



# 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. 13, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR6O2516-09B, 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

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

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				
<b>EUT Type :</b>	FLYBOOK			
<b>Trade Name :</b>	DIALOGUE			
<b>Model Name :</b>	V51BBB			
<b>FCC ID :</b>	JYV-V51BBB			
<b>Tx Frequency :</b>	802.11b/g: 2400 MHz ~ 2483.5 MHz 802.11a Band III: 5745 MHz ~ 5825 MHz			
<b>Rx Frequency :</b>	802.11b/g: 2400 MHz ~ 2483.5 MHz 802.11a Band III: 5745 MHz ~ 5825 MHz			
<b>Channel Spacing :</b>	802.11b/g: 5 MHz 802.11a Band III: 20 MHz			
<b>Type of Antenna Connector :</b>	Hirose			
<b>Antenna Type :</b>	PIFA Antenna			
<b>Antenna Gain :</b>	0 dBi			
<b>Type of Modulation :</b>	DSSS / OFDM			
<b>Function Type :</b>	Transmitter		Transceiver	V

## 2. Test Configuration of Equipment under Test

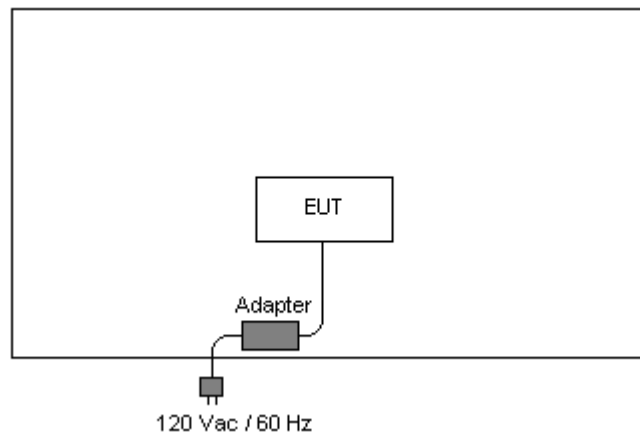
### 2.1 Test Manner

- a. 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.
- b. The EUT is programmed to transmit signal continuously for all tests.
- c. Because the model, V5B1BB, integrates Intel 3945 WLAN module (FCC ID:PD9WM3945ABG), the conducted test cases can be referred to the WLAN module FCC 15C report number INTEL-060331F.
- d. Frequency range investigated: radiation from 30 MHz to 25000MHz.

### 2.2 Test Mode

Test Item	Test Mode		
	802.11b	802.11g	802.11a Band III
Radiated Emission	Mode 1: CH01_2412 MHz	Mode 4: CH01_2412 MHz	Mode 7: CH149_5745 MHz
	Mode 2: CH06_2437 MHz	Mode 5: CH06_2437 MHz	Mode 8: CH157_5785 MHz
	Mode 3: CH11_2462 MHz	Mode 6: CH11_2462 MHz	Mode 9: CH165_5825 MHz

### 2.3 Connection Diagram of Test System



### 3. RF Utility

The programmed RF Utility, "CRTU" is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testings.

## 4. General Information of Test

Test Site Location : No. 52, Hwa Ya 1<sup>st</sup> 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 25000 MHz

### 4.5 Test Distance

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

## 5. Test Data and Test Result

### 5.1 List of Measurements and Examinations

The Emission Mode: Wireless LAN

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 : WLAN 802.11a/b/g
- Temperature : 21~26
- Relating Humidity : 49~57%
- Test Enginner : Sun

Test Result in WLAN lower band (802.11a/b/g)	:	<b>PASS</b>
Test Result in WLAN higher band (802.11a/b/g)	:	<b>PASS</b>

**5.2.4 Note on Band Edge Emission**
**➤WLAN 802.11b**
**CH01 (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
2389.99	48.34	-25.66	74.00	48.24	31.86	3.92	35.68	100	0	Peak
2389.99	34.66	-19.67	54.00	34.23	31.86	3.92	35.68	100	39	Average

**CH01 (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
2389.99	51.87	-22.13	74.00	51.77	31.86	3.92	35.68	100	0	Peak
2389.99	38.31	-15.69	54.00	35.21	31.86	3.92	35.68	104	319	Average

**CH11 (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
2483.66	46.60	-27.40	74.00	46.27	31.98	4.05	35.70	100	0	Peak
2483.66	33.47	-20.53	54.00	33.14	31.98	4.05	35.70	100	46	Average

**CH11 (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	48.78	-25.22	74.00	48.45	31.98	4.05	35.70	100	0	Peak
2483.50	34.63	-19.37	54.00	34.30	31.98	4.05	35.70	100	326	Average

**➤WLAN 802.11g**

CH01 (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
2389.99	62.13	-11.87	74.00	62.03	31.86	3.92	35.68	100	0	Peak
2389.99	40.94	-13.06	54.00	40.84	31.86	3.92	35.68	100	39	Average

CH01 (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
2389.99	68.90	-5.10	74.00	68.80	31.86	3.92	35.68	100	0	Peak
2389.99	47.05	-6.95	54.00	46.95	31.86	3.92	35.68	100	320	Average

CH11 (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
2484.61	57.34	-16.66	74.00	57.01	31.98	4.05	35.70	100	0	Peak
2484.61	39.25	-14.75	54.00	38.92	31.98	4.05	35.70	100	47	Average

CH11 (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	58.36	-15.64	74.00	58.03	31.98	4.05	35.70	100	0	Peak
2483.50	40.20	-13.80	54.00	39.87	31.98	4.05	35.70	100	326	Average

**➤WLAN 802.11a Band III**
**CH149 (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
5068.00	48.77	-25.23	74.00	44.17	34.28	5.94	35.62	100	0	Peak
5068.00	35.22	-18.78	54.00	30.61	34.28	5.94	35.62	175	131	Average

**CH149 (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
5628.00	52.63	-21.37	74.00	47.13	34.92	6.31	35.73	100	0	Peak
5628.00	39.25	-14.75	54.00	33.75	34.92	6.31	35.73	109	297	Average

**CH165 (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
5900.00	50.66	-23.34	74.00	44.69	35.20	6.56	35.78	100	0	Peak
5900.00	39.98	-17.02	54.00	31.01	35.20	6.56	35.78	161	126	Average

**CH165 (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
6796.00	50.04	-23.96	74.00	43.29	35.72	6.99	35.96	100	0	Peak
6796.00	35.55	-18.45	54.00	28.80	35.72	6.99	35.96	102	266	Average

### 5.3 Radiated Emission Measurement

#### 5.3.1 Measuring Instruments

As described in chapter 6 of this Report.

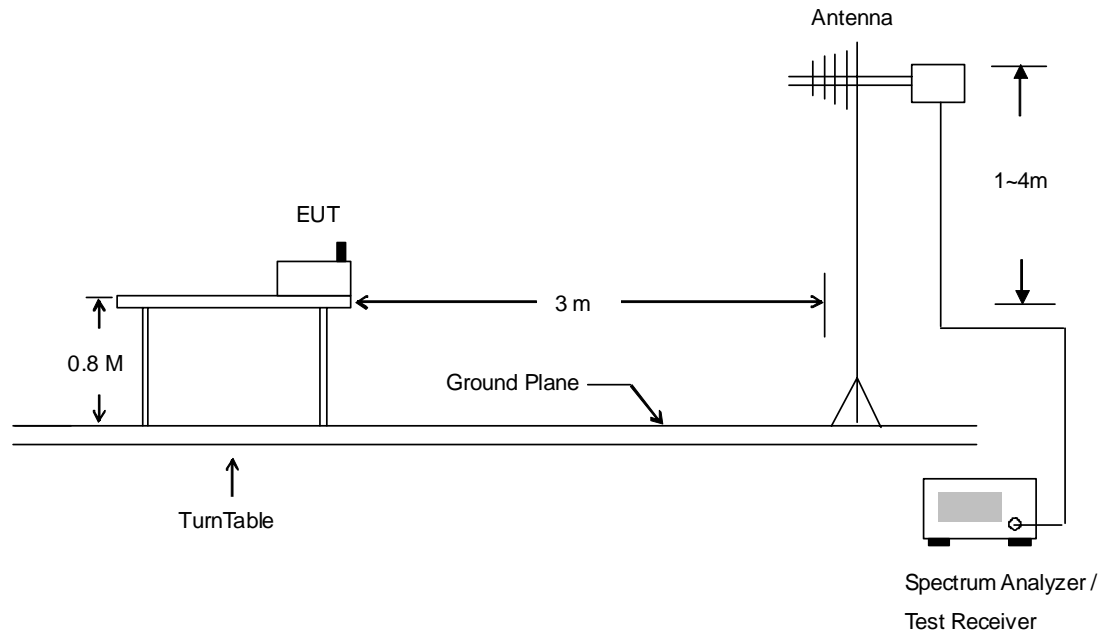
The spectrum analyzer setting :

30 ~ 1000 MHz	Detector : Quasi – Peak Bandwidth : 120 KHz
1 ~ 25 GHz	Detector : Peak and Average Bandwidth : 1 MHz

#### 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.

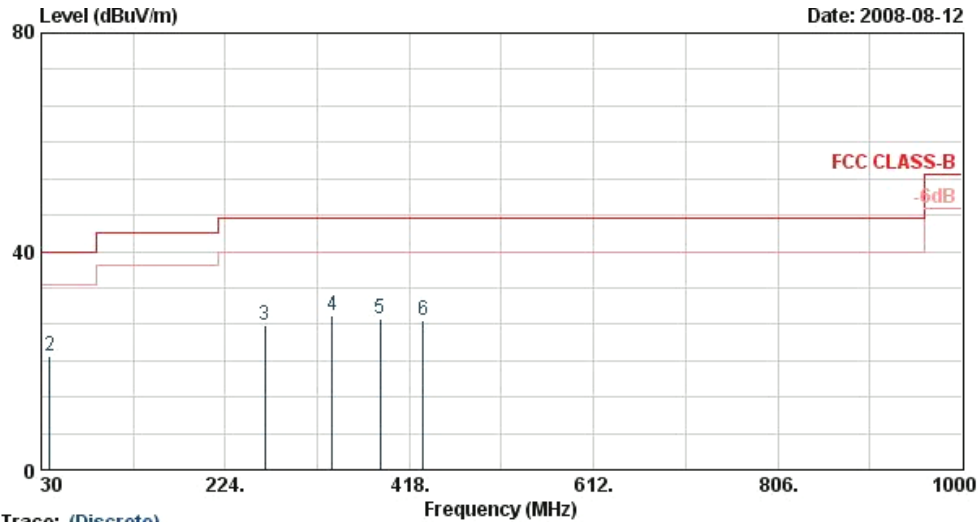
### 5.3.3 Typical Test Setup Layout of Radiated Emission



**5.3.4 Test Data**

- Test Mode : Mode 1
- Temperature : 21~26
- 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.**

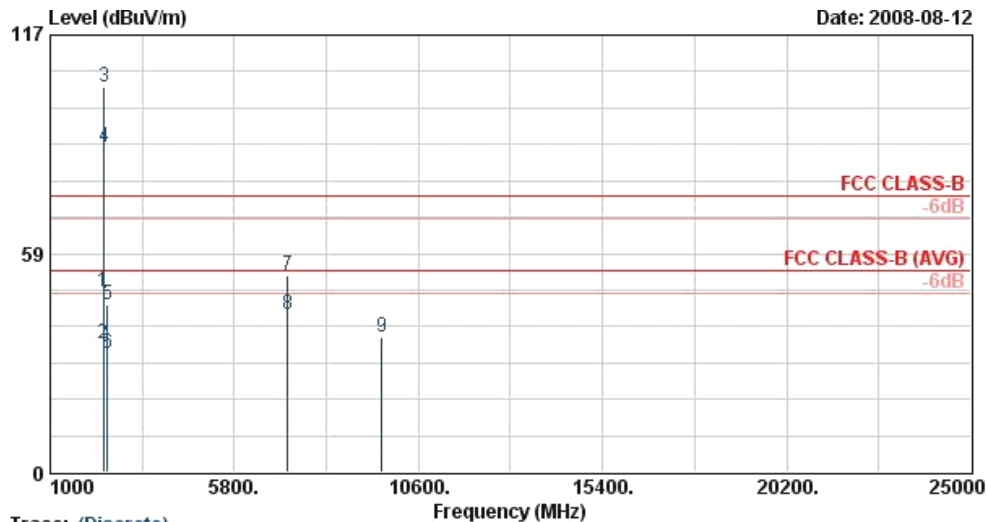


Trace: (Discrete)  
 Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 4

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Ant Pos	Table Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	22.64	-17.36	40.00	34.24	19.66	0.30	31.56	100	294 Peak	
2	38.64	20.82	-19.18	40.00	38.21	14.03	0.30	31.72	---	---	Peak
3	265.44	26.57	-19.43	46.00	45.20	12.56	0.70	31.90	---	---	Peak
4	336.40	28.12	-17.88	46.00	44.98	14.15	0.80	31.81	---	---	Peak
5	386.80	27.60	-18.40	46.00	43.17	15.44	0.83	31.84	---	---	Peak
6	432.30	27.37	-18.63	46.00	42.22	16.31	0.83	31.99	---	---	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 4

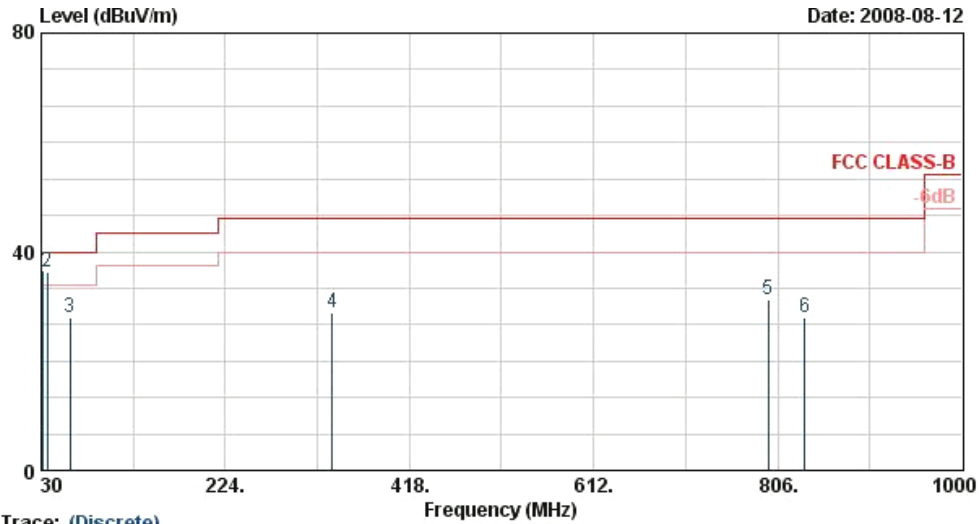
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2389.99	48.34	-25.66	74.00	48.24	31.86	3.92	35.68	100	0	Peak
2	2389.99	34.33	-19.67	54.00	34.23	31.86	3.92	35.68	100	39	Average
3 X	2412.00	103.12			102.97	31.88	3.95	35.68	100	0	Peak
4 X	2412.00	86.84			86.69	31.88	3.95	35.68	100	39	Average
5	2500.00	44.71	-29.29	74.00	44.36	32.00	4.05	35.70	100	0	Peak
6	2500.00	31.55	-22.45	54.00	31.20	32.00	4.05	35.70	100	39	Average
7	7191.00	52.82	-21.18	74.00	46.02	35.72	7.16	36.08	100	0	Peak
8	7191.00	42.01	-11.99	54.00	35.21	35.72	7.16	36.08	100	281	Average
9	9642.00	36.14	-37.86	74.00	75.02	-10.09	7.94	36.73	100	0	Peak

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.



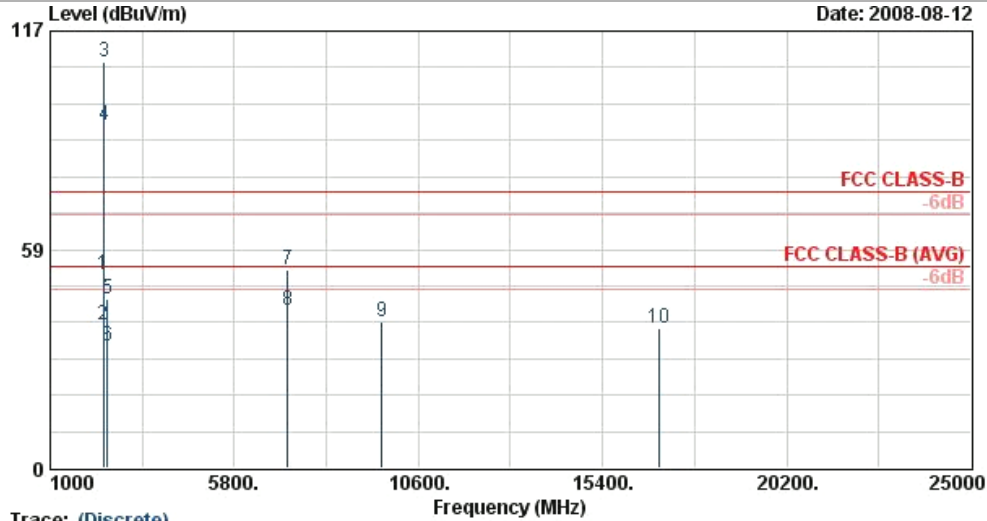
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 4

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	31.08	36.59	-3.41	40.00	48.95	18.95	0.30	31.61	100	181	Peak
2 !	36.48	36.20	-3.80	40.00	52.60	15.08	0.30	31.77	---	---	Peak
3	60.24	27.98	-12.02	40.00	53.01	6.62	0.40	32.05	---	---	Peak
4	336.40	28.89	-17.11	46.00	45.75	14.15	0.80	31.81	---	---	Peak
5	796.30	31.24	-14.76	46.00	42.43	19.78	1.20	32.17	---	---	Peak
6	834.80	28.09	-17.91	46.00	39.16	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.



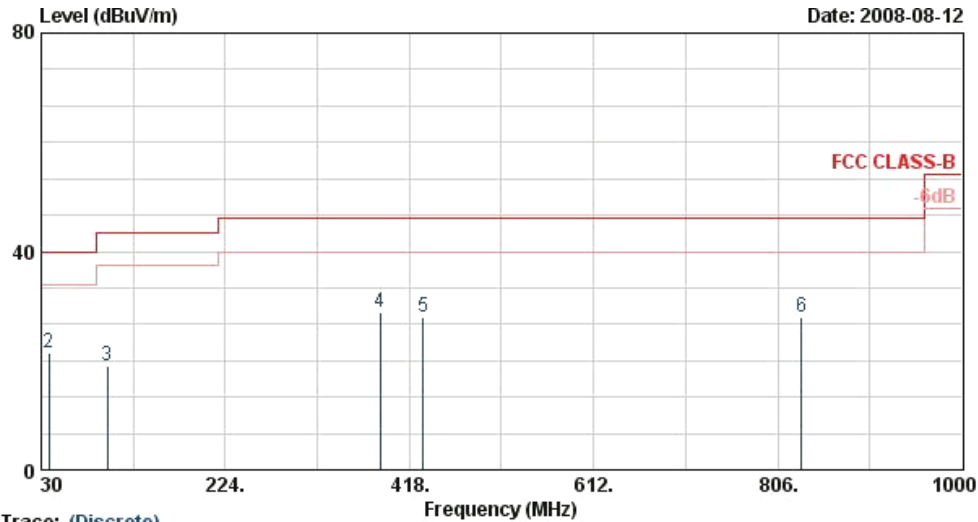
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 4

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2389.99	51.87	-22.13	74.00	51.77	31.86	3.92	35.68	100	0	Peak
2	2389.99	38.31	-15.69	54.00	38.21	31.86	3.92	35.68	104	319	Average
3 X	2412.00	108.63			108.47	31.88	3.95	35.68	100	0	Peak
4 @	2412.00	91.58			91.43	31.88	3.95	35.68	104	319	Average
5	2484.00	45.31	-28.69	74.00	44.97	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.70	-21.30	54.00	32.37	31.98	4.05	35.70	104	319	Average
7	7191.00	53.23	-20.77	74.00	46.43	35.72	7.16	36.08	100	0	Peak
8	7191.00	42.06	-11.94	54.00	35.26	35.72	7.16	36.08	100	116	Average
9	9642.00	38.98	-35.02	74.00	77.86	-10.09	7.94	36.73	100	0	Peak
10	16881.00	37.34	-36.66	74.00	72.70	-10.10	10.66	35.93	100	0	Peak

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.**



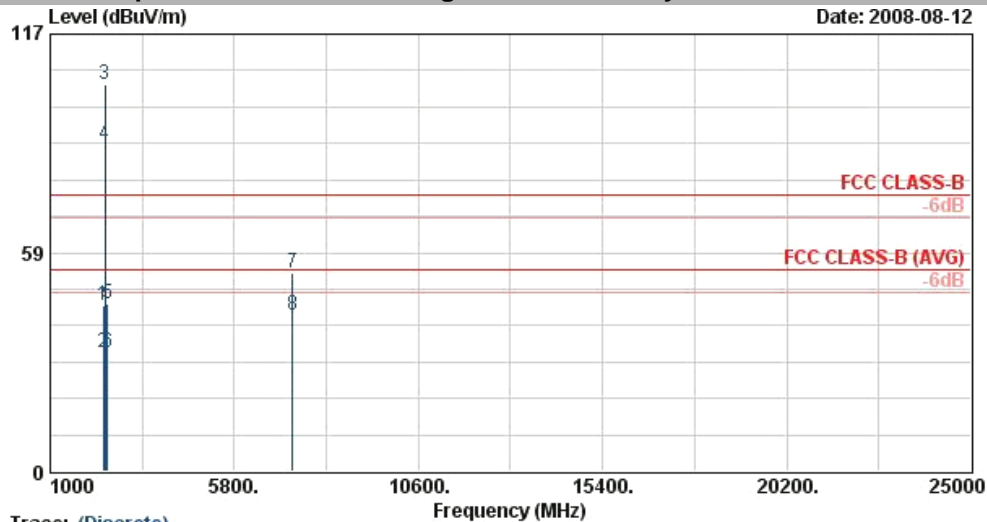
Trace: (Discrete)

Site : 03CH06-HY  
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
Model : FR 602516-09  
Memo : Mode 5

	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	30.00	22.00	-18.00	40.00	33.60	19.66	0.30	31.56	---	---	Peak
2	37.83	21.30	-18.70	40.00	38.19	14.56	0.30	31.75	---	---	Peak
3	99.39	19.08	-24.42	43.50	39.63	10.99	0.50	32.04	---	---	Peak
4	386.80	28.75	-17.25	46.00	44.32	15.44	0.83	31.84	100	197	Peak
5	432.30	27.85	-18.15	46.00	42.70	16.31	0.83	31.99	---	---	Peak
6	831.30	28.02	-17.98	46.00	39.10	20.04	1.20	32.32	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

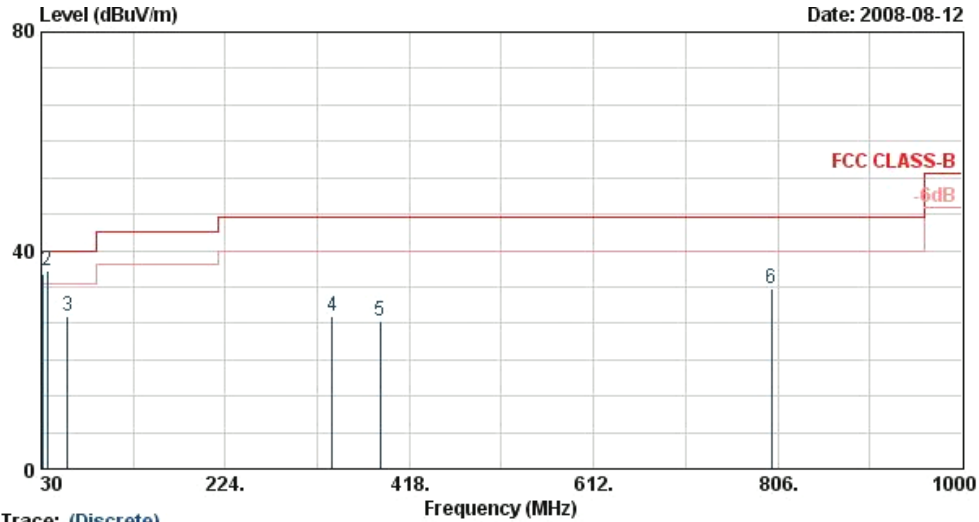
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 5

	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	2380.00	44.47	-29.53	74.00	44.40	31.83	3.92	35.68	100	0	Peak
2	2380.00	31.72	-22.28	54.00	31.64	31.83	3.92	35.68	100	38	Average
3 X	2437.00	103.53			103.30	31.93	3.99	35.69	100	0	Peak
4 X	2437.00	87.36			87.13	31.93	3.99	35.69	100	38	Average
5	2486.00	44.84	-29.16	74.00	44.51	31.98	4.05	35.70	100	0	Peak
6	2486.00	31.66	-22.34	54.00	31.33	31.98	4.05	35.70	100	38	Average
7	7317.00	53.03	-20.97	74.00	46.29	35.67	7.20	36.13	100	0	Peak
8	7317.00	41.90	-12.10	54.00	35.16	35.67	7.20	36.13	100	134	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.



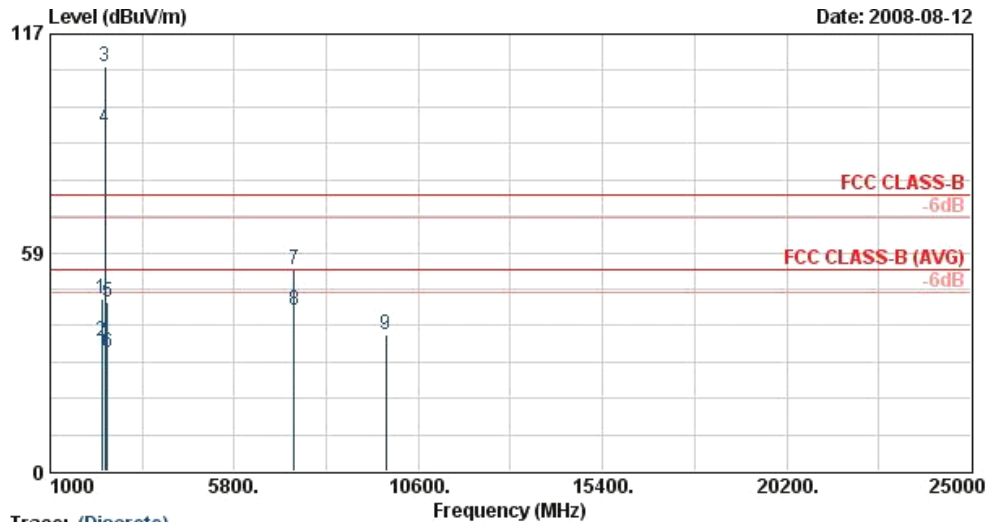
Trace: (Discrete)

Site : 03CH06-HY  
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
Model : FR 602516-09  
Memo : Mode 5

	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 !	31.08	35.77	-4.23	40.00	48.13	18.95	0.30	31.61	---	---	Peak
2 !	36.48	36.35	-3.65	40.00	52.74	15.08	0.30	31.77	100	136	Peak
3	57.54	27.85	-12.15	40.00	52.35	7.06	0.40	31.96	---	---	Peak
4	336.40	28.02	-17.98	46.00	44.88	14.15	0.80	31.81	---	---	Peak
5	386.80	27.12	-18.88	46.00	42.69	15.44	0.83	31.84	---	---	Peak
6	799.80	32.93	-13.07	46.00	44.09	19.82	1.20	32.18	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



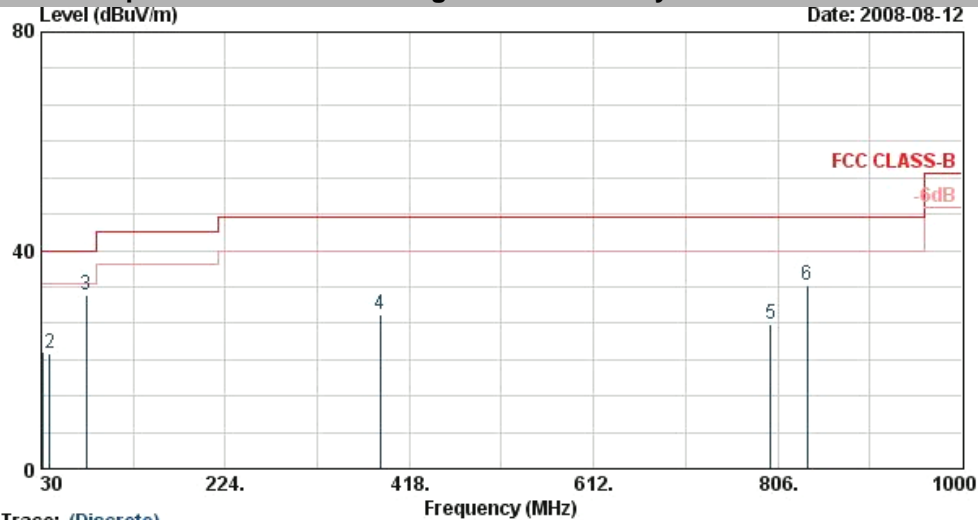
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 5

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2334.00	46.27	-27.73	74.00	46.32	31.76	3.86	35.67	100	0	Peak
2	2334.00	35.01	-18.99	54.00	35.06	31.76	3.86	35.67	105	319	Average
3 X	2437.00	108.28			108.08	31.90	3.99	35.69	100	0	Peak
4 @	2437.00	91.62			91.39	31.93	3.99	35.69	105	319	Average
5	2500.00	45.17	-28.83	74.00	44.82	32.00	4.05	35.70	100	0	Peak
6	2500.00	31.70	-22.30	54.00	31.35	32.00	4.05	35.70	105	319	Average
7	7362.00	54.07	-19.93	74.00	47.34	35.66	7.22	36.14	100	0	Peak
8	7362.00	42.94	-11.06	54.00	36.21	35.66	7.22	36.14	100	281	Average
9	9747.00	36.45	-37.55	74.00	75.07	-9.85	7.98	36.75	100	0	Peak

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.



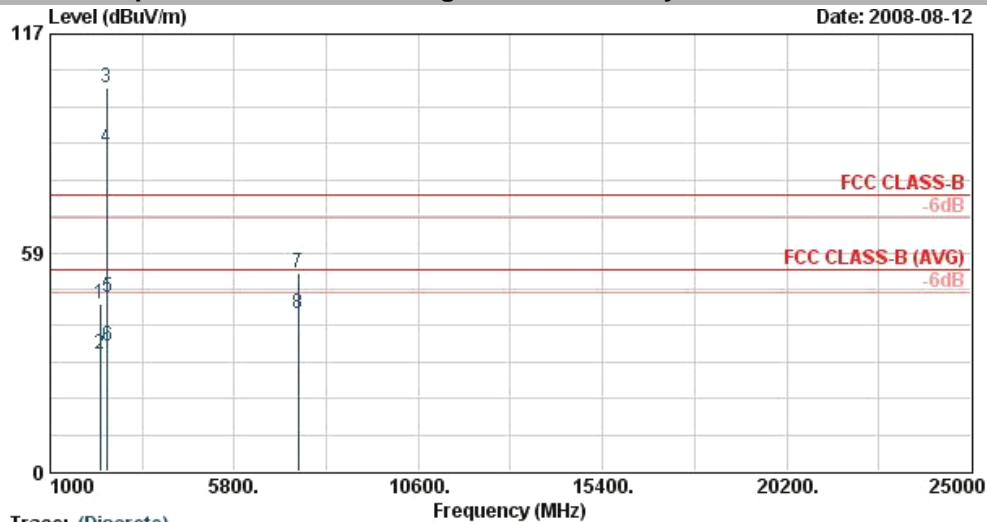
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 6

	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	21.47	-18.53	40.00	33.83	18.95	0.30	31.61	---	---	Peak
2	38.64	21.16	-18.84	40.00	38.54	14.03	0.30	31.72	---	---	Peak
3	77.79	31.82	-8.18	40.00	55.94	7.35	0.45	31.92	100	292	Peak
4	386.80	28.23	-17.77	46.00	43.80	15.44	0.83	31.84	---	---	Peak
5	798.40	26.53	-19.47	46.00	37.70	19.80	1.20	32.18	---	---	Peak
6	836.90	33.64	-12.36	46.00	44.70	20.08	1.20	32.34	---	---	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 6

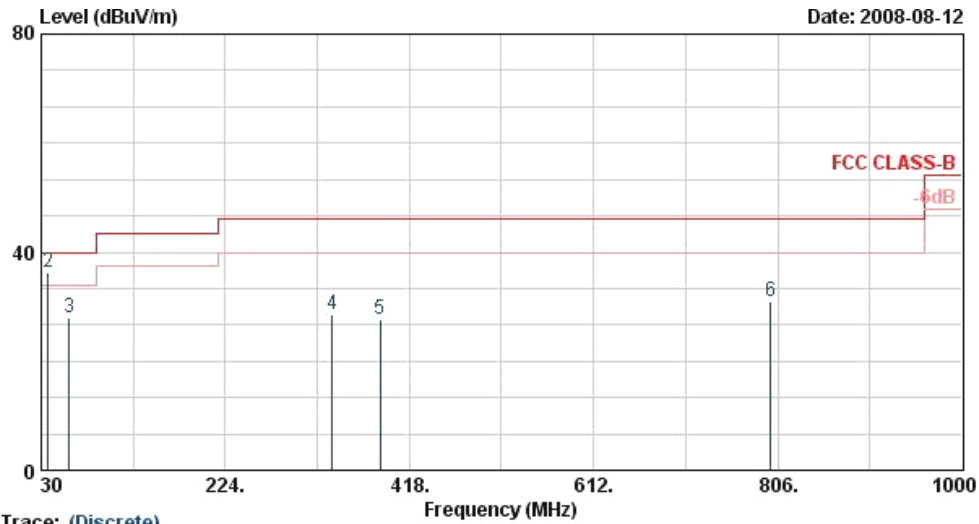
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2310.00	44.74	-29.26	74.00	44.84	31.73	3.82	35.66	100	0	Peak
2	2310.00	31.31	-22.69	54.00	31.41	31.73	3.82	35.66	100	46	Average
3 X	2462.00	102.66			102.38	31.95	4.02	35.69	100	0	Peak
4 X	2462.00	86.65			86.37	31.95	4.02	35.69	100	46	Average
5	2483.66	46.60	-27.40	74.00	46.27	31.98	4.05	35.70	100	0	Peak
6	2483.66	33.47	-20.53	54.00	33.14	31.98	4.05	35.70	100	46	Average
7	7461.00	53.26	-20.74	74.00	46.58	35.61	7.25	36.18	100	0	Peak
8	7461.00	42.11	-11.89	54.00	35.42	35.61	7.25	36.18	100	172	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.



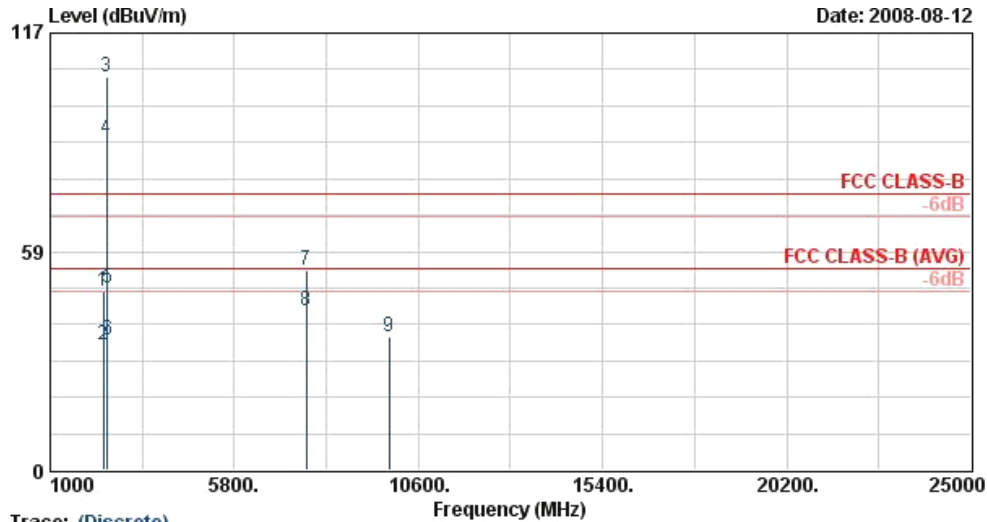
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 6

	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 !	30.54	35.81	-4.19	40.00	48.17	18.95	0.30	31.61	---	---	Peak
2 !	37.29	36.33	-3.67	40.00	53.22	14.56	0.30	31.75	100	197	Peak
3	59.43	27.88	-12.12	40.00	52.73	6.77	0.40	32.02	---	---	Peak
4	336.40	28.67	-17.33	46.00	45.53	14.15	0.80	31.81	---	---	Peak
5	386.80	27.66	-18.34	46.00	43.23	15.44	0.83	31.84	---	---	Peak
6	798.40	30.98	-15.02	46.00	42.15	19.80	1.20	32.18	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



Trace: (Discrete)

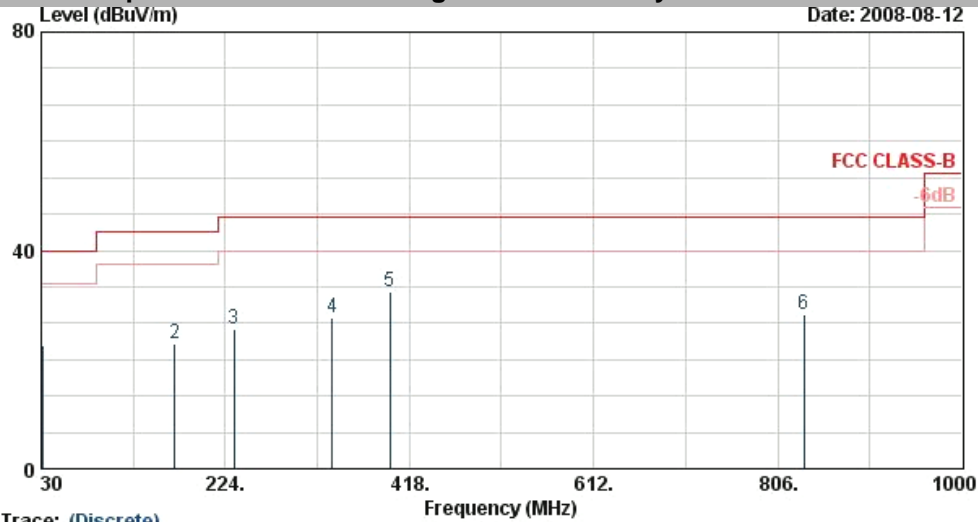
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2390.00	47.82	-26.18	74.00	47.72	31.86	3.92	35.68	100	0	Peak
2	2390.00	33.42	-20.58	54.00	33.32	31.86	3.92	35.68	100	326	Average
3 X	2462.00	105.32			105.04	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	88.86			88.58	31.95	4.02	35.69	100	326	Average
5	2483.50	48.78	-25.22	74.00	48.45	31.98	4.05	35.70	100	0	Peak
6	2483.50	34.63	-19.37	54.00	34.30	31.98	4.05	35.70	100	326	Average
7	7686.00	53.69	-20.31	74.00	46.93	35.64	7.37	36.24	100	0	Peak
8	7686.00	42.58	-11.42	54.00	35.81	35.64	7.37	36.24	100	226	Average
9	9846.00	35.71	-38.29	74.00	74.08	-9.63	8.04	36.77	100	0	Peak

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 4
- 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.**



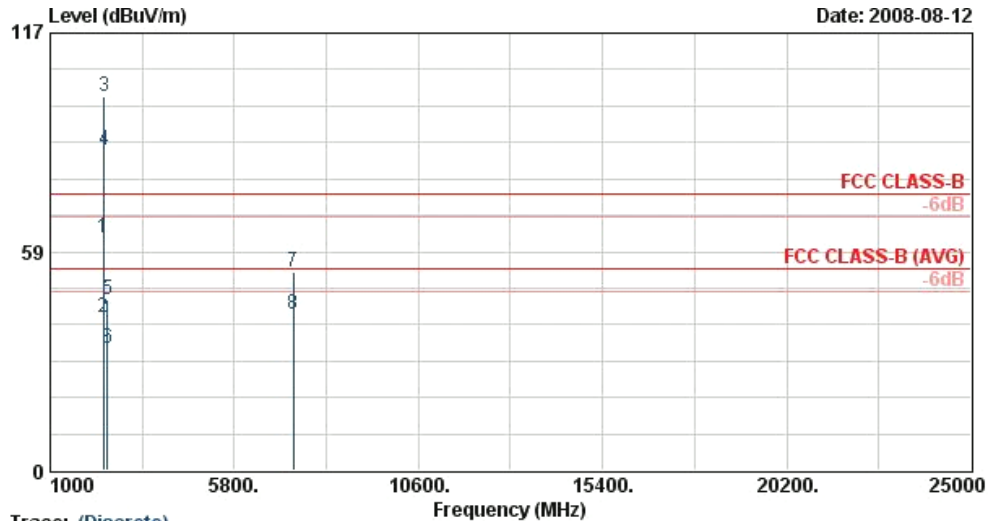
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 7

	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	22.64	-17.36	40.00	35.00	18.95	0.30	31.61	---	---	Peak
2	170.94	22.97	-20.53	43.50	44.38	9.90	0.60	31.91	---	---	Peak
3	233.04	25.55	-20.45	46.00	45.57	11.24	0.70	31.97	---	---	Peak
4	336.40	27.67	-18.33	46.00	44.53	14.15	0.80	31.81	---	---	Peak
5	397.30	32.42	-13.58	46.00	47.71	15.71	0.88	31.88	100	264	Peak
6	833.40	28.39	-17.61	46.00	39.46	20.05	1.20	32.33	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

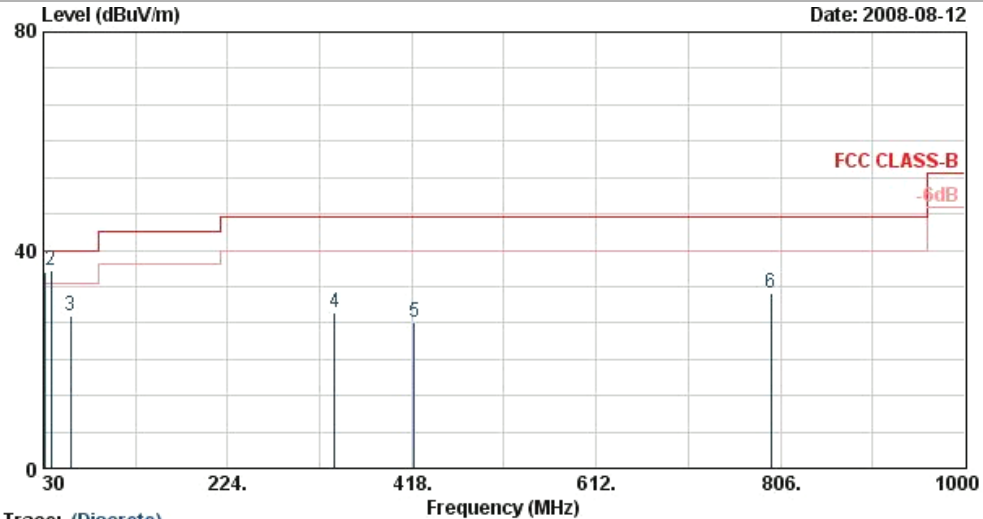
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 7

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2389.99	62.13	-11.87	74.00	62.03	31.86	3.92	35.68	100	0	Peak
2	2389.99	40.94	-13.06	54.00	40.84	31.86	3.92	35.68	100	39	Average
3 X	2412.00	100.07			99.90	31.90	3.95	35.69	100	0	Peak
4 X	2412.00	85.76			85.61	31.88	3.95	35.68	100	39	Average
5	2494.00	45.53	-28.47	74.00	45.18	32.00	4.05	35.70	100	0	Peak
6	2494.00	32.75	-21.25	54.00	32.40	32.00	4.05	35.70	100	39	Average
7	7341.00	53.02	-20.98	74.00	46.29	35.66	7.21	36.14	100	0	Peak
8	7341.00	41.85	-12.15	54.00	35.12	35.66	7.21	36.14	100	291	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.

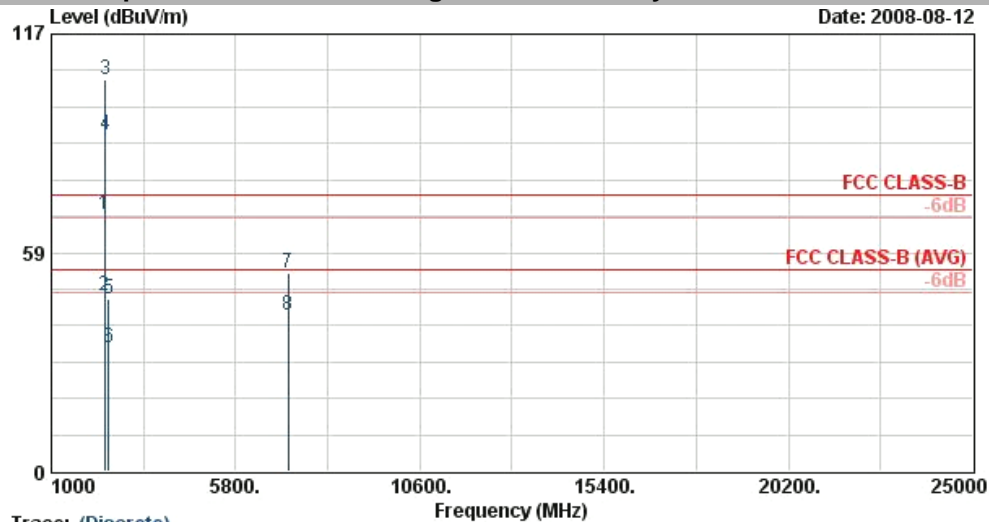


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 7

	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	35.96	-4.04	40.00	48.32	18.95	0.30	31.61	---	---	Peak
2 !	37.83	36.26	-3.74	40.00	53.15	14.56	0.30	31.75	100	125	Peak
3	58.89	27.95	-12.05	40.00	52.80	6.77	0.40	32.02	---	---	Peak
4	336.40	28.69	-17.31	46.00	45.56	14.15	0.80	31.81	---	---	Peak
5	420.40	26.86	-19.14	46.00	41.92	16.10	0.80	31.95	---	---	Peak
6	796.30	32.26	-13.74	46.00	43.45	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.



Trace: (Discrete)

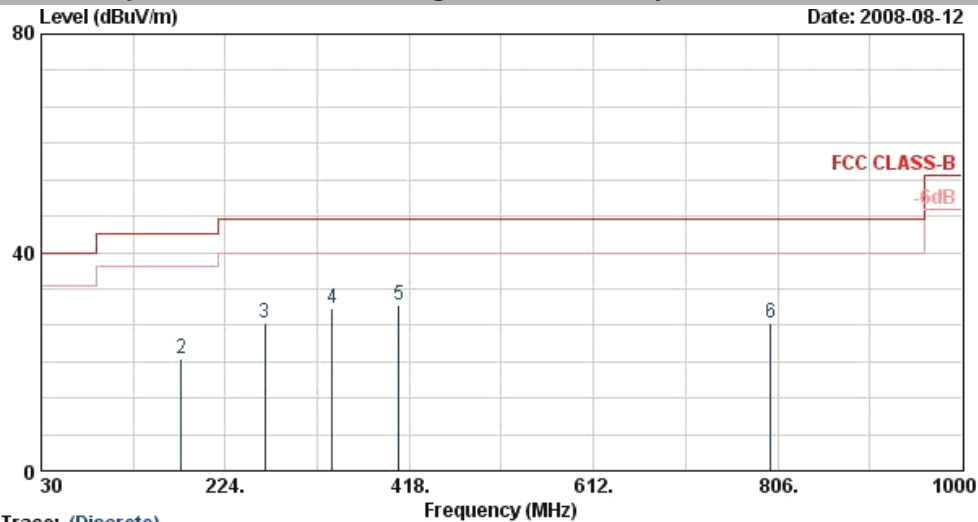
Site : 03CH06-HY  
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
Model : FR 602516-09  
Memo : Mode 7

	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 !	2389.99	68.90	-5.10	74.00	68.80	31.86	3.92	35.68	100	0	Peak
2	2389.99	47.05	-6.95	54.00	46.95	31.86	3.92	35.68	100	320	Average
3 X	2412.00	104.77			104.62	31.88	3.95	35.68	100	0	Peak
4 @	2412.00	89.90			89.75	31.88	3.95	35.68	100	320	Average
5	2486.00	46.29	-27.71	74.00	45.96	31.98	4.05	35.70	100	0	Peak
6	2486.00	33.03	-20.97	54.00	32.70	31.98	4.05	35.70	100	320	Average
7	7176.00	53.04	-20.96	74.00	46.23	35.73	7.15	36.07	100	0	Peak
8	7176.00	41.93	-12.07	54.00	35.12	35.73	7.15	36.07	100	73	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 5
- 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.**



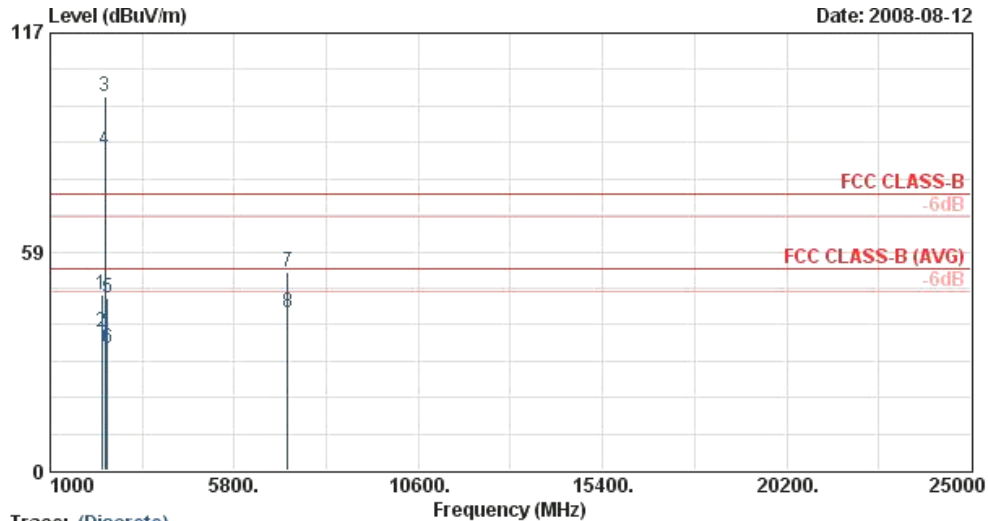
Trace: (Discrete)  
 Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 8

	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	30.00	21.29	-18.71	40.00	32.89	19.66	0.30	31.56	---	---	Peak
2	177.69	20.64	-22.86	43.50	42.44	9.63	0.60	32.04	---	---	Peak
3	265.98	27.16	-18.84	46.00	45.80	12.56	0.70	31.90	---	---	Peak
4	336.40	29.61	-16.39	46.00	46.47	14.15	0.80	31.81	---	---	Peak
5	406.40	30.32	-15.68	46.00	45.45	15.87	0.90	31.91	100	295	Peak
6	798.40	27.20	-18.80	46.00	38.37	19.80	1.20	32.18	---	---	Peak

Remark: #3 and #4 are Fundamental Signal.

- 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 8

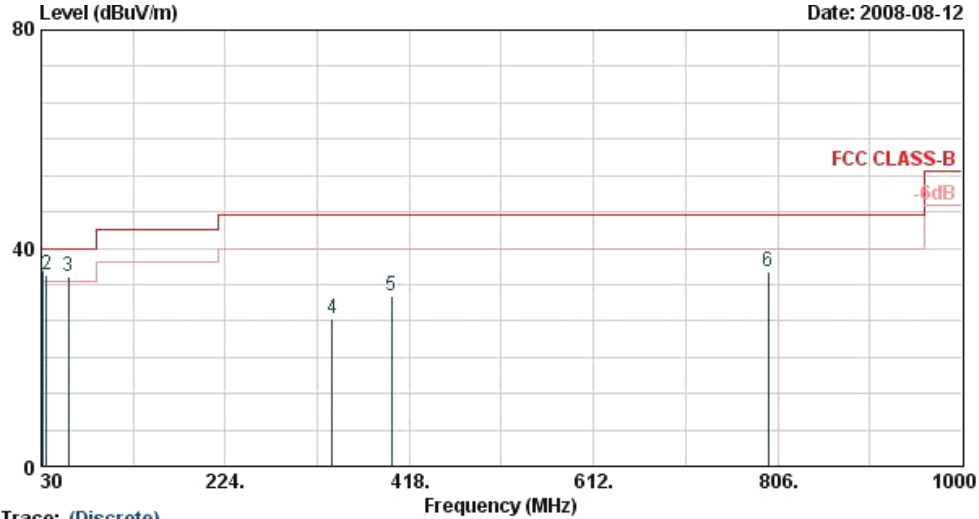
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2334.00	47.17	-26.83	74.00	47.22	31.76	3.86	35.67	100	0	Peak
2	2334.00	37.08	-16.92	54.00	37.13	31.76	3.86	35.67	100	38	Average
3 @	2437.00	100.25			100.04	31.90	3.99	35.69	100	0	Peak
4 @	2437.00	85.79			85.56	31.93	3.99	35.69	100	38	Average
5	2484.00	46.23	-27.77	74.00	45.90	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.78	-21.22	54.00	32.45	31.98	4.05	35.70	100	38	Average
7	7191.00	53.22	-20.78	74.00	46.41	35.72	7.16	36.08	100	0	Peak
8 @	7191.00	42.11	-11.89	54.00	35.31	35.72	7.16	36.08	100	117	Average

Remark: #3 and #4 are Fundamental Signals.



- Polarization : Vertivcal (30MHz-1GHz)

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



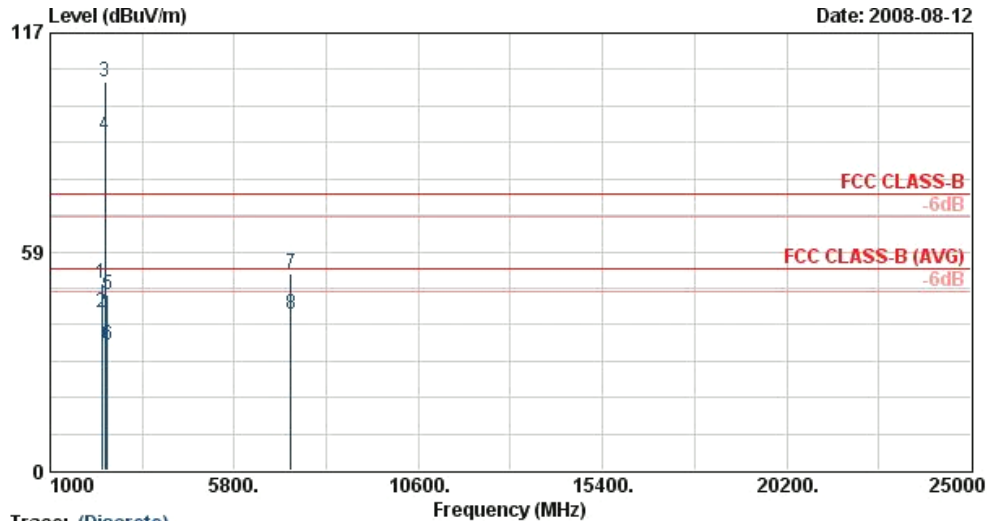
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 8

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	31.08	36.11	-3.89	40.00	48.47	18.95	0.30	31.61	100	132	Peak
2 @	35.94	35.20	-4.80	40.00	51.09	15.61	0.30	31.80	---	---	Peak
3 @	58.89	34.81	-5.19	40.00	59.66	6.77	0.40	32.02	---	---	Peak
4	336.40	27.17	-18.83	46.00	44.04	14.15	0.80	31.81	---	---	Peak
5	399.40	31.19	-14.81	46.00	46.42	15.76	0.90	31.89	---	---	Peak
6 @	796.30	35.75	-10.25	46.00	46.94	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.



Trace: (Discrete)

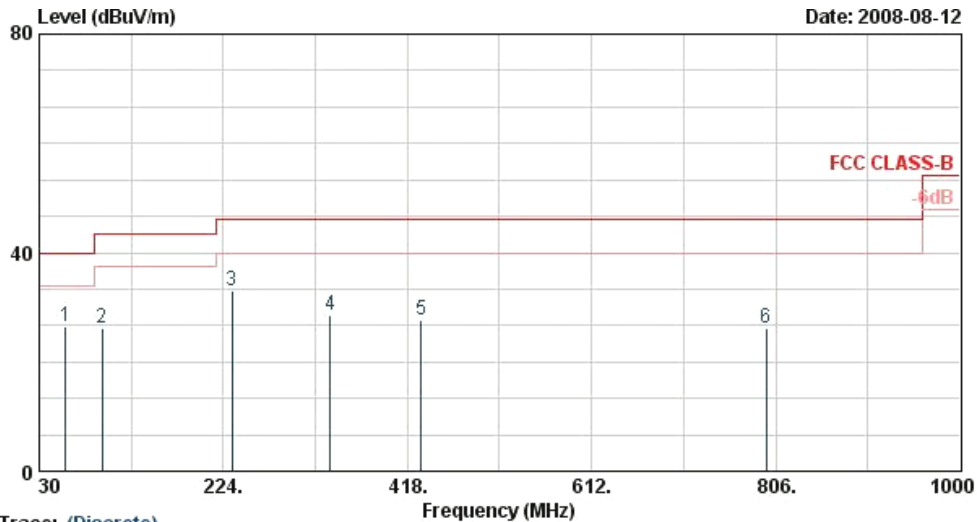
Site : 03CH06-HY  
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
Model : FR 602516-09  
Memo : Mode 8

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2334.00	50.08	-23.92	74.00	50.13	31.76	3.86	35.67	100	0	Peak
2 @	2334.00	42.38	-11.62	54.00	42.43	31.76	3.86	35.67	100	327	Average
3 @	2437.00	103.88			103.66	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	89.45			89.22	31.93	3.99	35.69	100	327	Average
5	2484.00	46.99	-27.01	74.00	46.66	31.98	4.05	35.70	100	0	Peak
6	2484.00	33.65	-20.35	54.00	33.32	31.98	4.05	35.70	100	327	Average
7	7281.00	52.82	-21.18	74.00	46.04	35.69	7.19	36.11	100	0	Peak
8 @	7281.00	41.81	-12.19	54.00	35.04	35.69	7.19	36.11	100	262	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 6
- 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.**



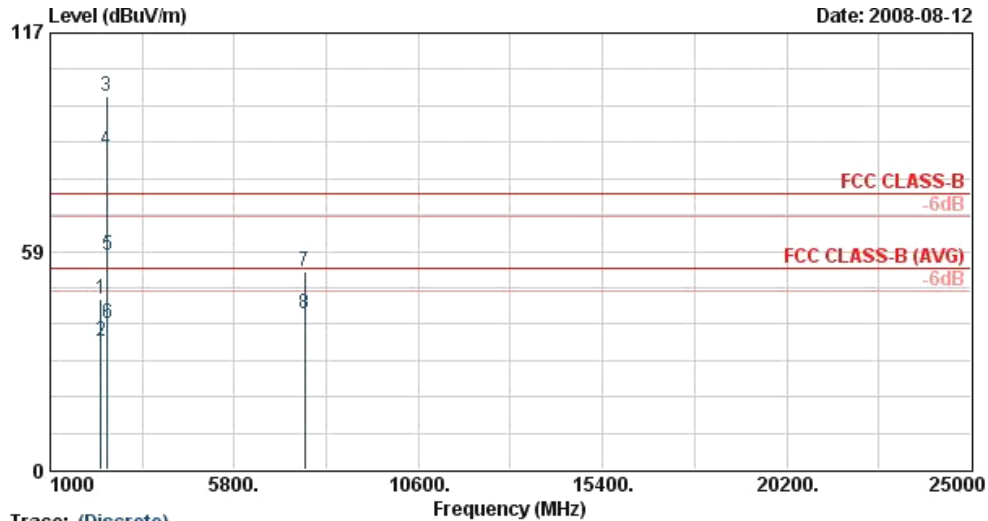
Trace: (Discrete)

Site : 03CH06-HY  
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
Model : FR 602516-09  
Memo : Mode 9

	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	58.08	26.56	-13.44	40.00	51.23	6.91	0.40	31.99	---	---	Peak
2	95.88	26.13	-17.37	43.50	47.48	10.21	0.50	32.06	---	---	Peak
3 @	233.04	32.89	-13.11	46.00	52.91	11.24	0.70	31.97	100	241	Peak
4	336.40	28.49	-17.51	46.00	45.35	14.15	0.80	31.81	---	---	Peak
5	432.30	27.60	-18.40	46.00	42.46	16.31	0.83	31.99	---	---	Peak
6	796.30	26.22	-19.78	46.00	37.40	19.78	1.20	32.17	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

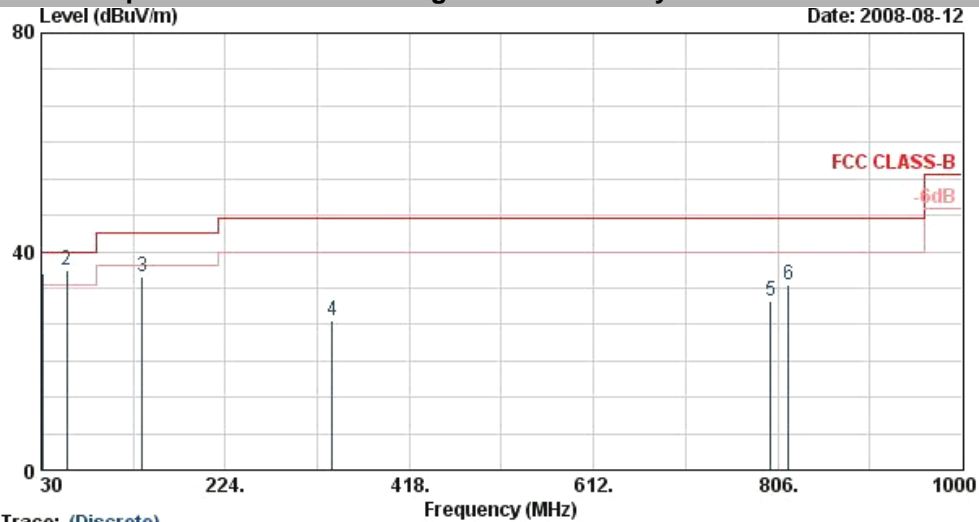
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 9

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2318.00	45.67	-28.33	74.00	45.76	31.76	3.82	35.67	100	0	Peak
2	2318.00	34.38	-19.62	54.00	34.46	31.76	3.82	35.67	100	47	Average
3 @	2462.00	100.03			99.75	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	85.69			85.41	31.95	4.02	35.69	100	47	Average
5	2484.61	57.34	-16.66	74.00	57.01	31.98	4.05	35.70	100	0	Peak
6	2484.61	39.25	-14.75	54.00	38.92	31.98	4.05	35.70	100	47	Average
7	7626.00	53.11	-20.89	74.00	46.38	35.63	7.33	36.23	100	0	Peak
8 @	7626.00	41.94	-12.06	54.00	35.21	35.63	7.33	36.23	100	196	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.

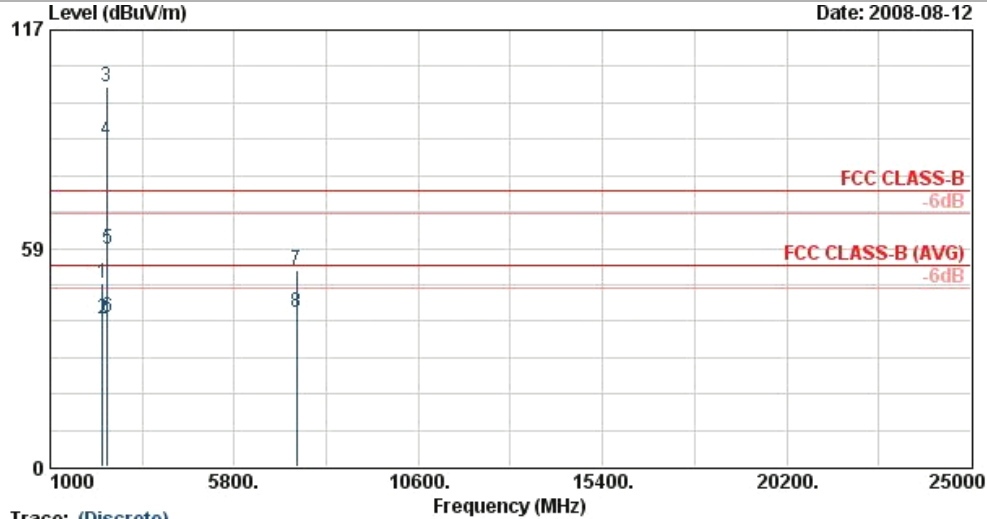


Trace: (Discrete)  
 Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 9

	Freq	Level	Over Limit	Limit Line	Read 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	35.87	-4.13	40.00	48.23	18.95	0.30	31.61	---	---	Peak
2 @	57.00	36.43	-3.57	40.00	60.93	7.06	0.40	31.96	100	215	Peak
3 @	136.38	35.31	-8.19	43.50	55.79	10.73	0.50	31.72	---	---	Peak
4	336.40	27.49	-18.51	46.00	44.35	14.15	0.80	31.81	---	---	Peak
5	798.40	30.89	-15.11	46.00	42.06	19.80	1.20	32.18	---	---	Peak
6 @	817.30	33.92	-12.08	46.00	45.03	19.94	1.20	32.26	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



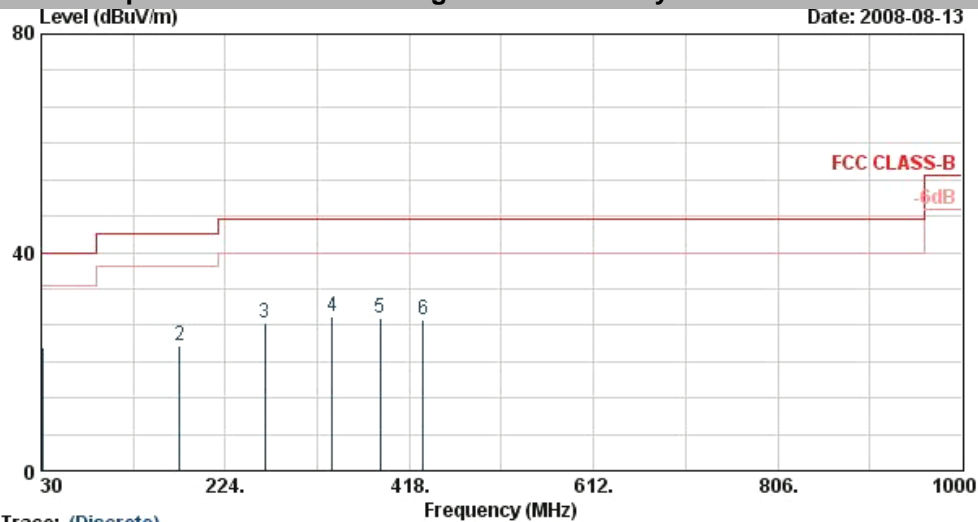
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 9

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2358.00	49.20	-24.80	74.00	49.18	31.81	3.89	35.67	100	0	Peak
2	2358.00	39.48	-14.52	54.00	39.46	31.81	3.89	35.67	100	326	Average
3 @	2462.00	101.93			101.65	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	87.45			87.17	31.95	4.02	35.69	100	326	Average
5	2483.50	58.36	-15.64	74.00	58.03	31.98	4.05	35.70	100	0	Peak
6	2483.50	40.20	-13.80	54.00	39.87	31.98	4.05	35.70	100	326	Average
7	7416.00	52.50	-21.50	74.00	45.80	35.63	7.24	36.17	100	0	Peak
8 @	7416.00	41.42	-12.58	54.00	34.72	35.63	7.24	36.17	100	192	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 7
- 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.**



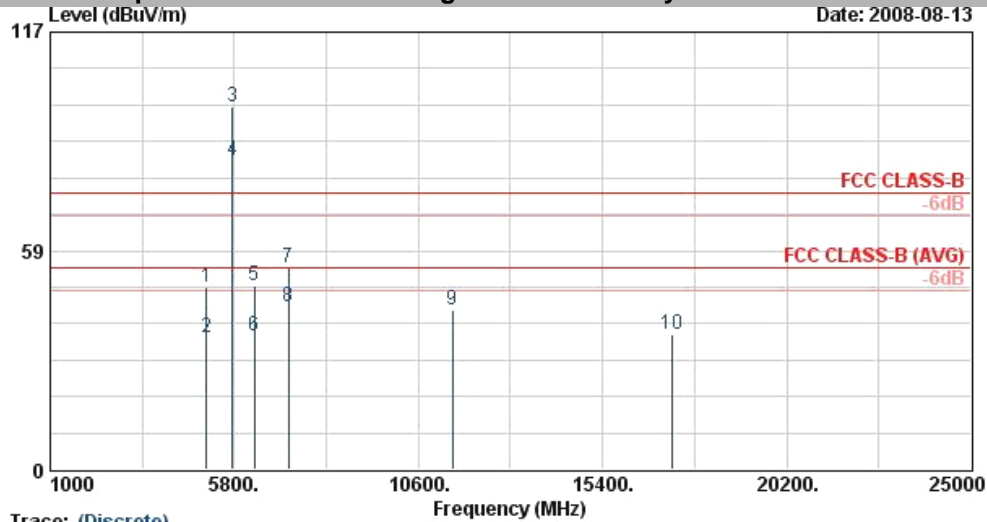
Trace: (Discrete)

Site : 03CH06-HY  
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
Model : FR 602516-09  
Memo : Mode 10

	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	22.48	-17.52	40.00	34.84	18.95	0.30	31.61	100	183	Peak
2	175.53	22.91	-20.59	43.50	44.55	9.76	0.60	32.00	---	---	Peak
3	265.98	27.02	-18.98	46.00	45.66	12.56	0.70	31.90	---	---	Peak
4	336.40	28.22	-17.78	46.00	45.08	14.15	0.80	31.81	---	---	Peak
5	386.80	27.82	-18.18	46.00	43.39	15.44	0.83	31.84	---	---	Peak
6	432.30	27.57	-18.43	46.00	42.42	16.31	0.83	31.99	---	---	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 10

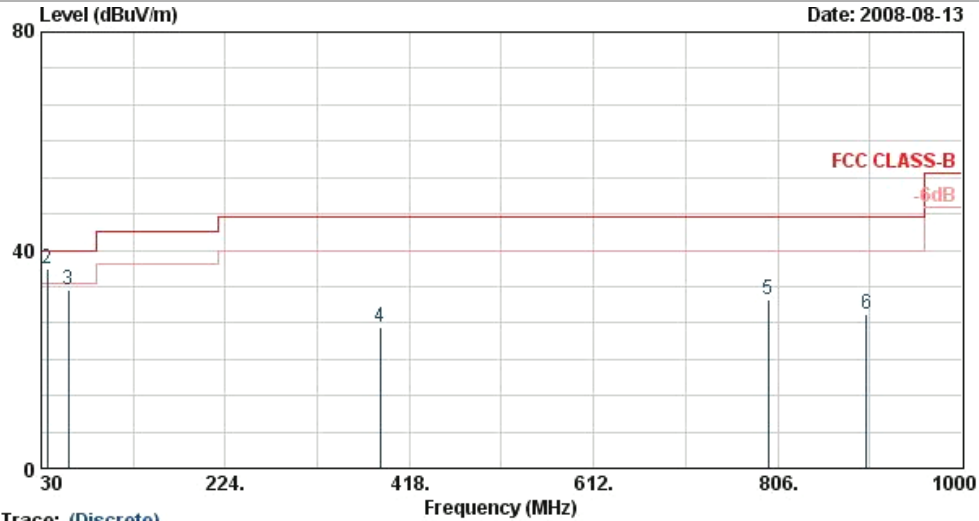
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	5068.00	48.77	-25.23	74.00	44.17	34.28	5.94	35.62	100	0 Peak
2	5068.00	35.22	-18.78	54.00	30.61	34.28	5.94	35.62	175	131 Average
3 X	5745.00	96.83			91.12	35.04	6.42	35.75	100	0 Peak
4 X	5745.00	82.73			77.02	35.04	6.42	35.75	175	131 Average
5	6326.00	48.94	-25.06	74.00	42.54	35.49	6.78	35.87	100	0 Peak
6	6326.00	35.50	-18.50	54.00	29.10	35.49	6.78	35.87	175	131 Average
7	7208.00	53.87	-20.13	74.00	47.06	35.72	7.17	36.08	100	0 Peak
8	7208.00	43.34	-10.66	54.00	36.54	35.72	7.17	36.08	100	291 Average
9	11487.00	42.54	-31.46	74.00	81.79	-11.73	8.77	36.29	100	0 Peak
10	17232.00	36.12	-37.88	74.00	72.57	-11.07	10.42	35.80	100	0 Peak

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.



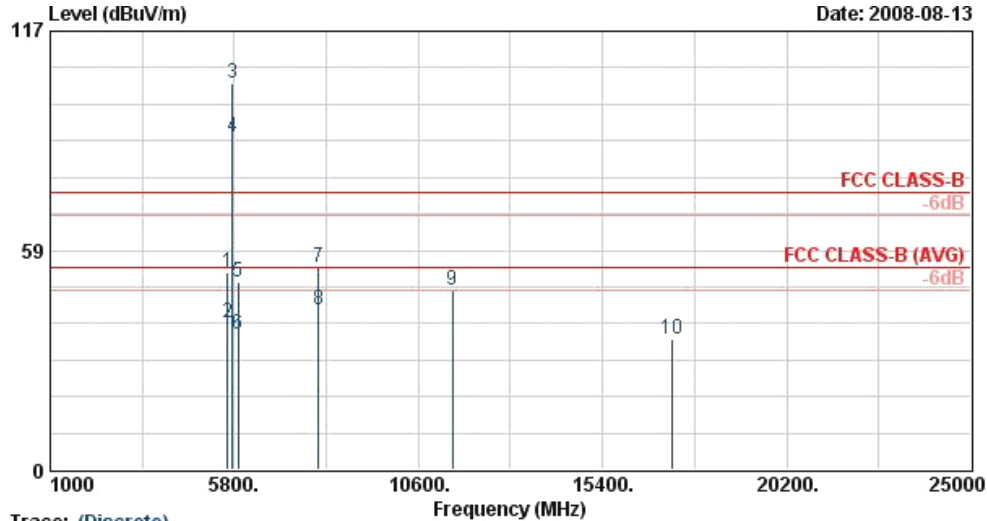
Trace: (Discrete)

Site : 03CH06-RY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 10

	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 !	30.54	36.24	-3.76	40.00	48.60	18.95	0.30	31.61	---	---	Peak
2 !	36.48	36.51	-3.49	40.00	52.90	15.08	0.30	31.77	100	78	QP
3	58.89	32.84	-7.16	40.00	57.70	6.77	0.40	32.02	---	---	Peak
4	386.80	26.02	-19.98	46.00	41.59	15.44	0.83	31.84	---	---	Peak
5	796.30	31.07	-14.93	46.00	42.26	19.78	1.20	32.17	---	---	Peak
6	899.90	28.34	-17.66	46.00	38.18	20.53	1.30	31.67	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



Trace: (Discrete)

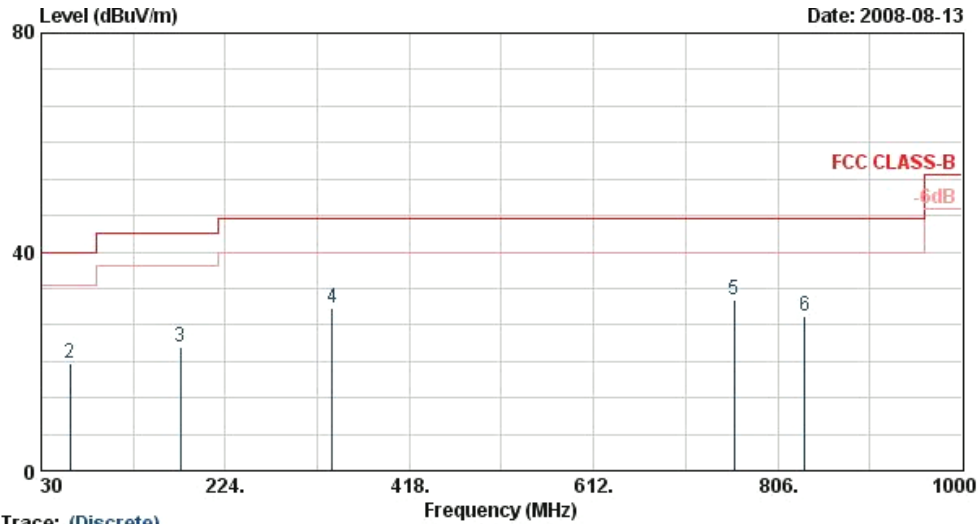
Site : 03CH06-HY  
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
Model : FR 602516-09  
Memo : Mode 10

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	5628.00	52.63	-21.37	74.00	47.13	34.92	6.31	35.73	100	0 Peak
2	5628.00	39.25	-14.75	54.00	33.75	34.92	6.31	35.73	109	297 Average
3 X	5745.00	103.09			97.38	35.04	6.42	35.75	100	0 Peak
4 @	5745.00	88.61			82.90	35.04	6.42	35.75	109	297 Average
5	5900.00	50.00	-24.00	74.00	44.03	35.20	6.56	35.78	100	0 Peak
6	5900.00	35.97	-18.03	54.00	30.00	35.20	6.56	35.78	109	297 Average
7	7998.00	53.80	-20.20	74.00	46.88	35.70	7.52	36.30	100	0 Peak
8	7998.00	42.64	-11.37	54.00	35.71	35.70	7.52	36.30	100	115 Average
9	11487.00	47.86	-26.14	74.00	87.10	-11.73	8.77	36.29	100	0 Peak
10	17232.00	34.78	-39.22	74.00	71.23	-11.07	10.42	35.80	100	0 Peak

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 8
- 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.**

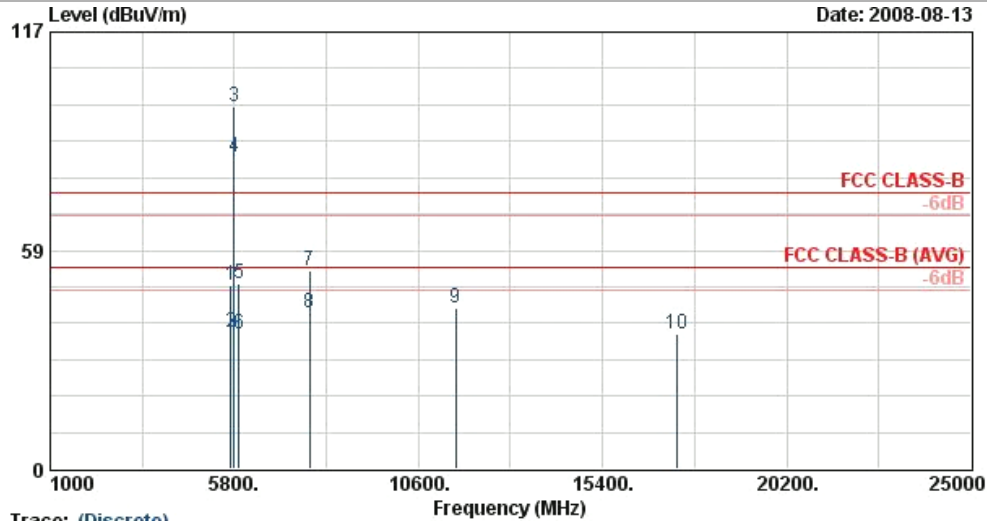


Trace: (Discrete)  
 Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 11

	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	30.00	22.84	-17.16	40.00	34.44	19.66	0.30	31.56	---	---	Peak
2	60.78	19.71	-20.29	40.00	44.69	6.65	0.40	32.03	---	---	Peak
3	176.88	22.71	-20.79	43.50	44.43	9.69	0.60	32.02	---	---	Peak
4	336.40	29.61	-16.39	46.00	46.48	14.15	0.80	31.81	---	---	Peak
5	759.90	31.23	-14.77	46.00	42.77	19.44	1.10	32.08	100	282	Peak
6	834.80	28.37	-17.63	46.00	39.43	20.07	1.20	32.34	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

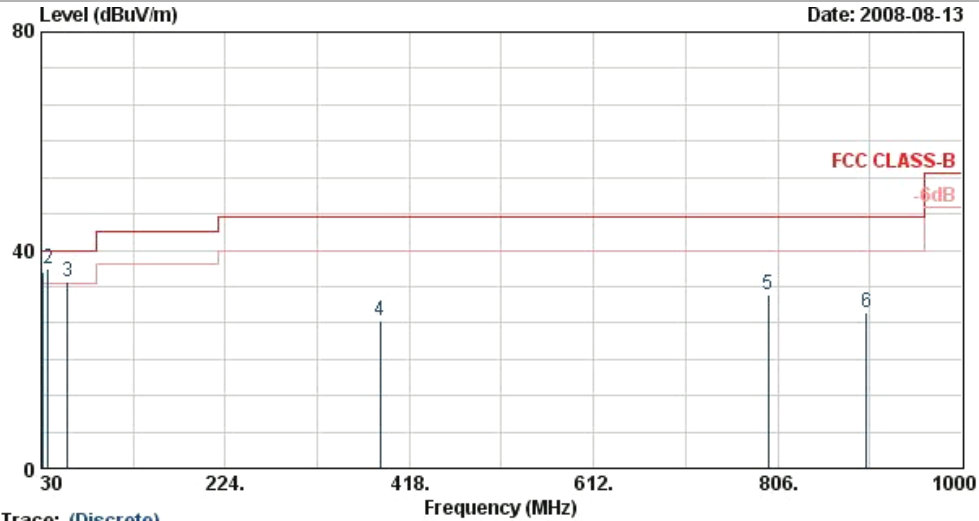
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode II

	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	5700.00	49.04	-24.96	74.00	43.42	34.99	6.37	35.74	100	0	Peak
2	5700.00	36.50	-17.50	54.00	30.88	34.99	6.37	35.74	167	130	Average
3 X	5785.00	96.91			91.11	35.09	6.47	35.76	100	0	Peak
4 X	5785.00	83.49			77.73	35.08	6.44	35.76	167	130	Average
5	5918.00	49.62	-24.38	74.00	43.61	35.21	6.58	35.79	100	0	Peak
6	5918.00	36.29	-17.71	54.00	30.28	35.21	6.58	35.79	167	130	Average
7	7768.00	53.06	-20.94	74.00	46.26	35.65	7.40	36.25	100	0	Peak
8	7768.00	41.92	-12.08	54.00	35.12	35.65	7.40	36.25	100	104	Average
9	11571.00	43.27	-30.73	74.00	82.24	-11.49	8.82	36.30	100	0	Peak
10	17352.00	36.18	-37.82	74.00	73.42	-11.57	10.13	35.80	100	0	Peak

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.



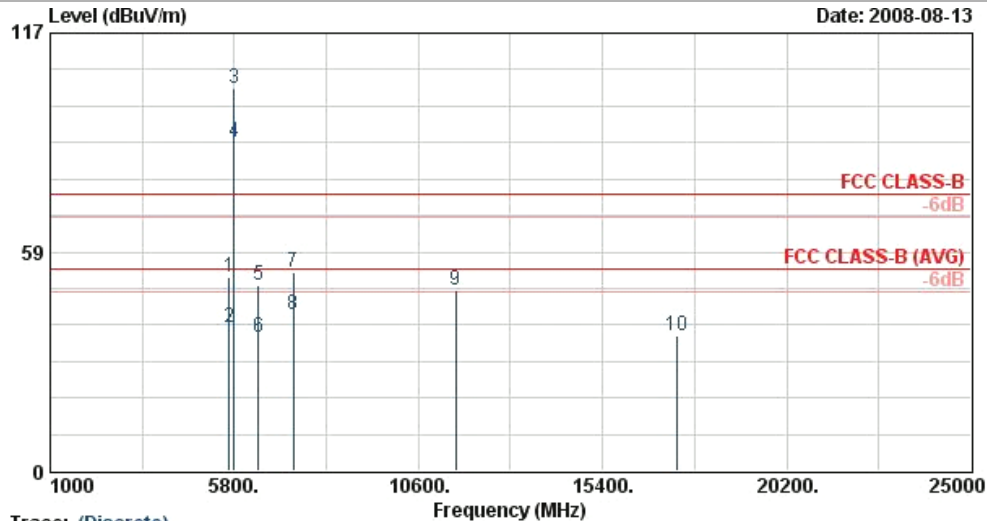
Trace: (Discrete)

Site : 03CH06-RY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 11

	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	36.13	-3.87	40.00	48.49	18.95	0.30	31.61	---	---	Peak
2 !	37.29	36.71	-3.29	40.00	53.60	14.56	0.30	31.75	100	38	QP
3 !	57.54	34.23	-5.77	40.00	58.74	7.06	0.40	31.96	---	---	Peak
4	386.80	27.17	-18.83	46.00	42.74	15.44	0.83	31.84	---	---	Peak
5	796.30	31.69	-14.31	46.00	42.88	19.78	1.20	32.17	---	---	Peak
6	899.90	28.54	-17.46	46.00	38.38	20.53	1.30	31.67	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



Trace: (Discrete)

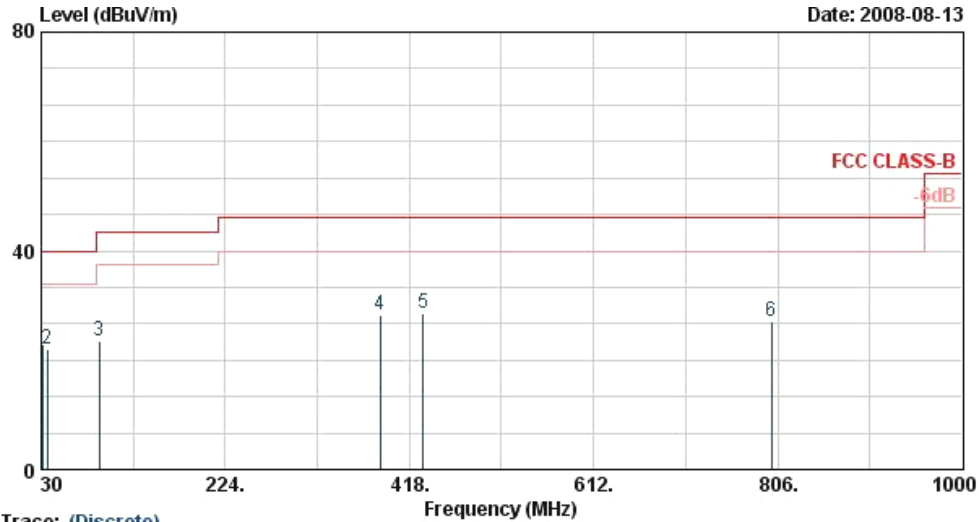
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
 Model : FR 602516-09  
 Memo : Mode II

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	5668.00	51.87	-22.13	74.00	46.31	34.97	6.33	35.74	100	0	Peak
2	5668.00	38.49	-15.51	54.00	32.92	34.97	6.33	35.74	100	287	Average
3 X	5785.00	102.17			96.41	35.08	6.44	35.76	100	0	Peak
4 @	5785.00	87.88			82.12	35.08	6.44	35.76	100	287	Average
5	6428.00	49.68	-24.32	74.00	43.20	35.55	6.81	35.89	100	0	Peak
6	6428.00	35.61	-18.39	54.00	29.13	35.55	6.81	35.89	100	287	Average
7	7348.00	52.92	-21.08	74.00	46.19	35.66	7.21	36.14	100	0	Peak
8	7348.00	41.74	-12.26	54.00	35.01	35.66	7.21	36.14	100	281	Average
9	11562.00	48.32	-25.68	74.00	87.34	-11.54	8.82	36.30	100	0	Peak
10	17352.00	36.23	-37.77	74.00	73.48	-11.57	10.13	35.80	100	0	Peak

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 9
- 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.



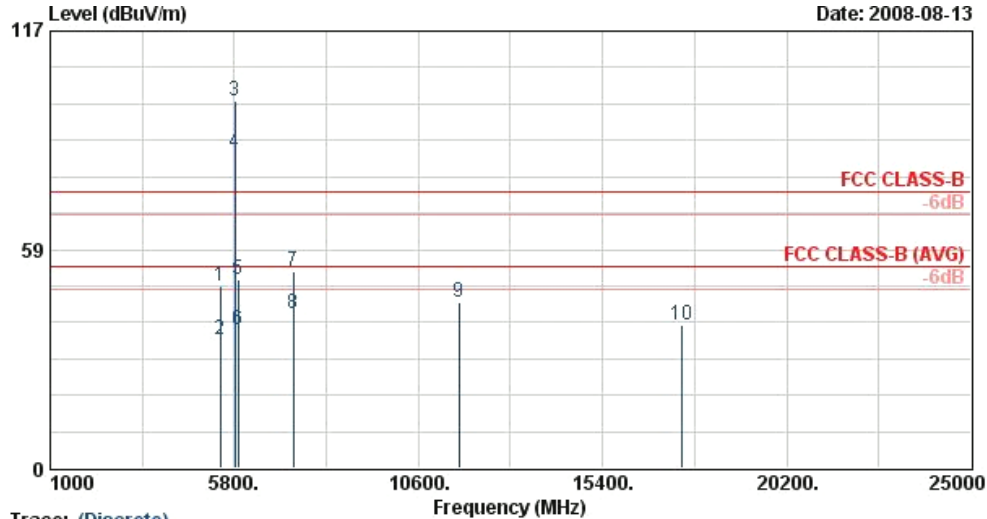
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 Model : FR 602516-09  
 Memo : Mode 12

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.08	22.87	-17.13	40.00	35.23	18.95	0.30	31.61	100	271	Peak
2	36.48	22.03	-17.97	40.00	38.42	15.08	0.30	31.77	---	---	Peak
3	91.29	23.57	-19.93	43.50	45.96	9.23	0.50	32.12	---	---	Peak
4	386.80	28.23	-17.77	46.00	43.80	15.44	0.83	31.84	---	---	Peak
5	432.30	28.46	-17.54	46.00	43.31	16.31	0.83	31.99	---	---	Peak
6	799.80	27.16	-18.84	46.00	38.32	19.82	1.20	32.18	---	---	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 12

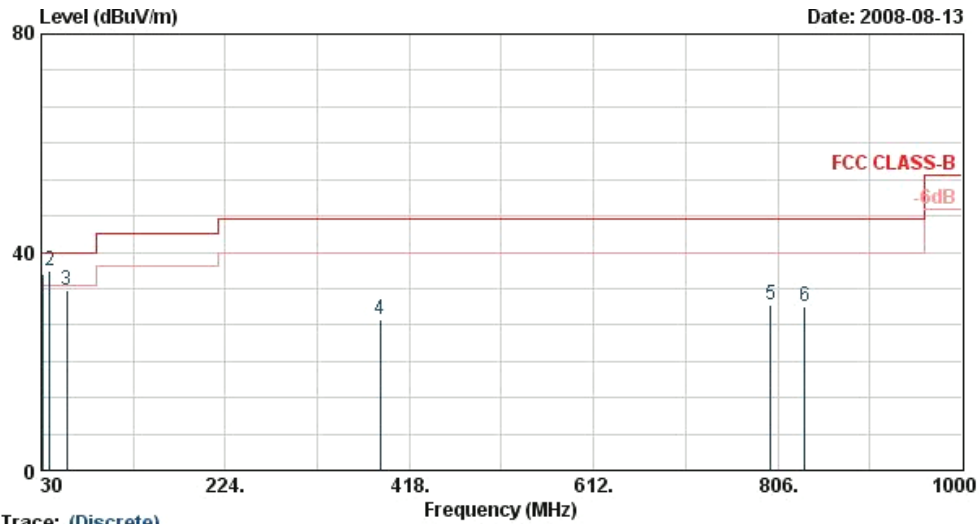
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	5430.00	48.73	-25.27	74.00	43.55	34.72	6.15	35.69	100	0	Peak
2	5430.00	34.36	-19.64	54.00	29.18	34.72	6.15	35.69	161	126	Average
3 X	5825.00	98.47			92.61	35.13	6.49	35.77	100	0	Peak
4 X	5825.00	84.44			78.59	35.13	6.49	35.77	161	126	Average
5	5900.00	50.66	-23.34	74.00	44.69	35.20	6.56	35.78	100	0	Peak
6	5900.00	36.98	-17.02	54.00	31.01	35.20	6.56	35.78	161	126	Average
7	7344.00	52.56	-21.44	74.00	45.83	35.66	7.21	36.14	100	0	Peak
8	7344.00	41.48	-12.52	54.00	34.75	35.66	7.21	36.14	100	125	Average
9	11652.00	44.15	-29.85	74.00	82.68	-11.14	8.92	36.30	100	0	Peak
10	17472.00	38.28	-35.72	74.00	76.32	-12.07	9.84	35.80	100	0	Peak

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.



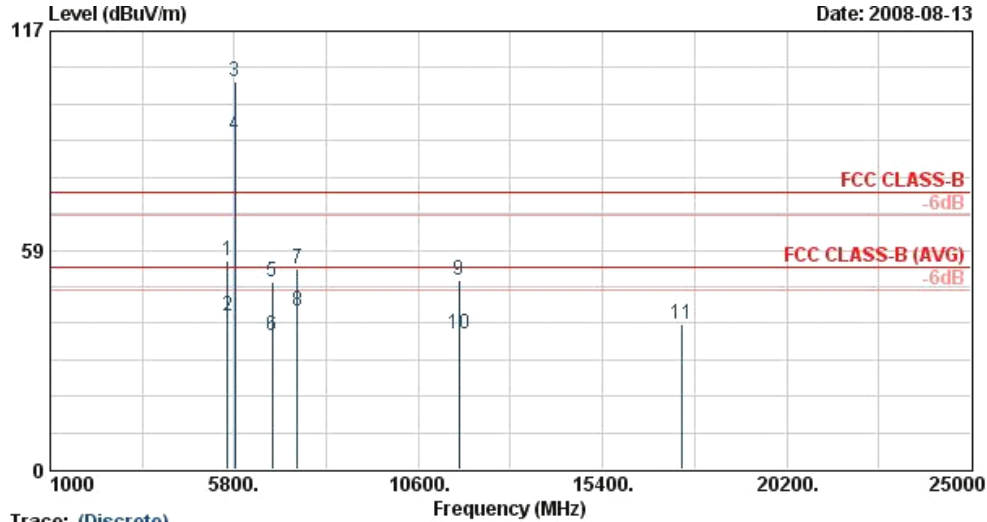
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Model : FR 602516-09  
 Memo : Mode 12

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	31.08	36.02	-3.98	40.00	48.38	18.95	0.30	31.61	---	---	Peak
2 !	38.64	36.56	-3.44	40.00	53.94	14.03	0.30	31.72	100	146	QP
3	56.73	32.93	-7.07	40.00	57.44	7.06	0.40	31.96	---	---	Peak
4	386.80	27.57	-18.43	46.00	43.14	15.44	0.83	31.84	---	---	Peak
5	798.40	30.45	-15.55	46.00	41.63	19.80	1.20	32.18	---	---	Peak
6	834.80	30.01	-15.99	46.00	41.08	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 12

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	5614.00	55.55	-18.45	74.00	50.09	34.90	6.28	35.73	100	0	Peak
2	5614.00	41.08	-12.92	54.00	35.62	34.90	6.28	35.73	102	266	Average
3 X	5825.00	103.40			97.56	35.11	6.49	35.77	100	0	Peak
4 @	5825.00	88.98			83.13	35.13	6.49	35.77	102	266	Average
5	6796.00	50.04	-23.96	74.00	43.29	35.72	6.99	35.96	100	0	Peak
6	6796.00	35.55	-18.45	54.00	28.80	35.72	6.99	35.96	102	266	Average
7	7448.00	53.32	-20.68	74.00	46.63	35.62	7.25	36.18	100	0	Peak
8	7448.00	42.11	-11.89	54.00	35.42	35.62	7.25	36.18	100	226	Average
9	11652.00	50.61	-23.39	74.00	89.13	-11.14	8.92	36.30	100	0	Peak
10	11652.00	36.17	-17.83	54.00	74.69	-11.14	8.92	36.30	100	190	Average
11	17472.00	38.73	-35.27	74.00	76.76	-12.07	9.84	35.80	100	0	Peak

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 WLAN 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 6 dBi. 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
<b>Combined standard uncertainty Uc(y)</b>	<b>1.30</b>		
<b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>	<b>2.60</b>		

### 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 = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
<b>Combined standard uncertainty Uc(y)</b>	<b>2.36</b>				
<b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>	<b>4.72</b>				

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.