



# **FCC TEST REPORT**

# (Part 15, Subpart E)

Applicant:	Meizu Technology Co., Ltd.
Address:	Meizu Tech Bldg., Technology & Innovation Coast, Zhuhai, Guangdong Province, China

Manufacturer or Supplier	Meizu Technology Co., Ltd.
Address	Meizu Tech Bldg., Technology & Innovation Coast, Zhuhai, Guangdong Province, China
Product	LTE Mobile Phone
Brand Name	MEIZU
Model Name	M881H
FCC ID	2ANQ6-M881H
Date of tests	Jan. 04, 2018 ~ Feb. 02, 2018

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

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

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Juging	I who
Date: Mar. 26, 2018	Date: Mar. 26, 2018

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# **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF171229W006-3	Original release	Mar. 26, 2018

# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPL	APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)		
STANDARD SECTION	TEST TYPE AND LIMIT		REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -5.63dB at 0.620000MHz.
15.407(b) Radiated Emission & Band Edge Measurement		PASS	Meet the requirement of limit. Minimum passing margin is -1.01dB at 5460MHz.
15.407(a/1/2/3)	Maximum conducted output Power	PASS	Meet the requirement of limit.
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(e)	15.407(e) 6 dB Bandwidth		Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

#### 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	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.66dB
	9KHz ~ 30MHz	2.68dB
Radiated emissions	30MHz ~ 1GMHz	3.26dB
radiated emissions	1GHz ~ 18GHz	4.48dB
	18GHz ~ 40GHz	4.12dB

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

2.1 GENERAL DESCRIPTION OF EUT		
EUT	LTE Mobile Phone	
MODEL NO.	M881H	
POWER SUPPLY	5/9/12Vdc (adapter or host equipment) 3.85Vdc (Li-ion, battery)	
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK	
MODULATION TECHNOLOGY	OFDM	
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to MCS7 802.11ac: up to 390.0Mbps	
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz,	
OPERATING FREQUENCY	5500 ~ 5700MHz, 5745 ~ 5825MHz	
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz)	
AVERAGE POWER	49.091mW for 5180 ~ 5240MHz 49.774mW for 5260 ~ 5320MHz 52.966mW for 5500 ~ 5700MHz 52.602mW for 5745 ~ 5825MHz	
ANTENNA TYPE	PIFA Antenna with 0.5dBi gain	
HW VERSION	V1.0	
SW VERSION	Flyme7.0.2.0G	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: non-shielded, detachable, 1.0meter Earphone cable: non-shielded, detachable, 1.2meter	

#### NOTE:

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



2. The EUT was powered by the following adapter:

ADAPTER	
BRAND:	MEIZU
MODEL:	UP1220A
INPUT:	AC 100-240V, 700mA
OUTPUT:	DC 5/9/12V, 2000mA

3. The EUT matched the following USB cables and Earphone:

USB CABLE 1	·
BRAND: N/A	
MODEL:	N/A
SIGNAL LINE:	1.0 METER

USB CABLE 2	
BRAND: N/A	
MODEL: N/A	
SIGNAL LINE: 1.0 METER	

EARPHONE	
BRAND:	MEIZU
MODEL:	EP21HD
SIGNAL LINE:	1.2 METER

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

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

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

## 2.2 DESCRIPTION OF TEST MODES

### FOR 5150 ~ 5250MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

#### FOR 5250 ~ 5350MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		



### FOR 5470 ~ 5725MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	134	5670 MHz
110	5550 MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530 MHz		

## FOR 5725 ~ 5825MHz

5 channels are provided for 802.11a, 802.11n (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 (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY	
151	5755 MHz	159	5795 MHz	

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
155	5775 MHz		



#### 2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE		APPLICA	ABLE TO		DESCRIPTION
MODE	RE≥1G	RE<1G	PLC APCM		DESCRIPTION
Α	$\sqrt{}$	$\checkmark$	√	-	Powered by Adapter with wifi(5G) link
В	-	•	-	√	Powered by Battery with wifi(5G) link
С	-	-	-	-	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 (ABOVE 1GHz):**

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

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
Α	802.11a		36 to 48	36, 40, 48	OFDM	BPSK	6.0
Α	802.11n (20MHz)	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	5180-5240	38 to 46	38, 46	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
Α	802.11a		52 to 64	52, 60, 64	OFDM	BPSK	6.0
Α	802.11n (20MHz)	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	5260-5320	54 to 62	54, 62	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
Α	802.11a		100 to 140	100, 116, 140	OFDM	BPSK	6.0
Α	802.11n (20MHz)	FF00 F700	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	5500-5700	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		106	106	OFDM	BPSK	V0
Α	802.11a		149 to 165	149, 157, 165	OFDM	BPSK	6.0
Α	802.11n (20MHz)	5725-5825	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
Α	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		155	155	OFDM	BPSK	V0



#### RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
Α	802.11ac (80MHz)	5500-5700	106	106	OFDM	BPSK	V0

#### **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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
Α	802.11ac (80MHz)	5500-5700	106	106	OFDM	BPSK	V0

#### **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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
Α	802.11a		36 to 48	36, 48	OFDM	BPSK	6.0
Α	802.11n (20MHz)	5180-5240	36 to 48	36, 48	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	5180-5240	38 to 46	38, 46	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
Α	802.11a		52 to 64	52, 64	OFDM	BPSK	6.0
Α	802.11n (20MHz)	F200 F220	52 to 64	52, 64	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	5260-5320	54 to 62	54, 62	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
Α	802.11a		100 to 140	100, 140	OFDM	BPSK	6.0
Α	802.11n (20MHz)	5500 5 <b>7</b> 00	100 to 140	100, 140	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	5500-5700	102 to 134	102, 134	OFDM	BPSK	MCS0
Α	802.11ac (80MHz)		106	106	OFDM	BPSK	V0
Α	802.11a		149 to 165	149, 165	OFDM	BPSK	6.0
Α	802.11n (20MHz)	5725-5825	149 to 165	149, 165	OFDM	BPSK	MCS0
Α	802.11n (40MHz)	3123-3823	151 to 159	151, 159	OFDM	BPSK	MCS0
А	802.11ac (80MHz)		155	155	OFDM	BPSK	V0



## **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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
В	802.11a		36 to 48	36, 40, 48	OFDM	BPSK	6.0
В	802.11n (20MHz)	E400 E240	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
В	802.11n (40MHz)	5180-5240	38 to 46	38, 46	OFDM	BPSK	MCS0
В	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
В	802.11a		52 to 64	52, 60, 64	OFDM	BPSK	6.0
В	802.11n (20MHz)	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
В	802.11n (40MHz)	5260-5320	54 to 62	54, 62	OFDM	BPSK	MCS0
В	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
В	802.11a		100 to 140	100, 116, 140	OFDM	BPSK	6.0
В	802.11n (20MHz)	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
В	802.11n (40MHz)	5500-5700	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
В	802.11ac (80MHz)		106	106	OFDM	BPSK	V0
В	802.11a		149 to 165	149, 165	OFDM	BPSK	6.0
В	802.11n (20MHz)	5725 5025	149 to 165	149, 165	OFDM	BPSK	MCS0
В	802.11n (40MHz)	5725-5825	151 to 159	151, 159	OFDM	BPSK	MCS0
В	802.11ac (80MHz)		155	155	OFDM	BPSK	V0

#### **TEST CONDITION:**

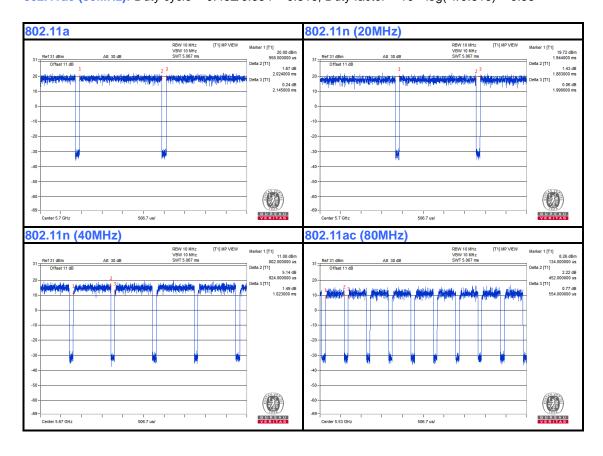
APPLICABLE TO ENVIRONMENTAL CONDITIONS		INPUT POWER	TESTED BY
<b>RE&lt;1G</b> 23deg. C, 62%RH		DC 5/9V from adaptor	Simon Yang
<b>RE≥1G</b> 23deg. C, 62%RH		DC 5/9V from adaptor	Simon Yang
PLC	24deg. C, 61%RH	DC 5/9V from adaptor	Jocan Guo
APCM	23.5deg. C, 60%RH	DC 3.85V By battery	Wenliang Wu



## 2.3 DUTY CYCLE OF TEST SIGNAL

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

```
802.11a: Duty cycle = 2.024/2.145 = 0.944, Duty factor = 10 * \log(1/0.944) = 0.25
802.11n (20MHz): Duty cycle = 1.883/1.990 = 0.946, Duty factor = 10 * \log(1/0.946) = 0.24
802.11n (40MHz): Duty cycle = 0.924/1.023 = 0.903, Duty factor = 10 * \log(1/0.903) = 0.44
802.11ac (80MHz): Duty cycle = 0.452/0.554 = 0.816, Duty factor = 10 * \log(1/0.816) = 0.88
```



#### 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.

N	D. PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
	PC	HP	A6608CN	3CR83825X3	N/A

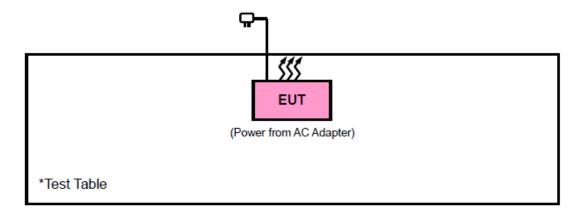
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m

## NOTE:

1. All power cords of the above support units are non shielded (1.8m).



#### 2.4.1 CONFIGURATION OF SYSTEM UNDER TEST



#### 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

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

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

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

	APPLICABLE TO		LIMIT			
RESTRICTED BANDS	789033 D02 General	FIELD STRENGTH AT 3m (dBμV/m)				
	UNII Test Procedures New Rules v01r04	PK : 74	AV : 54			
	APPLICABLE TO	EIRP LIMIT (dBm/MHz)	EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m)			
OUT OF THE	15.407(b)(1)					
OUT OF THE RESTRICTED BANDS	15.407(b)(2)	PK : -27	PK : 68.3			
27.1130	15.407(b)(3)					
	15.407(b)(4)	See note	2 (FCC 16-24)			

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

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

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

### 3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn- CT0001143-1216	May 06,17	May 05,18
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Nov. 26,16	Nov. 25,18
Horn Antenna	ETS-LINDGREN	3117	00168728	Nov. 26,16	Nov. 25,18
Loop antenna	Daze	ZN30900A	0708	Nov. 20,17	Nov. 19,18
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-4 0-K-SG/QMS- 00361	15433	Dec. 16,16	Dec. 15,17
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated _V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SM A	1505	Jul. 24,17	Jul. 23,18
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 10,17	Mar. 09,18
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jul. 24,17	Jul. 23,18
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jul. 24,17	Jul. 23,18
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Jul. 24,17	Jul. 23,18

#### NOTE:

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



#### 3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

## NOTE:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
- 4. All modes of operation were investigated and the worst-case emissions are reported.

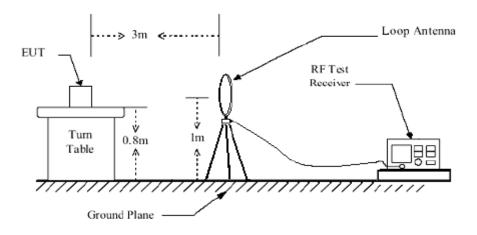
## 3.1.5 DEVIATION FROM TEST STANDARD

No deviation.

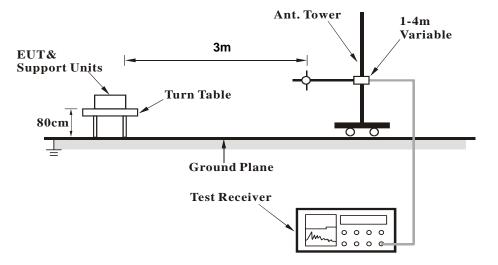


## 3.1.6 TEST SETUP

## < Frequency Range below 30MHz>

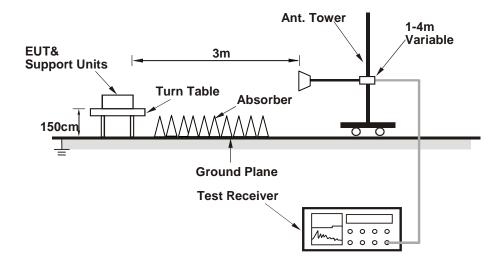


## < Frequency Range 30MHz~1GHz >





## <Frequency Range above 1GHz>



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

## 3.1.7 EUT OPERATING CONDITION

- a. Set the EUT under full load condition and placed them on a testing table.
- b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- c. The necessary accessories enable the EUT in full functions.



## 3.1.8 TEST RESULTS

#### **BELOW 1GHz WORST-CASE DATA:**

9 KHz – 30 MHz data: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

30 MHz – 1GHz data:

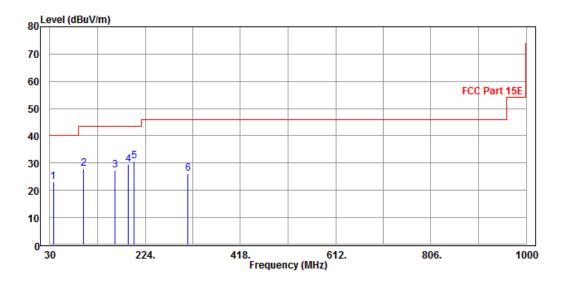
802.11ac (80MHz)

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Ougoi Pook (OD)
FREQUENCY RANGE		DETECTOR FUNCTION	Quasi-Peak (QP)

	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
36.79	22.98	47.18	40	-17.02	12.41	0.9	37.51	200	0	QP
98.87	28.01	55.6	43.5	-15.49	7.88	1.53	37	200	0	QP
162.89	27.51	52.13	43.5	-15.99	10.16	1.95	36.73	200	0	QP
189.08	29.39	53.91	43.5	-14.11	9.99	2.11	36.62	200	0	QP
200.72	30.58	54.82	43.5	-12.92	10.13	2.17	36.54	200	0	QP
311.3	26.08	46.36	46	-19.92	13.47	2.77	36.52	200	0	QP

#### **REMARKS:**

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



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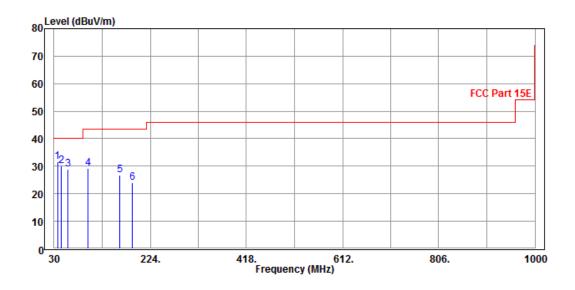


CHANNEL	Channel 106	DETECTOR FUNCTION	Ougoi Pook (OP)
FREQUENCY RANGE		DETECTOR FUNCTION	Quasi-Peak (QP)

		ANTEN	NA POLA	ARITY & 1	TEST DIST	ANCE: \	/ERTICA	L AT 3 M		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										
36.79	31.66	55.86	40	-8.34	12.41	0.9	37.51	100	0	QP										
43.58	30.1	57.68	40	-9.9	8.88	0.99	37.45	100	0	QP										
57.16	28.92	58.68	40	-11.08	6.43	1.15	37.34	100	0	QP										
98.87	29.16	56.75	43.5	-14.34	7.88	1.53	37	100	0	QP										
162.89	26.72	51.34	43.5	-16.78	10.16	1.95	36.73	100	0	QP										
188.11	24.13	48.68	43.5	-19.37	9.98	2.1	36.63	100	0	QP										

## **REMARKS:**

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



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BUREAU Test Report No.: RF171229W006-3

## **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		DETECTOR FUNCTION	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	42.97	40.99	54	-11.03	34.48	13.71	46.21	100	357	Average
5150	54.34	52.36	74	-19.66	34.48	13.71	46.21	100	357	Peak
5180	92.96	90.87			34.52	13.79	46.22	100	357	Average
5180	100.96	98.87			34.52	13.79	46.22	100	357	Peak
5350	43.14	40.39	54	-10.86	34.72	14.28	46.25	100	357	Average
5350	53.97	51.22	74	-20.03	34.72	14.28	46.25	100	357	Peak
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
-	LEVEL	LEVEL		_	FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK Average
(MHz)	LEVEL (dBuV/m)	LEVEL (dBuV)	(dBuV/m)	(dB)	FACTOR (dB /m)	LOSS (dB)	FACTOR (dB)	HEIGHT (cm)	ANGLE (Degree)	
(MHz) 5150	LEVEL (dBuV/m) 42.81	<b>LEVEL</b> (dBuV) 40.83	(dBuV/m) 54	(dB) -11.19	FACTOR (dB /m) 34.48	LOSS (dB)	<b>FACTOR</b> (dB) 46.21	HEIGHT (cm) 125	ANGLE (Degree) 277	Average
(MHz) 5150 5150	LEVEL (dBuV/m) 42.81 56.33	LEVEL (dBuV) 40.83 54.35	(dBuV/m) 54	(dB) -11.19	FACTOR (dB /m) 34.48 34.48	LOSS (dB) 13.71 13.71	<b>FACTOR</b> (dB) 46.21 46.21	HEIGHT (cm) 125 125	ANGLE (Degree) 277 277	Average Peak
(MHz) 5150 5150 5180	LEVEL (dBuV/m) 42.81 56.33 94.86	LEVEL (dBuV) 40.83 54.35 92.77	(dBuV/m) 54	(dB) -11.19	FACTOR (dB /m) 34.48 34.48 34.52	LOSS (dB) 13.71 13.71 13.79	<b>FACTOR</b> (dB) 46.21 46.21 46.22	HEIGHT (cm) 125 125 125	ANGLE (Degree) 277 277 277	Average Peak Average

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



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

	Α	NTENN	IA POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.85	40.87	54	-11.15	34.48	13.71	46.21	100	357	Average
5150	53.98	52	74	-20.02	34.48	13.71	46.21	100	357	Peak
5200	92.74	90.57			34.54	13.85	46.22	100	357	Average
5200	101.06	98.89			34.54	13.85	46.22	100	357	Peak
5350	43.13	40.38	54	-10.87	34.72	14.28	46.25	100	357	Average
5350	54.14	51.39	74	-19.86	34.72	14.28	46.25	100	357	Peak
	-	ANTEN	INA POLA	RITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.94	40.96	54	-11.06	34.48	13.71	46.21	125	277	Average
5150	54.32	52.34	74	-19.68	34.48	13.71	46.21	125	277	Peak
5200	95.04	92.87			34.54	13.85	46.22	125	277	Average
5200	103.82	101.65			34.54	13.85	46.22	125	277	Peak
5350	43.34	40.59	54	-10.66	34.72	14.28	46.25	125	277	Average
5350	54.24	51.49	74	-19.76	34.72	14.28	46.25	125	277	Peak

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



CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	DRIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.26	40.28	54	-11.74	34.48	13.71	46.21	100	335	Average
5150	53.2	51.22	74	-20.8	34.48	13.71	46.21	100	335	Peak
5240	92.35	90.02			34.59	13.97	46.23	100	335	Average
5240	100.54	98.21			34.59	13.97	46.23	100	335	Peak
5350	42.65	39.9	54	-11.35	34.72	14.28	46.25	100	335	Average
5350	55.47	52.72	74	-18.53	34.72	14.28	46.25	100	335	Peak
		ANTEN	NA POLA	ARITY & 1	EST DIST	ANCE: \	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.66	40.68	54	-11.34	34.48	13.71	46.21	125	277	Average
5150	53.72	51.74	74	-20.28	34.48	13.71	46.21	125	277	Peak
5240	95.95	93.62			34.59	13.97	46.23	125	277	Average
5240	104.11	101.78			34.59	13.97	46.23	125	277	Peak
5350	42.97	40.22	54	-11.03	34.72	14.28	46.25	125	277	Average
5350	55.1	52.35	74	-18.9	34.72	14.28	46.25	125	277	Peak

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



## 802.11n (20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.81	40.83	54	-11.19	34.48	13.71	46.21	100	356	Average
5150	54.31	52.33	74	-19.69	34.48	13.71	46.21	100	356	Peak
5180	91.78	89.69			34.52	13.79	46.22	100	356	Average
5180	100.2	98.11			34.52	13.79	46.22	100	356	Peak
5350	42.62	39.87	54	-11.38	34.72	14.28	46.25	100	356	Average
5350	53.99	51.24	74	-20.01	34.72	14.28	46.25	100	356	Peak
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.16	41.18	54	-10.84	34.48	13.71	46.21	118	276	Average
5150	55.22	53.24	74	-18.78	34.48	13.71	46.21	118	276	Peak
5180	94.95	92.86			34.52	13.79	46.22	118	276	Average
5180	103.79	101.7			34.52	13.79	46.22	118	276	Peak
5350	41.97	39.22	54	-12.03	34.72	14.28	46.25	118	276	Average
5350	54.09	51.34	74	-19.91	34.72	14.28	46.25	118	276	Peak

#### **REMARKS:**

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



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

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	DRIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.74	40.76	54	-11.26	34.48	13.71	46.21	100	356	Average
5150	54.3	52.32	74	-19.7	34.48	13.71	46.21	100	356	Peak
5200	91.74	89.57			34.54	13.85	46.22	100	356	Average
5200	100.41	98.24			34.54	13.85	46.22	100	356	Peak
5350	42.97	40.22	54	-11.03	34.72	14.28	46.25	100	356	Average
5350	54	51.25	74	-20	34.72	14.28	46.25	100	356	Peak
		ANTEN	NA POL	ARITY & 1	EST DIST	ANCE: \	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.8	40.82	54	-11.2	34.48	13.71	46.21	118	277	Average
5150	54.22	52.24	74	-19.78	34.48	13.71	46.21	118	277	Peak
5200	94.22	92.05			34.54	13.85	46.22	118	277	Average
5200	103.01	100.84			34.54	13.85	46.22	118	277	Peak
5350	42.52	39.77	54	-11.48	34.72	14.28	46.25	118	277	Average
5350	53.98	51.23	74	-20.02	34.72	14.28	46.25	118	277	Peak

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



CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.83	40.85	54	-11.17	34.48	13.71	46.21	100	335	Average
5150	53.84	51.86	74	-20.16	34.48	13.71	46.21	100	335	Peak
5240	92.25	89.92			34.59	13.97	46.23	100	335	Average
5240	101.16	98.83			34.59	13.97	46.23	100	335	Peak
5350	42.32	39.57	54	-11.68	34.72	14.28	46.25	100	335	Average
5350	53.99	51.24	74	-20.01	34.72	14.28	46.25	100	335	Peak
	-	ANTEN	NA POL	RITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.4	40.42	54	-11.6	34.48	13.71	46.21	125	277	Average
5150	53.22	51.24	74	-20.78	34.48	13.71	46.21	125	277	Peak
5240	95.19	92.86			34.59	13.97	46.23	125	277	Average
5240	103.38	101.05			34.59	13.97	46.23	125	277	Peak
5350	42.43	39.68	54	-11.57	34.72	14.28	46.25	125	277	Average
5350	53.8	51.05	74	-20.2	34.72	14.28	46.25	125	277	Peak

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



## 802.11n (40MHz)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	46.85	44.87	54	-7.15	34.48	13.71	46.21	181	318	Average
5150	57.4	55.42	74	-16.6	34.48	13.71	46.21	181	318	Peak
5190	91.24	89.11			34.53	13.82	46.22	181	318	Average
5190	100.9	98.77			34.53	13.82	46.22	181	318	Peak
5350	42.77	40.02	54	-11.23	34.72	14.28	46.25	181	318	Average
5350	53.99	51.24	74	-20.01	34.72	14.28	46.25	181	318	Peak
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	49.3	47.32	54	-4.7	34.48	13.71	46.21	198	318	Average
5150	58.6	56.62	74	-15.4	34.48	13.71	46.21	198	318	Peak
5190	94.9	92.77			34.53	13.82	46.22	198	318	Average
5190	103.03	100.9			34.53	13.82	46.22	198	318	Peak
5350	42.99	40.24	54	-11.01	34.72	14.28	46.25	198	318	Average
5350	54.41	51.66	74	-19.59	34.72	14.28	46.25	198	318	Peak

#### **REMARKS:**

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



CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.23	41.25	54	-10.77	34.48	13.71	46.21	181	318	Average
5150	55.33	53.35	74	-18.67	34.48	13.71	46.21	181	318	Peak
5230	91.92	89.63			34.58	13.94	46.23	181	318	Average
5230	100.97	98.68			34.58	13.94	46.23	181	318	Peak
5350	42.62	39.87	54	-11.38	34.72	14.28	46.25	181	318	Average
5350	54.62	51.87	74	-19.38	34.72	14.28	46.25	181	318	Peak
		ANTEN	NA POLA	RITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.22	41.24	54	-10.78	34.48	13.71	46.21	195	318	Average
5150	55.22	53.24	74	-18.78	34.48	13.71	46.21	195	318	Peak
5230	95.05	92.76			34.58	13.94	46.23	195	318	Average
5230	103.9	101.61			34.58	13.94	46.23	195	318	Peak
5350	43.28	40.53	54	-10.72	34.72	14.28	46.25	195	318	Average
5350	54.12	51.37	74	-19.88	34.72	14.28	46.25	195	318	Peak

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



## 802.11ac (80MHz)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.84	41.86	54	-10.16	34.48	13.71	46.21	178	318	Average
5150	54.67	52.69	74	-19.33	34.48	13.71	46.21	178	318	Peak
5210	87.01	84.8			34.55	13.88	46.22	178	318	Average
5210	96.56	94.35			34.55	13.88	46.22	178	318	Peak
5350	42.54	39.79	54	-11.46	34.72	14.28	46.25	178	318	Average
5350	53.12	50.37	74	-20.88	34.72	14.28	46.25	178	318	Peak
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	45.94	43.96	54	-8.06	34.48	13.71	46.21	191	318	Average
5150	55.6	53.62	74	-18.4	34.48	13.71	46.21	191	318	Peak
5210	90.14	87.93			34.55	13.88	46.22	191	318	Average
5210	100.97	98.76			34.55	13.88	46.22	191	318	Peak
5350	42.87	40.12	54	-11.13	34.72	14.28	46.25	191	318	Average
5350	53.98	51.23	74	-20.02	34.72	14.28	46.25	191	318	Peak

#### **REMARKS:**

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



# Band 2 802.11a

CHANNEL	TX Channel 52		Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	42.5	40.52	54	-11.5	34.48	13.71	46.21	100	335	Average	
5150	53.26	51.28	74	-20.74	34.48	13.71	46.21	100	335	Peak	
5260	92.26	89.86			34.61	14.02	46.23	100	335	Average	
5260	100.56	98.16			34.61	14.02	46.23	100	335	Peak	
5350	42.62	39.87	54	-11.38	34.72	14.28	46.25	100	335	Average	
5350	55.09	52.34	74	-18.91	34.72	14.28	46.25	100	335	Peak	
		ANTEN	INA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M			
FREQ.	<b>EMISSION</b>	READ			ANITENINIA		PREAMP	ANITENINIA	TABLE		
(MHz)	LEVEL (dBuV/m)	LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK	
-		LEVEL		_	FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK Average	
(MHz)	(dBuV/m)	LEVEL (dBuV)	(dBuV/m)	(dB)	FACTOR (dB /m)	LOSS (dB)	FACTOR (dB)	HEIGHT (cm)	ANGLE (Degree)		
(MHz) 5150	(dBuV/m) 42.33	<b>LEVEL</b> (dBuV) 40.35	(dBuV/m) 54	( <b>dB</b> )	FACTOR (dB /m) 34.48	LOSS (dB)	<b>FACTOR</b> (dB) 46.21	HEIGHT (cm) 125	ANGLE (Degree) 277	Average	
(MHz) 5150 5150	(dBuV/m) 42.33 54.03	LEVEL (dBuV) 40.35 52.05	(dBuV/m) 54	( <b>dB</b> )	FACTOR (dB /m) 34.48 34.48	LOSS (dB) 13.71 13.71	FACTOR (dB) 46.21 46.21	HEIGHT (cm) 125 125	ANGLE (Degree) 277 277	Average Peak	
(MHz) 5150 5150 5260	(dBuV/m) 42.33 54.03 96.08	LEVEL (dBuV) 40.35 52.05 93.68	(dBuV/m) 54	( <b>dB</b> )	FACTOR (dB /m) 34.48 34.48 34.61	LOSS (dB) 13.71 13.71 14.02	FACTOR (dB) 46.21 46.21 46.23	HEIGHT (cm) 125 125 125	ANGLE (Degree) 277 277 277	Average Peak Average	

## **REMARKS:**

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



CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	42.51	40.53	54	-11.49	34.48	13.71	46.21	100	335	Average	
5150	54.09	52.11	74	-19.91	34.48	13.71	46.21	100	335	Peak	
5300	92.21	89.65			34.66	14.14	46.24	100	335	Average	
5300	100.42	97.86			34.66	14.14	46.24	100	335	Peak	
5350	43.01	40.26	54	-10.99	34.72	14.28	46.25	100	335	Average	
5350	55.97	53.22	74	-18.03	34.72	14.28	46.25	100	335	Peak	
		ANTEN	NA POLA	RITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M	-		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.45	40.47	54	-11.55	34.48	13.71	46.21	122	277	Average	
5150	53.23	51.25	74	-20.77	34.48	13.71	46.21	122	277	Peak	
5300	95.68	93.12			34.66	14.14	46.24	122	277	Average	
5300	104.05	101.49			34.66	14.14	46.24	122	277	Peak	
5350	43.69	40.94	54	-10.31	34.72	14.28	46.25	122	277	Average	
5350	58.35	55.6	74	-15.65	34.72	14.28	46.25	122	277	Peak	

#### **REMARKS:**

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



CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	42.51	40.53	54	-11.49	34.48	13.71	46.21	100	335	Average
5150	53.52	51.54	74	-20.48	34.48	13.71	46.21	100	335	Peak
5320	91.16	88.52			34.68	14.2	46.24	100	335	Average
5320	99.2	96.56			34.68	14.2	46.24	100	335	Peak
5350	42.98	40.23	54	-11.02	34.72	14.28	46.25	100	335	Average
5350	55.11	52.36	74	-18.89	34.72	14.28	46.25	100	335	Peak
	-	ANTEN	NA POL	ARITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.33	40.35	54	-11.67	34.48	13.71	46.21	122	277	Average
5150	53.2	51.22	74	-20.8	34.48	13.71	46.21	122	277	Peak
5320	95.86	93.22			34.68	14.2	46.24	122	277	Average
5320	103.86	101.22			34.68	14.2	46.24	122	277	Peak
5350	43.28	40.53	54	-10.72	34.72	14.28	46.25	122	277	Average
5350	55.97	53.22	74	-18.03	34.72	14.28	46.25	122	277	Peak

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



## 802.11n (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.5	40.52	54	-11.5	34.48	13.71	46.21	125	19	Average
5150	53.54	51.56	74	-20.46	34.48	13.71	46.21	125	19	Peak
5260	92.33	89.93			34.61	14.02	46.23	125	19	Average
5260	101.27	98.87			34.61	14.02	46.23	125	19	Peak
5350	42.62	39.87	54	-11.38	34.72	14.28	46.25	125	19	Average
5350	54	51.25	74	-20	34.72	14.28	46.25	125	19	Peak
		ANTEN	NA POLA	RITY & 1	TEST DIST	ANCE: Y	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.51	40.53	54	-11.49	34.48	13.71	46.21	125	277	Average
5150	54.3	52.32	74	-19.7	34.48	13.71	46.21	125	277	Peak
5260	94.97	92.57			34.61	14.02	46.23	125	277	Average
5260	103.73	101.33			34.61	14.02	46.23	125	277	Peak
5350	42.62	39.87	54	-11.38	34.72	14.28	46.25	125	277	Average
5350	53.99	51.24	74	-20.01	34.72	14.28	46.25	125	277	Peak

#### **REMARKS:**

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



CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	41.81	39.83	54	-12.19	34.48	13.71	46.21	110	27	Average	
5150	53.22	51.24	74	-20.78	34.48	13.71	46.21	110	27	Peak	
5300	92.15	89.59			34.66	14.14	46.24	110	27	Average	
5300	100.77	98.21			34.66	14.14	46.24	110	27	Peak	
5350	42.62	39.87	54	-11.38	34.72	14.28	46.25	110	27	Average	
5350	55.11	52.36	74	-18.89	34.72	14.28	46.25	110	27	Peak	
		ANTEN	NA POL	ARITY & 1	EST DIST	ANCE: V	VERTICA	L AT 3 M	-		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.11	40.13	54	-11.89	34.48	13.71	46.21	150	273	Average	
5150	53.22	51.24	74	-20.78	34.48	13.71	46.21	150	273	Peak	
5300	95.03	92.47			34.66	14.14	46.24	150	273	Average	
5300	103.42	100.86			34.66	14.14	46.24	150	273	Peak	
5350	43.99	41.24	54	-10.01	34.72	14.28	46.25	150	273	Average	
5350	55.44	52.69	74	-18.56	34.72	14.28	46.25	150	273	Peak	

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



CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE			Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTAI	NCE: HO	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	41.85	39.87	54	-12.15	34.48	13.71	46.21	110	27	Average
5150	53.22	51.24	74	-20.78	34.48	13.71	46.21	110	27	Peak
5320	91.76	89.12			34.68	14.2	46.24	110	27	Average
5320	101.17	98.53			34.68	14.2	46.24	110	27	Peak
5350	42.24	39.49	54	-11.76	34.72	14.28	46.25	110	27	Average
5350	56	53.25	74	-18	34.72	14.28	46.25	110	27	Peak
	-	ANTEN	NA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	41.9	39.92	54	-12.1	34.48	13.71	46.21	150	273	Average
5150	53.53	51.55	74	-20.47	34.48	13.71	46.21	150	273	Peak
5320	94.95	92.31			34.68	14.2	46.24	150	273	Average
5320	103.88	101.24			34.68	14.2	46.24	150	273	Peak
5350	43.65	40.9	54	-10.35	34.72	14.28	46.25	150	273	Average
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- 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		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.91	40.93	54	-11.09	34.48	13.71	46.21	181	318	Average
5150	52.84	50.86	74	-21.16	34.48	13.71	46.21	181	318	Peak
5270	91.56	89.12			34.62	14.05	46.23	181	318	Average
5270	100.37	97.93			34.62	14.05	46.23	181	318	Peak
5350	43.64	40.89	54	-10.36	34.72	14.28	46.25	181	318	Average
5350	56.41	53.66	74	-17.59	34.72	14.28	46.25	181	318	Peak
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.85	40.87	54	-11.15	34.48	13.71	46.21	195	318	Average
5150	53.22	51.24	74	-20.78	34.48	13.71	46.21	195	318	Peak
5270	95.21	92.77			34.62	14.05	46.23	195	318	Average
5270	104.03	101.59			34.62	14.05	46.23	195	318	Peak
5350	45.52	42.77	54	-8.48	34.72	14.28	46.25	195	318	Average
5350	55.97	53.22	74	-18.03	34.72	14.28	46.25	195	318	Peak

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



CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE			Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	DRIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.91	40.93	54	-11.09	34.48	13.71	46.21	181	318	Average
5150	53.02	51.04	74	-20.98	34.48	13.71	46.21	181	318	Peak
5310	91.43	88.83			34.67	14.17	46.24	181	318	Average
5310	100.65	98.05			34.67	14.17	46.24	181	318	Peak
5350	46.93	44.18	54	-7.07	34.72	14.28	46.25	181	318	Average
5350	55.97	53.22	74	-18.03	34.72	14.28	46.25	181	318	Peak
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.62	40.64	54	-11.38	34.48	13.71	46.21	195	318	Average
5150	53.31	51.33	74	-20.69	34.48	13.71	46.21	195	318	Peak
5310	95.16	92.56			34.67	14.17	46.24	195	318	Average
5310	104.16	101.56			34.67	14.17	46.24	195	318	Peak
5350	51.97	49.22	54	-2.03	34.72	14.28	46.25	195	318	Average
5350	60.08	57.33	74	-13.92	34.72	14.28	46.25	195	318	Peak

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



# 802.11ac (80MHz)

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.81	40.83	54	-11.19	34.48	13.71	46.21	178	318	Average
5150	53.3	51.32	74	-20.7	34.48	13.71	46.21	178	318	Peak
5290	87.17	84.65			34.65	14.11	46.24	178	318	Average
5290	96.41	93.89			34.65	14.11	46.24	178	318	Peak
5350	46.87	44.12	54	-7.13	34.72	14.28	46.25	178	318	Average
5350	58.4	55.65	74	-15.6	34.72	14.28	46.25	178	318	Peak
		ANTEN	NA POLA	ARITY & 1	EST DIST	ANCE: Y	VERTICA	L AT 3 M	-	
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.74	41.76	54	-10.26	34.48	13.71	46.21	191	318	Average
5150	54.32	52.34	74	-19.68	34.48	13.71	46.21	191	318	Peak
5290	90.87	88.35			34.65	14.11	46.24	191	318	Average
5290	101.4	98.88			34.65	14.11	46.24	191	318	Peak
5350	52.61	49.86	54	-1.39	34.72	14.28	46.25	191	318	Average
5350	63.48	60.73	74	-10.52	34.72	14.28	46.25	191	318	Peak

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



### Band 3

#### 802.11a

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.15	39.97	54	-10.85	34.85	14.6	46.27	100	353	Average
5460	58.5	55.32	74	-15.5	34.85	14.6	46.27	100	353	Peak
#5470	59.65	56.44	74	-14.35	34.86	14.62	46.27	100	353	Peak
5500	97.21	93.88			34.9	14.71	46.28	100	353	Average
5500	105.2	101.87			34.9	14.71	46.28	100	353	Peak
	-	ANTEN	NA POLA	ARITY & 1	TEST DIST	ANCE: V	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.85	39.67	54	-11.15	34.85	14.6	46.27	122	277	Average
5460	57.2	54.02	74	-16.8	34.85	14.6	46.27	122	277	Peak
#5470	59.51	56.3	74	-14.49	34.86	14.62	46.27	122	277	Peak
5500	96.22	92.89			34.9	14.71	46.28	122	277	Average
5500	104.57	101.24			34.9	14.71	46.28	122	277	Peak

#### **REMARKS:**

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

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CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE			Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.75	39.57	54	-11.25	34.85	14.6	46.27	100	353	Average
5460	53.9	50.72	74	-20.1	34.85	14.6	46.27	100	353	Peak
#5470	54.45	51.24	74	-19.55	34.86	14.62	46.27	100	353	Peak
5580	98.73	94.78			35	15.23	46.28	100	353	Average
5580	106.66	102.71			35	15.23	46.28	100	353	Peak
		ANTEN	INA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.75	39.57	54	-11.25	34.85	14.6	46.27	122	277	Average
5460	53.63	50.45	74	-20.37	34.85	14.6	46.27	122	277	Peak
#5470	54.46	51.25	74	-19.54	34.86	14.62	46.27	122	277	Peak
5580	98.88	94.93			35	15.23	46.28	122	277	Average
5580	107.14	103.19		·	35	15.23	46.28	122	277	Peak

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



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	98.44	93.57			35.14	16.01	46.28	103	360	Average	
5700	107.06	102.19			35.14	16.01	46.28	103	360	Peak	
#5725	64.44	59.37	74	-9.56	35.17	16.18	46.28	103	360	Peak	
		ANTEN	NA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M			
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	100.46	95.59			35.14	16.01	46.28	120	277	Average	
5700	108.65	103.78			35.14	16.01	46.28	120	277	Peak	
#5725	64.86	59.79	74	-9.14	35.17	16.18	46.28	120	277	Peak	

- 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 (20MHz)

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.39	39.21	54	-11.61	34.85	14.6	46.27	105	45	Average
5460	54.42	51.24	74	-19.58	34.85	14.6	46.27	105	45	Peak
#5470	56.86	53.65	74	-17.14	34.86	14.62	46.27	105	45	Peak
5500	94.9	91.57			34.9	14.71	46.28	105	45	Average
5500	102.95	99.62			34.9	14.71	46.28	105	45	Peak
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43	39.82	54	-11	34.85	14.6	46.27	145	273	Average
5460	54.75	51.57	74	-19.25	34.85	14.6	46.27	145	273	Peak
#5470	55.79	52.58	74	-18.21	34.86	14.62	46.27	145	273	Peak
5500	97.08	93.75			34.9	14.71	46.28	145	273	Average
5500	105.87	102.54			34.9	14.71	46.28	145	273	Peak

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



CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	DRIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.42	39.24	54	-11.58	34.85	14.6	46.27	105	45	Average
5460	54.53	51.35	74	-19.47	34.85	14.6	46.27	105	45	Peak
#5470	56.43	53.22	74	-17.57	34.86	14.62	46.27	105	45	Peak
5580	95.81	91.86			35	15.23	46.28	105	45	Average
5580	104.35	100.4			35	15.23	46.28	105	45	Peak
		ANTEN	INA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	42.42	39.24	54	-11.58	34.85	14.6	46.27	151	273	Average
5460	55.5	52.32	74	-18.5	34.85	14.6	46.27	151	273	Peak
#5470	57.27	54.06	74	-16.73	34.86	14.62	46.27	151	273	Peak
5580	98.19	94.24			35	15.23	46.28	151	273	Average
5580	107.1	103.15		·	35	15.23	46.28	151	273	Peak

#### **REMARKS:**

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

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CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	A	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	95.74	90.87			35.14	16.01	46.28	100	45	Average
5700	104.53	99.66			35.14	16.01	46.28	100	45	Peak
#5725	58.27	53.2	74	-15.73	35.17	16.18	46.28	100	45	Peak
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	98.53	93.66			35.14	16.01	46.28	132	273	Average
5700	107.84	102.97			35.14	16.01	46.28	132	273	Peak
#5725	59.69	54.62	74	-14.31	35.17	16.18	46.28	132	273	Peak

- 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		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	44.32	41.14	54	-9.68	34.85	14.6	46.27	180	318	Average
5460	57.42	54.24	74	-16.58	34.85	14.6	46.27	180	318	Peak
#5470	62.18	58.97	74	-11.82	34.86	14.62	46.27	180	318	Peak
5510	91.73	88.32			34.91	14.78	46.28	180	318	Average
5510	100.94	97.53			34.91	14.78	46.28	180	318	Peak
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	49.41	46.23	54	-4.59	34.85	14.6	46.27	227	318	Average
5460	63.09	59.91	74	-10.91	34.85	14.6	46.27	227	318	Peak
#5470	67.22	64.01	74	-6.78	34.86	14.62	46.27	227	318	Peak
5510	98.62	95.21			34.91	14.78	46.28	227	318	Average
5510	106.91	103.5			34.91	14.78	46.28	227	318	Peak

#### **REMARKS:**

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

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CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	Α	NTENN	IA POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	43.74	40.56	54	-10.26	34.85	14.6	46.27	179	318	Average
5460	56.85	53.67	74	-17.15	34.85	14.6	46.27	179	318	Peak
#5470	59.88	56.67	74	-14.12	34.86	14.62	46.27	179	318	Peak
5550	93.55	89.83			34.96	15.04	46.28	179	318	Average
5550	102.58	98.86			34.96	15.04	46.28	179	318	Peak
		ANTEN	INA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	44.04	40.86	54	-9.96	34.85	14.6	46.27	227	318	Average
5460	55.94	52.76	74	-18.06	34.85	14.6	46.27	227	318	Peak
#5470	58.63	55.42	74	-15.37	34.86	14.62	46.27	227	318	Peak
5550	99.77	96.05			34.96	15.04	46.28	227	318	Average
5550	108.11	104.39			34.96	15.04	46.28	227	318	Peak

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



CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	93.38	88.74			35.1	15.82	46.28	181	318	Average		
5670	102.98	98.34			35.1	15.82	46.28	181	318	Peak		
#5725	59.42	54.35	74	-14.58	35.17	16.18	46.28	181	318	Peak		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
-	LEVEL	READ LEVEL	LIMIT	MARGIN	ANTENNA FACTOR	CABLE LOSS	PREAMP FACTOR	ANTENNA HEIGHT	ANGLE	REMARK Average		
(MHz)	LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	ANGLE (Degree)			

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



# 802.11ac (80MHz)

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	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	48.82	45.64	54	-5.18	34.85	14.6	46.27	178	315	Average		
5460	60.64	57.46	74	-13.36	34.85	14.6	46.27	178	315	Peak		
#5470	61.96	58.75	74	-12.04	34.86	14.62	46.27	178	315	Peak		
5530	88.5	84.93			34.94	14.91	46.28	178	315	Average		
5530	98.23	94.66			34.94	14.91	46.28	178	315	Peak		
		ANTEN	NA POL	ARITY & 1	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	52.99	49.81	54	-1.01	34.85	14.6	46.27	178	315	Average		
5460	65.81	62.63	74	-8.19	34.85	14.6	46.27	178	315	Peak		
#5470	67.22	64.01	74	-6.78	34.86	14.62	46.27	178	315	Peak		
5530	93.45	89.88			34.94	14.91	46.28	178	315	Average		
5530	102.33	98.76			34.94	14.91	46.28	178	315	Peak		

#### **REMARKS:**

- 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.

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### Band 4

### 802.11a

CHANNEL	TX Channel 149	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	98.08	92.86			35.19	16.31	46.28	100	311	Average		
5745	105.87	100.65			35.19	16.31	46.28	100	311	Peak		
		ANTEN	NA POL	ARITY & 1	EST DIST	ANCE: \	VERTICA	L AT 3 M	-			
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	103.31	98.09			35.19	16.31	46.28	102	211	Average		
5745	109.06	103.84			35.19	16.31	46.28	102	211	Peak		

# **REMARKS:**

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

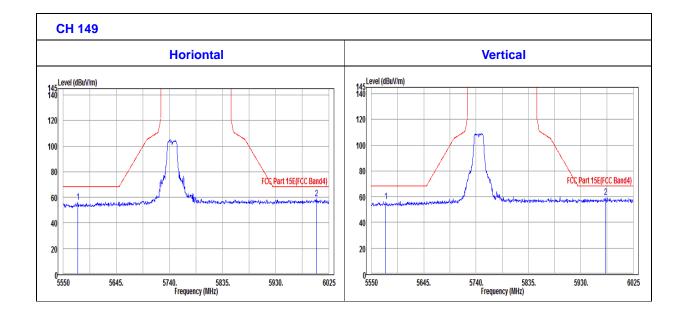
Email: <a href="mailto:customerservice.dg@cn.bureauveritas.com">customerservice.dg@cn.bureauveritas.com</a>



# **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		
5575.65	56.25	52.34	68.3	-12.05	34.99	15.2	46.28	100	311	Peak		
6003.15	59.01	51.83	68.3	-9.29	35.5	17.96	46.28	100	311	Peak		
		ANTEN	NA POLA	ARITY & T	FEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5576.14	56.05	52.13	68.3	-12.25	34.99	15.21	46.28	102	211	Peak		
5975.32	59.5	52.5	68.3	-8.8	35.47	17.81	46.28	102	211	Peak		





CHANNEL	TX Channel 157	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	98.94	93.41			35.24	16.57	46.28	100	78	Average		
5785	106.94	101.41			35.24	16.57	46.28	100	78	Peak		
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5785	100.87	95.34			35.24	16.57	46.28	100	122	Average		
5785	108.71	103.18	_		35.24	16.57	46.28	100	122	Peak		

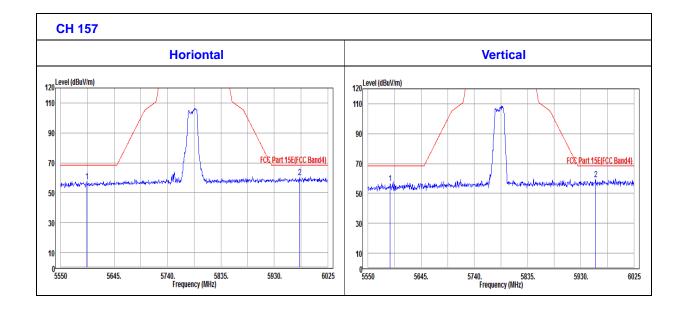
- 1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level Limit value.
- 2. 5785MHz: Fundamental frequency.



# **OOBE DATA**

#### 802.11a

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5597.03	57.46	53.38	68.3	-10.84	35.02	15.34	46.28	400	315	Peak		
5974.65	60.26	53.27	68.3	-8.04	35.47	17.8	46.28	400	315	Peak		
		ANTEN	NA POLA	ARITY & T	EST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5589.43	56.57	52.55	68.3	-11.73	35.01	15.29	46.28	400	315	Peak		
5956.6	59.25	52.39	68.3	-9.05	35.45	17.69	46.28	400	315	Peak		





CHANNEL	TX Channel 165	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	97.9	92.06			35.29	16.83	46.28	100	311	Average		
5825	106.77	100.93			35.29	16.83	46.28	100	311	Peak		
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	99.67	93.83			35.29	16.83	46.28	100	211	Average		
5825	108.03	102.19			35.29	16.83	46.28	100	211	Peak		

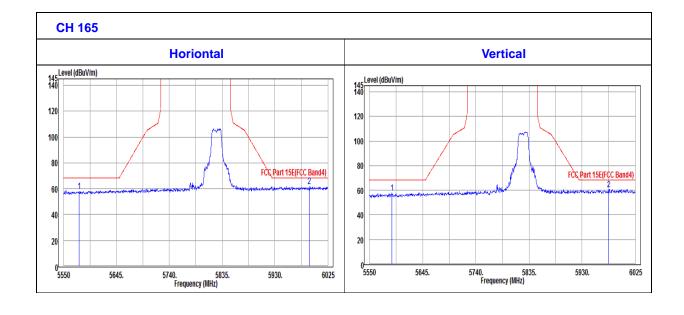
- 1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level Limit value.
- 2. 5825MHz: Fundamental frequency.



### **OOBE DATA**

#### 802.11a

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5629.8	60.59	56.25	68.3	-10.15	35.06	15.56	46.28	100	335	Peak		
5959.93	5959.93 63.84 56.96 68.3 -6.74 35.45 17.71 46.28 100 335 Peak											
		ANTEN	NA POL	ARITY & T	FEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	THE STATE OF THE S											
5643.58	58.72	54.28	68.3	-10.64	35.07	15.65	46.28	172	311	Peak		
5971.33	60.79	53.82	68.3	-7.62	35.47	17.78	46.28	172	311	Peak		





# 802.11n (20MHz)

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

	A	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M			
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	97.45	92.23			35.19	16.31	46.28	100	164	Average	
5745	106.18	100.96			35.19	16.31	46.28	100	164	Peak	
		ANTEN	NA POL	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M			
FREQ. (MHz)	I LEVEL LLEVELL L. L. LEACTOR LLOSS LEACTOR LHEIGHT LANGLE LREMARK I										
5745	99.15	93.93			35.19	16.31	46.28	102	80	Average	
5745	108.09	102.87			35.19	16.31	46.28	102	80	Peak	

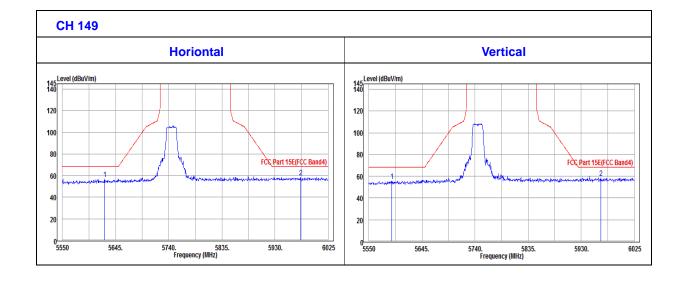
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 5745MHz: Fundamental frequency.



# **OOBE DATA**

# 802.11n (20MHZ)

	A	NTENN	A POLAF	RITY & TE	ST DISTAI	NCE: HO	DRIZONT	AL AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5626	56.94	52.64	68.3	-11.36	35.05	15.53	46.28	100	164	Peak		
5975.6	58.46	51.46	68.3	-9.84	35.47	17.81	46.28	100	164	Peak		
		ANTEN	NA POLA	ARITY & T	EST DIST	ANCE: \	/ERTICA	L AT 3 M		3		
FREQ. (MHz)	I LEVEL LLEVEL I I FACTOR LLOSS LEACTOR L HEIGHT LANGLE LREMARK											
5590.85	55.84	51.81	68.3	-12.46	35.01	15.3	46.28	102	80	Peak		
5965.15	58.51	51.59	68.3	-9.79	35.46	17.74	46.28	102	80	Peak		





CHANNEL	TX Channel 157	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	98.21	92.68			35.24	16.57	46.28	126	44	Average		
5785	106.61	101.08			35.24	16.57	46.28	126	44	Peak		
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	I LEVEL TIEVEL I I FACTOR LIOSS LEACTOR I HEIGHT LANGUE TREMARKT											
5785	98.78	93.25			35.24	16.57	46.28	100	165	Average		
5785	107.77	102.24			35.24	16.57	46.28	100	165	Peak		

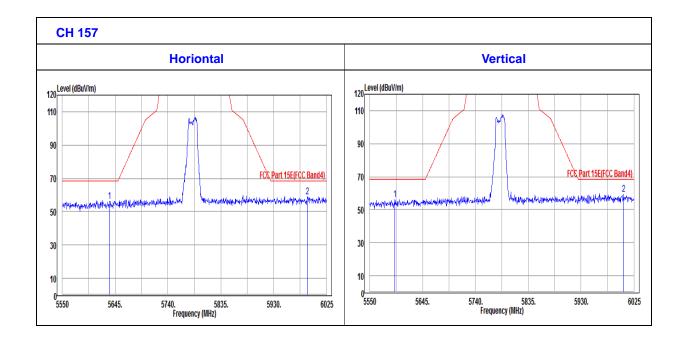
- 1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level Limit value.
- 2. 5785MHz: Fundamental frequency.



# **OOBE DATA**

# 802.11n (20MHZ)

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK	
5645.95	57.94	53.48	68.3	-10.36	35.08	15.66	46.28	175	316	Peak	
5972.28	61.33	54.35	68.3	-6.97	35.47	17.79	46.28	175	316	Peak	
	-	ANTEN	NA POL	ARITY & T	FEST DIST	ANCE: \	VERTICA	L AT 3 M			
FREQ. (MHz)	I LEVEL LLEVEL I I FACTOR LLOSS LEACTOR I HEIGHT LANGLE LREMARK I										
5638.83	57.94	53.53	68.3	-10.36	35.07	15.62	46.28	100	290	Peak	
5939.03	59.82	53.1	68.3	-8.48	35.43	17.57	46.28	100	290	Peak	





CHANNEL	TX Channel 165	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	100.22	94.38			35.29	16.83	46.28	100	132	Average		
5825	108.89	103.05			35.29	16.83	46.28	100	132	Peak		
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	I LEVEL LLEVEL I I FACTOR LLOSS LEACTOR I HEIGHT LANGLE TREMARKT											
5825	98.31	92.47			35.29	16.83	46.28	100	80	Average		
5825	106.65	100.81			35.29	16.83	46.28	100	80	Peak		

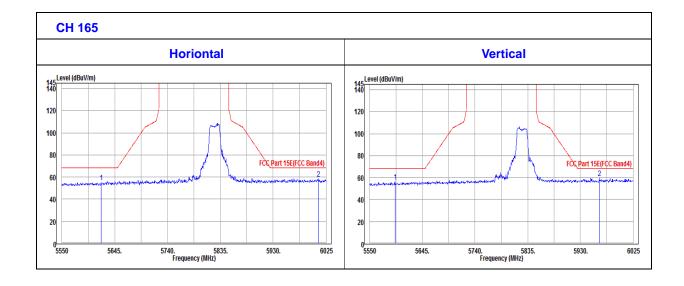
- 1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level Limit value.
- 2. 5825MHz: Fundamental frequency.



# **OOBE DATA**

# 802.11n (20MHZ)

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5620.3	54.96	50.71	68.3	-13.34	35.04	15.49	46.28	100	132	Peak		
6011.7	58.21	51.07	68.3	-10.09	35.5	17.92	46.28	100	132	Peak		
		ANTEN	NA POLA	ARITY & 1	EST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	THE STATE OF THE S											
5595.6	55.98	51.92	68.3	-12.32	35.01	15.33	46.28	100	80	Peak		
5964.68	59.47	52.55	68.3	-8.83	35.46	17.74	46.28	100	80	Peak		





# 802.11n (40MHz)

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

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M				
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK		
5755	95.12	89.82			35.21	16.37	46.28	100	142	Average		
5755	5755 103.86 98.56 35.21 16.37 46.28 100 142 Peak											
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M				
FREQ. (MHz)	I LEVEL LIEVEL I STANDER I FACTOR LLOSS LEACTOR I HEIGHT LANGLE LREMARK											
5755	100.83	95.53			35.21	16.37	46.28	103	81	Average		
5755	109.16	103.86			35.21	16.37	46.28	103	81	Peak		

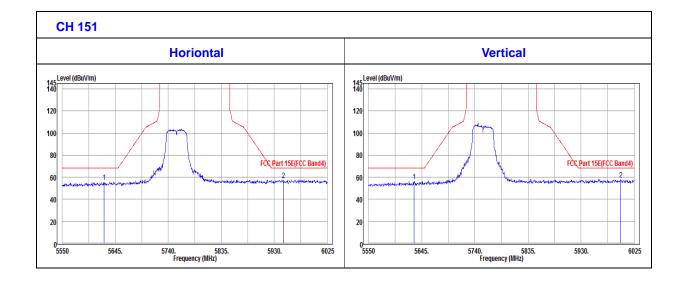
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 5755MHz: Fundamental frequency.



# **OOBE DATA**

# 802.11n (40MHZ)

	A	NTENN	A POLAF	RITY & TE	ST DISTAI	NCE: HO	DRIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5624.58	55.58	51.29	68.3	-12.72	35.05	15.52	46.28	100	142	Peak
5946.15	57.6	50.82	68.3	-10.7	35.44	17.62	46.28	100	142	Peak
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	/ERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5631.7	56.2	51.85	68.3	-12.1	35.06	15.57	46.28	103	81	Peak
6000.78	57.65	50.46	68.3	-10.65	35.5	17.97	46.28	103	81	Peak





CHANNEL	TX Channel 159	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	94.96	89.36			35.25	16.63	46.28	112	155	Average				
5795	103.73	98.13			35.25	16.63	46.28	112	155	Peak				
		ANTEN	NA POLA	ARITY & T	TEST DIST	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				
-	LEVEL	LEVEL			FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK Average				

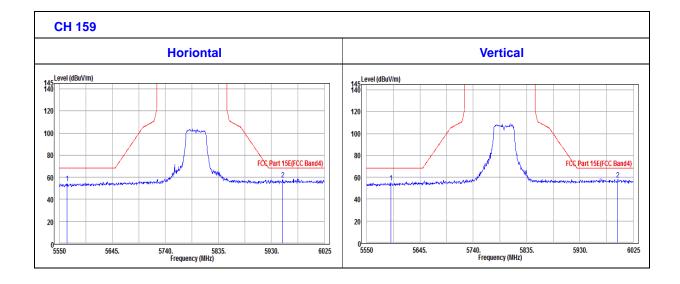
- 1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level Limit value.
- 2. 5795MHz: Fundamental frequency.



# **OOBE DATA**

# 802.11n (40MHZ)

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M									
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5563.3	54.79	50.97	68.3	-13.51	34.98	15.12	46.28	112	155	Peak
5949.95	58.03	51.23	68.3	-10.27	35.44	17.64	46.28	112	155	Peak
		ANTEN	NA POLA	ARITY & 1	EST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5593.23	55.01	50.96	68.3	-13.29	35.01	15.32	46.28	102	81	Peak
5997.45	58.11	50.94	68.3	-10.19	35.5	17.95	46.28	102	81	Peak



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# 802.11ac (80MHz)

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

	A	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: HO	ORIZONT	AL AT 3 M		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	89.57	84.12			35.23	16.5	46.28	100	0	Average								
5775	99.69	94.24			35.23	16.5	46.28	100	0	Peak								
		ANTEN	NA POLA	ARITY & T	TEST DIST	ANCE: \	VERTICA	L AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ 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	97.3	91.85			35.23	16.5	46.28	100	324	Average								
5775	105.32	99.87			35.23	16.5	46.28	100	324	Peak								

### **REMARKS:**

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

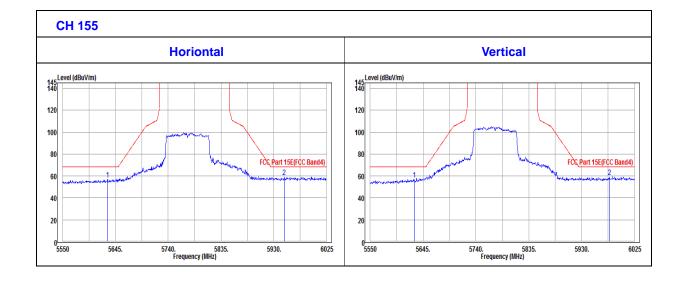
 $\pmb{Email: \underline{customerservice.dg@cn.bureauveritas.com}}\\$ 



# **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
5630.75	56.55	52.21	68.3	-11.75	35.06	15.56	46.28	100	0	Peak
5949	59.18	52.38	68.3	-9.12	35.44	17.64	46.28	100	0	Peak
		ANTEN	NA POLA	ARITY & T	EST DIST	ANCE: \	VERTICA	L AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5629.33	56.68	52.35	68.3	-11.62	35.06	15.55	46.28	100	324	Peak
5979.88	58.75	51.71	68.3	-9.55	35.48	17.84	46.28	100	324	Peak



#### 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.
- 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	Jun. 28,17	Jun. 27,18
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Sep. 18,17	Sep. 17,18

#### NOTE:

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

#### 3.2.3 TEST PROCEDURES

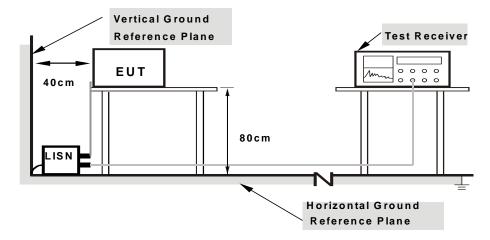
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit 20dB) was not recorded.

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

# 3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

# 3.2.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

### 3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.6.



# 3.2.7 TEST RESULTS

#### **CONDUCTED WORST-CASE DATA:**

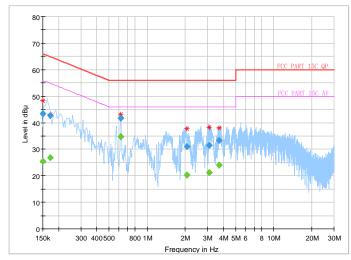
Frequency Range	1150KH7 ~ 30MH7	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	1120Vac 60Hz	Environmental Conditions	24deg. C, 55RH
Tested By	Jocan Guo	TEST DATE	2018/01/11

Frequency (MHz)	QuasiPeak (dB¦ÌV)	CAverage (dB¦ÌV)	Limit (dB¦ÌV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000		25.41	56.00	-30.59	L1	ON	9.6
0.150000	43.32		66.00	-22.68	L1	ON	9.6
0.172000		26.85	54.86	-28.01	L1	ON	9.7
0.172000	42.71		64.86	-22.15	L1	ON	9.7
0.620000		34.79	46.00	-11.21	L1	ON	9.7
0.620000	41.67		56.00	-14.33	L1	ON	9.7
2.052000		20.18	46.00	-25.82	L1	ON	9.7
2.052000	31.03		56.00	-24.97	L1	ON	9.7
3.084000		21.29	46.00	-24.71	L1	ON	9.7
3.084000	31.59		56.00	-24.41	L1	ON	9.7
3.716000		23.93	46.00	-22.07	L1	ON	9.7
3.716000	33.27		56.00	-22.73	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 = Emission level Limit value
- 5. Correction factor = Insertion loss + Cable loss
- 6. Emission Level = Correction Factor + Reading Value.





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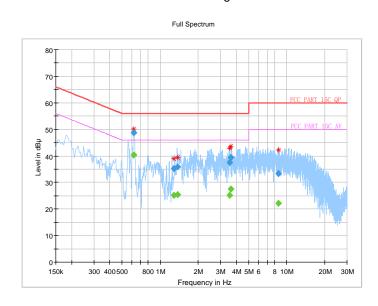


Frequency Range	150KHz ~ 30MHz		Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	24deg. C, 55RH
Tested By	Jocan Guo	TEST DATE	2018/01/11

Frequency (MHz)	QuasiPeak (dB¦ÌV)	CAverage (dB¦ÌV)	Limit (dB¦ÌV)	Margin (dB)	Line	Filter	Corr. (dB)
0.620000		40.37	46.00	-5.63	N	ON	10.1
0.620000	48.66		56.00	-7.34	N	ON	10.1
1.290000		25.15	46.00	-20.85	N	ON	9.9
1.290000	35.19		56.00	-20.81	N	ON	9.9
1.376000		25.31	46.00	-20.69	N	ON	9.9
1.376000	35.91		56.00	-20.09	N	ON	9.9
3.556000		25.24	46.00	-20.76	N	ON	9.8
3.556000	37.62		56.00	-18.38	N	ON	9.8
3.632000		27.47	46.00	-18.53	N	ON	9.8
3.632000	39.51		56.00	-16.49	N	ON	9.8
8.584000		22.14	50.00	-27.86	N	ON	9.8
8.584000	33.37		60.00	-26.63	N	ON	9.8

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

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



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# 3.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

## 3.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

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

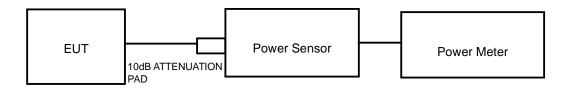
NOTE: Where B is the 26dB emission bandwidth in MHz.



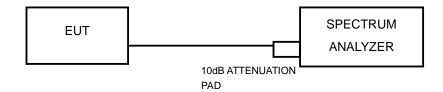
#### 3.3.2 **TEST SETUP**

#### FOR POWER OUTPUT MEASUREMENT

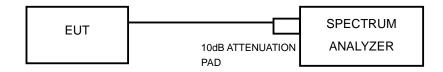
## 802.11a, 802.11n (20MHz), 802.11n (40MHz) TEST CONFIGURATION



#### 11ac TEST CONFIGURATION



#### **FOR 26dB BANDWIDTH**



#### 3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	Mar. 01,18	Feb. 28,19
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510523	Mar. 01,18	Feb. 28,19
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510332	Mar. 01,18	Feb. 28,19
Power Sensor	ANRITSU	MA2411B	1339352	Mar. 01,18	Feb. 28,19

## NOTE:

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

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#### 3.3.4 TEST PROCEDURE

#### FOR POWER MEASUREMENT

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

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

#### For 802.11ac (80MHz)

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

#### FOR 99 PERCENT OCCUPIED BANDWIDTH

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

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

#### **FOR 26dB BANDWIDTH**

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

#### **FOR 6dB BANDWIDTH**

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



## 3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

## 3.3.6 EUT OPERATING CONDITIONS

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



# 3.3.7 TEST RESULTS

#### **OUTPUT POWER:**

#### 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	16.91	49.091	24	PASS
40	5200	16.89	48.865	24	PASS
48	5240	16.85	48.417	24	PASS
52	5260	16.97	49.774	24	PASS
60	5300	16.66	46.345	24	PASS
64	5320	16.74	47.206	24	PASS
100	5500	17.24	52.966	24	PASS
116	5580	17.15	51.880	24	PASS
140	5700	17.03	50.466	24	PASS
149	5745	17.15	51.880	30	PASS
157	5785	17.21	52.602	30	PASS
165	5825	16.71	46.881	30	PASS

#### 802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	16.27	42.364	24	PASS
40	5200	16.19	41.591	24	PASS
48	5240	16.34	43.053	24	PASS
52	5260	16.38	43.451	24	PASS
60	5300	16.18	41.495	24	PASS
64	5320	16.11	40.832	24	PASS
100	5500	16.75	47.315	24	PASS
116	5580	16.64	46.132	24	PASS
140	5700	16.52	44.875	24	PASS
149	5745	16.54	45.082	30	PASS
157	5785	16.59	45.604	30	PASS
165	5825	16.12	40.926	30	PASS

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## 802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	15.47	35.237	24	PASS
46	5230	15.37	34.435	24	PASS
54	5270	15.45	35.075	24	PASS
62	5310	15.24	33.420	24	PASS
102	5510	16.23	41.976	24	PASS
110	5550	16.12	40.926	24	PASS
134	5670	16.06	40.365	24	PASS
151	5755	16.09	40.644	30	PASS
165	5825	16.04	40.179	30	PASS

#### 802.11ac (80MHz)

002.11ac	(001111112)						
CHANNEL	CHANNEL FREQUENC Y (MHz)	AVERAGE POWER w/o Duty Factor (dBm)	Duty Factor	AVERAGE POWER with Duty Factor (dBm)	AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	15.37	0.88	16.24	34.435	24	PASS
58	5290	15.41	0.88	16.29	34.754	24	PASS
106	5530	15.52	0.88	16.40	35.645	24	PASS
155	5775	15.16	0.88	16.04	32.810	30	PASS



#### 99% OCCUPIED BANDWIDTH & 26dB BANDWIDTH/6dB BANDWIDTH:

## 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
36	5180	16.86	26.07	PASS
40	5200	16.86	25.66	PASS
48	5240	16.92	25.34	PASS
52	5260	16.86	24.08	PASS
60	5300	16.92	24.20	PASS
64	5320	16.86	25.41	PASS
100	5500	17.04	24.50	PASS
116	5580	16.92	25.33	PASS
140	5700	16.86	25.63	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
149	5745	16.86	15.48	PASS
157	5785	16.98	15.48	PASS
165	5825	16.86	15.90	PASS



# 802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
36	5180	17.94	25.65	PASS
40	5200	17.94	26.17	PASS
48	5240	17.94	26.29	PASS
52	5260	17.94	24.18	PASS
60	5300	18.00	24.46	PASS
64	5320	17.94	25.46	PASS
100	5500	18.00	25.92	PASS
116	5580	17.94	25.93	PASS
140	5700	18.06	26.25	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
149	5745	17.94	15.13	PASS
157	5785	18.00	16.62	PASS
165	5825	18.00	15.13	PASS



# 802.11n (40MHz)

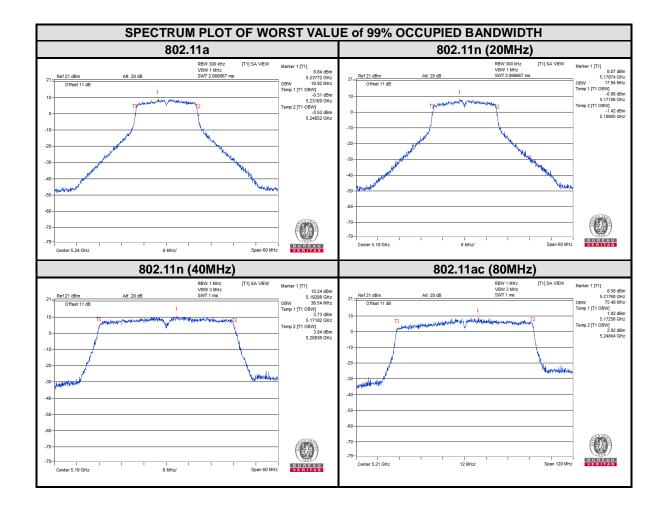
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
38	5190	36.54	42.20	PASS
46	5230	36.54	41.93	PASS
54	5270	36.60	42.03	PASS
62	5310	36.54	42.13	PASS
102	5510	36.60	42.43	PASS
110	5550	36.54	42.32	PASS
134	5670	36.54	42.30	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
151	5755	36.48	35.68	PASS
159	5795	36.60	36.27	PASS

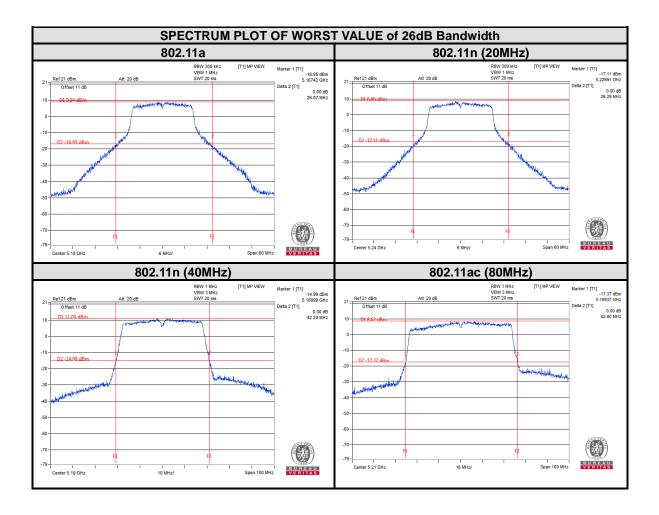
## 802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
42	5210	75.48	82.80	PASS
58	5290	75.72	83.74	PASS
106	5530	75.72	83.33	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
155	5775	75.84	75.21	PASS



#### For U-NII-1:

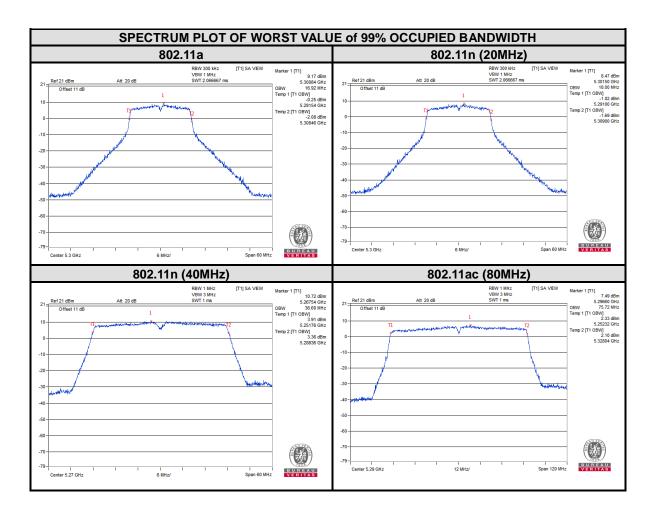


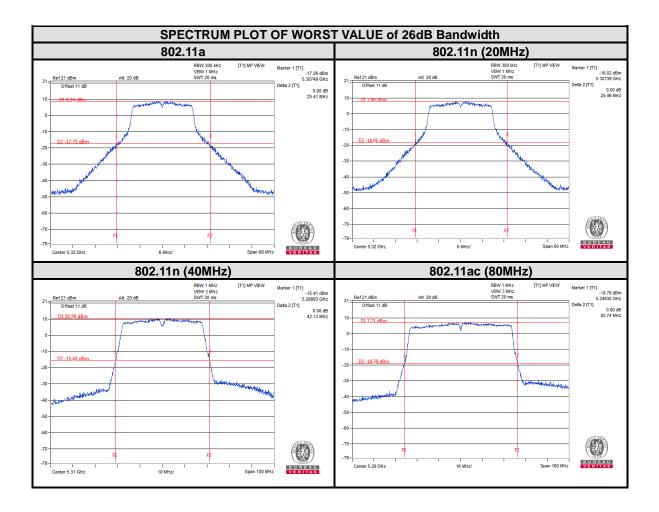


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#### For U-NII-2A:

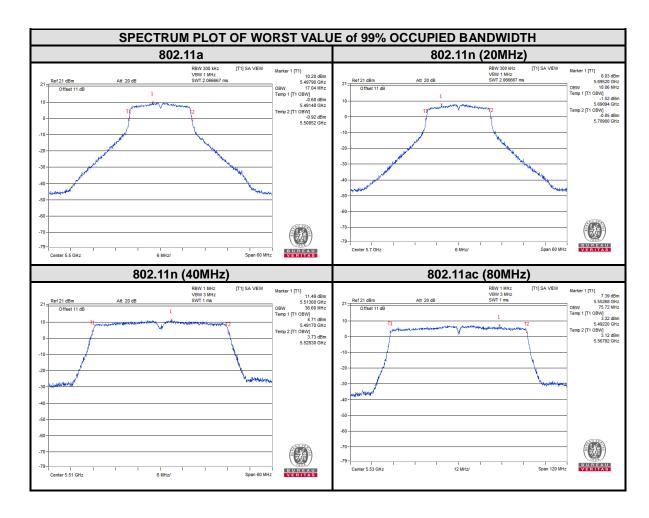


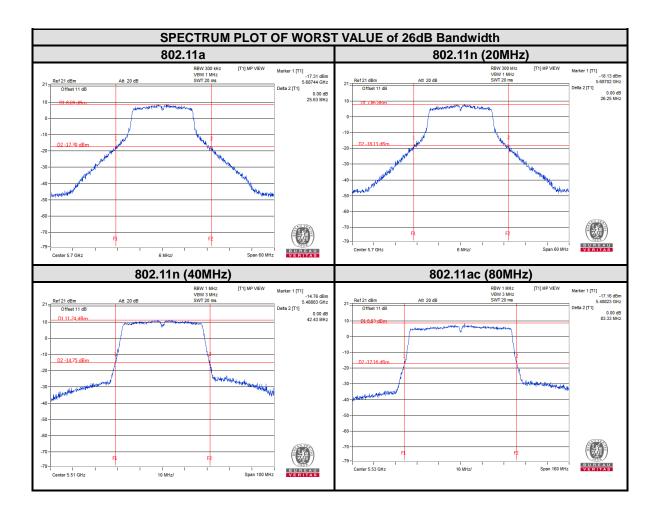


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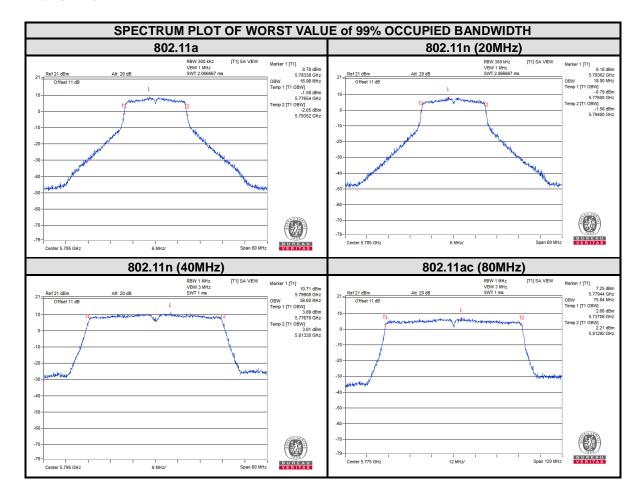
#### For U-NII-2C:





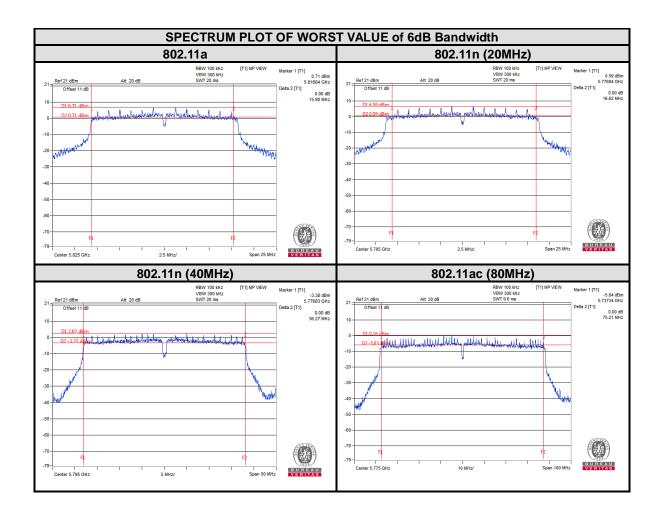


#### For U-NII-3:



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#### 3.4 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

# 3.4.1 LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
		Outdoor Access Point	
11 NIII 4		Fixed point-to-point Access Point	17dBm/ MHz
U-NII-1		Indoor Access Point	
	$\sqrt{}$	Client devices	11dBm/ MHz
U-NII-2A		$\sqrt{}$	11dBm/ MHz
U-NII-2C			11dBm/ MHz
U-NII-3			30dBm/ 500kHz

## 3.4.2 TEST SETUP



#### 3.4.3 **TEST INSTRUMENTS**

Refer to section 3.3.3 to get information of above instrument.



#### 3.4.4 TEST PROCEDURES

Using method SA-2

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

#### 3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.4.6 EUT OPERATING CONDITIONS

Same as 3.1.6.

# 3.4.7 TEST RESULTS

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

#### 802.11a

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
36	5180	4.05	0.25	4.30	11	PASS
40	5200	4.91	0.25	5.16	11	PASS
48	5240	3.90	0.25	4.15	11	PASS
52	5260	4.25	0.25	4.50	11	PASS
60	5300	4.06	0.25	4.31	11	PASS
64	5320	3.96	0.25	4.21	11	PASS
100	5500	3.45	0.25	3.70	11	PASS
116	5580	3.82	0.25	4.07	11	PASS
140	5700	3.00	0.25	3.25	11	PASS

## 802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
36	5180	4.75	0.24	4.99	11	PASS
40	5200	2.88	0.24	3.12	11	PASS
48	5240	3.12	0.24	3.36	11	PASS
52	5260	3.05	0.24	3.29	11	PASS
60	5300	2.74	0.24	2.98	11	PASS
64	5320	3.03	0.24	3.27	11	PASS
100	5500	2.58	0.24	2.82	11	PASS
116	5580	4.60	0.24	4.84	11	PASS
140	5700	2.54	0.24	2.78	11	PASS



# 802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor	PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
38	5190	1.04	0.44	1.48	11	PASS
46	5230	0.74	0.44	1.18	11	PASS
54	5270	0.84	0.44	1.28	11	PASS
62	5310	0.26	0.44	0.7	11	PASS
102	5510	1.38	0.44	1.82	11	PASS
110	5550	1.20	0.44	1.64	11	PASS
134	5670	1.07	0.44	1.51	11	PASS

## 802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	I I ) LITY Factor		PSD with Duty Factor (dBm/MHz)	MAXIMUM LIMIT (dBm/MHz)	PASS/FAIL
42	5210	-2.97	0.88	-2.09	11	PASS
58	5290	-3.01	0.88	-2.13	11	PASS
106	5530	-2.91	0.88	-2.03	11	PASS



## For U-NII-3:

#### 802.11a

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
149	5745	15.24	12.23	0.25	12.48	30	PASS
157	5785	15.30	12.29	0.25	12.54	30	PASS
165	5825	14.76	11.75	0.25	12.00	30	PASS

## 802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
149	5745	14.40	11.39	0.24	11.63	30	PASS
157	5785	14.42	11.41	0.24	11.65	30	PASS
165	5825	13.60	10.59	0.24	10.83	30	PASS

# 802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
151	5755	11.69	8.68	0.44	9.12	30	PASS
159	5795	11.36	8.35	0.44	8.79	30	PASS

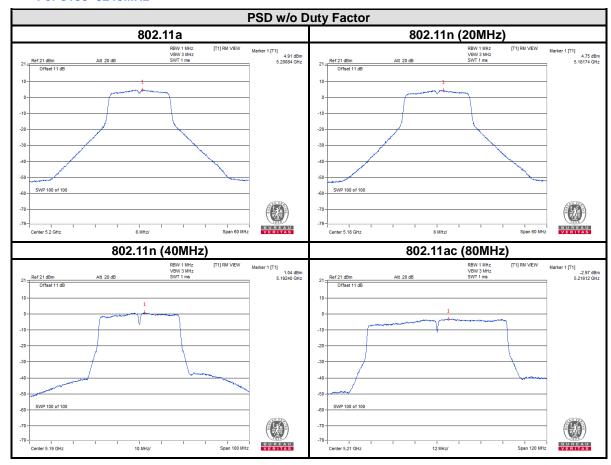
## 802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
155	5775	8.07	5.06	0.88	5.94	30	PASS

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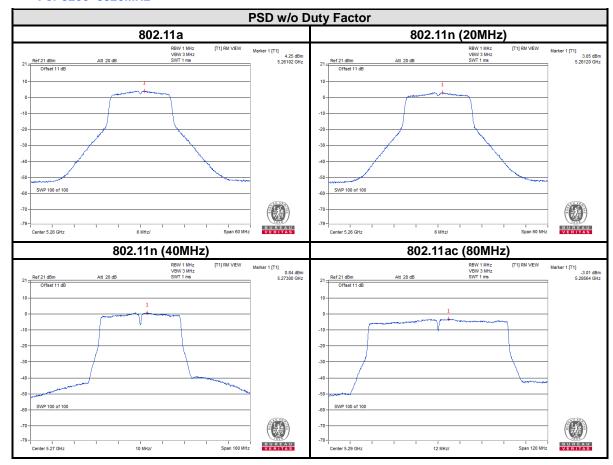
#### For 5180~5240MHz



Email: <a href="mailto:customerservice.dg@cn.bureauveritas.com">customerservice.dg@cn.bureauveritas.com</a>



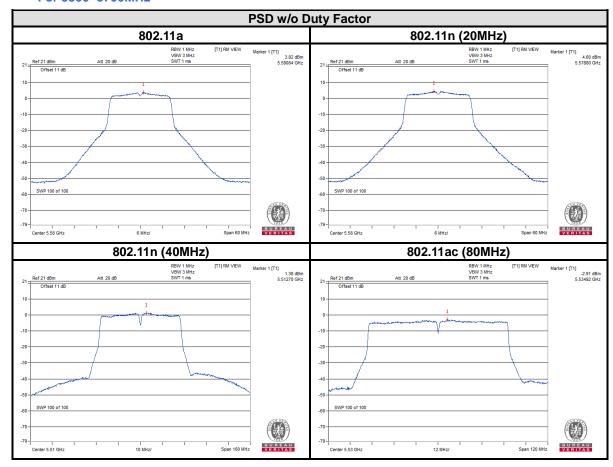
#### For 5260~5320MHz



Email: <a href="mailto:customerservice.dg@cn.bureauveritas.com">customerservice.dg@cn.bureauveritas.com</a>



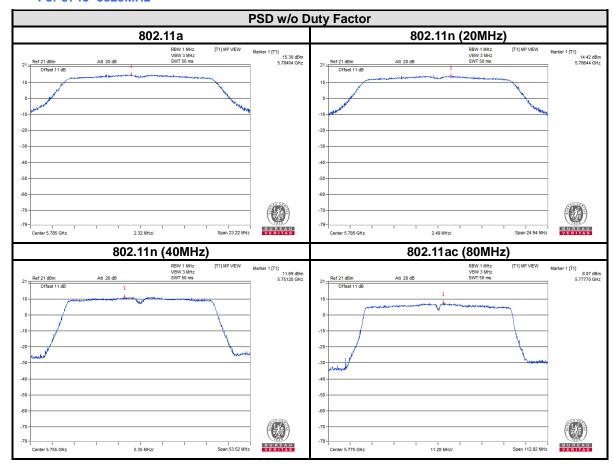
## For 5500~5700MHz



 $\pmb{Email: \underline{customerservice.dg@cn.bureauveritas.com}}\\$ 



## For 5745~5825MHz



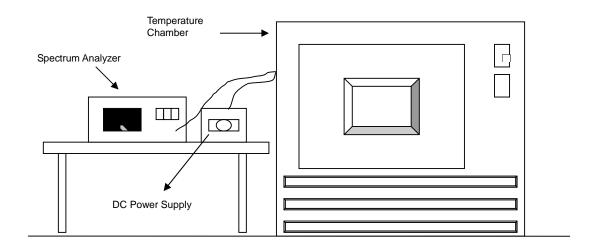
Email: <a href="mailto:customerservice.dg@cn.bureauveritas.com">customerservice.dg@cn.bureauveritas.com</a>

## 3.5 FREQUENCY STABILITY

## 3.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

## 3.5.2 TEST SETUP



#### 3.5.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.5.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

#### 3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.5.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.



# 3.5.7 TEST RESULTS

			FREC	UEMCY STA	ABILITY VER	SUS TEMP.						
OPERATING FREQUENCY: 5180MHz												
O MINUTE 2 MINUTES 5 MINUTES 10 MINUTE										RESULT		
<b>TEMP.</b> (℃)	Supply (Vdc)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)			
50	120	5179.9847	-2.954	5179.9844	-3.012	5179.9878	-2.355	5179.9877	-2.375	PASS		
40	120	5180.0274	5.290	5180.0212	4.093	5180.0248	4.788	5180.0279	5.386	PASS		
30	120	5179.996	-0.772	5179.9949	-0.985	5179.9885	-2.220	5179.9929	-1.371	PASS		
20	120	5180.0092	1.776	5180.0037	0.714	5180.0042	0.811	5180.0103	1.988	PASS		
10	120	5180.0028	0.541	5180.003	0.579	5180.0029	0.560	5180.0023	0.444	PASS		
0	120	5180.0005	0.097	5179.9927	-1.409	5179.9995	-0.097	5179.9959	-0.792	PASS		
-10	120	5179.999	-0.193	5180.0016	0.309	5179.9977	-0.444	5180.0039	0.753	PASS		
-20	120	5180.0166	3.205	5180.0238	4.595	5180.0228	4.402	5180.018	3.475	PASS		
-30	120	5179.9985	-0.290	5180.0008	0.154	5180.0055	1.062	5180.0033	0.637	PASS		

	FREQUEMCY STABILITY VERSUS VOLTAGE											
OPERATING FREQUENCY: 5180MHz												
0 MINUTE 2 MINUTE 5 MINUTE 10 MIN									NUTE	RESULT		
<b>TEMP.</b> (℃)	Power Supply (Vdc)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)			
	138	5180.01	1.931	5180.0041	0.792	5180.006	1.158	5180.0109	2.104	PASS		
20	120	5180.0092	1.776	5180.0037	0.714	5180.0042	0.811	5180.0103	1.988	PASS		
	102	5180.0089	1.718	5180.0042	0.811	5180.0048	0.927	5180.0093	1.795	PASS		



			FREQ	UEMCY STA	ABILITY VER	SUS TEMP.						
OPERATING FREQUENCY: 5825MHz												
	O MINUTE 2 MINUTES 5 MINUTES 10 MINUTE											
<b>TEMP.</b> (℃)	Supply (Vdc)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)			
50	120	5825.0275	4.721	5825.0199	3.416	5825.0282	4.841	5825.0237	4.069	PASS		
40	120	5824.9782	-3.742	5824.9809	-3.279	5824.9838	-2.781	5824.9792	-3.571	PASS		
30	120	5824.9866	-2.300	5824.9883	-2.009	5824.9892	-1.854	5824.9942	-0.996	PASS		
20	120	5824.9764	-4.052	5824.9759	-4.137	5824.9692	-5.288	5824.9712	-4.944	PASS		
10	120	5825.0222	3.811	5825.0214	3.674	5825.0135	2.318	5825.0129	2.215	PASS		
0	120	5824.9944	-0.961	5824.9849	-2.592	5824.9942	-0.996	5824.9861	-2.386	PASS		
-10	120	5824.9939	-1.047	5824.9856	-2.472	5824.9942	-0.996	5824.9833	-2.867	PASS		
-20	120	5825.0158	2.712	5825.0101	1.734	5825.0208	3.571	5825.0173	2.970	PASS		
-30	120	5824.9738	-4.498	5824.9795	-3.519	5824.9769	-3.966	5824.9745	-4.378	PASS		

	FREQUEMCY STABILITY VERSUS VOLTAGE											
OPERATING FREQUENCY: 5825MHz												
	O WINOTE Z WINOTE TO WINOTE									RESULT		
<b>TEMP.</b> (℃)	Power Supply (Vdc)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)			
	138	5824.9779	-3.794	5824.9776	-3.845	5824.9686	-5.391	5824.972	-4.807	PASS		
20	120	5824.9764	-4.052	5824.9759	-4.137	5824.9692	-5.288	5824.9712	-4.944	PASS		
	102	5824.9763	-4.069	5824.9764	-4.052	5824.9698	-5.185	5824.971	-4.979	PASS		



# 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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

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

---END---