

**FCC PART 15 SUBPART C TEST REPORT**

**for**

**Wireless Speaker Amplifier**

**Model No.: Control 2.4GAW**

**FCC ID: R48CTRL24GAWTX**

**of**

**Applicant: MEILOON INDUSTRIAL CO., LTD.**

**Address: No.77, Lane 1775, Chuen-Ryh Road, Taoyuan City, Taiwan**

**Tested and Prepared**

**by**

**Worldwide Testing Services (Taiwan) Co., Ltd.**

**FCC Registration No.: 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679A-1**

**A2LA Accredited No.: 2732.01**

**Report No.: W6D20807-9226-P-15-T**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
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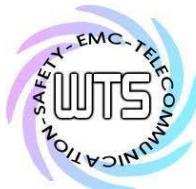


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T  
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## **1 General Information**

### **1.1 Notes**

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services (Taiwan) Co., Ltd.

### **Tester:**

August 4, 2008

Danny Soong

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Date

WTS-Lab.

Name

Signature

### **Technical responsibility for area of testing:**

August 4, 2008

Steven Chuang

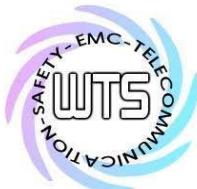
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Date

WTS

Name

Signature



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## **1.2 Testing laboratory**

### **1.2.1 Location**

OATS  
No.5-1, Shuang Sing Village,  
LiShuei Rd., Wanli Township,  
Taipei County 207, Taiwan (R.O.C.)

Company  
Worldwide Testing Services (Taiwan) Co., Ltd.  
6F, NO. 58, LANE 188, RUEY-KUANG RD.  
NEIHU, TAIPEI 114, TAIWAN R.O.C.  
Tel : 886-2-66068877  
Fax : 886-2-66068879

### **1.2.2 Details of accreditation status**

#### **Accredited testing laboratory**

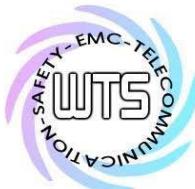
**A2LA-registration number: 2732.01**

**FCC filed test laboratory Reg. No. 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679A-1**

## **1.3 Details of approval holder**

Name	: MEILOON INDUSTRIAL CO., LTD.
Street	: No.77, Lane 1775, Chuen-Ryh Road
Town	: Taoyuan City
Country	: Taiwan
Telephone	: +886-3-326-1611
Fax	: +886-3-326-3884



# Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID : R48CTRL24GAWTX

## **1.4 Application details**

Date of receipt of application : July 29, 2008  
Date of receipt of test item : July 29, 2008  
Date of test : from July 30, 2008 to August 4, 2008

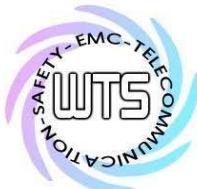
## **1.5 General information of Test item**

Type of test item : Wireless Speaker Amplifier  
Model Number : Control 2.4GAW  
Hardware : Ver. 3.4  
Software : Ver. 1.01  
Serial number : without  
Photos : see Annex

## **Technical data**

Frequency band : 2.4 GHz – 2.4835 GHz  
Frequency ( ch A ) : 2.403 GHz  
Frequency ( ch B ) : 2.443 GHz  
Frequency ( ch C ) : 2.479 GHz

<u>Transmitter</u>	<u>Unom</u>				
Power ( ch A )	: Conducted: 14.90 dBm				
Power ( ch B )	: Conducted: 15.73 dBm				
Power ( ch C )	: Conducted: 16.81 dBm				
Power supply	<table><tr><td>Input</td><td>: 100-240 VAC, 50/60 Hz</td></tr><tr><td>Out</td><td>: 5 V, 1000mA</td></tr></table>	Input	: 100-240 VAC, 50/60 Hz	Out	: 5 V, 1000mA
Input	: 100-240 VAC, 50/60 Hz				
Out	: 5 V, 1000mA				
Operation modes	: duplex				
Modulation Type	: FHSS				
Antenna Type	: Dipole Antenna				
Antenna gain	: 2.06 dBi				



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T  
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Host device : none

Classification :

Fixed Device	<input checked="" type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input type="checkbox"/>

**Manufacturer:**  
(if applicable)

Name : ./.  
Street : ./.  
Town : ./.  
Country : ./.

Additional information

: This wireless speaker system includes two units: T unit and R unit. The T unit is to transmit the audio modulated RF signal to the R unit. The R unit is a amplifier with speaker to demodulate the RF signal and play the audio signal. However, the R unit is also able to transmit protocol RF signal to the T unit to maintain the communication of both units.

## 1.6 Test standards

Technical standard : FCC RULES PART 15 Subpart B / SUBPART C § 15.247 (2007-10)



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## **2      Technical test**

### **2.1    Summary of test results**

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

or

The deviations as specified in 2.5 were ascertained in the course of the tests performed.

### **2.2    Test environment**

Temperature : 23 °C

Relative humidity content : 20 ... 75 %

Air pressure : 86 ... 103 kPa

Details of power supply      Input : 100-240 VAC, 50/60 Hz  
                                    Output : 5 V, 1000mA

Extreme conditions parameters : test voltage : -- extreme  
                                    min :-- V  
                                    max :-- V



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2007/10/15	2008/10/14
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY	None	None		Function Test	
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2007/10/15	2008/10/14
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2007/10/15	2008/10/14
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2008/5/10	2009/5/09
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2007/10/23	2009/10/22
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2008/7/25	2009/7/24
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2007/11/2	2009/11/1
ETSTW-CE 014	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T2-02	20241	FCC	2005/12/7	2008/12/6
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2006/11/7	2008/11/6
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2007/10/29	2008/10/28
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2007/10/12	2009/10/11
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2007/12/3	2008/12/2
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2007/10/29	2008/10/28
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2007/10/11	2008/10/12
ETSTW-RE 010	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070181	MOTECH	Function Test	
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	Function Test	
ETSTW-RE 017	Log-Periodic Antenna	HL025	352886/001	R&S	2008/5/5	2010/5/4
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2007/11/7	2010/11/6
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2007/10/9	2008/10/8
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148	34429	EMCO	2008/4/23	2010/4/22
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2008/4/23	2010/4/22
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2008/3/26	2010/3/25
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2007/10/9	2008/10/8
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	2008/6/27	2009/6/26

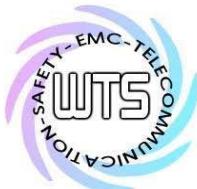


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ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2007/10/16	2009/10/15
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2007/1/11	2009/1/10
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2008/5/2	2010/5/1
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2008/5/22	2010/5/21
ETSTW-RE 047	ESA-E SERIES SPECTRUM ANALYZER	E4445A	MY46181369	Agilent	2008/6/26	2009/6/25
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2005/3/22	2009/3/21
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2007/5/2	2009/5/1
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2008/7/1	2009/6/30
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2007/7/2	2009/7/1



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## 2.4 General Test Procedure

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.4-2003 using a 50 $\mu$ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dB $\mu$ V) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

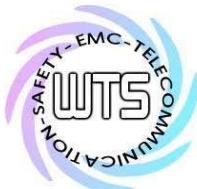
Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dB $\mu$ V + 10.36 dB + 6 dB = 36.36 dB $\mu$ V/m @3m

The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2003 Section 13.1.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

Measurements were made by Worldwide Testing Services (Taiwan) Co., Ltd.. at the registered open field test site located No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.). The Registration Number: 930600.



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When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

Average = Peak + Duty Factor

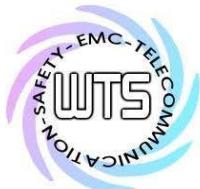
Duty Factor =  $20 \log (dwell\ time/T)$

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

ANTENNA & GROUND:

**This unit uses Dipole Antenna.**



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## **3 Test results (enclosure)**

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equivalent radiated Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions radiated – Transmitter operating	15.247(c)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions conducted – Transmitter operating	15.247	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carrier Frequency Separation	15.247(a) (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Number of Hopping Frequencies	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20 dB Bandwidth	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Band-edge Compliance of RF Emission	15.247(c)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Digital Part And Receiver L.O.	15.109	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The follows is intended to leave blank.



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## 3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

The power was measured with modulation (declared by the applicant).

Test conditions	Conducted Power		
	Channel A [dBm]	Channel B [dBm]	Channel C [dBm]
T <sub>nom</sub> = 23°C   V <sub>nom</sub> = 120 V	14.90	15.73	16.81
Measurement uncertainty	< 3 dB		

Test conditions	Radiated Power		
	Channel A [dBm]	Channel B [dBm]	Channel C [dBm]
T <sub>nom</sub> = 23°C   V <sub>nom</sub> = 120 V	--	--	--
Measurement uncertainty	< 3 dB		

Test conditions T <sub>nom</sub> = 23°C, V <sub>nom</sub> = 120 V Frequency[MHz]	Signal Field strength TX highest power mode dB $\mu$ V/m
2443	116.28
Measurement uncertainty	< 3 dB

The diagrams for the field strength measurements are included in Appendix.



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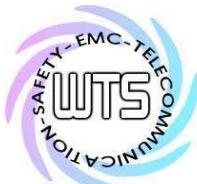
## Maximum Peak Output Power

Limits:

Frequency MHz	Number of hopping channels			
	$\geq 75$	$\geq 50$	$49 \geq 25$	$74 \geq 15$
902-928		30 dBm	24 dBm	
2400-2483.5 MHz	30 dBm	-		21 dbm
5725-5850 MHz	30 dBm	-		

In case of employing transmitter antennas having antenna gain >dB<sub>i</sub> and using fixed point-to point operation consider §15.247 (b)(4).

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 055



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## **3.2 Equivalent isotropic radiated power**

FCC Rule: 15.239(b), 15.35

Because using an internal antenna there are no deviations from the radiated test results according 3.1.

### **3.2.1 Transmitter**

#### Integral Antenna:

At the transmitter the measurement was transacted with the modulation declared by the manufacturer and the maximum available output power of the EUT.

In this arrangement the EUT fulfils the requirements of the FCC rules § 15.247, subpart C, section b. This unit uses an internal antenna. There is no provision for an external antenna (see photo).

## **3.3 RF Exposure Compliance Requirements**

According to Supplement C, Edition 01-01 to OET Bulletin 65, Edition 97-01 this spread spectrum transmitter is categorically excluded from routine environmental evaluation because of the low power level, where there is a high likelihood of compliance with RF exposure standards.

The antenna used for this Bluetooth transceiver module must not be co-located or operating in conjunction with any other antenna or transmitter.

## **3.4 Out of Band Radiated Emissions**

FCC Rule: 15.247(c) , 15.35

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

#### Limits:

For frequencies below 1GHz :

Max. reading – 20 dB

116.28 dB $\mu$ V/m- 20 dB= 96.28 dB $\mu$ V/m

Guidance on Measurement of FHSS Systems:

“If the emission is pulsed, modify the unit for continuous operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.” Here the correction was added to the limit instead subtracted from the reading.

Duty Cycle correction =  $20 \log (\text{dwell time}/100\text{ms})$

For frequencies above 1GHz (Peak measurements).

Limit = max. aver. reading-20dB +20dB(because Peak detector is used)

96.28 dB $\mu$ V/m

For frequencies above 1GHz (Average measurements).

Max. reading – 20 dB - duty cycle correction:

No duty cycle correction was added to the reading

116.28 dB $\mu$ V/m- 20 dB= 96.28 dB $\mu$ V/m

Explanation: See attached diagrams in the Appendix.

Test equipment used: ETSTW-RE 004, ETSTW-RE 003, ETSTW-RE 030, ETSTW-RE 017



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## **3.5 Transmitter Radiated Emissions in restricted Bands**

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26000 MHz.

For radiated emission tests, the analyzer setting was as followings:

RES BW VID BW

Frequency <1 GHz 100 kHz 100 kHz (Peak measurements)

Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)

1 MHz 1 MHz (Average measurements)

Limits:

For frequencies below 1GHz :

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of FHSS Systems:

“If the emission is pulsed, modify the unit for continues operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.” Here the correction was added to the limit instead subtracted from the reading.

Duty cycle correction =  $20 \log (\text{dwell time}/100\text{ms})$

For frequencies above 1GHz (Average measurements).

Limit – duty cycle correction

No duty cycle correction was added to the reading.

54.0dB $\mu$ V/m

For frequencies above 1GHz (Peak measurements).

Limit + 20dB

54.0dB $\mu$ V/m + 20 dB= 74 dB $\mu$ V/m

Explanation: See attached diagrams in the Appendix.

Test equipment used: ETSTW-RE 004, ETSTW-RE 003, ETSTW-RE 030, ETSTW-RE 017



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## **3.6 Spurious emissions (tx)**

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

**SAMPLE CALCULATION OF LIMIT.** All results will be updated by an automatic measuring system in accordance to point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.

In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Marker-Delta-Method" or the „Duty-Cycle Correction Factor“.

## **Summary table with radiated data of the test plots**

Low Channel

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
H	36.814	12.70	12.61	QP	25.31	30	4.69	214	296
	87.253	13.85	9.43	QP	23.28	30	6.72	221	305
	137.347	9.97	13.87	QP	23.84	30	6.16	185	328
	193.629	12.41	11.94	QP	24.35	30	5.65	147	319
	401.304	15.88	17.94	QP	33.82	37	3.18	96	165
	700.627	10.56	23.90	QP	34.46	37	2.54	312	242
	802.806	8.21	25.70	QP	33.91	37	3.09	284	222
	1603.206	48.27	-7.04	PK	41.23	54.00	12.77	125	213
	3204.408	54.28	0.34	PK	54.62	96.28	41.66	175	147
	4805.438	50.76	4.42	PK	55.18	74.00	18.82	144	198
	4805.438	42.87	4.42	AV	47.29	54.00	6.71	144	198
	7206.412	49.33	7.63	PK	56.96	96.28	39.32	183	317



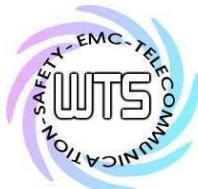
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Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
V	36.814	15.23	12.61	QP	27.84	30	2.16	211	184
	89.256	17.38	9.70	QP	27.08	30	2.92	234	196
	144.719	12.88	14.31	QP	27.19	30	2.81	188	227
	373.197	16.46	17.13	QP	33.59	37	3.41	75	201
	810.822	8.39	25.83	QP	34.22	37	2.78	296	296
	928.165	6.89	27.47	QP	34.36	37	2.64	331	279
	1603.206	51.52	-7.04	PK	44.48	54.00	9.52	127	215
	1743.486	71.86	-5.69	PK	66.17	96.28	30.11	185	241
	1903.807	51.49	-5.14	PK	46.35	96.28	49.93	163	169
	3202.404	56.98	0.34	PK	57.32	96.28	38.96	119	96
	4805.594	52.37	4.42	PK	56.79	74.00	17.21	152	202
	4805.594	47.50	4.42	AV	51.92	54.00	2.08	152	202
	7206.4120	49.69	7.63	PK	57.32	96.28	38.96	179	328

## Middle Channel

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
H	36.814	12.70	12.61	QP	25.31	30	4.69	214	296
	87.253	13.85	9.43	QP	23.28	30	6.72	221	305
	137.347	9.97	13.87	QP	23.84	30	6.16	185	328
	193.629	12.41	11.94	QP	24.35	30	5.65	147	319
	401.304	15.88	17.94	QP	33.82	37	3.18	96	165
	700.627	10.56	23.90	QP	34.46	37	2.54	312	242
	802.806	8.21	25.70	QP	33.91	37	3.09	284	222
	1629.258	55.88	-6.94	PK	48.94	96.28	47.34	171	218
	3254.509	56.59	0.27	PK	56.86	96.28	39.42	128	246
	4881.763	46.43	4.85	PK	51.28	54.00	2.72	156	88
	7325.220	51.84	6.33	PK	58.17	74.00	15.83	139	132
	7325.220	43.05	6.33	AV	49.38	54.00	4.62	139	132



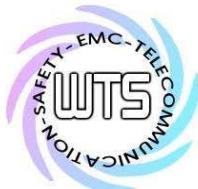
# Worldwide Testing Services(Taiwan) Co., Ltd.

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Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
V	36.814	15.23	12.61	QP	27.84	30	2.16	211	184
	89.256	17.38	9.70	QP	27.08	30	2.92	234	196
	144.719	12.88	14.31	QP	27.19	30	2.81	188	227
	373.197	16.46	17.13	QP	33.59	37	3.41	75	201
	810.822	8.39	25.83	QP	34.22	37	2.78	296	296
	928.165	6.89	27.47	QP	34.36	37	2.64	331	279
	1629.258	58.21	-6.94	PK	51.27	96.28	45.01	174	222
	3254.509	58.68	0.27	PK	58.95	96.28	37.33	130	251
	4881.763	51.53	4.85	PK	56.38	74.00	17.62	163	92
	4881.763	44.88	4.85	AV	49.73	54.00	4.27	163	92
	7362.653	52.18	6.23	PK	58.41	74.00	15.59	134	136
	7362.653	43.96	6.23	AV	50.19	54.00	3.81	134	136

## High Channel

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
H	36.814	12.70	12.61	QP	25.31	30	4.69	214	296
	87.253	13.85	9.43	QP	23.28	30	6.72	221	305
	137.347	9.97	13.87	QP	23.84	30	6.16	185	328
	193.629	12.41	11.94	QP	24.35	30	5.65	147	319
	401.304	15.88	17.94	QP	33.82	37	3.18	96	165
	700.627	10.56	23.90	QP	34.46	37	2.54	312	242
	802.806	8.21	25.70	QP	33.91	37	3.09	284	222
	1653.306	52.49	-6.75	PK	45.74	96.30	50.54	192	108
	1899.799	47.43	-5.06	PK	42.37	96.30	53.91	188	139
	3304.609	55.08	0.20	PK	55.28	96.30	41.00	152	247
	4953.907	42.83	4.45	PK	47.28	54.00	6.72	119	314
	7438.877	52.17	6.34	PK	58.51	74.00	15.49	127	69
	7438.877	41.85	6.34	AV	48.19	54.00	5.81	127	69



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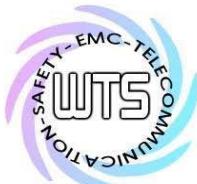
Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
V	36.814	15.23	12.61	QP	27.84	30	2.16	211	184
	89.256	17.38	9.70	QP	27.08	30	2.92	234	196
	144.719	12.88	14.31	QP	27.19	30	2.81	188	227
	373.197	16.46	17.13	QP	33.59	37	3.41	75	201
	810.822	8.39	25.83	QP	34.22	37	2.78	296	296
	928.165	6.89	27.47	QP	34.36	37	2.64	331	279
	1653.306	51.77	-6.75	PK	45.02	96.30	51.26	183	117
	1901.803	51.55	-5.14	PK	46.41	96.30	49.87	196	148
	3306.613	58.06	0.20	PK	58.26	96.30	38.02	149	252
	4953.907	41.70	4.45	PK	46.15	54.00	7.85	115	302
	4172.584	46.95	2.88	PK	49.83	54.00	4.17	102	329
	7438.877	52.28	6.34	PK	58.62	74.00	15.38	132	77
	7438.877	42.40	6.34	AV	48.74	54.00	5.26	132	77

All other not noted test plots do not contain significant test results in relation to the limits.

**TEST RESULT (Transmitter):** The unit DOES meet the FCC requirements.

Explanation: See attached diagrams in the Appendix.

Test equipment used: ETSTW-RE 004, ETSTW-RE 003, ETSTW-RE 030, ETSTW-RE 017, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 042, ETSTW-RE 043



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 3.7 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer).

According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

		Channel Separation	
Test conditions		Channel B	Channel B+1
$T_{\text{nom}} = 23^{\circ}\text{C}$		$V_{\text{nom}} = 120 \text{ V}$	
Measurement uncertainty		< 10 Hz	

### Limits:

Frequency Range MHz	Limits	
	20 dB bandwidth < 25 kHz	20 dB bandwidth > 25 kHz
902-928	25 kHz	20 dB bandwidth
2400-2483.5 5725-5850.0	25 kHz	20 dB bandwidth

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 055

Explanation: See attached diagrams in the Appendix.



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## **3.8 Number of Hopping Frequencies**

According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use least 75 hopping frequencies.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

Test conditions		Operating Mode	Number of Channels
$T_{nom}= 23^{\circ}\text{C}$	$V_{nom}= 120 \text{ V}$	normal transmitting	20

### **Limits:**

Frequency Range MHz	Limit		
	20dB Bandwidth		20dB Bandwidth < 250 kHz
	$\leq 1 \text{ MHz}$		
902-928 MHz			$\geq 50$
2400-2483.5	$\geq 15$	$\geq 15$	
5725-5850.0 MHz	$\geq 75$		

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 055

Explanation: See attached diagrams in the Appendix.

### **3.8.1 Pseudorandom Frequency Hopping Sequence**

The generation of the hopping sequence is determined by the Bluetooth cord specification and complies with the FCC requirements.

### **3.8.2 Coordination of hopping sequences to other transmitters**

According to the Bluetooth core specification V1.1 such a coordination is not possible. During scatternet function only one of the two hopping sequences will be used at a definite moment.

### **3.8.3 System Receiver Hopping Capability**

According to the Bluetooth core specification. The system receivers shift frequencies in synchronization with the transmitted signals.



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## **3.9 Time of Occupancy (Dwell Time)**

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

In 2400-2483,5 MHz band the average time of occupancy on any channel shall not be greater than 0,4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

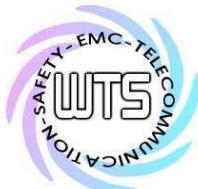
Test conditions	Operating mode	Measurement period	Time of Occupancy
$T_{\text{nom}} = 23^{\circ}\text{C}$ $V_{\text{nom}} = 120 \text{ V}$ Channel B	normal transmitting	8	172.252ms
Measurement uncertainty	$< 1 \mu\text{s}$		

### **Limits and measurement periods:**

Frequency MHz	Number of channels	Measurement Period	Limit
902 – 928	≥50	20 s	0,4 s
	49 ≥ 25	10 s	0,4 s
2400 – 2483,5	≥ 15	0,4 s * number of used channels	0,4 s
5725- 5850	≥ 75	30 s	0,4s

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 055

**Comment:** See attached diagram, which show the On-time and the number of counted events during the measurement period



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## **3.10 20dB Bandwidth**

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.

The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

Test conditions	20 dB Bandwidth		
	Channel A	Channel B	Channel C
$T_{nom} = 23^{\circ}\text{C}$   $V_{nom} = 120 \text{ V}$	1.833333333 MHz	1.820512821 MHz	1.820512821 MHz
Measurement uncertainty	$< 10 \text{ Hz}$		

## **Limits:**

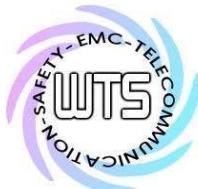
Frequency Range / MHz	Number of channels	Limit
902-928	< 50	< 250 kHz
	$49 \geq 25$	$500 \text{ kHz} \geq 250 \text{ kHz}$
2400-2483.5	$\geq 15$	not determined
5725-5850	75	$\leq 1 \text{ MHz}$

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 055

Explanation: See attached diagrams in the Appendix.

### **3.10.1 System Receiver Input Bandwidth**

It is determined in the Bluetooth core specification. The value matches to the bandwidth of transmitter signal.



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## **3.11 Band-edge Compliance of RF Emissions**

According to FCC rules part 15 subpart C §15.247(c) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required.

In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

Test conditions	Attenuation at or outside band-edges	
	Lower Band-edge	Upper Band-edge
$T_{\text{nom}} = 23^{\circ}\text{C}$ $V_{\text{nom}} = 120 \text{ V}$	56.57 dB	59.63 dB
Measurement uncertainty	$< 100 \text{ Hz}$	

### **Limits:**

Frequency Range / MHz	Limit
902 – 928	
2400 – 2483.5	- 20 dB
5725 - 5850	

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 055

Explanation: See attached diagrams in the Appendix.



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## **3.12 Radiated Emissions from Receiver Section of Transceiver**

FCC Rule: 15.109

### **Summary table with radiated data of the test plots**

(RX)

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
H	124.038	20.49	13.68	QP	34.17	43.5	9.33	337	117
	166.257	20.58	15.16	QP	35.74	43.5	7.76	348	182
	407.342	24.93	17.93	QP	42.86	46.0	3.14	201	294
	1648.157	51.07	-7.00	PK	44.07	54.0	9.93	124	229

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Azimuth (degree)
V	107.624	23.22	12.09	QP	35.31	43.5	8.19	217	126
	373.749	22.42	17.06	QP	39.48	46.0	6.52	309	314
	1648.157	51.96	-7.00	PK	44.96	54.0	9.04	121	231

**Note**

- 1. Correction Factor = Antenna factor + Cable loss - Preamplifier**
- 2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor**
- 3. Detector function in the form : P = Peak, QP = Quasi Peak, AV = Average**

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 028, , ETSTW-RE 029, ETSTW-RE 042, ETSTW-RE 043

Explanation: See attached diagrams in the Appendix.



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## **3.13 Power Line Conducted Emission**

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Frequency	Level (dB $\mu$ V)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

LISN type	Frequency Marker	Corrected Reading (dBuV)	Correction Factor	Test Result (dBuV)		Compliance Limit (dBuV)		Margin (dB)		
N	MHz	QP	AV	dB	QP	AV	QP	AV	QP	AV
	0.580	35.68	25.50	10.10	45.78	35.60	56.00	46.00	10.22	10.40
	7.010	25.87	14.43	10.10	35.97	24.53	60.00	50.00	24.03	25.47
	28.640	31.21	8.70	10.10	41.31	18.80	60.00	50.00	18.69	31.20

LISN type	Frequency Marker	Corrected Reading (dBuV)	Correction Factor	Test Result (dBuV)		Compliance Limit (dBuV)		Margin (dB)		
L1	MHz	QP	AV	dB	QP	AV	QP	AV	QP	AV
	0.180	40.43	20.78	10.10	50.53	30.88	64.48	54.48	13.95	23.60
	0.590	35.70	24.71	10.10	45.80	34.81	56.00	46.00	10.20	11.19
	6.890	25.64	13.31	10.10	35.74	23.41	60.00	50.00	24.26	26.59

### **Limits:**

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
	66 to 56	56 to 46
	56	46
	60	50

Test equipment used: ETSTW-CE 001, ETSTW-CE 003, ETSTW-CE 004, ETSTW-CE 006

Explanation: See attached diagrams in the Appendix.



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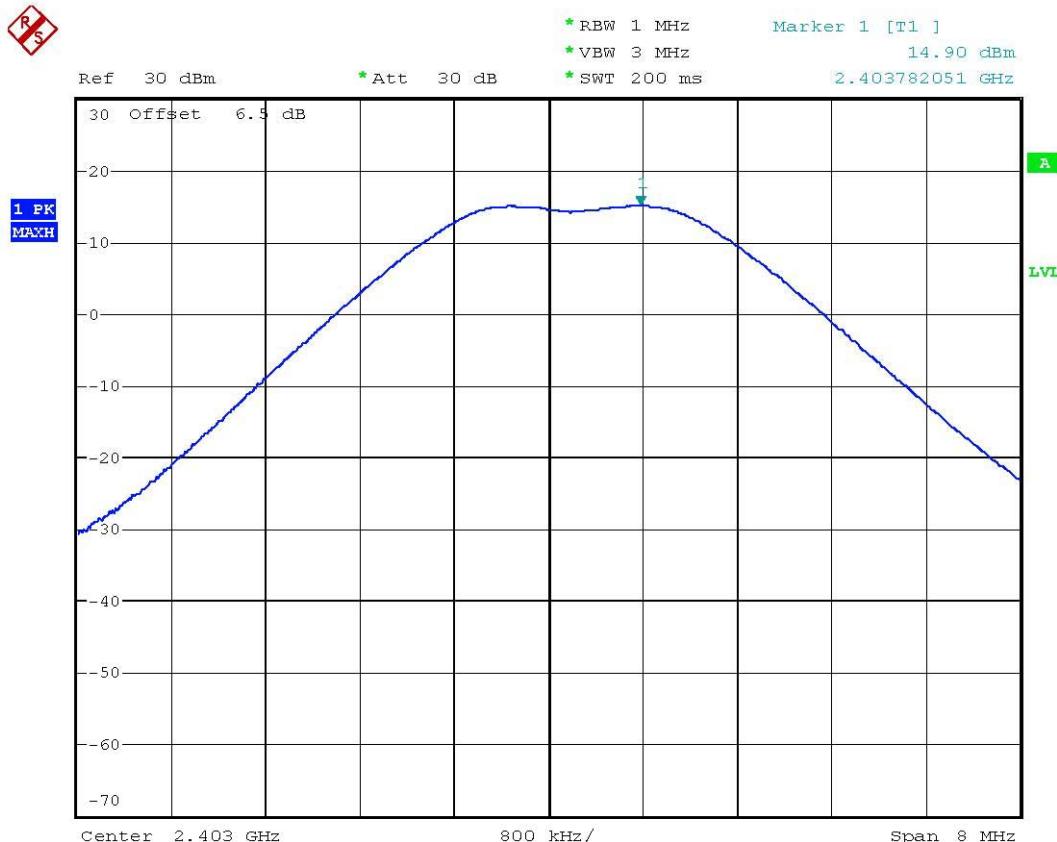
## Appendix

- A Peak Output Power
- B Spurious Emissions radiated
- C Carrier Frequency Separation
- D Number of Hopping Frequencies
- E Time of Occupancy (Dwell Time)
- F 20dB Bandwidth
- G Band-edge Compliance of RF Conducted Emissions
- H Radiated Emissions from Receiver Section of Transceiver
- I Power Line Conducted Emission

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## Peak Output Power

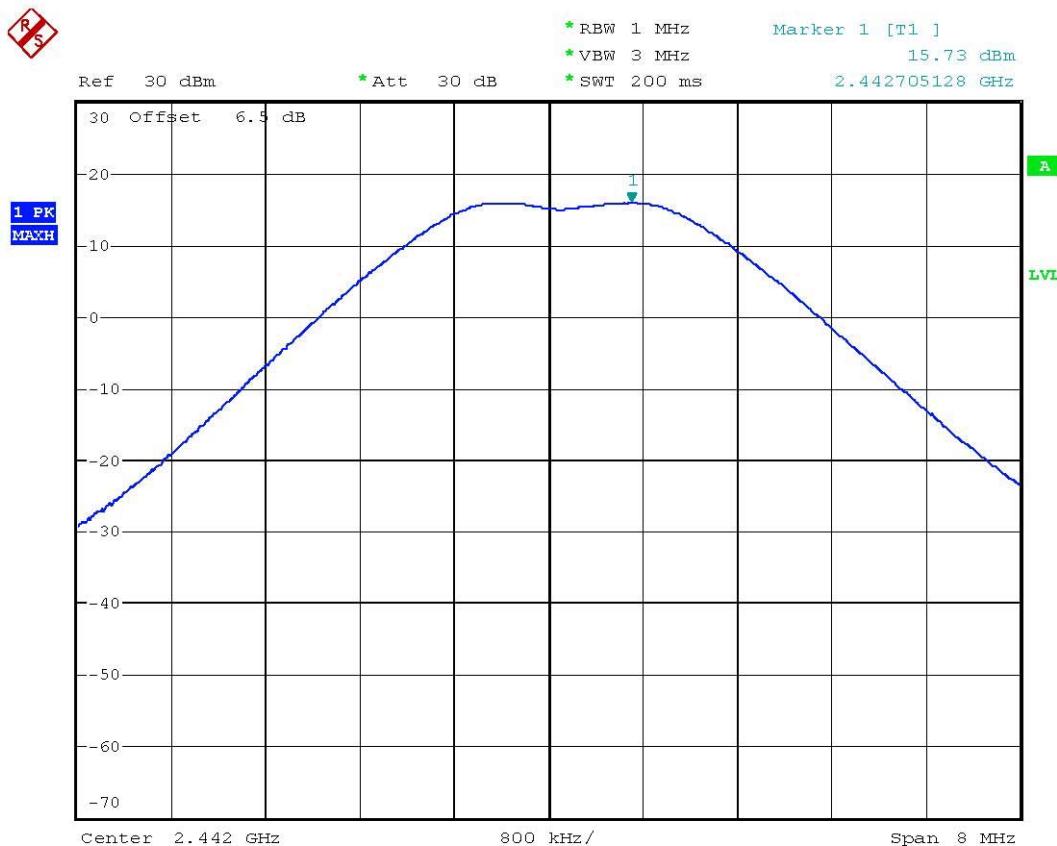


MAX OUTPUT POWER LOW CH

Date: 30.JUL.2008 09:29:20

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

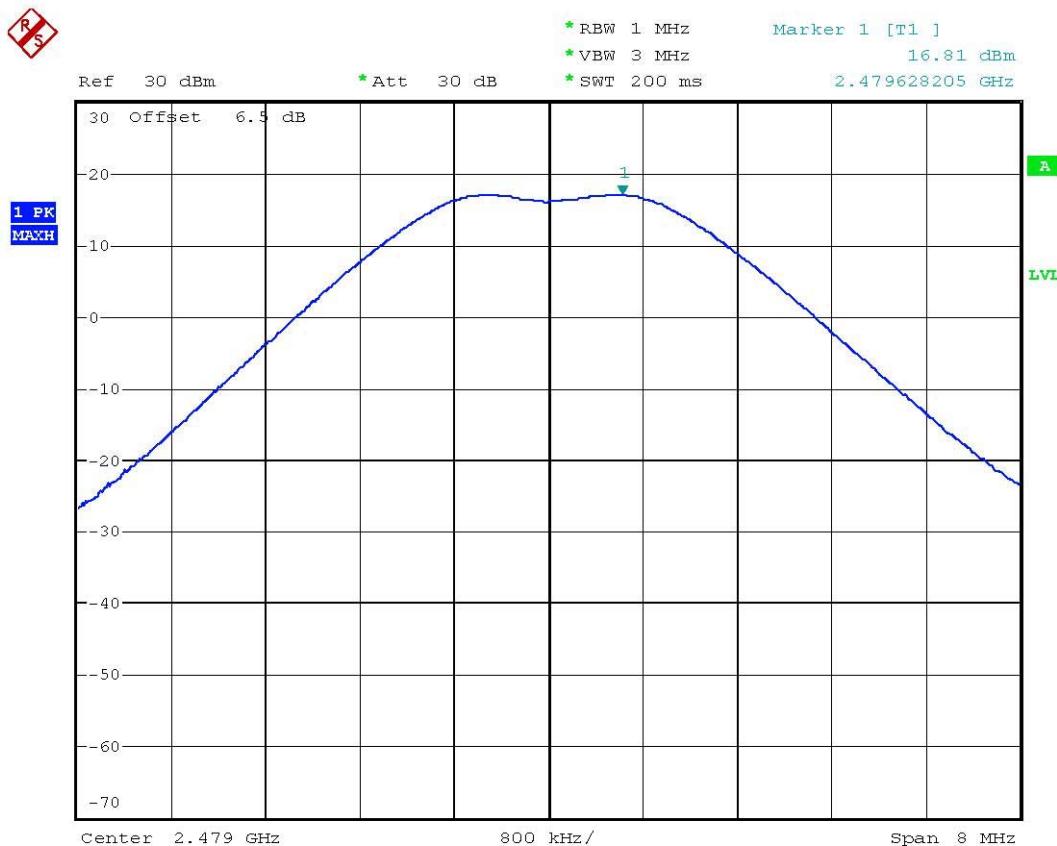


MAX OUTPUT POWER MIDDLE CH

Date: 30.JUL.2008 09:36:00

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX



MAX OUTPUT POWER HIGH CH  
Date: 30.JUL.2008 13:03:03



# Worldwide Testing Services(Taiwan) Co., Ltd.

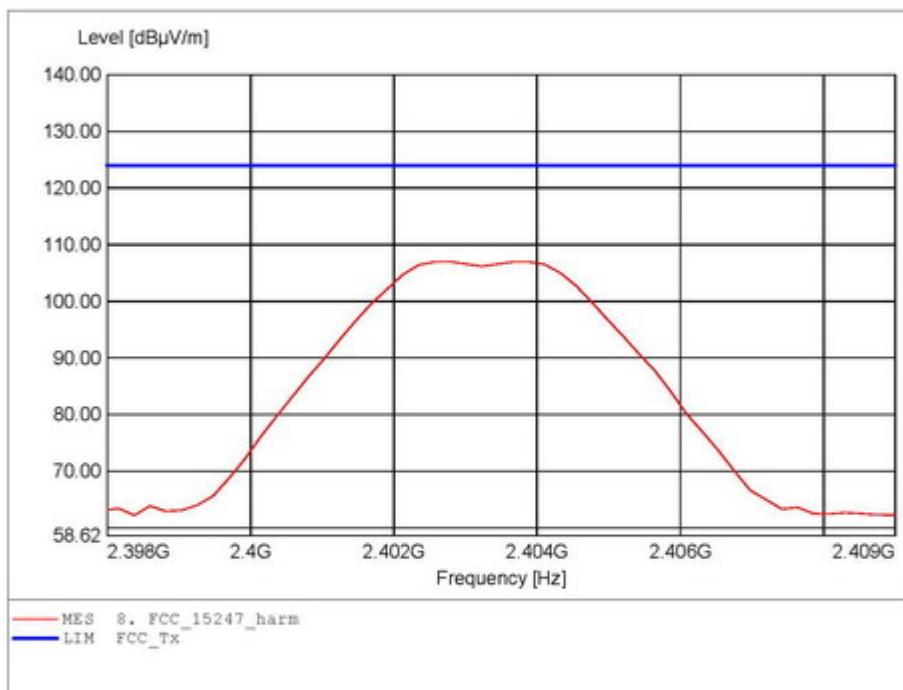
Registration number: W6D20807-9226-P-15-T

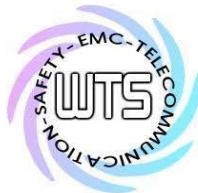
FCC ID: R48CTRL24GAWTX

*Carrier power (Field Strength)*

**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.403GHz, Emax: 107.01dB $\mu$ V/m, RBW: 1MHz





# Worldwide Testing Services(Taiwan) Co., Ltd.

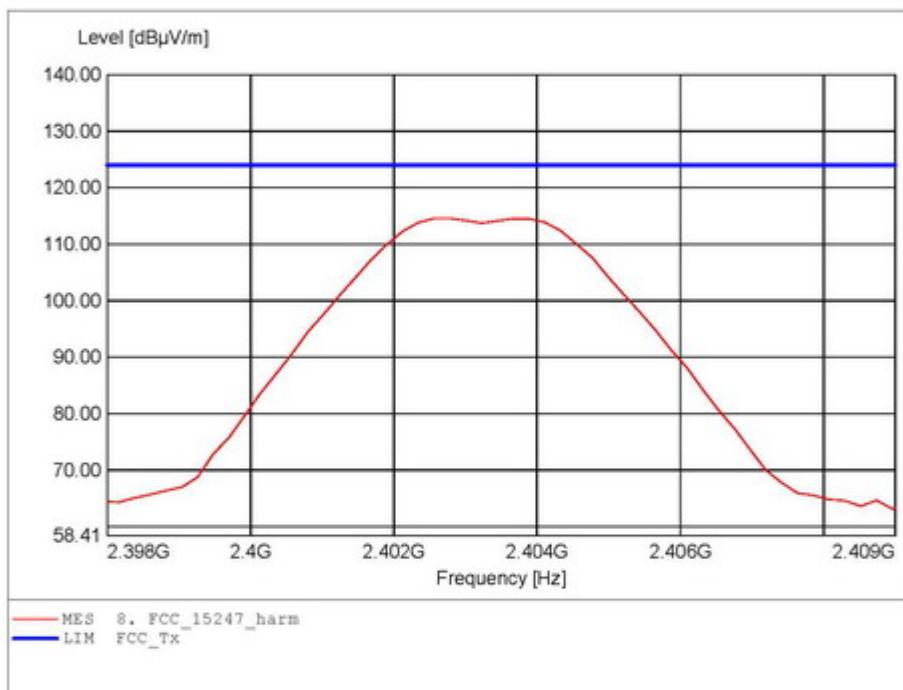
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Carrier power (Field Strength)*

**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.403GHz, Emax: 114.60dB $\mu$ V/m, RBW: 1MHz





# Worldwide Testing Services(Taiwan) Co., Ltd.

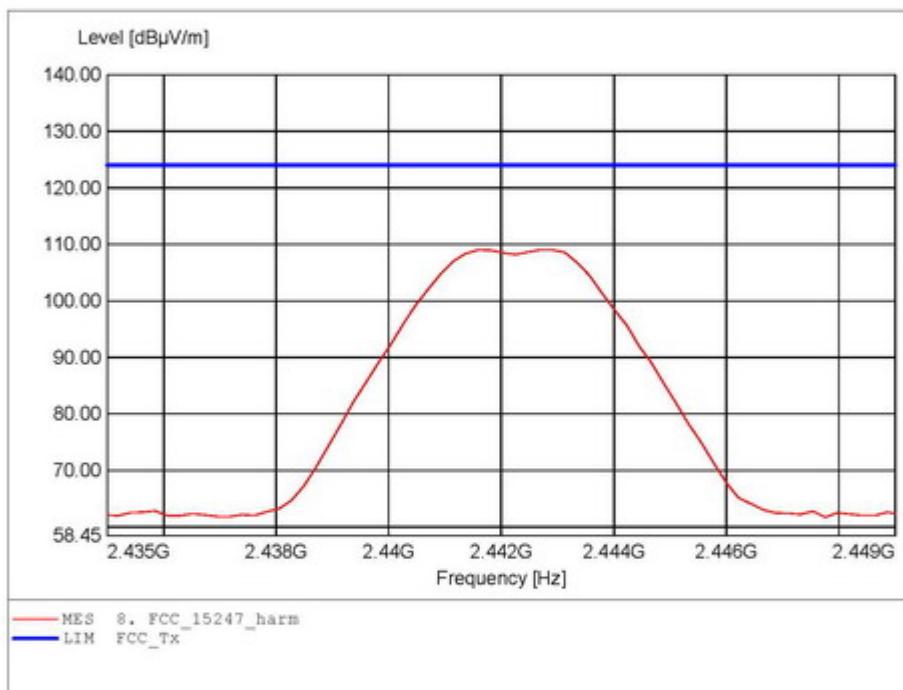
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Carrier power (Field Strength)*

**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.443GHz, Emax: 109.01dB $\mu$ V/m, RBW: 1MHz





# Worldwide Testing Services(Taiwan) Co., Ltd.

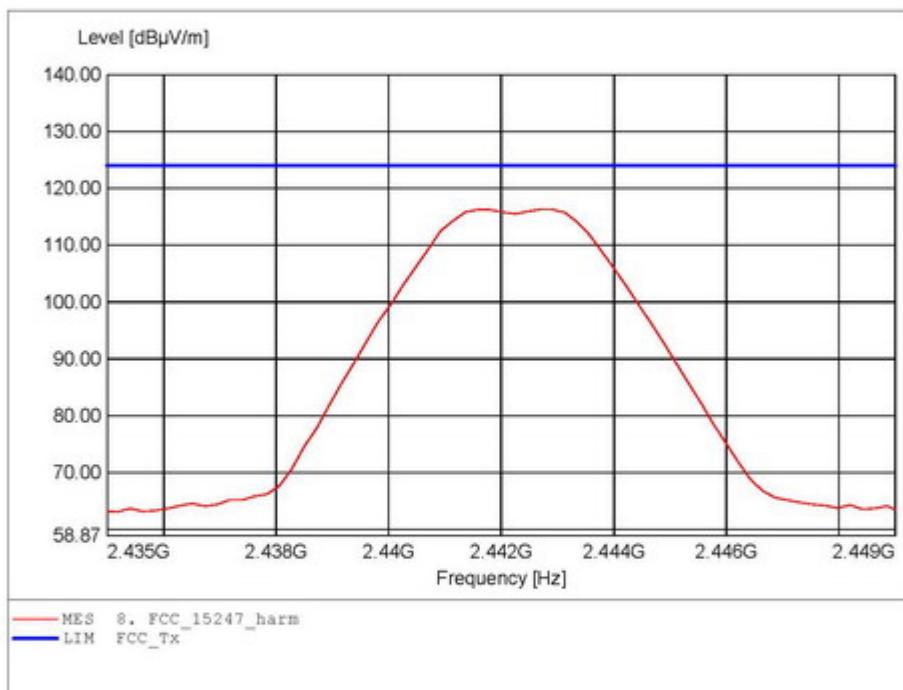
Registration number: W6D20807-9226-P-15-T

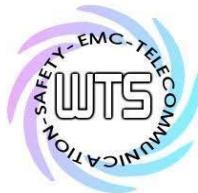
FCC ID: R48CTRL24GAWTX

*Carrier power (Field Strength)*

**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.443GHz, Emax: 116.28dB $\mu$ V/m, RBW: 1MHz





# Worldwide Testing Services(Taiwan) Co., Ltd.

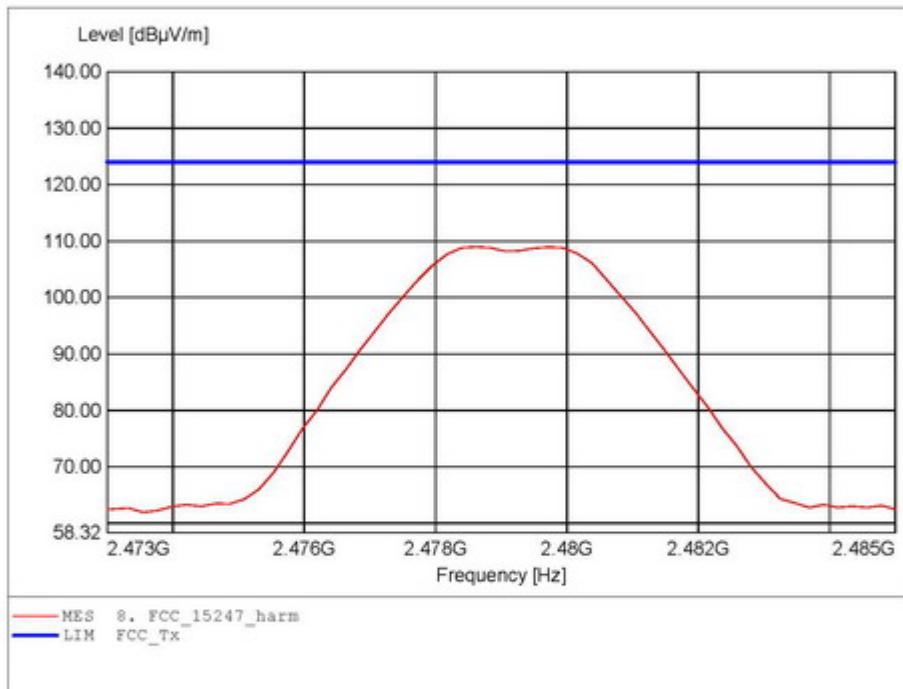
Registration number: W6D20807-9226-P-15-T

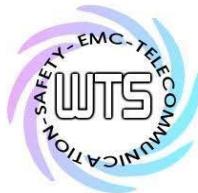
FCC ID: R48CTRL24GAWTX

*Carrier power (Field Strength)*

**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 high channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.479GHz, Emax: 108.97dB $\mu$ V/m, RBW: 1MHz





# Worldwide Testing Services(Taiwan) Co., Ltd.

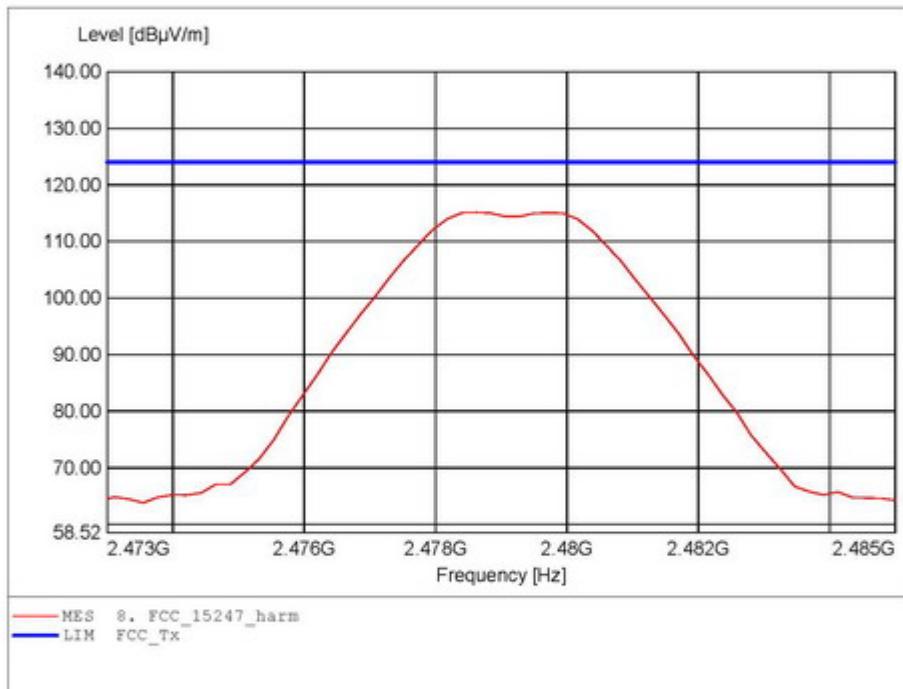
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Carrier power (Field Strength)*

*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 high channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Freq: 2.479GHz, Emax: 115.15dB $\mu$ V/m, RBW: 1MHz





# Worldwide Testing Services(Taiwan) Co., Ltd.

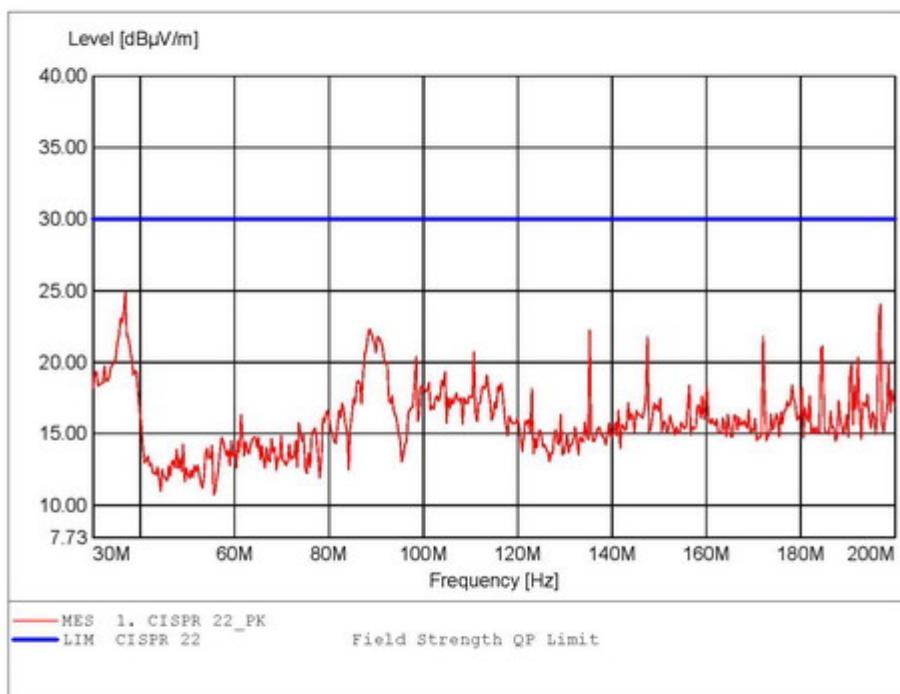
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

## Spurious Emissions radiated

*Spurious emissions under normal conditions  
in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116 , Peak detector  
Freq:36.814MHz Emax:24.85dB $\mu$ V/m RBW: 100 kHz



Page 1/1 2008/7/30 04:55PM Overview / Antenna horizontal

### Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

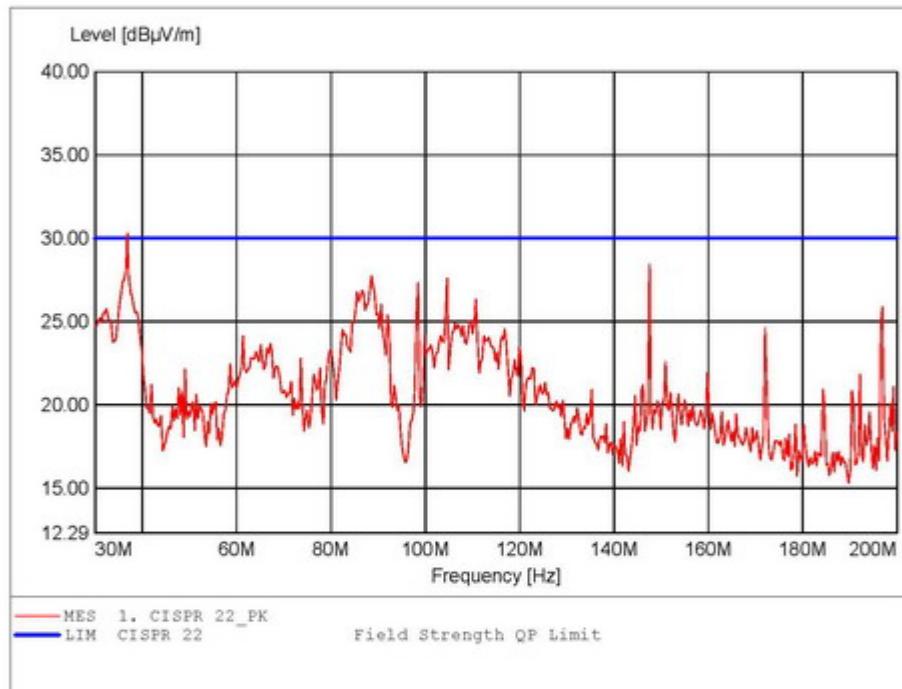
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

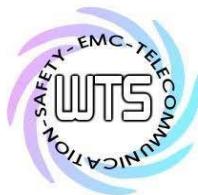
Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116 , Peak detector  
Fréq:36.814MHz Emax:30.29dB $\mu$ V/m RBW: 100 kHz



Page 1/1 2008/7/30 04:49PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

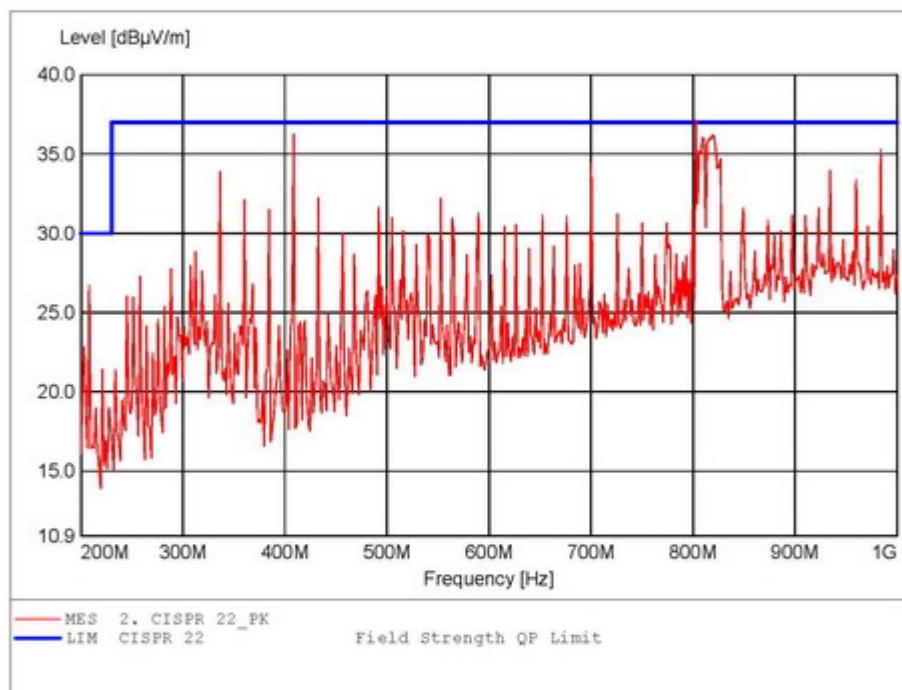
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223 , Peak detector  
Freq:802.806MHz Emax:37.12dB $\mu$ V/m RBW: 100 kHz



Page 1/1 2008/7/30 05:00PM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

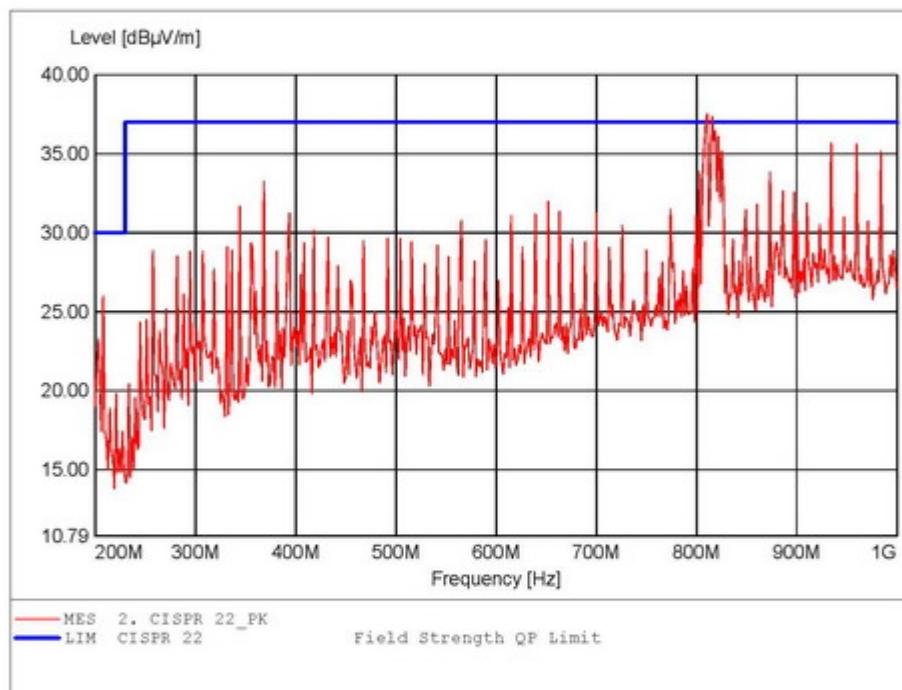
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

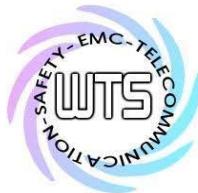
Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223 , Peak detector  
Freq:810.822MHz Emax:37.51dB<sub>u</sub>V/m RBW: 100 kHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



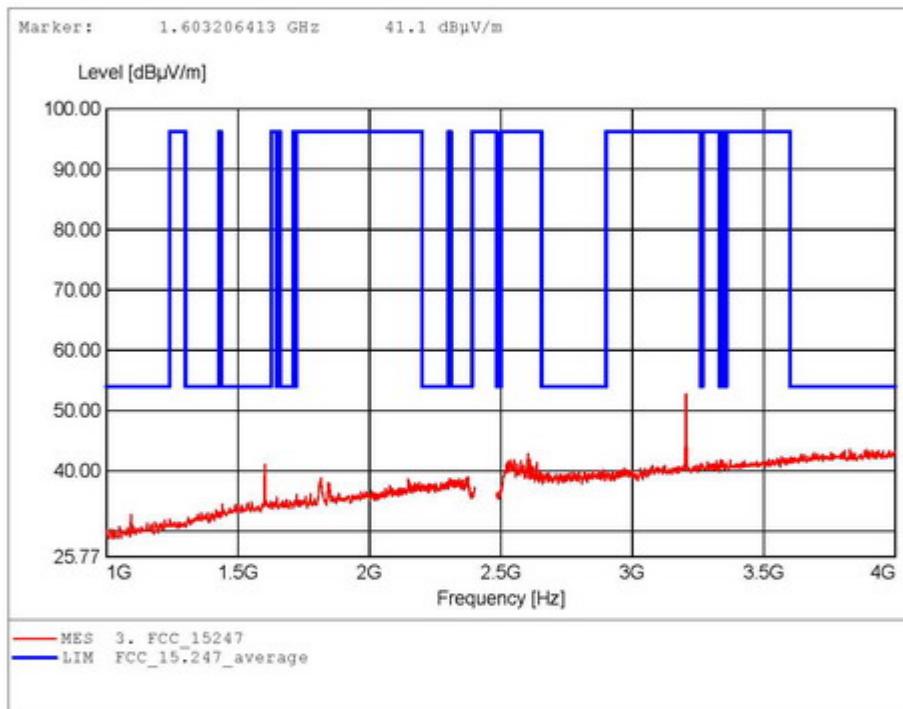
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 3.204GHz, Emax: 52.77dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 10:15AM Overview / Antenna horizontal

**Note:**

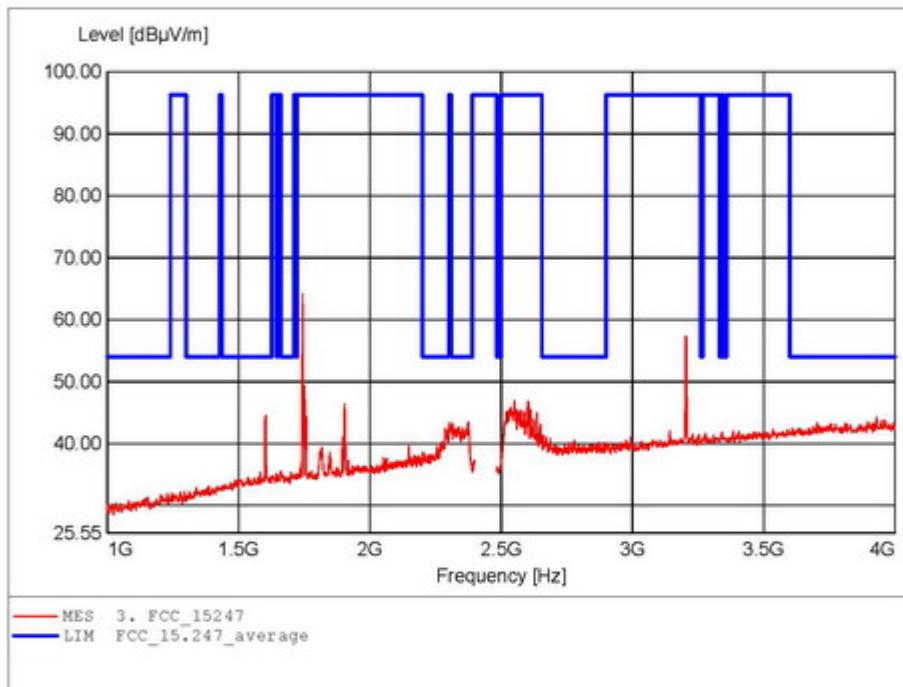
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
 Freq: 1.743GHz, Emax: 64.21dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 10:25AM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



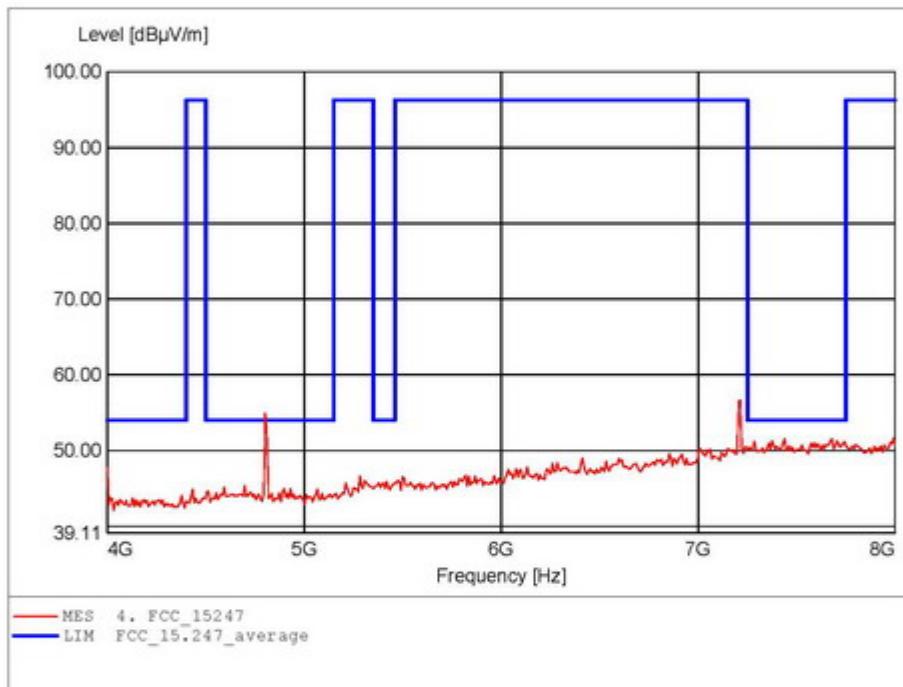
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 7.214GHz, Emax: 56.65dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 5:04PM Overview / Antenna horizontal

**Note:**

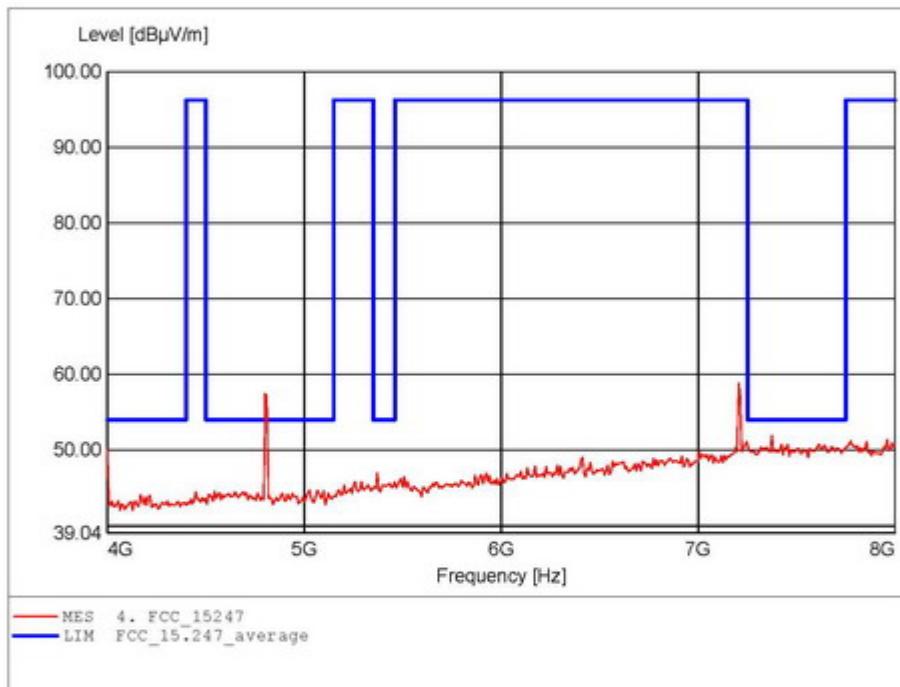
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
 Freq: 7.214GHz, Emax: 57.26dB $\mu$ V/m, RBW: 1MHz



**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



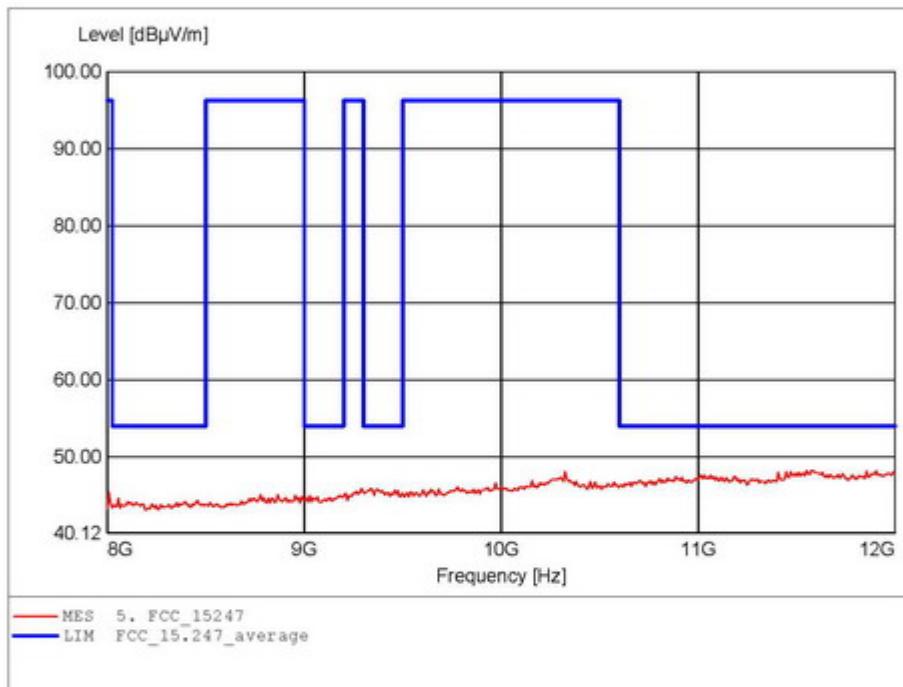
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.551GHz, Emax: 48.25dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 10:47AM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



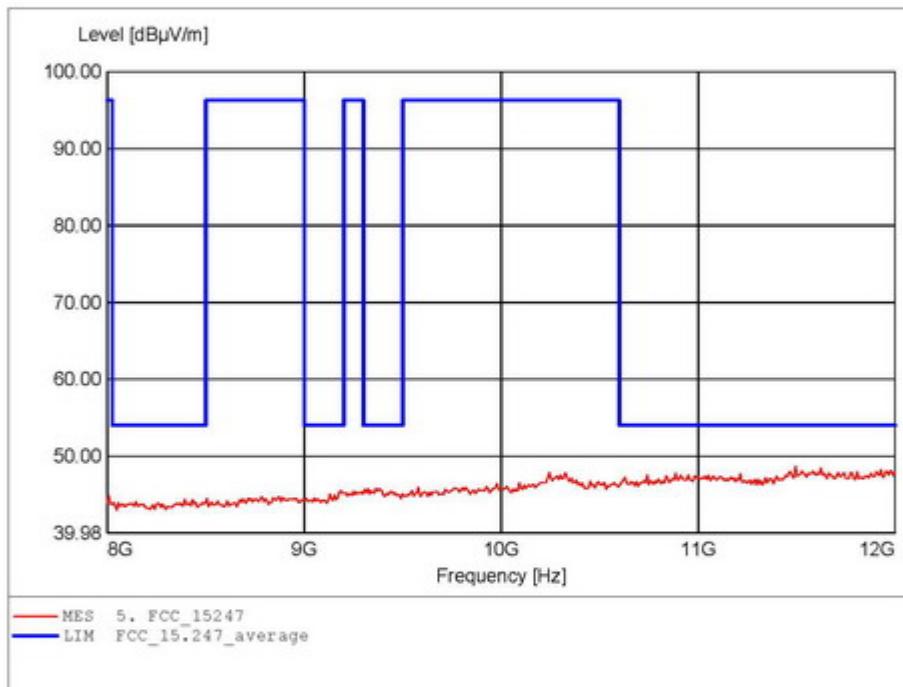
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 11.495GHz, Emax: 48.67dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 10:41AM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



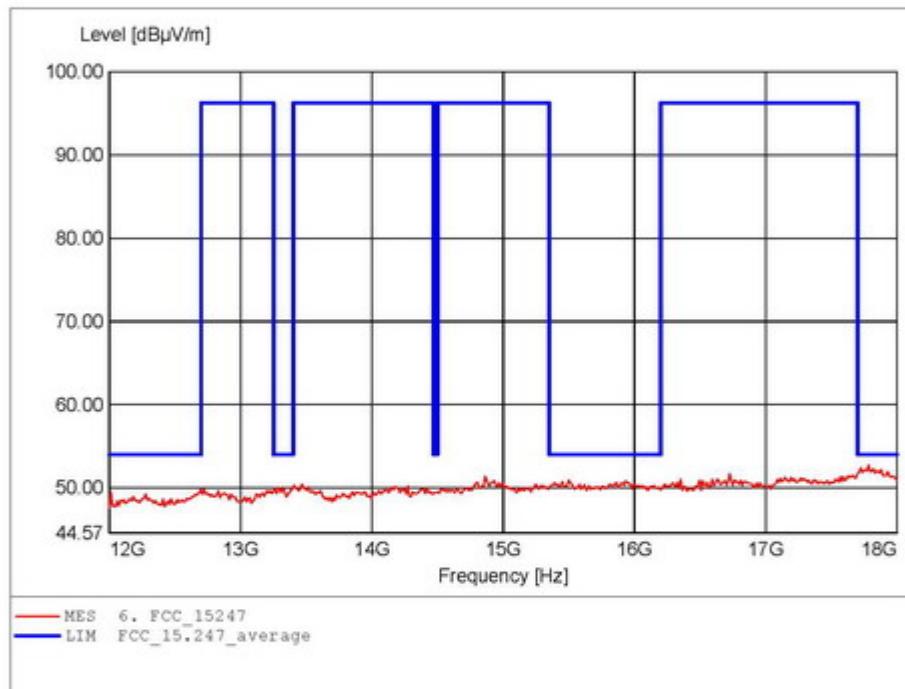
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.784GHz, Emax: 52.78dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 10:44AM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



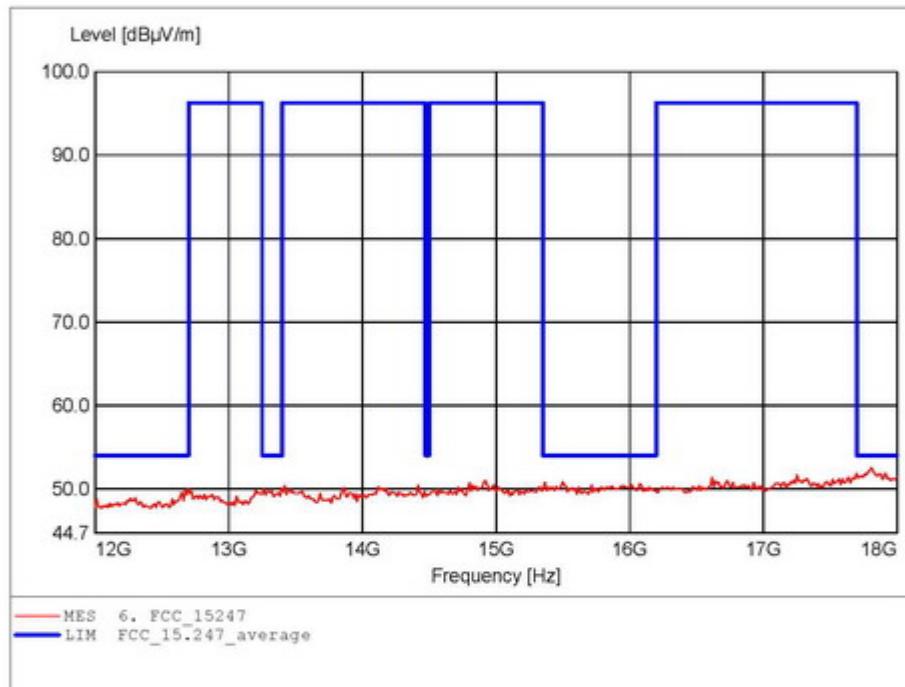
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.808GHz, Emax: 52.53dB $\mu$ V/m, RBW: 1MHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



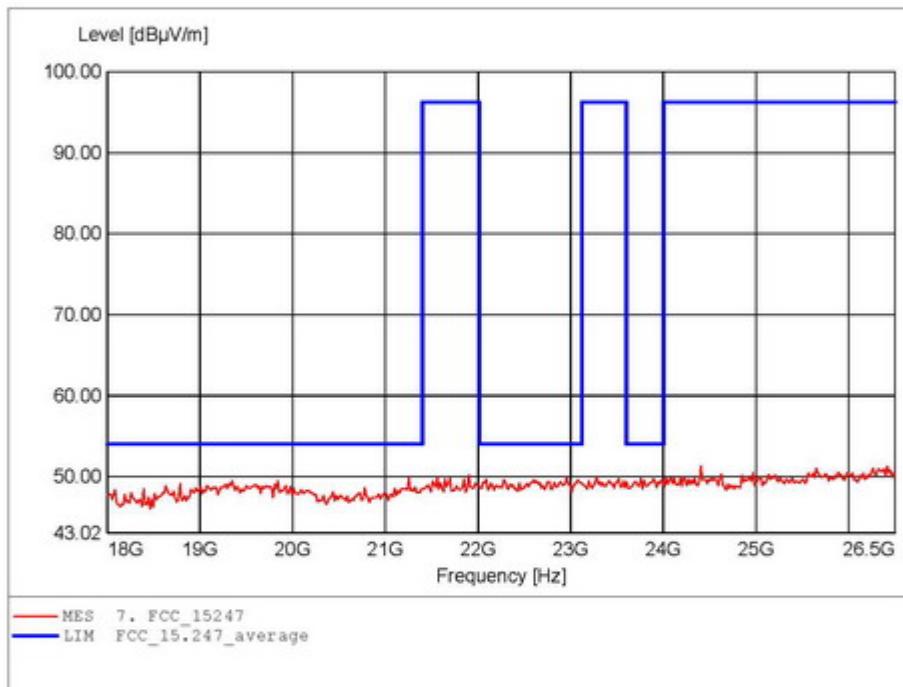
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 24.405GHz, Emax: 51.29dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 4:56PM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



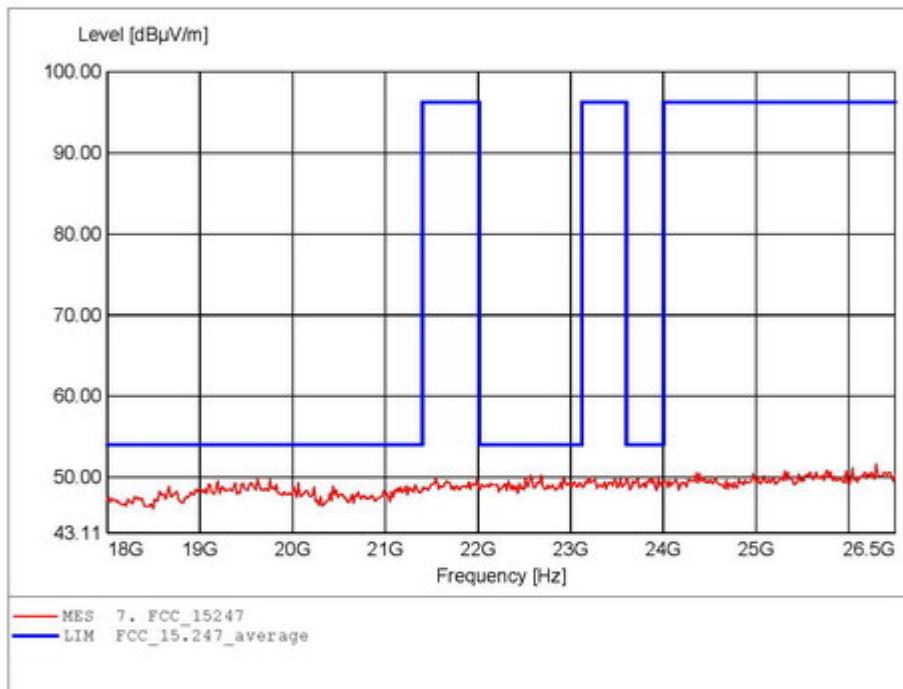
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 low channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 26.296GHz, Emax: 51.63dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 4:56PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

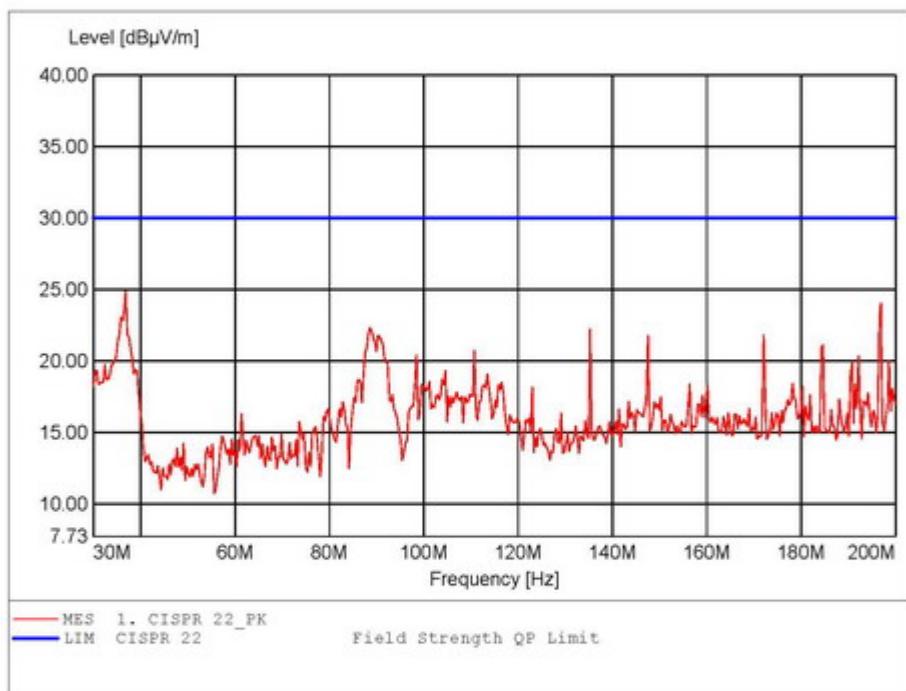
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116 , Peak detector  
Freq:36.814MHz Emax:24.85dB $\mu$ V/m RBW: 100 kHz



Page 1/1 2008/7/30 04:55PM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

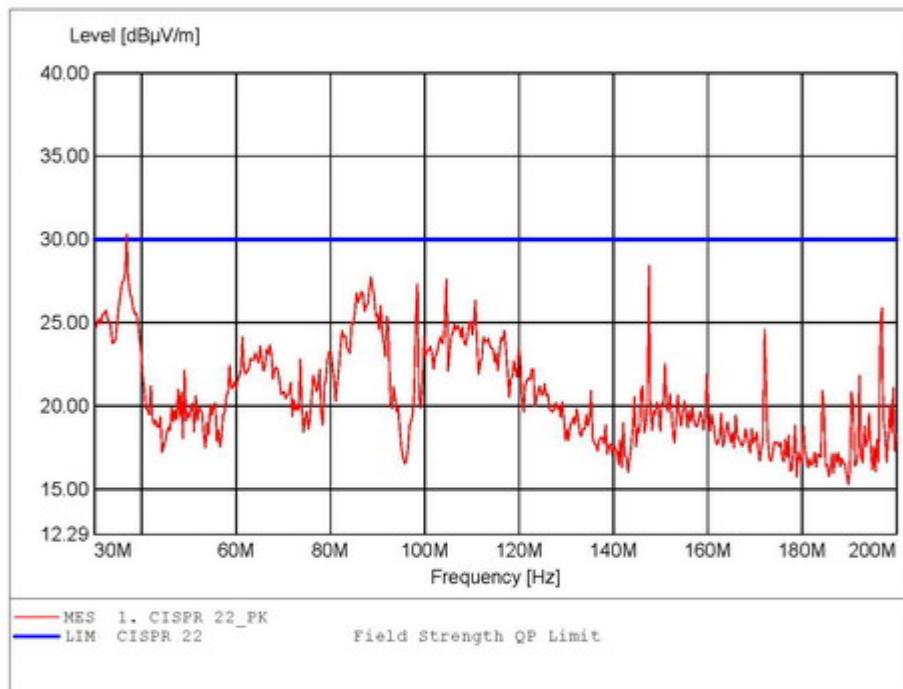
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

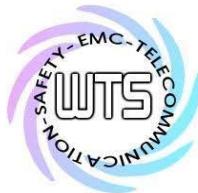
Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116 , Peak detector  
Freq:36.814MHz Emax:30.29dB $\mu$ V/m REW: 100 kHz



Page 1/1 2008/7/30 04:49PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

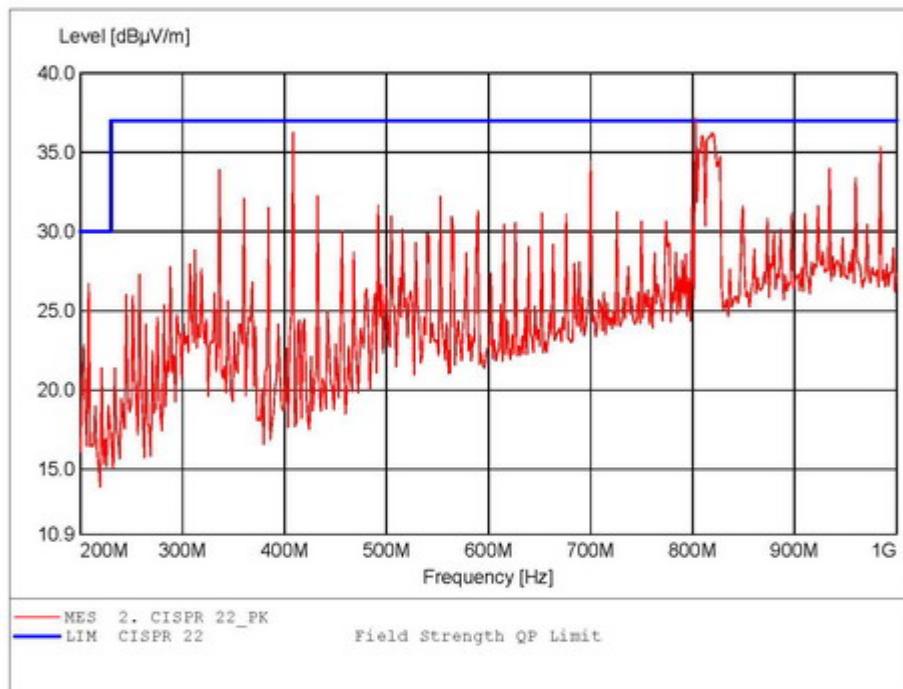
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

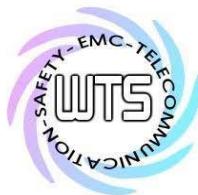
Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223, Peak detector  
Freq:802.806MHz Emax:37.12dB $\mu$ V/m RBW: 100 kHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

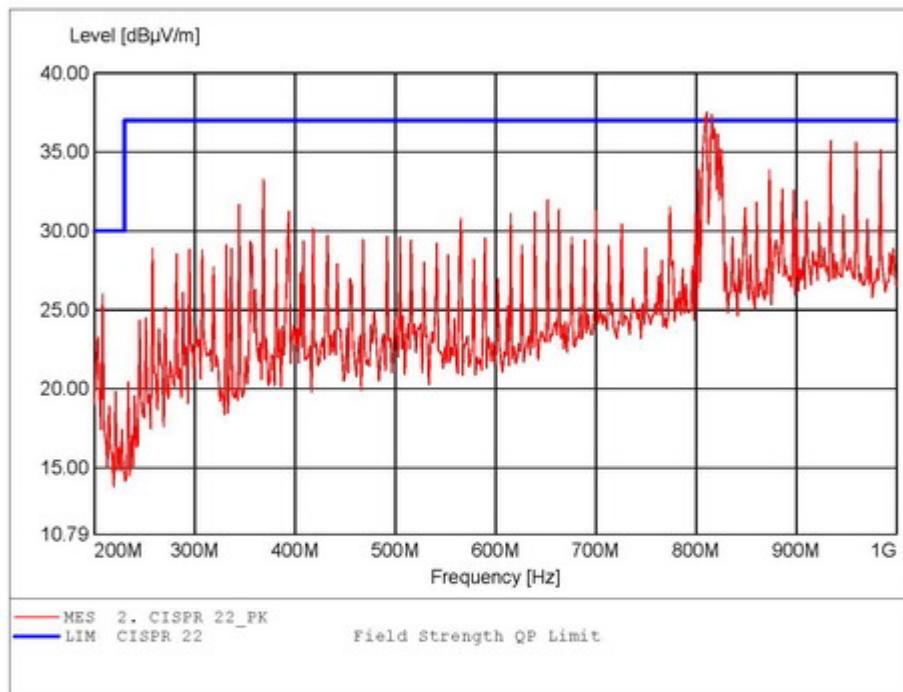
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223, Peak detector  
Freq:810.822MHz Emax:37.51dB $\mu$ V/m RBW: 100 kHz



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**Note:**

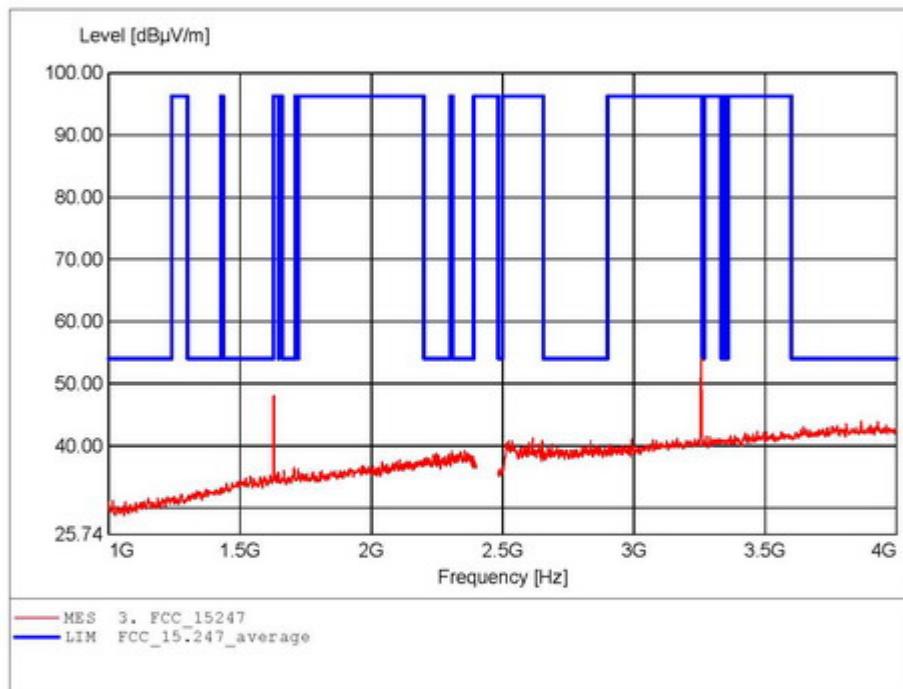
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
 Freq: 3.255GHz, Emax: 54.15dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 4:23PM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



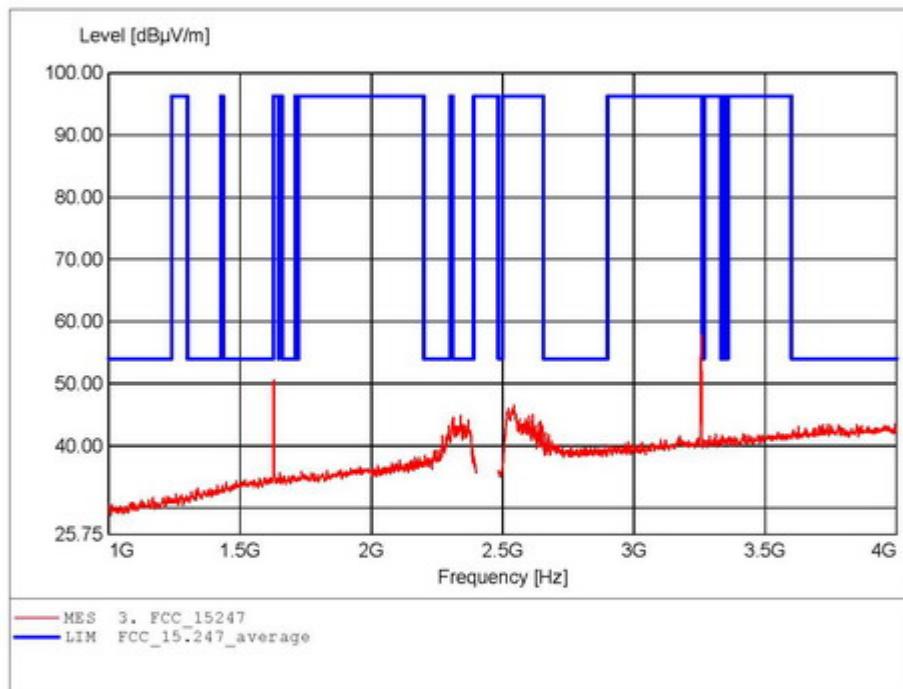
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 3.255GHz, Emax: 57.88dB $\mu$ V/m, RBW: 1MHz



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**Note:**

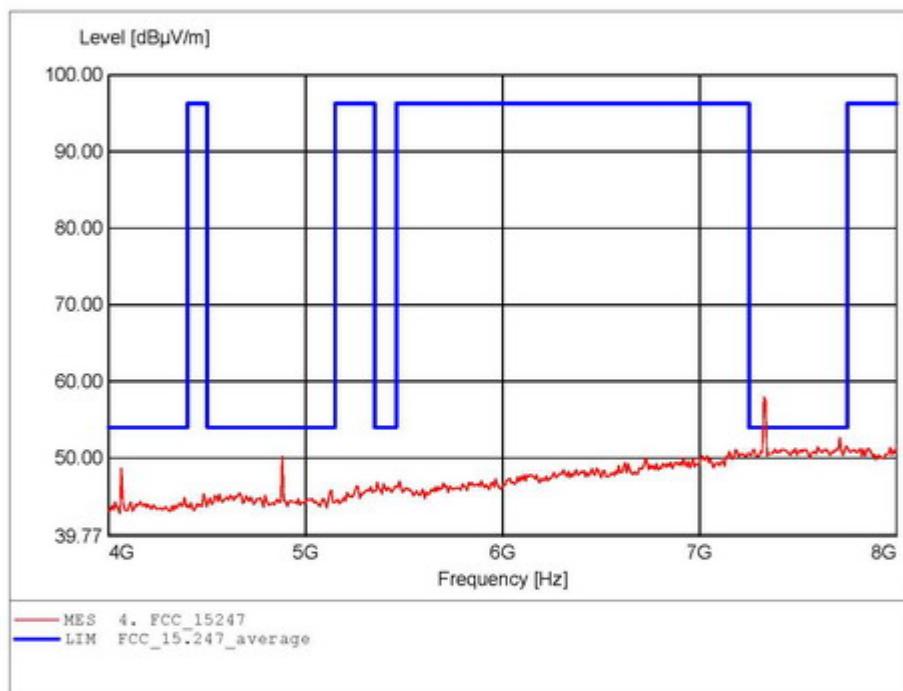
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
 Freq: 7.327GHz, Emax: 57.95dB $\mu$ V/m, RBW: 1MHz



**Note:**

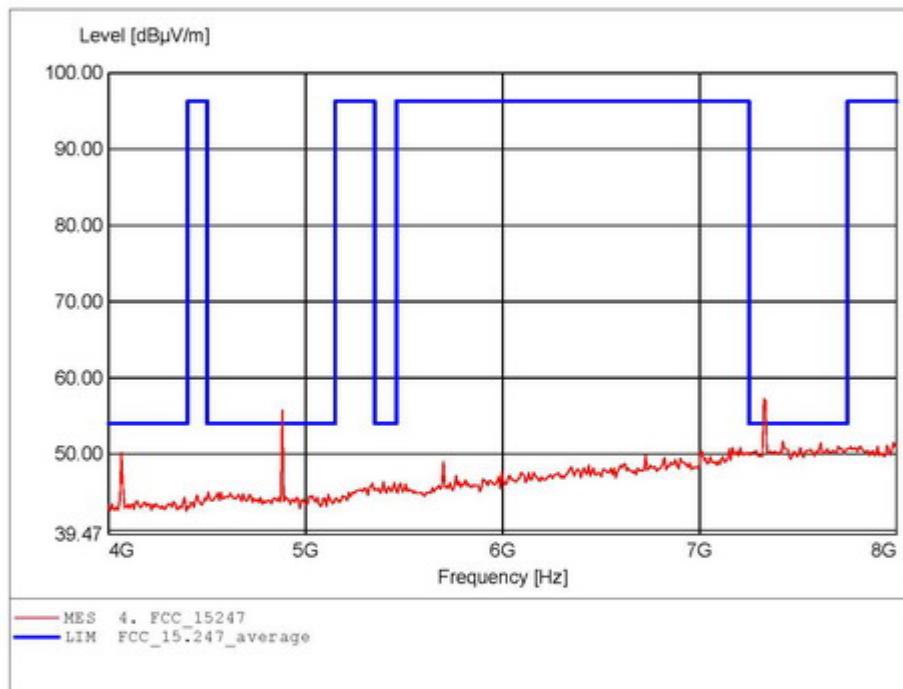
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
 Freq: 7.327GHz, Emax: 57.21dB $\mu$ V/m, RBW: 1MHz



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**Note:**

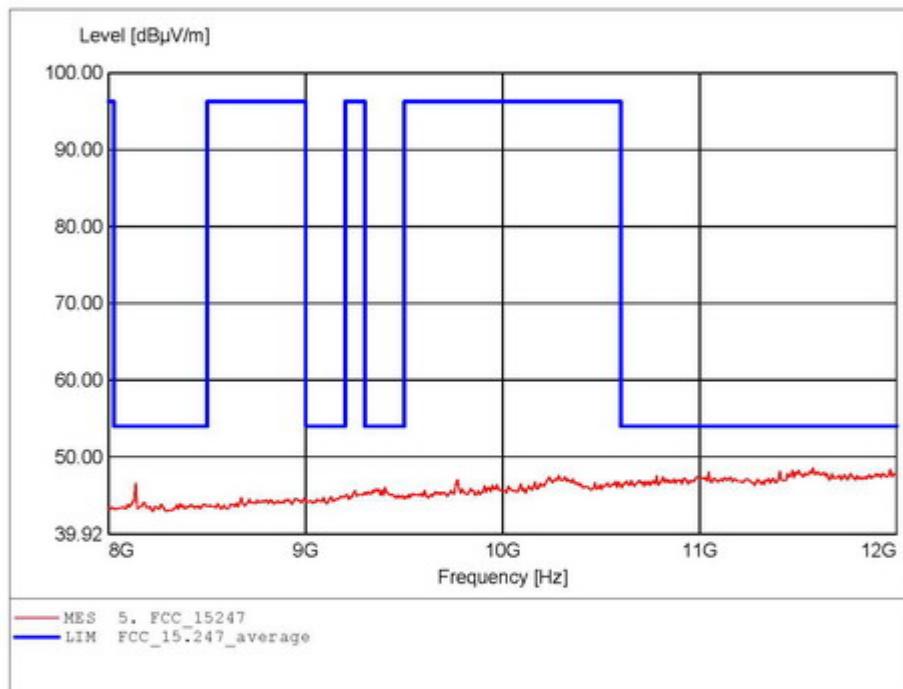
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
 Freq: 11.575GHz, Emax: 48.51dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 3:54PM Overview / Antenna horizontal

**Note:**

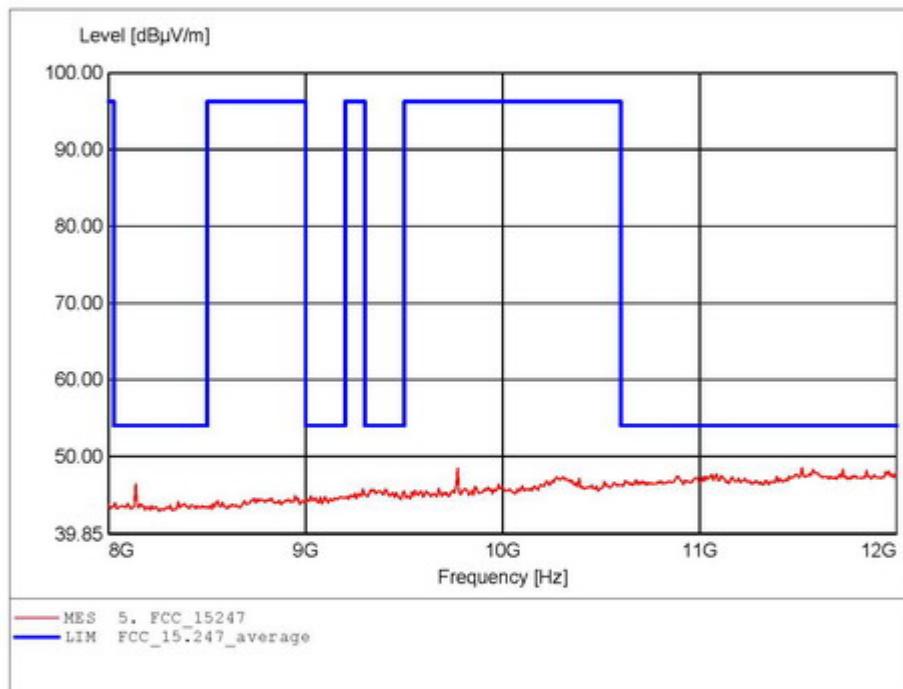
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
 Test Site / Operator: WTS / Danny  
 Temperature: Temp.: 23.9°C  
 Test Specification: according to §15.247, peak detector  
 Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
 Freq: 11.519GHz, Emax: 48.52dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 3:51PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



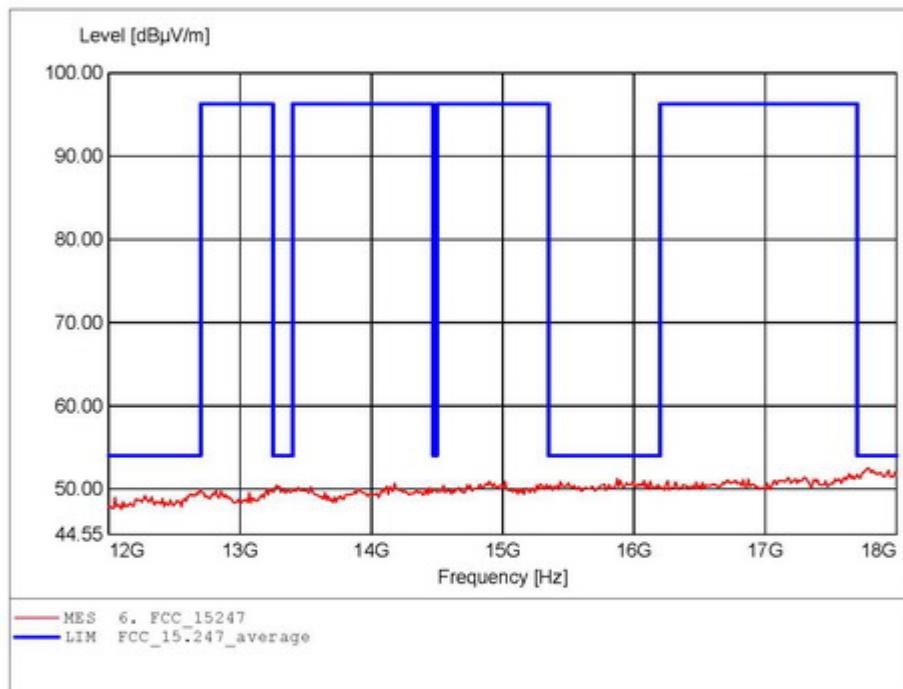
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

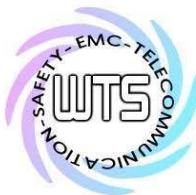
Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.784GHz, Emax: 52.54dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 3:56PM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



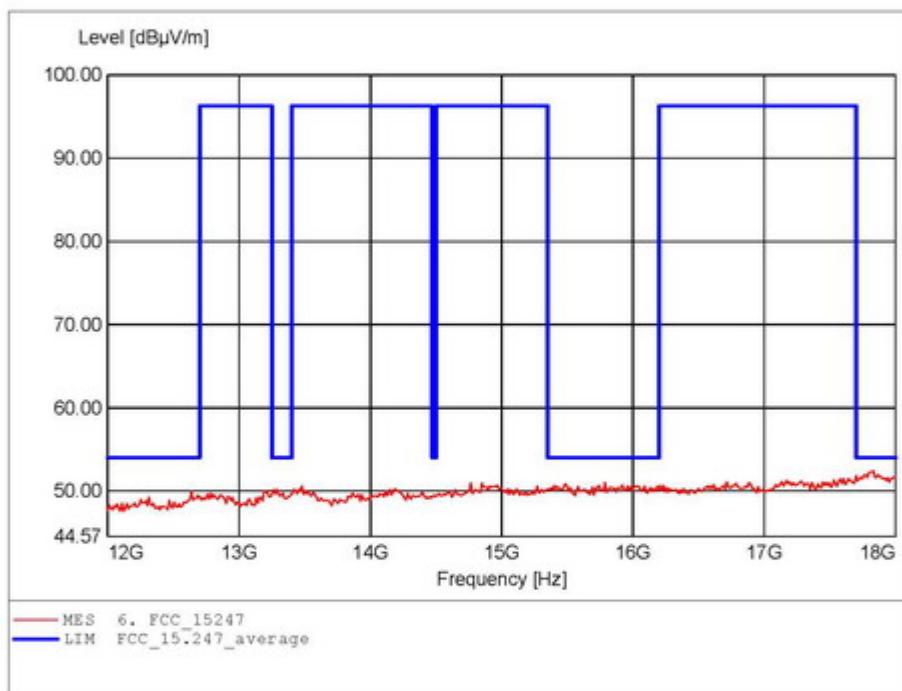
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C / LP0002**

Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.  
Freq: 17.832GHz, Emax: 52.42dB $\mu$ V/m, RBW: 1MHz



Page 1/1 7/30/2008 3:52PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



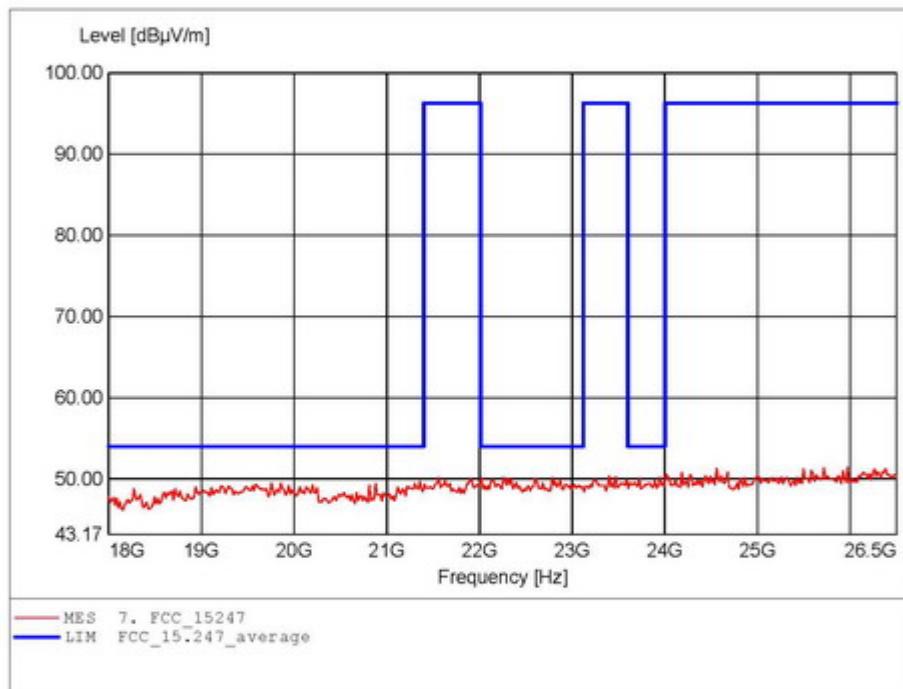
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 25.972GHz, Emax: 51.41dB $\mu$ V/m, RBW: 1MHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



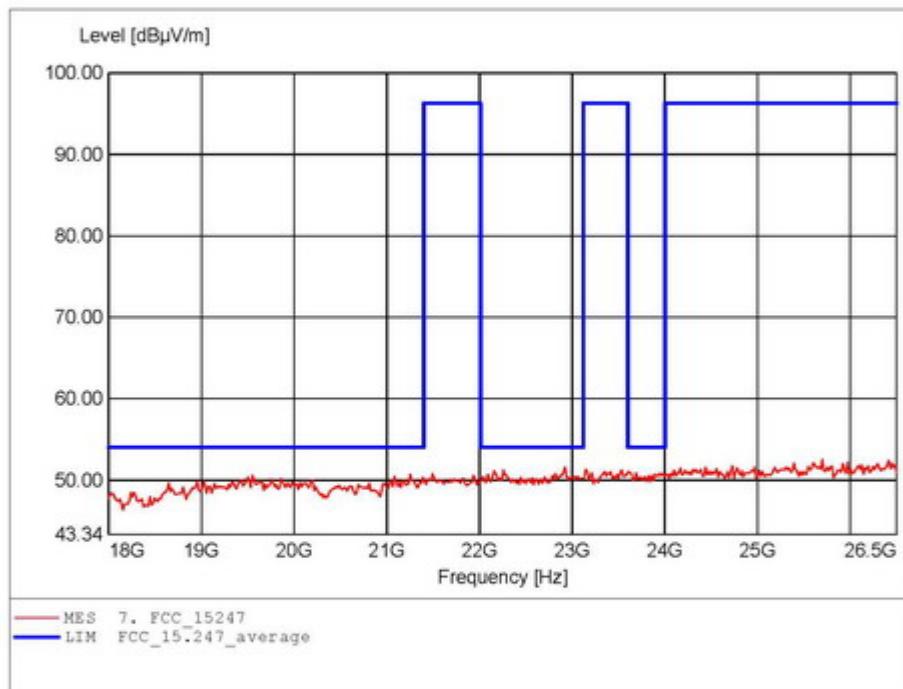
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
*FCC RULES PART 15, SUBPART C / LP0002*

Order Number : W6D20807-9226 middle channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 25.699GHz, Emax: 52.54dB $\mu$ V/m, RBW: 1MHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

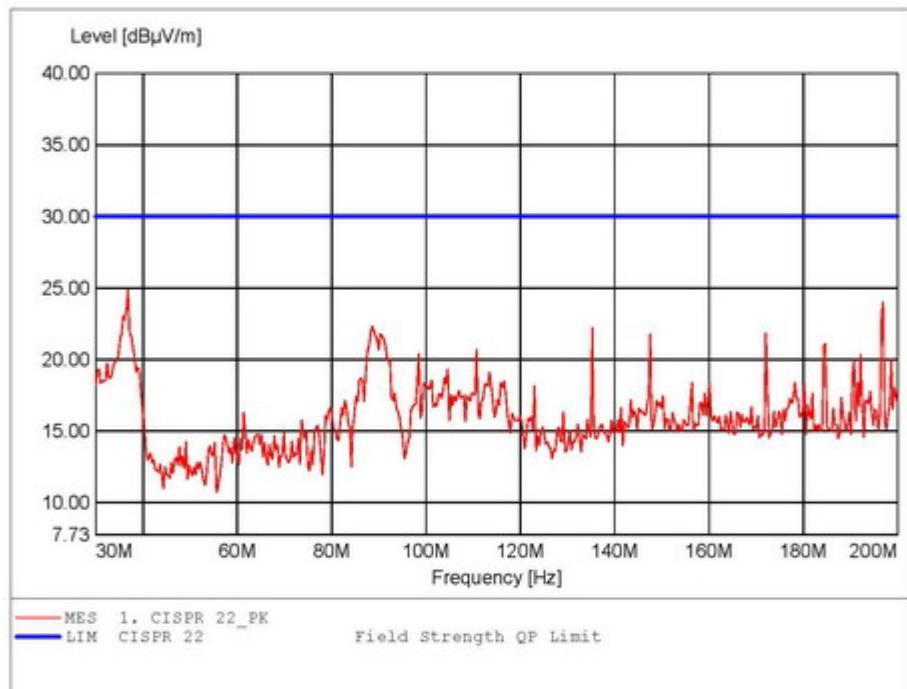
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116 , Peak detector  
Freq:36.814MHz Emax:24.85dB $\mu$ V/m RBW: 100 kHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

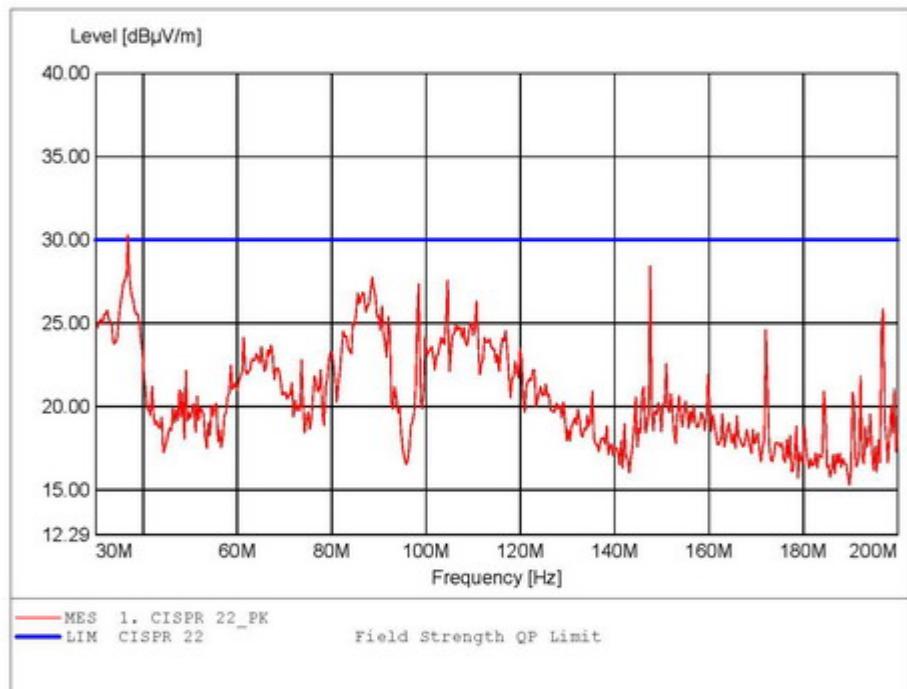
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116 , Peak detector  
Freq:36.814MHz Emax:30.29dB $\mu$ V/m RBW: 100 kHz



Page 1/1 2008/7/30 04:49PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

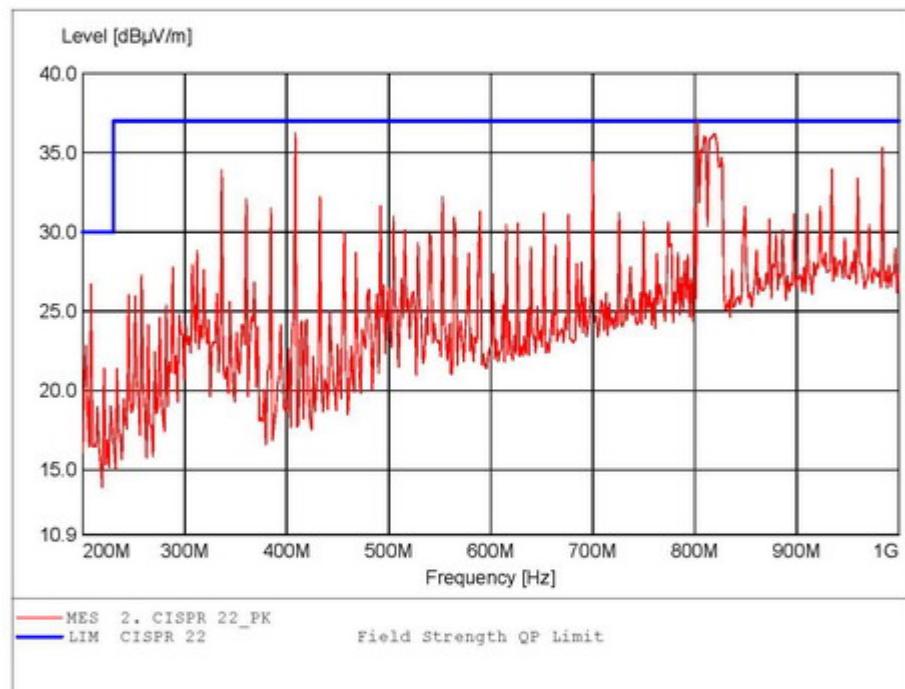
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223 , Peak detector  
Freq:802.806MHz Emax:37.12dB $\mu$ V/m RBW: 100 kHz



Page 1/1 2008/7/30 05:00PM Overview / Antenna horizontal

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

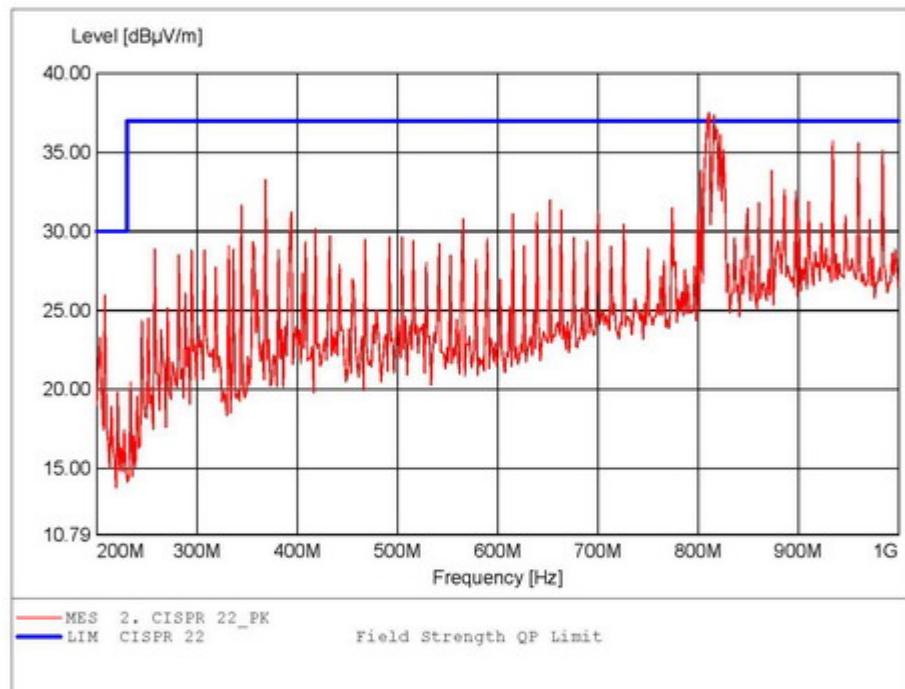
Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions under normal conditions*

*in accordance to the CISPR 22*

Order Number: W6D20807-9226  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223 , Peak detector  
Freq:810.822MHz Emax:37.51dB<sub>u</sub>V/m RBW: 100 kHz



Page 1/1 2008/7/30 04:58PM Overview / Antenna vertical

**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



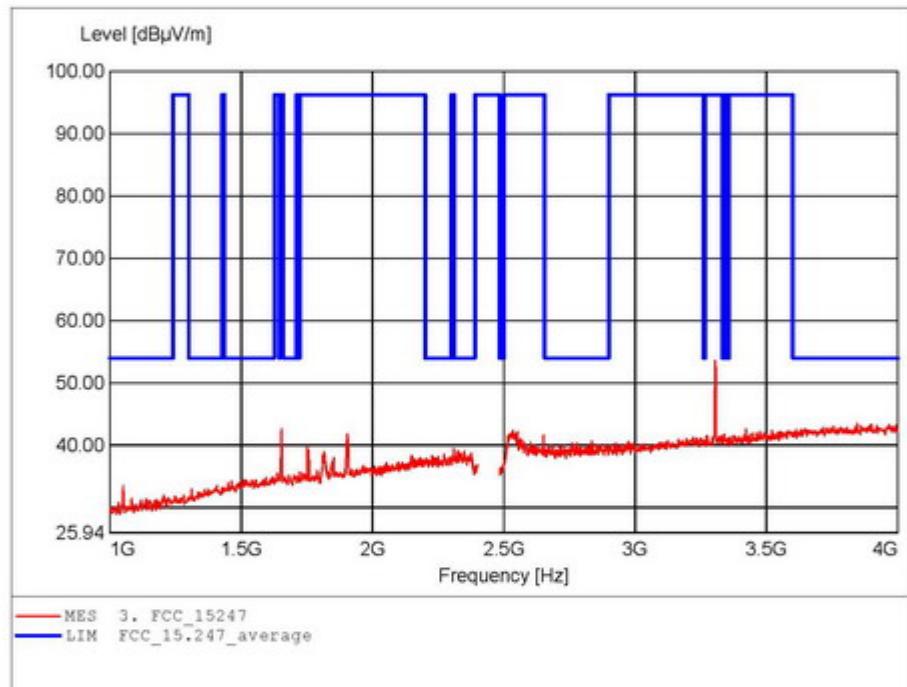
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D20807-9226-P-15-T

FCC ID: R48CTRL24GAWTX

*Spurious emissions Field Strength*  
FCC RULES PART 15, SUBPART C / LP0002

Order Number : W6D20807-9226 high channel Tx  
Test Site / Operator: WTS / Danny  
Temperature: Temp.: 23.9°C  
Test Specification: according to §15.247, peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Freq: 3.305GHz, Emax: 53.57dB $\mu$ V/m, RBW: 1MHz



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**Note:**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.