

## TEST REPORT



Applicant	MTRLC LLC
Address	PO Box 121147 Boston, MA 02112-1147

Manufacturer or Supplier	MTRLC LLC
Address	PO Box 121147 Boston, MA 02112-1147
Product	8x4 DOCSIS 3.0 Cable Modem plus N300 Router
Brand Name	Motorola
Model	MG7310
Additional Model & Model Difference	MG7310XY(X, Y= A, B, C, D or blank); See items 3.1
Date of tests	Nov. 20, 2015 ~ Dec. 02, 2015

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

☒ **FCC Part 15, Subpart C, Section 15.247**

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

Tested by Blue Zheng Project Engineer / EMC Department	Approved by Chris Chen Assistant Manager / EMC Department
	  Date: Dec. 02, 2015

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF151029N068	Original release	Dec. 02, 2015

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## 1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.205 & 209	Radiated Emissions	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(d)	Conducted Out Of Band Emission Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted output power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	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	2.74dB
	30MHz ~ 1GMHz	3.55dB
	1GHz ~ 18GHz	4.84dB
	18GHz ~ 40GHz	4.84dB

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

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

<b>EUT</b>	8x4 DOCSIS 3.0 Cable Modem plus N300 Router
<b>MODEL NO.</b>	MG7310
<b>FCC ID</b>	2AF5PMG7310
<b>POWER SUPPLY</b>	DC 12V From Adapter
<b>MODULATION TYPE</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, 256QAM, QPSK, BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	DSSS, OFDM
<b>TRANSFER RATE</b>	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
<b>OPERATING FREQUENCY</b>	2412-2462MHz for 11b/g/n(20MHz) 2422-2452MHz for 11n(40MHz)
<b>NUMBER OF CHANNEL</b>	11 for 802.11b/g/n (20MHz) 7 for 802.11n (40MHz)
<b>AVG. OUTPUT POWER</b>	371.596mW
<b>ANTENNA TYPE</b>	Wire antenna with 3.1dBi gain
<b>DATA CABLE</b>	N/A
<b>I/O PORTS</b>	Refer to user's manual

**NOTE:**

1. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	2TX
802.11g	2TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX
NOTE: 802.11b one antenna transmitting, in the meanwhile, other antenna stop transmitting	

2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. For the test results, the EUT had been tested with all conditions, but only the worst case was shown in test report.
4. Please refer to the EUT photo document (Reference No.: 151029N068) for detailed product photo.



5. Models MG7310XY(X, Y= A, B, C, D or blank) are identical hardware models except the model no. for trading purpose.
6. The EUT can be powered by adapter as list as attach.

ADAPTER	
<b>BRAND:</b>	N/A
<b>MODEL:</b>	S18B72-120A150-C4
<b>INPUT:</b>	AC 100-240V, 50/60Hz, 0.7A
<b>OUTPUT:</b>	DC 12V/1.5A
<b>DC CABLE:</b>	Unshielded, Non-detachable, 1.47m

## 2.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

### 2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Powered by Adapter + WIFI 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





**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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

**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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1	DSSS	DBPSK	1.0

**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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1	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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5
A	802.11n (40MHz)	3 to 9	3, 9	OFDM	BPSK	13.5

### 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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

### TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	25deg. C, 55%RH	AC 120V 60Hz	Sen He
RE<1G	25deg. C, 55%RH	AC 120V 60Hz	Sen He
PLC	25deg. C, 53%RH	AC 120V 60Hz	Sen He
APCM	20deg. C, 60%RH	AC 120V 60Hz	Blue Zheng



## 2.3 DUTY CYCLE OF TEST SIGNAL

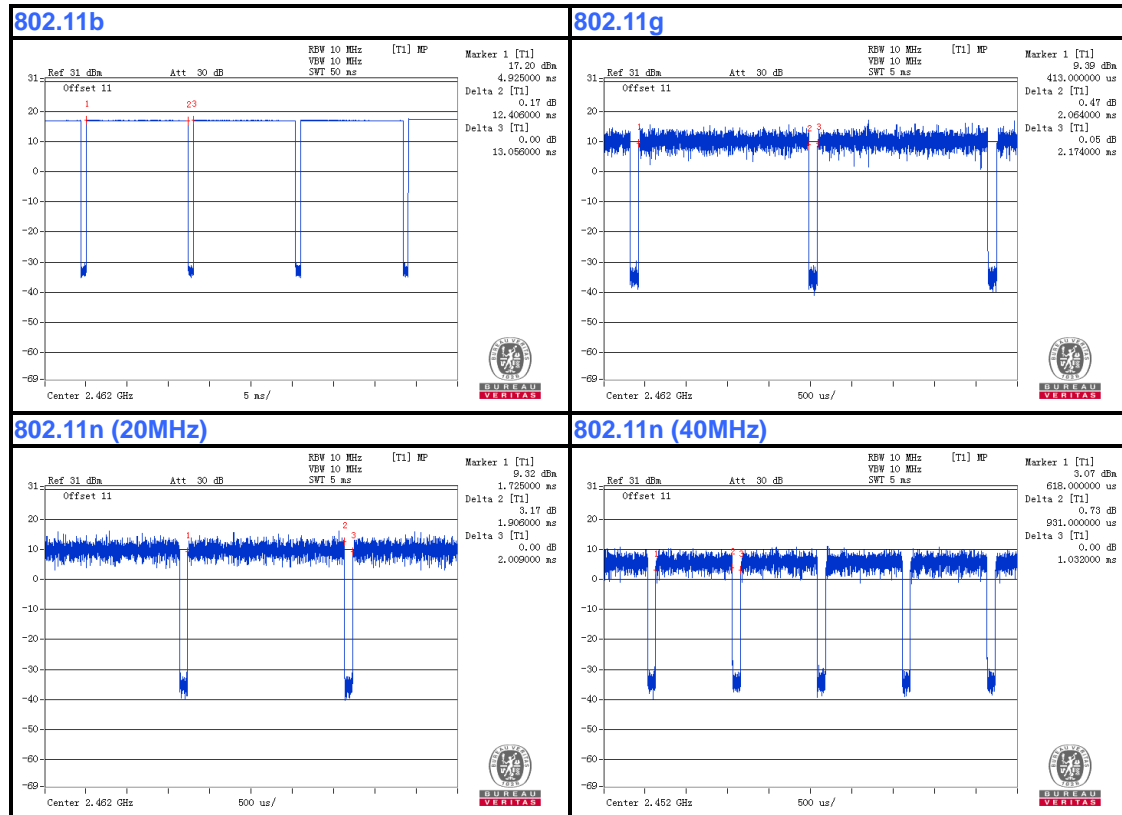
### Chain 0:

11b Duty cycle of test signal is 91.86 %

11g Duty cycle of test signal is 94.94 %

11n(20) Duty cycle of test signal is 94.87 %

11n(40) Duty cycle of test signal is 90.21 %





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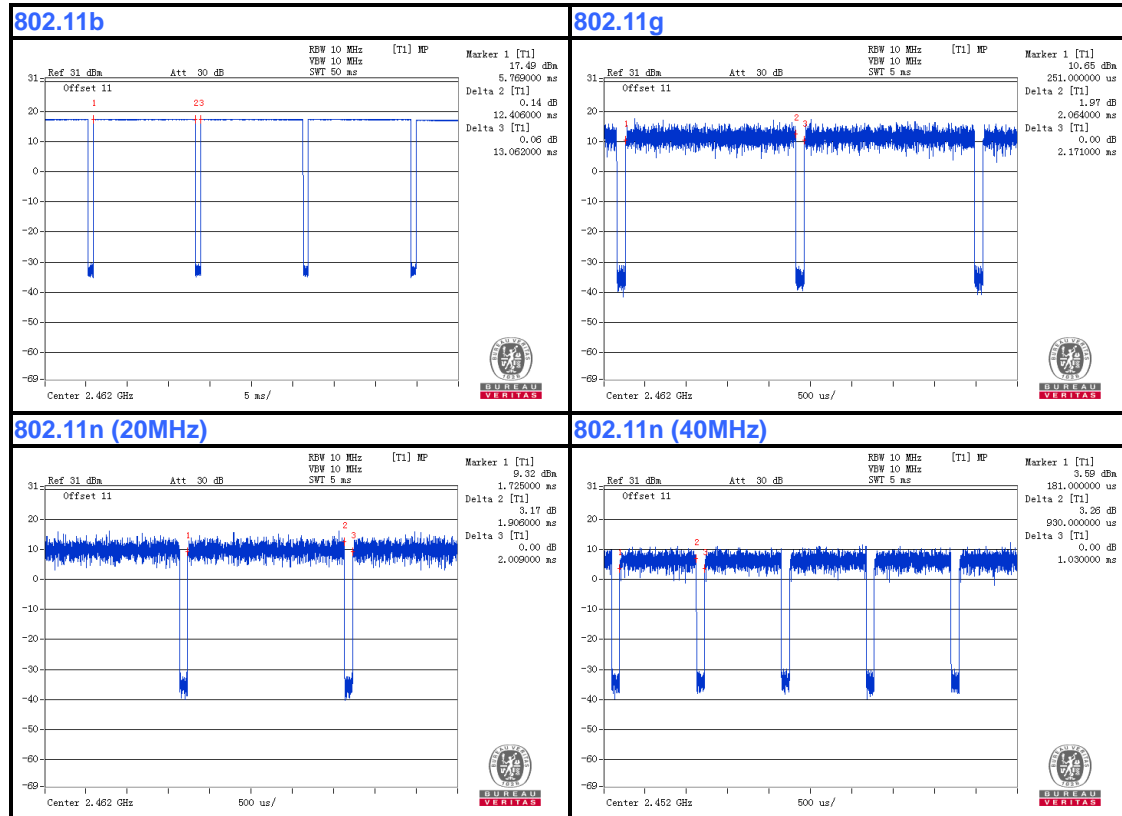
#### Chain 1:

11g Duty cycle of test signal is 94.98 %

11g Duty cycle of test signal is 95.07 %

11n(20) Duty cycle of test signal is 94.87 %

11n(40) Duty cycle of test signal is 90.29 %



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## 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	N/A	N/A	N/A	N/A	N/A

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

## 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

**FCC Part 15, Subpart C (15.247)**

**558074 D01 DTS Meas Guidance v03r03**

**662911 D01 Multiple Transmitter Output v02r01**

**ANSI C63.10-2013**

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

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

### 3. TEST TYPES AND RESULTS

#### 3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

##### 3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

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 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
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
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Aug. 08, 14	Aug. 07,16
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Apr. 19,14	Apr. 18,16
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	Jan. 21,14	Jan. 20,17
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 20,15	Nov. 19,16

**NOTE:**

1. The test was performed in 966 Chamber.
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. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 494399.



### 3.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meters semi-anechoic chamber at frequency above 1GHz. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meters semi-anechoic chamber at frequency below 1GHz. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

**NOTE:**

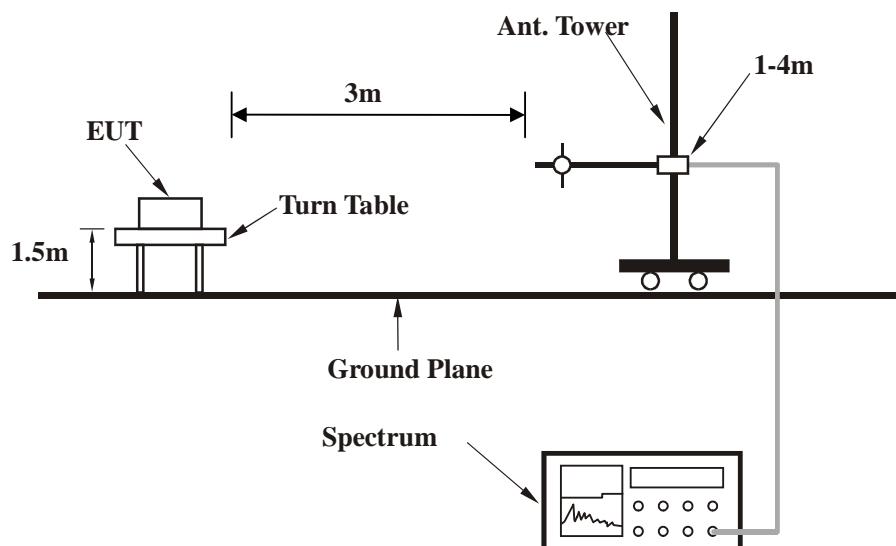
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. The testing of the EUT was performed on all 3 orthogonal axes, the worst-case test configuration was reported on the file test setup photo.

### 3.1.4 DEVIATION FROM TEST STANDARD

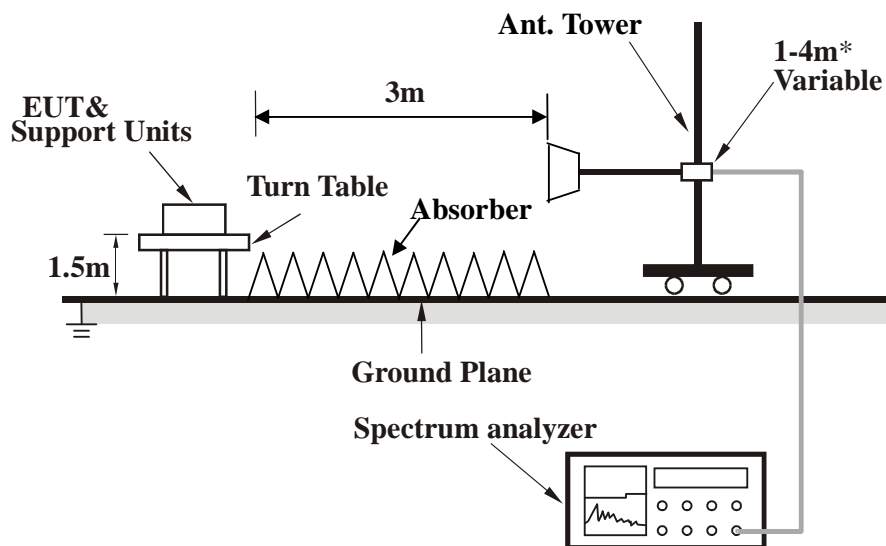
No deviation.

### 3.1.5 TEST SETUP

#### Test below 1GHz



#### Test above 1GHz



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



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### 3.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table.
- b. Prepared notebooks to act as communication partner and placed it outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.



### 3.1.7 TEST RESULTS

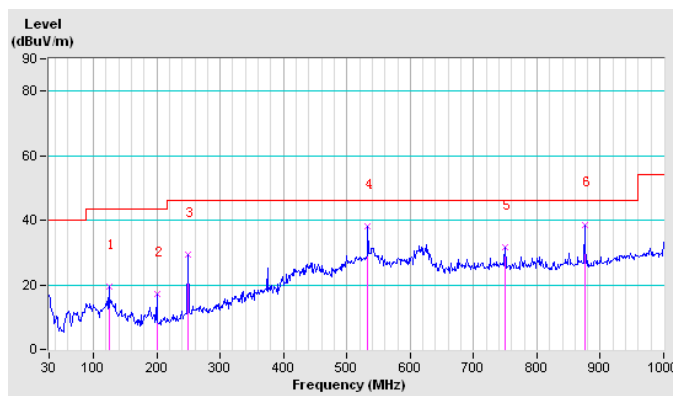
#### BELOW 1GHz WORST-CASE DATA: 802.11b- CH1

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	124.19	19.37	43.50	-24.13	100	0	37.70	-18.33
2	200.10	17.30	43.50	-26.20	100	0	38.23	-20.93
3	249.30	29.38	46.00	-16.62	100	0	46.12	-16.74
4	533.28	38.19	46.00	-7.81	100	0	45.55	-7.36
5	749.77	31.75	46.00	-14.25	100	0	34.19	-2.44
6	874.88	38.67	46.00	-7.33	100	0	39.65	-0.98

#### REMARKS:

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





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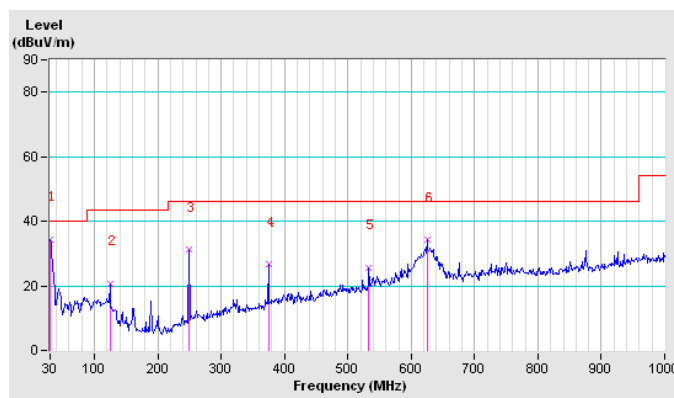
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<b>CHANNEL</b>	TX Channel 1	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	34.50	40.00	-5.50	100	0	46.85	-12.35
2	124.19	20.75	43.50	-22.75	100	0	39.08	-18.33
3	249.30	31.23	46.00	-14.77	100	0	47.97	-16.74
4	374.42	26.71	46.00	-19.29	100	0	39.38	-12.67
5	533.28	25.70	46.00	-20.30	100	0	33.06	-7.36
6	624.65	34.21	46.00	-11.79	100	0	39.57	-5.36

**REMARKS:**

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



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## ABOVE 1GHz DATA

## 802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		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	2390.00	62.3 PK	74.0	-11.7	1.04 H	65	61.90	0.40
2	2390.00	53.4 AV	54.0	-0.6	1.04 H	65	53.00	0.40
3	*2412.00	113.6 PK			1.16 H	221	113.20	0.40
4	*2412.00	110.8 AV			1.16 H	221	110.40	0.40
5	4824.00	51.6 PK	74.0	-22.4	1.01 H	125	45.10	6.50
6	4824.00	40.9 AV	54.0	-13.1	1.01 H	125	34.40	6.50
7	#7236.00	54.9 PK	93.6	-38.7	1.08 H	335	44.10	10.80
8	#7236.00	41.1 AV	90.8	-49.7	1.08 H	335	30.30	10.80
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	2390.00	57.6 PK	74.0	-16.4	1.26 V	91	57.20	0.40
2	2390.00	48.9 AV	54.0	-5.1	1.26 V	91	48.50	0.40
3	*2412.00	104.5 PK			1.74 V	42	104.10	0.40
4	*2412.00	102.6 AV			1.74 V	42	102.20	0.40
5	4824.00	53.6 PK	74.0	-20.4	1.02 V	33	47.10	6.50
6	4824.00	40.0 AV	54.0	-14.0	1.02 V	33	33.50	6.50
7	#7236.00	54.9 PK	84.5	-29.6	1.00 V	127	44.10	10.80
8	#7236.00	41.7 AV	82.6	-40.9	1.00 V	127	30.90	10.80

## 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.



<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	*2437.00	116.8 PK			1.84 H	102	116.30	0.50
2	*2437.00	112.4 AV			1.84 H	102	111.90	0.50
3	4874.00	51.5 PK	74.0	-22.5	1.02 H	211	44.80	6.70
4	4874.00	41.7 AV	54.0	-12.3	1.02 H	211	35.00	6.70
5	7311.00	54.2 PK	74.0	-19.8	1.00 H	77	43.40	10.80
6	7311.00	44.8 AV	54.0	-9.2	1.00 H	77	34.00	10.80
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	*2437.00	110.8 PK			1.48 V	66	110.30	0.50
2	*2437.00	107.4 AV			1.48 V	66	106.90	0.50
3	4874.00	55.6 PK	74.0	-18.4	1.22 V	49	48.90	6.70
4	4874.00	51.7 AV	54.0	-2.3	1.22 V	49	45.00	6.70
5	7311.00	57.9 PK	74.0	-16.1	1.01 V	274	47.10	10.80
6	7311.00	47.2 AV	54.0	-6.8	1.01 V	274	36.40	10.80

**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.



<b>CHANNEL</b>	TX Channel 11	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	*2462.00	110.6 PK			1.32 H	204	110.00	0.60
2	*2462.00	107.2 AV			1.32 H	204	106.60	0.60
3	2483.50	63.2 PK	74.0	-10.8	1.48 H	291	62.60	0.60
4	2483.50	53.4 AV	54.0	-0.6	1.48 H	291	52.80	0.60
5	4924.00	52.3 PK	74.0	-21.7	1.01 H	221	45.40	6.90
6	4924.00	39.7 AV	54.0	-14.3	1.01 H	221	32.80	6.90
7	7386.00	54.6 PK	74.0	-19.4	1.04 H	76	43.80	10.80
8	7386.00	41.1 AV	54.0	-12.9	1.04 H	76	30.30	10.80
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	*2462.00	102.3 PK			1.84 V	43	101.70	0.60
2	*2462.00	98.1 AV			1.84 V	43	97.50	0.60
3	2483.50	54.6 PK	74.0	-19.4	1.12 V	200	54.00	0.60
4	2483.50	43.2 AV	54.0	-10.8	1.12 V	200	42.60	0.60
5	4924.00	50.6 PK	74.0	-23.4	1.00 V	213	43.70	6.90
6	4924.00	38.7 AV	54.0	-15.3	1.00 V	213	31.80	6.90
7	7386.00	53.7 PK	74.0	-20.3	1.02 V	114	42.90	10.80
8	7386.00	40.6 AV	54.0	-13.4	1.02 V	114	29.80	10.80

**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.





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**Test Report No.: RF151029N068**

802.11g

<b>CHANNEL</b>	TX Channel 1	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		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	2390.00	69.6 PK	74.0	-4.4	1.04 H	216	69.20	0.40
2	2390.00	53.4 AV	54.0	-0.6	1.04 H	216	53.00	0.40
3	*2412.00	106.3 PK			1.13 H	302	105.90	0.40
4	*2412.00	95.7 AV			1.13 H	302	95.30	0.40
5	4824.00	51.6 PK	74.0	-22.4	1.02 H	22	45.10	6.50
6	4824.00	38.2 AV	54.0	-15.8	1.02 H	22	31.70	6.50
7	#7236.00	54.3 PK	86.3	-32.0	1.00 H	59	43.50	10.80
8	#7236.00	40.5 AV	75.7	-35.2	1.00 H	59	29.70	10.80
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	2390.00	61.7 PK	74.0	-12.3	1.52 V	31	61.30	0.40
2	2390.00	45.9 AV	54.0	-8.1	1.52 V	31	45.50	0.40
3	*2412.00	102.8 PK			1.69 V	57	102.40	0.40
4	*2412.00	91.6 AV			1.69 V	57	91.20	0.40
5	4824.00	51.6 PK	74.0	-22.4	1.25 V	172	45.10	6.50
6	4824.00	39.1 AV	54.0	-14.9	1.25 V	172	32.60	6.50
7	#7236.00	54.6 PK	82.8	-28.2	1.09 V	317	43.80	10.80
8	#7236.00	40.9 AV	71.6	-30.7	1.09 V	317	30.10	10.80

**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.

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<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
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	*2437.00	121.8 PK			1.52 H	217	121.30	0.50
2	*2437.00	112.7 AV			1.52 H	217	112.20	0.50
3	4874.00	52.6 PK	74.0	-21.4	1.01 H	42	45.90	6.70
4	4874.00	39.4 AV	54.0	-14.6	1.01 H	42	32.70	6.70
5	7311.00	55.1 PK	74.0	-18.9	1.00 H	136	44.30	10.80
6	7311.00	43.2 AV	54.0	-10.8	1.00 H	136	32.40	10.80
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
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	*2437.00	113.2 PK			1.33 V	104	112.70	0.50
2	*2437.00	103.9 AV			1.33 V	104	103.40	0.50
3	4874.00	56.3 PK	74.0	-17.7	1.62 V	60	49.60	6.70
4	4874.00	44.2 AV	54.0	-9.8	1.62 V	60	37.50	6.70
5	7311.00	58.6 PK	74.0	-15.4	1.24 V	68	47.80	10.80
6	7311.00	47.7 AV	54.0	-6.3	1.24 V	68	36.90	10.80

**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.



<b>CHANNEL</b>	TX Channel 11	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	*2462.00	109.4 PK			1.62 H	295	108.80	0.60
2	*2462.00	100.0 AV			1.62 H	295	99.40	0.60
3	2483.50	72.8 PK	74.0	-1.2	1.05 H	321	72.20	0.60
4	2483.50	53.5 AV	54.0	-0.5	1.05 H	321	52.90	0.60
5	4924.00	52.3 PK	74.0	-21.7	1.01 H	25	45.40	6.90
6	4924.00	38.7 AV	54.0	-15.3	1.01 H	25	31.80	6.90
7	7386.00	54.2 PK	74.0	-19.8	1.00 H	133	43.40	10.80
8	7386.00	40.6 AV	54.0	-13.4	1.00 H	133	29.80	10.80
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	*2462.00	102.5 PK			1.28 V	84	101.90	0.60
2	*2462.00	93.3 AV			1.28 V	84	92.70	0.60
3	2483.50	63.7 PK	74.0	-10.3	1.74 V	61	63.10	0.60
4	2483.50	44.6 AV	54.0	-9.4	1.74 V	61	44.00	0.60
5	4924.00	52.3 PK	74.0	-21.7	1.00 V	103	45.40	6.90
6	4924.00	39.2 AV	54.0	-14.8	1.00 V	103	32.30	6.90
7	7386.00	54.6 PK	74.0	-19.4	1.01 V	208	43.80	10.80
8	7386.00	41.1 AV	54.0	-12.9	1.01 V	208	30.30	10.80

**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.



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**Test Report No.: RF151029N068**

**802.11n (20MHz)**

<b>CHANNEL</b>	TX Channel 1	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
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	2390.00	71.2 PK	74.0	-2.8	1.02 H	64	70.80	0.40
2	2390.00	53.3 AV	54.0	-0.7	1.02 H	64	52.90	0.40
3	*2412.00	105.3 PK			1.06 H	51	104.90	0.40
4	*2412.00	94.8 AV			1.06 H	51	94.40	0.40
5	4824.00	51.8 PK	74.0	-22.2	1.19 H	142	45.30	6.50
6	4824.00	38.9 AV	54.0	-15.1	1.19 H	142	32.40	6.50
7	#7236.00	54.2 PK	85.3	-31.1	1.08 H	204	43.40	10.80
8	#7236.00	40.9 AV	74.8	-33.9	1.08 H	204	30.10	10.80
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
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	2390.00	63.9 PK	74.0	-10.1	1.01 V	162	63.50	0.40
2	2390.00	47.8 AV	54.0	-6.2	1.01 V	162	47.40	0.40
3	*2412.00	101.9 PK			1.03 V	193	101.50	0.40
4	*2412.00	92.3 AV			1.03 V	193	91.90	0.40
5	4824.00	52.8 PK	74.0	-21.2	1.04 V	206	46.30	6.50
6	4824.00	39.2 AV	54.0	-14.8	1.04 V	206	32.70	6.50
7	#7236.00	55.2 PK	81.9	-26.7	1.00 V	71	44.40	10.80
8	#7236.00	41.2 AV	72.3	-31.1	1.00 V	71	30.40	10.80

**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.

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**Test Report No.: RF151029N068**

<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		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	*2437.00	119.6 PK			1.61 H	213	119.10	0.50
2	*2437.00	109.2 AV			1.61 H	213	108.70	0.50
3	4874.00	52.4 PK	74.0	-21.6	1.01 H	200	45.70	6.70
4	4874.00	39.6 AV	54.0	-14.4	1.01 H	200	32.90	6.70
5	7311.00	58.1 PK	74.0	-15.9	1.04 H	42	47.30	10.80
6	7311.00	43.6 AV	54.0	-10.4	1.04 H	42	32.80	10.80
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	*2437.00	114.6 PK			1.19 V	85	114.10	0.50
2	*2437.00	105.2 AV			1.19 V	85	104.70	0.50
3	4874.00	53.2 PK	74.0	-20.8	1.06 V	317	46.50	6.70
4	4874.00	42.9 AV	54.0	-11.1	1.06 V	317	36.20	6.70
5	7311.00	60.2 PK	74.0	-13.8	1.01 V	212	49.40	10.80
6	7311.00	47.6 AV	54.0	-6.4	1.01 V	212	36.80	10.80

**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.

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CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		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	*2462.00	107.8 PK			1.12 H	301	107.20	0.60
2	*2462.00	96.4 AV			1.12 H	301	95.80	0.60
3	2483.50	70.9 PK	74.0	-3.1	1.02 H	316	70.30	0.60
4	2483.50	53.6 AV	54.0	-0.4	1.02 H	316	53.00	0.60
5	4924.00	52.3 PK	74.0	-21.7	1.00 H	52	45.40	6.90
6	4924.00	39.1 AV	54.0	-14.9	1.00 H	52	32.20	6.90
7	7386.00	54.6 PK	74.0	-19.4	1.01 H	22	43.80	10.80
8	7386.00	41.3 AV	54.0	-12.7	1.01 H	22	30.50	10.80
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	*2462.00	102.6 PK			1.57 V	301	102.00	0.60
2	*2462.00	93.2 AV			1.57 V	301	92.60	0.60
3	2483.50	64.6 PK	74.0	-9.4	1.62 V	316	64.00	0.60
4	2483.50	46.2 AV	54.0	-7.8	1.62 V	316	45.60	0.60
5	4924.00	51.9 PK	74.0	-22.1	1.00 V	74	45.00	6.90
6	4924.00	38.7 AV	54.0	-15.3	1.00 V	74	31.80	6.90
7	7386.00	54.3 PK	74.0	-19.7	1.01 V	208	43.50	10.80
8	7386.00	40.8 AV	54.0	-13.2	1.01 V	208	30.00	10.80

**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.



## 802.11n (40MHz)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		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	2390.00	69.3 PK	74.0	-4.7	1.66 H	177	68.90	0.40
2	2390.00	53.5 AV	54.0	-0.5	1.66 H	177	53.10	0.40
3	*2422.00	104.3 PK			1.31 H	104	103.80	0.50
4	*2422.00	93.6 AV			1.31 H	104	93.10	0.50
5	4844.00	51.0 PK	74.0	-23.0	1.07 H	84	44.30	6.70
6	4844.00	39.6 AV	54.0	-14.4	1.07 H	84	32.90	6.70
7	7266.00	54.6 PK	74.0	-19.4	1.04 H	239	43.80	10.80
8	7266.00	41.5 AV	54.0	-12.5	1.04 H	239	30.70	10.80
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	2390.00	62.3 PK	74.0	-11.7	1.02 V	52	61.90	0.40
2	2390.00	45.6 AV	54.0	-8.4	1.02 V	52	45.20	0.40
3	*2422.00	100.7 PK			1.05 V	79	100.20	0.50
4	*2422.00	91.2 AV			1.05 V	79	90.70	0.50
5	4844.00	51.9 PK	74.0	-22.1	1.00 V	54	45.20	6.70
6	4844.00	39.5 AV	54.0	-14.5	1.00 V	54	32.80	6.70
7	7266.00	55.3 PK	74.0	-18.7	1.67 V	133	44.50	10.80
8	7266.00	41.6 AV	54.0	-12.4	1.67 V	133	30.80	10.80

## 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.



<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
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	*2437.00	117.6 PK			1.96 H	98	117.10	0.50
2	*2437.00	108.4 AV			1.96 H	98	107.90	0.50
3	4874.00	63.6 PK	74.0	-10.4	1.02 H	214	56.90	6.70
4	4874.00	40.2 AV	54.0	-13.8	1.02 H	214	33.50	6.70
5	7311.00	55.6 PK	74.0	-18.4	1.00 H	63	44.80	10.80
6	7311.00	41.9 AV	54.0	-12.1	1.00 H	63	31.10	10.80
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
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	*2437.00	112.3 PK			1.24 V	30	111.80	0.50
2	*2437.00	103.6 AV			1.24 V	30	103.10	0.50
3	4874.00	53.6 PK	74.0	-20.4	1.21 V	320	46.90	6.70
4	4874.00	42.9 AV	54.0	-11.1	1.21 V	320	36.20	6.70
5	7311.00	57.4 PK	74.0	-16.6	1.12 V	284	46.60	10.80
6	7311.00	46.2 AV	54.0	-7.8	1.12 V	284	35.40	10.80

**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.





<b>CHANNEL</b>	TX Channel 9	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		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	*2452.00	103.6 PK			1.44 H	320	103.00	0.60
2	*2452.00	91.9 AV			1.44 H	320	91.30	0.60
3	2483.50	68.9 PK	74.0	-5.1	1.25 H	326	68.30	0.60
4	2483.50	53.3 AV	54.0	-0.7	1.25 H	326	52.70	0.60
5	4904.00	52.4 PK	74.0	-21.6	1.04 H	58	45.50	6.90
6	4904.00	39.6 AV	54.0	-14.4	1.04 H	58	32.70	6.90
7	7356.00	54.6 PK	74.0	-19.4	1.00 H	142	43.80	10.80
8	7356.00	40.9 AV	54.0	-13.1	1.00 H	142	30.10	10.80
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	*2452.00	97.8 PK			1.14 V	192	97.20	0.60
2	*2452.00	88.2 AV			1.14 V	192	87.60	0.60
3	2483.50	62.3 PK	74.0	-11.7	1.39 V	201	61.70	0.60
4	2483.50	47.6 AV	54.0	-6.4	1.39 V	201	47.00	0.60
5	4904.00	52.8 PK	74.0	-21.2	1.00 V	187	45.90	6.90
6	4904.00	39.1 AV	54.0	-14.9	1.00 V	187	32.20	6.90
7	7356.00	53.8 PK	74.0	-20.2	1.02 V	218	43.00	10.80
8	7356.00	40.4 AV	54.0	-13.6	1.02 V	218	29.60	10.80

**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.



### 3.2 CONDUCTED EMISSION MEASUREMENT

#### 3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

#### 3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	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_Cond_V7.3.7	N/A	N/A	N/A

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

### 3.2.3 TEST PROCEDURES

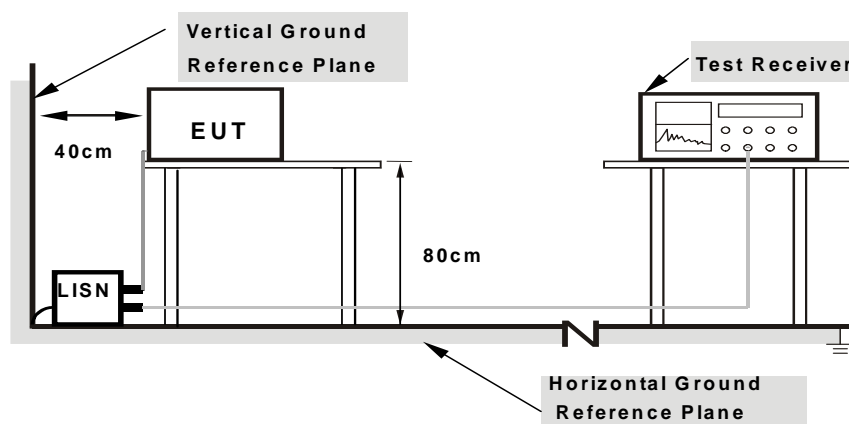
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) 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 cm from other units and other metal planes

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

### 3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.6



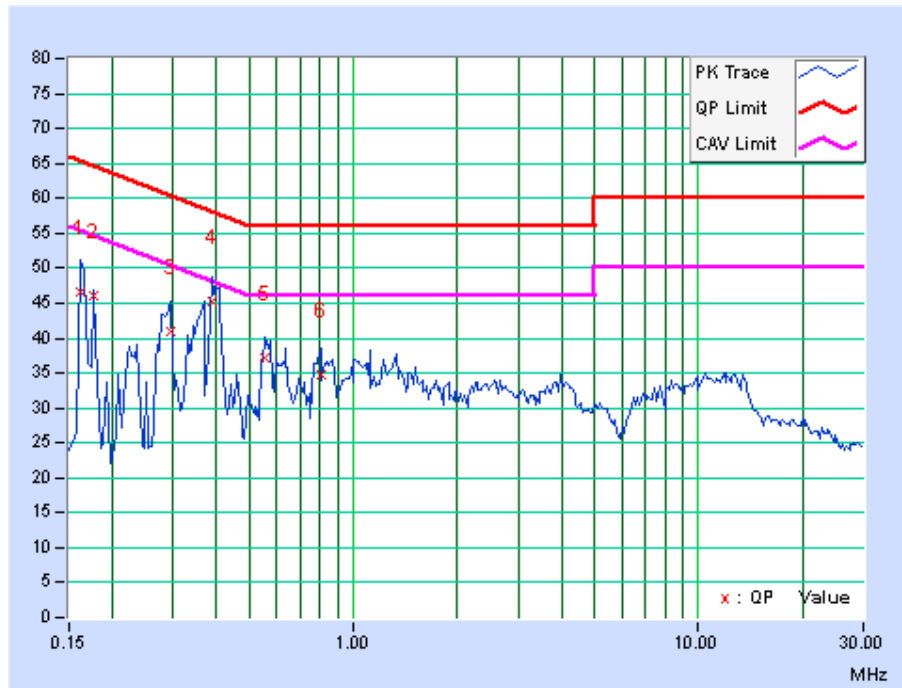
## 3.2.7 TEST RESULTS

## CONDUCTED WORST-CASE DATA : 802.11b CH1

PHASE	Line	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	9.81	36.70	21.06	46.51	30.87	65.38	55.38	-18.86	-24.50
2	0.17734	9.80	36.26	19.58	46.06	29.38	64.61	54.61	-18.55	-25.23
3	0.29453	9.83	31.00	22.08	40.83	31.91	60.40	50.40	-19.57	-18.49
4	0.38828	9.87	35.44	29.92	45.31	39.79	58.10	48.10	-12.79	-8.31
5	0.55625	9.92	27.22	21.50	37.14	31.42	56.00	46.00	-18.86	-14.58
6	0.80234	9.94	24.82	19.54	34.76	29.48	56.00	46.00	-21.24	-16.52

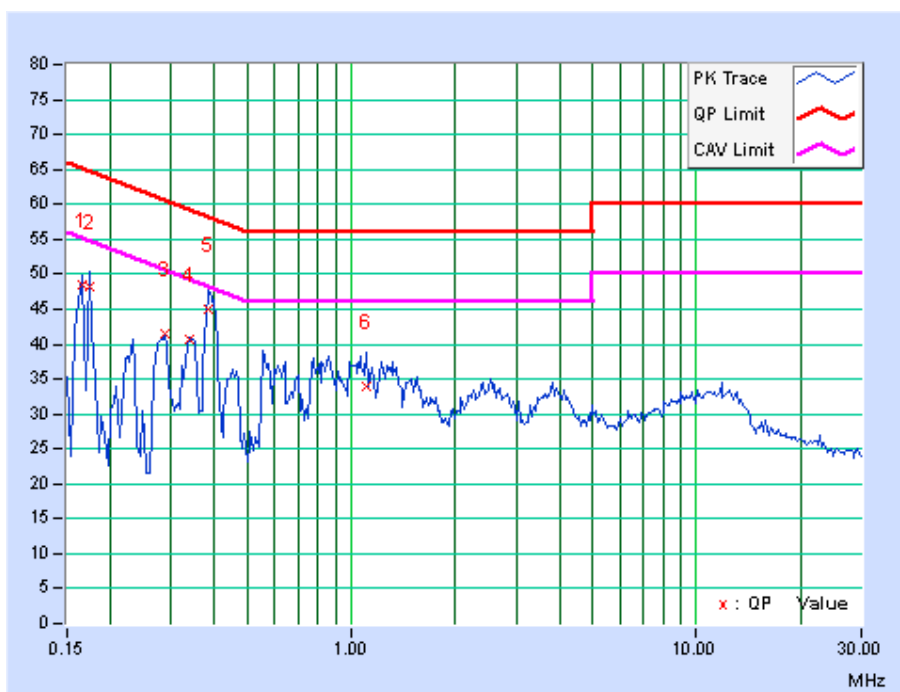
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.  
2. The emission levels of other frequencies were very low against the limit.  
3. Margin value = Emission level - Limit value  
4. Correction factor = Insertion loss + Cable loss  
5. Emission Level = Correction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



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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.50	38.98	24.00	48.48	33.50	65.18	55.18	-16.70	-21.68
2	0.17344	9.50	38.62	24.66	48.12	34.16	64.79	54.79	-16.67	-20.63
3	0.28672	9.52	32.02	27.78	41.54	37.30	60.62	50.62	-19.08	-13.32
4	0.33750	9.52	31.20	27.08	40.72	36.60	59.26	49.26	-18.54	-12.66
5	0.38438	9.54	35.48	26.90	45.02	36.44	58.18	48.18	-13.17	-11.75
6	1.09766	9.63	24.40	19.06	34.03	28.69	56.00	46.00	-21.97	-17.31

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

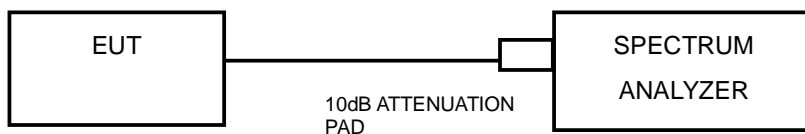


### 3.3 6dB BANDWIDTH MEASUREMENT

#### 3.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	Feb. 18,15	Feb. 17,16
Power Sensor	Keysight	U2021XA	MY55060018	Feb. 18,15	Feb. 17,16
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 12, 15	Oct.11, 16
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.07,15	Sep. 06,16
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 28,15	Nov. 27,16
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 05,15	Nov. 04,16
Signal Generator	Agilent	N5183A	MY50140980	Nov. 05,15	Nov. 04,16
ESG Vector Signal Generator	Agilent	E4438C	MY49072505	Apr. 22, 15	Apr. 21, 16
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Sep. 01,15	Aug. 31,16

**NOTE:**

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



### **3.4 TEST PROCEDURE**

- a. Set resolution bandwidth (RBW) = 100kHz
- b. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- c. Trace mode = max hold.
- d. Sweep = auto couple.
- e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission



Test Report No.: RF151029N068

### 3.4.1 DEVIATION FROM TEST STANDARD

No deviation.

### 3.4.2 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



### 3.4.3 TEST RESULTS

#### 802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	8.11	8.08	0.5	PASS
6	2437	9.59	9.57	0.5	PASS
11	2462	8.10	8.11	0.5	PASS

#### 802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	15.14	15.13	0.5	PASS
6	2437	15.12	15.11	0.5	PASS
11	2462	15.12	15.14	0.5	PASS

#### 802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	15.12	15.13	0.5	PASS
6	2437	15.14	15.13	0.5	PASS
11	2462	15.72	15.13	0.5	PASS



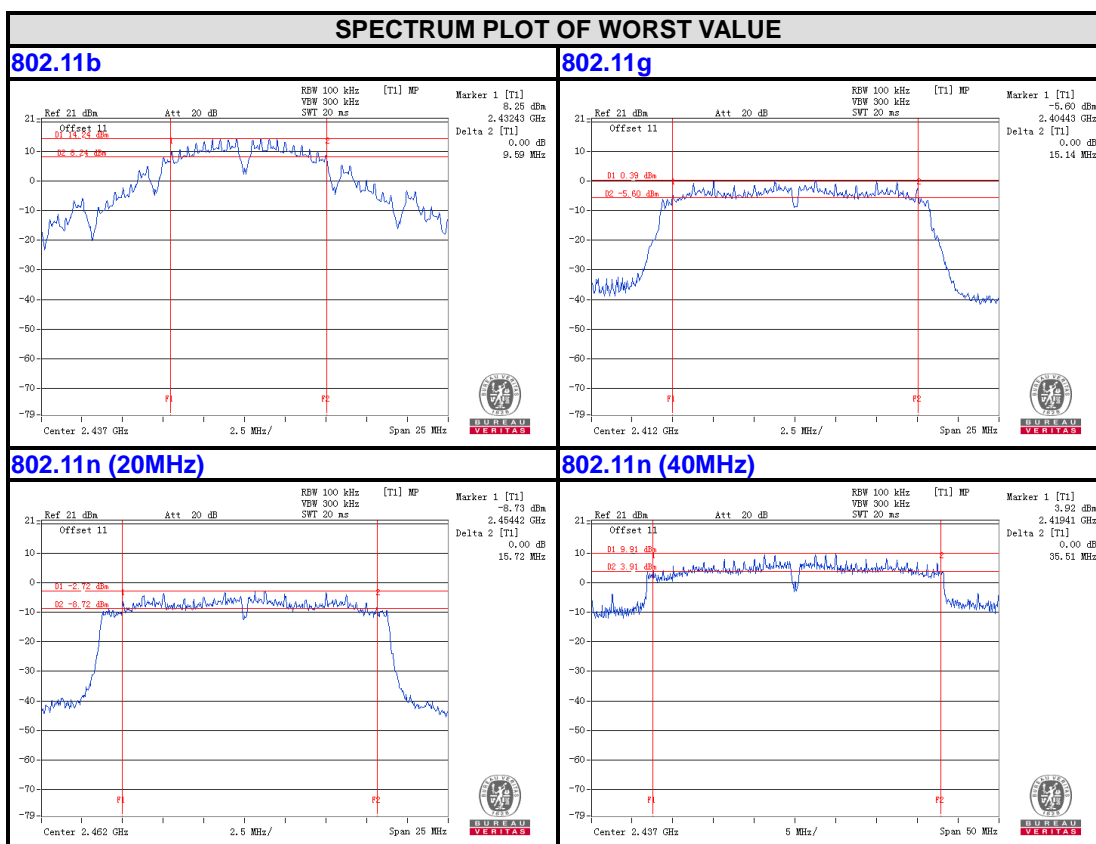
**BUREAU  
VERITAS**

Test Report No.: RF151029N068

### 802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	35.15	35.24	0.5	PASS
6	2437	35.51	33.24	0.5	PASS
9	2452	35.24	35.20	0.5	PASS

### CHAIN 0



Bureau Veritas Shenzhen Co., Ltd.  
Dongguan Branch

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

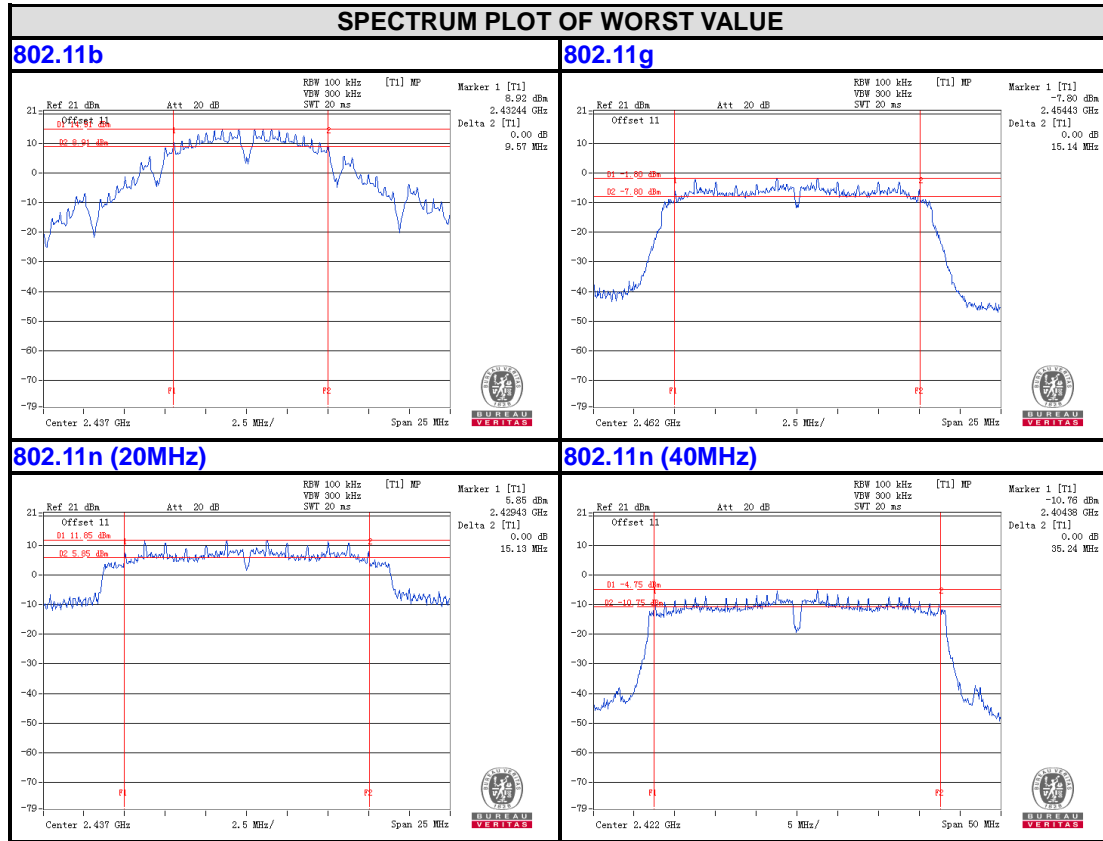
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VERITAS

Test Report No.: RF151029N068

CHAIN 1



### 3.5 CONDUCTED OUTPUT POWER

#### 3.5.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

Per KDB 662911 D01 Multiple Transmitter Output v02r01 Method of conducted output power measurement on IEEE 802.11 devices,

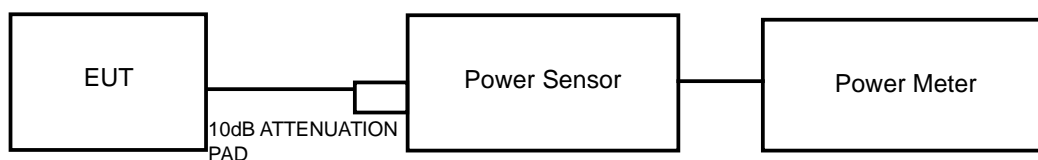
Array Gain = 0 dB (i.e., no array gain) for  $NANT \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any NANT;

Array Gain =  $5 \log(NANT/NSS)$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $NANT \geq 5$ .

For power measurements on all other devices: Array Gain =  $10 \log(NANT/NSS)$  dB.

#### 3.5.2 TEST SETUP





### 3.5.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer (10Hz–40GHz)	Rohde&Schwarz	FSV40	101003	Apr. 07,15	Apr. 06,16
Power Meter	Anritsu	ML2495A	1139001	Feb. 20,15	Feb. 19,16
Power Sensor	Anritsu	MA2411B	1126068	Feb. 20,15	Feb. 19,16
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 27,15	Oct. 26,16
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.04,15	Sep. 03,16
Oscilloscope	Agilent	DSO9254A	MY51260160	Oct. 17, 15	Oct. 16, 16
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 05,15	Nov. 04,16

**NOTE:**

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

### 3.5.4 TEST PROCEDURES

A average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor. Record the Average power level.

### 3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.5.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

### 3.5.7 TEST RESULTS

#### FOR AVERAGE POWER 802.11b

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)	TOTAL POWER (mW)	LIMIT (dBm)	PASS / FAIL
		CHAIN0	CHAIN0	CHAIN0	
1	2412	18.16	65.464	30	PASS
6	2437	<b>23.37</b>	<b>217.270</b>	30	PASS
11	2462	14.46	27.925	30	PASS

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)	TOTAL POWER (mW)	LIMIT (dBm)	PASS / FAIL
		CHAIN1	CHAIN1	CHAIN1	
1	2412	18.12	64.863	30	PASS
6	2437	23.04	201.372	30	PASS
11	2462	14.21	26.363	30	PASS

#### 802.11g

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	11.08	11.24	26.128	14.17	30	PASS
6	2437	22.27	22.34	340.051	25.32	30	PASS
11	2462	9.56	9.71	18.390	12.65	30	PASS

#### 802.11n (20MHz)

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	10.95	11.14	25.447	14.06	30	PASS
6	2437	21.99	22.13	321.430	25.07	30	PASS
11	2462	8.07	8.42	13.362	11.26	30	PASS



Test Report No.: RF151029N068

802.11n (40MHz)

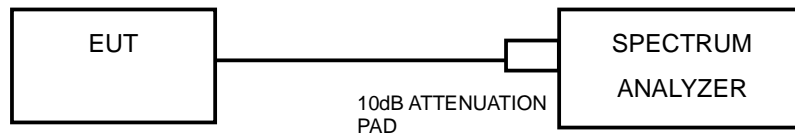
CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
3	2422	8.65	8.97	15.217	11.82	30	PASS
6	2437	22.63	22.75	371.596	25.70	30	PASS
9	2452	7.13	7.70	11.052	10.43	30	PASS

### 3.6 POWER SPECTRAL DENSITY MEASUREMENT

#### 3.6.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

#### 3.6.2 TEST SETUP



#### 3.6.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.6.4 TEST PROCEDURE

- a) Set instrument center frequency to DTS channel center frequency.
- b) Set span to at least 1.5 times the OBW.
- c) Set RBW to: 3 kHz
- d) Set VBW :10 kHz
- e) Detector = peak
- f) Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span}/\text{RBW}$ .
- g) Sweep time = auto couple.
- h) Use the peak marker function to determine the maximum amplitude level.

#### 3.6.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.6.6 EUT OPERATING CONDITION

Same as Item 3.3.6



### 3.6.7 TEST RESULTS

#### 802.11b

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=1) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-4.32	0.00	-4.32	8	PASS
	6	2437	0.06	0.00	0.06	8	PASS
	11	2462	-7.94	0.00	-7.94	8	PASS
TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=1) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	1	2412	-4.26	0.00	-4.26	8	PASS
	6	2437	1.52	0.00	1.52	8	PASS
	11	2462	-7.71	0.00	-7.71	8	PASS

**NOTE:**

Directional gain = gain of antenna element + 10 log (1 of TX antenna elements)

Effective Legacy Gain (dBi) = 0

#### 802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-13.11	3.01	-10.10	7.89	PASS
	6	2437	-2.29	3.01	0.72	7.89	PASS
	11	2462	-15.19	3.01	-12.18	7.89	PASS
1	1	2412	-14.30	3.01	-11.29	7.89	PASS
	6	2437	-3.25	3.01	-0.24	7.89	PASS
	11	2462	-15.67	3.01	-12.66	7.89	PASS

**NOTE:**

Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)=3.1+3.01=6.11

Effective Legacy Gain (dBi) =6.11

The effective legacy gain is 6.11 dBi, therefore the limit needs to reduce.



**802.11n (20MHz)**

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-14.79	3.01	-11.78	7.89	PASS
	6	2437	-2.49	3.01	0.52	7.89	PASS
	11	2462	-16.72	3.01	-13.71	7.89	PASS
1	1	2412	-14.95	3.01	-11.94	7.89	PASS
	6	2437	-1.89	3.01	1.12	7.89	PASS
	11	2462	-17.67	3.01	-14.66	7.89	PASS

**NOTE:**

Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)=3.1+3.01=6.11

Effective Legacy Gain (dBi) = 6.11

The effective legacy gain is 6.11 dBi, therefore the limit needs to reduce.

**802.11n (40MHz)**

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	3	2422	-19.68	3.01	-16.67	7.89	PASS
	6	2437	-5.42	3.01	-2.41	7.89	PASS
	9	2452	-20.07	3.01	-17.06	7.89	PASS
1	3	2422	-20.55	3.01	-17.54	7.89	PASS
	6	2437	-5.12	3.01	-2.11	7.89	PASS
	9	2452	-21.76	3.01	-18.75	7.89	PASS

**NOTE:**

Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)=3.1+3.01=6.11

Effective Legacy Gain (dBi) = 6.11

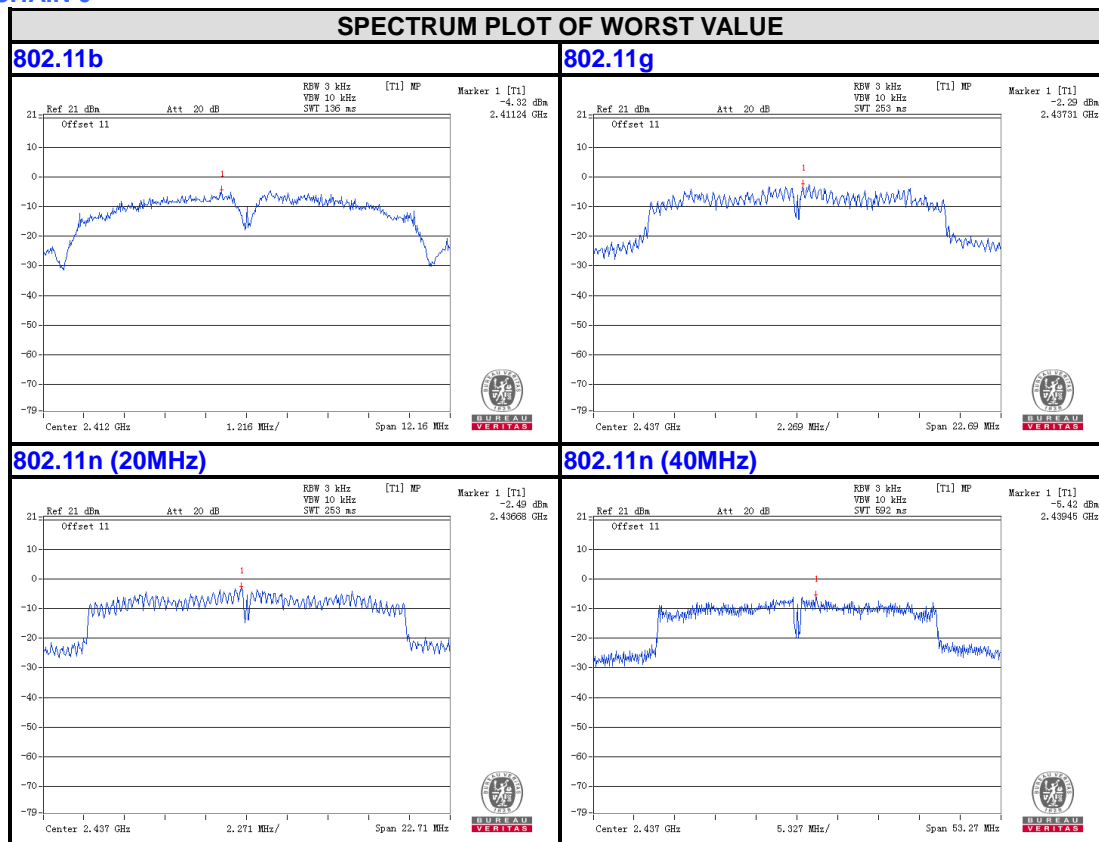
The effective legacy gain is 6.11 dBi, therefore the limit needs to reduce.



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## CHAIN 0



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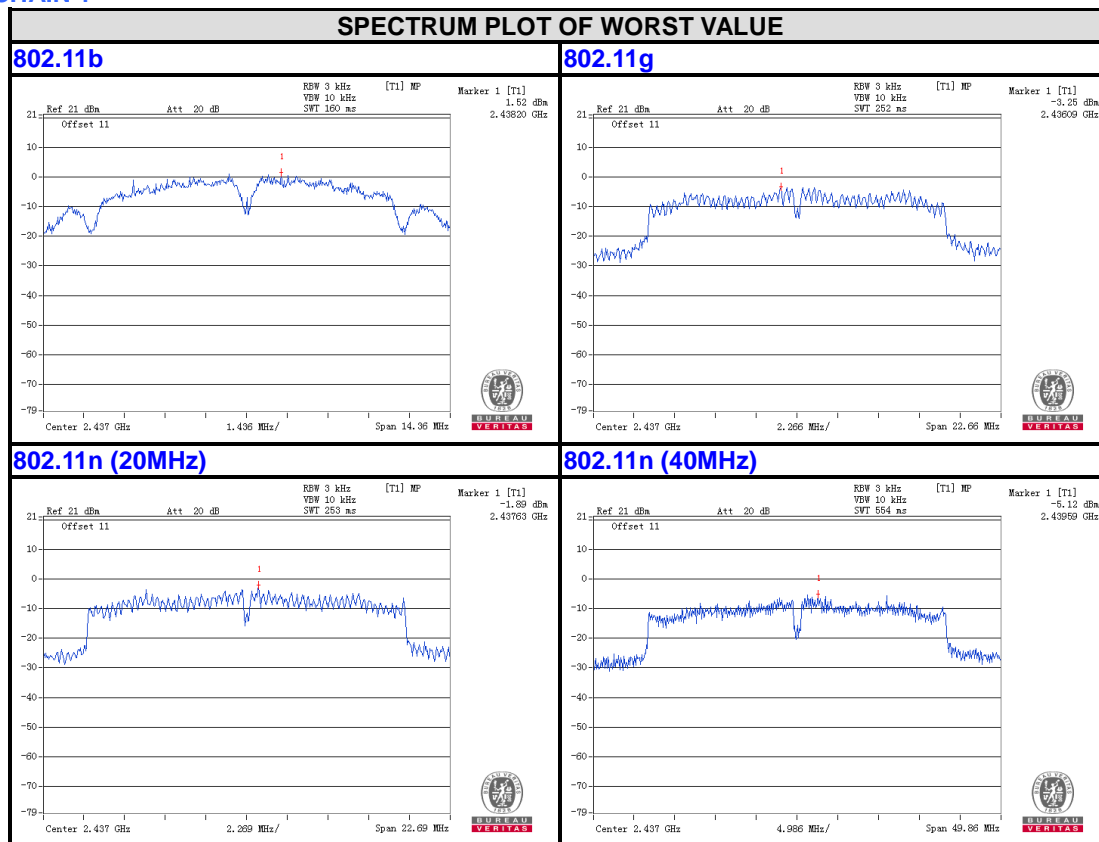
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## CHAIN 1



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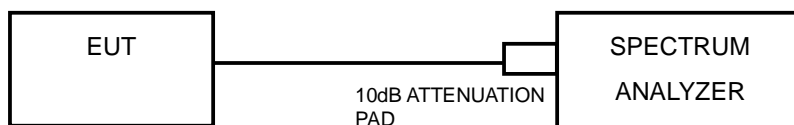
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### 3.7 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

#### 3.7.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below -30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

#### 3.7.2 TEST SETUP



#### 3.7.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.7.4 TEST PROCEDURE

##### MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.



### **MEASUREMENT PROCEDURE OOB**

1. Set RBW = 100 kHz.
2. Set VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

### **3.7.5 DEVIATION FROM TEST STANDARD**

No deviation.

### **3.7.6 EUT OPERATING CONDITION**

Same as Item 3.3.6

### **3.7.7 TEST RESULTS**

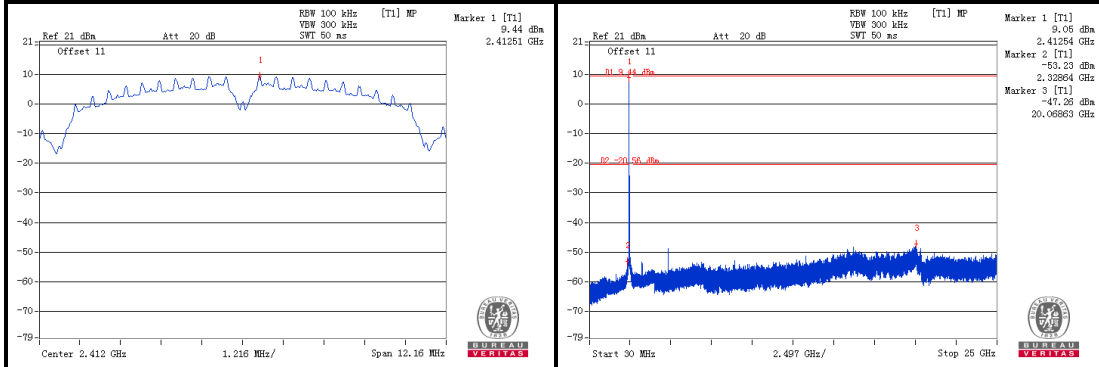
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.



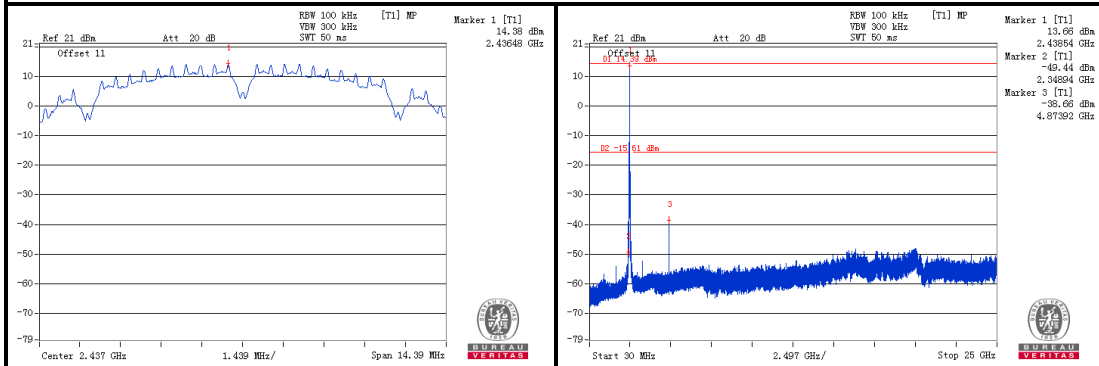
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802.11b  
CHAIN 0

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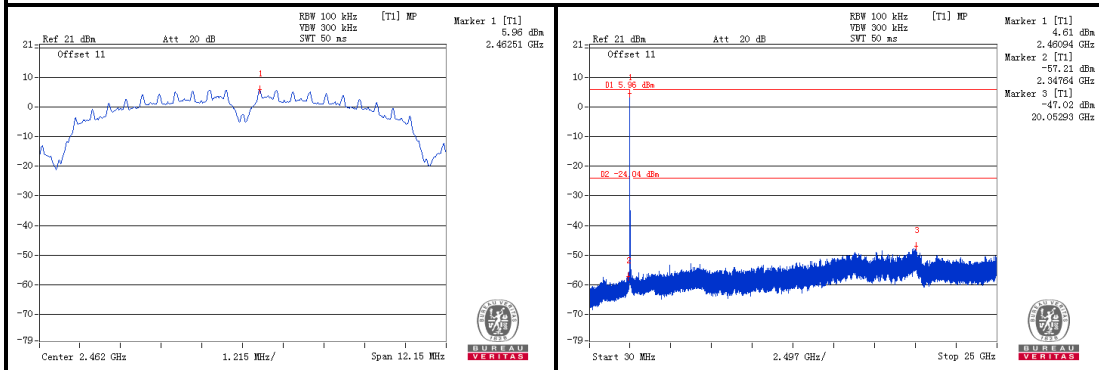
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### CH 6



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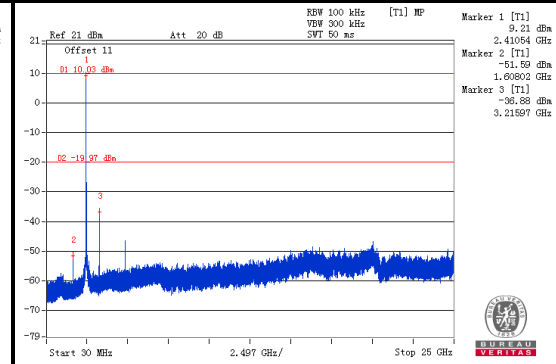
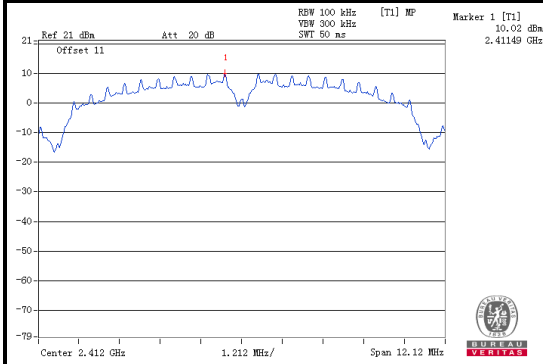


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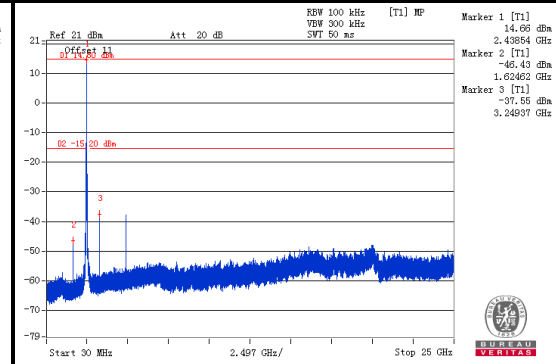
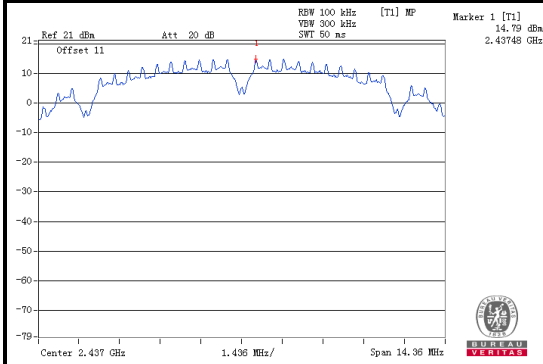
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CHAIN 1

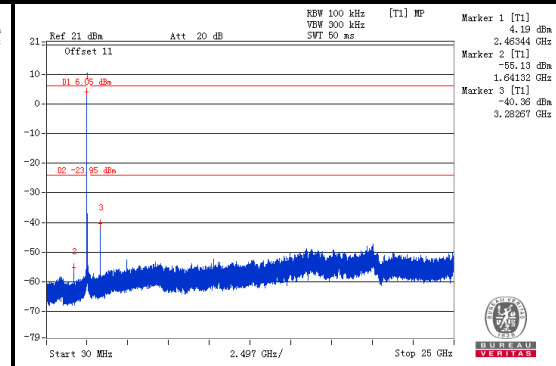
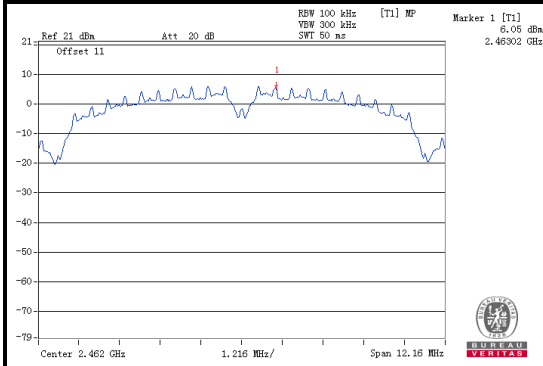
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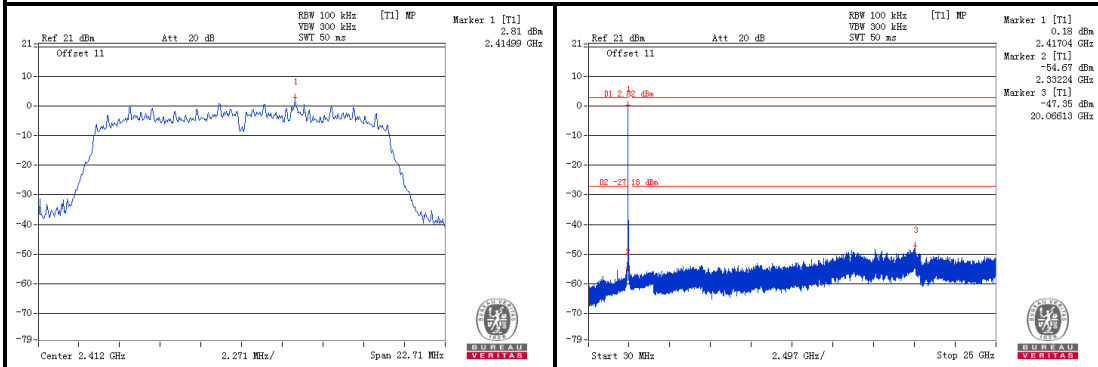




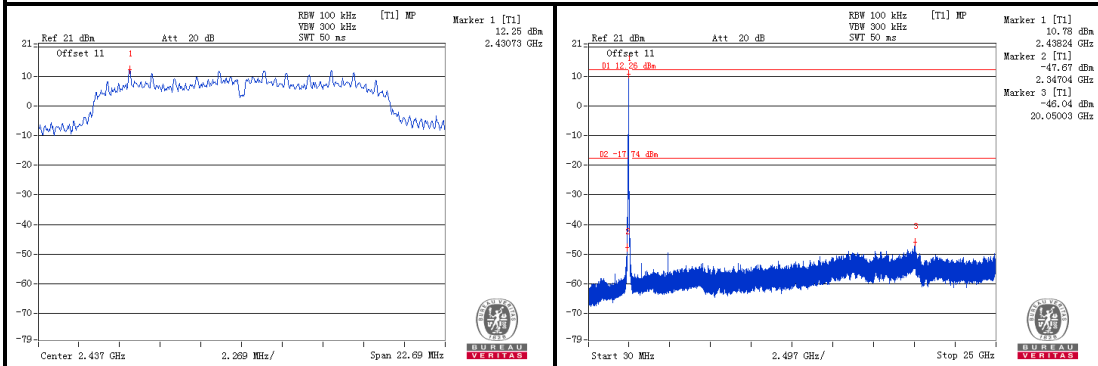
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802.11g  
CHAIN 0

Test Report No.: RF151029N068

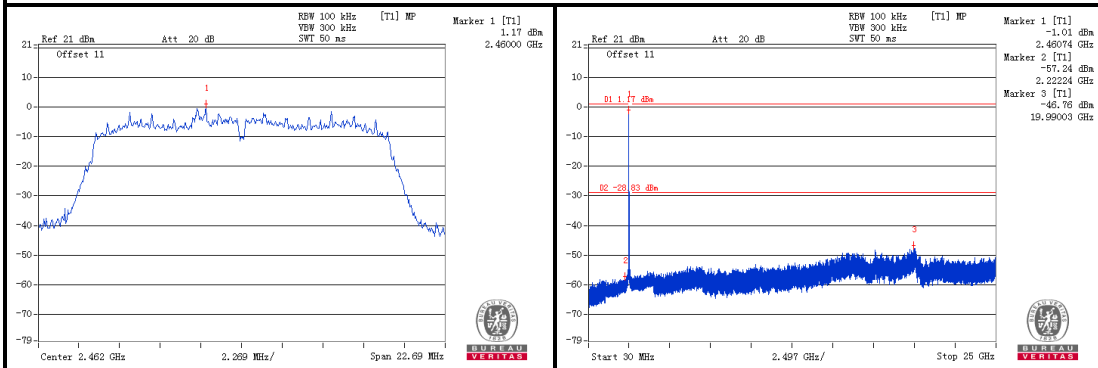
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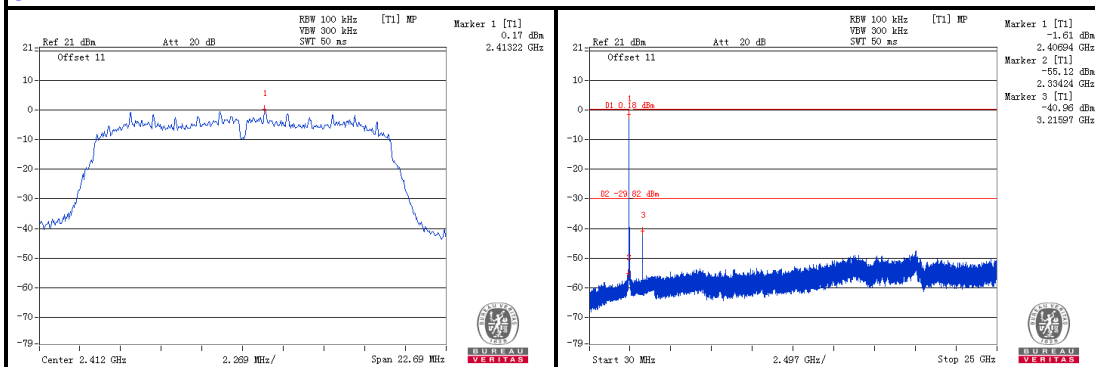


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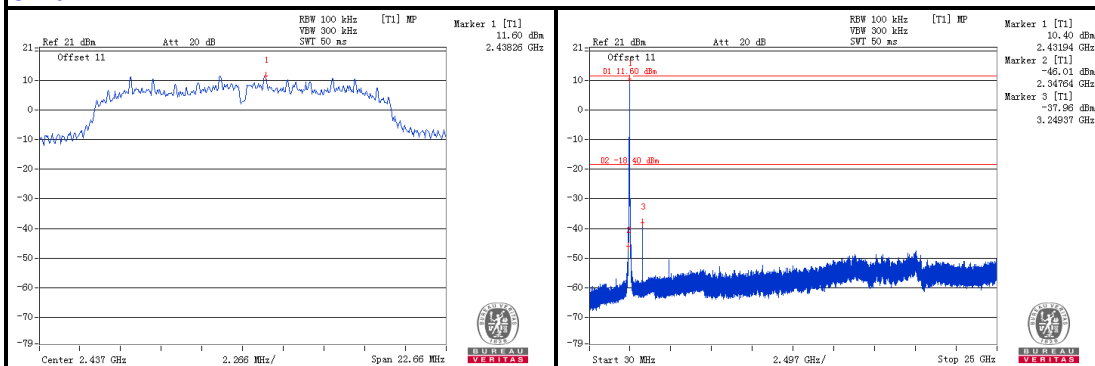
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## CHAIN 1

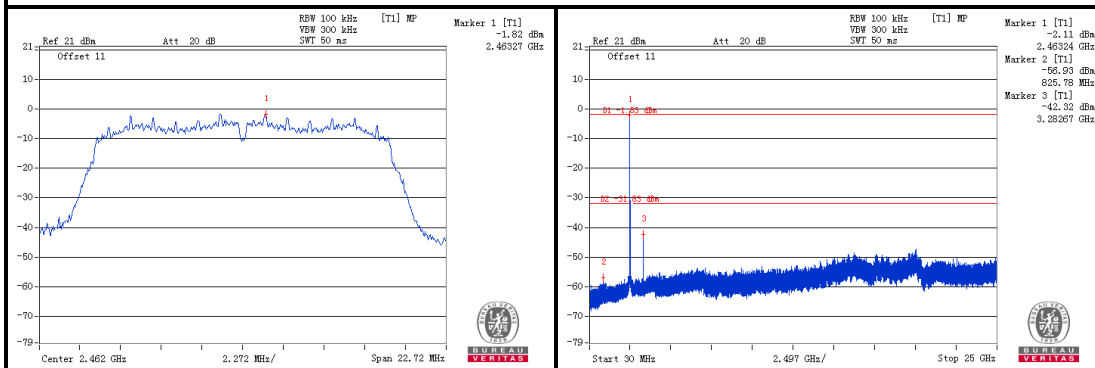
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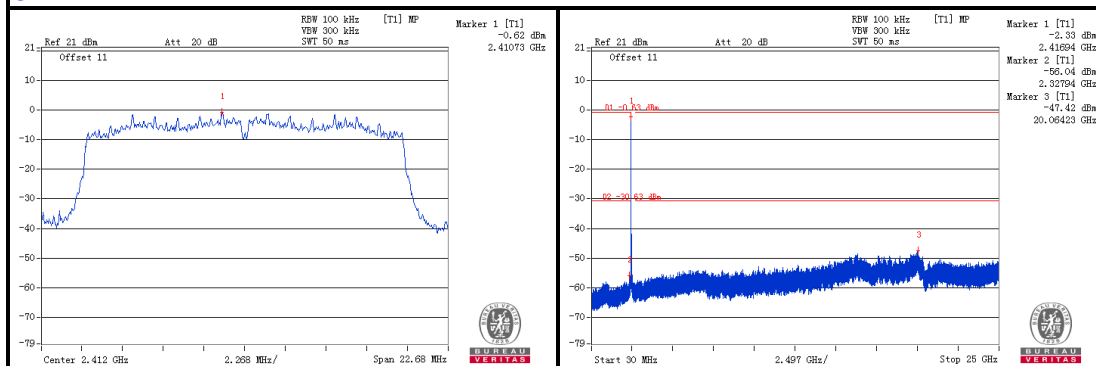
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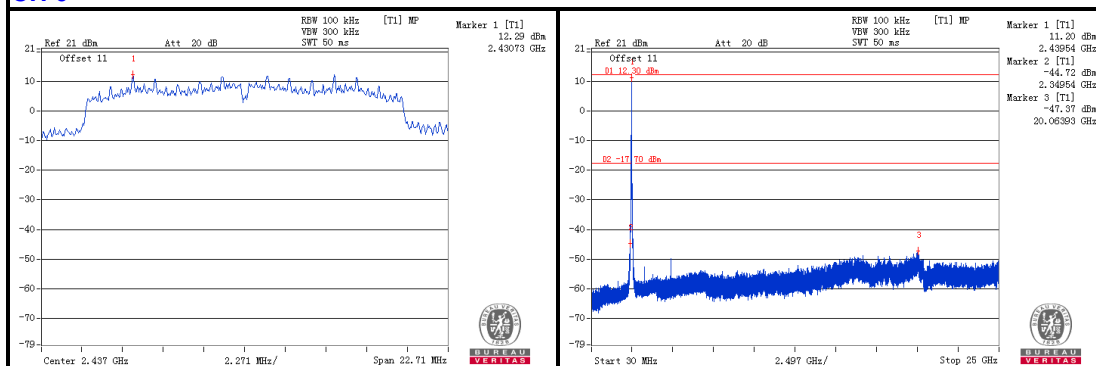
802.11n (20MHz)

CHAIN 0

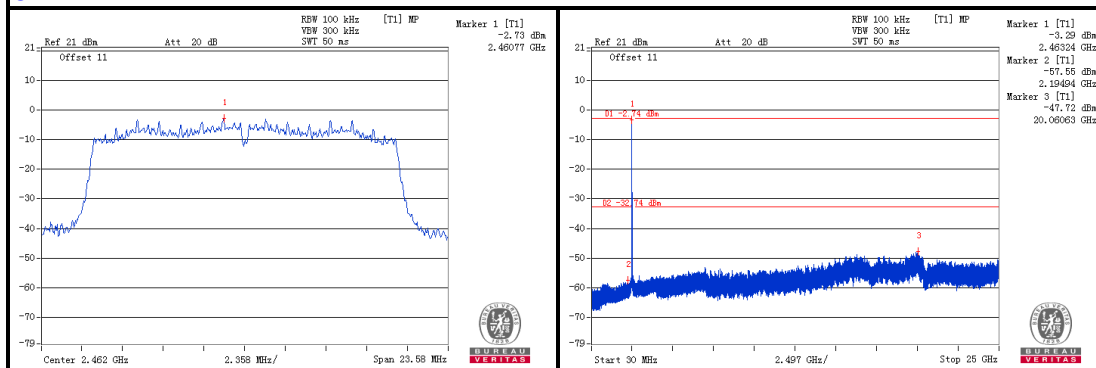
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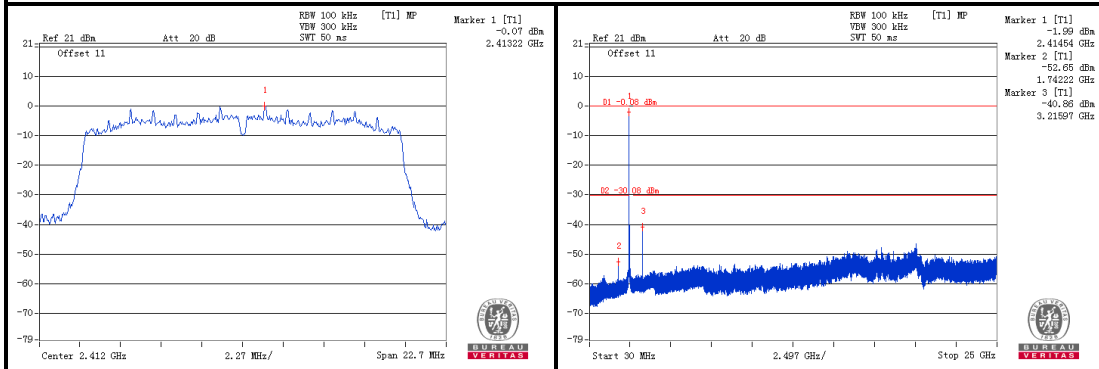


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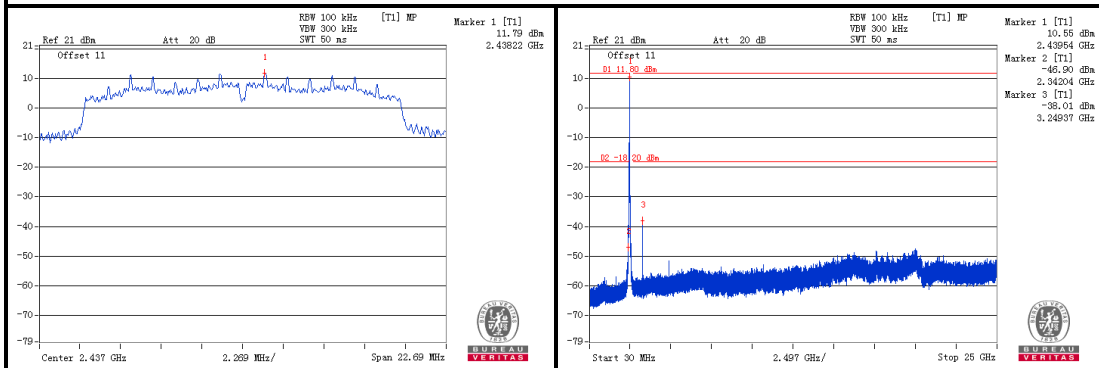
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## CHAIN 1

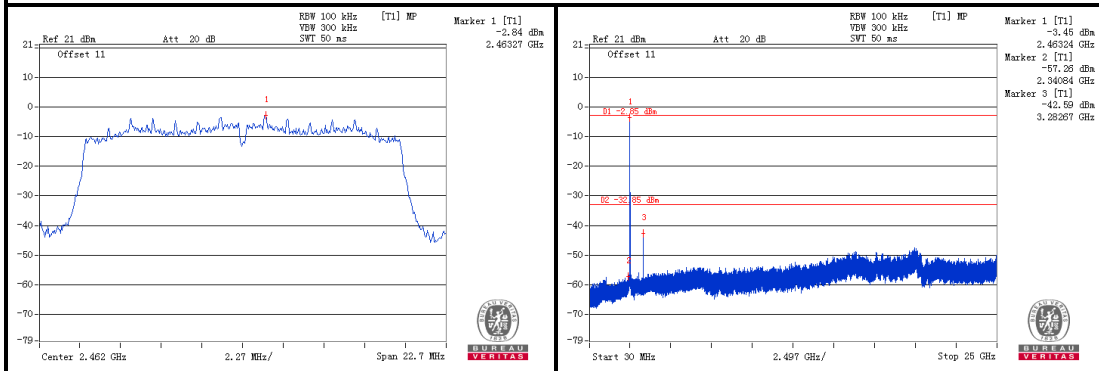
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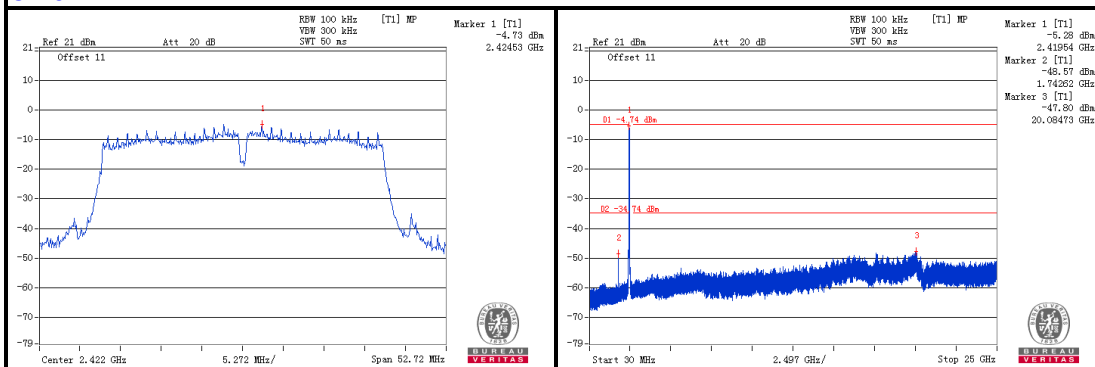
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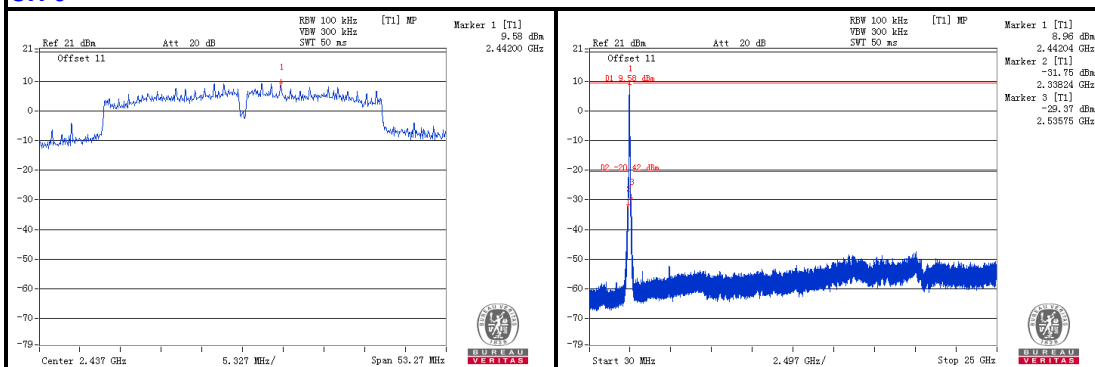
802.11n (40MHz)

CHAIN 0

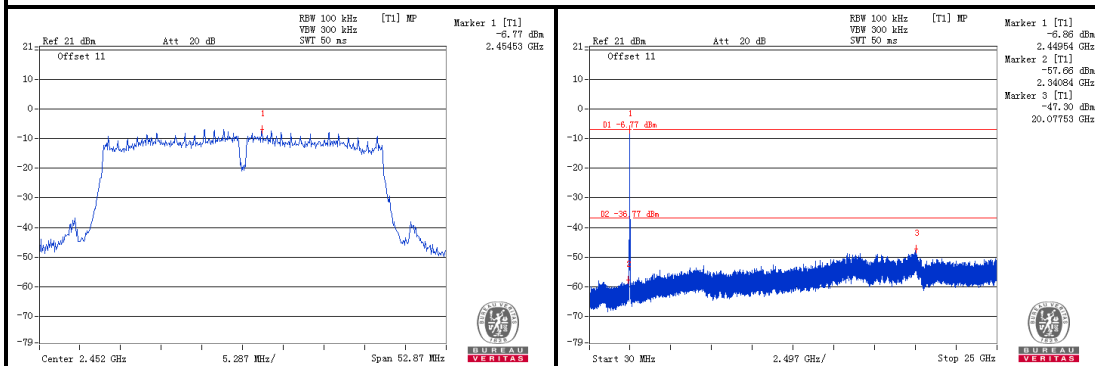
### CH 3



### CH 6



### CH 9



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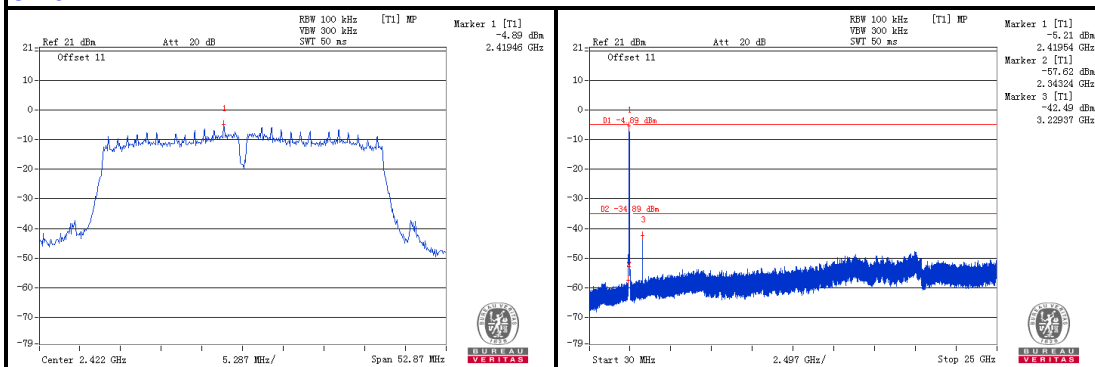


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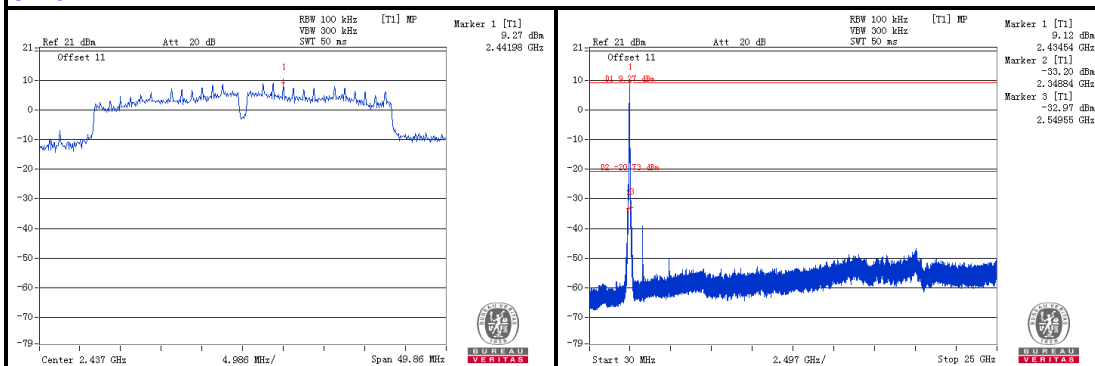
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## CHAIN 1

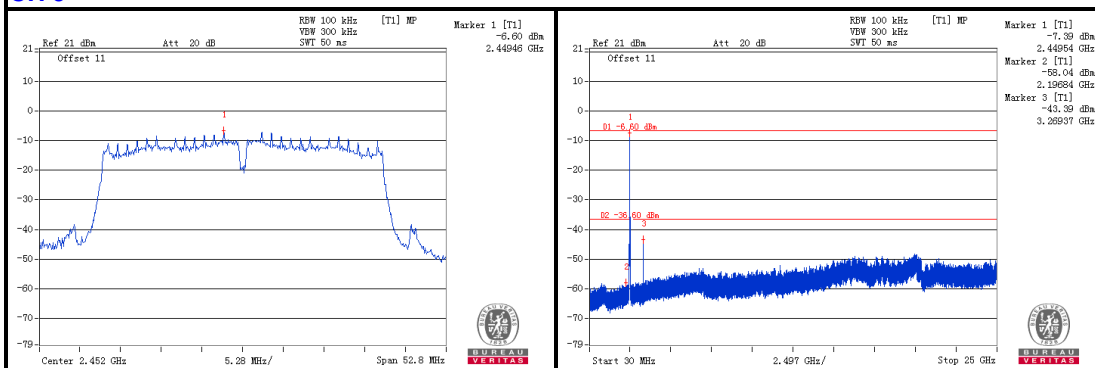
### CH 3



### CH 6



### CH 9



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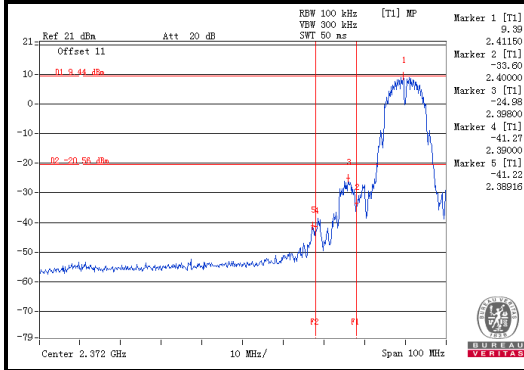
BUREAU  
VERITAS

Test Report No.: RF151029N068

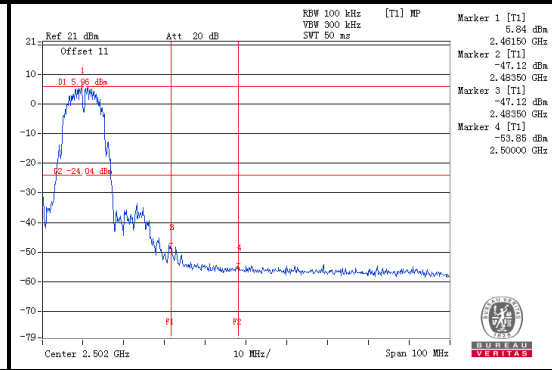
802.11b

CHAIN 0

### CH 1 Band edge

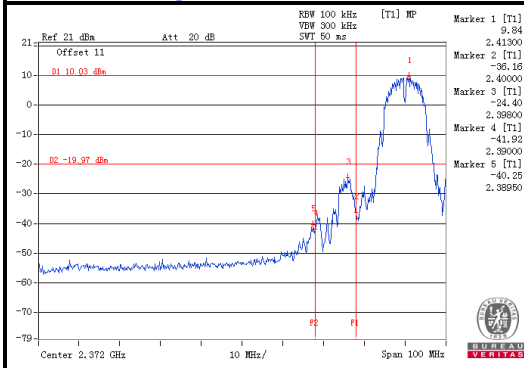


### CH 11 Band edge

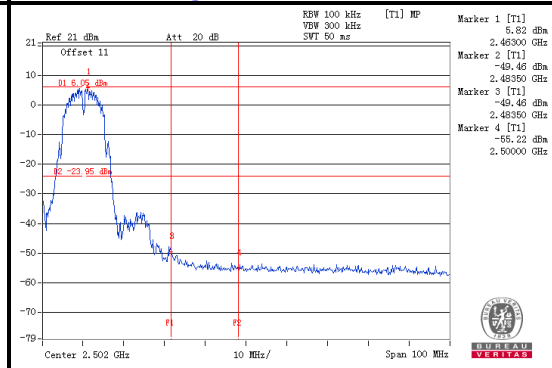


### CHAIN 1

### CH 1 Band edge



### CH 11 Band edge



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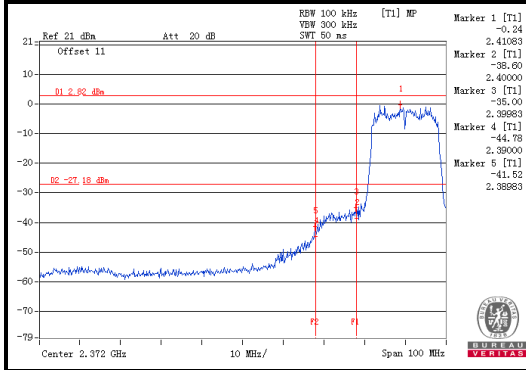


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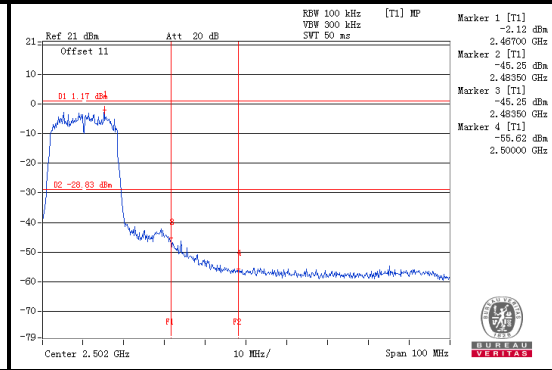
Test Report No.: RF151029N068

802.11g  
CHAIN 0

### CH 1 Band edge

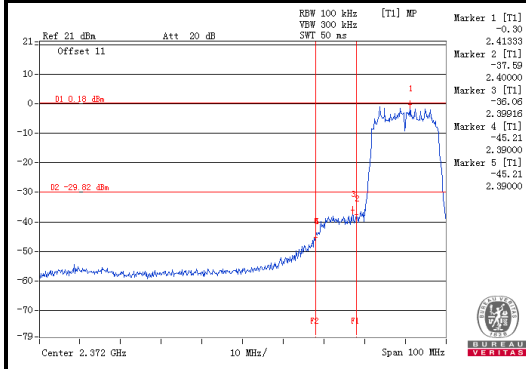


### CH 11 Band edge

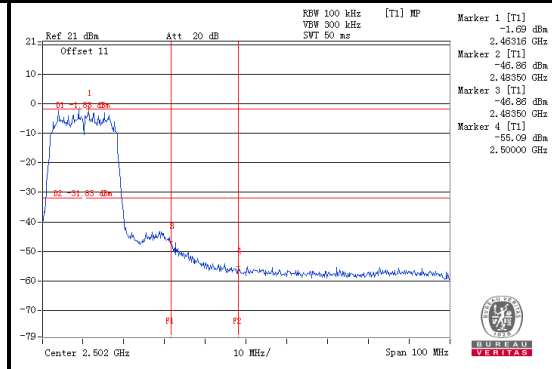


### CHAIN 1

### CH 1 Band edge



### CH 11 Band edge



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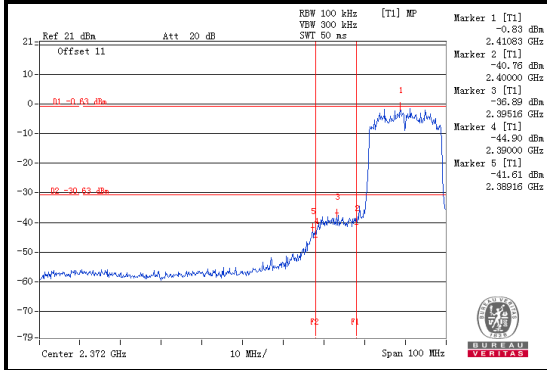
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Test Report No.: RF151029N068

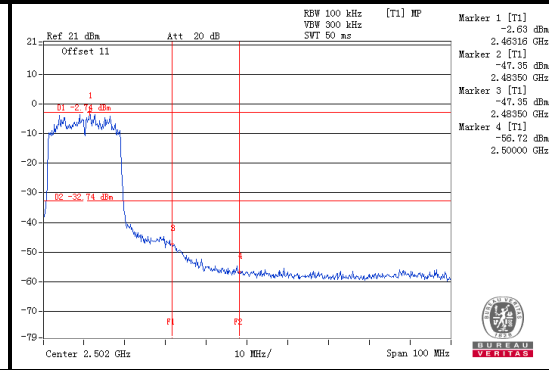
802.11n (20MHz)

CHAIN 0

### CH 1 Band edge

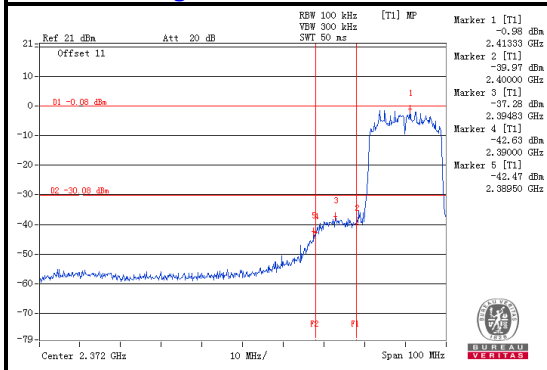


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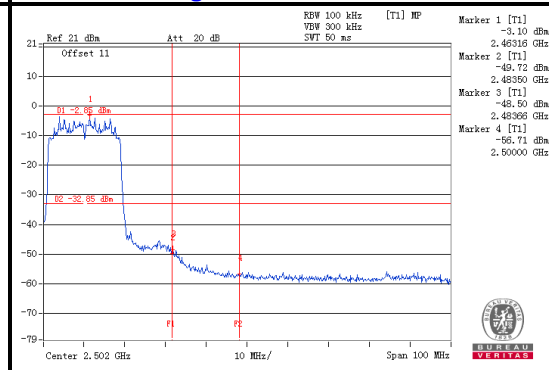


### CHAIN 1

### CH 1 Band edge



### CH 11 Band edge



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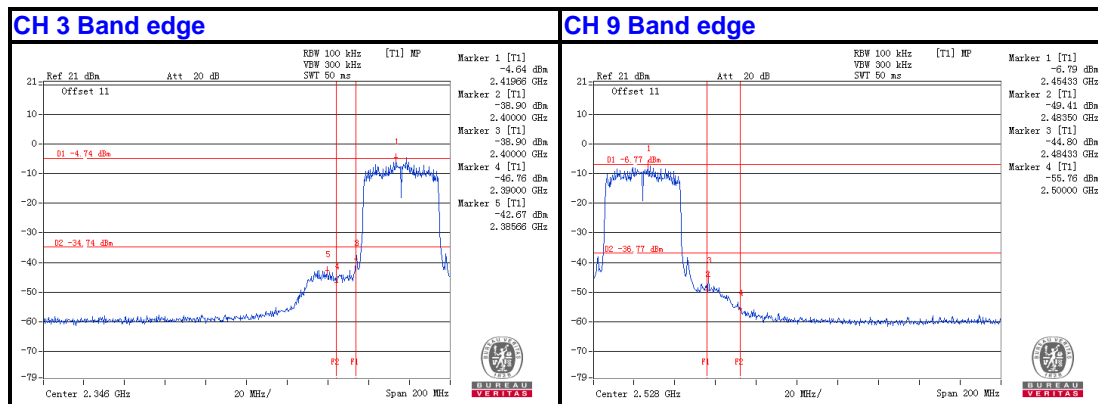


BUREAU  
VERITAS

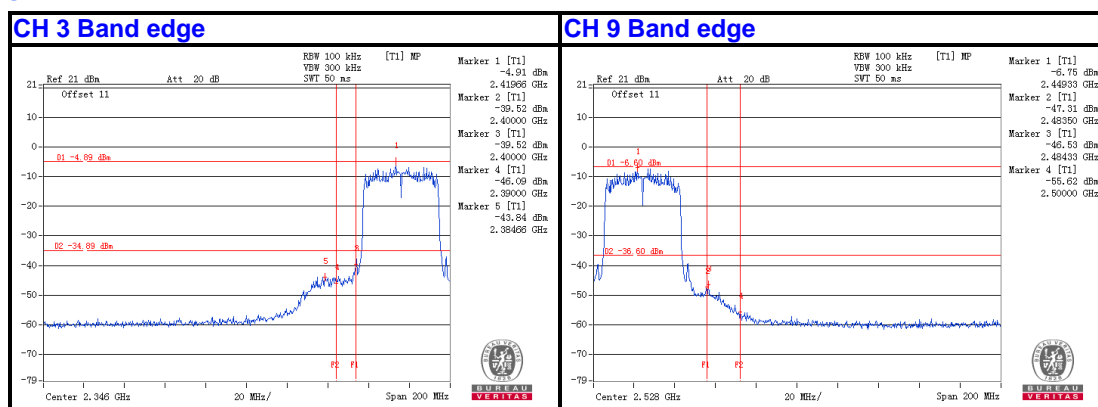
Test Report No.: RF151029N068

802.11n (40MHz)

CHAIN 0



CHAIN 1



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Test Report No.: RF151029N068

## 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 any modifications are made to the EUT by the lab during the test.

**---END---**