



**Neutron Engineering Inc.**

# FCC/IC Radio Test Report

**FCC ID: GPI-M5M001**

**IC: 7310A-M5M001**

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

**Issued Date** : Aug. 07, 2012  
**Project No.** : 1205C079  
**Equipment** : Wireless Transmitter  
**Model Name** : M5M001  
**Applicant** : General Sensing Limited  
**Address** : Unit 716, Cyberport 1 100 Cyberport Road Pok Fu  
Lam Hong Kong  
**Manufacturer** : Honey Bee (Hong Kong) Limited  
**Address** : Flat L, 12/F., Phase 4, Kwun Tong Industrial  
Centre, 436-446 Kwun Tong Road, Kowloon, Hong  
Kong

**Tested by:**  
Neutron Engineering Inc. EMC Laboratory  
**Date of Receipt:** May. 17, 2012  
**Date of Test:**  
May. 17, 2012 ~ Aug. 06, 2012

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### **Declaration**

**Neutron** 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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## **1. CERTIFICATION**

Equipment : Wireless Transmitter  
Brand Name : MedSense Beacon  
Model Name : M5M001  
Applicant : General Sensing Limited  
Factory : Shantou S.E.Z. Honey Bee Electronics Co. Limited  
Address : 5th Floor, Block 3, Zhu Hua Industrial Zone, Li Shui Zhuang Zhong Qu, Long Hu Qu, Shantou City, Shantou S.E.Z., Guangdong Province, China  
Date of Test : May. 17, 2012 ~ Aug. 06, 2012  
Test Sample : Engineering Sample  
Standards : FCC Part15, Subpart C(15.249)/ ANSI C63.4 : 2009;  
Canada RSS-210:2010 ; Canada RSS-Gen:2010

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FICP-1-1205C079) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).



## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249) Canada RSS-Gen:2010				
StandardSection		Test Item	Judgment	Remark
FCC	RSS-210/ RSS-Gen			
15.207	RSS-Gen 7.2.2	Conducted Emission	PASS	
15.209	RSS-210 2.7	Radiated Emission	PASS	
15.249	RSS-210 A2.9(a)	Radiated Spurious Emission	PASS	

### NOTE:

(1)"N/A" denotes test is not applicable in this test report.



## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3,Jinshagang 1st Road, ShiXia, Dalang Town,Dong Guan, China.523792

Neutron's test firm number for FCC 319330

Neutron's test firm number for IC 4428B-1

## 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. Conducted Measurement :

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

### B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
DG-CB03	CISPR	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	



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Transmitter	
Brand Name	MedSense Beacon	
Model Name.	M5M001	
Model Difference	N/A	
Product Description	The EUT is a Wireless Transmitter.	
	Operation Frequency	2401.999~2480.920 MHz
	Modulation Technology	FSK
	Data rate	250Kbps
	Number of Channel	16CH. Please see note 2. (Page 9)
	Antenna Gain(Peak)	Please see note 3. (Page 9)
	Output Power	63.47 dBuV/m (AV Max.)
	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.	
Power Source	#1 DC voltage supplied from AC adapter. Adapter model: CENB1010A1203B01	
	#2 DC voltage supplied from 6*AA size battery.	
Power Rating	#1 I/P AC 100-240V~50-60Hz 0.3A    O/P DC 12V 1.0A #2 DC 9V	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

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



2.

Frequency Channel			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
<b>3</b>	<b>2401.999</b>	147	2449.951
8	2403.664	219	2473.927
40	2414.320	222	2474.926
69	2423.977	225	2475.925
72	2424.976	228	2476.924
100	2434.300	234	2478.922
<b>118</b>	<b>2440.294</b>	237	2479.921
144	2448.952	<b>240</b>	<b>2480.920</b>

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Integral	N/A	7	-



### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based 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	Normal Link
Mode 2	Low – 2401.999MHz
Mode 3	Middle – 2440.294MHz
Mode 4	High -2480.920MHz

For Conducted Test	
Final Test Mode	Description
Mode 1	Normal Link

For Radiated Test	
Final Test Mode	Description
Mode 2	Low – 2401.999MHz
Mode 3	Middle – 2440.294MHz
Mode 4	High -2480.920MHz

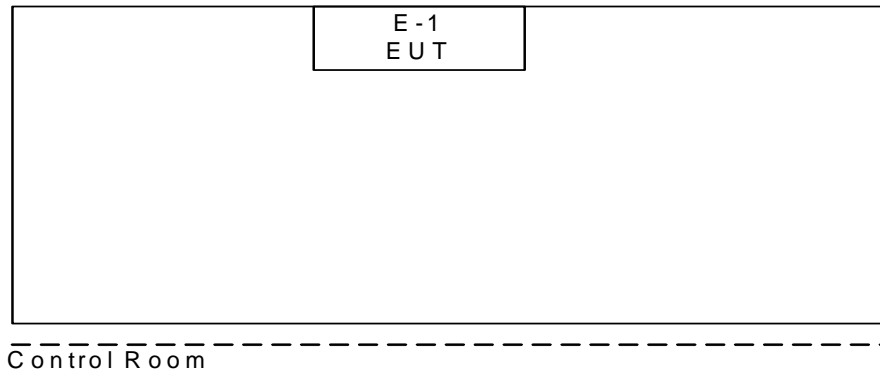
Note:

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

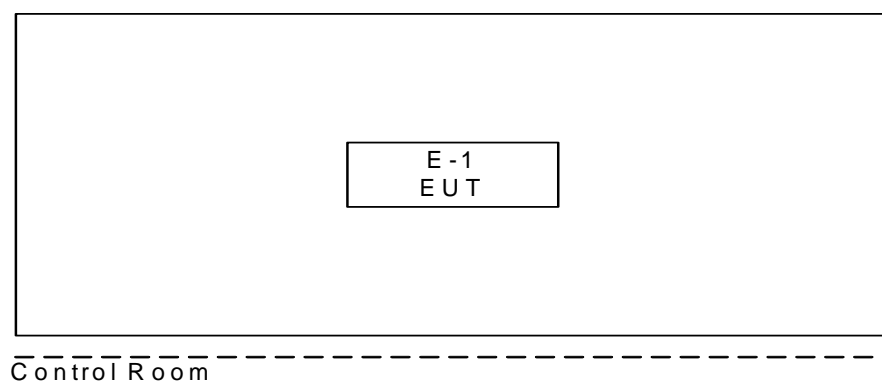


### 3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

**Conducted: Normal Link**



**Radiated: TX/RX Mode**





### 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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
E-1	Wireless Transmitter	MedSense Beacon	M5M001	GPI-M5M001/ 7310A-M5M001	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	-

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 (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.

###### 4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	May.04.2013
2	LISN	R&S	ENV216	100087	May.04.2013
3	Test Cable	N/A	C_17	N/A	Mar.28.2013
4	EMI TEST RECEIVER	R&S	ESCS30	826547/022	May.04.2013
5	50Ω Terminator	SHX	TF2-3G-A	08122902	May.04.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

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

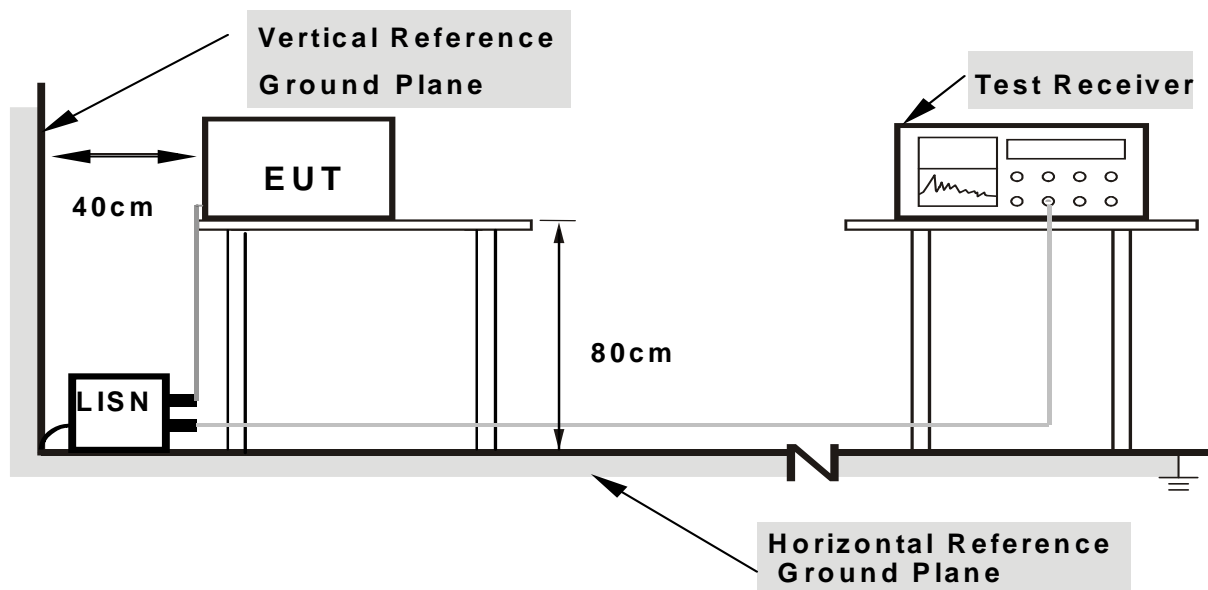
#### 4.1.3 TEST PROCEDURE

- 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.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



**Note: 1.Support units were connected to second LISN.**

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

#### 4.1.6 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.

The EUT was programmed to be in continuously transmitting mode.



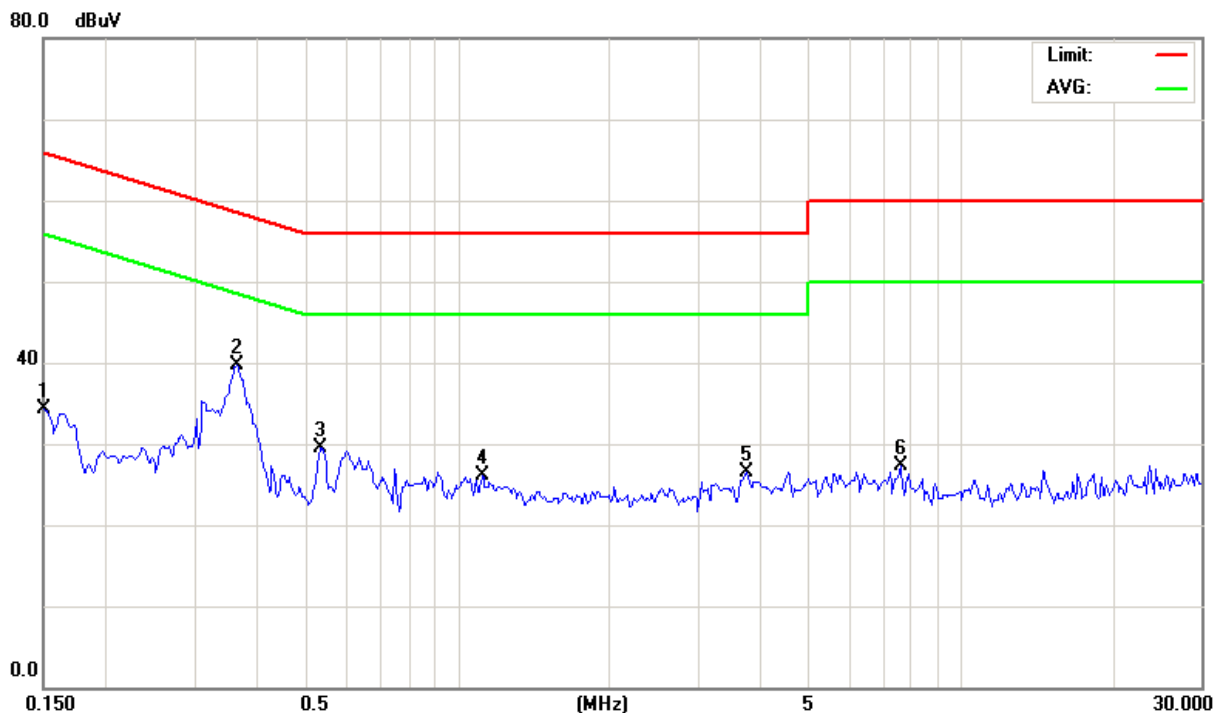
#### 4.1.7 TEST RESULTS

E.U.T	Wireless Transmitter	Model Name	M5M001
Temperature	25 °C	Relative Humidity :	60 %
Pressure	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode	Normal Link		

Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.15	Line	34.34	*	66.00	56.00	-31.66	(QP)
0.36	Line	39.70	*	58.62	48.62	-18.92	(QP)
0.53	Line	29.50	*	56.00	46.00	-26.50	(QP)
1.12	Line	26.07	*	56.00	46.00	-29.93	(QP)
3.75	Line	26.41	*	56.00	46.00	-29.59	(QP)
7.59	Line	27.23	*	60.00	50.00	-32.77	(QP)

#### 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.



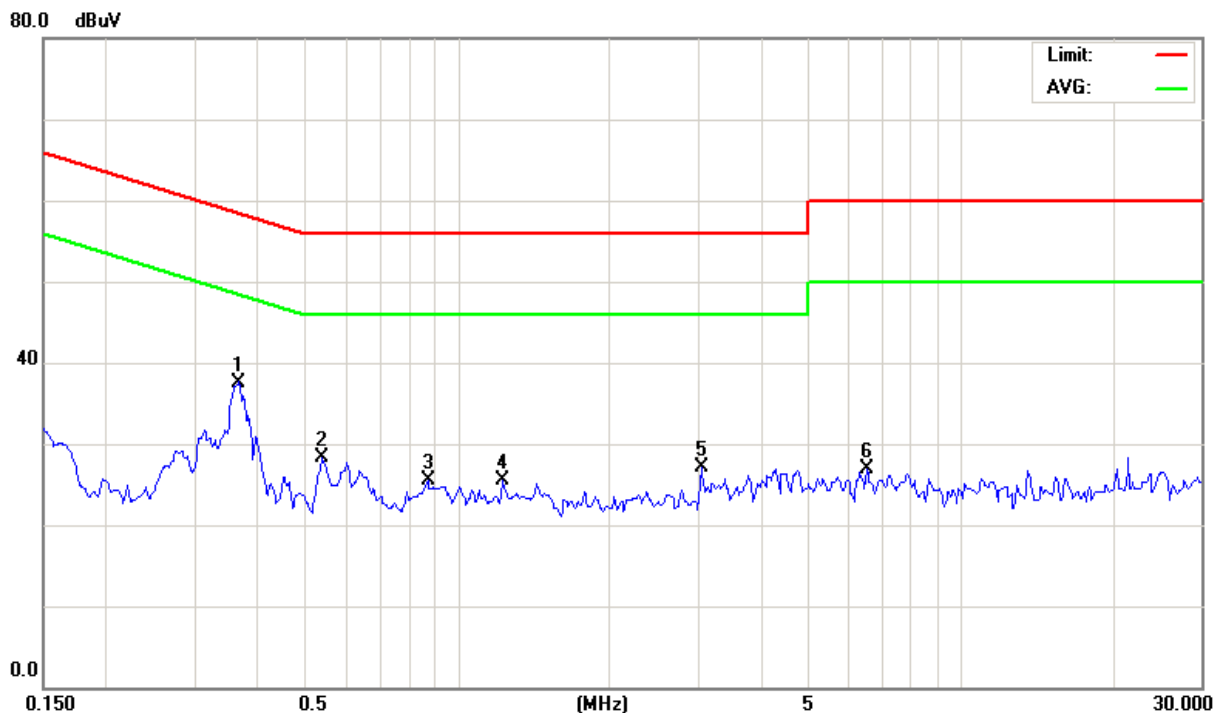


EUT :	Wireless Transmitter	Model Name	M5M001
Temperature :	25 °C	Relative Humidity :	60 %
Pressure :	1009 hPa	Test Power :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.37	Neutral	37.60	*	58.53	48.53	-20.93	(QP)
0.54	Neutral	28.25	*	56.00	46.00	-27.75	(QP)
0.87	Neutral	25.54	*	56.00	46.00	-30.46	(QP)
1.23	Neutral	25.50	*	56.00	46.00	-30.50	(QP)
3.04	Neutral	27.07	*	56.00	46.00	-28.93	(QP)
6.50	Neutral	26.99	*	60.00	50.00	-33.01	(QP)

#### 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.







## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS ( FCC 15.209 )

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
960~1000	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

### LIMITS OF RADIATED EMISSION MEASUREMENT ( FCC 15.209 )

FREQUENCY (MHz)	(dBuV/m) (at 3m)	
	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).

### LIMITS OF RADIATED EMISSION MEASUREMENT (FCC Part 15.249)

FCC Part15 (15.249) , Subpart C	
Limit	Frequency Range (MHz)
Field strength of fundamental 50000 $\mu$ V/m (94 dB $\mu$ V/m) @ 3 m	2400-2483.5
Field strength of harmonics 500 $\mu$ V/m (54 dB $\mu$ V/m) @ 3 m	Above 2483.5



#### 4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	May.25.2013
2	Amplifier	HP	8447D	2944A09673	May.04.2013
3	Test Receiver	R&S	ESCI	100382	May.04.2013
4	Test Cable	N/A	C-01_CB03	N/A	Jul.01.2013
5	Antenna	ETS	3115	00075789	May.25.2013
6	Amplifier	Agilent	8449B	3008A02274	May.04.2013
7	Spectrum	Agilent	E4408B	US39240143	Nov.25.2012
8	Test Cable	HUBER+SUHNER	C-45	N/A	May.02.2013
9	Controller	CT	SC100	N/A	N/A
10	Active Loop Antenna	R&S	HFH2-Z2	830749/020	May.04.2013
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Oct.13.2012
12	Horn Antenna	EMCO	3115	9605-4803	May.25.2013

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic

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



Duty cycle: TX 2481MHz

Duty cycle =  $T_{ON} / (T_{ON} + T_{OFF})$

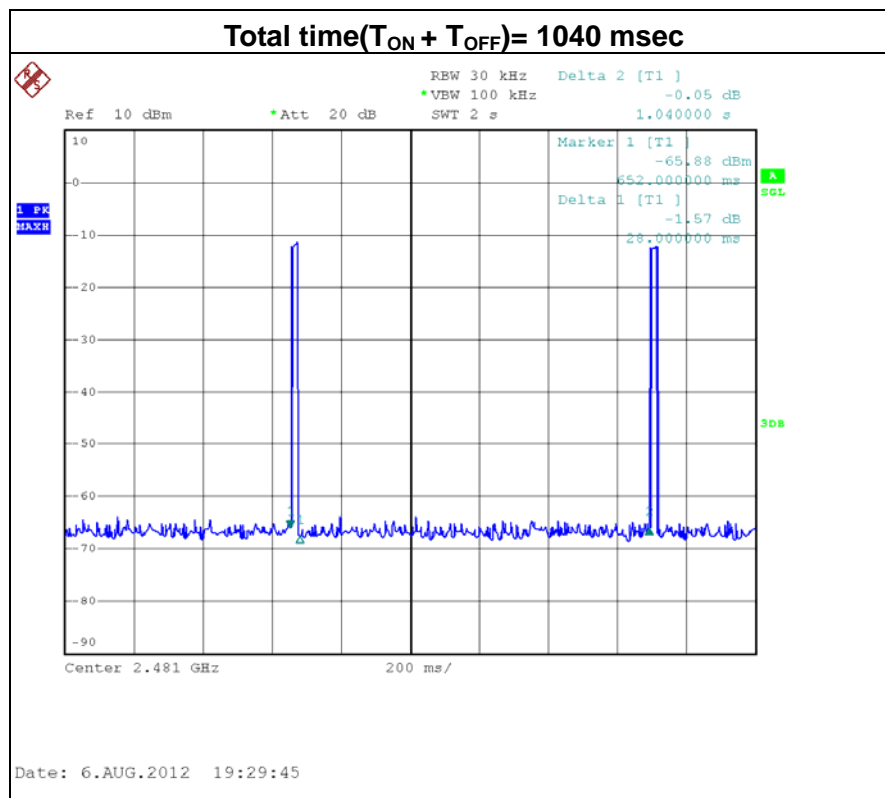
$T_{ON}$ : 28msec

$T_{ON} + T_{OFF}$ : (total time):1040 msec

Duty cycle: 2.69%

$AV = PK + 20 \log(\text{Duty cycle})$

$AV = PK - 31.4$





#### 4.2.3 TEST PROCEDURE

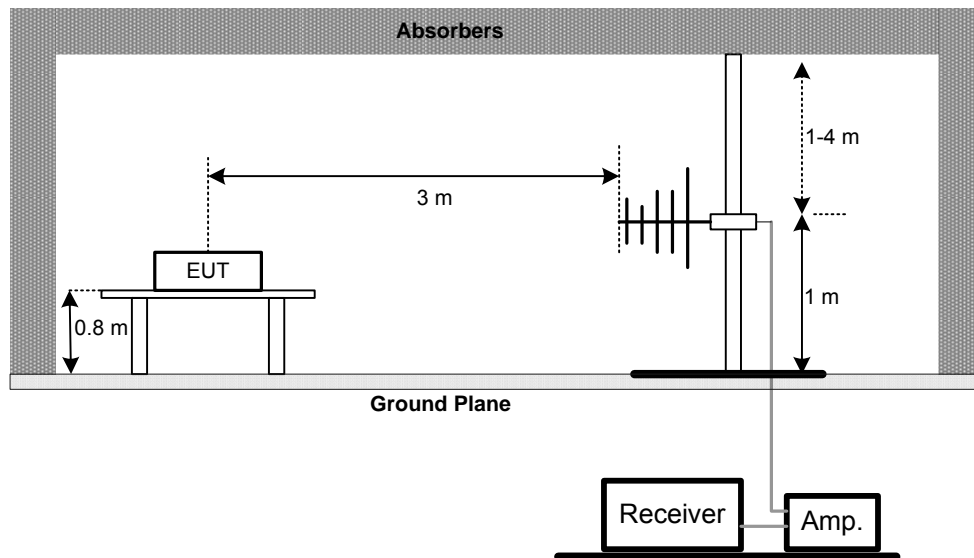
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- 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 AV 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.

#### 4.2.4 DEVIATION FROM TEST STANDARD

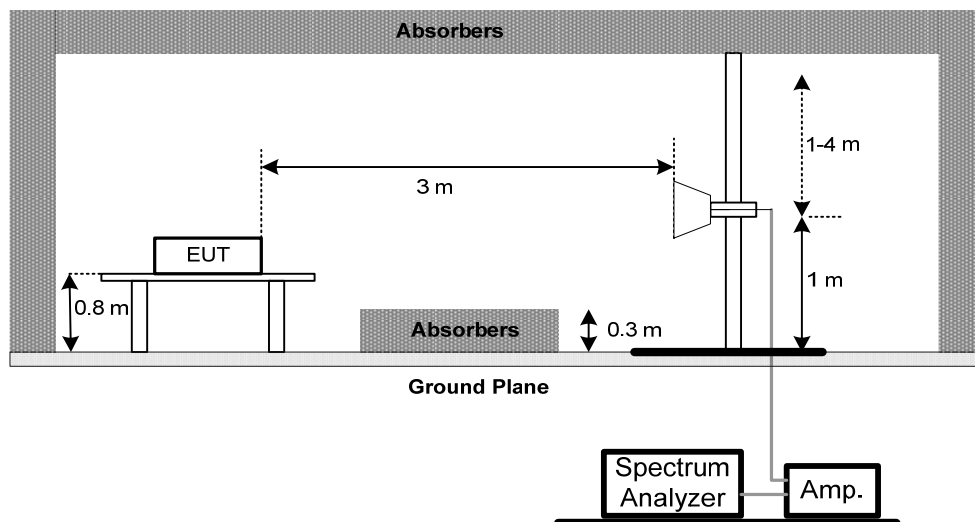
No deviation

#### 4.2.5 TEST SETUP

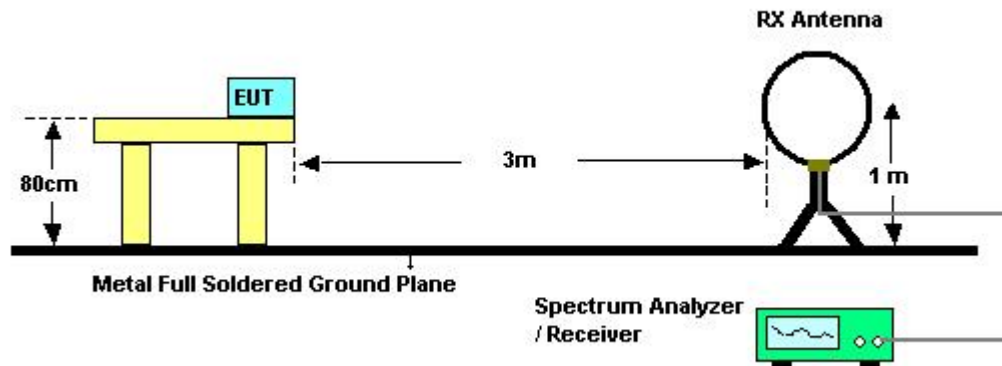
##### (A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



#### 4.2.6 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.



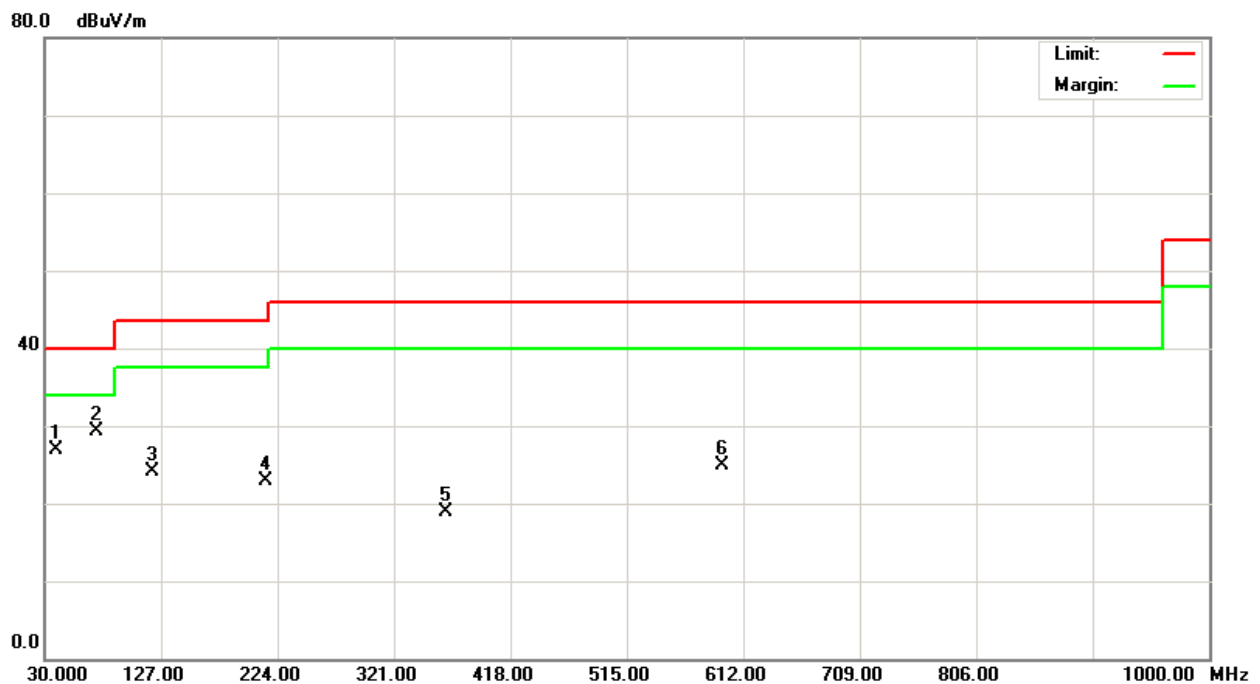
#### 4.2.7 TEST RESULTS (BETWEEN 30 – 1000 MHz)

EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25 °C	Relative Humidity	58 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX Mode 2401.999MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
37.90	V	43.72	-16.83	26.89	40.00	- 13.11	
73.65	V	47.93	-18.68	29.25	40.00	- 10.75	
119.73	V	42.38	-18.28	24.10	43.50	- 19.40	
214.30	V	39.08	-16.11	22.97	43.50	- 20.53	
364.65	V	29.25	-10.31	18.94	46.00	- 27.06	
595.03	V	29.22	-4.39	24.83	46.00	- 21.17	

#### 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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



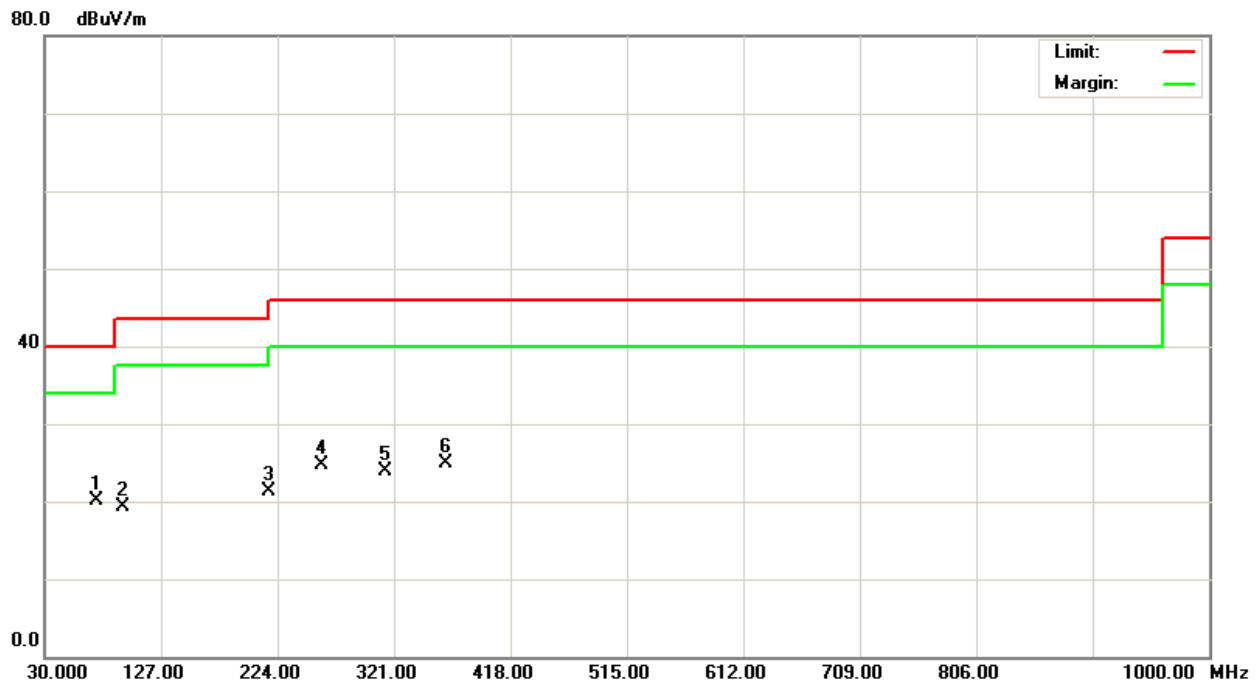


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25 °C	Relative Humidity	58 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX Mode 2401.999MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
73.65	H	38.82	-18.68	20.14	40.00	- 19.86	
95.48	H	37.82	-18.48	19.34	43.50	- 24.16	
216.73	H	37.31	-16.00	21.31	46.00	- 24.69	
260.38	H	38.44	-13.83	24.61	46.00	- 21.39	
313.73	H	35.59	-11.74	23.85	46.00	- 22.15	
364.65	H	35.13	-10.31	24.82	46.00	- 21.18	

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency."F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.





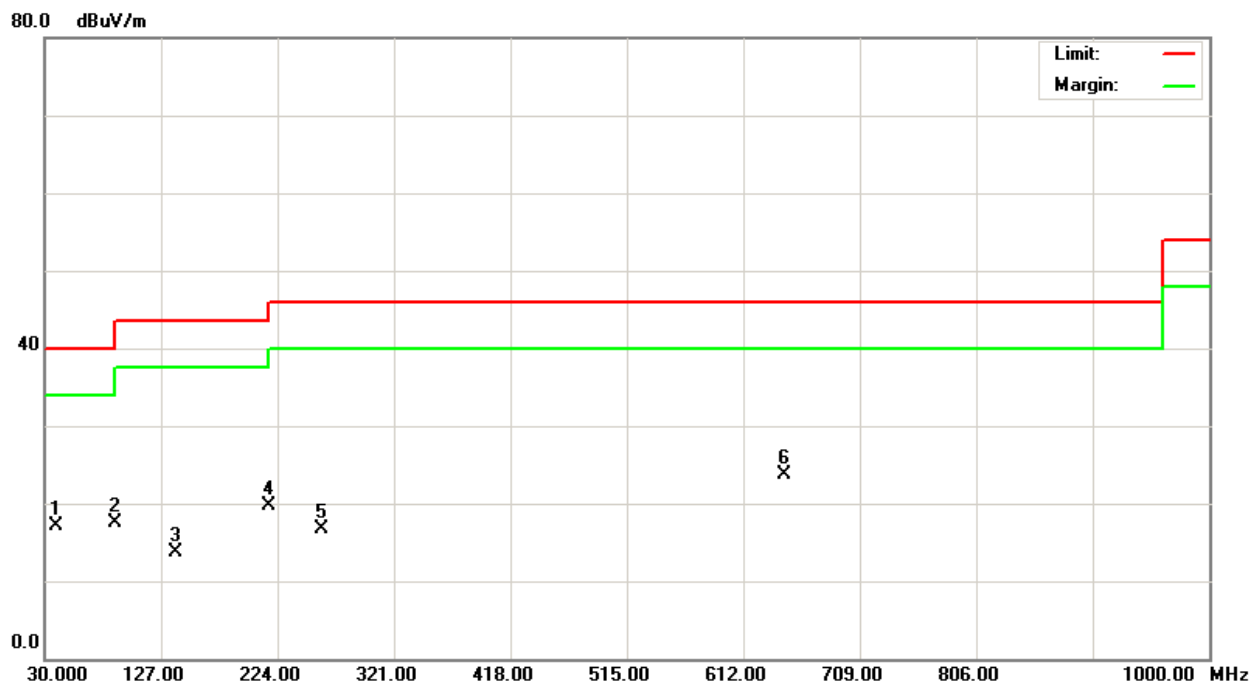


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25 °C	Relative Humidity	58 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX Mode		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
39.70	V	34.02	-16.83	17.19	40.00	- 22.81	
88.20	V	36.57	-19.08	17.49	43.50	- 26.01	
139.13	V	31.48	-17.77	13.71	43.50	- 29.79	
216.73	V	35.80	-16.00	19.80	46.00	- 26.20	
260.38	V	30.46	-13.83	16.63	46.00	- 29.37	
645.95	V	27.21	-3.41	23.80	46.00	- 22.20	

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



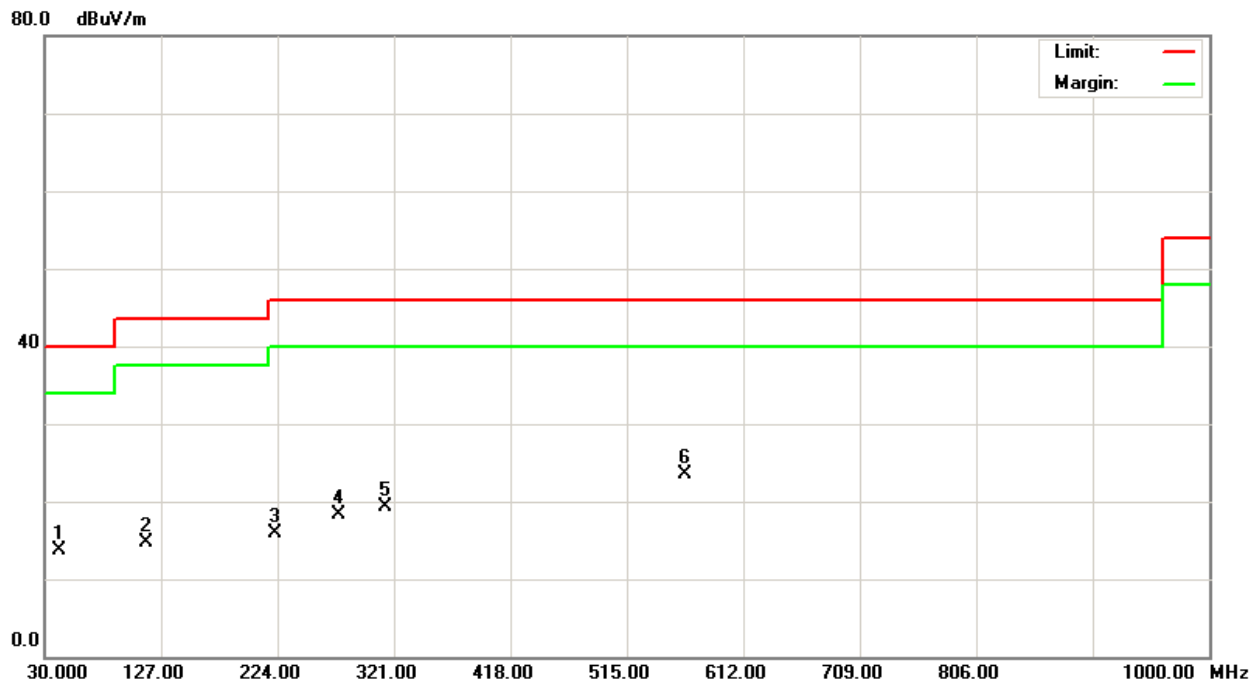


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25 °C	Relative Humidity	58 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX Mode		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
42.13	H	30.43	-16.68	13.75	40.00	- 26.25	
114.88	H	32.99	-18.32	14.67	43.50	- 28.83	
221.58	H	31.70	-15.82	15.88	46.00	- 30.12	
274.93	H	31.21	-12.96	18.25	46.00	- 27.75	
313.73	H	31.04	-11.74	19.30	46.00	- 26.70	
563.50	H	28.71	-5.16	23.55	46.00	- 22.45	

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



#### 4.2.8 TEST RESULTS (ABOVE 1000 MHz)

EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX 2401.999MHz		

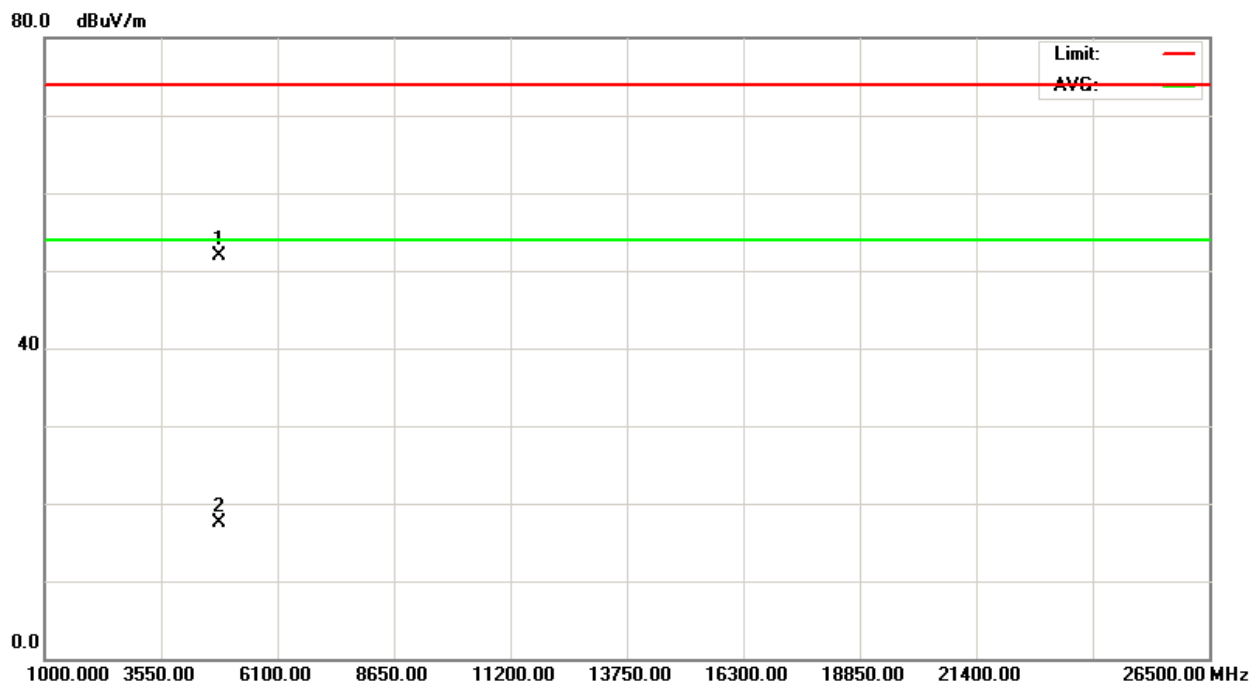
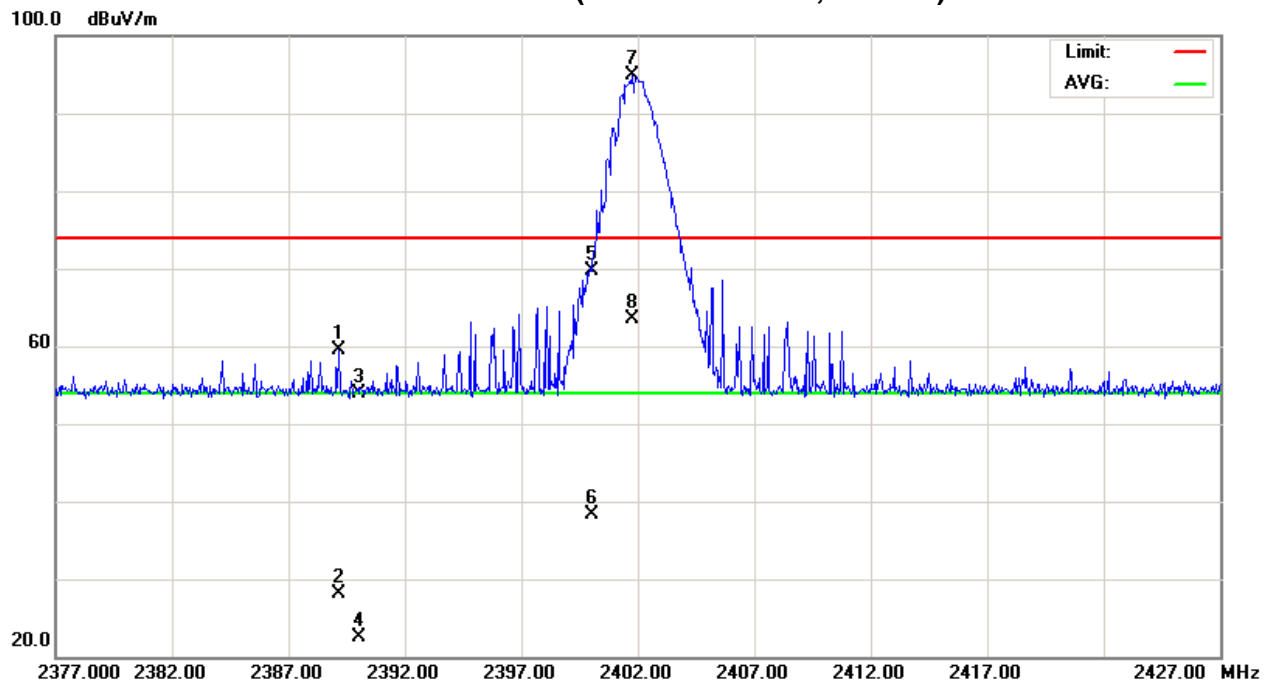
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2389.15	V	27.95	-3.45	31.54	59.49	28.09	74.00	54.00	X/E
2390.00	V	22.35	-9.05	31.54	53.89	22.49	74.00	54.00	X/E
2400.00	V	38.21	6.81	31.56	69.77	38.37	74.00	54.00	X/E
<b>2401.75</b>	<b>V</b>	<b>63.31</b>	<b>31.91</b>	<b>31.56</b>	<b>94.87</b>	<b>63.47</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
4804.21	V	46.69	12.29	5.21	51.90	17.50	74.00	54.00	X/H

#### 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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) 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
- (8) The average value of fundamental frequency is:  
Average = Peak value + 20log(Duty cycle) , Final AV=PK-31.4



Orthogonal Axis : X  
TX 2401.999MHz (Above 1000 MHz, Vertical)



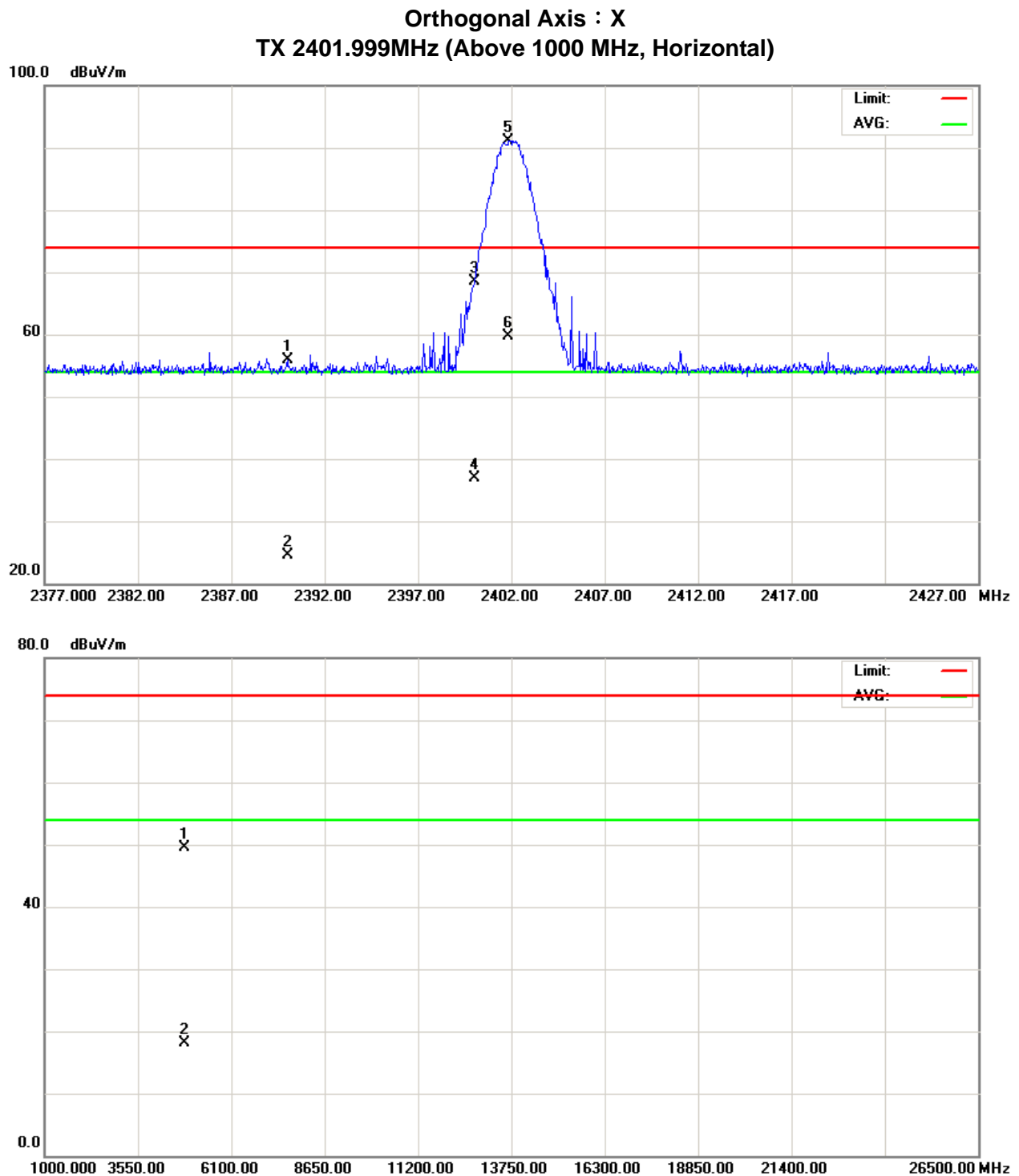


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX 2401.999MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	24.45	-6.95	31.54	55.99	24.59	74.00	54.00	X/E
2400.00	H	36.84	5.44	31.56	68.40	37.00	74.00	54.00	X/E
<b>2401.85</b>	<b>H</b>	<b>59.50</b>	<b>28.10</b>	<b>31.56</b>	<b>91.06</b>	<b>59.66</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
4804.65	H	44.21	12.81	5.21	49.42	18.02	74.00	54.00	X/H

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) 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
- (8) The average value of fundamental frequency is:  
Average = Peak value + 20log(Duty cycle) → Final AV=PK-31.4





EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX 2440.294MHz		

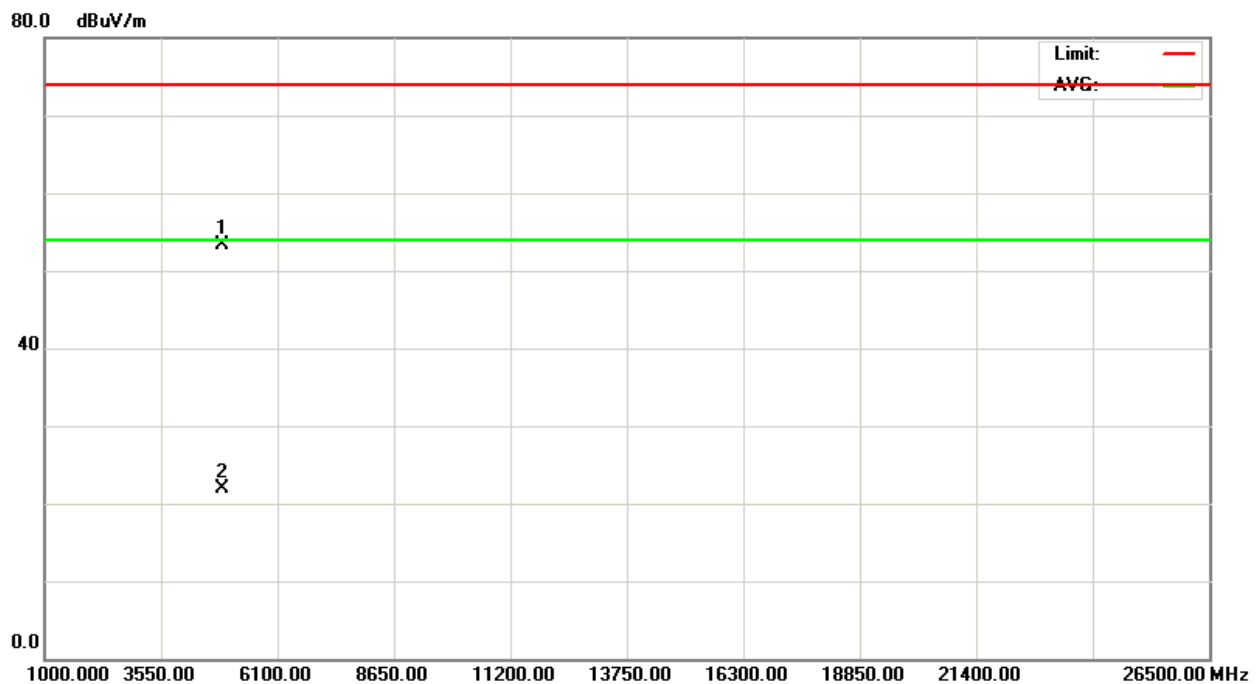
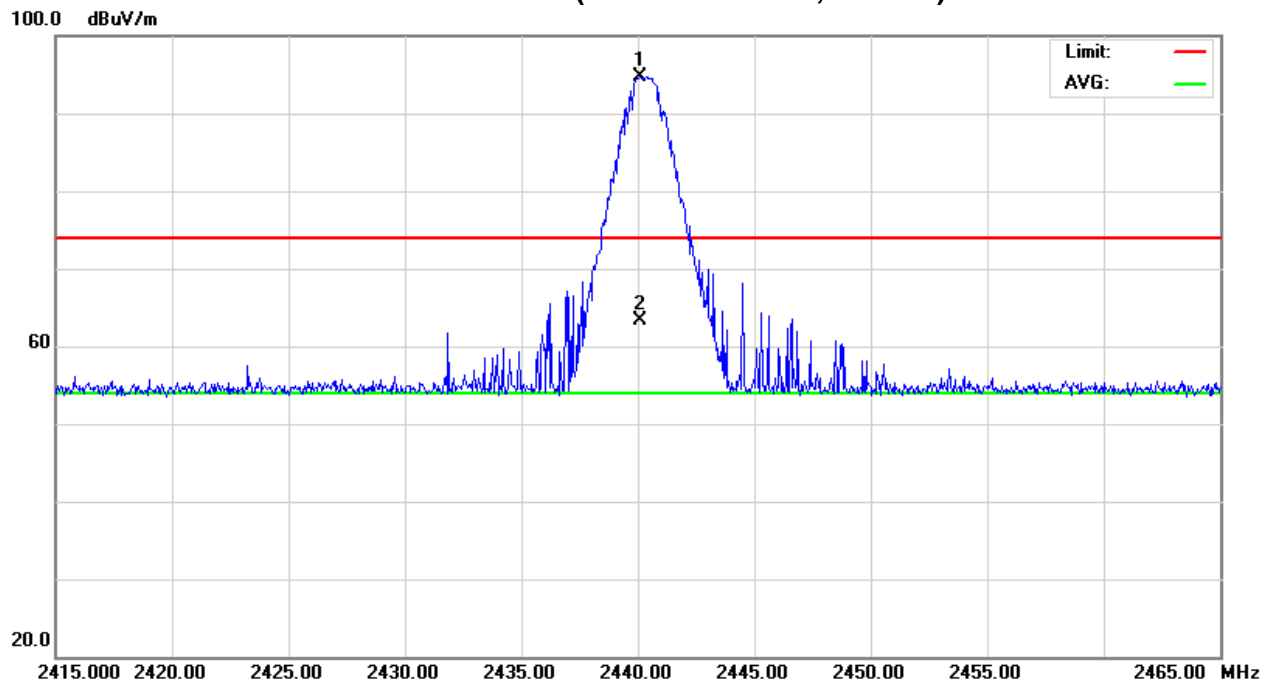
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
<b>2440.10</b>	<b>V</b>	<b>63.04</b>	<b>31.64</b>	<b>31.62</b>	<b>94.66</b>	<b>63.26</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
4881.40	V	47.84	16.44	5.50	53.34	21.94	74.00	54.00	X/H

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) 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
- (8) The average value of fundamental frequency is:  
Average = Peak value + 20log(Duty cycle) → Final AV=PK-31.4



Orthogonal Axis : X  
TX 2440.294MHz (Above 1000 MHz, Vertical)





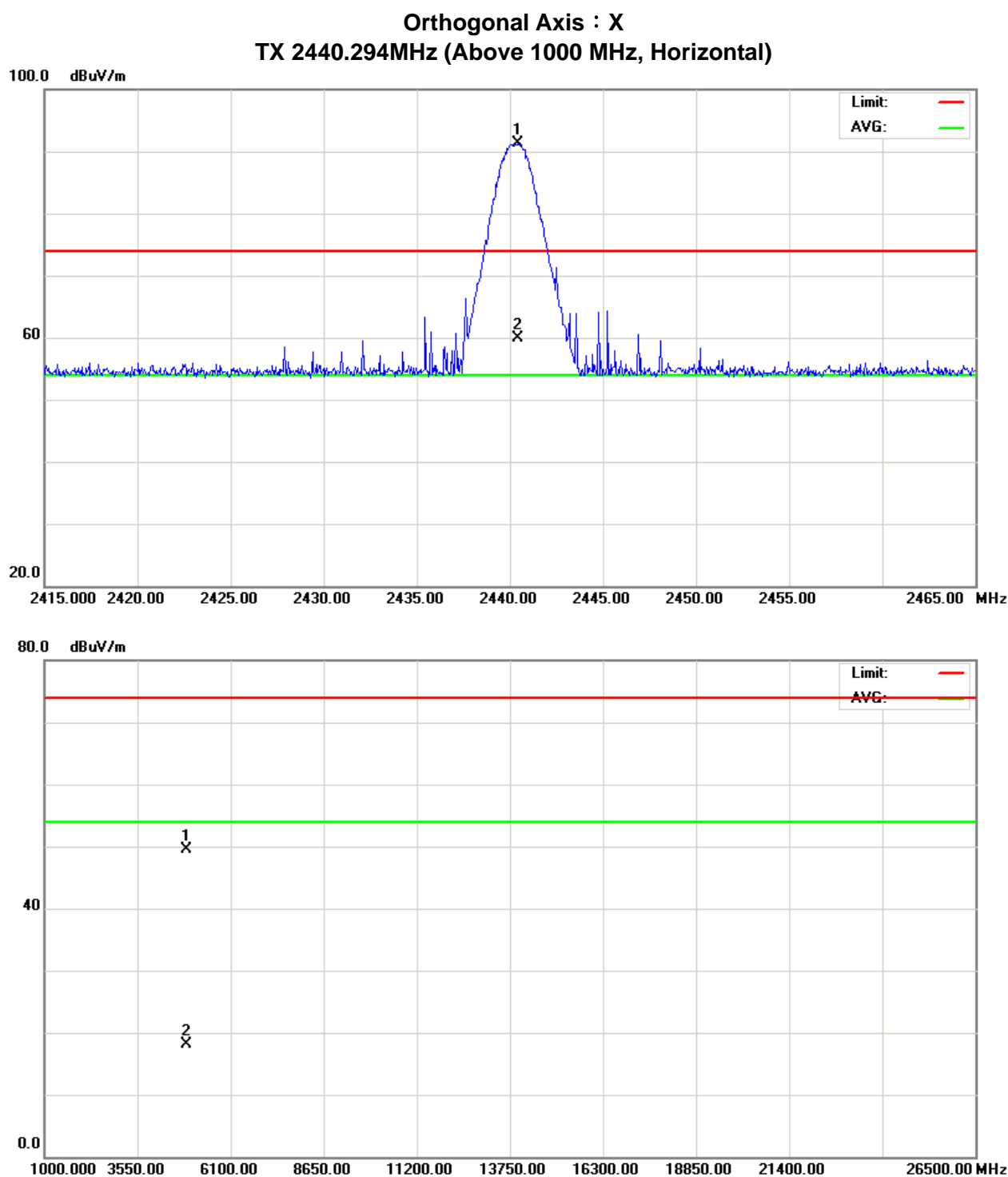


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX 2440.294MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
<b>2440.40</b>	<b>H</b>	<b>59.62</b>	<b>28.22</b>	<b>31.62</b>	<b>91.24</b>	<b>59.84</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
4880.50	H	43.95	12.55	5.49	49.44	18.04	74.00	54.00	X/H

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) 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
- (8) The average value of fundamental frequency is:  
Average = Peak value + 20log(Duty cycle) → Final AV=PK-31.4



EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX 2480.920MHz		

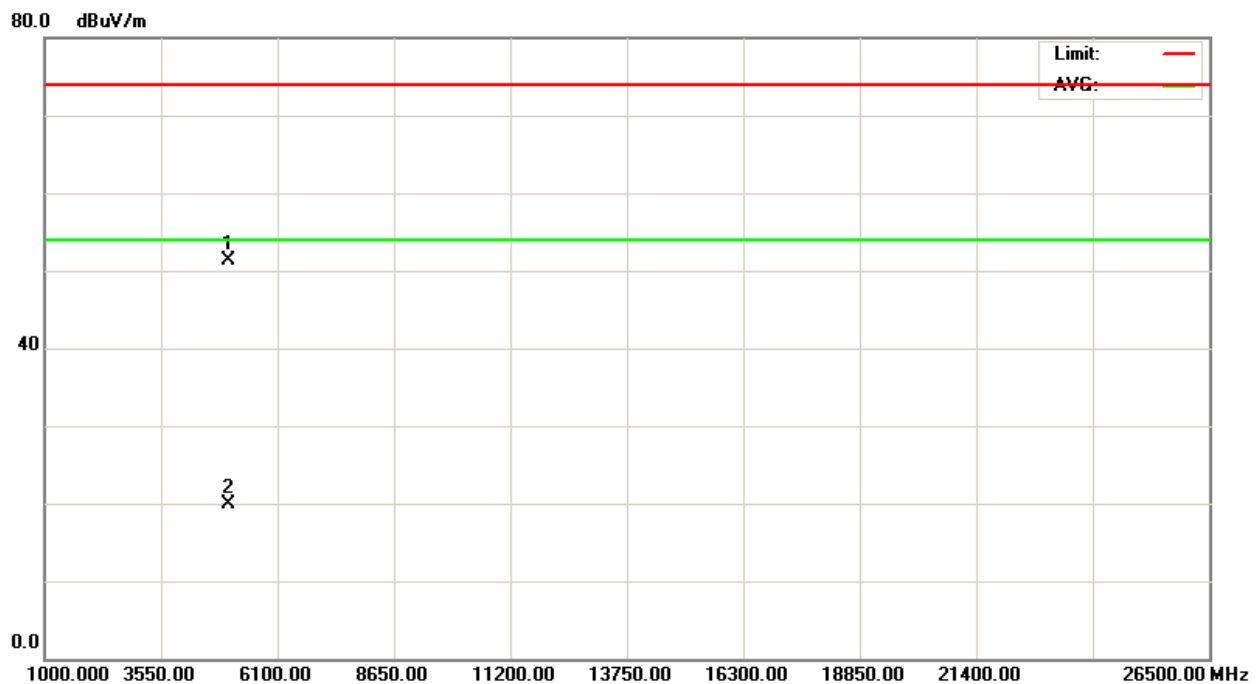
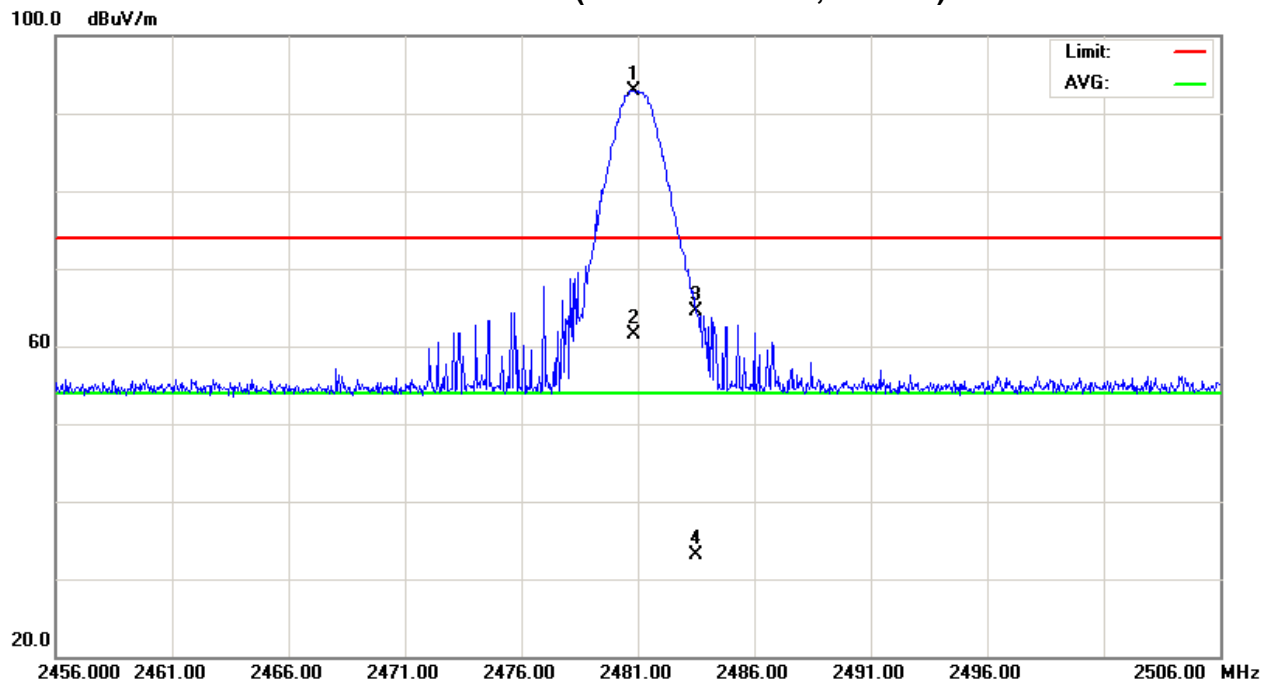
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
<b>2480.80</b>	<b>V</b>	<b>61.22</b>	<b>29.82</b>	<b>31.69</b>	<b>92.91</b>	<b>61.51</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
2483.50	V	32.73	1.33	31.70	64.43	33.03	74.00	54.00	X/E
4961.72	V	45.56	14.16	5.79	51.35	19.95	74.00	54.00	X/H

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) 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
- (8) The average value of fundamental frequency is:  
Average = Peak value + 20log(Duty cycle) → Final AV=PK-31.4



Orthogonal Axis : X  
TX 2480.920MHz (Above 1000 MHz, Vertical)



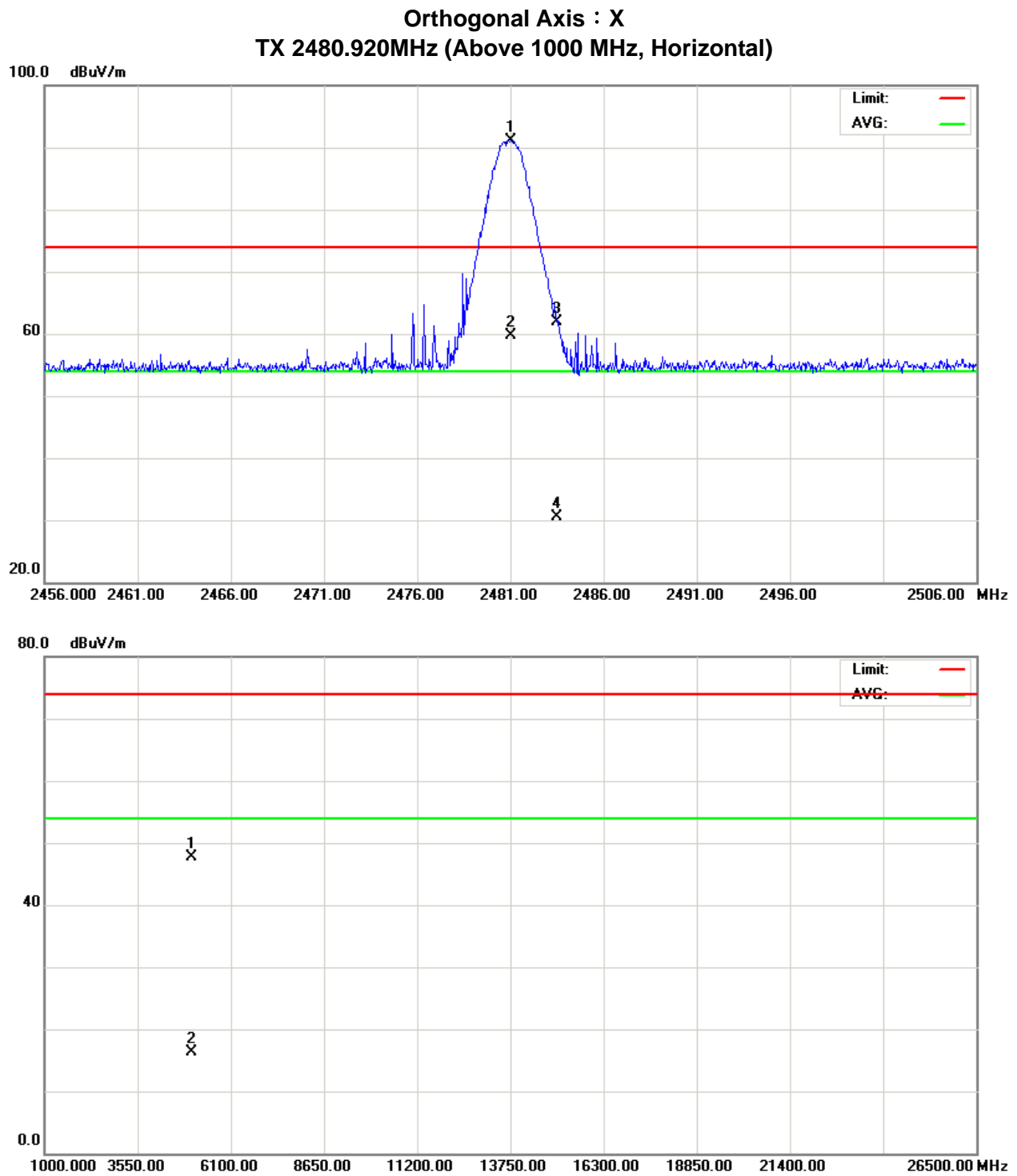


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX 2480.920MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
<b>2481.00</b>	<b>H</b>	<b>59.40</b>	<b>28.00</b>	<b>31.69</b>	<b>91.09</b>	<b>59.69</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
2483.50	H	30.23	-1.17	31.70	61.93	30.53	74.00	54.00	X/E
4961.50	H	41.90	10.50	5.79	47.69	16.29	74.00	54.00	X/H

**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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) 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
- (8) The average value of fundamental frequency is:  
Average = Peak value + 20log(Duty cycle) ∙ Final AV=PK-31.4



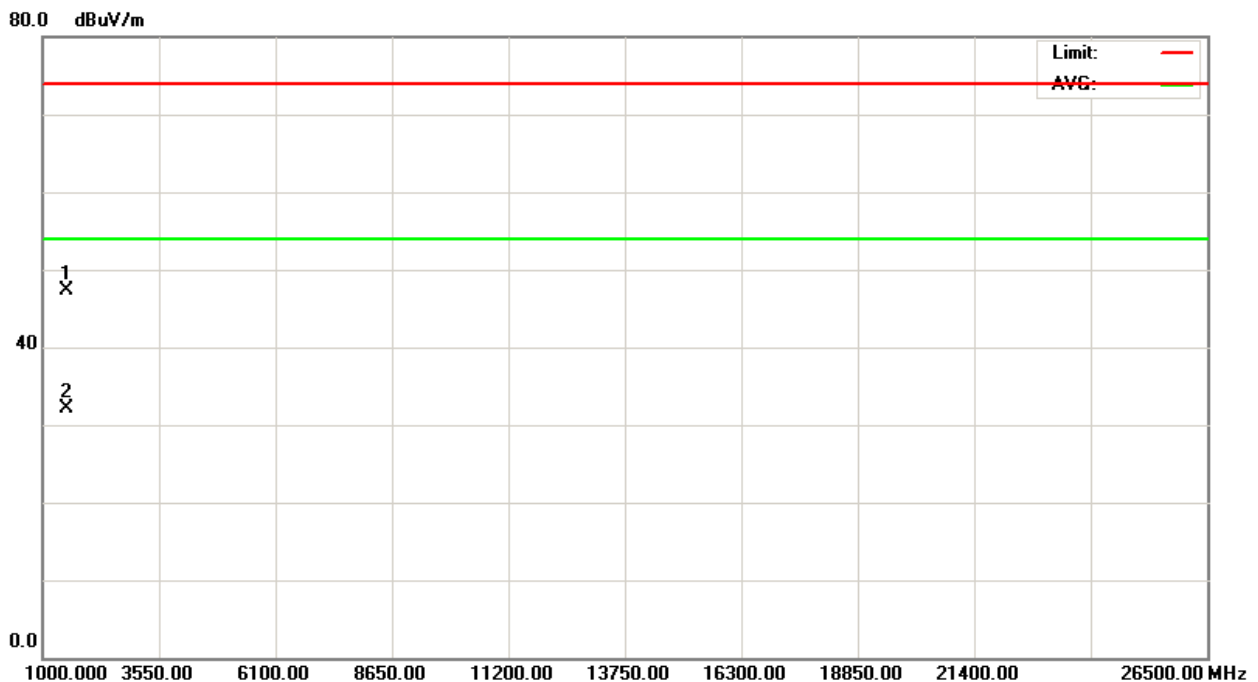


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX 2401.999MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1467.11	V	53.84	38.72	-6.59	47.25	32.13	74.00	54.00	X/E

**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) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



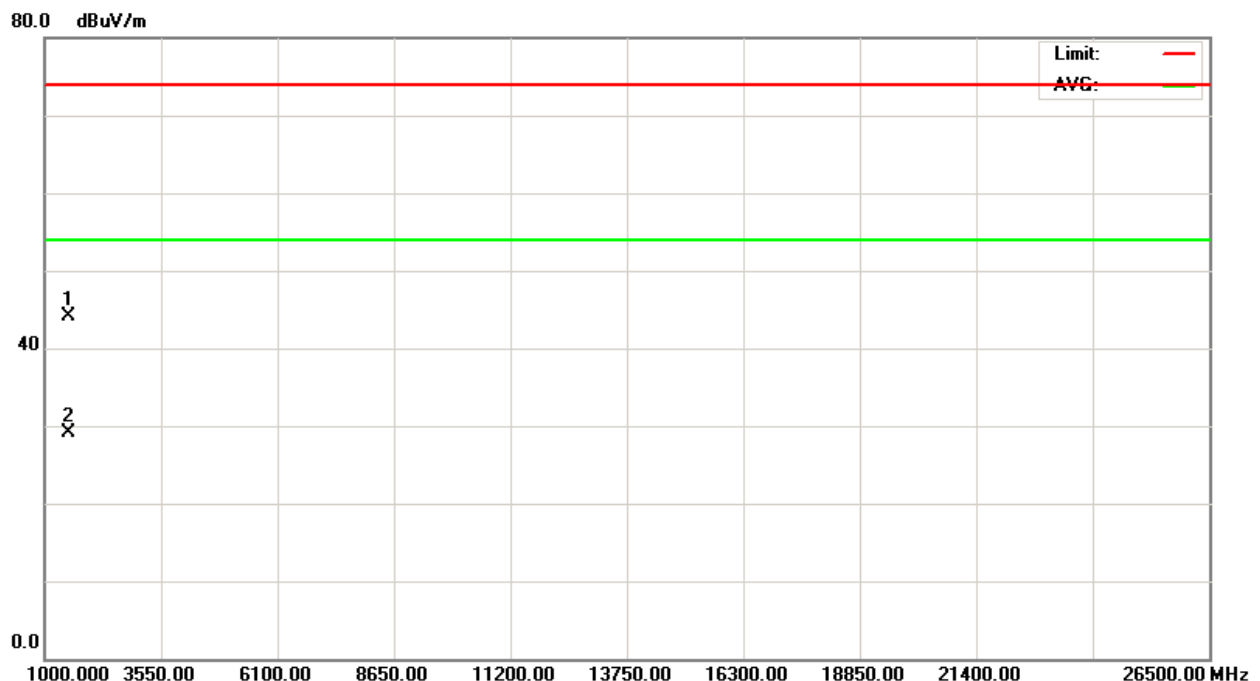


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX 2401.999MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1459.45	H	50.69	35.67	-6.63	44.06	29.04	74.00	54.00	X/E

**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) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand





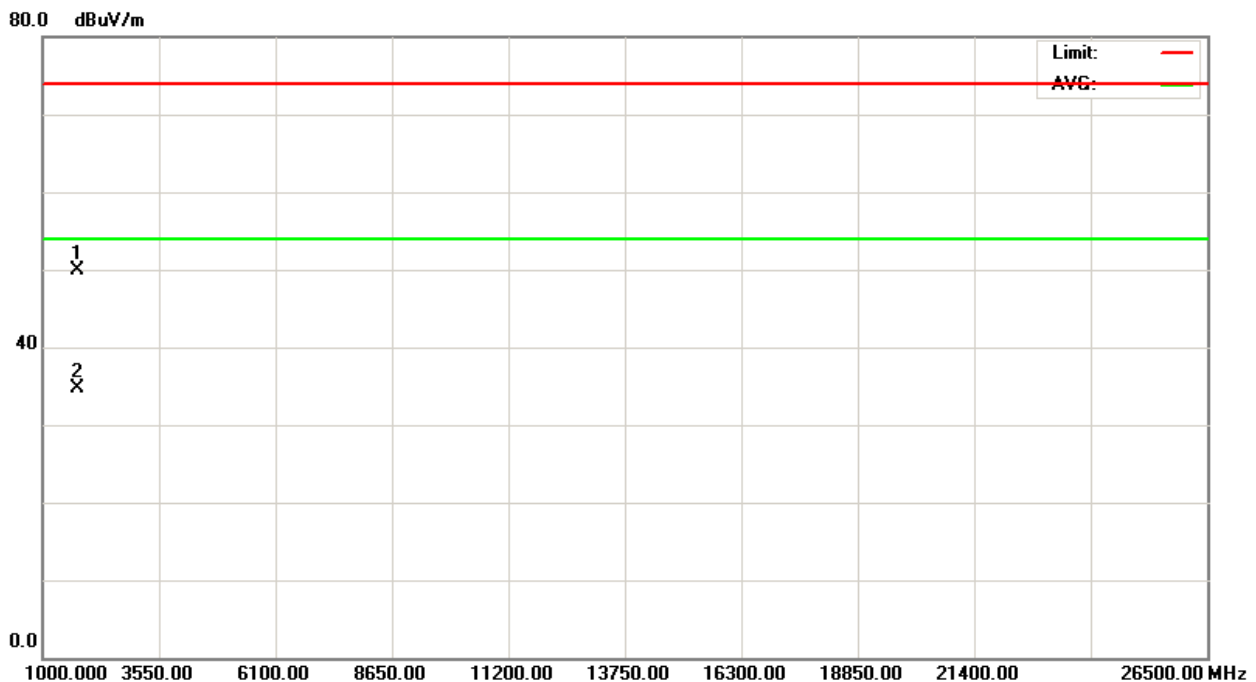


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX 2440.294MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1724.35	V	53.82	38.64	-3.94	49.88	34.70	74.00	54.00	X/E

**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) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



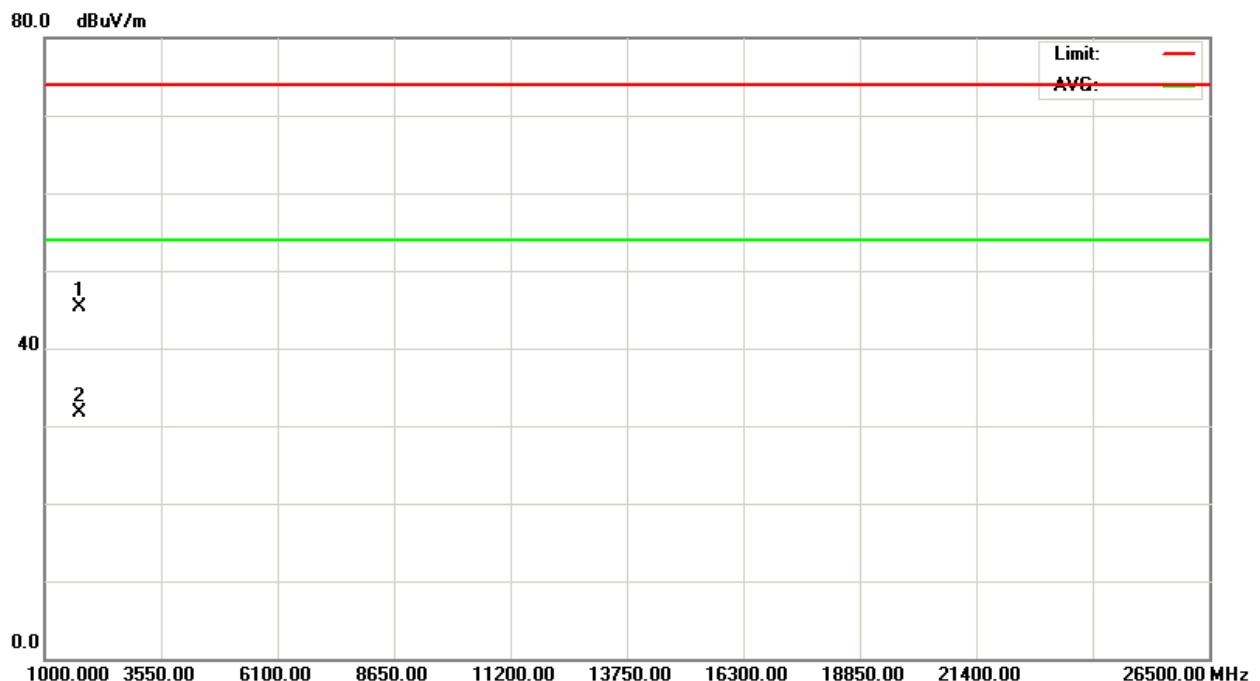


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX 2440.294MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1735.20	H	49.05	35.47	-3.83	45.22	31.64	74.00	54.00	X/E

**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) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



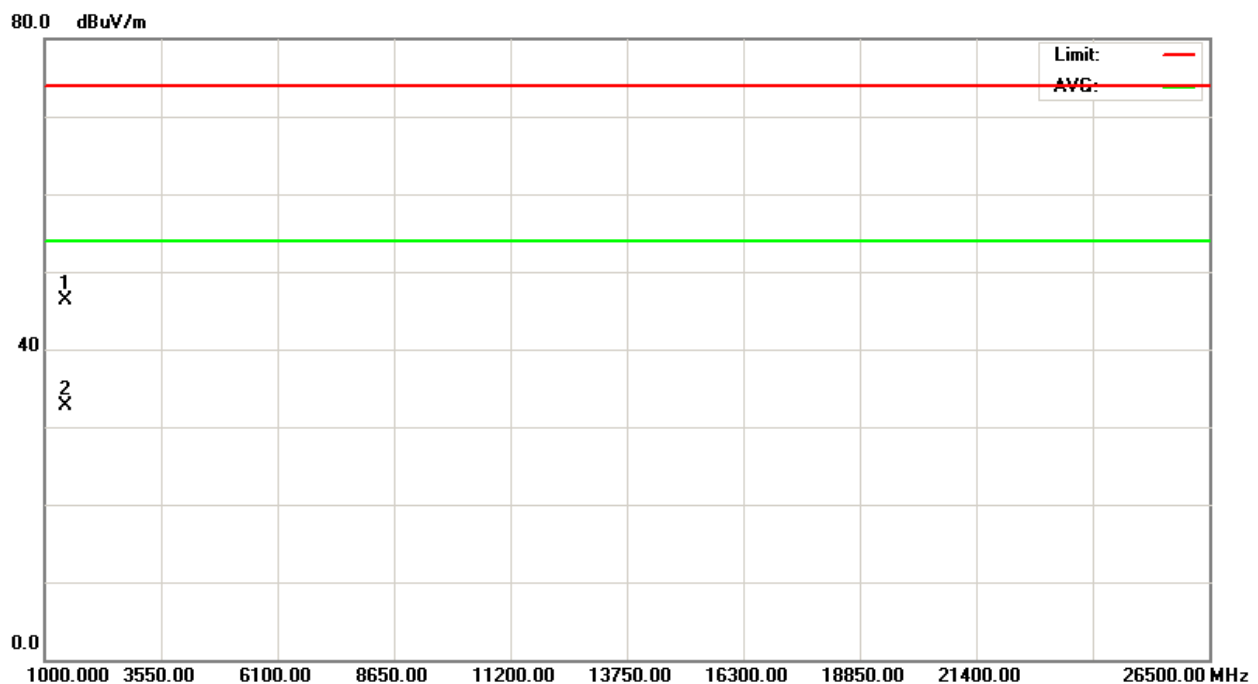


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX 2480.920MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1424.20	V	53.17	39.58	-6.82	46.35	32.76	74.00	54.00	X/E

**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) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



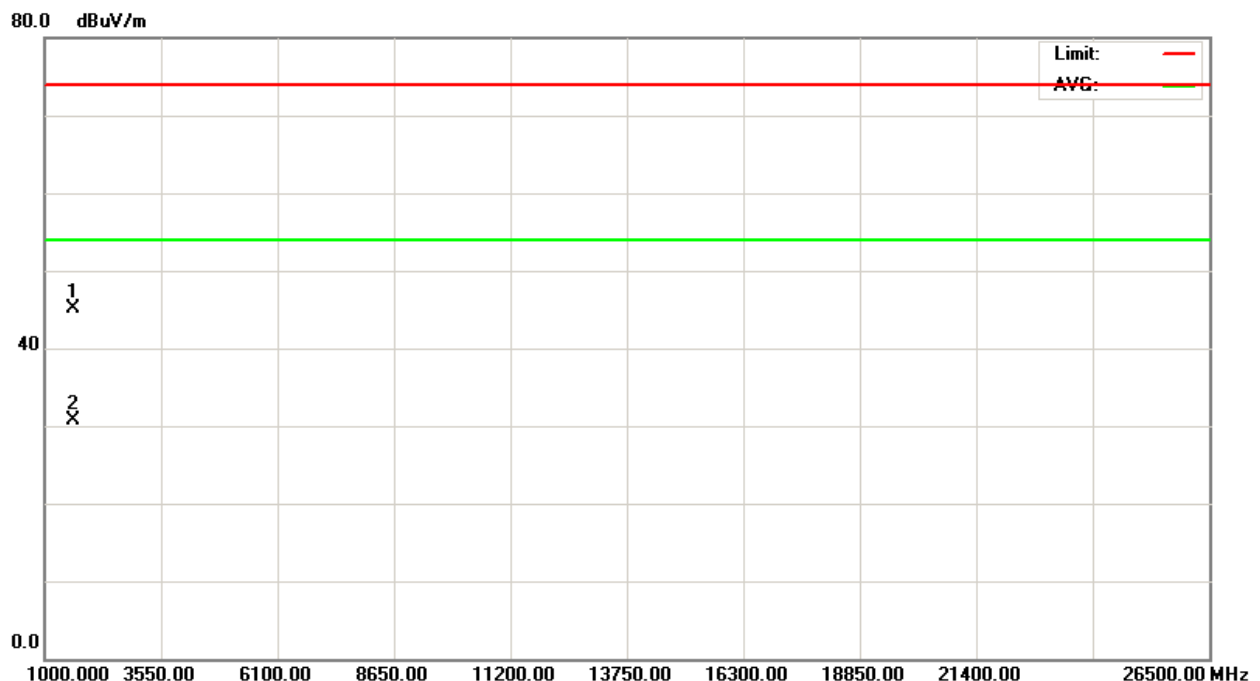


EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	60 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	RX 2480.920MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1628.55	H	50.17	35.62	-5.00	45.17	30.62	74.00	54.00	X/E

**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) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand





## **5. BANDWIDTH TEST**

### **5.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2012

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

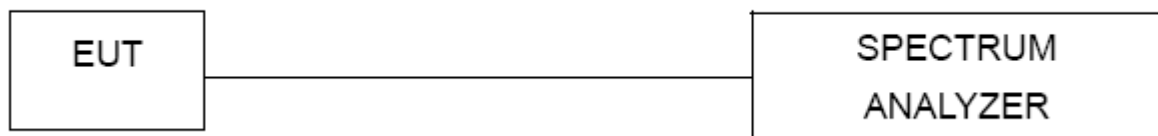
### **5.2 TEST PROCEDURE**

- 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=100KHz, Sweep time = 2.5 ms.

### **5.3 DEVIATION FROM STANDARD**

No deviation.

### **5.4 TEST SETUP**



### **5.5 EUT OPERATION CONDITIONS**

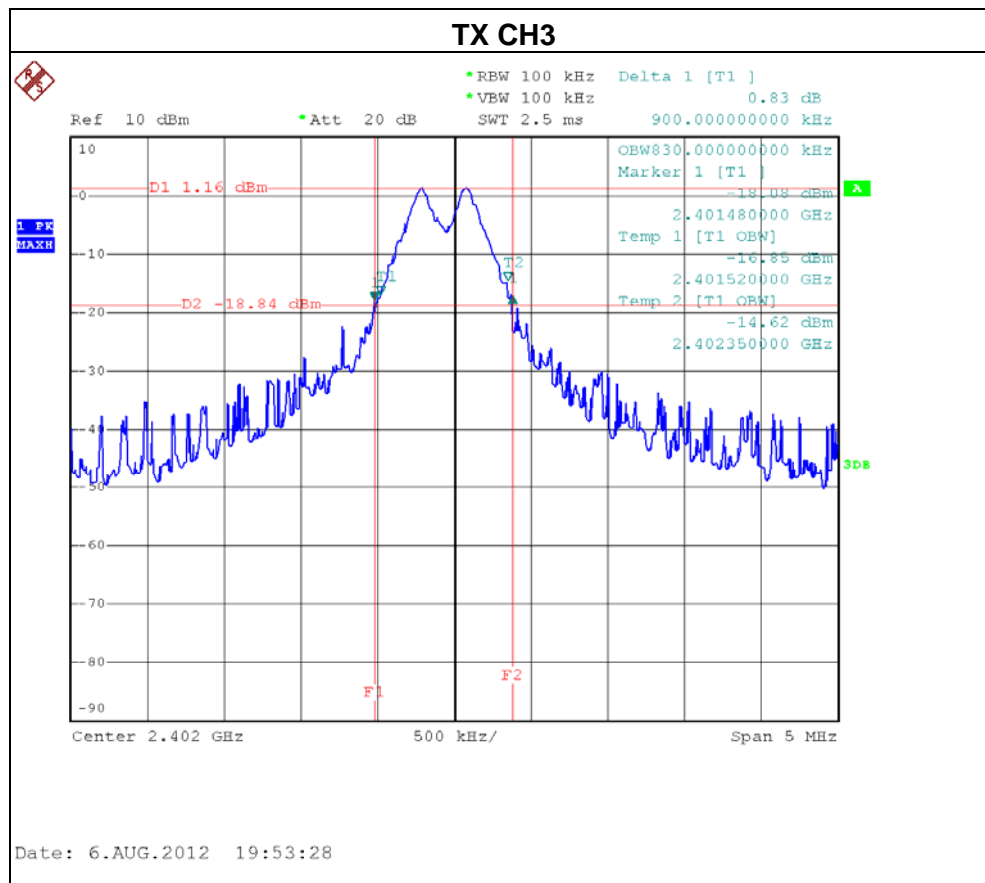
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

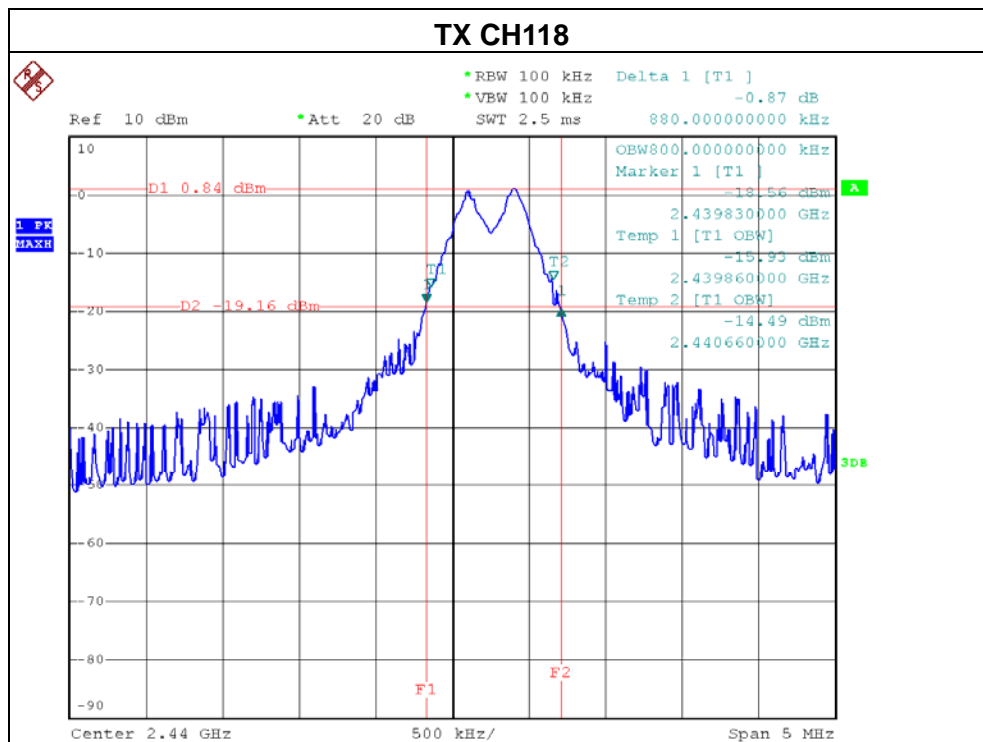


## 5.6 TEST RESULTS

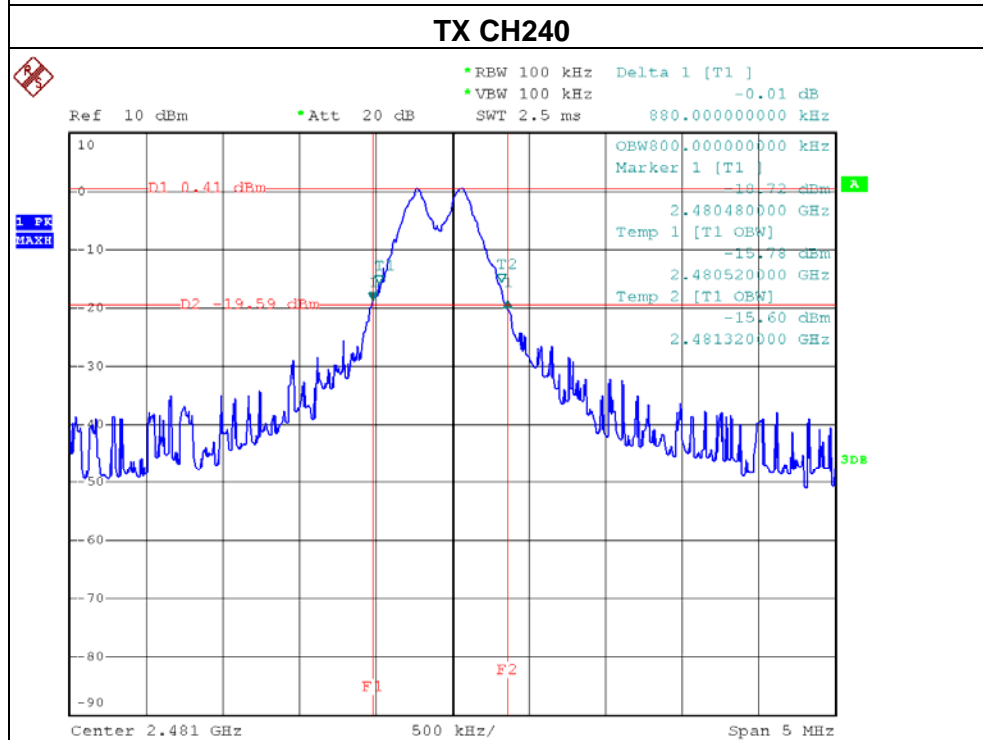
EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	55 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX CH 3/118/240		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)	99% occupied Bandwidth(MHz)
CH 3	2401.999	0.90	0.83
CH 118	2440.294	0.88	0.80
CH 240	2480.920	0.88	0.80





Date: 6.AUG.2012 19:58:29



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## 6. ANTENNA CONDUCTED SPURIOUS EMISSION

### 6.1 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
960~1000	500	3

#### 6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2012

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of Equipment List is One Year.

#### 6.1.2 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=100KHz, Sweep time = 10 ms.

#### 6.1.3 DEVIATION FROM STANDARD

No deviation.

#### 6.1.4 TEST SETUP



#### 6.1.5 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.

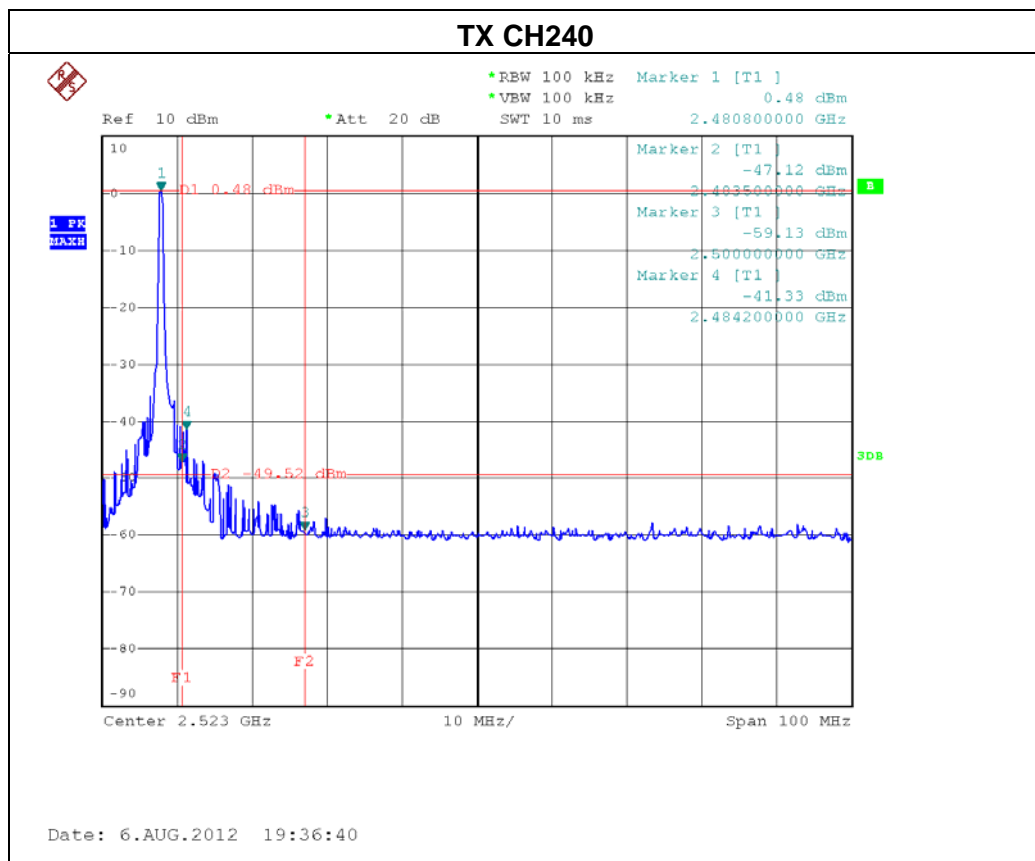
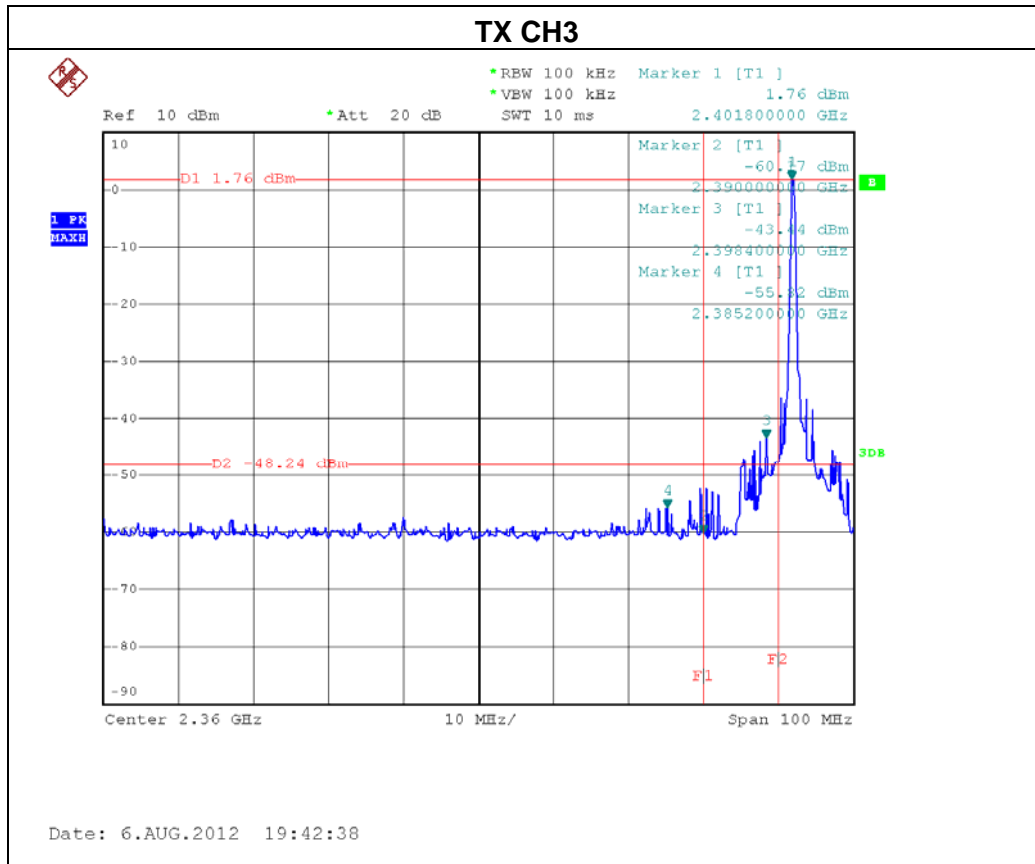


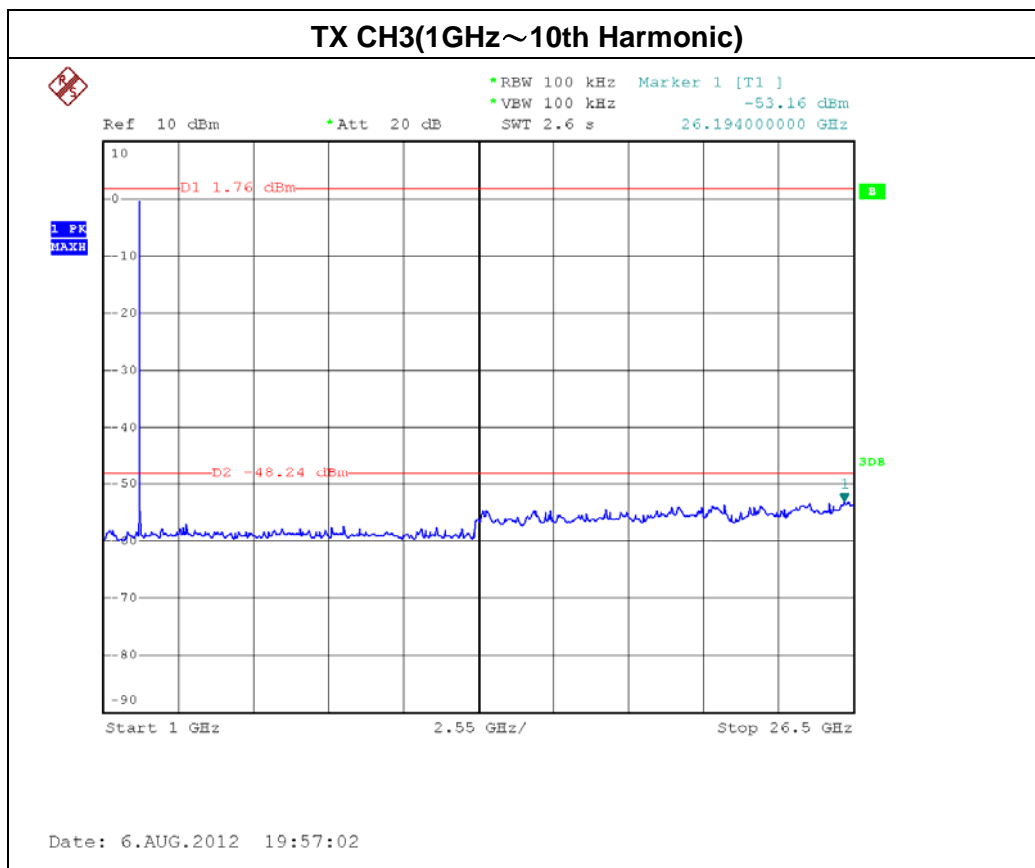
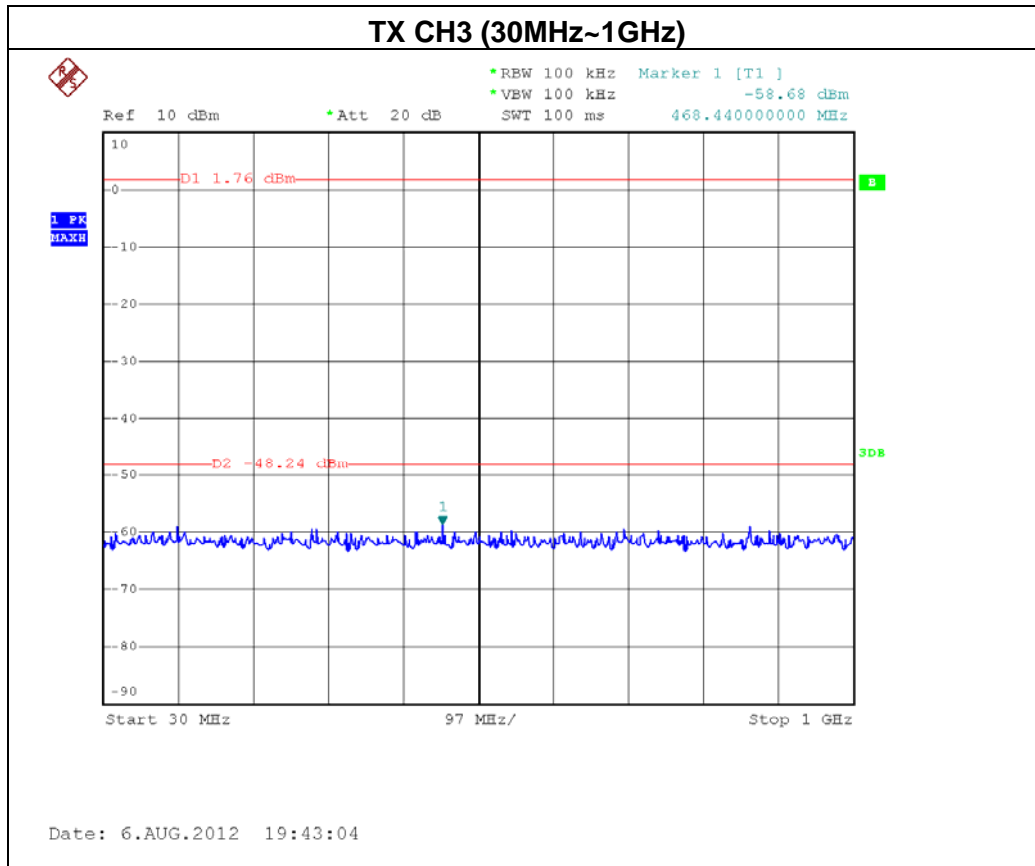


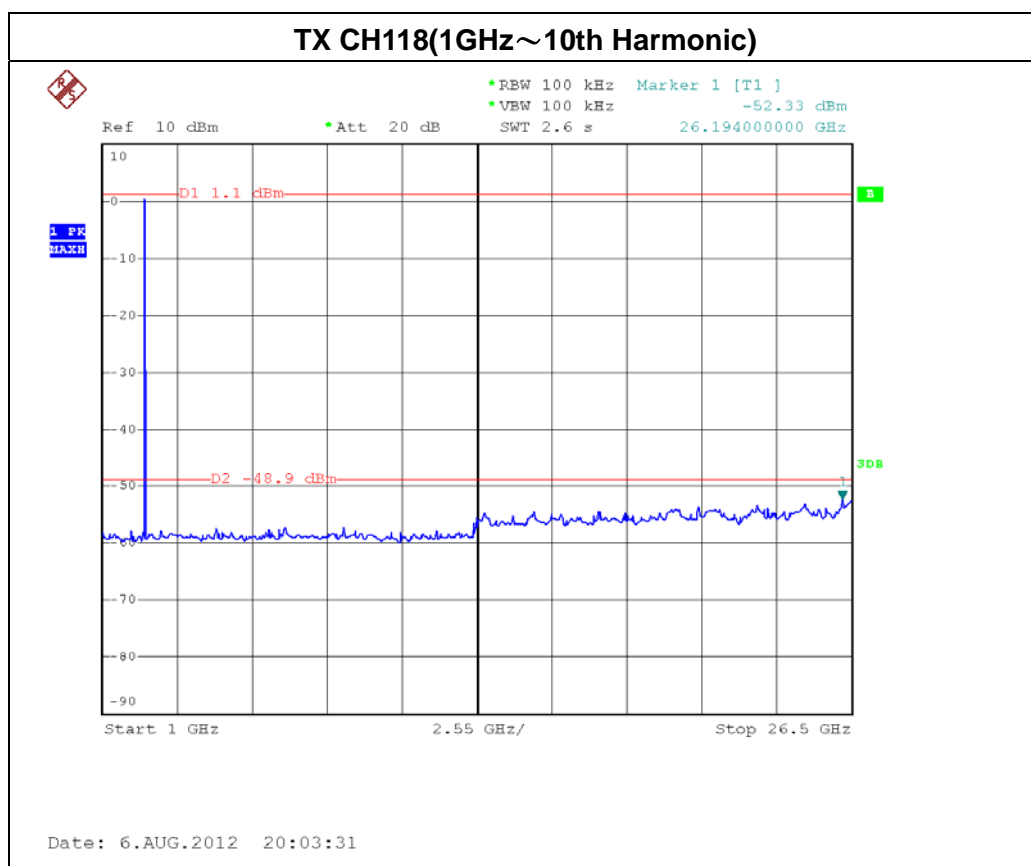
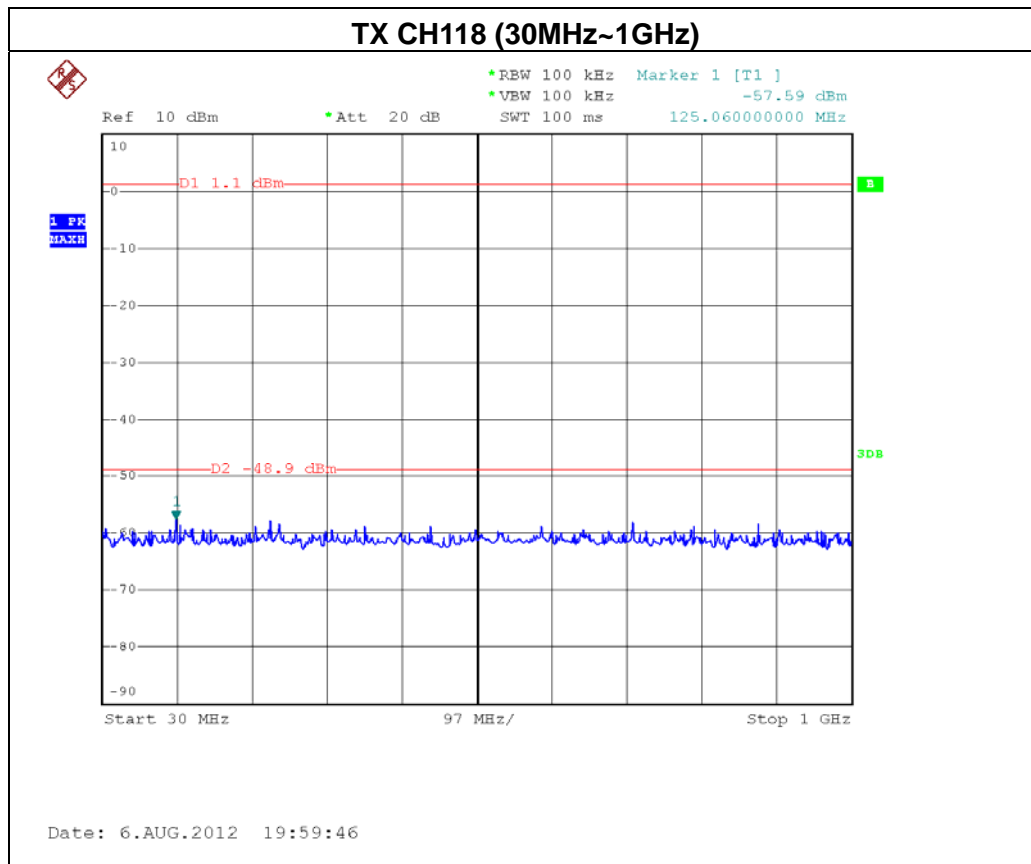
**6.1.6 TEST RESULTS**

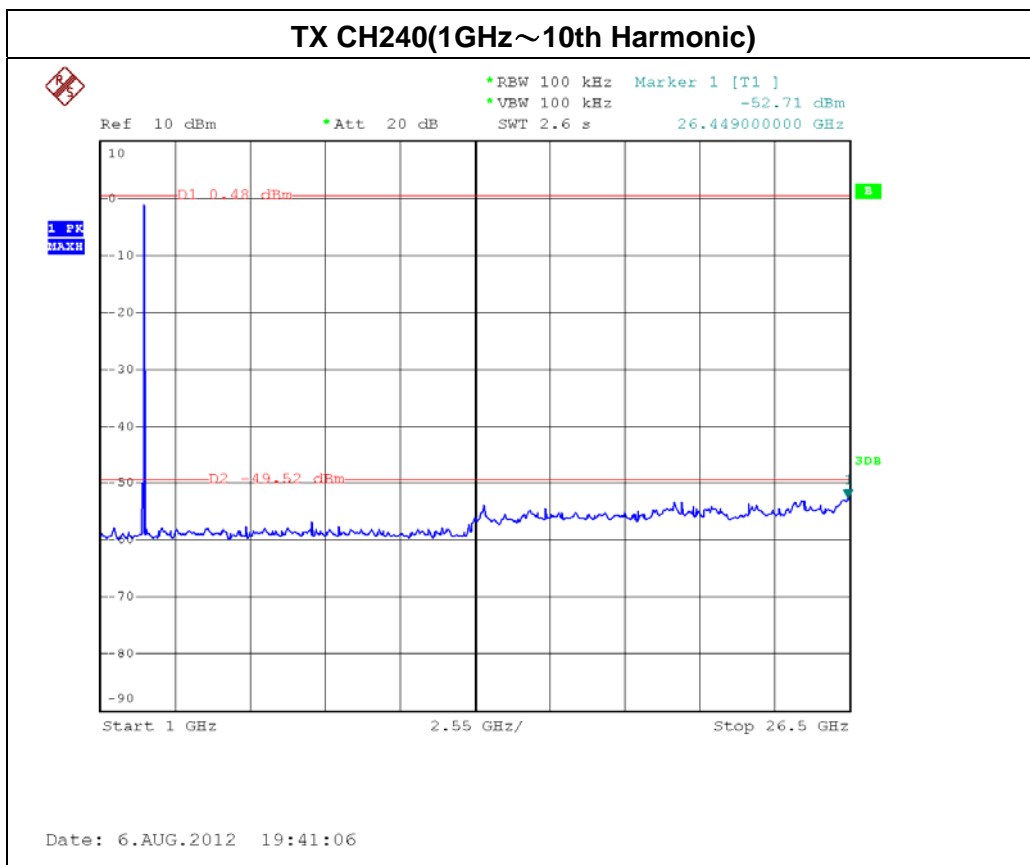
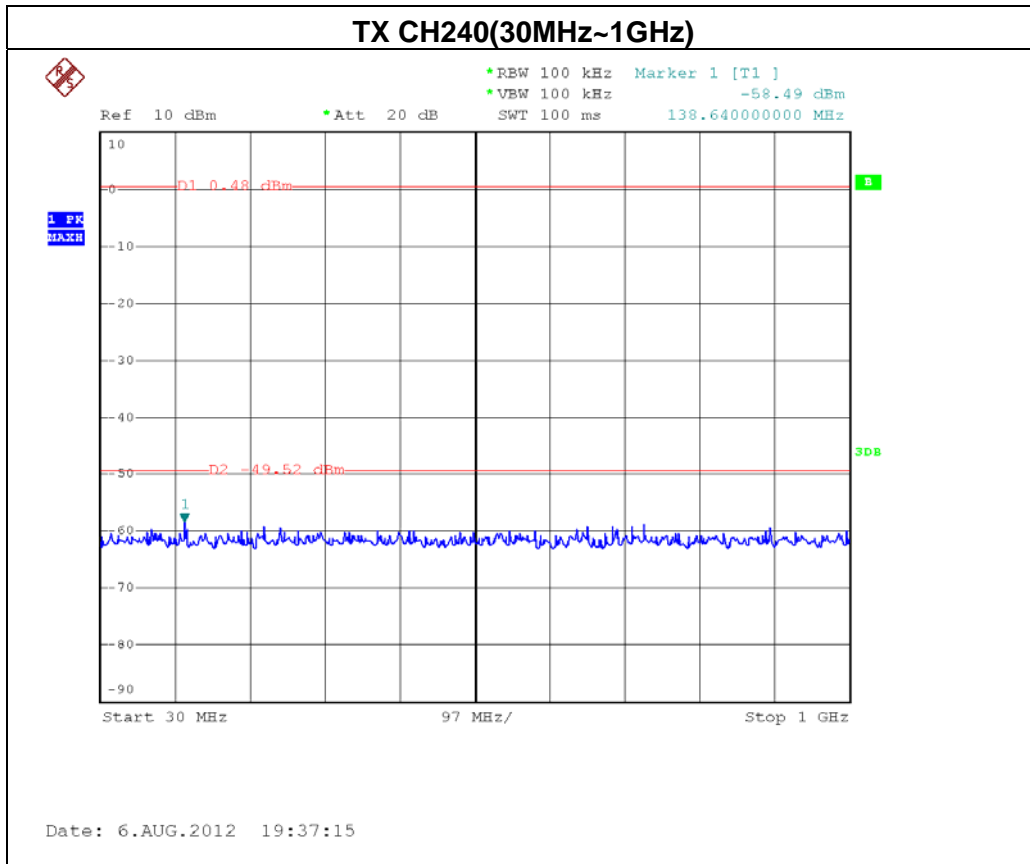
EUT	Wireless Transmitter	Model Name	M5M001
Temperature	25°C	Relative Humidity	55 %
Pressure	1009 hPa	Test Power	AC 120V/60Hz
Test Mode	TX CH3, CH 118, CH240		

The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2398.40	-43.44	2484.20	-41.33
Result			
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.			











## 7. EUT TEST PHOTO

### Conducted Measurement Photos



**Radiated Measurement Photos**

