

FCC/IC TEST REPORT

for

47 CFR, Part 15 Subpart E and RSS-210

Equipment : Notebook Computer

Trade Name : Fujitsu Siemens Computers, Fujitsu Limited

Model No. : E83XX (X maybe any alphanumeric character or blank)

FCC ID : EJE-WB0048

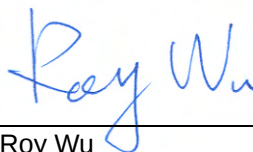
IC ID : 337J-WB0048

Filing Type : Certification

Applicant : **Fujitsu Limited**

4-1-1 Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211-8588, Japan

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- The data shown in this test report were carried out on Apr. 30, 2007 at **Sporton International Inc. LAB.**
- Report No.: FR6D2906-B, Report Version: Rev. 01.



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Deputy Manager

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History of this test report

Report Issue Date: May 14, 2007

Report No.	Description

1. General Description of Equipment under Test

1.1 Applicant

Fujitsu Limited

4-1-1 Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211-8588, Japan

1.2 Manufacturer

Fujitsu Siemens Computers GmbH

Buergermeister-Ulrich-Str. 100, 86199 Augsburg, Germany

1.3 Basic Description of Equipment under Test

Equipment	: Notebook Computer
Trade Name	: Fujitsu Siemens Computers, Fujitsu Limited
Model No.	: E83XX (X maybe any alphanumeric character or blank)
FCC ID	: EJE-WB0048
IC ID	: 337J-WB0048
Power Supply Type	: Switching
AC Power Cord	: AC 120V, 1.2 meter, 2 pin

1.4 Feature of Equipment under Test

Product Feature & Specification				
1. DUT Type	Notebook Computer			
2. Trade Name	Fujitsu Siemens Computers, Fujitsu Limited			
3. Model Name	E83XX (X maybe any alphanumeric character or blank)			
4. FCC ID	EJE-WB0048			
5. IC ID	337J-WB0048			
6. Freq. Range/Carrier Freqs.	802.11a : 5150 ~ 5250MHz (Band I) / 5725MHz ~ 5850MHz (Band III) 802.11b/g : 2400MHz ~ 2483.5MHz BT : 2400MHz ~ 2483.5MHz			
7. Number of Channels	802.11a : 4 (Band I) / 5 (Band III) 802.11b/g : 11 BT : 79			
8. Carrier Frequency of each channel	802.11a Band I : 5000+n*5 MHz, n=36, 40, 44, 48 802.11a Band III : 5000+n*5 MHz, n=149, 153, 157, 161, 165 802.11b/g : 2412MHz+(n-1)*5MHz, n=1~11 BT : 2402MHz+n*1MHz, n=0~78			
9. Channel Spacing	802.11a : 20MHz 802.11b/g : 5MHz BT : 1MHz			
10. Antenna Type	PIFA Antenna			
11. Antenna Gain	3 dBi			
12. Maximum Output Power to Antenna (Normal condition)	802.11a : 16.50 dBm (Band I) / 19.20 dBm (Band III) 802.11b : 20.68 dBm / 802.11g: 22.28 dBm BT : 0.49 dBm (Normal) / 1.27 dBm (EDR)			
13. Modulation Type/Data Rate	802.11a : OFDM 802.11b/g : DSSS / OFDM BT : GFSK / ¼DQPSK / 8DPSK			
14. Function Type	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 complete test system refers to section 2.2 and EUT for EMI test.
- c. The EUT can operate on 5150MHz to 5250MHz and 5725MHz to 5850MHz as listed in section 1.4.
- d. Test Mode for radiated emission and conducted emission:

	802.11a Band I
Radiated Emission	Mode 1: Tx_Ch36_5180 MHz Mode 2: Tx_CH44_5220 MHz Mode 3: Tx_CH48_5240 MHz
Conducted Emission	Mode 1: BT Link + WLAN Link + Adapter

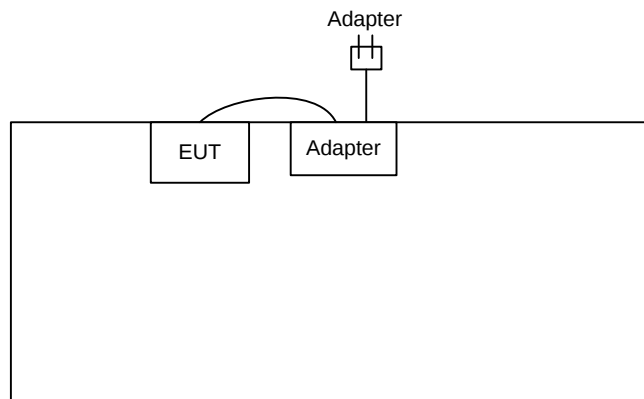
- e. Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 40000MHz.

2.2 Description of Test System

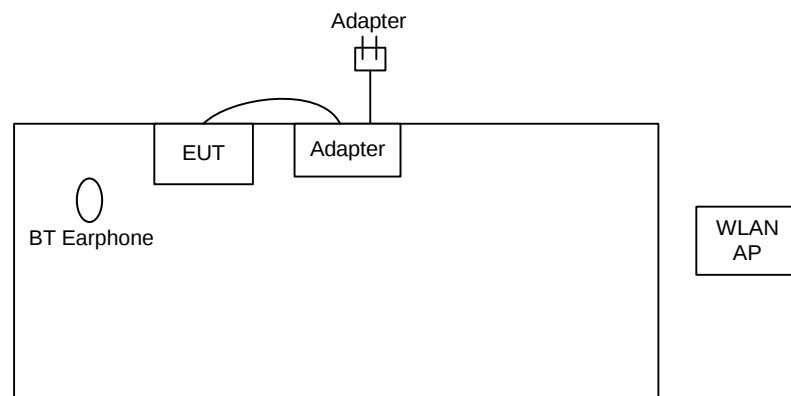
Item	Asset	Model Name	Power Cord
1.	WLAN AP (SMC)	SMC-100	N/A
2.	Bluetooth Earphone (Free Style)	JD-100	N/A

2.3 Connection Diagram of Test System

<Radiated Emission>



<Conducted Emission>



3. Operation of Equipment under Test

During the test, the following programs on WINXP were executed:
one self test program "CRTU" to keep transmitting signals.

4. General Information of Test

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiag, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-318-0055
Test Site No : CO04-HY, 03CH06-HY

4.1 Test Voltage

120V / 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2003

4.3 Test in Compliance with

FCC Part 15, Subpart E and IC RSS-210 Issue 6

4.4 Frequency Range Investigated

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation: from 30 MHz to 40000MHz

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)(5)	Conducted Emission	Pass
15.407(a)(1)(2)	Peak Transmit Power	Pass
15.407(b)(1)(2)(5)	Radiated Emission	Pass
15.407(a)(1)(2)	Power Spectral Density	Pass
15.407(b)(1)(2)	Band Edges Measurement	Pass
15.407(a)(1)(2)	Antenna Requirement	Pass
15.407(a)(6)	Peak Excursion Ratio Measurement	Pass
15.407(c)	Automatically Discontinue Transmission	Pass

5.2 Emission Bandwidth

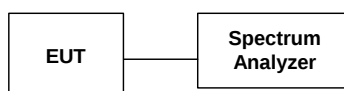
5.2.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.2.2 Test Procedure :

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to approximately 1% of the emission bandwidth. For these tests, the resolution bandwidth is 300 kHz, and peak detection is used. The 26 dB bandwidth is defined as the frequency range where the power is higher than the peak power minus 26 dB.

Test Setup Layout :



5.2.3 Test Result :

- Temperature : 23°C
- Relative Humidity :47%

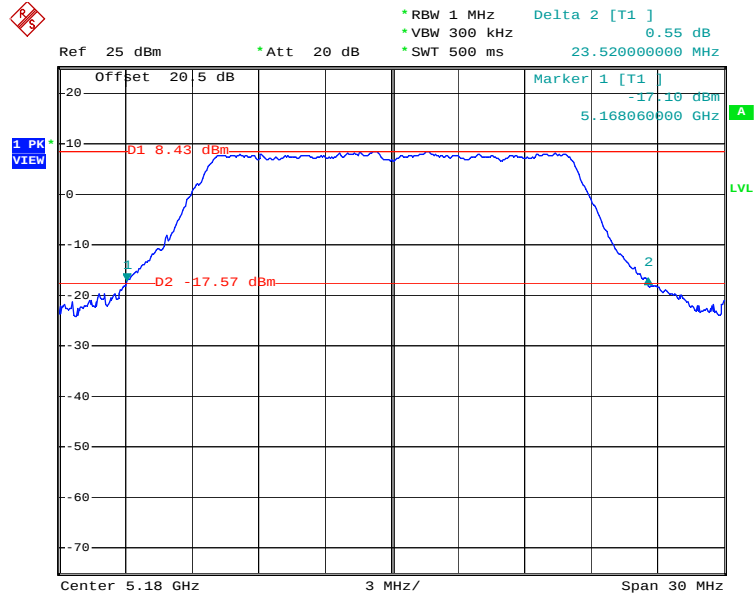
➤ Application: 802.11a

Channel	Frequency (MHz)	26dB Emission bandwidth (MHz)	Mode Ref. No.
36	5180	23.52	1
44	5220	23.94	2
48	5240	24.42	3

5.2.4 Test Data

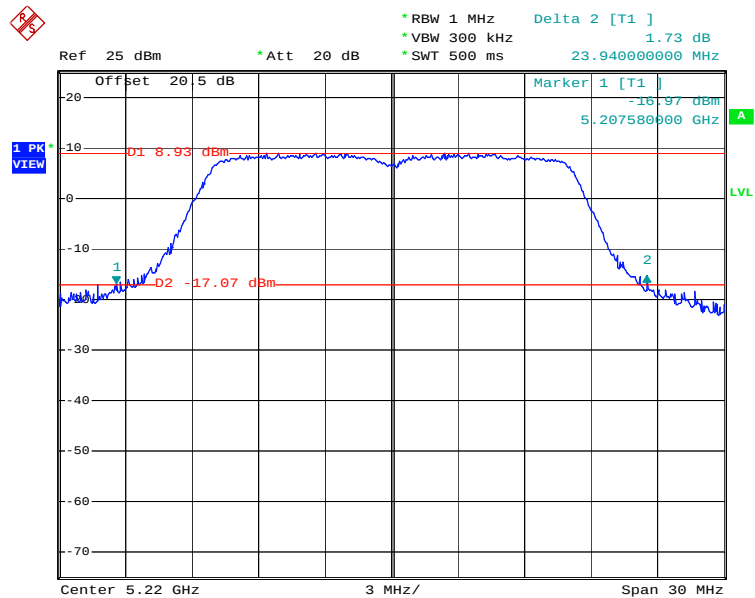
Mode Ref. No.

1

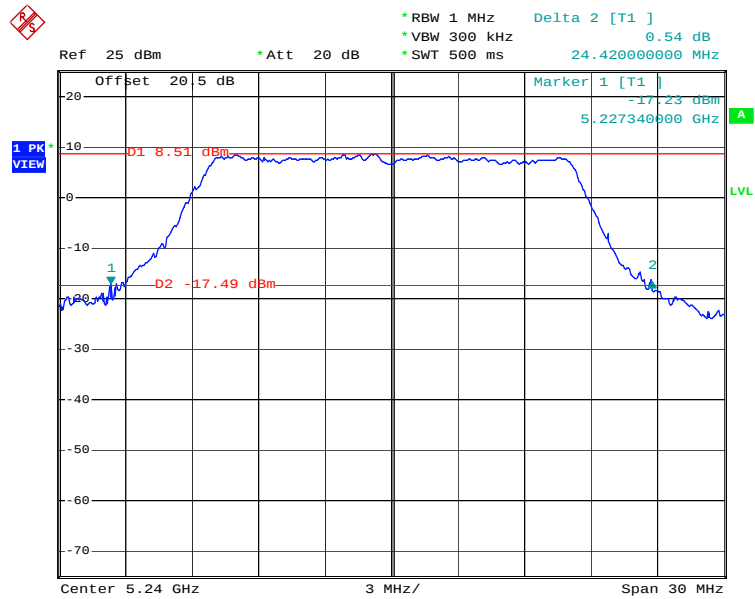


Date: 30.APR.2007 15:26:26

2



Date: 1.MAY.2007 20:01:59



Date: 30.APR.2007 15:32:04

5.3 Peak Transmit Power

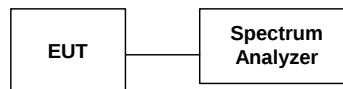
5.3.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.3.2 Test Procedure :

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz, and peak detection is used. The peak power is measured by channel power integration over the previously measured emissions bandwidth..

5.3.3 Test Setup Layout :



5.3.4 Test Result :

- Temperature : 23°C
- Relative Humidity :47%

➤ Application: 802.11a

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (dBm)	Mode Ref. No.
36	5180	16.50	17	1
44	5220	16.19	17	2
48	5240	16.07	17	3

Comments : The peak transmit power shall not exceed the lesser of 17dBm or 4dBm+10logB in 5150~5250 band;
24dBm

5180MHz 4dBm + 10log(23.52 MHz) = 17.71 dBm

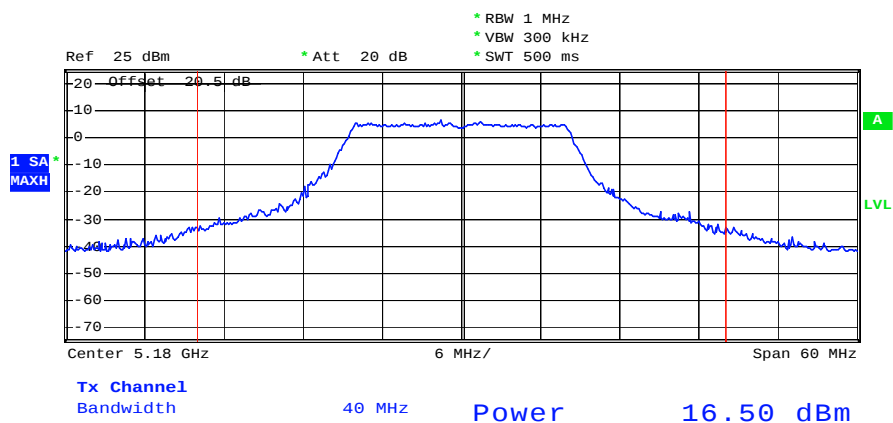
5220MHz 4dBm + 10log(23.94 MHz) = 17.79 dBm

5240MHz 4dBm + 10log(24.42 MHz) = 17.88 dBm

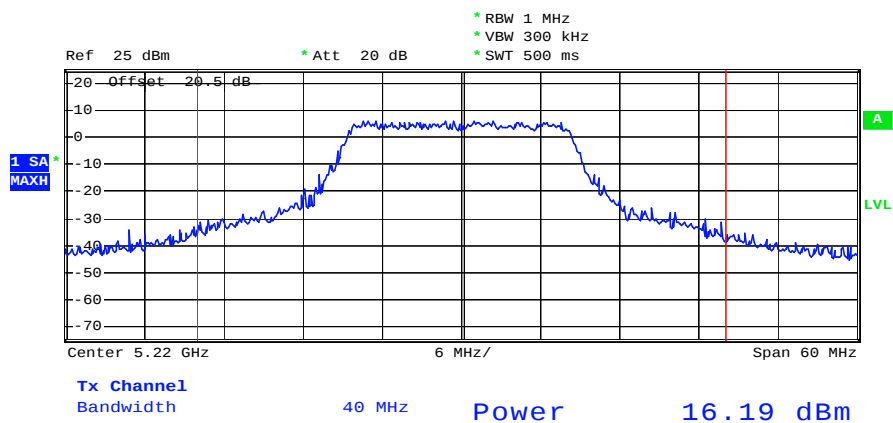
5.3.5 Test Data

Mode Ref. No.

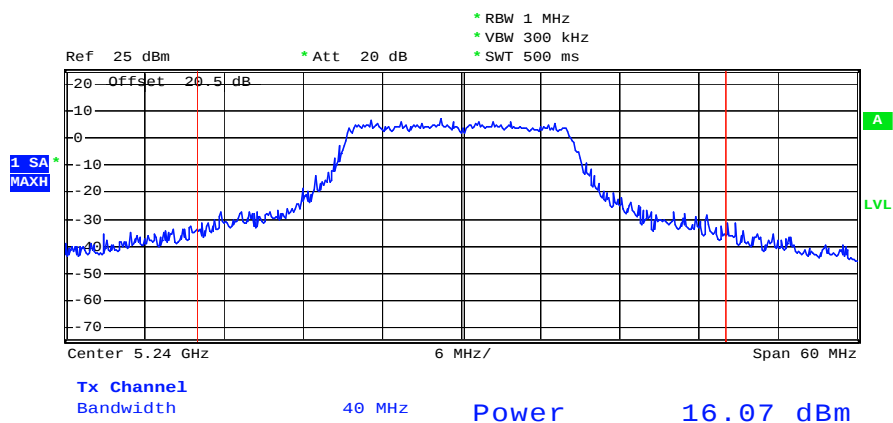
1



2



3



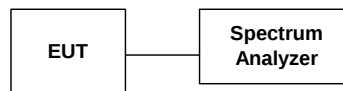
5.4 Peak Power Spectral Density

5.4.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.4.2 Test Procedure :

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz, sample detection is used, and the analyzer is set for video averaging.



5.4.3 Test Result :

- Temperature : 23°C
- Relative Humidity :47%

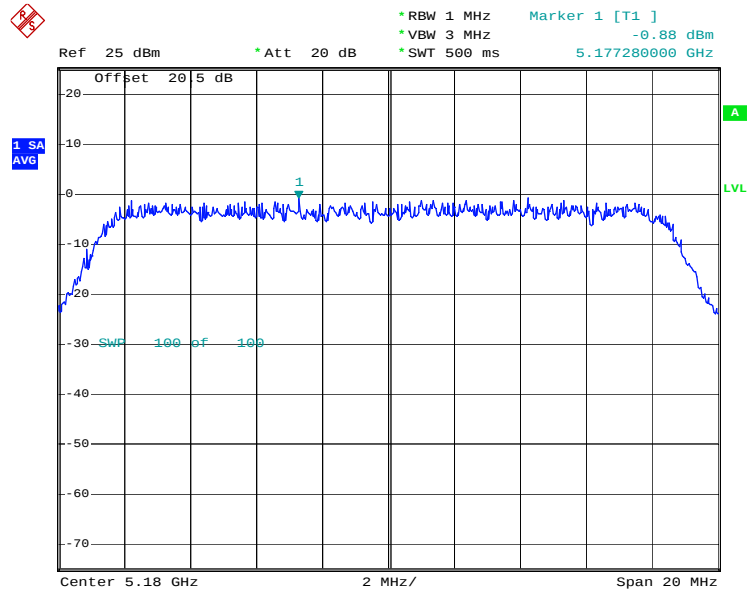
➤ Application: 802.11a

Channel	Frequency (MHz)	Power Spectral	Limits (dBm)	Mode
		Density (dBm)		Ref. No.
36	5180	-0.88	4	1
44	5220	-1.12	4	2
48	5240	-0.65	4	3

5.4.4 Test Data

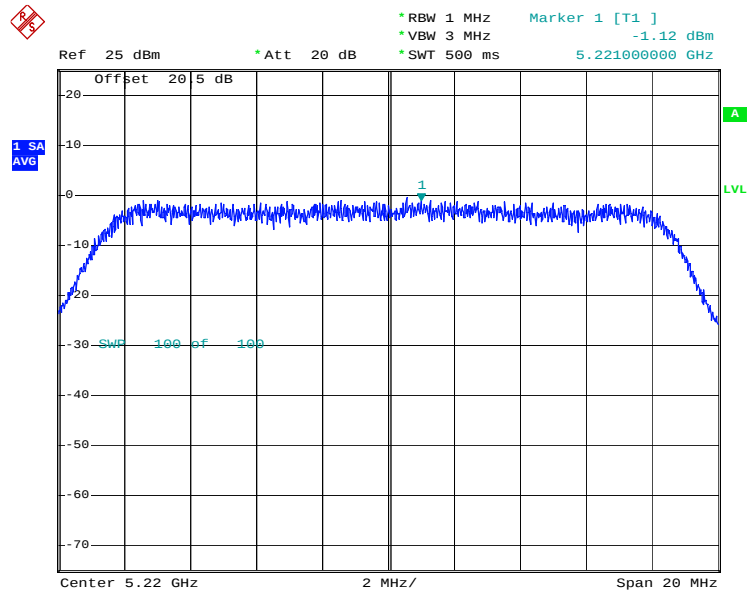
Mode Ref. No.

1



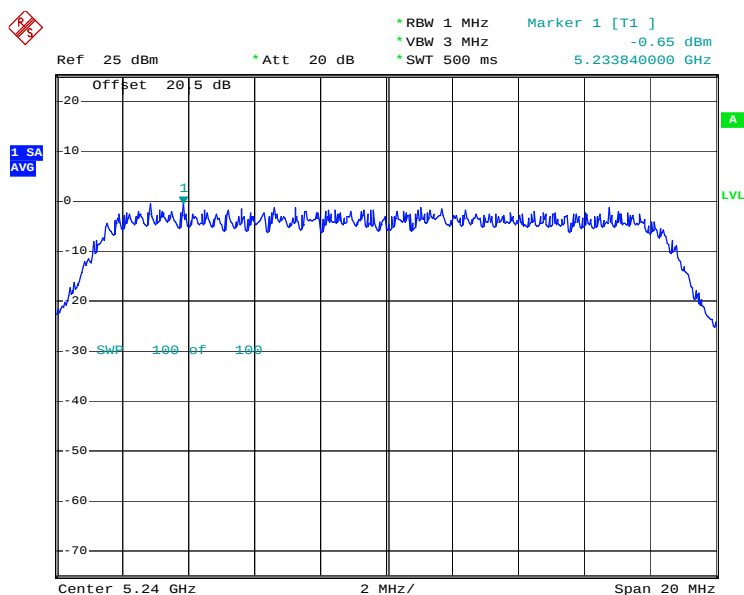
Date: 30.APR.2007 17:42:51

2



Date: 30.APR.2007 19:45:12

3



Date: 30.APR.2007 17:44:26

5.5 Test of Conducted Emission

As described in chapter 6 of this test report.

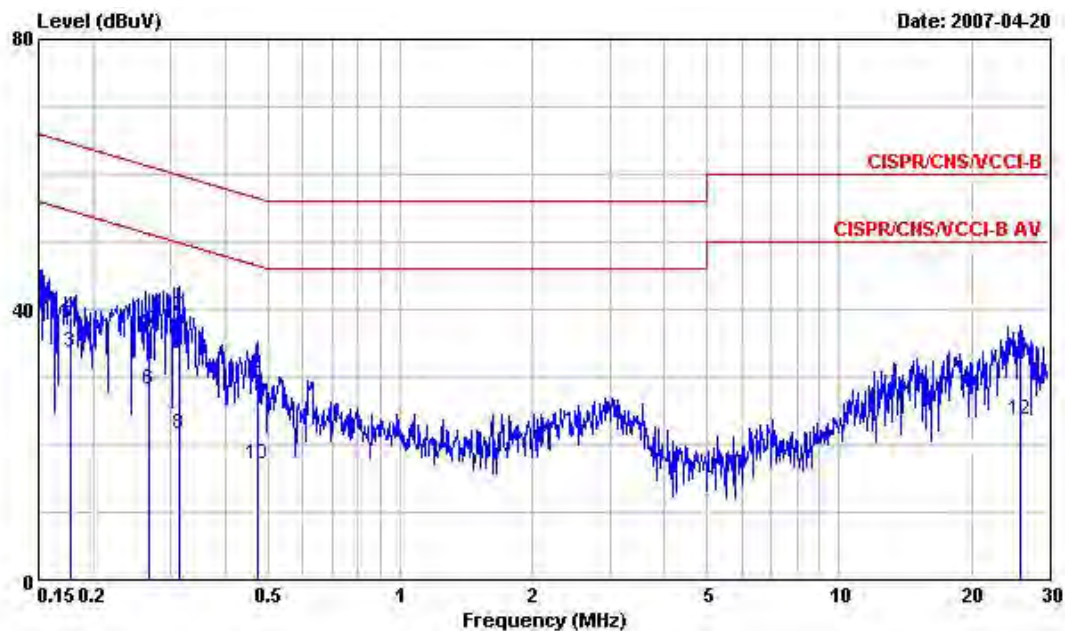
5.5.1 Test Procedures :

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power port of a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

5.5.2 Test Data

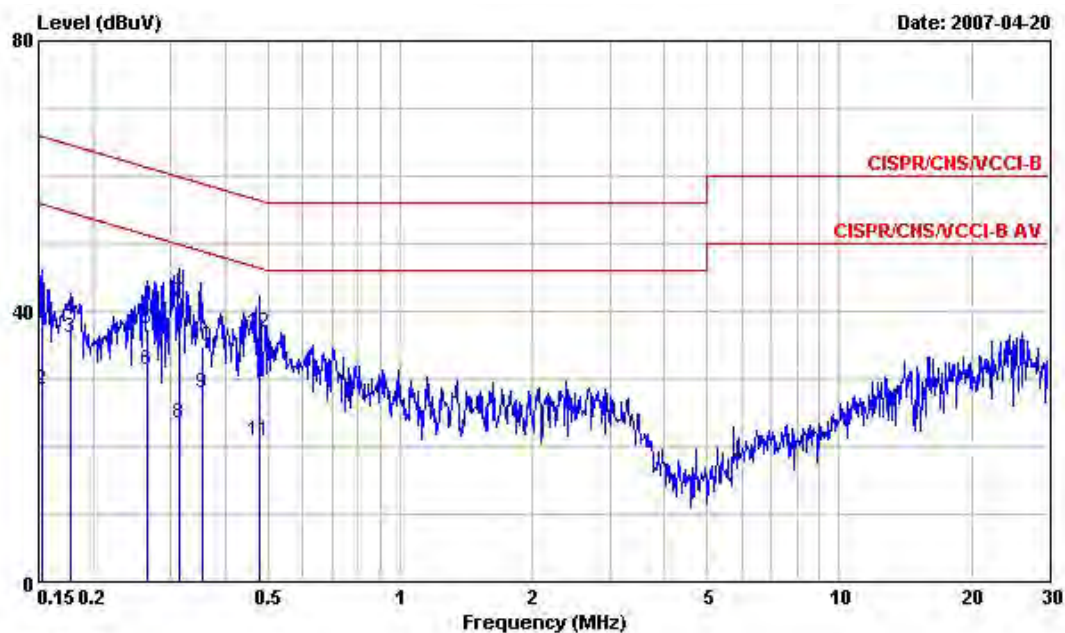
- Frequency Range of Test : 150kHz to 30 MHz
- Test Mode : Mode 1
- Temperature : 23 °C
- Relative Humidity : 47 %
- Test Engineer : James

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : Notebook
 POWER: AC 120V/60Hz
 Model : FR6D2906
 Memo : BT Link + WLAN Link + Adapter

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1500000	29.02	-26.98	56.00	28.22	0.10	0.70	Average
2	0.1500000	42.06	-23.94	66.00	41.26	0.10	0.70	QP
3	0.1773960	33.77	-20.84	54.61	33.09	0.10	0.58	Average
4	0.1773960	38.96	-25.65	64.61	38.28	0.10	0.58	QP
5	0.2667270	36.89	-24.33	61.22	36.33	0.10	0.46	QP
6	0.2667270	28.09	-23.13	51.22	27.53	0.10	0.46	Average
7	0.3149460	38.94	-20.90	59.84	38.44	0.10	0.40	QP
8	0.3149460	21.65	-28.19	49.84	21.15	0.10	0.40	Average
9	0.4736030	30.63	-25.82	56.45	30.08	0.10	0.45	QP
10	0.4736030	17.15	-29.30	46.45	16.60	0.10	0.45	Average
11	25.730	32.15	-27.85	60.00	30.91	0.32	0.92	QP
12	25.730	23.71	-26.29	50.00	22.47	0.32	0.92	Average



Site : C004-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : Notebook
 POWER: AC 120V/60Hz
 Model : FR6D2906
 Memo : BT Link + WLAN Link + Adapter

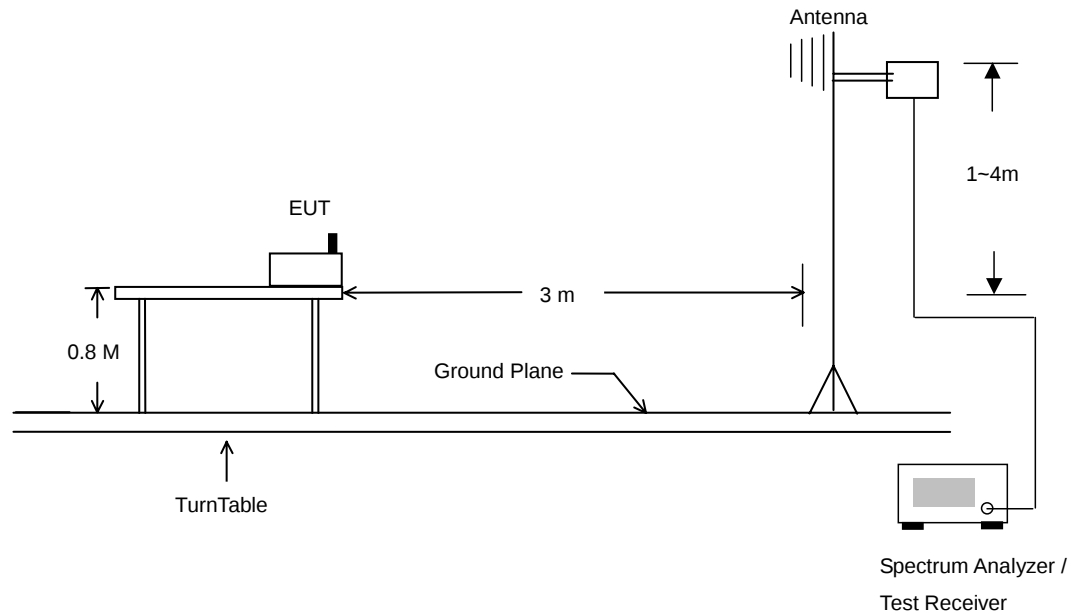
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1524030	41.38	-24.49	65.87	40.59	0.10	0.69	QP
2	0.1524030	28.46	-27.41	55.87	27.67	0.10	0.69	Average
3	0.1767760	36.11	-18.53	54.64	35.42	0.10	0.59	Average
4	0.1767760	38.65	-25.99	64.64	37.96	0.10	0.59	QP
5	0.2658290	37.24	-24.01	61.25	36.67	0.10	0.47	QP
6	0.2658290	31.44	-19.81	51.25	30.87	0.10	0.47	Average
7	0.3149460	41.36	-18.48	59.84	40.86	0.10	0.40	QP
8	0.3149460	23.33	-26.51	49.84	22.83	0.10	0.40	Average
9	0.3558320	27.81	-21.02	48.83	27.31	0.10	0.40	Average
10	0.3558320	34.86	-23.97	58.83	34.36	0.10	0.40	QP
11	0.4761190	20.88	-25.53	46.41	20.34	0.10	0.44	Average
12	0.4761190	36.94	-19.47	56.41	36.40	0.10	0.44	QP

5.6 Test of Radiated Emission

As described in chapter 6 of this test report.

5.6.1 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.

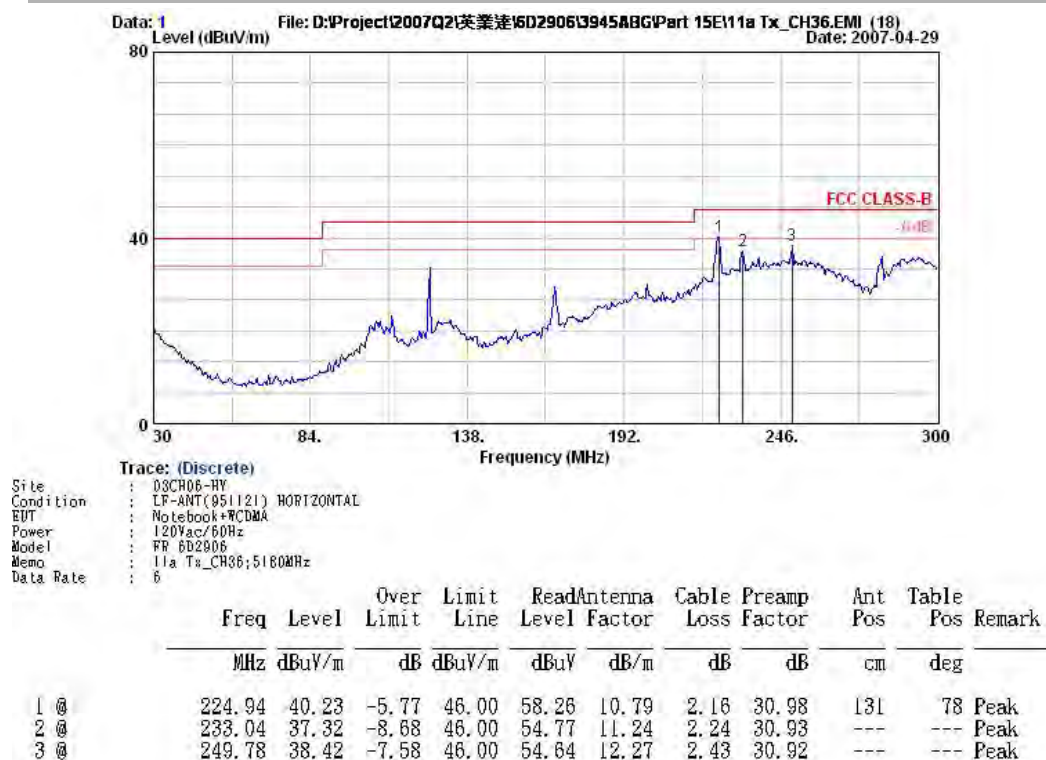
5.6.2 Typical Test Setup Layout of Radiated Emission

5.6.3 Test Data

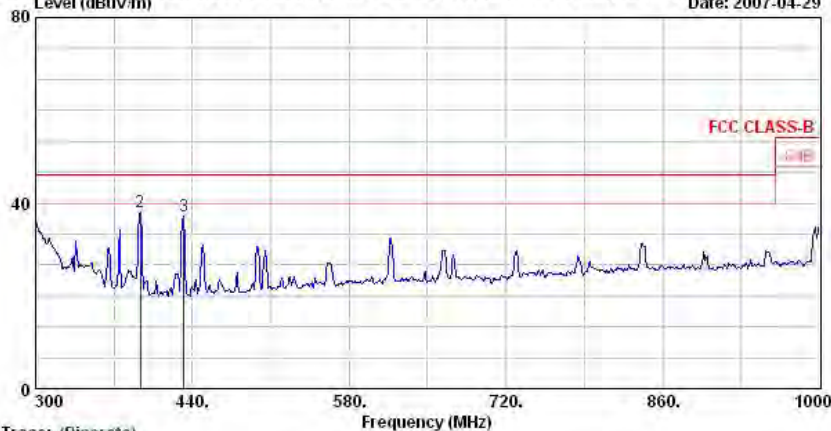
➤ Test Mode : Mode 1

- Temperature : 24°C
- Relative Humidity :53%
- Test Enginner : Andrew
- Polarization : Horizontal

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



Data: 2 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

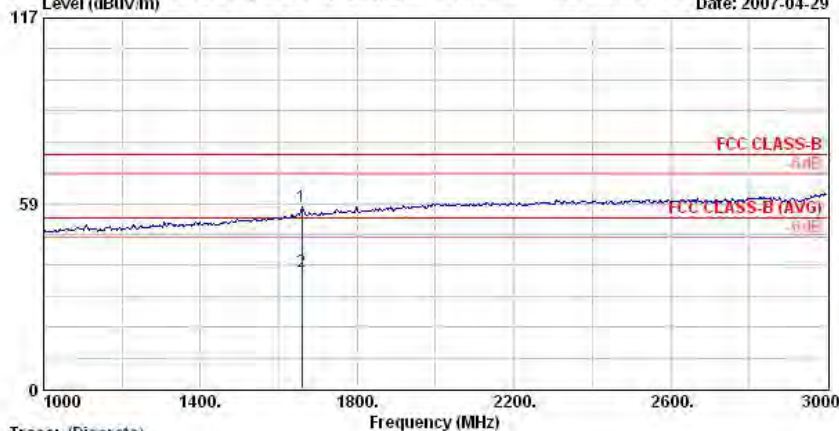


Trace: (Discrete)

Site : 03CH06-HV
Condition : LF-ANT(051121) HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	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 @	300.00	35.99	-10.01	46.00	51.08	13.21	2.63	30.93	---	---	Peak
2 @	393.80	37.93	-8.07	46.00	50.12	15.61	3.07	30.87	---	---	Peak
3 @	432.30	37.13	-8.87	46.00	48.40	16.31	3.26	30.83	---	---	Peak

Data: 3 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

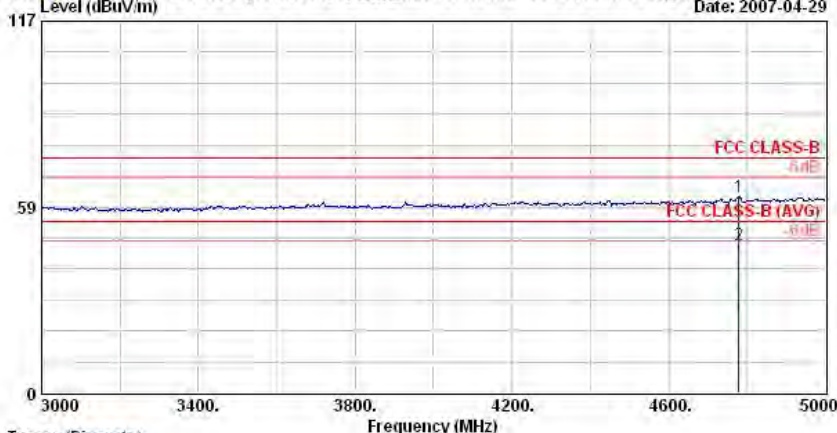


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	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 @	1658.00	57.51	-16.49	74.00	62.58	27.43	3.03	35.53	100	360	Peak
2 @	1658.00	37.03	-16.97	54.00	42.10	27.43	3.03	35.53	100	81	Average

Data: 4 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

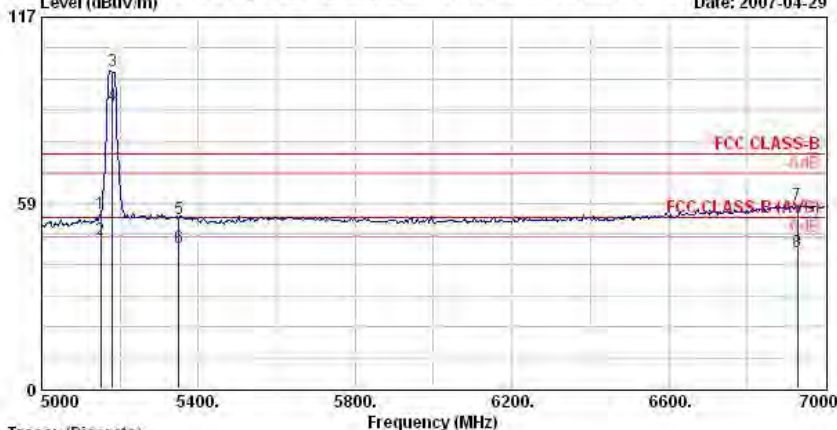


Trace: (Discrete)

Site : 03CH06-HY
Condition : RF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2806
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1 @	4778.00	61.93	-12.07	74.00	59.45	32.75	5.81	36.07	100	360	Peak
2 @	4778.00	46.61	-7.39	54.00	44.12	32.75	5.81	36.07	100	281	Average

Data: 5 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29



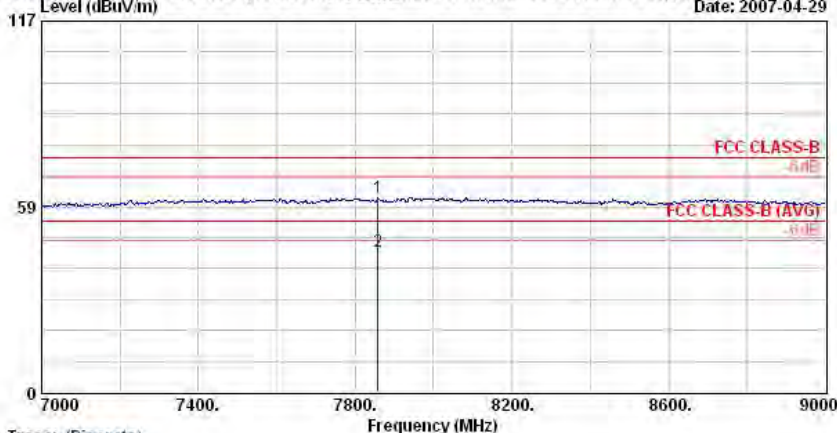
Trace: (Discrete)

Site : 03CH06-HY
Condition : RF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2806
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1 @	5150.00	55.10	-18.90	74.00	51.48	33.60	6.21	36.19	100	0	Peak
2 @	5150.00	46.82	-7.18	54.00	43.20	33.60	6.21	36.19	100	225	Average
3 @	5180.00	99.91			96.20	33.60	6.28	36.18	100	0	Peak
4 @	5180.00	89.20			85.50	33.60	6.28	36.18	113	297	Average
5 @	5350.00	53.53	-20.47	74.00	49.41	33.60	6.59	36.08	100	0	Peak
6 @	5350.00	44.20	-9.80	54.00	40.09	33.60	6.59	36.08	100	259	Average
7 @	6928.00	57.98	-16.02	74.00	48.48	37.43	7.81	35.74	100	0	Peak
8 @	6928.00	42.91	-11.09	54.00	33.41	37.43	7.81	35.74	100	176	Average

Remark: #3 and #4 Fundamental Signal

Data: 6 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

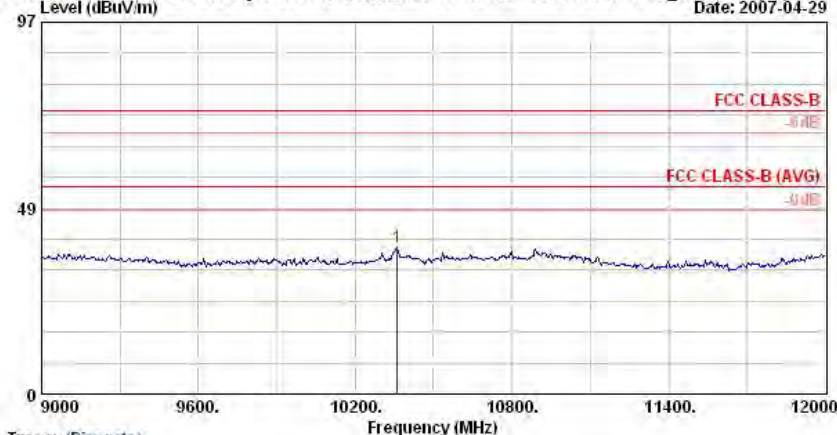


Trace: (Discrete)

Site : 03CH06-HY
Condition : HP-ANT-060410 HORIZONTAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	Freq	Level	Over	Limit	ReadAntenna	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 @	7858.00	61.34	-12.66	74.00	50.11	39.39	7.74	35.90	100 360 Peak
2 @	7858.00	44.57	-9.43	54.00	33.34	39.39	7.74	35.90	100 156 Average

Data: 7 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

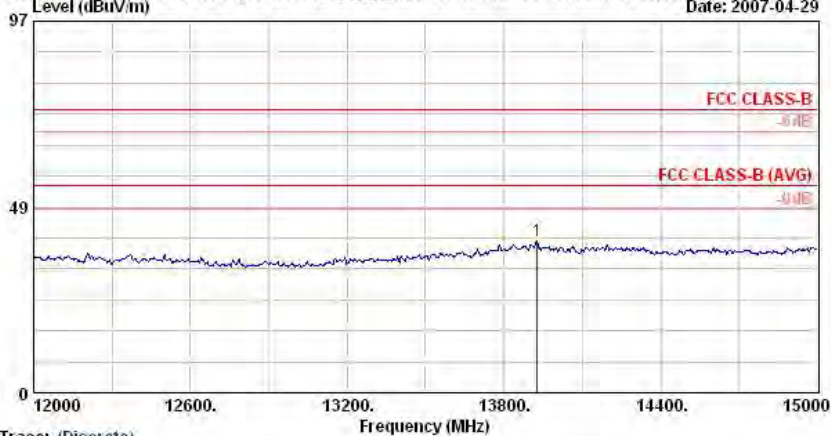


Trace: (Discrete)

Site : 03CH06-HY
Condition : HP-ANT(6-18)-060918 HORIZONTAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	Freq	Level	Over	Limit	ReadAntenna	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	10362.00	38.11	-35.89	74.00	74.01	-8.72	9.42	36.59	--- --- Peak

Data: 8 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

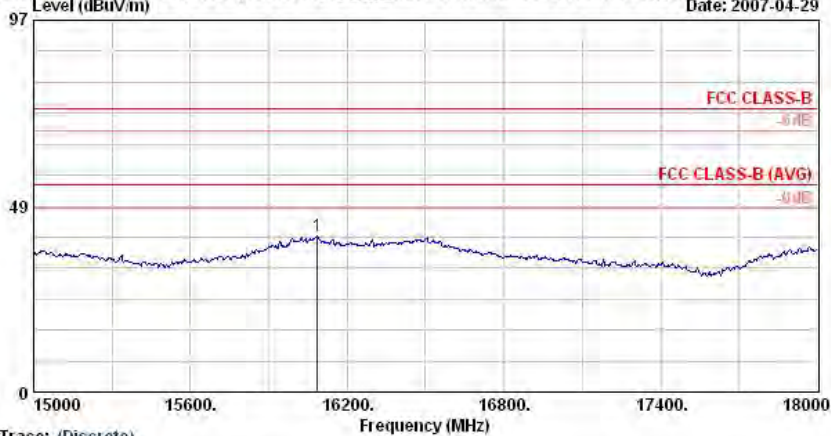


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1	13926.00	39.78	-34.22	74.00	69.27	-6.56	11.55	34.48	---	---	Peak

Data: 9 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29



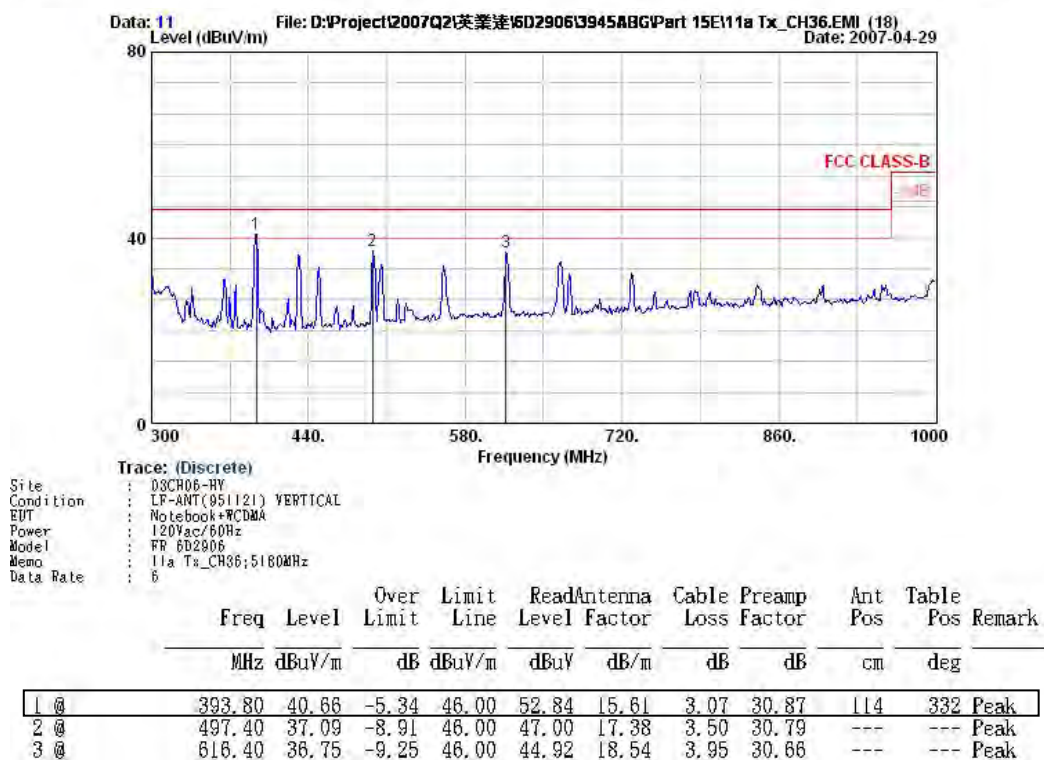
Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

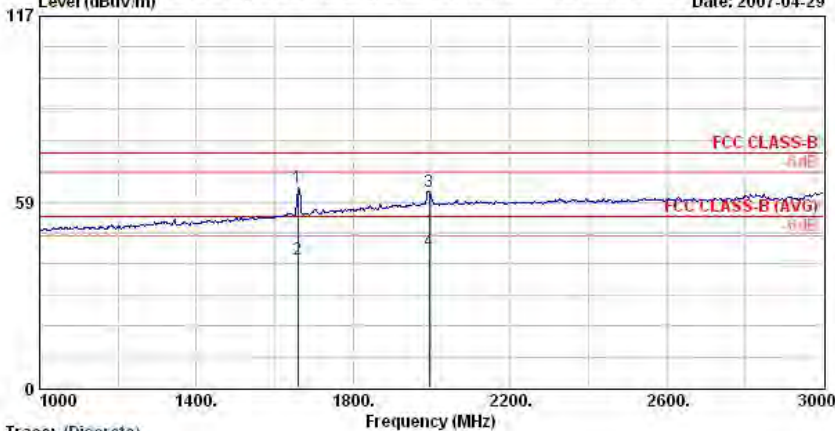
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1 @	16086.00	40.92	-33.08	74.00	69.38	-5.02	11.79	35.24	---	---	Peak

- Polarization : Vertical

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



Data: 12 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29
Level (dBuV/m)

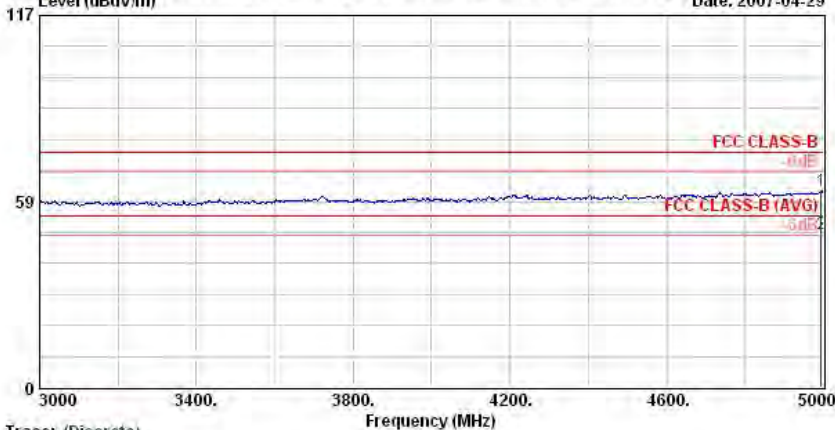


Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	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 @	1858.00	62.91	-11.09	74.00	67.99	27.43	3.03	35.53	100	360	Peak
2 @	1858.00	40.24	-13.76	54.00	45.31	27.43	3.03	35.53	100	245	Average
3 @	1994.00	61.83	-12.17	74.00	63.73	29.97	3.30	35.17	100	360	Peak
4 @	1994.00	42.99	-11.01	54.00	44.89	29.97	3.30	35.17	100	195	Average

Data: 13 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29
Level (dBuV/m)

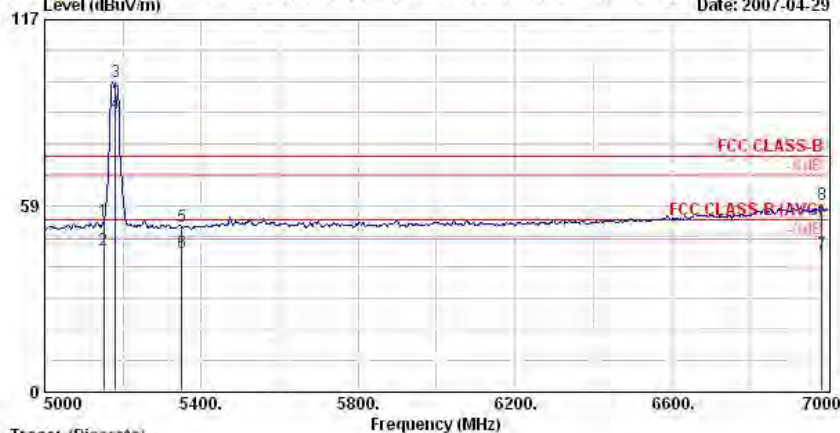


Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	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 @	4994.00	61.71	-12.29	74.00	58.43	33.60	5.96	36.28	100	360	Peak
2 @	4994.00	48.25	-5.75	54.00	44.97	33.60	5.96	36.28	100	289	Average

Data: 14 File: D:\Project\2007Q2\英業達\6D2906\3945ABGV\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29



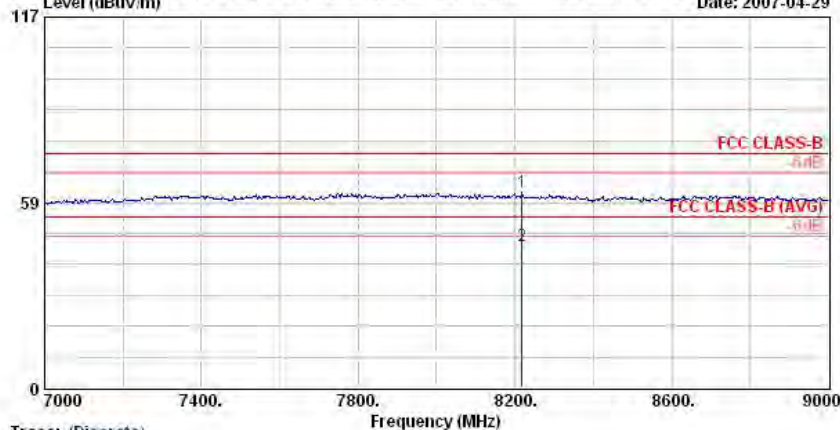
Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	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	5150.00	53.52	-20.48	74.00	49.90	33.60	6.21	36.19	100	0 Peak
2	5150.00	44.47	-9.53	54.00	40.85	33.60	6.21	36.19	100	284 Average
3 X	5180.00	97.52			93.82	33.60	6.28	36.18	100	0 Peak
4 @	5180.00	87.23			83.53	33.60	6.28	36.18	100	284 Average
5	5350.00	51.65	-22.35	74.00	47.54	33.60	6.59	36.08	100	0 Peak
6	5350.00	43.66	-10.34	54.00	39.55	33.60	6.59	36.08	100	284 Average
7	6984.00	42.95	-11.05	54.00	33.10	37.71	7.89	35.75	100	175 Average
8	6984.00	58.50	-15.50	74.00	48.65	37.71	7.89	35.75	100	0 Peak

Remark: #3 and #4 Fundamental Signal

Data: 15 File: D:\Project\2007Q2\英業達\6D2906\3945ABGV\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

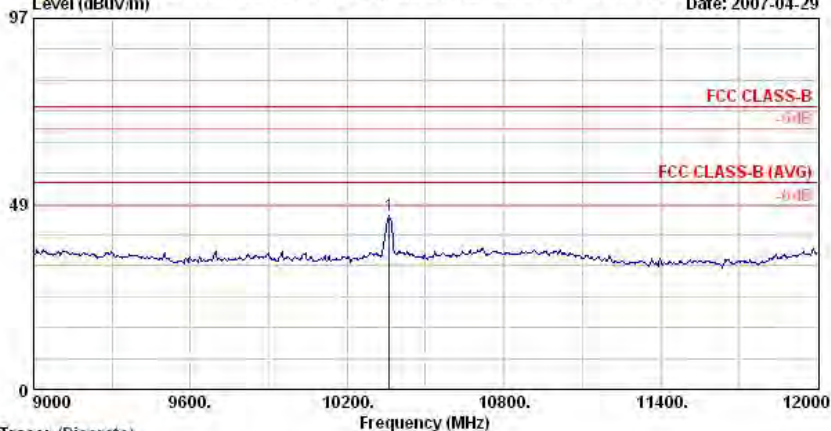


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	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 @	8218.00	61.64	-12.36	74.00	50.15	39.42	8.04	35.97	100	360 Peak
2 @	8218.00	44.60	-9.40	54.00	33.11	39.42	8.04	35.97	100	161 Average

Data: 16 File: D:\Project\2007Q2\美泰達\6D2906\3945A8G\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29

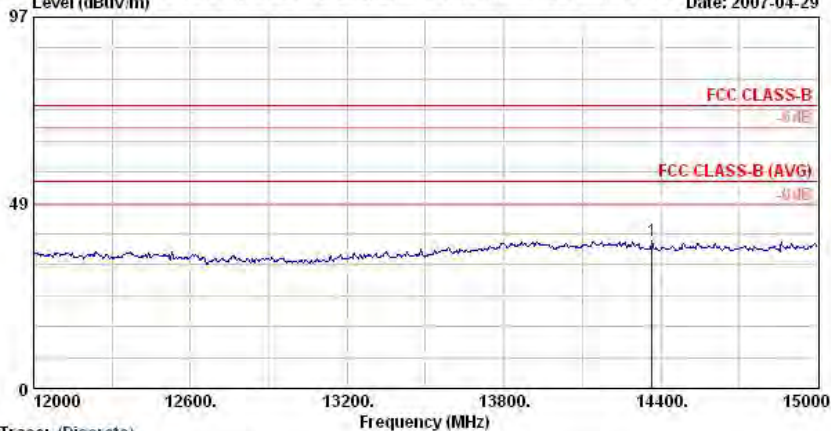


Trace: (Discrete)

Site : 03CH06-RV
Condition : HP-ANT(6-18)-060918 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1 @	10362.00	45.53	-28.47	74.00	81.43	-8.72	9.42	36.59	---	---	Peak

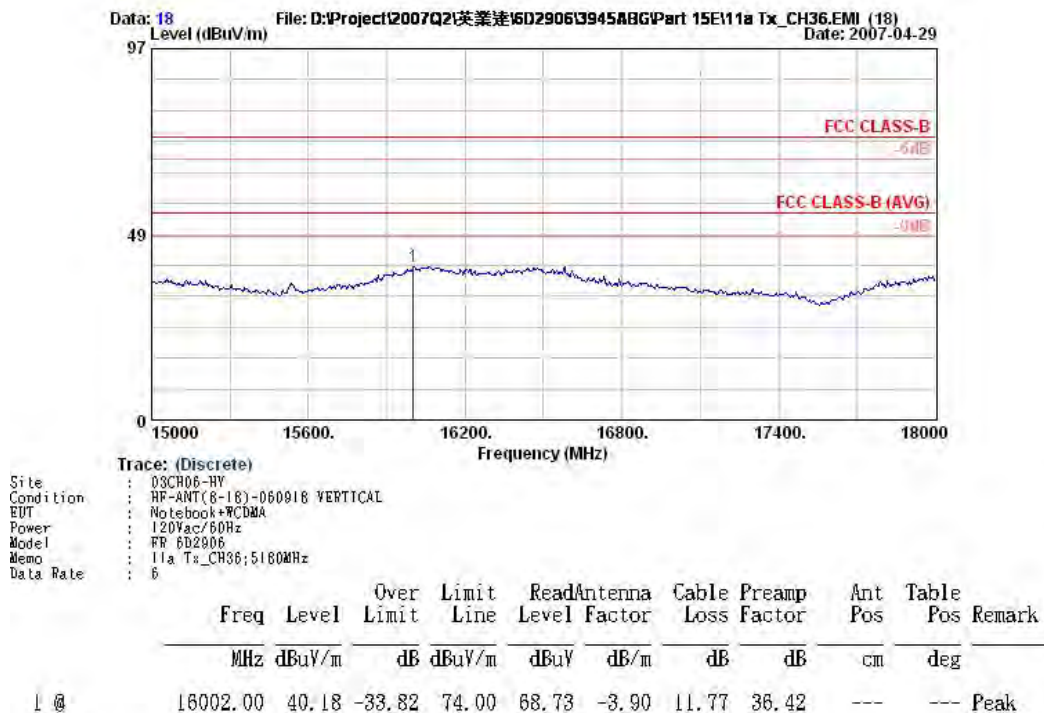
Data: 17 File: D:\Project\2007Q2\美泰達\6D2906\3945A8G\Part 15E\11a Tx_CH36.EMI (18) Date: 2007-04-29



Trace: (Discrete)

Site : 03CH06-RV
Condition : HP-ANT(6-18)-060918 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH36;5180MHz
Data Rate : 6

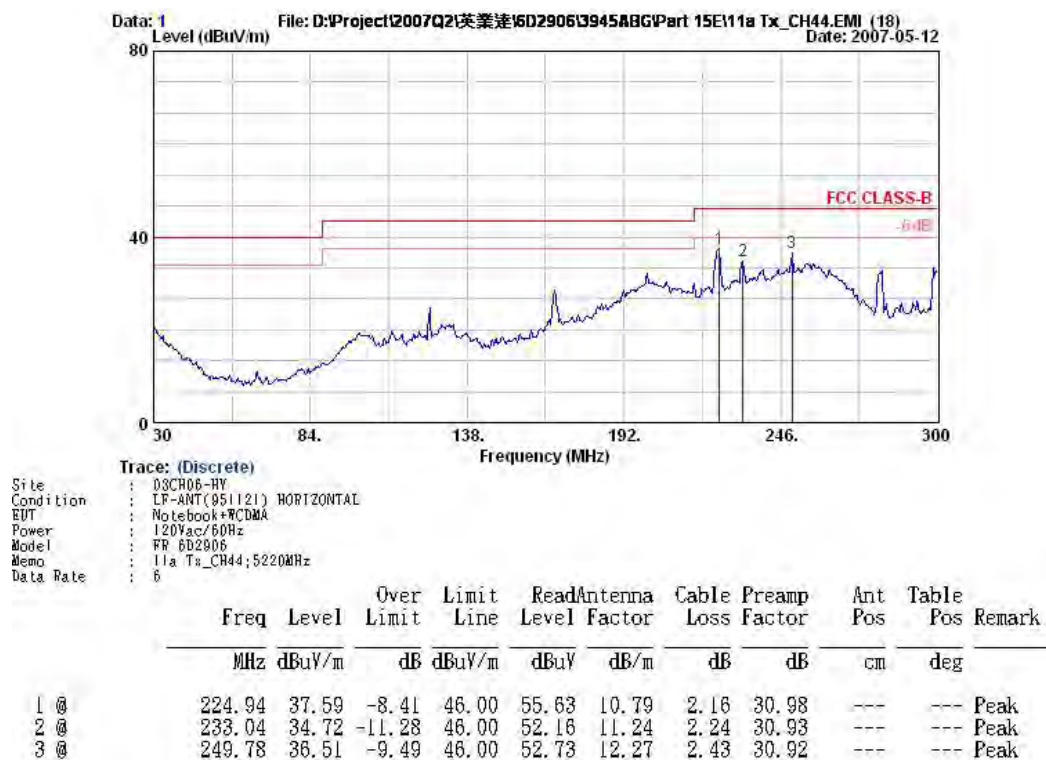
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	14367.00	38.75	-35.25	74.00	68.76	-6.47	11.70	35.24	---	---	Peak



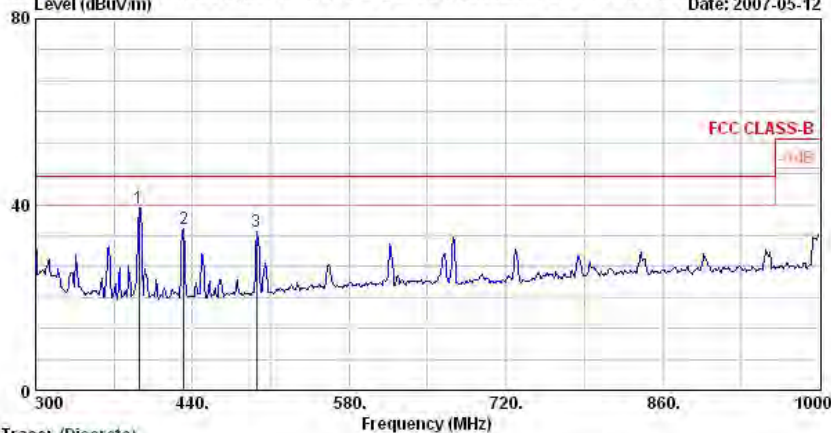
Remark : Frequency from 18GHz to 40GHz, the emission emitted by the EUT is too low to be measured.

- Test Mode : Mode 2
- Temperature : 24°C
 - Relative Humidity :53%
 - Test Enginner : Andrew
 - Polarization : Horizontal

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



Data: 2 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-12

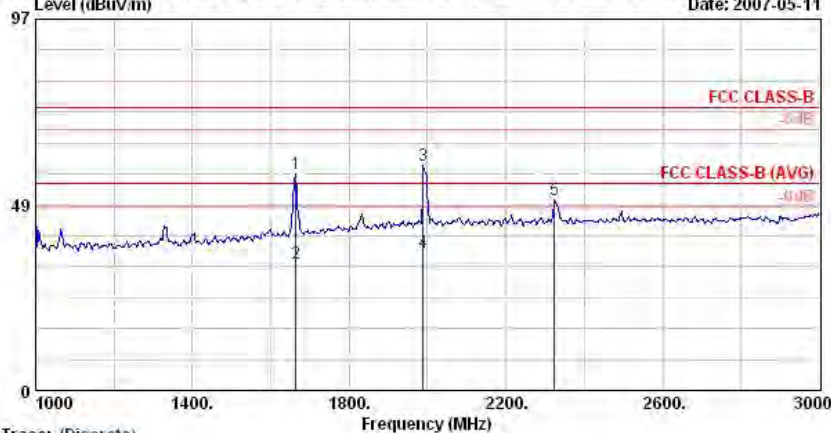


Trace: (Discrete)

Site : 03CH06-RV
Condition : LF-ANT(951121) HORIZONTAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	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 @	392.40	39.32	-6.68	46.00	51.53	15.59	3.07	30.87	100	229	Peak
2 @	432.30	34.67	-11.33	46.00	45.94	16.31	3.26	30.83	---	---	Peak
3 @	497.40	34.30	-11.70	46.00	44.21	17.38	3.50	30.79	---	---	Peak

Data: 3 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-11

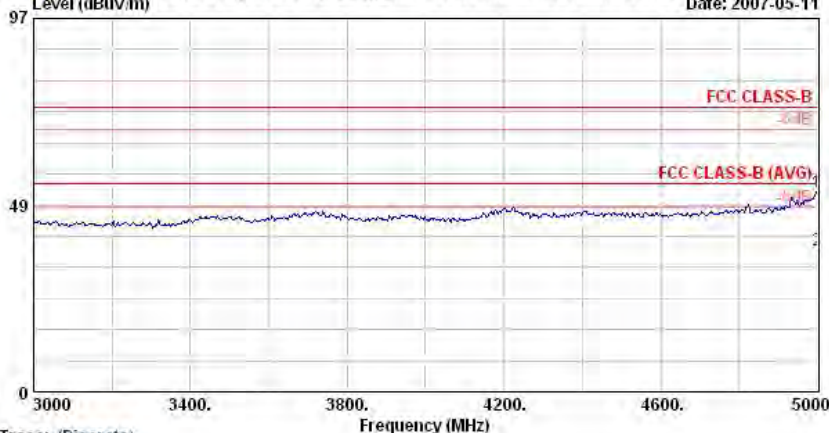


Trace: (Discrete)

Site : 03CH06-RV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	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 @	1664.00	56.56	-17.44	74.00	61.63	27.43	3.03	35.53	100	0	Peak
2 @	1664.00	33.16	-20.84	54.00	38.23	27.43	3.03	35.53	100	11	Average
3 @	1988.00	58.78	-15.22	74.00	60.69	29.97	3.30	35.17	100	0	Peak
4 @	1988.00	35.95	-18.05	54.00	37.85	29.97	3.30	35.17	100	160	Average
5 @	2324.00	49.62	-24.38	74.00	51.10	30.23	3.69	35.40	100	0	Peak

Data: 4 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-11

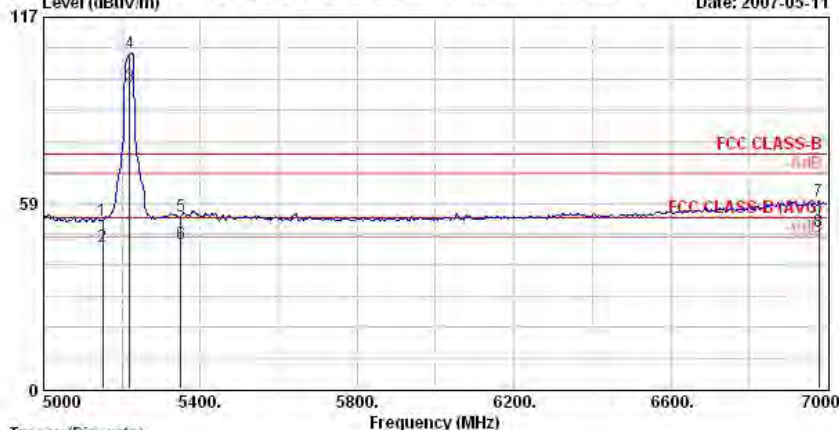


Trace: (Discrete)

Site : 03CH06-RV
Condition : HP-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Loss	Factor	Pos	Pos	Remark
					Factor			cm	deg	
1 @	5000.00	51.91	-22.09	74.00	48.61	33.60	5.97	36.28	---	Peak
2 @	5000.00	36.71	-17.29	54.00	33.42	33.60	5.97	36.28	100	227 Average

Data: 5 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-11



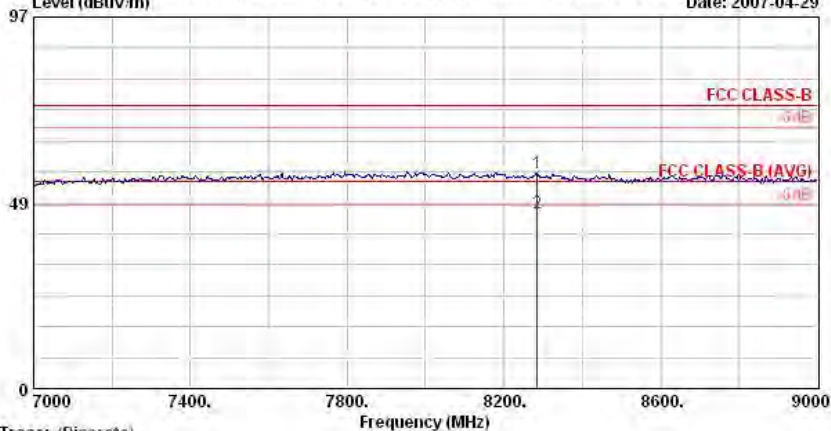
Trace: (Discrete)

Site : 03CH06-RV
Condition : HP-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Loss	Factor	Pos	Pos	Remark
					Factor			cm	deg	
1 @	5150.00	53.13	-20.87	74.00	49.51	33.60	6.21	36.19	100	0 Peak
2 @	5150.00	44.91	-9.09	54.00	41.29	33.60	6.21	36.19	100	317 Average
3 @	5220.00	95.30			91.51	33.60	6.35	36.16	100	317 Average
4 @	5220.00	105.78			101.97	33.60	6.35	36.15	100	--- Peak
5 @	5350.00	54.52	-19.48	74.00	50.41	33.60	6.59	36.08	100	0 Peak
6 @	5350.00	45.77	-8.23	54.00	41.66	33.60	6.59	36.08	100	317 Average
7 @	6978.00	59.20	-14.80	74.00	49.33	37.71	7.89	35.73	100	0 Peak
8 @	6978.00	49.74	-4.26	54.00	39.87	37.71	7.89	35.73	100	285 Average

Remark: #3 and #4 Fundamental Signal

Data: 6 File: D:\Project\2007Q2\美泰達\6D2906\3945ABGP\Part 15E11a Tx_CH44.EMI (18) Date: 2007-04-29

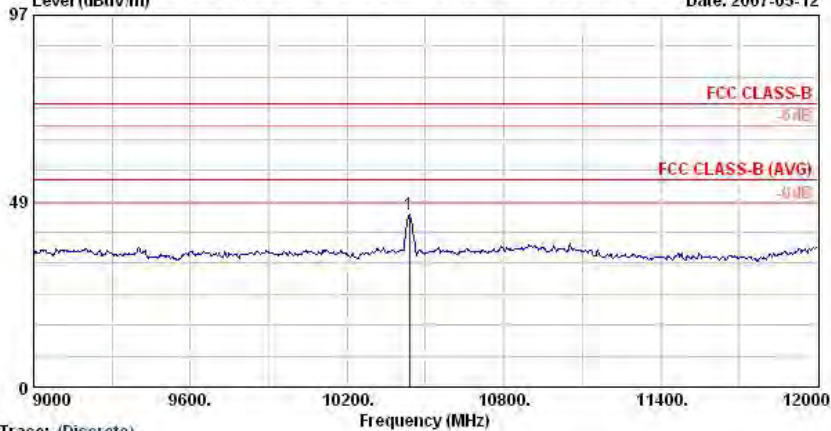


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	8284.00	56.39	-17.61	74.00	44.92	39.38	8.10	36.01	---	---
2 @	8284.00	45.97	-8.03	54.00	34.50	39.38	8.10	36.01	100	228

Data: 7 File: D:\Project\2007Q2\美泰達\6D2906\3945ABGP\Part 15E11a Tx_CH44.EMI (18) Date: 2007-05-12

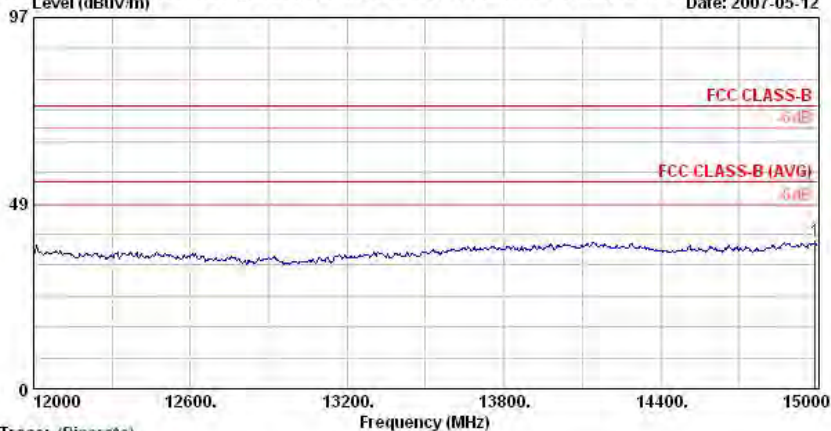


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT(6-18)-060918 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	10437.00	45.09	-28.91	74.00	80.84	-8.60	9.46	36.62	---	---

Data: 8 File: D:\Project\2007Q2\美菱達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-12

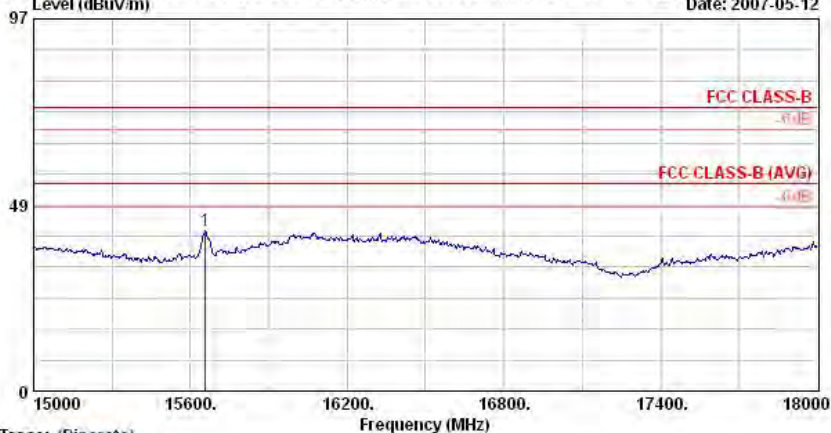


Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1	14991.00	38.48	-35.52	74.00	69.45	-6.21	11.27	36.03	---	---	Peak

Data: 9 File: D:\Project\2007Q2\美菱達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-12



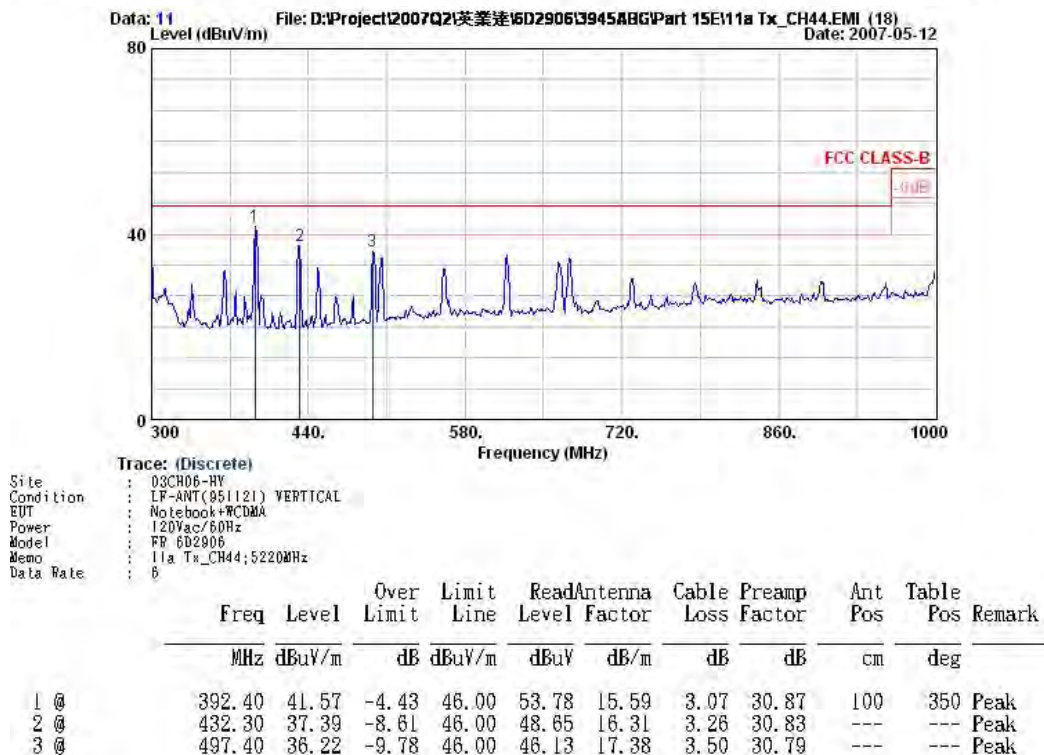
Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

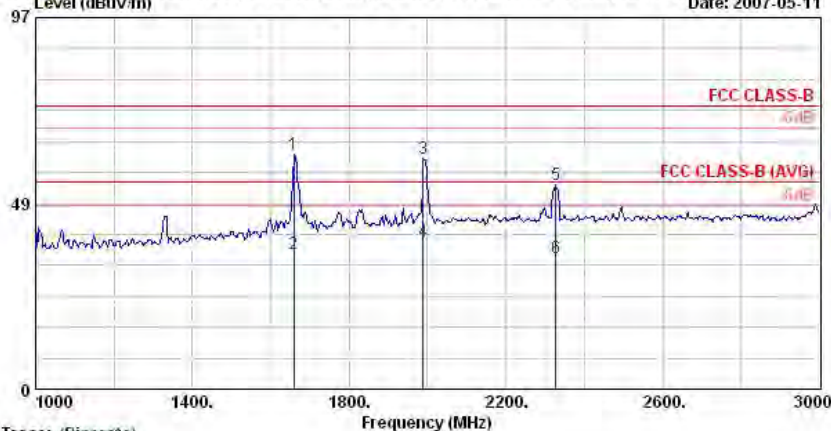
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1	15657.00	42.01	-31.99	74.00	75.26	-6.28	11.46	38.43	---	---	Peak

- Polarization : Vertical

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



Data: 12 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-11

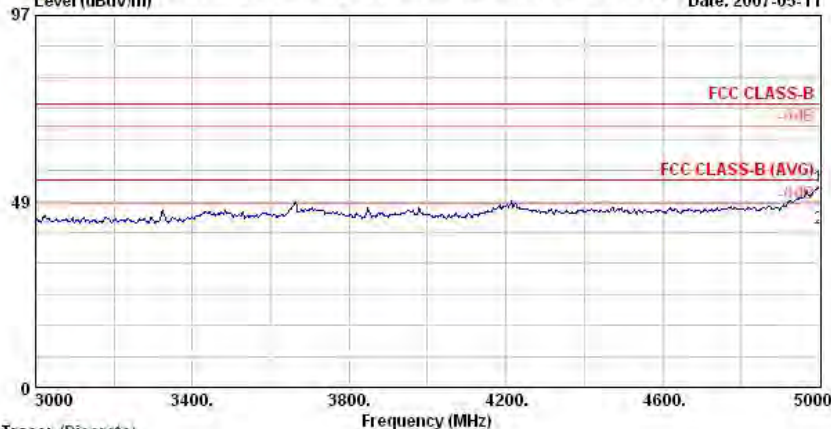


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	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 @	1658.00	61.13	-12.87	74.00	66.20	27.43	3.03	35.53	100	0	Peak
2 @	1658.00	35.39	-18.61	54.00	40.46	27.43	3.03	35.53	100	125	Average
3 @	1988.00	60.04	-13.96	74.00	61.95	29.97	3.30	35.17	100	0	Peak
4 @	1988.00	38.61	-15.39	54.00	40.51	29.97	3.30	35.17	100	191	Average
5 @	2328.00	53.50	-20.50	74.00	54.98	30.23	3.69	35.40	100	0	Peak
6 @	2328.00	34.12	-19.88	54.00	35.61	30.23	3.69	35.40	100	175	Average

Data: 13 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-11

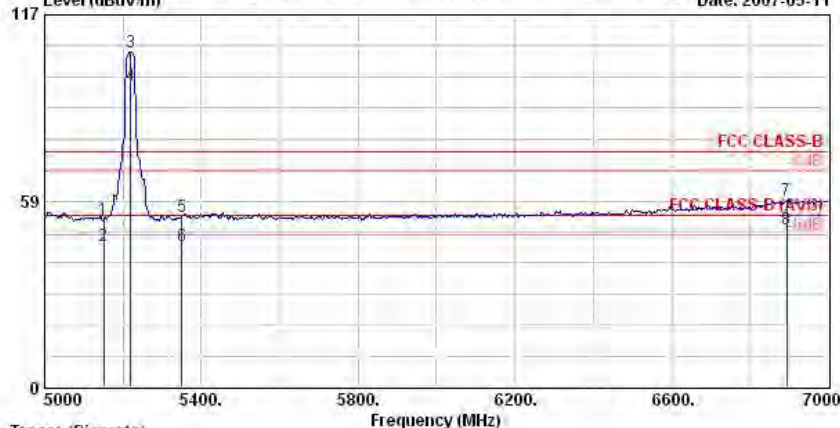


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	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 @	5000.00	52.37	-21.63	74.00	49.08	33.60	5.97	36.28	---	---	Peak
2 @	5000.00	41.61	-12.39	54.00	38.32	33.60	5.97	36.28	100	204	Average

Data: 14 File: D:\Project\2007Q2\美菱达\6D2906\3945ABGVPart 15E\11a Tx_CH44.EMI (18) Date: 2007-05-11



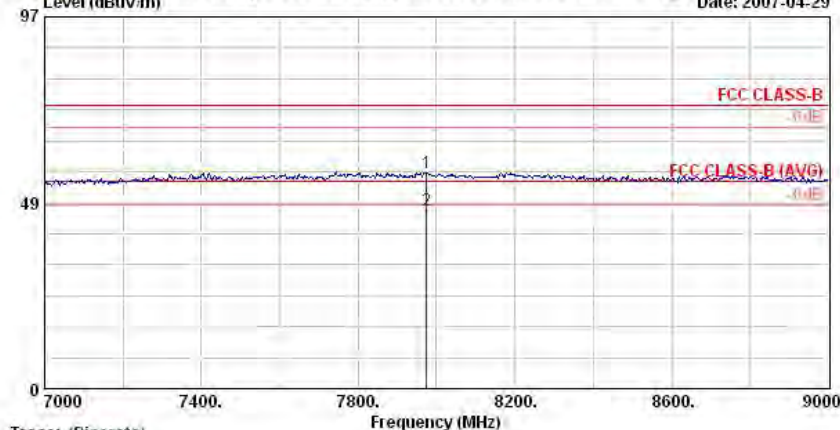
Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 0

	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 @	5150.00	52.84	-21.16	74.00	49.22	33.60	6.21	36.19	100	0	Peak
2 @	5150.00	44.55	-9.45	54.00	40.93	33.60	6.21	36.19	100	336	Average
3 @	5220.00	105.30			101.51	33.60	6.35	36.16	100	0	Peak
4 @	5220.00	94.98			91.19	33.60	6.35	36.16	100	336	Average
5 @	5350.00	53.52	-20.48	74.00	49.41	33.60	6.59	36.08	100	0	Peak
6 @	5350.00	44.48	-9.52	54.00	40.37	33.60	6.59	36.08	100	336	Average
7 @	6894.00	58.72	-15.28	74.00	49.47	37.24	7.76	35.75	100	0	Peak
8 @	6894.00	49.47	-4.53	54.00	40.22	37.24	7.76	35.75	100	198	Average

Remark: #3 and #4 Fundamental Signal

Data: 15 File: D:\Project\2007Q2\美菱达\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

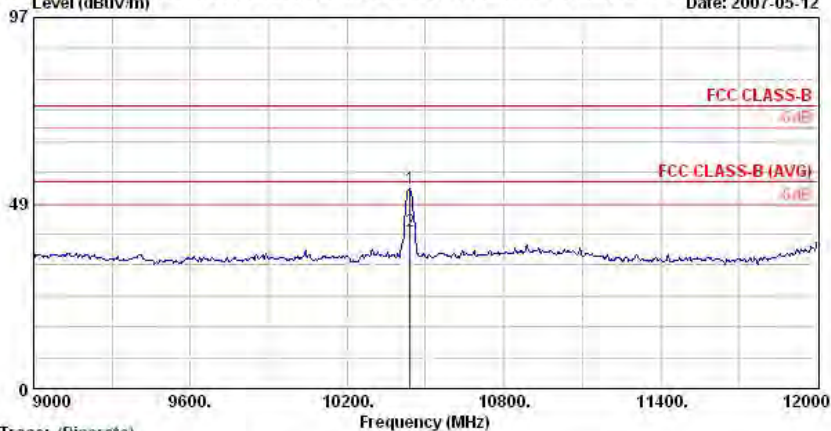


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 0

	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 @	7974.00	56.29	-17.71	74.00	44.81	39.55	7.78	35.86	---	---	Peak
2 @	7974.00	46.38	-7.62	54.00	34.90	39.55	7.78	35.86	100	301	Average

Data: 16 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-12

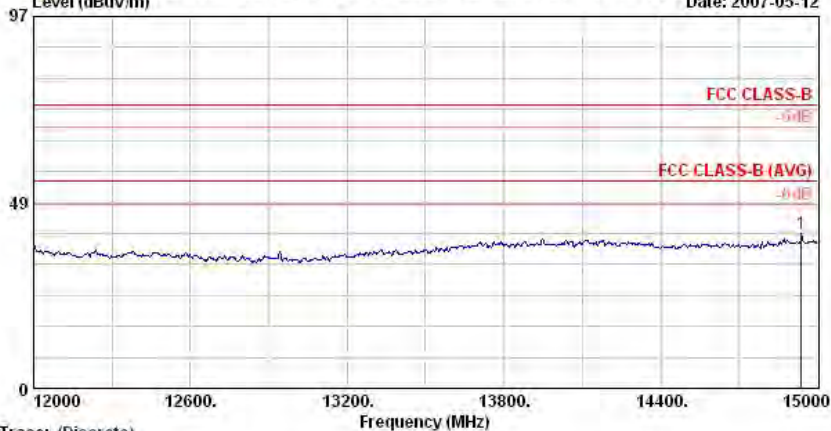


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT(8-18)-060918 VERTICAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1 @	10440.00	52.25	-21.75	74.00	88.01	-8.60	9.46	36.62	100	0	Peak
2 @	10440.00	41.04	-12.96	54.00	76.79	-8.60	9.46	36.62	106	349	Average

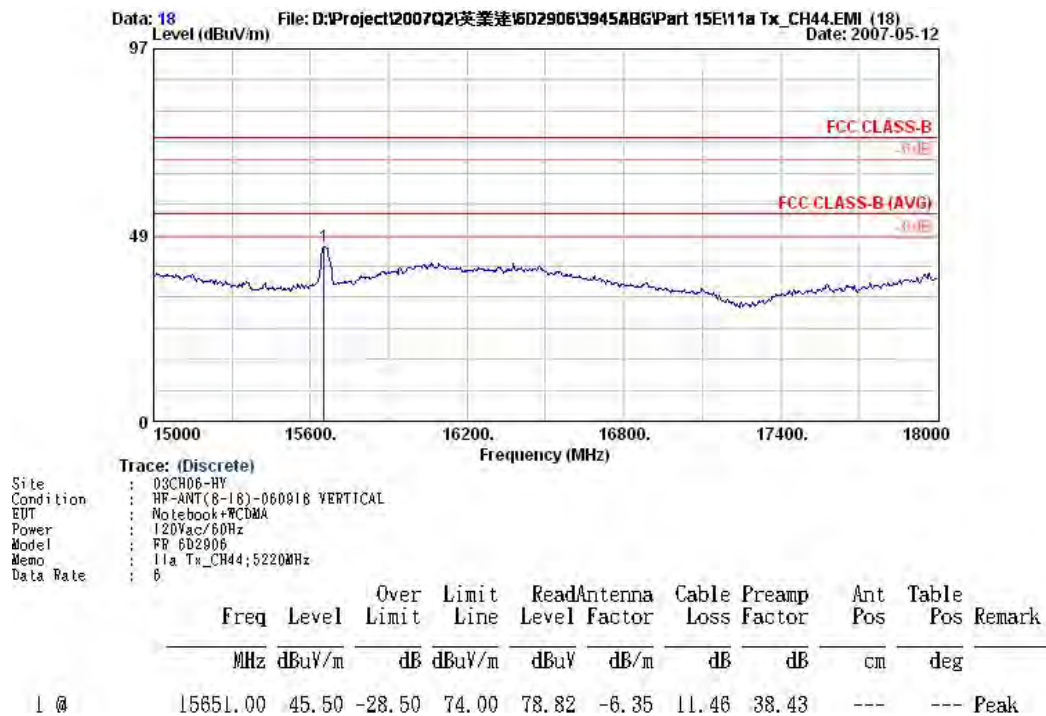
Data: 17 File: D:\Project\2007Q2\美業達\6D2906\3945ABG\Part 15E\11a Tx_CH44.EMI (18) Date: 2007-05-12



Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT(8-18)-060918 VERTICAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH44;5220MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1	14937.00	40.28	-33.72	74.00	71.20	-6.25	11.31	35.98	---	---	Peak

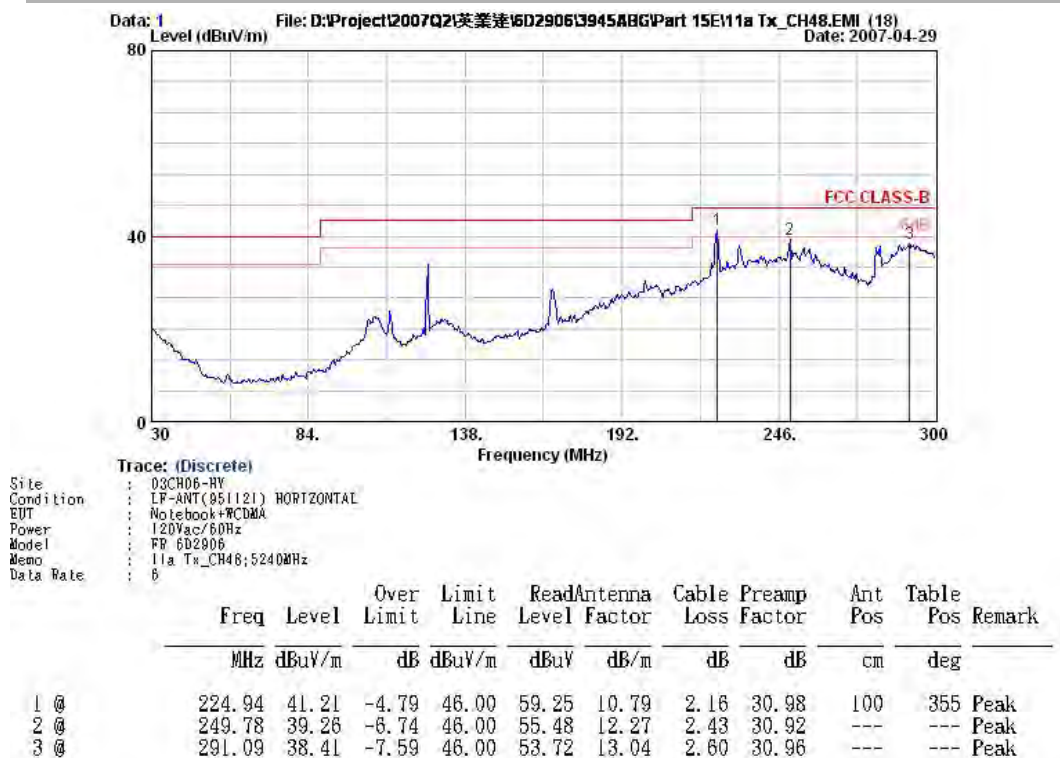


Remark : Frequency from 18GHz to 40GHz, the emission emitted by the EUT is too low to be measured.

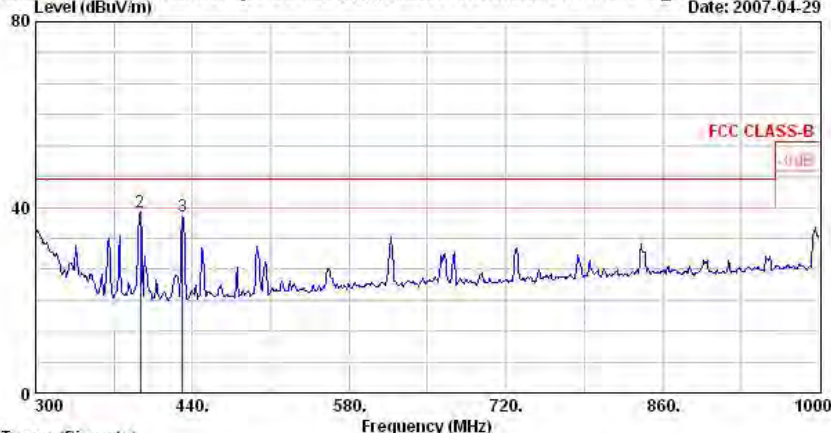
➤ Test Mode : Mode 3

- Temperature : 24°C
- Relative Humidity :53%
- Test Enginner : Andrew
- Polarization : Horizontal

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



Data: 2 File: D:\Project\2007Q2\美菱達\6D2906\3945ABG\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

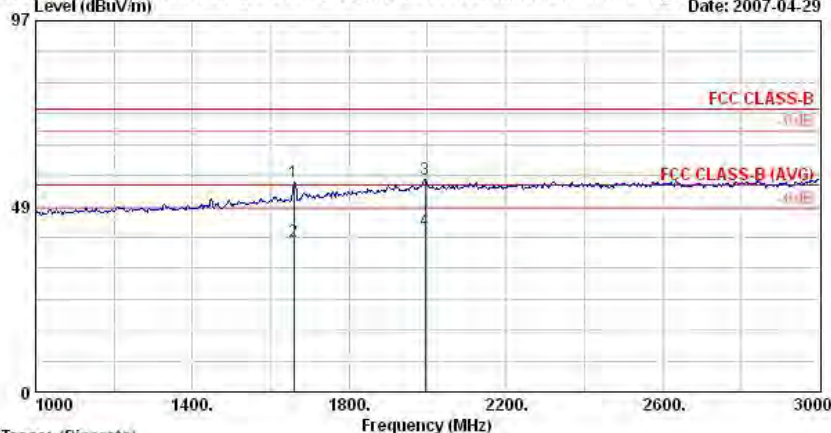


Trace: (Discrete)

Site : 03CH06-HV
Condition : LF-ANT(051121) HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	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 @	300.00	35.61	-10.39	46.00	50.70	13.21	2.63	30.93	---	---	Peak
2 @	393.80	38.86	-7.14	46.00	51.05	15.61	3.07	30.87	---	---	Peak
3 @	430.90	38.14	-7.86	46.00	49.44	16.27	3.26	30.83	---	---	Peak

Data: 3 File: D:\Project\2007Q2\美菱達\6D2906\3945ABG\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

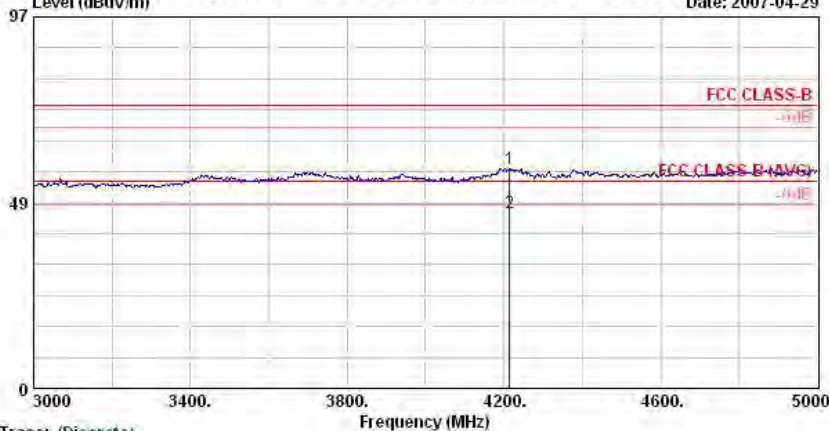


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	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 @	1658.00	54.97	-19.03	74.00	60.04	27.43	3.03	35.53	100	360	Peak
2 @	1658.00	39.44	-14.56	54.00	44.51	27.43	3.03	35.53	100	356	Average
3 @	1994.00	55.69	-18.31	74.00	57.59	29.97	3.30	35.17	100	360	Peak
4 @	1994.00	42.08	-11.92	54.00	43.98	29.97	3.30	35.17	100	61	Average

Data: 4 File: D:\Project\2007Q2\美菱達\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

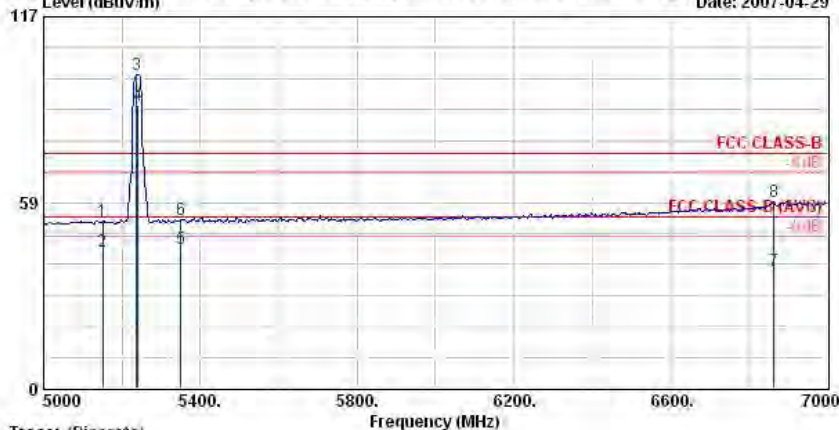


Trace: (Discrete)

Site : 03CH06-RV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1 @	4214.00	57.51	-16.49	74.00	56.61	31.30	5.33	35.73	100	360	Peak
2 @	4214.00	45.63	-8.37	54.00	44.72	31.30	5.33	35.73	100	276	Average

Data: 5 File: D:\Project\2007Q2\美菱達\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29



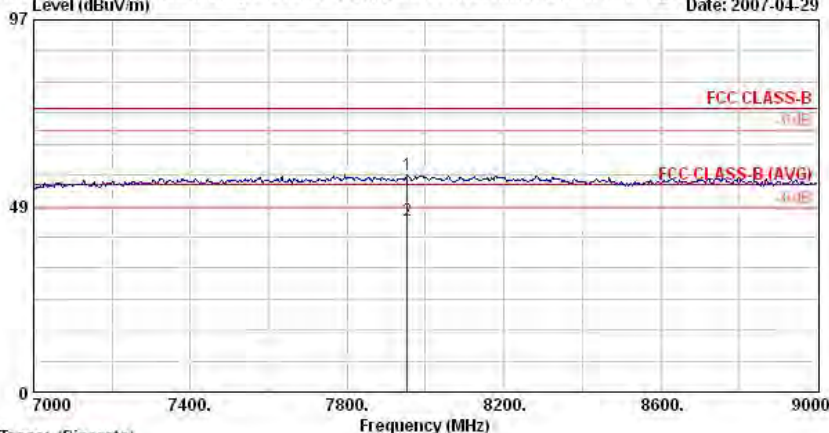
Trace: (Discrete)

Site : 03CH06-RV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	Level	Factor	Loss	Factor	Pos	Pos	Remark
					dBuV	dB/m	dB	dB	cm	deg	
1 @	5150.00	52.42	-21.58	74.00	48.80	33.60	6.21	36.19	100	360	Peak
2 @	5150.00	43.01	-10.99	54.00	39.39	33.60	6.21	36.19	124	294	Average
3 @	5238.00	98.64			94.80	33.60	6.39	36.15	100	360	Peak
4 @	5240.00	89.19			85.35	33.60	6.39	36.15	124	294	Average
5 @	5350.00	43.73	-10.27	54.00	39.62	33.60	6.59	36.08	124	294	Average
6 @	5350.00	52.92	-21.08	74.00	48.81	33.60	6.59	36.08	100	360	Peak
7 @	6864.00	37.10	-16.90	54.00	33.48	33.60	6.21	36.19	100	184	Average
8 @	6864.00	58.88	-15.12	74.00	49.85	37.06	7.73	35.76	100	360	Peak

Remark: #3 and #4 Fundamental Signal

Data: 6 File: D:\Project\2007Q2\美菱達\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

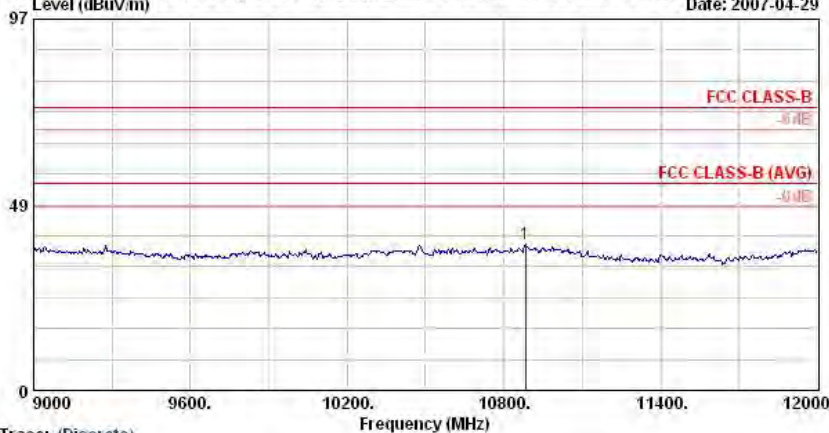


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1 @	7954.00	56.56	-17.44	74.00	45.11	39.53	7.78	35.86	100	360	Peak
2 @	7954.00	44.86	-9.14	54.00	33.41	39.53	7.78	35.86	100	256	Average

Data: 7 File: D:\Project\2007Q2\美菱達\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

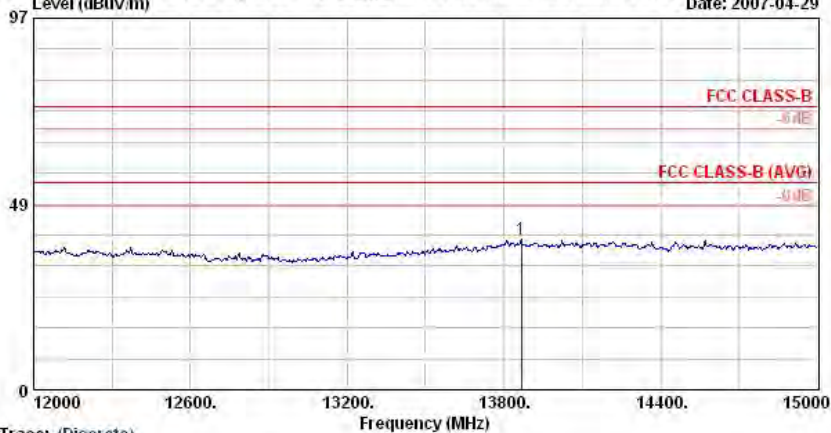


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	10881.00	38.35	-35.65	74.00	73.05	-8.35	9.78	36.14	---	---	Peak

Data: 8 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

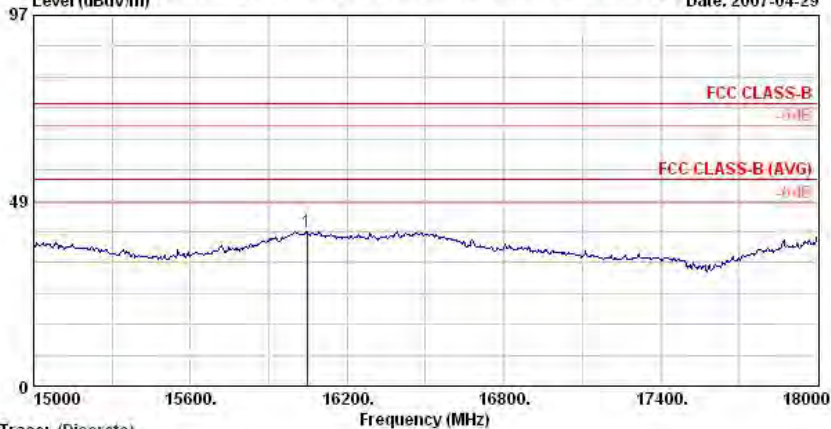


Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	13866.00	39.47	-34.53	74.00	69.41	-6.96	11.50	34.48	---	---	Peak

Data: 9 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29



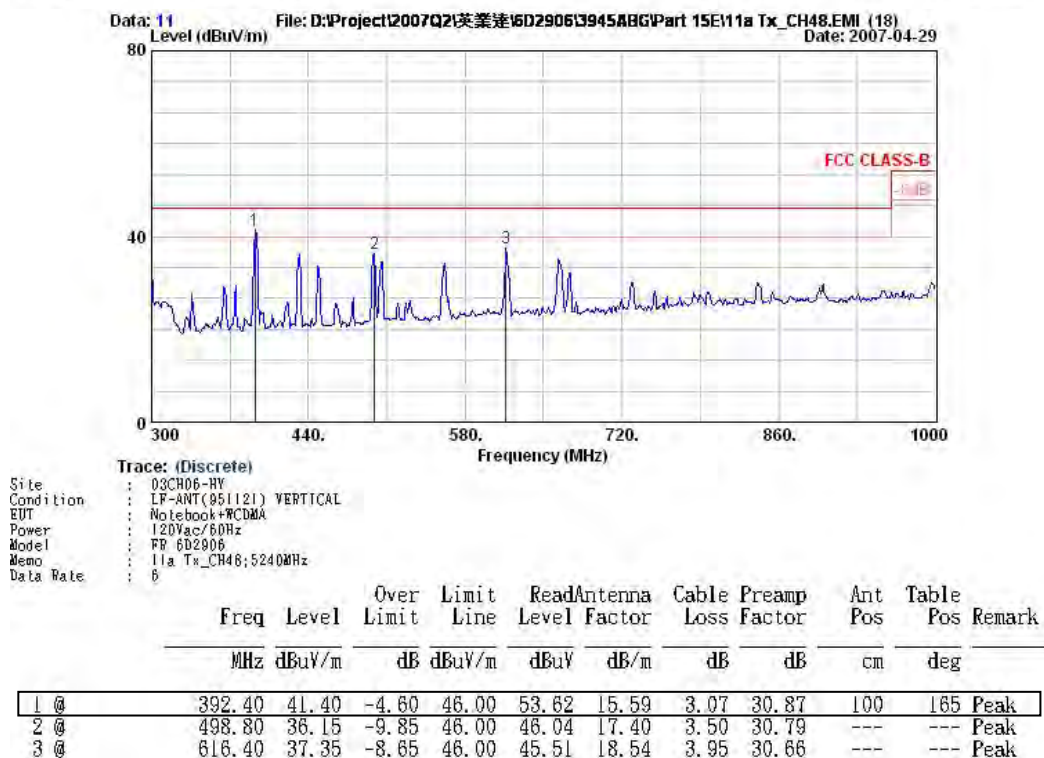
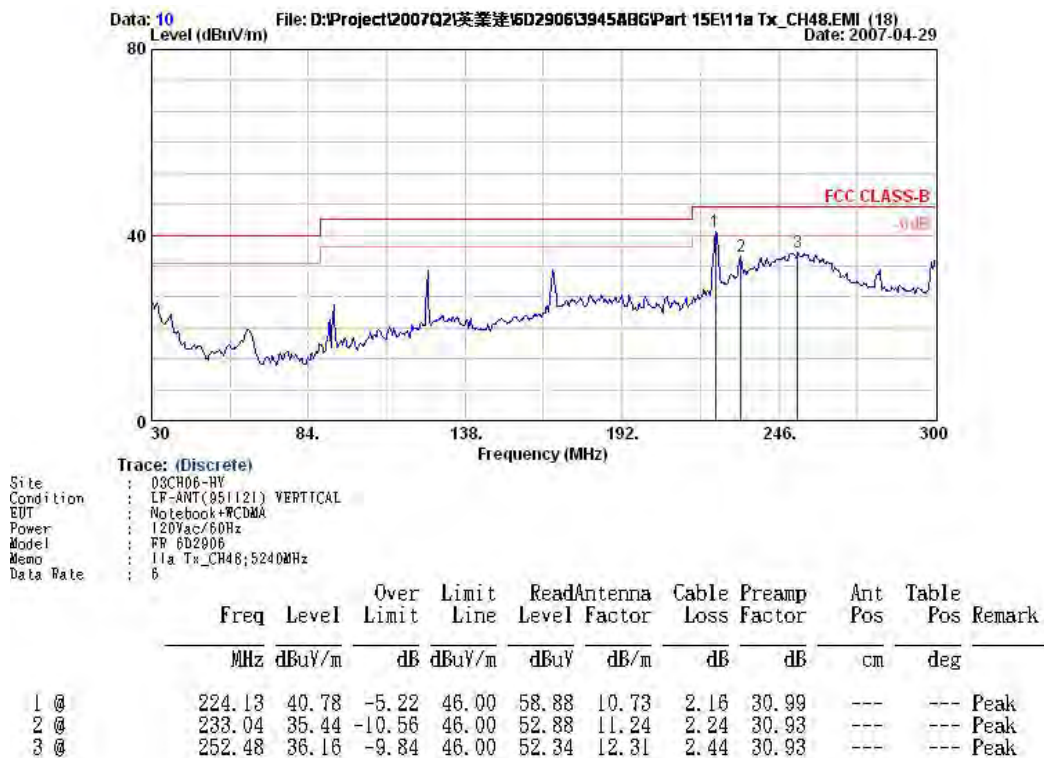
Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT(8-18)-060918 HORIZONTAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

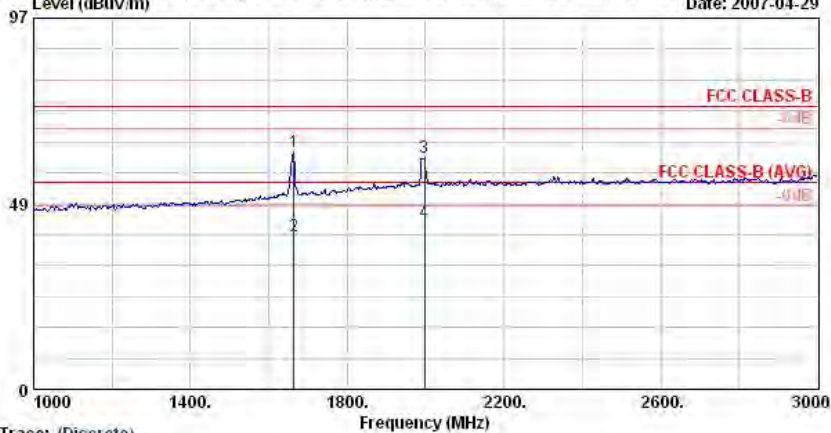
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	16047.00	40.51	-33.49	74.00	69.07	-4.52	11.78	35.83	---	---	Peak

- Polarization : Vertical

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



Data: 12 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

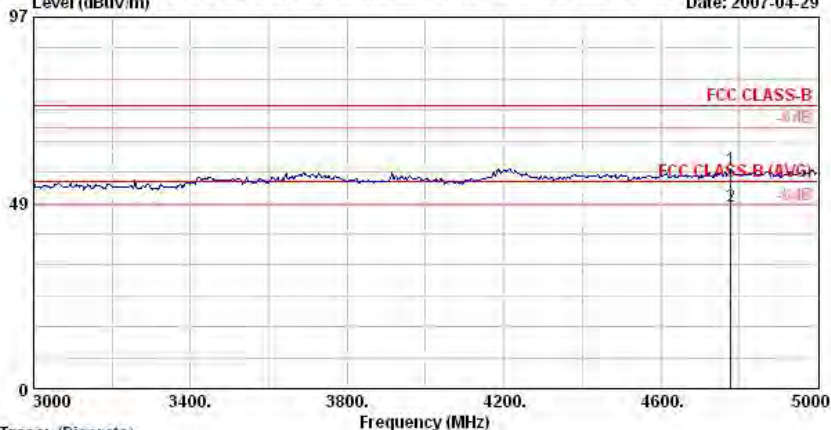


Trace: (Discrete)

Site : 03CH06-HV
Condition : RF-ANT-060410 VERTICAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	1664.00	61.88	-12.12	74.00	66.96	27.43	3.03	35.53	100	360	Peak
2 @	1664.00	40.06	-13.94	54.00	45.13	27.43	3.03	35.53	100	243	Average
3 @	1998.00	60.55	-13.45	74.00	62.30	30.10	3.32	35.17	100	360	Peak
4 @	1998.00	43.46	-10.54	54.00	45.21	30.10	3.32	35.17	100	185	Average

Data: 13 File: D:\Project\2007Q2\英業達\6D2906\3945ABG\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

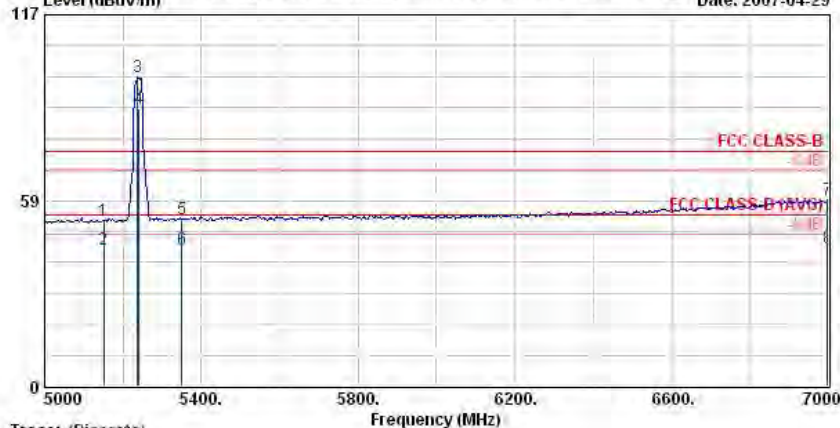


Trace: (Discrete)

Site : 03CH06-HV
Condition : RF-ANT-060410 VERTICAL
EUT : Notebook+WCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	4778.00	57.48	-16.52	74.00	54.99	32.75	5.81	36.07	---	---	Peak
2 @	4778.00	47.61	-6.39	54.00	45.12	32.75	5.81	36.07	100	305	Average

Data: 14 File: D:\Project\2007Q2\美菱建\6D2906\3945ABGV\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29



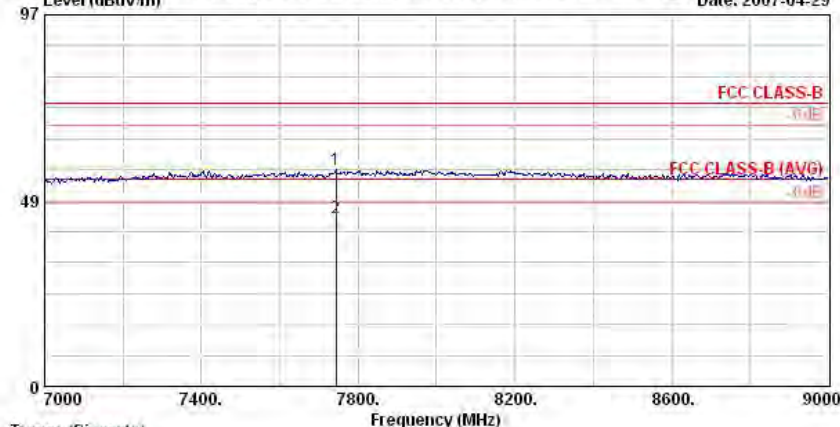
Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 0

	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	cm	deg	
1 @	5150.00	52.19	-21.81	74.00	48.57	33.60	6.21	36.19	100	0 Peak
2 @	5150.00	43.04	-10.96	54.00	39.42	33.60	6.21	36.19	102	320 Average
3 @	5238.00	97.36			93.52	33.60	6.39	36.15	100	0 Peak
4 @	5240.00	87.62			83.78	33.60	6.39	36.15	102	320 Average
5 @	5350.00	52.46	-21.54	74.00	48.35	33.60	6.59	36.08	100	0 Peak
6 @	5350.00	43.25	-10.75	54.00	39.14	33.60	6.59	36.08	102	320 Average
7 @	6998.00	58.50	-15.50	74.00	48.53	37.80	7.92	35.75	100	0 Peak
8 @	6998.00	43.51	-10.49	54.00	33.54	37.80	7.92	35.75	100	146 Average

Remark: #3 and #4 Fundamental Signal

Data: 15 File: D:\Project\2007Q2\美菱建\6D2906\3945ABGV\Part 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

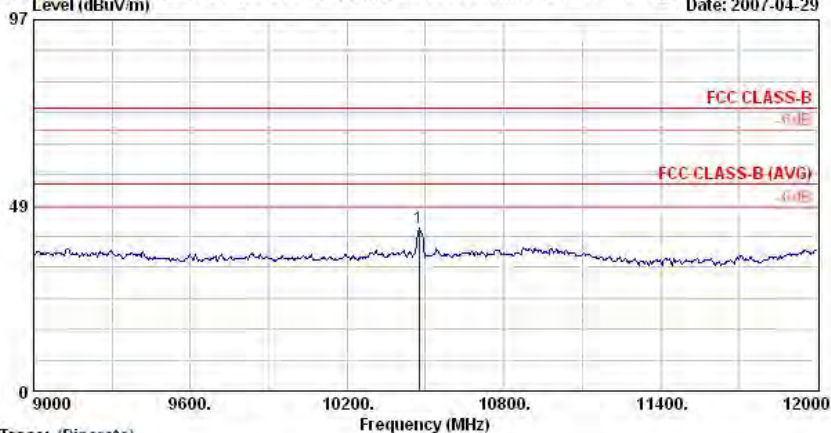


Trace: (Discrete)

Site : 03CH06-HV
Condition : HF-ANT-060410 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 0

	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	cm	deg	
1 @	7744.00	56.44	-17.56	74.00	45.45	39.25	7.70	35.96	100	360 Peak
2 @	7744.00	43.89	-10.11	54.00	32.90	39.25	7.70	35.96	100	160 Average

Data: 16 File: D:\Project\2007Q2\美菱達\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29

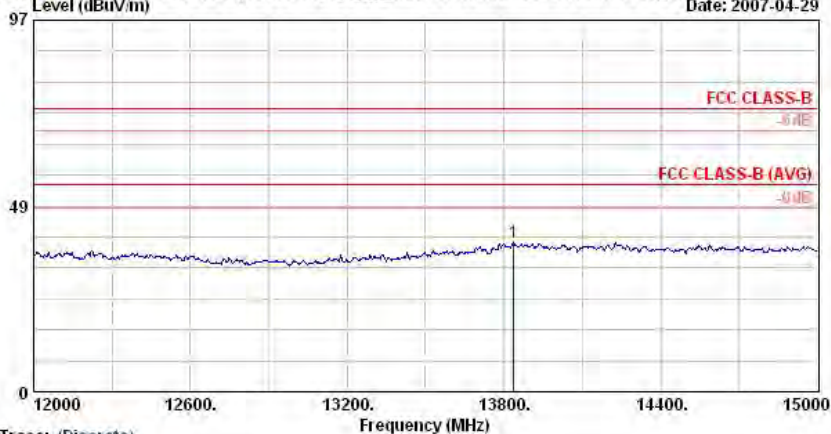


Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT(8-18)-060918 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 0

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	10476.00	42.46	-31.54	74.00	78.15	-8.53	9.48	36.64	---	---
										Peak

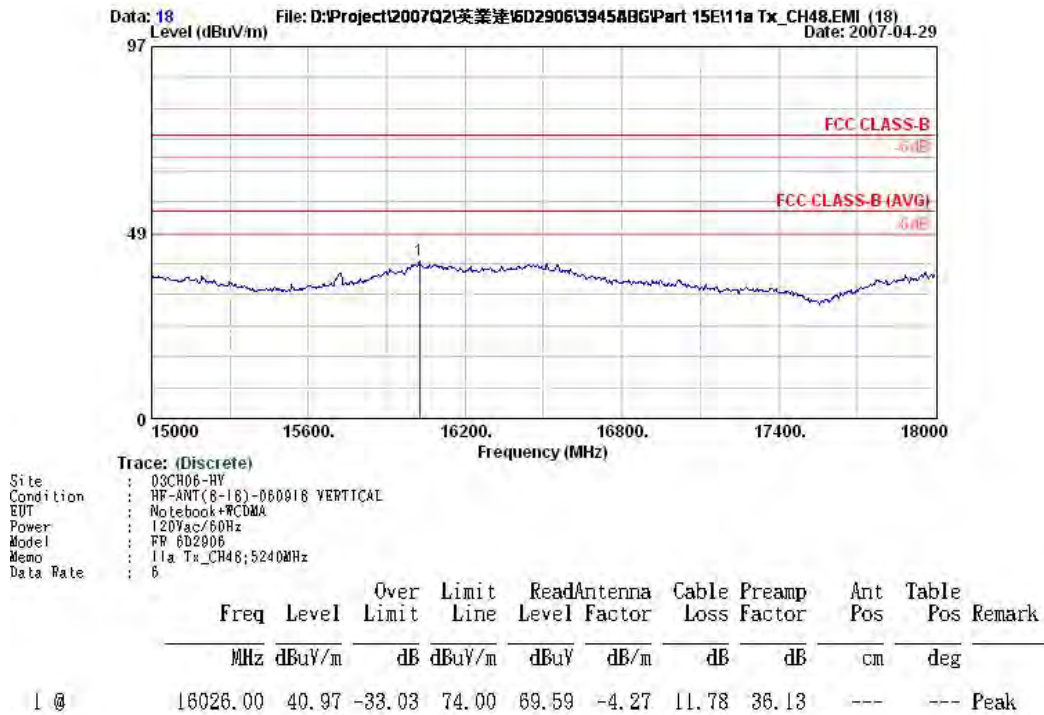
Data: 17 File: D:\Project\2007Q2\美菱達\6D2906\3945ABGVPart 15E\11a Tx_CH48.EMI (18) Date: 2007-04-29



Trace: (Discrete)

Site : 03CH06-HY
Condition : HF-ANT(8-18)-060918 VERTICAL
EUT : Notebook+PCDMA
Power : 120Vac/60Hz
Model : FR 6D2906
Memo : 11a Tx_CH48;5240MHz
Data Rate : 0

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	13836.00	39.05	-34.95	74.00	69.21	-7.16	11.48	34.48	---	---
										Peak



Remark : Frequency from 18GHz to 40GHz, the emission emitted by the EUT is too low to be measured.

5.7 Band Edges Measurement

5.7.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.7.2 Test Procedure :

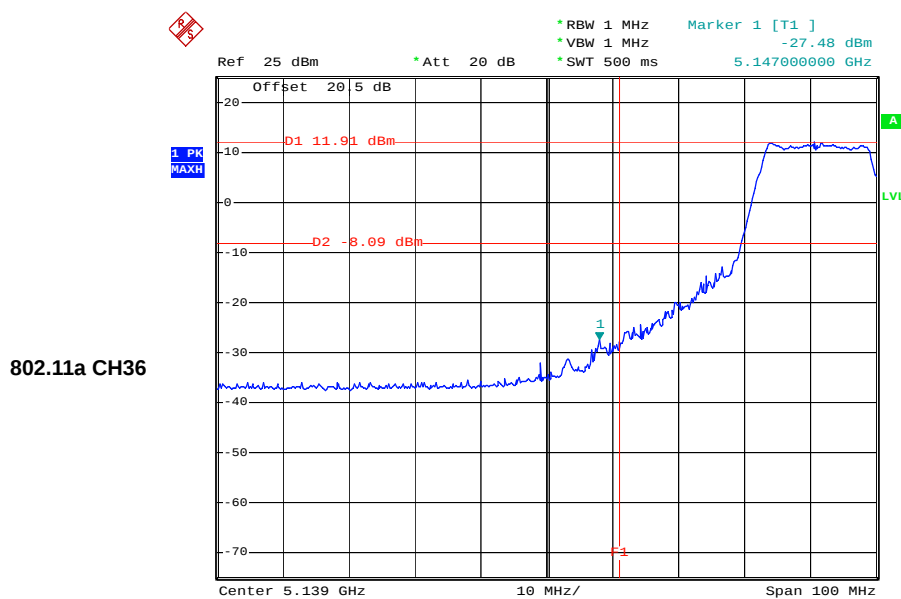
1. Set both RBW and VBW of spectrum analyzer to 1MHz with convenient frequency span including 1MHz bandwidth from band edge.
2. The band edges was measured and recorded.

5.7.3 Test Result :

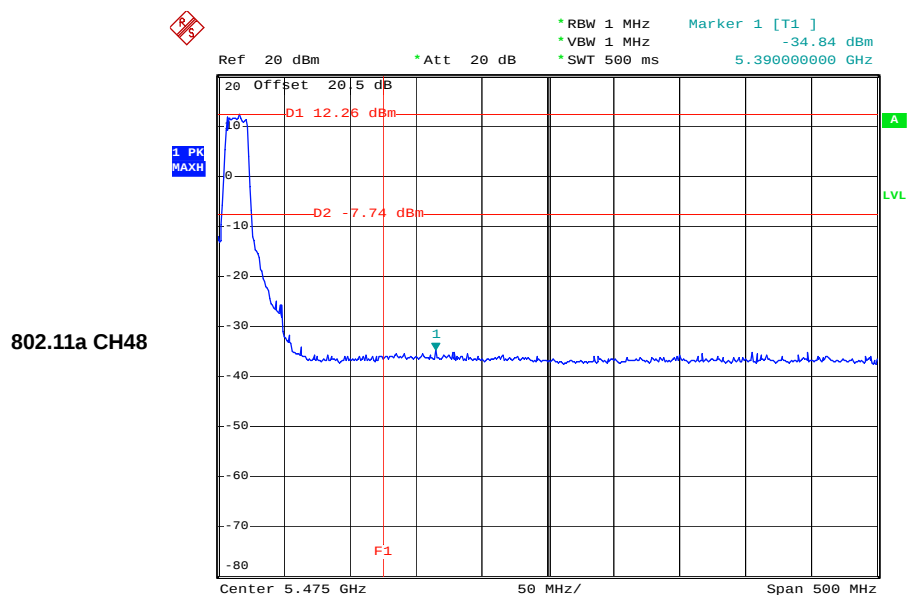
- Temperature : 23°C
- Relative Humidity :47%

Test Result Mode	Verdict
Test Result for 802.11a band I	PASS

5.7.4 Test Data



Date: 30.APR.2007 17:04:13



Date: 2.MAY.2007 12:32:10

5.7.5 EIRP Power

For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz.

Frequency(MHz)	Field Strength(dBuV/m)	EIRP (dBm)	Over Limit (dB)	Limit (EIPR dBm)
5150.00 MHz	55.10 dBuV/m	-40.13	-13.13	-27.00
5150.00 MHz	53.13 dBuV/m	-42.10	-15.10	-27.00
5150.00 MHz	52.84 dBuV/m	-42.39	-15.39	-27.00
5150.00 MHz	52.42 dBuV/m	-42.81	-15.81	-27.00
5150.00 MHz	52.19 dBuV/m	-43.04	-16.04	-27.00
5350.00 MHz	52.92 dBuV/m	-42.31	-15.31	-27.00
5350.00 MHz	52.46 dBuV/m	-42.77	-15.77	-27.00

5.8 Peak Excursion Ratio Measurement

5.8.1 Measuring Instruments :

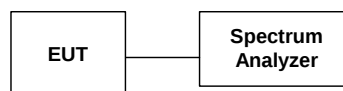
As described in chapter 6 of this test report.

5.8.2 Test Procedure :

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to and maintained at 1 MHz. First the video bandwidth is set to 1 MHz, Trace A is set to Max Hold, then to View. Then the video bandwidth is readjusted to 300 KHz, and the signal under this measurement condition is captured in Trace B.

The difference between the traces is investigated. The marker is placed at the frequency which shows the largest difference. The amplitude delta between the traces at this frequency is the peak excursion.

5.8.3 Test Setup Layout :



5.8.4 Test Result :

- Temperature : 23°C
- Relative Humidity :47%

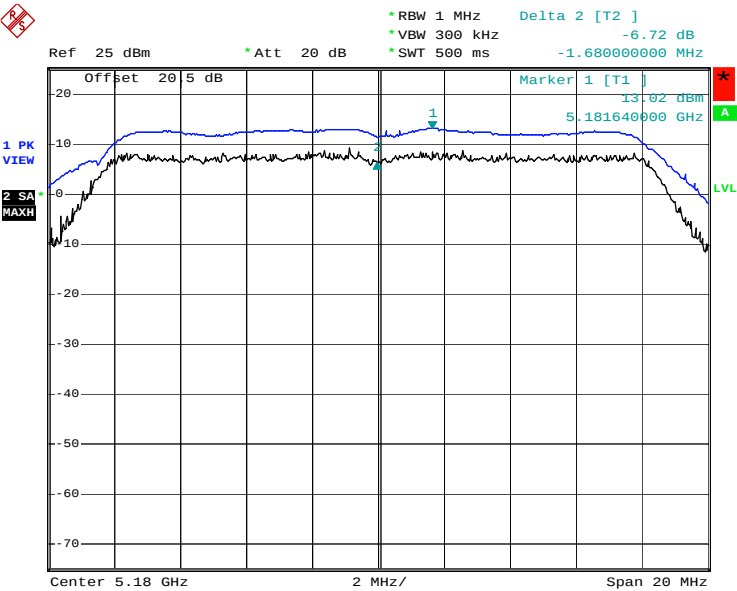
➤ Application: 802.11a

Channel	Frequency (MHz)	Peak Excursion (dB)	Limits (dB)	Mode Ref. No.
36	5180	-6.72	13	1
44	5220	-7.15	13	2
48	5240	-8.36	13	3

5.8.5 Test Data

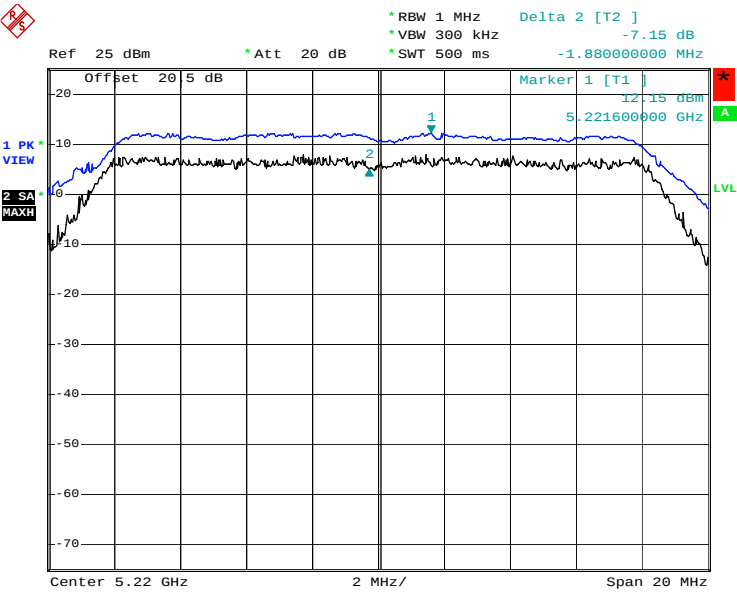
Mode Ref. No.

1

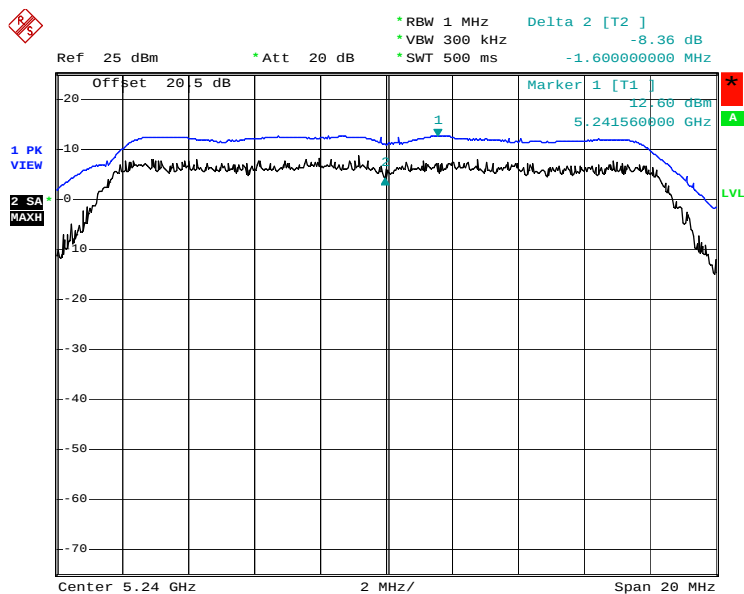


Date: 30.APR.2007 16:01:59

2



Date: 30.APR.2007 19:41:09



Date: 30.APR.2007 16:12:33

5.9 Frequency Stability

To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.

The EUT was operated at the maximum output power, and connected to the spectrum analyzer which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

Frequency(MHz)	Low Frequency (Fl)	High Frequency (Fh)	Center Frequency (Fc)	Frequency Stability (ppm)
5180	5171.68	5188.32	5180	0.00
5220	5211.68	5228.32	5220	0.00
5240	5231.68	5248.32	5240	0.00

5.10 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 .

5.11 Antenna Requirements

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

5.11.1 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.

5.11.2 Antenna Connected Construction

The antenna used in this product is PIFA for both WLAN and BT. The connector is I-PEX on antenna port and it is considered to meet antenna requirement of FCC.

5 List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100359	9kHz – 2.75GHz	Mar. 01, 2007	Mar. 01, 2008	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2007	Mar. 31, 2008	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2007	Mar. 22, 2008	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2007	Apr. 20, 2008	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	Mar. 27, 2007	Mar. 27, 2008	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	N/A	Conduction (CO04-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	N/A	Conduction (CO04-HY)
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Oct. 05, 2006	Oct. 04, 2007	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 13, 2006	Jul. 12, 2007	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 20, 2006	Nov. 19, 2007	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Com-Power	AH118	10094	1G~18G	Dec. 26, 2006	Dec. 25, 2007	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Nov. 20, 2006	Nov. 19, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 15, 2006	Nov. 14, 2007	Radiation (03CH06-HY)
Pre Amplifier	Mini Circuits	ZKL-2	D092004-1	10~2500MHz	Nov. 15, 2006	Nov. 14, 2007	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	106656	WCDMA	Nov. 20, 2006	Nov. 19, 2007	Radiation (03CH06-HY)

6 Uncertainty of Test Site

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

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

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 (1GHz ~ 40GHz)

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