



FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment : FLYBOOK

Trade Name : DIALOGUE

Model Name : V51BBB

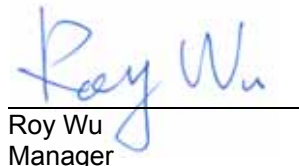
FCC ID : JYV-V51BBB

Filing Type : Certification

Applicant : Dialogue Technology Corp.

10F., No., 196, Sec. 2, Jungshing Rd., Shindian City,
Taipei 231, Taiwan, R.O.C.

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- The data shown in this test report were carried out on Aug. 21, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR6O2516-09A, Report Version: Rev.01



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Report Version: Rev.01

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History of This Test Report

Report Issued Date: Aug. 27, 2008

Report No.	Description

1. General Description of Equipment under Test

1.1. Applicant

Dialogue Technology Corp.

10F., No., 196, Sec. 2, Jungshing Rd., Shindian City, Taipei 231, Taiwan, R.O.C.

1.2. Manufacturer

Dialogue Technology Corp.

10F., No., 196, Sec. 2, Jungshing Rd., Shindian City, Taipei 231, Taiwan, R.O.C.

1.3. Basic Description of Accessories

AC Adapter	Brand Name	DIALOGUE
	Model Name	ADP-50HH A
	Power Rating	I/P:100-240Vac, 50-60Hz, 1.5A; O/P: 19Vdc, 2.64A
	AC Power Cord Type	1.8 meter shielded cable with ferrite core
Battery	Brand Name	DIAOGUE
	Model Name	FB-B5634
	Power Rating	11.1Vdc, 3400mAh
	Type	Li-ion

Remark: Above EUT's information was declared by manufacturer. Please refer to the specifications of manufacturer or User's Manual for more detailed features description.

1.4. Feature of Equipment under Test

Product Feature & Specification				
EUT Type :	FLYBOOK			
Trade Name :	DIALOGUE			
Model Name :	V51BBB			
FCC ID :	JYV-V51BBB			
Tx Frequency :	2400 MHz ~ 2483.5 MHz			
Rx Frequency :	2400 MHz ~ 2483.5 MHz			
Number of Channels :	79			
Carrier Frequency of Each Channel :	2402+n*1 MHz; n=0~78			
Channel Spacing :	1 MHz			
Type of Antenna Connector :	Hirose			
Antenna Type :	PIFA Antenna			
Antenna Gain :	0 dBi			
Type of Modulation :	GFSK			
Function Type :	Transmitter		Transceiver	V

2. Test Configuration of Equipment under Test

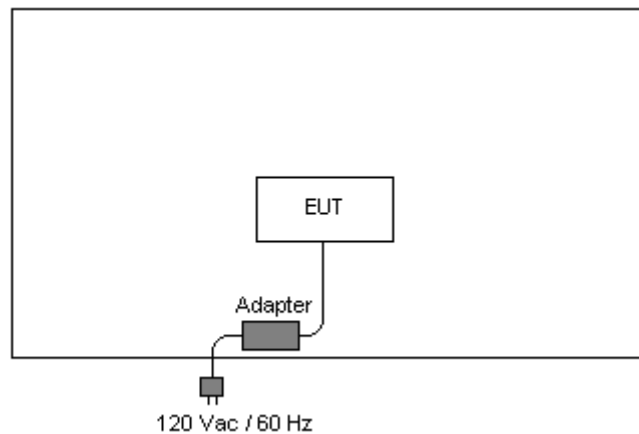
2.1. Test Manner

- The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
- For spurious emission below 1 GHz, only one channel of each application was tested because it is not related to channel selection.
- The EUT is programmed to transmit signal continuously for all tests.
- Because this model, V51BBB, integrates the same BT module with the model, V5W1BBHA, the conducted test cases can be referred to the Sporton report number FR6O2516AD for V5W1BBHA BT FCC Part 15C report.
- Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 25000 MHz.

2.2. Test Mode

Test Item	Test Mode
Radiated Emission	Mode 1: Tx_CH00_2402 MHz
	Mode 2: Tx_CH39_2441 MHz
	Mode 3: Tx_CH78_2480 MHz

2.3. Connection Diagram of Test System



3. RF Utility

The EUT is in BT Link mode with mobile phone for conducted emission or in BT continuous Tx Mode controlled by base station simulator for radiation emission. RF Utility, "BlueSuite" can send transmitting signals for the test.

4. General Information of Test

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-328-4978
Test Site No : 03CH06-HY
FCC Designation No : TW1022

4.1. Test Voltage

AC 120V / 60Hz

4.2. Standard for Methods of Measurement

ANSI C63.4-2003

4.3. Test Compliance

47 CFR Part 15 Subpart C

4.4. Frequency Range

Radiation: from 30 MHz to 25000MHz

4.5. Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.

5. Report of Measurements and Examinations

5.1 List of Measurements and Examinations

The Emission Mode: Bluetooth

FCC Rule	Description of Test	Result
15.247(d)	100 KHz Bandwidth of Frequency Band Edges	Pass
15.209(a) 15.247(d)	Radiated Emission	Pass
15.203 15.247(b)(4)	Antenna Requirement	Pass

5.2 Band Edges Measurement

5.2.1 Measuring Instruments

As described in chapter 6 of this test report.

5.2.2 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set both RBW and VBW of spectrum analyzer to 100 KHz with suitable frequency span including 100 KHz bandwidth from band edge.
3. The band edges was measured and recorded.

5.2.3 Test Result

- Application Type : Bluetooth
- Temperature : 21~26
- Relative Humidity : 49~57%
- Test Engineer : Sun

Test Result in Bluetooth lower band	:	PASS
Test Result in Bluetooth higher band	:	PASS

5.2.4 Note on Band Edge Emission
CH00 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.00	31.61	-22.40	54.00	31.06	32.30	3.92	35.68	100	12	Average
2385.00	44.71	-29.30	74.00	44.16	32.30	3.92	35.68	100	0	Peak

CH00 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.00	31.24	-22.76	54.00	30.57	32.42	3.92	35.68	127	360	Average
2387.00	44.93	-29.07	74.00	44.26	32.42	3.92	35.68	100	0	Peak

CH78 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	46.82	-7.15	54.00	46.19	32.30	4.05	35.70	100	10	Average
2483.50	59.28	-14.72	74.00	58.63	32.30	4.05	35.70	100	0	Peak

CH78 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	43.85	-10.15	54.00	43.09	32.40	4.05	35.70	100	360	Average
2483.50	53.28	-20.72	74.00	52.52	32.40	4.05	35.70	100	0	Peak

5.3 Radiated Emission Measurement

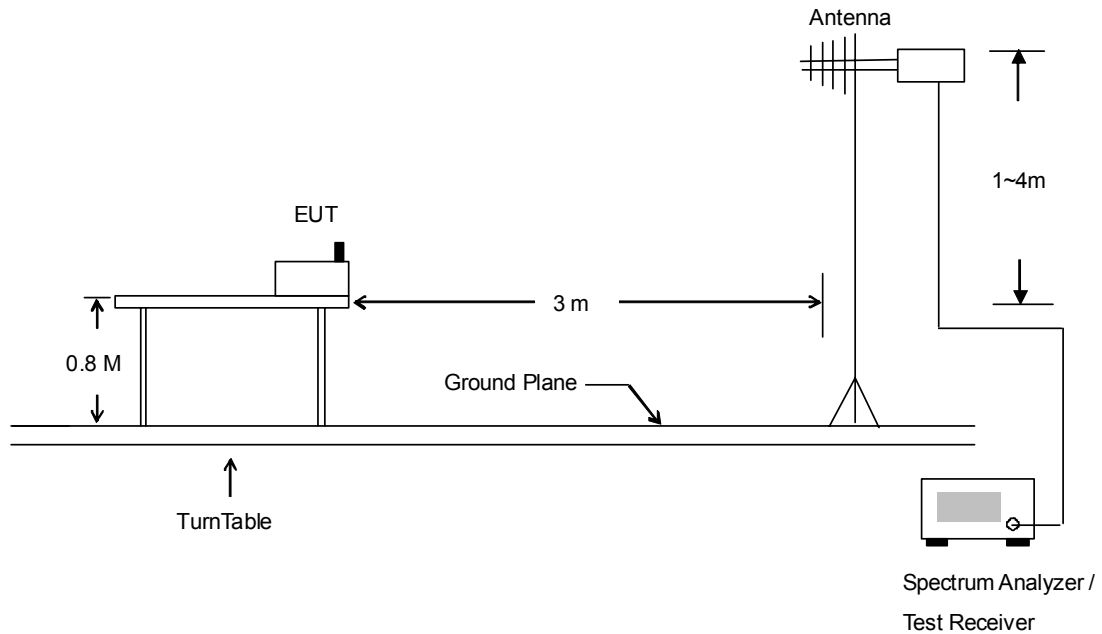
5.3.1 Measuring Instruments

As described in chapter 6 of this Report.

5.3.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

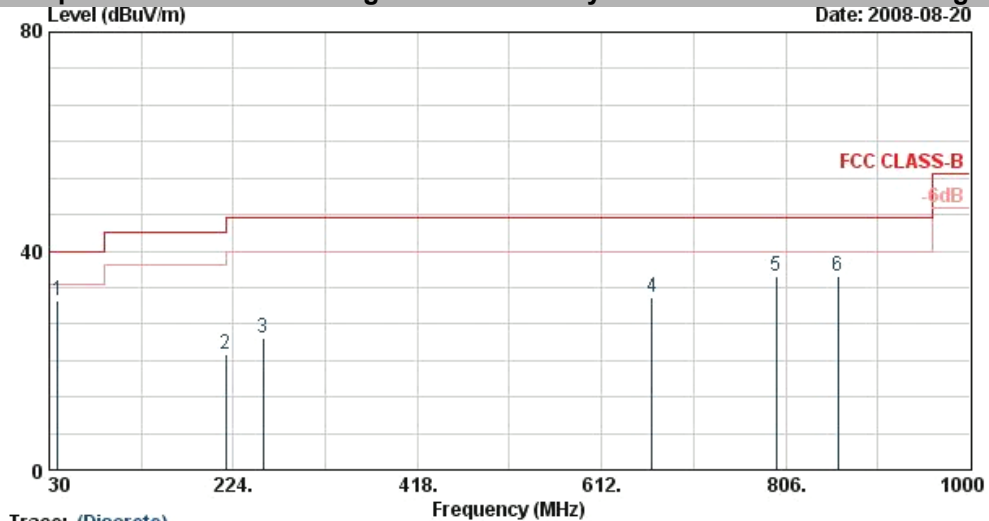
5.3.3 Typical Test Setup Layout of Radiated Emission



5.3.4 Test Data

- Test Mode : Mode 1
- Temperature : 21~26
- Relating Humidity : 49~57%
- Test Engineer : Sun
- Polarization : Horizontal (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

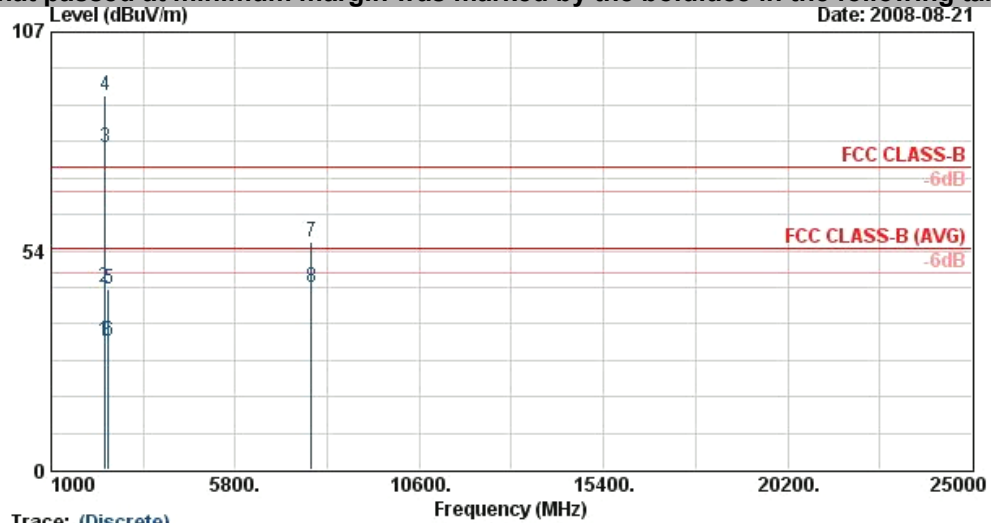


Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(851121) HORIZONTAL
 Model : FR 602516-09
 Memo : Mode 1

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	39.18	31.05	-8.95	40.00	48.43	14.03	0.30	31.72	100	126 Peak
2	216.03	21.25	-24.75	46.00	42.35	10.27	0.66	32.02	---	---
3	255.18	24.15	-21.85	46.00	42.91	12.36	0.70	31.83	---	---
4	665.40	31.61	-14.39	46.00	43.89	18.74	1.05	32.06	---	---
5	796.30	35.43	-10.57	46.00	46.62	19.78	1.20	32.17	---	---
6	861.40	35.25	-10.75	46.00	46.02	20.25	1.21	32.23	---	---

• Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



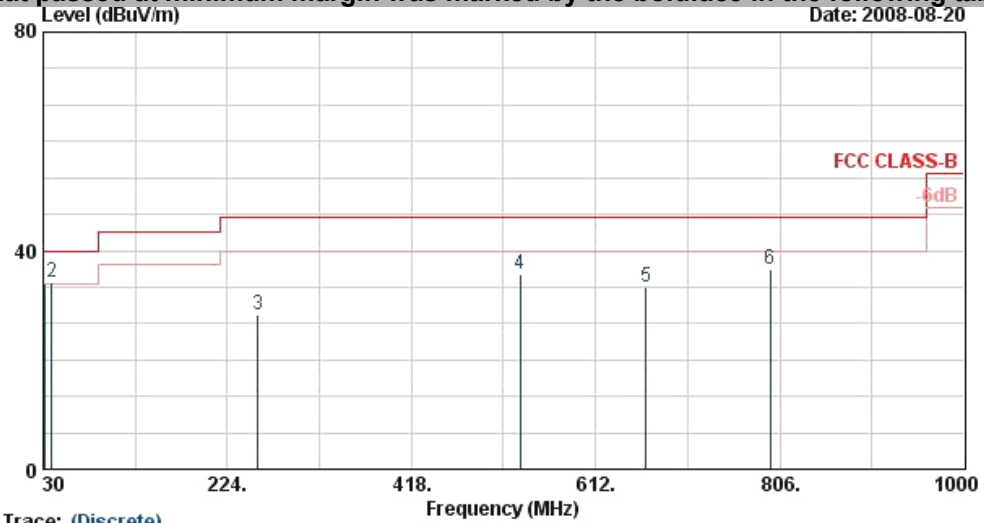
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Model : FR 602516-09
Memo : Mode 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2385.00	31.61	-22.40	54.00	31.06	32.30	3.92	35.68	100	12	Average
2	2385.00	44.71	-29.30	74.00	44.16	32.30	3.92	35.68	100	0	Peak
3 @	2402.00	78.86			78.32	32.30	3.92	35.68	100	12	Average
4 X	2402.00	91.47			90.93	32.30	3.92	35.68	100	0	Peak
5	2494.00	44.30	-29.70	74.00	43.65	32.30	4.05	35.70	100	0	Peak
6	2494.00	31.32	-22.68	54.00	30.67	32.30	4.05	35.70	100	12	Average
7	7782.00	55.60	-18.40	74.00	46.22	38.23	7.41	36.26	100	0	Peak
8	7782.00	44.44	-9.56	54.00	35.06	38.23	7.41	36.26	100	165	Average

Remark: #3 and #4 are Fundamental Signals.

• Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

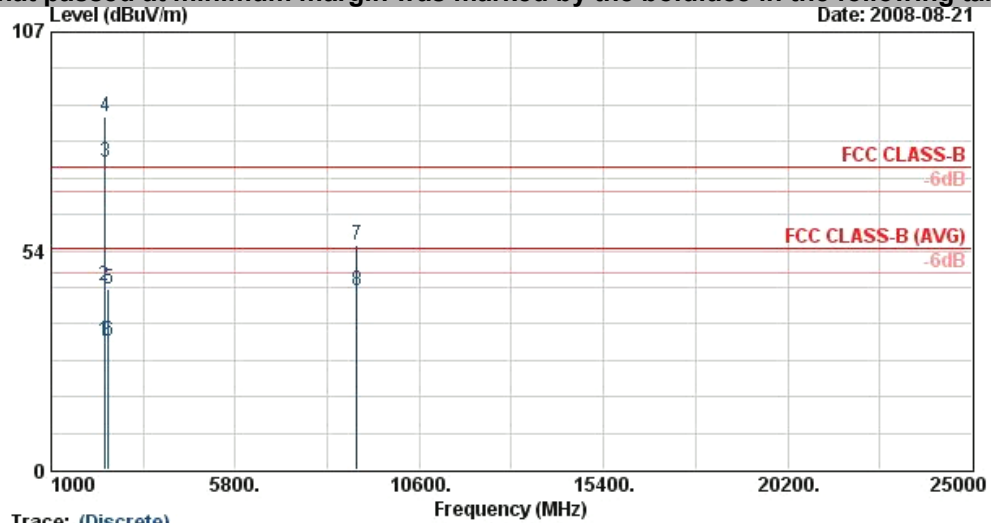


Site : 03CH06-HY
Condition : FCC CLASS-B 3m LP-ANT(051121) VERTICAL
Model : FR 602516-09
Memo : Mode 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.08	33.92	-6.08	40.00	46.28	18.95	0.30	31.61	---	---	Peak
2	38.64	34.23	-5.77	40.00	51.61	14.03	0.30	31.72	100	37	Peak
3	255.99	28.29	-17.71	46.00	47.04	12.38	0.70	31.83	---	---	Peak
4	532.40	35.55	-10.45	46.00	48.96	17.76	0.93	32.10	---	---	Peak
5	665.40	33.30	-12.70	46.00	45.58	18.74	1.05	32.06	---	---	Peak
6	796.30	36.68	-9.32	46.00	47.87	19.78	1.20	32.17	---	---	Peak

• Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



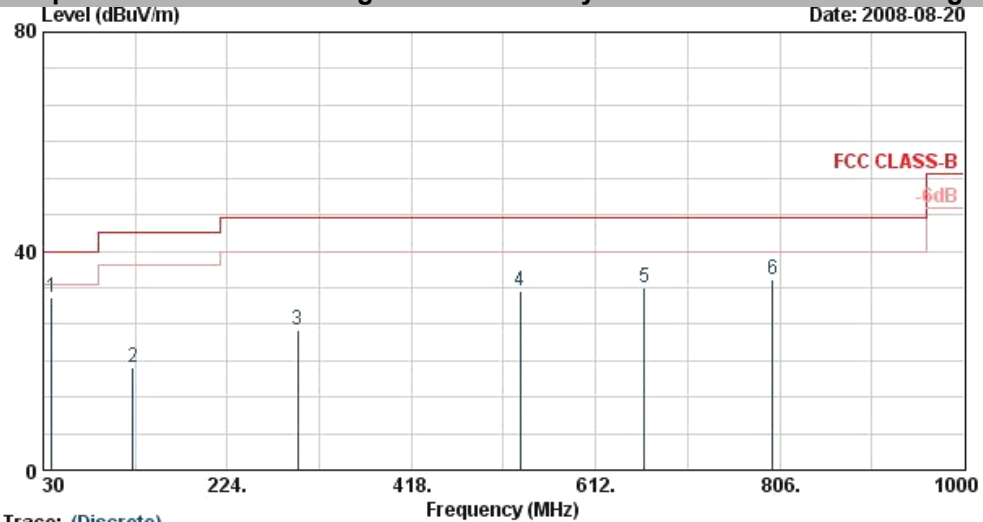
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Model : FR 602516-09
Memo : Mode 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2387.00	31.24	-22.76	54.00	30.57	32.42	3.92	35.68	127	360	Average
2	2387.00	44.93	-29.07	74.00	44.26	32.42	3.92	35.68	100	0	Peak
3 @	2402.00	75.26			74.60	32.42	3.92	35.68	127	360	Average
4 X	2402.00	86.25			85.60	32.42	3.92	35.68	100	0	Peak
5	2494.00	43.99	-30.01	74.00	43.24	32.40	4.05	35.70	100	0	Peak
6	2494.00	31.24	-22.76	54.00	30.49	32.40	4.05	35.70	127	360	Average
7	8967.00	54.88	-19.12	74.00	46.01	37.67	7.77	36.57	100	0	Peak
8	8967.00	43.74	-10.26	54.00	34.87	37.67	7.77	36.57	100	36	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 2
- Temperature : 21~26
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



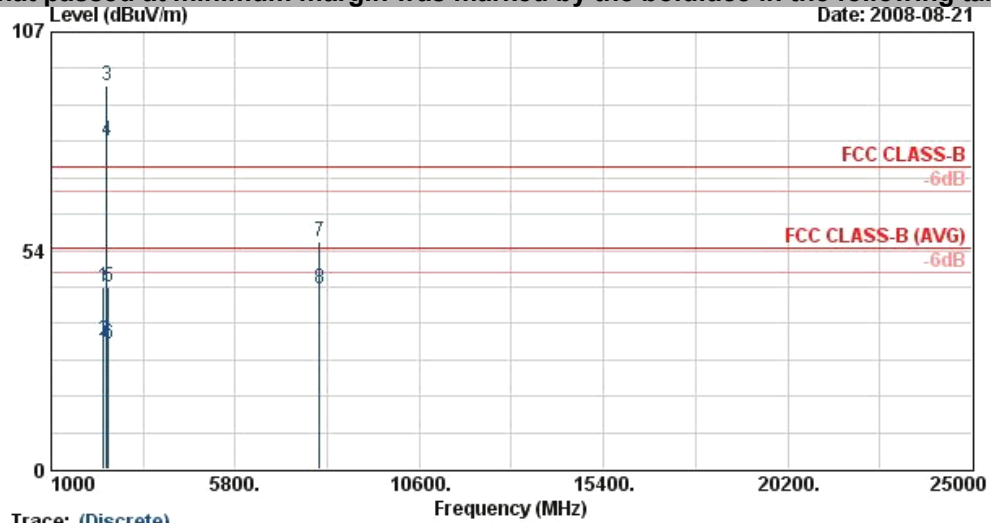
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) HORIZONTAL
Model : FR 602516-09
Memo : Mode 2

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	38.64	31.58	-8.42	40.00	48.96	14.03	0.30	31.72	100	213 Peak
2	124.23	18.86	-24.64	43.50	37.43	12.64	0.50	31.71	---	---
3	298.38	25.62	-20.38	46.00	43.87	13.19	0.70	32.14	---	---
4	532.40	32.69	-13.31	46.00	46.10	17.76	0.93	32.10	---	---
5	663.30	33.27	-12.73	46.00	45.51	18.74	1.06	32.04	---	---
6	798.40	34.65	-11.35	46.00	45.83	19.80	1.20	32.18	---	---

• Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

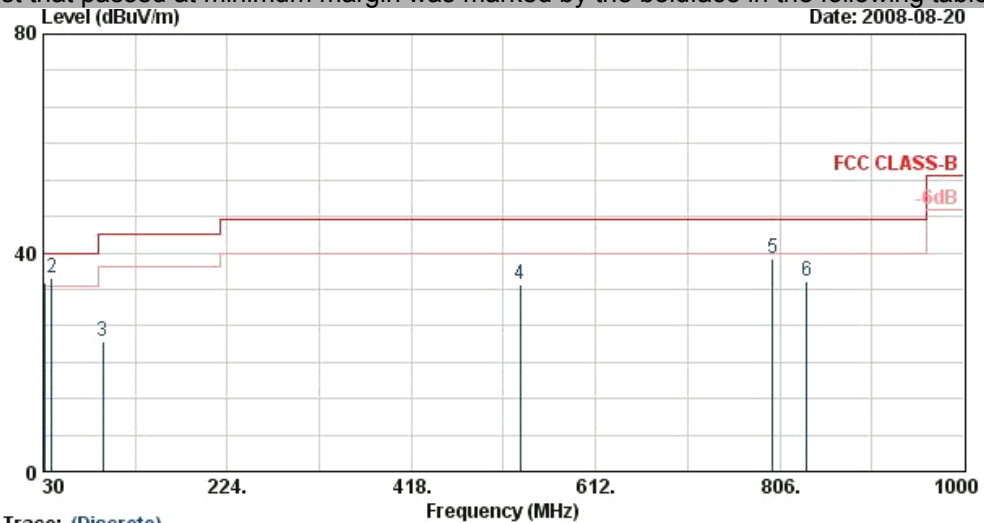


Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Model : FR 602516-09
Memo : Mode 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2372.00	44.65	-29.35	74.00	44.14	32.30	3.89	35.68	100	0	Peak
2	2372.00	31.27	-22.73	54.00	30.76	32.30	3.89	35.68	100	17	Average
3 X	2441.00	93.80			93.21	32.30	3.99	35.69	100	0	Peak
4 @	2441.00	80.31			79.72	32.30	3.99	35.69	100	17	Average
5	2486.00	44.64	-29.36	74.00	43.99	32.30	4.05	35.70	100	0	Peak
6	2486.00	30.78	-23.23	54.00	30.12	32.30	4.05	35.70	100	17	Average
7	7992.00	55.50	-18.50	74.00	45.90	38.39	7.51	36.30	100	0	Peak
8	7992.00	44.33	-9.67	54.00	34.73	38.39	7.51	36.30	100	341	Average

Remark: #3 and #4 are Fundamental Signals.

- Polarization : Vertical (30MHz-1GHz)
- ■ The test that passed at minimum margin was marked by the boldface in the following table.



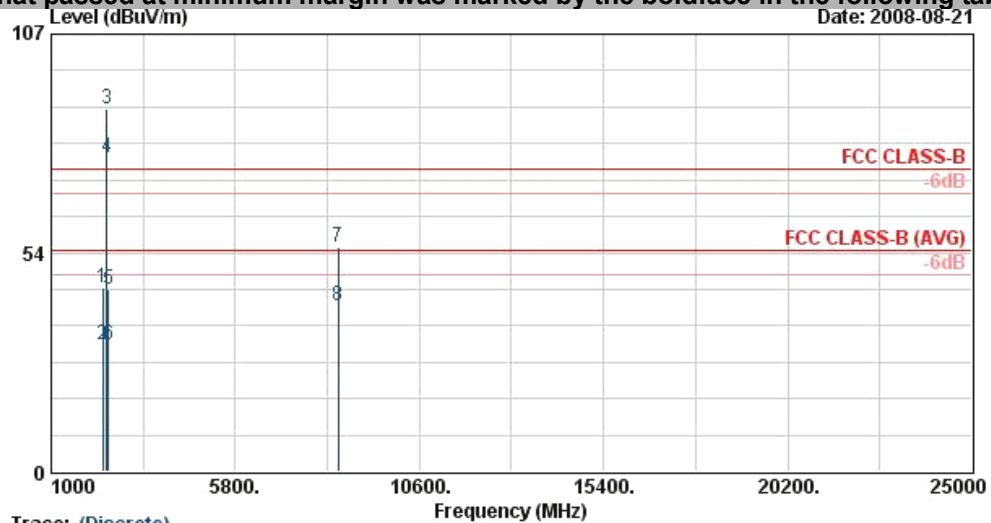
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
Model : FR 602516-09
Memo : Mode 2

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	31.08	34.41	-5.59	40.00	46.77	18.95	0.30	31.61	---	---	Peak
2 !	38.64	35.29	-4.71	40.00	52.67	14.03	0.30	31.72	100	330	Peak
3	92.64	23.77	-19.73	43.50	45.74	9.62	0.50	32.09	---	---	Peak
4	532.40	34.24	-11.76	46.00	47.66	17.76	0.93	32.10	---	---	Peak
5	798.40	38.93	-7.07	46.00	50.11	19.80	1.20	32.18	---	---	Peak
6	834.80	34.76	-11.24	46.00	45.83	20.07	1.20	32.34	---	---	Peak

• Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

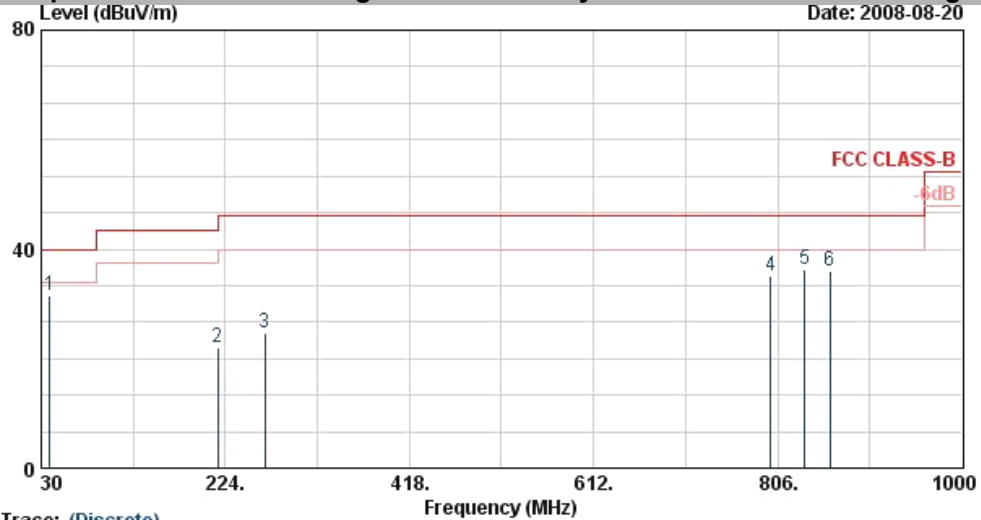
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Model : FR 602516-09
Memo : Mode 2

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	2340.00	44.97	-29.03	74.00	44.36	32.43	3.86	35.67	100	0 Peak
2	2340.00	31.03	-22.97	54.00	30.41	32.43	3.86	35.67	102	357 Average
3 X	2441.00	88.88			88.18	32.41	3.99	35.69	100	0 Peak
4 @	2441.00	76.67			75.96	32.41	3.99	35.69	102	357 Average
5	2492.00	44.55	-29.45	74.00	43.80	32.40	4.05	35.70	100	0 Peak
6	2492.00	31.19	-22.81	54.00	30.44	32.40	4.05	35.70	102	357 Average
7	8481.00	54.83	-19.17	74.00	46.65	37.30	7.18	36.30	100	0 Peak
8	8481.00	40.56	-13.44	54.00	32.38	37.30	7.18	36.30	100	320 Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 3
- Temperature : 21~26
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



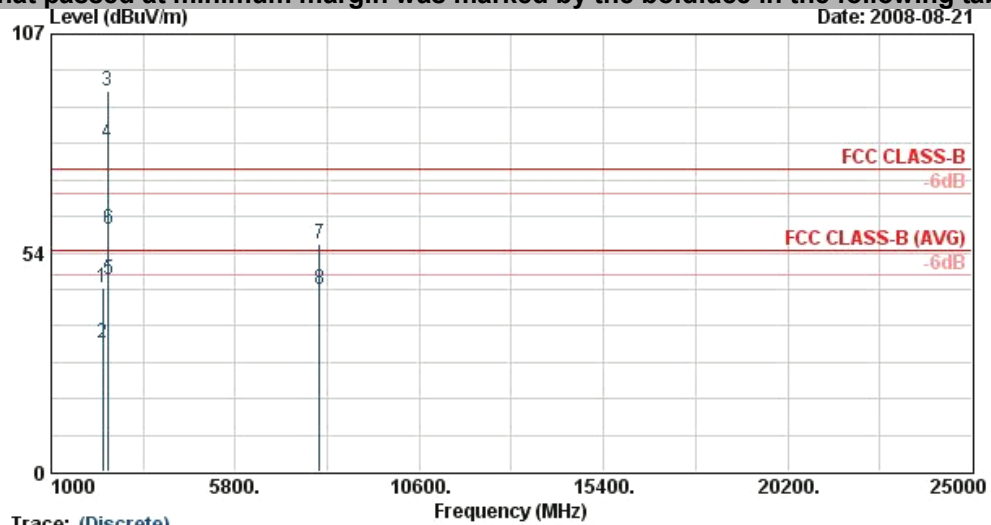
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) HORIZONTAL
Model : FR 602516-09
Memo : Mode 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	39.18	31.57	-8.43	40.00	48.96	14.03	0.30	31.72	100	23	Peak
2	216.03	21.93	-24.07	46.00	43.02	10.27	0.66	32.02	---	---	Peak
3	265.98	24.63	-21.37	46.00	43.27	12.56	0.70	31.90	---	---	Peak
4	798.40	35.04	-10.96	46.00	46.21	19.80	1.20	32.18	---	---	Peak
5	834.80	36.29	-9.71	46.00	47.36	20.07	1.20	32.34	---	---	Peak
6	861.40	36.06	-9.94	46.00	46.82	20.25	1.21	32.23	---	---	Peak

• Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



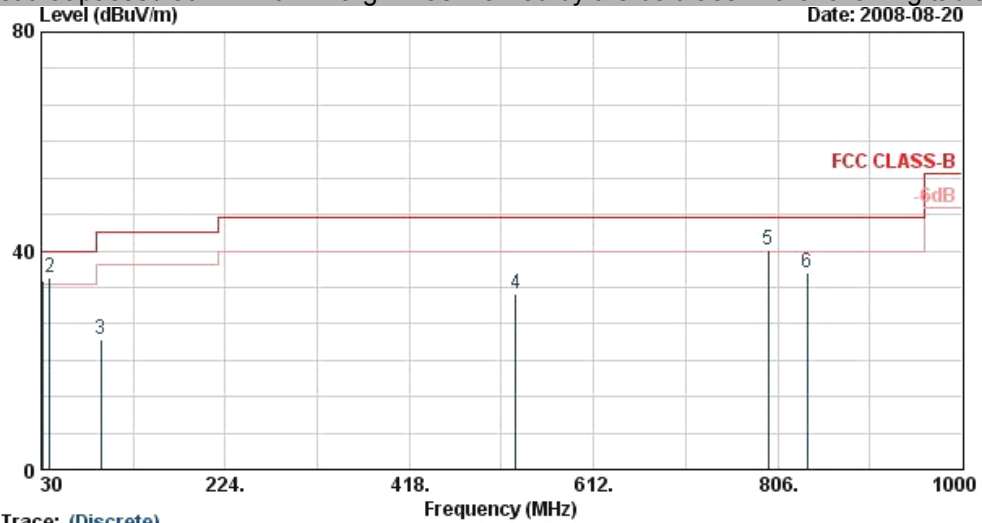
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Model : FR 602516-09
Memo : Mode 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2350.00	45.03	-28.97	74.00	44.55	32.30	3.86	35.67	100	0	Peak
2	2350.00	31.34	-22.67	54.00	30.85	32.30	3.86	35.67	100	10	Average
3 @	2480.00	93.13			92.48	32.30	4.05	35.70	100	0	Peak
4 @	2480.00	80.20			79.54	32.30	4.05	35.70	100	10	Average
5 @	2483.50	46.85	-7.15	54.00	46.19	32.30	4.05	35.70	100	10	Average
6	2483.50	59.28	-14.72	74.00	58.63	32.30	4.05	35.70	100	0	Peak
7	8001.00	55.86	-18.14	74.00	46.24	38.40	7.52	36.30	100	0	Peak
8	8001.00	44.71	-9.29	54.00	35.09	38.40	7.52	36.30	100	120	Average

Remark: #3 and #4 are Fundamental Signals.

- Polarization : Vertical (30MHz-1GHz)
- The test that passed at minimum margin was marked by the boldface in the following table.



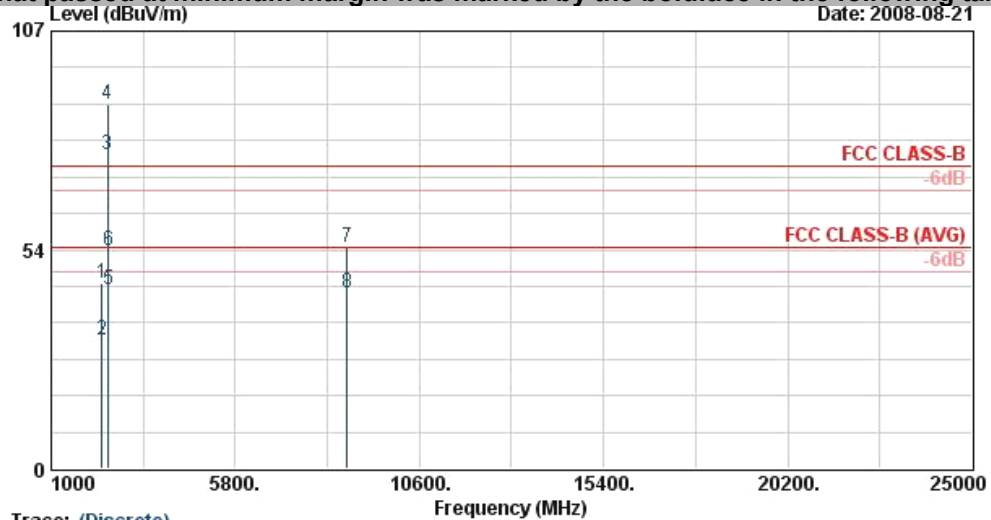
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
Model : FR 602516-00
Memo : Mode 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	31.62	34.36	-5.64	40.00	47.48	18.25	0.30	31.67	---	---	Peak
2 @	39.18	35.14	-4.86	40.00	52.52	14.03	0.30	31.72	100	293	Peak
3	92.64	23.70	-19.80	43.50	45.67	9.62	0.50	32.09	---	---	Peak
4	530.30	32.16	-13.84	46.00	45.61	17.74	0.91	32.10	---	---	Peak
5 @	796.30	40.14	-5.86	46.00	51.33	19.78	1.20	32.17	---	---	Peak
6	836.90	36.12	-9.88	46.00	47.18	20.08	1.20	32.34	---	---	Peak

• Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Model : FR 602516-09
Memo : Mode 3

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	2318.00	45.31	-28.69	74.00	44.71	32.43	3.82	35.67	100	0 Peak
2	2318.00	31.24	-22.76	54.00	30.65	32.43	3.82	35.67	100	360 Average
3 @	2480.00	76.92			76.16	32.40	4.05	35.70	100	360 Average
4 @	2480.00	89.07			88.31	32.40	4.05	35.70	100	0 Peak
5	2483.50	43.85	-10.15	54.00	43.09	32.40	4.05	35.70	100	360 Average
6	2483.50	53.28	-20.72	74.00	52.52	32.40	4.05	35.70	100	0 Peak
7	8712.00	54.26	-19.74	74.00	45.76	37.47	7.45	36.42	100	0 Peak
8	8712.00	43.01	-10.99	54.00	34.51	37.47	7.45	36.42	100	248 Average

Remark: #3 and #4 are Fundamental Signals.

5.4 Antenna Requirements

5.4.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

5.4.2 Antenna Connected Construction

The antenna used in this product is PIFA Antenna for Bluetooth with Hirose connector and it is considered to meet antenna requirement of FCC.

5.4.3 Antenna Gain

The antenna gain of EUT is less than 6dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

6 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20MHz-1000MHz	Apr. 24, 2008	Apr. 23, 2009	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 01, 2007	Nov. 30, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00075962	1G~18G	Aug. 29, 2007	Aug. 28, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Training Research	AF-0801	95119	8G~18G	Oct. 17, 2007	Oct. 16, 2008	Radiation (05CH02-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	14G - 40G	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 22, 2007	Nov. 21, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	310N	186713	9KHz~1GHz	Apr. 21, 2008	Apr. 20, 2009	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	103937	Third-Band	Oct. 19, 2007	Oct. 18, 2008	Radiation (03CH06-HY)

7 Uncertainty Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.11	Normal(k=2)	0.06
Antenna factor calibration	0.91	Normal(k=2)	0.46
Cable loss calibration	0.12	Normal(k=2)	0.06
Pre Amplifier Gain calibration	0.15	Normal(k=2)	0.08
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.52	Rectangular	0.88
Mismatch	+0.45/-0.48	U-shaped	0.33
Combined standard uncertainty Uc(y)	1.30		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.60		

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 \Gamma_2)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	2.36				
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	4.72				

The measured result is : y dBuV ± U dB
for a level of confidence of approximately 95% , (k= 2)

Appendix A. Photographs of EUT

Please refer to Sporton report number EP6O2516-09 as below.