

FCC TEST REPORT

For

Wireless ADSL Router

Model Number: ZXV10 W300 V8

FCC ID: Q78-ZXV10W300V8

Report Number : WT098004350

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Test report declaration

Applicant : ZTE Corporation

Address : ZTE PLAZA, KEJI ROAD SOUTH, HI-TECH INDUSTRIAL PARK, NANSHAN DISTRICT, SHENZHEN, P.R.CHINA

Manufacturer : ZTE Corporation

Address : ZTE PLAZA, KEJI ROAD SOUTH, HI-TECH INDUSTRIAL PARK, NANSHAN DISTRICT, SHENZHEN, P.R.CHINA

EUT : Wireless ADSL Router

Description

Model No : ZXV10 W300 V8

Trade mark :

Serial Number : --

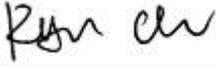
FCC ID : Q78-ZXV10W300V8

Test Standards:

FCC Part 15 15.207, 15.209, 15.247

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with FCC Rules Part 15.207, 15.209 and 15.247.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:  Date: Dec.07,2009
(Ryan Chen)

Checked by:  Date: Dec.07,2009
(Dewelly Yang)

Approved by:  Date: Dec.07,2009
(Peter Lin)

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1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
Conducted Disturbance	15.207	Pass
Radiated disturbance	15.209	Pass
6dB Bandwidth	15.247(a)(2)	Pass
Maximum Peak Output Power	15.247(b)	Pass
Band Edge Measurement	15.247(d)	Pass
Power Spectral Density	15.247(e)	Pass

Remark: "N/A" means "Not applicable."

2. GENERAL INFORMATION

2.1. Report information

- 2.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.
- 2.1.2. The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.
- 2.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at Bldg. of Metrology & Quality Inspection, Longzhu Road, Nanshan District, Shenzhen, Guangdong, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number are 97379(open area test site) and 274801(semi anechoic chamber).

The Laboratory is listed in Voluntary Control Council for Interference by Information Technology Equipment (VCCI), and the registration number are R-1974(open area test site) , R-1966(semi anechoic chamber),C-2117(mains ports conducted interference measurement) and T-180(telecommunication ports conducted interference measurement).

The Laboratory is registered to perform emission tests with Industry Canada (IC), and the registration number is IC4174.

TUV Rhineland accredits the Laboratory for conformance to IEC and EN standards, the registration number is E2024086Z02.

2.3.Measurement Uncertainty

Conducted Emission

9kHz~30MHz 3.5dB

Radiated Emission

30MHz~1000MHz 4.5dB

1GHz~18GHz 4.6dB

3. PRODUCT DESCRIPTION

3.1. EUT Description

Description : Wireless ADSL Router

Manufacturer : ZTE Corporation

Model Number : ZXV10 W300 V8

Adaptor : Model: FM120010-US
Input:100-240V~ 50/60Hz 0.6A
Output:12V DC 1A

Operate Frequency : 2.412GHz~2.462GHz

Antenna Designation : PCB Antenna

Antenna Gain : 1.8dBi

Table 2 Working Frequency List

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: Q78-ZXV10W300V8 filing to comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

3.3. Block Diagram of EUT Configuration

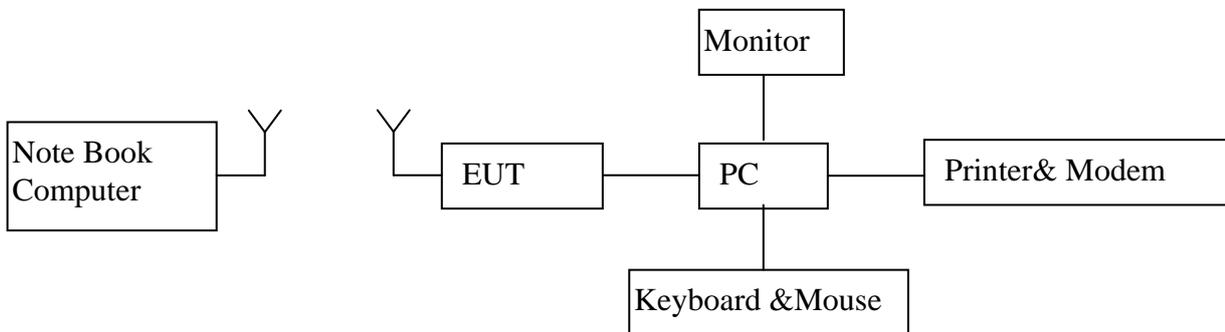


Figure 1 EUT setup of test mode 1&2

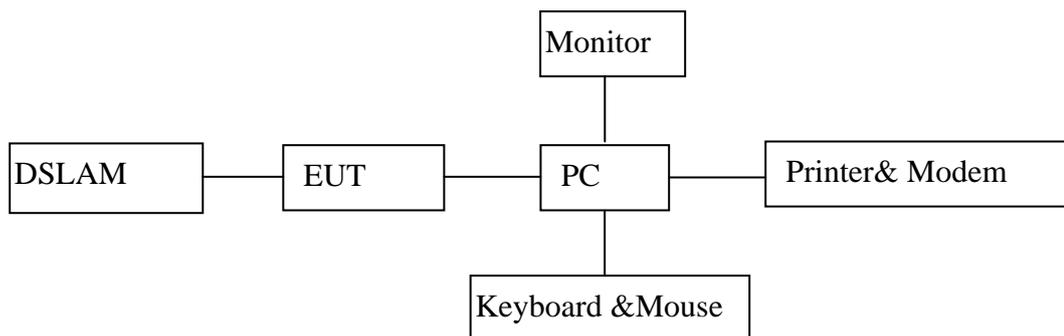


Figure 2 EUT setup of test mode 3

3.4. Operating Condition of EUT

Test Mode 1: IEEE802.11b (Channel 1 (2412MHz), Channel 6 (2437MHz) and Channel 11 (2462MHz) with 1Mbps data rate were chosen for full testing.)

Test Mode 2: IEEE802.11g mode (Channel 1 (2412MHz), Channel 6 (2437MHz) and Channel 11 (2462MHz) with 6Mbps data rate were chosen for full testing.)

Test Mode 3: Communication (wire network)

3.5. Support Equipment List

Table 3 Support Equipment List

Name	Model No	S/N	Manufacturer
Notebook	R51	--	IBM
Adaptor for Notebook	02K6654	--	IBM
Computer	9439	L3BDF2K	Lenovo
Keyboard (USB)	SK-8825 (L)	02553778	Lenovo
Mouse (USB)	MO28UOL	4418011108	Lenovo
Monitor	9227-AE1	V1TDB38	Lenovo
Printer	BJC-265SP	EVX81604	CANON
Adaptor for Printer	AD-300	---	CANON
MODEM	TM-EC5656V	03402406009	TP-Link
Adaptor for modem	EI-41-AD9010	---	---

3.6. Test Conditions

Date of test: Nov.09-20, 2009

Date of EUT Receive: Nov.06,2009

Temperature: 23-24 °C

Relative Humidity: 53-56%

3.7. Special Accessories

Not available for this EUT intended for grant.

3.8. Equipment Modifications

Not available for this EUT intended for grant.

4. TEST EQUIPMENT USED

Table 4 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB2603	EMI Test Receiver	Rohde & Schwarz	ESCS30	Jan.23, 2009	1 Year
SB3321	AMN	Rohde & Schwarz	ESH2-Z5	Jan.23, 2009	1 Year
SB2604	AMN	Rohde & Schwarz	ESH3-Z5	Jan.23, 2009	1 Year
SB3436	EMI Test Receiver	Rohde & Schwarz	ESI26	Jan.23, 2009	1 Year
SB3440	Bilog Antenna	Chase	CBL6112B	Jan.23, 2009	1 Year
SB3435	Horn Antenna	Rohde & Schwarz	HF906	Jan.23, 2009	1 Year
SB3435/01	Amplifier(1-18GHz)	Rohde & Schwarz	---	Jan.23, 2009	1 Year
SB3435/02	Amplifier(18-40GHz)	Rohde & Schwarz	---	May.03, 2009	1 Year
SB3435/03	Horn Antenna	Rohde & Schwarz	AT4560	May.03, 2009	1 Year
SB3450/01	3m Semi-anechoic chamber	Albatross Projects	9X6X6	Jan.30, 2009	2 Years

5. CONDUCTED DISTURBANCE TEST

5.1. Test Standard and Limit

5.1.1. Test Standard

FCC Part 15 15.207

5.1.2. Test Limit

Table 5 Conducted Disturbance Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

* Decreasing linearly with logarithm of the frequency

* The lower limit shall apply at the transition frequency.

5.2. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions from both sides of AC line. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

5.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

5.4. Test Data

The emissions don't show in below are too low against the limits. Refer to the test curves.

Test mode 3: Communication (wire network) (the worst case)

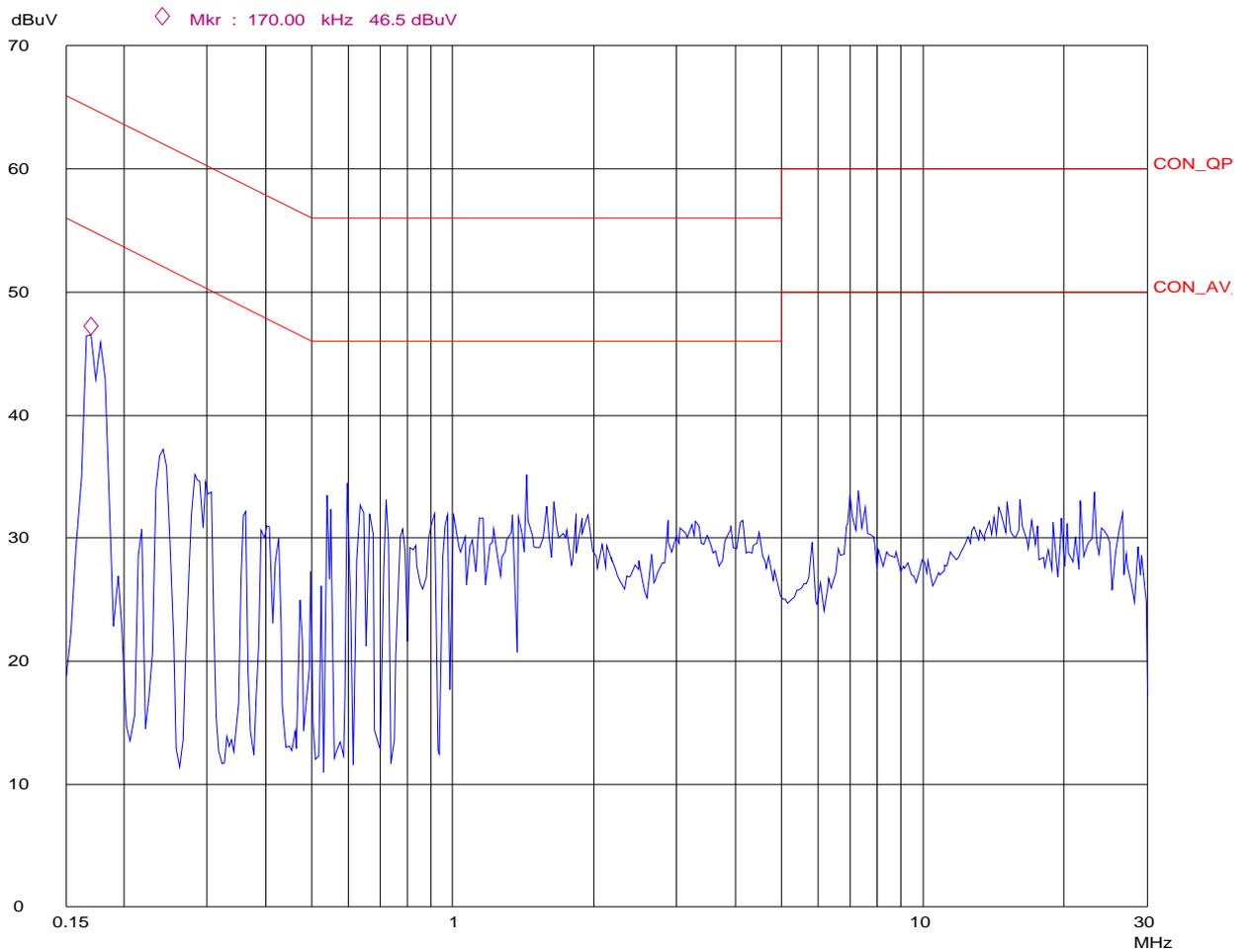
Table 6 Conducted Disturbance Test Data

Model No.: ZXV10 W300 V8								
Test mode: 3								
	Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
			Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)
Line	0.170	9.7	35.0	44.7	65.0	20.2	29.9	55.0
	1.506	9.8	25.5	35.3	56	20.4	30.2	46
	7.325	10.0	21.3	31.3	60	18.1	28.1	50
Neutral	0.166	9.7	34.5	44.2	65.2	19.6	29.3	55.2
	1.503	9.8	26.7	36.5	56	22.7	32.5	46
	7.336	10.0	20.1	30.1	60	17.5	27.5	50

REMARKS: 1. Emission level(dBuV)=Read Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB) =LISN Factor (dB) + Cable Factor (dB)+Limiter Factor(dB)
 3. The other emission levels were very low against the limit.

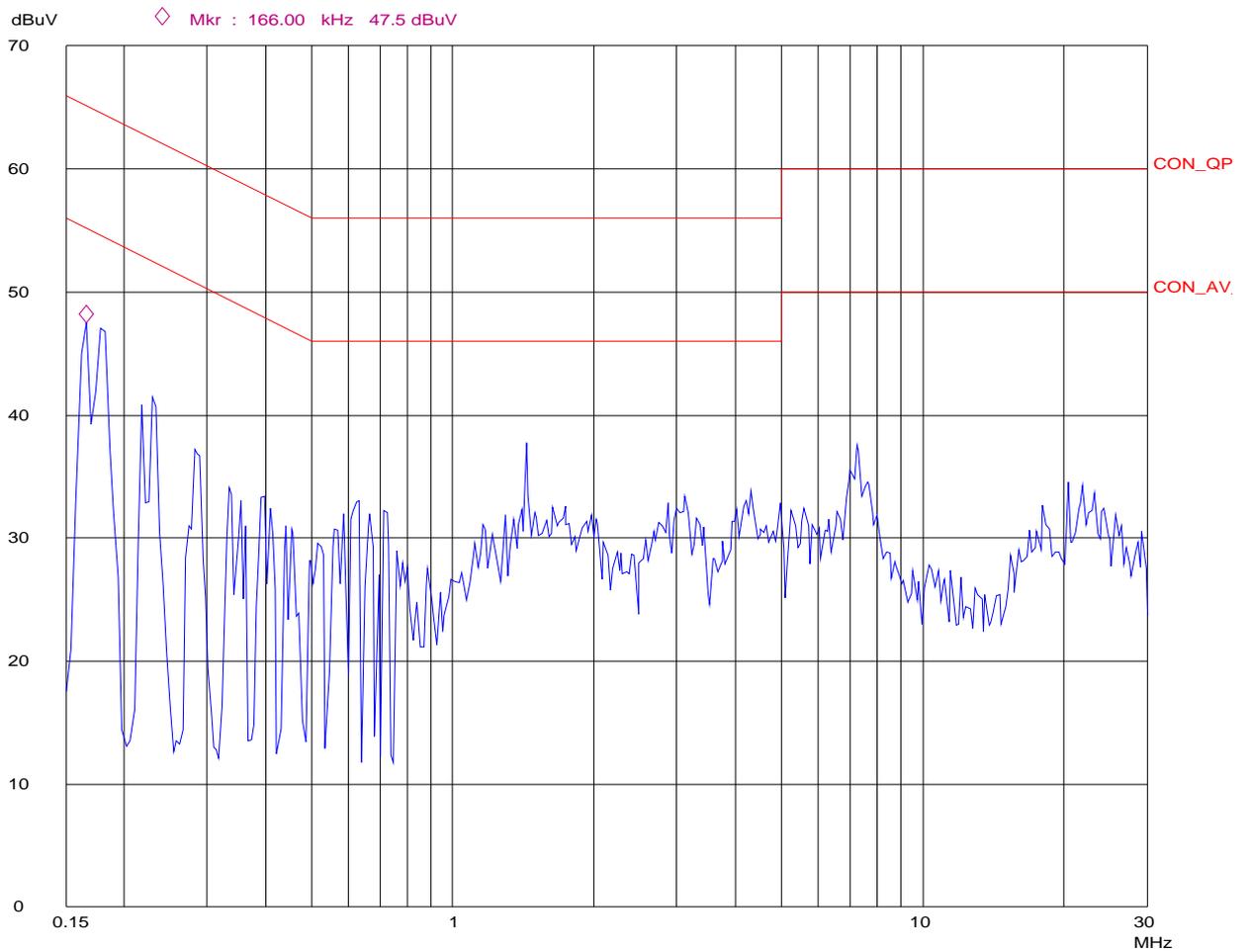
Conducted Disturbance

EUT: Z XV10 W300 V8
Op Cond: Test mode 3
Test Spec: L
Comment: AC 120V/60Hz



Conducted Disturbance

EUT: ZXV10 W300 V8
Op Cond: Test mode 3
Test Spec: N
Comment: AC 120V/60Hz



6. RADIATED DISTURBANCE TEST

6.1. Test Standard and Limit

6.1.1. Test Standard

FCC Part 15 15.209

6.1.2. Test Limit

Table 7 Radiated Disturbance Test Limit

FREQUENCY MHz	FIELD STRENGTHS LIMITS ($\mu\text{V/m}$)	FIELD STRENGTHS LIMITS dB ($\mu\text{V/m}$)
Fundamental	50000	94.0
Harmonics	500	54.0
30 ~ 88	100	40.0
88 ~ 216	150	43.5
216 ~ 960	200	46.0
960 ~	500	54.0

* The lower limit shall apply at the transition frequency.

* The test distance is 3m.

6.2. Test Procedure

The EUT is placed on a turntable, which is 0.8 meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find out the max emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

Radiated measurements were performed on the frequency range from 30MHz to 25GHz. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz, $\text{VBW} \geq \text{RBW}$. All readings above 1 GHz are AV and PK values. $\text{RBW}=1\text{MHz}$ and $\text{VBW}=10\text{Hz}$ for AV value, $\text{RBW}=1\text{MHz}$ and $\text{VBW} \geq \text{RBW}$ for peak value.

Measurements were made at 3 meters

6.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

6.4. Test Data

The emissions don't show in below are too low against the limits.

Table 8 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 1 channel 1						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
250.010	44.5	28.6	15.9	Horizontal	46.0	QP Value
839.988	45.0	19.5	25.5	Horizontal	46.0	QP Value
1319.985	47.6	54.8	-7.2	Horizontal	54.0	AV Value
106.713	39.8	25.5	14.3	Vertical	43.5	QP Value
149.970	41.5	28.1	13.4	Vertical	43.5	QP Value
840.010	43.3	17.9	25.5	Vertical	46.0	QP Value
1320.001	41.2	48.4	-7.2	Vertical	54.0	AV Value

- REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 9 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 1 channel 6						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
106.713	39.1	24.8	14.3	Vertical	43.5	QP Value
149.990	41.9	28.5	13.4	Vertical	43.5	QP Value
840.010	44.8	19.4	25.5	Vertical	46.0	QP Value
1320.008	47.7	54.9	-7.2	Vertical	54.0	AV Value
250.010	43.8	27.9	15.9	Horizontal	46.0	QP Value
840.010	44.8	19.4	25.5	Horizontal	46.0	QP Value
2239.152	45.3	49.0	-3.7	Horizontal	54.0	AV Value
4873.987	47.3	45.0	2.3	Horizontal	54.0	AV Value

- REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 10 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 1 channel 11						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
250.010	44.4	28.5	15.9	Horizontal	46.0	QP Value
840.010	43.4	18.0	25.5	Horizontal	46.0	QP Value
1319.990	47.6	54.8	-7.2	Horizontal	54.0	AV Value
150.010	41.8	28.6	13.2	Vertical	43.5	QP Value
1320.001	42.1	49.3	-7.2	Vertical	54.0	AV Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 11 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 2 channel 1						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
101.929	38.4	24.5	13.9	Vertical	43.5	QP Value
150.010	41.6	28.4	13.2	Vertical	43.5	QP Value
840.010	42.9	17.5	25.5	Vertical	46.0	QP Value
1320.001	43.7	50.9	-7.2	Vertical	54.0	AV Value
250.010	44.2	28.3	15.9	Horizontal	46.0	QP Value
792.010	44.5	19.6	24.9	Horizontal	46.0	QP Value
840.010	44.9	19.5	25.5	Horizontal	46.0	QP Value
1320.020	47.6	54.8	-7.2	Horizontal	54.0	AV Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 12 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 2 channel 6						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
250.010	44.1	28.2	15.9	Horizontal	46.0	QP Value
792.050	43.4	18.5	24.9	Horizontal	46.0	QP Value
840.010	45.0	19.6	25.5	Horizontal	46.0	QP Value
1320.008	47.1	54.3	-7.2	Horizontal	54.0	AV Value
2241.163	42.8	46.5	-3.7	Horizontal	54.0	AV Value
101.909	39.4	25.5	13.9	Vertical	43.5	QP Value
150.010	41.7	28.5	13.2	Vertical	46.0	QP Value
1319.997	45.7	52.9	-7.2	Vertical	54.0	AV Value
2235.753	46.1	49.8	-3.7	Vertical	54.0	AV Value

- REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 13 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 2 channel 11						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
150.010	41.7	28.5	13.2	Vertical	43.5	QP Value
840.010	43.2	17.8	25.5	Vertical	46.0	QP Value
1320.001	44.4	51.6	-7.2	Vertical	54.0	AV Value
2268.130	48.6	52.3	-3.7	Vertical	54.0	AV Value
198.092	34.0	21.3	12.7	Horizontal	43.5	QP Value
250.010	44.0	28.1	15.9	Horizontal	46.0	QP Value
840.010	44.8	19.4	25.5	Horizontal	46.0	QP Value
1319.989	47.7	54.9	-7.2	Horizontal	54.0	AV Value
2274.158	45.0	48.7	-3.7	Horizontal	54.0	AV Value

- REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 14 General Radiated Emission Data

Model No.: ZXV10 W300 V8						
Test mode: 3						
Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
250.010	44.2	15.9	28.3	Horizontal	46.0	QP Value
792.010	43.5	24.9	18.6	Horizontal	46.0	QP Value
32.511	35.7	18.5	17.2	Vertical	40.0	QP Value
150.010	41.5	13.2	28.3	Vertical	43.5	QP Value
840.040	42.3	25.5	16.9	Vertical	46.0	QP Value

- REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Table 15 Restricted Band Radiated Emission Data

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	
6.31175 - 6.31225	123 - 138	2200 - 2300	
8.291 - 8.294	149.9 - 150.05	2310 - 2390	
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	
12.29 - 12.293	167.72 - 173.2	3332 - 3339	
12.51975 -	240 - 285	3345.8 - 3358	
12.52025	322 - 335.4	3600 - 4400	
12.57675 -			
12.57725			
13.36 - 13.41			

Except as shown in table 9 to table 15, all other emission of the above band were less than the limit 20dB.

7. 6DB BANDWIDTH MEASUREMENT

7.1. LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

7.2. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and $VBW \geq RBW$. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.3. TEST SETUP



7.4. EUT OPERATING CONDITIONS

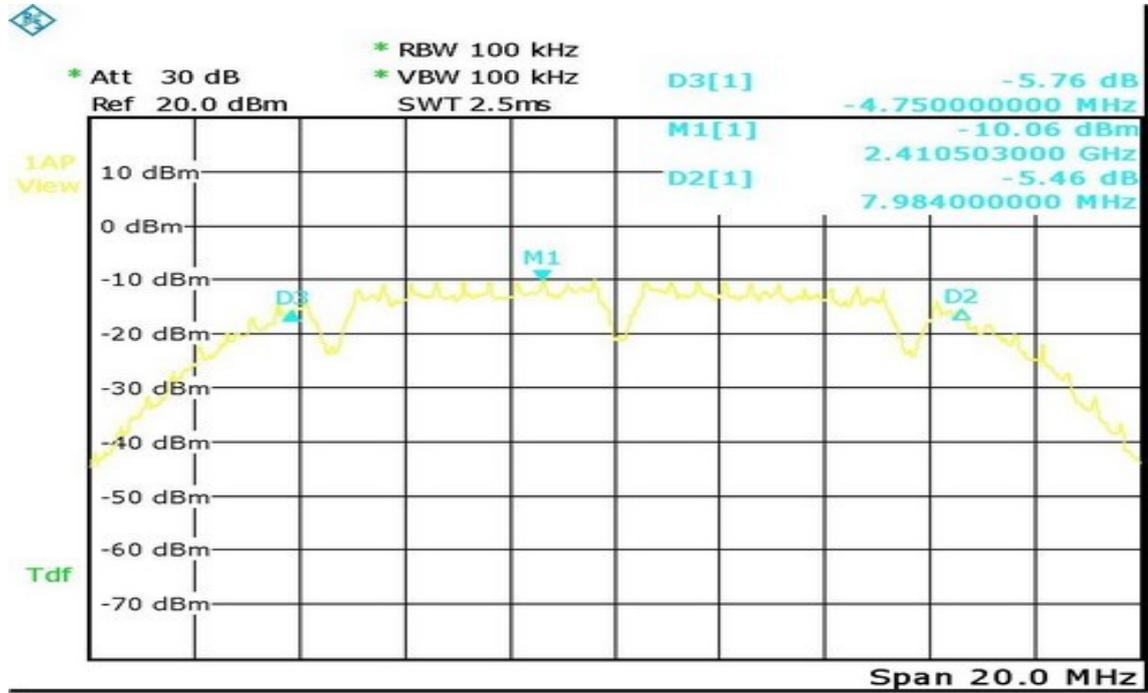
Test mode 1
Test mode 2

7.5. Test Data

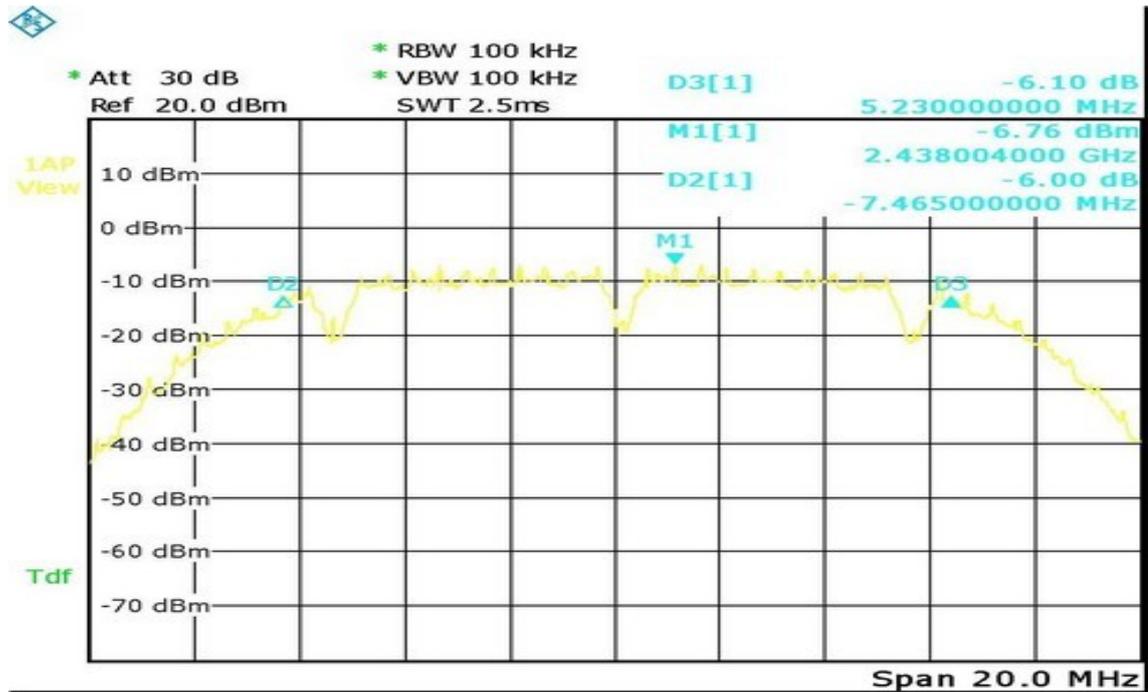
Table 16 6dB Bandwidth Test Data (802.11b)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	results
Ch1	2412	12.7	0.5	Pass
Ch6	2437	12.7	0.5	Pass
Ch11	2462	12.7	0.5	Pass

Test mode 1 (channel 1)



Test mode 1 (channel 6)



Test mode 1 (channel 11)

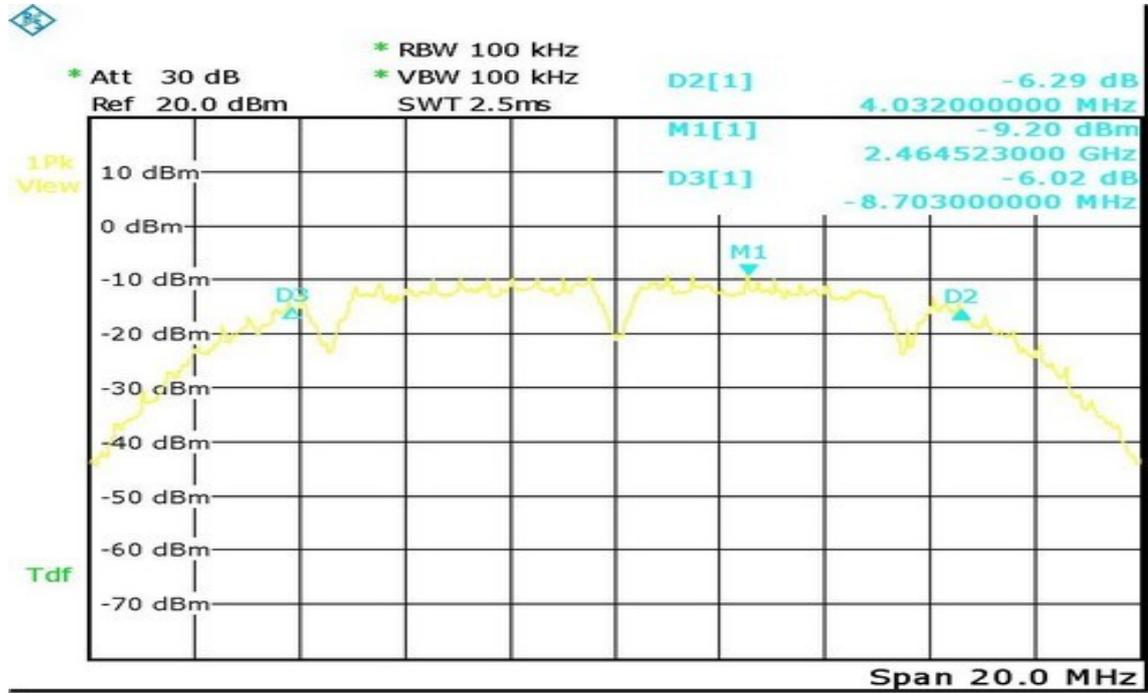
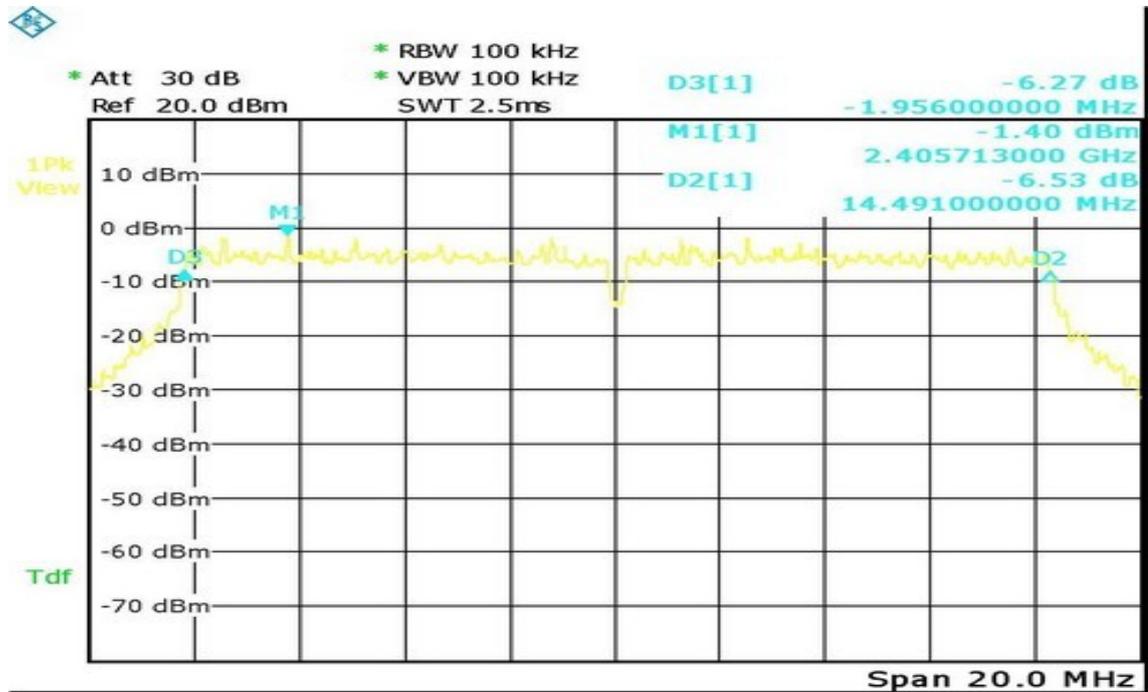


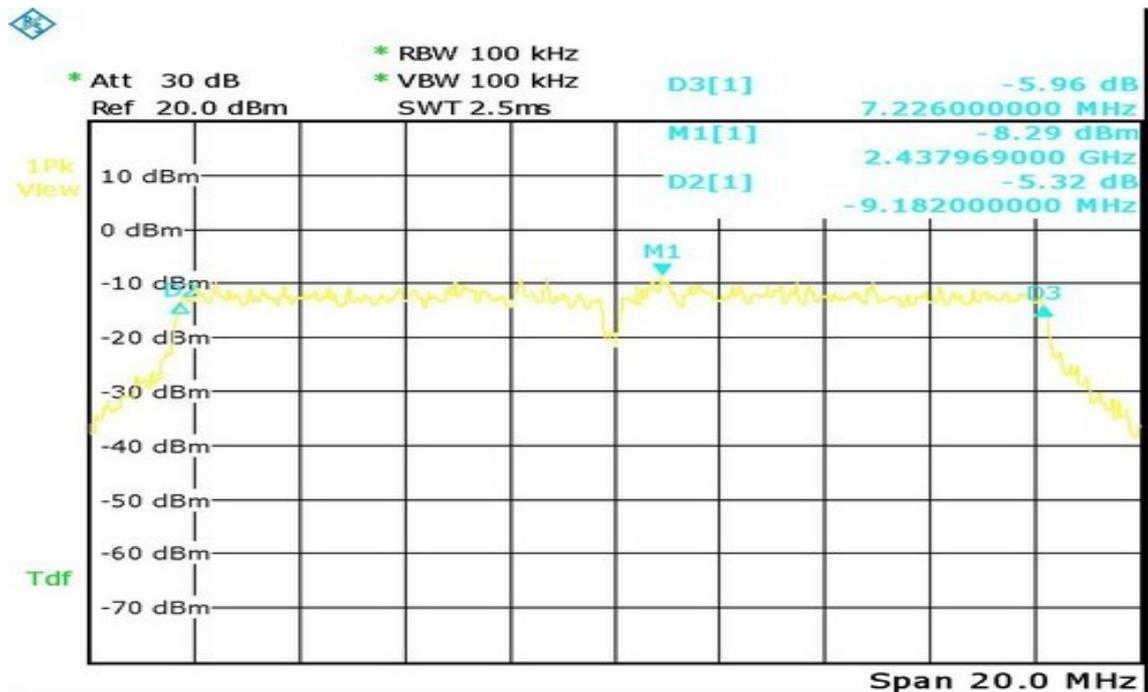
Table 17 6dB Bandwidth Test Data (802.11g)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	results
Ch1	2412	16.4	0.5	Pass
Ch6	2437	16.4	0.5	Pass
Ch11	2462	16.4	0.5	Pass

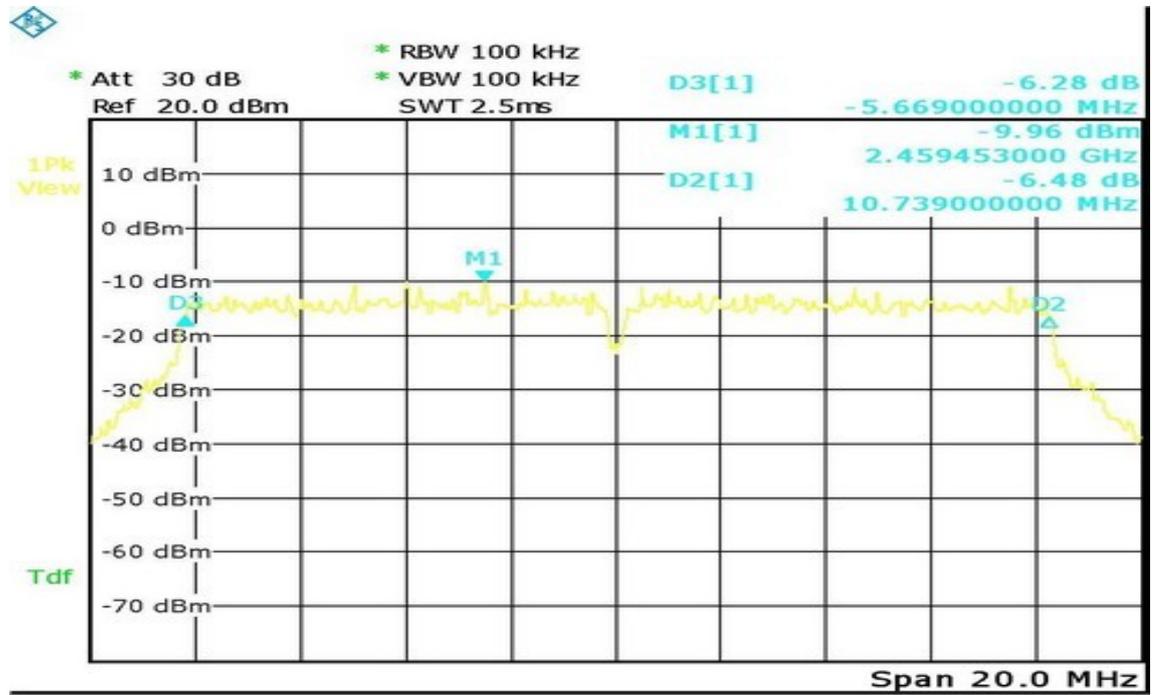
Test mode 2 (channel 1)



Test mode 2 (channel 6)



Test mode 2 (channel 11)



8. MAXIMUM PEAK OUTPUT POWER

8.1. LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

8.2. TEST PROCEDURES

The measurement is made according to DTS procedures KDB 558074. The transmitter output is connected to the spectrum analyzer, the spectrum analyzer is set to band power measurement function.

8.3. TEST SETUP



8.4. EUT OPERATING CONDITIONS

Test mode 1
Test mode 2

8.5. Test Data

Table 18 Maximum Peak Output Power Test Data (802.11b)

Supply voltage	Peak Power Output (dBm)			LIMIT (dBm)	results
	Ch1	Ch6	Ch11		
AC 120V/60Hz				30dBm	Pass
	10.3	12.8	10.5	30dBm	Pass

Table 19 Maximum Peak Output Power Test Data (802.11g)

Supply voltage	Peak Power Output (dBm)			LIMIT (dBm)	results
	Ch1	Ch6	Ch11		
AC 120V/60Hz				30dBm	Pass
	15.3	17.5	15.9	30dBm	Pass

9. POWER SPECTRAL DENSITY MEASUREMENT

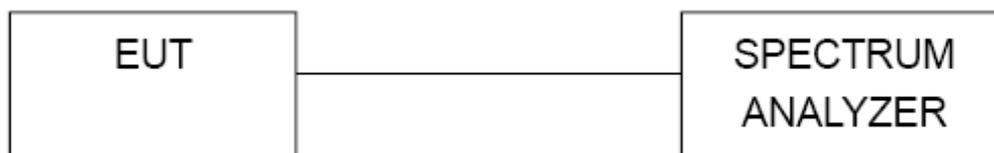
9.1. LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

9.2. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator(10.0dB), the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and $VBW \geq RBW$, set sweep time = span/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

9.3. TEST SETUP



9.4. EUT OPERATING CONDITION

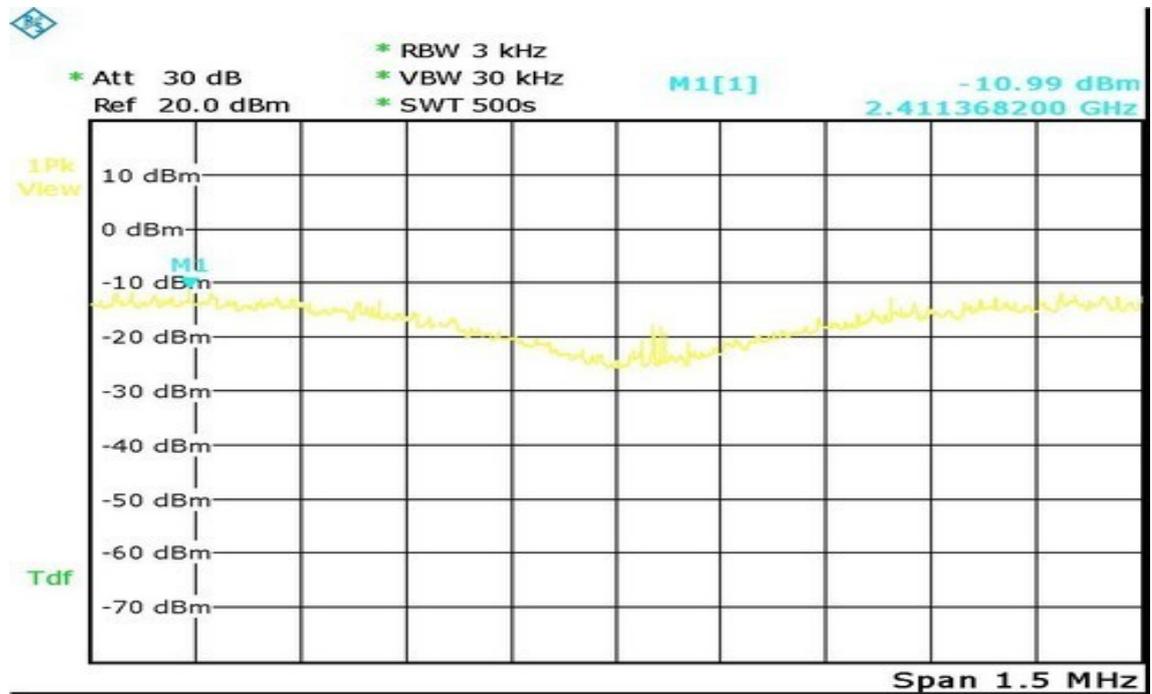
Test mode 1
Test mode 2

9.5. Test Data

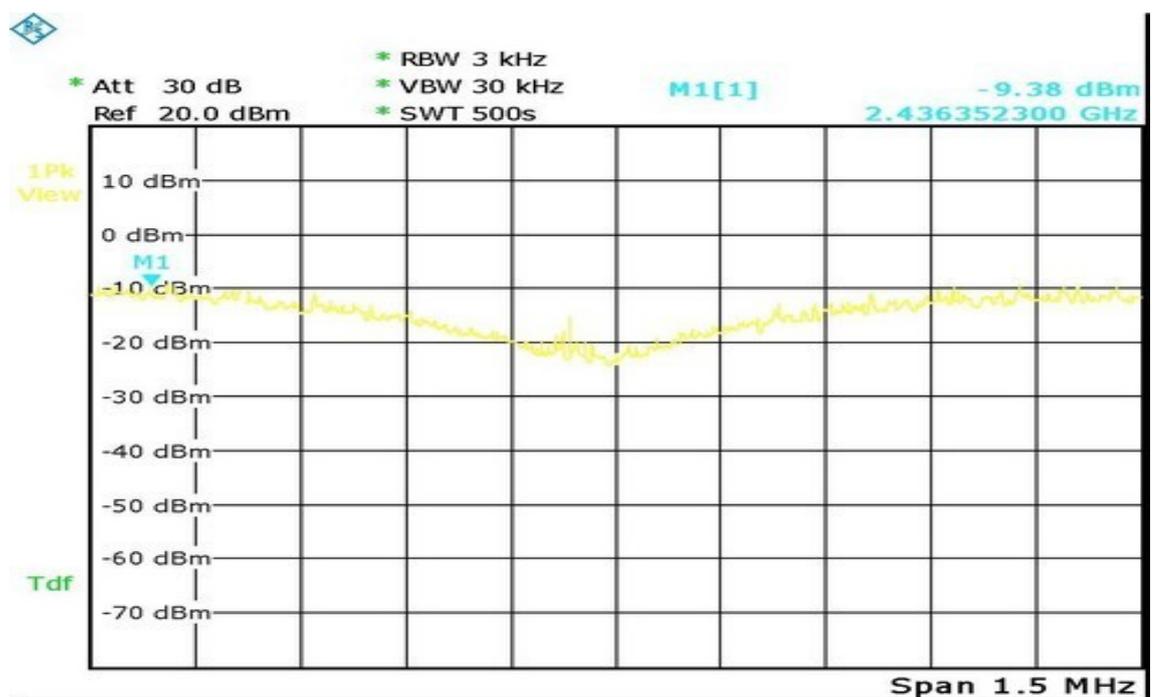
Table 20 Test Data (802.11b)

CHANNEL	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	results
Ch1	-11.0	8	Pass
Ch7	-9.4	8	Pass
Ch11	-11.0	8	Pass

Test mode 1 (channel 1)



Test mode 1 (channel 6)



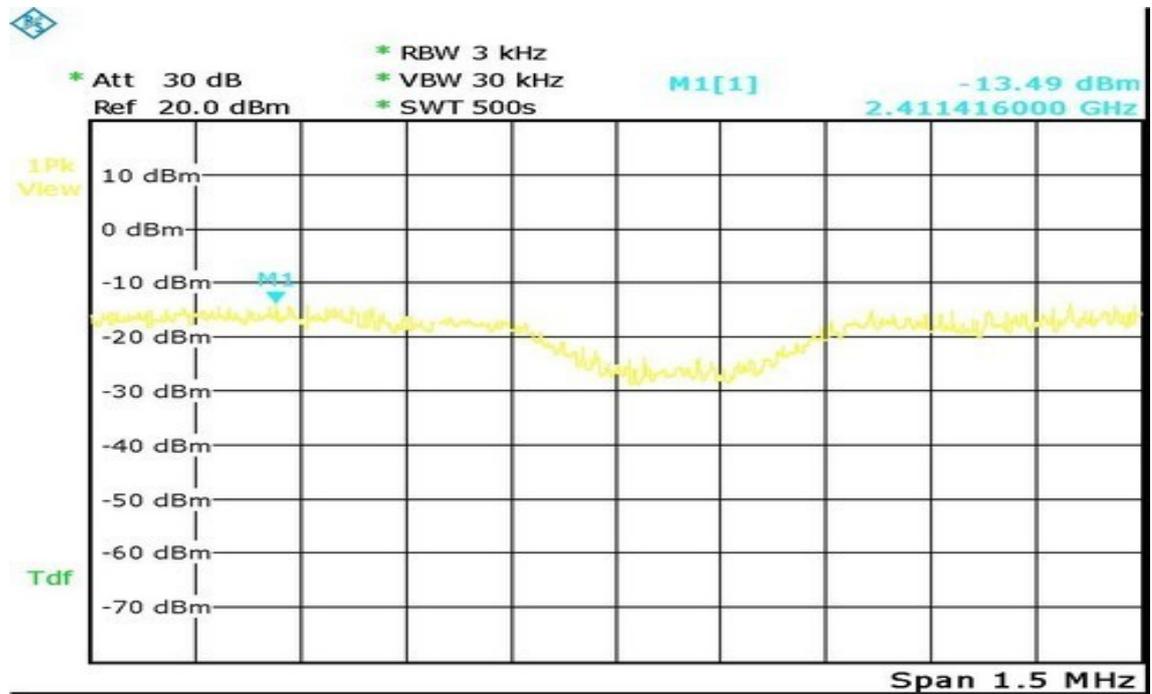
Test mode 1 (channel 11)



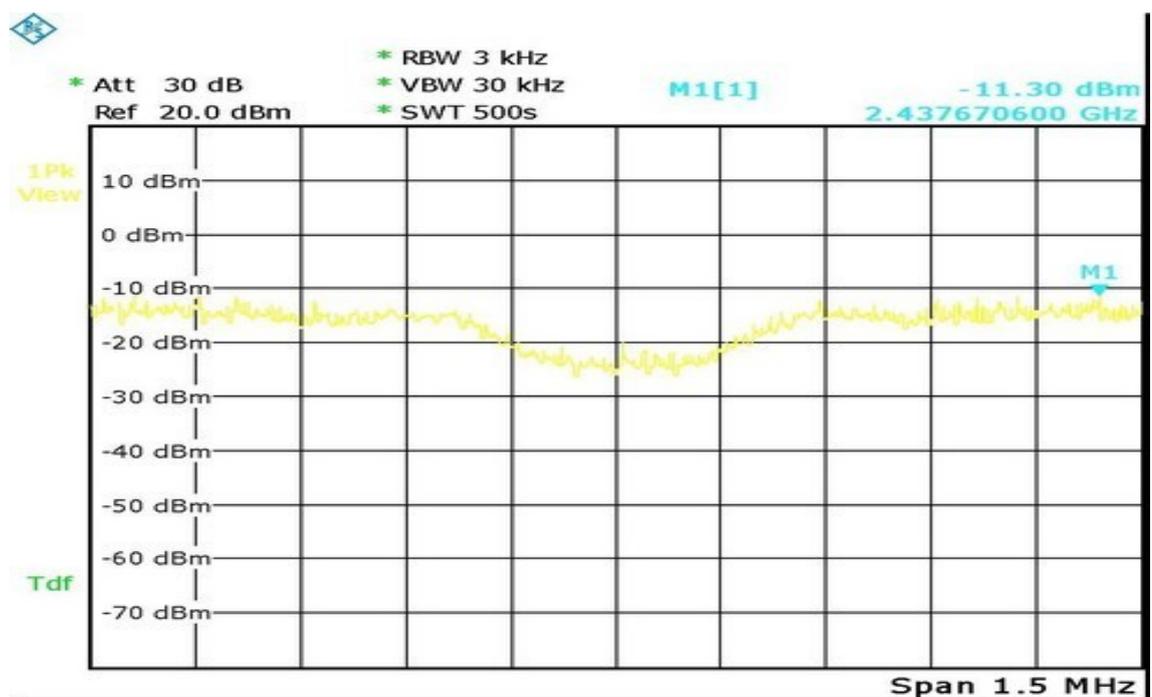
Table 21 Test Data (802.11g)

CHANNEL	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	results
Ch1	-13.5	8	Pass
Ch7	-11.3	8	Pass
Ch11	-13.6	8	Pass

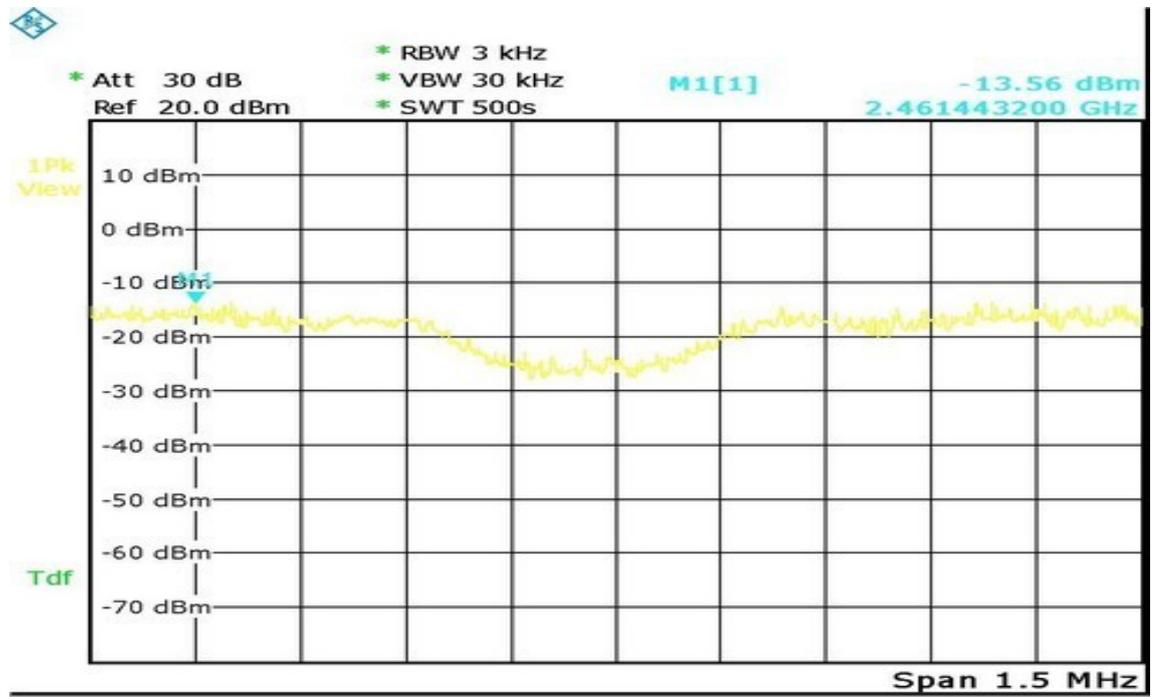
Test mode 2 (channel 1)



Test mode 2 (channel 6)



Test mode 2 (channel 11)



10. BAND EDGES MEASUREMENT

10.1. LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

10.2. TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

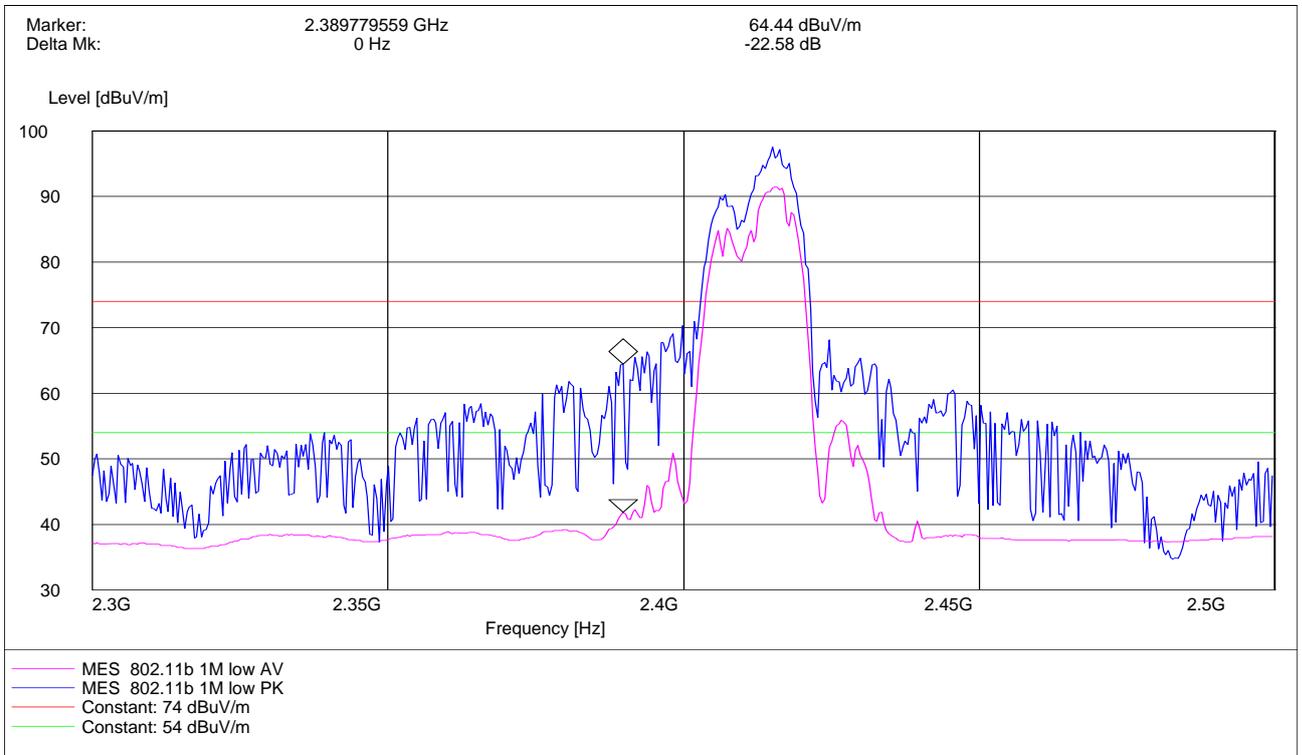
10.3. EUT OPERATING CONDITION

Test mode 1
Test mode 2

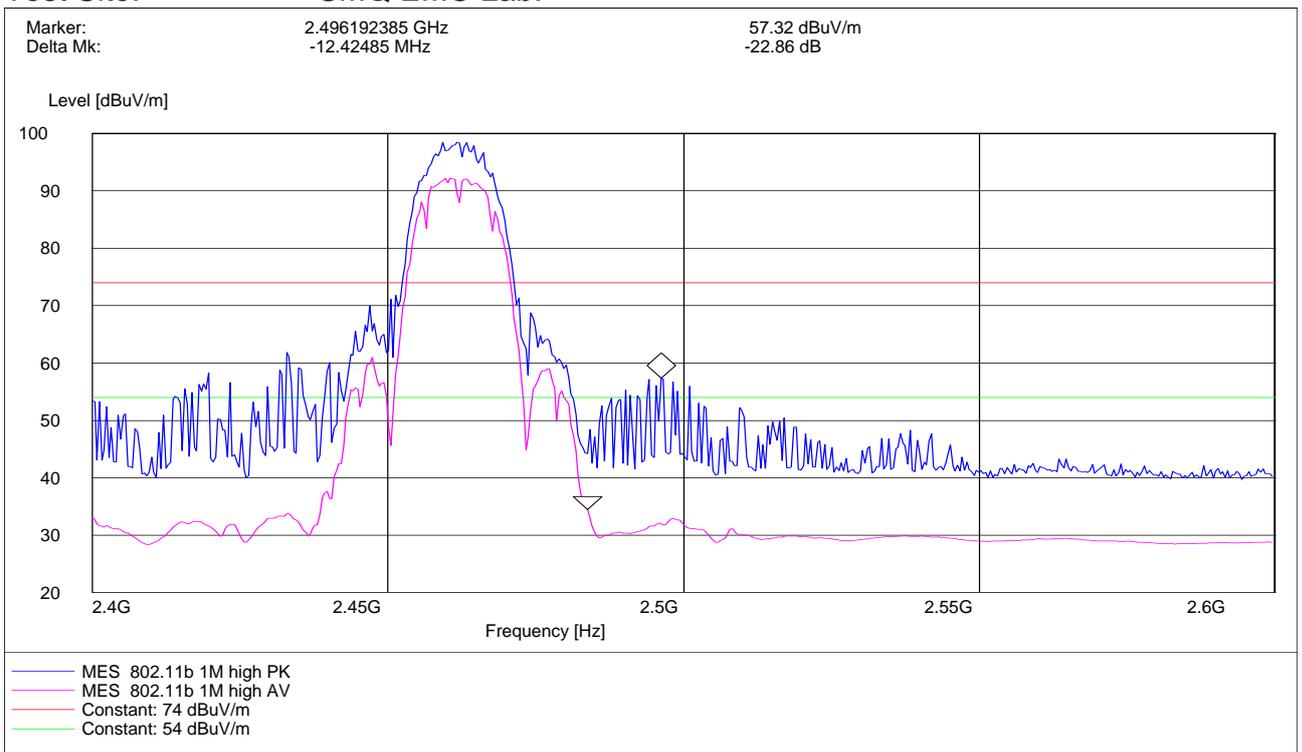
10.4. TEST RESULTS

The measured plots are attached on the following. Test data shows compliance with the band edge requirement in part 15.247(d).

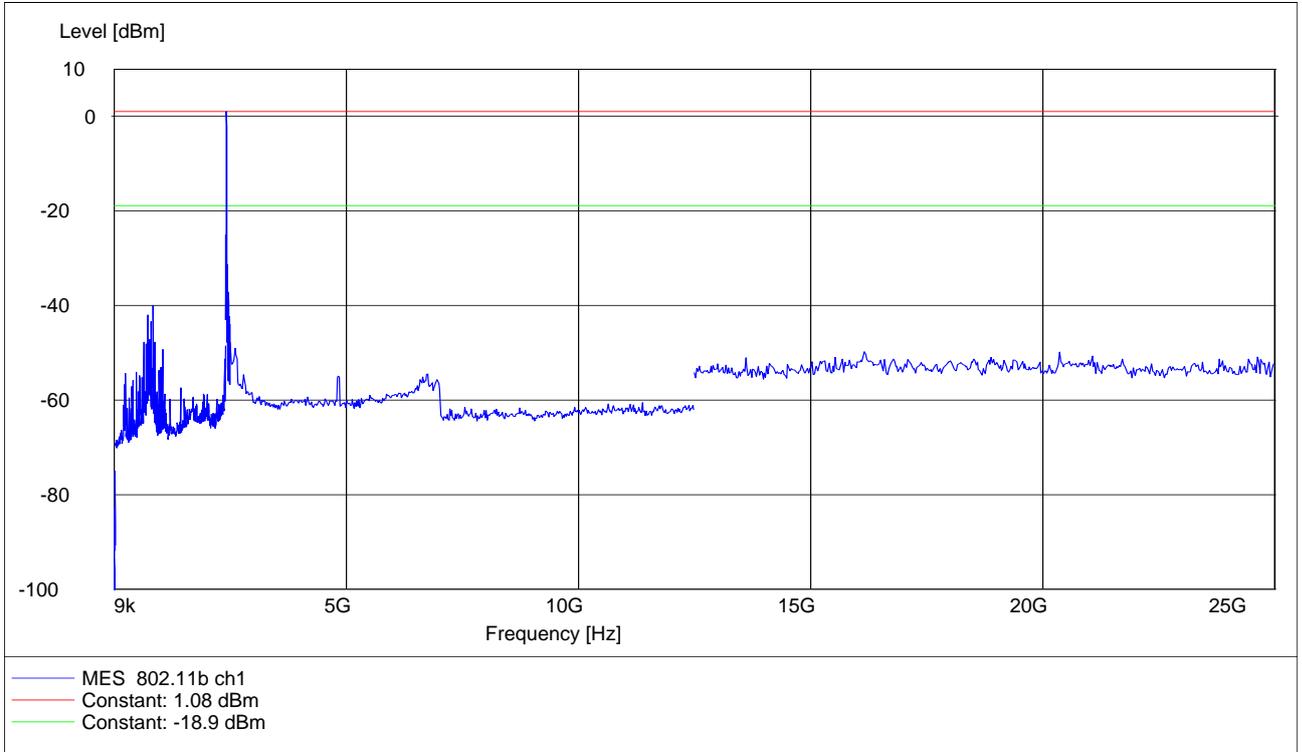
EUT: ZXV10 W300 V8
 Operating Condition: TX 802.11b 1M ch1
 Test Site: SMQ EMC Lab.



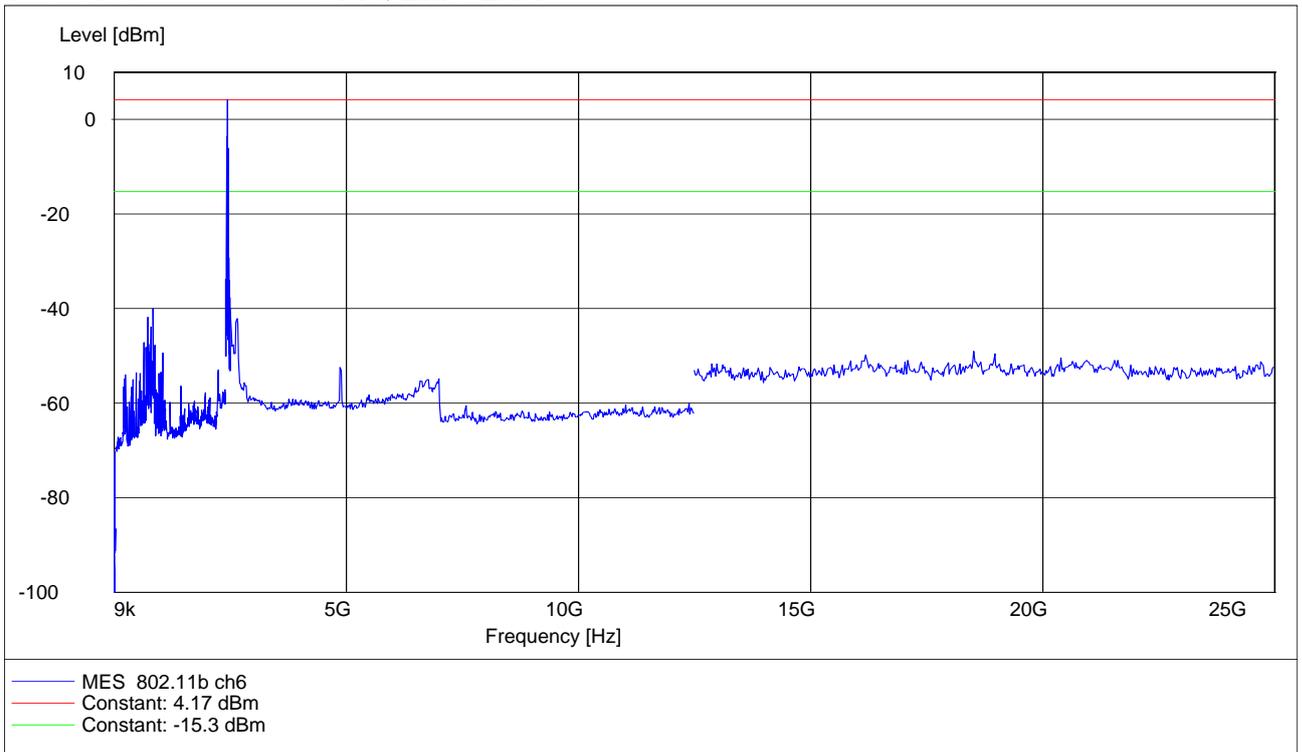
EUT: ZXV10 W300 V8
 Operating Condition: TX 802.11b 6M ch11
 Test Site: SMQ EMC Lab.



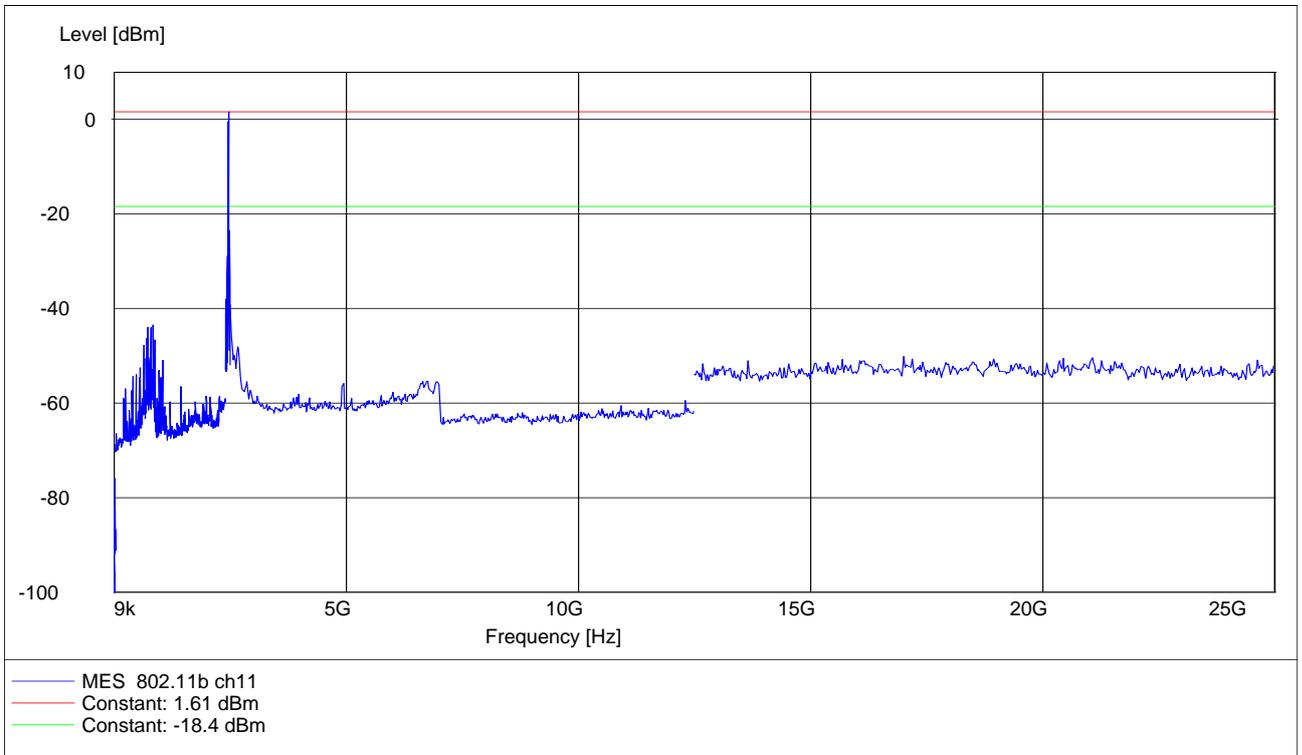
EUT: ZXV10 W300 V8
Operating Condition: TX 802.11b 1M ch1
Test Site: SMQ EMC Lab.



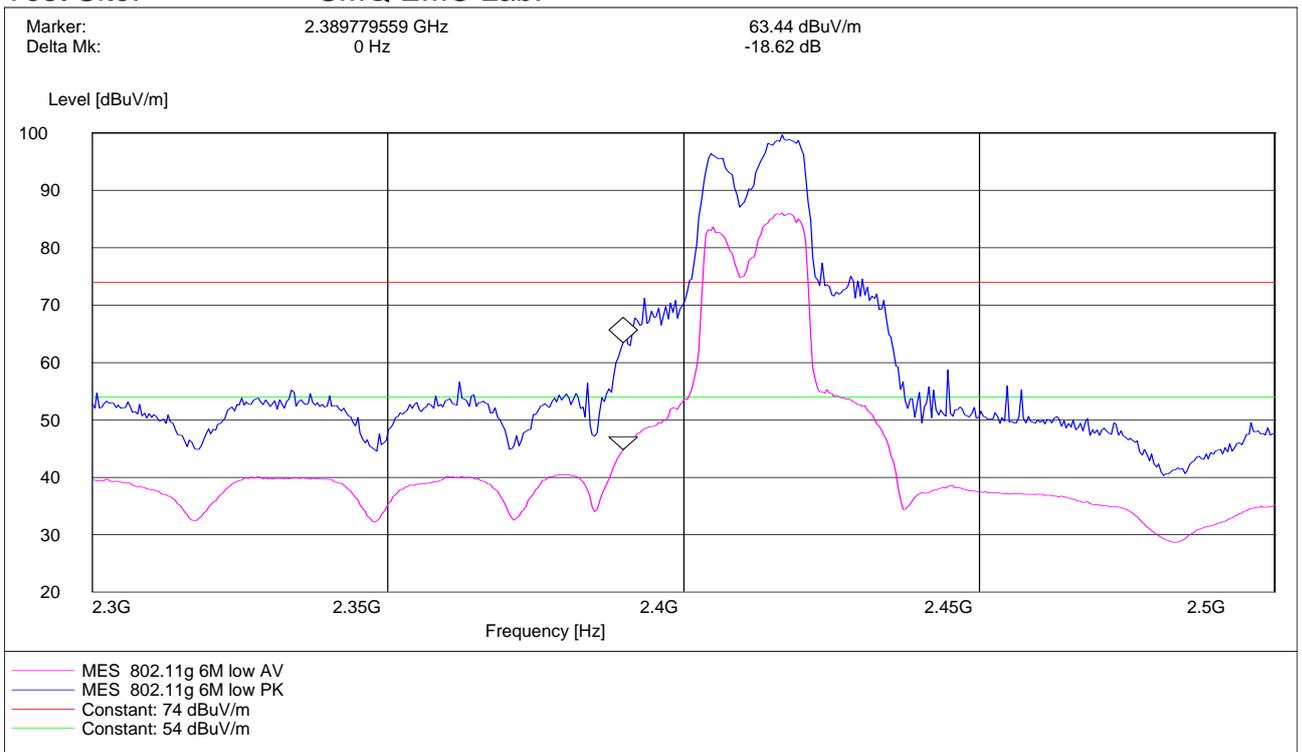
EUT: ZXV10 W300 V8
Operating Condition: TX 802.11b 1M ch6
Test Site: SMQ EMC Lab.



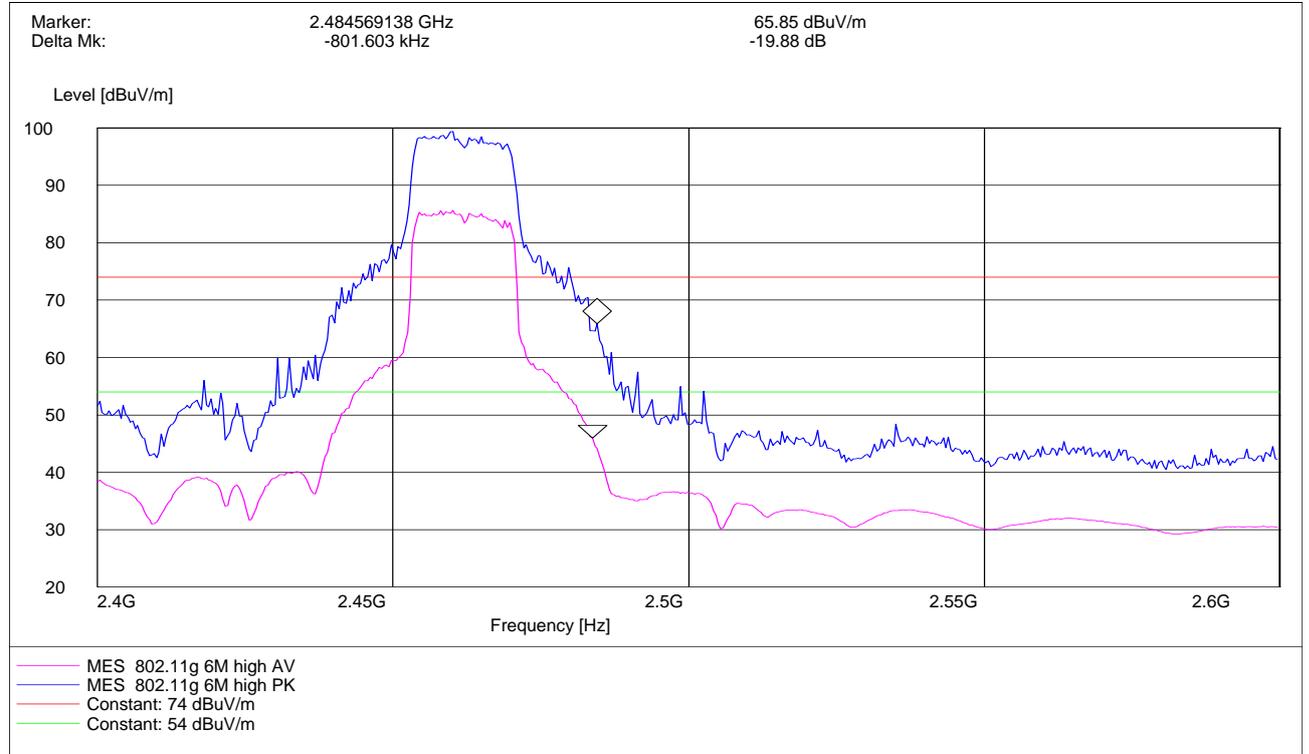
EUT: ZXV10 W300 V8
 Operating Condition: TX 802.11b 1M ch11
 Test Site: SMQ EMC Lab.



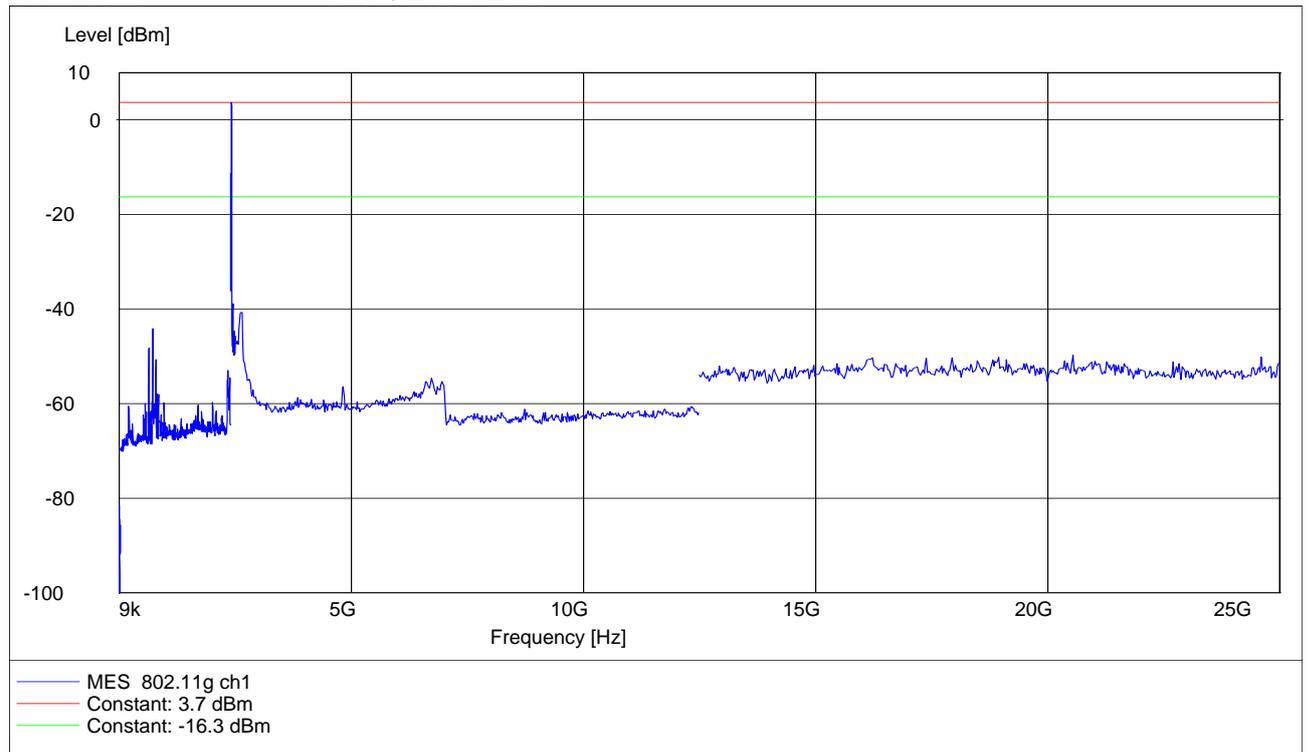
EUT: ZXV10 W300 V8
 Operating Condition: TX 802.11g 6M ch1
 Test Site: SMQ EMC Lab.



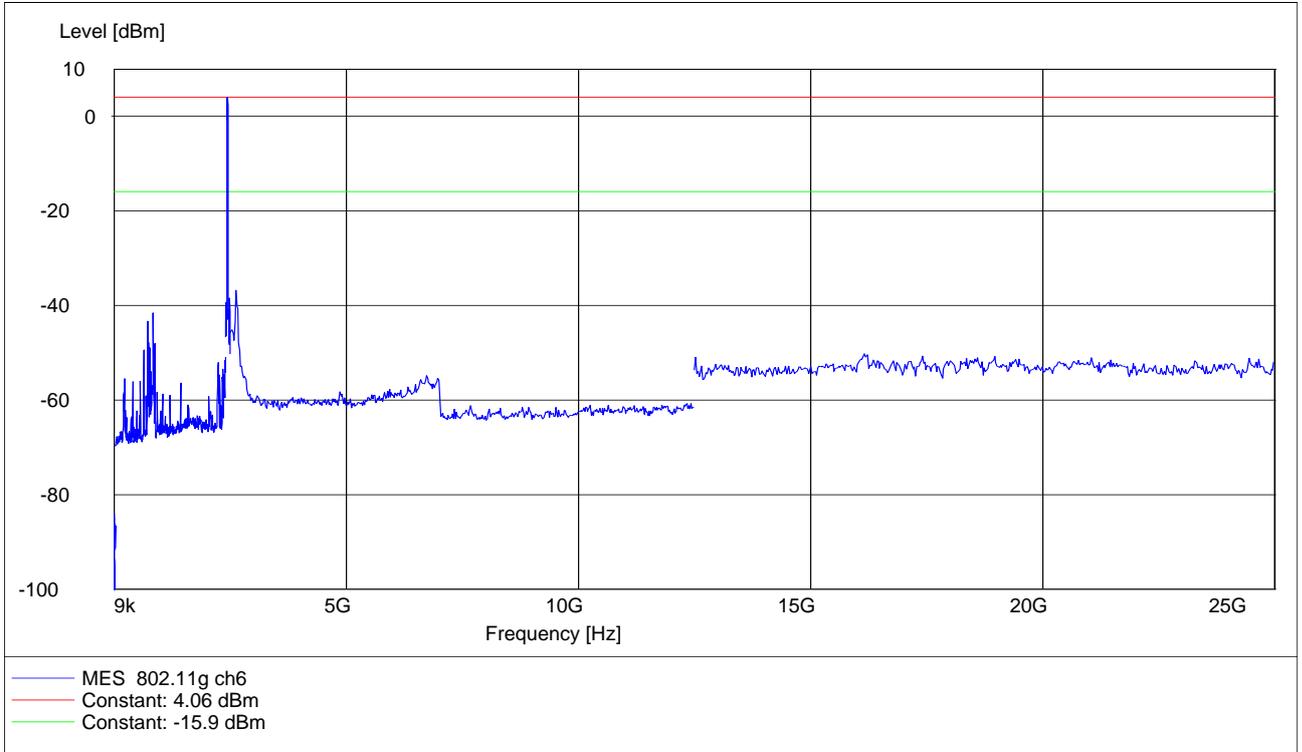
EUT: ZXV10 W300 V8
 Operating Condition: TX 802.11g 6M ch11
 Test Site: SMQ EMC Lab.



EUT: ZXV10 W300 V8
 Operating Condition: TX 802.11g 1M ch6
 Test Site: SMQ EMC Lab.



EUT: ZXV10 W300 V8
Operating Condition: TX 802.11g 1M ch6
Test Site: SMQ EMC Lab.



EUT: ZXV10 W300 V8
Operating Condition: TX 802.11g 1M ch11
Test Site: SMQ EMC Lab.

