RADIO TEST REPORT

Report Reference No. ..... :	NTEK-2011NT070110729005E	
Compiled by (+ signature)	Jumy Qiu	Jumy qiu
Approved by (+ signature)	Ada Li	Ada Li
Date of issue..... :	2011-08-16	
Total number of pages	57	

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Manufacture's Name ..... :	Shenzhen Jing Hong Sheng Electronics Co., Ltd.
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Factory's Name ..... :	Shenzhen Jing Hong Sheng Electronics Co., Ltd.
Address ..... :	601B, 20 Building, Liuxiandong Industrial Zone, Xili Town, Nanshan District, Shenzhen City, Guangdong Province, China

Test specification:	
Standard ..... :	FCC Part 15.247
Test procedure ..... :	ANSI C63.4 : 2003
Non-standard test method……..:	N/A

Test item description	
Product name ..... :	MID
FCC ID	ZVE2011806
Trademark ..... :	/
Model and/or type reference :	M703, M706, M707, M801, M802, M806, M808, M1001, M1006,M1008
Rating(s) ..... :	DC 9V,2.0A

Testing Laboratory information:	
Testing Laboratory Name ..... :	NTEK Testing Technology Co., Ltd.
Address ..... :	3/F,Block B, Hua feng Technology & Business Building, Xin 'an 6 Road, Bao an Center District, Shenzhen, China
FCC Registration Number .... :	935596
IC Registration Number ..... :	9270A
Tel ..... :	+86755-29453021
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Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item .....:	2011-08-4
Date (s) of performance of tests .....:	2011-08-4~2011-08-15

General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report would be invalid test report without all the signatures of testing technician and approver.

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (c)	Antenna conducted Spurious Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS	

1.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U，(dB)	NOTE
OS-01	ANSI	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
OS-02	ANSI	30MHz ~ 200MHz	V	2.48	
		30MHz ~ 200MHz	H	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	H	2.66	

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>MID</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>M703, M706, M707, M801, M802, M806, M808, M1001, M1006,M1008</td></tr>
<tr><td>Model Difference</td><td>All the model “M703/M706/M707/M801/M802/M806/M808/M1001/M1006/ M1008” are the same circuit and RF module, except the size, appearance and colour .
M703/M706/M707 are 7 ", only the appearance is different.
M801/M802/M806/M808 are 8 ", only the colour is different.
M1001/M1006/M100 are 10 ", the colour and appearance are all different.</td></tr>
<tr><td>OEM Brand/Model Name</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Dreampad
<table>
<tr><td>Operation Frequency:</td><td>802.11b: 2412~2462 MHz
802.11g: 2412~2462 MHz</td></tr>
<tr><td>Modulation Type:</td><td>CCK/OFDM/DBPSK/DAPSK</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps
802.11g:54/48/36/24/18/12/9/6 Mbps</td></tr>
<tr><td>Number Of Channel</td><td>11 CH, Please see Note 2.</td></tr>
<tr><td>Antenna Designation:</td><td>Please see Note 3.</td></tr>
<tr><td>Antenna Gain(Peak)</td><td>Please see Note 3.</td></tr>
<tr><td>Output Power:</td><td>802.11b: 10.41dBm(Max)
802.11g: 9.98dBm(Max)</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Power Source</td><td>DC Voltage supply</td></tr>
<tr><td>Power Rating</td><td>DC 9V</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
<tr><td>Products Covered</td><td>N/A</td></tr>
<tr><td>EUT Modification(s)</td><td>N/A</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.
2. All the model “M703/M706/M707/M801/M802/M806/M808/M1001/M1006/M1008” are the same circuit and RF module, except the size, appearance and colour .
   M703/M706/M707 are 7 ", only the appearance is different.
   M801/M802/M806/M808 are 8 ", only the colour is different.
   M1001/M1006/M100 are 10 ", the colour and appearance are all different.

2.

Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	External antenna	NA	0	N/A

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11

For Conducted Emission	
Final Test Mode	Description
TX	NORMAL LINK

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11

Note:

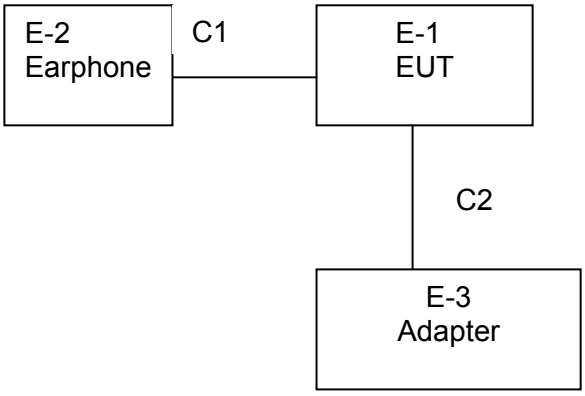
(1) The measurements are performed at the highest, middle, lowest available channels.
(2) The measurements are performed at all Bit Rate of Transmitter, the highest Bit Rate of Transmitter was the worst data, and was shown.

2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software Version	Test program: Ralink RT3x7x_V1.5.2.0		
Frequency	2412 MHz	2437 MHz	2462 MHz
802.11b	42	42	42
802.11g	45	45	45

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	MID	N/A	M806	ZVE2011806	N/A	EUT
E-2	Adapter	N/A	HJT-660	N/A	N/A	
E-2	Earphone	N/A	ABD567	N/A	3490754	

Item	Shielded Type	Ferrite Core	Length	Note
C1	NO	NO	0.8M	
C2	NO	NO	1.0M	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test Equipment:					
No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Due Date dd-mm-yy
1	Spectrum Analyzer	Agilent	E4407B	160400005	2012-4-24
2	Test Receiver	R&S	ESPI7	101318	2012-4-24
3	Bilog Antenna	TESEQ	CBL6111D	31216	2012-4-24
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2012-4-24
5	Spectrum Analyzer	ADVANTEST	R3182	150900201	2012-4-24
6	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2012-4-24
7	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	451	2012-4-24
8	Loop Antenna	ARA	PLA-1030/B	1029	2012-3-19

Conduction Test equipment					
No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Due Date dd-mm-yy
1**	Test Receiver	R&S	ESCI	101160	2012-4-24
2	LISN	R&S	ENV216	101313	2012-4-24
3	LISN	Kyoritsu	KNW-407	8-1789-3	2012-4-24
4**	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2012-4-24
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2012-4-24
6	Absorbing clamp	R&S	MDS-21	100423	2012-4-24

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

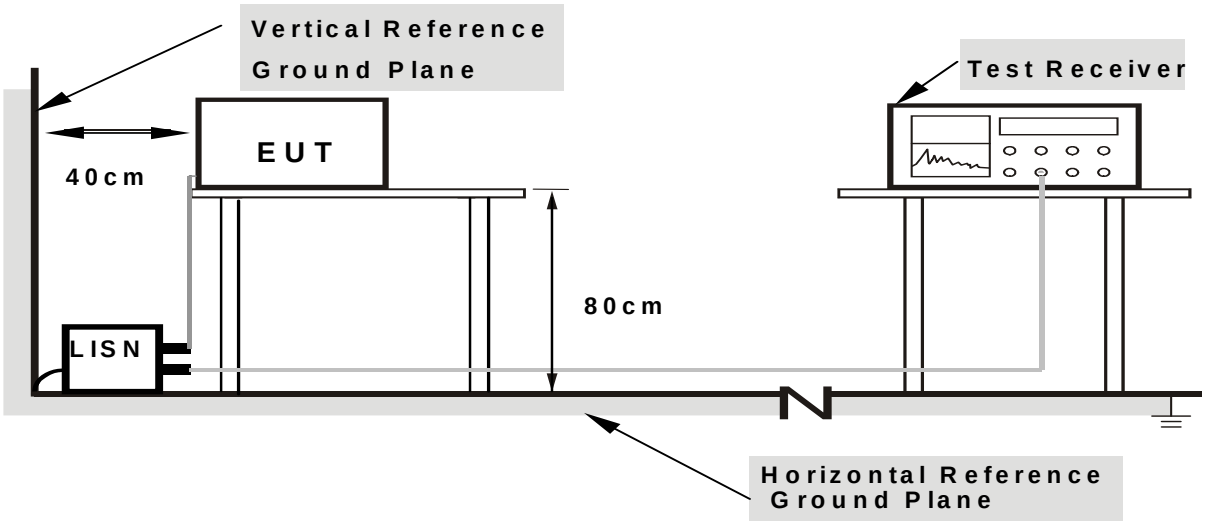
3.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



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

3.1.5 EUT OPERATING CONDITIONS

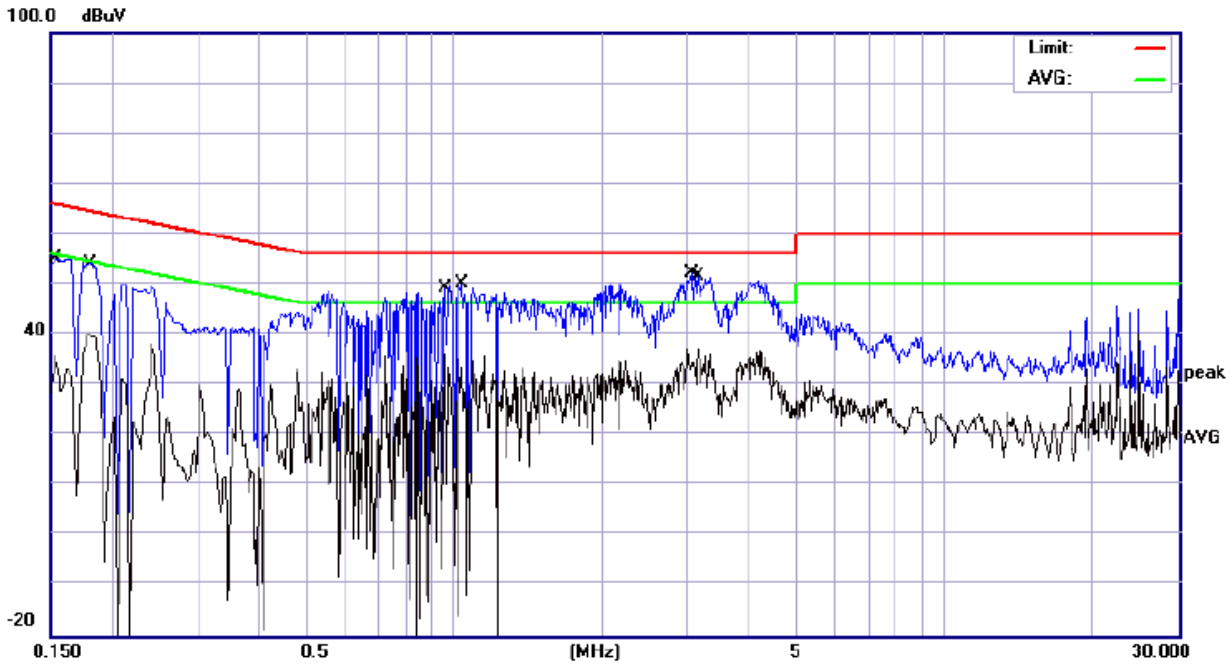
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

EUT：	MID	Model Name. ：	M806
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date：	2011-8-10
Test Mode：	Normal Link	Phase：	L
Test Voltage ：	DC 9V		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1539	44.01	11.17	55.18	65.78	-10.60	QP	
2		0.1779	29.41	10.44	39.85	54.58	-14.73	AVG	
3		0.9619	25.60	10.41	36.01	46.00	-9.99	AVG	
4		1.0420	39.73	10.41	50.14	56.00	-5.86	QP	
5	*	3.0459	41.69	10.43	52.12	56.00	-3.88	QP	
6		3.1499	26.78	10.43	37.21	46.00	-8.79	AVG	

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. '*' means the worst case

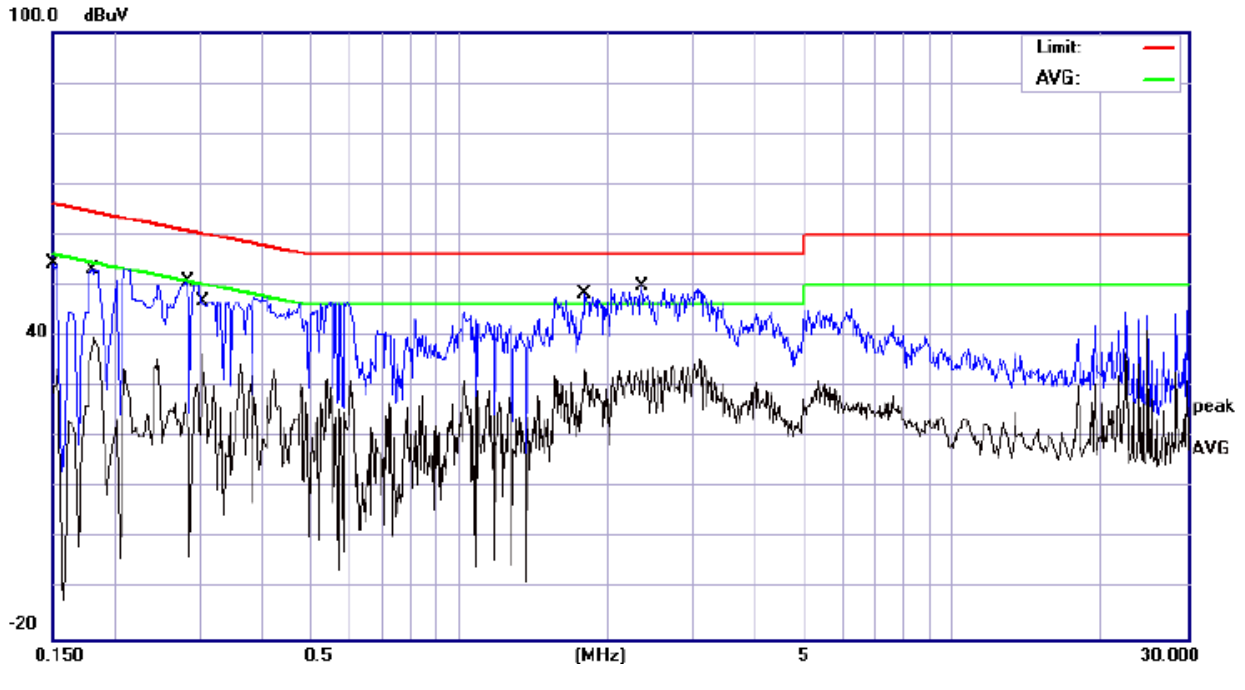


EUT：	MID	Model Name. ：	M806
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date：	2011-8-10
Test Mode：	Normal Link	Phase：	N
Test Voltage ：	DC 9V		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1507	42.92	11.40	54.32	65.96	-11.64	QP	
2		0.1824	29.04	10.38	39.42	54.37	-14.95	AVG	
3		0.2819	40.11	10.42	50.53	60.76	-10.23	QP	
4		0.3020	25.82	10.42	36.24	50.19	-13.95	AVG	
5	*	1.8020	37.76	10.44	48.20	56.00	-7.80	QP	
6		2.3540	22.87	10.44	33.31	46.00	-12.69	AVG	

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. '*' means the worst case



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

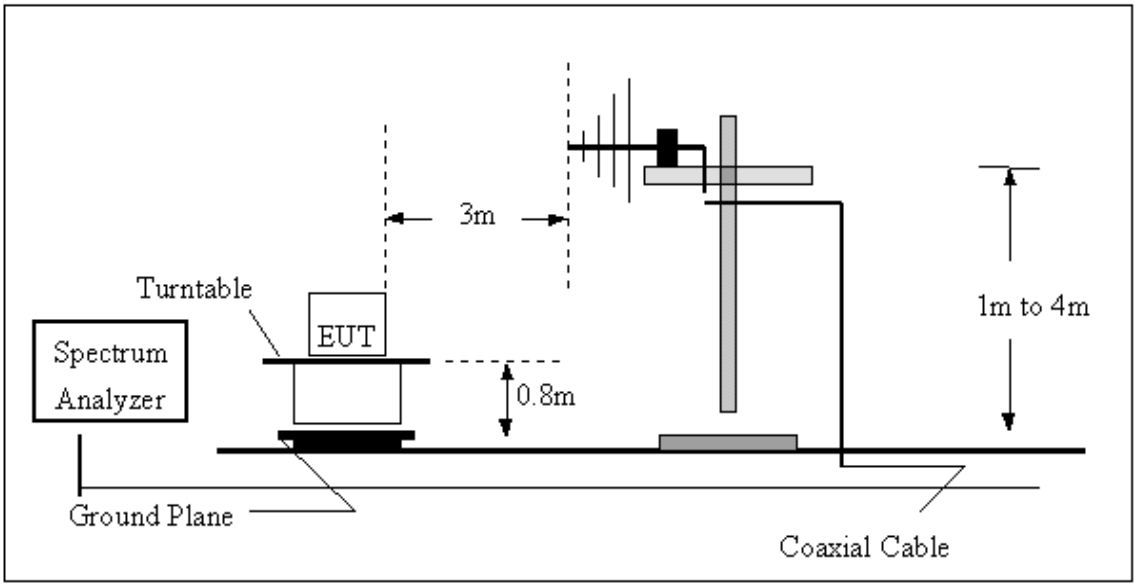
a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 DEVIATION FROM TEST STANDARD

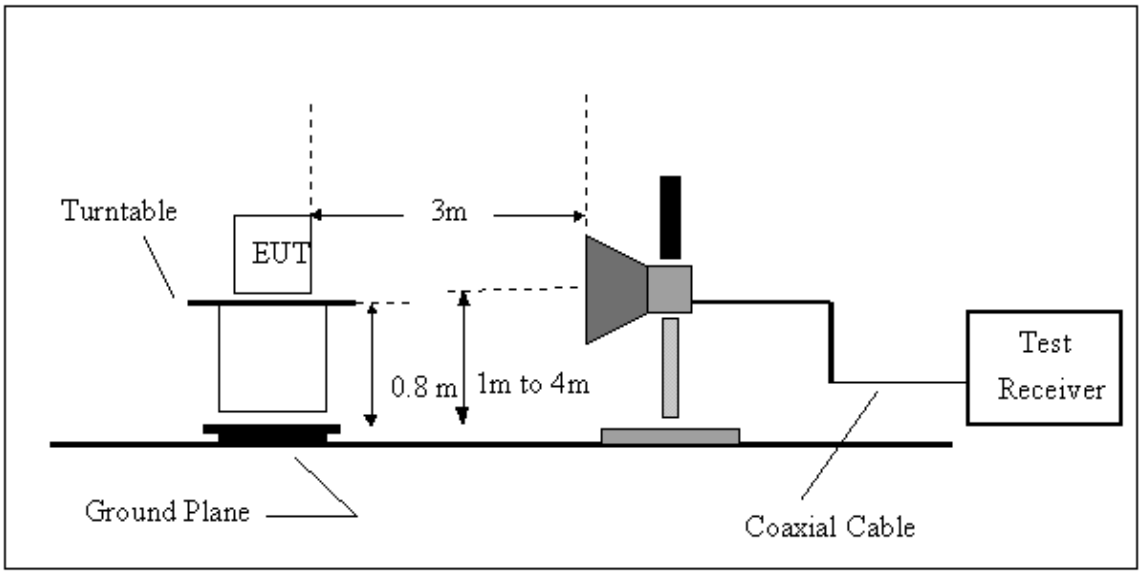
No deviation

3.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



3.2.5 EUT OPERATING CONDITIONS

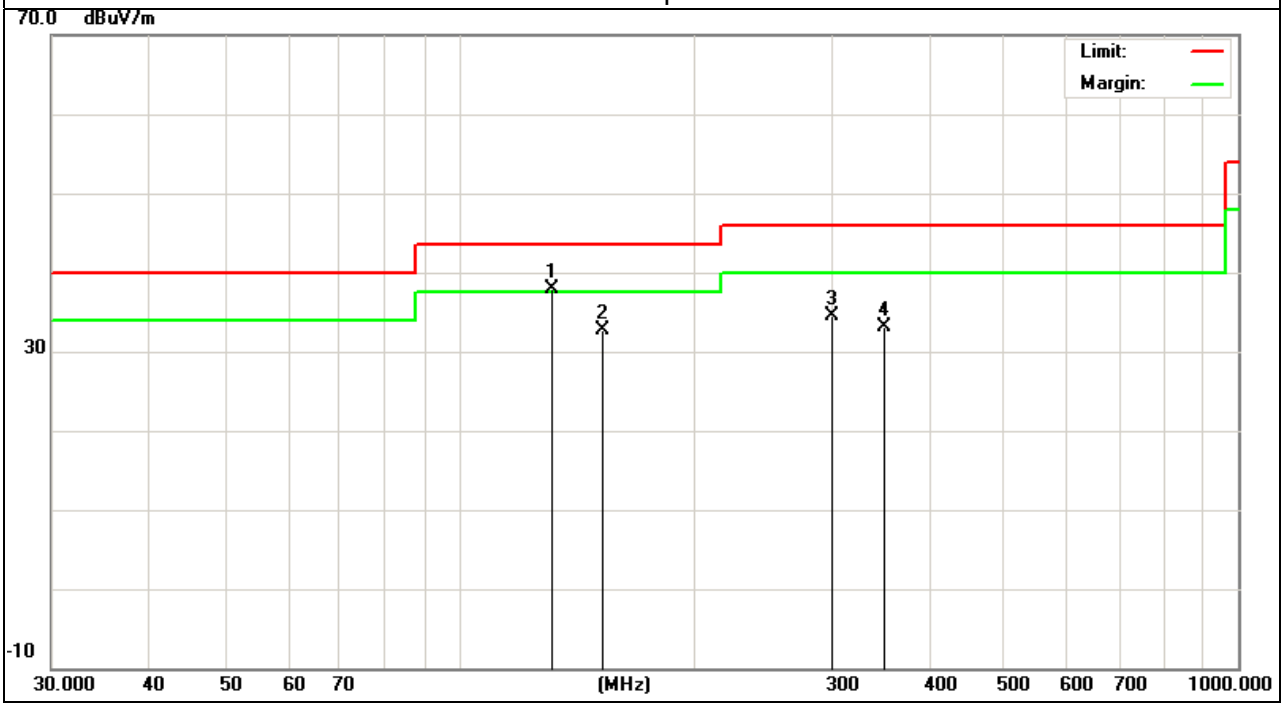
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 1000 MHZ)

EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
131.2100	26.00	11.93	37.93	43.50	-5.57	Quasi-Peak
152.6700	21.21	11.54	32.75	43.50	-10.75	Quasi-Peak
300.3300	19.92	14.57	34.49	46.00	-11.51	Quasi-Peak
351.2100	17.77	15.40	33.17	46.00	-12.83	Quasi-Peak

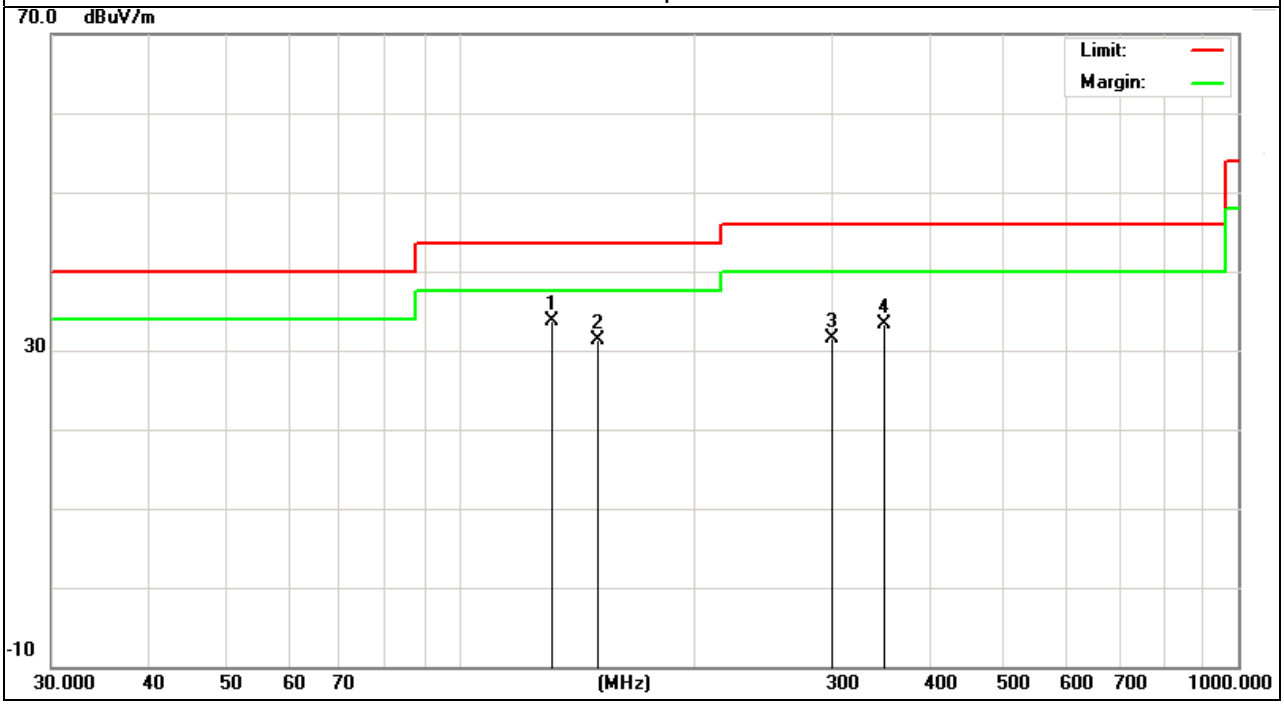
Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
131.2100	21.77	11.93	33.70	43.50	-9.80	Quasi-Peak
149.5200	19.43	11.79	31.22	43.50	-12.28	Quasi-Peak
300.3300	17.01	14.57	31.58	46.00	-14.42	Quasi-Peak
351.2100	17.99	15.40	33.39	46.00	-12.61	Quasi-Peak

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

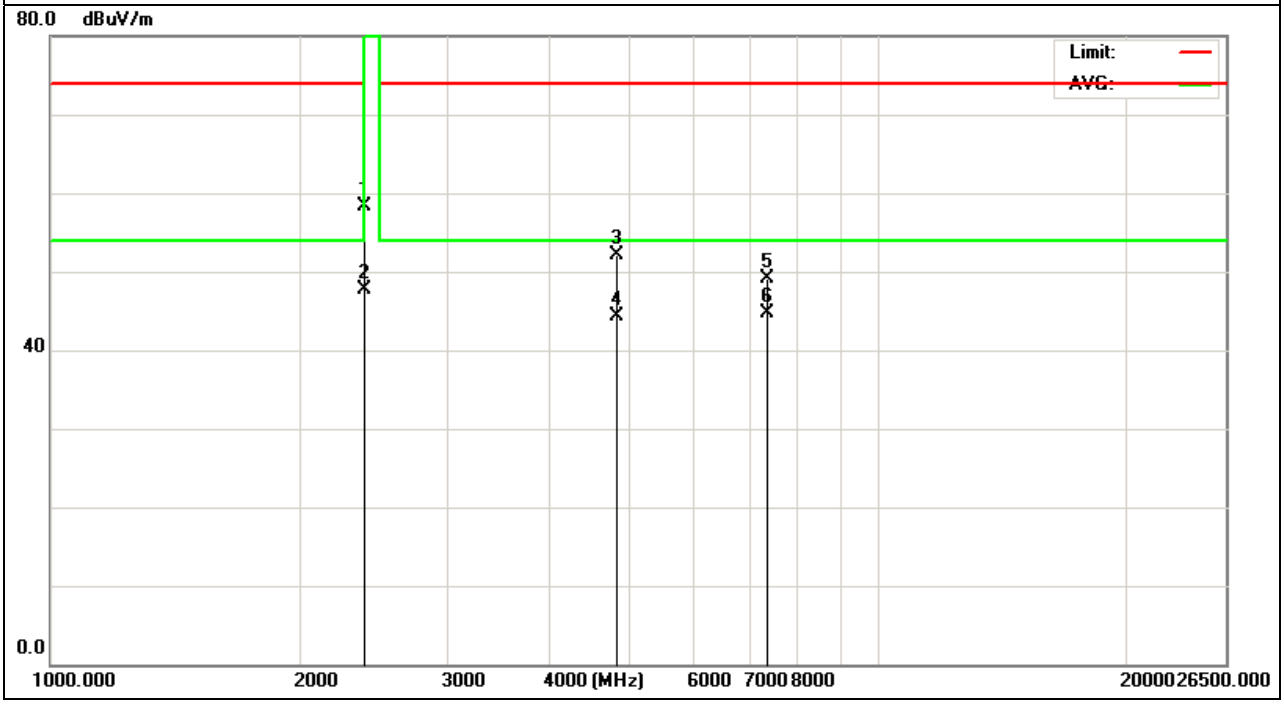


3.2.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH1 (802.11b Mode)	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.00	25.60	32.65	58.25	74.00	-15.75	peak
2400.00	15.12	32.65	47.77	54.00	-6.23	AVG
4824.00	8.12	44.04	52.16	74.00	-21.84	peak
4824.00	0.31	44.04	44.35	54.00	-9.65	AVG
7236.00	1.11	48.03	49.14	74.00	-24.86	peak
7236.00	-3.33	48.03	44.70	54.00	-9.30	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

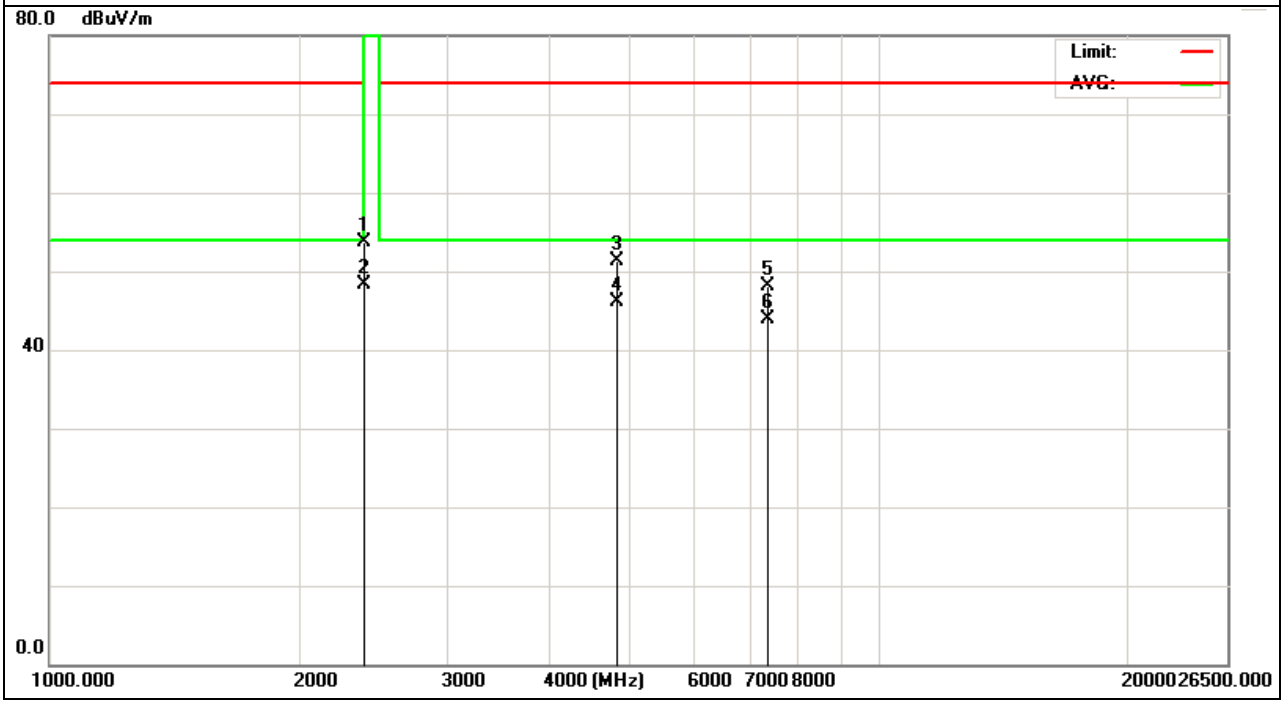


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH1 (802.11b Mode)	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.00	21.11	32.65	53.76	74.00	-20.24	peak
2400.00	15.67	32.65	48.32	54.00	-5.68	AVG
4824.00	7.32	44.04	51.36	74.00	-22.64	peak
4824.00	2.12	44.04	46.16	54.00	-7.84	AVG
7326.00	0.12	48.03	48.15	74.00	-25.85	peak
7326.00	-4.11	48.03	43.92	54.00	-10.08	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

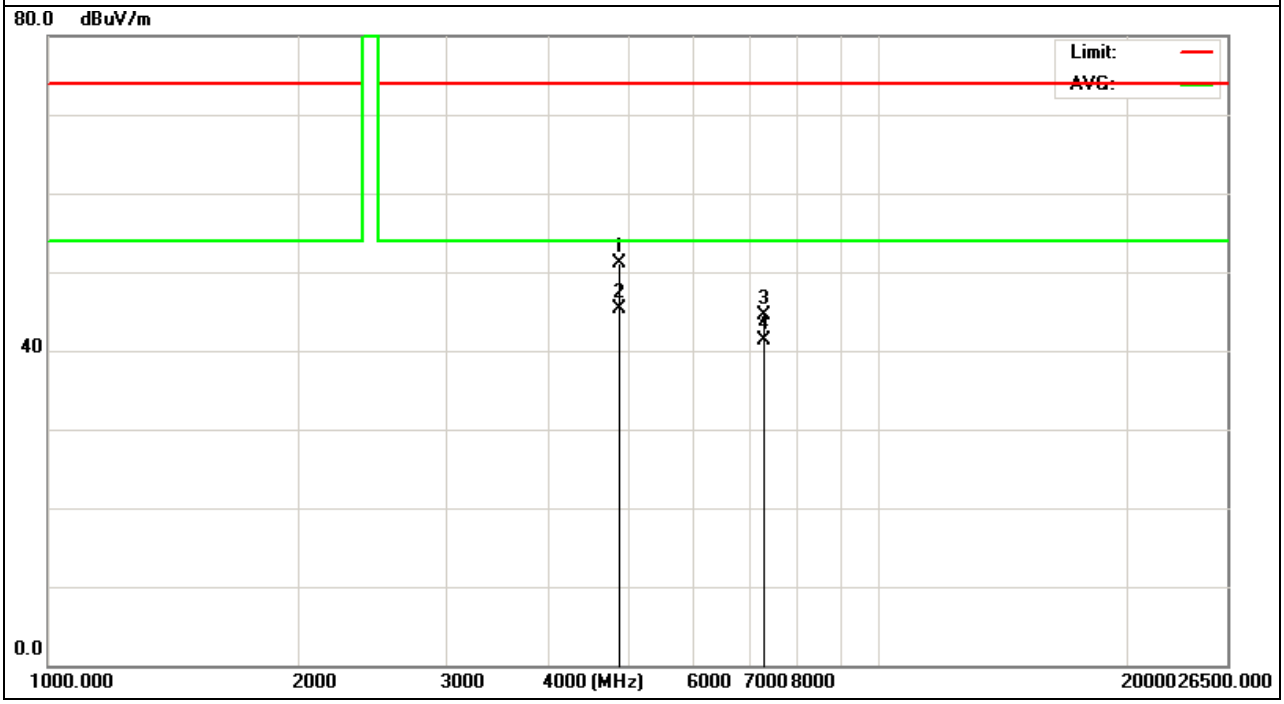


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH6 (802.11b Mode)	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	7.12	44.07	51.19	74.00	-22.81	peak
4874.00	1.21	44.07	45.28	54.00	-8.72	AVG
7311.00	-3.43	47.97	44.54	74.00	-29.46	peak
7311.00	-6.67	47.97	41.30	54.00	-12.70	AVG

Remark:

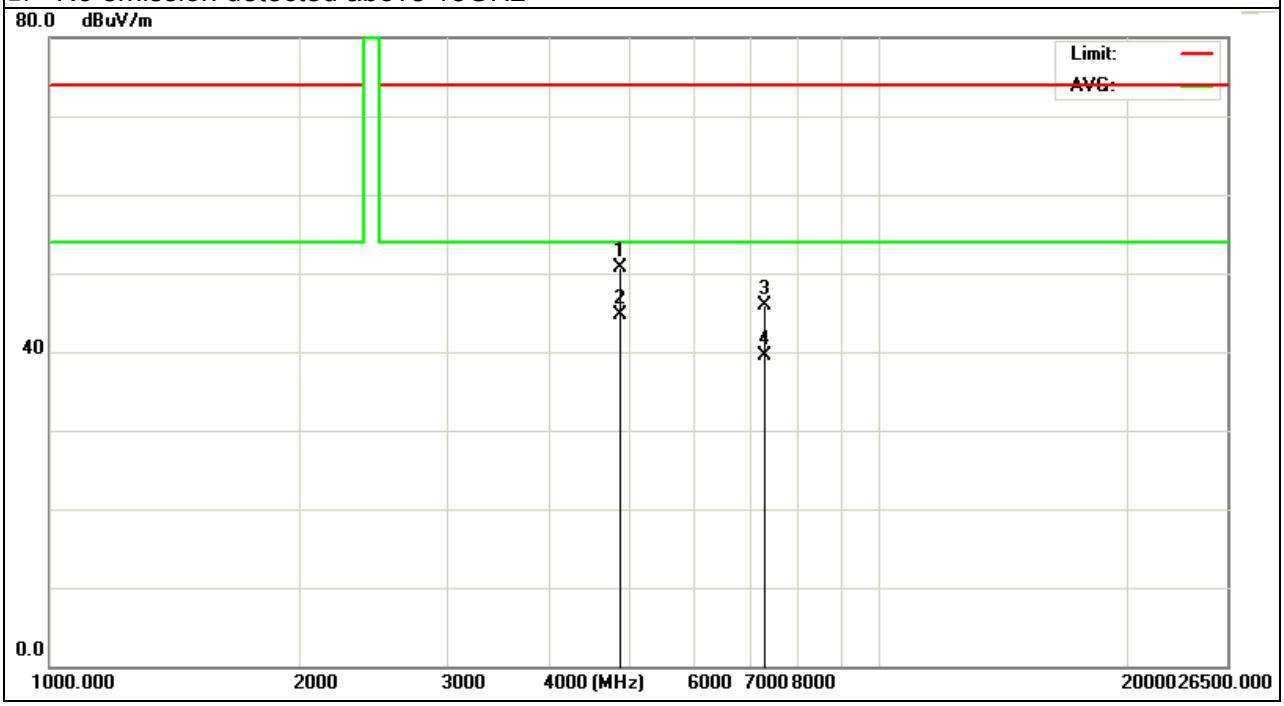
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz



EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH6 (802.11b Mode)	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	6.67	44.07	50.74	74.00	-23.26	peak
4874.00	0.67	44.07	44.74	54.00	-9.26	AVG
7311.00	-2.14	47.97	45.83	74.00	-28.17	peak
7311.00	-8.46	47.97	39.51	54.00	-14.49	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

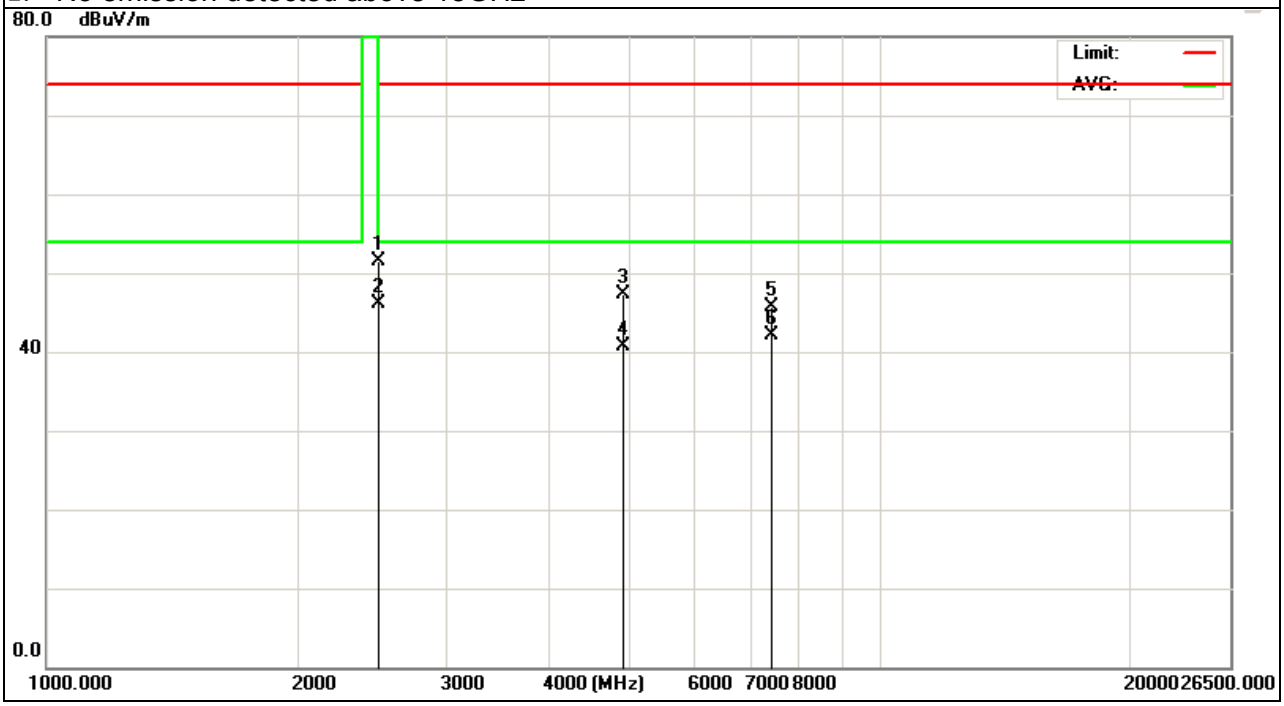


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH11 (802.11b Mode)	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	18.24	33.27	51.51	74.00	-22.49	peak
2483.5	12.91	33.27	46.18	54.00	-7.82	AVG
4924.00	3.17	44.10	47.27	74.00	-26.73	peak
4924.00	-3.33	44.10	40.77	54.00	-13.23	AVG
7386.00	-2.51	48.31	45.80	74.00	-28.20	peak
7386.00	-6.13	48.31	42.18	54.00	-11.82	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

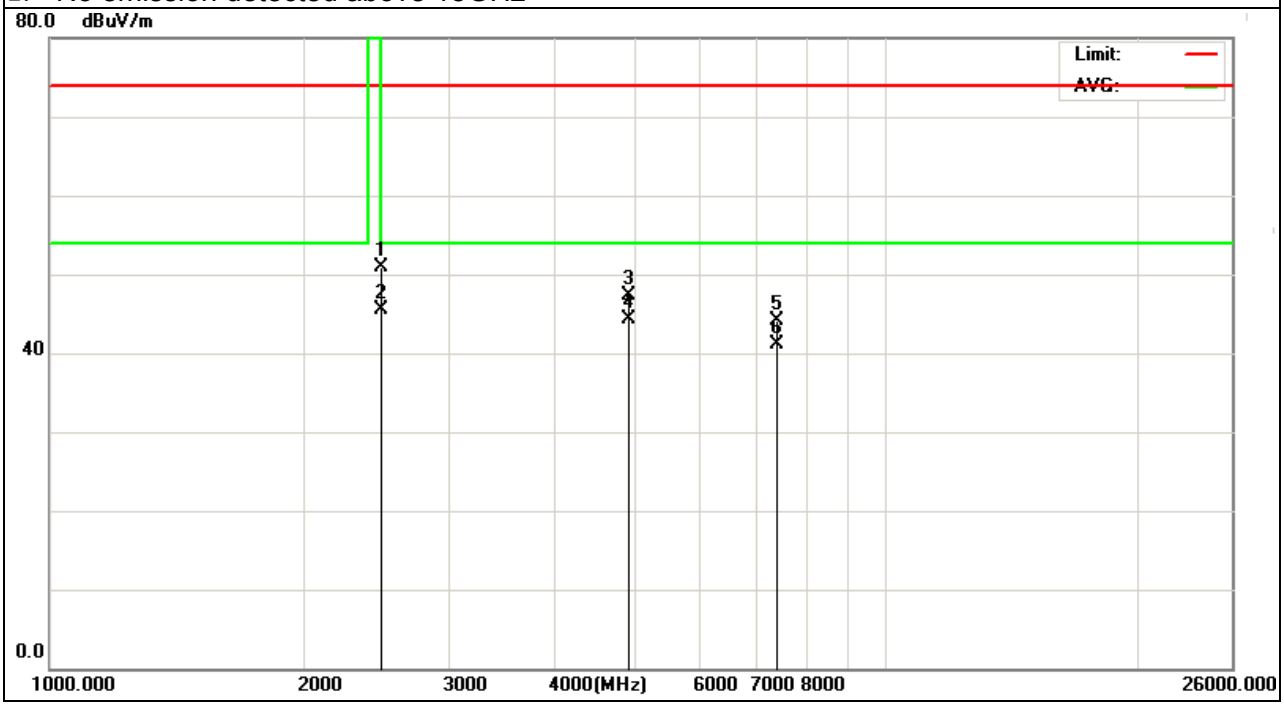


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH11 (802.11b Mode)	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	52.11	4.36	56.47	74.00	-17.53	peak
2483.5	43.98	4.36	48.34	54.00	-5.66	AVG
4924.00	44.77	12.24	57.01	74.00	-16.99	peak
4924.00	35.51	12.24	47.75	54.00	-6.25	AVG
7386.00	35.58	18.50	54.08	74.00	-19.92	peak
7386.00	27.23	18.50	45.73	54.00	-8.27	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

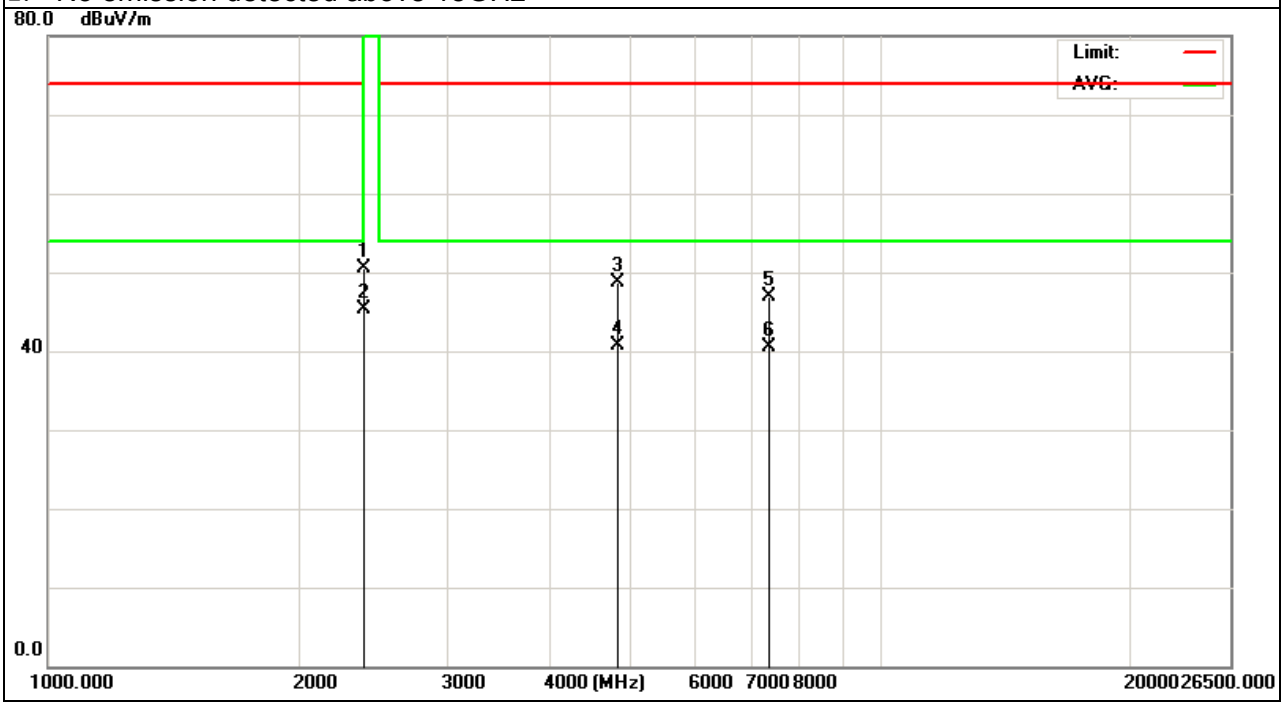


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH1 (802.11g Mode)	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.00	19.50	32.65	52.15	74.00	-21.85	peak
2400.00	15.23	32.65	47.88	54.00	-6.12	AVG
4824.00	0.23	44.04	44.27	74.00	-29.73	peak
4824.00	-3.43	44.04	40.61	54.00	-13.39	AVG
7236.00	1.21	48.03	49.24	74.00	-24.76	peak
7236.00	-4.23	48.03	43.80	54.00	-10.20	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

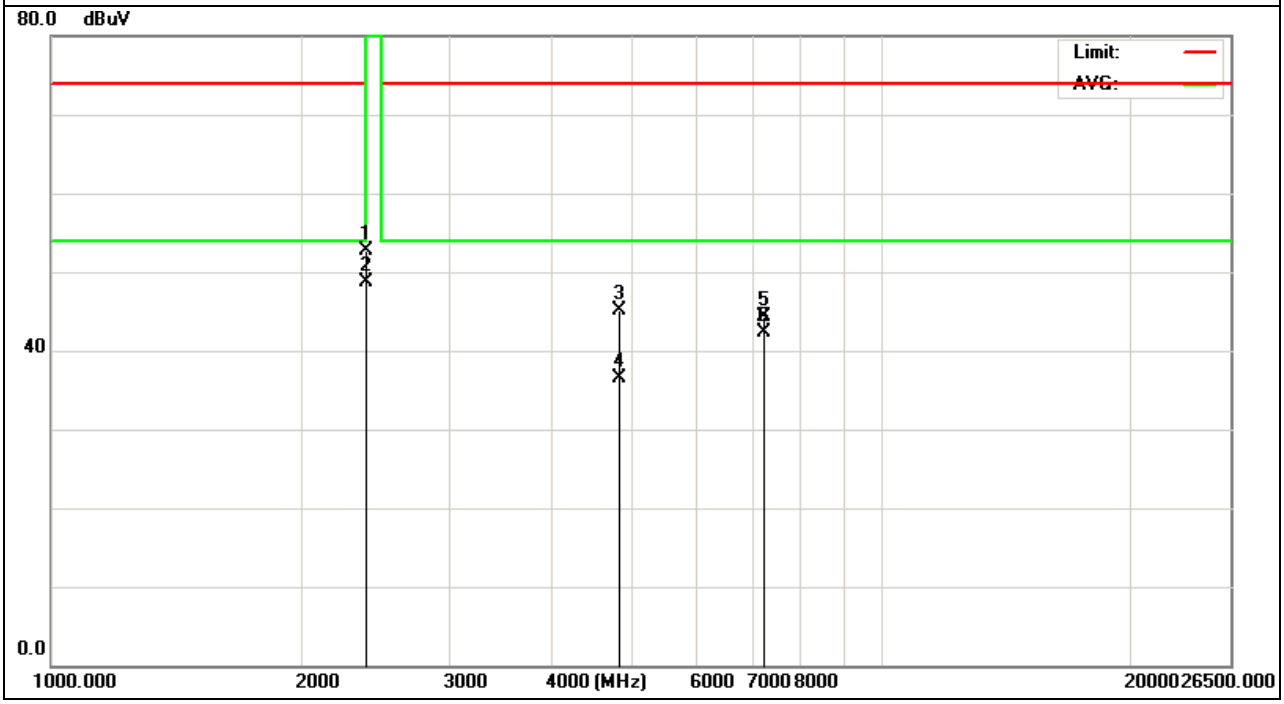


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH1 (802.11g Mode)	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400.00	17.77	32.65	50.42	74.00	-23.58	peak
2400.00	12.65	32.65	45.30	54.00	-8.70	AVG
4824.00	4.58	44.04	48.62	74.00	-25.38	peak
4824.00	-3.39	44.04	40.65	54.00	-13.35	AVG
7236.00	-1.13	48.63	46.90	74.00	-27.10	peak
7236.00	-7.46	48.63	40.57	54.00	-13.43	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

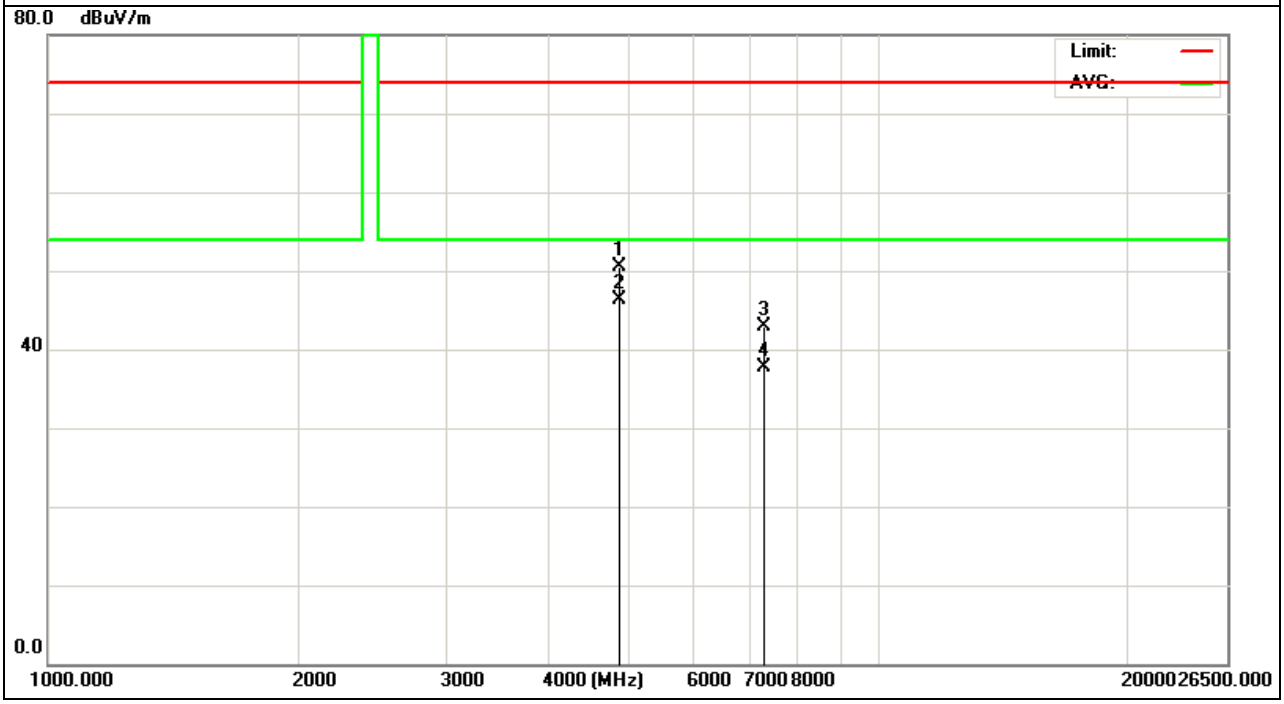


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH6 (802.11g Mode)	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	6.37	44.07	50.44	74.00	-23.56	peak
4874.00	2.19	44.07	46.26	54.00	-7.74	AVG
7311.00	-5.14	47.97	42.83	74.00	-31.17	peak
7311.00	-10.24	47.97	37.73	54.00	-16.27	AVG

Remark:

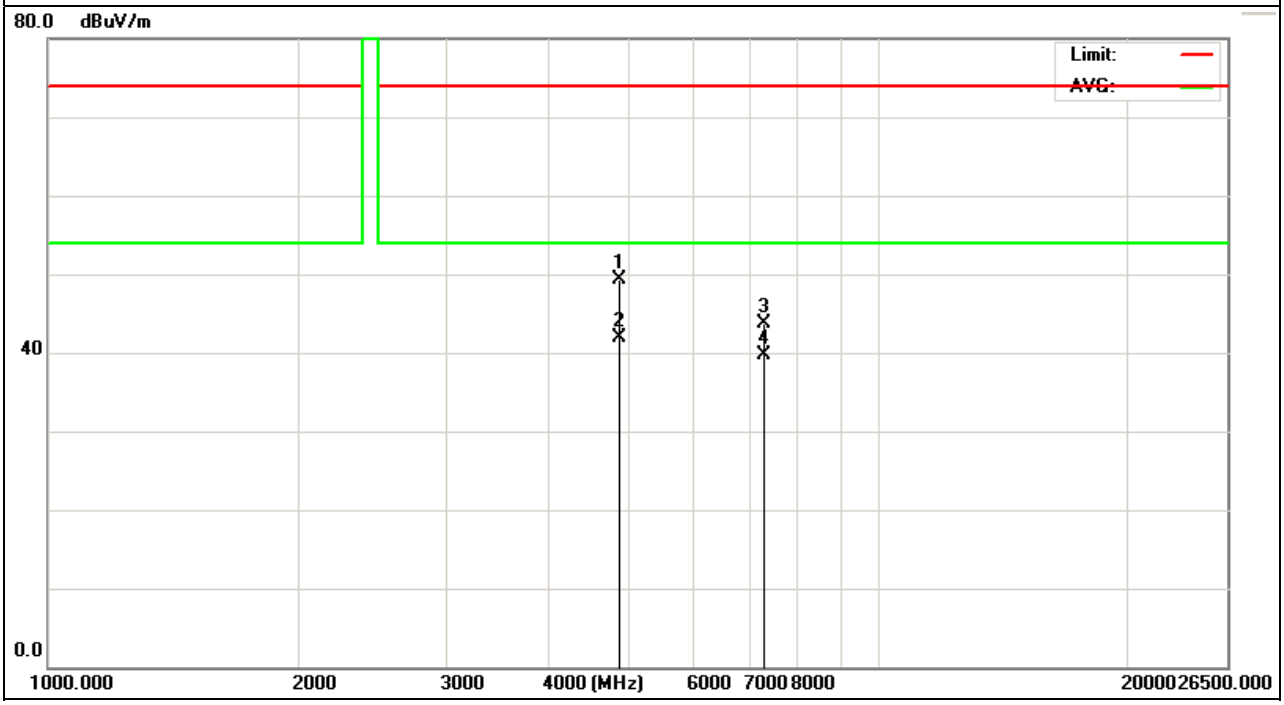
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz



EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH6 (802.11g Mode)	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	5.32	44.07	49.39	74.00	-24.61	peak
4874.00	-2.13	44.07	41.94	54.00	-12.06	AVG
7311.00	-4.26	47.97	43.71	74.00	-30.29	peak
7311.00	-8.26	47.97	39.71	54.00	-14.29	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

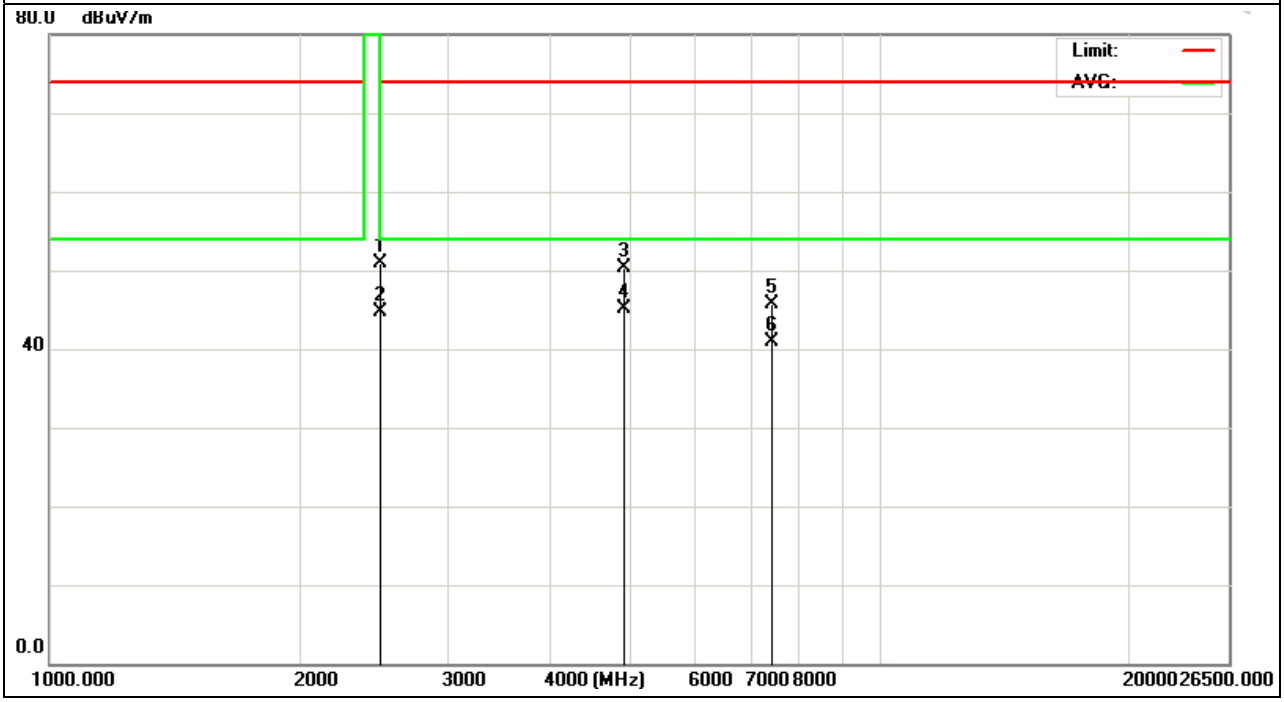


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH11 (802.11g Mode)	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	17.56	33.27	50.83	74.00	-23.17	peak
2483.5	11.44	33.27	44.71	54.00	-9.29	AVG
4924.00	6.21	44.10	50.31	74.00	-23.69	peak
4924.00	1.01	44.10	45.11	54.00	-8.89	AVG
7386.00	-2.51	48.31	45.80	74.00	-28.20	peak
7386.00	-7.31	48.31	41.00	54.00	-13.00	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

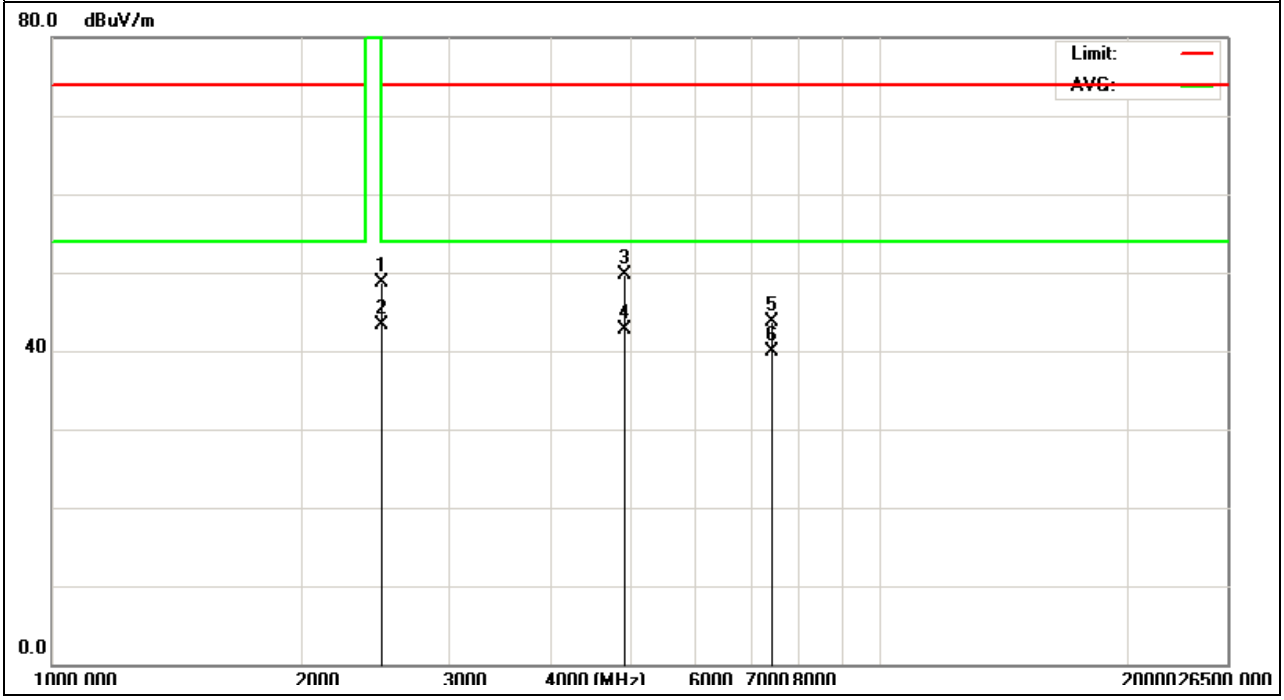


EUT：	MID	Model Name. ：	M806
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC9V
Test Mode ：	CH11(802.11g Mode)	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	15.49	33.27	48.76	74.00	-25.24	peak
2483.50	9.98	33.27	43.25	54.00	-10.75	AVG
4924.00	5.69	44.10	49.77	74.00	-24.21	peak
4924.00	-1.31	44.10	42.79	54.00	-11.21	AVG
7386.00	-4.51	48.31	43.80	74.00	-30.20	peak
7386.00	-8.35	48.31	39.96	54.00	-14.04	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz



4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (d)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RB	3 kHz
VB	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	500s

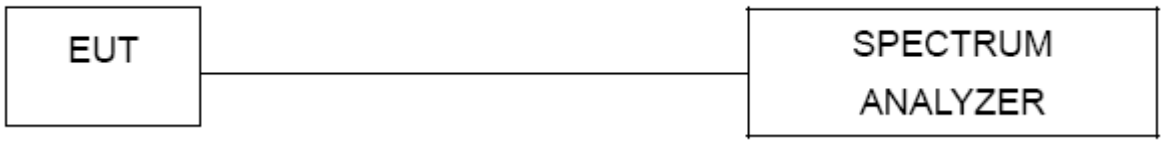
4.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 3KHz, VBW=30KHz, Sweep time = 500s.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

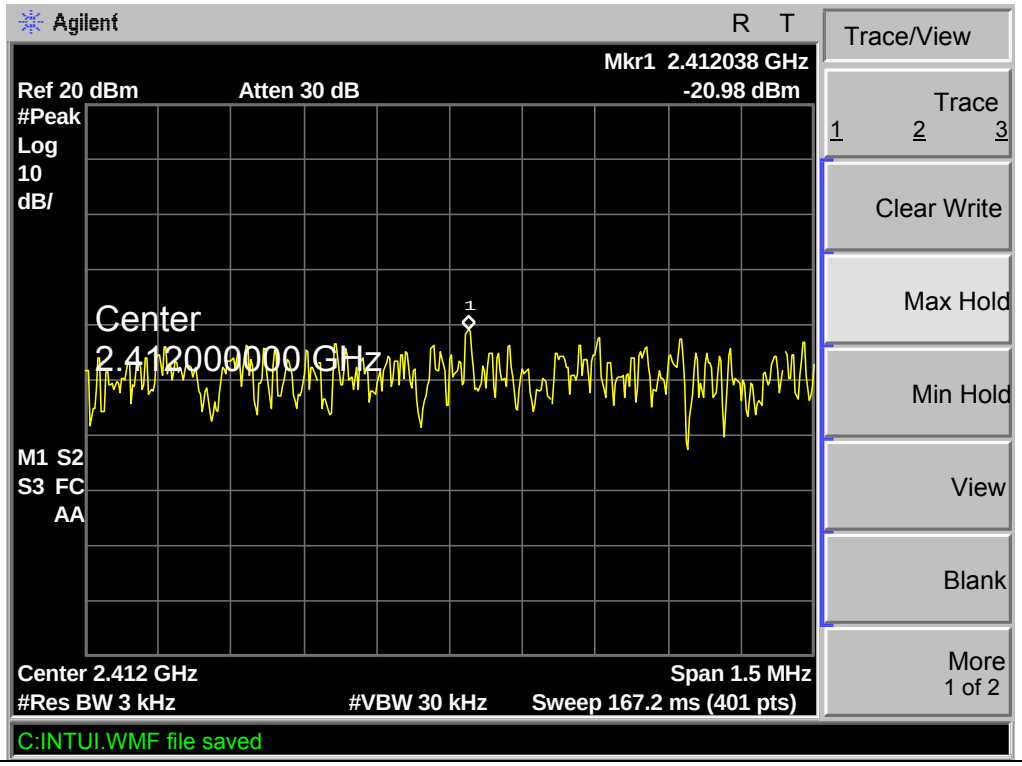
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

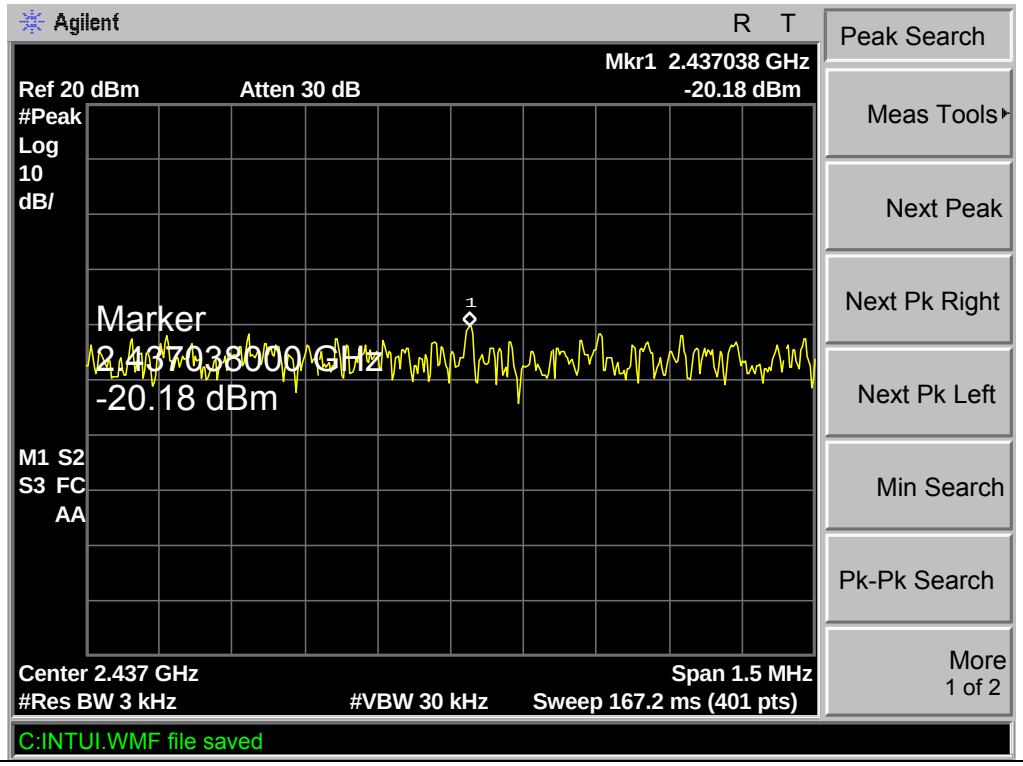
EUT：	MID	Model Name. ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX B MODE /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-20.98	8	**PASS**
2437 MHz	-20.18	8	**PASS**
2462 MHz	-17.36	8	**PASS**

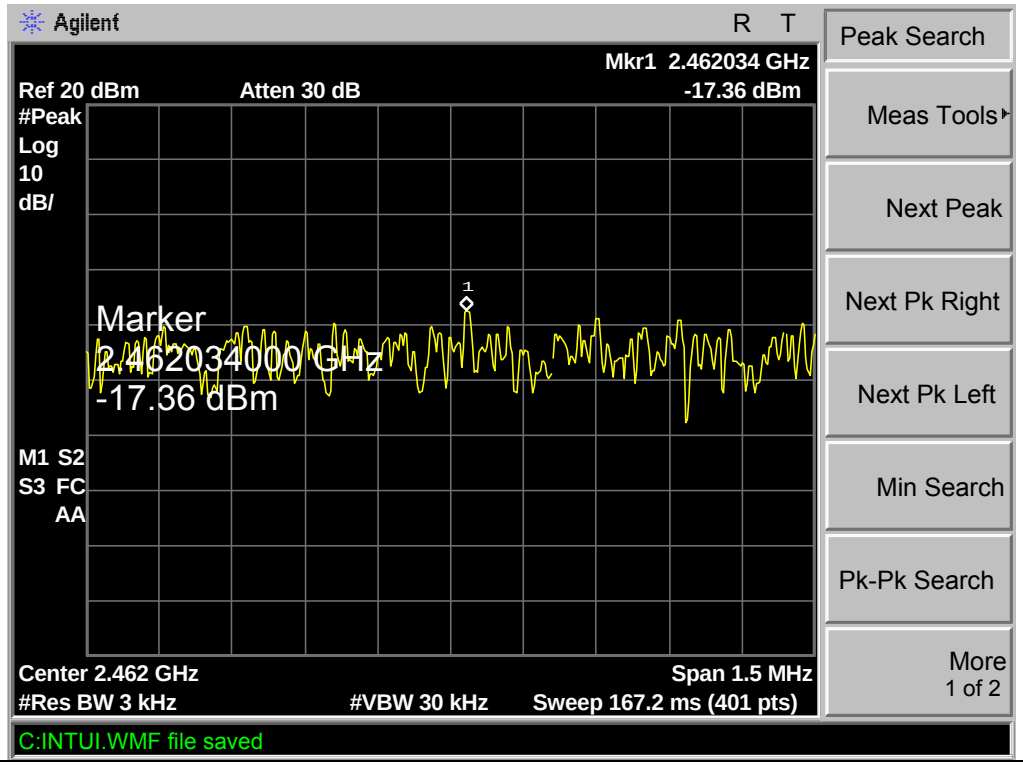
TX CH01



TX CH06



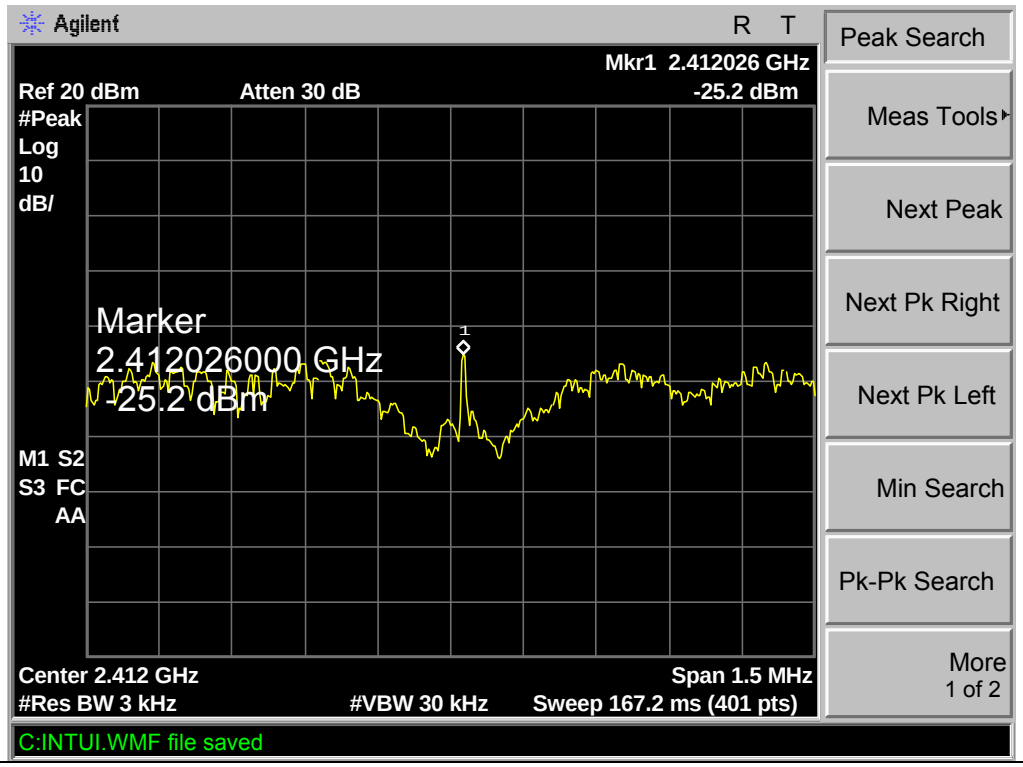
TX CH11



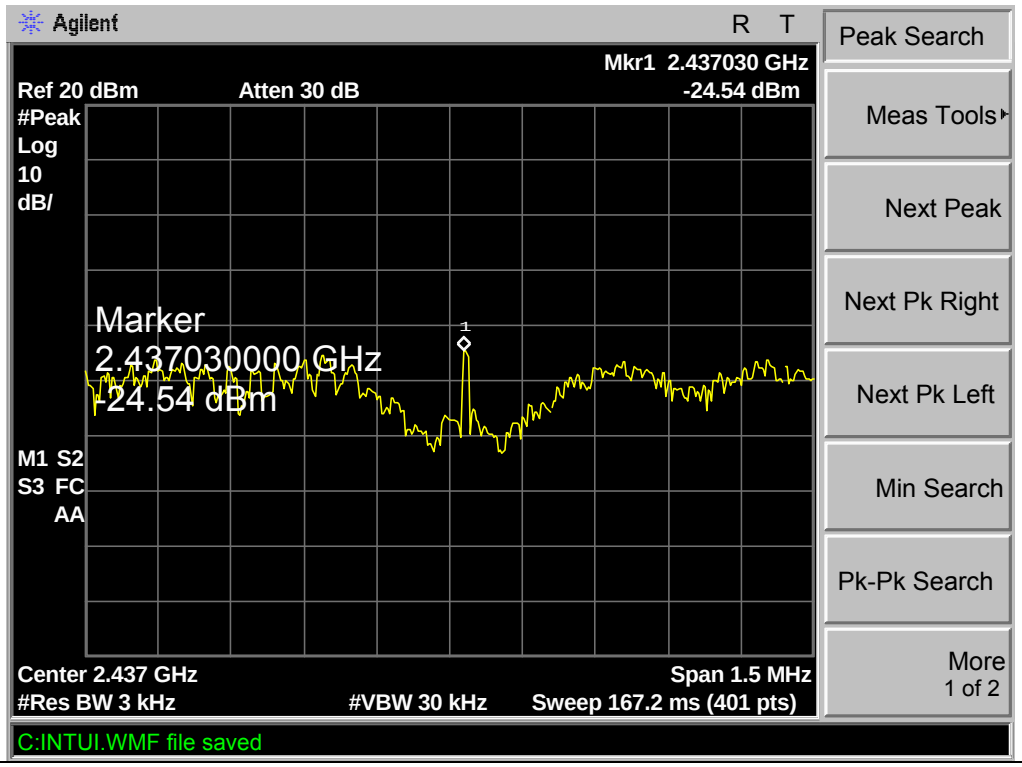
EUT：	MID	Model Name. ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-25.2	8	**PASS**
2437MHz	-24.54	8	**PASS**
2462 MHz	-24.05	8	**PASS**

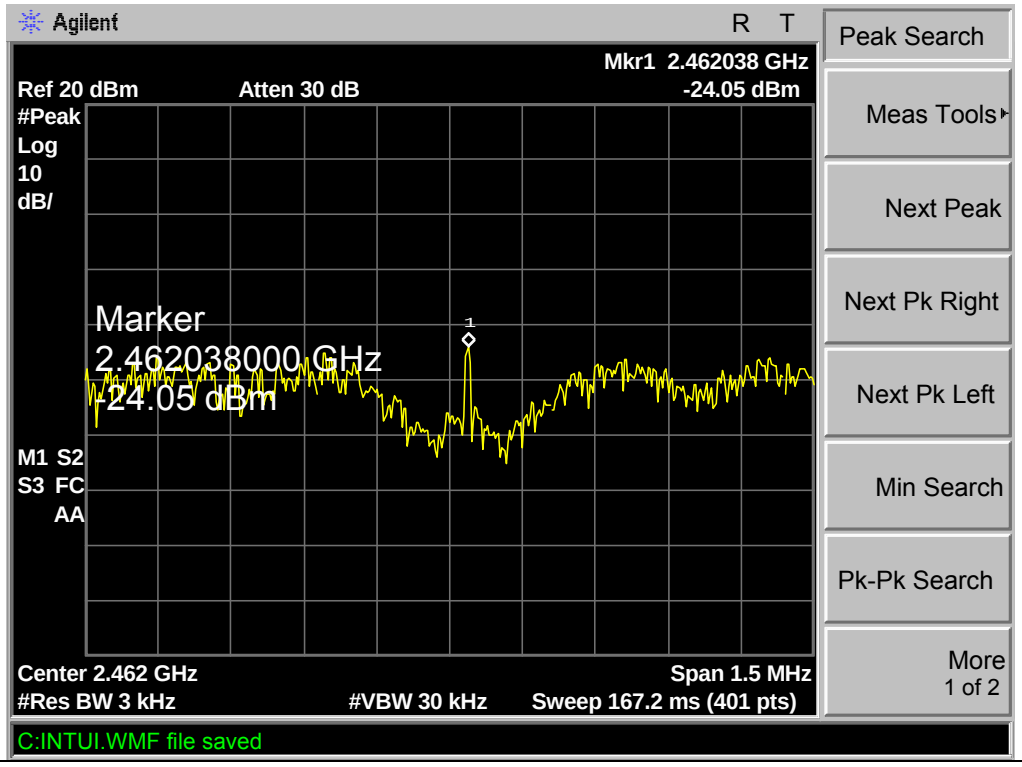
TX CH01



TX CH06



TX CH11



5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

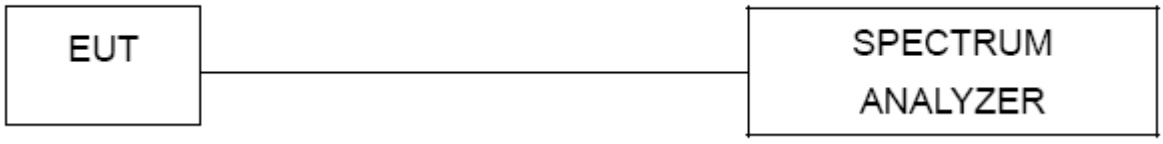
5.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

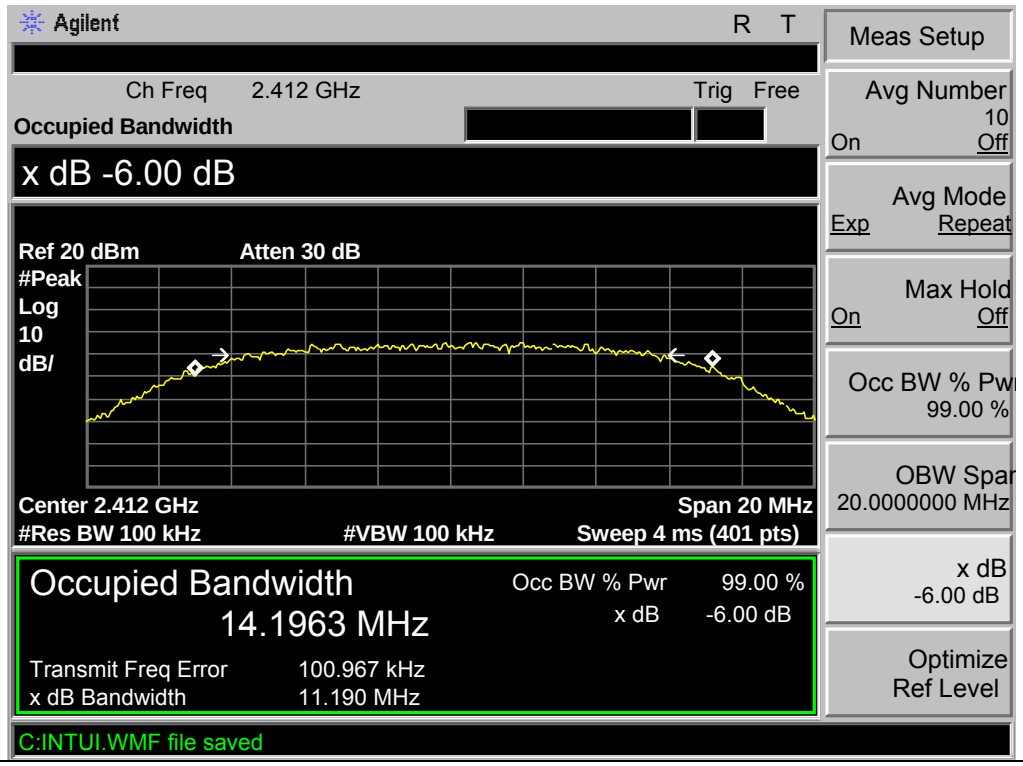
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

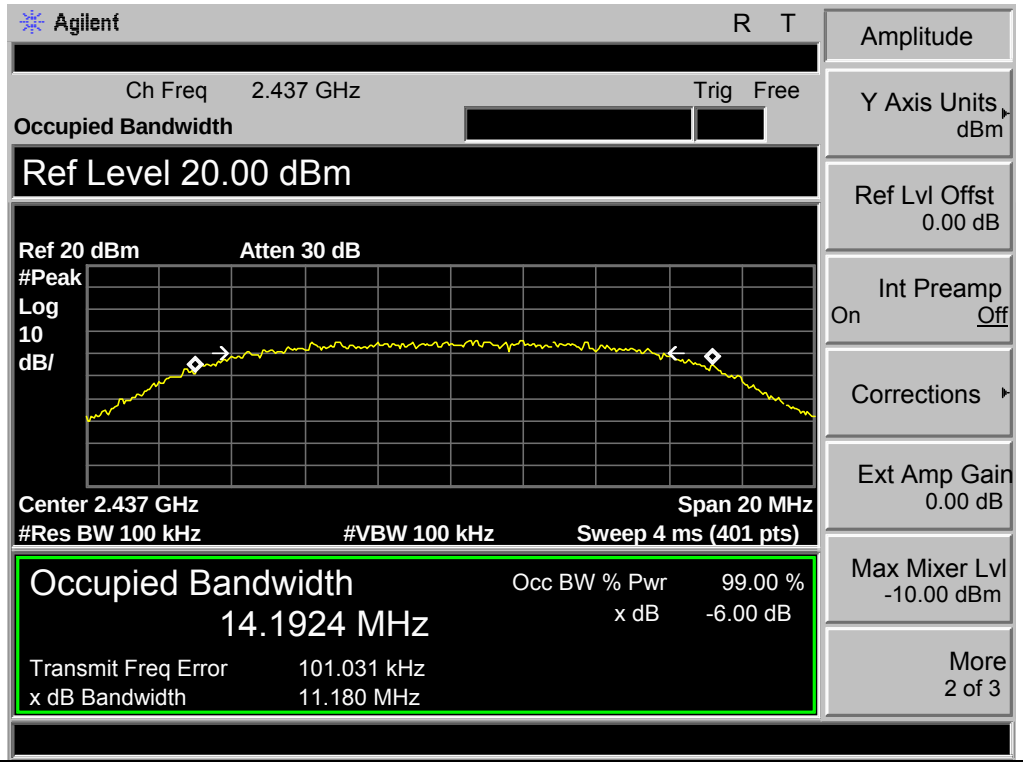
EUT：	MID	Model Name. ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX B MODE /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Channel Separation (MHz)	Result
2412 MHz	11.19	14.19	>=500KHz	**PASS**
2437 MHz	11.18	14.19	>=500KHz	**PASS**
2462 MHz	11.18	14.17	>=500KHz	**PASS**

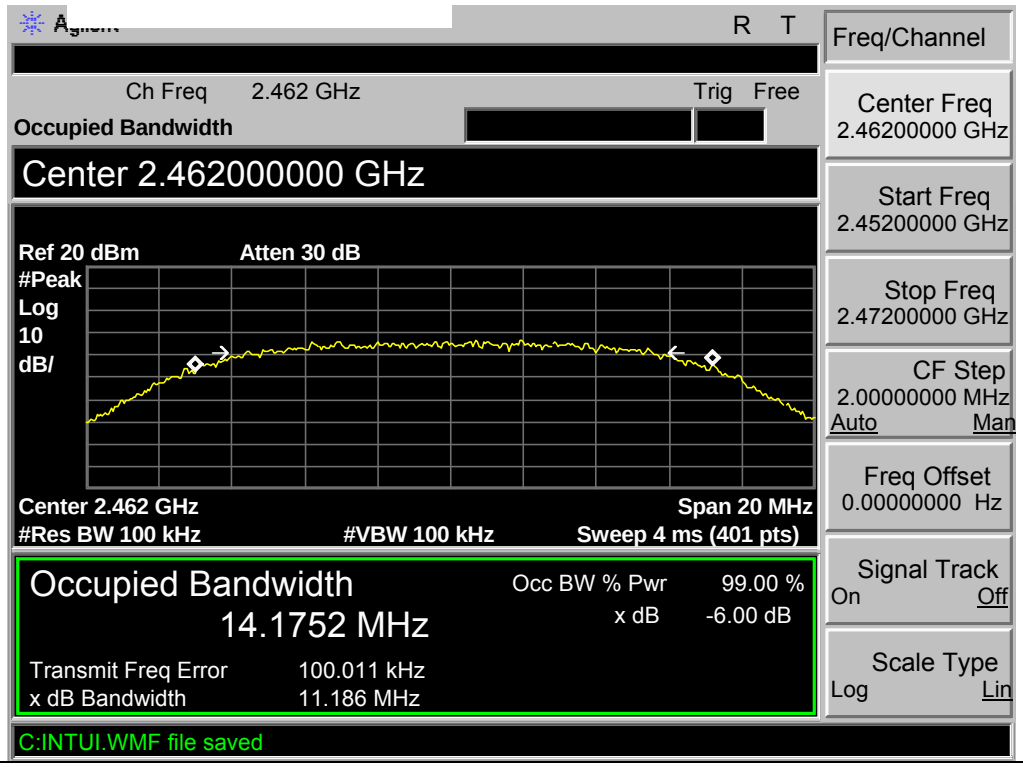
TX CH 01



TX CH 06



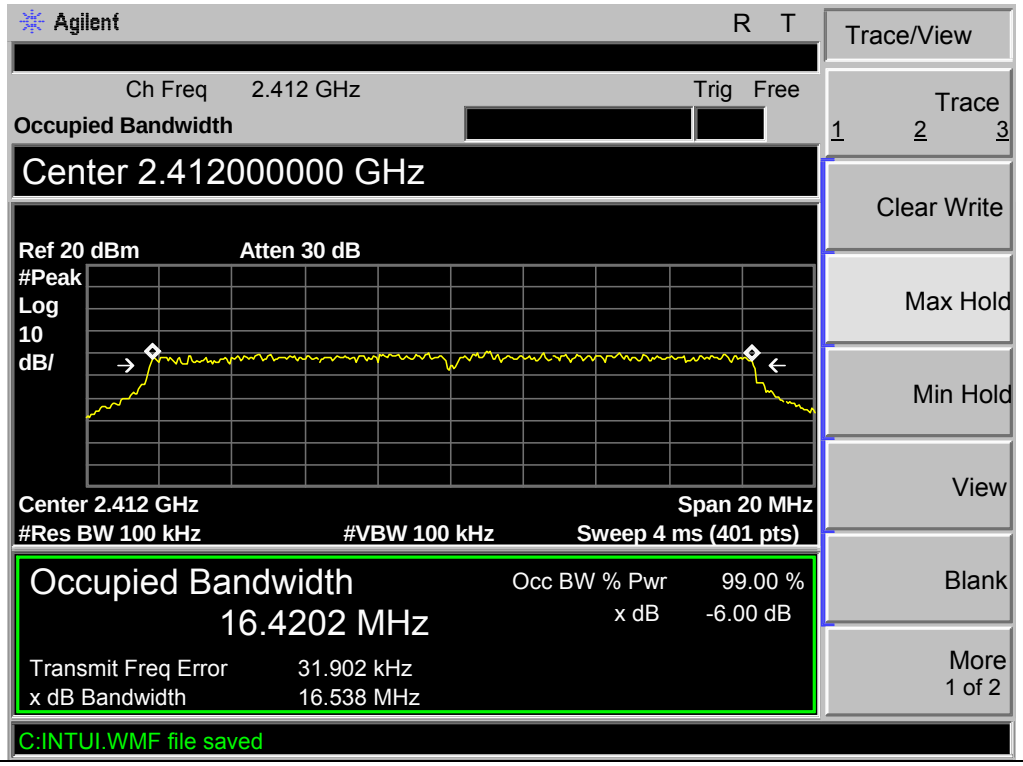
TX CH 11



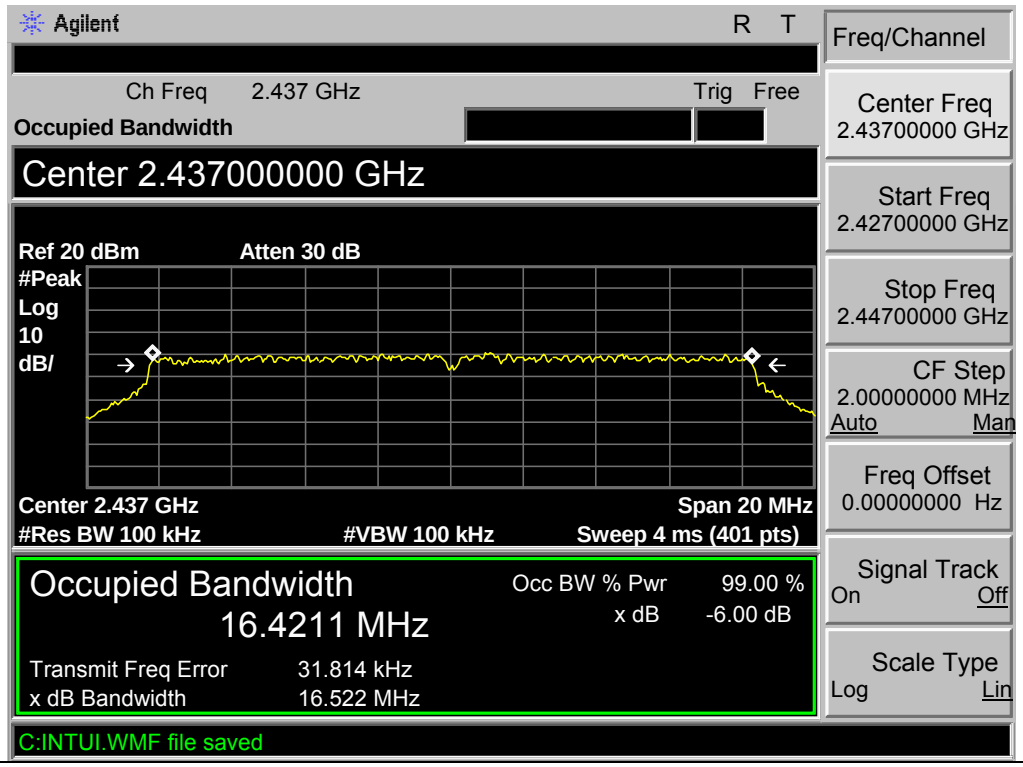
EUT：	MID	Model Name. ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.53	16.42	>=500KHz	**PASS**
2437 MHz	16.52	16.42	>=500KHz	**PASS**
2462 MHz	16.54	16.42	>=500KHz	**PASS**

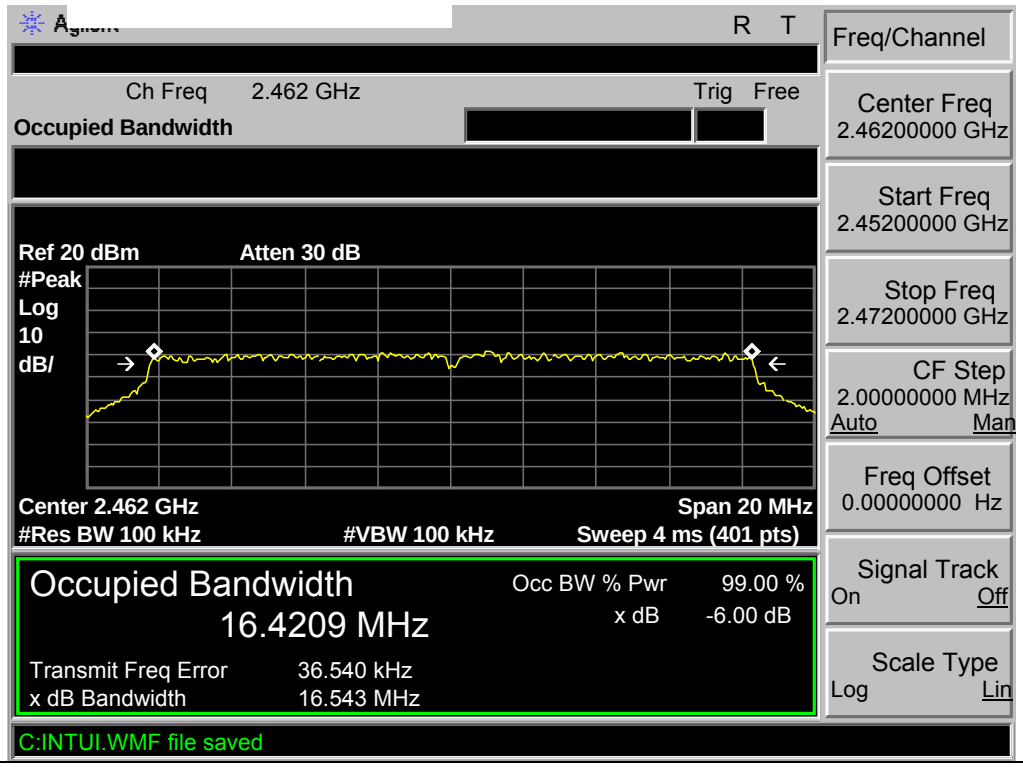
TX CH 01



TX CH 06



TX CH 11



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (b)(1)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

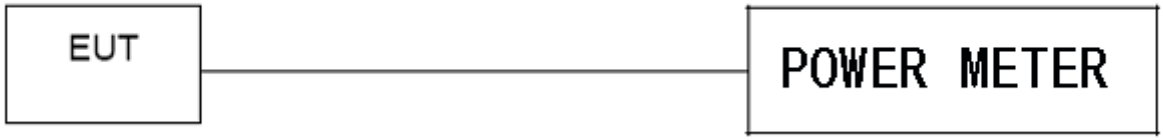
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT：	MID	Model Name. ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC9V
Test Mode ：	TX B MODE /CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Average output power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	10.41	30	1
CH06	2437	10.09	30	1
CH11	2462	10.01	30	1

EUT：	MID	Model Name ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC9V
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Test Channel	Frequency (MHz)	Average output power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	9.98	30	1
CH06	2437	9.53	30	1
CH11	2462	9.24	30	1

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100 KHz /100 KHz for Peak

7.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP

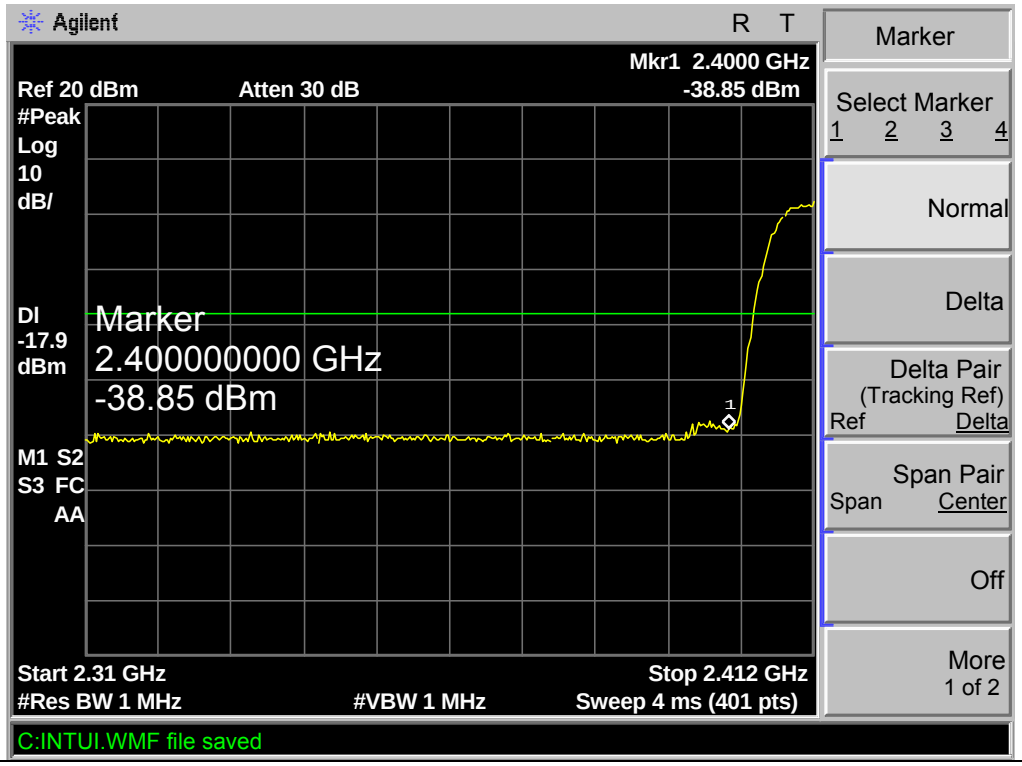
7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

EUT：	MID	Model Name ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC9V
Test Mode ：	TX B MODE /CH01, CH11		

TX CH01



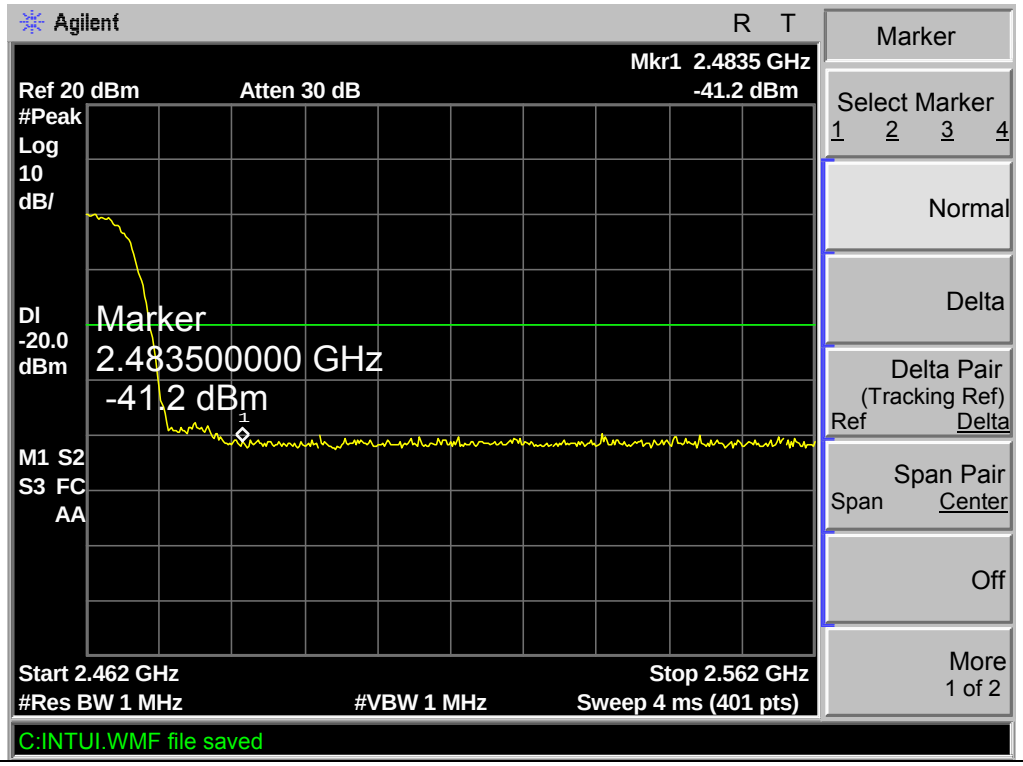
Horizontal(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.00	19.50	32.65	52.15	74.00	-21.85	peak
2400.00	15.23	32.65	47.88	54.00	-6.12	AVG

Vertical(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.00	17.77	32.65	50.42	74.00	-23.58	peak
2400.00	12.65	32.65	45.30	54.00	-8.70	AVG

TX CH11



Horizontal(radiated method)

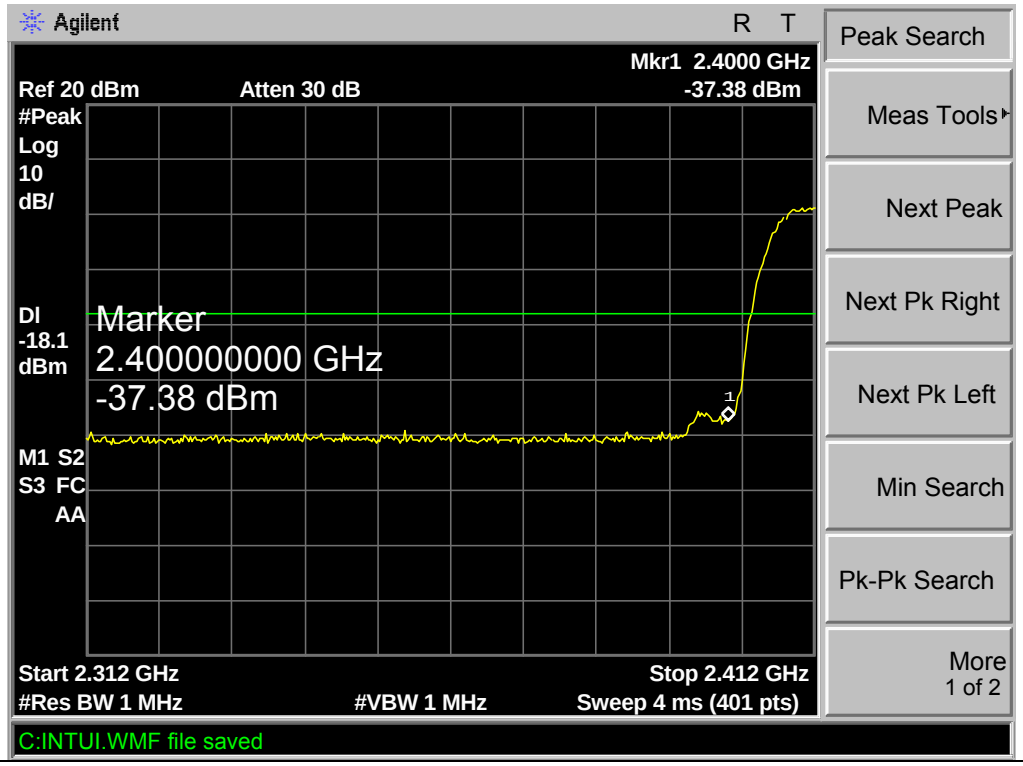
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	18.24	33.27	51.51	74.00	-22.49	peak
2483.5	12.91	33.27	46.18	54.00	-7.82	AVG

Vertical(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	15.49	33.27	48.76	74.00	-25.24	peak
2483.50	9.98	33.27	43.25	54.00	-10.75	AVG

EUT：	MID	Model Name ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 9V
Test Mode ：	TX G MODE /CH01, CH11		

TX CH01



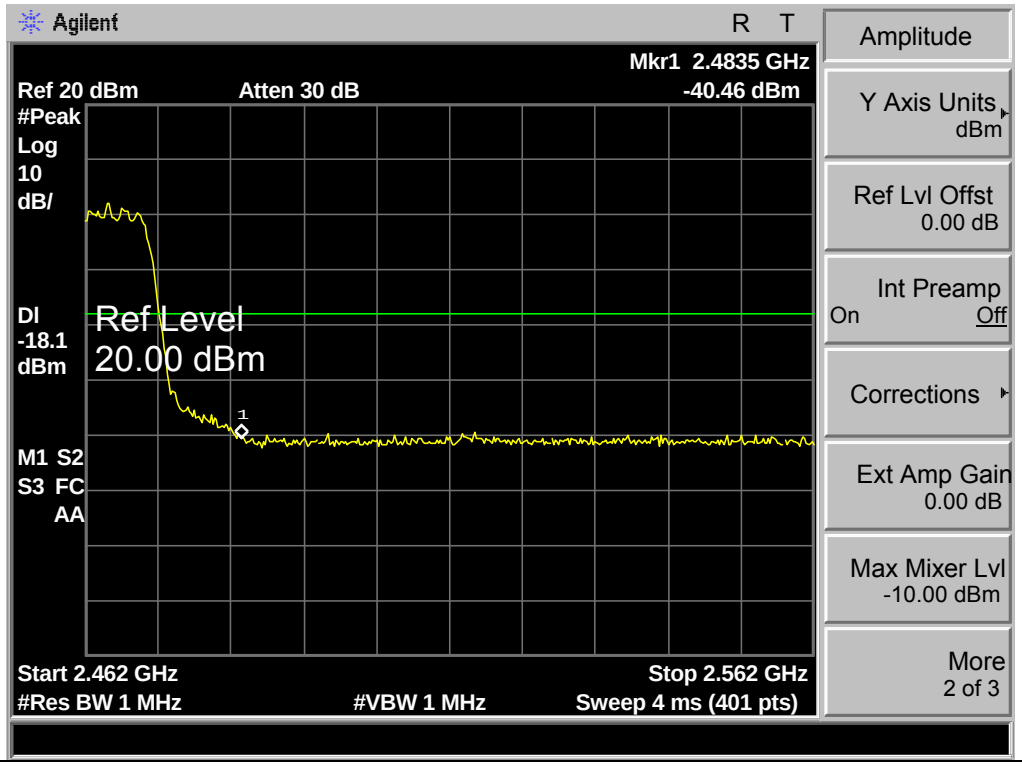
Horizontal(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.00	17.77	32.65	50.42	74.00	-23.58	peak
2400.00	12.65	32.65	45.30	54.00	-8.70	AVG

Vertical(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.00	17.77	32.65	50.42	74.00	-23.58	peak
2400.00	12.65	32.65	45.30	54.00	-8.70	AVG

TX CH11



Horizontal(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	17.56	33.27	50.83	74.00	-23.17	peak
2483.5	11.44	33.27	44.71	54.00	-9.29	AVG

Vertical(radiated method)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	15.49	33.27	48.76	74.00	-25.24	peak
2483.50	9.98	33.27	43.25	54.00	-10.75	AVG

8. RF EXPOSURE TEST

8.1 APPLIED PROCEDURES / LIMIT

These devices are not exempted from compliance does not exceed the Commission's RF exposure guidelines.Unless a device operates at substantially low power levels,with a low gain antenna(s),supporting information is generally needed to establish the various potential operating configurations and exposure conditions of a transmitter and its antenna(s) in order to determine compliance with the RF exposure guidelines.
In order to demonstrate compliance with MPE requirement(see Section 2.1091),the following information is typically needed:
Calculation that estimates the minimum separation distance(20 cm or more)between an antenna and persons required to satisfy power density limits defined for free space.
Antenna installation and device operating instructions for installers(professional/unskilled users), and the parties responsible for ensuring compliance with the RF exposure requirement Any caution statements and/or warming labels that are necessary in order to comply with the exposure limits Any other RF exposure related issues that may affect MPE compliance.

FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency(RF) radiation as specified in 1.1307(b).

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

8.1.1 MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

P :power input to the antenna in Mw
EIRP :Equivalent(effective) isotropic radiated power.
S :power density mW/ cm^2
G ;numeric gain of antenna relative to isotropic radiator
R :distance to centre of radiation in cm

FCC radio frequency exposure limits may be exceeded at distances closer than r cm from the antenna of this device

$$r = \sqrt{\frac{PG}{4\pi S}} = \sqrt{\frac{EIRP}{4\pi S}}$$

$EIRP=10^{(Antenna\ Gain+Peak\ Output\ Power/10)}$

Note:

1. s=1.0 mW /cm^2 for limits for General Population/Uncontrolled Exposures.
2. The time averaged power over 30 minutes will be equaled Output Power.
3. Minimum calculated separation distance betweet antenna and persons required:0.53 cm
4. The Power Density at a distance of 20cm calculated from the formula is far below the limit of 1MW/ cm^2
5. For portable device,the power limit is 60/f(in GHz) mW
   For limit 60/f is equal:
   60/2.412=24.87mW
   60/2.437=24.62 mW
   60/2.462=24.37mW
   The max.output power E.I.R.P is 19,95mW

8.1.2 TEST RESULTS

EUT：	MID	Model Name ：	M806
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC9V
Test Mode ：	TX Mode		

Operating Mode:802.11 b

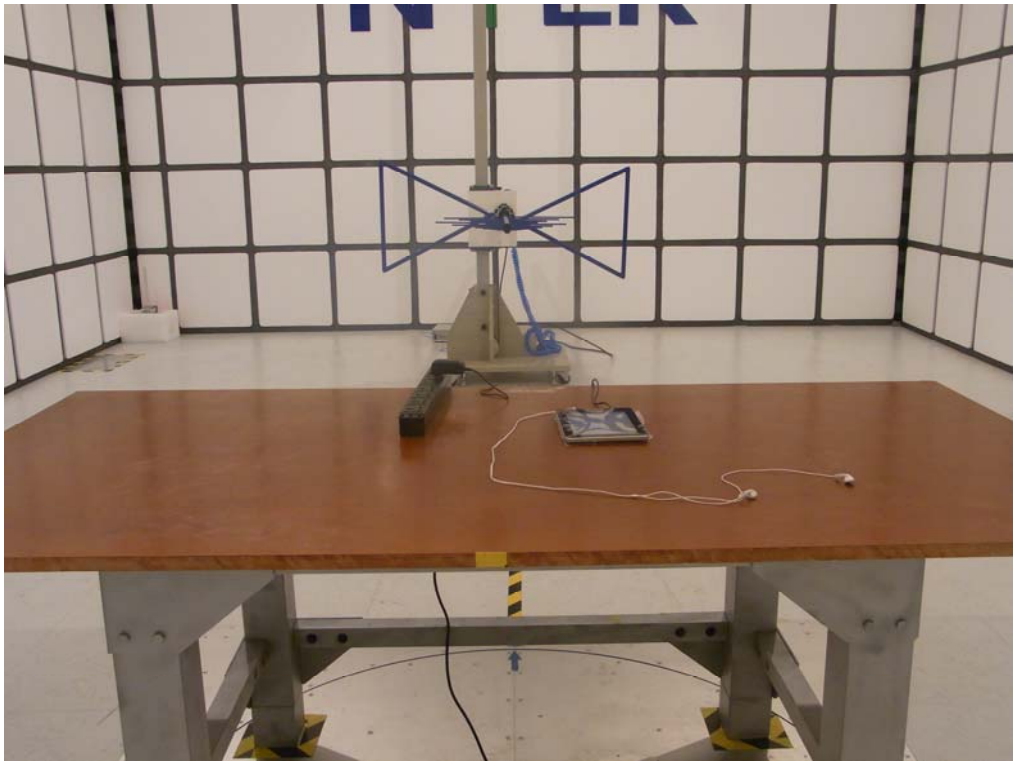
Channal (MHz)	peak output power (dBm)	Limit of Power (dBm)	Limit of Power (mw)	Result
2412	10.41	13.96	24.87	Pass
2437	10.09	13.91	24.62	Pass
2462	10.01	13.87	24.37	Pass

Operating Mode:802.11 g

Channal (MHz)	peak output power (dBm)	Limit of Power (dBm)	Limit of Power (dBm)	Result
2412	9.98	13.96	24.87	Pass
2437	9.53	13.91	24.62	Pass
2462	9.24	13.87	24.37	Pass

9. EUT TEST PHOTO

Radiated Measurement Photos



Conducted Measurement Photos