

FCC Radio Test Report FCC ID: XCNDDW3600

This report concerns (check one): Original Grant Class I Change

Issued Date : Nov. 19, 2009

Project No. : 0911C013

Equipment : TI 4830 Wireless Cable Modem

Model Name : DDW3600

Applicant : Ubee Interactive Corp.

Address : 6F-9, No.38, Taiyuan St. Jhubei City Hsinchu

County 302, Taiwan

Manufacturer: Ubee Interactive Corp.

Address : 6F-9, No.38, Taiyuan St. Jhubei City Hsinchu

County 302, Taiwan

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Test:

Nov. 04, 2009 ~ Nov. 18, 2009

Testing Engineer :

(Jeff Yang)

Technical Manager

(Vic Chiu)

Authorized Signatory

(Steven Lu)

NEUTRON ENGINEERING INC.

No. 132-1, Lane 329, Sec. 2, Palain Rd., Shijr City, Taipei, Taiwan TEL: (02) 2646-5426 FAX: (02) 2646-6815









Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

Neutron's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

Neutron's reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **Neutron-self**, extracts from the test report shall not be reproduced except in full with **Neutron**'s authorized written approval.

Neutron's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Report No.: NEI-FCCP-1-0911C013 Page 2 of 126

Table of Contents	Page
1. CERTIFICATION	5
2 . SUMMARY OF TEST RESULTS	6
2.1 TEST FACILITY	7
2.2 MEASUREMENT UNCERTAINTY	7
3. GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST MODES	10
3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM	TESTED 11
3.4 DESCRIPTION OF SUPPORT UNITS	12
4 . EMC EMISSION TEST	13
4.1 CONDUCTED EMISSION MEASUREMENT	13
4.1.1 POWER LINE CONDUCTED EMISSION	13
4.1.2 MEASUREMENT INSTRUMENTS LIST	13
4.1.3 TEST PROCEDURE	14
4.1.4 DEVIATION FROM TEST STANDARD 4.1.5 TEST SETUP	14 14
4.1.6 EUT OPERATING CONDITIONS	15
4.1.7 TEST RESULTS	16
4.2 RADIATED EMISSION MEASUREMENT	18
4.2.1 RADIATED EMISSION LIMITS	18
4.2.2 MEASUREMENT INSTRUMENTS LIST	19
4.2.3 TEST PROCEDURE	19
4.2.4 DEVIATION FROM TEST STANDARD	19
4.2.5 TEST SETUP 4.2.6 EUT OPERATING CONDITIONS	20 20
4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ	21
4.2.8 TEST RESULTS - ABOVE 1000MHZ	23
4.2.9 TEST RESULTS-RESTRICTED BANDS REQUIREMENTS	71
5 . BANDWITH TEST	87
5.1 APPLIED PROCEDURES / LIMIT	87
5.1.1 MEASUREMENT INSTRUMENTS LIST	87
5.1.2 TEST PROCEDURE 5.1.3 DEVIATION FROM STANDARD	87 87
5.1.4 TEST SETUP	87 87
5.1.5 EUT OPERATION CONDITIONS	87
5.1.6 TEST RESULTS	88

Report No.: NEI-FCCP-1-0911C013 Page 3 of 126

Table of Contents	Page
6 . PEAK OUTPUT POWER TEST	96
6.1 APPLIED PROCEDURES / LIMIT 6.1.1 MEASUREMENT INSTRUMENTS LIST 6.1.2 TEST PROCEDURE 6.1.3 DEVIATION FROM STANDARD 6.1.4 TEST SETUP 6.1.5 EUT OPERATION CONDITIONS 6.1.6 TEST RESULTS	96 96 96 96 96 97
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	101
7.1 APPLIED PROCEDURES / LIMIT 7.1.1 MEASUREMENT INSTRUMENTS LIST 7.1.2 TEST PROCEDURE 7.1.3 DEVIATION FROM STANDARD 7.1.4 TEST SETUP 7.1.5 EUT OPERATION CONDITIONS 7.1.6 TEST RESULTS	101 101 101 101 101 101 102
8 . POWER SPECTRAL DENSITY TEST	110
8.1 APPLIED PROCEDURES / LIMIT 8.1.1 MEASUREMENT INSTRUMENTS LIST 8.1.2 TEST PROCEDURE 8.1.3 DEVIATION FROM STANDARD 8.1.4 TEST SETUP 8.1.5 EUT OPERATION CONDITIONS 8.1.6 TEST RESULTS	110 110 110 110 110 110
9 . RF EXPOSURE TEST	119
9.1 APPLIED PROCEDURES / LIMIT 9.1.1 MEASUREMENT INSTRUMENTS LIST 9.1.2 MPE CALCULATION METHOD 9.1.3 DEVIATION FROM STANDARD 9.1.4 TEST SETUP 9.1.5 EUT OPERATION CONDITIONS 9.1.6 TEST RESULTS	119 119 119 120 120 120 121
10 . EUT TEST PHOTO	125

Report No.: NEI-FCCP-1-0911C013 Page 4 of 126

1. CERTIFICATION

Equipment: TI 4830 Wireless Cable Modem

Brand Name: Ubee Model Name: DDW3600

Applicant : Ubee Interactive Corp.

Factory: Ambit Microsystems (Shanghai) Ltd.

A d d r e s s: No., 1925, Nanle Road Songjiang Export Processing Zone, Shanghai China

Date of Test: Nov. 04, 2009 ~ Nov. 18, 2009

Standards: FCC Part15, Subpart C(15.247) / ANCI C63.4:2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-0911C013) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

Report No.: NEI-FCCP-1-0911C013 Page 5 of 126

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (c)	Antenna conducted Spurious Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

Report No.: NEI-FCCP-1-0911C013 Page 6 of 126

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C01/OS01** (FCC Test Firm Number: 95335) at the location of No.132-1, Lane 329, Sec. 2, Palian Road, Shijr City, Taipei, Taiwan.

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of $\mathbf{k=2}$, providing a level of confidence of approximately 95 % \circ

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
OS-01	ANSI	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	Η	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	Н	3.94	
OS-02	ANSI	30MHz ~ 200MHz	V	2.48	
		30MHz ~ 200MHz	Н	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	Н	2.66	

Report No.: NEI-FCCP-1-0911C013 Page 7 of 126



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	TI 4830 Wireless Cable Modem		
Brand Name	Ubee		
Model Name	DDW3600		
OEM Brand/Model Name	N/A		
Model Difference	N/A		
Product Description	The EUT is a TI 4830 Wireless Cable Modem. Operation Frequency: 2412~2462 MHz Modulation Type: 802.11b:CCK, DQPSK, DBPSK 802.11g:OFDM 802.11n:OFDM Bit Rate of Transmitter: 802.11b:11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n(20MHz):130+ Mbps 130/117/104/78/52/39/26/13 Mbps 802.11n(40MHz):300+ Mbps 300/270/243/216/162/108/81/54/27 Mbps Number Of Channel: 11CH .Please see Note 2. Antenna Designation: Please see Note 3. EIRP Power(Max): 802.11b:19.28 dBm 802.11b:19.28 dBm 802.11N(20MHz):22.20 dBm 802.11N(20MHz):22.20 dBm 802.11N(40MHz):19.51 dBm Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.		
Channel List	Please refer to the Note 3.		
Power Source	DC Voltage supplied from AC/DC adapter DDW3600 used adapter: Brand name: DVE Model name: DSA-18W-12 US1 120180		
Power Rating	I/P 100-240VAC~ 50/60Hz, 0.8A O/P +12V 1.5A (DDW3600)		
Connecting I/O Port(s)	Please refer to the User's Manual		
Products Covered	N/A		

Report No.: NEI-FCCP-1-0911C013 Page 8 of 126

Note:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2. CH 01 CH 11 for 802.11b, 802.11g, 802.11n(20MHz) CH 03 – CH 09 for 802.11n(40MHz)

		Chanr	nel List		
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

3. Table for Filed Antenna

Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
0	Foxconn	FX01X53-0G-EF	Dipole(70mm)	U.FL	2.0
1	Foxconn	FX01X54-0G-EF	Dipole(280mm)	U.FL	2.0

The chip Atheros AR9102 Function is (2T2R)

4 The EUT incorporates MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R)

Modulated type	TX Function
802.11b	2TX
802.11g	2TX
Draft 802.11n(20MHz)	2TX
Draft 802.11n(40MHz)	2TX

Report No.: NEI-FCCP-1-0911C013 Page 9 of 126

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Madad	802.11b/CH01, CH06, CH11
Mode 1	(Port. 0, Port. 1 or Port. 0 + Port. 1)
Mode 2	802.11g/CH01, CH06, CH11
IVIOGE 2	(Port. 0, Port. 1 or Port. 0 + Port. 1)
Mode 3	802.11n/20M/CH01, CH06, CH11
	(Port. 0, Port. 1 or Port. 0 + Port. 1)
Mode 4	802.11n/40M/CH03, CH6, CH9
	(Port. 0, Port. 1 or Port. 0 + Port. 1)
Mode 5	Normal Link

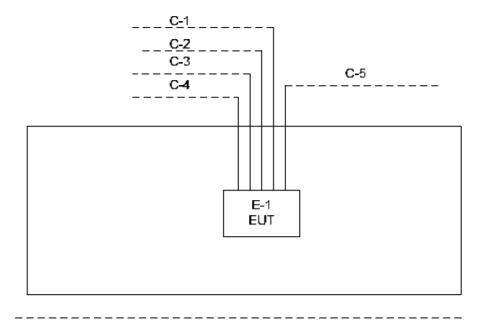
	For Conducted Test
Final Test Mode	Description
Mode 5	Normal Link

For Radiated Test		
Final Test Mode	Description	
Mode 1	802.11b/CH01, CH06, CH11 (Port. 0 + Port. 1)	
Mode 2	802.11g/CH01, CH06, CH11 (Port. 0 + Port. 1)	
Mode 3	802.11n/20M/CH01, CH06, CH11 (Port. 0 + Port. 1)	
Mode 4	802.11n/40M/CH03, CH6, CH9 (Port. 0 + Port. 1)	

Report No.: NEI-FCCP-1-0911C013 Page 10 of 126



3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



Control Room

C-1 RJ-45 Cable

C-2 RJ-45 Cable

C-3 RJ-45 Cable

C-4 RJ-45 Cable

C-5 Coaxial Cable

Report No.: NEI-FCCP-1-0911C013 Page 11 of 126

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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	TI 4830 Wireless Cable Modem	Ubee	DDW3600	XCNDDW3600	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	7M	
C-2	NO	NO	7M	
C-3	NO	NO	7M	
C-4	NO	NO	7M	
C-5	YES	NO	7M	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length"</code> column.

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software Version	Test Program: ART			
Frequency	2412 MHz	2437 MHz	2462 MHz	
802.11b DSSS Ant.(0+1)	17	17	17	
802.11g OFDM Ant.(0+1)	13	13	13	
11N-20MHz-Ant.(0+1)	12	12	12	

Test software Version	Test Program: ART		
Frequency	2422 MHz	2437 MHz	2452 MHz
11N-40MHz-Ant. (0+1)	9	9	9

Report No.: NEI-FCCP-1-0911C013 Page 12 of 126

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A	(dBuV)	Class B (dBuV)		
TREQUENCT (MITZ)	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	
0.50 -5.0	73.00	60.00	56.00	46.00	
5.0 -30.0	73.00	60.00	60.00	50.00	

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.1.2 MEASUREMENT INSTRUMENTS LIST

Iten	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Cable	N/A	SR03_C_01 &02	N/A	Aug. 18, 2010
2	LISN	EMCO	3816/2	00042991	Jan. 21, 2010
3	Pulse Limiter	Electro-Metrics	EM-7600	112644	Dec. 28, 2009
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 17, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

Report No.: NEI-FCCP-1-0911C013 Page 13 of 126

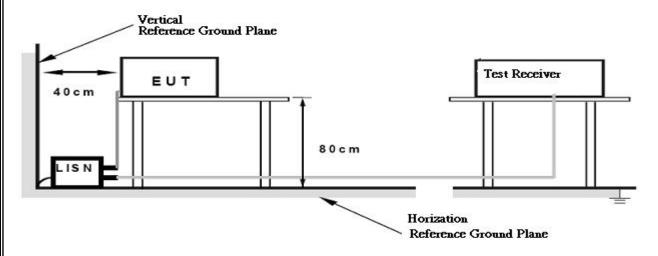
4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

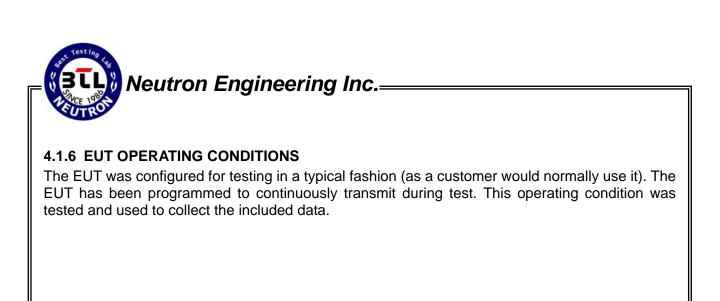
4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Report No.: NEI-FCCP-1-0911C013 Page 14 of 126



Report No.: NEI-FCCP-1-0911C013 Page 15 of 126

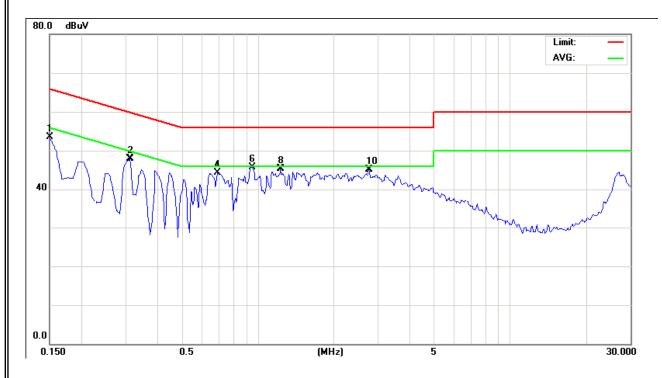
4.1.7 TEST RESULTS

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq.	Terminal	Measure	d(dBuV)	Limits((dBuV)	Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	Note
0.15	Line	53.49	*	66.00	56.00	-12.51	(QP)
0.31	Line	47.93	41.63	59.92	49.92	-8.29	(AV)
0.69	Line	44.38	32.99	56.00	46.00	-11.62	(QP)
0.95	Line	45.79	32.89	56.00	46.00	-10.21	(QP)
1.23	Line	45.23	32.21	56.00	46.00	-10.77	(QP)
2.77	Line	45.09	29.09	56.00	46.00	-10.91	(QP)

Remark

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform on this case, a " * " marked in AVG Mode column of Interference Voltage Measured on the Note of
- (2) Measuring frequency range from 150KHz to 30MHz \circ

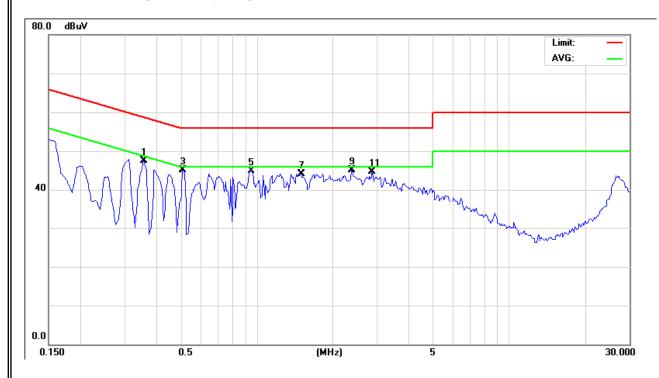


Report No.: NEI-FCCP-1-0911C013 Page 16 of 126

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq.	Terminal	Measure	d(dBuV)	Limits((dBuV)	Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	NOLE
0.36	Neutral	47.60	35.24	58.80	48.80	-11.20	(QP)
0.51	Neutral	45.04	26.35	56.00	46.00	-10.96	(QP)
0.95	Neutral	44.90	31.68	56.00	46.00	-11.10	(QP)
1.50	Neutral	44.19	30.52	56.00	46.00	-11.81	(QP)
2.39	Neutral	45.05	25.97	56.00	46.00	-10.95	(QP)
2.88	Neutral	44.68	26.98	56.00	46.00	-11.32	(QP)

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note ... If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform In this case, a " * " marked in AVG Mode column of Interference Voltage Measured •
- (2) Measuring frequency range from 150KHz to 30MHz o



Report No.: NEI-FCCP-1-0911C013 Page 17 of 126

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBu	ıV/m) (at 3m)	Class B (dBuV/m) (at 3m)		
FREQUENCT (IVITZ)	PEAK	AVERAGE	PEAK	AVERAGE	
Above 1000	80	60	74	54	

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Report No.: NEI-FCCP-1-0911C013 Page 18 of 126

4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9160	3176	Jul. 23, 2010
2	Test Cable	N/A	LMR-400	N/A	Jan. 05, 2010
3	Test Cable	N/A	3M_OS01	N/A	Oct. 07, 2010
4	Test Cable	N/A	OS01-1/-2	N/A	Oct. 07, 2010
5	RF Switch	Anritsu	MP59B	M65982	Aug. 24, 2010
6	Pre-Amplifier	Anritsu	MH648A	M09961	Dec. 29, 2009
7	Positioning Controller (OS01)	MF	MF7802	N/A	N/A
8	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
9	Spectrum Analyzer	ADVAN TEST	R3261C	81720298	Oct. 01, 2010
10	Spectrum Analyzer	HP	8591EM	3536A00687	Mar. 13, 2010
11	EMI Measuring Receiver	SHCAFFNER	SCR 3501	408	Nov. 24.2009

Remark: "N/A" denotes No Model Name / Serial No. and No Calibration specified.

4.2.3 TEST PROCEDURE

- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.4 DEVIATION FROM TEST STANDARD

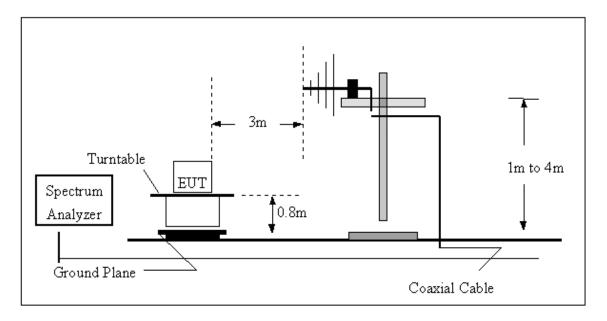
No deviation

Report No.: NEI-FCCP-1-0911C013 Page 19 of 126

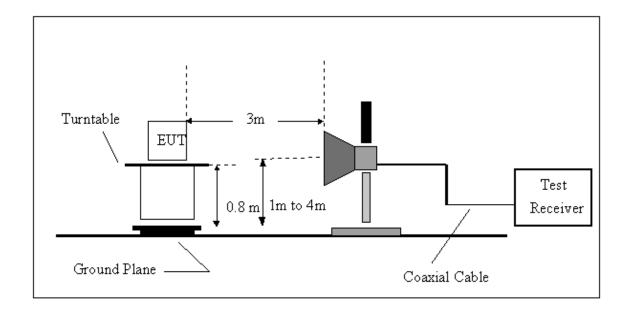


4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-0911C013 Page 20 of 126

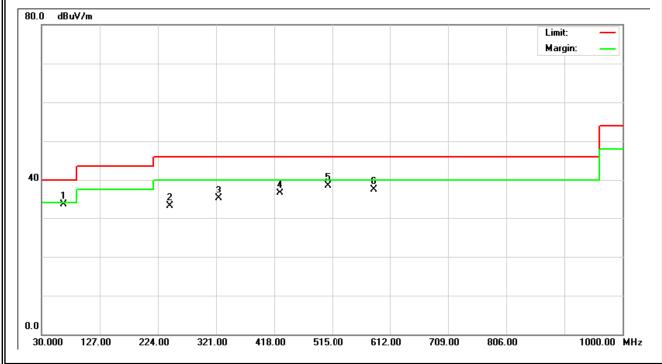
4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ

FUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/CH03		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
65.32	V	40.32	-6.84	33.48	40.00	- 6.52	
242.69	V	38.77	-5.66	33.11	46.00	- 12.89	
324.65	V	38.21	-3.13	35.08	46.00	- 10.92	
425.66	V	36.89	-0.43	36.46	46.00	- 9.54	
505.69	V	37.54	1.01	38.55	46.00	- 7.45	
584.97	V	34.62	2.96	37.58	46.00	- 8.42	

Remark:

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ${}^{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency o "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (5) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

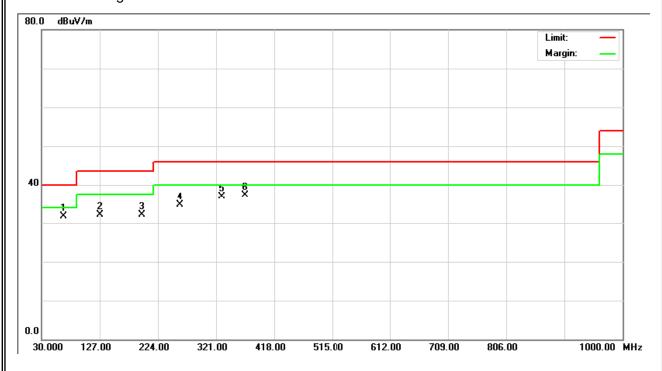


Report No.: NEI-FCCP-1-0911C013

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/CH03		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
65.98	Ι	38.65	-6.93	31.72	40.00	- 8.28	
125.87	Ι	37.66	-5.50	32.16	43.50	- 11.34	
196.65	Ι	39.54	-7.53	32.01	43.50	- 11.49	
258.44	Ι	40.21	-5.41	34.80	46.00	- 11.20	
330.65	Ι	39.93	-2.99	36.94	46.00	- 9.06	
368.82	Η	39.33	-2.04	37.29	46.00	- 8.71	

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of \lceil Note $_{
 m J}$. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform $_{
 m O}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency \circ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission \circ
- (5) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Report No.: NEI-FCCP-1-0911C013 Page 22 of 126

4.2.8 TEST RESULTS - ABOVE 1000MHZ

IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b/CH01 (Port. 0 + Port. 1	1)	

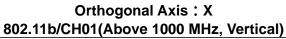
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	24.16	14.98	32.63	56.79	47.61	74.00	54.00	X/E
2415.70	V	80.96	77.23	32.77	113.73	109.99			X/F
4704.04	V	42.79	37.73	4.09	46.88	41.82	74.00	54.00	X/H
4825.21	V	37.26	33.26	4.51	41.77	37.77	74.00	54.00	X/H

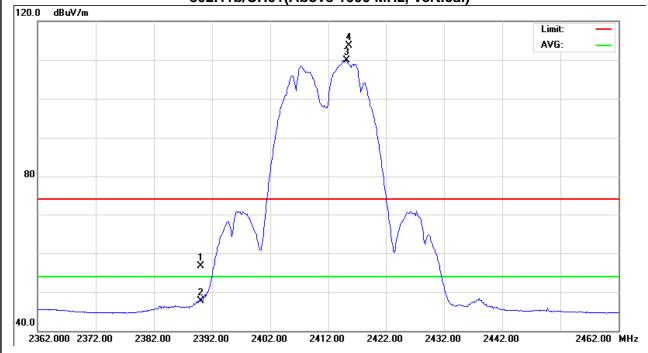
Remark:

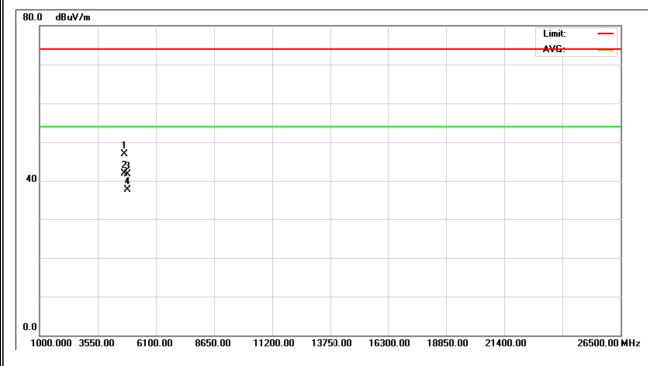
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 23 of 126









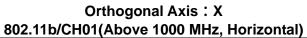
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b/CH01 (Port. 0 + Port. 1	1)	

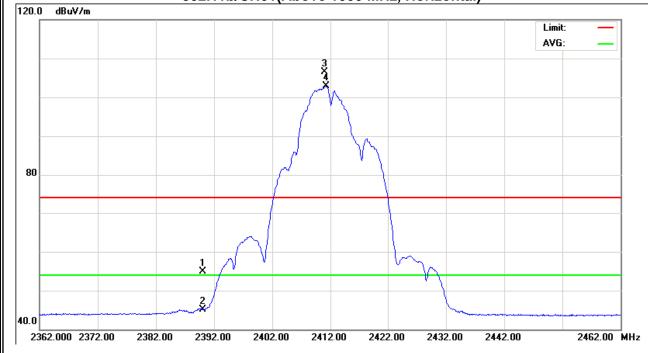
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	22.23	12.52	32.63	54.86	45.15	74.00	54.00	X/E
2411.00	Н	73.77	70.09	32.74	106.51	102.83			X/F
4704.04	Н	41.27	36.29	4.09	45.36	40.38	74.00	54.00	X/H
4823.89	Н	35.66	32.45	4.50	40.16	36.95	74.00	54.00	X/H

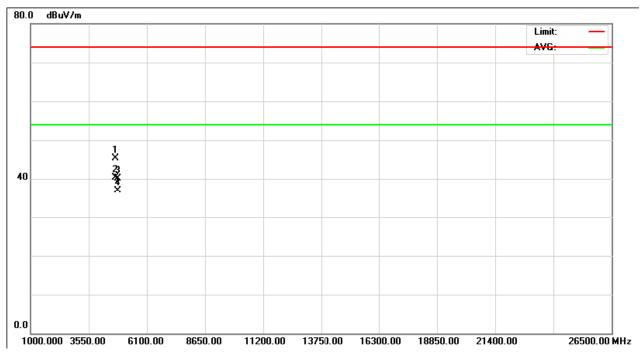
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 25 of 126

Neutron Engineering Inc.







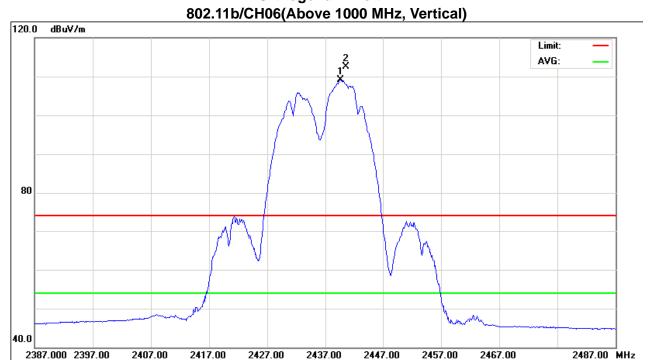
EUI:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b/CH06 (Port. 0 + Port. 1	1)	

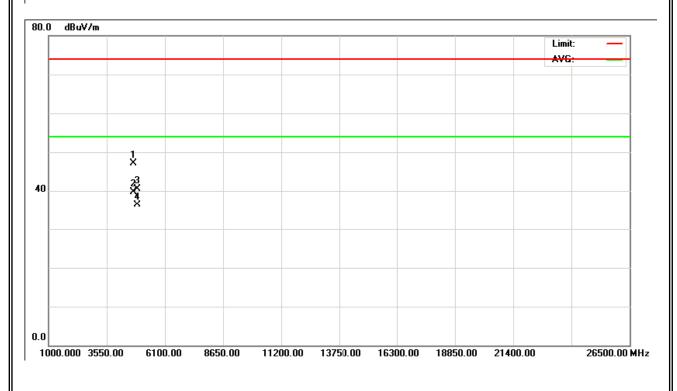
Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2440.70	V	79.70	76.20	32.89	112.59	109.09			X/F
4703.95	V	42.92	35.69	4.09	47.01	39.78	74.00	54.00	X/H
4874.67	V	35.74	31.55	4.67	40.41	36.22	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 27 of 126

Neutron Engineering Inc. Orthogonal Axis: X 802.11b/CH06(Above 1000 MHz





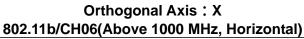
IEUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	302.11b/CH06 (Port. 0 + Port. 1)					

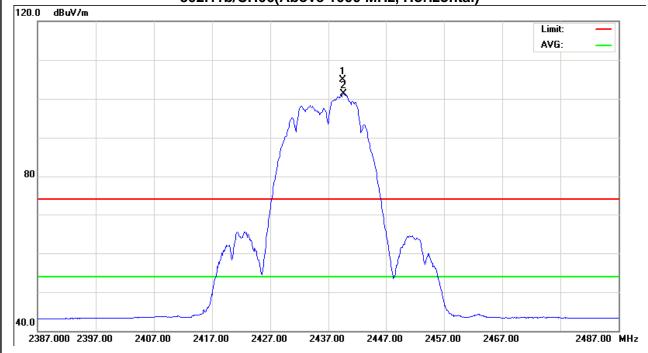
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2439.60	Н	72.04	68.36	32.89	104.93	101.25			X/F
4704.50	Н	40.90	35.58	4.10	45.00	39.68	74.00	54.00	X/H
4874.87	Н	35.98	32.51	4.67	40.65	37.18	74.00	54.00	X/H

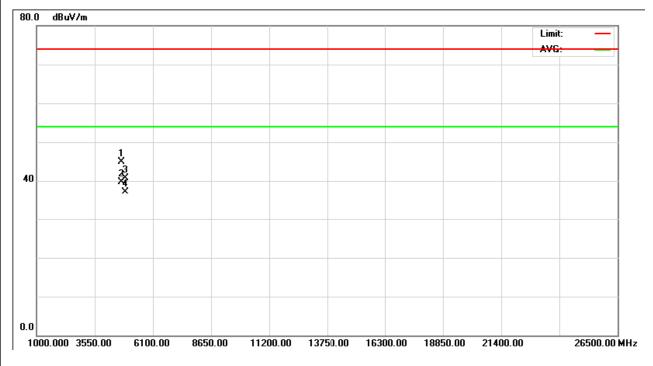
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 29 of 126









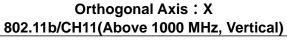
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	802.11b/CH11 (Port. 0 + Port. 1)					

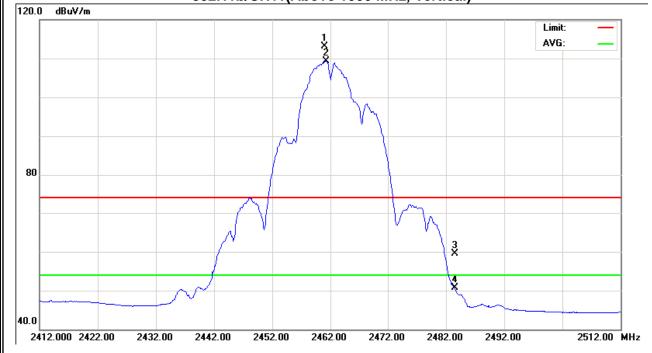
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.00	V	80.19	76.39	33.00	113.19	109.39			X/F
2483.50	V	26.45	17.55	33.11	59.56	50.66	74.00	54.00	X/E
4703.85	V	42.38	35.92	4.09	46.47	40.01	74.00	54.00	X/H
4924.55	V	36.03	31.65	4.84	40.87	36.49	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 31 of 126

Neutron Engineering Inc.=







EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	802.11b/CH11 (Port. 0 + Port. 1)						

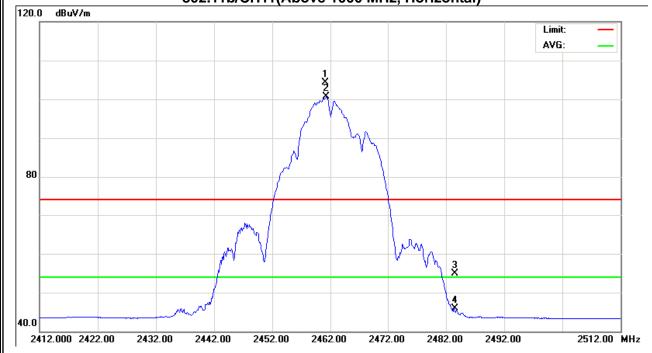
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.10	Н	71.35	67.66	33.00	104.35	100.66			X/F
2483.50	Н	21.81	12.74	33.11	54.92	45.85	74.00	54.00	X/E
4703.85	Н	41.87	35.18	4.09	45.96	39.27	74.00	54.00	X/H
4924.52	Н	35.21	31.12	4.84	40.05	35.96	74.00	54.00	X/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of F' denotes fundamental frequency; "H' denotes spurious frequency. "E' denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 33 of 126

Neutron Engineering Inc.







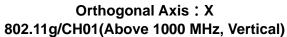
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	802.11g/CH01 (Port. 0 + Port. 1)					

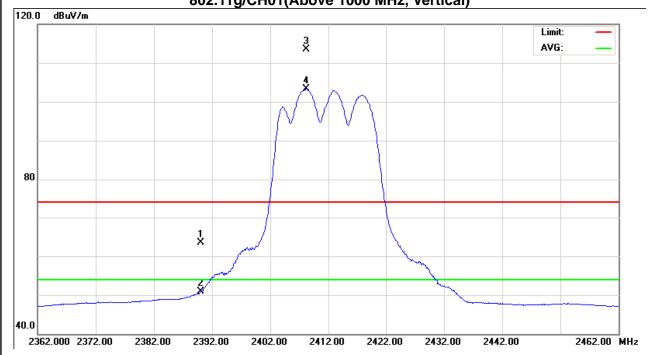
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	30.84	18.28	32.63	63.47	50.91	74.00	54.00	X/E
2408.20	V	80.86	70.63	32.72	113.58	103.35			X/F
4703.85	V	44.64	42.81	4.09	48.73	46.90	74.00	54.00	X/H
4824.11	V	39.02	33.24	4.50	43.52	37.74	74.00	54.00	X/H

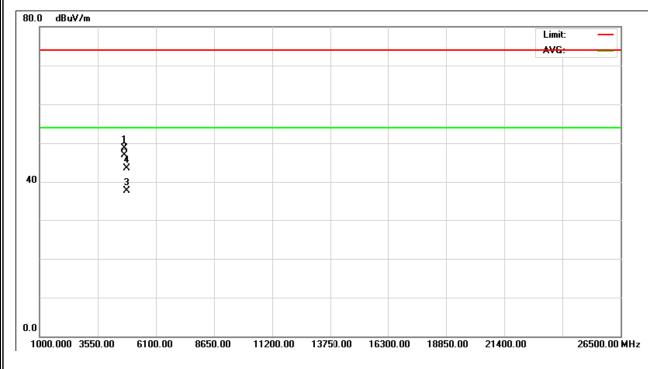
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 35 of 126









EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	302.11g/CH01 (Port. 0 + Port. 1)					

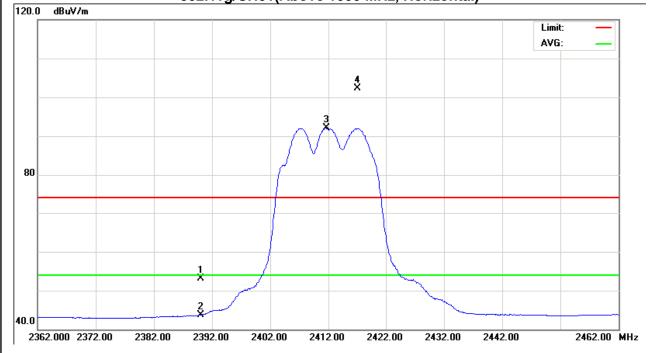
Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	20.49	11.06	32.63	53.12	43.69	74.00	54.00	X/E
2411.60	Н	69.45	59.42	32.74	102.22	92.16			X/F
4703.94	Н	42.12	37.94	4.09	46.21	42.03	74.00	54.00	X/H
4824.66	Н	39.94	34.04	4.50	44.44	38.54	74.00	54.00	X/H

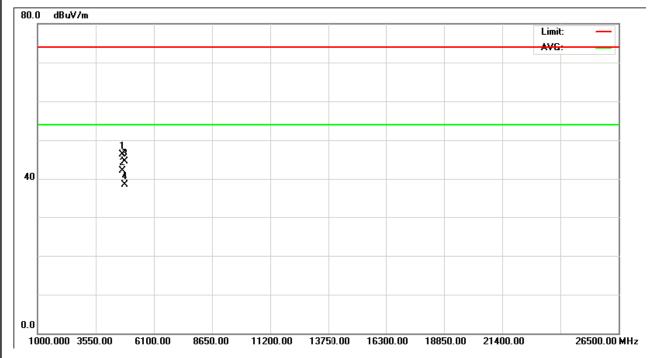
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 37 of 126









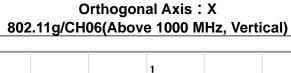
EUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	302.11g/CH06 (Port. 0 + Port. 1)					

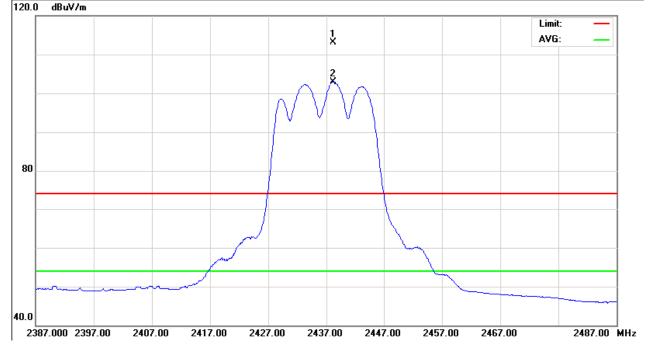
Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2438.30	V	80.19	70.06	32.88	113.07	102.94			X/F
4703.86	V	45.66	42.25	4.09	49.75	46.34	74.00	54.00	X/H
4874.11	V	38.73	33.12	4.67	43.40	37.79	74.00	54.00	X/H

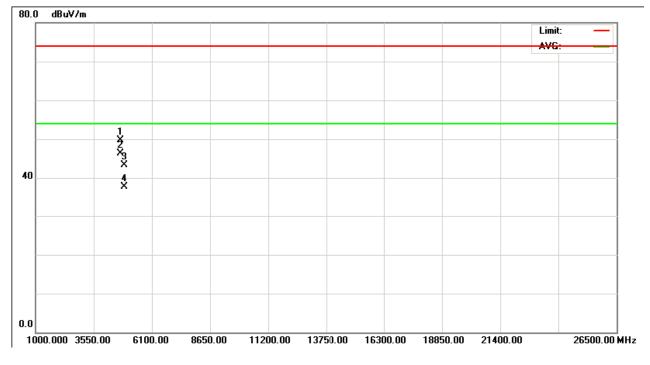
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 39 of 126

Neutron Engineering Inc.= 120.0 dBuV/m







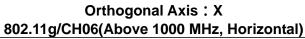
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	302.11g/CH06 (Port. 0 + Port. 1)						

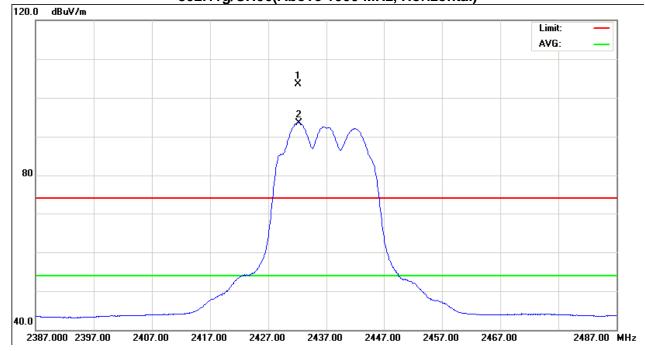
Freq.	Ant.Pol.	Rea	Reading		Act.		Lir		
		Peak	ΑV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2432.10	Н	70.73	60.71	32.84	103.57	93.56			X/F
4704.06	Н	41.24	39.64	4.09	45.33	43.73	74.00	54.00	X/H
4874.66	Н	36.91	32.03	4.67	41.58	36.70	74.00	54.00	X/H

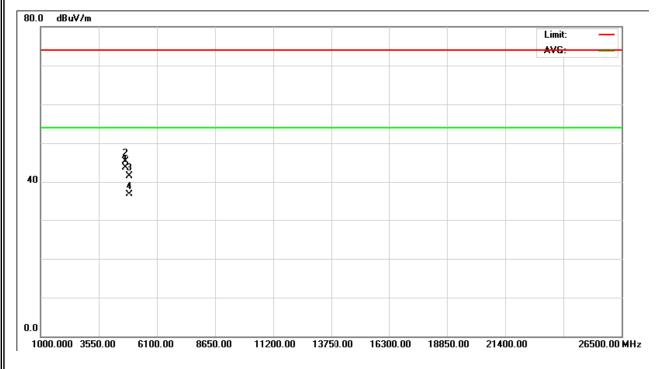
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 41 of 126









EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	302.11g/CH11 (Port. 0 + Port. 1)					

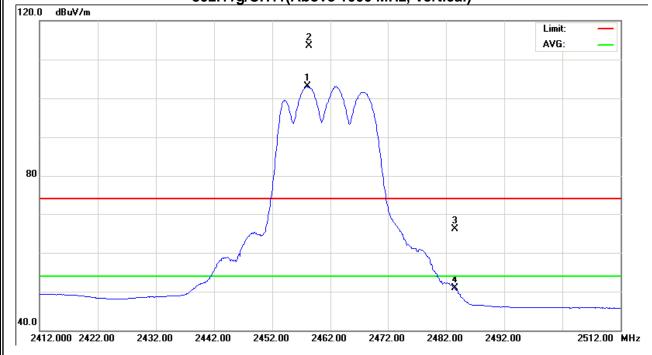
Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2458.30	V	80.45	70.10	32.98	113.43	103.08			X/F
2483.50	V	33.05	17.84	33.11	66.16	50.95	74.00	54.00	X/E
4704.04	V	42.41	39.21	4.09	46.50	43.30	74.00	54.00	X/H
4924.75	V	37.96	32.77	4.84	42.80	37.61	74.00	54.00	X/H

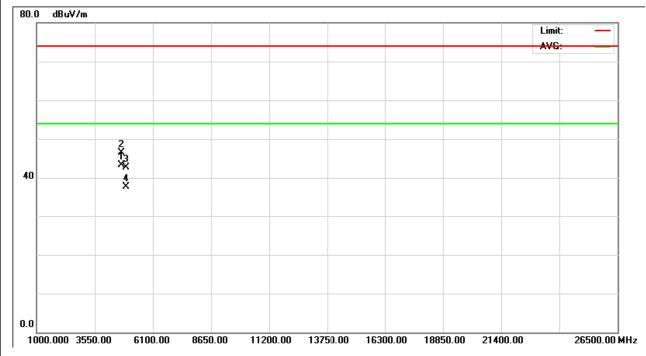
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 43 of 126









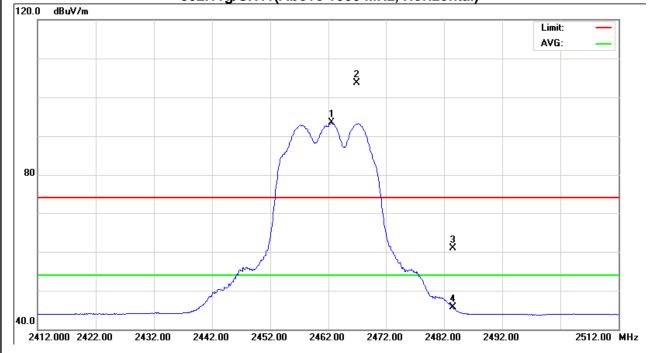
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	02.11g/CH11 (Port. 0 + Port. 1)						

Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2467.00	Н	70.72	60.47	33.03	103.75	93.47			X/F
2483.50	Н	27.76	12.56	33.11	60.87	45.67	74.00	54.00	X/E
4703.90	Н	43.92	39.48	4.09	48.01	43.57	74.00	54.00	X/H
4924.10	Н	38.23	33.30	4.84	43.07	38.14	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 45 of 126

Orthogonal Axis: X 802.11g/CH11(Above 1000 MHz, Horizontal)





IFUI :	TI 4830 Wireless Cable Modem	Model Name :	DDW3600					
Temperature:	27 ℃	Relative Humidity:	48 %					
Pressure:	1010hPa	Test Power :	AC 120V/60Hz					
Test Mode :	802.11n/20M/CH01 (Port. 0 + F	02.11n/20M/CH01 (Port. 0 + Port. 1)						

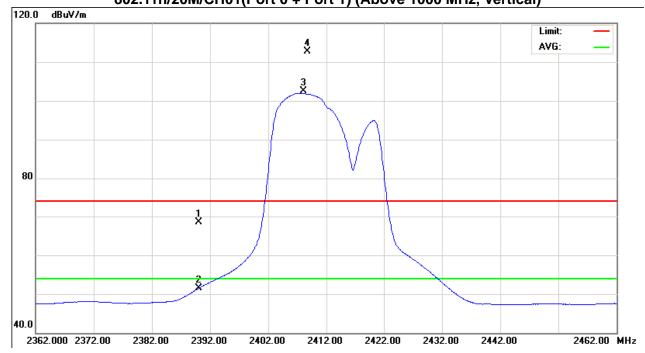
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	35.85	18.82	32.63	68.48	51.45	74.00	54.00	X/E
2408.70	V	80.01	69.84	32.72	112.73	102.56			X/F
4703.24	V	42.69	36.25	4.09	46.78	40.34	74.00	54.00	X/H
4824.95	V	35.90	31.96	4.50	40.40	36.46	74.00	54.00	X/H

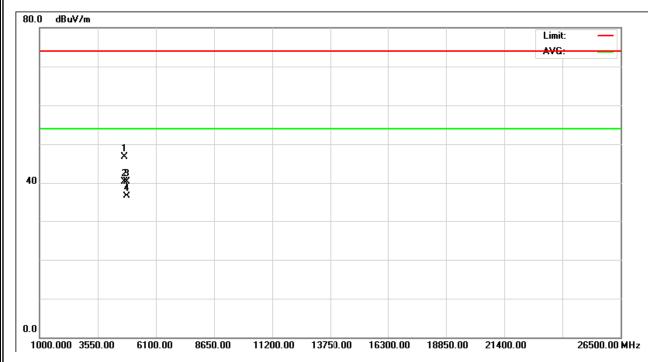
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 47 of 126



Orthogonal Axis: X 802.11n/20M/CH01(Port 0 + Port 1) (Above 1000 MHz, Vertical)





IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/20M/CH01 (Port. 0 + F	Port. 1)	

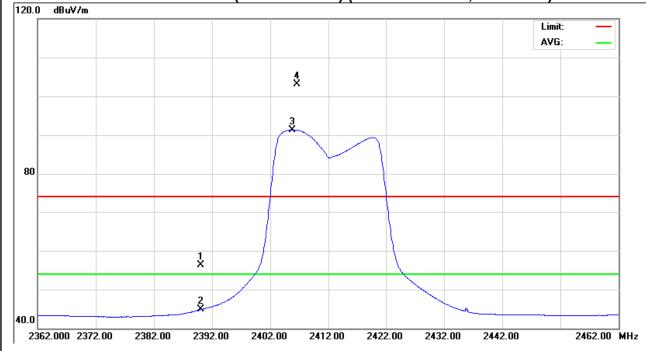
Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	23.72	12.21	32.63	56.35	44.84	74.00	54.00	X/E
2406.60	Н	70.34	58.69	32.72	103.06	91.40			X/F
4703.87	Н	41.92	35.78	4.09	46.01	39.87	74.00	54.00	X/H
4824.36	Н	35.63	31.12	4.50	40.13	35.62	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 49 of 126



Orthogonal Axis: X 802.11n/20M/CH01(Port 0 + Port 1) (Above 1000 MHz, Horizontal)





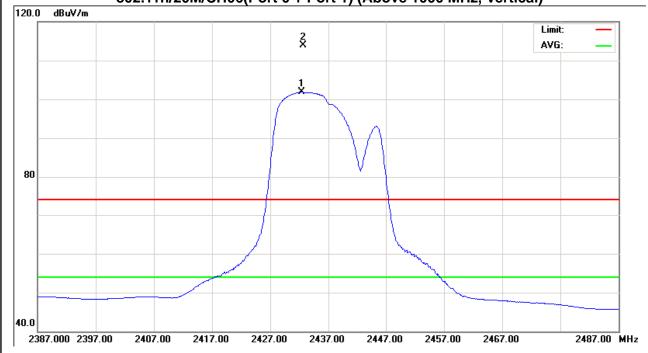
I E U J I	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/20M/CH06 (Port. 0 + F	Port. 1)	

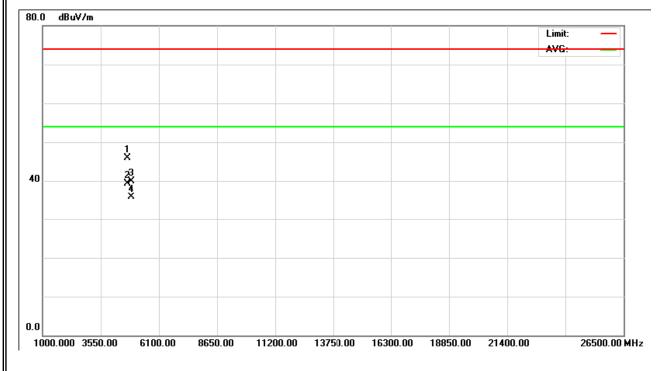
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2432.70	V	81.15	69.01	32.85	114.00	101.86			X/F
4703.62	V	41.88	35.26	4.09	45.97	39.35	74.00	54.00	X/H
4874.65	V	35.21	30.97	4.67	39.88	35.64	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 51 of 126

Orthogonal Axis: X 802.11n/20M/CH06(Port 0 + Port 1) (Above 1000 MHz, Vertical)





EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/20M/CH06 (Port. 0 + F	Port. 1)	

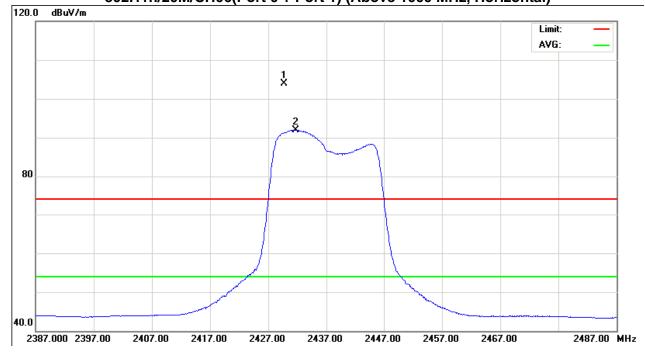
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2429.70	Н	71.04	59.10	32.83	103.87	91.94			X/F
4703.52	Н	41.69	35.58	4.09	45.78	39.67	74.00	54.00	X/H
4874.97	Н	35.29	31.08	4.67	39.96	35.75	74.00	54.00	X/H

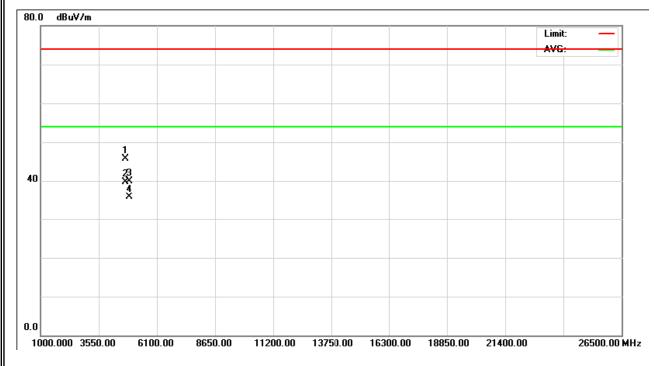
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 53 of 126



Orthogonal Axis: X 802.11n/20M/CH06(Port 0 + Port 1) (Above 1000 MHz, Horizontal)





Report No.: NEI-FCCP-1-0911C013

Page 54 of 126

IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/20M/CH11 (Port. 0 + P	ort. 1)	

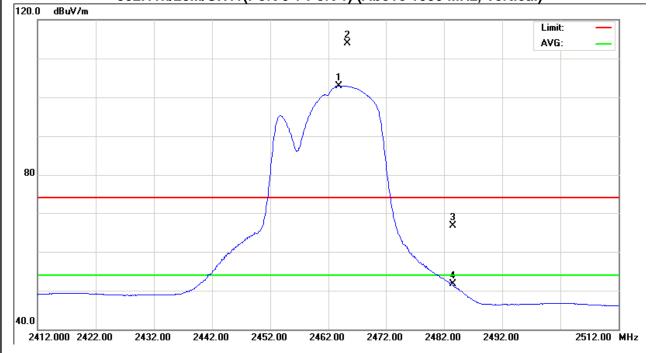
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2465.40	V	80.84	69.95	33.01	113.85	102.96			X/F
2483.50	V	33.67	18.62	33.11	66.78	51.73	74.00	54.00	X/E
4703.54	V	42.91	35.95	4.09	47.00	40.04	74.00	54.00	X/H
4924.84	V	36.20	31.74	4.84	41.04	36.58	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 55 of 126



Orthogonal Axis: X 802.11n/20M/CH11(Port 0 + Port 1) (Above 1000 MHz, Vertical)





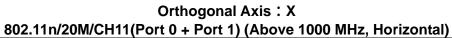
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/20M/CH11 (Port. 0 + F	Port. 1)	

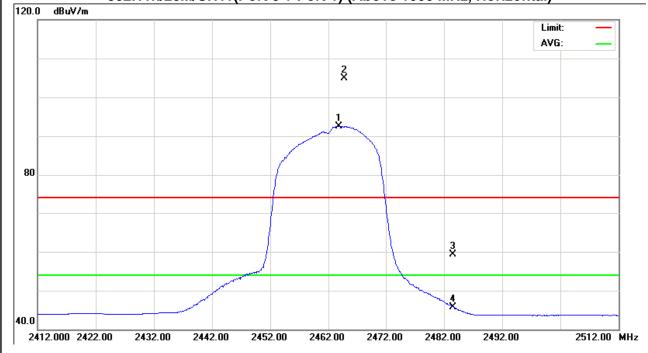
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2464.50	Н	71.83	59.55	33.01	104.84	92.56			X/F
2483.50	Н	26.24	12.68	33.11	59.35	45.79	74.00	54.00	X/E
4703.50	Н	42.07	35.59	4.09	46.16	39.68	74.00	54.00	X/H
4924.65	Н	35.40	31.65	4.84	40.24	36.49	74.00	54.00	X/H

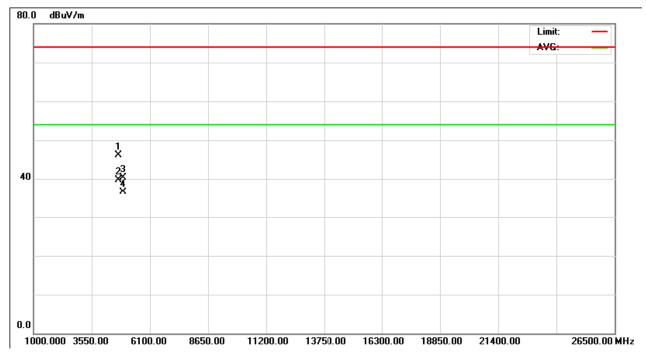
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 57 of 126









EUI:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/40M/CH03 (Port. 0 + F	Port. 1)	

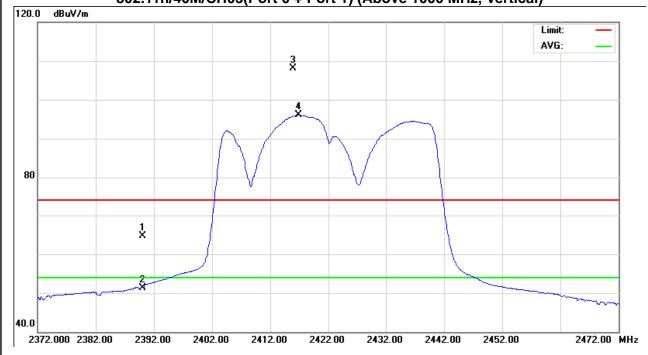
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	32.02	18.62	32.63	64.65	51.25	74.00	54.00	X/E
2415.90	V	75.33	63.25	32.77	108.10	96.02			X/F
4844.59	V	34.58	30.80	4.57	39.15	35.37	74.00	54.00	X/H

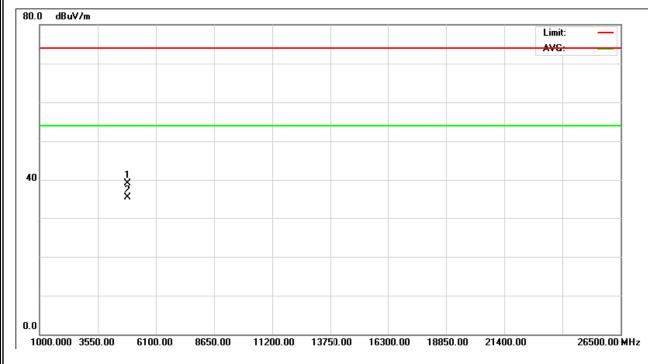
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency of Fr denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 59 of 126









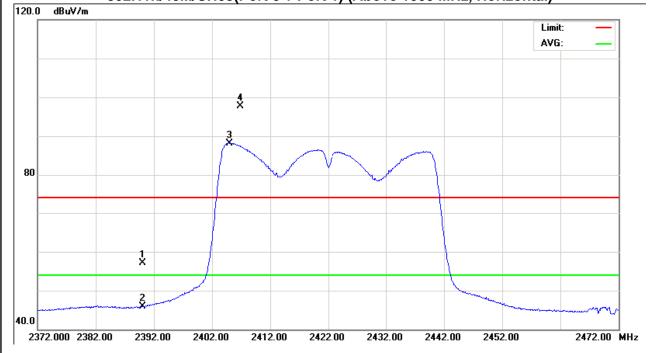
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	802.11n/40M/CH03 (Port. 0 + F	02.11n/40M/CH03 (Port. 0 + Port. 1)					

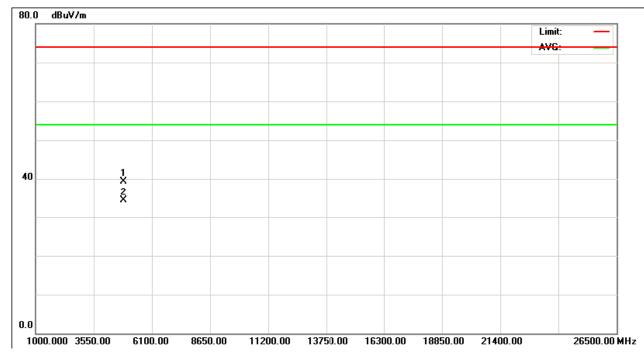
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	24.46	13.33	32.63	57.09	45.96	74.00	54.00	X/E
2406.80	Н	64.93	55.49	32.72	97.65	88.20			X/F
4845.82	Н	34.75	29.78	4.57	39.32	34.35	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 61 of 126

Orthogonal Axis: X 802.11n/40M/CH03(Port 0 + Port 1) (Above 1000 MHz, Horizontal)





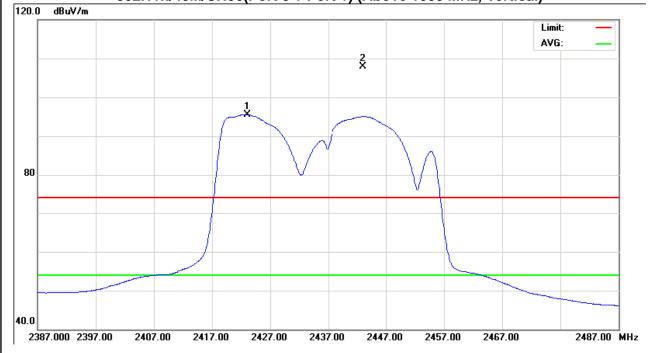
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	302.11n/40M/CH06 (Port. 0 + Port. 1)					

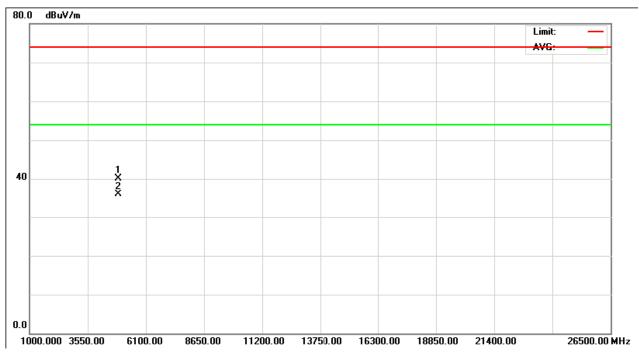
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2443.10	V	74.94	62.76	32.80	107.74	95.56			X/F
4874.66	V	35.52	31.25	4.67	40.19	35.92	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 63 of 126

Orthogonal Axis: X 802.11n/40M/CH06(Port 0 + Port 1) (Above 1000 MHz, Vertical)





Page 64 of 126

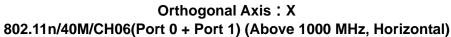
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	802.11n/40M/CH06 (Port. 0 + F	02.11n/40M/CH06 (Port. 0 + Port. 1)					

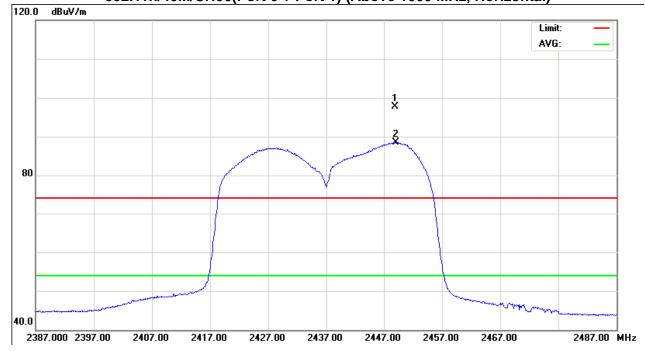
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2448.90	Н	64.82	55.48	32.94	97.76	88.42			X/F
4873.59	Н	34.25	28.98	4.67	38.92	33.65	74.00	54.00	X/H

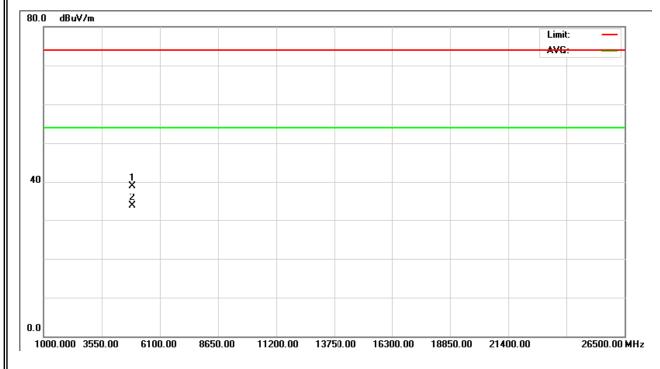
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 65 of 126









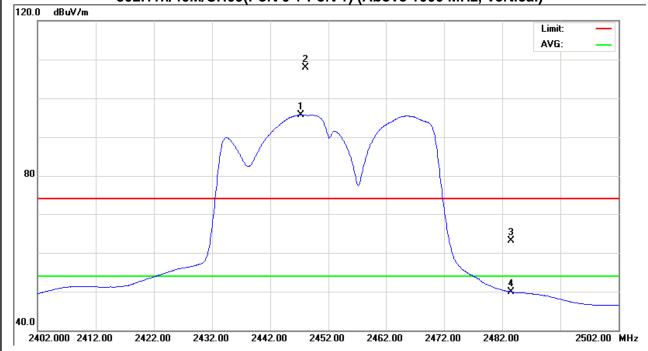
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	302.11n/40M/CH09 (Port. 0 + Port. 1)					

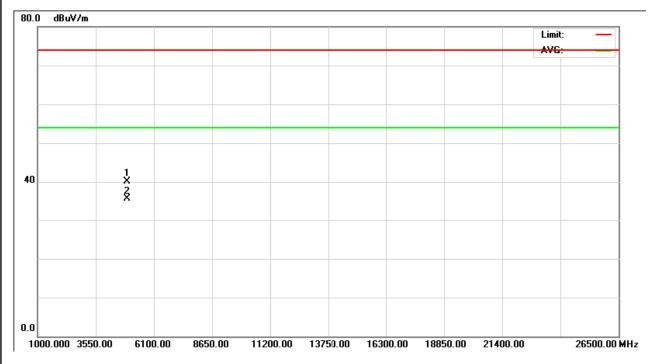
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2448.00	V	75.04	62.82	32.93	107.97	95.75			X/F
2483.50	V	29.91	16.86	33.11	63.02	49.97	74.00	54.00	X/E
4905.68	V	35.40	30.76	4.78	40.18	35.54	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 67 of 126

Orthogonal Axis: X 802.11n/40M/CH09(Port 0 + Port 1) (Above 1000 MHz, Vertical)





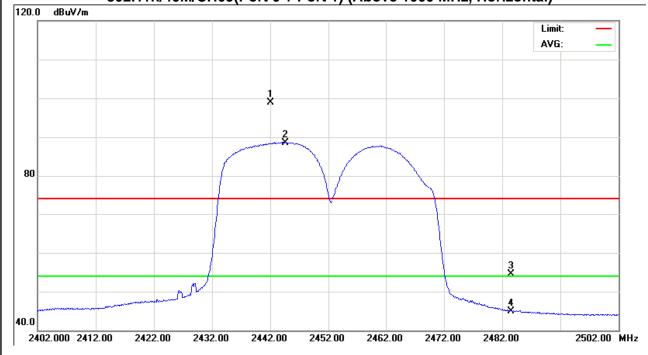
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/40M/CH09 (Port. 0 + F	Port. 1)	

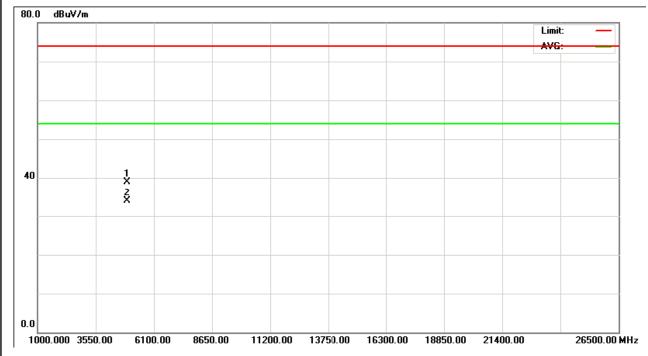
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2442.10	Н	65.93	55.69	32.90	98.83	88.60			X/F
2483.50	Н	21.41	11.79	33.11	54.52	44.90	74.00	54.00	X/E
4904.87	Н	34.21	29.04	4.78	38.99	33.82	74.00	54.00	X/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission o
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Report No.: NEI-FCCP-1-0911C013 Page 69 of 126

Orthogonal Axis: X 802.11n/40M/CH09(Port 0 + Port 1) (Above 1000 MHz, Horizontal)





Report No.: NEI-FCCP-1-0911C013 Page 70 of 126

4.2.9 TEST RESULTS-RESTRICTED BANDS REQUIREMENTS

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity: 48 %					
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	802.11b(Vertical) (Port. 0 + Port. 1)						
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH; 2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

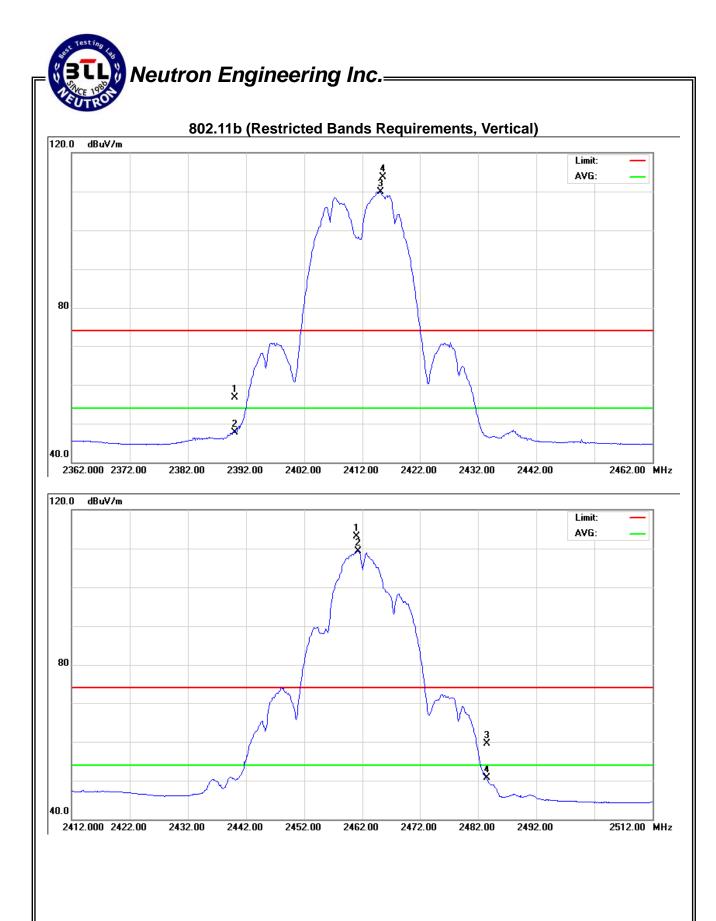
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	24.16	14.98	32.63	56.79	47.61	74.00	54.00	X
2483.50	V	26.45	17.55	33.11	59.56	50.66	74.00	54.00	X

Remark:

- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 71 of 126



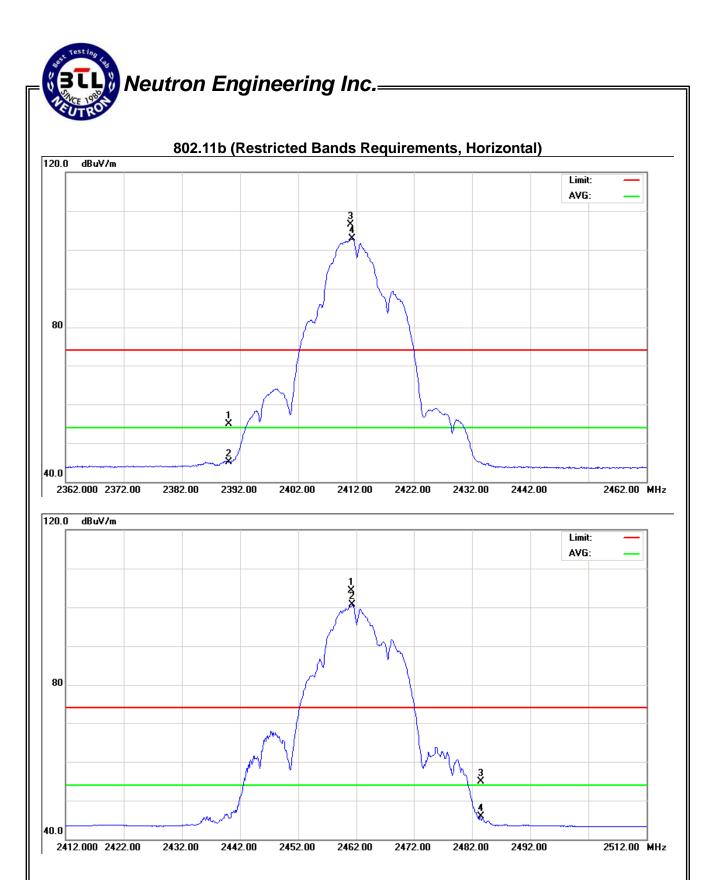
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	802.11b(Horizontal) (Port. 0 + Port. 1)					
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then cor to transmit at the lowest charmeasured at 2310-2390 MH: 2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst ca nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to			

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	22.23	12.52	32.63	54.86	45.15	74.00	54.00	X
2483.50	Н	21.81	12.74	33.11	54.92	45.85	74.00	54.00	X

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission $\,^{\circ}$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 73 of 126



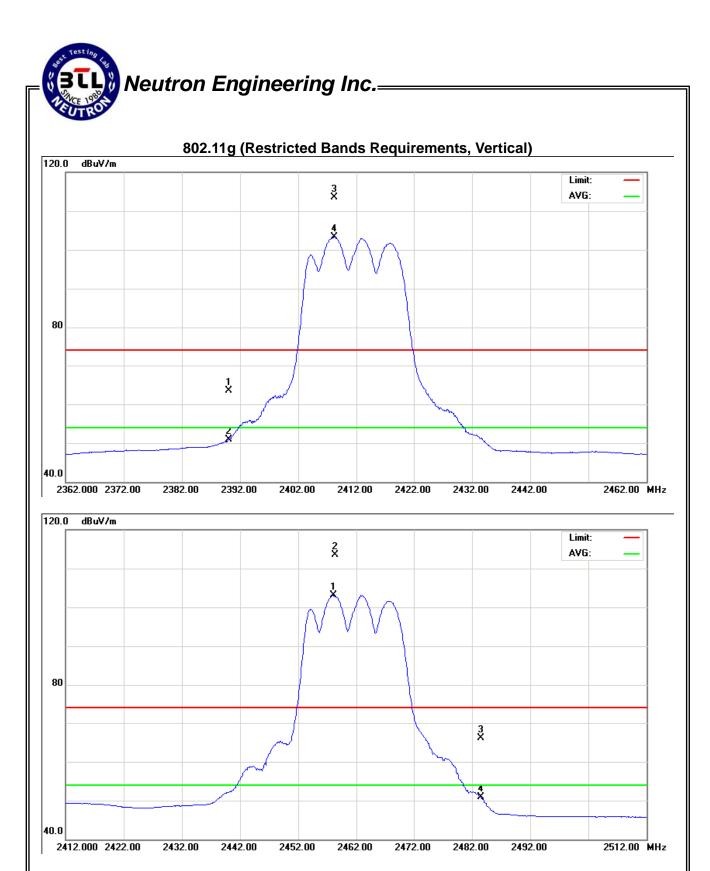
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa Test Power : AC 120V/60Hz						
Test Mode :	802.11g(Vertical) (Port. 0 + Port. 1)						
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then conto transmit at the lowest charmeasured at 2310-2390 MH: 2. The transmitter was configur transmit at the highest charmeasured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	30.84	18.28	32.63	63.47	50.91	74.00	54.00	Χ
2483.50	V	33.05	17.84	33.11	66.16	50.95	74.00	54.00	Х

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 75 of 126



EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	802.11g(Horizontal) (Port. 0 + Port. 1)					
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then conto transmit at the lowest charmeasured at 2310-2390 MH: 2. The transmitter was configur transmit at the highest chanrmeasured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to			

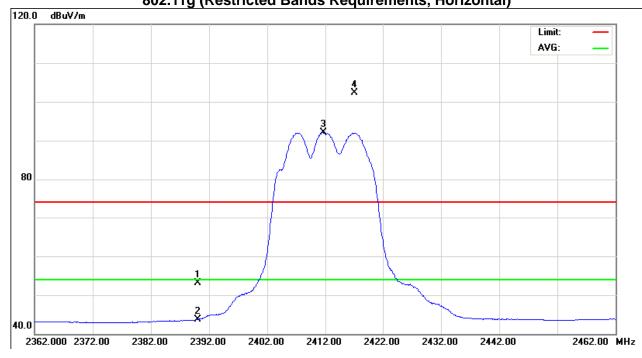
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	20.49	11.06	32.63	53.12	43.69	74.00	54.00	Χ
2483.50	Н	27.76	12.56	33.11	60.87	45.67	74.00	54.00	Χ

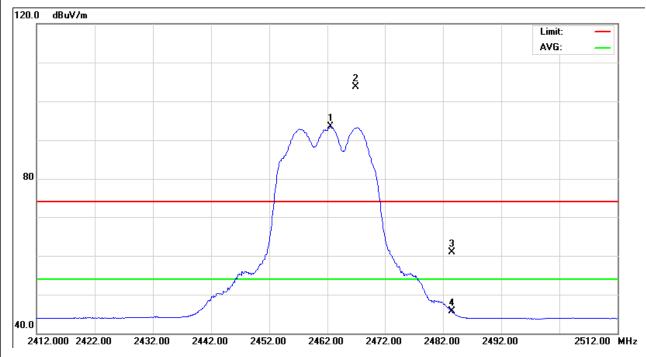
- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 77 of 126

Neutron Engineering Inc. 802.11g (Restricted Bands Requirements, Horizontal)





EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	802.11n/20M(Port. 0 + Port. 1) (Vertical)						
Note:	 The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then corto transmit at the lowest charmeasured at 2310-2390 MH; 2. The transmitter was configur transmit at the highest charmeasured at 2483.5-2500 M 	nfigured with the wor nnel (CH01). Then th z. red with the worst car nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

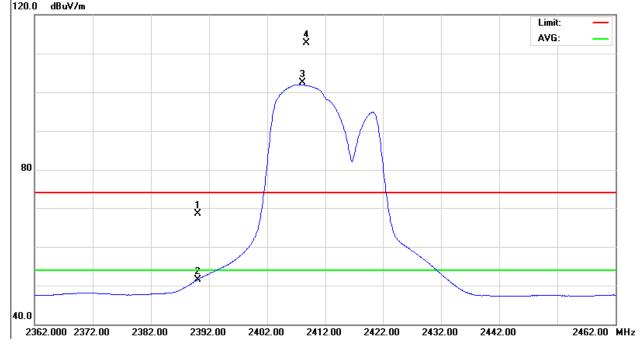
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	35.85	18.82	32.63	68.48	51.45	74.00	54.00	Χ
2483.50	V	33.67	18.62	33.11	66.78	51.73	74.00	54.00	X

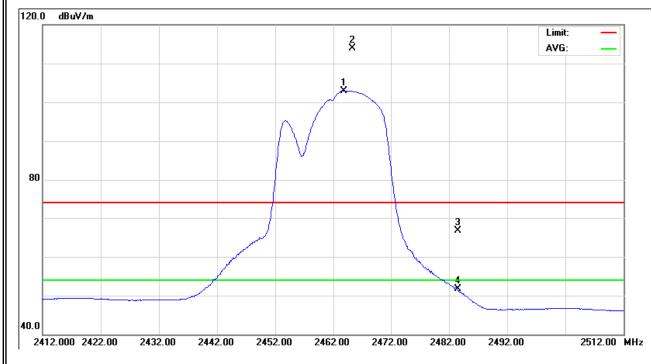
- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 79 of 126

Neutron Engineering Inc.= 802.11n/20M (Port 0 + Port 1) (Restricted Bands Requirements, Vertical) 120.0 dBuV/m 4 × 1 X





Report No.: NEI-FCCP-1-0911C013 Page 80 of 126

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600				
Temperature:	27 ℃	Relative Humidity:	48 %				
Pressure:	1010hPa	Test Power :	AC 120V/60Hz				
Test Mode :	802.11n/20M(Port. 0 + Port. 1) (Horizontal)						
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH: 2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to				

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	23.72	12.21	32.63	56.35	44.84	74.00	54.00	X
2483.50	Н	26.24	12.68	33.11	59.35	45.79	74.00	54.00	X

- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (3) EUT Orthogonal Axes:

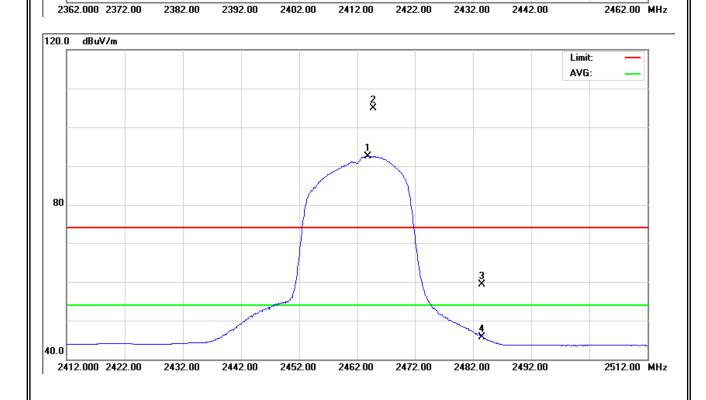
"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 81 of 126

X X

40.0

802.11n/20M (Port 0 + Port 1) (Restricted Bands Requirements, Horizontal) 120.0 dBuV/m Limit: AVG: 4 X



Report No.: NEI-FCCP-1-0911C013

Page 82 of 126

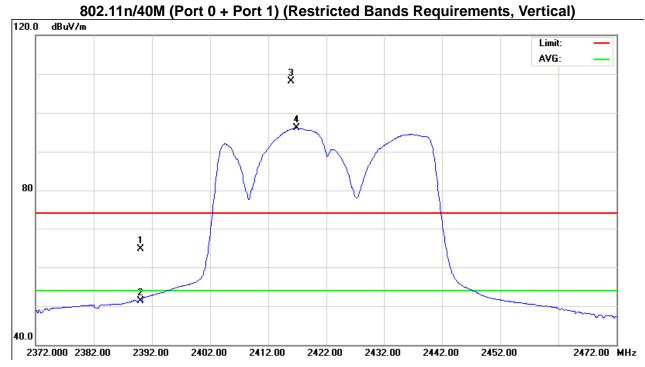
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600			
Temperature:	27 ℃	Relative Humidity:	48 %			
Pressure:	1010hPa	Test Power :	AC 120V/60Hz			
Test Mode :	802.11n/40M (Port. 0 + Port. 1) (Vertical)					
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH; 2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH03). Then th z. red with the worst can nel (CH09). Then the	st case antenna and setup ne field strength was se antenna and setup to			

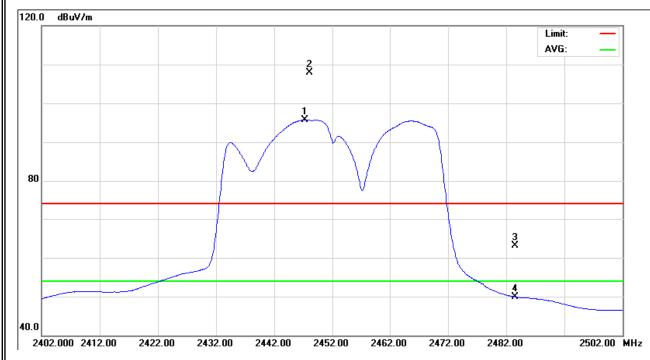
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	32.02	18.62	32.63	64.65	51.25	74.00	54.00	Χ
2483.50	V	29.91	16.86	33.11	63.02	49.97	74.00	54.00	X

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (3) EUT Orthogonal Axes:
 - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 83 of 126

Neutron Engineering Inc.— 802.11n/40M (Port 0 + Port 1) (Restricted





Report No.: NEI-FCCP-1-0911C013 Page 84 of 126

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/40M(Port. 0 + Port. 1)	(Horizontal)	
Note:	The emission of the carrier radi (Peak and AV) as following: 1. The transmitter was then cor to transmit at the lowest charmeasured at 2310-2390 MH: 2. The transmitter was configur transmit at the highest charrmeasured at 2483.5-2500 M	nfigured with the wor nnel (CH03). Then th z. red with the worst can nel (CH09). Then the	st case antenna and setup ne field strength was se antenna and setup to

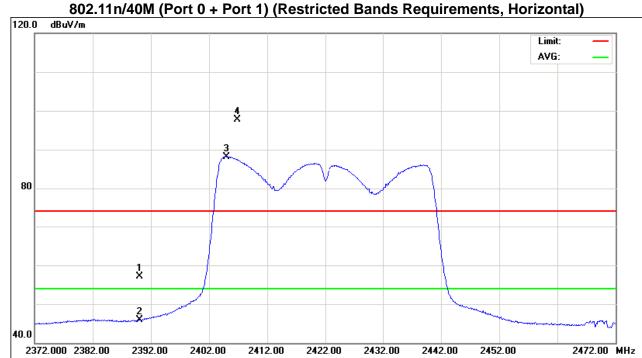
Freq.	Ant.Pol.	Rea	ding	Ant./CF	A	ct.	Lir	mit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	24.46	13.33	32.63	57.09	45.96	74.00	54.00	Χ
2483.50	Н	21.41	11.79	33.11	54.52	44.90	74.00	54.00	Х

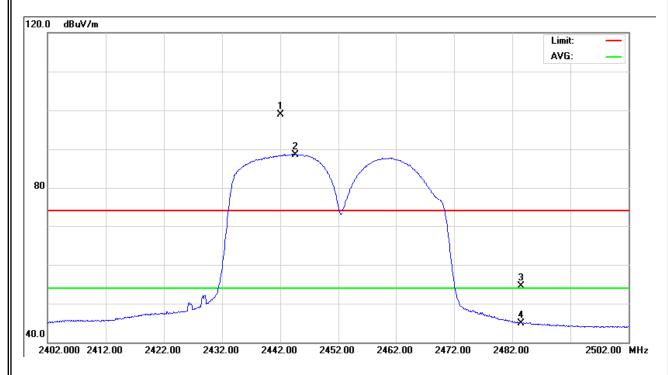
- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission \circ
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

Report No.: NEI-FCCP-1-0911C013 Page 85 of 126

Neutron Engineering Inc.— 802.11n/40M (Port 0 + Port 1) (Restricted B





Report No.: NEI-FCCP-1-0911C013 Page 86 of 126

5. BANDWITH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C					
Test Item Limit Frequency Range (MHz) Result					
Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS		

5.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

5.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

5.1.3 DEVIATION FROM STANDARD

No deviation.

5.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

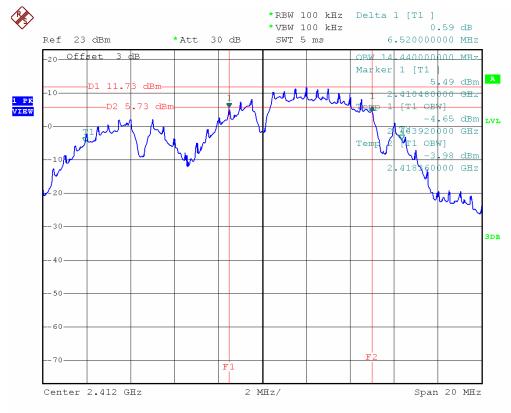
Report No.: NEI-FCCP-1-0911C013 Page 87 of 126

5.1.6 TEST RESULTS

IFUI '	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b/CH01, CH06, CH11 (Port. 0 + Port. 1)		

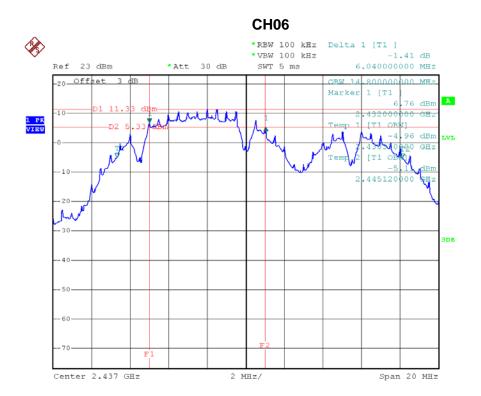
Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	6.52	>=500KHz
CH06	2437	6.04	>=500KHz
CH11	2462	5.52	>=500KHz

CH01

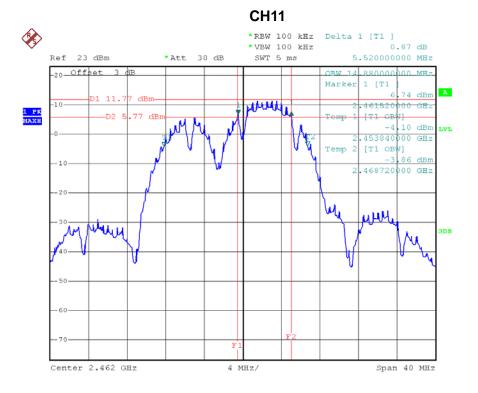


Date: 11.NOV.2009 03:15:36

Report No.: NEI-FCCP-1-0911C013 Page 88 of 126



Date: 11.NoV.2009 03:07:24

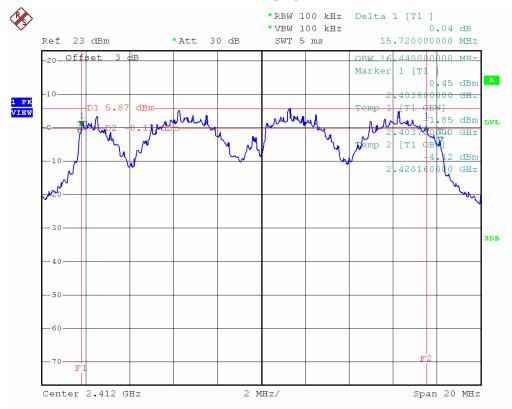


Date: 11.NOV.2009 03:01:45

IFUI '	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	: 802.11g/CH01, CH06, CH11 (Port. 0 + Port. 1)		

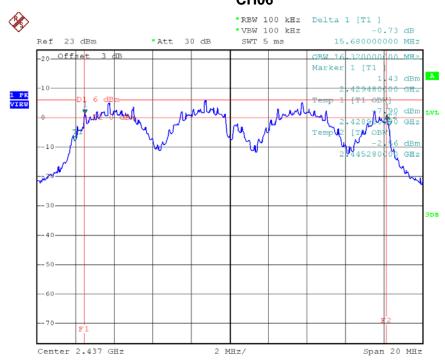
Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	15.72	>=500KHz
CH06	2437	15.68	>=500KHz
CH11	2462	15.60	>=500KHz

CH01



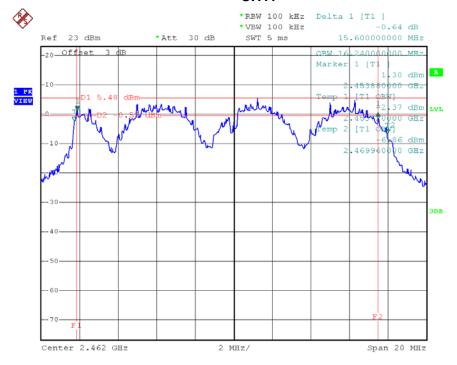
Date: 11.NOV.2009 02:34:27





Date: 11.NOV.2009 02:36:02

CH11

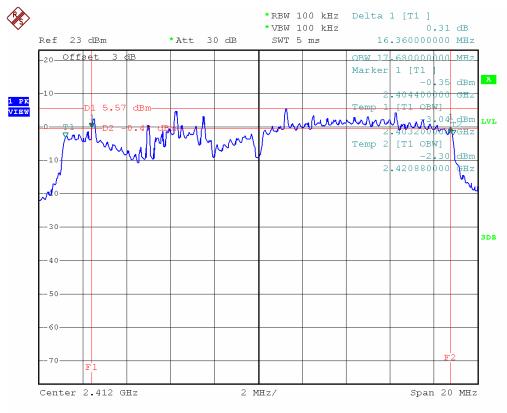


Date: 11.NOV.2009 02:44:24

I I I I I	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/20M/CH01, CH06, CH11 (Port. 0 + Port. 1)		

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	16.36	>=500KHz
CH06	2437	15.72	>=500KHz
CH11	2462	15.96	>=500KHz

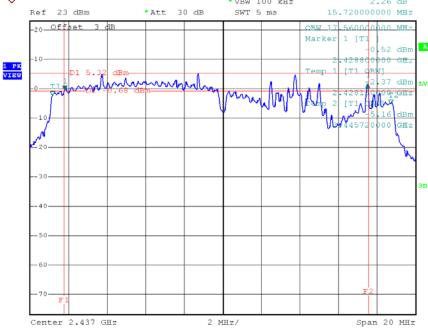
CH01



Date: 11.NOV.2009 03:23:15

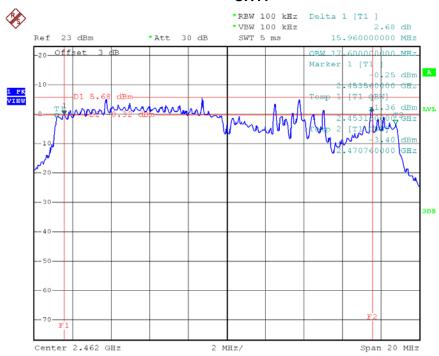
CH06 *RBW 10 *VBW 10





Date: 11.NOV.2009 03:29:17

CH11

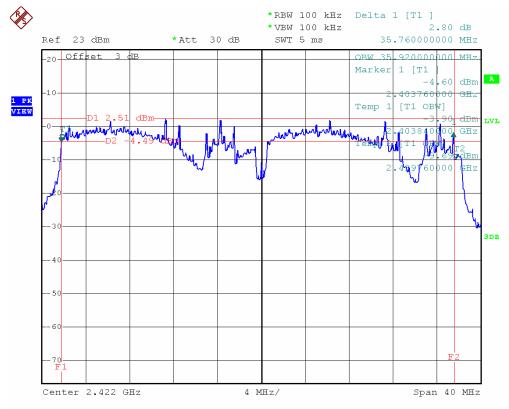


Date: 11.NOV.2009 06:06:19

IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/40M/CH03, CH06, CH09 (Port. 0 + Port. 1)		

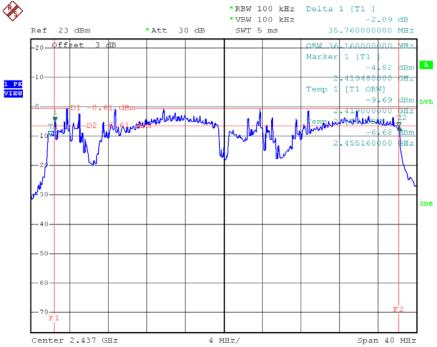
Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH03	2422	35.76	>=500KHz
CH06	2437	35.76	>=500KHz
CH09	2452	35.68	>=500KHz

CH03



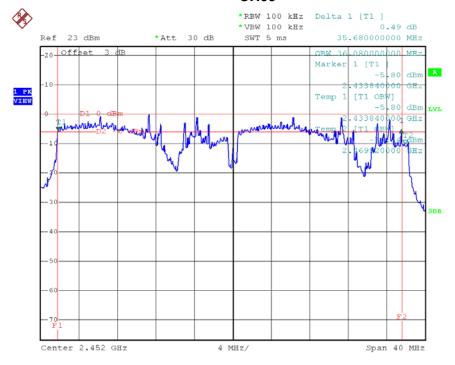
Date: 11.NOV.2009 06:14:13





Date: 11.NOV.2009 06:24:25

CH09



Date: 11.NOV.2009 06:29:33

6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C					
Test Item	Result				
Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS		

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

6.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto.

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP

FIIT	Power Meter
EUI	rower Meter

6.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-0911C013 Page 96 of 126

6.1.6 TEST RESULTS

IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600		
Temperature:	27 ℃	Relative Humidity:	48 %		
Pressure:	1010hPa	Test Power :	AC 120V/60Hz		
Test Mode :	802.11b/CH01, CH06, CH11 (Port. 0 + Port. 1)				

Port. 0						
Test Channel	Frequency	Peak Out	put Power	LIMIT	LIMIT	
Test onamer	(MHz)	(dBm)	(W)	(dBm)	(W)	
CH01	2412	15.20	0.0331	30	1	
CH06	2437	15.59	0.0362	30	1	
CH11	2462	15.57	0.0361	30	1	

Port. 1							
Test Channel	Frequency	Peak Output Power		LIMIT	LIMIT		
rest orialine	(MHz)	(dBm)	(W)	(dBm)	(W)		
CH01	2412	17.12	0.0515	30	1		
CH06	2437	16.81	0.0479	30	1		
CH11	2462	16.07	0.0406	30	1		

Total (Port. 0 + Port. 1)							
Test Channel	Frequency Peak Output Power (MHz) (dBm) (W)		LIMIT (dBm)	LIMIT (W)			
CH01	2412	19.28	0.0846	30	1		
CH06	2437	19.25	0.0842	30	1		
CH11	2462	18.84	0.0765	30	1		

Remark:

- (1) The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.
 - And after obtain each individual transmitter chain power, then sum the output power by using the following formula:
 - ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) = Combined peak output power in mW.
- (2) Antenna Gain=2.0 dBi.

Report No.: NEI-FCCP-1-0911C013 Page 97 of 126



EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600	
Temperature:	27 ℃	Relative Humidity:	48 %	
Pressure:	1010hPa	AC 120V/60Hz		
Test Mode :	802.11g/CH01, CH06, CH11 (Port. 0 + Port. 1)			

Port. 0						
Test Channel	Frequency	Peak Output Power		LIMIT	LIMIT	
rest Charmer	(MHz)	(dBm)	(W)	(dBm)	(W)	
CH01	2412	19.28	0.0847	30	1	
CH06	2437	19.34	0.0859	30	1	
CH11	2462	18.47	0.0703	30	1	

Port. 1						
Test Channel	Frequency	Peak Output Power		LIMIT	LIMIT	
103t Orialino	(MHz)	(dBm)	(W)	(dBm)	(W)	
CH01	2412	19.15	0.0822	30	1	
CH06	2437	19.17	0.0826	30	1	
CH11	2462	18.74	0.0748	30	1	

Total (Port. 0 + Port. 1)							
Test Channel	Frequency	Peak Output Power		LIMIT	LIMIT		
rest Chamilei	(MHz) (dBm) (W)		(dBm)	(W)			
CH01	2412	22.23	0.1669	30	1		
CH06	2437	22.27	0.1685	30	1		
CH11	2462	21.62	0.1451	30	1		

- (1) The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method. And after obtain each individual transmitter chain power, then sum the output power by using the following formula: ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) = Combined peak output power in mW.
- (2) Antenna Gain=2.0 dBi.

Report No.: NEI-FCCP-1-0911C013 Page 98 of 126



IFUI :	TI 4830 Wireless Cable Modem	Model Name :	DDW3600		
Temperature:	27 ℃	Relative Humidity:	48 %		
Pressure:	010hPa Test Power : AC 120V/60Hz				
Test Mode :	802.11n/20M/CH01, CH06, CH11 (Port. 0 + Port. 1)				

Port. 0					
Test Channel	Frequency	Peak Out	put Power	LIMIT	LIMIT
103t Orlannor	(MHz)	(dBm)	(W)	(dBm)	(W)
CH01	2412	19.48	0.0887	30	1
CH06	2437	18.89	0.0774	30	1
CH11	2462	18.48	0.0705	30	1

Port. 1					
Test Channel	Frequency	Peak Out	put Power	LIMIT	LIMIT
rest orialine	(MHz)	(dBm)	(W)	(dBm)	(W)
CH01	2412	18.92	0.0779	30	1
CH06	2437	18.89	0.0774	30	1
CH11	2462	18.79	0.0757	30	1

Total (Port. 0 + Port. 1)					
Test Channel	Frequency (MHz)	Peak Out (dBm)	out Power (W)	LIMIT (dBm)	LIMIT (W)
CH01	2412	22.22	0.1667	30	1
CH06	2437	21.90	0.1549	30	1
CH11	2462	21.65	0.1462	30	1

- (1) The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.

 And after obtain each individual transmitter chain power, then sum the output power by using the following formula:

 ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) =
 - ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) = Combined peak output power in mW.
- (2) Antenna Gain=2.0 dBi.

Report No.: NEI-FCCP-1-0911C013 Page 99 of 126



IFUI:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600		
Temperature:	27 ℃	Relative Humidity:	48 %		
Pressure:	1010hPa Test Power : AC 120V/60Hz				
Test Mode :	802.11n/40M/CH03, CH06, CH09 (Port. 0 + Port. 1)				

Port. 0					
Test Channel	Frequency	Peak Out	put Power	LIMIT	LIMIT
rest Chamilei	(MHz)	(dBm)	(W)	(dBm)	(W)
CH03	2422	16.11	0.0408	30	1
CH06	2437	16.07	0.0405	30	1
CH09	2452	16.20	0.0417	30	1

Port. 1					
Test Channel	Frequency	Peak Out	put Power	LIMIT	LIMIT
rest orialine	(MHz)	(dBm)	(W)	(dBm)	(W)
CH03	2422	16.86	0.0485	30	1
CH06	2437	16.60	0.0457	30	1
CH09	2452	16.57	0.0454	30	1

Total (Port. 0 + Port. 1)					
Test Channel	Tost Channel Frequency Peak Output Power		LIMIT	LIMIT	
rest Charmer	(MHz)	(dBm)	(W)	(dBm)	(W)
CH03	2422	19.51	0.0894	30	1
CH06	2437	19.35	0.0862	30	1
CH09	2452	19.40	0.0871	30	1

- (1) The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.

 And after obtain each individual transmitter chain power, then sum the output power by using the following formula:

 ((dBm/Chain 1)/10^Log) + ((dBm/Chain 2)/10^log) + ((dBm/ChainN)/10^log) = Combined peak output power in mW.
- (2) Antenna Gain=2.0 dBi.

Report No.: NEI-FCCP-1-0911C013 Page 100 of 126

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C					
Test Item	Limit	Frequency Range (MHz)	Result		
Antenna conducted Spurious Emission	20dB less than the peak value of fundamental frequency	30-25000	PASS		

7.1.1 MEASUREMENT INSTRUMENTS LIST

Ite	em	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
	1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

7.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-0911C013 Page 101 of 126

7.1.6 TEST RESULTS

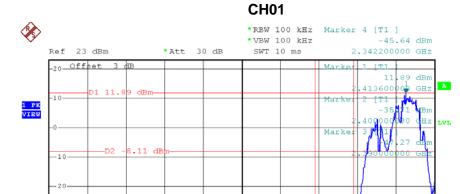
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600		
Temperature:	27 ℃	Relative Humidity:	48 %		
Pressure:	Test Power : AC 120V/60Hz				
Test Mode :	802.11b/CH01, CH11 (Port. 0 + Port. 1)				

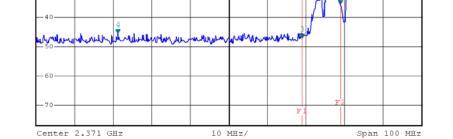
Channel of Worst Data: CH1			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2342.20	-45.64	2487.40	-45.79
Result			

Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

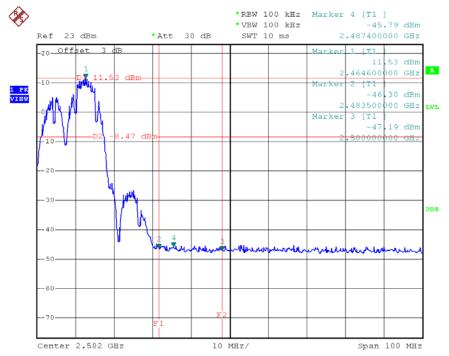
Report No.: NEI-FCCP-1-0911C013 Page 102 of 126





Date: 11.NOV.2009 03:16:53

CH11



Date: 11.NOV.2009 02:51:04

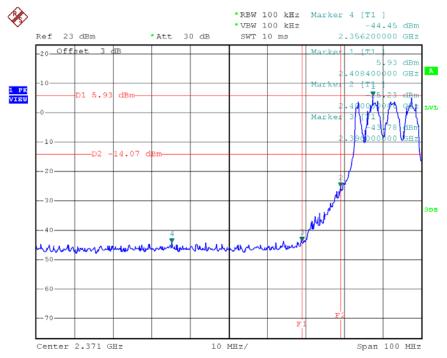
HUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11g/CH01, CH11 (Port. 0 + Port. 1)		

Channel of Worst Data: CH11			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2356.20	-44.45	2483.50	-42.39
Result			

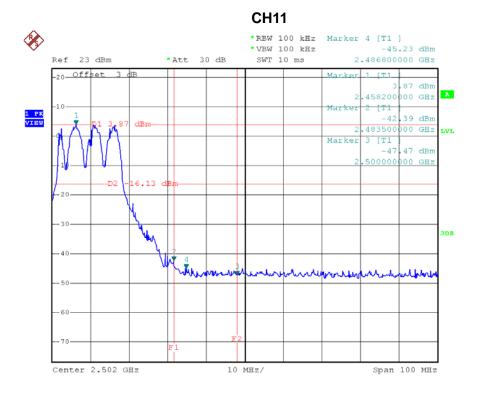
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

Report No.: NEI-FCCP-1-0911C013 Page 104 of 126





Date: 11.NOV.2009 02:32:03



Date: 11.NOV.2009 02:45:52

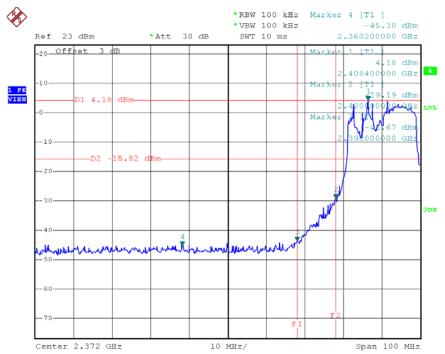
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode : 802.11n/20M/CH01, CH11 (Port. 0 + Port. 1)			

Channel of Worst Data: CH11			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2360.20	-45.30	2486.40	-44.54
Result			

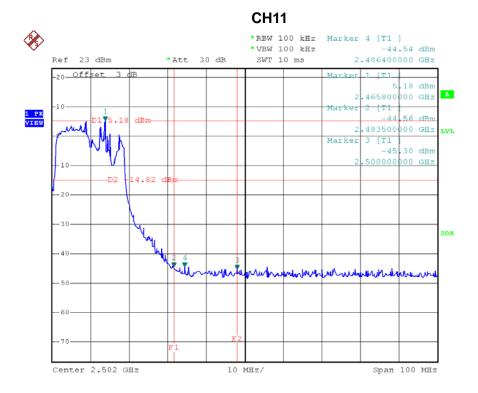
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

Report No.: NEI-FCCP-1-0911C013 Page 106 of 126





Date: 11.NOV.2009 03:25:39



Date: 11.NOV.2009 06:10:37

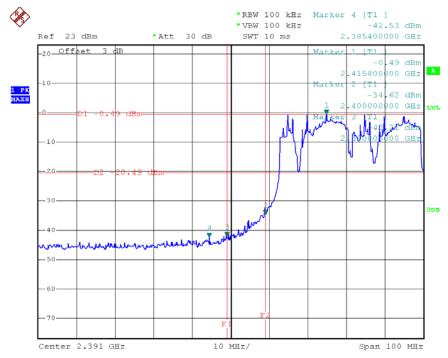
EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n/40M/CH03, CH09 (Port. 0 + Port. 1)		

Channel of Worst Data: CH3			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2385.40	-42.53	2494.60	-43.61
Result			

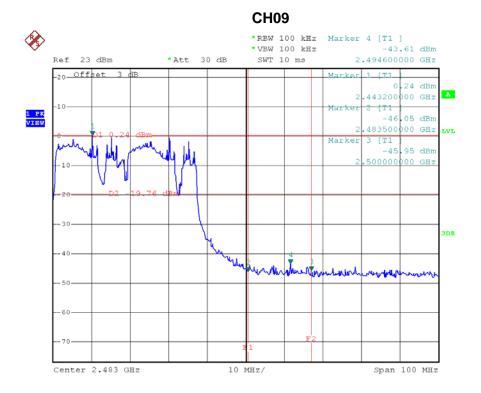
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

Report No.: NEI-FCCP-1-0911C013 Page 108 of 126





Date: 11.NOV.2009 06:16:59



Date: 11.NOV.2009 06:31:06

8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C					
Test Item	Limit	Frequency Range (MHz)	Result		
Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS		

8.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

8.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=30KHz, Sweep time = 500s.

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

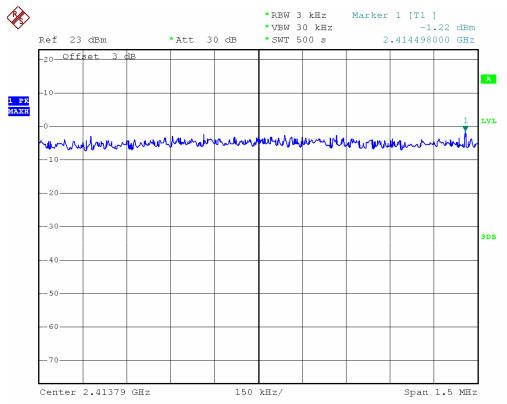
Report No.: NEI-FCCP-1-0911C013 Page 110 of 126

8.1.6 TEST RESULTS

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600	
Temperature:	27 ℃	Relative Humidity:	48 %	
Pressure:	1010hPa	Test Power :	AC 120V/60Hz	
Test Mode :	802.11b/CH01, CH06, CH11 (Port. 0 + Port. 1)			

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412	-1.22	8
CH06	2437	-2.06	8
CH11	2462	-1.45	8

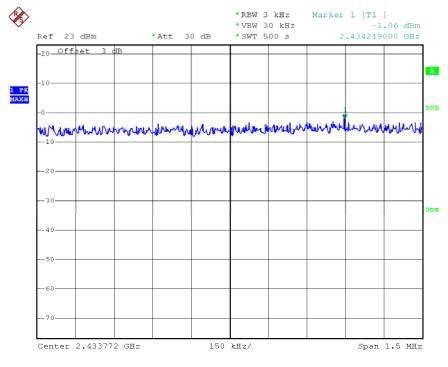
CH01



Date: 11.NOV.2009 03:18:10

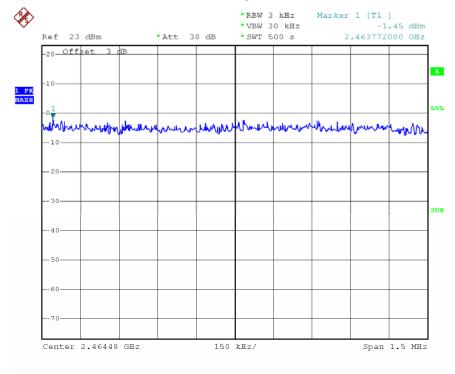
Report No.: NEI-FCCP-1-0911C013 Page 111 of 126





Date: 11.NOV.2009 03:05:58

CH11

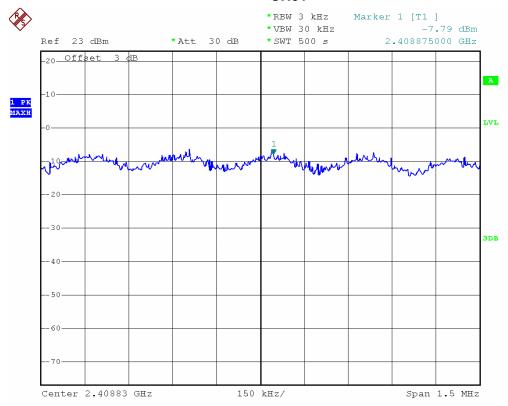


Date: 11.NOV.2009 03:03:58

IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode : 802.11g/CH01, CH06, CH11 (Port. 0 + Port. 1)			

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412	-7.79	8
CH06	2437	-7.73	8
CH11	2462	-6.55	8

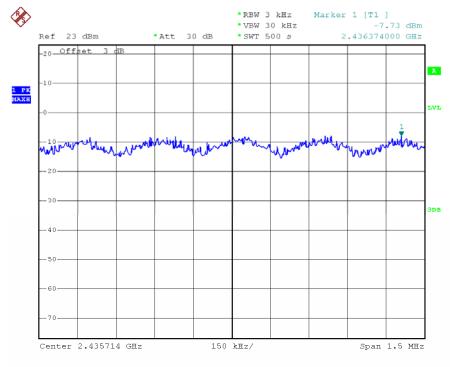
CH01



Date: 11.NOV.2009 02:05:19

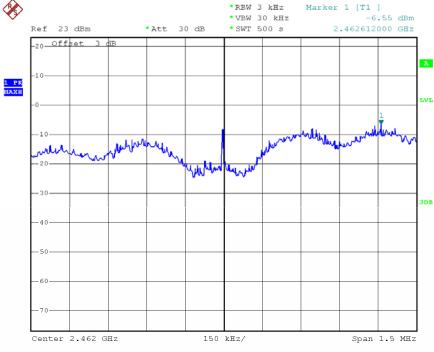
Report No.: NEI-FCCP-1-0911C013 Page 113 of 126





Date: 11.NOV.2009 02:39:14

CH11 * RBW 3

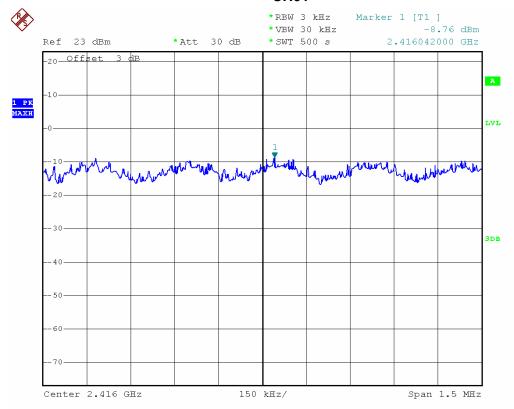


Date: 11.NOV.2009 02:42:02

I I I I I	TI 4830 Wireless Cable Modem	Model Name :	DDW3600	
Temperature:	27 ℃	Relative Humidity:	48 %	
Pressure:	1010hPa	Test Power :	AC 120V/60Hz	
Test Mode :	802.11n/20M/CH01, CH06, CH11 (Port. 0 + Port. 1)			

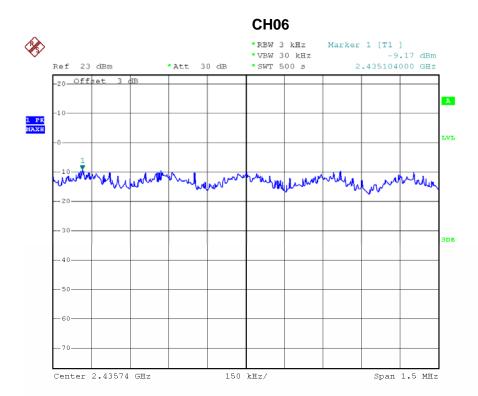
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412	-8.76	8
CH06	2437	-9.17	8
CH11	2462	-8.58	8

CH01

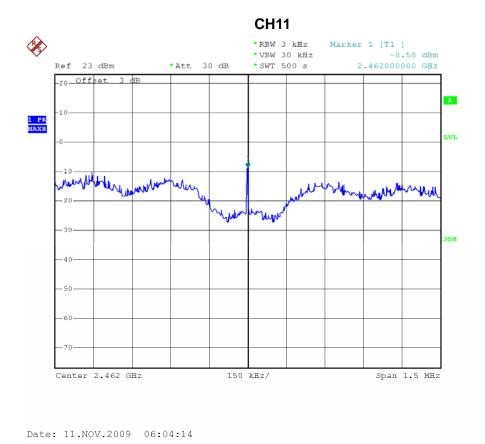


Date: 11.NOV.2009 03:21:24

Report No.: NEI-FCCP-1-0911C013 Page 115 of 126



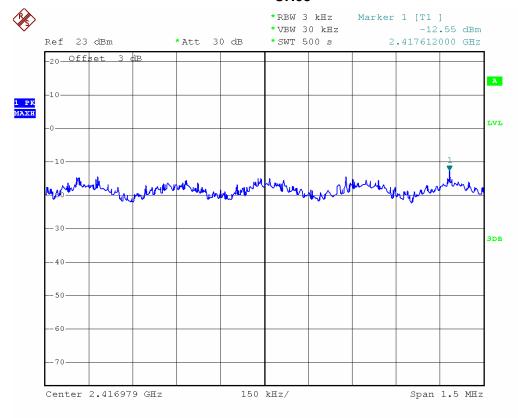




EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600	
Temperature:	27 ℃	Relative Humidity:	48 %	
Pressure:	1010hPa	Test Power :	AC 120V/60Hz	
Test Mode :	802.11n/40M/CH03, CH06, CH09 (Port. 0 + Port. 1)			

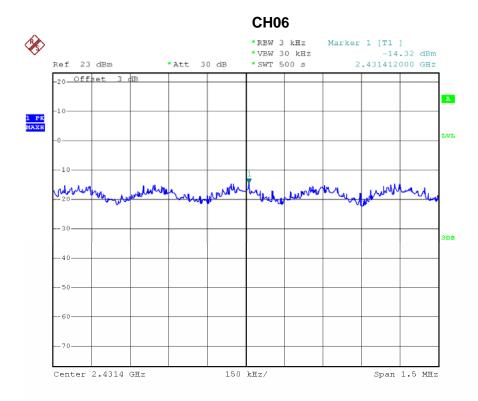
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH03	2422	-12.55	8
CH06	2437	-14.32	8
CH09	2452	-14.34	8

CH03

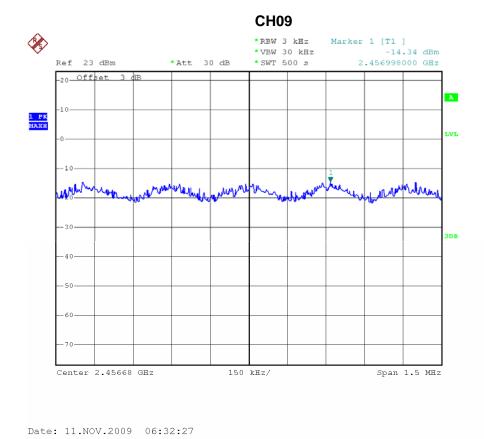


Date: 11.NOV.2009 06:20:14

Report No.: NEI-FCCP-1-0911C013 Page 117 of 126









9. RF EXPOSURE TEST

9.1 APPLIED PROCEDURES / LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time E ², H ²or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz; *Plane-wave equivalent power density

9.1.1 MEASUREMENT INSTRUMENTS LIST

Ite	m Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

9.1.2 MPE CALCULATION METHOD

E (V/m)
$$=\frac{\sqrt{30 \times P \times G}}{d}$$
 Power Density: Pd (W/m²) $=\frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

Report No.: NEI-FCCP-1-0911C013 Page 119 of 126

9.1.4 TEST SETUP

No deviation.

EUT	SPECTRUM
	ANALYZER

9.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: NEI-FCCP-1-0911C013 Page 120 of 126

9.1.6 TEST RESULTS

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b (Port. 0)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	15.20	33.1131	0.010446	1
2437	2.00	1.5849	15.59	36.2243	0.011427	1
2462	2.00	1.5849	15.57	36.0579	0.011375	1

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b (Port. 1)		

Frequency (MHz)	Antenna Gain (dBi)		•	•	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	17.12	51.5229	0.016254	1
2437	2.00	1.5849	16.81	47.9733	0.015134	1
2462	2.00	1.5849	16.07	40.4576	0.012763	1

IFUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11b (Port. 0 + Port. 1)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	19.28	84.7227	0.026727	1
2437	2.00	1.5849	19.25	84.1395	0.026543	1
2462	2.00	1.5849	18.84	76.5597	0.024152	1

Report No.: NEI-FCCP-1-0911C013 Page 121 of 126



EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11g (Port. 0)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	19.28	84.7227	0.026727	1
2437	2.00	1.5849	19.34	85.9014	0.027099	1
2462	2.00	1.5849	18.47	70.3072	0.022179	1

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11g (Port. 1)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	19.15	82.2243	0.025939	1
2437	2.00	1.5849	19.17	82.6038	0.026059	1
2462	2.00	1.5849	18.74	74.8170	0.023602	1

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11g (Port. 0 + Port. 1)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	22.23	167.1091	0.052717	1
2437	2.00	1.5849	22.27	168.6553	0.053205	1
2462	2.00	1.5849	21.62	145.2112	0.045809	1

Remark :

Report No.: NEI-FCCP-1-0911C013 Page 122 of 126

⁽¹⁾ The MIMO test requirement, MPE shall measure by using the total sum power of each transmitter chain.



I-() (TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n HT20 (Port. 0)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	15.20	33.1131	0.010446	1
2437	2.00	1.5849	15.59	36.2243	0.011427	1
2462	2.00	1.5849	15.57	36.0579	0.011375	1

HUI:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n HT20 (Port. 1)		

Frequency (MHz)	Antenna Gain (dBi)		•	•	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	17.12	51.5229	0.016254	1
2437	2.00	1.5849	16.81	47.9733	0.015134	1
2462	2.00	1.5849	16.07	40.4576	0.012763	1

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600		
Temperature:	27 ℃	Relative Humidity:	48 %		
Pressure:	1010hPa	Test Power :	AC 120V/60Hz		
Test Mode :	802.11n HT20 (Port. 0 + Port. 1)				

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2412	2.00	1.5849	19.28	84.7227	0.026727	1
2437	2.00	1.5849	19.25	84.1395	0.026543	1
2462	2.00	1.5849	18.84	76.5597	0.024152	1

Remark:

(1) The MIMO test requirement, MPE shall measure by using the total sum power of each transmitter chain.

Report No.: NEI-FCCP-1-0911C013 Page 123 of 126



EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n HT40 (Port. 0)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2422	2.00	1.5849	16.11	40.8319	0.012881	1
2437	2.00	1.5849	16.07	40.4576	0.012763	1
2452	2.00	1.5849	16.20	41.6869	0.013151	1

EUT:	TI 4830 Wireless Cable Modem	Model Name :	DDW3600
Temperature:	27 ℃	Relative Humidity:	48 %
Pressure:	1010hPa	Test Power :	AC 120V/60Hz
Test Mode :	802.11n HT40 (Port. 1)		

Frequency (MHz)	Antenna Gain (dBi)		•		Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2422	2.00	1.5849	16.86	48.5289	0.015309	1
2437	2.00	1.5849	16.60	45.7088	0.014420	1
2452	2.00	1.5849	16.57	45.3942	0.014320	1

EUI.	TI 4830 Wireless Cable Modem	Model Name :	DDW3600		
Temperature:	27 ℃	Relative Humidity:	48 %		
Pressure:	1010hPa	Test Power :	AC 120V/60Hz		
Test Mode :	802.11n HT40 (Port. 0 + Port. 1)				

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm²)
2422	2.00	1.5849	19.51	89.3305	0.028181	1
2437	2.00	1.5849	19.35	86.0994	0.027161	1
2452	2.00	1.5849	19.40	87.0964	0.02746	1

Remark:

(1) The MIMO test requirement, MPE shall measure by using the total sum power of each transmitter chain.

Report No.: NEI-FCCP-1-0911C013 Page 124 of 126



10. EUT TEST PHOTO

Conducted Measurement Photos

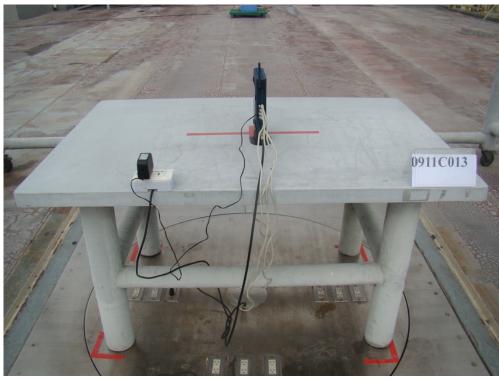




Report No.: NEI-FCCP-1-0911C013 Page 125 of 126

Radiated Measurement Photos





Report No.: NEI-FCCP-1-0911C013 Page 126 of 126