FCC Part 74 Subpart H

EMI TEST REPORT

of

E.U.T. : Plug-in UHF Wireless Audio Link Transmitter Module
FCC ID. : NTMTX-701-F
Model No. : TX-701

Working Frequency : 520~608 MHz

for

APPLICANT : OKAYO ELECTRONICS CO., LTD.
ADDRESS : No.2, Gongye 10th Rd., Dali Dist., Taichung 41280, Taiwan

Test Performed by

ELECTRONICS TESTING CENTER (ETC) , TAIWAN
NO. 34. LIN 5, DINGFU VIL., LINKOU DIST.,
NEW TAIPEI CITY, TAIWAN, 24442, R.O.C.
TEL : (02)26023052 FAX : (02)26010910
http:// www.etc.org.tw ; e-mail:emc@etc.org.tw

Report Number : 14-06-RBF-045

TEST REPORT CERTIFICATION

Applicant	:	OKAYO ELECTRONICS CO., LTD. No.2, Gongye 10th Rd., Dali Dist., Taichung 41280, Taiwan
Manufacturer	:	OKAYO ELECTRONICS CO., LTD. No.2, Gongye 10th Rd., Dali Dist., Taichung 41280, Taiwan
Description of EUT	:	
a) Type of EUT	:	Plug-in UHF Wireless Audio Link Transmitter Module
b) Trade Name	:	OKAYO
c) Model No.	:	TX-701
d) FCC ID	:	NTMTX-701-F
e) Working Frequency	:	520~608 MHz
f) Power Supply	:	DC 12Vdc

Regulation Applied: FCC Rules and Regulations Part 74 Subpart H

I HEREBY CERTIFY THAT; The data shown in this report were made in accordance with the procedures given in ANSI C63.4 and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Issued Date : Aug. 20, 2014

Test Engineer : Jiapeng Chen

(Jiapeng Chen, Engineer)

Approve & Authorized Signer : S. S. Liou

S. S. Liou, Section Manager
EMC Dept. II of ELECTRONICS
TESTING CENTER, TAIWAN

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1. GENERAL INFORMATION

1.1 Product Description

a) Type of EUT	:	Plug-in UHF Wireless Audio Link Transmitter Module
b) Trade Name	:	OKAYO
c) Model No.	:	TX-701
d) FCC ID	:	NTMTX-701-F
e) Working Frequency	:	520~608 MHz
f) Power Supply	:	DC 12Vdc
g) Emission Designator	:	59K4F3E 2M+2DK=2x(3kHz)+2x(26.7kHz)x1=59.4kHz

1.2 Test Methodology

Both conducted and radiated testing were performed according to the procedures in chapter 13 of ANSI C63.4 (2003). Test also follow “TIA-603-C(2004)-Land Mobile FM or PM Communications Equipment Measurement and Performance Standsrds” and section 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, and 2.1055 of Part 2 of CFR 47.

1.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No.34, Lin 5, Dingfu Vil., Linkou Dist., New Taipei City, Taiwan 24442, R.O.C.

This site is FCC 2.948 listed and accepted in a letter dated Jan. 29, 2014.

Registration Number: 90589

2. REQUIREMENTS OF PROVISIONS

2.1 Definition

Intentional radiator:
A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Frequencies Available

According to sec. 74.802 of Part 74, the following frequencies are available for low power auxiliary station :

Frequencies (MHz)

26.100-26.480	455.000-456.000
54.000-72.000	470.000-488.000
76.000-88.000	488.000-494.000
161.625-161.775	494.000-608.000
174.000-216.000	614.000-806.000
450.000-451.000	944.000-952.000

2.3 Requirements for Radio Equipment on Certification

(1) RF Output Power
For transmitters, the power output shall be measured at the RF output terminals.

(2) Modulation Characteristics
For Voice Modulated Communication Equipment, a curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.

(3) Occupied Bandwidth
For radiotelephone transmitter, other than single sideband or indenpent sideband transmitter, when modulateed by a 2.5kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation.

(4) Spurious Emissions at Antenna Terminals
The radio frequency voltage or power generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminal when properly loaded with a suitable artificial antenna.

(5) Field Strength of Spurious Emissions

Measurements shall be made to detect spurious emission that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal condition of installation and operation.

(6) Frequencies Tolerance

a) The frequency stability shall be measured with variation of ambient temperature.
b) The frequency stability shall be measured with variation of primary supply voltage.

2.4 Labeling Requirement

Each equipment for which a type acceptance application is filed on or after May 1,1981, shall bear an identification plate or label pursuant to §2.925（Identification of equipment） and §2.926（FCC identifier）.

3. OUTPUT POWER MEASUREMENT

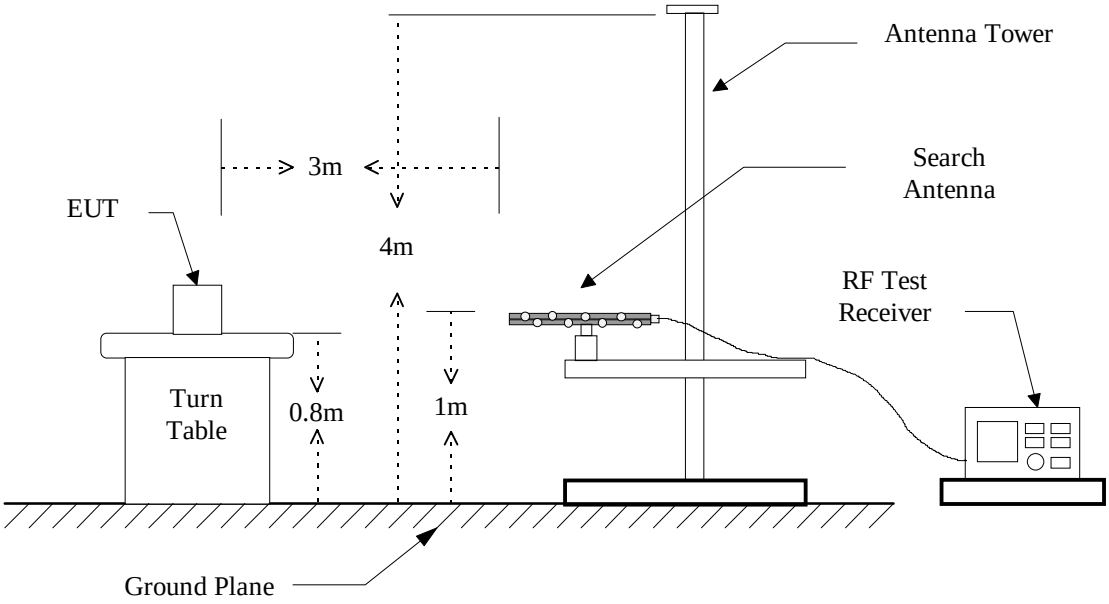
3.1 Provision Applicable

According to §74.861(e)(1)(ii), the output power shall not exceed 250 milliwatts.

3.2 Measurement Procedure

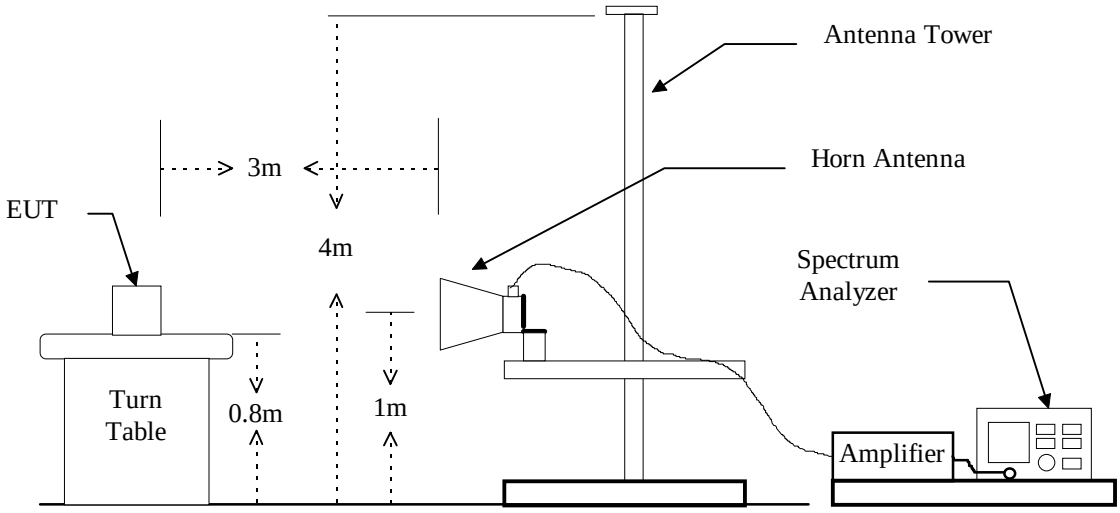
1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power.
2. Adjust the analyzer for each frequency measured in chapter 6 on a 1 MHz frequency span and 1MHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 °, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until all frequencies need to be measured were complete.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.
7. Repeat step 6 until all frequencies need to be measured were complete.
8. Repeat step 7 with both dipole antenna (horn antenna for above 1 GHz) and search antenna in vertical polarized orientations.

Figure 1 : Frequencies measured below 1 GHz configuration



Note: For substitution method, replace the EUT with a tuned dipole antenna relative to each frequency and connect to a standard signal generator (SG) via a low loss cable.

Figure 2 : Frequencies measured above 1 GHz configuration



Note: For substitution method, replace the EUT with a horn antenna and connect to a standard signal generator (SG) via a low loss cable.

3.3 Test Data

1.Operated mode : TX(Monopole Antenna) Test Date : Jul. 31, 2014
Temperature : 22 °C Humidity : 62 %

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
520.100	87.4	14.60	2.0	----	12.6	18.2	250.0

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
572.000	86.2	13.7	2.2	----	11.5	14.1	250.0

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
607.900	82.5	12.3	2.2	----	10.1	10.2	250.0

Note: For measured frequency below 1GHz, a tuned dipole antenna is used.

2.Operated mode : TX(Dipole Antenna) Test Date : Jul. 31, 2014
Temperature : 22 °C Humidity : 62 %

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
520.100	88.5	15.70	2.0	----	13.7	23.4	250.0

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
572.000	86.3	13.8	2.2	----	11.6	14.5	250.0

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
607.900	85.6	15.4	2.2	----	13.2	20.9	250.0

Note: For measured frequency below 1GHz, a tuned dipole antenna is used.

3.Operated mode : TX(Directional Antenna) Test Date : Jul. 31, 2014
Temperature : 22 °C Humidity : 62 %

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
520.100	86.7	13.90	2.0	----	11.9	15.5	250.0

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
572.000	87.4	14.9	2.2	----	12.7	18.6	250.0

Frequency (MHz)	Meter Reading (dB μ V/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
607.900	89.5	19.3	2.2	----	17.1	51.3	250.0

Note: For measured frequency below 1GHz, a tuned dipole antenna is used.

3.4 Result Calculation

Result calculation is as following :

Result = SG Reading + Cable Loss + Antenna Gain Corrected

Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

$$mW = \log^{-1}\left[\frac{\text{Result(dBm)}}{10}\right]$$

3.5 Test Equipment

Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESL	2013/09/11	2014/09/10
Biconical Antenna	EMCO	3110	2013/10/25	2014/10/24
Log-periodic Antenna	EMCO	3146	2013/10/25	2014/10/24
Amplifier	HP	8447D	2013/10/25	2014/10/24
Signal generator	HP	83732B	2013/09/14	2014/09/13

4. MODULATION CHARACTERISTICS

4.1 Provisions Applicable

According to § 2.1047 (a), for Voice Modulated Communication Equipment, the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be measured.

4.2 Measurement Method

A) Modulation Limit

1. Position the EUT as shown in figure 3, adjust the audio input frequency to 100 Hz and the input level from 0V to maximum permitted input voltage with recording each carrier frequency deviation responding to respective input level.

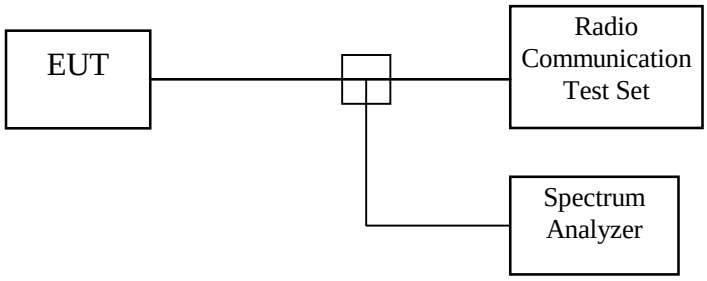
2. Repeat step 1 with changing the input frequency for 200, 500, 1000, 3000, and 5000 Hz in sequence.

B) Frequency response of all circuits

1. Position the EUT as shown in figure 3.

2. Vary the modulating frequency from 100 Hz to 15000 Hz with constant input voltage (derived from 5.4(a) of this test report), and observe the change in output.

Figure 3 : Modulation characteristic measurement configuration



4.3 Measurement Instrument

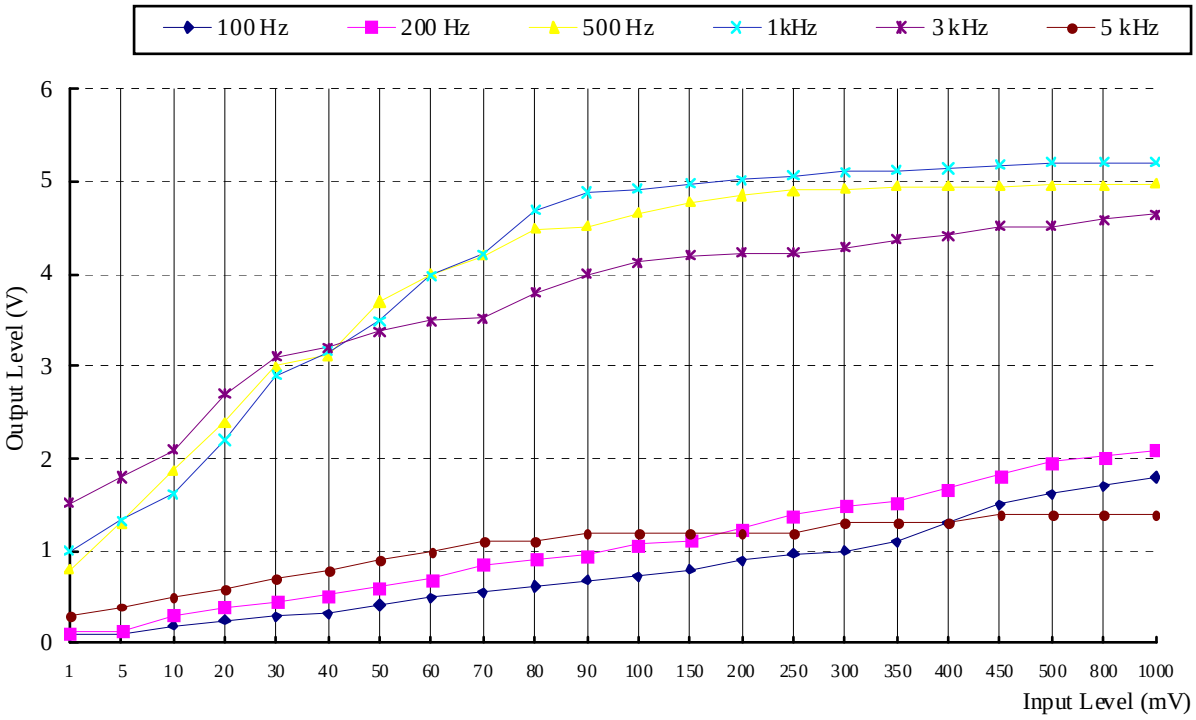
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Communications Service Monitor	AEROFLEX	2945B	2014/05/12	2015/05/11
Spectrum Analyzer	Rohde & Schwarz	FSP40	2014/01/21	2015/01/20

4.4 Measurement Result

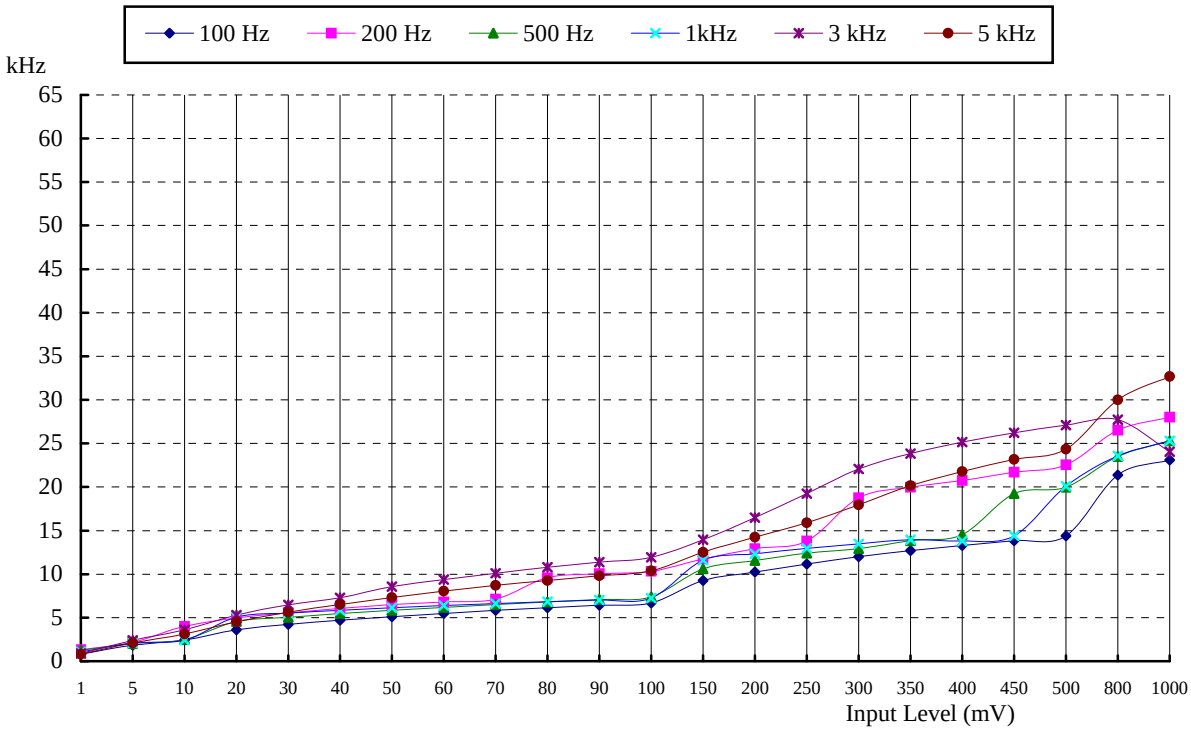
RF Frequency : 572.000MHz;

Test Date : Jul. 31, 2014 Temperature : 22 °C Humidity : 62 %

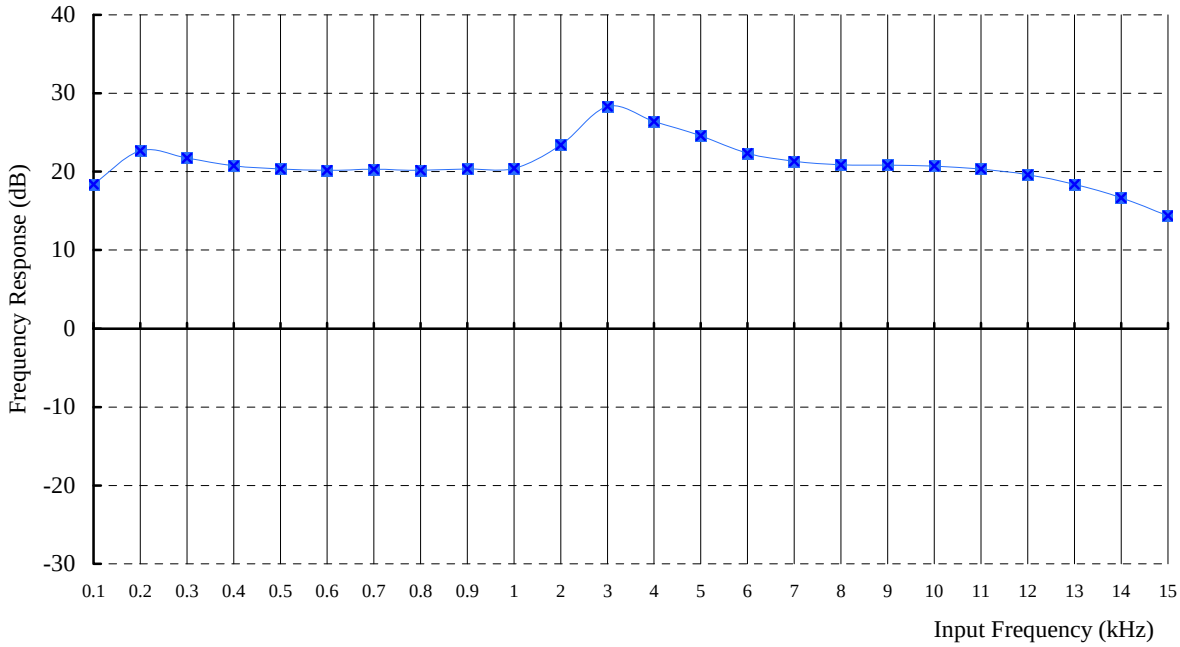
A). Frequency response



B). Modulation Limit



C). Frequency response of all circuits



5. OCCUPIED BANDWIDTH OF EMISSION

5.1 Provisions Applicable

According to §2.1049 (c)(1), For radiotelephone transmitter, other than single sideband or indenpent sideband transmitter, when modulateed by a 2.5kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation.
According to §74.861(e)(5), the frequency emission bandwidth shall not exceed 200 kHz.

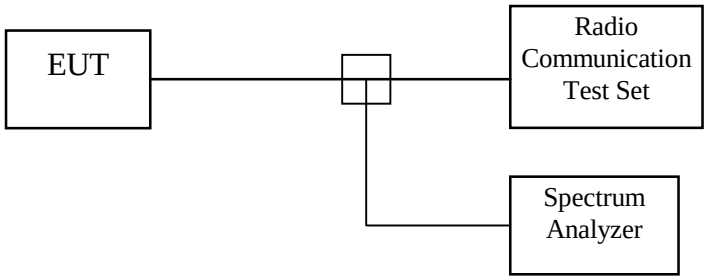
5.2 Measurement Method

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

2. Position the EUT as shown in figure 4, and Install new batteries in the EUT. Turn on the EUT ant set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

3. Apply a 2.5 kHz modulation signal to EUT and measure the frequencies of the modulated signal from the EUT where it is the specified number of dB below the reference level set in step 2. This is the occupied bandwidth specified.

Figure 4 : Occupied bandwidth measurement configuration



5.3 Occupied Bandwidth Test Equipment

Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Communications Service Monitor	AEROFLEX	2945B	2014/05/12	2015/05/11
Spectrum Analyzer	Rohde & Schwarz	FSP40	2014/01/21	2015/01/20

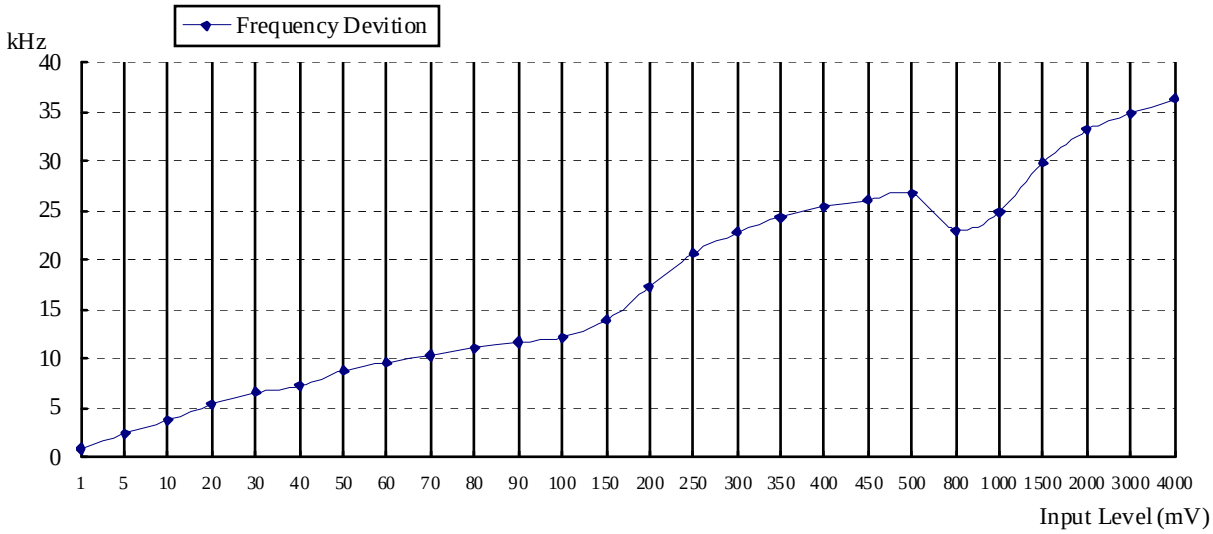
5.4 Bandwidth Measured

5.4.1 Input Level Derived

RF Frequency : 572.000MHz;

Test Date : Jul. 31, 2014 Temperature : 22 °C Humidity : 62 %

Input Audio Frequency : 2.5 kHz, Sine Wave

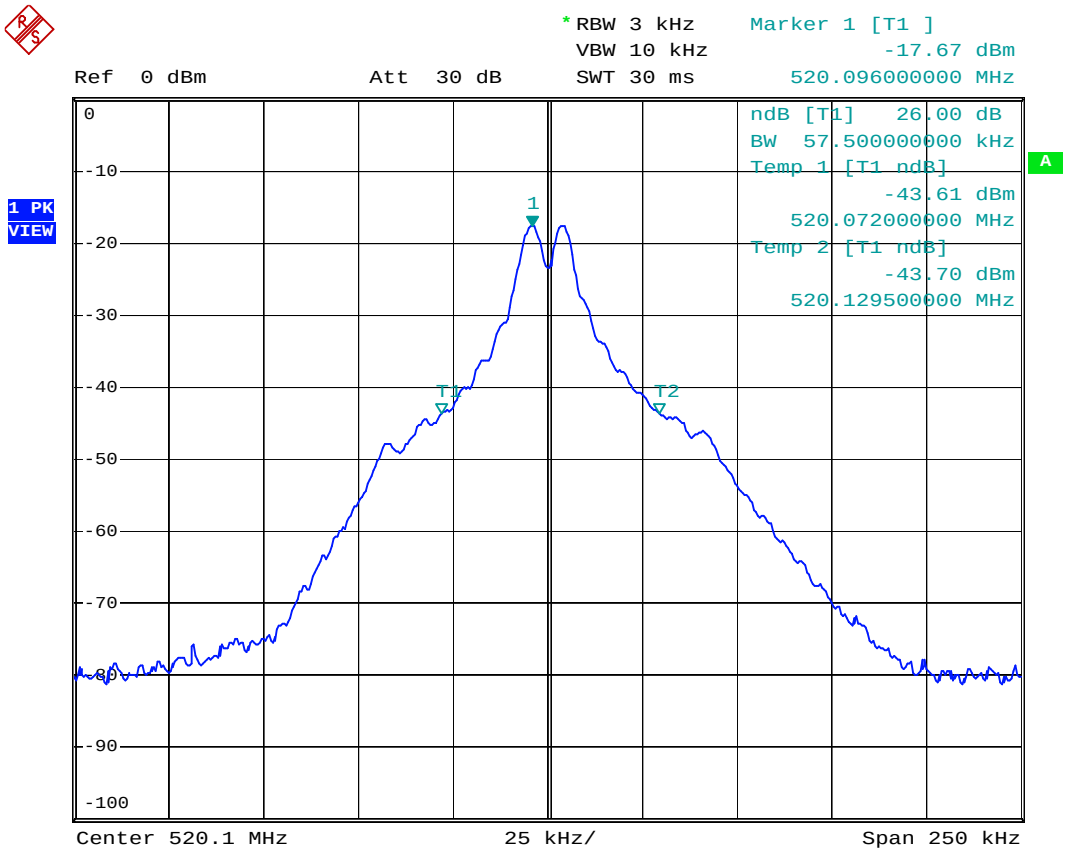


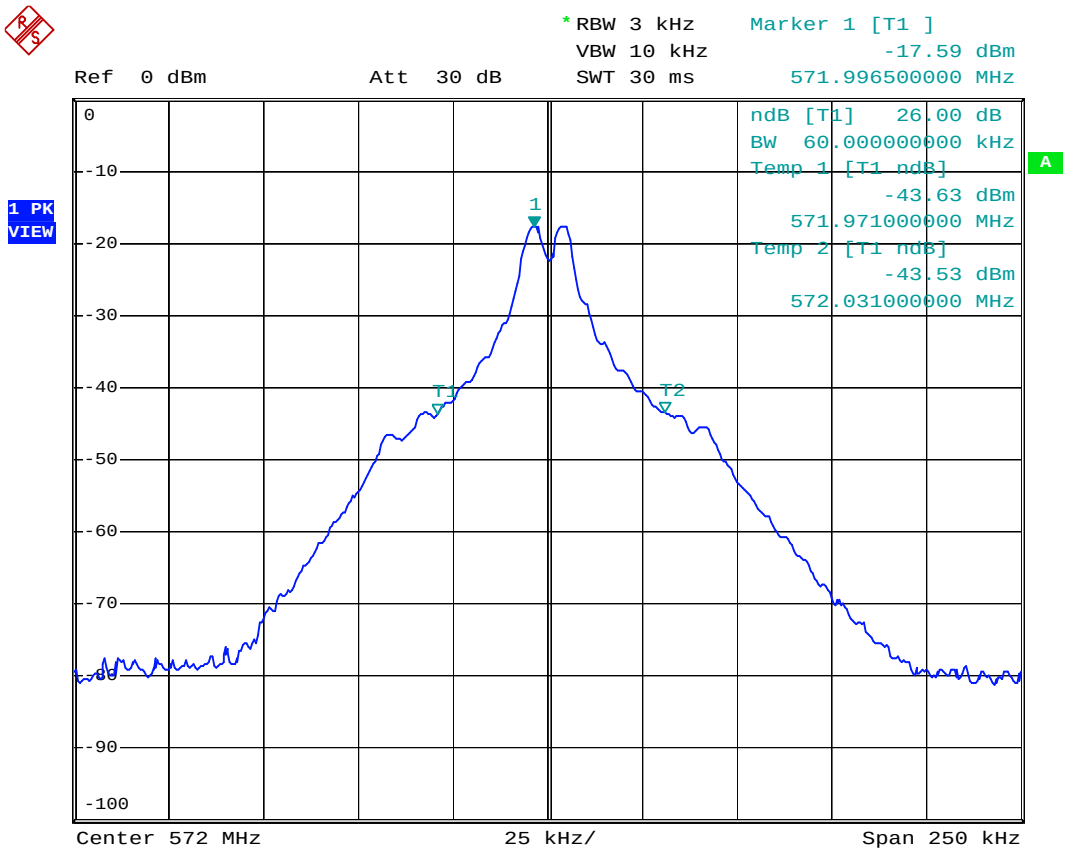
The Level input to produce 50% modulation is 150 mV, therefore the magnitude 16 dB greater than it is 946 mV.

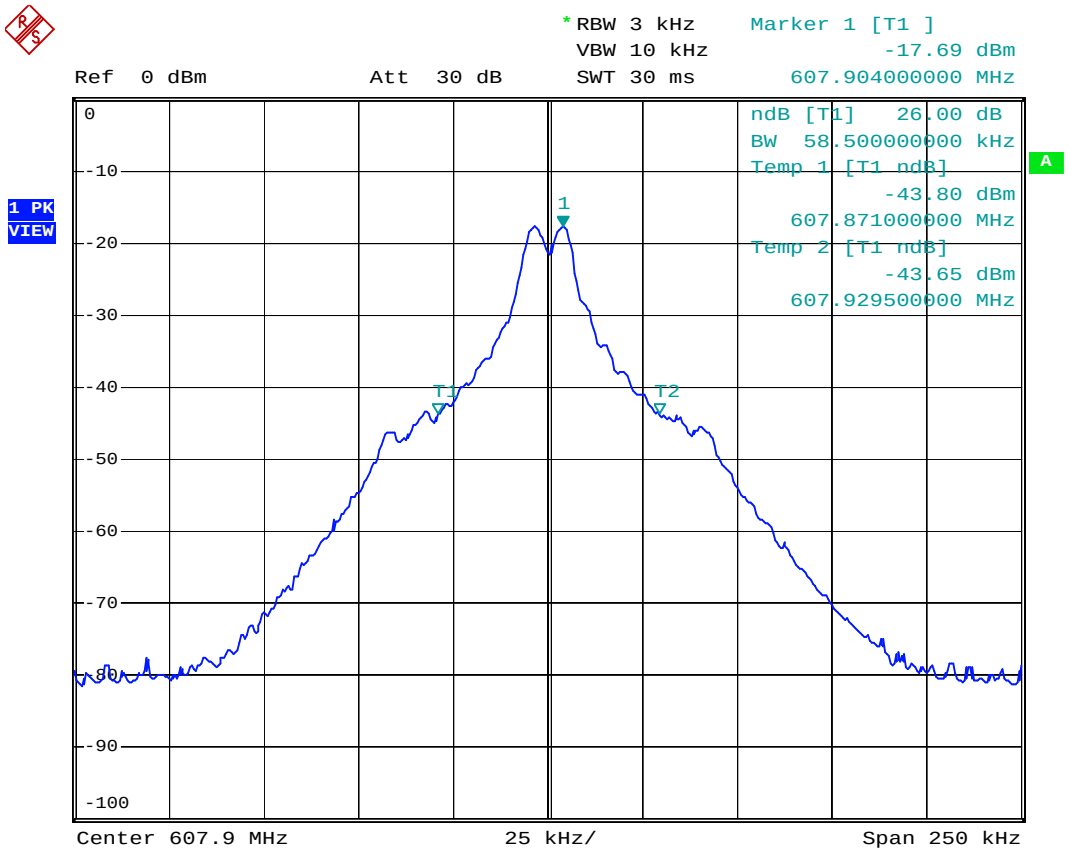
5.4.2 Occupied Bandwidth Plotted

Test Date : Jul. 31, 2014 Temperature : 22 °C Humidity : 62 %

RF Frequency (MHz)	26 dB Bandwidth (kHz)
520.100	57.5
572.000	60.5
607.900	58.5


*RBW 3 kHz
VBW 10 kHz
SWT 30 ms
Marker 1 [T1]
-17.67 dBm
520.096000000 MHz
Ref 0 dBm
Att 30 dB
ndB [T1] 26.00 dB
BW 57.500000000 kHz
Temp 1 [T1 ndB]
-43.61 dBm
520.072000000 MHz
Temp 2 [T1 ndB]
-43.70 dBm
520.129500000 MHz
1 PK
VIEW
A
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
T1
T2
Center 520.1 MHz
25 kHz/
Span 250 kHz


*RBW 3 kHz
VBW 10 kHz
SWT 30 ms
Marker 1 [T1]
-17.59 dBm
571.996500000 MHz
Ref 0 dBm
Att 30 dB
ndB [T1] 26.00 dB
BW 60.000000000 kHz
Temp 1 [T1 ndB]
-43.63 dBm
571.971000000 MHz
Temp 2 [T1 ndB]
-43.53 dBm
572.031000000 MHz
1 PK
VIEW
A
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
T1
T2
Center 572 MHz
25 kHz/
Span 250 kHz


*RBW 3 kHz
VBW 10 kHz
SWT 30 ms
Marker 1 [T1]
-17.69 dBm
607.904000000 MHz
Ref 0 dBm
Att 30 dB
ndB [T1] 26.00 dB
BW 58.500000000 kHz
Temp 1 [T1 ndB]
-43.80 dBm
607.871000000 MHz
Temp 2 [T1 ndB]
-43.65 dBm
607.929500000 MHz
1 PK
VIEW
A
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
T1
T2
Center 607.9 MHz
25 kHz/
Span 250 kHz

6. FIELD STRENGTH OF EMISSION

6.1 Provisions Applicable

According to §2.1053, measurements shall be made to detect spurious emission that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal condition of installation and operation. Information submitted shall include the relative radiated power of spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from a halfwave dipole antenna.

According to §74.861(e)(6), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the follwing sceedule:

(i) on any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB.

(ii) on any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB.

(iii) on any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth shall be attenuated below the unmodulated carrier by at least 43 plus 10 Log(output power in watts) dB.

6.2 Measurement Procedure

1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power as measured in chapter 3.
2. Adjust the analyzer for each frequency measured in chapter 6 on a 1 MHz frequency span and 1MHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 °, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until all frequencies need to be measured were complete.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.

7. Repeat step 6 until all frequencies need to be measured were complete.
8. Repeat step 7 with both dipole antenna (horn antenna for above 1 GHz) and search antenna in vertical polarized orientations.

6.3 Measuring Instrument

Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Spectrum Analyzer	Rohde & Schwarz	FSP40	2014/01/21	2015/01/20
Double Ridged Antenna	EMCO	3115	2013/08/02	2014/08/01
Double Ridged Antenna	EMCO	3115	2013/08/02	2014/08/01
Log-periodic Antenna	EMCO	3146	2013/10/25	2014/10/24
Biconical Antenna	EMCO	3110	2013/10/25	2014/10/24
Amplifier	HP	8449B	2014/01/15	2015/01/14
Amplifier	HP	8447D	2013/10/25	2014/10/24
Signal generator	HP	83732B	2013/09/14	2014/09/13

Measuring instrument setup in frequency band measured is as following :

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Spectrum Analyzer	Peak	100 kHz	100 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz

6.4 Measuring Data

6.4.1. Emission Test Data

1.Monopole Antenna
a. Tx Frequency: 520.1MHz
Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 12.6 dBm , or 18.2 mW (ERP).
The limit of spurious or harmonics is calculated as following :
12.6-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1040.200	60.5	58.4	-51.9	-54.0	5.9	-2.0	2.1	-48.1	-52.2	-13.0	-35.1
1560.300	---	---	---	---	7.8	-2.0	2.6	---	---	-13.0	---
2080.400	---	---	---	---	7.8	-2.0	3.1	---	---	-13.0	---
2600.500	---	---	---	---	9.2	-2.0	3.4	---	---	-13.0	---
3120.600	---	---	---	---	9.0	-2.0	3.8	---	---	-13.0	---
3640.700	---	---	---	---	9.3	-2.0	4.1	---	---	-13.0	---
4160.800	---	---	---	---	9.3	-2.0	4.4	---	---	-13.0	---
4680.900	---	---	---	---	9.9	-2.0	4.7	---	---	-13.0	---
5201.000	---	---	---	---	9.8	-2.0	5.0	---	---	-13.0	---

Note :
1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :
Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected
Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

b. Tx Frequency: 572.000MHz

Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 11.5 dBm , or 14.1 mW (ERP).
The limit of spurious or harmonics is calculated as following :

11.5-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1144.000	66.2	59.1	-45.8	-52.8	---	6.3	-2.0	-43.7	-50.7	-13.0	-30.7
1716.000	---	---	---	---	---	7.7	-2.0	---	---	-13.0	---
2288.000	---	---	---	---	---	8.5	-2.0	---	---	-13.0	---
2860.000	---	---	---	---	---	9.0	-2.0	---	---	-13.0	---
3432.000	---	---	---	---	---	9.3	-2.0	---	---	-13.0	---
4004.000	---	---	---	---	---	8.9	-2.0	---	---	-13.0	---
4576.000	---	---	---	---	---	10.0	-2.0	---	---	-13.0	---
5148.000	---	---	---	---	---	9.7	-2.0	---	---	-13.0	---
5720.000	---	---	---	---	---	10.4	-2.0	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

c. Tx Frequency: 607.900MHz

Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 10.1 dBm , or 10.2 mW (ERP).
The limit of spurious or harmonics is calculated as following :

10.1-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1215.800	56.8	47.6	-54.9	-64.0	6.6	-2.0	2.3	-52.6	-61.7	-13.0	-39.6
1823.700	---	---	---	---	7.6	-2.0	2.8	---	---	-13.0	---
2431.600	---	---	---	---	9.0	-2.0	3.3	---	---	-13.0	---
3039.500	---	---	---	---	8.9	-2.0	3.7	---	---	-13.0	---
3647.400	---	---	---	---	9.3	-2.0	4.1	---	---	-13.0	---
4255.300	---	---	---	---	9.5	-2.0	4.4	---	---	-13.0	---
4863.200	---	---	---	---	9.7	-2.0	4.8	---	---	-13.0	---
5471.100	---	---	---	---	10.0	-2.0	5.1	---	---	-13.0	---
6079.000	---	---	---	---	10.8	-2.0	5.3	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

2. Dipole Antenna
a. Tx Frequency: 520.1MHz
Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 13.7 dBm , or 23.4 mW (ERP).
The limit of spurious or harmonics is calculated as following :
13.7-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1040.200	54.9	66.0	-57.5	-46.4	5.9	-2.0	2.1	-53.7	-44.6	-13.0	-31.6
1560.300	---	---	---	---	7.8	-2.0	2.6	---	---	-13.0	---
2080.400	---	---	---	---	7.8	-2.0	3.1	---	---	-13.0	---
2600.500	---	---	---	---	9.2	-2.0	3.4	---	---	-13.0	---
3120.600	---	---	---	---	9.0	-2.0	3.8	---	---	-13.0	---
3640.700	---	---	---	---	9.3	-2.0	4.1	---	---	-13.0	---
4160.800	---	---	---	---	9.3	-2.0	4.4	---	---	-13.0	---
4680.900	---	---	---	---	9.9	-2.0	4.7	---	---	-13.0	---
5201.000	---	---	---	---	9.8	-2.0	5.0	---	---	-13.0	---

Note :
1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :
Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected
Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

b. Tx Frequency: 572.000MHz

Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 11.6 dBm , or 14.5 mW (ERP).
The limit of spurious or harmonics is calculated as following :

11.6-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1144.000	57.9	56.8	-54.1	-55.1	---	6.3	2.2	-52.0	-53.0	-13.0	-39.0
1716.000	---	---	---	---	---	7.7	2.7	---	---	-13.0	---
2288.000	---	---	---	---	---	8.5	3.2	---	---	-13.0	---
2860.000	---	---	---	---	---	9.0	3.6	---	---	-13.0	---
3432.000	---	---	---	---	---	9.3	4.0	---	---	-13.0	---
4004.000	---	---	---	---	---	8.9	4.3	---	---	-13.0	---
4576.000	---	---	---	---	---	10.0	4.6	---	---	-13.0	---
5148.000	---	---	---	---	---	9.7	4.9	---	---	-13.0	---
5720.000	---	---	---	---	---	10.4	5.2	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

c. Tx Frequency: 607.900MHz

Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 13.2 dBm , or 20.9 mW (ERP).
The limit of spurious or harmonics is calculated as following :

13.2-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1215.800	49.0	57.1	-62.7	-54.5	---	6.6	2.3	-60.4	-52.2	-13.0	-39.2
1823.700	---	---	---	---	---	7.6	2.8	---	---	-13.0	---
2431.600	---	---	---	---	---	9.0	3.3	---	---	-13.0	---
3039.500	---	---	---	---	---	8.9	3.7	---	---	-13.0	---
3647.400	---	---	---	---	---	9.3	4.1	---	---	-13.0	---
4255.300	---	---	---	---	---	9.5	4.4	---	---	-13.0	---
4863.200	---	---	---	---	---	9.7	4.8	---	---	-13.0	---
5471.100	---	---	---	---	---	10.0	5.1	---	---	-13.0	---
6079.000	---	---	---	---	---	10.8	5.3	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

3. Directional Antenna
a. Tx Frequency: 520.1MHz
Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 11.9 dBm , or 15.5 mW (ERP).
The limit of spurious or harmonics is calculated as following :
11.9 -[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1040.200	56.9	63.9	-55.5	-48.5	---	5.9	2.1	-51.7	-46.7	-13.0	-33.7
1560.300	---	---	---	---	---	7.8	2.6	---	---	-13.0	---
2080.400	---	---	---	---	---	7.8	3.1	---	---	-13.0	---
2600.500	---	---	---	---	---	9.2	3.4	---	---	-13.0	---
3120.600	---	---	---	---	---	9.0	3.8	---	---	-13.0	---
3640.700	---	---	---	---	---	9.3	4.1	---	---	-13.0	---
4160.800	---	---	---	---	---	9.3	4.4	---	---	-13.0	---
4680.900	---	---	---	---	---	9.9	4.7	---	---	-13.0	---
5201.000	---	---	---	---	---	9.8	5.0	---	---	-13.0	---

Note :
1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :
Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected
Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

b. Tx Frequency: 572.000MHz

Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 12.7 dBm , or 18.6 mW (ERP).
The limit of spurious or harmonics is calculated as following :

12.7-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1144.000	56.6	69.9	-55.4	-42.0	---	6.3	2.2	-53.3	-39.9	-13.0	-26.9
1716.000	---	---	---	---	---	7.7	2.7	---	---	-13.0	---
2288.000	---	---	---	---	---	8.5	3.2	---	---	-13.0	---
2860.000	---	---	---	---	---	9.0	3.6	---	---	-13.0	---
3432.000	---	---	---	---	---	9.3	4.0	---	---	-13.0	---
4004.000	---	---	---	---	---	8.9	4.3	---	---	-13.0	---
4576.000	---	---	---	---	---	10.0	4.6	---	---	-13.0	---
5148.000	---	---	---	---	---	9.7	4.9	---	---	-13.0	---
5720.000	---	---	---	---	---	10.4	5.2	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

c. Tx Frequency: 607.900MHz

Operated mode : TX Test Date :Jul. 31, 2014
Temperature : 22°C Humidity : 62%

Unmodulated carrier output power is 17.1 dBm , or 51.3 mW (ERP).
The limit of spurious or harmonics is calculated as following :

17.1-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
1215.800	48.9	62.4	-62.8	-49.2	---	6.6	2.3	-60.5	-46.9	-13.0	-33.9
1823.700	---	---	---	---	---	7.6	2.8	---	---	-13.0	---
2431.600	---	---	---	---	---	9.0	3.3	---	---	-13.0	---
3039.500	---	---	---	---	---	8.9	3.7	---	---	-13.0	---
3647.400	---	---	---	---	---	9.3	4.1	---	---	-13.0	---
4255.300	---	---	---	---	---	9.5	4.4	---	---	-13.0	---
4863.200	---	---	---	---	---	9.7	4.8	---	---	-13.0	---
5471.100	---	---	---	---	---	10.0	5.1	---	---	-13.0	---
6079.000	---	---	---	---	---	10.8	5.3	---	---	-13.0	---

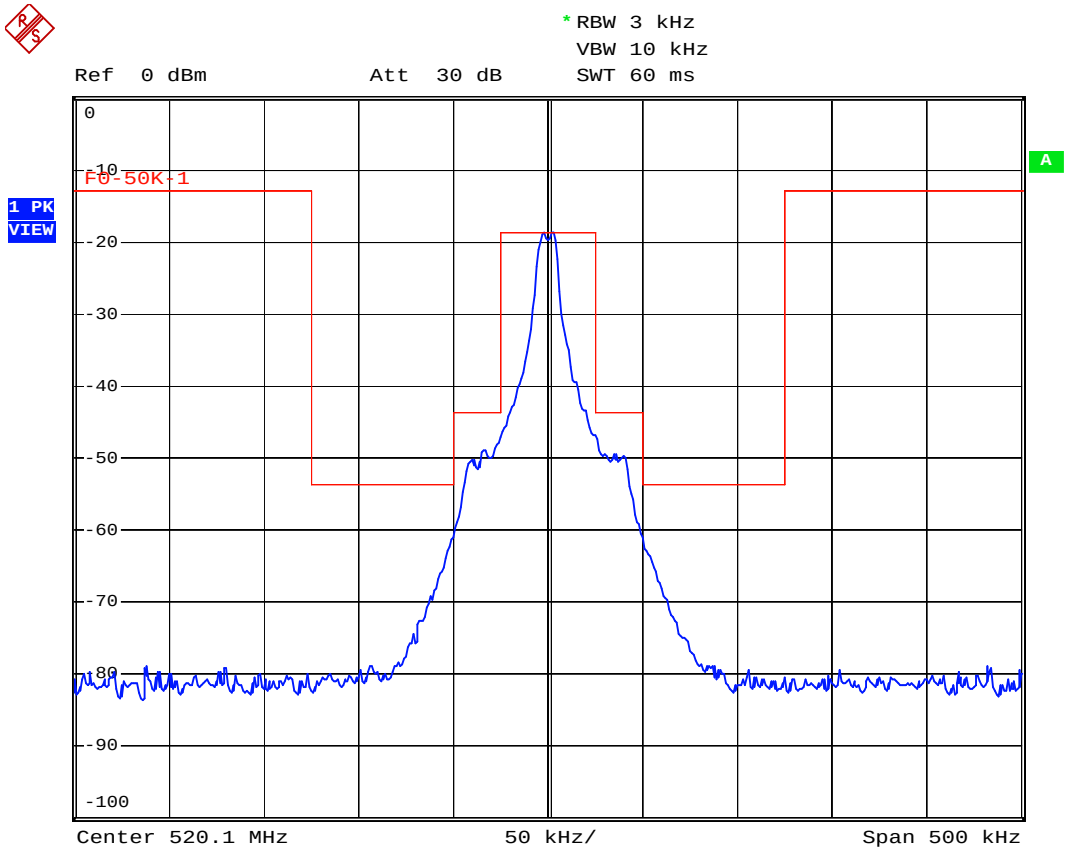
Note :

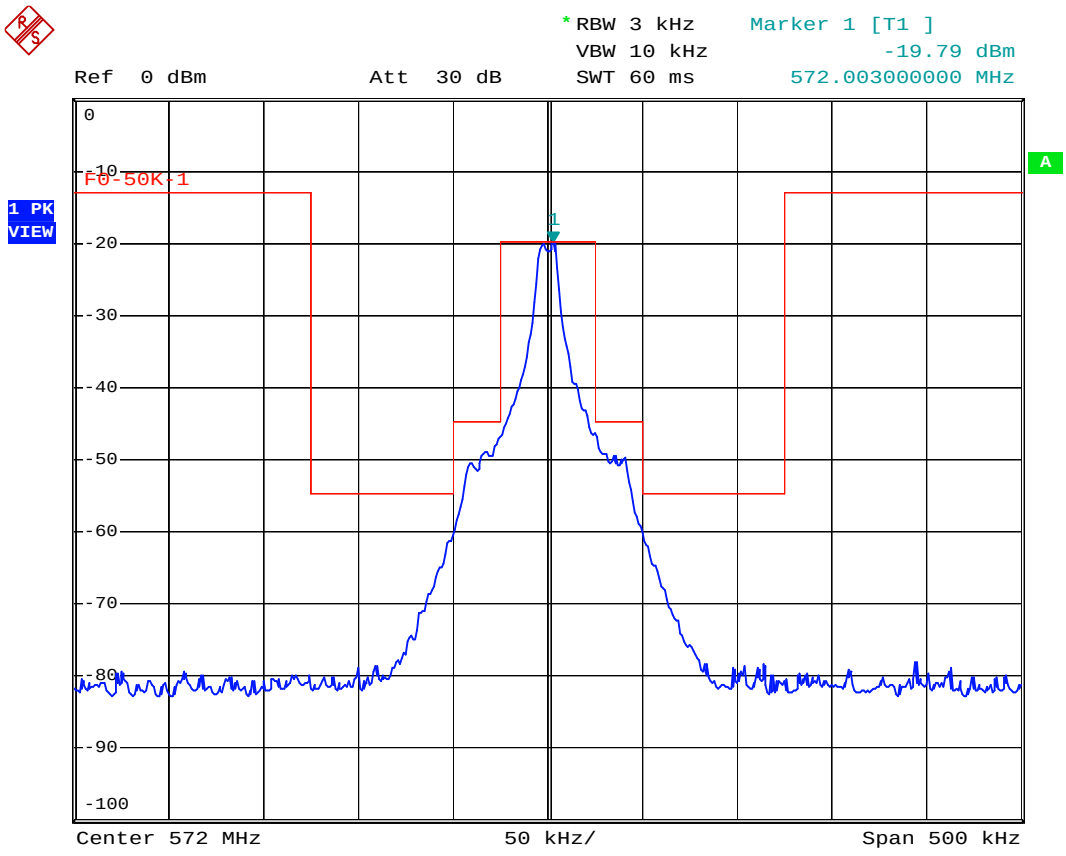
1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

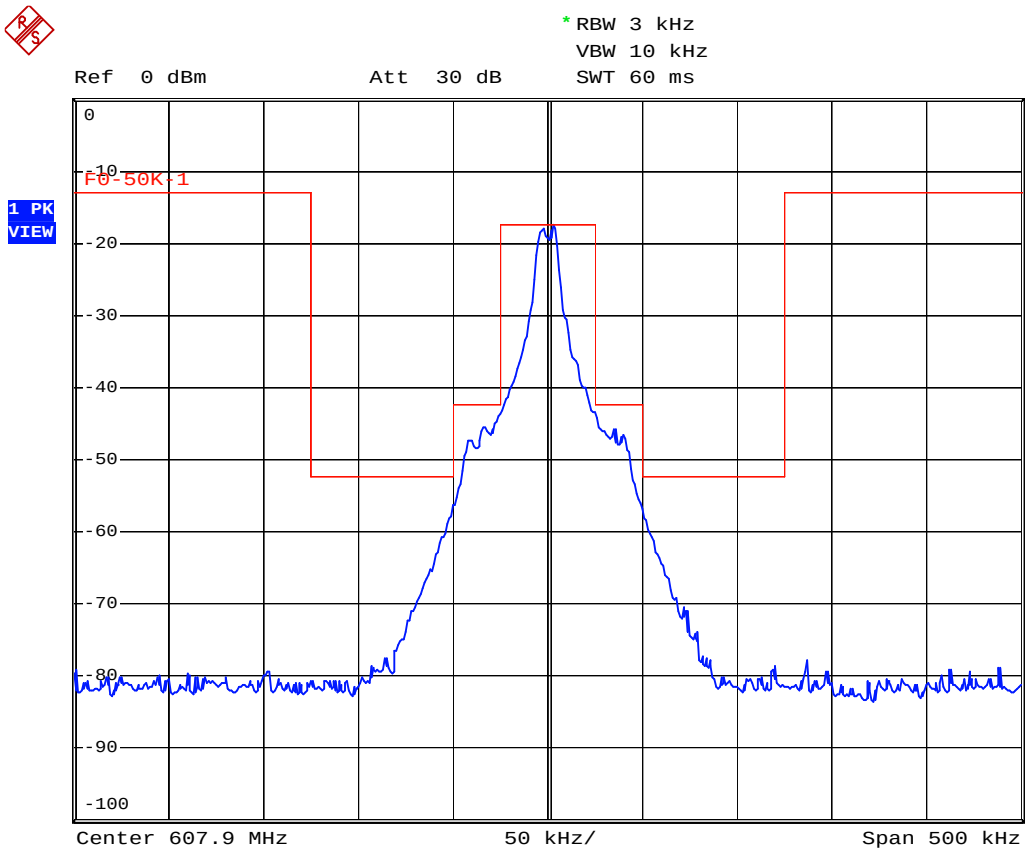
   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

6.4.2 Emission mask plots



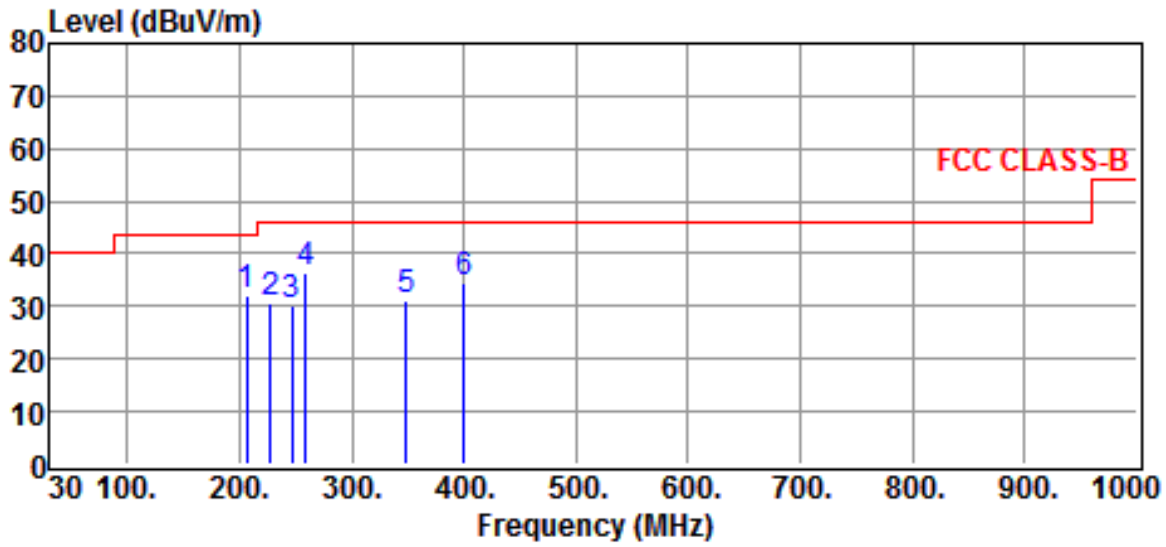

*RBW 3 kHz
VBW 10 kHz
SWT 60 ms
Marker 1 [T1]
-19.79 dBm
572.003000000 MHz
Ref 0 dBm
Att 30 dB
1 PK
VIEW
F0-50K-1
A
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 572 MHz
50 kHz/
Span 500 kHz


RBW 3 kHz
VBW 10 kHz
SWT 60 ms
Ref 0 dBm
Att 30 dB
1 PK
VIEW
F0-50K-1
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 607.9 MHz
50 kHz/
Span 500 kHz

6.5 Other Emission

a) Emission frequencies below 1 GHz

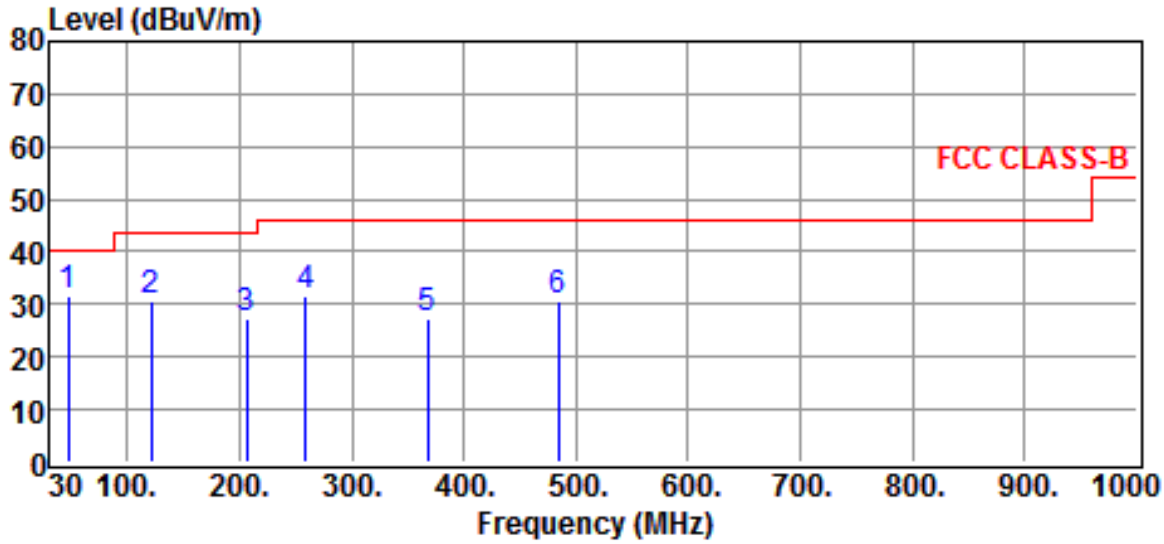
Test Date : Jul. 31, 2014 Temperature : 25°C Humidity : 65 %



Site	:Open Site	Date	:2014-07-31
Limit	:FCC CLASS-B	Ant. Pol.	:HORIZONTAL
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Temp.	:20°C		
Power Rating	:DC 12Vdc	Humi.	:62%
Model	:TX-701	Engineer.	:Jiapeng
Test Mode	: Monopole Antenna		

Freq MHz	Reading dBuV	Correction Factor dB	Result dBuV/m	Limits dBuV/m	Over limit dB	Detector
206.5400	17.3	15.0	32.3	43.5	-11.2	QP
227.8800	16.8	14.1	30.9	46.0	-15.1	QP
247.2800	15.7	14.4	30.1	46.0	-15.9	QP
258.9200	21.2	15.1	36.3	46.0	-9.7	QP
348.1600	13.4	17.8	31.2	46.0	-14.8	QP
400.5400	15.2	19.1	34.3	46.0	-11.7	QP

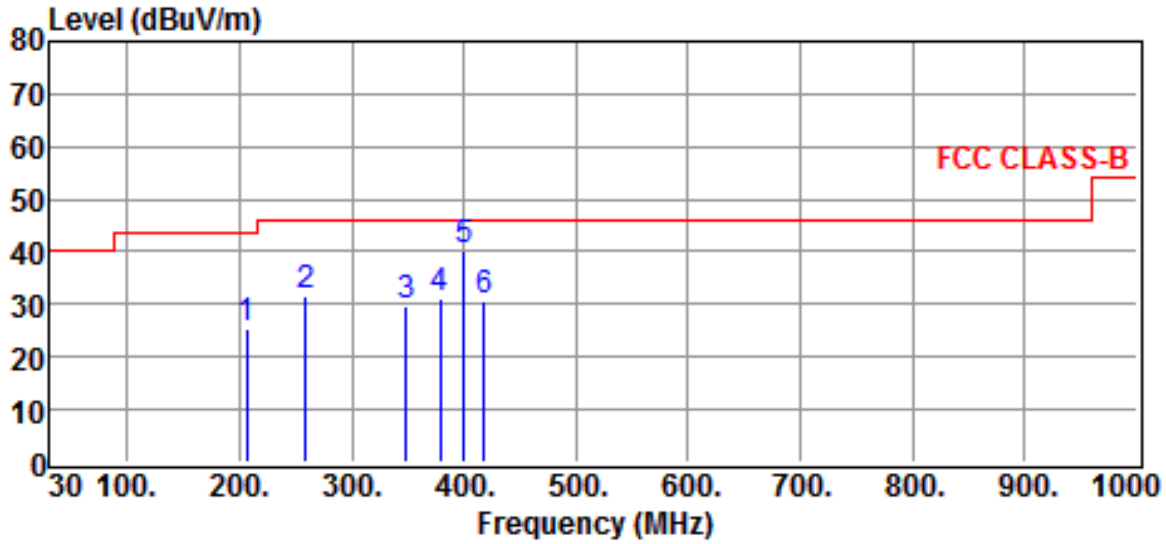
Note :
1. Result = Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss
3. The margin value=Limit - Result



Site	:Open Site	Date	:2014-07-31
Limit	:FCC CLASS-B	Ant. Pol.	:VERTICAL
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Temp.	:20°C		
Power Rating	:DC 12Vdc	Humi.	:62%
Model	:TX-701	Engineer.	:Jiapeng
Test Mode	: Monopole Antenna		

Freq MHz	Reading dBuV	Correction Factor dB	Result dBuV/m	Limits dBuV/m	Over limit dB	Detector
47.4600	18.9	12.5	31.4	40.0	-8.6	QP
121.1800	18.2	12.5	30.7	43.5	-12.8	QP
206.5400	12.5	15.0	27.5	43.5	-16.0	QP
258.9200	16.6	15.1	31.7	46.0	-14.3	QP
367.5600	9.0	18.3	27.3	46.0	-18.7	QP
483.9600	9.3	21.2	30.5	46.0	-15.5	QP

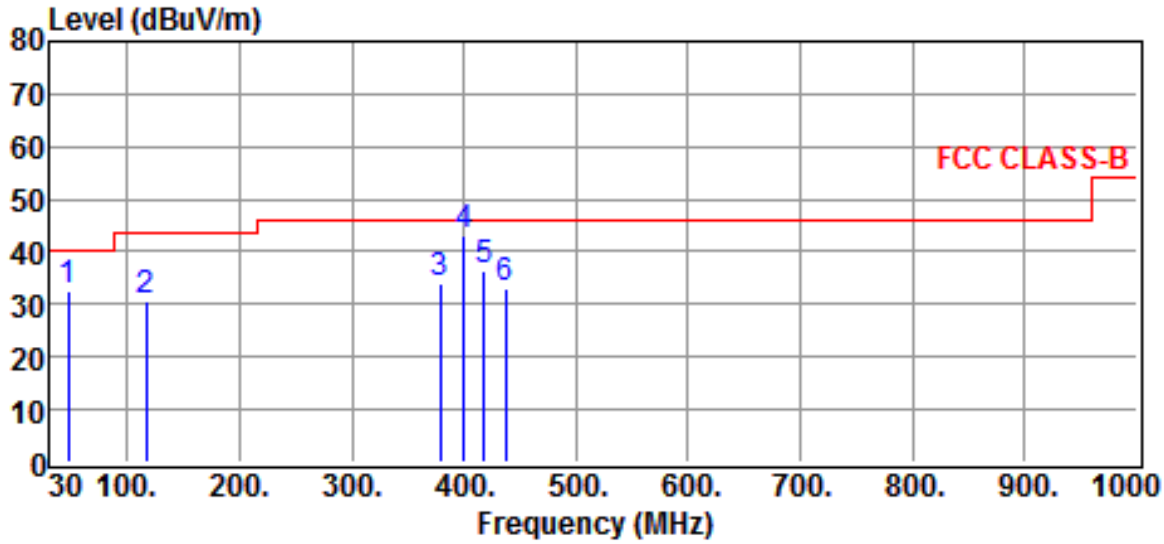
Note :
1. Result = Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss
3. The margin value=Limit - Result



Site	:Open Site	Date	:2014-07-31
Limit	:FCC CLASS-B	Ant. Pol.	:HORIZONTAL
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Temp.	:20°C		
Power Rating	:DC 12Vdc	Humi.	:62%
Model	:TX-701	Engineer.	:Jiapeng
Test Mode	: Dipole Antenna		

Freq MHz	Reading dBuV	Correction Factor dB	Result dBuV/m	Limits dBuV/m	Over limit dB	Detector
206.5400	10.4	15.0	25.4	43.5	-18.1	QP
258.9200	16.7	15.1	31.8	46.0	-14.2	QP
348.1600	11.7	17.8	29.5	46.0	-16.5	QP
379.2000	12.7	18.5	31.2	46.0	-14.8	QP
400.5400	21.0	19.1	40.1	46.0	-5.9	QP
418.0000	11.3	19.6	30.9	46.0	-15.1	QP

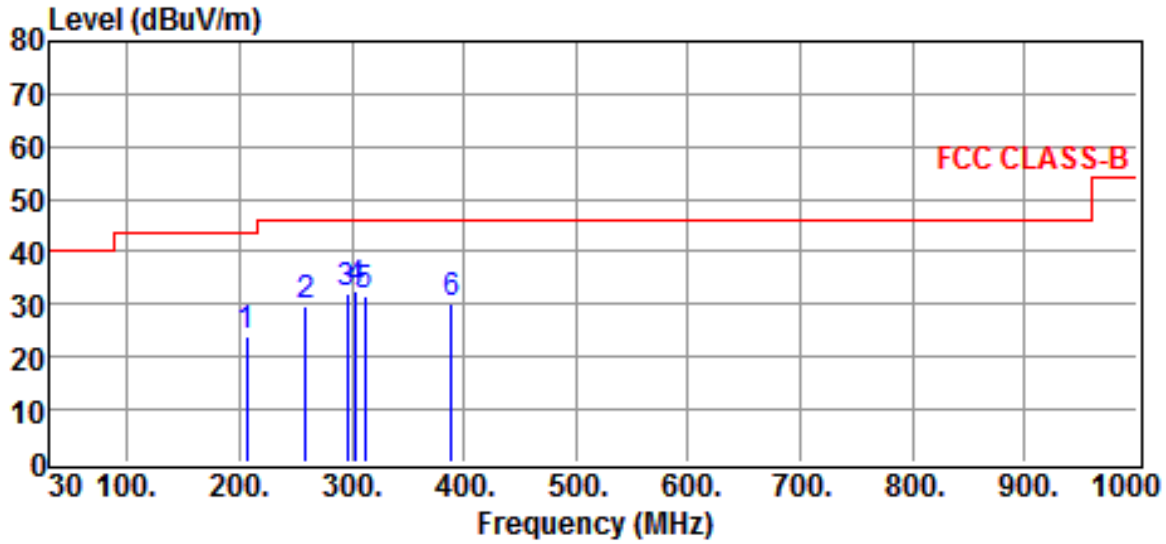
Note :
1. Result = Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss
3. The margin value=Limit - Result



Site	:Open Site	Date	:2014-07-31
Limit	:FCC CLASS-B	Ant. Pol.	:VERTICAL
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Temp.	:20°C		
Power Rating	:DC 12Vdc	Humi.	:62%
Model	:TX-701	Engineer.	:Jiapeng
Test Mode	: Dipole Antenna		

Freq MHz	Reading dBuV	Correction Factor dB	Result dBuV/m	Limits dBuV/m	Over limit dB	Detector
47.4600	19.9	12.5	32.4	40.0	-7.6	QP
117.3000	18.6	12.3	30.9	43.5	-12.6	QP
379.2000	15.4	18.5	33.9	46.0	-12.1	QP
400.5400	24.0	19.1	43.1	46.0	-2.9	QP
418.0000	16.6	19.6	36.2	46.0	-9.8	QP
437.4000	13.0	20.1	33.1	46.0	-12.9	QP

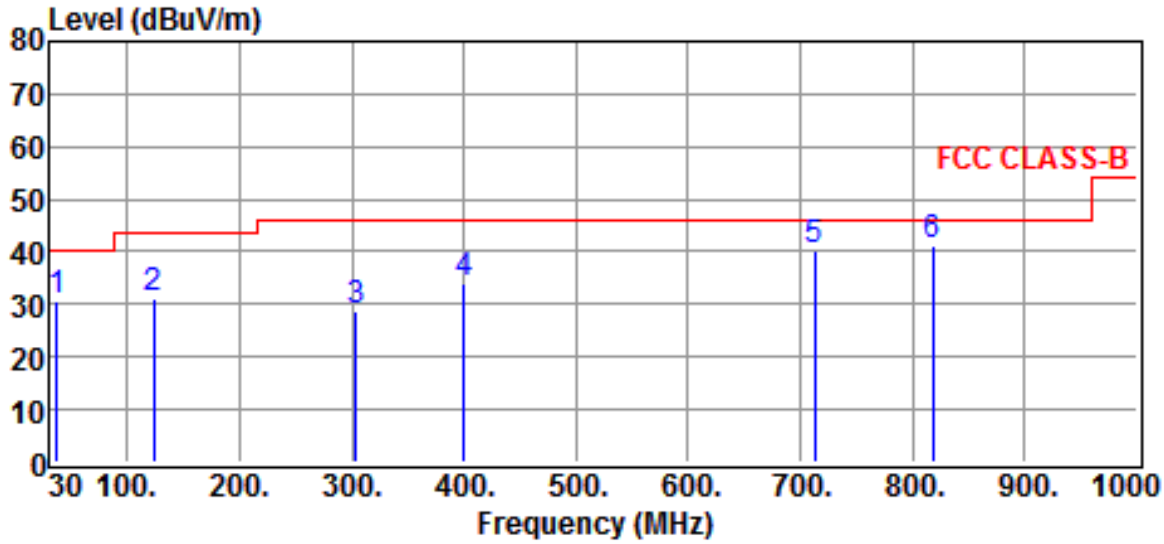
Note :
1. Result = Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss
3. The margin value=Limit – Result



Site	:Open Site	Date	:2014-07-31
Limit	:FCC CLASS-B	Ant. Pol.	:HORIZONTAL
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Temp.	:20°C		
Power Rating	:DC 12Vdc	Humi.	:62%
Model	:TX-701	Engineer.	:Jiapeng
Test Mode	: Directional Antenna		

Freq MHz	Reading dBuV	Correction Factor dB	Result dBuV/m	Limits dBuV/m	Over limit dB	Detector
206.5400	9.0	15.0	24.0	43.5	-19.5	QP
258.9200	14.7	15.1	29.8	46.0	-16.2	QP
295.7800	14.7	17.2	31.9	46.0	-14.1	QP
303.5400	15.3	17.5	32.8	46.0	-13.2	QP
311.3000	14.0	17.5	31.5	46.0	-14.5	QP
388.9000	11.1	18.9	30.0	46.0	-16.0	QP

Note :
1. Result = Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss
3. The margin value=Limit – Result



Site	:Open Site	Date	:2014-07-31
Limit	:FCC CLASS-B	Ant. Pol.	:VERTICAL
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Temp.	:20°C		
Power Rating	:DC 12Vdc	Humi.	:62%
Model	:TX-701	Engineer.	:Jiapeng
Test Mode	: Directional Antenna		

Freq MHz	Reading dBuV	Correction Factor dB	Result dBuV/m	Limits dBuV/m	Over limit dB	Detector
37.7600	17.0	13.9	30.9	40.0	-9.1	QP
123.1200	18.8	12.5	31.3	43.5	-12.2	QP
303.5400	11.1	17.5	28.6	46.0	-17.4	QP
400.5400	14.9	19.1	34.0	46.0	-12.0	QP
712.8800	14.9	25.3	40.2	46.0	-5.8	QP
817.6400	14.5	26.7	41.2	46.0	-4.8	QP

Note :
1. Result = Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss
3. The margin value=Limit – Result

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured with a pre-amplifier of 35 dB.

6.6 Radiated Measurement Photos

Monopole Antenna

Dipole Antenna

Directional Antenna

7. FREQUENCY STABILITY MEASUREMENT

7.1 Provisions Applicable

According to §2.1055 (a)(1), the frequency stability shall be measured with variation of ambient temperature from -30℃to +50℃centigrade, and according to §2.1055 (d)(2), the frequency stability shall be measured with variation of primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

According to §74.861(e)(4), the frequency tolerance of the transmitter shall be 0.005 percent.

7.2 Measurement Procedure

A) Frequency stability versus environmental temperature

1. Setup the configuration per figure 5 for frequencies measured at ambient temperature if it is within 15℃to 25℃. Otherwise, an environmental chamber set for a temperature of 20℃shall be used.

2. Turn on EUT and set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 30 kHz, VBW to 100kHz and frequency span to 500 kHz. Record this frequency to be a reference.

3. Set the temperature of chamber to 50℃. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. While maintaining a constant temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.

4. Repeat step 2 with a 10℃decreased per stage until the lowest temperature -30℃is measured, record all measurement frequencies.

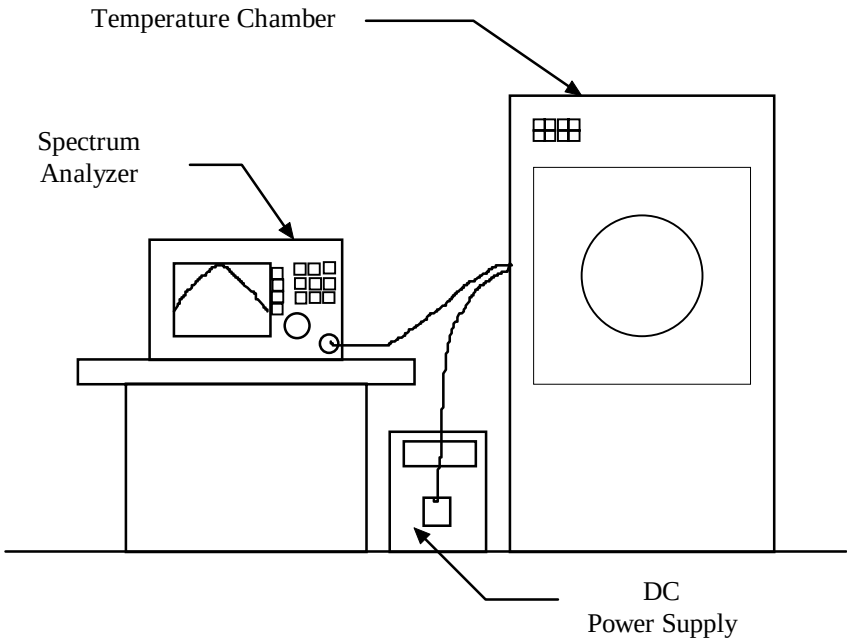
B) Frequency stability versus input voltage

1. Setup the configuration per figure 7 for frequencies measured at ambient temperature if it is within 15℃to 25℃. Otherwise, an environmental chamber set for a temperature of 20℃shall be used. Install new batteries in the EUT.

2. Set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 30 kHz, VBW to 100kHz and frequency span to 500 kHz. Record this frequency to be a reference.

3. For non hand carried, battery operated device, supply the EUT primary voltage with 85 and 115 percent of the nominal value and record the frequency.

Figure 5 : Frequency stability measurement configuration



7.3 Measurement Instrument

Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Spectrum Analyzer	Rohde & Schwarz	FSP40	2014/01/21	2015/01/20
Temperature Chamber	MALLIER	MCT-2X-M	2014/05/02	2015/05/01

7.4 Measurement Data

Test Date : Jul. 31, 2014 Temperature : 22 °C Humidity : 62 %

A. Tx Frequency 520.100MHz

A1. Frequency stability versus enviroment tempture

Reference Frequency 520.100 MHz		Limit：0.005%					
Enviroment Tempture (℃)	Power Supplied (Vdc)	Frequency measured with time elapsed					
		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	12.0	520.0807	-0.00372	520.0852	-0.00285	520.1106	0.00204
40		520.0847	-0.00293	520.1197	0.00379	520.1159	0.00305
30		520.1081	0.00156	520.0971	-0.00056	520.0970	-0.00058
20		520.1193	0.00372	520.1142	0.00273	520.1052	0.00101
10		520.0942	-0.00112	520.1157	0.00301	520.0893	-0.00206
0		520.1109	0.00210	520.0804	-0.00378	520.0851	-0.00287
-10		520.1057	0.00110	520.0832	-0.00324	520.0807	-0.00371
-20		520.0946	-0.00105	520.0885	-0.00222	520.1064	0.00122
-30		520.1087	0.00168	520.0811	-0.00363	520.0872	-0.00245

A2. Frequency stability versus supplied voltage (85% - 115%)

Reference Frequency : 520.100 MHz		Limit：0.005%					
Enviroment Tempture (℃)	Power Supplied (Vdc)	Frequency measured with time elapsed					
		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	10.2	520.1137	0.00263	520.0839	-0.00309	520.0972	-0.00054
25	13.8	520.1142	0.00273	520.0870	-0.00250	520.1171	0.00328

Test Date : Jul. 31, 2014 Temperature : 22 °C Humidity : 62 %

B. Tx Frequency 572.000MHz

B1. Frequency stability versus enviroment tempture

Reference Frequency : 572.000MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	12.0	572.0074	0.00130	571.9883	-0.00205	572.0180	0.00315
40		572.0146	0.00254	571.9969	-0.00054	571.9820	-0.00314
30		571.9885	-0.00201	572.0210	0.00367	572.0046	0.00081
20		571.9990	-0.00017	571.9856	-0.00252	571.9891	-0.00190
10		571.9871	-0.00225	572.0062	0.00108	571.9823	-0.00309
0		572.0146	0.00256	571.9866	-0.00234	571.9906	-0.00164
-10		571.9971	-0.00051	572.0203	0.00355	571.9844	-0.00273
-20		571.9814	-0.00326	572.0045	0.00079	571.9788	-0.00371
-30		571.9951	-0.00085	572.0039	0.00068	572.0021	0.00038

B2. Frequency stability versus supplied voltage (85% - 115%)

Reference Frequency : 572.000MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	10.2	572.0169	0.00295	572.0117	0.00204	571.9824	-0.00307
25	13.8	571.9797	-0.00356	571.9913	-0.00152	572.0145	0.00253

Test Date : Jul. 31, 2014 Temperature : 22 °C Humidity : 62 %

C. Tx Frequency 607.900MHz

C1. Frequency stability versus enviroment tempture

Reference Frequency : 607.900MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	12.0	607.8778	-0.00365	607.8783	-0.00356	607.8995	-0.00008
40		607.8859	-0.00232	607.8980	-0.00032	607.8944	-0.00092
30		607.8937	-0.00103	607.8859	-0.00232	607.8867	-0.00220
20		607.9099	0.00163	607.9046	0.00076	607.9186	0.00307
10		607.9075	0.00124	607.9214	0.00352	607.9079	0.00131
0		607.8845	-0.00254	607.9139	0.00228	607.9189	0.00311
-10		607.9185	0.00304	607.9021	0.00034	607.8854	-0.00240
-20		607.8817	-0.00302	607.8878	-0.00200	607.8896	-0.00171
-30		607.9180	0.00297	607.9091	0.00150	607.9045	0.00074

C2. Frequency stability versus supplied voltage (85% - 115%)

Reference Frequency : 607.900MHz		Limit：0.005%					
Enviroment	Power	Frequency measured with time elapsed					
Tempture	Supplied	2 minute		5 minute		10 minute	
(℃)	(Vdc)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	10.2	607.8921	-0.00130	607.9015	0.00025	607.9040	0.00067
25	13.8	607.8962	-0.00062	607.9155	0.00254	607.8914	-0.00141

8 CONDUCTED EMISSION MEASUREMENT

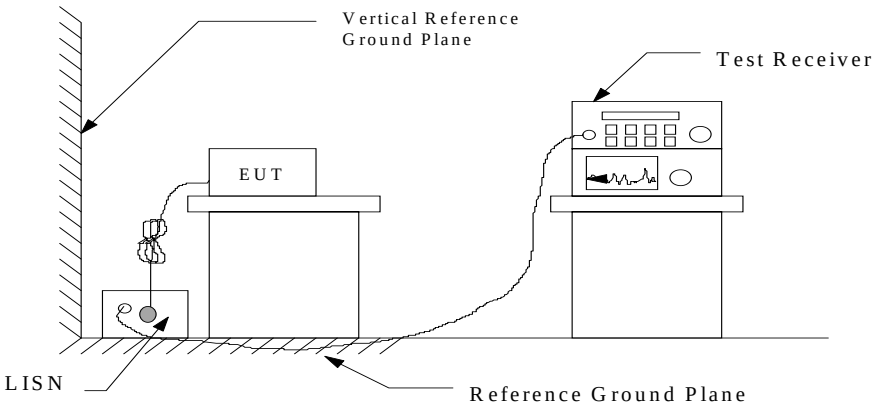
8.1 Standard Applicable

For unintentional and intentional device, Line Conducted Emission Limits are in accordance to § 15.107(a) and § 15.207(a) respectively. Both Limits are identical specification.

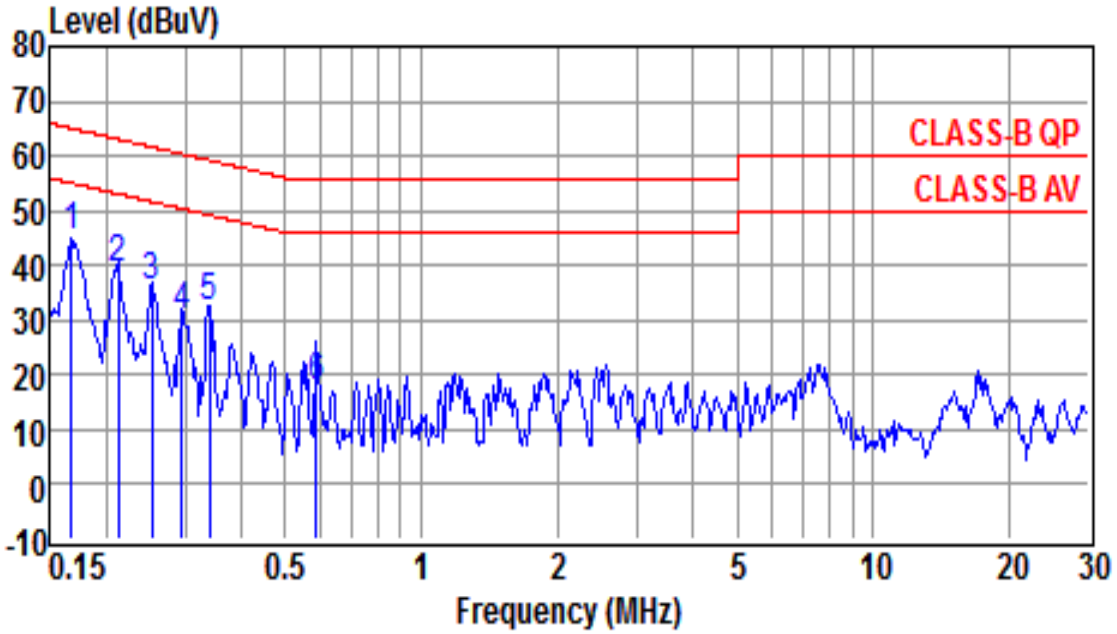
8.2 Measurement Procedure

1. Setup the configuration per figure 3.
2. A preliminary scan with a spectrum monitor is performed to identify the frequency of emission that has the highest amplitude relative to the limit by operating the EUT in selected modes of operation, typical cable positions, and with a typical system configuration.
3. Record the 6 or 8 highest emissions relative to the limit.
4. Measure each frequency obtained from step 3 by a test receiver set on quasi peak detector function, and then record the accuracy frequency and emission level. If all emissions measured in the specified band are attenuated more than 20 dB from the limit, this step would be ignored, and the peak detector function would be used.
5. Confirm the highest three emissions with variation of the EUT cable configuration and record the final data.
6. Repeat all above procedures on measuring each operation mode of EUT.

Figure 3 : Conducted emissions measurement configuration



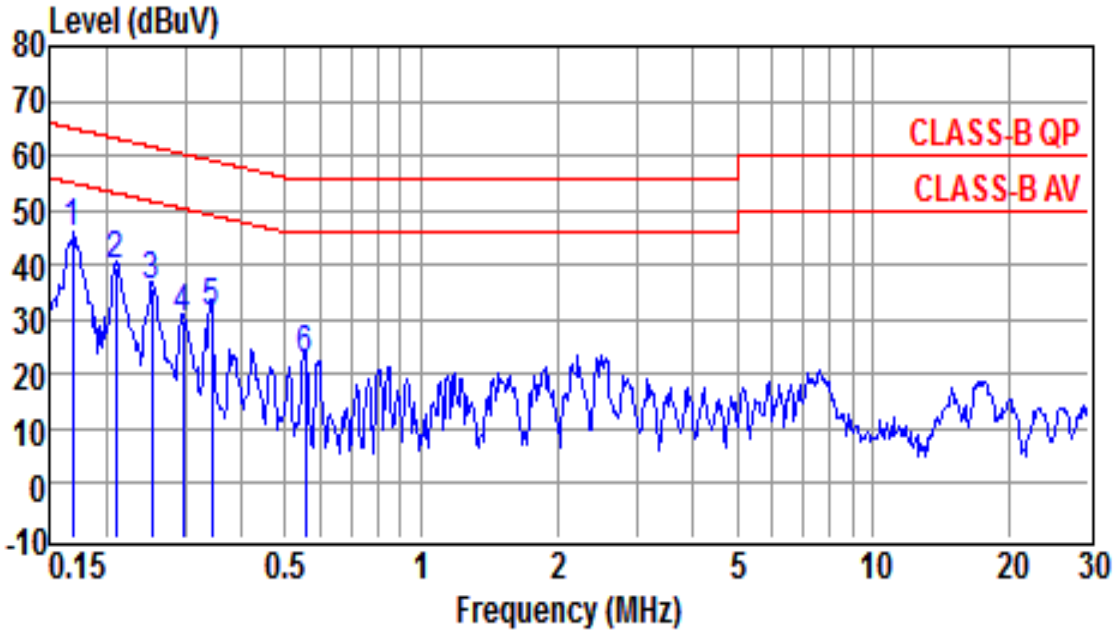
8.3 Conducted Emission Data



Site	: conducted #1	Date	: 2014-08-01
Condition	: CLASS-B QP	LISN	: NEUTRAL
Tem / Hum	: 22 ℃ / 60%		
Test Mode	: Monopole Antenna		
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Power Rating	: DC 12Vdc		
Memo	: TX-701	Memo	:

Freq (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.1677	34.9	10.2	45.1	65.1	-20.0	QP
0.2128	28.9	10.2	39.1	63.1	-24.0	QP
0.2535	25.9	10.2	36.1	61.6	-25.5	QP
0.2955	20.4	10.2	30.6	60.4	-29.8	QP
0.3392	21.7	10.2	31.9	59.2	-27.3	QP
0.5854	7.1	10.2	17.3	56.0	-38.7	QP

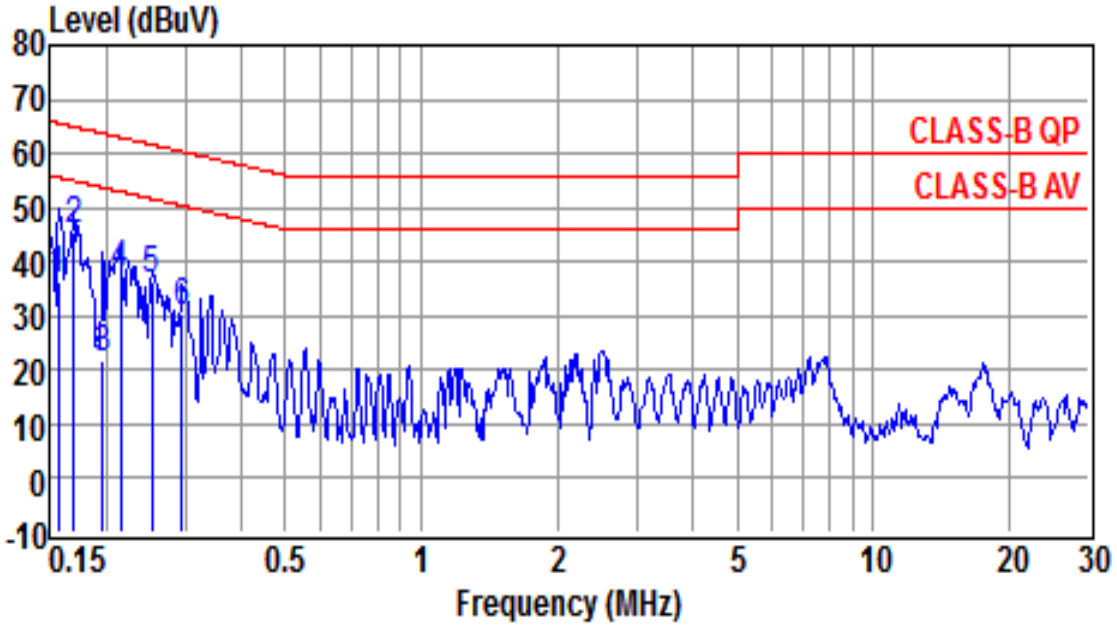
Note :
1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss



Site : conducted #1 Date : 2014-08-01
Condition : CLASS-B QP LISN : LINE
Tem / Hum : 22 ℃ / 60%
Test Mode : Monopole Antenna
EUT :Plug-in UHF Wireless Audio Link Transmitter Module
Power Rating : DC 12Vdc
Memo : TX-701 Memo :

Freq (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.1694	35.2	10.1	45.3	65.0	-19.7	QP
0.2106	29.5	10.1	39.6	63.2	-23.6	QP
0.2535	25.8	10.1	35.9	61.6	-25.7	QP
0.2971	19.7	10.1	29.8	60.3	-30.5	QP
0.3428	20.9	10.1	31.0	59.1	-28.1	QP
0.5523	12.2	10.2	22.4	56.0	-33.6	QP

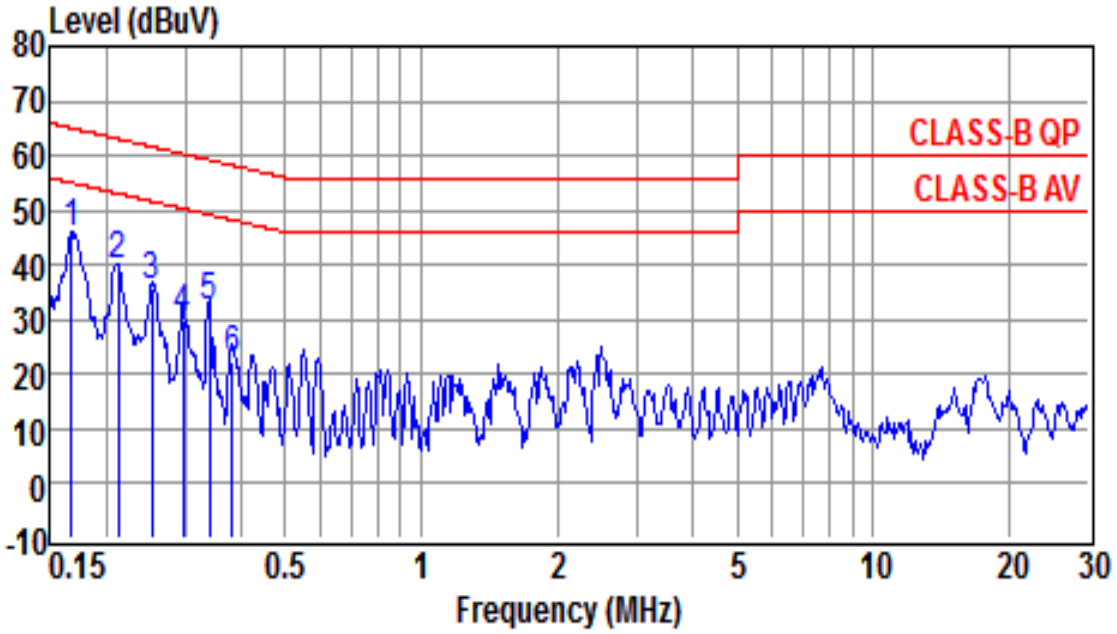
Note :
1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss



Site	: conducted #1	Date	: 2014-08-01
Condition	: CLASS-B QP	LISN	: NEUTRAL
Tem / Hum	: 22 ℃ / 60%		
Test Mode	: Dipole Antenna		
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Power Rating	: DC 12Vdc		
Memo	: TX-701	Memo	:

Freq (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.1573	26.4	10.2	36.6	65.6	-29.0	QP
0.1703	35.2	10.2	45.4	64.9	-19.5	QP
0.1965	11.8	10.2	22.0	63.8	-41.8	QP
0.2162	27.3	10.2	37.5	63.0	-25.5	QP
0.2535	25.9	10.2	36.1	61.6	-25.5	QP
0.2955	20.4	10.2	30.6	60.4	-29.8	QP

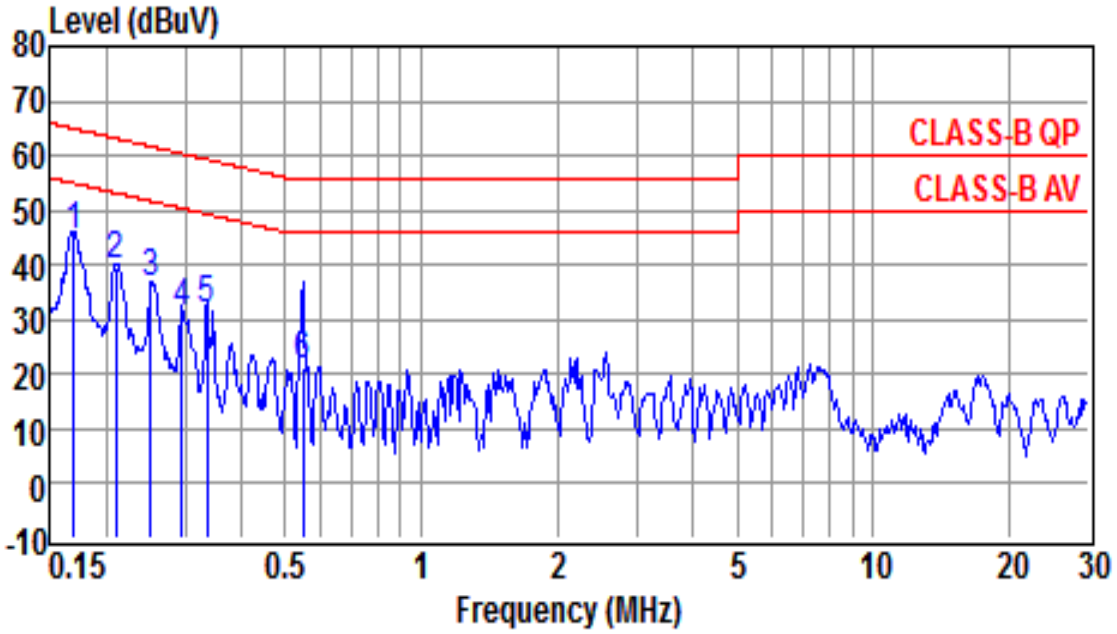
Note :
1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss



Site : conducted #1 Date : 2014-08-01
Condition : CLASS-B QP LISN : LINE
Tem / Hum : 22 ℃ / 60%
Test Mode : Dipole Antenna
EUT :Plug-in UHF Wireless Audio Link Transmitter Module
Power Rating : DC 12Vdc
Memo : TX-701 Memo :

Freq (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.1677	35.2	10.1	45.3	65.1	-19.8	QP
0.2128	29.3	10.1	39.4	63.1	-23.7	QP
0.2535	26.0	10.1	36.1	61.6	-25.5	QP
0.2971	19.9	10.1	30.0	60.3	-30.3	QP
0.3392	22.1	10.1	32.2	59.2	-27.0	QP
0.3811	12.1	10.1	22.2	58.3	-36.1	QP

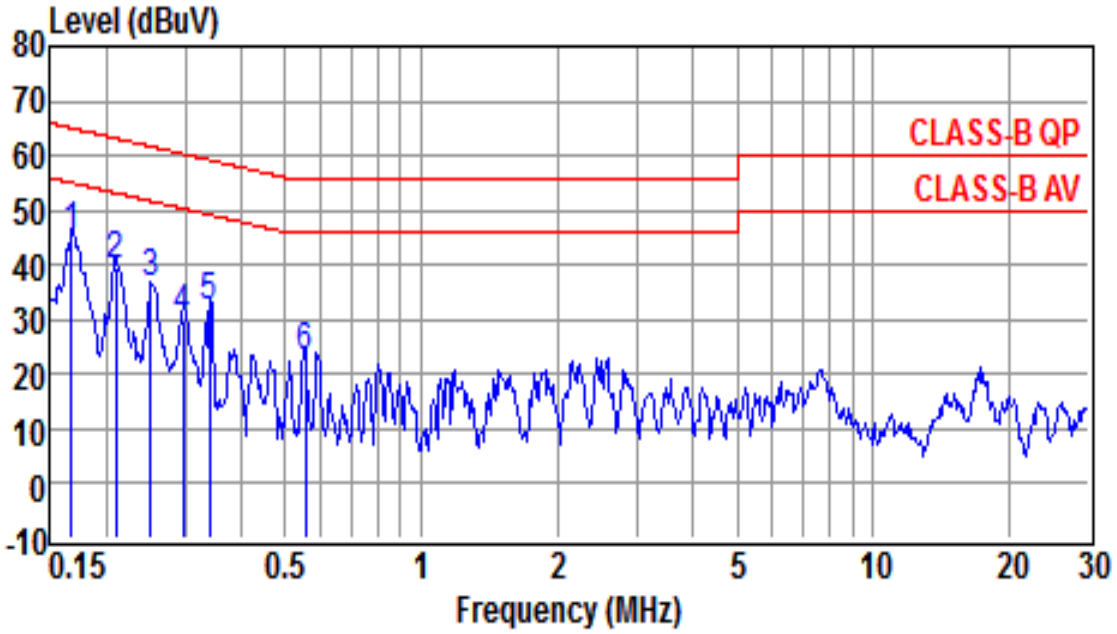
Note :
1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss



Site	: conducted #1	Date	: 2014-08-01
Condition	: CLASS-B QP	LISN	: NEUTRAL
Tem / Hum	: 22 ℃ / 60%		
Test Mode	: Directional Antenna		
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Power Rating	: DC 12Vdc		
Memo	: TX-701	Memo	:

Freq (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.1703	34.9	10.2	45.1	64.9	-19.8	QP
0.2106	29.5	10.2	39.7	63.2	-23.5	QP
0.2521	26.0	10.2	36.2	61.7	-25.5	QP
0.2955	20.5	10.2	30.7	60.4	-29.7	QP
0.3356	21.4	10.2	31.6	59.3	-27.7	QP
0.5464	11.0	10.2	21.2	56.0	-34.8	QP

Note :
1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss



Site	: conducted #1	Date	: 2014-08-01
Condition	: CLASS-B QP	LISN	: LINE
Tem / Hum	: 22 ℃ / 60%		
Test Mode	: Directional Antenna		
EUT	:Plug-in UHF Wireless Audio Link Transmitter Module		
Power Rating	: DC 12Vdc		
Memo	: TX-701	Memo	:

Freq (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.1677	35.0	10.1	45.1	65.1	-20.0	QP
0.2106	29.7	10.1	39.8	63.2	-23.4	QP
0.2521	26.0	10.1	36.1	61.7	-25.6	QP
0.2971	19.8	10.1	29.9	60.3	-30.4	QP
0.3392	21.8	10.1	31.9	59.2	-27.3	QP
0.5523	12.5	10.2	22.7	56.0	-33.3	QP

Note :
1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss

8.4 Result Data Calculation

The result data is calculated by adding the LISN Factor to the measured reading. The basic equation with a sample calculation is as follows:

RESULT = READING + LISN FACTOR

Assume a receiver reading of 22.5 dB μV is obtained, and LISN Factor is 0.1 dB, then the total of disturbance voltage is 22.6 dB μV.

RESULT = 22.5 + 0.1 = 22.6 dB μV
Level in μV = Common Antilogarithm[(22.6 dB μV)/20]
= 13.48 μV

8.5 Conducted Measurement Equipment

The following test equipment are used during the conducted test .

Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	2014/05/30	2015/05/29
LISN	EMCO	3625/2	2014/05/06	2015/05/05
LISN	Rohde & Schwarz	ESH2-Z5	2014/04/08	2015/04/07

8.6 Photos of Conduction Measuring Setup

Monopole Antenna

Dipole Antenna

Directional Antenna