



FCC TEST REPORT

REPORT NO.: RF970312L14A-2

MODEL NO.: DIR-855

RECEIVED: Apr. 10, 2008

TESTED: Apr. 15 ~ Apr. 22, 2008

ISSUED: Dec. 29, 2008

APPLICANT: D-Link Corporation

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92708, U.S.A.

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

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R.O.C.

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1. CERTIFICATION

PRODUCT: Xtreme N DUO MEDIA ROUTER
MODEL: DIR-855
BRAND: D-Link
APPLICANT: D-Link Corporation
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Apr. 15 ~ Apr. 22, 2008
STANDARDS: FCC Part 15, Subpart C (Section 15.247)
FCC Part 15, Subpart E (Section 15.407)
ANSI C63.4-2003

The above equipment (Model: DIR-855) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, 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 : Rennie Wang , **DATE:** Dec. 29, 2008
Rennie Wang / Senior Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** Dec. 29, 2008
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** Dec. 29, 2008
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) FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.13dB at 1125.00MHz
15.407(b/1/2 /3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz		

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
Radiated emissions	30MHz ~ 200MHz	2.93dB
	200MHz ~1000MHz	2.95dB
	1GHz ~ 18GHz	2.26dB
	18GHz ~ 40GHz	1.94dB

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



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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Xtreme N DUO MEDIA ROUTER
MODEL NO.	DIR-855
FCC ID	KA2DIR855A2
POWER SUPPLY	12Vdc from AC adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n: up to 270.0Mbps
FREQUENCY RANGE	2.4GHz: 2400.0 ~ 2483.5MHz 5.0GHz: 5150.0 ~ 5250.0MHz, 5250.0 ~ 5350.0MHz, 5470.0 ~ 5725.0MHz, 5725.0 ~ 5850.0MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz) 5.0GHz: 5150 ~ 5250MHz: 4 for 802.11a, draft 802.11n (20MHz) 2 for draft 802.11n (40MHz) 5250 ~ 5350MHz: 4 for 802.11a, draft 802.11n (20MHz) 2 for draft 802.11n (40MHz) 5470 ~ 5725MHz: 11 for 802.11a, draft 802.11n (20MHz) 5 for draft 802.11n (40MHz) 5725 ~ 5850MHz: 5 for 802.11a, draft 802.11n (20MHz) 2 for draft 802.11n (40MHz)
OUTPUT POWER	64.269mW for 2400.0 ~ 2483.5MHz 36.428mW for 5150.0 ~ 5250.0MHz 29.353mW for 5250.0 ~ 5350.0MHz 29.458mW for 5470.0 ~ 5725.0MHz 119.018mW for 5725.0 ~ 5850.0MHz



ANTENNA TYPE	2.4GHz: Dipole antenna with 2.0dBi gain 5.0GHz: Dipole antenna with 2.0dBi gain
DATA CABLE	NA
I/O PORTS	RJ45, USB
ASSOCIATED DEVICES	Adapter

NOTE:

1. The frequency bands used in this EUT are listed as follows:

Frequency Band (MHz)	2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
802.11b	√				
802.11g	√				
802.11a		√	√	√	√
Draft 802.11n (20MHz)	√	√	√	√	√
Draft 802.11n (40MHz)	√	√	√	√	√

2. The EUT was powered by the following adapter:

BRAND:	D-Link
MODEL:	AG2412-B
INPUT:	100-240Vac, 50-60Hz, 0.5A
OUTPUT:	12Vdc, 2A
POWER LINE:	1.8m non-shielded cable without core

3. The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and three receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
Draft 802.11n (20MHz)	3TX
Draft 802.11n (40MHz)	3TX

4. The EUT with following module cards:

ITEM	MODULE CARDS
A	With 802.11b, 802.11g, and 802.11n function
B	With 802.11a, 802.11b, 802.11g and 802.11n function

**For the module cards B, all the function of 2.4GHz will be closed by software.

5. 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, draft 802.11n (20MHz):

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		

7 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

FOR 5.0GHz (5150 ~ 5250MHz):

4 channels are provided for 802.11a, draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz

2 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190MHz	46	5230MHz

FOR 5.0GHz (5250 ~ 5350MHz):

4 channels are provided for 802.11a, draft 802.11n (20MHz):

CHANNEL	FREQUENCY
52	5260MHz
56	5280MHz
60	5300MHz
64	5320MHz

2 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY
54	5270MHz
62	5310MHz

**FOR 5.0GHz (5470 ~ 5725MHz):**

11 channels are provided to this EUT.

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500MHz	124	5620MHz
104	5520MHz	128	5640MHz
108	5540MHz	132	5660MHz
112	5560MHz	136	5680MHz
116	5580MHz	140	5700MHz
120	5600MHz		

5 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510MHz	126	5630MHz
110	5550MHz	134	5670MHz
118	5590MHz		

FOR 5.0GHz (5725 ~ 5850MHz):

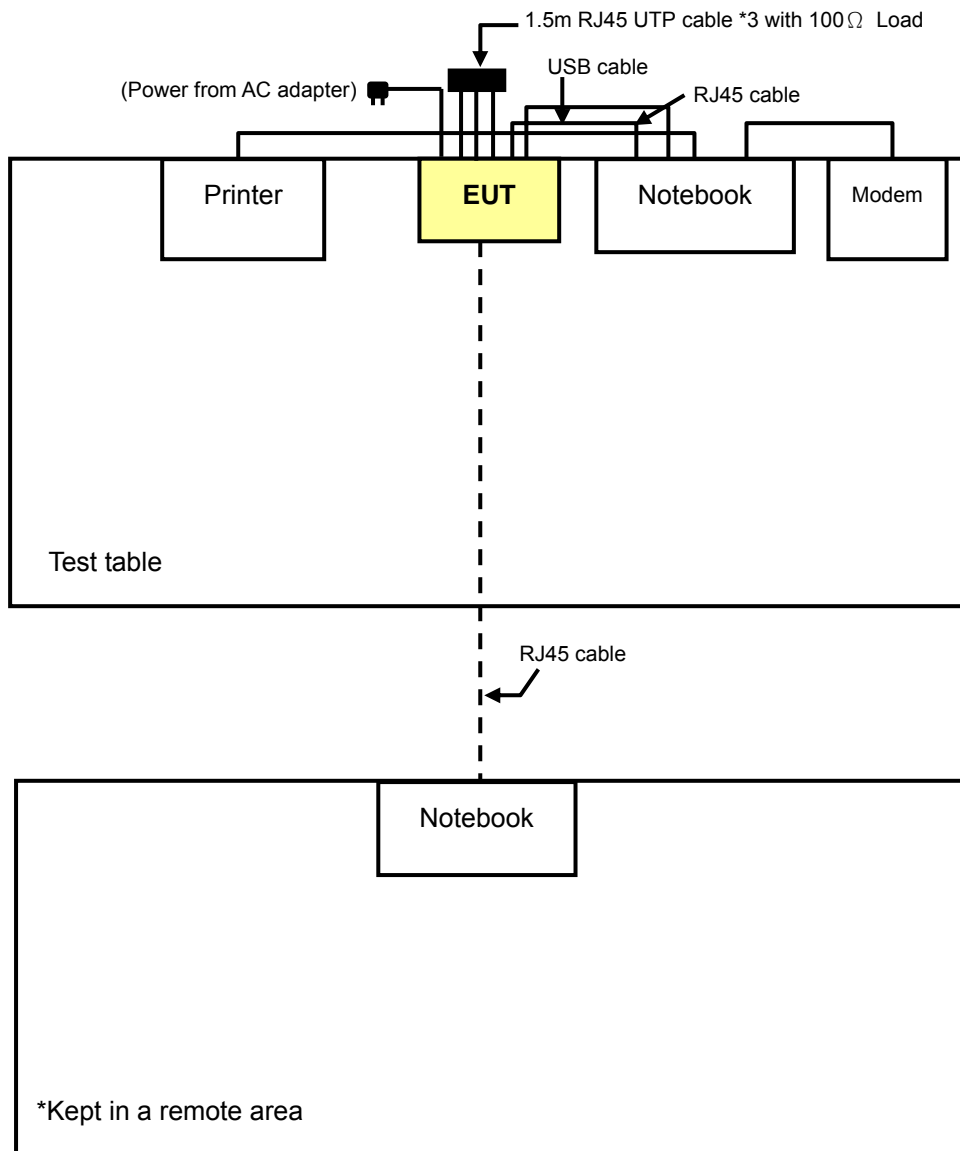
5 channels are provided for 802.11a, draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION
	RE≥1G	RE<1G	CE	
-	√	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
CE: Conducted Emission Measurement

NOTE: Test modes as below are composed of the max output power channel of each band.

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 and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. RANGE (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5150-5250	1 to 11 36 to 48	6 + 40	DSSS OFDM	DBPSK BPSK	1.0 6.5
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5725-5850	1 to 11 149 to 165	6 + 157	DSSS OFDM	DBPSK BPSK	1.0 6.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5150-5250	1 to 11 38 to 46	6 + 46	DSSS OFDM	DBPSK BPSK	1.0 13.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5725-5850	1 to 11 151 to 159	6 + 159	DSSS OFDM	DBPSK BPSK	1.0 13.5
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5470-5725	1 to 11 100 to 140	6 + 120	DSSS OFDM	DBPSK BPSK	1.0 6.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5470-5725	1 to 11 102 to 134	6 + 118	DSSS OFDM	DBPSK BPSK	1.0 13.5

**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 and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. RANGE (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5150-5250	1 to 11 38 to 46	6 + 46	DSSS OFDM	DBPSK BPSK	1.0 13.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5725-5850	1 to 11 151 to 159	6 + 159	DSSS OFDM	DBPSK BPSK	1.0 13.5
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5470-5725	1 to 11 100 to 140	6 + 120	DSSS OFDM	DBPSK BPSK	1.0 6.5

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.

MODE	FREQ. RANGE (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5150-5250	1 to 11 36 to 48	6 + 40	DSSS OFDM	DBPSK BPSK	1.0 6.5
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5725-5850	1 to 11 149 to 165	6 + 157	DSSS OFDM	DBPSK BPSK	1.0 6.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5150-5250	1 to 11 38 to 46	6 + 46	DSSS OFDM	DBPSK BPSK	1.0 13.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5725-5850	1 to 11 151 to 159	6 + 159	DSSS OFDM	DBPSK BPSK	1.0 13.5
802.11b + 802.11a Draft 802.11n (20MHz)	2400-2483.5 5470-5725	1 to 11 100 to 140	6 + 120	DSSS OFDM	DBPSK BPSK	1.0 6.5
802.11b + 802.11a Draft 802.11n (40MHz)	2400-2483.5 5470-5725	1 to 11 102 to 134	6 + 118	DSSS OFDM	DBPSK BPSK	1.0 13.5



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 (Section 15.247)

FCC Part 15, Subpart E (Section 15.407)

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	NOTEBOOK COMPUTER	DELL	PP05L	16484462992	E2K24CLNS
2	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
3	PRINTER	EPSON	LQ-300+	DCGY054147	FCC DoC Approved
4	MODEM	ACEEX	1414V/3	0401008269	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	3m UTP RJ 45 cable
2	10m UTP RJ 45 cable
3	1.8m braid shielded wire , DB25 connector , w/o core.
4	1.2m braid shielded wire , DB25 & DB9 connector , w/o core.

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

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 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.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

FREQUENCIES (MHz)	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m) *NOTE 3
	PK	PK
5150 ~ 5250	-27	68.3
5250 ~ 5350	-27	68.3
5470 ~ 5725	-27	68.3

NOTE:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$



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4.1.3 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. 03, 2009
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Jul. 30, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009
Preamplifier Agilent	8449B	3008A01910	Sep. 19, 2008
Preamplifier Agilent	8447D	2944A10638	Dec. 19, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274039/223650	Nov. 07, 2008
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.

4.1.4 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.

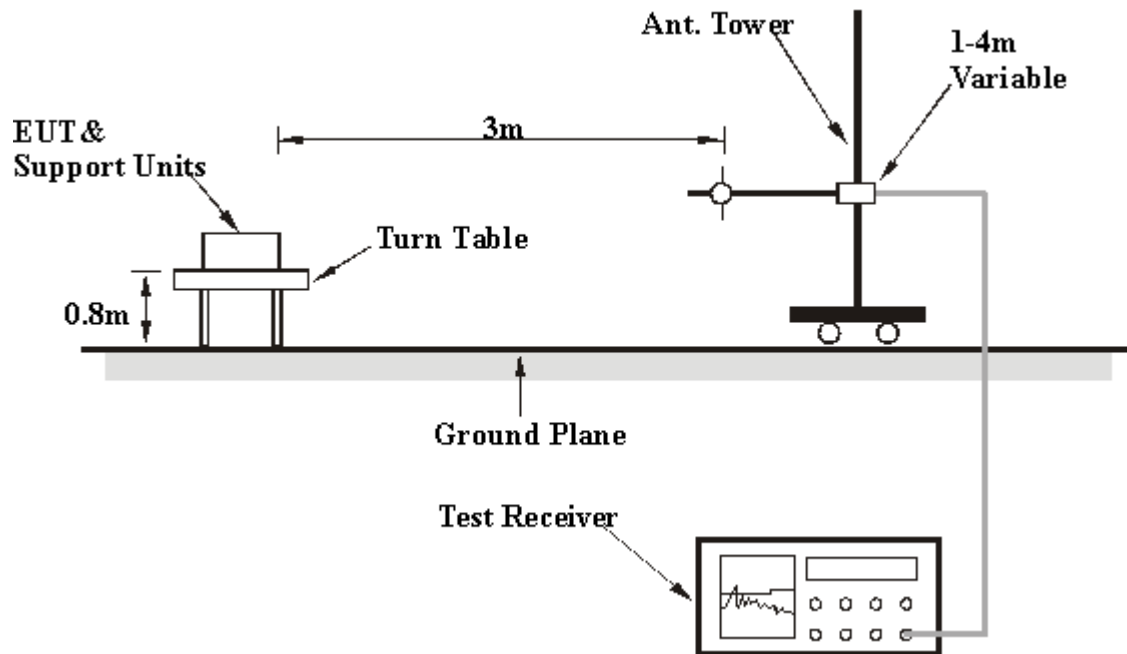
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection 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. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table.
- b. The necessary accessories enable the system in full functions.
- c. Prepared the other notebook outside of testing area to act as a communication partner.
- d. The communication partner connected with EUT via a UTP cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- e. The communication partner sent data to EUT by command "PING".



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4.1.8 TEST RESULTS

802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	102.77 PK			1.05 H	256	70.43	32.34
2	*2437.00	97.76 AV			1.05 H	256	65.42	32.34
3	4874.00	46.90 PK	74.00	-27.10	1.11 H	100	8.78	38.12
4	4874.00	35.34 AV	54.00	-18.66	1.11 H	100	-2.78	38.12
5	*5200.00	96.57 PK			1.08 H	341	57.90	38.67
6	*5200.00	86.90 AV			1.08 H	341	48.23	38.67
7	#10400.00	57.32 PK	68.30	-16.68	1.00 H	12	8.55	48.77
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	1125.00	60.24 PK	74.00	-13.76	1.01 V	5	32.16	28.08
2	1125.00	52.11 AV	54.00	-1.89	1.01 V	5	24.03	28.08
3	*2437.00	108.89 PK			1.03 V	255	76.55	32.34
4	*2437.00	104.16 AV			1.03 V	255	71.82	32.34
5	4874.00	47.42 PK	74.00	-26.58	1.01 V	213	9.30	38.12
6	4874.00	35.60 AV	54.00	-18.40	1.01 V	213	-2.52	38.12
7	*5200.00	109.79 PK			1.23 V	106	71.12	38.67
8	*5200.00	98.68 AV			1.23 V	106	60.01	38.67
9	#6933.00	52.64 PK	68.30	-21.36	1.00 V	35	9.32	43.32
10	#10400.00	57.42 PK	68.30	-16.58	1.07 V	97	8.65	48.77

- 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 limit value is defined as per 15.407.
 7. “ # ”: The radiated frequency falling in the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	102.69 PK			1.10 H	231	70.35	32.34
2	*2437.00	97.74 AV			1.10 H	231	65.40	32.34
3	4874.00	46.78 PK	74.00	-27.22	1.00 H	331	8.66	38.12
4	4874.00	35.40 AV	54.00	-18.60	1.00 H	331	-2.72	38.12
5	*5785.00	98.94 PK			1.03 H	134	59.19	39.75
6	*5785.00	89.01 AV			1.03 H	134	49.26	39.75
7	11570.00	58.00 PK	74.00	-16.00	1.01 H	287	8.31	49.69
8	11570.00	44.21 AV	54.00	-9.79	1.01 H	287	-5.48	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	1125.00	60.23 PK	74.00	-13.77	1.02 V	5	32.15	28.08
2	1125.00	52.30 AV	54.00	-1.70	1.02 V	5	24.22	28.08
3	*2437.00	108.93 PK			1.24 V	258	76.59	32.34
4	*2437.00	104.20 AV			1.24 V	258	71.86	32.34
5	4874.00	48.35 PK	74.00	-25.65	1.00 V	244	10.23	38.12
6	4874.00	36.02 AV	54.00	-17.98	1.00 V	244	-2.10	38.12
7	*5785.00	110.01 PK			1.33 V	163	70.26	39.75
8	*5785.00	99.78 AV			1.33 V	163	60.03	39.75
9	7713.00	58.13 PK	74.00	-15.87	1.22 V	5	12.98	45.15
10	7713.00	51.08 AV	54.00	-2.92	1.22 V	5	5.93	45.15
11	11570.00	58.24 PK	74.00	-15.76	1.28 V	306	8.55	49.69
12	11570.00	44.63 AV	54.00	-9.37	1.28 V	306	-5.06	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 limit value is defined as per 15.247.



A D T

802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	102.81 PK			1.10 H	173	70.47	32.34
2	*2437.00	97.72 AV			1.10 H	173	65.38	32.34
3	4874.00	46.93 PK	74.00	-27.07	1.50 H	100	8.81	38.12
4	4874.00	35.40 AV	54.00	-18.60	1.50 H	100	-2.72	38.12
5	*5230.00	93.75 PK			1.09 H	62	55.05	38.70
6	*5230.00	82.67 AV			1.09 H	62	43.97	38.70
7	5350.00	46.32 PK	74.00	-27.68	1.23 H	22	7.51	38.81
8	5350.00	33.51 AV	54.00	-20.49	1.23 H	22	-5.30	38.81
9	10460.00	57.65 PK	74.00	-16.35	1.06 H	5	8.70	48.95
10	10460.00	45.19 AV	54.00	-8.81	1.06 H	5	-3.76	48.95

- 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 limit value is defined as per 15.407.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	1125.00	60.28 PK	74.00	-13.72	1.00 V	6	32.20	28.08
2	1125.00	52.52 AV	54.00	-1.48	1.00 V	6	24.44	28.08
3	*2437.00	108.90 PK			1.10 V	167	76.56	32.34
4	*2437.00	104.23 AV			1.10 V	167	71.89	32.34
5	4874.00	47.94 PK	74.00	-26.06	1.40 V	211	9.82	38.12
6	4874.00	35.42 AV	54.00	-18.58	1.40 V	211	-2.70	38.12
7	*5230.00	106.76 PK			1.36 V	208	68.06	38.70
8	*5230.00	96.11 AV			1.36 V	208	57.41	38.70
9	5350.00	46.52 PK	74.00	-27.48	1.36 V	208	7.71	38.81
10	5350.00	33.61 PK	54.00	-20.39	1.36 V	208	-5.20	38.81
11	#6972.00	56.68 PK	68.30	-11.62	1.37 V	71	13.16	43.52
12	10460.00	58.61 PK	74.00	-15.39	1.26 V	15	9.66	48.95
13	10460.00	45.52 AV	54.00	-8.48	1.26 V	15	-3.43	48.95

- 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 limit value is defined as per 15.407.
 7. “ # ”: The radiated frequency falling in the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	102.81 PK			1.18 H	291	70.47	32.34
2	*2437.00	97.52 AV			1.18 H	291	65.18	32.34
3	4874.00	47.55 PK	74.00	-26.45	1.23 H	37	9.43	38.12
4	4874.00	34.68 AV	54.00	-19.32	1.23 H	37	-3.44	38.12
5	*5795.00	94.09 PK			1.27 H	38	54.31	39.78
6	*5795.00	83.26 AV			1.27 H	38	43.48	39.78
7	#5850.00	68.11 PK	82.81	-14.70	1.27 H	38	28.20	39.91
8	#5850.00	56.82 AV	77.52	-20.70	1.27 H	38	16.91	39.91
9	11590.00	58.00 PK	74.00	-16.00	1.00 H	10	8.32	49.68
10	11590.00	45.26 AV	54.00	-8.74	1.00 H	10	-4.42	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	1125.00	60.16 PK	74.00	-13.84	1.00 V	4	32.08	28.08
2	1125.00	52.33 AV	54.00	-1.67	1.00 V	4	24.25	28.08
3	*2437.00	108.64 PK			1.05 V	265	76.30	32.34
4	*2437.00	103.38 AV			1.05 V	265	71.04	32.34
5	4874.00	48.31 PK	74.00	-25.69	1.11 V	135	10.19	38.12
6	4874.00	35.74 AV	54.00	-18.26	1.11 V	135	-2.38	38.12
7	*5795.00	107.77 PK			1.06 V	91	67.99	39.78
8	*5795.00	96.28 AV			1.06 V	91	56.50	39.78
9	#5850.00	68.20 PK	88.64	-20.44	1.06 V	91	28.29	39.91
10	#5850.00	57.03 AV	83.38	-26.35	1.06 V	91	17.12	39.91
11	7726.00	58.33 PK	74.00	-15.67	1.34 V	154	13.15	45.18
12	7726.00	51.46 AV	54.00	-2.54	1.34 V	154	6.28	45.18
13	11590.00	59.25 PK	74.00	-14.75	1.01 V	320	9.57	49.68
14	11590.00	46.03 AV	54.00	-7.97	1.01 V	320	-3.65	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 limit value is defined as per 15.247.
 7. “ # ”: The radiated frequency falling in the restricted band.



A D T

802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 120	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	102.64 PK			1.30 H	326	70.30	32.34
2	*2437.00	97.59 AV			1.30 H	326	65.25	32.34
3	4874.00	46.85 PK	74.00	-27.15	1.00 H	173	8.73	38.12
4	4874.00	35.31 AV	54.00	-18.69	1.00 H	173	-2.81	38.12
5	*5600.00	93.21 PK			1.11 H	268	53.92	39.29
6	*5600.00	83.67 AV			1.11 H	268	44.38	39.29
7	11200.00	58.28 PK	74.00	-15.72	1.00 H	6	8.50	49.78
8	11200.00	45.90 AV	54.00	-8.10	1.00 H	6	-3.88	49.78

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	1125.00	61.21 PK	74.00	-12.79	1.00 V	4	33.13	28.08
2	1125.00	52.59 AV	54.00	-1.41	1.00 V	4	24.51	28.08
3	*2437.00	108.65 PK			1.13 V	214	76.31	32.34
4	*2437.00	104.00 AV			1.13 V	214	71.66	32.34
5	4874.00	47.88 PK	74.00	-26.12	1.21 V	26	9.76	38.12
6	4874.00	35.67 AV	54.00	-18.33	1.21 V	26	-2.45	38.12
7	*5600.00	106.64 PK			1.01 V	200	67.35	39.29
8	*5600.00	96.53 AV			1.01 V	200	57.24	39.29
9	7466.00	56.34 PK	74.00	-17.66	1.45 V	336	11.34	45.00
10	7466.00	48.27 AV	54.00	-5.73	1.45 V	336	3.27	45.00
11	11200.00	58.66 PK	74.00	-15.34	1.10 V	32	8.88	49.78
12	11200.00	46.59 AV	54.00	-7.41	1.10 V	32	-3.19	49.78

- 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 limit value is defined as per 15.407.



A D T

802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 118	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	102.72 PK			1.20 H	315	70.38	32.34
2	*2437.00	97.68 AV			1.20 H	315	65.34	32.34
3	4874.00	47.59 PK	74.00	-26.41	1.01 H	357	9.47	38.12
4	4874.00	35.11 AV	54.00	-18.89	1.01 H	357	-3.01	38.12
5	*5590.00	95.34 PK			1.15 H	310	56.07	39.27
6	*5590.00	85.58 AV			1.15 H	310	46.31	39.27
7	7453.00	54.54 PK	74.00	-19.46	1.08 H	159	9.53	45.01
8	7453.00	43.67 AV	54.00	-10.33	1.08 H	159	-1.34	45.01
9	11180.00	57.34 PK	74.00	-16.66	1.17 H	59	7.57	49.77
10	11180.00	45.28 AV	54.00	-8.72	1.17 H	59	-4.49	49.77

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	1125.00	60.34 PK	74.00	-13.66	1.00 V	7	32.26	28.08
2	1125.00	52.87 AV	54.00	-1.13	1.00 V	7	24.79	28.08
3	*2437.00	108.80 PK			1.00 V	241	76.46	32.34
4	*2437.00	104.03 AV			1.00 V	241	71.69	32.34
5	4874.00	48.23 PK	74.00	-25.77	1.03 V	52	10.11	38.12
6	4874.00	35.47 AV	54.00	-18.53	1.03 V	52	-2.65	38.12
7	*5590.00	104.67 PK			1.36 V	109	65.40	39.27
8	*5590.00	94.30 AV			1.36 V	109	55.03	39.27
9	7453.00	58.27 PK	74.00	-15.73	1.45 V	294	13.26	45.01
10	7453.00	52.46 AV	54.00	-1.54	1.45 V	294	7.45	45.01
11	11180.00	57.87 PK	74.00	-16.13	1.27 V	8	8.10	49.77
12	11180.00	45.63 AV	54.00	-8.37	1.27 V	8	-4.14	49.77

- 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 limit value is defined as per 15.407.



A D T

BELOW 1GHz WORST-CASE DATA**802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (40MHz)**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 46	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	374.04	43.45 QP	46.00	-2.55	1.00 H	214	28.08	15.37
2	500.42	44.07 QP	46.00	-1.93	2.00 H	91	24.95	19.12
3	550.97	39.57 QP	46.00	-6.43	1.50 H	55	19.23	20.34
4	624.85	42.21 QP	46.00	-3.79	1.00 H	133	20.46	21.75
5	799.84	44.00 QP	46.00	-2.00	1.00 H	40	19.08	24.92
6	875.67	40.79 QP	46.00	-5.21	1.50 H	358	15.17	25.62
7	900.94	39.83 QP	46.00	-6.17	1.50 H	271	13.98	25.85
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	374.04	40.08 QP	46.00	-5.92	1.50 V	283	24.71	15.37
2	500.42	42.53 QP	46.00	-3.47	1.00 V	169	23.42	19.12
3	624.85	39.76 QP	46.00	-6.24	1.00 V	169	18.01	21.75
4	799.84	42.61 QP	46.00	-3.39	1.50 V	334	17.69	24.92
5	875.67	40.26 QP	46.00	-5.74	1.00 V	271	14.64	25.62
6	900.94	42.42 QP	46.00	-3.58	1.50 V	325	16.57	25.85
7	951.49	39.65 QP	46.00	-6.35	1.50 V	310	13.32	26.34

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 159	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	374.04	41.76 QP	46.00	-4.24	1.00 H	355	26.39	15.37
2	500.42	44.15 QP	46.00	-1.85	2.00 H	70	25.04	19.12
3	550.97	40.42 QP	46.00	-5.58	1.50 H	52	20.07	20.34
4	624.85	43.00 QP	46.00	-3.00	1.00 H	136	21.25	21.75
5	799.84	43.51 QP	46.00	-2.49	1.00 H	244	18.59	24.92
6	875.67	40.13 QP	46.00	-5.87	1.50 H	205	14.51	25.62

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	374.04	40.18 QP	46.00	-5.82	1.50 V	73	24.80	15.37
2	500.42	41.91 QP	46.00	-4.09	1.00 V	175	22.79	19.12
3	624.85	39.62 QP	46.00	-6.38	1.50 V	199	17.88	21.75
4	799.84	42.51 QP	46.00	-3.49	1.50 V	331	17.59	24.92
5	875.67	39.53 QP	46.00	-6.47	1.00 V	271	13.91	25.62
6	900.94	42.14 QP	46.00	-3.86	1.50 V	328	16.29	25.85

- 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.



A D T

802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	CH 6 + CH 120	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 993hPa	TESTED BY	Lori Chiu

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	374.04	42.06 QP	46.00	-3.94	1.00 H	10	26.68	15.37
2	500.42	44.50 QP	46.00	-1.50	2.00 H	73	25.39	19.12
3	550.97	40.16 QP	46.00	-5.84	1.50 H	49	19.82	20.34
4	624.85	43.45 QP	46.00	-2.55	1.00 H	142	21.70	21.75
5	799.84	42.90 QP	46.00	-3.10	1.00 H	250	17.98	24.92
6	875.67	40.20 QP	46.00	-5.80	1.50 H	196	14.57	25.62

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	374.04	38.57 QP	46.00	-7.43	1.50 V	67	23.20	15.37
2	500.42	42.70 QP	46.00	-3.30	1.00 V	169	23.59	19.12
3	624.85	38.70 QP	46.00	-7.30	1.00 V	166	16.96	21.75
4	799.84	42.68 QP	46.00	-3.32	1.50 V	331	17.76	24.92
5	875.67	39.51 QP	46.00	-6.49	1.00 V	280	13.88	25.62
6	900.94	42.77 QP	46.00	-3.23	1.50 V	310	16.92	25.85
7	951.49	38.95 QP	46.00	-7.05	1.50 V	184	12.62	26.34

- 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.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 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.

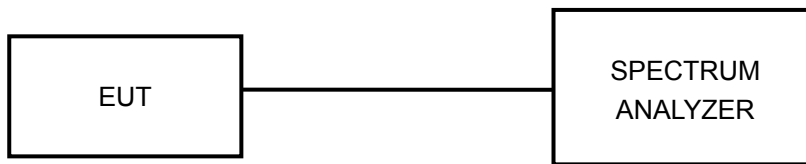
4.2.2 TEST PROCEDURE

- a. The transmitter output was connected to the spectrum analyzer via a low loss cable.
- b. Set RBW and VBW of spectrum analyzer to 1MHz and 3MHz.
- c. Set scan range from 30MHz ~ 40GHz. to measure spurious emissions from antenna port.

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

4.2.4 TEST SETUP



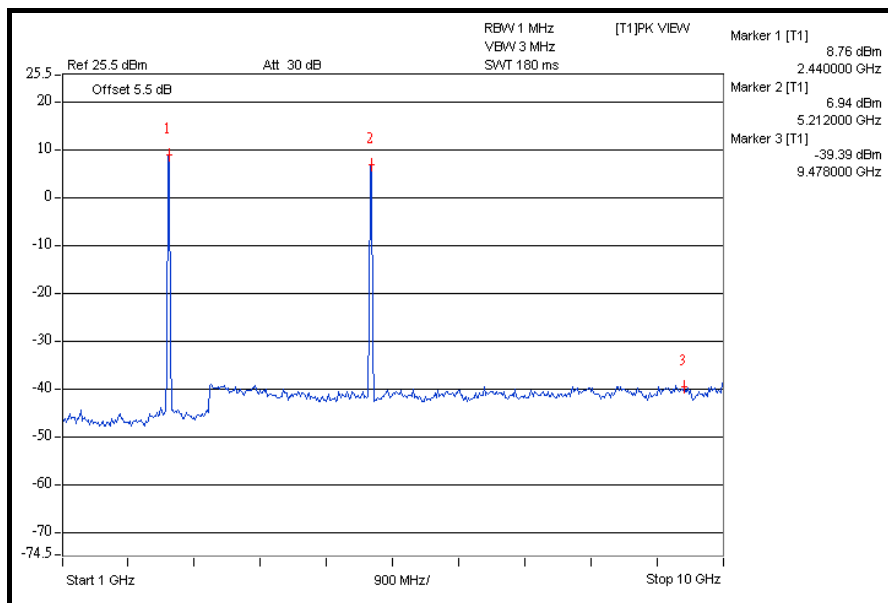
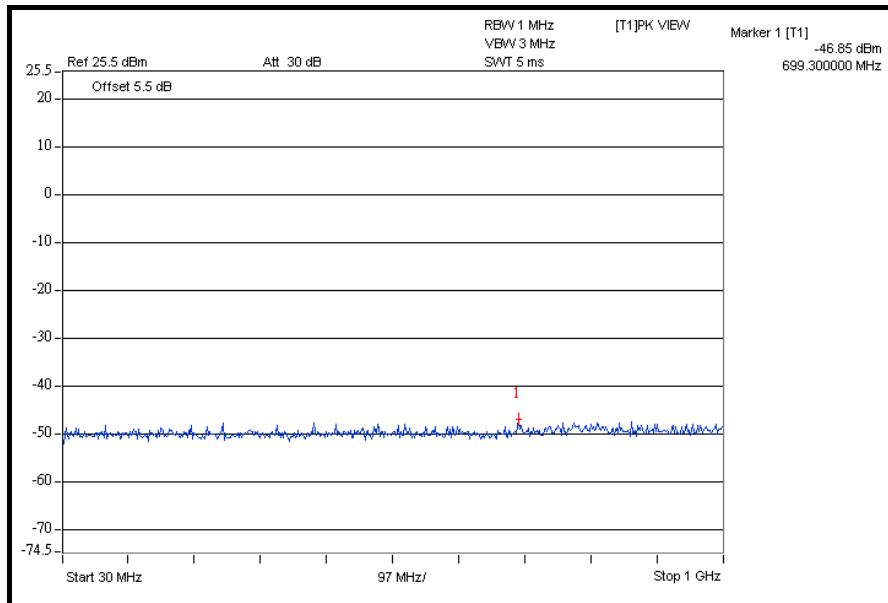
4.2.5 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.2.6 TEST RESULTS

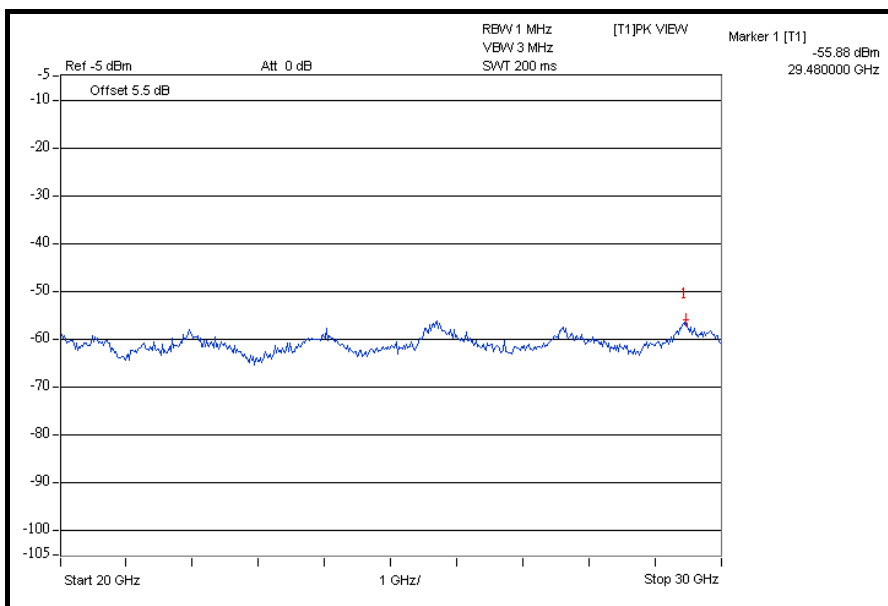
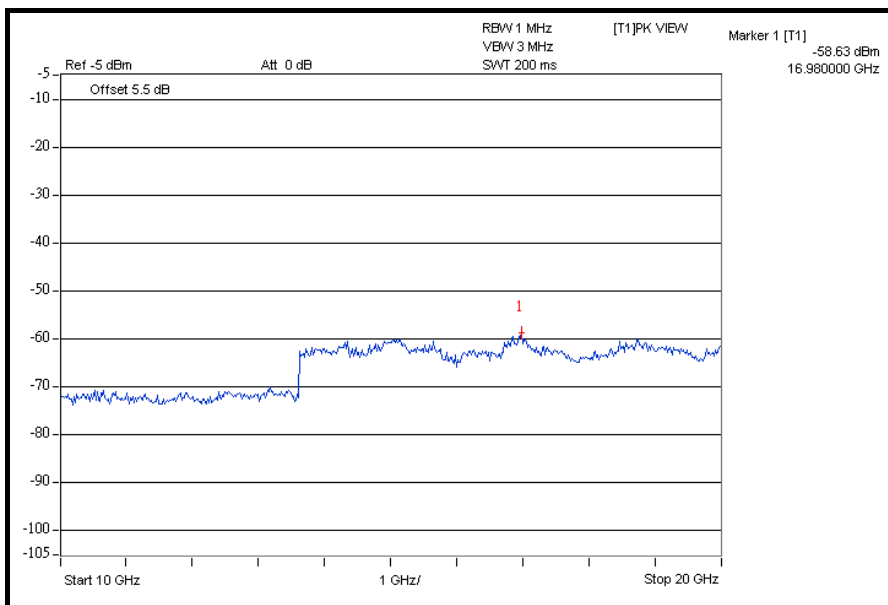
802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (20MHz)

CH 6 + CH 40



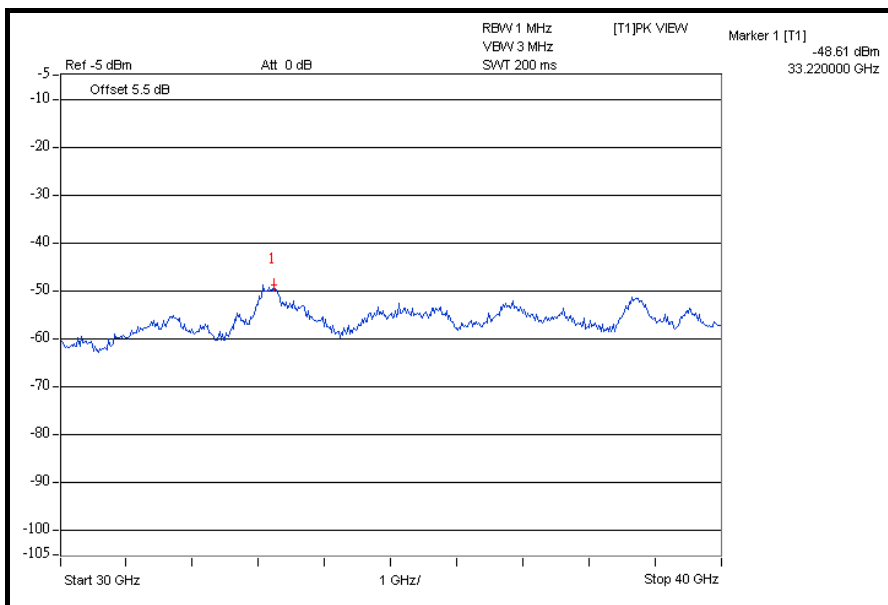


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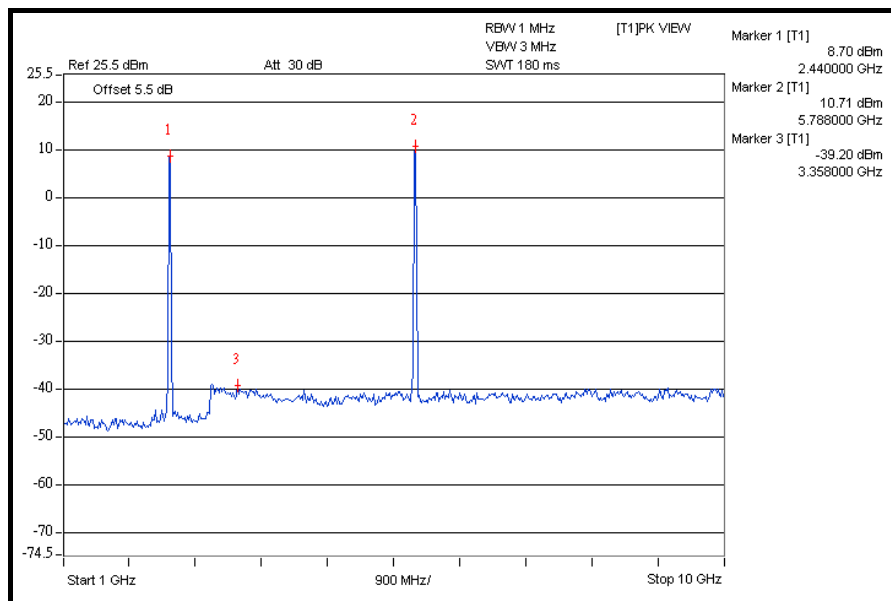
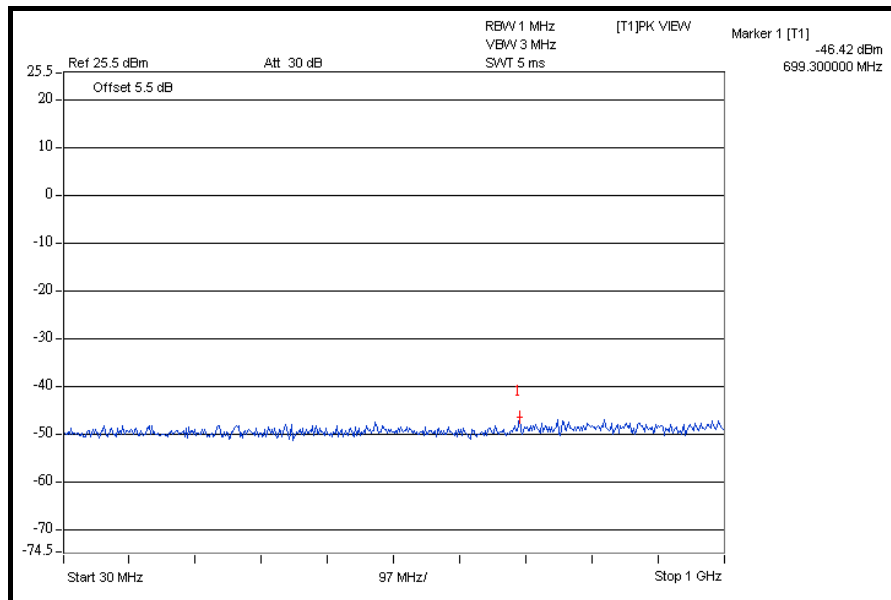




A D T

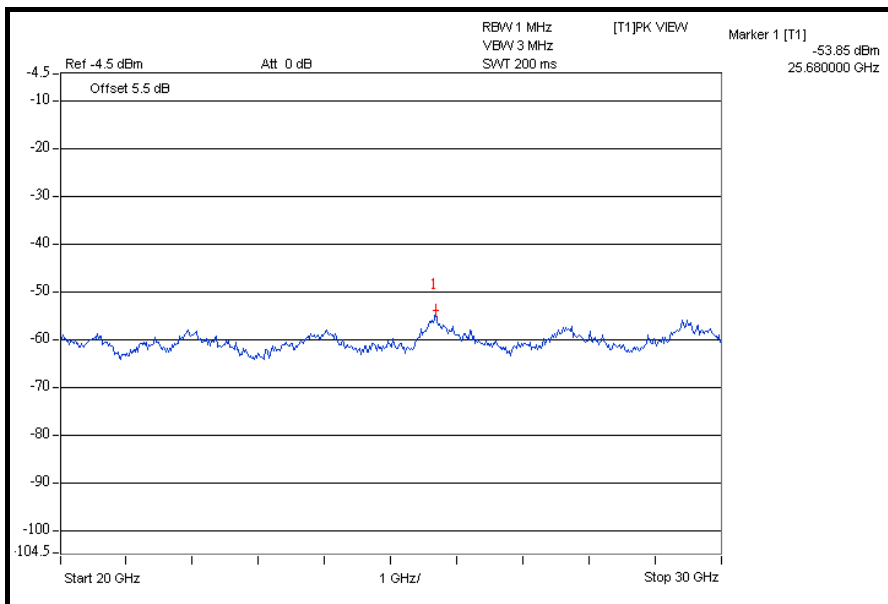
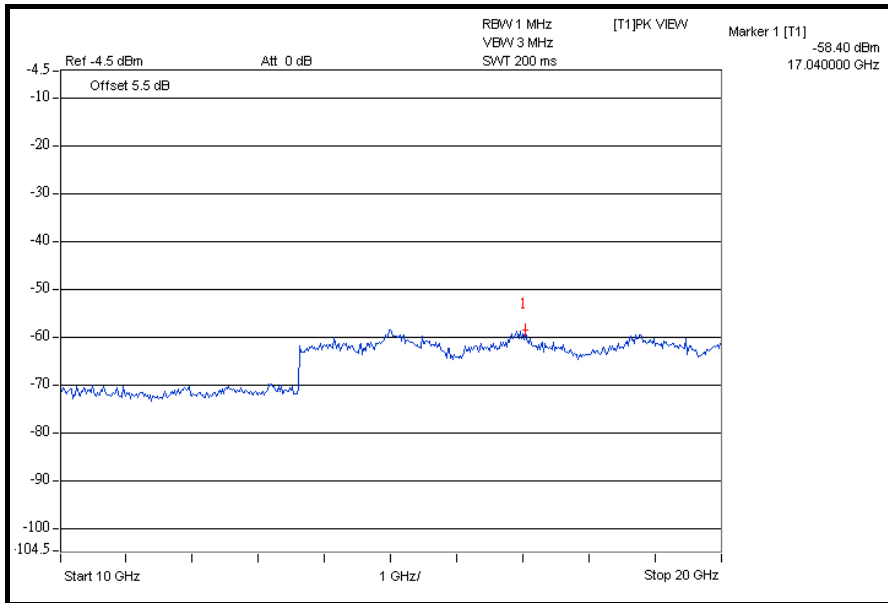
802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (20MHz)

CH 6 + CH 157



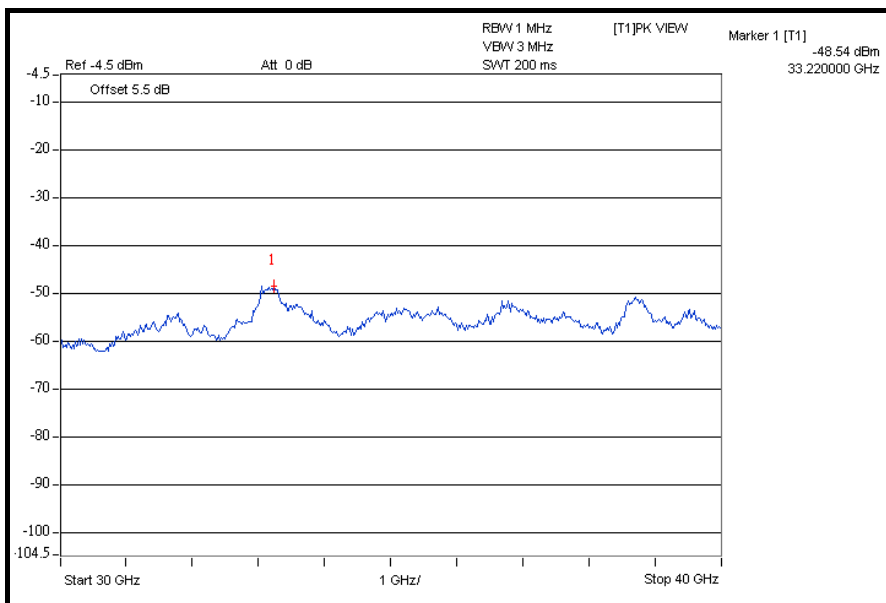


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A D T

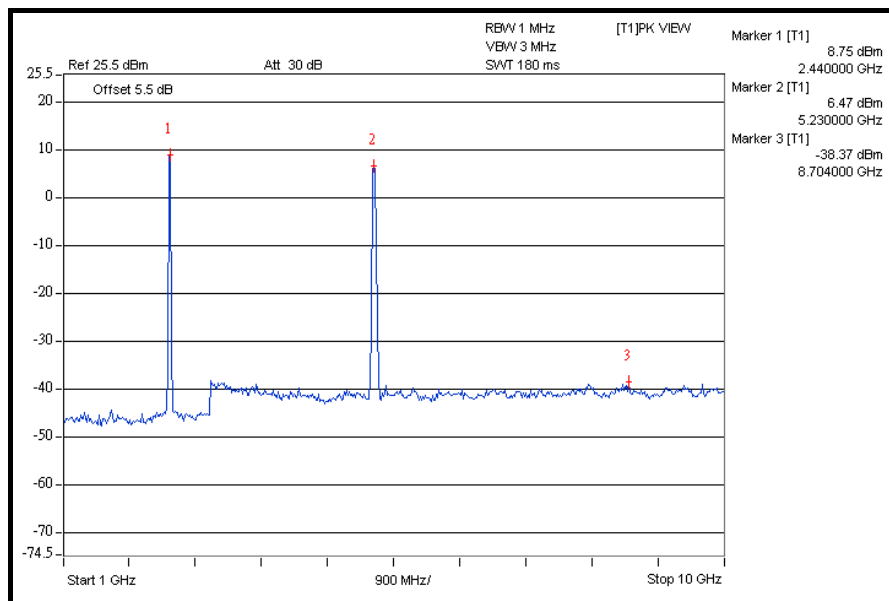
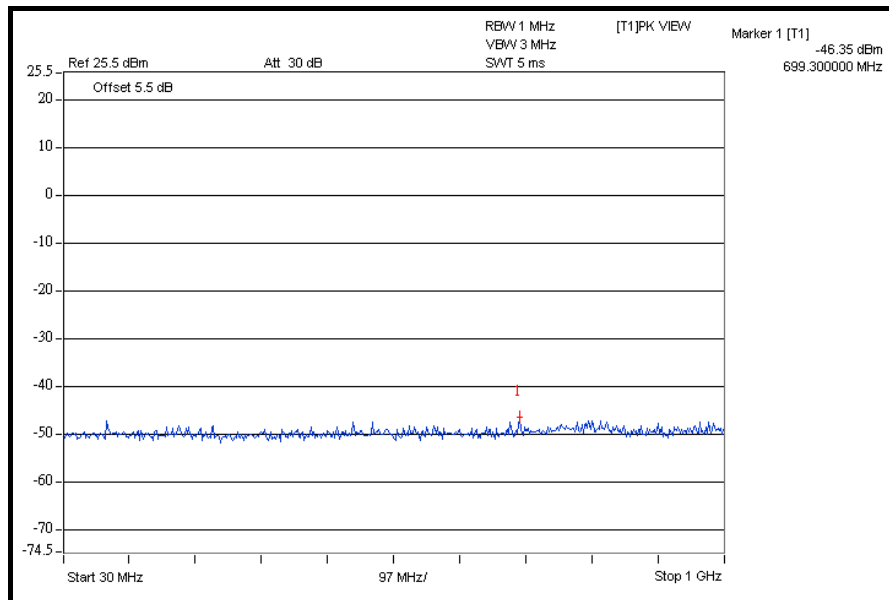




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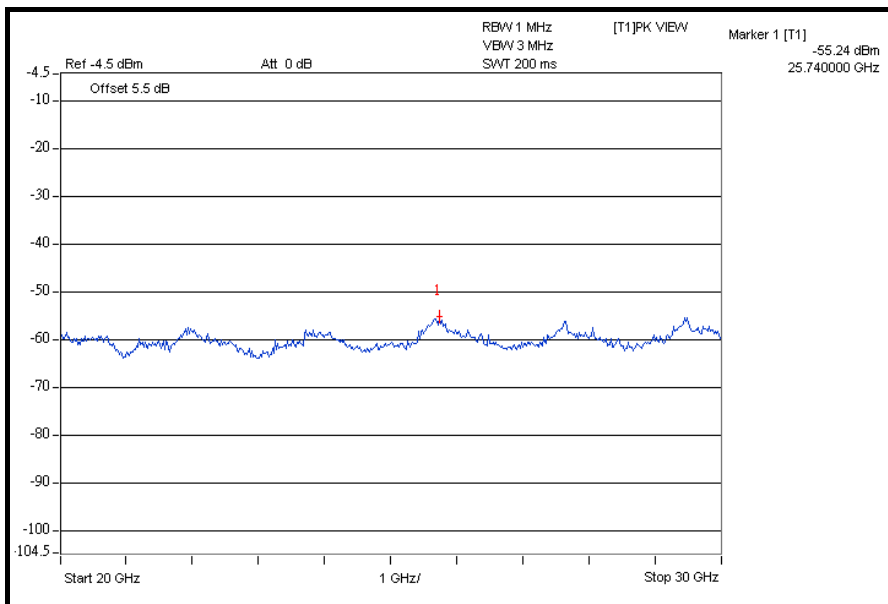
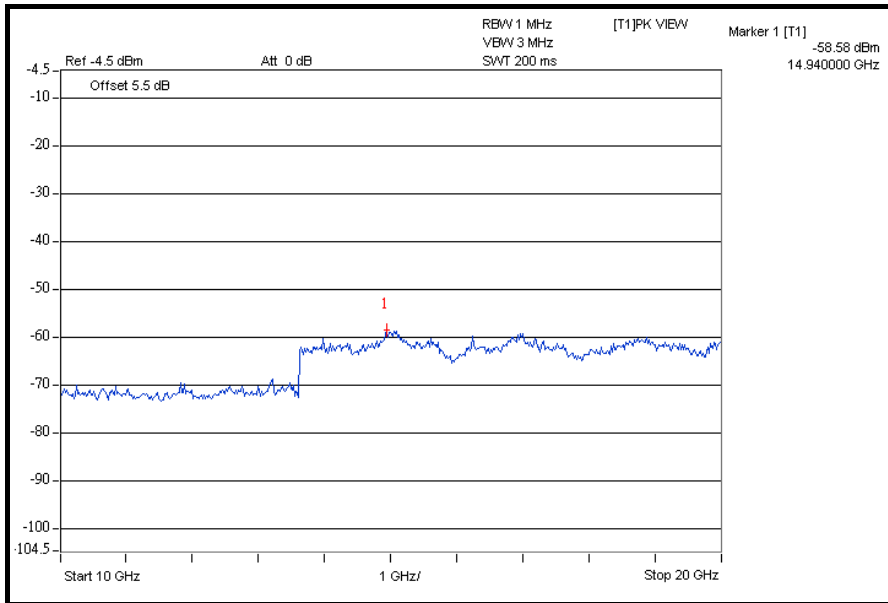
802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (40MHz)

CH 6 + CH 46



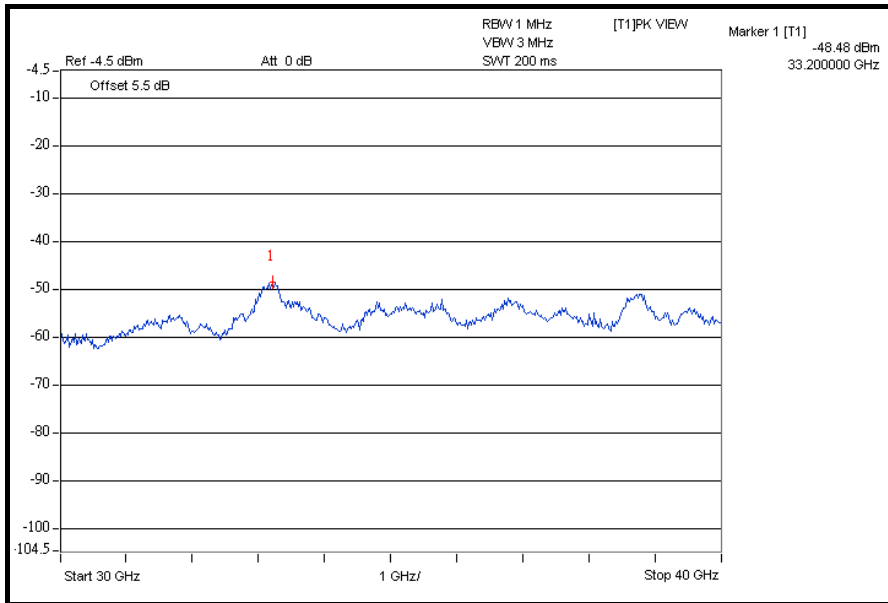


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A D T

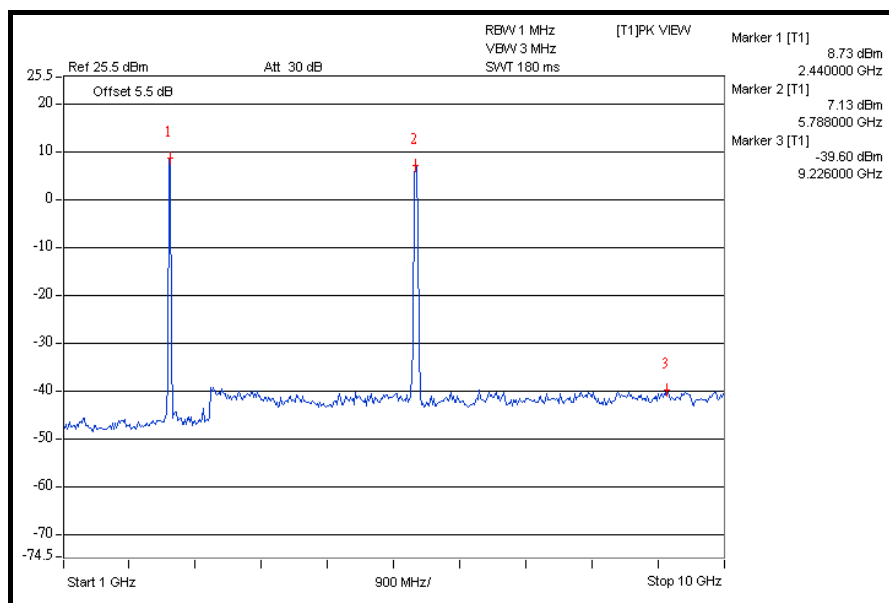
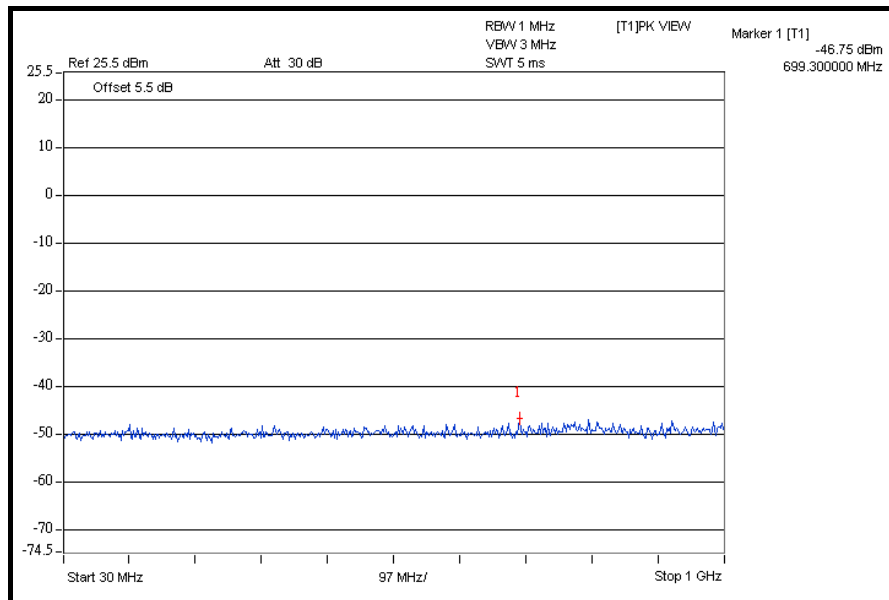




A D T

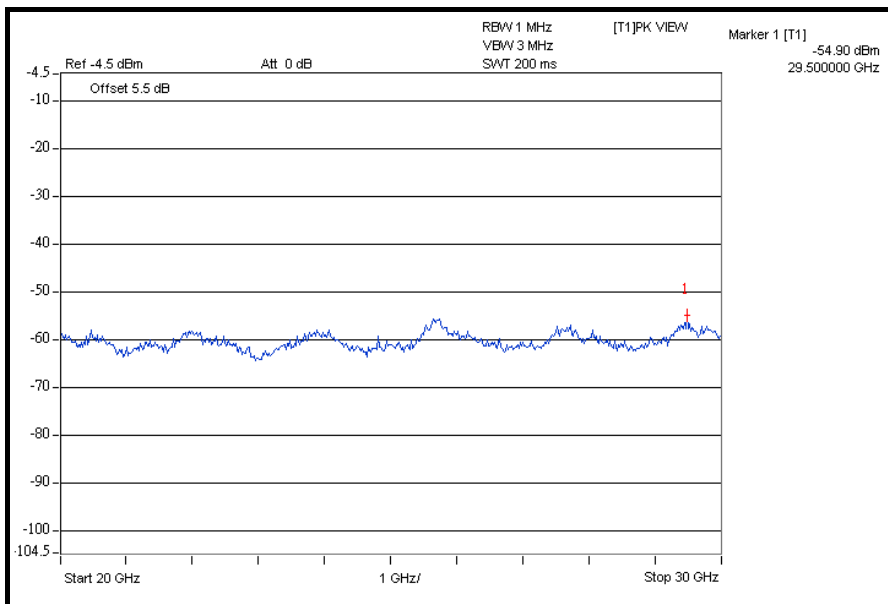
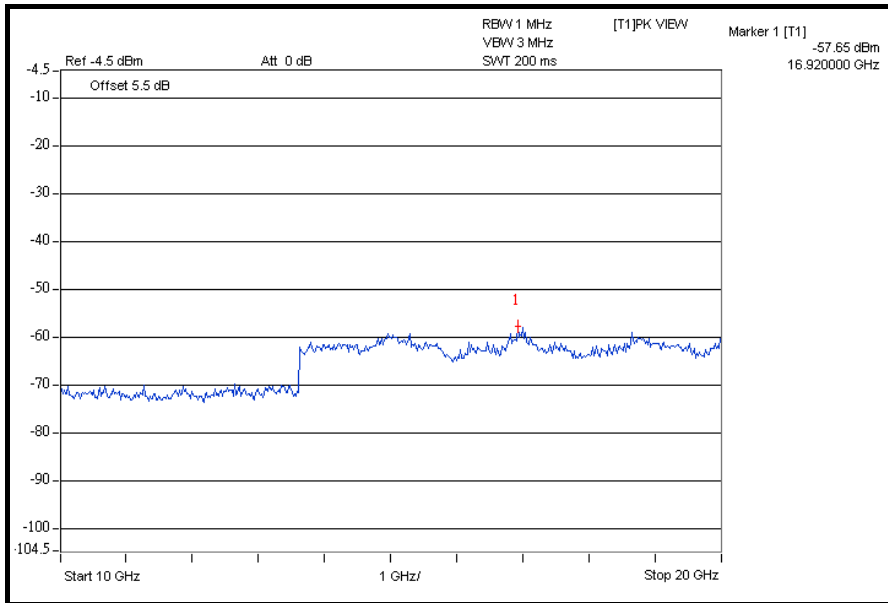
802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (40MHz)

CH 6 + CH 159



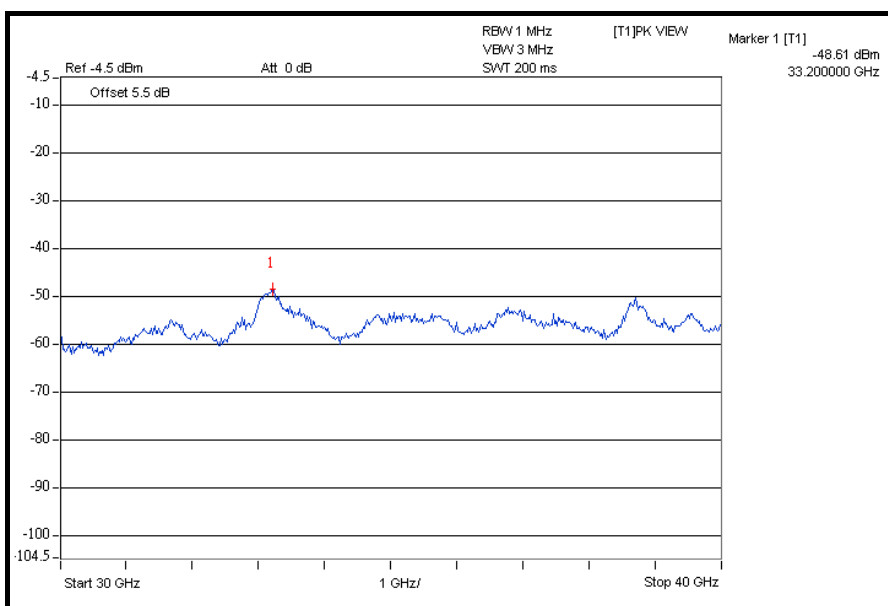


A D T





A D T

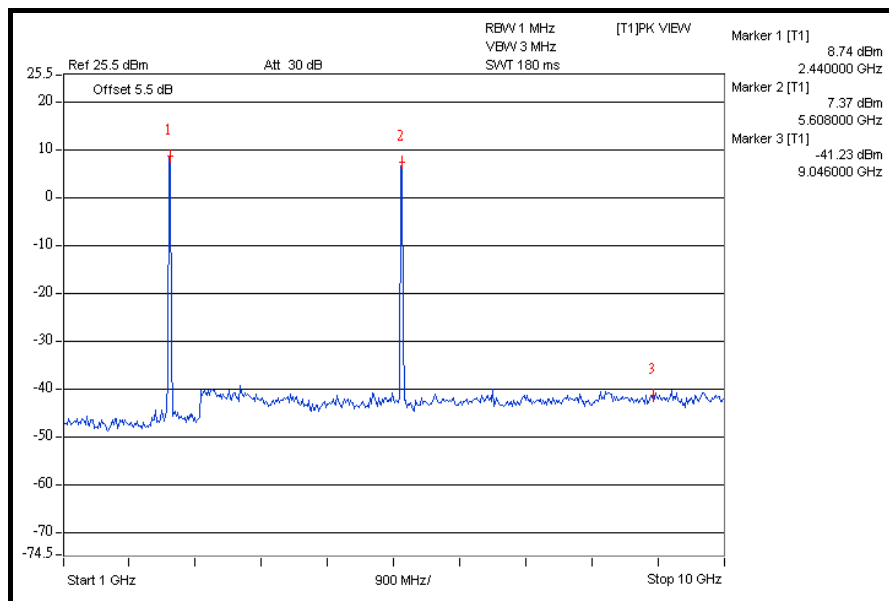
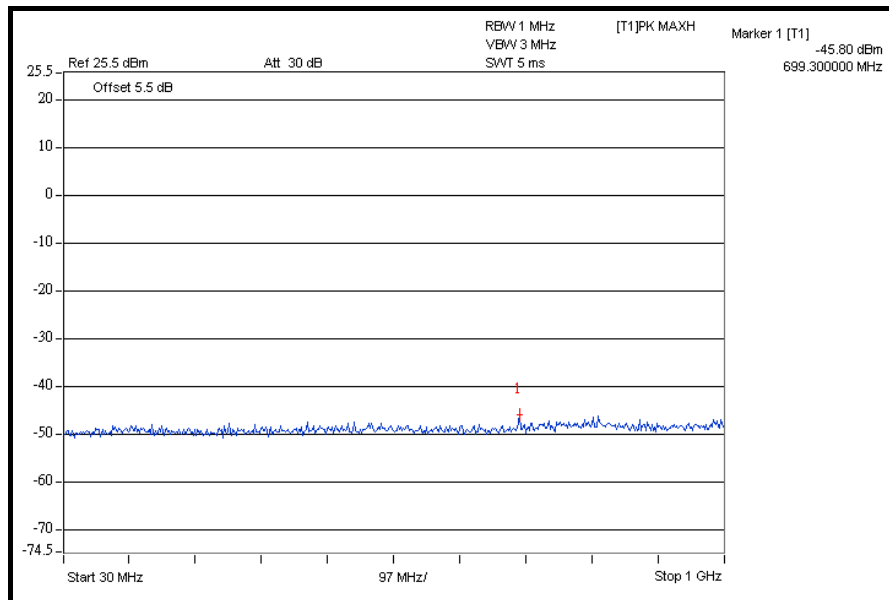




A D T

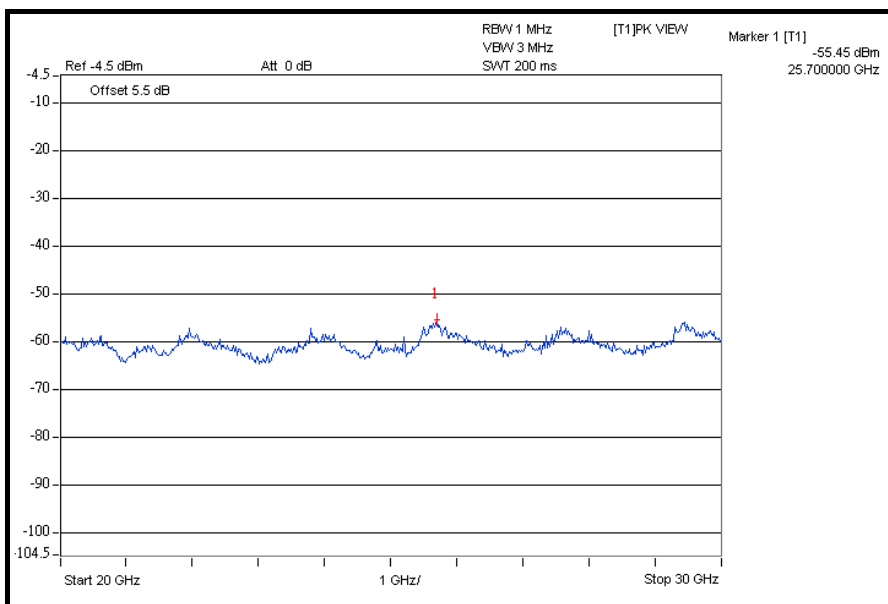
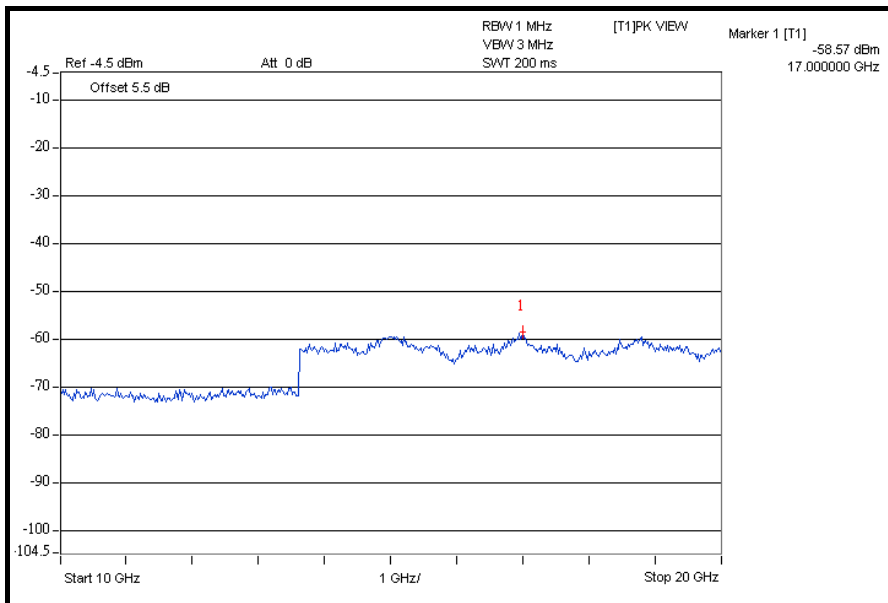
802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (20MHz)

CH 6 + CH 120



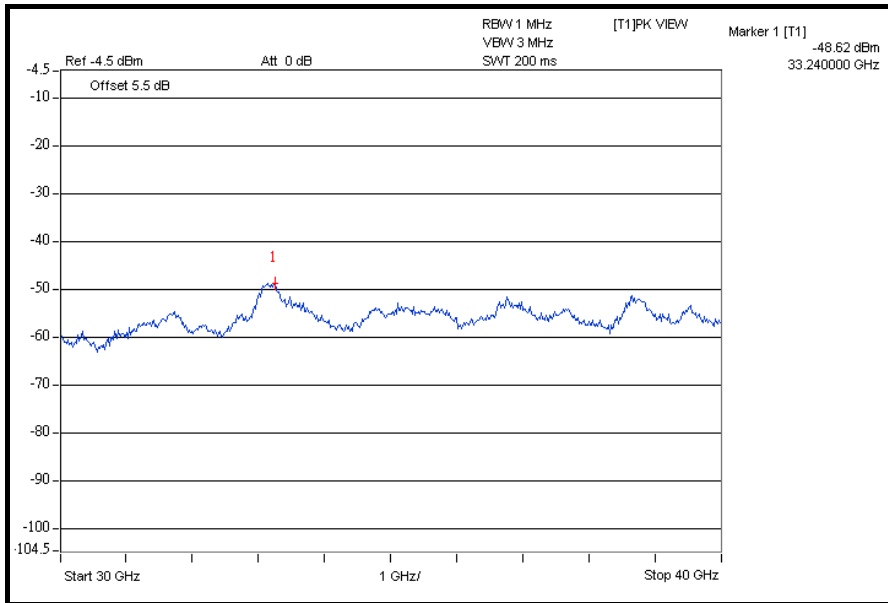


A D T





A D T

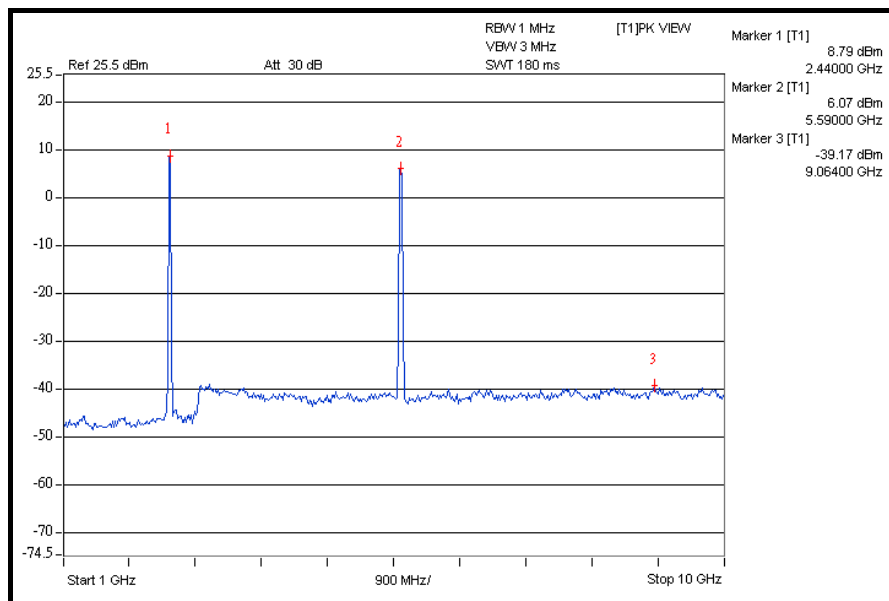
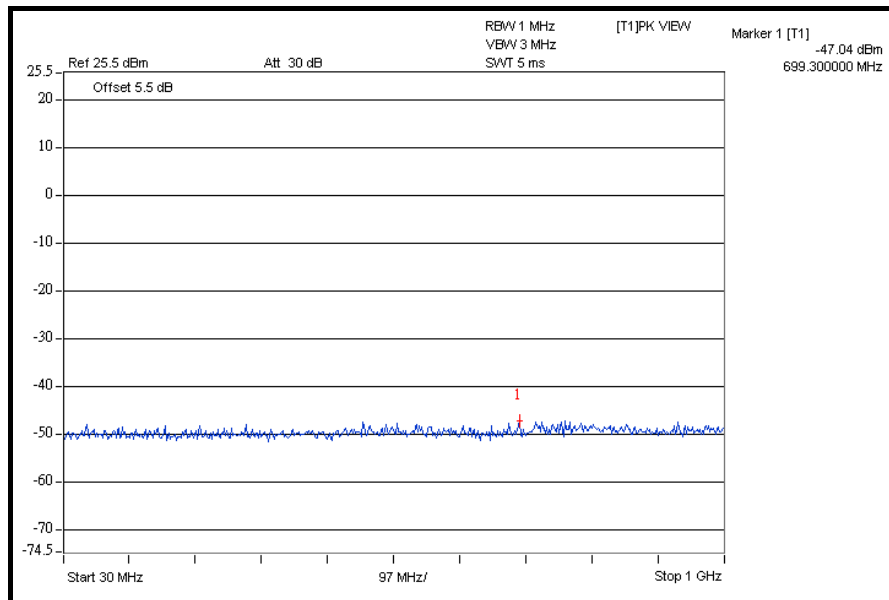




A D T

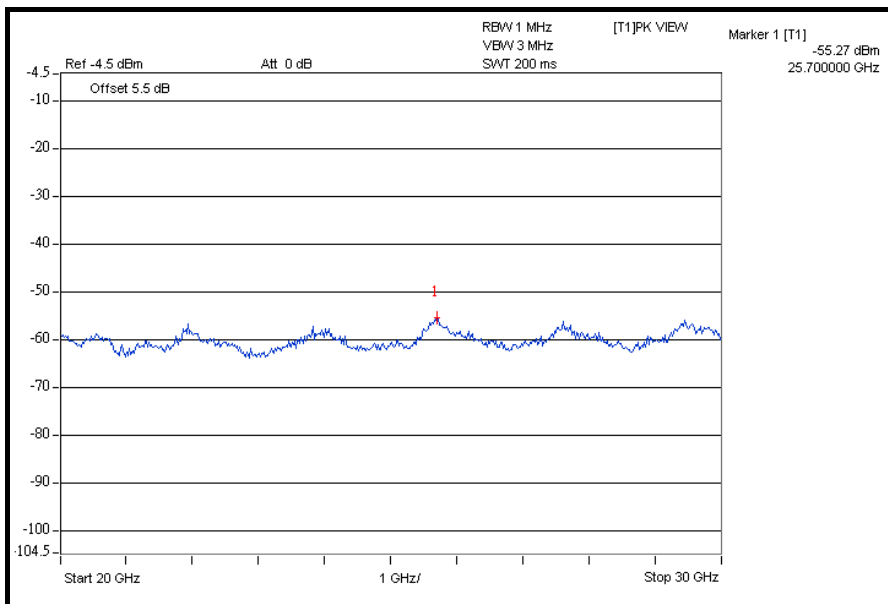
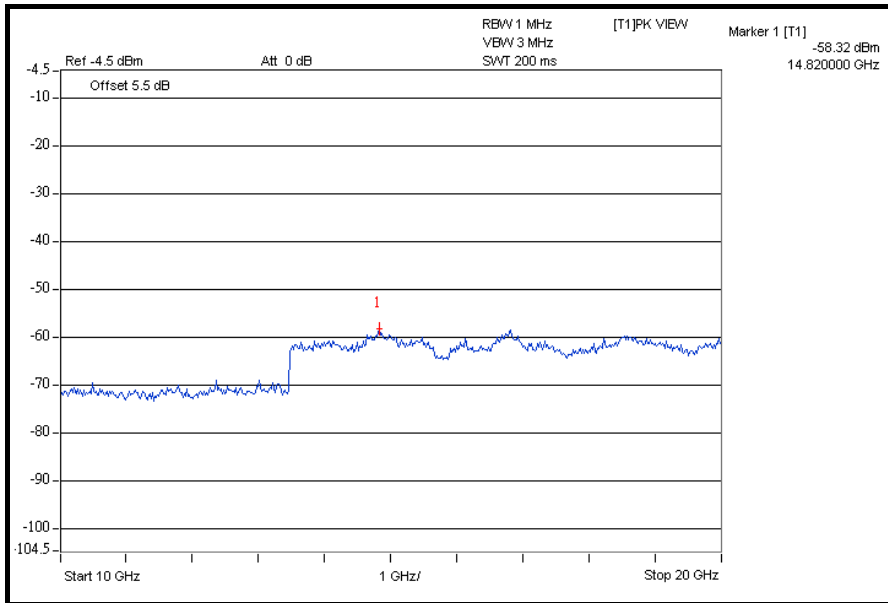
802.11b DSSS MODULATION + 802.11a DRAFT 802.11n (40MHz)

CH 6 + CH 118



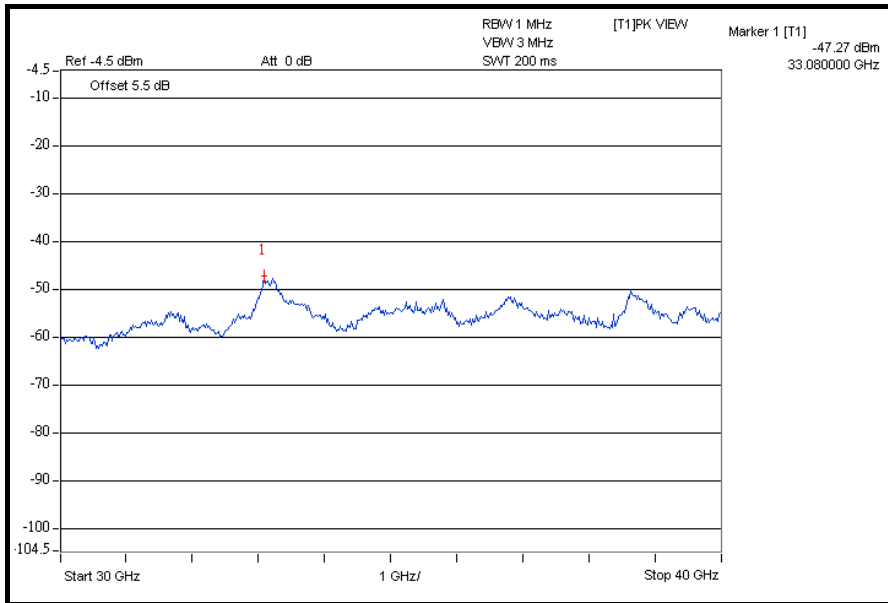


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5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, 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, NVLAP
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.

7. 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.

---END---