

# Global United Technology Service Co., Ltd.

Report No: GTSE10090020601

# **FCC REPORT**

**Applicant:** SHENZHEN VOGUE INDUSTRIES CO., LTD.

Address of Applicant:

Bldg. 38, 5th Cuigang Industry Zone, Huaide Village, Fuyong

Town, Bao'an District, Shenzhen, China

**Equipment Under Test (EUT)** 

Product Name: Universe Tablet PC

Model No.: M-150, PC706

**FCC ID:** V97M150

Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2009

Date of Receipt: 08 Oct., 2010

**Date of Test:** 08-29 Oct., 2010

**Date of Issue:** 29 Oct., 2010

Test Result: PASS \*

Authorized Signature:

Robinson Lo Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



# 2 Contents

			Page
			1
2	CON	ITENTS	2
3	TES	T SUMMARY	3
4	GEN	IERAL INFORMATION	4
	4.1	CLIENT INFORMATION	4
	4.2	GENERAL DESCRIPTION OF E.U.T.	4
	4.3	TEST ENVIRONMENT AND MODE	
	4.4	TEST FACILITY	
	4.5	TEST LOCATION	
	4.6	OTHER INFORMATION REQUESTED BY THE CUSTOMER	
	4.7	TEST INSTRUMENTS LIST	8
5	TES	T RESULTS AND MEASUREMENT DATA	9
	5.1	ANTENNA REQUIREMENT:	9
	5.2	CONDUCTED EMISSIONS	10
	5.3	CONDUCTED PEAK OUTPUT POWER	
	5.4	6DB OCCUPY BANDWIDTH	14
	5.5	POWER SPECTRAL DENSITY	18
	5.6	BAND EDGE	
	5.7	RF ANTENNA CONDUCTED SPURIOUS EMISSIONS	
	5.8	RADIATED EMISSION	32
	5.8.1	100000000000000000000000000000000000000	
	5.8.2	2 Transmitter emission above 1GHz	35

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# 3 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Passed
AC Power Line Conducted Emission	15.207	Passed
Conducted Peak Output Power	15.247 (b)(3)	Passed
6dB Occupied Bandwidth	15.247 (a)(2)	Passed
Power Spectral Density	15.247 (e)	Passed
Radiated Emission	15.205/15.209	Passed
Band Edge	15.247(d)	Passed

#### Remark:

- Passed: The EUT complies with the essential requirements in the standard.
- Failed: The EUT does not comply with the essential requirements in the standard.
- Tx: In this whole report Tx (or tx) means Transmitter.
- Rx: In this whole report Rx (or rx) means Receiver.

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# 4 General Information

# **4.1 Client Information**

Applicant:	SHENZHEN VOGUE INDUSTRIES CO., LTD.				
Address of Applicant:	Bldg. 38, 5th Cuigang Industry Zone, Huaide Village, Fuyong Town, Bao'an District, Shenzhen, China				
Manufacturer/ Factory:	SHENZHEN VOGUE INDUSTRIES CO., LTD.				
Address of Manufacturer/ Factory:	Bldg. 38, 5th Cuigang Industry Zone, Huaide Village, Fuyong Town, Bao'an District, Shenzhen, China				

# 4.2 General Description of E.U.T.

Product Name:	Universe Tablet PC
Model No.:	M-150, PC706
Operation Frequency:	2412MHz~2462MHz
Channel numbers:	11
Channel separation:	5MHz
Modulation type: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation type: (IEEE 802.11g)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Antenna Type:	Integral
Antenna gain:	0dBi (declare by Applicant)
Power supply:	Input: AC 100-240V 50/60Hz
	Output: DC 9V 1.5A

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

#### Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2437MHz
The Highest channel	2462MHz

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Page 5 of 38



#### 4.3 Test environment and mode

Operating Environment:	Operating Environment:					
Temperature:	24.0 °C					
Humidity:	54 % RH					
Atmospheric Pressure:	1010 mbar					
Test mode:						
Operation mode	Keep the EUT in running with full load.(Playing video and audio, connect USB driver, earphone, SD card and network)					

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-Test Mode: channel 1								
Mode		80	2.11b					
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
Power (dBm)	12.25	12.46	12.51	12.77				
Mode					02.11g			
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps

#### **Final Test Mode:**

According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup"11Mbps for 802.11b, 54Mbps for 802.11g

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## 4.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### ● FCC —Registration No.: 600491

Global United Technology Service Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 600491, July 20, 2010.

#### Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Service Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

#### 4.5 Test Location

All tests were performed at:

Global United Technology Service Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen,

China

Tel: 0755-27798480 Fax: 0755-27798960

# 4.6 Other Information Requested by the Customer

None.

Global United Technology Service Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

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## 4.7 Test Instruments list

Radia	Radiated Emission:									
Item Test Equipment		Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)				
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS201	Mar. 30 2010	Mar. 30 2011				
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS202	N/A	N/A				
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Sep. 10 2010	Sep. 10 2011				
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS204	Sep. 10 2010	Sep. 10 2011				
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS205	June 30 2010	June 30 2011				
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A				
7	Coaxial Cable	GTS	N/A	GTS400	Apr. 01 2010	Apr. 01 2011				
8	Coaxial Cable	GTS	N/A	GTS401	Apr. 01 2010	Apr. 01 2011				
9	Coaxial cable	GTS	N/A	GTS402	Apr. 01 2010	Apr. 01 2011				
10	Coaxial Cable	GTS	N/A	GTS407	Apr. 01 2010	Apr. 01 2011				
11	Coaxial Cable	GTS	N/A	GTS408	Apr. 01 2010	Apr. 01 2011				
12	Amplifier(10KHz- 5GHz)	Sonnoma Instrument	305-1052	GTS210	Aug. 03 2010	Aug. 03 2011				
13	Amplifier(2GHz- 20GHz)	HP	8349B	GTS231	Aug. 03 2010	Aug. 03 2011				

Conducted Emission:										
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)				
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS206	Apr. 10 2010	Apr. 10 2011				
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS208	Sep. 14 2010	Sep. 14 2011				
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS209	Sep. 14 2010	Sep. 14 2011				
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS207	Apr. 14 2010	Apr. 14 2011				
5	Coaxial Cable	GTS	N/A	GTS406	Apr. 01 2010	Apr. 01 2011				
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A				

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Project No.: GTSE100900206IT

#### 5 Test results and Measurement Data

## 5.1 Antenna requirement:

**Standard requirement:** FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

#### **E.U.T Antenna:**

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -3.0dBi.



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#### 5.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207						
Test Method:	ANSI C63.4: 2003						
Test Frequency Range:	150KHz to 30MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9KHz, VBW=30KHz						
Limit:	Fraguency range (MHz)	Limit (d	BuV)				
	Frequency range (MHz)  Quasi-peak  Average						
	0.15-0.5 66 to 56* 56 to 46*						
	0.5-5     56     46       5-30     60     50						
Test procedure	* Decreases with the logarithm The E.U.T and simulators are						
	impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.						
Test setup:	Refere	nce Plane					
	AUX Equipment E.U  Test table/Insulation pla  Remark E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Test table height=0.8m		er — AC power				
Test Instruments:	Refer to section 4.7 for details						
Test mode:	Refer to section 4.3 for details						
Test results:	Passed						

#### **Measurement Data**

An initial pre-scan was performed on the live and neutral lines with peak detector.

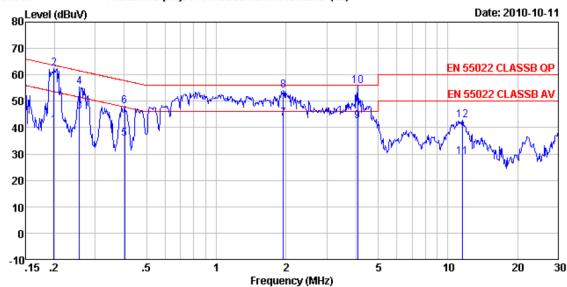
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

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#### Live Line:





Condition : EN 55022 CLASSB QP LISN LINE

Job No. Test Mode : 206IT : Operation mode

Test Engineer: Taik

. 0.0 :	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.199	37.20	3.66	0.01	40.87	53.67	-12.80	Average
2	0.199	58.76	3.66	0.01	62.43	63.67	-1.24	QP
3	0.256	42.36	3.63	0.01	46.00	51.56	-5.56	Average
4	0.256	51.91	3.63	0.01	55.55	61.56	-6.01	QP
5	0.402	32.35	3.58	0.01	35.94	47.81	-11.87	Average
6	0.402	44.54	3.58	0.01	48.13	57.81	-9.68	QP
7	1.949	40.10	3.40	0.11	43.61	46.00	-2.39	Average
8	1.949	50.63	3.40	0.11	54.14	56.00	-1.86	QP
9	4.070	38.90	3.32	0.28	42.50	46.00	-3.50	Average
10	4.070	52.00	3.32	0.28	55.60	56.00		
11	11.559	25.36	3.21	0.41	28.98	50.00	-21.02	Average
12	11.559	39.13	3.21	0.41	42.75		-17.25	

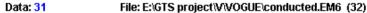
#### Notes:

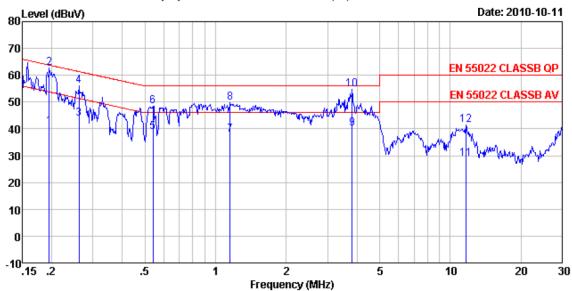
- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

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#### **Neutral Line:**





: EN 55022 CLASSB QP LISN NEUTRAL Condition

: 206IT

Job No. Test Mode : Operation mode

Test Engineer: Taik

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	d₿	dBu₹	dBuV	dB	
1	0.195	37.20	3.66	0.01	40.87			Average
2	0.195	59. 20	3.66	0.01	62.87	63.80	-0.93	QP
2 3	0.262	40.33	3.63	0.01	43.97	51.38	-7.41	Average
4	0.262	52.33	3.63	0.01	55.97	61.38	-5.41	QP
5	0.541	35.26	3.55	0.01	38.82	46.00	-7.18	Average
6	0.541	44.87	3.55	0.01	48.43	56.00	-7.57	
7	1.153	34.26	3.46	0.01	37.73	46.00	-8.27	Average
	1.153	46.18	3.46	0.01	49.65	56.00		
8 9	3.820	36.70	3.33	0.26	40.29	46.00		Average
10	3.820	51.03	3.33	0.26	54.62	56.00	-1.38	
11	11.621	25.36	3. 21	0.41	28.98	50.00		Average
12	11.621	37.88	3. 21	0.41	41.50		-18.50	

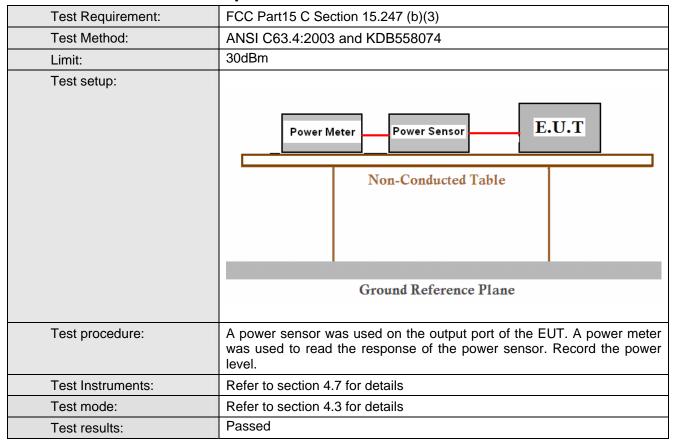
#### Notes:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

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## **5.3 Conducted Peak Output Power**



#### **Measurement Data**

	802.11b mode									
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result							
Lowest	12.77	30.00	Pass							
Middle	12.28	30.00	Pass							
Highest	11.82	30.00	Pass							
	802.11g mo	de								
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result							
Lowest	10.79	30.00	Pass							
Middle	10.31	30.00	Pass							
Highest	10.24	30.00	Pass							

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# 5.4 6dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	>500KHz
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane
Test Instruments:	Refer to section 4.7 for details
Test mode:	Refer to section 4.3 for details
Test results:	Passed

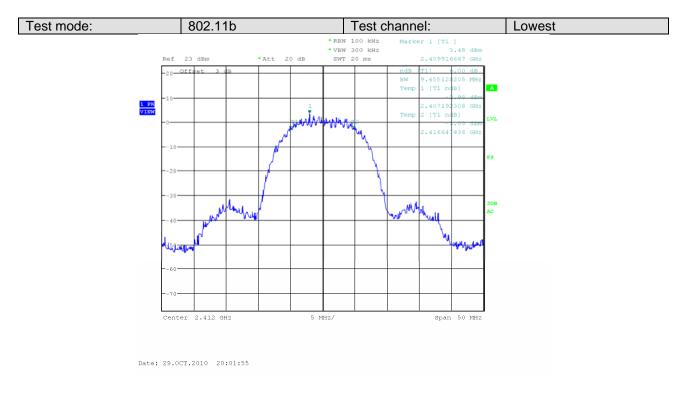
#### **Measurement Data**

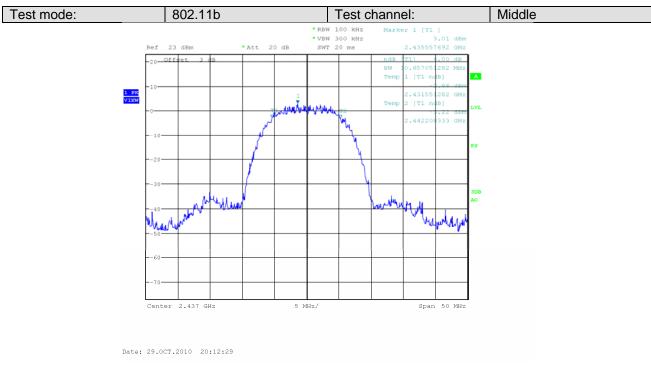
	802.11b mode									
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result							
Lowest	9.455	>500	Pass							
Middle	10.657	>500	Pass							
Highest	10.576	>500	Pass							
	802.11g mode									
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result							
Lowest	16.586	>500	Pass							
Middle	16.506	>500	Pass							
Highest	16.586	>500	Pass							

#### Test plot as follows:

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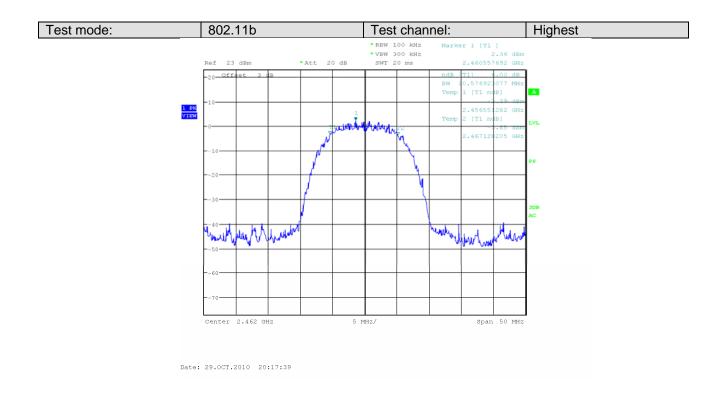


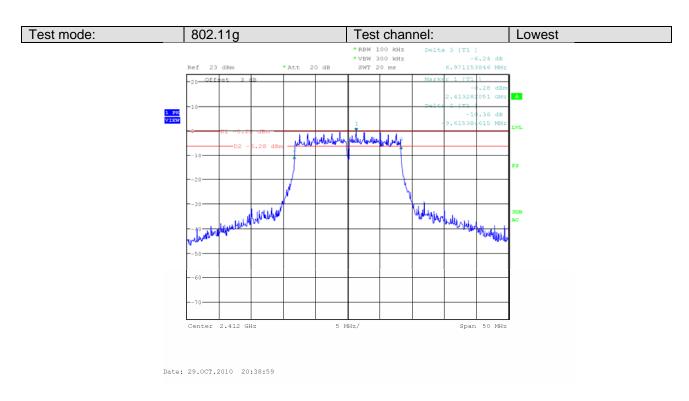




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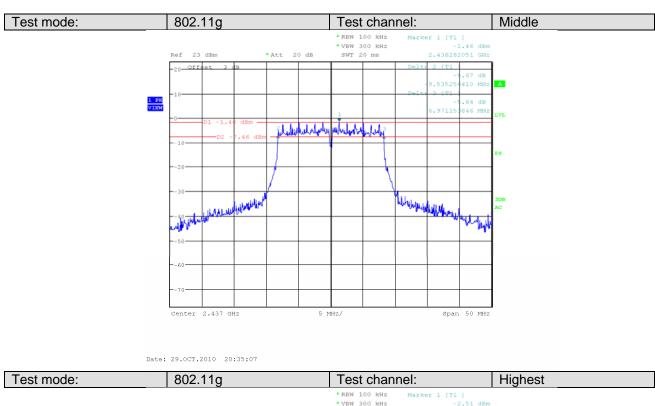


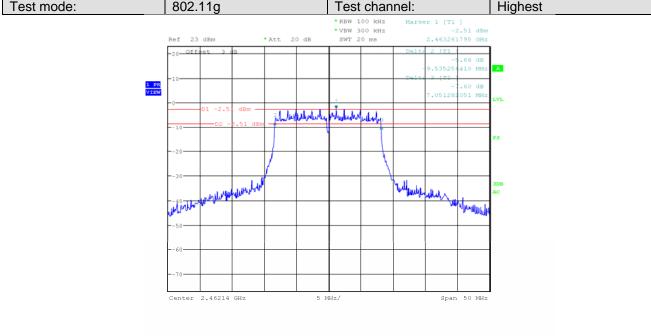






Project No.: GTSE100900206IT

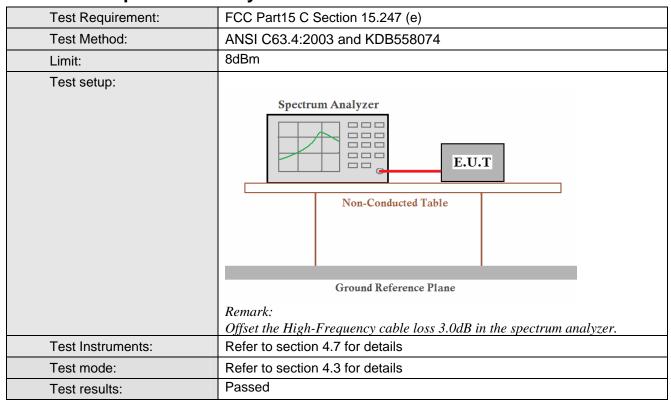




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# 5.5 Power Spectral Density



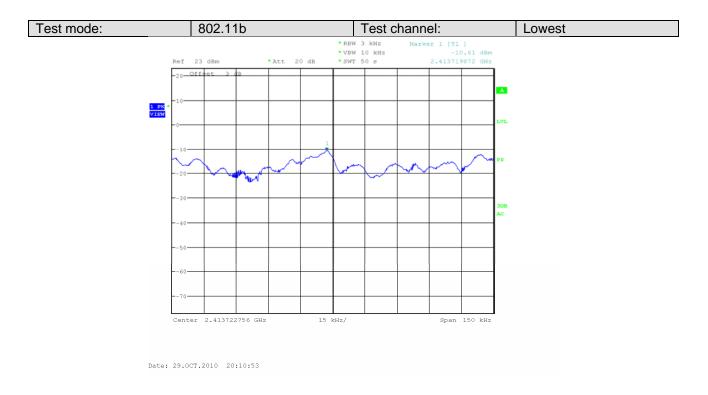
#### **Measurement Data**

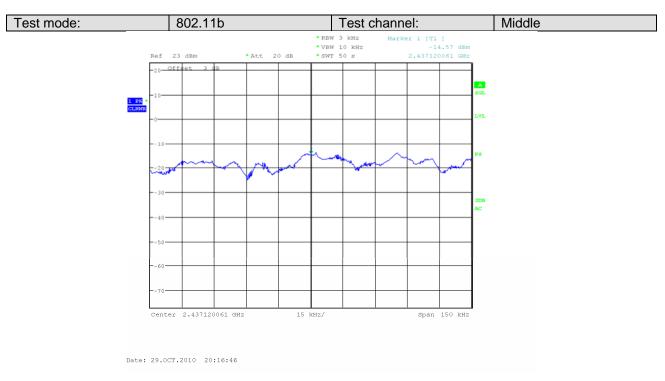
Measurement Data											
	802.11b mode										
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result								
Lowest	-10.61	8.00	Pass								
Middle	-14.57	8.00	Pass								
Highest	-14.60	8.00	Pass								
	802.11g mode										
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result								
Lowest	-16.23	8.00	Pass								
Middle	-10.82	8.00	Pass								
Highest	-18.24	8.00	Pass								

#### Test plot as follows:

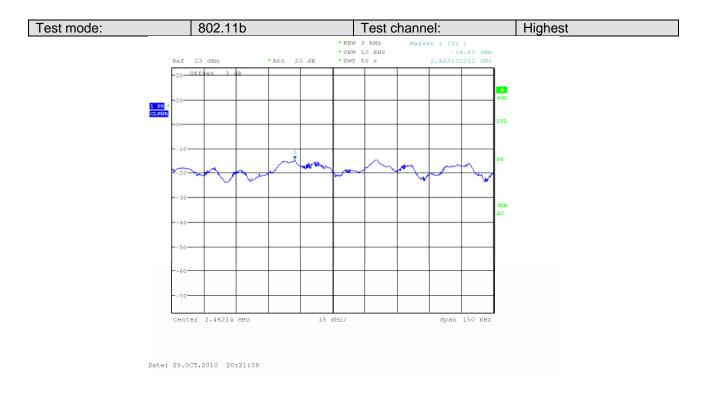
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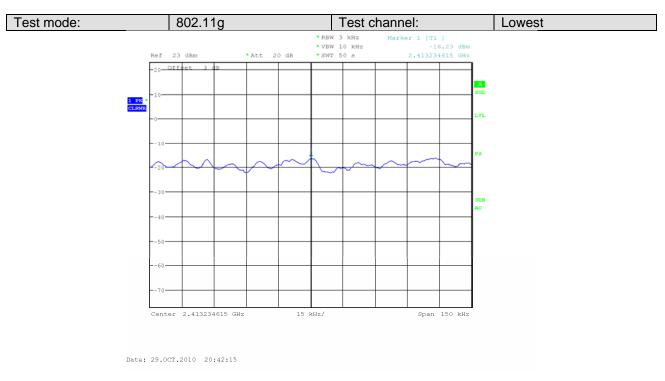






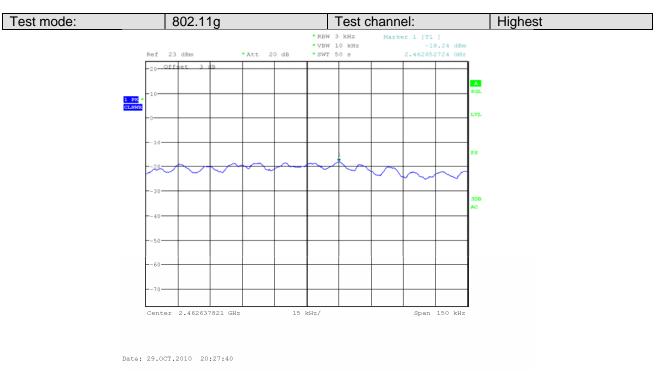














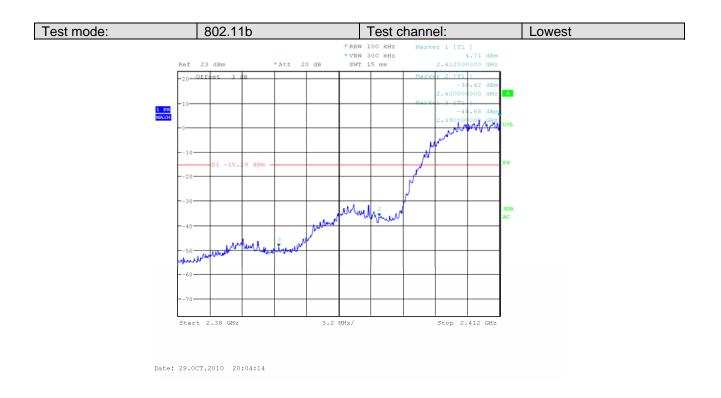
# 5.6 Band Edge

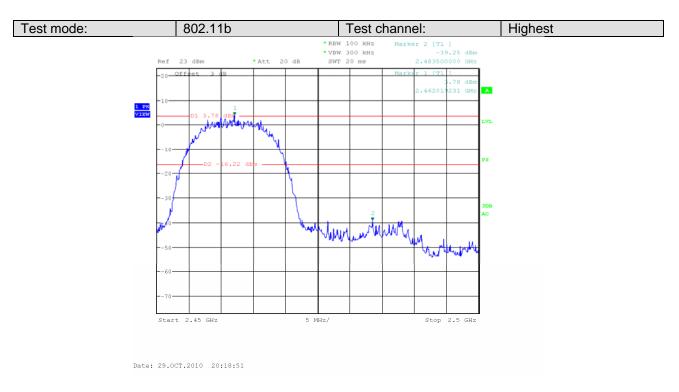
Test Requirement:	FCC Part15 C Section 15.247 (d)					
Test Method:	ANSI C63.4:2003 and KDB558074					
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.					
Test setup:						
	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane  Remark:  Offset the High-Frequency cable loss 3.0dB in the spectrum analyzer.					
Test Instruments:	Refer to section 4.7 for details					
Test mode:	Refer to section 4.3 for details					
Test results:	Passed					

#### Test plot as follows:

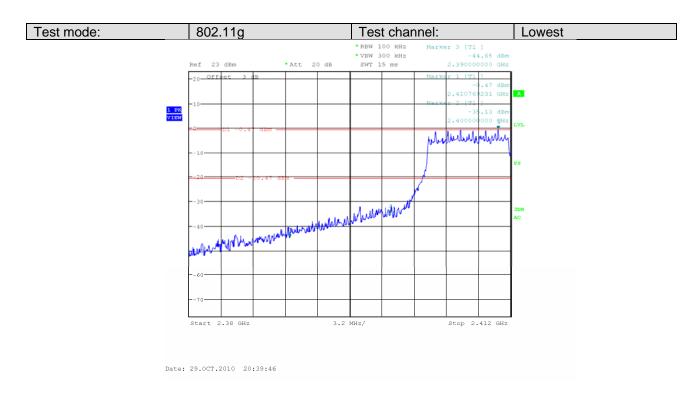
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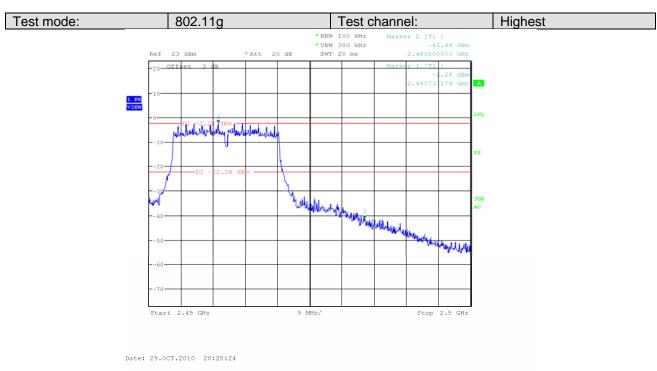














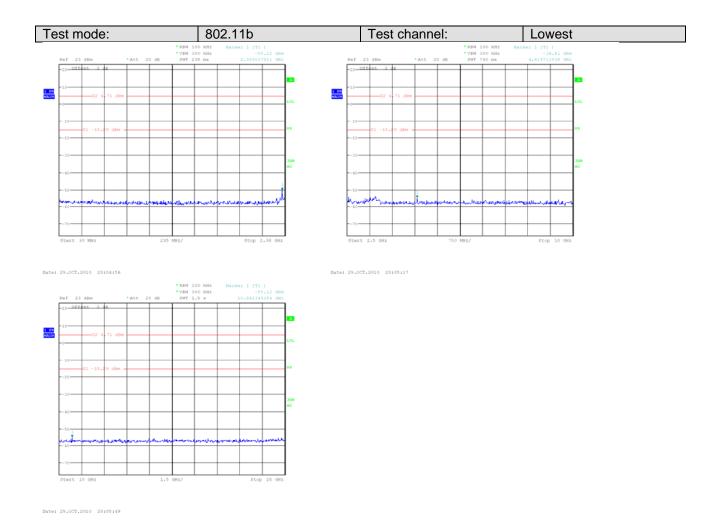
# 5.7 RF Antenna Conducted spurious emissions

Test Requirement:	FCC Part15 C Section 15.247 (d)						
Test Method:	ANSI C63.4:2003 and KDB558074						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.						
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane  Remark:  Offset the High-Frequency cable loss 3.0dB in the spectrum analyzer.						
Test Instruments:	Refer to section 4.7 for details						
Test mode:	Refer to section 4.3 for details						
Test results:	Passed						

#### Test plot as follows:

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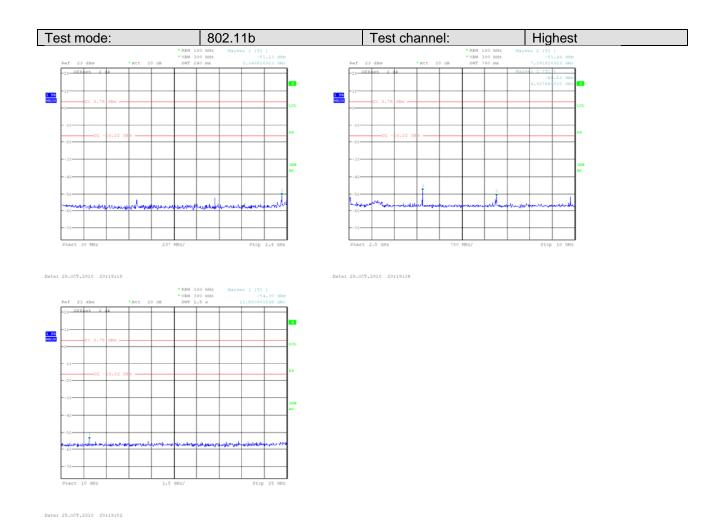




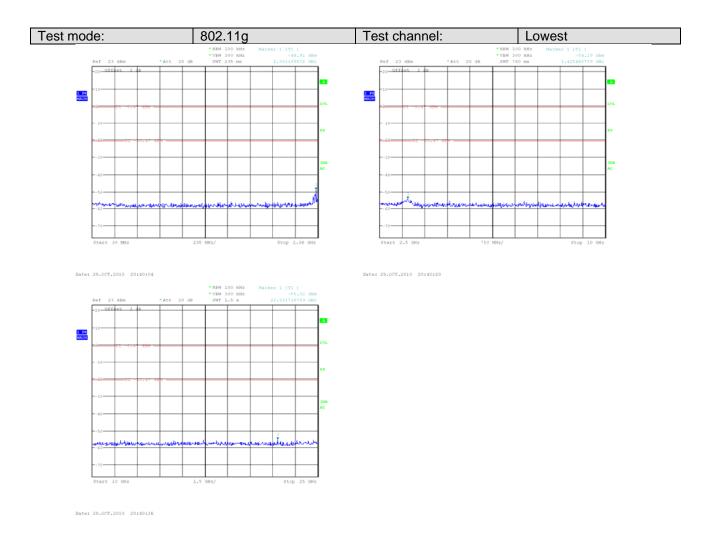






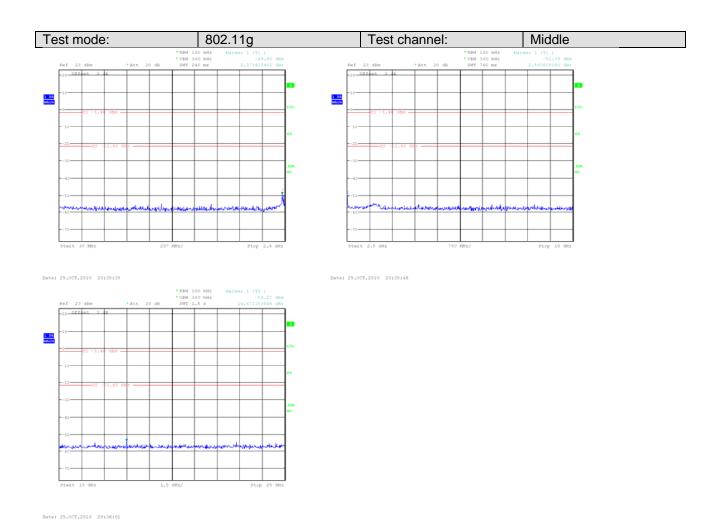






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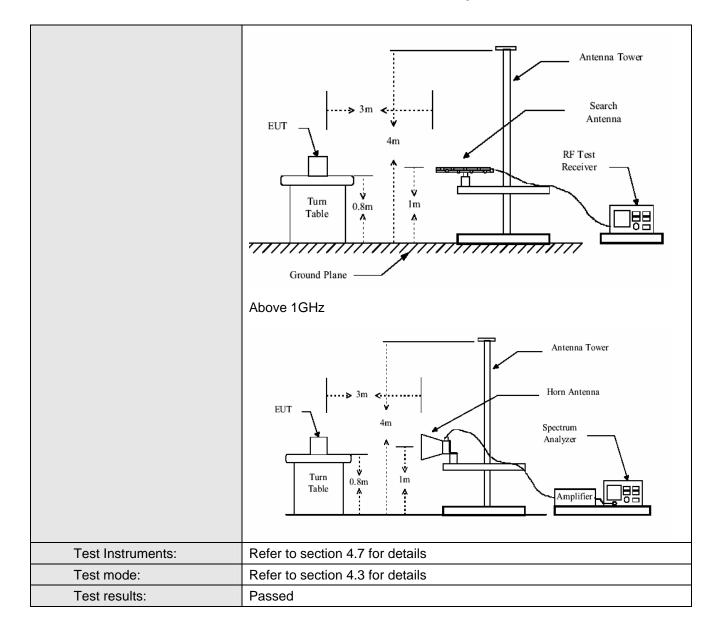


# 5.8 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205								
Test Method:	ANSI C63.4: 20	03							
Test Frequency Range:	30MHz to 25GHz								
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)								
Receiver setup:									
·	Frequency Detector RBW VBW Remark								
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value				
	Above 1GHz	Peak	1MHz	3MHz	Peak Value				
	7.5010 1011	Peak	1MHz	10Hz	Average Value				
Limit:									
	Freque		Limit (dBuV/		Remark				
	30MHz-8		40.0		Quasi-peak Value				
	88MHz-21		43.5		Quasi-peak Value				
	216MHz-9		46.0		Quasi-peak Value				
	960MHz-	1GHz	54.0		Quasi-peak Value				
	Above 1	GHz	54.0		Average Value				
Test Procedure:			74.0		Peak Value 0.8 meters above				
	rotated 360 radiation. b. The EUT was antenna, who tower. c. The antenna the ground and Both horizon make the mind. For each succase and the meters and degrees to a specified Base. The test-reconstruction of the EUT whave 10dB in the EUT was antenance and the EUT whave 10dB in the EUT was antenance and the EUT was antenance	a height is vari to determine the ntal and vertical easurement. Ispected emission the antenna the rotable take find the maximal ceiver system wandwidth with ion level of the pecified, then test would be report	termine the particle and the total and the t	meter to fo value of the armous arranto heights for deak Detect I old Mode. It makes to peak be the emissione by one	he highest ence-receiving able-height antenna ur meters above e field strength. atenna are set to ged to its worst rom 1 meter to 4 egrees to 360				
Test setup:	Below 1GHz								

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#### Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

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#### **5.8.1** Radiated emission below 1GHz

#### Test in WIFI mode.

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
49.19	49.64	14.16	0.67	25.72	38.75	40.00	-1.25	Vertical
74.92	51.09	12.08	0.89	25.69	38.37	40.00	-1.63	Vertical
135.03	56.33	9.75	1.42	25.64	41.86	43.50	-1.64	Vertical
258.33	53.38	15.01	1.97	25.60	44.76	46.00	-1.24	Vertical
552.88	47.57	19.58	2.57	25.54	44.18	46.00	-1.82	Vertical
776.88	43.22	23.69	3.10	25.52	44.49	46.00	-1.51	Vertical
74.92	56.34	7.53	0.89	25.69	39.07	40.00	-0.93	Horizontal
135.03	56.17	10.71	1.42	25.64	42.66	43.50	-0.84	Horizontal
258.33	55.08	13.22	1.97	25.60	44.67	46.00	-1.33	Horizontal
307.83	53.61	14.17	2.09	25.59	44.28	46.00	-1.72	Horizontal
528.25	46.85	20.91	2.50	25.55	44.71	46.00	-1.29	Horizontal
726.81	38.23	29.25	2.99	25.52	44.95	46.00	-1.05	Horizontal

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#### **5.8.2** Transmitter emission above 1GHz

Test mode:	802.	.11b	Test channe	el:	Lowe	est	Remark:		Pea	k
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)		Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit IB)	polarization
2327.75	6.02	29.76	39.75	43	.21	39.24	74.00	-34	1.76	Vertical
2398.25	6.34	30.03	38.87	40	.80	38.30	74.00	-35	5.70	Vertical
2400.00	6.34	30.03	38.87	42.42		39.92	74.00	-34	4.08	Vertical
4924.50	10.53	34.41	40.90	45	.41	49.45	74.00	-24	1.55	Vertical
5911.50	13.07	35.70	41.96	44	.21	51.02	74.00	-22	2.98	Vertical
8555.25	13.10	37.76	38.00	43	.29	56.15	74.00	-17	7.85	Vertical
2327.75	6.02	29.76	39.75	41.	.87	37.90	74.00	-36	5.10	Horizontal
2398.25	6.34	30.03	38.87	39	.19	36.69	74.00	-37	7.31	Horizontal
2400.00	6.34	30.03	38.87	42	.39	39.89	74.00	-34	4.11	Horizontal
5676.50	12.82	35.41	42.01	44	.53	50.75	74.00	-23	3.25	Horizontal
7756.25	14.01	37.57	39.56	43	.16	55.18	74.00	-18	3.82	Horizontal
10341.25	14.20	38.17	36.75	40	.54	56.16	74.00	-17	7.84	Horizontal

Test mode	: 802	2.11b	Test char	nnel:	Lowe	st Remark:		Ave	rage
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Read Lev (dBµ	el	Emission Level (dBµV/m)	Limit (dBµV/m)	Over limit	polarization
2351.25	6.14	29.86	39.43	29.9	95	26.52	54.00	-27.48	Vertical
2398.25	6.34	30.03	38.87	27.8	31	25.31	54.00	-28.69	Vertical
2400.00	6.34	30.03	38.87	29.7	77	27.27	54.00	-26.73	Vertical
3044.50	7.08	31.96	39.41	29.6	88	29.31	54.00	-24.69	Vertical
6792.75	13.47	36.85	40.18	30.2	21	40.35	54.00	-13.65	Vertical
8884.25	13.30	37.79	37.31	28.3	36	42.14	54.00	-11.86	Vertical
2339.50	6.08	29.81	39.59	29.5	57	25.87	54.00	-28.13	Horizontal
2398.25	6.34	30.03	38.87	27.4	10	24.90	54.00	-29.10	Horizontal
2400.00	6.34	30.03	38.87	29.3	34	26.84	54.00	-27.16	Horizontal
4489.75	8.86	33.83	39.62	29.32		32.39	54.00	-21.61	Horizontal
6945.50	13.69	37.05	40.86	29.49		39.37	54.00	-14.63	Horizontal
9095.75	13.38	37.83	38.00	27.3	39	40.60	54.00	-13.40	Horizontal

Test mode	: 802	2.11b	Test char	st channel: Middle Remark: F		Peal	K			
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Read Lev (dBµ	el	Emission Level (dBµV/m)	Limit (dBµV/m)	Ove limit		polarization
2339.50	6.08	29.81	39.59	42.1	13	38.43	74.00	-35	5.57	Vertical
3138.50	7.31	32.09	39.71	44.5	59	44.28	74.00	-29	).72	Vertical
4877.50	10.36	34.34	39.89	43.9	99 48.80		74.00	-25	5.20	Vertical
6240.50	14.45	36.14	41.65	45.8	34	54.78	74.00	-19	).22	Vertical
7791.50	14.18	37.58	39.61	43.7	<b>7</b> 1	55.86	74.00	-18	3.14	Vertical
10623.25	14.91	38.23	36.65	40.1	13	56.62	74.00	-17	7.38	Vertical
2327.75	6.02	29.76	39.75	48.7	<b>7</b> 5	44.78	74.00	-29	).22	Horizontal
3855.25	7.72	32.94	40.04	43.9	97	44.59	74.00	-29	).41	Horizontal
5676.50	12.82	35.41	42.01	44.6	88	50.90	74.00	-23	3.10	Horizontal
7850.25	13.97	37.62	39.74	44.50		56.35	74.00	-17	7.65	Horizontal
8872.50	13.24	37.79	37.36	42.1	16	55.83	74.00	-18	3.17	Horizontal
10752.50	14.89	38.25	36.99	40.3	37	56.52	74.00	-17	'.48	Horizontal

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Test mode	: 802	2.11b	Test char	nnel: Middle		е	Remark:	Ave	rage
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)		Emission Level (dBµV/m)	Limit (dBµV/m)	Over limit	polarization
2339.50	6.08	29.81	39.59	35.6	64	31.94	54.00	-22.06	Vertical
3138.50	7.31	32.09	39.71	34.8	38	34.57	54.00	-19.43	Vertical
4877.50	10.36	34.34	39.89	32.84		37.65	54.00	-16.35	Vertical
6240.50	14.45	36.14	41.65	30.55		39.49	54.00	-14.51	Vertical
7791.50	14.18	37.58	39.61	29.7	75	41.90	54.00	-12.10	Vertical
10623.25	14.91	38.23	36.65	26.8	35	43.34	54.00	-10.66	Vertical
2339.50	6.08	29.81	39.59	29.8	31	26.11	54.00	-27.89	Horizontal
3079.75	7.39	32.01	39.77	29.5	59	29.22	54.00	-24.78	Horizontal
5147.75	11.27	34.71	41.19	29.5	52	34.31	54.00	-19.69	Horizontal
6358.00	14.42	36.29	41.52	30.44		39.63	54.00	-14.37	Horizontal
7791.50	14.18	37.58	39.61	29.9	99	42.14	54.00	-11.86	Horizontal
10693.75	14.90	38.24	36.82	26.4	16	42.78	54.00	-11.22	Horizontal

Test mode:	802.	11b	Test channe	st channel: Highest I		Remark:		Pea	eak			
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)		Level		Level (dBuV/m)	Limit Line (dBuV/m)	Li	ver mit dB)	polarization
2327.75	6.02	29.76	39.75	42.	95	38.98	74.00	-3	5.02	Vertical		
2483.50	6.22	30.32	39.53	57.	61	54.62	74.00	-19	9.38	Vertical		
2492.25	5.99	30.35	39.34	42.	88	39.88	74.00	-34	4.12	Vertical		
4889.25	10.57	34.35	40.33	46.	46	51.05	74.00	-22	2.95	Vertical		
6240.50	14.45	36.14	41.65	46.	20	55.14	74.00	-18	3.86	Vertical		
10670.25	14.90	38.23	36.74	41.	69	58.08	74.00	-15	5.92	Vertical		
2339.50	6.08	29.81	39.59	45.	72	42.02	74.00	-3	1.98	Horizontal		
2483.50	6.22	30.32	39.53	46.	24	43.25	74.00	-30	0.75	Horizontal		
2492.25	5.99	30.35	39.34	42.	93	39.93	74.00	-34	4.07	Horizontal		
5265.25	11.79	34.87	41.18	44.	47	49.95	74.00	-24	4.05	Horizontal		
7897.25	13.60	37.65	39.82	45.	63	57.06	74.00	-16	6.94	Horizontal		
10576.25	14.80	38.22	36.49	40.	42	56.95	74.00	-17	7.05	Horizontal		

Test mode	: 802	2.11b	Test char	nnel:	Highe	est	Re	emark:	Aver	age
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)		Emission Level (dB <sub>µ</sub> V/m)		Limit (dBµV/m)	Over limit	polarization
2327.75	6.02	29.76	39.75	30.7	73	26.76		54.00	-27.24	Vertical
2483.50	6.22	30.32	39.53	33.2	29	30.30		54.00	-23.70	Vertical
2492.25	5.99	30.35	39.34	30.2	27	27.27		54.00	-26.73	Vertical
6792.75	13.47	36.85	40.18	31.07		41.21		54.00	-12.79	Vertical
7803.25	14.34	37.60	39.65	30.6	88	42.97		54.00	-11.03	Vertical
12174.25	18.03	39.21	39.27	27.0	)1	44.98		54.00	-9.02	Vertical
2351.25	6.14	29.86	39.43	30.1	19	26.76		54.00	-27.24	Horizontal
2483.50	6.22	30.32	39.53	32.9	91	29.92		54.00	-24.08	Horizontal
2492.25	5.99	30.35	39.34	29.9	90	26.90		54.00	-27.10	Horizontal
6369.75	14.42	36.32	41.50	30.8	32	40.06		54.00	-13.94	Horizontal
7803.25	14.34	37.60	39.65	30.2	29	42.58		54.00	-11.42	Horizontal
12174.25	18.03	39.21	39.27	26.6	88	44.65		54.00	-9.35	Horizontal

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Test mode:	802.	11g	Test channe	Test channel: Lowest		Remark: Pea		k
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2327.75	6.02	29.76	39.75	42.84	38.87	74.00	-35.13	Vertical
2398.25	6.34	30.03	38.87	41.70	39.20	74.00	-34.80	Vertical
2400.00	6.34	30.03	38.87	42.34	39.84	74.00	-34.16	Vertical
7791.50	14.18	37.58	39.61	44.59	56.74	74.00	-17.26	Vertical
9530.50	13.59	37.96	37.34	42.18	56.39	74.00	-17.61	Vertical
12021.50	16.45	39.10	39.09	41.25	57.71	74.00	-16.29	Vertical
2316.00	6.00	29.74	39.83	42.43	38.34	74.00	-35.66	Horizontal
2398.25	6.34	30.03	38.87	47.22	44.72	74.00	-29.28	Horizontal
2400.00	6.34	30.03	38.87	49.18	46.68	74.00	-27.32	Horizontal
5265.25	11.79	34.87	41.18	43.54	49.02	74.00	-24.98	Horizontal
7791.50	14.18	37.58	39.61	43.34	55.49	74.00	-18.51	Horizontal
10517.50	14.58	38.20	36.32	39.75	56.21	74.00	-17.79	Horizontal

Test mode	le: 802.11g Te		Test char	nel:	Lowe	st	Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)		Emission Level (dBµV/m)	Limit (dBμV/m)	Ove limit		polarization
2351.25	6.14	29.86	39.43	29.8	36	26.43	54.00	-27	7.57	Vertical
2398.25	6.34	30.03	38.87	28.	74	26.24	54.00	-27	7.76	Vertical
2400.00	6.34	30.03	38.87	29.69		27.19	54.00	-26	3.81	Vertical
7803.25	14.34	37.60	39.65	29.9	93	42.22	54.00	-11	.78	Vertical
8884.25	13.30	37.79	37.31	28.4	40	42.18	54.00	-11	.82	Vertical
12174.25	18.03	39.21	39.27	26.	16	44.13	54.00	-9	.87	Vertical
2327.75	6.02	29.76	39.75	29.4	43	25.46	54.00	-28	3.54	Horizontal
2398.25	6.34	30.03	38.87	28.	17	25.67	54.00	-28	3.33	Horizontal
2400.00	6.34	30.03	38.87	29.	12	26.62	54.00	-27	7.38	Horizontal
6181.75	14.35	36.05	41.73	29.9	91	38.58	54.00	-15	5.42	Horizontal
7791.50	14.18	37.58	39.61	29.3	35	41.50	54.00	-12	2.50	Horizontal
10693.75	14.90	38.24	36.82	25.	78	42.10	54.00	-11	.90	Horizontal

Test mode:	802.	11g	Test channe	el: Midd	l: Middle F		Pea	k
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2327.75	6.02	29.76	39.75	48.41	44.44	74.00	-29.56	Vertical
3150.25	7.27	32.10	39.67	44.01	43.71	74.00	-30.29	Vertical
5218.25	11.74	34.81	41.19	44.64	50.00	74.00	-24.00	Vertical
6757.50	13.41	36.81	40.34	44.56	54.44	74.00	-19.56	Vertical
7650.50	13.19	37.50	39.53	45.26	56.42	74.00	-17.58	Vertical
10517.50	14.58	38.20	36.32	40.54	57.00	74.00	-17.00	Vertical
2327.75	6.02	29.76	39.75	43.18	39.21	74.00	-34.79	Horizontal
2715.50	6.23	31.07	39.03	44.12	42.39	74.00	-31.61	Horizontal
3925.75	7.94	33.02	40.03	43.79	44.72	74.00	-29.28	Horizontal
6052.50	13.51	35.87	41.84	44.83	52.37	74.00	-21.63	Horizontal
7756.25	14.01	37.57	39.56	43.67	55.69	74.00	-18.31	Horizontal
10623.25	14.91	38.23	36.65	39.76	56.25	74.00	-17.75	Horizontal

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Test mode	: 802	2.11g	Test char	nel:	Middle		Re	mark:	A۱	verage
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)		Emission Level (dBµV/m)		Limit (dBμV/m)	Over limit	polarization
2351.25	6.14	29.86	39.43	29.9	98	26.55		54.00	-27.45	Vertical
3573.25	8.21	32.63	40.68	29.9	90	30.06		54.00	-23.94	Vertical
6205.25	14.46	36.09	41.69	30.73		39.59		54.00	-14.41	Vertical
7826.75	14.16	37.61	39.69	30.15		42.23		54.00	-11.77	Vertical
10541.00	14.69	38.21	36.40	26.	74	43.24		54.00	-10.76	Vertical
12315.25	17.71	39.30	39.41	26.	51	44.11		54.00	-9.89	Vertical
2351.25	6.14	29.86	39.43	29.	78	26.35		54.00	-27.65	Horizontal
3032.75	7.00	31.95	39.32	29.	72	29.35		54.00	-24.65	Horizontal
4865.75	9.68	34.32	40.35	30.3	31	33.96		54.00	-20.04	Horizontal
6287.50	14.44	36.19	41.61	30.49		39.51		54.00	-14.49	Horizontal
7744.50	13.85	37.56	39.52	29.8	39	41.78		54.00	-12.22	Horizontal
10623.25	14.91	38.23	36.65	26.4	42	42.91		54.00	-11.09	Horizontal

Test mode:	802.	11g	Test channe	hannel: Highest R		Remark:	Pea	k
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2327.75	6.02	29.76	39.75	43.08	39.11	74.00	-34.89	Vertical
2483.50	6.22	30.32	39.53	55.81	52.82	74.00	-21.18	Vertical
2492.25	5.99	30.35	39.34	42.66	39.66	74.00	-34.34	Vertical
4889.25	10.57	34.35	40.33	48.37	52.96	74.00	-21.04	Vertical
7368.50	12.76	37.33	40.21	46.90	56.78	74.00	-17.22	Vertical
12174.25	18.03	39.21	39.27	41.51	59.48	74.00	-14.52	Vertical
2327.75	6.02	29.76	39.75	42.31	38.34	74.00	-35.66	Horizontal
2483.50	6.22	30.32	39.53	54.06	51.07	74.00	-22.93	Horizontal
2492.25	5.99	30.35	39.34	43.18	40.18	74.00	-33.82	Horizontal
6205.25	14.46	36.09	41.69	44.38	53.24	74.00	-20.76	Horizontal
8719.75	13.10	37.77	37.68	41.55	54.74	74.00	-19.26	Horizontal
12139.00	17.71	39.19	39.23	38.96	56.63	74.00	-17.37	Horizontal

Test mode	: 802	2.11g	Test char	nel:	Highe	est	Remark:		Aver	age		
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBµV)		Level		Emission Level (dBµV/m)	Limit (dBμV/m)	Ove		polarization
2327.75	6.02	29.76	39.75	30.0	68	26.71	54.00	-27	7.29	Vertical		
2483.50	6.22	30.32	39.53	34.0	04	31.05	54.00	-22	2.95	Vertical		
2492.25	5.99	30.35	39.34	30.96		27.96	54.00	0 -26.04		Vertical		
6334.50	14.43	36.27	41.55	31.24		40.39	54.00	-13	3.61	Vertical		
7991.25	12.87	37.70	40.00	30.3	39	40.96	54.00	-13	3.04	Vertical		
10505.75	14.58	38.20	36.32	27.2	21	43.67	54.00	-10	0.33	Vertical		
2327.75	6.02	29.76	39.75	30.3	31	26.34	54.00	-27	7.66	Horizontal		
2483.50	6.22	30.32	39.53	32.8	39	29.90	54.00	-24	4.10	Horizontal		
2492.25	5.99	30.35	39.34	29.8	37	26.87	54.00	-27	7.13	Horizontal		
6792.75	13.47	36.85	40.18	30.68		40.82	54.00	-13	3.18	Horizontal		
7850.25	13.97	37.62	39.74	30.	18	42.03	54.00	-11	1.97	Horizontal		
10693.75	14.90	38.24	36.82	26.8	35	43.17	54.00	-10	0.83	Horizontal		

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