

FCC TEST REPORT

REPORT NO.: RF911122A11

MODEL NO.: SC800, SC500, SC300

RECEIVED: Nov. 21, 2002

TESTED: Nov. 26, 2002 ~ Jan. 1, 2003

APPLICANT: Tatung Co.

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R.O.C.

ISSUED BY: Advance Data Technology Corporation

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0528
ILAC MRA



Lab Code: 200102-0

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1 CERTIFICATION

PRODUCT : Tablet PC
MODEL NO. : SC800, SC500, SC300
BRAND : Electrovara
APPLICANT : Tatung Co.
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
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. 26, 2002 ~ Jan. 1, 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.

CHECKED BY: Rennie Wang, **DATE:** January 5, 2003
Rennie Wang

APPROVED BY: Dr. Alan Lane for, **DATE:** January 5, 2003
Dr. Alan Lane
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 Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is -22.54dBuV at 2.048MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -10.70dBuV at 144.20MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Tablet PC
MODEL NO.	SC800, SC500, SC300
POWER SUPPLY	12VDC from AC adapter
MODULATION TYPE	BPSK, QPSK, CCK
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
BANDWIDTH OF EACH CHANNEL	22MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	18.42dBm
ANTENNA TYPE	Printed Antenna
DATA CABLE	1.8m (Non-shielded)
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. There are three models provided to this EUT. Model SC800 uses PIII 866MHz CPU, two 256MB memories and fingerprint identification function. Model SC500 uses PIII 866MHz CPU, two 256MB memories but without fingerprint identification function. Model SC300 uses CELERON 733MHz CPU, one 256MB memory but without fingerprint identification function.
2. This EUT was operated with the following power adapter:

Brand :	HIPRO
Model No. :	HP-OD042D03
Input power :	100-240Vac, 50-60Hz, 1.2A
Output power :	12Vdc, 3.5A

3. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided to this EUT.

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

NOTE:

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. The model SC800 was chosen be the worse case to do the test.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC 47 CFR Part 15, Subpart C. (15.247)

ANSI C63.4 : 1992

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

NOTE: 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	MONITOR	ADI	CM100	020058T10200180	FCC DoC APPROVED
2	MO DRIVER	FUJITSU	MDF3064EE	05000997	FCC DoC APPROVED
3	USB MOUSE	Geniusnet	828 U+P	66820011004448	FCC DoC APPROVED
4	SPEAKER	JAZZ	J-008	J791149	N/A
5	MICROPHONE	CAROL	MUD-329		N/A
6	PERSONAL COMPUTER	NTI	PIII450	P201178	FCC DoC APPROVED
7	MONITOR	ADI	PV-448	604012V00100237A	BR8PV-448
8	PS/2 KEYBOARD	BTC	5121W	A00801380	E5XKB5121WTH0110
9	PS/2 MOUSE	DEXIN	A2P800A	80102095	NIYA2P800A
10	LAN CARD	HP	EN1207D-TX-4A-18	ACC000214410	FCC DoC APPROVED
11	EPABX	VIDAR-SMS	EASYSWITCH PX-4	95080283	N/A
12	MODEM	ACTIONTEC	EX560RK	119W0007	FCC DoC APPROVED

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core
2	1.8 m braid shielded wire, terminated with IEEE 1394 connector via drain wire, w/o cor
3	1.5 m foil shielded wire, terminated with USB connector via drain wire, w/o core.
4	1.1 m wrapped shielded wire, terminated via drain wire, with 3.5 mm phone plug, w/o core.
5	3.0 m wrapped shielded wire, terminated via drain wire, with 3.5 mm phone plug, w/o core.
6	NA
7	NA
8	1.6 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.
9	1.5 m foil shielded wire, terminated with PS/2 connector via drain wire, w/o core.
10	NA
11	NA
12	NA

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

4 TEST TYPES 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	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class 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	ESHS30	828109/007	July 03, 2003
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	839135/006	July 02, 2003
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Nov. 29, 2003
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 29, 2003
EMCO-L.I.S.N. (for peripheral)	3825/2	9204-1964	July 02, 2003
Software	Cond-V2M1	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C02.01	July 5, 2003
HP Terminator (For EMCO LISN)	11593A	E1-01-298	Feb. 20, 2003
HP Terminator (For EMCO LISN)	11593A	E1-01-299	Feb. 20, 2003

- 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. 2.
 4. The VCCI Site Registration No. is C-240.

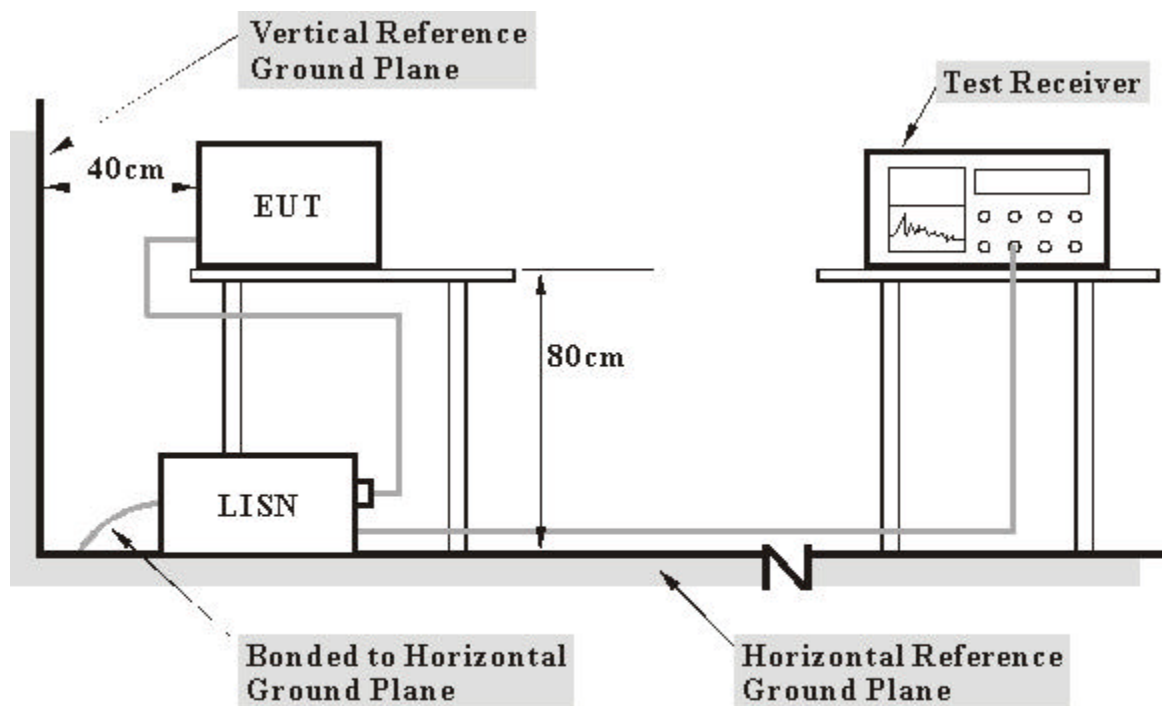
4.1.3 TEST PROCEDURES

- 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.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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. Turned on the power of all equipment.
- b. EUT ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
- c. EUT read and wrote messages from ext. MO.
- d. EUT sent and received messages from WORKSTATION PC via a UTP cable and a telephone cable.
- e. EUT sent "H" messages to monitor. Then monitor displayed "H" messages on its screen.
- f. EUT sent audio messages to earphone.
- g. Steps c-f were repeated.

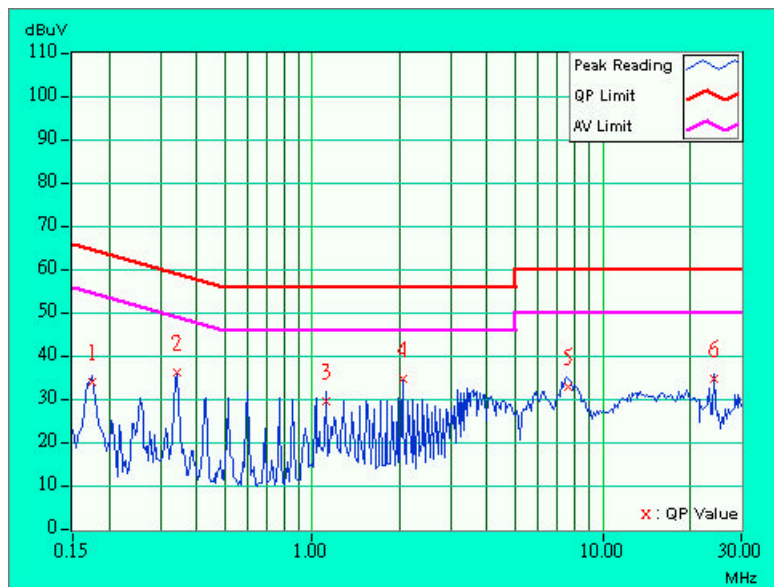
4.1.7 TEST RESULTS

EUT	Tablet PC	MODEL	SC800
MODE	Channel 11	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	24 deg. C, 71%RH, 1005 hPa	TESTED BY: Martin Lee	

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	0.174	0.10	32.76	-	32.86	-	64.77	54.77	-31.91	-
2	0.344	0.10	35.00	-	35.10	-	59.11	49.11	-24.01	-
3	1.116	0.10	28.35	-	28.45	-	56.00	46.00	-27.55	-
4	2.048	0.10	33.36	-	33.46	-	56.00	46.00	-22.54	-
5	7.560	0.48	31.57	-	32.05	-	60.00	50.00	-27.95	-
6	24.046	1.28	33.71	-	34.99	-	60.00	50.00	-25.01	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

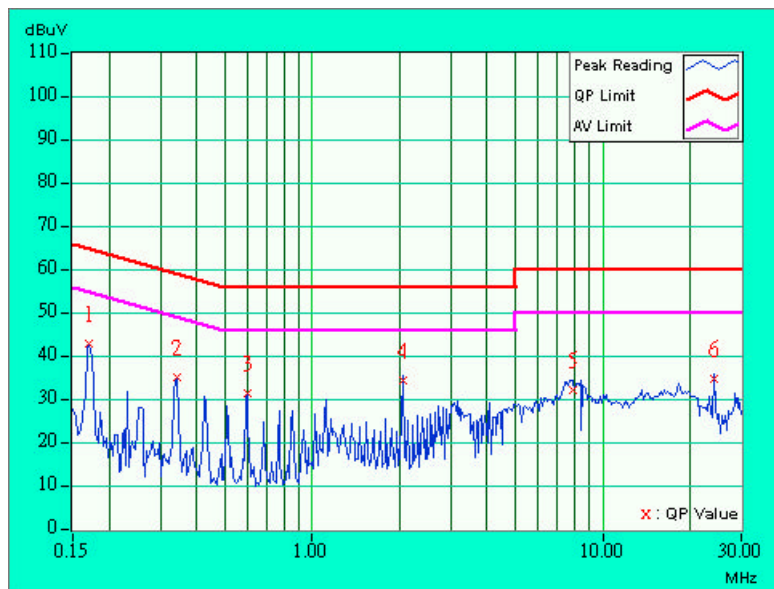


EUT	Tablet PC	MODEL	SC800
MODE	Channel 11	6dB BANDWIDTH	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	24 deg. C, 71%RH, 1005 hPa	TESTED BY: Martin Lee	

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	0.171	0.10	41.66	-	41.76	-	64.91	54.91	-23.15	-
2	0.342	0.10	34.04	-	34.14	-	59.15	49.15	-25.01	-
3	0.599	0.10	30.39	-	30.49	-	56.00	46.00	-25.51	-
4	2.049	0.10	33.10	-	33.20	-	56.00	46.00	-22.80	-
5	7.875	0.36	31.13	-	31.49	-	60.00	50.00	-28.51	-
6	24.046	1.16	33.51	-	34.67	-	60.00	50.00	-25.33	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
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	8590L	3520A00667	Aug. 26, 2003
*CHASE Preamplifier	CPA9231A/4	3215	Nov. 06, 2003
* HP Preamplifier	8449B	3008A01201	Dec. 01, 2003
* HP Preamplifier	8449B	3008A01292	Aug. 07, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESVS10	846285/012	Sept. 16, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	Nov. 22, 2003
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* CHASE BILOG Antenna	CBL6112B	2751	March 30, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 3, 2003
* EMCO Horn Antenna	3115	9312-4192	April 9, 2003
* CHANCE Turn Table & Tower Controller	ACS-I	NA	NA
* Software	ADT_Radiated_V5.09	NA	NA
* ANRITSU RF Switches	MP59B	M51167	Aug. 21, 2003
* TIMES RF cable	LMR-600	CABLE-ST6-01	Aug. 21, 2003

- 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 Open Site No. 6.
5. The VCCI Site Registration No. is R-728.



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.

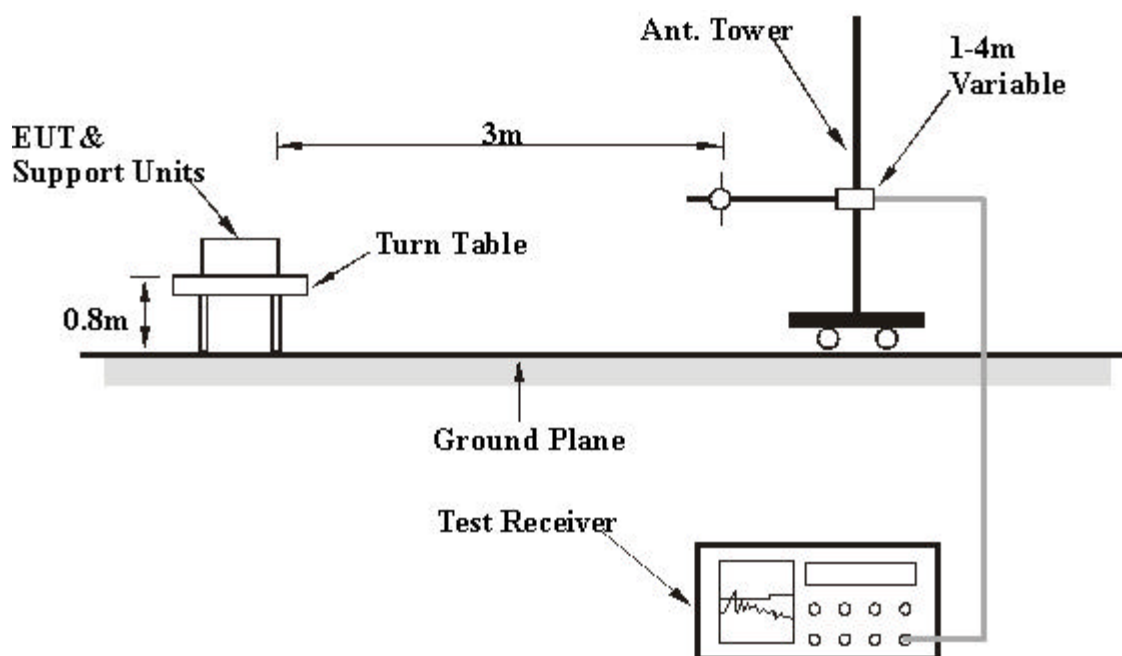
NOTE:

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 300 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 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

EUT	Tablet PC	MODEL	SC800
MODE	Channel 11	FREQUENCY RANGE	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 59 % RH, 1050 hPa	TESTED BY: Martin Lee	

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	120.00	30.0 QP	43.50	-13.50	1.10 H	35	17.30	12.70
2	133.50	30.6 QP	43.50	-12.90	1.30 H	210	18.30	12.30
3	144.20	32.1 QP	43.50	-11.40	1.26 H	240	20.40	11.80
4	167.20	29.8 QP	43.50	-13.70	1.76 H	200	19.40	10.40
5	220.00	26.7 QP	46.00	-19.30	1.93 H	25	15.30	11.40
6	240.00	26.6 QP	46.00	-19.40	1.00 H	259	14.00	12.60
7	271.00	24.2 QP	46.00	-21.80	1.56 H	352	10.40	13.80
8	308.02	19.0 QP	46.00	-27.00	1.05 H	93	4.30	14.70
9	398.50	28.3 QP	46.00	-17.70	1.82 H	110	10.60	17.70
10	440.02	21.2 QP	46.00	-24.80	1.19 H	273	3.00	18.20
11	465.50	26.4 QP	46.00	-19.60	1.68 H	59	7.70	18.70
12	528.06	25.5 QP	46.00	-20.50	1.29 H	304	5.40	20.10
13	664.00	28.3 QP	46.00	-17.70	1.68 H	214	7.00	21.30

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. The other emission levels were very low against the limit.

EUT	Tablet PC	MODEL	SC800
MODE	Channel 11	FREQUENCY RANGE	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 59 % RH, 1050 hPa	TESTED BY: Martin Lee	

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	120.00	31.1 QP	43.50	-12.40	1.48 V	279	18.40	12.70
2	133.50	30.1 QP	43.50	-13.40	1.30 V	45	17.80	12.30
3	144.20	32.8 QP	43.50	-10.70	1.08 V	248	21.00	11.80
4	167.20	30.7 QP	43.50	-12.80	1.15 V	184	20.30	10.40
5	220.00	24.6 QP	46.00	-21.40	1.12 V	24	13.20	11.40
6	240.00	25.4 QP	46.00	-20.60	1.27 V	251	12.80	12.60
7	271.00	22.1 QP	46.00	-23.90	1.60 V	81	8.30	13.80
8	308.00	20.9 QP	46.00	-25.10	1.40 V	258	6.20	14.70
9	398.50	30.3 QP	46.00	-15.70	1.82 V	124	12.60	17.70
10	440.00	24.2 QP	46.00	-21.80	1.56 V	222	6.00	18.20
11	465.50	26.4 QP	46.00	-19.60	1.55 V	232	7.70	18.70
12	528.00	26.5 QP	46.00	-19.50	1.59 V	20	6.40	20.10
13	664.00	28.9 QP	46.00	-17.10	1.18 V	46	7.60	21.30

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. The other emission levels were very low against the limit.

EUT	Tablet PC	MODEL	SC800
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 59 % RH, 1050 hPa	TESTED BY: Martin Lee	

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	2038.00	44.7 PK	74.00	-29.30	1.31 H	309	14.20	30.40
2	2389.00	44.5 PK	74.00	-29.50	1.00 H	273	12.60	31.90
3	*2412.00	98.8 PK			1.00 H	273	66.80	32.00
3	*2412.00	89.7 AV			1.00 H	273	57.70	30.40
4	4824.00	49.7 PK	74.00	-24.30	1.05 H	25	11.20	38.50

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	2038.00	38.7 PK	74.00	-35.30	1.29 V	323	8.30	30.40
2	2390.00	44.7 PK	74.00	-29.30	1.29 V	284	12.80	31.90
3	*2412.00	90.8 PK			1.29 V	284	58.70	32.00
3	*2412.00	82.4 AV			1.29 V	284	50.40	30.40
4	4824.00	48.4 PK	74.00	-25.60	1.00 V	0	9.90	38.50

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	Tablet PC	MODEL	SC800
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 59 % RH, 1050 hPa	TESTED BY: Martin Lee	

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	2063.00	45.5 PK	74.00	-28.50	1.03 H	12	14.90	30.60
2	*2437.00	103.2 PK			1.09 H	0	70.90	32.20
2	*2437.00	94.9 AV			1.09 H	0	62.60	30.60
3	4125.00	47.3 PK	74.00	-26.70	1.05 H	162	10.20	37.00

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	2063.00	42.6 PK	74.00	-31.40	1.29 V	296	12.00	30.60
2	*2437.00	92.5 PK			1.26 V	284	60.30	32.20
2	*2437.00	84.5 AV			1.26 V	284	52.30	30.60
3	4125.00	48.3 PK	74.00	-25.70	1.29 V	348	11.30	37.00
4	4875.00	48.5 PK	74.00	-25.50	1.20 V	0	9.80	38.70

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	Tablet PC	MODEL	SC800
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 59 % RH, 1050 hPa	TESTED BY: Martin Lee	

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	2088.00	44.6 PK	74.00	-29.40	1.97 H	22	13.80	30.80
2	*2462.00	104.3 PK			1.08 H	0	71.80	32.50
2	*2462.00	96.2 AV			1.08 H	0	63.70	30.80
3	2500.00	46.8 PK	74.00	-27.20	1.08 H	0	14.00	32.80
4	4175.00	47.5 PK	74.00	-26.50	1.97 H	135	10.50	37.00

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	2088.00	44.5 PK	74.00	-29.50	1.03 V	353	13.60	30.80
2	*2462.00	91.4 PK			1.37 V	0	59.00	32.50
2	*2462.00	83.7 AV			1.37 V	0	51.20	30.80
3	2499.00	43.9 PK	74.00	-30.10	1.37 V	0	11.20	32.80
4	4175.00	47.5 PK	74.00	-26.50	1.31 V	0	10.60	37.00

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.

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE:

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

4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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

4.3.6 EUT OPERATING CONDITIONS

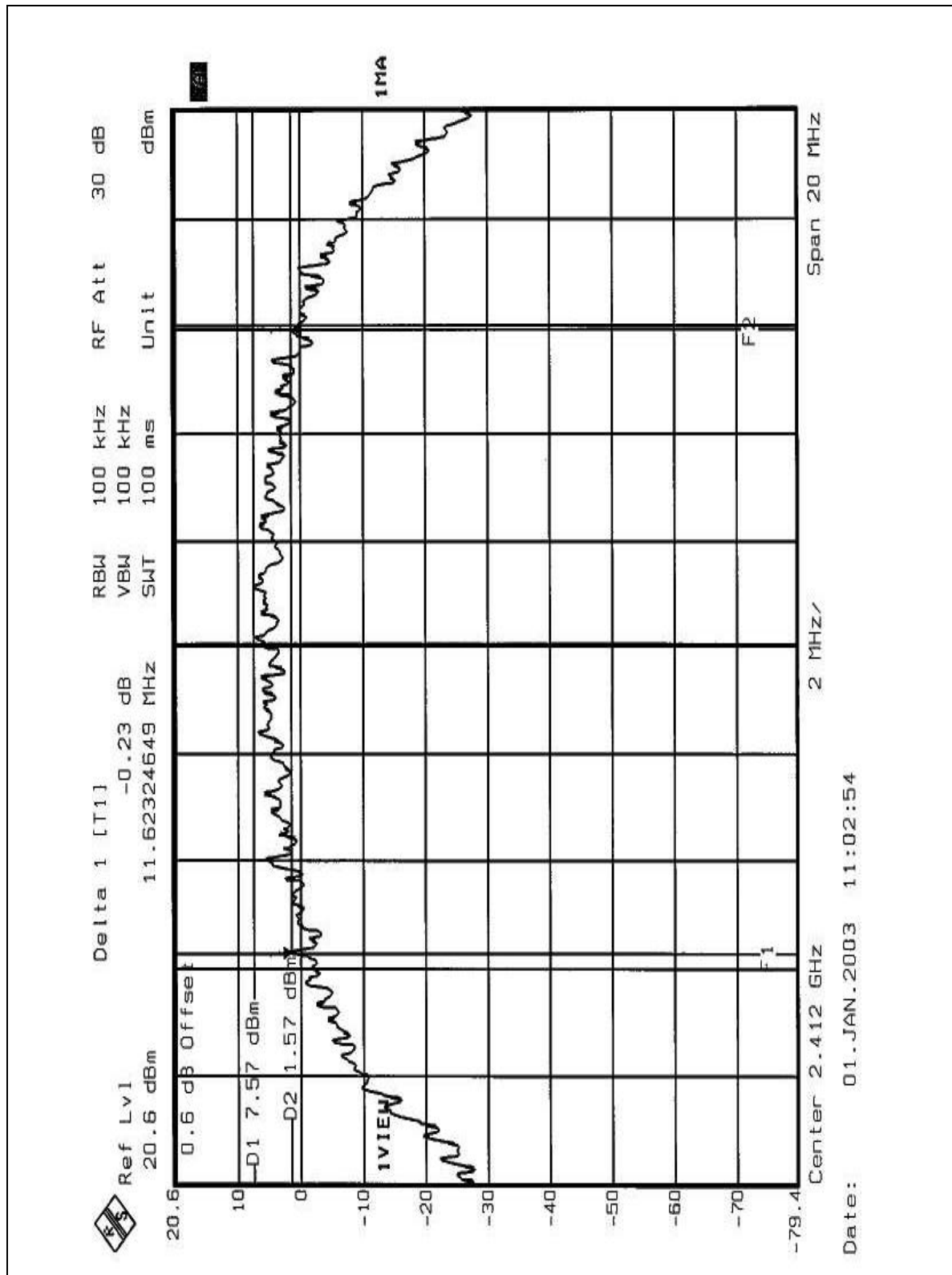
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

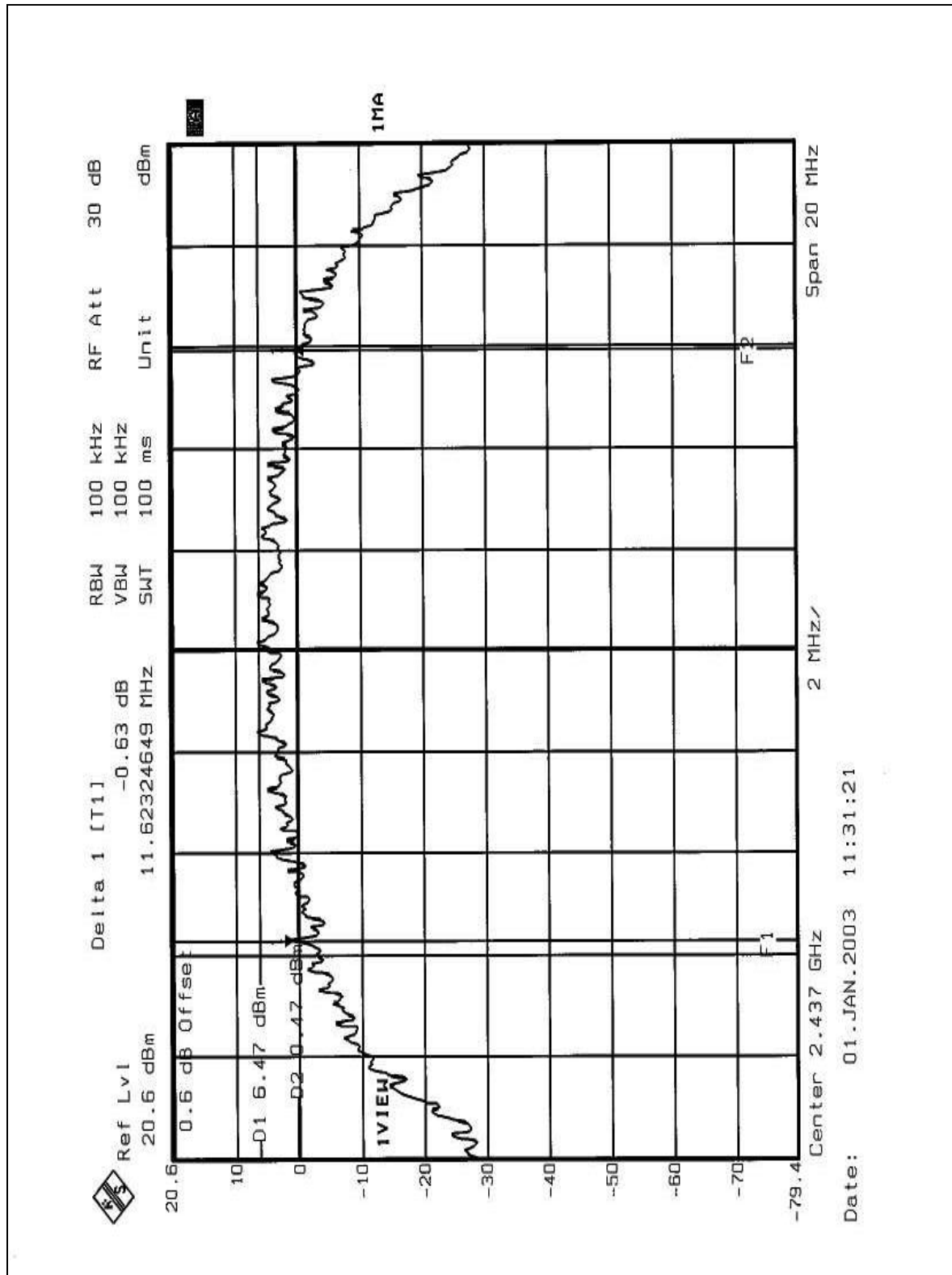
EUT	Tablet PC	MODEL	SC800
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21 deg. C, 68 %RH, 1005 hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.62	0.5	PASS
6	2437	11.62	0.5	PASS
11	2462	11.62	0.5	PASS

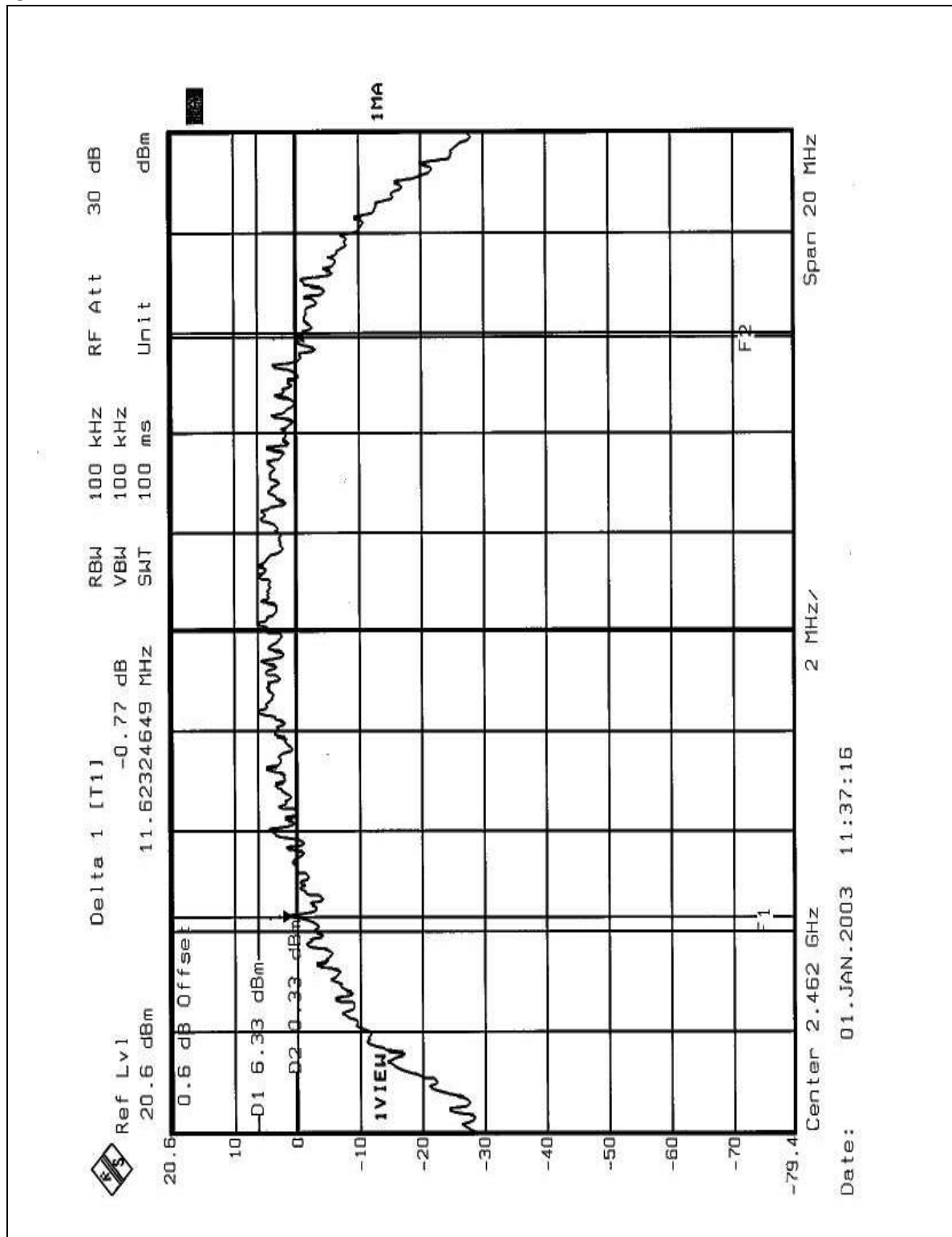
CH1



CH6



CH11



4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
POWER METER	E4416A	GB41291118	Jul. 30, 2003
PEAK POWER SENSOR	E9327A	US40440722	Jul. 30, 2003

NOTE:

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

4.4.3 TEST PROCEDURES

The transmitter output was connected to the peak power meter.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

EUT	Tablet PC	MODEL	SC800
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21 deg. C, 68 %RH, 1005 hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.38	30	PASS
6	2437	18.42	30	PASS
11	2462	18.31	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE:

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

4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

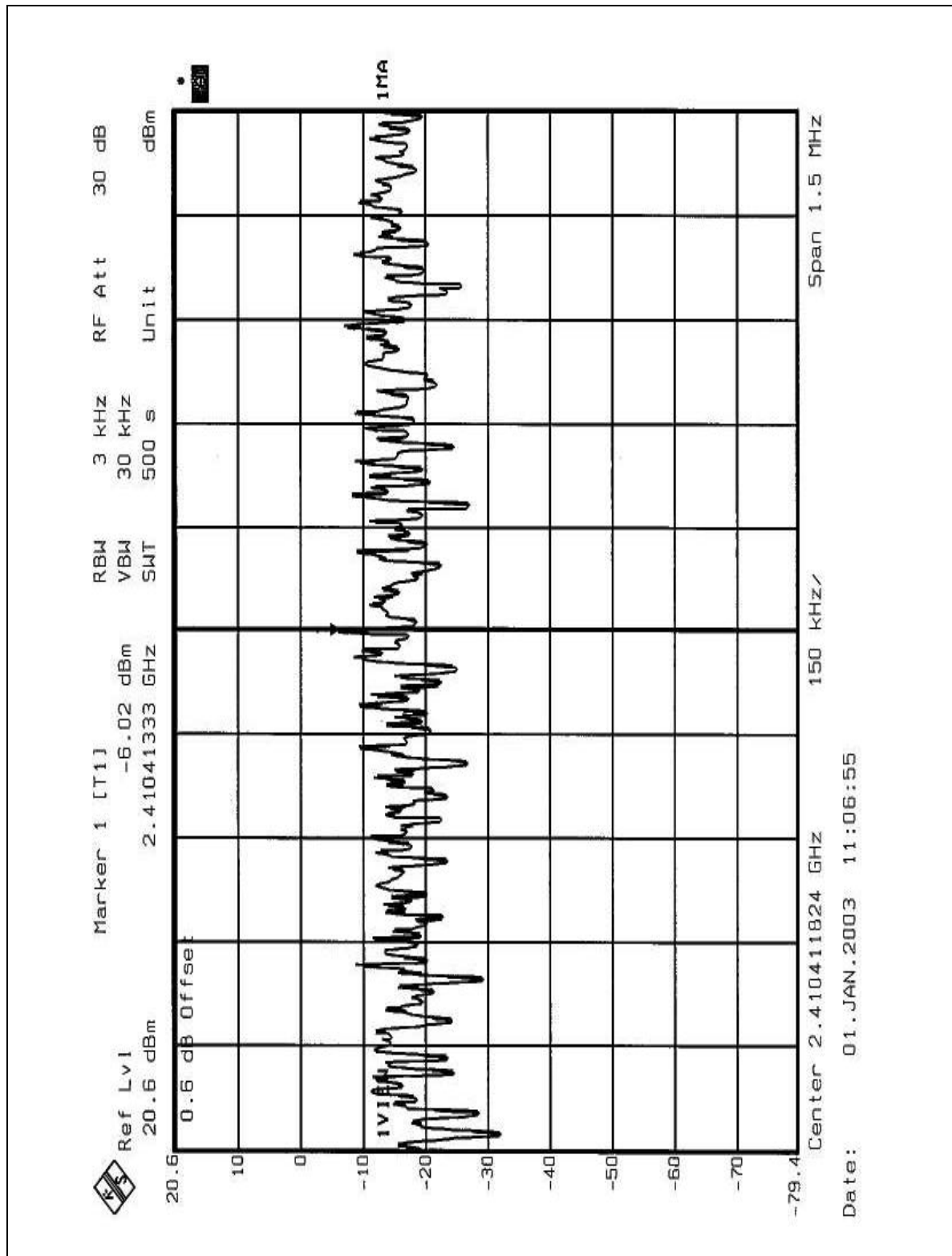
Same as 4.3.6

4.5.7 TEST RESULTS

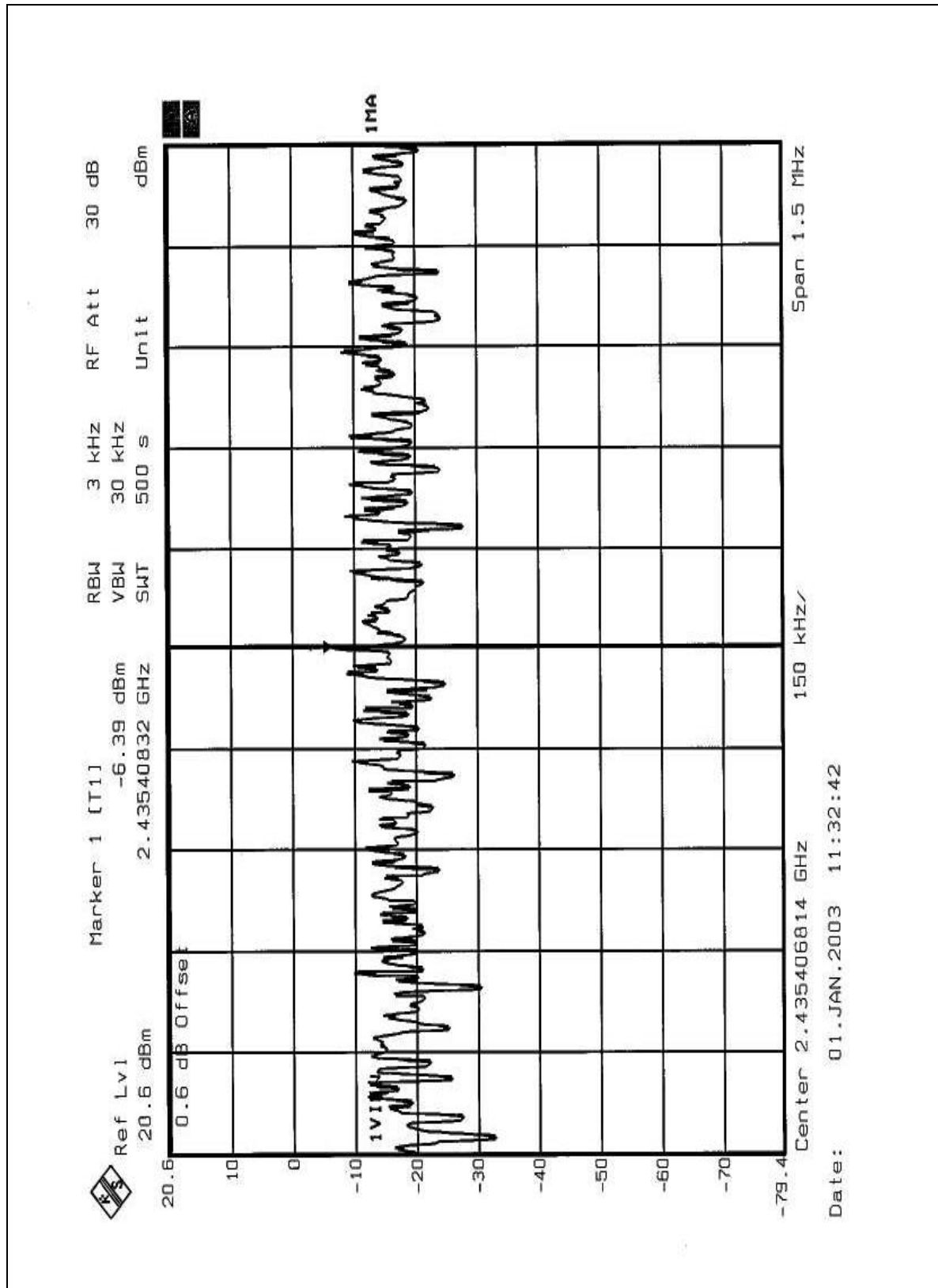
EUT	Tablet PC	MODEL	SC800
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21 deg. C, 68 %RH, 1005 hPa
TESTED BY: Ansen Lei			

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-6.02	8	PASS
6	2437	-6.39	8	PASS
11	2462	-6.46	8	PASS

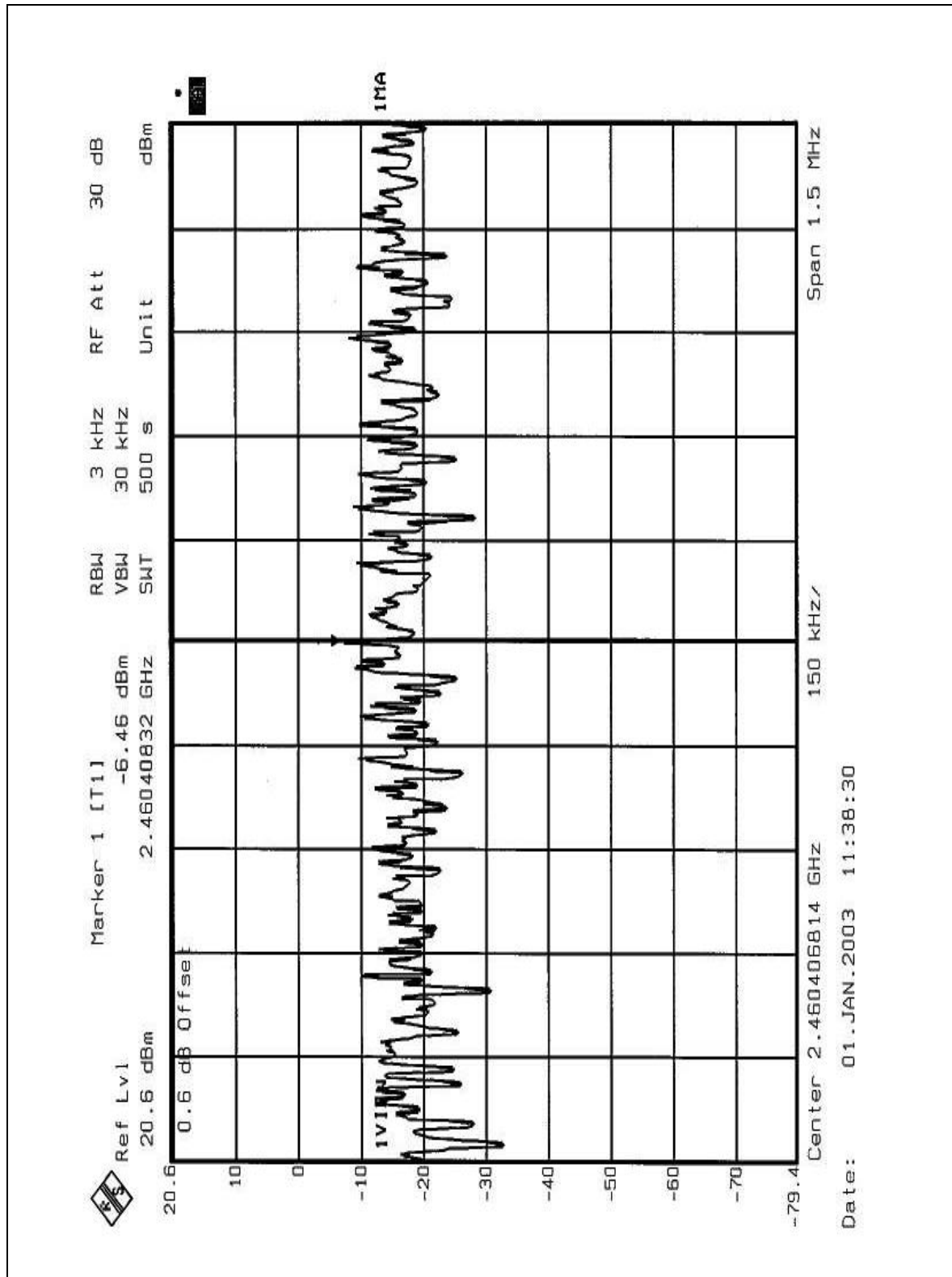
CH1



CH6



CH11



4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE:

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

4.6.3 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 kHz bandwidth from band edge. The band edges was measured and recorded.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation



4.6.5 EUT OPERATING CONDITION

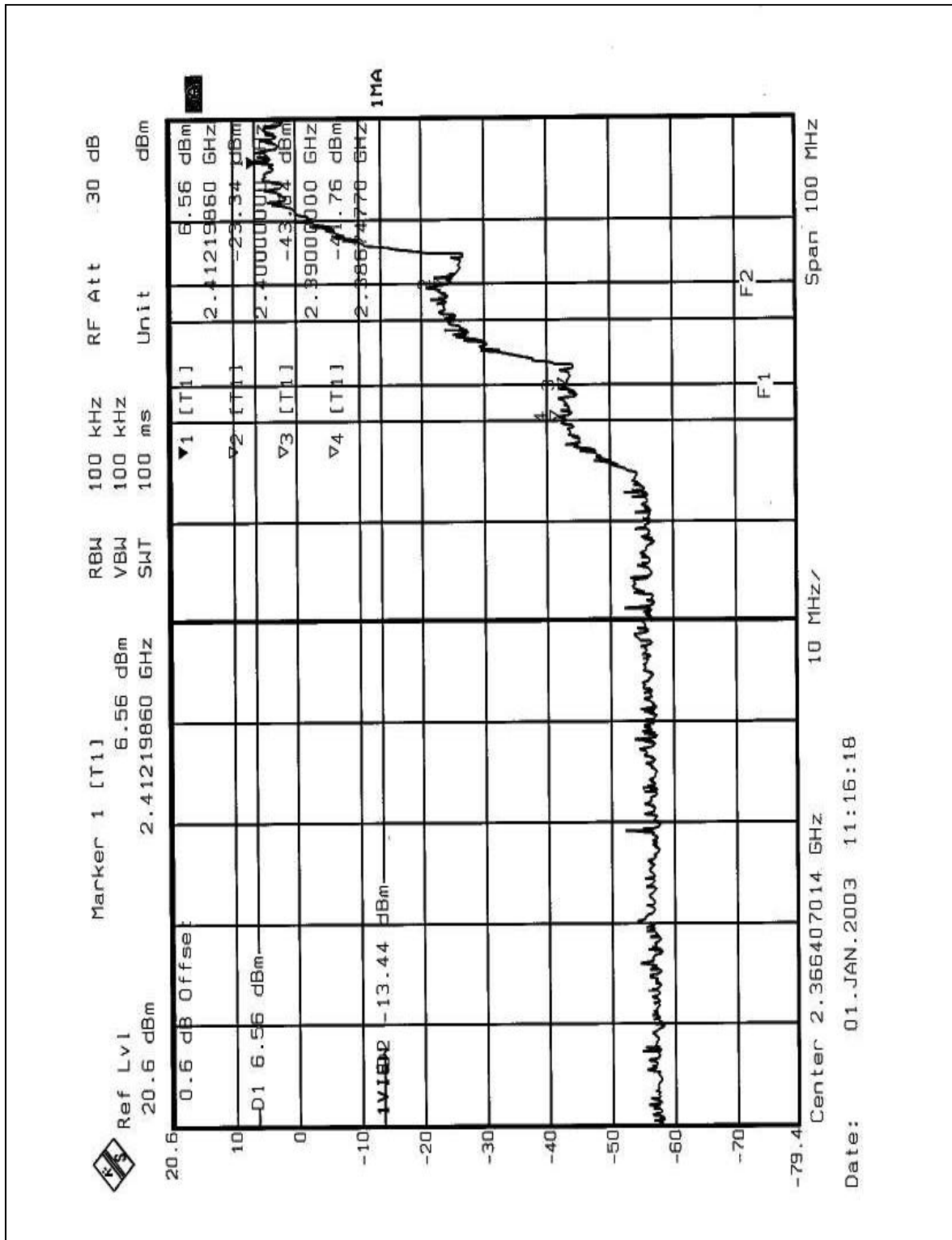
Same as Item 4.3.6

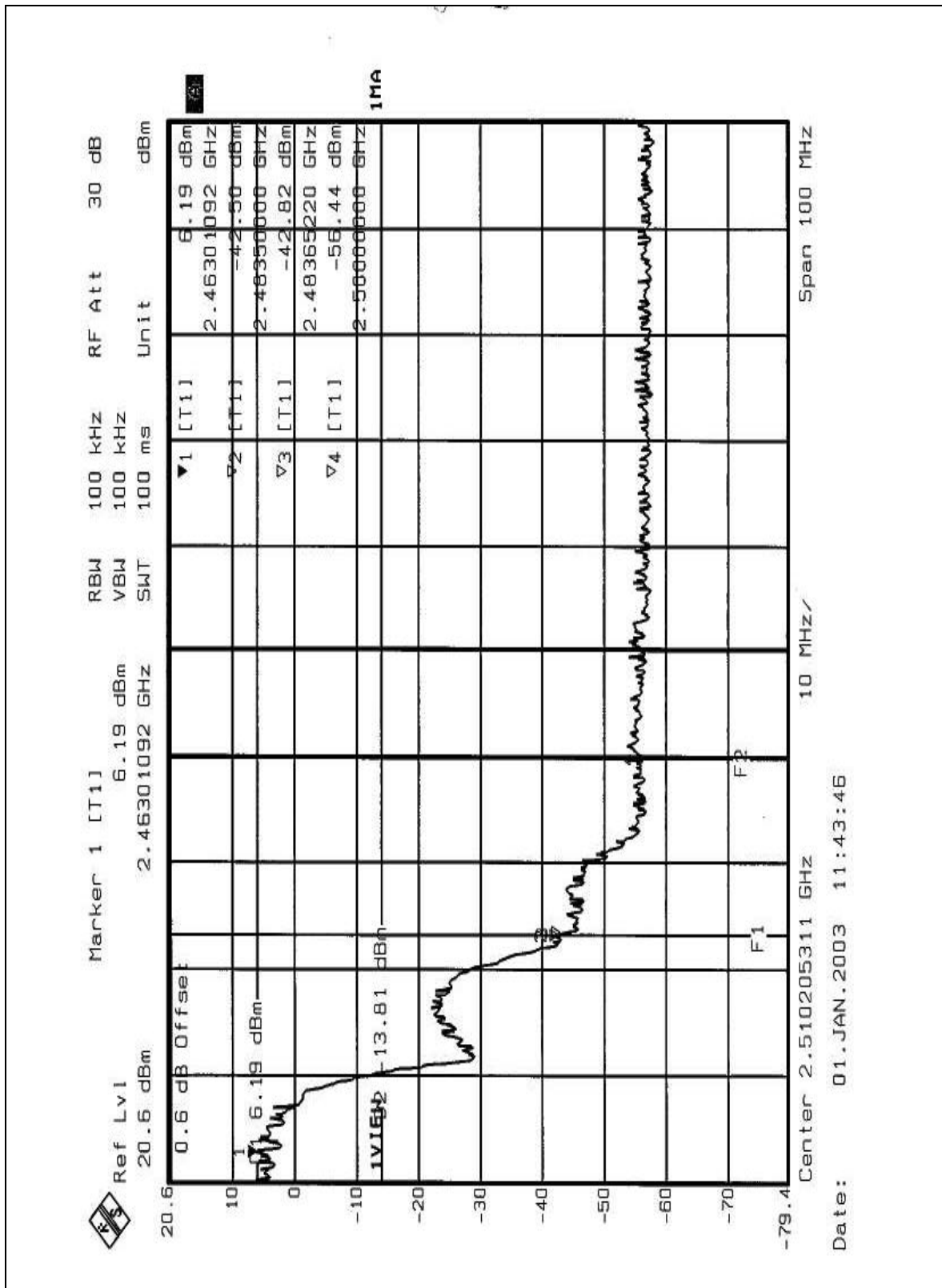
4.6.6 TEST RESULTS

The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

NOTE1: The band edge emission plot on the following first page shows 48.32dB delta between carrier maximum power and local maximum emission in restrict band (2.3867GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 (page 20) is 89.7dBuV/m, so the maximum field strength in restrict band is $89.7 - 48.32 = 41.38$ dBuV/m which is under 54 dBuV/m limit.

NOTE2: The band edge emission plot on the following second page shows 48.69dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 (page 22) is 96.2dBuV/m, so the maximum field strength in restrict band is $96.2 - 48.69 = 47.51$ dBuV/m which is under 54 dBuV/m limit.







4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Printed antenna with UFL connector. And the maximum Gain of this antenna is only -9dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST





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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Email: service@mail.adt.com.tw

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