

# FCC Radio Test Report

## FCC ID: 2AEIWMYNT01S

This report concerns (check one): ☒ Original Grant ☐ Class II Change

**Project No.** : 1503C198  
**Equipment** : MYNT Smart Companion  
**Model Name** : M01S  
**Applicant** : Slightech, Inc.  
**Address** : 18 Qingyuan Road, Mansion 530, Suite C602, Ta i  
Lake International Science Park, New Development  
District, Wuxi, Jiangsu, China

**Date of Receipt** : Mar. 24, 2015  
**Date of Test** : Mar. 24, 2015 ~ Apr. 02, 2015  
**Issued Date** : Apr. 03, 2015  
**Tested by** : BTL Inc.

**Testing Engineer** : David Mao  
(David Mao)

**Technical Manager** : Leo Hung  
(Leo Hung)

**Authorized Signatory** : Steven Lu  
(Steven Lu)

# **B T L I N C .**

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan,  
Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

### **Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**, or National Institute of Standards and Technology (**NIST**) of **U.S.A**.

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### **Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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## REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1503C198	Original Issue.	Apr. 03, 2015

## 1. CERTIFICATION

Equipment : MYNT Smart Companion  
Brand Name : MYNT  
Model Name : M01S  
Applicant : Slightech, Inc.  
Manufacturer : Slightech, Inc.  
Address : 18 Qingyuan Road, Mansion 530, Suite C602, Tai Lake International Science Park, New Development District, Wuxi, Jiangsu, China  
Factory : AnDao, Inc.  
Address : Tiantou Beiyong industrial district, Hengli Town, Dongguan, Guangdong Province, China  
Date of Test : Mar. 24, 2015 ~ Apr. 02, 2015  
Test Sample : ENGINEERING SAMPLE  
Standard(s) : FCC Part15, Subpart C :2014 (15.247) / ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1503C198) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C				
Standard(s)	Section	Test Item	Judgment	Remark
	15.207	Conducted Emission	N/A	NOTE(1)
	15.247(d)	Antenna conducted Spurious Emission	PASS	
	15.247(a)(2)	6dB Bandwidth	PASS	
	15.247(b)(3)	Peak Output Power	PASS	
	15.247(e)	Power Spectral Density	PASS	
	15.203	Antenna Requirement	PASS	
	15.209/15.205	Transmitter Radiated Emissions	PASS	

NOTE:

(1) "N/A" denotes test is not applicable to this device.

(2) The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v03r02 (Measurement Guidelines of DTS)

## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is located at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's test firm number for FCC: 319330

## 2.2 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:

The reported uncertainty of measurement  $y \pm U$ , where expanded 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. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)	Note
DG-CB03	CISPR	9KHz~30MHz	V	3.79	
		9KHz~30MHz	H	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	MYNT Smart Companion	
Brand Name	MYNT	
Model Name	M01S	
Model Difference	N/A	
Product Description	Operation Frequency	2402~2480 MHz
	Modulation Technology	GFSK(1Mbps)
	Bit Rate of Transmitter	
	Output Power (Max.)	1.32 dBm (1Mbps)
Power Source	Battery supplied.	
Power Rating	DC 3V	

**Note:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Channel List			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	0.43

### 3.2 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	TX Mode <b>NOTE (1)</b>

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
N/A	"N/A" denotes test is not applicable to this device.

For Radiated Test	
Final Test Mode	Description
Mode 1	TX Mode <b>NOTE (1)</b>

Note:

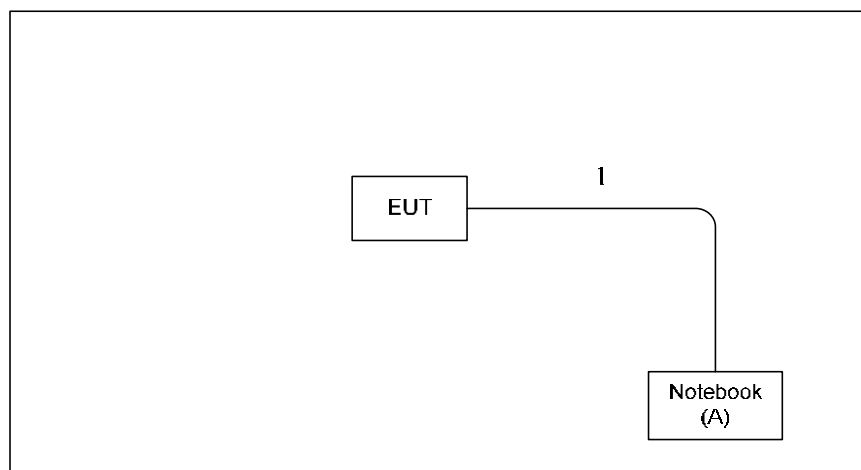
(1) The measurements are performed at the high, middle, low available channels.

### 3.3 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	0		
Frequency (MHz)	2402	2440	2480
BT LE	6	6	6

### 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.5 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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
A	Notebook	DELL	Inspiron 14-3437	DOC	N/A	-

Item	Shielded Type	Ferrite Core	Length	Note
1	YES	NO	0.5m	Fixture cable

Note:

- (1) For detachable type I/O cable should be specified the length in m in 『Length』 column.

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

(1) The limit of " \* " decreases with the logarithm of the frequency

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

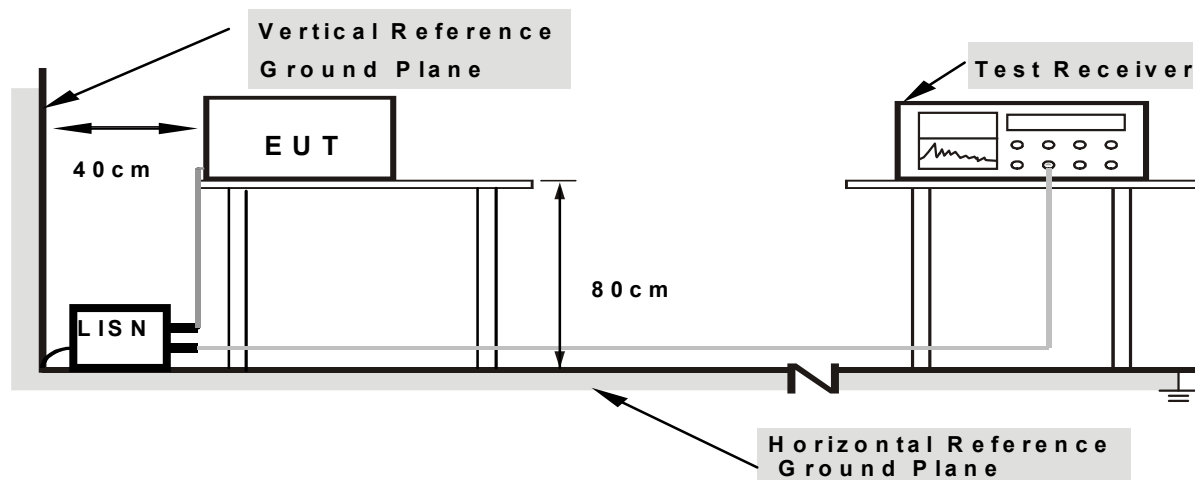
#### 4.1.2 TEST PROCEDURE

- The EUT was placed 0.8 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.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.4 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

#### 4.1.5 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.

#### 4.1.6 EUT TEST CONDITIONS

Temperature: N/A  
 Relative Humidity: N/A  
 Test Voltage: N/A

#### 4.1.7 TEST RESULTS

**Please refer to the Attachment A.**

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』 . If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform.In this case, a “ \* ” marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.
- (3) “ N/A ” denotes test is not applicable to this device.

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS

20dB 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.

#### LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency (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
960~1000	500	3

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	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).
- (4) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
 Margin Level = Measurement Value - Limit Value

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	RBW 1MHz VBW 3MHz peak detector for Pk value RMS detector for AV value



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

#### 4.2.2 TEST PROCEDURE

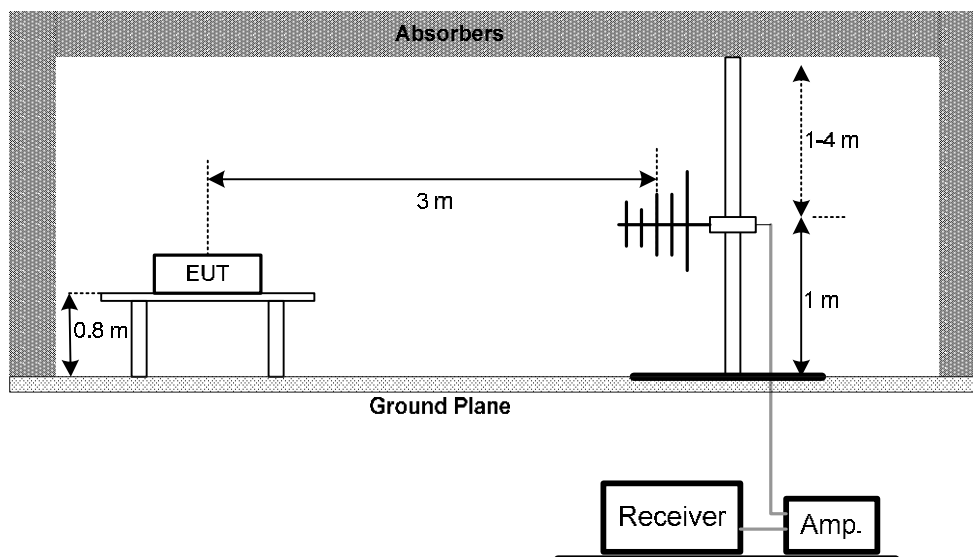
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- 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.
- 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.
- 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.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.2.3 DEVIATION FROM TEST STANDARD

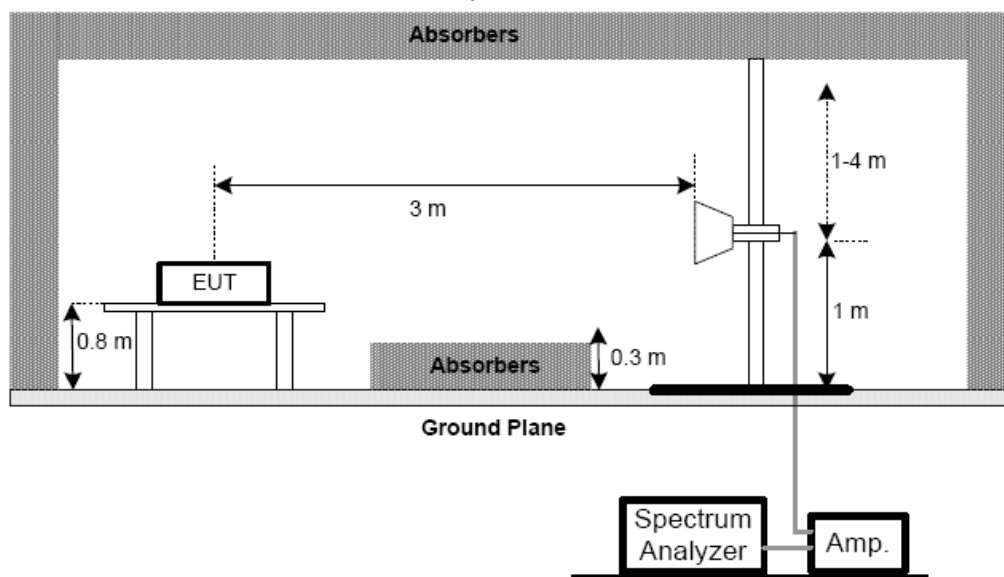
No deviation

#### 4.2.4 TEST SETUP

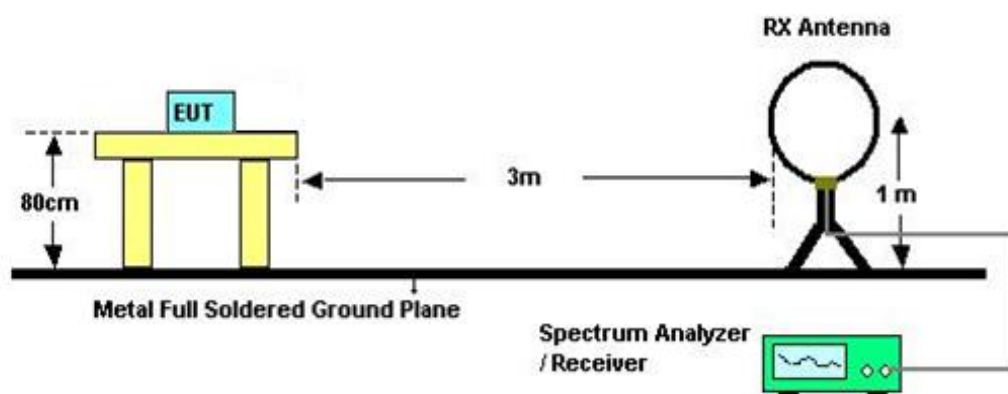
##### (A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



#### 4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.5 Unless** otherwise a special operating condition is specified in the follows during the testing.

#### 4.2.6 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

**Test Voltage:** DC 3V

#### 4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

**Please refer to the Attachment B**

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

#### 4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

Remark:

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz; SPA setting in RBW=120KHz, VBW=120KHz, Swp. Time = 0.3 sec./MHz.
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

#### 4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

Remark:

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (3) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (4) EUT Orthogonal Axis:  
"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand
- (5) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (6) No limit: This is fundamental signal, the judgment is not applicable.  
For fundamental signal judgment was referred to Peak output test.

## 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	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

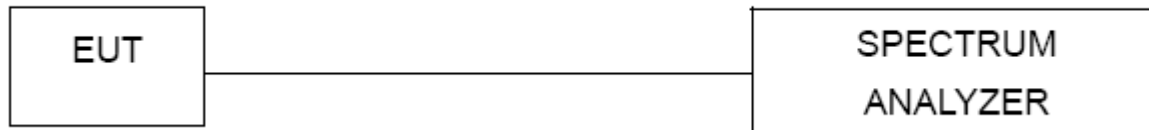
#### 5.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

#### 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 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.1.5 EUT TEST CONDITIONS

Temperature: 25°C  
 Relative Humidity: 55%  
 Test Voltage: DC 3V

#### 5.1.6 TEST RESULTS

Please refer to the Attachment E.

## 6. MAXIMUM 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)(3)	Maximum Output Power	1 watt or 30dBm	2400-2483.5	PASS

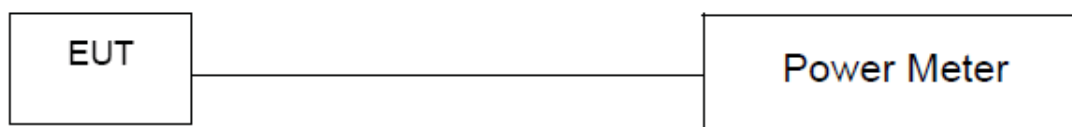
#### 6.1.1 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance v03r02.

#### 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 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.  
 Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

#### 6.1.5 EUT TEST CONDITIONS

Temperature: 25°C  
 Relative Humidity: 55%  
 Test Voltage: DC 3V

#### 6.1.6 TEST RESULTS

Please refer to the Attachment F.

## 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 Applied procedures / limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

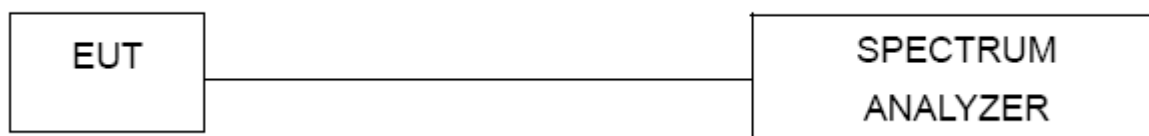
#### 7.1.1 TEST PROCEDURE

- 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=300KHz, Sweep time = 10 ms.

#### 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 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 7.1.5 EUT OPERATION CONDITIONS

Temperature: 25°C  
 Relative Humidity: 55%  
 Test Voltage: DC 3V

#### 7.1.6 TEST RESULTS

**Please refer to the Attachment G.**

## 8. POWER SPECTRAL DENSITY TEST

### 8.1 Applied procedures / limit

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

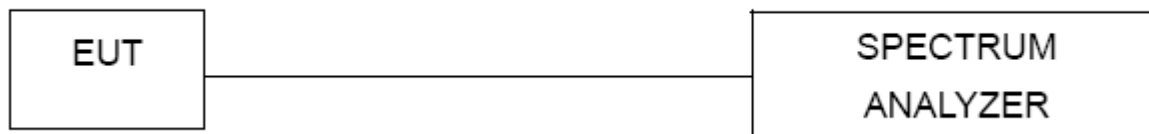
#### 8.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW=3KHz, VBW=10 KHz, Sweep time = auto.

#### 8.1.2 DEVIATION FROM STANDARD

No deviation.

#### 8.1.3 TEST SETUP



#### 8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 8.1.5 EUT TEST CONDITIONS

Temperature: 25°C  
 Relative Humidity: 55%  
 Test Voltage: DC 3V

#### 8.1.6 TEST RESULTS

Please refer to the Attachment H.



## 9. MEASUREMENT INSTRUMENTS LIST

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 28, 2016
2	Amplifier	HP	8447D	2944A09673	Nov. 17, 2015
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Controller	CT	SC100	N/A	N/A
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Antenna	ETS	3115	00075789	Mar. 28, 2016
8	Amplifier	Agilent	8449B	3008A02274	Nov. 02, 2015
9	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
10	Test Cable	HUBER+SUHNER	C-48	N/A	Apr. 30, 2015
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Mar. 28, 2016
12	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 28, 2016
13	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 16, 2015

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Mar. 28, 2016
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Mar. 28, 2016

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

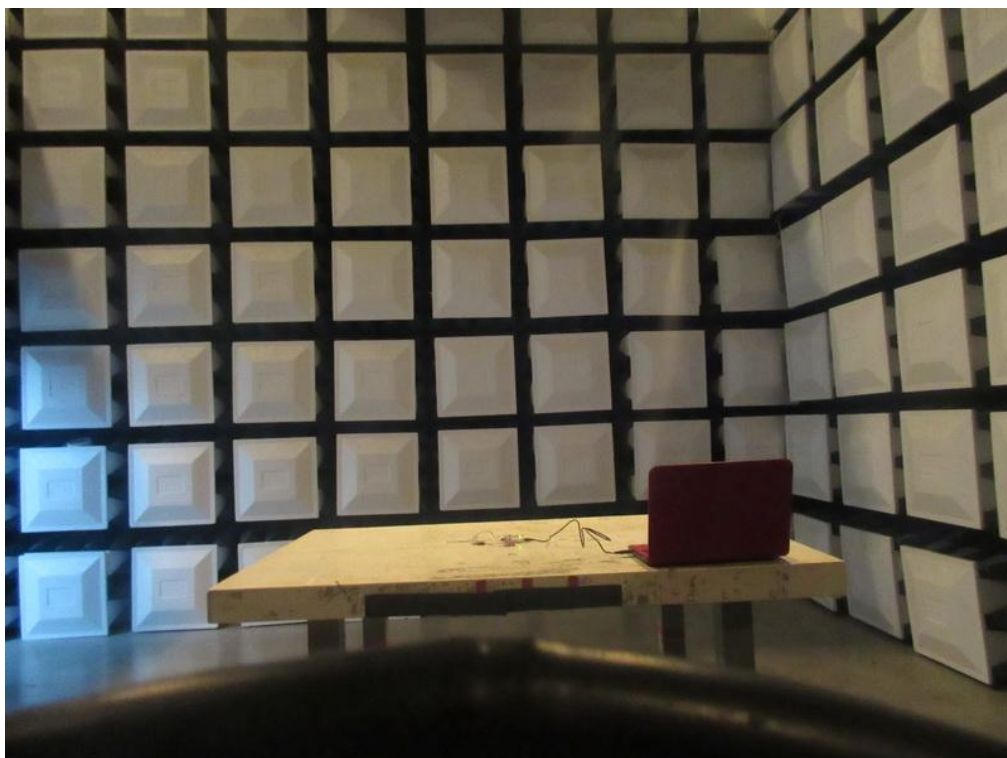
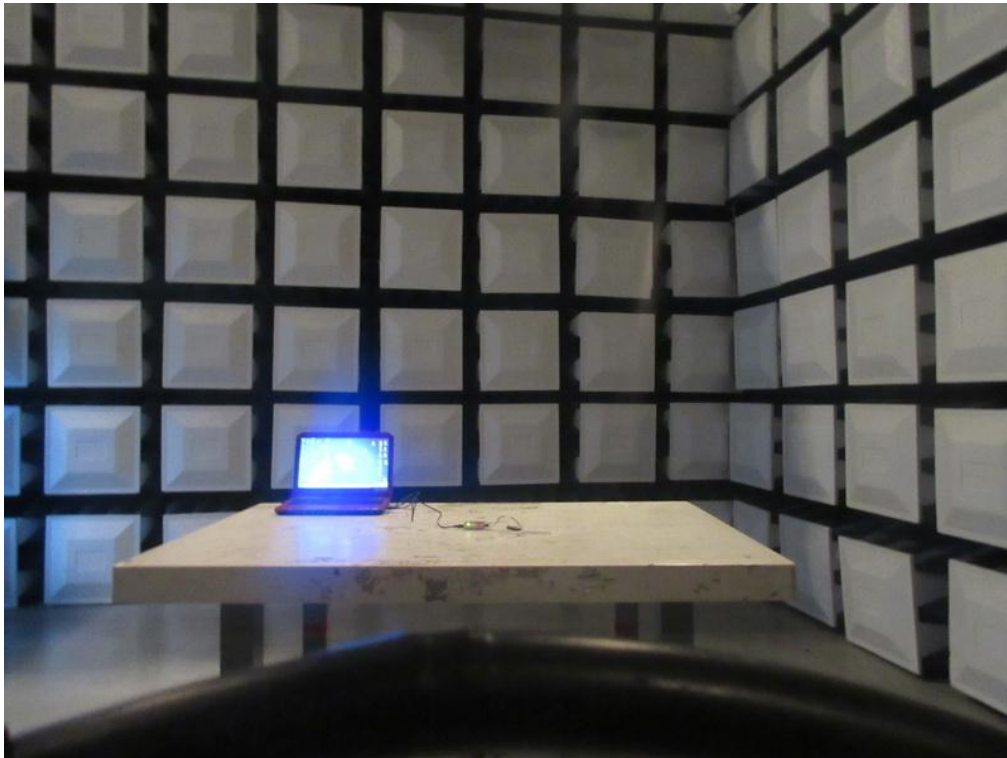
Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Remark: "N/A" denotes no model name, serial no. or calibration specified.  
All calibration period of equipment list is one year.

## 10. EUT TEST PHOTO

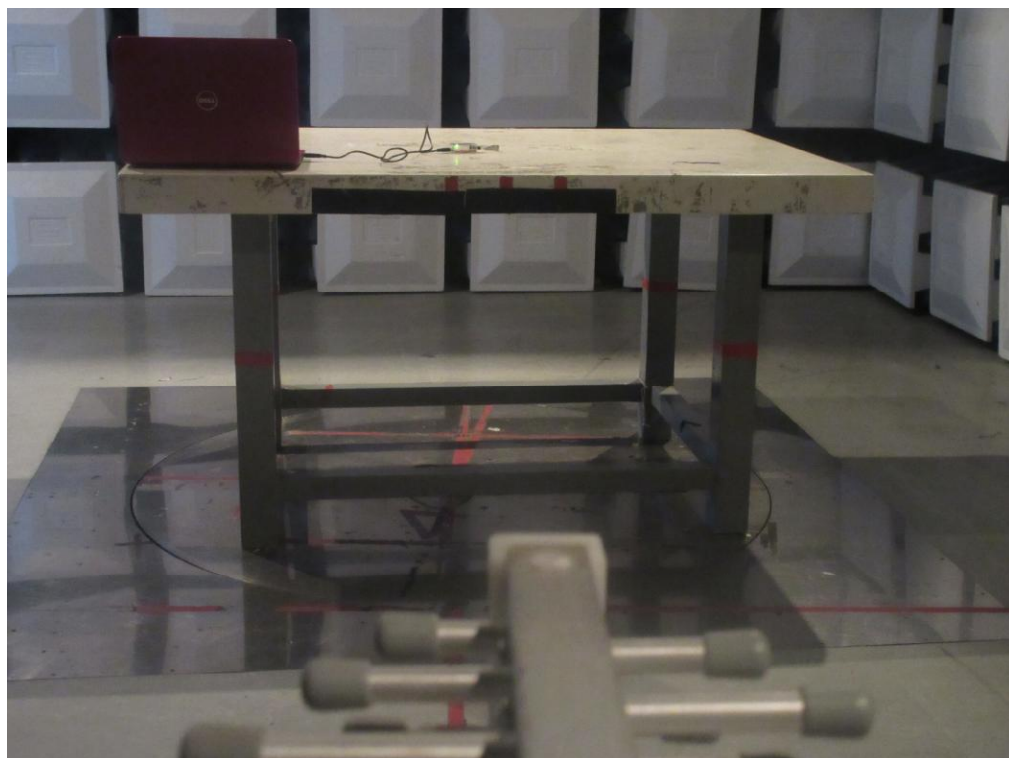
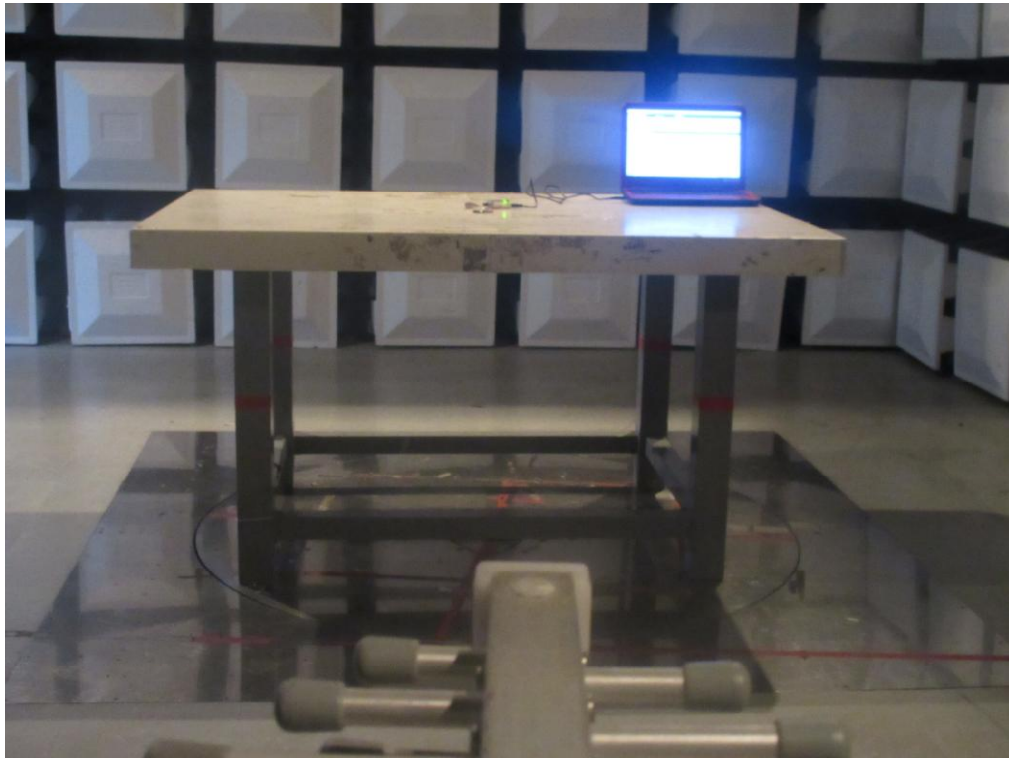
### Radiated Measurement Photos

9KHz to 30MHz



## Radiated Measurement Photos

30M to 1000MHz





## Radiated Measurement Photos

### Above 1000MHz



## **ATTACHMENT A - CONDUCTED EMISSION**

**Test Mode: N/A**

Note: "N/A" denotes test is not applicable to this device.

## **ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)**

Test Mode:	TX Mode
------------	---------

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0066	0°	12.45	25.15	37.60	111.21	-73.61	AVG
0.0066	0°	14.06	25.15	39.21	131.21	-92.00	PEAK
0.0217	0°	5.19	24.19	29.38	100.88	-71.49	AVG
0.0217	0°	7.56	24.19	31.75	120.88	-89.12	PEAK
0.0326	0°	3.62	23.50	27.12	97.34	-70.22	AVG
0.0326	0°	5.38	23.50	28.88	117.34	-88.46	PEAK
0.0352	0°	0.85	23.34	24.19	96.67	-72.49	AVG
0.0352	0°	2.68	23.34	26.02	116.67	-90.66	PEAK
0.4960	0°	30.15	19.81	49.96	73.69	-23.73	QP
1.8540	0°	21.29	19.51	40.80	69.54	-28.74	QP

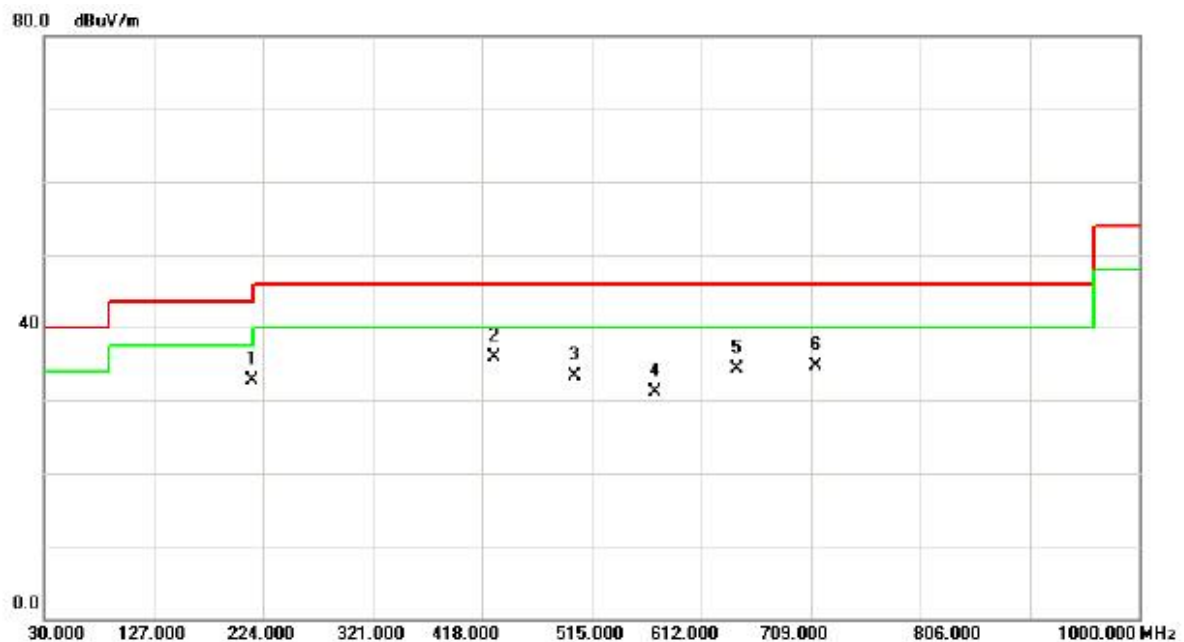
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0068	90°	12.02	24.30	36.32	130.95	-94.63	AVG
0.0068	90°	14.16	24.30	38.46	150.95	-112.49	PEAK
0.0358	90°	6.25	23.30	29.55	116.53	-86.98	AVG
0.0358	90°	8.55	23.30	31.85	136.53	-104.68	PEAK
0.0443	90°	3.85	22.76	26.61	114.68	-88.07	AVG
0.0443	90°	5.42	22.76	28.18	134.68	-106.50	PEAK
0.0482	90°	0.96	22.51	23.47	113.94	-90.47	AVG
0.0482	90°	2.71	22.51	25.22	133.94	-108.72	PEAK
0.5210	90°	30.46	19.87	50.33	73.27	-22.94	QP
1.8380	90°	21.48	19.52	41.00	69.54	-28.54	QP



## **ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)**

Test Mode: TX 2402MHz -CH00 -1Mbps

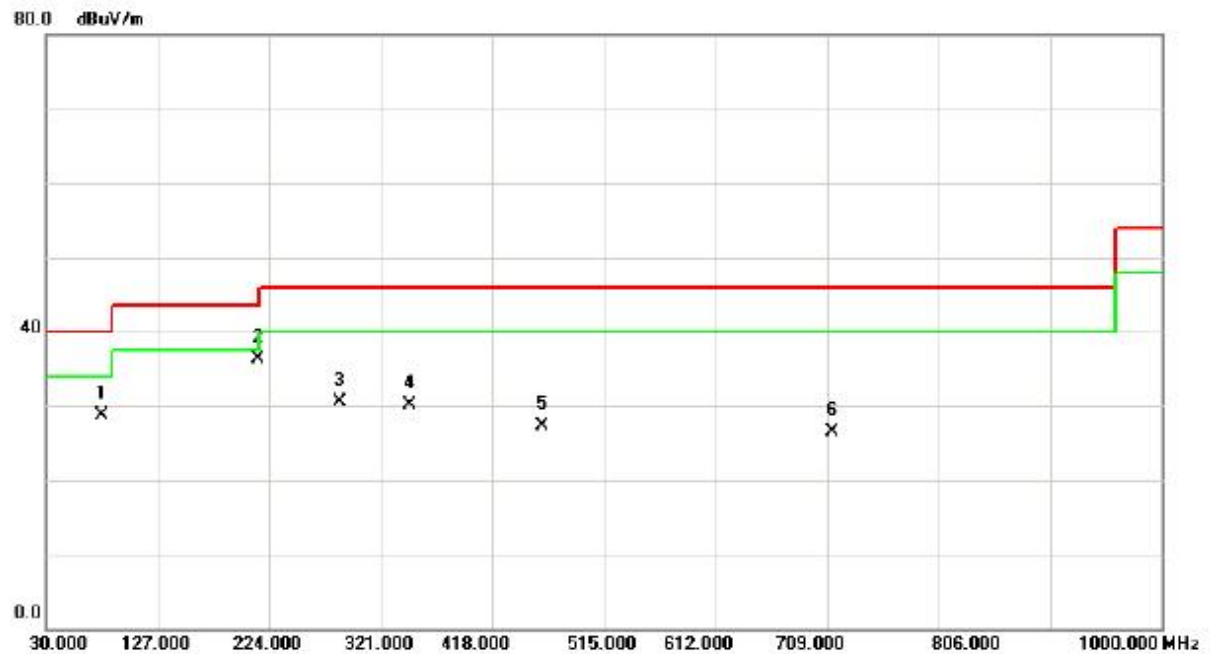
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		214.3000	47.94	-15.18	32.76	43.50	-10.74	QP	
2	*	428.6700	44.83	-9.00	35.83	46.00	-10.17	QP	
3		499.4800	43.79	-10.50	33.29	46.00	-12.71	QP	
4		571.2600	39.06	-7.92	31.14	46.00	-14.86	QP	
5		643.0400	39.93	-5.53	34.40	46.00	-11.60	QP	
6		713.8500	39.64	-4.84	34.80	46.00	-11.20	QP	

Test Mode: TX 2402MHz -CH00 -1Mbps

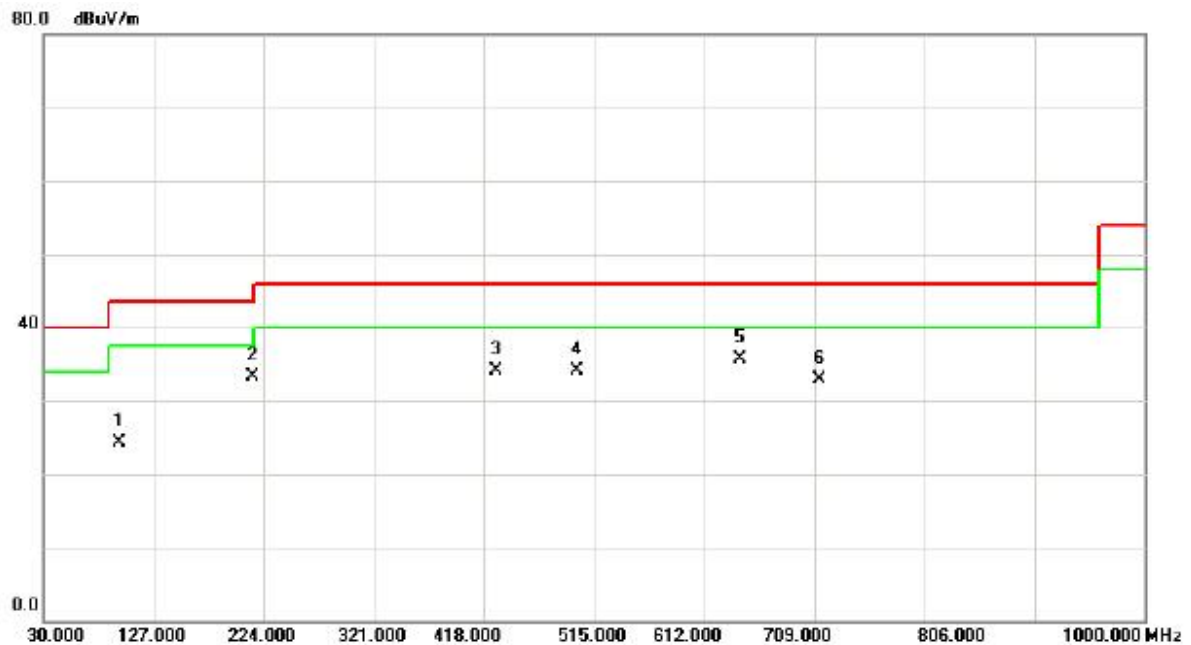
### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		78.5000	45.65	-16.98	28.67	40.00	-11.33	QP	
2	*	214.3000	51.58	-15.18	36.40	43.50	-7.10	QP	
3		285.1100	42.16	-11.73	30.43	46.00	-15.57	QP	
4		346.2200	41.89	-11.73	30.16	46.00	-15.84	QP	
5		461.6500	36.41	-9.07	27.34	46.00	-18.66	QP	
6		713.8500	31.31	-4.84	26.47	46.00	-19.53	QP	

Test Mode: TX 2440MHz -CH19 -1Mbps

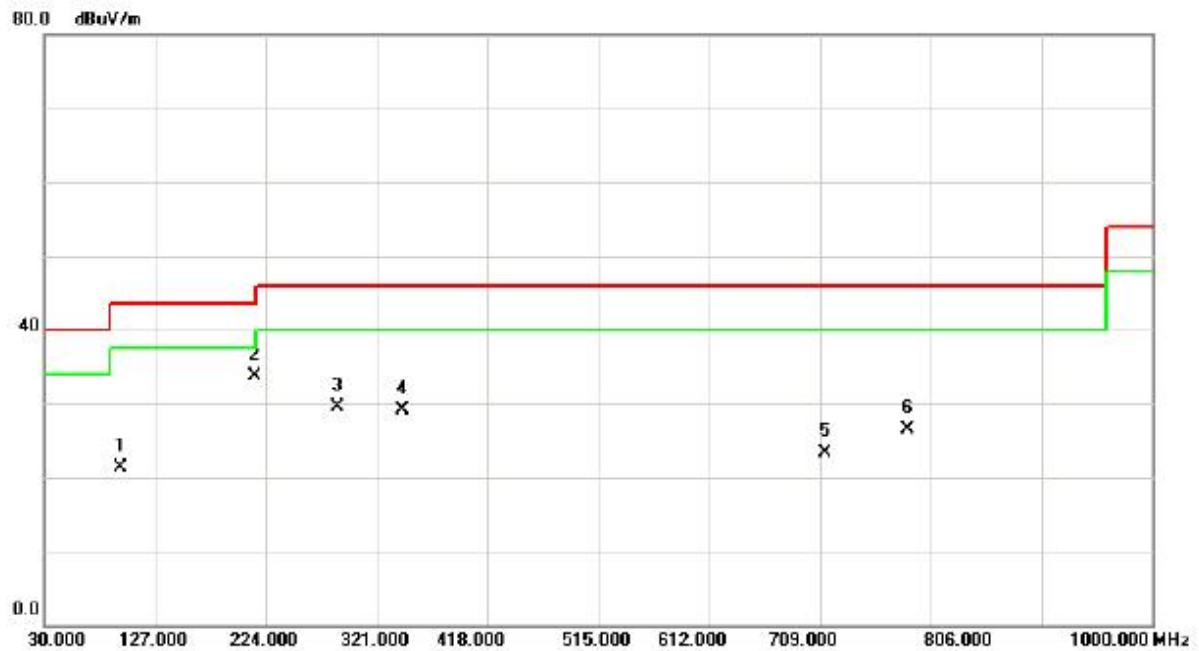
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		95.9600	41.19	-16.98	24.21	43.50	-19.29	QP	
2		214.3000	48.41	-15.18	33.23	43.50	-10.27	QP	
3		428.6700	43.09	-9.00	34.09	46.00	-11.91	QP	
4		499.4800	44.62	-10.50	34.12	46.00	-11.88	QP	
5	*	643.0400	41.33	-5.53	35.80	46.00	-10.20	QP	
6		713.8500	37.83	-4.84	32.99	46.00	-13.01	QP	

Test Mode: TX 2440MHz -CH19 -1Mbps

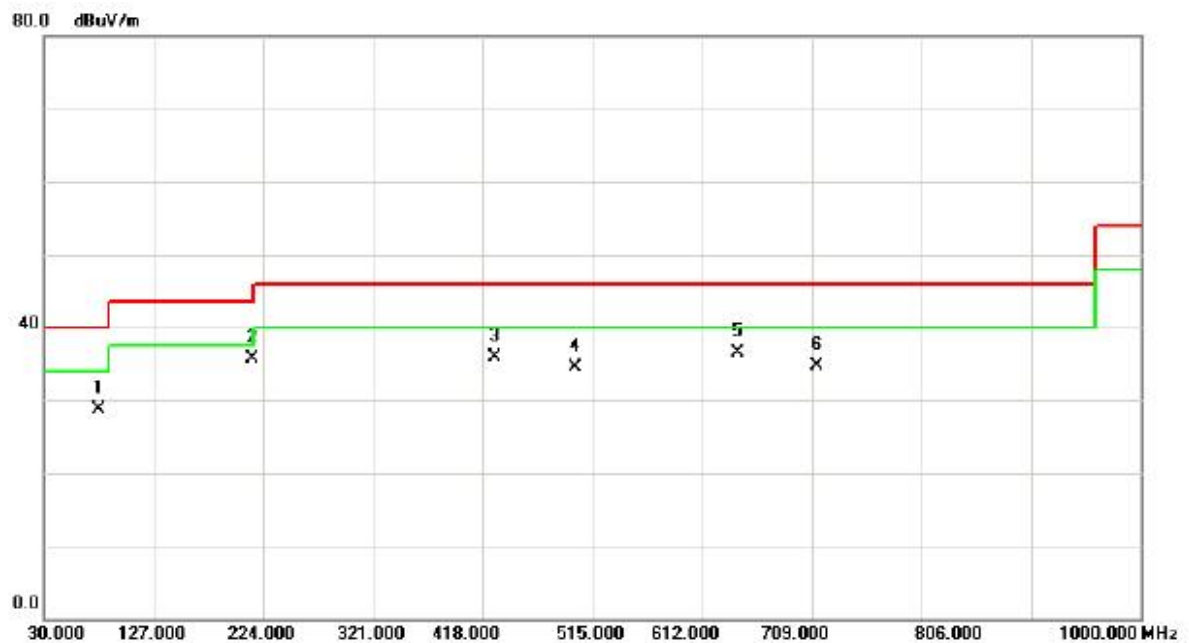
### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		95.9600	38.26	-16.98	21.28	43.50	-22.22	QP	
2	*	214.3000	48.87	-15.18	33.69	43.50	-9.81	QP	
3		286.0800	41.13	-11.62	29.51	46.00	-16.49	QP	
4		343.3100	40.83	-11.68	29.15	46.00	-16.85	QP	
5		713.8500	28.18	-4.84	23.34	46.00	-22.66	QP	
6		785.6300	29.95	-3.39	26.56	46.00	-19.44	QP	

Test Mode: TX 2480MHz -CH39 -1Mbps

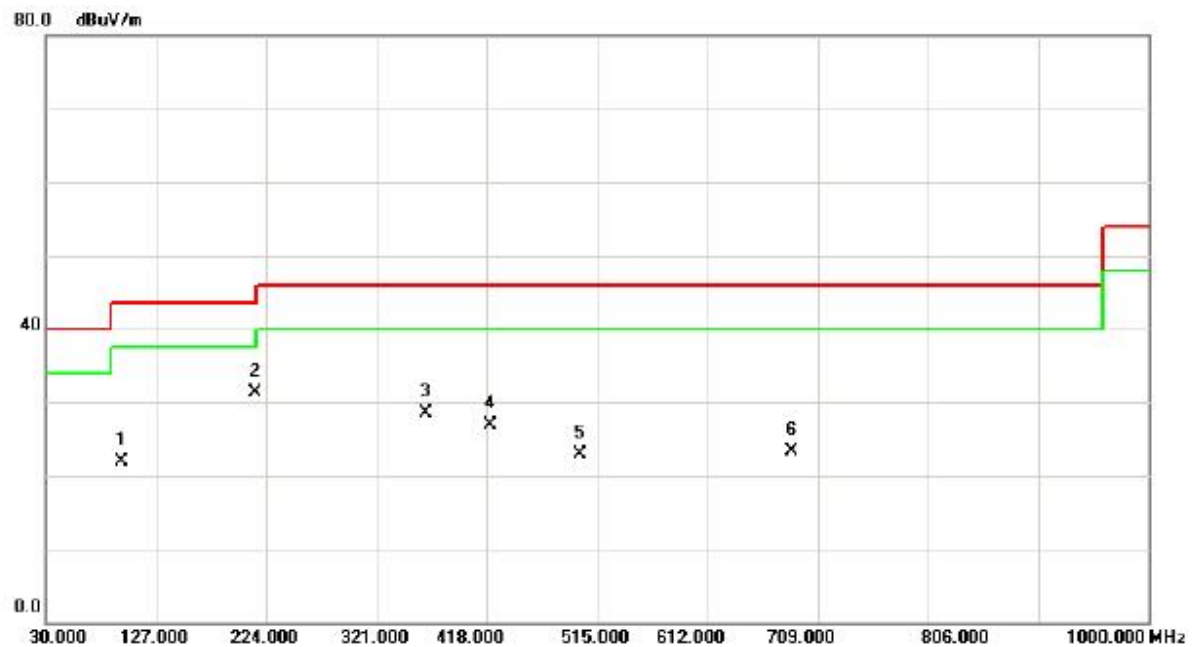
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		78.5000	45.60	-16.98	28.62	40.00	-11.38	QP	
2	*	214.3000	50.95	-15.18	35.77	43.50	-7.73	QP	
3		428.6700	44.82	-9.00	35.82	46.00	-10.18	QP	
4		499.4800	44.91	-10.50	34.41	46.00	-11.59	QP	
5		643.0400	42.09	-5.53	36.56	46.00	-9.44	QP	
6		713.8500	39.52	-4.84	34.68	46.00	-11.32	QP	

Test Mode: TX 2480MHz -CH39 -1Mbps

### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		95.9600	38.96	-16.98	21.98	43.50	-21.52	QP	
2	*	214.3000	46.39	-15.18	31.21	43.50	-12.29	QP	
3		364.6500	39.64	-11.13	28.51	46.00	-17.49	QP	
4		420.9100	36.06	-9.16	26.90	46.00	-19.10	QP	
5		499.4800	33.36	-10.50	22.86	46.00	-23.14	QP	
6		685.7200	28.21	-4.99	23.22	46.00	-22.78	QP	

## **ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)**



Orthogonal Axis :	X
Test Mode :	TX 2402MHz _CH00_1Mbps

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	24.56	31.88	56.44	74.00	-17.56	peak	
2		2390.000	14.50	31.88	46.38	54.00	-7.62	AVG	
3	*	2402.050	52.09	31.89	83.98	54.00	29.98	AVG	no limit
4	X	2402.250	53.22	31.89	85.11	74.00	11.11	peak	no limit

Orthogonal Axis :	X
Test Mode :	TX 2402MHz _CH00_1Mbps

### Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.260	41.71	3.58	45.29	74.00	-28.71	peak	
2	*	4804.040	31.76	3.58	35.34	54.00	-18.66	AVG	

Orthogonal Axis :	X
Test Mode :	TX 2402MHz _CH00_1Mbps

### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	15.37	31.88	47.25	74.00	-26.75	peak	
2		2390.000	5.99	31.88	37.87	54.00	-16.13	AVG	
3	*	2402.000	50.06	31.89	81.95	54.00	27.95	AVG	no limit
4	X	2402.300	50.92	31.89	82.81	74.00	8.81	peak	no limit

Orthogonal Axis :	X
Test Mode :	TX 2402MHz _CH00_1Mbps

### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4806.060	41.42	3.58	45.00	74.00	-29.00	peak	
2	*	4806.060	31.64	3.58	35.22	54.00	-18.78	AVG	

Orthogonal Axis :	X
Test Mode :	TX 2440MHz_CH19_1Mbps

### Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2440.050	53.31	31.95	85.26	54.00	31.26	AVG	no limit
2	X	2440.250	54.44	31.95	86.39	74.00	12.39	peak	no limit

Orthogonal Axis :	X
Test Mode :	TX 2440MHz_CH19_1Mbps

### Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4882.000	40.99	3.73	44.72	74.00	-29.28	peak	
2	*	4882.040	33.55	3.73	37.28	54.00	-16.72	AVG	

Orthogonal Axis :	X
Test Mode :	TX 2440MHz_CH19_1Mbps

### Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment				
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2440.050	49.80	31.95	81.75	54.00	27.75	AVG	no limit
2	X	2440.300	51.11	31.95	83.06	74.00	9.06	peak	no limit

Orthogonal Axis :	X
Test Mode :	TX 2440MHz_CH19_1Mbps

### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4880.270	38.55	3.73	42.28	74.00	-31.72	peak	
2	*	4880.350	31.74	3.73	35.47	54.00	-18.53	AVG	



Orthogonal Axis :	X
Test Mode :	TX 2480MHz_CH39_1Mbps

### Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment				
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2479.800	56.45	32.00	88.45	74.00	14.45	peak	no limit
2	*	2480.050	55.27	32.00	87.27	54.00	33.27	AVG	no limit
3		2483.500	28.43	32.01	60.44	74.00	-13.56	peak	
4		2483.500	18.54	32.01	50.55	54.00	-3.45	AVG	

Orthogonal Axis :	X
Test Mode :	TX 2480MHz _CH39_1Mbps

### Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4958.040	33.38	3.87	37.25	54.00	-16.75	AVG	
2		4958.260	41.80	3.87	45.67	74.00	-28.33	peak	

Orthogonal Axis :	X
Test Mode :	TX 2480MHz_CH39_1Mbps

### Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment				
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2479.850	48.01	32.00	80.01	74.00	6.01	peak	no limit
2	*	2480.000	46.57	32.00	78.57	54.00	24.57	AVG	no limit
3		2483.500	24.80	32.01	56.81	74.00	-17.19	peak	
4		2483.500	14.97	32.01	46.98	54.00	-7.02	AVG	

Orthogonal Axis :	X
Test Mode :	TX 2480MHz _CH39_1Mbps

### Horizontal

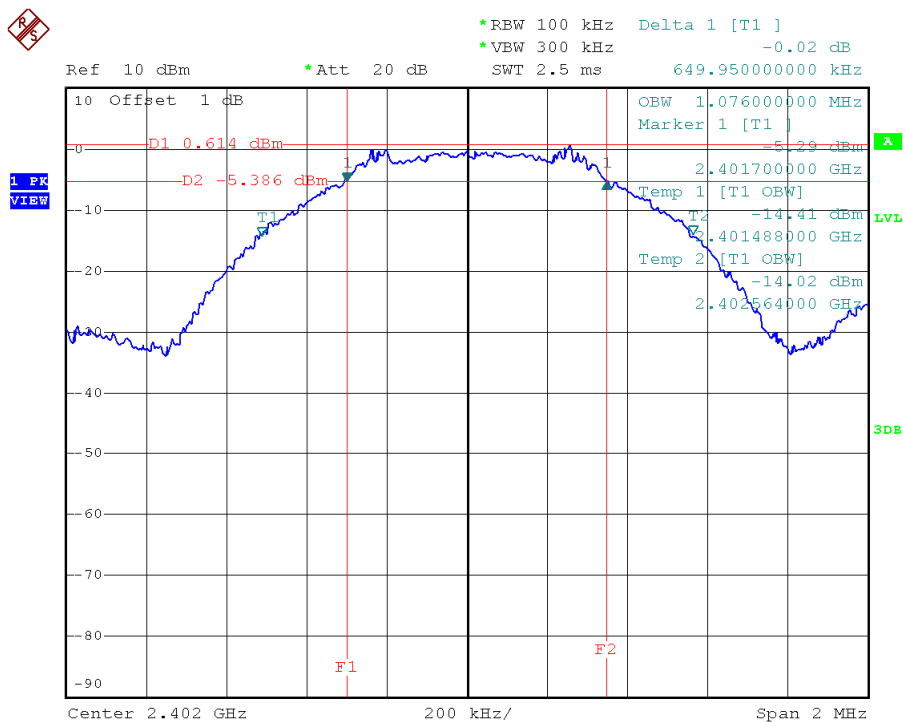


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.150	40.47	3.88	44.35	74.00	-29.65	peak	
2	*	4960.580	31.51	3.88	35.39	54.00	-18.61	AVG	

## **ATTACHMENT E - BANDWIDTH**

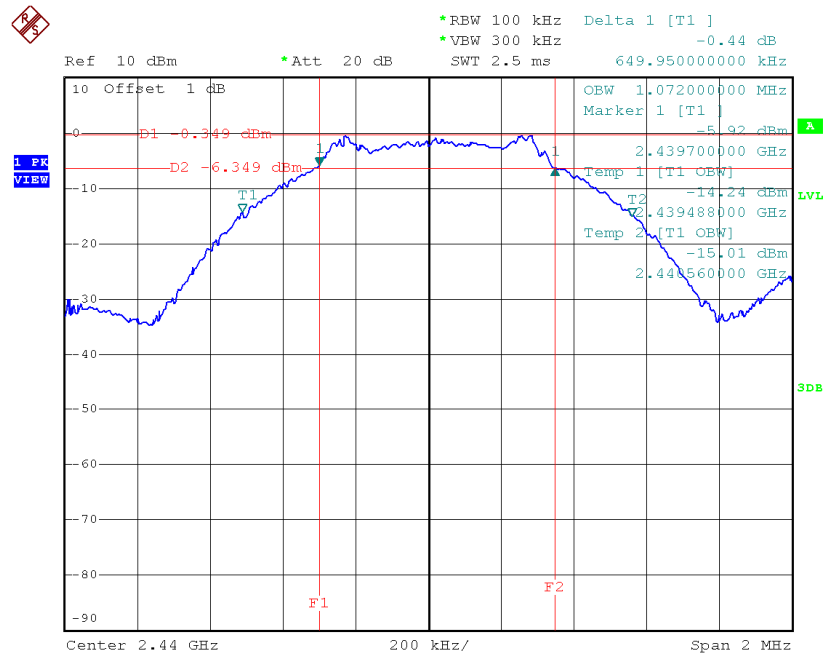
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.650	1.076	500	Complies
2440	0.650	1.070	500	Complies
2480	0.675	1.070	500	Complies

### TX CH00



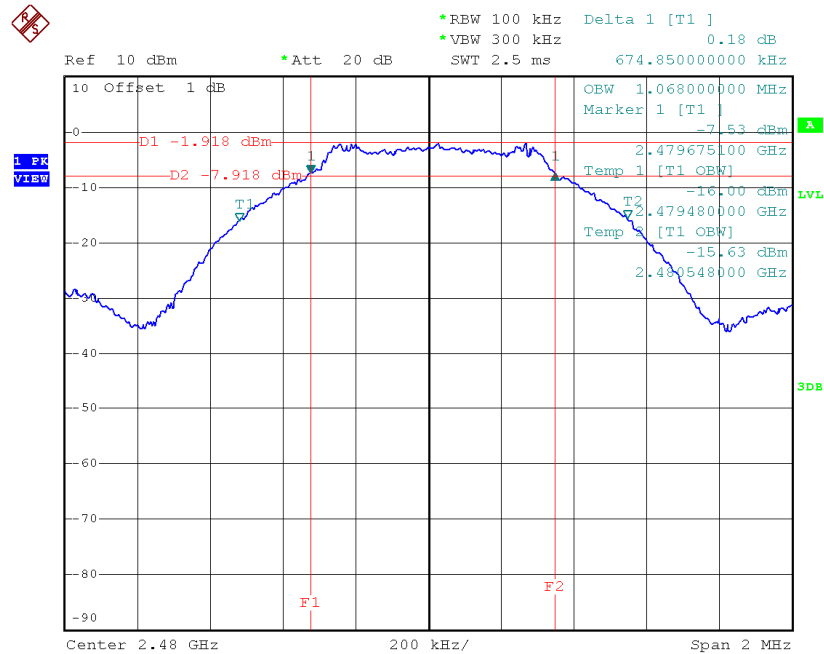
Date: 27.MAR.2015 18:16:06

### TX CH19



Date: 27.MAR.2015 18:18:13

### TX CH39



Date: 27.MAR.2015 18:19:16

## ATTACHMENT F - MAXIMUM OUTPUT POWER TEST

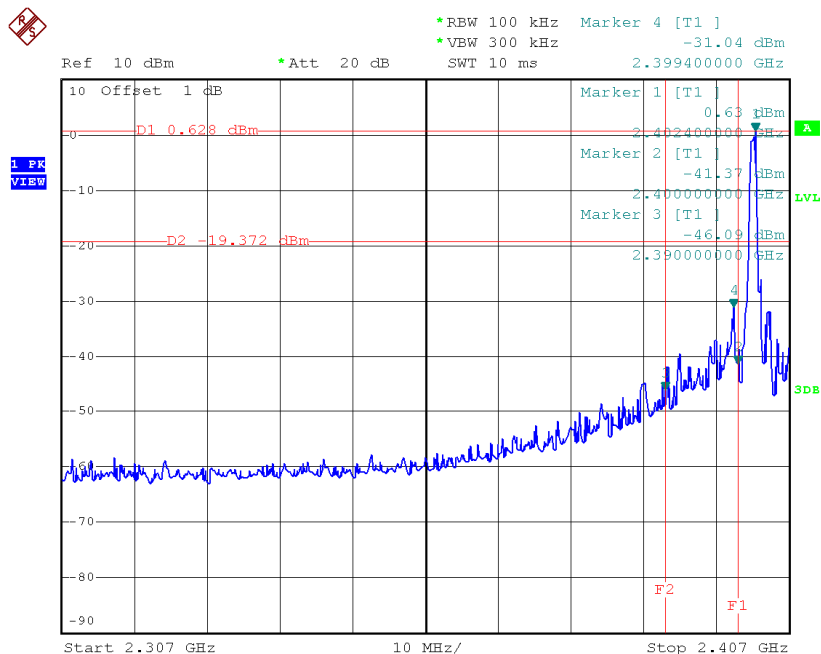
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watt)	Max. Limit (dBm)	Max. Limit (Watt)	Test Result
2402	1.32	0.0014	30.00	1.00	Complies
2440	-1.00	0.0008	30.00	1.00	Complies
2480	-0.77	0.0008	30.00	1.00	Complies



## **ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION**

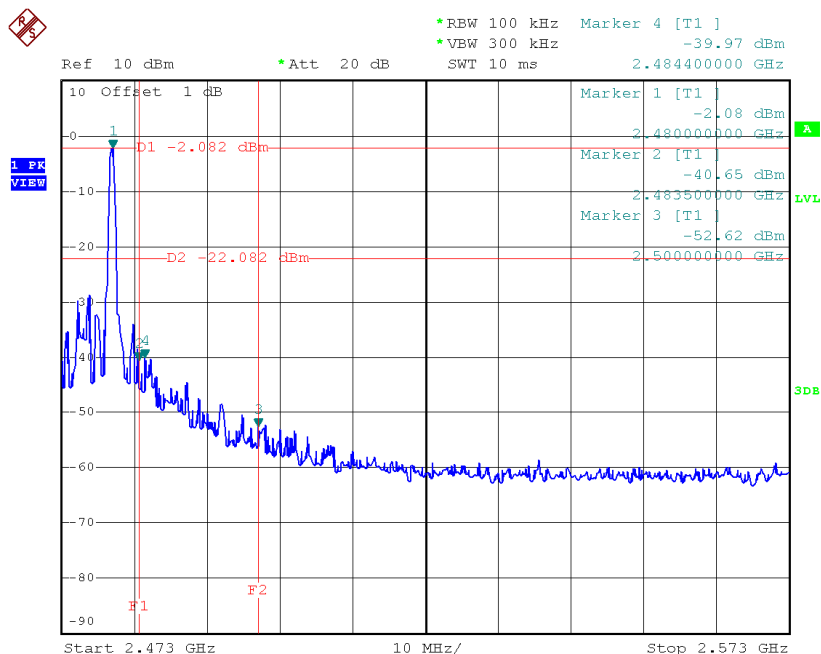
Test Mode : CH00, CH19 , CH39 - 1Mbps

### CH00 (Lower) - 1Mbps



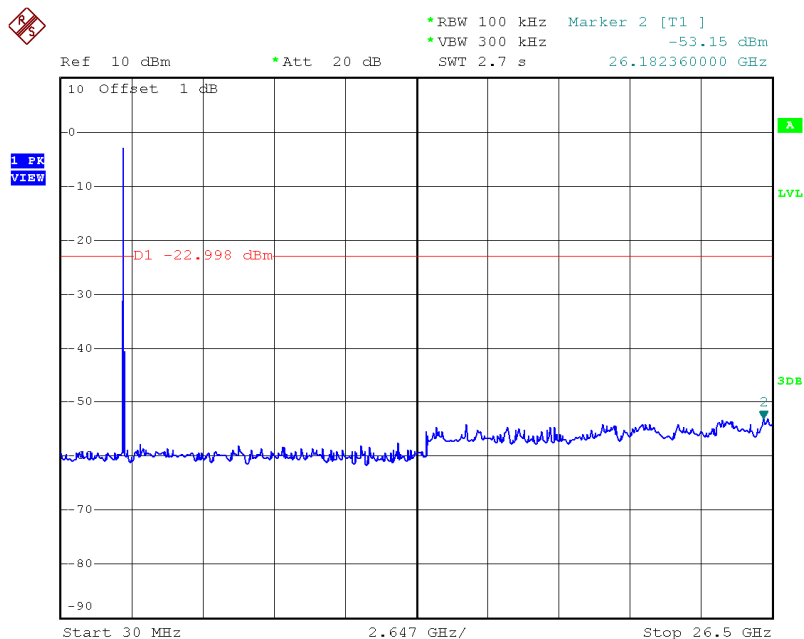
Date: 27.MAR.2015 18:16:15

### CH39 (upper) - 1Mbps



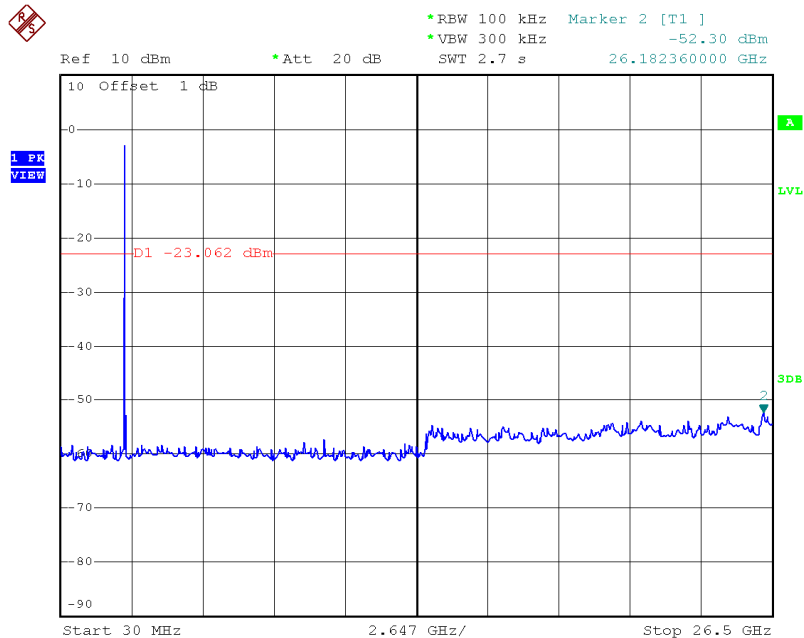
Date: 27.MAR.2015 18:19:24

### CH00 (10 Harmonic of the frequency)



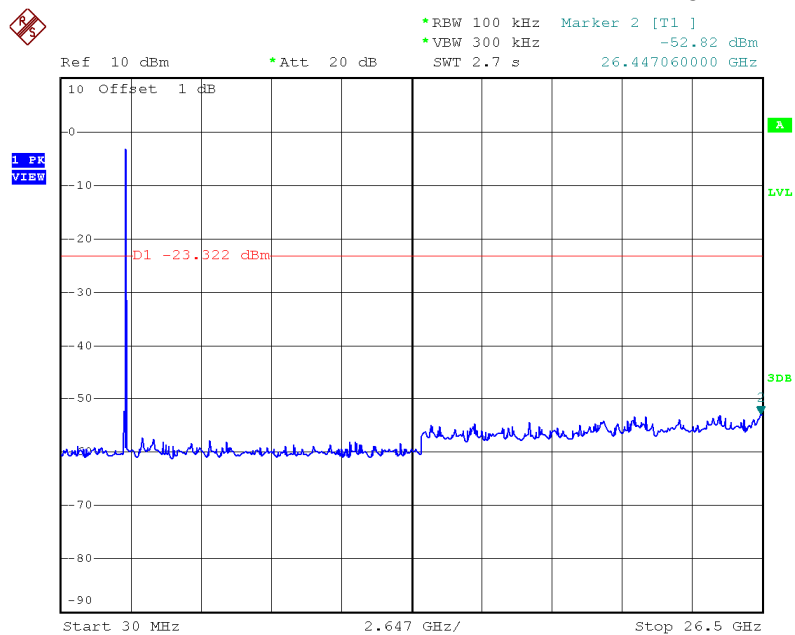
Date: 27.MAR.2015 18:16:28

### CH19 (10 Harmonic of the frequency)



Date: 27.MAR.2015 18:18:27

### CH39 (10 Harmonic of the frequency)

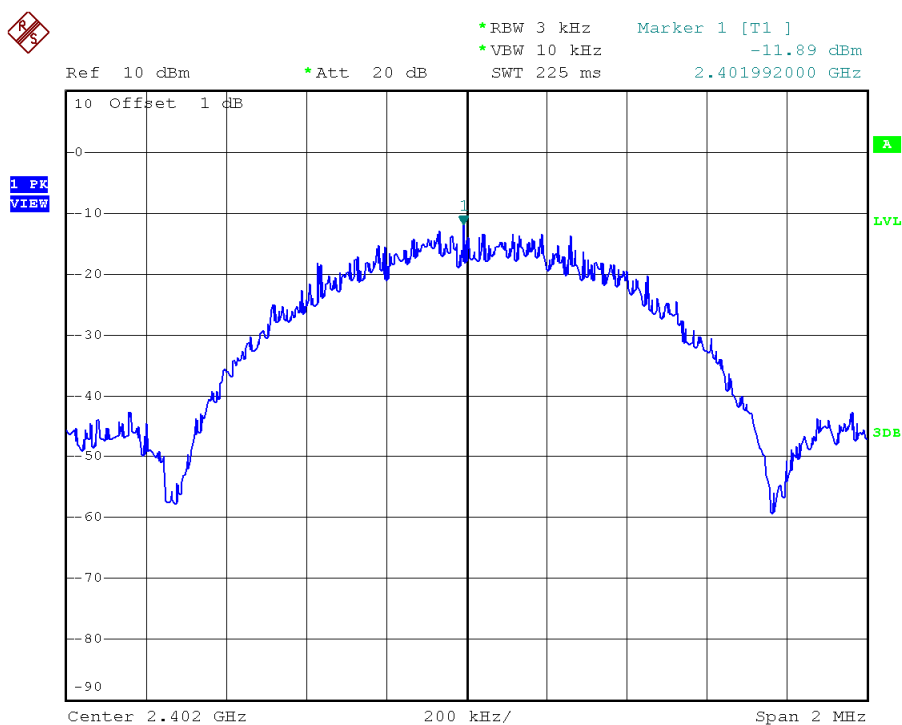


Date: 27.MAR.2015 18:19:37

## **ATTACHMENT H - POWER SPECTRAL DENSITY TEST**

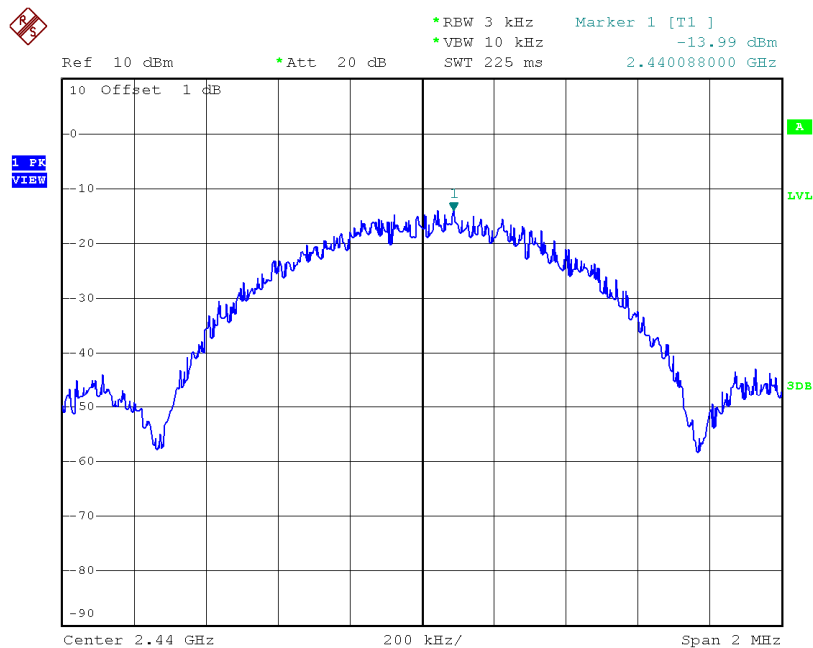
Frequency (MHz)	Power Density (dBm)	Max. Limit (dBm)	Result
2402	-11.89	8	Complies
2440	-13.99	8	Complies
2480	-14.24	8	Complies

### TX CH00



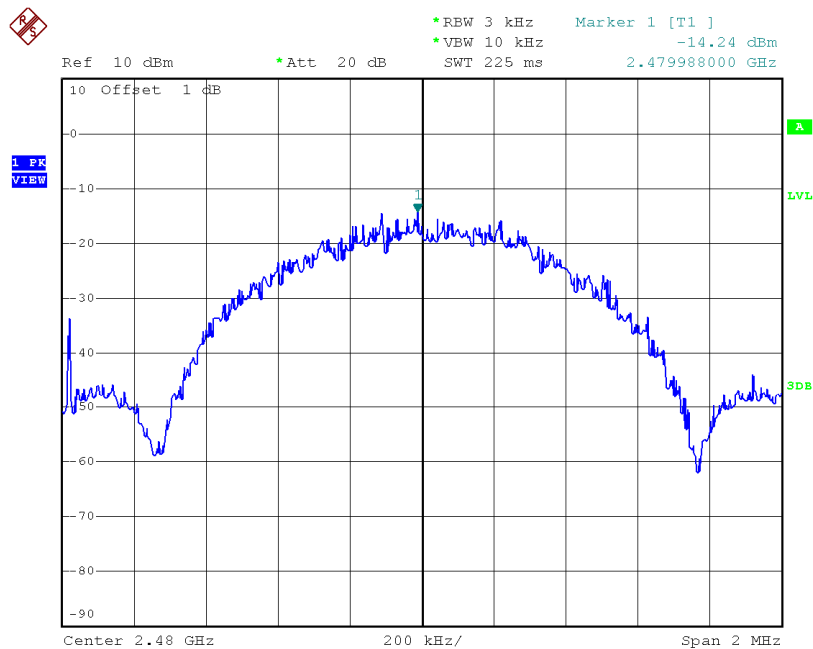
Date: 27.MAR.2015 18:16:34

# TX CH19



Date: 27.MAR.2015 18:18:32

# TX CH39



Date: 27.MAR.2015 18:19:43