FCC TEST REPORT

REPORT NO.: RF921027R05
MODEL NO.: 8061-C
RECEIVED: Oct. 27, 2003
TESTED: Nov. 06 ~ Nov. 07, 2003

APPLICANT: Syntech Information Co.,Ltd.

ADDRESS: 8F, No.210,Ta-Tung Rd., Sec.3, Hsi-Chih, Taipei Hsien, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei, Taiwan, R.O.C.

0528
ILAC MRA

Lab Code: 200102-0

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1 CERTIFICATION

PRODUCT :	Bluetooth Portable Terminal
BRAND NAME :	CipherLab
MODEL NO :	8061-C
TEST ITEM:	Engineering Sample
APPLICANT :	Syntech Information Co.,Ltd.
STANDARDS :	47 CFR Part 15, Subpart C (15.249) ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Nov. 06 ~ Nov. 07, 2003. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

PREPARED BY: Landy Soong , **DATE:** Nov. 11, 2003
Landy Soong

APPROVED BY: , **DATE:** Nov. 11, 2003
Ellis Wu /
Technical Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Paragraph	**Test Type**	**Result**	**Remark**
15.207	Conducted Emission Test	PASS	Minimum passing margin is –14.40dB at 0.830MHz
15.249	Radiated Emission Test	PASS	Minimum passing margin is –2.61dB at 141.01MHz
15.249	Band Edge Measurement	PASS	Meet the requirement of limit

NOTE: The information of measurement uncertainty is available upon the customer's request.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Bluetooth Portable Terminal
MODEL NO.	8061-C
POWER SUPPLY	5.0VDC from power adapter 3.7VDC from battery
MODULATION TYPE	GFSK
MODULATION TECHNOLOGY	FHSS
CARRIER FREQUENCY OF EACH CHANNEL	2402MHz ~ 2480MHz
BANDWIDTH OF EACH CHANNEL	1MHz
NUMBER OF CHANNEL	79
ANTENNA TYPE	Wire antenna
DATA CABLE	1m nonshielded without core
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT was powered by following adapter:

Brand:	SINO-AMERICAN
Model:	SA10-0515U
Input:	100-240V--50/60Hz 250mA
Output:	5V--1500mA

2. The EUT is designed with CCD function.

3. For more detailed feature description of the EUT, please refer to user's manual.

3.2 DESCRIPTION OF TEST MODES

Seventy-night channels are provided to this EUT.

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2431	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

NOTE:

1. There are two modes provided to the EUT, MODE 1 is EUT powered by the charger of scan bond code and transferring data, MODE 2 is the EUT powered by batteries with CTX and CRX function.
2. Below 1 GHz, the channel 0, 39, and 78 were pre-tested in chamber. The channel 78, worst case one, was chosen for final test.
3. Above 1 GHz, the channel 0, 39, and 78 were tested individually.
4. Since the EUT is considered a portable unit, it was pre-tested on the position of 3 axis. The worst case was found when positioned on Z-plane. Therefore, only the test data of this Z-plane was used for Radiated Test.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Bluetooth Portable Terminal. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 15, Subpart C. (15.249)
ANSI C63.4 :1992

All test items have been performed and recorded as per the above standards.

NOTES: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-16M-5064	FCC DoC Approved
2	PRINTER	EPSON	LQ-300+	DCGY017065	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core

NOTE: All power cords of the above support units are non shielded (1.8m).

4 TEST PROCEDURES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5 0.5-5 5-30	66 to 56 56 60	56 to 46 46 50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 20, 2004
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 18, 2003
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 18, 2003
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 18, 2003
ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 29 2003
ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 29 2003
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May. 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 06, 2004

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. "*": These equipment are used for conducted telecom port test only (if tested).
3. The test was performed in ADT Shielded Room No. 10.
4. The VCCI Site Registration No. is C-1312.

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

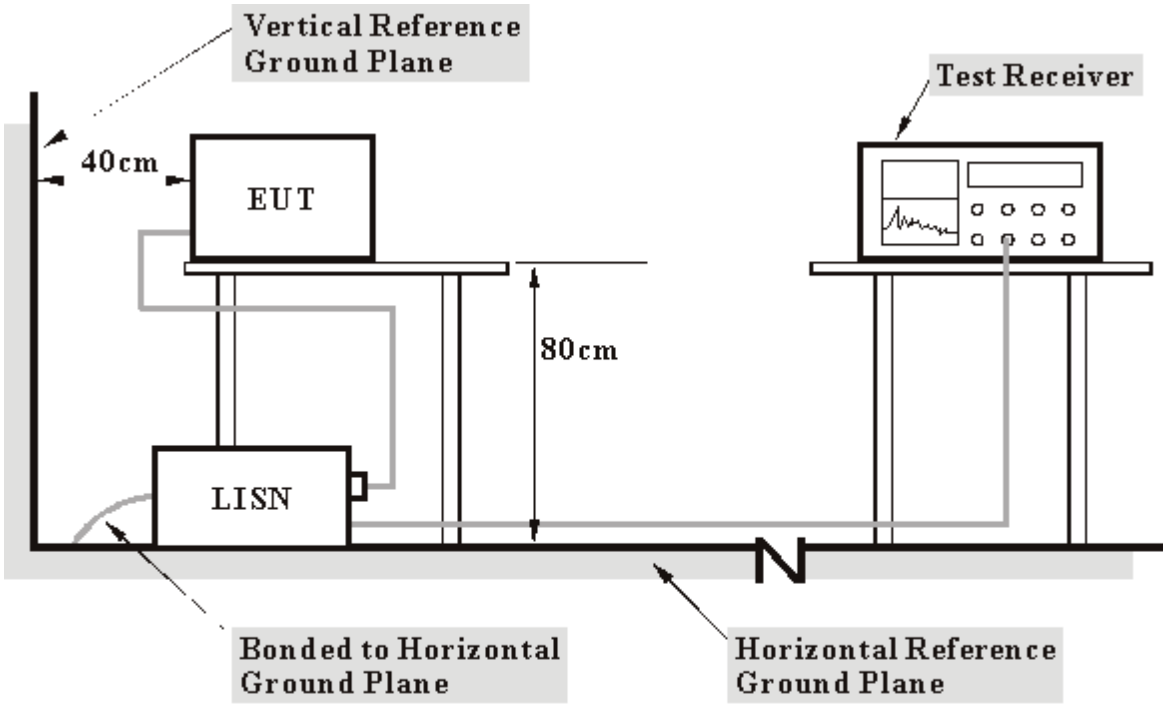
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

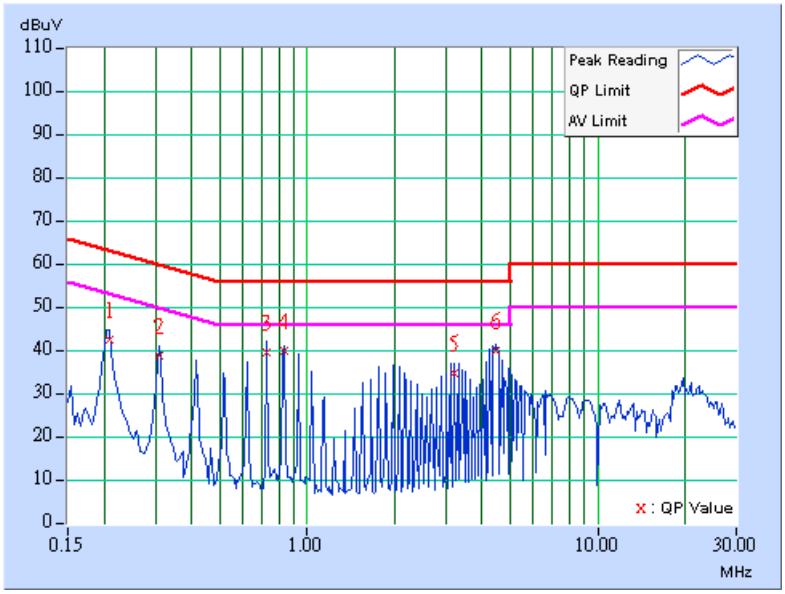
a. Plug the EUT into the computer system placed on a testing table.
b. The computer system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The computer system sent "H" messages to its screen.
d. The computer system sent “H” messages to modem.

4.1.7 TEST RESULTS

EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 0	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 75%RH, 991 hPa	**TESTED BY**: Jamison Chan	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.06	42.51	-	42.57	-	63.26	53.26	-20.69	-
2	0.311	0.06	38.79	-	38.85	-	59.94	49.94	-21.09	-
3	0.724	0.11	39.52	-	39.63	-	56.00	46.00	-16.37	-
4	0.830	0.13	39.85	-	39.98	-	56.00	46.00	-16.02	-
5	3.211	0.20	34.60	-	34.80	-	56.00	46.00	-21.20	-
6	4.457	0.24	39.73	-	39.97	-	56.00	46.00	-16.03	-

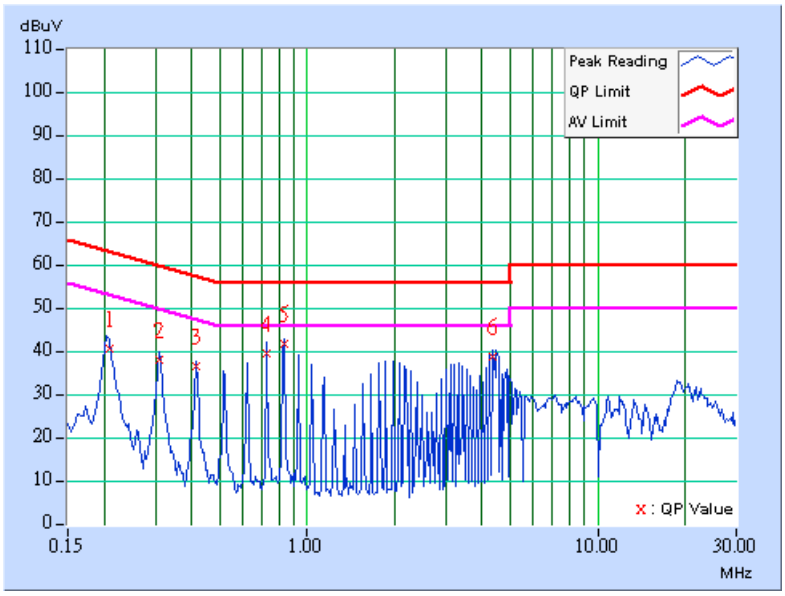
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 0	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 75%RH, 991 hPa	**TESTED BY**: Jamison Chan	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.05	40.62	-	40.67	-	63.26	53.26	-22.59	-
2	0.310	0.05	38.01	-	38.06	-	59.97	49.97	-21.91	-
3	0.416	0.05	36.28	-	36.33	-	57.54	47.54	-21.20	-
4	0.724	0.11	39.42	-	39.53	-	56.00	46.00	-16.47	-
5	**0.830**	**0.13**	**41.47**	**-**	**41.60**	**-**	**56.00**	**46.00**	**-14.40**	**-**
6	4.355	0.22	38.63	-	38.85	-	56.00	46.00	-17.15	-

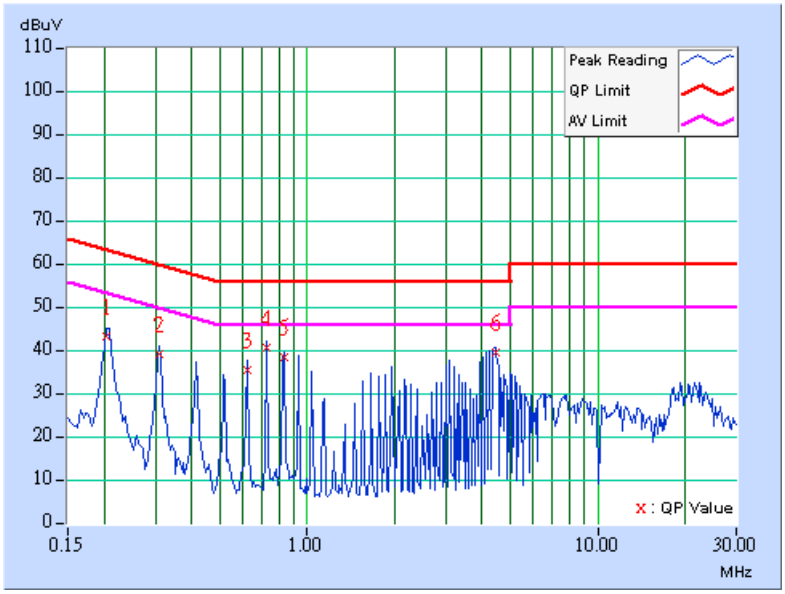
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 39	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 75%RH, 991 hPa	**TESTED BY**: Jamison Chan	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.06	43.05	-	43.11	-	63.42	53.42	-20.31	-
2	0.310	0.06	38.96	-	39.02	-	59.97	49.97	-20.95	-
3	0.619	0.10	35.23	-	35.33	-	56.00	46.00	-20.67	-
4	0.724	0.11	40.65	-	40.76	-	56.00	46.00	-15.24	-
5	0.830	0.13	38.35	-	38.48	-	56.00	46.00	-17.52	-
6	4.453	0.24	39.49	-	39.73	-	56.00	46.00	-16.27	-

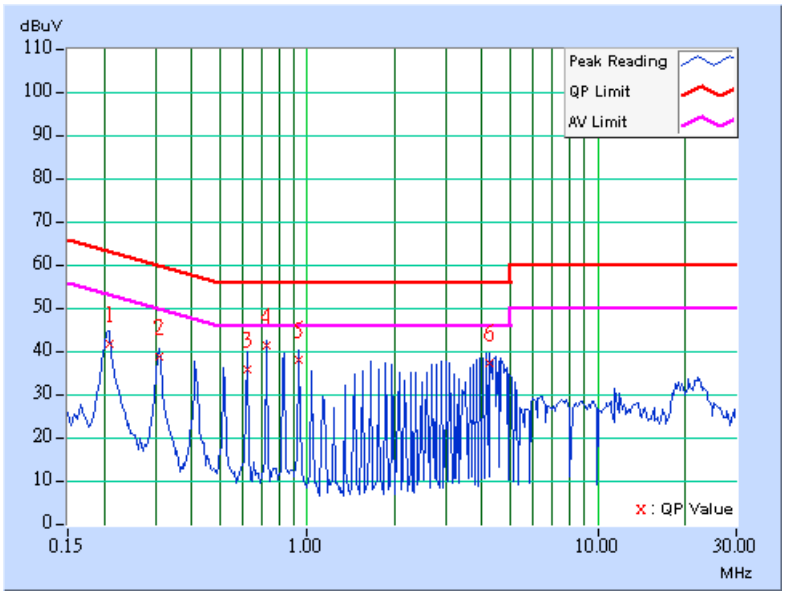
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 39	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 75%RH, 991 hPa	**TESTED BY**: Jamison Chan	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.05	41.75	-	41.80	-	63.26	53.26	-21.46	-
2	0.310	0.05	38.84	-	38.89	-	59.97	49.97	-21.08	-
3	0.619	0.09	35.75	-	35.84	-	56.00	46.00	-20.16	-
4	0.724	0.11	41.09	-	41.20	-	56.00	46.00	-14.80	-
5	0.931	0.15	37.89	-	38.04	-	56.00	46.00	-17.96	-
6	4.242	0.21	37.02	-	37.23	-	56.00	46.00	-18.77	-

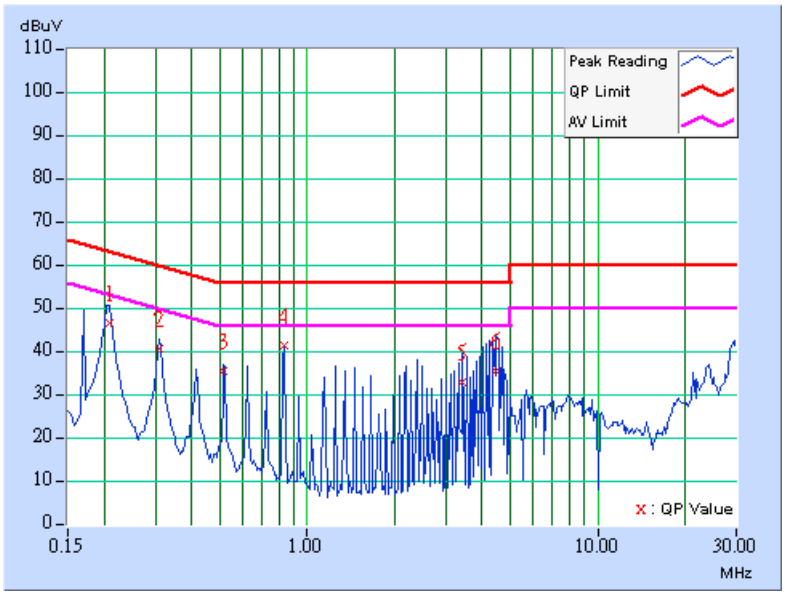
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 78	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 75%RH, 991 hPa	**TESTED BY**: Jamison Chan	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.06	46.37	-	46.43	-	63.26	53.26	-16.83	-
2	0.310	0.06	40.36	-	40.42	-	59.97	49.97	-19.55	-
3	0.517	0.08	35.24	-	35.32	-	56.00	46.00	-20.68	-
4	0.830	0.13	41.19	-	41.32	-	56.00	46.00	-14.68	-
5	3.426	0.21	32.56	-	32.77	-	56.00	46.00	-23.23	-
6	4.461	0.24	35.46	-	35.70	-	56.00	46.00	-20.30	-

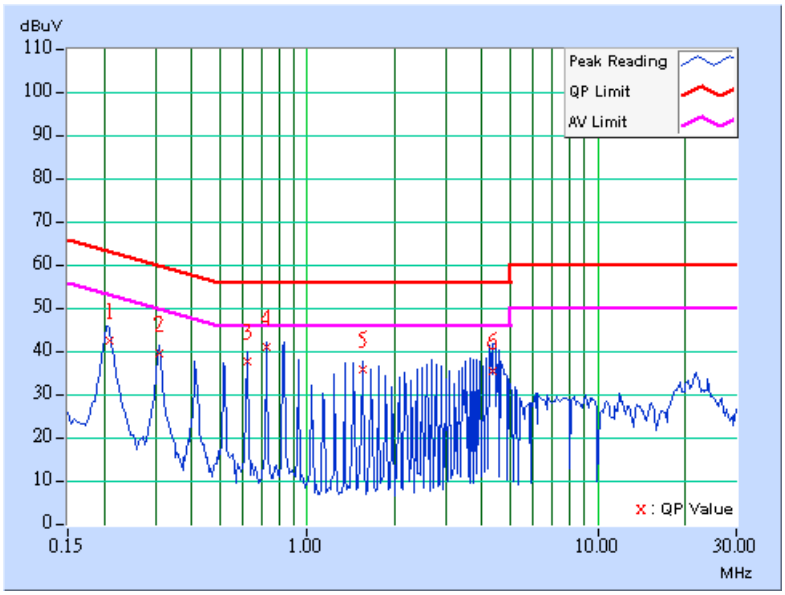
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 78	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neurral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 75%RH, 991 hPa	**TESTED BY**: Jamison Chan	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.05	42.39	-	42.44	-	63.26	53.26	-20.82	-
2	0.310	0.05	39.26	-	39.31	-	59.97	49.97	-20.66	-
3	0.619	0.09	37.69	-	37.78	-	56.00	46.00	-18.22	-
4	0.724	0.11	40.83	-	40.94	-	56.00	46.00	-15.06	-
5	1.551	0.17	35.64	-	35.81	-	56.00	46.00	-20.19	-
6	4.348	0.22	35.48	-	35.70	-	56.00	46.00	-20.30	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to 15.249 the field strength of emissions from intentional radiators operated under these frequencies bands shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBuV/m)	
	Peak	Average
2400 ~ 2483.5	114	94

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8594E	3911A07465	July 07, 2004
* HP Preamplifier	8447D	2432A03504	June 10, 2004
HP Preamplifier	8449B	3008A01201	Dec. 01, 2003
* HP Preamplifier	8449B	3008A01292	Aug. 11, 2004
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	Nov. 22, 2003
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
*Schwarzbeck Antenna	VULB9168	137	Apr. 03, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 30, 2004
* EMCO Horn Antenna	3115	9312-4192	Mar. 23, 2004
*ADT. Turn Table	TT100	0306	NA
*ADT. Tower	AT100	0306	NA
*Software	ADT_Radiated_V 5.14	NA	NA
*TIMES RF cable	LL142	CABLE-CH6-01	Apr. 30, 2004

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. "*" = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Chamber No. 6.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

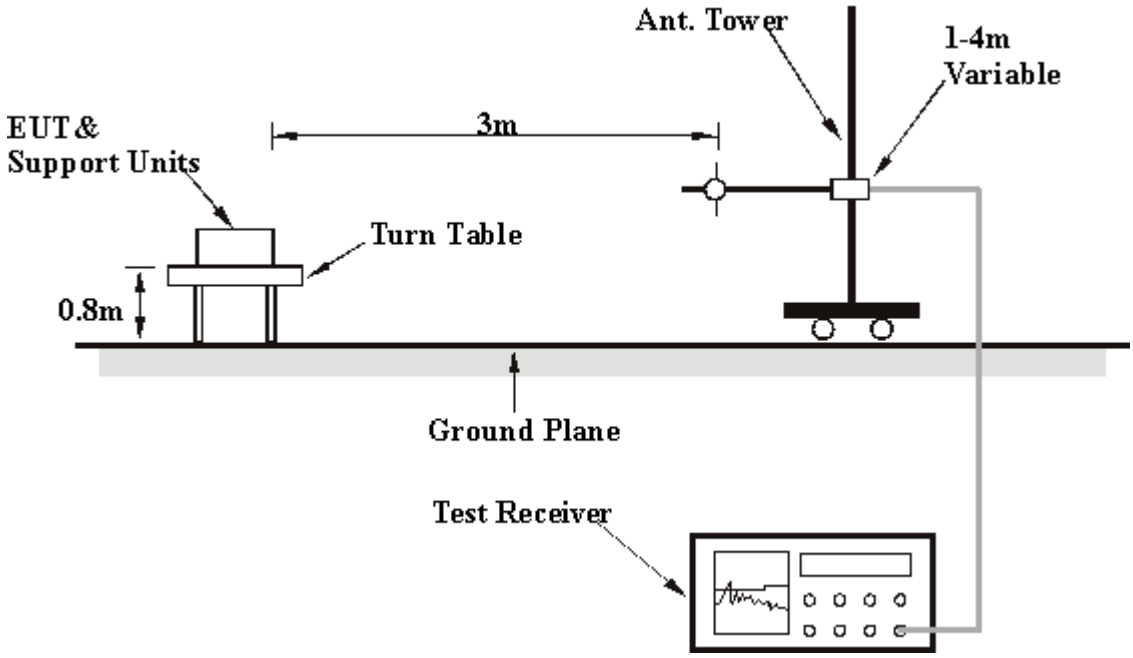
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 TEST RESULTS (MODE 1)

EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 78	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 62%RH, 991 hPa	**TESTED BY**: Steven Lu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	100.06	34.27 QP	43.50	-9.23	2.50 H	190	23.97	10.30
2	166.88	34.49 QP	43.50	-9.01	1.50 H	88	20.82	13.67
3	199.21	40.26 QP	43.50	-3.24	1.50 H	118	29.02	11.24
4	271.42	39.03 QP	46.00	-6.97	1.00 H	196	24.83	14.19
5	288.67	39.28 QP	46.00	-6.72	1.00 H	220	24.45	14.83
6	332.86	36.45 QP	46.00	-9.55	1.00 H	304	20.49	15.96
7	454.64	35.46 QP	46.00	-10.54	1.00 H	184	16.10	19.37
8	567.81	39.50 QP	46.00	-6.50	1.50 H	244	17.85	21.65
9	601.22	33.84 QP	46.00	-12.16	1.50 H	64	11.22	22.62
10	733.79	35.67 QP	46.00	-10.33	1.00 H	238	10.76	24.91

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	39.70	34.68 QP	40.00	-5.32	1.50 V	27	20.35	14.33
2	100.06	37.31 QP	43.50	-6.19	1.50 V	28	27.02	10.30
3	**141.01**	**40.89 QP**	**43.50**	**-2.61**	**1.00 V**	**202**	**27.09**	**13.80**
4	200.29	35.22 QP	43.50	-8.28	1.00 V	88	24.02	11.20
5	221.84	33.93 QP	46.00	-12.07	2.00 V	64	21.66	12.27
6	276.81	40.95 QP	46.00	-5.05	1.00 V	250	26.48	14.47
7	344.71	36.85 QP	46.00	-9.15	1.50 V	178	20.57	16.28
8	366.27	34.79 QP	46.00	-11.21	1.00 V	148	17.95	16.84
9	454.64	37.44 QP	46.00	-8.56	1.00 V	160	18.08	19.37
10	567.81	35.87 QP	46.00	-10.13	1.00 V	220	14.22	21.65
11	675.59	31.85 QP	46.00	-14.15	1.00 V	28	8.23	23.62
12	698.22	33.37 QP	46.00	-12.63	1.00 V	28	9.42	23.95
13	876.06	31.92 QP	46.00	-14.08	1.00 V	154	5.25	26.66

REMARKS:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

4.2.7 TEST RESULTS (MODE 2)

EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 78	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 62%RH, 991 hPa	**TESTED BY**: Steven Lu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.09	22.15 QP	40.00	-17.85	4.00 H	148	7.62	14.53
2	266.03	25.80 QP	46.00	-20.20	1.50 H	244	11.88	13.92
3	327.47	24.81 QP	46.00	-21.19	1.00 H	124	8.99	15.82
4	366.27	21.69 QP	46.00	-24.31	1.00 H	58	4.85	16.84
5	432.01	24.01 QP	46.00	-21.99	1.50 H	82	5.28	18.73
6	675.59	30.81 QP	46.00	-15.19	1.50 H	88	7.18	23.62
7	709.00	30.62 QP	46.00	-15.38	1.50 H	316	6.40	24.23
8	730.56	34.36 QP	46.00	-11.64	1.00 H	112	9.55	24.82
9	753.19	31.76 QP	46.00	-14.24	1.00 H	280	6.40	25.37
10	775.82	30.69 QP	46.00	-15.31	1.00 H	154	5.20	25.49

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.09	22.60 QP	40.00	-17.40	2.50 V	250	8.07	14.53
2	88.20	15.67 QP	43.50	-27.83	2.00 V	64	6.24	9.43
3	159.33	15.58 QP	43.50	-27.92	4.00 V	10	1.32	14.26
4	375.97	18.89 QP	46.00	-27.11	2.00 V	304	1.80	17.09
5	595.83	24.61 QP	46.00	-21.39	2.00 V	328	2.13	22.48
6	765.04	27.54 QP	46.00	-18.46	2.50 V	10	2.11	25.43
7	808.16	28.47 QP	46.00	-17.53	2.00 V	280	2.77	25.70
8	879.29	29.36 QP	46.00	-16.64	1.00 V	322	2.64	26.73
9	913.78	29.38 QP	46.00	-16.62	2.00 V	22	2.08	27.30
10	956.89	29.21 QP	46.00	-16.79	2.00 V	10	1.47	27.74

REMARKS:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 0	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62%RH, 991 hPa	**TESTED BY**: Steven Lu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1201.55	45.98 PK	74.00	-28.02	1.00 H	264	17.02	28.96
2	2370.00	63.88 PK	74.00	-10.12	1.27 H	213	32.43	31.45
2	2370.00	33.88 AV	54.00	-20.12	1.27 H	213	2.43	31.45
3	*2402.00	103.62 PK			1.27 H	213	72.13	31.49
3	*2402.00	73.62 AV			1.27 H	213	42.13	31.49
4	4804.00	56.57 PK	74.00	-17.43	1.32 H	196	18.74	37.83
4	4804.00	26.57 AV	54.00	-27.43	1.32 H	196	-11.26	37.83

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1201.55	45.31 PK	74.00	-28.69	1.02 V	292	16.35	28.96
2	2370.00	61.03 PK	74.00	-12.97	1.19 V	354	29.58	31.45
2	2370.00	31.03 AV	54.00	-22.97	1.19 V	354	-0.42	31.45
3	*2402.00	100.77 PK			1.19 V	354	69.28	31.49
3	*2402.00	70.77 AV			1.19 V	354	39.28	31.49
4	4804.13	61.20 PK	74.00	-12.80	1.04 V	155	23.37	37.83
4	4804.13	31.20 AV	54.00	-22.80	1.04 V	155	-6.63	37.83

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 39	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62%RH, 991 hPa	**TESTED BY**: Steven Lu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1221.27	44.95 PK	74.00	-29.05	1.56 H	268	16.02	28.93
2	*2441.00	101.05 PK			1.00 H	143	69.51	31.54
2	*2441.00	71.05 AV			1.00 H	143	39.51	31.54
3	4882.00	56.49 PK	74.00	-17.51	1.46 H	198	18.54	37.95
3	4882.00	26.49 AV	54.00	-27.51	1.46 H	198	-11.46	37.95

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1221.27	45.95 PK	74.00	-28.05	1.00 V	289	17.02	28.93
2	*2441.00	99.78 PK			1.19 V	354	68.24	31.54
2	*2441.00	69.78 AV			1.19 V	354	38.24	31.54
3	4882.13	59.77 PK	74.00	-14.23	1.41 V	299	21.82	37.95
3	4882.13	29.77 AV	54.00	-24.23	1.41 V	299	-8.18	37.95

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

EUT	Bluetooth Portable Terminal	**MODEL**	8061-C
MODE	Channel 78	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62%RH, 991 hPa	**TESTED BY**: Steven Lu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1240.00	45.33 PK	74.00	-28.67	1.00 H	277	16.43	28.90
2	*2480.00	101.53 PK			1.00 H	212	69.94	31.59
2	*2480.00	71.53 AV			1.00 H	212	39.94	31.59
3	2483.50	63.13 PK	74.00	-10.87	1.00 H	212	31.53	31.60
3	2483.50	33.13 AV	54.00	-20.87	1.00 H	212	1.53	31.60
4	4960.00	57.84 PK	74.00	-16.16	1.19 H	198	19.76	38.08
4	4960.00	27.84 AV	54.00	-26.16	1.19 H	198	-10.24	38.08
5	9920.00	60.91 PK	74.00	-13.09	1.00 H	157	15.83	45.08
5	9920.00	30.91 AV	54.00	-23.09	1.00 H	157	-14.17	45.08

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1240.00	45.81 PK	74.00	-28.19	1.00 V	292	16.91	28.90
2	*2480.00	96.23 PK			1.00 V	355	64.64	31.59
2	*2480.00	66.23 AV			1.00 V	355	34.64	31.59
3	2483.50	57.86 PK	74.00	-16.14	1.00 V	355	26.26	31.60
3	2483.50	27.86 AV	54.00	-26.14	1.00 V	355	-3.74	31.60
4	4960.00	60.83 PK	74.00	-13.17	1.12 V	158	22.75	38.08
4	4960.00	30.83 AV	54.00	-23.17	1.12 V	158	-7.25	38.08
5	7440.09	59.97 PK	74.00	-14.03	1.10 V	180	17.45	42.52
5	7440.09	29.97 AV	54.00	-24.03	1.10 V	180	-12.55	42.52
6	9920.08	63.70 PK	74.00	-10.30	1.19 V	177	18.62	45.08
6	9920.08	33.70 AV	54.00	-20.30	1.19 V	177	-11.38	45.08

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.

4.8 BAND EDGES MEASUREMENT

4.8.1 LIMITS OF BAND EDGES MEASUREMENT

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

4.8.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

NOTES:

The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.8.3 TEST PROCEDURE

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

4.8.4 DEVIATION FROM TEST STANDARD

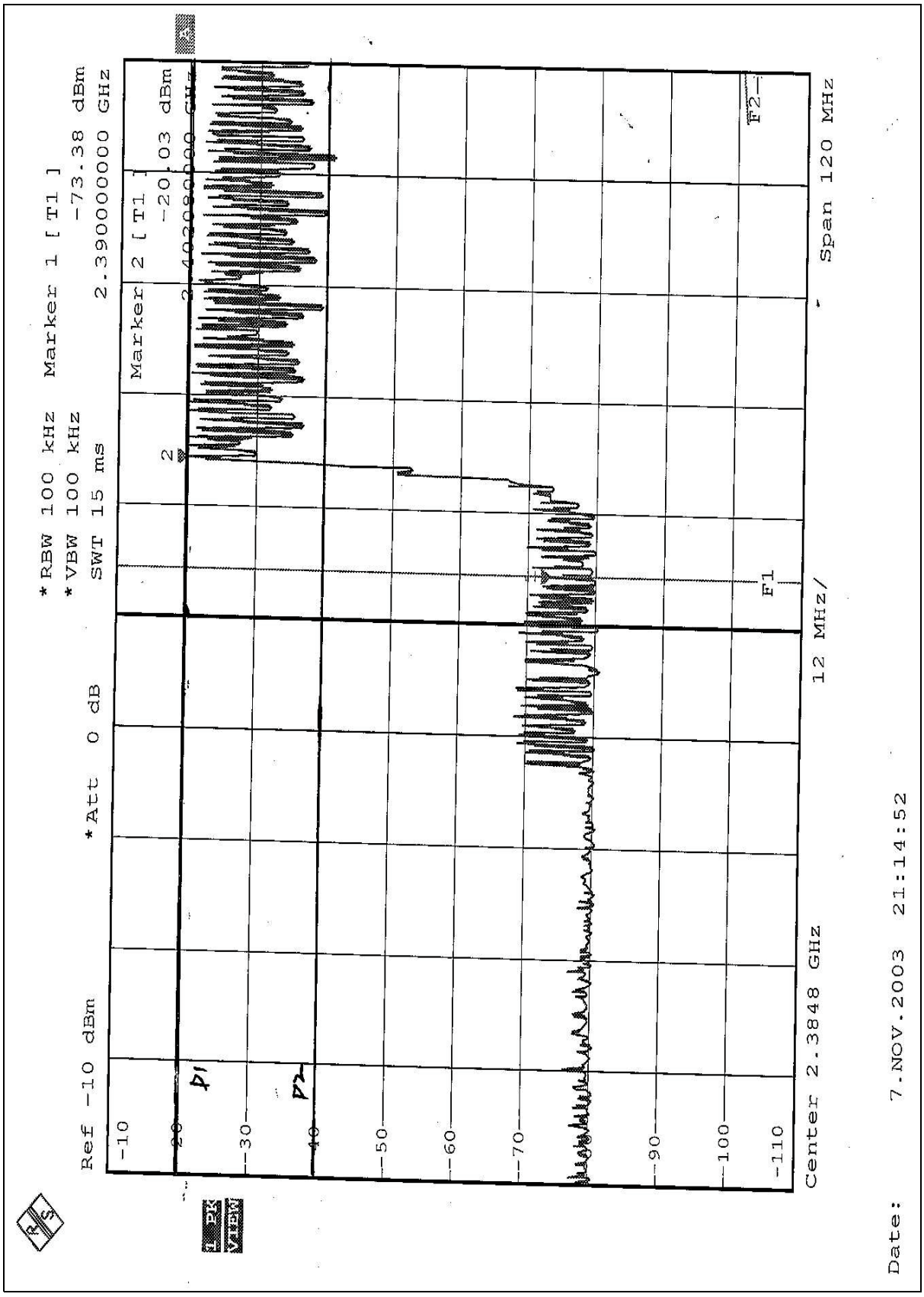
No deviation

4.8.5 EUT OPERATING CONDITION

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

4.8.6 TEST RESULTS

Emissions radiated outside of the specified frequency bands, please refer to p23 and 25 for met the requirement of the general radiated emission limits in § 15.209.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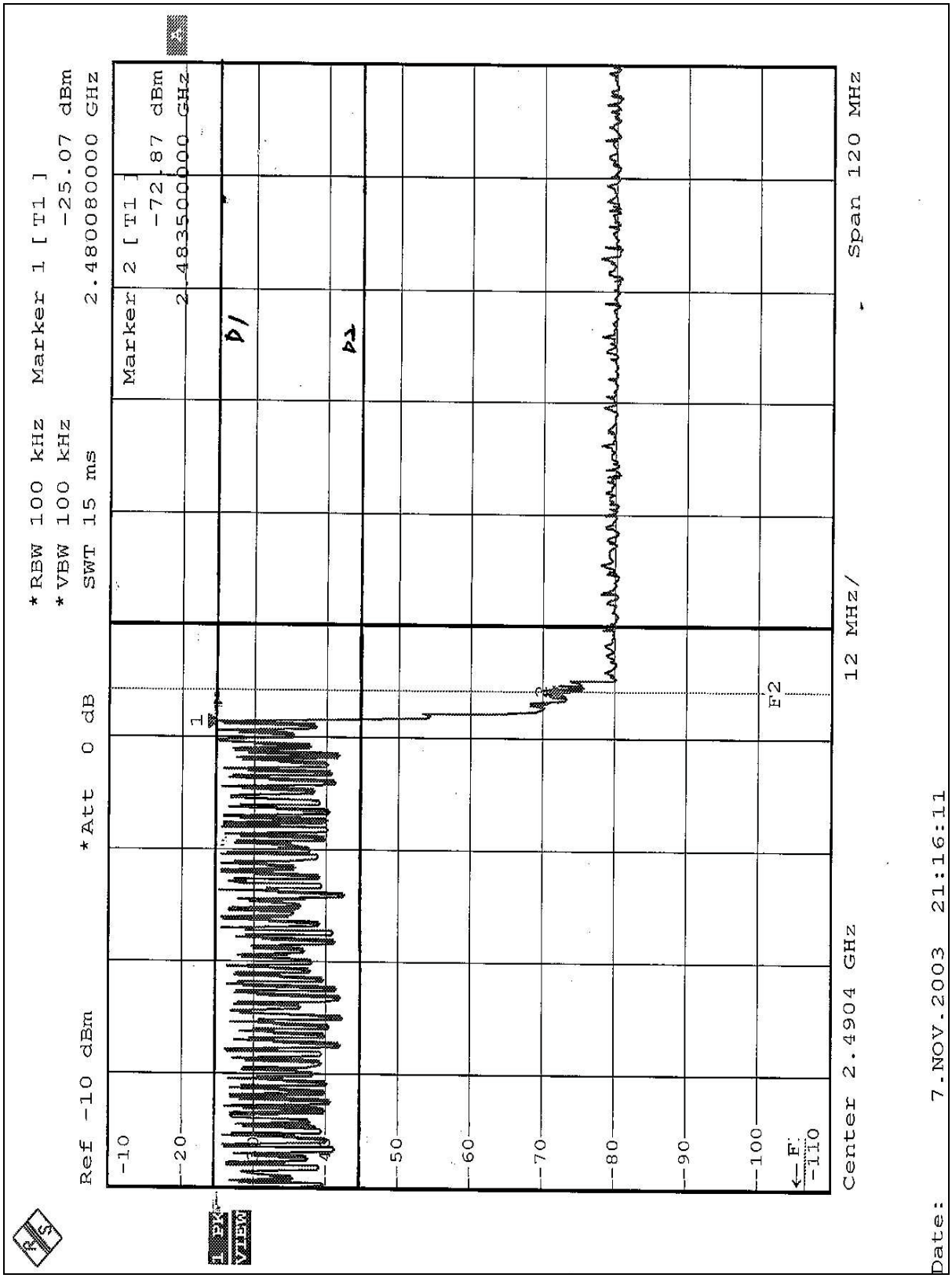
*VBW 100 kHz
SWT 15 ms
Marker 1 [T1]
-73.38 dBm
2.390000000 GHz
Marker 2 [T1]
-20.03 dBm
2.403200000 GHz
*Att 0 dB
Ref -10 dBm
Center 2.3848 GHz
12 MHz/
Span 120 MHz
F1
F2
P1
P2
PK
VIEW
7.NOV.2003 21:14:52
Date:


*RBW 100 kHz
*VBW 100 kHz
SWT 15 ms
Marker 1 [T1]
-25.07 dBm
2.480080000 GHz
Marker 2 [T1]
-72.87 dBm
2.483500000 GHz
Ref -10 dBm
*Att 0 dB
Center 2.4904 GHz
12 MHz/
Span 120 MHz
Date: 7.NOV.2003 21:16:11

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (MODE 1)

RADIATED EMISSION TEST (Mode 1)

RADIATED EMISSION TEST (Mode 2)

6 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
New Zealand	MoC
Norway	NEMKO
R.O.C.	BSMI, DGT, CNLA

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml.

If you have any comments, please feel free to contact us at the following:

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Tel: 886-3-3270910
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Email: service@mail.adt.com.tw
Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.