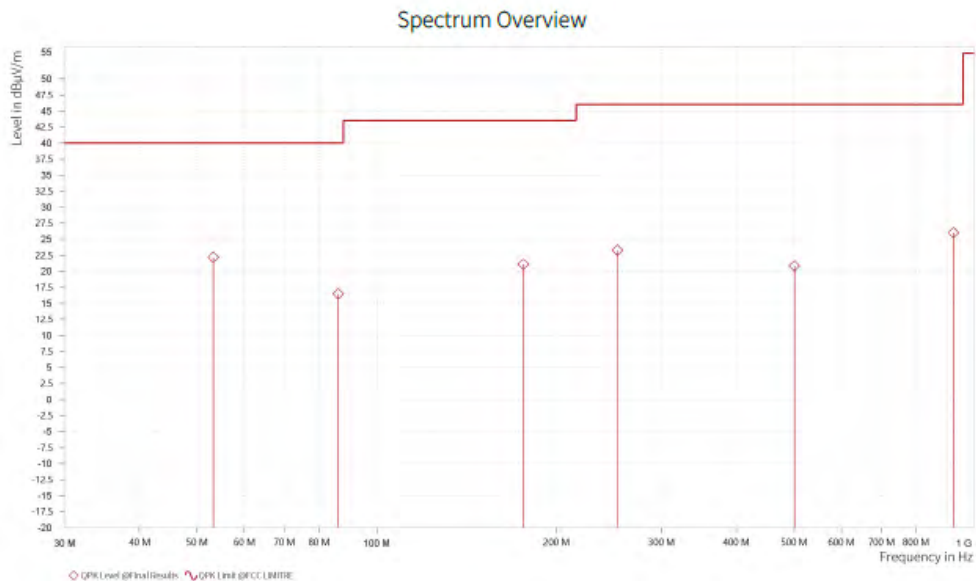
**802.11ac (80MHz):**

<b>CHANNEL</b>	TX Channel 42	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	53.232	22.21	40.00	17.79	-10.43	H	1	1	120.000
1	86.212	16.46	40.00	23.54	-15.27	H	224.3	2	120.000
1	176.179	21.08	43.50	22.42	-13.60	H	273.1	1	120.000
1	253.003	23.27	46.00	22.73	-8.90	H	86.9	2	120.000
1	500.596	20.81	46.00	25.19	-4.55	H	224.3	2	120.000
1	925.407	26.02	46.00	19.98	1.72	H	86.9	2	120.000

#### 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 = Limit value.- Emission level



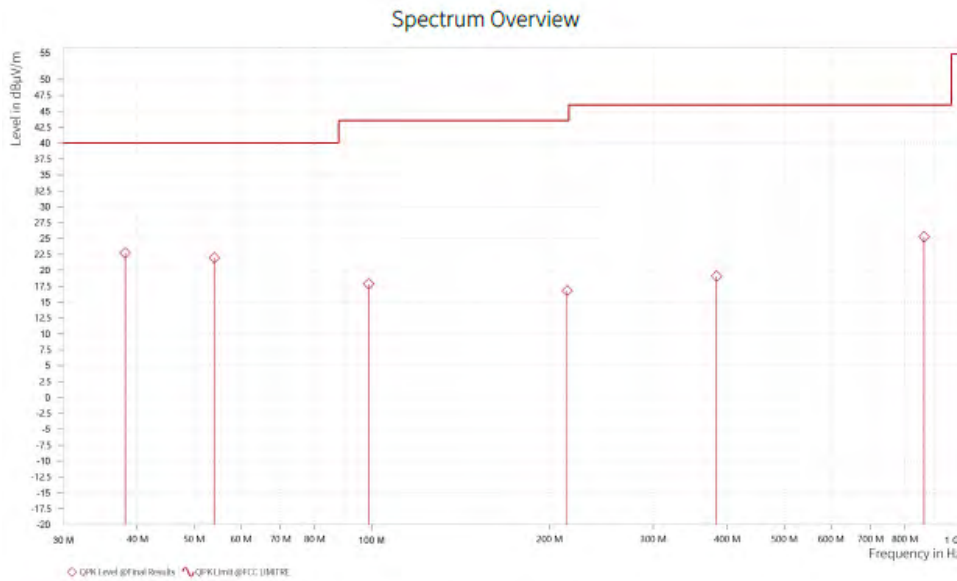


<b>CHANNEL</b>	Channel 42	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

Rg	Frequency [MHz]	QPK Level [dBuV/m]	QPK Limit [dBuV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	38.197	22.70	40.00	17.30	-11.57	V	79.8	2	120.000
1	54.056	21.96	40.00	18.04	-10.49	V	225.6	2	120.000
1	98.822	17.87	43.50	25.63	-12.50	V	79.8	2	120.000
1	214.397	16.79	43.50	26.71	-10.96	V	274.3	1	120.000
1	384.002	19.05	46.00	26.95	-5.36	V	1	1	120.000
1	863.279	25.26	46.00	20.74	0.82	V	0.9	2	120.000

**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 = Limit value - Emission level.





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)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	58.04	59.11	74	-15.96	34.52	9.92	45.51	200	323	Peak
5150	50.32	51.39	54	-3.68	34.52	9.92	45.51	200	323	Average
5180	107.15	108.21	/	/	34.54	9.91	45.51	200	323	Peak
5180	101.22	102.28	/	/	34.54	9.91	45.51	200	323	Average
5350	55.72	56.7	74	-18.28	34.68	9.85	45.51	200	323	Peak
5350	47.41	48.39	54	-6.59	34.68	9.85	45.51	200	323	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	54.81	55.8	74	-19.19	34.6	9.92	45.51	100	292	Peak
5150	49.54	50.53	54	-4.46	34.6	9.92	45.51	100	292	Average
5180	101.49	102.49	/	/	34.6	9.91	45.51	100	292	Peak
5180	95.82	96.82	/	/	34.6	9.91	45.51	100	292	Average
5350	54.04	55.1	74	-19.96	34.6	9.85	45.51	100	292	Peak
5350	47.47	48.53	54	-6.53	34.6	9.85	45.51	100	292	Average

REMARKS:

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5180MHz: Fundamental frequency.



<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	54.44	55.51	74	-19.56	34.52	9.92	45.51	200	323	Peak
5150	49.14	50.21	54	-4.86	34.52	9.92	45.51	200	323	Average
5200	106.11	107.16	/	/	34.56	9.9	45.51	200	323	Peak
5200	100.04	101.09	/	/	34.56	9.9	45.51	200	323	Average
5350	53.56	54.54	74	-20.44	34.68	9.85	45.51	200	323	Peak
5350	47.32	48.3	54	-6.68	34.68	9.85	45.51	200	323	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	54.72	55.71	74	-19.28	34.6	9.92	45.51	100	292	Peak
5150	48.25	49.24	54	-5.75	34.6	9.92	45.51	100	292	Average
5200	100.65	101.66	/	/	34.6	9.9	45.51	100	292	Peak
5200	94.4	95.41	/	/	34.6	9.9	45.51	100	292	Average
5350	54.13	55.19	74	-19.87	34.6	9.85	45.51	100	292	Peak
5350	47.54	48.6	54	-6.46	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5200MHz: Fundamental frequency.



<b>CHANNEL</b>	TX Channel 48	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.7	54.77	74	-20.3	34.52	9.92	45.51	190	323	Peak
5150	47.97	49.04	54	-6.03	34.52	9.92	45.51	190	323	Average
5240	106.18	107.21	/	/	34.59	9.89	45.51	190	323	Peak
5240	99.26	100.29	/	/	34.59	9.89	45.51	190	323	Average
5350	54.07	55.05	74	-19.93	34.68	9.85	45.51	190	323	Peak
5350	47.9	48.88	54	-6.1	34.68	9.85	45.51	190	323	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	100	292	Peak
5150	48.68	49.67	54	-5.32	34.6	9.92	45.51	100	292	Average
5240	100.29	101.31	/	/	34.6	9.89	45.51	100	292	Peak
5240	93.52	94.54	/	/	34.6	9.89	45.51	100	292	Average
5350	54.39	55.45	74	-19.61	34.6	9.85	45.51	100	292	Peak
5350	47.42	48.48	54	-6.58	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. 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	55.5	56.57	74	-18.5	34.52	9.92	45.51	195	323	Peak
5150	49.02	50.09	54	-4.98	34.52	9.92	45.51	195	323	Average
5180	105.15	106.21	/	/	34.54	9.91	45.51	195	323	Peak
5180	99.46	100.52	/	/	34.54	9.91	45.51	195	323	Average
5350	54.06	55.04	74	-19.94	34.68	9.85	45.51	195	323	Peak
5350	47.76	48.74	54	-6.24	34.68	9.85	45.51	195	323	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	53.51	54.5	74	-20.49	34.6	9.92	45.51	100	292	Peak
5150	48.6	49.59	54	-5.4	34.6	9.92	45.51	100	292	Average
5180	99.78	100.78	/	/	34.6	9.91	45.51	100	292	Peak
5180	93.62	94.62	/	/	34.6	9.91	45.51	100	292	Average
5350	53.25	54.31	74	-20.75	34.6	9.85	45.51	100	292	Peak
5350	47.66	48.72	54	-6.34	34.6	9.85	45.51	100	292	Average

REMARKS:

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5180MHz: Fundamental frequency.





<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	55.01	56.08	74	-18.99	34.52	9.92	45.51	195	323	Peak
5150	48.66	49.73	54	-5.34	34.52	9.92	45.51	195	323	Average
5200	105.49	106.54	/	/	34.56	9.9	45.51	195	323	Peak
5200	99.36	100.41	/	/	34.56	9.9	45.51	195	323	Average
5350	55.74	56.72	74	-18.26	34.68	9.85	45.51	195	323	Peak
5350	47.89	48.87	54	-6.11	34.68	9.85	45.51	195	323	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	100	292	Peak
5150	48.68	49.67	54	-5.32	34.6	9.92	45.51	100	292	Average
5200	98.76	99.77	/	/	34.6	9.9	45.51	100	292	Peak
5200	92.8	93.81	/	/	34.6	9.9	45.51	100	292	Average
5350	53.74	54.8	74	-20.26	34.6	9.85	45.51	100	292	Peak
5350	47.63	48.69	54	-6.37	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5200MHz: Fundamental frequency.



<b>CHANNEL</b>	TX Channel 48	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	54.71	55.78	74	-19.29	34.52	9.92	45.51	195	323	Peak
5150	49.23	50.3	54	-4.77	34.52	9.92	45.51	195	323	Average
5240	105.39	106.42	/	/	34.59	9.89	45.51	195	323	Peak
5240	98.32	99.35	/	/	34.59	9.89	45.51	195	323	Average
5350	54.13	55.11	74	-19.87	34.68	9.85	45.51	195	323	Peak
5350	47.59	48.57	54	-6.41	34.68	9.85	45.51	195	323	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	53.38	54.37	74	-20.62	34.6	9.92	45.51	100	292	Peak
5150	47.78	48.77	54	-6.22	34.6	9.92	45.51	100	292	Average
5240	99.17	100.19	/	/	34.6	9.89	45.51	100	292	Peak
5240	92.06	93.08	/	/	34.6	9.89	45.51	100	292	Average
5350	53.44	54.5	74	-20.56	34.6	9.85	45.51	100	292	Peak
5350	47.68	48.74	54	-6.32	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5240MHz: Fundamental frequency.



802.11n (40MHz)

<b>CHANNEL</b>	TX Channel 38	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	54.49	55.56	74	-19.51	34.52	9.92	45.51	195	323	Peak
5150	50.53	51.6	54	-3.47	34.52	9.92	45.51	195	323	Average
5190	100.43	101.48	/	/	34.55	9.91	45.51	195	323	Peak
5190	95.75	96.8	/	/	34.55	9.91	45.51	195	323	Average
5350	53.46	54.44	74	-20.54	34.68	9.85	45.51	195	323	Peak
5350	47.43	48.41	54	-6.57	34.68	9.85	45.51	195	323	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	54.41	55.4	74	-19.59	34.6	9.92	45.51	100	292	Peak
5150	48.85	49.84	54	-5.15	34.6	9.92	45.51	100	292	Average
5190	94	95	/	/	34.6	9.91	45.51	100	292	Peak
5190	89.81	90.81	/	/	34.6	9.91	45.51	100	292	Average
5350	53.42	54.48	74	-20.58	34.6	9.85	45.51	100	292	Peak
5350	47.54	48.6	54	-6.46	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5190MHz: Fundamental frequency.



<b>CHANNEL</b>	TX Channel 46	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	54.14	55.21	74	-19.86	34.52	9.92	45.51	195	323	Peak
5150	49.16	50.23	54	-4.84	34.52	9.92	45.51	195	323	Average
5230	99.8	100.84	/	/	34.58	9.89	45.51	195	323	Peak
5230	93.99	95.03	/	/	34.58	9.89	45.51	195	323	Average
5350	53.52	54.5	74	-20.48	34.68	9.85	45.51	195	323	Peak
5350	47.7	48.68	54	-6.3	34.68	9.85	45.51	195	323	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	100	292	Peak
5150	48.39	49.38	54	-5.61	34.6	9.92	45.51	100	292	Average
5230	93.35	94.37	/	/	34.6	9.89	45.51	100	292	Peak
5230	87.98	89	/	/	34.6	9.89	45.51	100	292	Average
5350	52.95	54.01	74	-21.05	34.6	9.85	45.51	100	292	Peak
5350	47.54	48.6	54	-6.46	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. 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	54.98	56.05	74	-19.02	34.52	9.92	45.51	195	323	Peak
5150	49.81	50.88	54	-4.19	34.52	9.92	45.51	195	323	Average
5180	104.99	106.05	/	/	34.54	9.91	45.51	195	323	Peak
5180	99.15	100.21	/	/	34.54	9.91	45.51	195	323	Average
5350	53.49	54.47	74	-20.51	34.68	9.85	45.51	195	323	Peak
5350	47.95	48.93	54	-6.05	34.68	9.85	45.51	195	323	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	54.7	55.69	74	-19.3	34.6	9.92	45.51	100	292	Peak
5150	48.89	49.88	54	-5.11	34.6	9.92	45.51	100	292	Average
5180	99.43	100.43	/	/	34.6	9.91	45.51	100	292	Peak
5180	93.77	94.77	/	/	34.6	9.91	45.51	100	292	Average
5350	54.45	55.51	74	-19.55	34.6	9.85	45.51	100	292	Peak
5350	48.15	49.21	54	-5.85	34.6	9.85	45.51	100	292	Average

REMARKS:

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5180MHz: Fundamental frequency.



<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	54.07	55.14	74	-19.93	34.52	9.92	45.51	195	323	Peak
5150	49.25	50.32	54	-4.75	34.52	9.92	45.51	195	323	Average
5200	105.31	106.36	/	/	34.56	9.9	45.51	195	323	Peak
5200	99.1	100.15	/	/	34.56	9.9	45.51	195	323	Average
5350	54.02	55	74	-19.98	34.68	9.85	45.51	195	323	Peak
5350	47.33	48.31	54	-6.67	34.68	9.85	45.51	195	323	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	53.37	54.36	74	-20.63	34.6	9.92	45.51	100	292	Peak
5150	48.01	49	54	-5.99	34.6	9.92	45.51	100	292	Average
5200	98.48	99.49	/	/	34.6	9.9	45.51	100	292	Peak
5200	93.06	94.07	/	/	34.6	9.9	45.51	100	292	Average
5350	53.85	54.91	74	-20.15	34.6	9.85	45.51	100	292	Peak
5350	47.21	48.27	54	-6.79	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5200MHz: Fundamental frequency.



<b>CHANNEL</b>	TX Channel 48	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	56.29	57.36	74	-17.71	34.52	9.92	45.51	195	323	Peak
5150	48.36	49.43	54	-5.64	34.52	9.92	45.51	195	323	Average
5240	105.82	106.85	/	/	34.59	9.89	45.51	195	323	Peak
5240	98.67	99.7	/	/	34.59	9.89	45.51	195	323	Average
5350	53.64	54.62	74	-20.36	34.68	9.85	45.51	195	323	Peak
5350	47.67	48.65	54	-6.33	34.68	9.85	45.51	195	323	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	54.21	55.2	74	-19.79	34.6	9.92	45.51	100	292	Peak
5150	47.86	48.85	54	-6.14	34.6	9.92	45.51	100	292	Average
5240	99.09	100.11	/	/	34.6	9.89	45.51	100	292	Peak
5240	92.33	93.35	/	/	34.6	9.89	45.51	100	292	Average
5350	53.74	54.8	74	-20.26	34.6	9.85	45.51	100	292	Peak
5350	48.23	49.29	54	-5.77	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. 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)
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	57.38	58.45	74	-16.62	34.52	9.92	45.51	195	323	Peak
5150	50.78	51.85	54	-3.22	34.52	9.92	45.51	195	323	Average
5190	100.24	101.29	/	/	34.55	9.91	45.51	195	323	Peak
5190	96.32	97.37	/	/	34.55	9.91	45.51	195	323	Average
5350	53.14	54.12	74	-20.86	34.68	9.85	45.51	195	323	Peak
5350	48.32	49.3	54	-5.68	34.68	9.85	45.51	195	323	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	53.02	54.01	74	-20.98	34.6	9.92	45.51	100	292	Peak
5150	48.59	49.58	54	-5.41	34.6	9.92	45.51	100	292	Average
5190	95.05	96.05	/	/	34.6	9.91	45.51	100	292	Peak
5190	90.2	91.2	/	/	34.6	9.91	45.51	100	292	Average
5350	53.01	54.07	74	-20.99	34.6	9.85	45.51	100	292	Peak
5350	47.44	48.5	54	-6.56	34.6	9.85	45.51	100	292	Average

REMARKS:

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5190MHz: Fundamental frequency.





<b>CHANNEL</b>	TX Channel 46	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.32	54.39	74	-20.68	34.52	9.92	45.51	195	323	Peak
5150	48.74	49.81	54	-5.26	34.52	9.92	45.51	195	323	Average
5230	99.92	100.96	/	/	34.58	9.89	45.51	195	323	Peak
5230	94.72	95.76	/	/	34.58	9.89	45.51	195	323	Average
5350	53.77	54.75	74	-20.23	34.68	9.85	45.51	195	323	Peak
5350	47.76	48.74	54	-6.24	34.68	9.85	45.51	195	323	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	53.2	54.19	74	-20.8	34.6	9.92	45.51	100	292	Peak
5150	48.52	49.51	54	-5.48	34.6	9.92	45.51	100	292	Average
5230	93.93	94.95	/	/	34.6	9.89	45.51	100	292	Peak
5230	88.76	89.78	/	/	34.6	9.89	45.51	100	292	Average
5350	53.9	54.96	74	-20.1	34.6	9.85	45.51	100	292	Peak
5350	48.4	49.46	54	-5.6	34.6	9.85	45.51	100	292	Average

**REMARKS:**

802. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission level – Limit value.

2. 5230MHz: Fundamental frequency.



802.11ac (80MHz)

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

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,145.500	43.89	54.00	10.11	12.73	H	353	1
1	5,150.000	44.77	54.00	9.23	12.75	H	359	1
1	5,212.500	86.11			12.94	H	303	1

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,137.000	66.34	74.00	7.66	12.71	H	357.7	1
1	5,150.000	64.61	74.00	9.39	12.75	H	359.1	1
1	5,212.500	104.87			12.94	H	336.3	1

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,145.500	39.19	54.00	14.81	12.73	V	138	1
1	5,150.000	40.16	54.00	13.84	12.75	V	138	1
1	5,207.500	77.27			12.94	V	138	1

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,145.000	60.67	74.00	13.33	12.73	V	246.7	1
1	5,150.000	57.47	74.00	16.53	12.75	V	246.7	1
1	5,203.500	97.15			12.95	V	246.7	1

**REMARKS:**

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



802.11ac (80MHz)

Worst case harmonic:

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

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,420.000	45.58	74.00	28.42	34.85	54.00	19.15	6.78	H	0.9	2
2	15,630.000	49.73	74.00	24.27	39.19	54.00	14.81	10.94	H	8.2	2





Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,420.000	44.73	74.00	29.27	34.63	54.00	19.37	6.78	V	138.3	2
2	15,630.000	49.05	74.00	24.95	39.22	54.00	14.78	10.94	V	359.1	1



**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Limit value - Emission level.
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	55.47	56.54	74	-18.53	34.52	9.92	45.51	200	323	Peak
5150	48.07	49.14	54	-5.93	34.52	9.92	45.51	200	323	Average
5260	106.37	107.39	/	/	34.61	9.88	45.51	200	323	Peak
5260	98.28	99.3	/	/	34.61	9.88	45.51	200	323	Average
5350	53.47	54.45	74	-20.53	34.68	9.85	45.51	200	323	Peak
5350	48.76	49.74	54	-5.24	34.68	9.85	45.51	200	323	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	52.97	53.96	74	-21.03	34.6	9.92	45.51	100	292	Peak
5150	47.45	48.44	54	-6.55	34.6	9.92	45.51	100	292	Average
5260	101.17	102.2	/	/	34.6	9.88	45.51	100	292	Peak
5260	94.12	95.15	/	/	34.6	9.88	45.51	100	292	Average
5350	53.43	54.49	74	-20.57	34.6	9.85	45.51	100	292	Peak
5350	47.38	48.44	54	-6.62	34.6	9.85	45.51	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	54.62	55.69	74	-19.38	34.52	9.92	45.51	200	323	Peak
5150	48.41	49.48	54	-5.59	34.52	9.92	45.51	200	323	Average
5300	106.39	107.39	/	/	34.64	9.87	45.51	200	323	Peak
5300	99.75	100.75	/	/	34.64	9.87	45.51	200	323	Average
5350	54.38	55.36	74	-19.62	34.68	9.85	45.51	200	323	Peak
5350	47.9	48.88	54	-6.1	34.68	9.85	45.51	200	323	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	53.17	54.16	74	-20.83	34.6	9.92	45.51	100	292	Peak
5150	47.86	48.85	54	-6.14	34.6	9.92	45.51	100	292	Average
5300	101.24	102.28	/	/	34.6	9.87	45.51	100	292	Peak
5300	94.67	95.71	/	/	34.6	9.87	45.51	100	292	Average
5350	52.61	53.67	74	-21.39	34.6	9.85	45.51	100	292	Peak
5350	47.48	48.54	54	-6.52	34.6	9.85	45.51	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 64	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	55.61	56.68	74	-18.39	34.52	9.92	45.51	200	323	Peak
5150	47.57	48.64	54	-6.43	34.52	9.92	45.51	200	323	Average
5320	104.49	105.48	/	/	34.66	9.86	45.51	200	323	Peak
5320	97.98	98.97	/	/	34.66	9.86	45.51	200	323	Average
5350	54.93	55.91	74	-19.07	34.68	9.85	45.51	200	323	Peak
5350	48.66	49.64	54	-5.34	34.68	9.85	45.51	200	323	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	55.03	74	-19.96	34.6	9.92	45.51	100	292	Peak
5150	48.25	49.24	54	-5.75	34.6	9.92	45.51	100	292	Average
5320	99.35	100.4	/	/	34.6	9.86	45.51	100	292	Peak
5320	91.93	92.98	/	/	34.6	9.86	45.51	100	292	Average
5350	53.59	54.65	74	-20.41	34.6	9.85	45.51	100	292	Peak
5350	47.7	48.76	54	-6.3	34.6	9.85	45.51	100	292	Average

**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 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	53.25	54.32	74	-20.75	34.52	9.92	45.51	200	323	Peak
5150	48.26	49.33	54	-5.74	34.52	9.92	45.51	200	323	Average
5260	105.26	106.28	/	/	34.61	9.88	45.51	200	323	Peak
5260	98.54	99.56	/	/	34.61	9.88	45.51	200	323	Average
5350	53.17	54.15	74	-20.83	34.68	9.85	45.51	200	323	Peak
5350	48.08	49.06	54	-5.92	34.68	9.85	45.51	200	323	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	55.08	56.07	74	-18.92	34.6	9.92	45.51	100	292	Peak
5150	47.94	48.93	54	-6.06	34.6	9.92	45.51	100	292	Average
5260	99.95	100.98	/	/	34.6	9.88	45.51	100	292	Peak
5260	93.37	94.4	/	/	34.6	9.88	45.51	100	292	Average
5350	53.07	54.13	74	-20.93	34.6	9.85	45.51	100	292	Peak
5350	48.05	49.11	54	-5.95	34.6	9.85	45.51	100	292	Average

REMARKS:

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





<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.58	54.65	74	-20.42	34.52	9.92	45.51	200	323	Peak
5150	48.21	49.28	54	-5.79	34.52	9.92	45.51	200	323	Average
5300	104.39	105.39	/	/	34.64	9.87	45.51	200	323	Peak
5300	97.46	98.46	/	/	34.64	9.87	45.51	200	323	Average
5350	52.71	53.69	74	-21.29	34.68	9.85	45.51	200	323	Peak
5350	47.93	48.91	54	-6.07	34.68	9.85	45.51	200	323	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	54.76	55.75	74	-19.24	34.6	9.92	45.51	100	292	Peak
5150	47.75	48.74	54	-6.25	34.6	9.92	45.51	100	292	Average
5300	99.08	100.12	/	/	34.6	9.87	45.51	100	292	Peak
5300	93.8	94.84	/	/	34.6	9.87	45.51	100	292	Average
5350	54.14	55.2	74	-19.86	34.6	9.85	45.51	100	292	Peak
5350	47.49	48.55	54	-6.51	34.6	9.85	45.51	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 64	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	55.07	74	-20	34.52	9.92	45.51	200	323	Peak
5150	48.59	49.66	54	-5.41	34.52	9.92	45.51	200	323	Average
5320	105.46	106.45	/	/	34.66	9.86	45.51	200	323	Peak
5320	97.62	98.61	/	/	34.66	9.86	45.51	200	323	Average
5350	56.48	57.46	74	-17.52	34.68	9.85	45.51	200	323	Peak
5350	48.93	49.91	54	-5.07	34.68	9.85	45.51	200	323	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	53.45	54.44	74	-20.55	34.6	9.92	45.51	100	292	Peak
5150	48.3	49.29	54	-5.7	34.6	9.92	45.51	100	292	Average
5320	98.02	99.07	/	/	34.6	9.86	45.51	100	292	Peak
5320	92.16	93.21	/	/	34.6	9.86	45.51	100	292	Average
5350	54.62	55.68	74	-19.38	34.6	9.85	45.51	100	292	Peak
5350	48.13	49.19	54	-5.87	34.6	9.85	45.51	100	292	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	51.98	53.05	74	-22.02	34.52	9.92	45.51	195	323	Peak
5150	48.66	49.73	54	-5.34	34.52	9.92	45.51	195	323	Average
5270	100.36	101.37	/	/	34.62	9.88	45.51	195	323	Peak
5270	95.29	96.3	/	/	34.62	9.88	45.51	195	323	Average
5350	53.77	54.75	74	-20.23	34.68	9.85	45.51	195	323	Peak
5350	48.02	49	54	-5.98	34.68	9.85	45.51	195	323	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	51.27	52.26	74	-22.73	34.6	9.92	45.51	100	292	Peak
5150	47.57	48.56	54	-6.43	34.6	9.92	45.51	100	292	Average
5270	95.37	96.4	/	/	34.6	9.88	45.51	100	292	Peak
5270	89.63	90.66	/	/	34.6	9.88	45.51	100	292	Average
5350	50.84	51.9	74	-23.16	34.6	9.85	45.51	100	292	Peak
5350	47.61	48.67	54	-6.39	34.6	9.85	45.51	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 62	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.97	54.04	74	-21.03	34.52	9.92	45.51	195	323	Peak
5150	48	49.07	54	-6	34.52	9.92	45.51	195	323	Average
5310	98.56	99.56	/	/	34.65	9.86	45.51	195	323	Peak
5310	94.58	95.58	/	/	34.65	9.86	45.51	195	323	Average
5350	53.8	54.78	74	-20.2	34.68	9.85	45.51	195	323	Peak
5350	50.02	51	54	-3.98	34.68	9.85	45.51	195	323	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	51.8	52.79	74	-22.2	34.6	9.92	45.51	100	292	Peak
5150	49.43	50.42	54	-4.57	34.6	9.92	45.51	100	292	Average
5310	94.28	95.33	/	/	34.6	9.86	45.51	100	292	Peak
5310	89.02	90.07	/	/	34.6	9.86	45.51	100	292	Average
5350	55.26	56.32	74	-18.74	34.6	9.85	45.51	100	292	Peak
5350	49.01	50.07	54	-4.99	34.6	9.85	45.51	100	292	Average

**REMARKS:**

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



802.11ac (20MHz)

<b>CHANNEL</b>	TX Channel 52	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	55.3	74	-19.77	34.52	9.92	45.51	195	323	Peak
5150	47.85	48.92	54	-6.15	34.52	9.92	45.51	195	323	Average
5260	105.14	106.16	/	/	34.61	9.88	45.51	195	323	Peak
5260	98.57	99.59	/	/	34.61	9.88	45.51	195	323	Average
5350	53.9	54.88	74	-20.1	34.68	9.85	45.51	195	323	Peak
5350	47.19	48.17	54	-6.81	34.68	9.85	45.51	195	323	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	54.77	55.76	74	-19.23	34.6	9.92	45.51	100	292	Peak
5150	47.91	48.9	54	-6.09	34.6	9.92	45.51	100	292	Average
5260	100.39	101.42	/	/	34.6	9.88	45.51	100	292	Peak
5260	93.62	94.65	/	/	34.6	9.88	45.51	100	292	Average
5350	54.64	55.7	74	-19.36	34.6	9.85	45.51	100	292	Peak
5350	48.85	49.91	54	-5.15	34.6	9.85	45.51	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.85	53.92	74	-21.15	34.52	9.92	45.51	195	323	Peak
5150	48.09	49.16	54	-5.91	34.52	9.92	45.51	195	323	Average
5300	105.58	106.58	/	/	34.64	9.87	45.51	195	323	Peak
5300	98.17	99.17	/	/	34.64	9.87	45.51	195	323	Average
5350	54.4	55.38	74	-19.6	34.68	9.85	45.51	195	323	Peak
5350	48.56	49.54	54	-5.44	34.68	9.85	45.51	195	323	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	54.44	55.43	74	-19.56	34.6	9.92	45.51	100	292	Peak
5150	47.95	48.94	54	-6.05	34.6	9.92	45.51	100	292	Average
5300	100	101.04	/	/	34.6	9.87	45.51	100	292	Peak
5300	93.59	94.63	/	/	34.6	9.87	45.51	100	292	Average
5350	53.24	54.3	74	-20.76	34.6	9.85	45.51	100	292	Peak
5350	47.43	48.49	54	-6.57	34.6	9.85	45.51	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 64	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.84	54.91	74	-20.16	34.52	9.92	45.51	200	323	Peak
5150	47.5	48.57	54	-6.5	34.52	9.92	45.51	200	323	Average
5320	104.75	105.74	/	/	34.66	9.86	45.51	200	323	Peak
5320	98.28	99.27	/	/	34.66	9.86	45.51	200	323	Average
5350	56.52	57.5	74	-17.48	34.68	9.85	45.51	200	323	Peak
5350	48.52	49.5	54	-5.48	34.68	9.85	45.51	200	323	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	52.53	53.52	74	-21.47	34.6	9.92	45.51	100	292	Peak
5150	47.89	48.88	54	-6.11	34.6	9.92	45.51	100	292	Average
5320	99.8	100.85	/	/	34.6	9.86	45.51	100	292	Peak
5320	92.45	93.5	/	/	34.6	9.86	45.51	100	292	Average
5350	53.16	54.22	74	-20.84	34.6	9.85	45.51	100	292	Peak
5350	47.61	48.67	54	-6.39	34.6	9.85	45.51	100	292	Average

**REMARKS:**

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



802.11ac (40MHz)

<b>CHANNEL</b>	TX Channel 54	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.72	53.79	74	-21.28	34.52	9.92	45.51	200	323	Peak
5150	47.89	48.96	54	-6.11	34.52	9.92	45.51	200	323	Average
5270	98.89	99.9	/	/	34.62	9.88	45.51	200	323	Peak
5270	94.42	95.43	/	/	34.62	9.88	45.51	200	323	Average
5350	52.48	53.46	74	-21.52	34.68	9.85	45.51	200	323	Peak
5350	47.87	48.85	54	-6.13	34.68	9.85	45.51	200	323	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	53.87	54.86	74	-20.13	34.6	9.92	45.51	100	292	Peak
5150	47.91	48.9	54	-6.09	34.6	9.92	45.51	100	292	Average
5270	93.77	94.8	/	/	34.6	9.88	45.51	100	292	Peak
5270	88.8	89.83	/	/	34.6	9.88	45.51	100	292	Average
5350	53.88	54.94	74	-20.12	34.6	9.85	45.51	100	292	Peak
5350	47.93	48.99	54	-6.07	34.6	9.85	45.51	100	292	Average

REMARKS:

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





<b>CHANNEL</b>	TX Channel 62	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	51.98	53.05	74	-22.02	34.52	9.92	45.51	200	323	Peak
5150	48.37	49.44	54	-5.63	34.52	9.92	45.51	200	323	Average
5310	98.44	99.44	/	/	34.65	9.86	45.51	200	323	Peak
5310	93.1	94.1	/	/	34.65	9.86	45.51	200	323	Average
5350	53.42	54.4	74	-20.58	34.68	9.85	45.51	200	323	Peak
5350	48.7	49.68	54	-5.3	34.68	9.85	45.51	200	323	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	52.26	53.25	74	-21.74	34.6	9.92	45.51	100	292	Peak
5150	48.08	49.07	54	-5.92	34.6	9.92	45.51	100	292	Average
5310	93.18	94.23	/	/	34.6	9.86	45.51	100	292	Peak
5310	88.57	89.62	/	/	34.6	9.86	45.51	100	292	Average
5350	54.38	55.44	74	-19.62	34.6	9.85	45.51	100	292	Peak
5350	48.77	49.83	54	-5.23	34.6	9.85	45.51	100	292	Average

**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 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	52.34	53.41	74	-21.66	34.52	9.92	45.51	200	323	Peak
5150	48.62	49.69	54	-5.38	34.52	9.92	45.51	200	323	Average
5290	95.47	96.48	/	/	34.63	9.87	45.51	200	323	Peak
5290	90.29	91.3	/	/	34.63	9.87	45.51	200	323	Average
5350	55.37	56.35	74	-18.63	34.68	9.85	45.51	200	323	Peak
5350	50.88	51.86	54	-3.12	34.68	9.85	45.51	200	323	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	52.26	53.25	74	-21.74	34.6	9.92	45.51	100	292	Peak
5150	48.2	49.19	54	-5.8	34.6	9.92	45.51	100	292	Average
5310	91	92.05	/	/	34.6	9.86	45.51	100	292	Peak
5310	85.94	86.99	/	/	34.6	9.86	45.51	100	292	Average
5350	54.11	55.17	74	-19.89	34.6	9.85	45.51	100	292	Peak
5350	49.35	50.41	54	-4.65	34.6	9.85	45.51	100	292	Average

REMARKS:

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



BUREAU VERITAS

Test Report No.: W7L-P23080017RF03

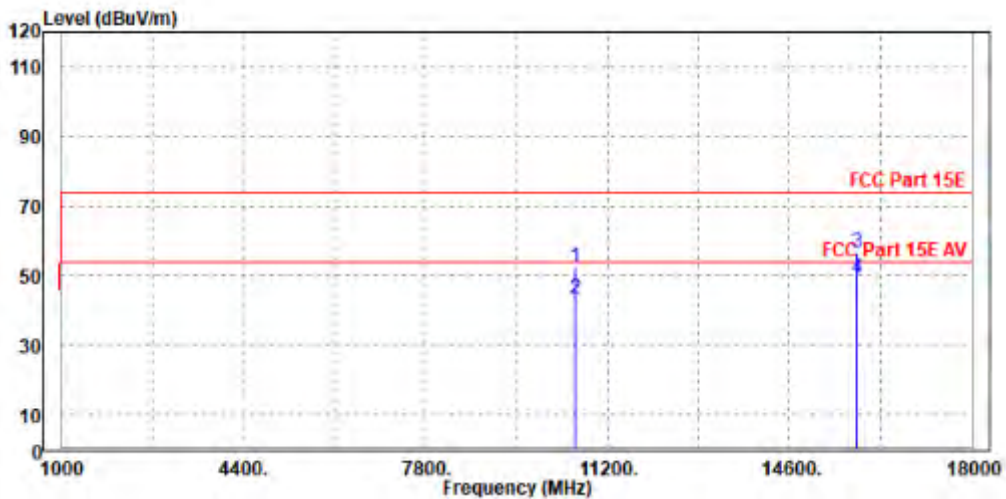
802.11ac (80MHz)

Worst case harmonic:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

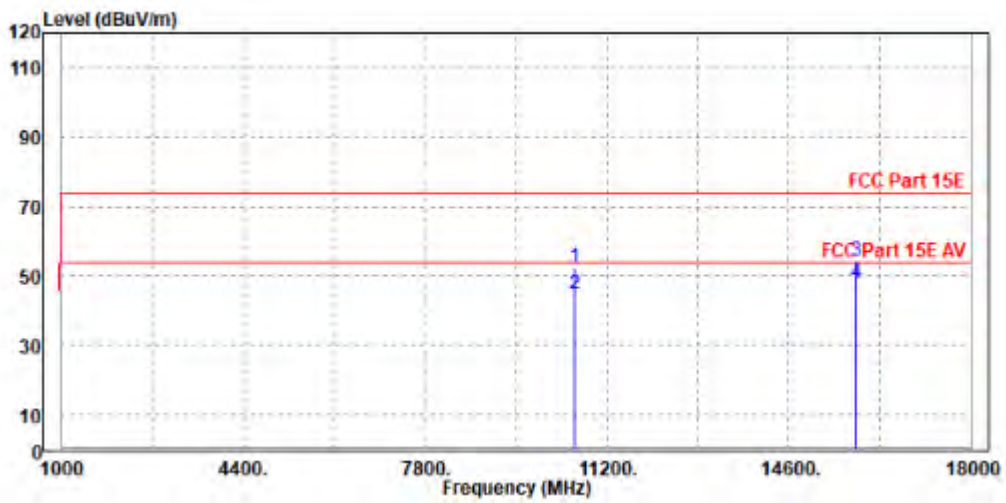
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	PoI/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	10588.000	52.64	45.70	74.00	-21.36	6.94	Peak	Horizontal
2	10588.000	43.42	36.48	54.00	-10.58	6.94	Average	Horizontal
3	PK15870.000	56.43	42.39	74.00	-17.57	14.04	Peak	Horizontal
4	PP15870.000	49.17	35.13	54.00	-4.83	14.04	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	10588.000	52.40	44.24	74.00	-21.60	8.16	Peak	Vertical
2	10588.000	44.79	36.63	54.00	-9.21	8.16	Average	Vertical
3	PK15870.000	54.51	41.88	74.00	-19.49	12.63	Peak	Vertical
4	PP15870.000	47.89	35.26	54.00	-6.11	12.63	Average	Vertical



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
2. 5290MHz: Fundamental frequency.
3. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.



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	54.35	55.28	74	-19.65	34.77	9.81	45.51	200	323	Peak
5460	47.87	48.8	54	-6.13	34.77	9.81	45.51	200	323	Average
5470	54.48	55.4	68.2	-13.72	34.78	9.81	45.51	200	323	Peak
5500	102.35	103.25	/	/	34.8	9.8	45.5	200	323	Peak
5500	96.23	97.13	/	/	34.8	9.8	45.5	200	323	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	53.96	54.89	74	-20.04	34.77	9.81	45.51	100	292	Peak
5460	48.11	49.04	54	-5.89	34.77	9.81	45.51	100	292	Average
5470	54.45	55.37	68.2	-13.75	34.78	9.81	45.51	100	292	Peak
5500	98.34	99.24	/	/	34.8	9.8	45.5	100	292	Peak
5500	92.4	93.3	/	/	34.8	9.8	45.5	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 116	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.05	53.98	74	-20.95	34.77	9.81	45.51	200	323	Peak
5460	47.63	48.56	54	-6.37	34.77	9.81	45.51	200	323	Average
5470	54.63	55.55	68.2	-13.57	34.78	9.81	45.51	200	323	Peak
5580	102.95	103.72	/	/	34.9	9.83	45.5	200	323	Peak
5580	97.11	97.88	/	/	34.9	9.83	45.5	200	323	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	52.63	53.73	74	-21.37	34.6	9.81	45.51	100	292	Peak
5460	46.26	47.36	54	-7.74	34.6	9.81	45.51	100	292	Average
5470	52.82	53.92	68.2	-15.38	34.6	9.81	45.51	100	292	Peak
5580	98.16	99.13	/	/	34.7	9.83	45.5	100	292	Peak
5580	91.97	92.94	/	/	34.7	9.83	45.5	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 140	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5700	100.68	101.27	/	/	35.04	9.87	45.5	200	0	Peak
5700	94.54	95.13	/	/	35.04	9.87	45.5	200	0	Average
5725	54.43	55.02	68.2	-13.77	35.04	9.87	45.5	200	0	Peak

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	95.07	95.86	/	/	34.84	9.87	45.5	100	292	Peak
5700	88.73	89.52	/	/	34.84	9.87	45.5	100	292	Average
5725	53.81	54.56	68.2	-14.39	34.87	9.88	45.5	100	292	Peak

**REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5700MHz: Fundamental frequency.
- #: 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	55.31	56.24	74	-18.69	34.77	9.81	45.51	200	360	Peak
5460	48.35	49.28	54	-5.65	34.77	9.81	45.51	200	360	Average
5470	54.79	55.71	68.2	-13.41	34.78	9.81	45.51	200	360	Peak
5500	103.89	104.79	/	/	34.8	9.8	45.5	200	360	Peak
5500	97.25	98.15	/	/	34.8	9.8	45.5	200	360	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	52.82	53.92	74	-21.18	34.6	9.81	45.51	100	292	Peak
5460	46.81	47.91	54	-7.19	34.6	9.81	45.51	100	292	Average
5470	53.79	54.89	68.2	-14.41	34.6	9.81	45.51	100	292	Peak
5500	98.32	99.42	/	/	34.6	9.8	45.5	100	292	Peak
5500	92.48	93.58	/	/	34.6	9.8	45.5	100	292	Average

REMARKS:

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





<b>CHANNEL</b>	TX Channel 116	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.87	53.8	74	-21.13	34.77	9.81	45.51	200	360	Peak
5460	47.1	48.03	54	-6.9	34.77	9.81	45.51	200	360	Average
5470	52.25	53.17	68.2	-15.95	34.78	9.81	45.51	200	360	Peak
5580	101.46	102.23	/	/	34.9	9.83	45.5	200	360	Peak
5580	94.88	95.65	/	/	34.9	9.83	45.5	200	360	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	52.27	53.37	74	-21.73	34.6	9.81	45.51	100	292	Peak
5460	47.44	48.54	54	-6.56	34.6	9.81	45.51	100	292	Average
5470	53.35	54.45	68.2	-14.85	34.6	9.81	45.51	100	292	Peak
5580	95.6	96.57	/	/	34.7	9.83	45.5	100	292	Peak
5580	90.82	91.79	/	/	34.7	9.83	45.5	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 140	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5700	100.94	101.53	/	/	35.04	9.87	45.5	200	360	Peak
5700	95.86	96.45	/	/	35.04	9.87	45.5	200	360	Average
5725	54.01	54.56	68.2	-14.19	35.07	9.88	45.5	200	360	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	95.78	96.57	/	/	34.84	9.87	45.5	100	292	Peak
5700	89.49	90.28	/	/	34.84	9.87	45.5	100	292	Average
5725	55.19	55.94	68.2	-13.01	34.87	9.88	45.5	100	292	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.



802.11n (40MHz)

CHANNEL	TX Channel 102	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	52.49	53.42	74	-21.51	34.77	9.81	45.51	200	360	Peak
5460	47.64	48.57	54	-6.36	34.77	9.81	45.51	200	360	Average
5470	54.47	55.39	68.2	-13.73	34.78	9.81	45.51	200	360	Peak
5510	98.3	99.19	/	/	34.81	9.8	45.5	200	360	Peak
5510	91.76	92.65	/	/	34.81	9.8	45.5	200	360	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	51.88	52.98	74	-22.12	34.6	9.81	45.51	100	292	Peak
5460	47.64	48.74	54	-6.36	34.6	9.81	45.51	100	292	Average
5470	53.8	54.9	68.2	-14.4	34.6	9.81	45.51	100	292	Peak
5510	91.37	92.46	/	/	34.61	9.8	45.5	100	292	Peak
5510	88.55	89.64	/	/	34.61	9.8	45.5	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 110	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.24	53.17	74	-21.76	34.77	9.81	45.51	200	360	Peak
5460	47.5	48.43	54	-6.5	34.77	9.81	45.51	200	360	Average
5470	52.73	53.65	68.2	-15.47	34.78	9.81	45.51	200	360	Peak
5550	96.69	97.51	/	/	34.86	9.82	45.5	200	360	Peak
5550	93.76	94.58	/	/	34.86	9.82	45.5	200	360	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	53.55	54.65	74	-20.45	34.6	9.81	45.51	100	292	Peak
5460	46.69	47.79	54	-7.31	34.6	9.81	45.51	100	292	Average
5470	51.87	52.97	68.2	-16.33	34.6	9.81	45.51	100	292	Peak
5550	91.15	92.17	/	/	34.66	9.82	45.5	100	292	Peak
5550	87.4	88.42	/	/	34.66	9.82	45.5	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 134	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5670	95.82	96.46	/	/	35	9.86	45.5	200	360	Peak
5670	91.46	92.1	/	/	35	9.86	45.5	200	360	Average
5725	54.06	54.61	68.2	-14.14	35.07	9.88	45.5	200	360	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	90.76	91.6	/	/	34.8	9.86	45.5	100	292	Peak
5670	86.83	87.67	/	/	34.8	9.86	45.5	100	292	Average
5725	53.1	53.1	68.2	-15.1	0	0	0	100	292	Peak

**REMARKS:**

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



**802.11ac (20MHz)**

<b>CHANNEL</b>	TX Channel 100	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.64	53.57	74	-21.36	34.77	9.81	45.51	200	360	Peak
5460	47.95	48.88	54	-6.05	34.77	9.81	45.51	200	360	Average
5470	54.02	54.94	68.2	-14.18	34.78	9.81	45.51	200	360	Peak
5500	103.69	104.59	/	/	34.8	9.8	45.5	200	360	Peak
5500	96.19	97.09	/	/	34.8	9.8	45.5	200	360	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	52.63	53.73	74	-21.37	34.6	9.81	45.51	100	292	Peak
5460	47.43	48.53	54	-6.57	34.6	9.81	45.51	100	292	Average
5470	53.36	54.46	68.2	-14.84	34.6	9.81	45.51	100	292	Peak
5500	97.73	98.83	/	/	34.6	9.8	45.5	100	292	Peak
5500	91.39	92.49	/	/	34.6	9.8	45.5	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 116	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.7	54.63	74	-20.3	34.77	9.81	45.51	200	360	Peak
5460	47.47	48.4	54	-6.53	34.77	9.81	45.51	200	360	Average
5470	54.19	55.11	68.2	-14.01	34.78	9.81	45.51	200	360	Peak
5580	100.82	101.59	/	/	34.9	9.83	45.5	200	360	Peak
5580	94.99	95.76	/	/	34.9	9.83	45.5	200	360	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	54.42	55.52	74	-19.58	34.6	9.81	45.51	100	292	Peak
5460	47.17	48.27	54	-6.83	34.6	9.81	45.51	100	292	Average
5470	52.67	53.77	68.2	-15.53	34.6	9.81	45.51	100	292	Peak
5580	95.51	96.48	/	/	34.7	9.83	45.5	100	292	Peak
5580	90.16	91.13	/	/	34.7	9.83	45.5	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 140	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5700	100.3	100.89	/	/	35.04	9.87	45.5	200	360	Peak
5700	95.29	95.88	/	/	35.04	9.87	45.5	200	360	Average
5725	54.3	54.85	68.2	-13.9	35.07	9.88	45.5	200	360	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	95.21	96	/	/	34.84	9.87	45.5	100	292	Peak
5700	88.46	89.25	/	/	34.84	9.87	45.5	100	292	Average
5725	54	54.75	68.2	-14.2	34.87	9.88	45.5	100	292	Peak

**REMARKS:**

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





802.11ac (40MHz)

CHANNEL	TX Channel 102	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	52.73	53.66	74	-21.27	34.77	9.81	45.51	200	360	Peak
5460	47.93	48.86	54	-6.07	34.77	9.81	45.51	200	360	Average
5470	53.16	54.08	68.2	-15.04	34.78	9.81	45.51	200	360	Peak
5510	98.38	99.27	/	/	34.81	9.8	45.5	200	360	Peak
5510	93.95	94.84	/	/	34.81	9.8	45.5	200	360	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	53.68	54.78	74	-20.32	34.6	9.81	45.51	100	292	Peak
5460	47.66	48.76	54	-6.34	34.6	9.81	45.51	100	292	Average
5470	53.07	54.17	68.2	-15.13	34.6	9.81	45.51	100	292	Peak
5510	91.58	92.67	/	/	34.61	9.8	45.5	100	292	Peak
5510	88.12	89.21	/	/	34.61	9.8	45.5	100	292	Average

REMARKS:

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



<b>CHANNEL</b>	TX Channel 110	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	52.65	53.58	74	-21.35	34.77	9.81	45.51	200	360	Peak
5460	47.35	48.28	54	-6.65	34.77	9.81	45.51	200	360	Average
5470	53.79	54.71	68.2	-14.41	34.78	9.81	45.51	200	360	Peak
5550	97.46	98.28	/	/	34.86	9.82	45.5	200	360	Peak
5550	94.56	95.38	/	/	34.86	9.82	45.5	200	360	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	51.27	52.37	74	-22.73	34.6	9.81	45.51	100	292	Peak
5460	47.29	48.39	54	-6.71	34.6	9.81	45.51	100	292	Average
5470	52.15	53.25	68.2	-16.05	34.6	9.81	45.51	100	292	Peak
5550	92.76	93.78	/	/	34.66	9.82	45.5	100	292	Peak
5550	88.91	89.93	/	/	34.66	9.82	45.5	100	292	Average

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 134	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5670	94.34	94.98	/	/	35	9.86	45.5	200	360	Peak
5670	89.63	90.27	/	/	35	9.86	45.5	200	360	Average
5725	52.86	53.41	68.2	-15.34	35.07	9.88	45.5	200	360	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	89.22	90.06	/	/	34.8	9.86	45.5	100	292	Peak
5670	85.91	86.75	/	/	34.8	9.86	45.5	100	292	Average
5725	52.13	52.88	68.2	-16.07	34.87	9.88	45.5	100	292	Peak

**REMARKS:**

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



**802.11ac (80MHz)**

<b>CHANNEL</b>	TX Channel 106	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.98	54.91	74	-20.02	34.77	9.81	45.51	200	0	Peak
5460	50.01	50.94	54	-3.99	34.77	9.81	45.51	200	0	Average
5470	53.82	54.74	68.2	-14.38	34.78	9.81	45.51	200	0	Peak
5530	93.89	94.74	/	/	34.84	9.81	45.5	200	0	Peak
5530	90.41	91.26	/	/	34.84	9.81	45.5	200	0	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	53.01	54.11	74	-20.99	34.6	9.81	45.51	100	292	Peak
5460	48.48	49.58	54	-5.52	34.6	9.81	45.51	100	292	Average
5470	53.62	54.72	68.2	-14.58	34.6	9.81	45.51	100	292	Peak
5530	88.84	89.89	/	/	34.64	9.81	45.5	100	292	Peak
5530	85.17	86.22	/	/	34.64	9.81	45.5	100	292	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.



<b>CHANNEL</b>	TX Channel 122	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	53.11	54.04	74	-20.89	34.77	9.81	45.51	200	0	Peak
5460	47.74	48.67	54	-6.26	34.77	9.81	45.51	200	0	Average
5470	52.24	53.16	68.2	-15.96	34.78	9.81	45.51	200	0	Peak
5610	91.36	92.09	/	/	34.93	9.84	45.5	200	0	Peak
5610	88.54	89.27	/	/	34.93	9.84	45.5	200	0	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	52.25	53.35	74	-21.75	34.6	9.81	45.51	100	292	Peak
5460	47.71	48.81	54	-6.29	34.6	9.81	45.51	100	292	Average
5470	52.51	53.61	68.2	-15.69	34.6	9.81	45.51	100	292	Peak
5610	86.06	86.99	/	/	34.73	9.84	45.5	100	292	Peak
5610	83.12	84.05	/	/	34.73	9.84	45.5	100	292	Average

**REMARKS:**

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



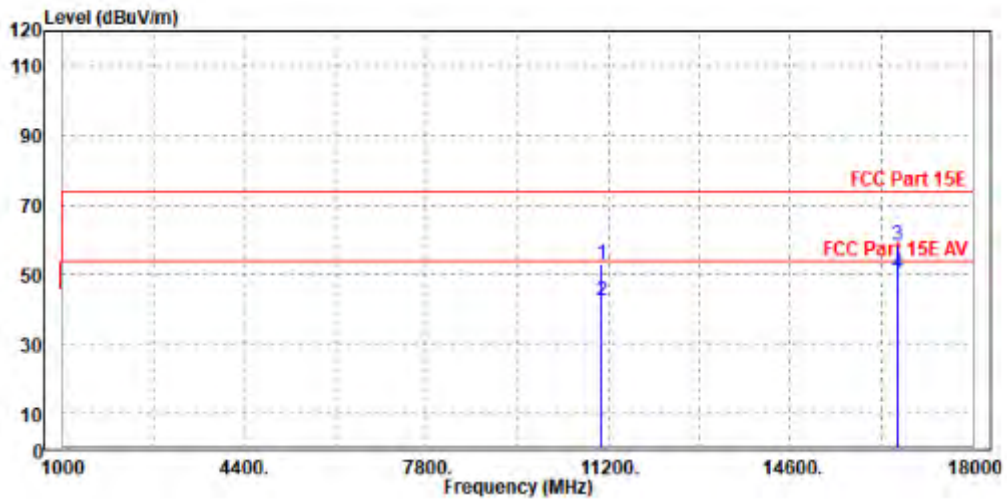
802.11ac (80MHz)

Worst case harmonic:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

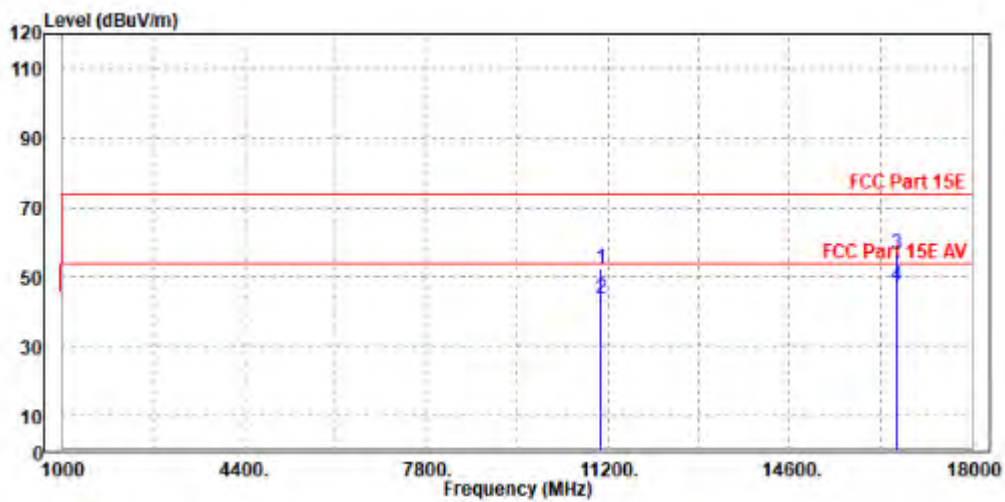
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	11060.000	53.15	46.03	74.00	-20.85	7.12	Peak	Horizontal
2	11060.000	42.40	35.28	54.00	-11.60	7.12	Average	Horizontal
3	PK16589.000	58.61	42.58	74.00	-15.39	16.03	Peak	Horizontal
4	PP16589.000	50.35	34.32	54.00	-3.65	16.03	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	11064.000	52.52	44.95	74.00	-21.48	7.57	Peak	Vertical
2	11064.000	43.62	36.05	54.00	-10.38	7.57	Average	Vertical
3	PK16590.000	56.59	42.44	74.00	-17.41	14.15	Peak	Vertical
4	PP16590.000	47.40	33.25	54.00	-6.60	14.15	Average	Vertical



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
2. 5530MHz: Fundamental frequency.
3. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.



Band 4:

802.11a

<b>CHANNEL</b>	TX Channel 149	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5745	103.16	103.69	/	/	35.09	9.88	45.5	135	300	Peak
5745	97.34	97.87	/	/	35.09	9.88	45.5	135	300	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	98.54	99.27	/	/	34.89	9.88	45.5	100	175	Peak
5745	92.8	93.53	/	/	34.89	9.88	45.5	100	175	Average

REMARKS:

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

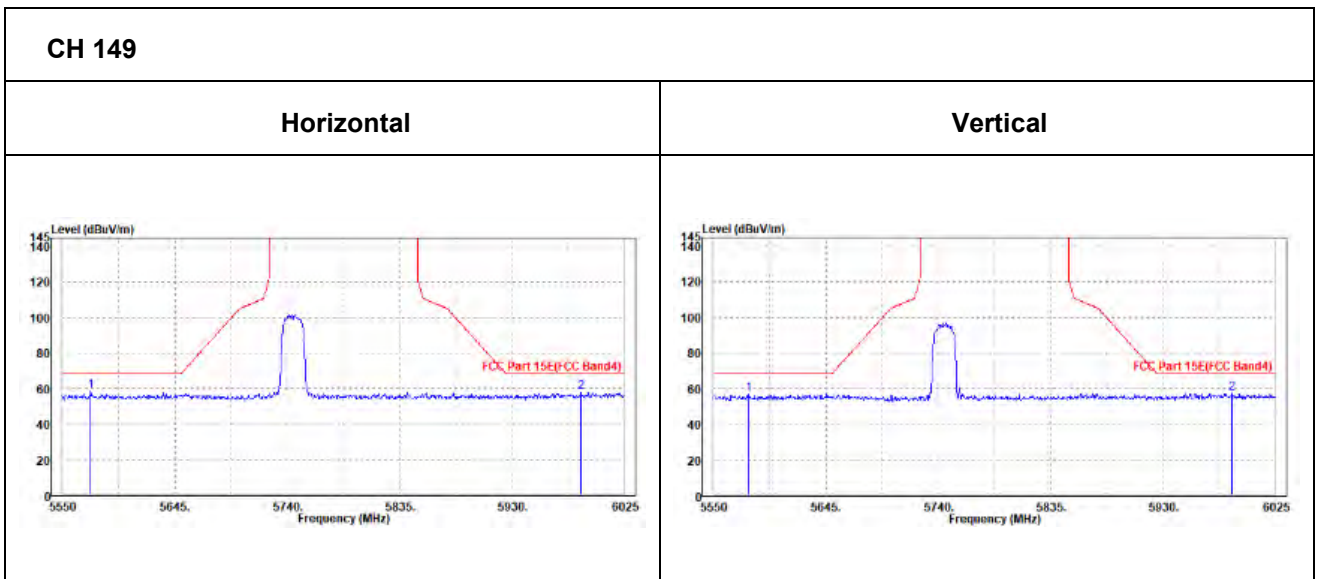




**Oobe Data**

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
5573.75	58.21	58.99	68.2	-9.99	34.89	9.83	45.5	135	0	Peak
5987.95	57.94	58.08	68.2	-10.26	35.39	9.97	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5578.975	56.65	57.63	68.2	-11.55	34.69	9.83	45.5	100	360	Peak
5988.425	57.42	57.76	68.2	-10.78	35.19	9.97	45.5	100	360	Peak





<b>CHANNEL</b>	TX Channel 157	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5785	102.59	103.05	/	/	35.14	9.9	45.5	135	300	Peak
5785	96.42	96.88	/	/	35.14	9.9	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	98.48	99.14	/	/	34.94	9.9	45.5	100	175	Peak
5785	92.6	93.26	/	/	34.94	9.9	45.5	100	175	Average

**REMARKS:**

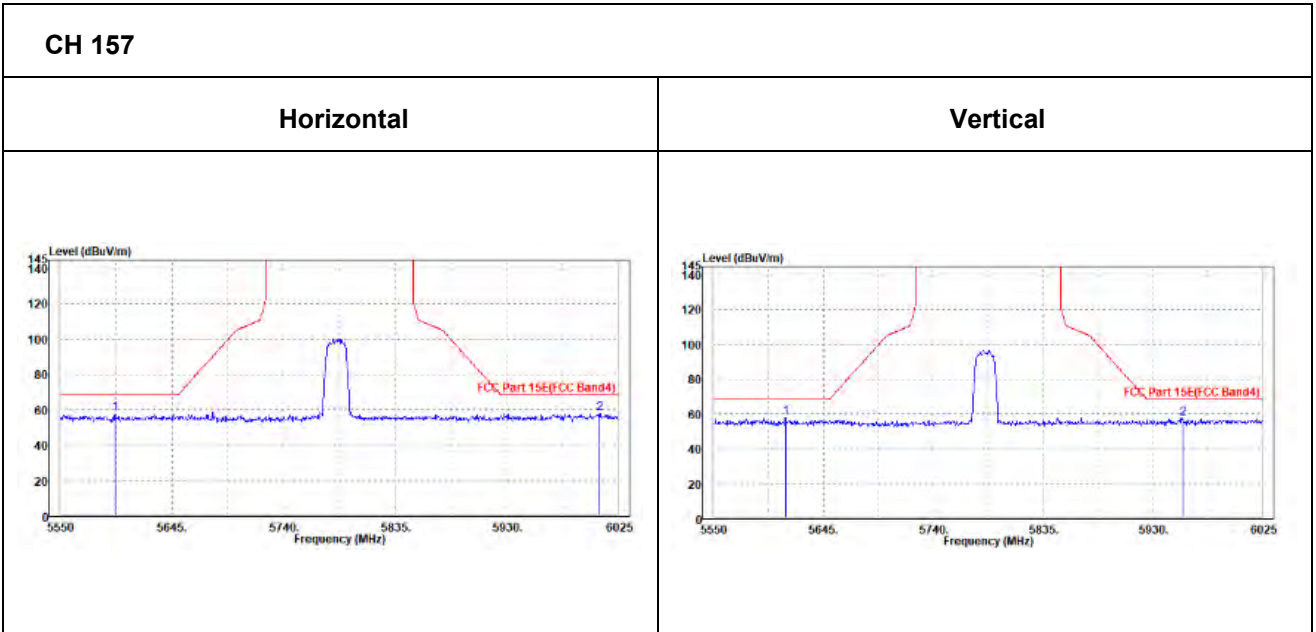
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5785MHz: Fundamental frequency.



**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
5596.55	57.89	58.64	68.2	-10.31	34.92	9.83	45.5	135	360	Peak
6008.85	57.95	58.07	68.2	-10.25	35.4	9.98	45.5	135	360	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
5612.225	57.92	58.85	68.2	-10.28	34.73	9.84	45.5	100	0	Peak
5955.65	57.45	57.85	68.2	-10.75	35.15	9.95	45.5	100	0	Peak





CHANNEL	TX Channel 165	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
5825	102.96	103.36	/	/	35.19	9.91	45.5	135	300	Peak
5825	96.71	97.11	/	/	35.19	9.91	45.5	135	300	Average

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5825	98.8	99.4	/	/	34.99	9.91	45.5	100	175	Peak
5825	92.81	93.41	/	/	34.99	9.91	45.5	100	175	Average

REMARKS:

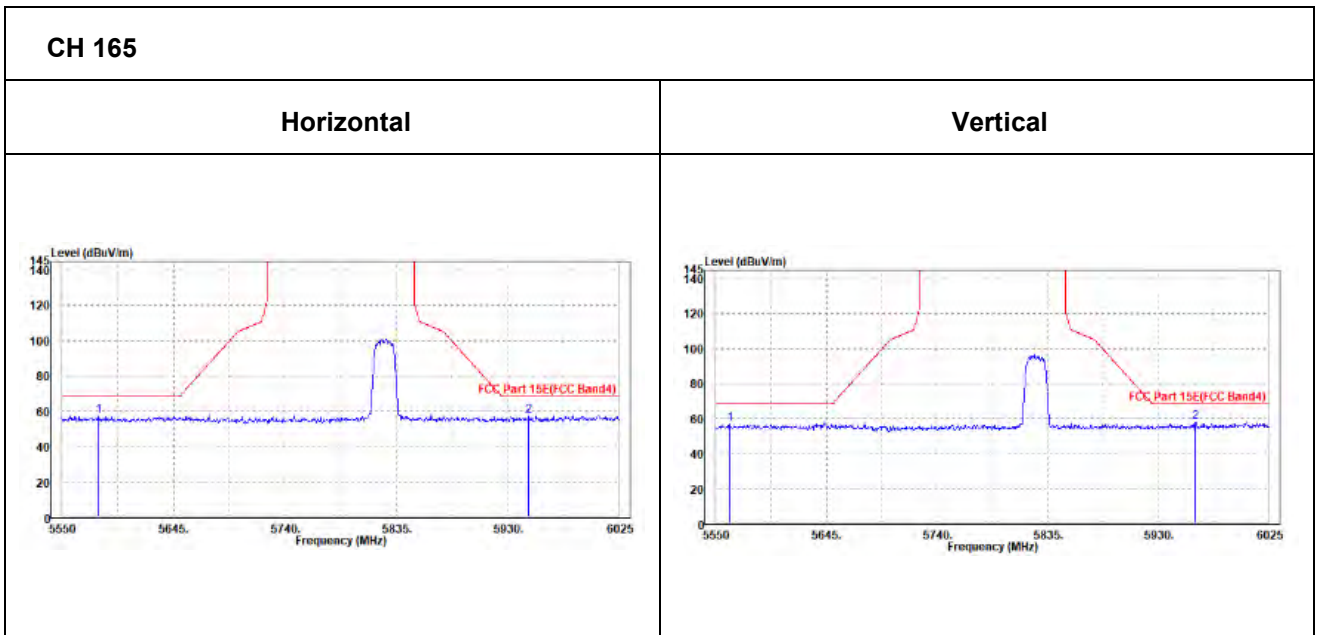
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5825MHz: Fundamental frequency.



**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
5581.35	57.36	58.13	68.2	-10.84	34.9	9.83	45.5	135	0	Peak
5948.05	57.58	57.79	68.2	-10.62	35.34	9.95	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5561.875	57.04	58.05	68.2	-11.16	34.67	9.82	45.5	100	360	Peak
5961.825	57.86	58.25	68.2	-10.34	35.15	9.96	45.5	100	360	Peak





802.11n (20MHz)

<b>CHANNEL</b>	TX Channel 149	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5745	103.46	103.99	/	/	35.09	9.88	45.5	135	300	Peak
5745	96.93	97.46	/	/	35.09	9.88	45.5	135	300	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	99	99.73	/	/	34.89	9.88	45.5	100	175	Peak
5745	91.8	92.53	/	/	34.89	9.88	45.5	100	175	Average

REMARKS:

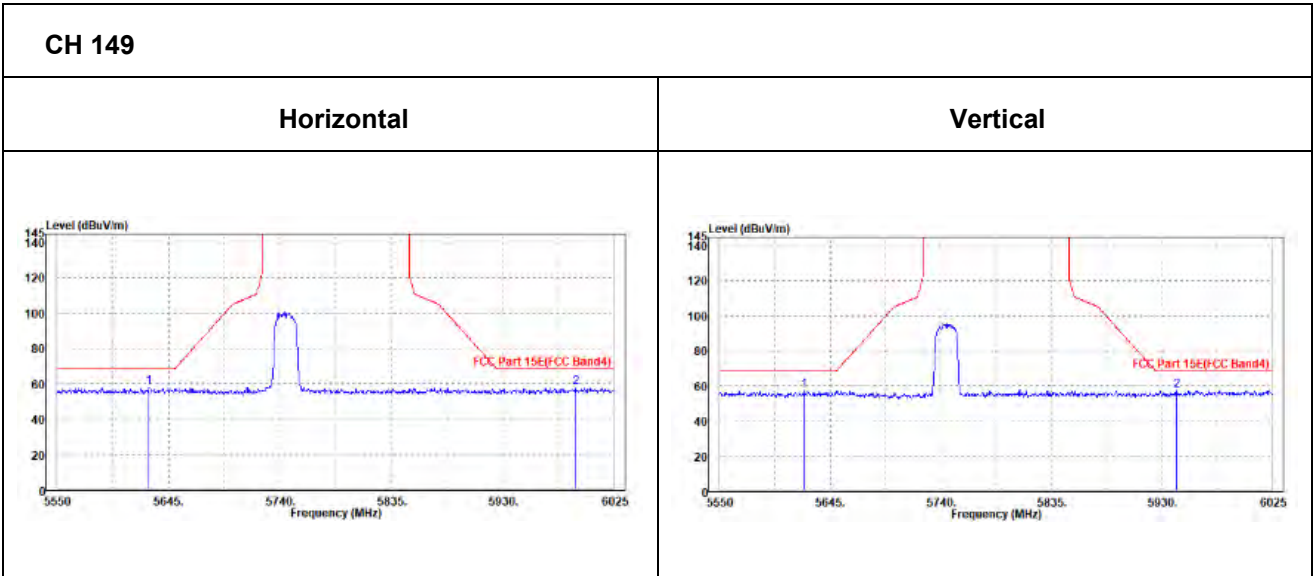
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5745MHz: Fundamental frequency.



**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
5627.9	57.68	58.39	68.2	-10.52	34.95	9.84	45.5	135	360	Peak
5992.225	58.14	58.28	68.2	-10.06	35.39	9.97	45.5	135	360	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
5622.675	57.38	58.29	68.2	-10.82	34.75	9.84	45.5	100	0	Peak
5942.825	57.45	57.87	68.2	-10.75	35.13	9.95	45.5	100	0	Peak





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

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>										
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	102.62	103.08	/	/	35.14	9.9	45.5	135	300	Peak
5785	96.05	96.51	/	/	35.14	9.9	45.5	135	300	Average
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>										
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	98.57	99.23	/	/	34.94	9.9	45.5	100	175	Peak
5785	92.31	92.97	/	/	34.94	9.9	45.5	100	175	Average

**REMARKS:**

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

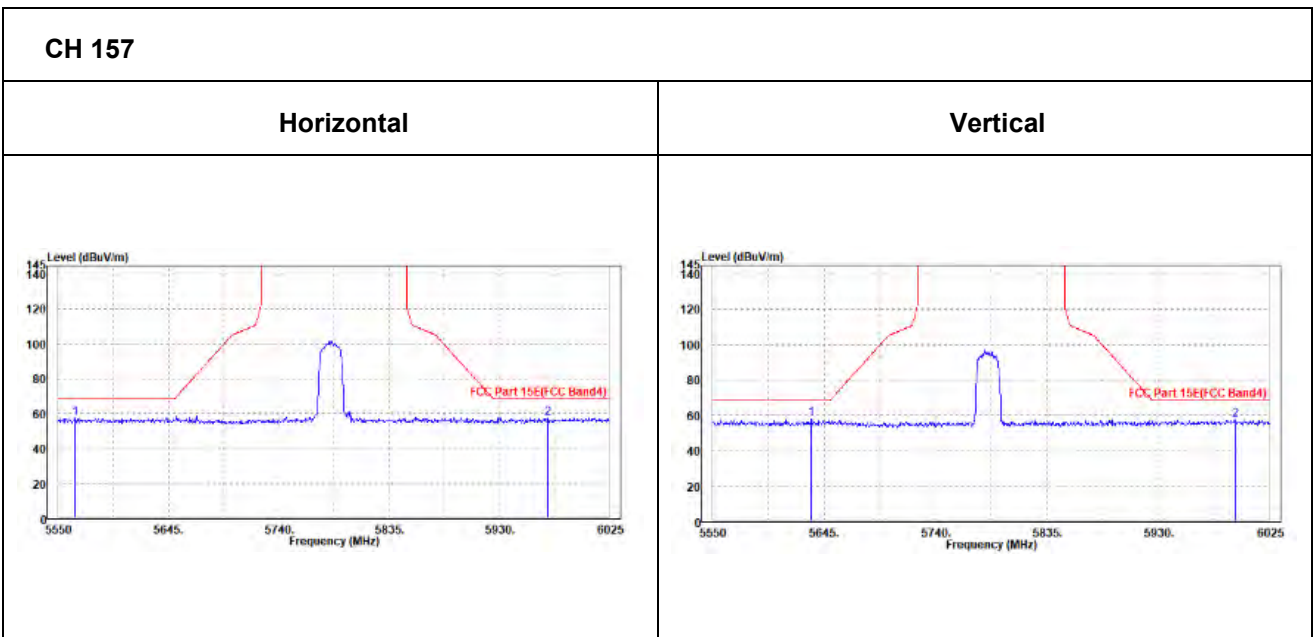




**OBE DATA**

**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
5564.25	57.12	57.92	68.2	-11.08	34.88	9.82	45.5	135	0	Peak
5971.8	57.43	57.6	68.2	-10.77	35.37	9.96	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV /m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5634.075	57.82	58.71	68.2	-10.38	34.76	9.85	45.5	100	360	Peak
5995.55	57.48	57.82	68.2	-10.72	35.19	9.97	45.5	100	360	Peak





<b>CHANNEL</b>	TX Channel 165	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5825	102.46	102.86	/	/	35.19	9.91	45.5	135	300	Peak
5825	95.65	96.05	/	/	35.19	9.91	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5825	98.14	98.74	/	/	34.99	9.91	45.5	100	175	Peak
5825	92.21	92.81	/	/	34.99	9.91	45.5	100	175	Average

**REMARKS:**

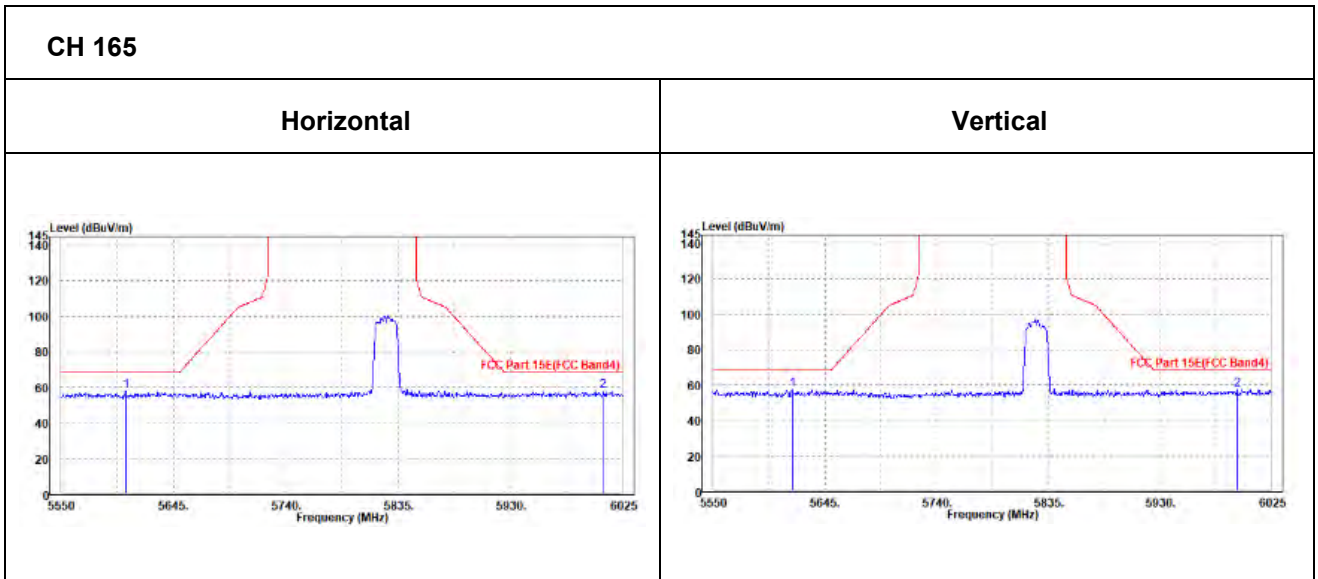
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5825MHz: Fundamental frequency.



**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
5604.625	57.67	58.4	68.2	-10.53	34.93	9.84	45.5	135	360	Peak
6008.375	57.69	57.81	68.2	-10.51	35.4	9.98	45.5	135	360	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
5616.975	57.09	58.01	68.2	-11.11	34.74	9.84	45.5	100	0	Peak
5996.025	57.3	57.63	68.2	-10.9	35.2	9.97	45.5	100	0	Peak





802.11n (40MHz)

<b>CHANNEL</b>	TX Channel 151	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5755	96.71	97.21	/	/	35.11	9.89	45.5	135	300	Peak
5755	93.63	94.13	/	/	35.11	9.89	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	92.3	93	/	/	34.91	9.89	45.5	100	175	Peak
5755	88.39	89.09	/	/	34.91	9.89	45.5	100	175	Average

**REMARKS:**

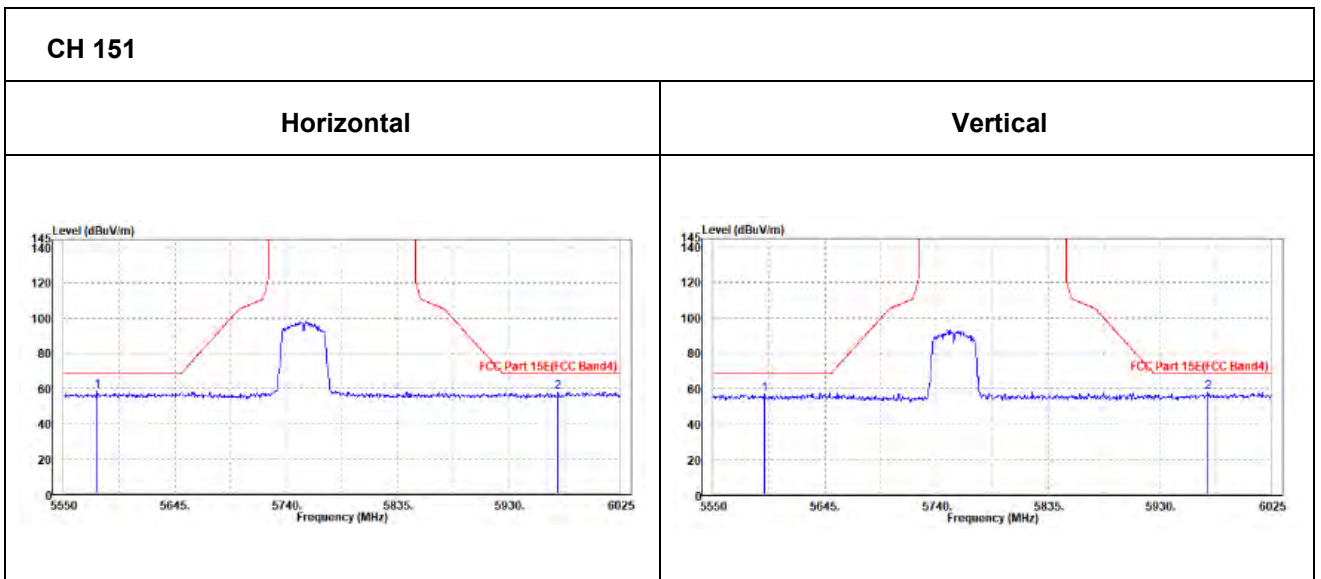
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5755MHz: Fundamental frequency.



**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
5578.5	58.25	59.03	68.2	-9.95	34.89	9.83	45.5	135	0	Peak
5971.8	57.93	58.1	68.2	-10.27	35.37	9.96	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5593.225	56.56	57.52	68.2	-11.64	34.71	9.83	45.5	100	360	Peak
5970.85	58.04	58.41	68.2	-10.16	35.17	9.96	45.5	100	360	Peak





<b>CHANNEL</b>	TX Channel 159	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5795	96.69	97.14	/	/	35.15	9.9	45.5	135	300	Peak
5795	93.18	93.63	/	/	35.15	9.9	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5795	93.42	94.07	/	/	34.95	9.9	45.5	100	175	Peak
5795	89.51	90.16	/	/	34.95	9.9	45.5	100	175	Average

**REMARKS:**

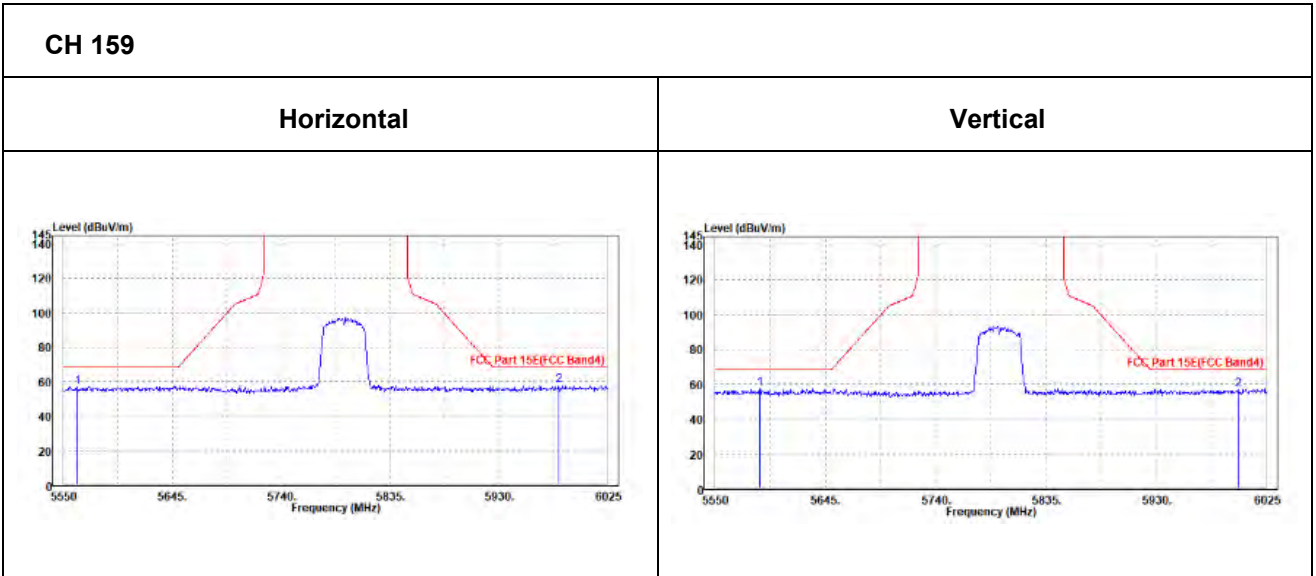
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5795MHz: Fundamental frequency.



**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	
5562.35	56.96	57.77	68.2	-11.24	34.87	9.82	45.5	135	360	Peak	
5982.725	58.15	58.31	68.2	-10.05	35.38	9.96	45.5	135	360	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	
5588.475	57.4	58.36	68.2	-10.8	34.71	9.83	45.5	100	0	Peak	
6000.775	56.9	57.23	68.2	-11.3	35.2	9.97	45.5	100	0	Peak	





802.11ac (20MHz)

CHANNEL	TX Channel 149	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
5745	102.65	103.18	/	/	35.09	9.88	45.5	135	300	Peak
5745	96.67	97.2	/	/	35.09	9.88	45.5	135	300	Average

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	98.16	98.89	/	/	34.89	9.88	45.5	100	175	Peak
5745	91.89	92.62	/	/	34.89	9.88	45.5	100	175	Average

REMARKS:

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

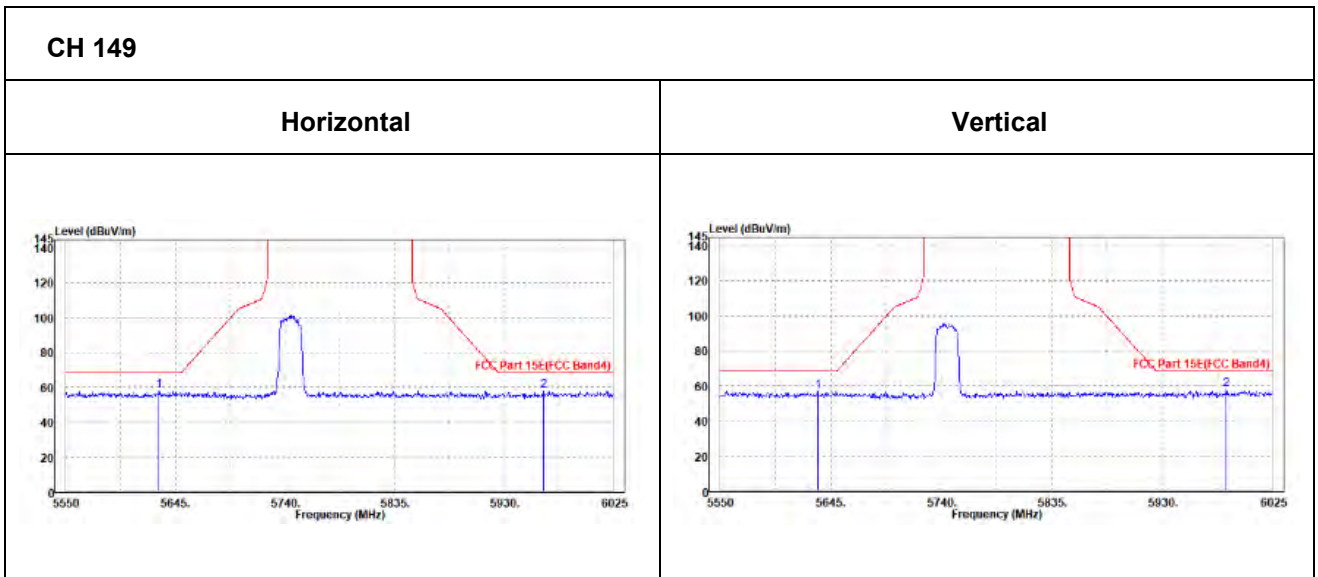




**Oobe Data**

**802.11ac (20MHz)**

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5630.75	57.77	58.47	68.2	-10.43	34.96	9.84	45.5	135	0	Peak
5964.675	57.97	58.15	68.2	-10.23	35.36	9.96	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5633.6	56.55	57.44	68.2	-11.65	34.76	9.85	45.5	100	360	Peak
5985.1	58.09	58.45	68.2	-10.11	35.18	9.96	45.5	100	360	Peak





CHANNEL	TX Channel 157	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
5785	102.31	102.77	/	/	35.14	9.9	45.5	135	300	Peak
5785	95.82	96.28	/	/	35.14	9.9	45.5	135	300	Average

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	97.86	98.52	/	/	34.94	9.9	45.5	100	175	Peak
5785	92.43	93.09	/	/	34.94	9.9	45.5	100	175	Average

REMARKS:

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



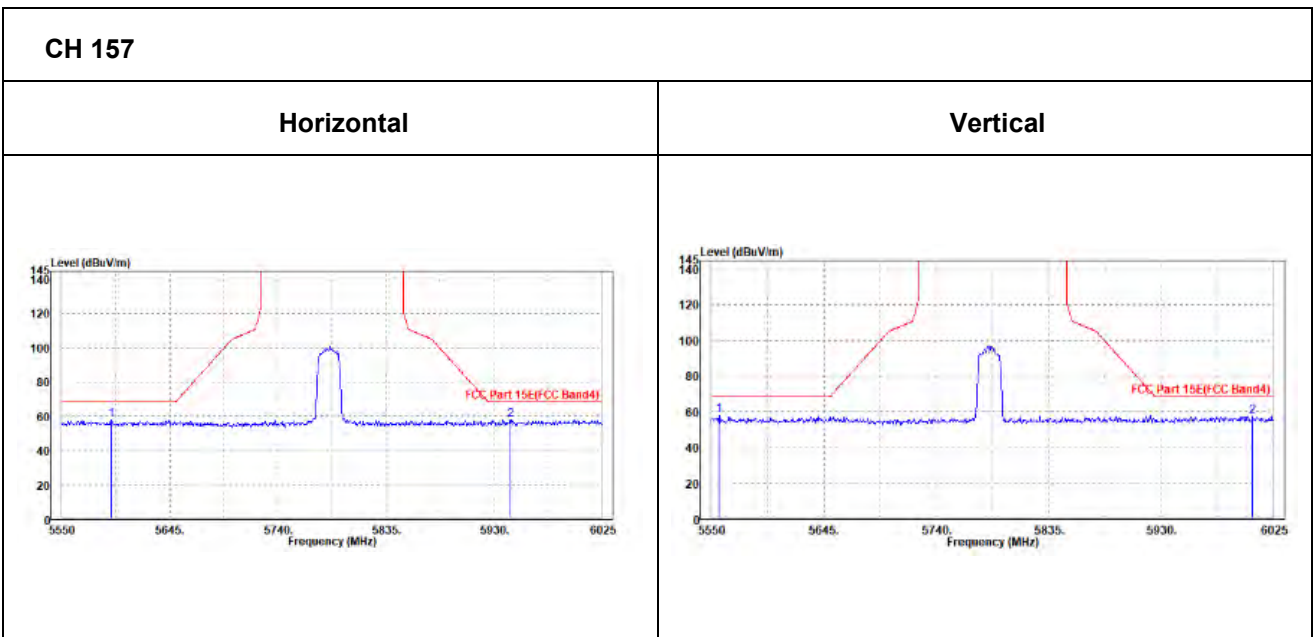
**BUREAU  
VERITAS**

Test Report No.: W7L-P23080017RF03

**OBE DATA**

**802.11ac (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
5593.7	57.67	58.43	68.2	-10.53	34.91	9.83	45.5	135	360	Peak
5944.725	57.99	58.21	68.2	-10.21	35.33	9.95	45.5	135	360	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
5556.175	57.98	58.99	68.2	-10.22	34.67	9.82	45.5	100	0	Peak
6007.425	57.24	57.55	68.2	-10.96	35.21	9.98	45.5	100	0	Peak





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

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>										
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	102.24	102.64	/	/	35.19	9.91	45.5	135	300	Peak
5825	96.27	96.67	/	/	35.19	9.91	45.5	135	300	Average
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>										
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	98.03	98.63	/	/	34.99	9.91	45.5	100	175	Peak
5825	92.45	93.05	/	/	34.99	9.91	45.5	100	175	Average

**REMARKS:**

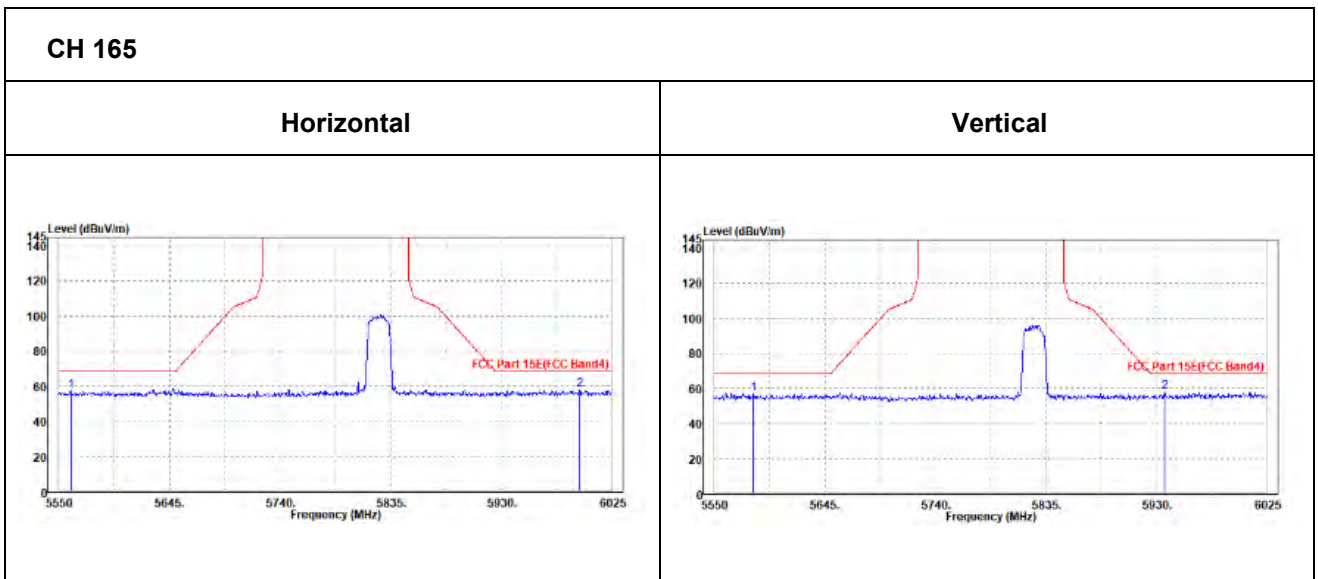
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
2. 5825MHz: Fundamental frequency.



**OBE DATA**

**802.11ac (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
5559.975	57.2	58.01	68.2	-11	34.87	9.82	45.5	135	0	Peak
5996.975	57.66	57.79	68.2	-10.54	35.4	9.97	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5583.25	56.76	57.73	68.2	-11.44	34.7	9.83	45.5	100	360	Peak
5937.125	57.88	58.31	68.2	-10.32	35.12	9.95	45.5	100	360	Peak





**802.11ac (40MHz)**

<b>CHANNEL</b>	TX Channel 151	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5755	97.84	98.34	/	/	35.11	9.89	45.5	135	300	Peak
5755	93.93	94.43	/	/	35.11	9.89	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	93.31	94.01	/	/	34.91	9.89	45.5	100	175	Peak
5755	89.24	89.94	/	/	34.91	9.89	45.5	100	175	Average

**REMARKS:**

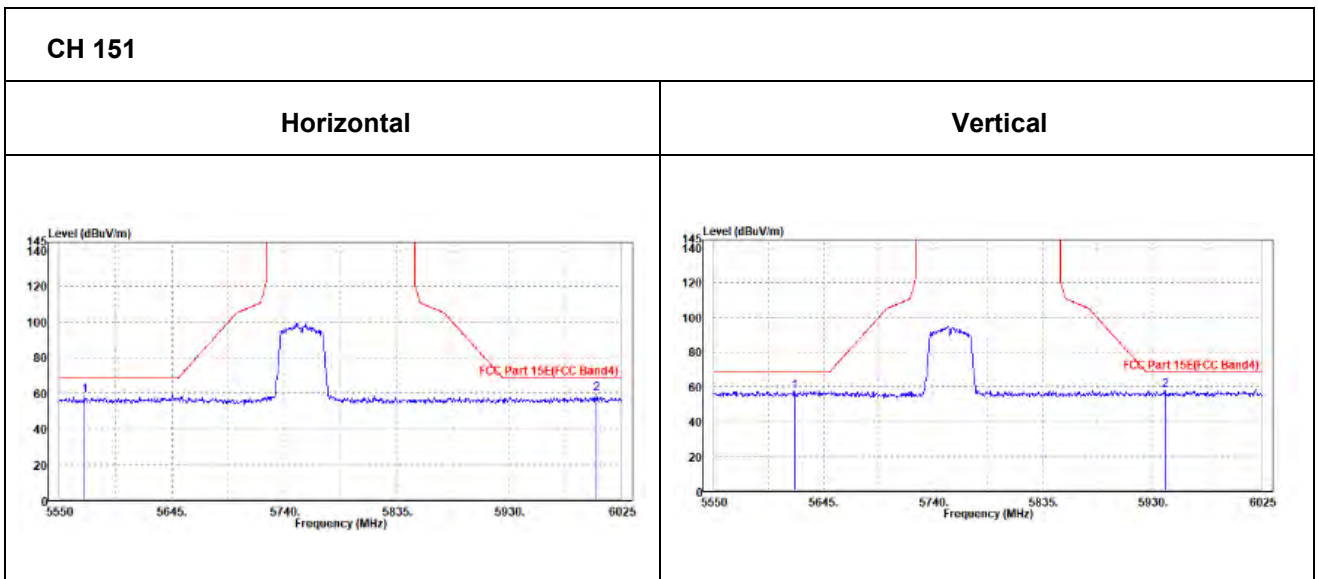
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5755MHz: Fundamental frequency.



**Oobe Data**

**802.11ac (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
5570.9	58.56	59.35	68.2	-9.64	34.89	9.82	45.5	135	360	Peak
6004.1	59.4	59.53	68.2	-8.8	35.4	9.97	45.5	135	360	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
5619.825	57.37	58.29	68.2	-10.83	34.74	9.84	45.5	100	0	Peak
5940.925	57.66	58.08	68.2	-10.54	35.13	9.95	45.5	100	0	Peak





<b>CHANNEL</b>	TX Channel 159	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5795	99.03	99.48	/	/	35.15	9.9	45.5	135	300	Peak
5795	94.29	94.74	/	/	35.15	9.9	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5795	94.8	95.45	/	/	34.95	9.9	45.5	100	175	Peak
5795	90.83	91.48	/	/	34.95	9.9	45.5	100	175	Average

**REMARKS:**

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

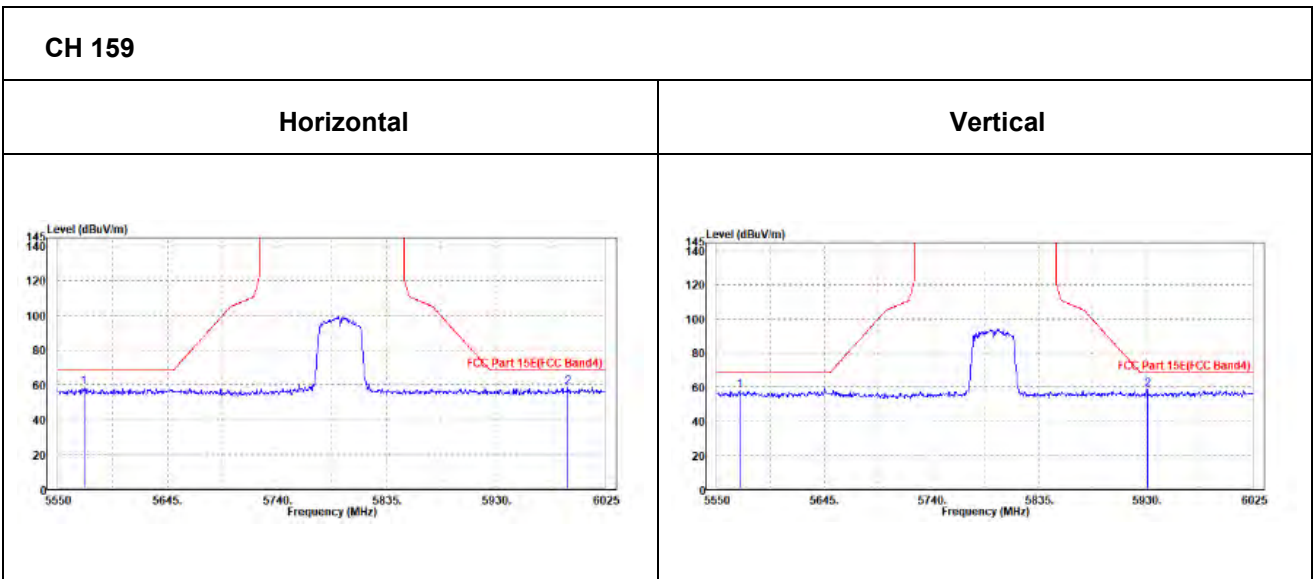




**Oobe Data**

**802.11ac (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
5572.325	58.38	59.17	68.2	-9.82	34.89	9.82	45.5	135	0	Peak
5992.225	58.61	58.75	68.2	-9.59	35.39	9.97	45.5	135	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5569.95	57.75	58.75	68.2	-10.45	34.68	9.82	45.5	100	360	Peak
5930.95	58.36	58.79	68.2	-9.84	35.12	9.95	45.5	100	360	Peak





802.11ac (80MHz)

<b>CHANNEL</b>	TX Channel 155	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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
5775	94.15	94.63	/	/	35.13	9.89	45.5	135	300	Peak
5775	91.77	92.25	/	/	35.13	9.89	45.5	135	300	Average

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5775	90.41	91.09	/	/	34.93	9.89	45.5	100	175	Peak
5775	87.58	88.26	/	/	34.93	9.89	45.5	100	175	Average

**REMARKS:**

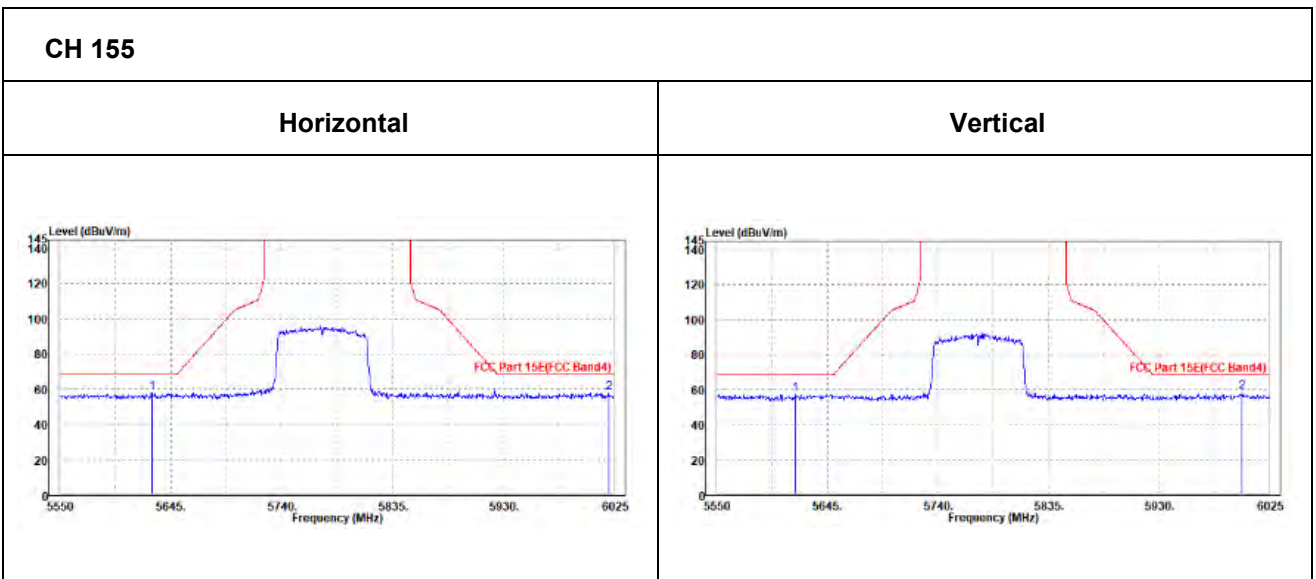
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
- 5775MHz: Fundamental frequency.



**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
5628.85	57.84	58.55	68.2	-10.36	34.95	9.84	45.5	135	360	Peak
6020.25	58.09	58.2	68.2	-10.11	35.4	9.98	45.49	135	360	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
5617.45	57.15	58.07	68.2	-11.05	34.74	9.84	45.5	100	0	Peak
6001.725	58.28	58.61	68.2	-9.92	35.2	9.97	45.5	100	0	Peak





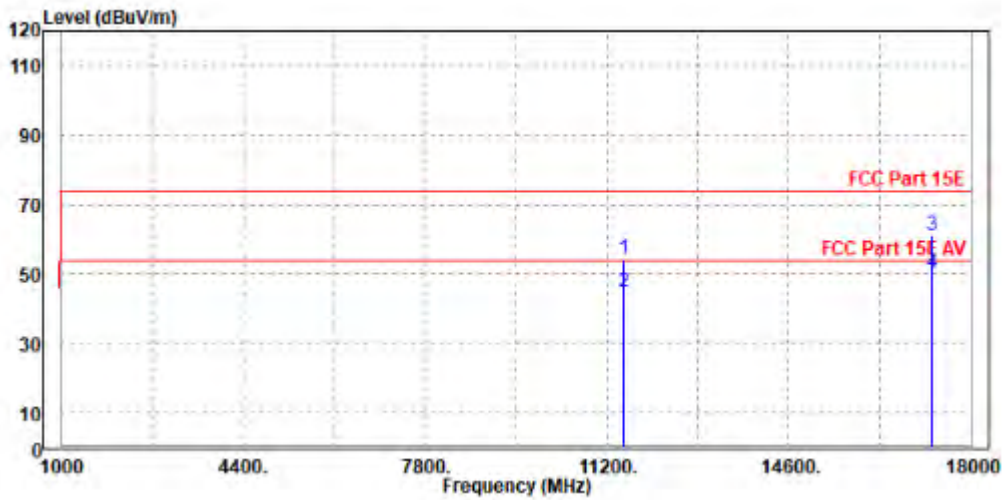
**802.11ac (40MHZ)**

**Worst case harmonic:**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

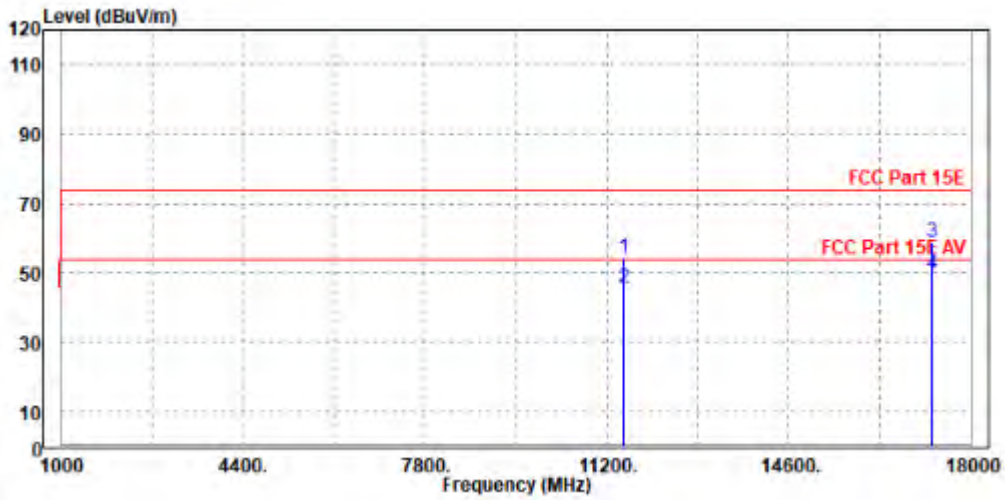
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	11510.000	54.08	44.99	74.00	-19.92	9.09	Peak	Horizontal
2	11510.000	44.58	35.49	54.00	-9.42	9.09	Average	Horizontal
3	PK17269.000	61.25	43.01	74.00	-12.75	18.24	Peak	Horizontal
4	PP17269.000	50.30	32.06	54.00	-3.70	18.24	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	11506.000	54.28	44.60	74.00	-19.72	9.68	Peak	Vertical
2	11506.000	45.85	36.17	54.00	-8.15	9.68	Average	Vertical
3	PK17265.000	58.65	41.79	74.00	-15.35	16.86	Peak	Vertical
4	PP17265.000	49.54	32.68	54.00	-4.46	16.86	Average	Vertical



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Emission level – Limit value.
2. 5755MHz: Fundamental frequency.
3. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.



### 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. 14,23	Feb. 13,24
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Mar. 03,23	Mar. 02,24

- NOTE:**
1. The test was performed in the 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) were not recorded.

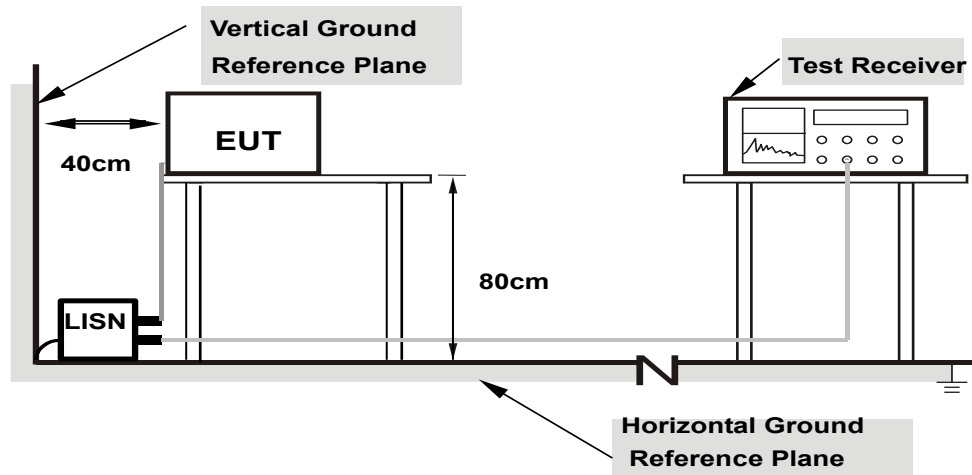
**NOTE:** All modes of operation were investigated, and the worst-case emissions are reported.



### 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 3.1.7.



### 3.2.7 TEST RESULTS

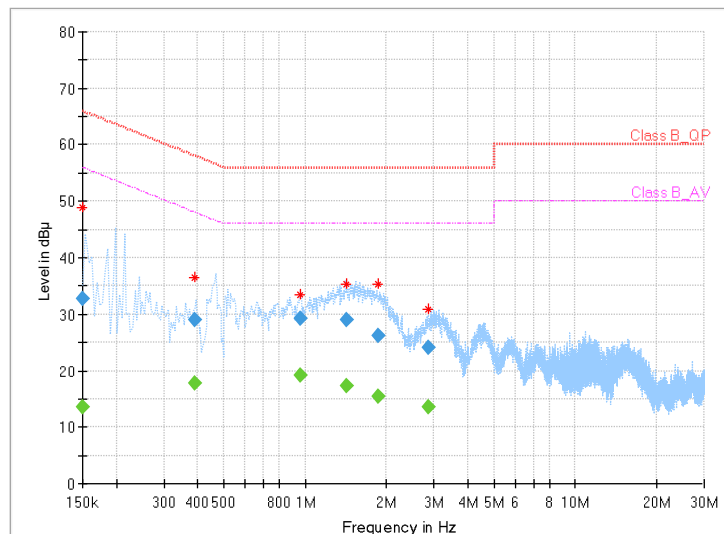
#### CONDUCTED WORST-CASE DATA:

<b>Frequency Range</b>	150KHz ~ 30MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120Vac, 60Hz	<b>Environmental Conditions</b>	26deg. C, 51%RH
<b>Tested By</b>	Carl Xie		

Frequency (MHz)	QuasiPeak (dBUV)	CAverage (dBUV)	Limit (dBUV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	13.45	56.00	42.55	L1	ON	9.7
0.150000	32.83	---	66.00	33.17	L1	ON	9.7
0.392000	---	17.88	48.02	30.14	L1	ON	9.7
0.392000	29.06	---	58.02	28.96	L1	ON	9.7
0.956000	---	19.18	46.00	26.82	L1	ON	9.7
0.956000	29.15	---	56.00	26.85	L1	ON	9.7
1.424000	---	17.40	46.00	28.60	L1	ON	9.7
1.424000	28.98	---	56.00	27.02	L1	ON	9.7
1.856000	---	15.45	46.00	30.55	L1	ON	9.7
1.856000	26.29	---	56.00	29.71	L1	ON	9.7
2.860000	---	13.54	46.00	32.46	L1	ON	9.7
2.860000	24.09	---	56.00	31.91	L1	ON	9.7

- 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.

Full Spectrum





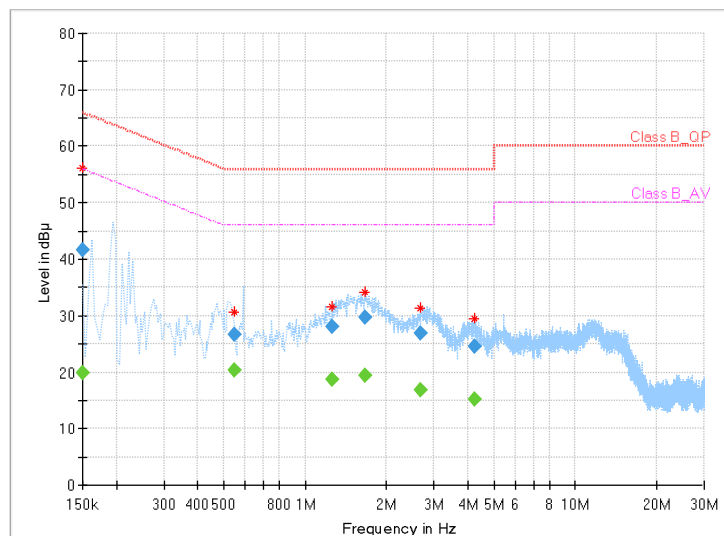


<b>Frequency Range</b>	150KHz ~ 30MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120Vac, 60Hz	<b>Environmental Conditions</b>	26deg. C, 51%RH
<b>Tested By</b>	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	19.83	56.00	36.17	N	ON	9.7
0.150000	41.62	---	66.00	24.38	N	ON	9.7
0.544000	---	20.35	46.00	25.65	N	ON	9.7
0.544000	26.68	---	56.00	29.32	N	ON	9.7
1.264000	---	18.76	46.00	27.24	N	ON	9.8
1.264000	28.02	---	56.00	27.98	N	ON	9.8
1.664000	---	19.49	46.00	26.51	N	ON	9.8
1.664000	29.77	---	56.00	26.23	N	ON	9.8
2.684000	---	16.89	46.00	29.11	N	ON	9.8
2.684000	26.83	---	56.00	29.17	N	ON	9.8
4.216000	---	15.25	46.00	30.75	N	ON	9.8
4.216000	24.59	---	56.00	31.41	N	ON	9.8

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

Full Spectrum





### 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 $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client devices	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

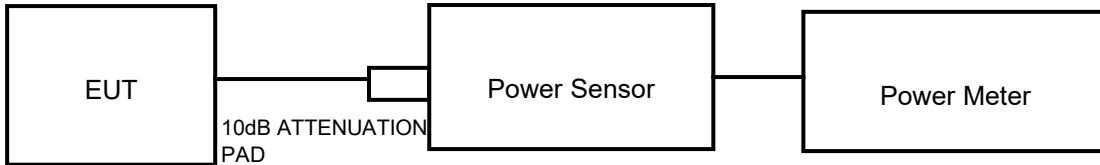
**NOTE:** Where B is the 26dB emission bandwidth in MHz



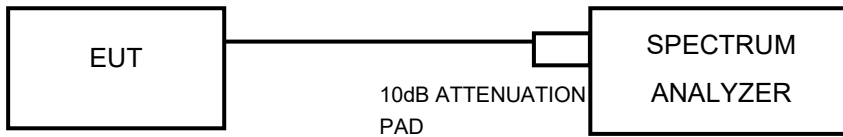
### 3.3.2 TEST SETUP

#### FOR POWER OUTPUT MEASUREMENT

##### 802.11a, 802.11n/ac (20MHz), 802.11 n/ac (40MHz), 802.11ac (80MHz) 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. 14,23	Feb. 13,24
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510523	Feb. 14,23	Feb. 13,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.10,23	May.09,24
Power Sensor	ANRITSU	MA2411B	1339352	Feb. 14,23	Feb. 13,24

**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 the RF Oven room.



### 3.3.4 TEST PROCEDURE

#### FOR POWER MEASUREMENT

For 802.11a, 802.11 n/ac (20MHz), 802.11 n/ac (40MHz) , 802.11ac (80MHz)

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 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  $\geq 3 \cdot$  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)  $\geq 3$  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 the client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

#### 3.3.7 TEST RESULTS

Please Refer to Appendix Of this test report.

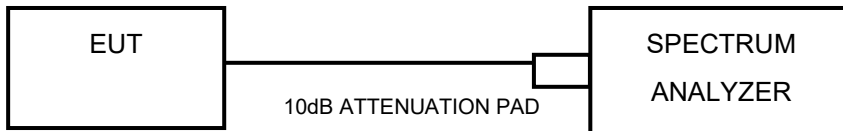


### 3.4 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

#### 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 about the above instrument.



### 3.4.4 TEST PROCEDURES

Using method SA-2(Band1/2/3)

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz, Set VBW  $\geq$  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

Using method SA-2 (Band4)

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 KHz, Set VBW  $\geq$  1 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  $10 \log(500\text{kHz}/\text{RBW})$  to the test result.  $10 \log(500\text{kHz}/300\text{KHZ}) = 2.22\text{dBm}$
- 7) 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).
- 8) Record the max value

### 3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.4.6 EUT OPERATING CONDITIONS

Same as 3.1.7.



Test Report No.: W7L-P23080017RF03

### 3.4.7 TEST RESULTS

Please Refer to Appendix Of this test report.





### 3.5 AUTOMATICALLY DISCONTINUE TRANSMISSION

#### 3.5.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

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

#### 3.5.2 TEST INSTRUMENTS

Refer to section 3.3.3 to get information about the above instrument.

#### 3.5.3 TEST RESULT

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



### **3.6 ANTENNA REQUIREMENTS**

#### **3.6.1 STANDARD APPLICABLE**

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmits power, and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **3.6.2 ANTENNA CONNECTED CONSTRUCTION**

An embedded-in antenna design is used.

#### **3.6.3 ANTENNA GAIN**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit and PSD limit.



Test Report No.: W7L-P23080017RF03

## 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

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



Test Report No.: W7L-P23080017RF03

## 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: RLAN

#### EMISSION BANDWIDTH

#### TEST RESULT

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.760	5169.600	5191.360	---	---
		5200	22.520	5187.320	5209.840	---	---
		5240	19.840	5230.080	5249.920	---	---
		5260	19.720	5250.080	5269.800	---	---
		5300	19.840	5290.080	5309.920	---	---
		5320	19.880	5310.000	5329.880	---	---
		5500	19.840	5490.080	5509.920	---	---
		5580	20.120	5569.920	5590.040	---	---
		5700	19.640	5690.120	5709.760	---	---
		5745	20.120	5734.960	5755.080	---	---
		5785	19.920	5775.080	5795.000	---	---
		5825	19.760	5815.120	5834.880	---	---
11N20SISO	Ant1	5180	20.440	5169.640	5190.080	---	---
		5200	20.080	5190.000	5210.080	---	---
		5240	20.320	5229.800	5250.120	---	---
		5260	20.000	5250.000	5270.000	---	---
		5300	20.160	5289.880	5310.040	---	---
		5320	21.480	5308.760	5330.240	---	---
		5500	21.400	5489.760	5511.160	---	---
		5580	20.720	5569.440	5590.160	---	---
		5700	20.120	5690.040	5710.160	---	---
		5745	20.160	5734.920	5755.080	---	---
		5785	20.160	5774.920	5795.080	---	---
		5825	20.200	5814.920	5835.120	---	---
11N40SISO	Ant1	5190	40.800	5169.840	5210.640	---	---
		5230	40.320	5209.840	5250.160	---	---
		5270	40.560	5249.760	5290.320	---	---
		5310	40.320	5289.920	5330.240	---	---
		5510	40.720	5489.760	5530.480	---	---



		5550	40.880	5529.600	5570.480	---	---
		5670	40.960	5649.520	5690.480	---	---
		5755	40.400	5734.760	5775.160	---	---
		5795	40.240	5775.000	5815.240	---	---
11AC20SISO	Ant1	5180	22.600	5169.960	5192.560	---	---
		5200	20.120	5190.000	5210.120	---	---
		5240	20.280	5229.880	5250.160	---	---
		5260	20.160	5249.840	5270.000	---	---
		5300	20.400	5289.760	5310.160	---	---
		5320	20.280	5309.760	5330.040	---	---
		5500	20.120	5489.960	5510.080	---	---
		5580	20.160	5569.880	5590.040	---	---
		5700	20.120	5689.880	5710.000	---	---
		5745	20.520	5734.640	5755.160	---	---
		5785	20.360	5774.760	5795.120	---	---
		5825	20.200	5815.000	5835.200	---	---
11AC40SISO	Ant1	5190	40.240	5169.920	5210.160	---	---
		5230	40.800	5209.680	5250.480	---	---
		5270	40.320	5249.600	5289.920	---	---
		5310	40.400	5290.000	5330.400	---	---
		5510	40.000	5489.920	5529.920	---	---
		5550	40.400	5529.760	5570.160	---	---
		5670	40.320	5650.000	5690.320	---	---
		5755	40.240	5734.920	5775.160	---	---
		5795	39.920	5775.000	5814.920	---	---
11AC80SISO	Ant1	5210	81.120	5169.360	5250.480	---	---
		5290	80.160	5250.000	5330.160	---	---
		5530	100.480	5490.000	5590.480	---	---
		5610	81.440	5569.520	5650.960	---	---
		5775	80.800	5734.680	5815.480	---	---



BUREAU VERITAS

Test Report No.: W7L-P23080017RF03

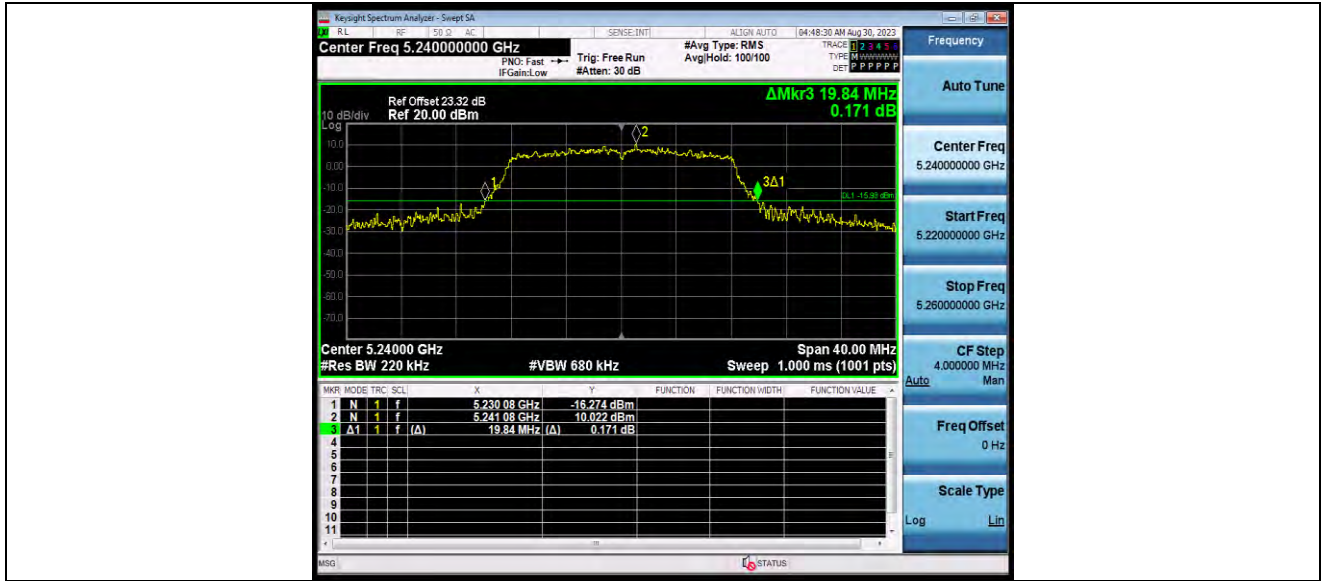
### TEST GRAPHS





BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11A\_Ant1\_5260



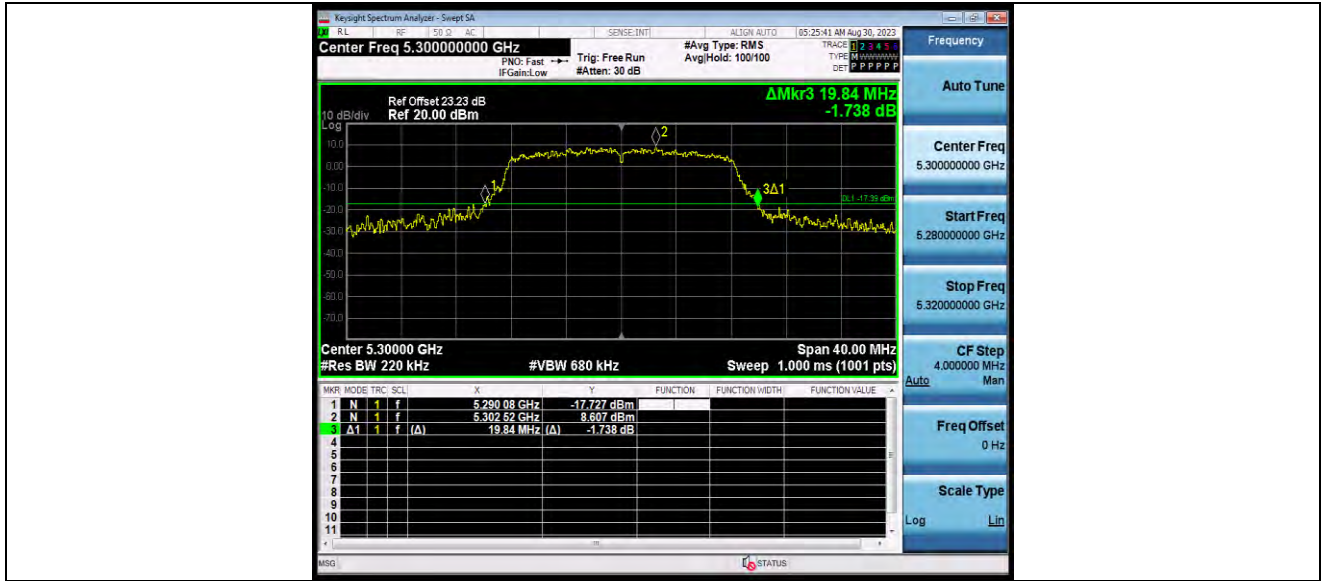
11A\_Ant1\_5300



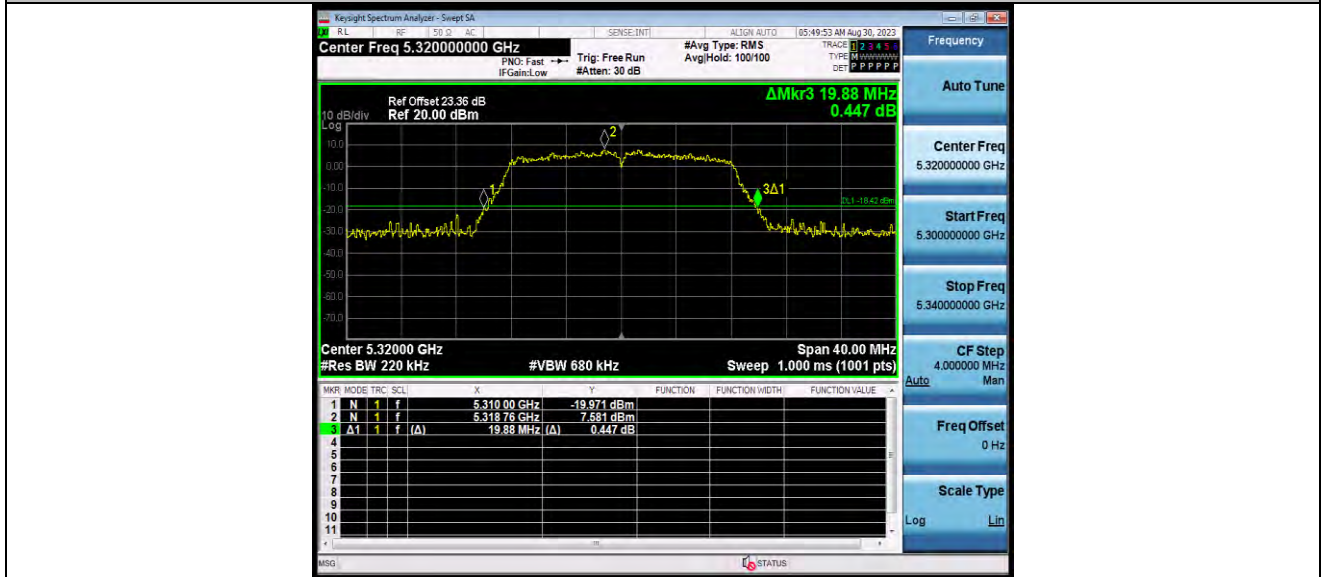


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11A\_Ant1\_5320

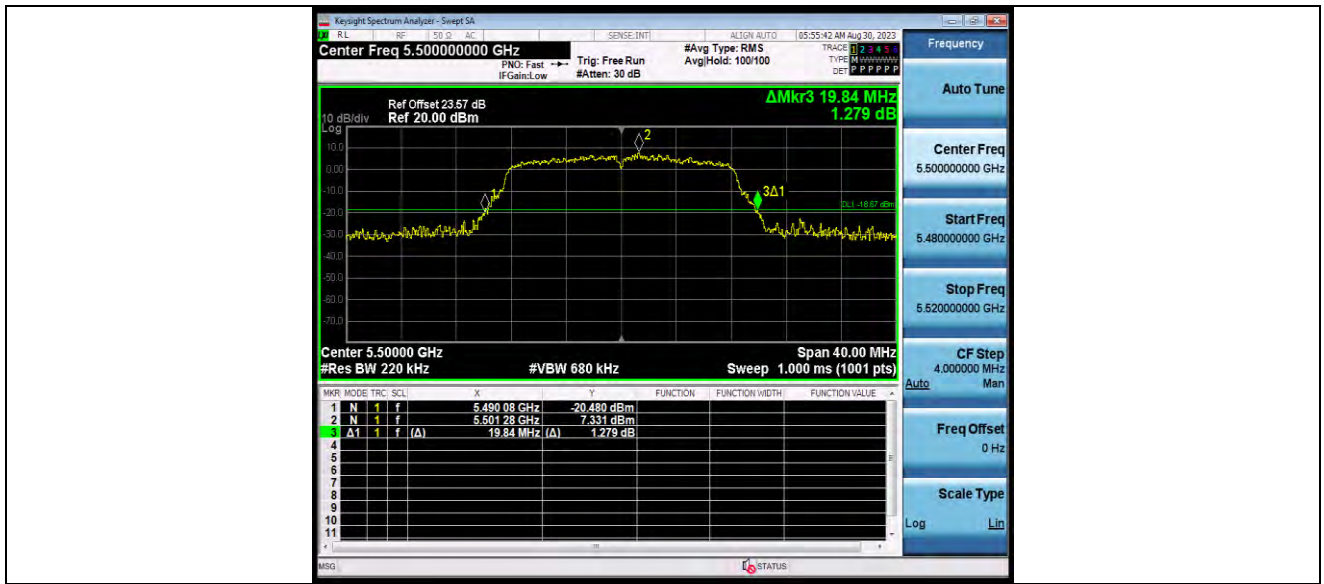


11A\_Ant1\_5500



BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11A\_Ant1\_5580

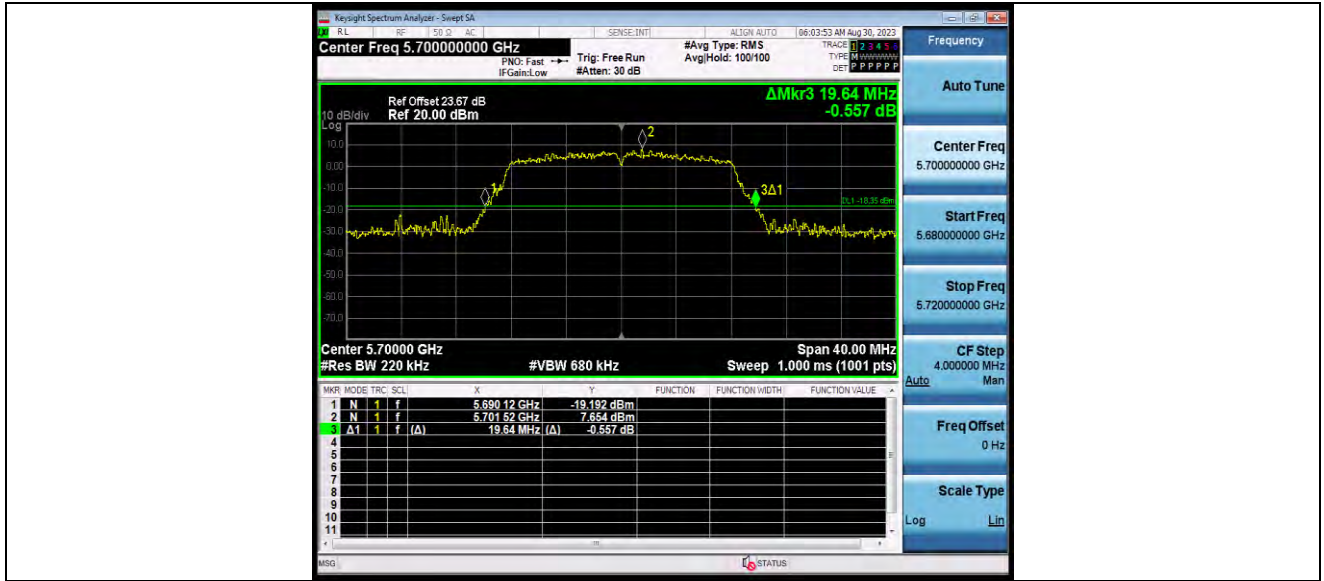


11A\_Ant1\_5700

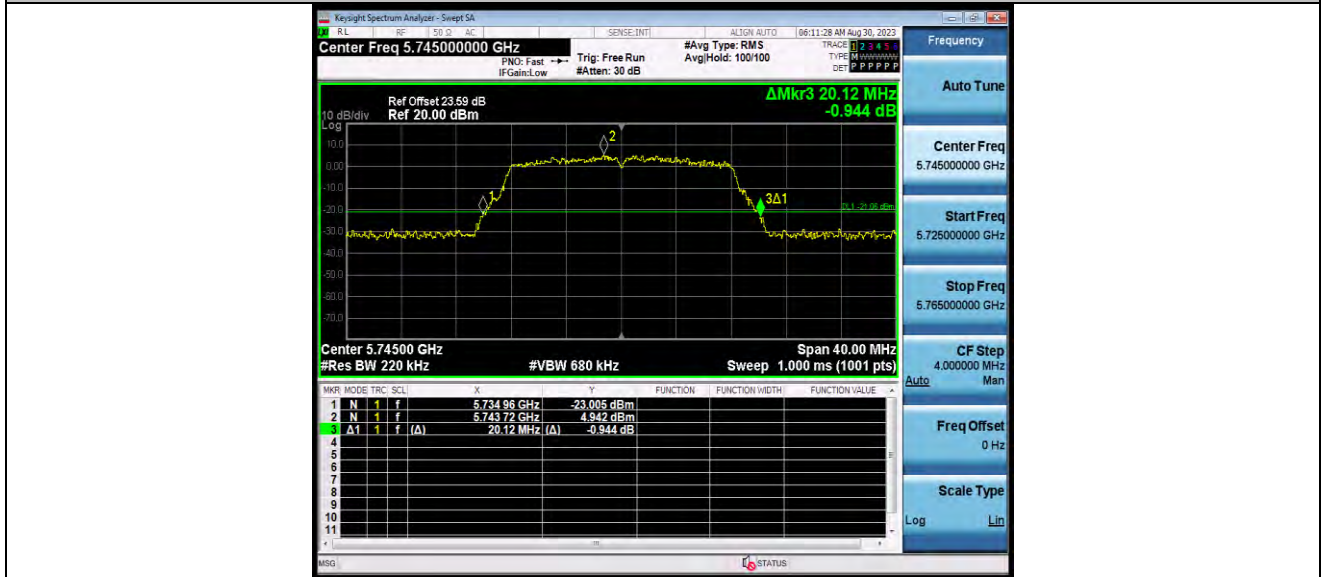


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11A\_Ant1\_5745

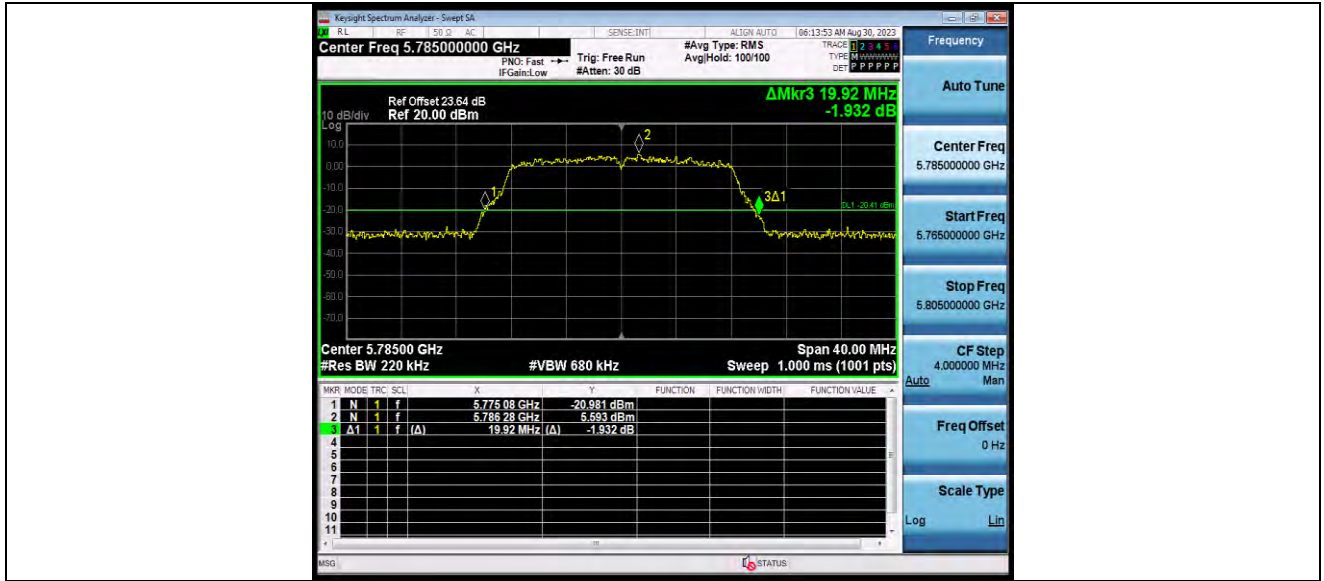


11A\_Ant1\_5785

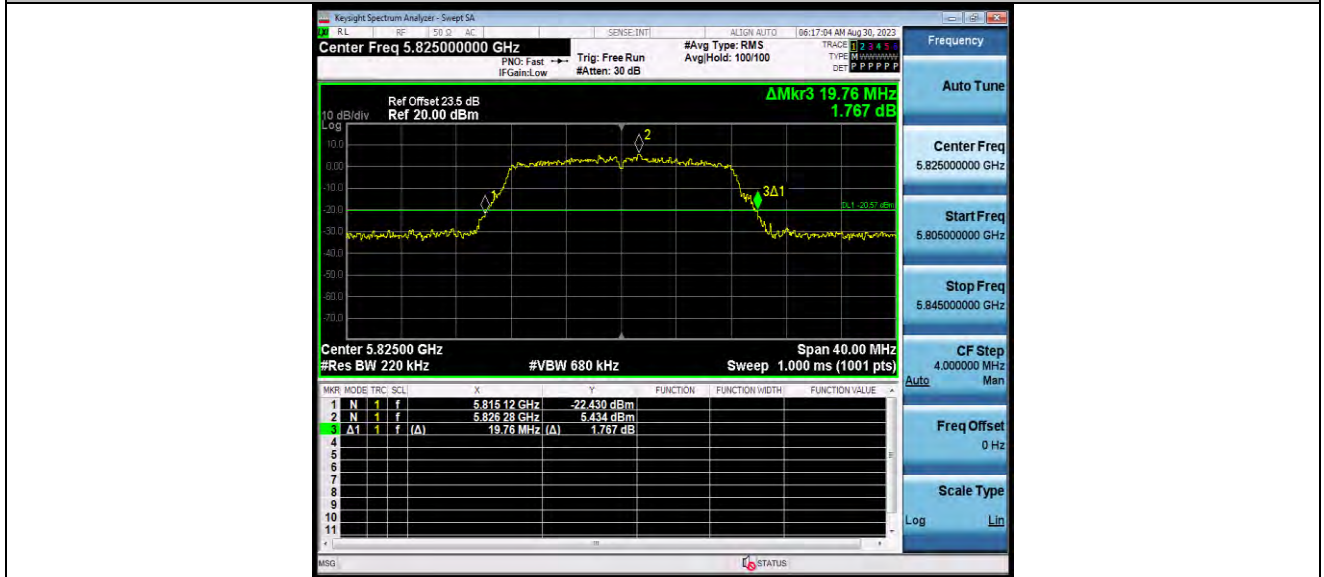


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11A\_Ant1\_5825

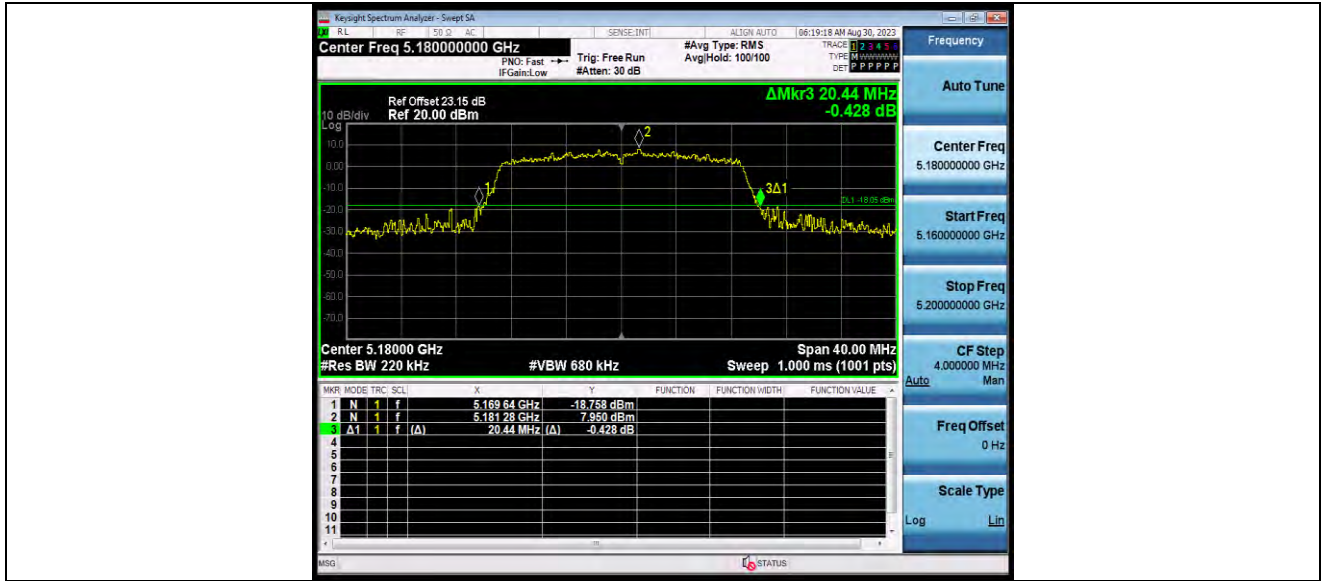


11N20SISO\_Ant1\_5180

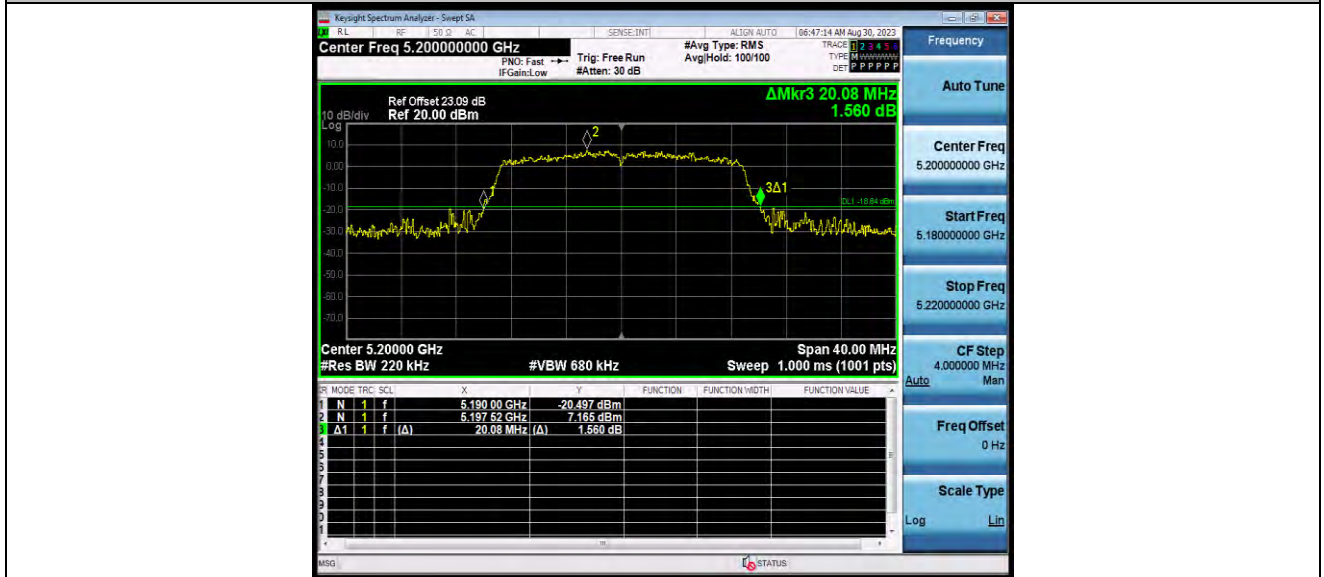


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11N20SISO\_Ant1\_5200

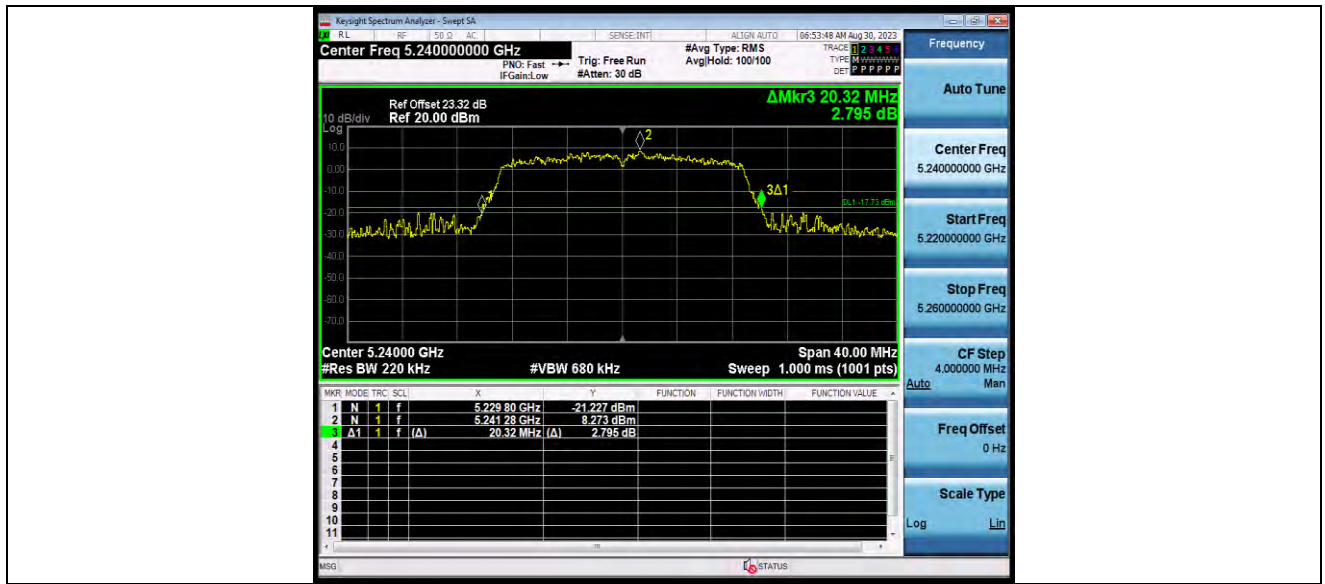


11N20SISO\_Ant1\_5240

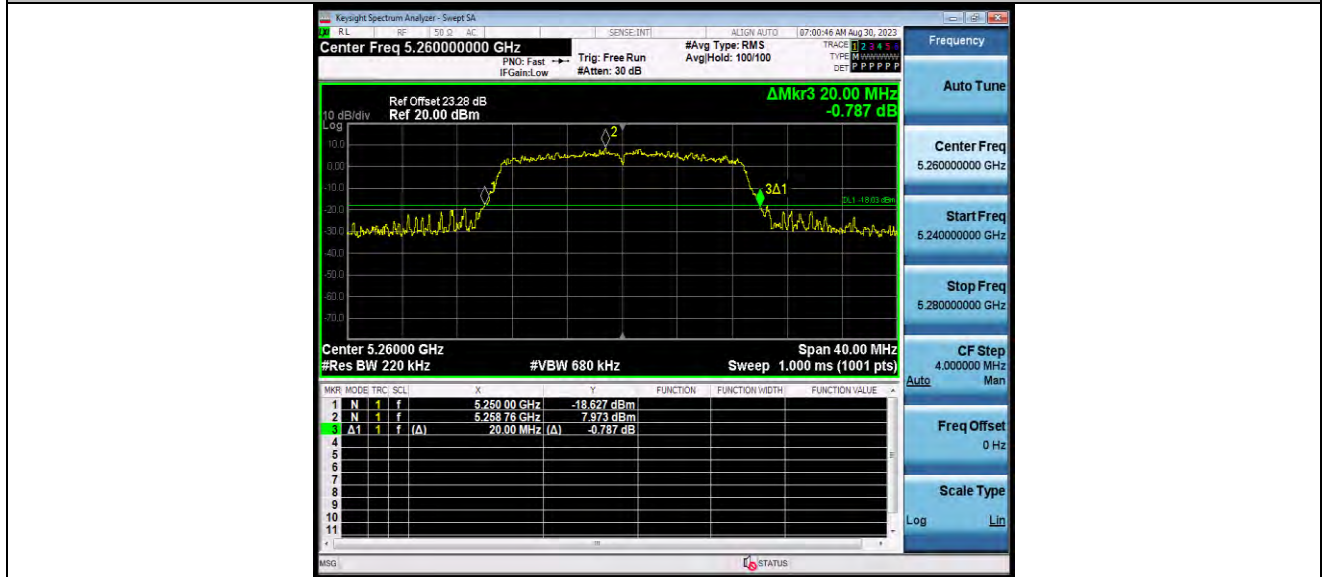


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11N20SISO\_Ant1\_5260

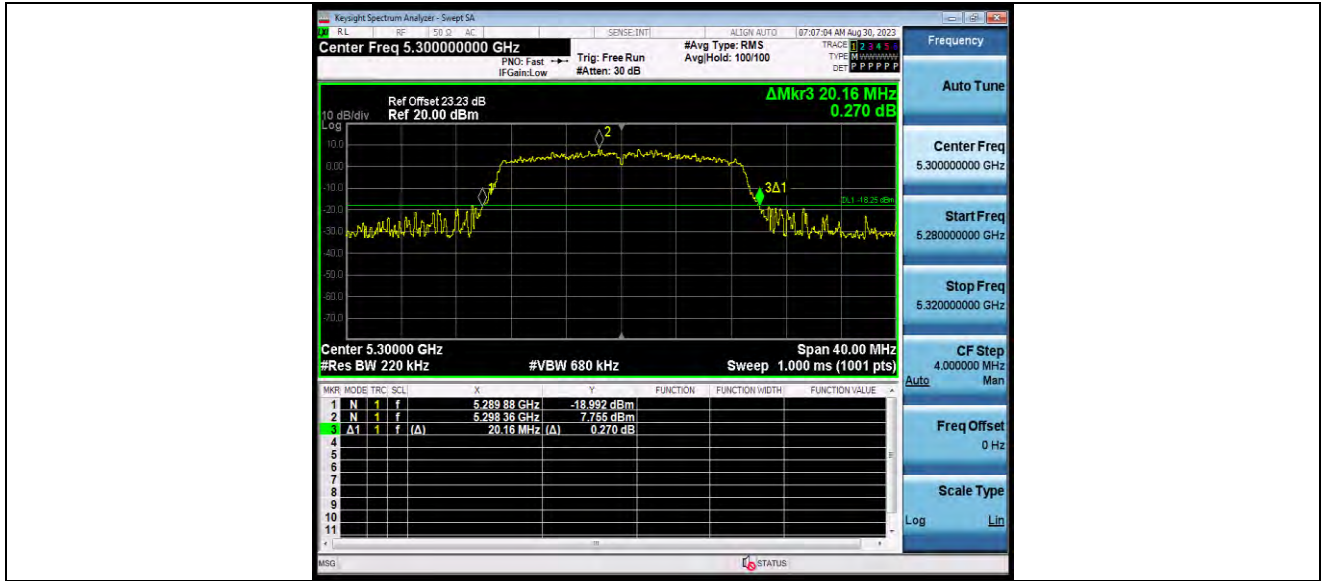


11N20SISO\_Ant1\_5300

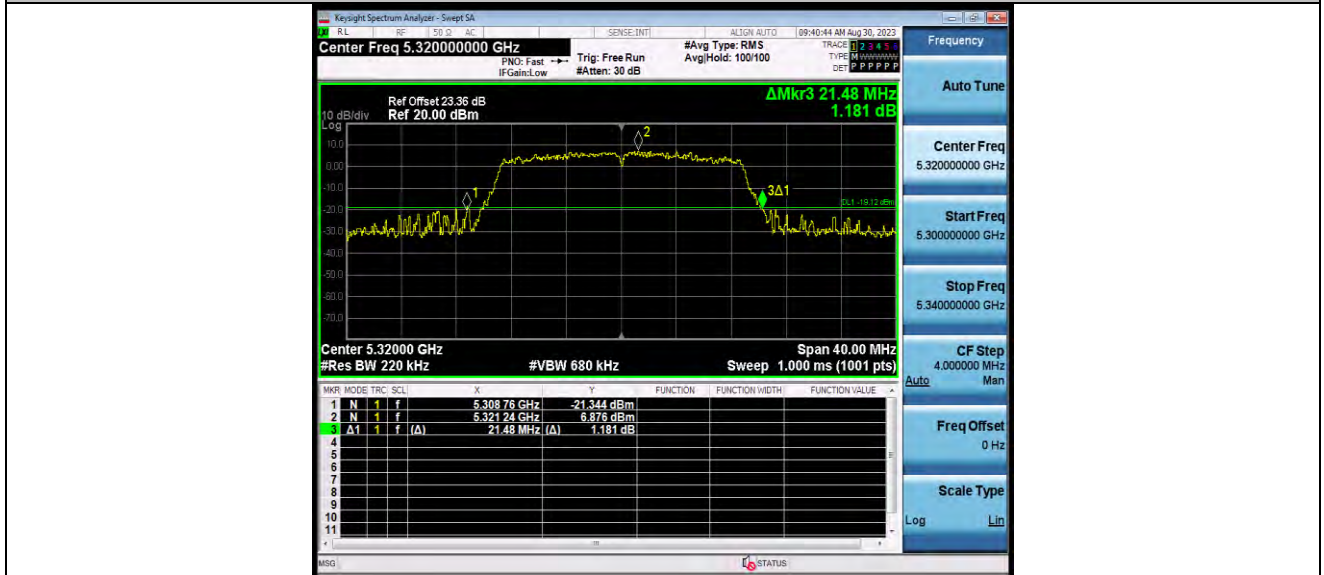


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11N20SISO\_Ant1\_5320

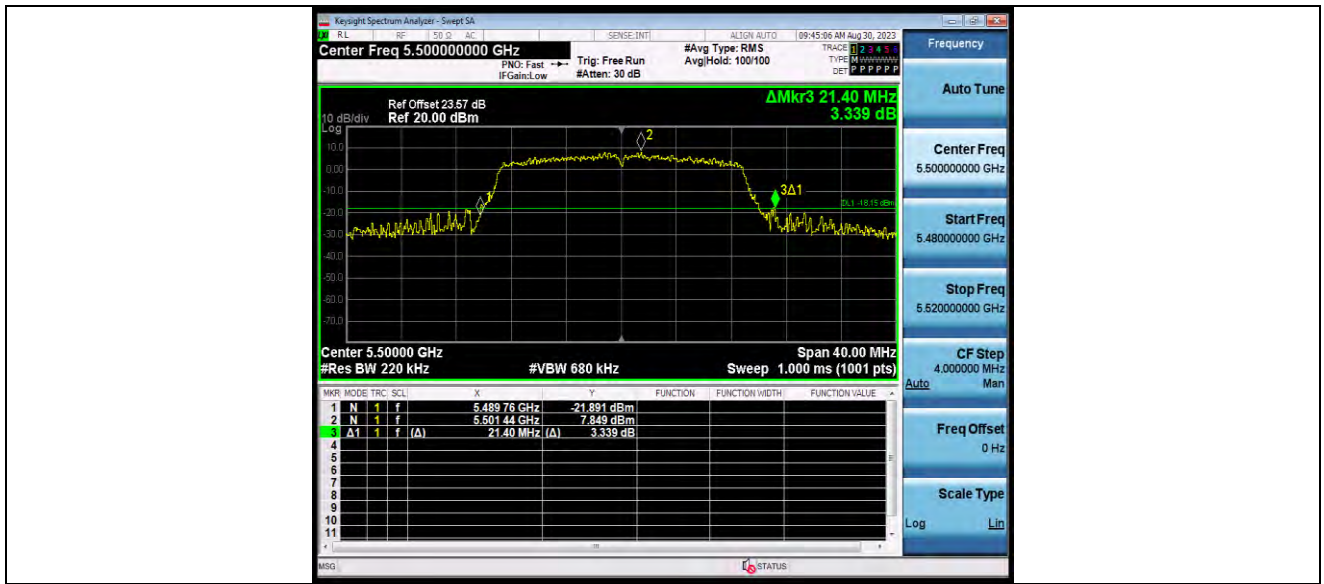


11N20SISO\_Ant1\_5500



BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11N20SISO\_Ant1\_5580



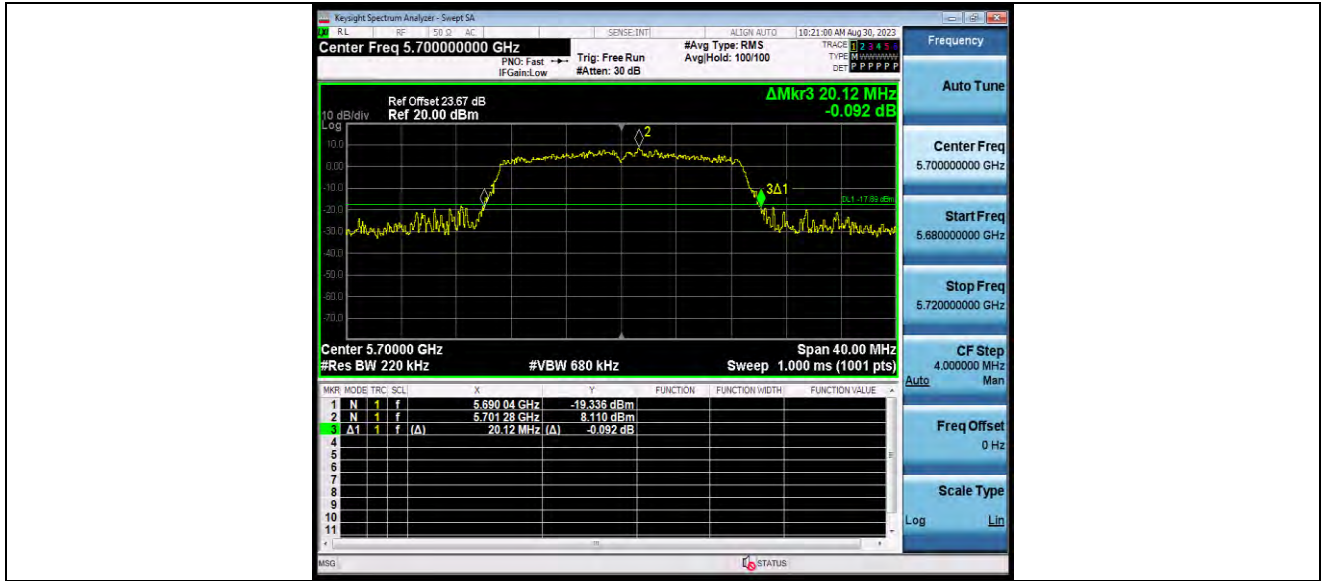
11N20SISO\_Ant1\_5700



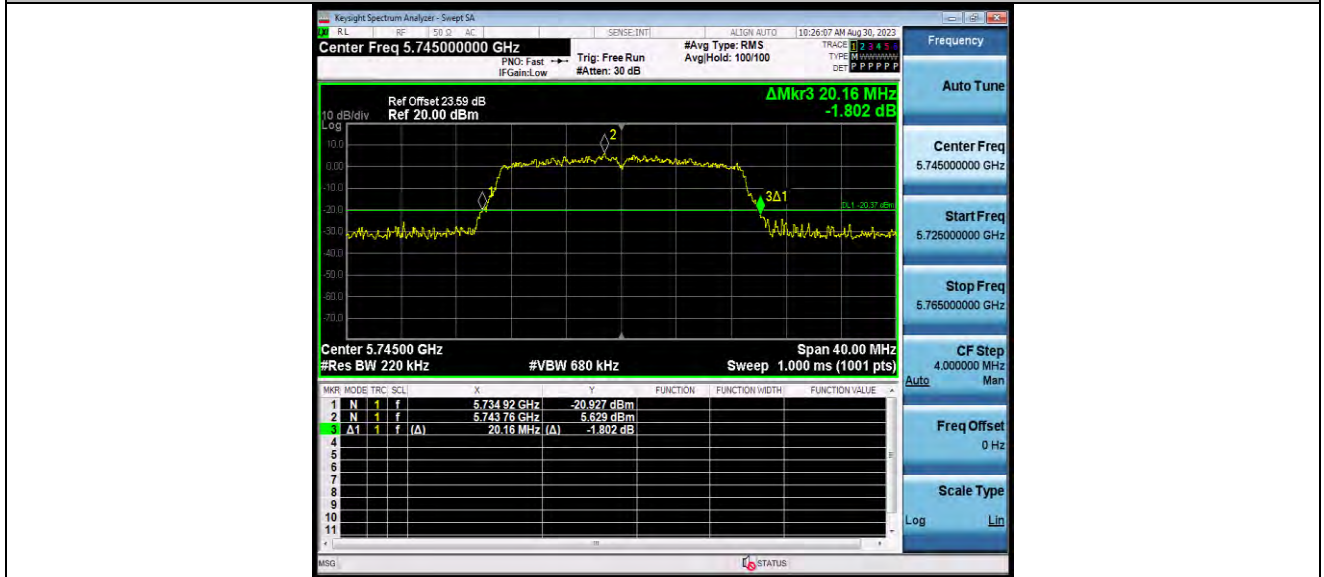


BUREAU VERITAS

Test Report No.: W7L-P23080017RF03



11N20SISO\_Ant1\_5745



11N20SISO\_Ant1\_5785