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Auftraggeber:	Desay A&V Science an	d Technology Co., Ltd.	
Client:	DESAY 3rd Industry Zor	ne, Chenjiang Town, Huizho	u City, Guandong, P.R. China
Gegenstand der Prüfung: Test item:	Blu-ray Disc Player		<u></u>
Bezeichnung: Identification:	DX-WBRDVD1	Certificate Number: Certificate Number	FCC ID: XJGDS0010
Wareneingangs-Nr.: Receipt No.:	173059541	Eingangsdatum: Date of receipt:	Mar. 15, 2011
Prüfort: Testing location:	TÜV Rheinland (Guanç Laboratory	gdong) Ltd. EMC	Listed test laboratory according to FCC rules
	Guangzhou Auto Mark Guangshan Road, Gua	et, Yuan Gang Section of angzhou 510650,	section 2.948 and RSS Gen, for measuring devices.
	P. R. China		
Prüfgrundlage:	ANSI C63.4: 2003		
Test specification:	FCC Part 15: 10-1-09	Edition, Subpart C section	n 15.207, 15.209 and 15.247
Prüfergebnis: Test Result:	Der Prüfgegenstand ei The test item passed th	ntspricht oben genannter to test specification(s).	Prüfgrundlage(n).
Prüflaboratorium:			
Testing Laboratory:	TÜV Rheinland (Guar	ngdong) Ltd.	
	TÜV Rheinland (Guar	ngdong) Ltd.  kontrolliert/ reviewed by:	
Testing Laboratory:	g ngineer		lanager Unterschrift
Testing Laboratory:  geprüft/ tested by:  Ken Kuan  Wan-Yu   Project Er  Datum Name/Stellu  Name/Positit  Sonstiges/ Other Aspects:  Abkürzungen: P(ass) = ents  F(ail) = ents  N/A = nich  N/T = nich	g ngineer ung unterschrift on Signature  pricht Prüfgrundlage pricht nicht Prüfgrundlage t anwendbar t getestet	kontrolliert/ reviewed by:  Mar. 24, 291/ Project Norme/Positions: P(ass) F(ail) N/A N/T	lanager Unterschift tion Signature



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# **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)	Out-Of-Band Emission measurement	Pass



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## 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



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## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment** 

Kind of Equipment	Туре	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	eject Filter BRM50702 Micro-Tro		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

## 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.



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## 2.5 Measurement Uncertainty

Uncertainty for conducted emissions measurements is  $\pm$  2.68dB. Uncertainty for radiated emissions measurements is  $\pm$  4.94dB (30MHz-1GHz),  $\pm$  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%.

## 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 (Guangdong) file for certification follow-up purposes.

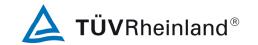
## 2.7 Status of facility used for testing

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.

## 3 General Product Information

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



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## 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): 2412MHz2462MHz
		IEEE 802.11n (HT40): 2422MHz2452MHz
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
		HDMI
		USB
		Audio/Video output
		Coaxial output
Protection Class	:	П

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



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## 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



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## 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. 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.



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## 4.5 Test set-up

#### **Diagram 1 of Configuration for Testing Radiated Emission below 30MHz**

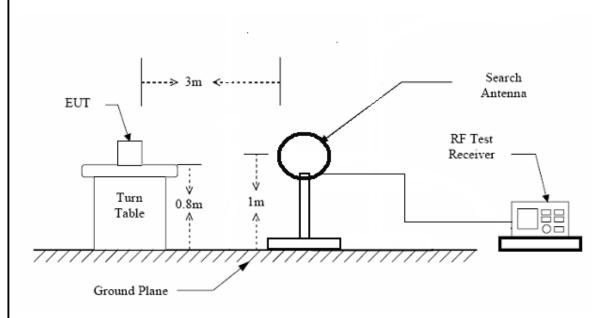
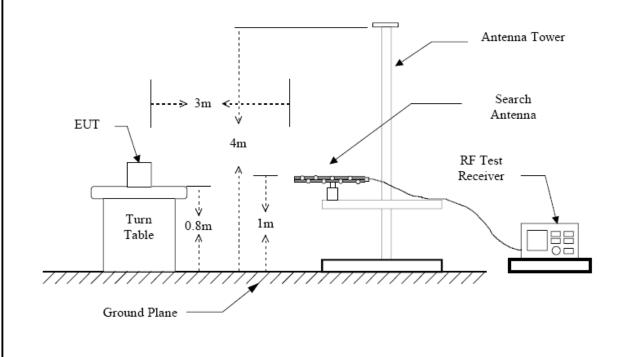


Diagram 2 of Configuration for Testing Radiated Emission from 30MHz to 1 GHz

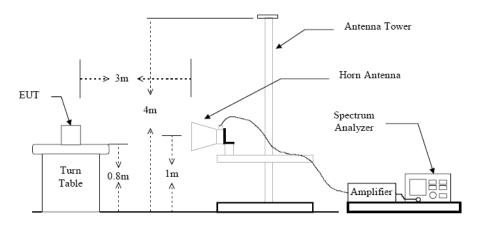




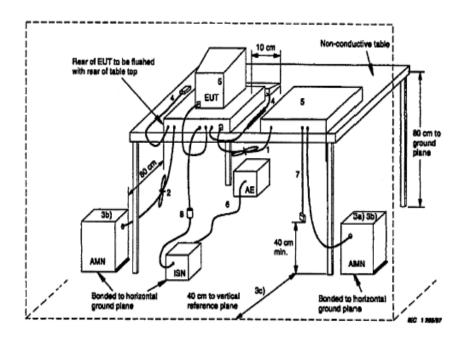
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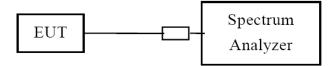
#### **Diagram 3 of Configuration for Testing Radiated Emission above 1 GHz**

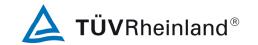


**Diagram 4 of Measurement Equipment Configuration for Testing Conducted Emission** 



**Diagram 5 of Configuration for Testing other test items** 





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## 5 Test Results EMISSION

## 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



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**Table 2: Disturbance Voltage on AC Mains** 

Frequency	Line	QP	AV	Quasi Peak Limit	Average Limit
[MHz]	L/N	[dBµV]	[dBµV]	[dBµV]	[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
*)	-			_	_

<sup>\*)</sup> 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.



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### 5.2 Transmitter Radiated Spurious Emission

RESULT: Pass

Date of testing : Mar. 21, 2011 to Mar. 23, 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.



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

Frequency	QP	AV	PK	Polarity	Limit			
					QP	AV	PK	
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]		
1486.62	N/A		42.5	Н	N/A	54	74	
1658.75	N/A		42.1	Н	N/A	54	74	
4822.87	N/A		46.5	Н	N/A	54	74	
7234.75	N/A		52.5	Н	N/A	54	74	
1488.75	N/A		52.3	V	N/A	54	74	
1658.75	N/A		52.2	V	N/A	54	74	
4822.87	N/A		51.1	V	N/A	54	74	
7234.75	N/A		50.1	V	N/A	54	74	
*)								

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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[(	lBμV/n	n]	(H/V)	[dBµV/m]		
1486.62	N/A		46.2	Н	N/A	54	74
4873.87	N/A	52.3	57.5	Н	N/A	54	74
7311.25	N/A	48.8	55.4	Н	N/A	54	74
1660.87	N/A		52.5	V	N/A	54	74
1996.62	N/A	44.5	57.3	V	N/A	54	74
4873.87	N/A		53.0	V	N/A	54	74
7311.25	N/A	46.2	53.5	V	N/A	54	74
*)							



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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1996.62	N/A		50.1	Н	N/A	54	74
4922.75	N/A		49.4	Н	N/A	54	74
7385.62	N/A	1	50.6	Н	N/A	54	74
1486.62	N/A		47.9	V	N/A	54	74
1658.75	N/A		46.6	V	N/A	54	74
1994.50	N/A	1	51.2	V	N/A	54	74
4924.87	N/A	1	50.7	V	N/A	54	74
7383.50	N/A		53.2	V	N/A	54	74
*)							

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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
4818.62	N/A	38.2	63.8	Н	N/A	54	74
7236.87	N/A	46.7	72.2	Н	N/A	54	74
9642.37	N/A	34.8	66.1	Н	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
*)					•		



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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1486.62	N/A	39.1	57.5	Н	N/A	54	74
1983.87	N/A		46.1	Н	N/A	54	74
4876.00	N/A	39.0	57.6	Н	N/A	54	74
7309.12	N/A	43.9	70.5	Н	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]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1990.25	N/A		50.8	Н	N/A	54	74
4924.87	N/A	40.3	56.9	Н	N/A	54	74
7385.62	N/A	43.4	68.1	Н	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
*)							



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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1486.62	N/A		51.3	Н	N/A	54	74
1996.62	N/A		51.7	Н	N/A	54	74
4827.12	N/A	37.0	62.7	Н	N/A	54	74
7236.87	N/A	42.9	70.4	Н	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
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]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1323.00	N/A		44.5	Н	N/A	54	74
4871.75	N/A	35.5	62.5	Н	N/A	54	74
7302.75	N/A	37.8	62.7	Н	N/A	54	74
1146.62	N/A	1	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
*)							



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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1123.25	N/A		52.1	Н	N/A	54	74
1488.75	N/A		51.2	Н	N/A	54	74
4924.87	N/A	41.3	57.3	Н	N/A	54	74
7387.75	N/A	45.9	68.6	Н	N/A	54	74
1486.62	N/A		51.6	V	N/A	54	74
1663.00	N/A	1	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]	[0	lBμV/n	n]	(H/V)		[dBµV/m]		
1992.37	N/A	37.9	54.4	Н	N/A	74		
4848.37	N/A		48.3	Н	N/A	54	74	
7287.87	N/A	36.7	56.9	Н	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	
*)								



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

Frequency	QP	AV	PK	Polarity	Limit		
					QP	AV	PK
[MHz]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1488.75	N/A		47.2	Н	N/A	54	74
4867.50	N/A		45.7	Н	N/A	54	74
7304.87	N/A	40.6	58.4	Н	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]	[0	lBμV/n	n]	(H/V)		[dBµV/m]	
1486.62	N/A		52.1	Н	N/A	54	74
4914.25	N/A	39.9	56.2	Н	N/A	54	74
7355.87	N/A	40.3	58.1	Н	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
*)							

 $<sup>^{*}</sup>$ ) 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.



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## 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

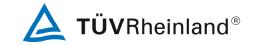
party shall be used with the device.

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.



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## 5.4 Maximum Peak Conducted Output Power

RESULT: Pass

Date of testing : Mar. 23, 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)**

Channel	Frequency(MHz) Power Reading		Cable Loss	Output P	Limit	
		(dBm)	(dB)	(dBm)	(mW)	(mW)
Low	2412	8.15	0.4	8.55	7.16	<1000
Mid	2437	8.15	0.4	8.55	7.16	<1000
High	2462	8.24	0.4	8.64	7.31	<1000

#### **Table 16: Peak Conducted Power (802.11g)**

Channel Frequency(MHz)		Power Reading	Cable Loss	Output P	ower	Limit
		(dBm)	(dB)	(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



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#### Table 17: Peak Conducted Power (802.11n HT20)

Channel	Frequency( MHz)	Power Reading(dBm)		Cable Loss	Output Power of Ant#0		Output Power of Ant#1		Total output	Limit (mW)
				(dB)					power	
		Ant#0	Ant#1		(dBm)	(mW)	(dBm)	(mW)	(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 18: Peak Conducted Power (802.11n HT40)

Channel	Frequency( MHz)	Power Reading(	Power Reading(dBm)		Output Power of Ant#0		Output Power of Ant#1		Total output power	Limit (mW)
T	2422	Ant#0	Ant#1	(dB)	(dBm)	(mW)	(dBm)	(mW)	(mW)	11000
Low Mid	2422 2437	11.82 11.85	11.91 11.92	0.4	12.22 12.25	16.67 16.79	12.31 12.32	17.02 17.06	33.69 33.85	<1000 <1000
High	2452	12.52	12.21	0.4	12.92	19.59	12.61	18.24	37.83	<1000



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#### 5.5 6dB Bandwidth

RESULT: Pass

Date of testing : Mar. 14, 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 19: 6dB Bandwidth (802.11b)** 

Channel	Frequency (MHz)	Test Result (MHz)	Limit (kHz)
Low	2412	9.0	>500
Mid	2437	9.0	>500
High	2462	9.0	>500



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#### Table 20: 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

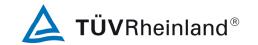
#### **Table 21: 6dB Bandwidth (802.11n HT20)**

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

## **Table 22: 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.



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## **5.6** Power Spectral Density

RESULT: Pass

Date of testing : Mar. 15, 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.



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#### **Table 23: Power spectral density (802.11b)**

Channel	Frequency (MHz)	Test Result (dBm)	Limit (dBm)
Low	2412.000	-11.12	<8
Mid	2437.000	-10.84	<8
High	2462.000	-11.59	<8

#### Table 24: 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 25: 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 26: 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.



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#### 5.7 Out-of-Band Emission

RESULT: Pass

Date of testing : Mar. 15, 2011 & Mar. 22, 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.



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**Table 27: 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 28: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11b)

Restricted	Frequency	PK	AV	Polarity	PK limit	AV limit
band	[GHz]	[dBµV/m]	[dBµV/m]	(H/V)	[dBµV/m]	[dBµV/m]
Low band	2.390	54.8	46.4	Н	74	54
Low band	2.390	55.6	47.1	V	74	54
High band	2.484	55.7	48.2	Н	74	54
High band	2.484	54.1	48.2	V	74	54
Remark:						

# Table 29: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz $(802.11\mathrm{g})$

Restricted	Frequency	PK	AV	Polarity	PK limit	AV limit
band	[GHz]	[dBµV/m]	[dBµV/m]	(H/V)	[dBµV/m]	[dBµV/m]
Low band	2.390	55.4	46.7	Н	74	54
Low band	2.390	55.7	47.2	V	74	54
High band	2.484	55.0	49.5	Н	74	54
High band	2.484	55.1	48.4	V	74	54
Remark:						



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Table 30: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11n HT20)

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

Table 31: Band Edges Emission in the Restricted Bands 2483.5-2500MHz and 2310-2390MHz (802.11n HT40)

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

<sup>\*</sup> **Note:** Please refer to the Appendix 1 for the plot.

Disturbances other than those mentioned above are small or not detectable.



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# 6 Photographs of the Test Set-Up

**Photograph 1: Set-up for Conducted Emission Measurement** 





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







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







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#### AC power conducted emission

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer: Test Item: Identification: Test Standard: Test Detail: Operation Mode:

Climate Condition: Test Voltage/ Freq.:

Port / Line: Receipt No.: Report No.: Result: Comment: Hardware Setup:

Level Unit:

Subrange

150kHz - 30MHz

Desay DVD player DX-WBRDVD1 FCC Part 15 Conducted Emission Normal operation

20 °C; 45 %RH; AC 120 V/ 60 Hz AC Mains(L1+N)

173059541 16030075 001 Pass

1phase LISN ESH3-Z5 to ESU 26 dBµV

Peak; Average

Detectors

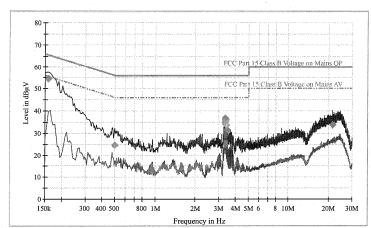
IF Bandwidth Step Size 9kHz

101 kPa.

Meas. Time 10ms

Receiver **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



Reviewed by:





Test Report no.

16030075 001

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### Radiated emission (below 1 GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### **Common Information**

Manufacturer: Test Item:

Identification

Test Standard: Test Detail:

Operation Mode: Climate Condition:

Test Voltage / Freq. : Receipt No.:

Report No. Result:

Comment:

Desay DVD player DX-WBRDVD1 FCC Part 15 RE

Normal mode 23 ℃; 50 %RH; AC 120V / 60Hz 101 kPa.

173059541 16030075 001

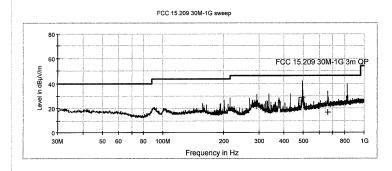
Pass Test distance is 3m, Horizontal

Subrange 1 Transducer:

Frequency Range: Receiver:

30M-1GHz

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	Н
496.102500	28.7	16.5	17.3	46.0	Н
661.591250	16.8	19.2	29.2	46.0	Н
926 076250	25.7	20.0	20.3	46.0	ш

Sign-off Test Data

Date: 22/03/2011 - Time: 16:22:16



Reviewed by:





Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### Common Information

Manufacturer:

Test Item: Identification

Test Standard: Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.:
Report No.

Result:

Comment:

Desay DVD player DX-WBRDVD1 FCC Part 15 RE

Normal mode

23 ℃; 50 %RH; AC 120V / 60Hz

173059541 16030075 001

Pass

Test distance is 3m, Vertical

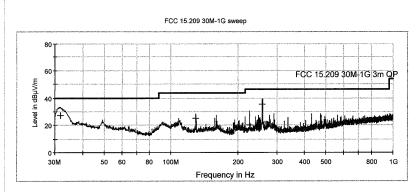
Subrange 1

Frequency Range: Receiver: 30M-1GHz TUV ESCI 3

Transducer:

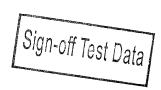
TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

101 kPa.



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dΒμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
31.950000	27.2	13.3	12.8	40.0	٧
129.300000	25.1	12.8	18.4	43.5	٧
226.900000	19.9	11.0	26.1	46.0	٧
258.800000	35.5	11.8	10.5	46.0	٧



Date: 22/03/2011 - Time: 16:49:05



Reviewed by:





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### **Band Edge Emission**

Test Report no.

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:
Test Item:
Identification
Test Standard

Test Standard:
Test Detail:
Operation Mode:

Operation Mode: Climate Condition: Test Voltage / Freq. :

Test Voltage / Fr Receipt No.: Report No.

Report No. Result: Comment: Desay DVD player DX-WBRDVD1 FCC Part 15 Band edge

Band edge Tx @ Low Channel (B mode) 23 °C; 50 %RH; 101 kPa. AC 120V / 60Hz

173059541 16030075 001

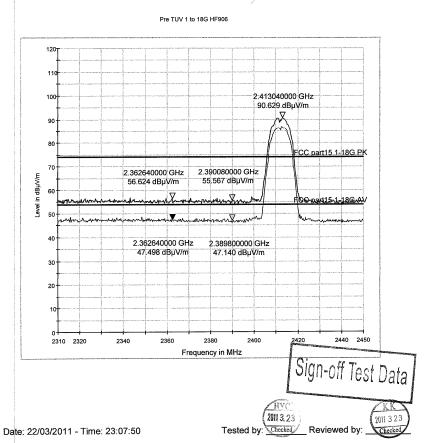
Test distance is 3m, Vertical

Subrange 1

Frequency Range: Receiver:

2GHz-3GHz TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906





Test Report no.

16030075 001

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### Common Information

Manufacturer:DesayTest Item:DVD playerIdentificationDX-WBRDVD1Test Standard:FCC Part 15Test Detail:Band edge

Operation Mode: Tx @ Low Channel (B mode)
Climate Condition: 23 °C; 50 %RH; 101 kPa.

Climate Condition: 23 °C; 50 %RH;
Test Voltage / Freq.: AC 120V / 60Hz
Receipt No.: 173059541
Report No. 16030075 001

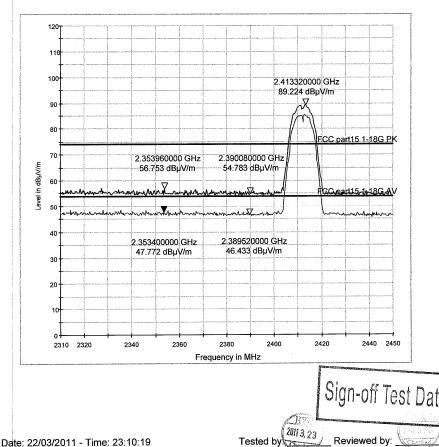
Result: Pass

Comment: Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906





Test Report no.

16030075 001

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### Common Information

Manufacturer:

Test Item:

Identification Test Standard: Test Detail:

Operation Mode: Climate Condition:

Test Voltage / Freq. : Receipt No.:

Report No. Result:

Comment:

Desay DVD player DX-WBRDVD1 FCC Part 15 Band edge

Tx @ High Channel (B mode) 23 °C; 50 %RH; 10 AC 120V / 60Hz 101 kPa.

173059541

16030075 001 Pass

Test distance is 3m, Horizontal

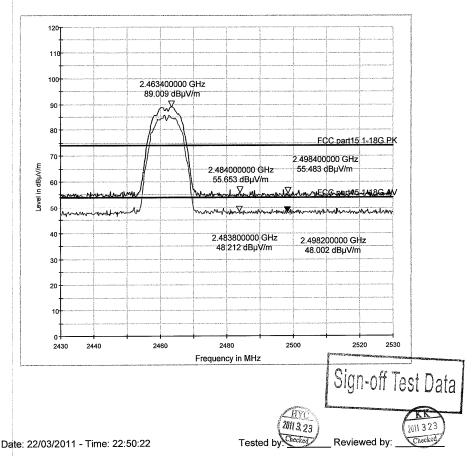
Subrange 1

Frequency Range: Receiver:

2GHz-3GHz **TUV FSP30** 

Transducer:

TUV SAC HF906/TUV FSP30-TUV SAC HF906





Test Report no.

16030075 001

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### Common Information

Manufacturer: Desay Test Item: DVD player DX-WBRDVD1 Identification Test Standard: FCC Part 15

Test Detail: Band edge Operation Mode:

Tx @ High Channel (B mode) Climate Condition: 23 ℃; 50 %RH; AC 120V / 60Hz 101 kPa.

Test Voltage / Freq. : Receipt No.: 173059541 Report No. 16030075 001

Result: Pass

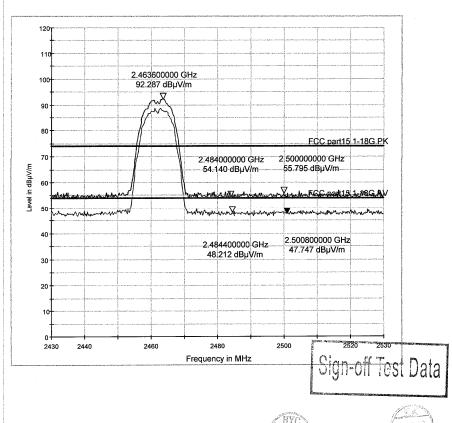
Test distance is 3m, Vertical Comment:

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Date: 22/03/2011 - Time: 22:53:01



Reviewed by:



Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### Common Information

Manufacturer:

Test Item: Identification Test Standard:

Test Detail:

Operation Mode: Climate Condition:

Tx @ Low Channel (G mode) 23 °C; 50 %RH; AC 120V / 60Hz

Test Voltage / Freq. : Receipt No.: Report No.

173059541

Desay DVD player DX-WBRDVD1

FCC Part 15 Band edge

16030075 001 Pass

Result: Comment:

Test distance is 3m, Horizontal

Subrange 1

Frequency Range:

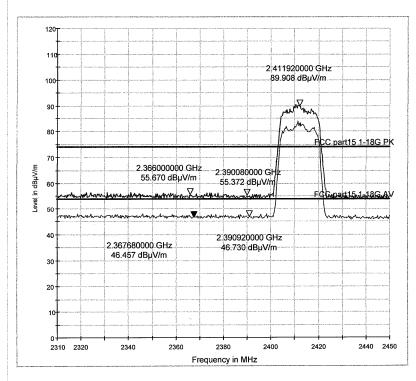
2GHz-3GHz **TUV FSP30** 

Receiver: Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906

101 kPa.







2011 3, 23

Reviewed by:





Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### **Common Information**

Manufacturer:

Test Item:

Identification

Test Standard: Test Detail:

Operation Mode: Climate Condition:

Test Voltage / Freq. : Receipt No.:

Report No. Result:

Comment:

Desay

DVD player DX-WBRDVD1 FCC Part 15 Band edge

Tx @ Low Channel (G mode) , 101 kPa.

23 ℃; 50 %RH; AC 120V / 60Hz 173059541

16030075 001 Pass

Test distance is 3m, Vertical

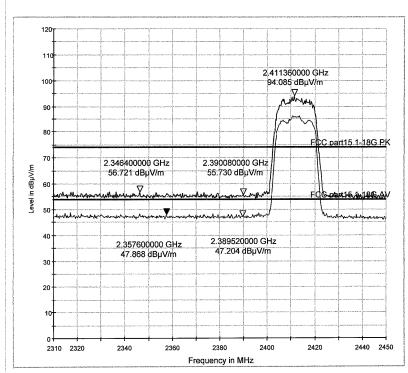
Subrange 1

Frequency Range: Receiver:

2GHz-3GHz TUV FSP30

Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906









Test Report no.

16030075 001

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### **Common Information**

Manufacturer:DesayTest Item:DVD playerIdentificationDX-WBRDVD1Test Standard:FCC Part 15

Test Detail: Band edge

Operation Mode: Tx @ High Channel (G mode)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq. : AC 120V / 60Hz

Test Voltage / Freq. : AC 120V / 60H
Receipt No.: 173059541
Report No. 16030075 001

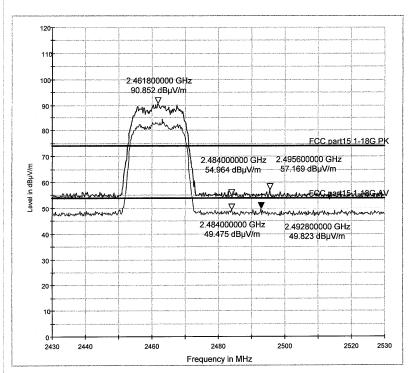
Result: Pass

Comment: Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906







Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: Desay

DVD player DX-WBRDVD1 Test Item: Identification Test Standard: FCC Part 15

Band edge Test Detail:

Tx @ High Channel (Gmode) 23 °C; 50 %RH; 1 AC 120V / 60Hz Operation Mode: Climate Condition: 101 kPa.

Test Voltage / Freq. : Receipt No.: 173059541

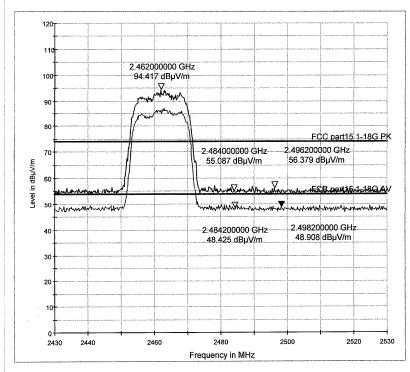
Report No. 16030075 001 Result: Pass

Test distance is 3m, Vertical Comment:

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: **TUV FSP30** 

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906







Test Report no.

16030075 001

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### Common Information

Manufacturer: Desay Test Item: DVD player DX-WBRDVD1 Identification Test Standard: FCC Part 15

Band edge Test Detail:

Tx @ Low Channel (HT20 mode) Operation Mode: 23 °C; 50 %RH; AC 120V / 60Hz 101 kPa. Climate Condition:

Test Voltage / Freq. : Receipt No.: 173059541 Report No. 16030075 001

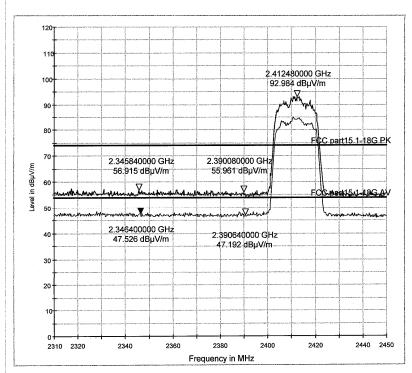
Result. Pass

Test distance is 3m, Horizontal Comment:

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: **TUV FSP30** 

Transducer: TUV SAC HF906/TUV FSP30-TUV SAC HF906









Test Report no.

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EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### **Common Information**

TUV Rheinland (Guangdong) Ltd.

Manufacturer:DesayTest Item:DVD playerIdentificationDX-WBRDVD1Test Standard:FCC Part 15Test Detail:Band edge

Operation Mode: Tx @ Low Channel (HT20 mode)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq.: AC 120V / 60Hz

Test Voltage / Freq. : AC 120V / 60H.
Receipt No.: 173059541
Report No. 16030075 001

Result: Pass

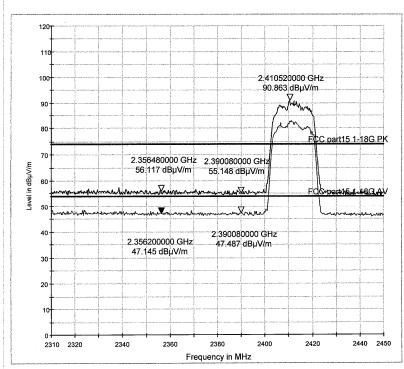
Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906







Reviewed by: KK



Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

Test Item:

DVD player DX-WBRDVD1

Desay

Identification Test Standard: Test Detail:

FCC Part 15 Band edge

Operation Mode:

Band edge Tx @ High Channel (HT20 mode)

Climate Condition:

23 ℃; 50 %RH; 101 kPa. AC 120V / 60Hz

Test Voltage / Freq. : Receipt No.:

AC 120V / 60Hz 173059541

Report No. Result: 16030075 001

Result:

Pass

Comment:

Test distance is 3m, Horizontal

Subrange 1

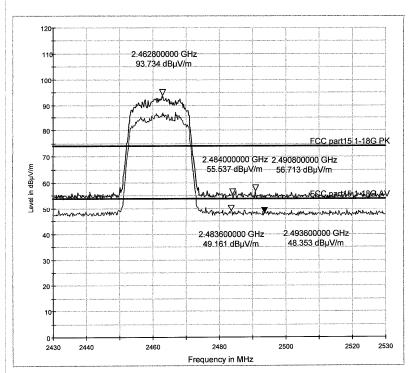
Frequency Range:

2GHz-3GHz TUV FSP30

Receiver: Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Sign-off Test Data

Tested by 2011 3.23 Reviewed by:





Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### Common Information

Manufacturer:DesayTest Item:DVD playerIdentificationDX-WBRDVD1Test Standard:FCC Part 15

Test Detail:Band edgeOperation Mode:Tx @ High Channel (HT20 mode)Climate Condition:23 ℃; 50 %RH; 101 kPa.Test Voltage / Freq. :AC 120V / 60Hz

Test Voltage / Freq. : AC 120V / 60H Receipt No.: 173059541 Report No.: 16030075 001

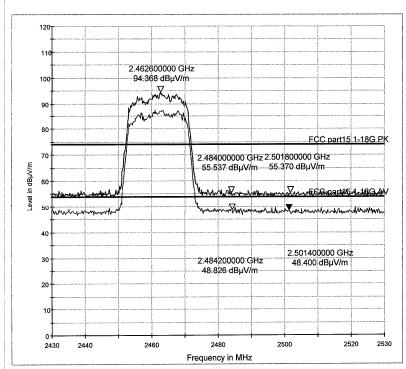
Result: Pass

Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906











Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:DesayTest Item:DVD playerIdentificationDX-WBRDVD1Test Standard:FCC Part 15Test Detail:Band edge

Operation Mode: Tx @ Low Channel (HT40 mode)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq. : AC 120V / 60Hz

Test Voltage / Freq. : AC 120V / 60Hz
Receipt No.: 173059541
Report No. 16030075 001

Result: Pass

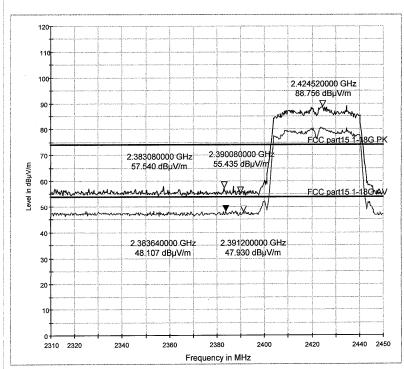
Comment: Test distance is 3m, Horizontal

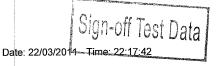
Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906





Tested by: Checked Reviewed by:





16030075 001

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Test Report no.

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: Test Item: DVD player Identification DX-WBRDVD1 Test Standard: FCC Part 15

Band edge Test Detail: Operation Mode:

Tx @ Low Channel (HT40 mode) 23 ℃; 50 %RH; AC 120V / 60Hz Climate Condition: 101 kPa.

Test Voltage / Freq. : Receipt No.: 173059541 Report No. 16030075 001

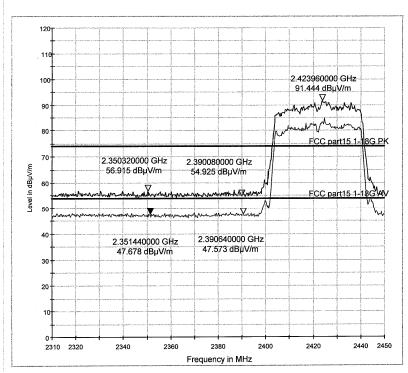
Result: Pass

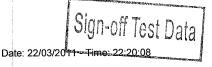
Test distance is 3m, Vertical Comment:

Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906











Test Report no.

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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 FCC Part 15

Test Standard: Test Detail:

Band edge Tx @ High Channel (HT40 mode) Operation Mode: 23 °C; 50 %RH; AC 120V / 60Hz Climate Condition: 101 kPa.

Test Voltage / Freq. : Receipt No.: 173059541 Report No. 16030075 001

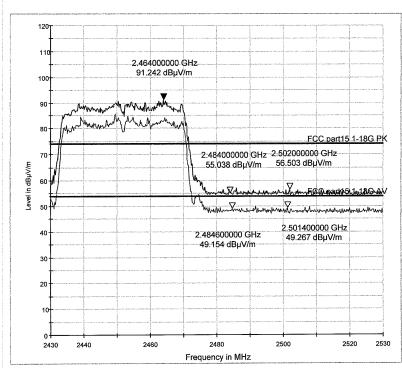
Result: Pass

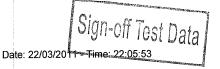
Test distance is 3m, Vertical Comment:

Subrange 1

Frequency Range: 2GHz-3GHz TUV FSP30 Receiver:

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906









Test Report no.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

### **Common Information**

Manufacturer:

Test Item: Identification Test Standard: DVD player DX-WBRDVD1 FCC Part 15

Desay

Test Detail:
Operation Mode:

Band edge Tx @ High Channel (HT40 mode)

Climate Condition: Test Voltage / Freq. : 23 °C; 50 %RH; AC 120V / 60Hz

Test Voltage / Freq. : Receipt No.: Report No.

173059541 16030075 001

Result:

Pass

Comment:

Test distance is 3m, Horizontal

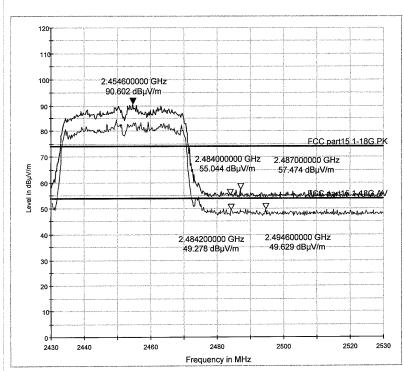
Subrange 1

Frequency Range:

2GHz-3GHz TUV FSP30

Receiver: Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906









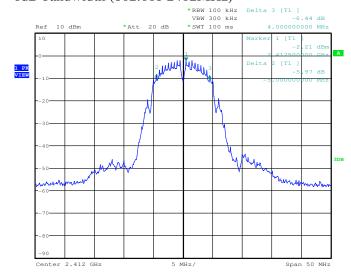


Test Report no.

16030075 001

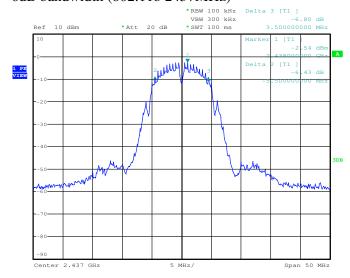
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### 6dB bandwidth (802.11b 2412MHz)



Date: 14.MAR.2011 21:20:05

### 6dB bandwidth (802.11b 2437MHz)



Date: 14.MAR.2011 21:28:08

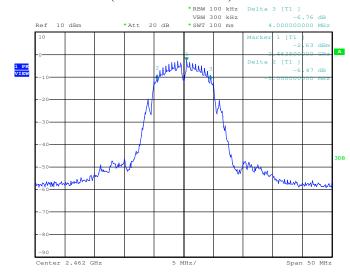


Test Report no.

16030075 001

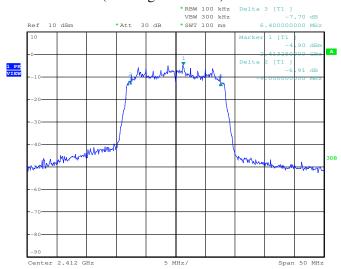
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### 6dB bandwidth (802.11b 2462MHz)



Date: 14.MAR.2011 21:29:56

## 6dB bandwidth (802.11g 2412MHz)



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

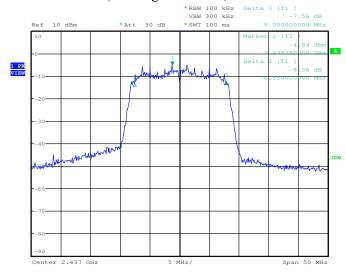


Test Report no.

16030075 001

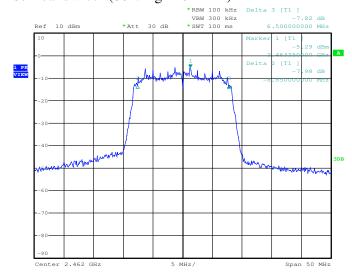
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6dB bandwidth (802.11g 2437MHz)



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

## 6dB bandwidth (802.11g 2462MHz)



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

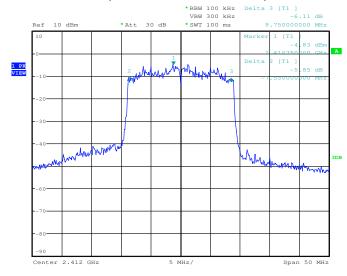


Test Report no.

16030075 001

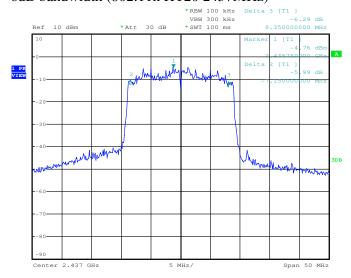
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### 6dB bandwidth (802.11n HT20 2412MHz)



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

## 6dB bandwidth (802.11n HT20 2437MHz)



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

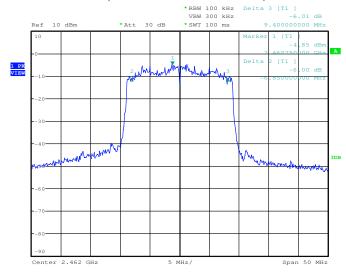


Test Report no.

16030075 001

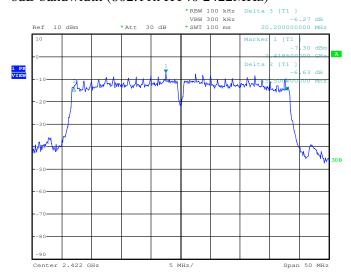
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### 6dB bandwidth (802.11n HT20 2462MHz)



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

## 6dB bandwidth (802.11n HT40 2422MHz)



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

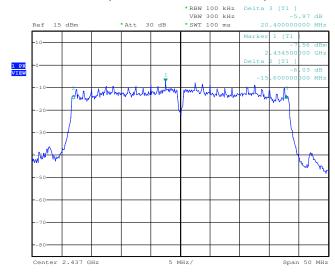


Test Report no.

16030075 001

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### 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

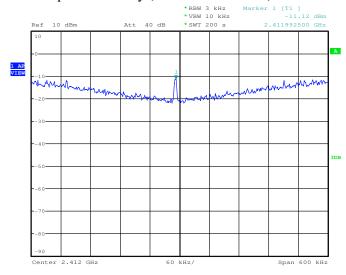


Test Report no.

16030075 001

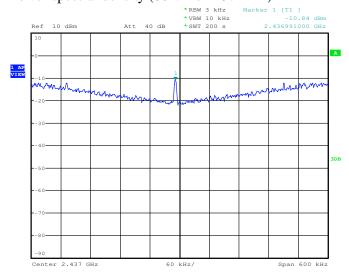
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Power spectral density (802.11b 2412MHz)



Date: 15.MAR.2011 02:01:03

## Power spectral density (802.11b 2437MHz)



Date: 15.MAR.2011 02:06:13

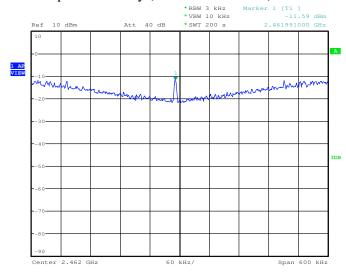


Test Report no.

16030075 001

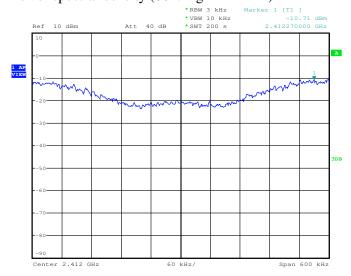
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Power spectral density (802.11b 2462MHz)



Date: 15.MAR.2011 02:10:38

# Power spectral density (802.11g 2412MHz)



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

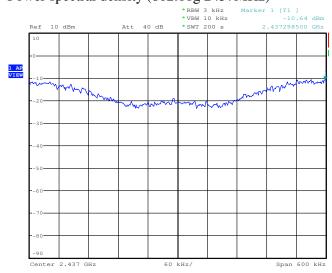


Test Report no.

16030075 001

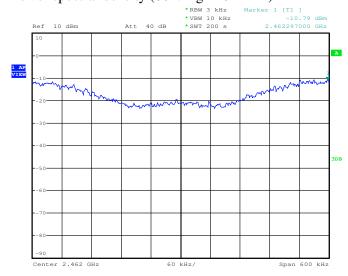
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Power spectral density (802.11g 2437MHz)



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

# Power spectral density (802.11g 2462MHz)



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

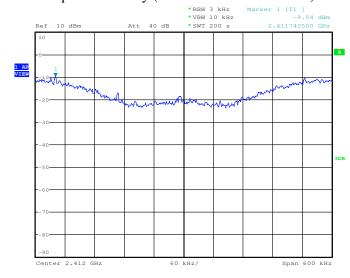


Test Report no.

16030075 001

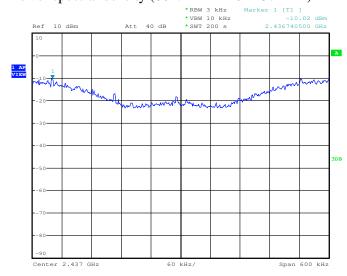
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Power spectral density (802.11n HT20 2412MHz)



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

# Power spectral density (802.11n HT20 2437MHz)



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

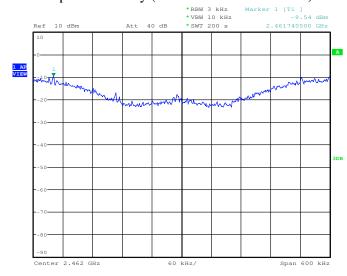


Test Report no.

16030075 001

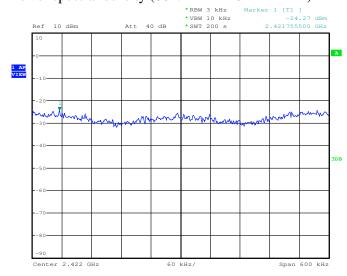
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Power spectral density (802.11n HT20 2462MHz)



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

# Power spectral density (802.11n HT40 2422MHz)



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

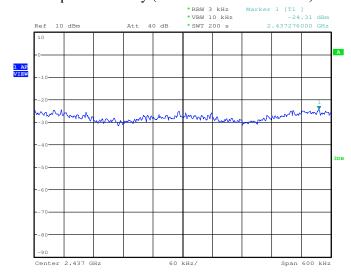


Test Report no.

16030075 001

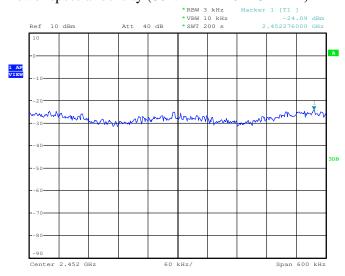
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Power spectral density (802.11n HT40 2437MHz)



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

# Power spectral density (802.11n HT40 2452MHz)



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

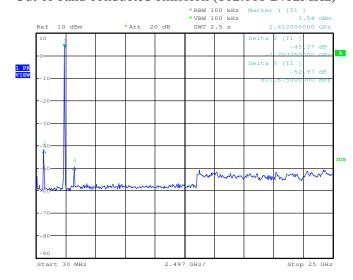


Test Report no.

16030075 001

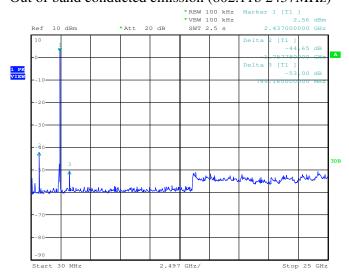
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Out of band conducted emission (802.11b 2412MHz)



Date: 15.MAR.2011 02:52:47

# Out of band conducted emission (802.11b 2437MHz)



Date: 15.MAR.2011 02:57:00

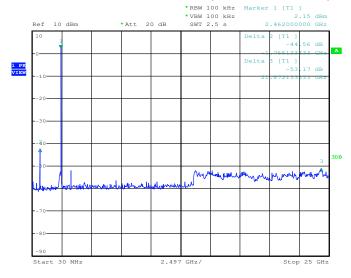


Test Report no.

16030075 001

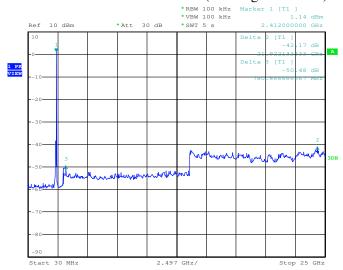
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### Out of band conducted emission (802.11b 2462MHz)



Date: 15.MAR.2011 03:02:30

## Out of band conducted emission (802.11g 2412MHz)



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

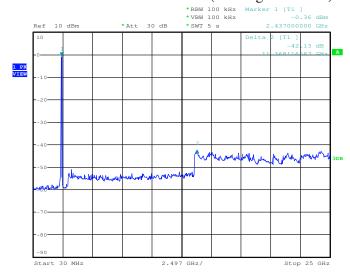


Test Report no.

16030075 001

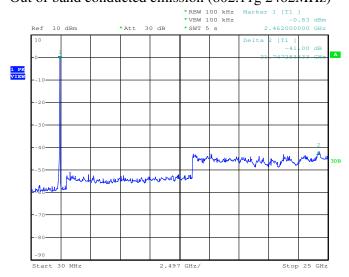
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Out of band conducted emission (802.11g 2437MHz)



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

# Out of band conducted emission (802.11g 2462MHz)



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

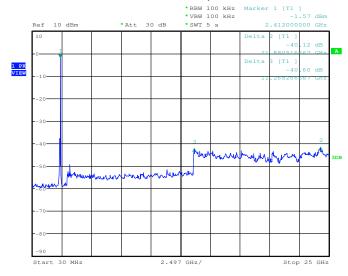


Test Report no.

16030075 001

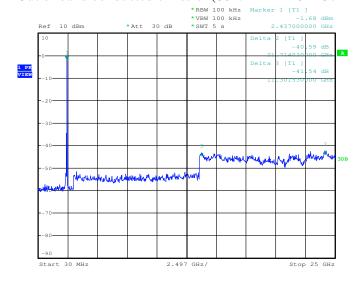
**Seite 35 von 37** *Page 35 of 37* 

Out of band conducted emission(802.11n HT20 2412MHz)



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

Out of band conducted emission(802.11n HT20 2437MHz)



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

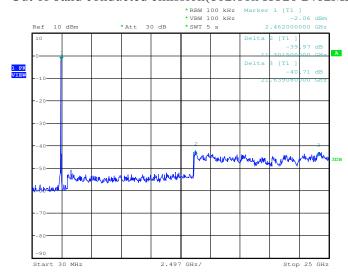


Test Report no.

16030075 001

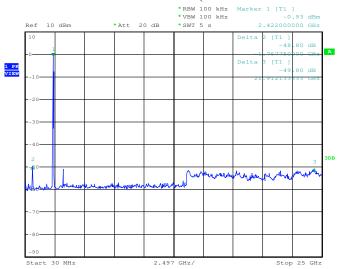
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Out of band conducted emission(802.11n HT20 2462MHz)



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

Out of band conducted emission(802.11n HT40 2422MHz)



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

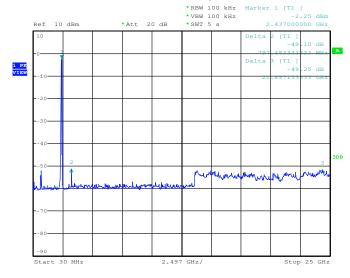


Test Report no.

16030075 001

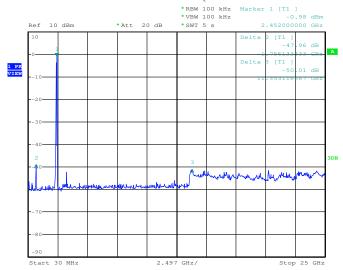
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Out of band conducted emission(802.11n HT40 2437MHz)



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

## Out of band conducted emission(802.11n HT40 2452MHz)



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