



FCC REPORT

Applicant: Hunan Space Satellite Communication Co., Ltd

Address of Applicant: HangTian yard, Wangchengpo, Changsha, Hunan, PRC

Equipment Under Test (EUT)

Product Name: Wireless hd transmission machine

Model No.: WTD-700R, NTD-700R, ETD700R, MTD700R

FCC ID: ZBOWTD-700R

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

Date of sample receipt: 12 Jan. 2011

Date of Test: 13 Jan – 1 Mar. 2011

Date of report issued: 7 Mar. 2011

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

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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2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 TEST SUMMARY	3
4 GENERAL INFORMATION	4
4.1 CLIENT INFORMATION	4
4.2 GENERAL DESCRIPTION OF E.U.T.	4
4.3 TEST ENVIRONMENT AND MODE.....	4
4.4 TEST FACILITY.....	4
4.5 TEST LOCATION	5
4.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER	5
4.7 TEST INSTRUMENTS LIST	6
5 TEST RESULTS AND MEASUREMENT DATA	7
5.1 ANTENNA REQUIREMENT:	7
5.2 CONDUCTED EMISSIONS.....	8
5.3 CONDUCTED PEAK OUTPUT POWER.....	11
5.4 6dB OCCUPY BANDWIDTH.....	13
5.5 POWER SPECTRAL DENSITY.....	16
5.6 RF ANTENNA CONDUCTED SPURIOUS EMISSIONS	19
5.7 RADIATED EMISSION	25
5.7.1 Radiated emission below 1GHz.....	27
5.7.2 Transmitter emission above 1GHz	28

3 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	PASS
Conducted emission	15.207	PASS
Conducted Peak Output Power	15.247 (b)(3)	PASS
6dB Occupied Bandwidth	15.247 (a)(2)	PASS
Power Spectral Density	15.247 (e)	PASS
RF antenna conducted spurious emissions	15.247(d)	PASS
Radiated Emission	15.205/15.209	PASS

Remark:

- Pass: The EUT complies with the essential requirements in the standard.
- Fail: 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.

4 General Information

4.1 Client Information

Applicant:	Hunan Space Satellite Communication Co., Ltd
Address of Applicant:	HangTian yard,Wangchengpo,Changsha,Hunan,PRC
Manufacturer/ Factory:	Hunan Space Satellite Communication Co., Ltd
Address of Manufacturer/ Factory:	HangTian yard,Wangchengpo,Changsha,Hunan,PRC

4.2 General Description of E.U.T.

Product Name:	Wireless hd transmission machine
Model No.:	WTD-700R, NTD-700R, ETD700R, MTD700R
Operation Frequency:	5190MHz, 5230MHz; 5755MHz, 5795MHz, 5835MHz
Channel numbers:	5
Channel separation:	40MHz
Modulation type:	OFDM
Antenna Type:	PCB Antenna (Transmit antenna: 1pcs; receive antenna: 4pcs)
Antenna gain:	2dBi
Power supply:	AC 120V 60Hz

4.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1008 mbar
Test mode:	
Transmitting mode	Keep the EUT in receiving mode with modulation.

4.4 Test Facility

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

● **FCC —Registration No.: 600491**

Global United Technology Services 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 files. Registration 600491, July 20, 2010.

● **Industry Canada (IC)**

The 3m Semi-anechoic chamber of Global United Technology Services 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 Services 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.

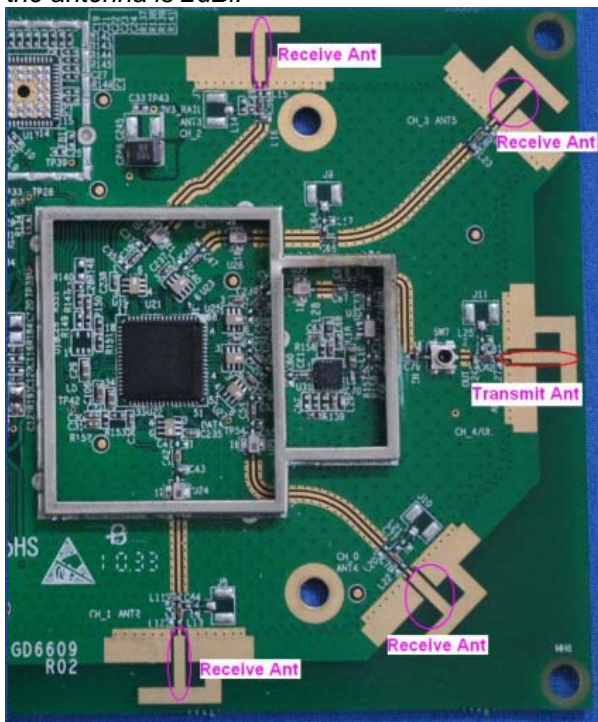
4.7 Test Instruments list

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	Spectrum analyzer	Rohde & Schwarz	FSP40	GTS203	Sep. 10 2010	Sep. 10 2011
5	8-WAY Power Divider	JFW	50PD-647	GTS203	Sep. 10 2010	Sep. 10 2011
6	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS204	Feb. 26 2011	Feb. 26 2012
7	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS205	June 30 2010	June 30 2011
8	Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	9170	GTS205	June 30 2010	June 30 2011
9	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
10	Coaxial Cable	GTS	N/A	GTS400	Apr. 01 2010	Apr. 01 2011
11	Coaxial Cable	GTS	N/A	GTS401	Apr. 01 2010	Apr. 01 2011
12	Coaxial cable	GTS	N/A	GTS402	Apr. 01 2010	Apr. 01 2011
13	Coaxial Cable	GTS	N/A	GTS407	Apr. 01 2010	Apr. 01 2011
14	Coaxial Cable	GTS	N/A	GTS408	Apr. 01 2010	Apr. 01 2011
15	Amplifier	Sonnoma Instrument	305-1052	GTS210	Apr. 01 2010	Apr. 01 2011
16	Amplifier	HP	8349B	GTS231	Apr. 01 2010	Apr. 01 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. 1 2010	Apr. 01 2011
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

5 Test results and Measurement Data

5.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203
<p>15.203 requirement: <i>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.</i></p>	
E.U.T Antenna:	
<p>The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2dBi.</p>	
	

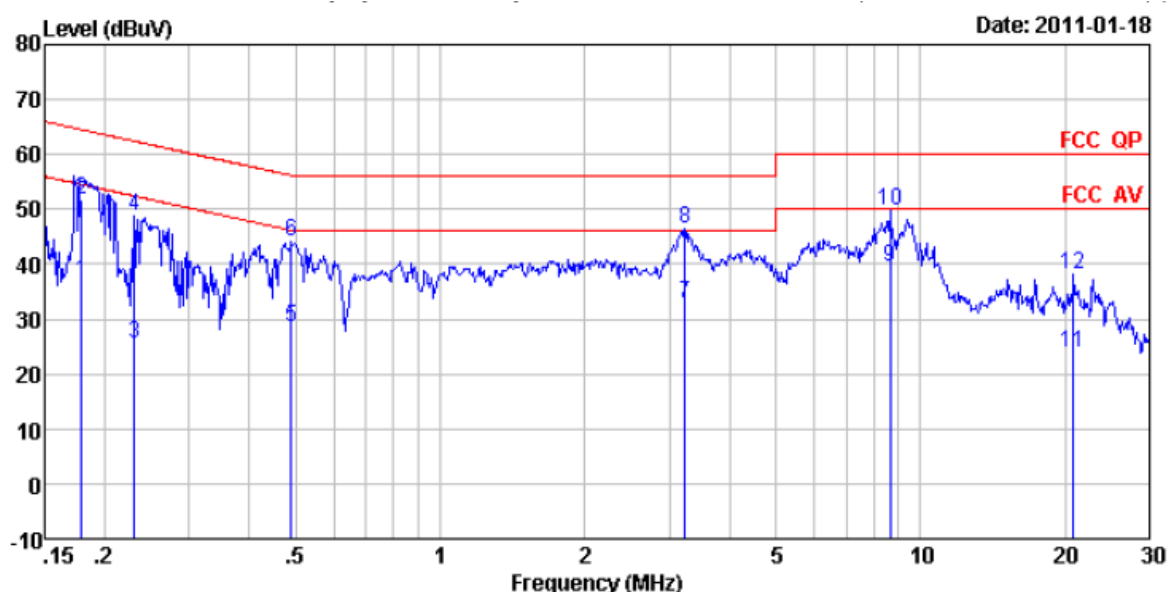
5.2 Conducted Emissions

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:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table> <p>* Decreases with the logarithm of the frequency.</p>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
Test procedure	<p>The E.U.T and simulators are connected to the main power through a line 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.</p>														
Test setup:	<div><div><div><div><div>Reference Plane</div><div>LISN</div><div>AUX Equipment</div><div>E.U.T</div></div><div>40cm</div><div>80cm</div><div>LISN</div><div>Filter</div><div>AC power</div><div>EMI Receiver</div></div><div>Test table/Insulation plane</div></div><p><i>Remark:</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p></div>														
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.

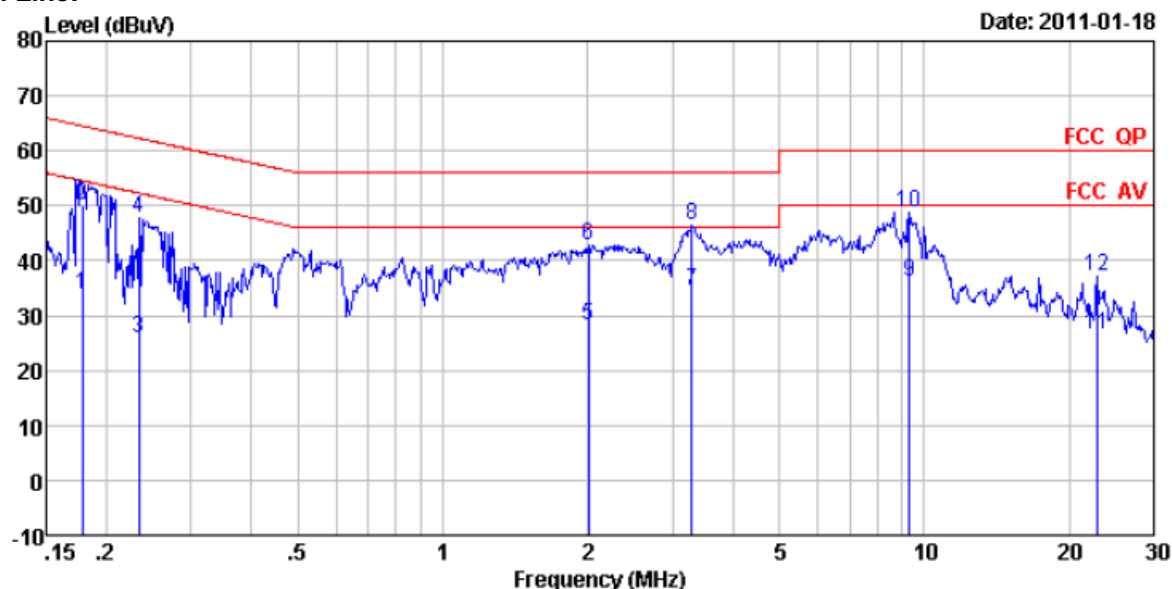
Live Line:



Condition : FCC QP LISN(2011) LINE
 Job No. : 018RF
 EUT : Wireless hd transmission machine
 Test Mode : Operation mode
 Test Engineer: Lau

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.179	36.28	0.67	0.01	36.96	54.53	-17.57	Average
2	0.179	51.10	0.67	0.01	51.78	64.53	-12.75	QP
3	0.230	24.76	0.64	0.01	25.41	52.44	-27.03	Average
4	0.230	48.06	0.64	0.01	48.71	62.44	-13.73	QP
5	0.489	27.85	0.56	0.01	28.42	46.19	-17.77	Average
6	0.489	43.56	0.56	0.01	44.13	56.19	-12.06	QP
7	3.241	32.43	0.35	0.22	33.00	46.00	-13.00	Average
8	3.241	45.98	0.35	0.22	46.55	56.00	-9.45	QP
9	8.637	38.76	0.24	0.38	39.38	50.00	-10.62	Average
10	8.637	49.29	0.24	0.38	49.91	60.00	-10.09	QP
11	20.814	23.28	0.14	0.45	23.87	50.00	-26.13	Average
12	20.814	37.40	0.14	0.45	37.99	60.00	-22.01	QP

Neutral Line:



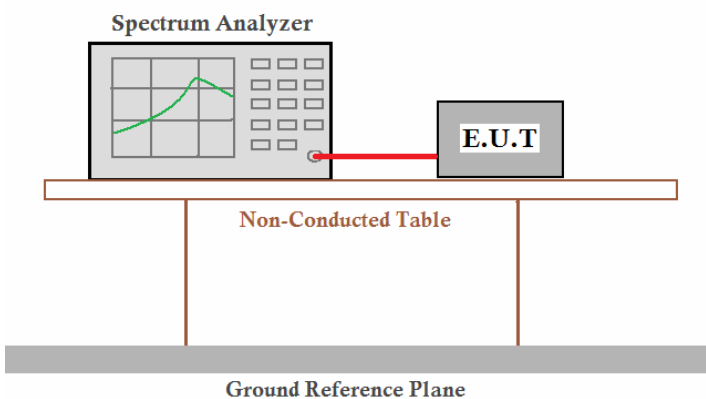
Condition : FCC QP LISN(2011) NEUTRAL
Job No. : 018RF
EUT : Wireless hd transmission machine
Test Mode : Operation mode
Test Engineer: Lau

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.179	33.18	0.67	0.01	33.86	54.55	-20.69	Average
2	0.179	49.40	0.67	0.01	50.08	64.55	-14.47	QP
3	0.234	25.17	0.64	0.01	25.82	52.30	-26.48	Average
4	0.234	47.16	0.64	0.01	47.81	62.30	-14.49	QP
5	2.012	27.68	0.40	0.12	28.20	46.00	-17.80	Average
6	2.012	42.39	0.40	0.12	42.91	56.00	-13.09	QP
7	3.293	33.82	0.34	0.22	34.38	46.00	-11.62	Average
8	3.293	45.80	0.34	0.22	46.36	56.00	-9.64	QP
9	9.302	35.69	0.23	0.39	36.31	50.00	-13.69	Average
10	9.302	48.31	0.23	0.39	48.93	60.00	-11.07	QP
11	22.896	25.86	0.13	0.45	26.44	50.00	-23.56	Average
12	22.896	36.65	0.13	0.45	37.23	60.00	-22.77	QP

Notes:

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

5.3 Conducted Peak Output Power

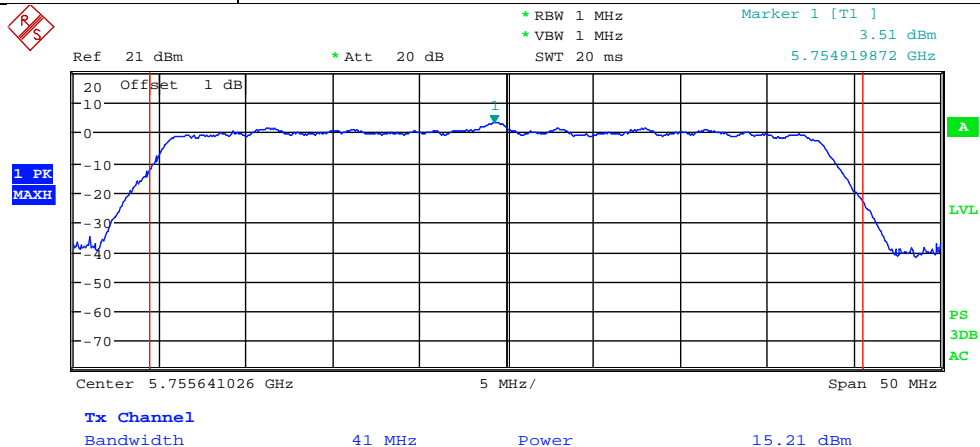
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 4.7 for details
Test mode:	Refer to section 4.3 for details
Test results:	Passed

Measurement Data

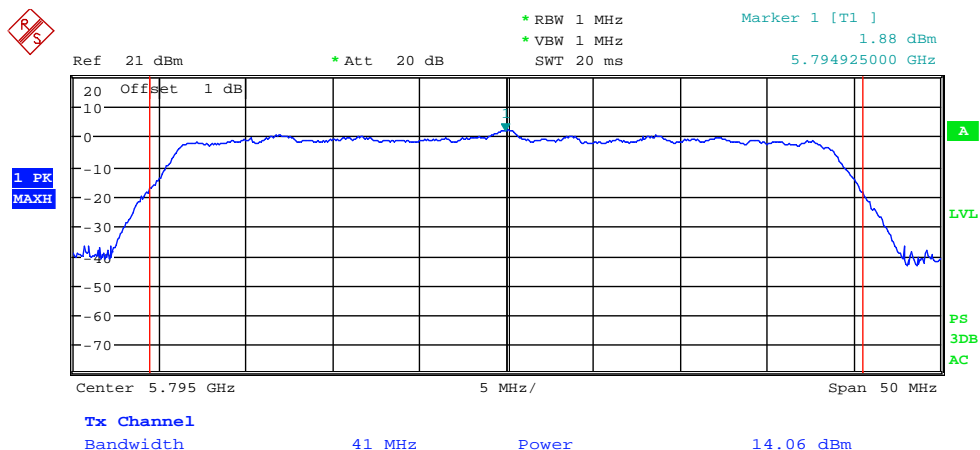
Test channel	Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)	Result
Low	5755	15.21	30.00	Pass
Middle	5795	14.06	30.00	Pass
High	5835	13.93	30.00	Pass

Test plot as follows:

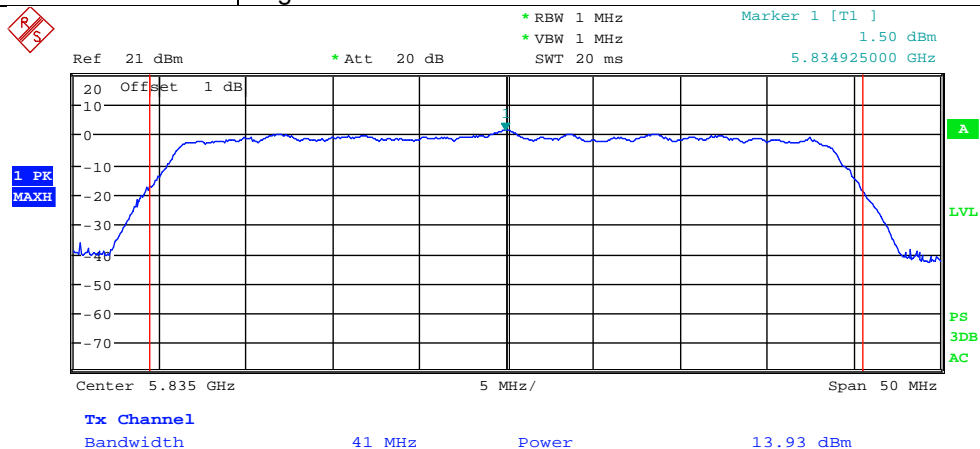
Test channel:	Low
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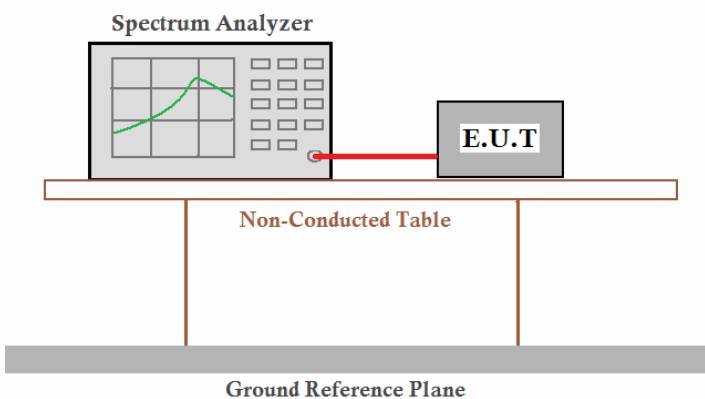
Test channel:	Middle
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Test channel:	High
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5.4 6dB Occupy Bandwidth

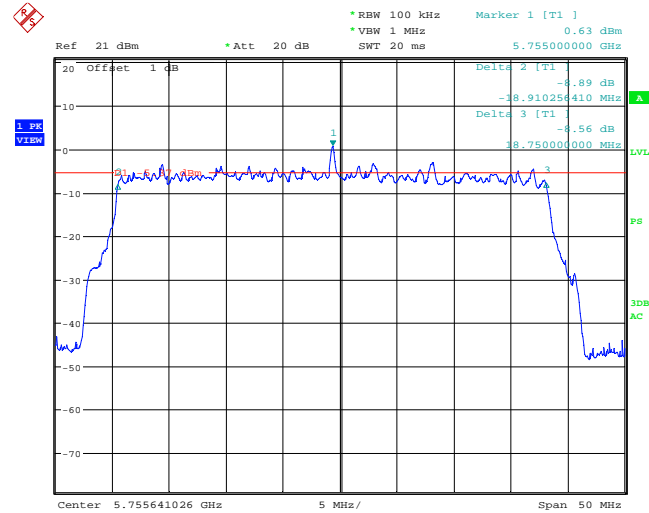
Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	>500KHz
Test setup:	
Test Instruments:	Refer to section 4.7 for details
Test mode:	Refer to section 4.3 for details
Test results:	Passed

Measurement Data

Test channel	Frequency (MHz)	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result
Low	5755	37.60	>500	Pass
Middle	5795	37.50	>500	Pass
High	5835	37.58	>500	Pass

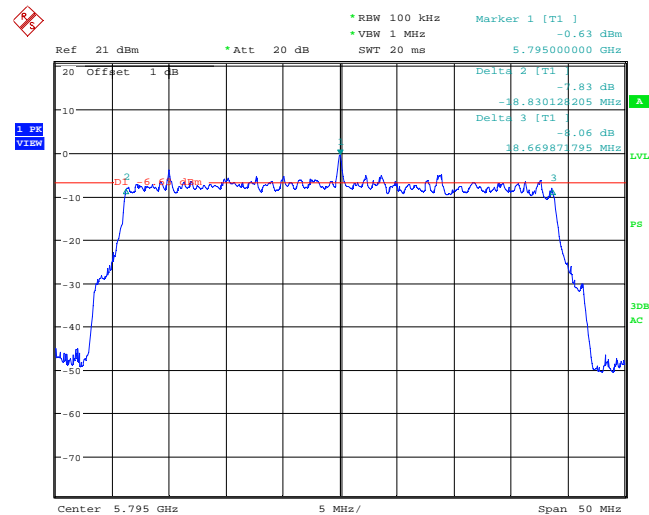
Test plot as follows:

Test channel:	Low
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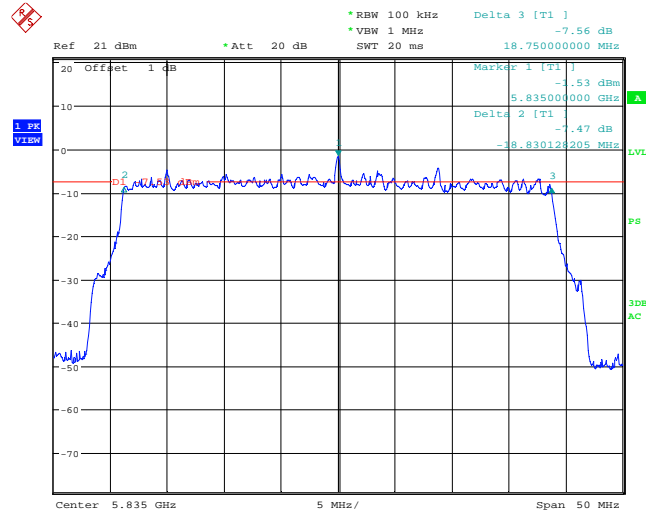
Date: 25.FEB.2011 17:49:08

Test channel:	Middle
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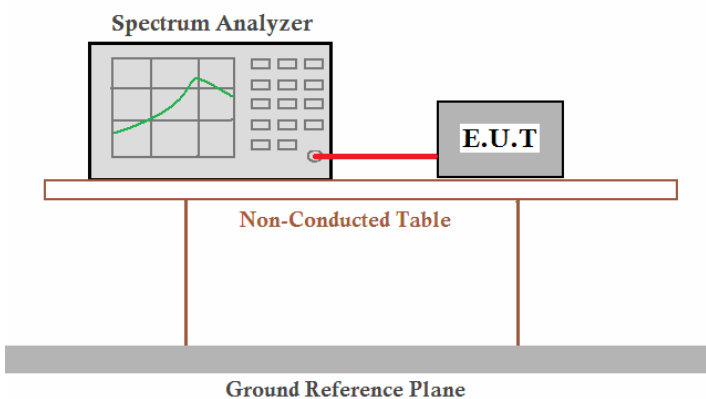
Date: 25.FEB.2011 17:56:01

Test channel:	High
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Date: 25.FEB.2011 18:03:25

5.5 Power Spectral Density

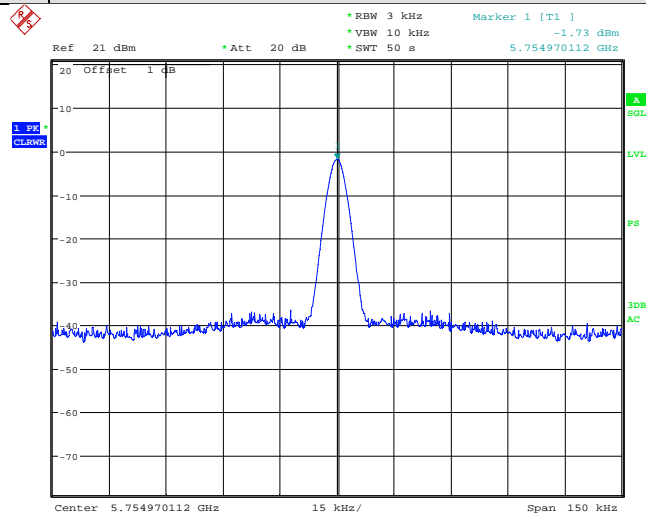
Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	8dBm
Test setup:	
Test Instruments:	Refer to section 4.7 for details
Test mode:	Refer to section 4.3 for details
Test results:	Passed

Measurement Data

Test channel	Frequency (MHz)	Power Spectral Density (dBm)	Limit (dBm)	Result
Low	5755	-1.73	8.00	Pass
Middle	5795	-2.98	8.00	Pass
High	5835	-4.31	8.00	Pass

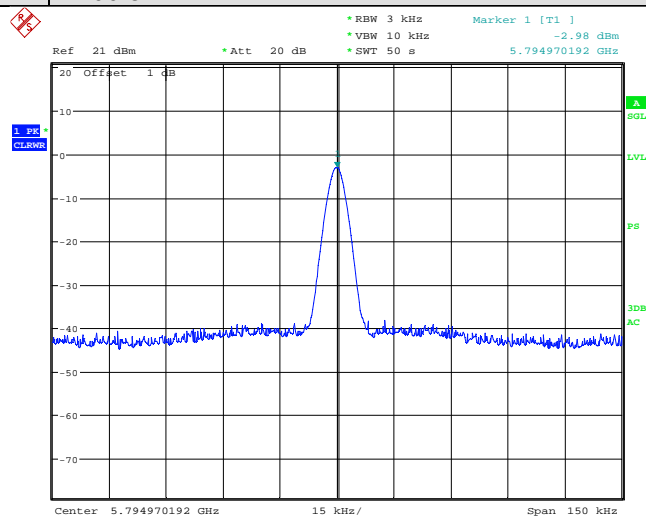
Test plot as follows:

Test channel:	Low
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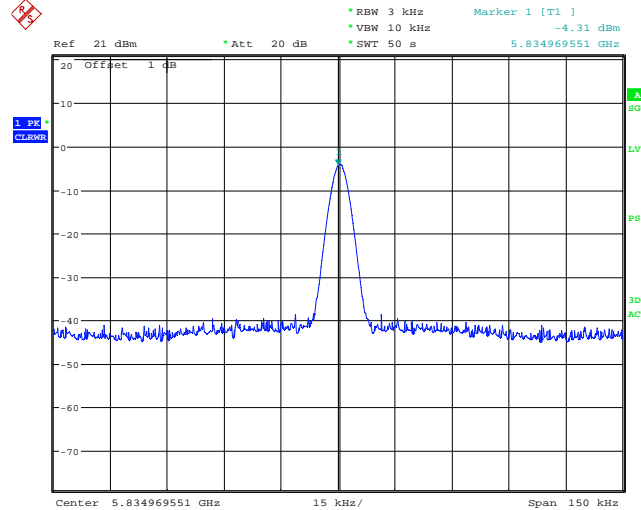
Date: 25.FEB.2011 17:53:12

Test channel:	Middle
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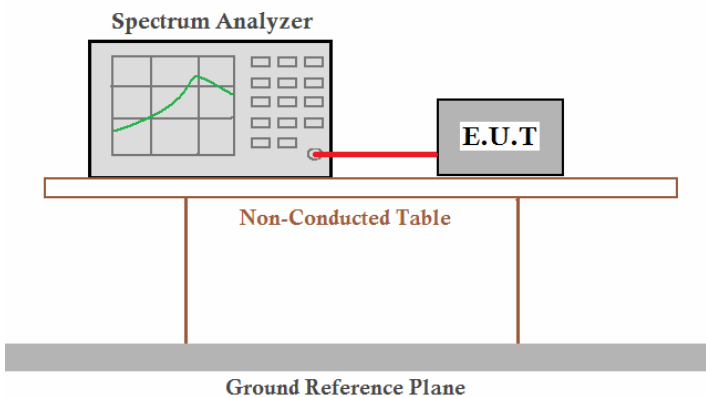
Date: 25.FEB.2011 17:59:58

Test channel: High



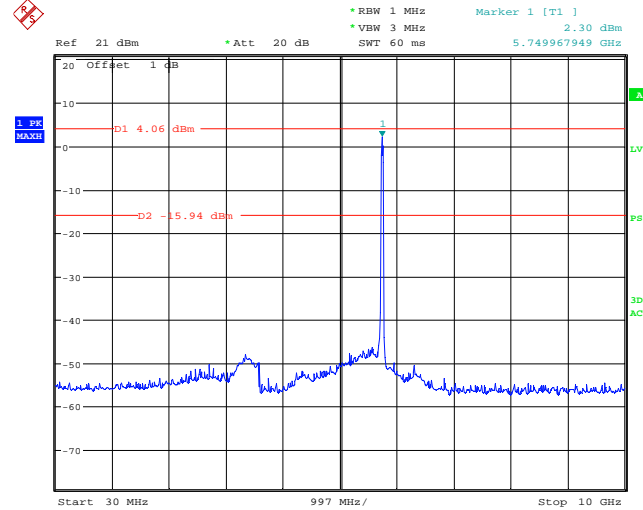
Date: 25.FEB.2011 18:07:04

5.6 RF Antenna Conducted spurious emissions

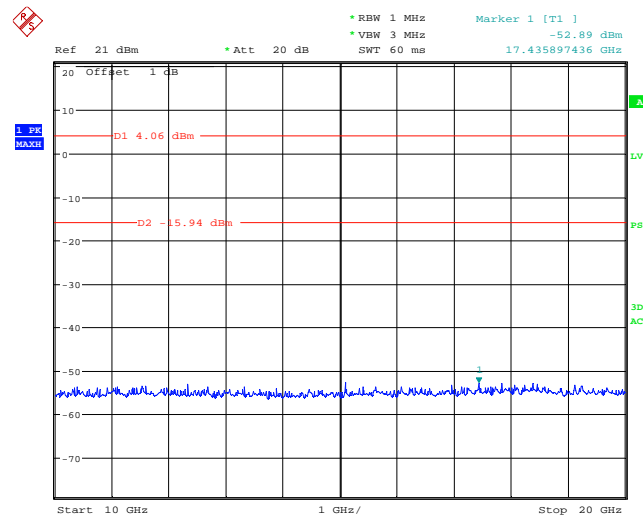
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 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:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by two vertical legs and sits on a Ground Reference Plane.</p>
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:

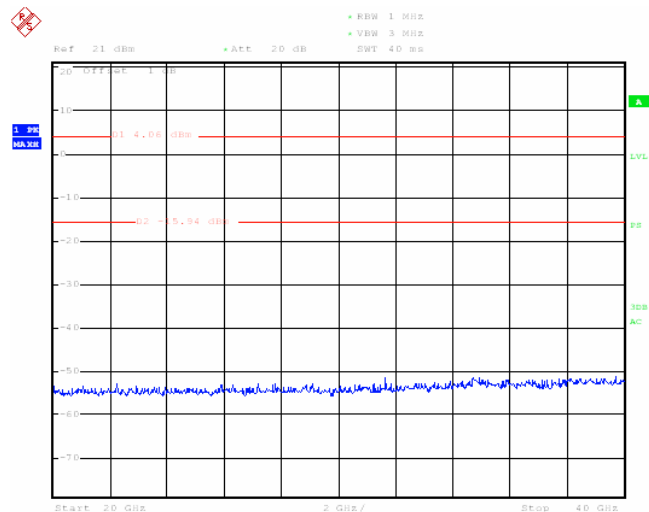
Test channel: Low



Date: 25.FEB.2011 17:50:24

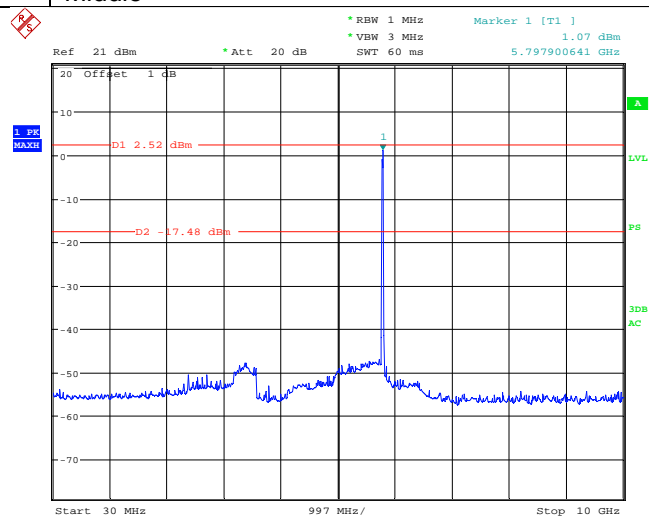


Date: 25.FEB.2011 17:50:35

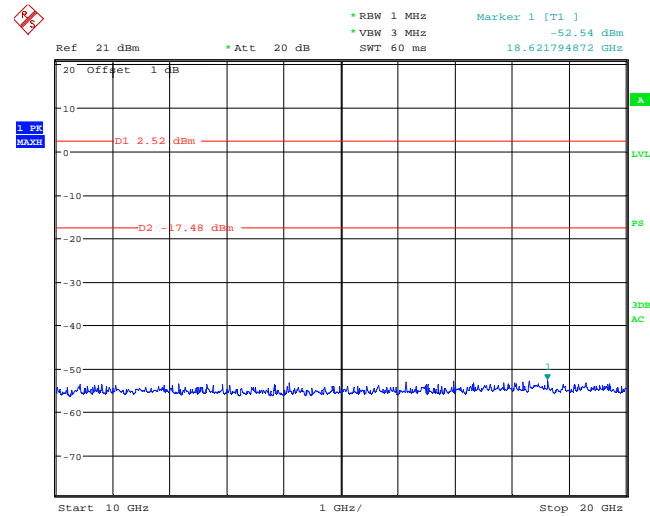


Date: 25.FEB.2011 17:50:49

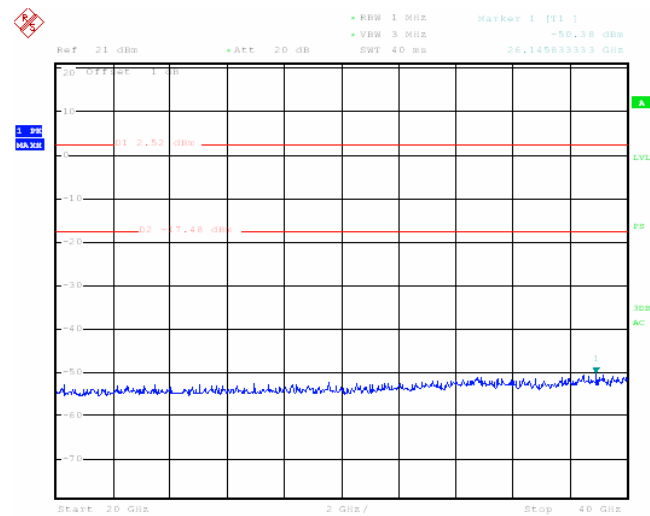
Test channel:	Middle
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Date: 25.FEB.2011 17:56:56

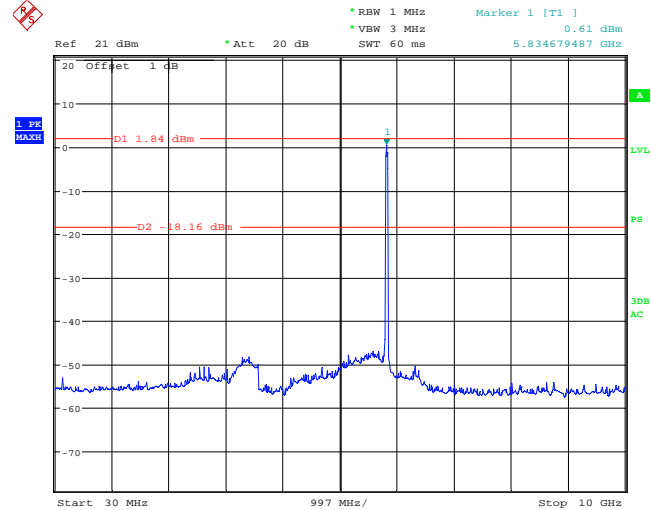


Date: 25.FEB.2011 17:57:08

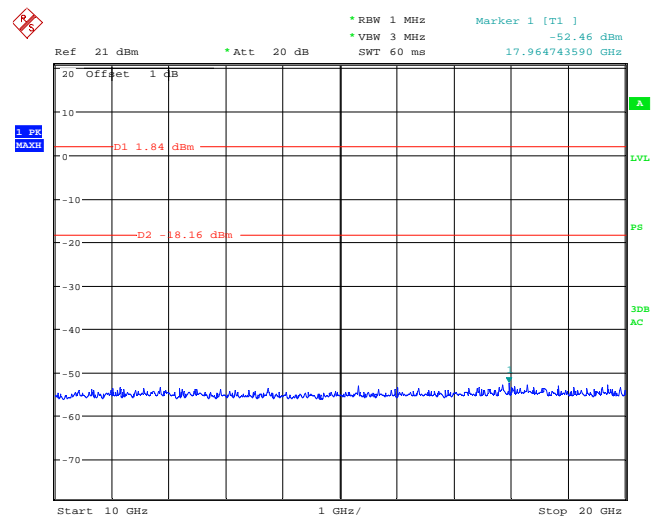


Date: 25.FEB.2011 17:57:22

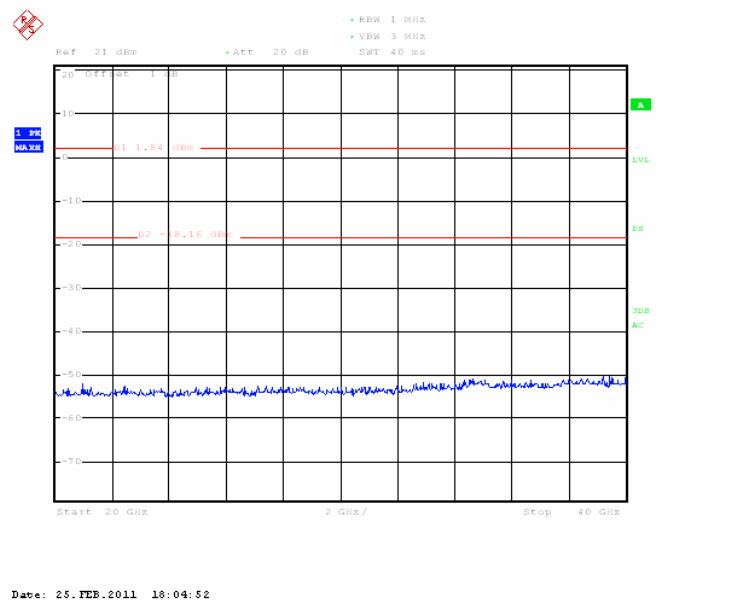
Test channel: Highest



Date: 25.FEB.2011 18:04:20

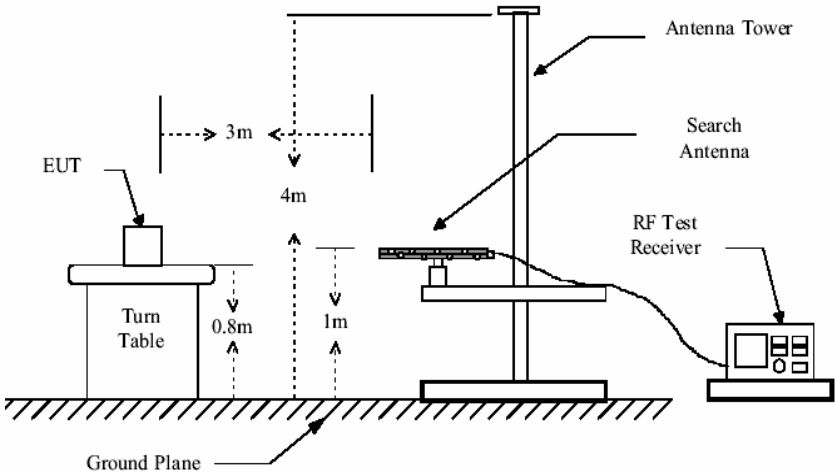
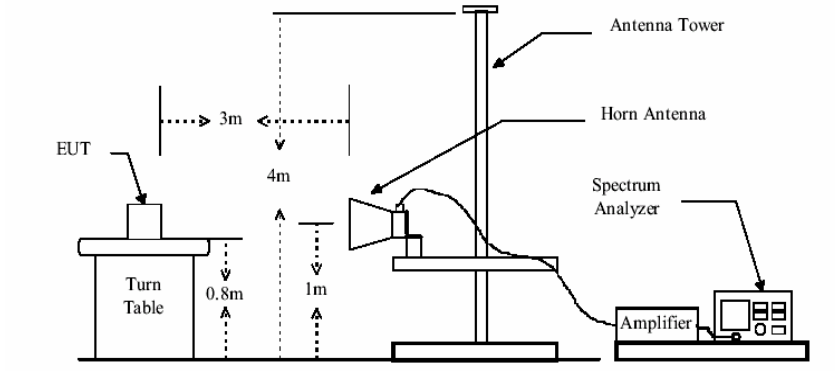


Date: 25.FEB.2011 18:04:32



5.7 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	30MHz to 40GHz				
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
Peak		1MHz	10Hz	Average Value	
Limit:					
	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		54.0		Average Value
74.0			Peak Value		
Test Procedure:	<p>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>d. For each suspected emission, the EUT was arranged to its worst case and then 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 find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p>				

<p>Test setup:</p>	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
<p>Test Instruments:</p>	<p>Refer to section 4.7 for details</p>
<p>Test mode:</p>	<p>Refer to section 4.3 for details</p>
<p>Test results:</p>	<p>Passed</p>

Note:

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

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$

5.7.1 Radiated emission below 1GHz

Worst case:	Middle Channel
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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
66.03	38.22	11.78	0.79	25.70	25.09	40.00	-14.91	Vertical
173.81	43.11	10.65	1.65	25.63	29.78	43.50	-13.72	Vertical
216.02	51.42	9.07	1.84	25.61	36.72	46.00	-9.28	Vertical
239.99	45.56	10.42	1.92	25.60	32.30	46.00	-13.70	Vertical
490.75	45.56	17.14	2.39	25.55	39.54	46.00	-6.46	Vertical
517.25	42.64	18.38	2.46	25.55	37.93	46.00	-8.07	Vertical
38.62	35.39	12.64	0.64	25.74	22.93	40.00	-17.07	Horizontal
167.82	39.67	11.53	1.62	25.63	27.19	43.50	-16.31	Horizontal
216.02	48.64	14.05	1.84	25.61	38.92	46.00	-7.08	Horizontal
225.31	44.17	14.51	1.88	25.61	34.95	46.00	-11.05	Horizontal
478.85	37.02	19.83	2.37	25.55	33.67	46.00	-12.33	Horizontal
517.25	40.31	21.65	2.46	25.55	38.87	46.00	-7.13	Horizontal

5.7.2 Transmitter emission above 1GHz

Test channel:	Lowest	Remark:	Peak
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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
11670	37.04	39.85	10.16	38.15	48.90	74.00	-25.10	Horizontal
17505	31.27	40.51	14.60	36.15	50.23	74.00	-23.77	Horizontal
23020	*	*	*	*	*	74.00	*	Horizontal
28775	*	*	*	*	*	74.00	*	Horizontal
34530	*	*	*	*	*	74.00	*	Horizontal
11670	35.70	39.85	10.16	38.15	47.56	74.00	-26.44	Vertical
17505	29.56	40.51	14.60	36.15	48.52	74.00	-25.48	Vertical
23020	*	*	*	*	*	74.00	*	Vertical
28775	*	*	*	*	*	74.00	*	Vertical
34530	*	*	*	*	*	74.00	*	Vertical

Test channel:	Lowest	Remark:	Average
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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
11670	24.89	39.85	10.16	38.15	36.75	54.00	-17.25	Horizontal
17505	19.75	40.51	14.60	36.15	38.71	54.00	-15.29	Horizontal
23020	*	*	*	*	*	54.00	*	Horizontal
28775	*	*	*	*	*	54.00	*	Horizontal
34530	*	*	*	*	*	54.00	*	Horizontal
11670	22.56	39.85	10.16	38.15	34.42	54.00	-19.58	Vertical
17505	17.19	40.51	14.60	36.15	36.15	54.00	-17.85	Vertical
23020	*	*	*	*	*	54.00	*	Vertical
28775	*	*	*	*	*	54.00	*	Vertical
34530	*	*	*	*	*	54.00	*	Vertical

Remark:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the too weak instrument of signal is unable to test.
5. Level = Reading Level + Antenna factor+ Cable loss – Preamp Factor
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test channel:	Middle	Remark:	Peak
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Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590	37.54	39.71	10.20	38.10	49.35	74.00	-24.65	Horizontal
17385	31.59	40.29	14.65	36.07	50.46	74.00	-23.54	Horizontal
23180	*	*	*	*	*	74.00	*	Horizontal
28975	*	*	*	*	*	74.00	*	Horizontal
34770	*	*	*	*	*	74.00	*	Horizontal
11590	36.04	39.71	10.20	38.10	47.85	74.00	-26.15	Vertical
17385	29.62	40.29	14.65	36.07	48.49	74.00	-25.51	Vertical
23180	*	*	*	*	*	74.00	*	Vertical
28975	*	*	*	*	*	74.00	*	Vertical
34770	*	*	*	*	*	74.00	*	Vertical

Test channel:	Middle	Remark:	Average
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Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590	25.68	39.71	10.20	38.10	37.49	54.00	-16.51	Horizontal
17385	20.86	40.29	14.65	36.07	39.73	54.00	-14.27	Horizontal
23180	*	*	*	*	*	54.00	*	Horizontal
28975	*	*	*	*	*	54.00	*	Horizontal
34770	*	*	*	*	*	54.00	*	Horizontal
11590	24.36	39.71	10.20	38.10	36.17	54.00	-17.83	Vertical
17385	19.28	40.29	14.65	36.07	38.15	54.00	-15.85	Vertical
23180	*	*	*	*	*	54.00	*	Vertical
28975	*	*	*	*	*	54.00	*	Vertical
34770	*	*	*	*	*	54.00	*	Vertical

Remark:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is too weak instrument of signal is unable to test.
5. Level = Reading Level + Antenna factor+ Cable loss – Preamplifier Factor
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test channel:	Highest	Remark:	Peak
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Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11670	37.67	39.61	10.23	37.95	49.56	74.00	-24.44	Horizontal
17505	32.49	40.05	14.71	36.04	51.21	74.00	-22.79	Horizontal
23340	*	*	*	*	*	74.00	*	Horizontal
29175	*	*	*	*	*	74.00	*	Horizontal
35010	*	*	*	*	*	74.00	*	Horizontal
11670	36.17	39.61	10.23	37.95	48.06	74.00	-25.94	Vertical
17505	30.52	40.05	14.71	36.04	49.24	74.00	-24.76	Vertical
23340	*	*	*	*	*	74.00	*	Vertical
29175	*	*	*	*	*	74.00	*	Vertical
35010	*	*	*	*	*	74.00	*	Vertical

Test channel:	Highest	Remark:	Average
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Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11670	25.70	39.61	10.23	37.95	37.59	54.00	-16.41	Horizontal
17505	22.46	40.05	14.71	36.04	41.18	54.00	-12.82	Horizontal
23340	*	*	*	*	*	54.00	*	Horizontal
29175	*	*	*	*	*	54.00	*	Horizontal
35010	*	*	*	*	*	54.00	*	Horizontal
11670	24.38	39.61	10.23	37.95	36.27	54.00	-17.73	Vertical
17505	20.88	40.05	14.71	36.04	39.60	54.00	-14.40	Vertical
23340	*	*	*	*	*	54.00	*	Vertical
29175	*	*	*	*	*	54.00	*	Vertical
35010	*	*	*	*	*	54.00	*	Vertical

Remark:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is too weak instrument of signal is unable to test.
5. Level = Reading Level + Antenna factor+ Cable loss – Preamplifier Factor
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.