

FCC TEST REPORT

(Part 15, Subpart E)



Applicant:	Icon Health & Fitness
Address:	1500 South 1000 West 435-786-5915 Logan, UT 84321, United States

Manufacturer or Supplier:	Icon Health & Fitness
Address:	1500 South 1000 West 435-786-5915 Logan, UT 84321, United States
Product:	402546 module
Brand Name:	N/A
Model Name:	MP7-ARGON
FCC ID:	OMC402546
Date of tests:	Aug. 20, 2018 ~ Sep. 04, 2018

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

FCC Part 15, Subpart E, Section 15.407

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

Prepared by Roger Li Engineer / Mobile Department	Approved by Sam Tung Manager / Mobile Department
 Date: Sep. 05, 2018	 Date: Sep. 05, 2018

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**BUREAU
VERITAS**

Test Report No.: RF180817W003-3

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF180817W003-3	Original release	Sep. 05, 2018



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)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -11.86dB at 29.252000MHz.
15.407(b) (1/2/3/4/6)	Radiated Emission & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -1.24dB at 5350MHz.
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)	6 dB Bandwidth	PASS	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
Radiated emissions	9KHz ~ 30MHz	2.68dB
	30MHz ~ 1GMHz	3.26dB
	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

EUT	402546 module
MODEL NO.	MP7-ARGON
POWER SUPPLY	12Vdc (adapter or host equipment)
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
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz, 5745 ~ 5805MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz) 5745 ~ 5805MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
AVERAGE POWER	26.67mW for 5180 ~ 5240MHz 26.24mW for 5260 ~ 5320MHz 26.18mW for 5500 ~ 5700MHz 25.64mW for 5745 ~ 5805MHz
ANTENNA TYPE	PIFA Antenna
ANTENNA GAIN	3.15dBi for 5180 ~ 5240MHz 3.3dBi for 5260 ~ 5320MHz 4.05dBi for 5500 ~ 5700MHz 4.13dBi for 5745 ~ 5805MHz
HW VERSION	A184C V2.0
SW VERSION	Model number J1002
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A



NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

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

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



2.2 DESCRIPTION OF TEST MODES

FOR 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

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



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		

FOR 5725 ~ 5805MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755 MHz	159	5795 MHz



2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	-	Powered by Adapter with wifi(5G) link
B	-	-	-	√	Powered by Battery with wifi(5G) link
C	-	-	-	-	Powered by USB with wifi(5G) link

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

NOTE:
The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
NOTE: "-" means no effect.

RADIATED EMISSION TEST (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)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
A	802.11a	5725-5805	149 to 161	149, 157, 161	OFDM	BPSK	6.0
A	802.11n (20MHz)		149 to 161	149, 157, 161	OFDM	BPSK	MCS0
A	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0



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)
A	802.11n (40MHz)	5260-5320	54 to 62	62	OFDM	BPSK	MCS0

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (40MHz)	5260-5320	54 to 62	62	OFDM	BPSK	MCS0

BANDEDGE MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 48	OFDM	BPSK	6.0
A	802.11n (20MHz)		36 to 48	36, 48	OFDM	BPSK	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
A	802.11a	5260-5320	52 to 64	52, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 64	OFDM	BPSK	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
A	802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	MCS0
A	802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	MCS0
A	802.11a	5725-5805	149 to 161	149, 161	OFDM	BPSK	6.0
A	802.11n (20MHz)		149 to 161	149, 161	OFDM	BPSK	MCS0
A	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0



ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
B	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	MCS0
B	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
B	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
B	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
B	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
B	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
B	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
B	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
B	802.11a	5725-5805	149 to 161	149, 161	OFDM	BPSK	6.0
B	802.11n (20MHz)		149 to 161	149, 161	OFDM	BPSK	MCS0
B	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 62%RH	DC 12V	Vincent Chen
RE≥1G	23deg. C, 62%RH	DC 12V	Vincent Chen
PLC	24deg. C, 61%RH	DC 12V	John Wen
APCM	23.5deg. C, 60%RH	DC 12V	Bert Ma



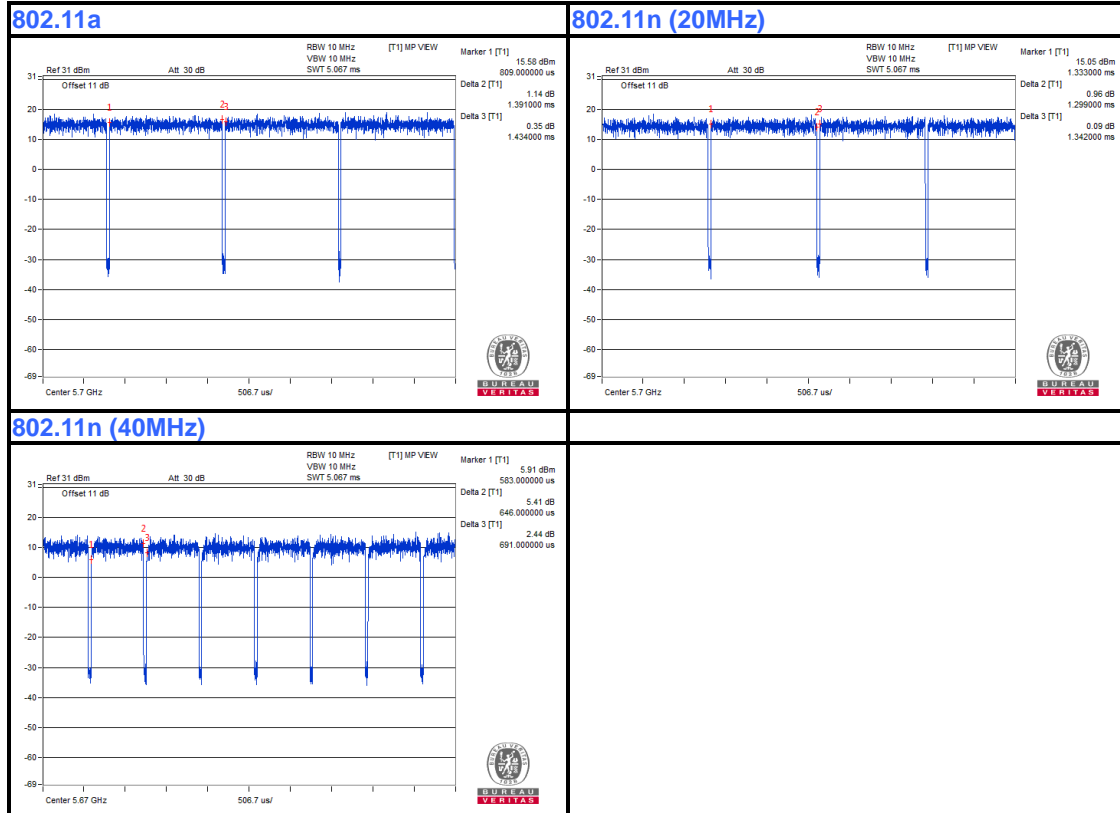
2.3 DUTY CYCLE OF TEST SIGNAL

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

802.11a: Duty cycle = 1.391/1.434 = 0.970, Duty factor = 10 * log(1/0.970) = 0.132

802.11n (20MHz): Duty cycle = 1.299/1.342 = 0.968, Duty factor = 10 * log(1/0.968) = 0.141

802.11n (40MHz): Duty cycle = 0.646/0.691 = 0.935, Duty factor = 10 * log(1/0.935) = 0.292





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	PC	HP	A6608CN	3CR83825X3	N/A

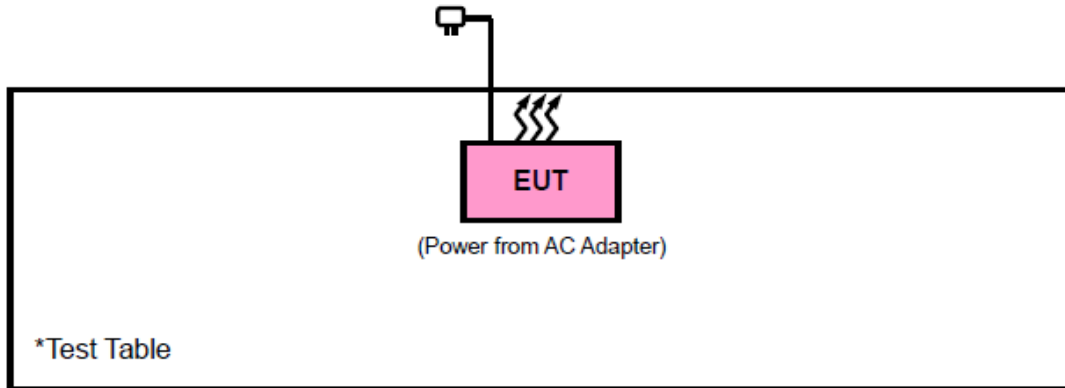
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m

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 (SDOC). The test report has been issued separately.



3 TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



3.1.2 LIMITS OF UNWANTED EMISSION

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

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

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

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



3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	Apr. 21,18	Apr. 20,19
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-18-40-K-SG/QMS-00361	15433	Dec. 16,16	Dec. 15,18
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jul. 09,18	Jul. 08,19
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 16,18	Mar. 15,19
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jul. 09,18	Jul. 08,19
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jul. 09,18	Jul. 08,19
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Jul. 09,18	Jul. 08,19

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 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.

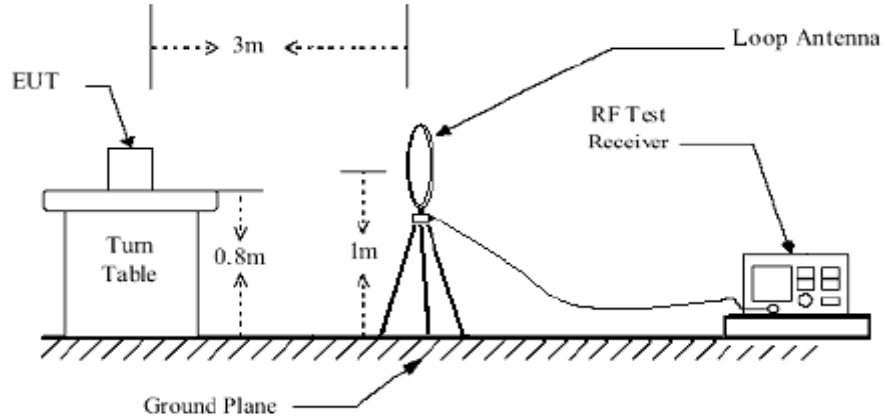
3.1.5 DEVIATION FROM TEST STANDARD

No deviation.

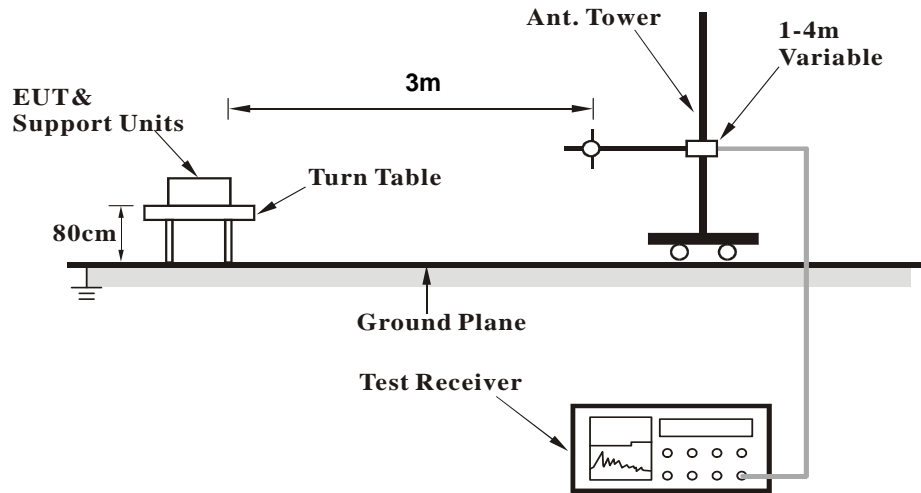


3.1.6 TEST SETUP

< Frequency Range below 30MHz >

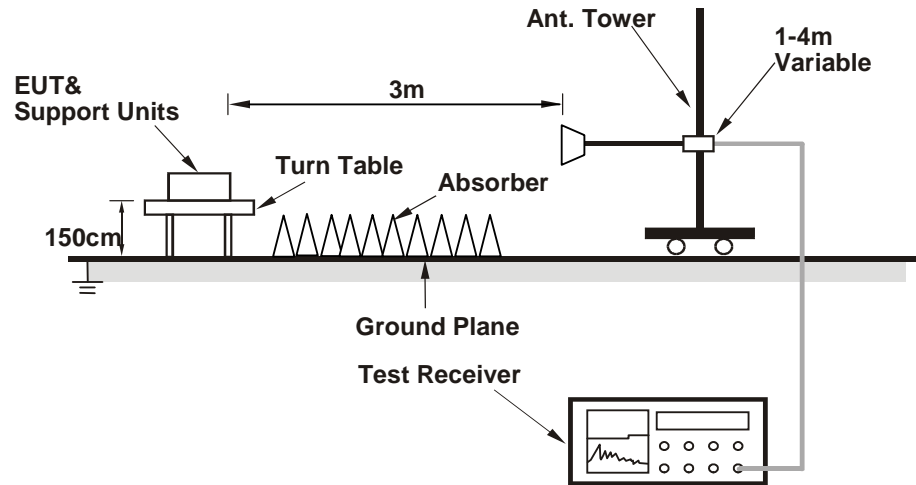


< Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



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

3.1.7 EUT OPERATING CONDITION

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- 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:

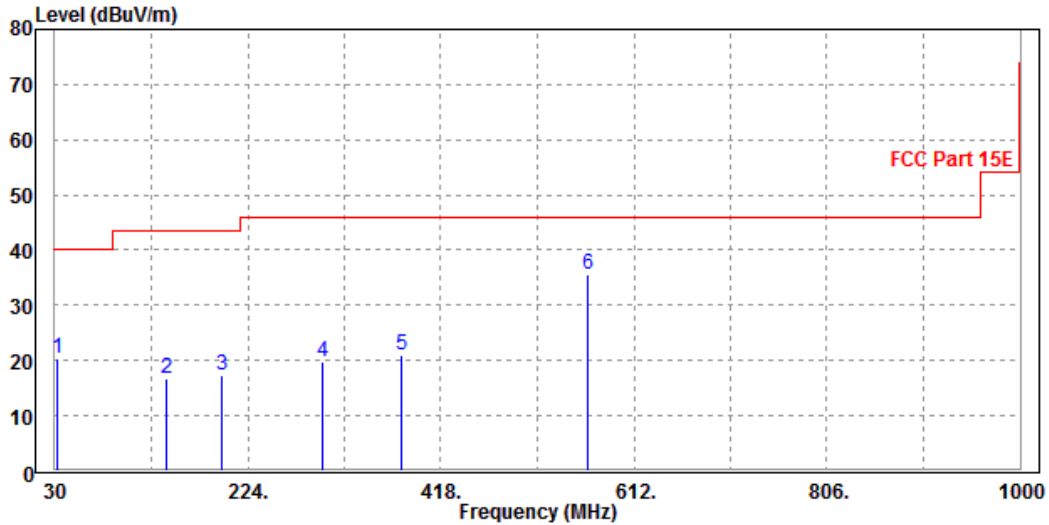
802.11n (40MHz)

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
31.94	20.46	41.27	40	-19.54	15.91	0.82	37.54	101	150	QP
141.55	16.75	42.81	43.5	-26.75	8.94	1.83	36.83	101	150	QP
197.81	17.23	41.08	43.5	-26.27	10.55	2.16	36.56	101	150	QP
299.66	19.76	39.75	46	-26.24	13.79	2.72	36.5	101	150	QP
378.23	20.86	38.09	46	-25.14	16.38	3.06	36.67	101	150	QP
565.44	35.53	49.55	46	-10.47	19.31	3.82	37.15	101	150	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.



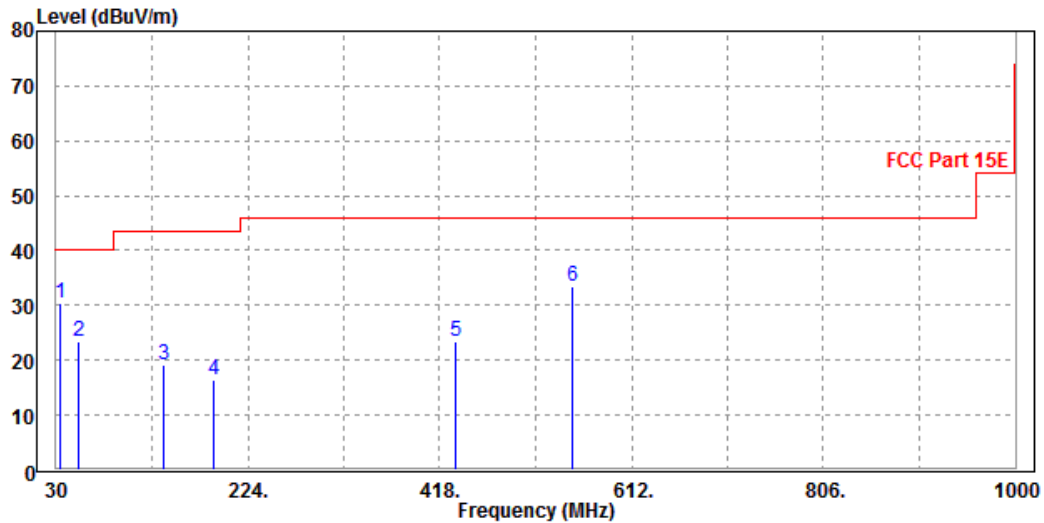


CHANNEL	Channel 62	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
34.85	30.28	52.63	40	-9.72	14.28	0.89	37.52	101	0	QP
53.28	23.55	53	40	-16.45	6.8	1.11	37.36	101	0	QP
139.61	19.1	45.33	43.5	-24.4	8.79	1.82	36.84	101	0	QP
190.05	16.57	40.71	43.5	-26.93	10.35	2.12	36.61	101	0	QP
434.49	23.36	39.49	46	-22.64	17.41	3.26	36.8	101	0	QP
552.83	33.32	47.62	46	-12.68	19.06	3.75	37.11	101	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.





ABOVE 1GHz WORST-CASE DATA:

Note: For higher frequency, the emission is too low to be detected.

Band 1
802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	52.01	53.68	54	-1.99	37.26	7.42	46.35	100	233	Average
5150	60.75	62.42	74	-13.25	37.26	7.42	46.35	100	233	Peak
5180	102.88	104.53			37.27	7.43	46.35	100	233	Average
5180	109.99	111.64			37.27	7.43	46.35	100	233	Peak
5350	48.24	49.73	54	-5.76	37.34	7.47	46.3	100	233	Average
5350	57.79	59.28	74	-16.21	37.34	7.47	46.3	100	233	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	51.12	52.79	54	-2.88	37.26	7.42	46.35	114	308	Average
5150	59.46	61.13	74	-14.54	37.26	7.42	46.35	114	308	Peak
5180	99.65	101.3			37.27	7.43	46.35	114	308	Average
5180	107.45	109.1			37.27	7.43	46.35	114	308	Peak
5350	48.04	49.53	54	-5.96	37.34	7.47	46.3	114	308	Average
5350	58.32	59.81	74	-15.68	37.34	7.47	46.3	114	308	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	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	51.24	52.91	54	-2.76	37.26	7.42	46.35	128	226	Average
5150	60.22	61.89	74	-13.78	37.26	7.42	46.35	128	226	Peak
5200	102.78	104.41			37.28	7.43	46.34	128	226	Average
5200	109.98	111.61			37.28	7.43	46.34	128	226	Peak
5350	48.67	50.16	54	-5.33	37.34	7.47	46.3	128	226	Average
5350	57.43	58.92	74	-16.57	37.34	7.47	46.3	128	226	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.35	51.02	54	-4.65	37.26	7.42	46.35	100	255	Average
5150	56.54	58.21	74	-17.46	37.26	7.42	46.35	100	255	Peak
5200	94.93	96.56			37.28	7.43	46.34	100	255	Average
5200	104.11	105.74			37.28	7.43	46.34	100	255	Peak
5350	48.22	49.71	54	-5.78	37.34	7.47	46.3	100	255	Average
5350	57.15	58.64	74	-16.85	37.34	7.47	46.3	100	255	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.96	51.63	54	-4.04	37.26	7.42	46.35	121	223	Average
5150	57.28	58.95	74	-16.72	37.26	7.42	46.35	121	223	Peak
5240	102.06	103.65			37.3	7.44	46.33	121	223	Average
5240	110.22	111.81			37.3	7.44	46.33	121	223	Peak
5350	48.48	49.97	54	-5.52	37.34	7.47	46.3	121	223	Average
5350	57.86	59.35	74	-16.14	37.34	7.47	46.3	121	223	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.24	50.91	54	-4.76	37.26	7.42	46.35	100	127	Average
5150	58.87	60.54	74	-15.13	37.26	7.42	46.35	100	127	Peak
5240	93.63	95.22			37.3	7.44	46.33	100	127	Average
5240	102.96	104.55			37.3	7.44	46.33	100	127	Peak
5350	48.05	49.54	54	-5.95	37.34	7.47	46.3	100	127	Average
5350	57.92	59.41	74	-16.08	37.34	7.47	46.3	100	127	Peak

REMARKS:

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



802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	50.74	52.41	54	-3.26	37.26	7.42	46.35	200	218	Average
5150	60.29	61.96	74	-13.71	37.26	7.42	46.35	200	218	Peak
5180	100.21	101.86			37.27	7.43	46.35	200	218	Average
5180	108.09	109.74			37.27	7.43	46.35	200	218	Peak
5350	48.27	49.76	54	-5.73	37.34	7.47	46.3	200	218	Average
5350	57.62	59.11	74	-16.38	37.34	7.47	46.3	200	218	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	50.41	52.08	54	-3.59	37.26	7.42	46.35	100	313	Average
5150	59.35	61.02	74	-14.65	37.26	7.42	46.35	100	313	Peak
5180	97.43	99.08			37.27	7.43	46.35	100	313	Average
5180	105.35	107			37.27	7.43	46.35	100	313	Peak
5350	48.02	49.51	54	-5.98	37.34	7.47	46.3	100	313	Average
5350	58.14	59.63	74	-15.86	37.34	7.47	46.3	100	313	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	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	50.19	51.86	54	-3.81	37.26	7.42	46.35	200	261	Average
5150	60.04	61.71	74	-13.96	37.26	7.42	46.35	200	261	Peak
5200	100.02	101.65			37.28	7.43	46.34	200	261	Average
5200	107.69	109.32			37.28	7.43	46.34	200	261	Peak
5350	48.4	49.89	54	-5.6	37.34	7.47	46.3	200	261	Average
5350	57.62	59.11	74	-16.38	37.34	7.47	46.3	200	261	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.78	51.45	54	-4.22	37.26	7.42	46.35	100	309	Average
5150	57.44	59.11	74	-16.56	37.26	7.42	46.35	100	309	Peak
5200	96.48	98.11			37.28	7.43	46.34	100	309	Average
5200	106.24	107.87			37.28	7.43	46.34	100	309	Peak
5350	47.9	49.39	54	-6.1	37.34	7.47	46.3	100	309	Average
5350	58.67	60.16	74	-15.33	37.34	7.47	46.3	100	309	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.54	51.21	54	-4.46	37.26	7.42	46.35	200	229	Average
5150	59.32	60.99	74	-14.68	37.26	7.42	46.35	200	229	Peak
5240	99.32	100.91			37.3	7.44	46.33	200	229	Average
5240	107.46	109.05			37.3	7.44	46.33	200	229	Peak
5350	48.47	49.96	54	-5.53	37.34	7.47	46.3	200	229	Average
5350	58.48	59.97	74	-15.52	37.34	7.47	46.3	200	229	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.25	50.92	54	-4.75	37.26	7.42	46.35	100	256	Average
5150	58.66	60.33	74	-15.34	37.26	7.42	46.35	100	256	Peak
5240	94.62	96.21			37.3	7.44	46.33	100	256	Average
5240	102.09	103.68			37.3	7.44	46.33	100	256	Peak
5350	48.03	49.52	54	-5.97	37.34	7.47	46.3	100	256	Average
5350	58.34	59.83	74	-15.66	37.34	7.47	46.3	100	256	Peak

REMARKS:

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



802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	51.52	53.19	54	-2.48	37.26	7.42	46.35	200	229	Average
5150	61.16	62.83	74	-12.84	37.26	7.42	46.35	200	229	Peak
5240	93.57	95.16			37.3	7.44	46.33	200	229	Average
5240	102.78	104.37			37.3	7.44	46.33	200	229	Peak
5350	44.49	45.98	54	-9.51	37.34	7.47	46.3	200	229	Average
5350	54.64	56.13	74	-19.36	37.34	7.47	46.3	200	229	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	47.29	48.96	54	-6.71	37.26	7.42	46.35	100	256	Average
5150	56.98	58.65	74	-17.02	37.26	7.42	46.35	100	256	Peak
5240	85.18	86.77			37.3	7.44	46.33	100	256	Average
5240	98.1	99.69			37.3	7.44	46.33	100	256	Peak
5350	44.63	46.12	54	-9.37	37.34	7.47	46.3	100	256	Average
5350	52.44	53.93	74	-21.56	37.34	7.47	46.3	100	256	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	48.18	49.85	54	-5.82	37.26	7.42	46.35	100	233	Average
5150	58.79	60.46	74	-15.21	37.26	7.42	46.35	100	233	Peak
5230	97.16	98.76			37.29	7.44	46.33	100	233	Average
5230	102.36	103.96			37.29	7.44	46.33	100	233	Peak
5350	46.65	48.14	54	-7.35	37.34	7.47	46.3	100	233	Average
5350	55.74	57.23	74	-18.26	37.34	7.47	46.3	100	233	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.55	51.22	54	-4.45	37.26	7.42	46.35	106	309	Average
5150	58.95	60.62	74	-15.05	37.26	7.42	46.35	106	309	Peak
5230	93.98	95.58			37.29	7.44	46.33	106	309	Average
5230	100.66	102.26			37.29	7.44	46.33	106	309	Peak
5350	48.03	49.52	54	-5.97	37.34	7.47	46.3	106	309	Average
5350	58.37	59.86	74	-15.63	37.34	7.47	46.3	106	309	Peak

REMARKS:

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



Band 2
802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.6	51.27	54	-4.4	37.26	7.42	46.35	200	223	Average
5150	58.88	60.55	74	-15.12	37.26	7.42	46.35	200	223	Peak
5260	101.55	103.12			37.3	7.45	46.32	200	223	Average
5260	109.17	110.74			37.3	7.45	46.32	200	223	Peak
5350	48.87	50.36	54	-5.13	37.34	7.47	46.3	200	223	Average
5350	61.59	63.08	74	-12.41	37.34	7.47	46.3	200	223	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.41	51.08	54	-4.59	37.26	7.42	46.35	100	253	Average
5150	57.95	59.62	74	-16.05	37.26	7.42	46.35	100	253	Peak
5260	94.69	96.26			37.3	7.45	46.32	100	253	Average
5260	101.94	103.51			37.3	7.45	46.32	100	253	Peak
5350	48.27	49.76	54	-5.73	37.34	7.47	46.3	100	253	Average
5350	57.89	59.38	74	-16.11	37.34	7.47	46.3	100	253	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.66	51.33	54	-4.34	37.26	7.42	46.35	200	225	Average
5150	58.77	60.44	74	-15.23	37.26	7.42	46.35	200	225	Peak
5300	100.31	101.84			37.32	7.46	46.31	200	225	Average
5300	107.99	109.52			37.32	7.46	46.31	200	225	Peak
5350	49.6	51.09	54	-4.4	37.34	7.47	46.3	200	225	Average
5350	58.78	60.27	74	-15.22	37.34	7.47	46.3	200	225	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.41	51.08	54	-4.59	37.26	7.42	46.35	100	257	Average
5150	58.71	60.38	74	-15.29	37.26	7.42	46.35	100	257	Peak
5300	93.81	95.34			37.32	7.46	46.31	100	257	Average
5300	101.2	102.73			37.32	7.46	46.31	100	257	Peak
5350	48.35	49.84	54	-5.65	37.34	7.47	46.3	100	257	Average
5350	58.38	59.87	74	-15.62	37.34	7.47	46.3	100	257	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.48	51.15	54	-4.52	37.26	7.42	46.35	200	232	Average
5150	59.29	60.96	74	-14.71	37.26	7.42	46.35	200	232	Peak
5320	100.19	101.7			37.33	7.46	46.3	200	232	Average
5320	108.39	109.9			37.33	7.46	46.3	200	232	Peak
5350	51.44	52.93	54	-2.56	37.34	7.47	46.3	200	232	Average
5350	61.89	63.38	74	-12.11	37.34	7.47	46.3	200	232	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.4	51.07	54	-4.6	37.26	7.42	46.35	106	257	Average
5150	59.67	61.34	74	-14.33	37.26	7.42	46.35	106	257	Peak
5320	94.59	96.1			37.33	7.46	46.3	106	257	Average
5320	101.59	103.1			37.33	7.46	46.3	106	257	Peak
5350	49.19	50.68	54	-4.81	37.34	7.47	46.3	106	257	Average
5350	58.2	59.69	74	-15.8	37.34	7.47	46.3	106	257	Peak

REMARKS:

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



802.11n (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.68	51.35	54	-4.32	37.26	7.42	46.35	165	232	Average
5150	60.14	61.81	74	-13.86	37.26	7.42	46.35	165	232	Peak
5260	100.3	101.87			37.3	7.45	46.32	165	232	Average
5260	108.05	109.62			37.3	7.45	46.32	165	232	Peak
5350	48.89	50.38	54	-5.11	37.34	7.47	46.3	165	232	Average
5350	57.64	59.13	74	-16.36	37.34	7.47	46.3	165	232	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.41	51.08	54	-4.59	37.26	7.42	46.35	100	257	Average
5150	59.79	61.46	74	-14.21	37.26	7.42	46.35	100	257	Peak
5260	93.31	94.88			37.3	7.45	46.32	100	257	Average
5260	101.04	102.61			37.3	7.45	46.32	100	257	Peak
5350	48.19	49.68	54	-5.81	37.34	7.47	46.3	100	257	Average
5350	57.38	58.87	74	-16.62	37.34	7.47	46.3	100	257	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.76	51.43	54	-4.24	37.26	7.42	46.35	173	233	Average
5150	59.26	60.93	74	-14.74	37.26	7.42	46.35	173	233	Peak
5300	99.44	100.97			37.32	7.46	46.31	173	233	Average
5300	107.82	109.35			37.32	7.46	46.31	173	233	Peak
5350	49.43	50.92	54	-4.57	37.34	7.47	46.3	173	233	Average
5350	59.97	61.46	74	-14.03	37.34	7.47	46.3	173	233	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.39	51.06	54	-4.61	37.26	7.42	46.35	100	257	Average
5150	60.01	61.68	74	-13.99	37.26	7.42	46.35	100	257	Peak
5300	92.9	94.43			37.32	7.46	46.31	100	257	Average
5300	100.8	102.33			37.32	7.46	46.31	100	257	Peak
5350	48.38	49.87	54	-5.62	37.34	7.47	46.3	100	257	Average
5350	58.48	59.97	74	-15.52	37.34	7.47	46.3	100	257	Peak

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.49	51.16	54	-4.51	37.26	7.42	46.35	146	234	Average
5150	59.85	61.52	74	-14.15	37.26	7.42	46.35	146	234	Peak
5320	100.21	101.72			37.33	7.46	46.3	146	234	Average
5320	107.72	109.23			37.33	7.46	46.3	146	234	Peak
5350	51.3	52.79	54	-2.7	37.34	7.47	46.3	146	234	Average
5350	60.93	62.42	74	-13.07	37.34	7.47	46.3	146	234	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.42	51.09	54	-4.58	37.26	7.42	46.35	100	254	Average
5150	59.26	60.93	74	-14.74	37.26	7.42	46.35	100	254	Peak
5320	91.29	92.8			37.33	7.46	46.3	100	254	Average
5320	99.82	101.33			37.33	7.46	46.3	100	254	Peak
5350	48.73	50.22	54	-5.27	37.34	7.47	46.3	100	254	Average
5350	57.69	59.18	74	-16.31	37.34	7.47	46.3	100	254	Peak

REMARKS:

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



802.11n (40MHz)

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.57	51.24	54	-4.43	37.26	7.42	46.35	100	235	Average
5150	59.02	60.69	74	-14.98	37.26	7.42	46.35	100	235	Peak
5270	95.77	97.33			37.31	7.45	46.32	100	235	Average
5270	102.96	104.52			37.31	7.45	46.32	100	235	Peak
5350	48.72	50.21	54	-5.28	37.34	7.47	46.3	100	235	Average
5350	58.38	59.87	74	-15.62	37.34	7.47	46.3	100	235	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.38	51.05	54	-4.62	37.26	7.42	46.35	100	304	Average
5150	59.25	60.92	74	-14.75	37.26	7.42	46.35	100	304	Peak
5270	93.2	94.76			37.31	7.45	46.32	100	304	Average
5270	100.17	101.73			37.31	7.45	46.32	100	304	Peak
5350	48.64	50.13	54	-5.36	37.34	7.47	46.3	100	304	Average
5350	58.18	59.67	74	-15.82	37.34	7.47	46.3	100	304	Peak

REMARKS:

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



CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.54	51.21	54	-4.46	37.26	7.42	46.35	100	226	Average
5150	61.12	62.79	74	-12.88	37.26	7.42	46.35	100	226	Peak
5310	92.15	93.68			37.32	7.46	46.31	100	226	Average
5310	99.3	100.83			37.32	7.46	46.31	100	226	Peak
5350	52.76	54.25	54	-1.24	37.34	7.47	46.3	100	226	Average
5350	61.44	62.93	74	-12.56	37.34	7.47	46.3	100	226	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.38	51.05	54	-4.62	37.26	7.42	46.35	100	251	Average
5150	58.59	60.26	74	-15.41	37.26	7.42	46.35	100	251	Peak
5310	85.02	86.55			37.32	7.46	46.31	100	251	Average
5310	92.37	93.9			37.32	7.46	46.31	100	251	Peak
5350	49.15	50.64	54	-4.85	37.34	7.47	46.3	100	251	Average
5350	59.05	60.54	74	-14.95	37.34	7.47	46.3	100	251	Peak

REMARKS:

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



Band 3

802.11a

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	47.45	48.84	54	-6.55	37.38	7.49	46.26	100	240	Average
5460	57.92	59.31	74	-16.08	37.38	7.49	46.26	100	240	Peak
#5470	59.63	61.01	68.3	-8.67	37.39	7.49	46.26	100	240	Peak
5500	100.46	101.81			37.4	7.5	46.25	100	240	Average
5500	109.29	110.64			37.4	7.5	46.25	100	240	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	47.87	49.26	54	-6.13	37.38	7.49	46.26	128	310	Average
5460	59.03	60.42	74	-14.97	37.38	7.49	46.26	128	310	Peak
#5470	60.6	61.98	68.3	-7.7	37.39	7.49	46.26	128	310	Peak
5500	96.43	97.78			37.4	7.5	46.25	128	310	Average
5500	105.56	106.91			37.4	7.5	46.25	128	310	Peak

REMARKS:

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



CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	46.3	47.69	54	-7.7	37.38	7.49	46.26	100	250	Average
5460	54.02	55.41	74	-19.98	37.38	7.49	46.26	100	250	Peak
#5470	60.01	61.39	68.3	-8.29	37.39	7.49	46.26	100	250	Peak
5580	103.65	104.85			37.45	7.58	46.23	100	250	Average
5580	111.65	112.85			37.45	7.58	46.23	100	250	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	44.85	46.24	54	-9.15	37.38	7.49	46.26	100	190	Average
5460	55.64	57.03	74	-18.36	37.38	7.49	46.26	100	190	Peak
#5470	58.7	60.08	68.3	-9.6	37.39	7.49	46.26	100	190	Peak
5580	96.03	97.23			37.45	7.58	46.23	100	190	Average
5580	105.36	106.56			37.45	7.58	46.23	100	190	Peak

REMARKS:

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



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	100.24	101.21			37.52	7.7	46.19	200	280	Average
5700	108.34	109.31			37.52	7.7	46.19	200	280	Peak
#5725	65.93	66.86	68.3	-2.37	37.53	7.73	46.19	200	280	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	94.68	95.65			37.52	7.7	46.19	100	258	Average
5700	103.51	104.48			37.52	7.7	46.19	100	258	Peak
#5725	63.97	64.9	68.3	-4.33	37.53	7.73	46.19	100	258	Peak

REMARKS:

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



802.11n (20MHz)

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	48.59	49.98	54	-5.41	37.38	7.49	46.26	100	240	Average
5460	57.96	59.35	74	-16.04	37.38	7.49	46.26	100	240	Peak
#5470	61.91	63.29	68.3	-6.39	37.39	7.49	46.26	100	240	Peak
5500	99.96	101.31			37.4	7.5	46.25	100	240	Average
5500	108.48	109.83			37.4	7.5	46.25	100	240	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	47.73	49.12	54	-6.27	37.38	7.49	46.26	128	310	Average
5460	57.87	59.26	74	-16.13	37.38	7.49	46.26	128	310	Peak
#5470	58.91	60.29	68.3	-9.39	37.39	7.49	46.26	128	310	Peak
5500	96.49	97.84			37.4	7.5	46.25	128	310	Average
5500	104.96	106.31			37.4	7.5	46.25	128	310	Peak

REMARKS:

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



CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	43.07	44.46	54	-10.93	37.38	7.49	46.26	100	250	Average
5460	55.82	57.21	74	-18.18	37.38	7.49	46.26	100	250	Peak
#5470	58.95	60.33	68.3	-9.35	37.39	7.49	46.26	100	250	Peak
5580	103.65	104.85			37.45	7.58	46.23	100	250	Average
5580	113.45	114.65			37.45	7.58	46.23	100	250	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	42.15	43.54	54	-11.85	37.38	7.49	46.26	100	190	Average
5460	54.5	55.89	74	-19.5	37.38	7.49	46.26	100	190	Peak
#5470	57.38	58.76	68.3	-10.92	37.39	7.49	46.26	100	190	Peak
5580	93.84	95.04			37.45	7.58	46.23	100	190	Average
5580	104.05	105.25			37.45	7.58	46.23	100	190	Peak

REMARKS:

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



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	100.07	101.04			37.52	7.7	46.19	200	280	Average
5700	108.57	109.54			37.52	7.7	46.19	200	280	Peak
#5725	64.59	65.52	68.3	-3.71	37.53	7.73	46.19	200	280	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	96.49	97.46			37.52	7.7	46.19	100	258	Average
5700	104.34	105.31			37.52	7.7	46.19	100	258	Peak
#5725	65.24	66.17	68.3	-3.06	37.53	7.73	46.19	100	258	Peak

REMARKS:

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



802.11n (40MHz)

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	49.26	50.65	54	-4.74	37.38	7.49	46.26	100	210	Average
5460	60.46	61.85	74	-13.54	37.38	7.49	46.26	100	210	Peak
#5470	66.55	67.93	68.3	-1.75	37.39	7.49	46.26	100	210	Peak
5510	91.7	93.03			37.41	7.51	46.25	100	210	Average
5510	97.98	99.31			37.41	7.51	46.25	100	210	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	48.35	49.74	54	-5.65	37.38	7.49	46.26	100	307	Average
5460	57.45	58.84	74	-16.55	37.38	7.49	46.26	100	307	Peak
#5470	64.6	65.98	68.3	-3.7	37.39	7.49	46.26	100	307	Peak
5510	87.61	88.94			37.41	7.51	46.25	100	307	Average
5510	96.84	98.17			37.41	7.51	46.25	100	307	Peak

REMARKS:

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



CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	47.12	48.51	54	-6.88	37.38	7.49	46.26	100	220	Average
5460	56.43	57.82	74	-17.57	37.38	7.49	46.26	100	220	Peak
#5470	57.03	58.41	68.3	-11.27	37.39	7.49	46.26	100	220	Peak
5550	94.38	95.64			37.43	7.55	46.24	100	220	Average
5550	105.12	106.38			37.43	7.55	46.24	100	220	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	47.04	48.43	54	-6.96	37.38	7.49	46.26	150	308	Average
5460	56.52	57.91	74	-17.48	37.38	7.49	46.26	150	308	Peak
#5470	56.76	58.14	68.3	-11.54	37.39	7.49	46.26	150	308	Peak
5550	89.61	90.87			37.43	7.55	46.24	150	308	Average
5550	100.58	101.84			37.43	7.55	46.24	150	308	Peak

REMARKS:

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



CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5670	89.56	90.59			37.5	7.67	46.2	100	343	Average
5670	98.58	99.61			37.5	7.67	46.2	100	343	Peak
#5725	59.04	59.97	68.3	-9.26	37.53	7.73	46.19	100	343	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5670	90.48	91.51			37.5	7.67	46.2	100	260	Average
5670	102.1	103.13			37.5	7.67	46.2	100	260	Peak
#5725	60.99	61.92	68.3	-7.31	37.53	7.73	46.19	100	260	Peak

REMARKS:

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



Band 4

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	102.95	103.83			37.55	7.75	46.18	100	249	Average
5745	111.26	112.14			37.55	7.75	46.18	100	249	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	91.78	92.66			37.55	7.75	46.18	100	266	Average
5745	101.23	102.11			37.55	7.75	46.18	100	266	Peak

REMARKS:

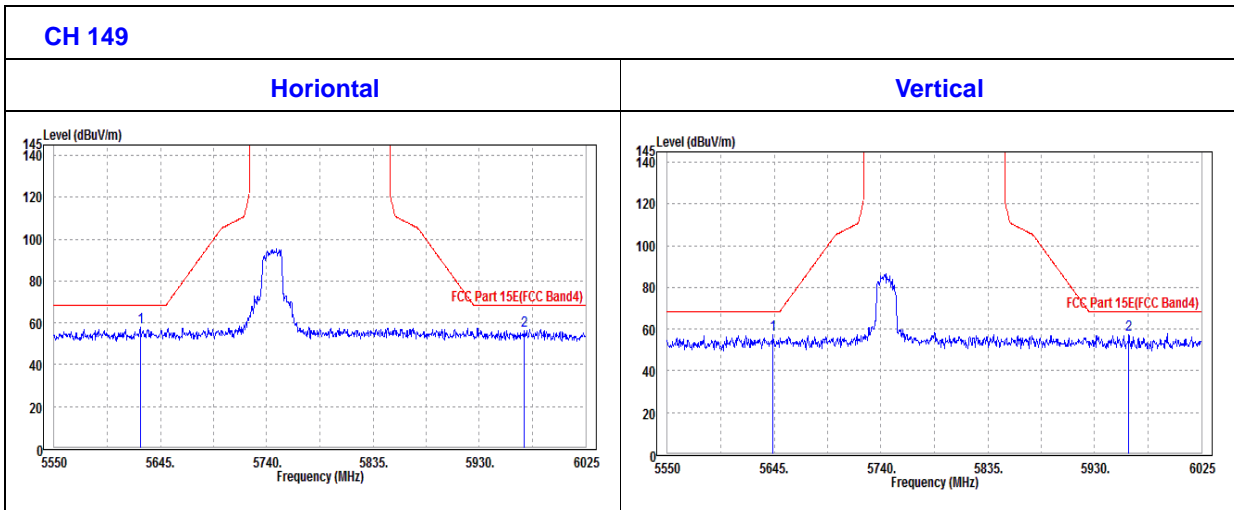
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5745MHz: Fundamental frequency.



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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
5626.95	57.88	58.98	68.3	-10.42	37.48	7.63	46.21	103	0	Peak
5970.38	56.33	56.79	68.3	-11.97	37.68	7.98	46.12	103	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5644.05	57.57	58.64	68.3	-10.73	37.49	7.65	46.21	103	0	Peak
5960.4	57.54	58.01	68.3	-10.76	37.68	7.97	46.12	103	0	Peak





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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	92.98	93.79			37.57	7.79	46.17	100	240	Average
5785	101.03	101.84			37.57	7.79	46.17	100	240	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	83.03	83.84			37.57	7.79	46.17	100	269	Average
5785	91.31	92.12			37.57	7.79	46.17	100	269	Peak

REMARKS:

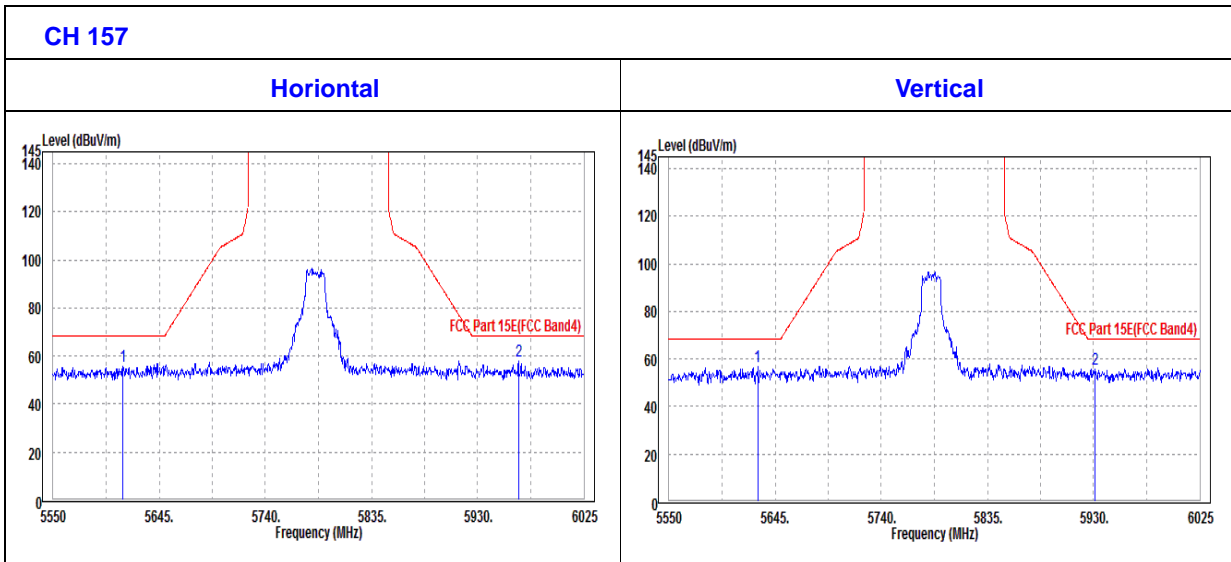
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.



OOBE DATA

802.11a

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5612.7	55.83	56.97	68.3	-12.47	37.47	7.61	46.22	106	267	Peak
5966.58	57.7	58.16	68.3	-10.6	37.68	7.98	46.12	106	267	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5629.33	56.88	57.98	68.3	-11.42	37.48	7.63	46.21	100	267	Peak
5930.95	55.75	56.28	68.3	-12.55	37.66	7.94	46.13	100	267	Peak





CHANNEL	TX Channel 161	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5805	91.84	92.61			37.58	7.81	46.16	100	230	Average
5805	100.96	101.73			37.58	7.81	46.16	100	230	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5805	82.46	83.23			37.58	7.81	46.16	100	310	Average
5805	92.15	92.92			37.58	7.81	46.16	100	310	Peak

REMARKS:

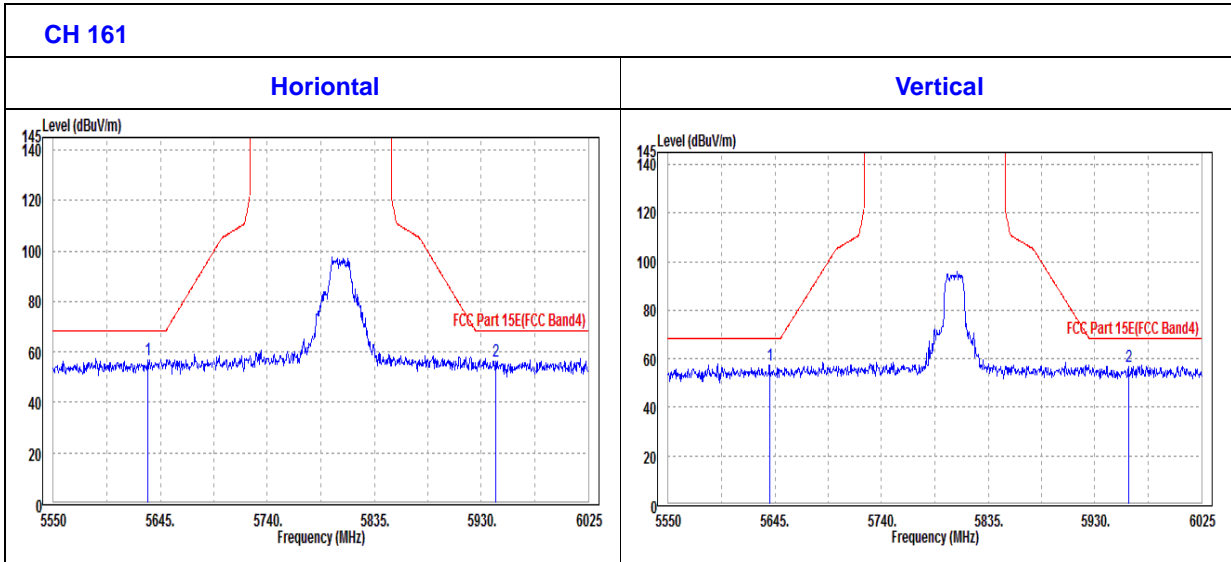
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5805MHz: Fundamental frequency.



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
5633.6	56.71	57.8	68.3	-11.59	37.48	7.64	46.21	104	230	Peak
5942.83	56.35	56.86	68.3	-11.95	37.67	7.95	46.13	104	230	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5640.25	57.13	58.22	68.3	-11.17	37.48	7.64	46.21	104	230	Peak
5959.93	56.85	57.32	68.3	-11.45	37.68	7.97	46.12	104	230	Peak





802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	91.21	92.09			37.55	7.75	46.18	100	240	Average
5745	99.33	100.21			37.55	7.75	46.18	100	240	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5745	79.24	80.12			37.55	7.75	46.18	100	273	Average
5745	90.01	90.89			37.55	7.75	46.18	100	273	Peak

REMARKS:

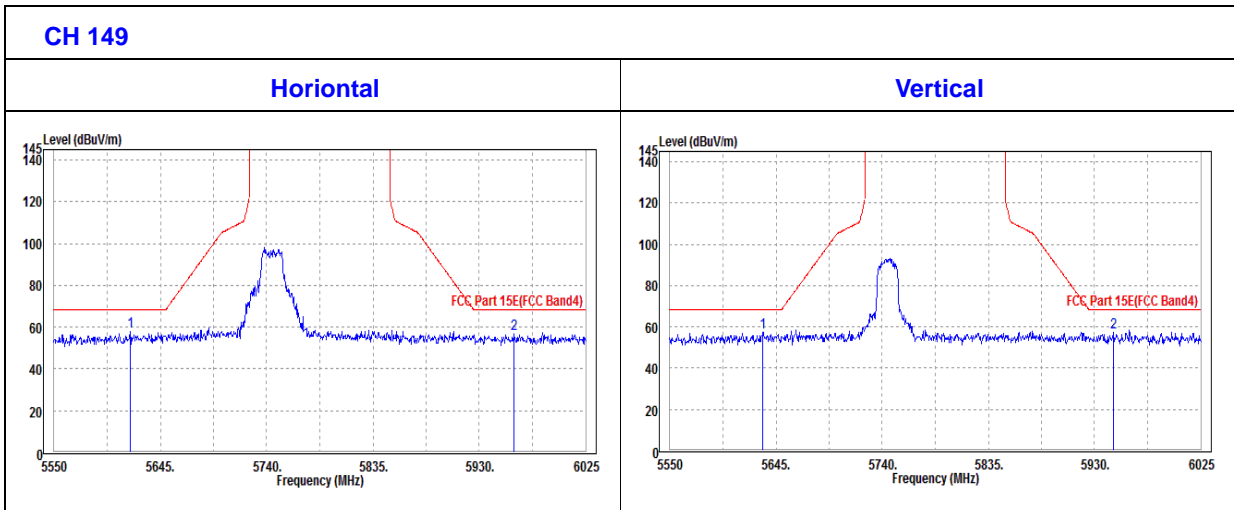
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5745MHz: Fundamental frequency.



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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
5617.93	57.8	58.93	68.3	-10.5	37.47	7.62	46.22	104	230	Peak
5961.35	56.52	56.99	68.3	-11.78	37.68	7.97	46.12	104	230	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5633.13	57.4	58.49	68.3	-10.9	37.48	7.64	46.21	104	230	Peak
5946.63	57.43	57.92	68.3	-10.87	37.67	7.96	46.12	104	230	Peak





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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	91.08	91.89			37.57	7.79	46.17	100	240	Average
5785	99.53	100.34			37.57	7.79	46.17	100	240	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5785	80.75	81.56			37.57	7.79	46.17	100	316	Average
5785	91.44	92.25			37.57	7.79	46.17	100	316	Peak

REMARKS:

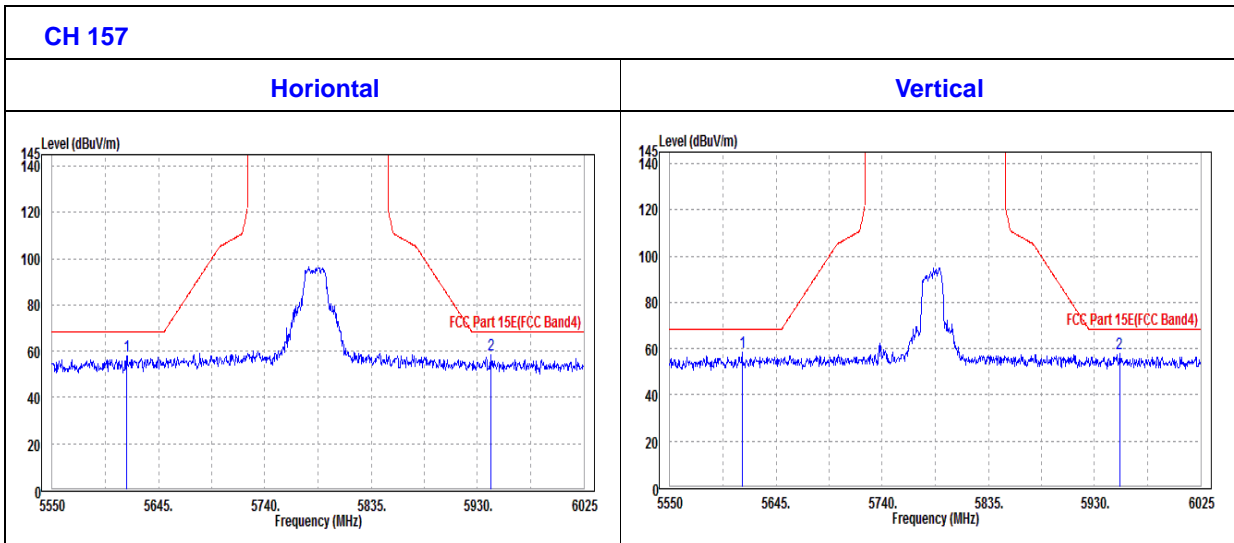
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5785MHz: Fundamental frequency.



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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
5616.5	58.06	59.19	68.3	-10.24	37.47	7.62	46.22	104	240	Peak
5942.35	58.36	58.87	68.3	-9.94	37.67	7.95	46.13	104	240	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5614.6	58.26	59.39	68.3	-10.04	37.47	7.62	46.22	104	240	Peak
5952.33	58.02	58.51	68.3	-10.28	37.67	7.96	46.12	104	240	Peak





CHANNEL	TX Channel 161	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5805	100.26	101.03			37.58	7.81	46.16	100	230	Average
5805	107.84	108.61			37.58	7.81	46.16	100	230	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5805	92.19	92.96			37.58	7.81	46.16	100	310	Average
5805	100.9	101.67			37.58	7.81	46.16	100	310	Peak

REMARKS:

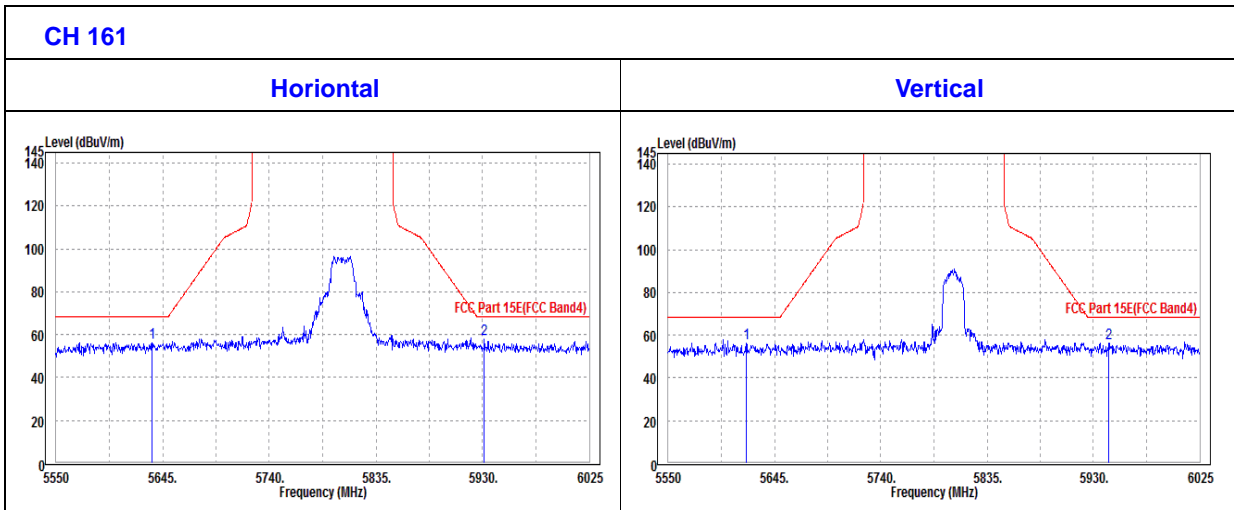
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5805MHz: Fundamental frequency.



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
5635.5	56.22	57.31	68.3	-12.08	37.48	7.64	46.21	104	240	Peak
5931.43	57.73	58.26	68.3	-10.57	37.66	7.94	46.13	104	240	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5619.83	56.06	57.19	68.3	-12.24	37.47	7.62	46.22	104	240	Peak
5943.78	56.34	56.85	68.3	-11.96	37.67	7.95	46.13	104	240	Peak





802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	97.8	98.67			37.55	7.76	46.18	100	238	Average
5755	106.54	107.41			37.55	7.76	46.18	100	238	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5755	88.21	89.08			37.55	7.76	46.18	100	310	Average
5755	98.64	99.51			37.55	7.76	46.18	100	310	Peak

REMARKS:

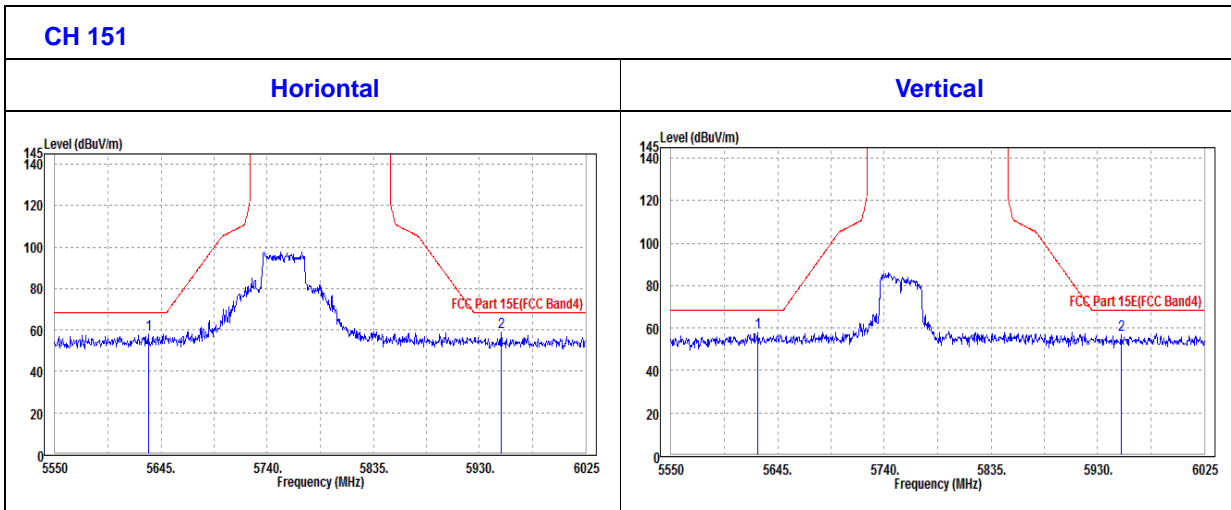
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5755MHz: Fundamental frequency.



OOBE DATA

802.11n (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5633.6	57.71	58.8	68.3	-10.59	37.48	7.64	46.21	103	239	Peak
5949.48	58.96	59.45	68.3	-9.34	37.67	7.96	46.12	103	239	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5626.95	58.13	59.23	68.3	-10.17	37.48	7.63	46.21	103	239	Peak
5950.9	56.53	57.02	68.3	-11.77	37.67	7.96	46.12	103	239	Peak





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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5795	96.95	97.74			37.58	7.8	46.17	100	230	Average
5795	104.96	105.75			37.58	7.8	46.17	100	230	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5795	87.49	88.28			37.58	7.8	46.17	100	300	Average
5795	96.72	97.51			37.58	7.8	46.17	100	300	Peak

REMARKS:

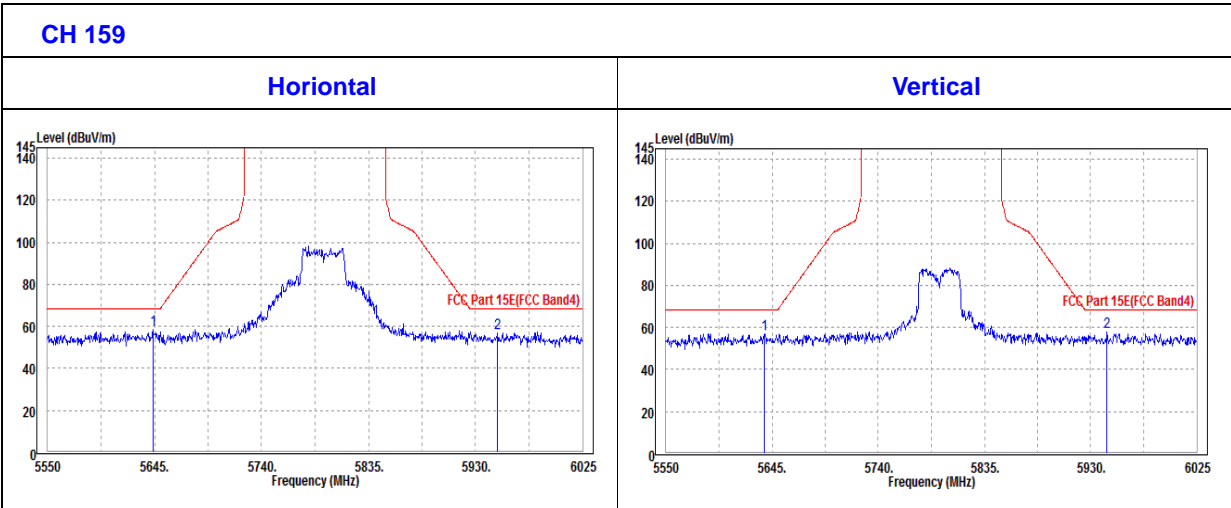
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5795MHz: Fundamental frequency.



OOBE DATA

802.11n (40MHZ)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5643.58	58.27	59.34	68.3	-10.03	37.49	7.65	46.21	103	239	Peak
5949.48	56.87	57.36	68.3	-11.43	37.67	7.96	46.12	103	239	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5638.35	56.89	57.98	68.3	-11.41	37.48	7.64	46.21	103	239	Peak
5944.73	57.84	58.35	68.3	-10.46	37.67	7.95	46.13	103	239	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.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Mar. 15,18	Mar. 14,19
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.

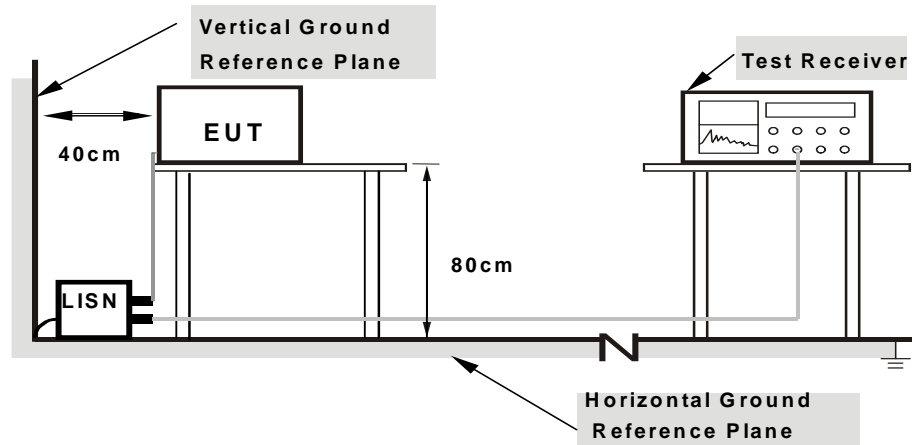
NOTE: All modes of operation were investigated and the worst-case emissions are reported.



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.



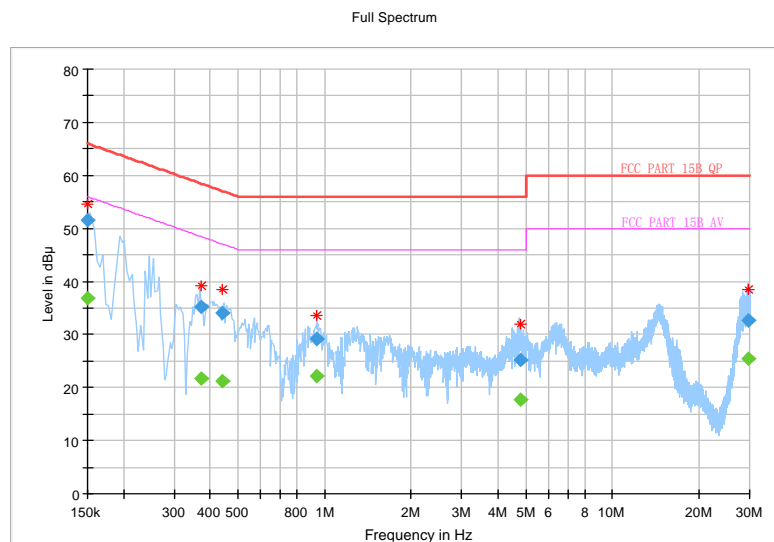
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA :

Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	24deg. C, 55RH
Tested By	John Wen	TEST DATE	2018/08/28

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	36.90	56.00	-19.10	L1	ON	9.6
0.150000	51.58	---	66.00	-14.42	L1	ON	9.6
0.372000	---	21.60	48.46	-26.86	L1	ON	9.7
0.372000	35.16	---	58.46	-23.30	L1	ON	9.7
0.440000	---	21.23	47.06	-25.83	L1	ON	9.7
0.440000	33.96	---	57.06	-23.10	L1	ON	9.7
0.936000	---	22.26	46.00	-23.74	L1	ON	9.7
0.936000	29.04	---	56.00	-26.96	L1	ON	9.7
4.784000	---	17.65	46.00	-28.35	L1	ON	9.7
4.784000	25.21	---	56.00	-30.79	L1	ON	9.7
29.688000	---	25.38	50.00	-24.62	L1	ON	10.4
29.688000	32.54	---	60.00	-27.46	L1	ON	10.4

- 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.



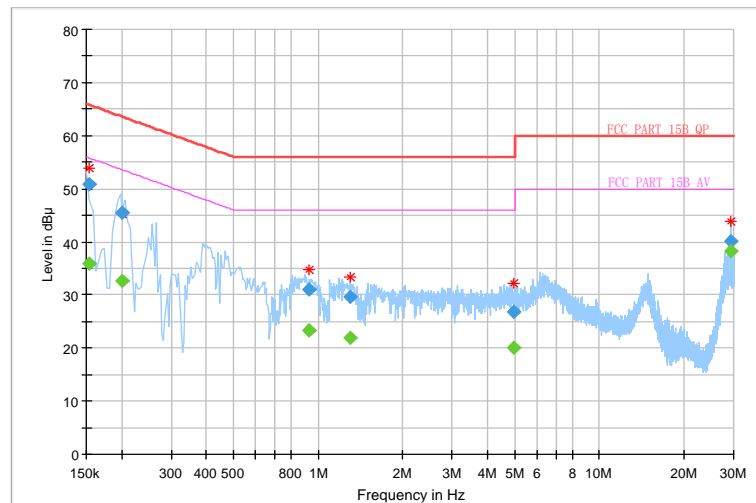


Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	24deg. C, 55RH
Tested By	John Wen	TEST DATE	2018/08/28

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154000	---	35.91	55.78	-19.87	N	ON	9.9
0.154000	50.73	---	65.78	-15.05	N	ON	9.9
0.200000	---	32.62	53.61	-20.99	N	ON	9.9
0.200000	45.48	---	63.61	-18.13	N	ON	9.9
0.932000	---	23.40	46.00	-22.60	N	ON	9.9
0.932000	30.93	---	56.00	-25.07	N	ON	9.9
1.304000	---	22.02	46.00	-23.98	N	ON	9.9
1.304000	29.69	---	56.00	-26.31	N	ON	9.9
4.940000	---	20.00	46.00	-26.00	N	ON	9.8
4.940000	26.73	---	56.00	-29.27	N	ON	9.8
29.252000	---	38.14	50.00	-11.86	N	ON	10.5
29.252000	40.14	---	60.00	-19.86	N	ON	10.5

- 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.

Full Spectrum





3.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

3.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

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

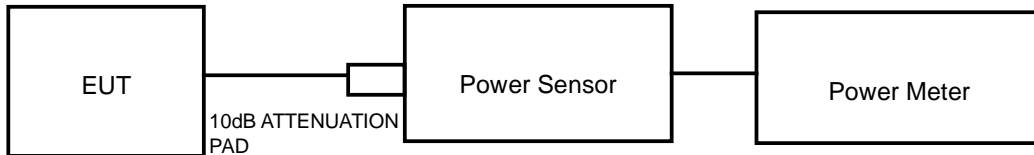
NOTE: Where B is the 26dB emission bandwidth in MHz.



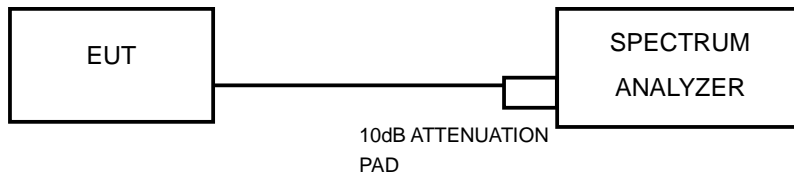
3.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

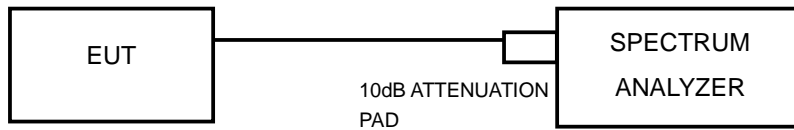
802.11a, 802.11n (20MHz), 802.11n (40MHz) TEST CONFIGURATION



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. 02,18	Mar. 01,19
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510523	Mar. 16,18	Mar. 15,19
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510332	Mar. 16,18	Mar. 15,19
Power Sensor	ANRITSU	MA2411B	1339352	Mar. 16,18	Mar. 15,19

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.



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 \geq 3 MHz.
5. Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This ensures that bin-to-bin spacing is $\leq \text{RBW}/2$, 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 $10 \log (1/0.25) = 6 \text{ dB}$ 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 $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

FOR 26dB BANDWIDTH

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

FOR 6dB BANDWIDTH

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 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	14.26	26.67	24	PASS
40	5200	14.15	26.00	24	PASS
48	5240	14.12	25.82	24	PASS
52	5260	14.19	26.24	24	PASS
60	5300	14.17	26.12	24	PASS
64	5320	14.10	25.70	24	PASS
100	5500	14.14	25.94	24	PASS
116	5580	14.18	26.18	24	PASS
140	5700	14.05	25.41	24	PASS
149	5745	14.08	25.59	30	PASS
157	5785	14.06	25.47	30	PASS
161	5805	14.09	25.64	30	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	13.22	20.99	24	PASS
40	5200	13.17	20.75	24	PASS
48	5240	13.08	20.32	24	PASS
52	5260	13.05	20.18	24	PASS
60	5300	13.22	20.99	24	PASS
64	5320	13.29	21.33	24	PASS
100	5500	13.31	21.43	24	PASS
116	5580	13.16	20.70	24	PASS
140	5700	13.27	21.23	24	PASS
149	5745	13.14	20.61	30	PASS
157	5785	13.23	21.04	30	PASS
161	5805	13.16	20.70	30	PASS



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	AVERAGE POWER (mW)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	13.11	20.46	24	PASS
46	5230	13.23	21.04	24	PASS
54	5270	13.11	20.46	24	PASS
62	5310	13.26	21.18	24	PASS
102	5510	13.30	21.38	24	PASS
110	5550	13.29	21.33	24	PASS
134	5670	13.34	21.58	24	PASS
151	5755	13.17	20.75	30	PASS
159	5795	13.20	20.89	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	16.74	19.73	PASS
40	5200	16.74	19.73	PASS
48	5240	16.38	20.65	PASS
52	5260	16.68	19.83	PASS
60	5300	16.74	21.85	PASS
64	5320	16.44	20.84	PASS
100	5500	16.80	23.80	PASS
116	5580	16.92	26.05	PASS
140	5700	17.04	26.29	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
149	5745	18.84	15.75	PASS
157	5785	17.22	15.49	PASS
161	5805	17.82	15.34	PASS



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
36	5180	17.58	19.92	PASS
40	5200	17.70	19.87	PASS
48	5240	17.70	20.01	PASS
52	5260	17.82	19.95	PASS
60	5300	17.70	21.11	PASS
64	5320	17.70	20.18	PASS
100	5500	17.82	26.23	PASS
116	5580	19.14	35.07	PASS
140	5700	18.30	34.03	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
149	5745	17.94	15.13	PASS
157	5785	18.06	15.96	PASS
161	5805	18.06	15.47	PASS



802.11n (40MHz)

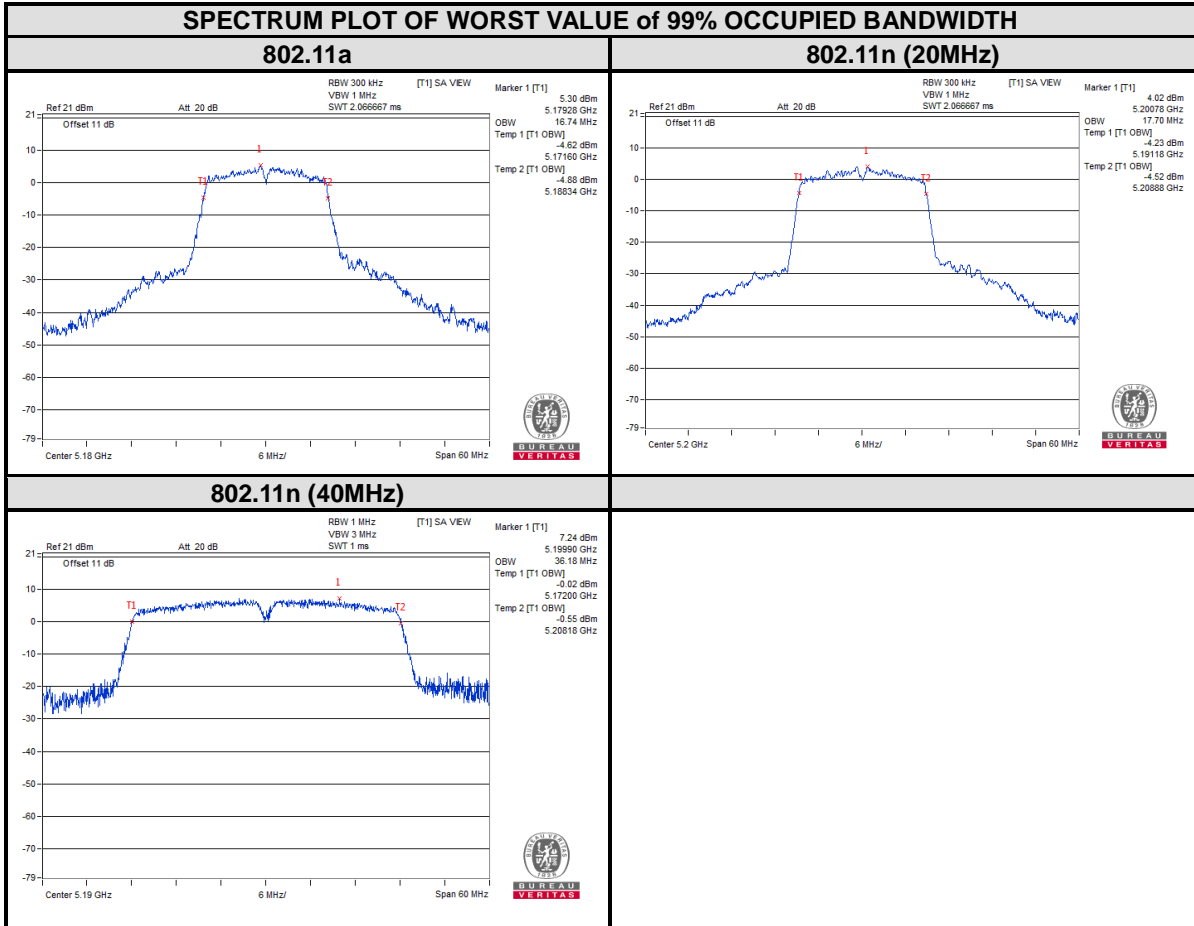
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
38	5190	36.18	55.60	PASS
46	5230	36.18	57.03	PASS
54	5270	36.30	64.23	PASS
62	5310	36.36	69.24	PASS
102	5510	37.56	85.76	PASS
110	5550	37.62	82.83	PASS
134	5670	36.60	77.24	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
151	5755	36.72	35.36	PASS
159	5795	36.54	35.15	PASS



BUREAU VERITAS

Test Report No.: RF180817W003-3

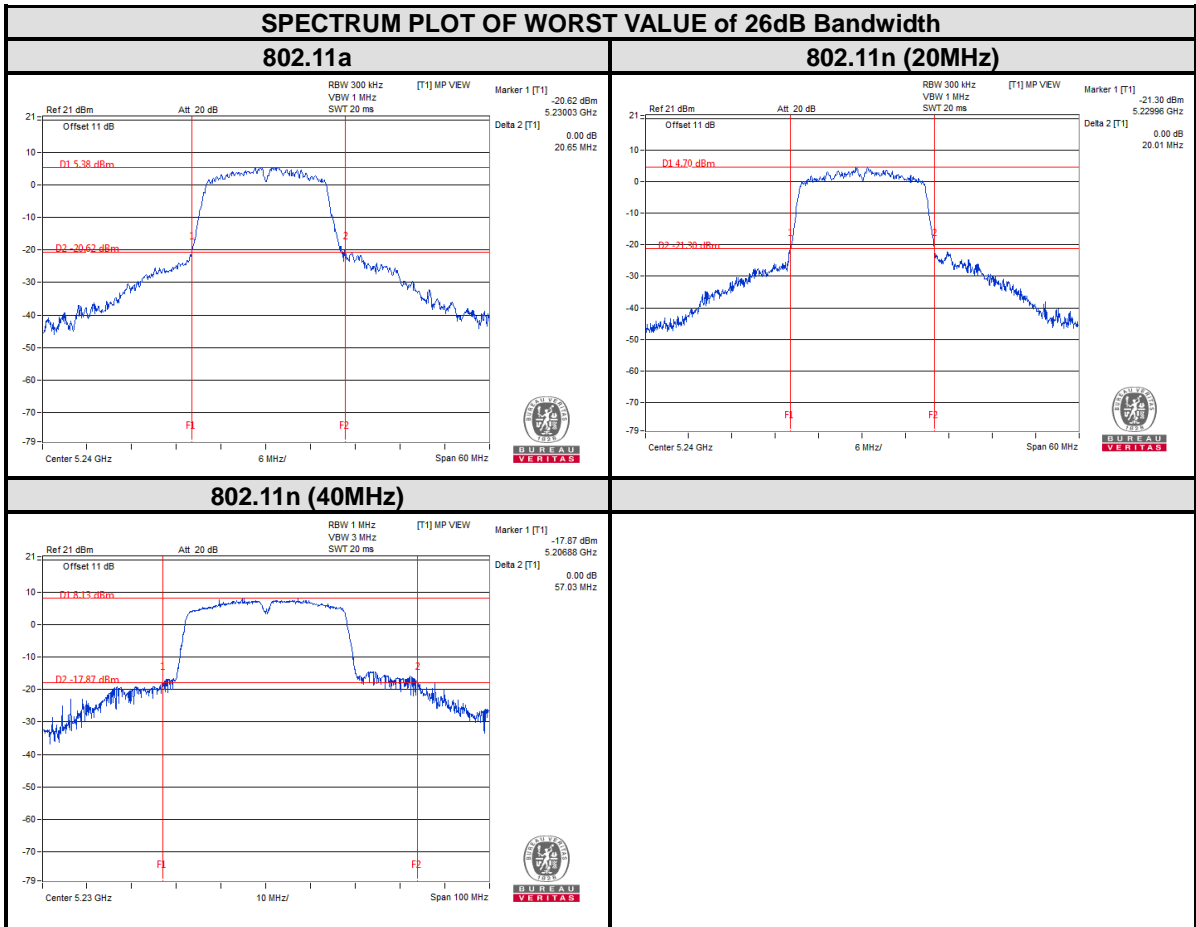
For U-NII-1:





BUREAU VERITAS

Test Report No.: RF180817W003-3

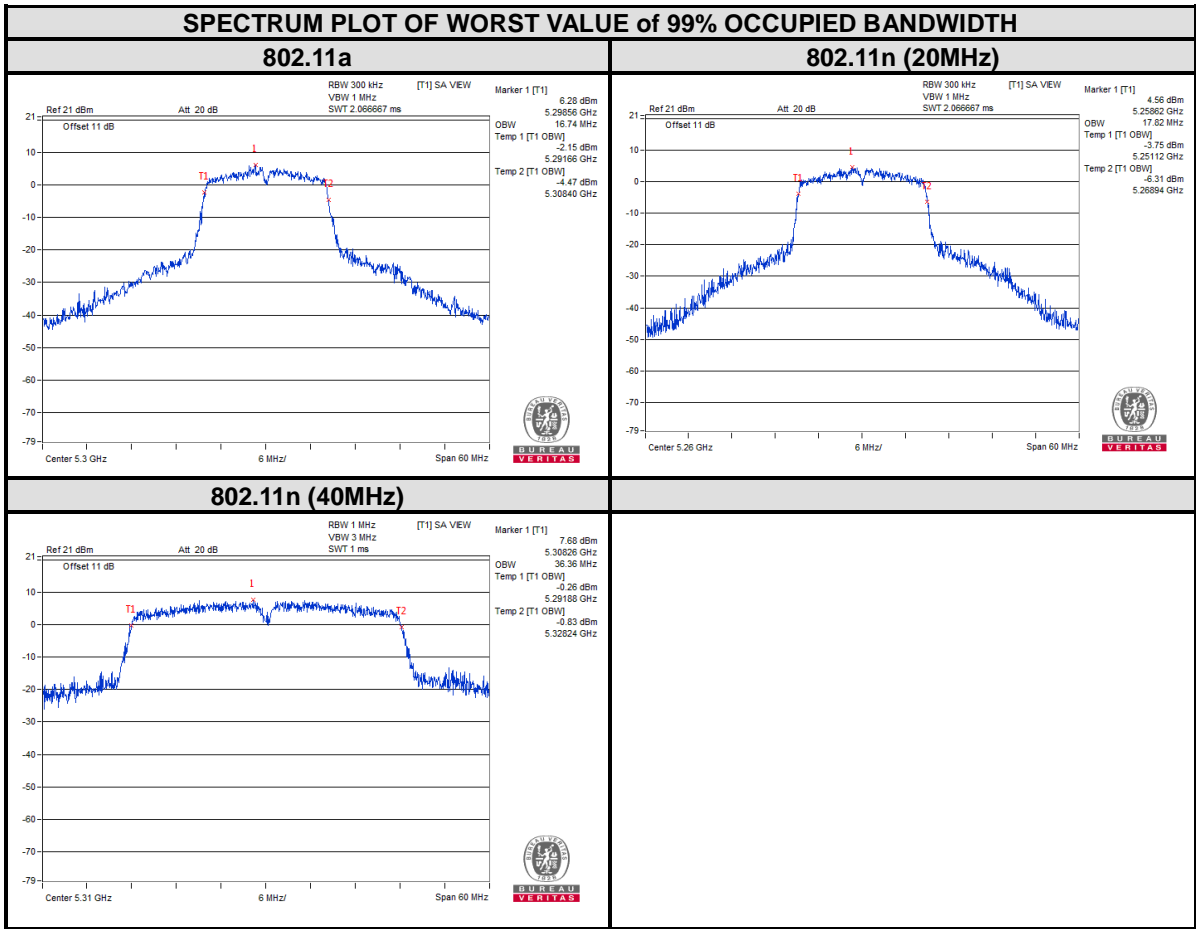




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Test Report No.: RF180817W003-3

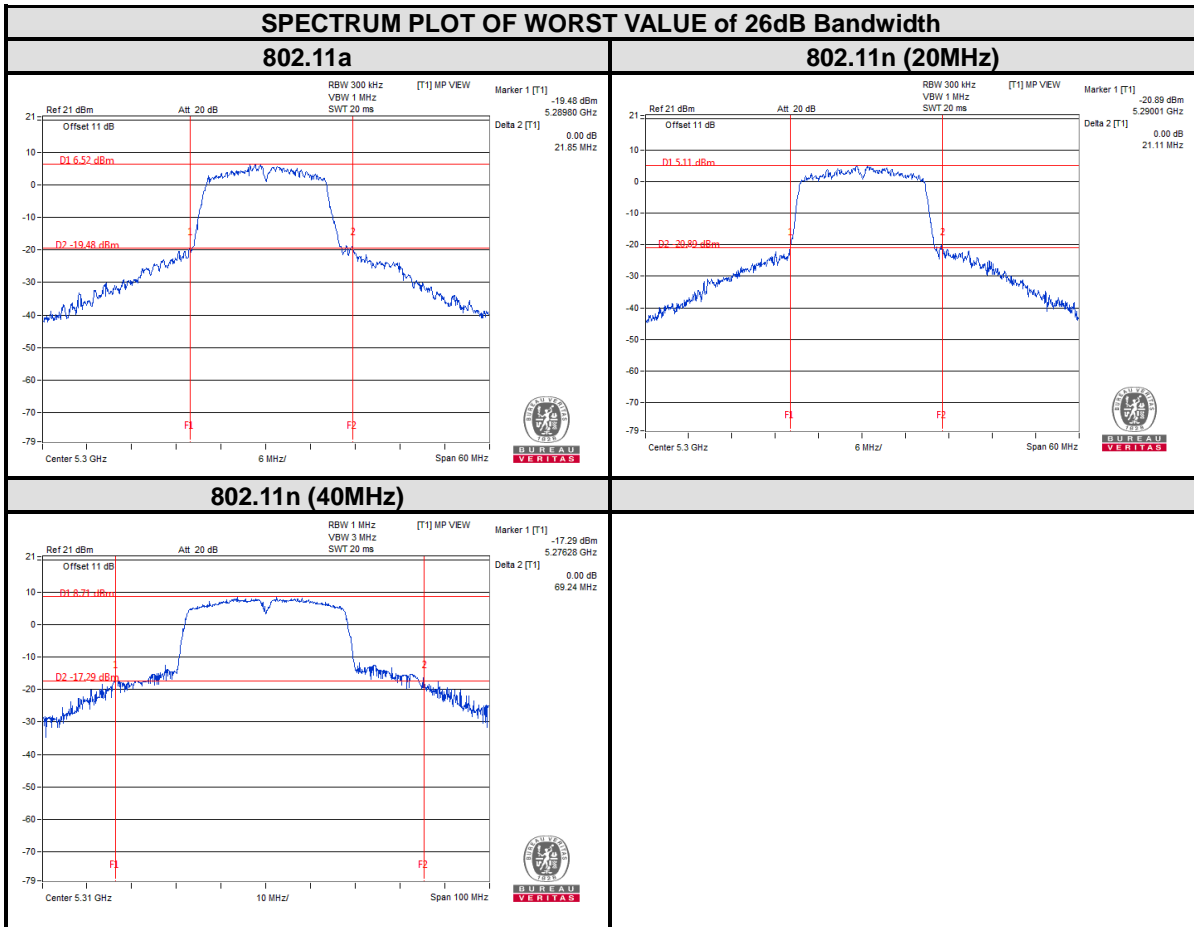
For U-NII-2A:





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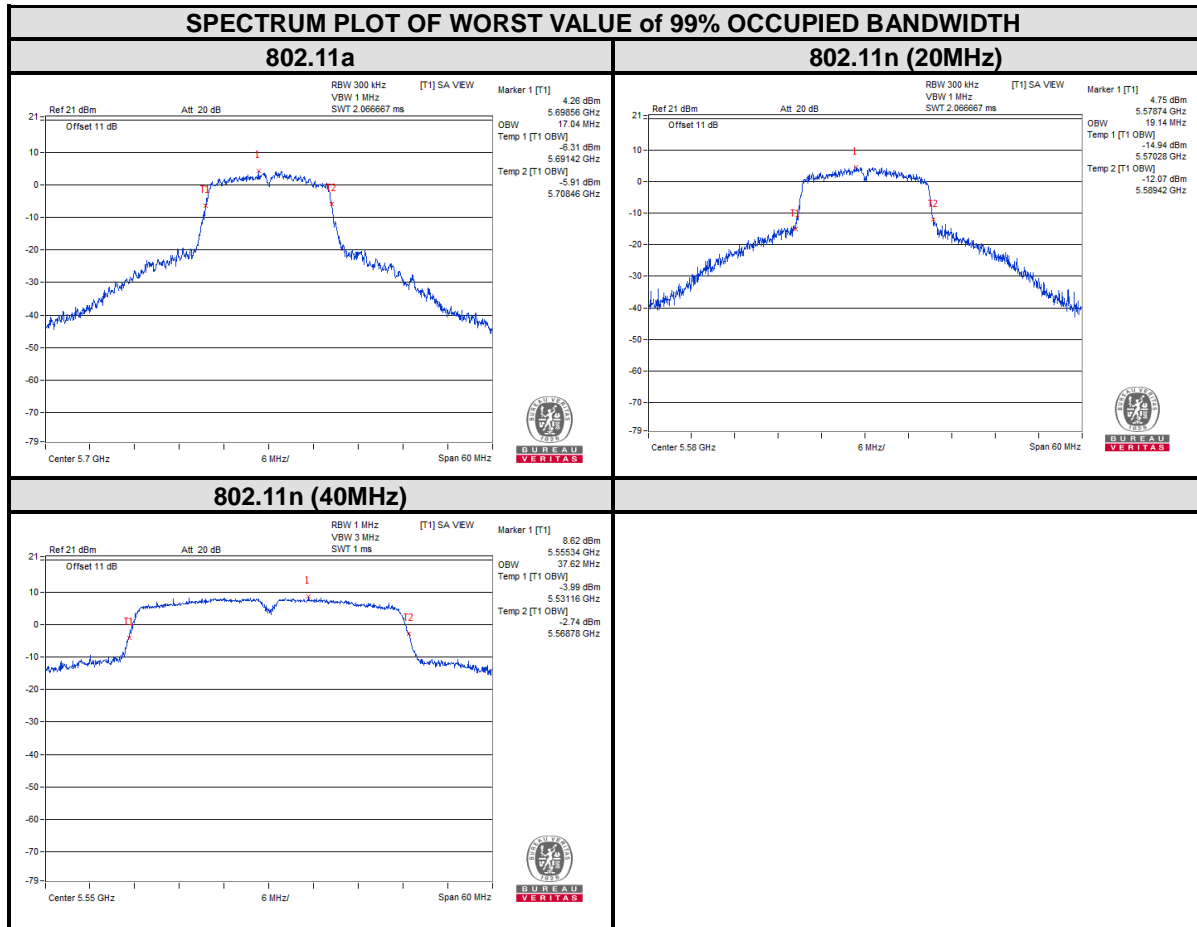




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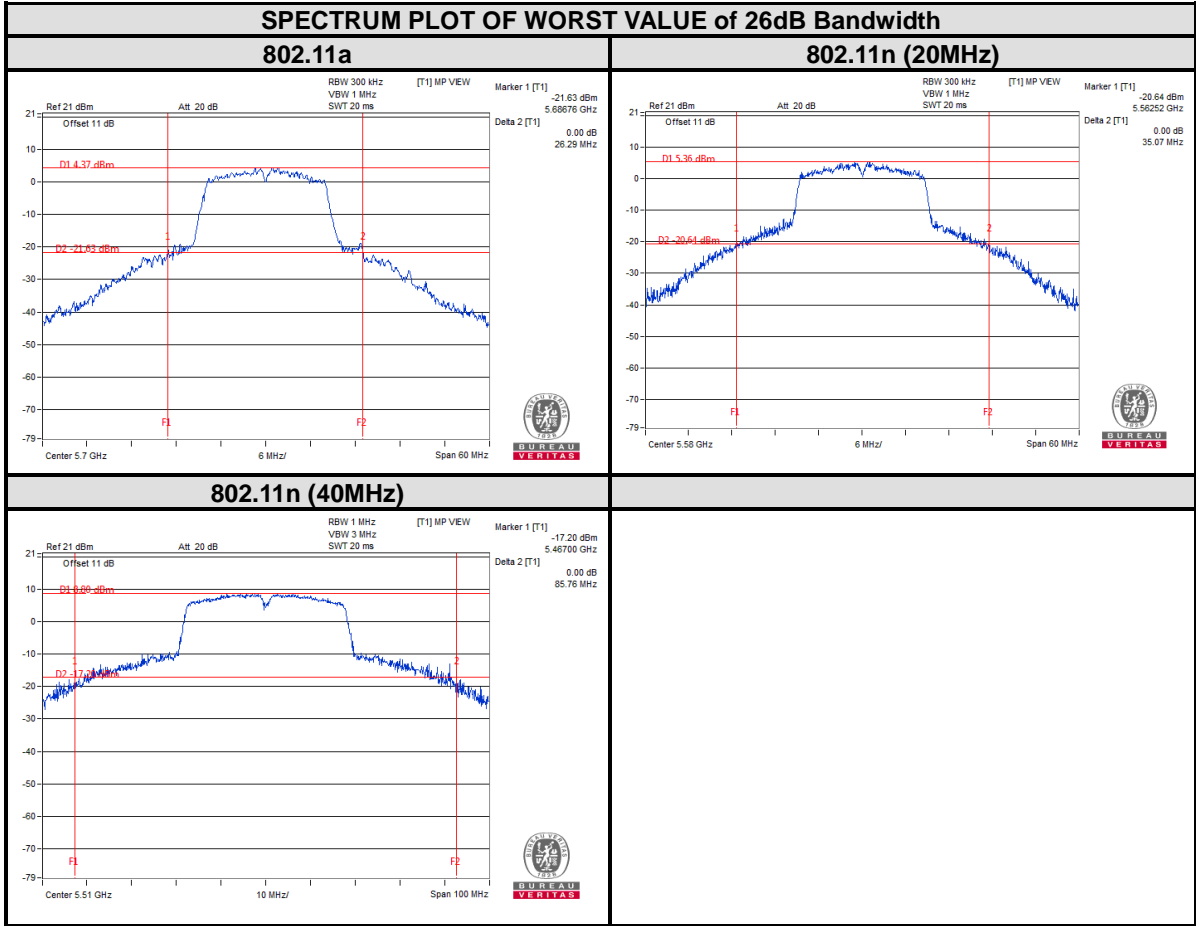
For U-NII-2C:





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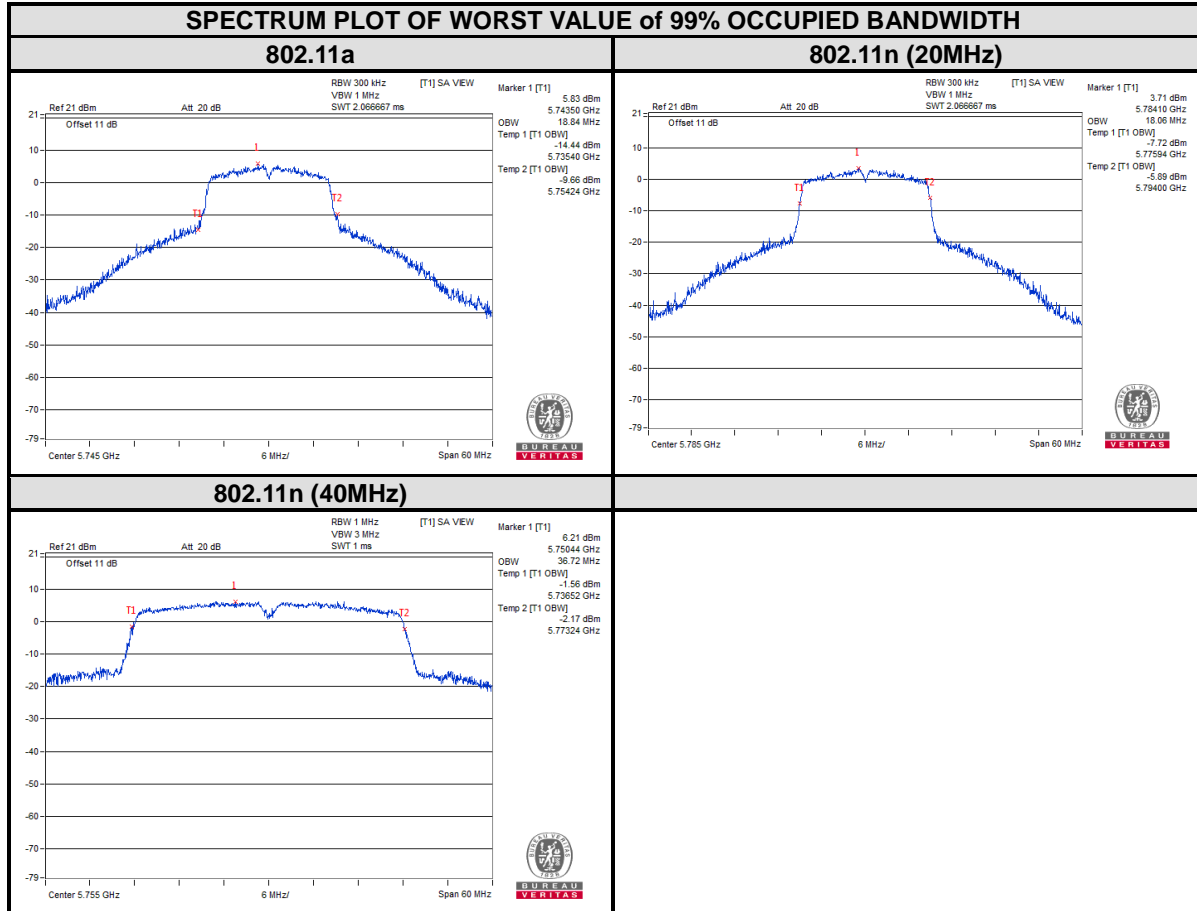




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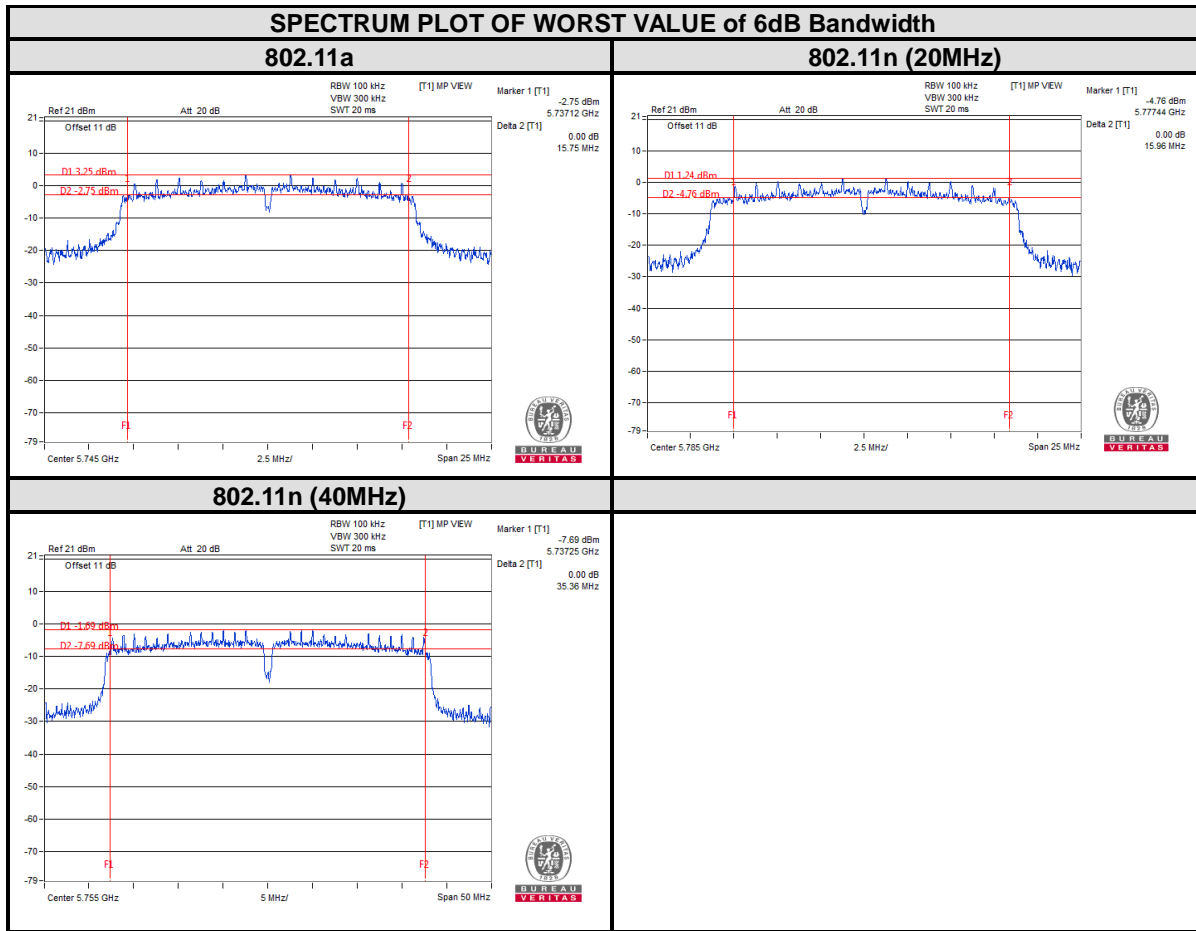
For U-NII-3:





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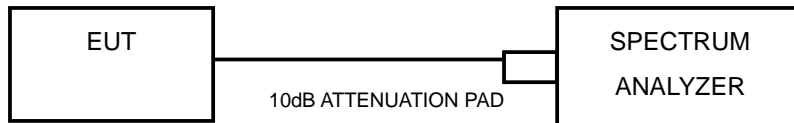


3.4 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

3.4.1 LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

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

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.



3.4.4 TEST PROCEDURES

Using method SA-2

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

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 & U-NII-2C :

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	7.64	0.132	7.772	11	PASS
40	5200	7.54	0.132	7.672	11	PASS
48	5240	9.81	0.132	9.942	11	PASS
52	5260	7.69	0.132	7.822	11	PASS
60	5300	8.13	0.132	8.262	11	PASS
64	5320	9.29	0.132	9.422	11	PASS
100	5500	8.49	0.132	8.622	11	PASS
116	5580	8.28	0.132	8.412	11	PASS
140	5700	6.65	0.132	6.782	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	5.74	0.141	5.881	11	PASS
40	5200	6.09	0.141	6.231	11	PASS
48	5240	7.16	0.141	7.301	11	PASS
52	5260	6.74	0.141	6.881	11	PASS
60	5300	7.35	0.141	7.491	11	PASS
64	5320	7.46	0.141	7.601	11	PASS
100	5500	7.32	0.141	7.461	11	PASS
116	5580	6.47	0.141	6.611	11	PASS
140	5700	6.78	0.141	6.921	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	4.68	0.292	4.972	11	PASS
46	5230	4.52	0.292	4.812	11	PASS
54	5270	4.87	0.292	5.162	11	PASS
62	5310	5.16	0.292	5.452	11	PASS
102	5510	6.40	0.292	6.692	11	PASS
110	5550	5.01	0.292	5.302	11	PASS
134	5670	2.39	0.292	2.682	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	11.60	8.59	0.132	8.72	30	PASS
157	5785	11.15	8.14	0.132	9.27	30	PASS
161	5805	9.47	6.46	0.132	6.59	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	9.54	6.53	0.141	6.67	30	PASS
157	5785	9.73	6.72	0.141	6.86	30	PASS
161	5805	9.47	6.47	0.141	6.60	30	PASS

802.11n (40MHz)

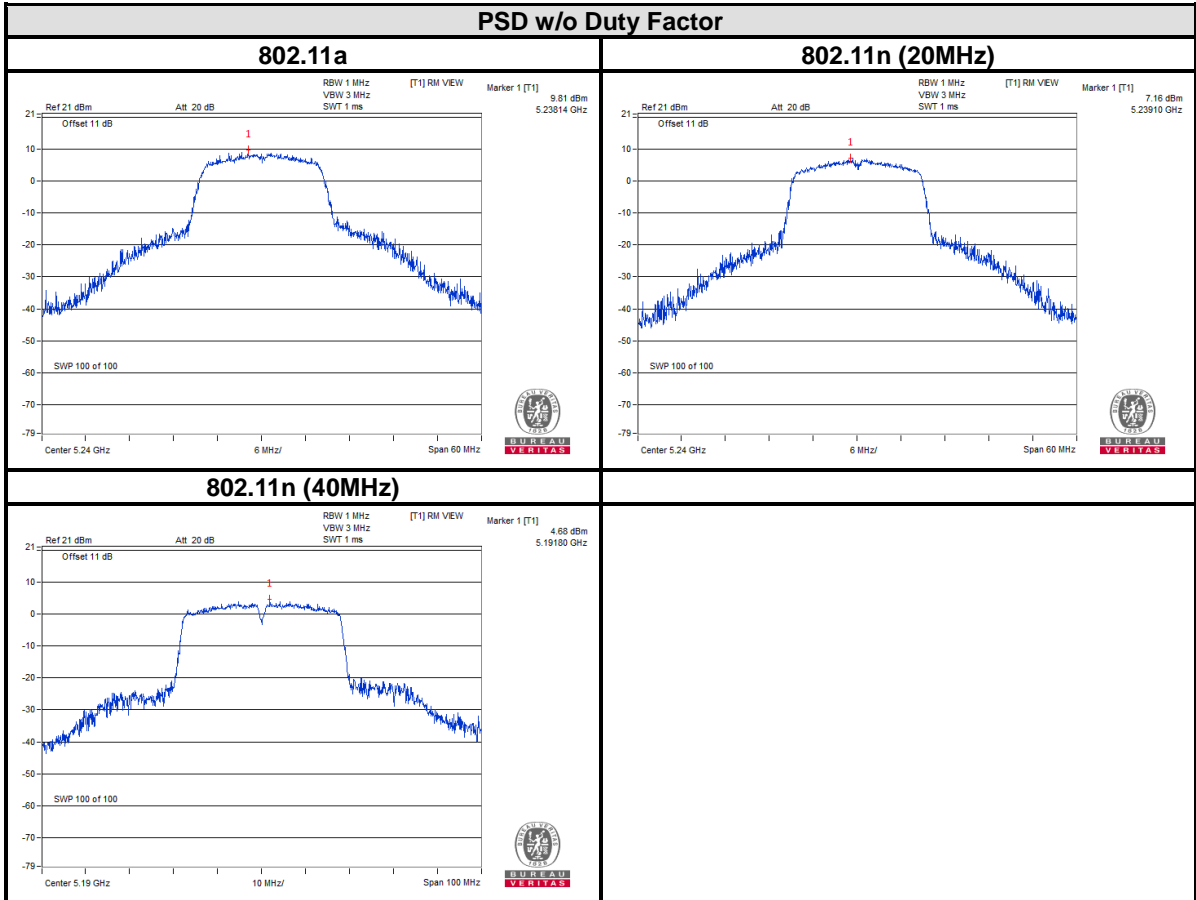
CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
151	5755	7.01	4.00	0.292	4.29	30	PASS
159	5795	7.18	4.17	0.292	4.46	30	PASS



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For 5180~5240MHz

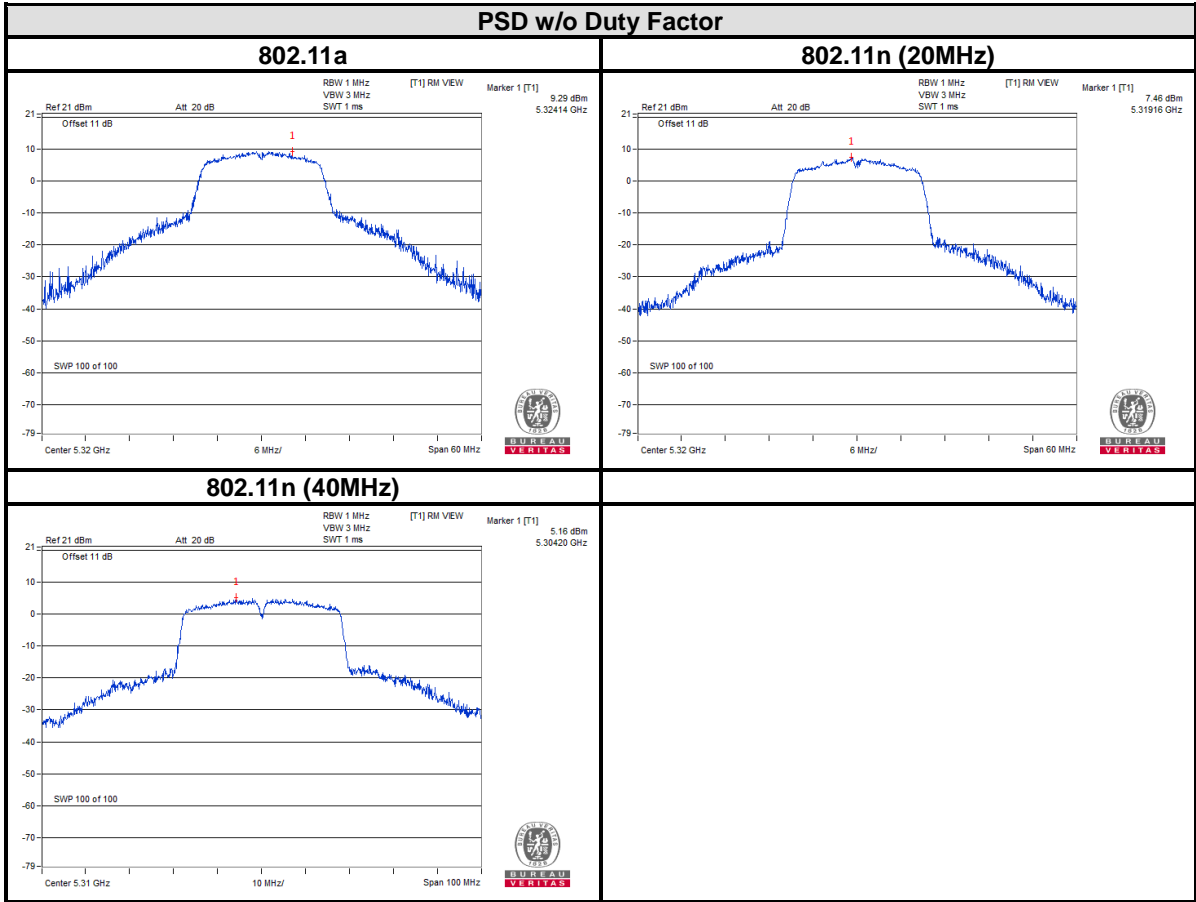




BUREAU VERITAS

Test Report No.: RF180817W003-3

For 5260~5320MHz

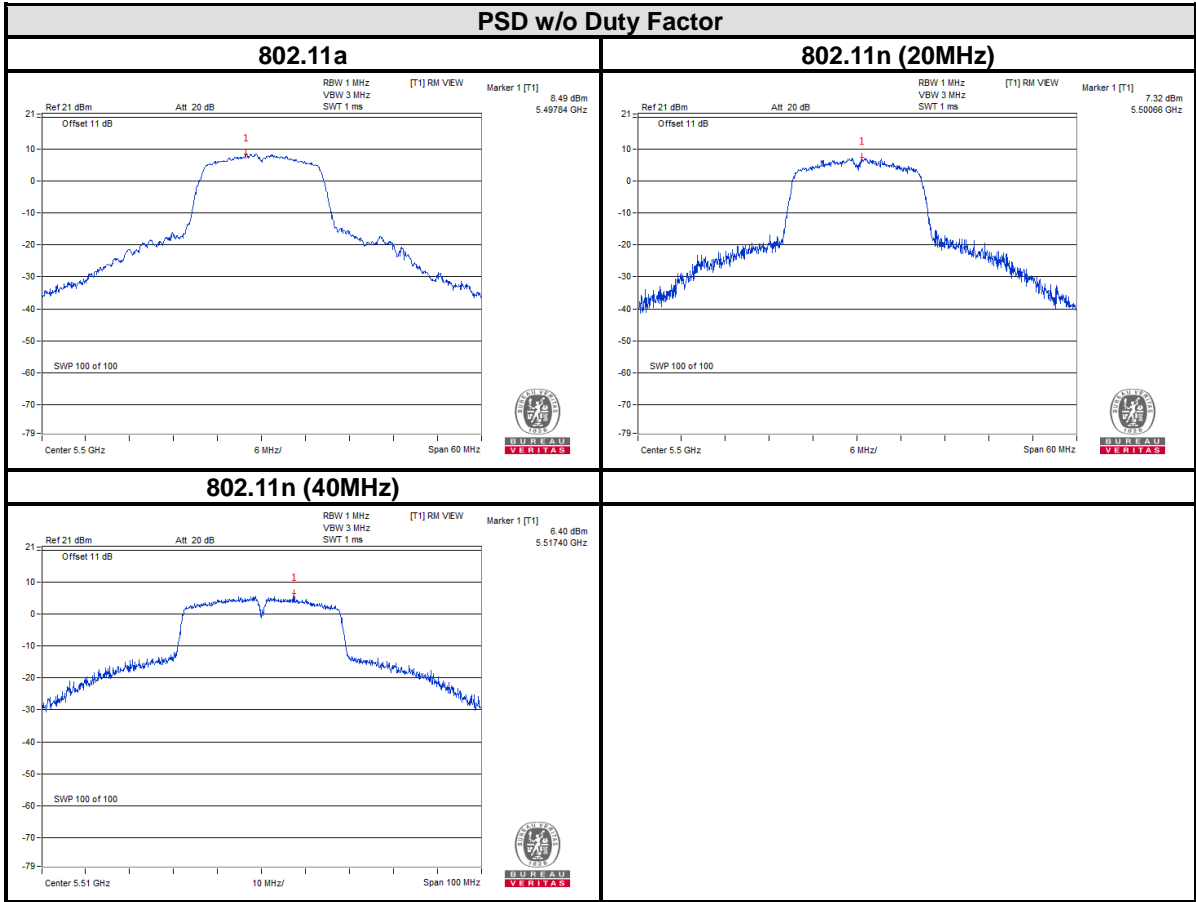




BUREAU VERITAS

Test Report No.: RF180817W003-3

For 5500~5700MHz

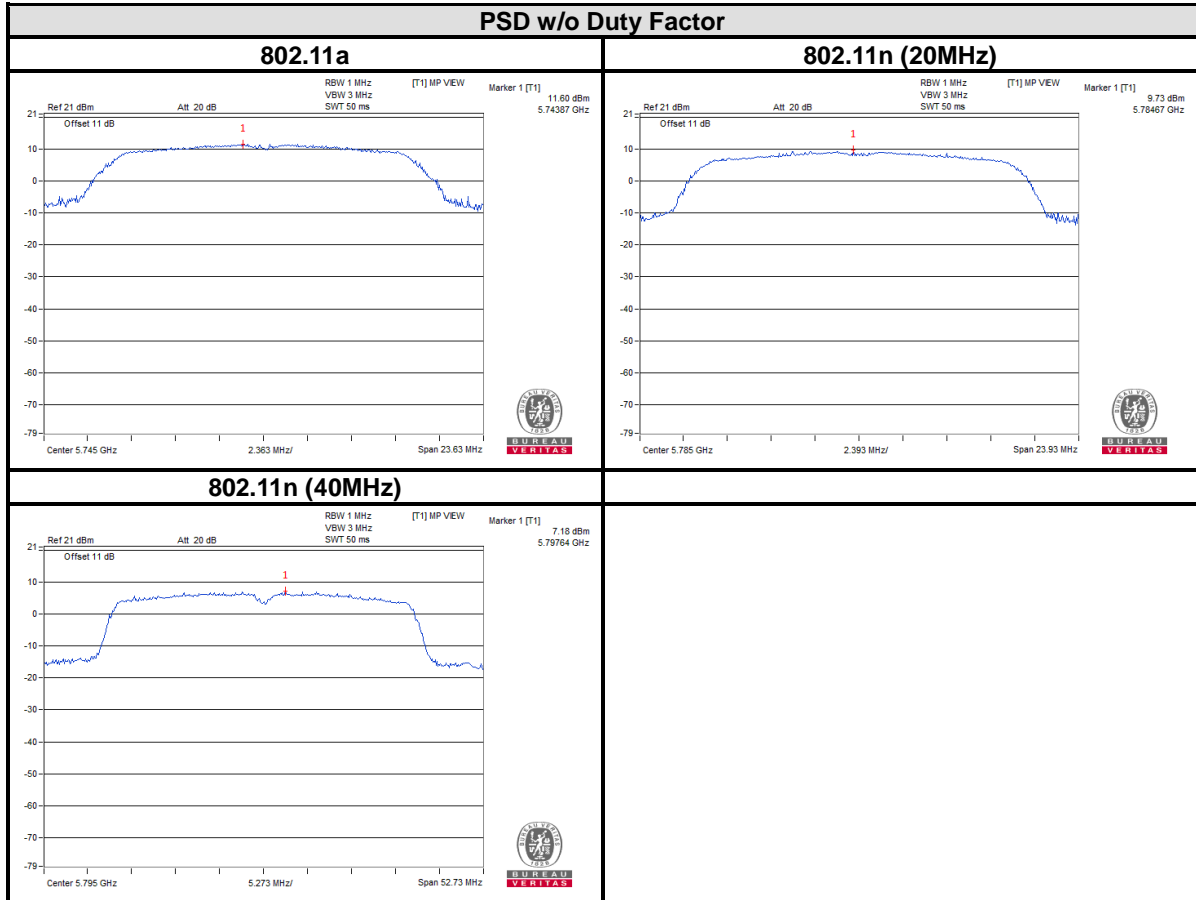




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Test Report No.: RF180817W003-3

For 5745~5805MHz



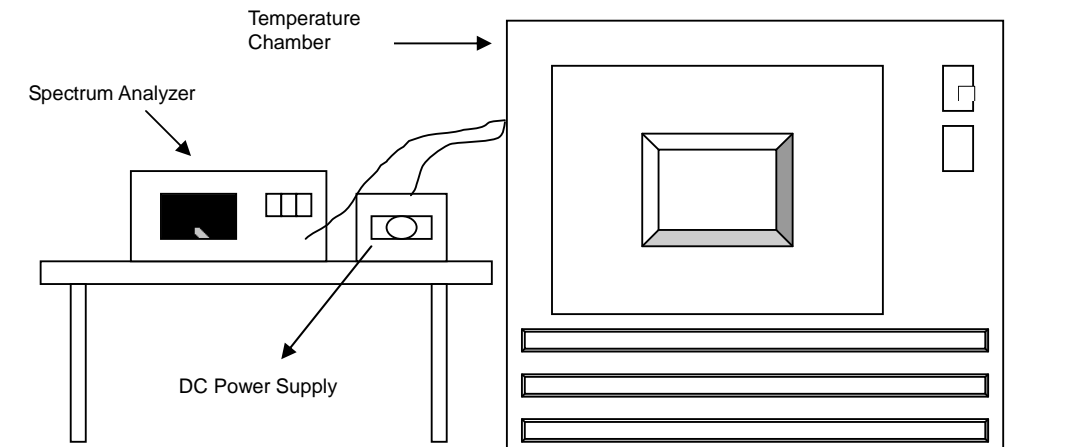


3.5 FREQUENCY STABILITY

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

FREQUENCY STABILITY VERSUS TEMP.										
OPERATING FREQUENCY: 5180MHz										
TEMP. (°C)	Power Supply (Vdc)	0 MINUTE		2 MINUTES		5 MINUTES		10 MINUTE		RESULT
		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	5179.9888	-2.162	5179.9882	-2.278	5179.9822	-3.436	5179.9786	-4.131	PASS
40	120	5180.0023	0.444	5179.9985	-0.290	5179.9935	-1.255	5180.0004	0.077	PASS
30	120	5180.0043	0.830	5180.0124	2.394	5180.0026	0.502	5180.0027	0.521	PASS
20	120	5180.0074	1.429	5180.0118	2.278	5180.007	1.351	5180.0129	2.490	PASS
10	120	5179.9851	-2.876	5179.982	-3.475	5179.9852	-2.857	5179.9785	-4.151	PASS
0	120	5180.0232	4.479	5180.0182	3.514	5180.018	3.475	5180.0205	3.958	PASS
-10	120	5180.0051	0.985	5180.0121	2.336	5180.0066	1.274	5180.0088	1.699	PASS
-20	120	5179.9788	-4.093	5179.9797	-3.919	5179.9843	-3.031	5179.982	-3.475	PASS
-30	120	5179.986	-2.703	5179.9854	-2.819	5179.9934	-1.274	5179.9873	-2.452	PASS

FREQUENCY STABILITY VERSUS VOLTAGE										
OPERATING FREQUENCY: 5180MHz										
TEMP. (°C)	Power Supply (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE		RESULT
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	
20	138	5180.0085	1.641	5180.0116	2.239	5180.0061	1.178	5180.0123	2.375	PASS
	120	5180.0074	1.429	5180.0118	2.278	5180.007	1.351	5180.0129	2.490	PASS
	102	5180.0087	1.680	5180.0112	2.162	5180.0066	1.274	5180.0133	2.568	PASS



FREQUENCY STABILITY VERSUS TEMP.										
OPERATING FREQUENCY: 5805MHz										
TEMP. (°C)	Power Supply (Vdc)	0 MINUTE		2 MINUTES		5 MINUTES		10 MINUTE		RESULT
		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	5805.0228	3.928	5805.0259	4.462	5805.0241	4.152	5805.027	4.651	PASS
40	120	5805.0173	2.980	5805.0162	2.791	5805.0234	4.031	5805.0198	3.411	PASS
30	120	5804.9827	-2.980	5804.9808	-3.307	5804.9784	-3.721	5804.9862	-2.377	PASS
20	120	5805.0157	2.705	5805.0152	2.618	5805.0208	3.583	5805.02	3.445	PASS
10	120	5804.9727	-4.703	5804.9781	-3.773	5804.9735	-4.565	5804.9766	-4.031	PASS
0	120	5805.0121	2.084	5805.0177	3.049	5805.0108	1.860	5805.0138	2.377	PASS
-10	120	5804.9977	-0.396	5805.0003	0.052	5805.0073	1.258	5804.9956	-0.758	PASS
-20	120	5805.0108	1.860	5805.0096	1.654	5805.0048	0.827	5805.0079	1.361	PASS
-30	120	5805.0134	2.308	5805.0086	1.481	5805.0125	2.153	5805.0045	0.775	PASS

FREQUENCY STABILITY VERSUS VOLTAGE										
OPERATING FREQUENCY: 5805MHz										
TEMP. (°C)	Power Supply (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE		RESULT
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	
20	138	5805.0157	2.705	5805.0149	2.567	5805.0193	3.325	5805.0193	3.325	PASS
	120	5805.0157	2.705	5805.0152	2.618	5805.0208	3.583	5805.02	3.445	PASS
	102	5805.016	2.756	5805.017	2.929	5805.0211	3.635	5805.0201	3.463	PASS



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---