



FCC Test Report

According to

47 CFR Part 15 Subpart E

Equipment : FLYBOOK

Trade Name : DIALOGUE

Model Name : V51BBB

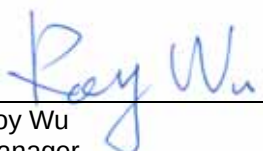
FCC ID : JYV-V51BBB

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.: FR6O2516-09C, Report Version: Rev.01.



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Report Version: Rev.01



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History of This Test Report

Report Issue 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 Equipment under Test

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			
Freq. Range/Carrier Freqs. :	802.11a Band I : 5150 MHz ~ 5250 MHz 802.11a Band II : 5250 MHz ~ 5350 MHz			
Channel Spacing :	20 MHz			
Type of Antenna Connector :	Hirose			
Antenna Type :	PIFA Antenna			
Antenna Gain :	0 dBi			
Modulation Type :	OFDM			
Function Type :	Transmitter		Transceiver	V

2. Test Configuration of Equipment under Test

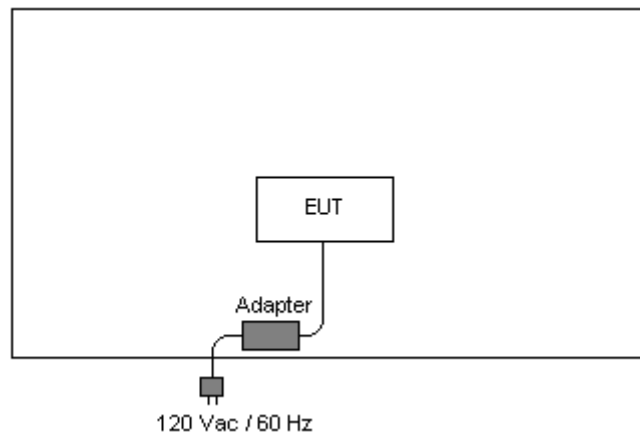
2.1 Test Manner

- 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.
- The complete test system refers to section 2.2 and EUT for EMI test.
- Because the model, V5B1BB, integrates Intel 3945 WLAN module (FCC ID:PD9WM3945ABG), the conducted test cases can be referred to the WLAN module FCC 15E report number INTEL-051020F.
- Test Mode :

Test Item	Test Mode	
Radiated Emission	802.11a Band I	802.11a Band II
	Mode 1: Tx_CH36_5180 MHz	Mode 4: Tx_CH52_5260 MHz
	Mode 2: Tx_CH44_8220 MHz	Mode 5: Tx_CH60_5300 MHz
	Mode 3: Tx_CH48_5240 MHz	Mode 6: Tx_CH64_5320 MHz

- Frequency range investigated: radiation from 30 MHz to 40000MHz.

2.2 Connection Diagram of Test System





3. RF Utility

During the test, RF Utility, "CRTU" were executed to 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 in Compliance

FCC Part 15, Subpart E

4.4 Frequency Range

Radiation: from 9KHz to 40GHz

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

FCC Rule	Description of Test	Result
15.407(b)(1)(2)(5)	Radiated Emission	Pass
15.407(b)(1)(2)	Band Edges Measurement	Pass
15.407(a)(1)(2)	Antenna Requirement	Pass
15.407(c)	Automatically Discontinue Transmission	Pass



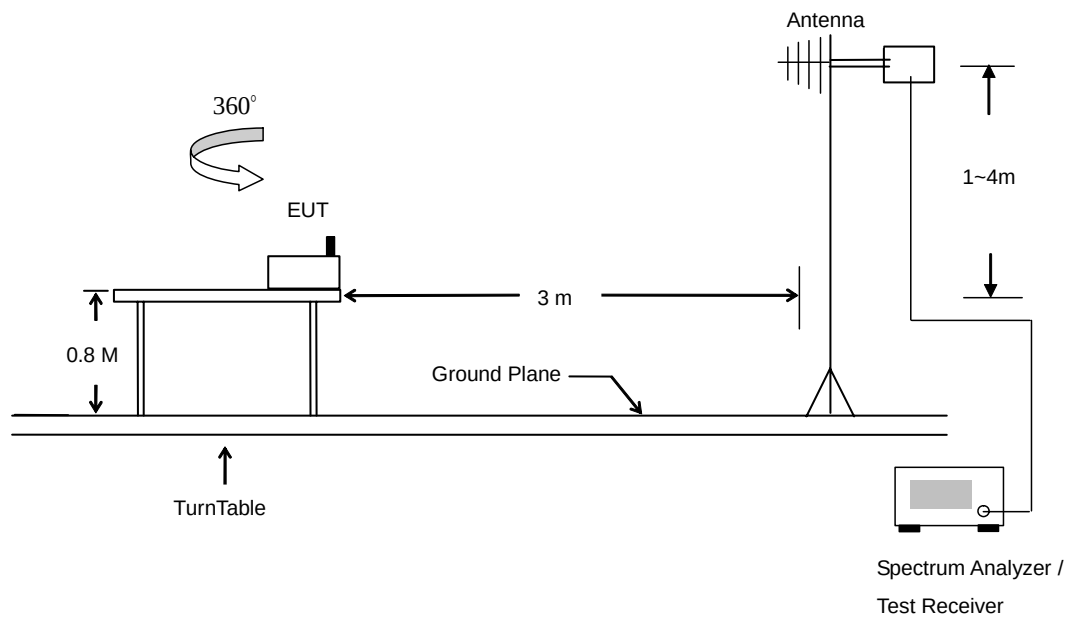
5.2 Test of Radiated Emission

As described in chapter 6 of this test report.

5.2.1 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. 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.
- e. 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.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. 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.
- h. 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.

5.2.2 Typical Test Setup Layout of Radiated Emission

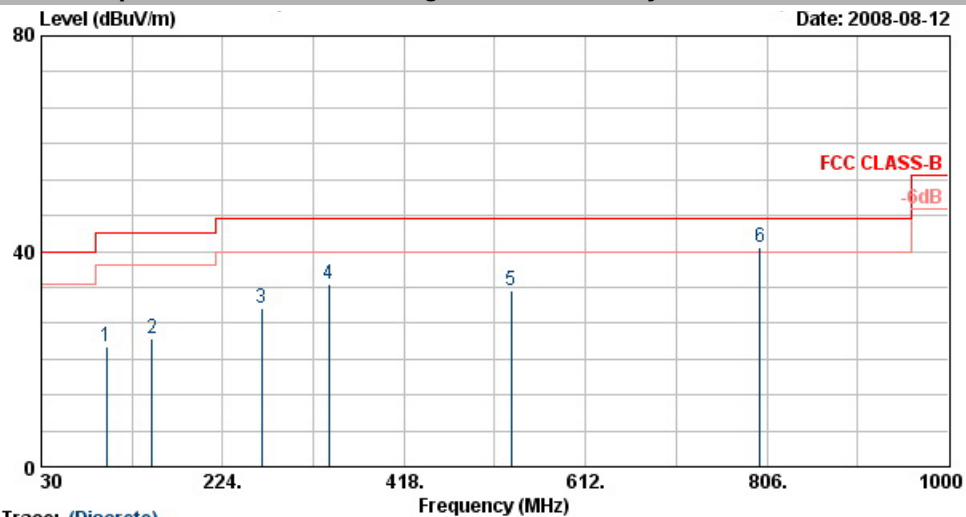




5.2.3 Test Data

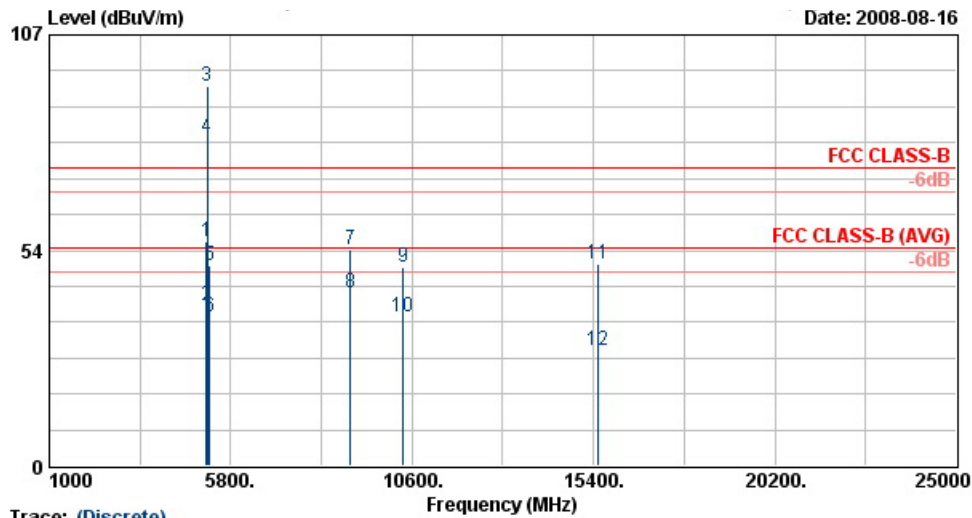
- Test Mode : Mode 1
- Temperature : 21~26°C
- Relative Humidity : 49~57%
- Test Engineer : Sun
- Polarization : Horizontal

■ 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 : Model

	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	99.93	22.43	-21.07	43.50	42.98	10.99	0.50	32.04	---	---	Peak
2	148.53	23.84	-19.66	43.50	44.58	10.37	0.58	31.69	---	---	Peak
3	265.98	29.50	-16.50	46.00	48.14	12.56	0.70	31.90	---	---	Peak
4 @	337.80	33.92	-12.08	46.00	50.75	14.18	0.80	31.81	---	---	Peak
5	532.40	32.58	-13.42	46.00	45.99	17.76	0.93	32.10	---	---	Peak
6 @	798.40	40.75	-5.25	46.00	51.93	19.80	1.20	32.18	100	106	Peak



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

	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	5150.00	55.87	-18.13	74.00	49.64	35.88	5.98	35.63	100	0	Peak
2	5150.00	39.83	-14.17	54.00	33.60	35.88	5.98	35.63	100	38	Average
3 @	5180.00	94.45			88.17	35.92	6.00	35.64	100	0	Peak
4 @	5180.00	81.74			75.46	35.92	6.00	35.64	100	38	Average
5	5250.00	49.61	-24.39	74.00	43.23	36.00	6.04	35.65	100	0	Peak
6	5250.00	37.15	-16.85	54.00	30.76	36.00	6.04	35.65	100	38	Average
7	8964.00	53.87	-20.13	74.00	44.21	38.46	7.77	36.57	100	0	Peak
8 @	8964.00	42.78	-11.22	54.00	33.12	38.46	7.77	36.57	100	248	Average
9	10362.00	49.26	-24.74	74.00	86.25	-8.72	8.25	36.52	100	0	Peak
10	10362.00	36.88	-17.12	54.00	73.87	-8.72	8.25	36.52	100	3	Average
11	15537.00	50.15	-23.85	74.00	83.97	-7.12	9.52	36.22	100	0	Peak
12	15537.00	28.62	-25.38	54.00	62.44	-7.12	9.52	36.22	100	12	Average

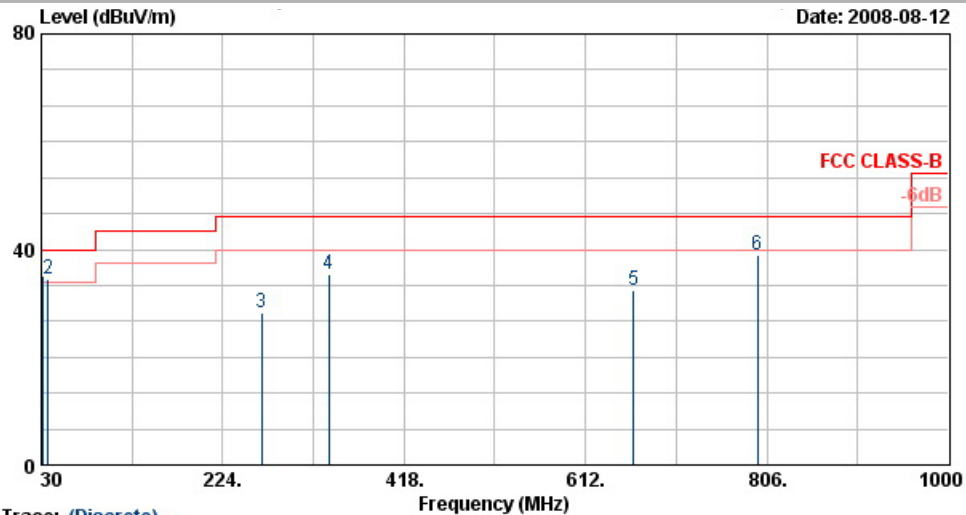
Remark:

- #3 and #4 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



- Polarization : Vertical

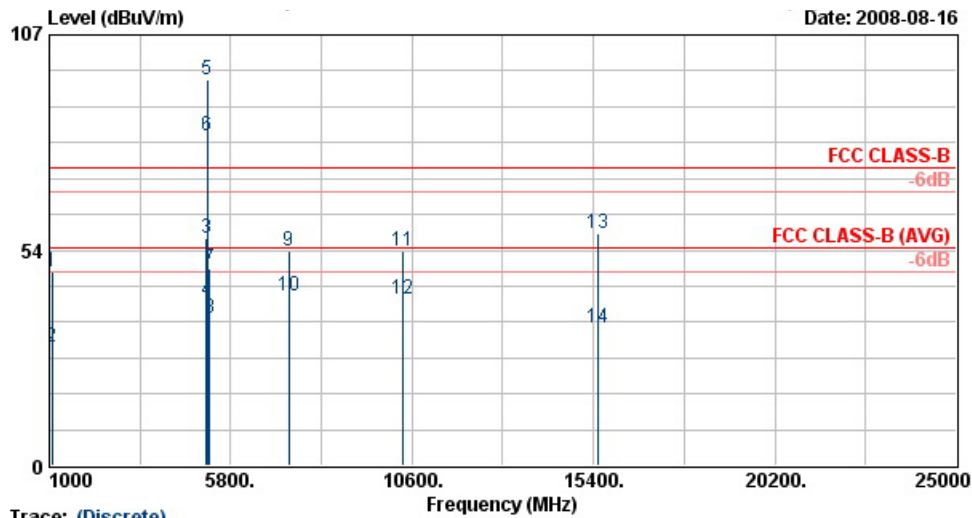
■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

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

	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	35.21	-4.79	40.00	47.57	18.95	0.30	31.61	100	162	Peak
2 @	37.29	34.47	-5.53	40.00	51.35	14.56	0.30	31.75	---	---	Peak
3	265.98	28.37	-17.63	46.00	47.00	12.56	0.70	31.90	---	---	Peak
4 @	337.80	35.50	-10.50	46.00	52.33	14.18	0.80	31.81	---	---	Peak
5	663.30	32.42	-13.58	46.00	44.67	18.74	1.06	32.04	---	---	Peak
6 @	796.30	38.96	-7.04	46.00	50.15	19.78	1.20	32.17	---	---	Peak



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

	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	1064.00	48.18	-25.82	74.00	54.17	28.44	2.31	36.74	100	0	Peak
2	1064.00	29.60	-24.40	54.00	35.59	28.44	2.31	36.74	100	132	Average
3	5150.00	56.53	-17.47	74.00	50.99	35.19	5.98	35.63	100	0	Peak
4	5150.00	40.95	-13.05	54.00	35.41	35.19	5.98	35.63	100	327	Average
5 @	5180.00	95.79			90.22	35.21	6.00	35.64	100	0	Peak
6 @	5180.00	81.99			76.42	35.21	6.00	35.64	100	327	Average
7	5250.00	48.97	-25.03	74.00	43.34	35.25	6.04	35.65	100	0	Peak
8	5250.00	36.42	-17.58	54.00	30.78	35.25	6.04	35.65	100	327	Average
9	7348.00	53.46	-20.54	74.00	45.52	36.88	7.21	36.14	100	0	Peak
10 @	7348.00	42.34	-11.66	54.00	34.40	36.88	7.21	36.14	100	121	Average
11	10362.00	53.32	-20.68	74.00	90.31	-8.72	8.25	36.52	100	0	Peak
12	10362.00	41.41	-12.59	54.00	78.40	-8.72	8.25	36.52	100	8	Average
13	15537.00	57.69	-16.31	74.00	91.51	-7.12	9.52	36.22	100	0	Peak
14	15537.00	34.21	-19.79	54.00	68.03	-7.12	9.52	36.22	100	352	Average

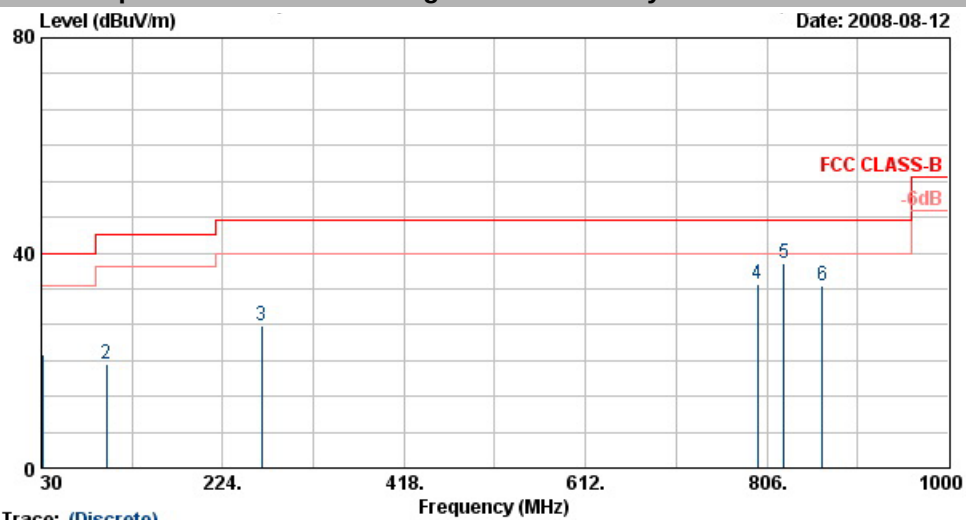
Remark:

- #5 and #6 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



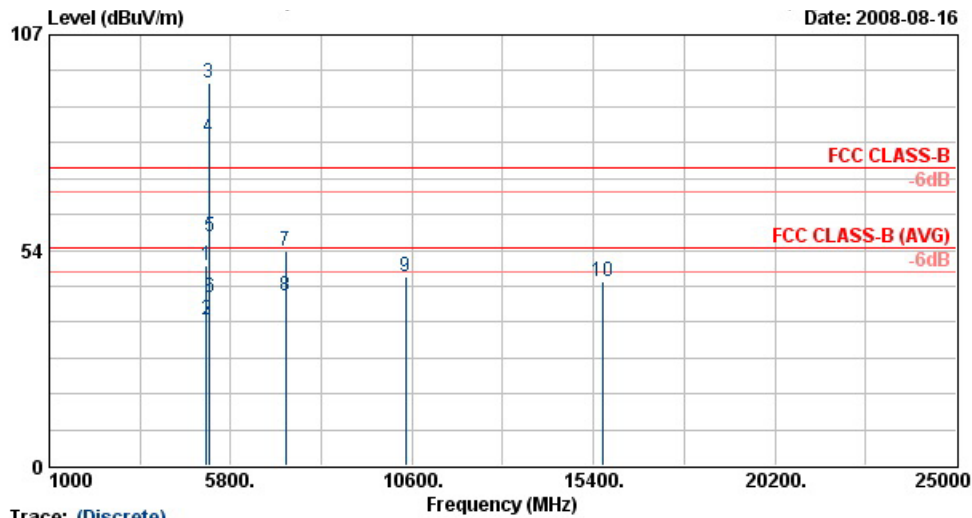
- Test Mode : Mode 2
- Temperature : 21~26°C
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal

■ 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 : Mode2

	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	21.04	-18.96	40.00	33.40	18.95	0.30	31.61	---	---	Peak
2	99.39	19.42	-24.08	43.50	39.97	10.99	0.50	32.04	---	---	Peak
3	265.98	26.34	-19.66	46.00	44.97	12.56	0.70	31.90	---	---	Peak
4	796.30	34.22	-11.78	46.00	45.40	19.78	1.20	32.17	---	---	Peak
5	824.30	38.11	-7.89	46.00	49.21	19.99	1.20	32.29	100	162	Peak
6	864.90	33.93	-12.07	46.00	44.58	20.28	1.25	32.18	---	---	Peak



Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Model : FR 602516-09
 Memo : Mode2

	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	5150.00	49.82	-24.18	74.00	43.59	35.88	5.98	35.63	100	0	Peak
2	5150.00	36.31	-17.69	54.00	30.08	35.88	5.98	35.63	100	36	Average
3 X	5220.00	95.11			88.77	35.96	6.02	35.64	100	0	Peak
4 X	5220.00	81.69			75.35	35.96	6.02	35.64	100	36	Average
5	5250.00	56.81	-17.19	74.00	50.42	36.00	6.04	35.65	100	0	Peak
6	5250.00	41.65	-12.35	54.00	35.26	36.00	6.04	35.65	100	36	Average
7	7244.00	53.38	-20.62	74.00	44.51	37.79	7.18	36.10	100	0	Peak
8	7244.00	42.29	-11.71	54.00	33.42	37.79	7.18	36.10	100	105	Average
9	10437.00	46.88	-27.12	74.00	83.65	-8.60	8.28	36.46	100	0	Peak
10	15657.00	45.56	-28.44	74.00	78.61	-6.28	9.56	36.33	100	0	Peak

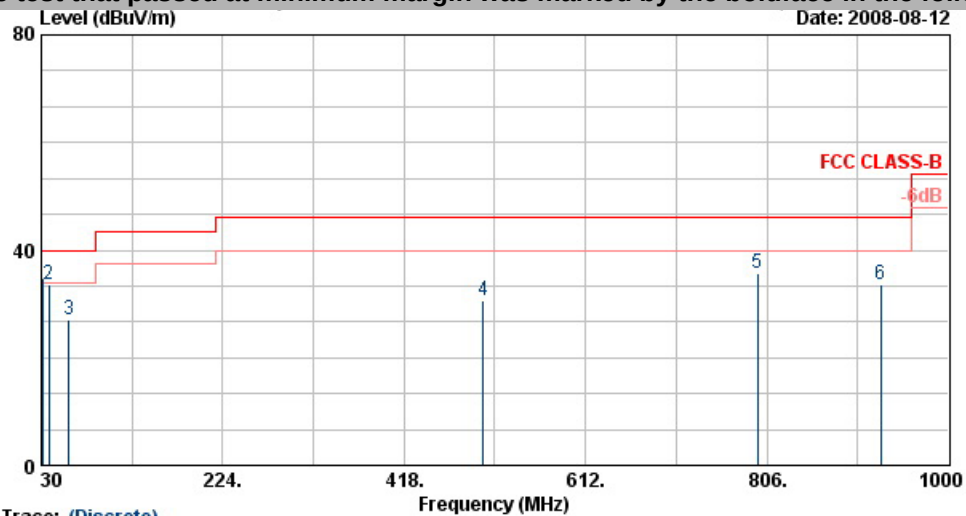
Remark:

- #3 and #4 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



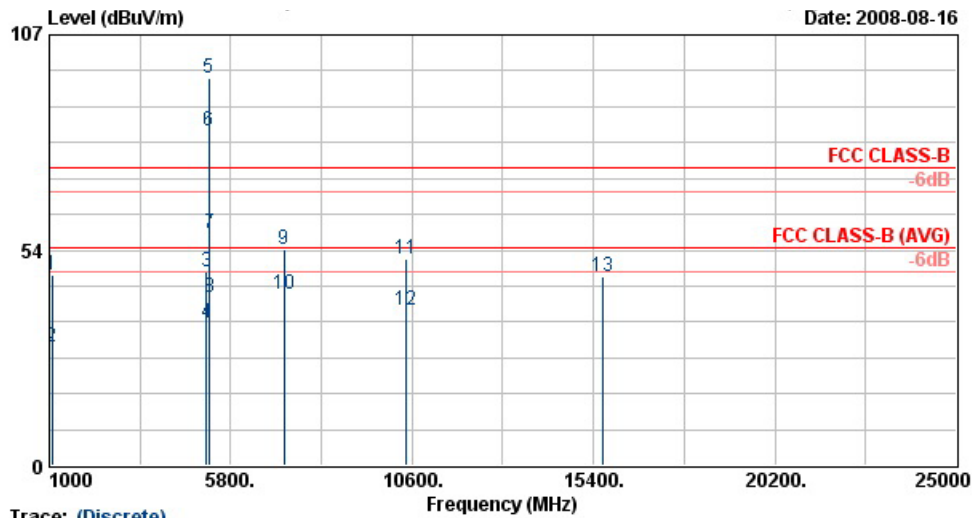
- Polarization : Vertical

■ 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(951121) VERTICAL
 Model : FR 602516-09
 Memo : Mode2

	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	34.91	-5.09	40.00	47.27	18.95	0.30	31.61	100	291	Peak
2	37.83	33.72	-6.28	40.00	50.61	14.56	0.30	31.75	---	---	Peak
3	59.43	27.19	-12.81	40.00	52.04	6.77	0.40	32.02	---	---	Peak
4	502.30	30.58	-15.42	46.00	44.20	17.45	1.00	32.07	---	---	Peak
5	796.30	35.71	-10.29	46.00	46.90	19.78	1.20	32.17	100	267	QP
6	927.90	33.52	-12.48	46.00	43.12	20.73	1.20	31.53	---	---	Peak



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Model : FR 602516-09
 Memo : Mode2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	1064.00	47.22	-26.78	74.00	53.20	28.44	2.31	36.74	100	0 Peak
2	1064.00	29.55	-24.45	54.00	35.54	28.44	2.31	36.74	100	142 Average
3	5150.00	48.14	-25.86	74.00	42.60	35.19	5.98	35.63	100	0 Peak
4	5150.00	35.56	-18.44	54.00	30.02	35.19	5.98	35.63	100	318 Average
5 X	5220.00	96.24			90.63	35.23	6.02	35.64	100	0 Peak
6 @	5220.00	83.29			77.68	35.23	6.02	35.64	100	318 Average
7	5250.00	57.71	-16.29	74.00	52.07	35.25	6.04	35.65	100	0 Peak
8	5250.00	41.75	-12.25	54.00	36.11	35.25	6.04	35.65	100	318 Average
9	7204.00	53.75	-20.25	74.00	45.91	36.77	7.16	36.08	100	0 Peak
10	7204.00	42.59	-11.41	54.00	34.74	36.77	7.16	36.08	100	245 Average
11	10437.00	51.25	-22.75	74.00	88.02	-8.60	8.28	36.46	100	0 Peak
12	10437.00	38.48	-15.52	54.00	75.26	-8.60	8.28	36.46	100	175 Average
13	15657.00	46.83	-27.17	74.00	79.87	-6.28	9.56	36.33	100	0 Peak

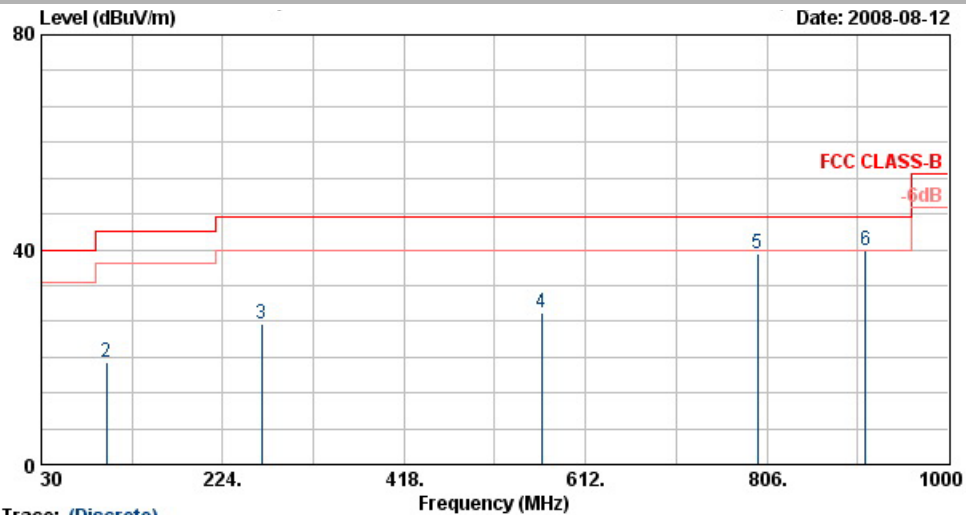
Remark:

- #5 and #6 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



- Test Mode : Mode 3
- Temperature : 21~26°C
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal

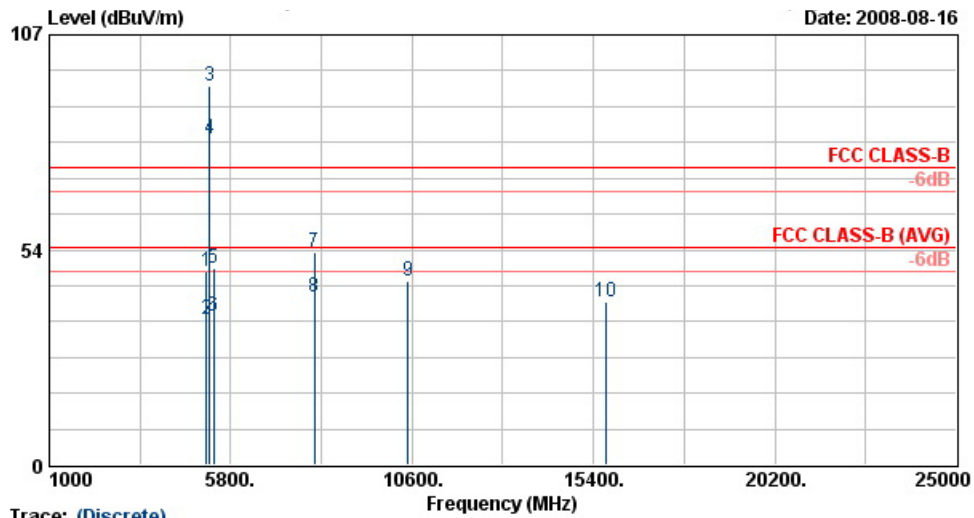
■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
Model : FR 602516-09
Memo : Mode3

	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	24.15	-15.85	40.00	35.75	19.66	0.30	31.56	---	---	Peak
2	99.93	18.98	-24.52	43.50	39.53	10.99	0.50	32.04	---	---	Peak
3	265.44	26.25	-19.75	46.00	44.89	12.56	0.70	31.90	---	---	Peak
4	565.30	28.31	-17.69	46.00	41.34	18.11	1.00	32.14	---	---	Peak
5	796.30	39.24	-6.76	46.00	50.42	19.78	1.20	32.17	---	---	Peak
6	911.80	39.83	-6.17	46.00	49.55	20.61	1.28	31.61	100	282	Peak



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Model : FR 602516-09
 Memo : Mode3

	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	5150.00	48.11	-25.89	74.00	41.88	35.88	5.98	35.63	100	0	Peak
2	5150.00	36.06	-17.94	54.00	29.83	35.88	5.98	35.63	100	36	Average
3 X	5240.00	94.34			87.97	35.98	6.04	35.65	100	0	Peak
4 @	5240.00	80.97			74.60	35.98	6.04	35.65	100	36	Average
5	5350.00	48.93	-25.07	74.00	42.39	36.12	6.09	35.67	100	0	Peak
6	5350.00	36.86	-17.14	54.00	30.32	36.12	6.09	35.67	100	36	Average
7	8014.00	52.88	-21.12	74.00	43.27	38.39	7.52	36.30	100	0	Peak
8	8014.00	41.73	-12.27	54.00	32.12	38.39	7.52	36.30	100	106	Average
9	10482.00	45.89	-28.11	74.00	82.55	-8.53	8.30	36.42	100	0	Peak
10	15717.00	40.59	-33.41	74.00	73.24	-5.86	9.57	36.37	100	0	Peak

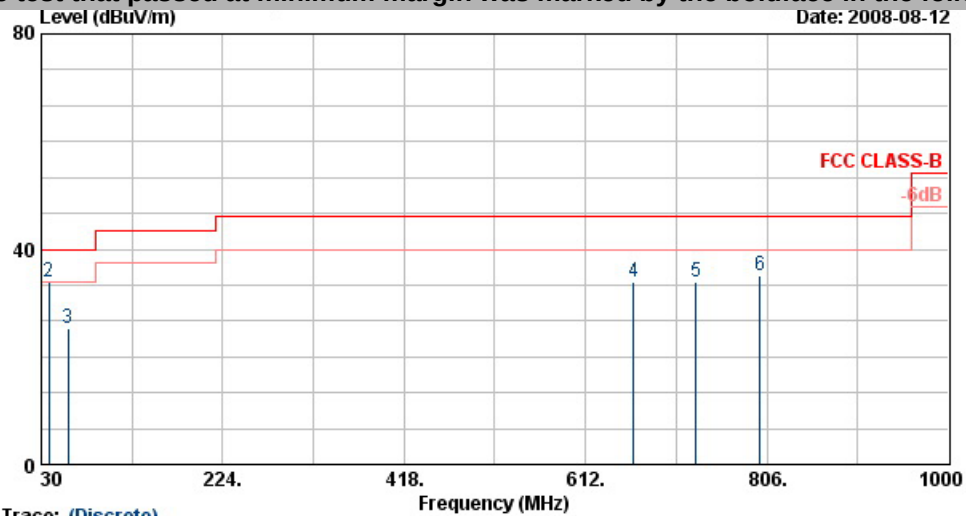
Remark:

- #3 and #4 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



- Polarization : Vertical

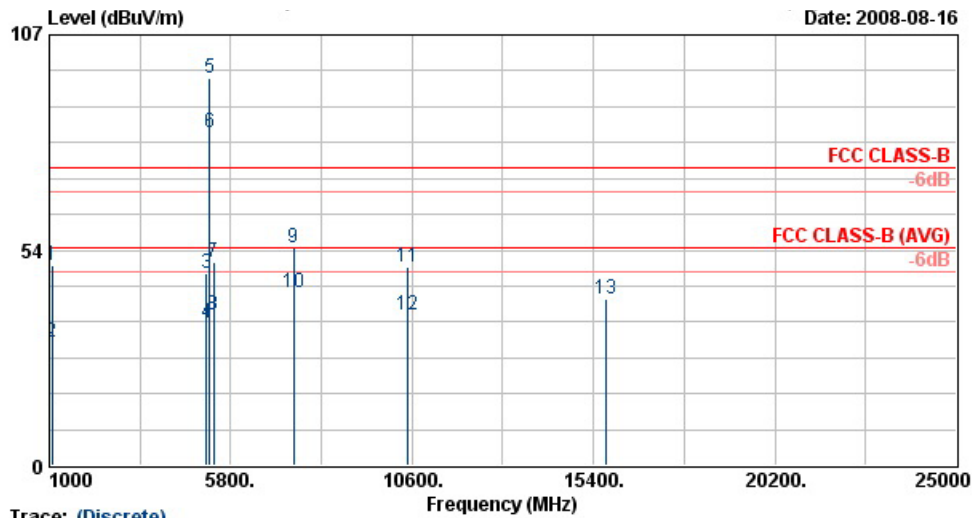
■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
 Model : FR 602516-09
 Memo : Mode3

	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	30.54	34.67	-5.33	40.00	47.03	18.95	0.30	31.61	100	115 Peak
2	37.83	34.02	-5.98	40.00	50.91	14.56	0.30	31.75	---	---
3	58.89	25.37	-14.63	40.00	50.23	6.77	0.40	32.02	---	---
4	663.30	33.88	-12.12	46.00	46.12	18.74	1.06	32.04	---	---
5	729.80	33.76	-12.24	46.00	45.72	19.16	1.11	32.23	---	---
6	798.40	35.14	-10.86	46.00	46.32	19.80	1.20	32.18	---	---



Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Model : FR 602516-09
 Memo : Mode3

	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	1064.00	49.69	-24.31	74.00	55.67	28.44	2.31	36.74	100	0	Peak
2	1064.00	30.70	-23.30	54.00	36.69	28.44	2.31	36.74	100	162	Average
3	5150.00	47.88	-26.12	74.00	42.34	35.19	5.98	35.63	100	0	Peak
4	5150.00	35.50	-18.50	54.00	29.96	35.19	5.98	35.63	110	325	Average
5 X	5240.00	96.08			90.47	35.24	6.02	35.65	100	0	Peak
6 @	5240.00	82.54			76.91	35.24	6.04	35.65	110	325	Average
7	5350.00	50.64	-23.36	74.00	44.91	35.31	6.09	35.67	100	0	Peak
8	5350.00	37.48	-16.52	54.00	31.75	35.31	6.09	35.67	110	325	Average
9	7468.00	53.99	-20.01	74.00	45.94	36.97	7.26	36.19	100	0	Peak
10	7468.00	42.85	-11.15	54.00	34.81	36.97	7.26	36.19	100	291	Average
11	10482.00	49.34	-24.66	74.00	85.99	-8.53	8.30	36.42	100	0	Peak
12	10482.00	37.42	-16.58	54.00	74.07	-8.53	8.30	36.42	100	178	Average
13	15717.00	41.23	-32.77	74.00	73.89	-5.86	9.57	36.37	100	0	Peak

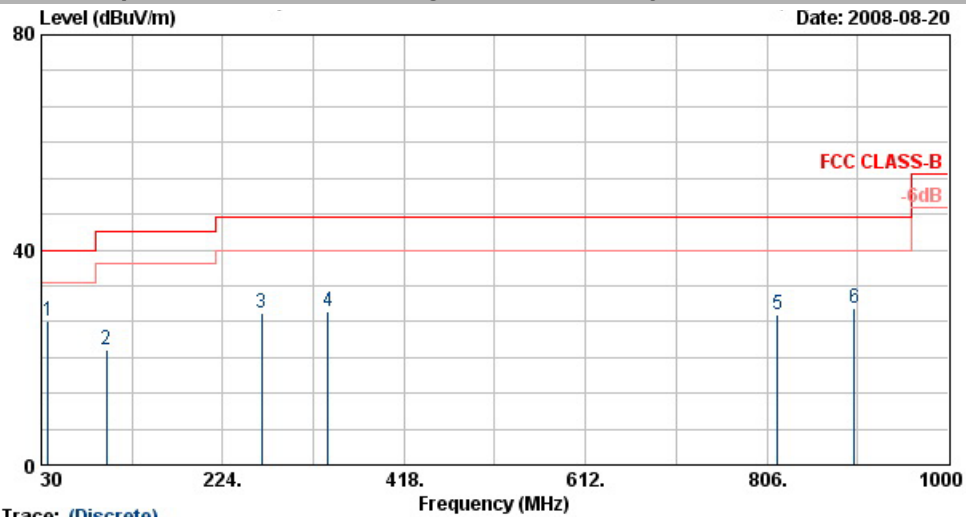
Remark:

- #5 and #6 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



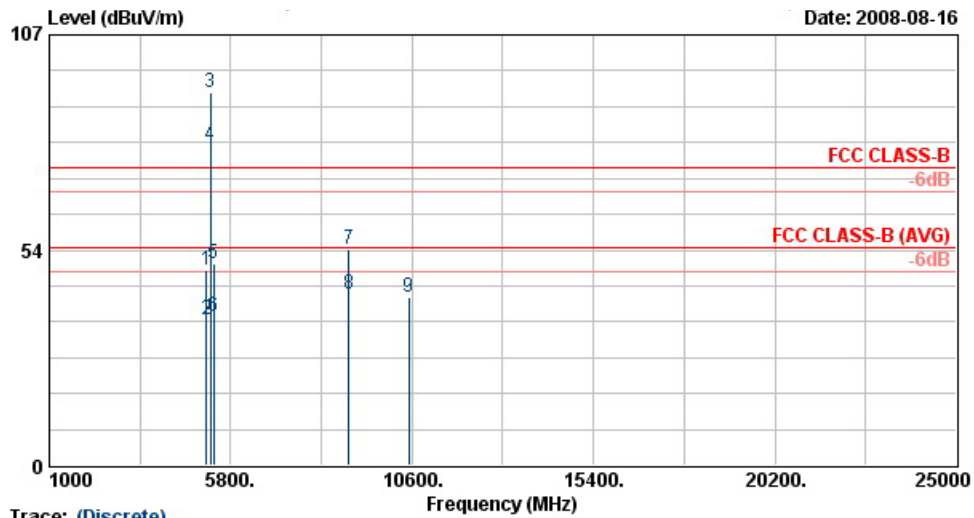
- Test Mode : Mode 4
- Temperature : 21~26°C
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal

■ 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 : Mode4

	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	37.29	26.83	-13.17	40.00	43.72	14.56	0.30	31.75	100	292 Peak
2	99.93	21.51	-21.99	43.50	42.06	10.99	0.50	32.04	---	--- Peak
3	265.98	28.16	-17.84	46.00	46.80	12.56	0.70	31.90	---	--- Peak
4	336.40	28.68	-17.32	46.00	45.55	14.15	0.80	31.81	---	--- Peak
5	817.30	27.99	-18.01	46.00	39.10	19.94	1.20	32.26	---	--- Peak
6	899.90	29.07	-16.93	46.00	38.91	20.53	1.30	31.67	---	--- Peak



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

	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	5150.00	48.71	-25.29	74.00	42.48	35.88	5.98	35.63	100	0	Peak
2	5150.00	36.05	-17.95	54.00	29.82	35.88	5.98	35.63	100	35	Average
3 X	5260.00	92.70			86.28	36.02	6.05	35.65	100	0	Peak
4 @	5260.00	79.50			73.08	36.02	6.05	35.65	100	35	Average
5	5350.00	50.13	-23.87	74.00	43.59	36.12	6.09	35.67	100	0	Peak
6	5350.00	36.85	-17.15	54.00	30.31	36.12	6.09	35.67	100	35	Average
7	8918.00	53.75	-20.25	74.00	44.16	38.43	7.71	36.56	100	0	Peak
8	8918.00	42.64	-11.36	54.00	33.05	38.43	7.71	36.56	100	291	Average
9	10521.00	41.58	-32.42	74.00	78.13	-8.49	8.34	36.40	100	0	Peak

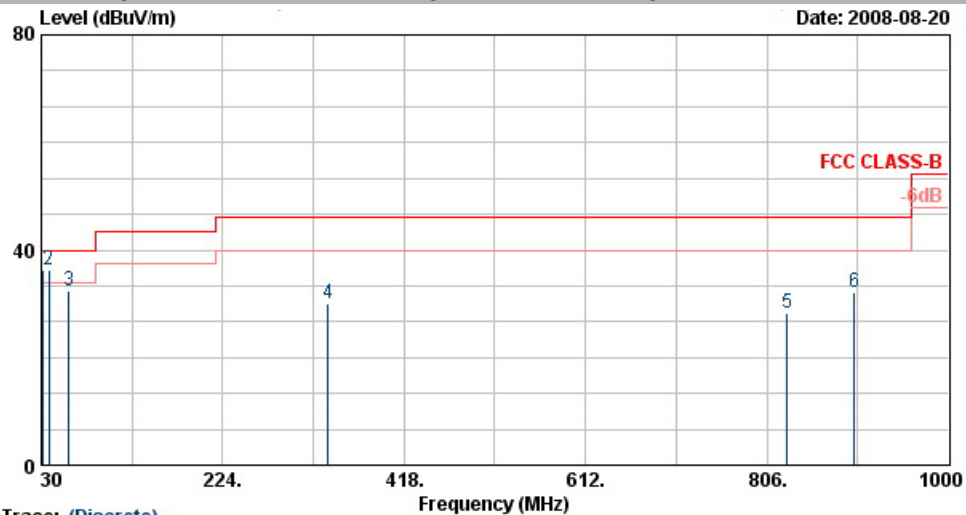
Remark:

- #3 and #4 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



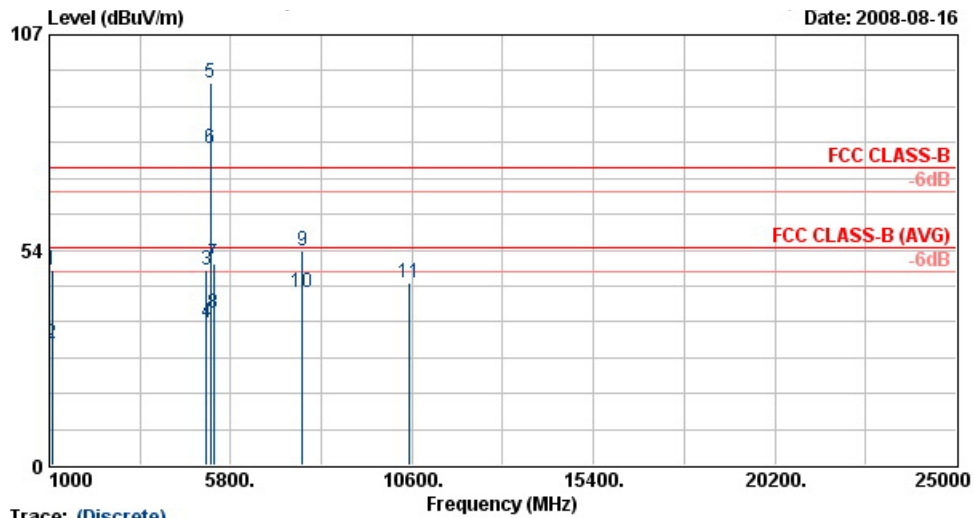
- Polarization : Vertical

■ 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 : Model

	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	36.39	-3.61	40.00	48.75	18.95	0.30	31.61	---	---	Peak
2	37.83	36.42	-3.58	40.00	53.31	14.56	0.30	31.75	100	92	QP
3	59.43	32.36	-7.64	40.00	57.21	6.77	0.40	32.02	---	---	Peak
4	336.40	29.96	-16.04	46.00	46.82	14.15	0.80	31.81	---	---	Peak
5	827.80	28.39	-17.61	46.00	39.48	20.01	1.20	32.30	---	---	Peak
6	899.90	32.15	-13.85	46.00	41.99	20.53	1.30	31.67	---	---	Peak



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

	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	1064.00	48.53	-25.47	74.00	54.51	28.44	2.31	36.74	100	0	Peak
2	1064.00	30.03	-23.97	54.00	36.02	28.44	2.31	36.74	100	152	Average
3	5150.00	48.36	-25.64	74.00	42.82	35.19	5.98	35.63	100	0	Peak
4	5150.00	35.39	-18.61	54.00	29.85	35.19	5.98	35.63	110	322	Average
5 X	5260.00	95.05			89.39	35.26	6.05	35.65	100	0	Peak
6 X	5260.00	78.74			73.08	35.26	6.05	35.65	110	322	Average
7	5350.00	50.25	-23.75	74.00	44.52	35.31	6.09	35.67	100	0	Peak
8	5350.00	37.87	-16.13	54.00	32.14	35.31	6.09	35.67	110	322	Average
9	7704.00	53.32	-20.68	74.00	45.07	37.12	7.37	36.24	100	0	Peak
10	7704.00	43.06	-10.94	54.00	34.81	37.12	7.37	36.24	100	82	Average
11	10521.00	45.49	-28.51	74.00	82.05	-8.49	8.34	36.40	100	0	Peak

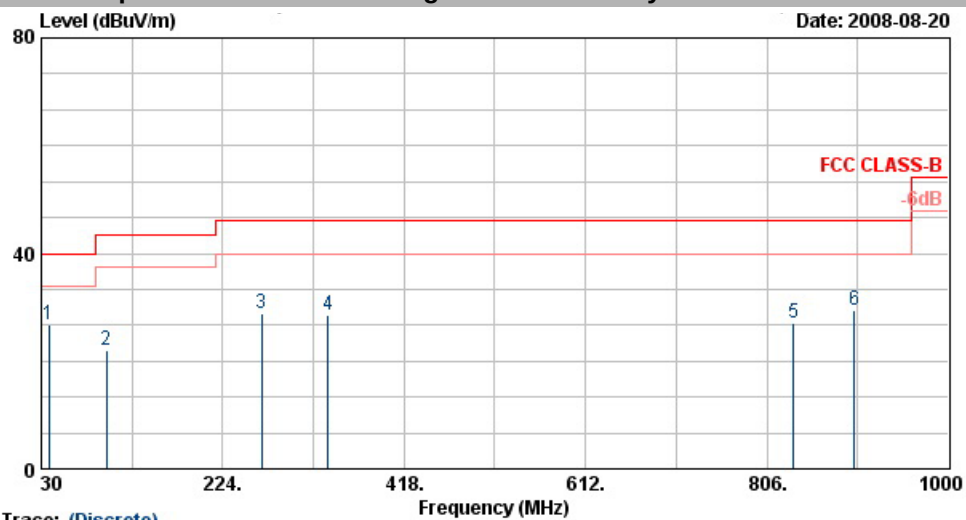
Remark:

- #5 and #6 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



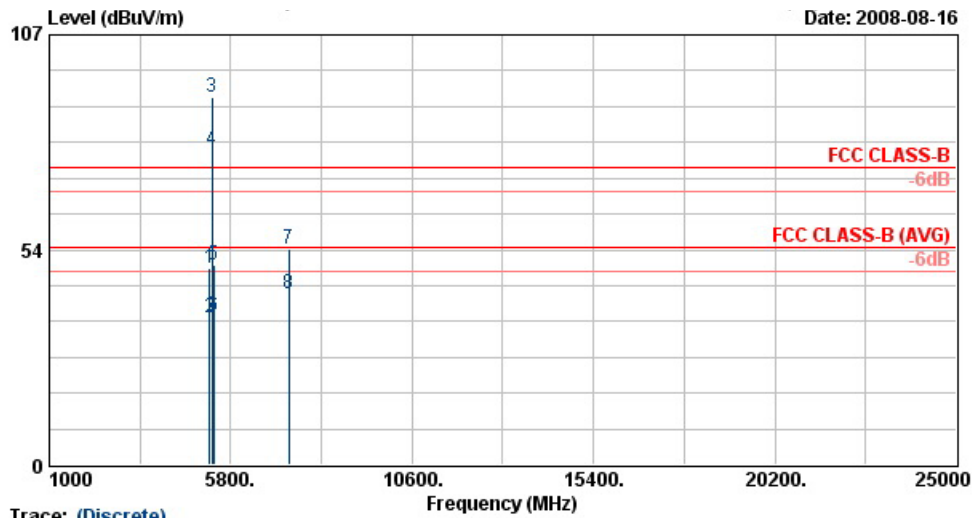
- Test Mode : Mode 5
- Temperature : 21~26°C
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal

■ 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 : Mode5

	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	37.83	26.86	-13.14	40.00	43.75	14.56	0.30	31.75	100	258 Peak
2	99.93	21.92	-21.58	43.50	42.47	10.99	0.50	32.04	---	--- Peak
3	265.98	28.73	-17.27	46.00	47.37	12.56	0.70	31.90	---	--- Peak
4	336.40	28.63	-17.37	46.00	45.49	14.15	0.80	31.81	---	--- Peak
5	834.80	27.10	-18.90	46.00	38.16	20.07	1.20	32.34	---	--- Peak
6	899.90	29.45	-16.55	46.00	39.29	20.53	1.30	31.67	---	--- Peak



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Model : FR 602516-09
 Memo : Mode5

	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	5250.00	48.78	-25.22	74.00	42.39	36.00	6.04	35.65	100	0 Peak
2	5250.00	36.62	-17.38	54.00	30.23	36.00	6.04	35.65	100	40 Average
3 X	5300.00	91.34			84.88	36.06	6.07	35.66	100	0 Peak
4 X	5300.00	78.35			71.89	36.06	6.07	35.66	100	40 Average
5	5350.00	49.84	-24.16	74.00	43.30	36.12	6.09	35.67	100	0 Peak
6	5350.00	36.94	-17.06	54.00	30.40	36.12	6.09	35.67	100	40 Average
7	7334.00	53.85	-20.15	74.00	44.89	37.88	7.21	36.13	100	0 Peak
8	7334.00	42.75	-11.25	54.00	33.80	37.88	7.21	36.13	100	106 Average

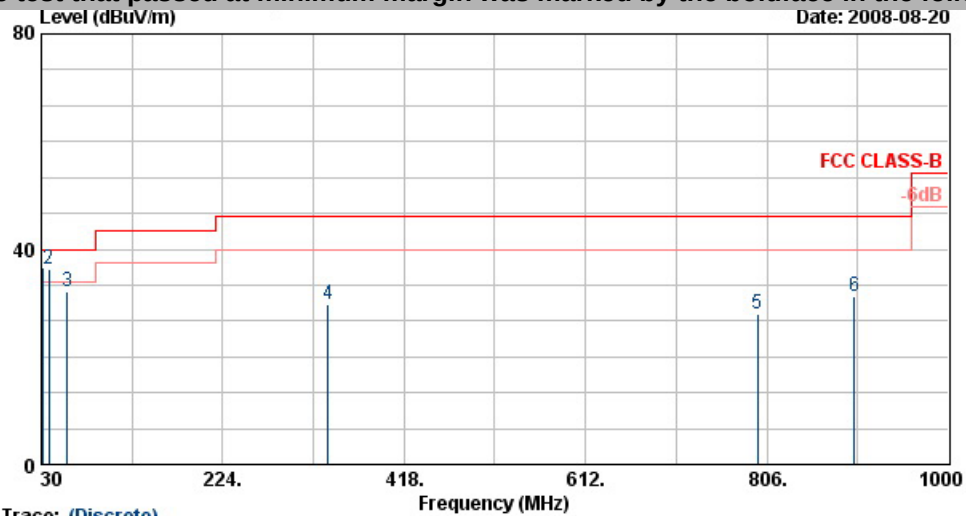
Remark:

- #3 and #4 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.

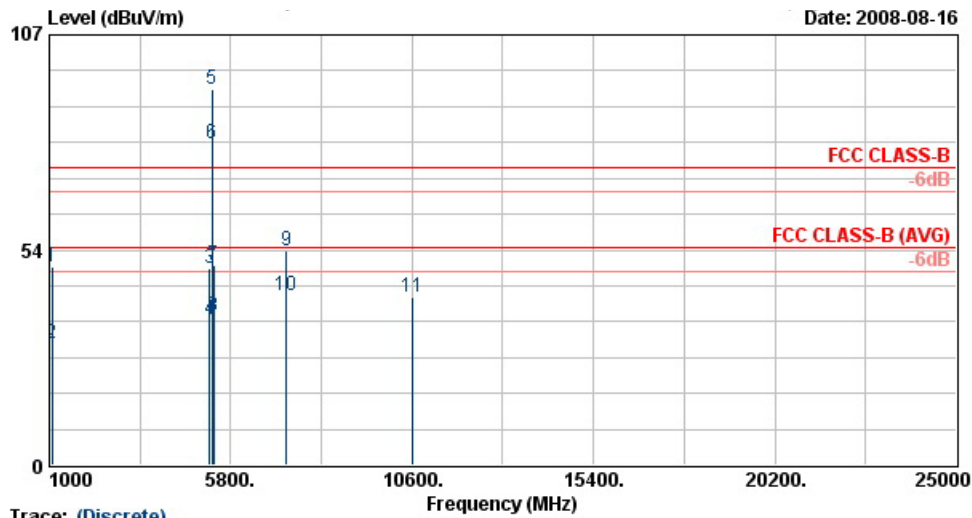


- Polarization : Vertical

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



	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	31.08	36.70	-3.30	40.00	49.06	18.95	0.30	31.61	---	Peak
2	37.83	36.21	-3.79	40.00	53.10	14.56	0.30	31.75	100	QP
3	58.08	32.19	-7.81	40.00	56.87	6.91	0.40	31.99	---	Peak
4	336.40	29.72	-16.28	46.00	46.58	14.15	0.80	31.81	---	Peak
5	796.30	27.89	-18.11	46.00	39.08	19.78	1.20	32.17	---	Peak
6	899.90	31.09	-14.91	46.00	40.93	20.53	1.30	31.67	---	Peak



Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Model : FR 602516-09
 Memo : Mode5

	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	1064.00	49.14	-24.86	74.00	55.12	28.44	2.31	36.74	100	0 Peak
2	1064.00	30.32	-23.68	54.00	36.31	28.44	2.31	36.74	100	148 Average
3	5250.00	49.01	-24.99	74.00	43.37	35.25	6.04	35.65	100	0 Peak
4	5250.00	36.13	-17.87	54.00	30.49	35.25	6.04	35.65	101	307 Average
5 X	5300.00	93.46			87.78	35.28	6.07	35.66	100	0 Peak
6 @	5300.00	80.14			74.46	35.28	6.07	35.66	101	307 Average
7	5350.00	49.82	-24.18	74.00	44.09	35.31	6.09	35.67	100	0 Peak
8	5350.00	37.04	-16.96	54.00	31.31	35.31	6.09	35.67	101	307 Average
9	7278.00	53.38	-20.62	74.00	45.48	36.82	7.19	36.11	100	0 Peak
10	7278.00	42.14	-11.86	54.00	34.24	36.82	7.19	36.11	100	165 Average
11	10596.00	41.62	-32.38	74.00	78.02	-8.46	8.41	36.35	100	0 Peak

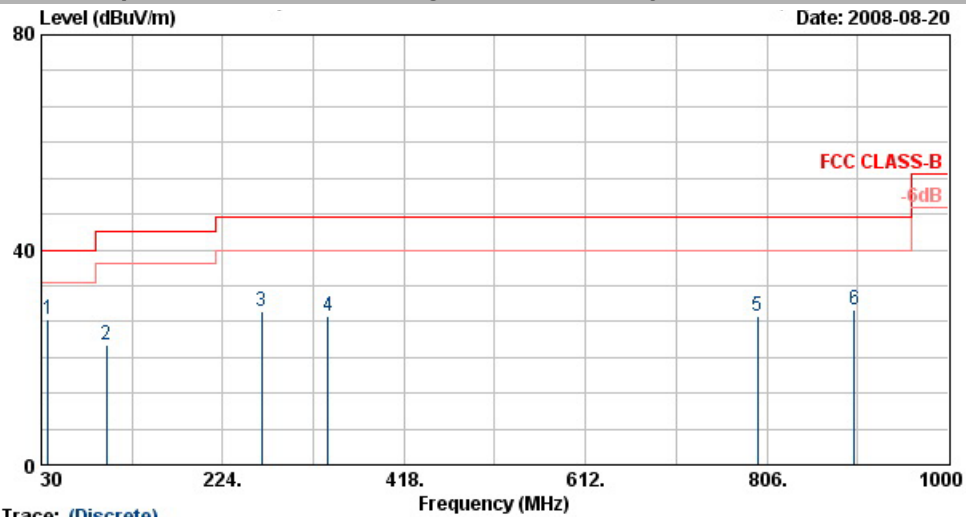
Remark:

- #5 and #6 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



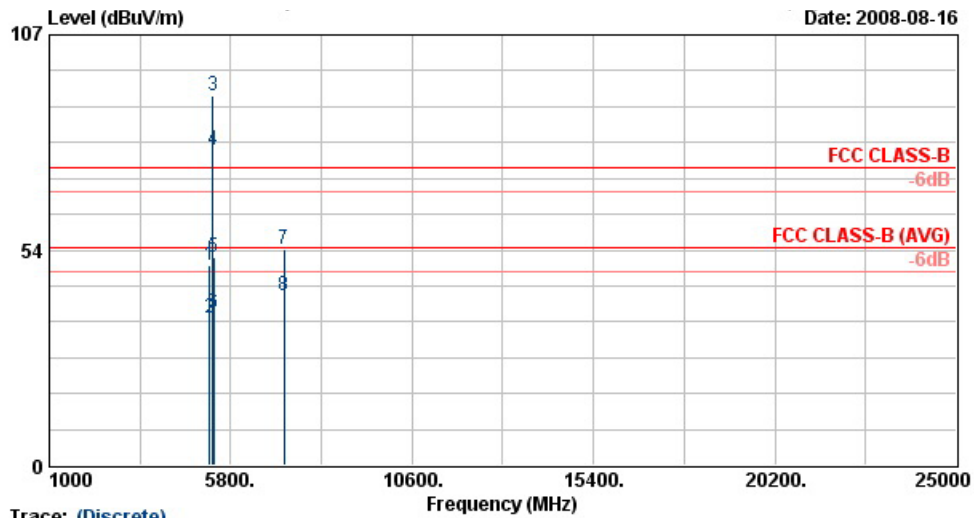
- Test Mode : Mode 6
- Temperature : 21~26°C
- Relative Humidity : 49~57%
- Test Engineer: Sun
- Polarization : Horizontal

■ 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 : Mode6

	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	37.29	27.04	-12.96	40.00	43.93	14.56	0.30	31.75	100	261 Peak
2	99.39	22.45	-21.05	43.50	43.00	10.99	0.50	32.04	---	--- Peak
3	265.98	28.70	-17.30	46.00	47.33	12.56	0.70	31.90	---	--- Peak
4	336.40	27.59	-18.41	46.00	44.45	14.15	0.80	31.81	---	--- Peak
5	796.30	27.61	-18.39	46.00	38.80	19.78	1.20	32.17	---	--- Peak
6	899.90	28.70	-17.30	46.00	38.54	20.53	1.30	31.67	---	--- Peak



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Model : FR 602516-09
 Memo : Model6

	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	5250.00	49.68	-24.32	74.00	43.29	36.00	6.04	35.65	100	0	Peak
2	5250.00	36.59	-17.41	54.00	30.20	36.00	6.04	35.65	100	41	Average
3 X	5320.00	92.02			85.53	36.08	6.08	35.67	100	0	Peak
4 @	5320.00	78.34			71.84	36.08	6.08	35.66	100	41	Average
5	5350.00	51.61	-22.39	74.00	45.07	36.12	6.09	35.67	100	0	Peak
6	5350.00	37.82	-16.18	54.00	31.28	36.12	6.09	35.67	100	41	Average
7	7214.00	53.51	-20.49	74.00	44.66	37.78	7.17	36.09	100	0	Peak
8	7214.00	42.28	-11.72	54.00	33.42	37.78	7.17	36.09	100	132	Average

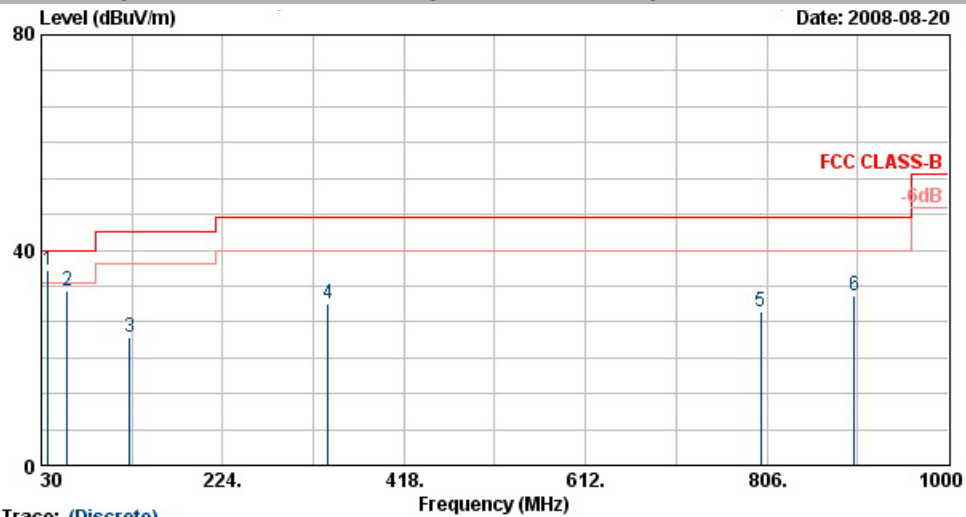
Remark:

- #3 and #4 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



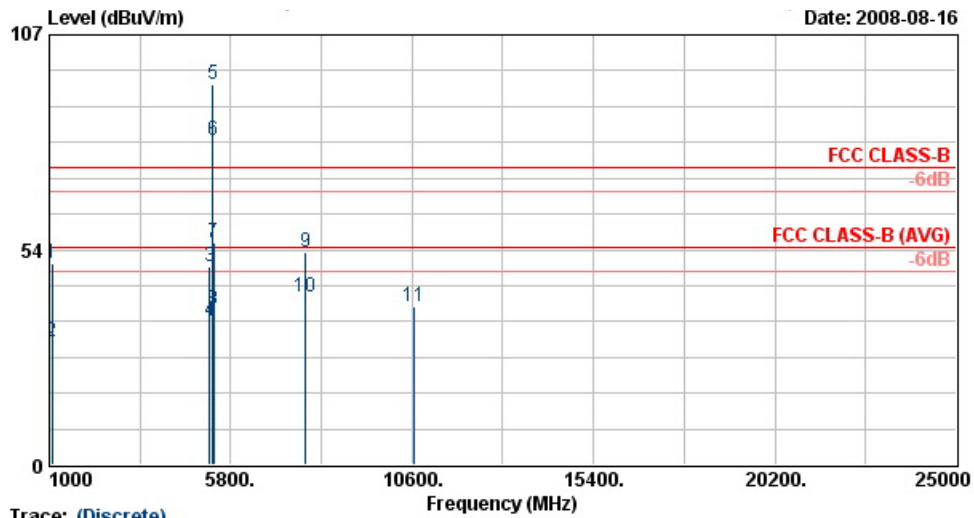
- Polarization : Vertical

■ 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 : Model

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	37.29	36.21	-3.79	40.00	53.10	14.56	0.30	31.75	100	134	QP
2	58.08	32.52	-7.48	40.00	57.20	6.91	0.40	31.99	---	---	Peak
3	124.23	23.82	-19.68	43.50	42.39	12.64	0.50	31.71	---	---	Peak
4	336.40	29.89	-16.11	46.00	46.76	14.15	0.80	31.81	---	---	Peak
5	799.80	28.44	-17.56	46.00	39.60	19.82	1.20	32.18	---	---	Peak
6	899.90	31.42	-14.58	46.00	41.26	20.53	1.30	31.67	---	---	Peak



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Model : FR 602516-09
 Memo : Model6

	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	1064.00	50.18	-23.82	74.00	56.17	28.44	2.31	36.74	100	0 Peak
2	1064.00	30.82	-23.18	54.00	36.81	28.44	2.31	36.74	100	158 Average
3	5250.00	49.17	-34.83	84.00	43.53	35.25	6.04	35.65	100	0 Peak
4	5250.00	35.90	-18.10	54.00	30.26	35.25	6.04	35.65	100	316 Average
5 X	5320.00	94.57			88.87	35.29	6.08	35.67	100	0 Peak
6 @	5320.00	80.87			75.16	35.29	6.08	35.66	100	316 Average
7	5350.00	55.11	-28.89	84.00	49.38	35.31	6.09	35.67	100	0 Peak
8	5350.00	38.58	-15.42	54.00	32.85	35.31	6.09	35.67	100	316 Average
9	7774.00	52.94	-21.06	74.00	44.64	37.16	7.40	36.26	100	0 Peak
10	7774.00	41.82	-12.18	54.00	33.51	37.16	7.40	36.26	100	281 Average
11	10632.00	39.40	-34.60	74.00	75.74	-8.45	8.44	36.32	100	0 Peak

Remark:

- #5 and #6 are Fundamental Signals.
- Frequency from 25GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



5.3 Automatically Discontinue Transmission

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission .



5.4 Antenna Requirements

The EUT meets antenna requirement of FCC for the following reasons.

5.4.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2), if transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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 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	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
Combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		

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
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.