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FCC TEST REPORT (WLAN)

REPORT NO.: RF120425C07-2

MODEL NO.: PJ40210

FCC ID: NM8PJ40210

RECEIVED: Apr. 25, 2012

TESTED: May 04 ~ 08, 2012

ISSUED: May 14, 2012

APPLICANT: HTC Corporation

ADDRESS: 23, Xinghua Rd., Taoyuan 330, Taiwan, R.O.C.

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

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,
New Taipei City, Taiwan (R.O.C.)

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120425C07-2	Original release	May 14, 2012

1. CERTIFICATION

PRODUCT: Smartphone
MODEL NO.: PJ40210
BRAND: HTC
APPLICANT: HTC Corporation
TESTED: May 04 ~ 08, 2012
TEST SAMPLE: PRODUCTION UNIT
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.10-2009

The above equipment (model: PJ40210) 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 :  , **DATE** : May 14, 2012
Pettie Chen / Specialist

APPROVED BY :  , **DATE** : May 14, 2012
Gary Chang / Technical 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	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -5.01dB at 0.18906MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -5.18dB at 2390.00MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

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	150kHz~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	Smartphone
MODEL NO.	PJ40210
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.7Vdc (Li-ion battery)
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 802.11n: up to 72.2Mbps
OPERATING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, 802.11n (20MHz)
OUTPUT POWER	0.243W
ANTENNA TYPE	PIFA antenna with -0.25dBi gain
ANTENNA CONNECTOR	N/A
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

1. The EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11n (20MHz)	1TX

2. The EUT's accessories list refers to Ext Pho.pdf.
3. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



3.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 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		

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Main Sample
B	√	√	√	-	Second Sample

Where **RE \geq 1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

NOTE: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.
2. "-" means no effect.

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.

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	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
B	802.11g	1 to 11	1	OFDM	BPSK	6.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11g	1 to 11	1	OFDM	BPSK	6.0



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, B	802.11g	1 to 11	1	OFDM	BPSK	6.0

BANDEDGE 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, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2

ANTENNA PORT CONDUCTED MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- 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	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2

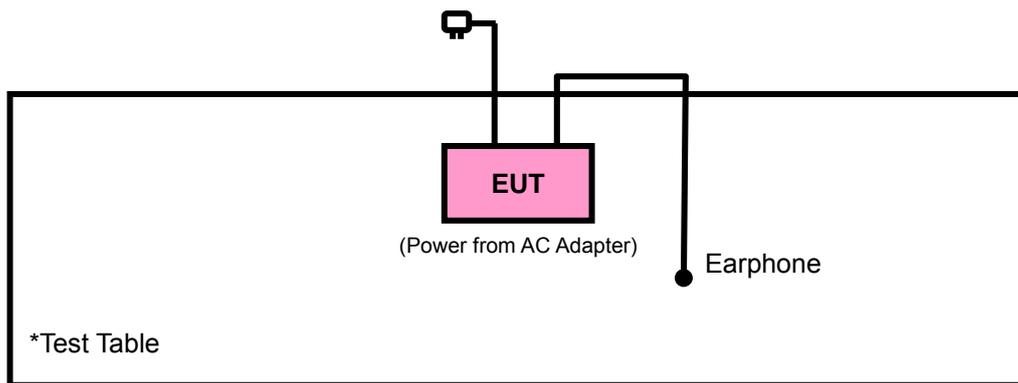
TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
PLC	25deg. C, 65%RH	120Vac, 60Hz	David Huang
APCM	25deg. C, 65%RH	120Vac, 60Hz	Phoenix Chen

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 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 C63.10-2009

558074 D01 DTS Meas Guidance v01

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.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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. 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 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver Agilent	N9038A	MY51210203	Dec. 22, 2011	Dec. 21, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2011	Dec. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 20, 2011	Dec. 19, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Dec. 20, 2011	Dec. 19, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 20, 2011	Dec. 19, 2012
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 30, 2011	Dec. 29, 2012
Preamplifier EMCI	EMC 330H	980112	Dec. 30, 2011	Dec. 29, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 21, 2011	Oct. 20, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Jan. 02, 2012	Jan. 01, 2013
RF signal cable Worken	RG-213	NA	Jan. 02, 2012	Jan. 01, 2013
Software	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Mini-Circuits Power Splitter	ZN2PD-9G	NA	May 25, 2011	May 24, 2012
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments except loop antenna is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The calibration interval of loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 9.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 460141.
6. The IC Site Registration No. is IC 7450F-4.

4.1.3 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. Height of receiving antenna 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.

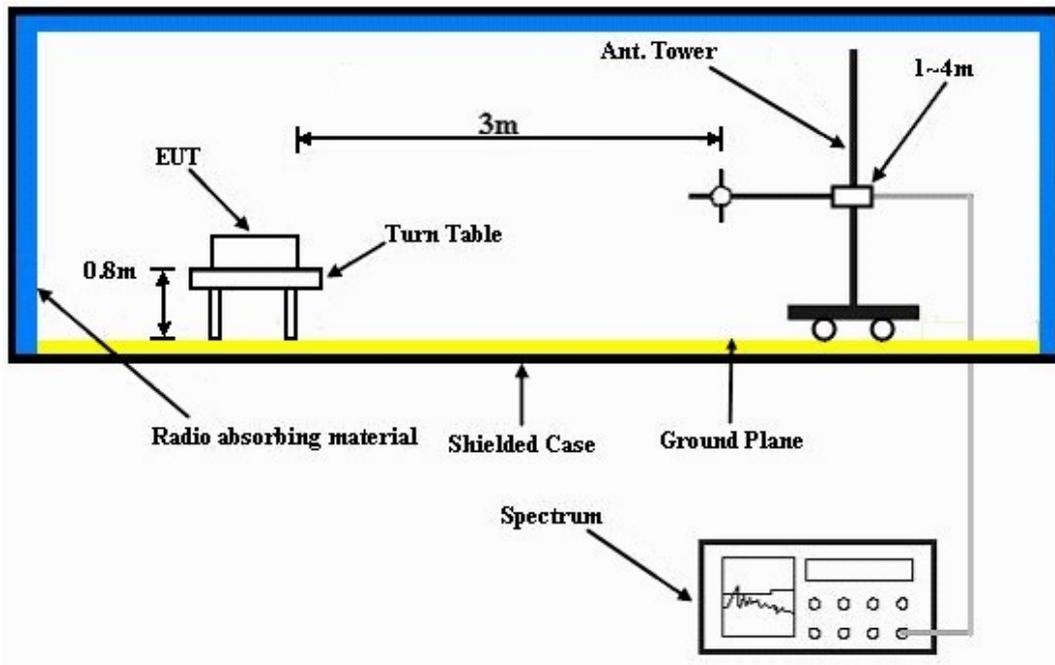
NOTE:

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. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.



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4.1.7 TEST RESULTS

TEST MODE A

ABOVE 1GHz WORST-CASE DATA :

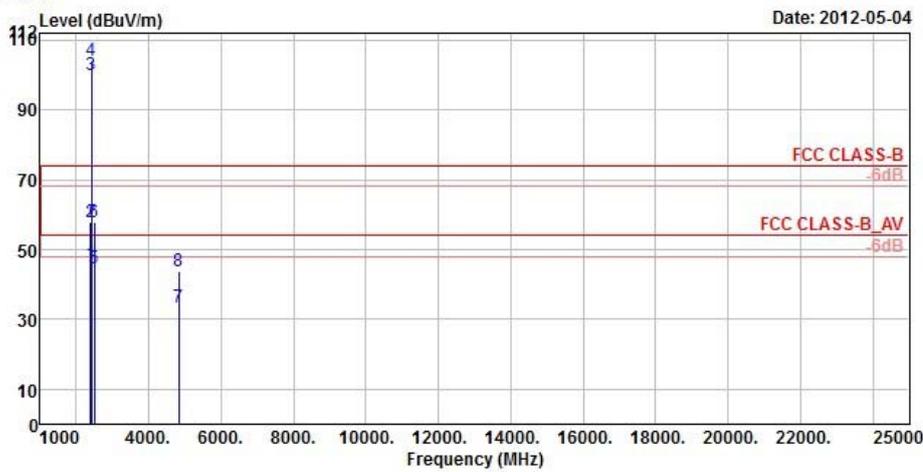
802.11b



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Data: 19



Date: 2012-05-04

Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11B TX CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 1M
 Power : 18

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	45.96	51.35	54.00	-8.04	27.26	4.87	37.52	145	222	Average
2	2390.00	57.99	63.38	74.00	-16.01	27.26	4.87	37.52	145	222	Peak
3 pp	2412.00	99.99	105.33			27.31	4.87	37.52	145	222	Average
4 pk	2412.00	104.18	109.52			27.31	4.87	37.52	145	222	Peak
5	2494.00	44.50	49.26	54.00	-9.50	27.55	4.94	37.25	145	222	Average
6	2494.00	57.85	62.61	74.00	-16.15	27.55	4.94	37.25	145	222	Peak
7	4824.00	33.56	47.52	54.00	-20.44	31.42	7.70	53.08	100	141	Average
8	4824.00	43.68	57.64	74.00	-30.32	31.42	7.70	53.08	100	141	Peak



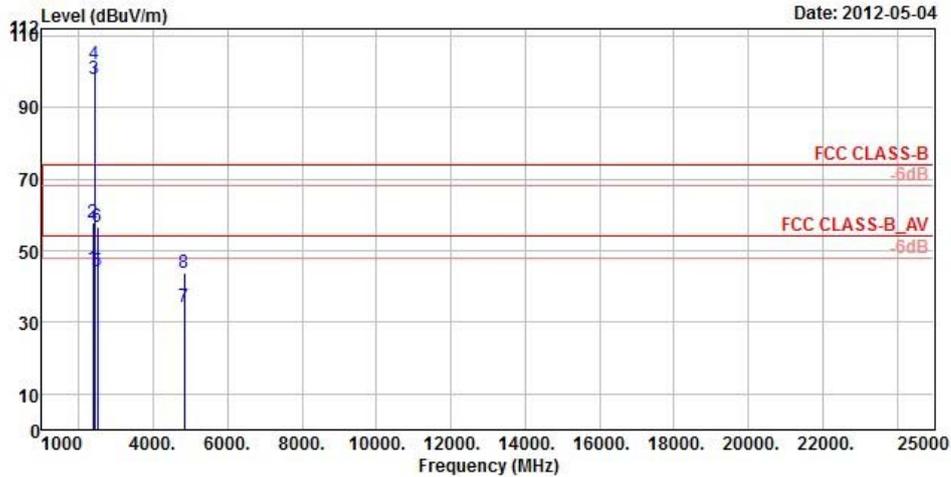
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Data: 20



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11B TX CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 1M
 Power : 18

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2380.00	45.19	50.63	54.00	-8.81	27.21	4.85	37.50	104	300	Average
2	2380.00	58.05	63.49	74.00	-15.95	27.21	4.85	37.50	104	300	Peak
3 pp	2412.00	97.75	103.09			27.31	4.87	37.52	104	300	Average
4 pk	2412.00	102.06	107.40			27.31	4.87	37.52	104	300	Peak
5	2492.00	44.29	49.05	54.00	-9.71	27.55	4.94	37.25	104	300	Average
6	2492.00	56.74	61.50	74.00	-17.26	27.55	4.94	37.25	104	300	Peak
7	4824.00	34.16	48.12	54.00	-19.84	31.42	7.70	53.08	121	166	Average
8	4824.00	43.95	57.91	74.00	-30.05	31.42	7.70	53.08	121	166	Peak



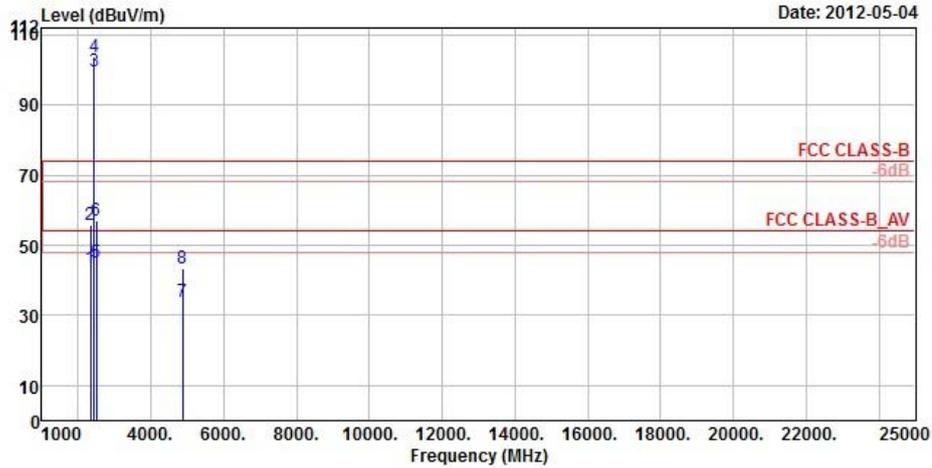
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Data: 19



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11B TX CH06
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 1M
 Power : 18

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2332.00	43.24	48.86	54.00	-10.76	27.06	4.79	37.47	100	359	Average
2	2332.00	55.59	61.21	74.00	-18.41	27.06	4.79	37.47	100	359	Peak
3 pp	2437.00	99.56	104.73			27.40	4.89	37.46	100	359	Average
4 pk	2437.00	103.57	108.74			27.40	4.89	37.46	100	359	Peak
5	2494.00	45.24	50.00	54.00	-8.76	27.55	4.94	37.25	100	359	Average
6	2494.00	57.22	61.98	74.00	-16.78	27.55	4.94	37.25	100	359	Peak
7	4874.00	33.77	47.57	54.00	-20.23	31.53	7.72	53.05	100	120	Average
8	4874.00	43.21	57.01	74.00	-30.79	31.53	7.72	53.05	100	120	Peak



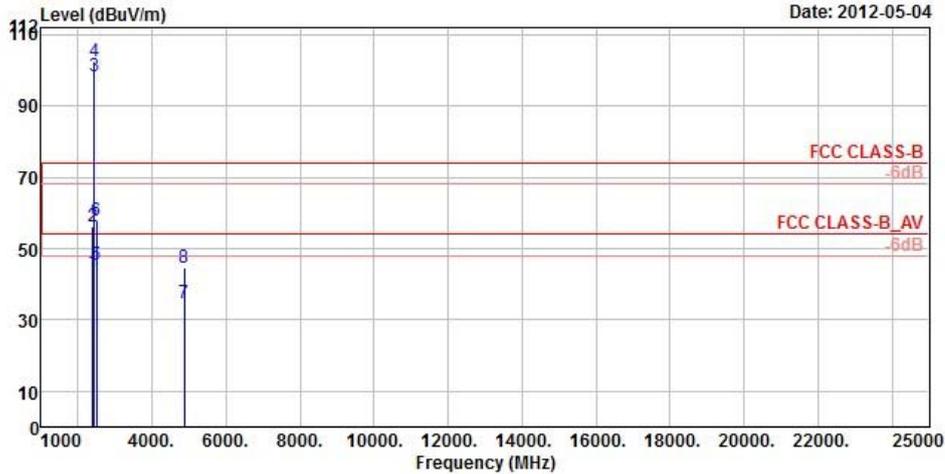
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Data: 20



Date: 2012-05-04

Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11B TX CH06
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 1M
 Power : 18

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2386.00	43.36	48.75	54.00	-10.64	27.26	4.85	37.50	103	271	Average
2	2386.00	56.26	61.65	74.00	-17.74	27.26	4.85	37.50	103	271	Peak
3	2437.00	98.44	103.61			27.40	4.89	37.46	103	271	Average
4	2437.00	102.54	107.71			27.40	4.89	37.46	103	271	Peak
5	2486.00	45.30	50.20	54.00	-8.70	27.50	4.92	37.32	103	271	Average
6	2486.00	57.81	62.71	74.00	-16.19	27.50	4.92	37.32	103	271	Peak
7	4874.00	34.82	48.62	54.00	-19.18	31.53	7.72	53.05	120	262	Average
8	4874.00	44.44	58.24	74.00	-29.56	31.53	7.72	53.05	120	262	Peak



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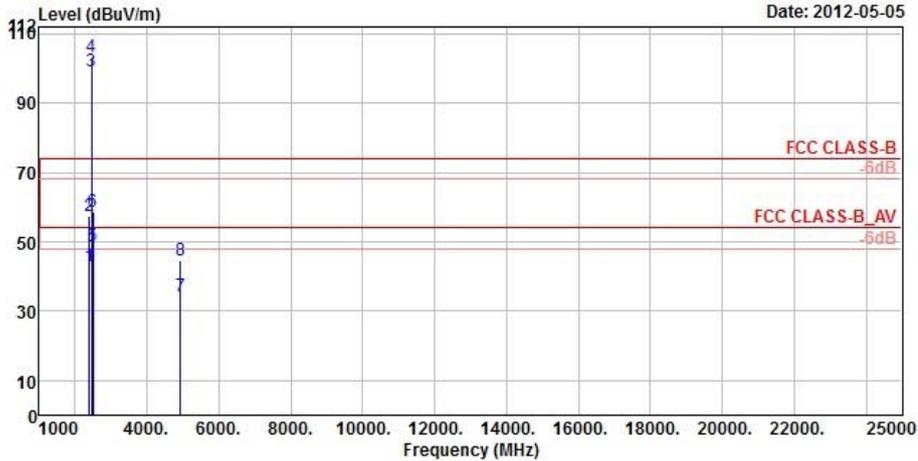


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19

Date: 2012-05-05



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11B TX CH11
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 1M
 Power : 18

	Freq	Level	Read Level	Limit Line	OverLimit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2386.00	43.12	11.01	54.00	-10.88	27.26	4.85	0.00	119	187	Average
2	2386.00	57.27	25.16	74.00	-16.73	27.26	4.85	0.00	119	187	Peak
3	2462.00	99.14	66.78			27.45	4.91	0.00	119	187	Average
4	2462.00	103.28	70.92			27.45	4.91	0.00	119	187	Peak
5	2492.00	48.72	16.23	54.00	-5.28	27.55	4.94	0.00	119	187	Average
6	2492.00	58.81	26.32	74.00	-15.19	27.55	4.94	0.00	119	187	Peak
7	4924.00	34.29	47.95	54.00	-19.71	31.64	7.73	53.03	110	154	Average
8	4924.00	44.82	58.48	74.00	-29.18	31.64	7.73	53.03	110	154	Peak



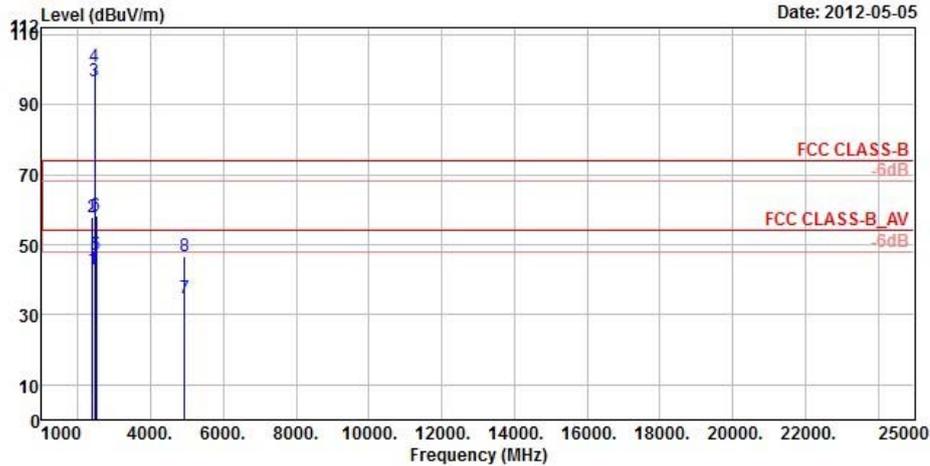
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20



Date: 2012-05-05

Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11B TX CH11
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 1M
 Power : 18

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	43.14	11.01	54.00	-10.86	27.26	4.87	0.00	100	290	Average
2	2390.00	57.79	25.66	74.00	-16.21	27.26	4.87	0.00	100	290	Peak
3 pp	2462.00	96.91	64.55			27.45	4.91	0.00	100	290	Average
4 pk	2462.00	100.95	68.59			27.45	4.91	0.00	100	290	Peak
5	2492.00	47.27	14.78	54.00	-6.73	27.55	4.94	0.00	100	290	Average
6	2492.00	58.09	25.60	74.00	-15.91	27.55	4.94	0.00	100	290	Peak
7	4924.00	34.79	48.45	54.00	-19.21	31.64	7.73	53.03	110	321	Average
8	4924.00	46.60	60.26	74.00	-27.40	31.64	7.73	53.03	110	321	Peak



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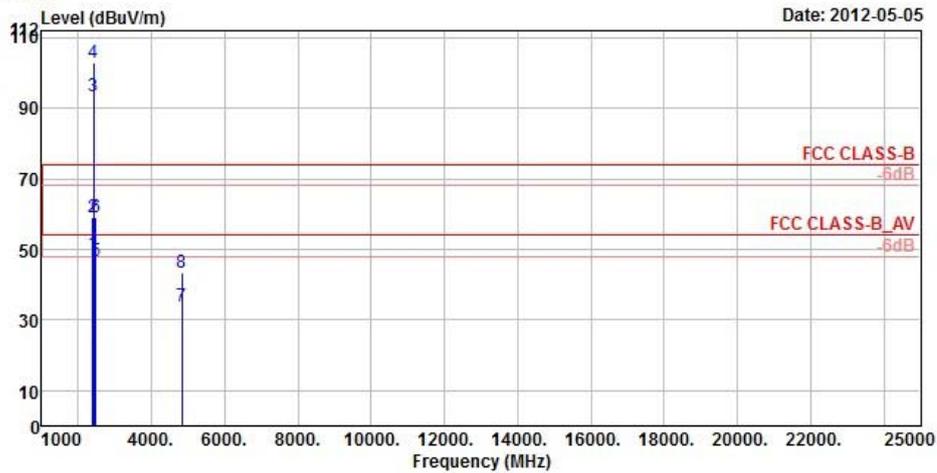
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19



Date: 2012-05-05

Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11G TX CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBUV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	48.75	54.14	54.00	-5.25	27.26	4.87	37.52	100	233	Average
2	2390.00	59.10	64.49	74.00	-14.90	27.26	4.87	37.52	100	233	Peak
3	2412.00	93.27	98.61			27.31	4.87	37.52	100	233	Average
4	2412.00	103.11	108.45			27.31	4.87	37.52	100	233	Peak
5	2483.50	46.77	51.67	54.00	-7.23	27.50	4.92	37.32	100	233	Average
6	2483.50	59.15	64.05	74.00	-14.85	27.50	4.92	37.32	100	233	Peak
7	4824.00	33.73	47.69	54.00	-20.27	31.42	7.70	53.08	100	106	Average
8	4824.00	43.27	57.23	74.00	-30.73	31.42	7.70	53.08	100	106	Peak



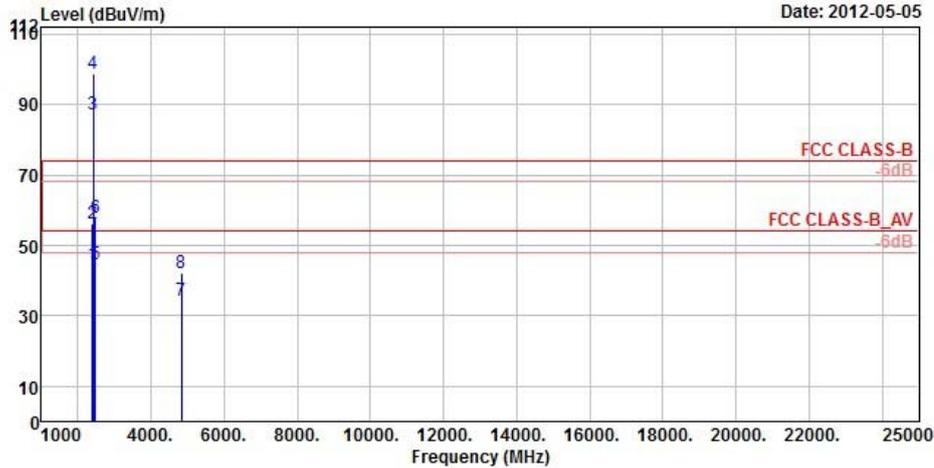
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11G TX CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	44.64	50.03	54.00	-9.36	27.26	4.87	37.52	102	48	Average
2	2390.00	56.40	61.79	74.00	-17.60	27.26	4.87	37.52	102	48	Peak
3 pp	2412.00	87.09	92.43			27.31	4.87	37.52	102	48	Average
4 pk	2412.00	98.96	104.30			27.31	4.87	37.52	102	48	Peak
5	2483.50	44.78	49.68	54.00	-9.22	27.50	4.92	37.32	102	48	Average
6	2483.50	57.95	62.85	74.00	-16.05	27.50	4.92	37.32	102	48	Peak
7	4824.00	34.16	48.12	54.00	-19.84	31.42	7.70	53.08	110	143	Average
8	4824.00	41.99	55.95	74.00	-32.01	31.42	7.70	53.08	140	143	Peak



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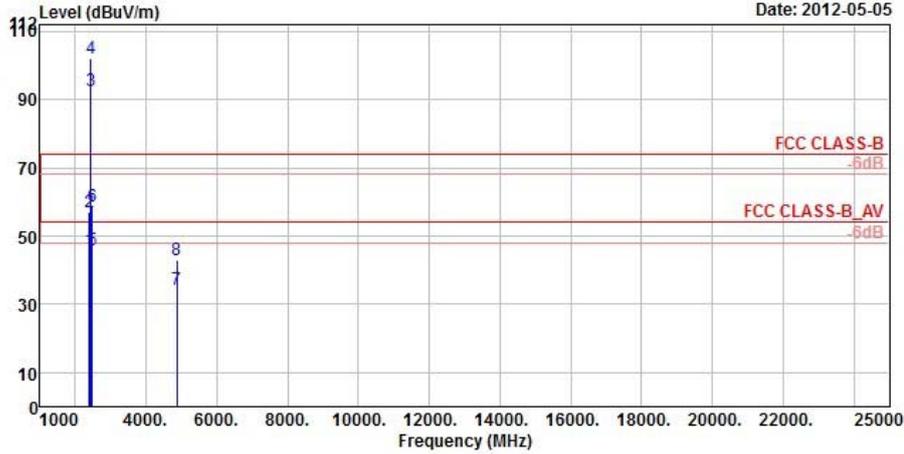


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19

Date: 2012-05-05



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11G TX CH06
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverLimit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	45.87	51.26	54.00	-8.13	27.26	4.87	37.52	100	231	Average
2	2390.00	56.94	62.33	74.00	-17.06	27.26	4.87	37.52	100	231	Peak
3 pp	2437.00	92.42	97.59			27.40	4.89	37.46	100	231	Average
4 pk	2437.00	101.91	107.08			27.40	4.89	37.46	100	231	Peak
5	2483.50	46.06	50.96	54.00	-7.94	27.50	4.92	37.32	100	231	Average
6	2483.50	58.48	63.38	74.00	-15.52	27.50	4.92	37.32	100	231	Peak
7	4874.00	34.17	47.97	54.00	-19.83	31.53	7.72	53.05	100	139	Average
8	4874.00	42.85	56.65	74.00	-31.15	31.53	7.72	53.05	100	139	Peak



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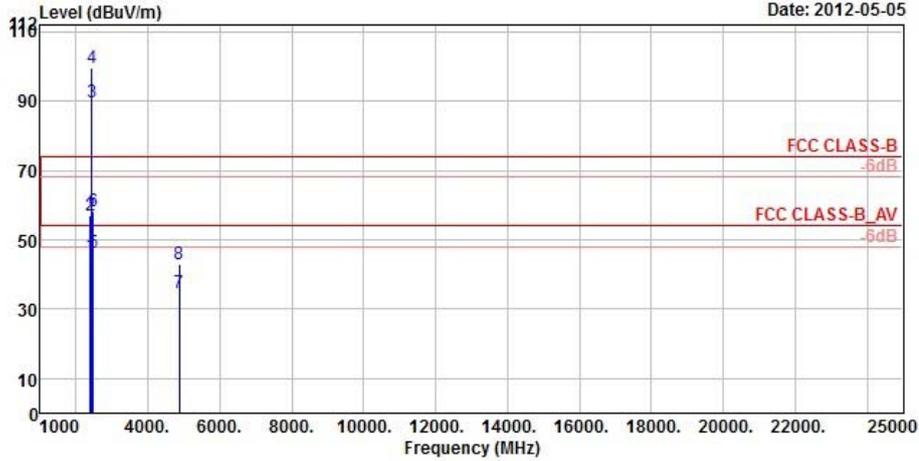


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20

Date: 2012-05-05



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11G TX CH06
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverLimit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	45.60	50.99	54.00	-8.40	27.26	4.87	37.52	126	17	Average
2	2390.00	57.04	62.43	74.00	-16.96	27.26	4.87	37.52	126	17	Peak
3 pp	2437.00	89.66	94.83			27.40	4.89	37.46	126	17	Average
4 pk	2437.00	99.58	104.75			27.40	4.89	37.46	126	17	Peak
5	2483.50	46.11	51.01	54.00	-7.89	27.50	4.92	37.32	126	17	Average
6	2483.50	58.14	63.04	74.00	-15.86	27.50	4.92	37.32	126	17	Peak
7	4874.00	34.54	48.34	54.00	-19.46	31.53	7.72	53.05	110	258	Average
8	4874.00	42.82	56.62	74.00	-31.18	31.53	7.72	53.05	110	258	Peak



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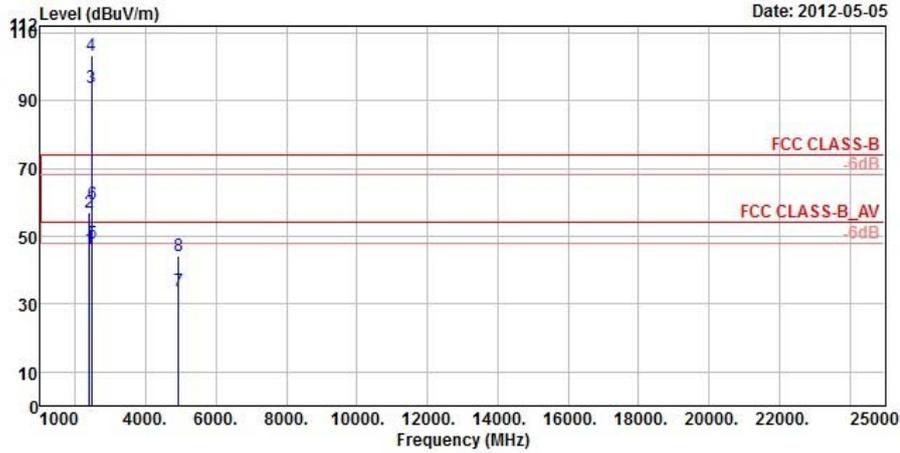


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19

Date: 2012-05-05



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11G TX CH11
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Cable Factor	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	cm	deg	
1	2390.00	46.34	51.73	54.00	-7.66	27.26	4.87	37.52	140	222 Average
2	2390.00	57.18	62.57	74.00	-16.82	27.26	4.87	37.52	140	222 Peak
3	2462.00	93.87	98.90			27.45	4.91	37.39	140	222 Average
4	2462.00	103.32	108.35			27.45	4.91	37.39	140	222 Peak
5	2483.50	48.02	52.92	54.00	-5.98	27.50	4.92	37.32	140	222 Average
6	2483.50	59.41	64.31	74.00	-14.59	27.50	4.92	37.32	140	222 Peak
7	4924.00	34.02	47.68	54.00	-19.98	31.64	7.73	53.03	100	221 Average
8	4924.00	44.27	57.93	74.00	-29.73	31.64	7.73	53.03	100	221 Peak



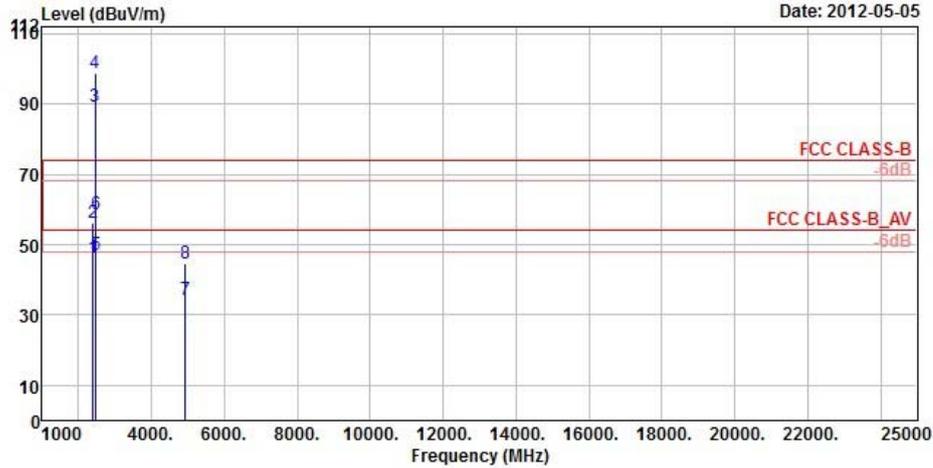
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11G TX CH11
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	46.23	51.62	54.00	-7.77	27.26	4.87	37.52	126	17	Average
2	2390.00	56.40	61.79	74.00	-17.60	27.26	4.87	37.52	126	17	Peak
3 pp	2462.00	89.07	94.10			27.45	4.91	37.39	126	17	Average
4 pk	2462.00	98.59	103.62			27.45	4.91	37.39	126	17	Peak
5	2483.50	47.16	52.06	54.00	-6.84	27.50	4.92	37.32	126	17	Average
6	2483.50	58.89	63.79	74.00	-15.11	27.50	4.92	37.32	126	17	Peak
7	4924.00	34.43	48.09	54.00	-19.57	31.64	7.73	53.03	110	214	Average
8	4924.00	44.53	58.19	74.00	-29.47	31.64	7.73	53.03	110	214	Peak



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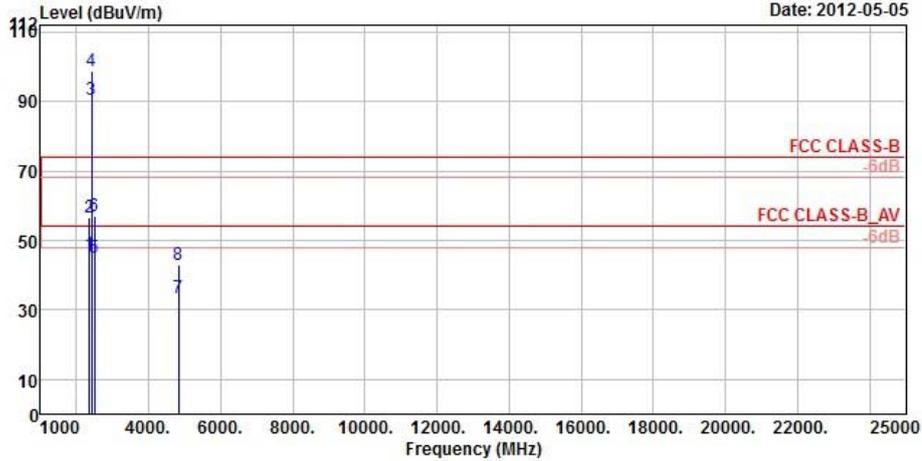


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19

Date: 2012-05-05



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11N HT20 CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : MCS0
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2348.00	45.68	51.24	54.00	-8.32	27.11	4.82	37.49	100	359	Average
2	2348.00	56.44	62.00	74.00	-17.56	27.11	4.82	37.49	100	359	Peak
3	2412.00	90.40	95.74			27.31	4.87	37.52	100	359	Average
4	2412.00	98.91	104.25			27.31	4.87	37.52	100	359	Peak
5	2496.00	44.89	49.65	54.00	-9.11	27.55	4.94	37.25	100	359	Average
6	2496.00	56.87	61.63	74.00	-17.13	27.55	4.94	37.25	100	359	Peak
7	4824.00	33.29	47.25	54.00	-20.71	31.42	7.70	53.08	120	187	Average
8	4824.00	43.16	57.12	74.00	-30.84	31.42	7.70	53.08	120	187	Peak



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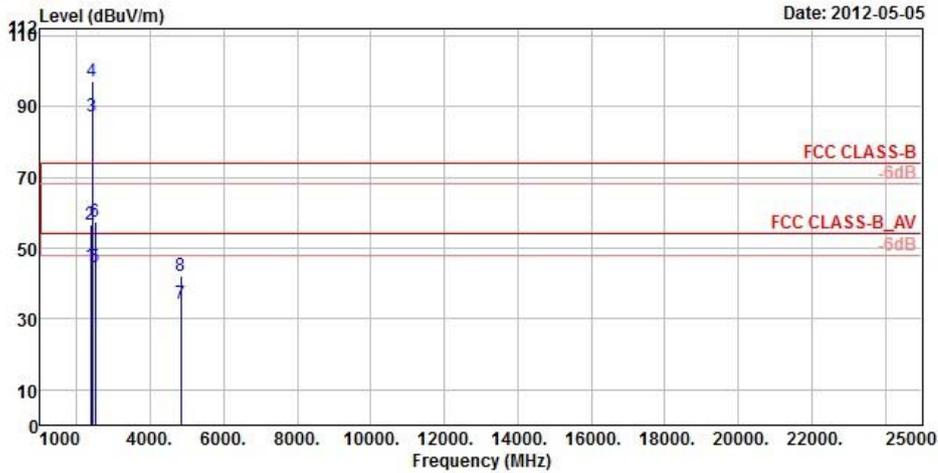


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20

Date: 2012-05-05



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11N HT20 CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : MCS0
 Power : 13

	Freq	Level	Read Level	Limit Line	OverLimit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2364.00	44.91	50.42	54.00	-9.09	27.16	4.82	37.49	102	59	Average
2	2364.00	56.66	62.17	74.00	-17.34	27.16	4.82	37.49	102	59	Peak
3 pp	2412.00	87.26	92.60			27.31	4.87	37.52	102	59	Average
4 pk	2412.00	96.93	102.27			27.31	4.87	37.52	102	59	Peak
5	2492.00	44.83	49.59	54.00	-9.17	27.55	4.94	37.25	102	59	Average
6	2492.00	57.48	62.24	74.00	-16.52	27.55	4.94	37.25	102	59	Peak
7	4824.00	34.35	48.31	54.00	-19.65	31.42	7.70	53.08	100	132	Average
8	4824.00	42.28	56.24	74.00	-31.72	31.42	7.70	53.08	100	132	Peak



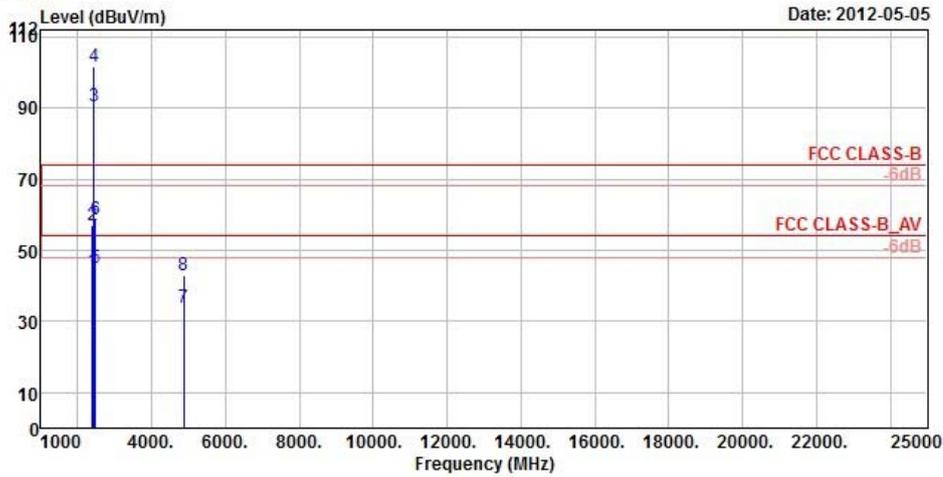
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11N HT20 CH06
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : MCS0
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	44.15	49.54	54.00	-9.85	27.26	4.87	37.52	100	0	Average
2	2390.00	57.15	62.54	74.00	-16.85	27.26	4.87	37.52	100	0	Peak
3	2437.00	90.43	95.60			27.40	4.89	37.46	100	0	Average
4	2437.00	101.57	106.74			27.40	4.89	37.46	100	0	Peak
5	2483.50	44.87	49.77	54.00	-9.13	27.50	4.92	37.32	100	0	Average
6	2483.50	58.73	63.63	74.00	-15.27	27.50	4.92	37.32	100	0	Peak
7	4874.00	33.90	47.70	54.00	-20.10	31.53	7.72	53.05	100	198	Average
8	4874.00	43.03	56.83	74.00	-30.97	31.53	7.72	53.05	100	198	Peak



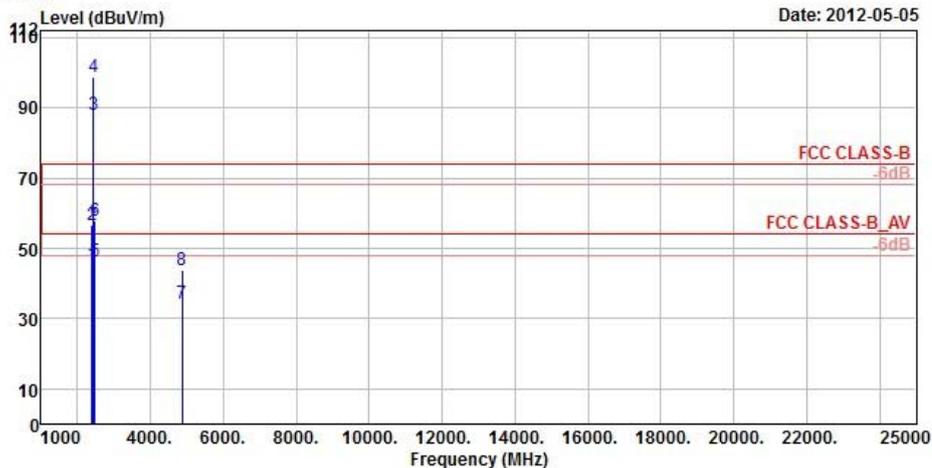
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11N HT20 CH06
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : MCS0
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	45.42	50.81	54.00	-8.58	27.26	4.87	37.52	100	62	Average
2	2390.00	56.70	62.09	74.00	-17.30	27.26	4.87	37.52	100	62	Peak
3 pp	2437.00	88.01	93.18			27.40	4.89	37.46	100	62	Average
4 pk	2437.00	98.77	103.94			27.40	4.89	37.46	100	62	Peak
5	2483.50	46.44	51.34	54.00	-7.56	27.50	4.92	37.32	100	62	Average
6	2483.50	57.85	62.75	74.00	-16.15	27.50	4.92	37.32	100	62	Peak
7	4874.00	34.19	47.99	54.00	-19.81	31.53	7.72	53.05	110	207	Average
8	4874.00	43.67	57.47	74.00	-30.33	31.53	7.72	53.05	110	207	Peak



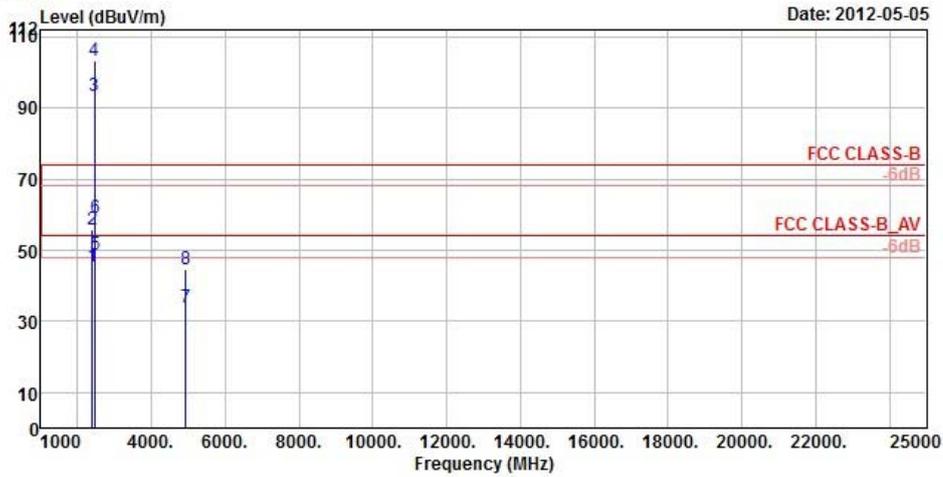
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 19



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11N HT20 CH11
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : MCS0
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg
1	2390.00	45.62	51.01	54.00	-8.38	27.26	4.87	37.52	100	357 Average
2	2390.00	55.83	61.22	74.00	-18.17	27.26	4.87	37.52	100	357 Peak
3 pp	2462.00	93.56	98.59			27.45	4.91	37.39	100	357 Average
4 pk	2462.00	103.41	108.44			27.45	4.91	37.39	100	357 Peak
5 !	2483.50	48.59	53.49	54.00	-5.41	27.50	4.92	37.32	100	357 Average
6	2483.50	59.18	64.08	74.00	-14.82	27.50	4.92	37.32	100	357 Peak
7	4924.00	33.71	47.37	54.00	-20.29	31.64	7.73	53.03	100	145 Average
8	4924.00	44.62	58.28	74.00	-29.38	31.64	7.73	53.03	100	145 Peak



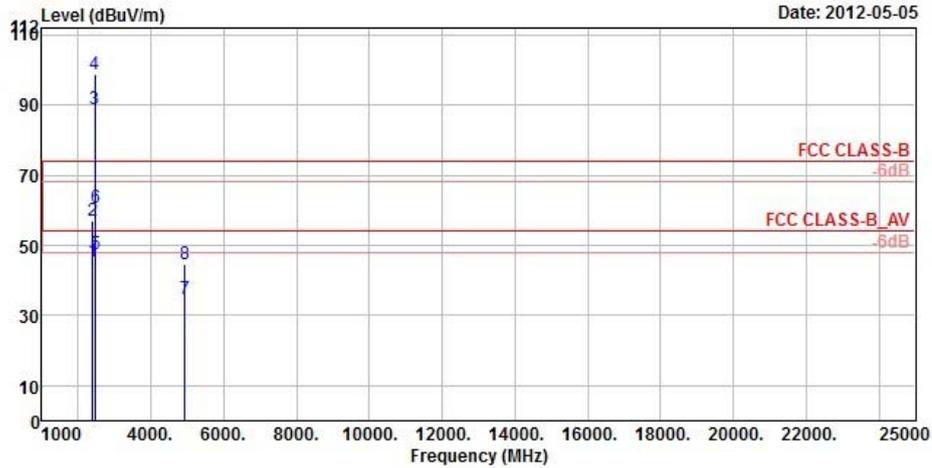
A D T



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 20



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_1G~18G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11N HT20 CH11
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : MCS0
 Power : 13

	Freq	Level	Read Level	Limit Line	OverLimit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	2390.00	45.34	50.73	54.00	-8.66	27.26	4.87	37.52	102	283	Average
2	2390.00	57.04	62.43	74.00	-16.96	27.26	4.87	37.52	102	283	Peak
3 pp	2462.00	88.95	93.98			27.45	4.91	37.39	102	283	Average
4 pk	2462.00	98.98	104.01			27.45	4.91	37.39	102	283	Peak
5	2483.50	47.52	52.42	54.00	-6.48	27.50	4.92	37.32	102	283	Average
6	2483.50	60.73	65.63	74.00	-13.27	27.50	4.92	37.32	102	283	Peak
7	4924.00	34.60	48.26	54.00	-19.40	31.64	7.73	53.03	105	232	Average
8	4924.00	44.50	58.16	74.00	-29.50	31.64	7.73	53.03	105	232	Peak



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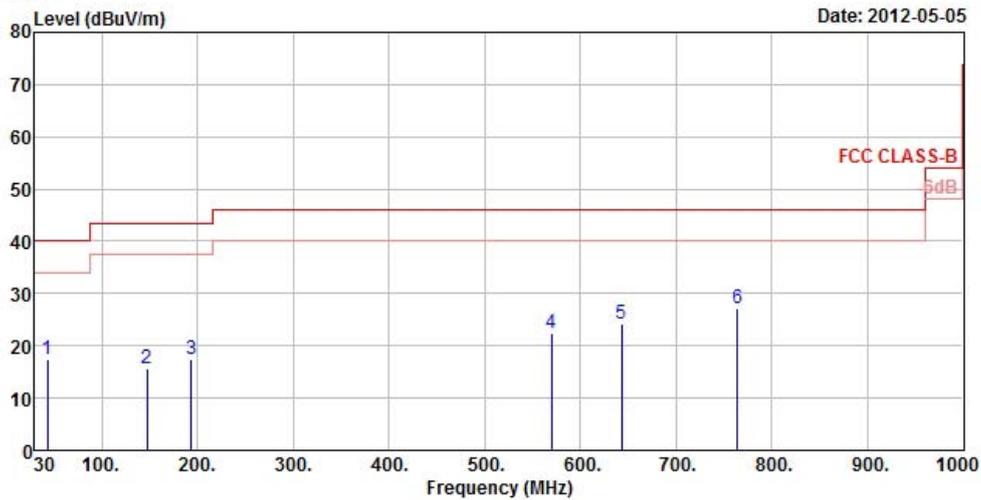
BELOW 1GHz WORST-CASE DATA : 802.11g



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_30M~1G_LF HORIZONTAL
 Brand/Model: PJ40210
 Remark : WIFI TX LF
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	42.96	17.30	34.10	40.00	-22.70	13.58	0.70	31.08	100	127	Peak
2	147.45	15.63	33.31	43.50	-27.87	12.61	1.33	31.62	128	77	Peak
3	193.89	17.38	37.76	43.50	-26.12	9.77	1.56	31.71	132	227	Peak
4	569.50	22.56	32.74	46.00	-23.44	18.90	3.00	32.08	108	55	Peak
5	643.00	24.32	33.04	46.00	-21.68	20.13	3.22	32.07	100	130	Peak
6 pp	764.10	27.22	33.28	46.00	-18.78	21.72	3.61	31.39	100	122	Peak



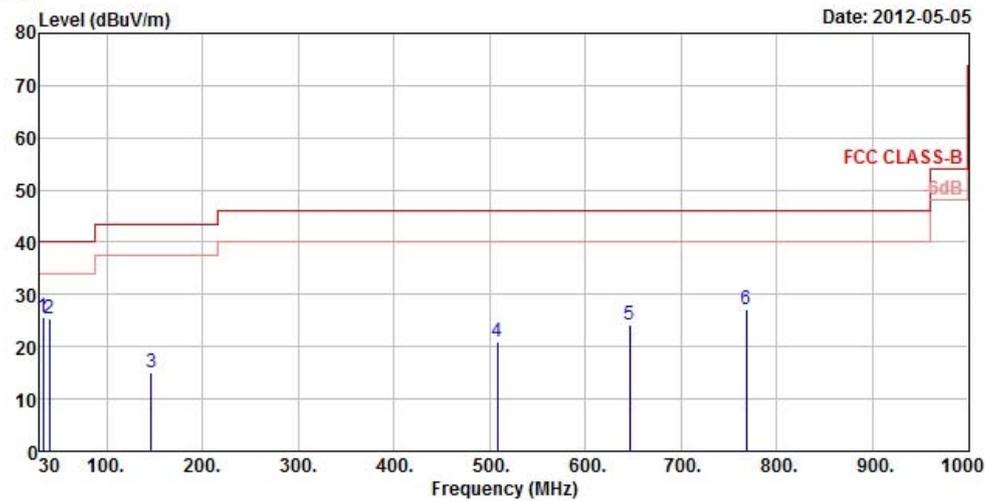
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6



Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_30M~1G_LF VERTICAL
 Brand/Model: PJ40210
 Remark : WIFI TX LF
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBUV/m	dBuV	dBUV/m	dB	dB/m	dB	dB	cm	deg	
1 pp	33.24	25.68	43.72	40.00	-14.32	12.47	0.58	31.09	100	225	Peak
2	40.26	25.38	42.18	40.00	-14.62	13.55	0.67	31.02	100	312	Peak
3	146.37	14.96	32.67	43.50	-28.54	12.58	1.33	31.62	100	158	Peak
4	507.90	21.09	32.37	46.00	-24.91	17.51	2.81	31.60	125	274	Peak
5	646.50	24.34	32.98	46.00	-21.66	20.17	3.23	32.04	112	74	Peak
6	768.30	27.18	33.11	46.00	-18.82	21.78	3.62	31.33	134	66	Peak



A D T

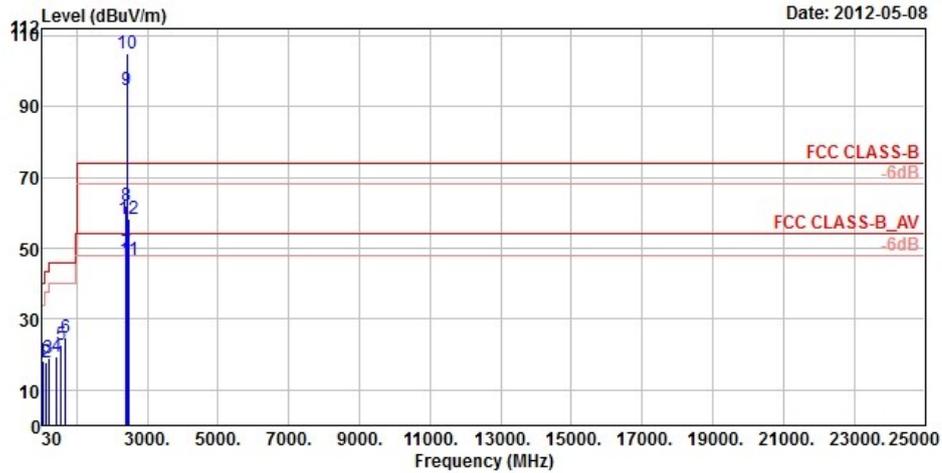
TEST MODE B 802.11g



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 23



Date: 2012-05-08

Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF HORIZONTAL
 Brand/Model: PJ40210
 Remark : 11G TX CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	dB	cm	deg	
1	42.96	18.30	35.10	40.00	-21.70	13.58	0.70	31.08	100	122	Peak
2	147.45	17.63	35.31	43.50	-25.87	12.61	1.33	31.62	102	285	Peak
3	199.83	18.81	39.63	43.50	-24.69	9.36	1.59	31.77	133	332	Peak
4	427.40	19.43	33.03	46.00	-26.57	15.89	2.53	32.02	100	133	Peak
5	569.50	22.56	32.74	46.00	-23.44	18.90	3.00	32.08	110	85	Peak
6	680.10	24.92	32.83	46.00	-21.08	20.57	3.36	31.84	121	133	Peak
7 !	2390.00	48.82	54.21	54.00	-5.18	27.26	4.87	37.52	147	234	Average
8	2390.00	62.19	67.58	74.00	-11.81	27.26	4.87	37.52	147	234	Peak
9 pp	2412.00	94.84	100.18			27.31	4.87	37.52	147	234	Average
10 pk	2412.00	104.92	110.26			27.31	4.87	37.52	147	234	Peak
11	2483.50	46.75	51.65	54.00	-7.25	27.50	4.92	37.32	147	234	Average
12	2483.50	58.07	62.97	74.00	-15.93	27.50	4.92	37.32	147	234	Peak



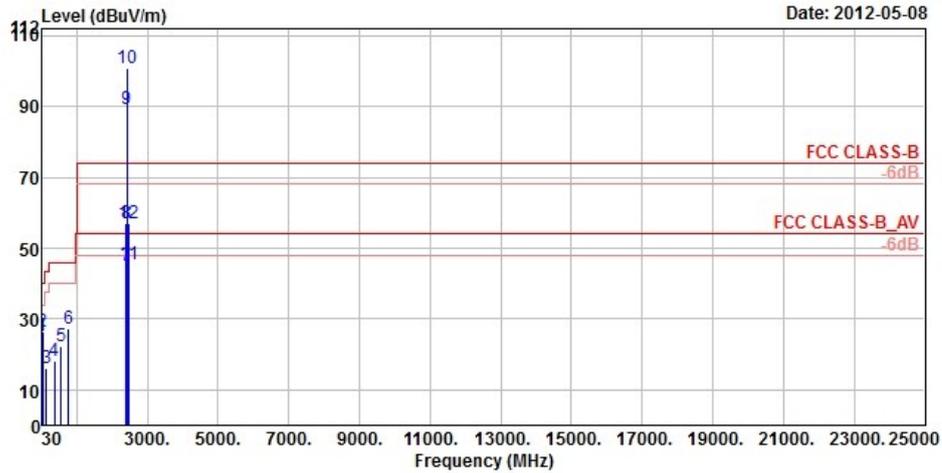
A D T



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 24



Date: 2012-05-08

Site : 966 Chamber 5
 Condition : FCC CLASS-B 3m ANT_18G~40G_HF VERTICAL
 Brand/Model: PJ40210
 Remark : 11G TX CH01
 Tested by : Kay Wu
 Temperature : 25°C
 Humidity : 65%
 Plane : Z
 Rate : 6M
 Power : 13

	Freq	Level	Read Level	Limit Line	OverAntenna Limit	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m	dB	cm	deg	
1	30.54	25.03	43.44	40.00	-14.97	12.14	0.57	31.12	105	77 Peak
2	40.26	26.38	43.18	40.00	-13.62	13.55	0.67	31.02	102	22 Peak
3	146.37	15.96	33.67	43.50	-27.54	12.58	1.33	31.62	122	133 Peak
4	374.90	18.20	33.06	46.00	-27.80	14.75	2.33	31.94	100	222 Peak
5	550.60	22.16	32.69	46.00	-23.84	18.48	2.95	31.96	100	115 Peak
6	768.30	27.18	33.11	46.00	-18.82	21.78	3.62	31.33	100	77 Peak
7	2390.00	44.97	50.36	54.00	-9.03	27.26	4.87	37.52	103	5 Average
8	2390.00	57.15	62.54	74.00	-16.85	27.26	4.87	37.52	103	5 Peak
9 pp	2412.00	89.17	94.51			27.31	4.87	37.52	103	5 Average
10 pk	2412.00	100.67	106.01			27.31	4.87	37.52	103	5 Peak
11	2483.50	45.66	50.56	54.00	-8.34	27.50	4.92	37.32	103	5 Average
12	2483.50	57.04	61.94	74.00	-16.96	27.50	4.92	37.32	103	5 Peak

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	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.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Nov. 19, 2011	Nov. 18, 2012
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 22, 2011	Dec. 21, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Dec. 30, 2011	Dec. 29, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Cond_ V7.3.7	NA	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.

4.2.3 TEST PROCEDURES

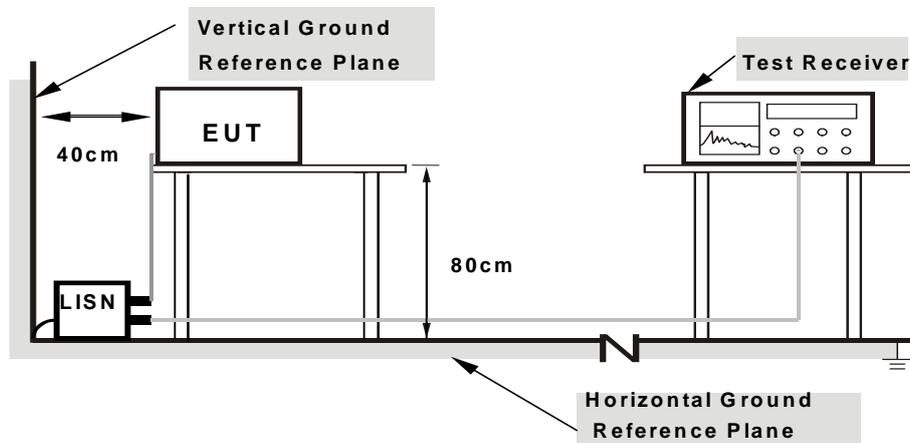
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 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).

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

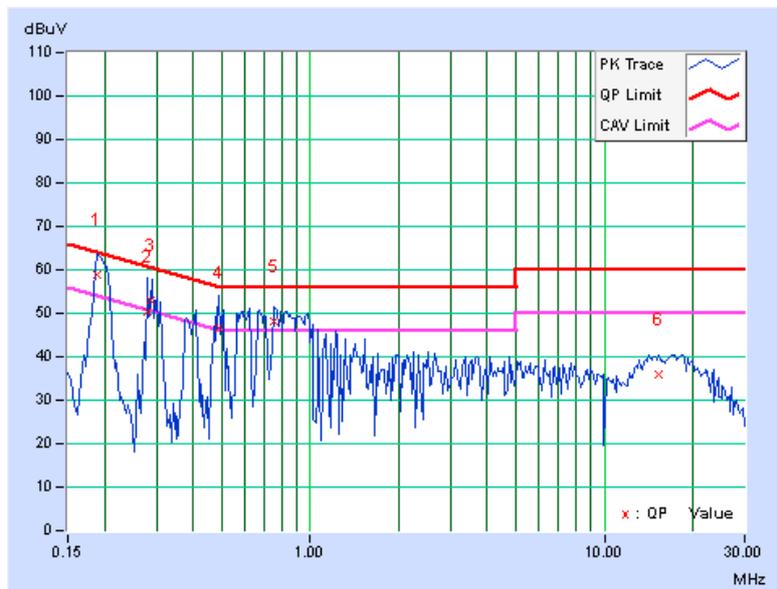
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11g

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.27	58.80	40.26	59.07	40.53	64.08	54.08	-5.01	-13.55
2	0.27890	0.28	50.11	27.57	50.39	27.85	60.85	50.85	-10.46	-23.00
3	0.28677	0.28	52.69	34.58	52.97	34.86	60.62	50.62	-7.65	-15.76
4	0.48984	0.29	46.28	26.80	46.57	27.09	56.17	46.17	-9.60	-19.08
5	0.75547	0.30	47.78	28.10	48.08	28.40	56.00	46.00	-7.92	-17.60
6	15.38672	0.62	35.19	26.63	35.81	27.25	60.00	50.00	-24.19	-22.75

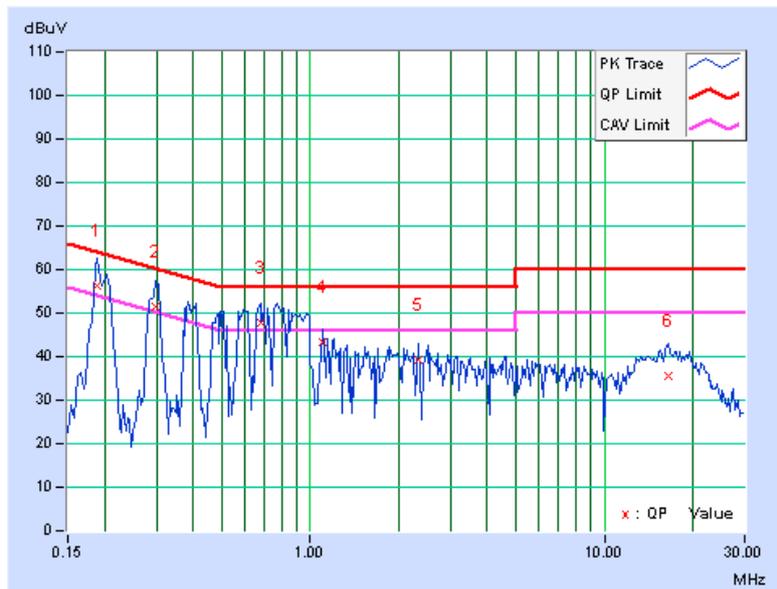
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.29	55.95	37.80	56.24	38.09	64.08	54.08	-7.84	-15.99
2	0.29844	0.29	51.08	33.43	51.37	33.72	60.29	50.29	-8.91	-16.56
3	0.67734	0.31	47.36	29.20	47.67	29.51	56.00	46.00	-8.33	-16.49
4	1.10547	0.33	42.94	22.79	43.27	23.12	56.00	46.00	-12.73	-22.88
5	2.33594	0.41	39.03	23.27	39.44	23.68	56.00	46.00	-16.56	-22.32
6	16.51563	0.78	34.72	25.88	35.50	26.66	60.00	50.00	-24.50	-23.34

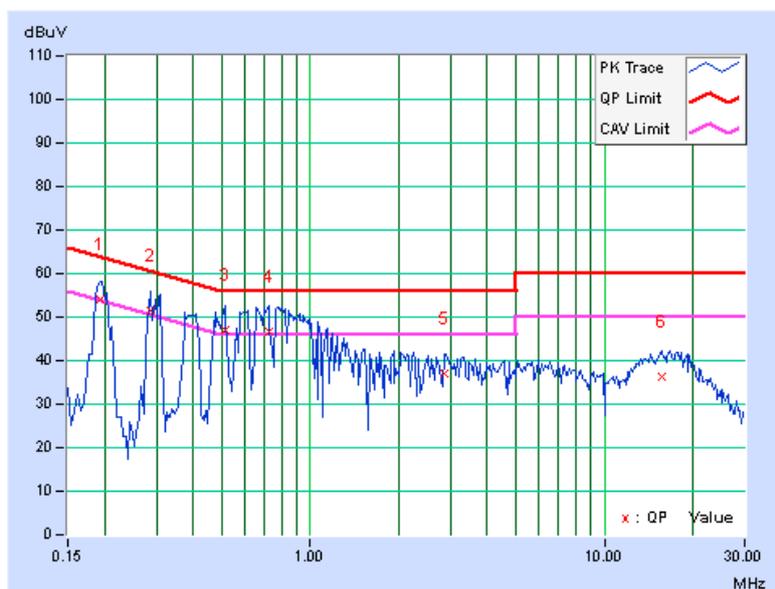
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19297	0.27	53.88	37.99	54.15	38.26	63.91	53.91	-9.76	-15.65
2	0.28672	0.28	51.19	34.47	51.47	34.75	60.62	50.62	-9.15	-15.87
3	0.51328	0.29	46.59	28.02	46.88	28.31	56.00	46.00	-9.12	-17.69
4	0.72422	0.30	46.28	25.71	46.58	26.01	56.00	46.00	-9.42	-19.99
5	2.87500	0.40	36.69	20.83	37.09	21.23	56.00	46.00	-18.91	-24.77
6	15.59766	0.63	35.85	26.15	36.48	26.78	60.00	50.00	-23.52	-23.22

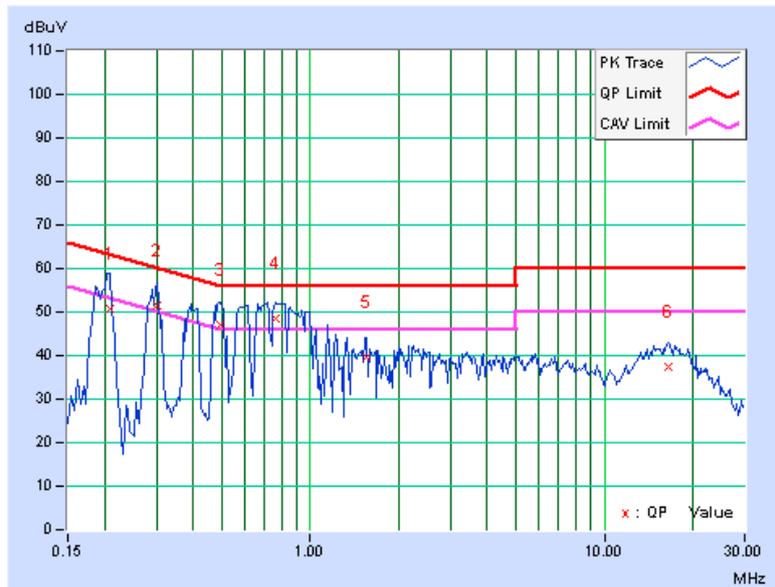
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20859	0.29	50.39	30.54	50.68	30.83	63.26	53.26	-12.58	-22.43
2	0.30234	0.30	51.22	34.67	51.52	34.97	60.18	50.18	-8.66	-15.21
3	0.49766	0.30	46.89	28.48	47.19	28.78	56.04	46.04	-8.85	-17.26
4	0.75938	0.31	48.12	27.89	48.43	28.20	56.00	46.00	-7.57	-17.80
5	1.55078	0.36	39.32	21.96	39.68	22.32	56.00	46.00	-16.32	-23.68
6	16.52734	0.78	36.51	27.97	37.29	28.75	60.00	50.00	-22.71	-21.25

- 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.

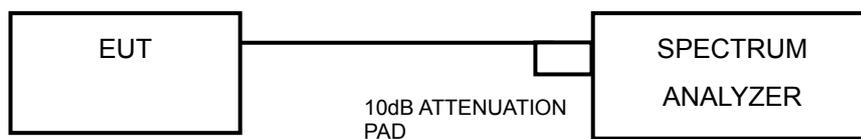


4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.3.4 TEST PROCEDURE

- a. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
- b. Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- c. Trace mode = max hold.
- d. Sweep = auto couple.
- e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

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

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	7.54	0.5	PASS
6	2437	7.54	0.5	PASS
11	2462	7.52	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.92	0.5	PASS
6	2437	15.74	0.5	PASS
11	2462	15.78	0.5	PASS

802.11n (20MHz)

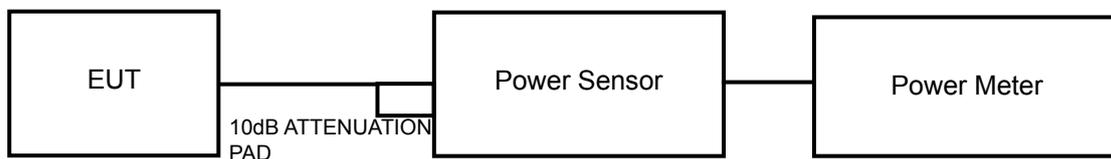
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.26	0.5	PASS
6	2437	17.26	0.5	PASS
11	2462	17.22	0.5	PASS

4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the peak power level.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (W)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	0.128	21.07	30	PASS
6	2437	0.133	21.23	30	PASS
11	2462	0.141	21.48	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (W)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	0.213	23.28	30	PASS
6	2437	0.220	23.42	30	PASS
11	2462	0.243	23.85	30	PASS

802.11n (20MHz)

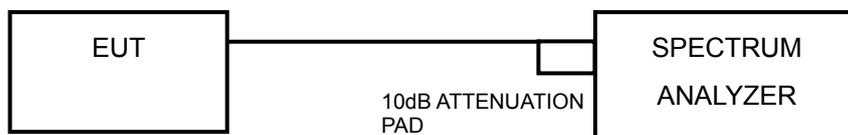
CHANNEL	FREQUENCY (MHz)	PEAK POWER (W)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	0.206	23.13	30	PASS
6	2437	0.220	23.43	30	PASS
11	2462	0.236	23.73	30	PASS

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 SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

- Set the RBW = 100 kHz, VBW = 300 kHz, Detector = peak.
- Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
- Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3 \text{ kHz}/100\text{kHz})$

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	10.12	-5.11	8	PASS
6	2437	12.50	-2.73	8	PASS
11	2462	10.46	-4.77	8	PASS

802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	1.77	-13.46	8	PASS
6	2437	2.13	-13.10	8	PASS
11	2462	2.27	-12.96	8	PASS

802.11n (20MHz)

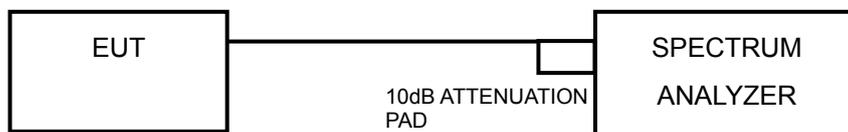
Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	1.90	-13.33	8	PASS
6	2437	2.14	-13.09	8	PASS
11	2462	2.34	-12.89	8	PASS

4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

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

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Set span to encompass the spectrum to be examined.
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

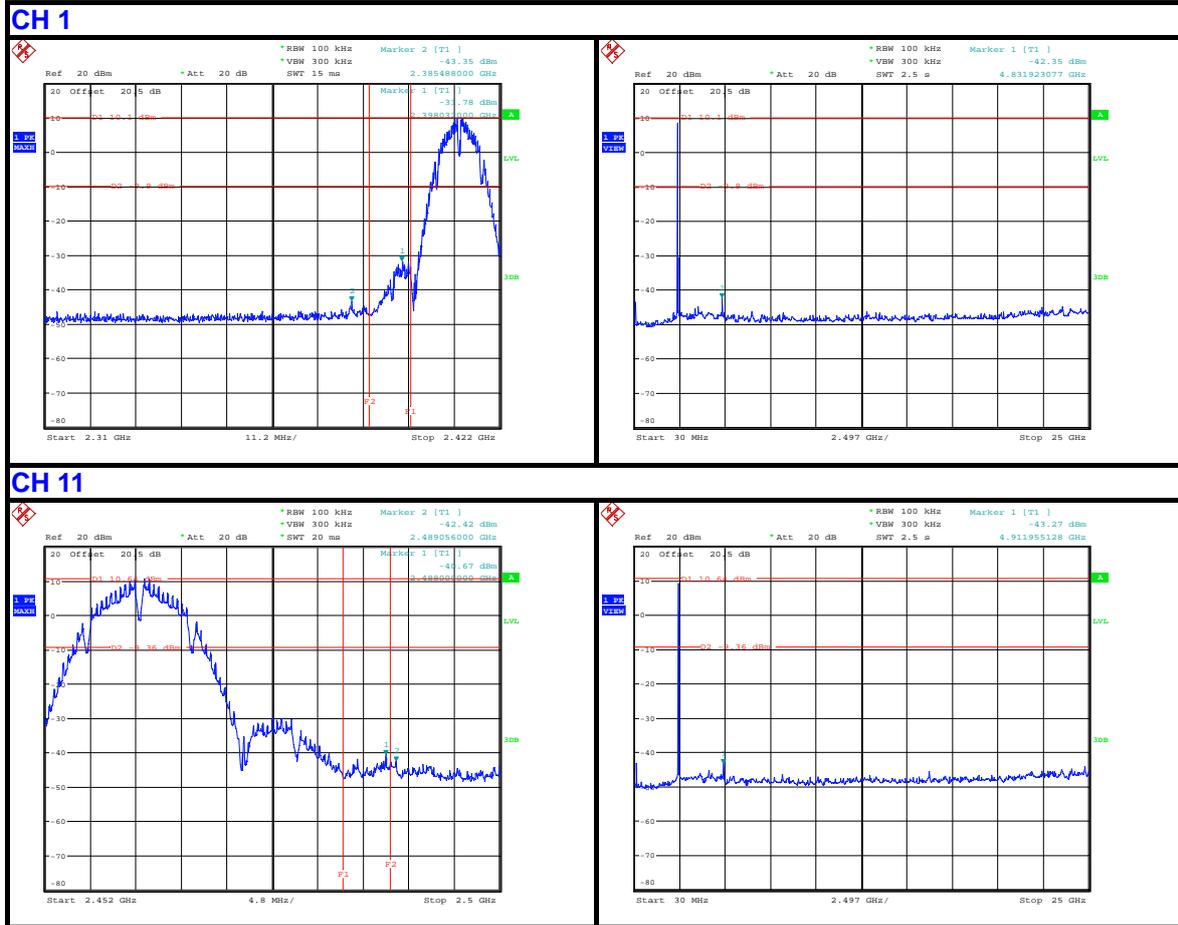
4.6.7 TEST RESULTS

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.



A D T

802.11b

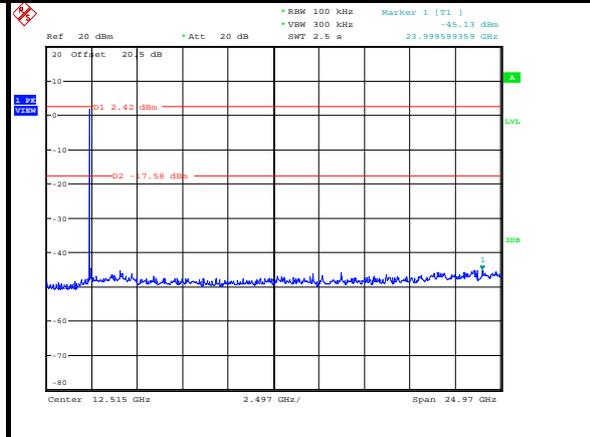
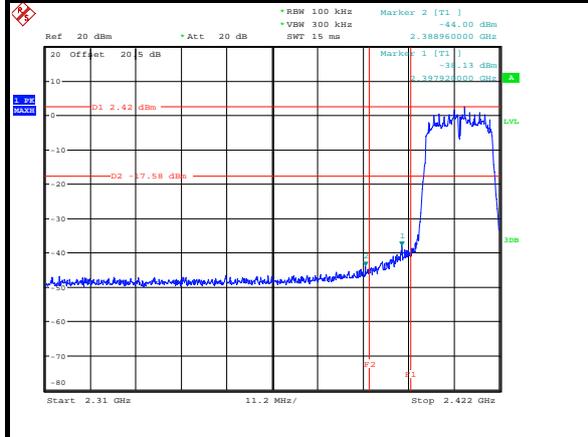




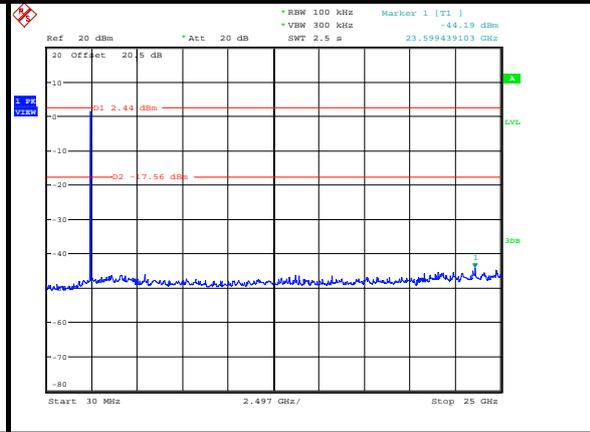
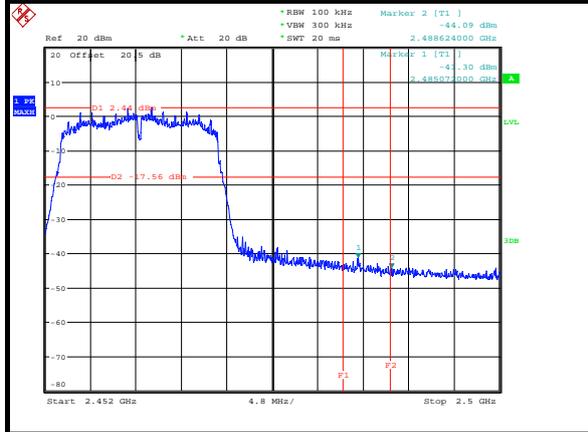
A D T

802.11g

CH 1



CH 11

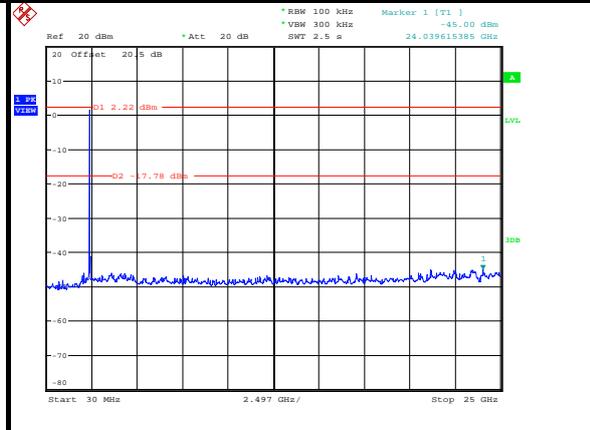
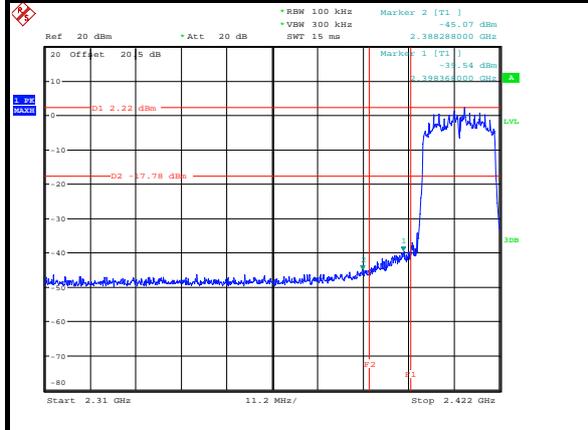




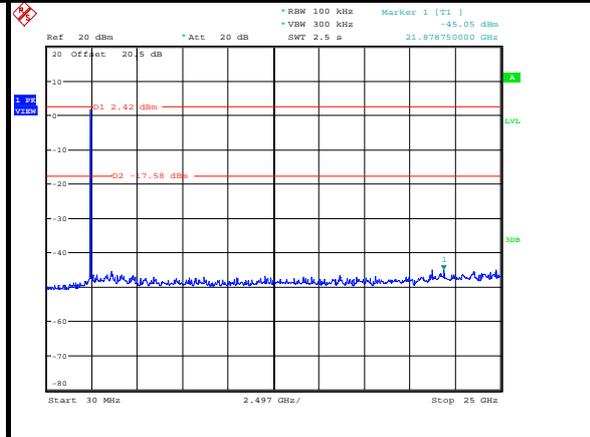
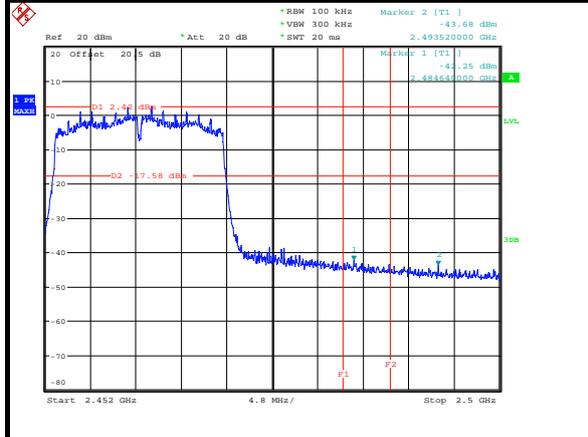
A D T

802.11n (20MHz)

CH 1



CH 11



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 according to ISO/IEC 17025.

Copies of accreditation and authorization 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: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

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---