FCC TEST REPORT (15.247)

REPORT NO.: RF960920L04-1

MODEL NO.: Pixium DS 3543 pR

RECEIVED: Sep. 20, 2007

TESTED: Sep. 22 ~ Oct. 08, 2007

ISSUED: Oct. 23, 2007

APPLICANT: TRIXELL

ADDRESS: 460, rue du Pommarin 38430 MOIRANS - FRANCE

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd., Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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1. CERTIFICATION

PRODUCT: Docking Station
MODEL: Pixium DS 3543 pR
BRAND: TRIXELL
APPLICANT: TRIXELL
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Sep. 22 ~ Oct. 08, 2007
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.4-2003

The above equipment (Model: Pixium DS 3543 pR) has been tested by **Advance Data Technology Corporation,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia , **DATE:** Oct. 23, 2007
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** Oct. 23, 2007
Responsible for RF
Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** Oct. 23, 2007
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is –64.76dB at 3.544MHz.
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(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –1.01dB at 3883.00MHz.
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 30dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~1000MHz	2.95 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Docking Station
MODEL NO.	Pixium DS 3543 pR
FCC ID	VPQPIXIUMDS3543PR
POWER SUPPLY	24Vdc from DC power supply
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11, 5.5, 2, 1Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6Mbps 802.11a: 54, 48, 36, 24, 18, 12, 9, 6Mbps
FREQUENCY RANGE	2.4GHz: 2.400 ~ 2.4835GHz 5.0GHz: 5.15 ~ 5.25GHz & 5.725 ~ 5.850GHz
NUMBER OF CHANNEL	**2.4GHz:** 11 for 802.11b, 802.11g **5.0GHz:** 5150 ~ 5250MHz: 4 for 802.11a 5725 ~ 5850MHz: 5 for 802.11a
OUTPUT POWER	28.708mW for 2400 ~ 2483.5MHz 24.434mW for 5150 ~ 5250MHz 25.882mW for 5725 ~ 5850MHz
ANTENNA TYPE	Patch antenna with 5.2dBi gain for 2.4 GHz Patch antenna with 8.4dBi gain for 5.0 GHz
DATA CABLE	7m non-shielded cable without core
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Power cable (1.7m shielded cable with three cores) Ground cable (2m)

NOTE:

1 The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.

2 The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.

3 The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

FOR 2.4GHz:

11 channels are provided for 802.11b, 802.11g:

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

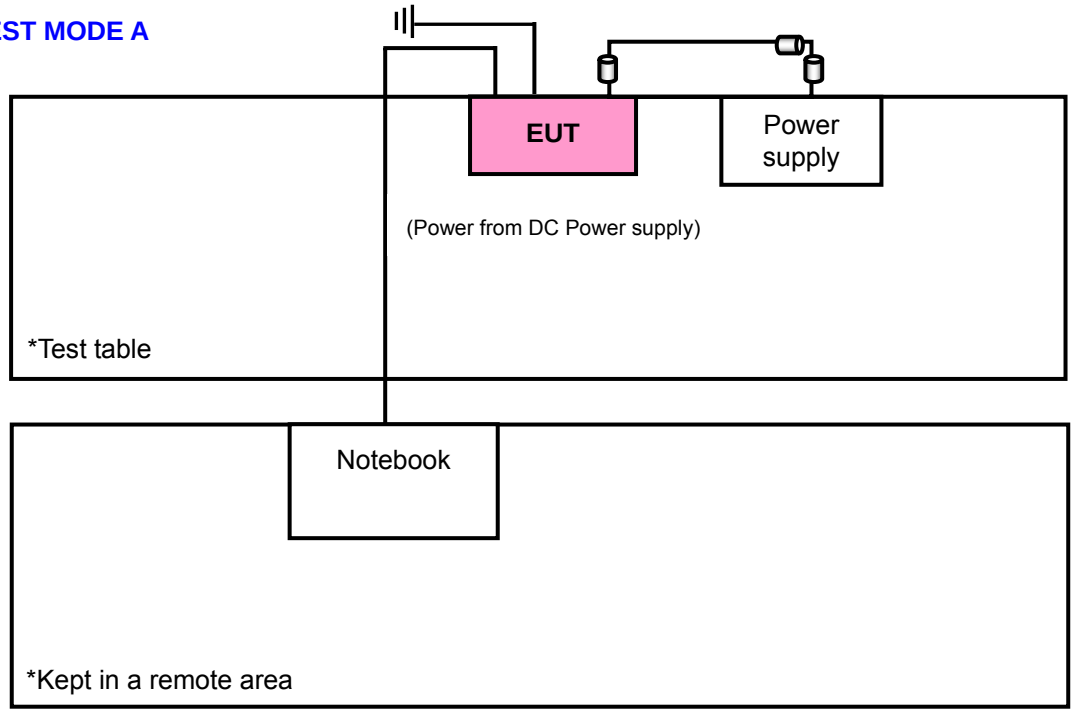
FOR 5.0GHz (5725 ~ 5850MHz):

5 channels are provided for 802.11a:

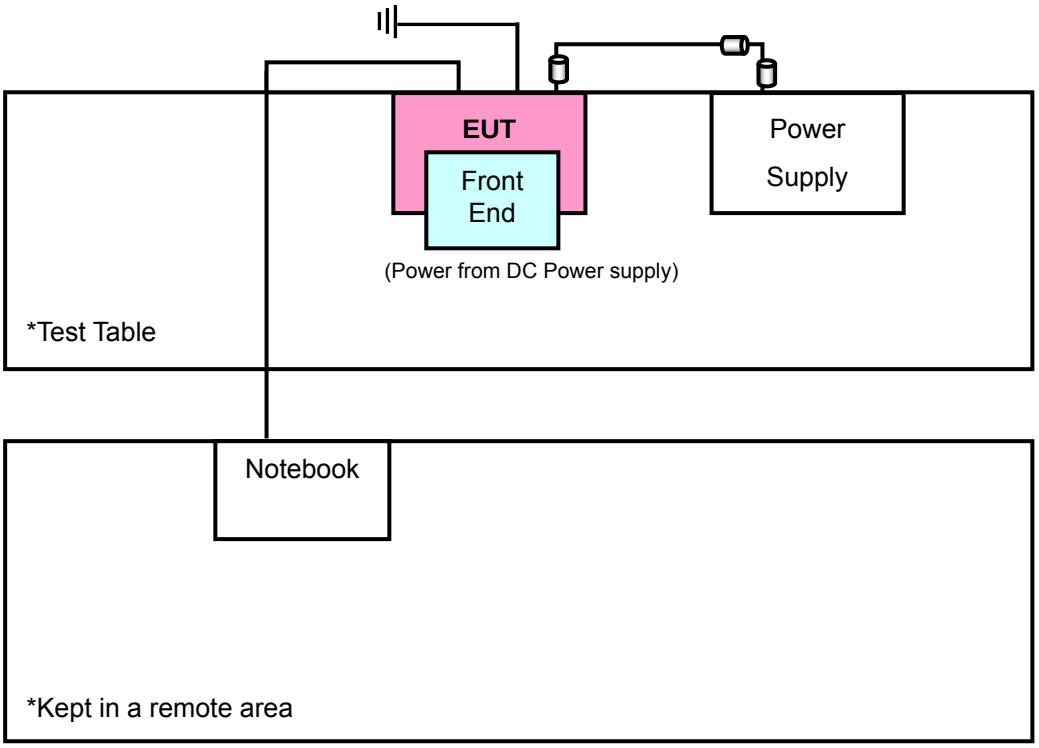
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5745MHz	4	5805MHz
2	5765MHz	5	5825MHz
3	5785MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

TEST MODE A



TEST MODE B



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE<1G	RE≥1G	APCM	
A	√	√	√	√	EUT only
B	√	√	-	-	EUT with Frond End (charger mode)

Where **PLC:** Power Line Conducted Emission **RE<1G:** Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement
"-": Means no effect.

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11g	1 to 11	1	OFDM	BPSK	6	X
B	802.11g	1 to 11	1	OFDM	BPSK	6	X

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1	X
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	X

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1	X
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6	X

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

FOR 5.0GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE<1G	RE≥1G	APCM	
A	√	√	√	√	EUT only
B	√	√	-	-	EUT with Frond End (charger mode)

Where **PLC:** Power Line Conducted Emission **RE<1G:** Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

"-": Means no effect.

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	1 to 5	1	OFDM	BPSK	6
B	802.11a	1 to 5	1	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	1 to 5	1	OFDM	BPSK	6	X
B	802.11a	1 to 5	1	OFDM	BPSK	6	X

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6	X

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	1 to 5	1, 5	OFDM	BPSK	6	X

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C (15.247)
ANSI C63.4-2003

All test items 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	FRONT END	TRIXELL	Pixium FE 3543 pR	NA	VPQPIXIUMFE3543PR
2	POWER SUPPLY	ISO-TECH	IPS 303DD	NA	NA
3	NOTEBOOK COMPUTER	DELL	PP05L	16484462992	E2K24CLNS

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.7m shielded power core with 3 cores
3	6m RJ45 UTP Cable

NOTE 1: All power cords of the above support units are non shielded (1.8m).
NOTE 2: Item 3 acted as communication partners to transfer data.
NOTE 3: Item 1 was supplied from client

4. TEST TYPES AND RESULTS (FOR 2.4GHz)

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. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. 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
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Dec. 08, 2007
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 06, 2008
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 08, 2008
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 16, 2008
Software ADT	ADT_Cond_V3	NA	NA

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. The test was performed in HwaYa Shielded Room 2.

3. The VCCI Site Registration No. is C-2047.

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.

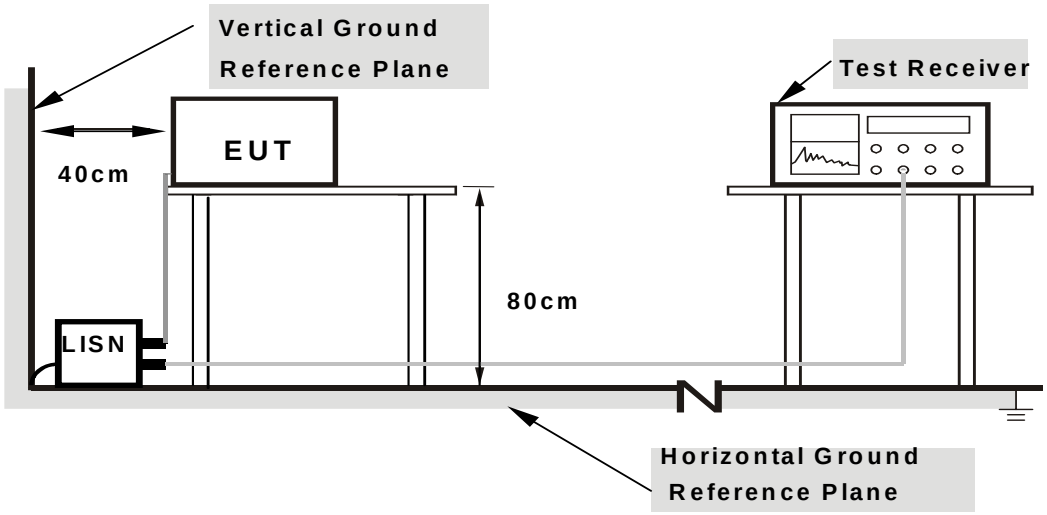
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT OPERATING CONDITIONS

TEST MODE A

a. Placed the EUT on a testing table.
b. Prepared notebook computer and placed it outside of testing area to act as communication partner for EUT.
c. The EUT ran a test program (provided by manufacturer) to enable all functions under transmission condition continuously at specific channel frequency.
d. The necessary accessories enable the EUT in full functions.

TEST MODE B

a. Place the EUT with front end on a testing table.
b. Prepared notebook computer and placed it outside of testing area to act as communication partner for EUT.
c. The EUT ran a test program (provided by manufacturer) to enable all functions under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

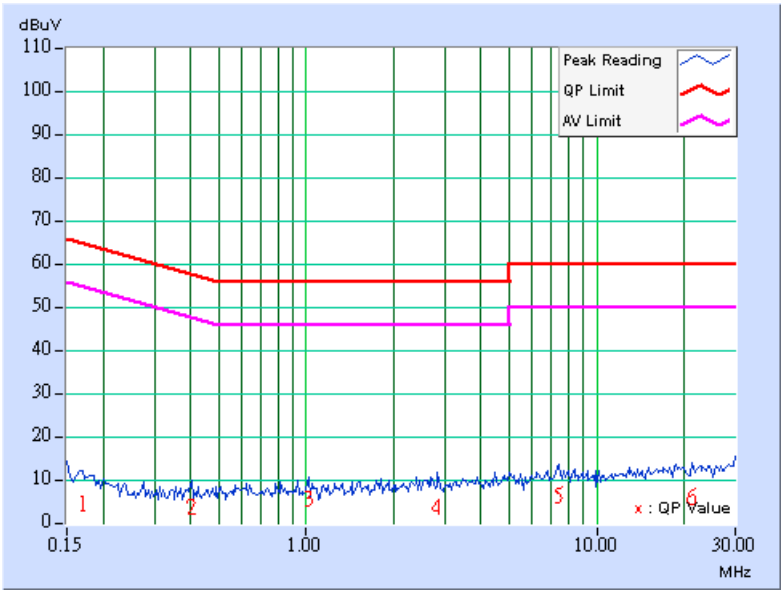
4.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11g OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	-10.34	-	-10.24	-	64.98	54.98	-75.22	-
2	0.404	0.10	-11.14	-	-11.04	-	57.77	47.77	-68.81	-
3	1.020	0.11	-9.23	-	-9.12	-	56.00	46.00	-65.12	-
4	2.840	0.25	-10.86	-	-10.61	-	56.00	46.00	-66.61	-
5	7.430	0.31	-8.55	-	-8.24	-	60.00	50.00	-68.24	-
6	21.406	0.64	-8.63	-	-7.99	-	60.00	50.00	-67.99	-

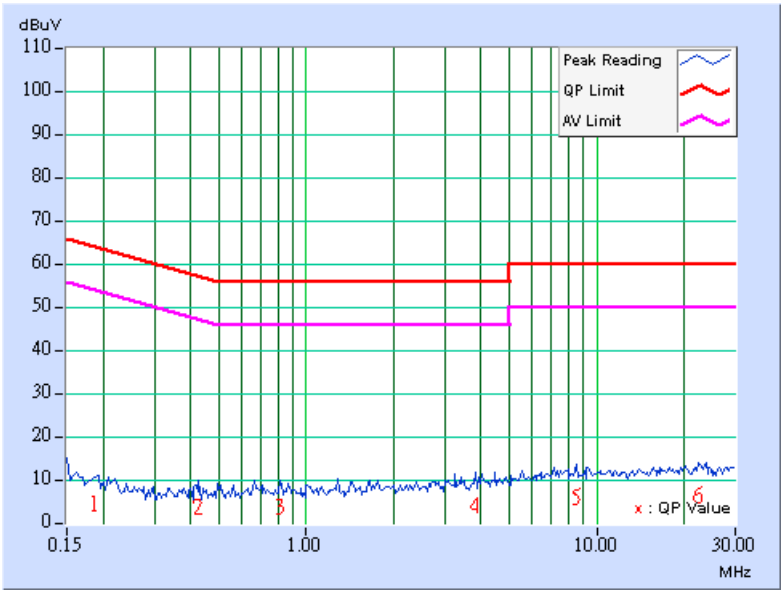
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.10	-10.35	-	-10.25	-	64.25	54.25	-74.50	-
2	0.427	0.11	-11.09	-	-10.98	-	57.30	47.30	-68.29	-
3	0.814	0.18	-11.04	-	-10.86	-	56.00	46.00	-66.86	-
4	3.844	0.28	-10.58	-	-10.30	-	56.00	46.00	-66.30	-
5	8.480	0.39	-8.75	-	-8.36	-	60.00	50.00	-68.36	-
6	22.391	0.64	-8.60	-	-7.96	-	60.00	50.00	-67.96	-

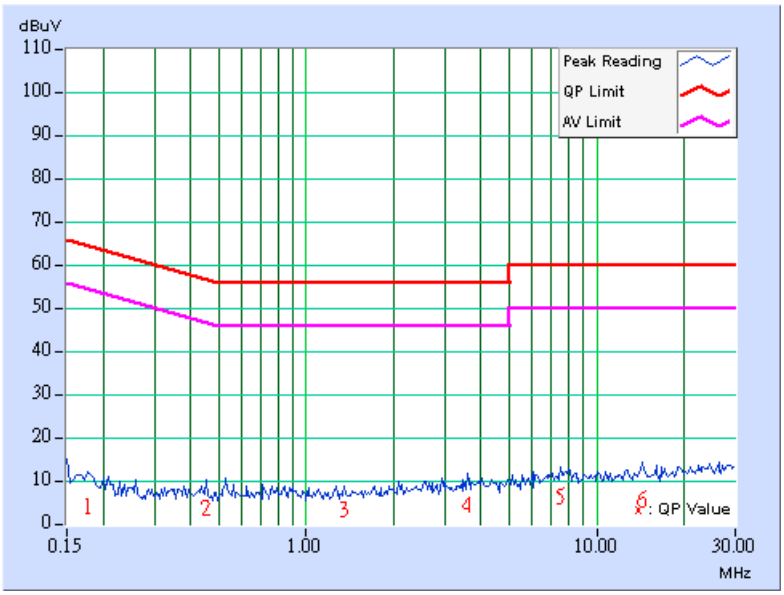
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	-10.36	-	-10.26	-	64.61	54.61	-74.87	-
2	0.455	0.10	-10.88	-	-10.78	-	56.79	46.79	-67.57	-
3	1.352	0.15	-11.04	-	-10.89	-	56.00	46.00	-66.89	-
4	3.590	0.27	-10.02	-	-9.75	-	56.00	46.00	-65.75	-
5	7.520	0.31	-8.31	-	-8.00	-	60.00	50.00	-68.00	-
6	14.316	0.46	-8.96	-	-8.50	-	60.00	50.00	-68.50	-

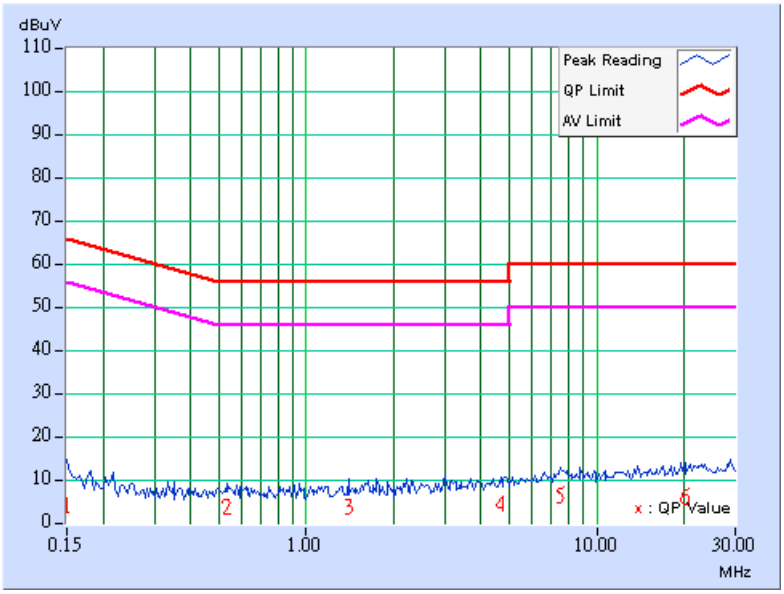
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	-10.58	-	-10.48	-	66.00	56.00	-76.48	-
2	0.533	0.12	-11.06	-	-10.94	-	56.00	46.00	-66.94	-
3	1.398	0.21	-11.06	-	-10.85	-	56.00	46.00	-66.85	-
4	4.664	0.30	-10.14	-	-9.84	-	56.00	46.00	-65.84	-
5	7.512	0.37	-8.30	-	-7.93	-	60.00	50.00	-67.93	-
6	20.113	0.57	-8.86	-	-8.29	-	60.00	50.00	-68.29	-

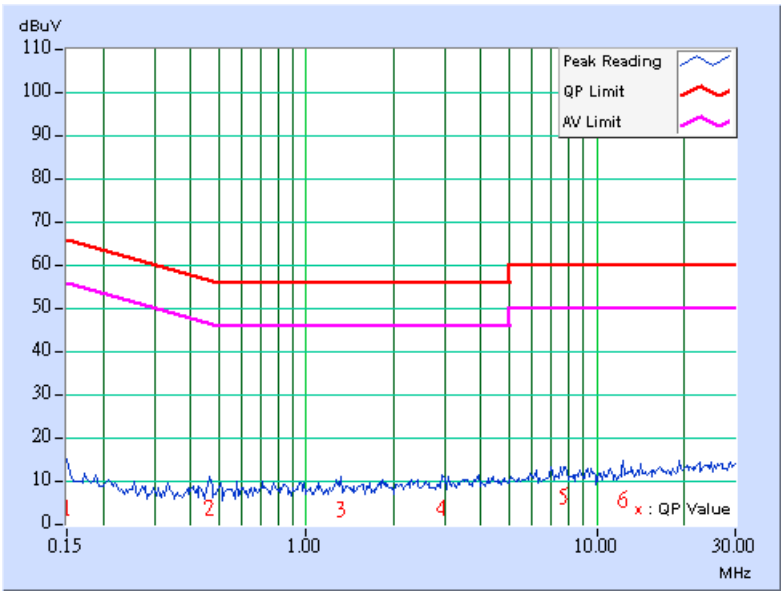
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	-10.64	-	-10.54	-	66.00	56.00	-76.54	-
2	0.463	0.10	-10.85	-	-10.75	-	56.65	46.65	-67.40	-
3	1.316	0.14	-10.97	-	-10.83	-	56.00	46.00	-66.83	-
4	2.918	0.25	-10.81	-	-10.56	-	56.00	46.00	-66.56	-
5	7.707	0.31	-8.01	-	-7.70	-	60.00	50.00	-67.70	-
6	12.398	0.40	-8.94	-	-8.54	-	60.00	50.00	-68.54	-

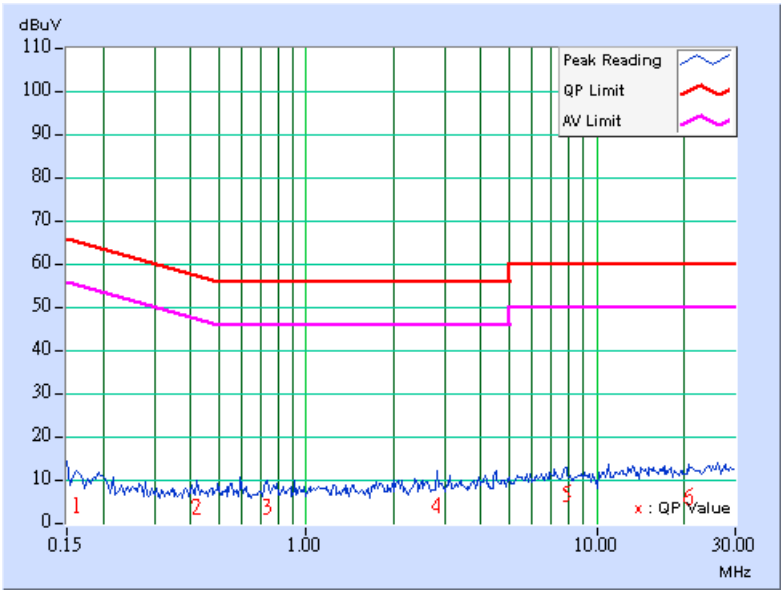
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.10	-10.44	-	-10.34	-	65.38	55.38	-75.72	-
2	0.420	0.10	-10.99	-	-10.89	-	57.46	47.46	-68.34	-
3	0.732	0.16	-11.11	-	-10.95	-	56.00	46.00	-66.95	-
4	2.813	0.24	-10.69	-	-10.45	-	56.00	46.00	-66.45	-
5	7.859	0.38	-8.15	-	-7.77	-	60.00	50.00	-67.77	-
6	20.648	0.59	-8.61	-	-8.02	-	60.00	50.00	-68.02	-

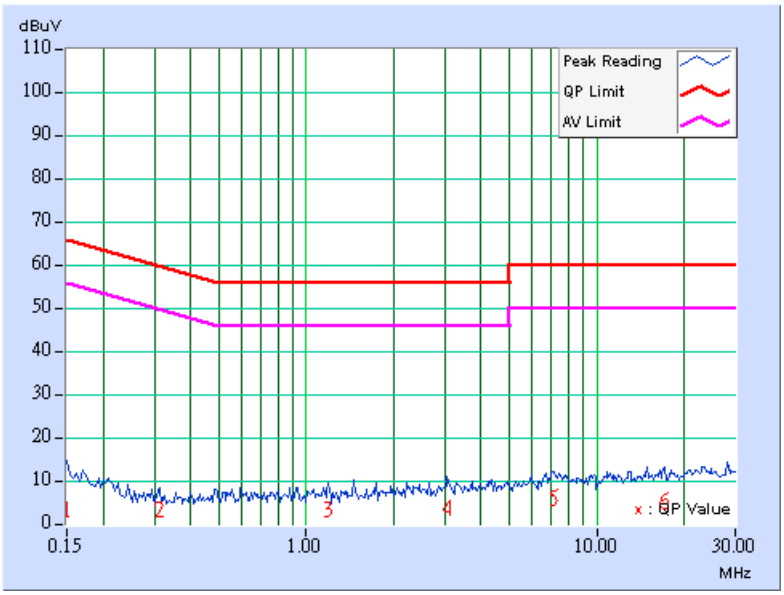
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	-11.35	-	-11.25	-	66.00	56.00	-77.25	-
2	0.314	0.10	-11.39	-	-11.29	-	59.86	49.86	-71.15	-
3	1.188	0.13	-11.22	-	-11.09	-	56.00	46.00	-67.09	-
4	3.066	0.25	-10.71	-	-10.46	-	56.00	46.00	-66.46	-
5	7.145	0.31	-8.58	-	-8.27	-	60.00	50.00	-68.27	-
6	17.086	0.52	-9.52	-	-9.00	-	60.00	50.00	-69.00	-

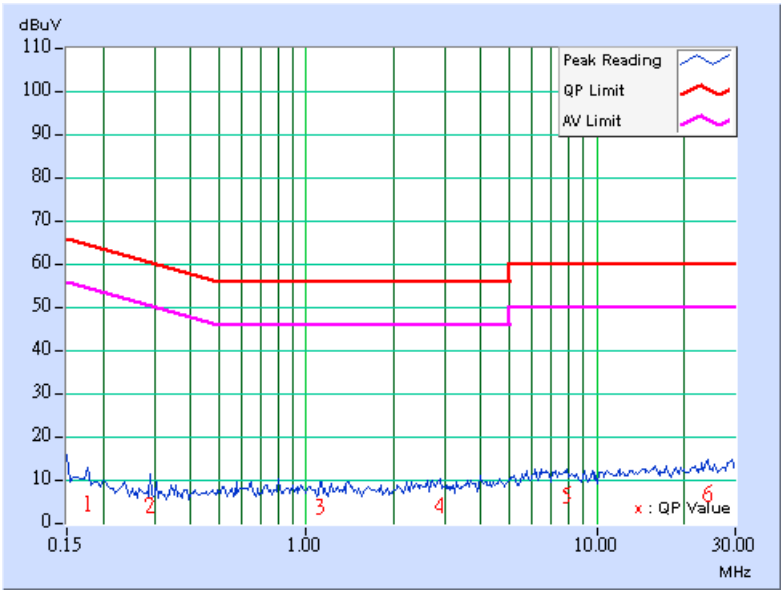
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	-10.26	-	-10.16	-	64.61	54.61	-74.77	-
2	0.291	0.10	-10.52	-	-10.42	-	60.51	50.51	-70.93	-
3	1.121	0.21	-11.21	-	-11.00	-	56.00	46.00	-67.00	-
4	2.891	0.25	-10.56	-	-10.31	-	56.00	46.00	-66.31	-
5	7.879	0.38	-8.32	-	-7.94	-	60.00	50.00	-67.94	-
6	24.188	0.70	-8.13	-	-7.43	-	60.00	50.00	-67.43	-

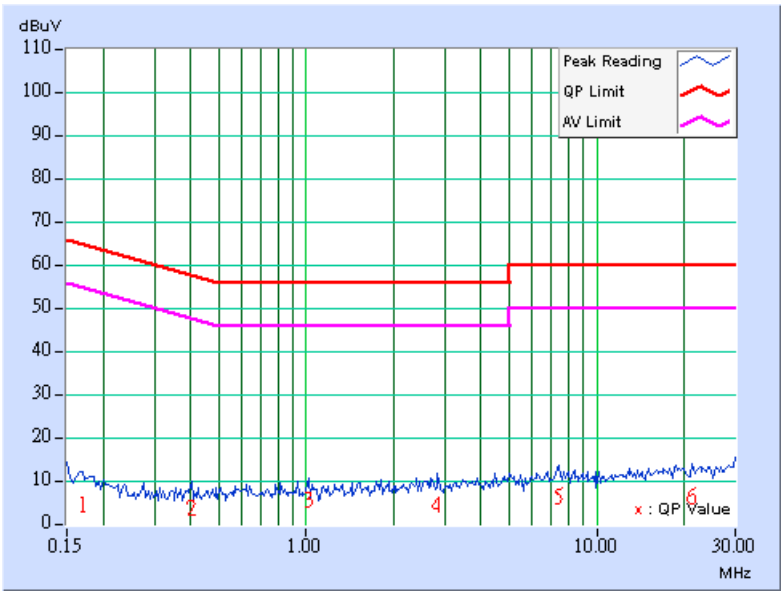
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	-10.13	-	-10.03	-	64.98	54.98	-75.01	-
2	0.404	0.10	-11.02	-	-10.92	-	57.77	47.77	-68.69	-
3	1.020	0.11	-9.14	-	-9.03	-	56.00	46.00	-65.03	-
4	2.840	0.25	-10.28	-	-10.03	-	56.00	46.00	-66.03	-
5	7.430	0.31	-8.47	-	-8.16	-	60.00	50.00	-68.16	-
6	21.406	0.64	-8.51	-	-7.87	-	60.00	50.00	-67.87	-

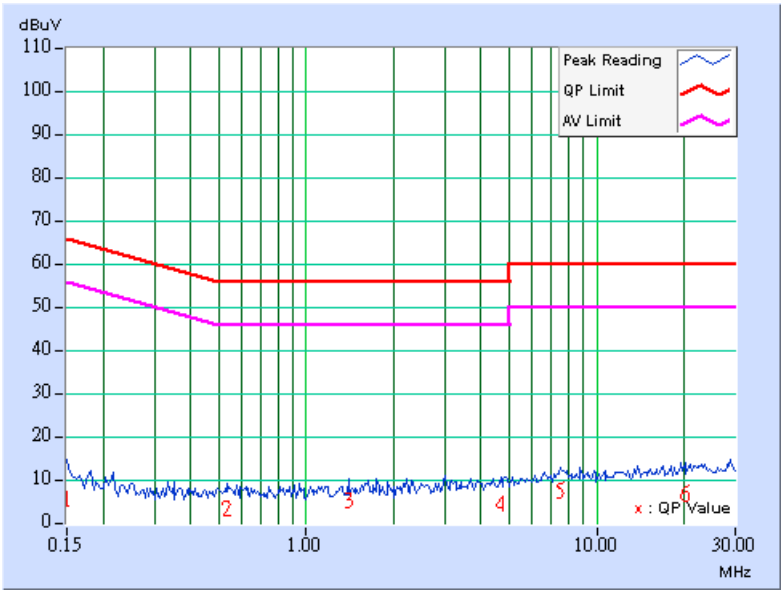
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	-9.23	-	-9.13	-	66.00	56.00	-75.13	-
2	0.534	0.12	-11.17	-	-11.05	-	56.00	46.00	-67.05	-
3	1.400	0.21	-9.57	-	-9.36	-	56.00	46.00	-65.36	-
4	4.667	0.30	-10.02	-	-9.72	-	56.00	46.00	-65.72	-
5	7.514	0.37	-7.13	-	-6.76	-	60.00	50.00	-66.76	-
6	20.115	0.57	-7.82	-	-7.25	-	60.00	50.00	-67.25	-

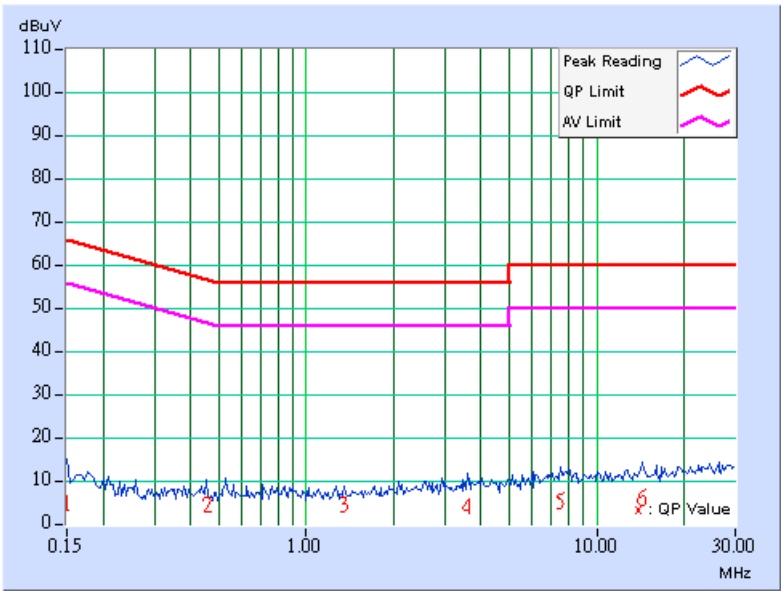
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	-9.57	-	-9.47	-	66.00	56.00	-75.47	-
2	0.457	0.10	-10.21	-	-10.11	-	56.75	46.75	-66.86	-
3	1.354	0.15	-10.23	-	-10.08	-	56.00	46.00	-66.08	-
4	3.595	0.27	-10.29	-	-10.02	-	56.00	46.00	-66.02	-
5	7.529	0.31	-9.31	-	-9.00	-	60.00	50.00	-69.00	-
6	14.328	0.46	-8.65	-	-8.19	-	60.00	50.00	-68.19	-

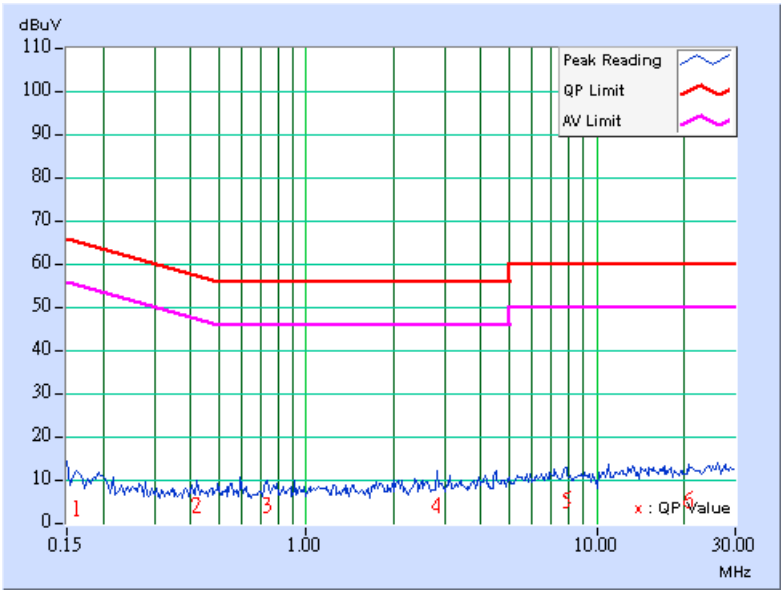
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.10	-11.18	-	-11.08	-	65.34	55.34	-76.42	-
2	0.420	0.10	-10.74	-	-10.64	-	57.44	47.44	-68.08	-
3	0.739	0.16	-10.48	-	-10.32	-	56.00	46.00	-66.32	-
4	2.824	0.24	-10.51	-	-10.27	-	56.00	46.00	-66.27	-
5	7.860	0.38	-9.59	-	-9.21	-	60.00	50.00	-69.21	-
6	20.654	0.59	-9.48	-	-8.89	-	60.00	50.00	-68.89	-

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

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
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jul. 27, 2008
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Aug. 05, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Jan. 04, 2008
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Jul. 30, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 16, 2008
Preamplifier Agilent	8449B	3008A01910	Sep. 19, 2008
Preamplifier Agilent	8447D	2944A10638	Dec. 20, 2007
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218188/218189	Nov. 14, 2007
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 09, 2008
Software	ADT_Radiated_V7.6	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA
Turn Table EMCO	2087-2.03	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA

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. The test was performed in HwaYa Chamber 9.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The IC Site Registration No. is IC3789B-9.

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 3 meters semi-anechoic chamber. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

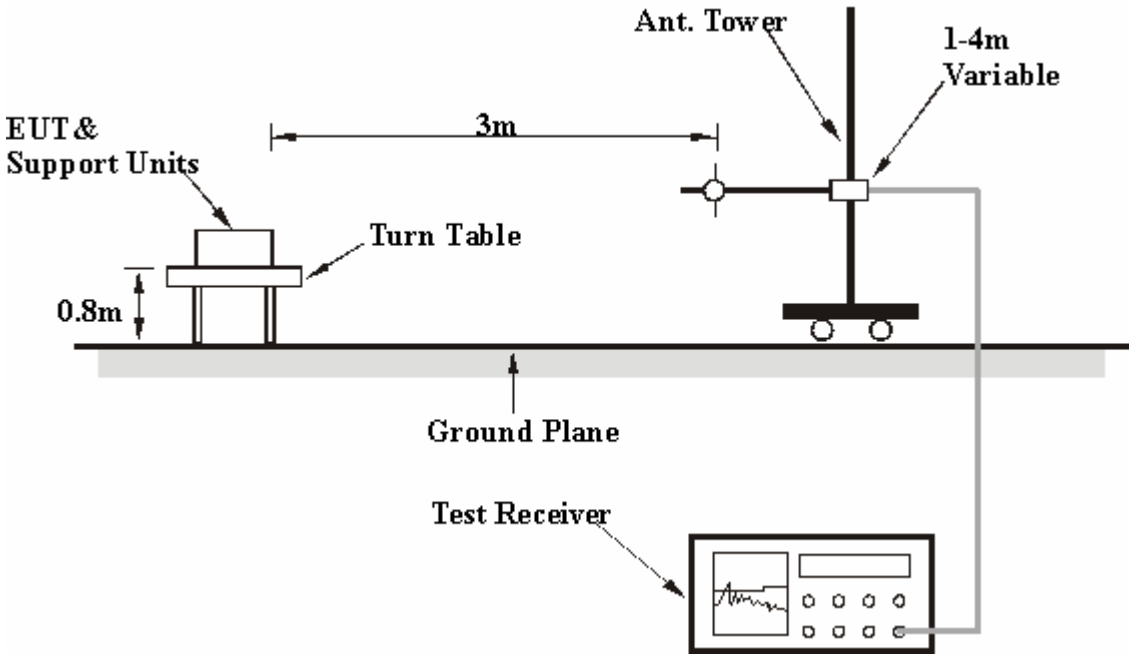
NOTE:

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 of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz 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 attached file (Test Setup Photo).

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA: 802.11g OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	57.12	33.75 QP	40.00	-6.25	2.50 H	58	20.37	13.38
2	70.73	38.95 QP	40.00	-1.05	2.00 H	124	27.82	11.13
3	121.28	38.45 QP	43.50	-5.05	1.50 H	229	26.84	11.61
4	160.17	32.62 QP	43.50	-10.88	1.50 H	124	19.17	13.45
5	175.72	33.88 QP	43.50	-9.62	1.50 H	202	21.55	12.33
6	224.33	34.40 QP	46.00	-11.60	1.50 H	196	23.00	11.40
7	702.62	34.20 QP	46.00	-11.80	1.00 H	91	12.15	22.06
8	803.73	35.01 QP	46.00	-10.99	1.00 H	178	10.61	24.40
9	902.89	37.96 QP	46.00	-8.04	1.50 H	214	12.62	25.34
10	947.60	36.67 QP	46.00	-9.33	2.50 H	163	10.96	25.71
11	998.16	42.77 QP	54.00	-11.23	1.00 H	73	16.87	25.91

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	57.12	37.51 QP	40.00	-2.49	1.00 V	79	24.13	13.38
2	70.73	38.81 QP	40.00	-1.19	1.00 V	205	27.68	11.13
3	121.28	41.04 QP	43.50	-2.46	1.00 V	271	29.42	11.61
4	131.00	31.84 QP	43.50	-11.66	1.00 V	157	19.86	11.97
5	171.83	35.67 QP	43.50	-7.83	1.00 V	166	23.06	12.61
6	902.89	39.05 QP	46.00	-6.95	1.00 V	187	13.71	25.34
7	953.44	37.44 QP	46.00	-8.56	1.00 V	10	11.70	25.74
8	1002.04	44.98 QP	54.00	-9.02	1.00 V	61	19.07	25.91

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 TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	199.05	34.41 QP	43.50	-9.09	1.00 H	163	23.07	11.34
2	331.26	35.21 QP	46.00	-10.79	1.25 H	121	19.24	15.97
3	399.31	36.24 QP	46.00	-9.76	2.50 H	106	18.62	17.62
4	599.58	41.75 QP	46.00	-4.25	1.25 H	205	19.30	22.45
5	700.68	44.09 QP	46.00	-1.91	1.00 H	133	19.87	24.22
6	751.23	37.66 QP	46.00	-8.34	1.00 H	214	12.01	25.65
7	799.84	41.57 QP	46.00	-4.43	1.00 H	112	15.69	25.88
8	900.94	41.71 QP	46.00	-4.29	1.00 H	181	14.09	27.61

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	47.40	37.22 QP	40.00	-2.78	1.25 V	283	22.70	14.52
2	74.62	35.75 QP	40.00	-4.25	1.50 V	4	24.04	11.71
3	129.06	33.14 QP	43.50	-10.36	1.50 V	112	20.00	13.14
4	599.58	42.12 QP	46.00	-3.88	1.50 V	10	19.68	22.45
5	700.68	38.21 QP	46.00	-7.79	1.00 V	154	13.99	24.22
6	799.84	36.64 QP	46.00	-9.36	1.25 V	187	10.76	25.88
7	900.94	41.27 QP	46.00	-4.73	1.00 V	343	13.66	27.61

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.

ABOVE 1GHz DATA: 802.11b DSSS MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	2386.00	58.97 PK	74.00	-15.03	1.34 H	131	26.65	32.32
2	2386.00	48.54 AV	54.00	-5.46	1.34 H	131	16.22	32.32
3	*2412.00	102.69 PK			1.56 H	124	70.37	32.32
4	*2412.00	98.30 AV			1.56 H	124	65.98	32.32
5	4824.00	48.11 PK	74.00	-25.89	1.02 H	105	10.11	38.00
6	4824.00	35.55 AV	54.00	-18.45	1.02 H	105	-2.45	38.00

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	2390.00	56.91 PK	74.00	-17.09	1.00 V	137	24.59	32.32
2	2390.00	46.56 AV	54.00	-7.44	1.00 V	137	14.24	32.32
3	*2412.00	101.12 PK			1.00 V	137	68.80	32.32
4	*2412.00	96.20 AV			1.00 V	137	63.88	32.32
5	4824.00	48.55 PK	74.00	-25.45	1.02 V	0	10.55	38.00
6	4824.00	35.31 AV	54.00	-18.69	1.02 V	0	-2.69	38.00

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	*2437.00	102.33 PK			1.58 H	126	69.99	32.34
2	*2437.00	97.60 AV			1.58 H	126	65.26	32.34
3	4874.00	49.46 PK	74.00	-24.54	1.01 H	360	11.34	38.12
4	4874.00	34.73 AV	54.00	-19.27	1.01 H	360	-3.39	38.12

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	*2437.00	100.32 PK			1.48 V	138	67.98	32.34
2	*2437.00	95.10 AV			1.48 V	138	62.76	32.34
3	4874.00	39.27 PK	74.00	-34.73	1.01 V	10	1.15	38.12
4	4874.00	35.00 AV	54.00	-19.00	1.01 V	10	-3.12	38.12

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	DBPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	1.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	*2462.00	101.62 PK			1.55 H	121	69.25	32.37
2	*2462.00	96.01 AV			1.55 H	121	63.64	32.37
3	2483.50	56.48 PK	74.00	-17.52	1.55 H	121	24.09	32.39
4	2483.50	46.54 AV	54.00	-7.46	1.55 H	121	14.15	32.39
5	4924.00	40.25 PK	74.00	-33.75	1.07 H	355	2.02	38.23
6	4924.00	35.68 AV	54.00	-18.32	1.07 H	355	-2.55	38.23

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	*2462.00	99.86 PK			1.51 V	141	67.49	32.37
2	*2462.00	94.52 AV			1.51 V	141	62.15	32.37
3	2483.50	56.04 PK	74.00	-17.96	1.51 V	141	23.65	32.39
4	2483.50	46.21 AV	54.00	-7.79	1.51 V	141	13.82	32.39
5	4924.00	39.54 PK	74.00	-34.46	1.00 V	0	1.31	38.23
6	4924.00	35.11 AV	54.00	-18.89	1.00 V	0	-3.12	38.23

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.
5. " * ": Fundamental frequency.

802.11g OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	2390.00	58.66 PK	74.00	-15.34	1.59 H	303	26.34	32.32
2	2390.00	47.16 AV	54.00	-6.84	1.59 H	303	14.84	32.32
3	*2412.00	102.51 PK			1.59 H	303	70.19	32.32
4	*2412.00	95.49 AV			1.59 H	303	63.17	32.32
5	3216.00	48.81 PK	74.00	-25.19	1.26 H	301	15.24	33.57
6	3216.00	43.52 AV	54.00	-10.48	1.26 H	301	9.95	33.57
7	4824.00	49.30 PK	74.00	-24.70	1.00 H	20	11.30	38.00
8	4824.00	36.21 AV	54.00	-17.79	1.00 H	20	-1.79	38.00

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	2390.00	57.34 PK	74.00	-16.66	1.45 V	316	25.02	32.32
2	2390.00	46.82 AV	54.00	-7.18	1.45 V	316	14.50	32.32
3	*2412.00	101.38 PK			1.45 V	316	69.06	32.32
4	*2412.00	94.20 AV			1.45 V	316	61.88	32.32
5	3216.00	47.66 PK	74.00	-26.34	1.11 V	147	14.09	33.57
6	3216.00	41.09 AV	54.00	-12.91	1.11 V	147	7.52	33.57
7	4824.00	47.30 PK	74.00	-26.70	1.11 V	0	9.30	38.00
8	4824.00	35.00 AV	54.00	-19.00	1.11 V	0	-3.00	38.00

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	*2437.00	102.10 PK			1.33 H	302	69.76	32.34
2	*2437.00	94.79 AV			1.33 H	302	62.45	32.34
3	3249.00	47.80 PK	74.00	-26.20	1.22 H	298	14.35	33.45
4	3249.00	42.49 AV	54.00	-11.51	1.22 H	298	9.04	33.45
5	4874.00	48.32 PK	74.00	-25.68	1.33 H	165	10.20	38.12
6	4874.00	35.82 AV	54.00	-18.18	1.33 H	165	-2.30	38.12

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	*2437.00	101.38 PK			1.41 V	313	69.04	32.34
2	*2437.00	93.47 AV			1.41 V	313	61.13	32.34
3	3249.00	47.38 PK	74.00	-26.62	1.06 V	143	13.93	33.45
4	3249.00	40.46 AV	54.00	-13.54	1.06 V	143	7.01	33.45
5	4874.00	48.16 PK	74.00	-25.84	1.06 V	143	10.04	38.12
6	4874.00	34.59 AV	54.00	-19.41	1.06 V	143	-3.53	38.12

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	*2462.00	102.20 PK			1.27 H	312	69.83	32.37
2	*2462.00	95.36 AV			1.27 H	312	62.99	32.37
3	2483.50	57.15 PK	74.00	-16.85	1.26 H	312	24.76	32.39
4	2483.50	46.70 AV	54.00	-7.30	1.26 H	312	14.31	32.39
5	3282.00	47.39 PK	74.00	-26.61	1.22 H	299	14.05	33.34
6	3282.00	40.72 AV	54.00	-13.28	1.22 H	299	7.38	33.34
7	4924.00	48.06 PK	74.00	-25.94	1.20 H	300	9.83	38.23
8	4924.00	36.94 AV	54.00	-17.06	1.20 H	300	-1.29	38.23

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	*2462.00	100.50 PK			1.19 V	313	68.13	32.37
2	*2462.00	93.47 AV			1.19 V	313	61.10	32.37
3	2483.50	56.63 PK	74.00	-17.37	1.19 V	313	24.24	32.39
4	2483.50	46.26 AV	54.00	-7.74	1.19 V	313	13.87	32.39
5	3282.00	45.90 PK	74.00	-28.10	1.00 V	141	12.56	33.34
6	3282.00	36.46 AV	54.00	-17.54	1.00 V	141	3.12	33.34
7	4924.00	47.39 PK	74.00	-26.61	1.00 V	360	9.16	38.23
8	4924.00	34.63 AV	54.00	-19.37	1.00 V	360	-3.60	38.23

REMARKS: 1. Ession 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.
5. " * ": Fundamental frequency.

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
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

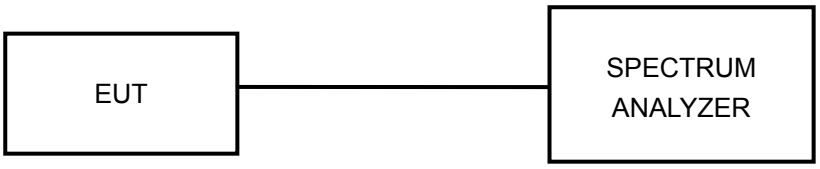
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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.

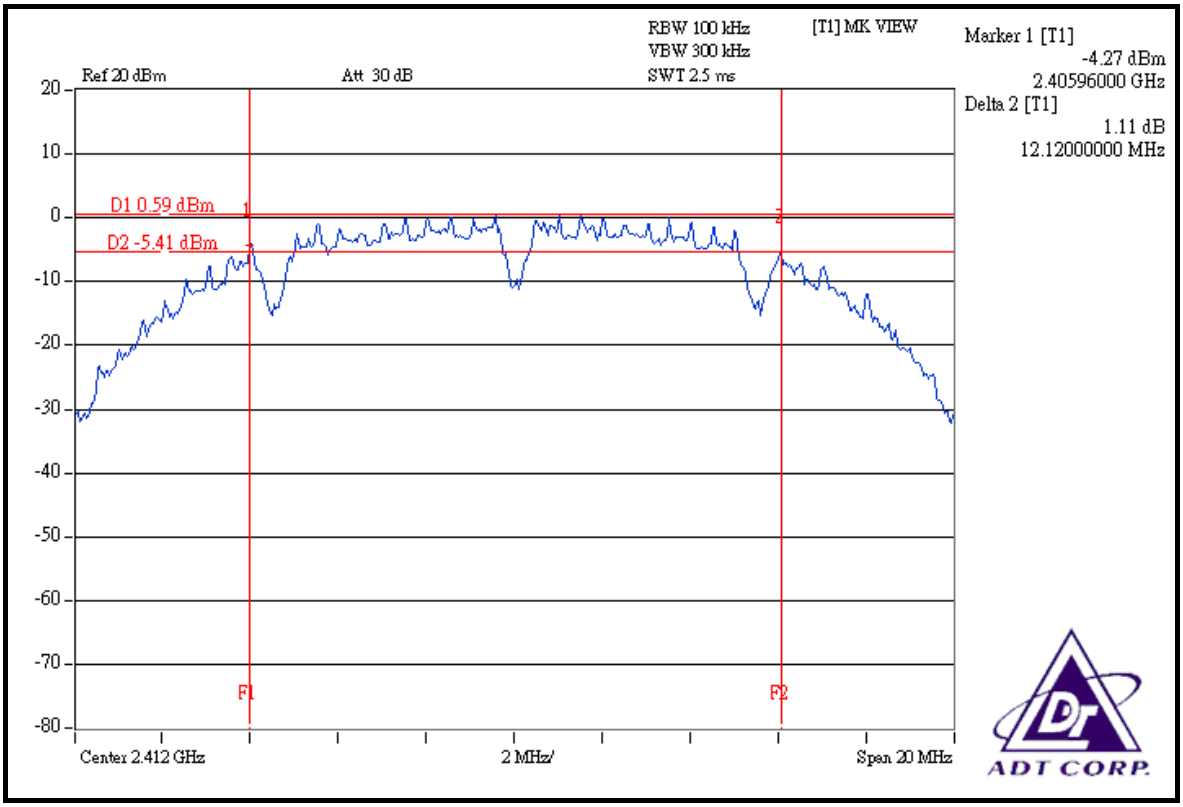
4.3.7 TEST RESULTS

802.11b DSSS MODULATION:

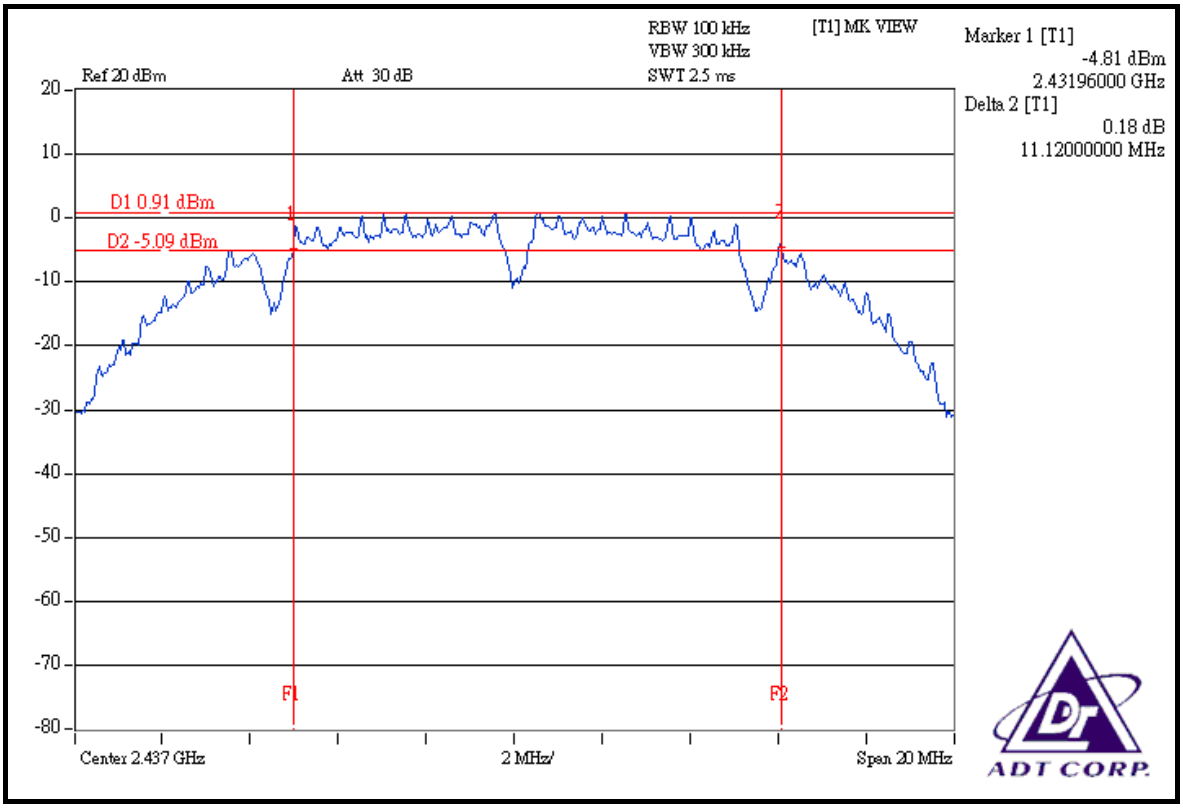
MODULATION TYPE	DBPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.12	0.5	PASS
6	2437	11.12	0.5	PASS
11	2462	12.04	0.5	PASS

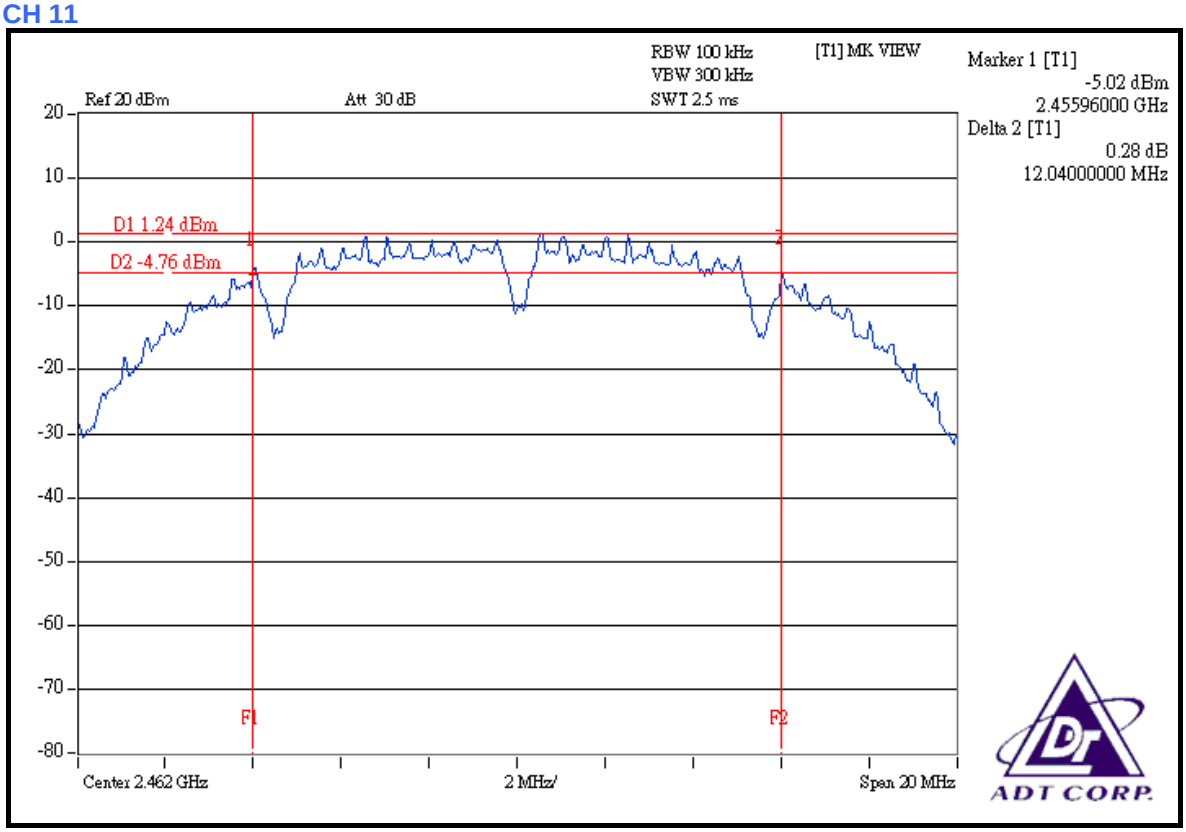
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MK VIEW
Marker 1 [T1]
-4.81 dBm
2.43196000 GHz
Delta 2 [T1]
0.18 dB
11.12000000 MHz
Ref 20 dBm
Att 30 dB
D1 0.91 dBm
D2 -5.09 dBm
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

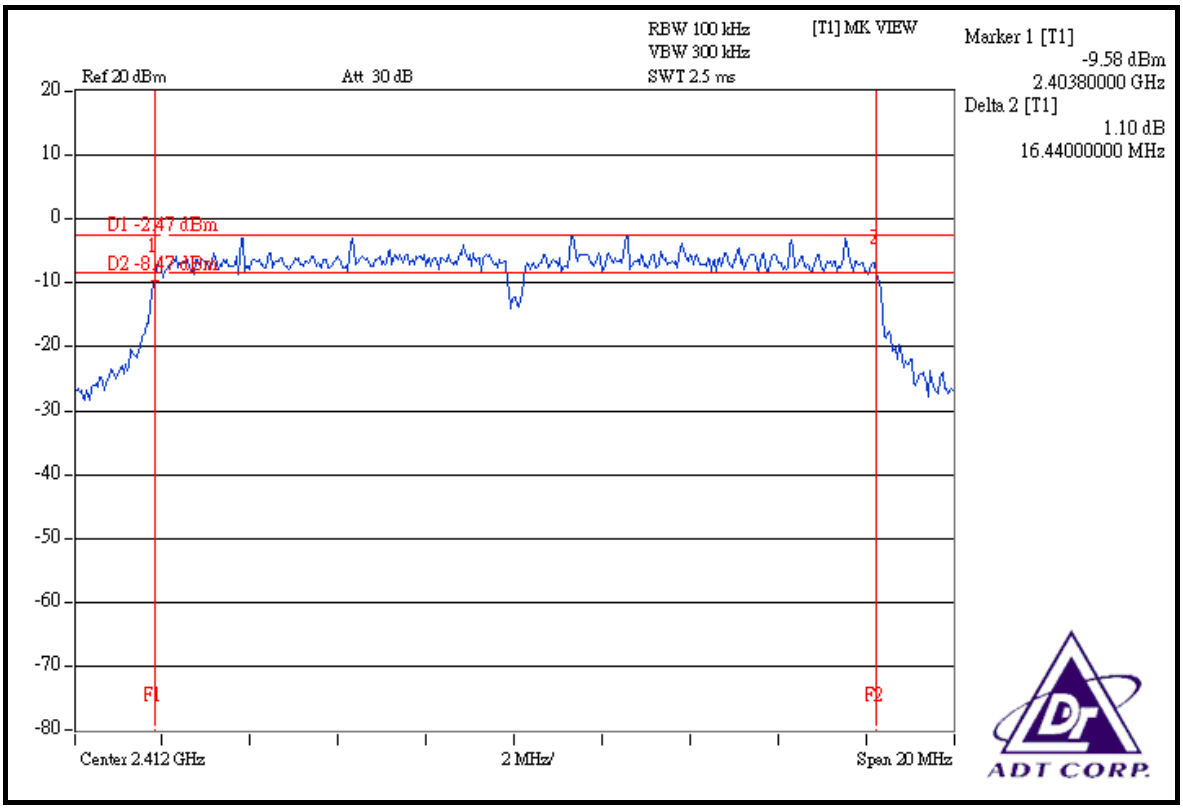

RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MK VIEW
Marker 1 [T1]
-5.02 dBm
2.45596000 GHz
Delta 2 [T1]
0.28 dB
12.04000000 MHz
Ref 20 dBm
Att 30 dB
D1 1.24 dBm
D2 -4.76 dBm
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM MODULATION:

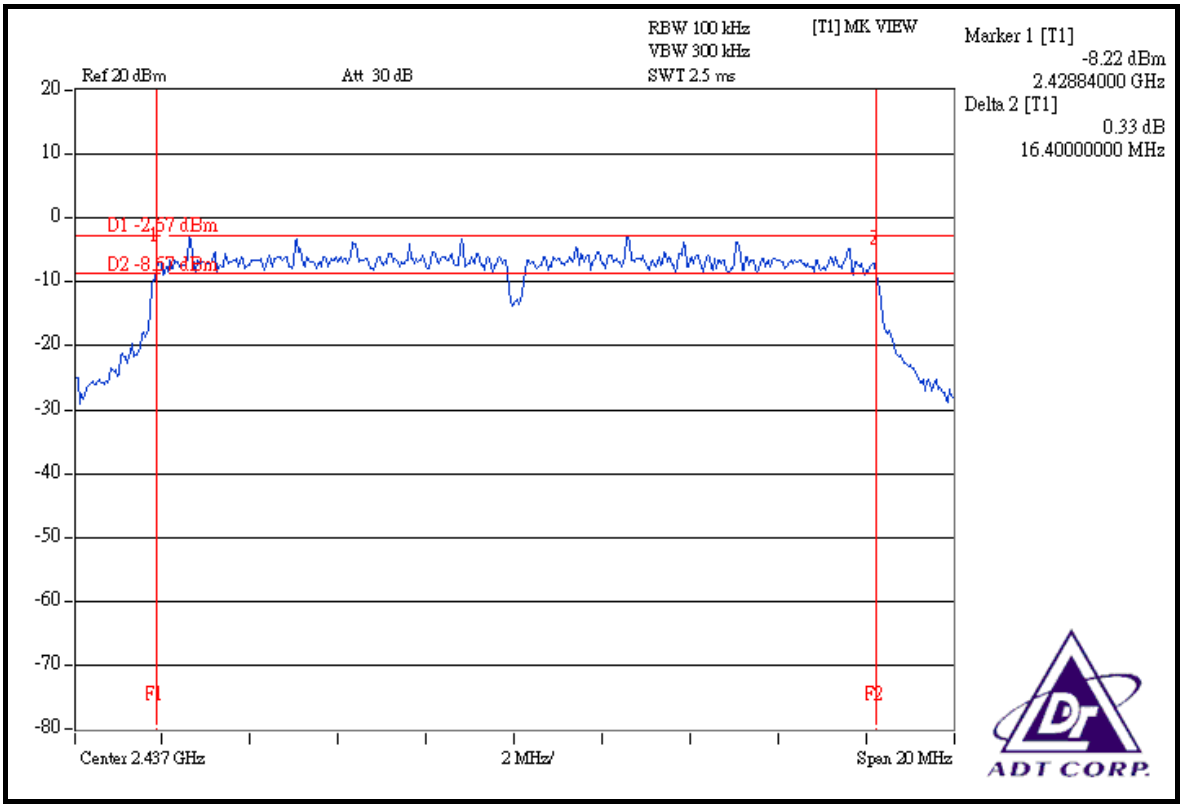
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.44	0.5	PASS
6	2437	16.40	0.5	PASS
11	2462	16.36	0.5	PASS

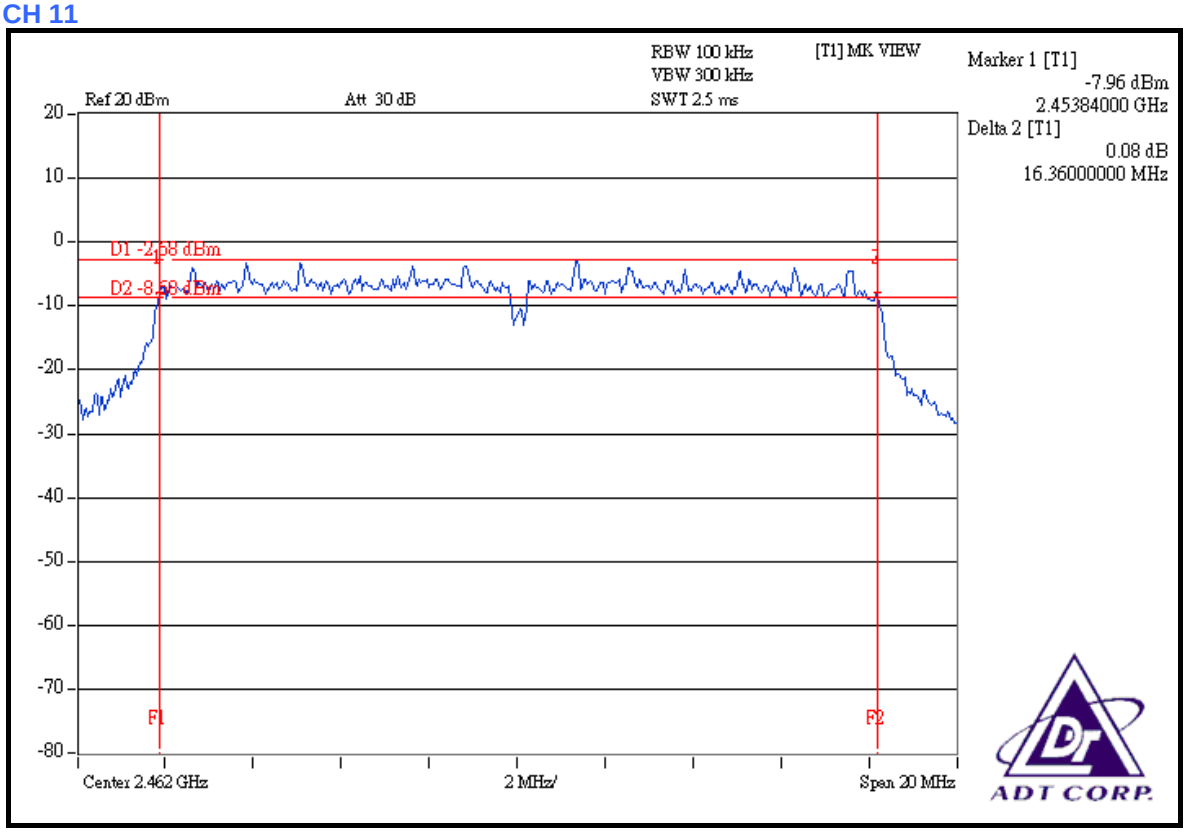
CH 1



CH 6


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MK VIEW
Marker 1 [T1]
-8.22 dBm
2.42884000 GHz
Delta 2 [T1]
0.33 dB
16.40000000 MHz
Ref 20 dBm
Att 30 dB
D1 -2.67 dBm
D2 -8.55 dBm
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11


RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
[T1] MK VIEW
Marker 1 [T1]
-7.96 dBm
2.45384000 GHz
Delta 2 [T1]
0.08 dB
16.36000000 MHz
Ref 20 dBm
Att 30 dB
D1 -2.68 dBm
D2 -8.58 dBm
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008
ANRITSU SYNTHESIZED SIGNAL GENERATOR	68247B	984703	May 18, 2008
DIGITAL RT OSCILLOSCOPE	TDS1012	C037299	Nov. 27, 2007
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE: 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

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

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

802.11b DSSS MODULATION:

MODULATION TYPE	DBPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	22.387	13.50	30	PASS
6	2437	25.235	14.02	30	PASS
11	2462	25.177	14.01	30	PASS

802.11g OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	28.184	14.50	30	PASS
6	2437	28.708	14.58	30	PASS
11	2462	28.249	14.51	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
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

NOTE: 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

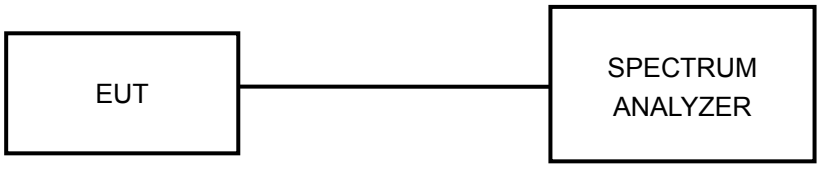
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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 CONDITION

Same as Item 4.3.6

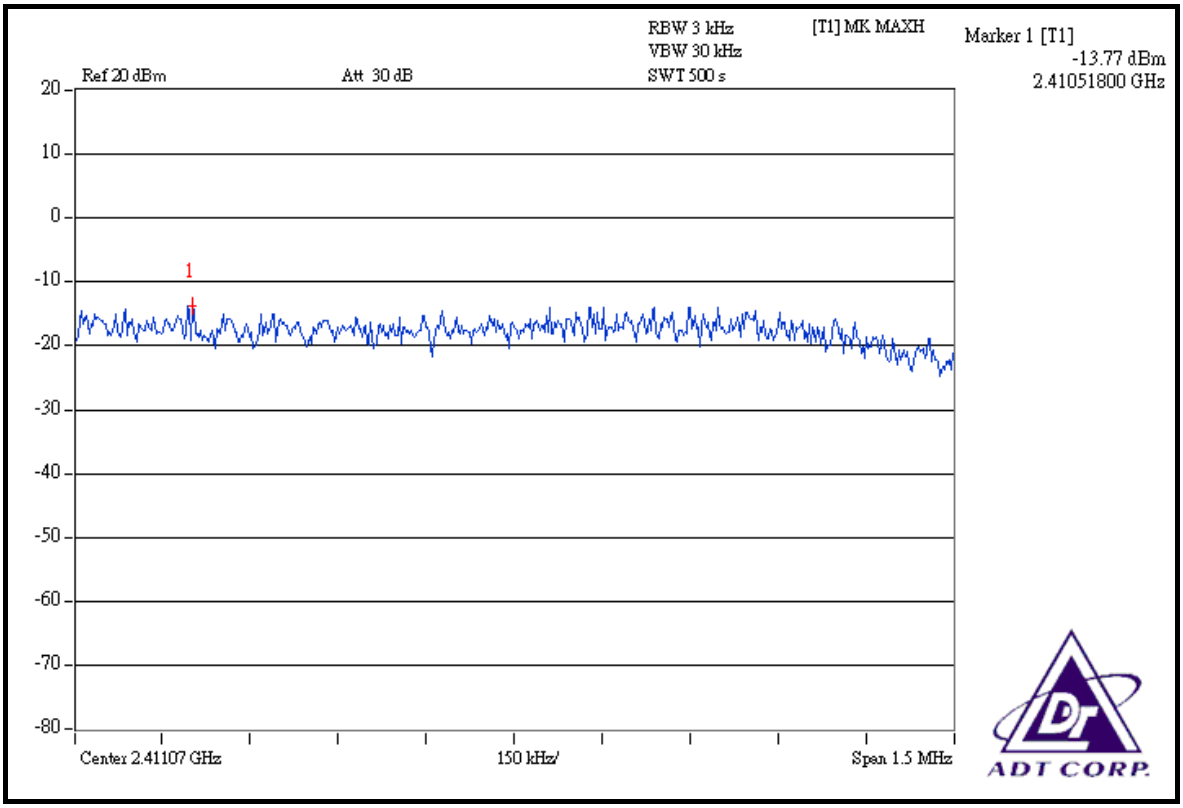
4.5.7 TEST RESULTS

802.11b DSSS MODULATION:

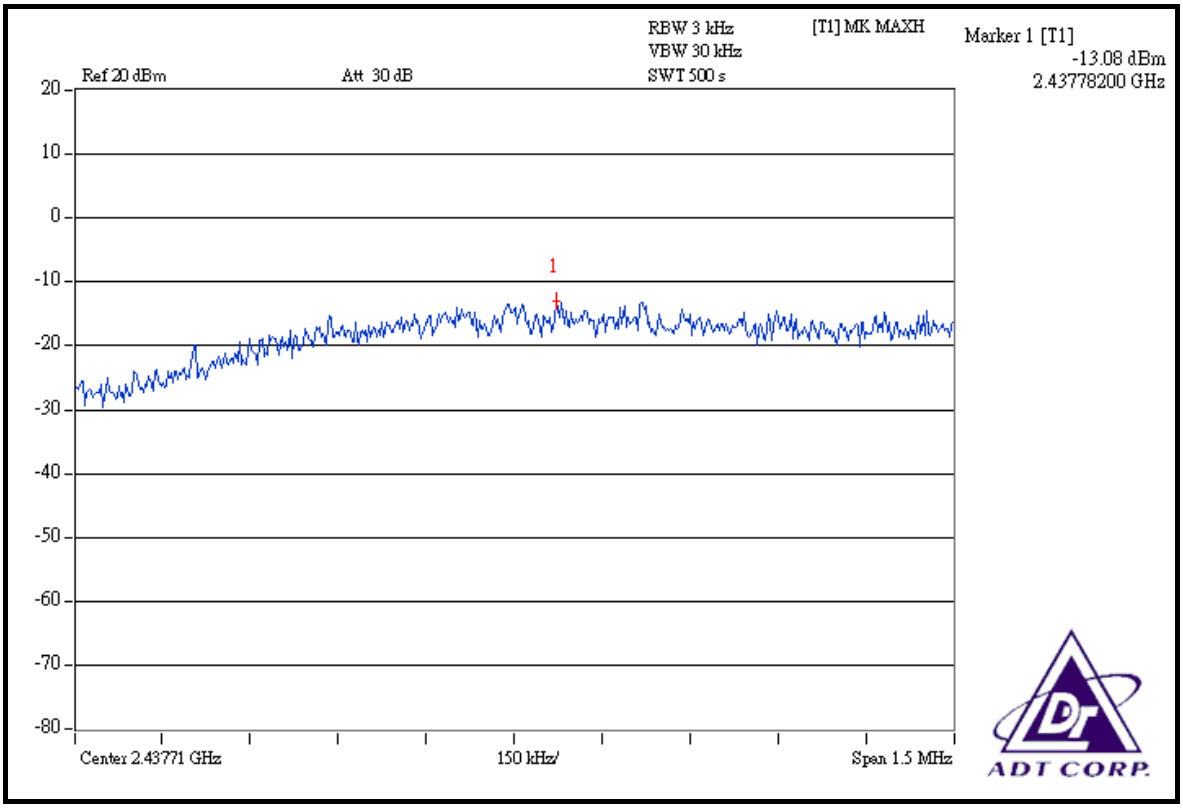
MODULATION TYPE	DBPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-13.77	8	PASS
6	2437	-13.08	8	PASS
11	2462	-13.44	8	PASS

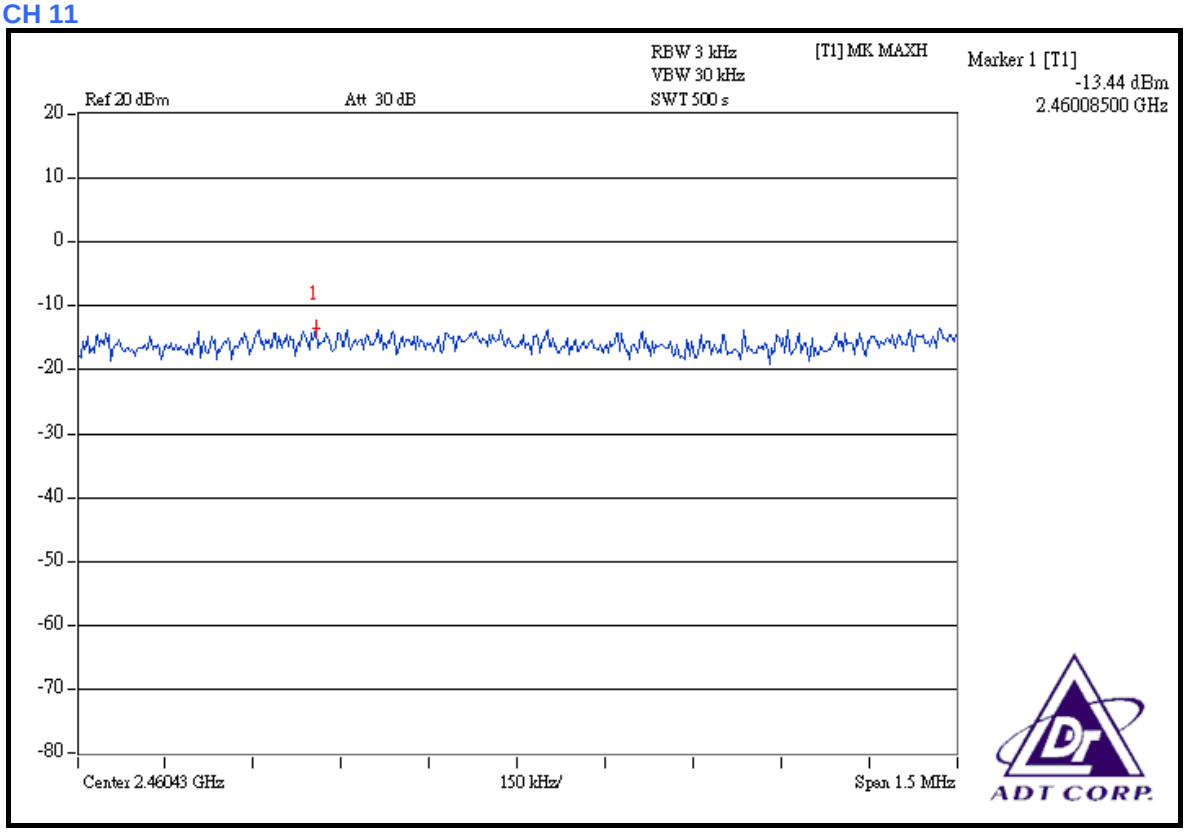
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-13.08 dBm
2.43778200 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.43771 GHz
150 kHz/
Span 1.5 MHz
ADT CORP.

CH 11

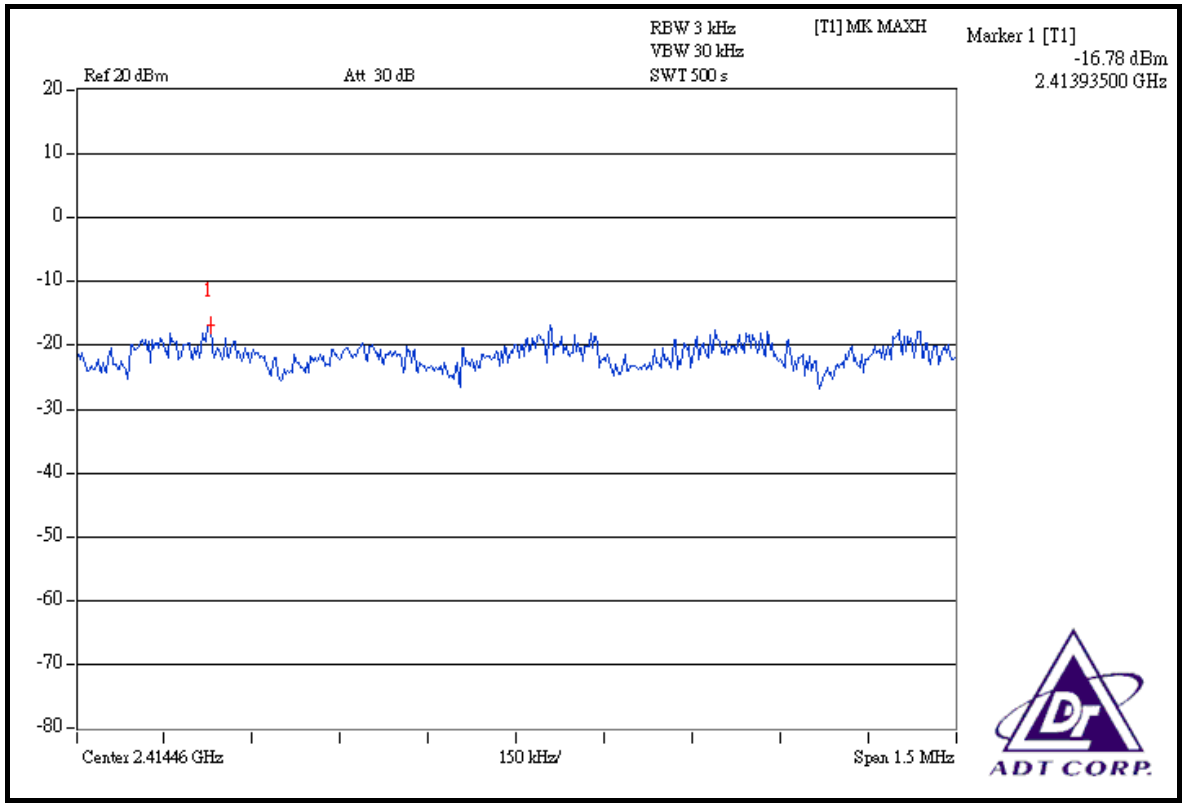

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-13.44 dBm
2.46008500 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 2.46043 GHz
150 kHz/
Span 1.5 MHz
ADT CORP.

802.11g OFDM MODULATION:

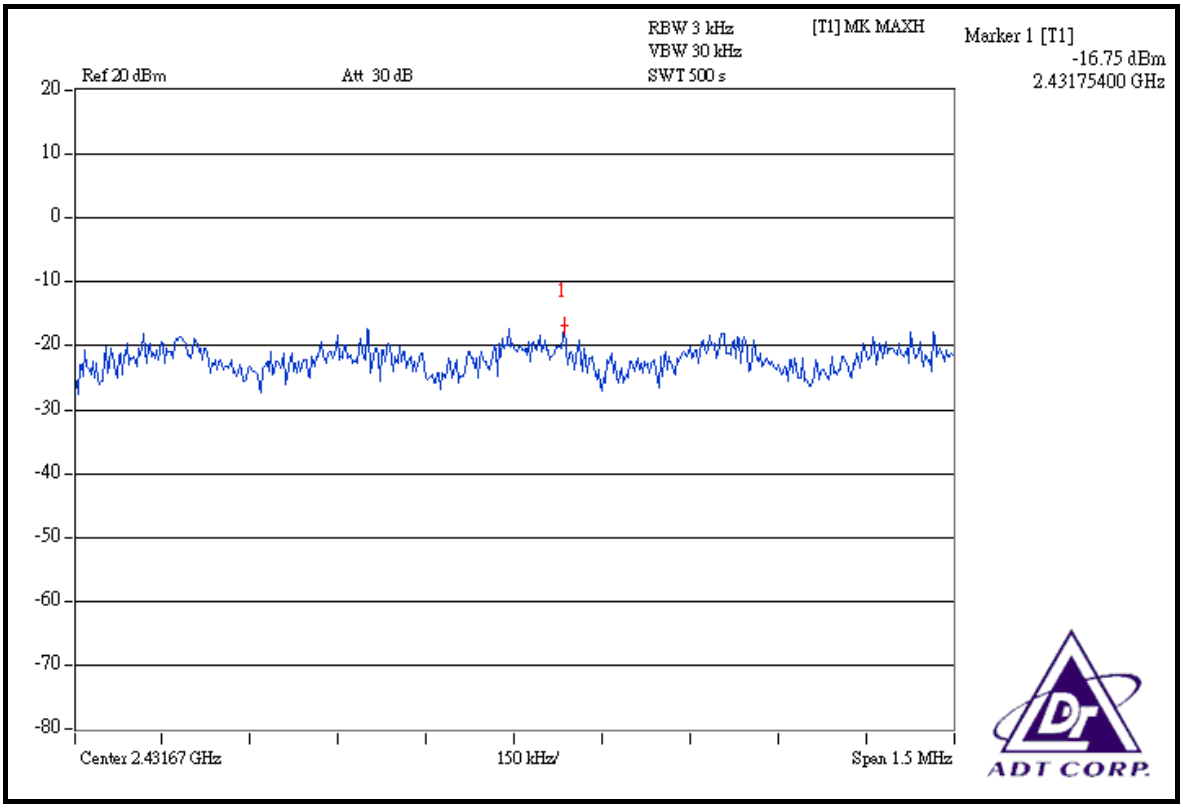
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-16.78	8	PASS
6	2437	-16.75	8	PASS
11	2462	-16.96	8	PASS

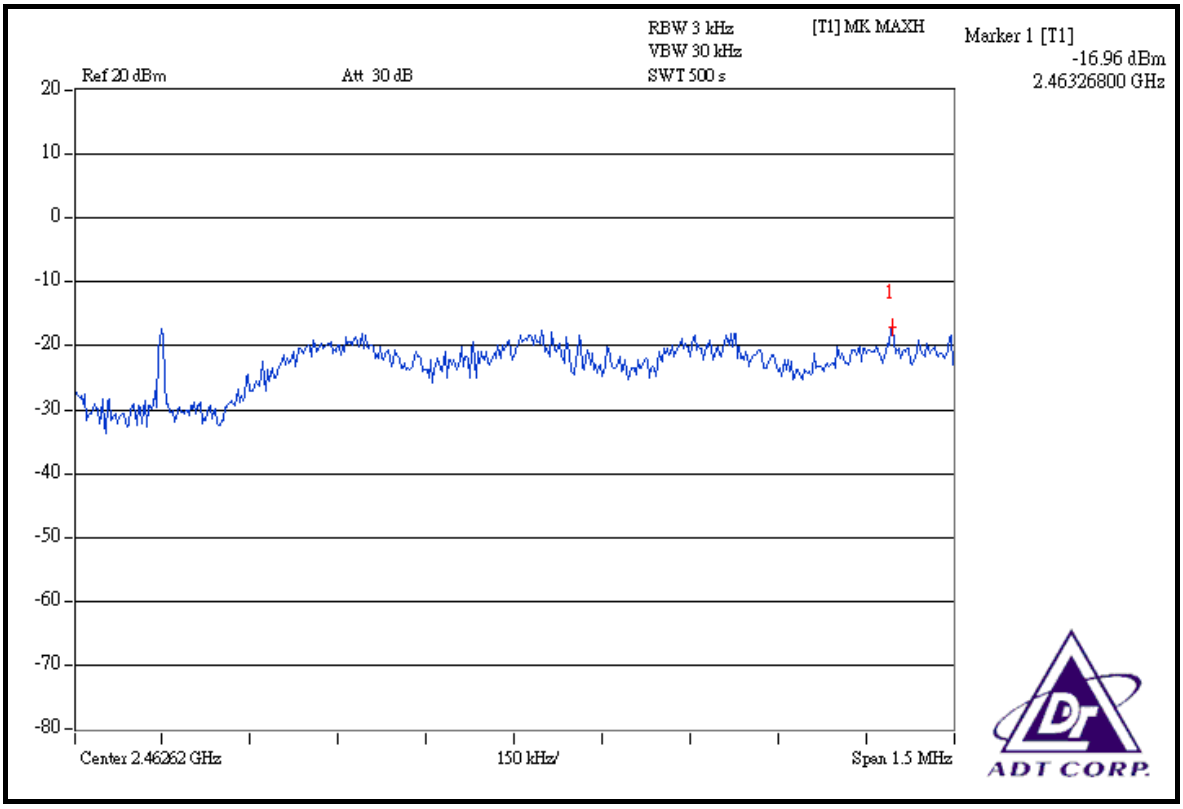
CH 1



CH 6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-16.75 dBm
2.43175400 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.43167 GHz
150 kHz/
Span 1.5 MHz
ADT CORP.

CH 11


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-16.96 dBm
2.46326800 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.46262 GHz
150 kHz/
Span 1.5 MHz
ADT CORP.

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
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

NOTE: 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 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW =100kHz, VBW = 300kHz; Average RBW = 1MHz, VBW = 1kHz) are attached on the following pages.

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 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS MODULATION

NOTE 1:

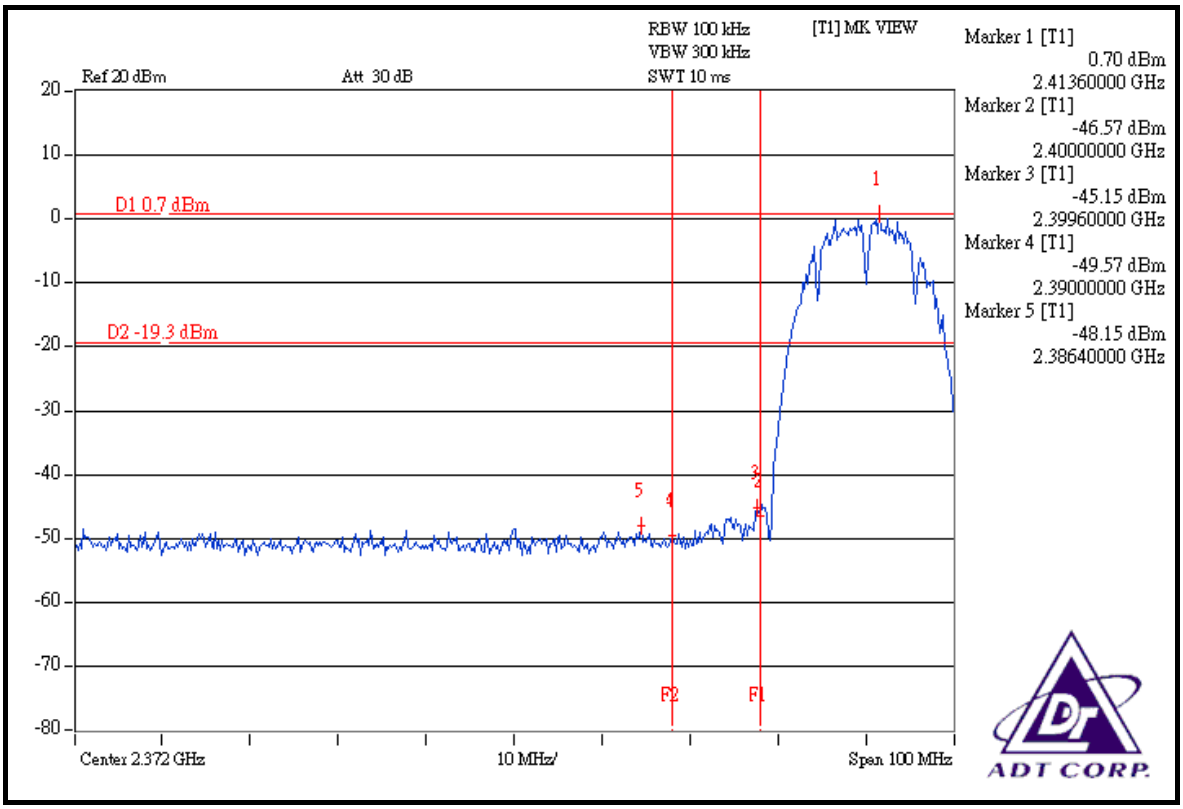
The band edge emission plot on the next page shows 48.85dBc between carrier maximum power and local maximum emission in restrict band (2.3864GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 102.69dBuV/m (Peak), so the maximum field strength in restrict band is 102.69 – 48.85 = 53.84dBuV/m which is under 74dBuV/m limit.

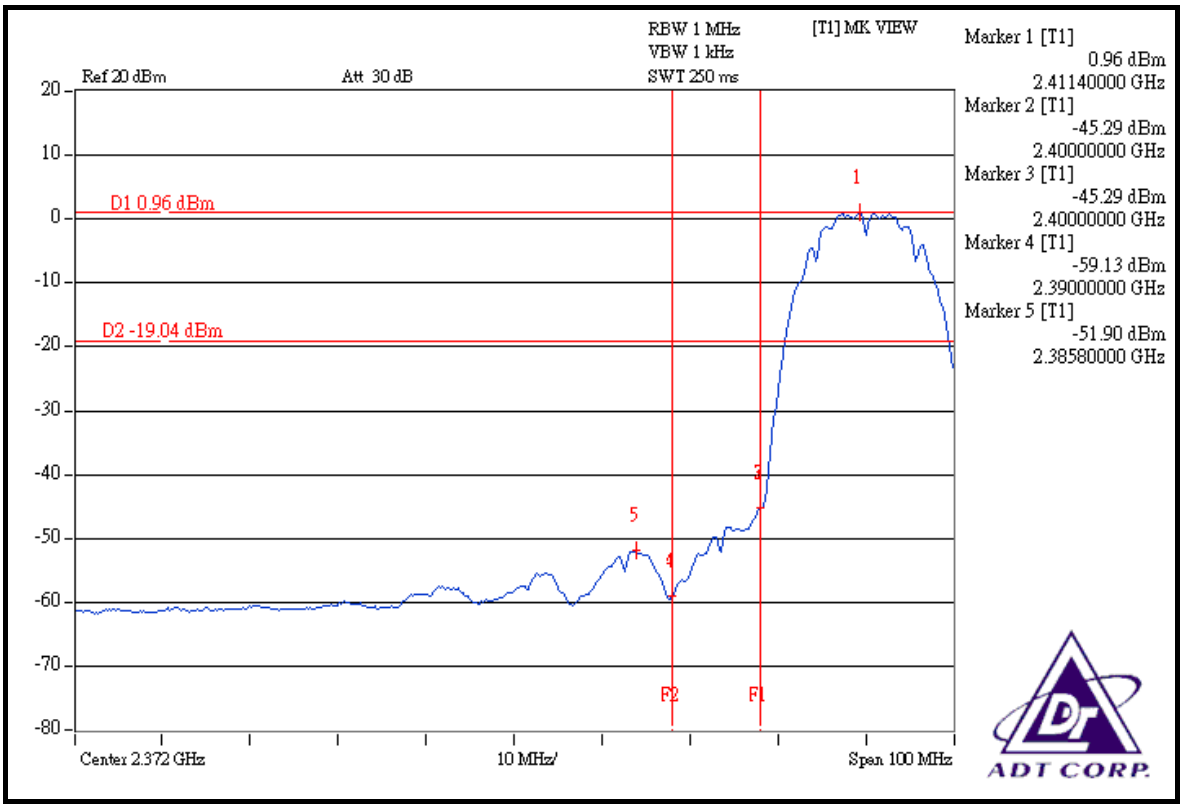
The band edge emission plot on the next page shows 52.86dBc between carrier maximum power and local maximum emission in restrict band (2.3858GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 98.30dBuV/m (Average), so the maximum field strength in restrict band is 98.30 – 52.86 = 45.44dBuV/m which is under 54dBuV/m limit.

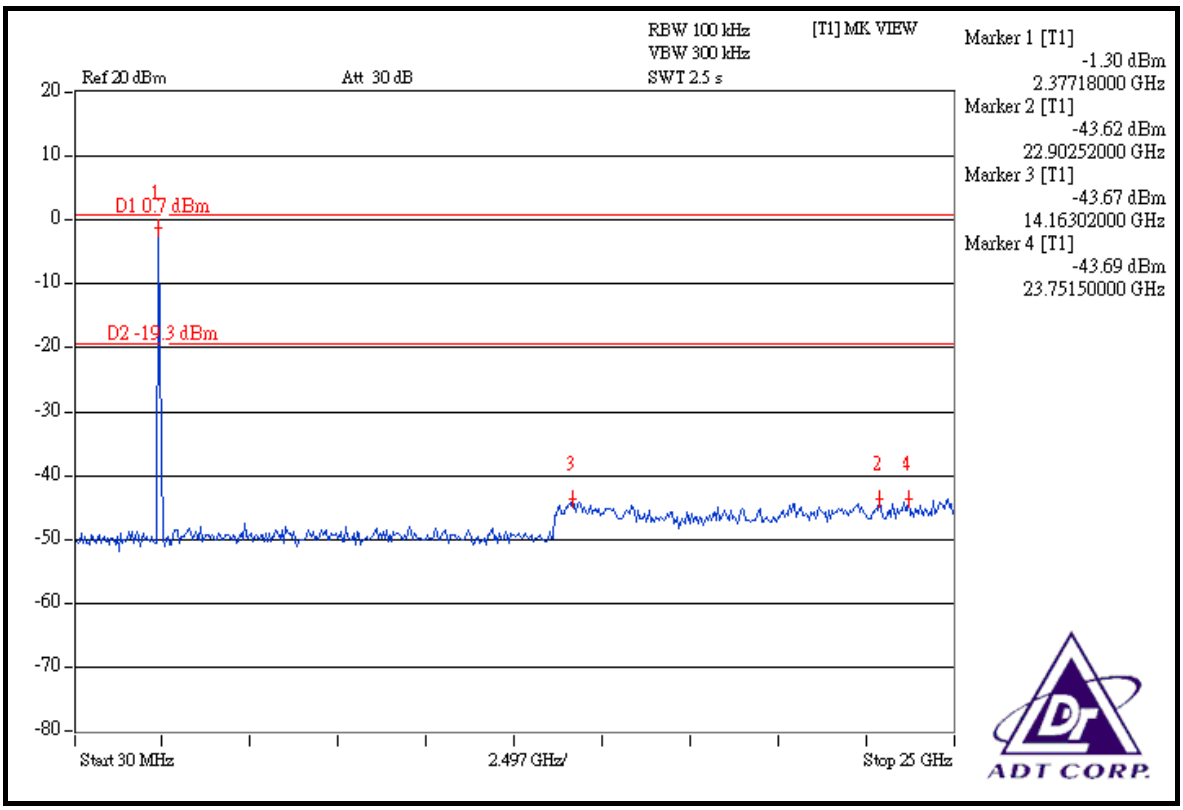
NOTE 2:

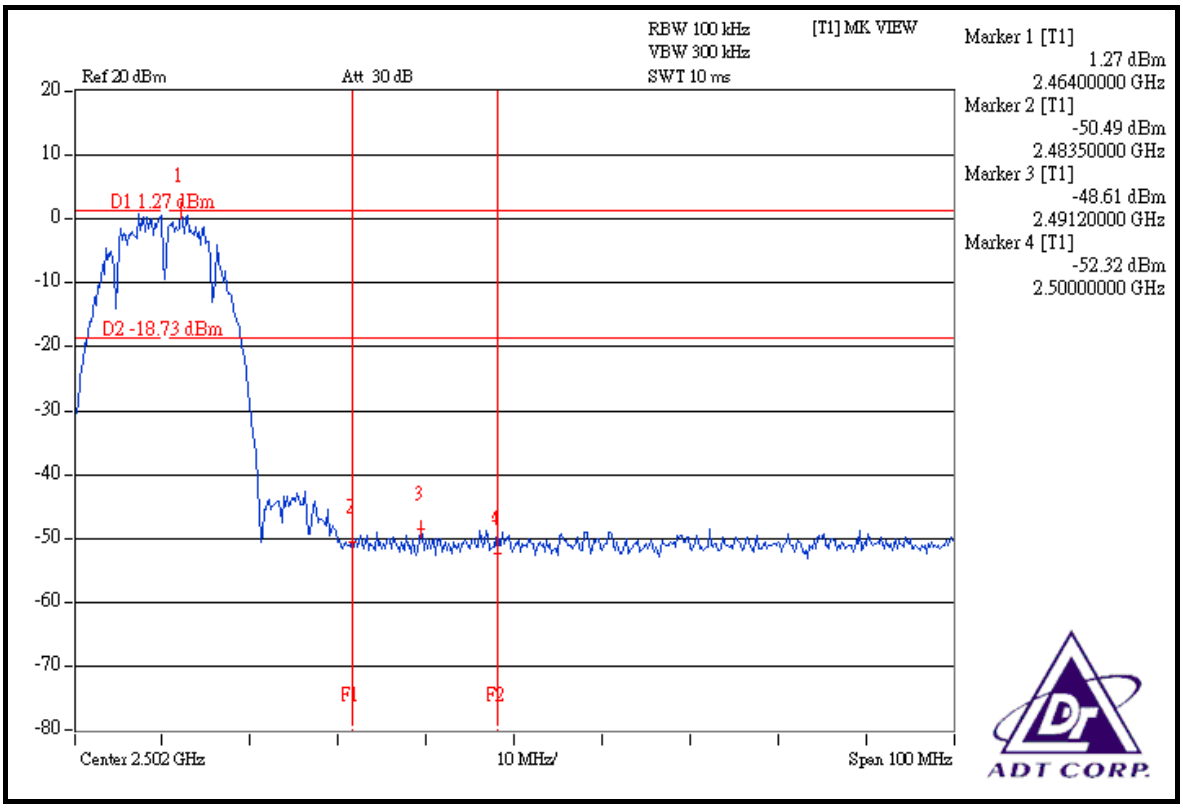
The band edge emission plot on the next second page shows 49.88dBc between carrier maximum power and local maximum emission in restrict band (2.4912GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 101.62dBuV/m (Peak), so the maximum field strength in restrict band is 101.62 – 49.88 = 51.74dBuV/m which is under 74dBuV/m limit.

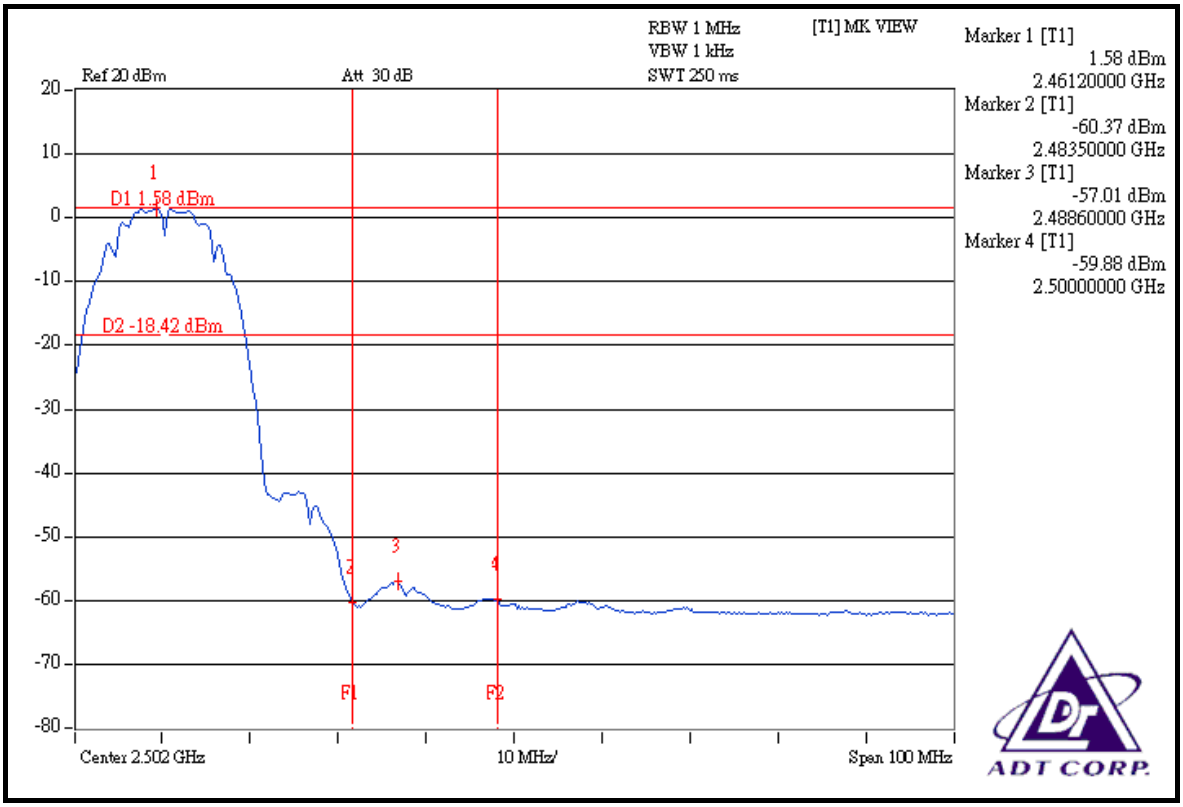
The band edge emission plot on the next third page shows 58.59dBc between carrier maximum power and local maximum emission in restrict band (2.4886GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 96.01dBuV/m (Average), so the maximum field strength in restrict band is 96.01 – 58.59 = 37.42dBuV/m which is under 54dBuV/m limit.

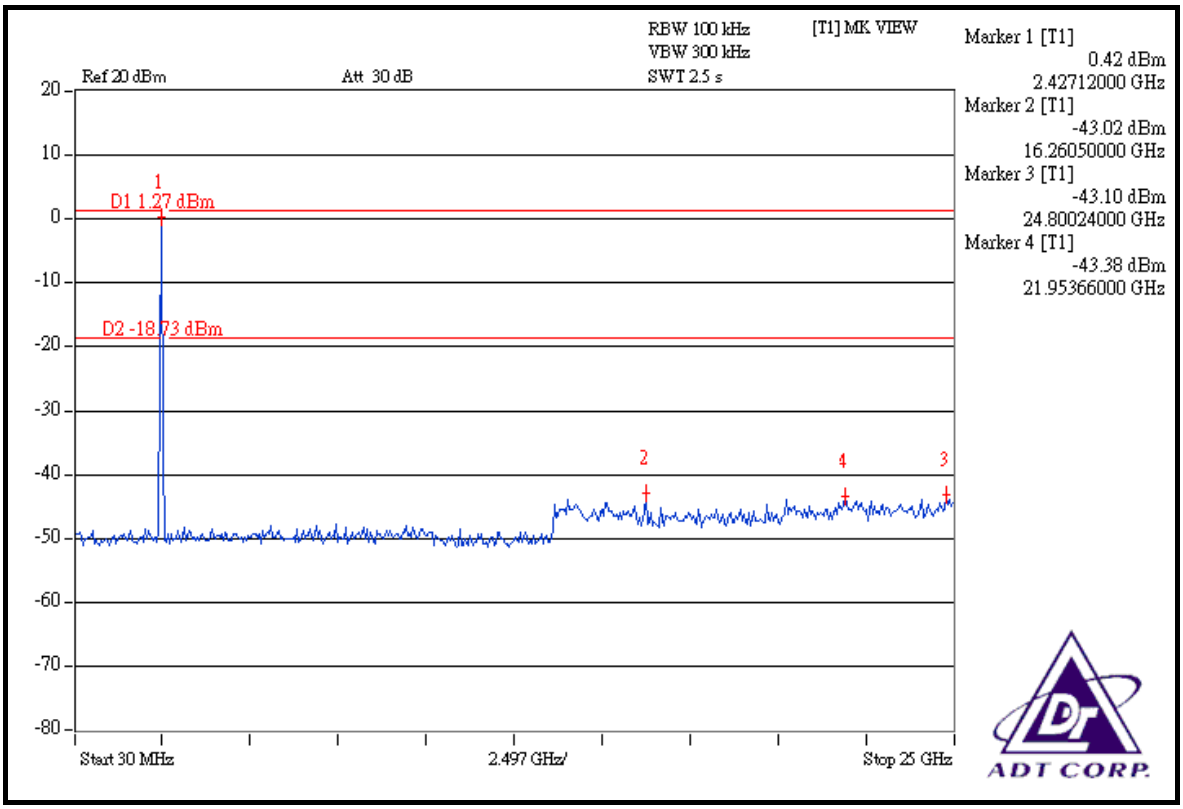

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.7 dBm
D2 -19.3 dBm
Center 2.372 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
0.70 dBm
2.41360000 GHz
Marker 2 [T1]
-46.57 dBm
2.40000000 GHz
Marker 3 [T1]
-45.15 dBm
2.39960000 GHz
Marker 4 [T1]
-49.57 dBm
2.39000000 GHz
Marker 5 [T1]
-48.15 dBm
2.38640000 GHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.96 dBm
D2 -19.04 dBm
Center 2.372 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
0.96 dBm
2.41140000 GHz
Marker 2 [T1]
-45.29 dBm
2.40000000 GHz
Marker 3 [T1]
-45.29 dBm
2.40000000 GHz
Marker 4 [T1]
-59.13 dBm
2.39000000 GHz
Marker 5 [T1]
-51.90 dBm
2.38580000 GHz
ADT CORP.


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.7 dBm
D2 -19.3 dBm
Marker 1 [T1]
-1.30 dBm
2.37718000 GHz
Marker 2 [T1]
-43.62 dBm
22.90252000 GHz
Marker 3 [T1]
-43.67 dBm
14.16302000 GHz
Marker 4 [T1]
-43.69 dBm
23.75150000 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz
ADT CORP.


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.27 dBm
D2 -18.73 dBm
Marker 1 [T1]
1.27 dBm
2.46400000 GHz
Marker 2 [T1]
-50.49 dBm
2.48350000 GHz
Marker 3 [T1]
-48.61 dBm
2.49120000 GHz
Marker 4 [T1]
-52.32 dBm
2.50000000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
1.58 dBm
2.46120000 GHz
Marker 2 [T1]
-60.37 dBm
2.48350000 GHz
Marker 3 [T1]
-57.01 dBm
2.48860000 GHz
Marker 4 [T1]
-59.88 dBm
2.50000000 GHz
D1 1.58 dBm
D2 -18.42 dBm
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.42 dBm
2.42712000 GHz
Marker 2 [T1]
-43.02 dBm
16.26050000 GHz
Marker 3 [T1]
-43.10 dBm
24.80024000 GHz
Marker 4 [T1]
-43.38 dBm
21.95366000 GHz
D1 1.27 dBm
D2 -18.73 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g OFDM MODULATION

NOTE 1:

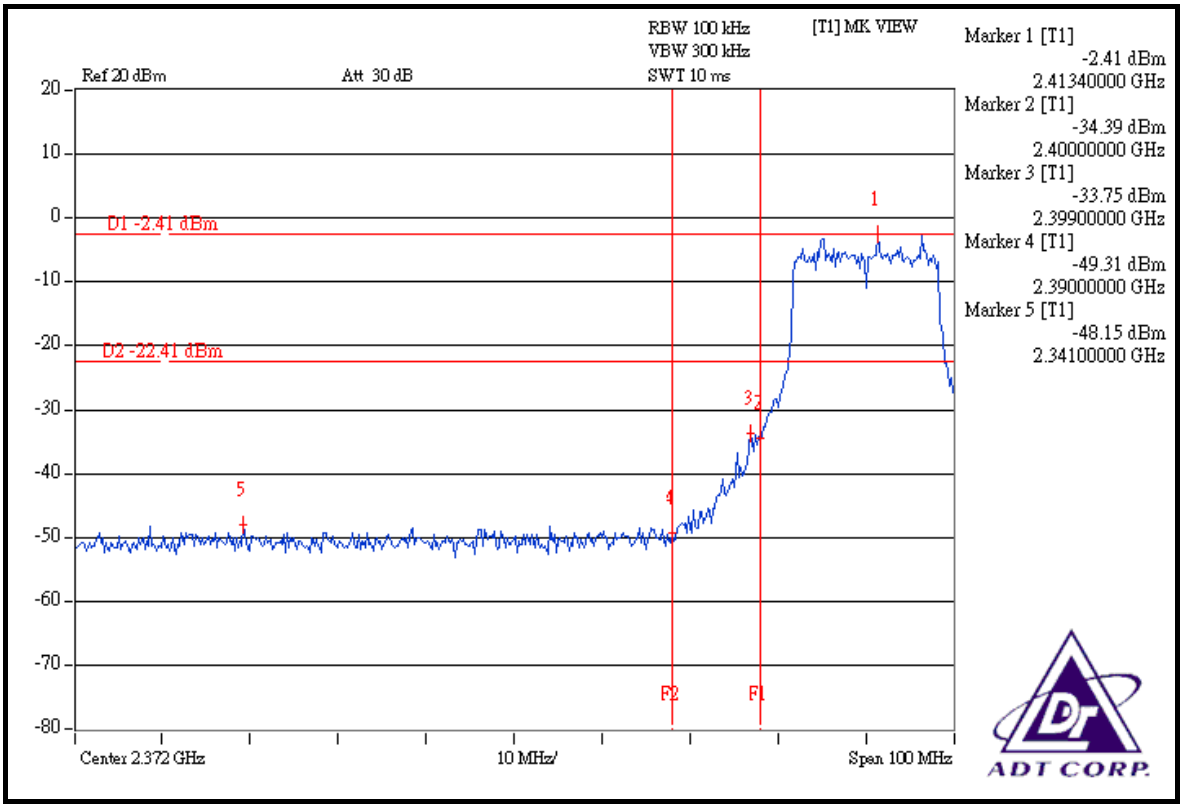
The band edge emission plot on the next page shows 45.74dBc between carrier maximum power and local maximum emission in restrict band (2.3410GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 102.51dBuV/m (Peak), so the maximum field strength in restrict band is 102.51 – 45.74 = 56.77dBuV/m which is under 74dBuV/m limit.

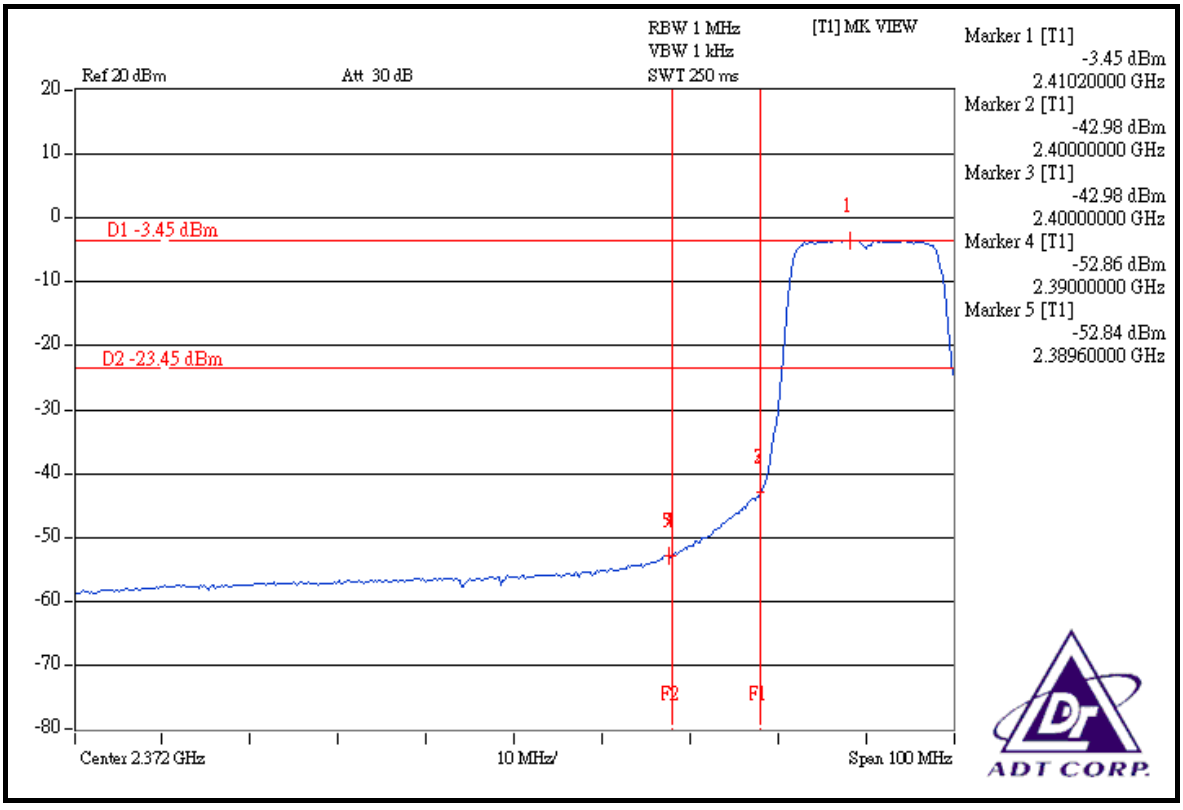
The band edge emission plot on the next page shows 49.39dBc between carrier maximum power and local maximum emission in restrict band (2.3896GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 95.49dBuV/m (Average), so the maximum field strength in restrict band is 95.49 – 49.39 = 46.10dBuV/m which is under 54dBuV/m limit.

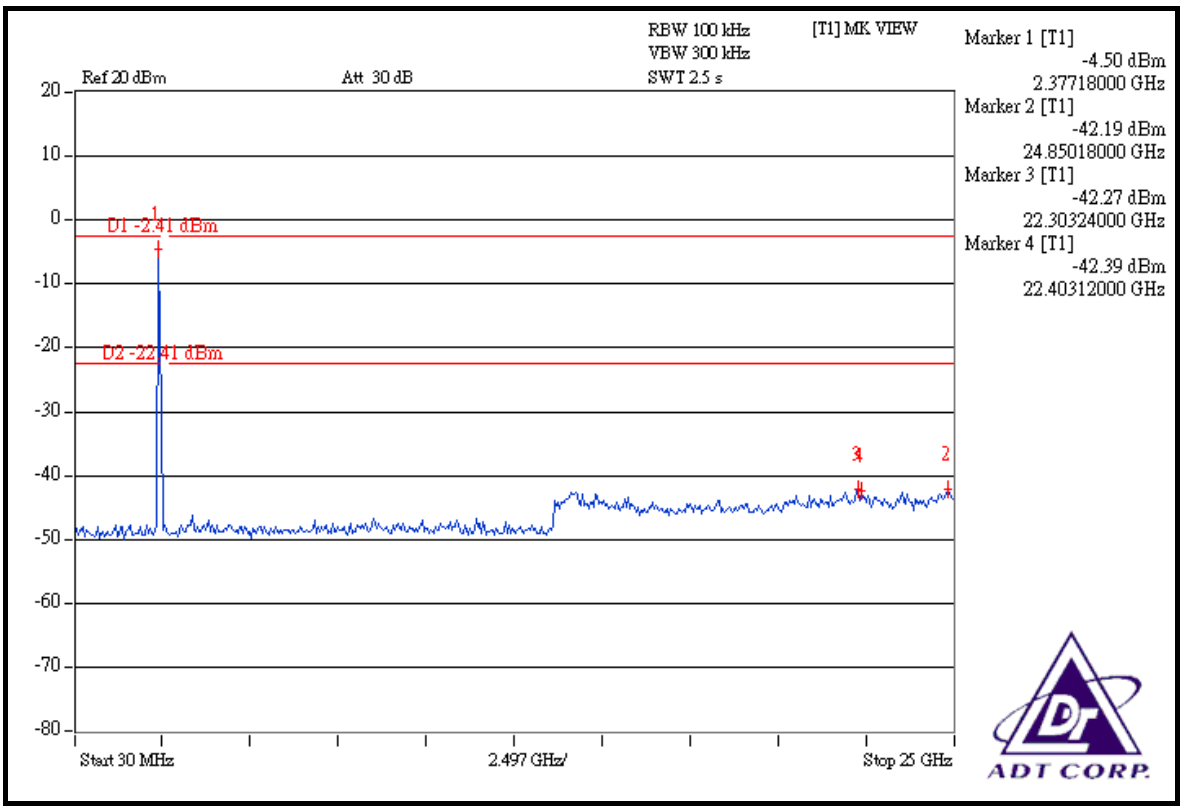
NOTE 2:

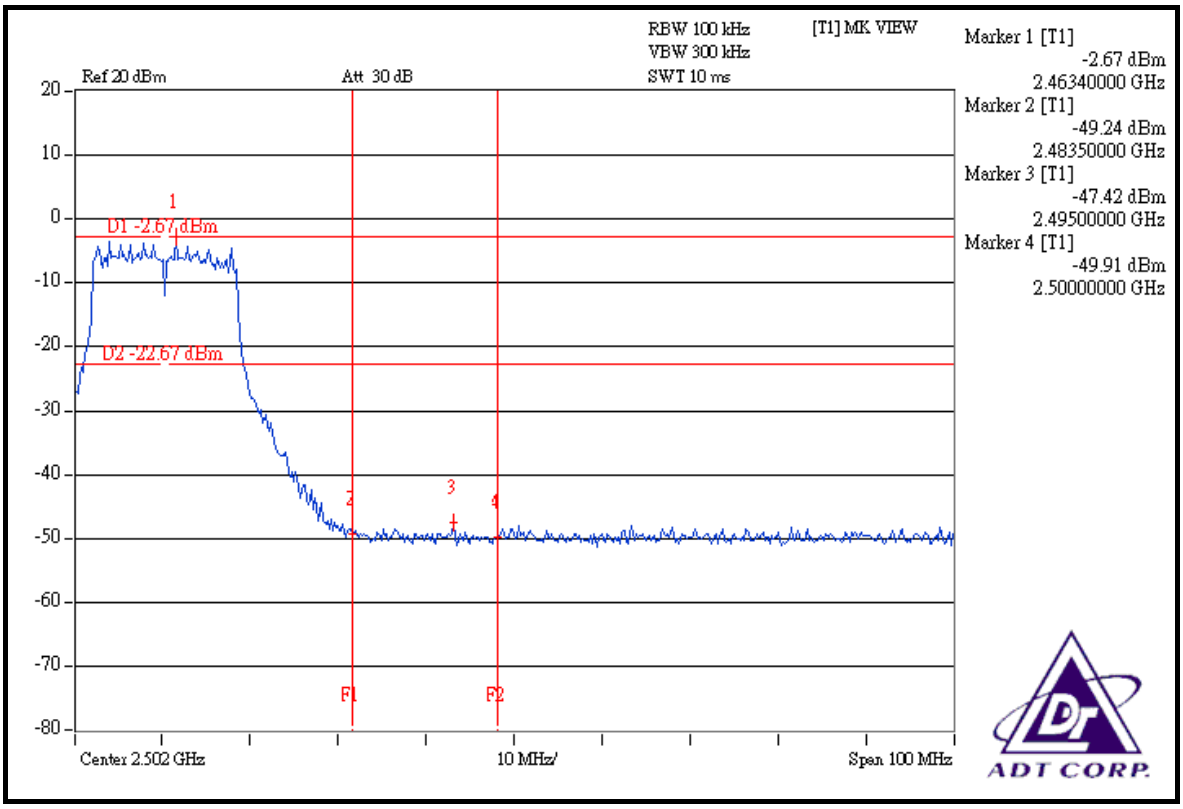
The band edge emission plot on the next second page shows 44.75dBc between carrier maximum power and local maximum emission in restrict band (2.4950GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 102.20dBuV/m (Peak), so the maximum field strength in restrict band is 102.20 – 44.75 = 57.45dBuV/m which is under 74dBuV/m limit.

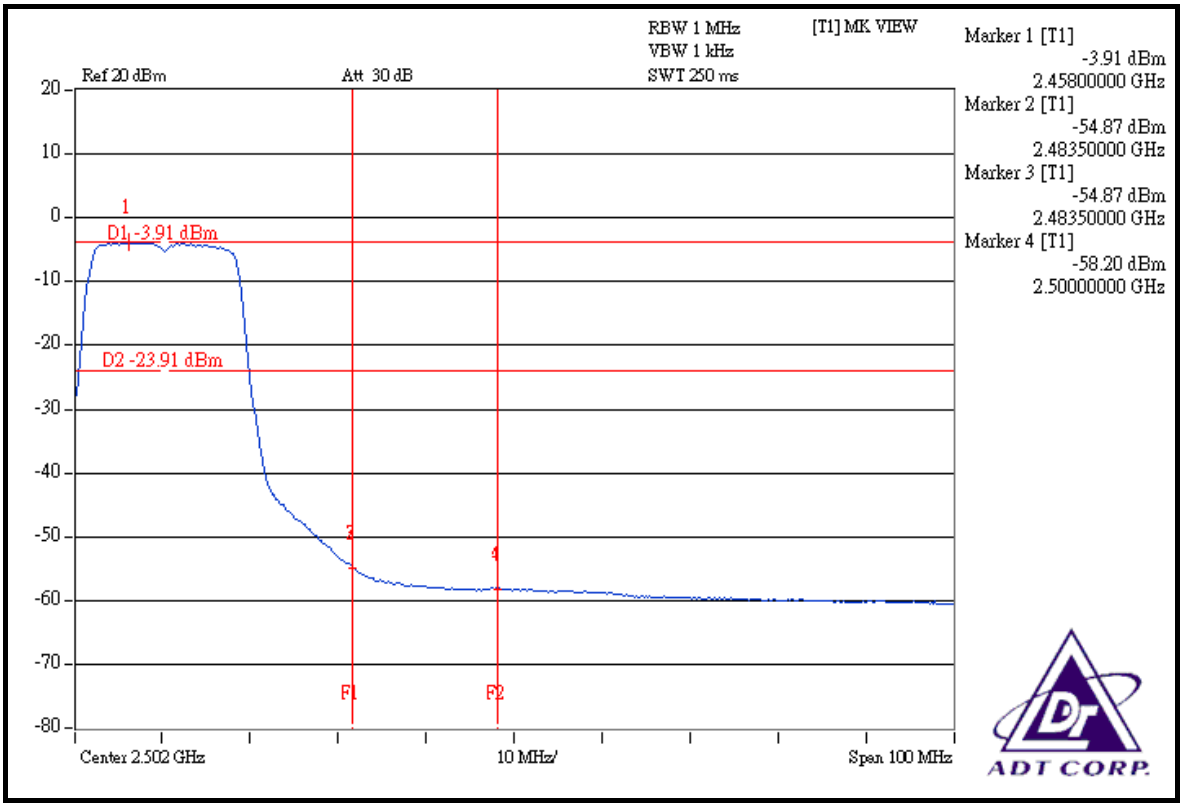
The band edge emission plot on the next third page shows 50.96dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 95.36dBuV/m (Average), so the maximum field strength in restrict band is 95.36 – 50.96 = 44.40dBuV/m which is under 54dBuV/m limit.

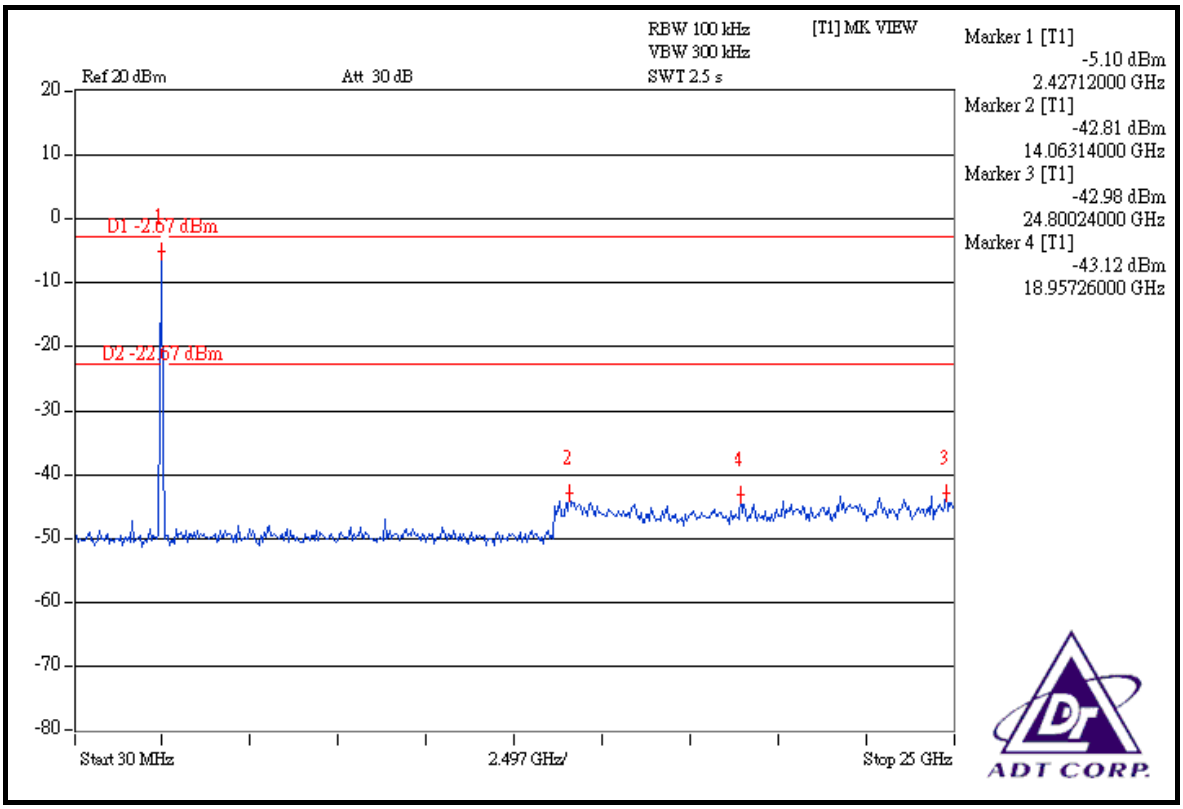

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.41 dBm
D2 -22.41 dBm
Marker 1 [T1]
-2.41 dBm
2.41340000 GHz
Marker 2 [T1]
-34.39 dBm
2.40000000 GHz
Marker 3 [T1]
-33.75 dBm
2.39900000 GHz
Marker 4 [T1]
-49.31 dBm
2.39000000 GHz
Marker 5 [T1]
-48.15 dBm
2.34100000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz
F2
F1


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -3.45 dBm
D2 -23.45 dBm
Marker 1 [T1]
-3.45 dBm
2.41020000 GHz
Marker 2 [T1]
-42.98 dBm
2.40000000 GHz
Marker 3 [T1]
-42.98 dBm
2.40000000 GHz
Marker 4 [T1]
-52.86 dBm
2.39000000 GHz
Marker 5 [T1]
-52.84 dBm
2.38960000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz
F2
F1


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-4.50 dBm
2.37718000 GHz
Marker 2 [T1]
-42.19 dBm
24.85018000 GHz
Marker 3 [T1]
-42.27 dBm
22.30324000 GHz
Marker 4 [T1]
-42.39 dBm
22.40312000 GHz
D1 -2.41 dBm
D2 -22.41 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
ADT CORP.


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.67 dBm
2.46340000 GHz
Marker 2 [T1]
-49.24 dBm
2.48350000 GHz
Marker 3 [T1]
-47.42 dBm
2.49500000 GHz
Marker 4 [T1]
-49.91 dBm
2.50000000 GHz
D1 -2.67 dBm
D2 -22.67 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-3.91 dBm
2.45800000 GHz
Marker 2 [T1]
-54.87 dBm
2.48350000 GHz
Marker 3 [T1]
-54.87 dBm
2.48350000 GHz
Marker 4 [T1]
-58.20 dBm
2.50000000 GHz
D1 -3.91 dBm
D2 -23.91 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-5.10 dBm
2.42712000 GHz
Marker 2 [T1]
-42.81 dBm
14.06314000 GHz
Marker 3 [T1]
-42.98 dBm
24.80024000 GHz
Marker 4 [T1]
-43.12 dBm
18.95726000 GHz
D1 -2.67 dBm
D2 -22.67 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

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 patch antenna with UFL antenna connector. The maximum Gain of the antenna is 5.2dBi.

5. TEST TYPES AND RESULTS (FOR 5.0GHz)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 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. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. 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.

5.1.2 T EST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Dec. 08, 2007
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 06, 2008
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 08, 2008
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 16, 2008
Software ADT	ADT_Cond_V3	NA	NA

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. The test was performed in HwaYa Shielded Room 2.

3. The VCCI Site Registration No. is C-2047.

5.1.3 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.

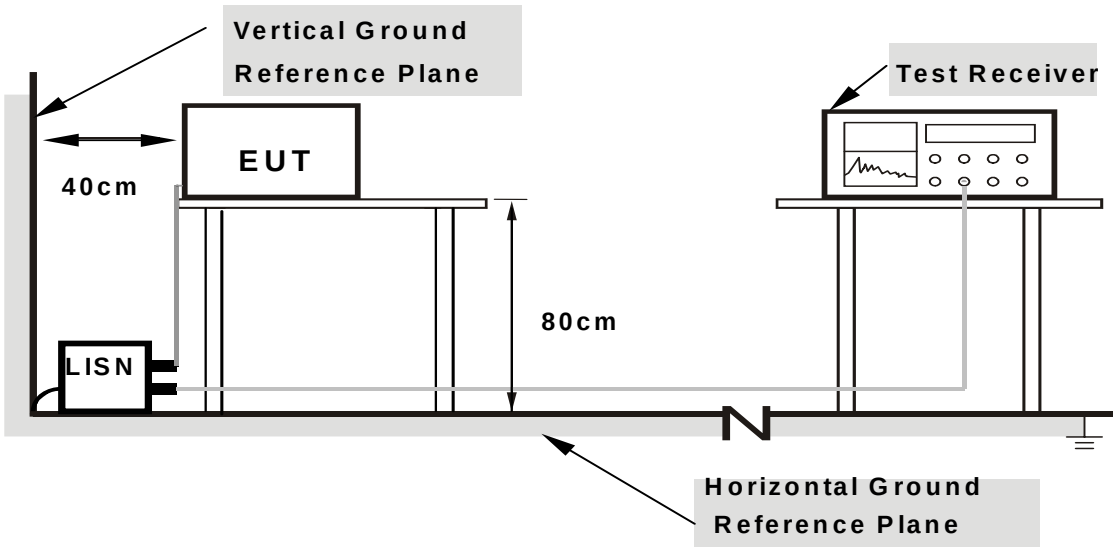
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6

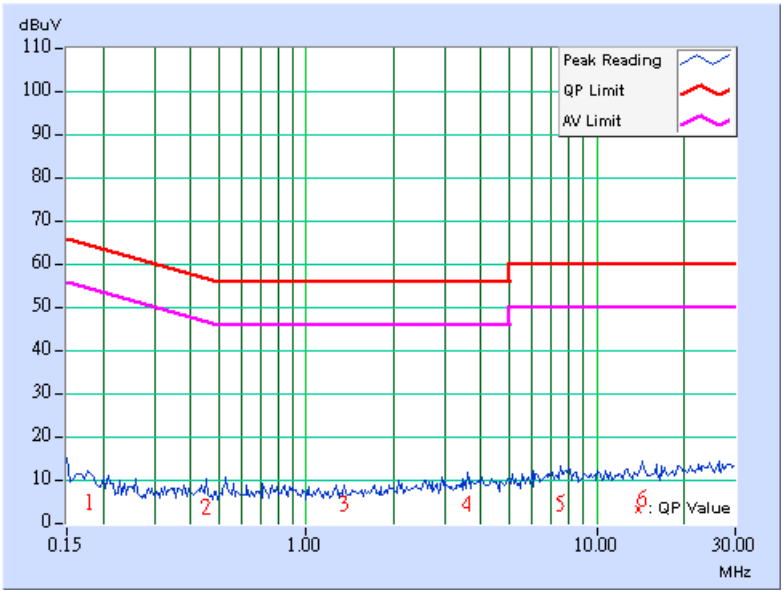
5.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.179	0.10	-9.54	-	-9.44	-	64.55	54.55	-73.99	-
2	0.456	0.10	-10.88	-	-10.78	-	56.77	46.77	-67.55	-
3	1.353	0.15	-10.24	-	-10.09	-	56.00	46.00	-66.09	-
4	3.596	0.27	-10.02	-	-9.75	-	56.00	46.00	-65.75	-
5	7.524	0.31	-10.23	-	-9.92	-	60.00	50.00	-69.92	-
6	14.324	0.46	-8.96	-	-8.50	-	60.00	50.00	-68.50	-

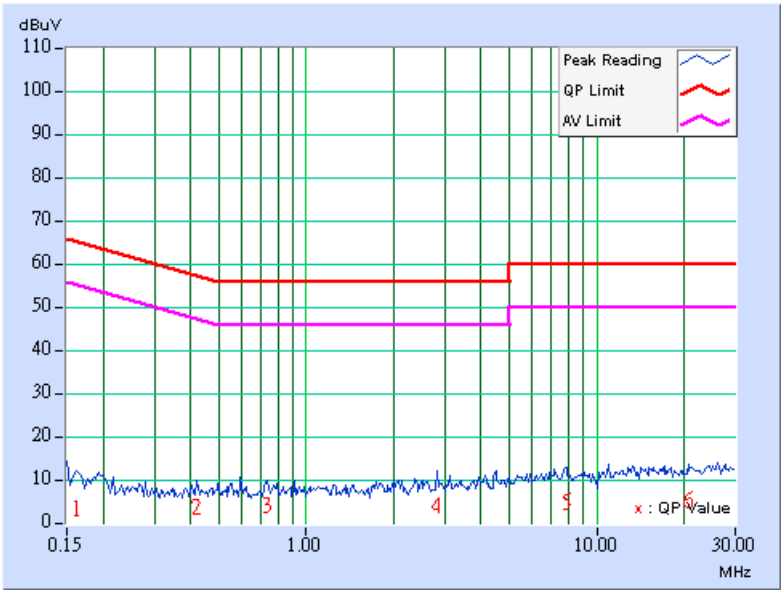
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	A	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.10	-11.45	-	-11.35	-	65.34	55.34	-76.69	-
2	0.420	0.10	-10.99	-	-10.89	-	57.44	47.44	-68.33	-
3	0.739	0.16	-10.57	-	-10.41	-	56.00	46.00	-66.41	-
4	2.824	0.24	-10.69	-	-10.45	-	56.00	46.00	-66.45	-
5	7.860	0.38	-9.67	-	-9.29	-	60.00	50.00	-69.29	-
6	20.654	0.59	-9.57	-	-8.98	-	60.00	50.00	-68.98	-

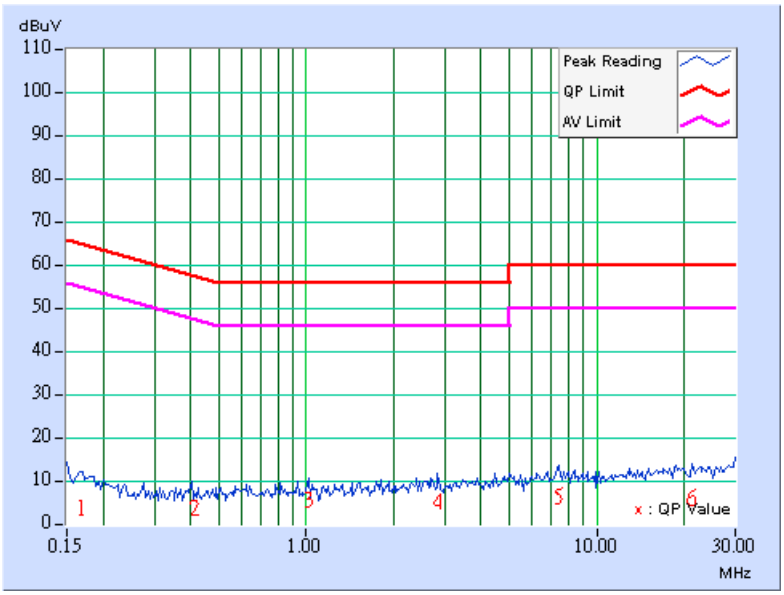
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.169	0.10	-10.95	-	-10.85	-	65.03	55.03	-75.88	-
2	0.415	0.10	-11.03	-	-10.93	-	57.55	47.55	-68.48	-
3	1.020	0.11	-9.11	-	-9.00	-	56.00	46.00	-65.00	-
4	2.844	0.25	-9.50	-	-9.25	-	56.00	46.00	-65.25	-
5	7.431	0.31	-8.31	-	-8.00	-	60.00	50.00	-68.00	-
6	21.415	0.64	-8.76	-	-8.12	-	60.00	50.00	-68.12	-

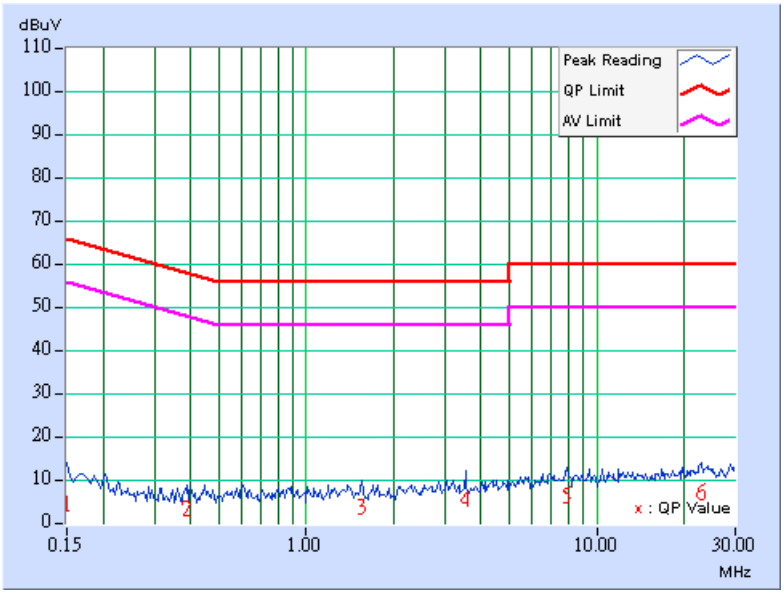
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	6dB BANDWIDTH	9kHz
TEST MODE	B	TESTED BY	Match Tsui

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	-10.42	-	-10.32	-	66.00	56.00	-76.32	-
2	0.390	0.10	-11.41	-	-11.31	-	58.07	48.07	-69.38	-
3	1.556	0.22	-11.02	-	-10.80	-	56.00	46.00	-66.80	-
4	**3.544**	**0.27**	**-9.03**	**-**	**-8.76**	**-**	**56.00**	**46.00**	**-64.76**	**-**
5	7.880	0.38	-8.52	-	-8.14	-	60.00	50.00	-68.14	-
6	22.855	0.66	-7.61	-	-6.95	-	60.00	50.00	-66.95	-

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.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jul. 27, 2008
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Aug. 05, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Jan. 04, 2008
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Jul. 30, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 16, 2008
Preamplifier Agilent	8449B	3008A01910	Sep. 19, 2008
Preamplifier Agilent	8447D	2944A10638	Dec. 20, 2007
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218188/218189	Nov. 14, 2007
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 09, 2008
Software	ADT_Radiated_V7.6	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA
Turn Table EMCO	2087-2.03	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	07026401	Apr. 23, 2008

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. The test was performed in HwaYa Chamber 9.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The IC Site Registration No. is IC3789B-9.

5.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

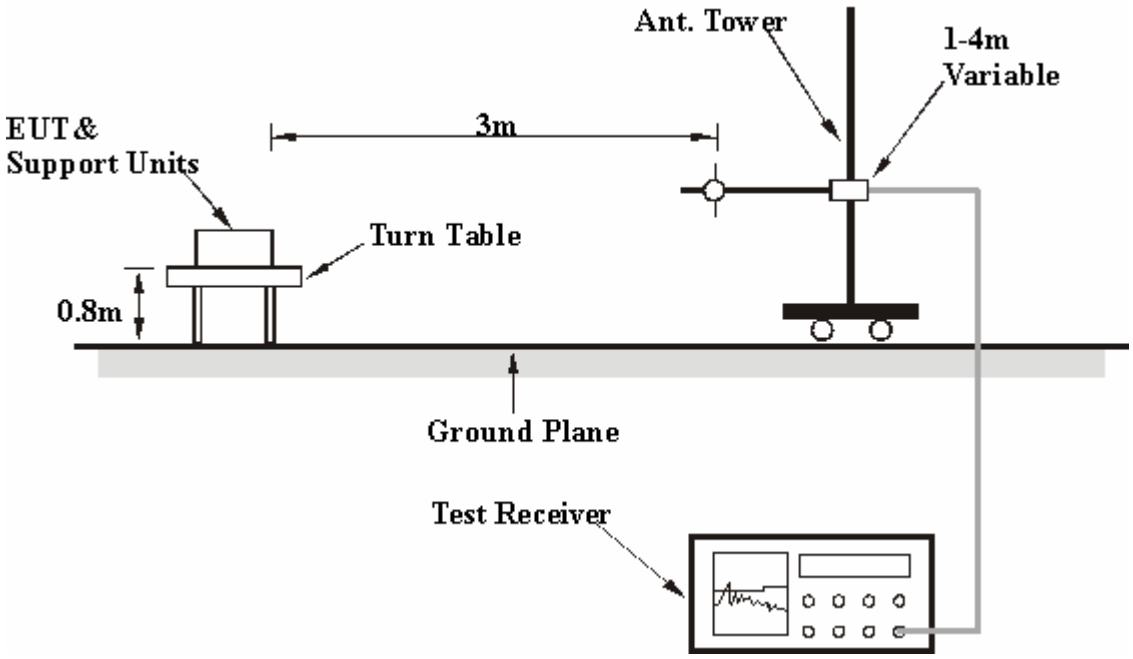
NOTE:

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 of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation

5.2.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	57.12	33.39 QP	40.00	-6.61	1.00 H	70	20.01	13.38
2	70.73	38.96 QP	40.00	-1.04	2.00 H	136	27.83	11.13
3	121.28	38.08 QP	43.50	-5.42	1.50 H	253	26.47	11.61
4	158.22	31.96 QP	43.50	-11.54	1.50 H	148	18.47	13.50
5	173.78	34.39 QP	43.50	-9.11	1.50 H	205	21.92	12.47
6	224.33	34.16 QP	46.00	-11.84	1.50 H	85	22.75	11.40
7	702.62	35.54 QP	46.00	-10.46	1.00 H	85	13.48	22.06
8	803.73	34.80 QP	46.00	-11.20	1.00 H	205	10.40	24.40
9	902.89	39.40 QP	46.00	-6.60	1.50 H	223	14.06	25.34
10	947.60	35.51 QP	46.00	-10.49	1.00 H	274	9.80	25.71

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	57.12	37.55 QP	40.00	-2.45	1.00 V	73	24.17	13.38
2	70.73	38.83 QP	40.00	-1.17	1.00 V	67	27.70	11.13
3	119.34	40.78 QP	43.50	-2.72	1.00 V	265	29.29	11.49
4	132.95	31.91 QP	43.50	-11.59	1.00 V	139	19.86	12.05
5	171.83	35.40 QP	43.50	-8.10	1.00 V	163	22.79	12.61
6	902.89	39.89 QP	46.00	-6.11	1.00 V	181	14.55	25.34
7	947.60	38.02 QP	46.00	-7.98	1.00 V	223	12.32	25.71

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 TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	B
TESTED BY	Dean Wang		

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	70.73	31.85 QP	40.00	-8.15	2.00 H	139	19.31	12.54
2	103.78	32.31 QP	43.50	-11.19	2.00 H	331	21.65	10.65
3	199.05	34.23 QP	43.50	-9.27	1.50 H	154	22.89	11.34
4	348.76	34.08 QP	46.00	-11.92	1.50 H	124	17.64	16.44
5	399.31	35.73 QP	46.00	-10.27	1.00 H	205	18.11	17.62
6	599.58	39.04 QP	46.00	-6.96	1.50 H	337	16.59	22.45
7	700.68	39.31 QP	46.00	-6.69	1.00 H	121	15.10	24.22
8	799.84	39.26 QP	46.00	-6.74	1.50 H	301	13.38	25.88
9	900.94	39.11 QP	46.00	-6.89	1.00 H	169	11.50	27.61

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	47.40	36.33 QP	40.00	-3.67	1.00 V	319	21.81	14.52
2	70.73	34.86 QP	40.00	-5.14	1.00 V	175	22.32	12.54
3	129.06	33.04 QP	43.50	-10.46	1.50 V	166	19.90	13.14
4	399.31	34.31 QP	46.00	-11.69	1.00 V	349	16.69	17.62
5	599.58	41.36 QP	46.00	-4.64	2.00 V	7	18.91	22.45
6	700.68	39.08 QP	46.00	-6.92	1.00 V	232	14.87	24.22
7	799.84	39.69 QP	46.00	-6.31	1.00 V	169	13.80	25.88
8	900.94	41.11 QP	46.00	-4.89	1.00 V	154	13.50	27.61

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.

ABOVE 1GHz DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#3830.00	53.76 PK	74.00	-20.24	1.07 H	337	18.68	35.09
2	#3830.00	50.82 AV	54.00	-3.18	1.07 H	337	15.74	35.09
3	5725.00	71.75 PK	92.57	-20.82	1.20 H	220	32.14	39.61
4	5725.00	59.41 AV	81.72	-22.31	1.20 H	220	19.80	39.61
5	*5745.00	112.57 PK			1.20 H	220	72.91	39.66
6	*5745.00	101.72 AV			1.20 H	220	62.06	39.66
7	#11450.00	60.67 PK	74.00	-13.33	1.07 H	0	10.87	49.80
8	#11450.00	46.94 AV	54.00	-7.06	1.07 H	0	-2.86	49.80

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	#3830.00	50.11 PK	74.00	-23.89	1.36 V	266	15.03	35.09
2	#3830.00	43.89 AV	54.00	-10.11	1.36 V	266	8.81	35.09
3	5725.00	69.27 PK	82.56	-13.29	1.91 V	89	29.66	39.61
4	5725.00	58.58 AV	71.92	-13.34	1.91 V	89	18.97	39.61
5	*5745.00	102.56 PK			1.91 V	89	62.90	39.66
6	*5745.00	91.92 AV			1.91 V	89	52.26	39.66
7	#11450.00	56.40 PK	74.00	-17.60	1.07 V	360	6.60	49.80
8	#11450.00	45.65 AV	54.00	-8.35	1.07 V	360	-4.15	49.80

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.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#3856.00	55.40 PK	74.00	-18.60	1.05 H	333	20.21	35.19
2	#3856.00	52.61 AV	54.00	-1.39	1.05 H	333	17.42	35.19
3	*5785.00	113.22 PK			1.23 H	220	73.47	39.75
4	*5785.00	102.59 AV			1.23 H	220	62.84	39.75
5	#11570.00	54.63 PK	74.00	-19.37	1.00 H	320	4.94	49.69
6	#11570.00	46.11 AV	54.00	-7.89	1.00 H	320	-3.58	49.69

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	#3856.00	51.82 PK	74.00	-22.18	1.36 V	233	16.63	35.19
2	#3856.00	46.93 AV	54.00	-7.07	1.36 V	233	11.74	35.19
3	*5785.00	103.15 PK			1.18 V	195	63.40	39.75
4	*5785.00	92.68 AV			1.18 V	195	52.93	39.75
5	#11570.00	54.49 PK	74.00	-19.51	1.21 V	310	4.80	49.69
6	#11570.00	45.03 AV	54.00	-8.97	1.21 V	310	-4.66	49.69

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.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#3883.00	56.64 PK	74.00	-17.36	1.07 H	327	21.35	35.29
2	**#3883.00**	**52.99 AV**	**54.00**	**-1.01**	**1.07 H**	**327**	**17.70**	**35.29**
3	*5825.00	113.52 PK			1.08 H	219	73.67	39.85
4	*5825.00	103.10 AV			1.08 H	219	63.25	39.85
5	5850.00	71.03 PK	93.52	-22.49	1.08 H	219	31.12	39.91
6	5850.00	59.12 AV	83.10	-23.98	1.08 H	219	19.21	39.91
7	#11650.00	55.58 PK	74.00	-18.42	1.12 H	330	5.90	49.68
8	#11650.00	45.46 AV	54.00	-8.54	1.12 H	330	-4.22	49.68

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	3883.00	51.71 PK	74.00	-22.29	1.62 V	226	16.42	35.29
2	3883.00	48.76 AV	54.00	-5.24	1.62 V	226	13.47	35.29
3	*5825.00	103.41 PK			1.19 V	200	63.56	39.85
4	*5825.00	92.89 AV			1.19 V	200	53.04	39.85
5	5850.00	70.20 PK	83.41	-13.21	1.19 V	200	30.29	39.91
6	5850.00	58.41 AV	72.89	-14.48	1.19 V	200	18.49	39.91
7	11650.00	54.54 PK	74.00	-19.46	1.00 V	360	4.86	49.68
8	11650.00	45.60 AV	54.00	-8.40	1.00 V	360	-4.08	49.68

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.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247.

5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

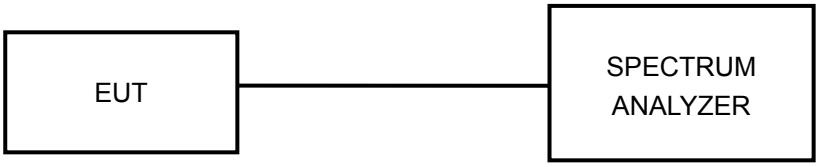
5.3.3 TEST PROCEDURE

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

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

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

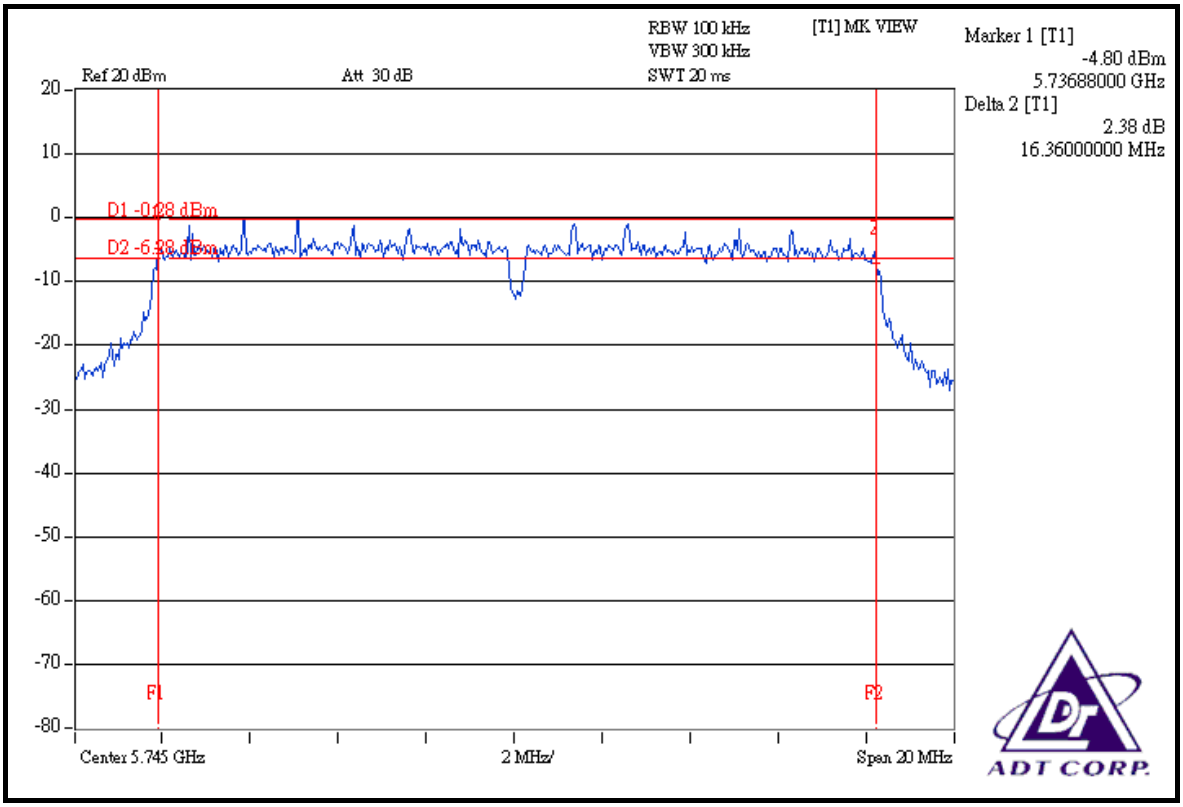
5.3.7 TEST RESULTS

802.11a OFDM MODULATION:

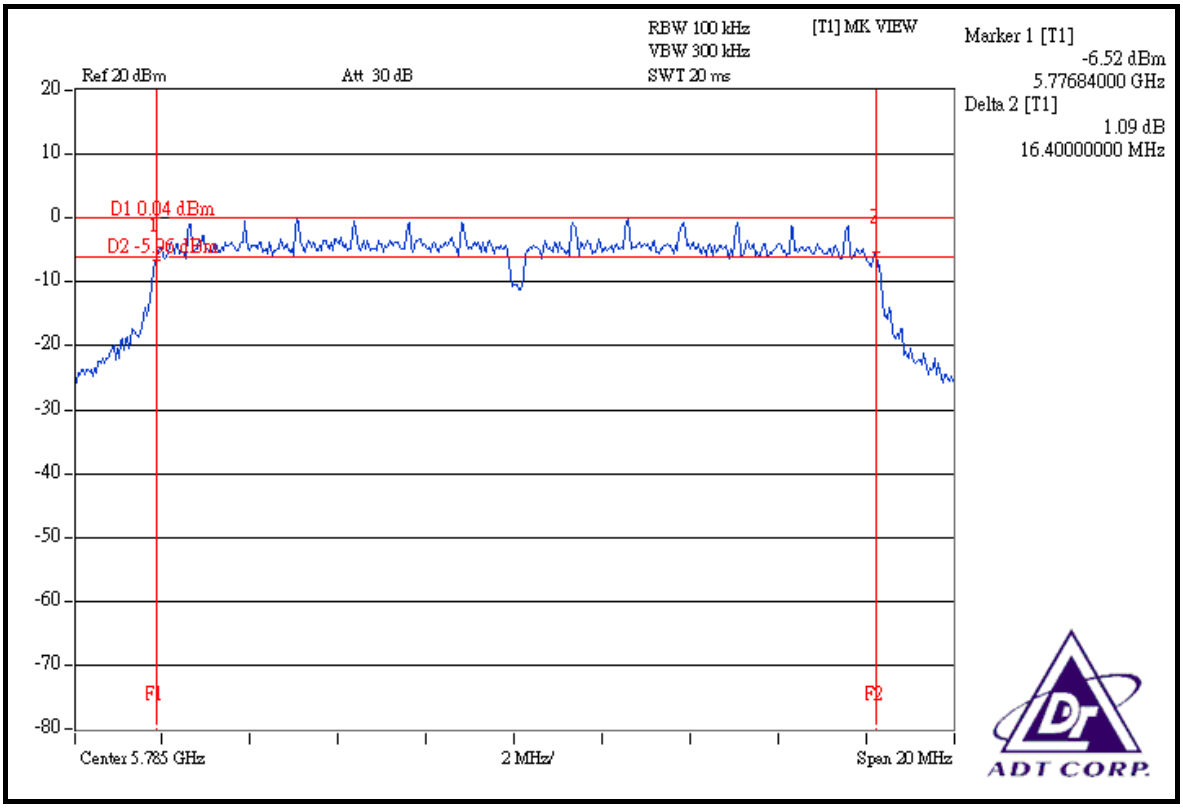
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	5745	16.36	0.5	PASS
3	5785	16.40	0.5	PASS
5	5825	16.40	0.5	PASS

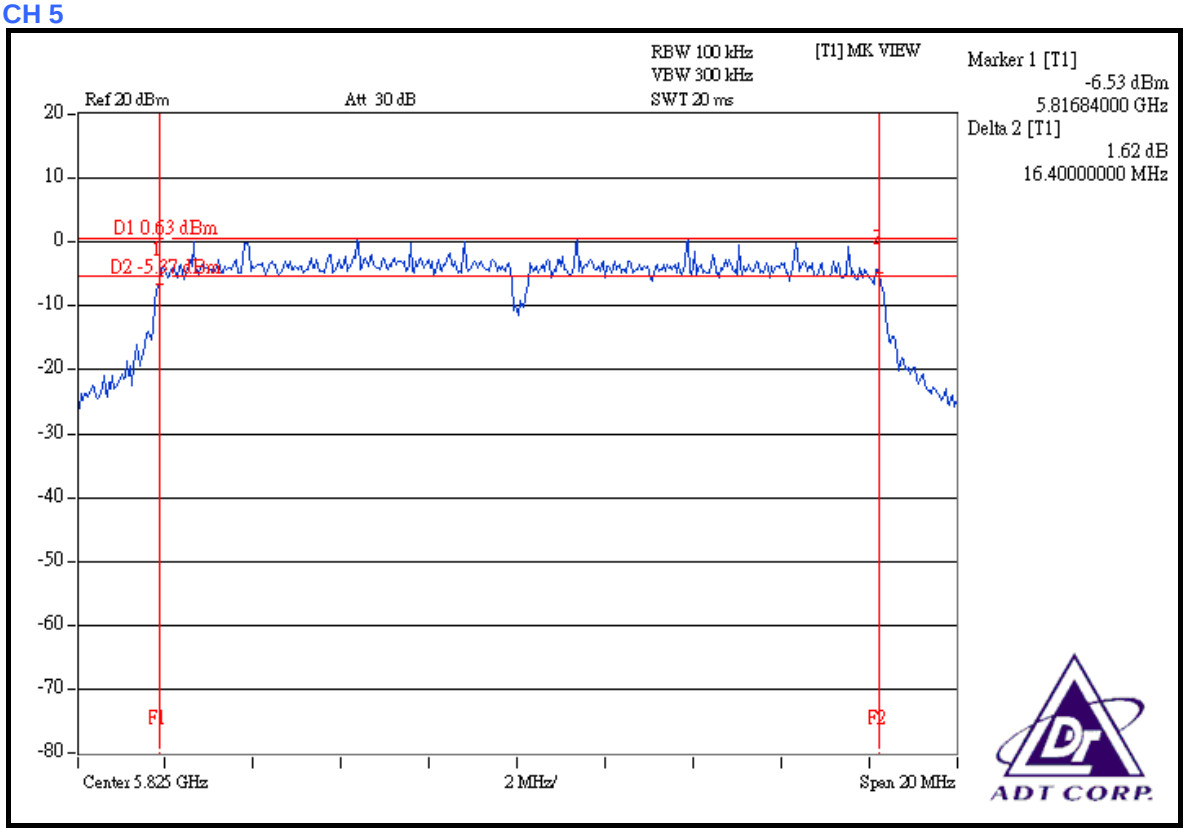
CH 1



CH 3


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-6.52 dBm
5.77684000 GHz
Delta 2 [T1]
1.09 dB
16.40000000 MHz
Ref 20 dBm
Att 30 dB
D1 0.04 dBm
D2 -5.96 dBm
F1
F2
Center 5.785 GHz
2 MHz/
Span 20 MHz
ADT CORP.

CH 5


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-6.53 dBm
5.81684000 GHz
Delta 2 [T1]
1.62 dB
16.40000000 MHz
Ref 20 dBm
Att 30 dB
D1 0.63 dBm
F1
F2
Center 5.825 GHz
2 MHz/
Span 20 MHz
ADT CORP.

5.4 MAXIMUM PEAK OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008
ANRITSU SYNTHESIZED SIGNAL GENERATOR	68247B	984703	May 18, 2008
DIGITAL RT OSCILLOSCOPE	TDS1012	C037299	Nov. 27, 2007
NARDA DETECTOR	4503A	FSCM99899	NA

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

5.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP

5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6

5.4.7 TEST RESULTS

802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	5745	20.464	13.11	27.6	PASS
3	5785	23.550	13.72	27.6	PASS
5	5825	25.882	14.13	27.6	PASS

NOTE: According to 15.247(b)(4), the maximum antenna gain 8.4dBi is higher than 6dBi, so the limit of peak power shall be reduced by 2.4dB.

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

5.5.3 TEST PROCEDURE

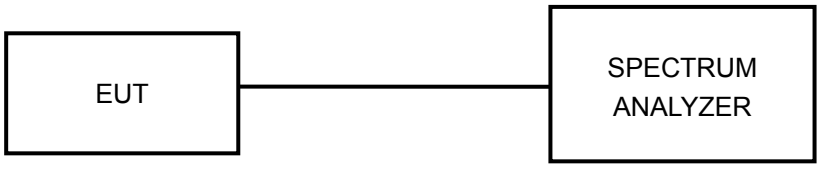
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6

5.5.7 TEST RESULTS

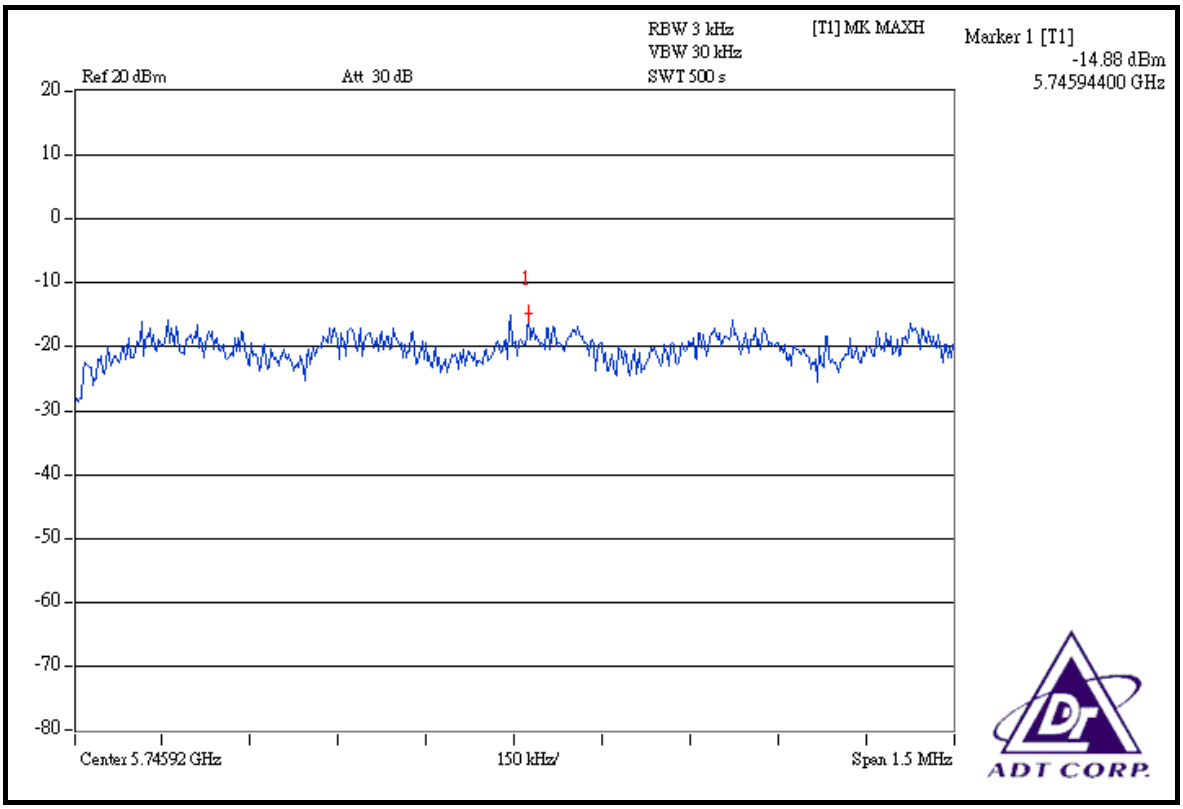
802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

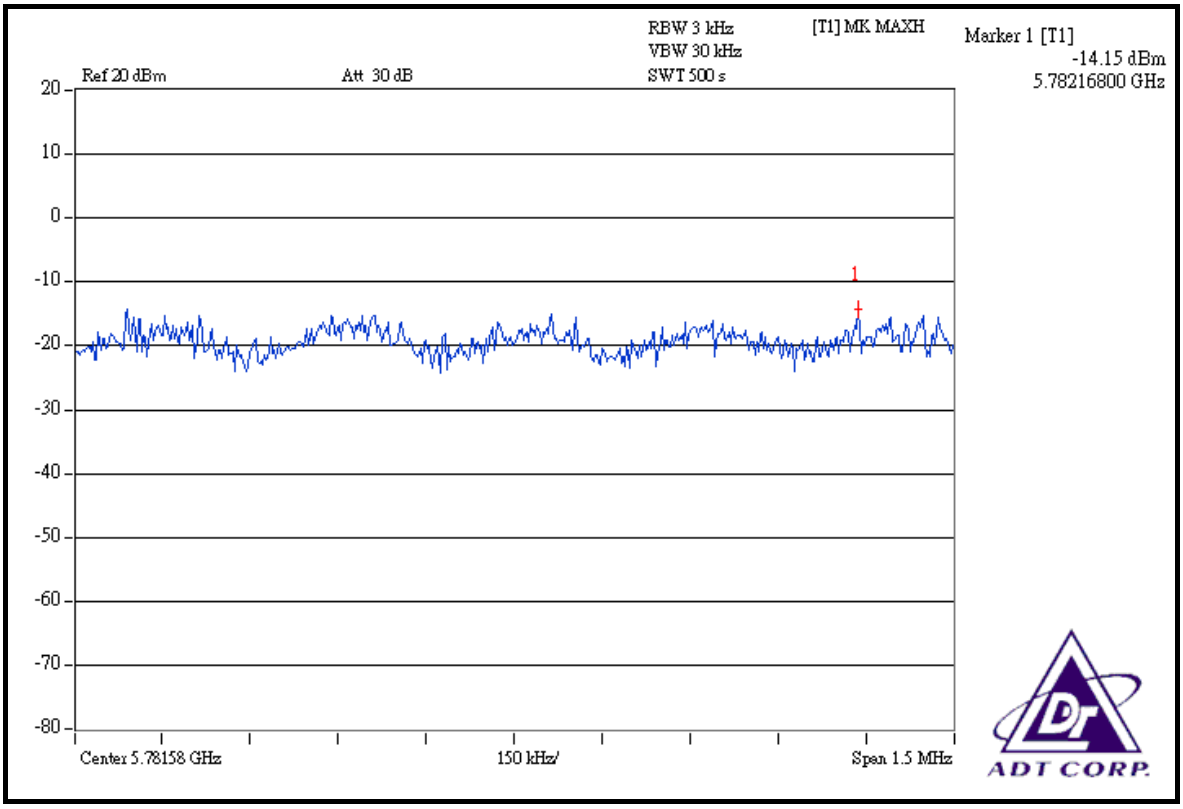
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	5745	-14.88	5.6	PASS
3	5785	-14.15	5.6	PASS
5	5825	-14.10	5.6	PASS

NOTE: According to 15.247(b)(4), the maximum antenna gain 8.4dBi is higher than 6dBi, so the limit of peak power shall be reduced by 2.4dB.

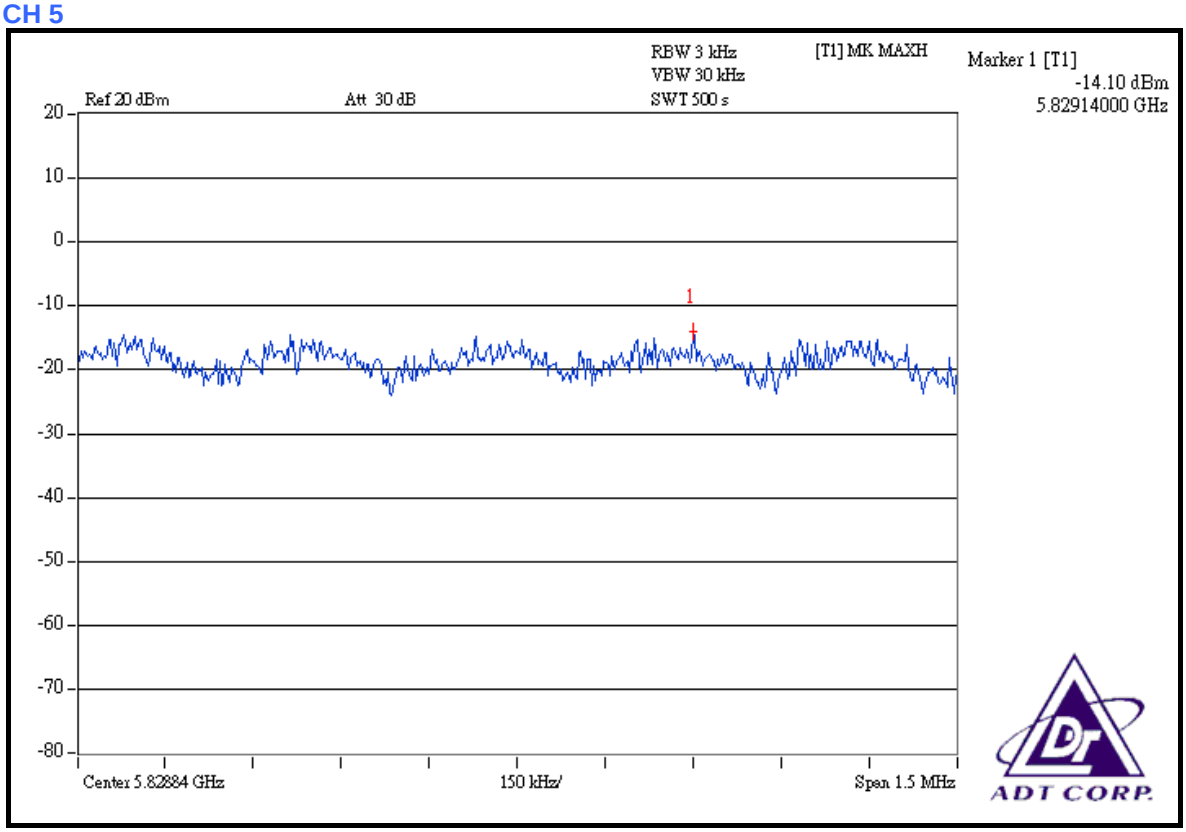
CH 1



CH 3


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-14.15 dBm
5.78216800 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.78158 GHz
150 kHz/
Span 1.5 MHz
ADT CORP.

CH 5


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-14.10 dBm
5.82914000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.82884 GHz
150 kHz/
Span 1.5 MHz
ADT CORP.

5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

5.6.3 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 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation.

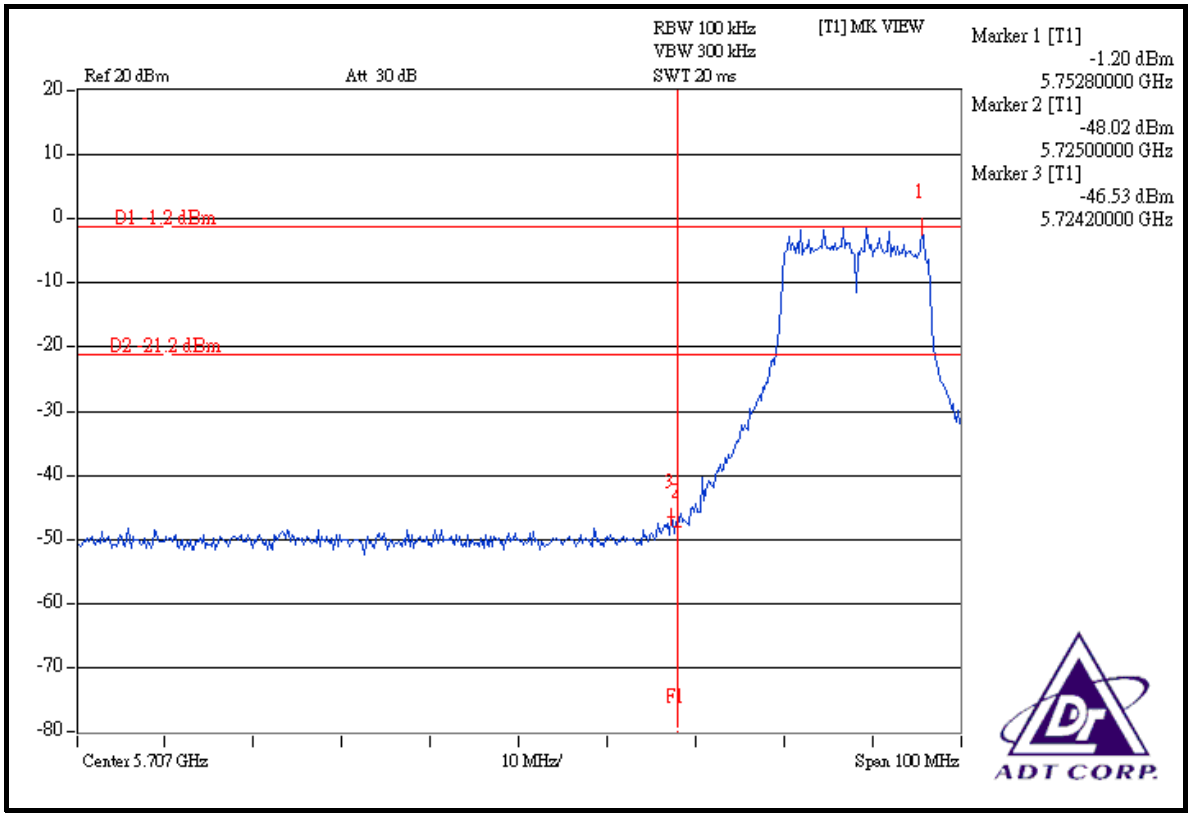
5.6.5 EUT OPERATING CONDITION

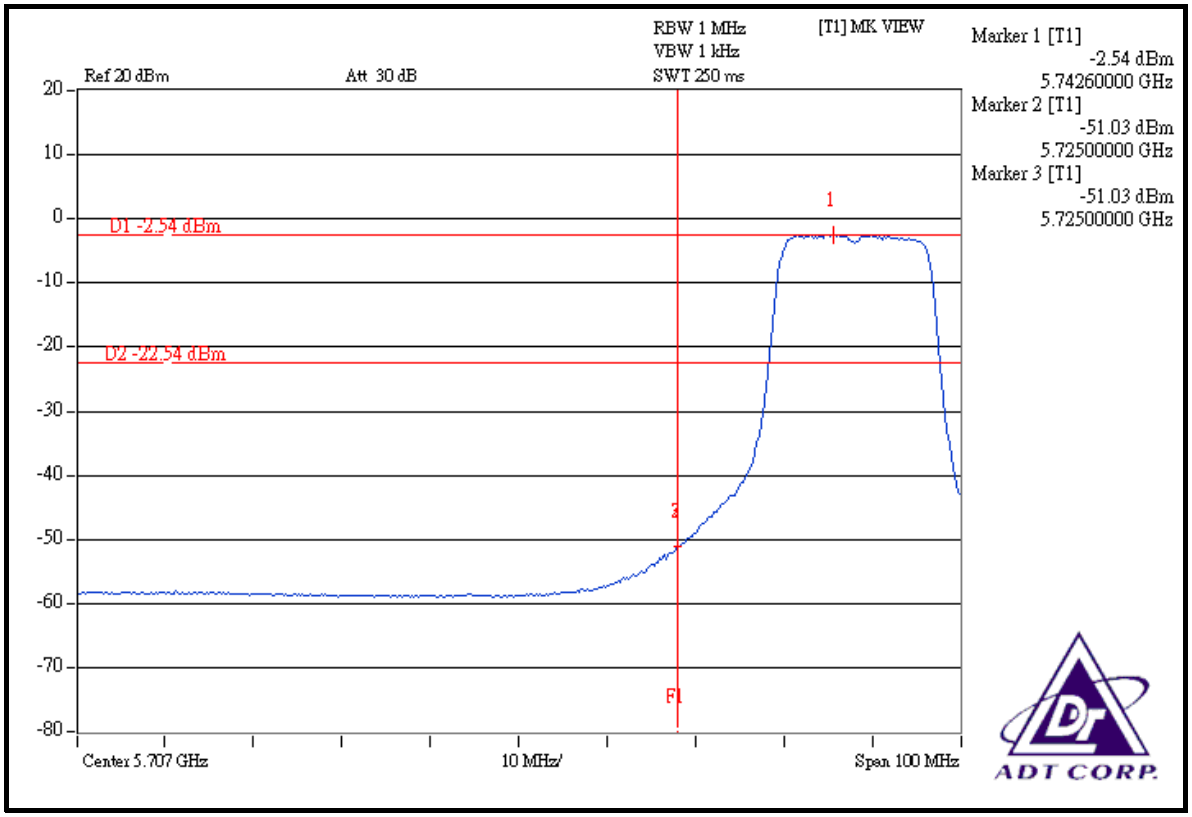
Same as Item 5.3.6

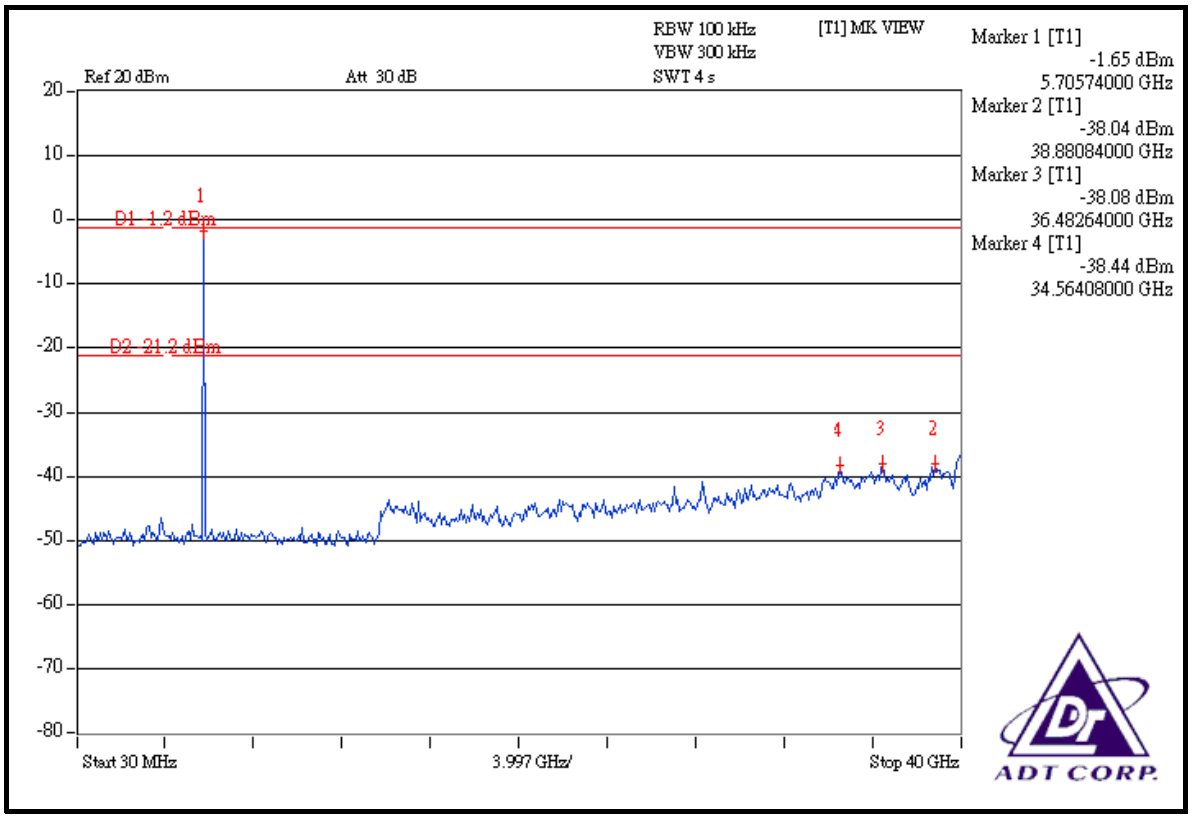
5.6.6 TEST RESULTS

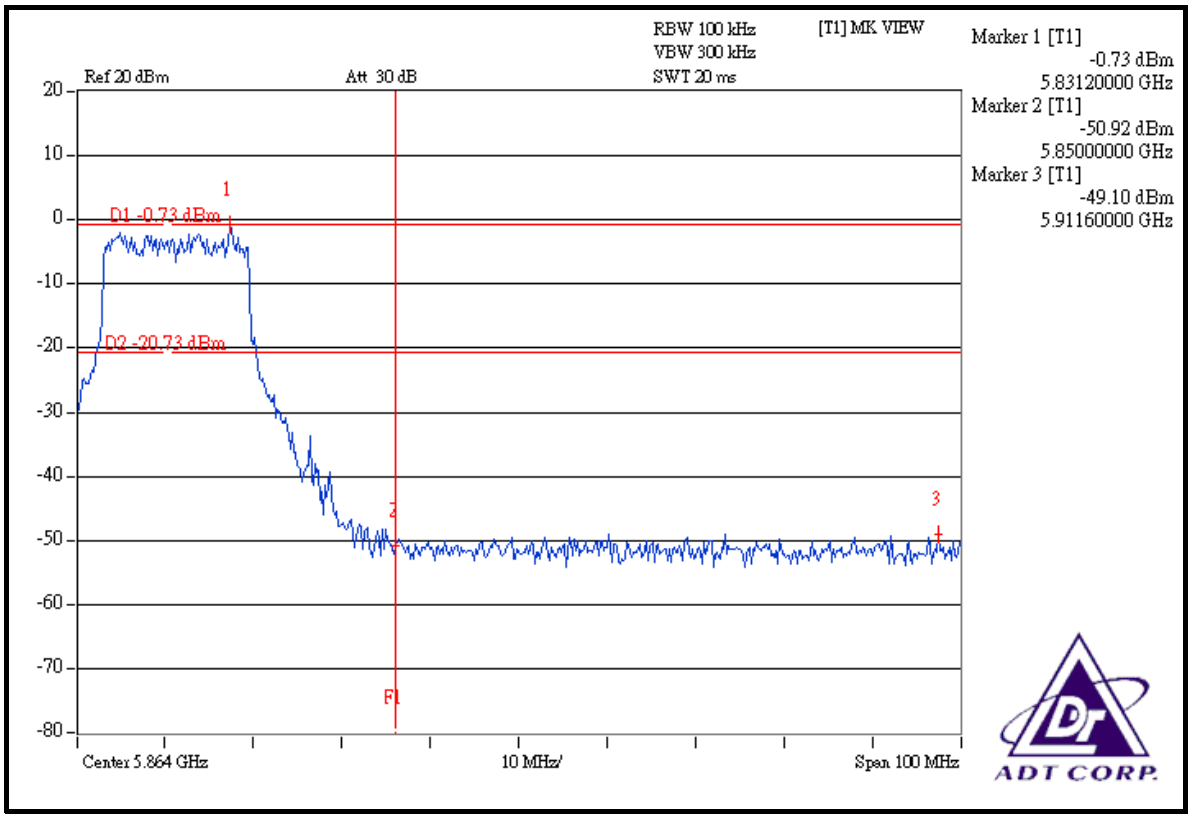
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

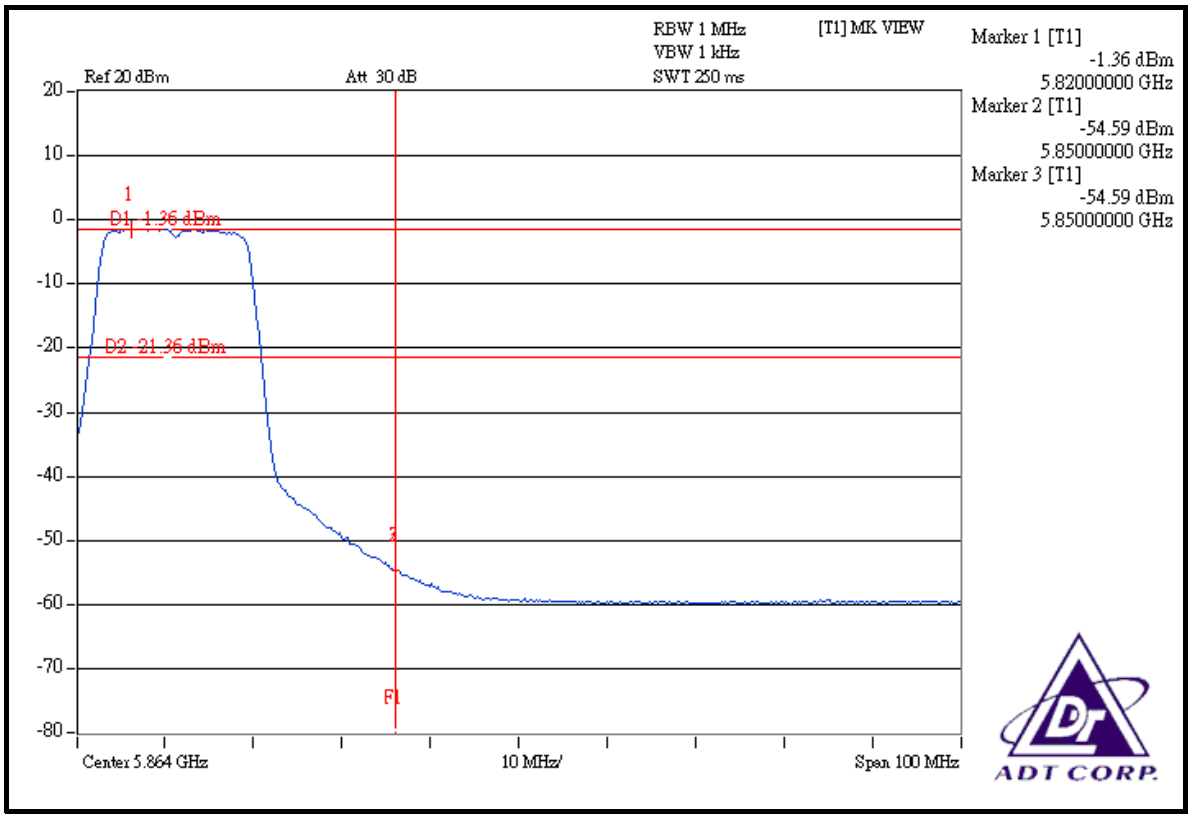
802.11a OFDM MODULATION:

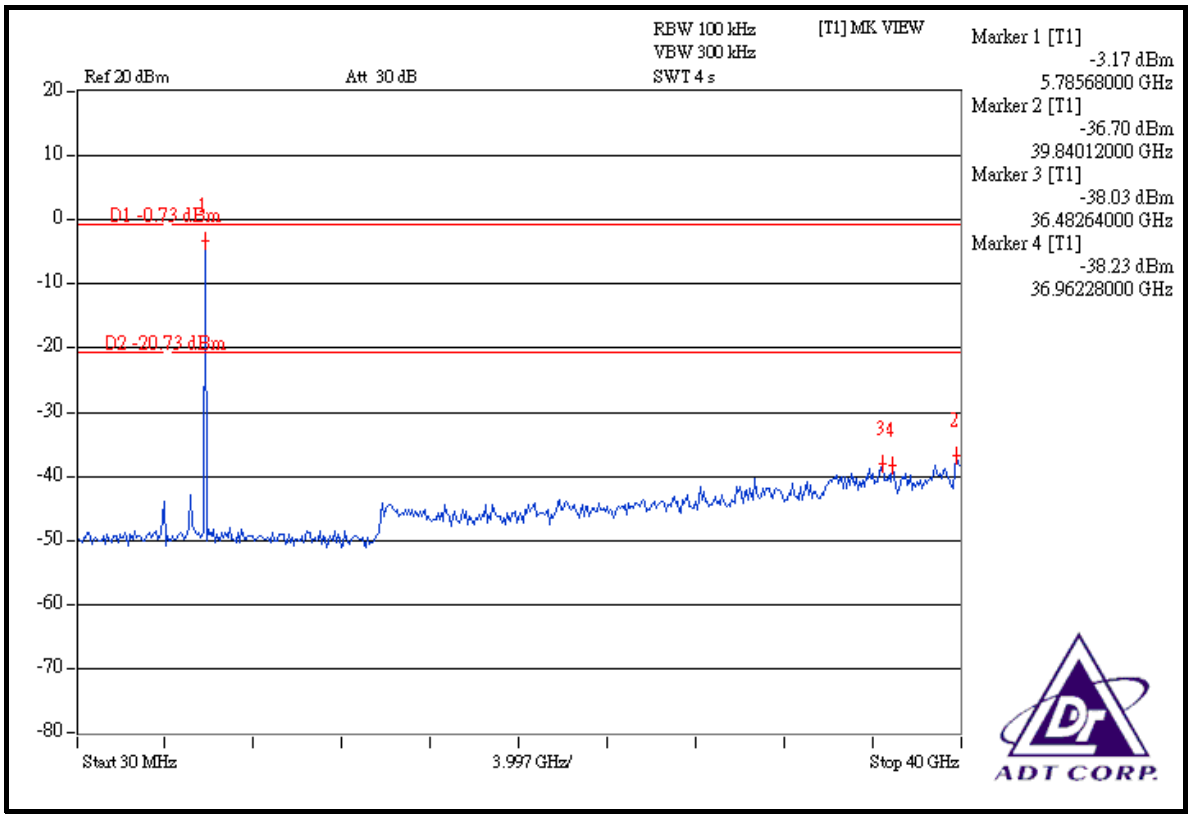





RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.2 dBm
D2 -21.2 dBm
Marker 1 [T1]
-1.65 dBm
5.70574000 GHz
Marker 2 [T1]
-38.04 dBm
38.88084000 GHz
Marker 3 [T1]
-38.08 dBm
36.48264000 GHz
Marker 4 [T1]
-38.44 dBm
34.56408000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -0.73 dBm
D2 -20.73 dBm
Marker 1 [T1]
-0.73 dBm
5.83120000 GHz
Marker 2 [T1]
-50.92 dBm
5.85000000 GHz
Marker 3 [T1]
-49.10 dBm
5.91160000 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-1.36 dBm
5.82000000 GHz
Marker 2 [T1]
-54.59 dBm
5.85000000 GHz
Marker 3 [T1]
-54.59 dBm
5.85000000 GHz
D1 -1.36 dBm
D2 -21.36 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-3.17 dBm
5.78568000 GHz
Marker 2 [T1]
-36.70 dBm
39.84012000 GHz
Marker 3 [T1]
-38.03 dBm
36.48264000 GHz
Marker 4 [T1]
-38.23 dBm
36.96228000 GHz
D1 -0.73 dBm
D2 -20.73 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.

5.7 ANTENNA REQUIREMENT

5.7.1 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(a), 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.

5.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is patch antenna with UFL connector. The maximum Gain of the antenna is 8.4dBi.

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

7. INFORMATION ON THE TESTING LABORATORIES

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

USA	FCC, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA, CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

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:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

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

8. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.