FCC TEST REPORT

REPORT NO.:	RF981230H01R R1
MODEL NO.:	RTL8188CE
FCC ID:	TX2-RTL8188CE
RECEIVED:	May 06, 2011
TESTED:	May 11 to June 09, 2011
ISSUED:	June 09, 2011

APPLICANT:	Realtek Semiconductor Corp.
ADDRESS:	No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
LAB ADDRESS:	No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan
TEST LOCATION (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan
TEST LOCATION (2):	No.49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF981230H01R	Original release	June 07, 2011
RF981230H01R R1	Added AC Power Conducted Emission test data.	June 09, 2011

1. CERTIFICATION

PRODUCT:	802.11b/g/n RTL8188CE miniCard
BRAND NAME:	Realtek
MODEL NO.:	RTL8188CE
TEST SAMPLE:	MASS-PRODUCTION
TESTED:	May 11 to June 09, 2011
APPLICANT:	Realtek Semiconductor Corp.
STANDARDS:	FCC Part 15, Subpart C (Section 15.247) ANSI C63.4-2003 ANSI C63.10-2009

The above equipment (Model: RTL8188CE) 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:** *June 09, 2011*
(Claire Kuan, Specialist)

APPROVED BY : _____ , **DATE:** *June 09, 2011*
(May Chen, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -14.14dB at 0.158MHz
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –0.9dB at 2483.5MHz
15.203	Antenna Requirement	PASS	Antenna connector is IPEX not a standard connector.

NOTE: This report is prepared for FCC class II permissive change. Only conducted emission, radiated emission and maximum peak output power measurement were presented in this test report.

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:

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

Measurement	**Value**
Conducted emissions	2.45 dB
Radiated emissions (30MHz-1GHz) – Chamber H	3.76 dB
Radiated emissions (1GHz -18GHz) – Chamber G	2.19 dB
Radiated emissions (18GHz -40GHz) – Chamber G	2.55 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	802.11b/g/n RTL8188CE miniCard
MODEL NO.	RTL8188CE
FCC ID	TX2-RTL8188CE
POWER SUPPLY	DC 3.3V from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11 / 5.5 / 2 / 1Mbps 802.11g: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6Mbps 802.11n (20MHz, 800ns GI): 65 / 58.5 / 52 / 39 / 26 / 19.5 / 13 / 6.5Mbps 802.11n (40MHz, 800ns GI): 135 / 121.5 / 108 / 81 / 54 / 40.5 / 27 / 13.5Mbps 802.11n (20MHz, 400ns GI): 72.2 / 65 / 57.8 / 43.3 / 28.9 / 21.7 / 14.4 / 7.2Mbps 802.11n (40MHz, 400ns GI): 150 / 135 / 120 / 90 / 60 / 45 / 30 / 15Mbps
OPRTAING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz)
MAXIMUM OUTPUT POWER	802.11b: 75.9mW 802.11g: 281.8mW 802.11n (20MHz): 269.2mW 802.11n (40MHz): 169.8mW
ANTENNA TYPE	Please see note
ANTENNA CONNECTOR	Please see note
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. This report is a supplementary report. The difference compared with the Report No.: RF981230H01Q design is as the following information:
   - **u** Only modify the original sample Version 0 to Version 0.1, see below table 1

Table 1

Original <Reference Report No.: RF981230H01Q >	
Sample	**Difference**
Verison 0	**PCIe Interface (miniCard) :** -populate R12, R13, R14, R15, C17 -discard R9, R10, C19
Verison 1	**USB Interface (miniCard) :** -populate R9, R10, C19 -discard R12, R13, R14, R15, C17
Newly < Reference Report No.: RF981230H01R >	
Sample	**Difference**
Verison 0.1 (Modified from Verison 0)	**PCIe Interface (miniCard) :** Changed the components as below : L1, C1, C2, C5, C4, C6, C26 < Please refer below table 2 >

Table 2

Components	**Verison 0**	**Version 0.1**
L1	6.8uH	0R
C1	10uF	NP
C2	22uF	4.7uF
C5	10uF	4.7uF
C4	1uF	0.1uF
C6	1uF	0.1uF
C26	1uF	0.1uF

2. For the above condition, only Conducted Emission / Radiated Emission / Maximum Peak Output Power test items need to be performed. And all data was verified to meet the requirements.

3. The EUT has two different types could be chose and please refer the below table:

Brand	Model Name	Type
Realtek	RTL8188CE	One antenna connector
		Two antenna connectors

4. The below antennas provided to this EUT, please refer to the following table:

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
1	wistron	DQ661500301(Main) DQ661500301(Aux)	PIFA	3.45 3.14	NA	I-PEX
2	Quanta Computer Inc	37LX6AATP00 (Tx1) 37LX6AATP00 (Tx2)	PIFA	1.8 -0.3	-1.40 -2.02	I-PEX
3	Quanta Computer Inc	37LX7AATP00 (Tx1) 37LX7AATP00 (Tx2)	PIFA	0.3 1.7	-1.44 -1.79	I-PEX
4	Quanta Computer Inc	3ASP8AATP20 (Tx1) 3ASP8AATP20 (Tx2)	PIFA	1.0 0.2	-1.36 -1.95	SPD
5	ACON	25.90675.001 (Rx) 25.90676.001 (Tx)	PIFA	-0.39 0.64	NA	U.FL
6	WNC	25.90669.001 (Rx) 25.90670.001 (Tx)	PIFA	-1.53 1.32	NA	I-PEX
7	NISSEI ELECTRIC CO., LTD	3209970 (Rx) 3210002 (Tx)	PIFA	1.88 1.26	NA	U.FL
8	ACON	25.90598.001 (Rx) 25.90597.001 (Tx)	PIFA	1.17 1.04	NA	I-PEX
9	WNC	25.90587.001 (Rx) 25.90586.001 (Tx)	PIFA	1.94 0.59	NA	I-PEX
10	ACON	25.90653.001 (Rx) 25.90654.001 (Tx)	PIFA	-0.42 -0.13	NA	I-PEX
11	WNC	25.90649.001 (Rx) 25.90650.001 (Tx)	PIFA	-0.52 0.31	NA	I-PEX
12	Foxconn	024-01F0-2242 (Rx) 024-01F0-2243 (Tx)	PIFA	1.16 -0.88	NA	SGX0003-02
13	NISSEI ELECTRIC CO., LTD	3176658 (Rx) 3176674 (Tx)	PIFA	-0.83 -0.61	NA	U.FL
14	Foxconn	WDAN-L1WK1001-DF (Rx) WDAN-L1WK1002-DF (Tx)	PIFA	1.71 1.43	NA	FOXCONN
15	Hitachi	HMT14-MAIN (Rx) HMT14-AUX (Tx)	PIFA	1.82 1.54	NA	U.FL
16	ACON	25.90700.001 (Rx) 25.90702.001 (Tx)	PIFA	-1.21 1.27	NA	I-PEX
17	ACON	25.90800.001 (Rx) 25.90802.001 (Tx)	PIFA	1.37 1.21	NA	U.FL
18	ACON	APM6P-700033 (Rx) APM6P-700034 (Tx)	PIFA	-0.96 -0.86	NA	I-PEX
19	Amphenol Taiwan Corporation	14G152168231LV (Rx) 14G152168131LV (Tx)	PIFA	-1.85 -1.60	NA	I-PEX
20	ACON	APM6P-700027 (Rx) APM6P-700029 (Tx)	PIFA	-1.32 -0.23	NA	I-PEX
21	TYCO	2023940-1 (Rx) 2023944-1 (Tx)	PIFA	-2.39 1.52	NA	U.FL
22	ACON	APM6P-700028 (Rx) APM6P-700030 (Tx)	PIFA	-1.16 -0.74	NA	I-PEX
23	Tyco Holding (Bermuda) VII Ltd.	2023946-1 (Rx) 2023950-1 (Tx)	PIFA	-0.58 -0.11	NA	U.FL

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
24	Amphenol SAA	LX-0980-11-000-R (Rx) LX-0983-11-000-R (Tx)	PIFA	1.61 1.57	NA	20351-111R-37
25	NISSEI ELECTRIC CO., LTD	3172525 (Rx) 3172566 (Tx)	PIFA	1.35 1.99	NA	U.FL
26	Amphenol	LX0970-11-000-R (Rx) LX0968-11-000-R (Tx)	PIFA	1.47 1.68	NA	U.FL
27	FOXCONN	WDAN-L1ML3001-DF (Rx) WDAN-L1ML3002-DF (Tx)	PIFA	-0.40 1.10	NA	SGX0003-02
28	NISSEI ELECTRIC CO., LTD	3172467 (Rx) 3172509 (Tx)	PIFA	0.54 1.80	NA	U.FL
29	Quanta	DQ6GC200100 (Rx) DQ6GC200200 (Tx)	PIFA	0.1 -0.4	NA	I-PEX
30	Quanta	DQ6GC300100 (Rx) DQ6GC300200 (Tx)	PIFA	-1.3 0.7	NA	I-PEX
31	QUANTA	QADCPS1_WL_M (Rx) QADCPS1_WL_A (Tx)	PIFA	-0.5 -1.4	NA	I-PEX
32	Quanta Computer Inc	QADCFL3 WL M (Rx) QADCFL3 WL A (Tx)	PIFA	-0.1 -0.1	NA	I-PEX
33	ACON	25.90929.001 (Rx) 25.90930.001 (Tx)	PIFA	-0.04 1.16	NA	U.FL
34	Ethertronics, Inc.	25.90934.001 (Rx) 25.90935.001 (Tx)	PIFA	0.60 -0.59	NA	U.FL
35	WNC	25.90919.001 (Rx) 25.90920.001 (Tx)	PIFA	0.87 -0.93	NA	I-PEX
36	Amphenol	C-1334-11-000-26 (Rx) C-1335-11-000-26 (Tx)	PIFA	-0.37 -2.64	NA	U.FL
37	WNC	25.90979.001 (Rx) 25.90980.001 (Tx)	PIFA	0.77 0.74	NA	I-PEX
38	WNC	81.EEO15.001 (Main) 81.EEO15.002 (Aux)	PIFA	1.52 1.72	1.86 2.03	I-PEX
39	WNC	81.EHD15.003 (Main) 81.EHD15.002 (Aux)	PIFA	0.94 -0.77	1.39 1.71	I-PEX
40	WNC	81.EHD15.005 (Tx1) 81.EHD15.004 (Tx2)	PIFA	0.95 -1.51	1.07 1.61	I-PEX
41	WNC	81.EHD15.004 (Main) 81.EHD15.006 (Aux)	PIFA	-1.51 -0.49	1.61 1.82	I-PEX
42	WNC	81.EHD15.004 (Main) 81.EHD15.007 (Aux)	PIFA	-1.51 -0.09	1.61 1.60	I-PEX
43	WNC	81.EHD15.G09 (Tx1) 81.EHD15.G10 (Tx2)	PIFA	-0.31 -1.21	1.08 1.39	I-PEX
44	HON HAI	WDAN-M1WC1001-DF (Main) WDAN-M1MM1001-DF (Aux)	PIFA	-0.28 -1.24	-1.407 1.99	SGX0003-02
45	Amphenol KAE Co., Ltd	SS-03-03-099 (Main) SS-03-03-100 (Aux)	PIFA	0.77 -0.90	1.59 1.76	MHC-231(KAE)
46	HON HAI	WDAN-M1WC1001-DF (Main) WDAN-M1BN1001-DF (Aux)	PIFA	-0.28 -0.14	-1.407 2.30	SGX0003-02
47	HON HAI	WDAN-M1NY1001-DF (Main)	PIFA	0.56	-0.054	SGX0001-00

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
48	HON HAI	WDAN-M1PB1001-DF (Tx1) WDAN-M1PB1002-DF (Tx2)	PIFA	0.54 -1.40	0.99 1.36	SGX0003-02
49	HON HAI	WDAN-M1SN1002-DF (Main) WDAN-M1SN1001-DF (Aux)	PIFA	0.93 -0.53	-1.357 -1.727	SGX0003-02
50	HON HAI	WDAN-M1OS1001-DF (Main) WDAN-M1OS1002-DF (Aux)	PIFA	0.13 -0.13	-1.871 -2.072	SGX0003-02
51	HON HAI	WDAN-M1WC1002-DF (Main) WDAN-M1WC1001-DF (Aux)	PIFA	0.18 -0.28	-0.866 -1.407	SGX0003-02
52	Hitachi	HFT40 (Tx1) HFT40 (Tx2)	PIFA	0.58 1.12	1.42 2.12	IPEX
53	Hitachi	HFT60 (Tx1) HFT60(Tx2)	PIFA	-1.65 -0.92	1.48 2.18	IPEX
54	WNC	WNC001 (Main) WNC001(Aux)	PIFA	-1.10 1.76	1.17 1.17	IPEX
55	WNC	WNC002 (Main) WNC002 (Aux)	PIFA	-0.37 -0.21	2.28 2.12	IPEX
56	Tyco Holding (Bermuda) VII Ltd.	TBN001 (Main) TBN001 (Aux)	PIFA	3.45 2.41	1.45 2.13	I.P.X
57	Tyco Holding (Bermuda) VII Ltd.	TBN003 (Main) TBN003 (Aux)	PIFA	-1.11 -1.11	1.84 2.16	I.P.X
58	Hitachi	HBY07 (Tx1) HBY07 (Tx2)	PIFA	2.19 -0.33	0.95 0.95	IPEX
59	Hitachi	HBY051 (Tx1) HBY051 (Tx2)	PIFA	2.91 2.82	0.95 0.95	IPEX
60	Hitachi	HBY052 (Tx1) HBY052 (Tx2)	PIFA	0.27 0.02	0.95 0.95	IPEX
61	Hitachi	HBY061 (Tx1) HBY061 (Tx2)	PIFA	1.30 2.42	0.95 0.95	IPEX
62	Hitachi	HBY062 (Tx1) HBY062 (Tx2)	PIFA	-1.04 -1.19	0.95 0.95	IPEX
63	Hitachi	HFT65 (Tx1) HFT65 (Tx2)	PIFA	-1.74 1.16	0.95 0.95	IPEX
64	Hitachi	HCT01 (Main) HCT01 (Aux)	PIFA	0.87 1.94	0.89 0.89	IPEX or HRS
65	FOXCONN	WDAN-TQ (Tx1) WDAN-TQ (Tx2)	PIFA	-0.43 -0.7	2.5 2.5	SGX0001-00
66	tyco	TBN005 TBN006	PIFA	2.09 3.40	NA	IPEX
67	WNC	WNC004 (Main) WNC004 (Aux)	PIFA	2.40 1.50	1.53 1.92	IPEX
68	Tyco Holding (Bermuda) VII Ltd.	TBN008 (Tx1) TBN008 (Tx2)	PIFA	-0.10 -0.92	1.85 2.66	Technova
69	TYCO	TBN008 (Tx1) TBN008 (Tx2)	PIFA	0.47 0.06	1.81 1.60	IPEX
70	Tyco	TBN008 (Tx1) TBN008 (Tx2)	PIFA	-2.60 -0.26	2.34 2.13	IPEX
71	Tyco	TBN007 (Tx1) TBN007 (Tx2)	PIFA	1.98 1.97	-0.97 -0.97	U.F.L

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
72	SmartApproach Co., Ltd	03-FR021-016 (Tx1) 03-FR021-016 (Tx2)	PIFA	2.32 0.49	1.03 1.11	IPEX
73	WNC	81XCAE15.G07 (Main) 81XCAE15.G08 (Aux)	PIFA	-3.20 '-2.99	NA	IPEX
74	ACON	AMP8P-700130 (Main) AMP8P-700131 (Aux)	PIFA	1.89 -2.13	NA	IPEX
75	WNC	WNC005 (Main) WNC005 (Aux)	PIFA	-2.76 -3.64	1.86 2.54	IPEX
76	WHAYU	MSA-00005A (Main) MSA-00005A (Aux)	PIFA	-2.12 -2.49	-1.55 -2.16	Tnov
77	WNC	WNC003 (Main) WNC003 (Aux)	PIFA	0.52 1.07	1.49 2.13	IPEX
78	Hitachi	HFS23	PIFA	-0.8	0.89	IPEX or HRS
79	Hitachi	HFS40	PIFA	0.64	0.89	IPEX or HRS
80	Tyco Electronic AMPKK	TBN004 (Main) TBN004 (Aux)	PIFA	0.28 -0.83	0.98 0.98	U.FL
81	Well Green	SKM11WMPB01+C (Tx1) SKM11WMPB02+D (Tx2)	PIFA	-1.70 -3.05	-1.41 -1.11	IPEX
82	Favortron CO.,LTD (FVC)	N01001165001 (Tx1) N01001165001 (Tx2)	PIFA	1.15 0.98	-2.38 -2.34	IPEX
83	Favortron CO.,LTD (FVC)	N01001177001 (Tx1) N01001177001 (Tx2)	PIFA	0.83 1.62	-2.6 -2.73	IPEX
84	Favortron CO.,LTD (FVC)	N01001175001 (Tx1) N01001176001 (Tx2)	PIFA	2.58 1.65	-3.55 -2.42	IPEX
85	Favortron CO.,LTD (FVC)	N01001080001 (Tx1) N01001080001 (Tx2)	PIFA	1.06 1.46	-2.03 -2.07	IPEX
86	Smart Approach Co., Ltd.	03-FR021-026 (Tx1) 03-FR021-026 (Tx2)	PIFA	1.51 1.56	1.26 1.69	IPEX
87	Smart Approach Co., Ltd.	03-FR021-020 (Tx1) 03-FR021-020 (Tx2)	PIFA	1.66 1.83	1.27 1.28	IPEX
88	ACON	AMP8P-700167 (Tx1) AMP8P-700167 (Tx2)	PIFA	1.47 0.35	0.71 1.13	IPEX, MHF, HRS, U.FL
89	Smart Approach Co., Ltd.	SE-0730G-ECM11 (Tx1) SE-0730G-ECM11 (Tx2)	PIFA	2.51 -0.51	1.18 1.85	IPEX, EP
90	WNC	81.EKJ15.G22 (Main) 81.EKJ15.G22 (Aux)	PIFA	-0.21 2.19	1.51 2.24	IPEX
91	Amphenol Taiwan Corporation	FL5130-11-002-C (Tx1) FL5130-11-003-C (Tx2)	PIFA	0.30 -0.20	1.33 1.72	IPEX, Technova
92	YAGEO	B2885050G00003 (Tx1) B2885050G00003 (Tx2)	PIFA	1.17 -0.85	1.00 1.30	Hirose, U.FL-LP, equivalent
93	Quanta	QADCFL3_WL_M (Main) QADCFL3_WL_A (Aux)	PIFA	-0.1 -0.1	NA	IPEX
94	Hitachi	HFT60 (Tx1) HFT60 (Tx2) *peak gain, cable loss & cable length are different with antenna no. 53.	PIFA	2.97 0.90	0.32 0.32	IPEX or HRS

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
95	WONDERFUL HI-TECH CO., LTD.	A6P1WFI0100A1 (Main) A6P1WFI0100A1 (Aux)	Dipole	1.76 1.76	NA	MHF
96	Auden	220265-09 (Tx1) 220265-09 (Tx2)	PIFA	-0.36 -0.53	1.57 1.08	U.FL
97	WNC	81XCAE15.G13 (Main) 81XCAE15.G14 (Aux)	PIFA	3.18 2.84	0.83 0.92	IPEX
98	Smart Approach Co., Ltd.	SE-042C0-ECL30 (Tx1) SE-042D0-ECL30 (Tx2)	PIFA	0.90 2.75	0.51 0.51	IPEX, EP
99	WNC	81.EJZ15.G52 (Main) 81.EJZ15.G52 (Aux)	PIFA	-1.08 -0.62	2.22 3.03	Ipex
100	WNC	81.EJT15.GJC (Main) 81.EJT15.GJC (Aux)	PIFA	-0.58 -1.26	2.20 3.01	IPEX
101	WNC	81.EJT15.GGW (Main) 81.EJT15.GGW (Aux)	PIFA	0.52 0.77	2.40 3.25	IPEX
102	WNC	81.EJZ15.G53 (Main) 81.EJZ15.G53 (Aux)	PIFA	-0.78 -2.14	2.45 3.24	IPEX
103	Ethertronics Inc.	5002011-1 (TX1) 5002012-1 (TX2)	PIFA	0.12 -3.87	NA	Technova
104	Ethertronics Inc.	5010011-1 (TX1) 5010012-1 (TX2)	PIFA	-1.76 -2.61	NA	Technova
105	QUANTA	AN-070-G(R) (TX1) AN-070-G(L) (TX2)	PIFA	-0.7 -1.9	-2.1 -3	IPEX
106	QUANTA	AN-070-G(R) (TX1) AN-070-G(L) (TX2)	PIFA	-0.3 -1.9	-2.1 -3	IPEX
107	Quanta	AN-120-F(R) (TX1) AN-120-F(L) (TX2)	PIFA	-0.4 -0.3	-2.1 -3	IPEX
108	Quanta	AN-120-F(R) (TX1) AN-120-F(L) (TX2)	PIFA	-1.8 -4.4	-2.1 -3	IPEX
109	Ethertronics Inc.	5002015-1 (TX1) 5002016-1 (TX2)	PIFA	0.76 0.59	NA	Technova
110	Ethertronics Inc.	5010015-1 (TX1) 5010016-1 (TX2)	PIFA	-0.84 -2.07	NA	Technova
111	WNC	25.90A0S.001 (Main) 25.90A0R.001 (Aux)	PIFA	-0.22 -0.74	1.55 2.05	IPEX
112	Dail Fong	AN-PF010008 (Main) AN-PF010007 (Aux)	PIFA	1.79 1.49	0.58 1.05	IPX
113	KimWell	R064018R (Main) R064019R (Aux)	PIFA	1.7 1.42	0.6 1.1	IPX
114	WGT	43R-A14001-0300 (Main) 43R-A14001-0310 (Aux)	PIFA	0.73 0.72	NA	IPEX
115	JEM	43R-A15001-0200 (Main) 43R-A15001-0210 (Aux)	PIFA	1.32 0.56	NA	IPEX
116	SPEEDTECH	43R-A15001-0100 (Main) 43R-A15001-0110 (Aux)	PIFA	2.99 0.35	NA	IPEX
117	WGT	43R-A15001-0300 (Main) 43R-A15001-0310 (Aux)	PIFA	1.54 -0.15	NA	IPEX
118	WGT	43R-B13001-0300 (Main) 43R-B14001-0310 (Aux)	PIFA	-1.49 -0.69	NA	IPEX
119	JEM	43R-DB1401-0200 (Main) 43R-B13001-0220 (Aux)	PIFA	0.20 2.23	NA	IPEX
120	WGT	43R-B14001-0300 (Main)	PIFA	0.85	NA	IPEX

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
121	JEM	43R-DB1401-0200 (Main) 43R-DA1801-0200 (Aux)	PIFA	3.10 2.98	NA	IPEX
122	WGT	43R-DA1801-0300 (Main) 43R-DA1801-0310 (Aux)	PIFA	1.56 2.23	NA	IPEX
123	JEM	43R-XS3501-0200 (Main) 43R-XS3501-0210 (Aux)	PIFA	-0.05 1.17	NA	IPEX
124	SPEEDTECH	43R-XS3501-0100 (Main) 43R-XS3501-0110 (Aux)	PIFA	1.12 1.62	NA	IPEX
125	WGT	43R-B14001-0300 (Main) 43R-B14001-0310 (Aux)	PIFA	1.06 0.85	NA	IPEX
126	Hitachi Cable	HBY17 (Tx1) HBY17 (Tx2)	PIFA	-0.36 0.97	0.99 0.99	IPEX
127	Tyco Electronic Japan G.K.	TBN009 (Tx1) TBN009 (Tx2)	PIFA	0.22 0.33	0.96 0.95	U.FL
128	Tyco Electronic Japan G.K.	TBN010 (Tx1) TBN010 (Tx2)	PIFA	1.68 1.45	0.96 0.95	U.FL
129	Aristotle	RFA-29-P86-L RFA-29-P86-R	PIFA	3.4 3.4	NA	IPEX
130	Aristotle	RFA-02-P24-70-305-L RFA-02-P24-70B-340-R	PIFA	0.88 0.88	NA	IPEX
131	Smart-Approach	SE-056A0-ECLB5 (Tx1) SE-056B0-ECLB5 (Tx2)	PIFA	0.29 0.37	1.63 2.67	IPX, EP
132	Smart-Approach	SE-084BC-ECCM1 (Tx1) SE-084CD-ECCM1 (Tx2)	PIFA	2.51 1.67	1.36 2.19	IPX
133	Smart-Approach	SE-088AC-ECBL1 (Main) SE-088BD-ECBL1 (Aux)	PIFA	1.87 1.69	1.80 3.46	IPX
134	Whayu	C923-520027-A (Main) C435-520021-A (Aux)	PIFA	0.20 -2.31	1.95 2.89	IPEX
135	WNC	81.EE215.G53 (Tx1) 81.EE215.G54 (Tx2)	PIFA	-2.03 -0.96	1.82 2.86	IPEX
136	YAGEO	CAN43130WLCO03171 (Tx1) CAN43130WLCO03172 (Tx2)	PIFA	-1.55 -2.13	1.33 2.20	Hirose, U.FL-LP, IPEX, MHF
137	Speed	720700300110	PIFA	1.09	NA	IPEX, MHF
138	JEM	43R-A15001-0220(Main) 43R-A15001-0230 (Aux)	PIFA	1.89 0.01	NA	IPEX
139	WGT	43R-A15001-0320 (Main) 43R-A15001-0330 (Aux)	PIFA	1.17 0.85	NA	IPEX
140	South Star	WF06 (L) WF06 (R)	PIFA	3.12 2.71	NA	IPEX
141	South Star	WIFI-L WIFI-R	PIFA	2.96 2.79	NA	IPEX
142	Hispeed	G-EJ-0028 (Main) G-EJ-0027 (Aux)	PIFA	3.02 1.8	NA	IPEX
143	ZTX	ZTX-A162-S10000-00 ZTX-A162-S10000-01	PIFA	1.66 1.82	NA	IPEX
144	Smart Approach	SE-001BC-ECLA0 (Main) SE-002AD-ECLA0 (Aux)	PIFA	1.17 -1.81	1.4 1.59	IPX
145	Foxconn	WDAN-HMCH1401-DH/79010T000-600-G (Tx1) WDAN-HMCH1402-DH/79010SY00-600-G (Tx2)	PIFA	-0.99 -0.09	1.05 1.82	IPEX

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
146	Yageo	CAN43130WIFO04921/79010SQ00-011-G (Tx1) CAN43130WIFO04922/79010SR00-011-G (Tx2)	PIFA	0.23 1.53	1.08 1.88	Hirose, U.FL-LP, IPEX, MHF
147	WHAYU	C107-520757-A/79010T100-12S-G (Tx1) C107-520756-A/79010SS00-12S-G (Tx2)	PIFA	-0.18 2.58	1.30 1.30	IPEX
148	Foxconn	WDAN-HMCH1501-DH/79010SW00-600-G (Tx1) WDAN-HMCH1502-DH/79010SV00-600-G (Tx2)	PIFA	-0.35 0.38	1.22 2.03	IPEX
149	WNC	25.90A1E.001 (Main) 25.90A1F.001 (Aux)	PIFA	1.89 -0.90	-1.85 -1.84	IPEX
150	Yageo	25.90A1E.011 (Main) 25.90A1F.011 (Aux)	PIFA	1.94 1.78	1.95 2.04	U.FL
151	WNC	25.91370.021 (Main) 25.91371.021 (Aux)	PIFA	0.51 0.58	1.40 1.73	IPEX
152	Yageo	25.91370.011 (Main) 25.91371.011 (Aux)	PIFA	1.06 0.16	1.36 2.00	U.FL
153	Quanta	DQ6GC200100 (Main) DQ6GC200200 (Aux)	PIFA	0.1 -0.4	NA	IPEX
154	Tyco	25.90A4C.021 (Main) 25.90A4D.021 (Aux)	PIFA	0.06 0.18	1.55 1.60	U.FL
155	WNC	25.90A4C.001 (Main) 25.90A4D.001 (Aux)	PIFA	1.52 -0.60	1.83 1.84	U.FL
156	YAGEO	25.90A4C.011 (Main) 25.90A4D.011 (Aux)	PIFA	0.93 -0.17	1.64 1.65	U.FL
157	ACON	25.90929.001 (Main) 25.90930.001 (Aux)	PIFA	-0.04 1.16	NA	IPEX, Hirose, U.FL-LP
158	Ethertronics Inc.	25.90934.001 (Main) 25.90935.001 (Aux)	PIFA	0.60 -0.59	NA	U.FL
159	WNC	25.90919.001 (Main) 25.90920.001 (Aux)	PIFA	0.87 -0.93	NA	IPEX
160	Tyco	25.90A2G.021 (Main) 25.90A2H.021 (Aux)	PIFA	-0.38 1.04	1.49 1.59	IPEX
161	WNC	25.90A2G.001 (Main) 25.90A2H.001 (Aux)	PIFA	1.23 0.29	1.65 1.74	IPEX
162	YAGEO	25.90A2G.011 (Main) 25.90A2H.011 (Aux)	PIFA	0.48 -1.37	1.50 1.60	U.FL
163	Amphenol	C-2238-11-000-26 (Main) C-2239-11-000-26 (Aux)	PIFA	-1.31 -3.09	0.92 1.08	U.FL
164	Amphenol	C-1952-11-000-26 (Main) C-1953-11-000-26 (Aux)	PIFA	0.35 -1.20	0.92 1.08	U.FL
165	Foxconn	WDAN-LFNZ3001-DH (Main) WDAN-LFNZ3002-DH (Aux)	PIFA ; Coupling Type Inverted F Antenna	1.14 0.61	1.03 1.12	IPEX
166	Tyco	1556219-1 (Main) 1556220-1 (Aux)	PIFA	0.64 -0.92	1.24 1.98	IPEX
167	ACON	APP8P-700189 (Main) APP8P-700190 (Aux)	PIFA	2.00 0.13	1.36 1.98	IPEX, MHF, U.FL-LP

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
168	ACON	APP8P-700191 (Main) APP8P-700192 (Aux)	PIFA	2.00 0.13	1.36 1.98	IPEX, MHF, U.FL-LP
169	Tyco	1556216-1 (Main) 1556215-1 (Aux)	PIFA	0.64 -0.92	1.24 1.98	IPEX
170	Quanta	DQ6GC300100 (Main) DQ6GC300200 (Aux)	PIFA	-1.3 0.7	NA	IPEX
171	Amphenol	C-2381-11-000-26 (Main) C-2382-11-000-26 (Aux)	PIFA	-1.54 -2.93	1.09 1.28	U.FL
172	Foxconn	WDAN-LWSN3001-DH (Main) WDAN-LWSN3002-DH (Aux)	PIFA ; Coupling Type Inverted F Antenna	0.87 0.49	1.40 1.43	IPEX
173	Quanta	DQ622026000 (Tx1) DQ622026000 (Tx2)	PIFA	-1.1 -2.8	-1.8 -2.5	IPEX
174	Quanta	3XTW9AA0000-1 (Tx1) 3XTW9AA0000-2 (Tx2)	PIFA	-2.3 -2.3	-1.8 -2.3	U.FL
175	Smart Approach	SE-00100-EQQUC (Main) SE-00100-EQQUC (Aux)	PIFA	0.15 1.12	0.94 1.77	IPEX
176	Wellshine	7KLQUT-AN020 (Tx1) 7KLQUT-AN020 (Tx2)	PIFA Stamping	0.11 1.17	1.74 0.95	IPEX
177	JEM	IA-100193 (Main) IA-100194 (Aux)	PIFA	1.27 -1.27	1.56 2.36	IPEX
178	ACON	APP8P-700236 (Main) APP8P-700237 (Aux)	PIFA	0.64 1.94	1.26 1.44	IPEX
179	ACON	APP6P-700549 (Main) APP6P-700550 (Aux)	PIFA	1.99 1.41	1.26 1.44	IPEX
180	Smart Approach	SE-ECLA0-001 (Main) SE-ECLA0-002 (Aux)	PIFA	0.57 -1.84	1.37 1.55	IPEX
181	ACON	AMP8P-700186 (Main) AMP8P-700187 (Aux)	PIFA	1.96 1.91	1.58 2.29	IPEX, U.FL, MHF
182	Amphenol	FL5202-11-001-C (Tx1) FL5202-11-001-C (Tx2)	PIFA	-1.41 -0.77	1.38 1.88	U.FL
183	Amphenol	IV5233-15-003-C (Tx1) IV5233-15-002-C (Tx2)	PIFA	0.54 -0.53	1.56 2.37	GBE
184	Amphenol	IV5218-11-002-C (Tx1) IV5218-11-001-C (Tx2)	PIFA	0.55 0.31	1.36 2.23	U.FL
185	Amphenol	FX5170-15-004-C (Tx1) FX5170-15-001-C (Tx2)	PIFA	0.76 -2.11	0.80 1.62	IPEX, Technova
186	HON HAI	WDAN-HMEDW005-DH (Tx1) WDAN-HMEDW005-DH (Rx2)	PIFA	-1.85 1.33	0.67 1.34	IPEX
187	WNC	6036B0086802 (Tx1) 6036B0087102 (Tx2)	PIFA	-1.30 -0.49	1.09 1.36	U.FL
188	WNC	6036B0088203 (Main) 6036B0088303 (Aux)	PIFA	0.50 0.12	1.83 2.25	U.FL
189	WNC	6036B0088203 (Main) 6036B0088303 (Aux)	PIFA	1.21 -0.07	1.83 2.25	U.FL
190	WNC	6036B0087303 (Main) 6036B0087203 (Aux)	PIFA	2.34 1.28	1.76 2.45	U.FL
191	WNC	6036B0091201 (Main) 6036B0091401 (Aux)	PIFA	-1.11 -0.95	1.85 2.71	U.FL
192	YAGEO	CAN43130LIIN03863 (Tx1) CAN43130LIIN03864 (Tx2)	PIFA	-2.69 -1.09	1.04 1.78	Technova

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
193	YAGEO	6036B0091202 (Tx1) 6036B0091402 (Tx2)	PIFA	0.80 0.25	1.30 1.98	Technova
194	YAGEO	CAN43130LIIN03841 (Tx1) CAN43130LIIN03842 (Tx2)	PIFA	1.46 0.95	1.22 2.03	Technova
195	YAGEO	6036B0088401 (Tx1) 6036B0088501 (Tx2)	PIFA	0.61 0.71	1.90 2.40	Technova
196	ACON	APP8P-700186 (Main) APP8P-700185 (Aux)	PIFA	1.84 0.07	0.81 1.12	I-PEX-MHF, U.FL, Technova
197	ACON	APP8P-700188 (Main) APP8P-700187 (Aux)	PIFA	1.84 0.07	0.81 1.12	I-PEX-MHF, U.FL, Technova
198	WHAYU	C435-520042-A (Main) C435-520045-A (Aux)	PIFA	1.91 1.88	1.11 1.85	Technova
199	WHAYU	C435-520044-A (Main) C435-520043-A (Aux)	PIFA	1.96 1.97	1.11 1.85	Technova
200	ACON	AMP6P (Tx1) AMP6P (Tx2)	PIFA	0.00 1.89	0.86 0.86	I-PEX, Hirose, U.FL-L(P)
201	Foxconn	WDAN-T1AM1001-DH (Tx1) WDAN-T1AM1002-DH (Tx2)	PIFA	2.58 1.39	0.91 0.91	IPEX
202	Quanata	AS-070-F (Tx1) AS-070-F (Tx2)	PIFA	-0.5 -1.9	-1.6 -3	IPEX
203	ACON	DQ60APM6P02(APM6P-700091) (Main) DQ60APM6P02(APM6P-700091) (Aux)	PIFA	-0.7 -0.29	1.81 2.52	IPX, Hirose, Technova, MHF
204	ACON	DQ60APM6P03(APM6P-700092) (Main) DQ60APM6P03(APM6P-700092) (Aux)	PIFA	-0.6 -1.02	2.02 2.73	IPX, Hirose, Technova, MHF
205	Whayu	C1491-520003-A (Main) C1491-520004-A (Aux)	PIFA	2.17 0.20	NA	Technova
206	ACON	ACTA-02 (Tx1) ACTA-02 (Tx2)	PIFA	1.86 1.96	1.63 2.05	I-PEX-MHF, MHF, U.FL-LP
207	ACON	ACTA-01 (Tx1) ACTA-01 (Tx2)	PIFA	1.19 0.46	1.63 2.05	IPEX, MHF, U.FL-LP
208	ACON	APP8P-700180 (TX1) APP8P-700180 (TX2)	PIFA	-0.96 0.22	1.32 1.76	I-PEX-MHF, U.FL-L(P)
209	ACON	APP8P-700182(TX1) APP8P-700181(TX2)	PIFA	2.62 2.80	0.99 0.94	I-PEX-MHF , U.FL-L(P)
210	Quanta Computer Inc	NM1_AN-090-H/I (TX1) NM1_AN-090-H/I (TX2)	PIFA	-1.9 -1.5	-0.96 -2.21	SPD
211	Quanta	DQ643130W13(TX1) DQ643130W13(TX2)	PIFA	-0.49 -2.30	0.69 1.23	Technova, compatible, HL
212	WNC	HPMH-B3035050G00011(Tx1) HPMH-B3035050G00011(Tx2)	PIFA	0.20 1.97	2.11 1.92	U.FL

No.	Brand	Model	Antenna type	Gain (dBi) with & w/o cable loss	Cable loss (dB)	Connector type
213	Favortron CO.,LTD (FVC)	W270HUQ-WiMAX-1 W270HUQ-WiMAX-2	PIFA	2.85 1.87	NA	I-PEX
214	Smart Approach	SE-ECC60-002 (Main) SE-ECC60-001 (Aux)	PIFA	1.49 1.76	0.93 1.06	IPEX
215	WNC	81.EEW15.G38 (Tx1) 81.EEW15.G39 (Tx2)	PIFA	0.62 2.8	1.13 1.25	IPEX
216	WNC	25.90A1E.001 (Main) 25.90A1F.001 (Aux)	PIFA	1.94 -0.85	-1.85 -1.84	IPEX
217	Quanta	QADC FL8_WL_M (Main) QADC FL8_WL_A (Aux)	PIFA	0.1 -0.3	1.6 1.6	IPEX
218	YAGEO	25.90A4W.001 (Main) 25.90A4V.001 (Aux)	PIFA	0.07 -0.06	-1.25 -1.5	U.FL
219	FOXLINK	25.90A4W.011(Main) 25.90A4V.011(Aux)	PIFA	1.98 1.97	-1.39 -1.58	U.FL
220	Quanta	QADC PS3_WL_M (Main) QADC PS3_WL_A (Aux)	PIFA	-0.1 0	1.6 1.6	I-PEX
221	Quanta	QADCGC6_WL_M (Main) QADCGC6_WL_A (Aux)	PIFA	0.7 1.2	N/A	I-PEX
222	Quanta	QADCGC5_WL_M (Main) QADCGC5_WL_A (Aux)	PIFA	0.4 -1.0	N/A	I-PEX

From the above antennas, the worst cases were found in No. 1 & No. 95.
Therefore only the test data of the mode was recorded in this report individually.

5. The EUT is 1 * 1 spatial SISO without beam forming function.

6. The above EUT information was 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

Operated in 2400 ~ 2483.5MHz band:

Eleven channels are provided for 802.11b, 802.11g, 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		

Seven channels are provided for 802.11n (40MHz):

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

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE < 1G	RE ³ 1G	APCM	
1	√	√	√	√	miniCard with two antenna connectors with PIFA antenna
2	-	√	√	√	miniCard with two antenna connectors with Dipole antenna

Where **PLC:** Power Line Conducted Emission **RE < 1G:** Radiated Emission below 1GHz
RE ³ 1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

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.

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

RADIATED EMISSION TEST (BELOW 1 GHz):

☒ 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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	CONFIGURE MODE
802.11g	1 to 11	6	OFDM	BPSK	6	1, 2

RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ 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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	CONFIGURE MODE
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1	1, 2
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	1, 2
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	1, 2
802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	1, 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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	COMBINATION & CONFIGURE MODE
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1	1, 2
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	1, 2
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	1, 2
802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	1, 2

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	19deg. C, 72%RH, 1024 hPa	120Vac, 60Hz	Rex Huang
RE<1G	18deg. C, 66%RH, 1024 hPa	120Vac, 60Hz	Frank Liu
PLC	19deg. C, 70%RH, 1024 hPa	120Vac, 60Hz	Wen Yu
APCM	25deg. C, 60%RH, 1024 hPa	120Vac, 60Hz	Rex Huang

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C. (15.247)
ANSI C63.4-2003
ANSI C63.10-2009

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

3.4 DESCRIPTION OF SUPPORT UNITS

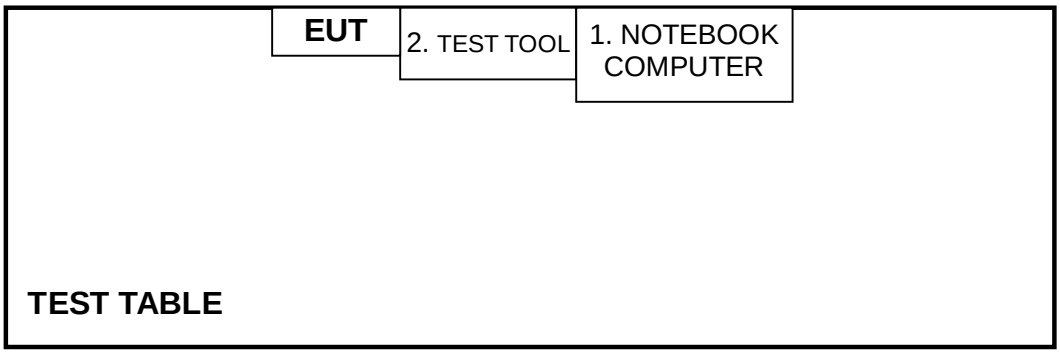
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP18L	6976685584	FCC DoC
2	TEST TOOL	Realtek	NA	NA	NA

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

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

3.5 CONFIGURATION OF SYSTEM UNDER TEST



4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	100287	Mar. 02, 2011	Mar. 01, 2012
Line-Impedance Stabilization Network (for EUT)	NSLK 8127	8127-523	Sep. 17, 2010	Sep. 16, 2011
Line-Impedance Stabilization Network (for Peripheral)	ENV-216	100072	June 11, 2010	June 10, 2011
RF Cable (JYEBAO)	5DFB	CONCAB-003	Aug. 06, 2010	Aug. 05, 2011
50 ohms Terminator	50	3	Nov. 03, 2010	Nov. 02, 2011
Software	BV 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 Shielded Room No. A.
3 The VCCI Con A Registration No. is C-817.

4.1.3 TEST PROCEDURES

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

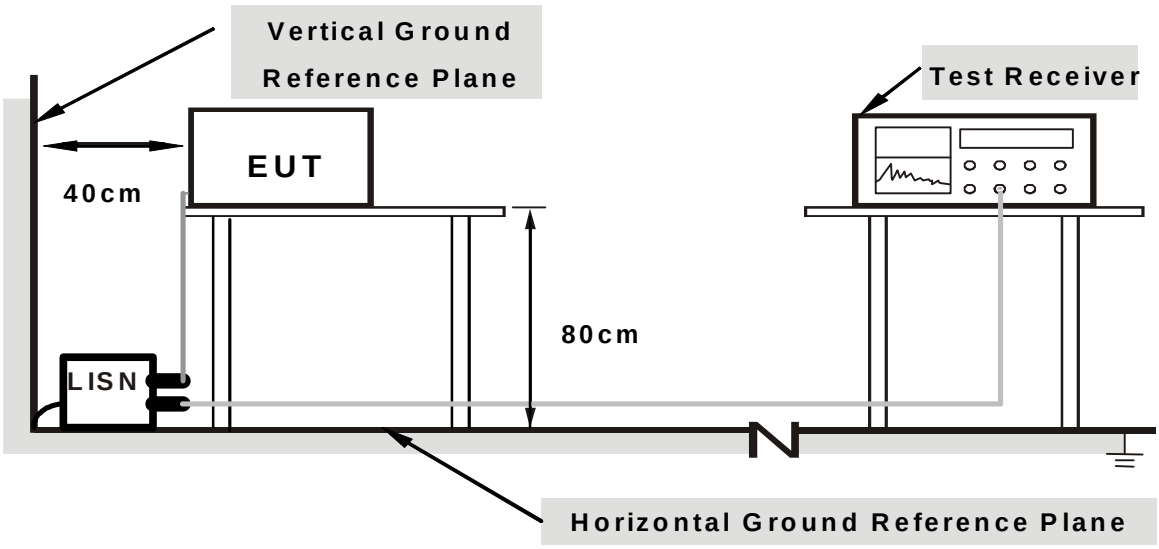
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

1. Plug the EUT into the support unit 1 (Notebook Computer) which placed on a testing table.
2. The communication partner run test program “Realtek 11n Single Chip 92C PCIE WLAN MP Diagnostic Program 0.0008.0105.2010” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

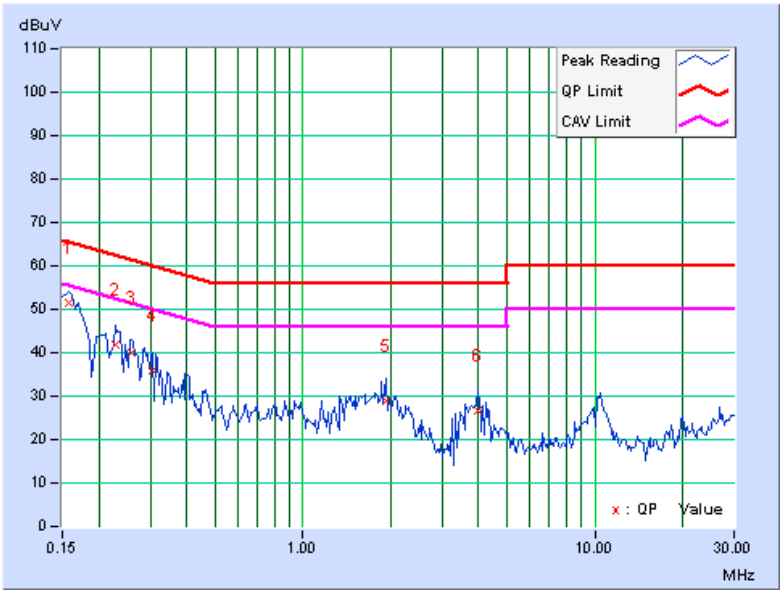
4.1.7 TEST RESULTS

802.11g OFDM MODULATION:

PHASE	Line (L)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.04	51.38	-	51.42	-	65.58	55.58	-14.16	-
2	0.229	0.04	41.79	-	41.83	-	62.49	52.49	-20.66	-
3	0.259	0.05	39.82	-	39.87	-	61.45	51.45	-21.59	-
4	0.306	0.05	35.88	-	35.93	-	60.07	50.07	-24.14	-
5	1.930	0.12	28.93	-	29.05	-	56.00	46.00	-26.95	-
6	3.961	0.20	26.34	-	26.54	-	56.00	46.00	-29.46	-

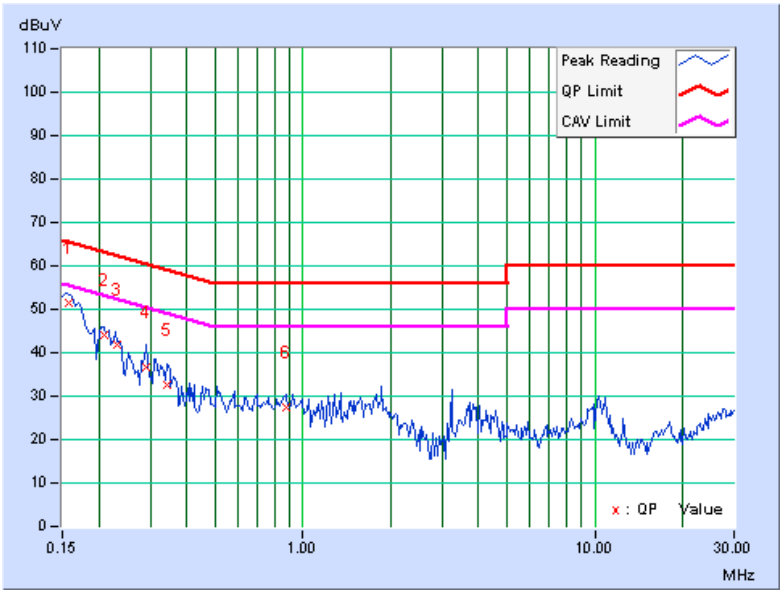
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.158**	**0.05**	**51.39**	**-**	**51.44**	**-**	**65.58**	**55.58**	**-14.14**	**-**
2	0.209	0.05	43.88	-	43.93	-	63.26	53.26	-19.33	-
3	0.230	0.05	41.86	-	41.91	-	62.44	52.44	-20.53	-
4	0.291	0.06	36.48	-	36.54	-	60.51	50.51	-23.97	-
5	0.341	0.06	32.47	-	32.53	-	59.17	49.17	-26.63	-
6	0.873	0.09	27.45	-	27.54	-	56.00	46.00	-28.46	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
4. Section 15.205 restricted bands of operation shall compliance with the limits in Section 15.209.

4.2.2 TEST INSTRUMENTS

For below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250253	Aug. 23, 2010	Aug. 22, 2011
Agilent Pre-Selector	N9039A	MY46520310	Aug. 23, 2010	Aug. 22, 2011
Agilent Signal Generator	N5181A	MY49060347	July 30, 2010	July 29, 2011
LIG NEX1 Test Receiver	ER-265	L09068005	Oct. 25, 2010	Oct. 24, 2011
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 16, 2010	Nov. 15, 2011
Agilent Pre-Amplifier	8449B	3008A02465	Feb. 28, 2011	Feb. 27, 2012
Miteq Pre-Amplifier	AFS33-18002650-30-8P-44	881786	NA	NA
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Apr. 14, 2011	Apr. 13, 2012
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 22, 2010	Nov. 21, 2011
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 08, 2010	Oct. 07, 2011
RF CABLE	NA	RF104-205 RF104-207 RF104-202	Dec. 28, 2010	Dec. 27, 2011
RF Cable	NA	CHHCAB_001	NA	NA
Software	ADT_Radiated_V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5. The CANADA Site Registration No. is IC 7450H-3.

For above 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011
Agilent Pre-Selector	N9039A	MY46520311	July 14, 2010	July 13, 2011
Agilent Signal Generator	N5181A	MY49060517	July 14, 2010	July 13, 2011
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-03	Nov. 16, 2010	Nov. 15, 2011
Agilent Pre-Amplifier	8449B	3008A02578	July 05, 2010	July 04, 2011
Miteq Pre-Amplifier	AFS33-18002650-30-8P-44	881786	NA	NA
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-360	Apr. 14, 2011	Apr. 13, 2012
AISI Horn_Antenna	AIH.8018	0000320091110	Nov. 12, 2010	Nov. 11, 2011
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 08, 2010	Oct. 07, 2011
RF CABLE	NA	RF104-201 RF104-203 RF104-204	Dec. 27, 2010	Dec. 26, 2011
RF Cable	NA	CHGCAB_001	NA	NA
Software	ADT_Radiated_V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. G.
4. The FCC Site Registration No. is 966073.
5. The VCCI Site Registration No. is G-137.
6. The CANADA Site Registration No. is IC 7450H-2.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meters chamber room. 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 height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, detect 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 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

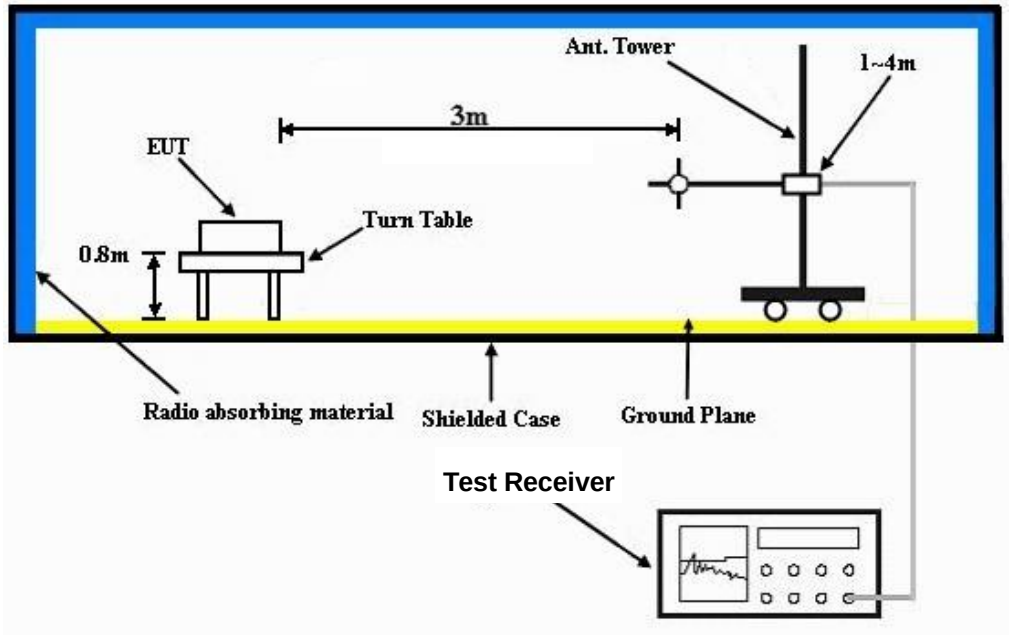
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS(PIFA ANTENNA)

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	18deg. C, 66%RH 1024 hPa	TESTED BY	Frank Liu

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	92.05	31.6 QP	43.5	-11.9	2.00 H	15	21.99	9.60
2	180.75	35.8 QP	43.5	-7.7	1.50 H	192	23.17	12.61
3	250.98	37.8 QP	46.0	-8.2	1.00 H	281	24.82	12.94
4	432.04	38.5 QP	46.0	-7.5	2.00 H	335	19.95	18.56
5	696.60	36.6 QP	46.0	-9.4	1.00 H	238	13.55	23.04
6	762.92	36.8 QP	46.0	-9.2	1.00 H	35	12.63	24.17
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	35.33	32.8 QP	40.0	-7.3	1.50 V	0	19.03	13.72
2	333.87	33.1 QP	46.0	-12.9	1.50 V	48	17.16	15.93
3	431.93	39.0 QP	46.0	-7.0	1.50 V	274	20.41	18.56
4	600.44	37.8 QP	46.0	-8.2	1.00 V	197	15.41	22.36
5	740.54	38.7 QP	46.0	-7.4	2.00 V	353	14.89	23.76
6	799.98	38.7 QP	46.0	-7.3	2.00 V	309	13.82	24.87

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

802.11b DSSS MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.13	55.9 PK	74.0	-18.1	1.54 H	329	24.26	31.64
2	2386.13	45.9 AV	54.0	-8.1	1.54 H	329	14.26	31.64
3	*2412.00	100.7 PK			1.54 H	329	68.97	31.73
4	*2412.00	98.4 AV			1.54 H	329	66.67	31.73
5	4824.00	50.6 PK	74.0	-23.4	1.00 H	337	11.63	38.97
6	4824.00	43.1 AV	54.0	-10.9	1.00 H	337	4.13	38.97
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	2386.48	56.9 PK	74.0	-17.1	1.11 V	35	25.25	31.65
2	2386.48	45.0 AV	54.0	-9.0	1.11 V	35	13.35	31.65
3	*2412.00	101.2 PK			1.11 V	35	69.47	31.73
4	*2412.00	98.9 AV			1.11 V	35	67.17	31.73
5	4824.00	52.4 PK	74.0	-21.6	1.04 V	27	13.43	38.97
6	4824.00	48.0 AV	54.0	-6.0	1.04 V	27	9.03	38.97

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	101.4 PK			1.59 H	321	69.59	31.81
2	*2437.00	99.7 AV			1.59 H	321	67.89	31.81
3	4874.00	50.7 PK	74.0	-23.3	1.00 H	342	11.56	39.14
4	4874.00	43.6 AV	54.0	-10.4	1.00 H	342	4.46	39.14
5	7311.00	55.7 PK	74.0	-18.3	1.94 H	36	9.07	46.63
6	7311.00	47.9 AV	54.0	-6.1	1.94 H	36	1.27	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	102.7 PK			1.04 V	37	70.89	31.81
2	*2437.00	100.3 AV			1.04 V	37	68.49	31.81
3	4874.00	52.7 PK	74.0	-21.3	1.02 V	32	13.56	39.14
4	4874.00	48.2 AV	54.0	-5.8	1.02 V	32	9.06	39.14
5	7311.00	57.9 PK	74.0	-16.1	1.06 V	73	11.27	46.63
6	7311.00	53.0 AV	54.0	-1.0	1.06 V	73	6.37	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.7 PK			1.50 H	339	70.81	31.89
2	*2462.00	100.5 AV			1.50 H	339	68.61	31.89
3	2487.59	58.3 PK	74.0	-15.7	1.50 H	339	26.32	31.98
4	2487.59	44.8 AV	54.0	-9.2	1.50 H	339	12.82	31.98
5	4924.00	50.4 PK	74.0	-23.6	1.00 H	336	11.09	39.31
6	4924.00	43.0 AV	54.0	-11.0	1.00 H	336	3.69	39.31
7	7386.00	55.4 PK	74.0	-18.6	1.91 H	28	8.80	46.60
8	7386.00	47.7 AV	54.0	-6.3	1.91 H	28	1.10	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.8 PK			1.08 V	36	71.91	31.89
2	*2462.00	101.6 AV			1.08 V	36	69.71	31.89
3	2488.51	58.8 PK	74.0	-15.2	1.08 V	36	26.82	31.98
4	2488.51	45.3 AV	54.0	-8.7	1.08 V	36	13.32	31.98
5	4924.00	51.9 PK	74.0	-22.1	1.02 V	30	12.59	39.31
6	4924.00	46.7 AV	54.0	-7.3	1.02 V	30	7.39	39.31
7	7386.00	57.6 PK	74.0	-16.4	1.06 V	68	11.00	46.60
8	7386.00	52.5 AV	54.0	-1.5	1.06 V	68	5.90	46.60

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

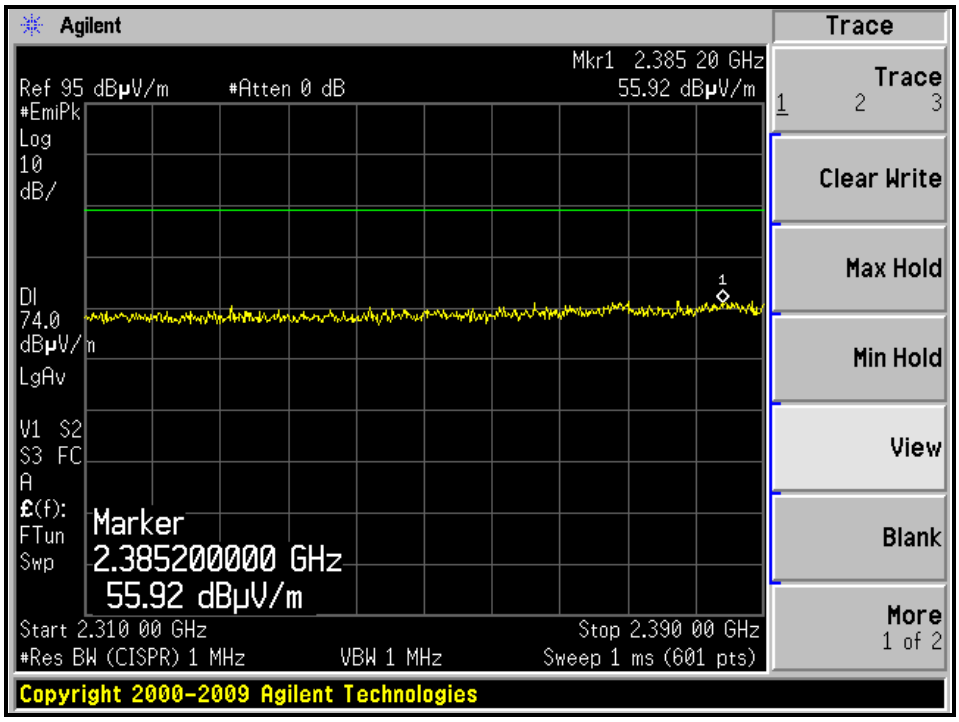
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

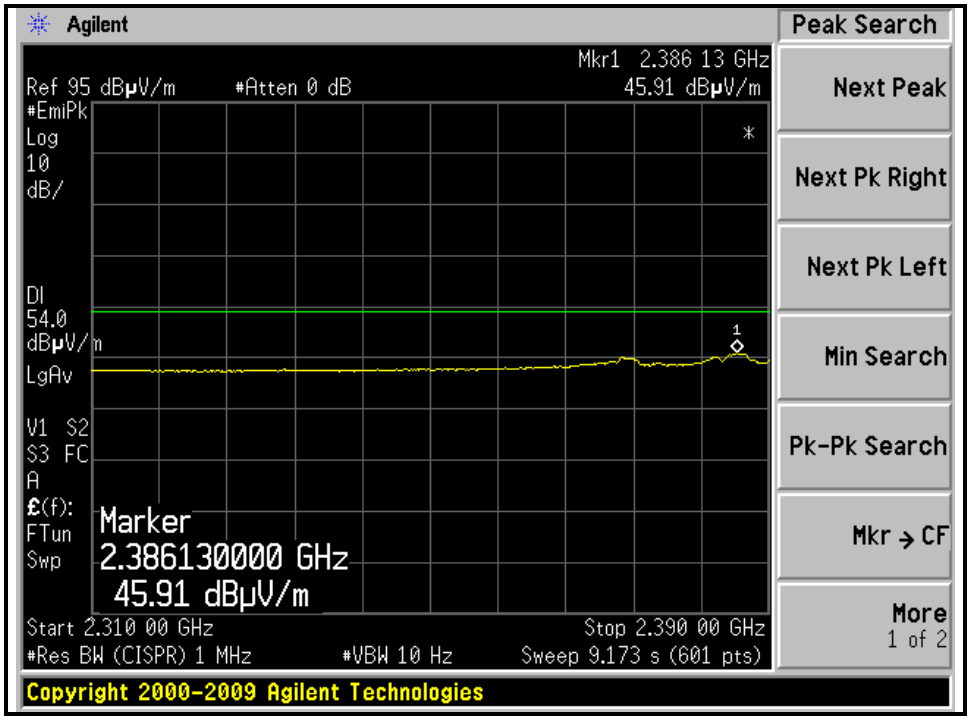
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

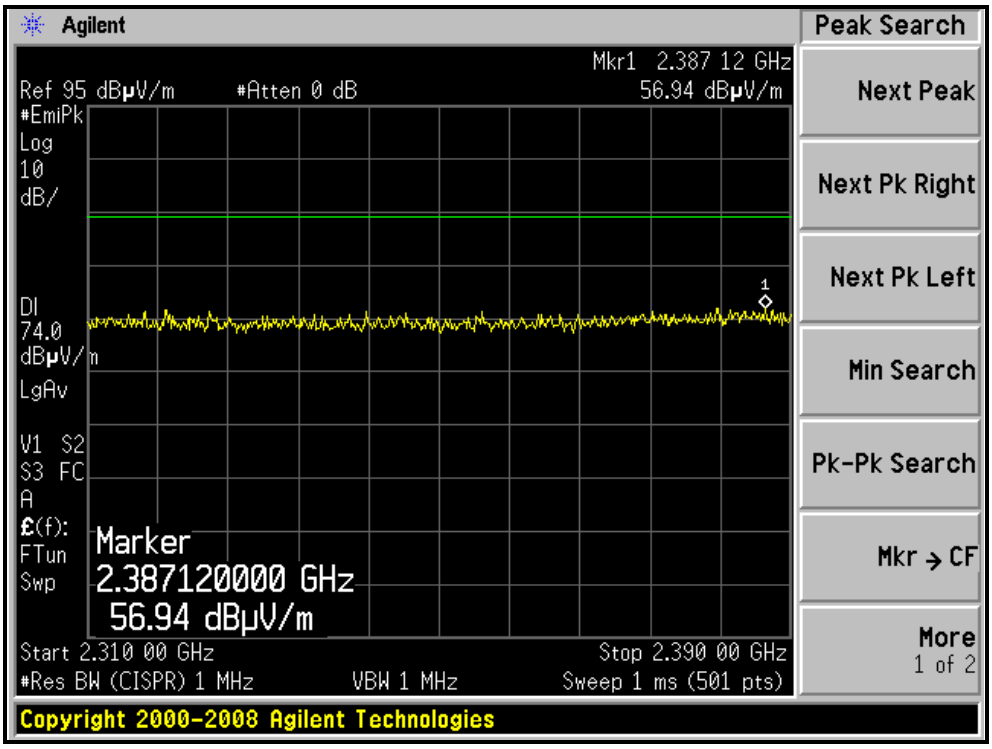
5. " * ": Fundamental frequency.

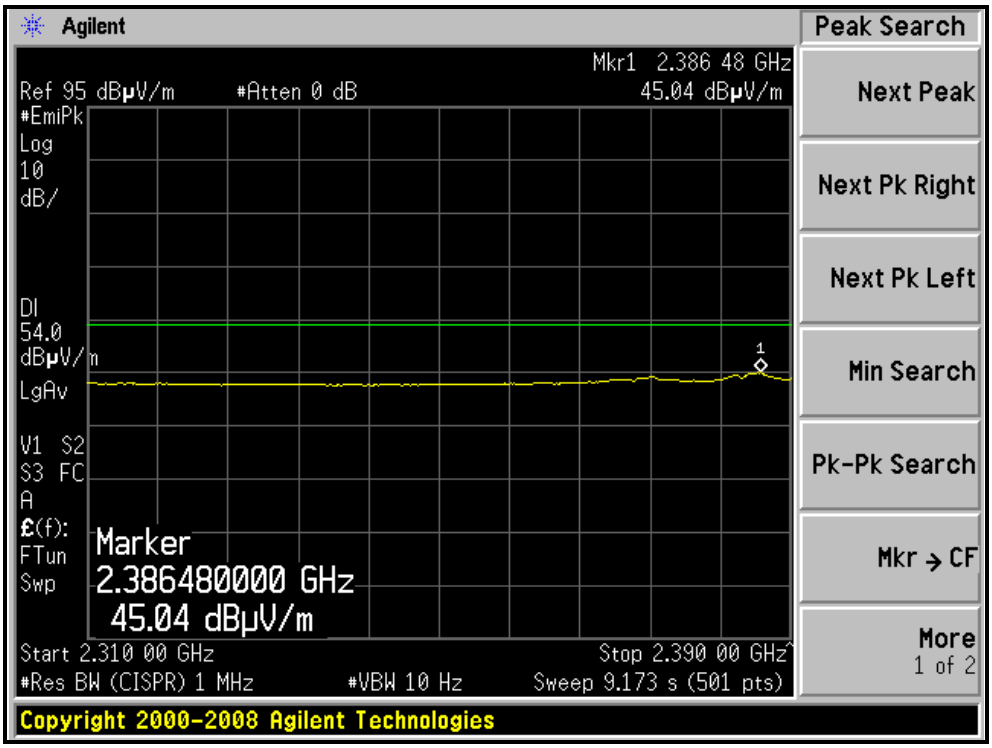
RESTRICTED BANDEDGE (802.11b MODE,CH1, HORIZONTAL)



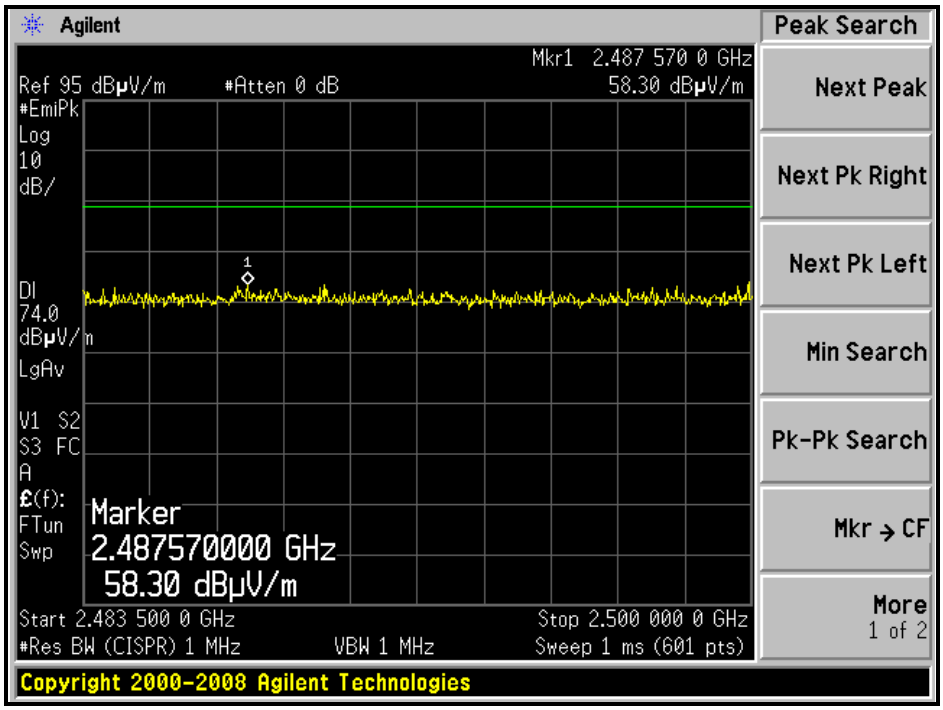


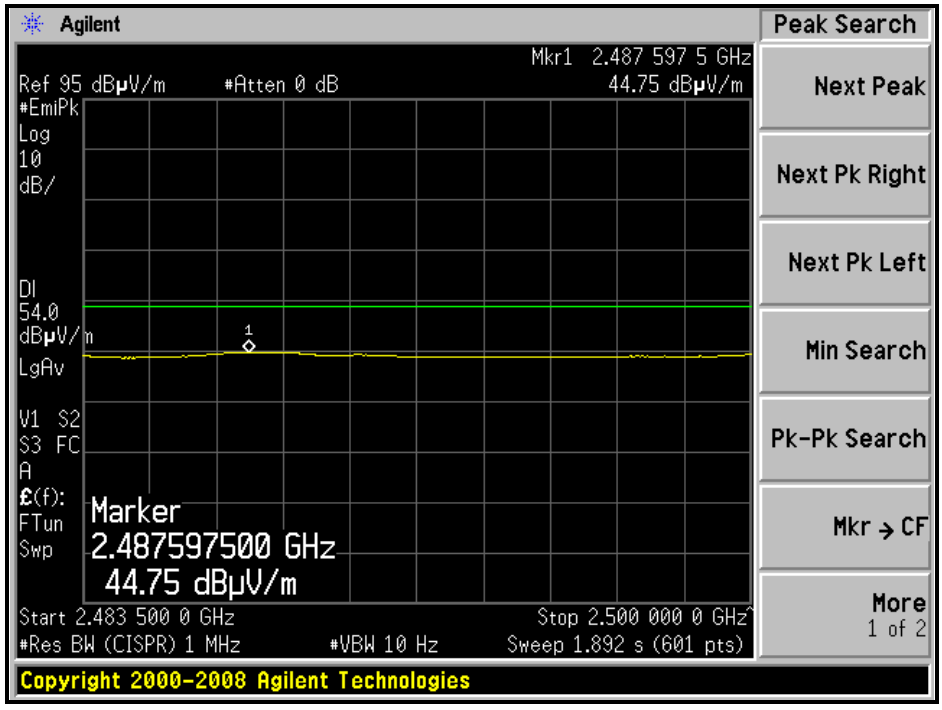
RESTRICTED BANDEDGE (802.11b MODE,CH1, VERTICAL)



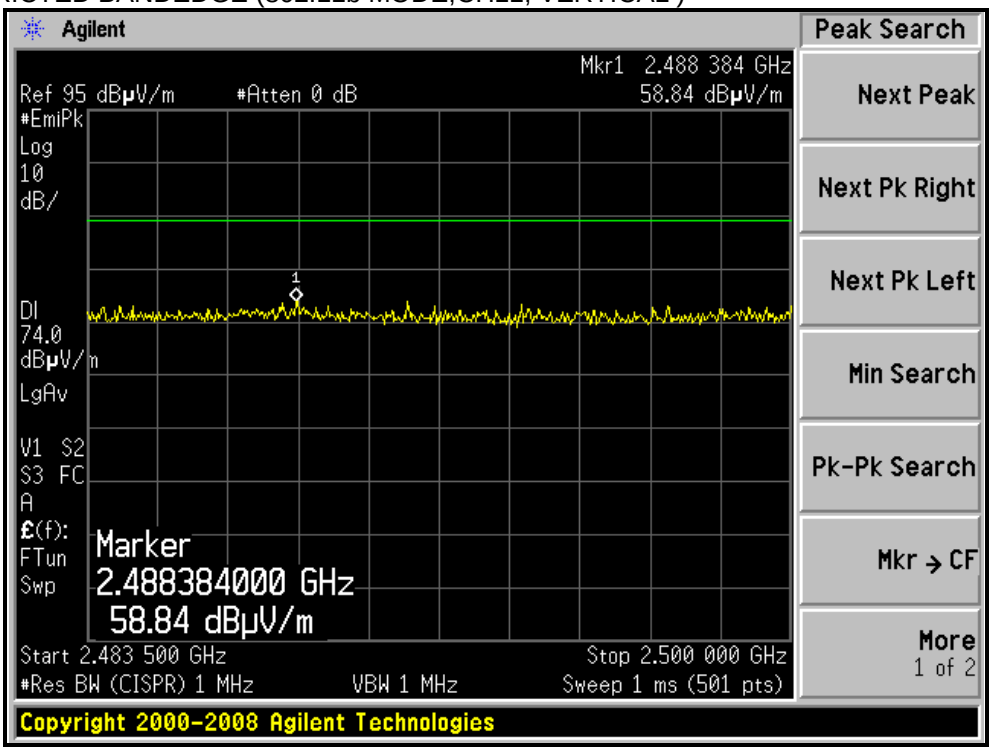


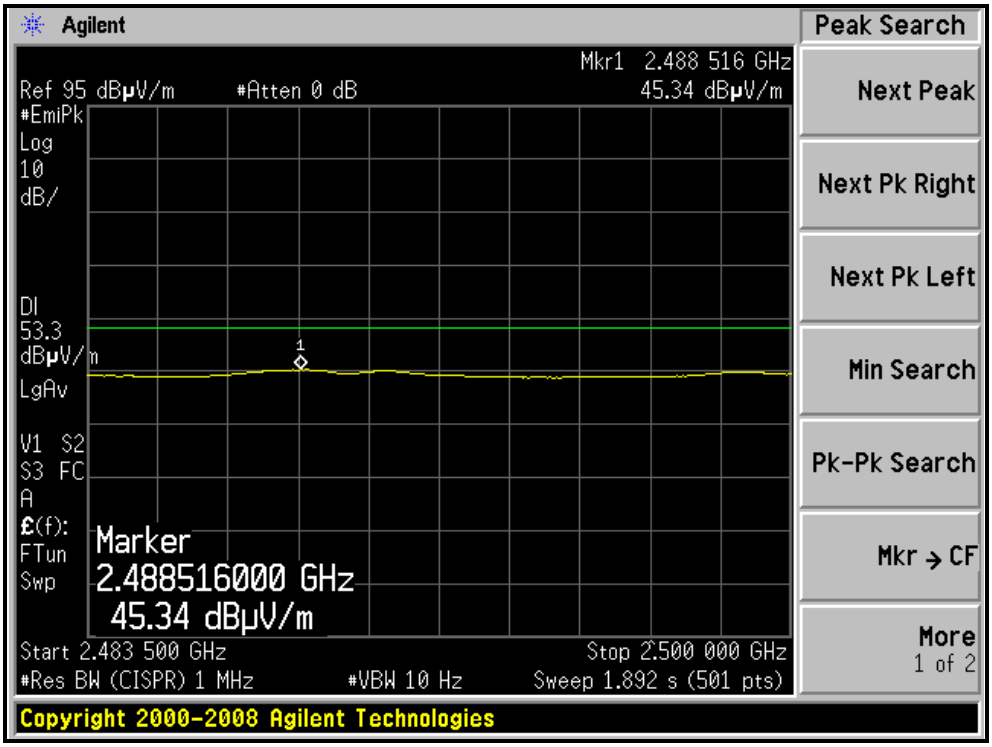
RESTRICTED BANDEDGE (802.11b MODE,CH11, HORIZONTAL)





RESTRICTED BANDEDGE (802.11b MODE,CH11, VERTICAL)





802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.5	1.54 H	321	28.84	31.66
2	2390.00	46.6 AV	54.0	-7.4	1.54 H	321	14.94	31.66
3	*2412.00	101.3 PK			1.54 H	321	69.57	31.73
4	*2412.00	92.4 AV			1.54 H	321	60.67	31.73
5	4824.00	46.3 PK	74.0	-27.7	1.00 H	339	7.33	38.97
6	4824.00	38.4 AV	54.0	-15.6	1.00 H	339	-0.57	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.6 PK	74.0	-14.4	1.12 V	35	27.94	31.66
2	2390.00	46.4 AV	54.0	-7.6	1.12 V	35	14.74	31.66
3	*2412.00	102.3 PK			1.12 V	35	70.57	31.73
4	*2412.00	93.2 AV			1.12 V	35	61.47	31.73
5	4824.00	48.4 PK	74.0	-25.6	1.00 V	31	9.43	38.97
6	4824.00	41.2 AV	54.0	-12.8	1.00 V	31	2.23	38.97

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	104.3 PK			1.57 H	329	72.49	31.81
2	*2437.00	95.4 AV			1.57 H	329	63.59	31.81
3	4874.00	48.6 PK	74.0	-25.4	1.00 H	332	9.46	39.14
4	4874.00	40.7 AV	54.0	-13.3	1.00 H	332	1.56	39.14
5	7311.00	55.9 PK	74.0	-18.1	1.84 H	32	9.27	46.63
6	7311.00	45.2 AV	54.0	-8.8	1.84 H	32	-1.43	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.7 PK			1.13 V	39	73.89	31.81
2	*2437.00	96.4 AV			1.13 V	39	64.59	31.81
3	4874.00	50.7 PK	74.0	-23.3	1.00 V	56	11.56	39.14
4	4874.00	43.5 AV	54.0	-10.5	1.00 V	56	4.36	39.14
5	7311.00	62.3 PK	74.0	-11.7	1.04 V	57	15.67	46.63
6	7311.00	49.3 AV	54.0	-4.7	1.04 V	57	2.67	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.6 PK			1.55 H	321	71.71	31.89
2	*2462.00	94.3 AV			1.55 H	321	62.41	31.89
3	2483.50	60.1 PK	74.0	-13.9	1.54 H	329	28.13	31.97
4	2483.50	47.5 AV	54.0	-6.5	1.54 H	329	15.53	31.97
5	4924.00	48.7 PK	74.0	-25.3	1.00 H	338	9.39	39.31
6	4924.00	38.3 AV	54.0	-15.7	1.00 H	338	-1.01	39.31
7	7386.00	55.0 PK	74.0	-19.0	1.92 H	30	8.40	46.60
8	7386.00	42.8 AV	54.0	-11.2	1.92 H	30	-3.80	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.5 PK			1.10 V	36	72.61	31.89
2	*2462.00	95.6 AV			1.10 V	36	63.71	31.89
3	2483.50	63.2 PK	74.0	-10.8	1.10 V	36	31.23	31.97
4	2483.50	48.1 AV	54.0	-5.9	1.10 V	36	16.13	31.97
5	4924.00	48.6 PK	74.0	-25.4	1.00 V	34	9.29	39.31
6	4924.00	41.5 AV	54.0	-12.5	1.00 V	34	2.19	39.31
7	7386.00	61.6 PK	74.0	-12.4	1.06 V	67	15.00	46.60
8	7386.00	47.2 AV	54.0	-6.8	1.06 V	67	0.60	46.60

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

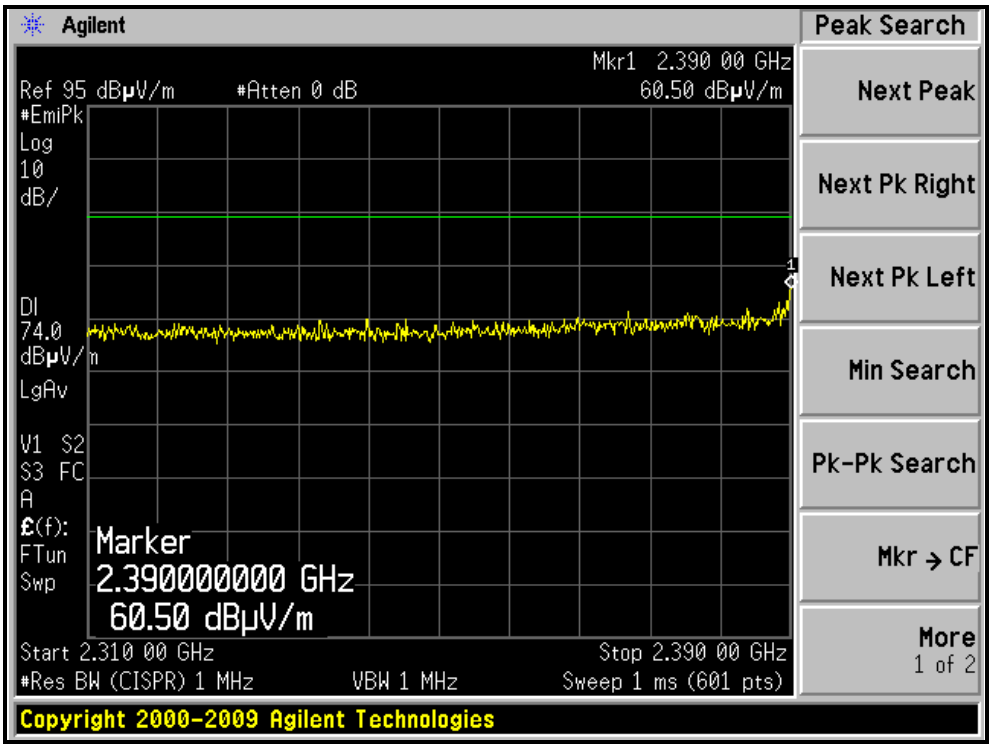
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

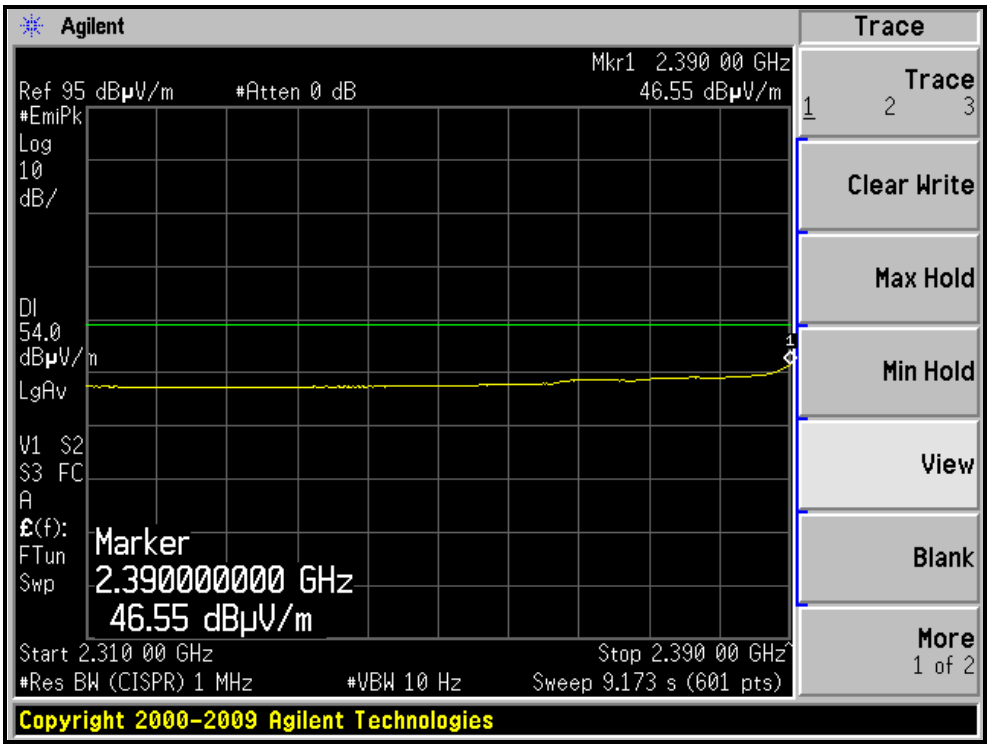
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

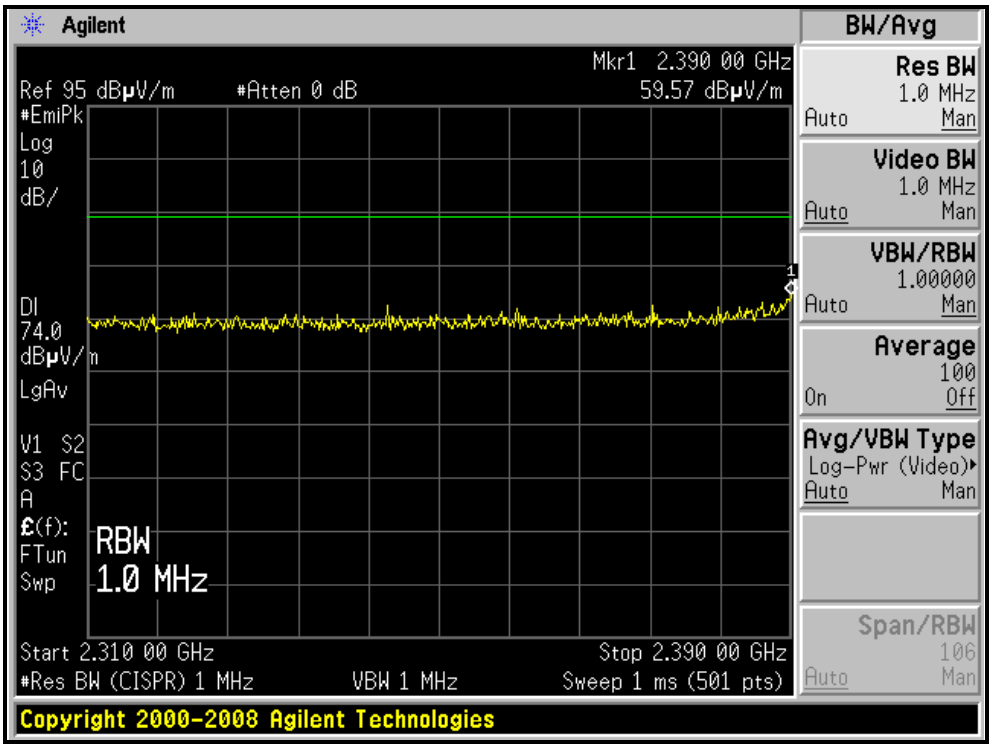
5. " * ": Fundamental frequency.

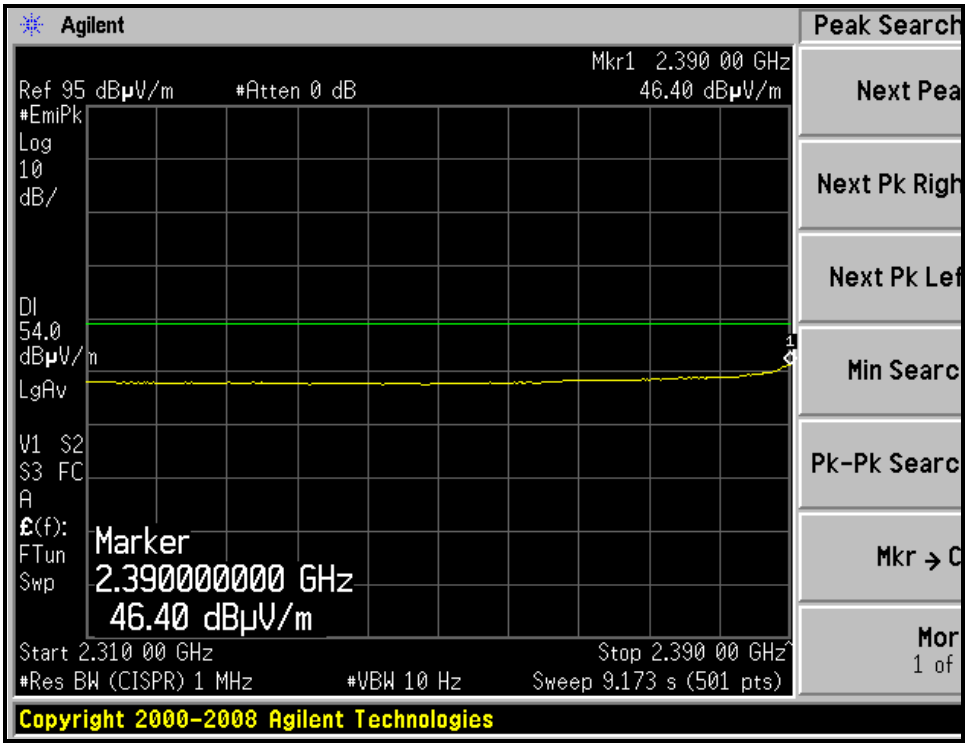
RESTRICTED BANDEDGE (802.11g MODE,CH1, HORIZONTAL)





RESTRICTED BANDEDGE (802.11g MODE,CH1, VERTICAL)





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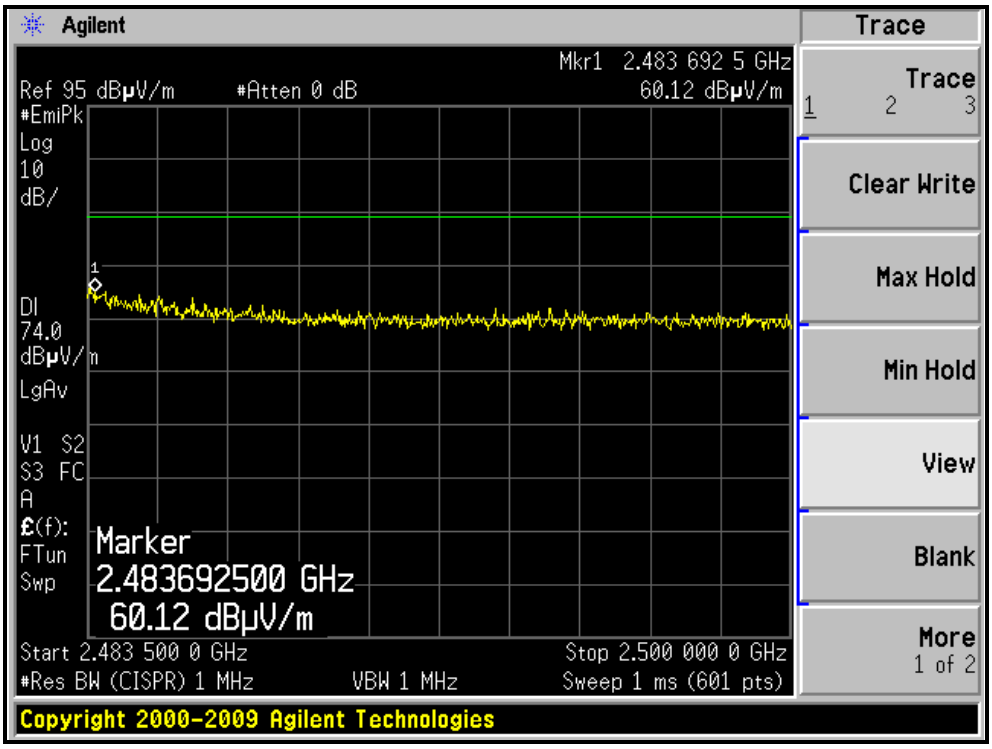
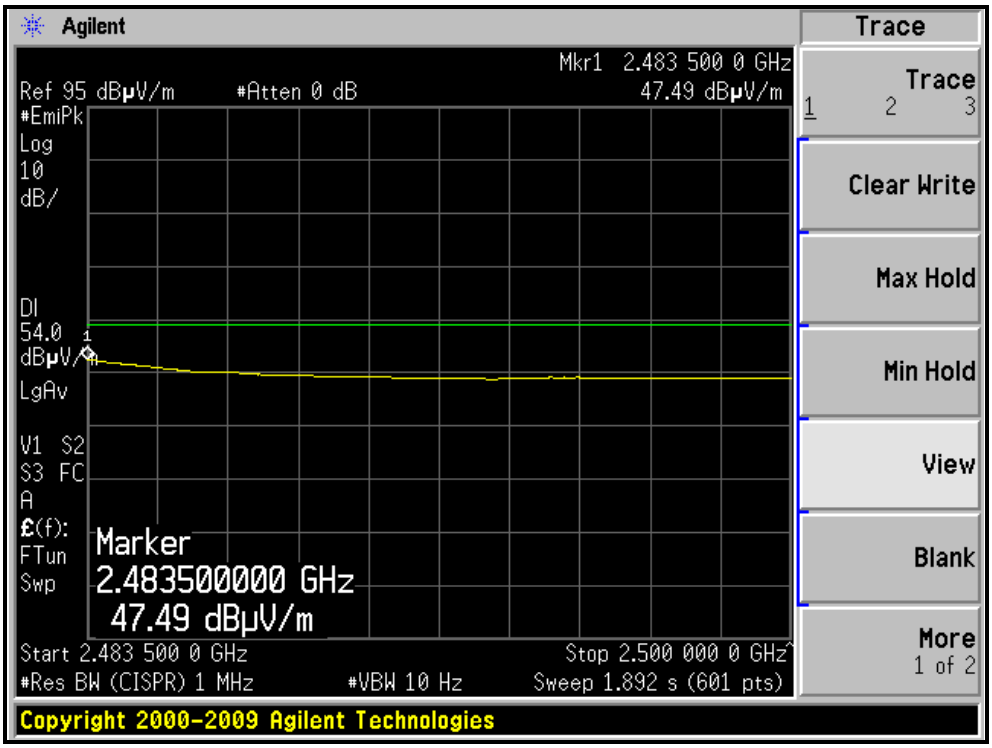
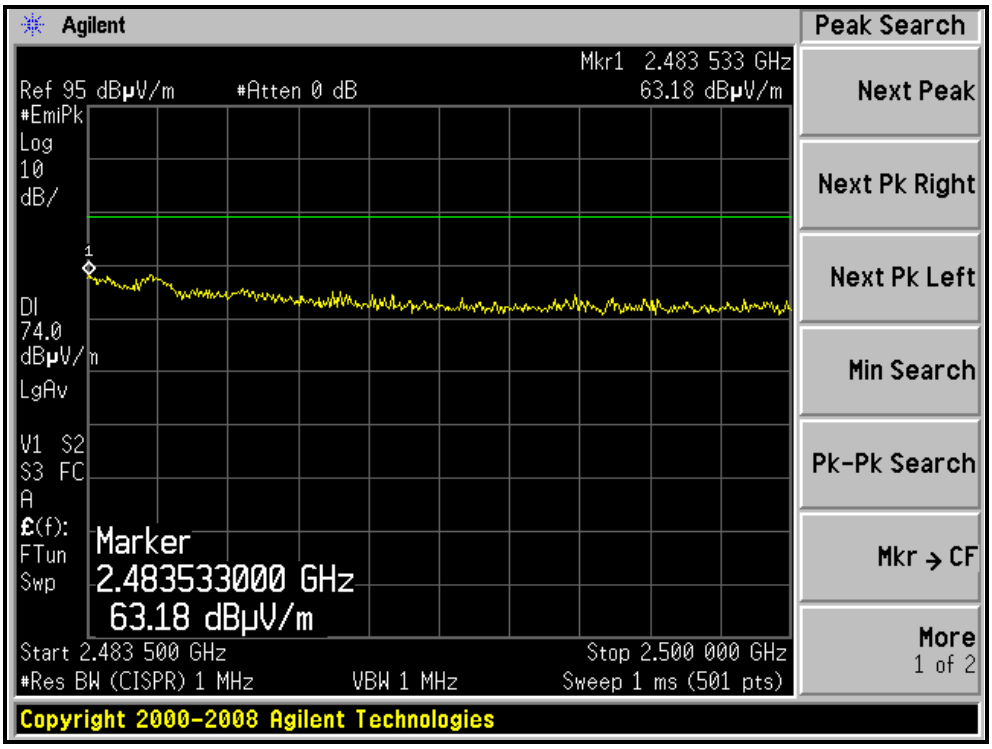
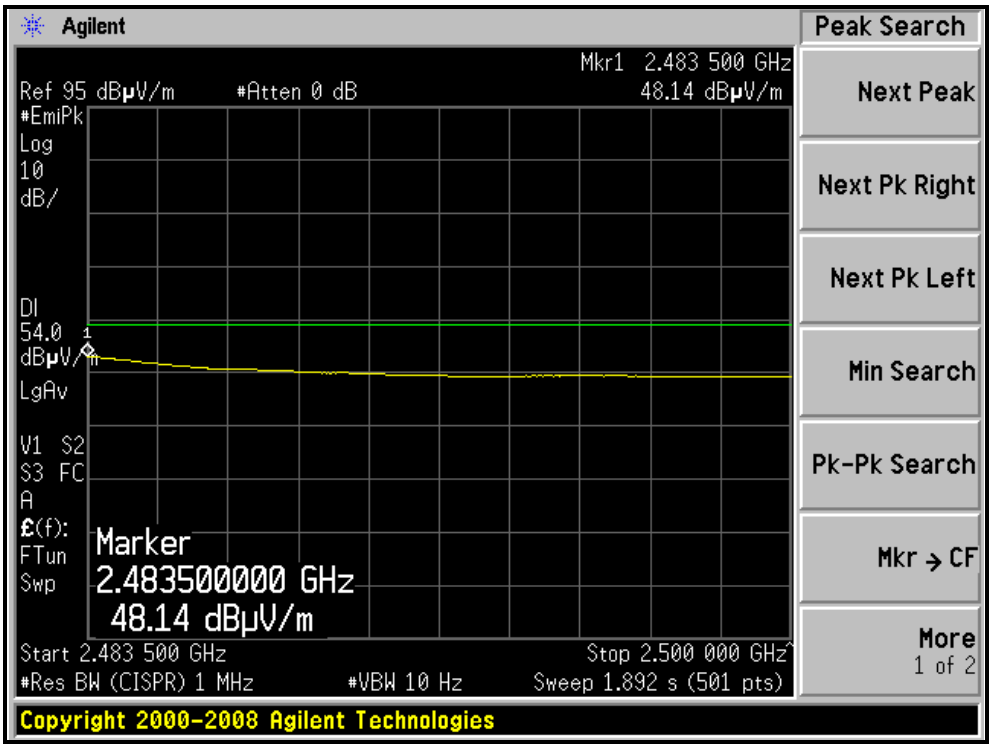




RESTRICTED BANDEDGE (802.11g MODE,CH11, VERTICAL)





DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.55 H	326	27.54	31.66
2	2390.00	45.2 AV	54.0	-8.8	1.55 H	326	13.54	31.66
3	*2412.00	100.4 PK			1.55 H	326	68.67	31.73
4	*2412.00	90.4 AV			1.55 H	326	58.67	31.73
5	4824.00	55.2 PK	74.0	-18.8	1.83 H	49	16.23	38.97
6	4824.00	42.4 AV	54.0	-11.6	1.83 H	49	3.43	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.1 PK	74.0	-13.9	1.11 V	35	28.44	31.66
2	2390.00	44.9 AV	54.0	-9.1	1.11 V	35	13.24	31.66
3	*2412.00	101.1 PK			1.11 V	35	69.37	31.73
4	*2412.00	91.3 AV			1.11 V	35	59.57	31.73
5	4824.00	61.5 PK	74.0	-12.5	1.05 V	66	22.53	38.97
6	4824.00	47.3 AV	54.0	-6.7	1.05 V	66	8.33	38.97

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	103.2 PK			1.54 H	322	71.39	31.81
2	*2437.00	96.2 AV			1.54 H	322	64.39	31.81
3	4874.00	48.7 PK	74.0	-25.3	1.05 H	343	9.56	39.14
4	4874.00	40.9 AV	54.0	-13.1	1.05 H	343	1.76	39.14
5	7311.00	55.7 PK	74.0	-18.3	1.86 H	35	9.07	46.63
6	7311.00	45.3 AV	54.0	-8.7	1.86 H	35	-1.33	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	104.3 PK			1.14 V	36	72.49	31.81
2	*2437.00	97.4 AV			1.14 V	36	65.59	31.81
3	4874.00	50.7 PK	74.0	-23.3	1.00 V	64	11.56	39.14
4	4874.00	43.2 AV	54.0	-10.8	1.00 V	64	4.06	39.14
5	7311.00	62.4 PK	74.0	-11.6	1.05 V	55	15.77	46.63
6	7311.00	49.4 AV	54.0	-4.6	1.05 V	55	2.77	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.9 PK			1.55 H	321	71.01	31.89
2	*2462.00	92.7 AV			1.55 H	321	60.81	31.89
3	2483.50	58.4 PK	74.0	-15.6	1.55 H	321	26.43	31.97
4	2483.50	45.6 AV	54.0	-8.4	1.55 H	321	13.63	31.97
5	4924.00	48.8 PK	74.0	-25.2	1.00 H	330	9.49	39.31
6	4924.00	40.9 AV	54.0	-13.1	1.00 H	330	1.59	39.31
7	7386.00	54.3 PK	74.0	-19.7	1.88 H	62	7.70	46.60
8	7386.00	42.4 AV	54.0	-11.6	1.88 H	62	-4.20	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.0 PK			1.10 V	36	71.11	31.89
2	*2462.00	93.6 AV			1.10 V	36	61.71	31.89
3	2483.50	61.5 PK	74.0	-12.5	1.10 V	36	29.53	31.97
4	2483.50	46.2 AV	54.0	-7.8	1.10 V	36	14.23	31.97
5	4924.00	50.5 PK	74.0	-23.5	1.00 V	48	11.19	39.31
6	4924.00	43.5 AV	54.0	-10.5	1.00 V	48	4.19	39.31
7	7386.00	61.3 PK	74.0	-12.7	1.04 V	59	14.70	46.60
8	7386.00	47.5 AV	54.0	-6.5	1.04 V	59	0.90	46.60

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

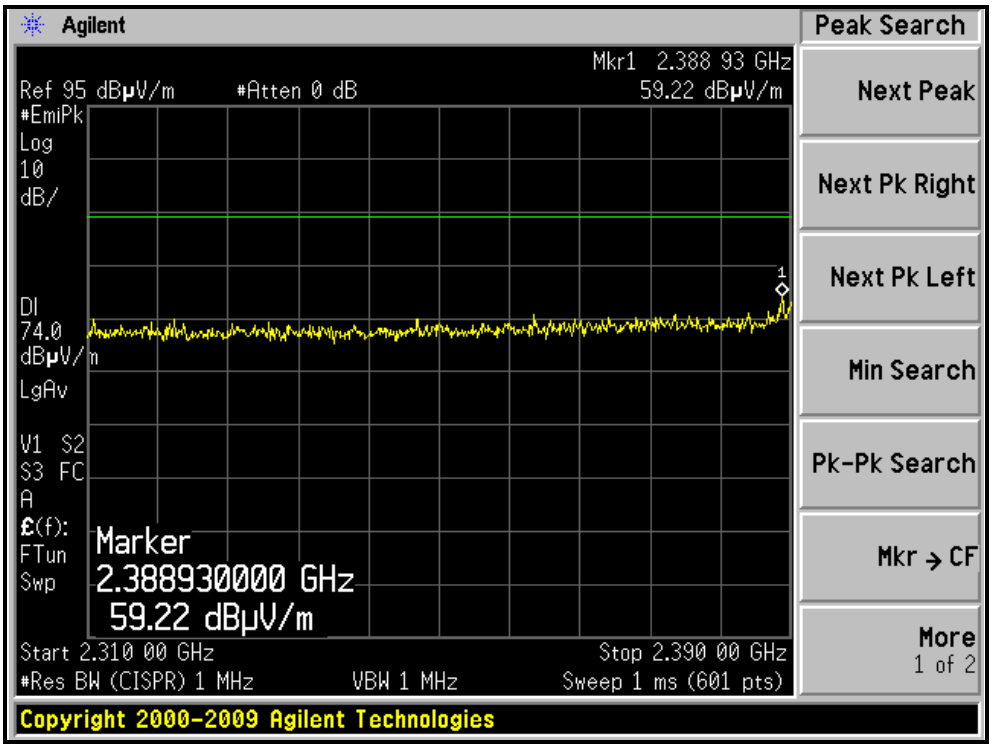
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

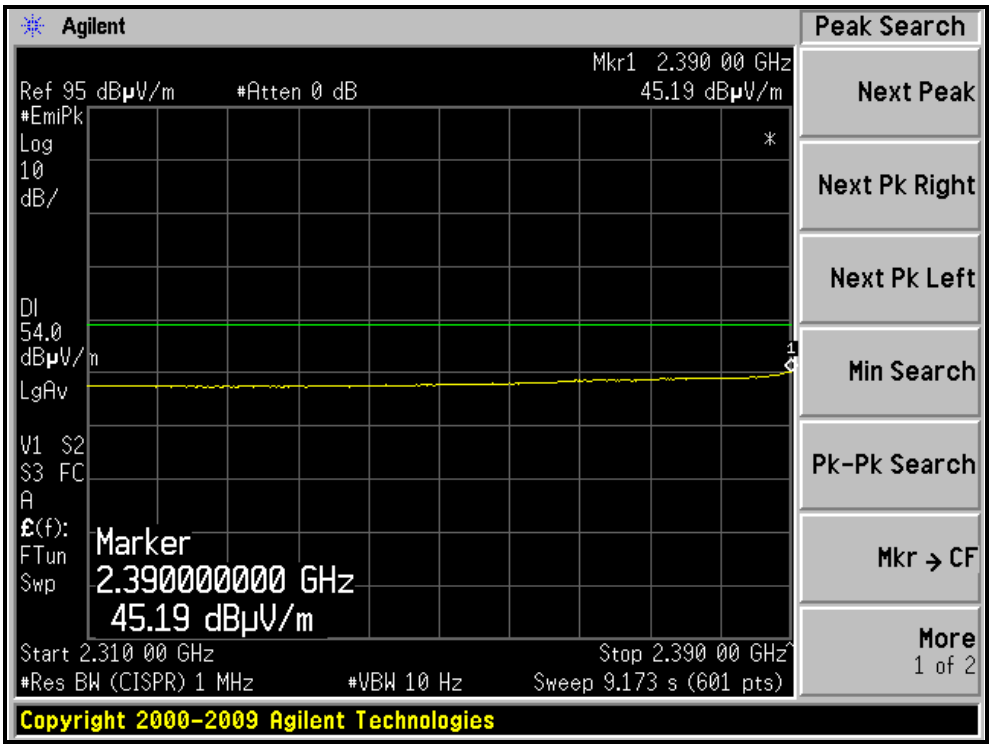
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

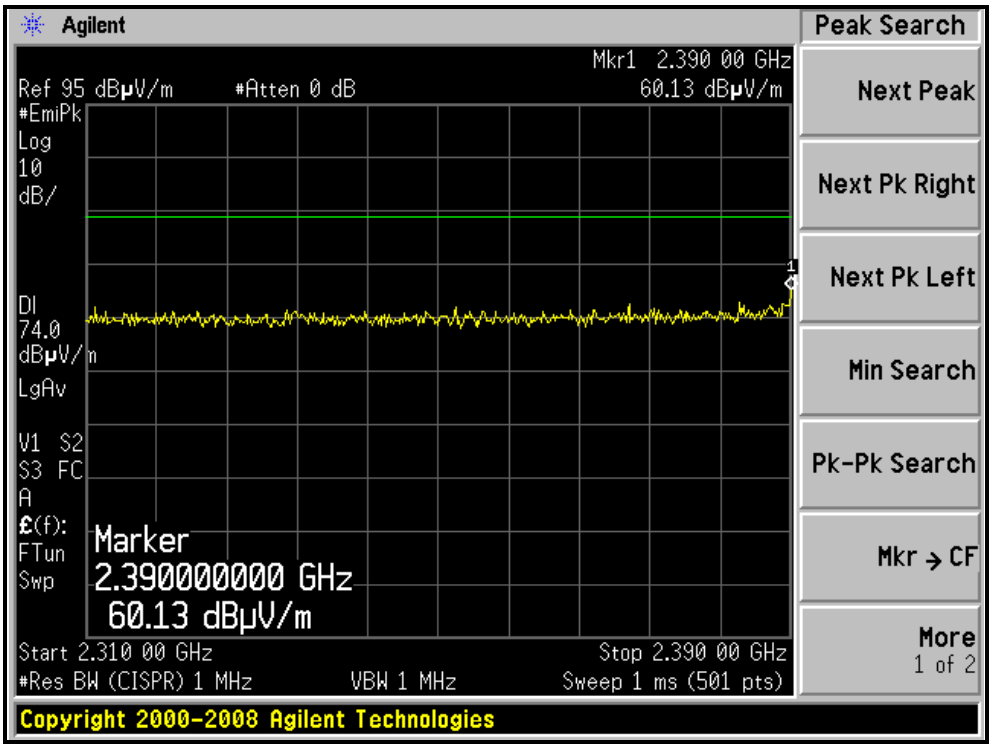
5. " * ": Fundamental frequency.

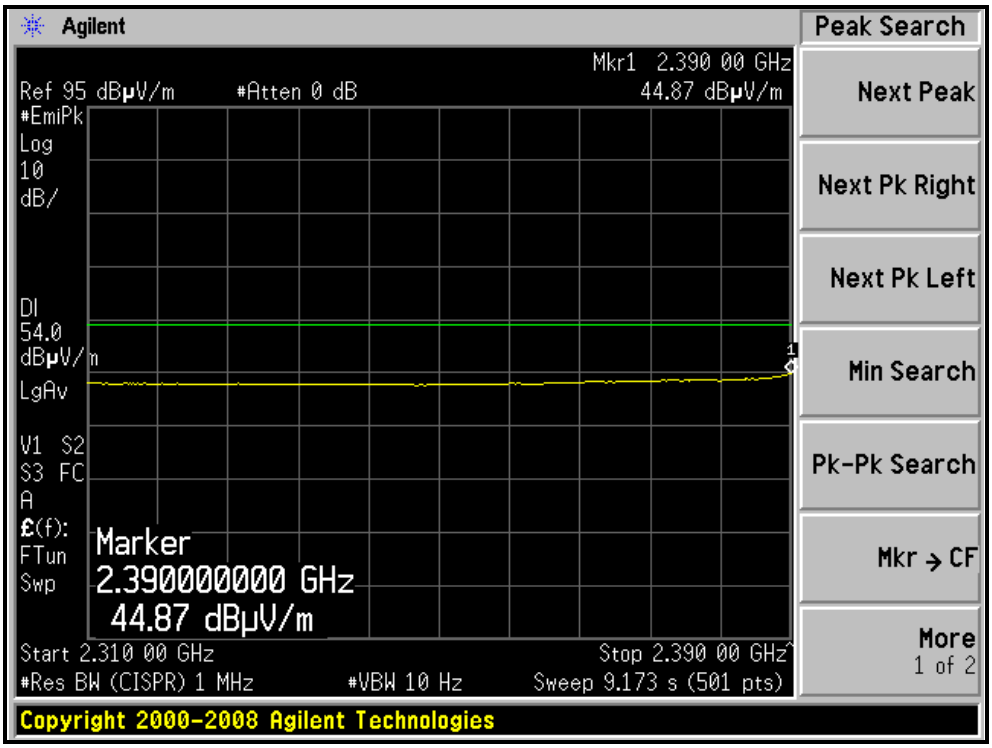
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH1, HORIZONTAL)



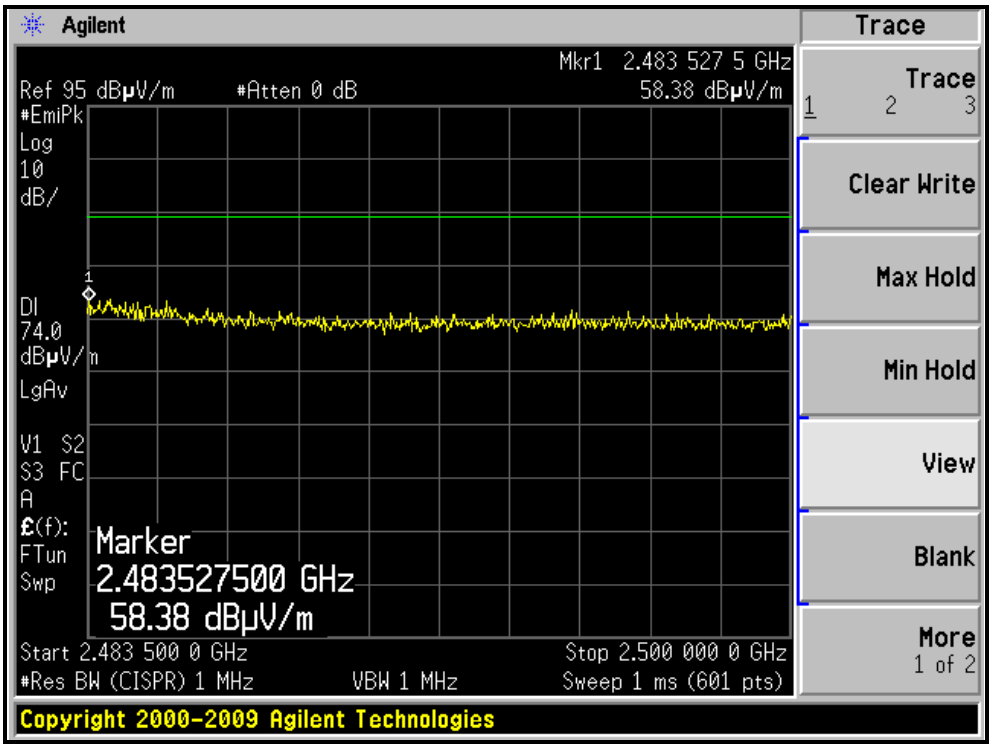


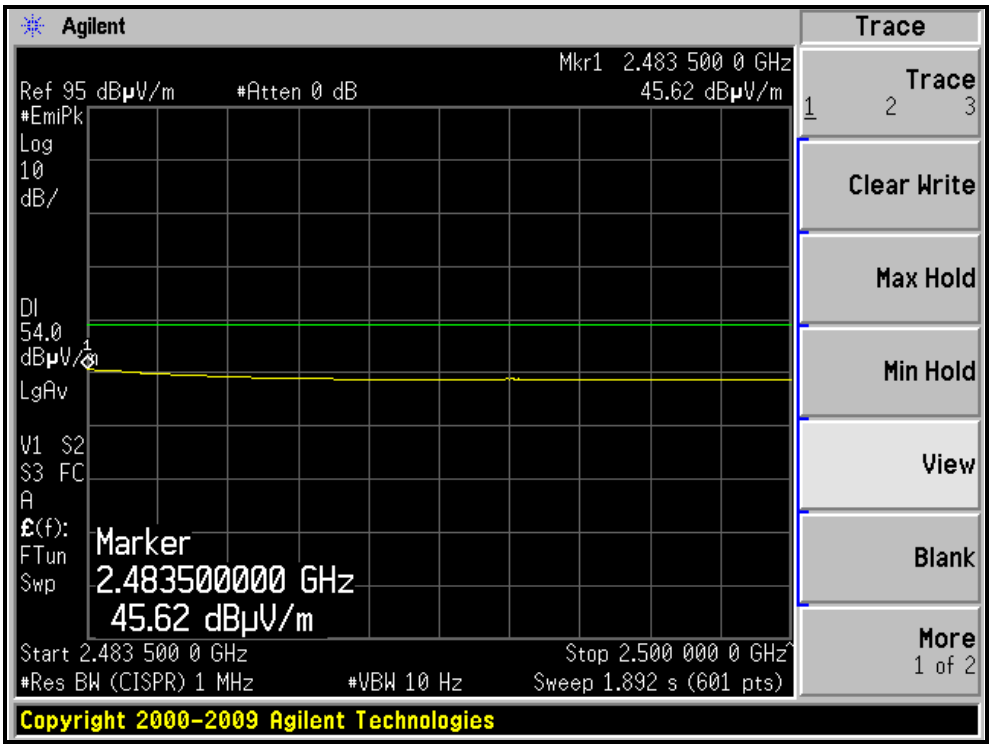
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH1, VERTICAL)



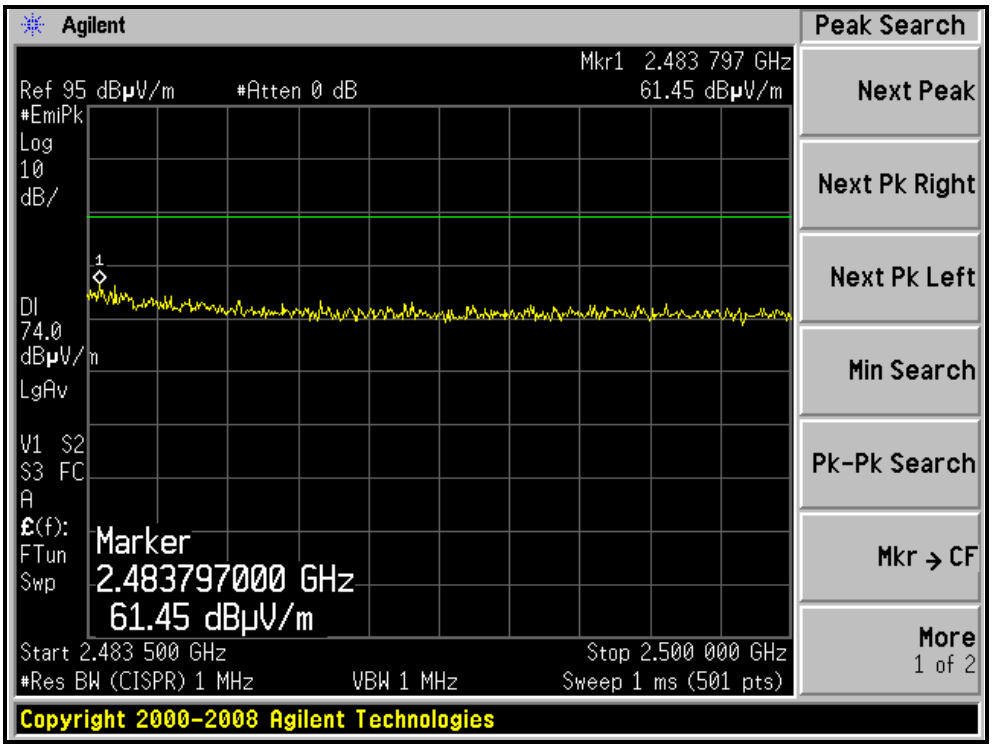


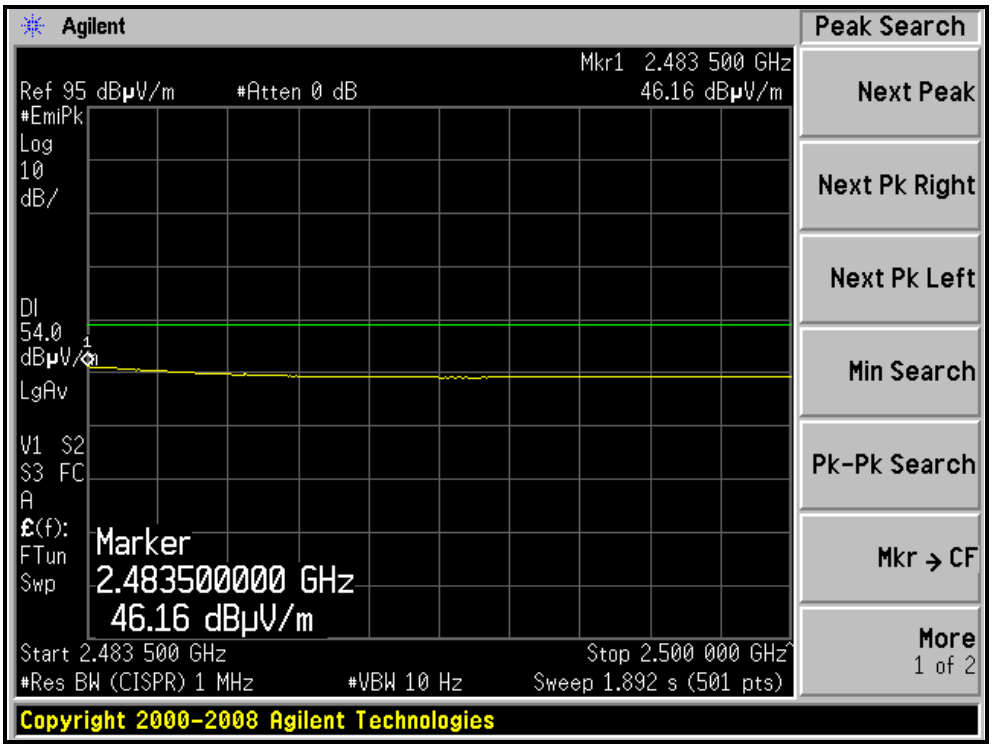
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH11, HORIZONTAL)





RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH11, VERTICAL)





DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.5 PK	74.0	-15.5	1.51 H	324	26.84	31.66
2	2390.00	45.8 AV	54.0	-8.2	1.51 H	324	14.14	31.66
3	*2422.00	96.9 PK			1.51 H	324	65.14	31.76
4	*2422.00	87.3 AV			1.51 H	324	55.54	31.76
5	4844.00	49.0 PK	74.0	-25.0	1.01 H	336	9.96	39.04
6	4844.00	40.9 AV	54.0	-13.1	1.01 H	336	1.86	39.04
7	7266.00	48.6 PK	74.0	-25.4	1.05 H	324	1.93	46.67
8	7266.00	40.4 AV	54.0	-13.6	1.05 H	324	-6.27	46.67
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.5 PK	74.0	-12.5	1.00 V	82	29.84	31.66
2	2390.00	45.9 AV	54.0	-8.1	1.00 V	82	14.24	31.66
3	*2422.00	97.9 PK			1.00 V	82	66.14	31.76
4	*2422.00	88.4 AV			1.00 V	82	56.64	31.76
5	4844.00	50.6 PK	74.0	-23.4	1.00 V	44	11.56	39.04
6	4844.00	43.3 AV	54.0	-10.7	1.00 V	44	4.26	39.04
7	7266.00	60.4 PK	74.0	-13.6	1.02 V	48	13.73	46.67
8	7266.00	46.2 AV	54.0	-7.8	1.02 V	48	-0.47	46.67

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	100.3 PK			1.54 H	326	68.49	31.81
2	*2437.00	90.6 AV			1.54 H	326	58.79	31.81
3	4874.00	48.6 PK	74.0	-25.4	1.02 H	339	9.46	39.14
4	4874.00	40.8 AV	54.0	-13.2	1.02 H	339	1.66	39.14
5	7311.00	53.0 PK	74.0	-21.0	1.83 H	21	6.37	46.63
6	7311.00	45.3 AV	54.0	-8.7	1.83 H	21	-1.33	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	101.2 PK			1.00 V	67	69.39	31.81
2	*2437.00	91.3 AV			1.00 V	67	59.49	31.81
3	2483.50	65.4 PK	74.0	-8.6	1.00 V	39	33.43	31.97
4	**2483.50**	**53.1 AV**	**54.0**	**-0.9**	**1.00 V**	**39**	**21.13**	**31.97**
5	4874.00	50.5 PK	74.0	-23.5	1.02 V	42	11.36	39.14
6	4874.00	43.4 AV	54.0	-10.6	1.02 V	42	4.26	39.14
7	7311.00	53.8 PK	74.0	-20.2	1.00 V	52	7.17	46.63
8	7311.00	49.0 AV	54.0	-5.0	1.00 V	52	2.37	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	*2452.00	98.9 PK			1.54 H	321	67.04	31.86
2	*2452.00	89.4 AV			1.54 H	321	57.54	31.86
3	2483.50	59.6 PK	74.0	-14.4	1.54 H	321	27.63	31.97
4	2483.50	46.3 AV	54.0	-7.7	1.54 H	321	14.33	31.97
5	4904.00	48.7 PK	74.0	-25.3	1.04 H	322	9.46	39.24
6	4904.00	40.9 AV	54.0	-13.1	1.04 H	322	1.66	39.24
7	7356.00	48.2 PK	74.0	-25.8	1.87 H	56	1.59	46.61
8	7356.00	40.6 AV	54.0	-13.4	1.87 H	56	-6.01	46.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	100.2 PK			1.00 V	27	68.34	31.86
2	*2452.00	90.4 AV			1.00 V	27	58.54	31.86
3	2483.50	65.1 PK	74.0	-8.9	1.00 V	27	33.13	31.97
4	2483.50	49.0 AV	54.0	-5.0	1.00 V	27	17.03	31.97
5	4904.00	50.6 PK	74.0	-23.4	1.00 V	43	11.36	39.24
6	4904.00	43.6 AV	54.0	-10.4	1.00 V	43	4.36	39.24
7	7356.00	60.7 PK	74.0	-13.3	1.04 V	56	14.09	46.61
8	7356.00	45.9 AV	54.0	-8.1	1.04 V	56	-0.71	46.61

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

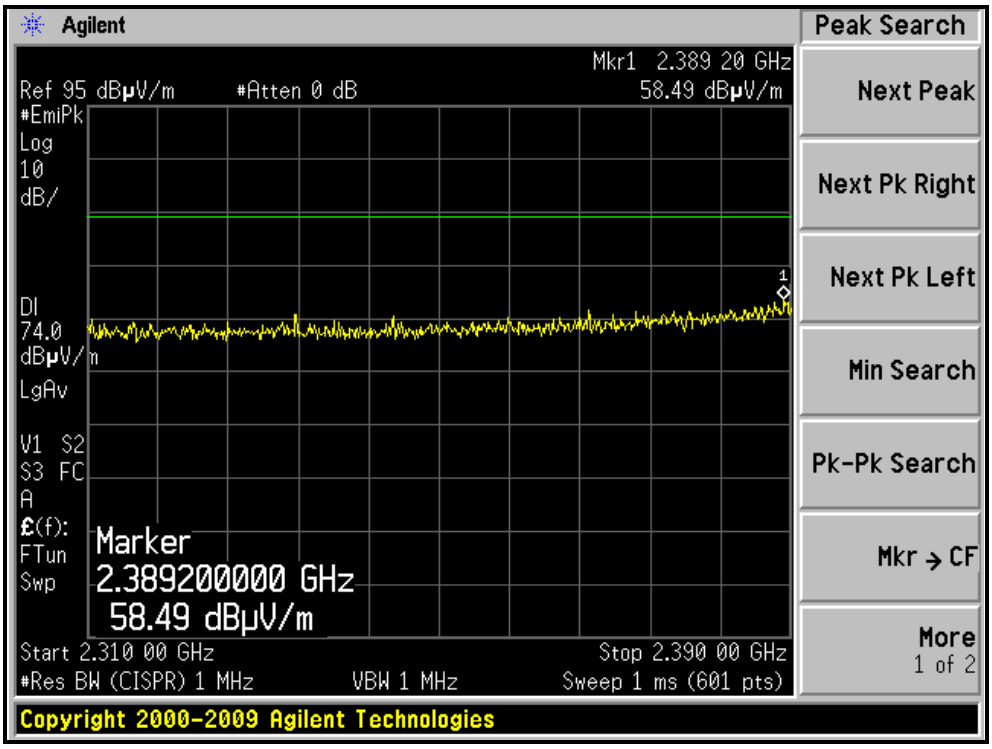
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

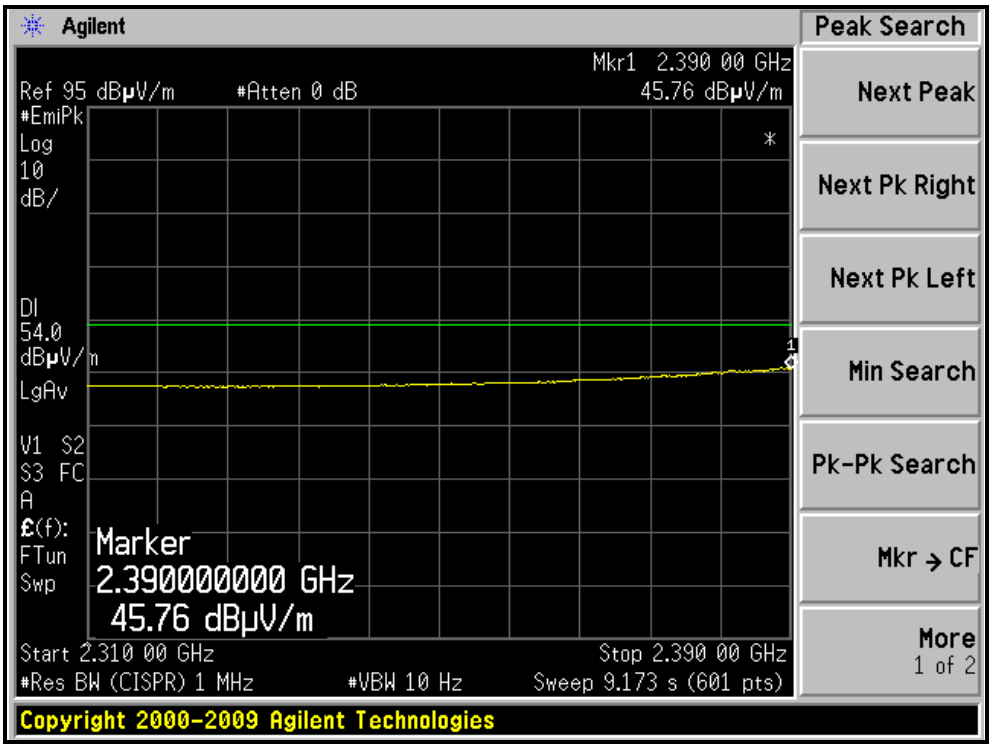
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

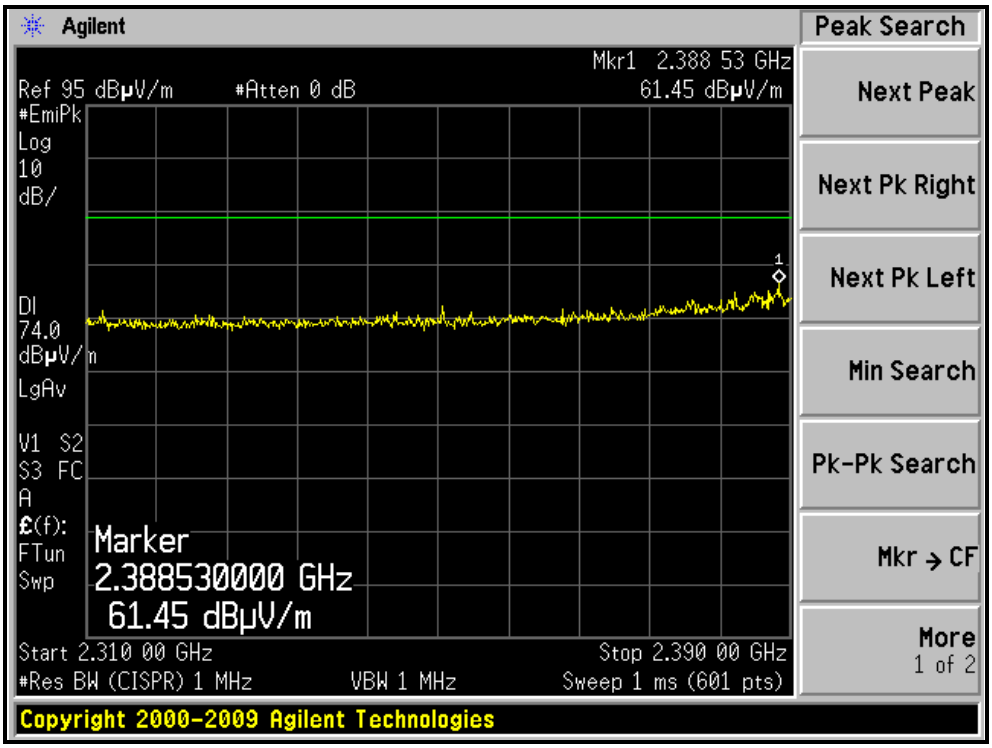
5. " * ": Fundamental frequency.

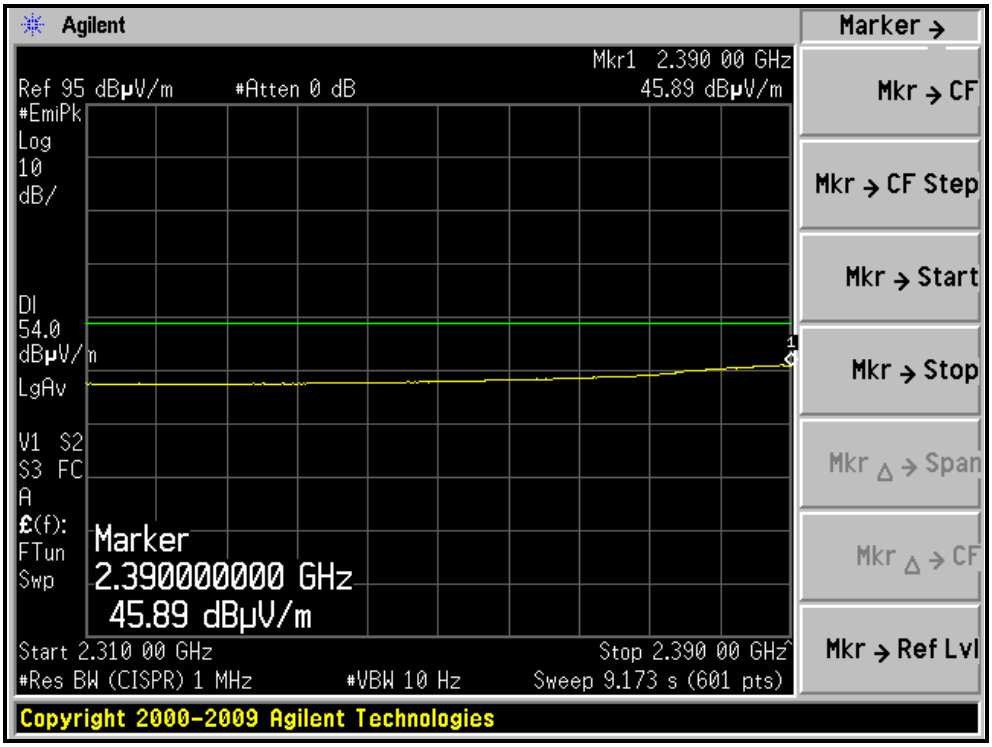
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH1, HORIZONTAL)



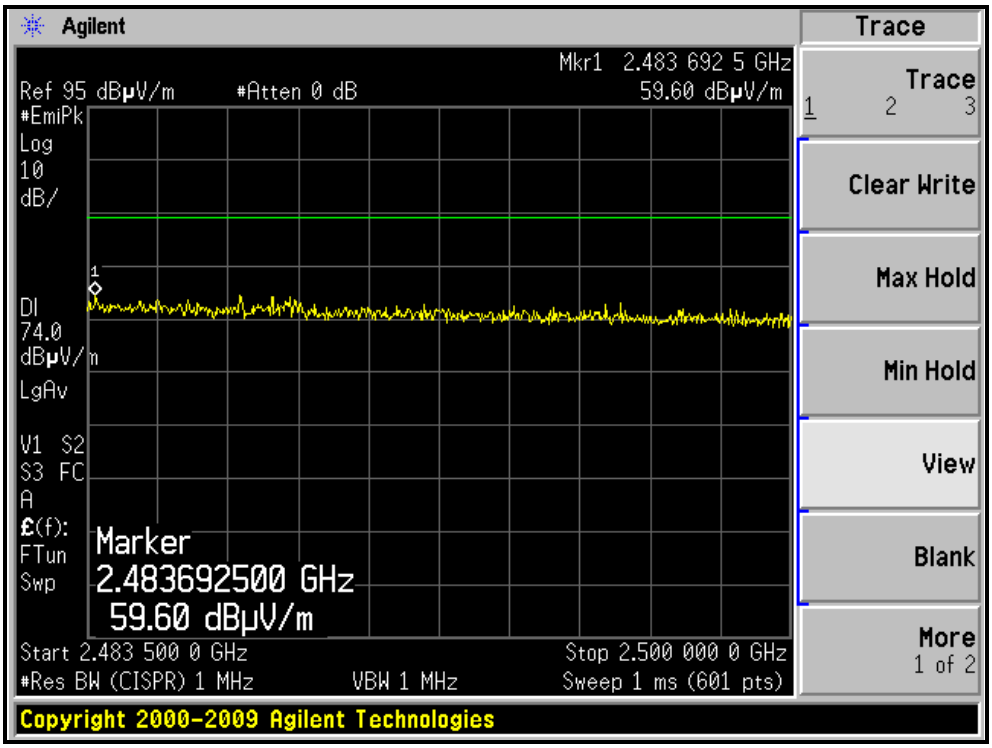


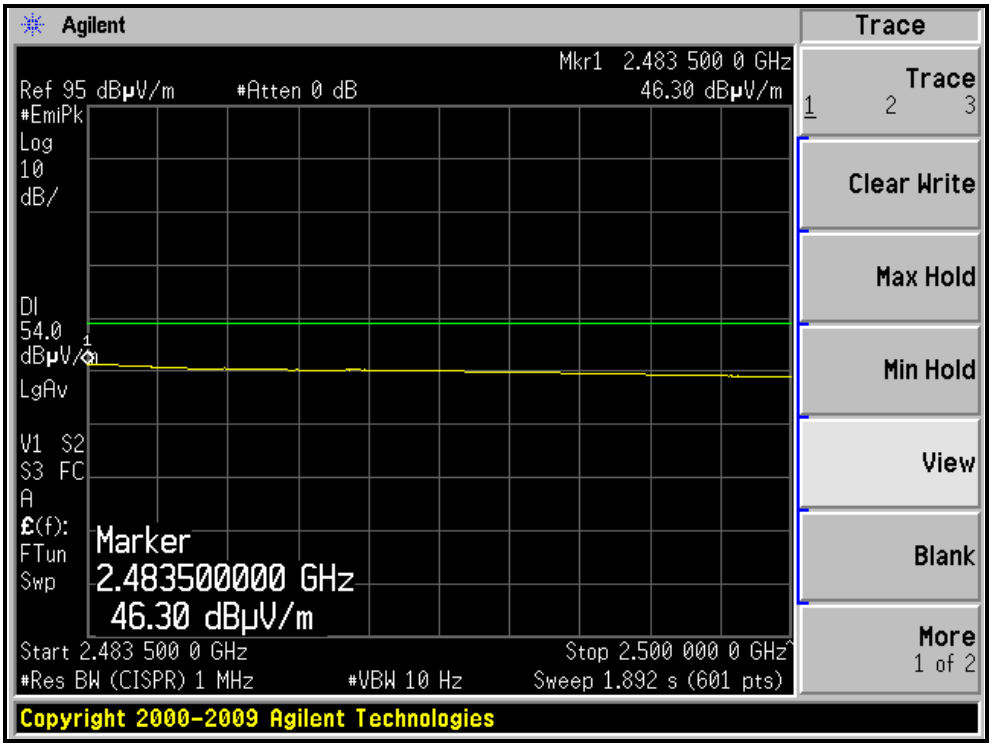
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH1, VERTICAL)



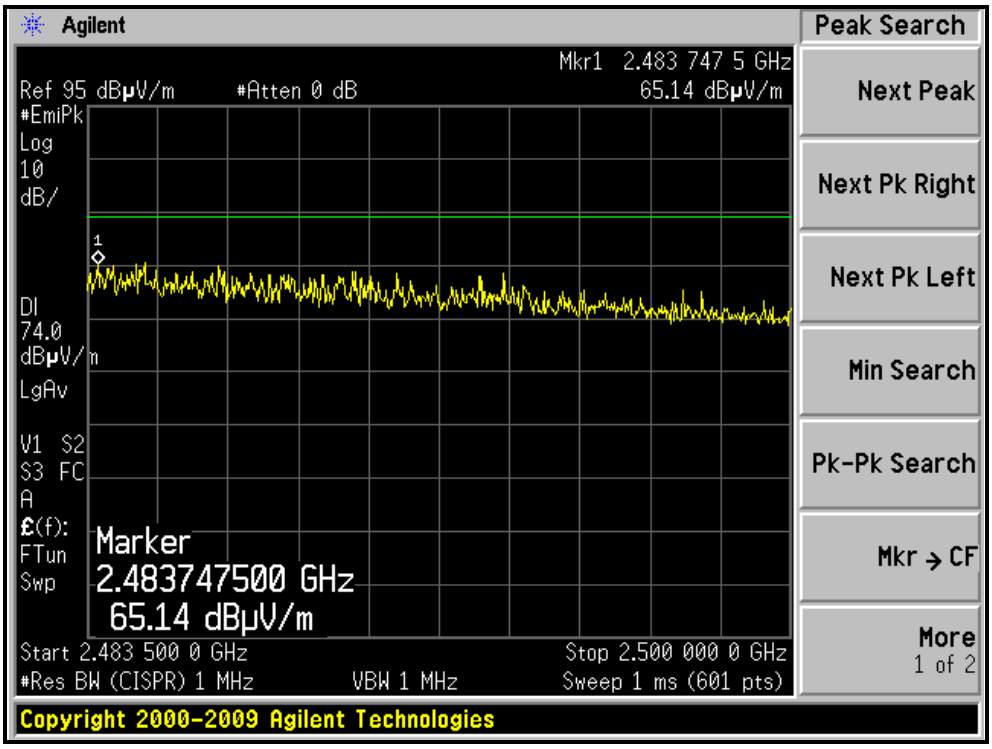


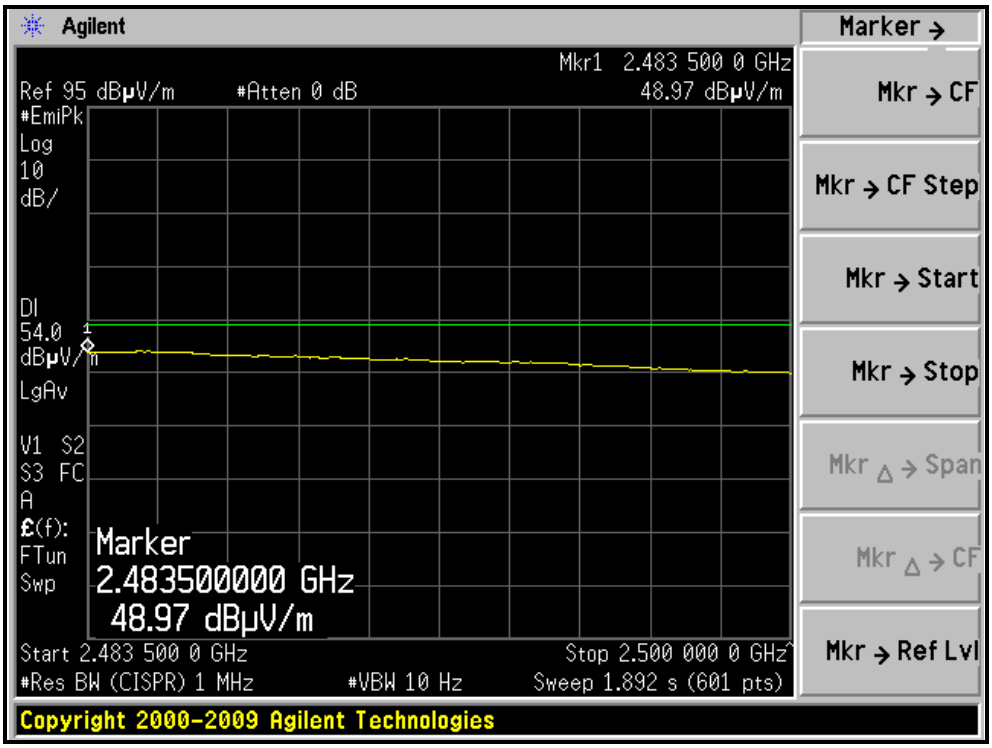
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH7, HORIZONTAL)





RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH7, VERTICAL)





4.2.8 TEST RESULTS (DIPOLE ANTENNA)

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	18deg. C, 66%RH 1024 hPa	**TESTED BY**	Frank Liu

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	99.63	33.8 QP	43.5	-9.7	2.00 H	30	23.97	9.87
2	149.96	38.0 QP	43.5	-5.5	2.00 H	0	23.71	14.26
3	250.03	31.7 QP	46.0	-14.4	1.50 H	134	18.75	12.90
4	432.04	39.0 QP	46.0	-7.0	2.00 H	342	20.40	18.56
5	699.80	38.3 QP	46.0	-7.7	1.00 H	246	15.25	23.06
6	899.81	36.9 QP	46.0	-9.1	1.50 H	224	10.33	26.56
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	35.57	33.5 QP	40.0	-6.5	1.00 V	307	19.71	13.76
2	149.96	35.2 QP	43.5	-8.3	1.50 V	0	20.93	14.26
3	299.89	39.5 QP	46.0	-6.5	1.50 V	313	24.55	14.93
4	432.04	38.7 QP	46.0	-7.3	1.50 V	272	20.11	18.56
5	600.44	39.1 QP	46.0	-7.0	1.00 V	175	16.69	22.36
6	799.98	40.0 QP	46.0	-6.0	2.00 V	310	15.09	24.87

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

802.11b DSSS MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.50	55.7 PK	74.0	-18.3	1.00 H	181	24.05	31.65
2	2386.50	44.1 AV	54.0	-9.9	1.00 H	181	12.45	31.65
3	*2412.00	97.1 PK			1.00 H	181	65.37	31.73
4	*2412.00	94.0 AV			1.00 H	181	62.27	31.73
5	4824.00	51.4 PK	74.0	-22.6	1.43 H	112	12.43	38.97
6	4824.00	44.3 AV	54.0	-9.7	1.43 H	112	5.33	38.97
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	2386.13	58.3 PK	74.0	-15.7	1.00 V	298	26.66	31.64
2	2386.13	46.1 AV	54.0	-7.9	1.00 V	298	14.46	31.64
3	*2412.00	104.9 PK			1.00 V	298	73.17	31.73
4	*2412.00	102.4 AV			1.00 V	298	70.67	31.73
5	4824.00	51.5 PK	74.0	-22.5	1.00 V	17	12.53	38.97
6	4824.00	43.7 AV	54.0	-10.3	1.00 V	17	4.73	38.97

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	97.6 PK			1.00 H	184	65.79	31.81
2	*2437.00	94.3 AV			1.00 H	184	62.49	31.81
3	4874.00	55.9 PK	74.0	-18.1	1.42 H	117	16.76	39.14
4	4874.00	44.2 AV	54.0	-9.8	1.42 H	117	5.06	39.14
5	7311.00	55.7 PK	74.0	-18.3	1.74 H	62	9.07	46.63
6	7311.00	46.9 AV	54.0	-7.1	1.74 H	62	0.27	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.0 PK			1.00 V	297	73.19	31.81
2	*2437.00	102.6 AV			1.00 V	297	70.79	31.81
3	4874.00	52.7 PK	74.0	-21.3	1.00 V	23	13.56	39.14
4	4874.00	43.6 AV	54.0	-10.4	1.00 V	23	4.46	39.14
5	7311.00	58.0 PK	74.0	-16.0	1.15 V	292	11.37	46.63
6	7311.00	52.7 AV	54.0	-1.3	1.15 V	292	6.07	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	97.6 PK			1.00 H	184	65.71	31.89
2	*2462.00	94.7 AV			1.00 H	184	62.81	31.89
3	2483.50	55.0 PK	74.0	-19.0	1.00 H	184	23.03	31.97
4	2483.50	43.8 AV	54.0	-10.2	1.00 H	184	11.83	31.97
5	4924.00	51.0 PK	74.0	-23.0	1.44 H	114	11.69	39.31
6	4924.00	44.0 AV	54.0	-10.0	1.44 H	114	4.69	39.31
7	7386.00	55.8 PK	74.0	-18.2	1.76 H	38	9.20	46.60
8	7386.00	46.5 AV	54.0	-7.5	1.76 H	38	-0.10	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.2 PK			1.02 V	276	73.31	31.89
2	*2462.00	103.1 AV			1.02 V	276	71.21	31.89
3	2487.87	59.2 PK	74.0	-14.8	1.02 V	276	27.22	31.98
4	2487.87	46.2 AV	54.0	-7.8	1.02 V	276	14.22	31.98
5	4924.00	51.9 PK	74.0	-22.1	1.00 V	19	12.59	39.31
6	4924.00	44.2 AV	54.0	-9.8	1.00 V	19	4.89	39.31

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

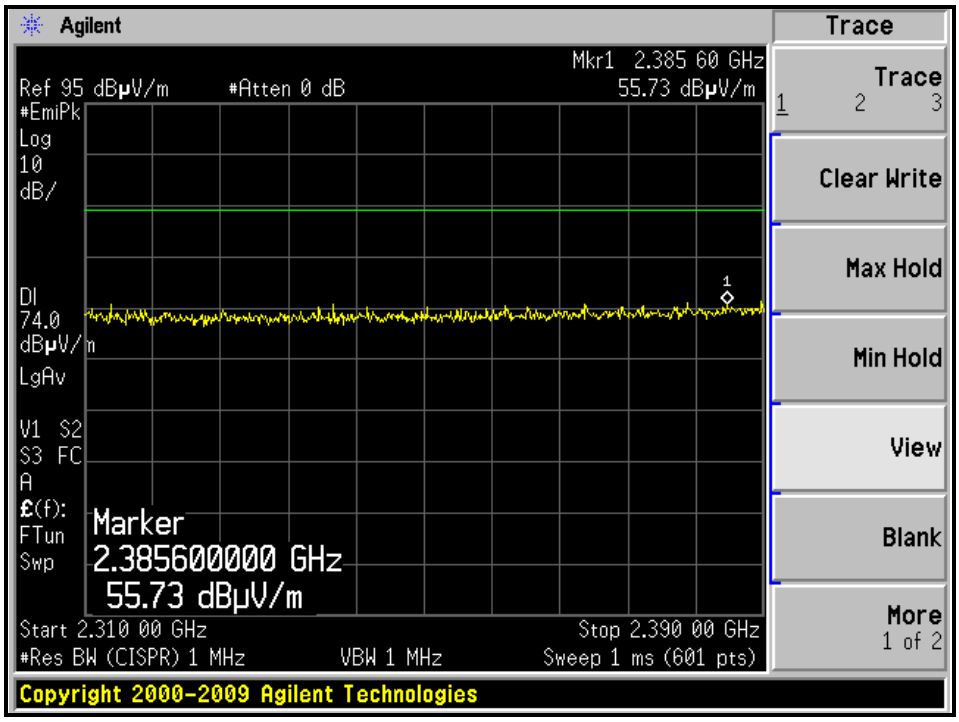
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

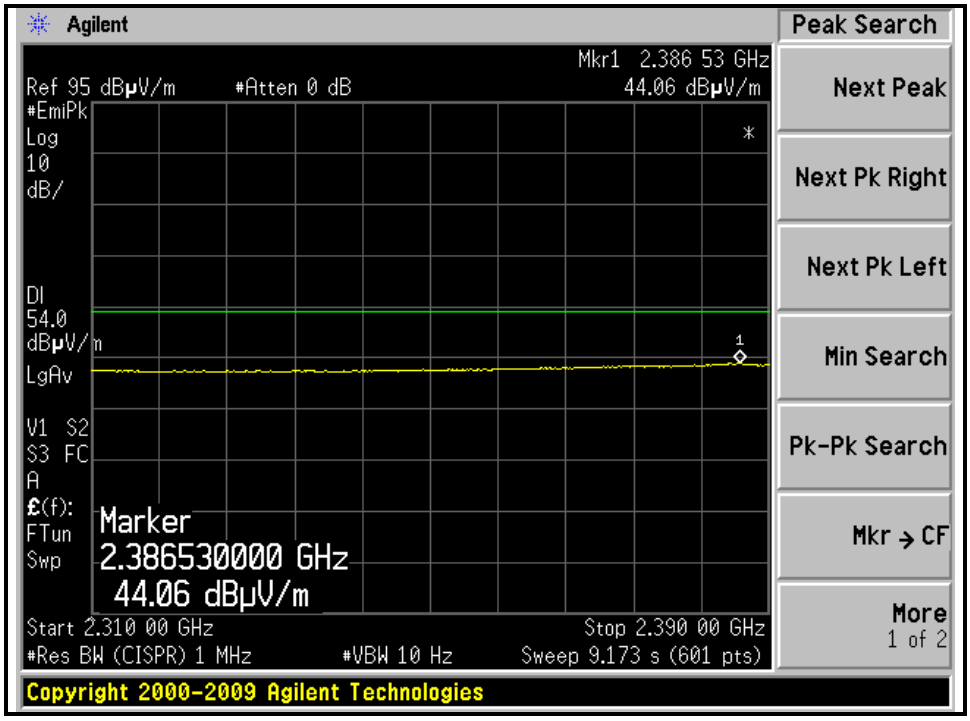
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

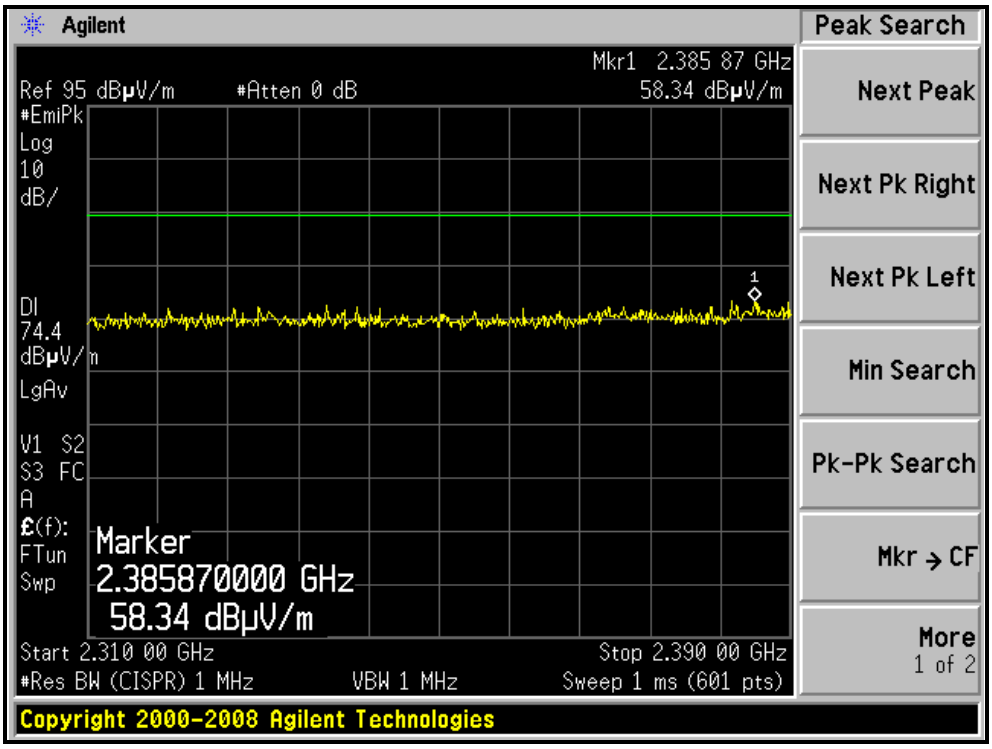
5. " * ": Fundamental frequency.

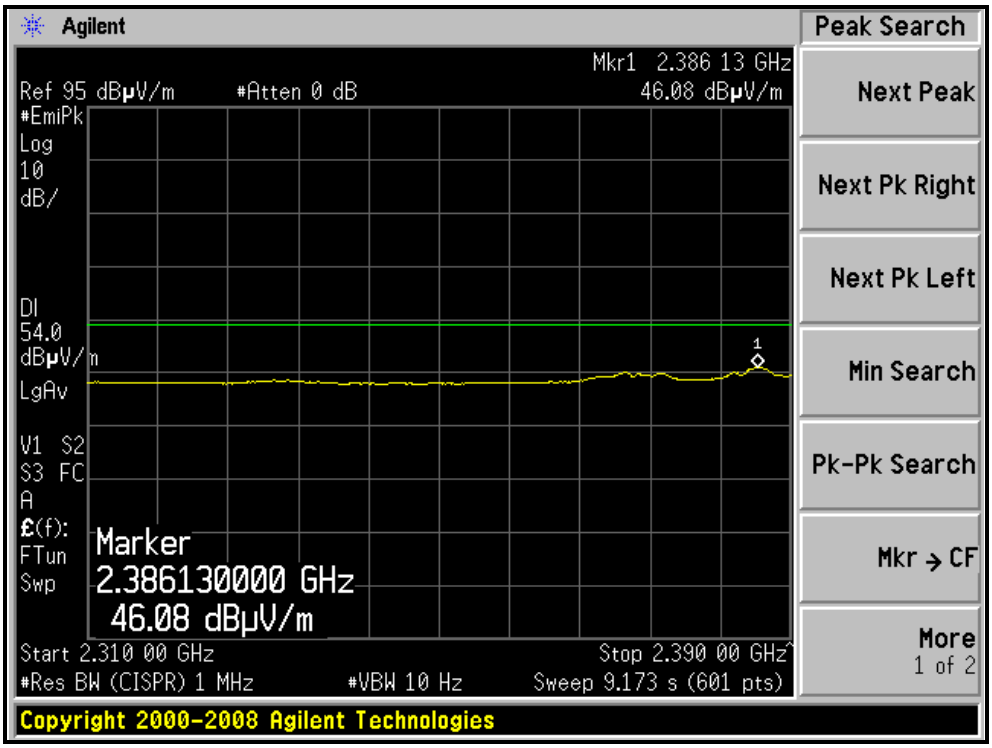
RESTRICTED BANDEDGE (802.11b MODE,CH1, HORIZONTAL)



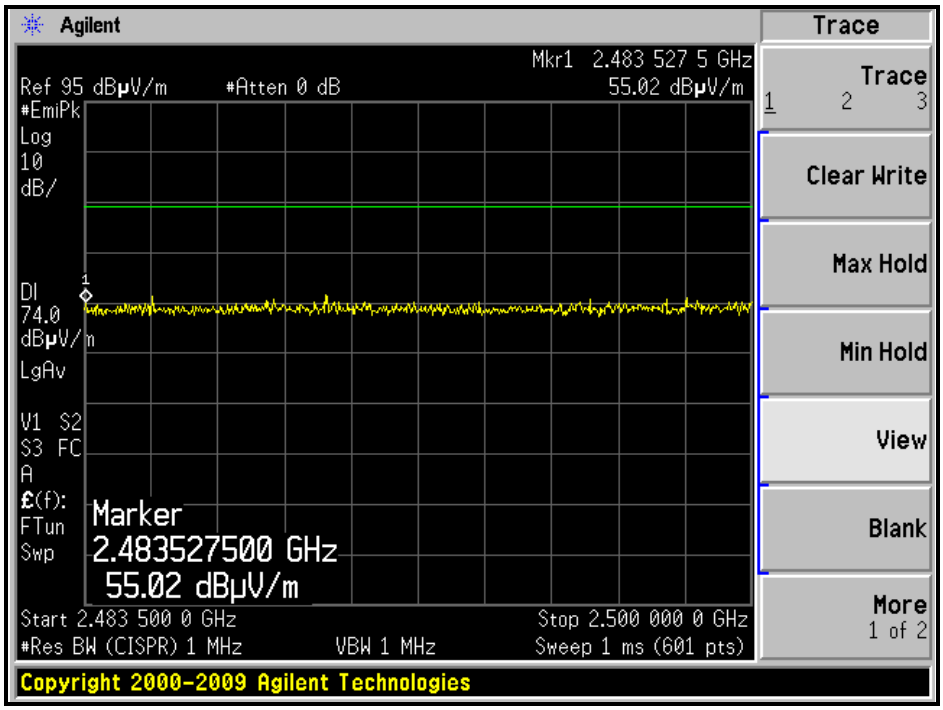


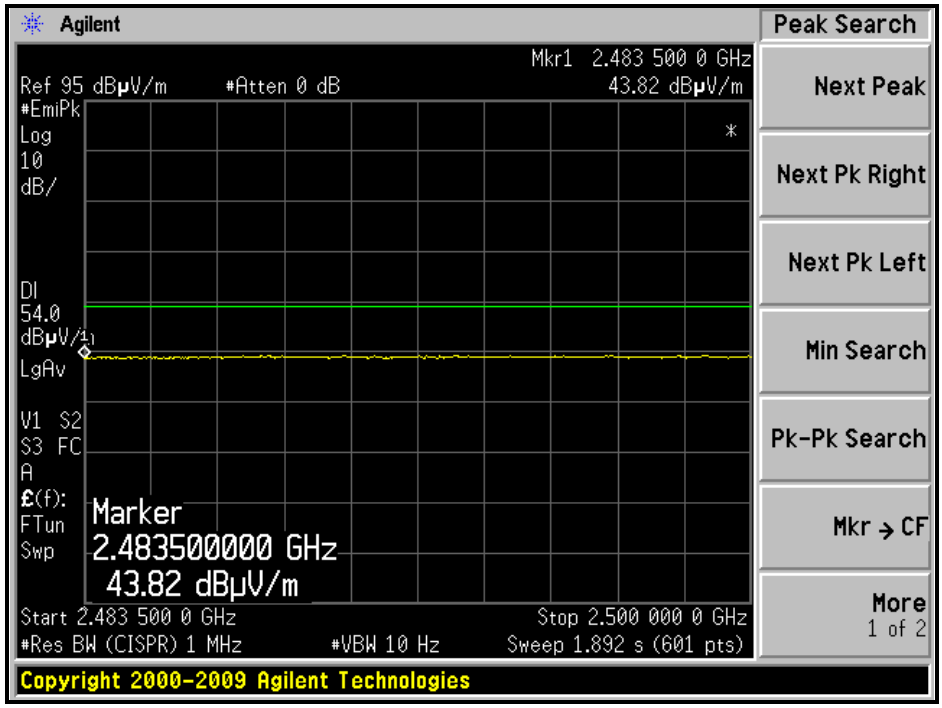
RESTRICTED BANDEDGE (802.11b MODE,CH1, VERTICAL)





RESTRICTED BANDEDGE (802.11b MODE,CH11, HORIZONTAL)





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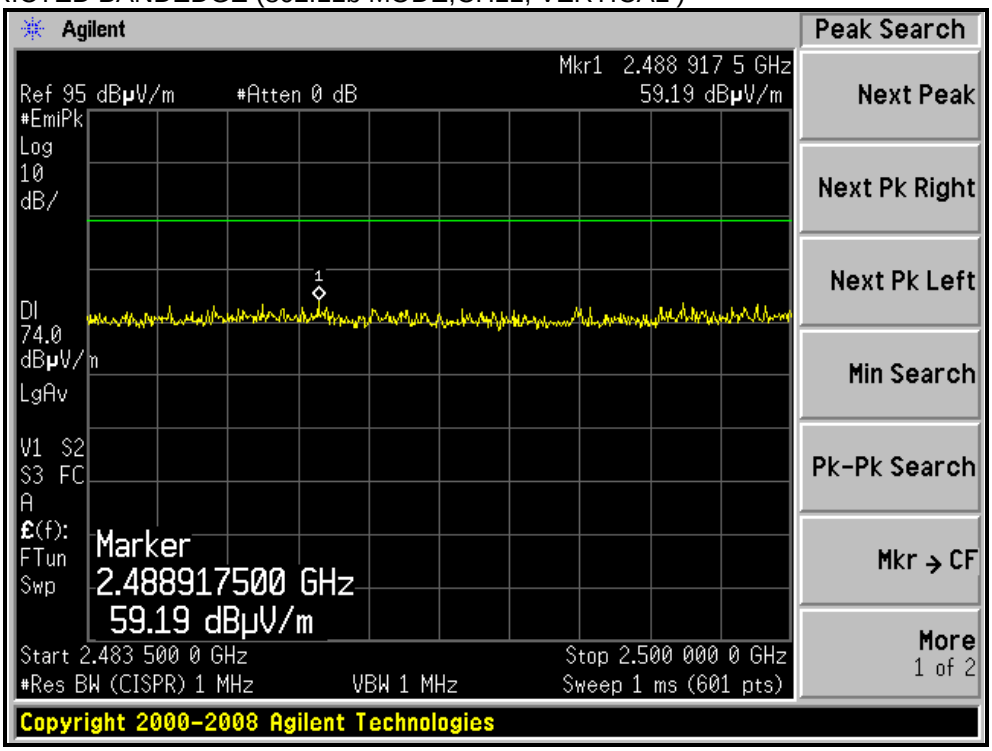
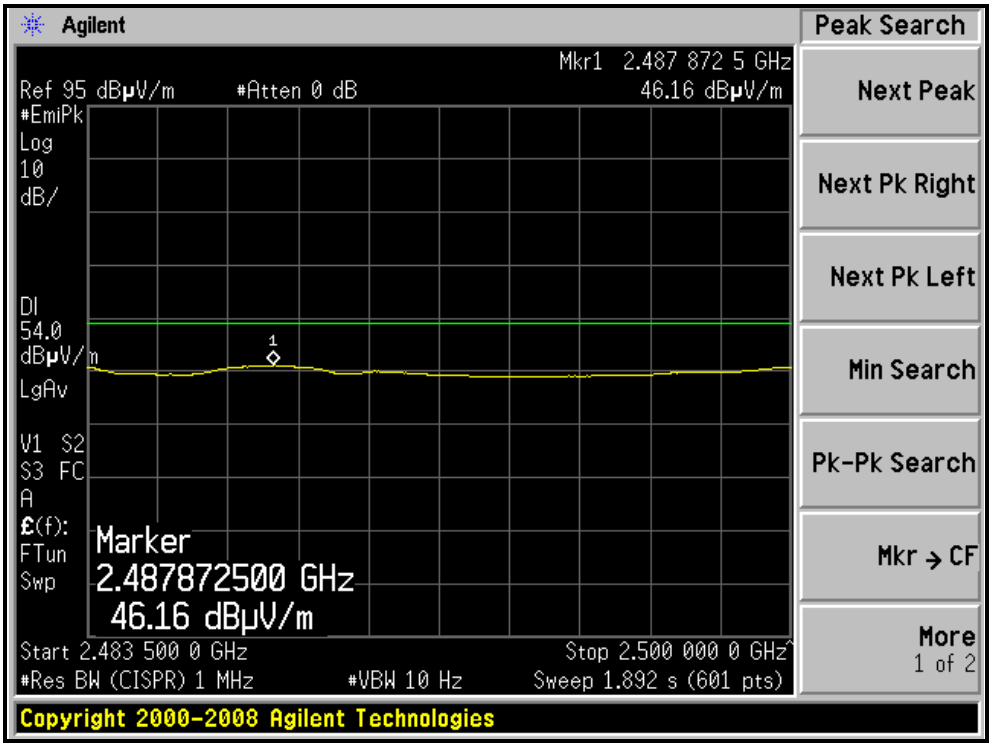




802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.2 PK	74.0	-16.8	1.00 H	189	25.54	31.66
2	2390.00	45.1 AV	54.0	-8.9	1.00 H	189	13.44	31.66
3	*2412.00	98.3 PK			1.00 H	189	66.57	31.73
4	*2412.00	88.4 AV			1.00 H	189	56.67	31.73
5	4824.00	49.4 PK	74.0	-24.6	1.42 H	119	10.43	38.97
6	4824.00	41.5 AV	54.0	-12.5	1.42 H	119	2.53	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.4 PK	74.0	-12.6	1.00 V	297	29.74	31.66
2	2390.00	47.7 AV	54.0	-6.3	1.00 V	297	16.04	31.66
3	*2412.00	105.7 PK			1.00 V	297	73.97	31.73
4	*2412.00	96.6 AV			1.00 V	297	64.87	31.73
5	4824.00	49.3 PK	74.0	-24.7	1.00 V	23	10.33	38.97
6	4824.00	41.2 AV	54.0	-12.8	1.00 V	23	2.23	38.97

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	100.7 PK			1.00 H	184	68.89	31.81
2	*2437.00	90.6 AV			1.00 H	184	58.79	31.81
3	4874.00	50.8 PK	74.0	-23.2	1.43 H	116	11.66	39.14
4	4874.00	43.9 AV	54.0	-10.1	1.43 H	116	4.76	39.14
5	7311.00	55.8 PK	74.0	-18.2	1.79 H	73	9.17	46.63
6	7311.00	45.3 AV	54.0	-8.7	1.79 H	73	-1.33	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	108.4 PK			1.00 V	294	76.59	31.81
2	*2437.00	98.2 AV			1.00 V	294	66.39	31.81
3	4874.00	50.9 PK	74.0	-23.1	1.00 V	37	11.76	39.14
4	4874.00	43.7 AV	54.0	-10.3	1.00 V	37	4.56	39.14
5	7311.00	61.4 PK	74.0	-12.6	1.00 V	113	14.77	46.63
6	7311.00	47.5 AV	54.0	-6.5	1.00 V	113	0.87	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	99.4 PK			1.00 H	186	67.51	31.89
2	*2462.00	89.3 AV			1.00 H	186	57.41	31.89
3	2483.50	54.8 PK	74.0	-19.2	1.00 H	186	22.83	31.97
4	2483.50	44.1 AV	54.0	-9.9	1.00 H	186	12.13	31.97
5	4924.00	50.5 PK	74.0	-23.5	1.47 H	125	11.19	39.31
6	4924.00	43.8 AV	54.0	-10.2	1.47 H	125	4.49	39.31
7	7386.00	54.3 PK	74.0	-19.7	1.73 H	69	7.70	46.60
8	7386.00	44.5 AV	54.0	-9.5	1.73 H	69	-2.10	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.9 PK			1.02 V	266	74.01	31.89
2	*2462.00	97.1 AV			1.02 V	266	65.21	31.89
3	2483.50	63.9 PK	74.0	-10.1	1.02 V	266	31.93	31.97
4	2483.50	48.4 AV	54.0	-5.6	1.02 V	266	16.43	31.97
5	4924.00	51.1 PK	74.0	-22.9	1.00 V	41	11.79	39.31
6	4924.00	43.9 AV	54.0	-10.1	1.00 V	41	4.59	39.31
7	7386.00	60.4 PK	74.0	-13.6	1.07 V	114	13.80	46.60
8	7386.00	46.3 AV	54.0	-7.7	1.07 V	114	-0.30	46.60

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

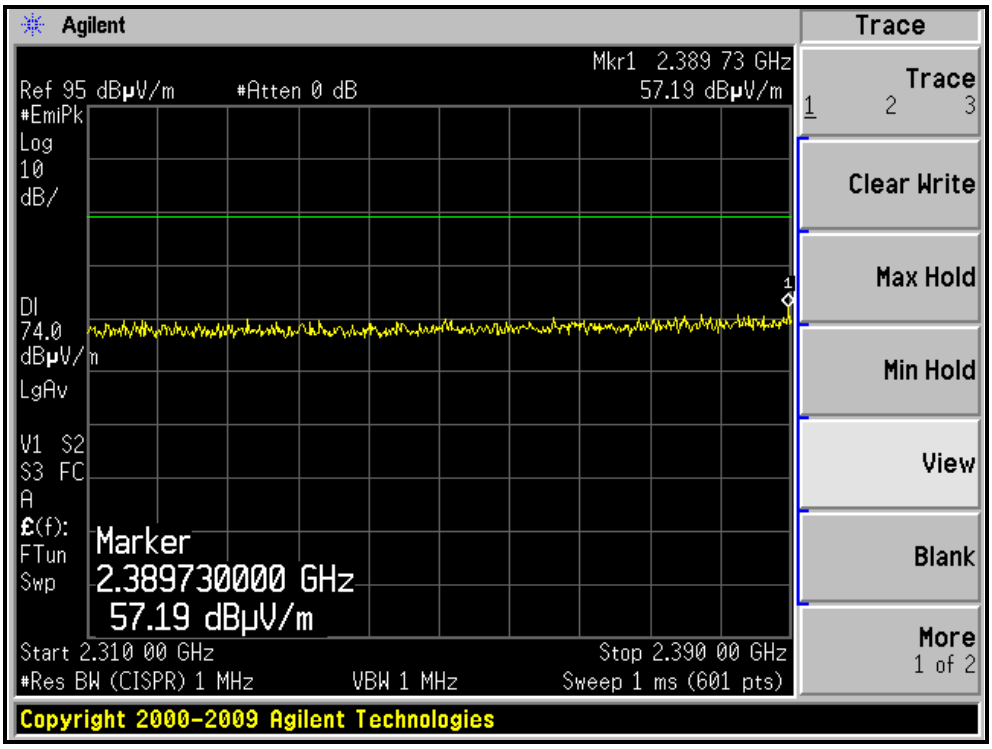
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

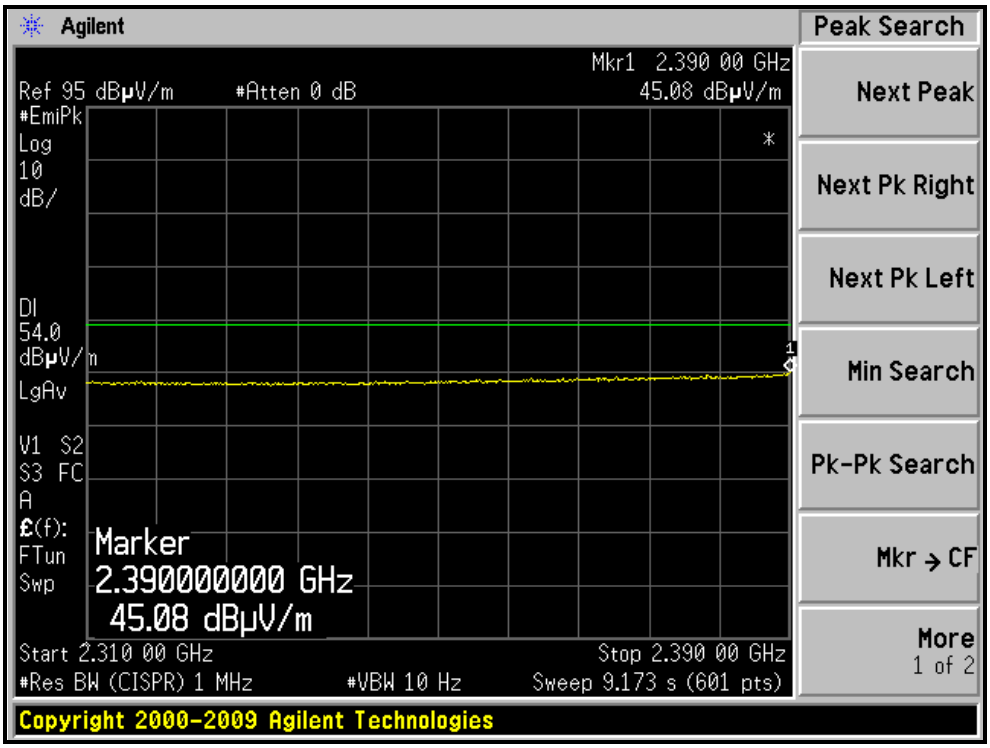
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

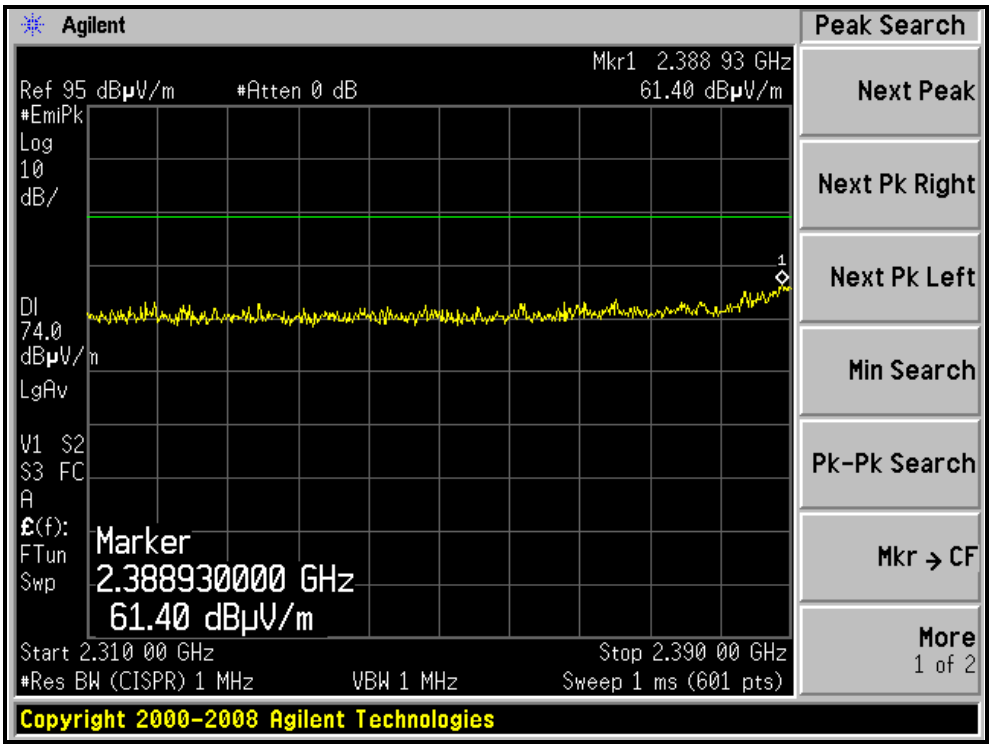
5. " * ": Fundamental frequency.

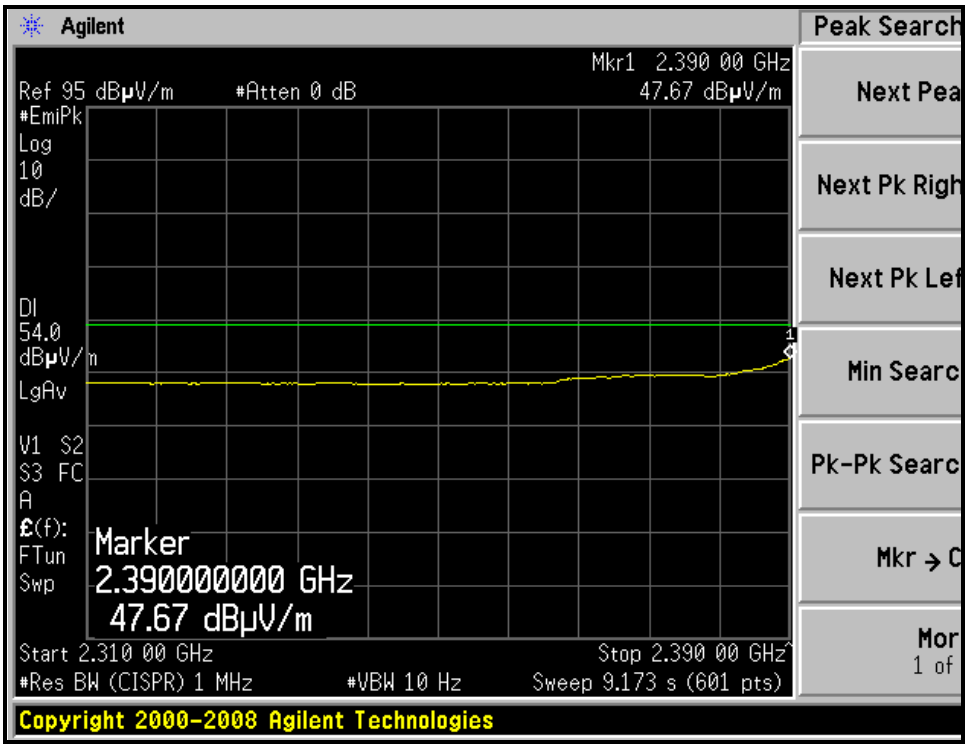
RESTRICTED BANDEDGE (802.11g MODE,CH1, HORIZONTAL)





RESTRICTED BANDEDGE (802.11g MODE,CH1, VERTICAL)





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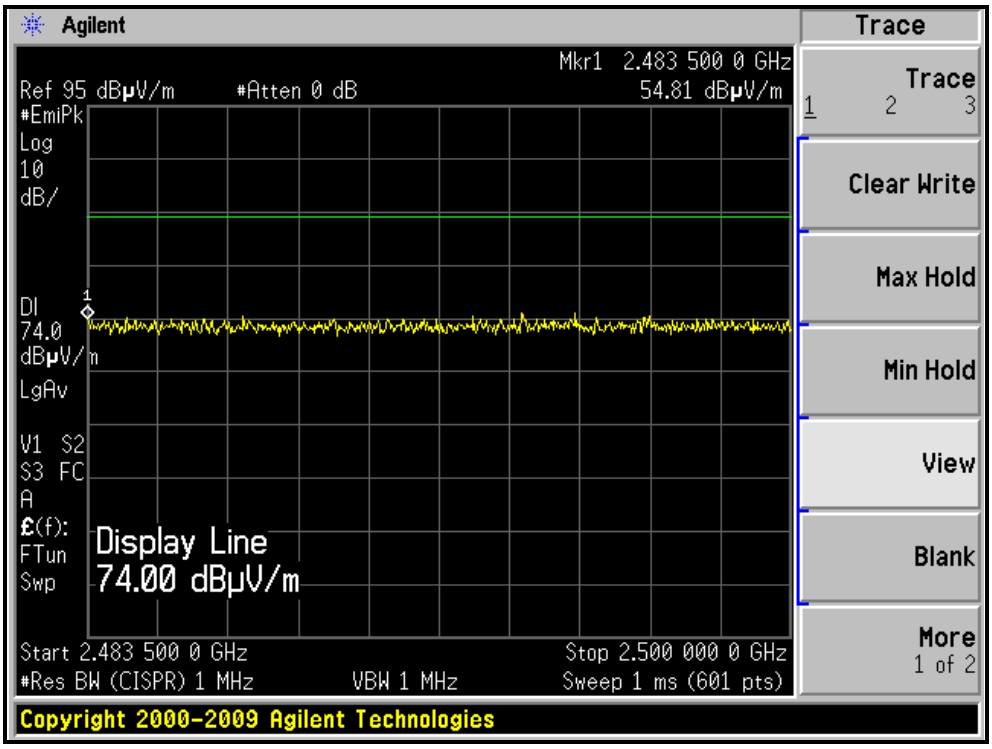
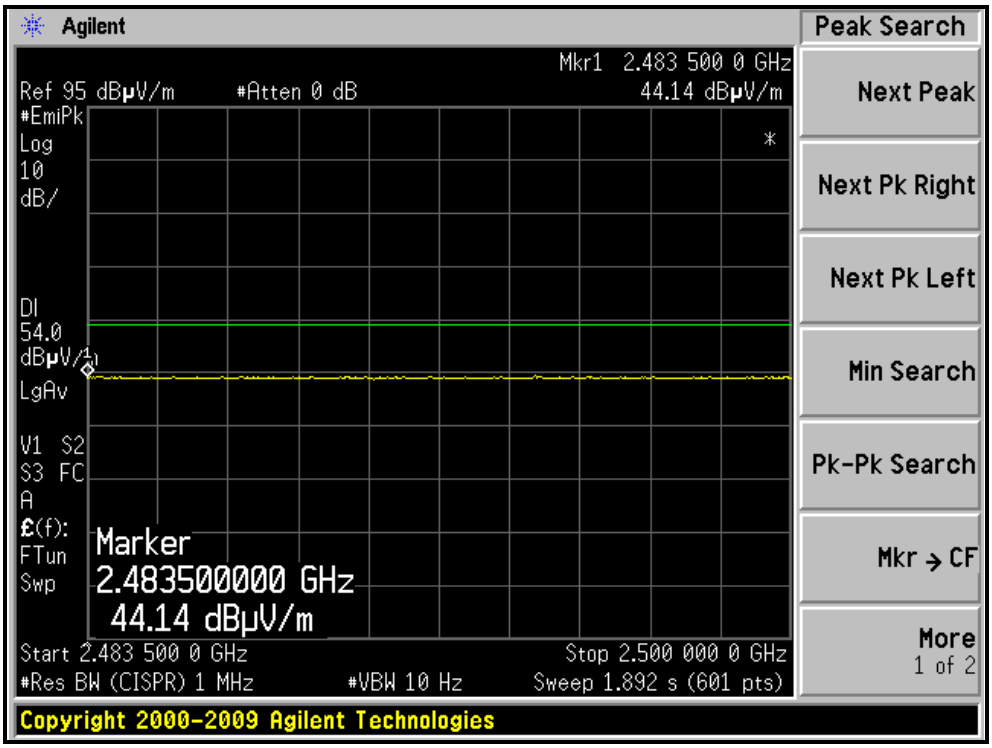
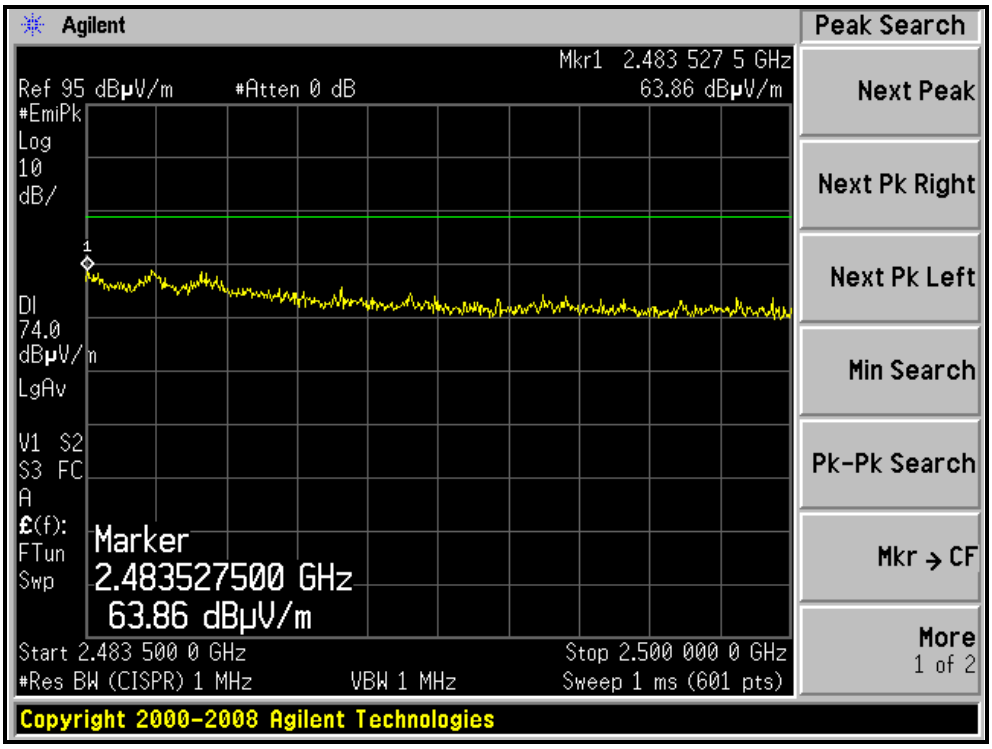
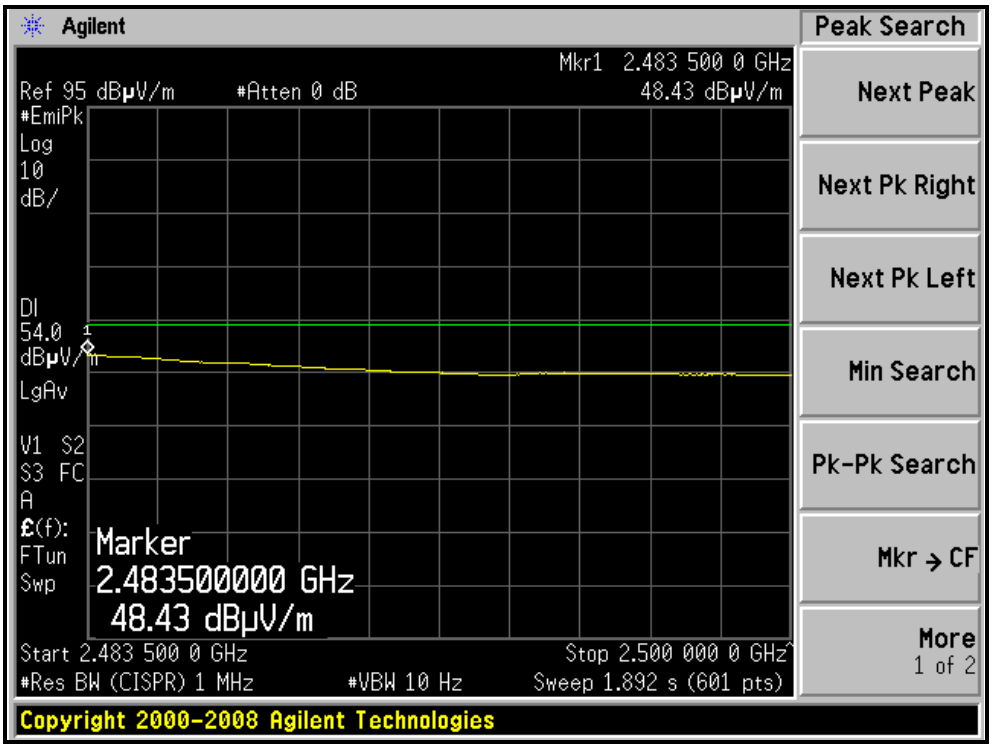




RESTRICTED BANDEDGE (802.11g MODE,CH11, VERTICAL)





DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	54.3 PK	74.0	-19.7	1.00 H	182	22.64	31.66
2	2390.00	44.5 AV	54.0	-9.5	1.00 H	182	12.84	31.66
3	*2412.00	97.3 PK			1.00 H	182	65.57	31.73
4	*2412.00	87.6 AV			1.00 H	182	55.87	31.73
5	4824.00	50.8 PK	74.0	-23.2	1.48 H	125	11.83	38.97
6	4824.00	43.6 AV	54.0	-10.4	1.48 H	125	4.63	38.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.00 V	299	27.54	31.66
2	2390.00	45.3 AV	54.0	-8.7	1.00 V	299	13.64	31.66
3	*2412.00	104.6 PK			1.00 V	299	72.87	31.73
4	*2412.00	94.8 AV			1.00 V	299	63.07	31.73
5	4824.00	50.7 PK	74.0	-23.3	1.00 V	40	11.73	38.97
6	4824.00	43.8 AV	54.0	-10.2	1.00 V	40	4.83	38.97

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	100.3 PK			1.00 H	186	68.49	31.81
2	*2437.00	90.2 AV			1.00 H	186	58.39	31.81
3	4874.00	50.9 PK	74.0	-23.1	1.37 H	124	11.76	39.14
4	4874.00	44.0 AV	54.0	-10.0	1.37 H	124	4.86	39.14
5	7311.00	55.9 PK	74.0	-18.1	1.74 H	83	9.27	46.63
6	7311.00	45.3 AV	54.0	-8.7	1.74 H	83	-1.33	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.3 PK			1.00 V	298	74.49	31.81
2	*2437.00	96.2 AV			1.00 V	298	64.39	31.81
3	4874.00	50.8 PK	74.0	-23.2	1.02 V	45	11.66	39.14
4	4874.00	43.5 AV	54.0	-10.5	1.02 V	45	4.36	39.14
5	7311.00	61.1 PK	74.0	-12.9	1.04 V	106	14.47	46.63
6	7311.00	47.3 AV	54.0	-6.7	1.04 V	106	0.67	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	98.2 PK			1.00 H	184	66.31	31.89
2	*2462.00	88.9 AV			1.00 H	184	57.01	31.89
3	2483.50	55.2 PK	74.0	-18.8	1.00 H	184	23.23	31.97
4	2483.50	43.8 AV	54.0	-10.2	1.00 H	184	11.83	31.97
5	4924.00	51.2 PK	74.0	-22.8	1.40 H	104	11.89	39.31
6	4924.00	44.2 AV	54.0	-9.8	1.40 H	104	4.89	39.31
7	7386.00	55.7 PK	74.0	-18.3	1.76 H	81	9.10	46.60
8	7386.00	45.2 AV	54.0	-8.8	1.76 H	81	-1.40	46.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.7 PK			1.02 V	267	72.81	31.89
2	*2462.00	95.2 AV			1.02 V	267	63.31	31.89
3	2483.50	60.2 PK	74.0	-13.8	1.02 V	267	28.23	31.97
4	2483.50	46.1 AV	54.0	-7.9	1.02 V	267	14.13	31.97
5	4924.00	51.2 PK	74.0	-22.8	1.00 V	50	11.89	39.31
6	4924.00	43.7 AV	54.0	-10.3	1.00 V	50	4.39	39.31
7	7386.00	61.6 PK	74.0	-12.4	1.00 V	115	15.00	46.60
8	7386.00	47.4 AV	54.0	-6.6	1.00 V	115	0.80	46.60

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

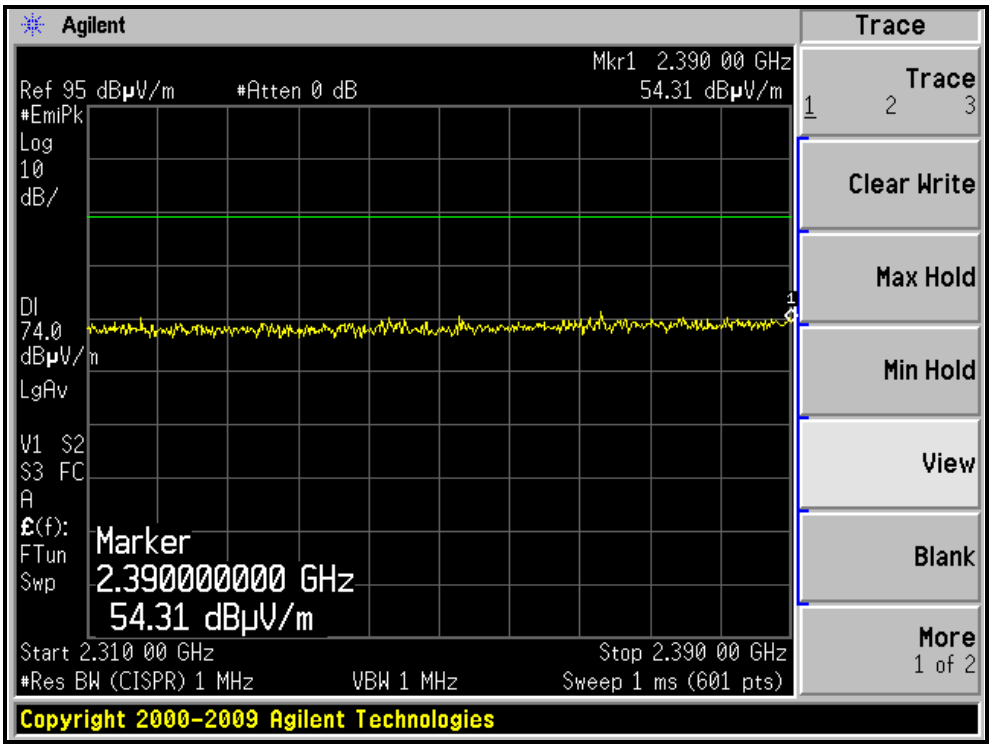
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

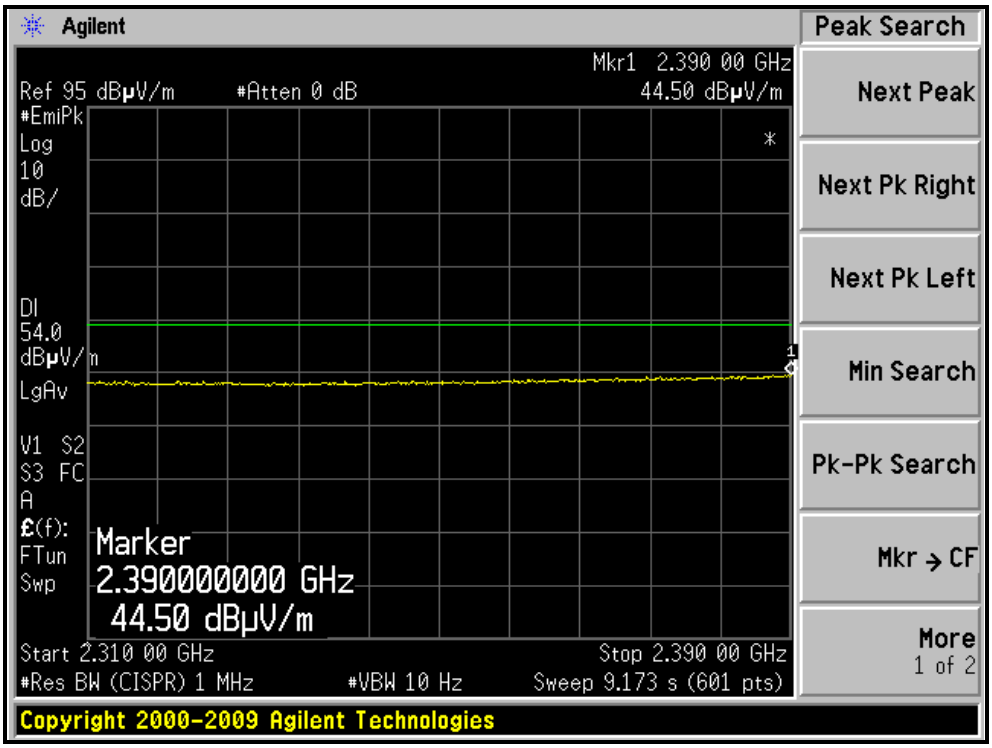
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

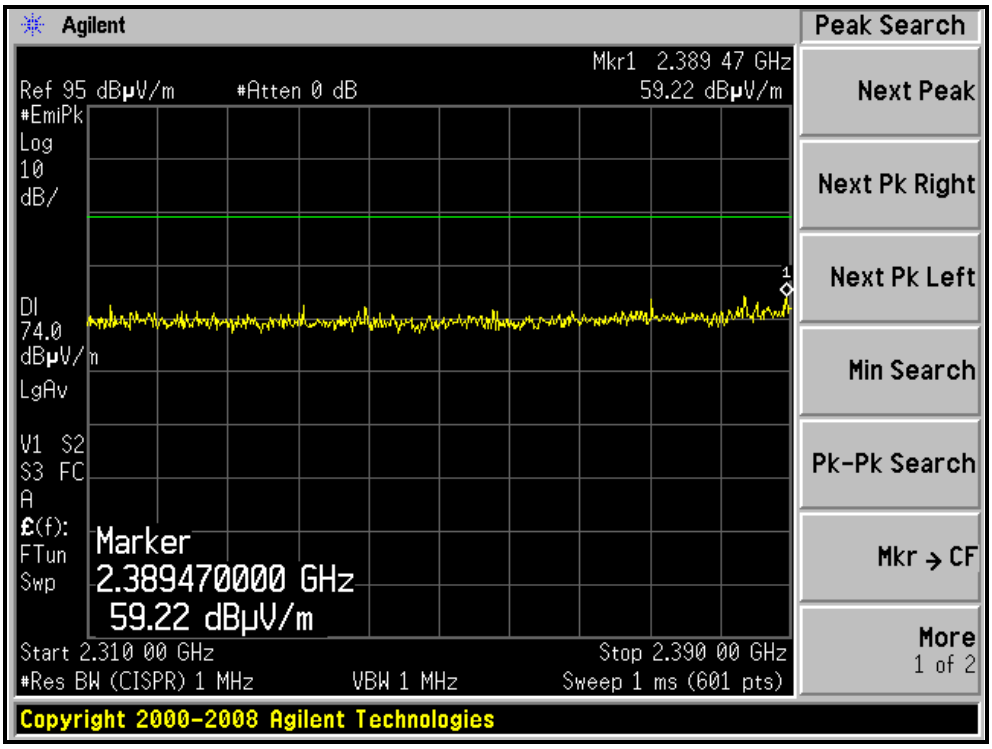
5. " * ": Fundamental frequency.

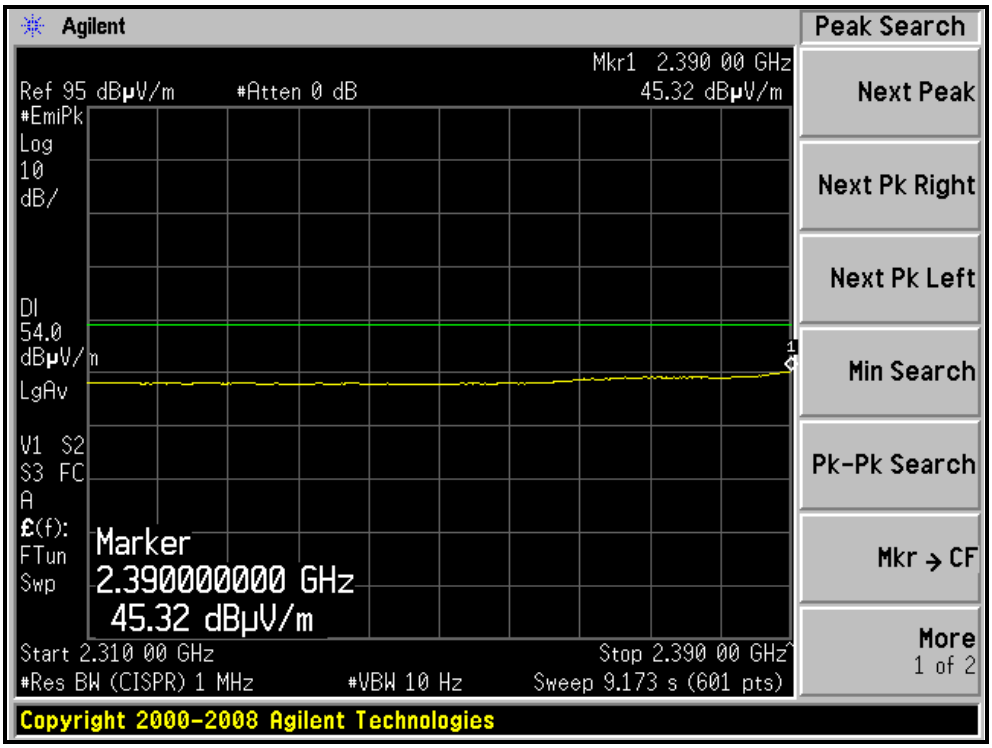
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH1, HORIZONTAL)



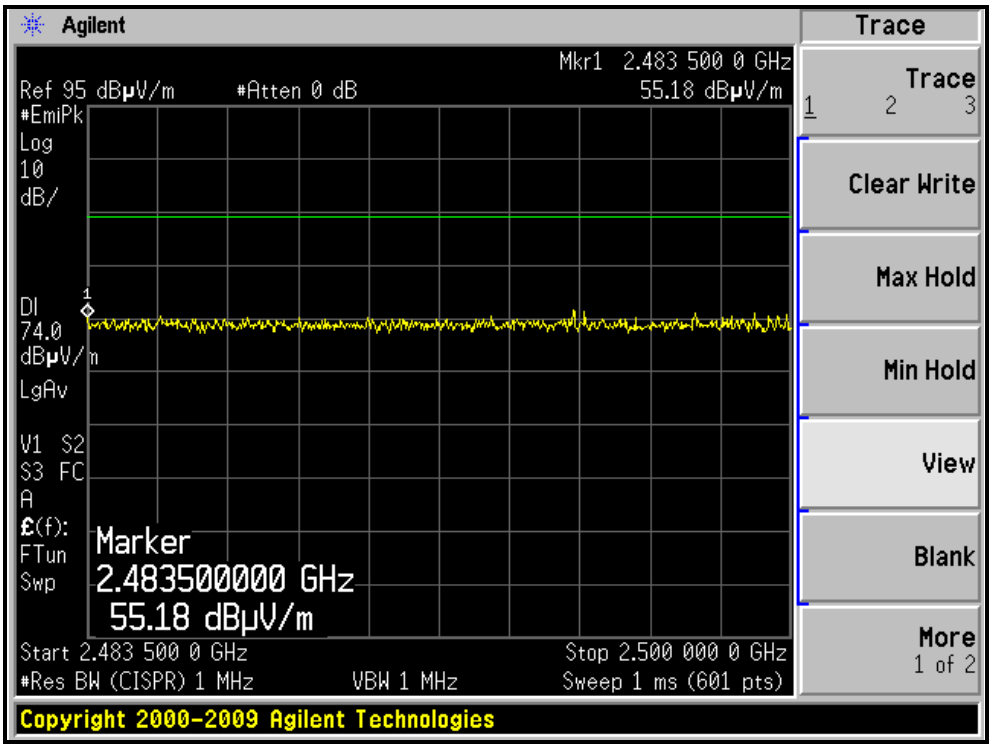


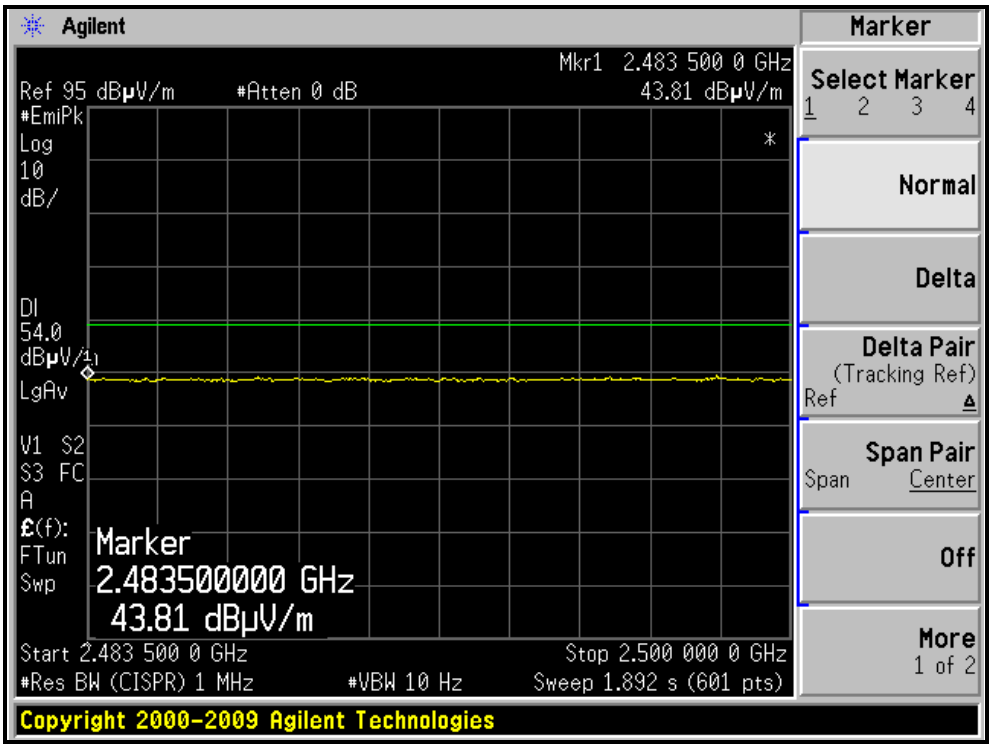
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH1, VERTICAL)



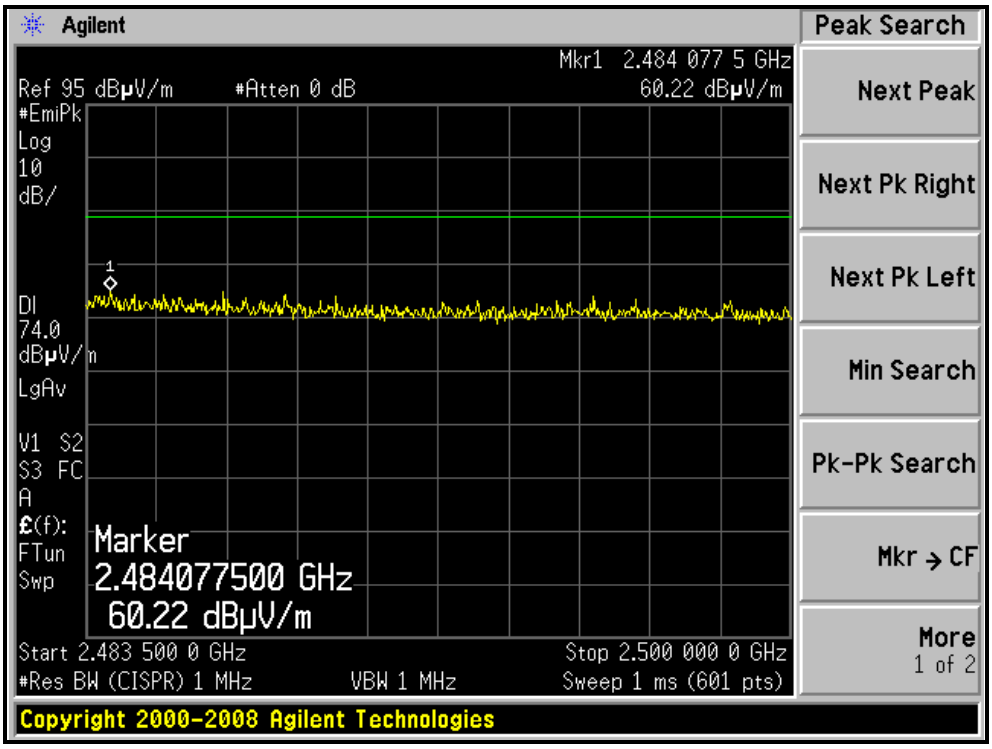


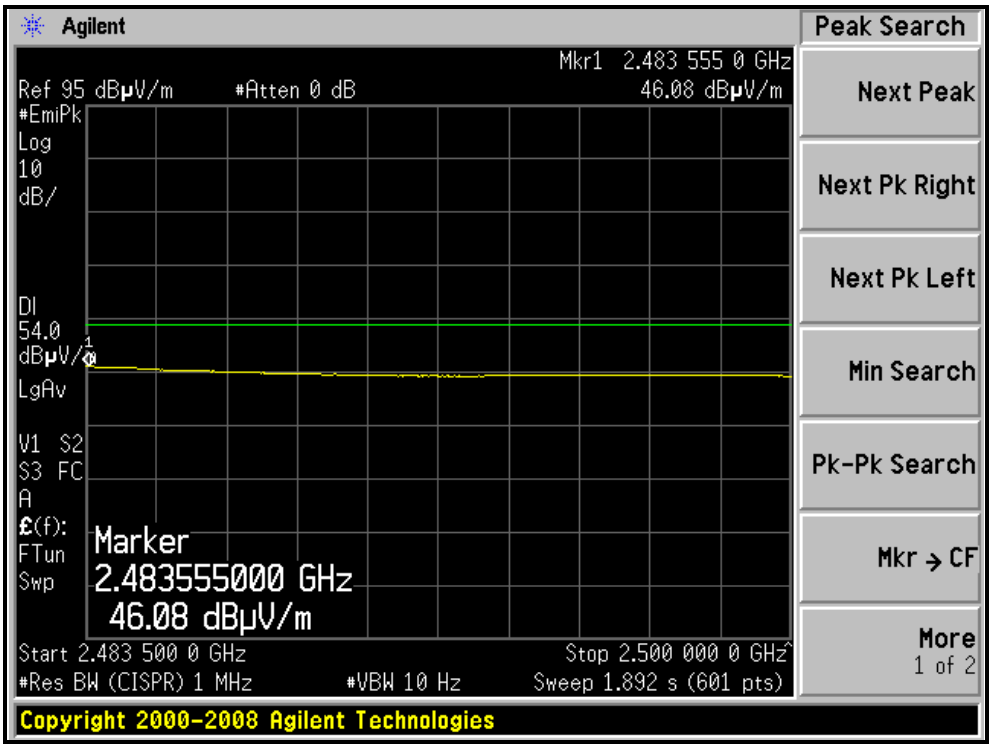
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH11, HORIZONTAL)





RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH11, VERTICAL)





DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.9 PK	74.0	-17.1	1.00 H	181	25.24	31.66
2	2390.00	44.3 AV	54.0	-9.7	1.00 H	181	12.64	31.66
3	*2422.00	90.4 PK			1.00 H	181	58.64	31.76
4	*2422.00	80.3 AV			1.00 H	181	48.54	31.76
5	4844.00	51.0 PK	74.0	-23.0	1.46 H	127	11.96	39.04
6	4844.00	43.9 AV	54.0	-10.1	1.46 H	127	4.86	39.04
7	7266.00	55.6 PK	74.0	-18.4	1.78 H	83	8.93	46.67
8	7266.00	45.1 AV	54.0	-8.9	1.78 H	83	-1.57	46.67
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.4 PK	74.0	-10.6	1.00 V	294	31.74	31.66
2	2390.00	47.6 AV	54.0	-6.4	1.00 V	294	15.94	31.66
3	*2422.00	101.8 PK			1.00 V	297	70.04	31.76
4	*2422.00	92.1 AV			1.00 V	297	60.34	31.76
5	4844.00	50.5 PK	74.0	-23.5	1.03 V	24	11.46	39.04
6	4844.00	43.5 AV	54.0	-10.5	1.03 V	24	4.46	39.04
7	7266.00	61.6 PK	74.0	-12.4	1.03 V	121	14.93	46.67
8	7266.00	47.7 AV	54.0	-6.3	1.03 V	121	1.03	46.67

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	93.5 PK			1.00 H	185	61.69	31.81
2	*2437.00	83.4 AV			1.00 H	185	51.59	31.81
3	4874.00	50.5 PK	74.0	-23.5	1.41 H	116	11.36	39.14
4	4874.00	43.9 AV	54.0	-10.1	1.41 H	116	4.76	39.14
5	7311.00	55.7 PK	74.0	-18.3	1.75 H	79	9.07	46.63
6	7311.00	45.0 AV	54.0	-9.0	1.75 H	79	-1.63	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.1 PK			1.00 V	297	73.29	31.81
2	*2437.00	95.7 AV			1.00 V	297	63.89	31.81
3	2483.50	67.6 PK	74.0	-6.4	1.00 V	297	35.63	31.97
4	2483.50	53.0 AV	54.0	-1.0	1.00 V	297	21.03	31.97
5	4874.00	50.5 PK	74.0	-23.5	1.00 V	51	11.36	39.14
6	4874.00	43.6 AV	54.0	-10.4	1.00 V	51	4.46	39.14
7	7311.00	61.6 PK	74.0	-12.4	1.02 V	121	14.97	46.63
8	7311.00	47.8 AV	54.0	-6.2	1.02 V	121	1.17	46.63

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 72%RH 1024 hPa	TESTED BY	Rex Huang

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	*2452.00	91.3 PK			1.00 H	184	59.44	31.86
2	*2452.00	81.4 AV			1.00 H	184	49.54	31.86
3	2483.50	57.1 PK	74.0	-16.9	1.00 H	184	25.13	31.97
4	2483.50	43.3 AV	54.0	-10.7	1.00 H	184	11.33	31.97
5	4904.00	50.8 PK	74.0	-23.2	1.47 H	118	11.56	39.24
6	4904.00	44.0 AV	54.0	-10.0	1.47 H	118	4.76	39.24
7	7356.00	56.1 PK	74.0	-17.9	1.79 H	68	9.49	46.61
8	7356.00	45.4 AV	54.0	-8.6	1.79 H	68	-1.21	46.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	102.3 PK			1.02 V	296	70.44	31.86
2	*2452.00	92.4 AV			1.02 V	296	60.54	31.86
3	2484.57	67.7 PK	74.0	-6.3	1.02 V	296	35.73	31.97
4	2484.57	49.2 AV	54.0	-4.8	1.02 V	296	17.23	31.97
5	4904.00	51.0 PK	74.0	-23.0	1.00 V	27	11.76	39.24
6	4904.00	43.7 AV	54.0	-10.3	1.00 V	27	4.46	39.24
7	7356.00	61.2 PK	74.0	-12.8	1.06 V	119	14.59	46.61
8	7356.00	47.5 AV	54.0	-6.5	1.06 V	119	0.89	46.61

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

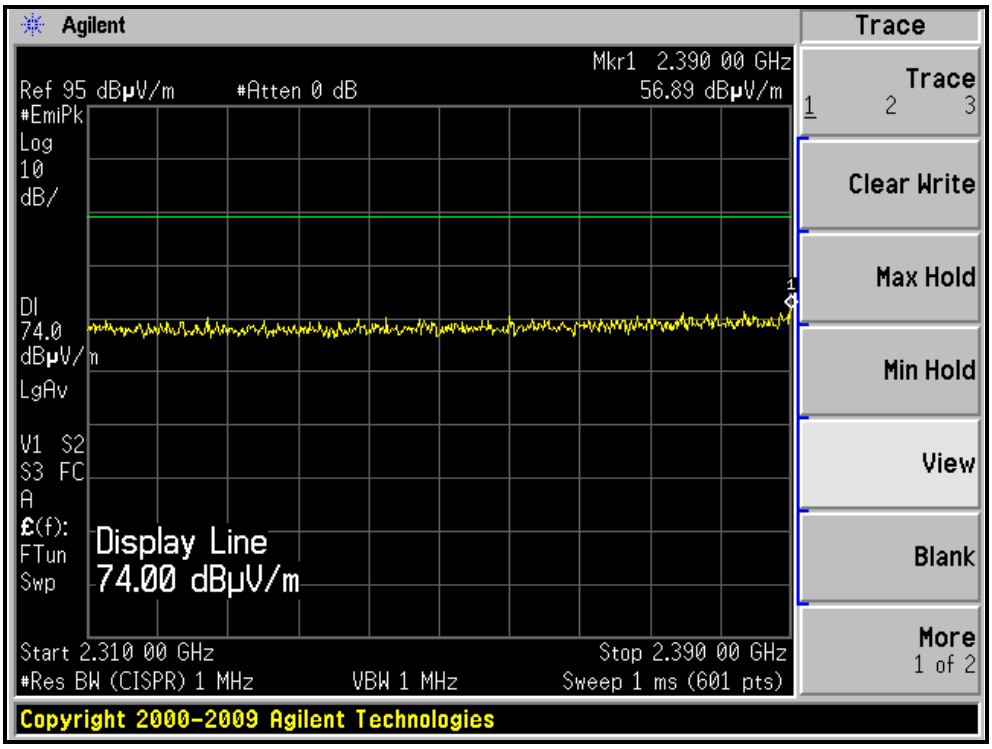
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

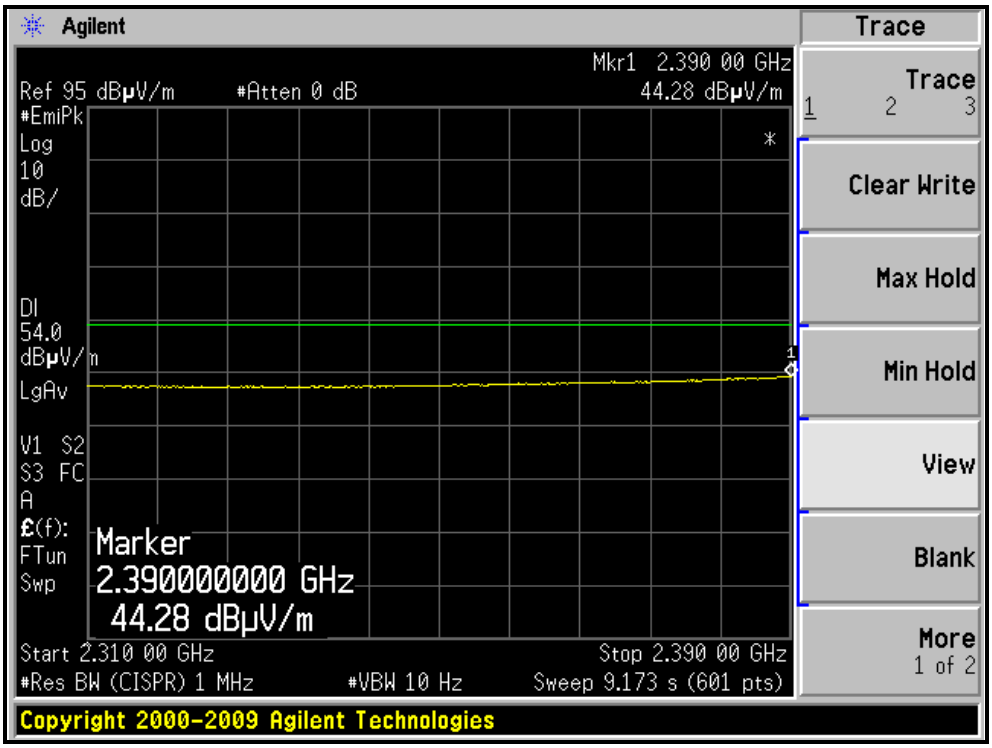
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

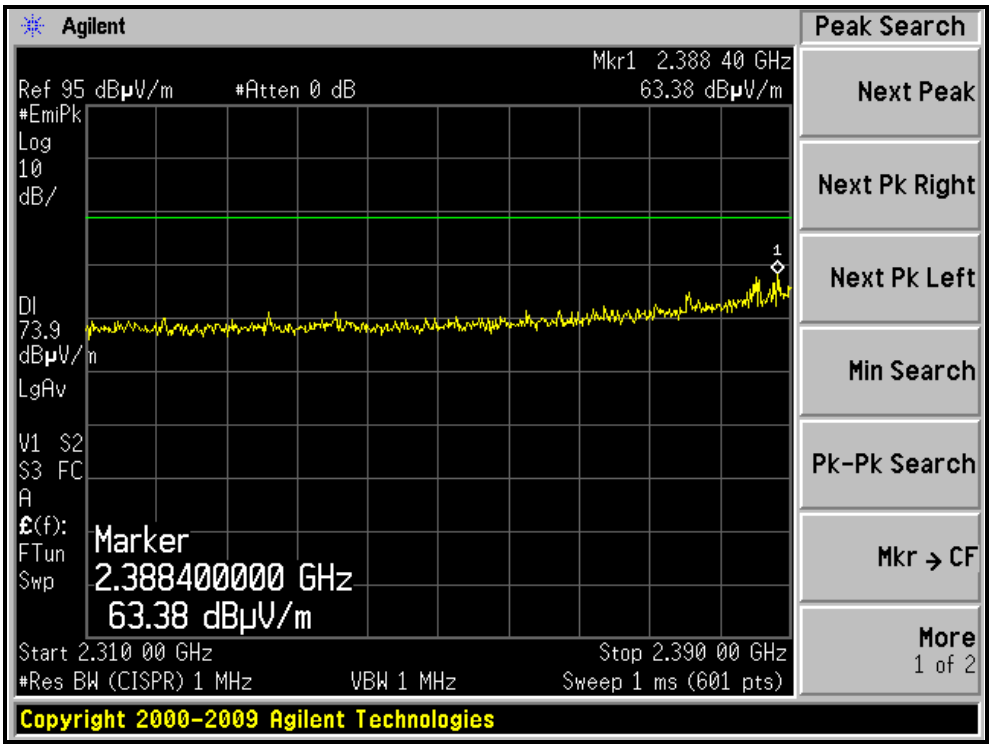
5. " * ": Fundamental frequency.

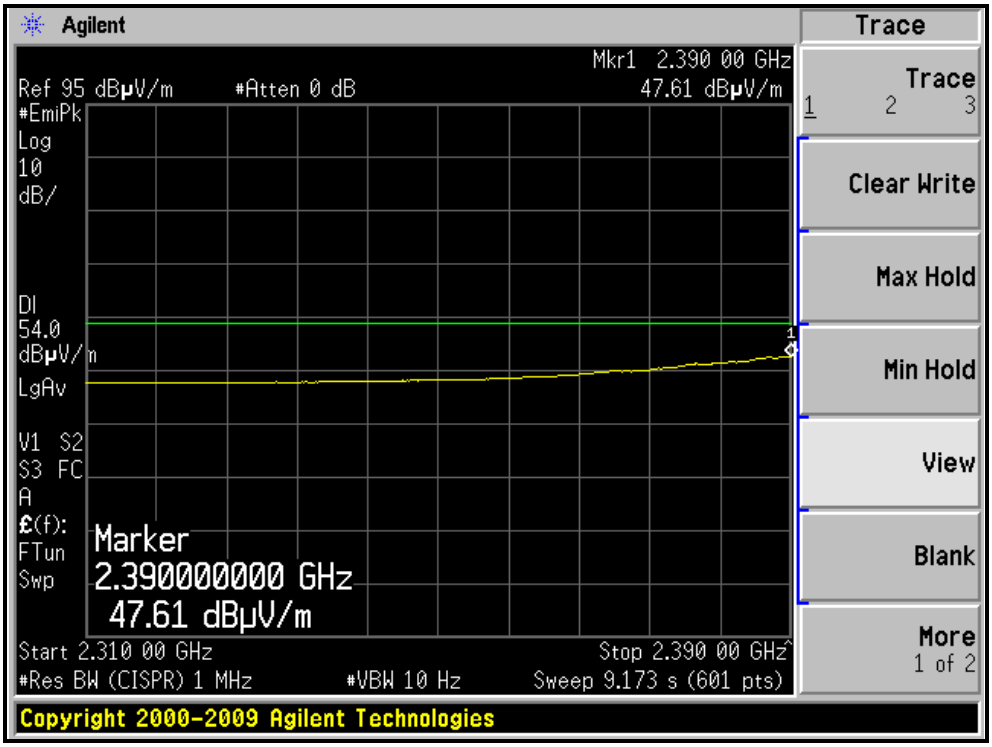
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH1, HORIZONTAL)



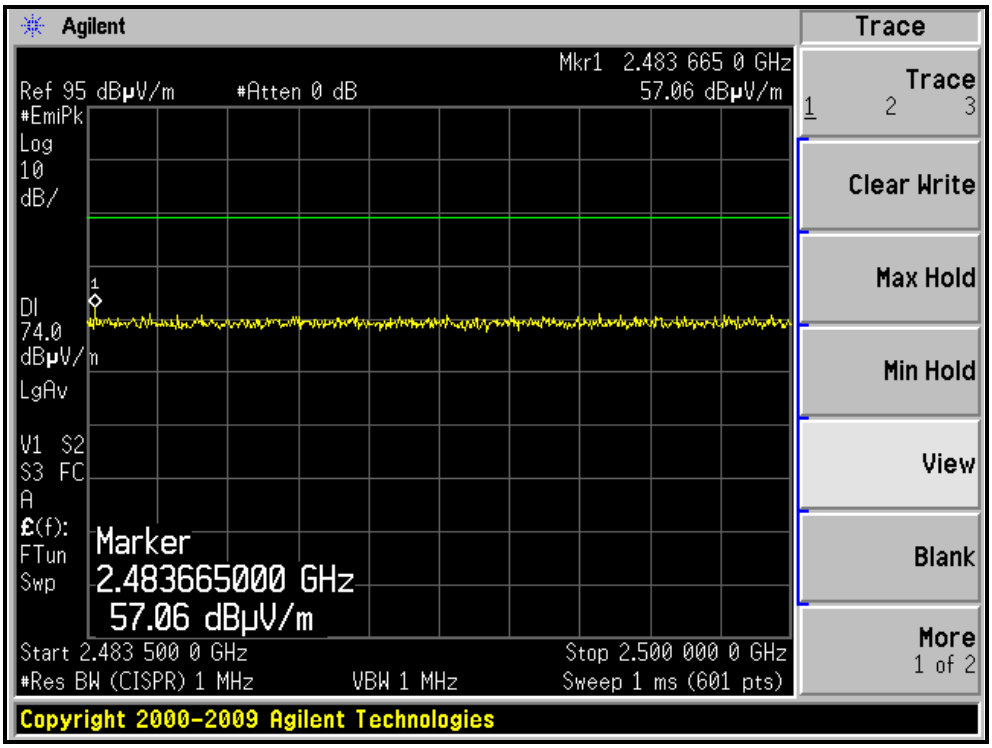


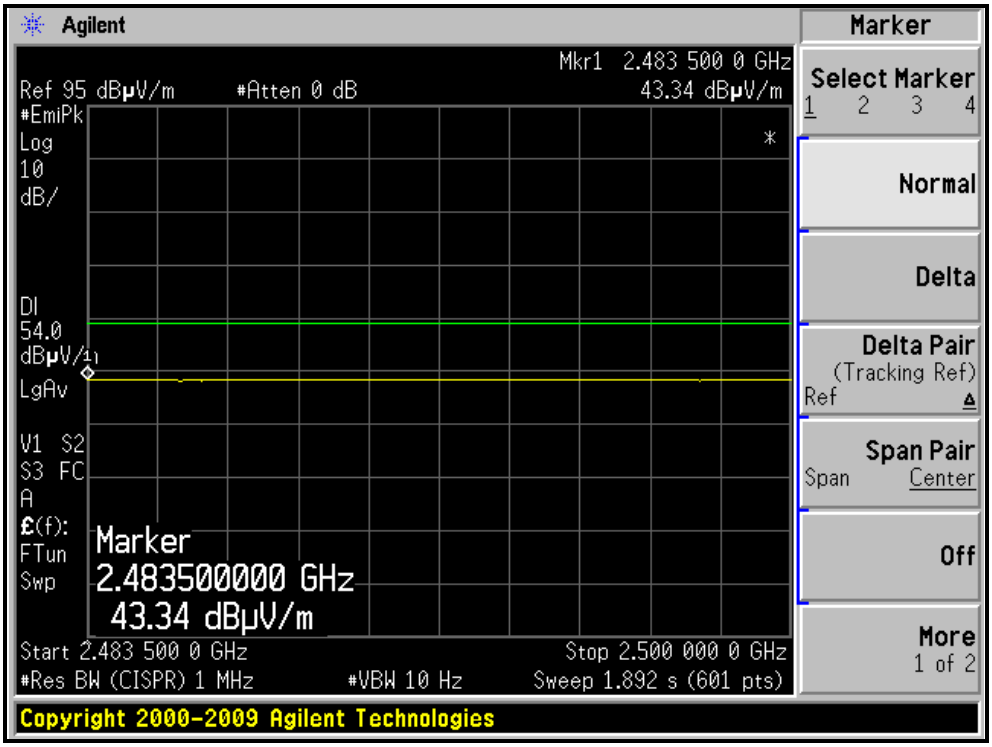
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH1, VERTICAL)



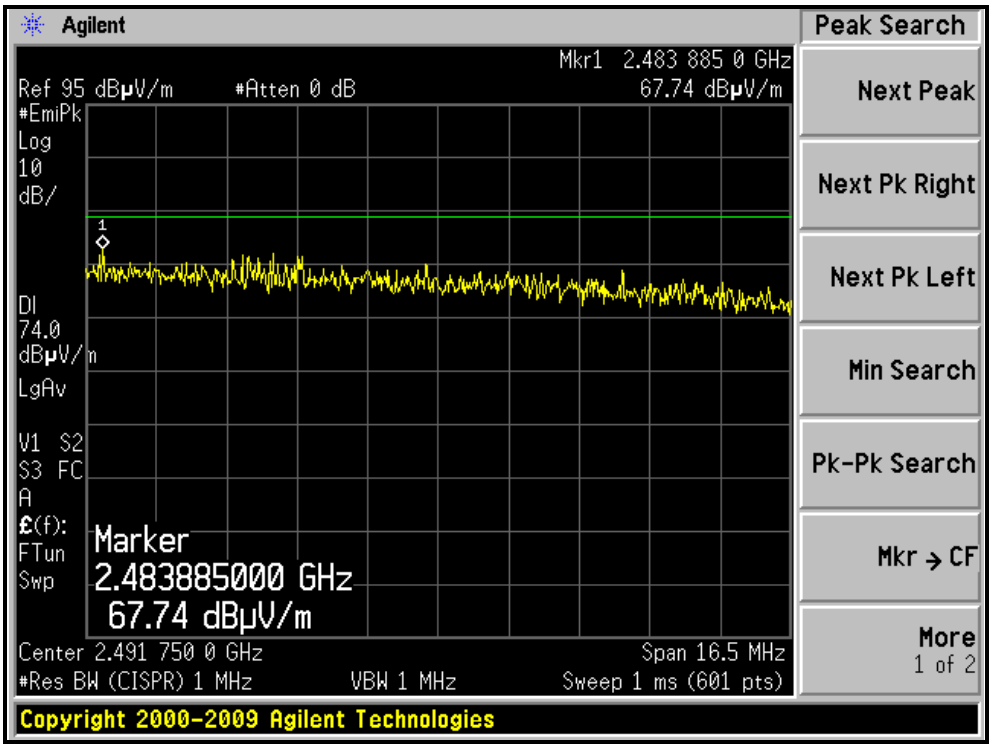


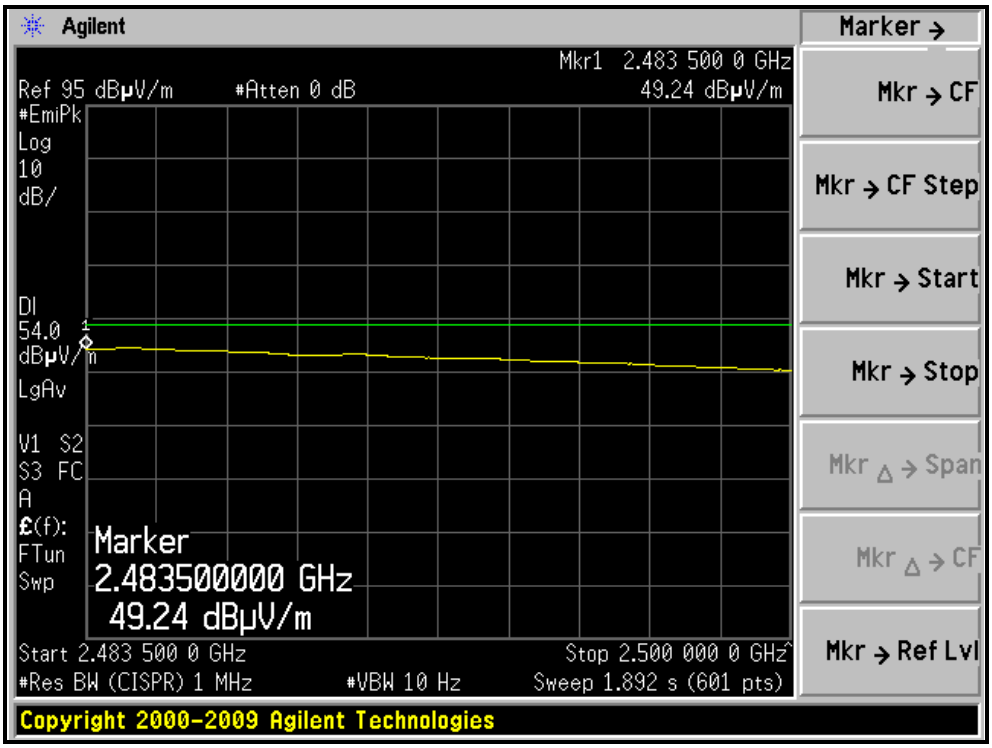
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH7, HORIZONTAL)





RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH7, VERTICAL)





4.3 MAXIMUM PEAK OUTPUT POWER

4.3.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.3.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Anritsu Power Meter	ML2495A	0824006	May 04, 2011	May 03, 2012
Pulse Power Sensor	MA2411B	0738172	May 03, 2011	May 02, 2012

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

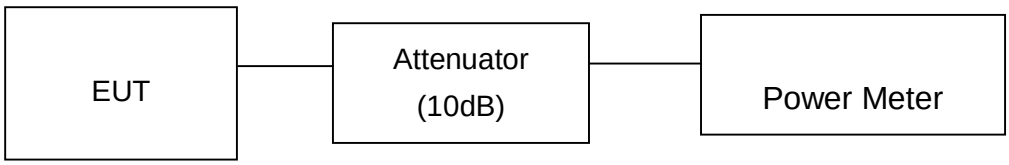
4.3.3 TEST PROCEDURES

1. The transmitter output was connected to the power meter through an attenuator; the bandwidth of the fundamental frequency was measured with the power meter.
2. Record the power level.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

802.11b DSSS MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	18.7	74.1	30	PASS
6	2437	18.6	72.4	30	PASS
11	2462	18.8	75.9	30	PASS

802.11g OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	23.2	208.9	30	PASS
6	2437	24.5	281.8	30	PASS
11	2462	22.3	169.8	30	PASS

802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	21.9	154.9	30	PASS
6	2437	24.3	269.2	30	PASS
11	2462	22.1	162.2	30	PASS

802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2422	21.9	154.9	30	PASS
4	2437	22.3	169.8	30	PASS
7	2452	21.9	154.9	30	PASS

5.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 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: 886-2-26052943

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

Email: service@adt.com.tw
Web Site: www.adt.com.tw

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

--- END ---

6.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.

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