Test Lab
Cert 2951.01

TEST REPORT

Applicant	NEW SUNNY TOYS INDUSTRIAL CO.,LTD
Address	FENGXIN INDUSTRIAL PARK, FENGXIN 2ND ROAD, CHENGHAI SHANTOU CITY, GUANGDONG CHINA

Manufacturer or Supplier	NEW SUNNY TOYS INDUSTRIAL CO.,LTD
Address	FENGXIN INDUSTRIAL PARK, FENGXIN 2ND ROAD, CHENGHAI SHANTOU CITY, GUANGDONG CHINA
Product	WIFI CAR
Brand Name	N/A
Model	LT-728
Additional Model & Model Difference	LT-729, LT-730, LT-731 etc; See item 3.1
Date of tests	Feb. 15 ~ Mar. 18, 2014

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

☒ **FCC Part 15, Subpart C, Section 15.247(2012-10)**

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

Tested by Venless Long Project Engineer / EMC Department	Approved by Glyn He Supervisor / EMC Department
Venless	Glyn Date: Mar. 18, 2014

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140214N107	Original release	Mar. 18, 2014

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 AND LIMIT**	**RESULT**	**REMARK**
15.207	AC Power Conducted Emission	N/A	EUT is powered by battery
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.9dB at 2390.00MHz
15.247(d)	Band Edge 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	WLAN No antenna connector is used

2 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	2.67dB
Radiated emissions	9KHz ~ 30MHz	2.74dB
	30MHz ~ 1GMHz	4.81dB
	1GHz ~ 18GHz	4.3 dB
	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	WIFI CAR
MODEL NO.	LT-728
ADDITIONAL MODEL	LT-729, LT-730, LT-731, LT-732, LT-733, LT-734, LT-735, LT-736, LT-737, LT-738, LT-739, LT-740, LT-741, LT-742, LT-743, LT-744, LT-745, LT-746, LT-747, LT-748, LT-749, LT-750, LT-751, LT-752, LT-753, LT-754, LT-755, LT-756, LT-757, LT-758, LT-759, LT-760, LT-761, LT-762, LT-763, LT-764, LT-765, LT-766, LT-767
FCC ID	T9DLT728AAA
NOMINAL VOLTAGE	DC 9V from Battery
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
OPERATING FREQUENCY	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
PEAK POWER	19.34dBm (Maximum)
ANTENNA TYPE	Integral dipole Antenna; 3dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. Please refer to the EUT photo document (Reference No.:140214N007) for detailed product photo.
4. Additional models LT-729, LT-730, LT-731, LT-732, LT-733, LT-734, LT-735, LT-736, LT-737, LT-738, LT-739, LT-740, LT-741, LT-742, LT-743, LT-744, LT-745, LT-746, LT-747, LT-748, LT-749, LT-750, LT-751, LT-752, LT-753, LT-754, LT-755, LT-756, LT-757, LT-758, LT-759, LT-760, LT-761, LT-762, LT-763, LT-764, LT-765, LT-766, LT-767 are identical in circuitry and electrical, mechanical and physical construction with the test model LT-728, the only differences are the appearance, trade name and model no. for trading purpose.

3.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n(HT20):

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

7 channels are provided for 802.11n (HT40):

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

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photographs of the test configuration for reference.

3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.
The worst case was found when positioned on Y axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
A	√	√	-	√	**Battery mode with WIFI function**

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

NOTE: No need to concern of Conducted Emission due to the EUT is powered by battery.

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, XYZ axis 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)	AXIS
A	802.11g	1 to 11	1	OFDM	BPSK	6.0	X

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, XYZ axis 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)	AXIS
A	802.11b	1 to 11	1, 6, 11	CCK	DBPSK	1.0	X
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	X
A	802.11n HT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5	X
A	802.11n HT40	3 to 9	3, 6, 9	OFDM	BPSK	13.5	X

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	802.11g	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	CCK	DBPSK	1.0
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A	802.11n HT20	1 to 11	1, 11	OFDM	BPSK	6.5
A	802.11n HT40	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	CCK	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n HT20	1 to 11	1,6, 11	OFDM	BPSK	6.5
A	802.11n HT40	3 to 9	3,6, 9	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	25deg. C, 60%RH	DC 9V from Battery	Venless Long
RE≥1G	25deg. C,60%RH	DC 9V from Battery	Venless Long
PLC	N/A	N/A	N/A
APCM	25deg. C, 60%RH	DC 9V from Battery	Venless Long

3.3 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, Section 15.247(2012-10)

558074 D01 DTS Meas Guidance v03r01

ANSI C63.10-2009

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

NOTE: 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.

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	N/A	N/A	N/A	N/A	N/A
					N/A

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

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

4 TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION 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. As shown in 15.35(b), 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 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	Agilent	E4446A	MY46180622	Apr. 24,13	Apr. 23,14
EMI Test Receiver	Rohde&Schwarz	ESVD	847398/003	May 14,13	May 13,14
Bilog Antenna	Teseq	CBL 6111D	27089	Jul. 27, 13	Jul. 26, 14
Horn Antenna (1GHz -18GHz)	ETS -Lindgren	3117	00062558	Oct. 19, 12	Oct. 18,14
Pre-Amplifier (9kHz~1GHz)	SONOMA	310D	186955	Mar. 05,14	Mar. 04,15
Pre-Amplifier (100MHz-26.5GHz)	Agilent	8449B	3008A00409	May 14,13	May 13,14
10m Semi-anechoic Chamber	CHANGLING	21.4m*12.1m*8.8m	NSEMC006	Jun. 11, 13	Jun. 10, 14
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 30, 13	Oct. 29,14
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170242	Feb. 13,14	Feb. 12,15
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 04,13	Nov. 03,14
Loop antenna (9kHz~30MHz)	Daze	ZN30900A	0708	Dec. 05,13	Dec. 05,14
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 and NIM/CHINA.

2. The test was performed in Dongguan 10m Chamber.

3. The horn antenna are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 502831.

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4.1.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

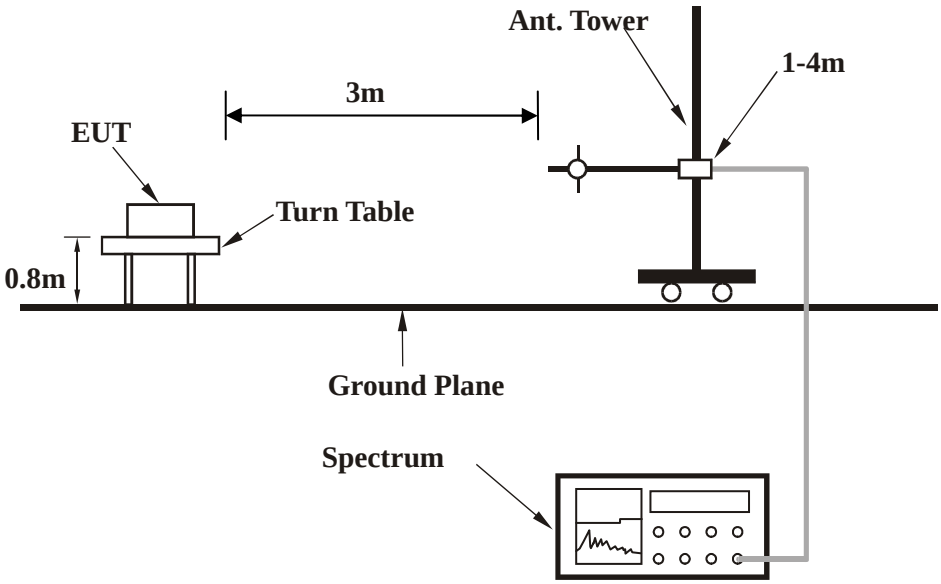
NOTE:

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 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

a. Set the EUT under full load condition and placed them on a testing table.

b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.

c. The necessary accessories enable the EUT in full functions.

4.1.7 TEST RESULTS

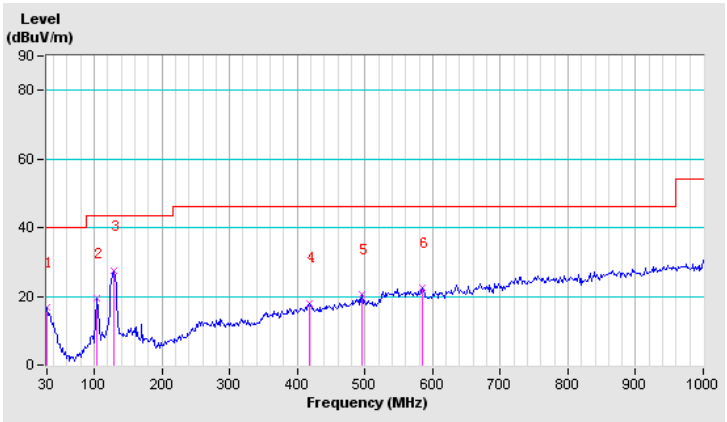
BELOW 1GHz WORST-CASE DATA: 802.11g- CH1

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	16.6 QP	40.0	-23.4	1.00 H	202	-3.21	19.84
2	104.37	19.4 QP	43.5	-24.1	1.00 H	220	7.31	12.09
3	**128.62**	**27.3 QP**	**43.5**	**-16.2**	**1.00 H**	**236**	**13.73**	**13.54**
4	418.00	18.1 QP	46.0	-27.9	1.00 H	254	-2.76	20.85
5	495.60	20.6 QP	46.0	-25.4	1.00 H	266	-2.09	22.72
6	584.52	22.4 QP	46.0	-23.6	1.00 H	279	-2.47	24.86

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. For the test results, the EUT had been tested from 9KHz ~25GHz. But only the worst case was shown in test report.

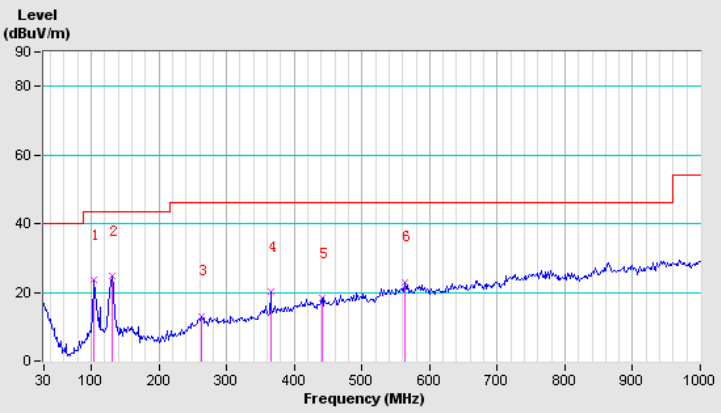


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	104.37	23.8 QP	43.5	-19.7	1.00 V	74	11.70	12.09
2	130.23	24.8 QP	43.5	-18.7	1.00 V	86	11.30	13.53
3	262.80	13.1 QP	46.0	-32.9	1.00 V	131	-3.28	16.40
4	364.65	20.4 QP	46.0	-25.6	1.00 V	109	1.61	18.75
5	440.63	18.2 QP	46.0	-27.8	1.00 V	148	-2.50	20.74
6	563.50	23.1 QP	46.0	-22.9	1.00 V	161	-2.11	25.17

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. For the test results, the EUT had been tested from 9KHz ~25GHz. But only the worst case was shown in test report.



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	53.1 PK	74.0	-20.9	1.00 H	75	14.66	38.44
2	2390.00	41.9 AV	54.0	-12.1	1.00 H	75	3.46	38.44
3	#2400.00	63.2 PK	81.9	-18.7	1.00 H	75	24.74	38.46
4	#2400.00	54.1 AV	78.4	-24.3	1.00 H	75	15.64	38.46
5	*2412.00	101.9 PK			1.00 H	75	63.41	38.49
6	*2412.00	98.4 AV			1.00 H	75	59.91	38.49
7	4824.00	58.6 PK	74.0	-15.4	1.00 H	160	15.11	43.49
8	4824.00	47.3 AV	54.0	-6.7	1.00 H	160	3.81	43.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.1 PK	74.0	-17.9	1.00 V	205	17.66	38.44
2	2390.00	43.7 AV	54.0	-10.3	1.00 V	205	5.26	38.44
3	#2400.00	67.0 PK	88.7	-21.7	1.00 V	205	28.54	38.46
4	#2400.00	59.9 AV	84.5	-24.6	1.00 V	205	21.44	38.46
5	*2412.00	108.7 PK			1.00 V	205	70.21	38.49
6	*2412.00	104.5 AV			1.00 V	205	66.01	38.49
7	4824.00	57.5 PK	74.0	-16.5	1.00 V	120	14.01	43.49
8	4824.00	47.2 AV	54.0	-6.8	1.00 V	120	3.71	43.49

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The 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 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	101.2 PK			1.00 H	145	62.61	38.54
2	*2437.00	97.1 AV			1.00 H	145	58.56	38.54
3	4874.00	58.4 PK	74.0	-15.6	1.00 H	240	14.86	43.54
4	4874.00	46.5 AV	54.0	-7.5	1.00 H	240	2.96	43.54
5	7311.00	58.2 PK	74.0	-15.8	1.00 H	135	10.14	48.06
6	7311.00	47.2 AV	54.0	-6.8	1.00 H	135	-0.86	48.06
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	102.3 PK			1.00 V	160	63.76	38.54
2	*2437.00	98.1 AV			1.00 V	160	59.56	38.54
3	4874.00	55.6 PK	74.0	-18.4	1.00 V	220	12.06	43.54
4	4874.00	43.6 AV	54.0	-10.4	1.00 V	220	0.06	43.54
5	7311.00	58.4 PK	74.0	-15.6	1.00 V	140	10.34	48.06
6	7311.00	47.2 AV	54.0	-6.8	1.00 V	140	-0.86	48.06

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.

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

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	99.4 PK			1.00 H	75	60.81	38.59
2	*2462.00	95.7 AV			1.00 H	75	57.11	38.59
3	2483.50	51.3 PK	74.0	-22.7	1.00 H	75	12.66	38.64
4	2483.50	40.2 AV	54.0	-13.8	1.00 H	75	1.56	38.64
5	4924.00	51.4 PK	74.0	-22.6	1.00 H	260	7.81	43.59
6	4924.00	40.5 AV	54.0	-13.5	1.00 H	260	-3.09	43.59
7	7386.00	55.4 PK	74.0	-18.6	1.00 H	320	7.29	48.11
8	7386.00	42.7 AV	54.0	-11.3	1.00 H	320	-5.41	48.11
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	*2462.00	100.8 PK			1.00 V	150	62.21	38.59
2	*2462.00	97.6 AV			1.00 V	150	59.01	38.59
3	2483.50	52.4 PK	74.0	-21.6	1.00 V	150	13.76	38.64
4	2483.50	40.6 AV	54.0	-13.4	1.00 V	150	1.96	38.64
5	4924.00	51.9 PK	74.0	-22.1	1.00 V	180	8.31	43.59
6	4924.00	42.1 AV	54.0	-11.9	1.00 V	180	-1.49	43.59
7	7386.00	57.6 PK	74.0	-16.4	1.00 V	330	9.49	48.11
8	7386.00	44.7 AV	54.0	-9.3	1.00 V	330	-3.41	48.11

REMARKS:

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

802.11g

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

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	65.2 PK	74.0	-8.8	1.00 H	76	26.76	38.44
2	2390.00	46.4 AV	54.0	-7.6	1.00 H	76	7.96	38.44
3	#2400.00	74.3 PK	81.6	-7.3	1.00 H	75	35.84	38.46
4	#2400.00	60.2 AV	70.4	-10.2	1.00 H	75	21.74	38.46
5	*2412.00	101.6 PK			1.00 H	76	63.11	38.49
6	*2412.00	90.4 AV			1.00 H	76	51.91	38.49
7	4824.00	54.6 PK	74.0	-19.4	1.00 H	210	11.11	43.49
8	4824.00	43.7 AV	54.0	-10.3	1.00 H	210	0.21	43.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.4 PK	74.0	-5.6	1.00 V	223	29.96	38.44
2	2390.00	50.4 AV	54.0	-3.6	1.00 V	223	11.96	38.44
3	#2400.00	80.1 PK	89.3	-9.2	1.00 V	223	41.64	38.46
4	#2400.00	64.2 AV	78.2	-14.0	1.00 V	223	25.74	38.46
5	*2412.00	109.3 PK			1.00 V	223	70.81	38.49
6	*2412.00	98.2 AV			1.00 V	223	59.71	38.49
7	4824.00	61.1 PK	74.0	-12.9	1.00 V	150	17.61	43.49
8	4824.00	47.2 AV	54.0	-6.8	1.00 V	150	3.71	43.49

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The 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 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	102.2 PK			1.00 H	144	63.66	38.54
2	*2437.00	91.3 AV			1.00 H	144	52.76	38.54
3	4874.00	52.6 PK	74.0	-21.4	1.00 H	175	9.06	43.54
4	4874.00	40.1 AV	54.0	-13.9	1.00 H	175	-3.44	43.54
5	7311.00	55.6 PK	74.0	-18.4	1.00 H	310	7.54	48.06
6	7311.00	42.7 AV	54.0	-11.3	1.00 H	310	-5.36	48.06
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	100.4 PK			1.00 V	80	61.86	38.54
2	*2437.00	90.2 AV			1.00 V	80	51.66	38.54
3	4874.00	52.1 PK	74.0	-21.9	1.00 V	130	8.56	43.54
4	4874.00	41.5 AV	54.0	-12.5	1.00 V	130	-2.04	43.54
5	7311.00	55.3 PK	74.0	-18.7	1.00 V	160	7.24	48.06
6	7311.00	42.8 AV	54.0	-11.2	1.00 V	160	-5.26	48.06

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.

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

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	100.7 PK			1.00 H	160	62.11	38.59
2	*2462.00	89.4 AV			1.00 H	160	50.81	38.59
3	4924.00	50.3 PK	74.0	-23.7	1.00 H	60	6.71	43.59
4	4924.00	39.1 AV	54.0	-14.9	1.00 H	60	-4.49	43.59
5	7386.00	55.4 PK	74.0	-18.6	1.00 H	220	7.29	48.11
6	7386.00	43.9 AV	54.0	-10.1	1.00 H	220	-4.21	48.11
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	*2462.00	106.3 PK			1.00 V	84	67.71	38.59
2	*2462.00	95.4 AV			1.00 V	84	56.81	38.59
3	2483.50	67.6 PK	74.0	-6.4	1.00 V	84	28.96	38.64
4	2483.50	49.6 AV	54.0	-4.4	1.00 V	84	10.96	38.64
5	4924.00	52.4 PK	74.0	-21.6	1.00 V	140	8.81	43.59
6	4924.00	43.8 AV	54.0	-10.2	1.00 V	140	0.21	43.59
7	7386.00	54.6 PK	74.0	-19.4	1.00 V	280	6.49	48.11
8	7386.00	43.8 AV	54.0	-10.2	1.00 V	280	-4.31	48.11

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The 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 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	61.2 PK	74.0	-12.8	1.00 H	120	22.76	38.44
2	2390.00	47.3 AV	54.0	-6.7	1.00 H	120	8.86	38.44
3	#2400.00	74.0 PK	82.3	-8.3	1.00 H	144	35.54	38.46
4	#2400.00	57.6 AV	71.6	-14.0	1.00 H	144	19.14	38.46
5	*2412.00	102.3 PK			1.00 H	144	63.81	38.49
6	*2412.00	91.6 AV			1.00 H	144	53.11	38.49
7	4824.00	53.1 PK	74.0	-20.9	1.00 H	200	9.61	43.49
8	4824.00	41.3 AV	54.0	-12.7	1.00 H	200	-2.19	43.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	68.1 PK	74.0	-5.9	1.00 V	70	29.66	38.44
2	2390.00	49.7 AV	54.0	-4.3	1.00 V	70	11.26	38.44
3	#2400.00	81.3 PK	87.7	-6.4	1.00 V	70	42.87	38.46
4	#2400.00	62.4 AV	75.4	-13.0	1.00 V	70	23.94	38.46
5	*2412.00	107.7 PK			1.00 V	70	69.21	38.49
6	*2412.00	95.4 AV			1.00 V	70	56.91	38.49
7	4824.00	54.2 PK	74.0	-19.8	1.00 V	120	10.71	43.49
8	4824.00	43.7 AV	54.0	-10.3	1.00 V	120	0.21	43.49

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The 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 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	100.2 PK			1.00 H	70	61.66	38.54
2	*2437.00	90.1 AV			1.00 H	70	51.56	38.54
3	4874.00	50.4 PK	74.0	-23.6	1.00 H	144	6.86	43.54
4	4874.00	38.9 AV	54.0	-15.1	1.00 H	144	-4.64	43.54
5	7311.00	58.4 PK	74.0	-15.6	1.00 H	288	10.34	48.06
6	7311.00	44.2 AV	54.0	-9.8	1.00 H	288	-3.86	48.06
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	108.8 PK			1.00 V	204	70.26	38.54
2	*2437.00	95.7 AV			1.00 V	204	57.16	38.54
3	4874.00	60.4 PK	74.0	-13.6	1.00 V	260	16.86	43.54
4	4874.00	46.7 AV	54.0	-7.3	1.00 V	260	3.16	43.54
5	7311.00	60.2 PK	74.0	-13.8	1.00 V	305	12.14	48.06
6	7311.00	46.5 AV	54.0	-7.5	1.00 V	305	-1.56	48.06

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.

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

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	100.7 PK			1.00 H	160	62.06	38.59
2	*2462.00	89.4 AV			1.00 H	160	50.81	38.59
3	2483.50	66.9 PK	74.0	-7.1	1.00 H	160	28.26	38.64
4	2483.50	50.4 AV	54.0	-3.6	1.00 H	160	11.76	38.64
5	4924.00	50.3 PK	74.0	-23.7	1.00 H	70	6.71	43.59
6	4924.00	39.9 AV	54.0	-14.1	1.00 H	70	-3.69	43.59
7	7386.00	56.4 PK	74.0	-17.6	1.00 H	210	8.29	48.11
8	7386.00	42.7 AV	54.0	-11.3	1.00 H	210	-5.41	48.11
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	*2462.00	107.7 PK			1.00 V	204	69.06	38.59
2	*2462.00	95.7 AV			1.00 V	204	57.11	38.59
3	2483.50	69.7 PK	74.0	-4.3	1.00 V	204	31.06	38.64
4	2483.50	50.3 AV	54.0	-3.7	1.00 V	204	11.66	38.64
5	4924.00	54.3 PK	74.0	-19.7	1.00 V	190	10.71	43.59
6	4924.00	41.6 AV	54.0	-12.4	1.00 V	190	-1.99	43.59
7	7386.00	56.6 PK	74.0	-17.4	1.00 V	245	8.49	48.11
8	7386.00	44.7 AV	54.0	-9.3	1.00 V	245	-3.41	48.11

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The 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	68.4 PK	74.0	-5.6	1.00 H	73	29.96	38.44
2	2390.00	50.7 AV	54.0	-3.3	1.00 H	73	12.26	38.44
3	#2400.00	73.0 PK	78.8	-5.8	1.00 H	73	34.54	38.46
4	#2400.00	60.0 AV	69.5	-9.5	1.00 H	73	21.54	38.46
5	*2422.00	98.8 PK			1.00 H	73	60.29	38.51
6	*2422.00	89.5 AV			1.00 H	73	50.99	38.51
7	4844.00	52.1 PK	74.0	-21.9	1.00 H	140	8.59	43.51
8	4844.00	38.9 AV	54.0	-15.1	1.00 H	140	-4.61	43.51
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	69.7 PK	74.0	-4.3	1.00 V	204	31.26	38.44
2	**2390.00**	**51.1 AV**	**54.0**	**-2.9**	**1.00 V**	**204**	**12.66**	**38.44**
3	#2400.00	80.0 PK	85.7	-5.7	1.00 V	204	41.54	38.46
4	#2400.00	64.2 AV	73.6	-9.4	1.00 V	204	25.74	38.46
5	*2422.00	105.7 PK			1.00 V	204	67.19	38.51
6	*2422.00	93.6 AV			1.00 V	204	55.09	38.51
7	4844.00	55.5 PK	74.0	-18.5	1.00 V	305	11.99	43.51
8	4844.00	45.3 AV	54.0	-8.7	1.00 V	305	1.79	43.51

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.

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

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	99.0 PK			1.00 H	76	60.46	38.54
2	*2437.00	87.4 AV			1.00 H	76	48.86	38.54
3	4874.00	51.2 PK	74.0	-22.8	1.00 H	240	7.66	43.54
4	4874.00	38.4 AV	54.0	-15.6	1.00 H	240	-5.14	43.54
5	7311.00	51.6 PK	74.0	-22.4	1.00 H	280	3.54	48.06
6	7311.00	40.6 AV	54.0	-13.4	1.00 H	280	-7.46	48.06
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	106.5 PK			1.00 V	206	67.96	38.54
2	*2437.00	94.7 AV			1.00 V	206	56.16	38.54
3	4874.00	60.2 PK	74.0	-13.8	1.00 V	170	16.66	43.54
4	4874.00	47.8 AV	54.0	-6.2	1.00 V	170	4.26	43.54
5	7311.00	58.1 PK	74.0	-15.9	1.00 V	340	10.04	48.06
6	7311.00	47.4 AV	54.0	-6.6	1.00 V	340	-0.66	48.06

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.

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	98.8 PK			1.00 H	160	60.23	38.57
2	*2452.00	86.4 AV			1.00 H	160	47.83	38.57
3	2483.50	68.4 PK	74.0	-5.6	1.00 H	160	29.76	38.64
4	2483.50	49.4 AV	54.0	-4.6	1.00 H	160	10.76	38.64
5	4904.00	50.7 PK	74.0	-23.3	1.00 H	150	7.13	43.57
6	4904.00	38.4 AV	54.0	-15.6	1.00 H	150	-5.17	43.57
7	7356.00	54.6 PK	74.0	-19.4	1.00 H	255	6.51	48.09
8	7356.00	43.8 AV	54.0	-10.2	1.00 H	255	-4.29	48.09
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	105.4 PK			1.00 V	103	66.83	38.57
2	*2452.00	93.4 AV			1.00 V	103	54.83	38.57
3	2483.50	68.1 PK	74.0	-5.9	1.00 V	103	29.46	38.64
4	2483.50	50.4 AV	54.0	-3.6	1.00 V	103	11.76	38.64
5	4904.00	53.4 PK	74.0	-20.6	1.00 V	260	9.83	43.57
6	4904.00	41.2 AV	54.0	-12.8	1.00 V	260	-2.37	43.57
7	7356.00	56.2 PK	74.0	-17.8	1.00 V	240	8.11	48.09
8	7356.00	44.9 AV	54.0	-9.1	1.00 V	240	-3.19	48.09

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.

4.2 6dB BANDWIDTH MEASUREMENT

4.2.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer (9KHz–40GHz)	Agilent	E4446A	MY46180622	Apr. 24,13	Apr. 23,14
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 30, 13	Oct. 29,14

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA and NIM/CHINA

2. The test was performed in Oven room

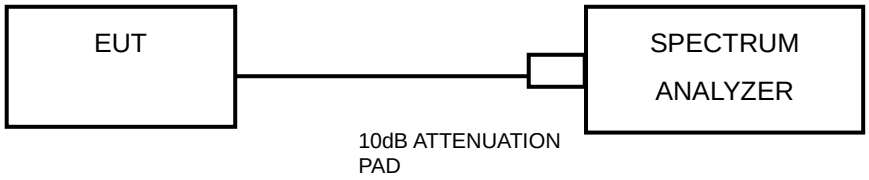
4.2.3 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = 100KHz
2. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. 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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



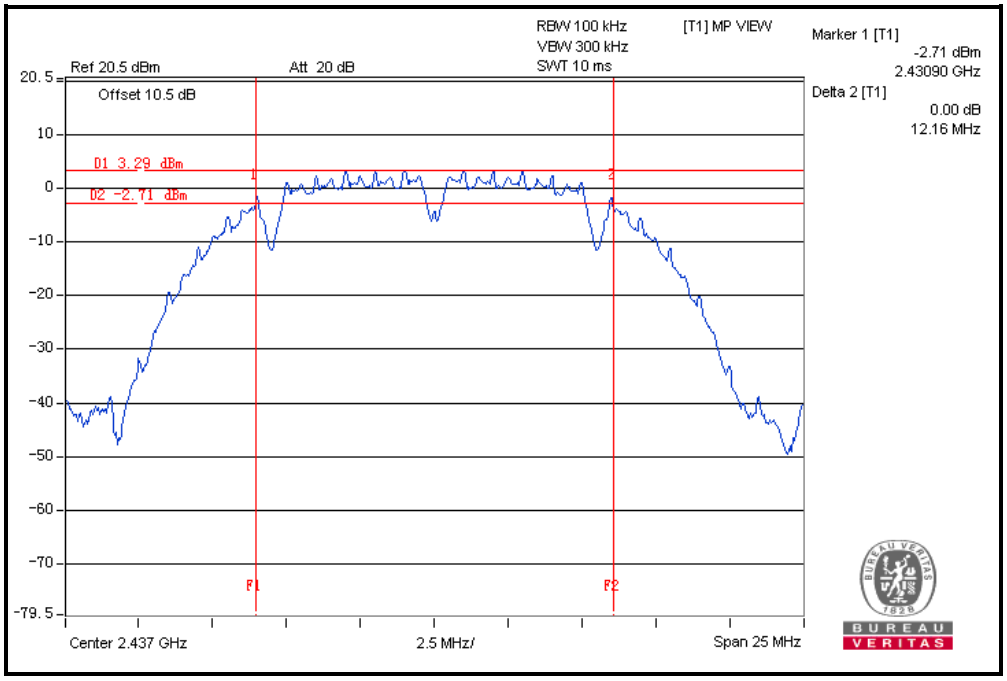
4.2.6 EUT OPERATING CONDITIONS

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

4.2.7 TEST RESULTS

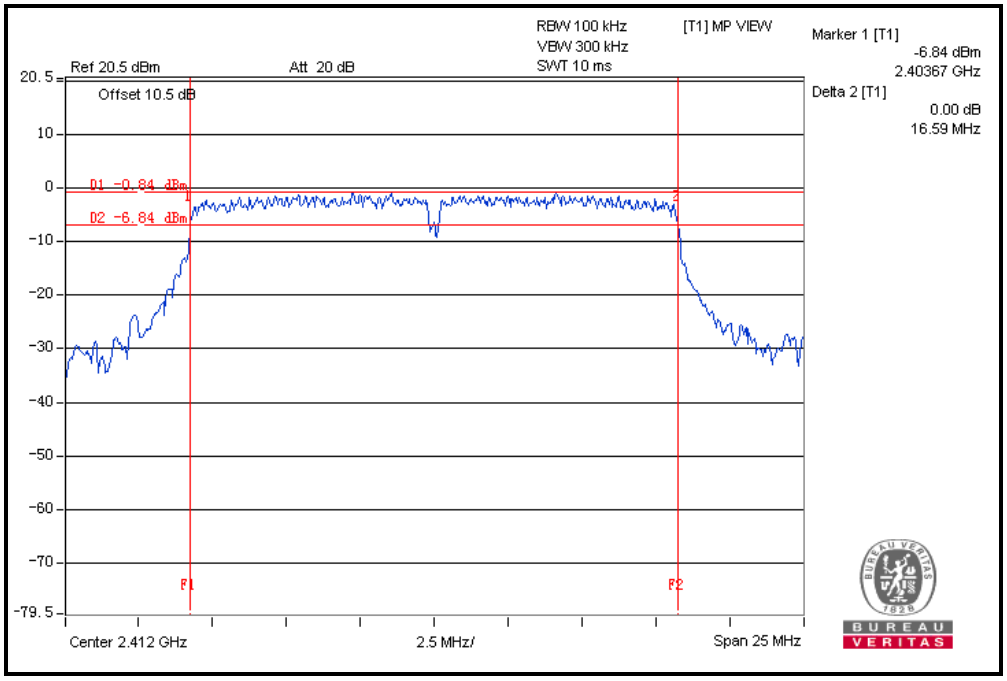
802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.15	0.5	PASS
6	2437	12.16	0.5	PASS
11	2462	12.16	0.5	PASS



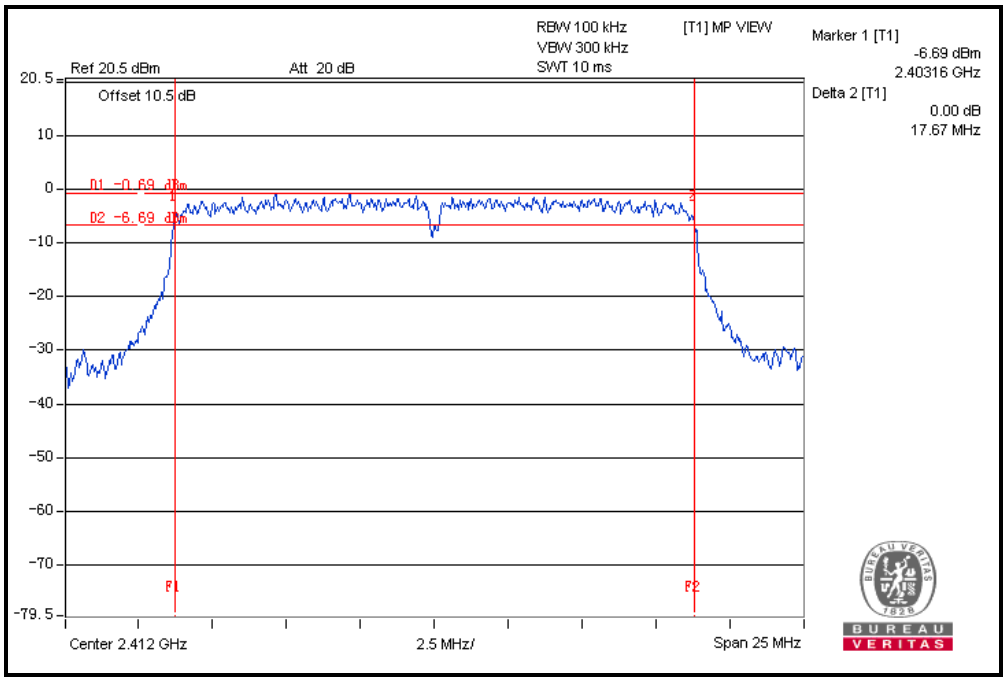
802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.59	0.5	PASS
6	2437	16.56	0.5	PASS
11	2462	16.57	0.5	PASS



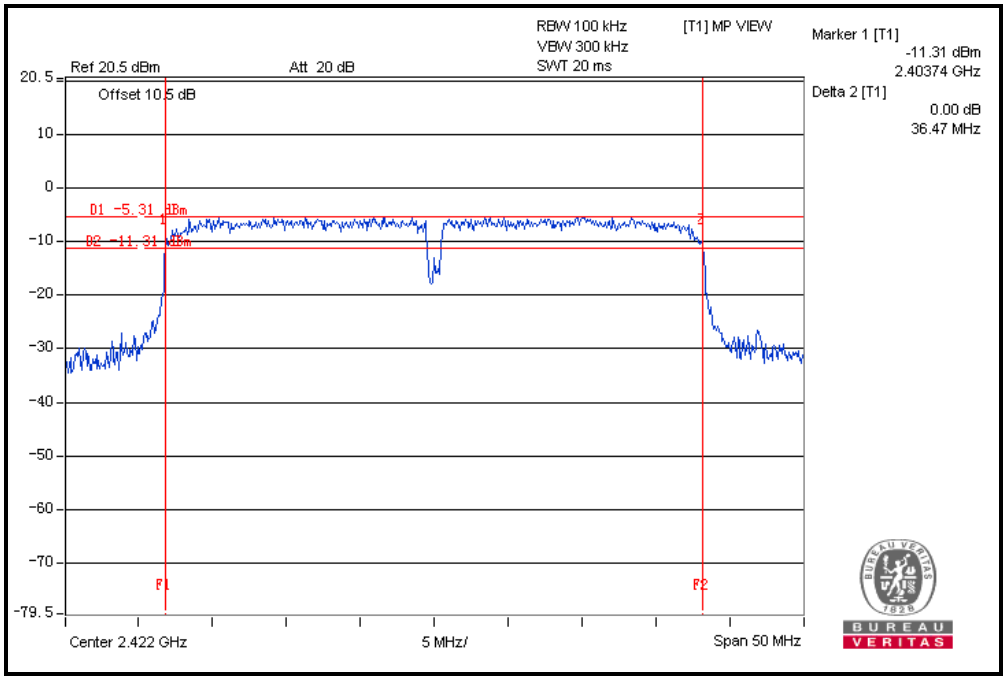
802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.67	0.5	PASS
6	2437	17.67	0.5	PASS
11	2462	17.66	0.5	PASS



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
3	2422	36.47	0.5	PASS
6	2437	36.46	0.5	PASS
9	2452	36.44	0.5	PASS

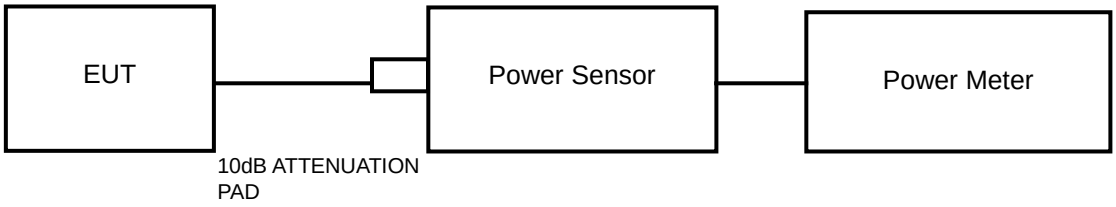


4.3 CONDUCTED OUTPUT POWER

4.3.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

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

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	Anritsu	ML2495A	1139001	Nov. 04,13	Nov. 03,14
Power Sensor	FLUKE	15B	A1220010DG	Nov. 04,13	Nov. 03,14

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA and NIM/CHINA

2. The test was performed in Oven room

4.3.4 TEST PROCEDURES

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

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 lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

4.3.7.1 MAXIMUM PEAK OUTPUT POWER

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.79	30	PASS
6	2437	18.70	30	PASS
11	2462	17.96	30	PASS

802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	21.75	30	PASS
6	2437	21.65	30	PASS
11	2462	21.36	30	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	22.02	30	PASS
6	2437	21.95	30	PASS
11	2462	21.75	30	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
3	2422	19.54	30	PASS
6	2437	19.60	30	PASS
9	2452	19.12	30	PASS

4.3.7.2 AVERAGE OUTPUT POWER (FOR REFERENCE)

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

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)
1	2412	15.30
6	2437	15.19
11	2462	14.48

802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)
1	2412	13.72
6	2437	13.64
11	2462	13.31

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)
1	2412	13.78
6	2437	13.68
11	2462	13.49

802.11n (40MHz)

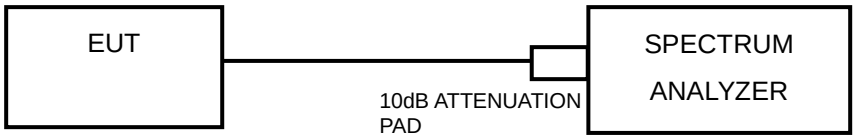
CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)
3	2422	9.23
6	2437	9.55
9	2452	9.24

4.4 POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.3.2 to get information of above instrument.

4.4.4 TEST PROCEDURE

1. Set the span to 1.5 times the DTS bandwidth
2. Set the RBW = 100 kHz, VBW ≥ 3 x RBW, Detector = peak.
3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

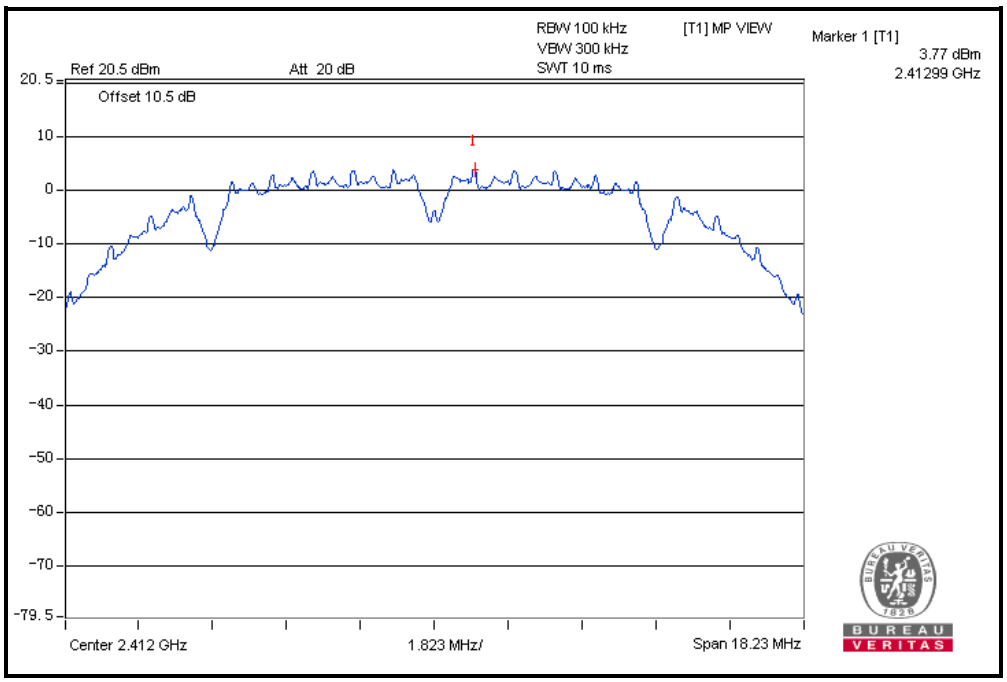
4.4.6 EUT OPERATING CONDITION

Same as item 4.3.6

4.4.7 TEST RESULTS

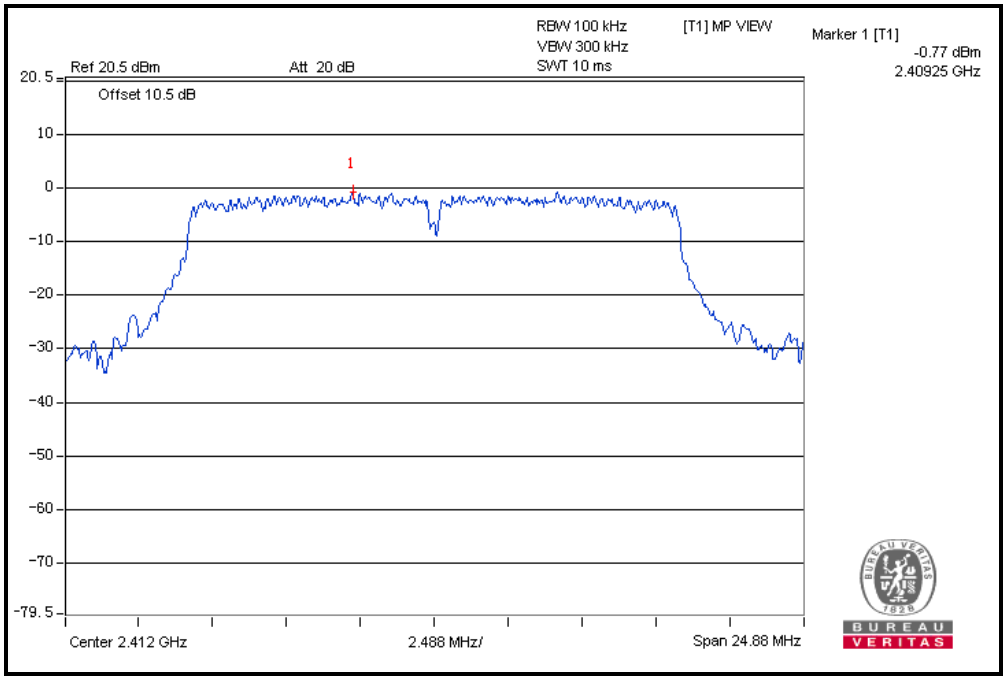
802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	3.77	8	PASS
6	2437	3.32	8	PASS
11	2462	2.84	8	PASS



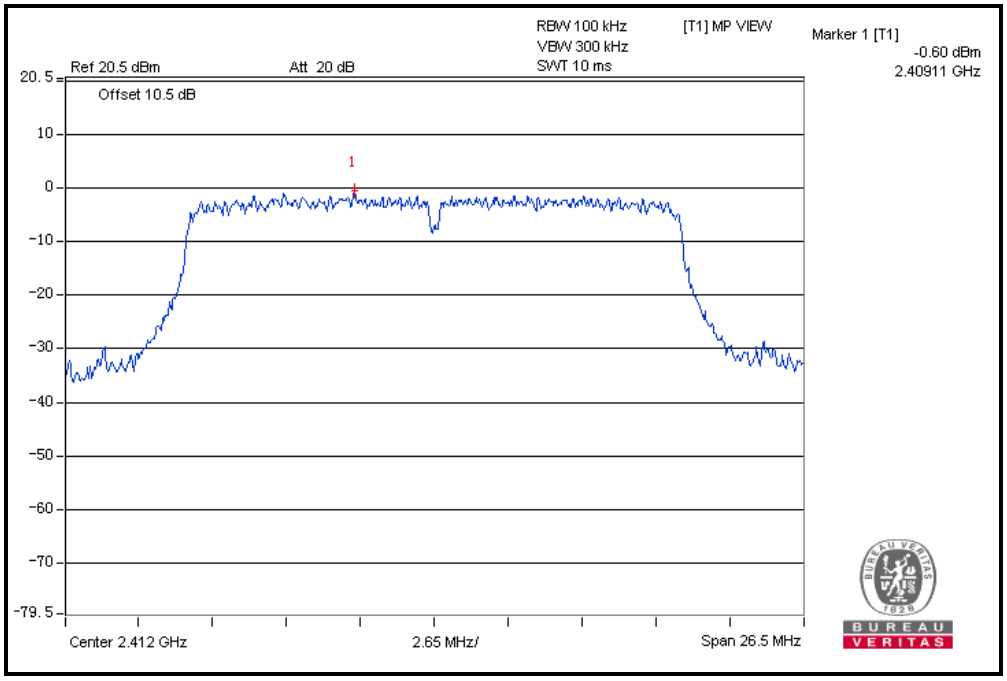
802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	-0.77	8	PASS
6	2437	-0.94	8	PASS
11	2462	-1.19	8	PASS



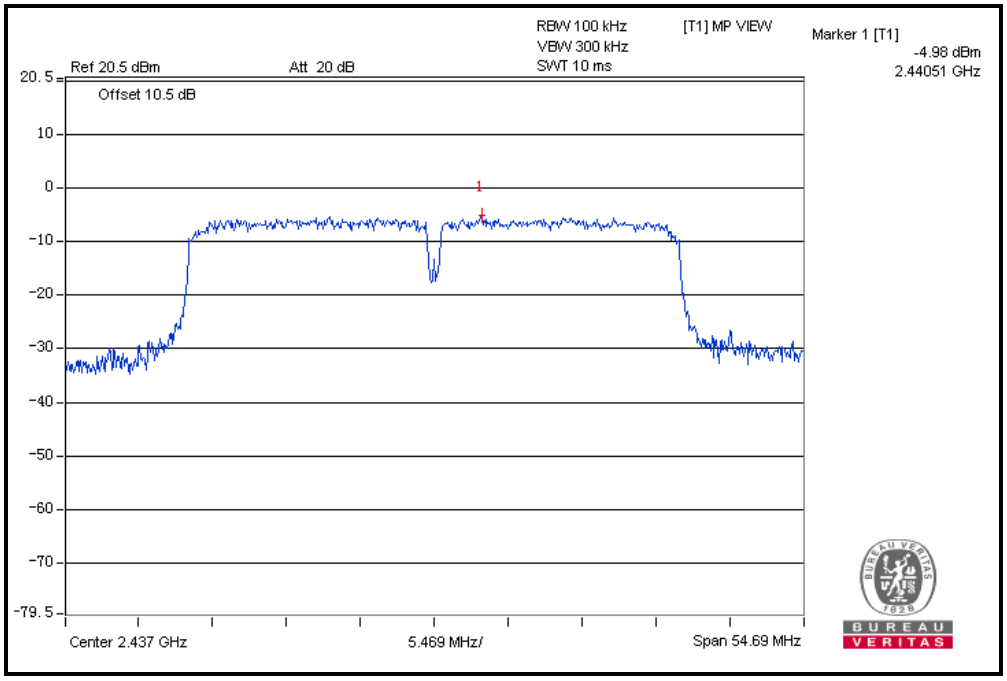
802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	-0.60	8	PASS
6	2437	-1.08	8	PASS
11	2462	-1.27	8	PASS



802.11n (40MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	Limit (dBm/3kHz)	PASS /FAIL
3	2422	-5.16	8	PASS
6	2437	-4.98	8	PASS
9	2452	-5.48	8	PASS

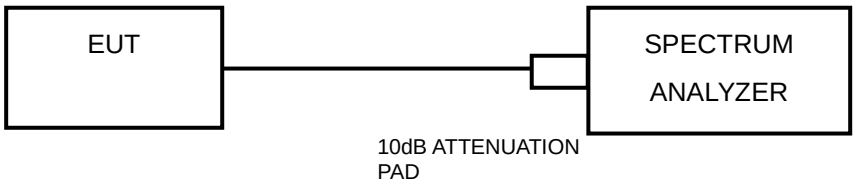


4.5 OUT OF BAND EMISSION MEASUREMENT

4.5.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.3.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

Measurement Procedure - Reference Level

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 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 –Unwanted Emission Level

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

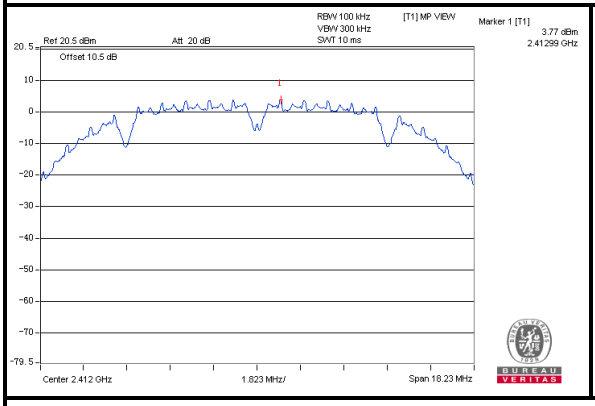
4.5.6 EUT OPERATING CONDITION

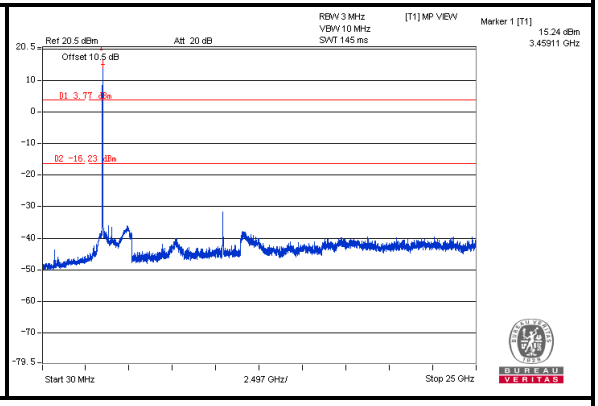
Same as item 4.3.6

4.5.7 TEST RESULTS

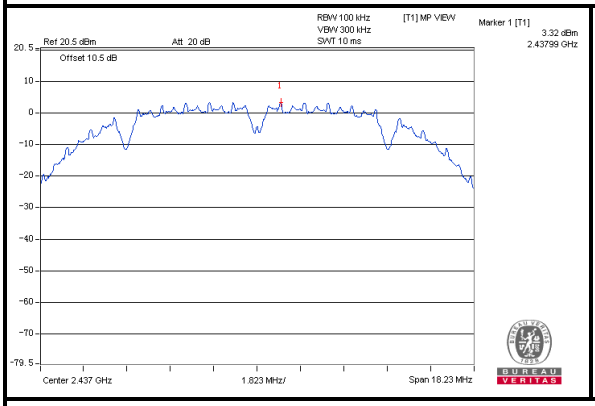
802.11b

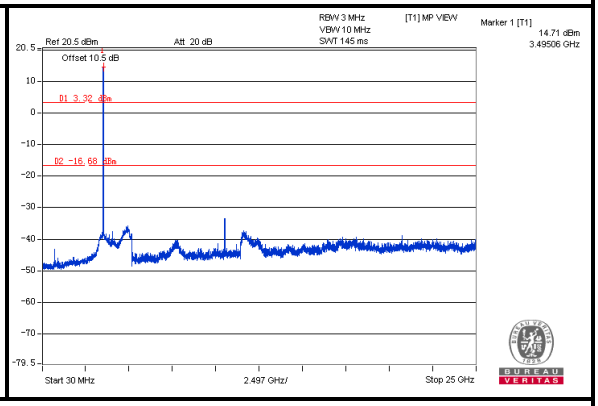
CH 1



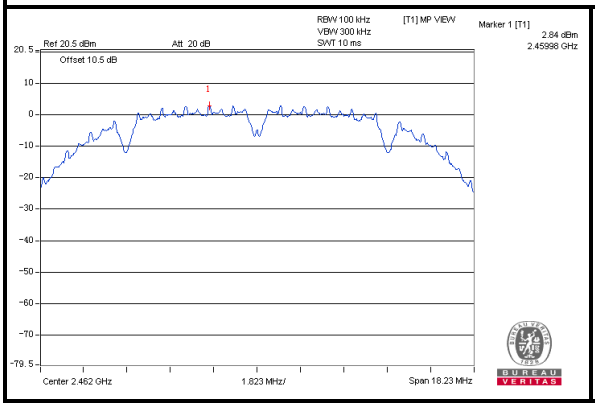


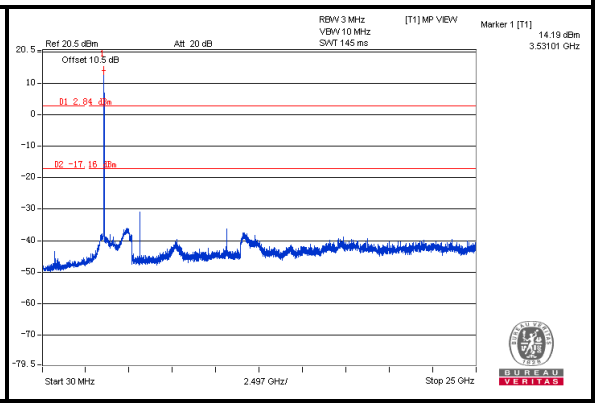
CH 6





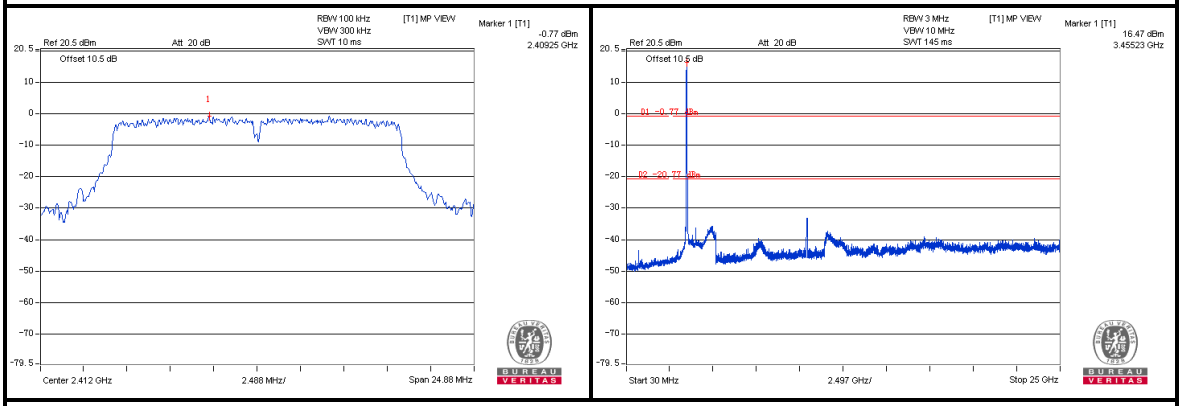
CH 11



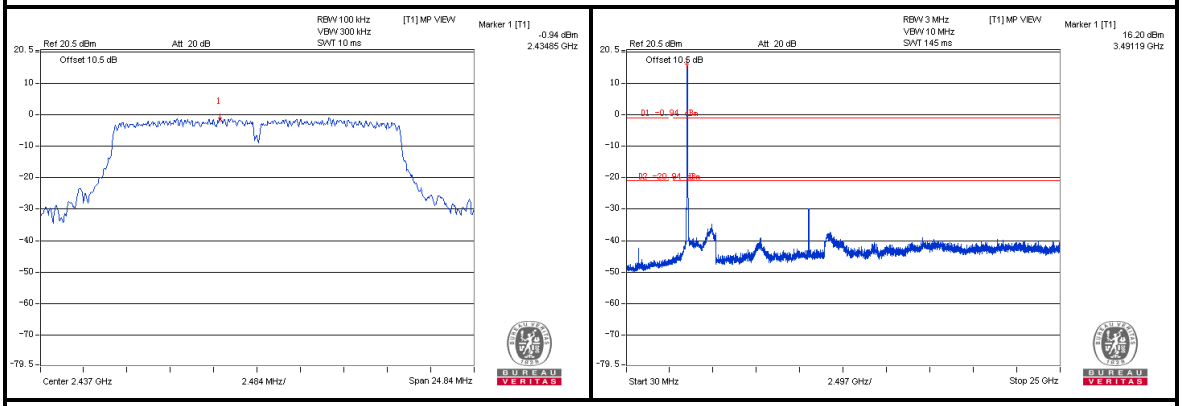


802.11g

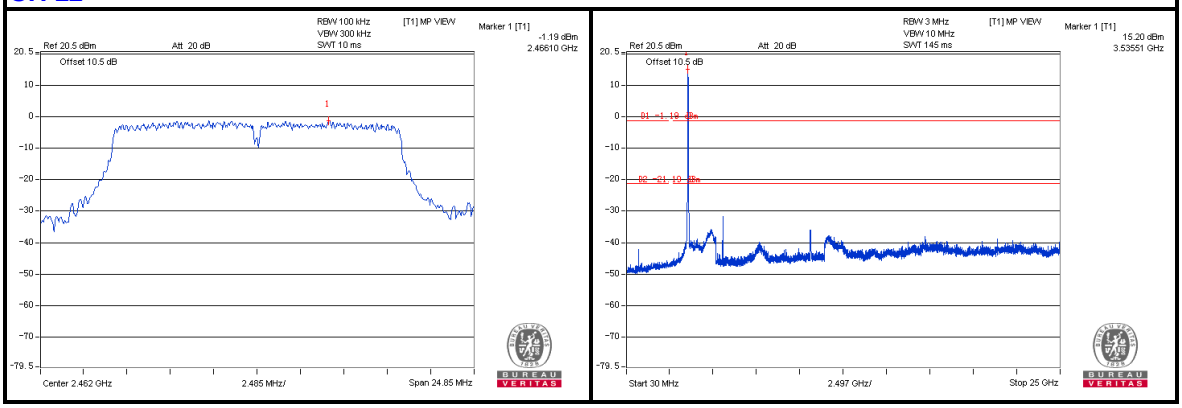
CH 1



CH 6

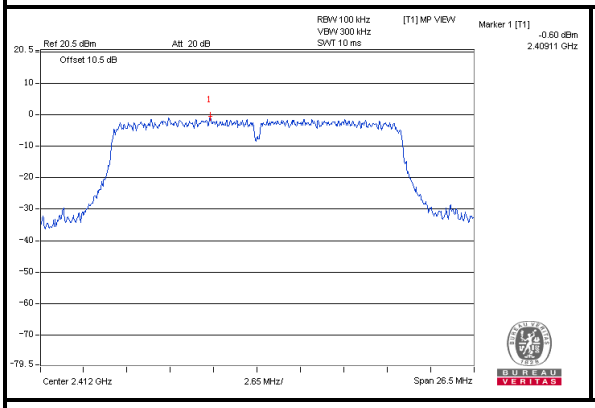


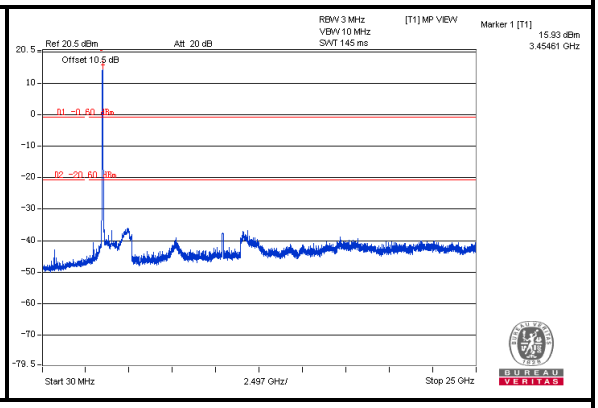
CH 11



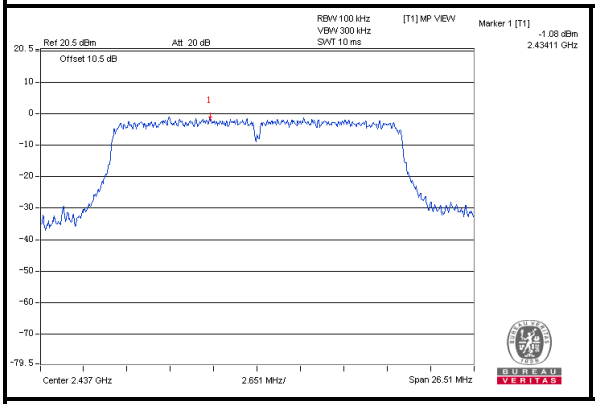
802.11n (20MHz)

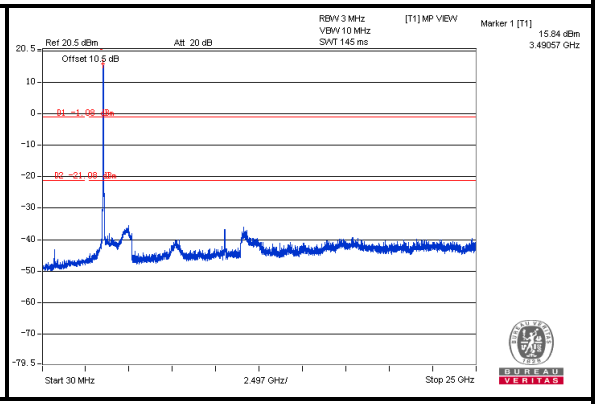
CH 1



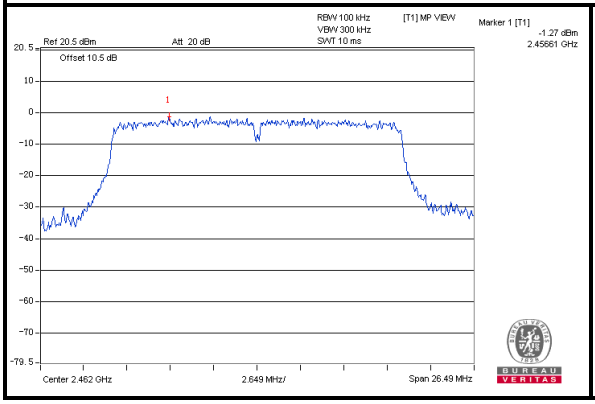


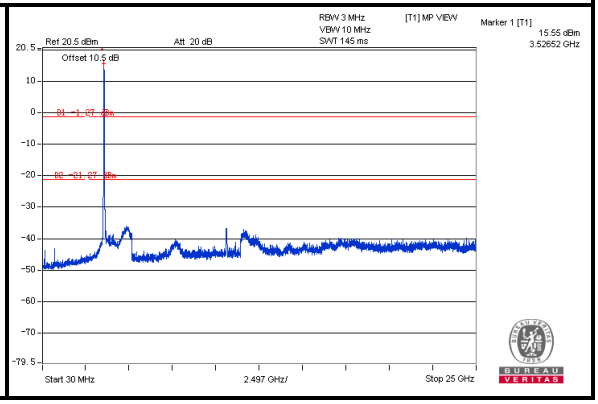
CH 6





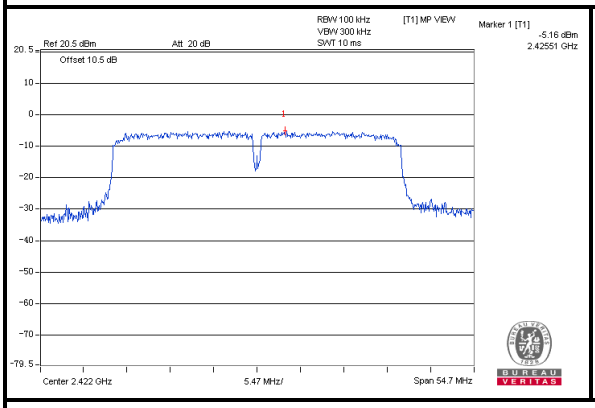
CH 11

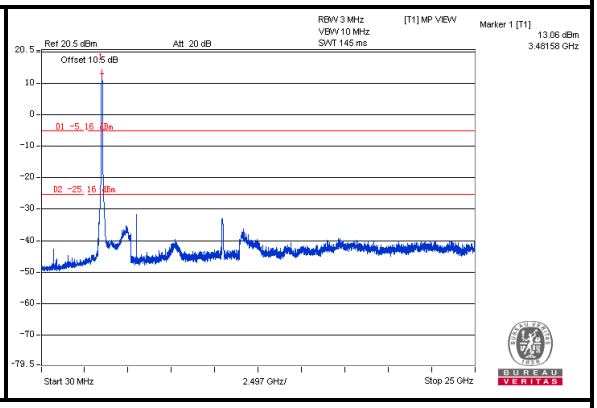




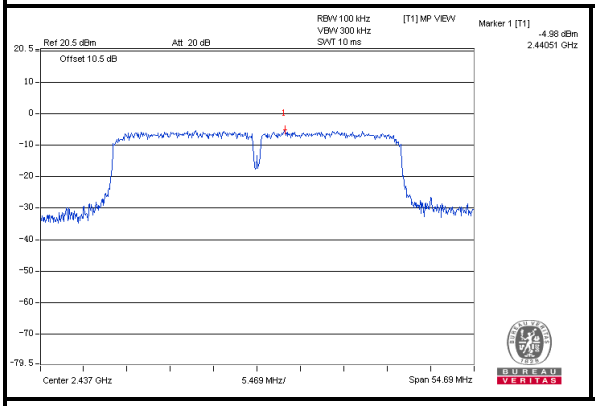
802.11n (40MHz)

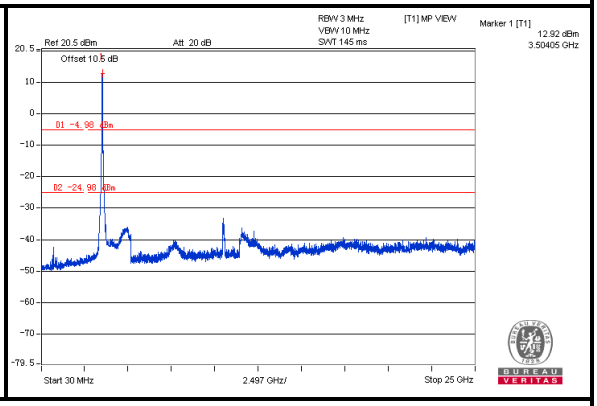
CH 3



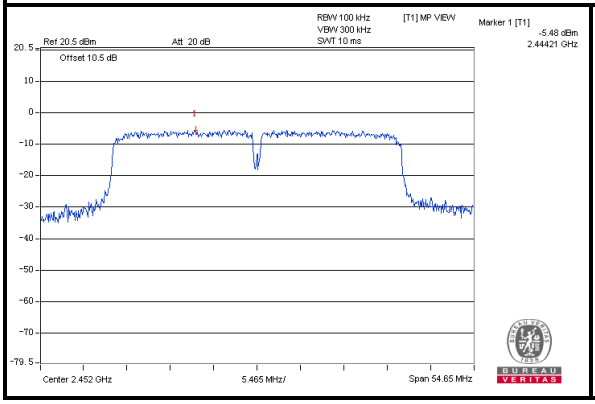


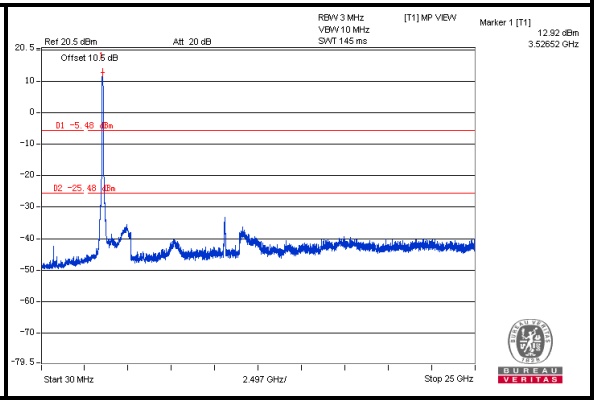
CH 6





CH 9





5 PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6 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---