

FCC TEST REPORT

(WIFI 5G)

Product: Phablet

Model Name: E6T

FCC ID: SMFE6T

Applicant: Wanlida Group co.,LTD

Address: No. 618 Jiahe Road Xiamen Fujian, China 361006

Manufacturer: Wanlida Group co.,LTD

Address: No. 618 Jiahe Road Xiamen Fujian, China 361006

Prepared by: Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

Lab Location: No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China

TEL: +86 769 8593 5656

FAX: +86 769 8593 1080

E-MAIL: customerservice.dg@cn.bureauveritas.com

Report No.: RF151125W002-5

Received Date: Nov. 25, 2015

Test Date: Nov. 26, 2015 ~ Dec. 14, 2015

Issued Date: Dec. 15, 2015

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 CERTIFICATION	5
2 SUMMARY OF TEST RESULTS.....	6
2.1 MEASUREMENT UNCERTAINTY	6
3 GENERAL INFORMATION	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 DESCRIPTION OF TEST MODES	9
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL.....	11
3.3 DUTY CYCLE OF TEST SIGNAL	14
3.4 DESCRIPTION OF SUPPORT UNITS	15
3.4.1 CONFIGURATION OF SYSTEM UNDER TEST	18
3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS	18
4 TEST TYPES AND RESULTS.....	19
4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT	19
4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT.....	19
4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS	19
4.1.3 TEST INSTRUMENTS.....	20
4.1.4 TEST PROCEDURES	21
4.1.5 DEVIATION FROM TEST STANDARD	21
4.1.6 TEST SETUP	22
4.1.7 EUT OPERATING CONDITION	22
4.1.8 TEST RESULTS	23
4.2 CONDUCTED EMISSION MEASUREMENT	49
4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	49
4.2.2 TEST INSTRUMENTS.....	49
4.2.3 TEST PROCEDURES	49
4.2.4 DEVIATION FROM TEST STANDARD	50
4.2.5 TEST SETUP	50
4.2.6 EUT OPERATING CONDITIONS	50
4.2.7 TEST RESULTS	51



4.3	MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	53
4.3.1	LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	53
4.3.2	TEST SETUP	53
4.3.3	TEST INSTRUMENTS	54
4.3.4	TEST PROCEDURE	54
4.3.5	DEVIATION FROM TEST STANDARD	55
4.3.6	EUT OPERATING CONDITIONS	55
4.3.7	TEST RESULTS	56
4.4	PEAK POWER SPECTRAL DENSITY MEASUREMENT	67
4.4.1	LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT	67
4.4.2	TEST SETUP	67
4.4.3	TEST INSTRUMENTS	67
4.4.4	TEST PROCEDURES	67
4.4.5	DEVIATION FROM TEST STANDARD	68
4.4.6	EUT OPERATING CONDITIONS	68
4.4.7	TEST RESULTS	69
4.5	FREQUENCY STABILITY	71
4.5.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT	74
4.5.2	TEST SETUP	74
4.5.3	TEST INSTRUMENTS	74
4.5.4	TEST PROCEDURE	75
4.5.5	DEVIATION FROM TEST STANDARD	75
4.5.6	EUT OPERATING CONDITION	75
4.5.7	TEST RESULTS	76
5	PHOTOGRAPHS OF THE TEST CONFIGURATION	77
6	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	78



Test Report No.: RF151125W002-5

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF151125W002-5	Original release	Dec. 15, 2015



1 CERTIFICATION

PRODUCT: Phablet
BRAND NAME: Malata
MODEL NAME: E6T
APPLICANT: Wanlida Group co.,LTD
TESTED: Nov. 26, 2015 ~ Dec. 14, 2015
TEST SAMPLE: Production unit
STANDARDS: FCC Part 15, Subpart E (15.407), Section 15.407
ANSI C63.10-2013

The above equipment has been tested by **Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY :  , **DATE:** Dec. 15, 2015
(Amyee Qian / Engineer)

APPROVED BY :  , **DATE:** Dec. 15, 2015
(William Chung / Supervisor)



2 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 -12.94dB at 0.508000MHz.
15.407(b)(1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -4.3dB at 11570.00MHz.
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(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

2.1 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	2.74dB
	30MHz ~ 1GMHz	3.55dB
	1GHz ~ 18GHz	4.84dB
	18GHz ~ 40GHz	1.94dB

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



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Phablet
MODEL NAME	E6T
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion, battery)
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to MCS7
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz, 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) 5745 ~ 5805MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
AVERAGE POWER	12.912mW for 5180 ~ 5240MHz 14.158mW for 5260 ~ 5320MHz 8.630mW for 5745 ~ 5805MHz
ANTENNA TYPE	5180 ~ 5240MHz: PIFA Antenna with 1.32dBi gain 5260 ~ 5320MHz: PIFA Antenna with 2.72dBi gain 5745 ~ 5805MHz: PIFA Antenna with 1.34dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB cable: Unshielded, detachable, 1.0m

NOTE:

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

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

- The EUT was powered by the following adapter:

ADAPTER	
BRAND:	Sunun Power
MODEL:	SA69-050200U
INPUT:	AC100-240V, 300mA
OUTPUT:	DC 5V, 2000mA



Test Report No.: RF151125W002-5

4. The EUT matched the following USB cable:

USB CABLE	
BRAND:	SIMULA
MODEL:	CB806D-6040-10F
SIGNAL LINE:	1.0METER

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



3.2 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



Test Report No.: RF151125W002-5

FOR 5725 ~ 5850MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz



3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz**RE<1G**: Radiated Emission below 1GHz**PLC**: Power Line Conducted Emission**APCM**: Antenna Port Conducted Measurement**NOTE:**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	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	802.11a	5180-5320	36 to 64	36	OFDM	BPSK	6.0



POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5320	36 to 64	36	OFDM	BPSK	6.0

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	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	5725-5805	149 to 161	149, 157, 161	OFDM	BPSK	6.0
B	802.11n (20MHz)		149 to 161	149, 157, 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 5V By Adapter	Blue Zheng
RE≥1G	23deg. C, 62%RH	DC 5V By Adapter	Blue Zheng
PLC	24deg. C, 61%RH	DC 5V By Adapter	Yuqiang Yin
APCM	23.5deg. C, 60%RH	DC 3.7V By battery	Yuqiang Yin



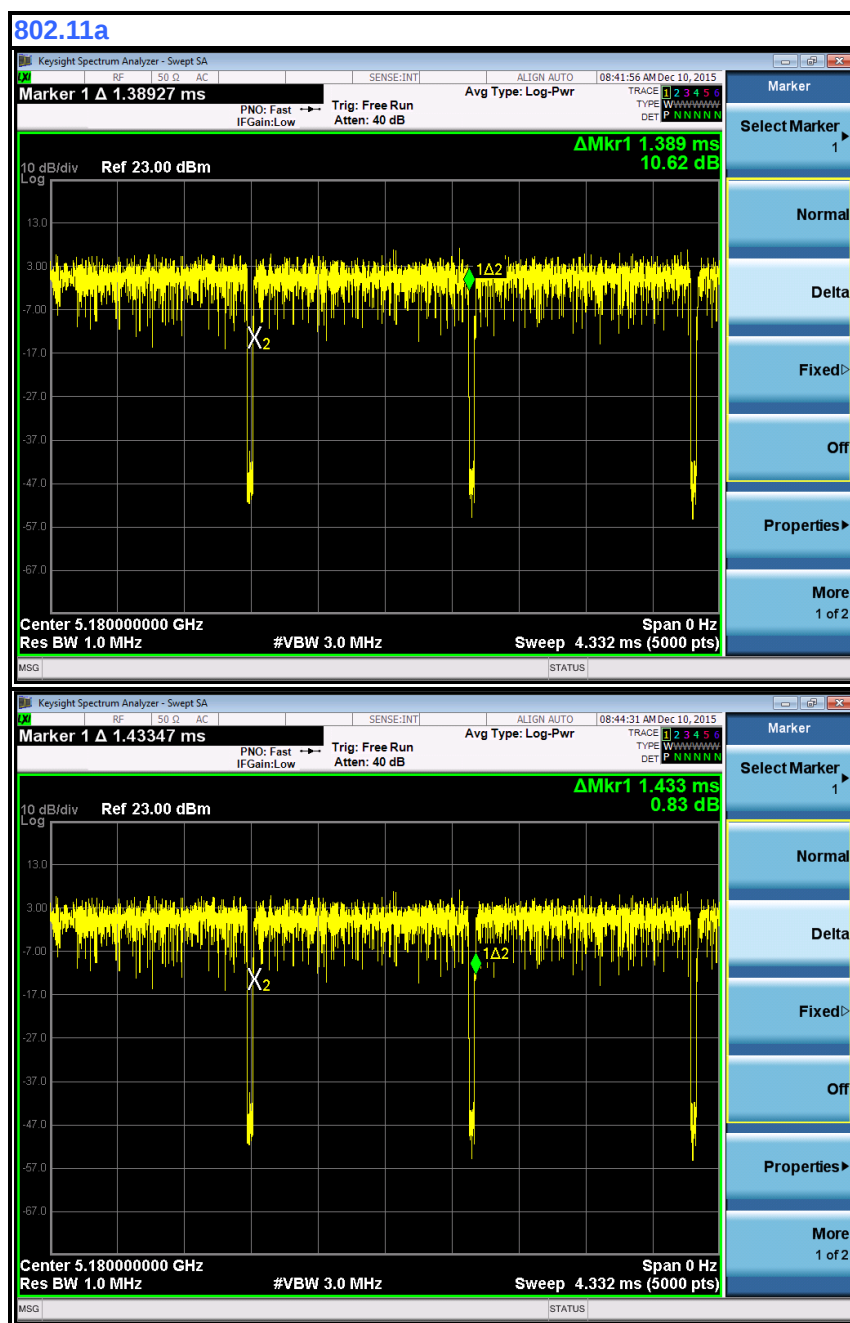
3.3 DUTY CYCLE OF TEST SIGNAL

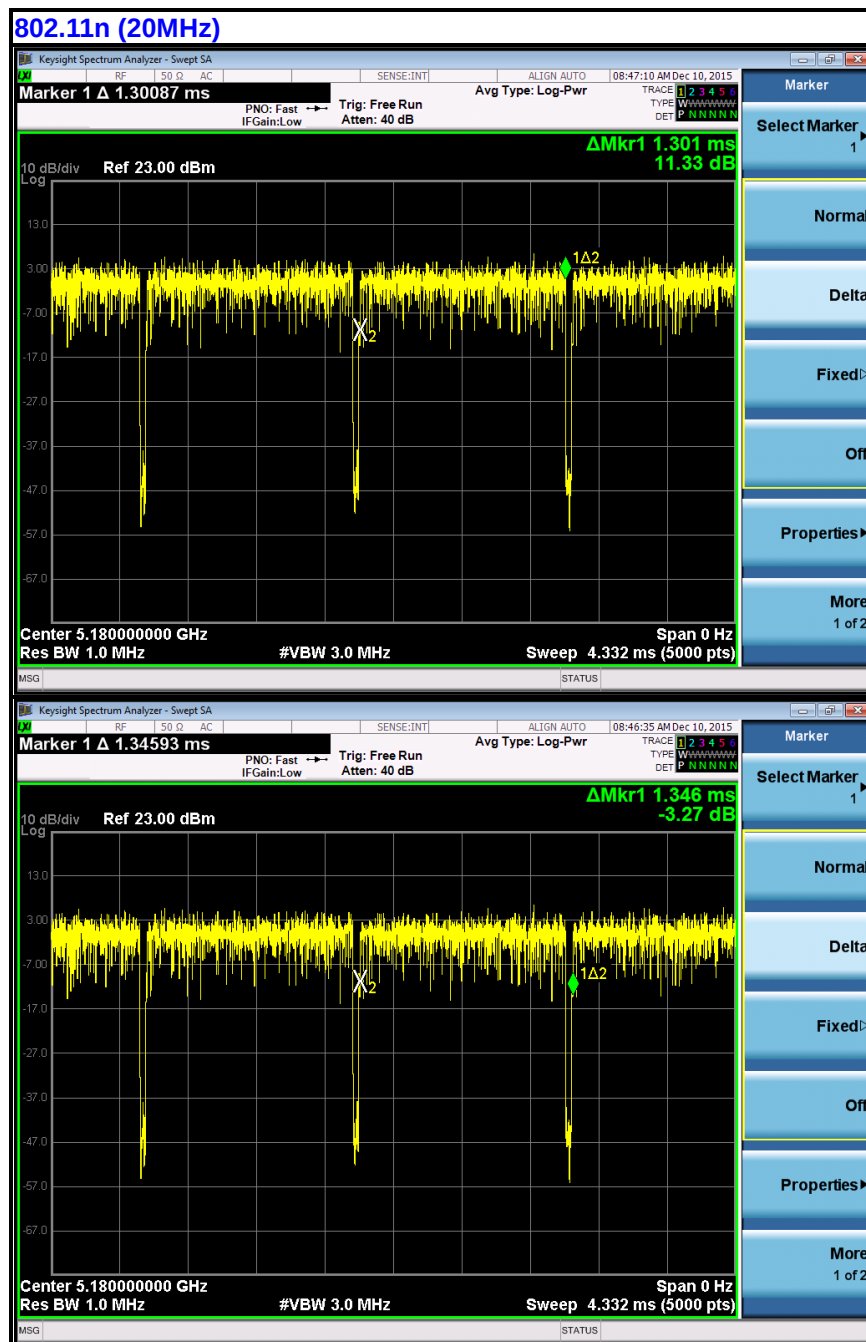
Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = $1.389/1.433 = 0.969$, Duty factor = $10 * \log(1/0.969) = 0.14$

802.11n (20MHz): Duty cycle = $1.301/1.346 = 0.967$, Duty factor = $10 * \log(1/0.967) = 0.15$

802.11n (40MHz): Duty cycle = $0.6489/0.6865 = 0.945$, Duty factor = $10 * \log(1/0.945) = 0.25$









3.4 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.

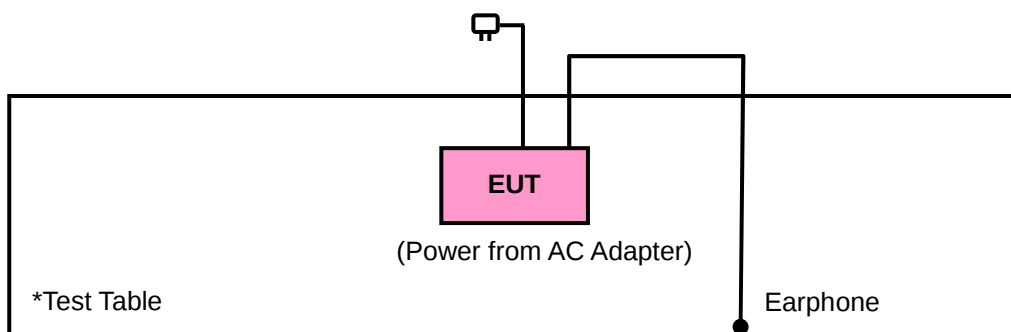
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	LONG WEI	PS-6403D	010934269	N/A
2	PC	HP	A6608CN	3CR83825X3	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.0m
2	AC Line: Unshielded, Detachable 1.5m

NOTE:

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

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



3.5 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_v01_General UNII Test Procedures New Rules

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

4 TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 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.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
	FIELD STRENGTH AT 3m (dBμV/m)	
	PK	AV
	74	54
√	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
	PK	PK
	-27	68.3

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

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



4.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Apr. 27,15	Apr. 26,16
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Apr. 23,15	Apr. 22,16
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 16, 15	Jul. 15, 16
Horn Antenna	ETS-Lindgren	3117	00062558	May 30,14	May 29,16
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	Jan. 21,14	Jan. 20,17
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,15	Mar. 03, 16
Pre-Amplifier (0.5~18GHz)	SCHWARZBECK	BBV 9718	9718-266	Mar 26,14	Mar. 25,16
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 19,15	Nov. 18,16
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Aug. 08, 14	Aug. 07, 16
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	April. 19,14	April. 18,16
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 966 Chamber.
3. The FCC Site Registration No. is 502831.

4.1.4 TEST PROCEDURES

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

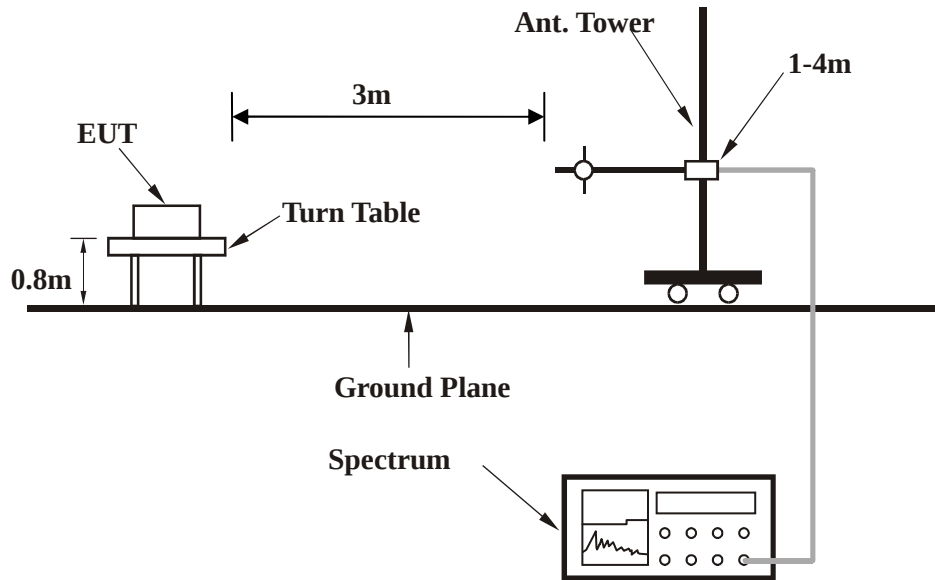
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for 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.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

4.1.6 TEST SETUP



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

4.1.7 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.



4.1.8 TEST RESULTS

BELOW 1GHz WORST-CASE DATA:

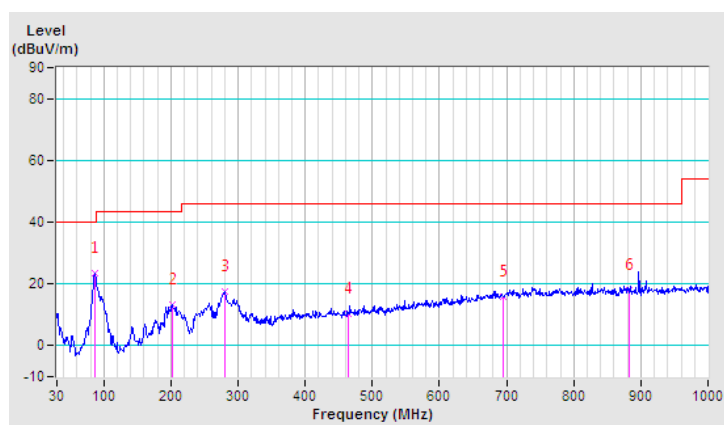
802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	87.23	23.3 QP	40.0	-16.7	1.00 H	0	57.08	-33.81
2	201.69	13.4 QP	43.5	-30.1	1.00 H	0	42.59	-29.18
3	280.26	17.6 QP	46.0	-28.5	1.00 H	0	43.69	-26.14
4	463.59	10.2 QP	46.0	-35.9	1.00 H	0	30.71	-20.56
5	694.45	15.8 QP	46.0	-30.2	1.00 H	0	30.92	-15.14
6	882.63	18.0 QP	46.0	-28.0	1.00 H	0	32.72	-14.71

REMARKS:

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



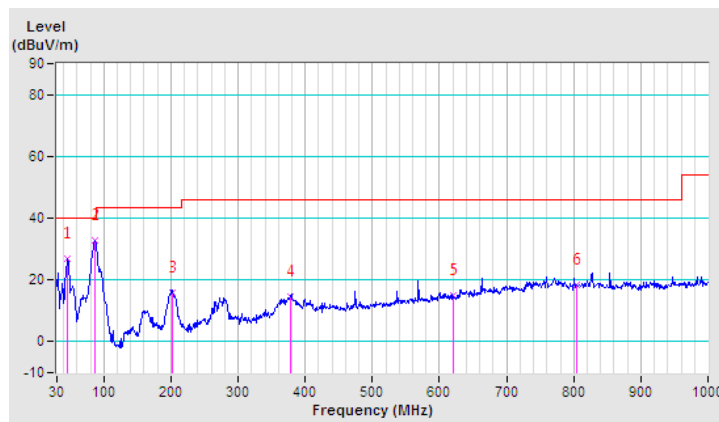


CHANNEL	Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	46.49	26.9 QP	40.0	-13.1	1.00 V	360	60.46	-33.59
2	87.23	32.8 QP	40.0	-7.2	1.00 V	360	66.57	-33.81
3	201.69	16.0 QP	43.5	-27.5	1.00 V	360	45.22	-29.18
4	378.23	14.6 QP	46.0	-31.4	1.00 V	360	36.94	-22.32
5	619.76	15.0 QP	46.0	-31.0	1.00 V	360	32.33	-17.36
6	805.03	18.6 QP	46.0	-27.4	1.00 V	360	33.49	-14.93

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) – Pre-Amplifier 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: 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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.1 PK	74.0	-14.9	1.00 H	120	59.95	-0.83
2	5150.00	46.3 AV	54.0	-7.7	1.00 H	120	47.09	-0.83
3	*5180.00	100.3 PK			1.00 H	120	101.05	-0.71
4	*5180.00	92.1 AV			1.00 H	120	92.77	-0.71
5	#10360.00	59.5 PK	68.3	-8.8	1.00 H	191	50.81	8.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.5 PK	74.0	-20.5	1.00 V	174	54.37	-0.83
2	5150.00	44.3 AV	54.0	-9.7	1.00 V	174	45.14	-0.83
3	*5180.00	98.1 PK			1.00 V	174	98.76	-0.71
4	*5180.00	89.1 AV			1.00 V	174	89.84	-0.71
5	#10360.00	60.5 PK	68.3	-7.8	1.00 V	234	51.81	8.69

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	99.2 PK			1.00 H	122	99.88	-0.64
2	*5200.00	91.7 AV			1.00 H	122	92.35	-0.64
3	#10400.00	59.4 PK	68.3	-8.9	1.00 H	176	50.67	8.76
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	97.4 PK			1.00 V	167	98.08	-0.64
2	*5200.00	89.0 AV			1.00 V	167	89.66	-0.64
3	#10400.00	59.8 PK	68.3	-8.5	1.00 V	239	51.03	8.76

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.3 PK			1.50 H	121	101.75	-0.48
2	*5240.00	88.7 AV			1.50 H	121	89.19	-0.48
3	#10480.00	61.9 PK	68.3	-6.4	1.50 H	276	52.99	8.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	97.8 PK			1.00 V	101	98.29	-0.48
2	*5240.00	89.2 AV			1.00 V	101	89.71	-0.48
3	#10480.00	60.0 PK	68.3	-8.3	1.00 V	193	51.10	8.89

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.8 PK	74.0	-18.2	1.00 H	117	56.63	-0.83
2	5150.00	44.2 AV	54.0	-9.9	1.00 H	117	44.98	-0.83
3	*5180.00	101.8 PK			1.00 H	117	102.47	-0.71
4	*5180.00	90.3 AV			1.00 H	117	91.04	-0.71
5	#10360.00	62.0 PK	68.3	-6.3	1.00 H	327	53.27	8.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.8 PK	74.0	-22.2	1.00 V	82	52.64	-0.83
2	5150.00	43.0 AV	54.0	-11.0	1.00 V	82	43.87	-0.83
3	*5180.00	98.8 PK			1.00 V	82	99.51	-0.71
4	*5180.00	87.3 AV			1.00 V	82	88.04	-0.71
5	#10360.00	61.1 PK	68.3	-7.2	1.00 V	129	52.44	8.69

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.2 PK			1.00 H	118	101.85	-0.64
2	*5200.00	90.1 AV			1.00 H	118	90.77	-0.64
3	#10400.00	61.4 PK	68.3	-6.9	1.00 H	0	52.68	8.76
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	98.8 PK			1.00 V	162	99.46	-0.64
2	*5200.00	87.5 AV			1.00 V	162	88.13	-0.64
3	#10400.00	61.4 PK	68.3	-6.9	1.00 V	274	52.62	8.76

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	100.4 PK			1.00 H	119	100.90	-0.48
2	*5240.00	89.3 AV			1.00 H	119	89.82	-0.48
3	#10480.00	61.2 PK	68.3	-7.1	1.00 H	276	52.31	8.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	99.0 PK			1.00 V	103	99.45	-0.48
2	*5240.00	87.3 AV			1.00 V	103	87.79	-0.48
3	#10480.00	62.1 PK	68.3	-7.1	1.00 V	113	53.19	8.89

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.17	74.0	-13.83	1.00 H	121	57.00	-0.83
2	5150.00	48.05	54.0	-5.95	1.00 H	121	48.88	-0.83
3	*5190.00	98.9 PK			1.00 H	121	99.61	-0.68
4	*5190.00	86.4 AV			1.00 H	121	87.11	-0.68
5	#10380.00	60.7 PK	68.3	-7.6	1.00 H	282	52.01	8.72
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	1.00 V	79	58.01	-0.83
2	5150.00	45.8 AV	54.0	-8.2	1.00 V	79	46.67	-0.83
3	*5190.00	97.7 PK			1.00 V	79	98.40	-0.68
4	*5190.00	85.1 AV			1.00 V	79	85.80	-0.68
5	#10380.00	61.1 PK	68.3	-7.2	1.00 V	219	52.41	8.72

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	97.7 PK			1.00 H	111	98.26	-0.52
2	*5230.00	84.6 AV			1.00 H	111	85.13	-0.52
3	#10460.00	61.8 PK	68.3	-6.5	1.00 H	174	52.92	8.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	96.4 PK			1.00 V	78	96.96	-0.52
2	*5230.00	84.4 AV			1.00 V	78	84.93	-0.52
3	#10460.00	60.9 PK	68.3	-7.4	1.00 V	263	52.08	8.86

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



ABOVE 1GHz WORST-CASE DATA: 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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	96.3 PK			1.50 H	61	96.75	-0.42
2	*5260.00	88.5 AV			1.50 H	61	88.96	-0.42
3	#10520.00	61.4 PK	68.3	-6.9	1.50 H	297	52.44	8.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	99.1 PK			1.50 V	129	99.56	-0.42
2	*5260.00	91.6 AV			1.50 V	129	92.01	-0.42
3	#10520.00	60.2 PK	68.3	-8.1	1.50 V	137	51.26	8.94

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	96.2 PK			1.50 H	127	96.47	-0.26
2	*5300.00	87.7 AV			1.50 H	127	87.91	-0.26
3	10600.00	60.3 PK	74.0	-13.7	1.50 H	237	51.30	9.00
4	10600.00	48.1 AV	54.0	-5.9	1.50 H	237	39.11	9.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	99.0 PK			1.50 V	124	99.29	-0.26
2	*5300.00	91.6 AV			1.50 V	124	91.89	-0.26
3	10600.00	58.9 PK	74.0	-15.1	1.50 V	117	49.94	9.00
4	10600.00	48.1 AV	54.0	-5.9	1.50 V	117	39.14	9.00

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	96.9 PK			1.50 H	78	97.04	-0.19
2	*5320.00	90.0 AV			1.50 H	78	90.22	-0.19
3	5350.00	51.2 PK	74.0	-22.8	1.50 H	78	51.26	-0.07
4	5350.00	43.1 AV	54.0	-10.9	1.50 H	78	43.21	-0.07
5	10640.00	60.6 PK	74.0	-13.4	1.50 H	291	51.52	9.04
6	10640.00	48.1 AV	54.0	-5.9	1.50 H	291	39.05	9.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	98.5 PK			1.50 V	126	98.69	-0.19
2	*5320.00	91.5 AV			1.50 V	126	91.65	-0.19
3	5350.00	53.1 PK	74.0	-20.9	1.50 V	126	53.21	-0.07
4	5350.00	43.7 AV	54.0	-10.3	1.50 V	126	43.81	-0.07
5	10640.00	59.6 PK	74.0	-14.4	1.50 V	213	50.54	9.04
6	10640.00	48.2 AV	54.0	-5.8	1.50 V	213	39.12	9.04

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": 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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	96.6 PK			1.00 H	102	96.97	-0.42
2	*5260.00	88.1 AV			1.00 H	102	88.54	-0.42
3	#10520.00	59.3 PK	68.3	-9.3	1.00 H	179	50.38	8.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	97.0 PK			1.00 V	131	97.41	-0.42
2	*5260.00	90.1 AV			1.00 V	131	90.51	-0.42
3	#10520.00	60.5 PK	68.3	-7.8	1.00 V	223	51.54	8.94

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	96.1 PK			1.00 H	126	96.32	-0.26
2	*5300.00	88.5 AV			1.00 H	126	88.71	-0.26
3	10600.00	59.7 PK	74.0	-14.3	1.00 H	273	50.74	9.00
4	10600.00	48.2 AV	54.0	-5.8	1.00 H	273	39.22	9.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	97.6 PK			1.00 V	132	97.87	-0.26
2	*5300.00	89.7 AV			1.00 V	132	89.96	-0.26
3	10600.00	59.9 PK	74.0	-14.1	1.00 V	89	50.92	9.00
4	10600.00	48.2 AV	54.0	-5.8	1.00 V	89	39.18	9.00

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	96.7 PK			1.00 H	121	96.88	-0.19
2	*5320.00	88.6 AV			1.00 H	121	88.83	-0.19
3	5350.00	55.2 PK	74.0	-18.8	1.00 H	121	55.30	-0.07
4	5350.00	42.9 AV	54.0	-11.1	1.00 H	121	43.00	-0.07
5	10640.00	59.2 PK	74.0	-14.8	1.00 H	304	50.16	9.04
6	10640.00	48.2 AV	54.0	-5.8	1.00 H	304	39.13	9.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	96.9 PK			1.00 V	124	97.10	-0.19
2	*5320.00	89.8 AV			1.00 V	124	89.98	-0.19
3	5350.00	53.5 PK	74.0	-20.5	1.00 V	124	53.60	-0.07
4	5350.00	43.2 AV	54.0	-10.8	1.00 V	124	43.30	-0.07
5	10640.00	59.1 PK	74.0	-15.0	1.00 V	295	50.01	9.04
6	10640.00	48.4 AV	54.0	-5.6	1.00 V	295	39.33	9.04

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": 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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	93.7 PK			1.00 H	92	94.05	-0.38
2	*5270.00	86.0 AV			1.00 H	92	86.42	-0.38
3	#10540.00	60.3 PK	68.3	-8	1.00 H	313	51.33	8.96
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	96.8 PK			1.50 V	131	97.19	-0.38
2	*5270.00	88.2 AV			1.50 V	131	88.53	-0.38
3	#10540.00	59.8 PK	68.3	-8.5	1.50 V	192	50.88	8.96

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	93.3 PK			1.00 H	92	93.48	-0.22
2	*5310.00	85.6 AV			1.00 H	92	85.80	-0.22
3	5350.00	52.9 PK	74.0	-21.1	1.00 H	92	52.93	-0.07
4	5350.00	43.6 AV	54.0	-10.4	1.00 H	92	43.71	-0.07
5	10620.00	59.2 PK	74.0	-14.8	1.00 H	196	50.22	9.02
6	10620.00	48.1 AV	54.0	-5.9	1.00 H	196	39.12	9.02
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	94.7 PK			1.00 V	132	94.96	-0.22
2	*5310.00	87.1 AV			1.00 V	132	87.30	-0.22
3	5350.00	51.6 PK	74.0	-22.4	1.00 V	132	51.70	-0.07
4	5350.00	43.5 AV	54.0	-10.5	1.00 V	132	43.54	-0.07
5	10620.00	60.2 PK	74.0	-13.8	1.00 V	333	51.21	9.02
6	10620.00	48.2 AV	54.0	-5.8	1.00 V	333	39.17	9.02

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.



ABOVE 1GHz WORST-CASE DATA: 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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	59.8 PK	68.3	-8.5	1.00 H	360	57.66	2.13
2	#5725.00	68.6 PK	78.3	-9.7	1.00 H	360	66.40	2.21
3	*5745.00	102.6 PK			1.00 H	360	100.23	2.36
4	*5745.00	93.5 AV			1.00 H	360	91.12	2.36
5	11490.00	60.4 PK	74.0	-13.6	1.00 H	82	50.38	10.02
6	11490.00	49.6 AV	54.0	-4.4	1.00 H	82	39.59	10.02
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	61.2 PK	68.3	-7.1	1.00 V	121	59.09	2.13
2	#5725.00	72.8 PK	78.3	-5.5	1.00 V	121	70.61	2.21
3	*5745.00	104.9 PK			1.00 V	121	102.53	2.36
4	*5745.00	96.5 AV			1.00 V	121	94.11	2.36
5	11490.00	61.0 PK	74.0	-13.0	1.00 V	178	50.97	10.02
6	11490.00	49.5 AV	54.0	-4.5	1.00 V	178	39.50	10.02

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	102.4 PK			1.00 H	114	99.71	2.66
2	*5785.00	94.1 AV			1.00 H	114	91.46	2.66
3	11570.00	61.3 PK	74.0	-12.7	1.00 H	83	51.18	10.11
4	11570.00	49.7 AV	54.0	-4.3	1.00 H	83	39.61	10.11
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	103.9 PK			1.00 V	127	101.23	2.66
2	*5785.00	96.4 AV			1.00 V	127	93.76	2.66
3	11570.00	61.4 PK	74.0	-12.7	1.00 V	143	51.24	10.11
4	11570.00	49.7 AV	54.0	-4.3	1.00 V	143	39.62	10.11

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5805.00	103.0 PK			1.00 H	360	99.98	2.97
2	*5805.00	91.5 AV			1.00 H	360	88.49	2.97
3	#5850.00	62.7 PK	78.3	-15.6	1.00 H	360	59.50	3.15
4	#5860.00	56.5 PK	68.3	-11.8	1.00 H	360	53.24	3.23
5	11650.00	60.8 PK	74.0	-13.2	1.00 H	98	50.62	10.20
6	11650.00	49.6 AV	54.0	-4.4	1.00 H	98	39.44	10.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5805.00	105.9 PK			1.00 V	131	102.95	2.97
2	*5805.00	95.9 AV			1.00 V	131	92.93	2.97
3	#5850.00	62.1 PK	78.3	-16.2	1.00 V	131	58.96	3.15
4	#5860.00	58.4 PK	68.3	-9.9	1.00 V	131	55.16	3.23
5	11650.00	60.4 PK	74.0	-13.6	1.00 V	148	50.22	10.20
6	11650.00	49.6 AV	54.0	-4.4	1.00 V	148	39.43	10.20

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	55.2 PK	68.3	-13.1	1.00 H	10	53.09	2.13
2	#5725.00	63.8 PK	78.3	-14.5	1.00 H	10	61.58	2.21
3	*5745.00	102.8 PK			1.00 H	10	100.48	2.36
4	*5745.00	94.6 AV			1.00 H	10	92.28	2.36
5	11490.00	62.1 PK	74.0	-11.9	1.00 H	176	52.07	10.02
6	11490.00	49.5 AV	54.0	-4.5	1.00 H	176	39.51	10.02
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	59.8 PK	68.3	-8.5	1.00 V	124	57.69	2.13
2	#5725.00	66.9 PK	78.3	-11.4	1.00 V	124	64.67	2.21
3	*5745.00	102.8 PK			1.00 V	124	100.40	2.36
4	*5745.00	95.8 AV			1.00 V	124	93.41	2.36
5	11490.00	61.5 PK	74.0	-12.5	1.00 V	10	51.50	10.02
6	11490.00	49.6 AV	54.0	-4.4	1.00 V	10	39.57	10.02

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	101.9 PK			1.00 H	360	99.20	2.66
2	*5785.00	92.0 AV			1.00 H	360	89.33	2.66
3	11570.00	61.2 PK	74.0	-12.8	1.00 H	79	51.10	10.11
4	11570.00	49.3 AV	54.0	-4.7	1.00 H	79	39.23	10.11
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	103.0 PK			1.00 V	119	100.30	2.66
2	*5785.00	94.8 AV			1.00 V	119	92.09	2.66
3	11570.00	60.3 PK	74.0	-13.7	1.00 V	192	50.20	10.11
4	11570.00	49.3 AV	54.0	-4.7	1.00 V	192	39.22	10.11

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5805.00	101.9 PK			1.00 H	10	98.95	2.97
2	*5805.00	94.2 AV			1.00 H	10	91.27	2.97
3	#5850.00	60.8 PK	78.3	-17.5	1.00 H	10	57.65	3.15
4	#5860.00	59.2 PK	68.3	-9.1	1.00 H	0	55.93	3.23
5	11650.00	60.6 PK	74.0	-13.4	1.00 H	231	50.37	10.20
6	11650.00	49.6 AV	54.0	-4.4	1.00 H	231	39.38	10.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5805.00	103.6 PK			1.00 V	123	100.62	2.97
2	*5805.00	95.8 AV			1.00 V	123	92.80	2.97
3	#5850.00	64.1 PK	78.3	-14.2	1.00 V	123	60.91	3.15
4	#5860.00	59.2 PK	68.3	-9.1	1.00 V	123	56.47	3.15
5	11650.00	60.9 PK	74.0	-13.1	1.00 V	134	50.73	10.20
6	11650.00	49.6 AV	54.0	-4.4	1.00 V	134	39.42	10.20

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.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	58.8 PK	68.3	-9.5	1.00 H	10	56.67	2.13
2	#5725.00	64.4 PK	78.3	-13.9	1.00 H	10	62.17	2.21
3	*5755.00	101.1 PK			1.00 H	10	98.63	2.43
4	*5755.00	92.1 AV			1.00 H	10	89.62	2.43
5	11510.00	61.6 PK	74.0	-12.4	1.00 H	273	51.59	10.04
6	11510.00	49.6 AV	54.0	-4.4	1.00 H	273	39.53	10.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	61.8 PK	68.3	-6.5	1.00 V	123	59.64	2.13
2	#5725.00	67.3 PK	78.3	-11.0	1.00 V	124	65.12	2.21
3	*5755.00	102.2 PK			1.00 V	125	99.72	2.43
4	*5755.00	93.2 AV			1.00 V	125	90.80	2.43
5	11510.00	60.9 PK	74.0	-13.1	1.00 V	179	50.82	10.04
6	11510.00	49.5 AV	54.0	-4.5	1.00 V	179	39.48	10.04

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	100.9 PK			1.00 H	10	98.19	2.73
2	*5795.00	92.2 AV			1.00 H	10	89.45	2.73
3	#5850.00	59.6 PK	78.3	-18.7	1.00 H	10	56.44	3.15
4	#5860.00	57.1 PK	68.3	-11.2	1.00 H	10	53.85	3.23
5	11590.00	60.7 PK	74.0	-13.3	1.00 H	123	50.60	10.13
6	11590.00	49.5 AV	54.0	-4.5	1.00 H	123	39.36	10.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	101.4 PK			1.00 V	125	98.62	2.73
2	*5795.00	92.4 AV			1.00 V	125	89.70	2.73
3	#5850.00	62.7 PK	78.3	-15.6	1.00 V	125	59.51	3.15
4	#5860.00	56.3 PK	68.3	-12.0	1.00 V	125	53.06	3.23
5	11590.00	61.1 PK	74.0	-12.9	1.00 V	253	50.93	10.13
6	11590.00	49.6 AV	54.0	-4.4	1.00 V	253	39.43	10.13

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCS30	100340	May 11,15	May 10,16
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	May 11,15	May 10,16
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	May 11,15	May 10,16
Test software	ADT	ADT_Conc_V7.3.7	N/A	N/A	N/A

NOTE:

- The test was performed in shielded room 553.
- The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

4.2.3 TEST PROCEDURES

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

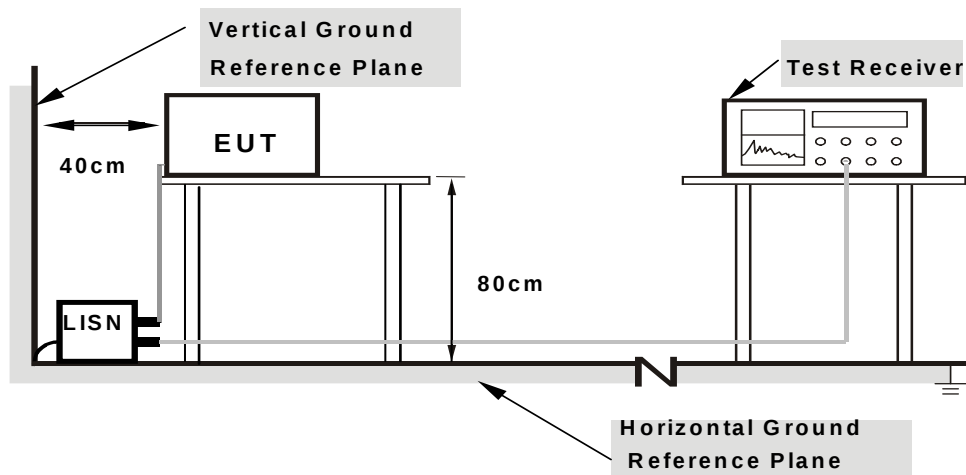
NOTE: All modes of operation were investigated and the worst-case emissions are reported.



4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 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).

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.



4.2.7 TEST RESULTS

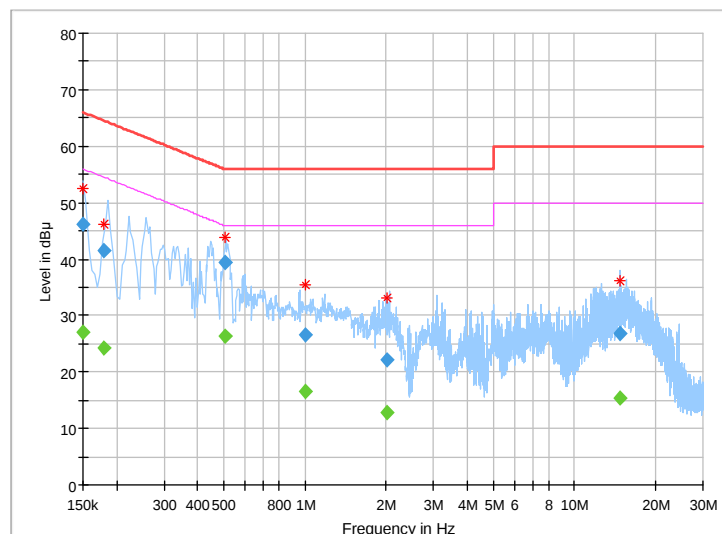
CONDUCTED WORST-CASE DATA:

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	----------	-------------------	-----------------------------------

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	26.95	56.00	-29.05	L	ON	9.6
0.150000	46.26	---	66.00	-19.74	L	ON	9.6
0.180000	---	24.36	54.49	-30.13	L	ON	9.7
0.180000	41.45	---	64.49	-23.04	L	ON	9.7
0.504000	---	26.40	46.00	-19.60	L	ON	9.7
0.504000	39.48	---	56.00	-16.52	L	ON	9.7
1.000000	---	16.58	46.00	-29.42	L	ON	9.7
1.000000	26.59	---	56.00	-29.41	L	ON	9.7
2.012000	---	12.84	46.00	-33.16	L	ON	9.7
2.012000	22.19	---	56.00	-33.81	L	ON	9.7
14.790000	---	15.36	50.00	-34.64	L	ON	9.9
14.790000	26.80	---	60.00	-33.20	L	ON	9.9

- 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



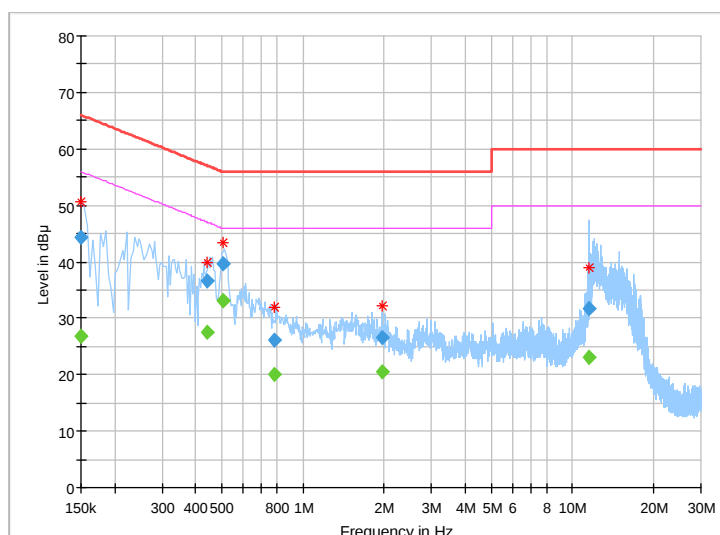


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
--------------	-------------	--------------------------	-----------------------------------

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	26.72	56.00	-29.28	N	ON	9.8
0.150000	44.25	---	66.00	-21.75	N	ON	9.8
0.444000	---	27.52	46.99	-19.47	N	ON	10.1
0.444000	36.73	---	56.99	-20.26	N	ON	10.1
0.508000	---	33.06	46.00	-12.94	N	ON	10.1
0.508000	39.68	---	56.00	-16.32	N	ON	10.1
0.784000	---	20.06	46.00	-25.94	N	ON	10.0
0.784000	26.16	---	56.00	-29.84	N	ON	10.0
1.968000	---	20.62	46.00	-25.38	N	ON	9.8
1.968000	26.57	---	56.00	-29.43	N	ON	9.8
11.488000	---	22.98	50.00	-27.02	N	ON	9.9
11.488000	31.72	---	60.00	-28.28	N	ON	9.9

- 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





4.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

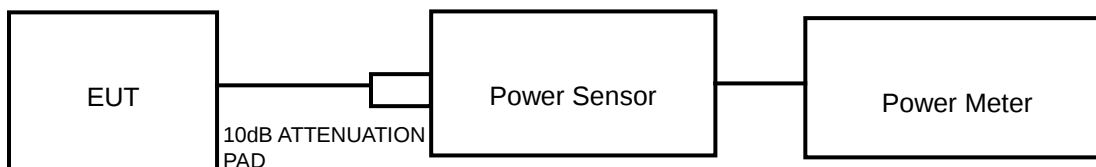
4.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

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)
	√	Mobile and Portable client device	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)

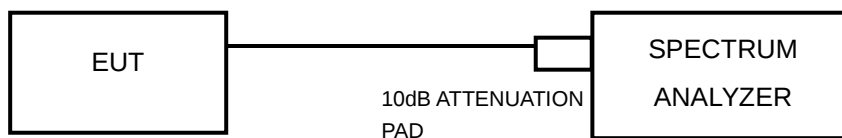
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR POWER MEASUREMENT

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

FOR 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.

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

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



Test Report No.: RF151125W002-5

4.3.7 TEST RESULTS

OUTPUT POWER:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	11.508	10.61	24	PASS
40	5200	10.304	10.13	24	PASS
48	5240	12.706	11.04	24	PASS
52	5260	11.220	10.50	24	PASS
60	5300	12.972	11.13	24	PASS
64	5320	14.158	11.51	24	PASS
149	5745	8.630	9.36	30	PASS
157	5785	8.551	9.32	30	PASS
161	5805	7.638	8.83	30	PASS

**802.11n (20MHz)**

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	10.257	10.11	24	PASS
40	5200	10.691	10.29	24	PASS
48	5240	11.858	10.74	24	PASS
52	5260	9.863	9.94	24	PASS
60	5300	11.194	10.49	24	PASS
64	5320	11.376	10.56	24	PASS
149	5745	6.668	8.24	30	PASS
157	5785	7.031	8.47	30	PASS
161	5805	6.124	7.87	30	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	10.765	10.32	24	PASS
46	5230	12.912	11.11	24	PASS
54	5270	11.535	10.62	24	PASS
62	5310	11.940	10.77	24	PASS
151	5755	7.656	8.84	30	PASS
159	5795	6.622	8.21	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	16.44	18.93	PASS
40	5200	16.32	18.82	PASS
48	5240	16.44	18.94	PASS
52	5260	16.38	19.04	PASS
60	5300	16.44	18.82	PASS
64	5320	16.32	18.89	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
149	5745	16.41	15.08	PASS
157	5785	16.41	15.05	PASS
161	5805	16.41	14.69	PASS

**802.11n (20MHz)**

CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
36	5180	17.52	19.31	PASS
40	5200	17.52	19.20	PASS
48	5240	17.52	19.27	PASS
52	5260	17.52	19.30	PASS
60	5300	17.52	19.33	PASS
64	5320	17.52	19.34	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
149	5745	17.55	15.01	PASS
157	5785	17.49	15.04	PASS
161	5805	17.52	15.05	PASS

**802.11n (40MHz)**

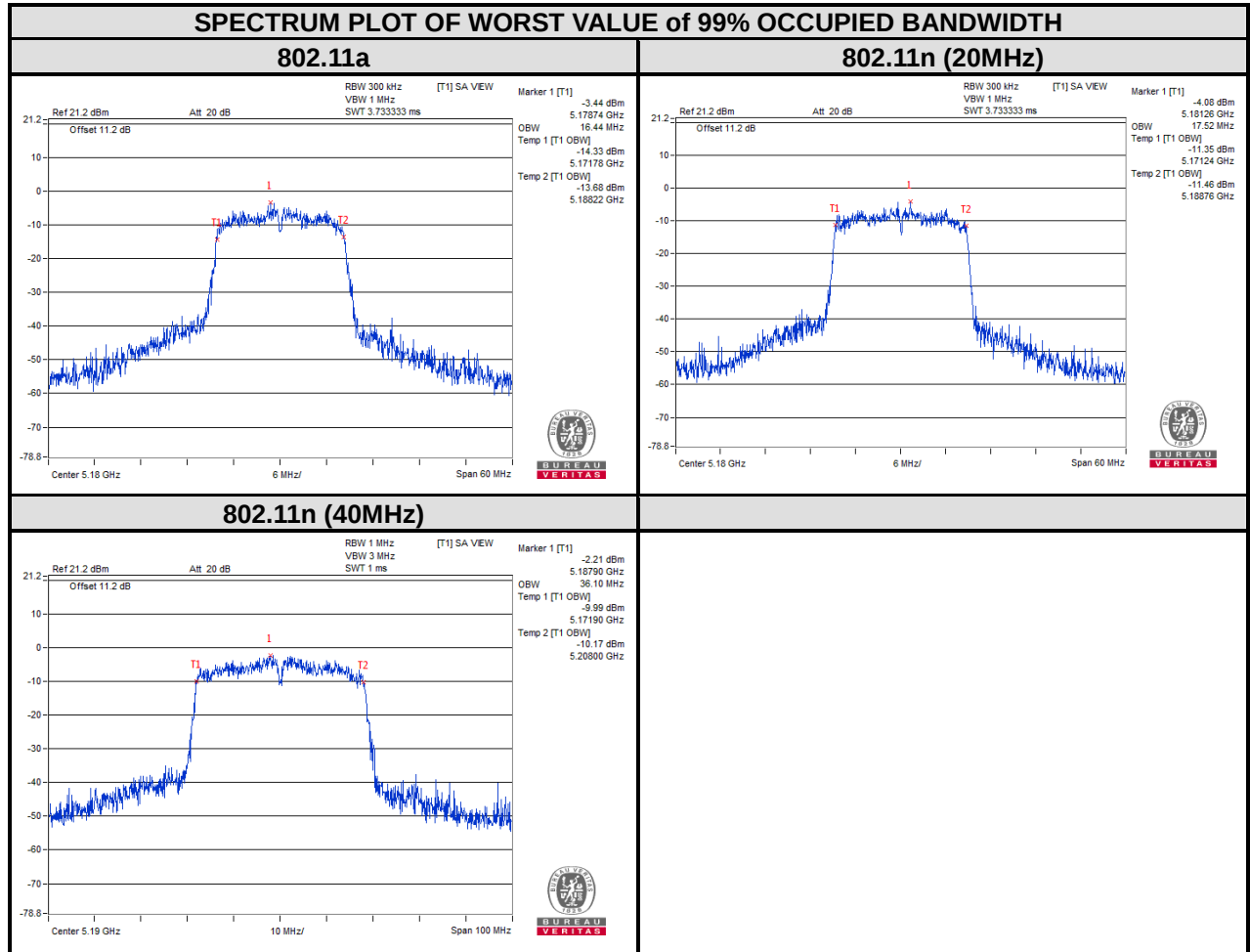
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	26dB BANDWIDTH (MHz)	PASS/FAIL
38	5190	36.10	40.23	PASS
46	5230	36.00	40.19	PASS
54	5270	36.00	40.39	PASS
62	5310	36.00	40.29	PASS
CHANNEL	CHANNEL FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH	6dB BANDWIDTH (MHz)	PASS/FAIL
151	5755	36.10	33.85	PASS
159	5795	36.10	35.04	PASS



BUREAU
VERITAS

Test Report No.: RF151125W002-5

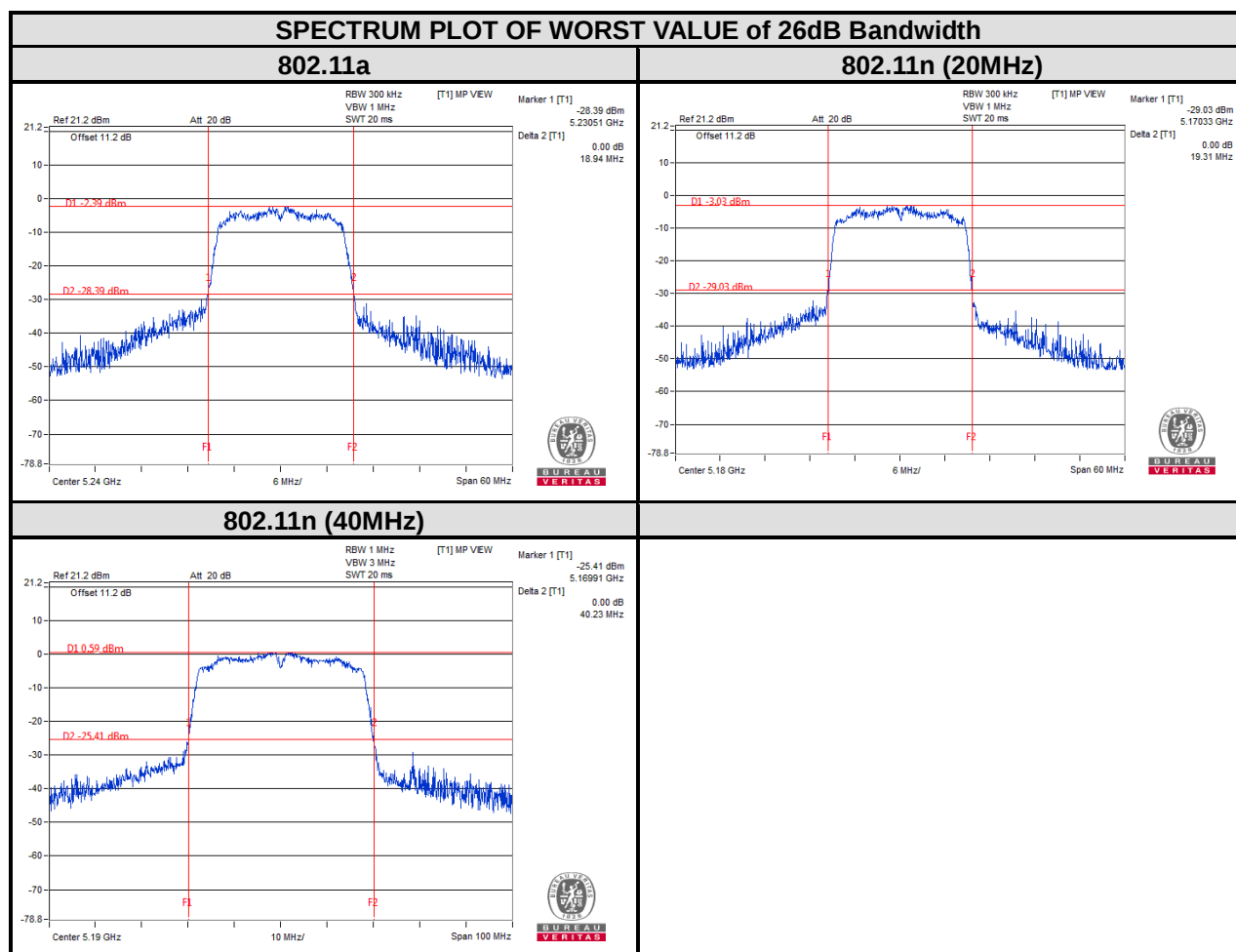
For U-NII-1:





BUREAU
VERITAS

Test Report No.: RF151125W002-5

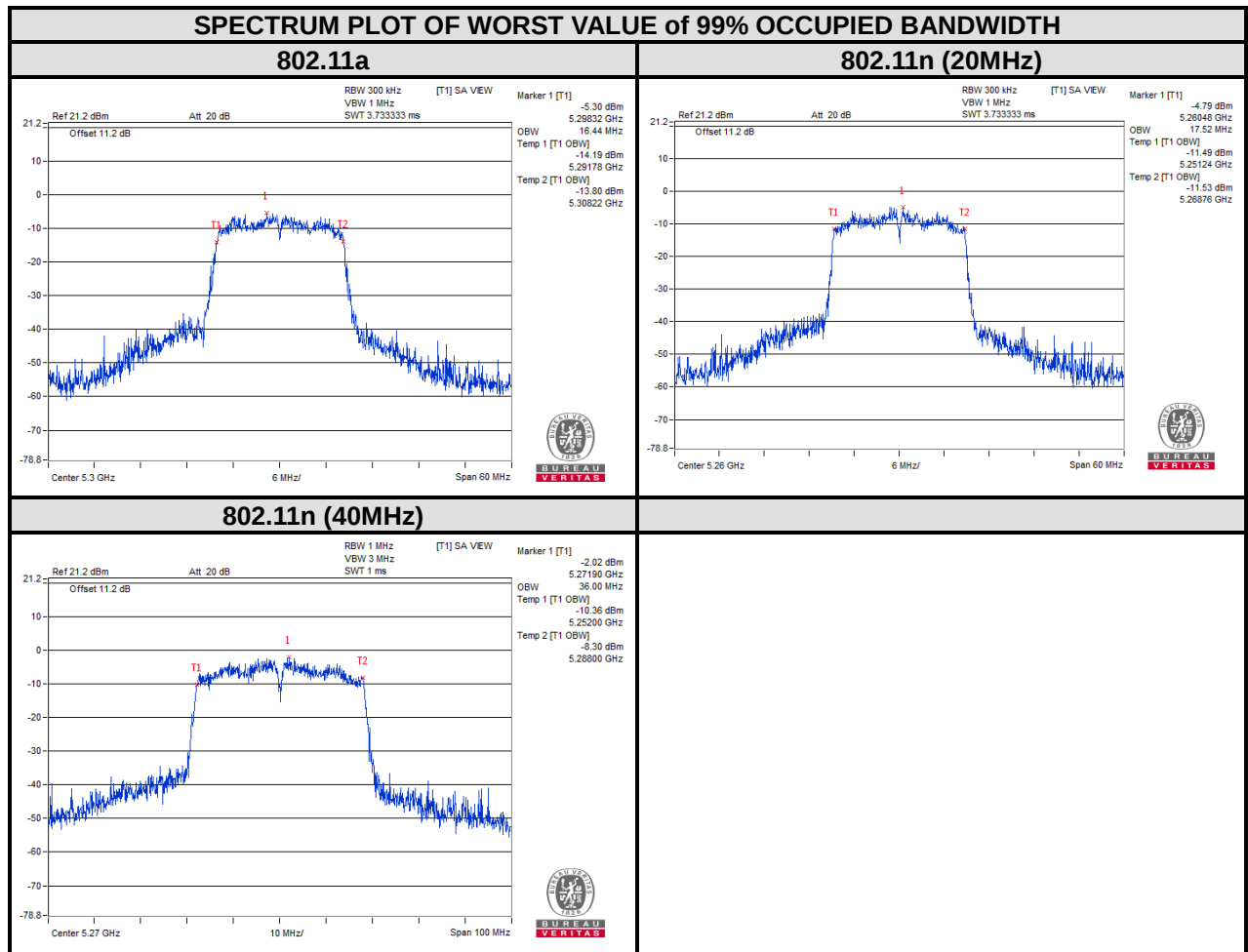




BUREAU
VERITAS

Test Report No.: RF151125W002-5

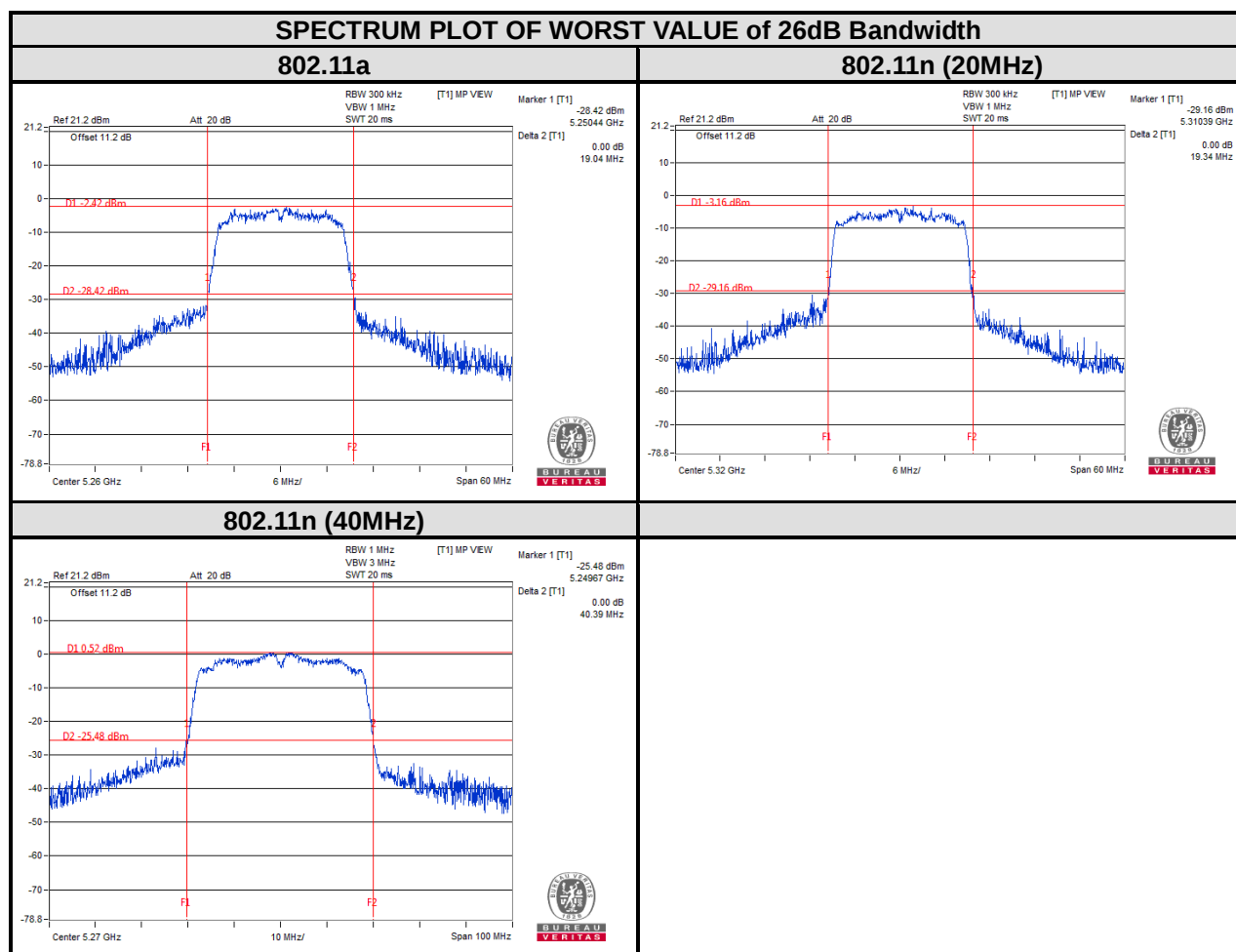
For U-NII-2A:





BUREAU
VERITAS

Test Report No.: RF151125W002-5

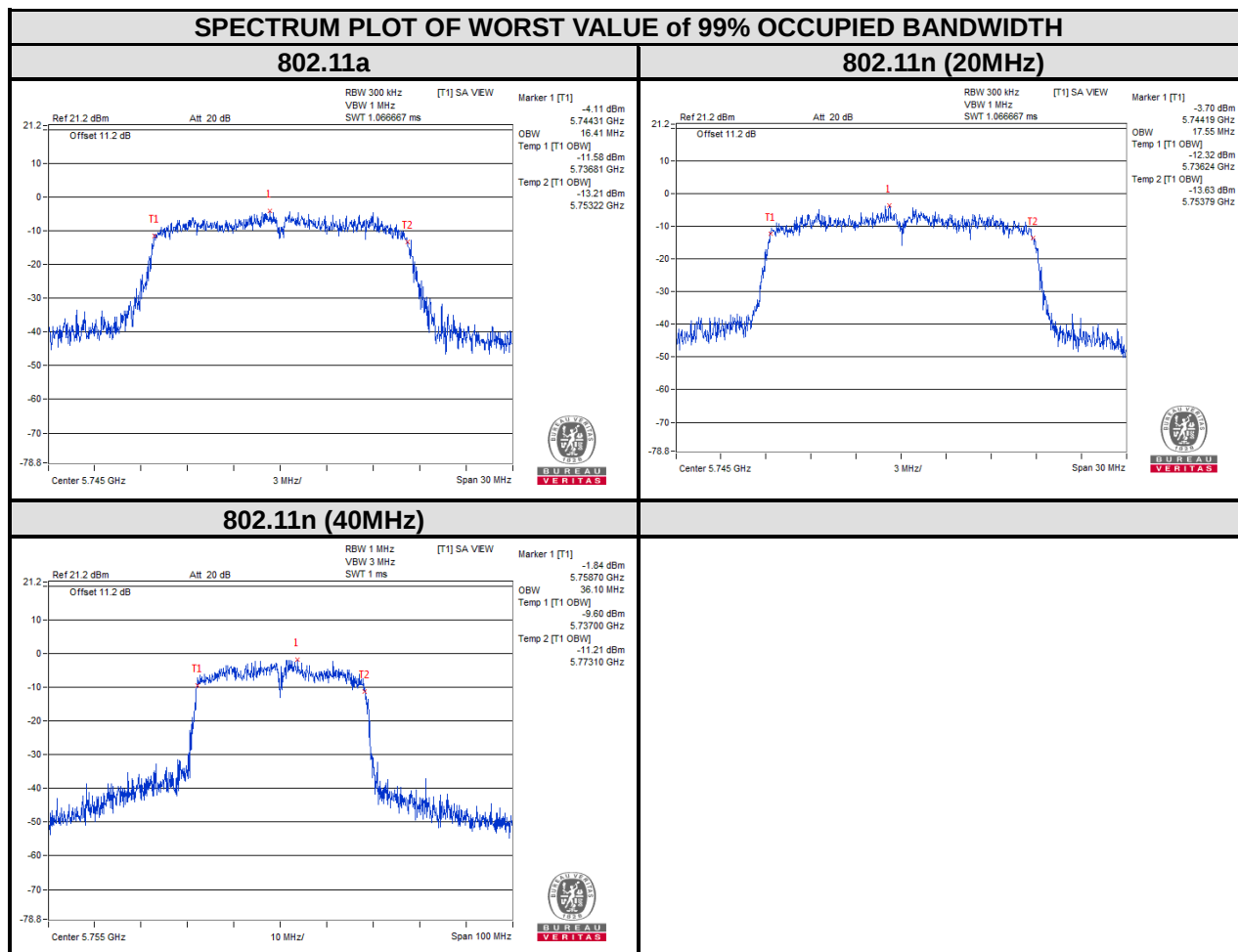




BUREAU
VERITAS

Test Report No.: RF151125W002-5

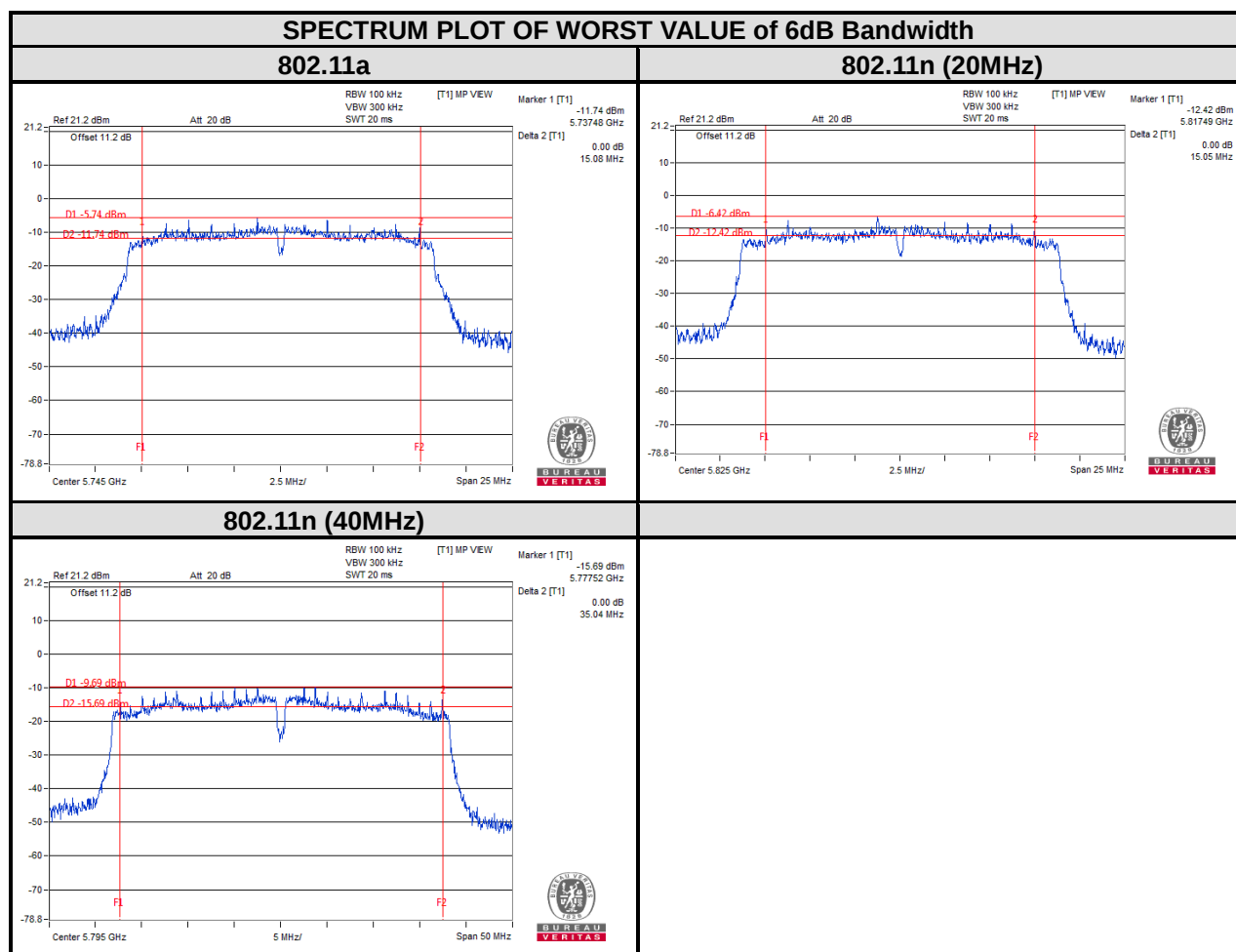
For U-NII-3:





BUREAU
VERITAS

Test Report No.: RF151125W002-5



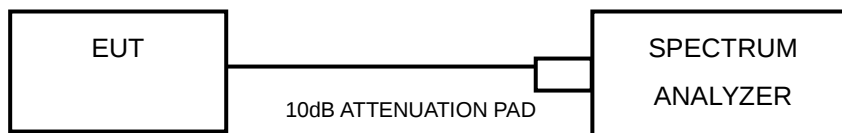


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURES



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

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 30 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
3. Set Channel power measure = 1MHz
4. Sweep time = auto, trigger set to "free run".
5. Trace average at least 100 traces in power averaging mode.
6. Record the max value and add $10 \log(1/\text{duty cycle})$

For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $\text{BWCF} = 10\log(500 \text{ kHz}/300\text{kHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add $10 \log (1/\text{duty cycle})$

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.1.6



4.4.7 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	1.51	0.14	1.65	11	PASS
40	5200	2.77	0.14	2.91	11	PASS
48	5240	2.57	0.14	2.71	11	PASS
52	5260	1.23	0.14	1.37	11	PASS
60	5300	2.27	0.14	2.41	11	PASS
64	5320	2.50	0.14	2.64	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	0.65	0.15	0.80	11	PASS
40	5200	2.00	0.15	2.15	11	PASS
48	5240	0.38	0.15	0.53	11	PASS
52	5260	0.79	0.15	0.94	11	PASS
60	5300	0.46	0.15	0.61	11	PASS
64	5320	0.48	0.15	0.63	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	-0.99	0.25	-0.74	11	PASS
46	5230	-0.37	0.25	-0.12	11	PASS
54	5270	-0.78	0.25	-0.53	11	PASS
62	5310	-1.86	0.25	-1.61	11	PASS



For U-NII-3:

802.11a

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
149	5745	2.33	0.14	2.47	30	PASS
157	5785	2.40	0.14	2.54	30	PASS
161	5805	1.02	0.14	1.16	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
149	5745	0.10	0.15	0.25	30	PASS
157	5785	0.45	0.15	0.30	30	PASS
161	5805	0.86	0.15	0.71	30	PASS

802.11n (40MHz)

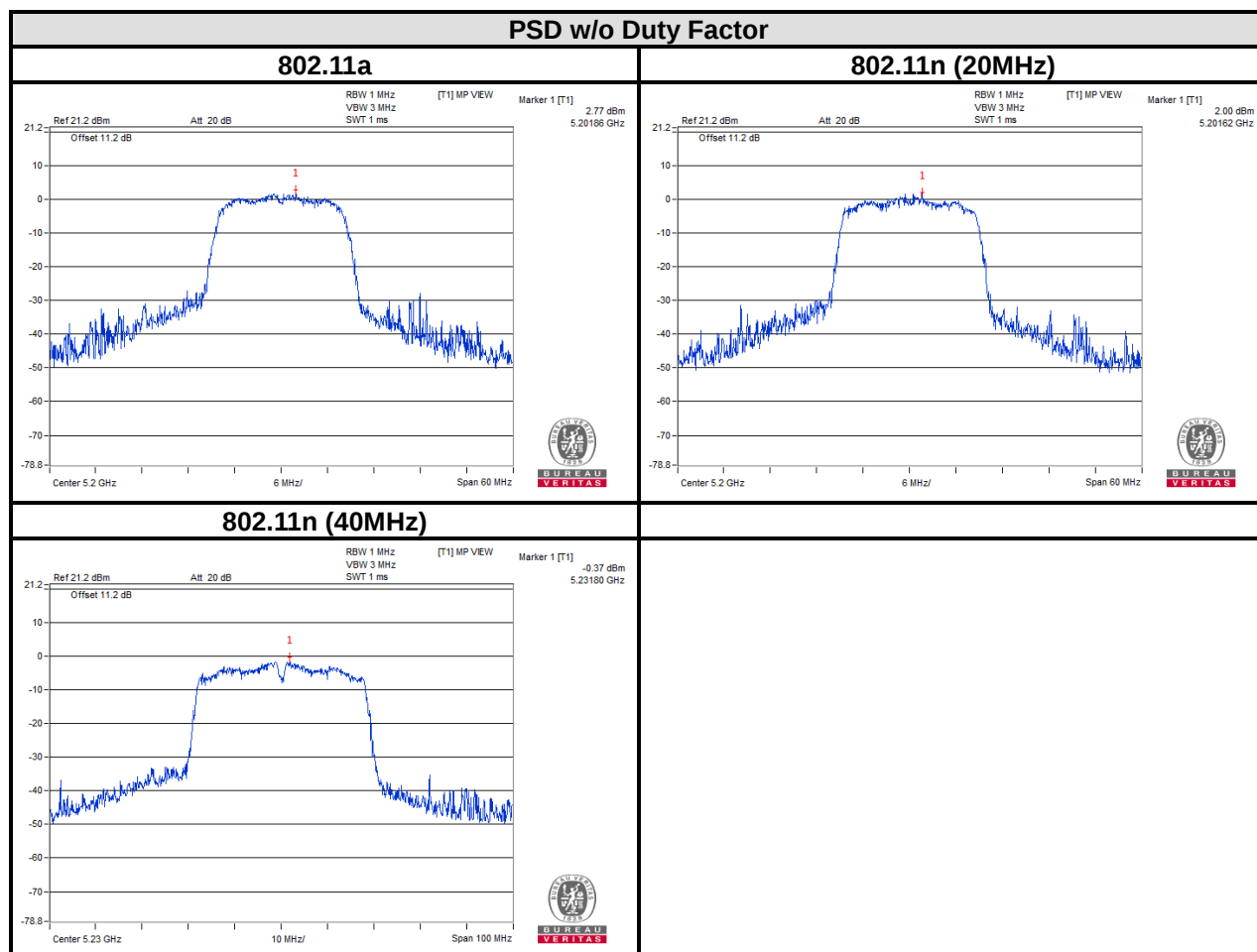
CHANNEL	FREQUENCY (MHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor	PSD with Duty Factor (dBm/500kHz)	LIMIT (dBm/500kHz)	PASS /FAIL
151	5755	0.27	0.25	2.02	30	PASS
159	5795	3.66	0.25	3.41	30	PASS



BUREAU
VERITAS

Test Report No.: RF151125W002-5

For 5180~5240MHz



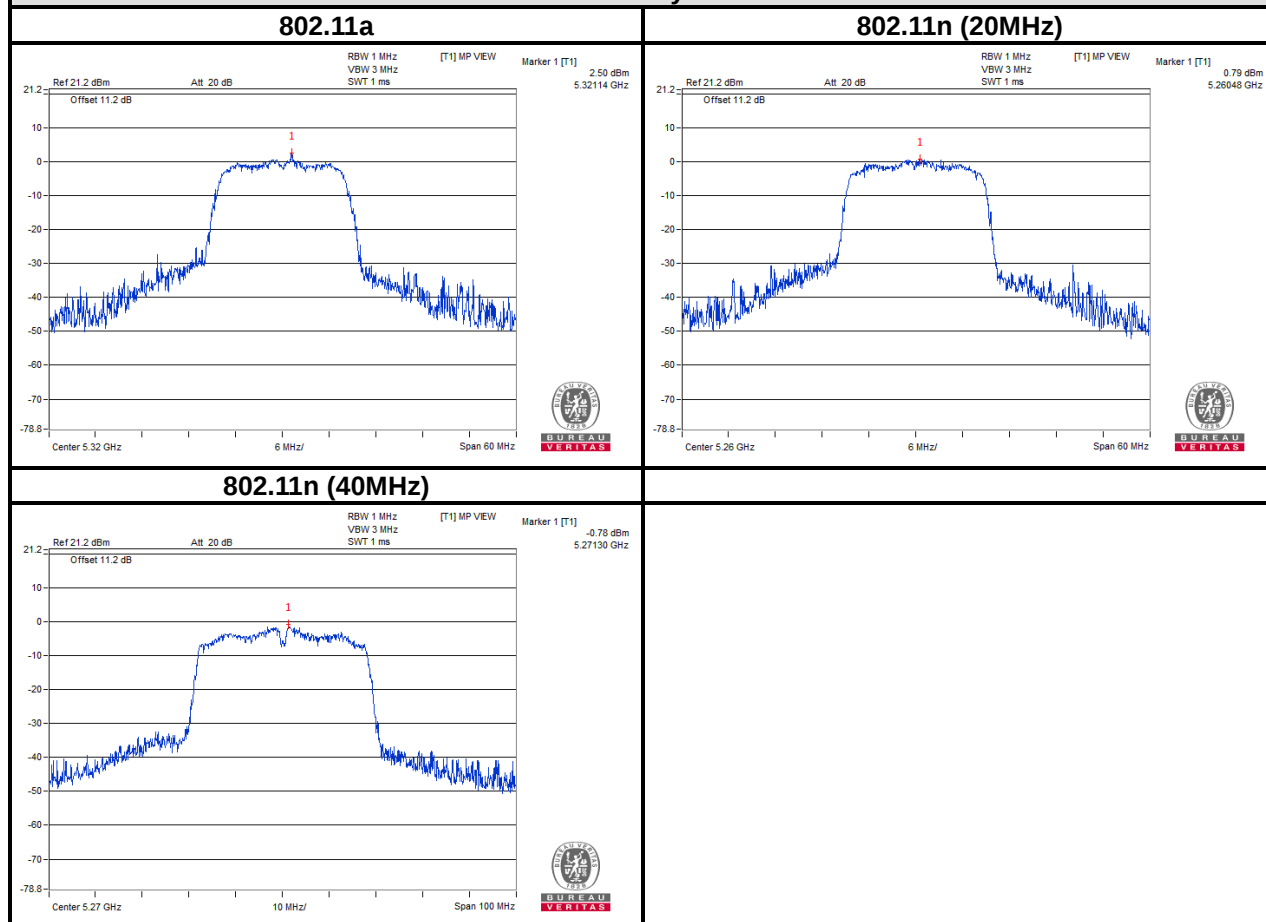


BUREAU
VERITAS

Test Report No.: RF151125W002-5

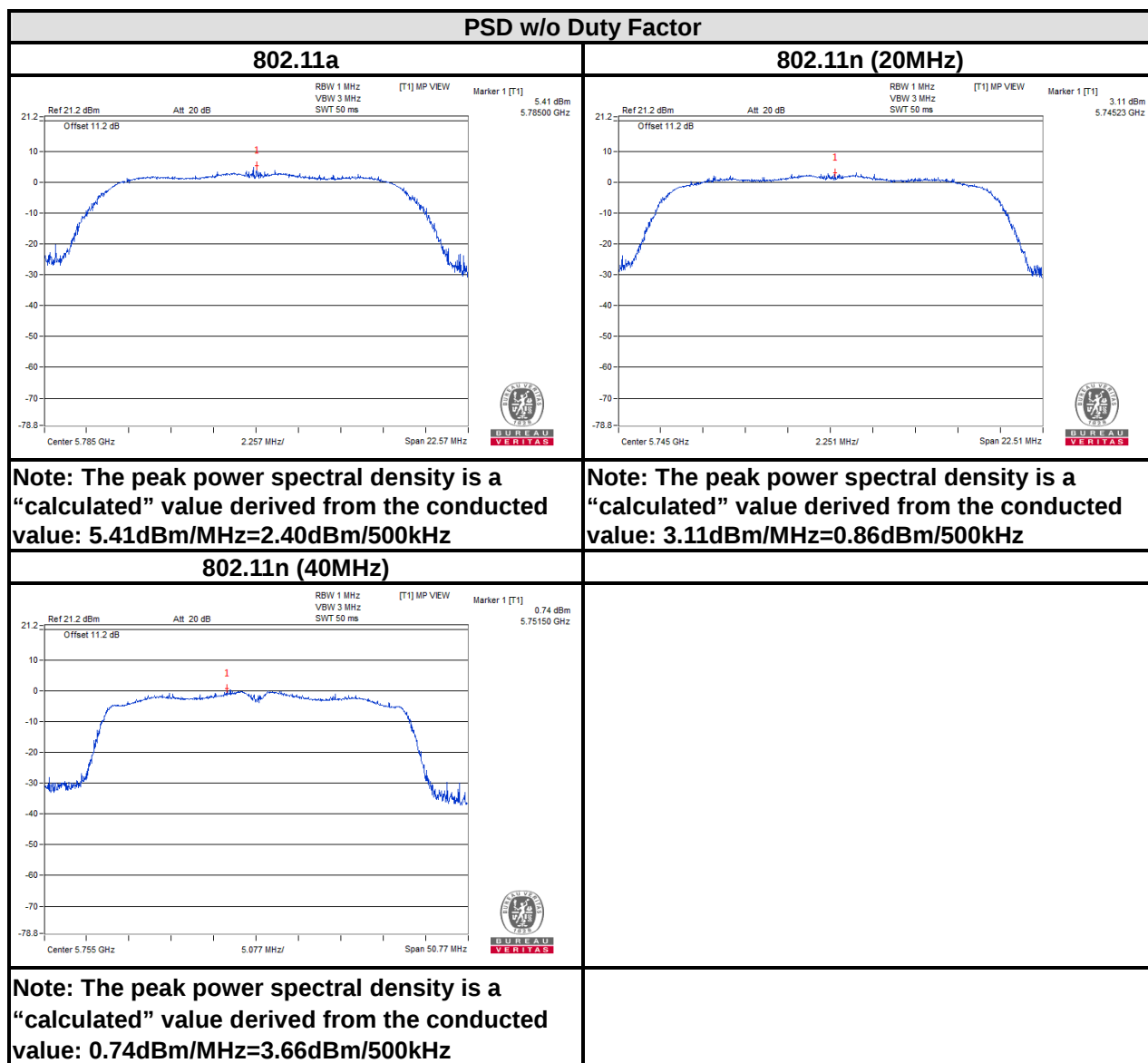
For 5260~5320MHz

PSD w/o Duty Factor





For 5745~5805MHz

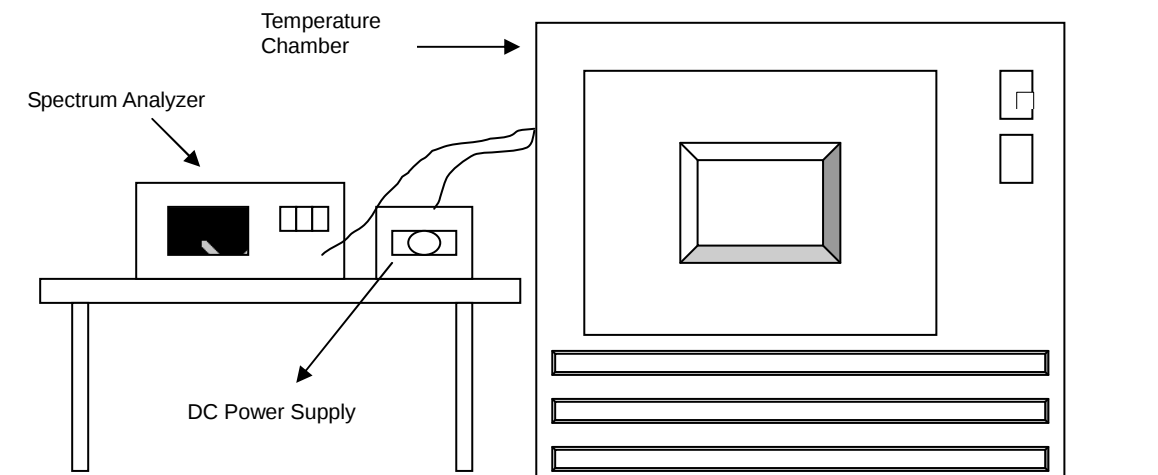


4.5 FREQUENCY STABILITY

4.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 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.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

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



4.5.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTES		5 MINUTES		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	5	5320.0256	4.812	5320.0285	5.357	5320.0262	4.925	5320.0254	4.774
40	5	5320.0261	4.906	5320.029	5.451	5320.0273	5.132	5320.0246	4.624
30	5	5320.0247	4.643	5320.0301	5.658	5320.027	5.075	5320.0239	4.492
20	5	5320.0242	4.549	5320.024	4.511	5320.025	4.699	5320.0227	4.267
10	5	5319.9948	-0.977	5319.9859	-2.650	5319.9869	-2.462	5319.9942	-1.090
0	5	5319.9946	-1.015	5319.9859	-2.650	5319.9872	-2.406	5319.993	-1.316
-10	5	5320.0187	3.515	5320.0193	3.628	5320.0199	3.741	5320.0185	3.477
-20	5	5320.0182	3.421	5320.0209	3.929	5320.0204	3.835	5320.0191	3.590
-30	5	5320.0176	3.308	5320.0209	3.929	5320.0199	3.741	5320.0182	3.421

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	5.25	5320.0253	4.756	5320.0247	4.643	5320.0254	4.774	5320.0218	4.098
	5	5320.0242	4.549	5320.024	4.511	5320.025	4.699	5320.0227	4.267
	4.75	5320.0252	4.737	5320.0258	4.850	5320.026	4.887	5320.0216	4.060



Test Report No.: RF151125W002-5

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

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



Test Report No.: RF151125W002-5

6 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---