TECHNICAL REPORT

ISO/IEC17025Accredited Lab.

Report No: FCC 1305068
File reference No: 2013-06-06

Applicant: Glory Star Technics(Shen Zhen)Co., Ltd.

Product: Advertising Displayer

Model No: TAD101-A, TAD151-A, TAD181-A, TAD215-A, TAD151-G

Trademark: N/A

Test Standards: FCC Part 15 Subpart C, Paragraph 15.247

Test result: It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4 and FCC Part 15 Subpart C, Paragraph 15.247 regulations for the evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung
Manager

Dated: June 06, 2013

Results appearing herein relate only to the sample tested
The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

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Tel (755) 83448688 Fax (755) 83442996

Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name : SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District, Shenzhen,CHINA.

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Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: Glory Star Technics(Shen Zhen)Co., Ltd.

Address: 4/Floor, West Block, Longzhu Road, Xinwu Cun Industry Building, NanShan District, Shen Zhen

Telephone: (755)-26001808-305

Fax: (755)-26002933

1.3 Description of EUT

Product:	Advertising Displayer
Manufacturer:	Glory Star Technics(Shen Zhen)Co., Ltd.
Address:	4/Floor, West Block, Longzhu Road, Xinwu Cun Industry Building, NanShan District, Shen Zhen
Brand Name:	N/A
Model Number:	TAD101-A, TAD151-A, TAD181-A, TAD215-A, TAD151-G

Type of Modulation	IEEE 802.11b : DSSS (CCK, QPSK, DBPSK)
	IEEE 802.11g/n (HT20/HT40) : OFDM(64QAM, 16QAM, QPSK, BPSK)
Frequency range	IEEE 802.11b/g/n (HT20) : 2412-2462MHz;
	IEEE 802.11n HT40 : 2422MHz-2452MHz
Channel Spacing	IEEE 802.11b/g/n (HT20/40) : 5MHz
Air Data Rate	IEEE 802.11b : 11, 5.5, 2, 1 Mbps
	IEEE 802.11g : 54, 48,36, 24, 18, 12, 9, 6 Mbps
	IEEE 802.11n HT20 : 150, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps
	IEEE 802.11n HT40 : 150, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps
Frequency Selection	By software

Channel Number	IEEE 802.11b/g/n (HT20) : 11 Channels IEEE 802.11n HT40 : 7 Channels
Antenna Designation	Dipole antennas, and the maximum Gain of this antenna is 3.0dBi
Power Supply 1:	SMS-00120500-S01; Input: 100-240V, 50/60Hz, 1.5A; Output: 12V, 5.0A (for model TAD151-A, TAD181-A, TAD215-A, TAD151-G)
Power Supply 2:	SUN-1200200; Input: 100-240V, 50/60Hz, 0.6A Max; Output: 12V, 2A (for Model TAD101-A)

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2013-05-17 to 2013-06-05

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by Terry Tang

Print Name: Terry Tang

2.0	Test Equipments				
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2012-08-21	2013-08-20
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2012-08-21	2013-08-20
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2012-08-21	2013-08-20
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2012-08-21	2013-08-20
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2012-08-21	2013-08-20
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2012-08-21	2013-08-20
System Controller	CT	SC100	-	--	--
Printer	EPSON	PHOTO EX3	CFNH234850	--	--
Computer	IBM	8434	1S8434KCE99BLXLO*	-	-
Loop Antenna	EMCO	6502	00042960	2012-08-21	2013-08-20
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2012-08-21	2013-08-20
3m OATS	--	--	N/A	2012-08-21	2013-08-20
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2012-08-21	2013-08-20
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2012-08-21	2013-08-20
Power meter	Anritsu	ML2487A	6K00003613	2012-08-21	2013-08-20
Power sensor	Anritsu	MA2491A	32263	2012-08-21	2013-08-20
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2012-08-21	2013-08-20
LISN	AFJ	LS16C	10010947251	2012-08-21	2013-08-20
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2012-08-21	2013-08-20
9*6*6 Anechoic	--	--	N/A	2012-08-21	2013-08-20
EMI Test Receiver	RS	ESCS30	100139	2012-08-21	2013-08-20
LISN	AFJ	LS16C	10010947251	2012-08-21	2013-08-20
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2012-08-21	2013-08-20

2.1 Auxiliary Equipment

Name	Model No.	Serial No.	Manufacturer	Cable	FCC ID/DOC
TF Card	--	--	Kingston	--	--

3. DESCRIPTION OF TEST MODES

IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 11Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 54Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: 65Mbps data rate (worst case) were chosen for full testing

IEEE 802.11n HT40

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Mid	2437
High	2452

IEEE 802.11n HT40 mode: 65Mbps data rate (worst case) was chosen for full testing.

The worst-case data rates are determined according to the description above, based on the investigations by measuring the PSD and average power across all the data rates, bandwidths, modulations and spatial stream modes.

3.0 Technical Details

3.1 Summary of test results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107 & 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.247(a)(2) Limit	Spectrum bandwidth of a Orthogonal Frequency Division Multiplex System Limit: 6dB bandwidth>500kHz	PASS	Complies
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power Limit: max. 30dBm	PASS	Complies
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	PASS	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band Radiation Limit: 20dB less than peak value of fundamental frequency Restricted band limit: Table 15.209	PASS	Complies

3.2 Test Standards

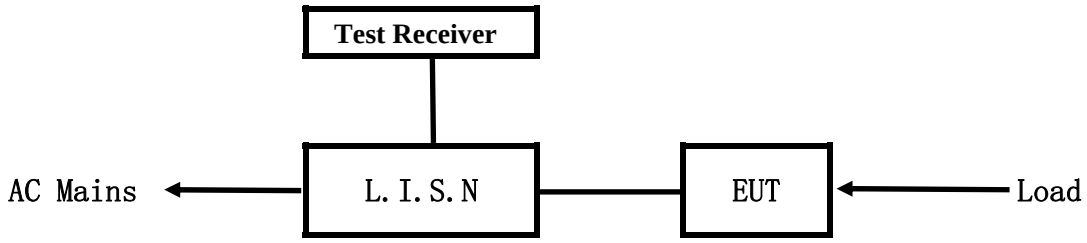
FCC Part 15 Subpart & Subpart C, Paragraph 15.247

4.0 EUT Modification

No modification by Shenzhen Timeway Technology Consulting Co., Ltd

5. Power Line Conducted Emission Test

5.1 Schematics of the test



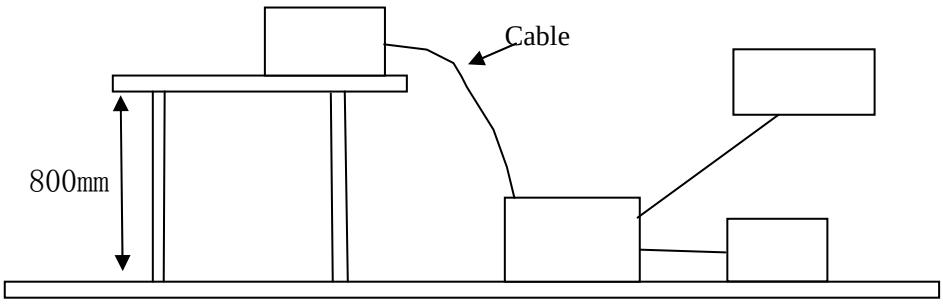
EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003.The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2003.

Test Voltage: 120V~, 60Hz

Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2003. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	Model	FCC ID
Advertising Displayer	Glory Star Technics(Shen Zhen) Co., Ltd.	TAD101-A, TAD151-A TAD181-A, TAD215-A TAD151-G	2AACS-TAD10151821

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
N/A				

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2003.

A Setup the EUT and simulators as shown on follow

B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207.

Frequency (MHz)	Class A Limits (dB μ V)		Class B Limits (dB μ V)	
	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
0.15 ～ 0.50	79.0	66.0	66.0～56.0*	56.0～46.0*
0.50 ～ 5.00	73.0	60.0	56.0	46.0
5.00 ～ 30.00	73.0	60.0	60.0	50.0

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

A: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

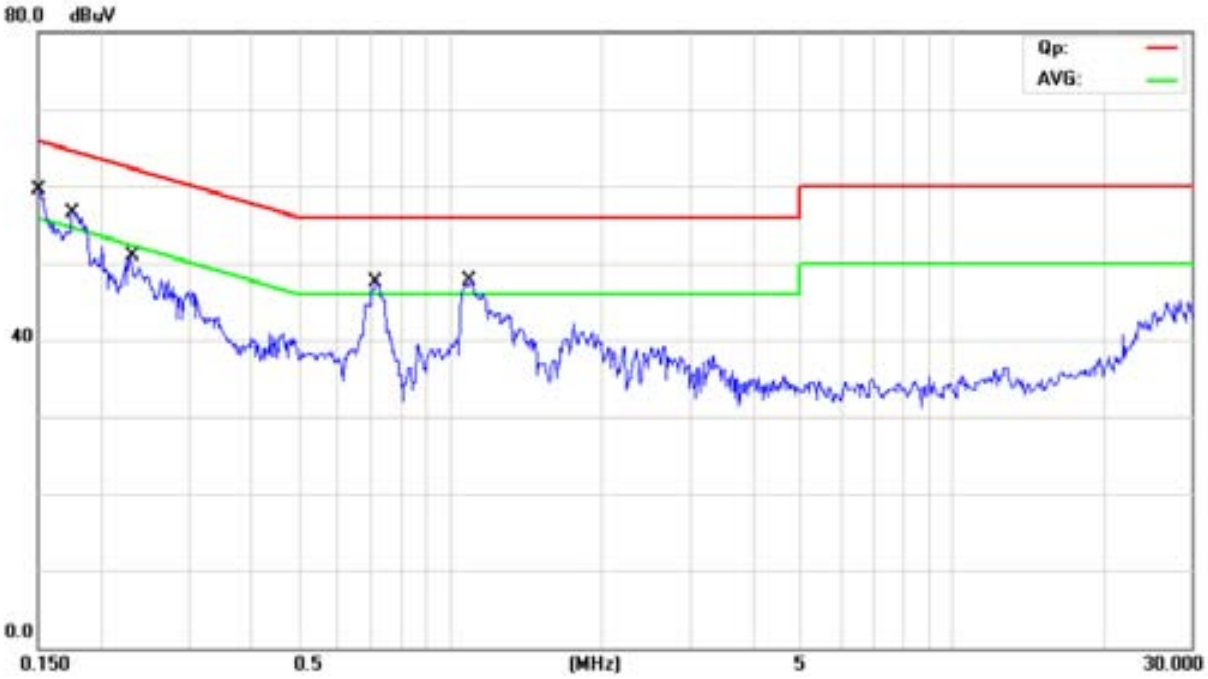
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD101-A

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.150	Live	55.58	21.29	66.00	56.00
0.176	Live	51.48	29.52	64.67	54.67
0.713	Live	44.42	28.16	56.00	46.00
1.096	Live	44.80	27.68	56.00	46.00
0.229	Live	47.84	34.84	62.47	52.47

B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

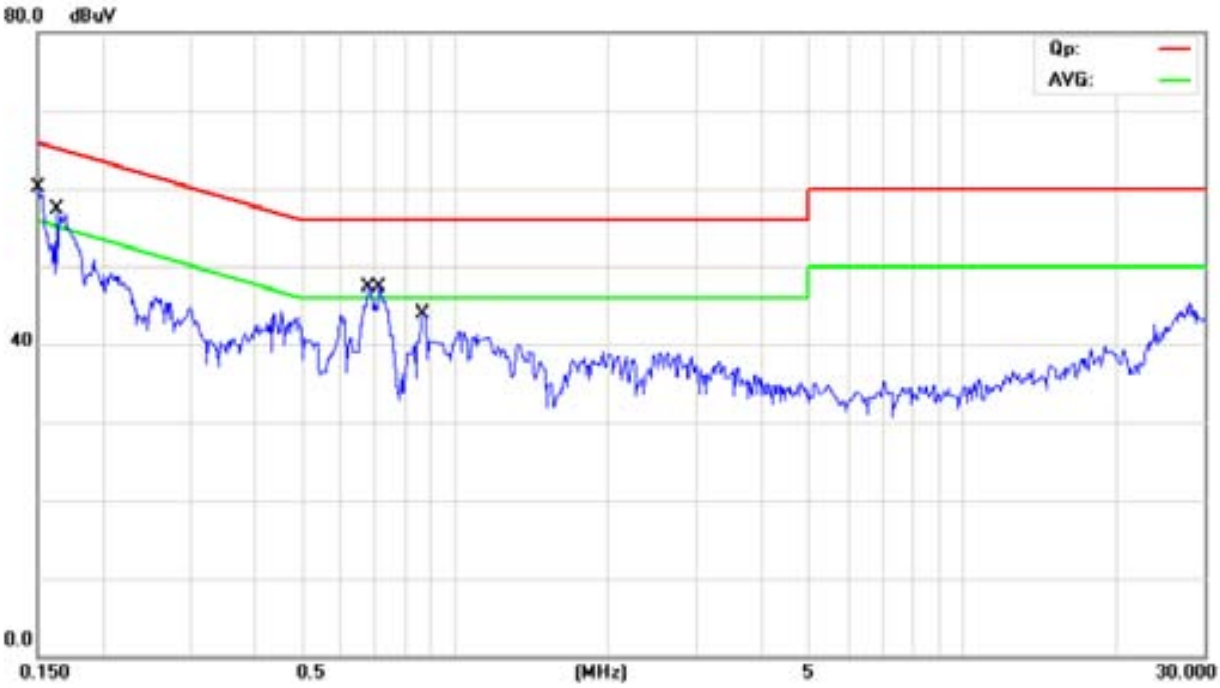
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD101-A

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.150	Neutral	54.10	20.23	66.00	56.00
0.164	Neutral	51.33	30.47	65.26	55.26
0.713	Neutral	44.37	30.18	56.00	46.00
0.680	Neutral	44.37	30.28	56.00	46.00
0.871	Neutral	41.91	33.91	56.00	46.00

C: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

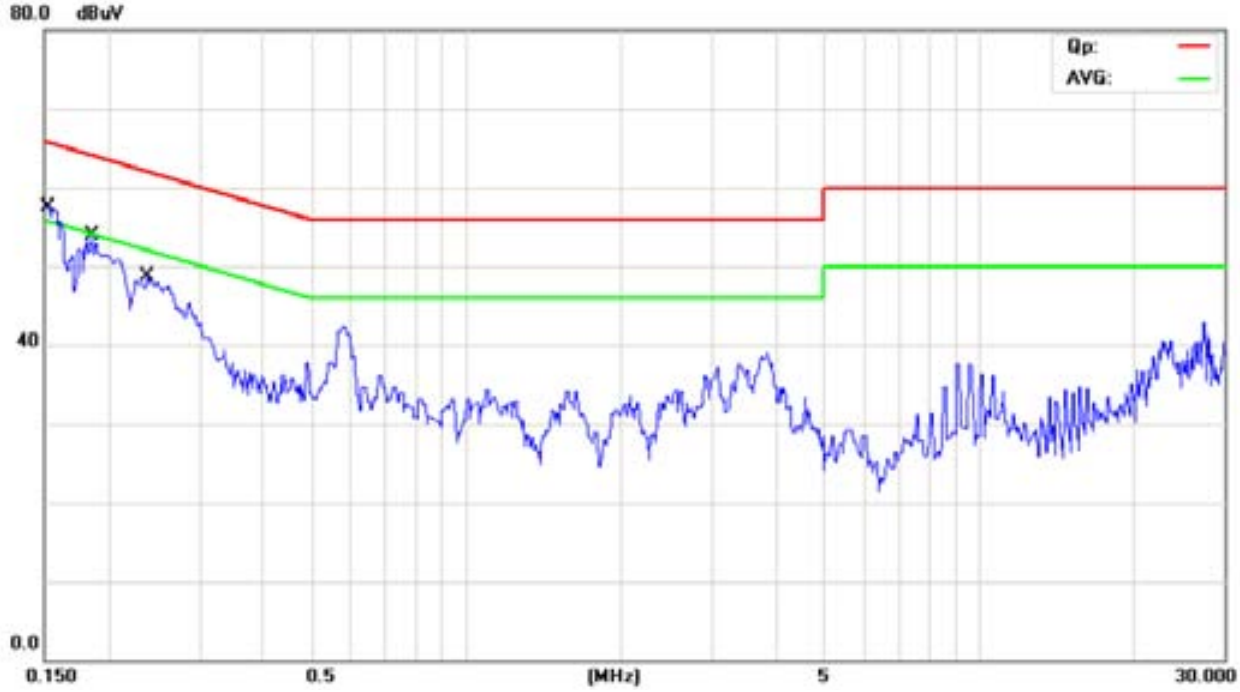
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD151-A /TAD151-G

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.155	Live	53.71	18.41	65.73	55.73
0.183	Live	51.04	30.84	64.32	54.32
0.237	Live	43.29	25.69	62.19	52.19

D: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

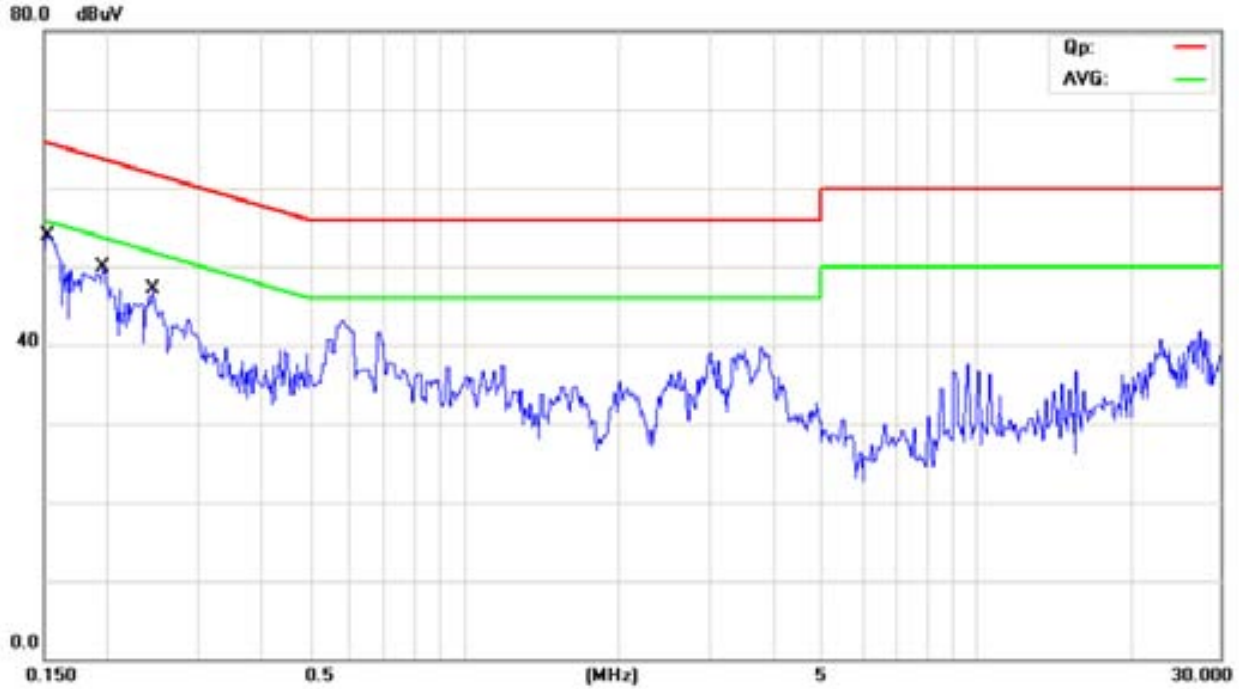
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD151-A /TAD151-G

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.152	Neutral	48.90	30.30	65.89	55.89
0.193	Neutral	47.85	30.55	63.90	53.90
0.245	Neutral	44.10	28.50	61.90	51.90

E: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

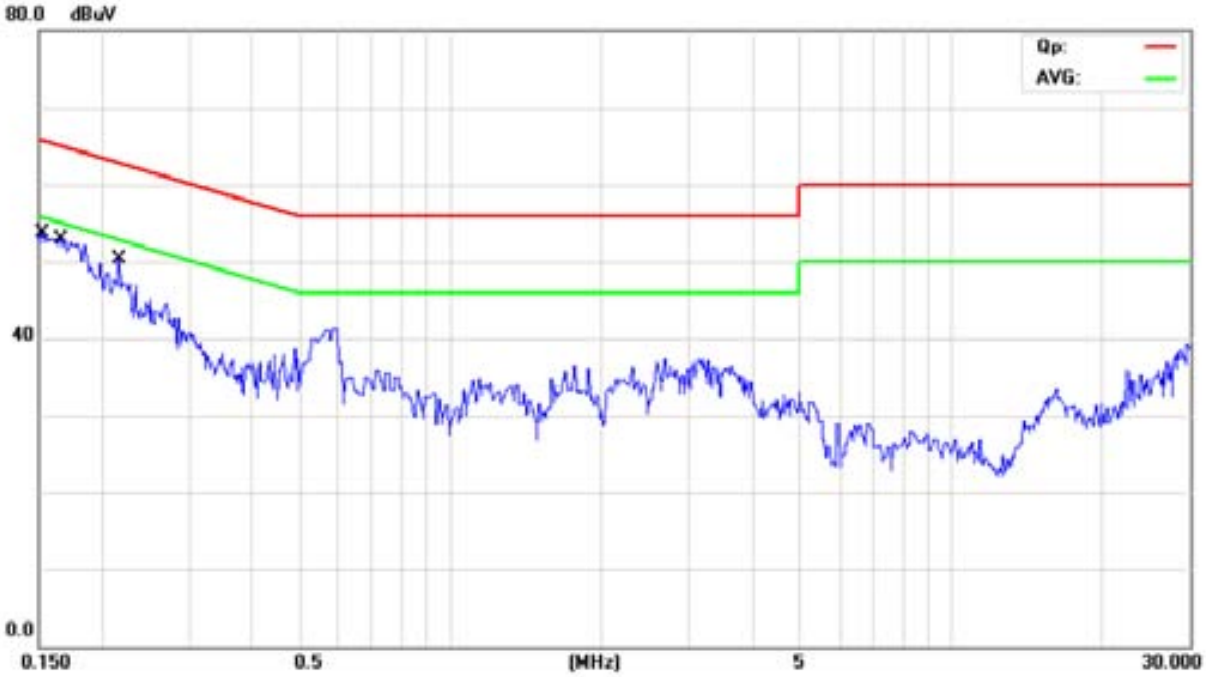
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD181-A

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.152	Live	50.10	27.90	65.86	55.86
0.165	Live	46.72	23.12	65.17	55.17
0.216	Live	42.97	26.47	62.95	52.95

F: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

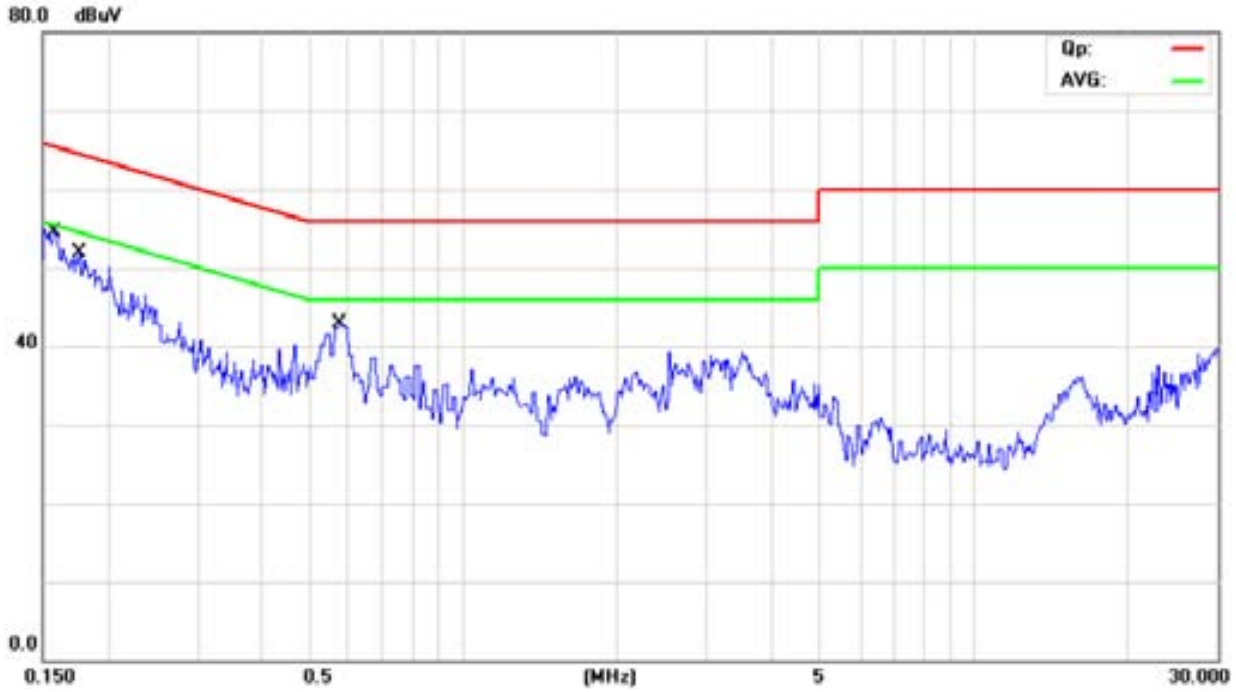
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD181-A

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.157	Neutral	46.71	25.91	65.61	55.61
0.572	Neutral	38.55	29.05	56.00	46.00
0.176	Neutral	47.03	27.13	64.66	54.66

G: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

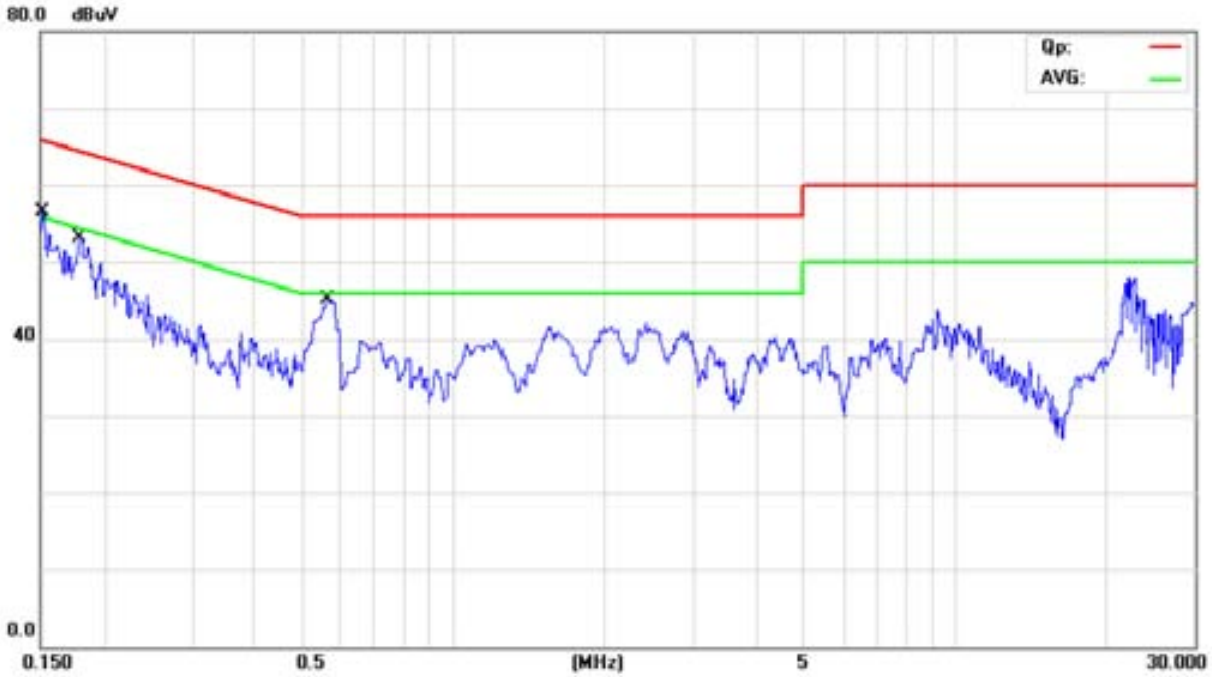
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD215-A

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.150	Live	43.70	19.60	65.99	55.99
0.179	Live	48.03	18.13	64.53	54.53
0.565	Live	42.84	33.64	56.00	46.00

H: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

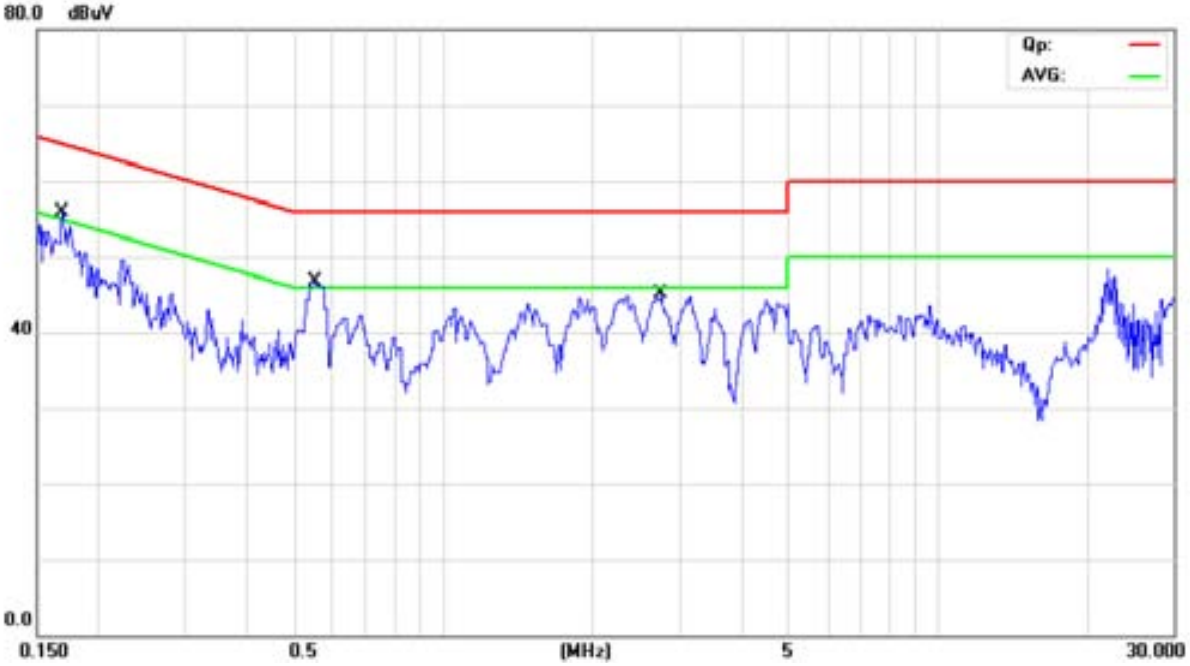
EUT set Condition: Keep WIFI Transmitting

Model No.: TAD215-A

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Line	Reading(dBμV)		Limit(dBμV)	
		Quasi-peak	Average	Quasi-peak	Average
0.168	Neutral	51.52	39.12	65.06	55.06
0.549	Neutral	42.32	22.92	56.00	46.00
2.763	Neutral	42.31	33.61	56.00	46.00

6 Radiated Emission Test

6.1 Test Method and test Procedure:

(1) The EUT was tested according to ANSI C63.4 –2003. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988

(2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2003.

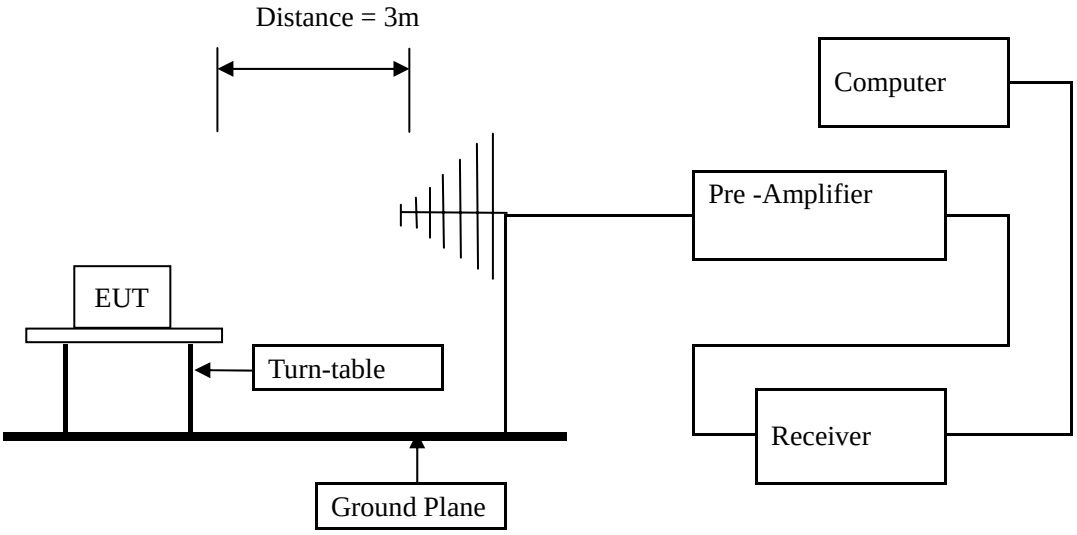
(3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector. Measurements were made at 3 meters.

(4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.

(5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "**QP**" in the data table.

(6) The antenna polarization : Vertical polarization and Horizontal polarization.

Block diagram of Test setup



6.2 Configuration of The EUT

Same as section 5.3 of this report

6.3 EUT Operating Condition

Same as section 5.4 of this report.

6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the higher limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

4. For Radiated emissions above 1GHz, all models were tested. Only the data of model TAD215-A was recorded and it was the worst case.

Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

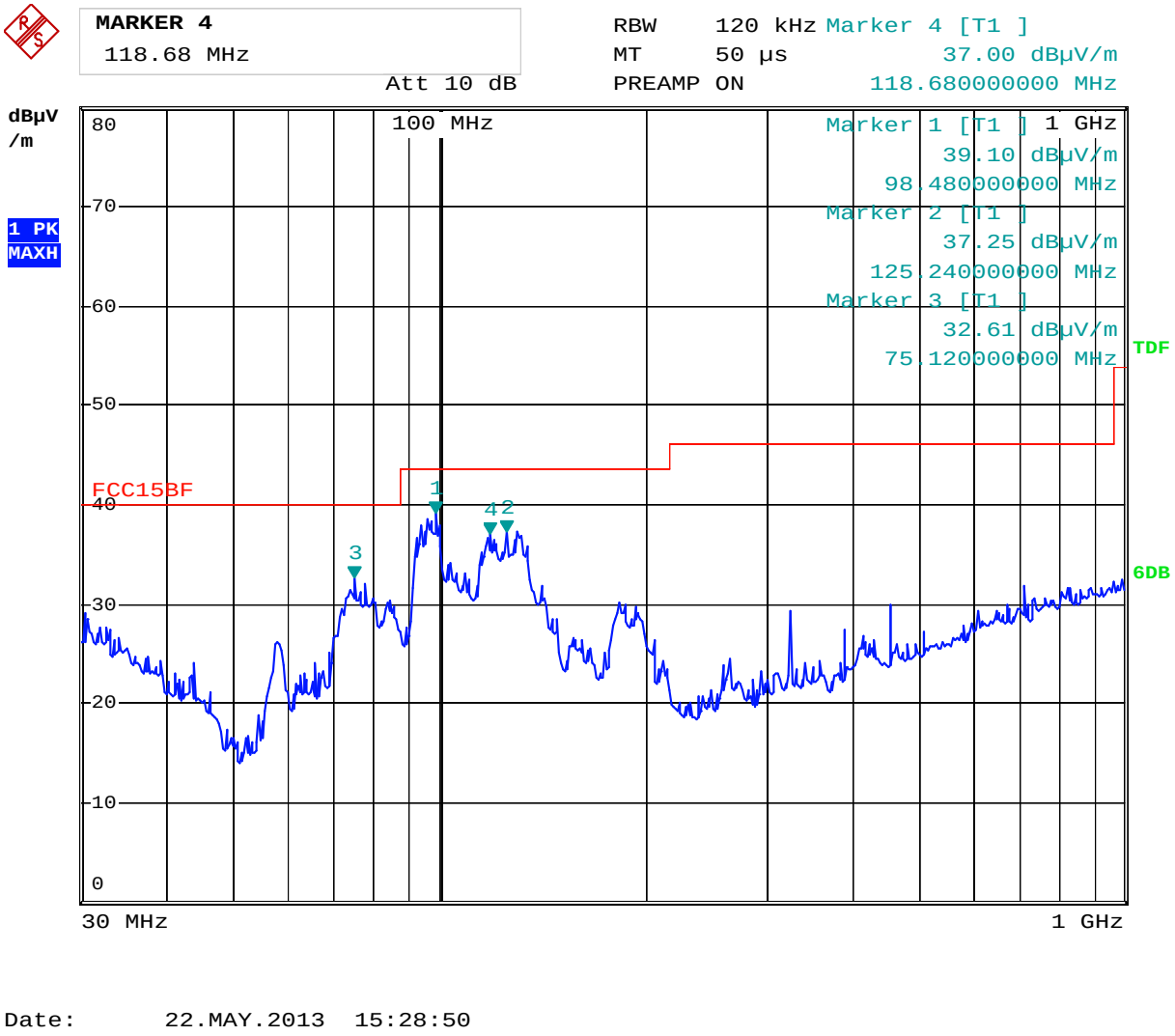
Radiated Emission In Horizontal/ Vertical (30MHz----1000MHz)

EUT set Condition: **Keep WIFI Transmitting**
Model No.: **TAD101-A**
Results: **Pass**

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
98.480	39.10	H	43.50
125.240	37.25	H	43.50
75.120	32.61	H	40.00
118.680	37.00	H	43.50
58.160	36.42	V	40.00
65.720	36.65	V	40.00
125.240	34.78	V	43.50
214.040	31.32	V	43.50

Test Figure:

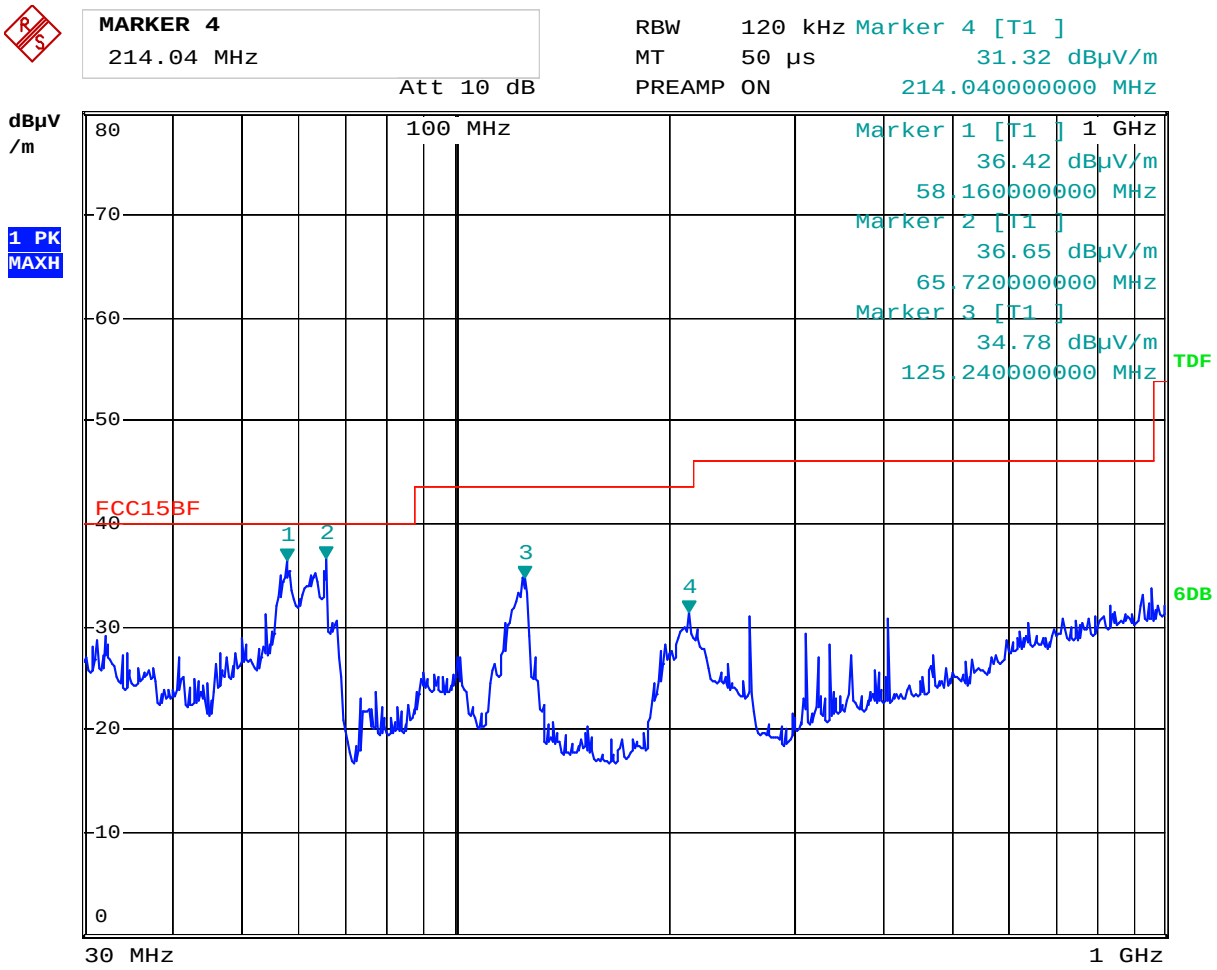
H



Date: 22.MAY.2013 15:28:50

Test Figure:

V



Date: 22.MAY.2013 15:05:37

Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

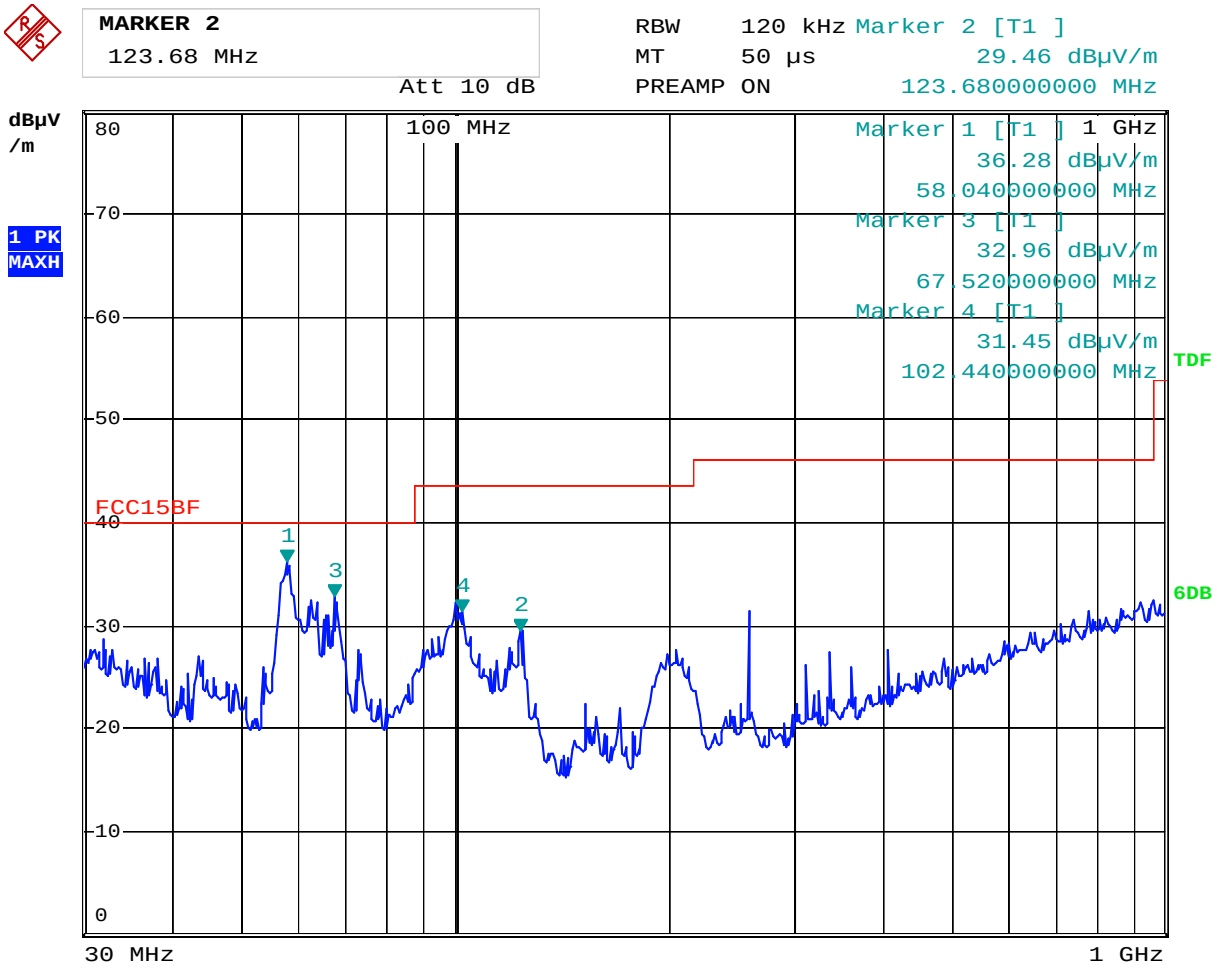
Radiated Emission In Horizontal/ Vertical (30MHz----1000MHz)

EUT set Condition: **Keep WIFI Transmitting**
Model No.: **TAD151-A/TAD151-G**
Results: **Pass**

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
58.040	36.28	H	40.00
123.680	29.46	H	43.50
68.520	32.96	H	40.00
102.440	31.45	H	43.50
58.360	25.86	V	40.00
123.320	34.32	V	43.50
71.560	27.99	V	40.00
104.920	31.80	V	43.50

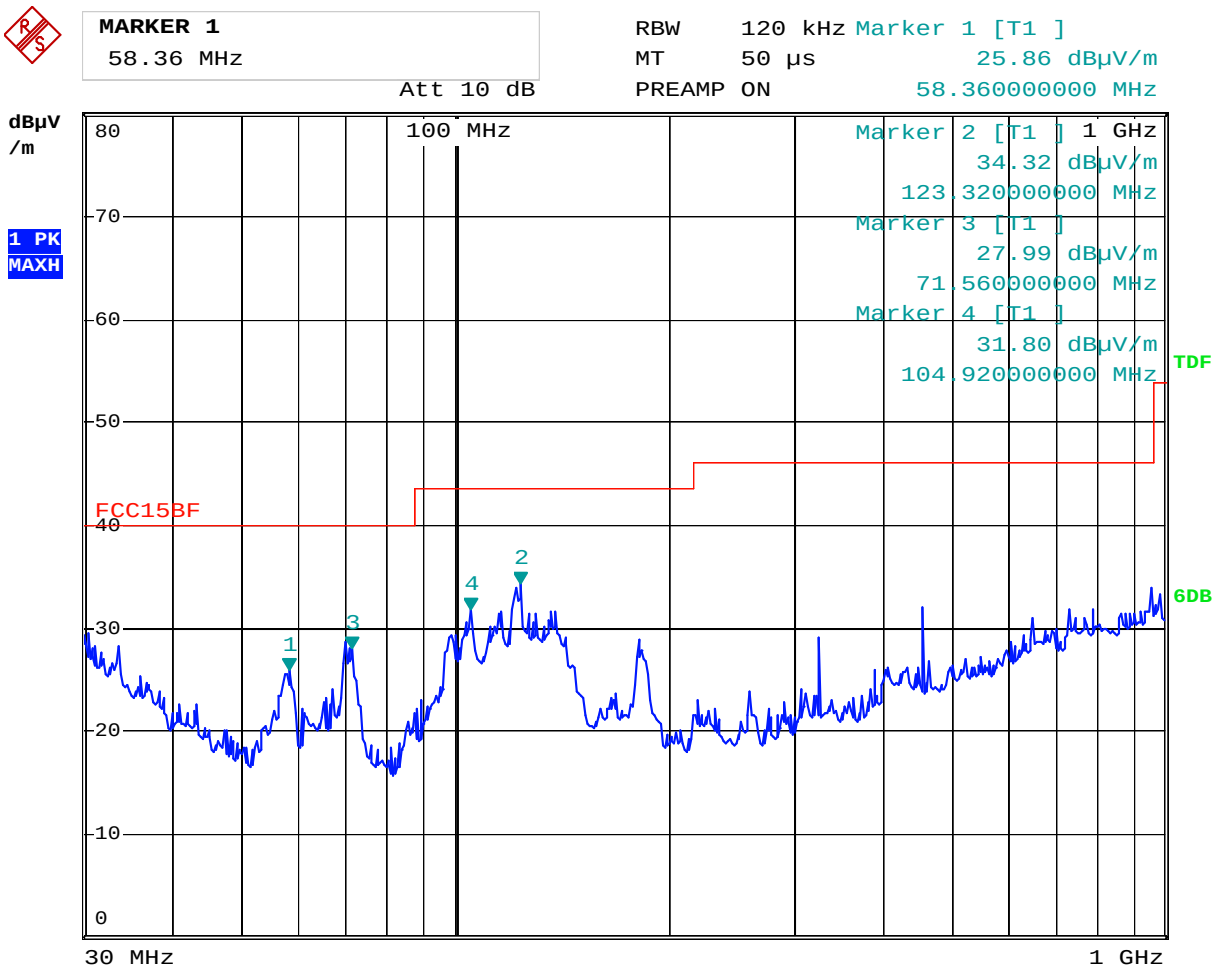
Test Figure:

H



Test Figure:

V



Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

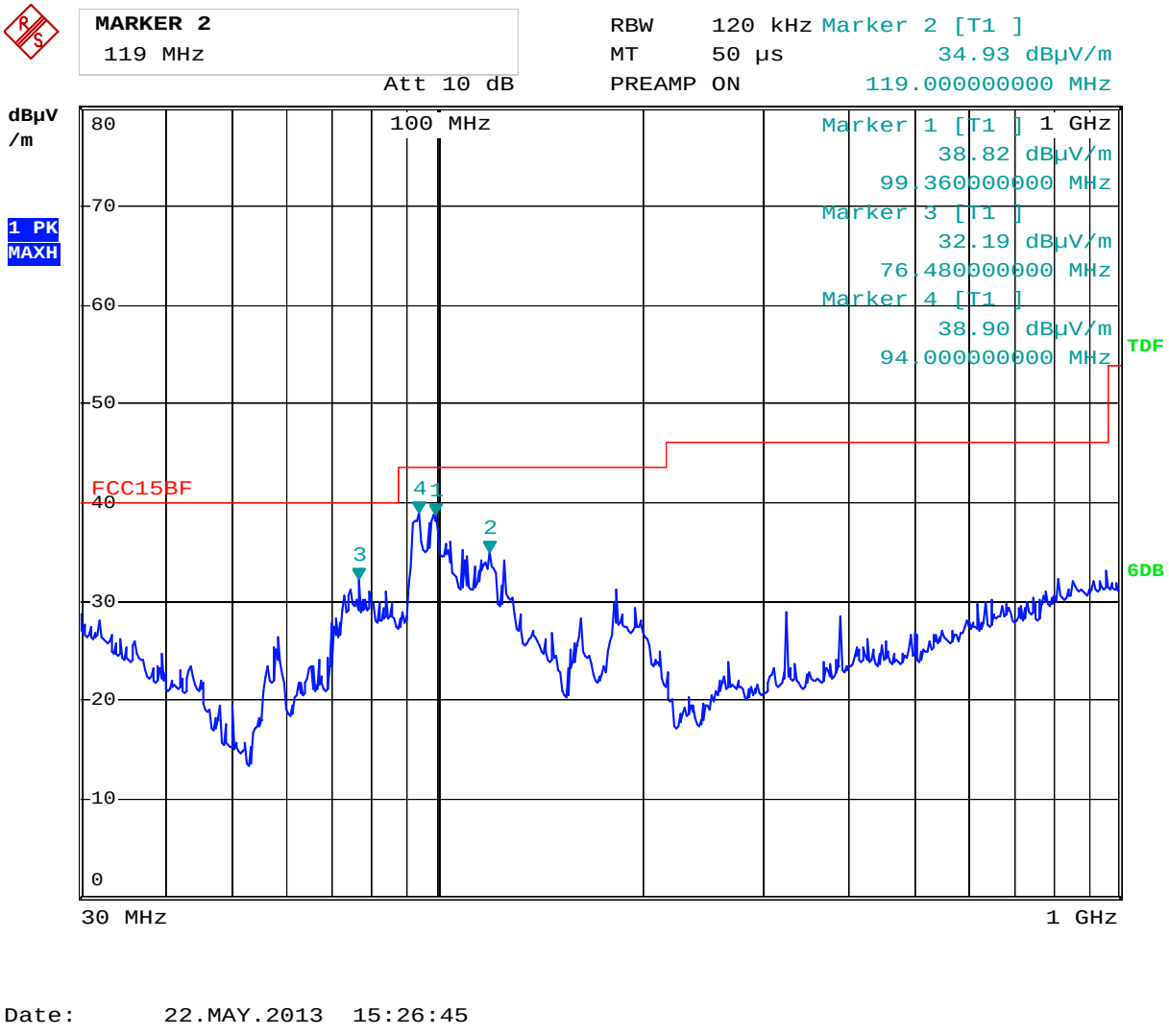
Radiated Emission In Horizontal/ Vertical (30MHz----1000MHz)

EUT set Condition: **Keep WIFI Transmitting**
Model No.: **TAD181-A**
Results: **Pass**

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
99.360	38.82	H	43.50
119.000	34.93	H	43.50
76.480	32.19	H	40.00
94.000	38.90	H	43.50
112.280	38.16	V	43.50
134.080	38.15	V	43.50
103.160	37.12	V	43.50
122.240	39.87	V	43.50

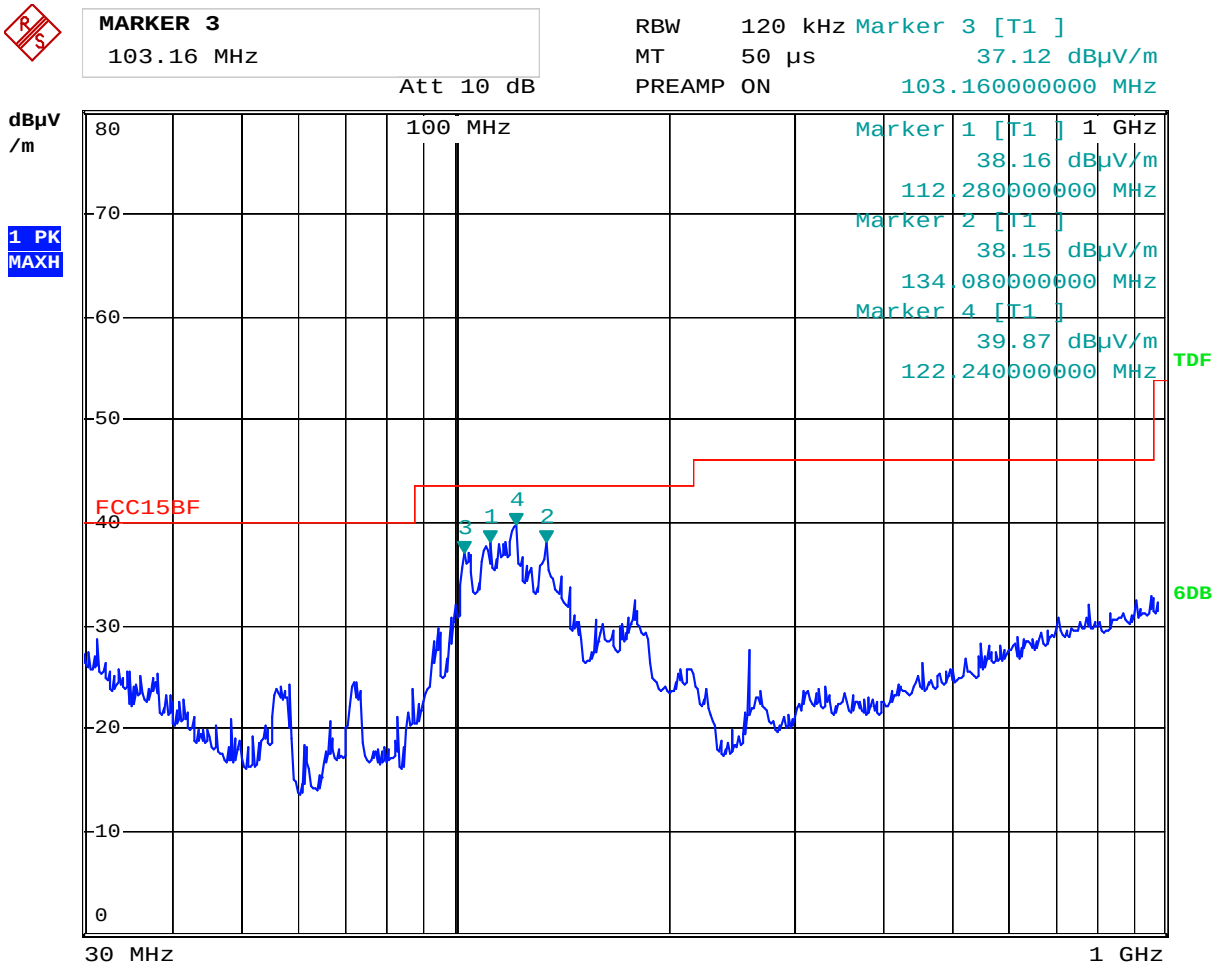
Test Figure:

H



Test Figure:

V



Date: 22.MAY.2013 15:31:00

Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

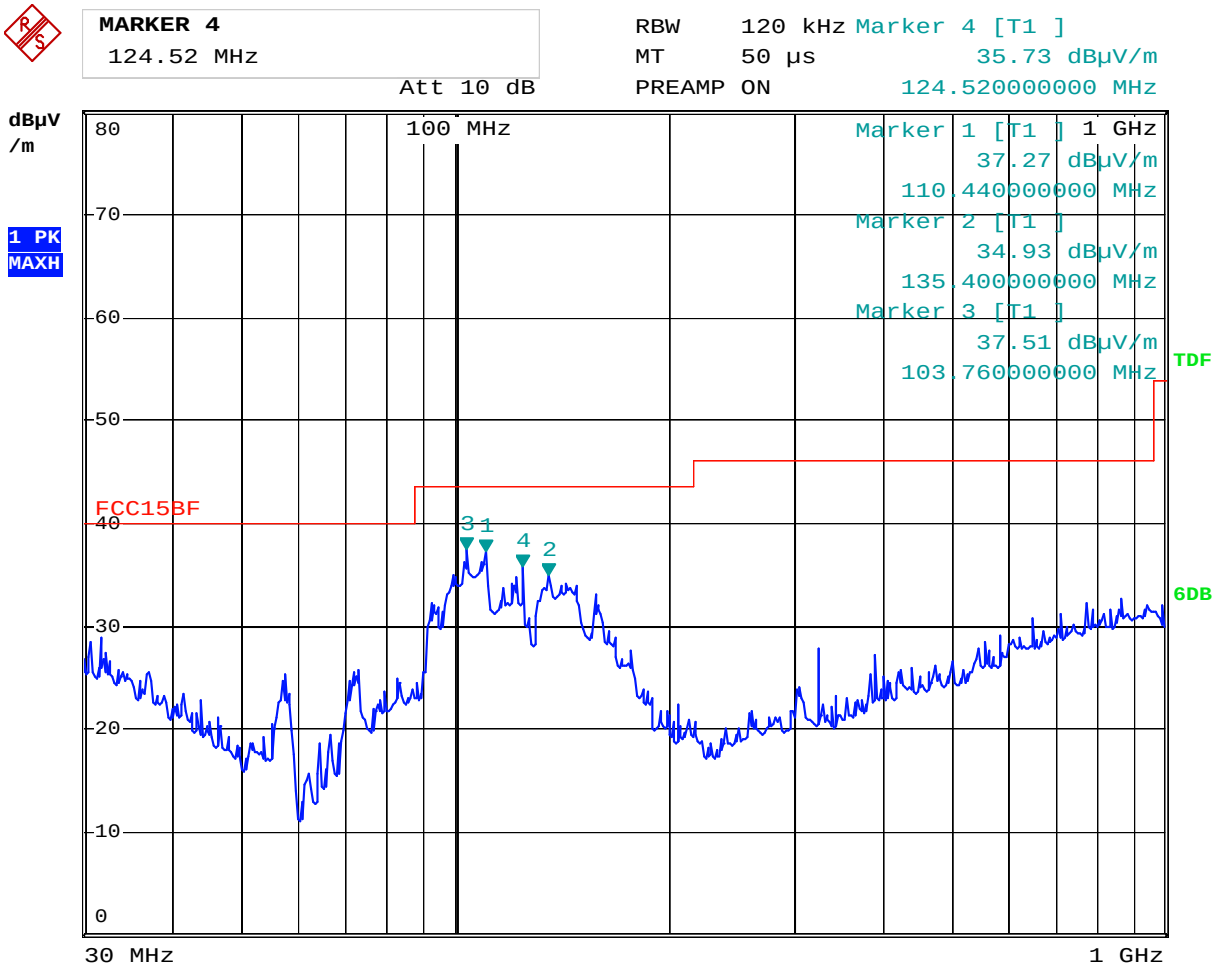
Radiated Emission In Horizontal/ Vertical (30MHz----1000MHz)

EUT set Condition: **Keep WIFI Transmitting**
Model No.: **TAD215-A**
Results: **Pass**

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
110.440	37.27	H	43.50
135.400	34.93	H	43.50
103.760	37.51	H	43.50
124.520	35.73	H	43.50
110.320	38.13	V	43.50
132.000	38.81	V	43.50
102.080	31.54	V	43.50
126.160	39.86	V	43.50

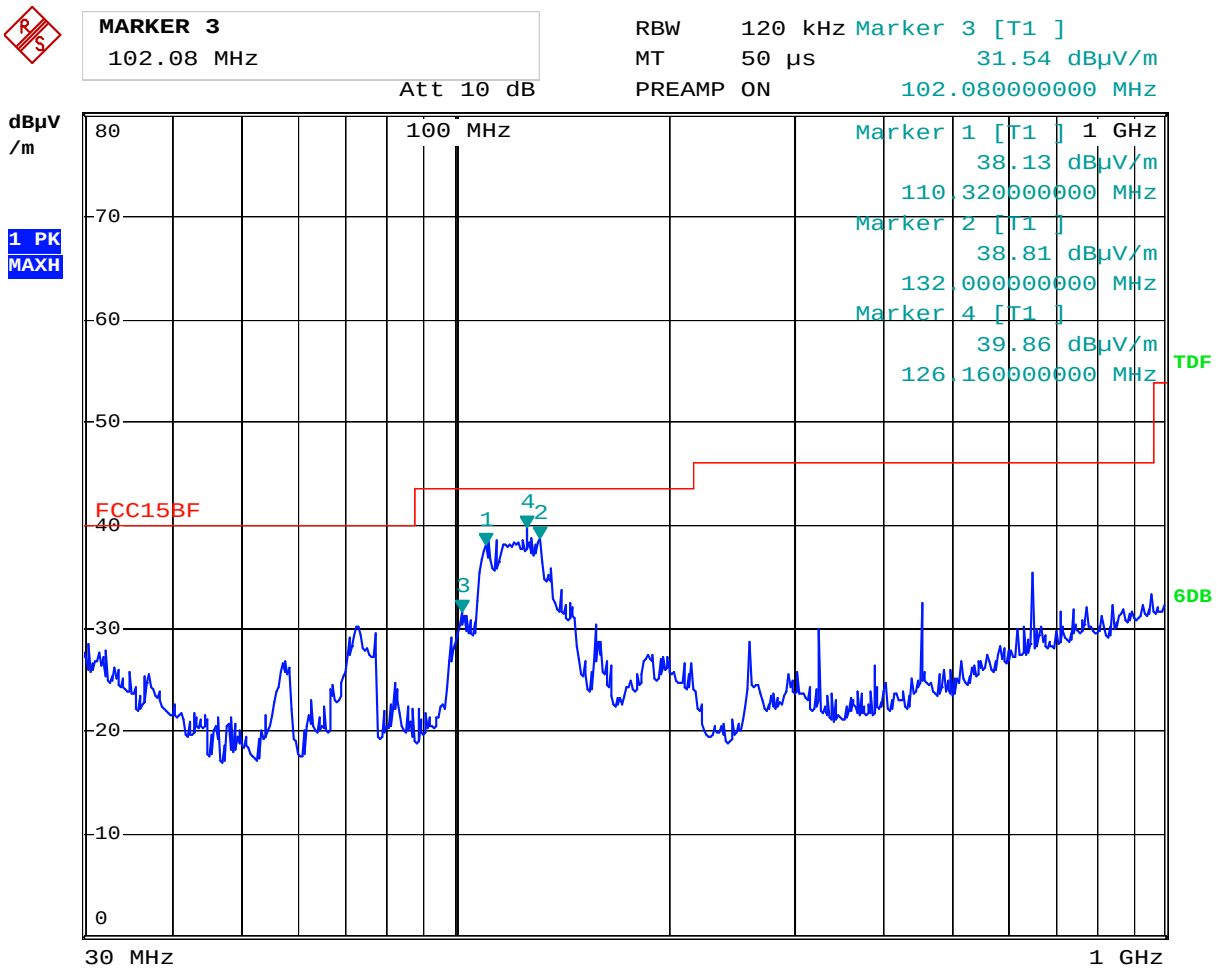
Test Figure:

H



Test Figure:

V



Operation Mode: Keep Transmitting under CH01 for 11g at 54Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2412.00	94.38（PK）	H	Fundamental Frequency
2412.00	94.19（PK）	V	
4824.00	49.78（PK）	H	74(Peak)/ 54(AV)
4824.00	49.82（PK）	V	74(Peak)/ 54(AV)
7236.00	--	H/V	74(Peak)/ 54(AV)
9648.00	--	H/V	74(Peak)/ 54(AV)
12060	--	H/V	74(Peak)/ 54(AV)
14472	--	H/V	74(Peak)/ 54(AV)
16884	--	H/V	74(Peak)/ 54(AV)
19296	--	H/V	74(Peak)/ 54(AV)
21708	--	H/V	74(Peak)/ 54(AV)
24120	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11g mode 54Mbps

Operation Mode: Keep Transmitting under CH06 for 11g at 54Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2437.00	94.97（PK）	H	Fundamental Frequency
2437.00	94.94（PK）	V	
4874.00	48.85（PK）	H	74(Peak)/ 54(AV)
4874.00	50.70（PK）	V	74(Peak)/ 54(AV)
7311.00	--	H/V	74(Peak)/ 54(AV)
9748.00	--	H/V	74(Peak)/ 54(AV)
12185	--	H/V	74(Peak)/ 54(AV)
14622	--	H/V	74(Peak)/ 54(AV)
17059	--	H/V	74(Peak)/ 54(AV)
19496	--	H/V	74(Peak)/ 54(AV)
21933	--	H/V	74(Peak)/ 54(AV)
24370	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11g mode 54 Mbps

Operation Mode: Keep Transmitting under CH11 for 11g at 54Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2462.00	93.34（PK）	H	Fundamental Frequency
2462.00	91.86（PK）	V	
4924	48.08（PK）	H	74(Peak)/ 54(AV)
4924	48.64（PK）	V	74(Peak)/ 54(AV)
7368	--	H/V	74(Peak)/ 54(AV)
9848	--	H/V	74(Peak)/ 54(AV)
12310	--	H/V	74(Peak)/ 54(AV)
14772	--	H/V	74(Peak)/ 54(AV)
17234	--	H/V	74(Peak)/ 54(AV)
19696	--	H/V	74(Peak)/ 54(AV)
22158	--	H/V	74(Peak)/ 54(AV)
24650	--	H/V	74(Peak)/ 54(AV)

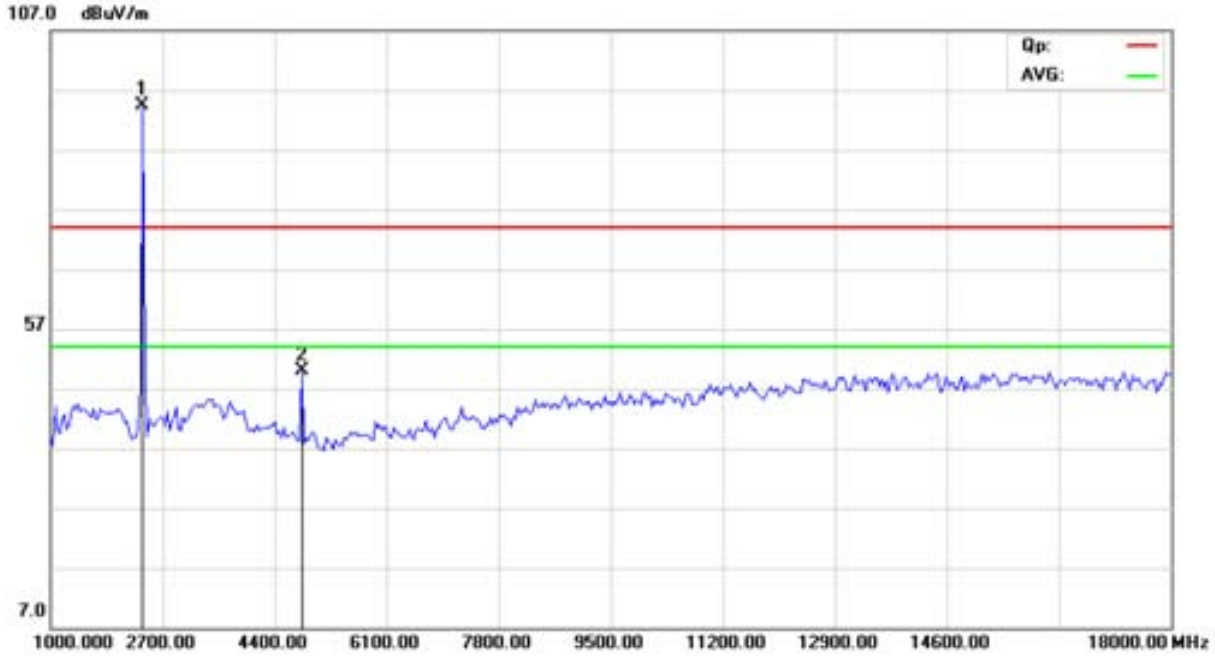
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

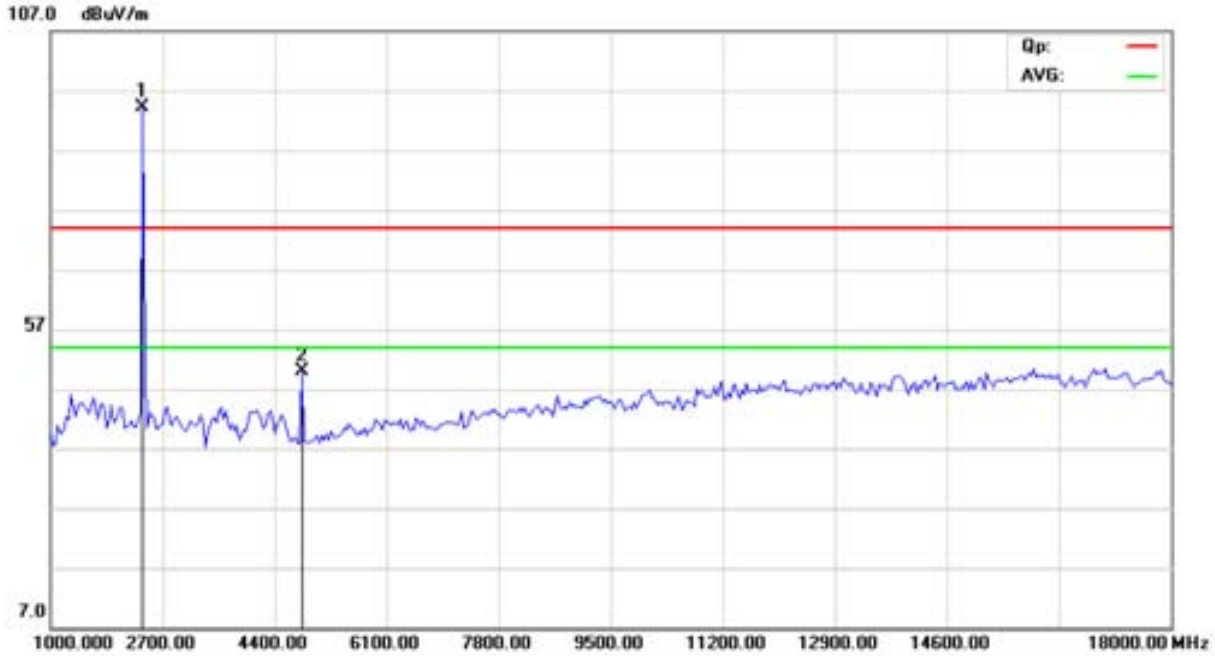
3. For 802.11g mode at 54 Mbps

Please refer to the following test plots for details:

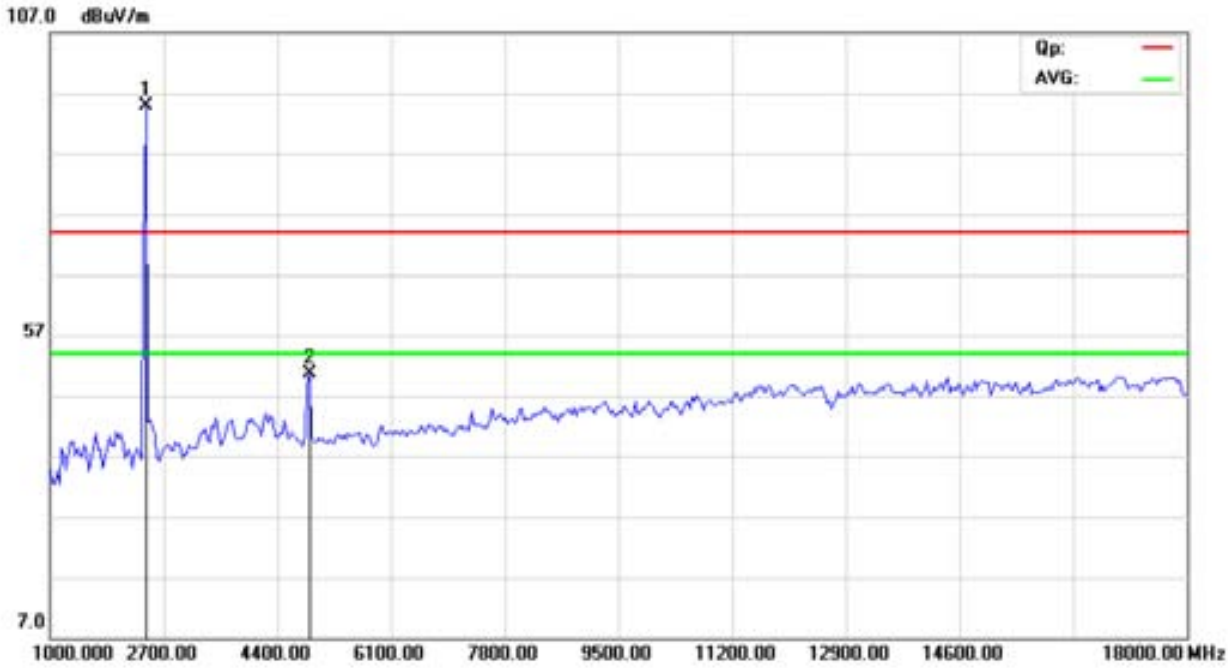
CH01 for 11g at 54Mbps: Horizontal



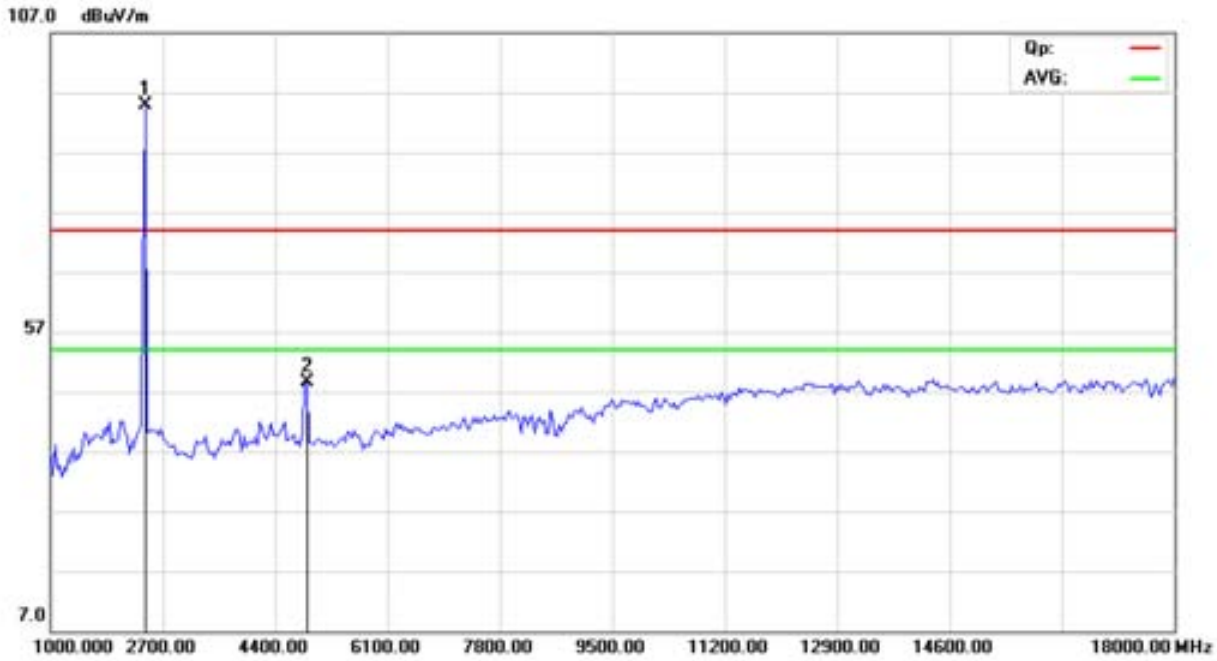
CH01 for 11g at 54Mbps: Vertical



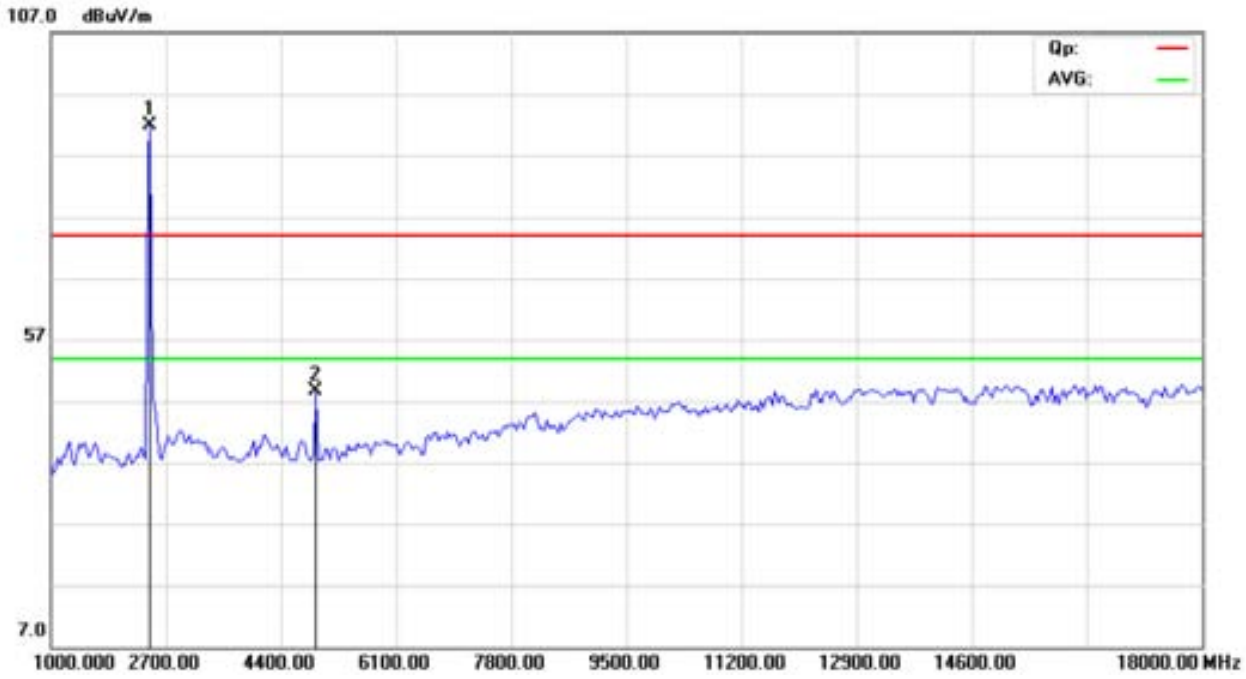
CH06 for 11g at 54Mbps: Vertical



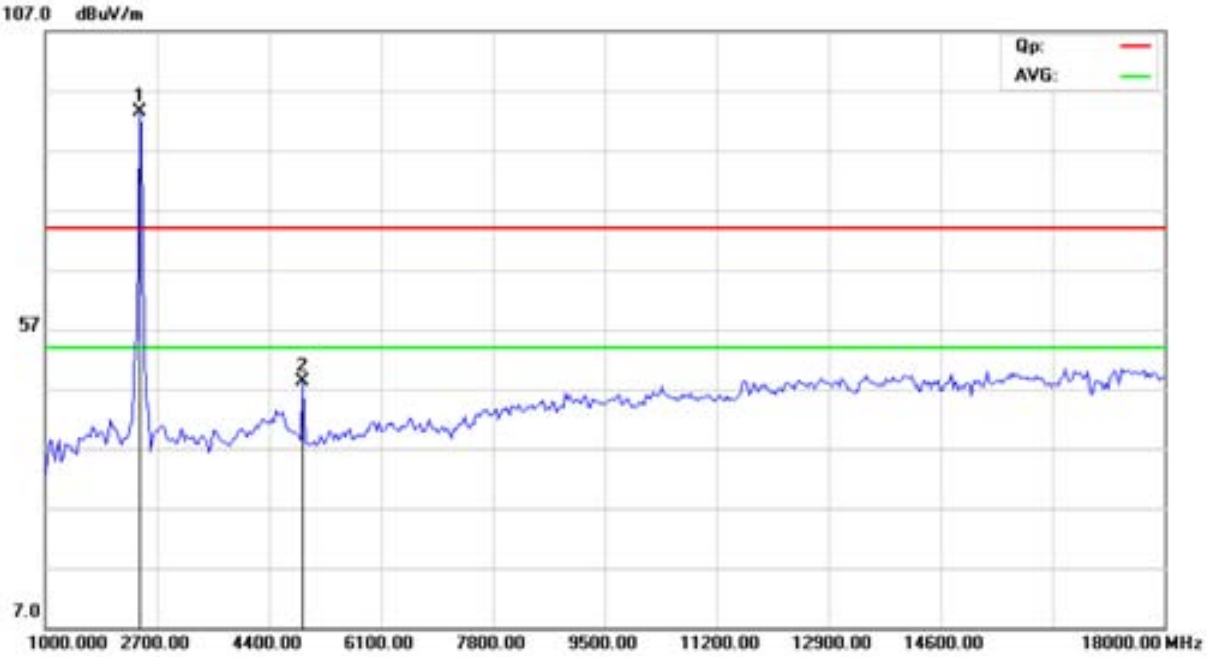
CH06 for 11g at 54Mbps: Horizontal



CH11 for 11g at 54Mbps: Vertical



CH11 for 11g at 54Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

Operation Mode: Keep Transmitting under CH01 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2412.00	94.26（PK）	V	Fundamental Frequency
2412.00	94.76（PK）	H	
4824.00	50.32（PK）	H	74(Peak)/ 54(AV)
4824.00	49.09（PK）	V	74(Peak)/ 54(AV)
7236.00	--	H/V	74(Peak)/ 54(AV)
9648.00	--	H/V	74(Peak)/ 54(AV)
12060	--	H/V	74(Peak)/ 54(AV)
14472	--	H/V	74(Peak)/ 54(AV)
16684	--	H/V	74(Peak)/ 54(AV)
19296	--	H/V	74(Peak)/ 54(AV)
21708	--	H/V	74(Peak)/ 54(AV)
24120	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11b mode 11Mbps

Operation Mode: Keep Transmitting under CH06 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2437.00	93.13（PK）	H	Fundamental Frequency
2437.00	92.15（PK）	V	
4874.00	49.62（PK）	H	74(Peak)/ 54(AV)
4874.00	48.50（PK）	V	74(Peak)/ 54(AV)
7311.00	--	H/V	74(Peak)/ 54(AV)
9748.00	--	H/V	74(Peak)/ 54(AV)
12185	--	H/V	74(Peak)/ 54(AV)
14622	--	H/V	74(Peak)/ 54(AV)
17059	--	H/V	74(Peak)/ 54(AV)
19496	--	H/V	74(Peak)/ 54(AV)
21933	--	H/V	74(Peak)/ 54(AV)
24370	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11b mode 11Mbps

Operation Mode: Keep Transmitting under CH11 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2462.00	94.38（PK）	H	Fundamental Frequency
2462.00	94.45（PK）	V	
4924	47.79（PK）	H	74(Peak)/ 54(AV)
4924	50.63（PK）	V	74(Peak)/ 54(AV)
7368	--	H/V	74(Peak)/ 54(AV)
9848	--	H/V	74(Peak)/ 54(AV)
12310	--	H/V	74(Peak)/ 54(AV)
14772	--	H/V	74(Peak)/ 54(AV)
17234	--	H/V	74(Peak)/ 54(AV)
19696	--	H/V	74(Peak)/ 54(AV)
22158	--	H/V	74(Peak)/ 54(AV)
24650	--	H/V	74(Peak)/ 54(AV)

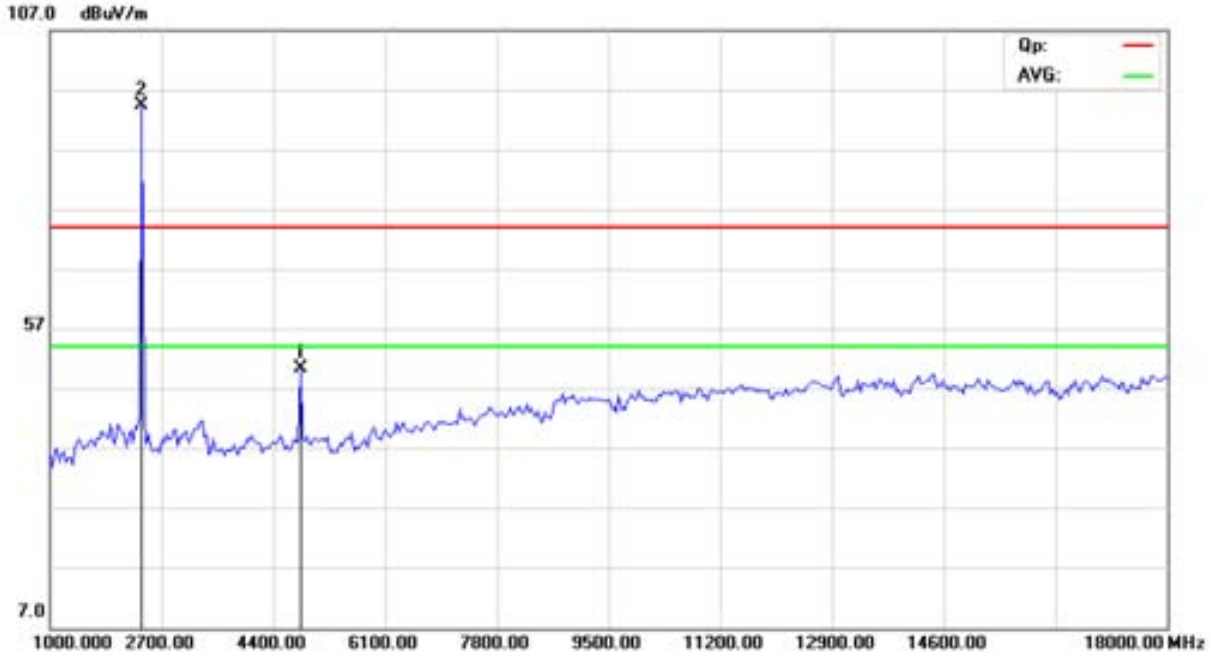
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

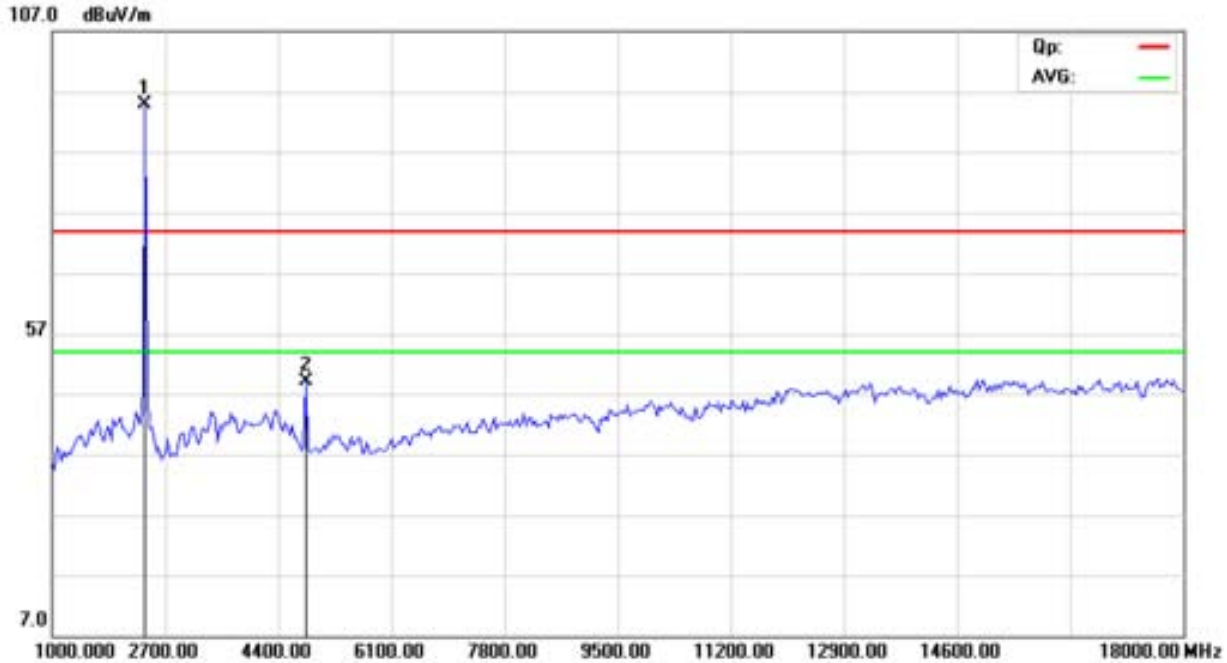
3. For 802.11b mode at 11Mbps

Please refer to the following test plots for details:

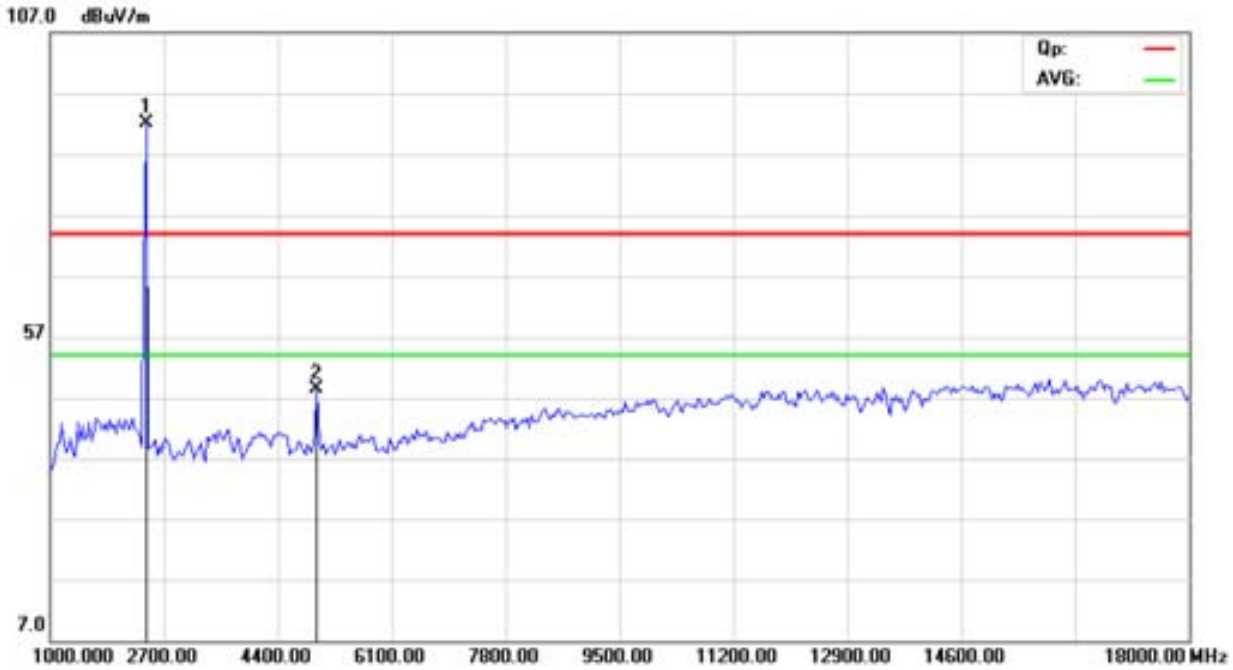
CH01 for 11b at 11Mbps: Horizontal



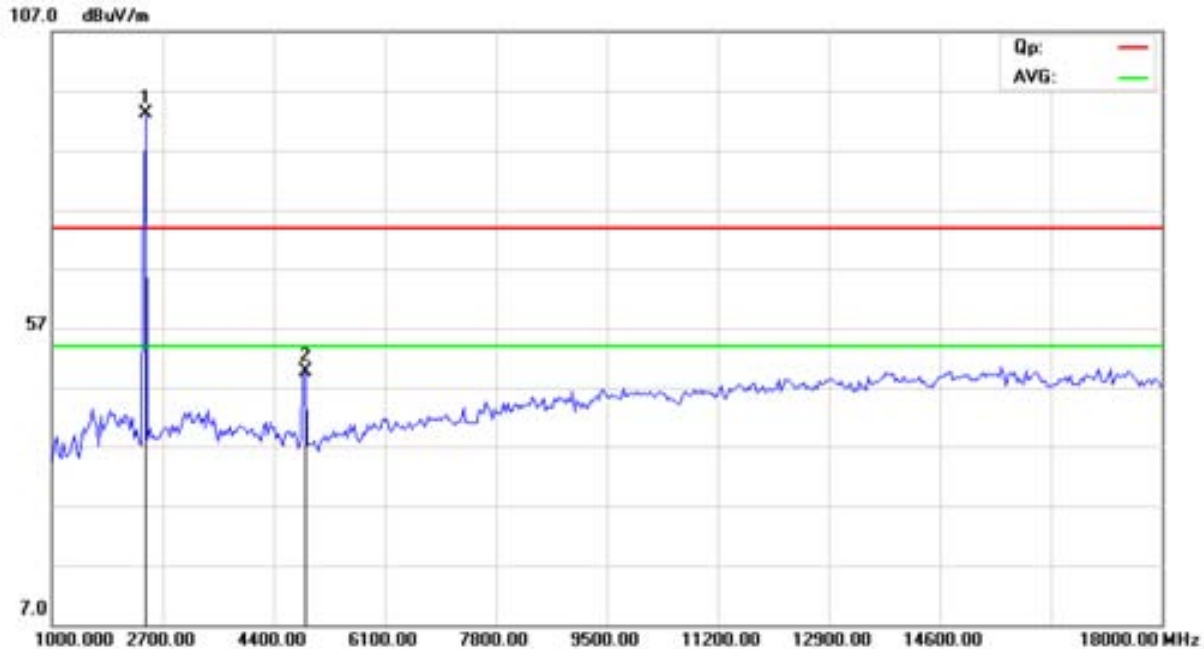
CH01 for 11b at 11Mbps: Vertical



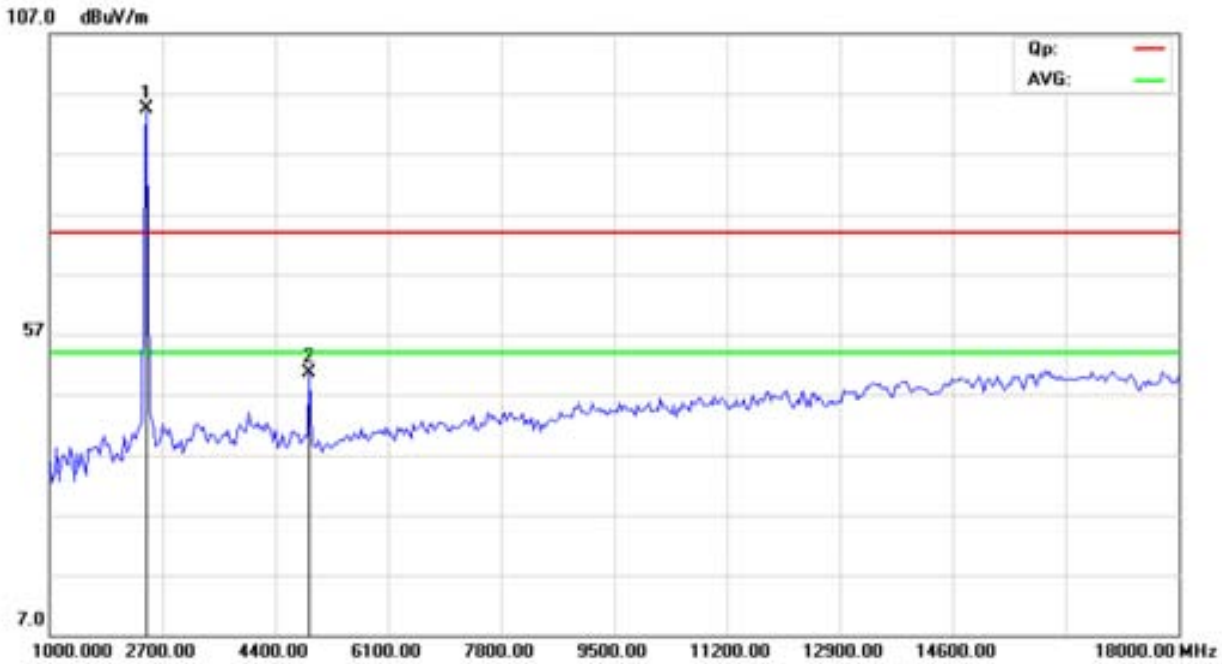
CH06 for 11b at 11Mbps: Vertical



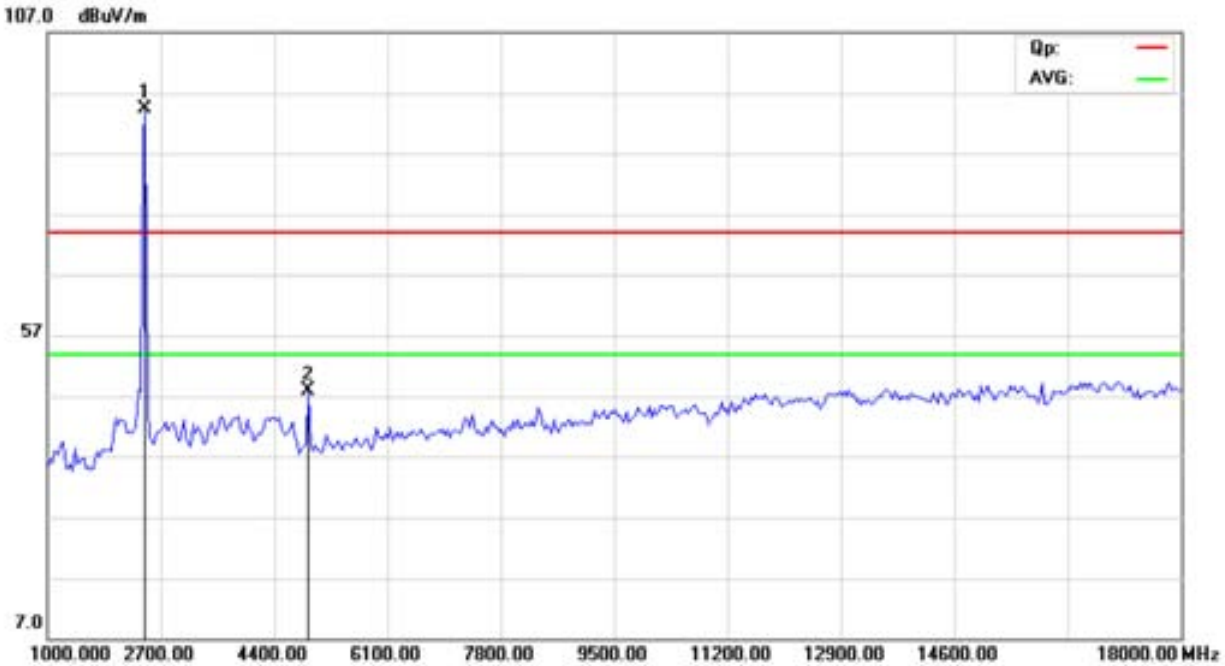
CH06 for 11b at 11Mbps: Horizontal



CH11 for 11b at 11Mbps: Vertical



CH11 for 11b at 11Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

Operation Mode: Keep Transmitting under CH01 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2412.00	93.38（PK）	H	Fundamental Frequency
2412.00	93.42（PK）	V	
4824.00	48.35（PK）	H	74(Peak)/ 54(AV)
4824.00	48.09（PK）	V	74(Peak)/ 54(AV)
7236.00	--	H/V	74(Peak)/ 54(AV)
9648.00	--	H/V	74(Peak)/ 54(AV)
12060	--	H/V	74(Peak)/ 54(AV)
14472	--	H/V	74(Peak)/ 54(AV)
16684	--	H/V	74(Peak)/ 54(AV)
19296	--	H/V	74(Peak)/ 54(AV)
21708	--	H/V	74(Peak)/ 54(AV)
24120	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11n (HT20) mode 65Mbps

Operation Mode: Keep Transmitting under CH06 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2437.00	94.05（PK）	H	Fundamental Frequency
2437.00	93.51（PK）	V	
4874.00	48.54（PK）	H	74(Peak)/ 54(AV)
4874.00	47.78（PK）	V	74(Peak)/ 54(AV)
7311.00	--	H/V	74(Peak)/ 54(AV)
9748.00	--	H/V	74(Peak)/ 54(AV)
12185	--	H/V	74(Peak)/ 54(AV)
14622	--	H/V	74(Peak)/ 54(AV)
17059	--	H/V	74(Peak)/ 54(AV)
19496	--	H/V	74(Peak)/ 54(AV)
21933	--	H/V	74(Peak)/ 54(AV)
24370	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11n (HT20) mode 65Mbps

Operation Mode: Keep Transmitting under CH11 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2462.00	94.82（PK）	H	Fundamental Frequency
2462.00	94.81（PK）	V	
4924	47.69（PK）	H	74(Peak)/ 54(AV)
4924	47.78（PK）	V	74(Peak)/ 54(AV)
7368	--	H/V	74(Peak)/ 54(AV)
9848	--	H/V	74(Peak)/ 54(AV)
12310	--	H/V	74(Peak)/ 54(AV)
14772	--	H/V	74(Peak)/ 54(AV)
17234	--	H/V	74(Peak)/ 54(AV)
19696	--	H/V	74(Peak)/ 54(AV)
22158	--	H/V	74(Peak)/ 54(AV)
24650	--	H/V	74(Peak)/ 54(AV)

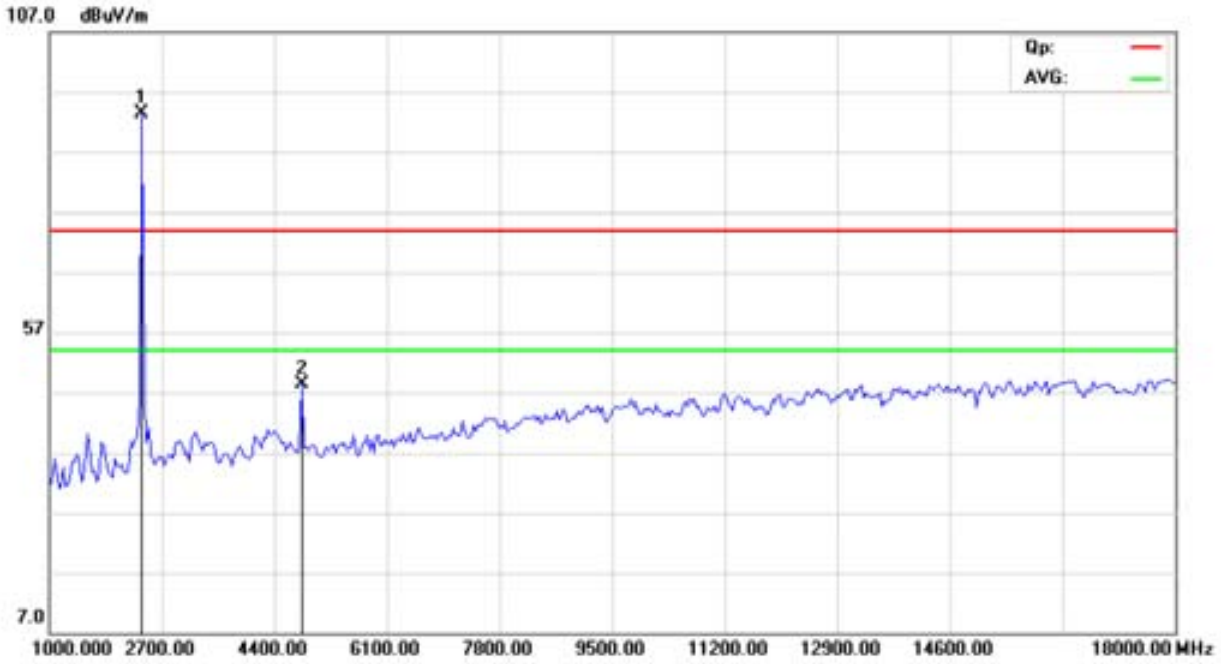
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

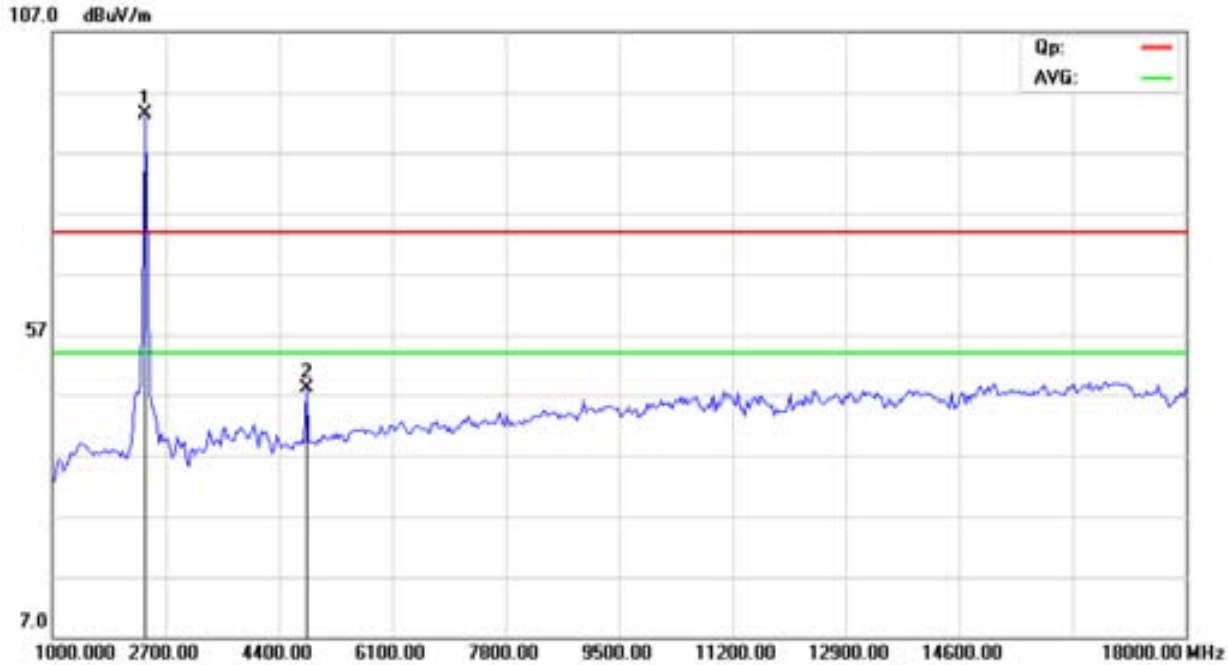
3. For 802.11n (HT20) mode 65Mbps

Please refer to the following test plots for details:

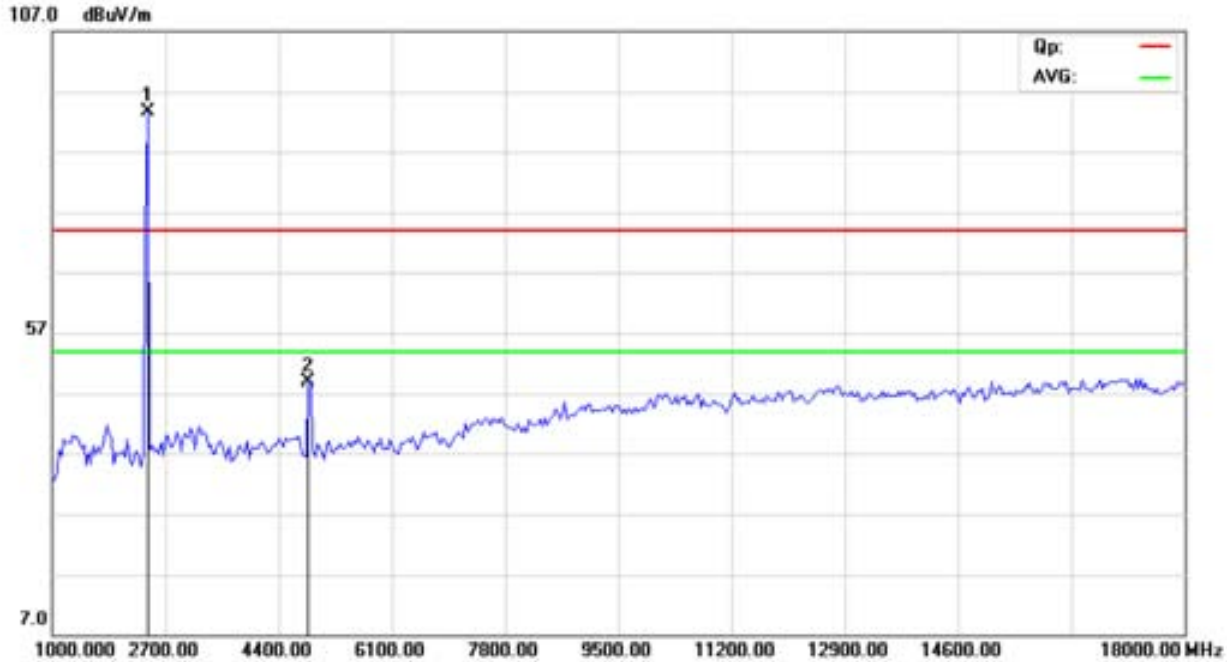
CH01 for 11n HT20 at 65Mbps: Horizontal



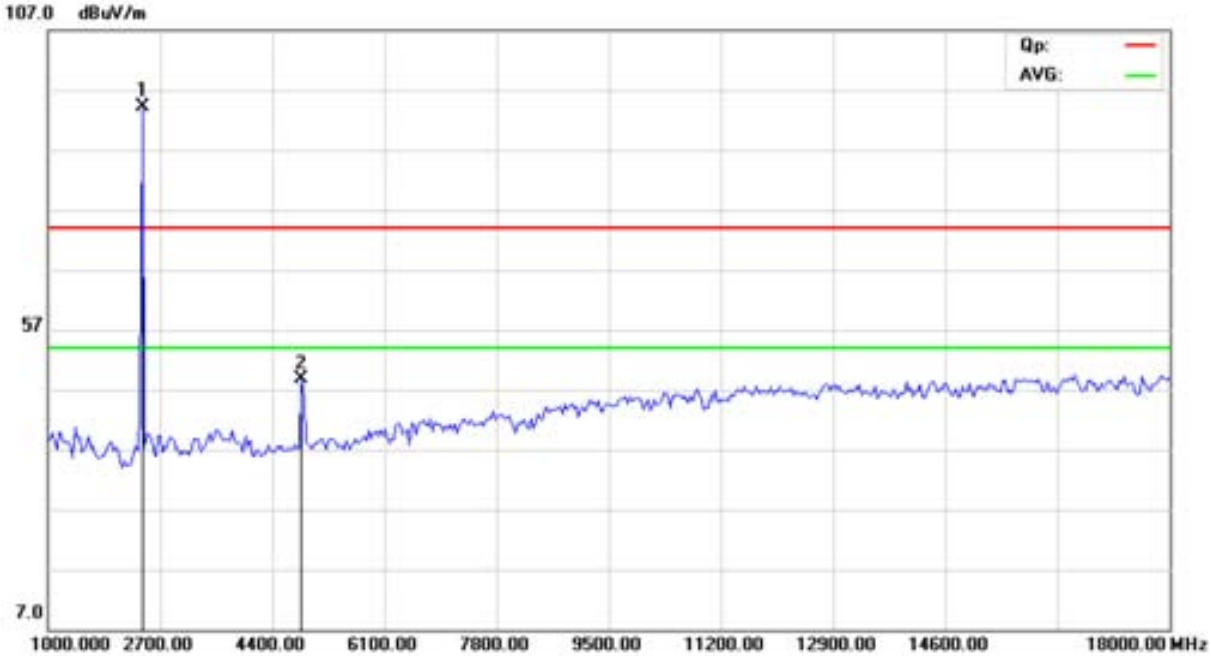
CH01 for 11n HT20 at 65Mbps: Vertical



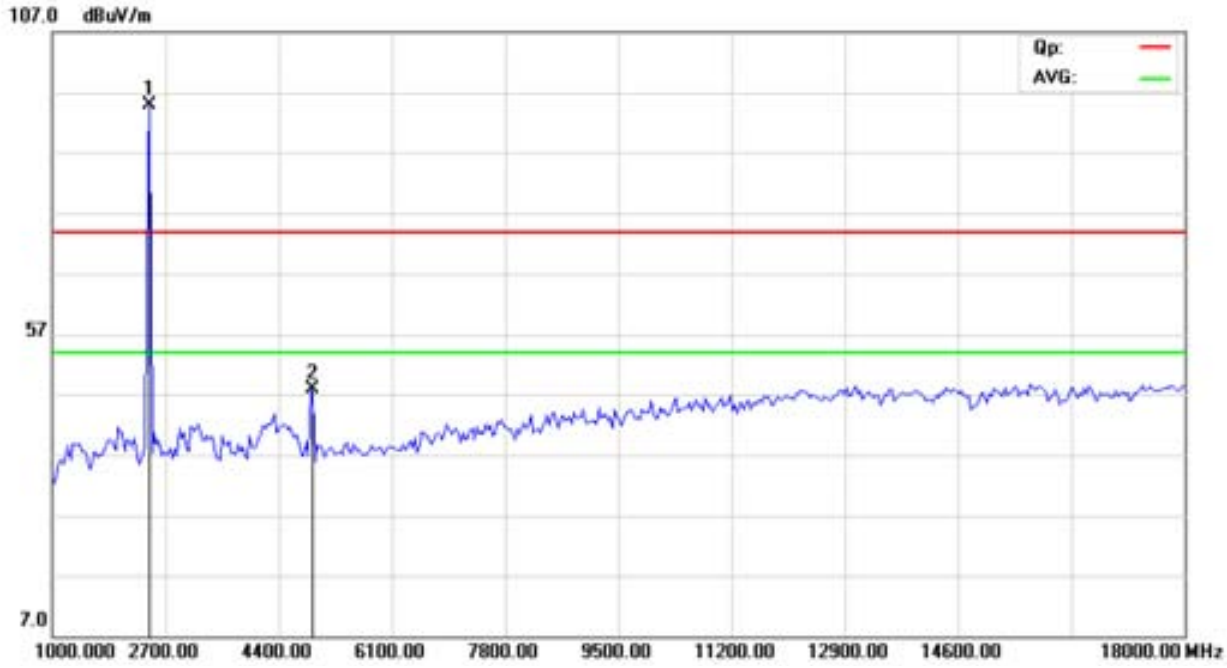
CH06 for 11n HT20 at 65Mbps: Vertical



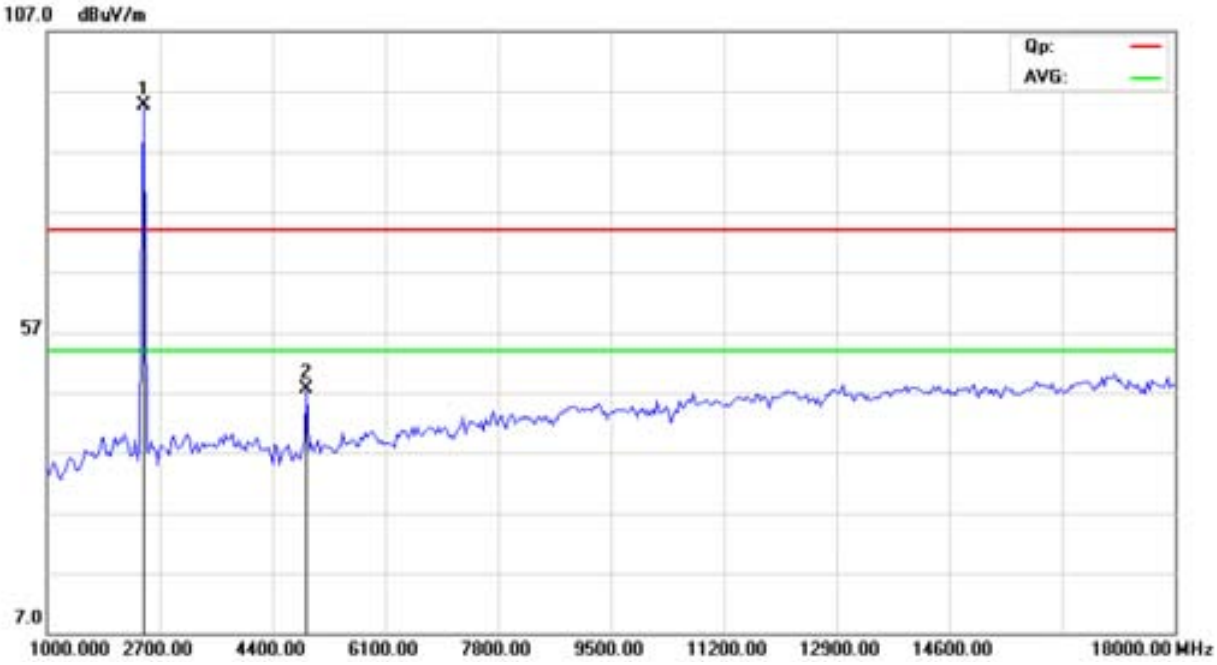
CH06 for 11n HT20 at 65Mbps: Horizontal



CH11 for 11n HT20 at 65Mbps: Vertical



CH11 for 11n HT20 at 65Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

Operation Mode: Keep Transmitting under CH01 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2422.00	90.93（PK）	V	Fundamental Frequency
2422.00	91.36（PK）	H	
4844.00	48.58（PK）	V	74(Peak)/ 54(AV)
4844.00	51.14（PK）	H	74(Peak)/ 54(AV)
7266.00	--	H/V	74(Peak)/ 54(AV)
9688.00	--	H/V	74(Peak)/ 54(AV)
12110	--	H/V	74(Peak)/ 54(AV)
14532	--	H/V	74(Peak)/ 54(AV)
16954	--	H/V	74(Peak)/ 54(AV)
19376	--	H/V	74(Peak)/ 54(AV)
21798	--	H/V	74(Peak)/ 54(AV)
24220	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11n (HT40) mode 65Mbps

Operation Mode: Keep Transmitting under CH04 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2437.00	90.47（PK）	H	Fundamental Frequency
2437.00	91.97（PK）	V	
4874.00	49.97（PK）	H	74(Peak)/ 54(AV)
4874.00	48.70（PK）	V	74(Peak)/ 54(AV)
7311.00	--	H/V	74(Peak)/ 54(AV)
9748.00	--	H/V	74(Peak)/ 54(AV)
12185	--	H/V	74(Peak)/ 54(AV)
14622	--	H/V	74(Peak)/ 54(AV)
17059	--	H/V	74(Peak)/ 54(AV)
19496	--	H/V	74(Peak)/ 54(AV)
21933	--	H/V	74(Peak)/ 54(AV)
24370	--	H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

3. For 802.11n (HT40) mode 65Mbps

Operation Mode: Keep Transmitting under CH7 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB μ V/m)
2452.00	91.89（PK）	H	Fundamental Frequency
2452.00	91.69（PK）	V	
4904	46.78（PK）	H	74(Peak)/ 54(AV)
4904	47.82（PK）	V	74(Peak)/ 54(AV)
7356	--	H/V	74(Peak)/ 54(AV)
9808	--	H/V	74(Peak)/ 54(AV)
12260	--	H/V	74(Peak)/ 54(AV)
14712	--	H/V	74(Peak)/ 54(AV)
17164	--	H/V	74(Peak)/ 54(AV)
19616	--	H/V	74(Peak)/ 54(AV)
22068	--	H/V	74(Peak)/ 54(AV)
24520	--	H/V	74(Peak)/ 54(AV)

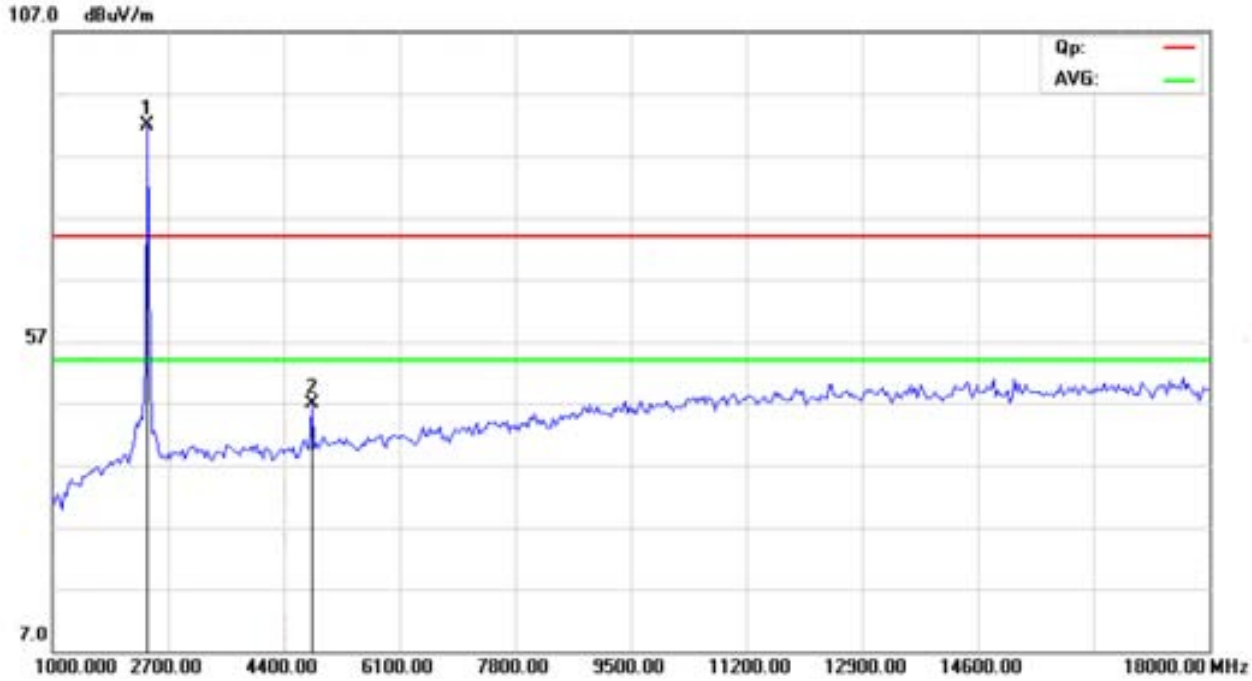
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark “---” means that the emissions level is too low to be measured

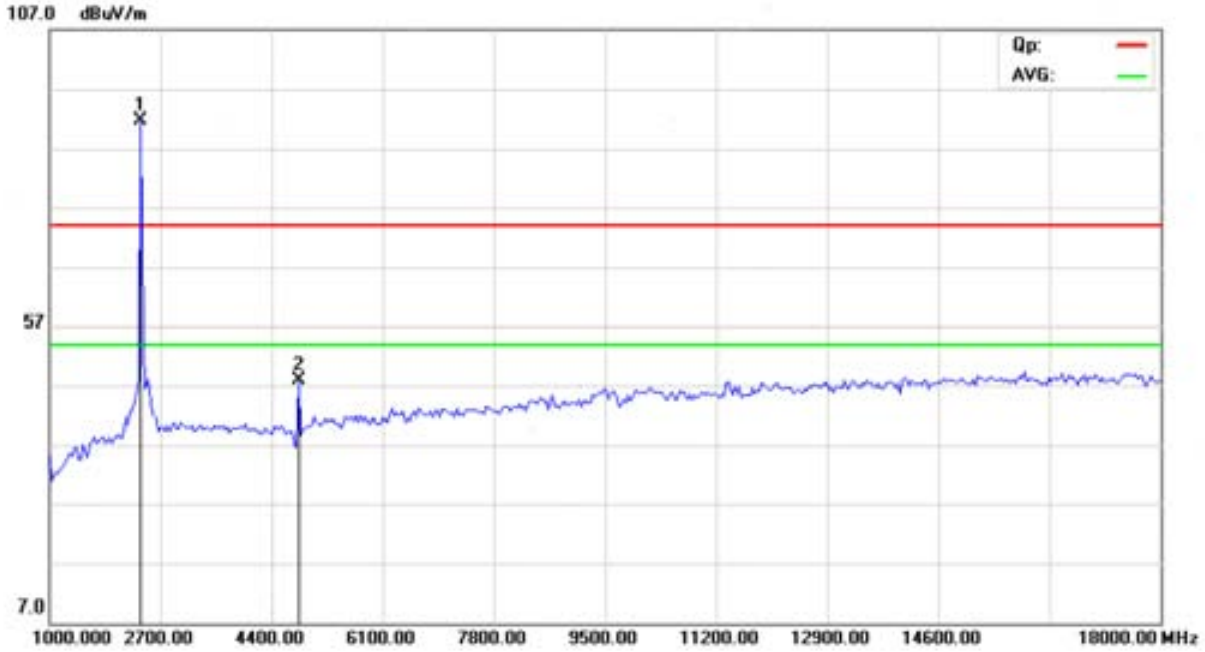
3. For 802.11n (HT40) mode 65Mbps

Please refer to the following test plots for details:

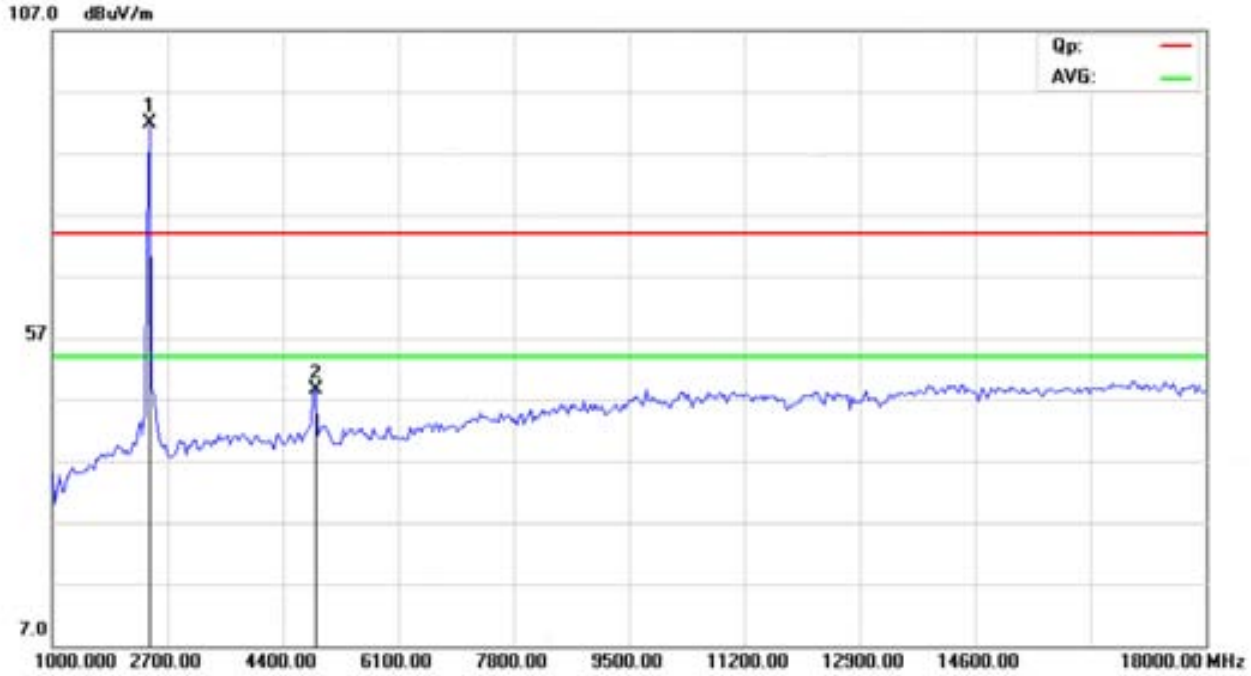
CH01 for 11n HT40 at 65Mbps: Vertical



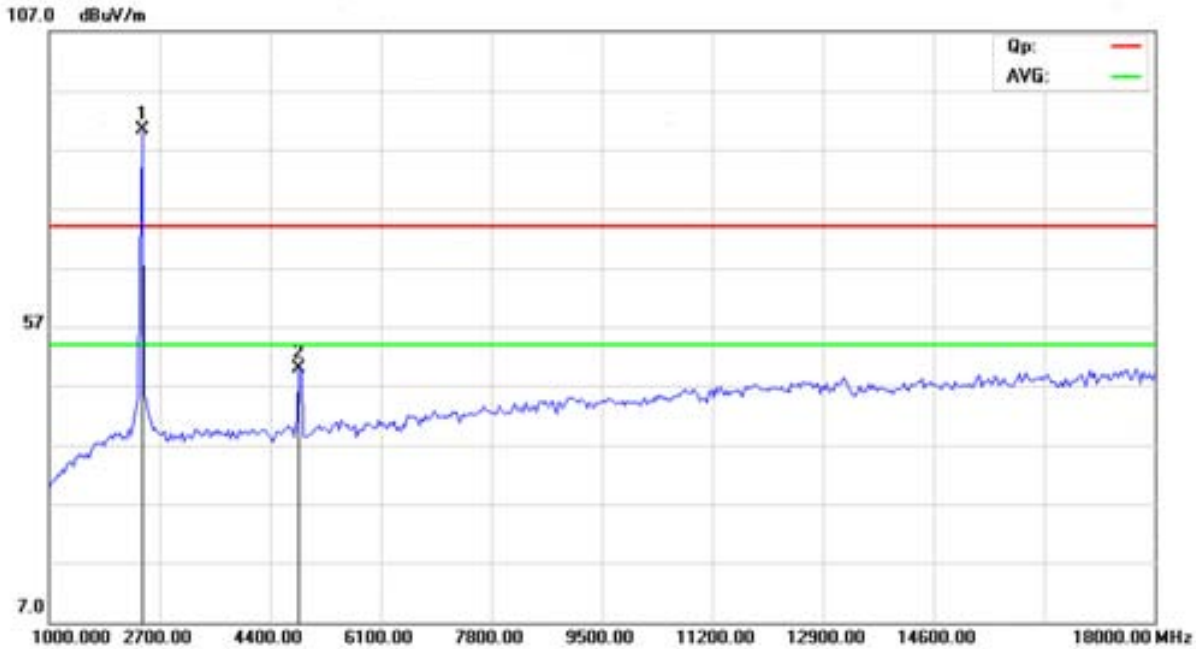
CH01 for 11n HT40 at 65Mbps: Horizontal



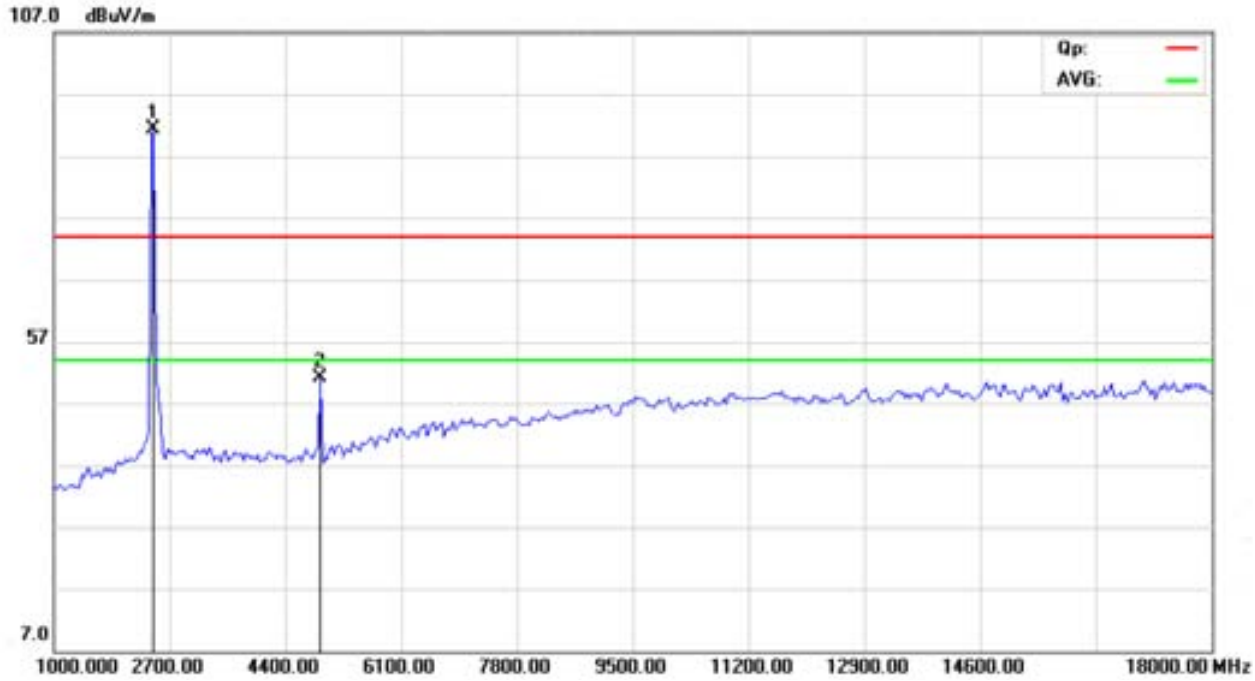
CH04 for 11n HT40 at 65Mbps: Vertical



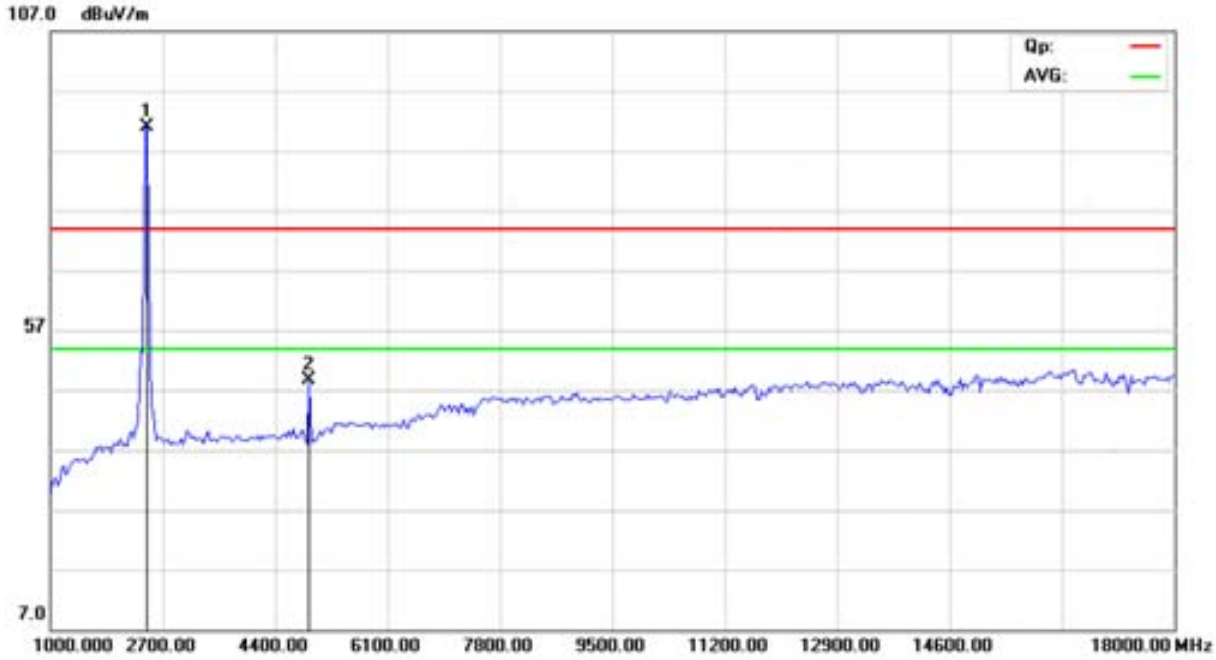
CH04 for 11n HT40 at 65Mbps: Horizontal



CH7 for 11n HT40 at 65Mbps: Vertical



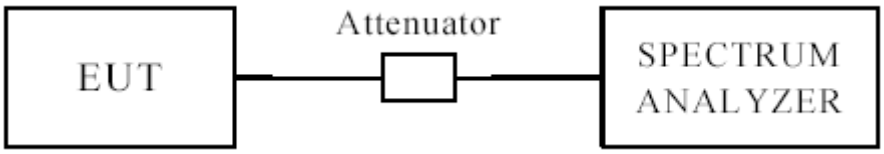
CH7 for 11n HT40 at 65Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

7.3 Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

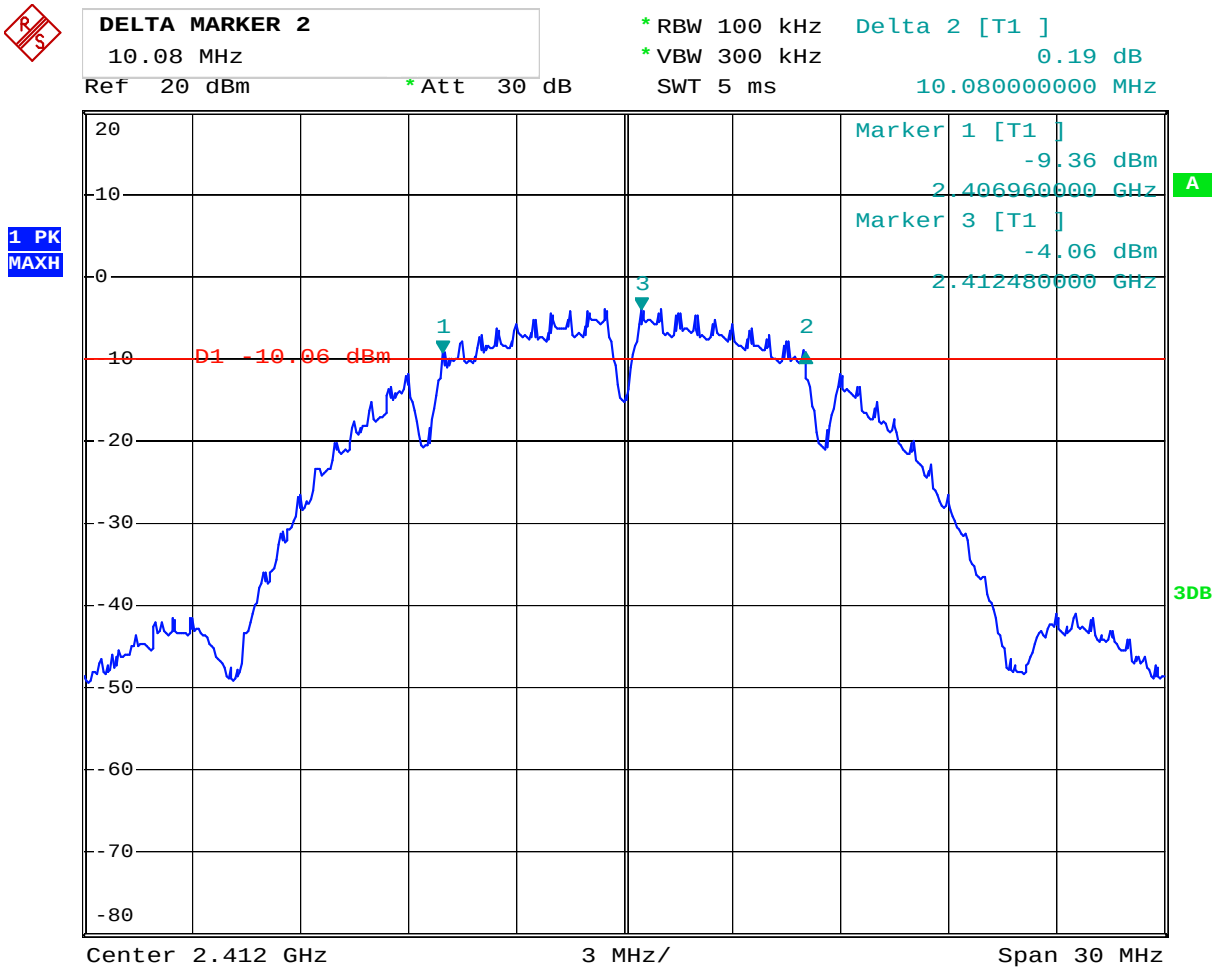
7.4 Test Result

6dB Occupied Bandwidth

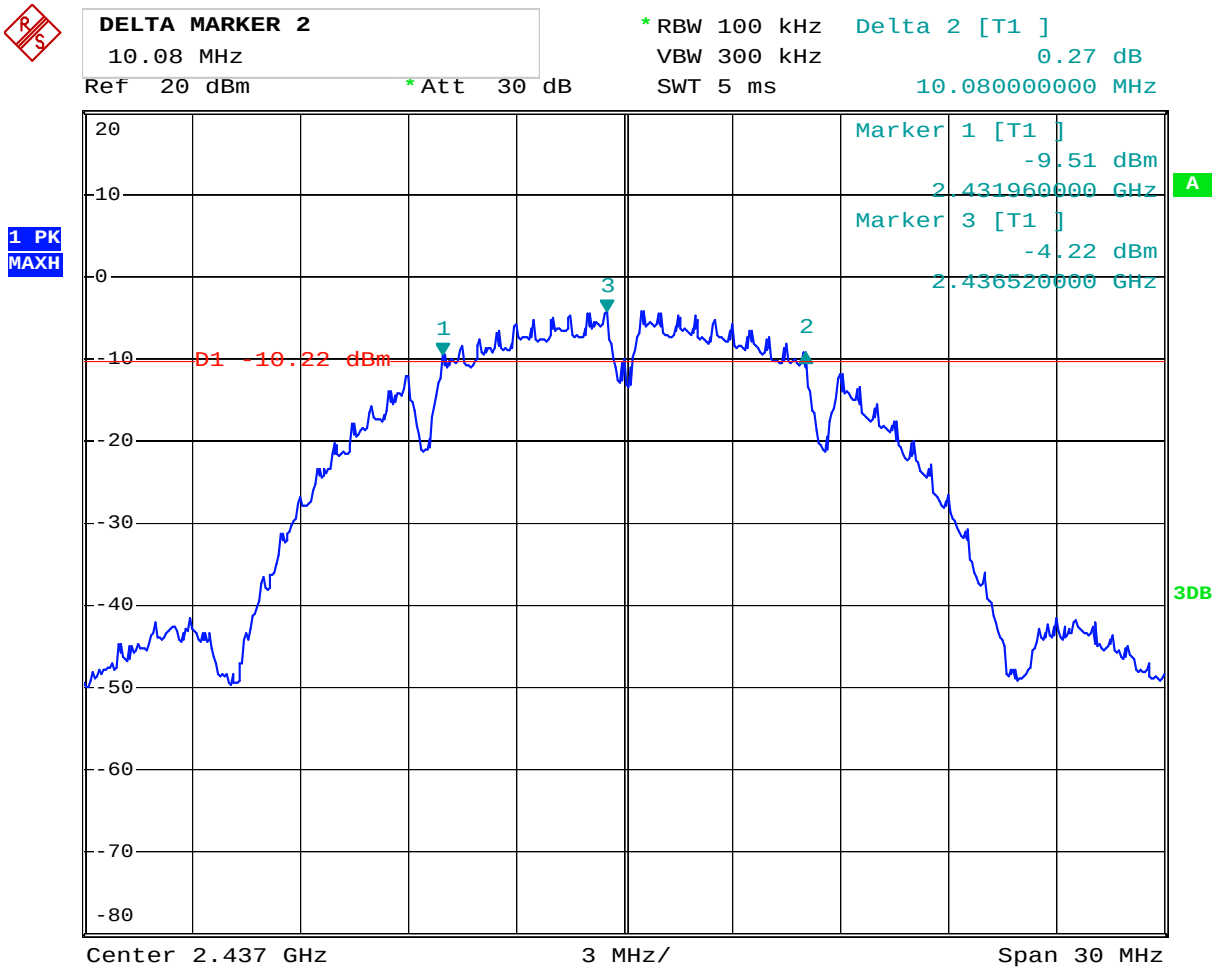
EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11b	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass/ Fail
1	2412	1	10.08	0.5	Pass
6	2437	1	10.08	0.5	Pass
11	2462	1	10.08	0.5	Pass
1	2412	11	9.42	0.5	Pass
6	2437	11	9.66	0.5	Pass
11	2462	11	9.60	0.5	Pass

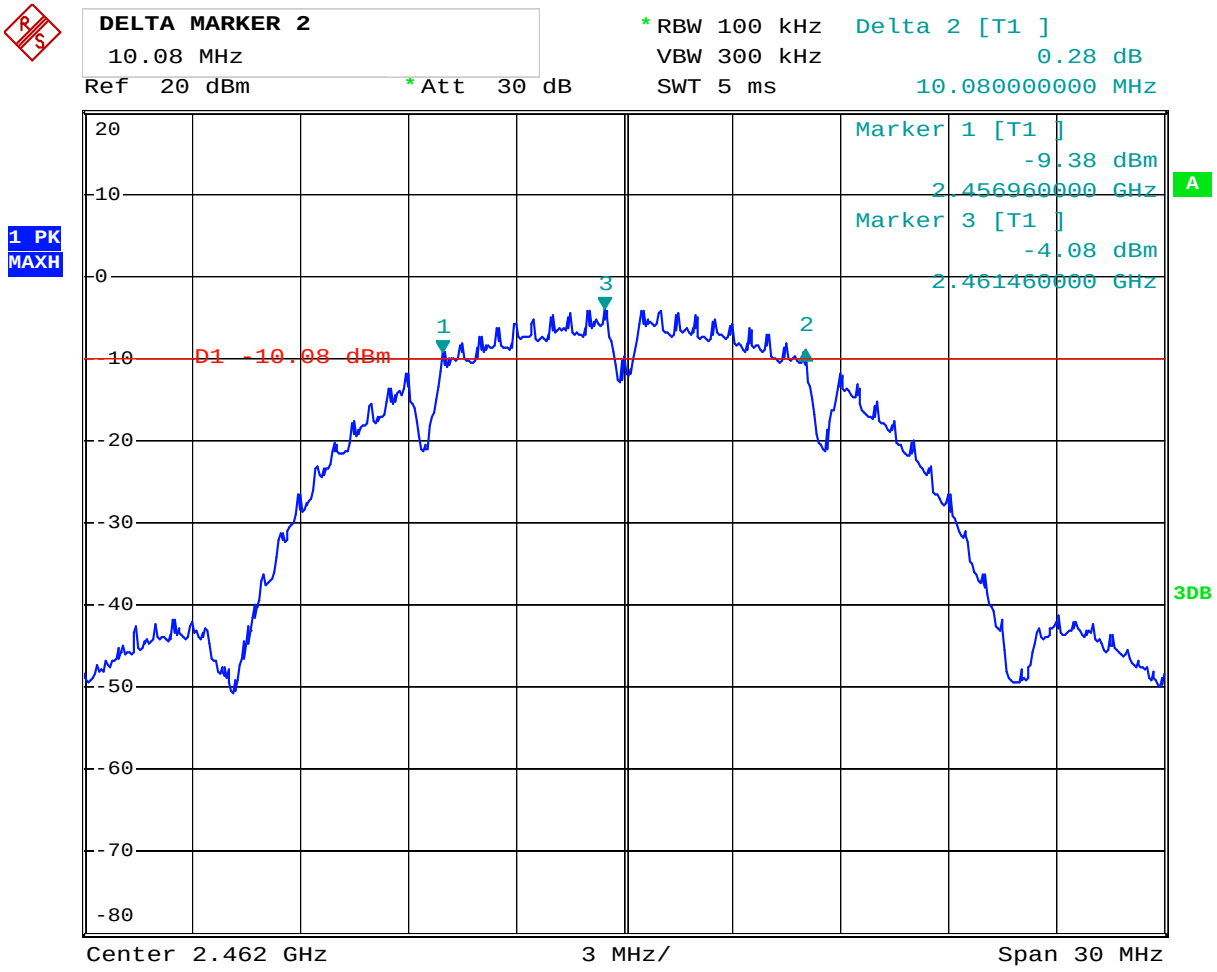
1. 802.11b at 1Mbps of CH01



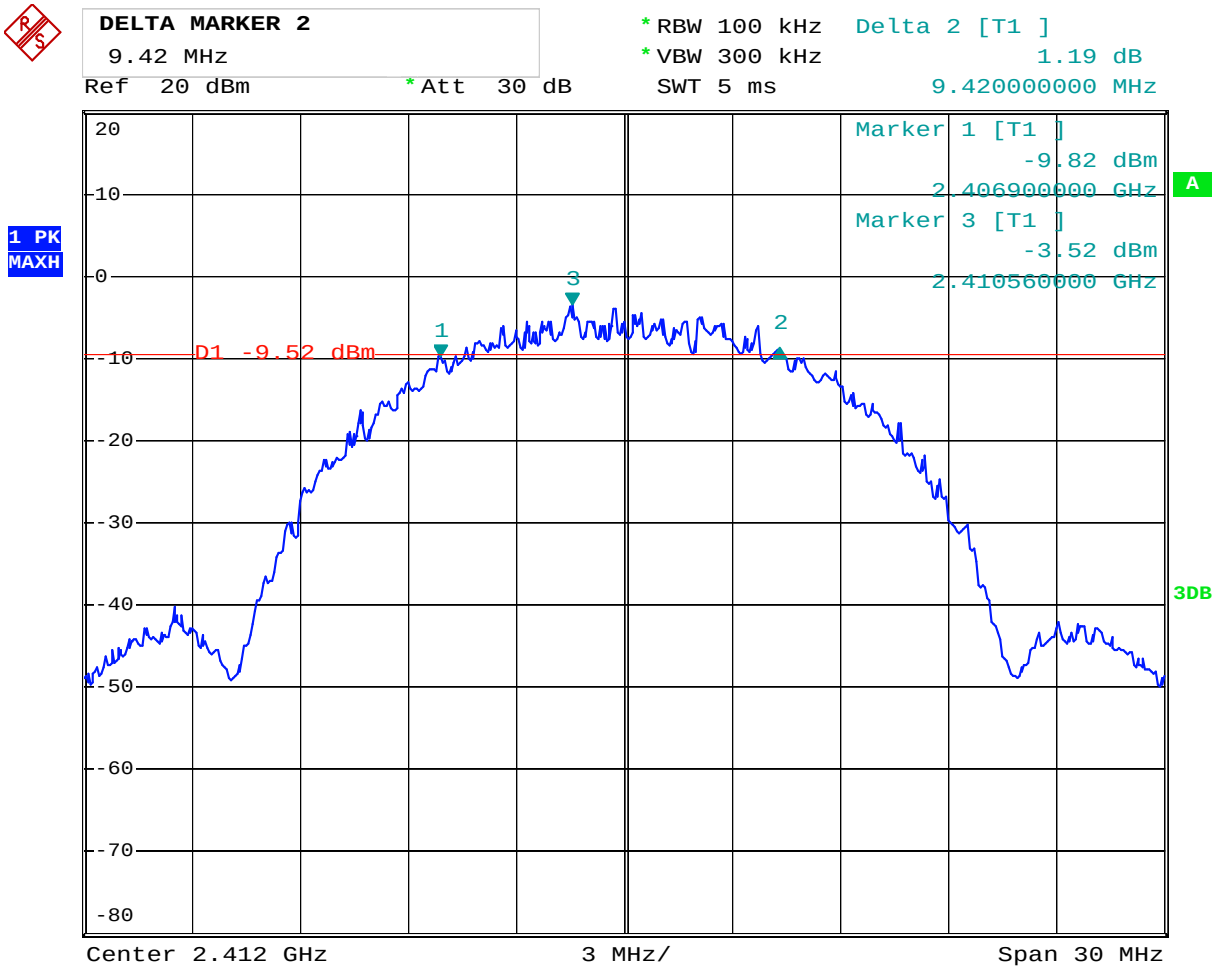
2. 802.11b at 1Mbps of CH06



3. 802.11b at 1Mbps of CH11

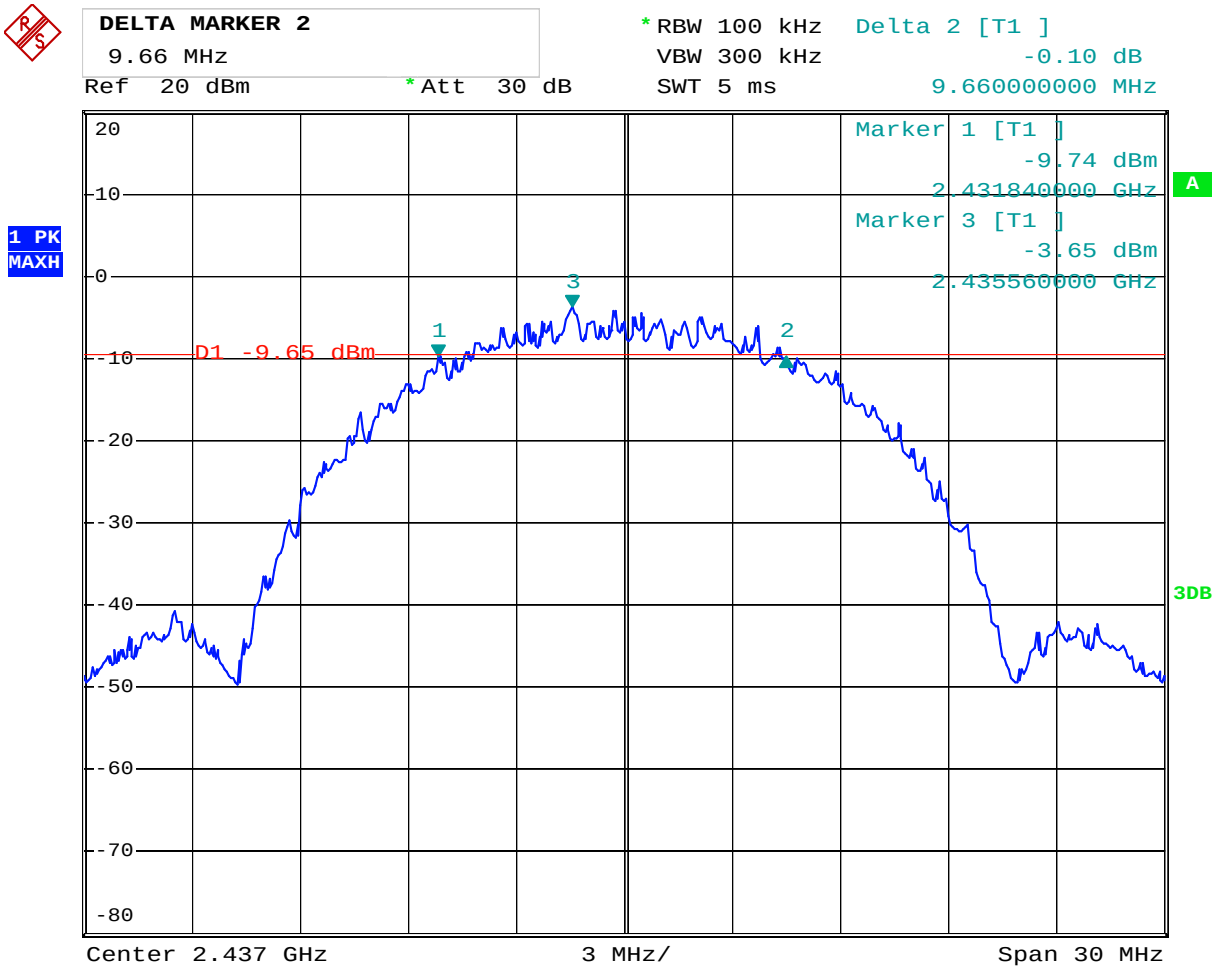


4. 802.11b at 11Mbps of CH01



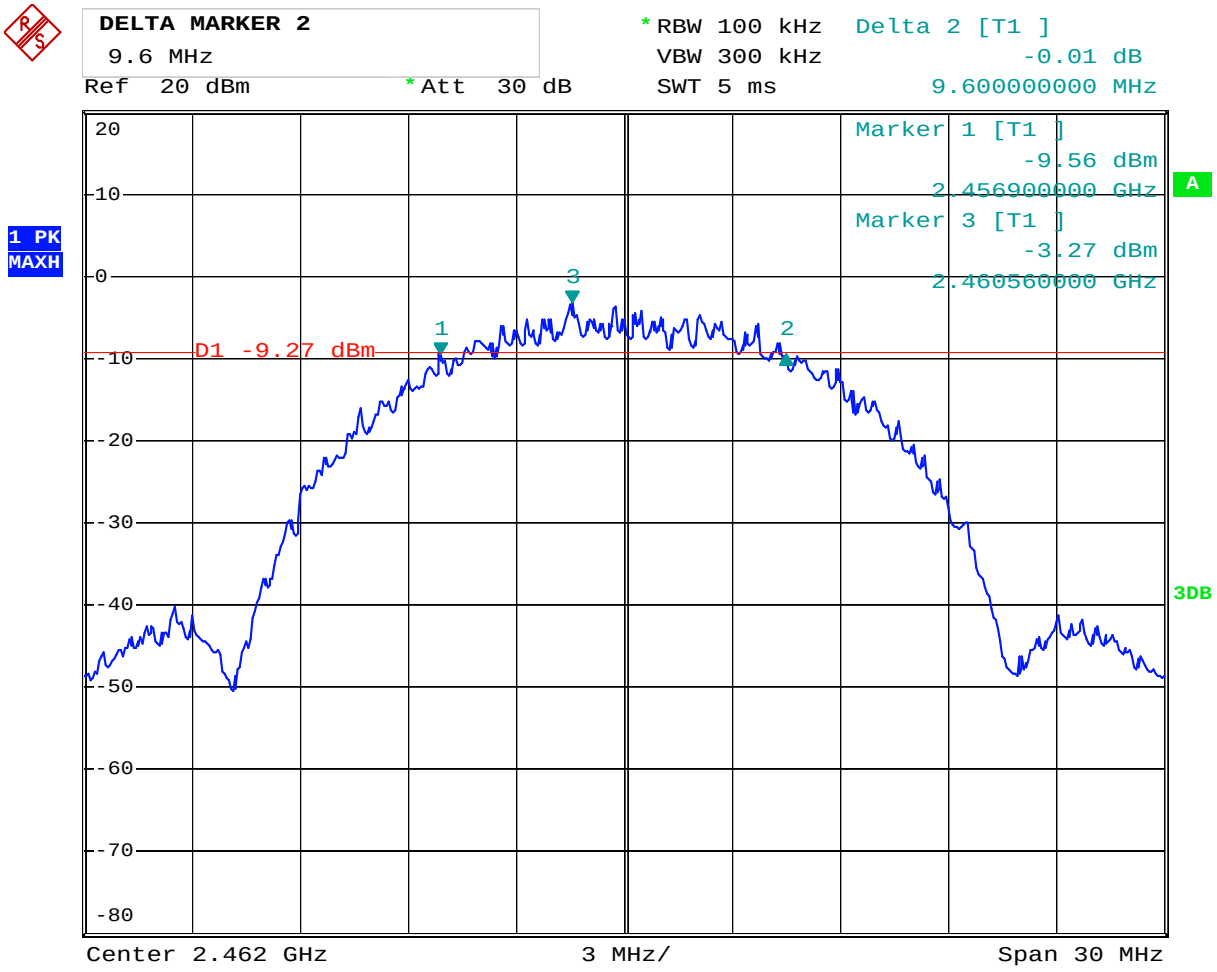
Date: 19.MAR.2013 10:37:16

5. 802.11b at 11Mbps of CH06



Date: 19.MAR.2013 10:48:59

6. 802.11b at 11Mbps of CH11



Date: 19.MAR.2013 10:50:07

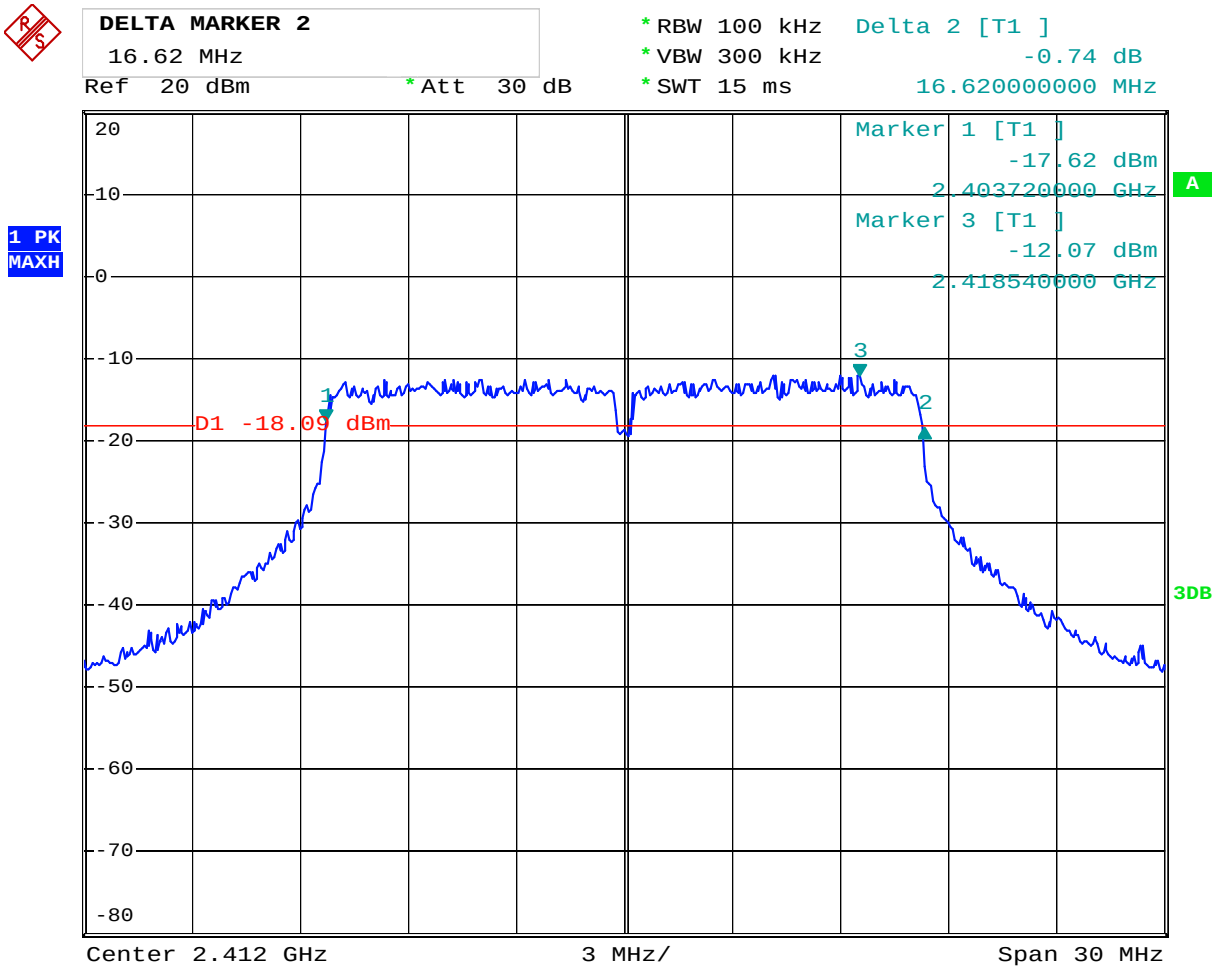
6dB Occupied Bandwidth

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A,TAD181-A TAD215-A, TAD151-G
Mode	802.11g	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass/ Fail
1	2412	6	16.62	0.5	Pass
6	2437	6	16.56	0.5	Pass
11	2462	6	16.56	0.5	Pass

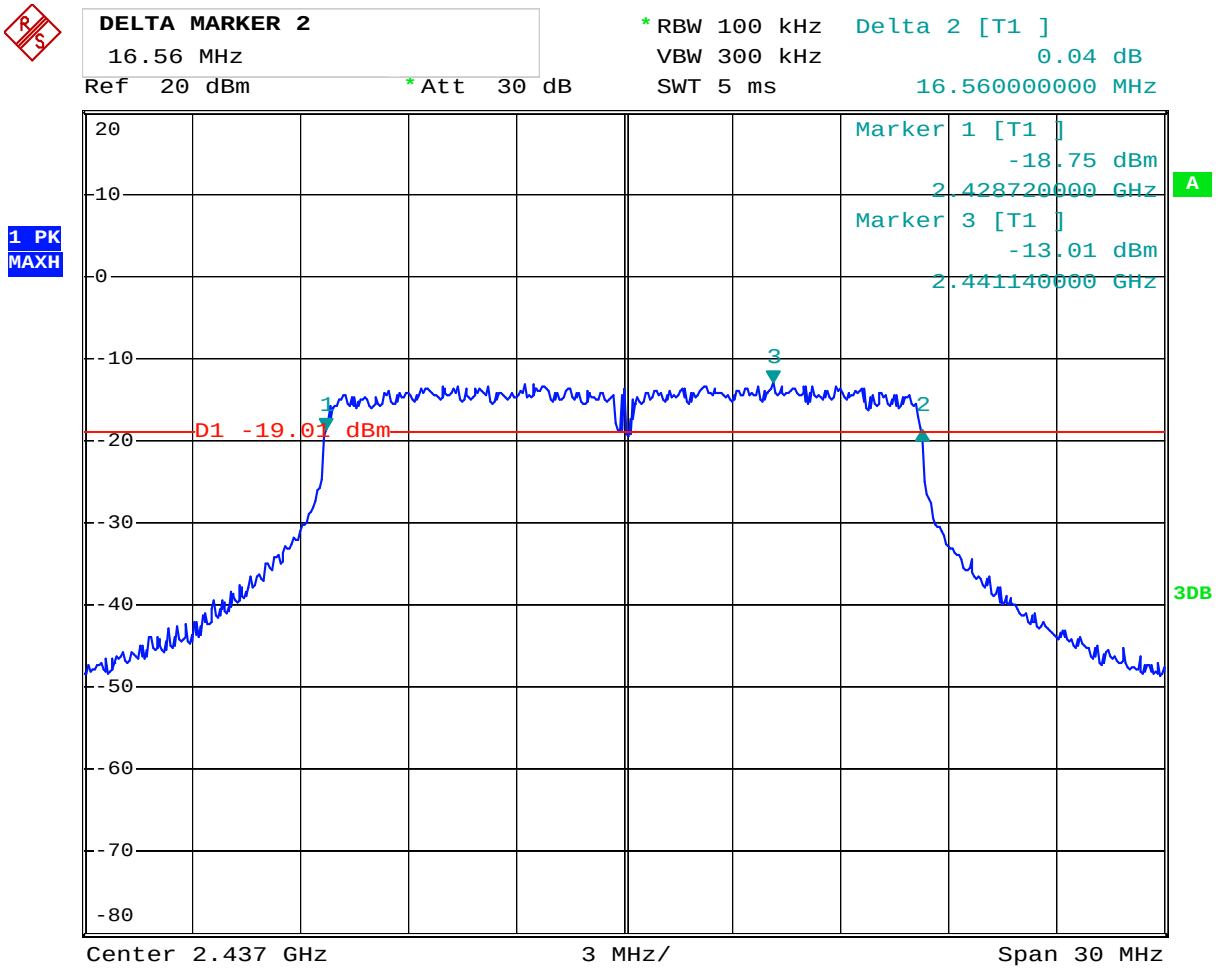
Test Plots:

1. 802.11g at 6Mbps of CH01

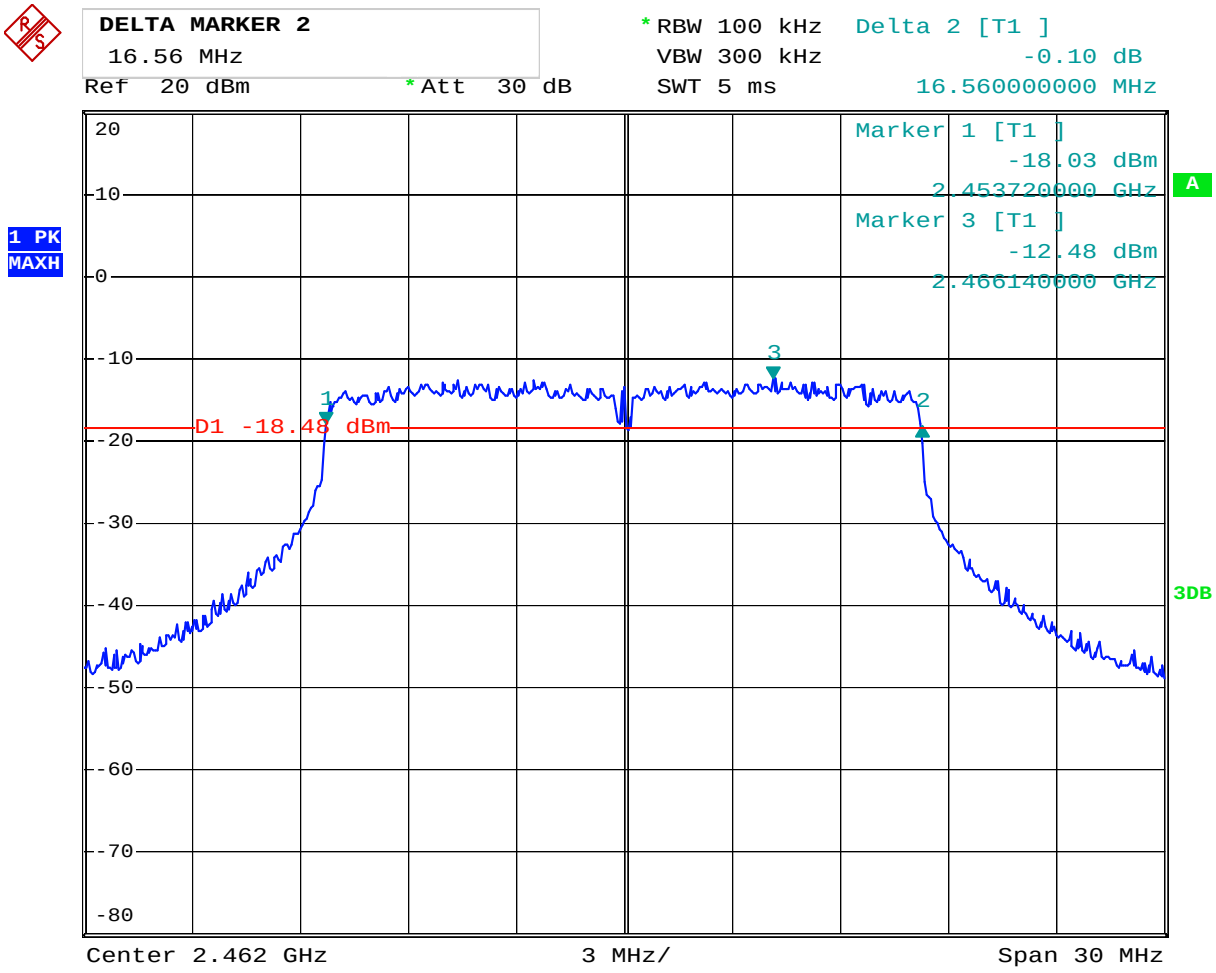


Date: 14.JAN.2013 11:36:24

2. 802.11g at 6Mbps of CH06



3. 802.11g at 6Mbps of CH11



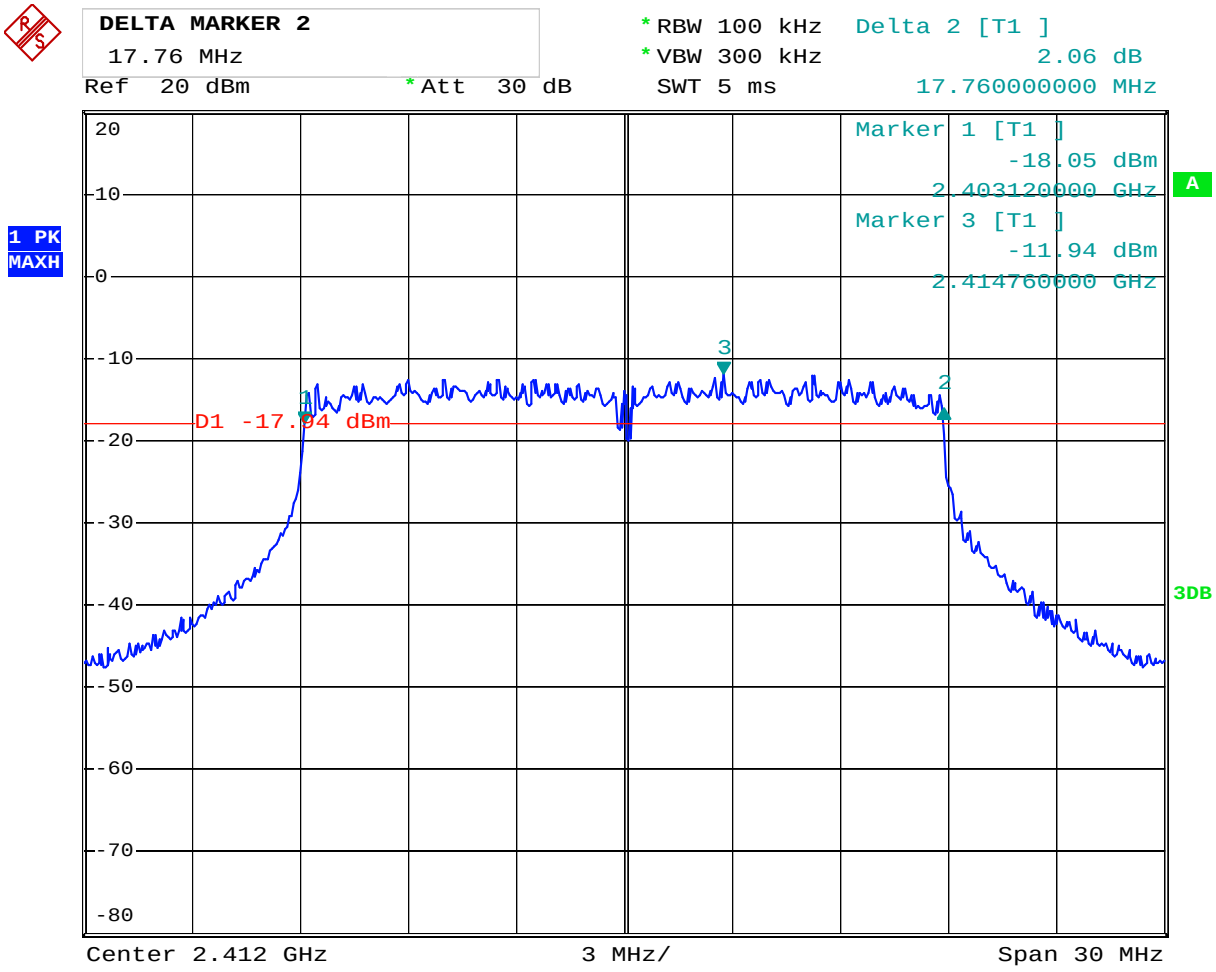
6dB Occupied Bandwidth

EUT	Advertising Displayer	Model	TAD101-A,TAD151-A, TAD181-A, TAD215-A, TAD151-G
Mode	802.11n	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass/ Fail
1	2412	HT20 65Mbps	17.76	0.5	Pass
6	2437	HT20 65Mbps	17.76	0.5	Pass
11	2462	HT20 65Mbps	17.76	0.5	Pass
1	2422	HT40 65Mbps	36.50	0.5	Pass
4	2437	HT40 65Mbps	36.30	0.5	Pass
7	2452	HT40 65Mbps	36.30	0.5	Pass

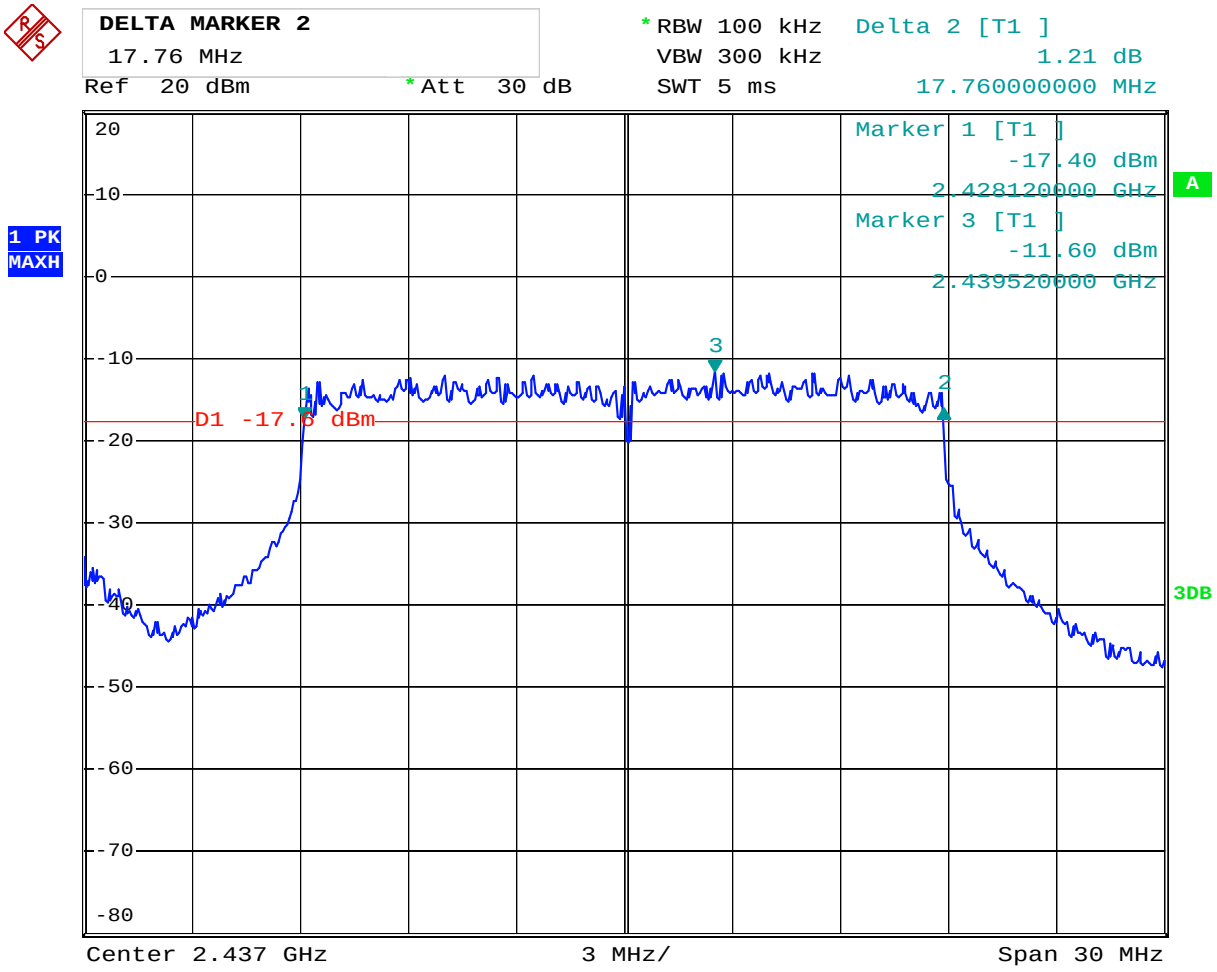
Test Plots:

1. 802.11n at HT20 of CH01



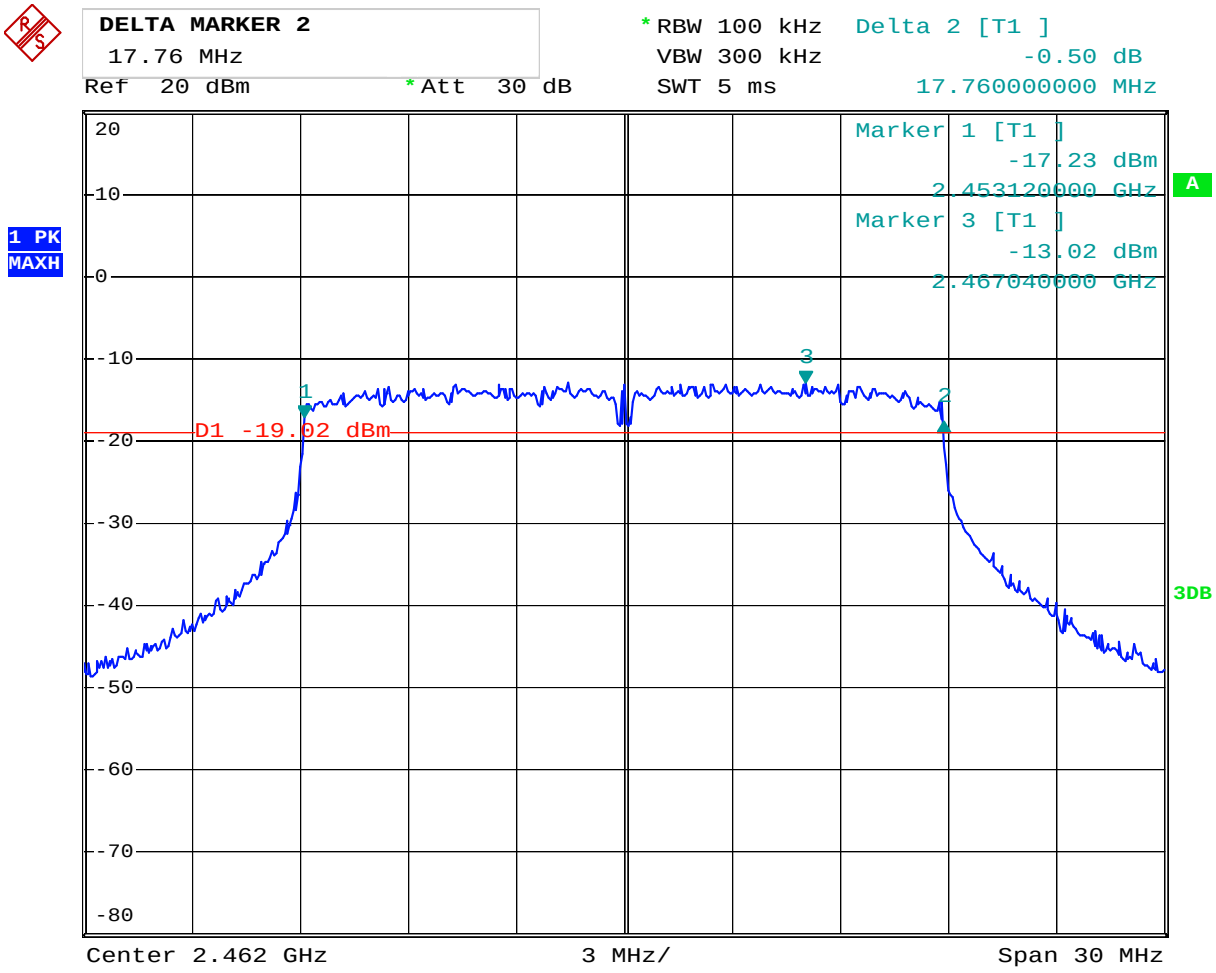
Date: 19.MAR.2013 10:38:30

2. 802.11n at HT20 of CH06

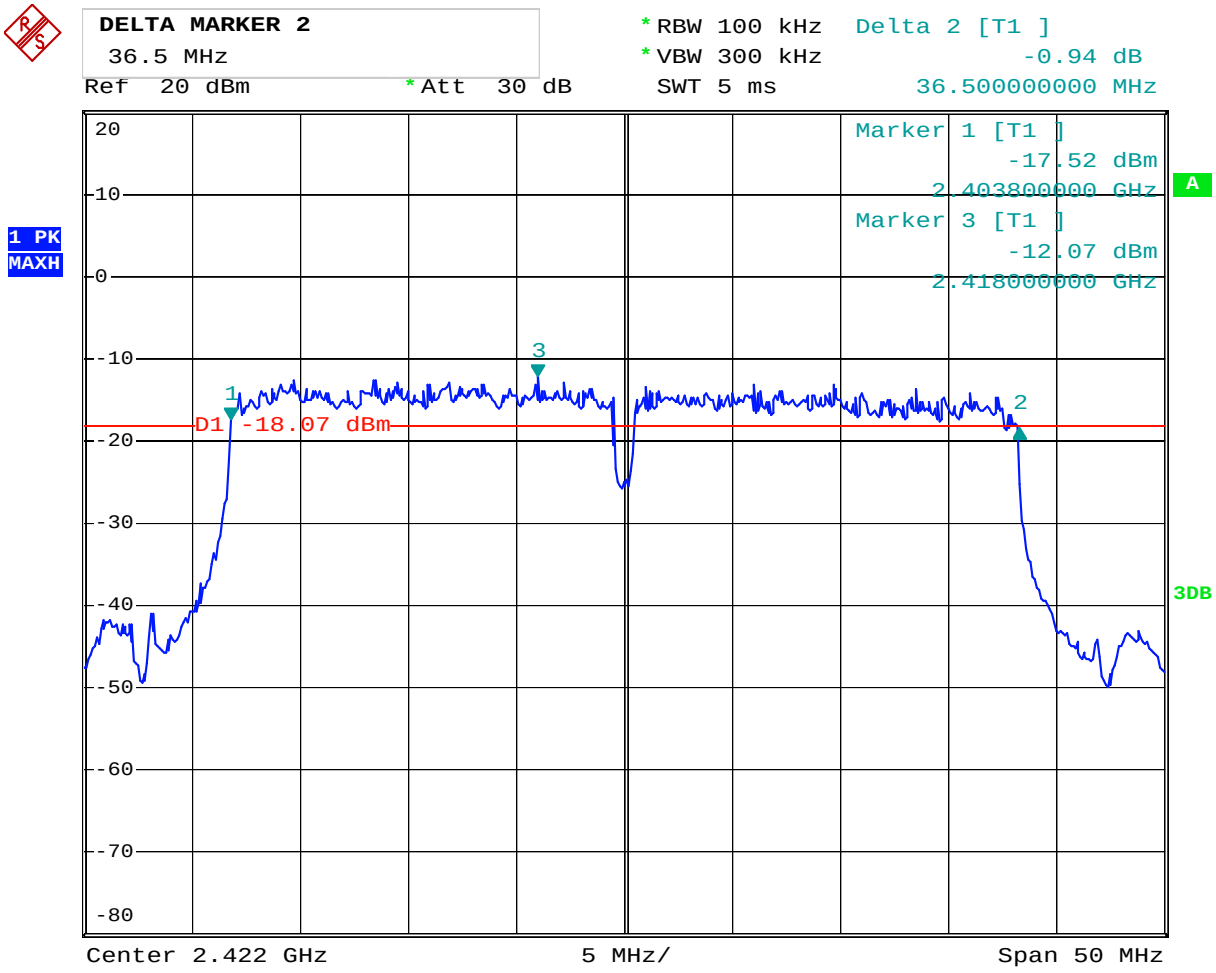


Date: 19.MAR.2013 10:46:08

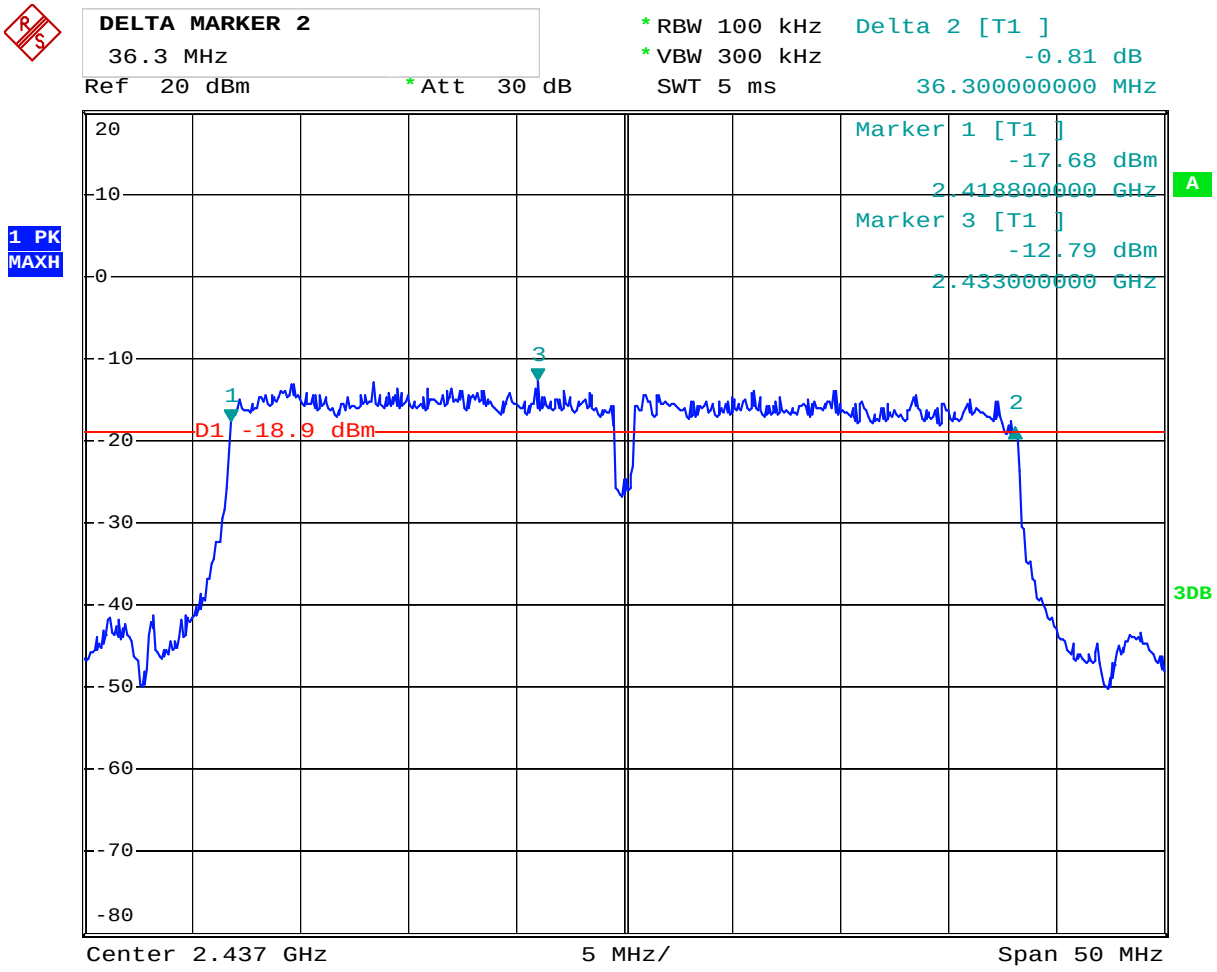
3. 802.11n at HT20 of CH11



4. 802.11n at HT40 of CH01

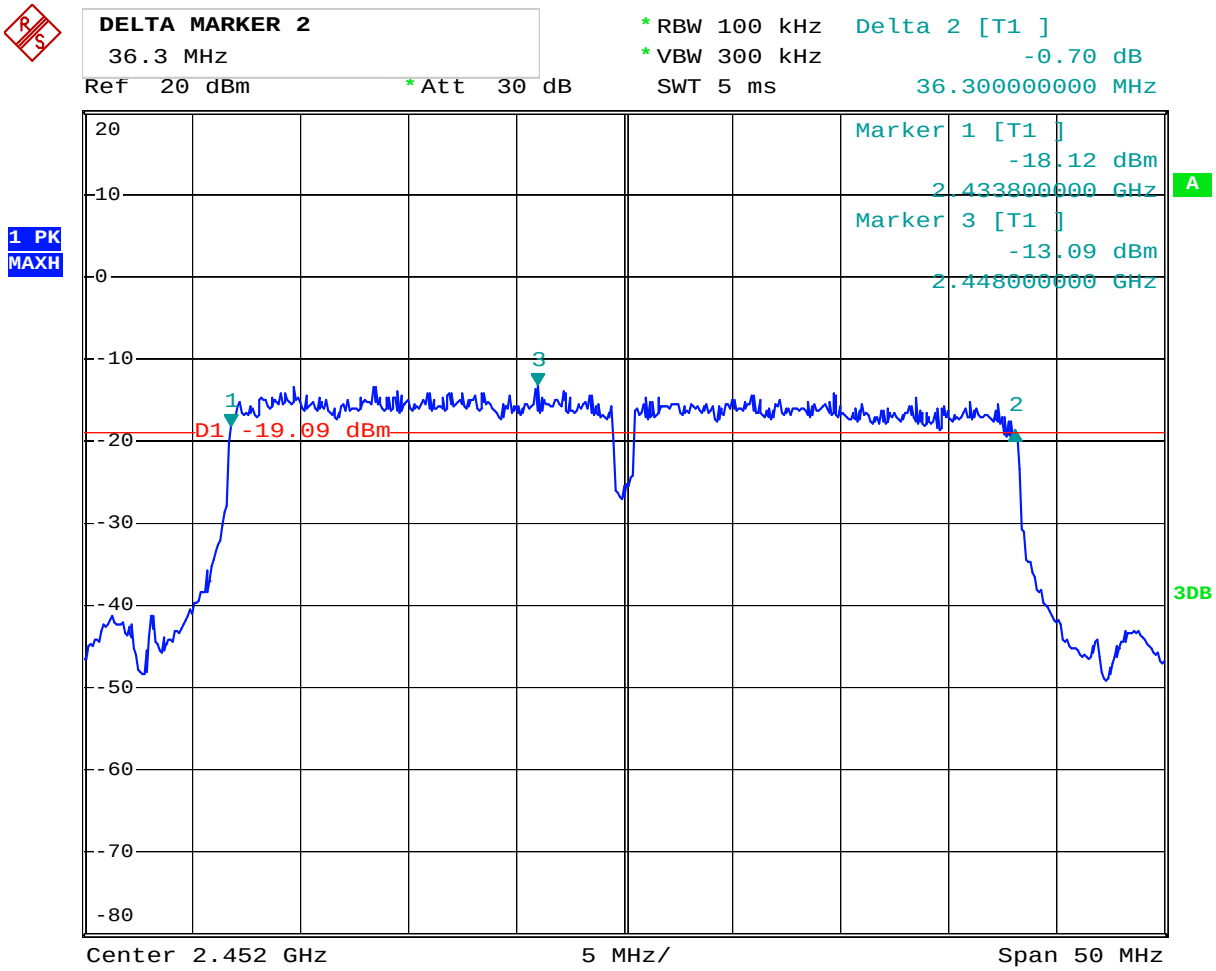


5. 802.11n at HT40 of CH04



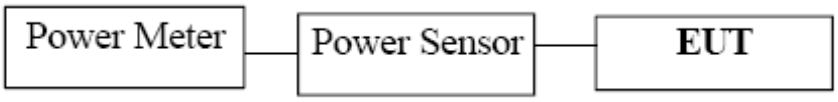
Date: 20.MAR.2013 09:41:19

6. 802.11n at HT40 of CH07



8. Maximum Peak Output Power

8.1 Test Setup



8.2 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: the peak power was measured

8.4Test Results

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11b	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass/ Fail
1	2412	**13.26**	30	Pass
6	2437	12.29	30	Pass
11	2462	12.92	30	Pass

Note: 1. At finial test to get the worst-case emission at 11Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The test voltage varied from AC102V-138V. The worse case was recorded

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11g	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass/ Fail
1	2412	10.71	30	Pass
6	2437	9.89	30	Pass
11	2462	8.49	30	Pass

Note: 1. At finial test to get the worst-case emission at 54Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The test voltage varied from AC102V-138V. The worse case was recorded

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11n (HT20)	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass/ Fail
1	2412	11.26	30	Pass
6	2437	10.76	30	Pass
11	2462	10.03	30	Pass

Note: 1. At finial test to get the worst-case emission at 11n HT20 for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The test voltage varied from AC102V-138V. The worse case was recorded

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11n (HT40)	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass/ Fail
1	2422	13.01	30	Pass
4	2437	11.69	30	Pass
7	2452	11.52	30	Pass

Note: 1. At finial test to get the worst-case emission at 11n HT40 for CH01, CH04 and CH07

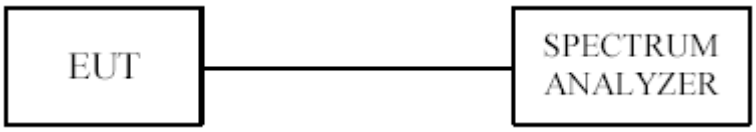
2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The test voltage varied from AC102V-138V. The worse case was recorded

9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
2. Set the RBW = 10 kHz.
3. Set the VBW ≥ 30 kHz.
4. Set the span to 1.5 times the DTS channel bandwidth.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
11. The resulting peak PSD level must be ≤ 8 dBm.

9.4Test Result

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11b 11Mbps	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Final Power Spectral Density (dBm)	Maximum Limit (dBm)	Pass/ Fail
11Mbps				
1	2412	-10.99	8	Pass
6	2437	-12.19	8	Pass
11	2462	-13.61	8	Pass

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11b 1Mbps	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Final Power Spectral Density (dBm)	Maximum Limit (dBm)	Pass/ Fail
1Mbps				
1	2412	-12.62	8	Pass
6	2437	-13.68	8	Pass
11	2462	-14.68	8	Pass

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11g 6Mbps	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

Channel	Channel Frequency (MHz)	Final Power Spectral Density (dBm)	Maximum Limit (dBm)	Pass/ Fail
6Mbps				
1	2412	-18.61	8	Pass
6	2437	-19.98	8	Pass
11	2462	-21.12	8	Pass

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11n HT20	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

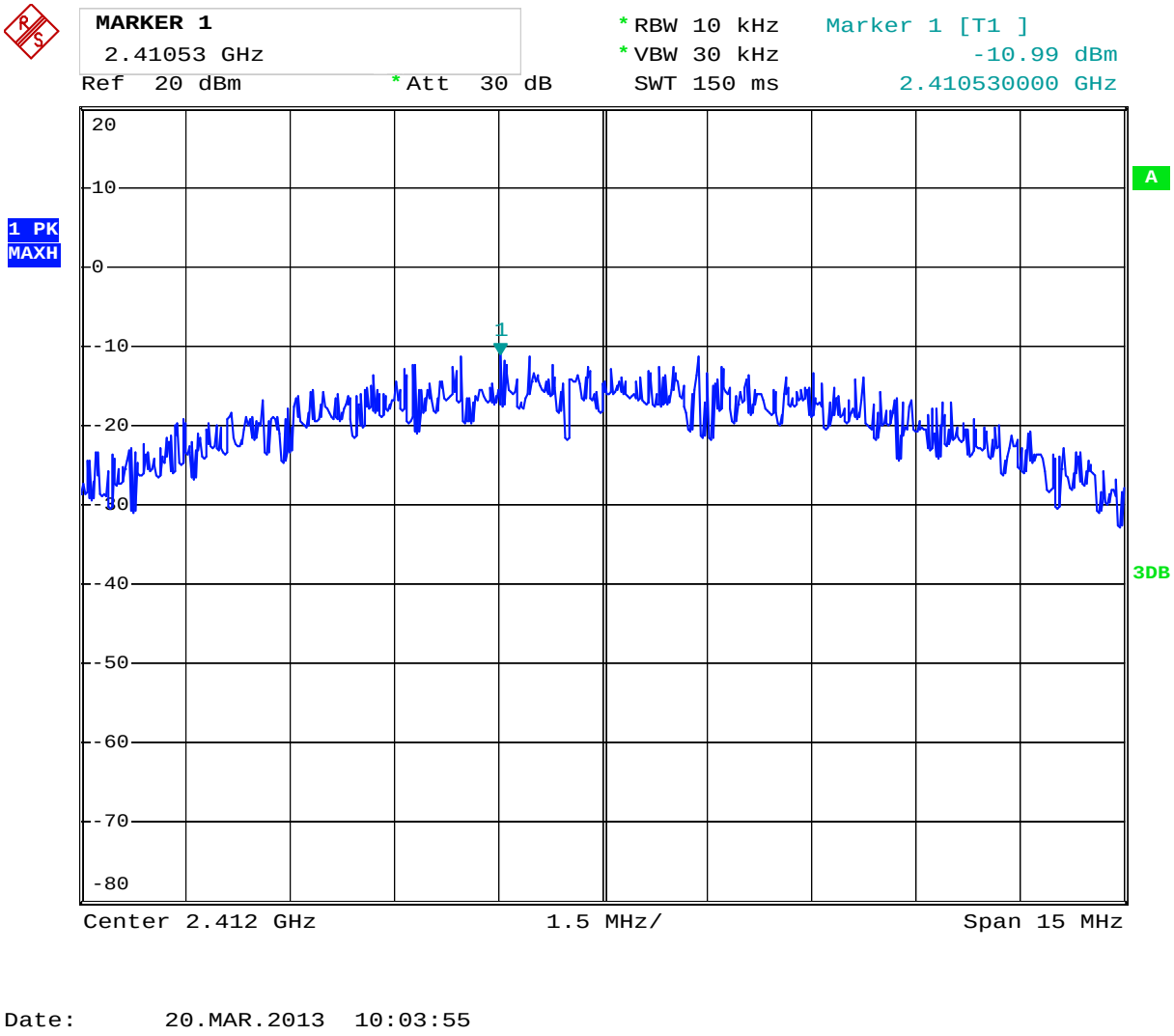
Channel	Channel Frequency (MHz)	Final Power Spectral Density (dBm)	Maximum Limit (dBm)	Pass/ Fail
HT20				
1	2412	-14.68	8	Pass
6	2437	-21.74	8	Pass
11	2462	-17.32	8	Pass

EUT	Advertising Displayer	Model	TAD101-A, TAD151-A, TAD181-A TAD215-A, TAD151-G
Mode	802.11n HT40	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH

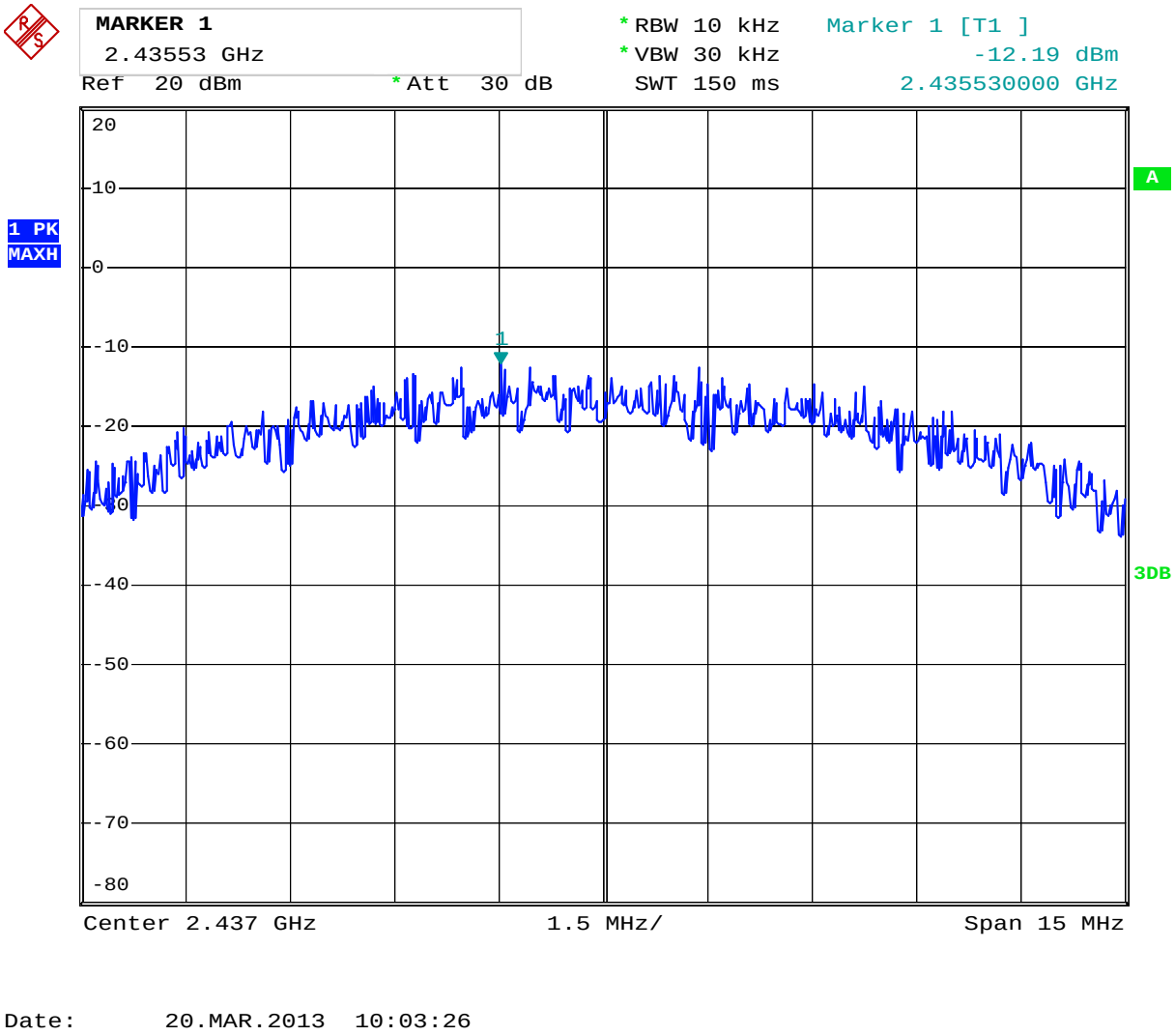
Channel	Channel Frequency (MHz)	Final RF Power Level in 3kHz BW (dBm)	Maximum Limit (dBm)	Pass/ Fail
HT40				
1	2422	-21.29	8	Pass
6	2437	-21.74	8	Pass
11	2452	-23.03	8	Pass

9.5 Photo of Power Spectral Density Measurement

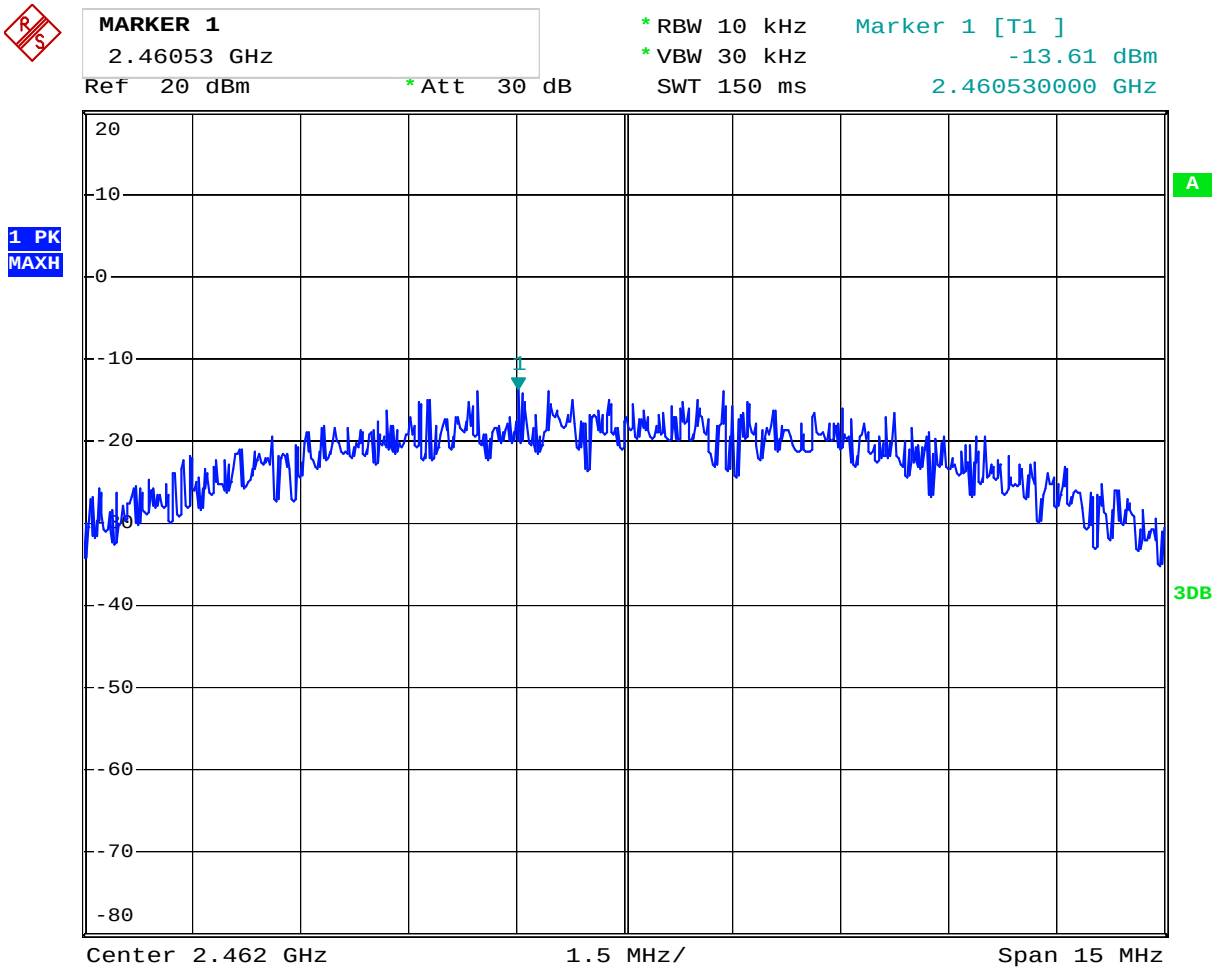
1.802.11b at 11Mbps of CH01



2. 802.11b at 11Mbps at CH06

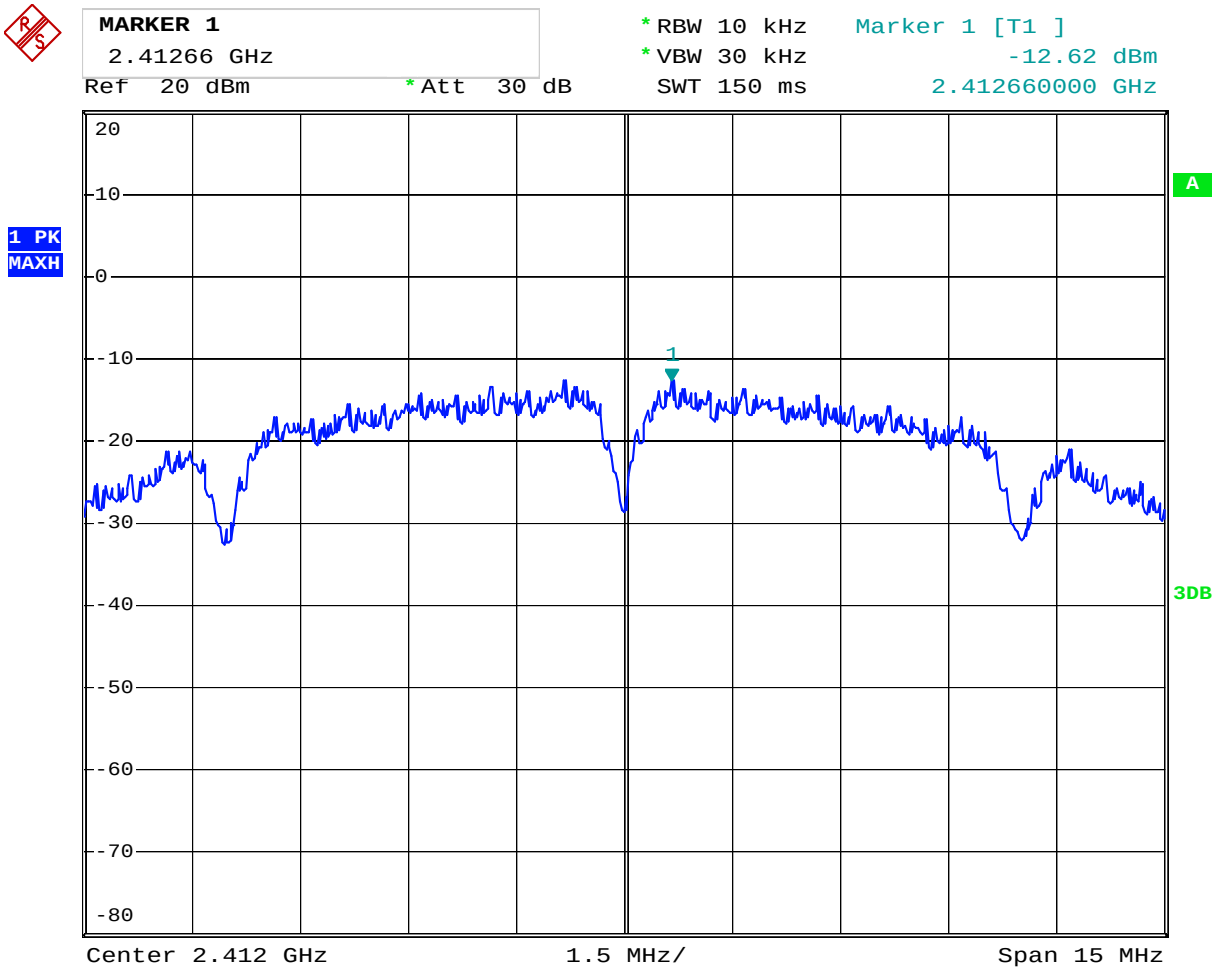


3. 802.11b at 11Mbps of CH11



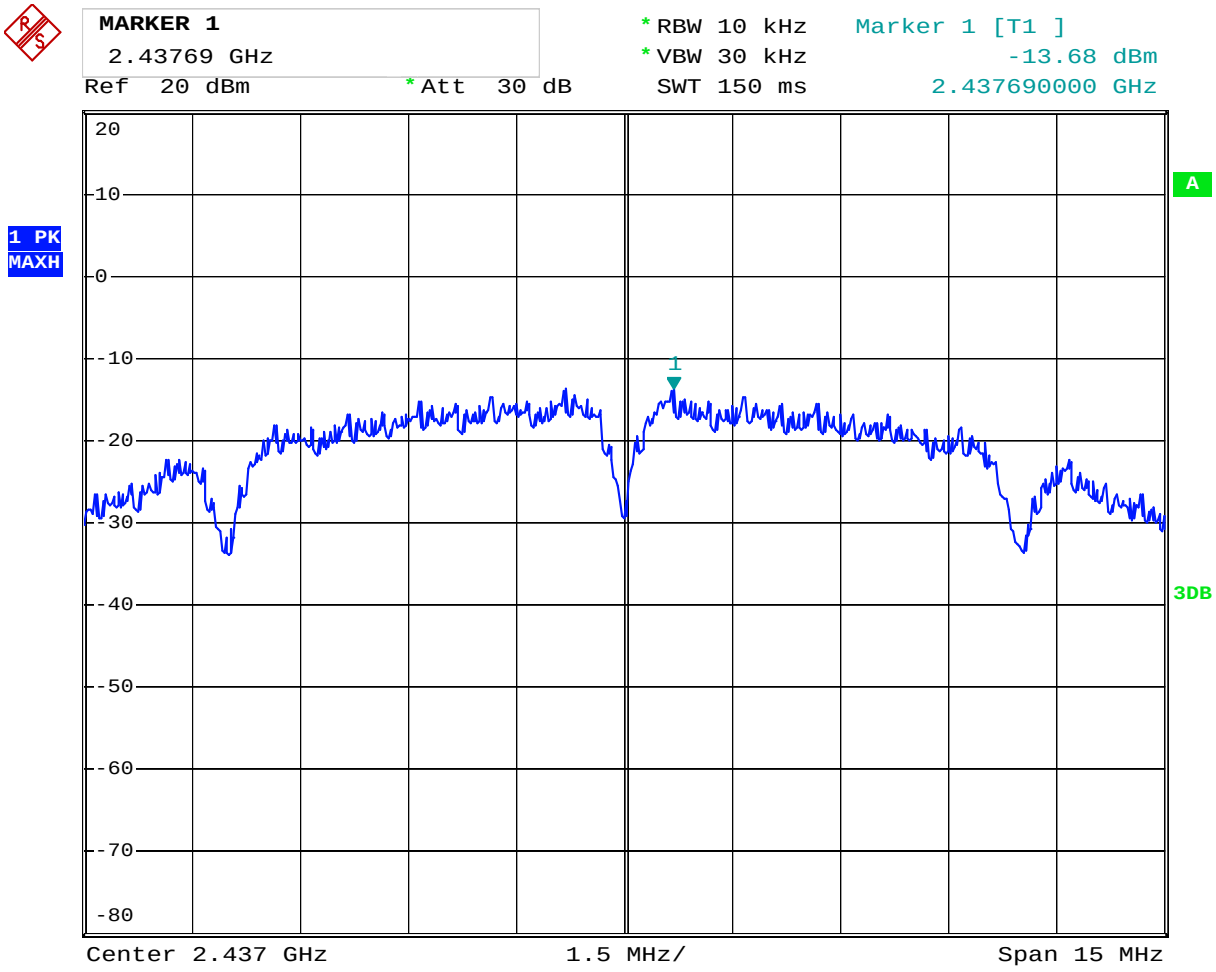
Date: 20.MAR.2013 10:02:54

4. 802.11b at 1Mbps of CH1



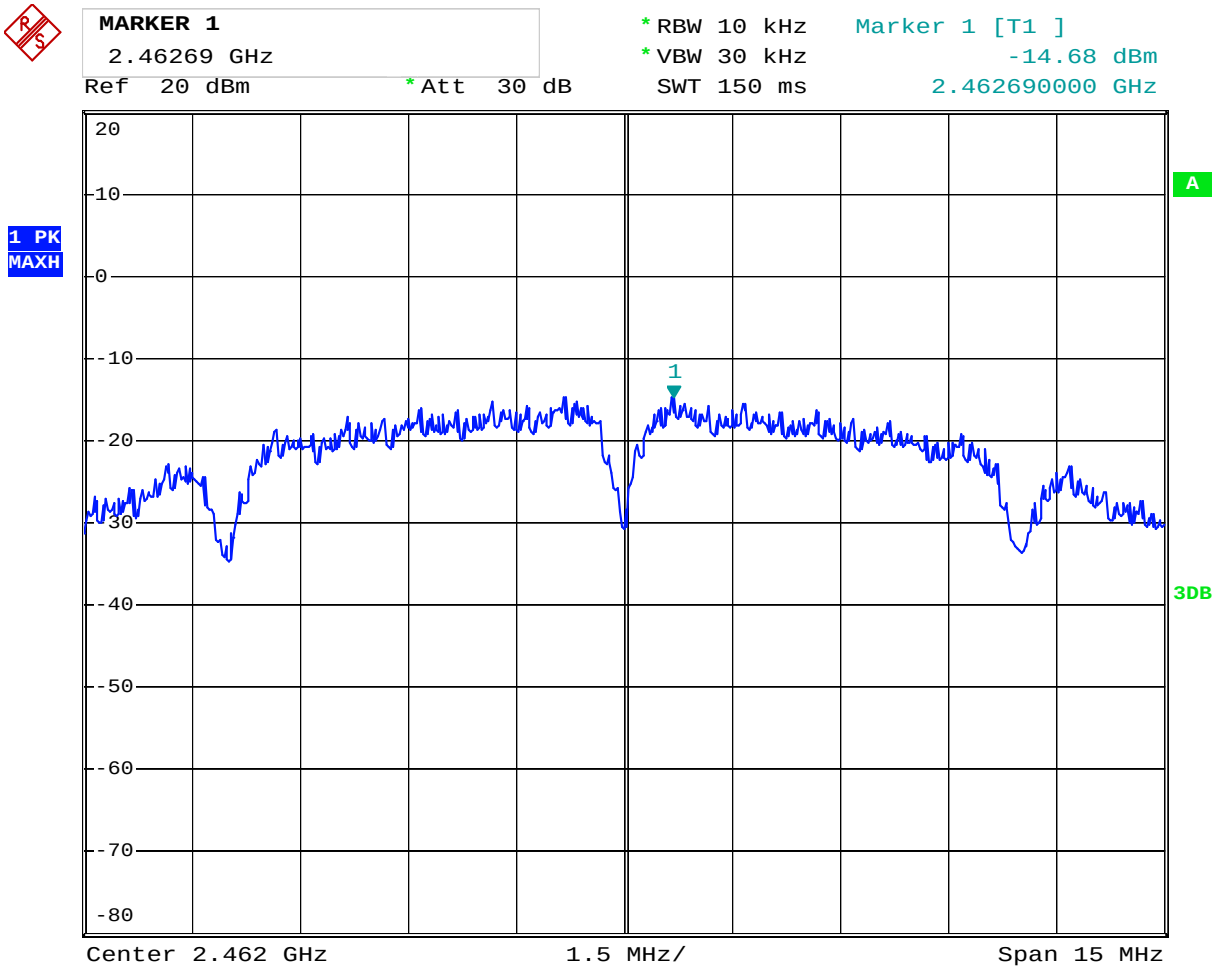
Date: 20.MAR.2013 09:58:02

5. 802.11b at 1Mbps of CH6

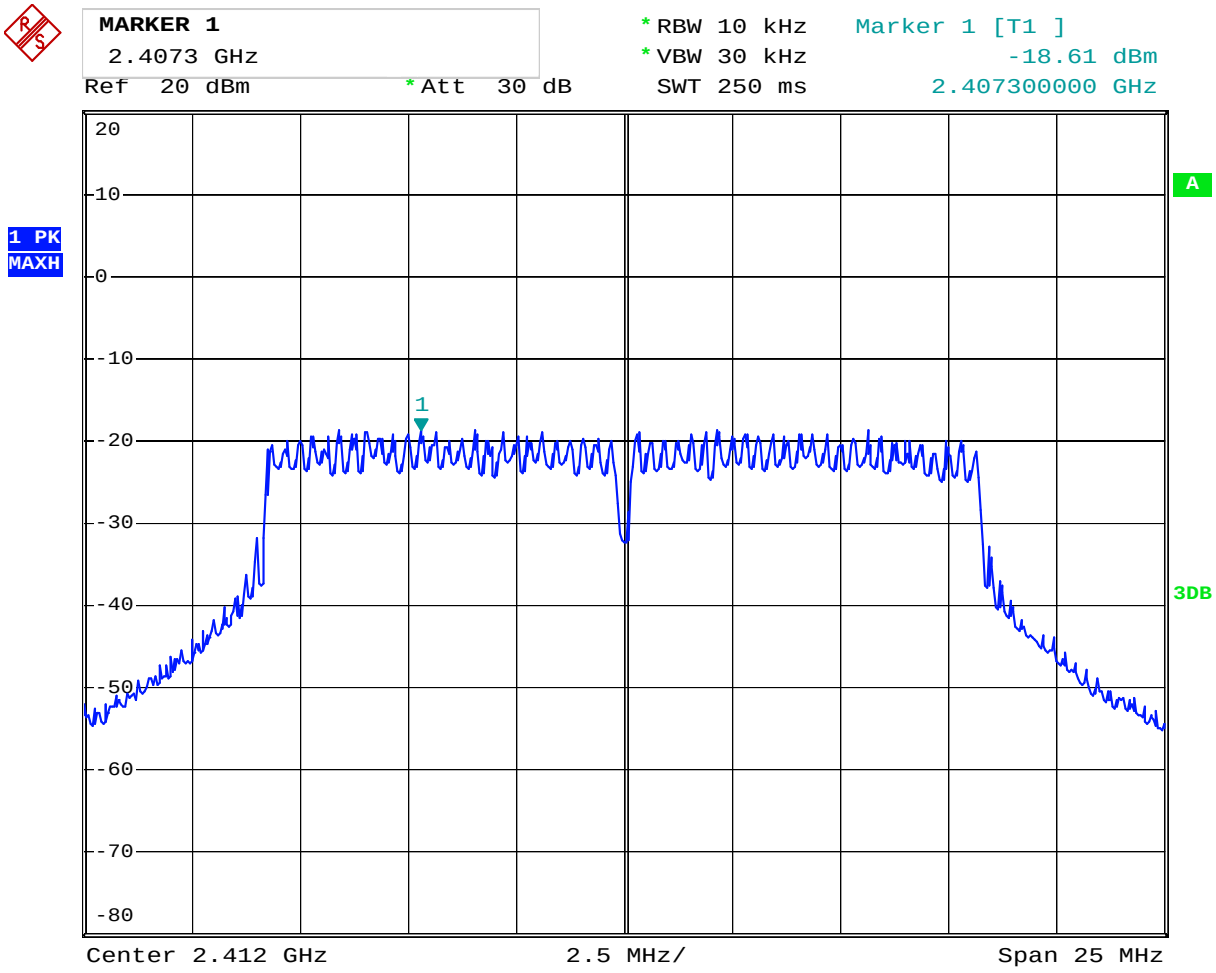


Date: 20.MAR.2013 09:57:41

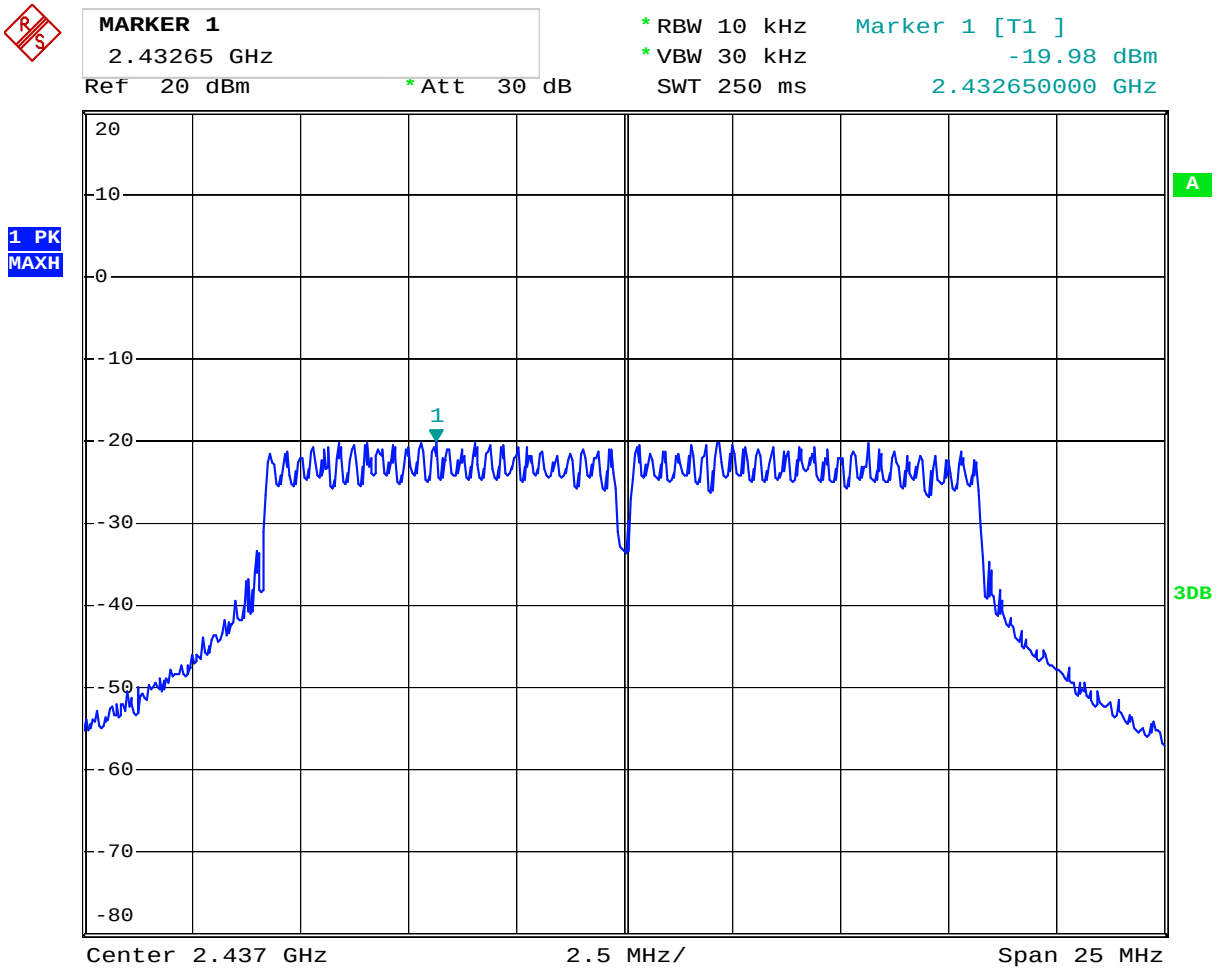
6. 802.11b at 1Mbps of CH11



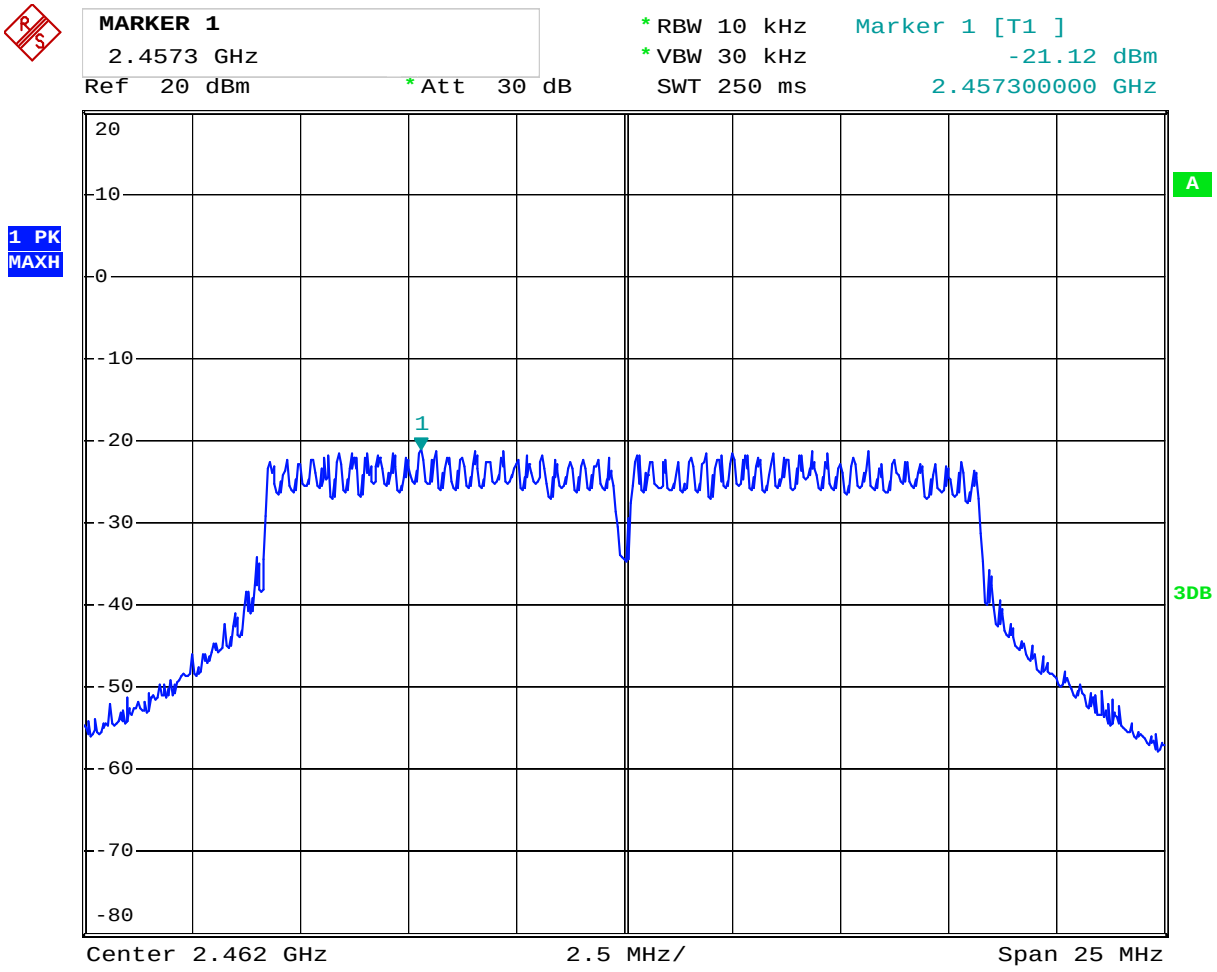
7. 802.11g at 6Mbps of CH1



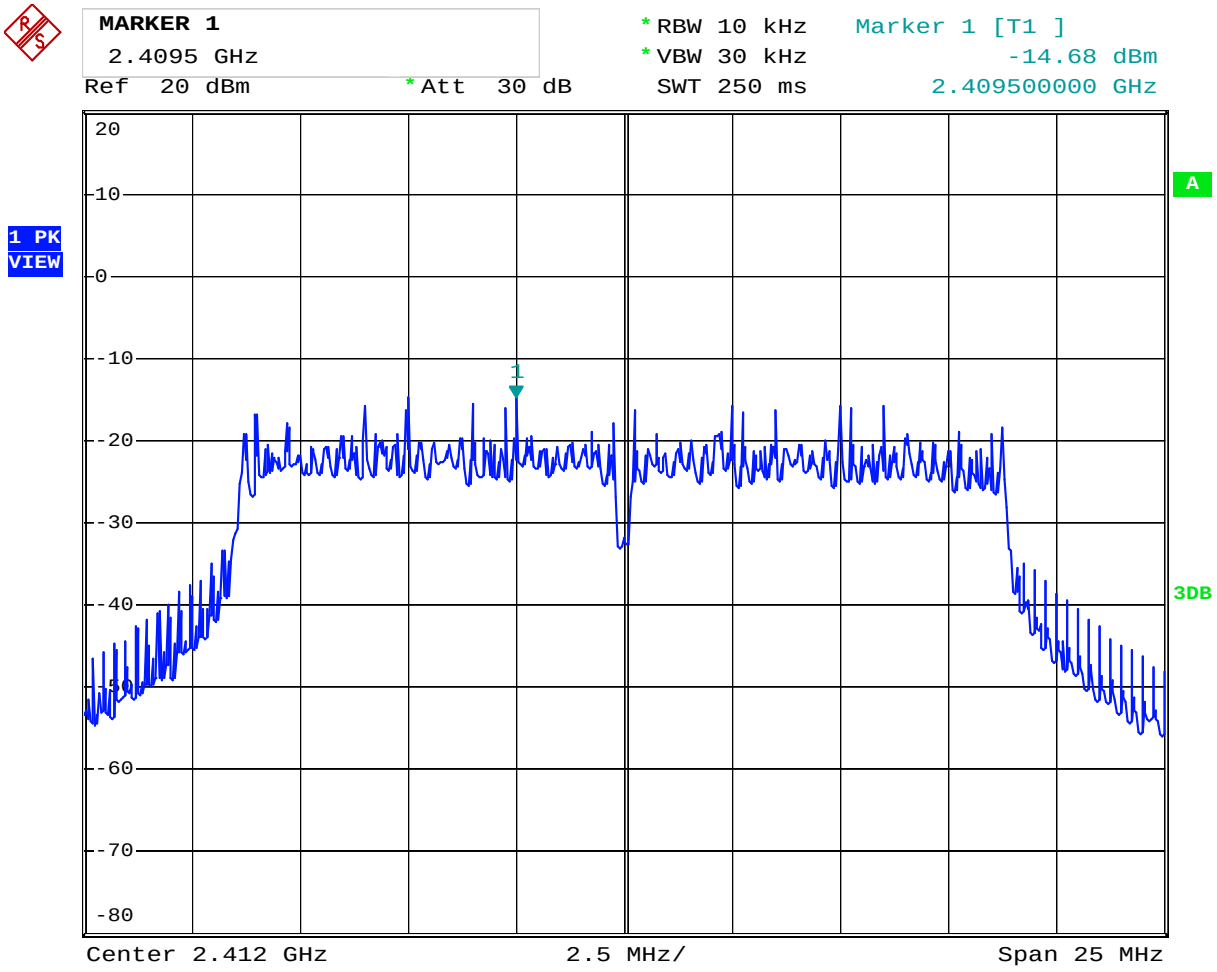
8. 802.11g at 6 Mbps of CH6



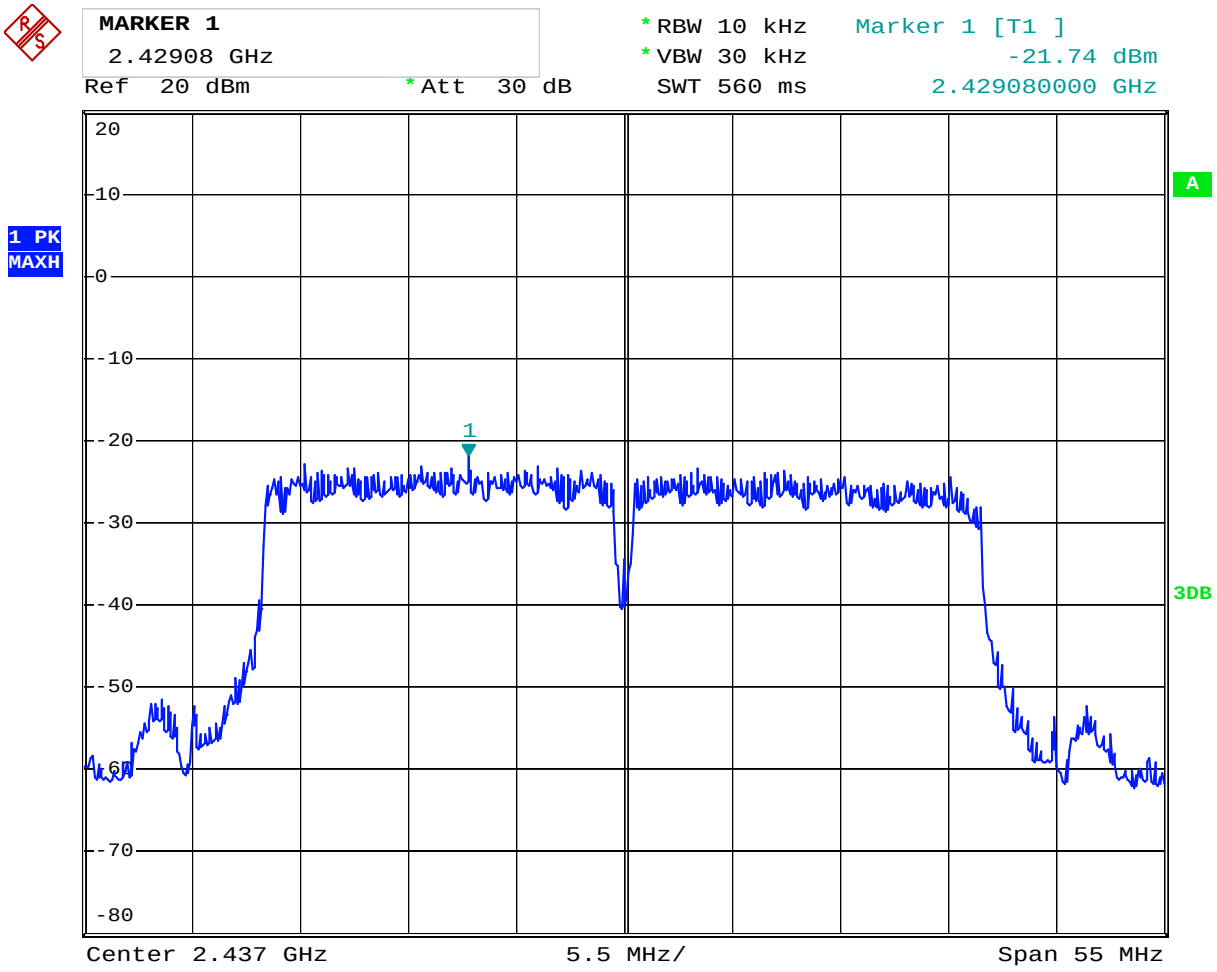
9. 802.11g at 6 Mbps of CH11



10. 802.11n at HT20 of CH01



11. 802.11n at HT20 of CH06



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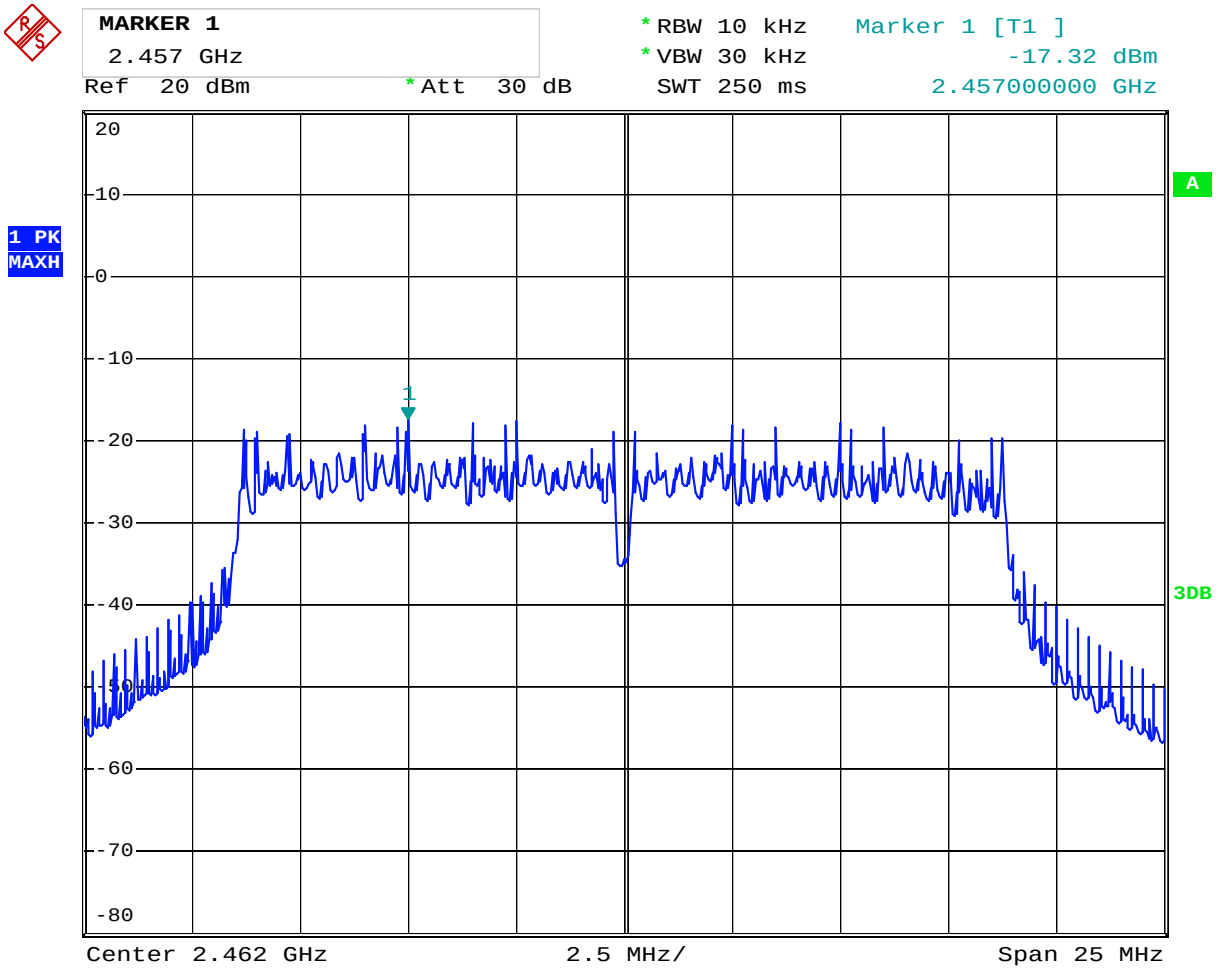
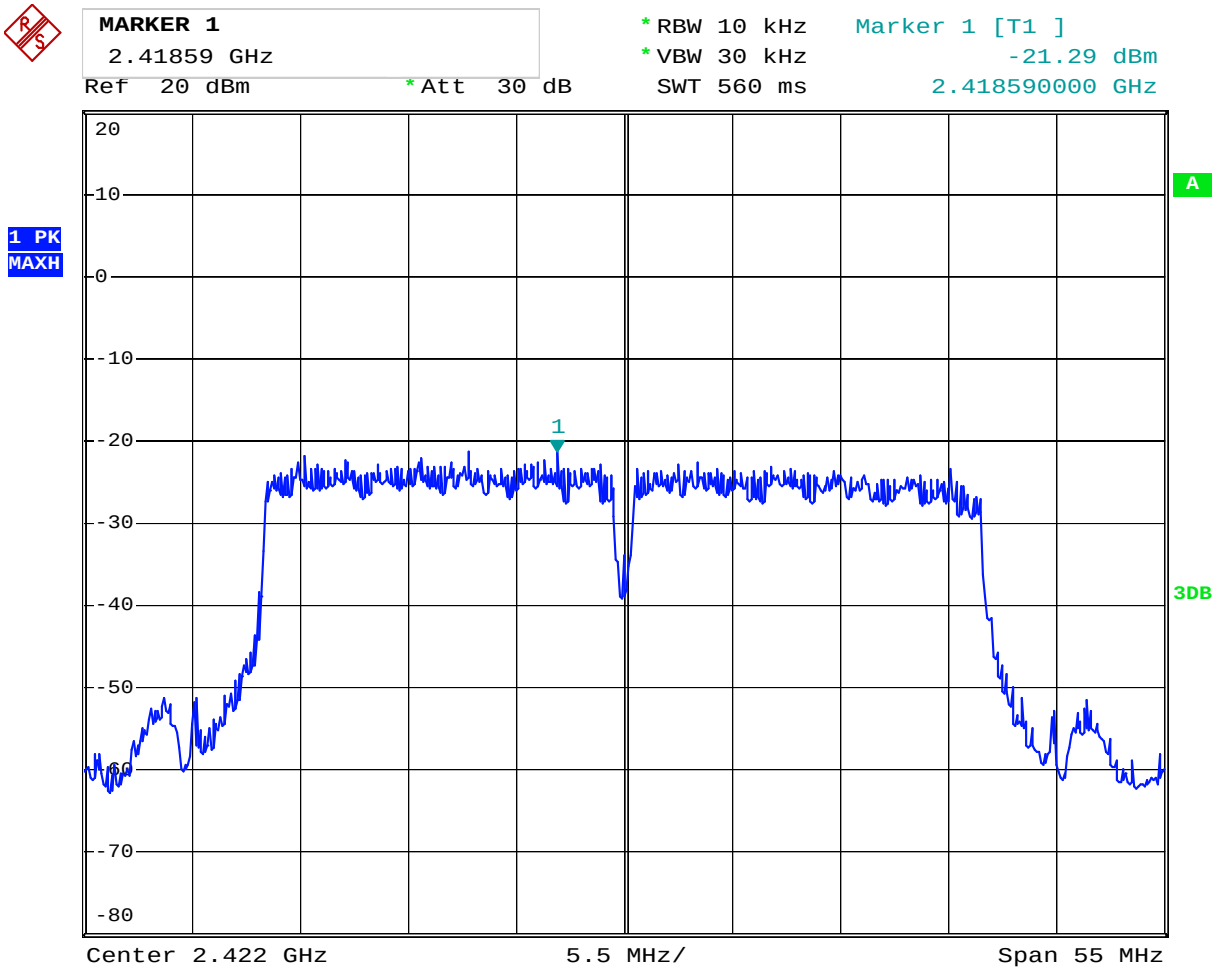
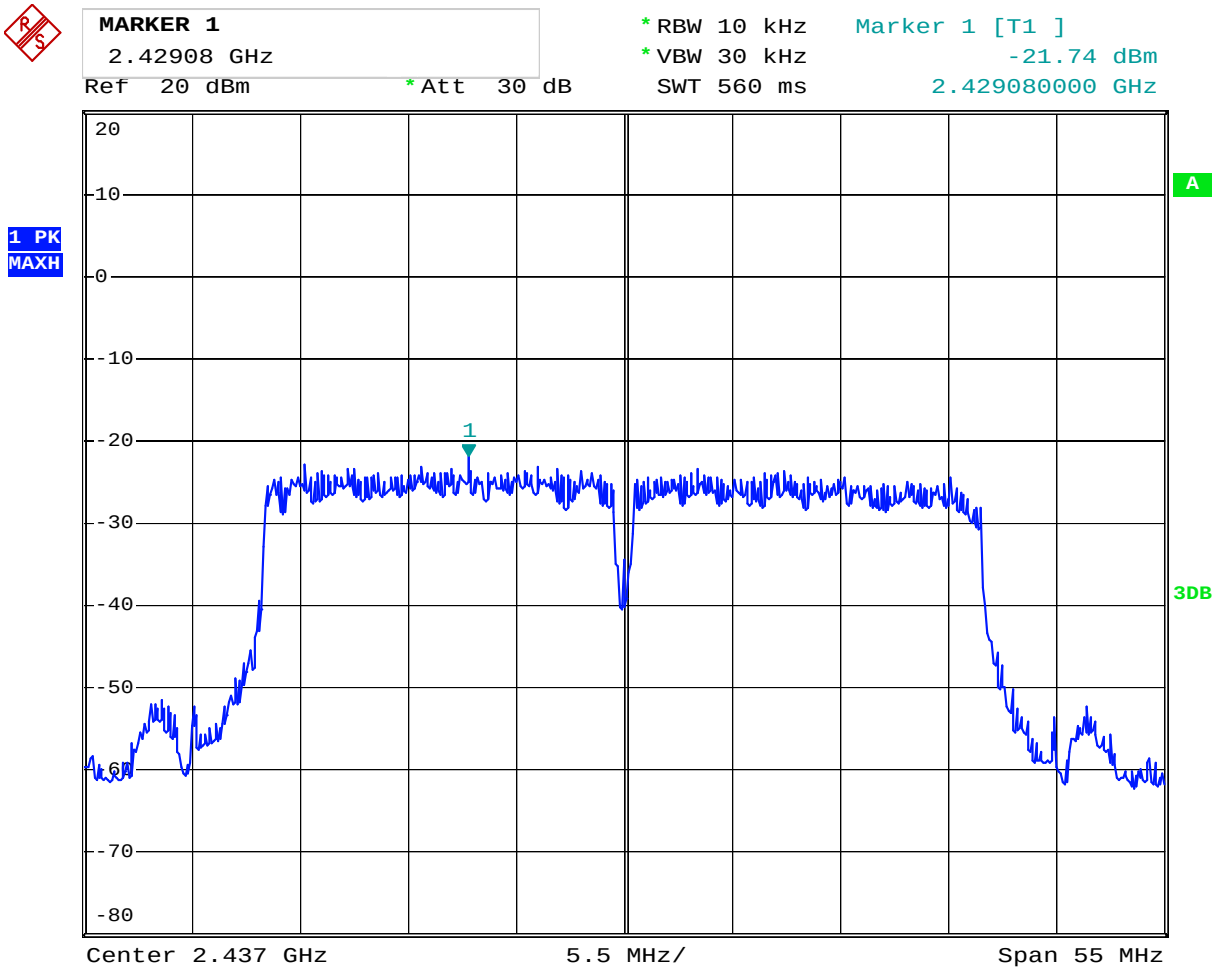
12. 802.11n at HT20 of CH11



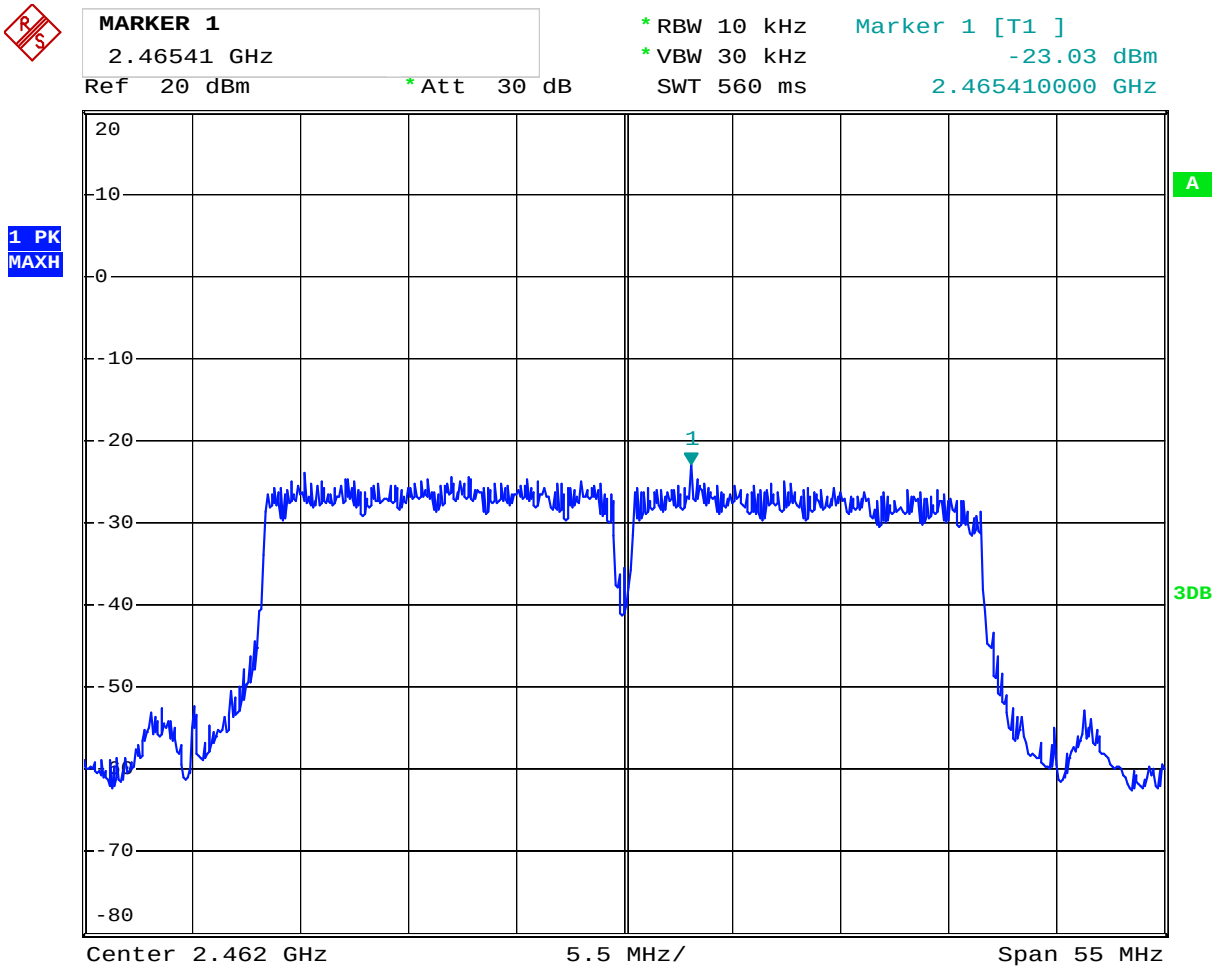
13. 802.11n at HT40 of CH01



14. 802.11n at HT40 of CH04

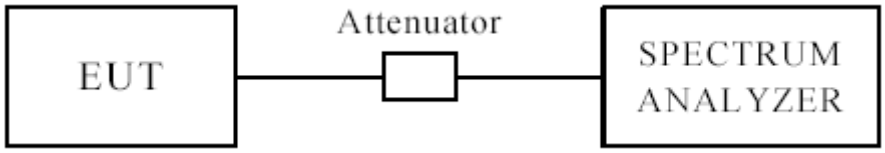


15. 802.11n at HT40 of CH07



10 Out of Band Measurement

10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test.(Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector)

For bandage test, the spectrum set as follows: RBW=VBW=100 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

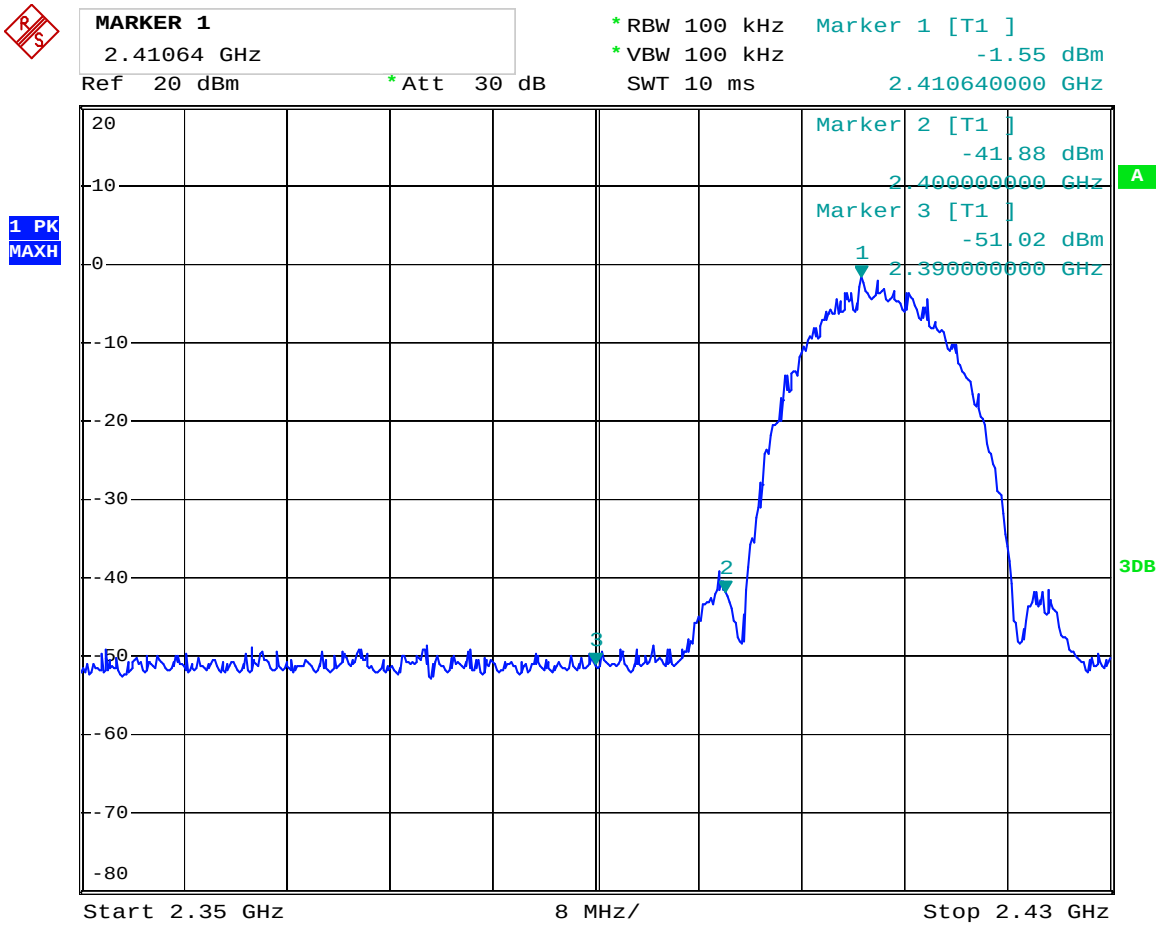
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	50.26	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)
2390	PK (dBμV/m)	39.53	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



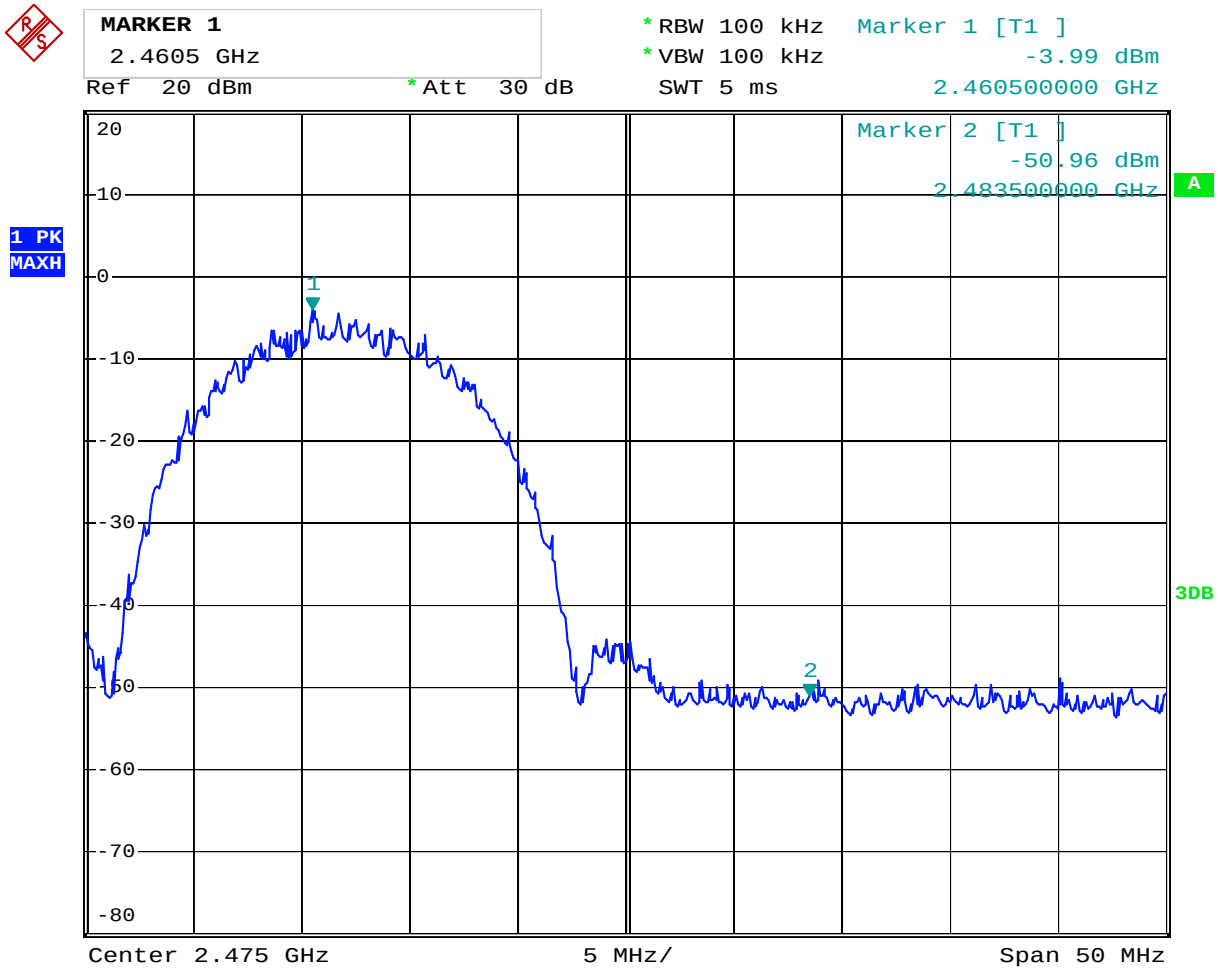
Note: The Max. FS in Restrict Band are measured in conventional method.

CH11 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	38.17	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



Note: The Max. FS in Restrict Band are measured in conventional method.

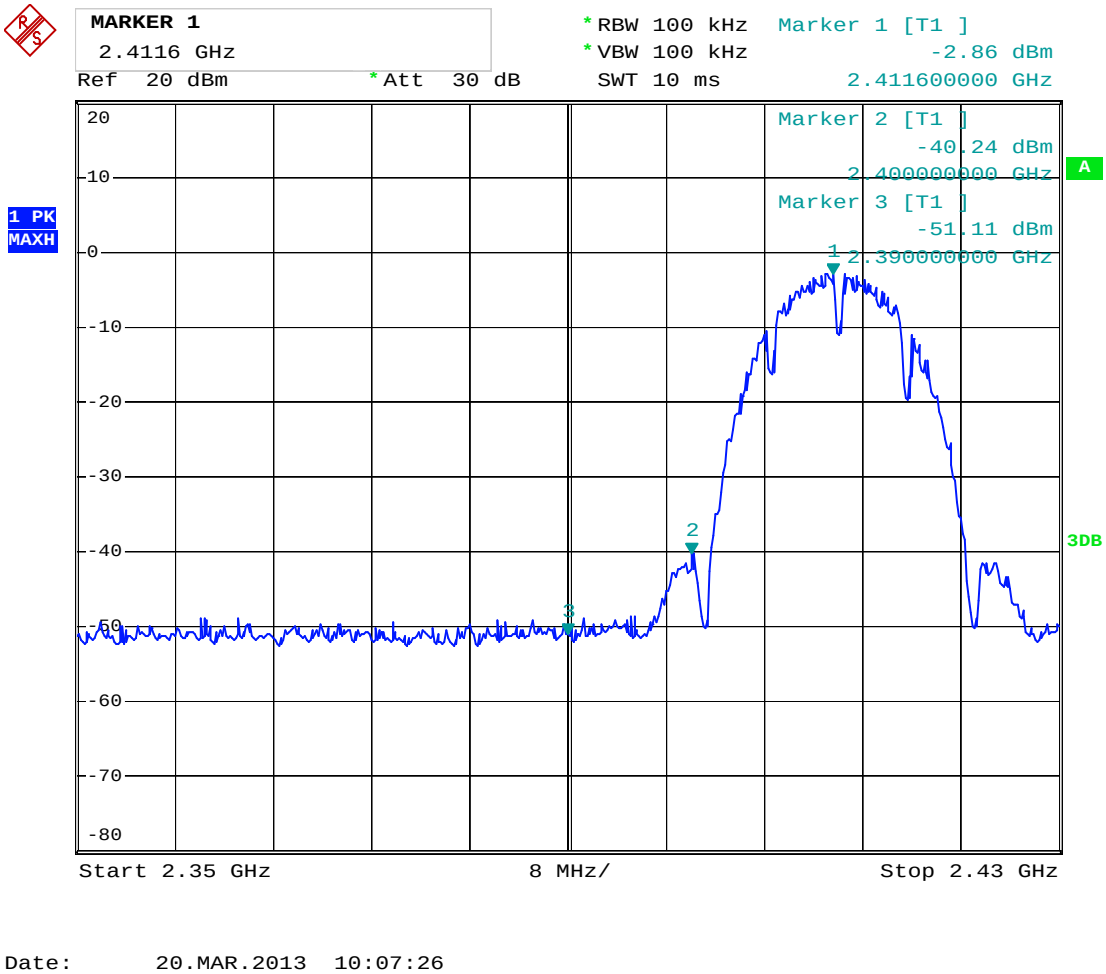
For 802.11b mode

CH01 at 1Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	48.87	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)
2390	PK (dBμV/m)	37.69	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



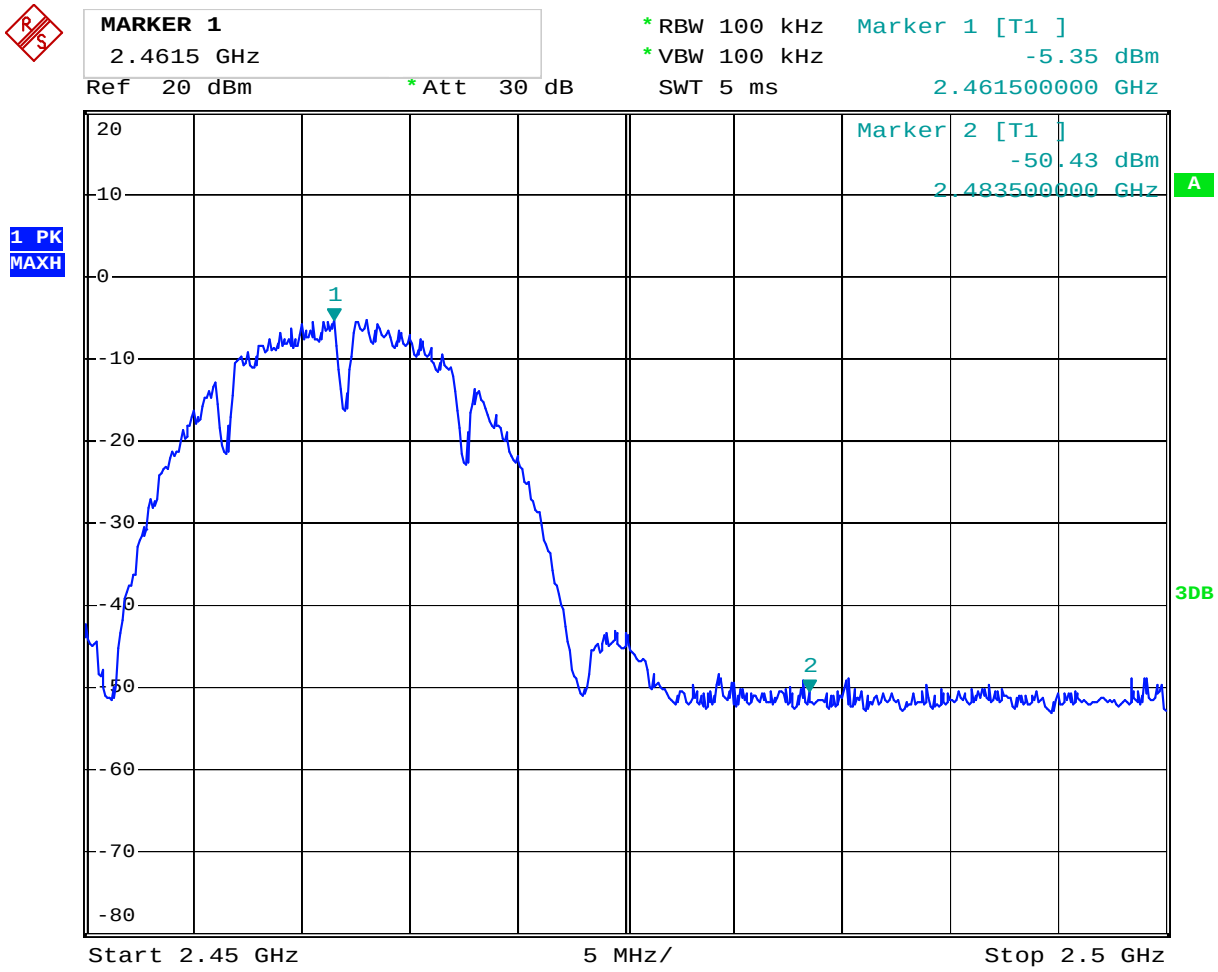
Note: The Max. FS in Restrict Band are measured in conventional method.

CH11 at 1Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	39.81	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



Date: 20.MAR.2013 10:41:17

Note: The Max. FS in Restrict Band are measured in conventional method.

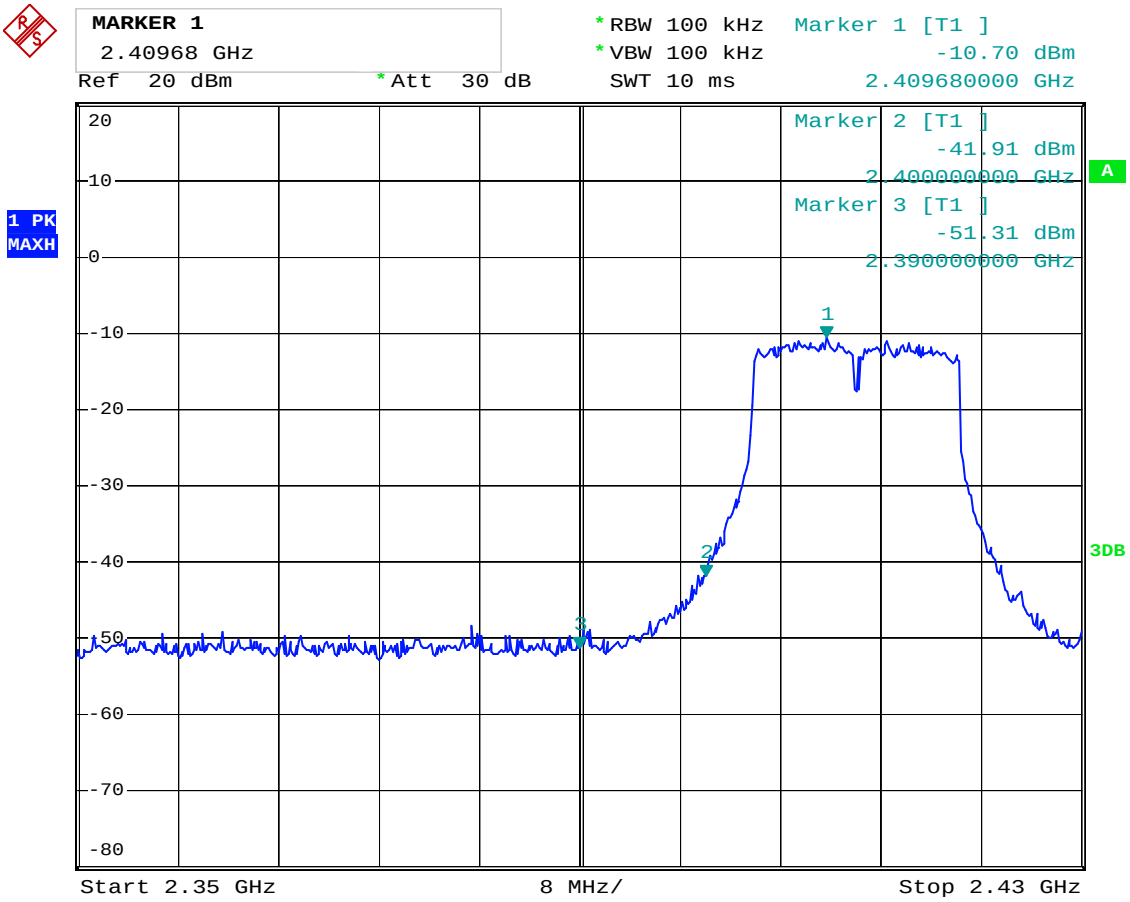
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	60.20	Limit	74(dBμV/m)
	AV (dBμV/m)	42.20		54(dBμV/m)
2390	PK (dBμV/m)	46.55	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



Date: 20.MAR.2013 10:07:58

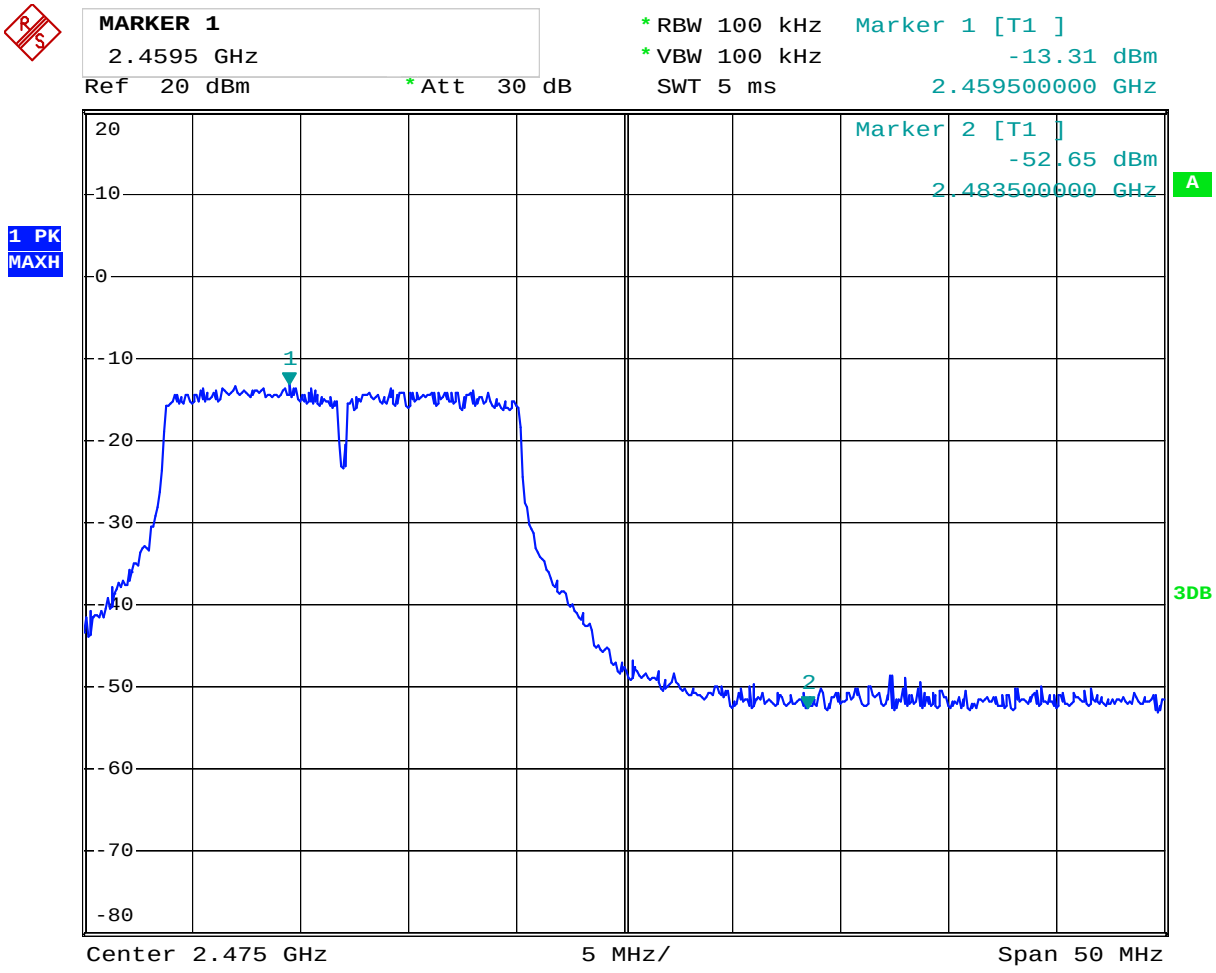
Note: The Max. FS in Restrict Band are measured in conventional method.

CH11 at 6Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	42.16	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



Date: 20.MAR.2013 10:41:59

Note: The Max. FS in Restrict Band are measured in conventional method.

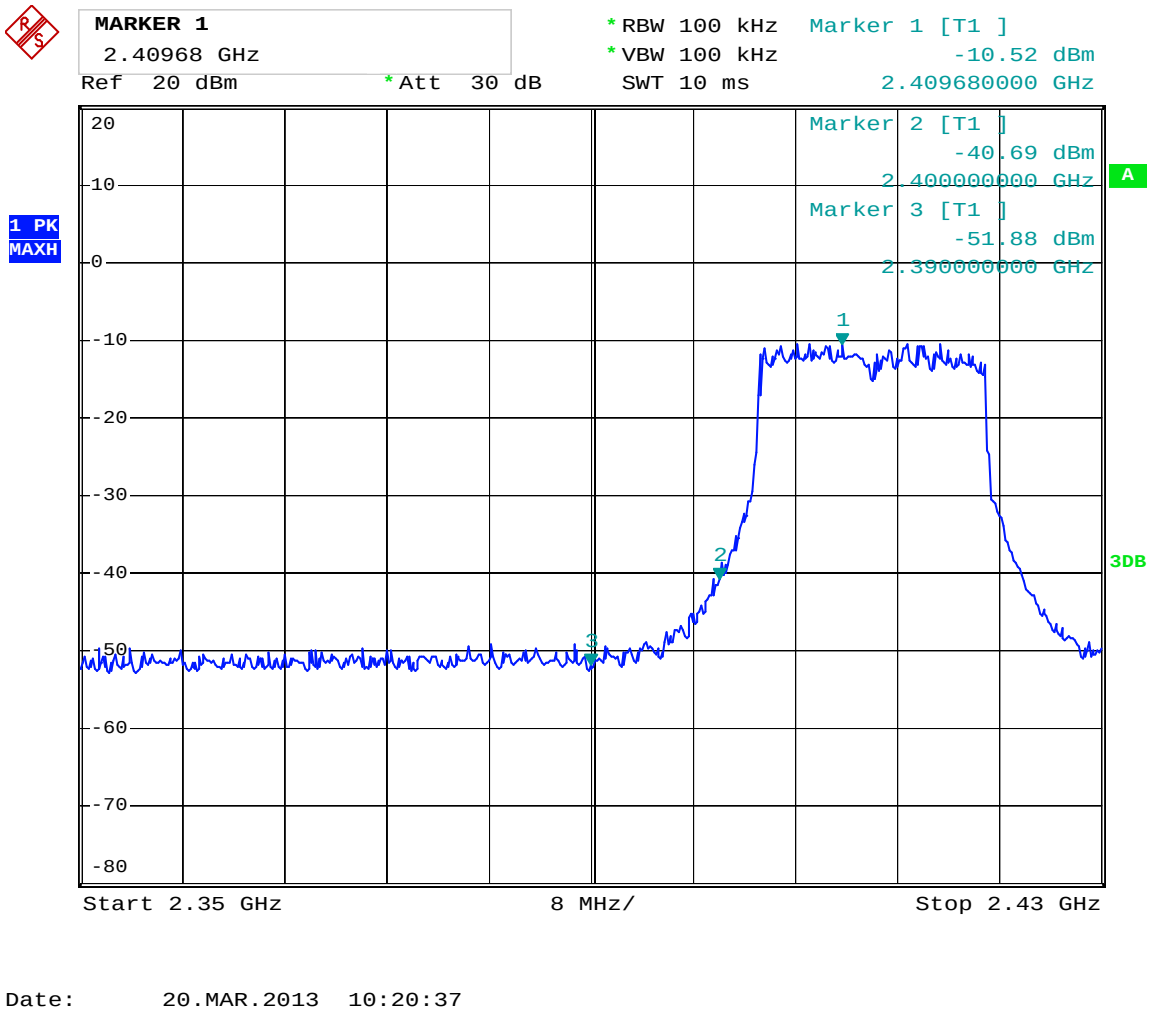
For 802.11n (HT20) mode

CH01 at 65Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	62.33	Limit	74(dBμV/m)
	AV (dBμV/m)	44.72		54(dBμV/m)
2390	PK (dBμV/m)	47.26	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



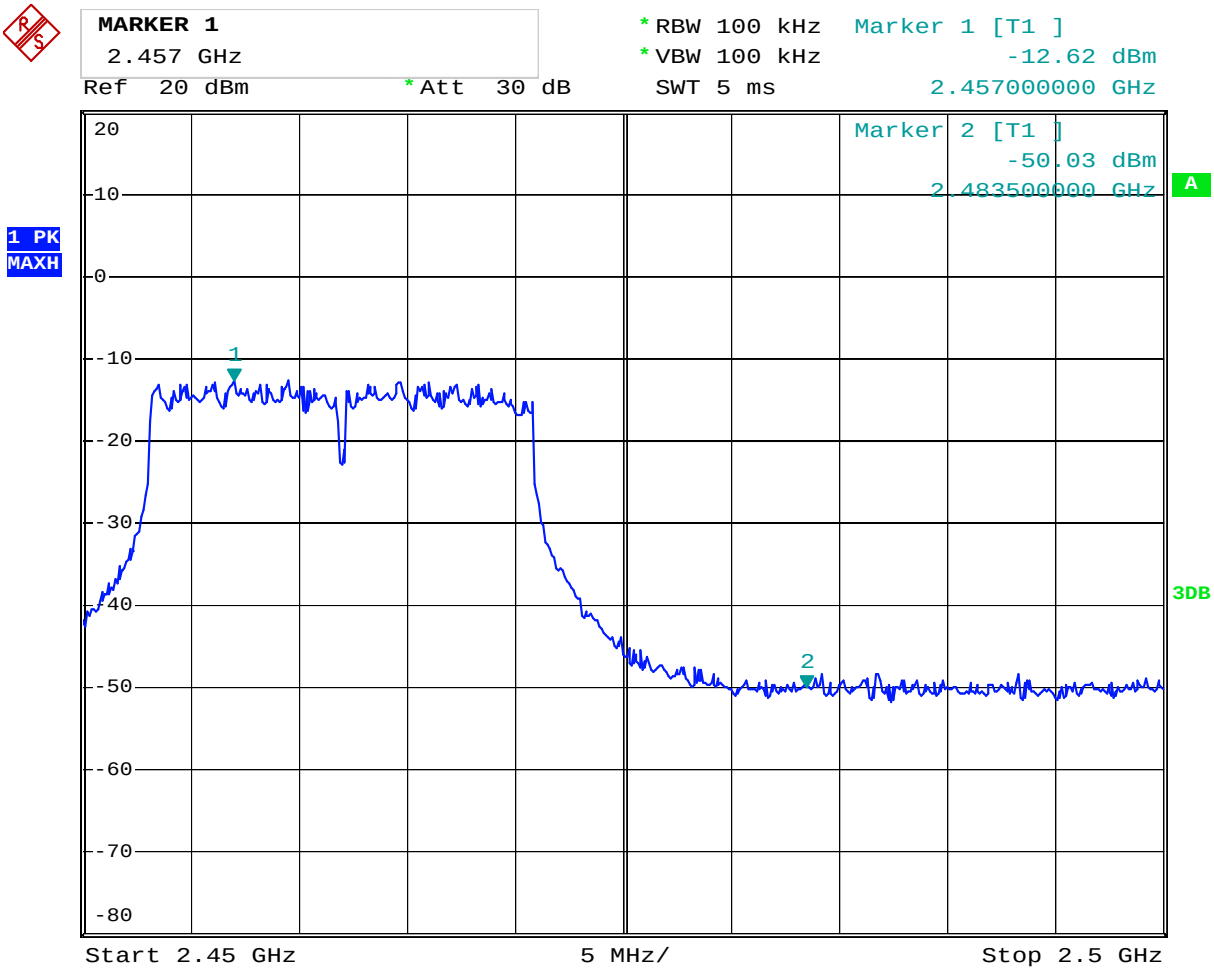
Note: The Max. FS in Restrict Band are measured in conventional method.

CH11 at 65Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	43.53	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



Date: 20.MAR.2013 10:40:53

Note: The Max. FS in Restrict Band are measured in conventional method.

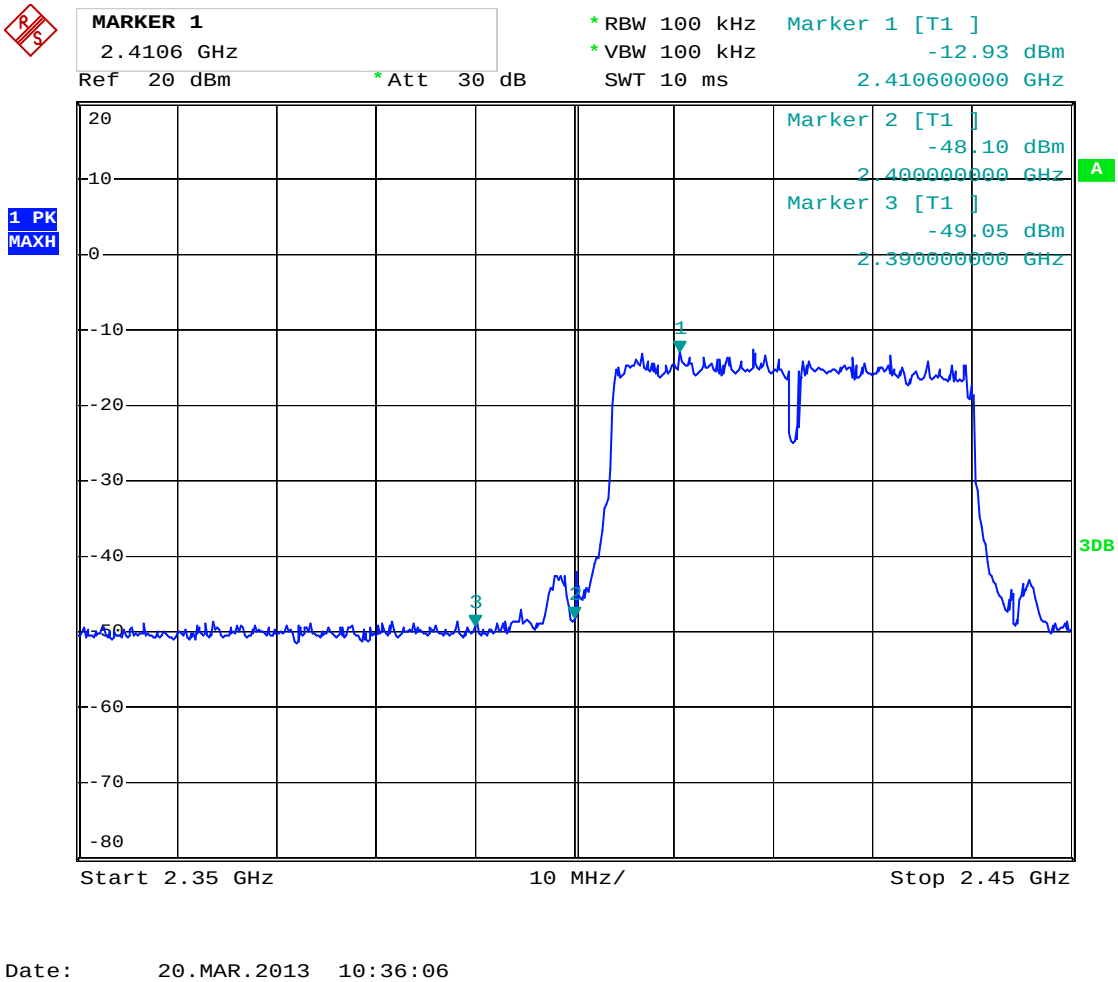
For 802.11n (HT40) mode

CH01 at 65Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	59.17	Limit	74(dBμV/m)
	AV (dBμV/m)	42.38		54(dBμV/m)
2390	PK (dBμV/m)	44.62	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



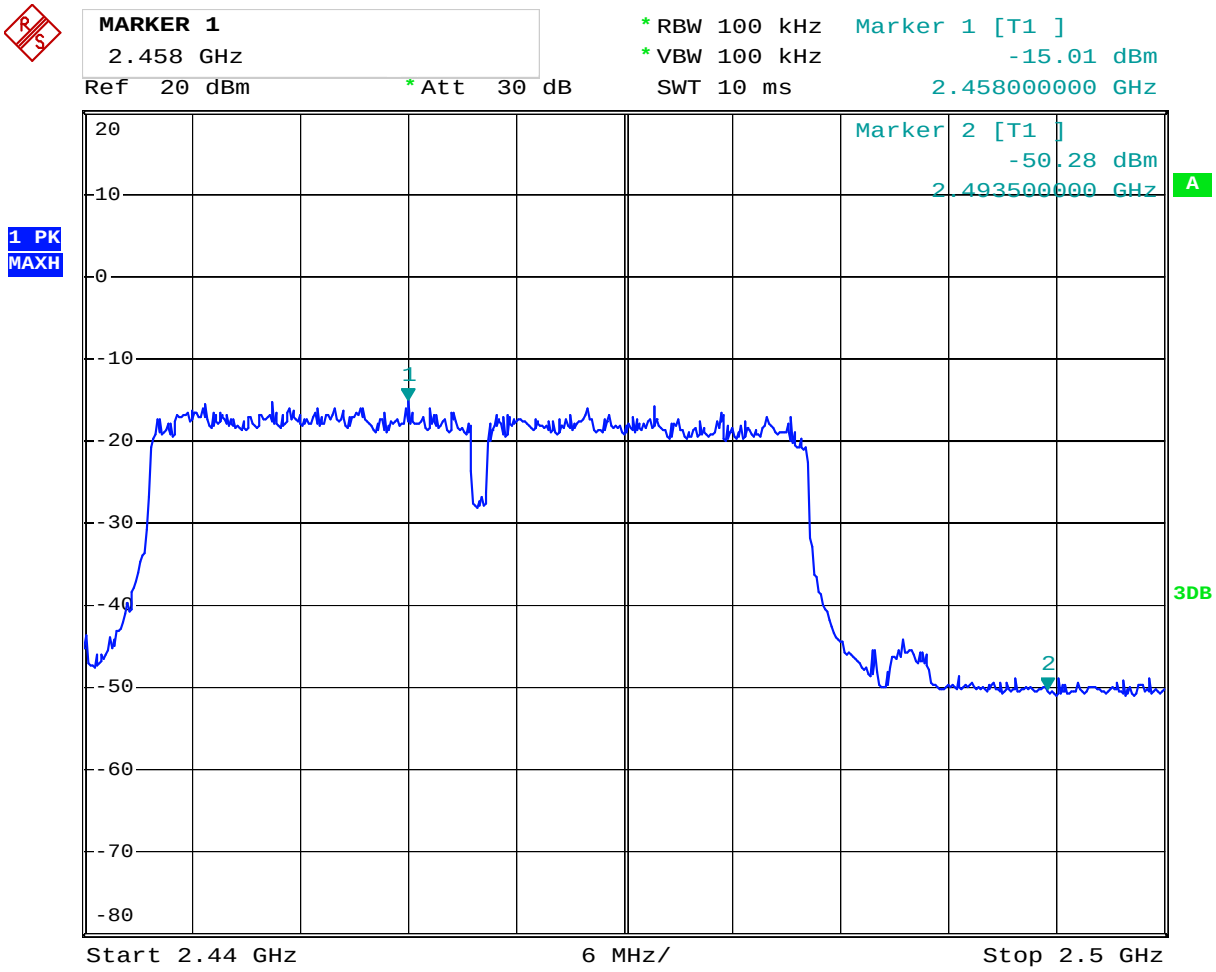
Note: The Max. FS in Restrict Band are measured in conventional method.

CH7 at 65Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Advertising Displayer		Model	TAD101-A TAD151-A TAD181-A TAD215-A TAD151-G
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	42.76	Limit	74(dBμV/m)
	AV (dBμV/m)	--		54(dBμV/m)

Test Figure:



Note: The Max. FS in Restrict Band are measured in conventional method.

11.0 Antenna Requirement

11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Antenna Connected construction

Dipole Antenna used. The maximum Gain of the antennas is 3.0dBi.

\

12.0 FCC ID Label

FCC ID: 2AACS-TAD10151821

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

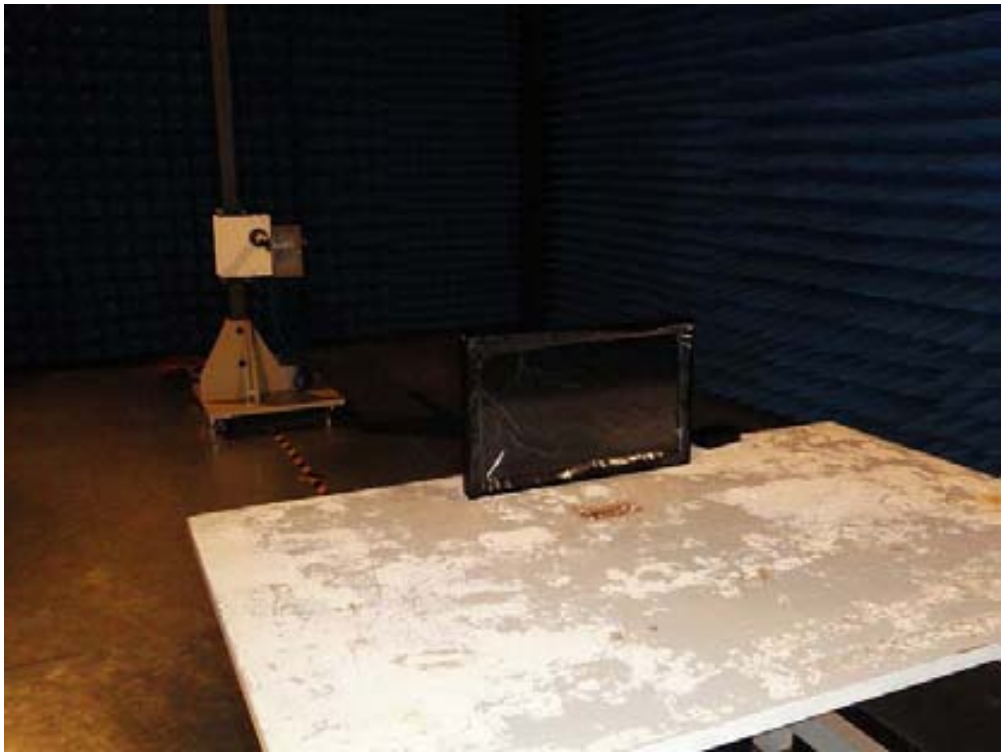
The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:

13.0 Photo of testing

Conducted Emission Test Setup:

Radiated Emission Test Setup:



Photographs – EUT

Model No.: TAD215-A

Model No.: TAD215-A

Model No.: TAD215-A

Model No.: TAD101-A

Model No.: TAD101-A

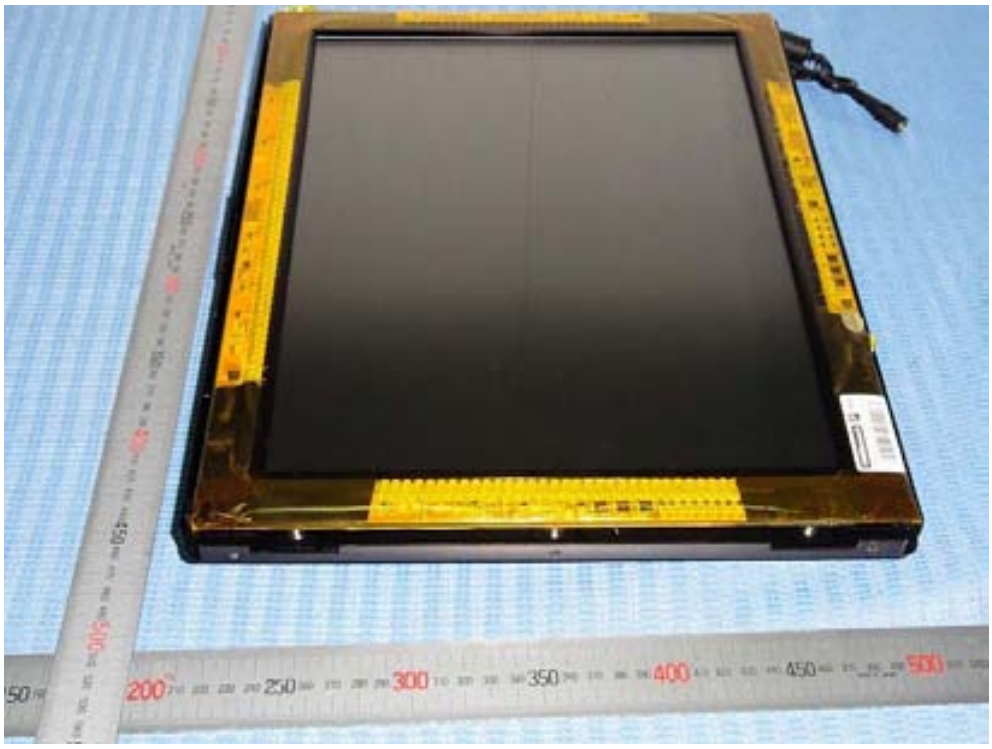
Model No.: TAD101-A

Model No.: TAD101-A

Model No.: TAD151-A

Model No.: TAD151-A

Model No.: TAD151-A



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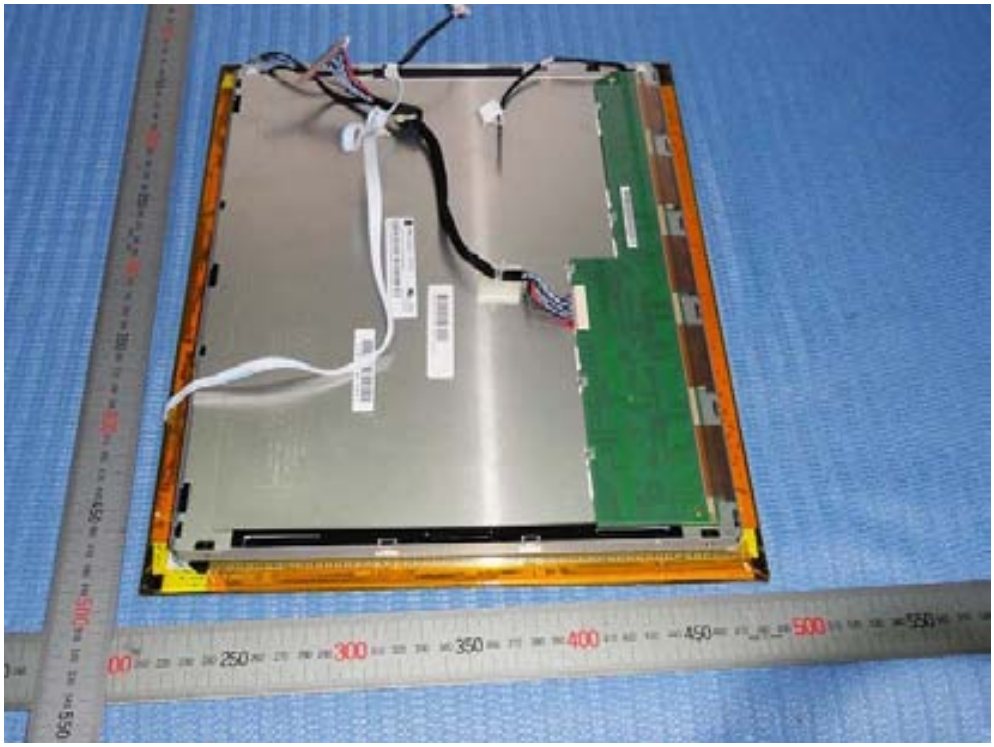


Model No.: TAD181-A

Model No.: TAD181-A

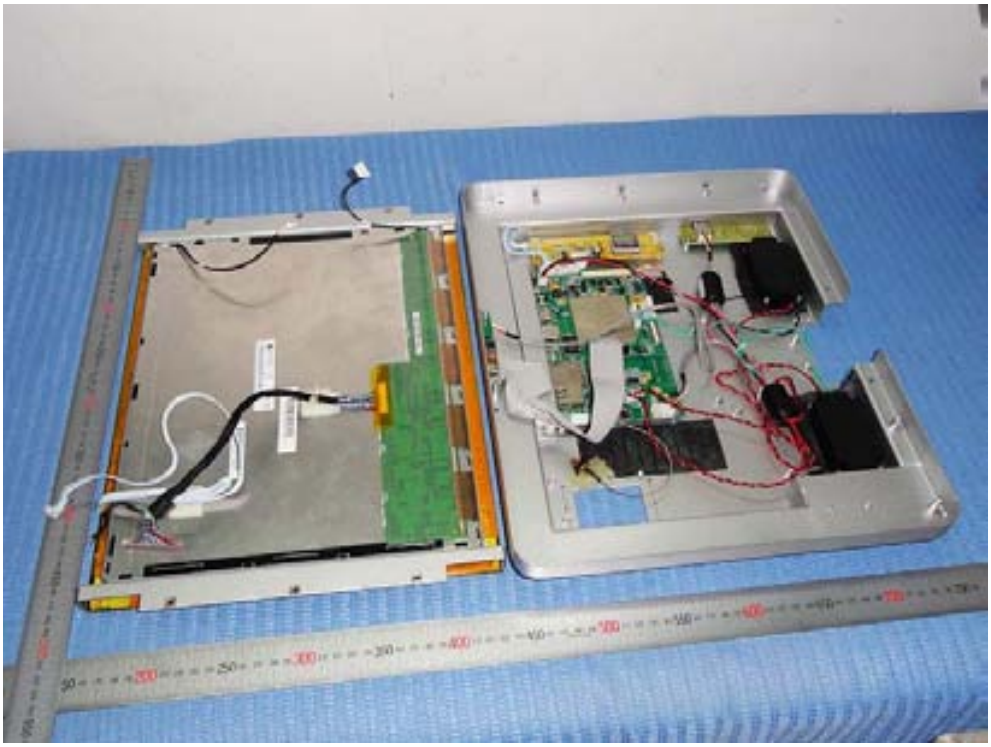
Model No.: TAD181-A

Photographs - EUT

Model No.: TAD151-G

Model No.: TAD151-G

Model No.: TAD151-G



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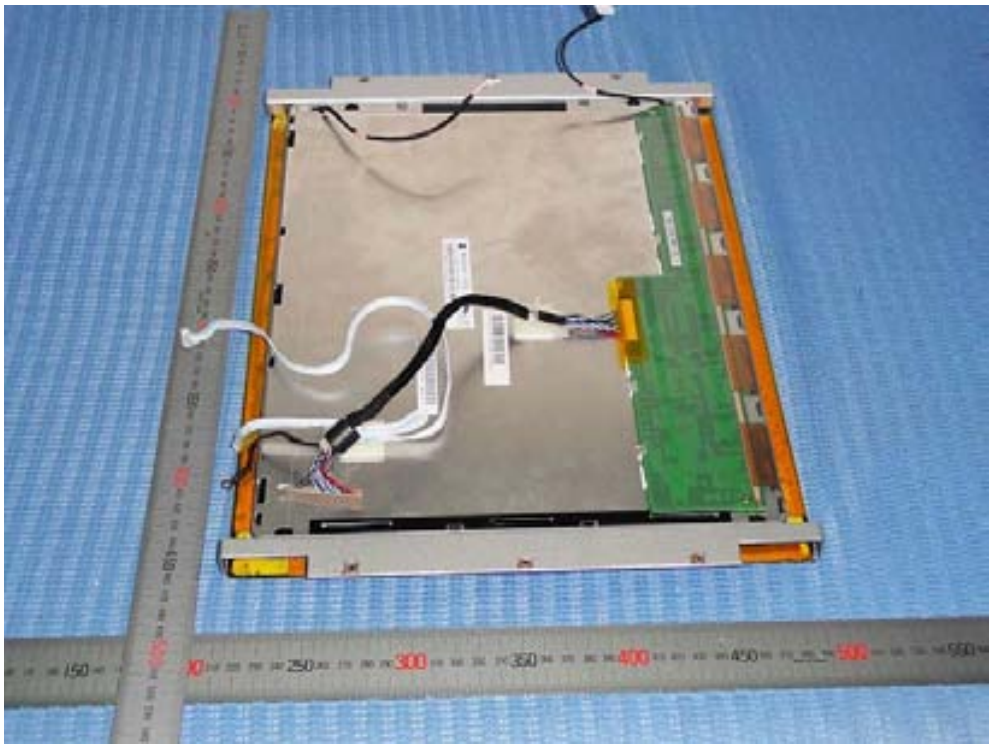

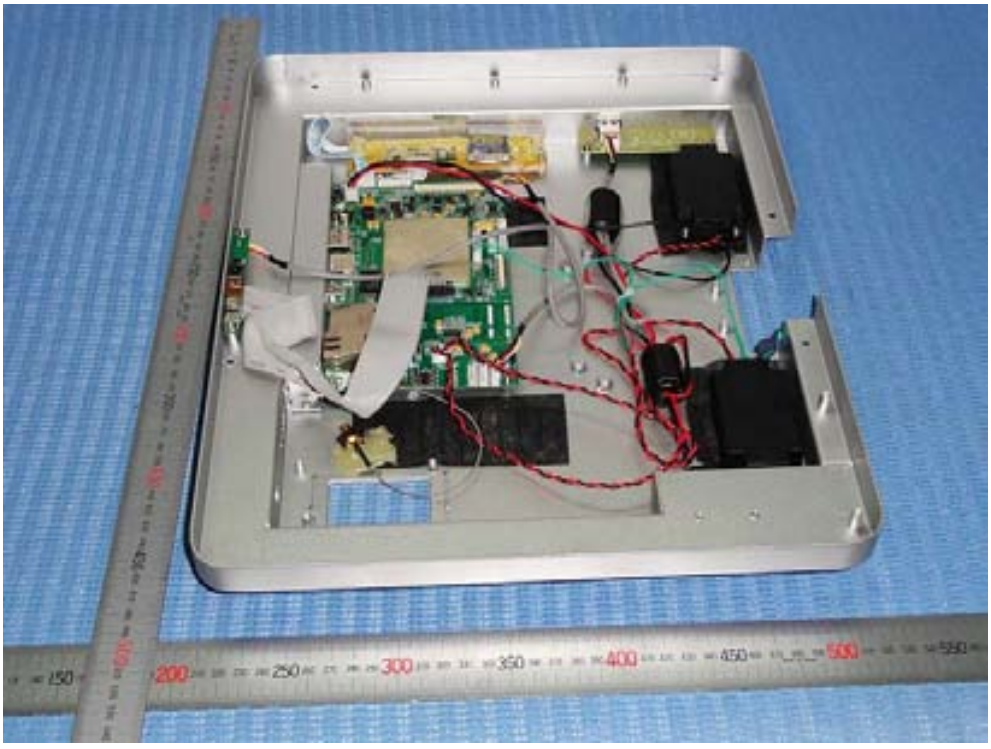

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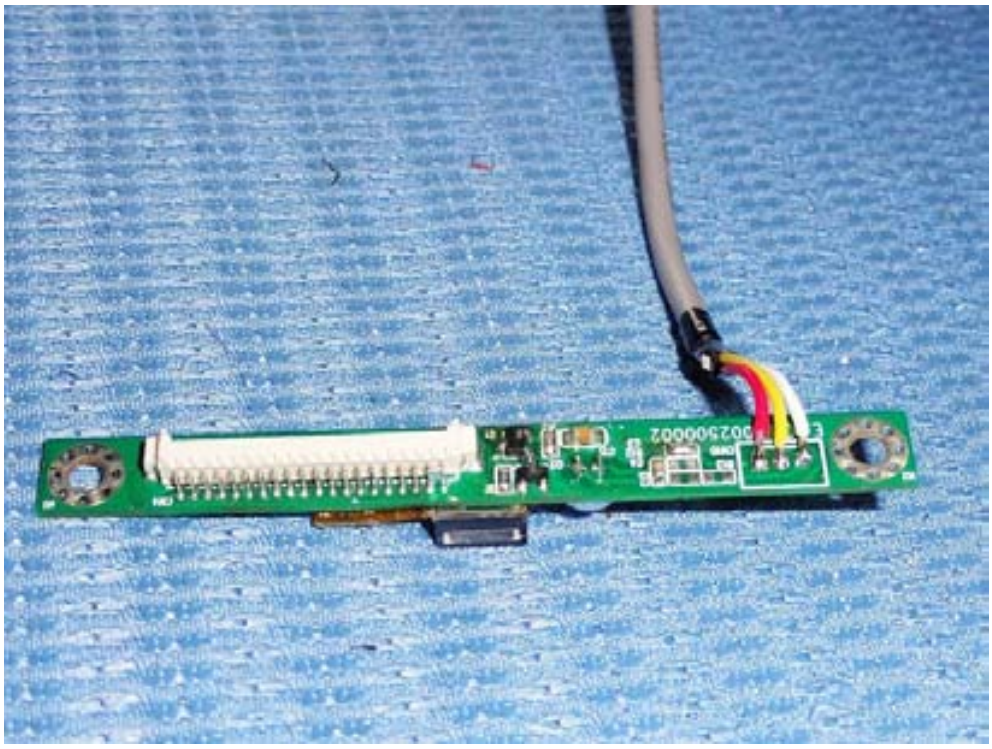

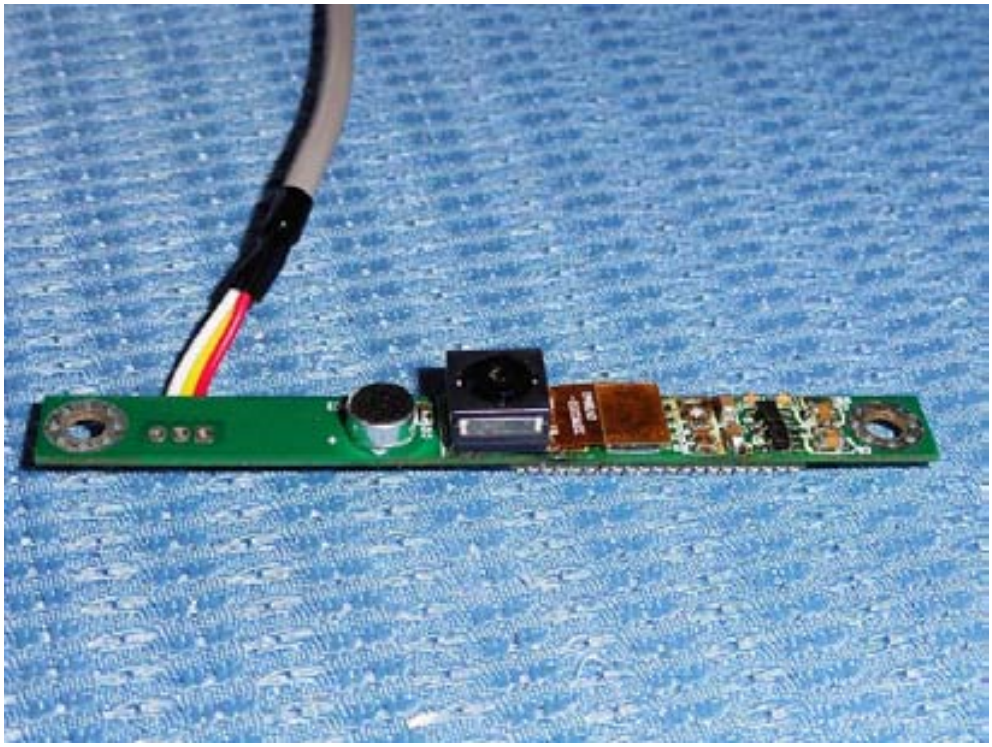

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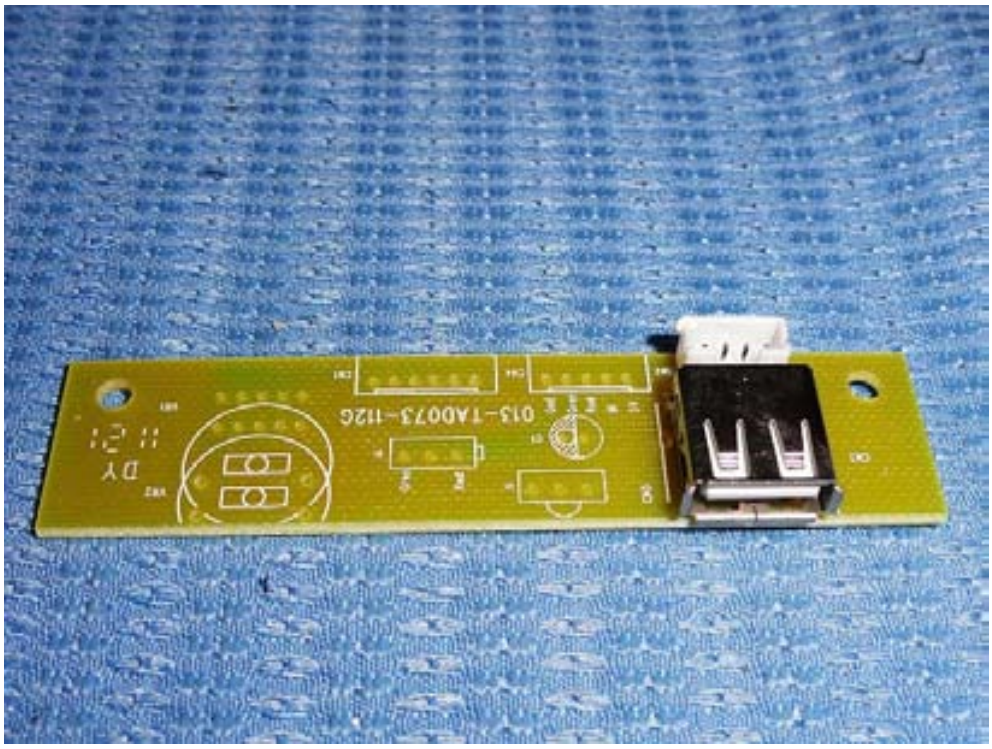

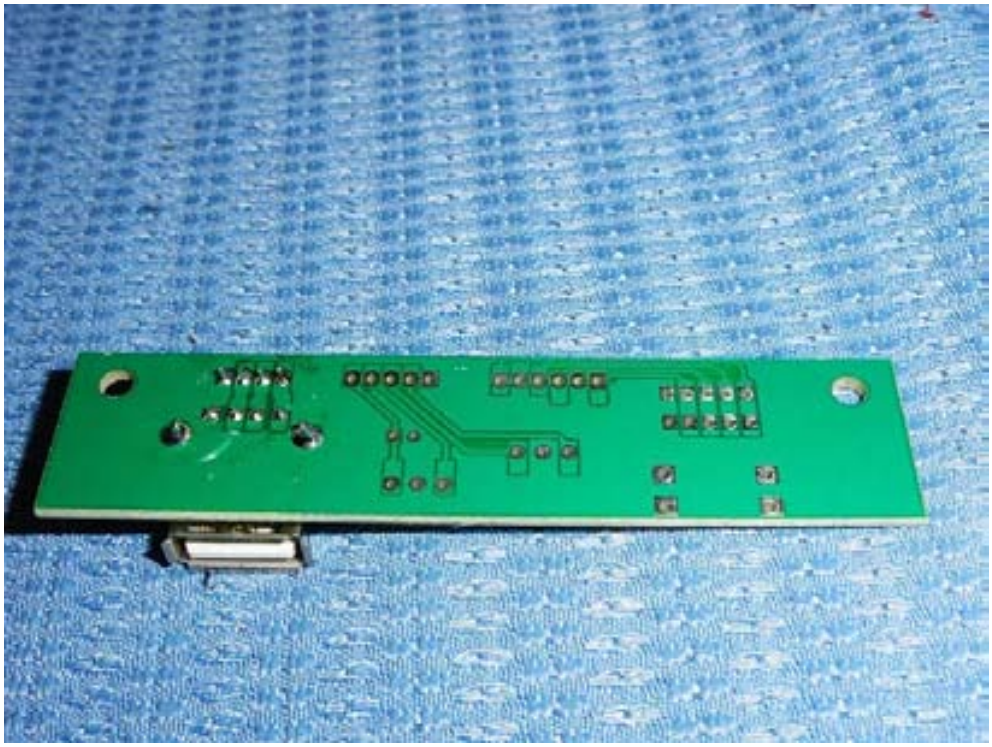

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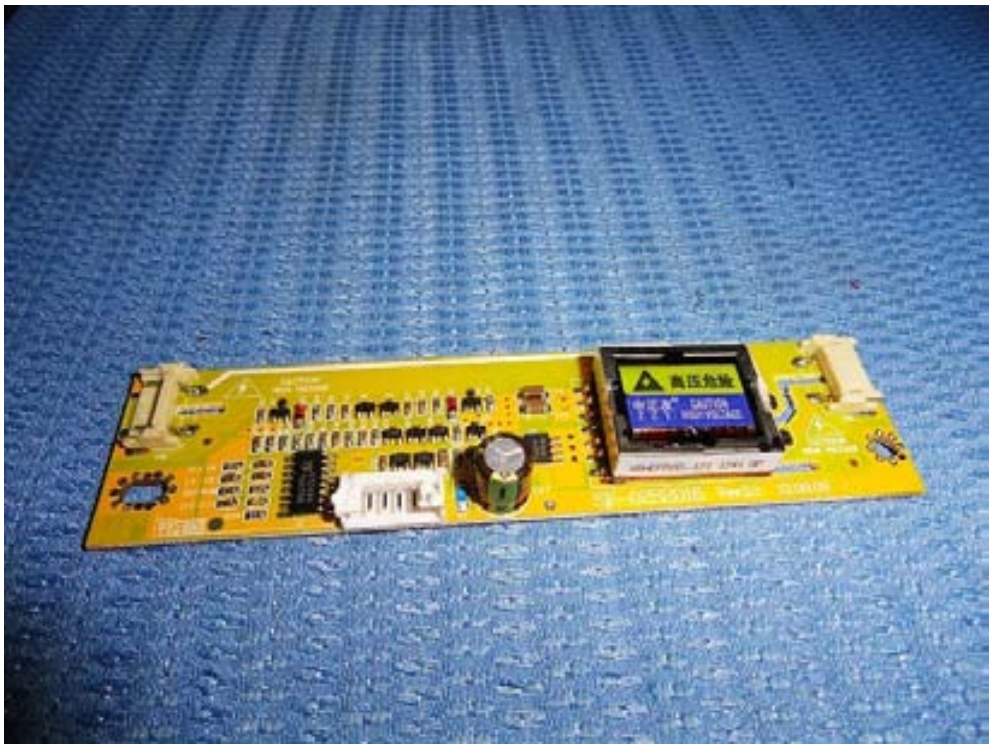
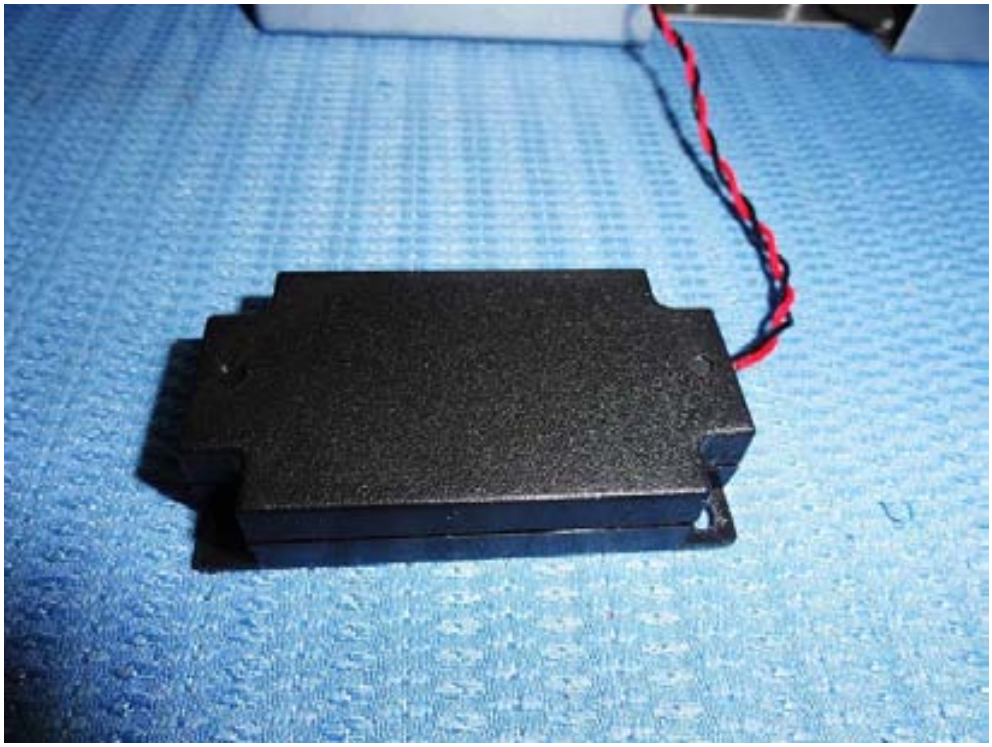


Model No.: TAD151-G



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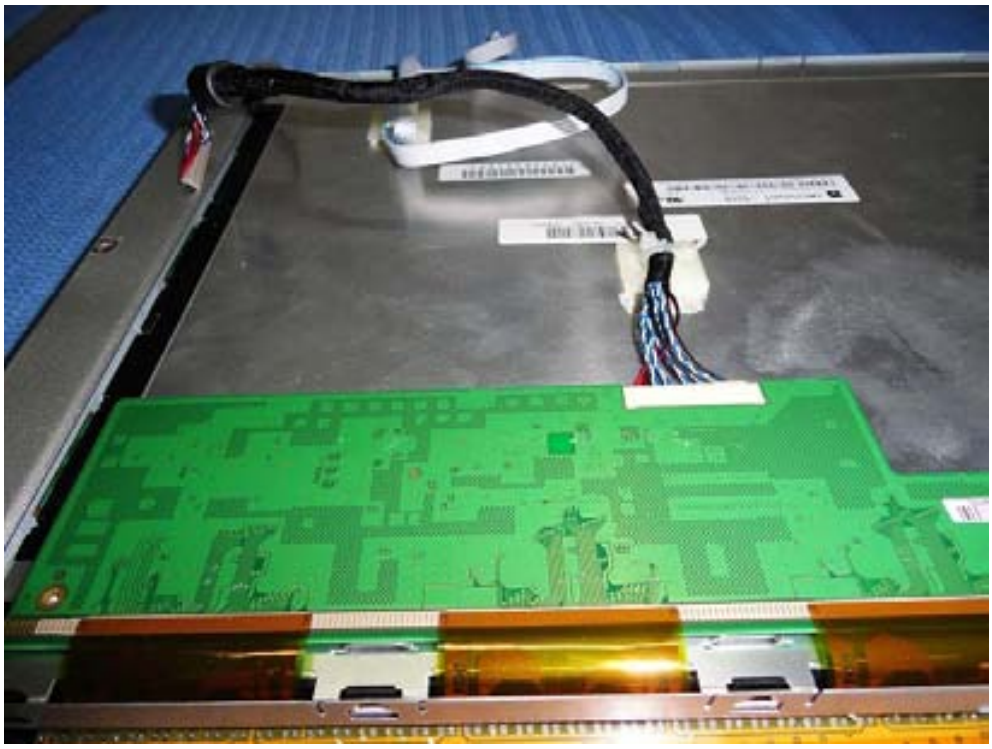
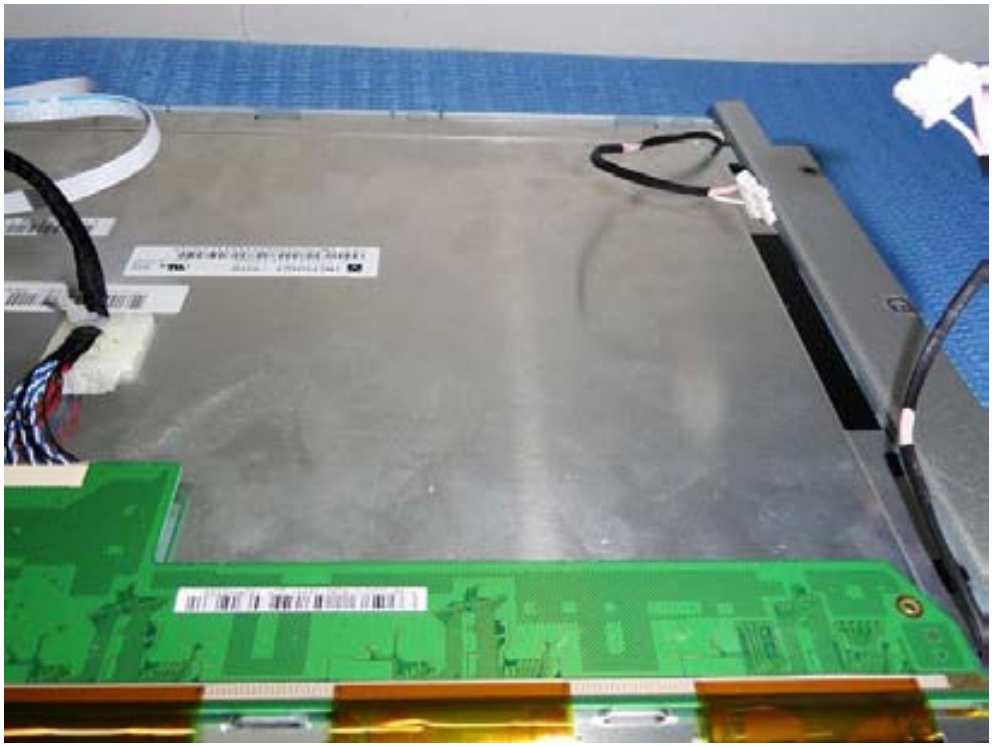
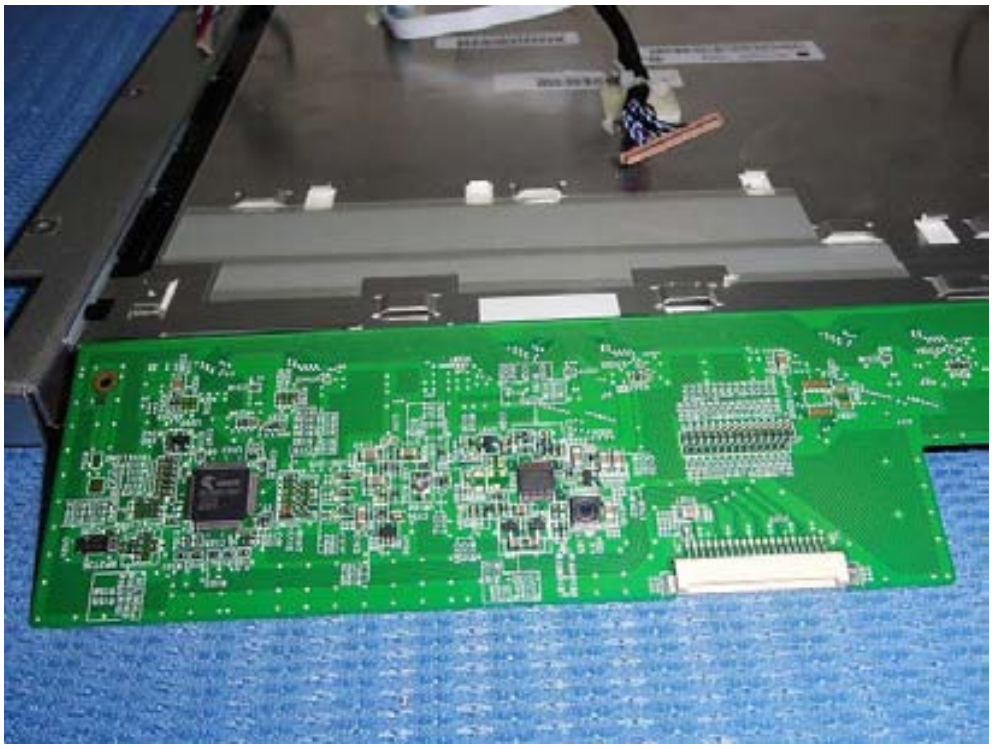
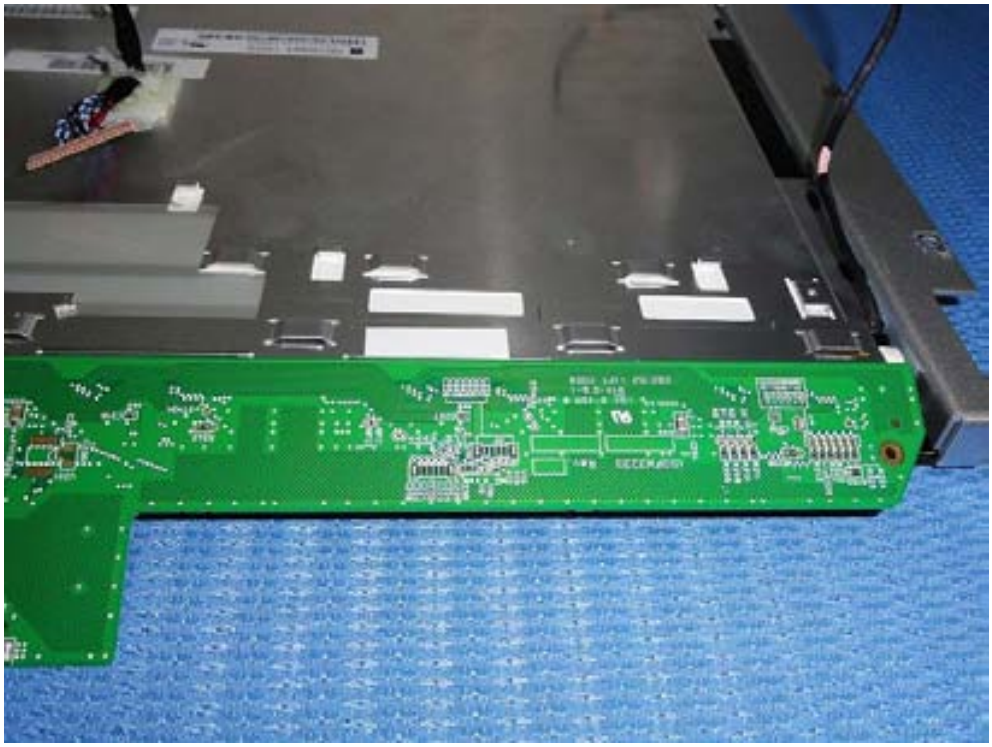


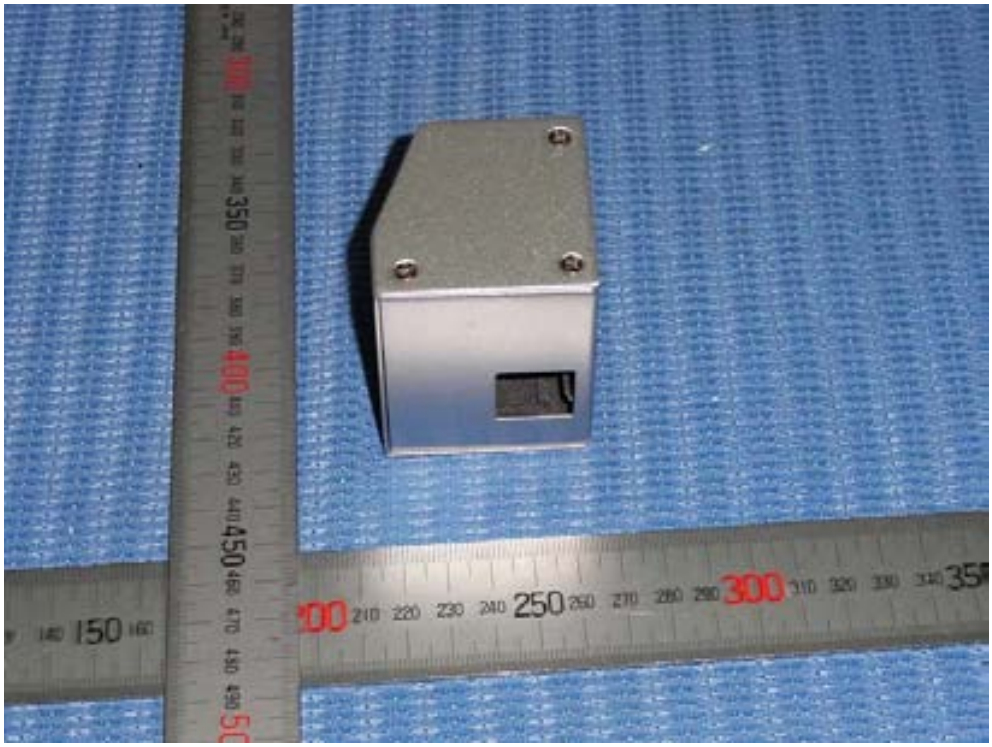


Model No.: TAD151-G





Model No.: TAD151-G



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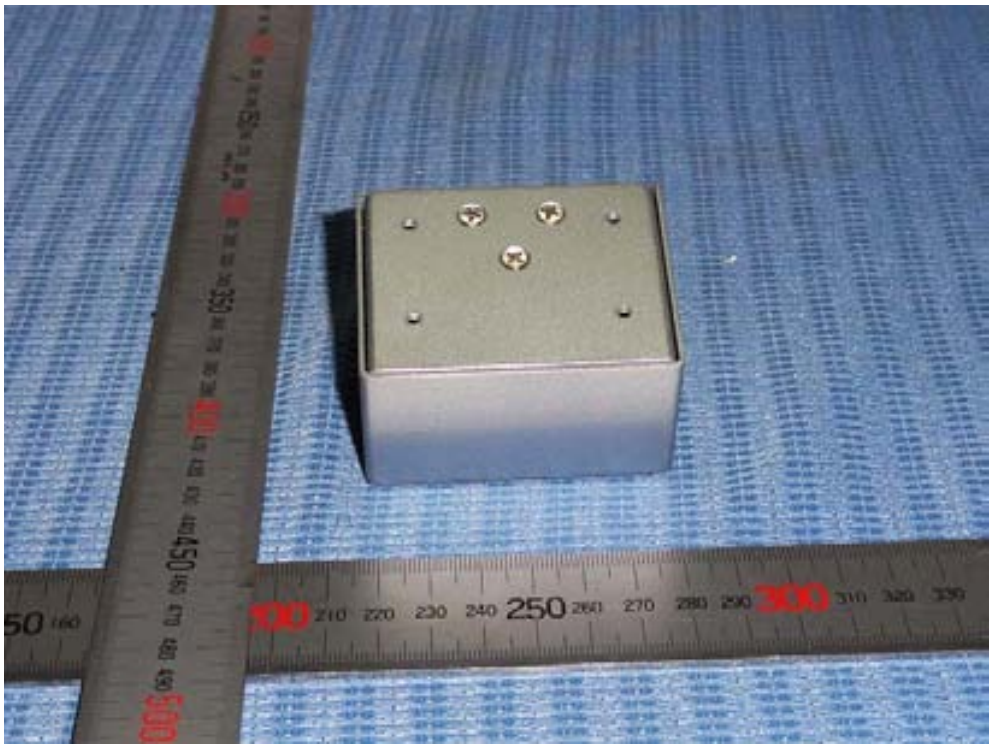

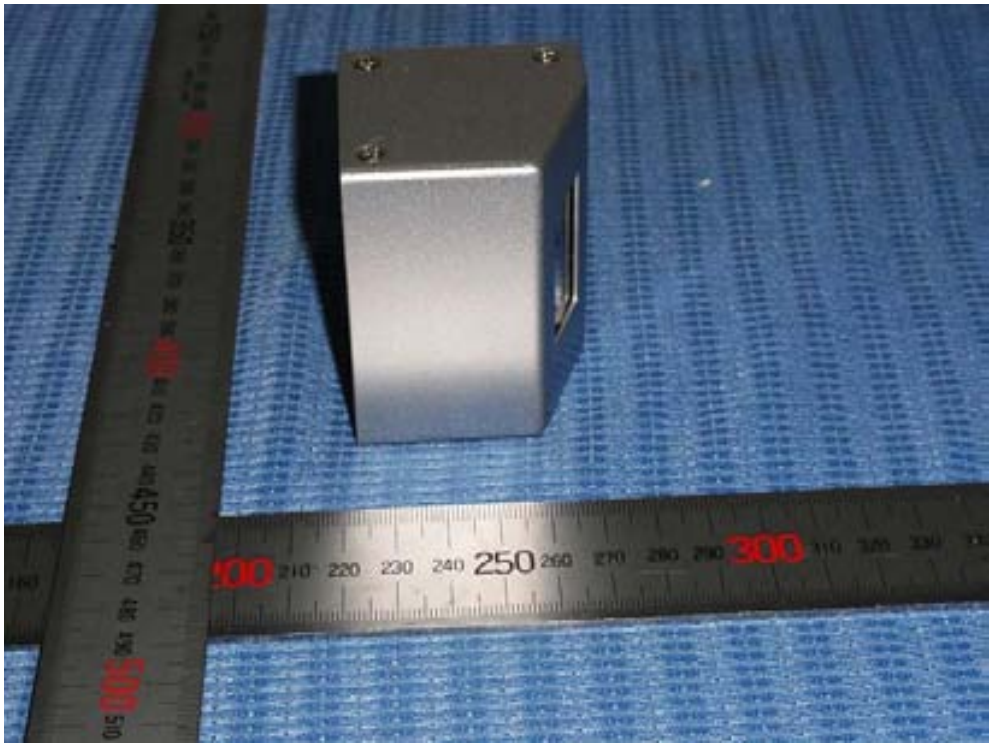

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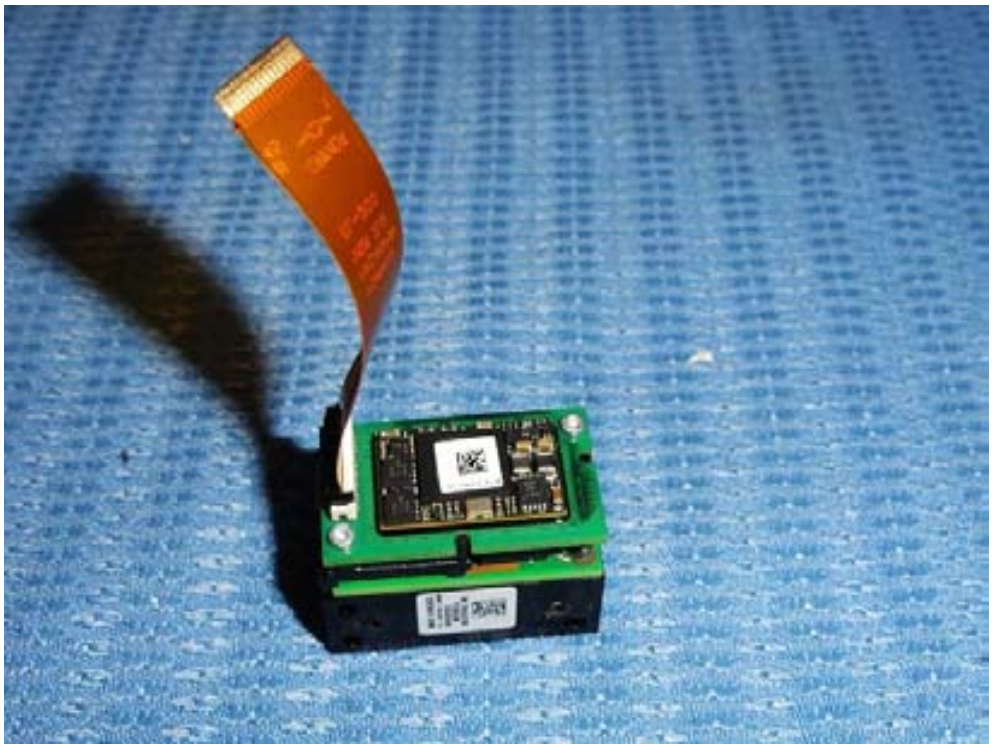

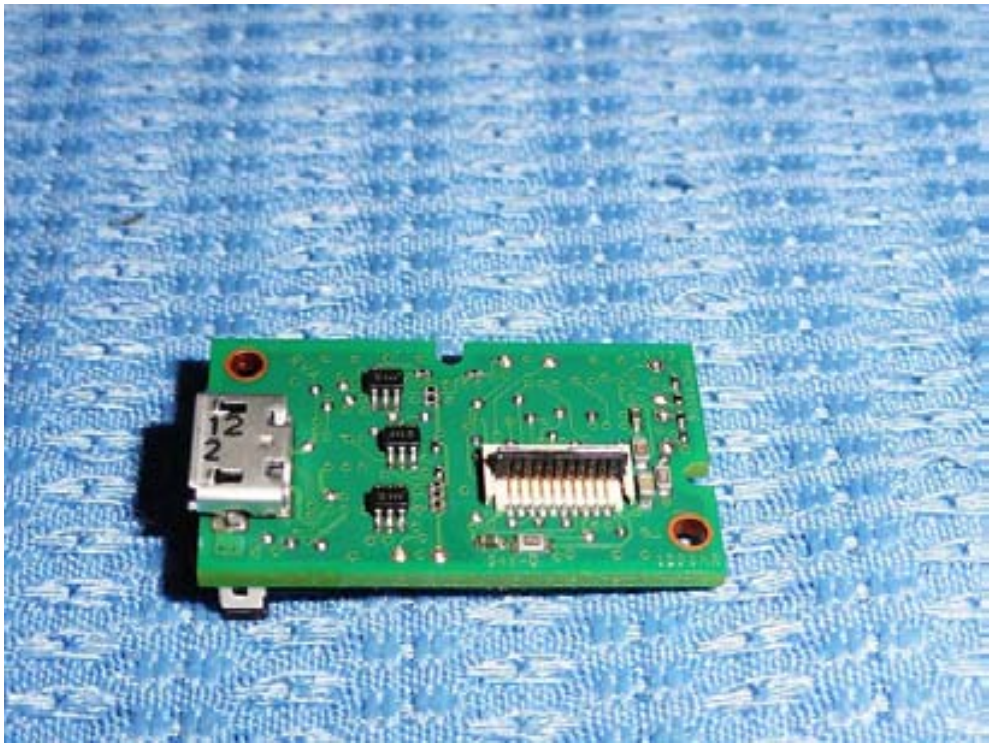

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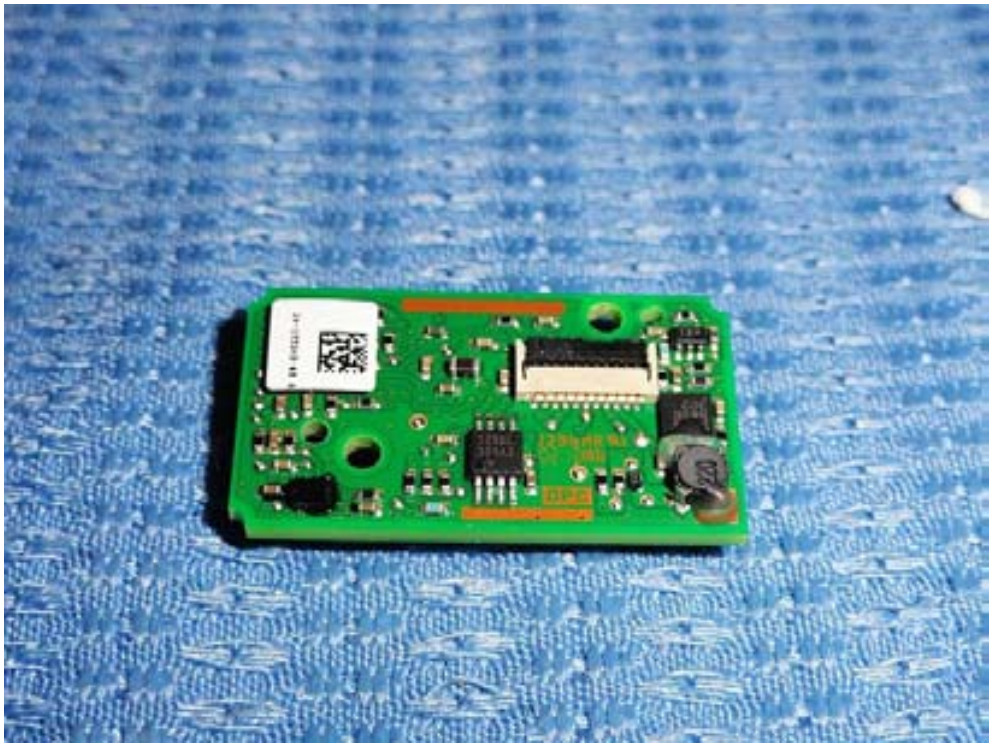

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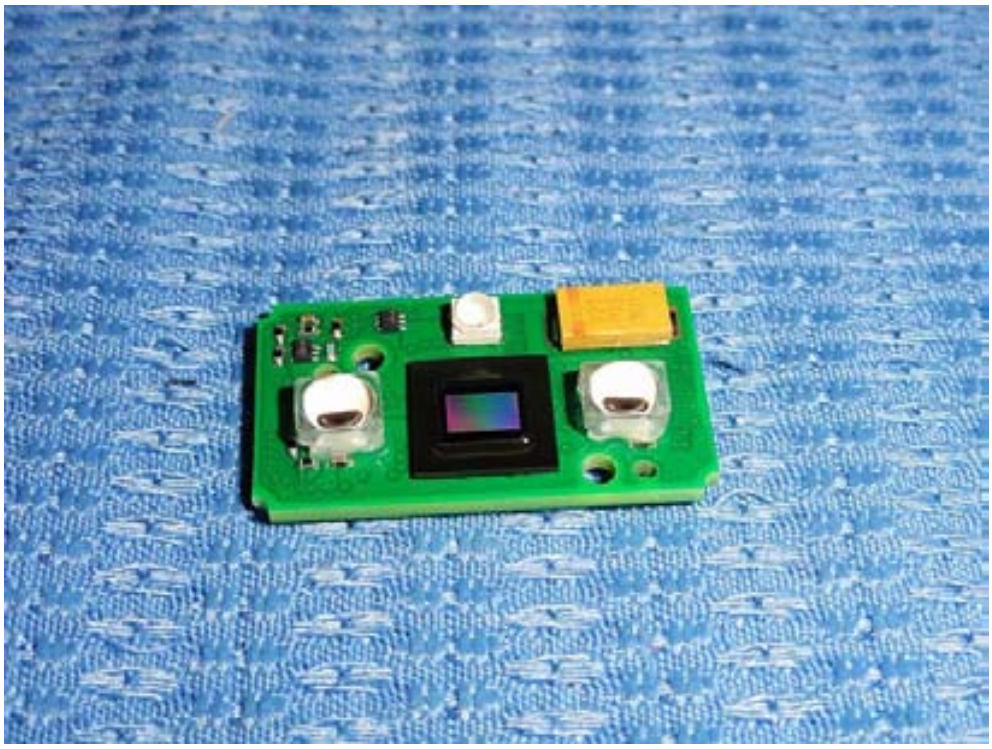

Main Board Schematics

Main Board Schematics

End of the report