FCC TEST REPORT

REPORT NO.: RF920821R03
MODEL NO.: 3560
RECEIVED: Aug. 21, 2003
TESTED: Sept. 4 ~ Oct. 3, 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 :	Wireless Scanner Base
BRAND NAME :	CipherLab
MODEL NO :	3560
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 Sept. 4 ~ Oct. 3, 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: Rennie Wang , **DATE:** October 7, 2003

APPROVED BY: Ellis Wu, Manager , **DATE:** October 7, 2003

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 –18.84dB at 4.56 MHz
15.249	Radiated Emission Test	PASS	Minimum passing margin is –1.20dB at 2370.00MHz
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	Wireless Scanner Base
MODEL NO.	3560
POWER SUPPLY	5VDC from AC adapter
MODULATION TYPE	FHSS
CARRIER FREQUENCY OF EACH CHANNEL	2402MHz ~ 2480MHz
BANDWIDTH OF EACH CHANNEL	1MHz
NUMBER OF CHANNEL	79
ANTENNA TYPE	Wire antenna
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT is powered by following AC adapter:

Brand:	SINO-AMERICAN
Model No.:	SA10-0515U
Input power :	100-240V ~ 50-60Hz, 250mA
Output power :	5V---1500mA

2. 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. 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.
2. Above 1 GHz, the channel 0, 39, and 78 were tested individually.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless Scanner Base. 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 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	NOTEBOOK	DELL	PP01L	TW-09C748-12800-19O-B220	FCC DoC APPROVED

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

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.

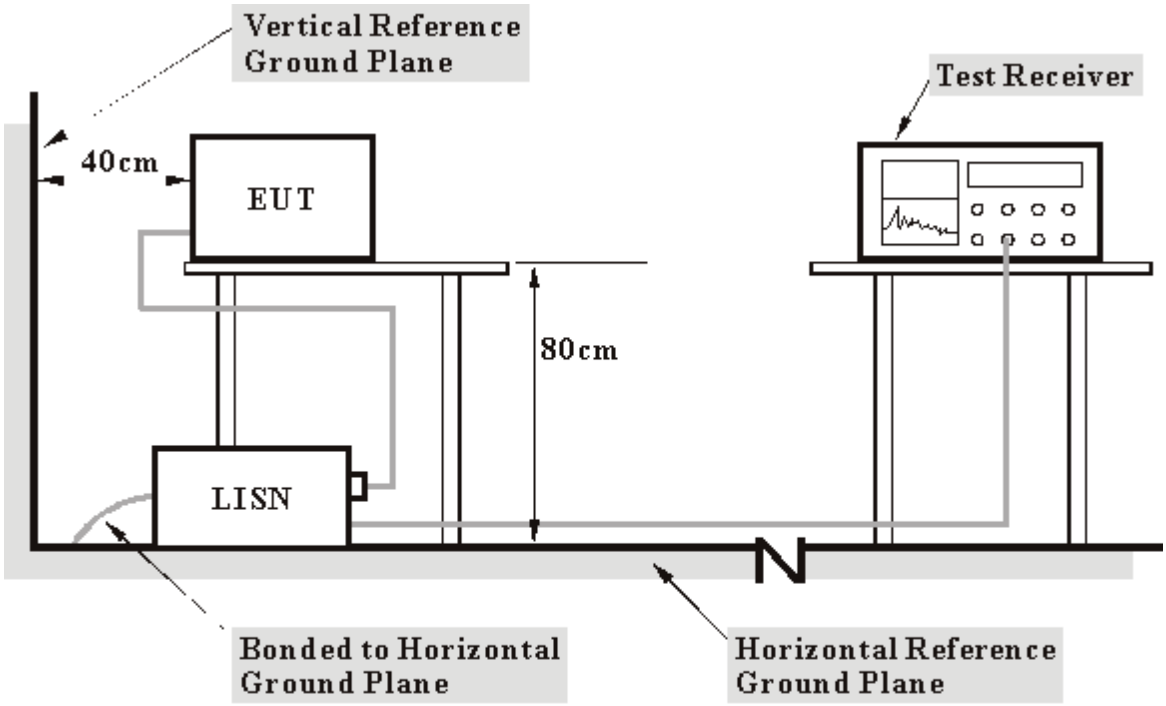
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

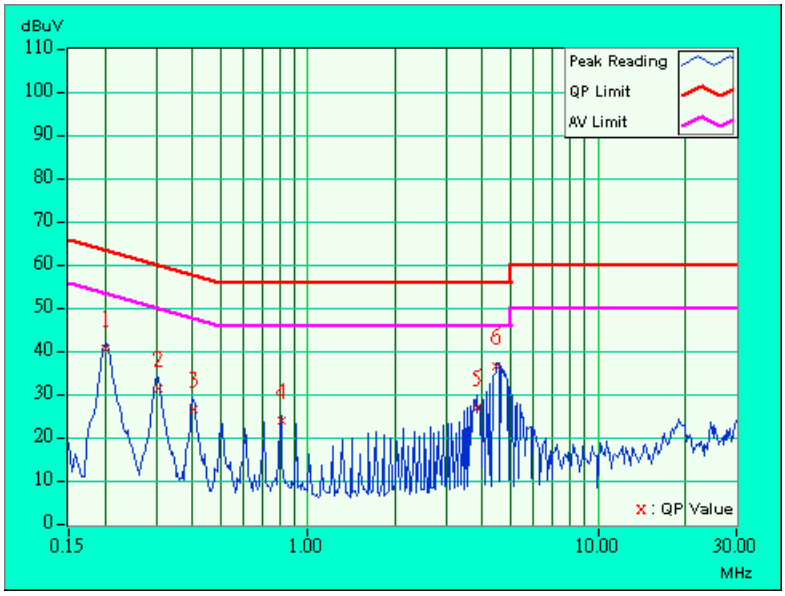
The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

4.1.7 TEST RESULTS

EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 0	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26 deg. C, 55%RH, 991 hPa	**TESTED BY**: Steven Lu	

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	0.201	0.06	40.51	-	40.57	-	63.58	53.58	-23.01	-
2	0.306	0.06	31.41	-	31.47	-	60.07	50.07	-28.60	-
3	0.406	0.06	26.41	-	26.47	-	57.74	47.74	-31.27	-
4	0.810	0.13	23.83	-	23.96	-	56.00	46.00	-32.04	-
5	3.850	0.22	26.65	-	26.87	-	56.00	46.00	-29.13	-
6	4.457	0.24	36.46	-	36.70	-	56.00	46.00	-19.30	-

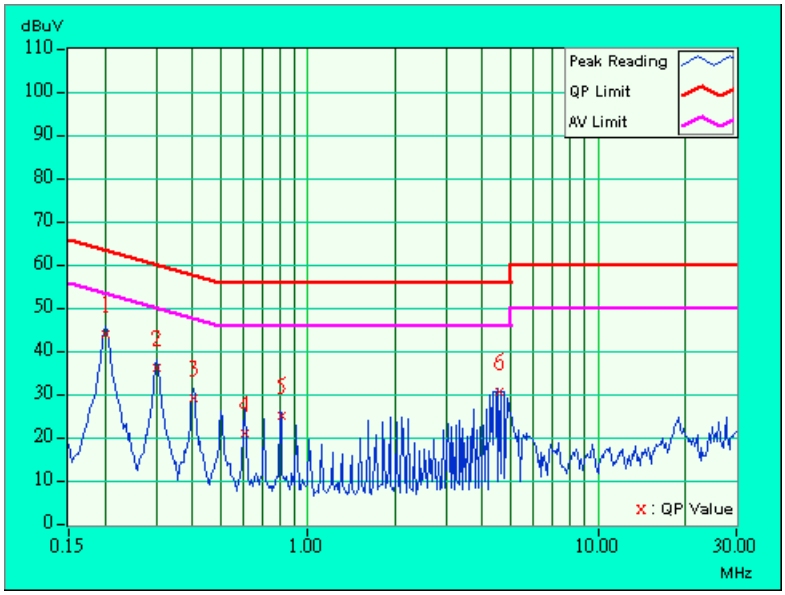
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 0	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26 deg. C, 55%RH, 991 hPa	**TESTED BY**: Steven Lu	

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	0.201	0.05	43.86	-	43.91	-	63.58	53.58	-19.67	-
2	0.302	0.05	36.23	-	36.28	-	60.18	50.18	-23.90	-
3	0.404	0.05	29.05	-	29.10	-	57.77	47.77	-28.67	-
4	0.608	0.09	20.82	-	20.91	-	56.00	46.00	-35.09	-
5	0.810	0.12	25.04	-	25.16	-	56.00	46.00	-30.84	-
6	4.556	0.22	30.52	-	30.74	-	56.00	46.00	-25.26	-

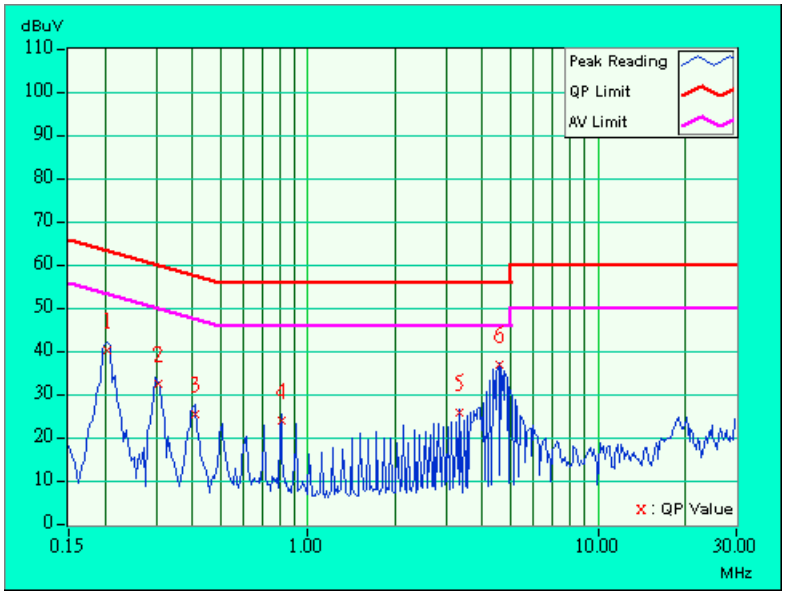
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 39	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26 deg. C, 55%RH, 991 hPa	**TESTED BY**: Steven Lu	

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	39.98	-	40.04	-	63.42	53.42	-23.38	-
2	0.304	0.06	32.47	-	32.53	-	60.14	50.14	-27.61	-
3	0.408	0.06	25.28	-	25.34	-	57.69	47.69	-32.35	-
4	0.810	0.13	23.87	-	24.00	-	56.00	46.00	-32.00	-
5	3.344	0.21	25.66	-	25.87	-	56.00	46.00	-30.13	-
6	4.562	0.24	36.92	-	37.16	-	56.00	46.00	-18.84	-

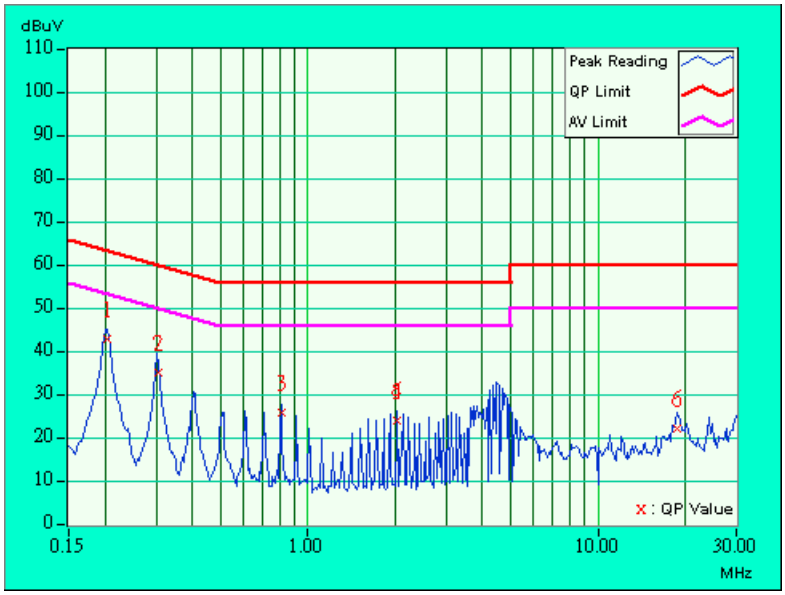
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 39	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26 deg. C, 55%RH, 991 hPa	**TESTED BY**: Steven Lu	

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	0.05	42.33	-	42.38	-	63.42	53.42	-21.04	-
2	0.306	0.05	34.72	-	34.77	-	60.07	50.07	-25.30	-
3	0.810	0.12	25.34	-	25.46	-	56.00	46.00	-30.54	-
4	2.027	0.18	23.63	-	23.81	-	56.00	46.00	-32.19	-
5	2.027	0.18	23.71	-	23.89	-	56.00	46.00	-32.11	-
6	18.668	0.50	21.79	-	22.29	-	60.00	50.00	-37.71	-

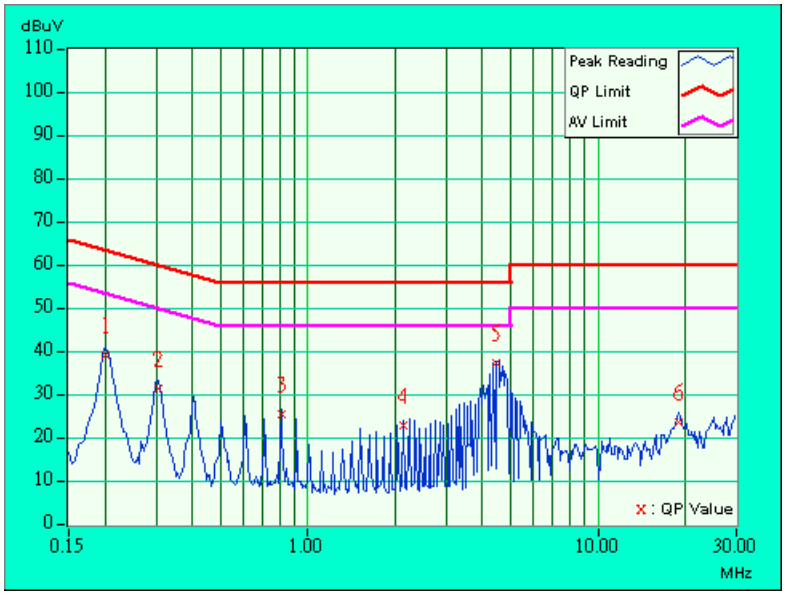
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 78	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26 deg. C, 55%RH, 991 hPa	**TESTED BY**: Steven Lu	

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	0.201	0.06	38.62	-	38.68	-	63.58	53.58	-24.90	-
2	0.306	0.06	31.04	-	31.10	-	60.07	50.07	-28.97	-
3	0.810	0.13	25.08	-	25.21	-	56.00	46.00	-30.79	-
4	2.133	0.18	22.27	-	22.45	-	56.00	46.00	-33.55	-
5	4.469	0.24	36.69	-	36.93	-	56.00	46.00	-19.07	-
6	18.910	0.62	23.15	-	23.77	-	60.00	50.00	-36.23	-

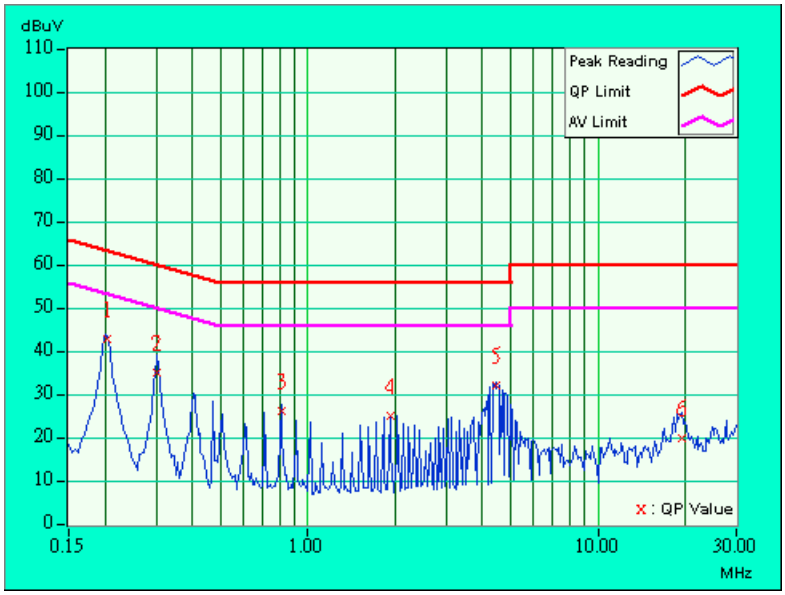
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 78	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neurral (N)
ENVIRONMENTAL CONDITIONS	26 deg. C, 55%RH, 991 hPa	**TESTED BY**: Steven Lu	

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	0.05	42.43	-	42.48	-	63.42	53.42	-20.94	-
2	0.302	0.05	34.70	-	34.75	-	60.18	50.18	-25.43	-
3	0.810	0.12	25.93	-	26.05	-	56.00	46.00	-29.95	-
4	1.930	0.18	24.65	-	24.83	-	56.00	46.00	-31.17	-
5	4.465	0.22	31.70	-	31.92	-	56.00	46.00	-24.08	-
6	19.387	0.51	19.42	-	19.93	-	60.00	50.00	-40.07	-

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	8590L	3544A01176	Jun. 10, 2004
* HP Preamplifier	8447D	2944A08485	May 01, 2004
* HP Preamplifier	8449B	3008A01201	Dec. 01, 2003
* HP Preamplifier	8449B	3008A01292	Aug. 13, 2004
ROHDE & SCHWARZ TEST RECEIVER	ESI7	838496/016	Feb. 23, 2004
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	Nov. 22, 2003
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* CHASE BILOG Antenna	CBL6112A	2221	July 26, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jun. 30, 2004
* EMCO Horn Antenna	3115	9312-4192	Mar. 23, 2004
* EMCO Turn Table	1060	1115	NA
* CHANCE Tower	CM-AT40	CM-A010	NA
* Software	ADT_Radiated_V5.14	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 05, 2004
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jan. 05, 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 Open Site No. 5.
5. The VCCI Site Registration No. is R-1039.

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.

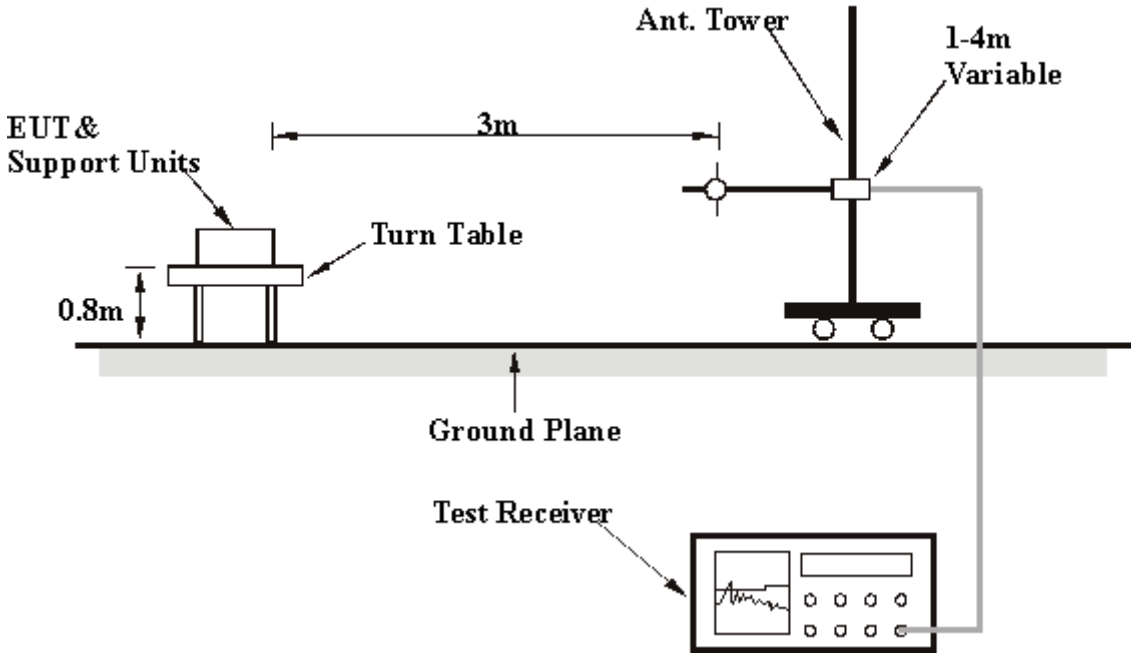
NOTE:

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 TEST RESULTS

EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 78	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 991 hPa	**TESTED BY**: Jamison Chan	

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	129.74	25.50 QP	43.50	-18.00	1.78 H	205	12.90	12.60
2	178.85	28.90 QP	43.50	-14.60	2.06 H	189	18.40	10.50
3	244.13	26.50 QP	46.00	-19.50	1.80 H	140	13.20	13.30
4	250.03	30.70 QP	46.00	-15.30	1.41 H	236	17.10	13.60
5	375.01	32.20 QP	46.00	-13.80	1.43 H	210	14.90	17.30
6	576.03	33.90 QP	46.00	-12.10	1.24 H	64	12.30	21.60
7	768.05	37.60 QP	46.00	-8.40	1.23 H	140	13.80	23.80

REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
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	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 78	**FREQUENCY RANGE**	Below 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 991 hPa	**TESTED BY**: Jamison Chan	

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	116.40	29.10 QP	43.50	-14.40	1.37 V	262	16.30	12.80
2	125.31	31.60 QP	43.50	-11.90	1.42 V	60	18.80	12.80
3	175.02	27.70 QP	43.50	-15.80	1.32 V	311	17.10	10.50
4	213.00	25.30 QP	43.50	-18.20	1.27 V	296	13.80	11.50
5	225.01	33.20 QP	46.00	-12.80	1.13 V	135	21.00	12.20
6	250.02	35.70 QP	46.00	-10.30	1.61 V	346	22.10	13.60
7	403.44	34.80 QP	46.00	-11.20	1.32 V	175	16.50	18.30
8	576.04	33.80 QP	46.00	-12.20	1.00 V	246	12.20	21.60
9	672.05	34.00 QP	46.00	-12.00	1.00 V	3	11.50	22.60
10	768.05	35.60 QP	46.00	-10.40	1.00 V	167	11.80	23.80

REMARKS:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
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	Wireless Scanner Base	MODEL	3560
MODE	Channel 0	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 991 hPa	TESTED BY: Jamison Chan	

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	2370.00	67.00 PK	74.00	-7.00	1.10 H	152	33.60	33.40
1	2370.00	52.80 AV	54.00	-1.20	1.10 H	152	19.40	33.40
2	*2402.00	108.80 PK	114.00	-5.20	1.10 H	152	75.20	33.60
2	*2402.00	74.30 AV	94.00	-19.70	1.10 H	152	40.70	33.60
3	4804.00	53.10 PK	74.00	-20.90	1.10 H	284	12.10	41.10
3	4804.00	39.00 AV	54.00	-15.00	1.10 H	284	-2.10	41.10

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	2370.00	61.80 PK	74.00	-12.20	1.62 V	196	28.40	33.40
1	2370.00	47.8 AV	54.00	-6.20	1.62 V	196	28.40	33.40
2	*2402.00	106.40 PK	114.00	-7.60	1.62 V	196	72.80	33.60
2	*2402.00	73.30 AV	94.00	-20.70	1.62 V	196	39.70	33.60
3	4804.00	53.60 PK	74.00	-20.40	1.62 V	190	12.60	41.10
3	4804.00	39.60 AV	54.00	-14.40	1.62 V	190	-1.40	41.10

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.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625*5 per 247 ms per channel.
   Therefore, the duty cycle be equal to: 20log(3.125/100)= -30dB
7. Average value = peak reading –20log(duty cycle)

EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 39	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 991 hPa	**TESTED BY**: Jamison Chan	

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	*2441.00	109.80 PK	114.00	-4.20	1.04 H	231	76.00	33.80
1	*2441.00	74.80 AV	94.00	-19.20	1.04 H	231	41.00	33.80
2	4882.00	55.70 PK	74.00	-18.30	1.19 H	117	14.40	41.30
2	4882.00	41.00 AV	54.00	-13.00	1.19 H	117	-0.30	41.30

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	*2441.00	88.40 PK	114.00	-25.60	1.20 V	188	54.70	33.80
1	*2441.00	73.80 AV	94.00	-20.20	1.20 V	188	40.00	33.80
2	4882.00	56.00 PK	74.00	-18.00	1.20 V	194	14.70	41.30
2	4882.00	41.00 AV	54.00	-13.00	1.20 V	194	-0.30	41.30

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. " * " : Fundamental frequency
5. The other emission levels were very low against the limit.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625*5 per 247 ms per channel.
   Therefore, the duty cycle be equal to: 20log(3.125/100)= -30dB
7. Average value = peak reading –20log(duty cycle)

EUT	Wireless Scanner Base	**MODEL**	3560
MODE	Channel 78	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 991 hPa	**TESTED BY**: Jamison Chan	

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	*2480.00	104.60 PK	114.00	-9.40	1.00 H	206	70.70	33.90
1	*2480.00	72.80 AV	94.00	-21.20	1.00 H	206	38.90	33.90
2	2483.50	57.90 PK	74.00	-16.10	1.00 H	206	24.00	33.90
2	2483.50	43.30 AV	54.00	-10.70	1.00 H	206	9.40	33.90
3	4960.00	55.70 PK	74.00	-18.30	1.00 H	300	14.20	41.50
3	4960.00	41.10 AV	54.00	-12.90	1.00 H	300	-0.40	41.50

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	*2480.00	106.10 PK	114.00	-7.90	1.55 V	190	72.20	33.90
1	*2480.00	73.40 AV	94.00	-20.60	1.55 V	190	39.50	33.90
2	2483.50	61.8 PK	74.00	-12.20	1.55 V	190	27.90	33.90
2	2483.50	42.70 AV	54.00	-11.30	1.55 V	190	27.90	33.90
3	4960.00	59.20 PK	74.00	-14.80	1.50 V	187	17.70	41.50
3	4960.00	42.90 AV	54.00	-11.10	1.50 V	187	1.40	41.50

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.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625*5 per 247 ms per channel.
   Therefore, the duty cycle be equal to: 20log(3.125/100)= -30dB
7. Average value = peak reading –20log(duty cycle)

4.8 BAND EDGES MEASUREMENT

4.8.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100KHz RB).

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

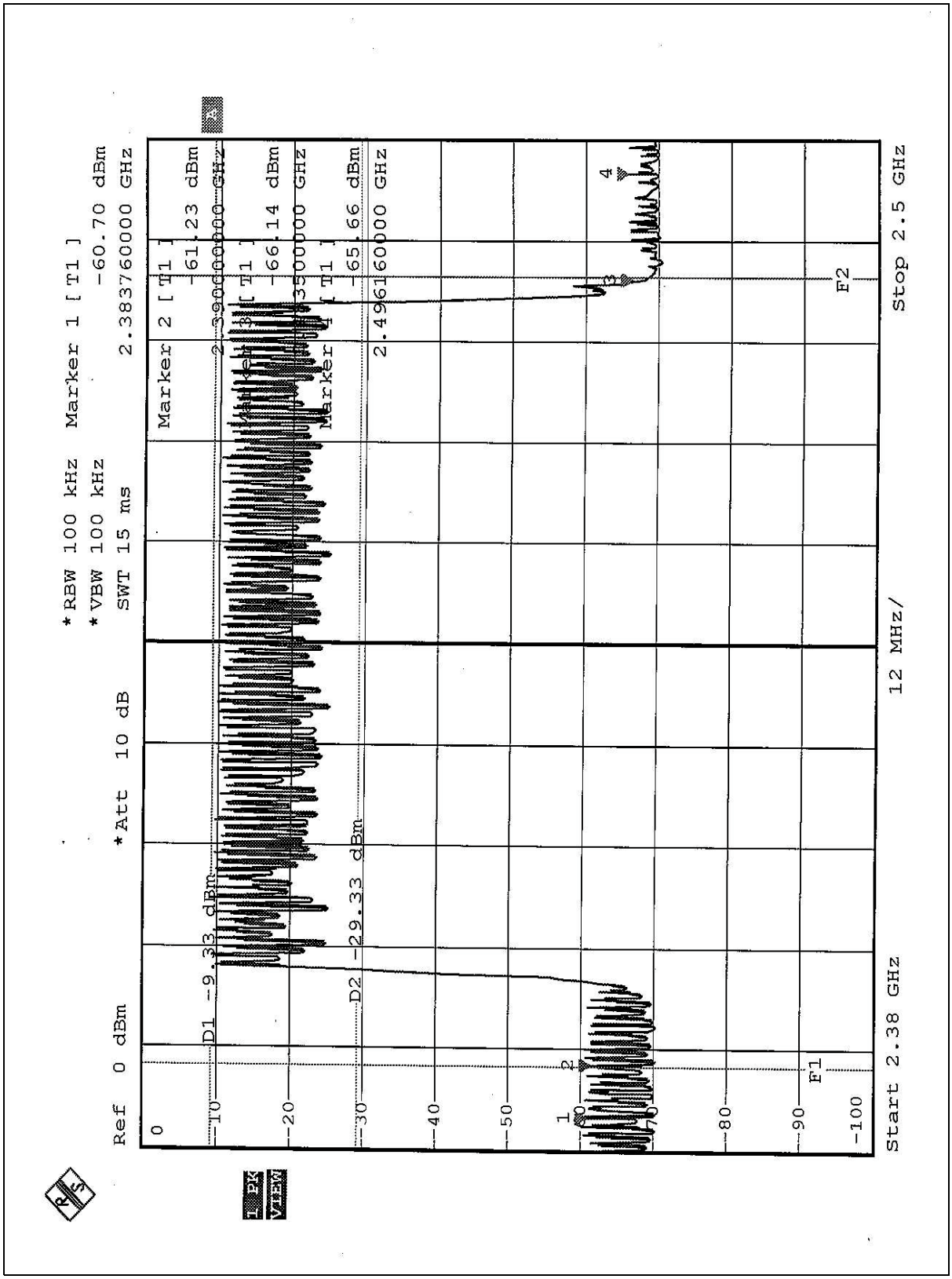
No deviation

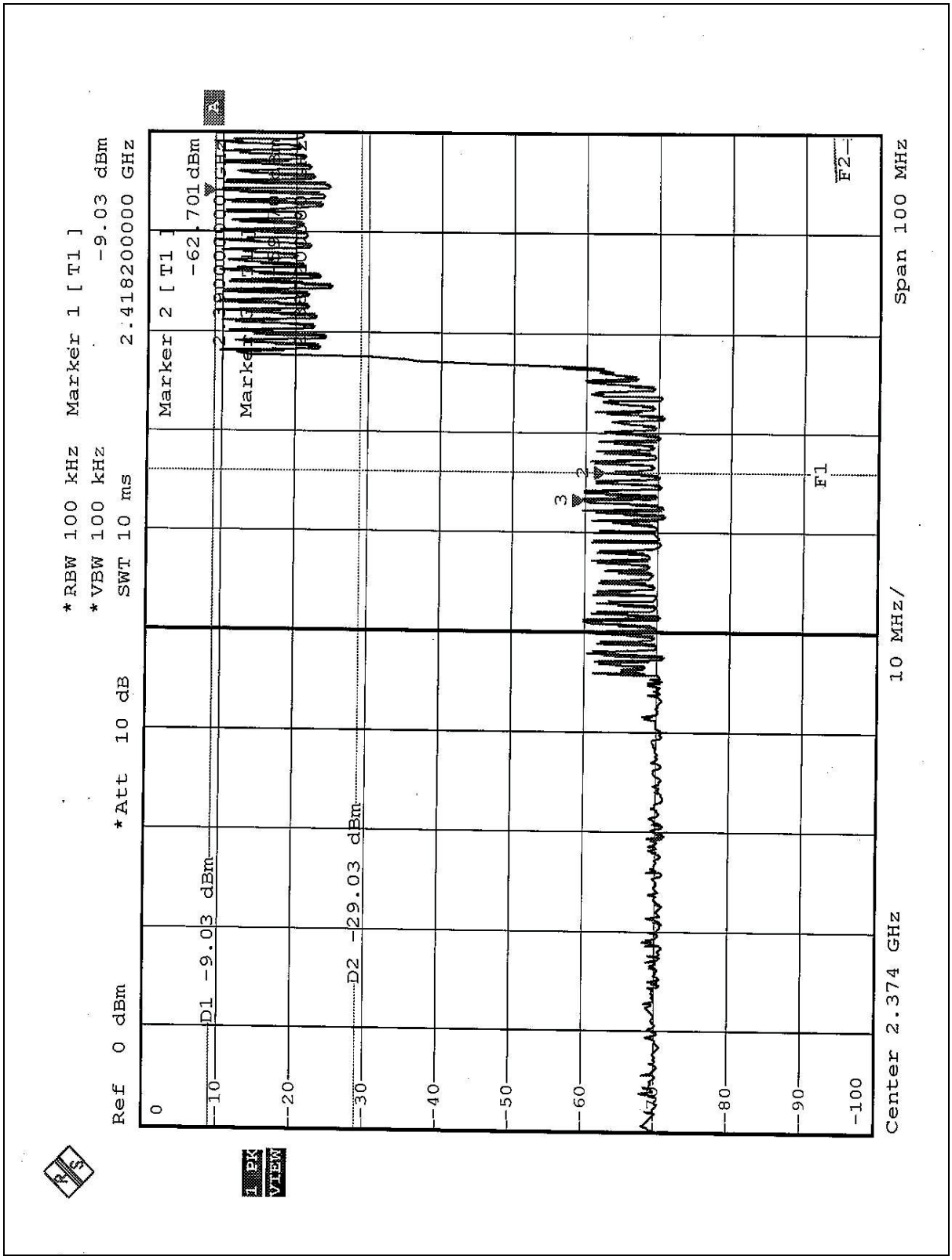
4.8.5 EUT OPERATING CONDITION

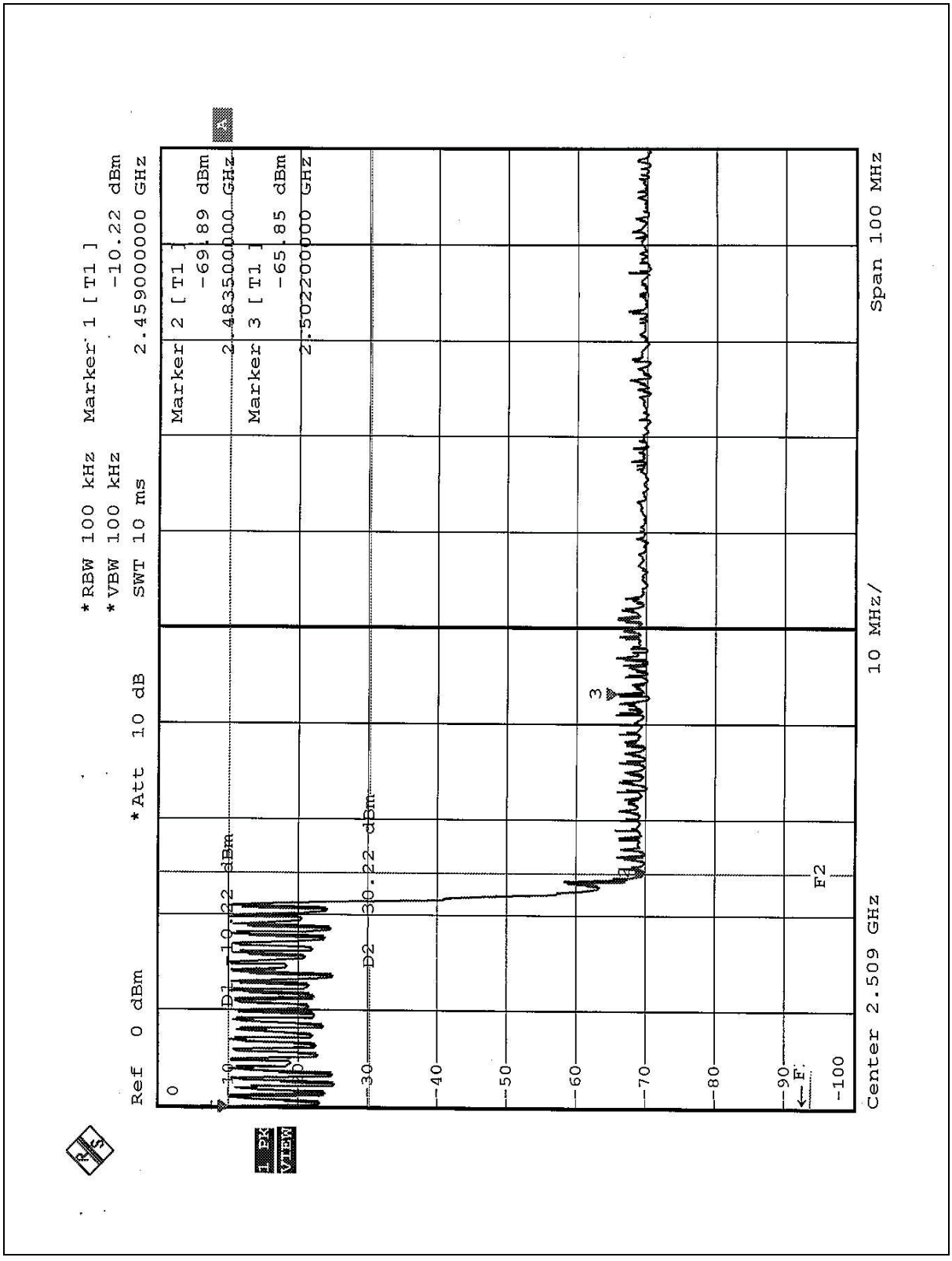
The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

4.8.6 TEST RESULTS

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 15.249.


*RBW 100 kHz
*VBW 100 kHz
SWT 15 ms
*Att 10 dB
Ref 0 dBm
Marker 1 [T1]
-60.70 dBm
2.38376000 GHz
Marker 2 [T1]
-61.23 dBm
2.39000000 GHz
Marker 3 [T1]
-66.14 dBm
2.49500000 GHz
Marker 4 [T1]
-65.66 dBm
2.49616000 GHz
D1 -9.33 dBm
D2 -29.33 dBm
Start 2.38 GHz
12 MHz/
Stop 2.5 GHz
F1
F2
MEAS
PEAK


Ref 0 dBm
*Att 10 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
-9.03 dBm
2.418200000 GHz
Marker 2 [T1]
-62.701 dBm
D1 -9.03 dBm
D2 -29.03 dBm
Center 2.374 GHz
10 MHz/
Span 100 MHz
F1
F2
1 PK VIEW


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
-10.22 dBm
2.459000000 GHz
Marker 2 [T1]
-69.89 dBm
2.483500000 GHz
Marker 3 [T1]
-65.85 dBm
2.502200000 GHz
Ref 0 dBm
*Att 10 dB
D1 10.22 dBm
D2 30.22 dBm
F2
Center 2.509 GHz
10 MHz/
Span 100 MHz
1 PK
VIEW

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.

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