



8.3 MAXIMUM PERMISSIBLE EXPOSURE

According to FCC 1.1310 : The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b) LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time
(A) Limits for Occupational / Control Exposures				
300-1,500	--	--	F/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Population / Uncontrol Exposures				
300-1,500	--	--	F/1500	6
1,500-100,000	--	--	1	30

CALCULATIONS

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

**LIMIT**Power Density Limit, $S=1.0\text{mW}/\text{cm}^2$ **TEST RESULTS**

No non-compliance noted.

Antenna Gain	4.04 dBi
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$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$

Once Antenna Gain=4.04dBi=2.53512863mW

IEEE 802.11b	=	0.0796 *	91.6220	*	2.53512863	÷ 400 =	0.04622
IEEE 802.11g	=	0.0796 *	134.2765	*	2.53512863	÷ 400 =	0.06774
IEEE 802.11n HT20	=	0.0796 *	145.2112	*	2.53512863	÷ 400 =	0.07326
IEEE 802.11n HT40	=	0.0796 *	164.8162	*	2.53512863	÷ 400 =	0.08315

Mode	Minimum separation distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Power Density Limit (mW/cm ²)	Power Density at 20cm (mW/cm ²)
IEEE 802.11b	20	19.62	91.62	4.04	1.00	0.046222
IEEE 802.11g	20	21.28	134.28	4.04	1.00	0.067741
IEEE 802.11n HT20	20	21.62	145.21	4.04	1.00	0.073258
IEEE 802.11n HT40	20	22.17	164.82	4.04	1.00	0.083148

REMARK: For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm² even if the calculation indicates that the power density would be larger.



Antenna Gain	2.0 dBi
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$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$

Once Antenna Gain=2.0dBi=1.58489319mW

IEEE 802.11b	=	0.0796 *	140.6048	*	1.58489319	÷ 400 =	0.04435
IEEE 802.11g	=	0.0796 *	187.9317	*	1.58489319	÷ 400 =	0.05927
IEEE 802.11n HT20	=	0.0796 *	211.3489	*	1.58489319	÷ 400 =	0.06666
IEEE 802.11n HT40	=	0.0796 *	194.0886	*	1.58489319	÷ 400 =	0.06121

Mode	Minimum separation distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Power Density Limit (mW/cm ²)	Power Density at 20cm (mW/cm ²)
IEEE 802.11b	20	21.48	140.60	2.00	1.00	0.044346
IEEE 802.11g	20	22.74	187.93	2.00	1.00	0.059272
IEEE 802.11n HT20	20	23.25	211.35	2.00	1.00	0.066658
IEEE 802.11n HT40	20	22.88	194.09	2.00	1.00	0.061214

REMARK: For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm² even if the calculation indicates that the power density would be larger.

Antenna Gain	2.35 dBi
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$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$

Once Antenna Gain=2.35dBi=1.71790839mW

IEEE 802.11b	=	0.0796 *	112.2018	*	1.71790839	÷ 400 =	0.03836
IEEE 802.11g	=	0.0796 *	151.3561	*	1.71790839	÷ 400 =	0.05174
IEEE 802.11n HT20	=	0.0796 *	162.9296	*	1.71790839	÷ 400 =	0.0557
IEEE 802.11n HT40	=	0.0796 *	126.7652	*	1.71790839	÷ 400 =	0.04334

Mode	Minimum separation distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Power Density Limit (mW/cm ²)	Power Density at 20cm (mW/cm ²)
IEEE 802.11b	20	20.50	112.20	2.35	1.00	0.038358
IEEE 802.11g	20	21.80	151.36	2.35	1.00	0.051743
IEEE 802.11n HT20	20	22.12	162.93	2.35	1.00	0.055700
IEEE 802.11n HT40	20	21.03	126.77	2.35	1.00	0.043336

REMARK: For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm² even if the calculation indicates that the power density would be larger.



8.4 POWER SPECTRAL DENSITY

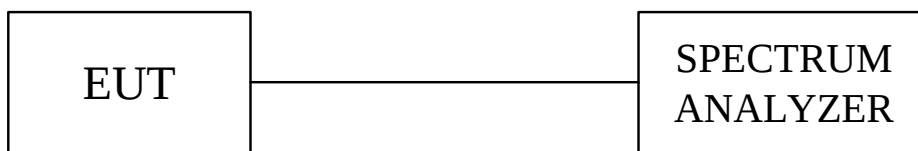
LIMIT

§ 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST EQUIPMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	R&S	FSU	200789	SEP. 29, 2013

TEST SETUP



TEST PROCEDURE

The tests were performed in accordance with KDB 558074 5.3.1.

5.3.1 Measurement Procedure PKPSD:

1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
2. Set the RBW = 100 kHz.
3. Set the VBW $\geq$ 300 kHz.
4. Set the span to 5-30 % greater than the EBW.
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 power level in any 100 kHz band segment within the fundamental EBW.
10. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3 \text{ kHz}/100 \text{ kHz} = -15.2 \text{ dB})$.
11. The resulting peak PSD level must be $\leq 8 \text{ dBm}$.

**TEST RESULTS**

Antenna Gain	4.04 dBi
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IEEE 802.11b mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	4.40	-15.2	-10.80	8.00	-18.80	PASS
Middle	2437	4.91	-15.2	-10.29	8.00	-18.29	PASS
High	2462	4.70	-15.2	-10.50	8.00	-18.50	PASS

NOTE : 1. At final test to get the worst-case emission at 1Mbps long.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	-2.35	-15.2	-17.55	8.00	-25.55	PASS
Middle	2437	-0.65	-15.2	-15.85	8.00	-23.85	PASS
High	2462	-1.03	-15.2	-16.23	8.00	-24.23	PASS

NOTE : 1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11n HT20 mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	-0.82	-15.2	-16.02	8.00	-24.02	PASS
Middle	2437	-0.73	-15.2	-15.93	8.00	-23.93	PASS
High	2462	-0.48	-15.2	-15.68	8.00	-23.68	PASS

NOTE : 1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

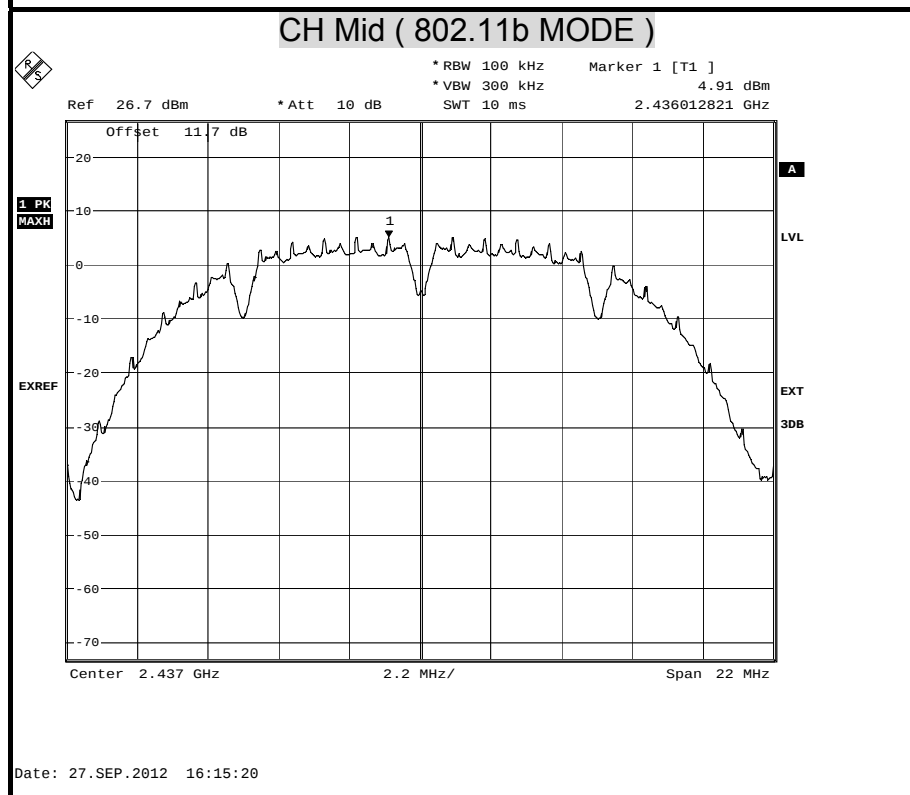
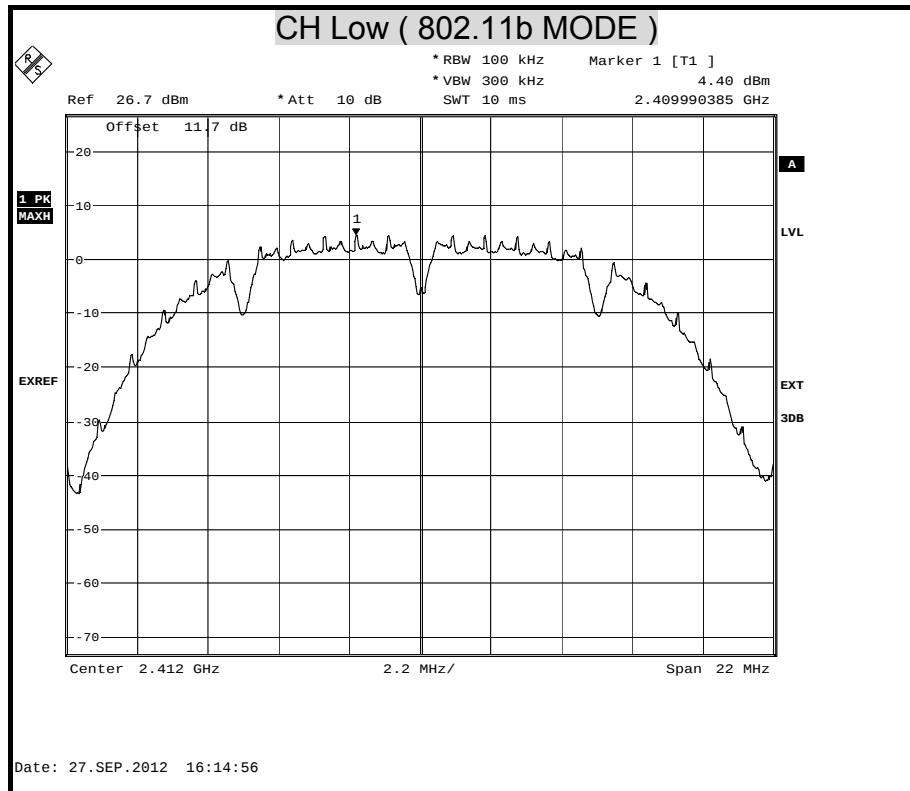
IEEE 802.11n HT40 mode

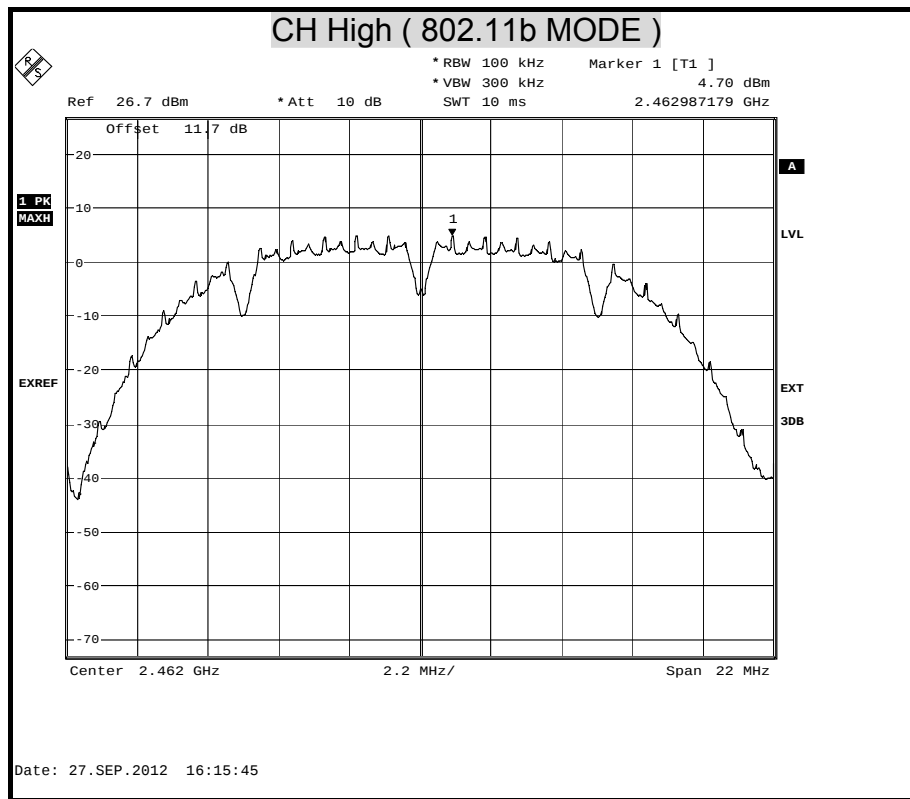
Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2422	-5.02	-15.2	-20.22	8.00	-28.22	PASS
Middle	2437	-3.61	-15.2	-18.81	8.00	-26.81	PASS
High	2452	-2.98	-15.2	-18.18	8.00	-26.18	PASS

NOTE : 1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.



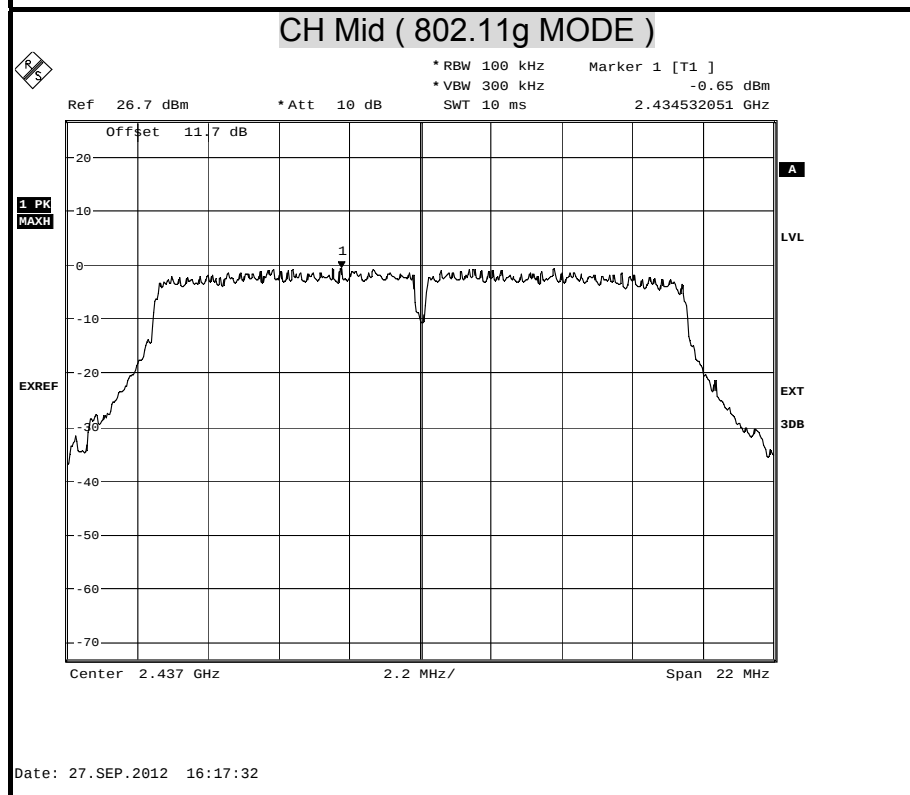
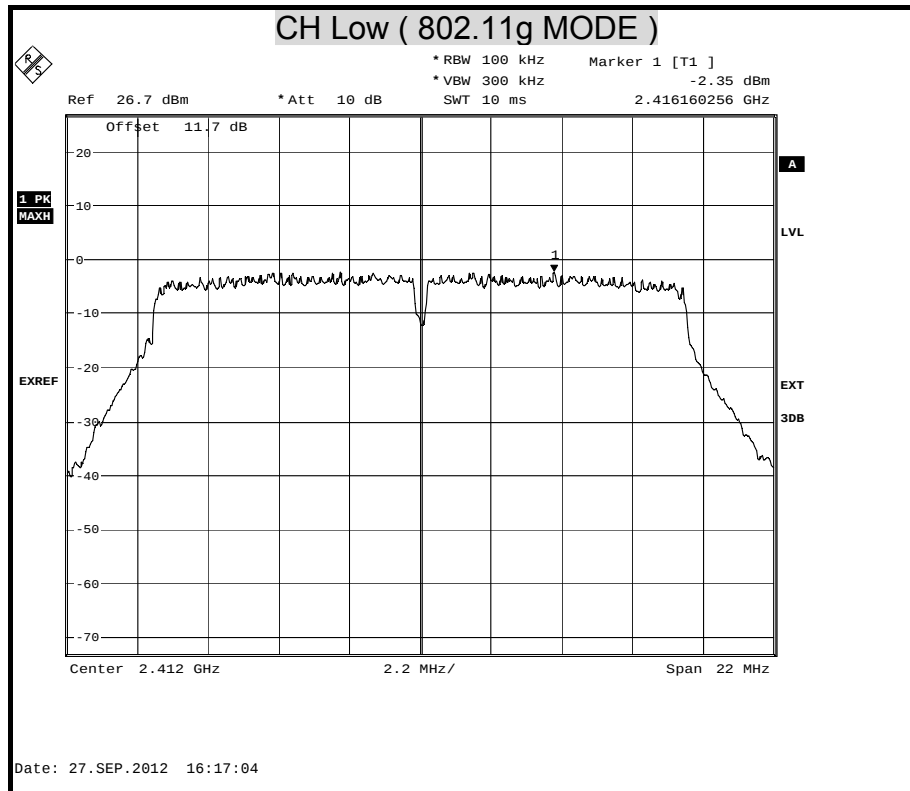
POWER SPECTRAL DENSITY (IEEE 802.11b MODE)

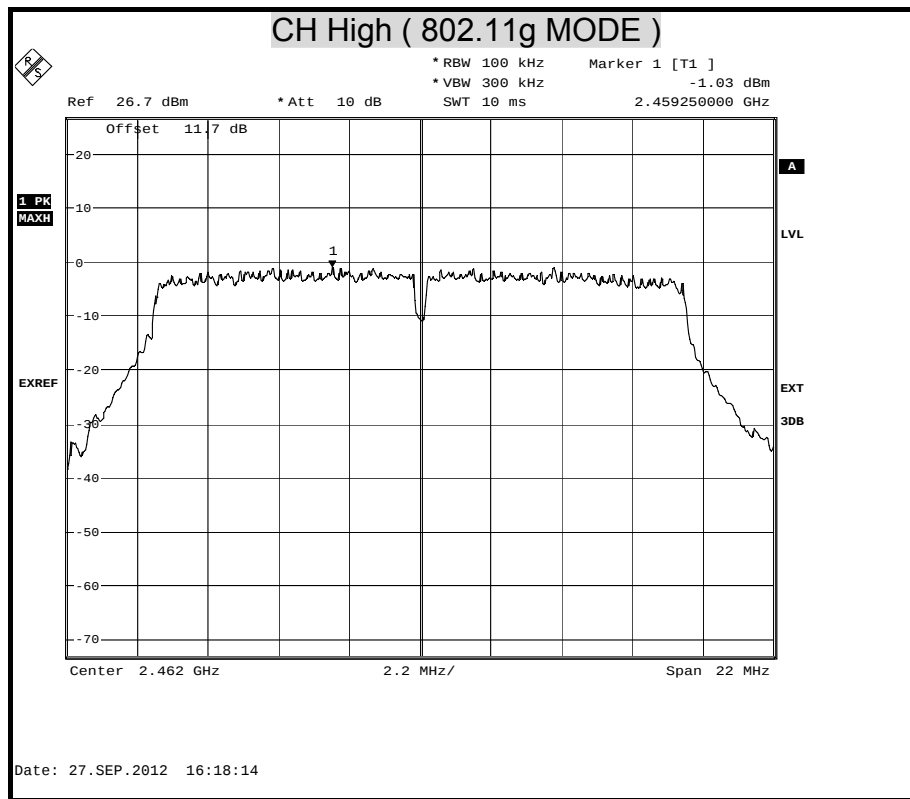






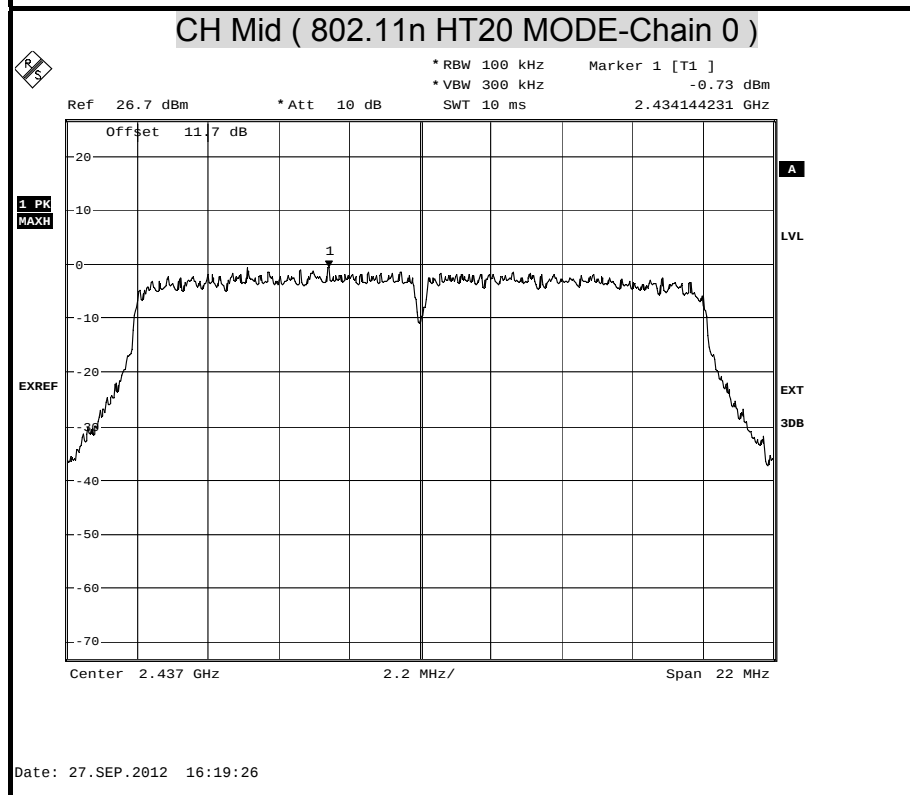
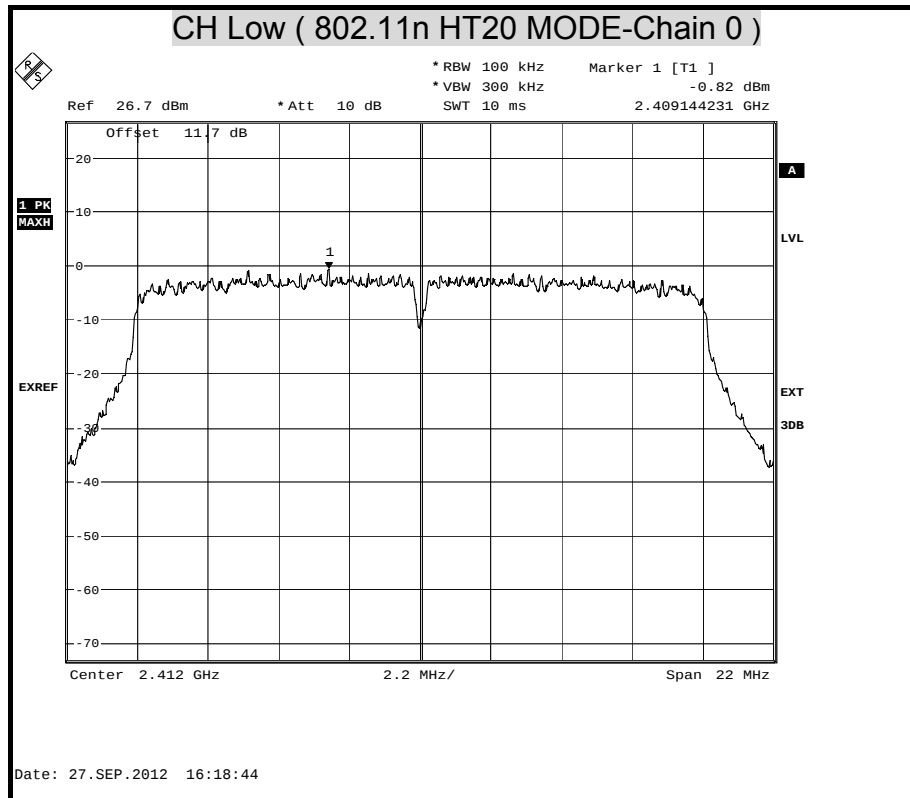
POWER SPECTRAL DENSITY (IEEE 802.11g MODE)

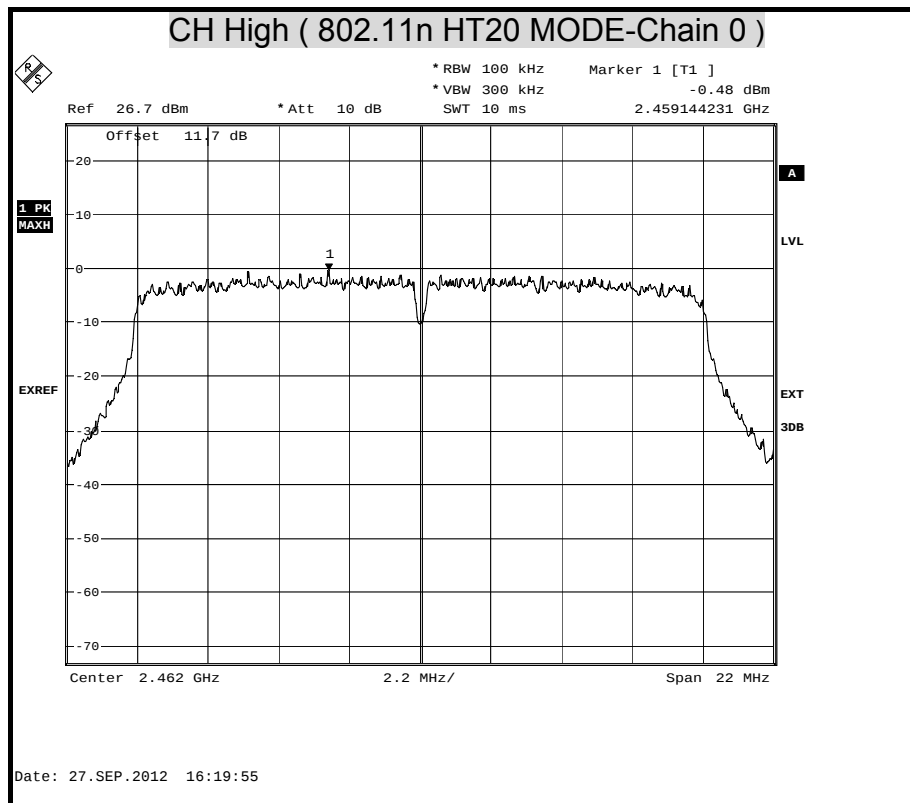






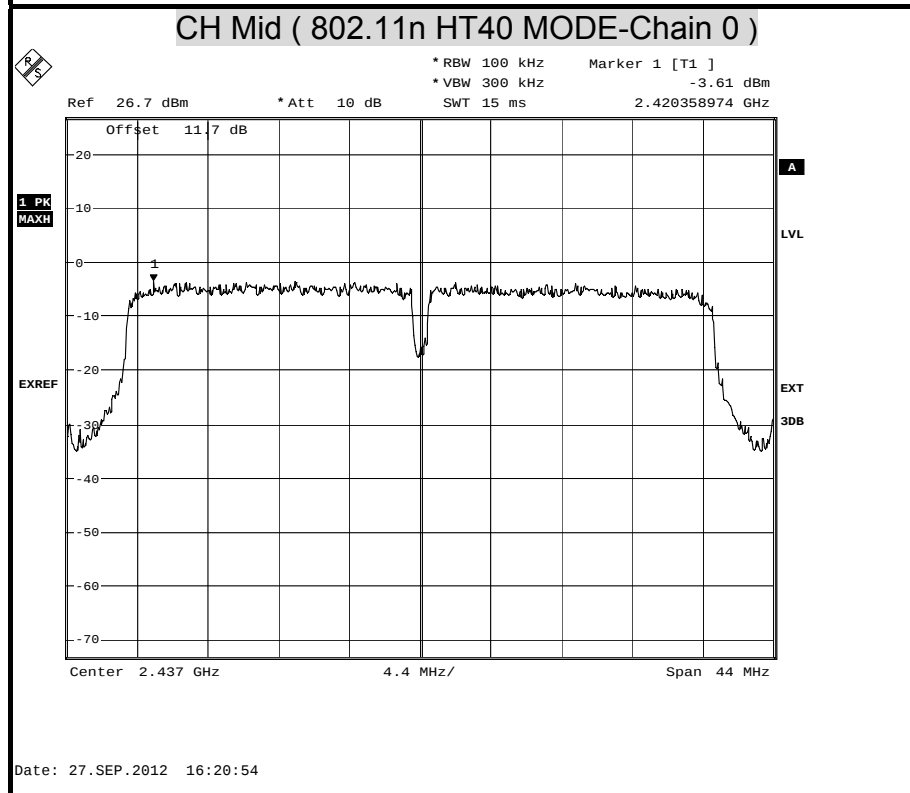
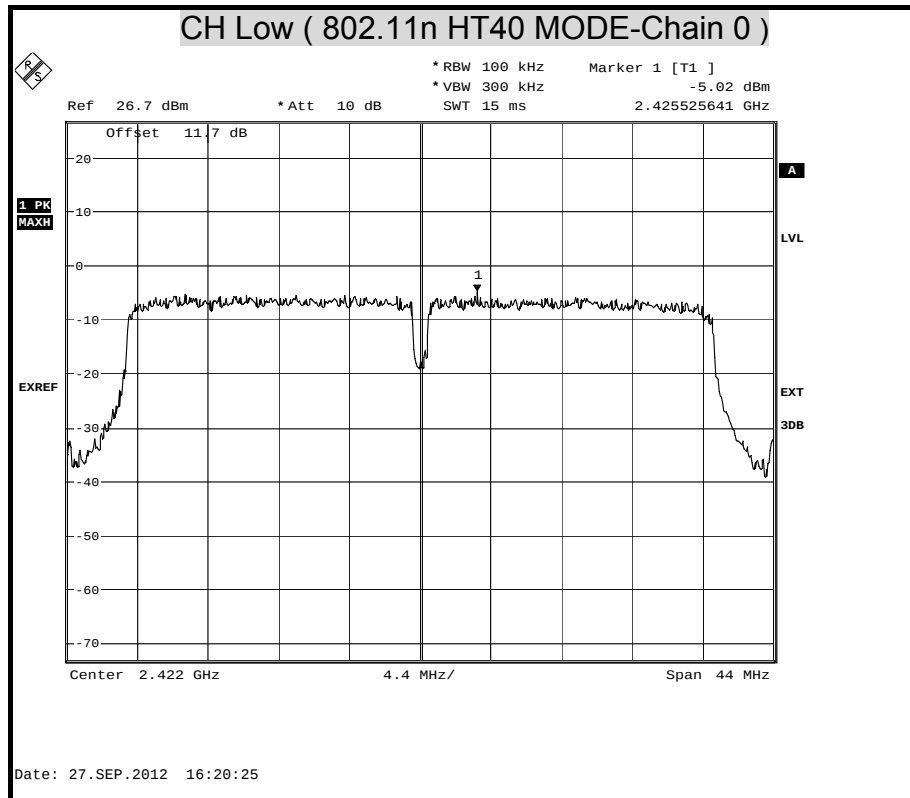
POWER SPECTRAL DENSITY (802.11n HT20 MODE)

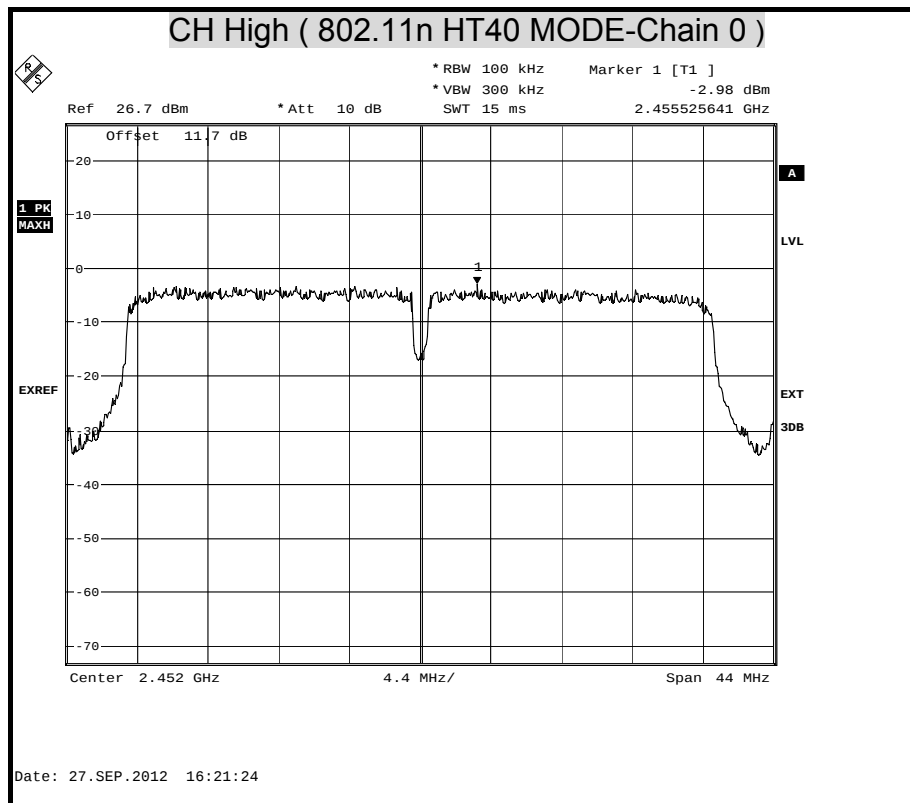






POWER SPECTRAL DENSITY (802.11n HT40 MODE)







Antenna Gain

2.0 dBi

IEEE 802.11b mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	4.94	-15.2	-10.26	8.00	-18.26	PASS
Middle	2437	5.98	-15.2	-9.22	8.00	-17.22	PASS
High	2462	6.52	-15.2	-8.68	8.00	-16.68	PASS

NOTE : 1. At final test to get the worst-case emission at 1Mbps long.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	0.04	-15.2	-15.16	8.00	-23.16	PASS
Middle	2437	0.93	-15.2	-14.27	8.00	-22.27	PASS
High	2462	0.98	-15.2	-14.22	8.00	-22.22	PASS

NOTE : 1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11n HT20 mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	0.13	-15.2	-15.07	8.00	-23.07	PASS
Middle	2437	0.98	-15.2	-14.22	8.00	-22.22	PASS
High	2462	1.01	-15.2	-14.19	8.00	-22.19	PASS

NOTE : 1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

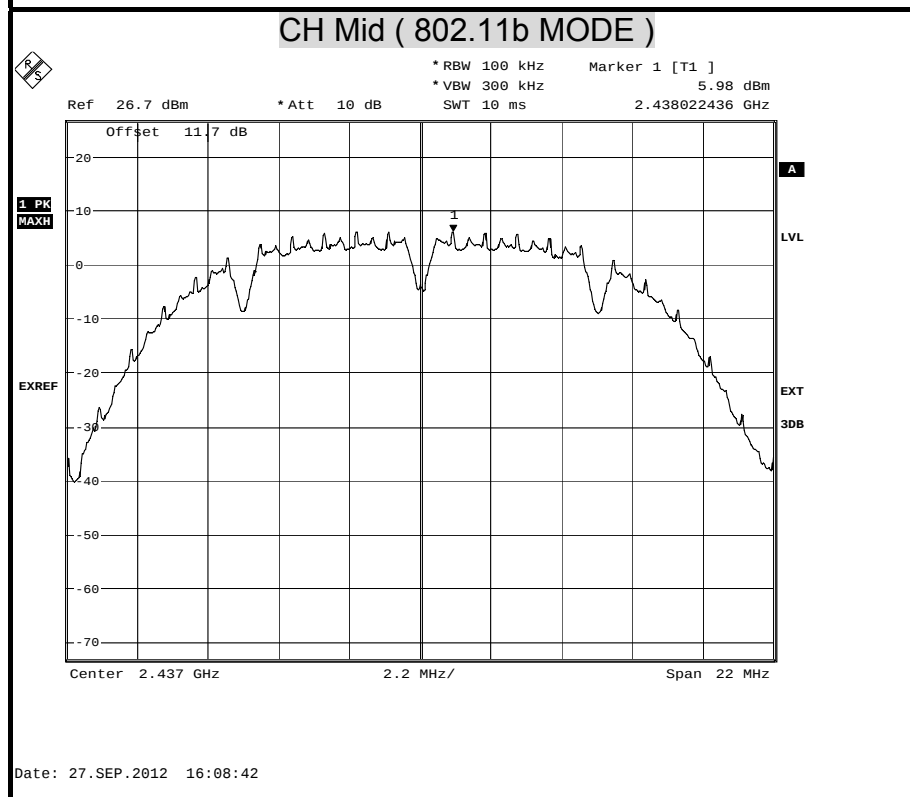
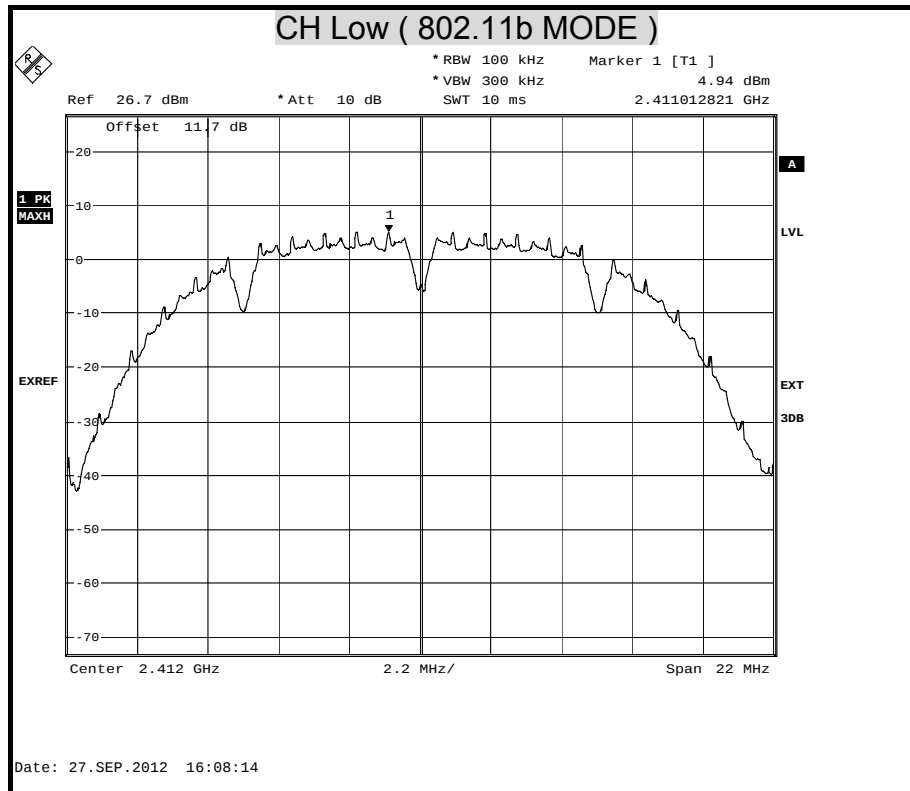
IEEE 802.11n HT40 mode

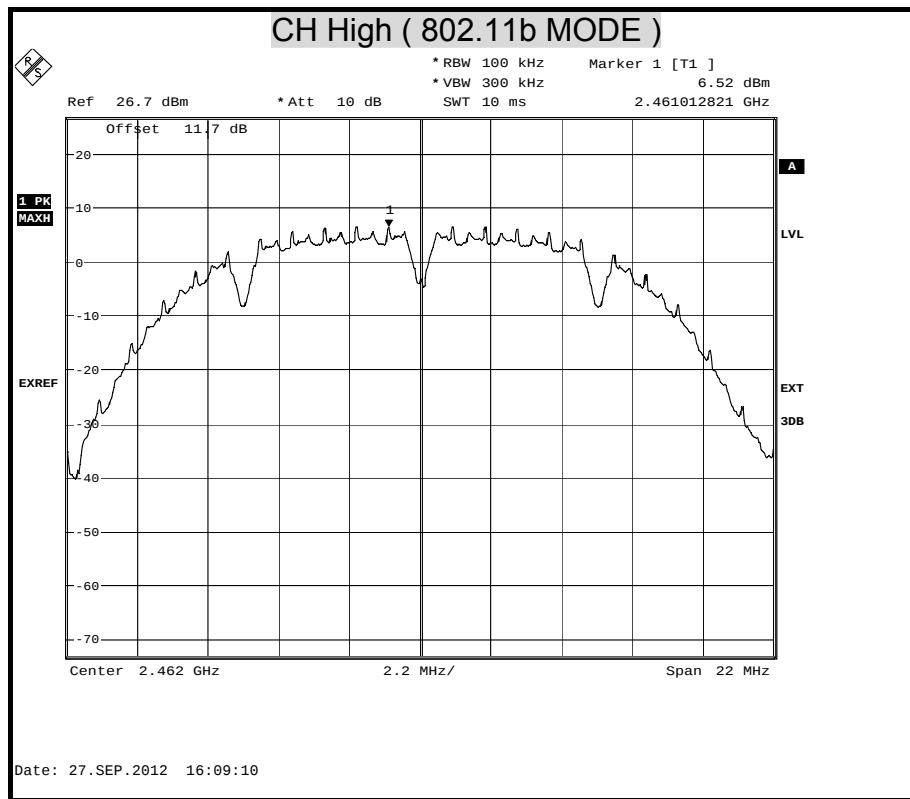
Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2422	-4.05	-15.2	-19.25	8.00	-27.25	PASS
Middle	2437	-2.45	-15.2	-17.65	8.00	-25.65	PASS
High	2452	-2.17	-15.2	-17.37	8.00	-25.37	PASS

NOTE : 1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.



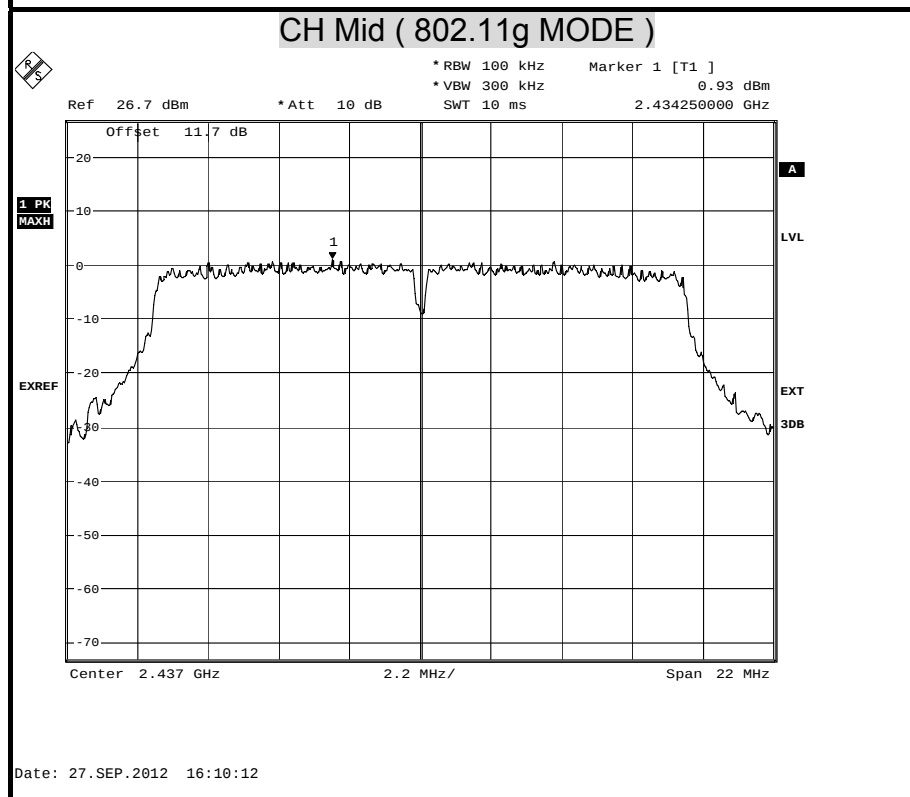
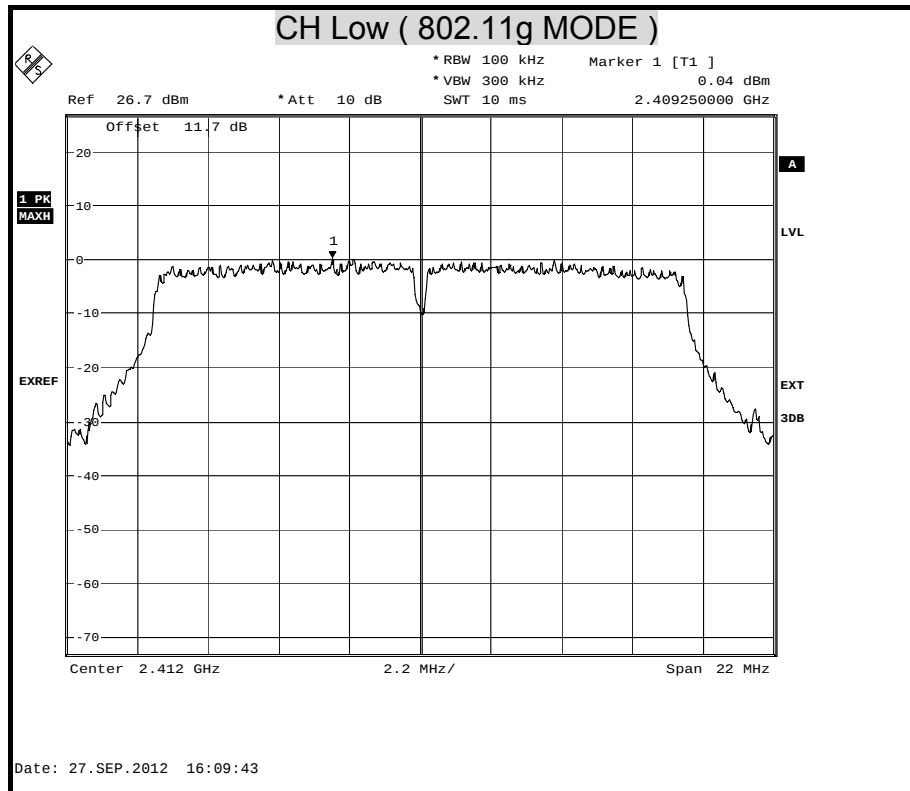
POWER SPECTRAL DENSITY (IEEE 802.11b MODE)

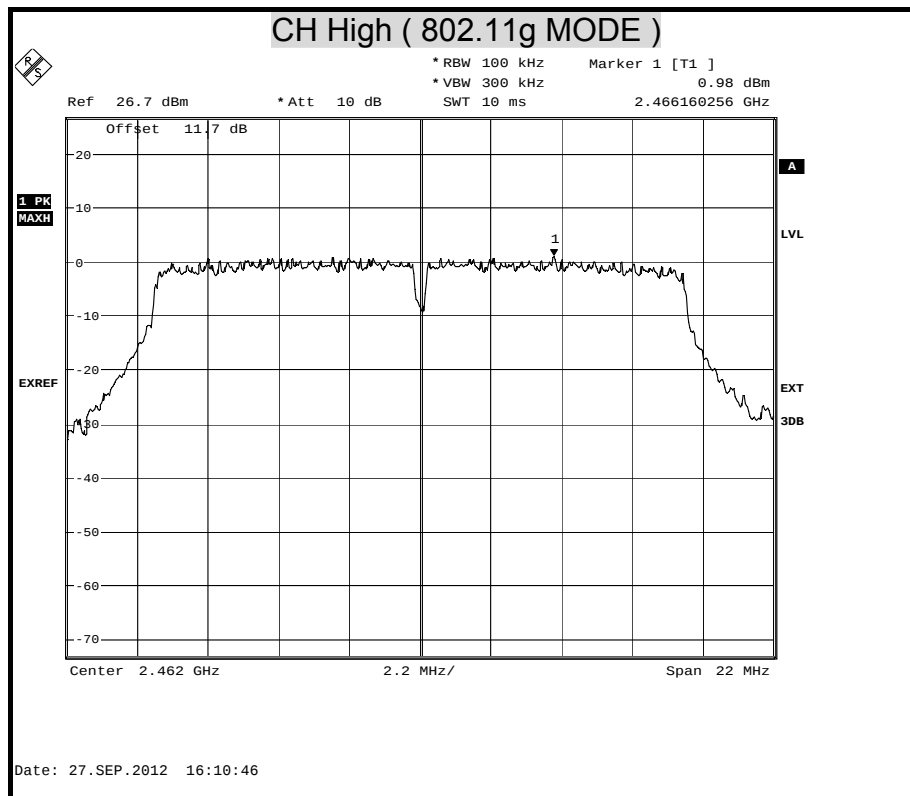






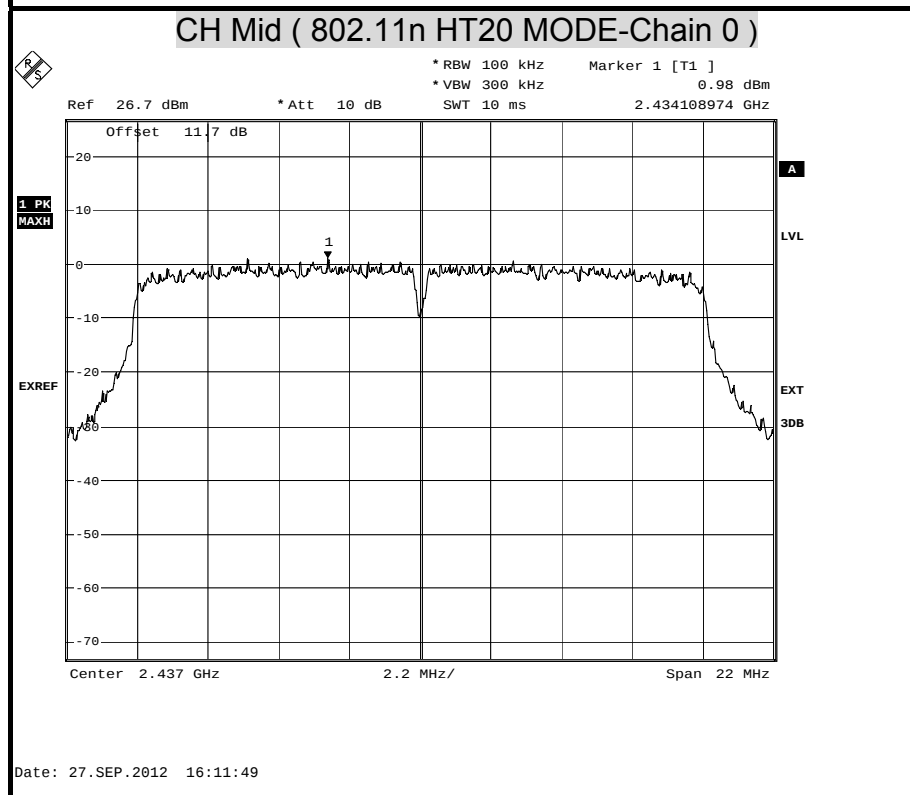
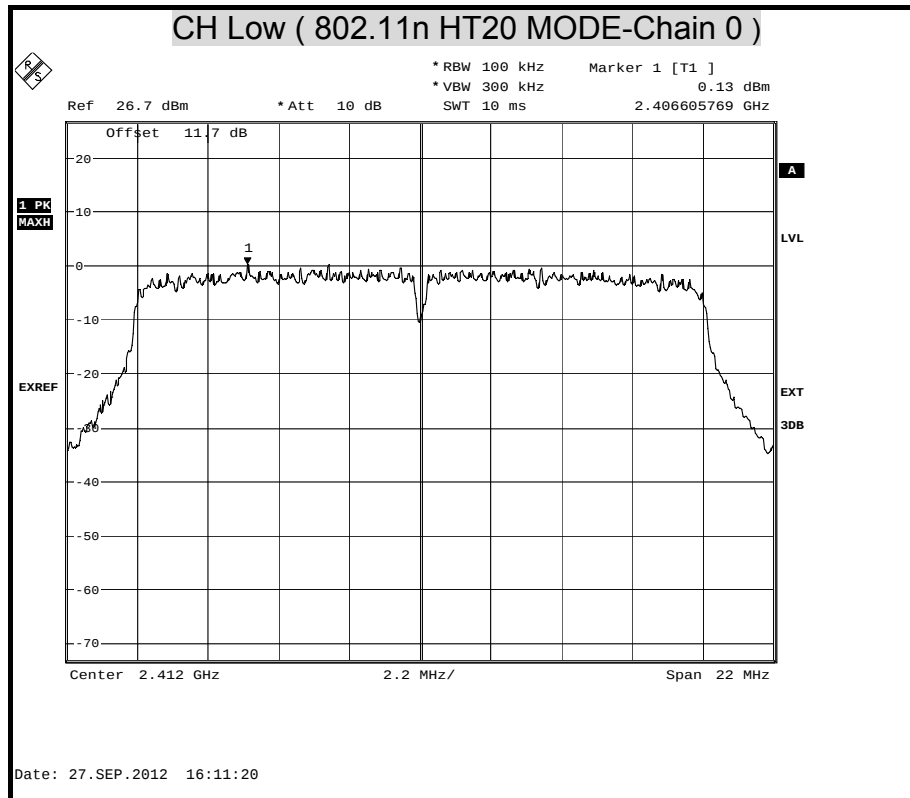
POWER SPECTRAL DENSITY (IEEE 802.11g MODE)

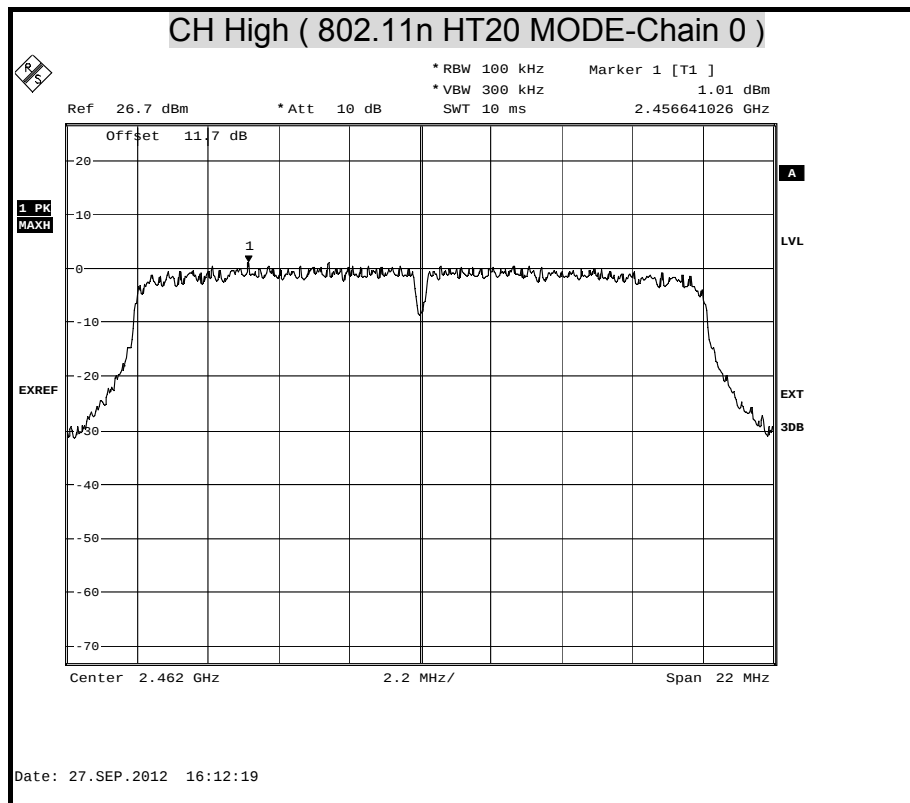






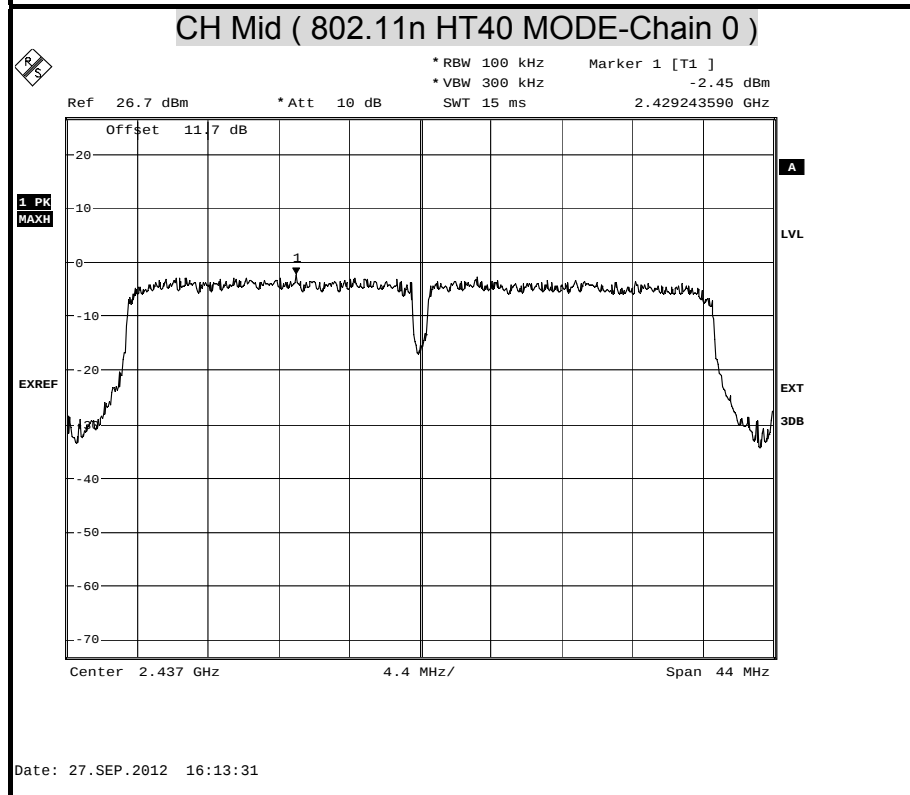
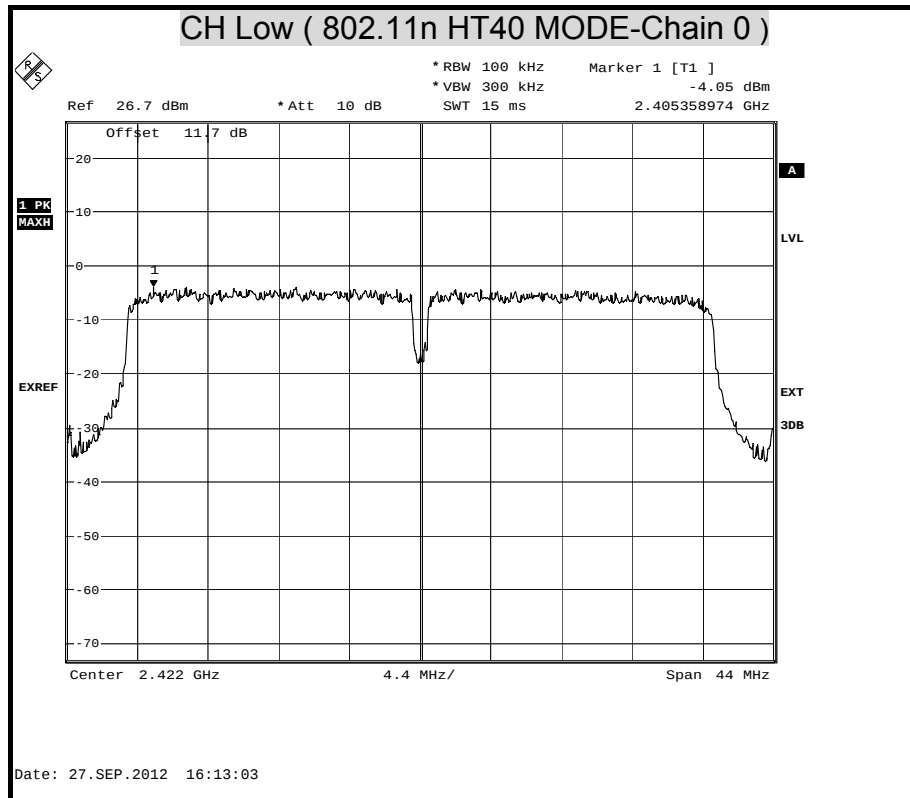
POWER SPECTRAL DENSITY (802.11n HT20 MODE)

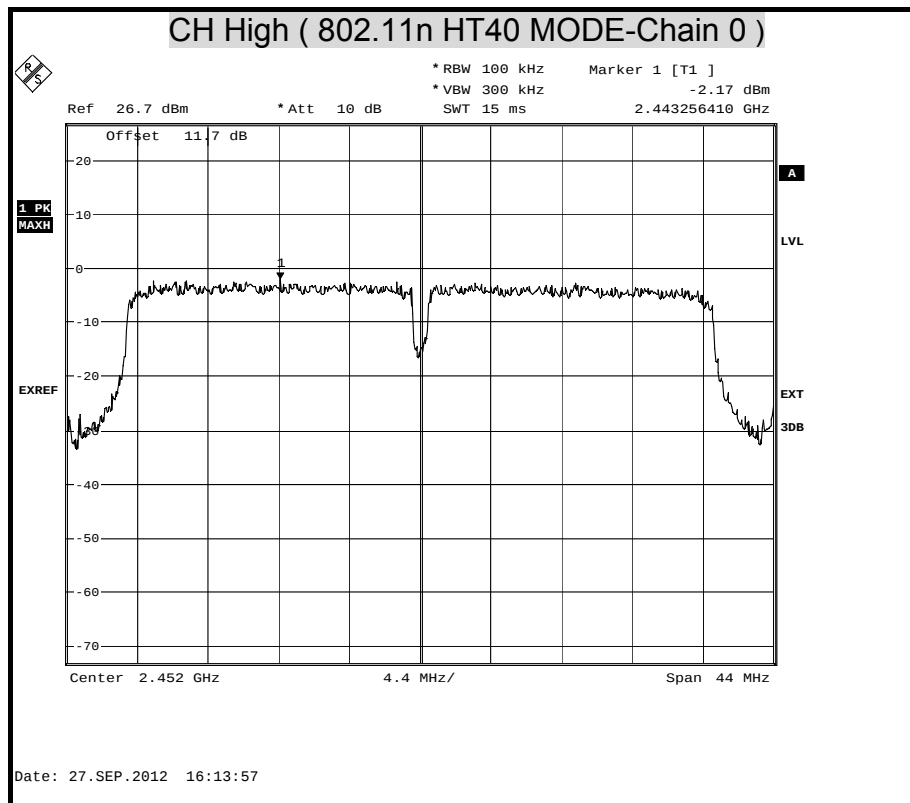






POWER SPECTRAL DENSITY (802.11n HT40 MODE)







Antenna Gain	2.35 dBi
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IEEE 802.11b mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	3.69	-15.2	-11.51	8.00	-19.51	PASS
Middle	2437	5.32	-15.2	-9.88	8.00	-17.88	PASS
High	2462	5.33	-15.2	-9.87	8.00	-17.87	PASS

NOTE : 1. At final test to get the worst-case emission at 1Mbps long.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	-1.46	-15.2	-16.66	8.00	-24.66	PASS
Middle	2437	-0.59	-15.2	-15.79	8.00	-23.79	PASS
High	2462	-0.47	-15.2	-15.67	8.00	-23.67	PASS

NOTE : 1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11n HT20 mode

Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2412	-1.34	-15.2	-16.54	8.00	-24.54	PASS
Middle	2437	-0.37	-15.2	-15.57	8.00	-23.57	PASS
High	2462	-0.23	-15.2	-15.43	8.00	-23.43	PASS

NOTE : 1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.

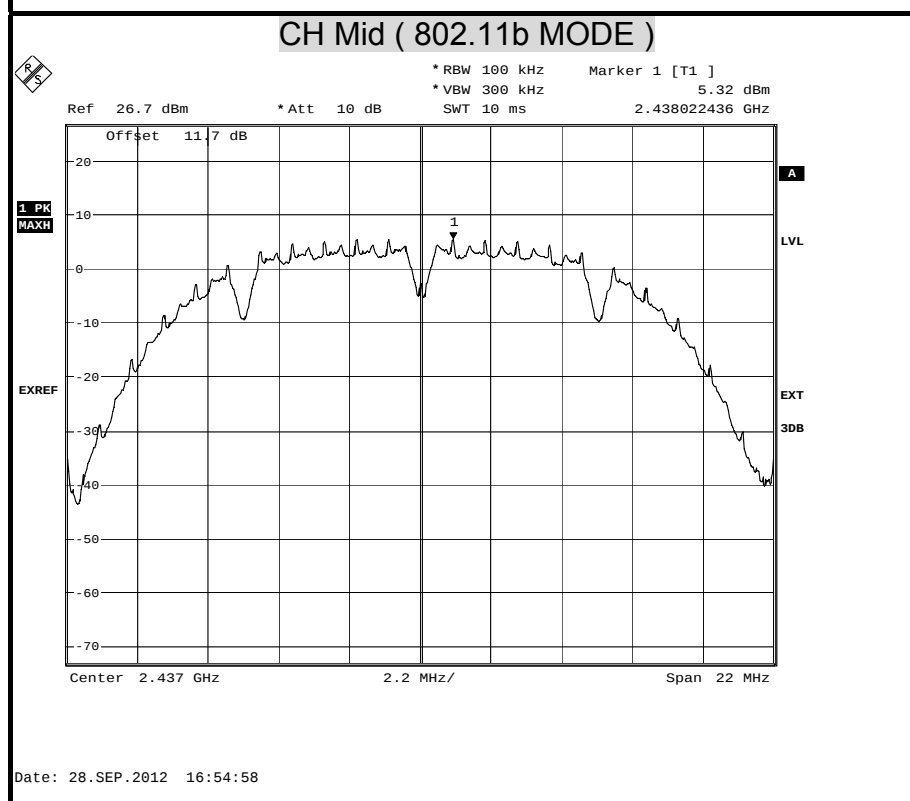
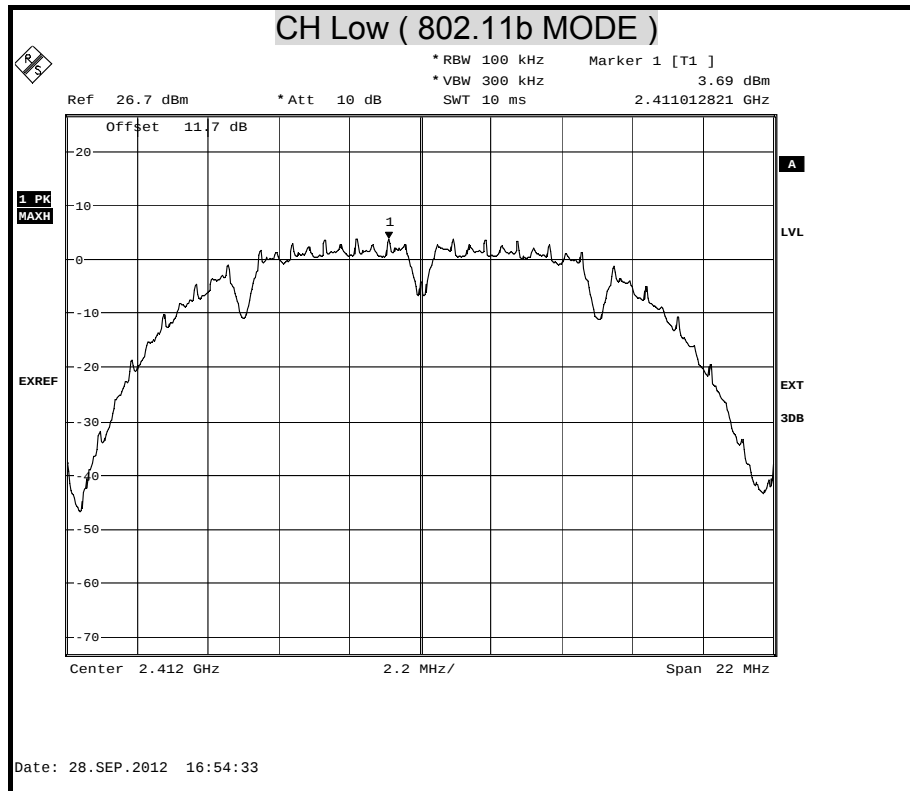
IEEE 802.11n HT40 mode

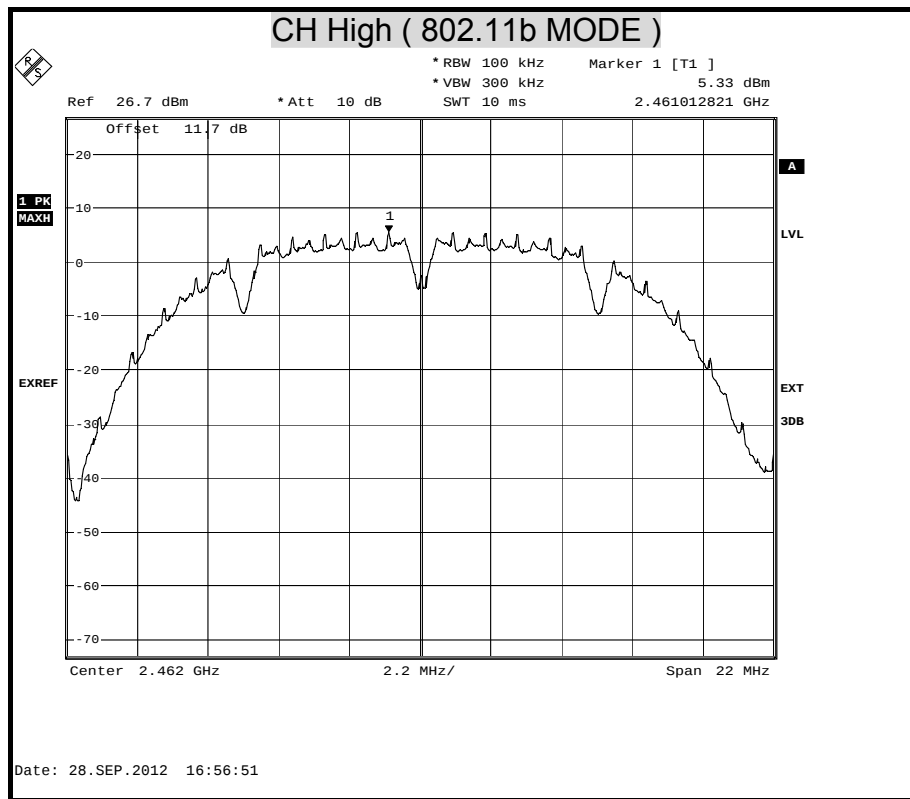
Channel	Frequency (MHz)	Reading (dBm)	BWCF (dB)	PPSD (dBm)	Limit (dBm)	Margin (dB)	Pass / Fail
Low	2422	-4.72	-15.2	-19.92	8.00	-27.92	PASS
Middle	2437	-4.47	-15.2	-19.67	8.00	-27.67	PASS
High	2452	-4.68	-15.2	-19.88	8.00	-27.88	PASS

NOTE : 1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 11.7dB (including 10 dB pad and 1.7 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.



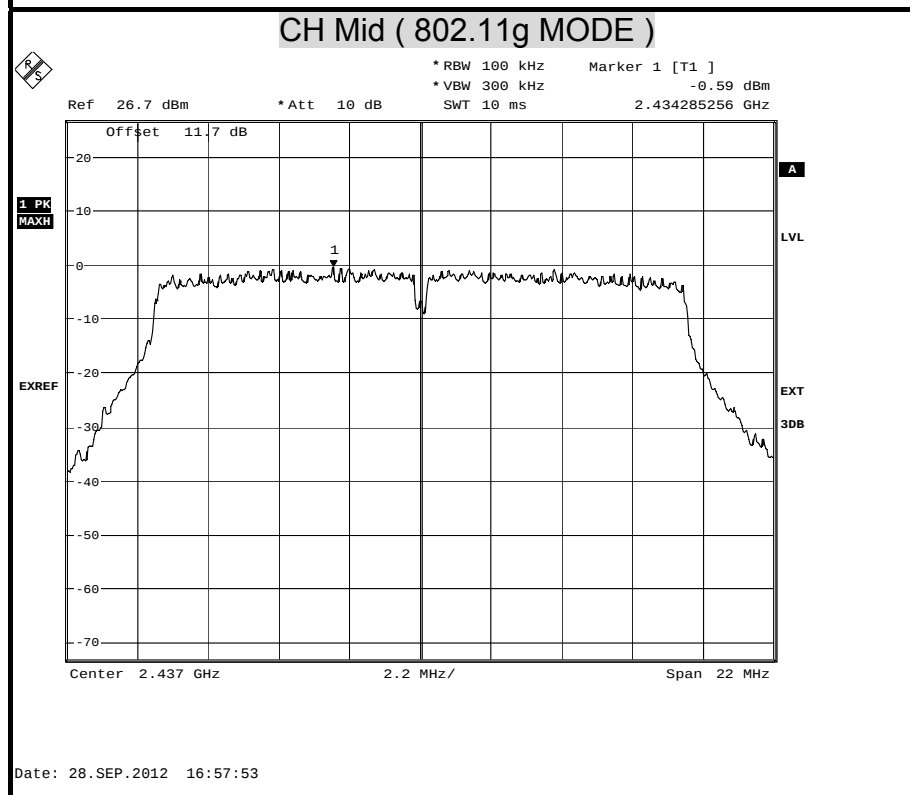
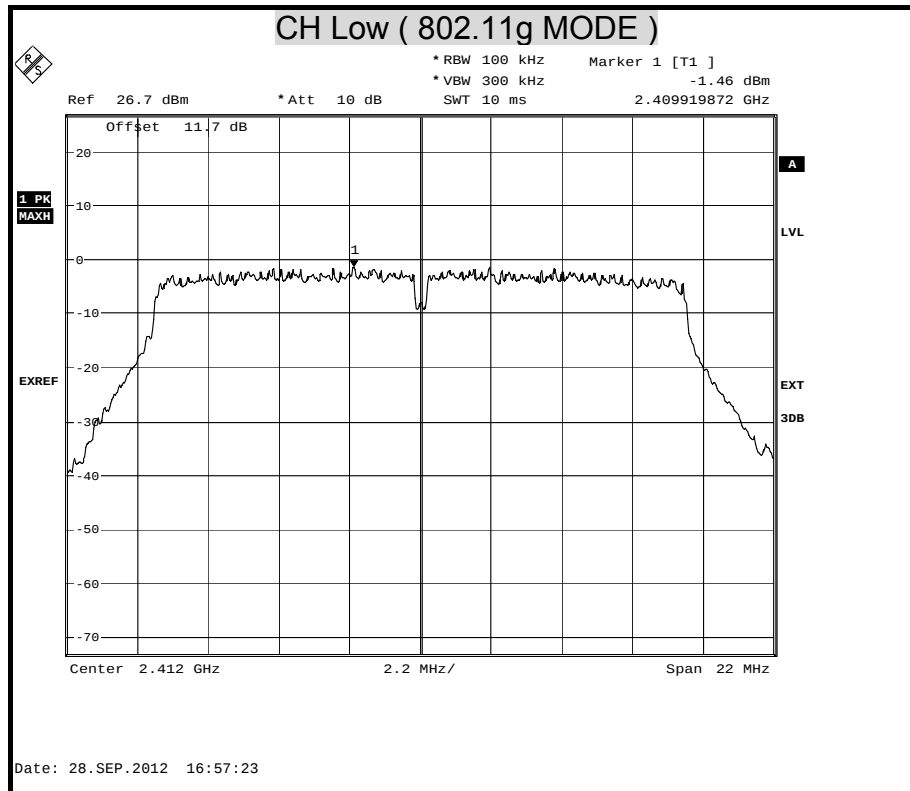
POWER SPECTRAL DENSITY (IEEE 802.11b MODE)

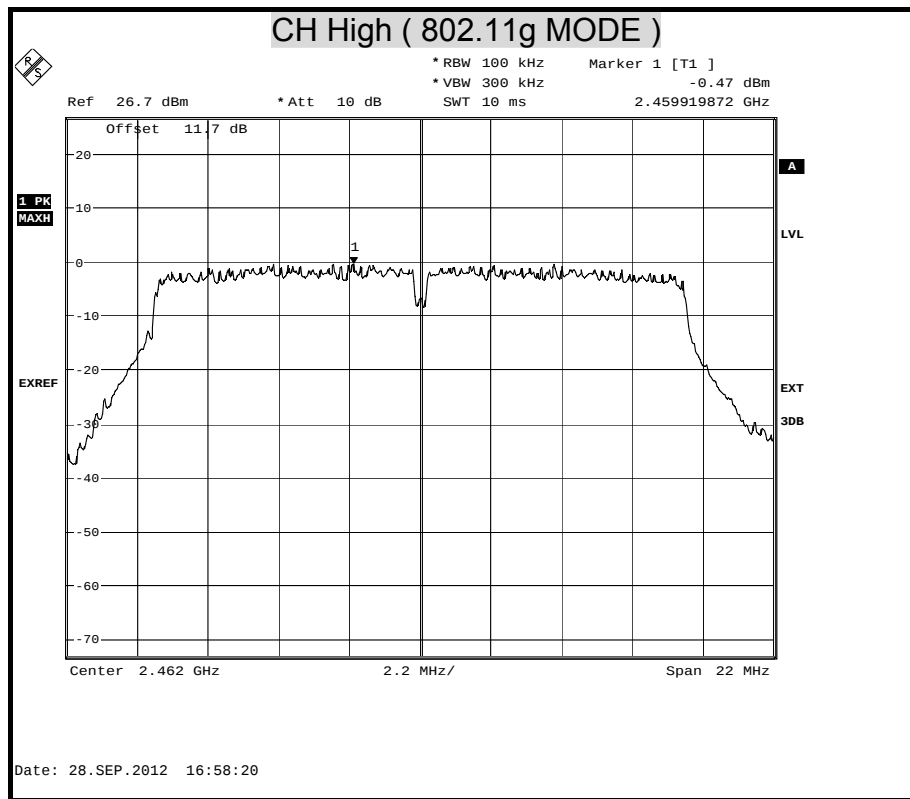






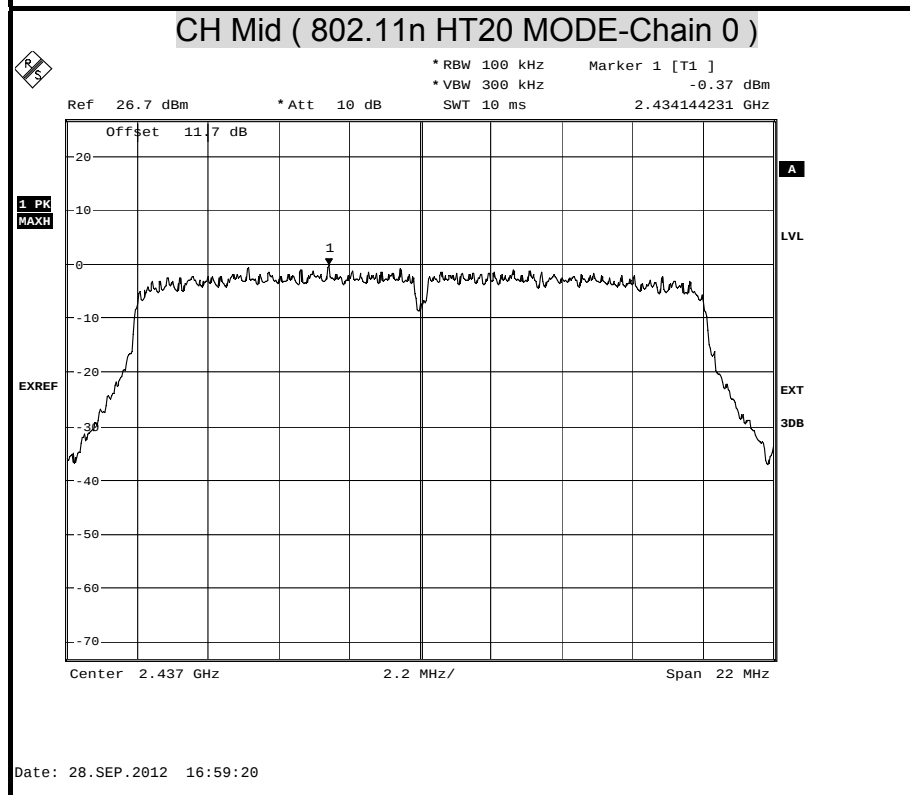
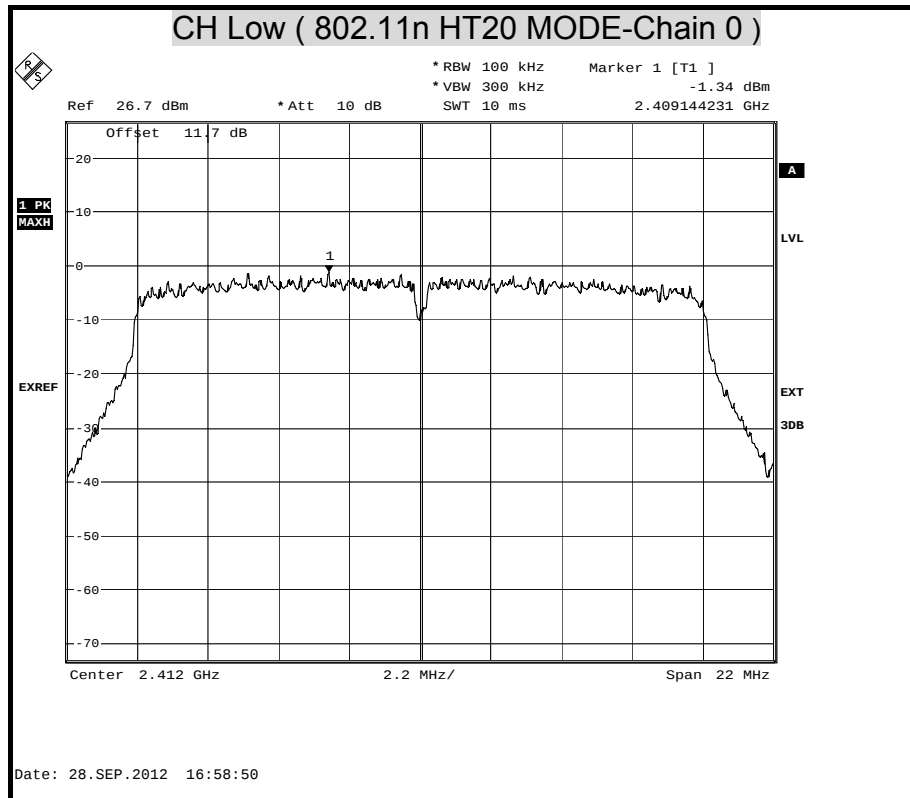
POWER SPECTRAL DENSITY (IEEE 802.11g MODE)

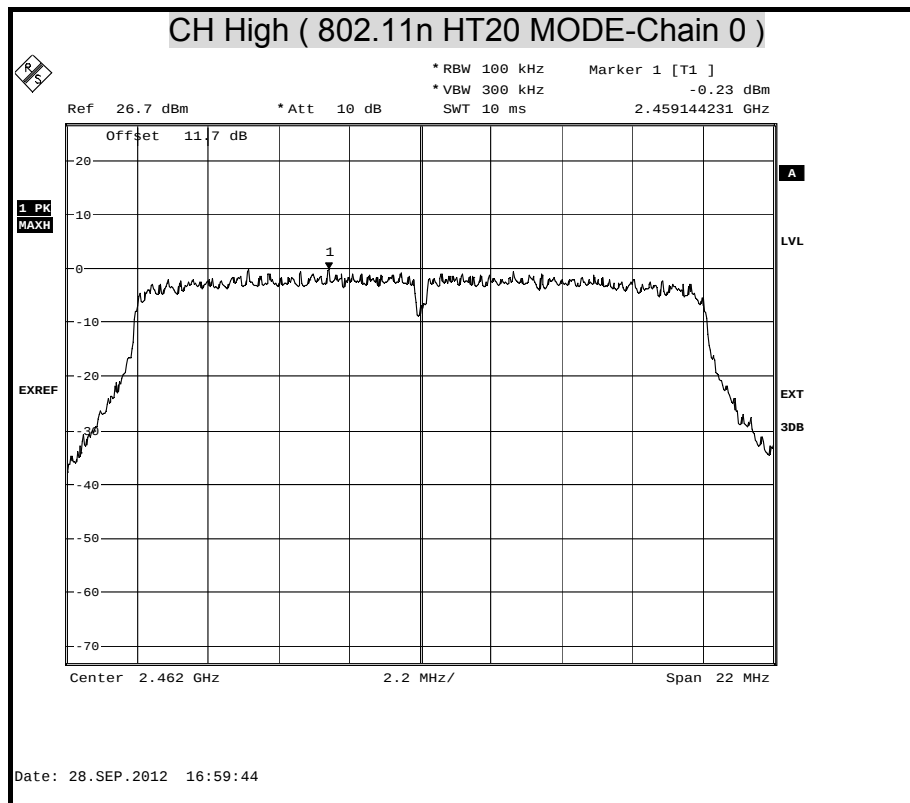






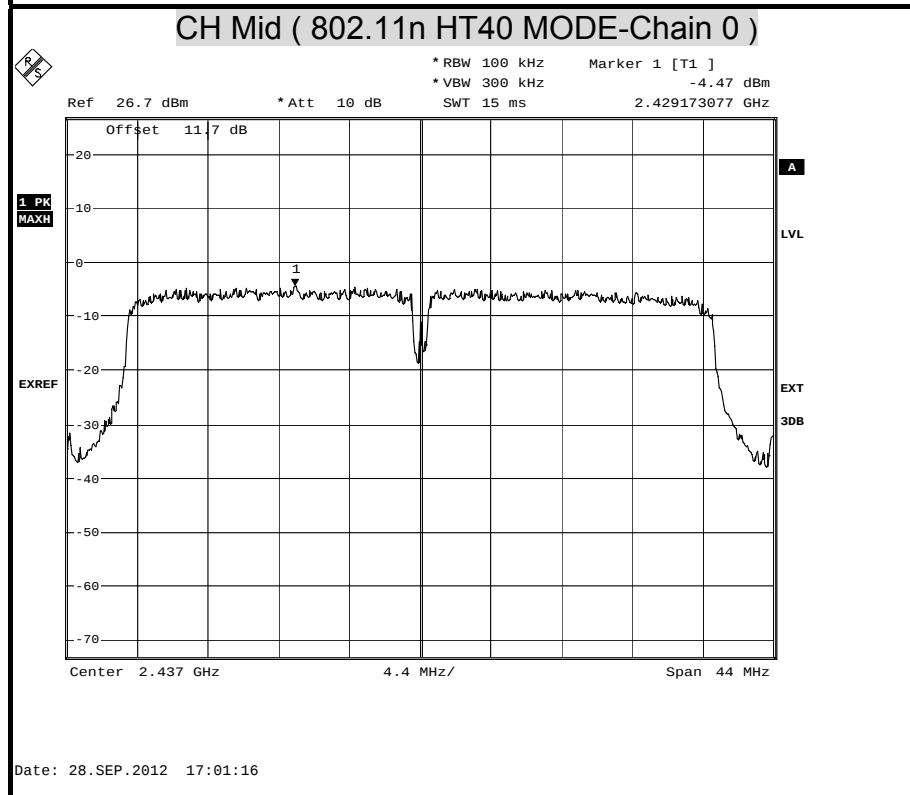
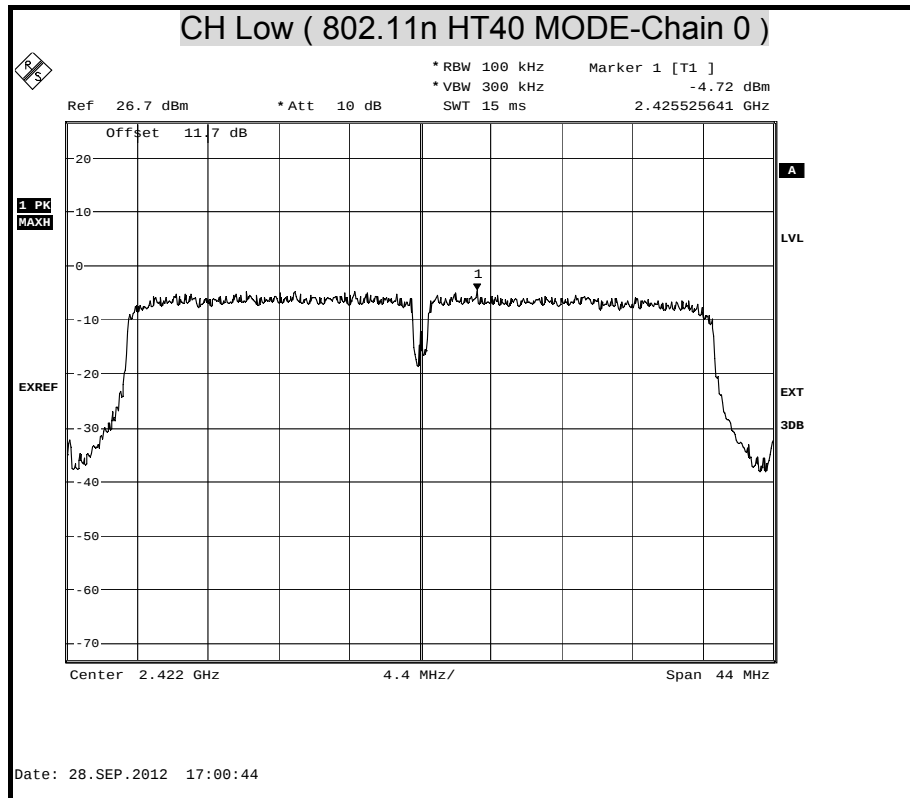
POWER SPECTRAL DENSITY (802.11n HT20 MODE)

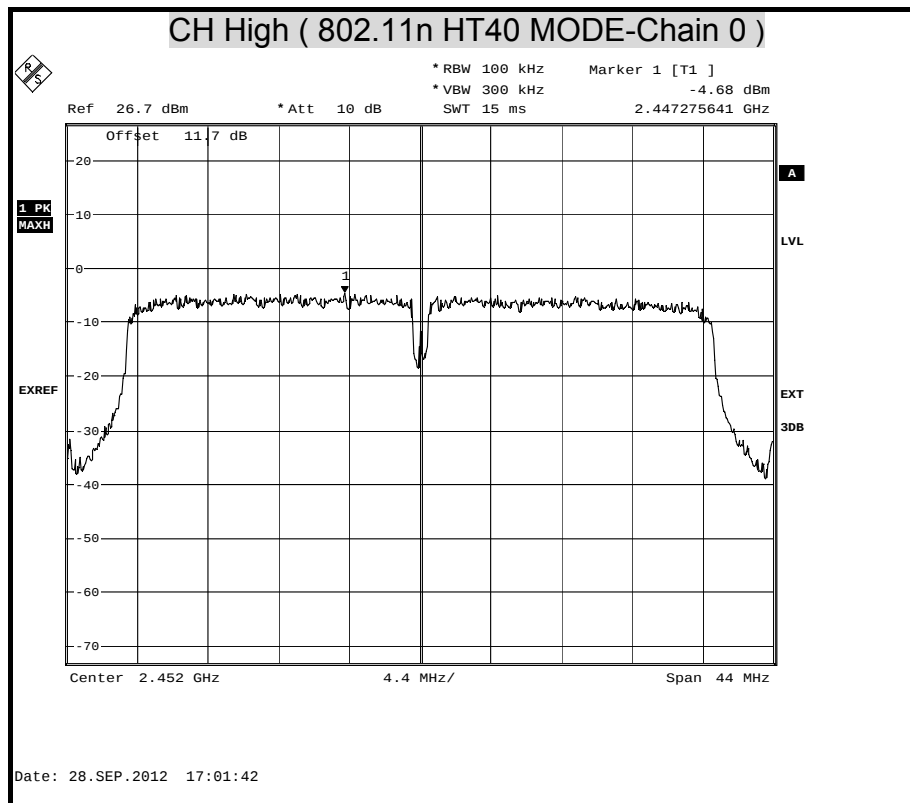






POWER SPECTRAL DENSITY (802.11n HT40 MODE)







8.5 CONDUCTED SPURIOUS EMISSION

LIMITS

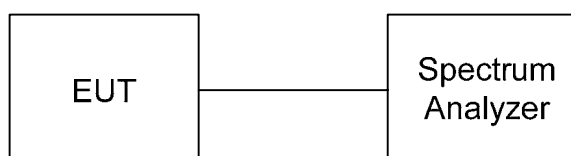
§ 15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	R&S	FSU	200789	SEP. 29, 2013

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

TEST RESULTS

No non-compliance noted.

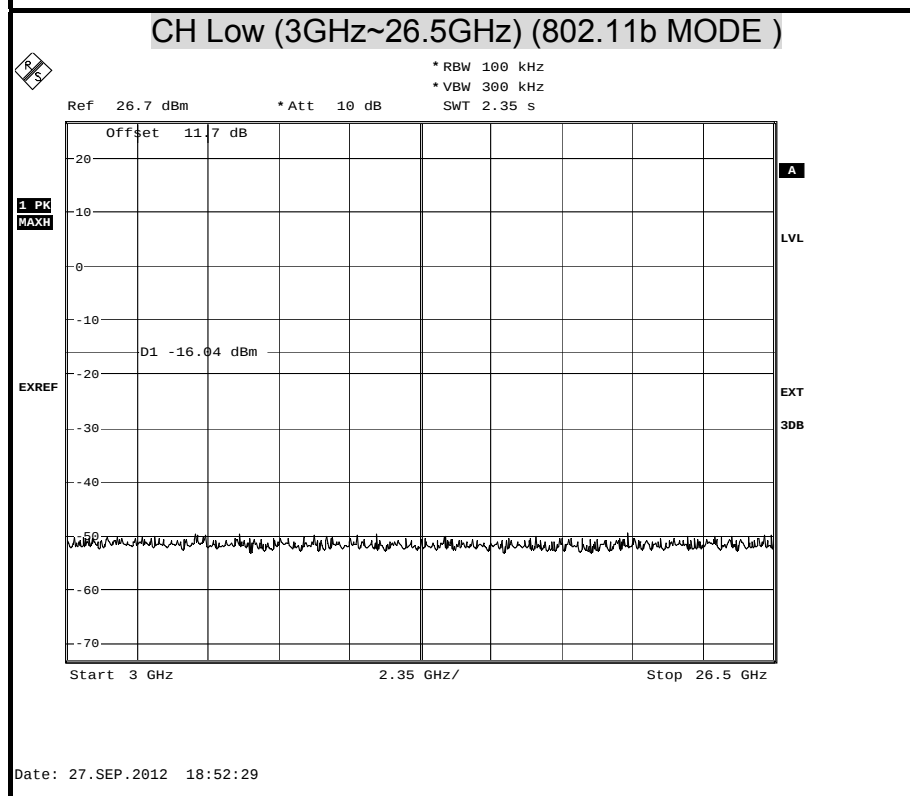
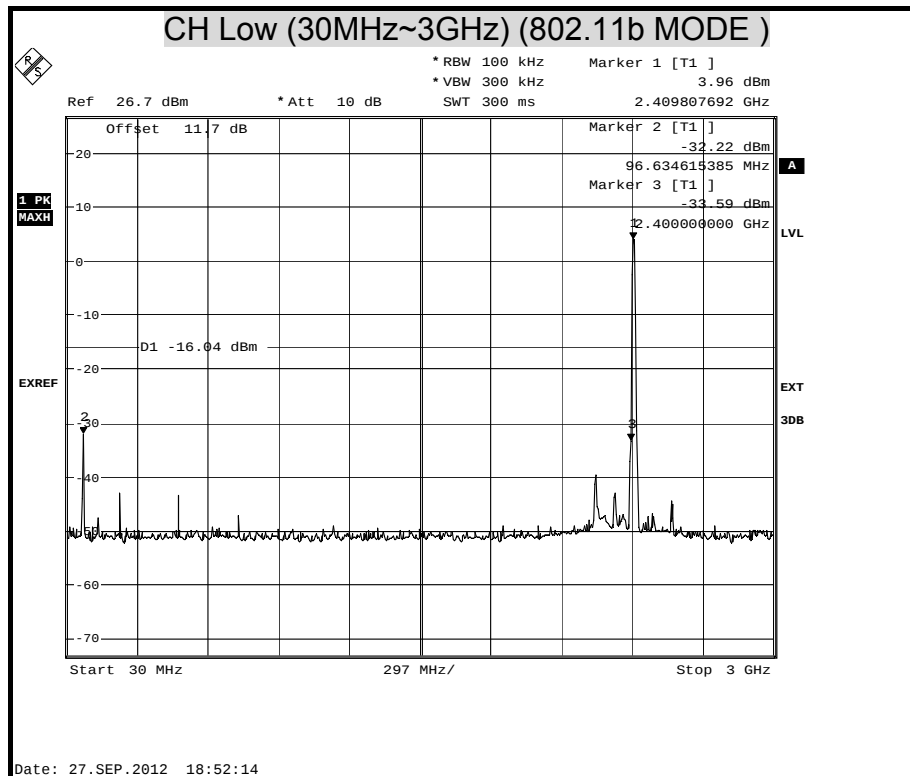


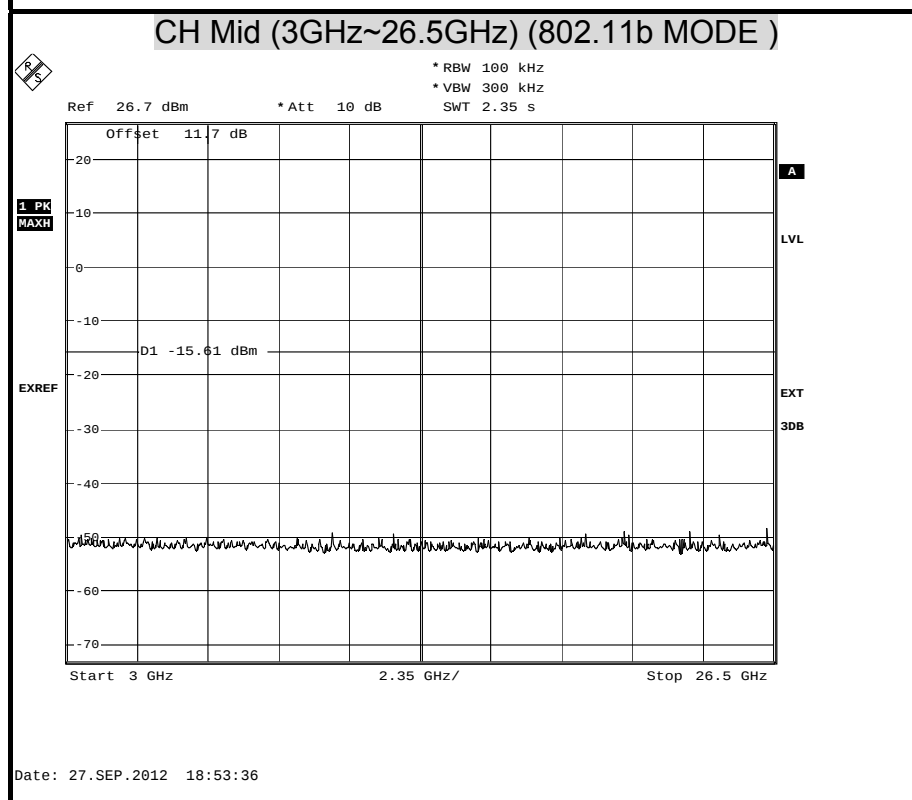
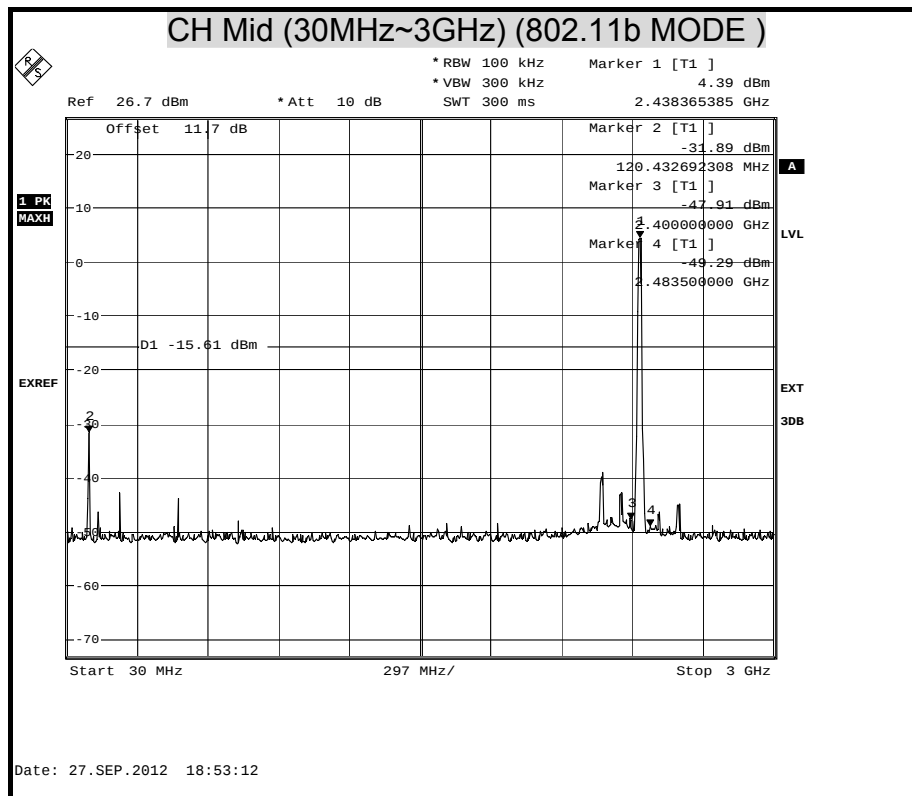
OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

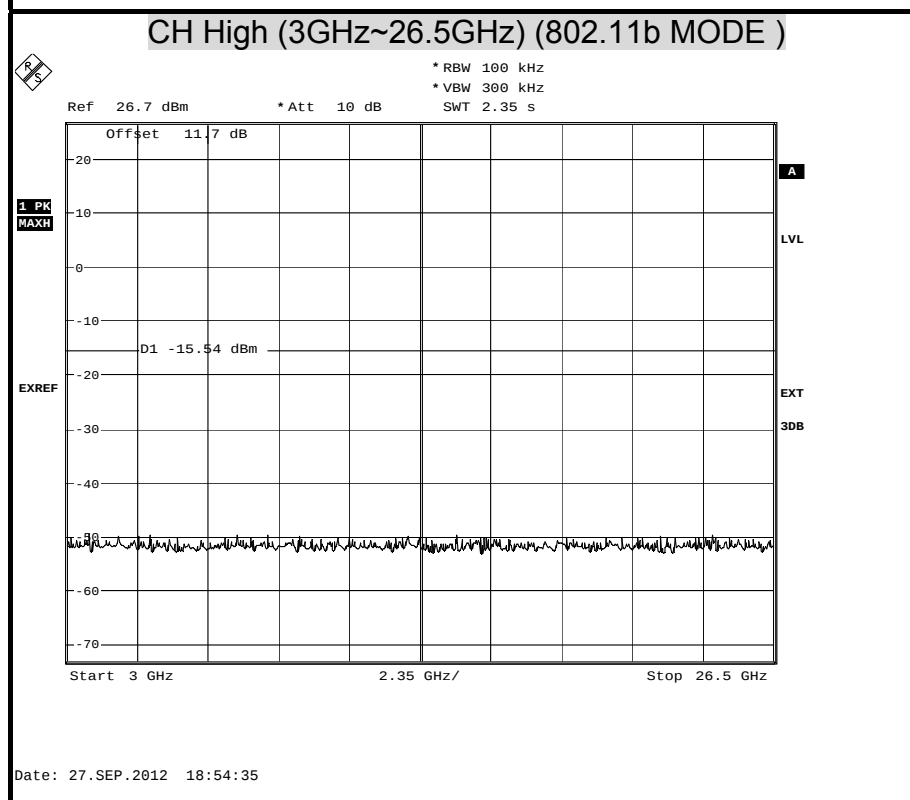
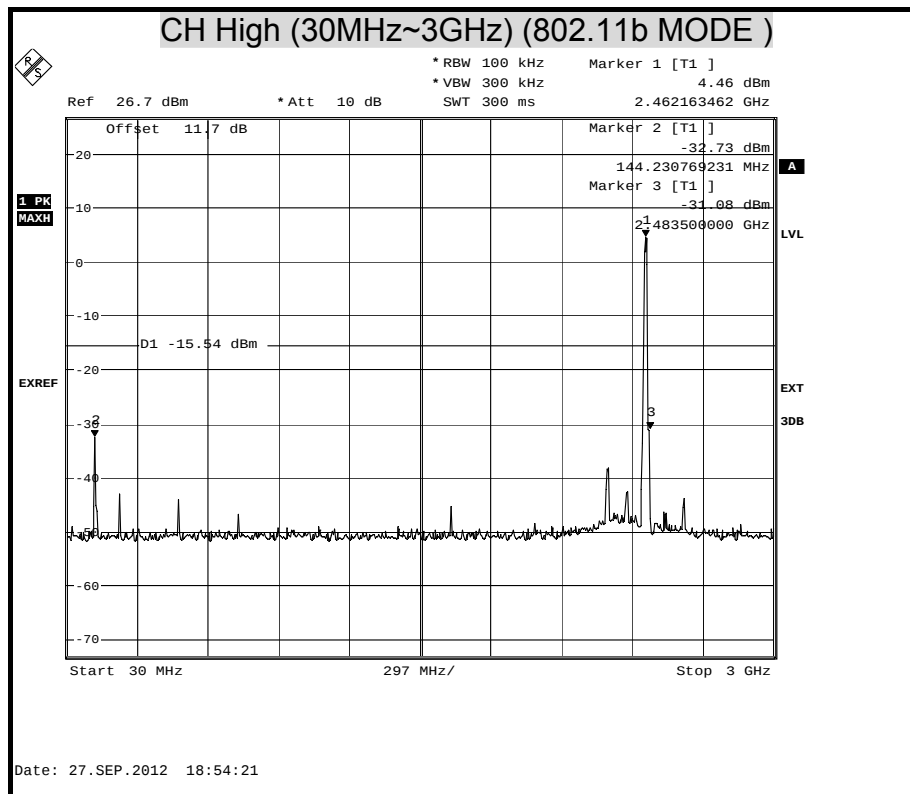
Antenna Gain

4.04 dBi

(IEEE 802.11b MODE)



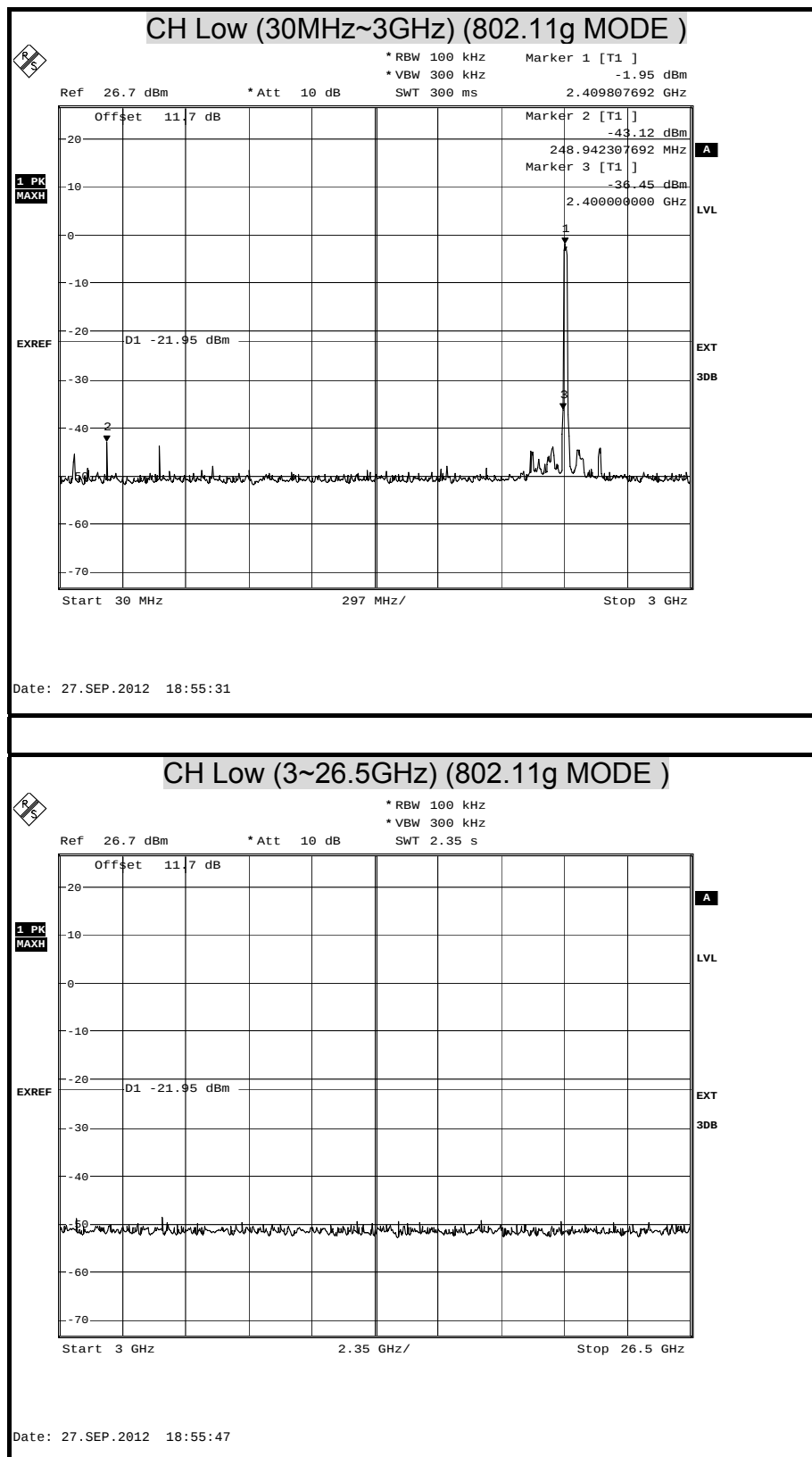


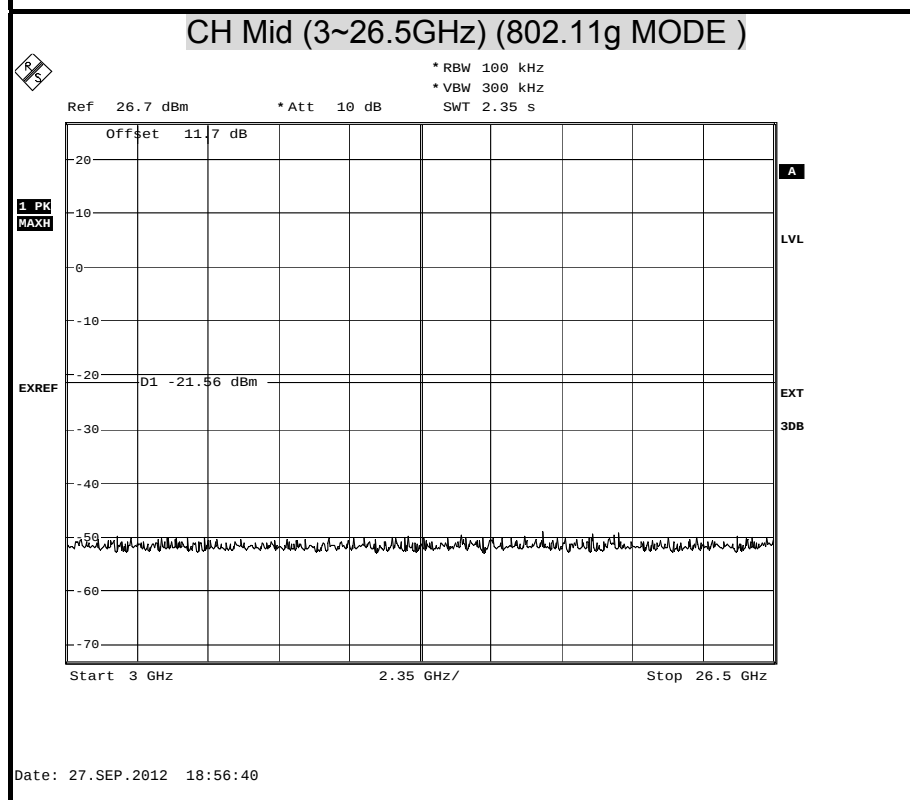
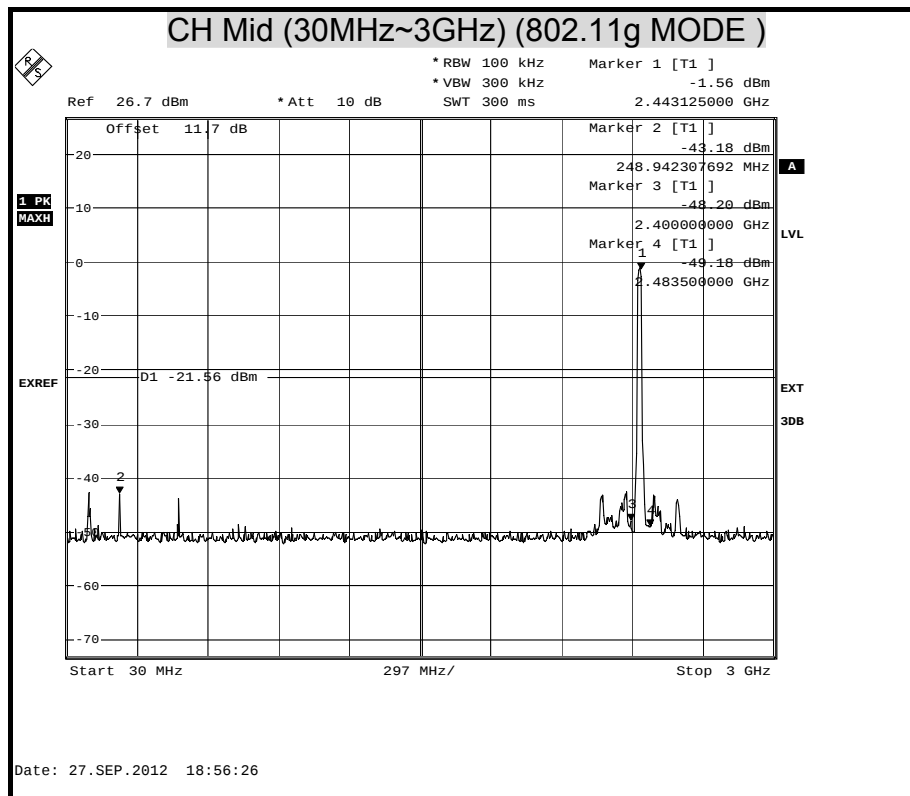


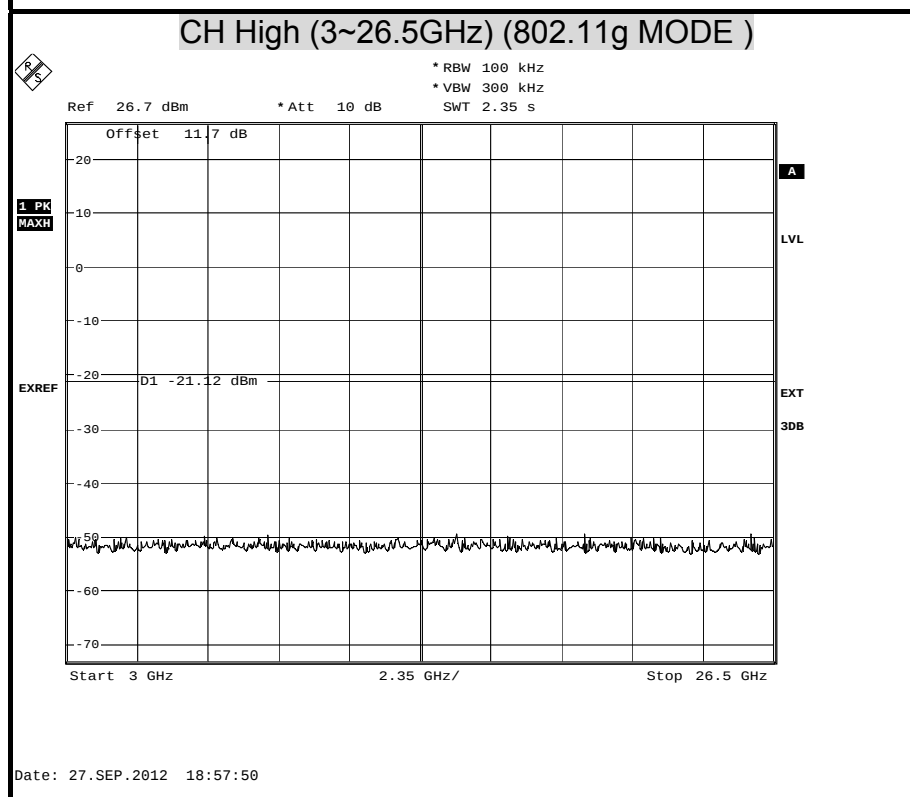
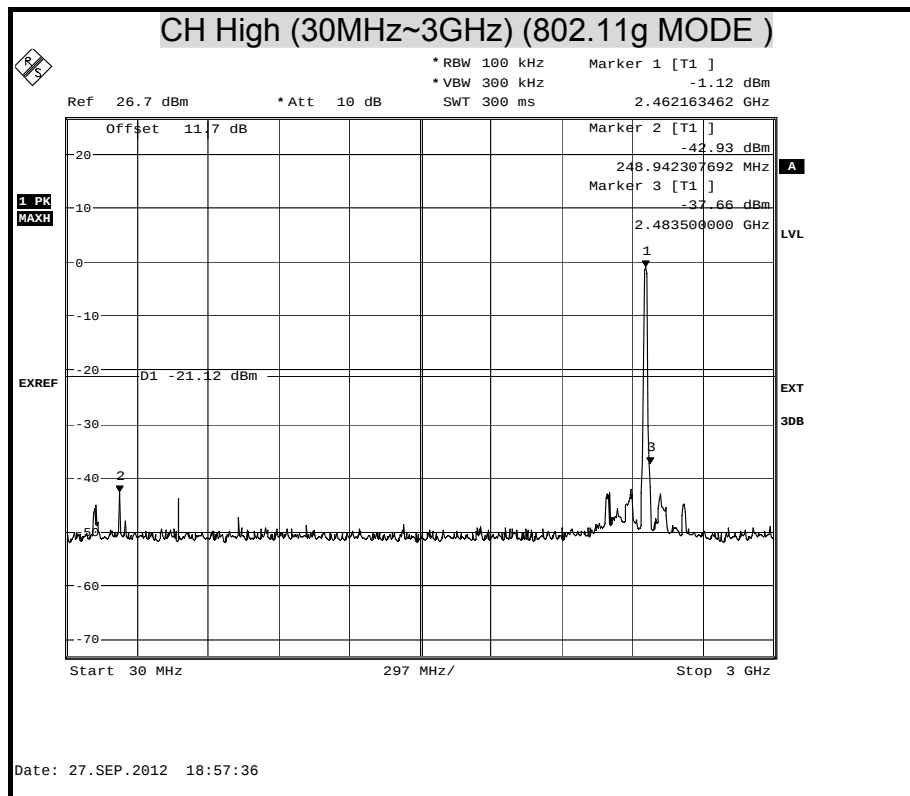


OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

(802.11g MODE)



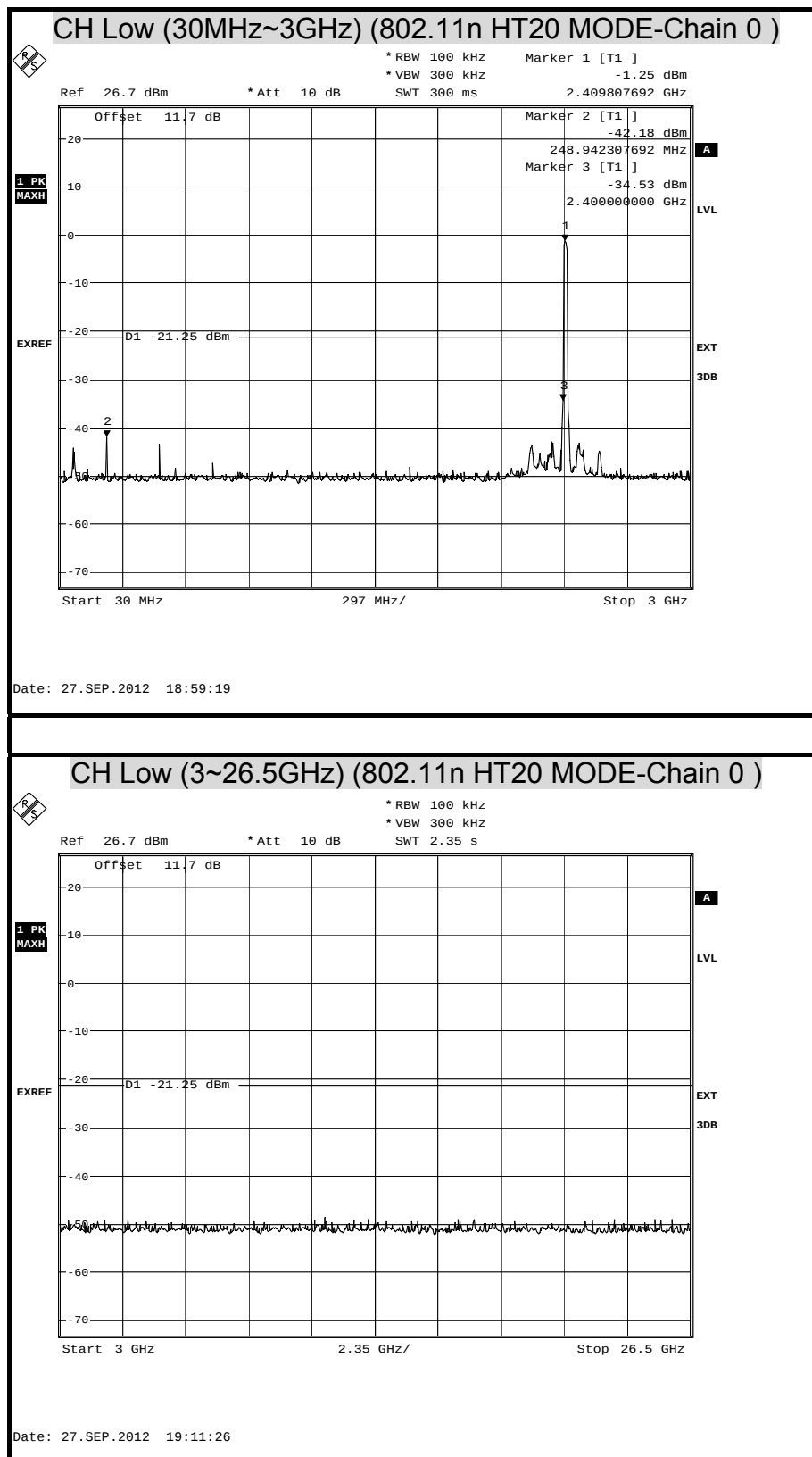


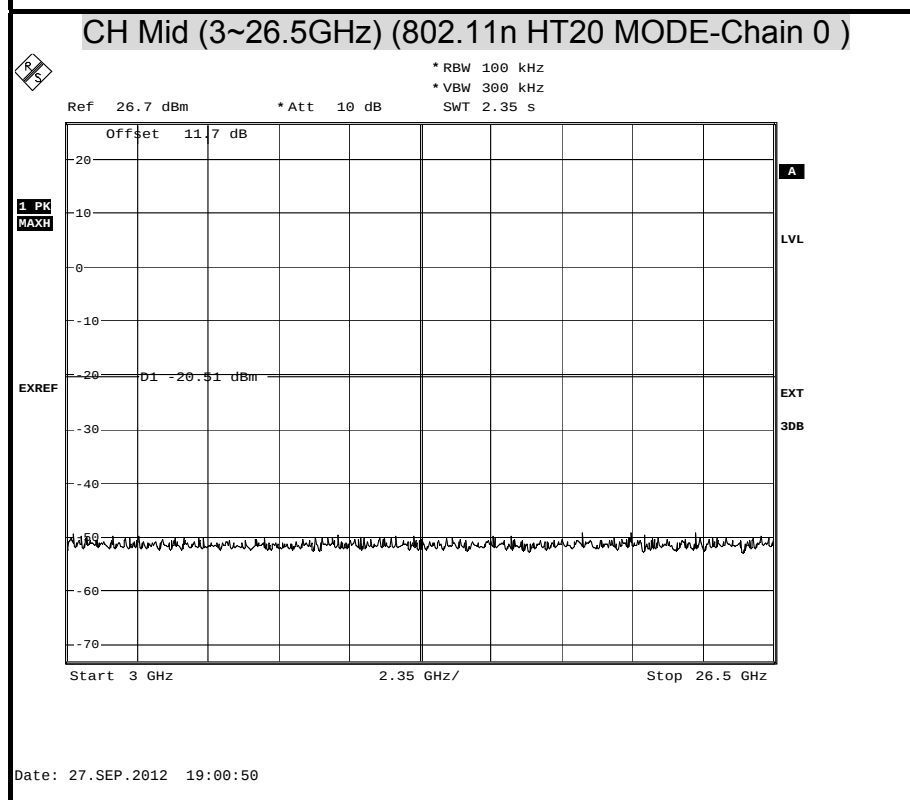
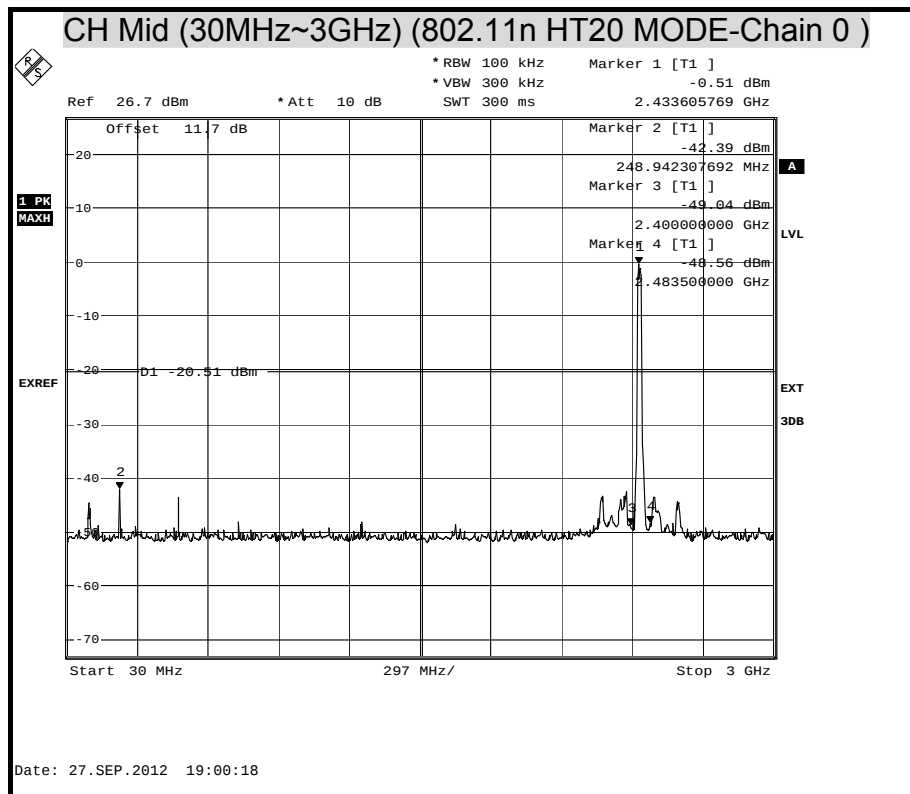


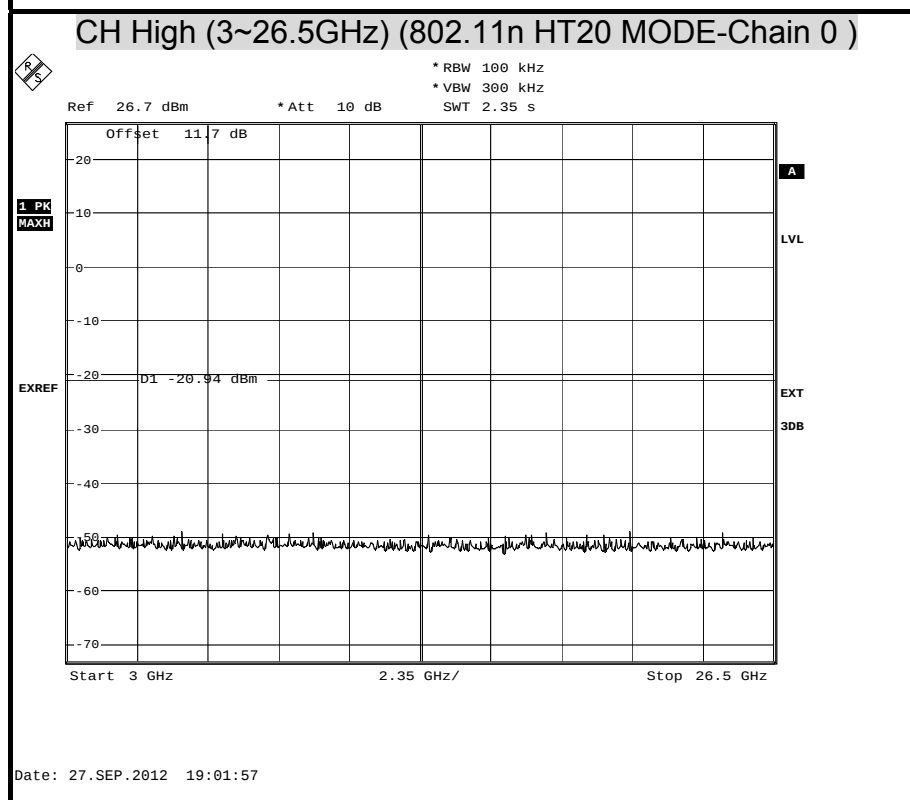
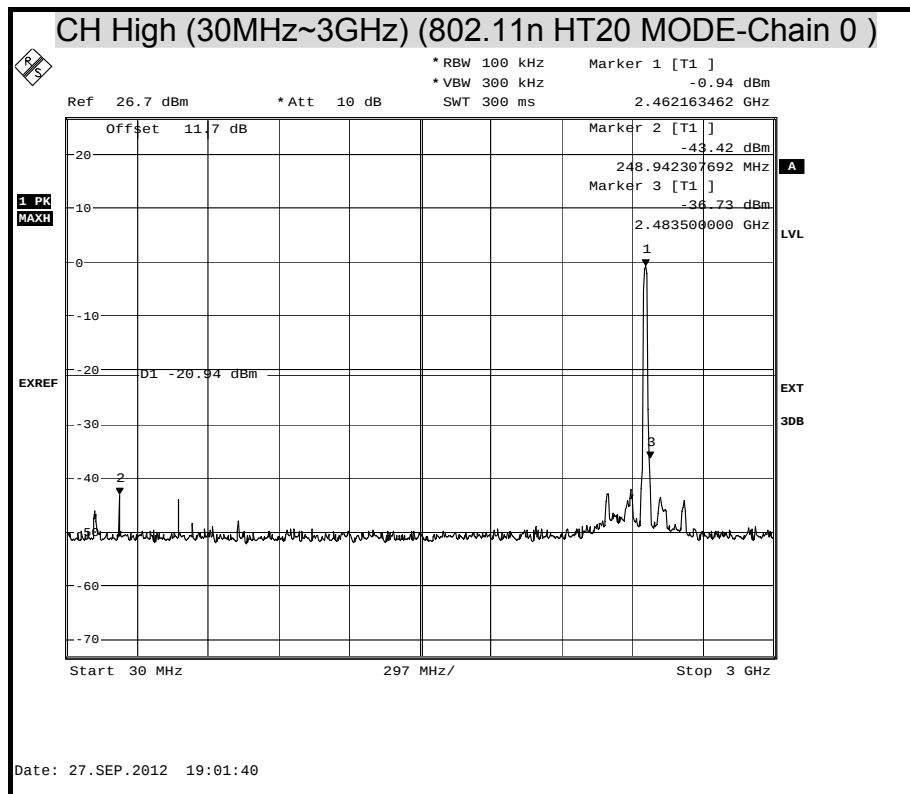


OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

(802.11n HT20 MODE)

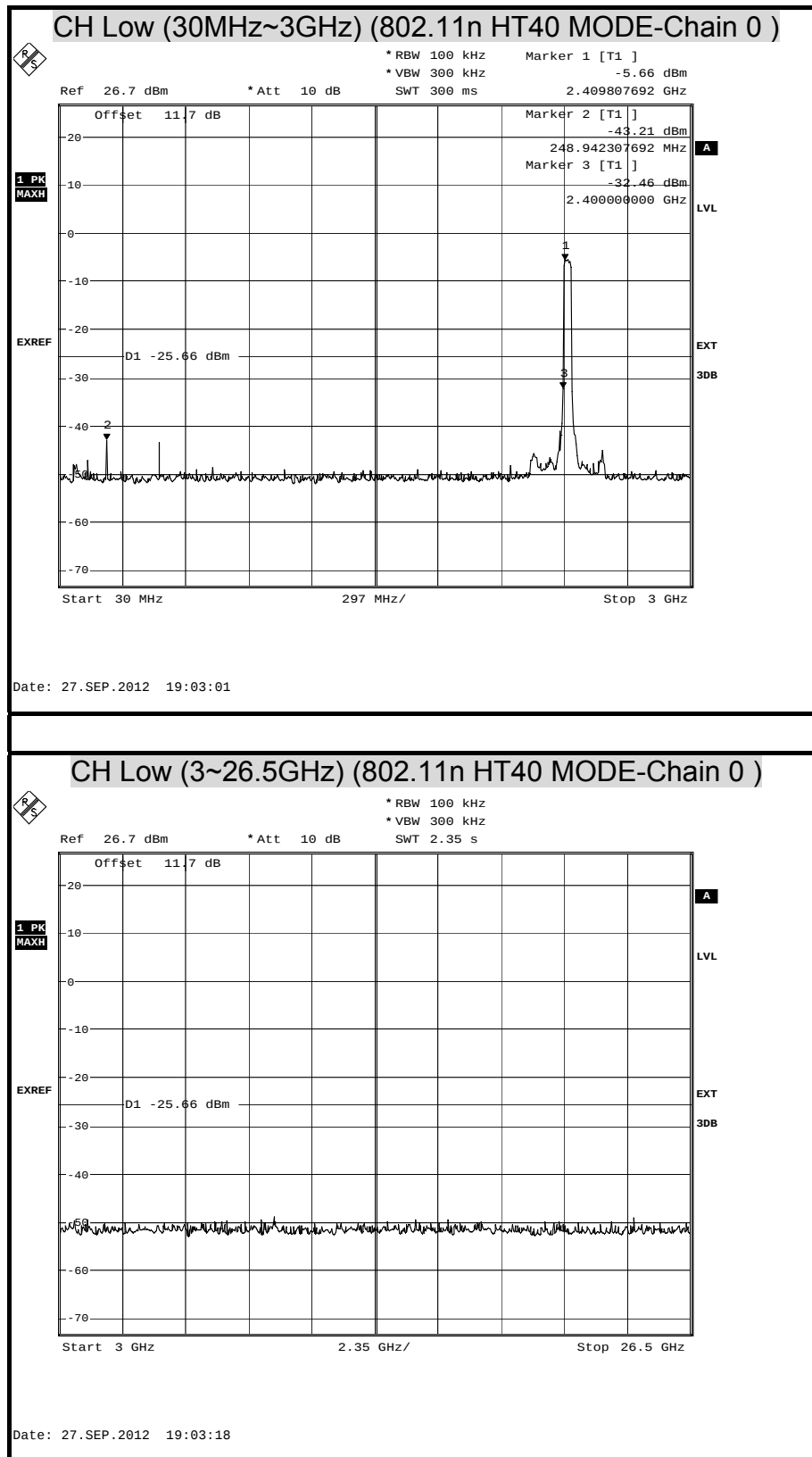


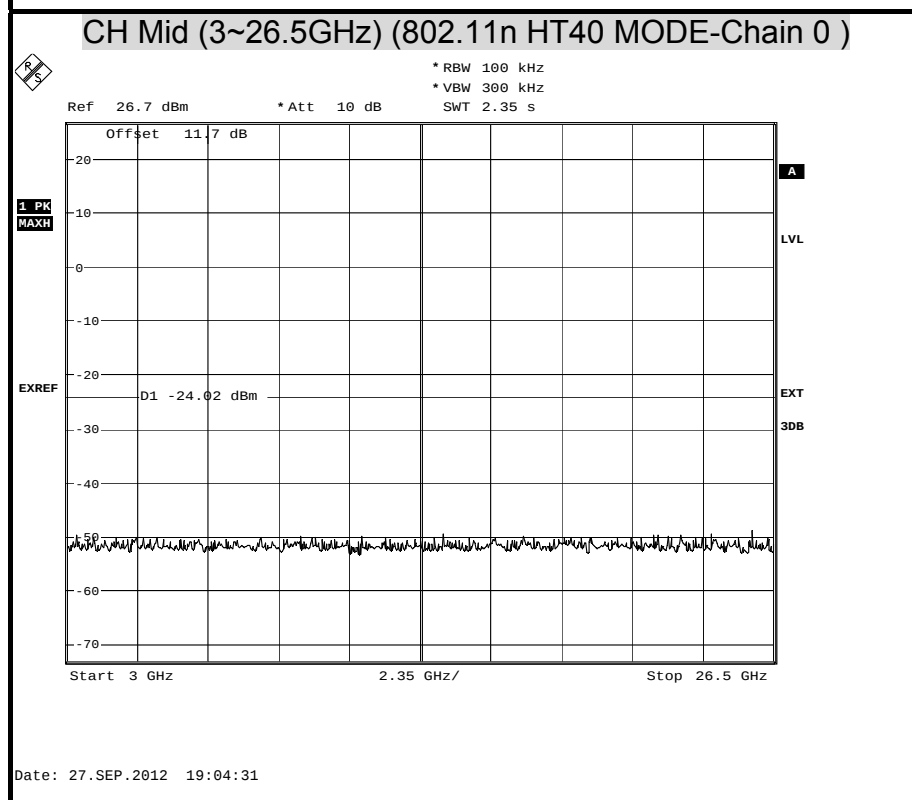
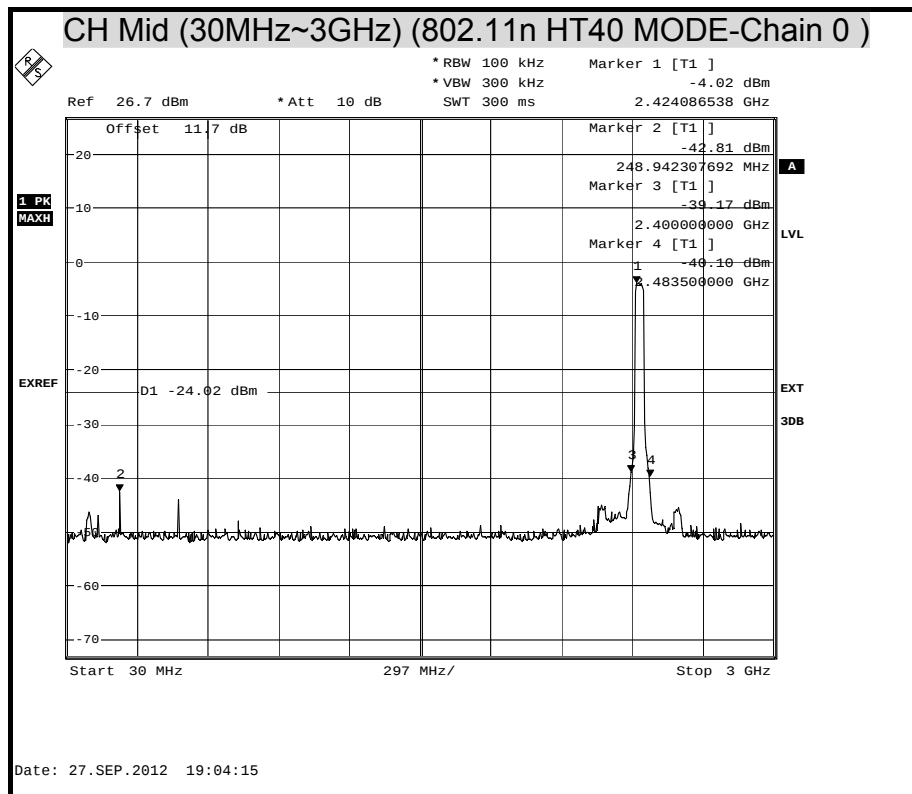


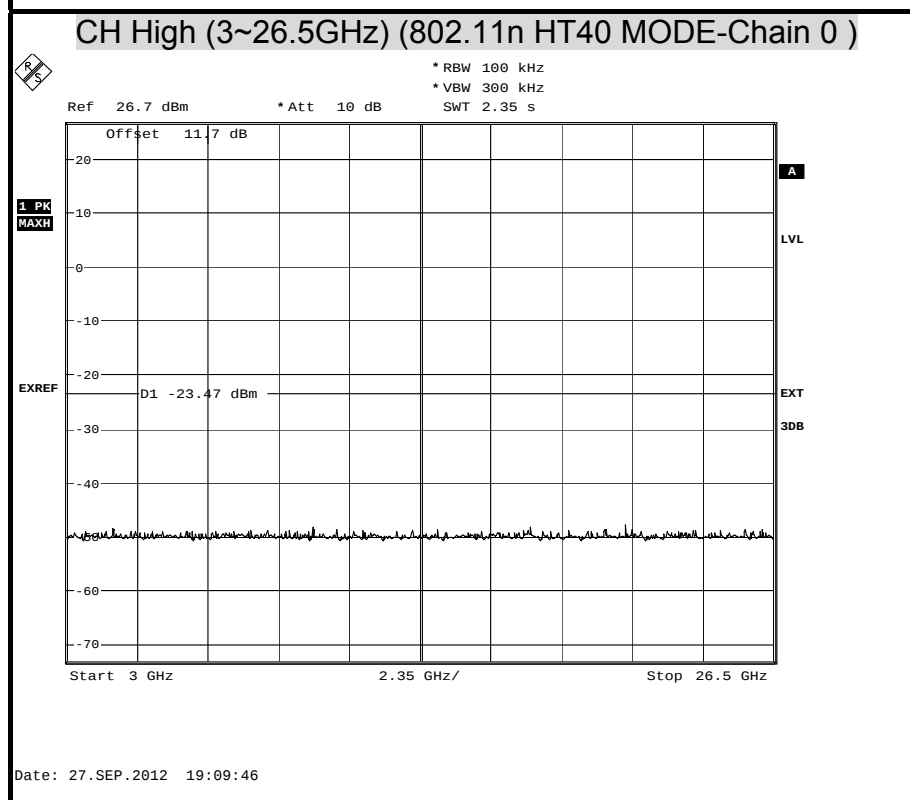
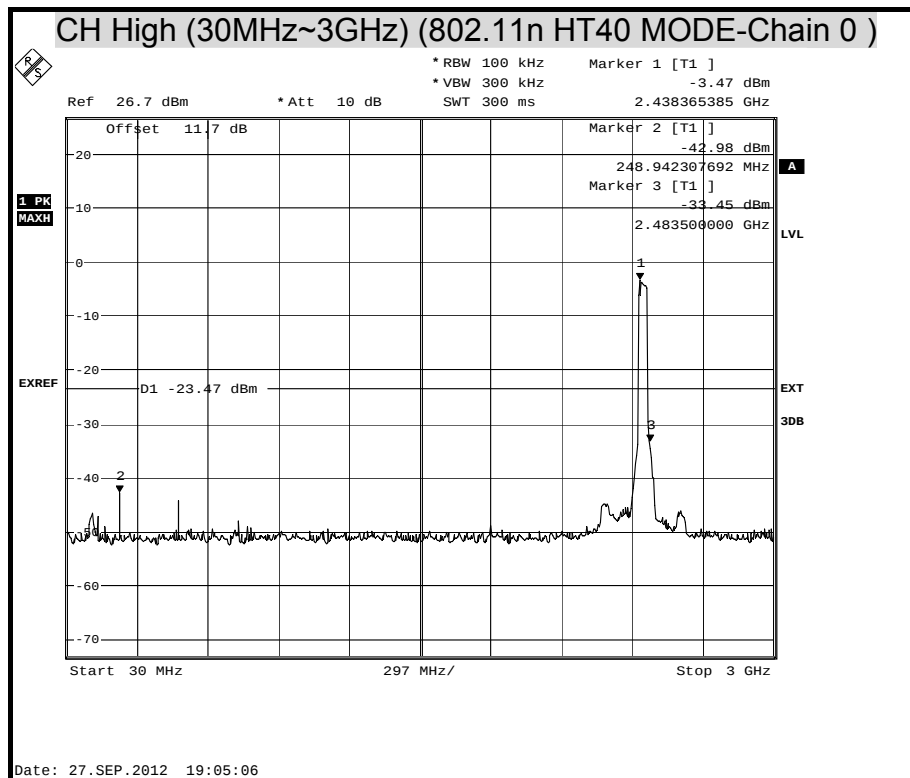




OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT
(802.11n HT40 MODE)







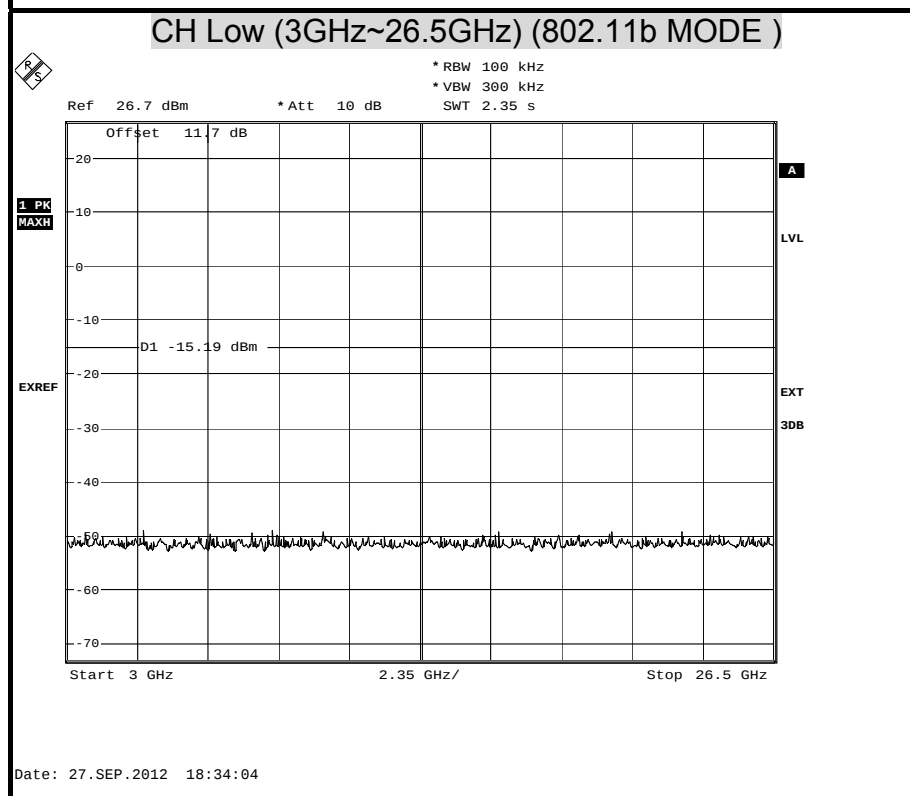
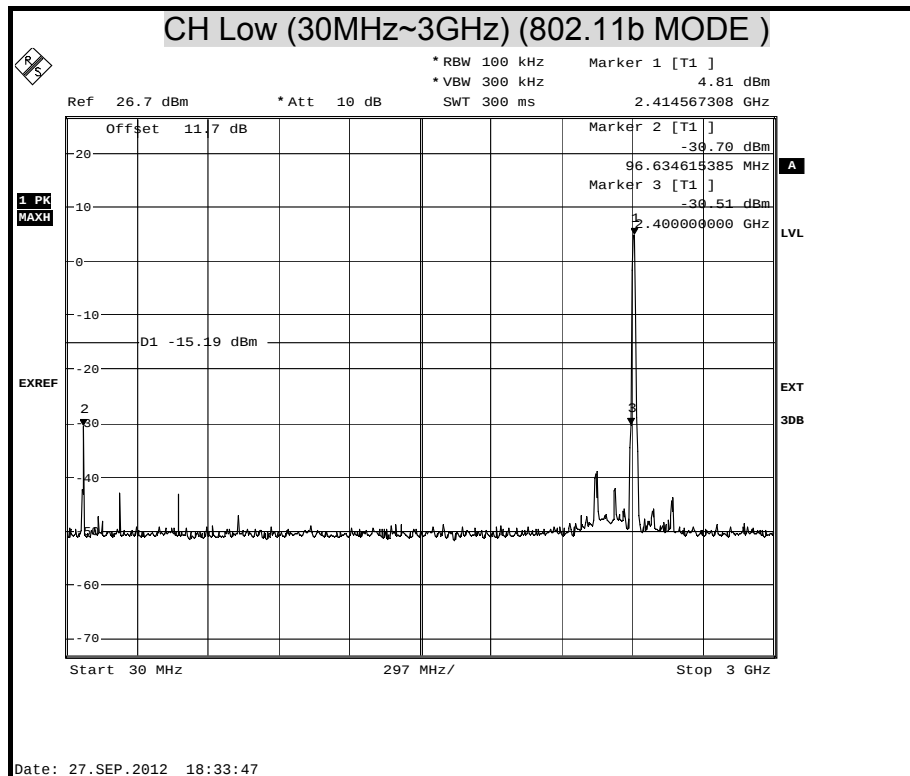


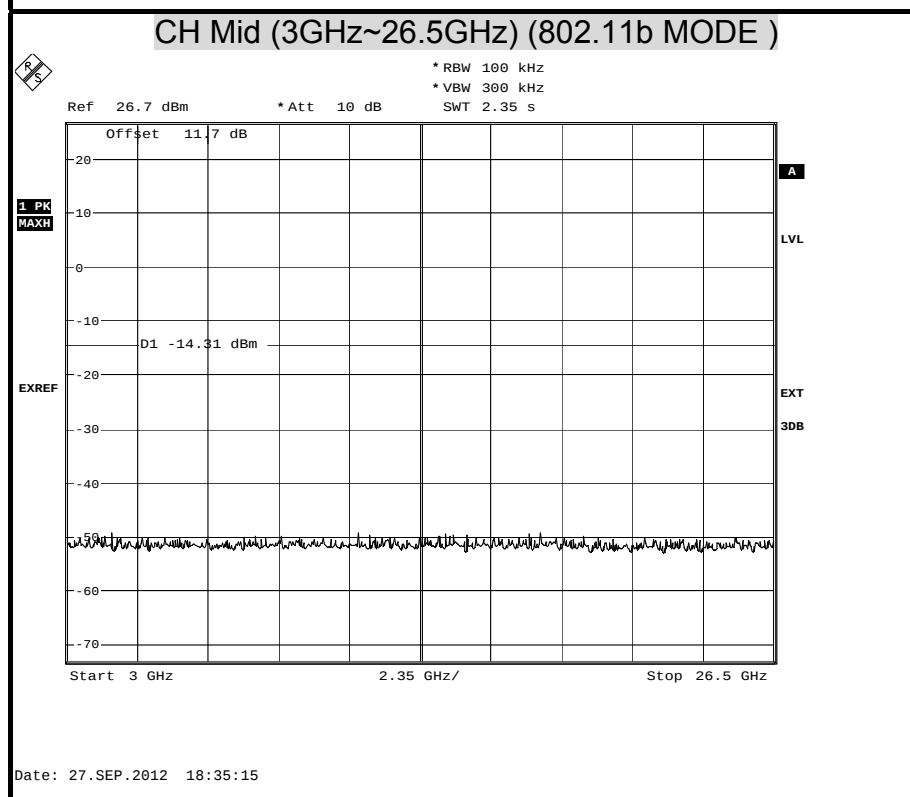
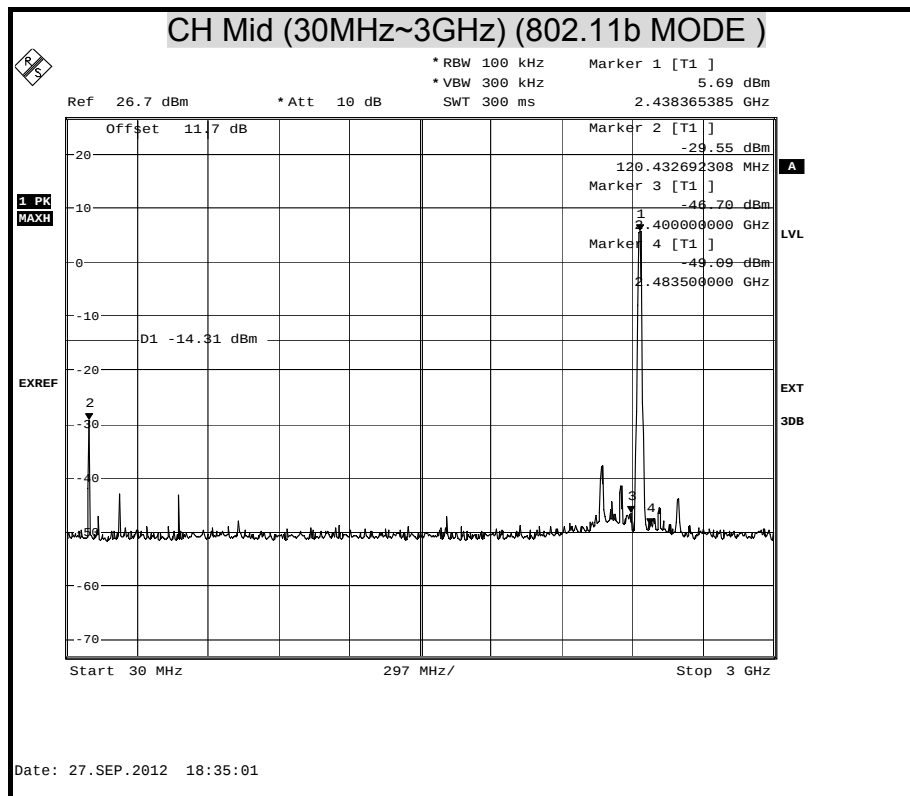
OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

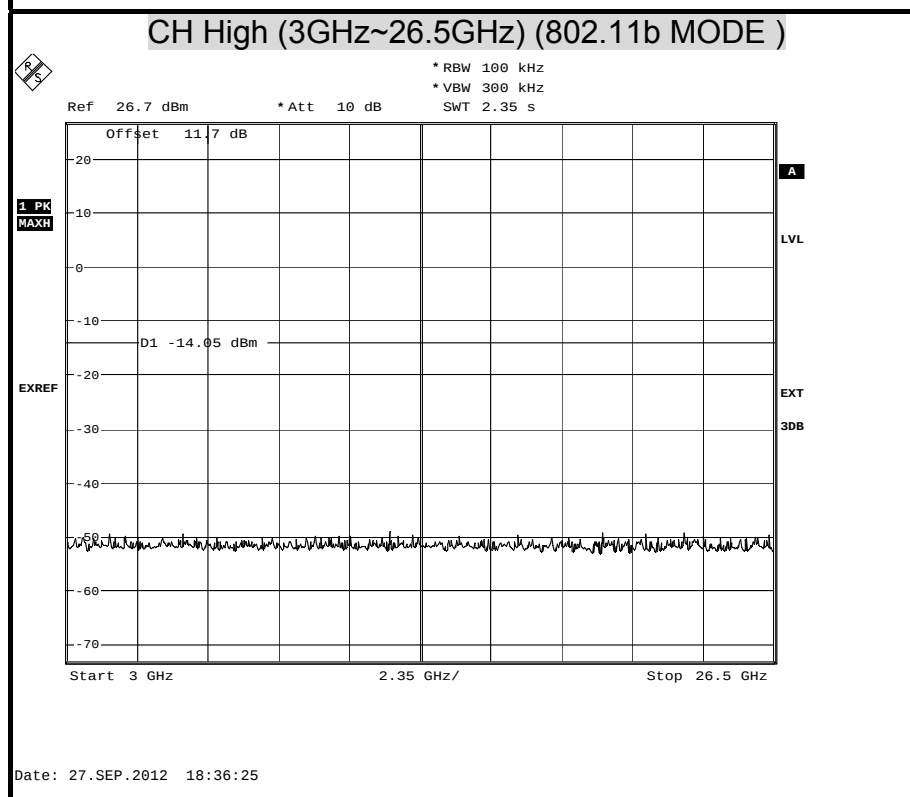
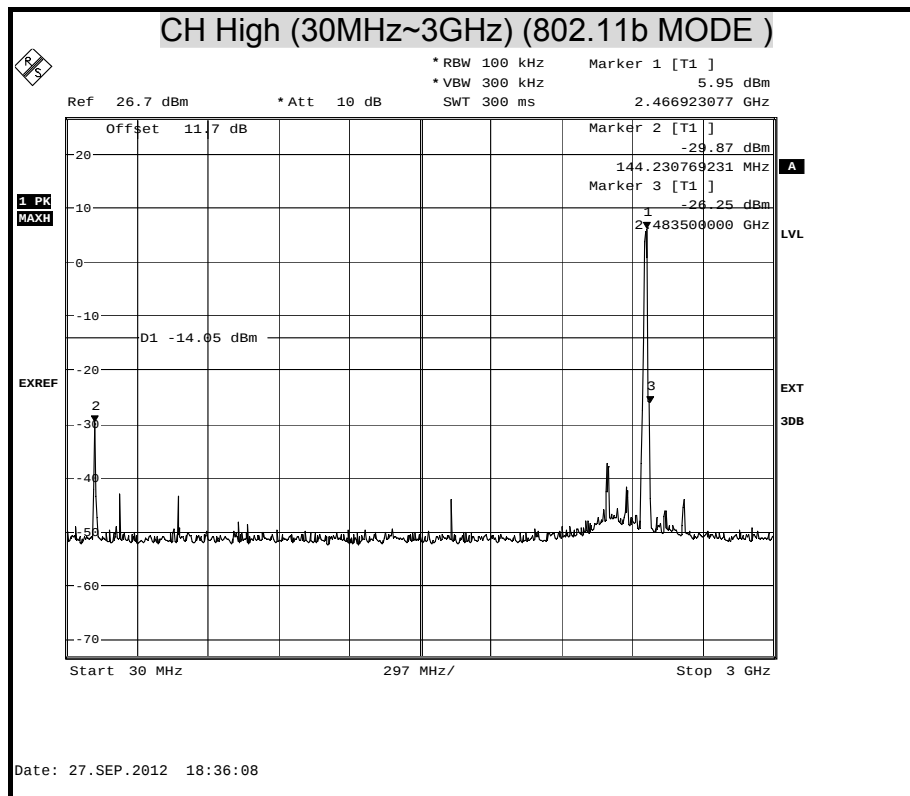
Antenna Gain

2.0 dBi

(IEEE 802.11b MODE)



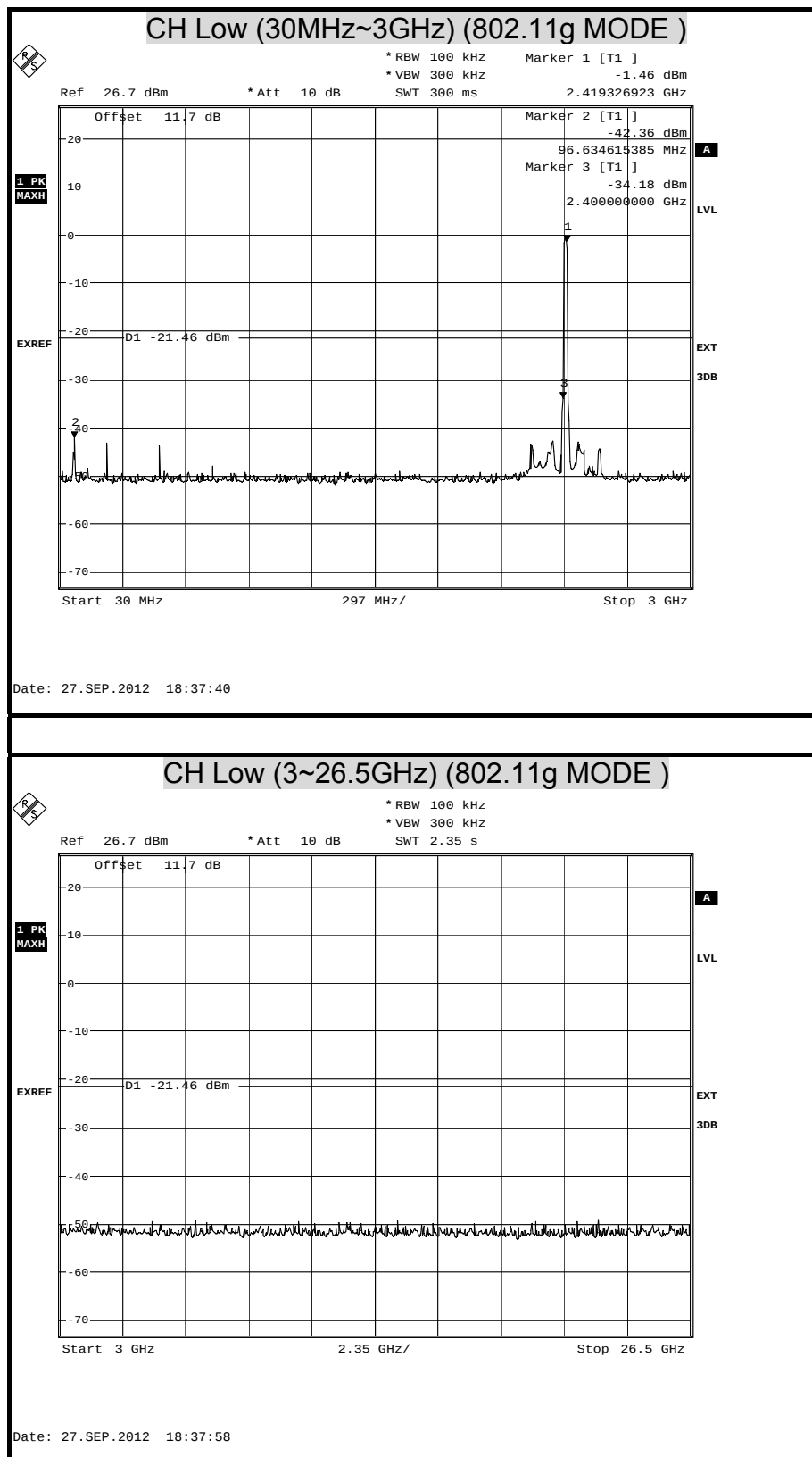


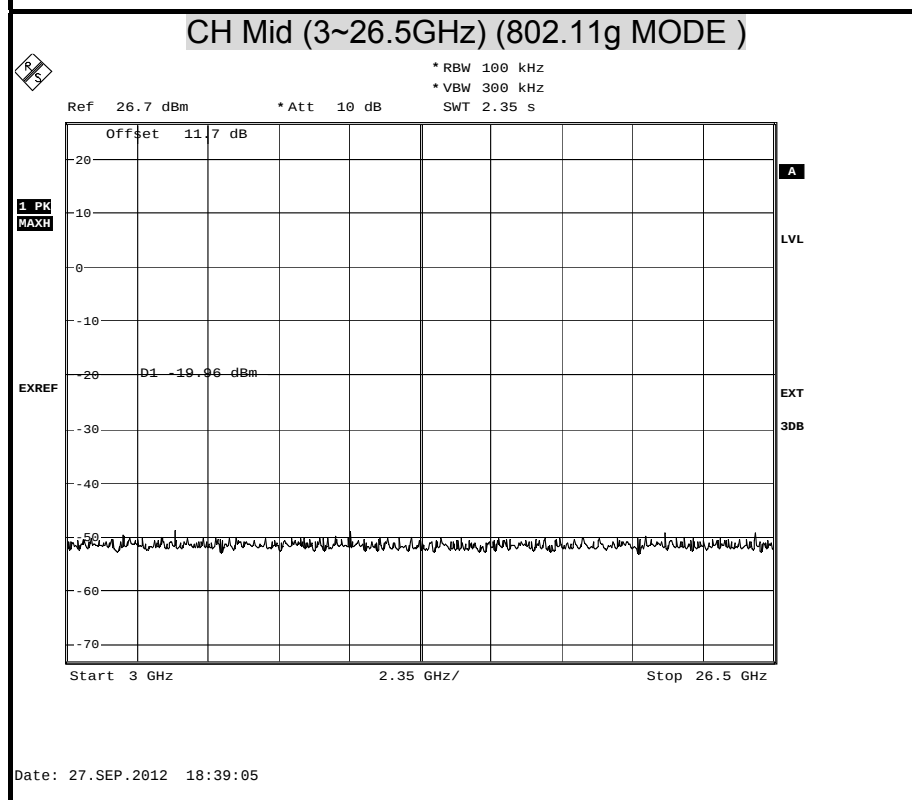
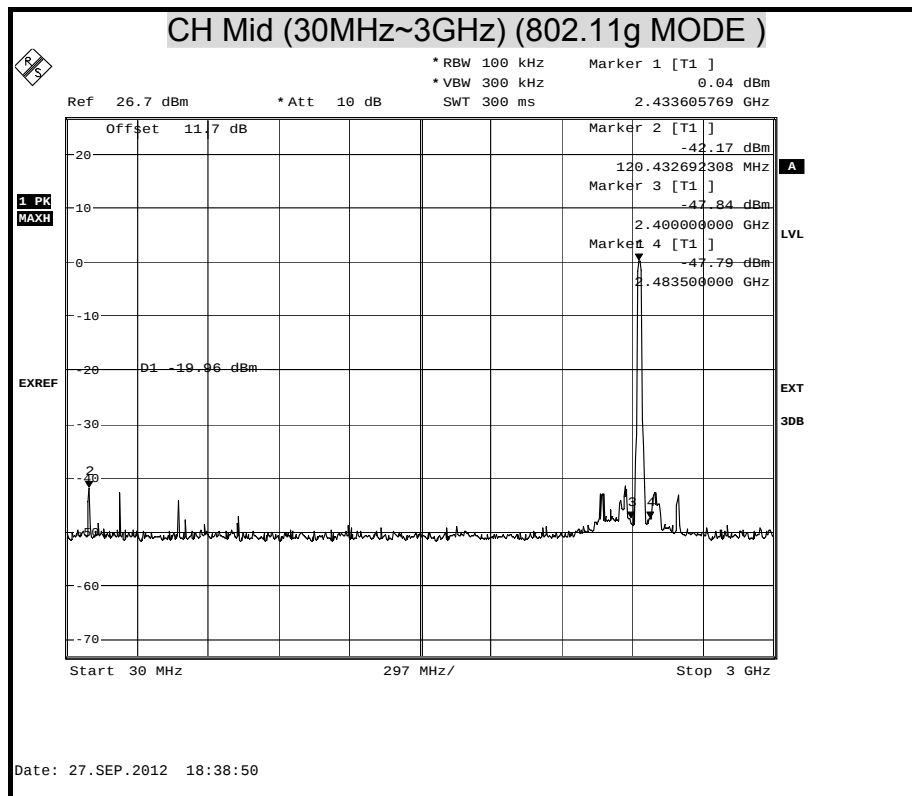


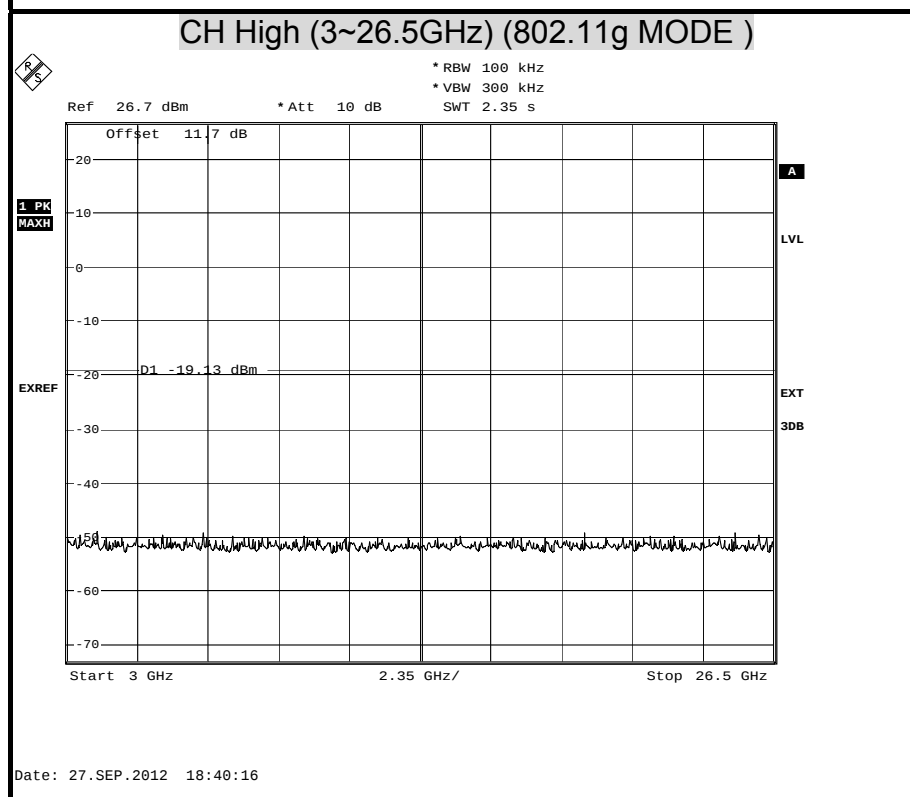
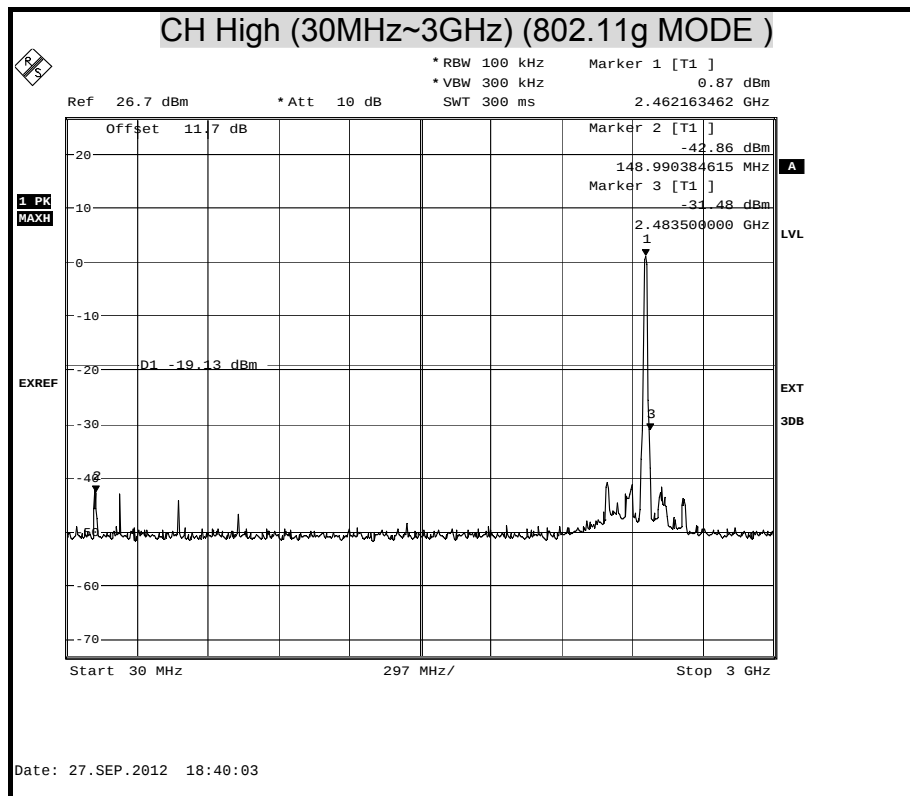


OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

(802.11g MODE)



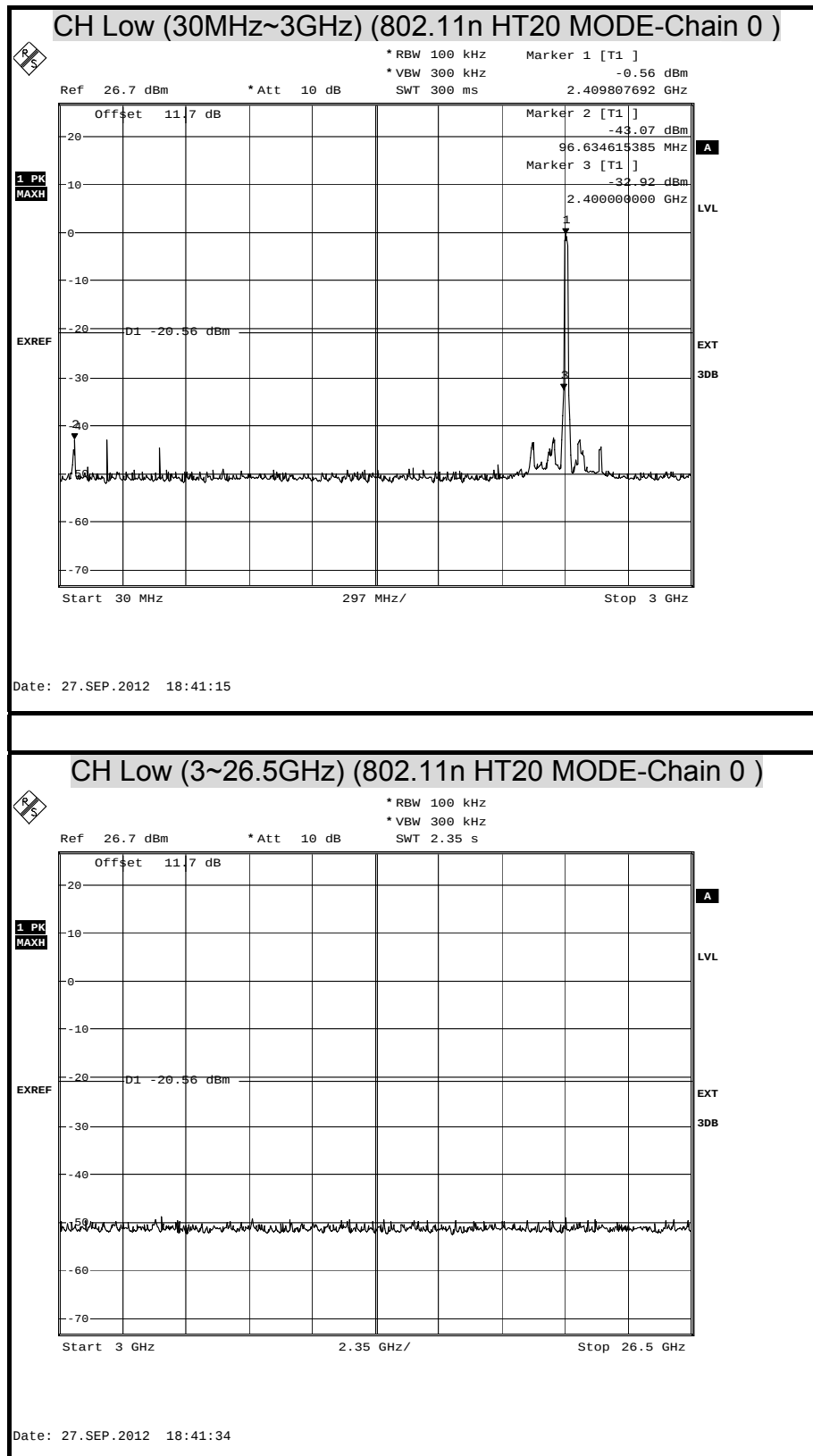


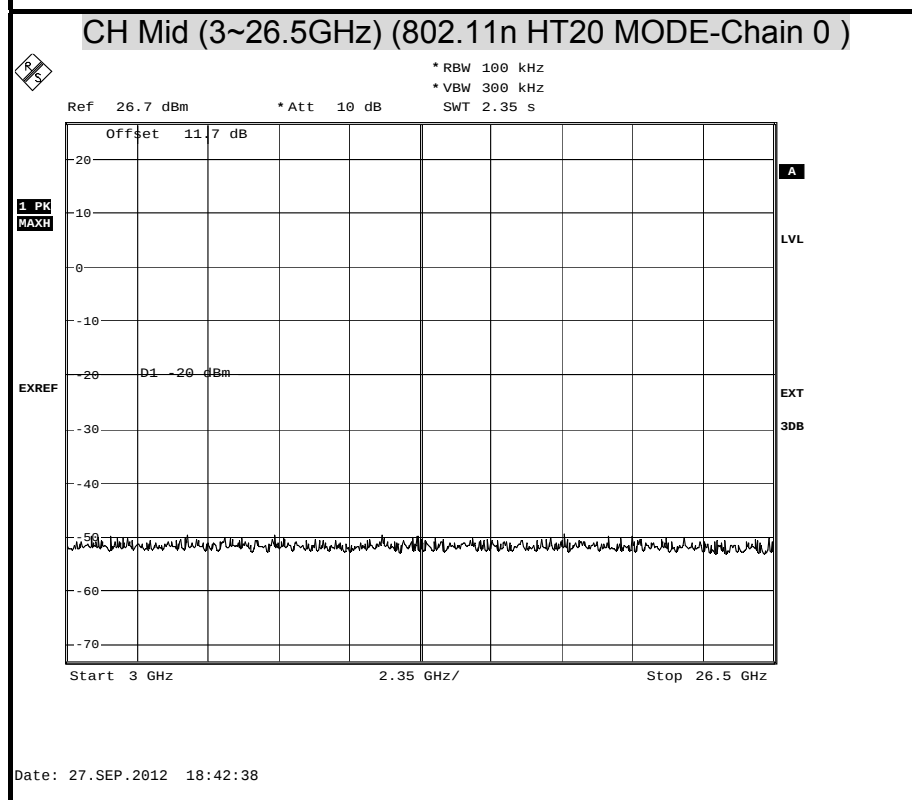
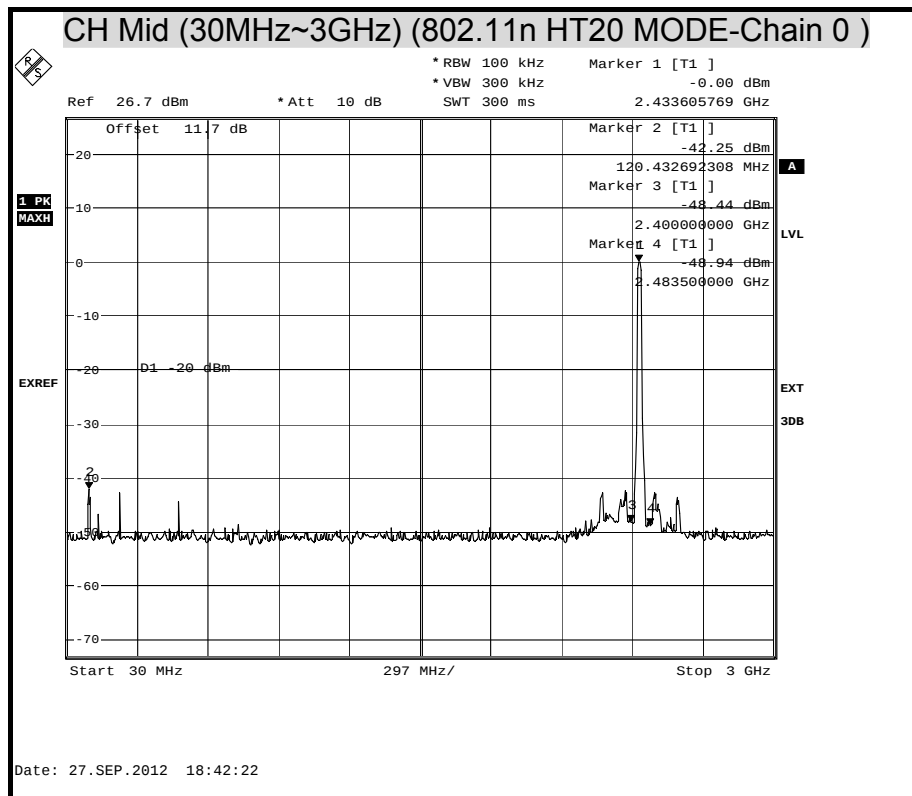


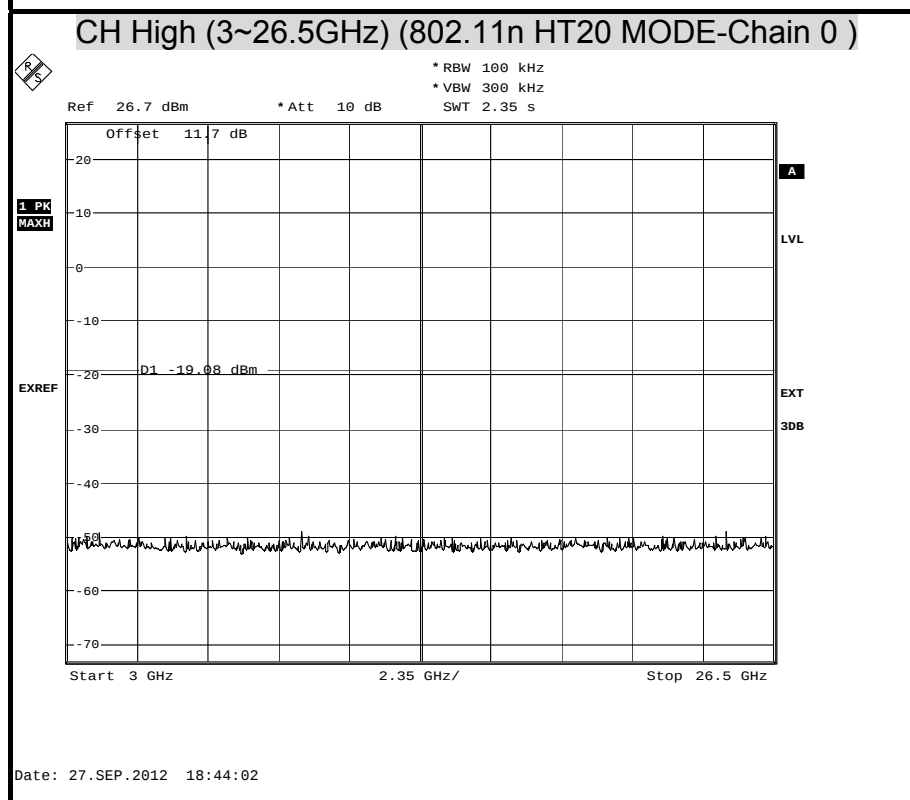
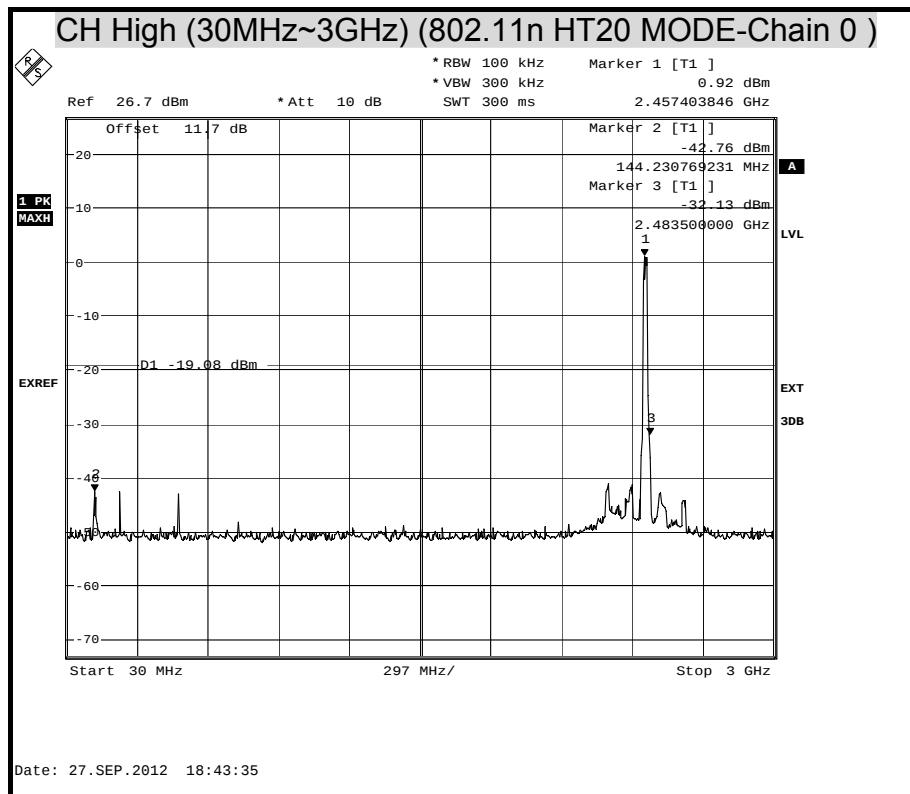


OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

(802.11n HT20 MODE)

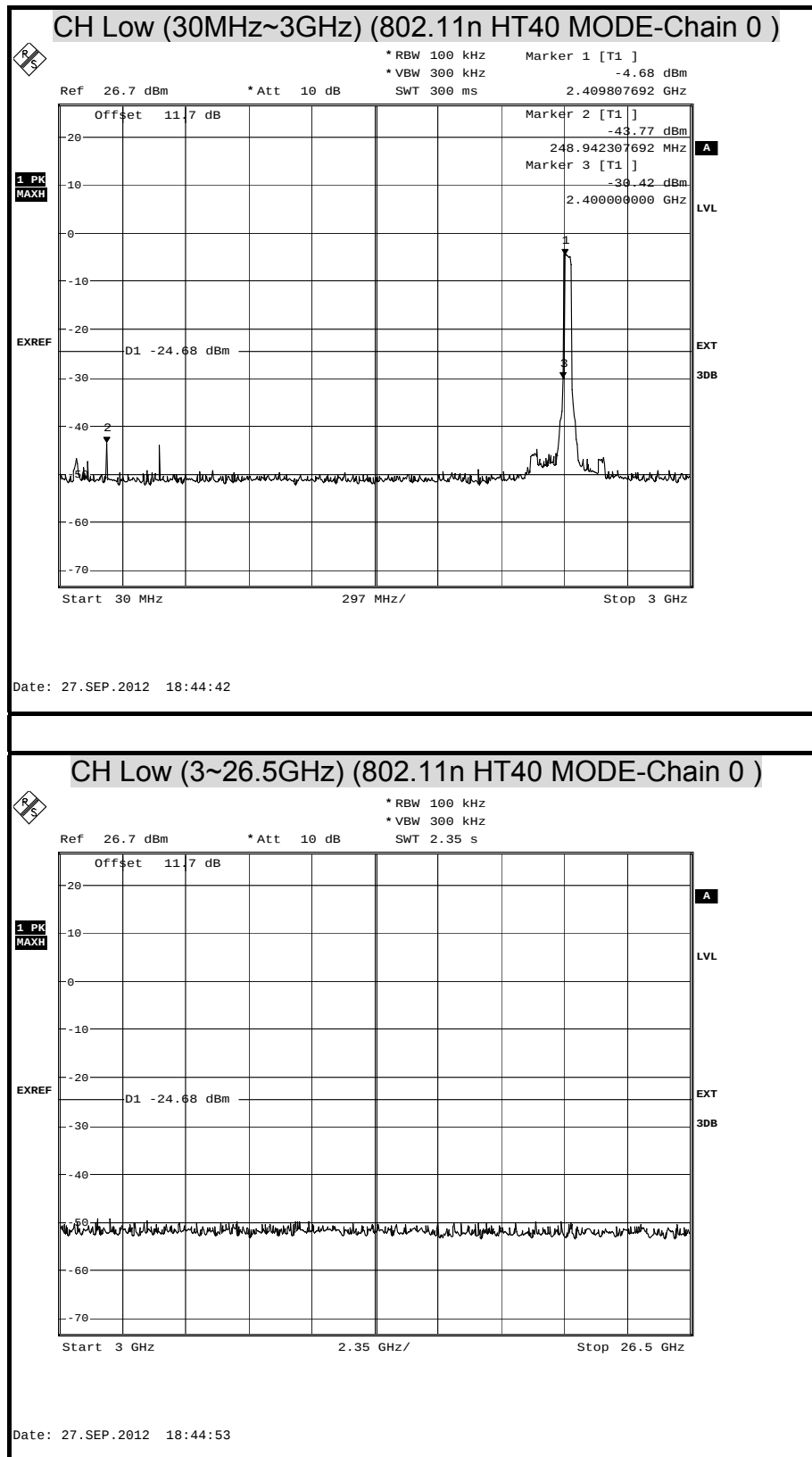


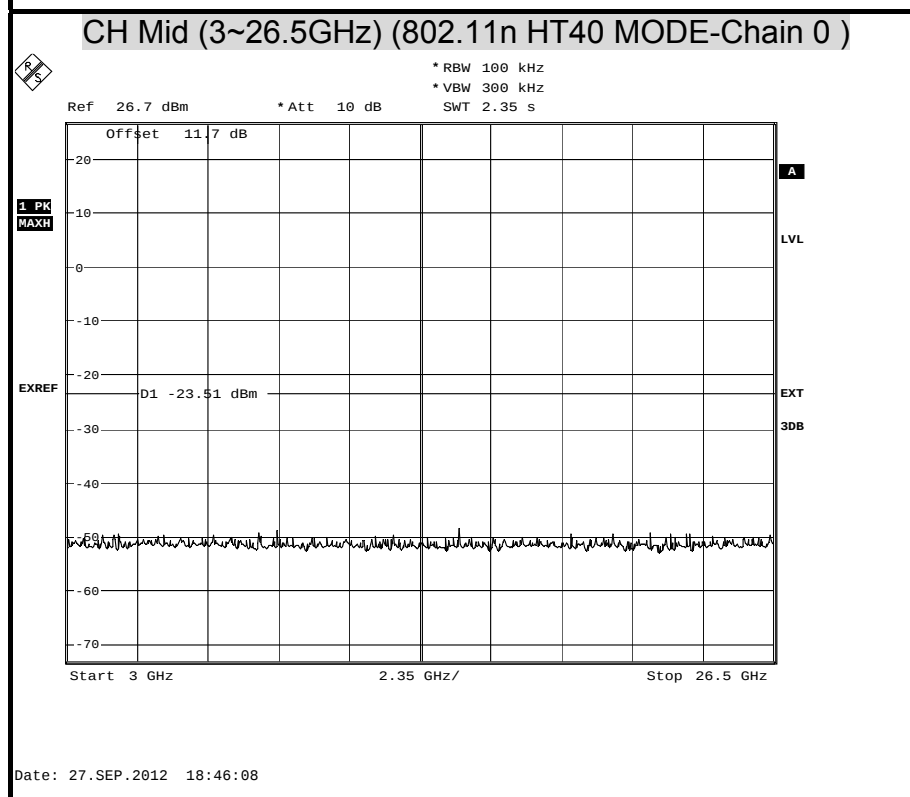
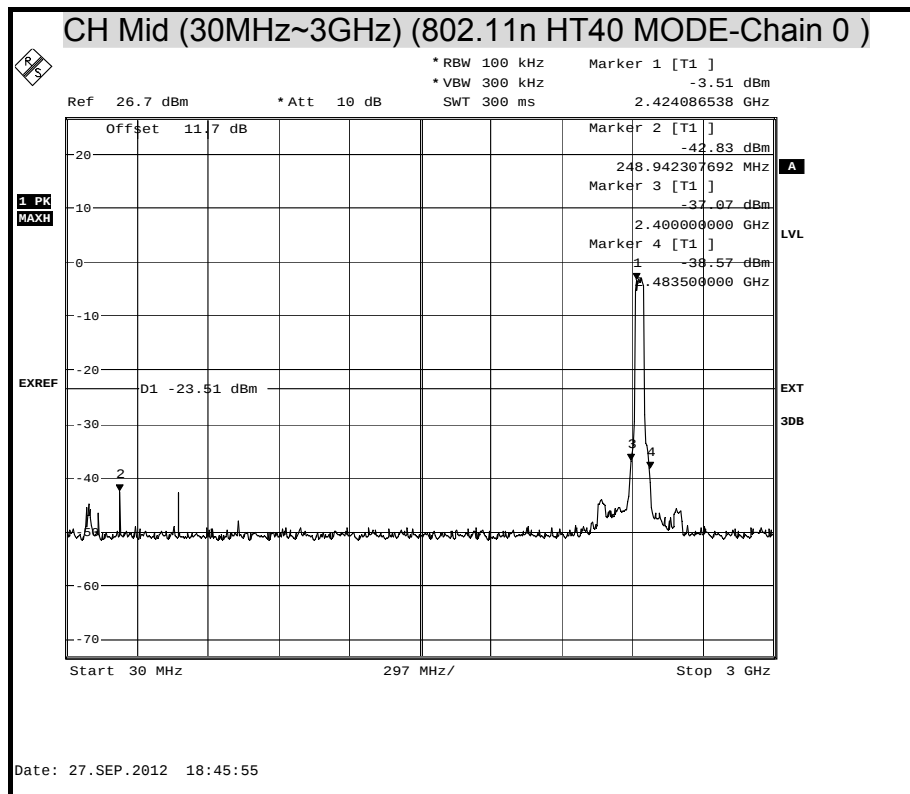


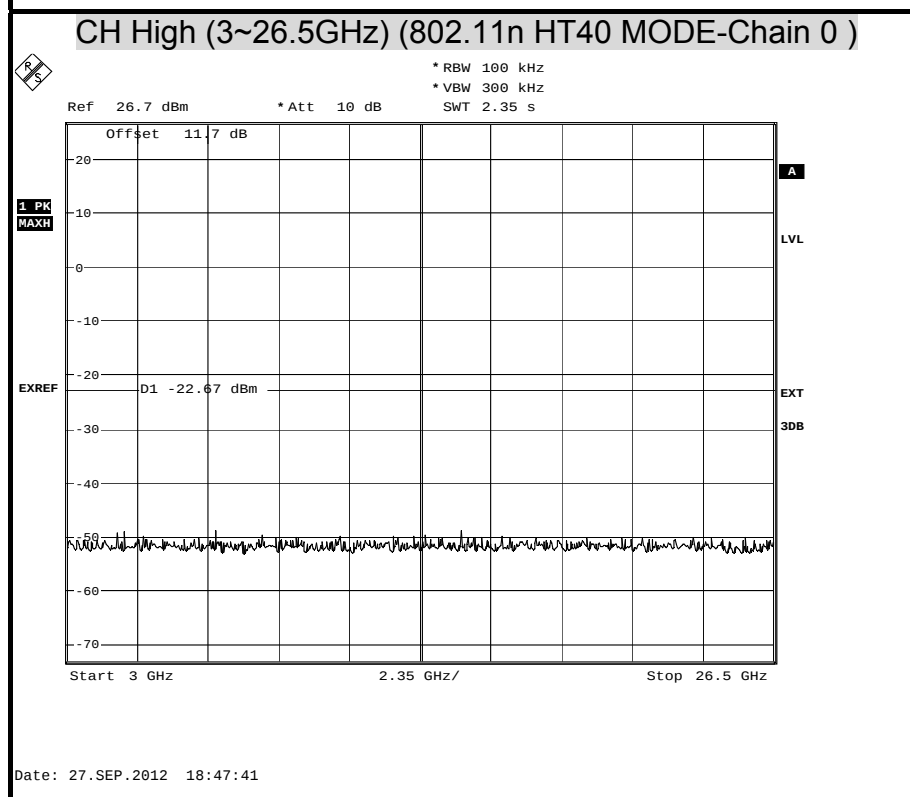
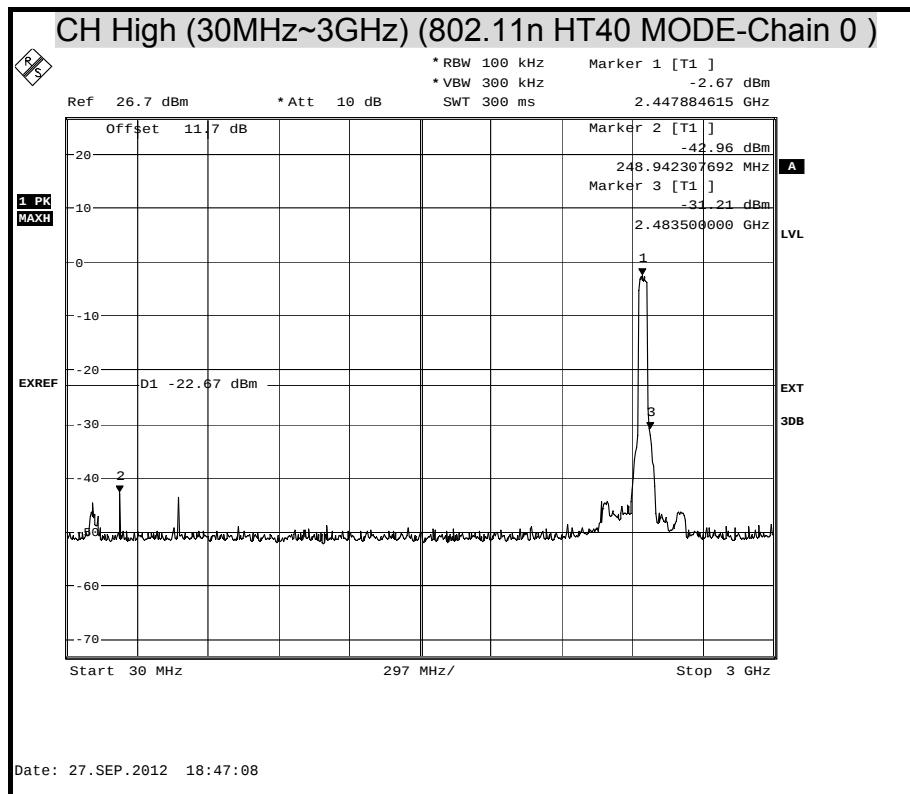




OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT (802.11n HT40 MODE)







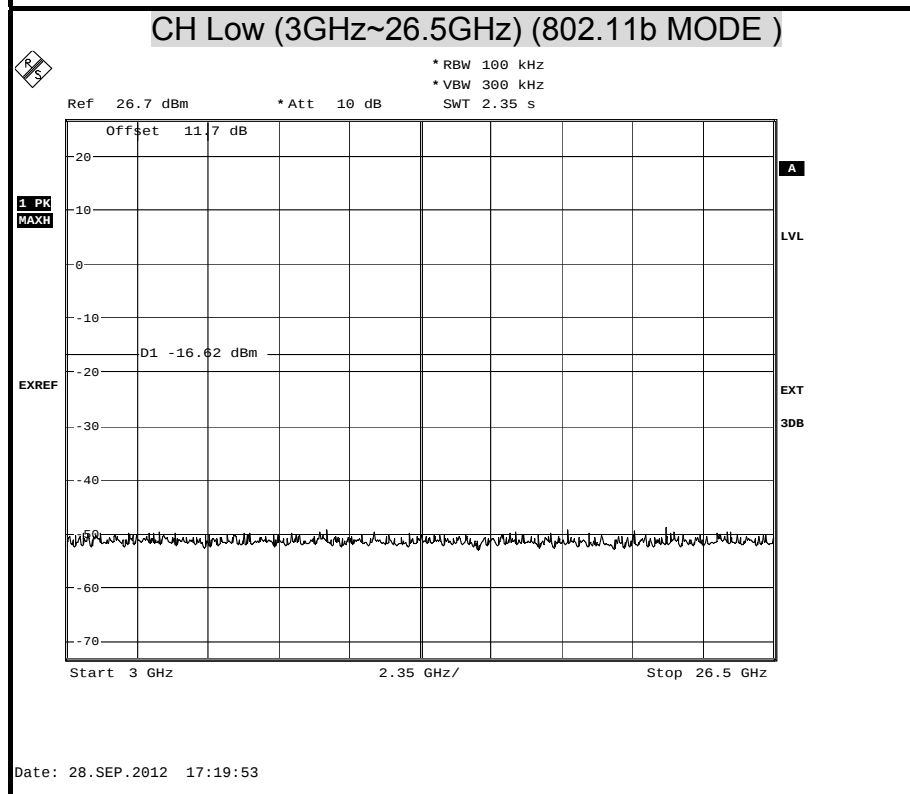
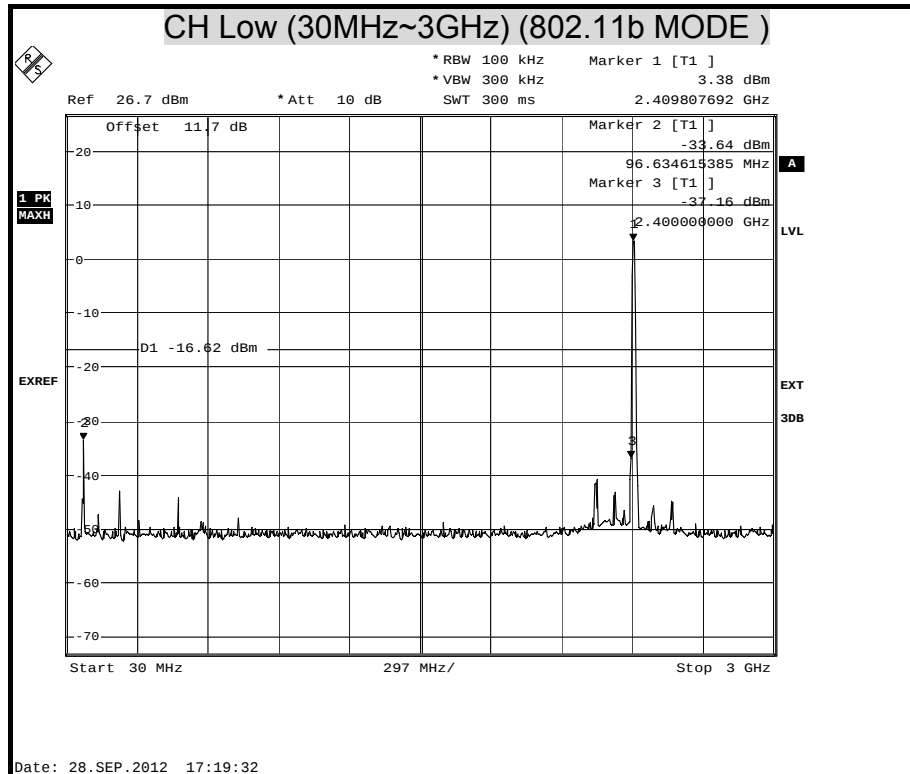


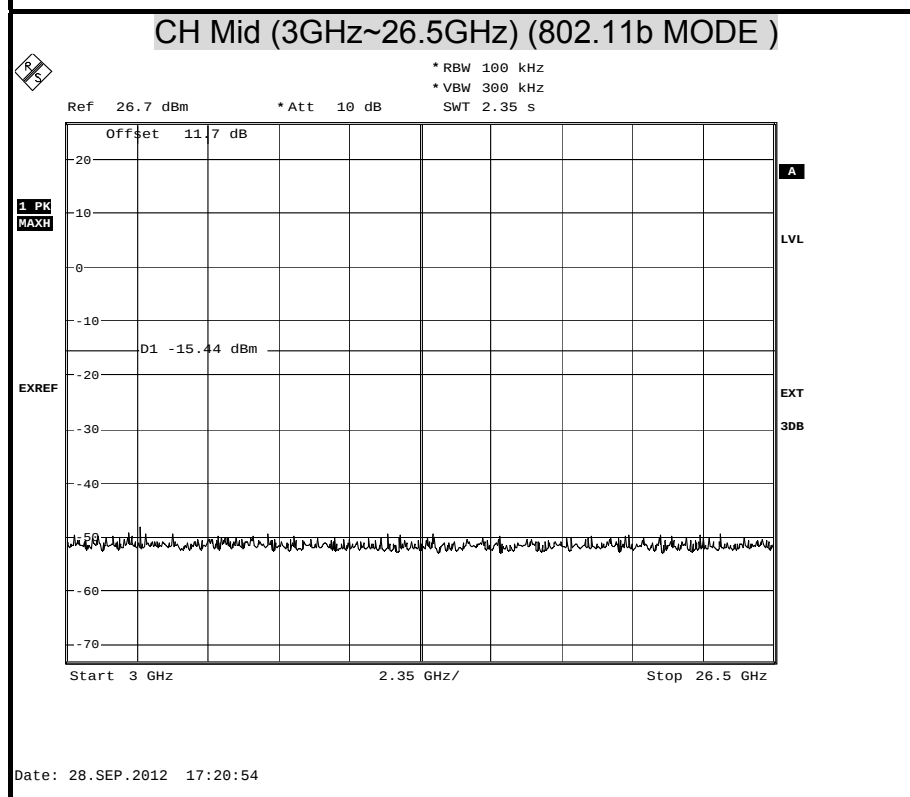
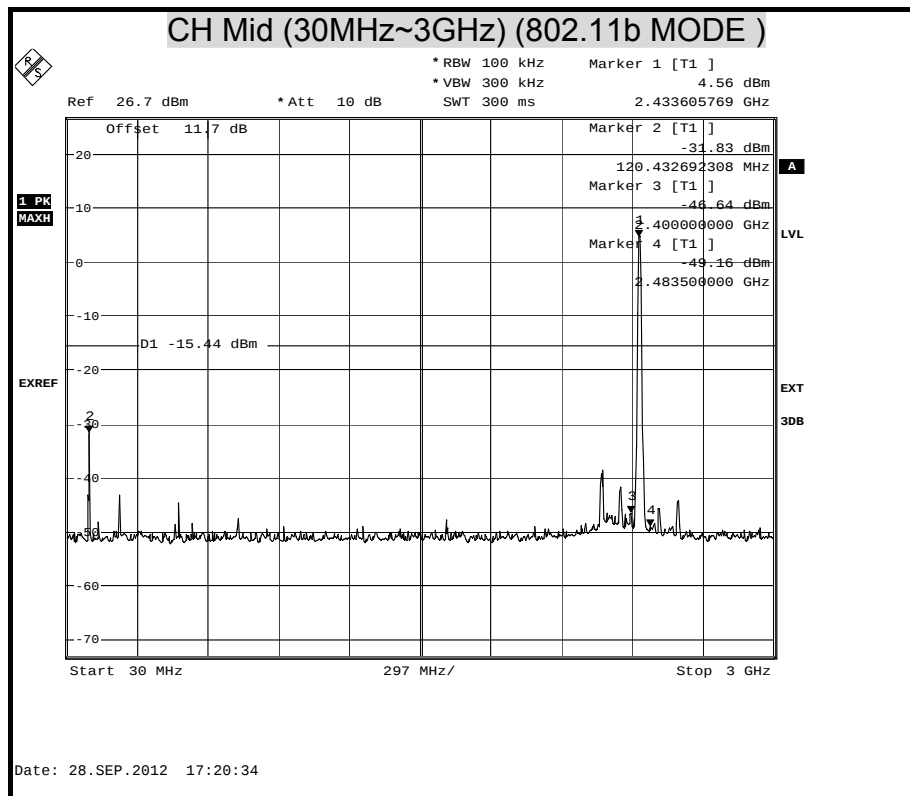
OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

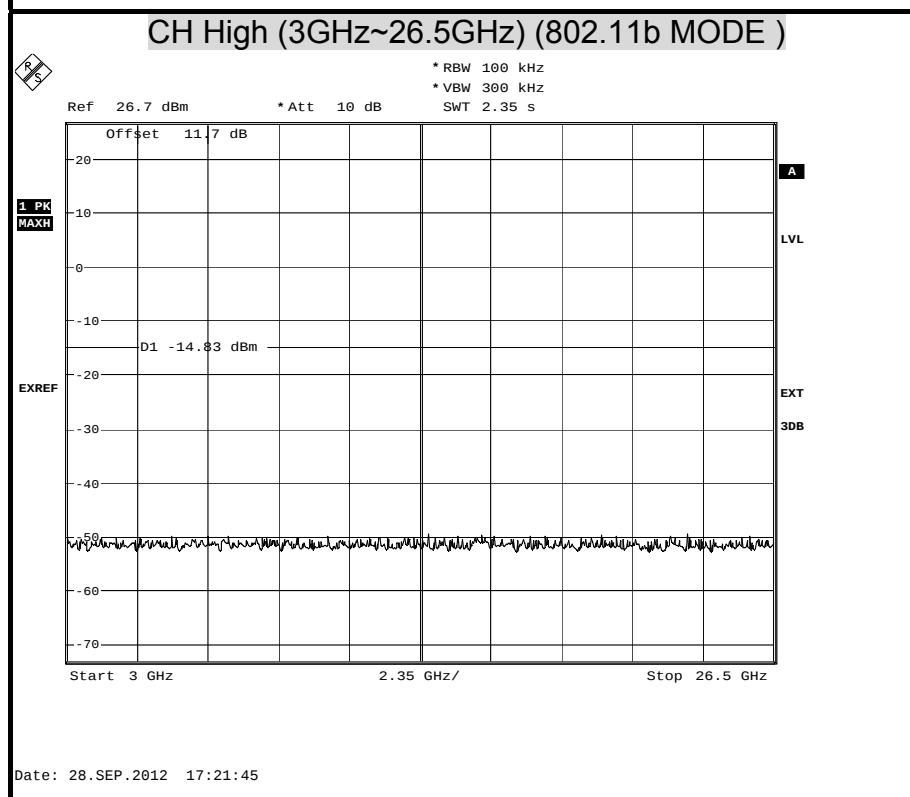
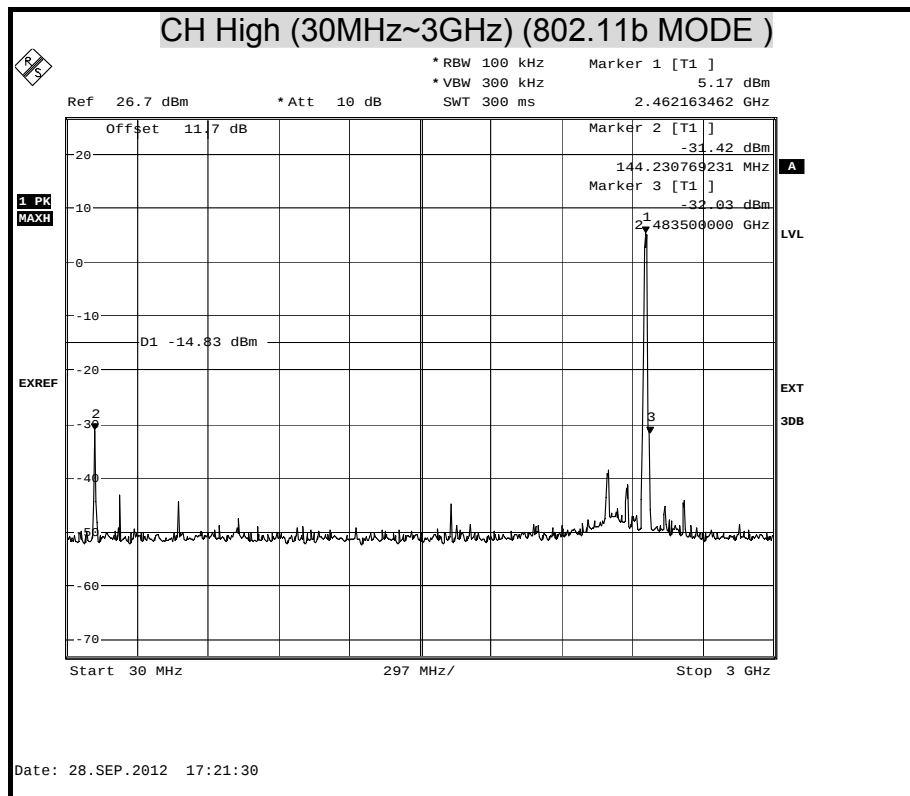
Antenna Gain

2.35 dBi

(IEEE 802.11b MODE)



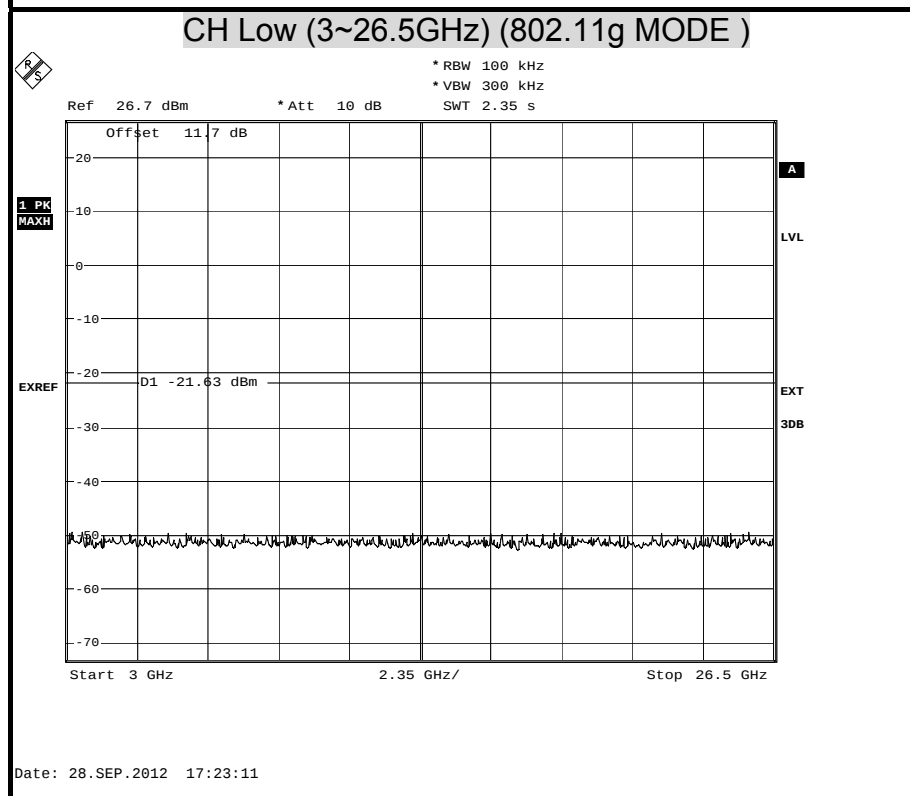
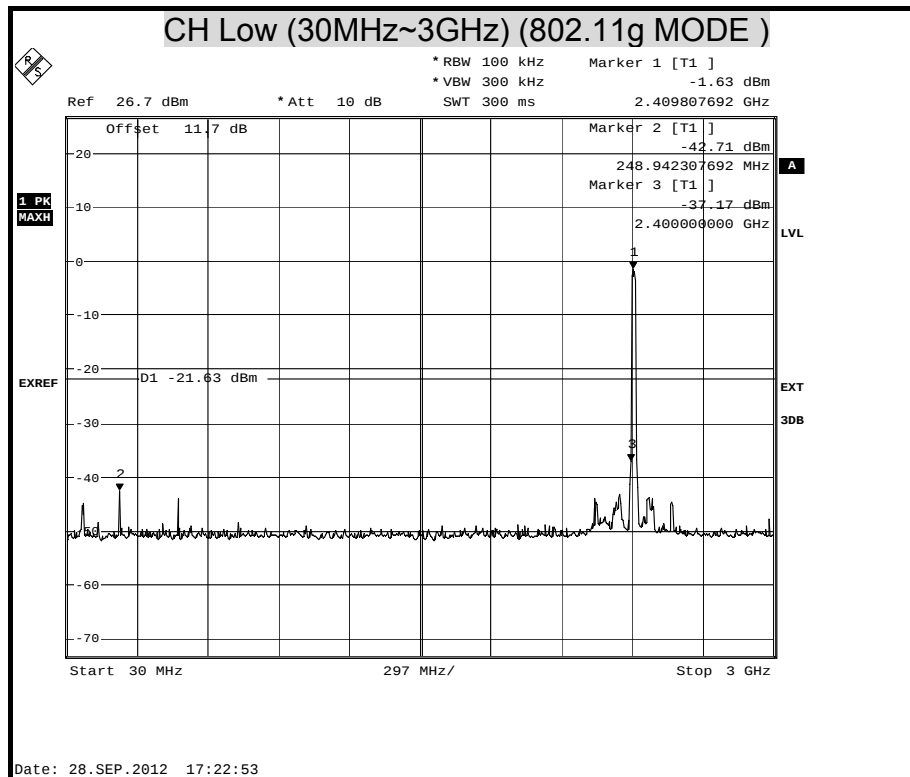


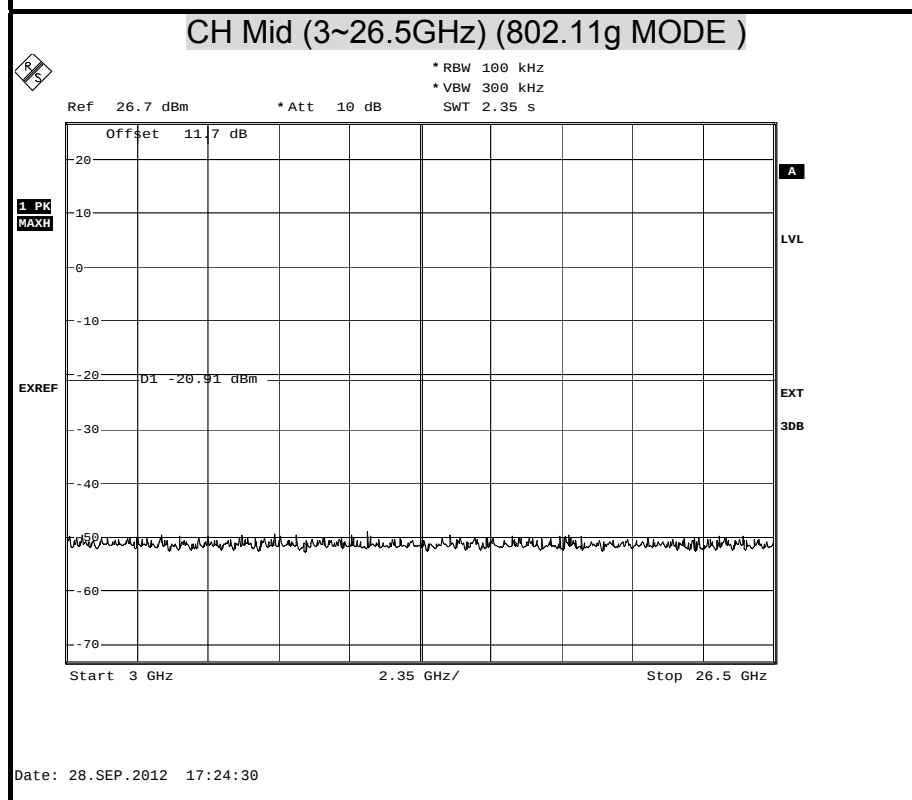
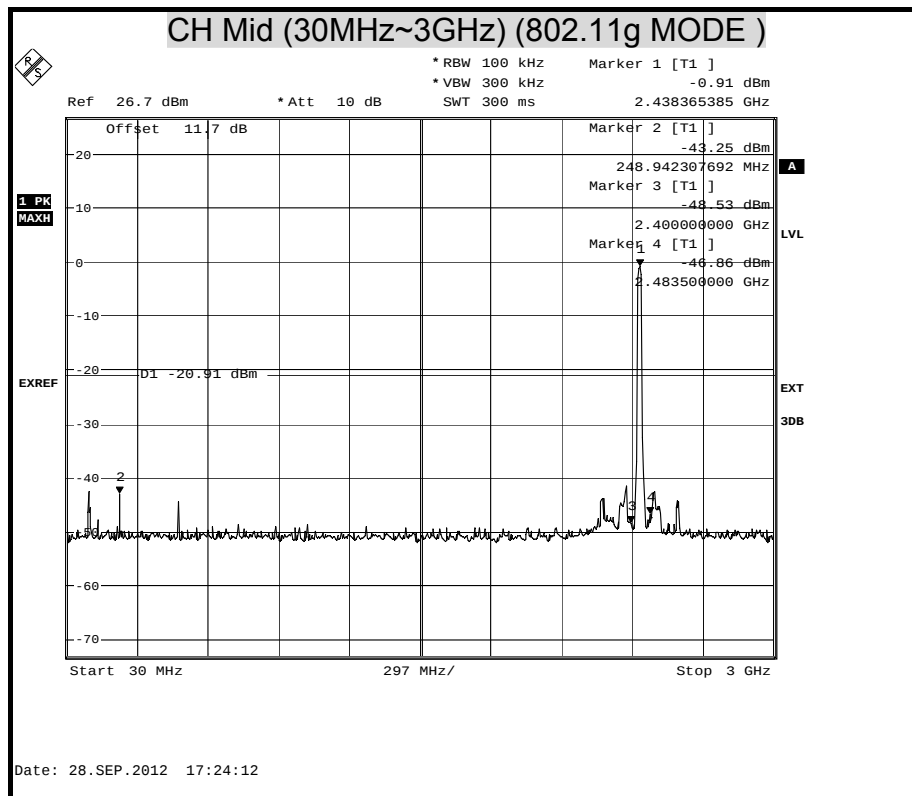


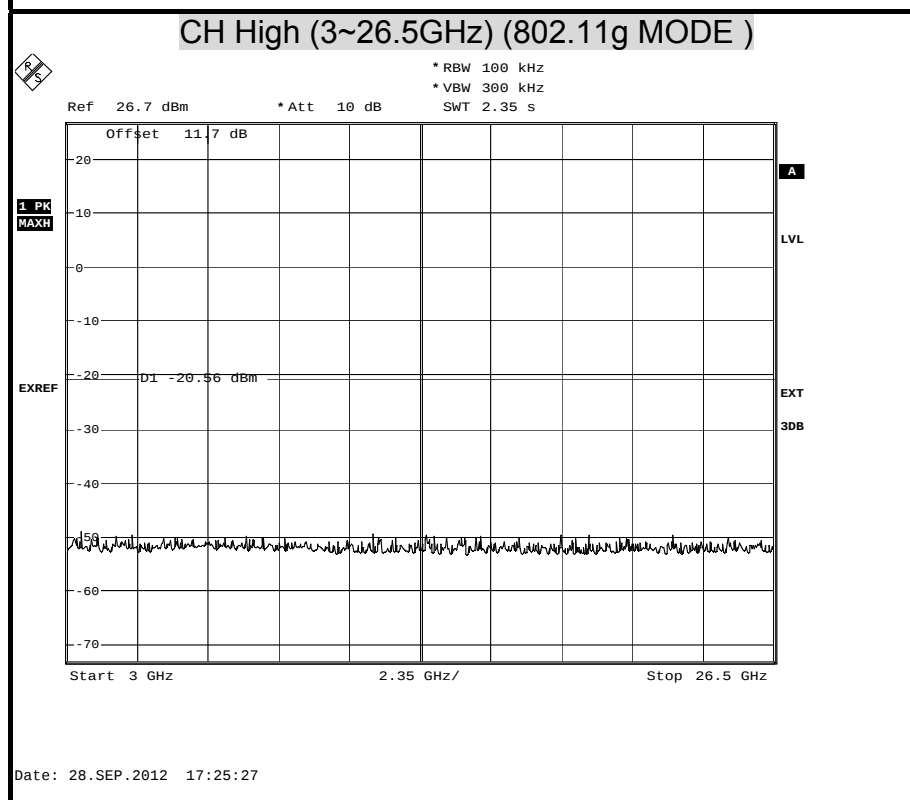
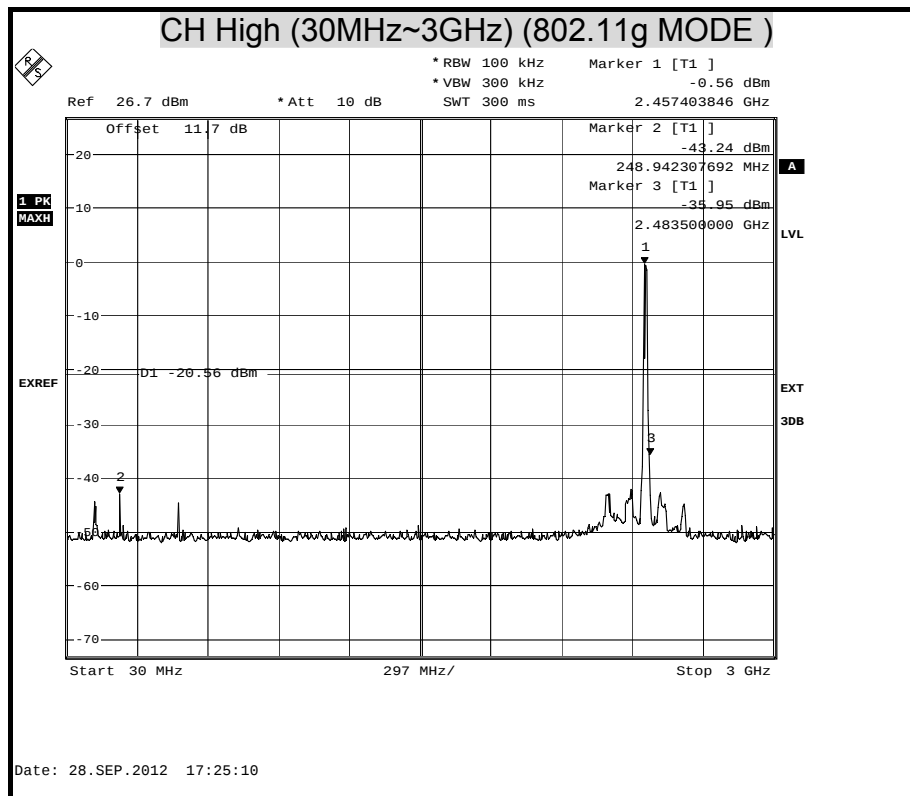


OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

(802.11g MODE)



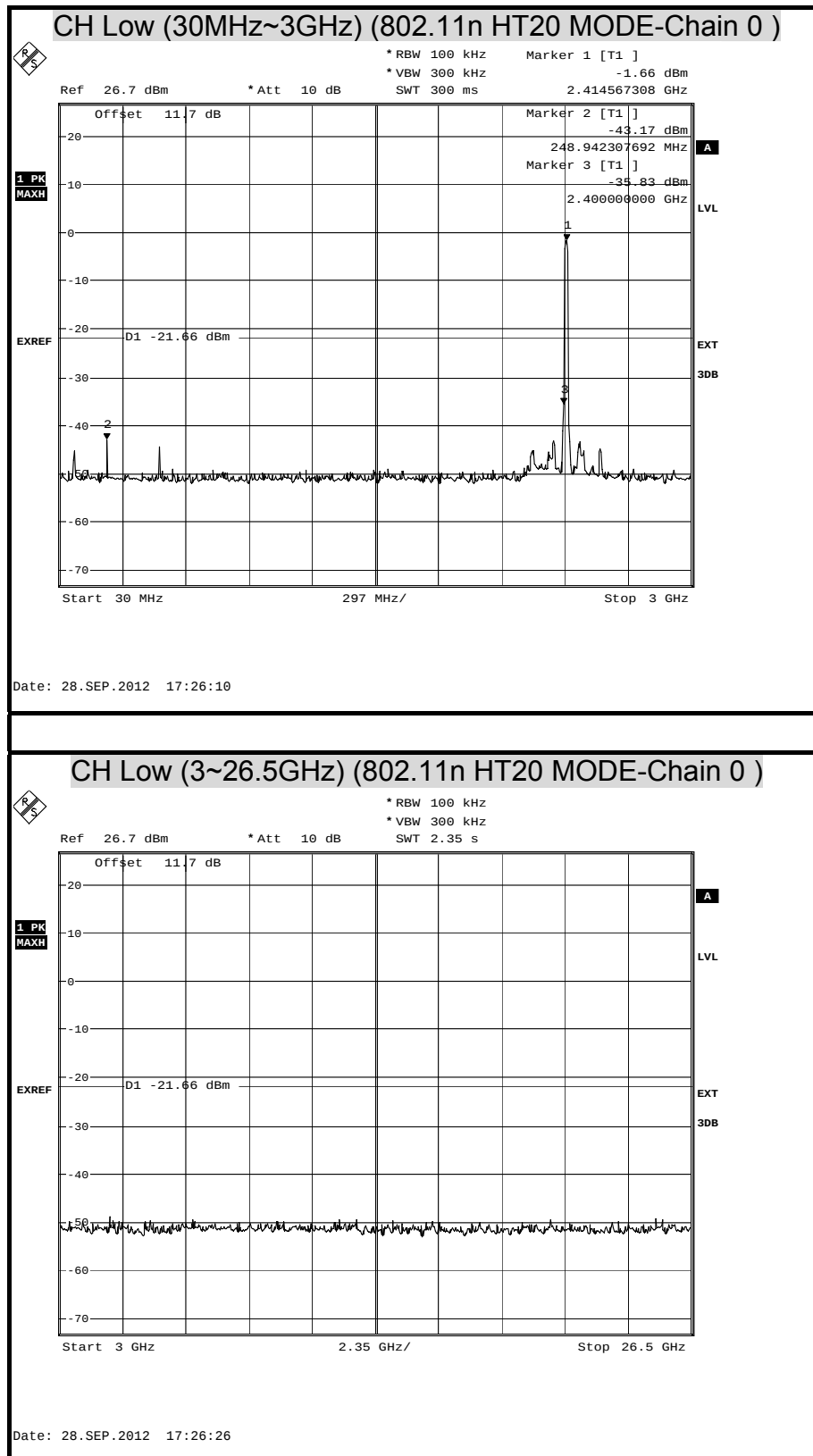


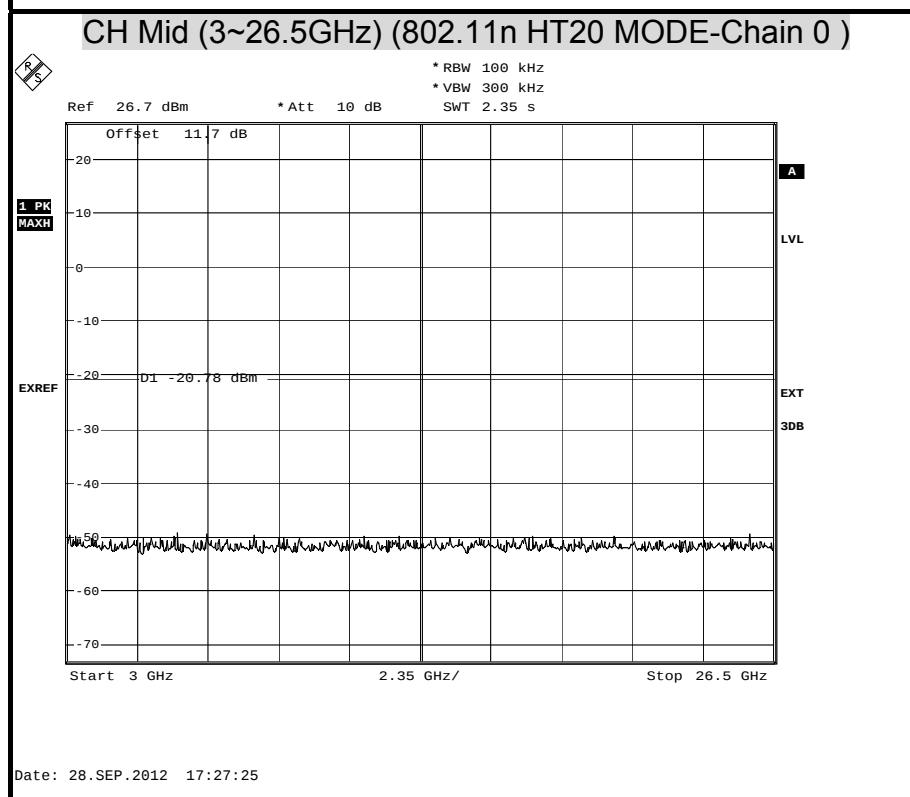
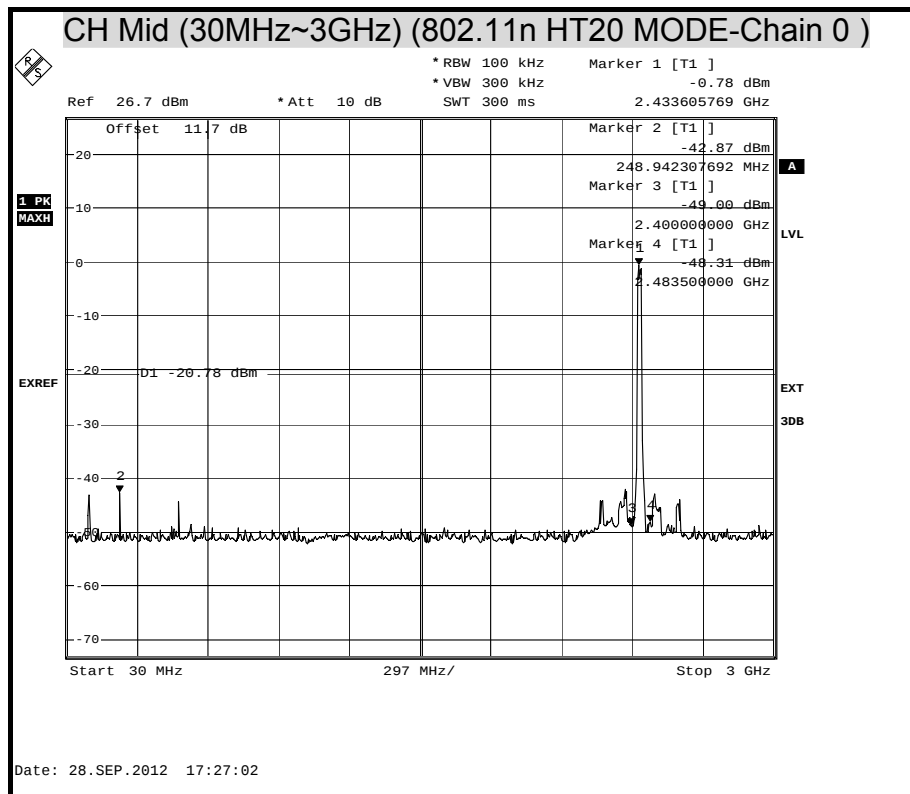


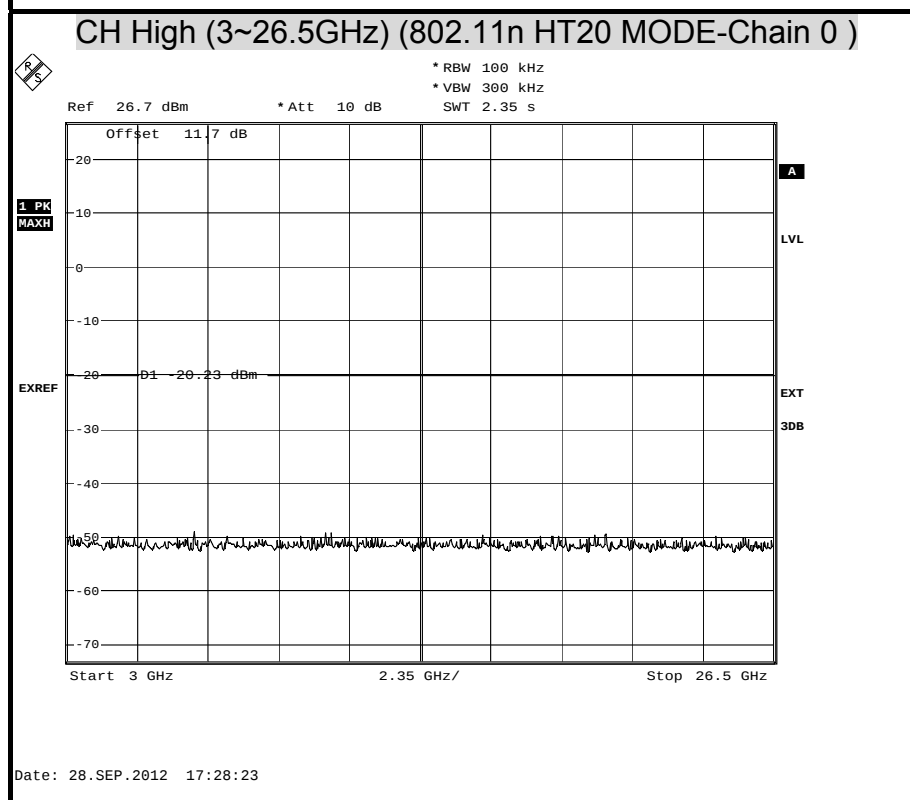
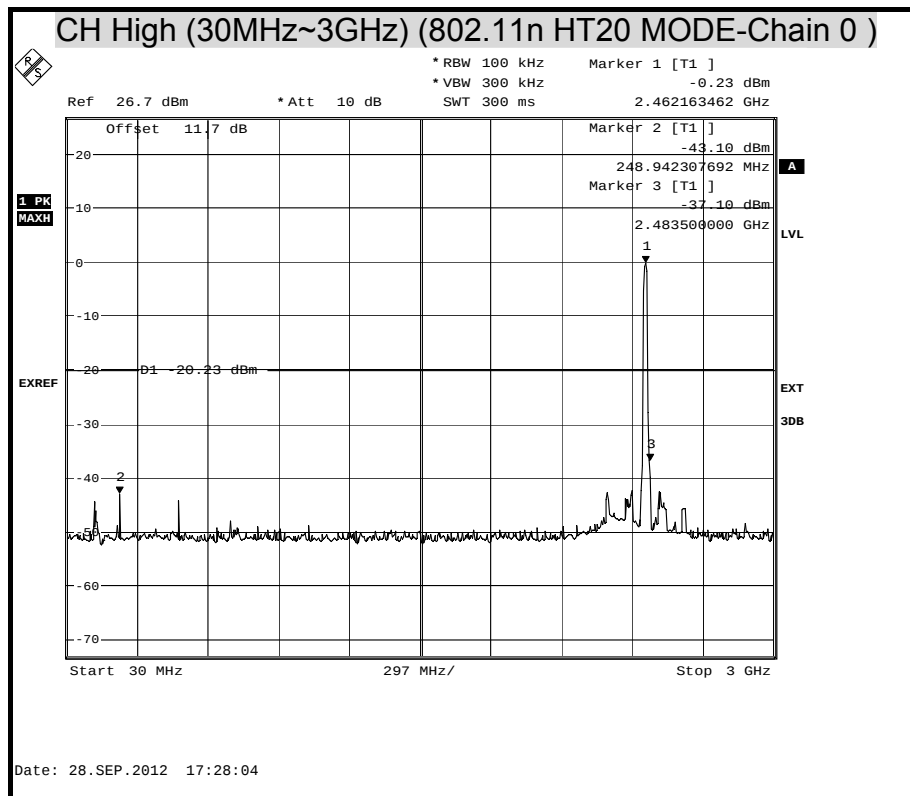


OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

(802.11n HT20 MODE)

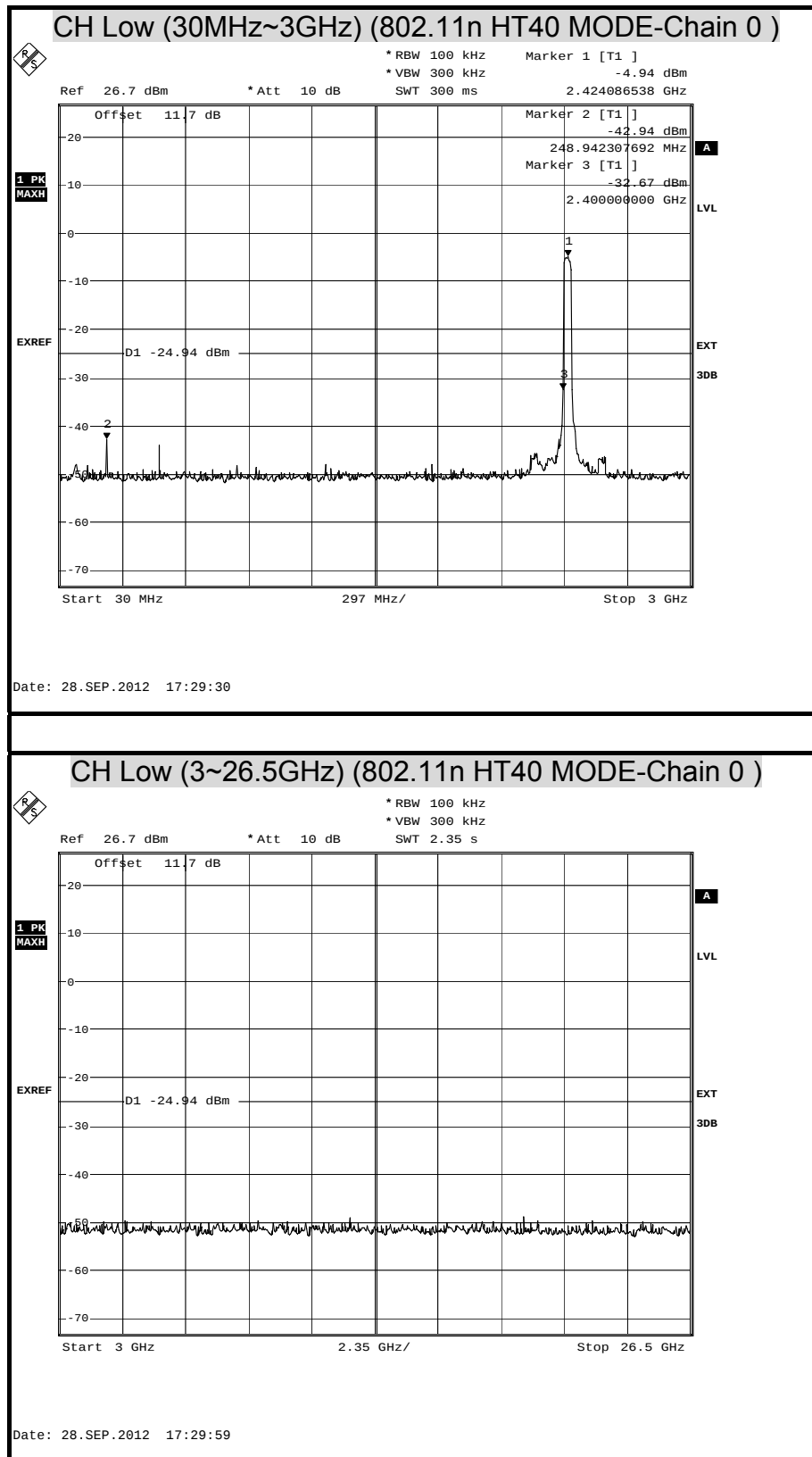


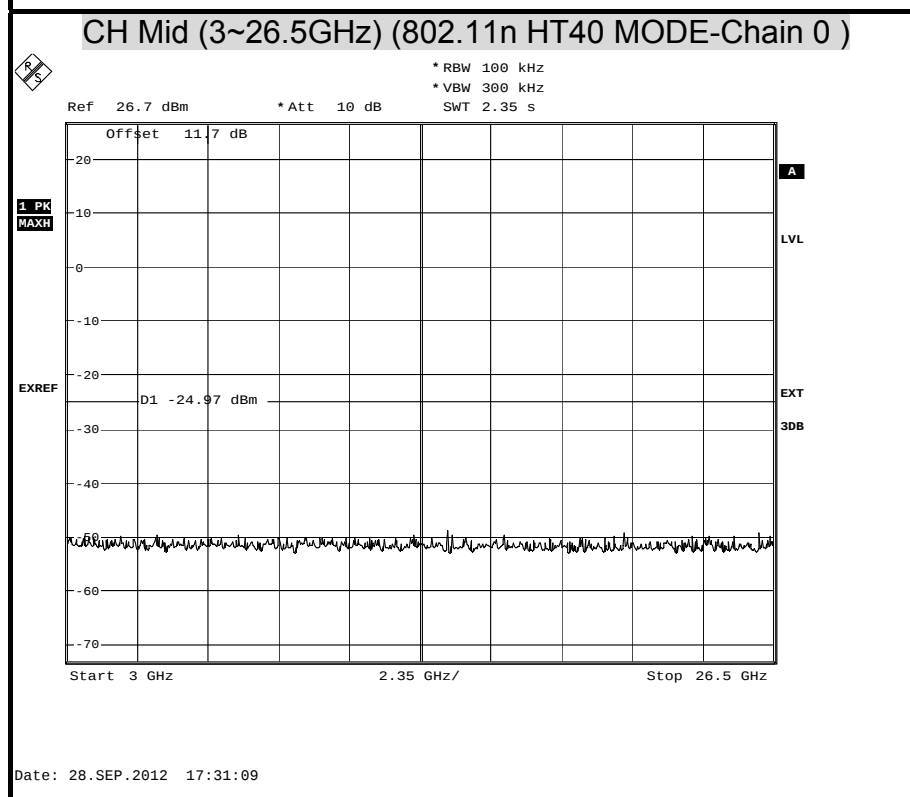
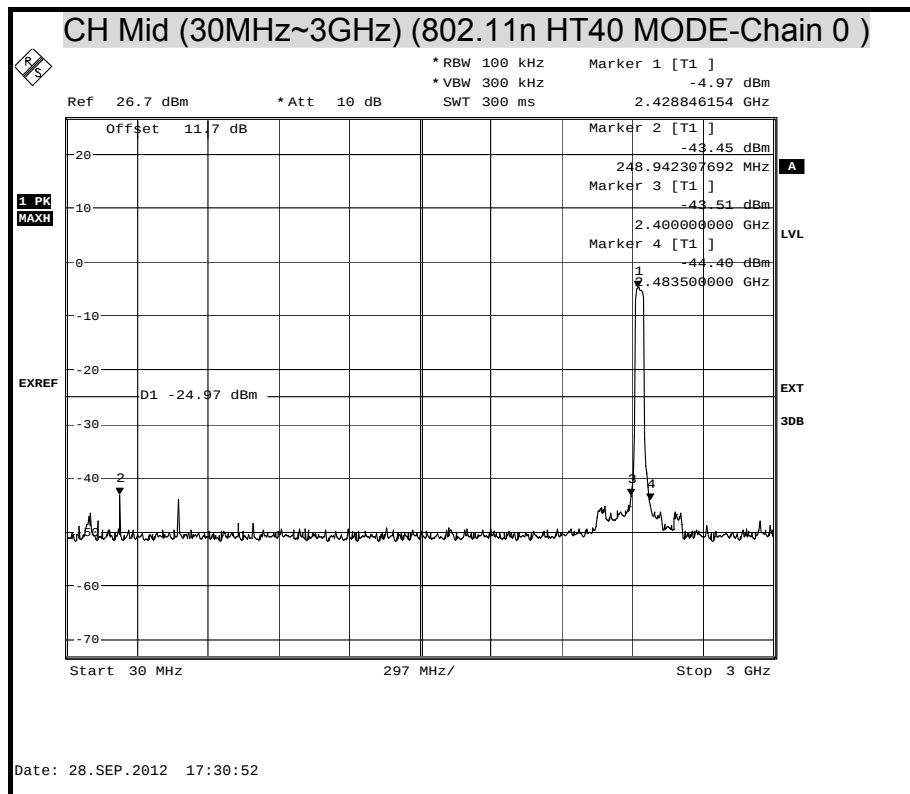


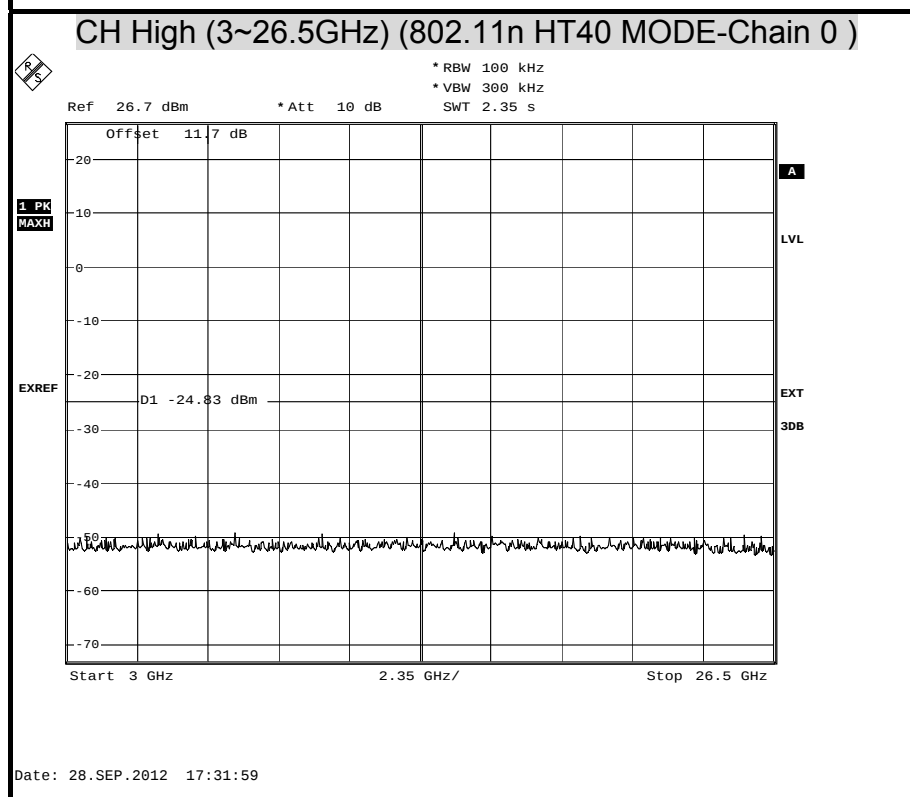
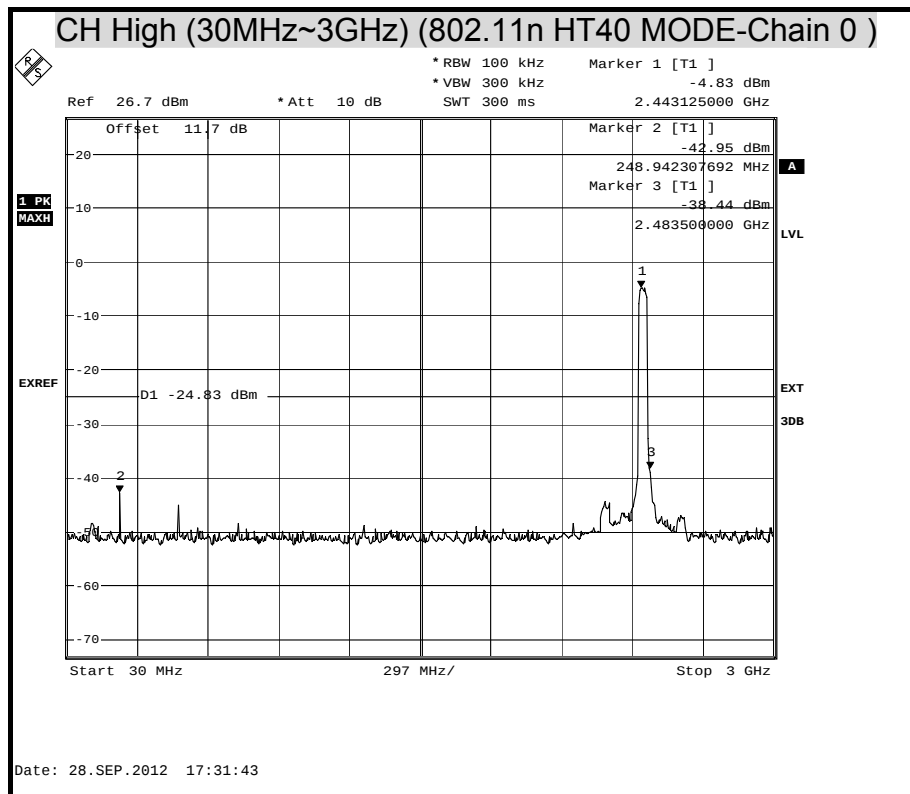




OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT
(802.11n HT40 MODE)









8.6 RADIATED EMISSIONS

8.6.1 TRANSMITTER RADIATED SUPURIOUS EMSSIONS

LIMITS

§ 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



§ 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz, However, operation within these frequency bands is permitted under other sections of this Part, e-g, Sections 15.231 and 15.241.

§ 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

**TEST EQUIPMENTS**

The following test equipments are utilized in making the measurements contained in this report.

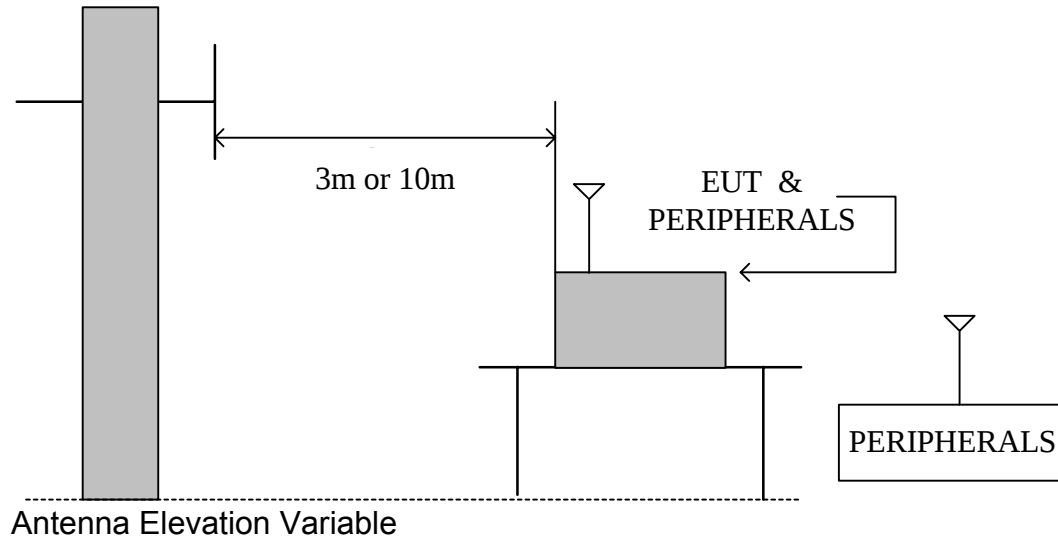
Open Area Test Site # 6				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
TYPE N COAXIAL CABLE	SUHNER	CHA9513	6	NOV. 15, 2012
BI-LOG Antenna	Sunol	JB1	A070506-2	OCT. 03, 2013
LOOP ANTENNA	EMCO	6502	8905-2356	JUN. 10, 2013
Pre-Amplifier	HP	8447F	2944A03817	NOV. 23, 2012
EMI Receiver	R&S	ESVS10	833206/012	JUN. 26, 2013
Horn Antenna	Com-Power	AH-118	071032	DEC. 04, 2012
Spectrum Analyzer	R&S	FSEK 30	835253/002	SEP. 29, 2013
Spectrum Analyzer	R&S	FSU	200789	SEP. 29, 2013
3116 Double Ridge Antenna (40G)	ETS-LINDGRE N	EMCO-003	00078	NOV. 14, 2012
Turn Table	Yo Chen	001	-----	N.C.R.
Antenna Tower	AR	TP1000A	309874	N.C.R.
Controller	CT	SC101	-----	N.C.R.
RF Swicth	E-INSTRUMENT TELH LTD	ERS-180A	EC1204141	N.C.R
DC Power Source	LOKO	DSP-5050	L1507009282	N.C.R

Open Area Test Site # 5				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
TEST RECEIVER	Rohde & Schwarz	ESCS 30	100294	MAY. 03, 2013
TYPE N COAXIAL CABLE	SUHNER	RG_214_U/2X	5	NOV. 09, 2012
BILOG ANTENNA	Sunol sciences	JB1	A070506-1	OCT. 05, 2013
Test Software	EMI e-3 / AUDIX (5.04211c)			

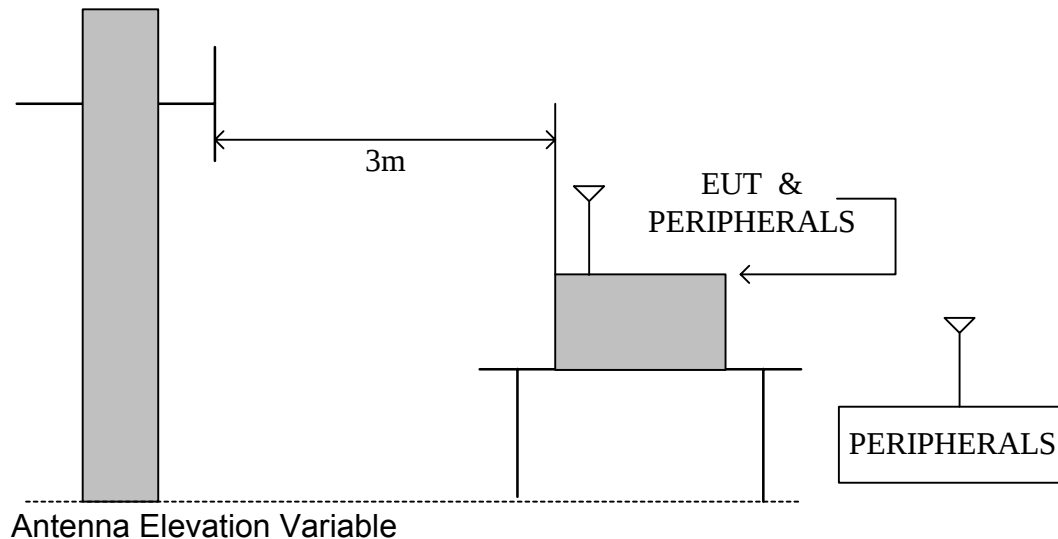


TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission from 30 to 1GHz.



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.





TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. While measuring the radiated emission below 1GHz, the EUT was set 3/10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. The tests were performed in accordance with KDB 558074 5.4 .

NOTE :

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.
4. No emission is found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz)

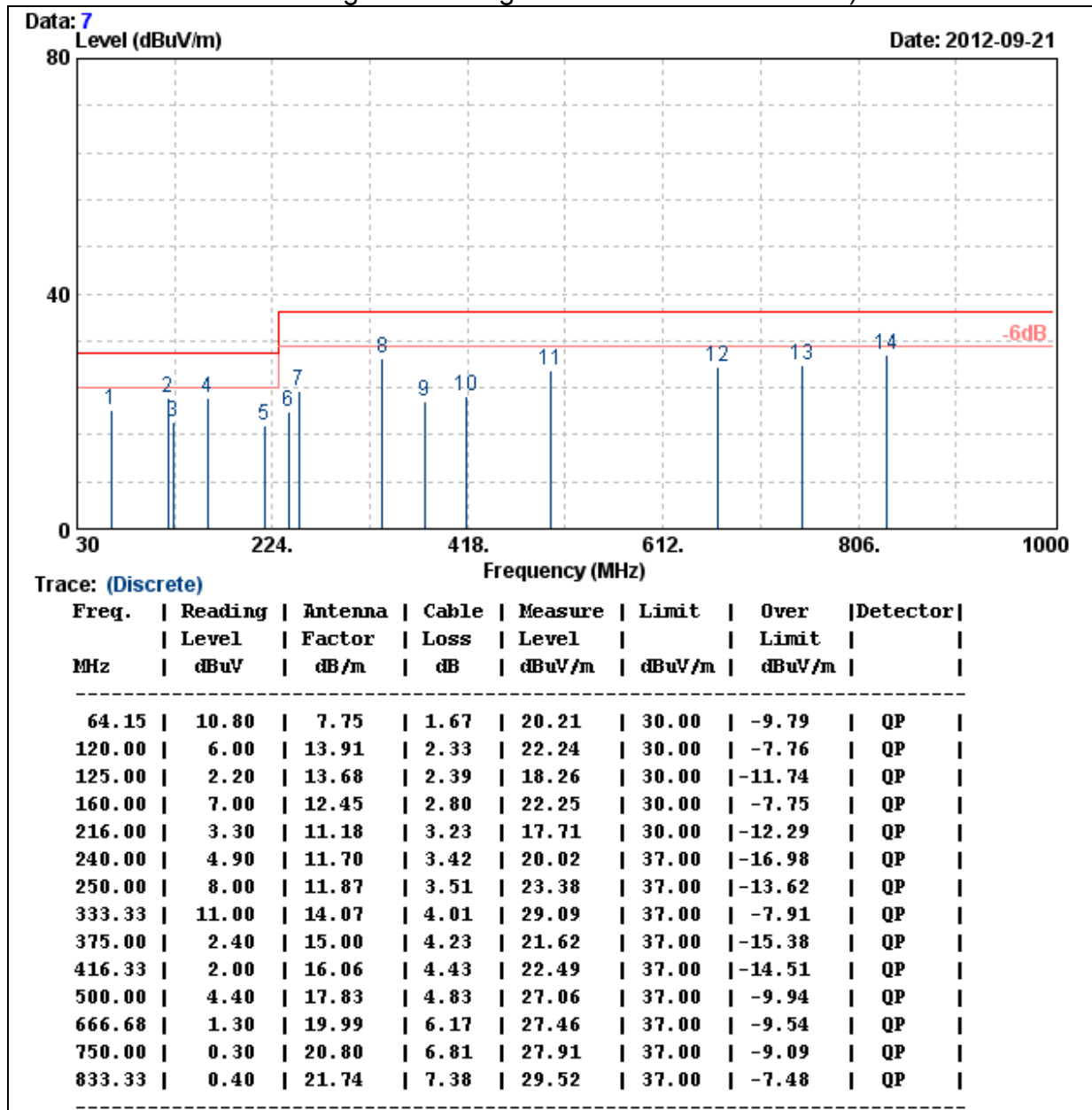
TEST RESULTS

No non-compliance noted.

**8.6.2 WORST-CASE RADIATED EMISSION BELOW 1 GHz**

Model No.	CDD531AM-U03	Test Mode	Normal Operation
Environmental Conditions	30 , 57 % RH	Resolution Bandwidth	120 kHz
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function:	Quasi-peak.	Tested By	Taiyu Cyu
Test Site	OATS 5		

(The chart below shows the highest readings taken from the final data.)

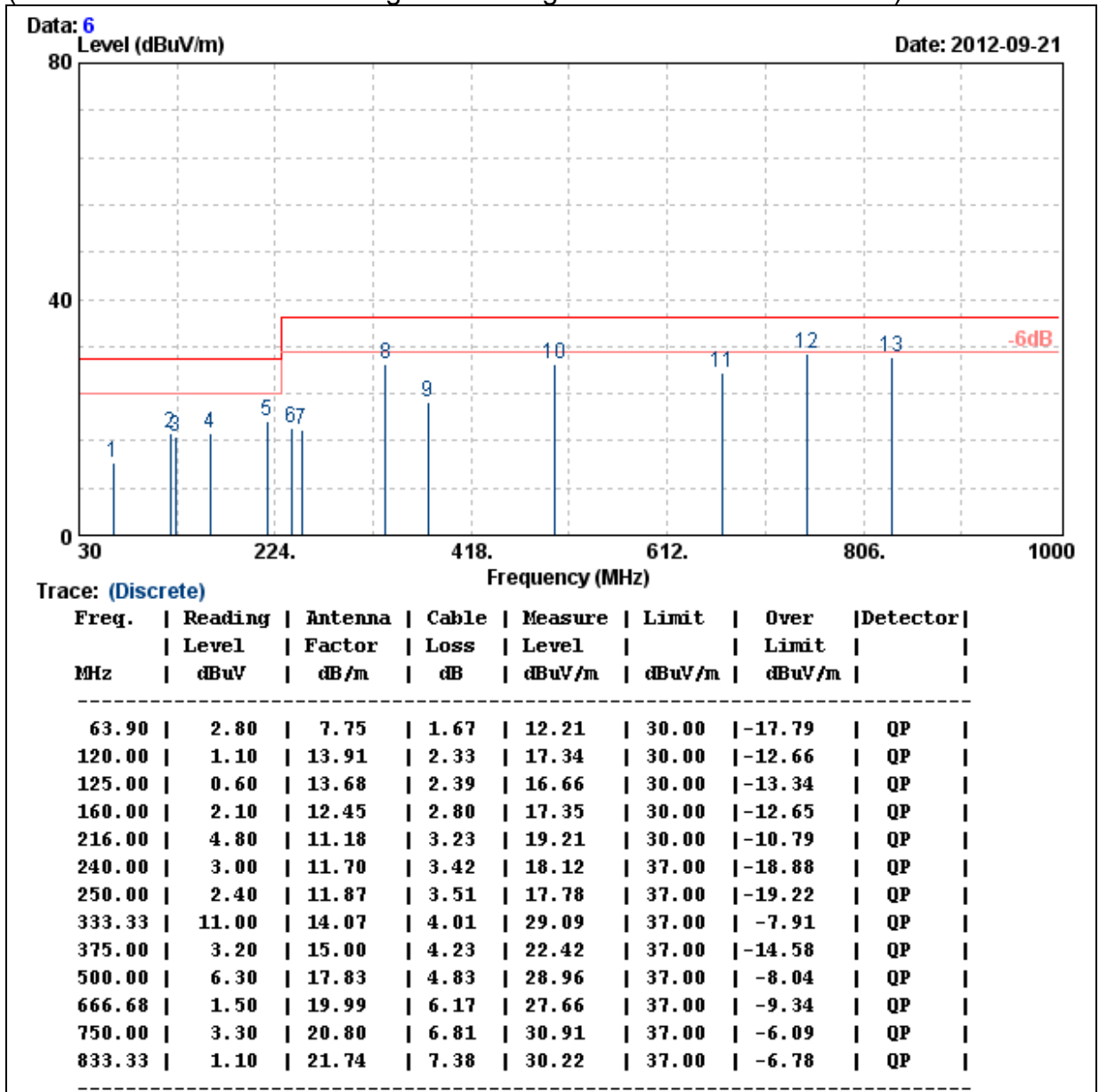


- Note: 1. QP= Quasi-peak Reading.
2. The other emission levels were very low against the limit



Model No.	CDD531AM-U03	Test Mode	Normal Operation
Environmental Conditions	30 , 57 % RH	Resolution Bandwidth	120 kHz
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested By	Taiyu Cyu
Test Site	OATS 5		

(The chart below shows the highest readings taken from the final data.)

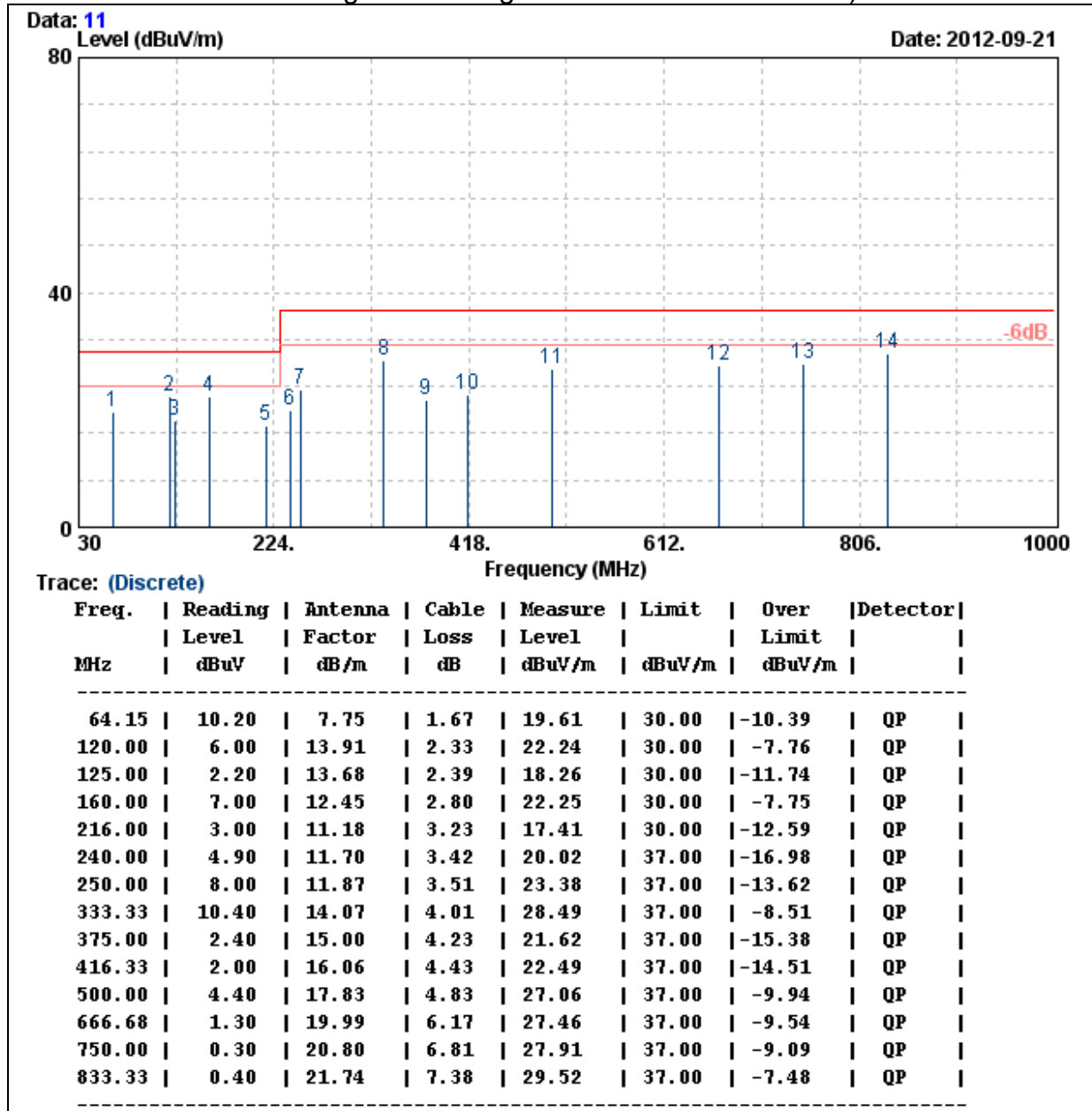


- Note: 1. QP= Quasi-peak Reading.
2. The other emission levels were very low against the limit



Model No.	CDD530AM-003	Test Mode	Normal Operation
Environmental Conditions	30 , 57 % RH	Resolution Bandwidth	120 kHz
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function:	Quasi-peak.	Tested By	Taiyu Cyu
Test Site	OATS 5		

(The chart below shows the highest readings taken from the final data.)

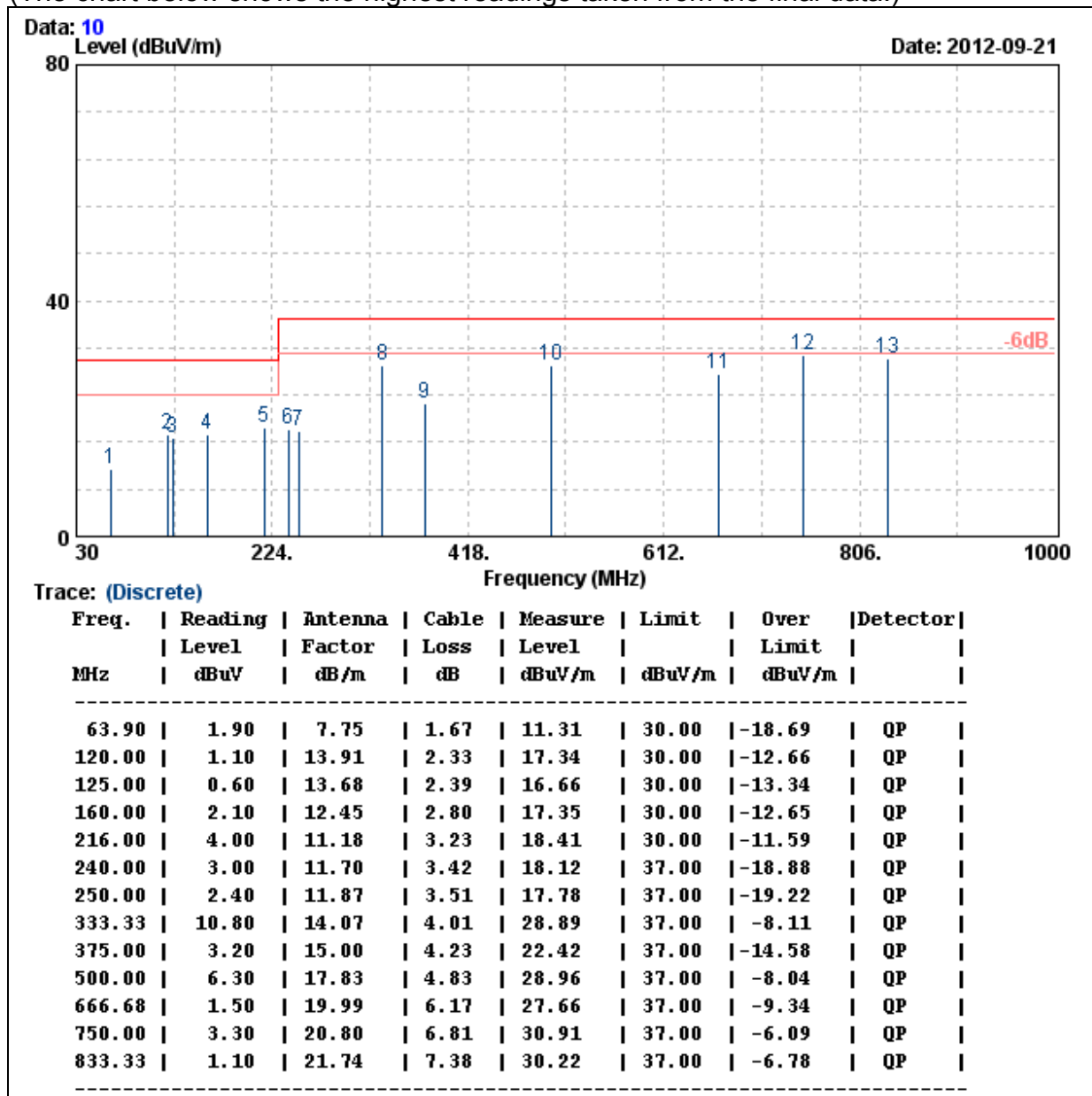


- Note: 1. QP= Quasi-peak Reading.
2. The other emission levels were very low against the limit



Model No.	CDD530AM-003	Test Mode	Normal Operation
Environmental Conditions	30 , 57 % RH	Resolution Bandwidth	120 kHz
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested By	Taiyu Cyu
Test Site	OATS 5		

(The chart below shows the highest readings taken from the final data.)



Note: 1. QP= Quasi-peak Reading.

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



8.6.3 TRANSMITTER RADIATED EMISSION ABOVE 1 GHz

Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH Low)	Antenna Gain	4.04 dBi

TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.82	28.50	2.30	41.38	0.92	49.16	74.00	-24.85	P
1750.00	47.46	28.50	2.30	41.38	0.92	37.80	54.00	-16.21	A
* 4824.07	53.28	33.17	3.73	42.38	0.69	48.49	74.00	-25.51	P
* 4824.07	48.37	33.17	3.73	42.38	0.69	43.58	54.00	-10.42	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.84	28.50	2.30	41.38	0.92	48.18	74.00	-25.83	P
1750.00	46.93	28.50	2.30	41.38	0.92	37.27	54.00	-16.74	A
* 4823.98	59.23	33.17	3.73	42.38	0.69	54.44	74.00	-19.56	P
* 4823.98	56.18	33.17	3.73	42.38	0.69	51.39	54.00	-2.61	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH Middle)	Antenna Gain	4.04 dBi

TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.51	28.50	2.30	41.38	0.92	48.85	74.00	-25.16	P
1750.00	47.37	28.50	2.30	41.38	0.92	37.71	54.00	-16.30	A
* 4874.16	53.19	33.32	3.74	42.43	0.71	48.54	74.00	-25.46	P
* 4874.16	48.64	33.32	3.74	42.43	0.71	43.99	54.00	-10.01	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.73	28.50	2.30	41.38	0.92	48.07	74.00	-25.94	P
1750.00	46.81	28.50	2.30	41.38	0.92	37.15	54.00	-16.86	A
* 4874.11	58.91	33.32	3.74	42.43	0.71	54.26	74.00	-19.74	P
* 4874.11	56.34	33.32	3.74	42.43	0.71	51.69	54.00	-2.31	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH High)	Antenna Gain	4.04 dBi

TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.81	28.50	2.30	41.38	0.92	49.15	74.00	-24.86	P
1750.00	47.51	28.50	2.30	41.38	0.92	37.85	54.00	-16.16	A
* 4924.08	53.33	33.47	3.76	42.48	0.73	48.81	74.00	-25.19	P
* 4924.08	48.74	33.47	3.76	42.48	0.73	44.22	54.00	-9.78	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1749.98	57.48	28.50	2.30	41.38	0.91	47.81	74.00	-26.19	P
1749.98	46.85	28.50	2.30	41.38	0.91	37.18	54.00	-16.82	A
* 4924.01	59.49	33.47	3.76	42.48	0.73	54.97	74.00	-19.03	P
* 4924.01	56.37	33.47	3.76	42.48	0.73	51.85	54.00	-2.15	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH Low)	Antenna Gain	4.04 dBi

TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.81	28.50	2.30	41.38	0.92	49.15	74.00	-24.86	P
1750.00	47.59	28.50	2.30	41.38	0.92	37.93	54.00	-16.08	A
* 4824.05	52.11	33.17	3.73	42.38	0.69	47.32	74.00	-26.68	P
* 4824.05	42.10	33.17	3.73	42.38	0.69	37.31	54.00	-16.69	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	56.90	28.50	2.30	41.38	0.92	47.24	74.00	-26.77	P
1750.00	46.39	28.50	2.30	41.38	0.92	36.73	54.00	-17.28	A
* 4824.09	54.26	33.17	3.73	42.38	0.69	49.47	74.00	-24.53	P
* 4824.09	44.52	33.17	3.73	42.38	0.69	39.73	54.00	-14.27	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH Middle)	Antenna Gain	4.04 dBi

TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.82	28.50	2.30	41.38	0.92	49.16	74.00	-24.85	P
1750.00	48.50	28.50	2.30	41.38	0.92	38.84	54.00	-15.17	A
* 4874.08	51.94	33.32	3.74	42.43	0.71	47.29	74.00	-26.71	P
* 4874.08	42.03	33.32	3.74	42.43	0.71	37.38	54.00	-16.62	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.05	28.50	2.30	41.38	0.92	47.39	74.00	-26.62	P
1750.00	47.23	28.50	2.30	41.38	0.92	37.57	54.00	-16.44	A
* 4874.06	54.12	33.32	3.74	42.43	0.71	49.46	74.00	-24.54	P
* 4874.06	44.53	33.32	3.74	42.43	0.71	39.87	54.00	-14.13	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH High)	Antenna Gain	4.04 dBi

TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P
1750.00	47.84	28.50	2.30	41.38	0.92	38.18	54.00	-15.83	A
* 4924.02	53.16	33.47	3.76	42.48	0.73	48.64	74.00	-25.36	P
* 4924.02	41.25	33.47	3.76	42.48	0.73	36.73	54.00	-17.27	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	56.38	28.50	2.30	41.38	0.92	46.72	74.00	-27.29	P
1750.00	46.39	28.50	2.30	41.38	0.92	36.73	54.00	-17.28	A
* 4924.02	54.12	33.47	3.76	42.48	0.73	49.60	74.00	-24.40	P
* 4924.02	44.52	33.47	3.76	42.48	0.73	40.00	54.00	-14.00	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH Low)	Antenna Gain	4.04 dBi

TX / IEEE 802.11n HT20 mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.91	28.50	2.30	41.38	0.92	49.25	74.00	-24.76	P
1750.00	48.05	28.50	2.30	41.38	0.92	38.39	54.00	-15.62	A
* 4824.04	53.62	33.17	3.73	42.38	0.69	48.83	74.00	-25.17	P
* 4824.04	41.48	33.17	3.73	42.38	0.69	36.69	54.00	-17.31	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	56.84	28.50	2.30	41.38	0.92	47.18	74.00	-26.83	P
1750.00	46.29	28.50	2.30	41.38	0.92	36.63	54.00	-17.38	A
* 4824.12	54.33	33.17	3.73	42.38	0.69	49.54	74.00	-24.46	P
* 4824.12	44.18	33.17	3.73	42.38	0.69	39.39	54.00	-14.61	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH Middle)	Antenna Gain	4.04 dBi

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m				Horizontal polarity		
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark	
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)	
1750.00	58.81	28.50	2.30	41.38	0.92	49.15	74.00	-24.86	P	
1750.00	47.49	28.50	2.30	41.38	0.92	37.83	54.00	-16.18	A	
* 4874.09	53.51	33.32	3.74	42.43	0.71	48.86	74.00	-25.14	P	
* 4874.09	41.34	33.32	3.74	42.43	0.71	36.69	54.00	-17.31	A	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A	

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m				Vertical polarity		
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark	
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)	
1750.00	56.81	28.50	2.30	41.38	0.92	47.15	74.00	-26.86	P	
1750.00	46.72	28.50	2.30	41.38	0.92	37.06	54.00	-16.95	A	
* 4874.07	54.51	33.32	3.74	42.43	0.71	49.86	74.00	-24.14	P	
* 4874.07	44.29	33.32	3.74	42.43	0.71	39.64	54.00	-14.36	A	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A	

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH High)	Antenna Gain	4.04 dBi

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.85	28.50	2.30	41.38	0.92	49.19	74.00	-24.82	P
1750.00	47.19	28.50	2.30	41.38	0.92	37.53	54.00	-16.48	A
* 4924.12	53.26	33.47	3.76	42.48	0.73	48.74	74.00	-25.26	P
* 4924.12	41.25	33.47	3.76	42.48	0.73	36.73	54.00	-17.27	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.41	28.50	2.30	41.38	0.92	47.75	74.00	-26.26	P
1750.00	46.51	28.50	2.30	41.38	0.92	36.85	54.00	-17.16	A
* 4924.07	54.49	33.47	3.76	42.48	0.73	49.97	74.00	-24.03	P
* 4924.07	44.17	33.47	3.76	42.48	0.73	39.65	54.00	-14.35	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH Low)	Antenna Gain	4.04 dBi

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.69	28.50	2.30	41.38	0.92	48.03	74.00	-25.98	P
1750.00	48.11	28.50	2.30	41.38	0.92	38.45	54.00	-15.56	A
* 4844.06	57.30	33.23	3.74	42.40	0.70	52.57	74.00	-21.43	P
* 4844.06	41.54	33.23	3.74	42.40	0.70	36.81	54.00	-17.19	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.50	28.50	2.30	41.38	0.92	47.83	74.00	-26.17	P
1750.00	48.05	28.50	2.30	41.38	0.92	38.39	54.00	-15.62	A
* 4844.07	53.49	33.23	3.74	42.40	0.70	48.76	74.00	-25.24	P
* 4844.07	44.34	33.23	3.74	42.40	0.70	39.61	54.00	-14.39	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH Middle)	Antenna Gain	4.04 dBi

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.71	28.50	2.30	41.38	0.92	49.05	74.00	-24.96	P
1750.00	47.57	28.50	2.30	41.38	0.92	37.91	54.00	-16.10	A
* 4874.05	52.41	33.32	3.74	42.43	0.71	47.75	74.00	-26.25	P
* 4874.05	42.09	33.32	3.74	42.43	0.71	37.43	54.00	-16.57	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	56.61	28.50	2.30	41.38	0.92	46.95	74.00	-27.06	P
1750.00	46.18	28.50	2.30	41.38	0.92	36.52	54.00	-17.49	A
* 4874.03	54.18	33.32	3.74	42.43	0.71	49.52	74.00	-24.48	P
* 4874.03	43.26	33.32	3.74	42.43	0.71	38.60	54.00	-15.40	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/03
TEMP& Humidity	29.4 , 66%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH High)	Antenna Gain	4.04 dBi

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.74	28.50	2.30	41.38	0.92	49.08	74.00	-24.93	P
1750.00	47.54	28.50	2.30	41.38	0.92	37.88	54.00	-16.13	A
* 4904.05	53.51	33.41	3.75	42.46	0.72	48.93	74.00	-25.07	P
* 4904.05	41.42	33.41	3.75	42.46	0.72	36.84	54.00	-17.16	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	56.49	28.50	2.30	41.38	0.92	46.83	74.00	-27.18	P
1750.00	46.37	28.50	2.30	41.38	0.92	36.71	54.00	-17.30	A
* 4904.06	54.33	33.41	3.75	42.46	0.72	49.75	74.00	-24.25	P
* 4904.06	44.10	33.41	3.75	42.46	0.72	39.52	54.00	-14.48	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH Low)	Antenna Gain	2.0 dBi

TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.46	28.50	2.30	41.38	0.92	48.80	74.00	-25.21	P
1750.00	48.74	28.50	2.30	41.38	0.92	39.08	54.00	-14.93	A
* 4824.09	56.34	33.17	3.73	42.38	0.69	51.55	74.00	-22.45	P
* 4824.09	52.03	33.17	3.73	42.38	0.69	47.24	54.00	-6.76	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.59	28.50	2.30	41.38	0.92	47.93	74.00	-26.08	P
1750.00	47.18	28.50	2.30	41.38	0.92	37.52	54.00	-16.49	A
* 4823.99	59.37	33.17	3.73	42.38	0.69	54.58	74.00	-19.42	P
* 4823.99	57.29	33.17	3.73	42.38	0.69	52.50	54.00	-1.50	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH Middle)	Antenna Gain	2.0 dBi

TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.59	28.50	2.30	41.38	0.92	48.93	74.00	-25.08	P
1750.00	48.21	28.50	2.30	41.38	0.92	38.55	54.00	-15.46	A
* 4874.16	56.86	33.32	3.74	42.43	0.71	52.21	74.00	-21.79	P
* 4874.16	52.37	33.32	3.74	42.43	0.71	47.72	54.00	-6.28	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.66	28.50	2.30	41.38	0.92	48.00	74.00	-26.01	P
1750.00	47.19	28.50	2.30	41.38	0.92	37.53	54.00	-16.48	A
* 4874.12	59.88	33.32	3.74	42.43	0.71	55.23	74.00	-18.77	P
* 4874.12	57.41	33.32	3.74	42.43	0.71	52.76	54.00	-1.24	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH High)	Antenna Gain	2.0 dBi

TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.53	28.50	2.30	41.38	0.92	48.87	74.00	-25.14	P
1750.00	48.94	28.50	2.30	41.38	0.92	39.28	54.00	-14.73	A
* 4924.09	56.84	33.47	3.76	42.48	0.73	52.32	74.00	-21.68	P
* 4924.09	52.41	33.47	3.76	42.48	0.73	47.89	54.00	-6.11	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.68	28.50	2.30	41.38	0.92	48.02	74.00	-25.99	P
1750.00	47.59	28.50	2.30	41.38	0.92	37.93	54.00	-16.08	A
* 4924.03	59.82	33.47	3.76	42.48	0.73	55.30	74.00	-18.70	P
* 4924.03	57.06	33.47	3.76	42.48	0.73	52.54	54.00	-1.46	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH Low)	Antenna Gain	2.0 dBi

TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.53	28.50	2.30	41.38	0.92	48.87	74.00	-25.14	P
1750.00	48.49	28.50	2.30	41.38	0.92	38.83	54.00	-15.18	A
* 4824.04	56.29	33.17	3.73	42.38	0.69	51.50	74.00	-22.50	P
* 4824.04	52.06	33.17	3.73	42.38	0.69	47.27	54.00	-6.73	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.49	28.50	2.30	41.38	0.92	47.83	74.00	-26.18	P
1750.00	47.28	28.50	2.30	41.38	0.92	37.62	54.00	-16.39	A
* 4824.08	59.26	33.17	3.73	42.38	0.69	54.47	74.00	-19.53	P
* 4824.08	54.02	33.17	3.73	42.38	0.69	49.23	54.00	-4.77	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH Middle)	Antenna Gain	2.0 dBi

TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P
1750.00	48.71	28.50	2.30	41.38	0.92	39.05	54.00	-14.96	A
* 4874.03	56.66	33.32	3.74	42.43	0.71	52.00	74.00	-22.00	P
* 4874.03	52.08	33.32	3.74	42.43	0.71	47.42	54.00	-6.58	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.18	28.50	2.30	41.38	0.92	47.52	74.00	-26.49	P
1750.00	47.36	28.50	2.30	41.38	0.92	37.70	54.00	-16.31	A
* 4874.04	59.27	33.32	3.74	42.43	0.71	54.61	74.00	-19.39	P
* 4874.04	54.68	33.32	3.74	42.43	0.71	50.02	54.00	-3.98	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH High)	Antenna Gain	2.0 dBi

TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	59.83	28.50	2.30	41.38	0.92	50.17	74.00	-23.84	P
1750.00	48.34	28.50	2.30	41.38	0.92	38.68	54.00	-15.33	A
* 4924.01	52.59	33.47	3.76	42.48	0.73	48.07	74.00	-25.93	P
* 4924.01	41.09	33.47	3.76	42.48	0.73	36.57	54.00	-17.43	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.44	28.50	2.30	41.38	0.92	47.78	74.00	-26.23	P
1750.00	47.28	28.50	2.30	41.38	0.92	37.62	54.00	-16.39	A
* 4924.07	59.68	33.47	3.76	42.48	0.73	55.16	74.00	-18.84	P
* 4924.07	54.03	33.47	3.76	42.48	0.73	49.51	54.00	-4.49	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH Low)	Antenna Gain	2.0 dBi

TX / IEEE 802.11n HT20 mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.66	28.50	2.30	41.38	0.92	49.00	74.00	-25.01	P
1750.00	48.28	28.50	2.30	41.38	0.92	38.62	54.00	-15.39	A
* 4824.03	56.49	33.17	3.73	42.38	0.69	51.70	74.00	-22.30	P
* 4824.03	52.02	33.17	3.73	42.38	0.69	47.23	54.00	-6.77	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.41	28.50	2.30	41.38	0.92	47.75	74.00	-26.26	P
1750.00	47.22	28.50	2.30	41.38	0.92	37.56	54.00	-16.45	A
* 4824.12	59.81	33.17	3.73	42.38	0.69	55.02	74.00	-18.98	P
* 4824.12	54.38	33.17	3.73	42.38	0.69	49.59	54.00	-4.41	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH Middle)	Antenna Gain	2.0 dBi

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m				Horizontal polarity		
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark	
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)	
1750.00	58.91	28.50	2.30	41.38	0.92	49.25	74.00	-24.76	P	
1750.00	49.28	28.50	2.30	41.38	0.92	39.62	54.00	-14.39	A	
* 4874.10	56.25	33.32	3.74	42.43	0.71	51.60	74.00	-22.40	P	
* 4874.10	52.83	33.32	3.74	42.43	0.71	48.18	54.00	-5.82	A	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A	

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m				Vertical polarity		
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark	
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)	
1750.00	57.18	28.50	2.30	41.38	0.92	47.52	74.00	-26.49	P	
1750.00	47.22	28.50	2.30	41.38	0.92	37.56	54.00	-16.45	A	
* 4874.07	59.27	33.32	3.74	42.43	0.71	54.62	74.00	-19.38	P	
* 4874.07	54.31	33.32	3.74	42.43	0.71	49.66	54.00	-4.34	A	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A	

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH High)	Antenna Gain	2.0 dBi

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P
1750.00	48.33	28.50	2.30	41.38	0.92	38.67	54.00	-15.34	A
* 4924.12	56.17	33.47	3.76	42.48	0.73	51.65	74.00	-22.35	P
* 4924.12	53.03	33.47	3.76	42.48	0.73	48.51	54.00	-5.49	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.48	28.50	2.30	41.38	0.92	47.82	74.00	-26.19	P
1750.00	47.12	28.50	2.30	41.38	0.92	37.46	54.00	-16.55	A
* 4924.05	59.35	33.47	3.76	42.48	0.73	54.83	74.00	-19.17	P
* 4924.05	54.12	33.47	3.76	42.48	0.73	49.60	54.00	-4.40	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH Low)	Antenna Gain	2.0 dBi

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.99	28.50	2.30	41.38	0.92	48.33	74.00	-25.68	P
1750.00	48.28	28.50	2.30	41.38	0.92	38.62	54.00	-15.39	A
* 4844.04	56.37	33.23	3.74	42.40	0.70	51.64	74.00	-22.36	P
* 4844.04	52.05	33.23	3.74	42.40	0.70	47.32	54.00	-6.68	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.18	28.50	2.30	41.38	0.92	47.52	74.00	-26.49	P
1750.00	47.59	28.50	2.30	41.38	0.92	37.93	54.00	-16.08	A
* 4844.07	59.82	33.23	3.74	42.40	0.70	55.09	74.00	-18.91	P
* 4844.07	54.70	33.23	3.74	42.40	0.70	49.97	54.00	-4.03	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH Middle)	Antenna Gain	2.0 dBi

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.44	28.50	2.30	41.38	0.92	48.78	74.00	-25.23	P
1750.00	49.28	28.50	2.30	41.38	0.92	39.62	54.00	-14.39	A
* 4874.05	56.18	33.32	3.74	42.43	0.71	51.52	74.00	-22.48	P
* 4874.05	52.49	33.32	3.74	42.43	0.71	47.83	54.00	-6.17	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.18	28.50	2.30	41.38	0.92	47.52	74.00	-26.49	P
1750.00	46.99	28.50	2.30	41.38	0.92	37.33	54.00	-16.68	A
* 4874.03	59.48	33.32	3.74	42.43	0.71	54.82	74.00	-19.18	P
* 4874.03	54.50	33.32	3.74	42.43	0.71	49.84	54.00	-4.16	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 46%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH High)	Antenna Gain	2.0 dBi

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P
1750.00	48.21	28.50	2.30	41.38	0.92	38.55	54.00	-15.46	A
* 4904.05	56.28	33.41	3.75	42.46	0.72	51.70	74.00	-22.30	P
* 4904.05	52.19	33.41	3.75	42.46	0.72	47.61	54.00	-6.39	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.58	28.50	2.30	41.38	0.92	47.92	74.00	-26.09	P
1750.00	47.12	28.50	2.30	41.38	0.92	37.46	54.00	-16.55	A
* 4904.06	59.34	33.41	3.75	42.46	0.72	54.76	74.00	-19.24	P
* 4904.06	54.11	33.41	3.75	42.46	0.72	49.53	54.00	-4.47	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH Low)	Antenna Gain	2.35 dBi

TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	59.51	28.50	2.30	41.38	0.92	49.85	74.00	-24.16	P
1750.00	48.34	28.50	2.30	41.38	0.92	38.68	54.00	-15.33	A
* 4824.05	51.88	33.17	3.73	42.38	0.69	47.09	74.00	-26.91	P
* 4824.05	46.29	33.17	3.73	42.38	0.69	41.50	54.00	-12.50	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.91	28.50	2.30	41.38	0.92	48.25	74.00	-25.76	P
1750.00	47.21	28.50	2.30	41.38	0.92	37.55	54.00	-16.46	A
* 4823.99	56.54	33.17	3.73	42.38	0.69	51.75	74.00	-22.25	P
* 4823.99	52.01	33.17	3.73	42.38	0.69	47.22	54.00	-6.78	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH Middle)	Antenna Gain	2.35 dBi

TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	59.33	28.50	2.30	41.38	0.92	49.67	74.00	-24.34	P
1750.00	48.41	28.50	2.30	41.38	0.92	38.75	54.00	-15.26	A
* 4874.14	51.59	33.32	3.74	42.43	0.71	46.94	74.00	-27.06	P
* 4874.14	46.13	33.32	3.74	42.43	0.71	41.48	54.00	-12.52	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.85	28.50	2.30	41.38	0.92	48.19	74.00	-25.82	P
1750.00	47.11	28.50	2.30	41.38	0.92	37.45	54.00	-16.56	A
* 4874.11	56.48	33.32	3.74	42.43	0.71	51.83	74.00	-22.17	P
* 4874.11	52.31	33.32	3.74	42.43	0.71	47.66	54.00	-6.34	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11b TX (CH High)	Antenna Gain	2.35 dBi

TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.81	28.50	2.30	41.38	0.92	49.15	74.00	-24.86	P
1750.00	48.16	28.50	2.30	41.38	0.92	38.50	54.00	-15.51	A
* 4924.08	51.88	33.47	3.76	42.48	0.73	47.36	74.00	-26.64	P
* 4924.08	46.56	33.47	3.76	42.48	0.73	42.04	54.00	-11.96	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.99	28.50	2.30	41.38	0.92	48.33	74.00	-25.68	P
1750.00	47.16	28.50	2.30	41.38	0.92	37.50	54.00	-16.51	A
* 4924.01	56.72	33.47	3.76	42.48	0.73	52.20	74.00	-21.80	P
* 4924.01	52.02	33.47	3.76	42.48	0.73	47.50	54.00	-6.50	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH Low)	Antenna Gain	2.35 dBi

TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	60.48	28.50	2.30	41.38	0.92	50.82	74.00	-23.19	P
1750.00	47.23	28.50	2.30	41.38	0.92	37.57	54.00	-16.44	A
* 4824.01	50.59	33.17	3.73	42.38	0.69	45.80	74.00	-28.20	P
* 4824.01	41.57	33.17	3.73	42.38	0.69	36.78	54.00	-17.22	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P
1750.00	47.82	28.50	2.30	41.38	0.92	38.16	54.00	-15.85	A
* 4824.07	52.02	33.17	3.73	42.38	0.69	47.23	74.00	-26.77	P
* 4824.07	42.48	33.17	3.73	42.38	0.69	37.69	54.00	-16.31	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH Middle)	Antenna Gain	2.35 dBi

TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	60.18	28.50	2.30	41.38	0.92	50.52	74.00	-23.49	P
1750.00	47.19	28.50	2.30	41.38	0.92	37.53	54.00	-16.48	A
* 4874.07	50.23	33.32	3.74	42.43	0.71	45.58	74.00	-28.42	P
* 4874.07	41.61	33.32	3.74	42.43	0.71	36.96	54.00	-17.04	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.34	28.50	2.30	41.38	0.92	48.68	74.00	-25.33	P
1750.00	48.02	28.50	2.30	41.38	0.92	38.36	54.00	-15.65	A
* 4874.05	51.84	33.32	3.74	42.43	0.71	47.18	74.00	-26.82	P
* 4874.05	42.29	33.32	3.74	42.43	0.71	37.63	54.00	-16.37	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11g TX (CH High)	Antenna Gain	2.35 dBi

TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	60.29	28.50	2.30	41.38	0.92	50.63	74.00	-23.38	P
1750.00	47.37	28.50	2.30	41.38	0.92	37.71	54.00	-16.30	A
* 4924.01	50.14	33.47	3.76	42.48	0.73	45.62	74.00	-28.38	P
* 4924.01	41.49	33.47	3.76	42.48	0.73	36.97	54.00	-17.03	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.15	28.50	2.30	41.38	0.92	48.49	74.00	-25.52	P
1750.00	48.01	28.50	2.30	41.38	0.92	38.35	54.00	-15.66	A
* 4924.01	52.03	33.47	3.76	42.48	0.73	47.51	74.00	-26.49	P
* 4924.01	41.49	33.47	3.76	42.48	0.73	36.97	54.00	-17.03	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH Low)	Antenna Gain	2.35 dBi

TX / IEEE 802.11n HT20 mode / CH Low					Measurement Distance at 3m			Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
* 1500.00	59.11	26.60	2.17	41.71	0.79	46.96	74.00	-27.04	P
* 1500.00	48.27	26.60	2.17	41.71	0.79	36.12	54.00	-17.88	A
* 4824.04	51.73	33.17	3.73	42.38	0.69	46.94	74.00	-27.06	P
* 4824.04	46.31	33.17	3.73	42.38	0.69	41.52	54.00	-12.48	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH Low					Measurement Distance at 3m			Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.22	28.50	2.30	41.38	0.92	48.56	74.00	-25.45	P
1750.00	48.03	28.50	2.30	41.38	0.92	38.37	54.00	-15.64	A
* 4824.12	52.05	33.17	3.73	42.38	0.69	47.26	74.00	-26.74	P
* 4824.12	41.51	33.17	3.73	42.38	0.69	36.72	54.00	-17.28	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH Middle)	Antenna Gain	2.35 dBi

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	59.27	28.50	2.30	41.38	0.92	49.61	74.00	-24.40	P
1750.00	48.43	28.50	2.30	41.38	0.92	38.77	54.00	-15.24	A
* 4874.20	51.49	33.32	3.74	42.43	0.71	46.84	74.00	-27.16	P
* 4874.20	46.28	33.32	3.74	42.43	0.71	41.63	54.00	-12.37	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.18	28.50	2.30	41.38	0.92	48.52	74.00	-25.49	P
1750.00	47.29	28.50	2.30	41.38	0.92	37.63	54.00	-16.38	A
* 4874.07	52.03	33.32	3.74	42.43	0.71	47.38	74.00	-26.62	P
* 4874.07	43.03	33.32	3.74	42.43	0.71	38.38	54.00	-15.62	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11n HT20 TX (CH High)	Antenna Gain	2.35 dBi

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.44	28.50	2.30	41.38	0.92	48.78	74.00	-25.23	P
1750.00	47.56	28.50	2.30	41.38	0.92	37.90	54.00	-16.11	A
* 4924.11	51.79	33.47	3.76	42.48	0.73	47.27	74.00	-26.73	P
* 4924.11	46.41	33.47	3.76	42.48	0.73	41.89	54.00	-12.11	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P
1750.00	48.21	28.50	2.30	41.38	0.92	38.55	54.00	-15.46	A
* 4924.05	51.26	33.47	3.76	42.48	0.73	46.74	74.00	-27.26	P
* 4924.05	43.10	33.47	3.76	42.48	0.73	38.58	54.00	-15.42	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH Low)	Antenna Gain	2.35 dBi

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	60.14	28.50	2.30	41.38	0.92	50.48	74.00	-23.53	P
1750.00	48.13	28.50	2.30	41.38	0.92	38.47	54.00	-15.54	A
* 4844.04	50.33	33.23	3.74	42.40	0.70	45.60	74.00	-28.40	P
* 4844.04	41.29	33.23	3.74	42.40	0.70	36.56	54.00	-17.44	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.84	28.50	2.30	41.38	0.92	48.18	74.00	-25.83	P
1750.00	47.23	28.50	2.30	41.38	0.92	37.57	54.00	-16.44	A
* 4844.07	56.71	33.23	3.74	42.40	0.70	51.98	74.00	-22.02	P
* 4844.07	52.18	33.23	3.74	42.40	0.70	47.45	54.00	-6.55	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH Middle)	Antenna Gain	2.35 dBi

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m				Horizontal polarity		
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark	
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)	
1750.00	59.83	28.50	2.30	41.38	0.92	50.17	74.00	-23.84	P	
1750.00	47.12	28.50	2.30	41.38	0.92	37.46	54.00	-16.55	A	
* 4874.05	50.36	33.32	3.74	42.43	0.71	45.70	74.00	-28.30	P	
* 4874.05	41.48	33.32	3.74	42.43	0.71	36.82	54.00	-17.18	A	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A	

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m				Vertical polarity		
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark	
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)	
1750.00	58.49	28.50	2.30	41.38	0.92	48.83	74.00	-25.18	P	
1750.00	47.13	28.50	2.30	41.38	0.92	37.47	54.00	-16.54	A	
* 4874.02	52.18	33.32	3.74	42.43	0.71	47.52	74.00	-26.48	P	
* 4874.02	43.29	33.32	3.74	42.43	0.71	38.63	54.00	-15.37	A	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P	
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A	

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.



Model	CDD531AM-U03	Test Date	2012/10/02
TEMP& Humidity	30.4 , 53%	Test By	John Chen
Test Mode	IEEE 802.11n HT40 TX (CH High)	Antenna Gain	2.35 dBi

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m				Horizontal polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	57.99	28.50	2.30	41.38	0.92	48.33	74.00	-25.68	P
1750.00	47.55	28.50	2.30	41.38	0.92	37.89	54.00	-16.12	A
* 4904.05	51.38	33.41	3.75	42.46	0.72	46.80	74.00	-27.20	P
* 4904.05	46.49	33.41	3.75	42.46	0.72	41.91	54.00	-12.09	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m				Vertical polarity	
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
1750.00	58.21	28.50	2.30	41.38	0.92	48.55	74.00	-25.46	P
1750.00	47.19	28.50	2.30	41.38	0.92	37.53	54.00	-16.48	A
* 4904.06	56.43	33.41	3.75	42.46	0.72	51.85	74.00	-22.15	P
* 4904.06	52.16	33.41	3.75	42.46	0.72	47.58	54.00	-6.42	A
N/A	-----	-----	-----	-----	-----	-----	-----	-----	P
N/A	-----	-----	-----	-----	-----	-----	-----	-----	A

REMARK:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: 2.4GHz~2.5GHz Filter Insertion Loss
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. The result basic equation calculation is as follow:
Level = Reading + AF + Cable – Preamp + Filter , Margin = Level-Limit
4. The other emission levels were 20dB below the limit
5. The test limit distance is 3M limit.