

## TEST REPORT



Applicant	Shenzhen Arashi Vision Company Limited
Address	6/F, Building A, Logan Century Center, Haixiu Road, Bao'an District, Shenzhen, China

Manufacturer or Supplier	Shenzhen Arashi Vision Company Limited
Address	6/F, Building A, Logan Century Center, Haixiu Road, Bao'an District, Shenzhen, China
Product Name	Insta360 ONE R
Brand Name	Insta360
Model	CINORAH/A
Additional Model & Model Difference	CINORAH/X (X can be changed with the way change of packing, from B,C,D to Z) see items 3.1
Date of tests	Sep. 19, 2019 ~ Nov. 07, 2019

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

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

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

Tested by Andy Zhu Project Engineer/ EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	 Date: Nov. 15, 2019

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Test Report No.: RF190919N042-2

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF190919N042-2	Original release.	Nov. 15, 2019

## 1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407 UNDER NEW RULE)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit.
15.407(b)(1/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit.
15.407(a)(1/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(1/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
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	2.70dB
Radiated emissions	9KHz ~ 30MHz	2.16dB
	30MHz ~ 1GMHz	3.76dB
	1GHz ~ 18GHz	4.84dB
	18GHz ~ 40GHz	4.96dB

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



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT NAME</b>	Insta360 ONE R
<b>MODEL NO.</b>	CINORAH/A
<b>ADDITIONAL MODEL</b>	CINORAH/X (X can be changed with the way change of packing, from B,C,D to Z)
<b>FCC ID</b>	2AFSH-CINORAH-A
<b>POWER SUPPLY</b>	DC 5V from USB Host Unit or DC 9V from Li-ion Battery
<b>MODULATION TYPE</b>	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	OFDM
<b>TRANSFER RATE</b>	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150.0Mbps 802.11ac : up to 433.3Mbps
<b>OPERATING FREQUENCY</b>	5150MHz ~ 5250MHz, 5725MHz ~ 5850MHz
<b>NUMBER OF CHANNEL</b>	5150MHz ~ 5250MHz: 4 channels for 802.11a, 802.11n (HT20), 11ac (VHT20) 2 channels for 802.11n(HT40), 11ac (VHT40) 1 channel for 802.11ac (VHT80) 5725MHz ~ 5850MHz: 5 channels for 802.11a, 802.11n (HT20), 11ac (VHT20) 2 channels for 802.11n(HT40), 11ac (VHT40) 1 channel for 802.11ac (VHT80)
<b>CONDUCTED OUTPUT POWER</b>	7.86 dBm for 5150 ~ 5250MHz (Maximum AVG Power) 7.32 dBm for 5725 ~ 5850MHz (Maximum AVG Power)
<b>ANTENNA TYPE</b>	5150MHz ~ 5250MHz: Integral antenna, 3.24dBi Gain 5725MHz ~ 5850MHz: Integral antenna, 3.24dBi Gain
<b>I/O PORTS</b>	Refer to user's manual
<b>CABLE SUPPLIED</b>	USB Line: Shielded, Detachable, 80cm



**NOTES:**

1. The EUT have SISO function, provides 1 completed transmitters and 1 receivers.

MODULATION MODE	TX FUNCTION
802.11a	1TX/1RX
802.11n (HT20), 802.11ac (VHT20)	1TX/1RX
802.11n (HT40), 802.11ac (VHT40)	1TX/1RX
802.11ac (VHT80)	1TX/1RX

2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. Please refer to the EUT photo document (Reference No.: 190919N042) for detailed product photo.
5. Additional model (See above table) is identical with the test model CINORAH/A except the packing method and model number for marketing purpose.

## 2.2 DESCRIPTION OF TEST MODES

### FOR 5150 ~ 5250MHz

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

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

2 channels are provided for 802. 11ac (40MHz), 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	5210MHz	--	--

### FOR 5725 ~ 5850MHz

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

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

2 channels are provided for 802. 11ac (40MHz), 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
155	5775MHz	--	--



## 2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	-	-	-	√	Powered by Battery with WIFI function
B	√	√	√	-	Powered by Adapter with with WIFI function

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

**RE<1G**: Radiated Emission below 1GHz

**PLC**: Power Line Conducted Emission

**APCM**: Antenna Port Conducted Measurement

**NOTE:**

1. 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)
B	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
	802.11ac 80MHz		42	42	OFDM	BPSK	29.3
	802.11a	5725-5850	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5
	802.11ac 80MHz		155	155	OFDM	BPSK	29.3

### 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)
B	802.11a	5150-5250 5725-5850	36 to 48 149 to 165	36	OFDM	BPSK	6.0

#### 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)
B	802.11a	5150-5250 5725-5850	36 to 48 149 to 165	36	OFDM	BPSK	6.0

#### 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)
A	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
	802.11ac 80MHz		42	42	OFDM	BPSK	29.3
	802.11a	5725-5850	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5
	802.11ac 80MHz		155	155	OFDM	BPSK	29.3

#### TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	24deg. C, 55%RH	DC 5V from USB	Cheng Zhong
RE≥1G	24deg. C, 55%RH	DC 5V from USB	Cheng Zhong
PLC	20deg. C, 56%RH	DC 5V from USB	Dragon
APCM	20deg. C, 55%RH	DC 9V from Fully Battery	Sen He



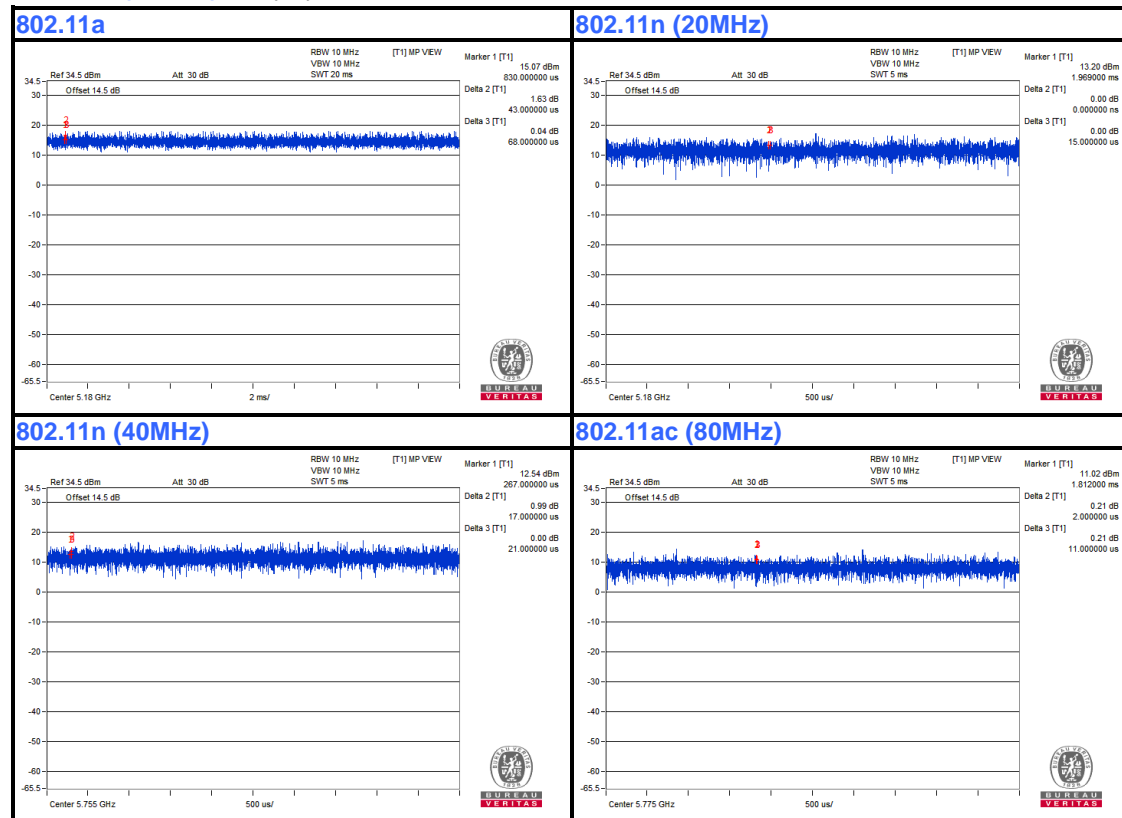
## 2.3 DUTY CYCLE OF TEST SIGNAL

**802.11a:** Duty cycle = 100 %

**802.11n (20MHz):** Duty cycle =100 %

**802.11n (40MHz):** Duty cycle =100 %

**802.11ac (80MHz):** Duty cycle =100 %



## 2.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	Lenovo	C-P30	N/A	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

## 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

**FCC Part 15, Subpart E (15.407)**

**789033 D02 General UNII Test Procedures New Rules v01r03**

**KDB 662911 D01 v02r01**

**ANSI C63.10-2013**

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

### 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 30dB under any condition of modulation.

### 3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedures New Rules v01r03	FIELD STRENGTH AT 3m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	Note	Note

**NOTE:** For transmitters operating in the 5.725-5.85 GHz band:

Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

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



### 3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU40	100449	Mar. 21,19	Mar. 20,20
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Mar. 21,19	Mar. 20,20
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 28, 19	Jul. 27, 20
Horn Antenna	ETS-Lindgren	3117	00062558	Jul. 02,19	Jul. 01,20
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Feb. 10,19	Feb. 09,20
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	May 05,19	May 04,20
Amplifier	Burgeon	BPA-530	100220	Apr. 18,19	Apr. 18,20
Broadband Preamplifier (1GHz~18GHz)	SCHWARZBECK	BBV9718	305	Apr. 18,19	Apr. 18,20
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 08,19	Nov. 07,20
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A

**NOTE:**

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to CEPREI/CHINA, GREGT/CHINA and NIM/CHINA.
2. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
3. The FCC Site Registration No. is 749762.

### 3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. 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 Quasi-peak detection 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  $\geq 1/T$  (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) 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

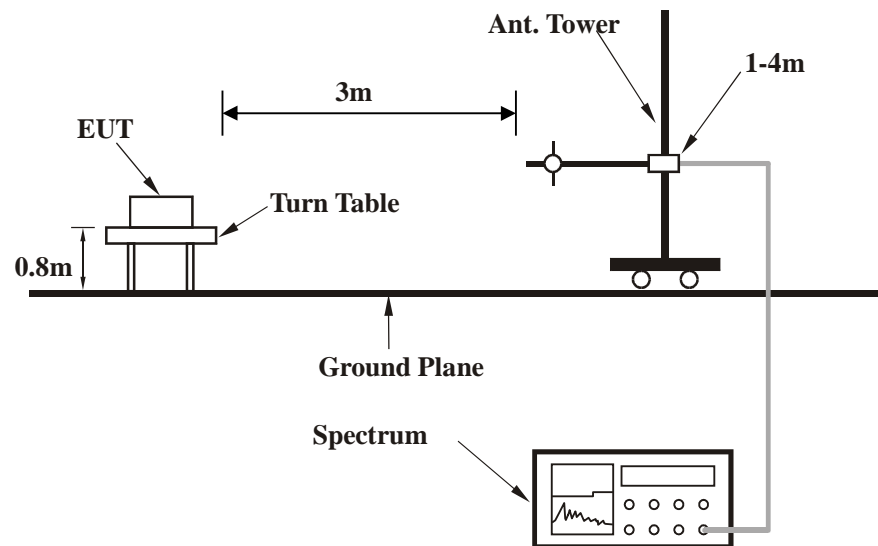
No deviation.





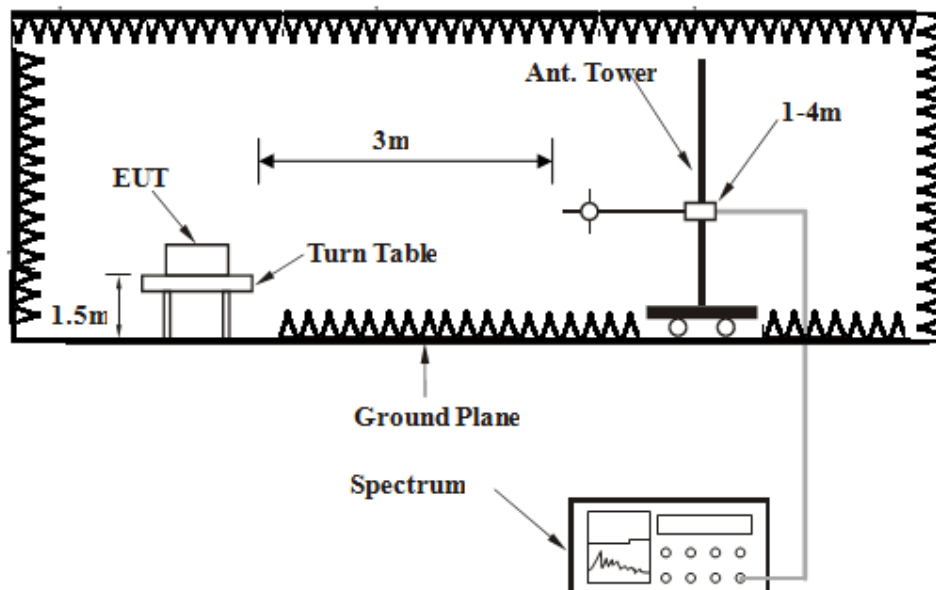
### 3.1.6 TEST SETUP

#### Below 1GHz test setup



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

#### Above 1GHz test setup



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



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### 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 FTEST RESULTS

## BELOW 1GHz WORST-CASE DATA

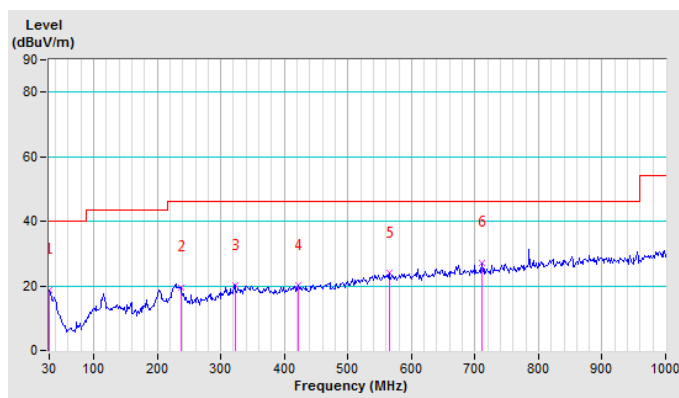
## 802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	18.85 QP	40.00	-21.15	1.00 H	197	30.05	-11.20
2	236.75	19.60 QP	46.00	-26.40	1.00 H	228	35.71	-16.11
3	322.24	20.14 QP	46.00	-25.86	1.00 H	150	31.14	-11.00
4	421.73	20.31 QP	46.00	-25.69	1.00 H	183	29.17	-8.86
5	564.74	24.05 QP	46.00	-21.95	1.00 H	172	29.31	-5.26
6	710.87	27.26 QP	46.00	-18.74	1.00 H	161	30.42	-3.16

## 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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.

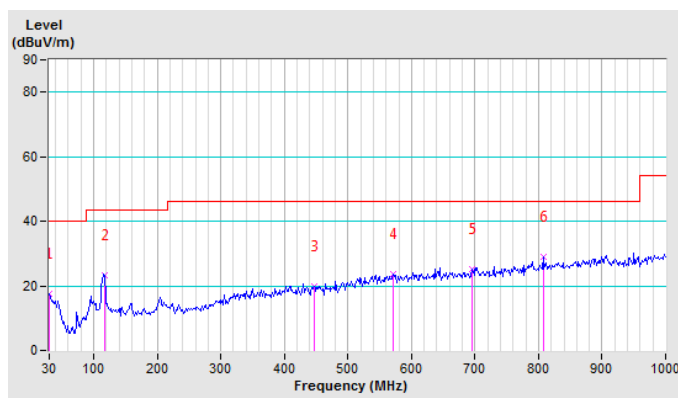


<b>CHANNEL</b>	TX Channel 36	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	17.42 QP	40.00	-22.58	1.00 V	192	28.62	-11.20
2	117.05	23.41 QP	43.50	-20.09	1.00 V	47	40.49	-17.08
3	446.60	19.70 QP	46.00	-26.30	1.00 V	122	28.19	-8.49
4	570.96	23.60 QP	46.00	-22.40	1.00 V	208	28.66	-5.06
5	695.32	25.08 QP	46.00	-20.92	1.00 V	242	28.76	-3.68
6	807.24	28.84 QP	46.00	-17.16	1.00 V	301	30.14	-1.30

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.



Band 1 (5150-5250MHz):

ABOVE 1GHz DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.34 PK	74.00	-25.66	1.58 H	355	41.88	6.46
2	5150.00	34.44 AV	54.00	-19.56	1.58 H	355	27.98	6.46
3	*5180.00	99.63 PK			1.58 H	355	93.17	6.46
4	*5180.00	73.42 AV			1.58 H	355	66.96	6.46
5	#10360.00	54.26 PK	74.00	-19.74	1.54 H	265	38.63	15.63
6	#10360.00	41.26 AV	54.00	-12.74	1.54 H	265	25.63	15.63
7	15540.00	58.26 PK	74.00	-15.74	1.47 H	320	36.24	22.02
8	15540.00	47.26 AV	54.00	-6.74	1.47 H	320	25.24	22.02
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.17 PK	74.00	-19.83	2.10 V	163	47.71	6.46
2	5150.00	37.48 AV	54.00	-16.52	2.10 V	163	31.02	6.46
3	*5180.00	109.93 PK			2.10 V	163	103.47	6.46
4	*5180.00	80.55 AV			2.10 V	163	74.09	6.46
5	#10360.00	53.62 PK	74.00	-20.38	1.00 V	236	37.99	15.63
6	#10360.00	41.26 AV	54.00	-12.74	1.00 V	236	25.63	15.63
7	15540.00	58.26 PK	74.00	-15.74	1.85 V	264	36.24	22.02
8	15540.00	48.15 AV	54.00	-5.85	1.85 V	264	26.13	22.02

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.93 PK	74.00	-25.07	1.24 H	256	42.47	6.46
2	5150.00	33.93 AV	54.00	-20.07	1.24 H	256	27.47	6.46
3	*5200.00	100.46 PK			1.57 H	335	94.00	6.46
4	*5200.00	90.42 AV			1.57 H	335	83.96	6.46
5	5350.00	44.66 PK	74.00	-29.34	2.15 H	315	38.19	6.47
6	5350.00	32.46 AV	54.00	-21.54	2.15 H	315	25.99	6.47
7	#10400.00	51.69 PK	74.00	-22.31	1.84 H	301	35.94	15.75
8	#10400.00	32.14 AV	54.00	-21.86	1.84 H	301	16.39	15.75
9	15600.00	58.46 PK	74.00	-15.54	1.30 H	227	36.25	22.21
10	15600.00	47.62 AV	54.00	-6.38	1.30 H	227	25.41	22.21
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.83 PK	74.00	-25.17	1.45 V	360	42.37	6.46
2	5150.00	37.45 AV	54.00	-16.55	1.45 V	360	30.99	6.46
3	*5200.00	105.59 PK			N/A V	N/A	99.13	6.46
4	*5200.00	95.95 AV			N/A V	N/A	89.49	6.46
5	5350.00	44.94 PK	74.00	-29.06	1.89 V	246	38.47	6.47
6	5350.00	32.37 AV	54.00	-21.63	1.89 V	246	25.90	6.47
7	#10400.00	52.14 PK	74.00	-21.86	1.45 V	320	36.39	15.75
8	#10400.00	42.00 AV	54.00	-12.00	1.45 V	320	26.25	15.75
9	15600.00	58.63 PK	74.00	-15.37	1.00 V	46	36.42	22.21
10	15600.00	47.85 AV	54.00	-6.15	1.00 V	46	25.64	22.21

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	105.23 PK			1.60 H	17	98.77	6.46
2	*5240.00	95.14 AV			1.60 H	17	88.68	6.46
3	5350.00	45.19 PK	74.00	-28.81	1.56 H	18	38.72	6.47
4	5350.00	33.13 AV	54.00	-20.87	1.56 H	18	26.66	6.47
5	#10480.00	51.68 PK	74.00	-22.32	1.42 H	36	35.71	15.97
6	#10480.00	41.74 AV	54.00	-12.26	1.42 H	36	25.77	15.97
7	15720.00	58.62 PK	74.00	-15.38	1.00 H	147	36.04	22.58
8	15720.00	48.23 AV	54.00	-5.77	1.00 H	147	25.65	22.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	108.25 PK			2.39 V	22	101.79	6.46
2	*5240.00	97.60 AV			2.39 V	22	91.14	6.46
3	5350.00	46.94 PK	74.00	-27.06	2.38 V	264	40.47	6.47
4	5350.00	35.02 AV	54.00	-18.98	2.38 V	264	28.55	6.47
5	#10480.00	51.26 PK	74.00	-22.74	2.69 V	168	35.29	15.97
6	#10480.00	42.47 AV	54.00	-11.53	2.69 V	168	26.50	15.97
7	15720.00	57.69 PK	74.00	-16.31	1.57 V	42	35.11	22.58
8	15720.00	46.75 AV	54.00	-7.25	1.57 V	42	24.17	22.58

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	47.03 PK	74.00	-26.97	1.72 H	265	40.57	6.46
2	5150.00	35.20 AV	54.00	-18.80	1.72 H	265	28.74	6.46
3	*5180.00	102.26 PK			1.71 H	265	95.80	6.46
4	*5180.00	92.22 AV			1.71 H	265	85.76	6.46
5	#10360.00	51.28 PK	74.00	-22.72	1.54 H	231	35.65	15.63
6	#10360.00	42.69 AV	54.00	-11.31	1.54 H	231	27.06	15.63
7	15540.00	58.63 PK	74.00	-15.37	1.42 H	332	36.61	22.02
8	15540.00	47.62 AV	54.00	-6.38	1.42 H	332	25.60	22.02
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	50.58 PK	74.00	-23.42	2.64 V	164	44.12	6.46
2	5150.00	39.10 AV	54.00	-14.90	2.64 V	164	32.64	6.46
3	*5180.00	109.01 PK			2.61 V	169	102.55	6.46
4	*5180.00	98.96 AV			2.61 V	169	92.50	6.46
5	#10360.00	51.47 PK	74.00	-22.53	2.14 V	241	35.84	15.63
6	#10360.00	40.26 AV	54.00	-13.74	2.14 V	241	24.63	15.63
7	15540.00	57.58 PK	74.00	-16.42	1.65 V	228	35.56	22.02
8	15540.00	48.62 AV	54.00	-5.38	1.65 V	228	26.60	22.02

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	47.01 PK	74.00	-26.99	2.15 H	360	40.55	6.46
2	5150.00	31.87 AV	54.00	-22.13	2.15 H	360	25.41	6.46
3	*5200.00	98.12 PK			2.52 H	276	91.66	6.46
4	*5200.00	88.39 AV			2.52 H	276	81.93	6.46
5	5350.00	44.33 PK	74.00	-29.67	2.11 H	187	37.86	6.47
6	5350.00	32.12 AV	54.00	-21.88	2.11 H	187	25.65	6.47
7	#10400.00	50.26 PK	74.00	-23.74	1.54 H	58	34.51	15.75
8	#10400.00	39.14 AV	54.00	-14.86	1.54 H	58	23.39	15.75
9	15600.00	57.26 PK	74.00	-16.74	1.27 H	147	35.05	22.21
10	15600.00	46.36 AV	54.00	-7.64	1.27 H	147	24.15	22.21
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.12 PK	74.00	-25.88	2.45 V	241	41.66	6.46
2	5150.00	36.27 AV	54.00	-17.73	2.45 V	241	29.81	6.46
3	*5200.00	109.61 PK			1.54 V	226	103.15	6.46
4	*5200.00	99.27 AV			1.54 V	226	92.81	6.46
5	5350.00	46.93 PK	74.00	-27.07	1.57 V	246	40.46	6.47
6	5350.00	34.00 AV	54.00	-20.00	1.57 V	246	27.53	6.47
7	#10400.00	51.69 PK	74.00	-22.31	1.45 V	336	35.94	15.75
8	#10400.00	41.27 AV	54.00	-12.73	1.45 V	336	25.52	15.75
9	15600.00	58.36 PK	74.00	-15.64	1.52 V	227	36.15	22.21
10	15600.00	47.26 AV	54.00	-6.74	1.52 V	227	25.05	22.21

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	99.87 PK			2.30 H	334	93.41	6.46
2	*5240.00	89.74 AV			2.30 H	334	83.28	6.46
3	5350.00	45.31 PK	74.00	-28.69	2.36 H	234	38.84	6.47
4	5350.00	32.25 AV	54.00	-21.75	2.36 H	234	25.78	6.47
5	#10480.00	49.36 PK	74.00	-24.64	1.00 H	142	33.39	15.97
6	#10480.00	38.15 AV	54.00	-15.85	1.00 H	142	22.18	15.97
7	15720.00	57.26 PK	74.00	-16.74	1.78 H	254	34.68	22.58
8	15720.00	46.25 AV	54.00	-7.75	1.78 H	254	23.67	22.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	99.87 PK			2.30 H	334	93.41	6.46
2	*5240.00	89.74 AV			2.30 H	334	83.28	6.46
3	5350.00	45.31 PK	74.00	-28.69	2.36 H	234	38.84	6.47
4	5350.00	32.25 AV	54.00	-21.75	2.36 H	234	25.78	6.47
5	#10480.00	49.36 PK	74.00	-24.64	1.00 H	142	33.39	15.97
6	#10480.00	38.15 AV	54.00	-15.85	1.00 H	142	22.18	15.97
7	15720.00	57.26 PK	74.00	-16.74	1.78 H	254	34.68	22.58
8	15720.00	46.25 AV	54.00	-7.75	1.78 H	254	23.67	22.58

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.64 PK	74.00	-13.36	2.14 H	15	54.18	6.46
2	5150.00	42.37 AV	54.00	-11.63	2.14 H	15	35.91	6.46
3	*5190.00	101.23 PK			1.65 H	17	94.76	6.47
4	*5190.00	90.64 AV			1.65 H	17	84.17	6.47
5	#10380.00	51.54 PK	74.00	-22.46	1.00 H	256	35.84	15.70
6	#10380.00	42.36 AV	54.00	-11.64	1.00 H	256	26.66	15.70
7	15570.00	57.26 PK	74.00	-16.74	2.45 H	145	35.15	22.11
8	15570.00	48.26 AV	54.00	-5.74	2.45 H	145	26.15	22.11
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.74 PK	74.00	-13.26	2.46 V	132	54.28	6.46
2	5150.00	42.84 AV	54.00	-11.16	2.46 V	132	36.38	6.46
3	*5190.00	102.17 PK			2.39 V	128	95.70	6.47
4	*5190.00	91.57 AV			2.39 V	128	85.10	6.47
5	#10380.00	51.26 PK	74.00	-22.74	1.54 V	41	35.56	15.70
6	#10380.00	40.26 AV	54.00	-13.74	1.54 V	41	24.56	15.70
7	15570.00	56.26 PK	74.00	-17.74	1.54 V	117	34.15	22.11
8	15570.00	44.28 AV	54.00	-9.72	1.54 V	117	22.17	22.11

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	95.26 PK			2.45 H	217	88.79	6.47
2	*5230.00	87.26 AV			2.45 H	217	80.79	6.47
3	5350.00	48.26 PK	74.00	-25.74	1.57 H	229	41.79	6.47
4	5350.00	31.26 AV	54.00	-22.74	1.57 H	229	24.79	6.47
5	#10460.00	51.22 PK	74.00	-22.78	2.54 H	336	35.30	15.92
6	#10460.00	41.25 AV	54.00	-12.75	2.54 H	336	25.33	15.92
7	15690.00	56.37 PK	74.00	-17.63	1.75 H	285	33.88	22.49
8	15690.00	47.26 AV	54.00	-6.74	1.75 H	285	24.77	22.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	102.42 PK			2.65 V	213	95.95	6.47
2	*5230.00	91.70 AV			2.65 V	213	85.23	6.47
3	5350.00	47.45 PK	74.00	-26.55	2.65 V	248	40.98	6.47
4	5350.00	34.62 AV	54.00	-19.38	2.65 V	248	28.15	6.47
5	#10460.00	49.36 PK	74.00	-24.64	1.00 V	241	33.44	15.92
6	#10460.00	37.26 AV	54.00	-16.74	1.00 V	241	21.34	15.92
7	15690.00	57.26 PK	74.00	-16.74	1.00 V	256	34.77	22.49
8	15690.00	47.26 AV	54.00	-6.74	1.00 V	256	24.77	22.49

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (80MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.26 PK	74.00	-19.74	1.00 H	145	47.80	6.46
2	5150.00	41.26 AV	54.00	-12.74	1.00 H	145	34.80	6.46
3	*5210.00	94.25 PK			1.54 H	229	87.78	6.47
4	*5210.00	80.62 AV			1.54 H	229	74.15	6.47
5	#10420.00	52.26 PK	74.00	-21.74	1.87 H	55	36.45	15.81
6	#10420.00	41.26 AV	54.00	-12.74	1.87 H	55	25.45	15.81
7	15630.00	57.65 PK	74.00	-16.35	1.54 H	226	35.35	22.30
8	15630.00	48.26 AV	54.00	-5.74	1.54 H	226	25.96	22.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.10 PK	74.00	-15.90	2.23 V	24	51.64	6.46
2	5150.00	43.23 AV	54.00	-10.77	2.23 V	24	36.77	6.46
3	*5210.00	98.62 PK			2.47 V	244	92.15	6.47
4	*5210.00	83.87 AV			2.47 V	244	77.40	6.47
5	#10420.00	51.26 PK	74.00	-22.74	1.00 V	145	35.45	15.81
6	#10420.00	40.26 AV	54.00	-13.74	1.00 V	145	24.45	15.81
7	15630.00	57.58 PK	74.00	-16.42	2.10 V	227	35.28	22.30
8	15630.00	46.25 AV	54.00	-7.75	2.10 V	227	23.95	22.30

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band 4 (5725-5850MHz):

ABOVE 1GHz DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	45.39 PK	68.2	-22.81	2.05 H	249	35.59	9.80
2	#5700.00	61.44 PK	105.2	-43.76	2.05 H	249	51.37	10.07
3	#5720.00	69.72 PK	110.8	-41.08	2.05 H	249	59.54	10.18
4	#5725.00	75.57 PK	122.2	-48.63	2.05 H	249	65.37	10.20
5	*5745.00	103.92 PK			2.45 H	226	96.85	7.07
6	*5745.00	94.44 AV			2.45 H	226	87.37	7.07
7	11490.00	59.79 PK	74.00	-14.21	1.45 H	230	42.28	17.51
8	11490.00	40.63 AV	54.00	-13.37	1.45 H	230	23.12	17.51
9	#17235.00	59.15 PK	74.00	-14.85	1.55 H	175	33.55	25.60
10	#17235.00	48.32 AV	54.00	-5.68	1.55 H	175	22.72	25.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	47.65 PK	68.2	-20.55	1.00 V	24	37.85	9.80
2	#5700.00	63.47 PK	105.2	-41.73	1.00 V	24	53.40	10.07
3	#5720.00	70.75 PK	110.8	-40.05	1.00 V	24	60.57	10.18
4	#5725.00	68.57 PK	122.2	-53.63	1.00 V	24	58.37	10.20
5	*5745.00	104.88 PK			1.84 V	264	97.81	7.07
6	*5745.00	94.27 AV			1.84 V	264	87.20	7.07
7	11490.00	53.17 PK	74.00	-20.83	1.00 V	134	35.66	17.51
8	11490.00	40.44 AV	54.00	-13.56	1.00 V	134	22.93	17.51
9	#17235.00	59.85 PK	74.00	-14.15	1.00 V	225	34.25	25.60
10	#17235.00	48.35 AV	54.00	-5.65	1.00 V	225	22.75	25.60

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	41.74 PK	68.2	-26.46	3.96 H	67	31.94	9.80
2	#5700.00	48.58 PK	105.2	-56.62	3.96 H	67	38.51	10.07
3	#5720.00	55.59 PK	110.8	-55.21	3.96 H	67	45.41	10.18
4	#5725.00	57.30 PK	122.2	-64.90	3.96 H	67	47.10	10.20
5	*5785.00	103.12 PK			1.00 H	264	95.96	7.16
6	*5785.00	93.83 AV			1.00 H	264	86.67	7.16
7	#5850.00	53.74 PK	122.2	-68.46	3.96 H	67	42.86	10.88
8	#5855.00	55.99 PK	110.8	-54.81	3.96 H	67	45.09	10.90
9	#5875.00	47.79 PK	105.2	-57.41	3.96 H	67	36.78	11.01
10	#5925.00	45.05 PK	68.2	-23.15	3.96 H	67	33.77	11.28
11	11570.00	55.13 PK	74.00	-18.87	1.42 H	210	37.51	17.62
12	11570.00	42.65 AV	54.00	-11.35	1.42 H	210	25.03	17.62
13	#17355.00	59.14 PK	74.00	-14.86	1.25 H	235	33.43	25.71
14	#17355.00	47.56 AV	54.00	-6.44	1.25 H	235	21.85	25.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
1	#5650.00	46.75 PK	68.2	-21.45	1.00 V	48	36.95	9.80
2	#5700.00	52.73 PK	105.2	-52.47	1.00 V	48	42.66	10.07
3	#5720.00	58.60 PK	110.8	-52.20	1.90 V	48	48.42	10.18
4	#5725.00	59.58 PK	122.2	-62.62	2.72 V	48	49.38	10.20
5	*5785.00	104.17 PK			1.42 V	256	97.01	7.16
6	*5785.00	94.46 AV			1.42 V	256	87.30	7.16
7	#5850.00	57.71 PK	122.2	-64.49	1.00 V	48	46.83	10.88
8	#5855.00	59.19 PK	110.8	-51.61	1.00 V	48	48.29	10.90
9	#5875.00	52.99 PK	105.2	-52.21	1.00 V	48	41.98	11.01
10	#5925.00	48.94 PK	68.2	-19.26	1.00 V	48	37.66	11.28
11	11570.00	55.26 PK	74.00	-18.74	1.45 V	302	37.64	17.62
12	11570.00	42.69 AV	54.00	-11.31	1.45 V	302	25.07	17.62
13	#17355.00	58.76 PK	74.00	-15.24	1.00 V	226	33.05	25.71
14	#17355.00	48.65 AV	54.00	-5.35	1.00 V	226	22.94	25.71

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	103.98 PK			1.54 H	229	96.72	7.26
2	*5825.00	93.82 AV			1.54 H	229	86.56	7.26
3	#5850.00	71.22 PK	122.2	-50.98	3.96 H	278	60.34	10.88
4	#5855.00	67.43 PK	110.8	-43.37	3.96 H	278	56.53	10.90
5	#5875.00	55.34 PK	105.2	-49.86	3.96 H	278	44.33	11.01
6	#5925.00	48.53 PK	68.2	-19.67	3.96 H	278	37.25	11.28
7	11650.00	54.69 PK	74.00	-19.31	1.00 H	174	36.95	17.74
8	11650.00	42.62 AV	54.00	-11.38	1.00 H	174	24.88	17.74
9	#17475.00	59.24 PK	74.00	-14.76	1.00 H	114	33.41	25.83
10	#17475.00	48.62 AV	54.00	-5.38	1.00 H	114	22.79	25.83
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	102.17 PK			1.74 V	263	94.91	7.26
2	*5825.00	92.09 AV			1.74 V	263	84.83	7.26
3	#5850.00	72.07 PK	122.2	-40.13	3.96 V	28	61.19	10.88
4	#5855.00	69.00 PK	110.8	-31.80	3.96 V	28	58.10	10.90
5	#5875.00	65.98 PK	105.2	-39.22	3.96 V	28	54.97	11.01
6	#5925.00	48.69 PK	68.2	-19.51	3.96 V	28	37.41	11.28
7	11650.00	53.26 PK	74.00	-20.74	1.00 V	221	35.52	17.74
8	11650.00	42.36 AV	54.00	-11.64	1.00 V	221	24.62	17.74
9	#17475.00	59.54 PK	74.00	-14.46	1.00 V	145	33.71	25.83
10	#17475.00	49.52 AV	54.00	-4.48	1.00 V	145	23.69	25.83

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	43.28 PK	68.2	-24.92	3.96 H	247	33.48	9.80
2	#5700.00	59.87 PK	105.2	-45.33	3.96 H	247	49.80	10.07
3	#5720.00	66.05 PK	110.8	-44.75	3.96 H	247	55.87	10.18
4	#5725.00	74.72 PK	122.2	-47.48	3.96 H	247	64.52	10.20
5	*5745.00	102.59 PK			1.25 H	254	95.52	7.07
6	*5745.00	93.04 AV			1.25 H	254	85.97	7.07
7	11490.00	51.67 PK	74.00	-22.33	1.54 H	229	34.16	17.51
8	11490.00	40.69 AV	54.00	-13.31	1.54 H	229	23.18	17.51
9	#17235.00	57.26 PK	74.00	-16.74	1.42 H	255	31.66	25.60
10	#17235.00	48.62 AV	54.00	-5.38	1.42 H	255	23.02	25.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	36.90 PK	68.2	-31.30	3.96 V	25	27.10	9.80
2	#5700.00	46.99 PK	105.2	-58.21	3.96 V	25	36.92	10.07
3	#5720.00	63.11 PK	110.8	-47.69	3.96 V	25	52.93	10.18
4	#5725.00	75.63 PK	122.2	-46.57	3.96 V	25	65.43	10.20
5	*5745.00	100.78 PK			2.10 V	175	93.71	7.07
6	*5745.00	90.80 AV			2.10 V	175	83.73	7.07
7	11490.00	52.32 PK	74.00	-21.68	1.00 V	142	34.81	17.51
8	11490.00	41.59 AV	54.00	-12.41	1.00 V	142	24.08	17.51
9	#17235.00	57.65 PK	74.00	-16.35	1.00 V	264	32.05	25.60
10	#17235.00	46.58 AV	54.00	-7.42	1.00 V	264	20.98	25.60

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	42.97 PK	68.2	-25.23	3.96 H	279	33.17	9.80
2	#5700.00	51.10 PK	105.2	-54.10	3.96 H	279	41.03	10.07
3	#5720.00	57.92 PK	110.8	-52.88	3.96 H	279	47.74	10.18
4	#5725.00	59.56 PK	122.2	-62.64	3.96 H	279	49.36	10.20
5	*5785.00	105.95 PK			1.28 H	117	98.79	7.16
6	*5785.00	96.26 AV			1.28 H	117	89.10	7.16
7	#5850.00	56.09 PK	122.2	-66.11	3.96 H	279	45.21	10.88
8	#5855.00	53.74 PK	110.8	-57.06	3.96 H	279	42.84	10.90
9	#5875.00	47.92 PK	105.2	-57.28	3.96 H	279	36.91	11.01
10	#5925.00	45.61 PK	68.2	-22.59	3.96 H	279	34.33	11.28
11	11570.00	52.36 PK	74.00	-21.64	1.00 H	142	34.74	17.62
12	11570.00	32.47 AV	54.00	-21.53	1.00 H	142	14.85	17.62
13	#17355.00	58.62 PK	74.00	-15.38	1.54 H	274	32.91	25.71
14	#17355.00	47.65 AV	54.00	-6.35	1.54 H	274	21.94	25.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
1	#5650.00	42.56 PK	68.2	-25.64	3.96 V	59	32.76	9.80
2	#5700.00	47.02 PK	105.2	-58.18	3.96 V	59	36.95	10.07
3	#5720.00	53.24 PK	110.8	-57.56	3.96 V	59	43.06	10.18
4	#5725.00	55.16 PK	122.2	-67.04	3.96 V	59	44.96	10.20
5	*5785.00	101.66 PK			2.42 V	196	94.50	7.16
6	*5785.00	91.63 AV			2.42 V	196	84.47	7.16
7	#5850.00	54.52 PK	122.2	-67.68	3.96 V	59	43.64	10.88
8	#5855.00	51.30 PK	110.8	-59.50	3.96 V	59	40.40	10.90
9	#5875.00	47.13 PK	105.2	-58.07	3.96 V	59	36.12	11.01
10	#5925.00	44.95 PK	68.2	-23.25	3.96 V	59	33.67	11.28
11	11570.00	52.15 PK	74.00	-21.85	1.04 V	124	34.53	17.62
12	11570.00	41.69 AV	54.00	-12.31	1.04 V	124	24.07	17.62
13	#17355.00	57.69 PK	74.00	-16.31	2.01 V	154	31.98	25.71
14	#17355.00	48.36 AV	54.00	-5.64	2.01 V	154	22.65	25.71

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	103.07 PK			1.54 H	156	95.81	7.26
2	*5825.00	93.56 AV			1.54 H	156	86.30	7.26
3	#5850.00	62.13 PK	122.2	-60.07	3.96 H	273	51.25	10.88
4	#5855.00	55.15 PK	110.8	-55.65	3.96 H	273	44.25	10.90
5	#5875.00	43.98 PK	105.2	-61.22	3.96 H	273	32.97	11.01
6	#5925.00	39.20 PK	68.2	-29.00	3.96 H	273	27.92	11.28
7	11650.00	51.26 PK	74.00	-22.74	1.00 H	145	33.52	17.74
8	11650.00	32.36 AV	54.00	-21.64	1.00 H	145	14.62	17.74
9	#17475.00	58.36 PK	74.00	-15.64	1.00 H	214	32.53	25.83
10	#17475.00	47.64 AV	54.00	-6.36	1.00 H	214	21.81	25.83
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	102.02 PK			1.84 V	321	94.76	7.26
2	*5825.00	92.45 AV			1.84 V	321	85.19	7.26
3	#5850.00	70.31 PK	122.2	-51.89	3.96 V	36	59.43	10.88
4	#5855.00	67.07 PK	110.8	-43.73	3.96 V	36	56.17	10.90
5	#5875.00	56.31 PK	105.2	-48.89	3.96 V	36	45.30	11.01
6	#5925.00	45.46 PK	68.2	-22.74	3.96 V	36	34.18	11.28
7	11650.00	51.47 PK	74.00	-22.53	1.00 V	142	33.73	17.74
8	11650.00	41.69 AV	54.00	-12.31	1.00 V	142	23.95	17.74
9	#17475.00	59.26 PK	74.00	-14.74	1.00 V	147	33.43	25.83
10	#17475.00	49.25 AV	54.00	-4.75	1.00 V	147	23.42	25.83

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	56.62 PK	68.2	-11.58	3.96 H	246	46.82	9.80
2	#5700.00	66.06 PK	105.2	-39.14	3.96 H	246	55.99	10.07
3	#5720.00	65.94 PK	110.8	-44.86	3.96 H	246	65.76	10.18
4	#5725.00	77.14 PK	122.2	-45.06	3.96 H	246	66.94	10.20
5	*5755.00	102.76 PK			1.45 H	353	95.67	7.09
6	*5755.00	92.17 AV			1.45 H	353	85.08	7.09
7	11510.00	52.36 PK	74.00	-21.64	1.00 H	145	34.82	17.54
8	11510.00	43.26 AV	54.00	-10.74	1.00 H	145	25.72	17.54
9	#17265.00	57.26 PK	74.00	-16.74	1.00 H	241	31.62	25.64
10	#17265.00	47.25 AV	54.00	-6.75	1.00 H	241	21.61	25.64
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	47.26 PK	68.2	-20.94	3.96 V	29	37.46	9.80
2	#5700.00	66.40 PK	105.2	-38.80	3.96 V	29	56.33	10.07
3	#5720.00	73.13 PK	110.8	-37.67	3.96 V	29	62.95	10.18
4	#5725.00	76.89 PK	122.2	-45.31	3.96 V	29	66.69	10.20
5	*5755.00	96.69 PK			1.45 V	325	89.60	7.09
6	*5755.00	85.42 AV			1.45 V	325	78.33	7.09
7	11510.00	51.26 PK	74.00	-22.74	1.54 V	236	33.72	17.54
8	11510.00	41.26 AV	54.00	-12.74	1.54 V	236	23.72	17.54
9	#17265.00	57.45 PK	74.00	-16.55	1.24 V	241	31.81	25.64
10	#17265.00	46.58 AV	54.00	-7.42	1.24 V	241	20.94	25.64

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	100.11 PK			1.42 H	6	92.92	7.19
2	*5795.00	90.13 AV			1.42 H	6	82.94	7.19
3	#5850.00	71.05 PK	122.2	-51.15	3.96 H	277	60.17	10.88
4	#5855.00	67.04 PK	110.8	-43.76	3.96 H	277	56.14	10.90
5	#5875.00	60.30 PK	105.2	-44.90	3.96 H	277	49.29	11.01
6	#5925.00	48.33 PK	68.2	-19.87	3.96 H	277	37.05	11.28
7	11590.00	51.26 PK	74.00	-22.74	1.42 H	226	33.61	17.65
8	11590.00	41.26 AV	54.00	-12.74	1.42 H	226	23.61	17.65
9	#17385.00	58.26 PK	74.00	-15.74	1.00 H	145	32.52	25.74
10	#17385.00	48.65 AV	54.00	-5.35	1.00 H	145	22.91	25.74
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	97.10 PK			1.25 V	241	89.91	7.19
2	*5795.00	86.35 AV			1.25 V	241	79.16	7.19
3	#5850.00	74.08 PK	122.2	-48.12	3.96 V	53	63.20	10.88
4	#5855.00	70.71 PK	110.8	-40.09	3.96 V	53	59.81	10.90
5	#5875.00	62.63 PK	105.2	-42.57	3.96 V	53	51.62	11.01
6	#5925.00	50.68 PK	68.2	-17.52	3.96 V	53	39.40	11.28
7	11590.00	52.63 PK	74.00	-21.37	1.00 V	145	34.98	17.65
8	11590.00	42.15 AV	54.00	-11.85	1.00 V	145	24.50	17.65
9	#17385.00	58.76 PK	74.00	-15.24	1.42 V	330	33.02	25.74
10	#17385.00	47.26 AV	54.00	-6.74	1.42 V	330	21.52	25.74

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



**BUREAU  
VERITAS**

Test Report No.: RF190919N042-2

**802.11ac 80MHz**

CHANNEL		TX Channel 155			DETECTOR FUNCTION		Peak (PK)	
FREQUENCY RANGE		1GHz ~ 40GHz					Average (AV)	
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	63.30 PK	68.2	-4.90	3.96 H	280	53.50	9.80
2	#5700.00	66.93 PK	105.2	-38.27	3.96 H	280	56.86	10.07
3	#5720.00	74.54 PK	110.8	-36.26	3.96 H	280	64.36	10.18
4	#5725.00	74.97 PK	122.2	-47.23	3.96 H	280	64.77	10.20
5	*5775.00	98.51 PK			1.26 H	224	91.37	7.14
6	*5775.00	83.23 AV			1.26 H	224	76.09	7.14
7	#5850.00	71.58 PK	122.2	-50.62	3.96 H	280	60.70	10.88
8	#5855.00	70.55 PK	110.8	-40.25	3.96 H	280	59.65	10.90
9	#5875.00	67.82 PK	105.2	-37.38	3.96 H	280	56.81	11.01
10	#5950.00	55.99 PK	68.2	-12.21	2.33 H	156	44.58	11.41
11	11550.00	52.26 PK	74.00	-21.74	1.44 H	265	34.67	17.59
12	11550.00	43.65 AV	54.00	-10.35	1.44 H	265	26.06	17.59
13	#17325.00	58.65 PK	74.00	-15.35	1.06 H	44	32.96	25.69
14	#17325.00	48.76 AV	54.00	-5.24	1.06 H	44	23.07	25.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	63.45 PK	68.2	-4.75	1.00 V	53	53.65	9.80
2	#5700.00	66.42 PK	105.2	-38.78	1.00 V	53	56.35	10.07
3	#5720.00	73.47 PK	110.8	-37.33	1.00 V	53	63.29	10.18
4	#5725.00	74.89 PK	122.2	-47.31	1.00 V	53	64.69	10.20
5	*5775.00	91.58 PK			1.45 V	227	84.44	7.14
6	*5775.00	77.36 AV			1.45 V	227	70.22	7.14
7	#5850.00	76.60 PK	122.2	-45.6	1.00 V	53	65.72	10.88
8	#5855.00	71.22 PK	110.8	-39.58	1.00 V	53	60.32	10.90
9	#5875.00	66.45 PK	105.2	-38.75	1.00 V	53	55.44	11.01
10	#5925.00	63.39 PK	68.2	-4.81	1.00 V	53	52.11	11.28
11	11550.00	51.26 PK	74.00	-22.74	1.17 V	247	33.67	17.59
12	11550.00	40.45 AV	54.00	-13.55	1.17 V	247	22.86	17.59
13	#17325.00	57.14 PK	74.00	-16.86	1.47 V	175	31.45	25.69
14	#17325.00	47.26 AV	54.00	-6.74	1.47 V	175	21.57	25.69

**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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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## 3.2 CONDUCTED EMISSION MEASUREMENT

### 3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
  2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
  3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Mar. 21,19	Mar. 20,20
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 03,19	Mar. 02,20
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Apr. 11,19	Apr. 10,20
Voltage probe	SCHWARZBEC K	TK 9421	TK 9421-176	Jan. 17,19	Jan. 16,20
Test software	ADT	ADT_Cond_ V7.3.7	N/A	N/A	N/A

- NOTE:**
1. The test was performed in shielded room 553.
  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

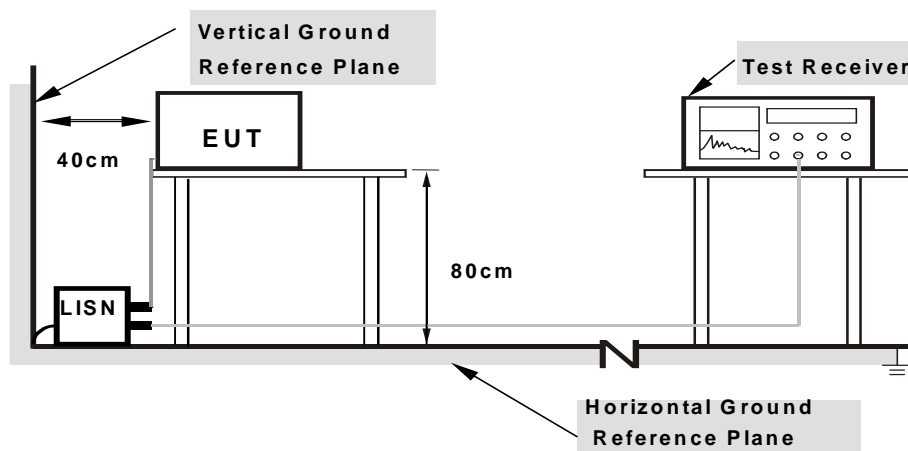
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

### 3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

### 3.2.5 TEST SETUP



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

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

### 3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.6



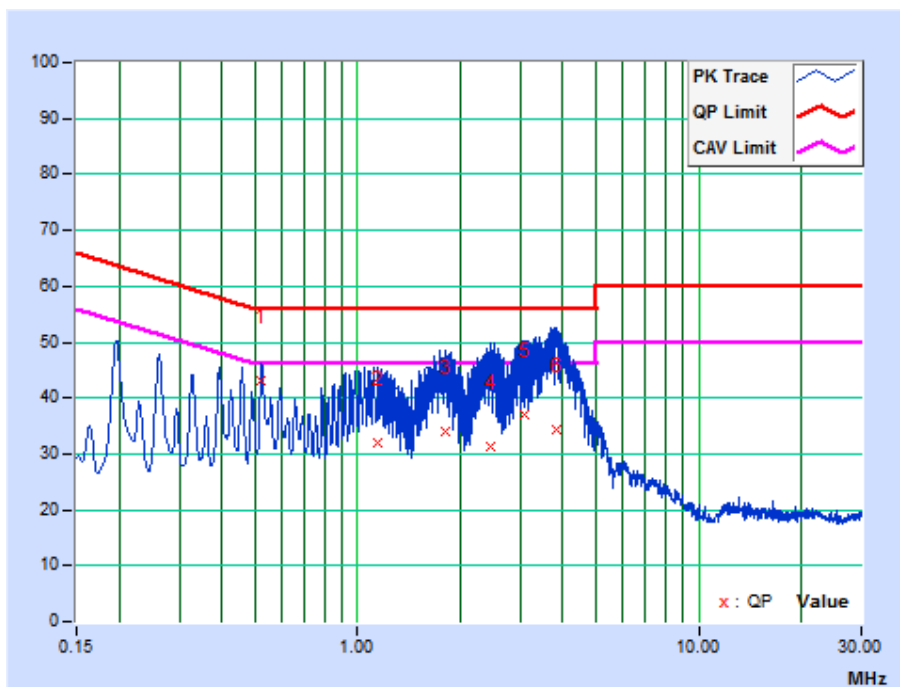
### 3.2.7 TEST RESULTS

#### CONDUCTED WORST-CASE DATA: 802.11a

PHASE	Line	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.52385	10.22	32.85	22.90	43.07	33.12	56.00	46.00	-12.93	-12.88
2	1.14900	10.23	21.65	4.02	31.88	14.25	56.00	46.00	-24.12	-31.75
3	1.80240	10.22	23.63	5.86	33.85	16.08	56.00	46.00	-22.15	-29.92
4	2.45625	10.22	21.05	5.27	31.27	15.49	56.00	46.00	-24.73	-30.51
5	3.07500	10.22	26.79	9.71	37.01	19.93	56.00	46.00	-18.99	-26.07
6	3.83100	10.23	24.26	6.63	34.49	16.86	56.00	46.00	-21.51	-29.14

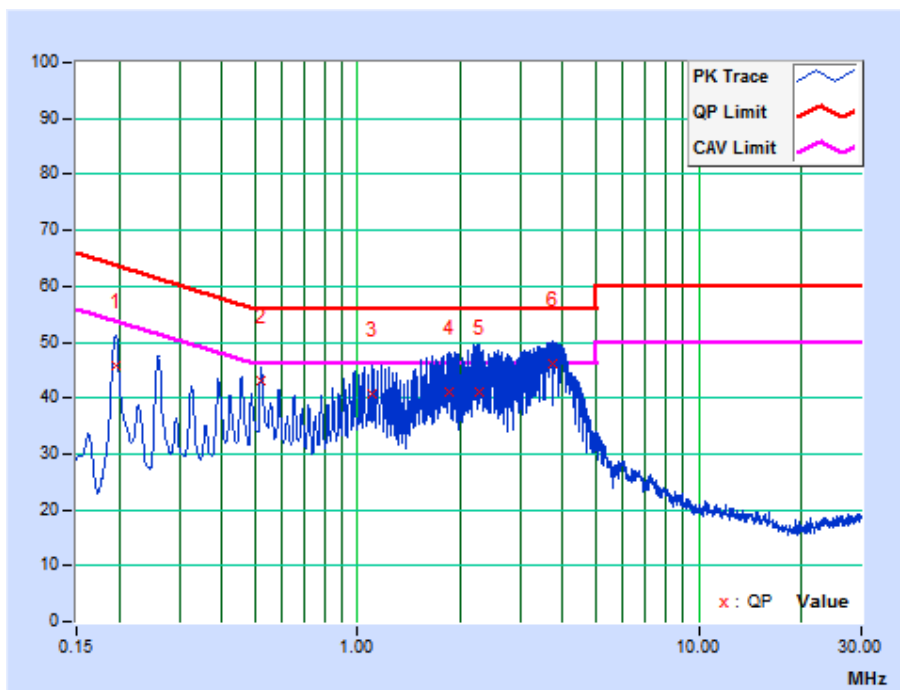
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. The emission levels of other frequencies were very low against the limit.
  3. Margin value = Emission level - Limit value
  4. Correction factor = Insertion loss + Cable loss
  5. Emission Level = Correction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



PHASE	Neutral	6dB BANDWIDTH	9kHz
-------	---------	---------------	------

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19514	10.00	35.91	25.85	45.91	35.85	63.81	53.81	-17.90	-17.96
2	<b>0.52109</b>	<b>10.02</b>	<b>33.15</b>	<b>26.13</b>	<b>43.17</b>	<b>36.15</b>	<b>56.00</b>	<b>46.00</b>	<b>-12.83</b>	<b>-9.85</b>
3	1.10882	10.03	30.73	20.89	40.76	30.92	56.00	46.00	-15.24	-15.08
4	1.85775	10.01	30.92	20.36	40.93	30.37	56.00	46.00	-15.07	-15.63
5	2.28075	10.02	31.11	18.78	41.13	28.80	56.00	46.00	-14.87	-17.20
6	3.74325	10.03	36.10	20.98	46.13	31.01	56.00	46.00	-9.87	-14.99

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





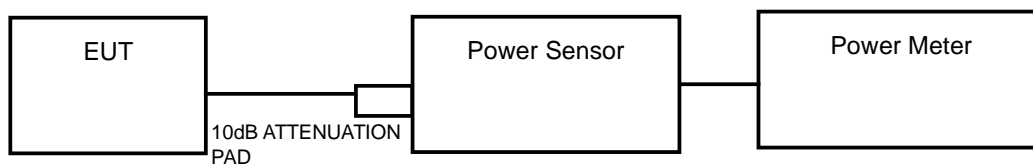
### 3.3 TRANSMIT POWER MEASUREMENT

#### 3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

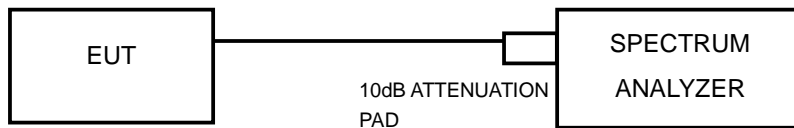
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-2C	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-3	√		1 Watt (30 dBm)

**NOTE:** 1. Where B is the 26dB emission bandwidth in MHz.

#### 3.3.2 TEST SETUP



#### FOR 6/26dB BANDWIDTH



### 3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	May 19,19	May 18,20
Power Sensor	Keysight	U2021XA	MY55060018	May 19,19	May 18,20
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 21, 19	Oct. 20, 20
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.05,19	Sep. 04,20
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 08,19	Nov. 07,20
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV7	102331	Nov. 04,19	Nov. 03,20
Spectrum Analyzer	Keysight	N9020A	MY55400499	Mar. 21,19	Mar. 20,20
Signal Generator	Agilent	N5183A	MY50140980	Jan. 02,19	Jan. 01,20
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200288	Jan. 02,19	Jan. 01,20
Wireless Connectivity Tester	Rohde&Schwarz	CMW270	100908	Jan. 10, 19	Jan. 09, 20
Vector Signal Generator	Rohde&Schwarz	SMBV100A	257199	Apr. 18, 19	Apr. 17, 20
Attenuator	MINI	BW-S10W2 +	S130129FGE2	N/A	N/A

**NOTE:**

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

### 3.3.4 TEST PROCEDURE

#### FOR AVERAGE POWER MEASUREMENT

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 26dB BANDWIDTH

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



**FOR 6dB BANDWIDTH**

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

**3.3.5 DEVIATION FROM TEST STANDARD**

No deviation.

**3.3.6 EUT OPERATING CONDITIONS**

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

### 3.3.7 TEST RESULTS

#### 802.11a

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
36	5180	7.41	5.508	24.00	PASS
40	5200	7.43	5.534	24.00	PASS
48	5240	7.86	6.109	24.00	PASS
149	5745	6.95	4.955	30.00	PASS
157	5785	6.99	5.000	30.00	PASS
165	5825	7.28	5.346	30.00	PASS

For Band 2~Band 3: Limit = 11dBm+10log(26 BW)=11+10log(22.34)=24.49dBm > 24dBm

#### 802.11n (20MHz)

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
36	5180	7.08	5.105	24.00	PASS
40	5200	7.78	5.998	24.00	PASS
48	5240	7.83	6.067	24.00	PASS
149	5745	6.76	4.742	30.00	PASS
157	5785	6.85	4.842	30.00	PASS
165	5825	7.32	5.395	30.00	PASS

For Band 2~Band 3: Limit = 11dBm+10log(26 BW)=11+10log(22.63)=24.55dBm > 24dBm

**802.11n (40MHz)**

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
38	5190	6.97	4.977	24.00	PASS
46	5230	6.73	4.71	24.00	PASS
151	5755	6.76	4.742	24.00	PASS
159	5795	6.68	4.656	30.00	PASS

**802.11ac (80MHz)**

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
42	5210	6.46	4.426	24.00	PASS
155	5775	6.85	4.842	30.00	PASS

## 26dB BANDWIDTH:

### 802.11a

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
36	5180	20.39	PASS
40	5200	22.34	PASS
48	5240	20.14	PASS

### 802.11n (20MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
36	5180	20.55	PASS
40	5200	20.67	PASS
48	5240	22.63	PASS

### 802.11n (40MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
38	5190	41.86	PASS
46	5230	42.42	PASS

### 802.11ac (80MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
42	5210	81.37	PASS



**6dB BANDWIDTH For 5725-5850MHz**

**802.11a**

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
149	5745	16.33	PASS
157	5785	16.32	PASS
165	5825	16.37	PASS

**802.11n (20M)**

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
149	5745	17.05	PASS
157	5785	16.99	PASS
165	5825	17.07	PASS

**802.11n (40M)**

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
151	5755	35.33	PASS
159	5795	35.34	PASS

**802.11ac (80MHz)**

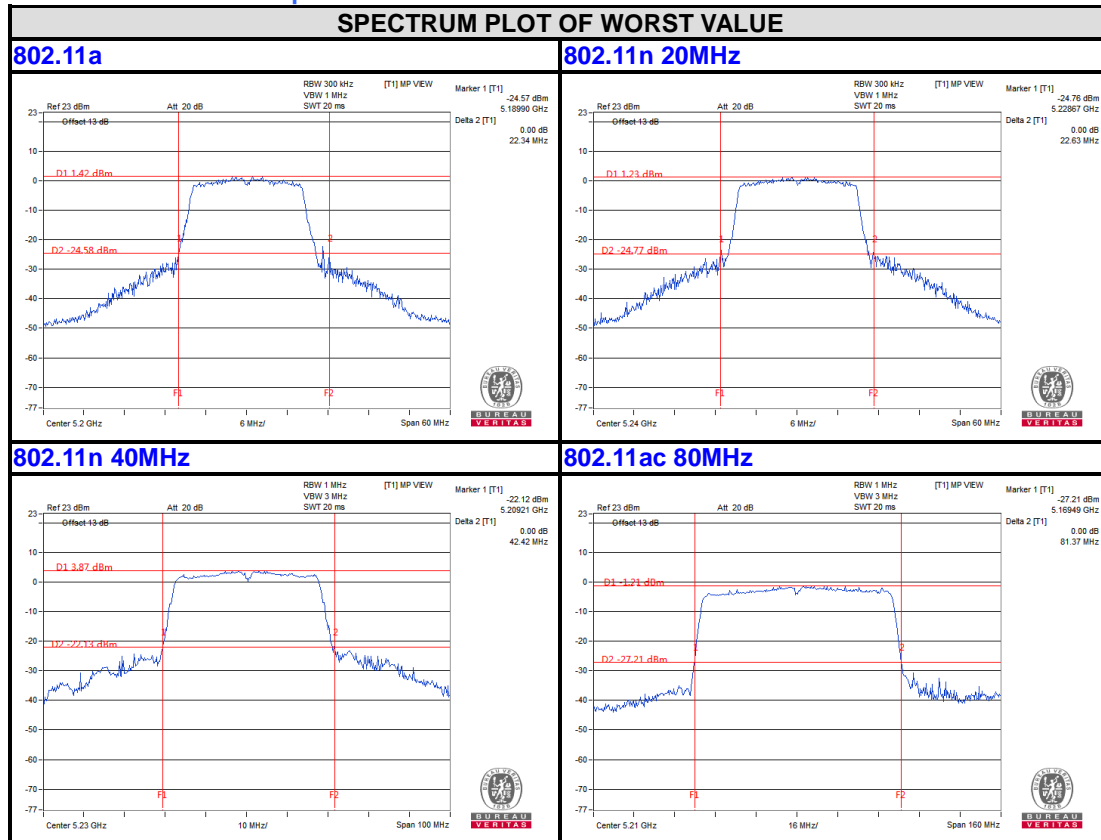
Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
155	5775	75.43	PASS



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26dB bandwidth Test Plot  
For 5150-5250MHz worst plot



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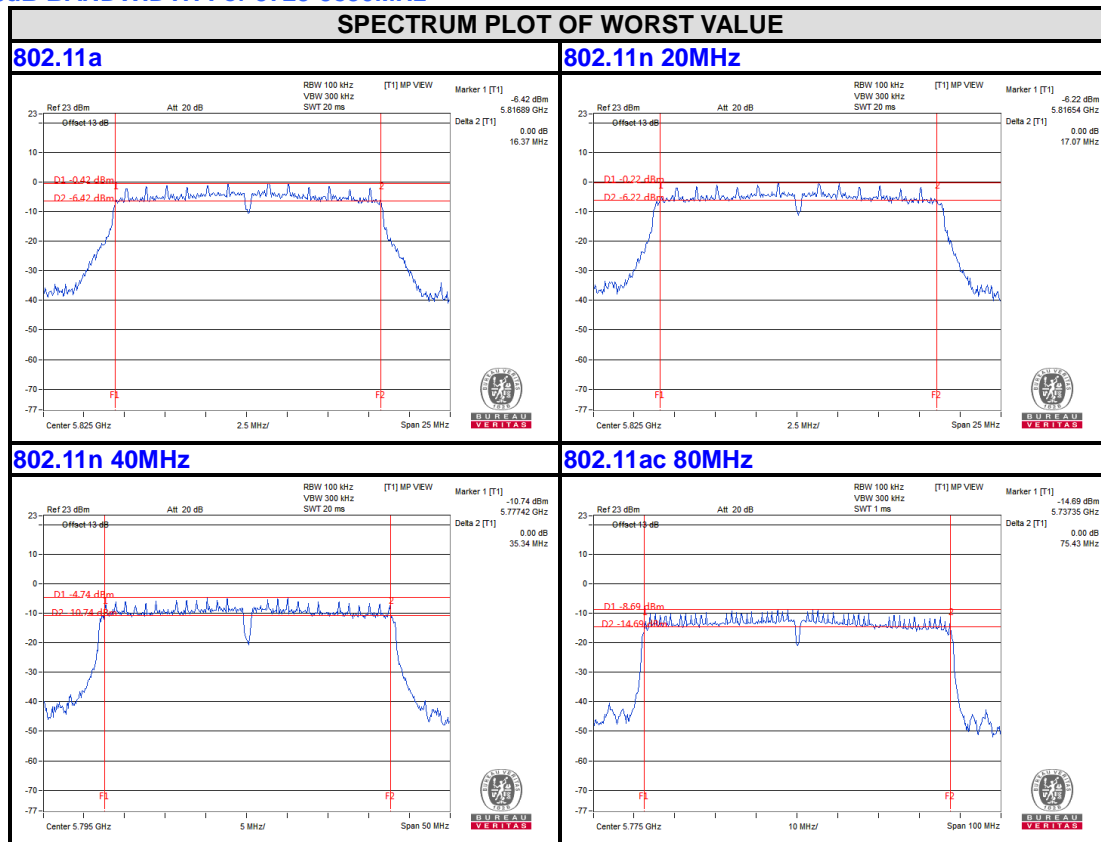
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6dB BANDWIDTH For 5725-5850MHz



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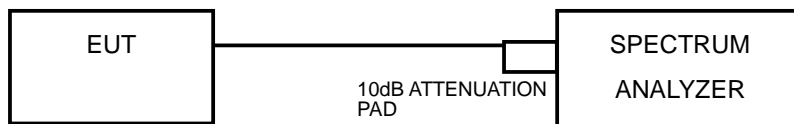
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### 3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

#### 3.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

#### 3.4.2 TEST SETUP



#### 3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.4.4 TEST PROCEDURES

##### For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, 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) Record the max value and add 10 log (1/duty cycle)

**For U-NII-3 band:**

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW = 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

**3.4.5 DEVIATION FROM TEST STANDARD**

No deviation.

**3.4.6 EUT OPERATING CONDITIONS**

Same as 3.3.6

### 3.4.7 TEST RESULTS

For U-NII-1, U-NII-2A & U-NII-2C, For U-NII-3:  
802.11a

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)	RF Power Level in 1MHz BW (mW)	MAX. Limit (dBm)	PASS / FAIL
36	5180	-5.96	0.2535	11.00	PASS
40	5200	-5.95	0.2541	11.00	PASS
48	5240	-5.31	0.2944	11.00	PASS

Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)	RF Power Level in 500kHz BW (mW)	MAX. Limit (dBm/500k)	PASS / FAIL
149	5745	-12.57	0.0553	30.00	PASS
157	5785	-12.15	0.0610	30.00	PASS
165	5825	-11.90	0.0646	30.00	PASS

802.11n (20MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)	RF Power Level in 1MHz BW (mW)	MAX. Limit (dBm)	PASS / FAIL
36	5180	-6.53	0.2223	11.00	PASS
40	5200	-5.73	0.2673	11.00	PASS
48	5240	-5.71	0.2685	11.00	PASS

Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)	RF Power Level in 500kHz BW (mW)	MAX. Limit (dBm/500k)	PASS / FAIL
149	5745	-12.64	0.0545	30.00	PASS
157	5785	-12.56	0.0555	30.00	PASS
165	5825	-12.23	0.0598	30.00	PASS

802.11n (40MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)	RF Power Level in 1MHz BW (mW)	MAX. Limit (dBm)	PASS / FAIL
38	5190	-12.97	0.0505	11.00	PASS
46	5230	-12.77	0.0528	11.00	PASS

Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)	RF Power Level in 500kHz BW (mW)	MAX. Limit (dBm/500k)	PASS / FAIL
151	5755	-16.16	0.0242	30.00	PASS
159	5795	-16.27	0.0236	30.00	PASS

802.11ac (80MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)	RF Power Level in 1MHz BW (mW)	MAX. Limit (dBm)	PASS / FAIL
42	5210	-15.23	0.0300	11.00	PASS

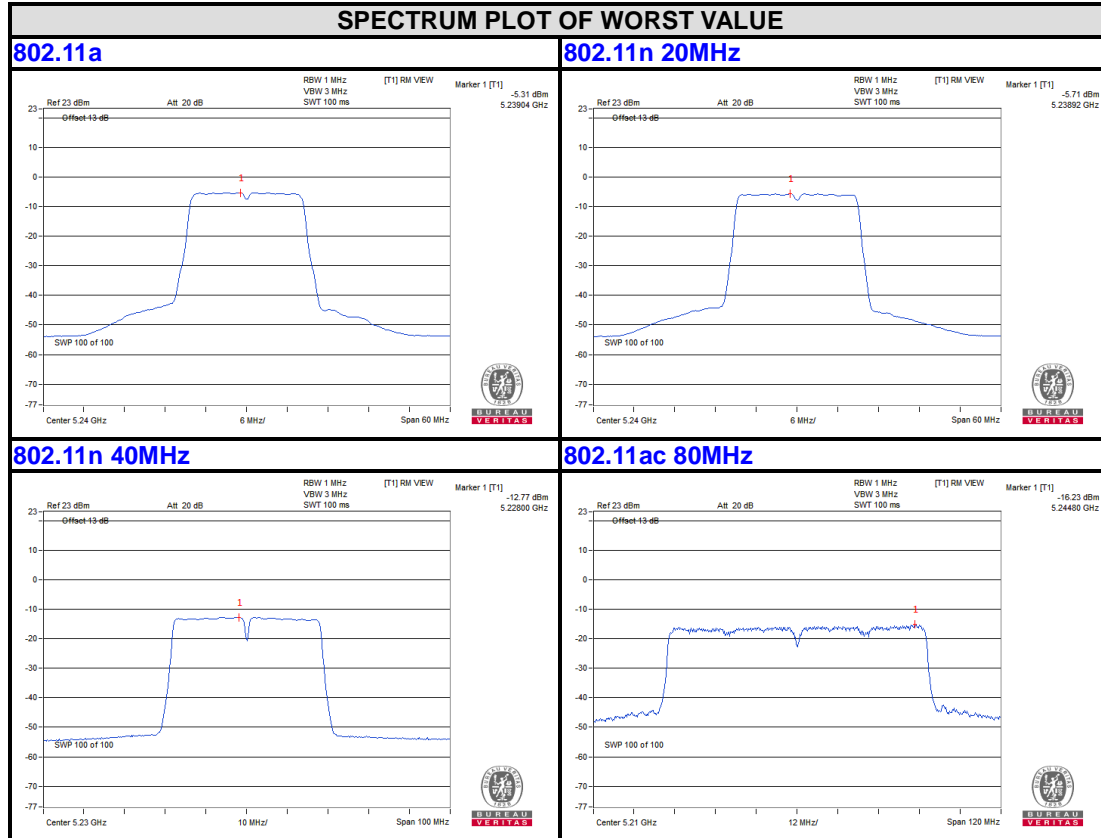
Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)	RF Power Level in 500kHz BW (mW)	MAX. Limit (dBm/500k)	PASS / FAIL
155	5775	-21.22	0.0076	30.00	PASS



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PSD Test Plot  
BAND 1  
5150-5250MHz



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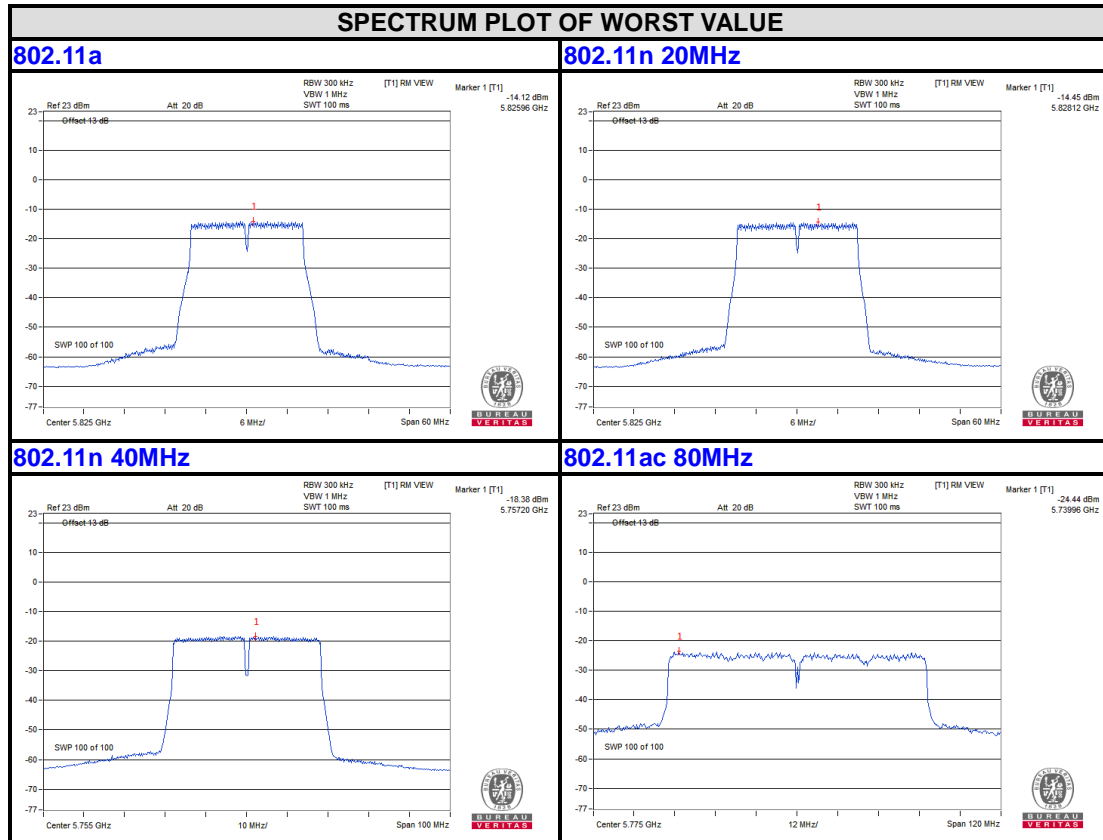




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BAND4  
5725-5850MHz



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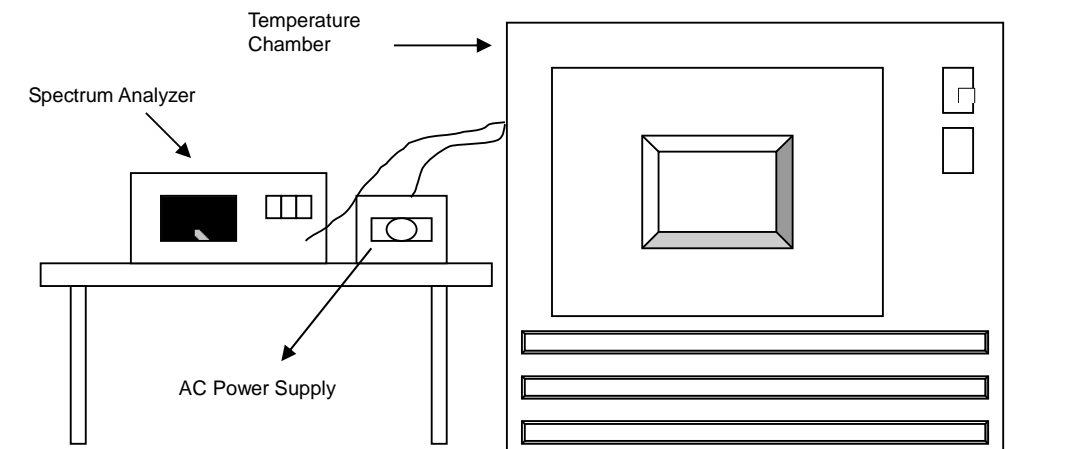
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### 3.5 FREQUENCY STABILITY

#### 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 AC 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

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
50	3.8	5180.0106	0.00020	5180.0091	0.00018	5180.0115	0.00022	5180.0104	0.00020
40	3.8	5180.0028	0.00005	5180.0041	0.00008	5179.9999	0.00000	5180.0035	0.00007
30	3.8	5179.9941	-0.00011	5179.9934	-0.00013	5179.9935	-0.00013	5179.9959	-0.00008
20	3.8	5179.9887	-0.00022	5179.9902	-0.00019	5179.9902	-0.00019	5179.9853	-0.00028
10	3.8	5180.01	0.00019	5180.0104	0.00020	5180.0095	0.00018	5180.0111	0.00021
0	3.8	5179.9835	-0.00032	5179.9847	-0.00030	5179.9873	-0.00025	5179.9875	-0.00024
-10	3.8	5180.005	0.00010	5180.0027	0.00005	5180.0037	0.00007	5180.005	0.00010
-20	3.8	5179.9946	-0.00010	5179.9933	-0.00013	5179.9981	-0.00004	5179.9949	-0.00010
-30	3.8	5180.008	0.00015	5180.008	0.00015	5180.0081	0.00016	5180.0077	0.00015

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
20	4.37	5179.988	-0.00023	5179.9904	-0.00019	5179.9907	-0.00018	5179.9844	-0.00030
	3.8	5179.9887	-0.00022	5179.9902	-0.00019	5179.9902	-0.00019	5179.9853	-0.00028
	3.23	5179.9891	-0.00021	5179.9903	-0.00019	5179.9905	-0.00018	5179.9847	-0.00030



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#### 4. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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## 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---