Prüfbericht - Nr.: *Test Report No.:*	**16030075 002**		**Seite 1 von 33** *Page 1 of 33*
Auftraggeber: *Client:*	Desay A&V Science and Technology Co., Ltd. Desay 3rd Industry Zone, Chenjiang Town, Huizhou City, Guandong, P.R. China		
Gegenstand der Prüfung: *Test item:*	Blu-ray Disc Player		
Bezeichnung: *Identification:*	DX-WBRDVD1	**Serien-Nr.:** *Serial No.:*	n.a.
Wareneingangs-Nr.: *Receipt No.:*	163074378	**Eingangsdatum:** *Date of receipt:*	2011-03-15
Prüfort: *Testing location:*	Neutron Engineering Inc. FCC Registration No.: 319330 Industry Canada Test Site No.: 4428B-1 TÜV Rheinland (Guangdong) Ltd. EMC Laboratory FCC Registration No.: 833845 Industry Canada Test Site No.: 2932C		
Prüfgrundlage: *Test specification:*	FCC CFR47 Part 15: Subpart C Section 15.247 FCC CFR47 Part 15: Subpart C Section 15.207 FCC CFR47 Part 15: Subpart C Section 15.209		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.		

geprüft/ *tested by:*			**kontrolliert/** *reviewed by:*		
2011-05-09	Sam Lin/ Project Manager		2011-05-11	Shawn Peng/Manager	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other Aspects:*

Abkürzungen:				*Abbreviations:*			
	P(ass)	=	*entspricht Prüfgrundlage*		*P(ass)*	=	*passed*
	F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*
	N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*
	N/T	=	*nicht getestet*		*N/T*	=	*not tested*

Test Summary

FCC rules	Test items	Result
Part 15 Per Section 15.207(a)	AC Power Conducted Emission	Pass
Part 15 Per Section 15.209(a)	Transmitter Radiated Spurious Emission	Pass
Part 15 Per Section 15.203	Antenna Requirement	Pass
Part 15 Per Section 15.247(b)(3)	Maximum Peak Conducted Output Power	Pass
Part 15 Per Section 15.247(a)(2)	6dB Bandwidth	Pass
Part 15 Per Section 15.247(e)	Power Spectral Density	Pass
Part 15 Per Section 15.247(d)	Conducted Spurious Emissions at Antenna Ports	Pass

Contents

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test result

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

Guangzhou Auto Market, Yuan Gang Section of Guangshan Road
Guangzhou 510650

P. R. China

Neutron Engineering Inc.

No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

Kind of Equipment	Type	Manufacturer	S/N	Calibrated until	Calibrated Interval
EMI Test Receiver	ESU26	Rohde & Schwarz	100209	2012-03-16	1 year
Spectrum Analyzer	FSP30	Rohde & Schwarz	100286	2012-03-16	1 year
Loop Antenna	HFH2-Z2	Rohde & Schwarz	100111	2012-03-16	1 year
Trilog-Broadband Antenna	VULB9168	SCHWARZBECK MESS-ELEKTRONIK	209	2011-08-21	2 years
Double-Ridged Waveguide Horn Antenna	HF906	Rohde & Schwarz	100385	2011-08-24	2 years
Pre-amplifier	AFS42-00101800-25-S-42	MITEQ	1101599	2013-08-11	2 years
Band Reject Filter	BRM50702	Micro-Tronics	023	2012-03-16	2 years
Standard Gain Horn Antenna	3160-09	EMCO	21642	2014-06-26	5 years
Pre-amplifier	AFS33-18002650-30-8P-44	MITEQ	1108282	2013-03-16	2 years
3m Anechoic Chamber	N/A	Albatross Project GmbH	N/A	2013-07-17	3 year

Neutron Engineering Inc.

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Triple Loop Antenna	R&S	HFH2-Z2	830749/020	May.27.2011
2	Bi-log Antenna	Schwarbeck	VULB9160	9160-3232	May.26.2011
3	Horn Antenna	ETS	3115	00075789	May.12.2011
4	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170340	Dec.15.2011
5	Amplifier	HP	8447D	2944A09673	May.26.2011
6	Amplifier	Agilent	8449B	3008A02274	May.26.2011
7	Amplifier	EMC	EMC2654045	980039	Aug.12.2011
8	Test Receiver	R&S	ESCI	100895	May.26.2011
9	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2011

10	Test Cable	N/A	C-01_CB03	N/A	Jul.05.2011
11	Test Cable	HUBER+SUHNER	SUCOFLEX _8m	313794/4	Apr.11.2012
12	Controller	CT	SC100	N/A	N/A
13	Spectrum Analyzer	R&S	FSP_40	100129	Jan. 04, 2012
14	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 09, 2012
15	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 09, 2012

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

Uncertainty for conducted emissions measurements is ± 2.68dB.
Uncertainty for radiated emissions measurements is ± 4.94dB (30MHz-1GHz), ± 4.88dB (>1GHz).

The reported expanded uncertainty is based on a standard uncertainty multiply by a coverage factor k=2, providing a level of confidence of approximately 95%.

Neutron Engineering Inc.

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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

A. Conducted Measurement :

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

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U，(dB)	NOTE
DG-CB03	CISPR	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	

2.6 Location of original data

The original copies of test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of facility used for testing

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory; Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou 510650, P. R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements, the register no. 833845

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory; Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou 510650, P. R. China is listed on Certification and Engineering Bureau of Canada, whose file number is IC 2932C.

Neutron Engineering Inc; No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements, the register no. 319330

3 General Product Information

The submitted sample DX-WBRDVD1 is a Blu-ray Disc player with wireless module.

3.1 Product Function and Intended Use

Following function is provided:

1. DVD playback.
2. Wired / wireless network connection.

Refer to user manual for more information.

3.2 Ratings and System Details

Frequency range	:	IEEE 802.11b/g /n(HT20): 2412MHz---2462MHz IEEE 802.11n (HT40): 2422MHz-----2452MHz
Number of employed channels	:	IEEE 802.11b/g ,802.11n (HT20): 11 IEEE802.11n (HT40): 7
Modulation Type	:	DSSS, OFDM
Mode of RF Operation (Simplex/ Duplex)	:	Duplex
Type of antenna	:	Non-detachable printed antennas (Ant#0 & Ant#1)
Antenna Gain	:	1dBi
Power supply	:	AC 100V-240V 50/60Hz
Ports	:	AC mains Ethernet (only connect to router) HDMI USB (Host Type) Audio/Video output Coaxial output
Protection Class	:	II

The above information was declared by client. Refer to the Technical Documentation for further information

3.3 Independent Operation Modes

Off
On (802.11b / 802.11g / 802.11n HT20 / 802.11n HT40)

The basic operation modes for wireless connection:
Transmitting and receiving

For further information refer to User Manual

3.4 Submitted Documents

Operation Description
Block Diagram
Schematics
FCC label and its location
User Manual
Internal Photos
External Photos
Application form

4 Test Set-up and Operation Mode

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Refer to test set-up in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following auxiliary equipment.

1. Laptop PC:
Manufacturer: IBM
Model Number: X60
Serial Number: L3-CG041

2. Notebook:
Manufacturer: DELL
Model Number: Inspiron 1420
Serial Number: FRPN62X

3. Test software: wl commands provided by client.
Note: During the test, the RF output power was set to the level declared by client, via wl commands.

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the technical document. No additional measures were employed to achieve compliance.

4.5 Test set-up

Diagram 1 of Configuration for Testing Radiated Emission below 30MHz

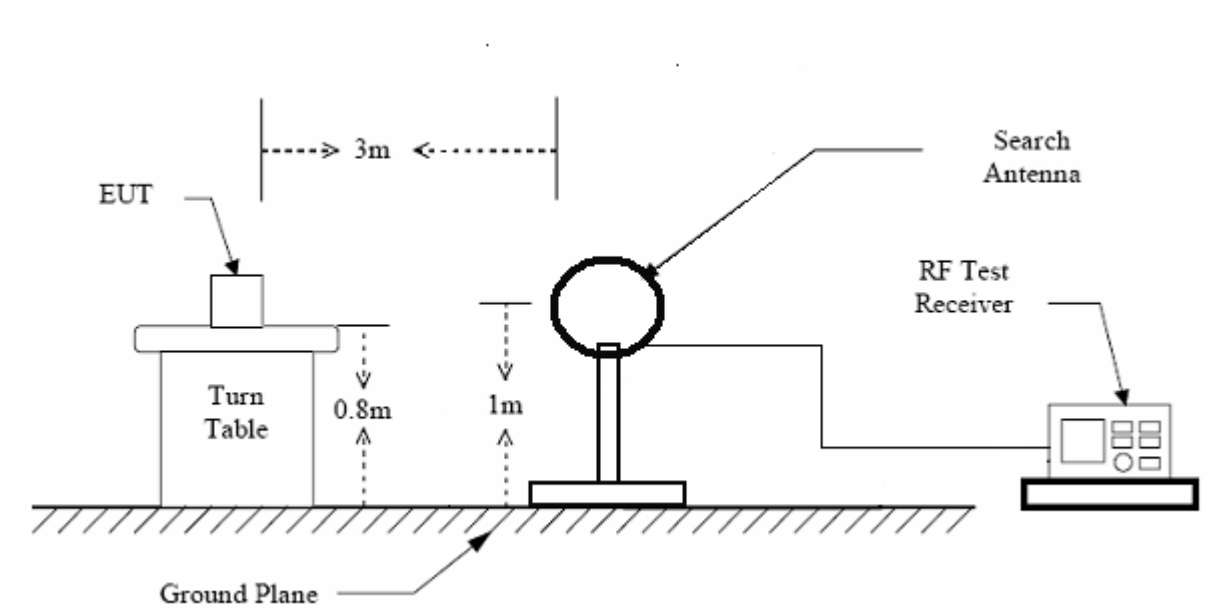


Diagram 2 of Configuration for Testing Radiated Emission from 30MHz to 1 GHz

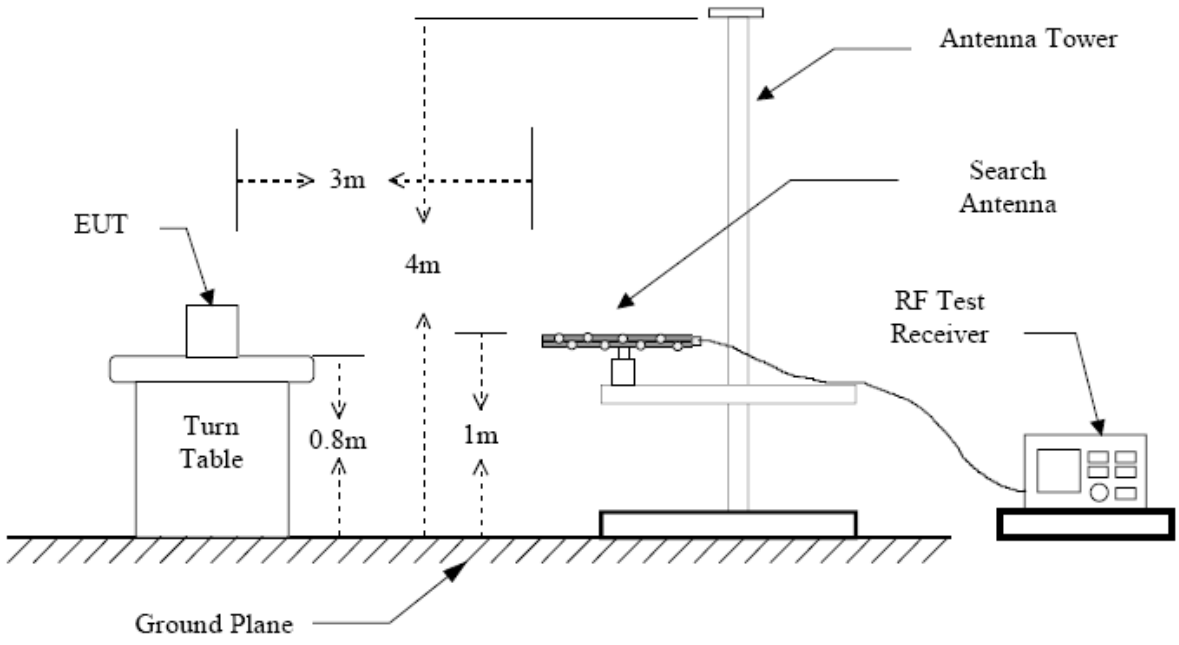


Diagram 3 of Configuration for Testing Radiated Emission above 1 GHz

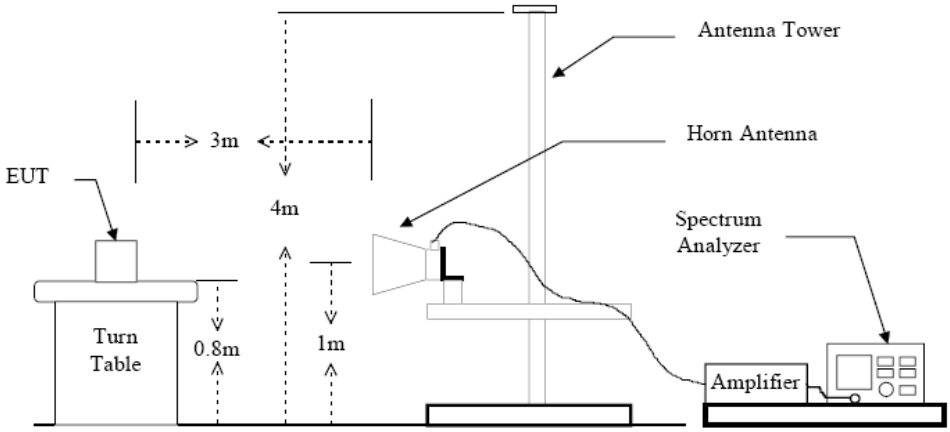


Diagram 4 of Measurement Equipment Configuration for Testing Conducted Emission

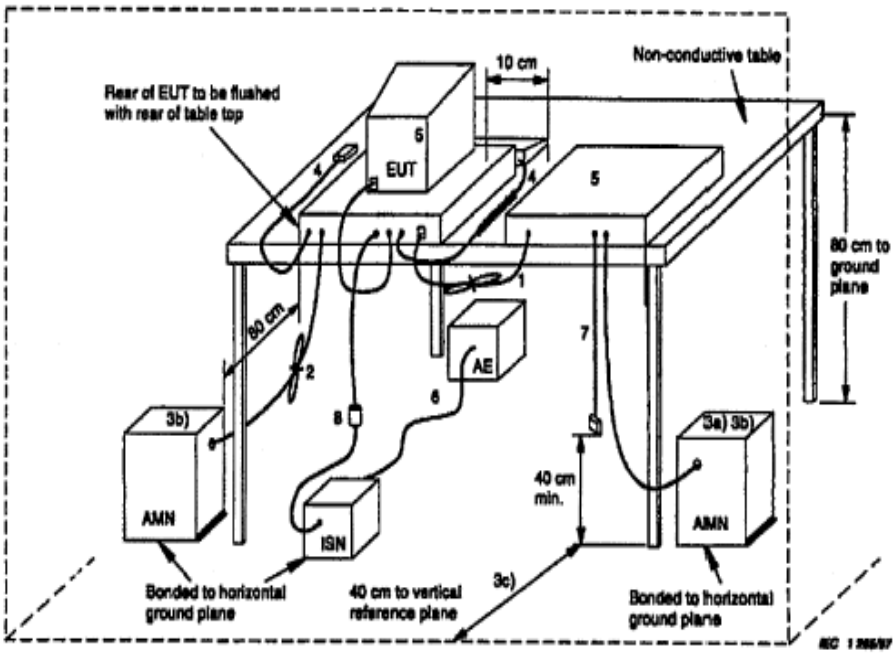
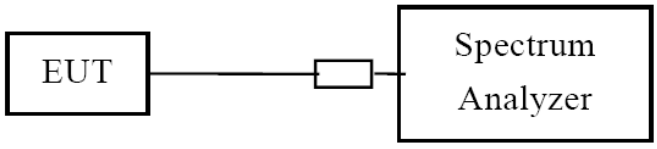


Diagram 5 of Configuration for Testing other test items



5 Test Results E M I S S I O N

5.1 Conducted Emission on AC mains

RESULT: **Pass**

Date of testing	:	Mar. 17, 2011
Test specification	:	FCC Part 15 Per Section 15.207(a)
Limits	:	FCC Part 15 Per Section 15.207(a)
Test procedure	:	Procedure specified in ANSI C63.4 was followed
Deviations from Standard Test procedures	:	None
Kind of test site	:	Shielded room
Operation mode	:	Normal operation
Power supply	:	AC 120V 60Hz
Temperature	:	20°C
Humidity	:	45%

Test procedure:

1. Place the EUT as specified in ANSI C63.4 Clause 7.2.1

2. Plug the LISN to a correct power source.

4. Connect the EUT to LISN and choose N or L1 on the LISN.

5. Connect ESCS30 and LISN via a 50-ohm coaxial cable and a pulse limiter then begin exploratory measurement as specified in ANSI C63.4 Clause 7.2.3

6. Make final measurement as specified in ANSI C63.4 Clause 7.2.4

Table 2: Disturbance Voltage on AC Mains

Frequency [MHz]	**Line** L/N	**QP** [dBµV]	**AV** [dBµV]	**Quasi Peak Limit** [dBµV]	**Average Limit** [dBµV]
0.159	L	54.6	--	65.5	55.5
0.501	L	24.7	--	56.0	46.0
3.358	N	36.9	--	56.0	46.0
3.390	L	36.2	--	56.0	46.0
3.453	L	31.4	--	56.0	46.0
21.322	L	33.7	--	60.0	50.0
*)					

*) Measurement is made from 150 kHz to 30 MHz. Disturbances other than those mentioned above are small or not detectable. Refer to appendix 1 for the test plot.

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector may be omitted.

5.2 Transmitter Radiated Spurious Emission

RESULT: **Pass**

Date of testing	:	Mar. 21, 2011 to Mar. 23, 2011 Apr 14, 2011 to Apr 18, 2011
Test specification	:	FCC Part 15 Per Section 15.209(a)
Limits	:	FCC Part 15 Per Section 15.209(a)
Test procedure	:	Procedure specified in ANSI C63.4 was followed
Deviations from Standard Test procedures	:	None
Kind of test site	:	3m Semi-anechoic chamber
Operation mode	:	Below 1GHz: normal operation Above 1GHz: Transmitting at low, middle and high channel (802.11b / 802.11g / 802.11n HT20 / 802.11n HT40)
Power supply	:	AC 120V 60Hz
Temperature	:	23°C
Humidity	:	50%

Test procedure:
1. The EUT was placed on the top of a rotatable table 0.8 meters above the ground with 3-orthogonal direction and be kept close enough to the receiving antenna. The table was rotated 360 degrees to determine the suspected emission frequency and the position of the worst radiation case with both horizontal and vertical antenna polarization.
2. The EUT was then set 3 meters away from the receiving antenna, which was mounted on a variable-height antenna tower.
3. For each suspected emission frequency recorded in step 1, the EUT was arranged to its worst case and:
for tests below 30MHz the loop antenna is positioned with its plane vertical and the center of it is 1m above the ground. During the tests it is rotated about its vertical axis for maximum response at each azimuth about the EUT;
for tests above 30MHz the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to read the maximum emission.
4. The RBW and VBW of the test receiver were 120 kHz and 120 kHz for Quasi-peak detection at frequency below 1GHz.
The RBW and VBW of the test receiver were 1MHz and 3MHz for Peak detection at frequency above 1GHz.

For Average measurement at frequency above 1GHz.The resolution bandwidth of the test receiver was 1MHz, video bandwidth is 10Hz. If the peak value was below the AV limit, AV measurement was skipped.

Table 3: Radiated Emission (802.11b Transmitting at 2412MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
4824.012	N/A	52.26	--	V	N/A	54	74
4824.030	N/A	50.67	--	H	N/A	54	74
*)---							

Table 4: Radiated Emission (802.11b Transmitting at 2437MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
4874.010	N/A	52.07	--	V	N/A	54	74
4874.010	N/A	50.61	--	H	N/A	54	74
*)---							

Table 5: Radiated Emission (802.11b Transmitting at 2462MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
4924.020	N/A	49.93	--	H	N/A	54	74
4924.020	N/A	52.33	--	V	N/A	54	74
*)---							

Table 6: Radiated Emission (802.11g Transmitting at 2412MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
4818.62	N/A	38.2	63.8	H	N/A	54	74
7236.87	N/A	46.7	72.2	H	N/A	54	74
9642.37	N/A	34.8	66.1	H	N/A	54	74
1665.12	N/A	36.1	54.1	V	N/A	54	74
1994.50	N/A	--	48.0	V	N/A	54	74
4814.37	N/A	--	45.3	V	N/A	54	74
*)---							

Table 7: Radiated Emission (802.11g Transmitting at 2437MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1486.62	N/A	39.1	57.5	H	N/A	54	74
1983.87	N/A	--	46.1	H	N/A	54	74
4876.00	N/A	39.0	57.6	H	N/A	54	74
7309.12	N/A	43.9	70.5	H	N/A	54	74
1665.12	N/A	34.1	53.7	V	N/A	54	74
4873.87	N/A	34.3	52.5	V	N/A	54	74
7317.62	N/A	31.7	52.9	V	N/A	54	74
*)---							

Table 8: Radiated Emission (802.11g Transmitting at 2462MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1990.25	N/A	--	50.8	H	N/A	54	74
4924.87	N/A	40.3	56.9	H	N/A	54	74
7385.62	N/A	43.4	68.1	H	N/A	54	74
1998.75	N/A	38.4	55.3	V	N/A	54	74
2659.62	N/A	--	51.3	V	N/A	54	74
4918.50	N/A	--	45.2	V	N/A	54	74
7375.00	N/A	38.1	54.6	V	N/A	54	74
*)---							

Table 9: Radiated Emission (802.11n HT20, Transmitting at 2412MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1486.62	N/A	--	51.3	H	N/A	54	74
1996.62	N/A	--	51.7	H	N/A	54	74
4827.12	N/A	37.0	62.7	H	N/A	54	74
7236.87	N/A	42.9	70.4	H	N/A	54	74
1656.62	N/A	--	52.1	V	N/A	54	74
1994.50	N/A	42.2	58.9	V	N/A	54	74

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
4827.12	N/A	39.4	58.8	V	N/A	54	74
7243.25	N/A	38.0	65.3	V	N/A	54	74
*)---							

Table 10: Radiated Emission (802.11n HT20, Transmitting at 2437MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1323.00	N/A	--	44.5	H	N/A	54	74
4871.75	N/A	35.5	62.5	H	N/A	54	74
7302.75	N/A	37.8	62.7	H	N/A	54	74
1146.62	N/A	--	46.7	V	N/A	54	74
1992.37	N/A	39.7	55.7	V	N/A	54	74
7302.75	N/A	41.2	66.0	V	N/A	54	74
*)---							

Table 11: Radiated Emission (802. 11n HT20, Transmitting at 2462MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1123.25	N/A	--	52.1	H	N/A	54	74
1488.75	N/A	--	51.2	H	N/A	54	74
4924.87	N/A	41.3	57.3	H	N/A	54	74
7387.75	N/A	45.9	68.6	H	N/A	54	74
1486.62	N/A	--	51.6	V	N/A	54	74
1663.00	N/A	--	52.8	V	N/A	54	74
4927.00	N/A	--	49.3	V	N/A	54	74
7392.00	N/A	35.4	53.0	V	N/A	54	74
*)---							

Table 12: Radiated Emission (802. 11n HT40, Transmitting at 2422MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1992.37	N/A	37.9	54.4	H	N/A	54	74

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
4848.37	N/A	--	48.3	H	N/A	54	74
7287.87	N/A	36.7	56.9	H	N/A	54	74
1486.62	N/A	--	50.1	V	N/A	54	74
4839.87	N/A	39.4	55.1	V	N/A	54	74
7275.12	N/A	43.2	65.2	V	N/A	54	74
*)---							

Table 13: Radiated Emission (802.11n HT40, Transmitting at 2437MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1488.75	N/A	--	47.2	H	N/A	54	74
4867.50	N/A	--	45.7	H	N/A	54	74
7304.87	N/A	40.6	58.4	H	N/A	54	74
1663.00	N/A	35.0	56.3	V	N/A	54	74
1998.75	N/A	40.1	56.7	V	N/A	54	74
4880.25	N/A	38.4	55.2	V	N/A	54	74
7315.50	N/A	44.5	65.5	V	N/A	54	74
*)---							

Table 14: Radiated Emission (802. 11n HT40, Transmitting at 2452MHz)

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[dBµV/m]			(H/V)	[dBµV/m]		
1486.62	N/A	--	52.1	H	N/A	54	74
4914.25	N/A	39.9	56.2	H	N/A	54	74
7355.87	N/A	40.3	58.1	H	N/A	54	74
1486.62	N/A	--	50.7	V	N/A	54	74
1998.75	N/A	38.3	56.8	V	N/A	54	74
7302.75	N/A	--	43.4	V	N/A	54	74
*)---							

*) Measurement is made from 20MHz to 26 GHz. Disturbances other than those mentioned above are small or not detectable.

Refer to appendix 1 for the test plot of measurement from 30MHz to 1GHz.

5.3 Antenna requirement

RESULT: **Pass**

Date of testing	:	---
Test specification	:	FCC Part 15 Per Section 15.203 FCC Part 15 Per Section 15.247(b)

For intentional device, according to 15.203, and intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to 15.247(b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by amount in dB than the directional gain of the antenna exceeds of 6dBi.

As the antenna is permanently printed on RF Board, there is no possibility of replacement.

Since the max gain of the antenna is 1dBi, it is no need to reduce the peak output power limit.

5.4 Maximum Peak Conducted Output Power

RESULT: **Pass**

Date of testing	:	Mar. 23, 2011, Apr 14, 2011 to Apr 18, 2011
Test specification	:	FCC Part 15 Per Section 15.247(b)(3)
Limits	:	FCC Part 15 Per Section 15.247(b)(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, the max. peak conducted output power shall not exceed 1 Watt.
Deviations from Standard Test procedures	:	None
Test procedure	:	Procedure specified in ANSI C63.4 was followed
Kind of test site	:	Shielded room
Operation mode	:	Transmitting at low, middle and high channel (802.11b / 802.11g / 802.11n HT20 / 802.11n HT40)
Power supply	:	AC 120V 60Hz
Temperature	:	22°C
Humidity	:	50%

Test procedure:
1. Connect the antenna output of the EUT to the power meter by a low lost cable.
2. Set the EUT to proper test mode with relative test software and hardware.
3. Read the power from power meter and add the cable loss correction.

Table 15: Peak Conducted Power (802.11b), Ant 0

Channel	Frequency(MHz)	Power Reading (dBm)	Cable Loss (dB)	Output Power		Limit
				(dBm)	(mW)	(mW)
Low	2412	19.0	0.5	19.5	89.12	<1000
Mid	2437	18.71	0.5	19.21	83.37	<1000
High	2462	18.91	0.5	19.41	87.30	<1000

Table 16: Peak Conducted Power (802.11b), Ant 1

Channel	Frequency(MHz)	Power Reading (dBm)	Cable Loss (dB)	Output Power		Limit
				(dBm)	(mW)	(mW)
Low	2412	17.50	0.5	18.0	63.10	<1000
Mid	2437	17.02	0.5	17.52	56.49	<1000
High	2462	17.2	0.5	17.7	58.88	<1000

Table 17: Peak Conducted Power (802.11g)

Channel	Frequency(MHz)	Power Reading (dBm)	Cable Loss (dB)	Output Power		Limit
				(dBm)	(mW)	(mW)
Low	2412	11.82	0.4	12.22	16.67	<1000
Mid	2437	11.80	0.4	12.20	16.60	<1000
High	2462	11.91	0.4	12.31	17.02	<1000

Table 18: Peak Conducted Power (802.11n HT20)

Channel	Frequency(MHz)	Power Reading(dBm)		Cable Loss (dB)	Output Power of Ant#0		Output Power of Ant#1		Total output power (mW)	Limit (mW)
		Ant#0	Ant#1		(dBm)	(mW)	(dBm)	(mW)		
Low	2412	11.82	11.74	0.4	12.22	16.67	12.14	16.37	33.04	<1000
Mid	2437	12.02	12.12	0.4	12.42	17.46	12.52	17.86	35.32	<1000
High	2462	12.10	11.97	0.4	12.50	17.78	12.37	17.26	35.04	<1000

Table 19: Peak Conducted Power (802.11n HT40)

Channel	Frequency(MHz)	Power Reading(dBm)		Cable Loss (dB)	Output Power of Ant#0		Output Power of Ant#1		Total output power (mW)	Limit (mW)
		Ant#0	Ant#1		(dBm)	(mW)	(dBm)	(mW)		
Low	2422	11.82	11.91	0.4	12.22	16.67	12.31	17.02	33.69	<1000
Mid	2437	11.85	11.92	0.4	12.25	16.79	12.32	17.06	33.85	<1000
High	2452	12.52	12.21	0.4	12.92	19.59	12.61	18.24	37.83	<1000

5.5 6dB Bandwidth

RESULT: **Pass**

Date of testing	:	Mar. 14, 2011 Apr. 14, 2011 to Apr 18, 2011
Test specification	:	FCC Part 15 Per Section 15.247(a)(2)
Limits	:	FCC Part 15 Per Section 15.247(a)(2) The minimum 6 dB bandwidth shall be at least 500 kHz.
Deviations from Standard Test procedures	:	None
Test procedure	:	Procedure specified in ANSI C63.4 was followed
Operation mode	:	Transmitting at low, middle and high channel (802.11b / 802.11g / 802.11n HT20 / 802.11n HT40)
Kind of test site	:	Shielded room
Power supply	:	AC 120V 60Hz
Temperature	:	23°C
Humidity	:	50%

Test procedure:

1. Connect the antenna output of the EUT to the spectrum analyzer by a low lost cable.
2. Set the EUT to proper test mode with relative test software and hardware.
3. Spectrum analyzer setting: Centered Frequency= measured channel, RBW=100kHz, VBW=300kHz.
4. Mark the peak power frequency point and the -6dB upper and lower frequency points.
5. Read the frequency delta value between the -6dB upper and lower frequency points.
6. Repeat step 2 to 5 until all the channels required are finished.

Table 20: 6dB Bandwidth (802.11b)

Channel	Frequency (MHz)	Test Result (MHz)		Limit (kHz)
		Ant 0	Ant 1	
Low	2412	8.2	9.0	>500
Mid	2437	9.1	9.0	>500
High	2462	8.1	8.6	>500

Table 21: 6dB Bandwidth (802.11g)

Channel	Frequency (MHz)	Test Result (MHz)	Limit (kHz)
Low	2412	15.4	>500
Mid	2437	15.4	>500
High	2462	15.4	>500

Table 22: 6dB Bandwidth (802.11n HT20)

Channel	Frequency (MHz)	Test Result (MHz)	Limit (kHz)
Low	2412	17.3	>500
Mid	2437	16.5	>500
High	2462	16.3	>500

Table 23: 6dB Bandwidth (802.11n HT40)

Channel	Frequency (MHz)	Test Result (MHz)	Limit (kHz)
Low	2422	35.7	>500
Mid	2437	36.0	>500
High	2452	35.7	>500

Please refer to Appendix 1 for measurement data.

5.6 Power Spectral Density

RESULT: **Pass**

Date of testing	:	Mar. 15, 2011 Apr. 14, 2011 to Apr 18, 2011
Test specification	:	FCC Part 15 Per Section 15.247(e)
Limits	:	FCC Part 15 Per Section 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission
Deviations from Standard Test procedures	:	None
Test procedure	:	Procedure specified in ANSI C63.4 was followed
Kind of test site	:	Shielded room
Operation mode	:	Transmitting at low, middle and high channel (802.11b / 802.11g / 802.11n HT20 / 802.11n HT40)
Power supply	:	AC 120V 60Hz
Temperature	:	23°C
Humidity	:	50%

Test procedure:

1. Connect the antenna output of the EUT to the spectrum analyzer by a low lost cable.
2. Set the EUT to proper test mode with relative test software and hardware.
3.Spectrum analyzer setting: Centered Frequency= measured channel, RBW= 3kHz, VBW=10kHz.. Span = 600kHz, Sweep Time = 200s.
4. Mark the max. peak point.
5. Repeat step 2 to 4 until all the channels required are finished.

Table 24: Power spectral density (802.11b)

Channel	Frequency (MHz)	Test Result (dBm)		Limit (dBm)
		Ant 0	Ant 1	
Low	2412.000	-8.53	-10.14	<8
Mid	2437.000	-6.02	-9.48	<8
High	2462.000	-8.41	-9.03	<8

Table 25: Power spectral density (802.11g)

Channel	Frequency (MHz)	Test Result (dBm)	Limit (dBm)
Low	2412.000	-10.71	<8
Mid	2437.000	-10.64	<8
High	2462.000	-10.79	<8

Table 26: Power spectral density (802.11n HT20)

Channel	Frequency (MHz)	Test Result (dBm)	Limit (dBm)
Low	2412.000	-9.54	<8
Mid	2437.000	-10.02	<8
High	2462.000	-9.54	<8

Table 27: Power spectral density (802.11n HT40)

Channel	Frequency (MHz)	Test Result (dBm)	Limit (dBm)
Low	2422.000	-24.27	<8
Mid	2437.000	-24.31	<8
High	2452.000	-24.09	<8

Please refer to Appendix 1 for measurement data.

5.7 Conducted Spurious Emissions at Antenna Ports

RESULT: **Pass**

Date of testing	:	Mar. 15, 2011 & Mar. 22, 2011 Apr. 14, 2011 to Apr 18, 2011
Test specification	:	FCC Part 15 Per Section 15.247(d)
Limits	:	FCC Part 15 Per Section 15.247(d) In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. In addition: FCC Part 15 - radiated emission which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a).
Deviations from Standard Test procedures	:	None
Test Procedure	:	Procedure specified in ANSI C63.4 was followed
Kind of test site	:	Shielded room
Operation mode	:	Transmitting at low, middle and high channel (802.11b / 802.11g / 802.11n HT20 / 802.11n HT40)
Power supply	:	AC 120V 60Hz
Temperature	:	23°C
Humidity	:	50%

Test procedure:

1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.
2. Set the EUT to proper test mode with relative test software and hardware.
3. Spectrum analyzer setting: RBW = 100 kHz, VBW≥RBW.
4. Set proper frequency span respectively for out-of-band emission measurement of the band edge and the whole range (up to 10 times of the carrier frequency.)
5. Set the trace mode to Max Hold and mark the peak reading of any spurious emission recorded.
6. The band edge radiated emission was measured according to the procedure in clause 5.2 of this report.

Table 28: Out-Of-Band Emission measurement (conducted)

Emission (Max reading among Channel low, mid and high)	Attenuation	Limit (dB)
30MHz to 25GHz	All emission in this 100kHz bandwidth are attenuated more than 20dB from the carrier	△≥20

Table 29: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11b), Ant 0

Restricted band	Frequency [GHz]	PK [dBµV/m]	AV [dBµV/m]	Polarity (H/V)	PK limit [dBµV/m]	AV limit [dBµV/m]
Low band	2.390	55.73	46.72	H	74	54
Low band	2.390	51.65	44.47	V	74	54
High band	2.4835	55.66	45.73	H	74	54
High band	2.4835	55.63	45.64	V	74	54
Remark:--						

Table 30: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11b), Ant 1

Restricted band	Frequency [GHz]	PK [dBµV/m]	AV [dBµV/m]	Polarity (H/V)	PK limit [dBµV/m]	AV limit [dBµV/m]
Low band	2.390	59.37	49.68	H	74	54
Low band	2.390	57.56	47.71	V	74	54
High band	2.4835	55.82	45.71	H	74	54
High band	2.4835	56.82	46.18	V	74	54
Remark:--						

Table 31: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11g)

Restricted band	Frequency [GHz]	PK [dBµV/m]	AV [dBµV/m]	Polarity (H/V)	PK limit [dBµV/m]	AV limit [dBµV/m]
Low band	2.390	55.4	46.7	H	74	54
Low band	2.390	55.7	47.2	V	74	54
High band	2.484	55.0	49.5	H	74	54

Restricted band	Frequency [GHz]	PK [dBµV/m]	AV [dBµV/m]	Polarity (H/V)	PK limit [dBµV/m]	AV limit [dBµV/m]
High band	2.484	55.1	48.4	V	74	54
Remark:--						

Table 32: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11n HT20)

Restricted band	Frequency [GHz]	PK [dBµV/m]	AV [dBµV/m]	Polarity (H/V)	PK limit [dBµV/m]	AV limit [dBµV/m]
Low band	2.390	56.0	47.2	H	74	54
Low band	2.390	55.1	47.5	V	74	54
High band	2.484	55.5	49.2	H	74	54
High band	2.484	55.5	48.8	V	74	54
Remark:--						

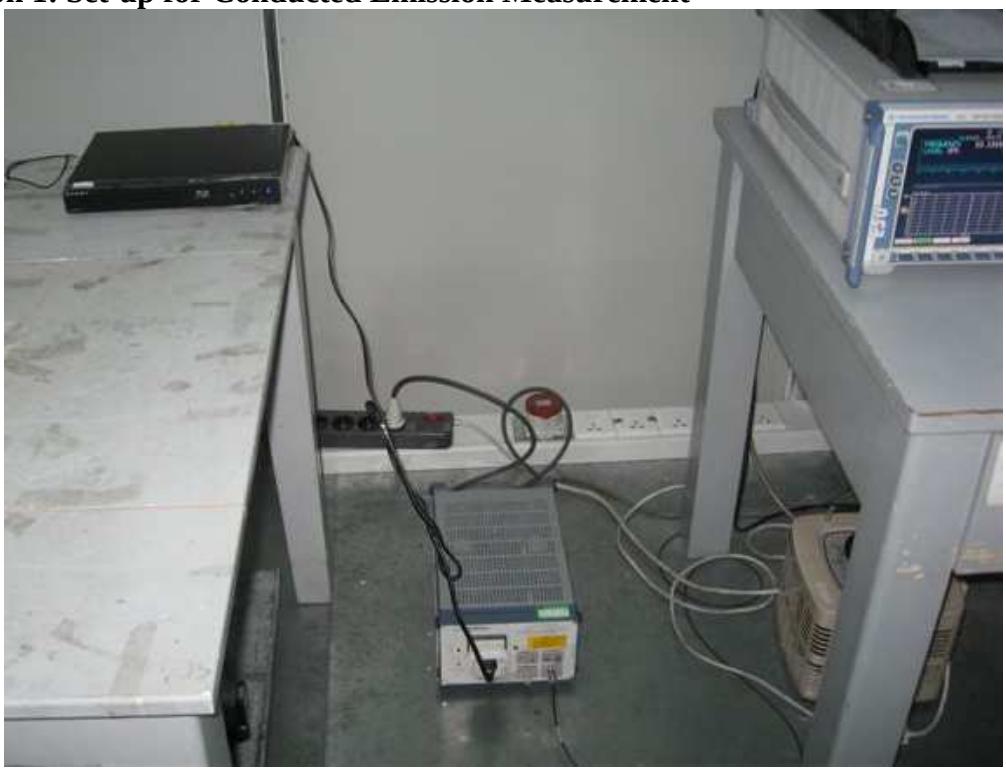
Table 33: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11n HT40)

Restricted band	Frequency [GHz]	PK [dBµV/m]	AV [dBµV/m]	Polarity (H/V)	PK limit [dBµV/m]	AV limit [dBµV/m]
Low band	2.390	55.4	47.9	H	74	54
Low band	2.390	54.9	47.6	V	74	54
High band	2.484	55.0	49.3	H	74	54
High band	2.484	55.0	49.2	V	74	54
Remark:--						

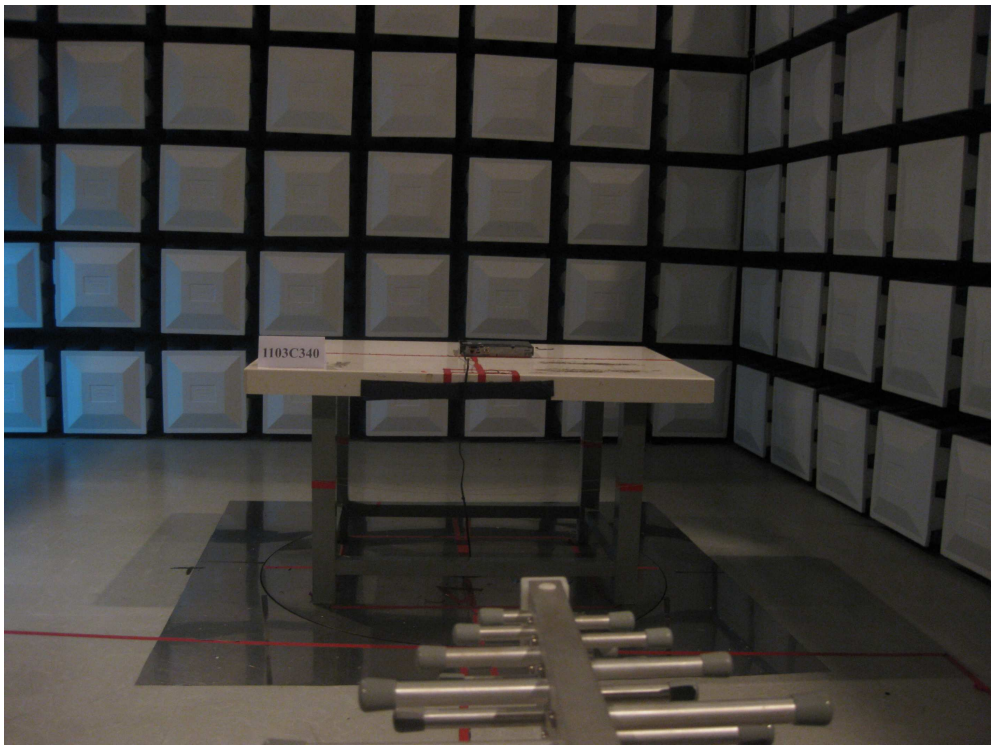
*** Note:** Please refer to the Appendix 1 for the plot.
Disturbances other than those mentioned above are small or not detectable.

6 Photographs of the Test Set-Up

Photograph 1: Set-up for Conducted Emission Measurement



Photograph 2: Set-up for Radiation Measurement below 1GHz



Photograph 3: Set-up for Radiation Measurement above 1GHz

7 List of Tables

8 List of Photographs

Radio Testing, 802.11b mode

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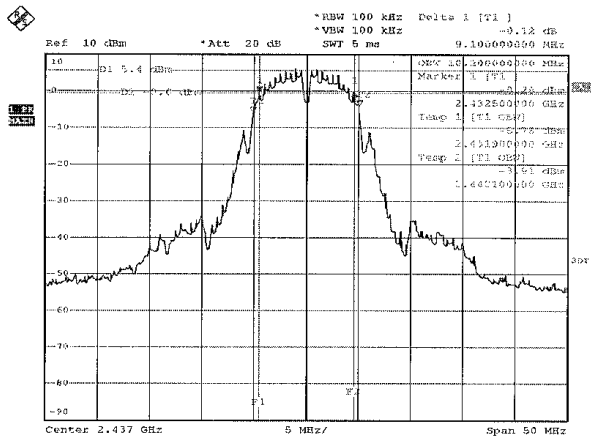
Test Plots of 6dB Bandwidth, Ant 0



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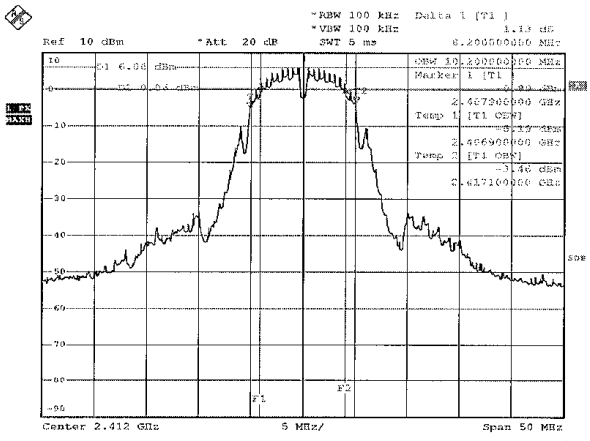

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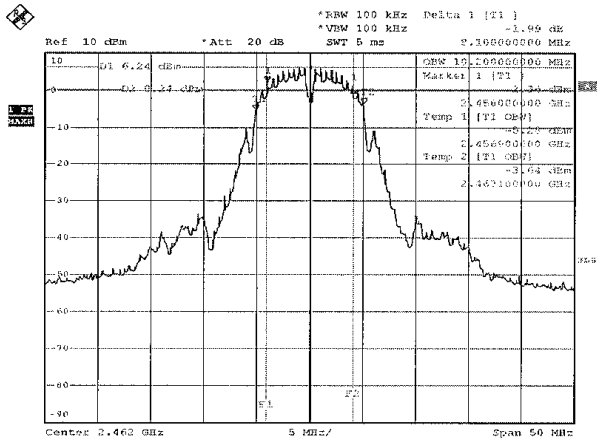

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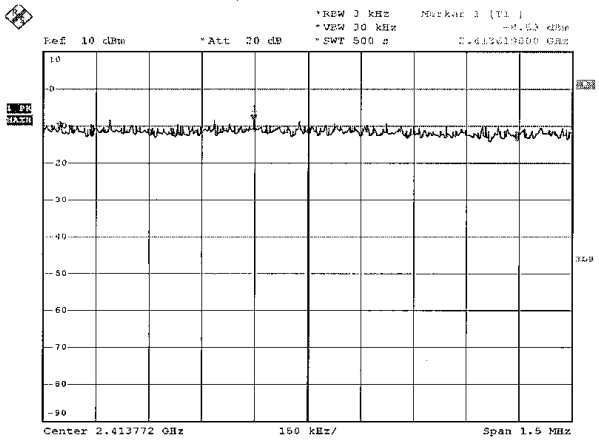
Test Plots of Peak Power Density, Ant 0



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TUV Ref. No.: 163074378

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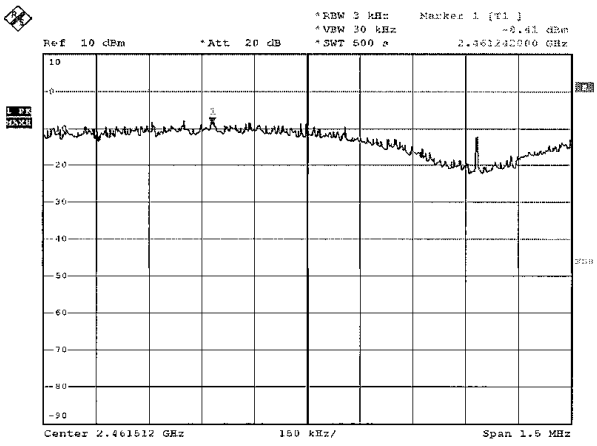

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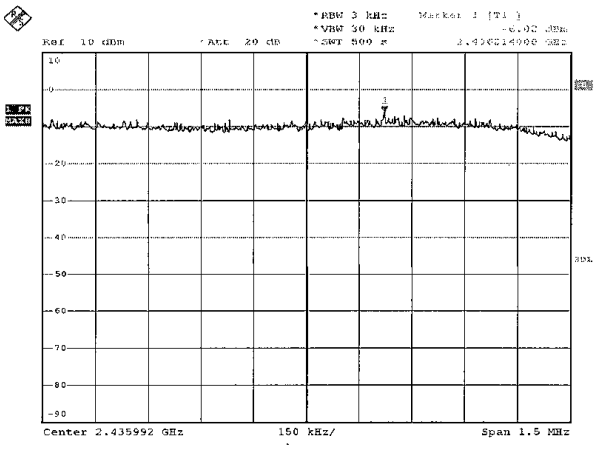

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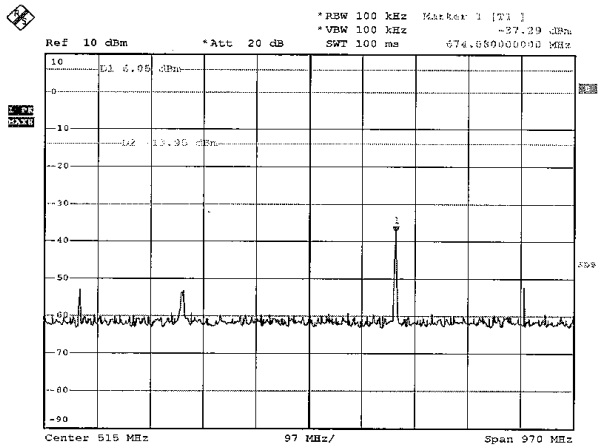
Test Plots of Conducted Spurious Emissions at Antenna Ports, Ant 0
Low Channel



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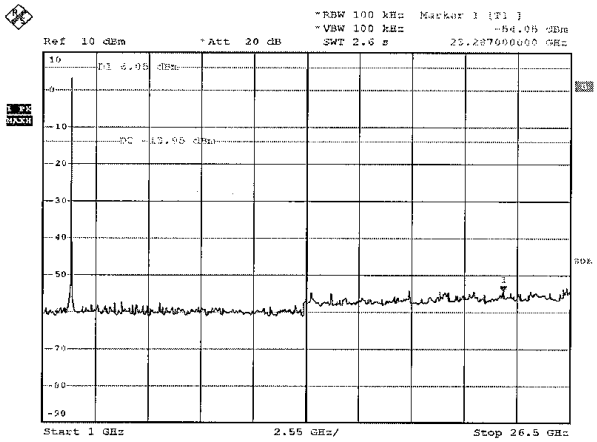

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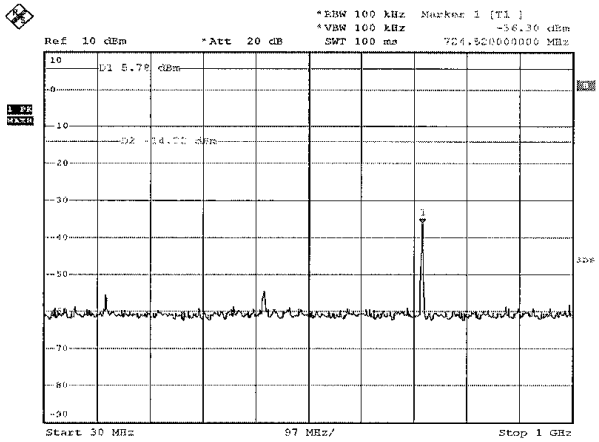
High Channel



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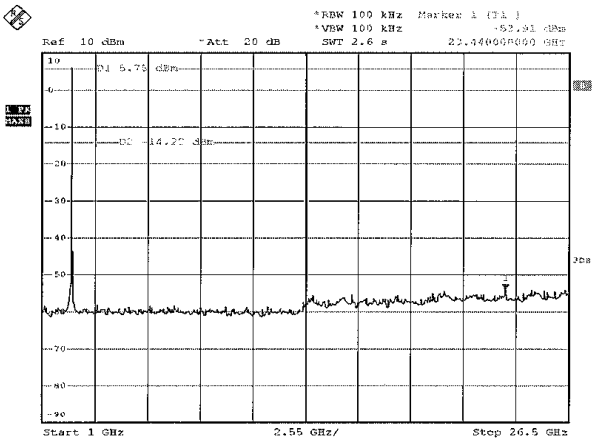

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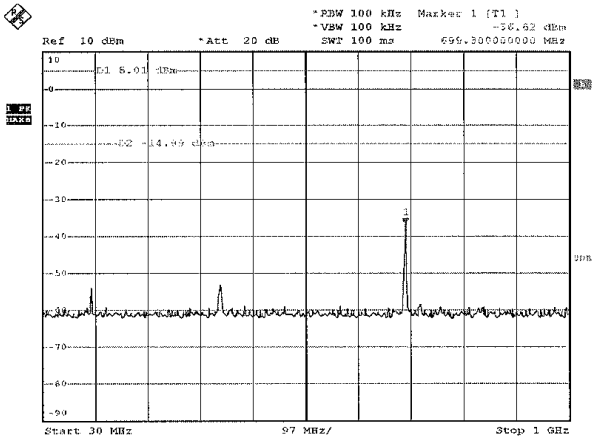
Middle Channel



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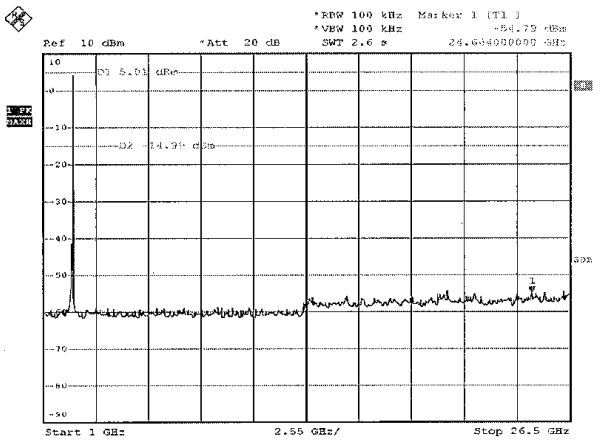

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TUV Ref. No.: 163074378

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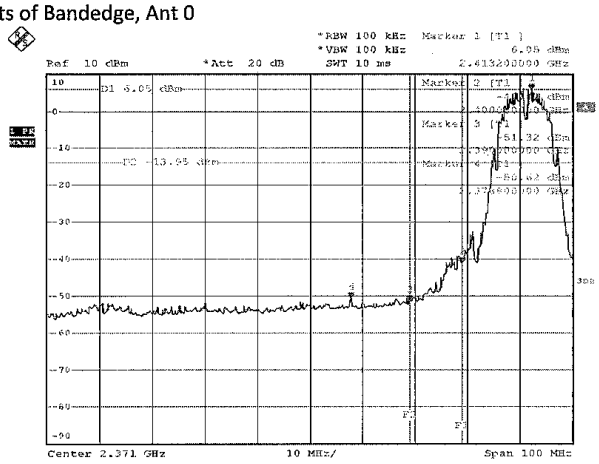
Test Plots of Bandedge, Ant 0



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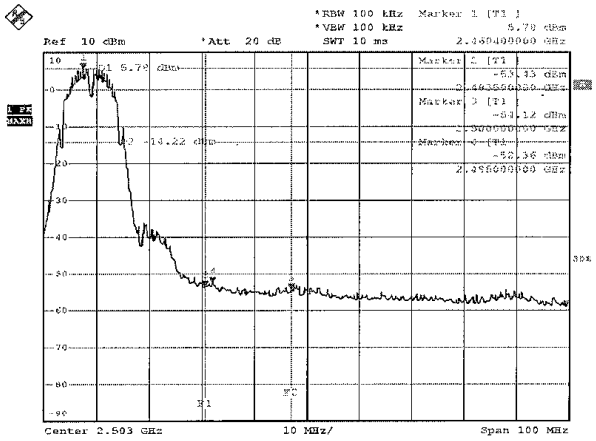

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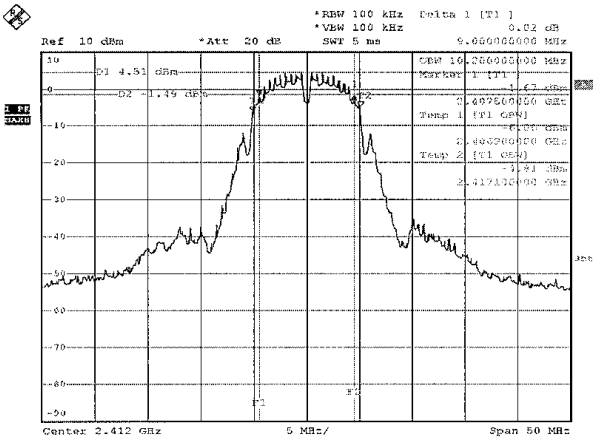
Test Plots of 6dB Bandwidth, Ant 1



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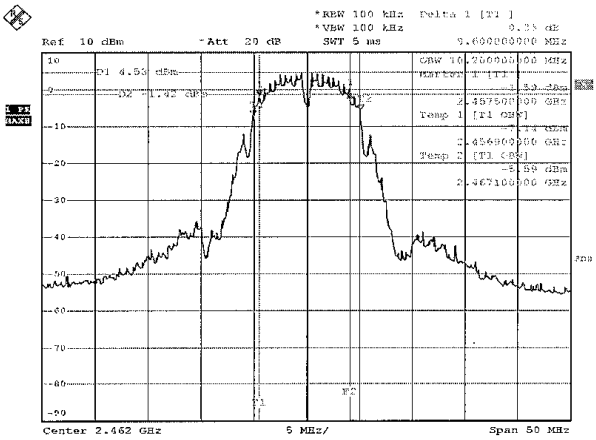

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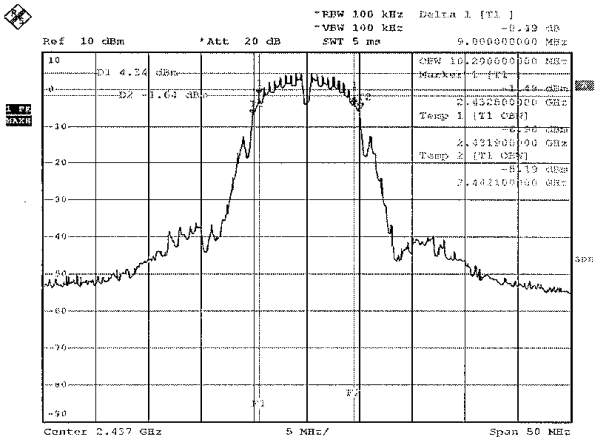

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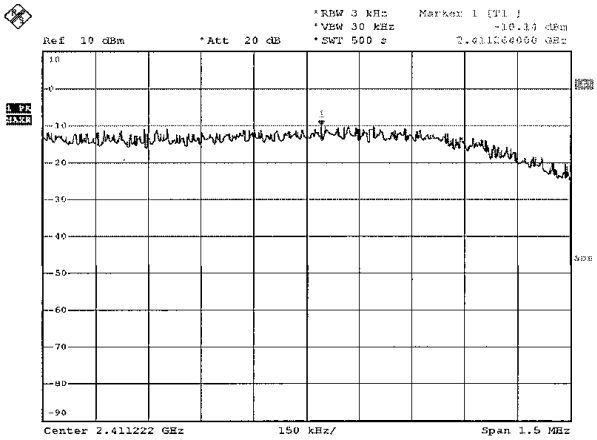
Test Plots of Peak Power Density, Ant 1



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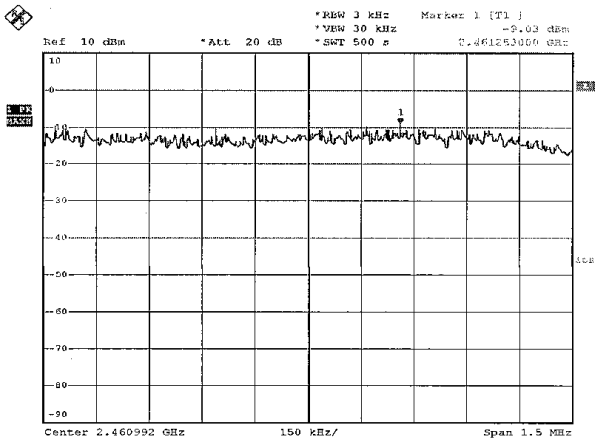

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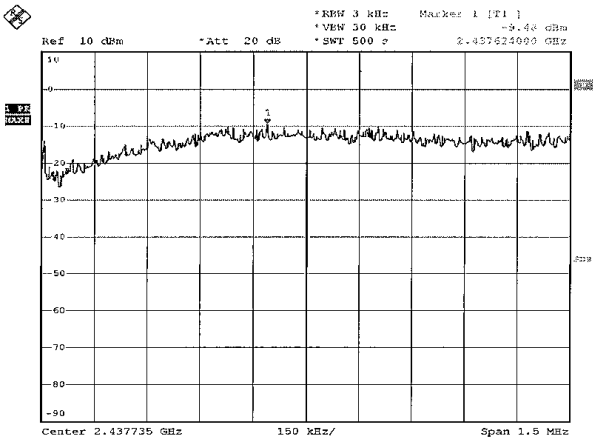

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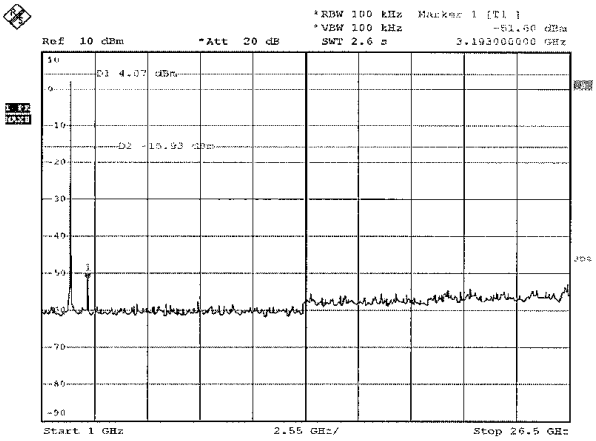
Test Plots of Conducted Spurious Emissions at Antenna Ports, Ant 1
Low Channel



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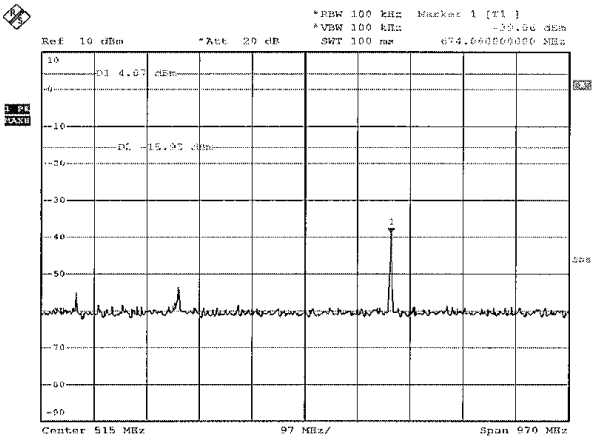

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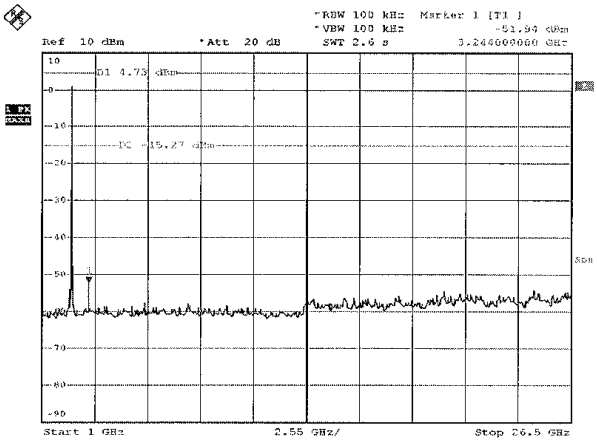
High Channel



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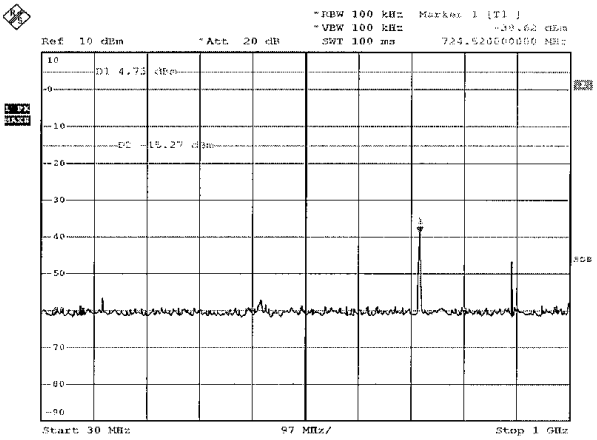
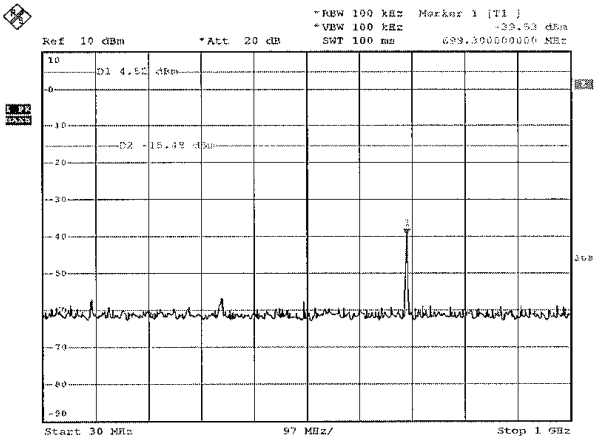


Date: 18.APR.2011 16:25:13

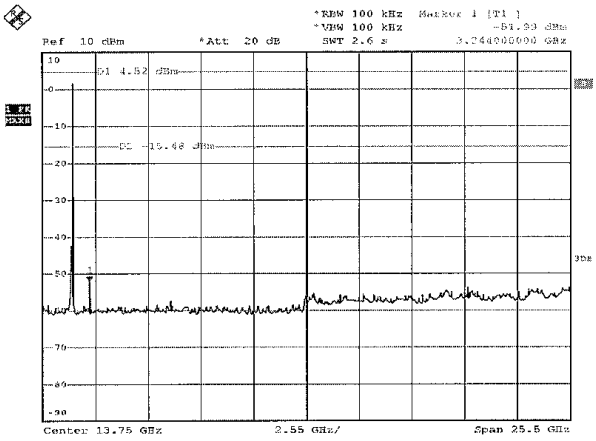
TUV Ref. No.: 163074378

TÜVRheinland®

Middle Channel



Date: 18.APR.2011 16:27:31



Date: 18.APR.2011 16:27:09

TUV Ref. No.: 163074378

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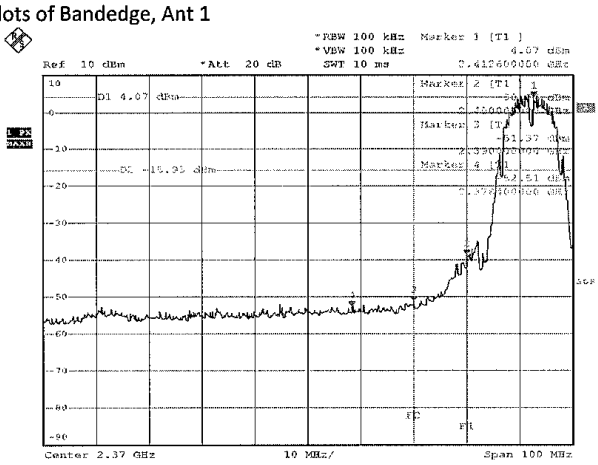
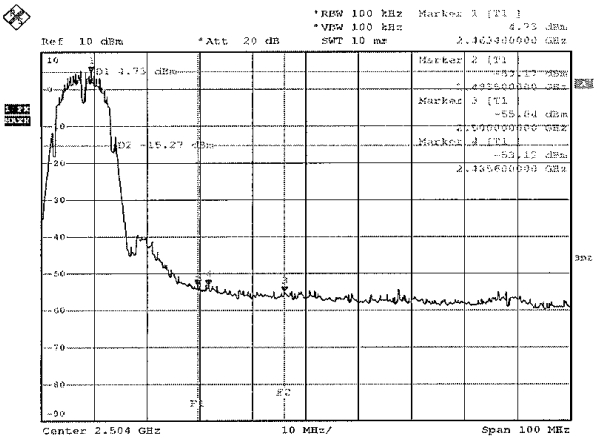
Test Plots of Bandedge, Ant 1



Date: 18.APR.2011 16:28:39



Date: 18.APR.2011 16:24:18

Radiated spurious emissions, 802.11b, Ant 0

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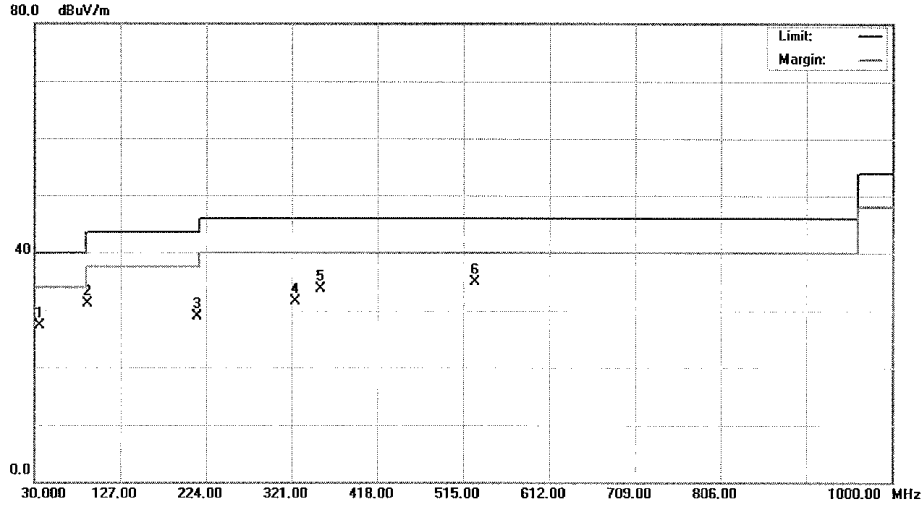
Radiated Emission Measurement

File :TUV Data :#17 Date: 2011-4-14 Time: 14:47:41



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 1 ANT 0

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 23
Humidity: 51 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		35.0200	44.12	-16.91	27.21	40.00	-12.79	peak	
2		89.9100	50.12	-19.07	31.05	43.50	-12.45	peak	
3		213.0200	45.01	-16.17	28.84	43.50	-14.66	peak	
4		324.6700	43.03	-11.47	31.56	46.00	-14.44	peak	
5		352.7300	44.36	-10.74	33.62	46.00	-12.38	peak	
6	*	528.5100	41.11	-6.29	34.82	46.00	-11.18	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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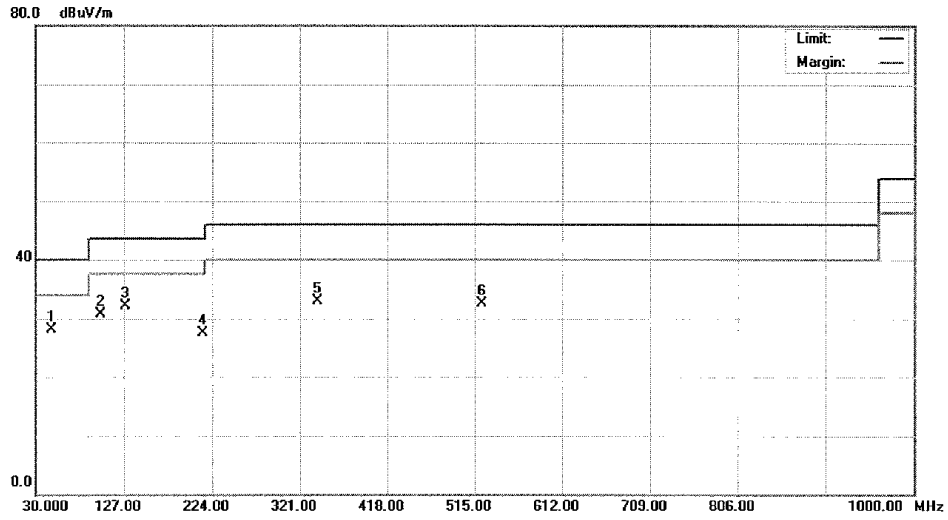
Radiated Emission Measurement

File :TUV Data :#18 Date: 2011-4-14 Time: 14:50:01



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 1 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 23
Humidity: 51 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		46.8200	45.21	-17.09	28.12	40.00	-11.88	peak	
2		101.2300	49.03	-18.41	30.62	43.50	-12.88	peak	
3	*	128.3400	50.31	-18.15	32.16	43.50	-11.34	peak	
4		213.2500	43.59	-16.16	27.43	43.50	-16.07	peak	
5		339.2600	44.02	-11.10	32.92	46.00	-13.08	peak	
6		522.0300	39.14	-6.54	32.60	46.00	-13.40	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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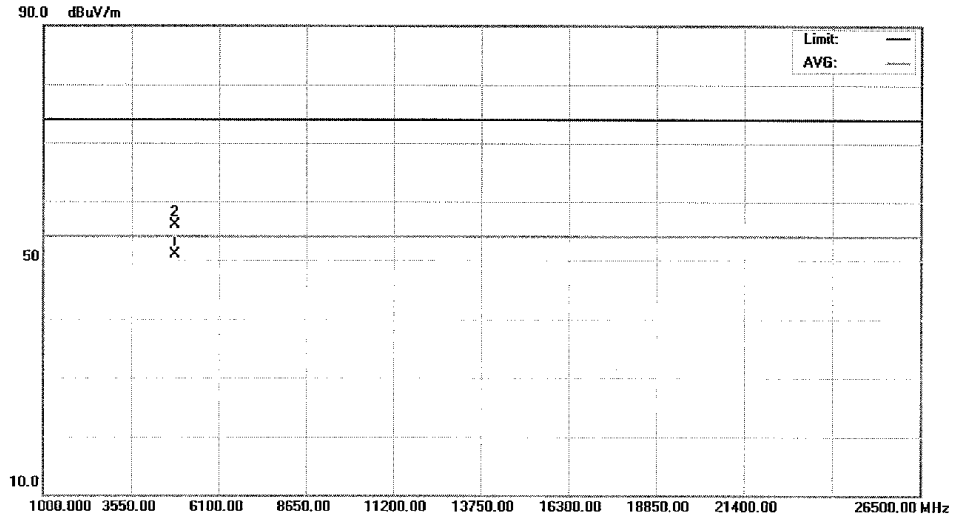
Radiated Emission Measurement

File :TUV Data :#1 Date: 2011-4-14 Time: 14:06:50



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 1 ANT 0

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4824.030	44.61	6.24	50.85	54.00	-3.15	AVG	
2		4824.135	49.60	6.24	55.84	74.00	-18.16	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

File :TUV\Data :#1 *Page: 1* Engineer Signature:

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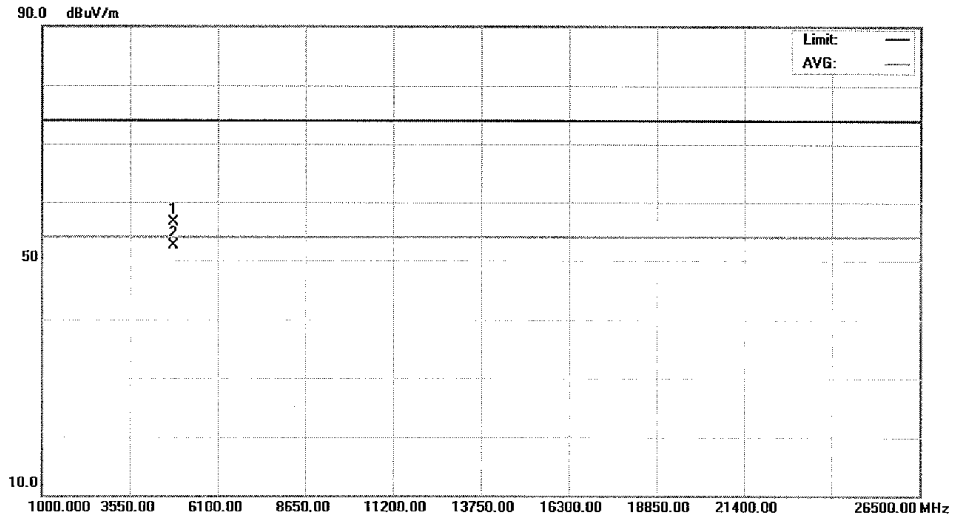
Radiated Emission Measurement

File :TUV Data :#2 Date: 2011-4-14 Time: 14:08:00



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 1 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.935	50.36	6.24	56.60	74.00	-17.40	peak	
2	*	4824.010	46.21	6.24	52.45	54.00	-1.55	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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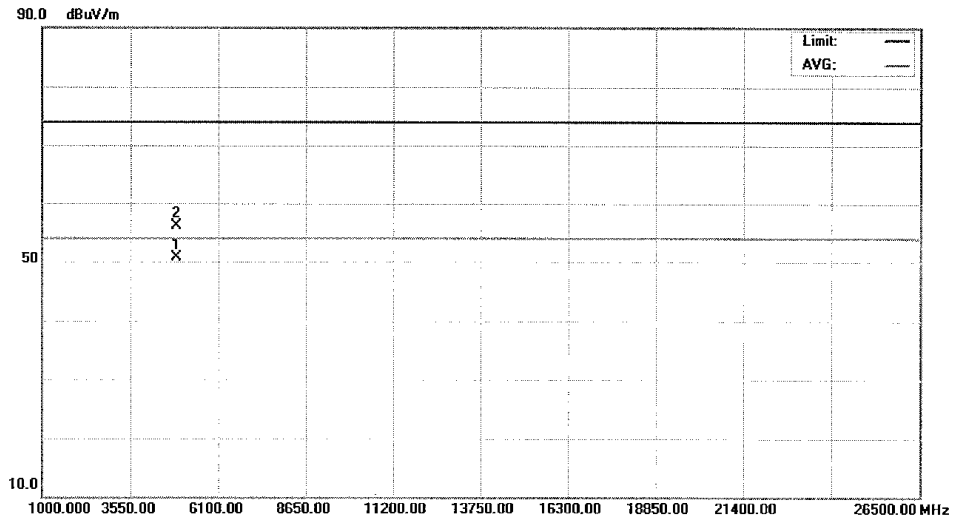
Radiated Emission Measurement

File :TUV Data :#3 Date: 2011-4-14 Time: 14:16:23



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 6 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4874.030	44.22	6.48	50.70	54.00	-3.30	AVG	
2		4874.285	49.63	6.48	56.11	74.00	-17.89	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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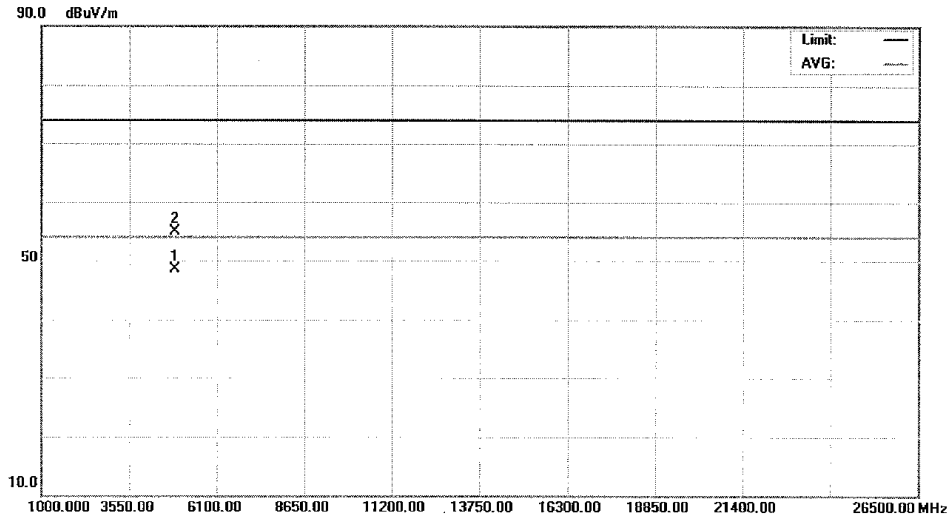
Radiated Emission Measurement

File :TUV Data :#4 Date: 2011-4-14 Time: 14:18:47



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 6 ANT 0

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4874.010	41.97	6.48	48.45	54.00	-5.55	AVG	
2		4874.030	48.40	6.48	54.88	74.00	-19.12	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

File :TUV\Data :#4 *Page: 1* Engineer Signature:

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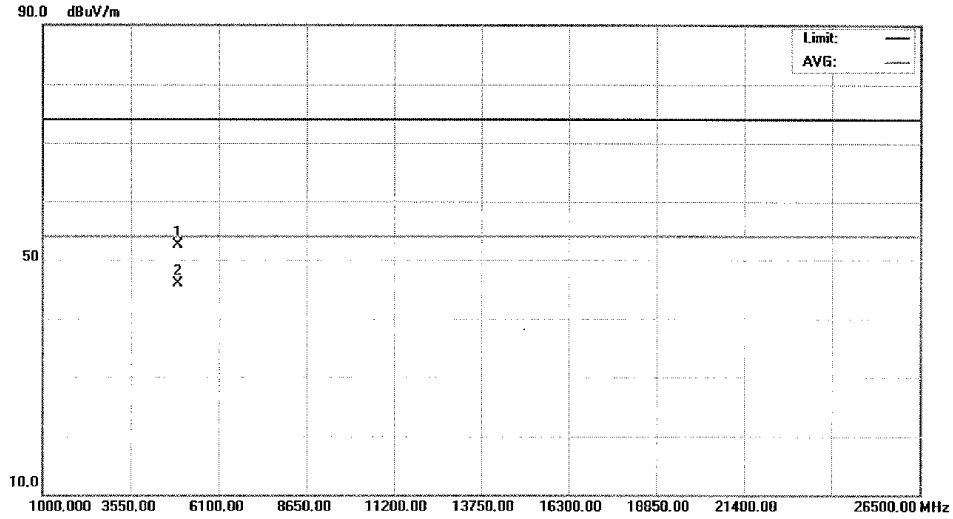
Radiated Emission Measurement

File :TUV Data :#5 Date: 2011-4-14 Time: 14:22:12



Site DG-CB03 Polarization: ***Horizontal*** Temperature: 20
Limit: FCC_RF_1G-40G_(Peak) Power: AC 120V/60Hz Humidity: 55 %
EUT: 第二次提供模组 Distance: 3m
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 11 ANT 0

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.980	45.88	6.72	52.60	74.00	-21.40	peak	
2	*	4923.990	39.27	6.72	45.99	54.00	-8.01	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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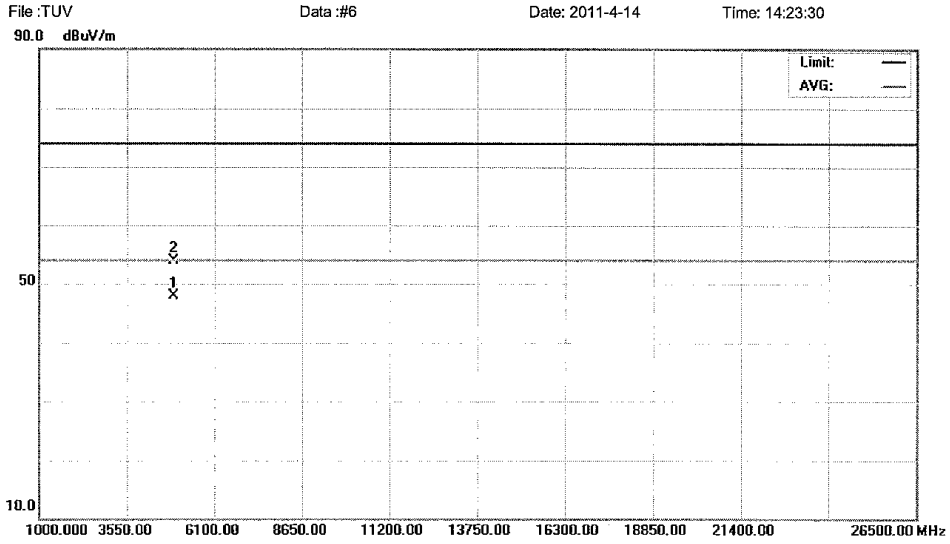
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 11 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4924.010	41.11	6.72	47.83	54.00	-6.17	AVG	
2		4924.115	47.25	6.72	53.97	74.00	-20.03	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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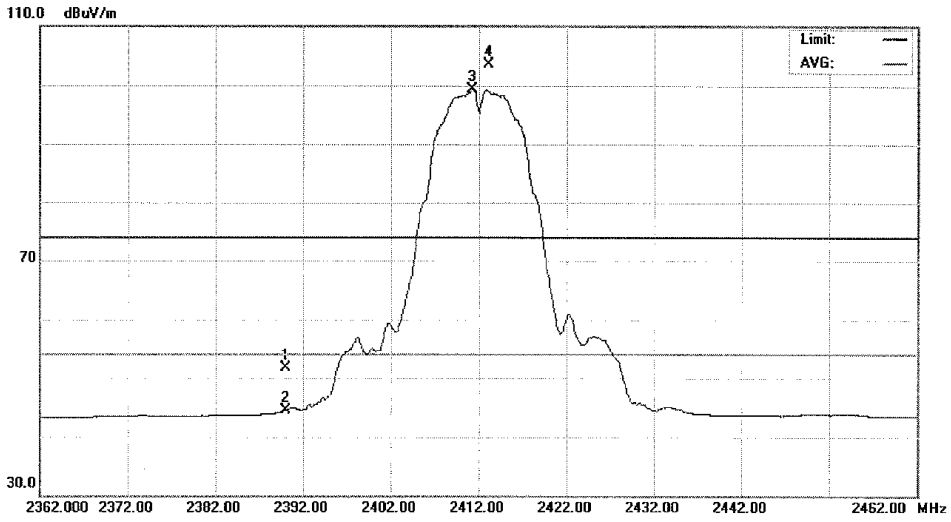
Radiated Emission Measurement

File :TUV Data :#11 Date: 2011-4-14 Time: 14:43:08



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 1 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	20.04	31.61	51.65	74.00	-22.35	peak	
2		2390.000	12.86	31.61	44.47	54.00	-9.53	AVG	
3	*	2411.300	67.78	31.59	99.37	54.00	45.37	AVG	
4	X	2413.100	72.02	31.58	103.60	74.00	29.60	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

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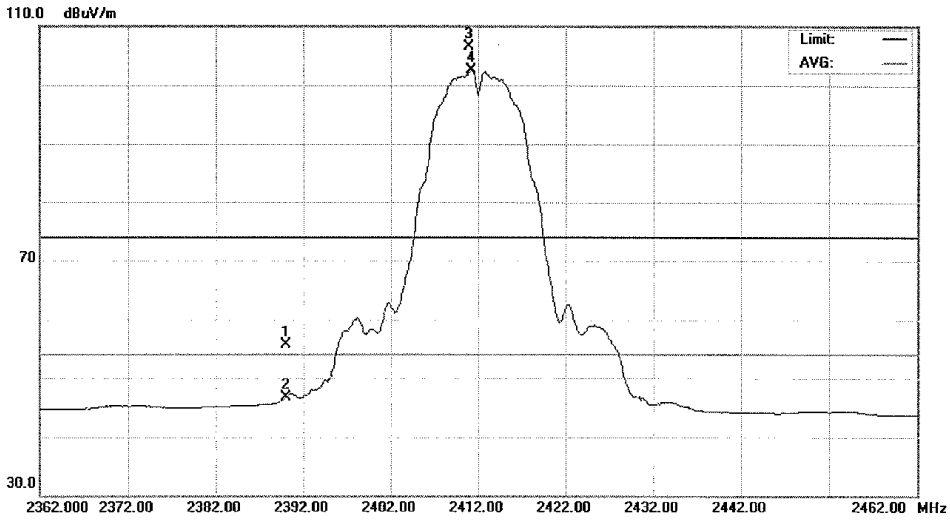
Radiated Emission Measurement

File :TUV Data :#12 Date: 2011-4-14 Time: 14:45:24



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 1 ANT 0

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.12	31.61	55.73	74.00	-18.27	peak	
2		2390.000	15.11	31.61	46.72	54.00	-7.28	AVG	
3	X	2411.000	74.88	31.59	106.47	74.00	32.47	peak	
4	*	2411.300	70.83	31.59	102.42	54.00	48.42	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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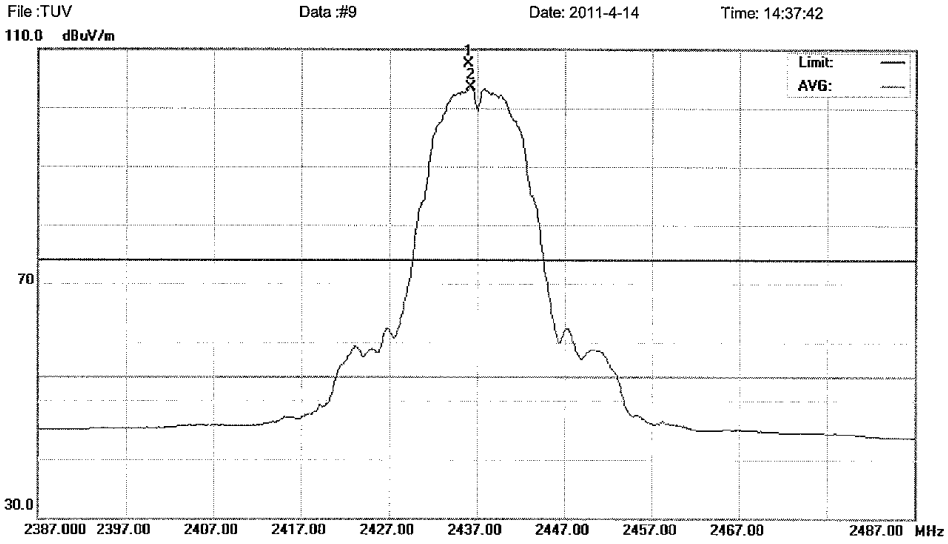
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 6 ANT 0

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2436.000	75.96	31.56	107.52	74.00	33.52	peak	
2	*	2436.200	72.00	31.56	103.56	54.00	49.56	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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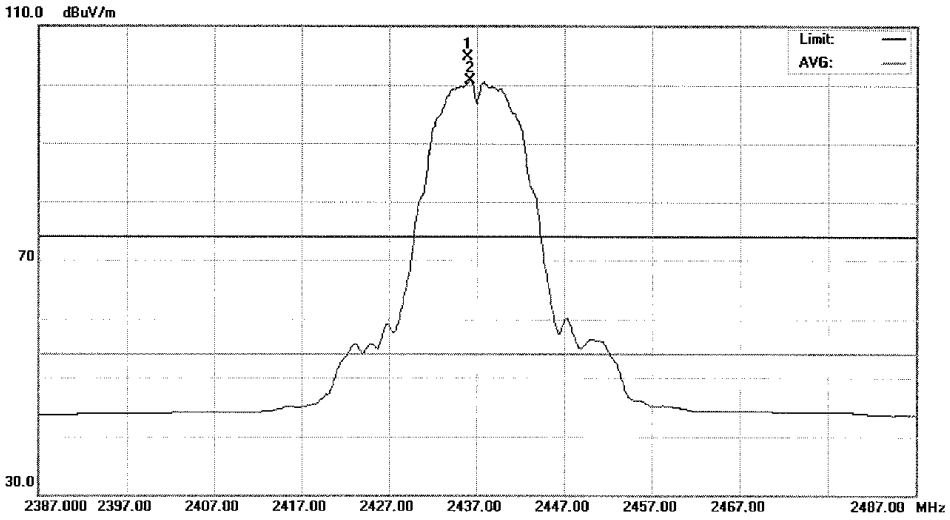
Radiated Emission Measurement

File :TUV Data :#10 Date: 2011-4-14 Time: 14:39:56



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 6 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2436.000	73.10	31.56	104.66	74.00	30.66	peak	
2	*	2436.300	69.09	31.56	100.65	54.00	46.65	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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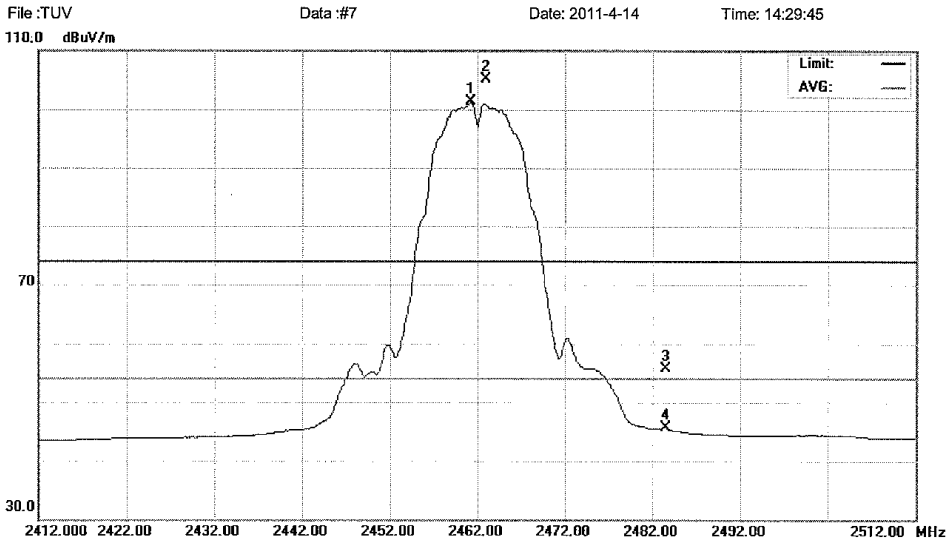
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 11 ANT 0

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2461.300	69.71	31.53	101.24	54.00	47.24	AVG	
2	X	2463.000	73.67	31.52	105.19	74.00	31.19	peak	
3		2483.500	24.13	31.50	55.63	74.00	-18.37	peak	
4		2483.500	14.14	31.50	45.64	54.00	-8.36	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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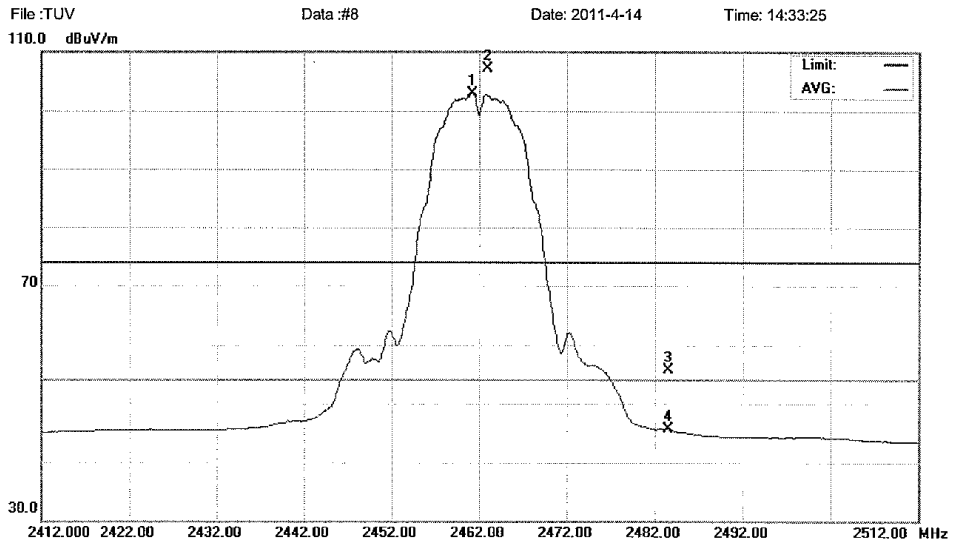
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 11 ANT 0

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2461.300	71.47	31.53	103.00	54.00	49.00	AVG	
2	X	2463.000	75.54	31.52	107.06	74.00	33.06	peak	
3		2483.500	24.16	31.50	55.66	74.00	-18.34	peak	
4		2483.500	14.23	31.50	45.73	54.00	-8.27	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

Radiated spurious emissions, 802.11b, Ant 1

Neutron Engineering Inc.
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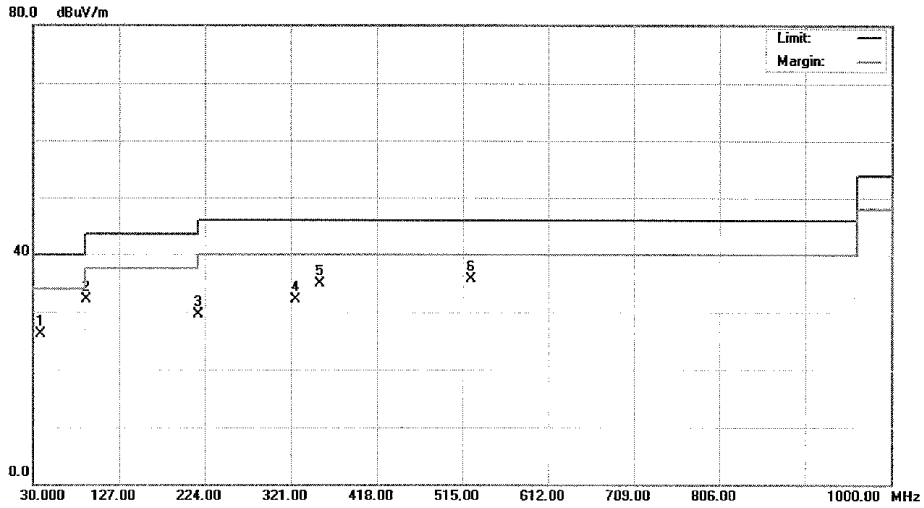
http://www.btl.org.cn

Radiated Emission Measurement

File :TUV Data :#31 Date: 2011-4-14 Time: 21:27:19



Site DG-CB03 Polarization: ***Horizontal*** Temperature: 23
Limit: FCC Class B 3M Radiation Power: AC 120V/60Hz Humidity: 51 %
EUT: 第二次提供模组 Distance: 3m
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 1 ANT 1 POWER14

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		36.1200	43.12	-16.95	26.17	40.00	-13.83	peak	
2		90.1300	51.23	-19.06	32.17	43.50	-11.33	peak	
3		214.5700	45.67	-16.10	29.57	43.50	-13.93	peak	
4		326.1400	43.58	-11.43	32.15	46.00	-13.85	peak	
5		353.6400	45.64	-10.70	34.94	46.00	-11.06	peak	
6	*	523.9000	42.12	-6.47	35.65	46.00	-10.35	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

File :TUV\Data :#31 *Page: 1* Engineer Signature:

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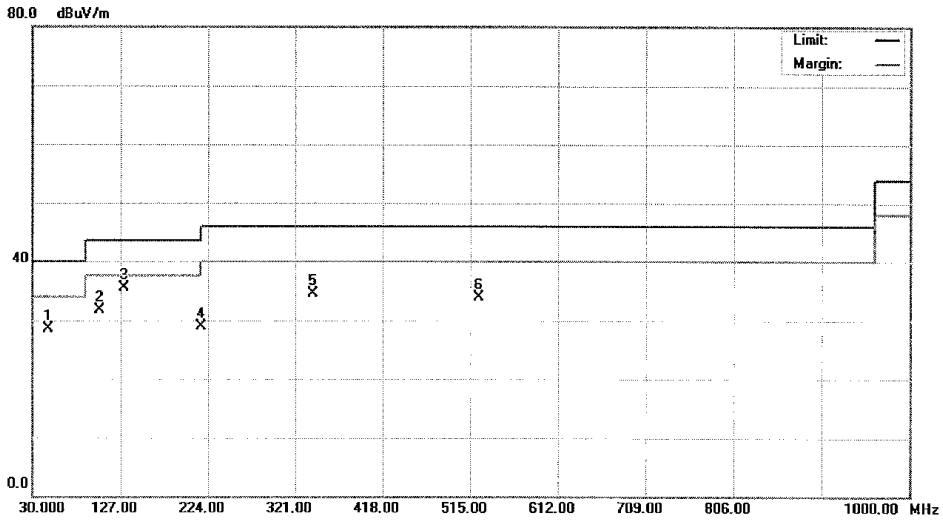
Radiated Emission Measurement

File :TUV Data :#32 Date: 2011-4-14 Time: 21:29:01



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 1 ANT 1 POWER14

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 23
Humidity: 51 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		46.8600	45.51	-17.09	28.42	40.00	-11.58	peak	
2		102.5400	50.01	-18.39	31.62	43.50	-11.88	peak	
3	*	129.3700	53.68	-18.12	35.56	43.50	-7.94	peak	
4		214.6000	44.98	-16.10	28.88	43.50	-14.62	peak	
5		340.1200	45.66	-11.09	34.57	46.00	-11.43	peak	
6		524.2000	40.30	-6.46	33.84	46.00	-12.16	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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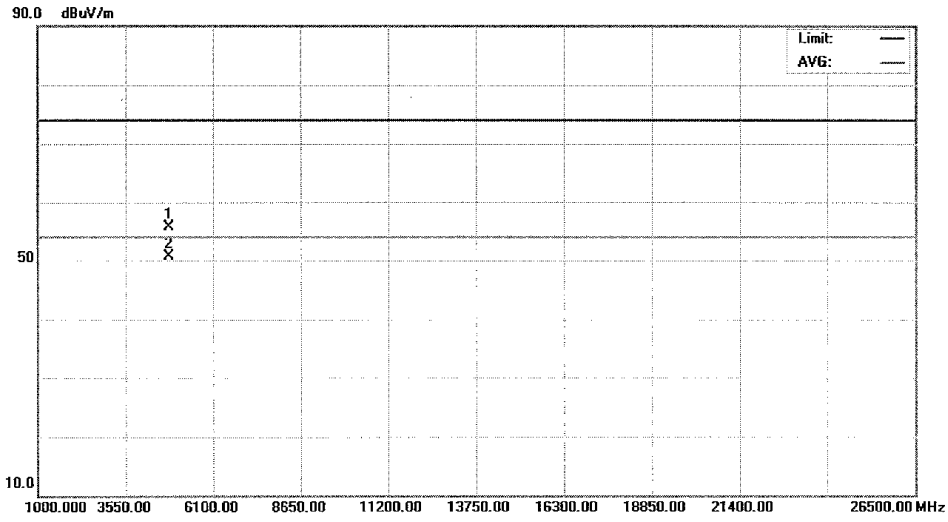
Radiated Emission Measurement

File :TUV Data :#19 Date: 2011-4-14 Time: 20:56:13



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 1 ANT 1 POWER14

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.030	49.37	6.24	55.61	74.00	-18.39	peak	
2	*	4824.030	44.43	6.24	50.67	54.00	-3.33	AVG	

*:Maximum data x:Over limit !:over margin ⟨Reference Only

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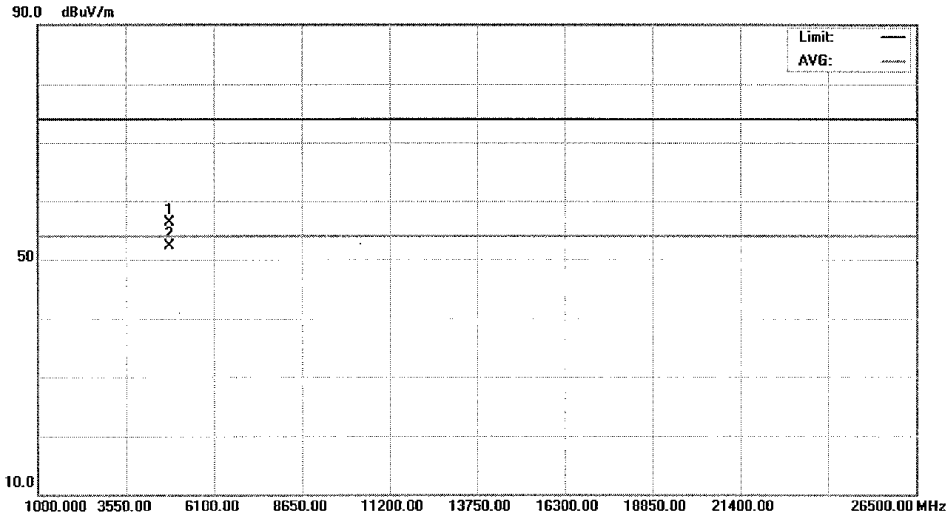
Radiated Emission Measurement

File :TUV Data :#20 Date: 2011-4-14 Time: 20:58:57



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 1 ANT 1 POWER14

Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.012	50.01	6.24	56.25	74.00	-17.75	peak	
2	*	4824.012	46.02	6.24	52.26	54.00	-1.74	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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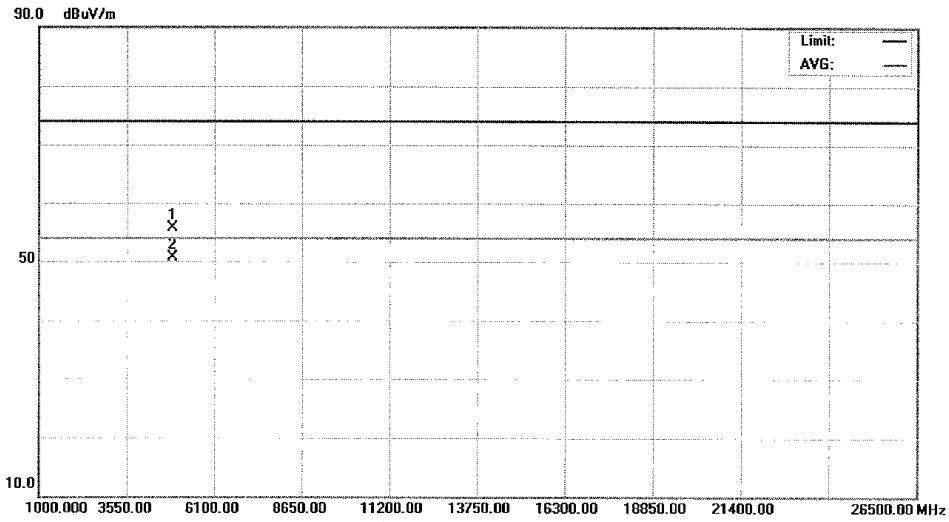
Radiated Emission Measurement

File :TUV Data :#21 Date: 2011-4-14 Time: 21:02:01



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 6 ANT 1 POWER14

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.010	49.21	6.48	55.69	74.00	-18.31	peak	
2	*	4874.010	44.13	6.48	50.61	54.00	-3.39	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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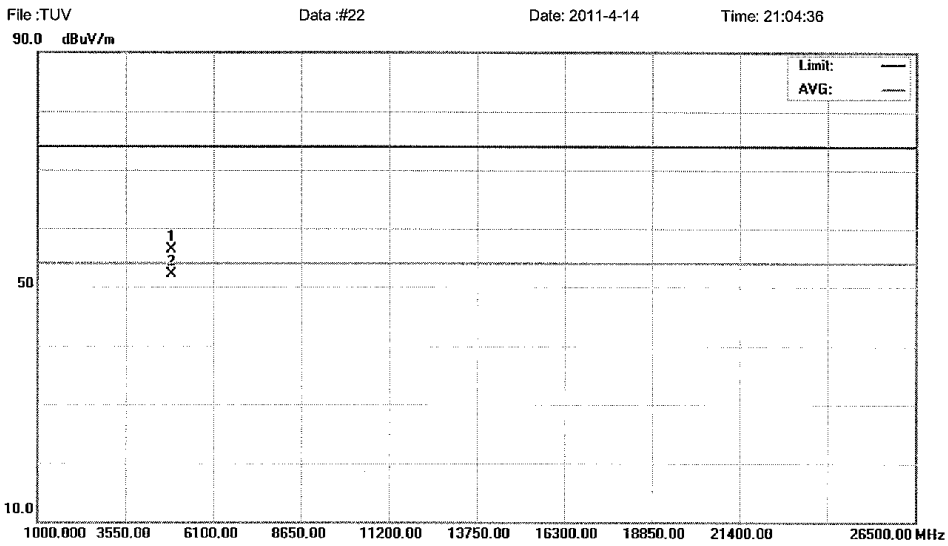
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 6 ANT 1 POWER14

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.010	49.83	6.48	56.31	74.00	-17.69	peak	
2	*	4874.010	45.59	6.48	52.07	54.00	-1.93	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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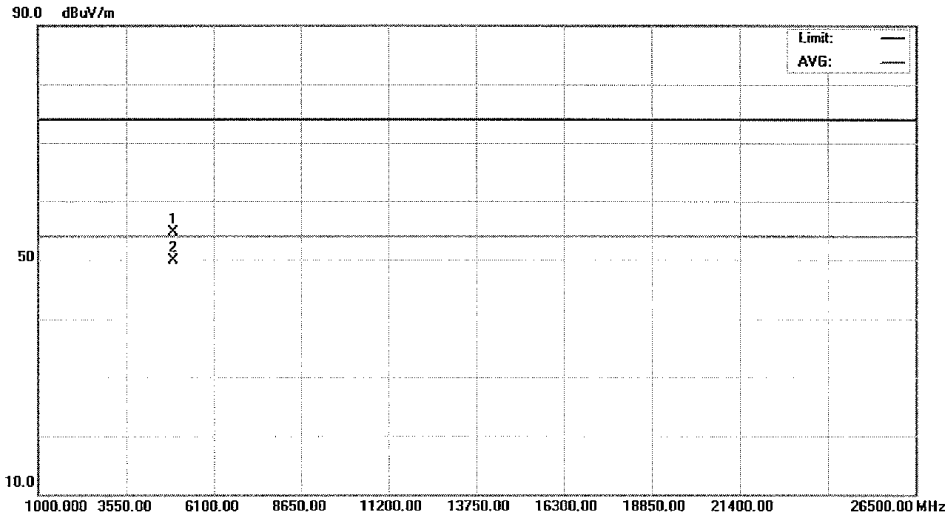
Radiated Emission Measurement

File :TUV Data :#23 Date: 2011-4-14 Time: 21:06:25



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 11 ANT 1 POWER14

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.020	48.02	6.72	54.74	74.00	-19.26	peak	
2	*	4924.020	43.21	6.72	49.93	54.00	-4.07	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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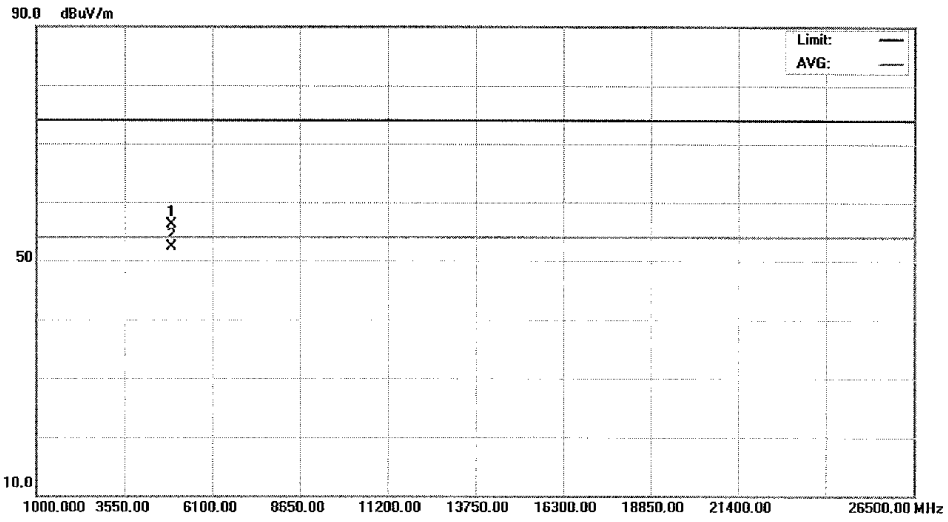
Radiated Emission Measurement

File :TUV Data :#24 Date: 2011-4-14 Time: 21:08:35



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNAL 11 ANT 1 POWER14

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.020	49.35	6.72	56.07	74.00	-17.93	peak	
2	*	4924.020	45.61	6.72	52.33	54.00	-1.67	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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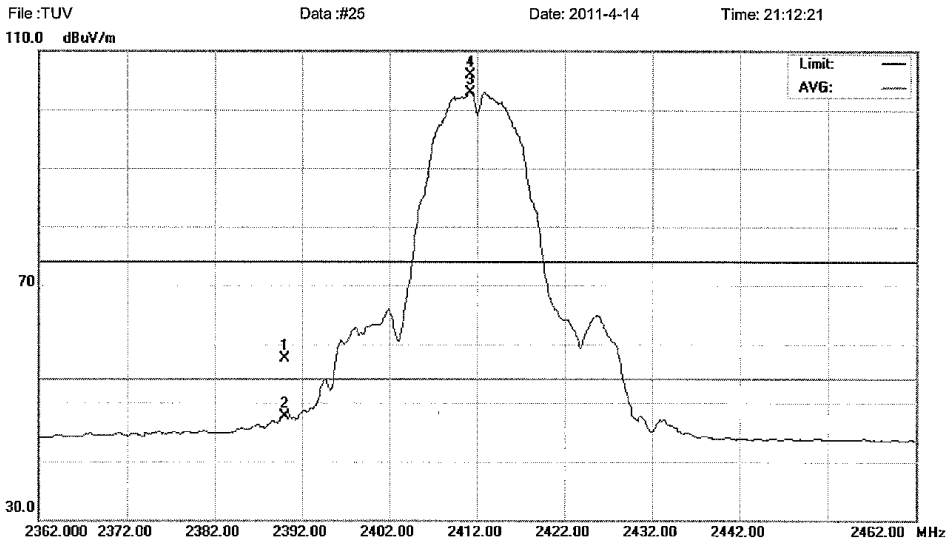
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 1 ANT 1 POWER14

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	26.02	31.54	57.56	74.00	-16.44	peak	
2		2390.000	16.17	31.54	47.71	54.00	-6.29	AVG	
3	*	2411.200	71.39	31.57	102.96	54.00	48.96	AVG	
4	X	2411.310	74.35	31.57	105.92	74.00	31.92	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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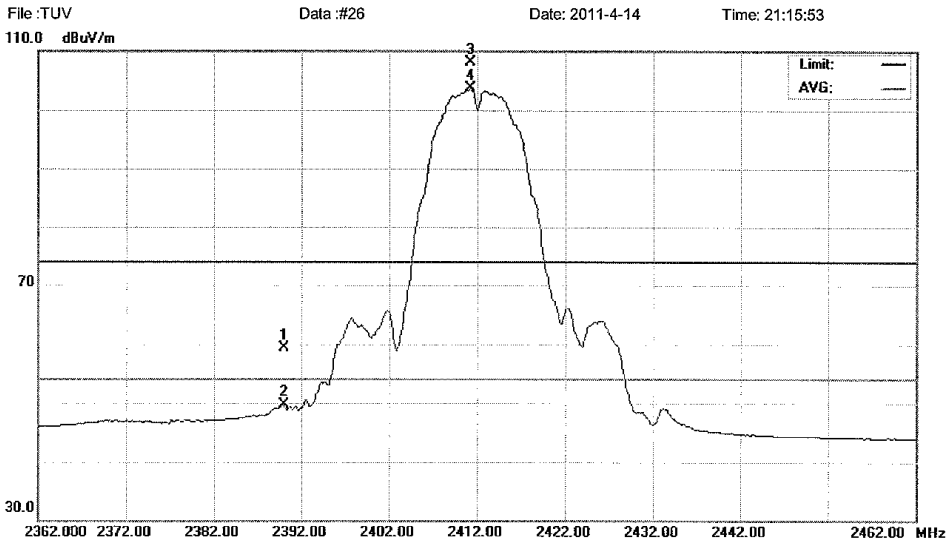
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 1 ANT 1 POWER14

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	27.83	31.54	59.37	74.00	-14.63	peak	
2		2390.000	18.14	31.54	49.68	54.00	-4.32	AVG	
3	X	2411.230	76.63	31.57	108.20	74.00	34.20	peak	
4	*	2411.300	72.11	31.57	103.68	54.00	49.68	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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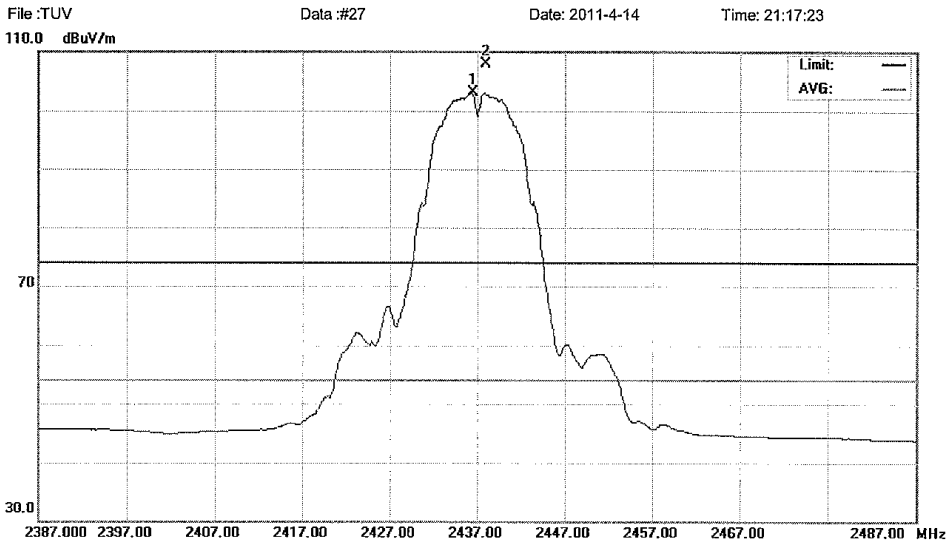
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 6 ANT 1 POWER14

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2436.520	71.53	31.62	103.15	74.00	29.15	peak	
2	*	2438.000	76.23	31.62	107.85	74.00	33.85	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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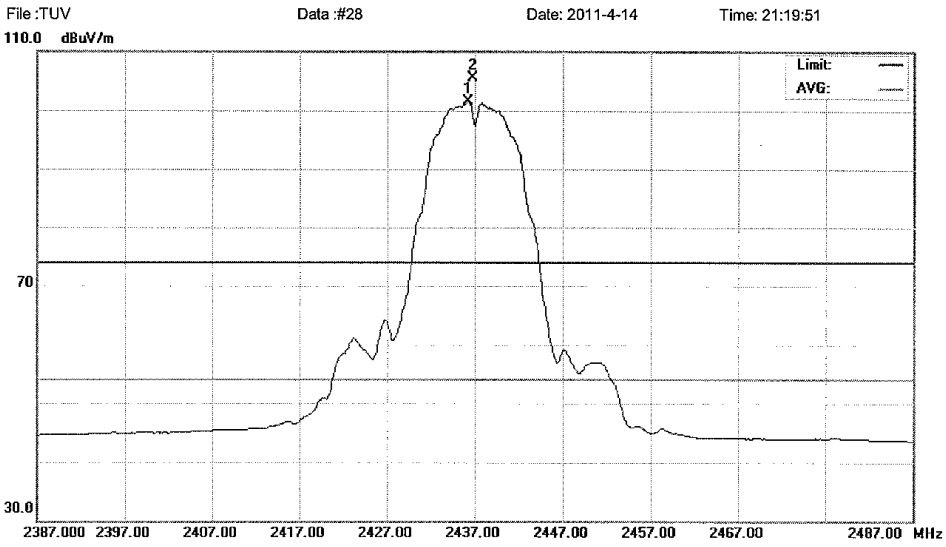
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 6 ANT 1 POWER14

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2436.300	69.90	31.62	101.52	54.00	47.52	AVG	
2	X	2436.810	73.79	31.62	105.41	74.00	31.41	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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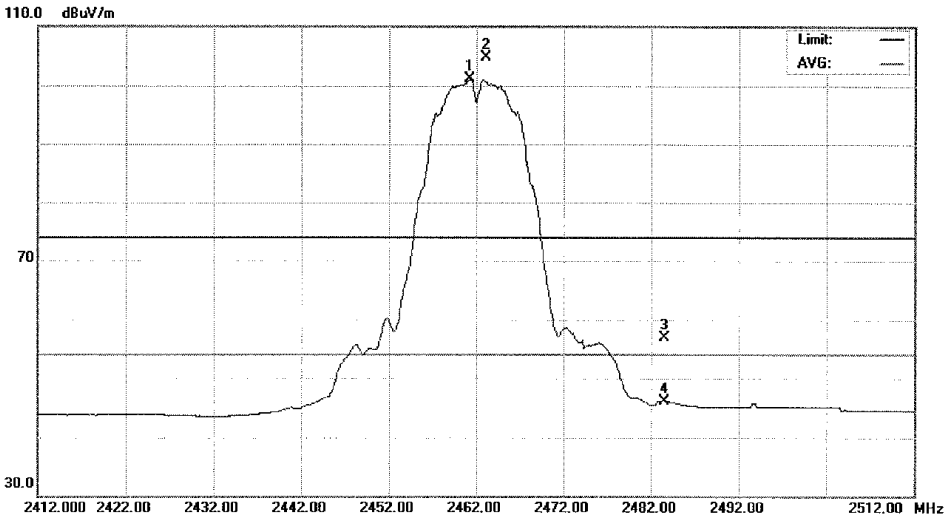
Radiated Emission Measurement

File :TUV Data :#29 Date: 2011-4-14 Time: 21:22:46



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 11 ANT 1 POWER14

Polarization: ***Vertical***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2461.380	69.53	31.65	101.18	54.00	47.18	AVG	
2	X	2463.100	72.98	31.66	104.64	74.00	30.64	peak	
3		2483.500	25.12	31.70	56.82	74.00	-17.18	peak	
4		2483.500	14.48	31.70	46.18	54.00	-7.82	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

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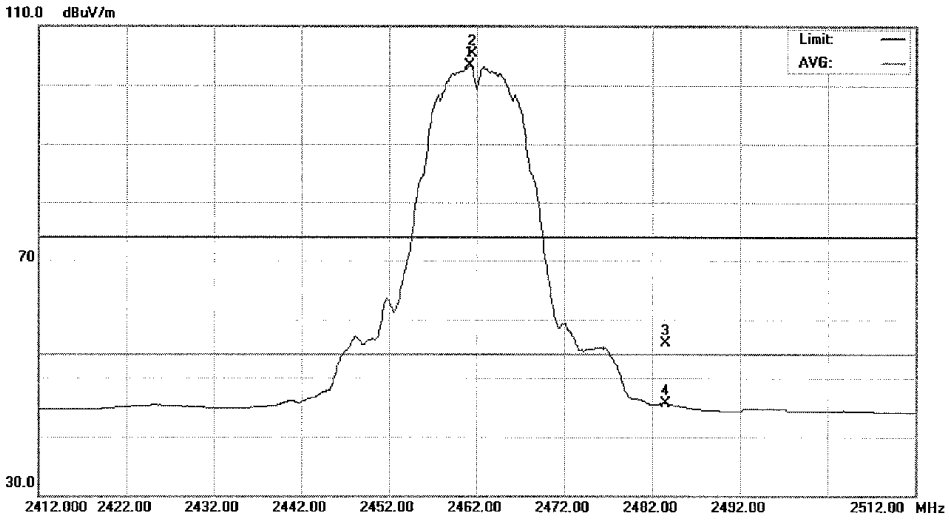
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :TUV Data :#30 Date: 2011-4-14 Time: 21:25:31



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: 第二次提供模组
M/N: 第二次提供模组
Mode: TX
Note: B MODE CHANNEL 11 ANT 1 POWER14

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2461.300	71.67	31.65	103.32	54.00	49.32	AVG	
2	X	2461.530	73.69	31.65	105.34	74.00	31.34	peak	
3		2483.500	24.12	31.70	55.82	74.00	-18.18	peak	
4		2483.500	14.01	31.70	45.71	54.00	-8.29	AVG	

*:Maximum data x:Over limit !:over margin 〈Reference Only

AC power conducted emission

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

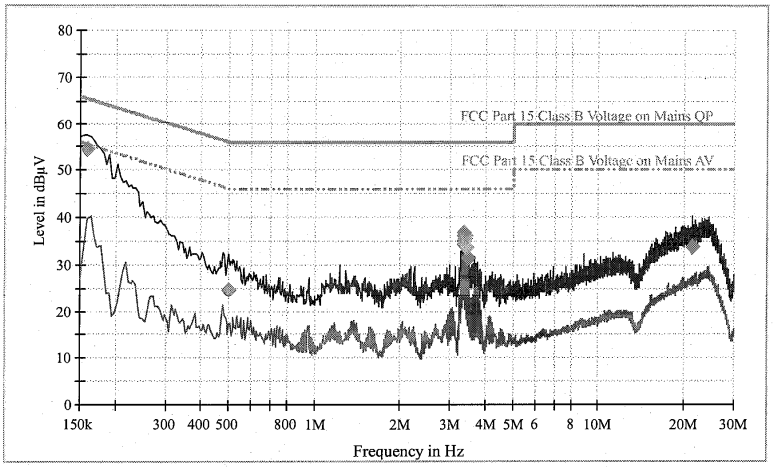
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Desay
Test Item:	DVD player
Identification:	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Conducted Emission
Operation Mode:	Normal operation
Climate Condition:	20 ℃; 45 %RH; 101 kPa.
Test Voltage/ Freq.:	AC 120 V/ 60 Hz
Port / Line:	AC Mains(L1+N)
Receipt No.:	173059541
Report No.:	16030075 001
Result:	Pass
Comment:	/
Hardware Setup:	1phase LISN ESH3-Z5 to ESU 26
Level Unit:	dBµV

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESU 26

FCC Part 15 DV ESH3-Z5 150k to 30M ESU 26



Sign-off Test Data

Date: 3/17/2011 Time: 3:39:21 Tested by: HCH 2011.3.23 Checked Reviewed by: KK 2011 3 23

Radiated emission (below 1 GHz)

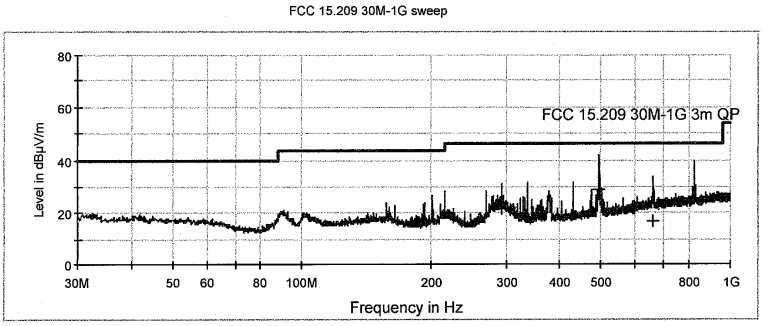
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	Normal mode
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
293.597500	21.5	12.7	24.5	46.0	H
496.102500	28.7	16.5	17.3	46.0	H
661.591250	16.8	19.2	29.2	46.0	H
826.976250	25.7	20.9	20.3	46.0	H

Sign-off Test Data

Date: 22/03/2011 - Time: 16:22:16 Tested by: _____ Reviewed by: _____

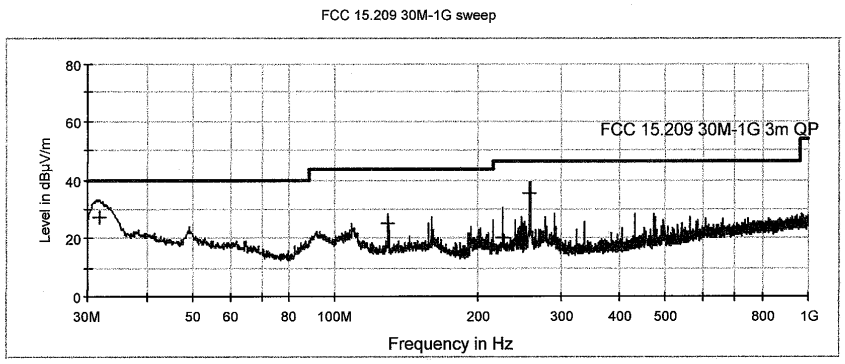
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	Normal mode
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
31.950000	27.2	13.3	12.8	40.0	V
129.300000	25.1	12.8	18.4	43.5	V
226.900000	19.9	11.0	26.1	46.0	V
258.800000	35.5	11.8	10.5	46.0	V

Sign-off Test Data

Date: 22/03/2011 - Time: 16:49:05 Tested by: _____ Reviewed by: _____

Band Edge Emission , 802.11g and 802.11n mode

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

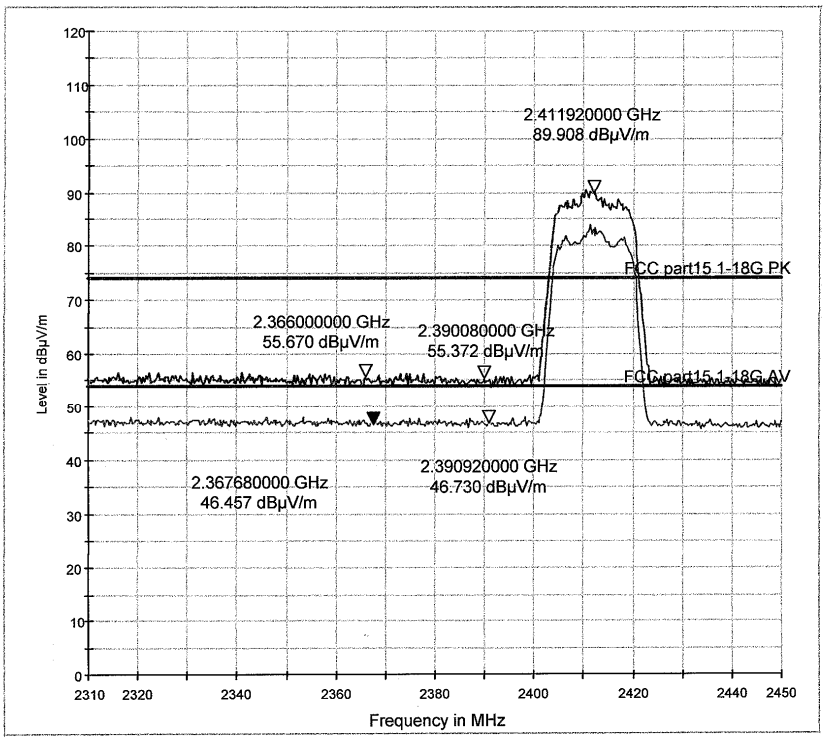
Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low Channel (G mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1

Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 - Time: 23:21:19 Tested by: 2011.3.23 Checked Reviewed by: KK 2011.3.23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

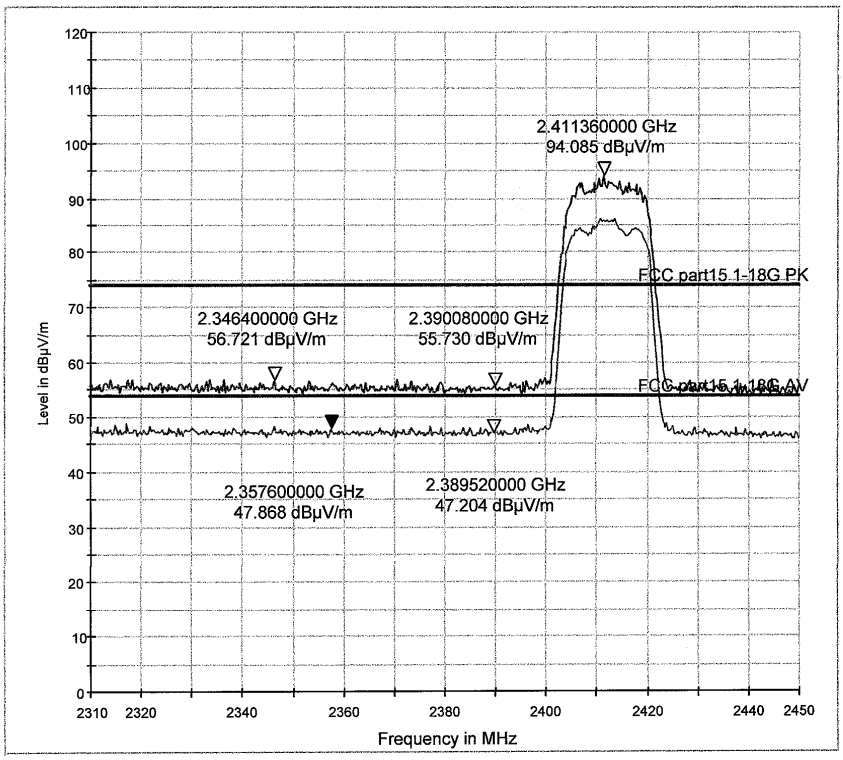
Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low Channel (G mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1

Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 - Time: 23:23:15 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

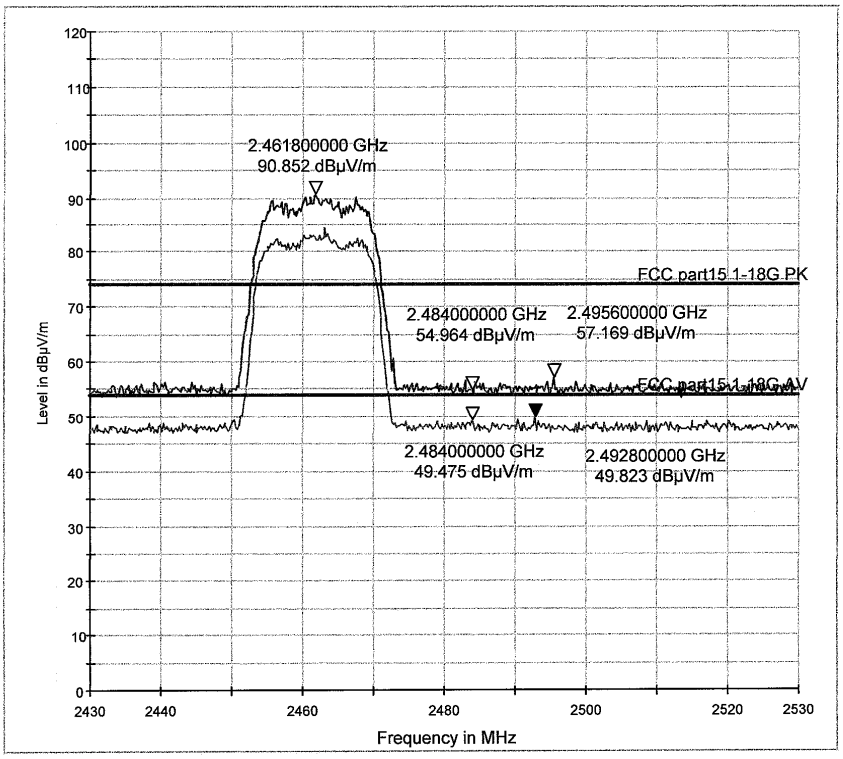
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High Channel (G mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 - Time: 22:46:54 Tested by: 2011 3 23 Checked Reviewed by: KK 2011 3 23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

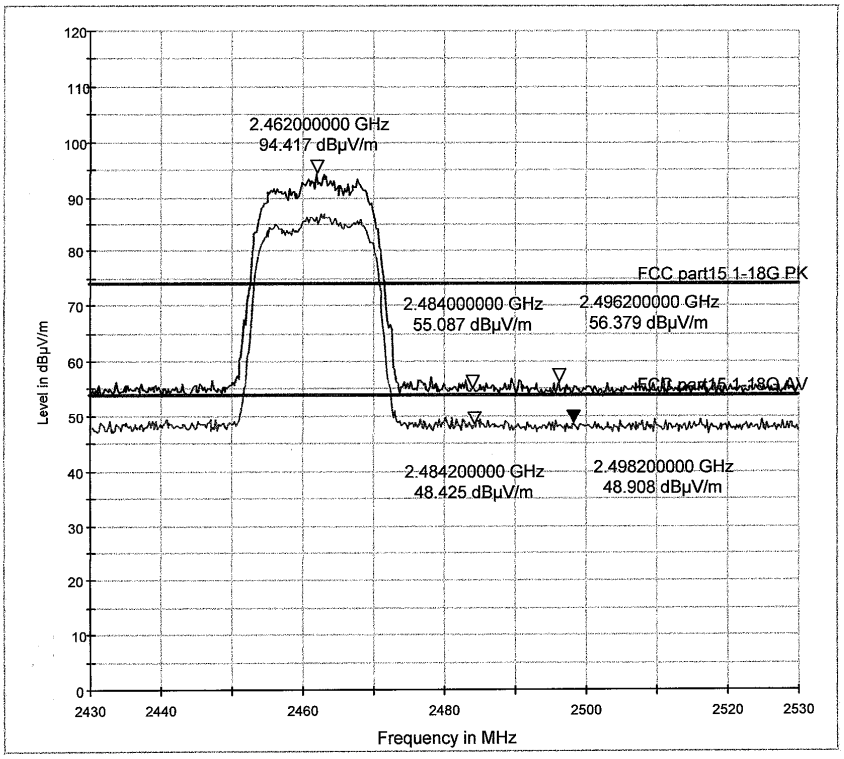
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High Channel (Gmode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 - Time: 22:44:19 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

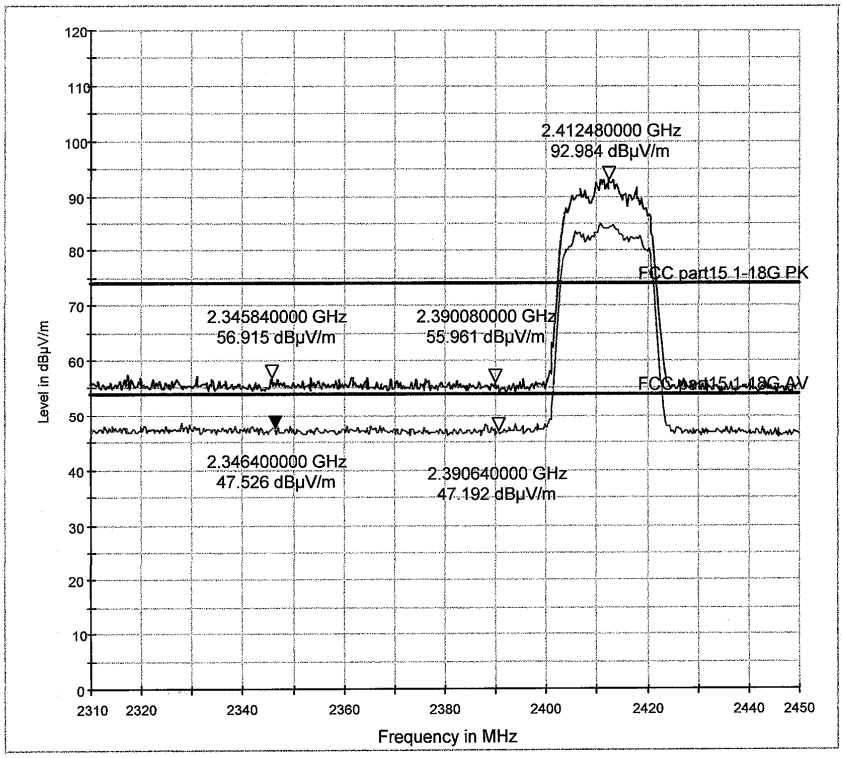
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low Channel (HT20 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 - Time: 22:26:08 Tested by: HYC 2011.3.23 Checked Reviewed by: KK 2011 3 23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

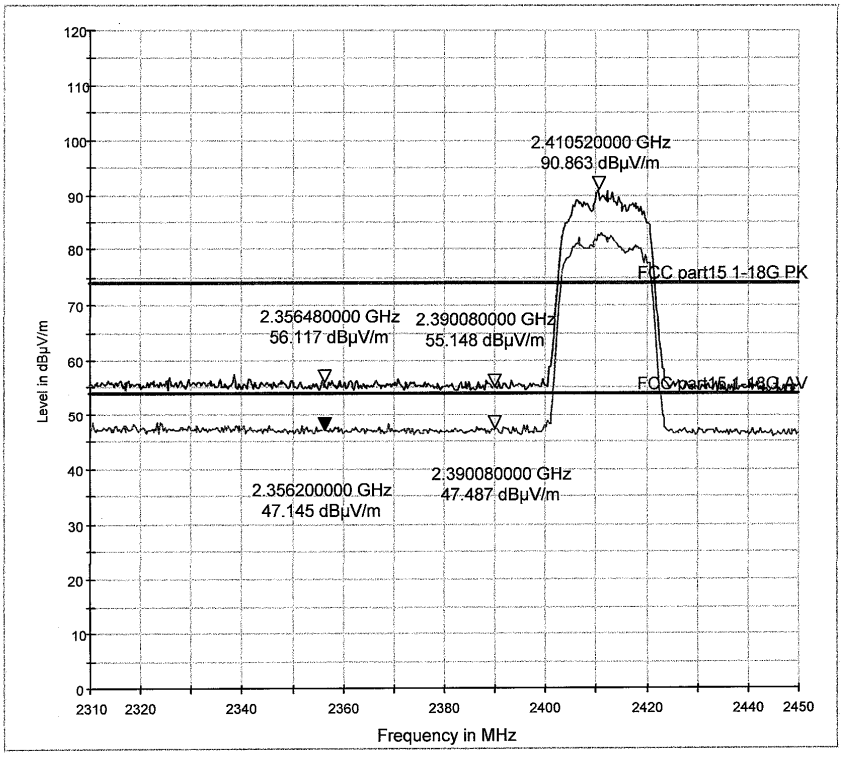
Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low Channel (HT20 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1

Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 Time: 22:23:50 Tested by: HYC 2011.3.23 Checked Reviewed by: KK 2011 3 23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

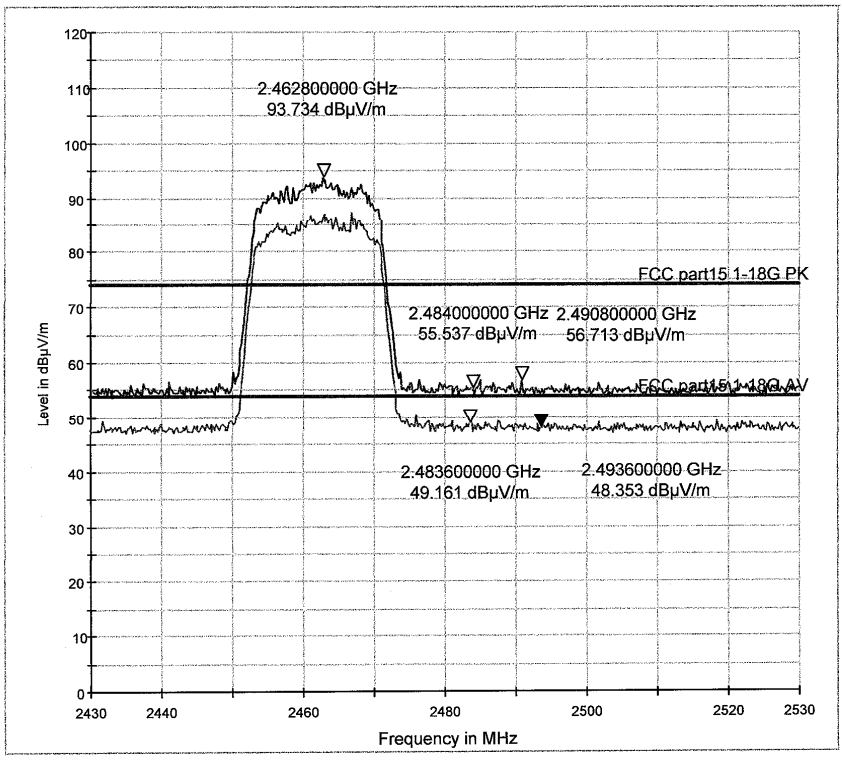
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High Channel (HT20 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 - Time: 22:34:29 Tested by: HYC 2011.3.23 Checked Reviewed by: KK 2011 3 23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

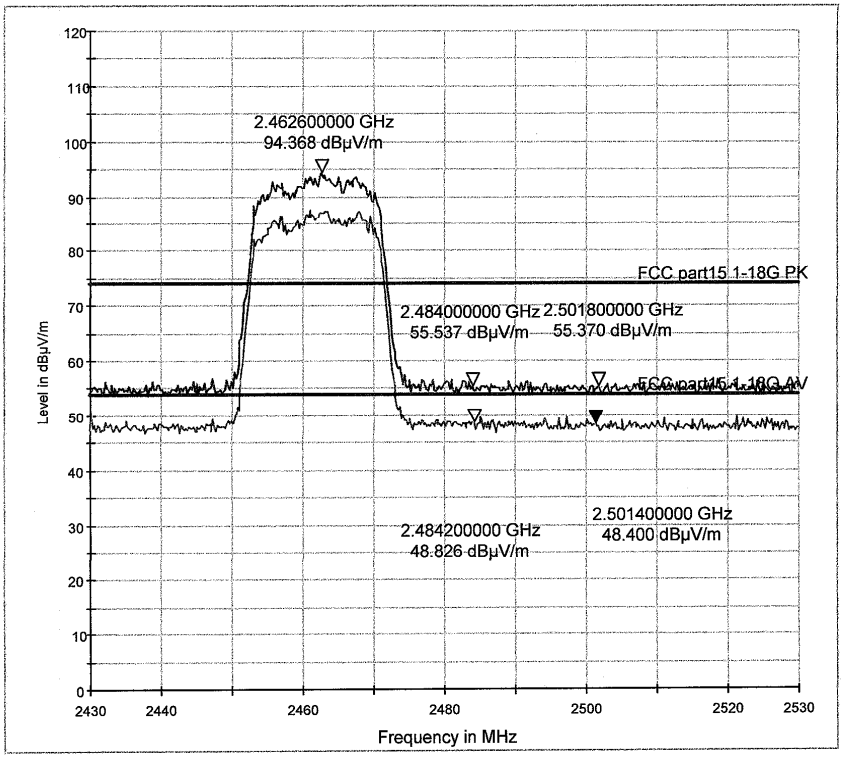
Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High Channel (HT20 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1

Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 Time: 22:37:42 Tested by: HYC 2011.3.23 Checked Reviewed by: KK 2011 3 23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

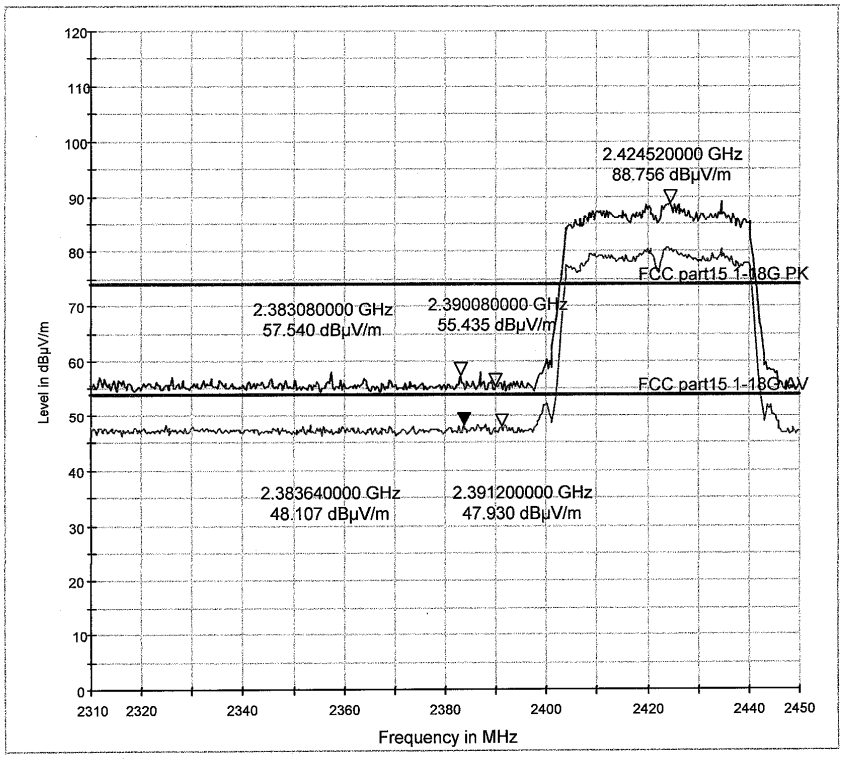
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low Channel (HT40 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 Time: 22:17:42 Tested by: Reviewed by:

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

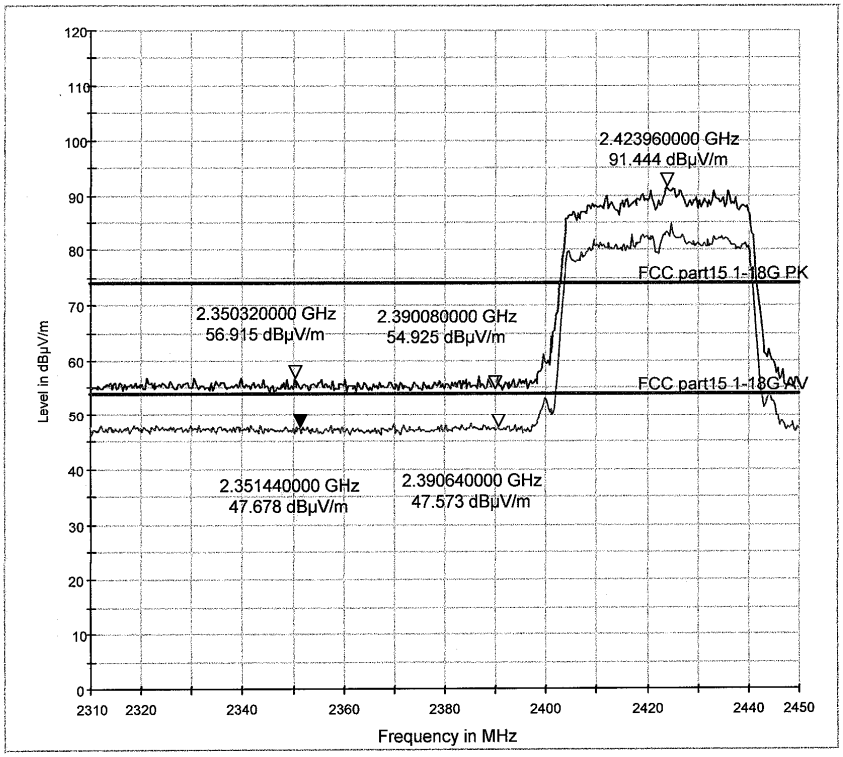
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low Channel (HT40 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 Time: 22:20:08 Tested by: HYC 2011.3.23 Checked Reviewed by: KK 2011 3 23 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

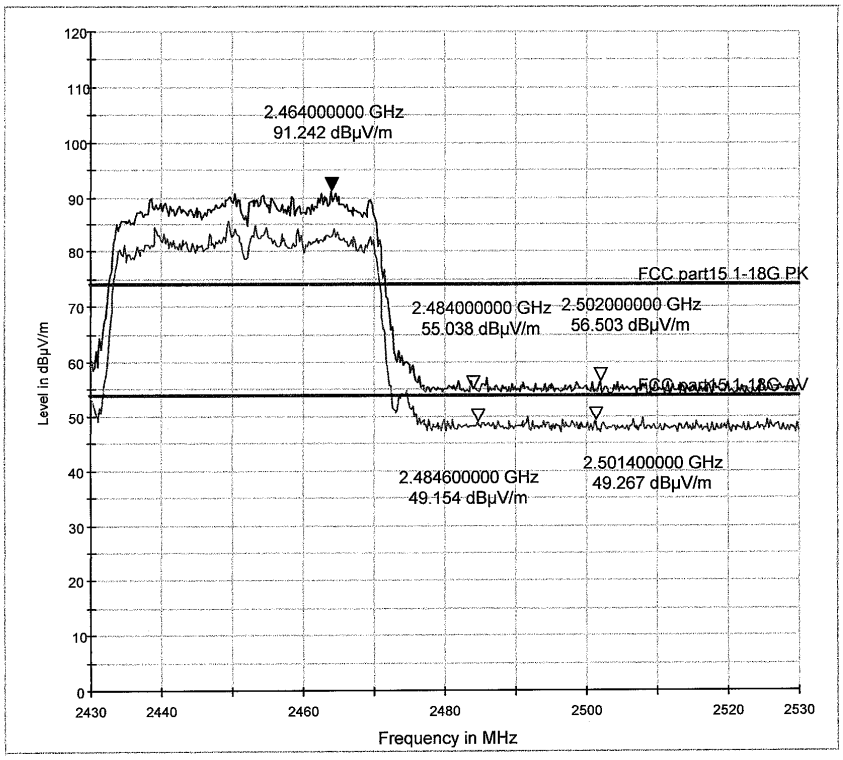
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High Channel (HT40 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Date: 22/03/2011 Time: 22:05:53 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

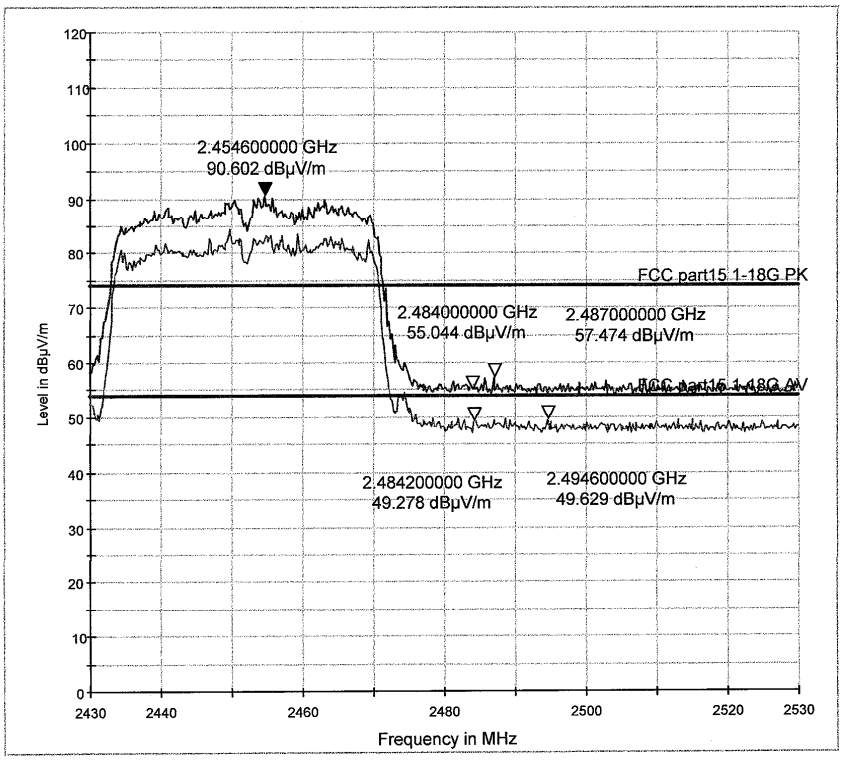
EMC Test Record (Emission)

Common Information

Manufacturer:	Desay
Test Item:	DVD player
Identification	DX-WBRDVD1
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High Channel (HT40 mode)
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC 120V / 60Hz
Receipt No.:	173059541
Report No.	16030075 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	2GHz-3GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906

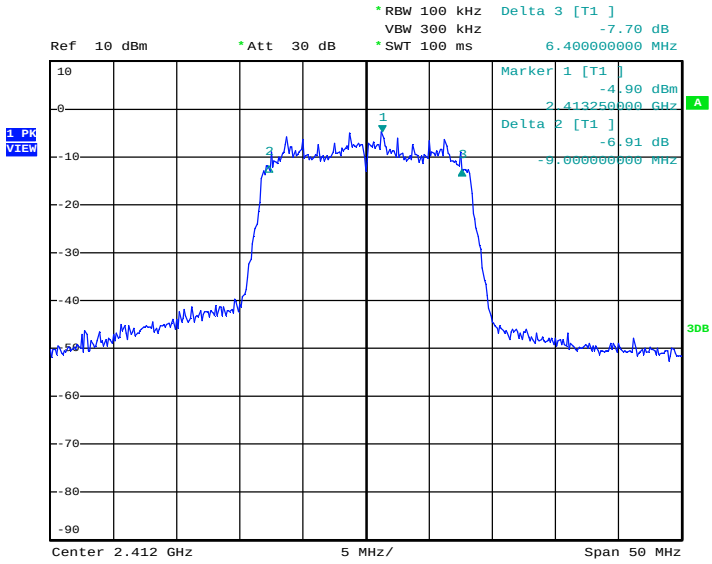


Sign-off Test Data

Date: 22/03/2011 - Time: 22:09:30

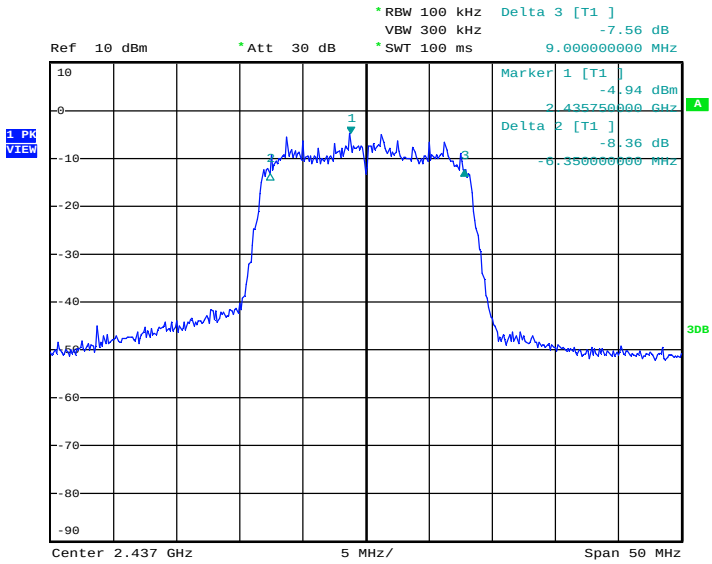
Tested by: _____ Reviewed by: _____

6dB bandwidth (802.11g 2412MHz)



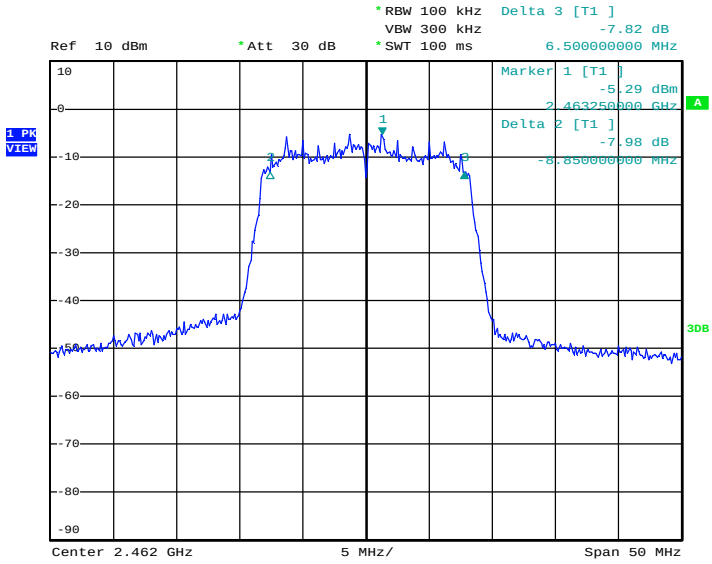
Date: 14.MAR.2011 21:52:12

6dB bandwidth (802.11g 2437MHz)



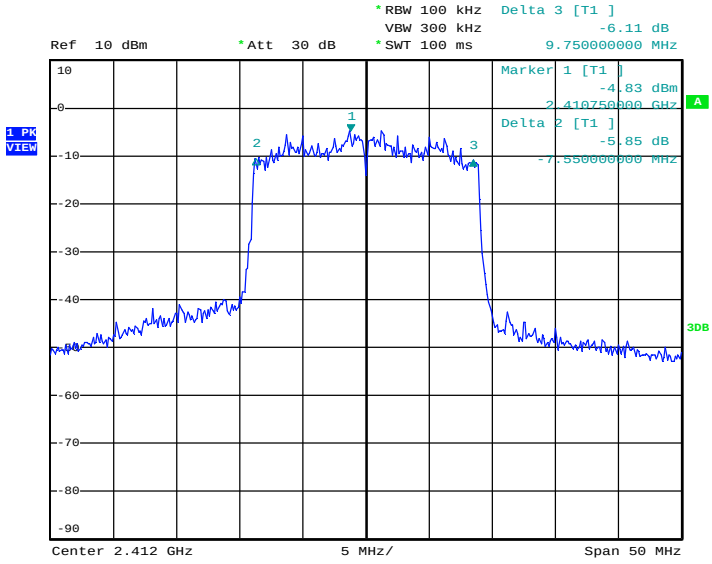
Date: 14.MAR.2011 21:54:08

6dB bandwidth (802.11g 2462MHz)



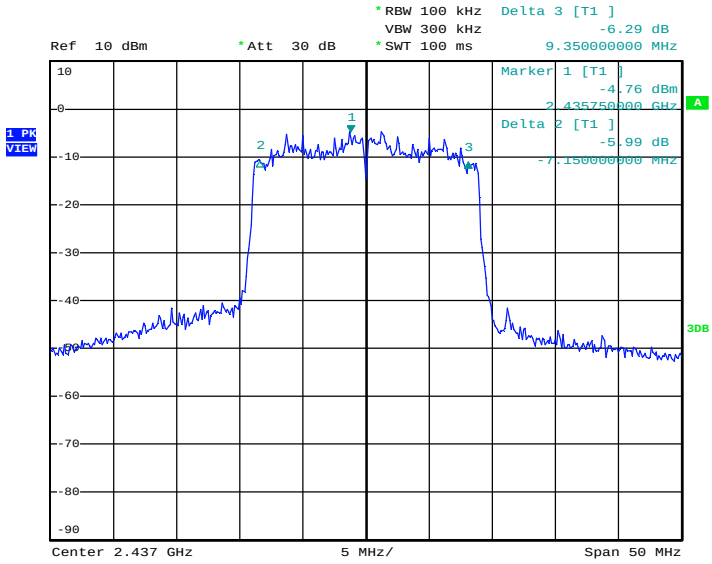
Date: 14.MAR.2011 21:56:10

6dB bandwidth (802.11n HT20 2412MHz)



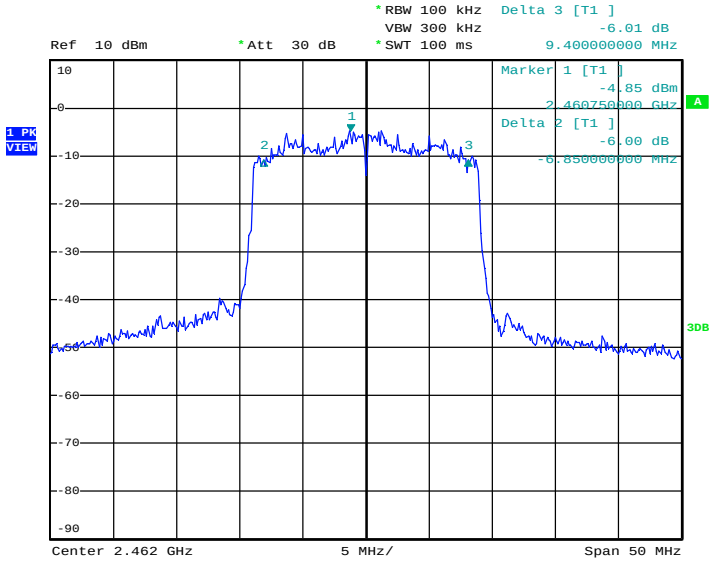
Date: 14.MAR.2011 22:07:20

6dB bandwidth (802.11n HT20 2437MHz)



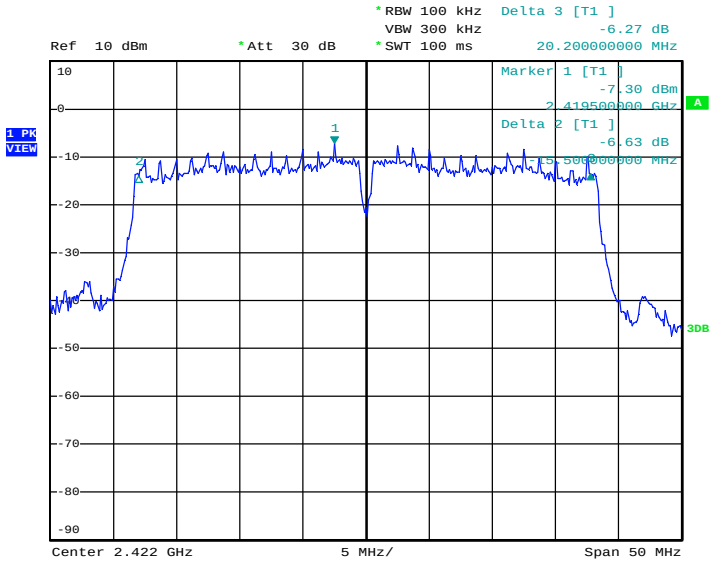
Date: 14.MAR.2011 22:04:29

6dB bandwidth (802.11n HT20 2462MHz)



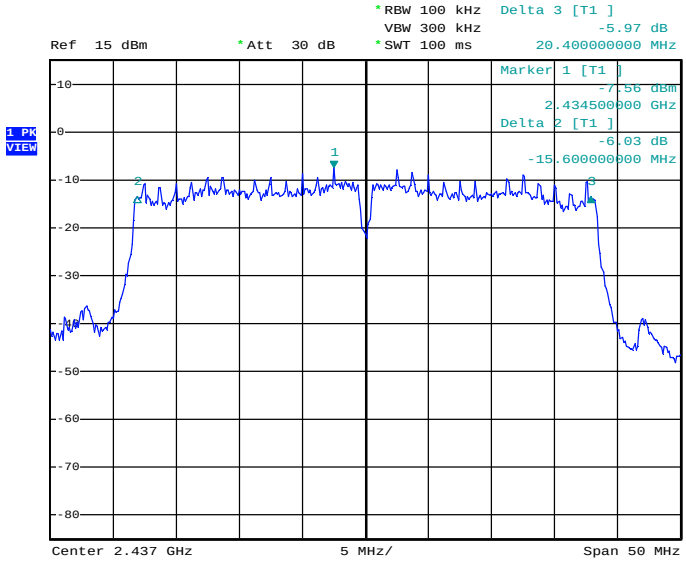
Date: 14.MAR.2011 22:02:43

6dB bandwidth (802.11n HT40 2422MHz)



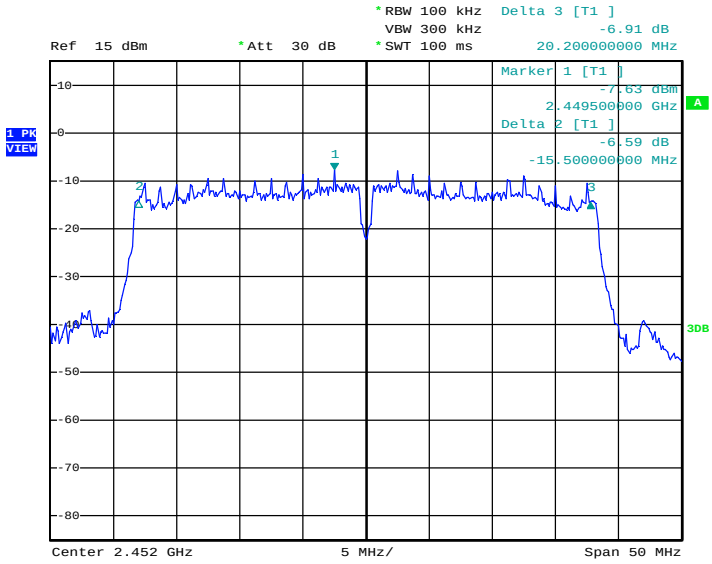
Date: 14.MAR.2011 22:10:26

6dB bandwidth (802.11n HT20 2437MHz)



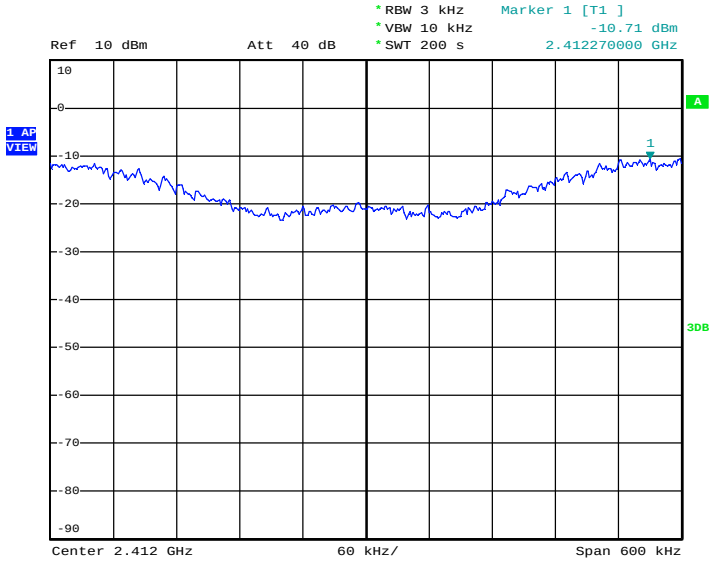
Date: 14.MAR.2011 22:13:40

6dB bandwidth (802.11n HT20 2452MHz)



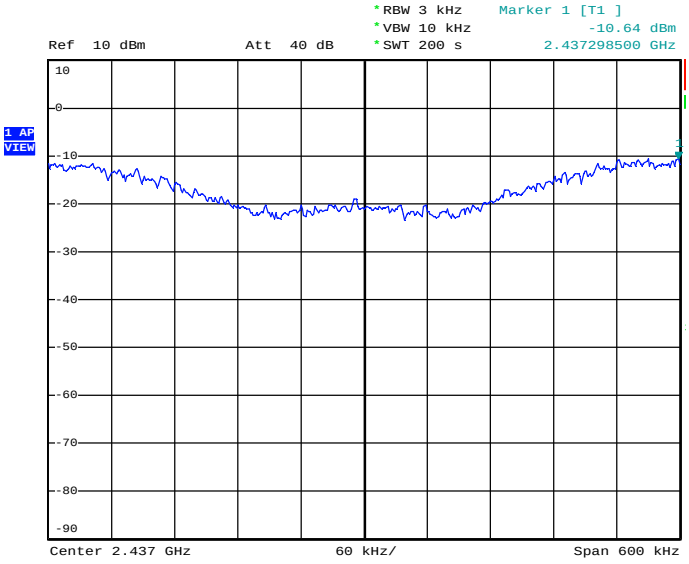
Date: 14.MAR.2011 22:15:16

Power spectral density (802.11g 2412MHz)



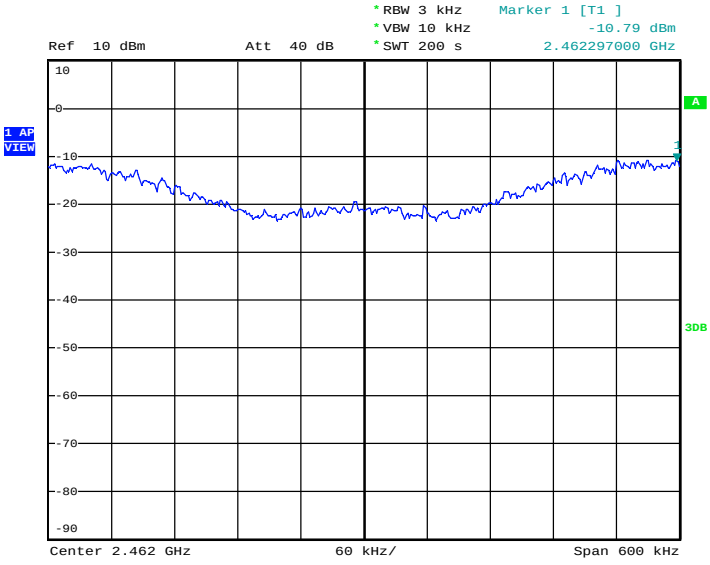
Date: 15.MAR.2011 01:56:18

Power spectral density (802.11g 2437MHz)



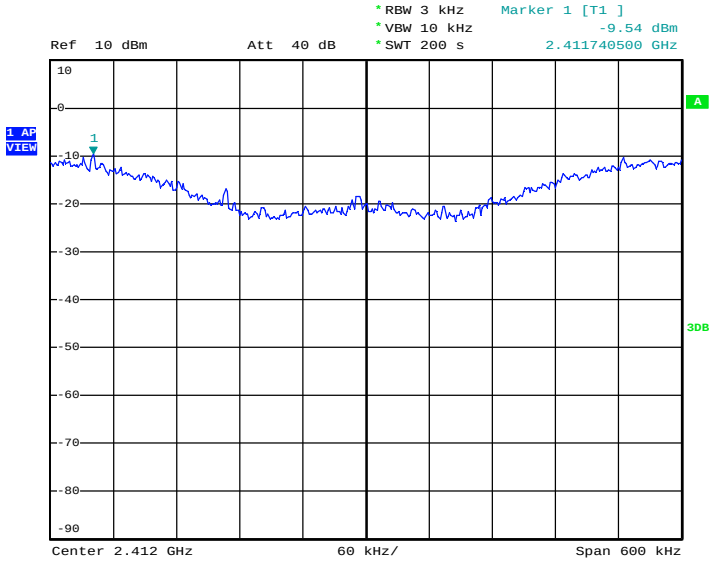
Date: 15.MAR.2011 01:51:40

Power spectral density (802.11g 2462MHz)



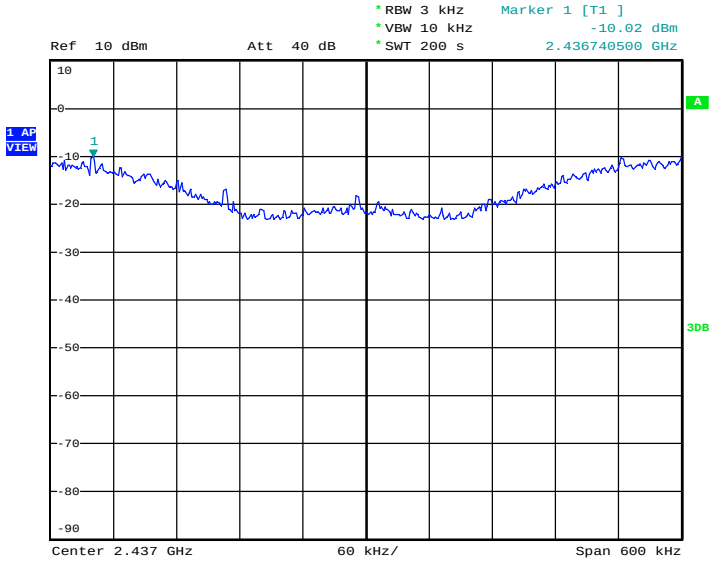
Date: 15.MAR.2011 01:46:44

Power spectral density (802.11n HT20 2412MHz)



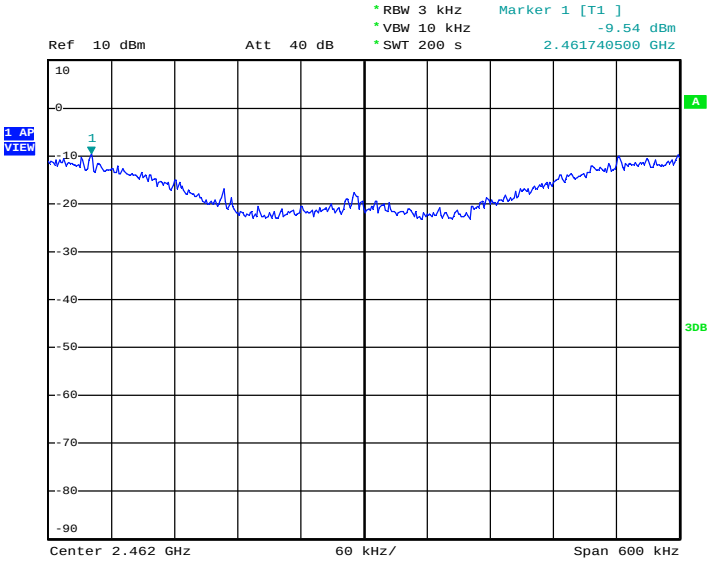
Date: 15.MAR.2011 02:26:22

Power spectral density (802.11n HT20 2437MHz)



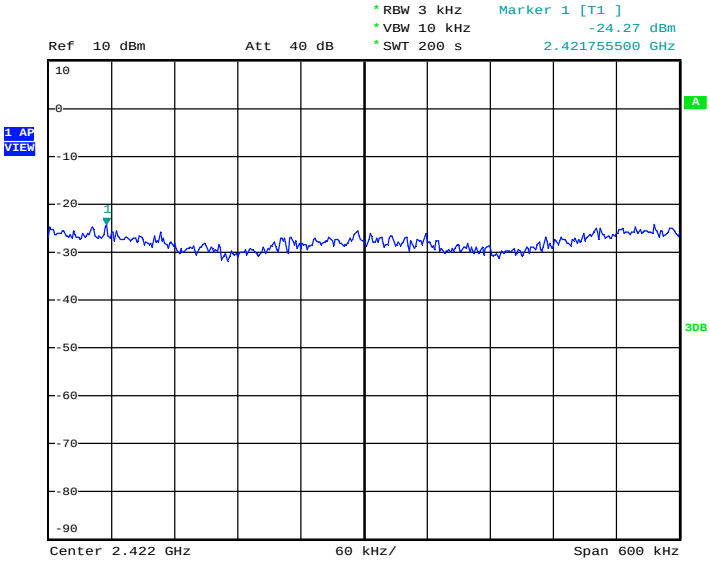
Date: 15.MAR.2011 02:21:41

Power spectral density (802.11n HT20 2462MHz)



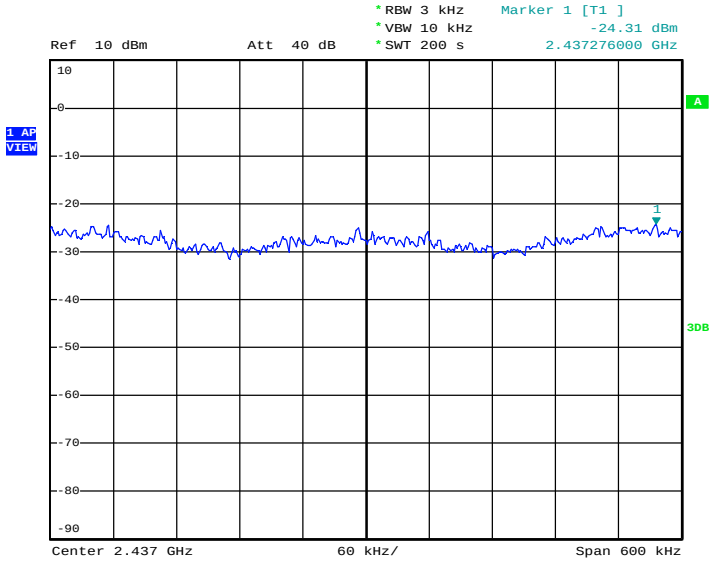
Date: 15.MAR.2011 02:17:12

Power spectral density (802.11n HT40 2422MHz)



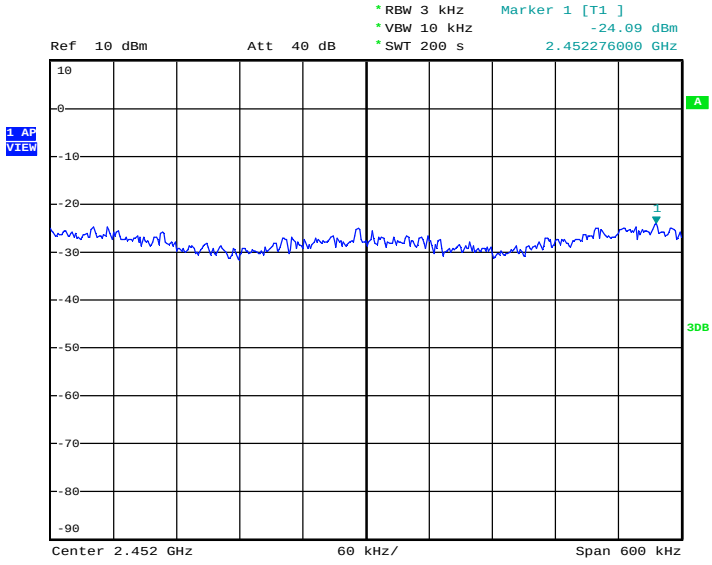
Date: 15.MAR.2011 02:32:25

Power spectral density (802.11n HT40 2437MHz)



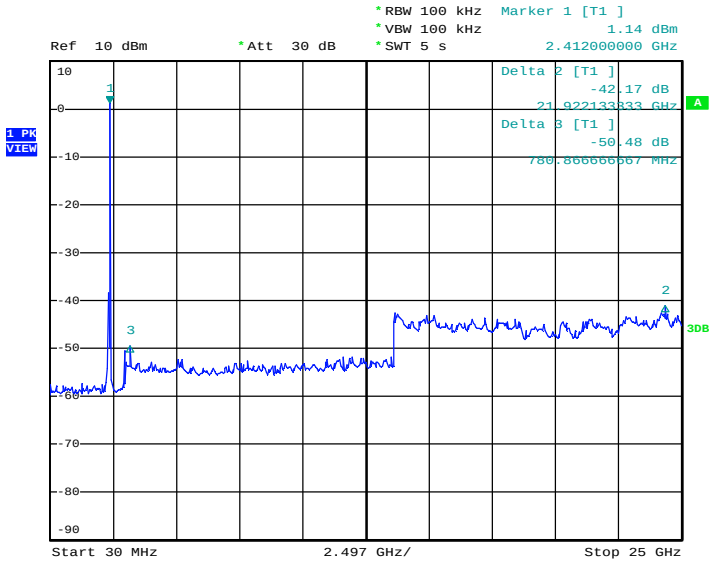
Date: 15.MAR.2011 02:36:50

Power spectral density (802.11n HT40 2452MHz)



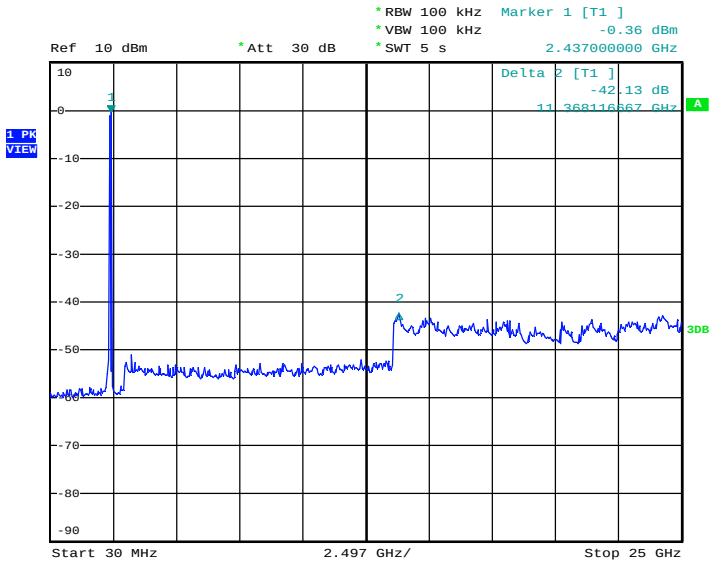
Date: 15.MAR.2011 02:41:19

Conducted spurious emission at antenna port (802.11g 2412MHz)



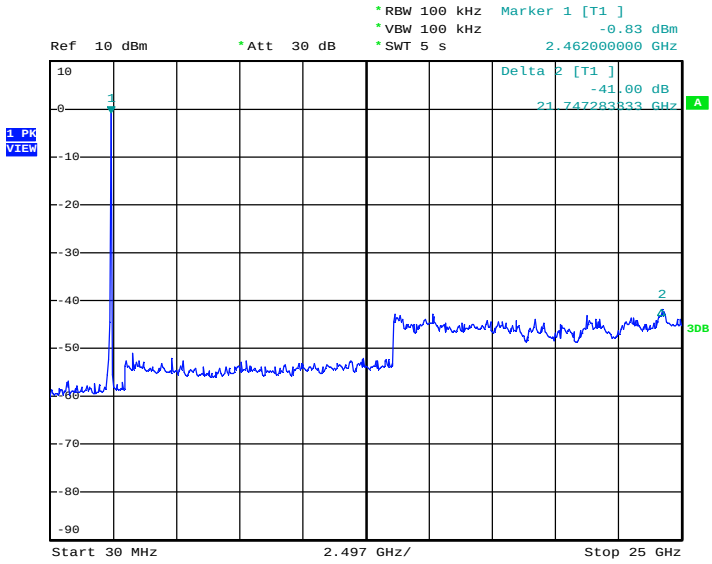
Date: 15.MAR.2011 03:51:04

Conducted spurious emission at antenna port (802.11g 2437MHz)



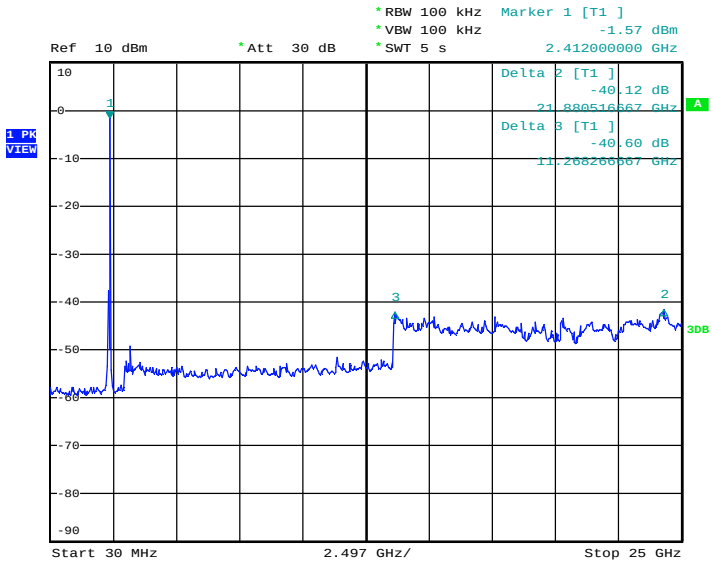
Date: 15.MAR.2011 03:53:01

Conducted spurious emission at antenna port (802.11g 2462MHz)



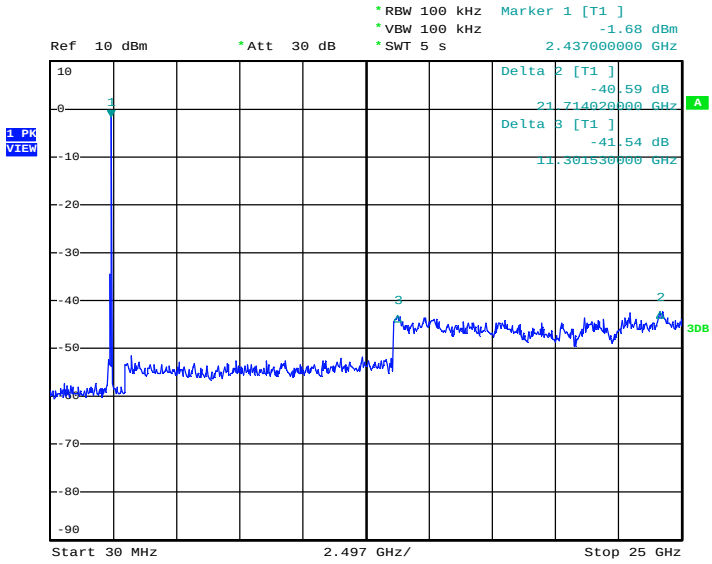
Date: 15.MAR.2011 03:54:35

Conducted spurious emission at antenna port (802.11n HT20 2412MHz)



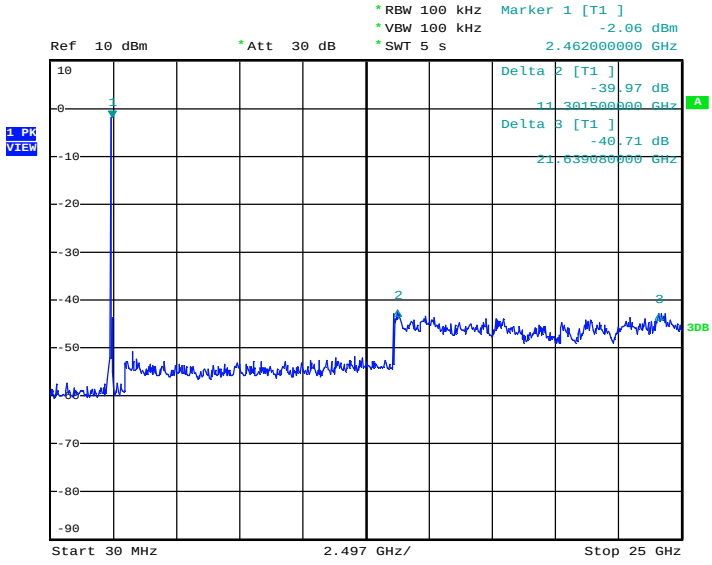
Date: 15.MAR.2011 03:56:24

Conducted spurious emission at antenna port (802.11n HT20 2437MHz)



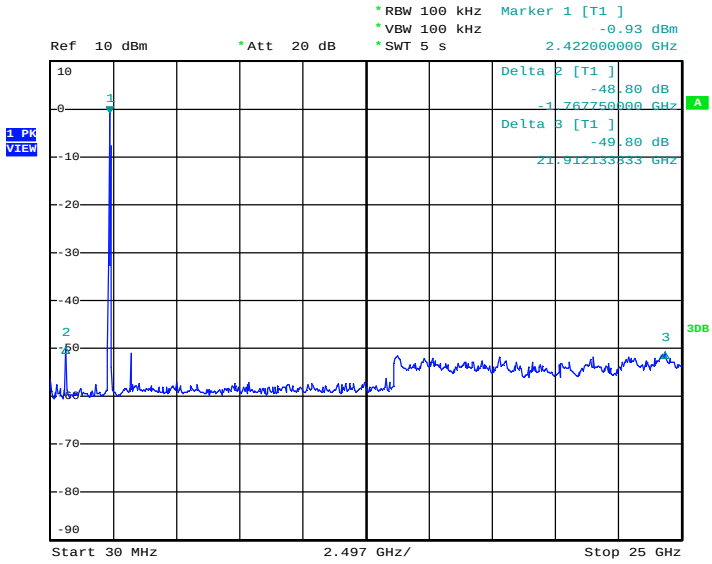
Date: 15.MAR.2011 04:02:05

Conducted spurious emission at antenna port (802.11n HT20 2462MHz)



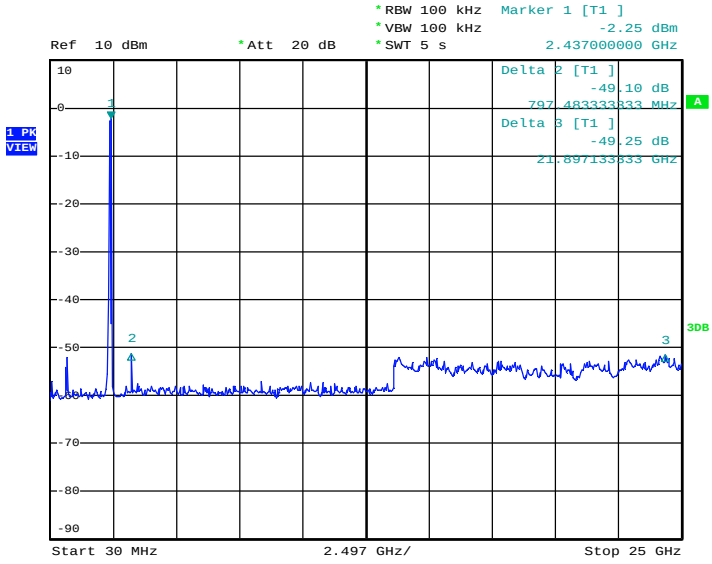
Date: 15.MAR.2011 04:03:39

Conducted spurious emission at antenna port (802.11n HT40 2422MHz)



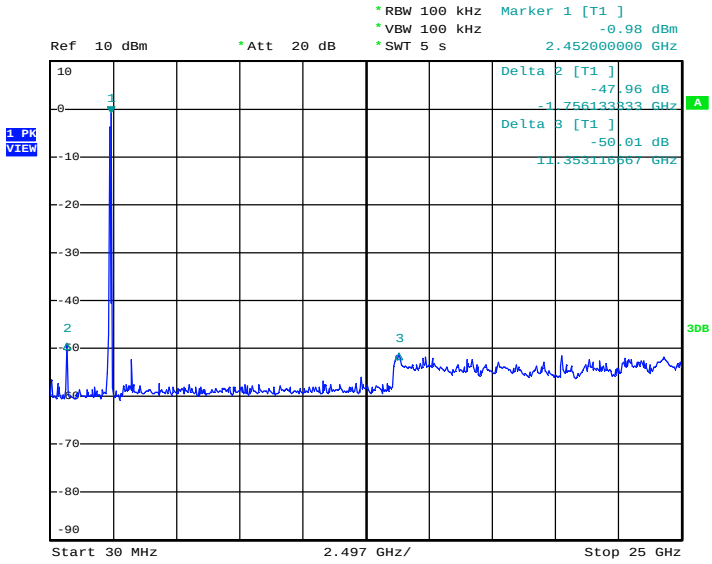
Date: 15.MAR.2011 03:32:05

Conducted spurious emission at antenna port (802.11n HT40 2437MHz)



Date: 15.MAR.2011 03:34:51

Conducted spurious emission at antenna port (802.11n HT40 2452MHz)



Date: 15.MAR.2011 03:36:36