



FCC RADIO TEST REPORT

Applicant : LITE-ON Technology Corp.

Address : Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City,
23585, Taiwan

Equipment : 802.11b/g/n 2Tx2R + BT5.0 USB WLAN Module

Model No. : WCBN4606L

Trade Name : LITE-ON

FCC ID. : PPQ-WCBN4606L

I HEREBY CERTIFY THAT :

The sample was received on Dec. 12, 2019 and the testing was completed on Dec. 27, 2019 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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History of this test report

Report No.	Issue Date	Description
TEFI1912122	Dec. 30, 2019	Original



1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart C §15.247

FCC Rule	Description of Test	Result
15.203	. Antenna Requirement	PASS
15.207	. AC Power Line Conducted Emission	PASS
15.209 15.205	. Radiated Spurious Emission	PASS
15.247(d)	. Conducted Spurious Emission	PASS
15.247(a)(2)	. 6dB Bandwidth	PASS
15.247(b)	. Maximum Peak and Average Output Power	PASS
15.247(e)	. Power Spectral Density	PASS
2.1091	. Radio Frequency Exposure	PASS

*The lab has lowered the uncertainty risk of test equipment, environment, and staff technicians according to ISO-IEC17025. Therefore we define test result as compliant when it complies with the standard without further evaluation of test result uncertainty.

*This EUT has been also tested and compiled with the requirement of FCC Part 15, Subpart B, recorded in a separate test report(TEFD1912122).



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Frequency Range	802.11b/g/n: 2400-2483.5MHz
Modulation Type	802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM
Modulation Technology	DSSS, OFDM
Data Rate	WLAN: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40
Antenna Type	PIFA Antenna
Antenna Gain	WLAN: 2400-2483.5MHz: ANT A: 1.5dBi, ANT B: 2.4dBi

Note:

*For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

*802.11b/g 1TX only, 802.11n 2TX.

*802.11b/g support diversity.

Antenna Number	Brand Name	Model Name	Ant. Type	Connector	Support	Max Peak Gain	Antenna Gain includes Cable loss
Antenna 1	HONGBO	290-10569	PIFA	I-Pex	BT	BT : 3.74	Yes
Antenna 2	PSA	RFMTA401030IMLB702	PIFA	I-Pex	BT	BT : 3.74	Yes
Antenna 3	HONGBO	290-10843	PIFA	I-Pex	BT	BT : 3.05	Yes
Antenna 4	PSA	RFMTA401050IMLB706	PIFA	I-Pex	BT	BT : 3.05	Yes
Antenna 5	HONGBO	290-10844	PIFA	I-Pex	BT	BT : 2.38	Yes
Antenna 6	PSA	RFMTA401080IMLB704	PIFA	I-Pex	BT	BT : 1.72	Yes
Antenna 7	PSA	RFMTA340730IMLB305	PIFA	I-Pex	BT	BT : -0.5	Yes

Antenna Number	Brand Name	Model Name	Ant. Type	Connector	Support	Max Peak Gain	Antenna Gain includes Cable loss
Antenna A	Walsin	RFMTA100600NNLB002	PIFA	N/A	WIFI	WIFI: 1.5	N/A
Antenna B	Walsin	RFMTA100600NNLB002	PIFA	N/A	WIFI	WIFI: 2.4	N/A

Note:

1. For more detailed information, please refer to the Antenna's specifications.
2. Antenna 1 generated the worst case, it was reported as the final data.



2.2 Carrier Frequency of Channels

802.11b, 802.11g (2412MHz~2462MHz)

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

802.11n HT40 (2422MHz~2452MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
---	---	07	2442
---	---	08	2447
*03	2422	*09	2452
04	2427	---	---
05	2432	---	---
*06	2437	---	---

Note: Channels remarked * are selected to perform test.



2.3 Test Mode and Test Software

- During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
- The complete test system included remote workstation and EUT for RF test. The remote workstation included Notebook.
- An executive program, " MPTool ver.0.0000.03.20190507" under Windows OS system was executed to transmit and receive data via WLAN.
- The following test modes were performed for the test:

Conducted Emissions from the AC mains power ports	
Test Mode	Operating Description
1	802.11b (1Mbps), ANT B
2	802.11g (6Mbps), ANT B
3	802.11n HT20 (6.5Mbps)
4	802.11n HT40 (13.5Mbps)
caused "Test Mode 3" generated the worst case, it was reported as the final data.	
Radiation Emissions (30MHz ~ 1GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps), ANT B
2	802.11g (6Mbps), ANT B
3	802.11n HT20 (6.5Mbps)
4	802.11n HT40 (13.5Mbps)
caused "Test Mode 3" generated the worst case, it was reported as the final data.	
Radiation Emissions (1GHz ~ 25GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps), ANT B
2	802.11g (6Mbps), ANT B
3	802.11n HT20 (6.5Mbps)
4	802.11n HT40 (13.5Mbps)
caused "Test Mode 1~4" generated the worst case, they were reported as the final data.	



2.4 Description of Test System

RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	DELL	Vostro 3560	N/A	Adapter / 1.8m / NS
USB Cable	N/A	N/A	1.0m / NS	N/A
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	DELL	Vostro 3560	N/A	Adapter / 1.8m / NS
USB Cable	N/A	N/A	1.0m / NS	N/A
AC Power Line Conducted Emission				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	DELL	Vostro 3560	N/A	Adapter / 1.8m / NS
USB Cable	N/A	N/A	1.0m / NS	N/A



2.5 General Information of Test

Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication test C-4663 for Conducted emission test R-4218 for Radiated emission test G-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

Test Item	Test Site	Finish Date	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2019/12/27	22°C / 60%	Nick Guan
Radiated Emissions	3M02-NK	2019/12/23	24°C / 52%	Vic Yeh
AC Power Line Conducted Emission	CON01-NK	2019/12/24	22°C / 46%	Nick Guan

2.6 Measurement Uncertainty

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±1.60dB
Radiated Spurious Emission(9KHz~30MHz)	±3.405dB
Radiated Spurious Emission(30MHz~1GHz)	±5.326dB
Radiated Spurious Emission(1GHz~25GHz)	±5.918dB
Conducted Spurious Emission	±2.156dB
6dB Bandwidth	±4.401%
20dB Bandwidth	±4.40%
Occupied Bandwidth	±4.41%
Peak Output Power(Conducted Power Meter)	±1.31dB
Dwell Time	±0.11%
Power Spectral Density	±2.146dB
Duty Cycle	±0.17%



3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Bilog Antenna	Schwarzbeck	VULB9168	275	2019/09/24	2020/09/23
Bilog Antenna	Schwarzbeck	VULB9168	369	2019/03/29	2020/03/28
Active Loop Antenna	EMCO	6507	40855	2019/05/24	2020/05/23
Horn Antenna	EMCO	3115	31589	2019/04/01	2020/03/31
Horn Antenna	EMCO	3116	31974	2019/09/17	2020/09/16
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2019/05/14	2020/05/13
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2019/03/28	2020/03/27
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2019/08/02	2020/08/01
Preamplifier	EM Electronics corp.	EM330	60660	2019/03/11	2020/03/10
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2019/09/20	2020/09/19
Preamplifier	Agilent	8449B	3008A01954	2019/03/11	2020/03/10
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2019/11/07	2020/11/06
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2019/04/07	2020/04/06
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2019/04/09	2020/04/08
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1316	2019/09/20	2020/09/19
Cable-0.5m(1G-40G)	HUBER SUHNER	SUCOFLEX 100	805443/4	2019/05/20	2020/05/19
Cable-3m(1G-40G)	HUBER SUHNER	SUCOFLEX 100	805796/4	2019/05/20	2020/05/19
Cable-8m(1G-40G)	HUBER SUHNER	SUCOFLEX 100	805795/4	2019/05/20	2020/05/19
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2019/03/28	2020/03/27
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2019/08/02	2020/08/01
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2019/04/07	2020/04/06
Attenuator	KEYSIGHT	8491B	MY39250703	2019/09/12	2020/09/11
TEMP & HUMI CHAMBER	T-MACHINE	TMJ-9712	T-12-040111	2019/08/28	2020/08/27
Power Meter	Anritsu	ML2495A	1224005	2019/04/11	2020/04/10
Power Sensor	Anritsu	MA2411B	1207295	2019/04/09	2020/04/08



Test Item	AC Power Line Conducted Emission				
Test Site	CON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	ROHDE & SCHWARZ	ESCI	100443	2019/03/29	2020/03/28
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	8127-568	2019/03/15	2020/03/14
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	101934	2019/03/12	2020/03/11
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2019/03/14	2020/03/13
E3	AUDIX	v8.2014-8-6	RK-000531	NA	NA



4. Antenna Requirements

4.1 Standard Applicable

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

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

4.2 Antenna Construction and Directional Gain

Antenna Type	PIFA Antenna
Antenna Gain	2.4GHz: ANT A: 1.5 dBi ; ANT B: 2.4 dBi

For BT

2400-2483.5MHz

For Power directional gain= G_{ant} = 3.74 dBi

For PSD directional gain = G_{ant} = 3.74 dBi

For WLAN

802.11b/g:

2412-2462MHz

For Power directional gain= G_{ant} = 2.4 dBi

For PSD directional gain= G_{ant} = 2.4 dBi

802.11n:

2412-2462MHz

For Power directional gain= G_{ant} = 2.4 dBi

For PSD directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / NANT]$
= 4.97 (dBi)



Antenna Number	Brand Name	Model Name	Ant. Type	Connector	Support	Max Peak Gain	Antenna Gain includes Cable loss
Antenna 1	HONGBO	290-10569	PIFA	I-Pex	BT	BT : 3.74	Yes
Antenna 2	PSA	RFMTA401030IMLB702	PIFA	I-Pex	BT	BT : 3.74	Yes
Antenna 3	HONGBO	290-10843	PIFA	I-Pex	BT	BT : 3.05	Yes
Antenna 4	PSA	RFMTA401050IMLB706	PIFA	I-Pex	BT	BT : 3.05	Yes
Antenna 5	HONGBO	290-10844	PIFA	I-Pex	BT	BT : 2.38	Yes
Antenna 6	PSA	RFMTA401080IMLB704	PIFA	I-Pex	BT	BT : 1.72	Yes
Antenna 7	PSA	RFMTA340730IMLB305	PIFA	I-Pex	BT	BT : -0.5	Yes

Antenna Number	Brand Name	Model Name	Ant. Type	Connector	Support	Max Peak Gain	Antenna Gain includes Cable loss
Antenna A	Walsin	RFMTA100600NNLB002	PIFA	N/A	WIFI	WIFI: 1.5	N/A
Antenna B	Walsin	RFMTA100600NNLB002	PIFA	N/A	WIFI	WIFI: 2.4	N/A

Note:

1. For more detailed information, please refer to the Antenna's specifications.
2. Antenna 1 generated the worst case, it was reported as the final data.



5. Test of AC Power Line Conducted Emission

5.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

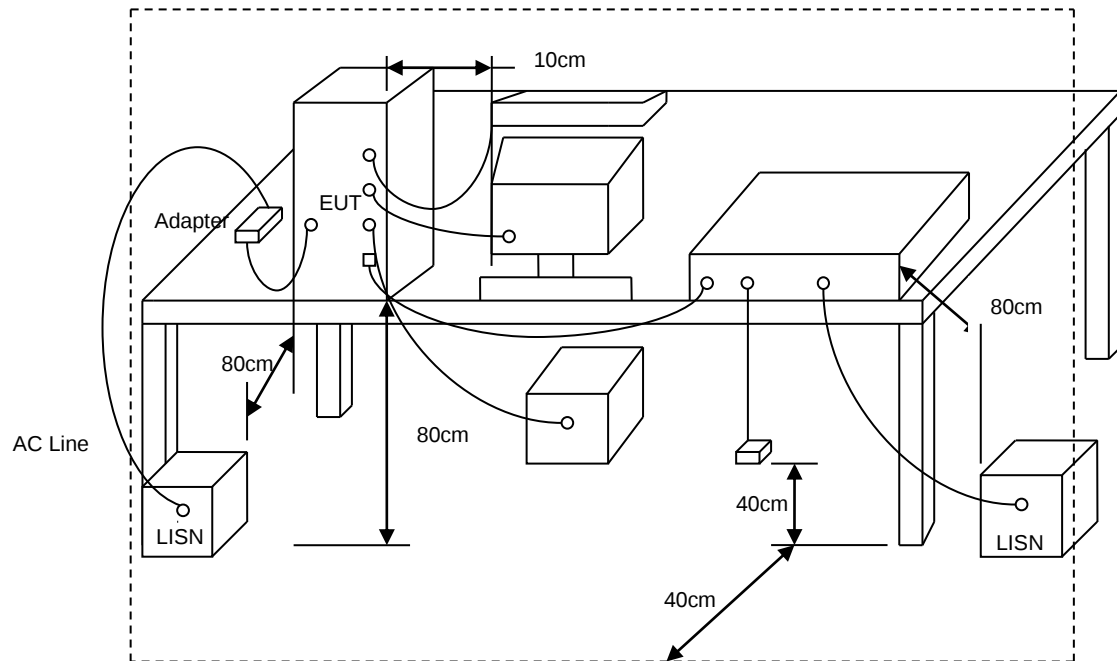
*Decreases with the logarithm of the frequency.

5.2 Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



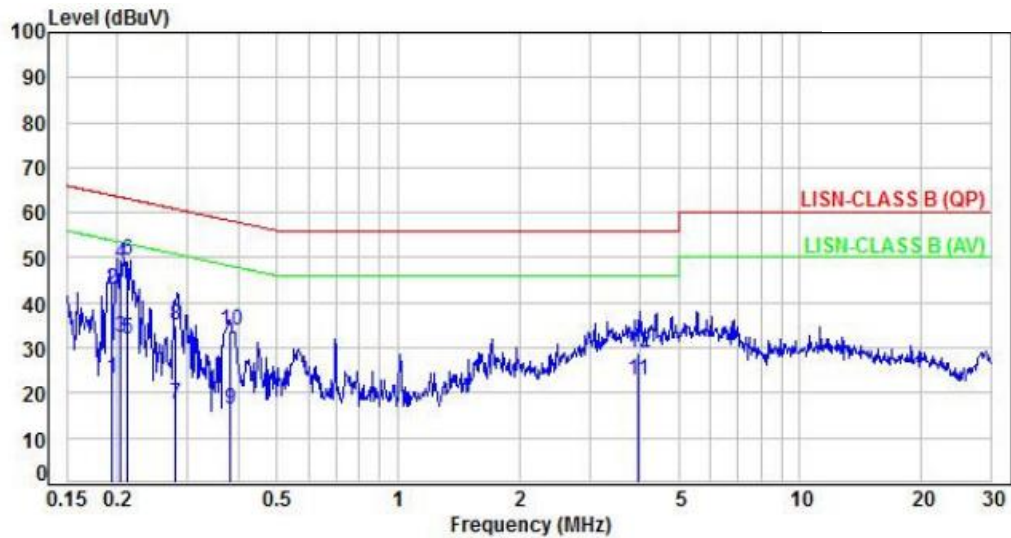
5.3 Typical Test Setup





5.4 Test Result and Data

Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	LINE
Test Mode	:	Mode 3		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	P/F
1	0.19	9.92	13.26	23.18	53.89	-30.71	Average	P
2	0.19	9.92	33.18	43.10	63.89	-20.79	QP	P
3	0.20	9.92	22.22	32.14	53.43	-21.29	Average	P
4	0.20	9.92	38.93	48.85	63.43	-14.58	QP	P
5	0.21	9.92	22.14	32.06	53.15	-21.09	Average	P
6	0.21	9.92	39.56	49.48	63.15	-13.67	QP	P
7	0.28	9.92	7.47	17.39	50.85	-33.46	Average	P
8	0.28	9.92	24.91	34.83	60.85	-26.02	QP	P
9	0.38	9.94	6.25	16.19	48.22	-32.03	Average	P
10	0.38	9.94	24.00	33.94	58.22	-24.28	QP	P
11	3.95	10.09	12.90	22.99	46.00	-23.01	Average	P
12	3.95	10.09	18.91	29.00	56.00	-27.00	QP	P

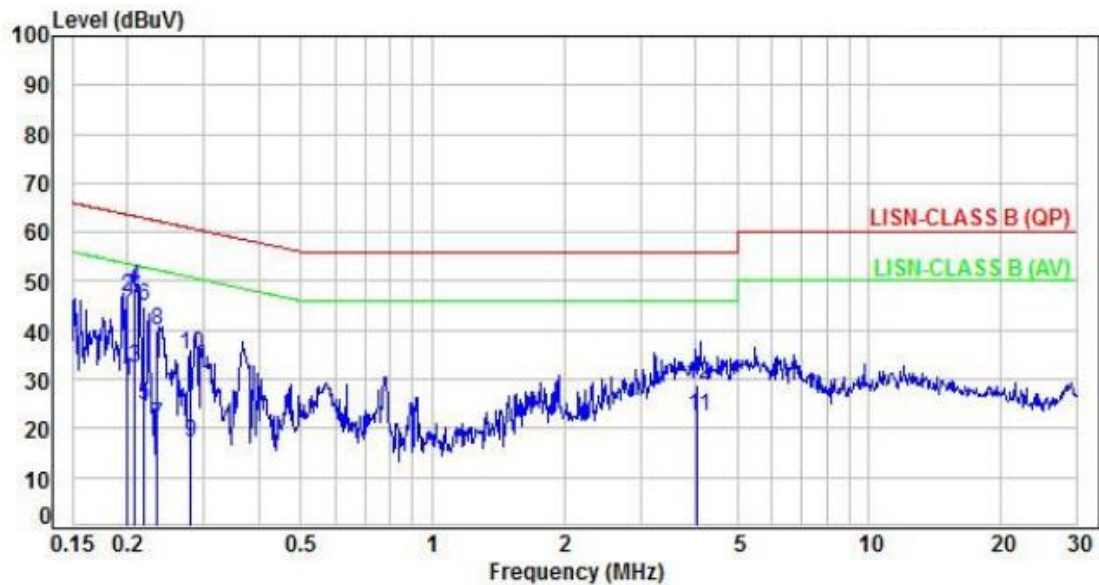
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 3		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.20	9.95	19.64	29.59	53.58	-23.99	Average	P
2	0.20	9.95	36.95	46.90	63.58	-16.68	QP	P
3	0.21	9.95	22.44	32.39	53.27	-20.88	Average	P
4	0.21	9.95	38.60	48.55	63.27	-14.72	QP	P
5	0.22	9.95	14.71	24.66	52.90	-28.24	Average	P
6	0.22	9.95	35.07	45.02	62.90	-17.88	QP	P
7	0.23	9.95	10.54	20.49	52.30	-31.81	Average	P
8	0.23	9.95	29.88	39.83	62.30	-22.47	QP	P
9	0.28	9.95	7.08	17.03	50.81	-33.78	Average	P
10	0.28	9.95	25.19	35.14	60.81	-25.67	QP	P
11	4.05	10.11	12.42	22.53	46.00	-23.47	Average	P
12	4.05	10.11	18.75	28.86	56.00	-27.14	QP	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=(LISN or ISN or Current Probe)Factor + Cable Loss



6. Test of Radiated Spurious Emission

6.1 Test Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

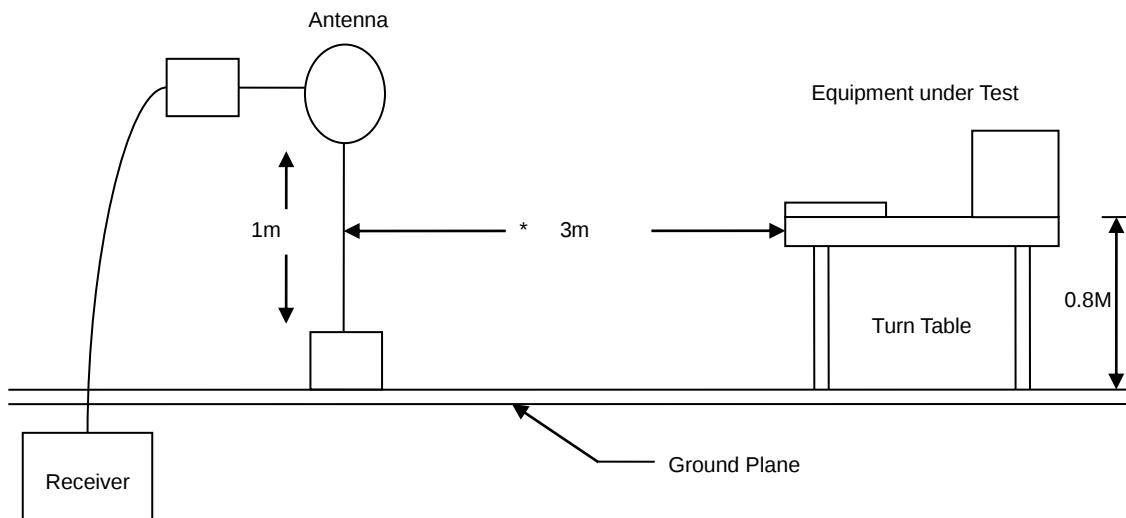
6.2 Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

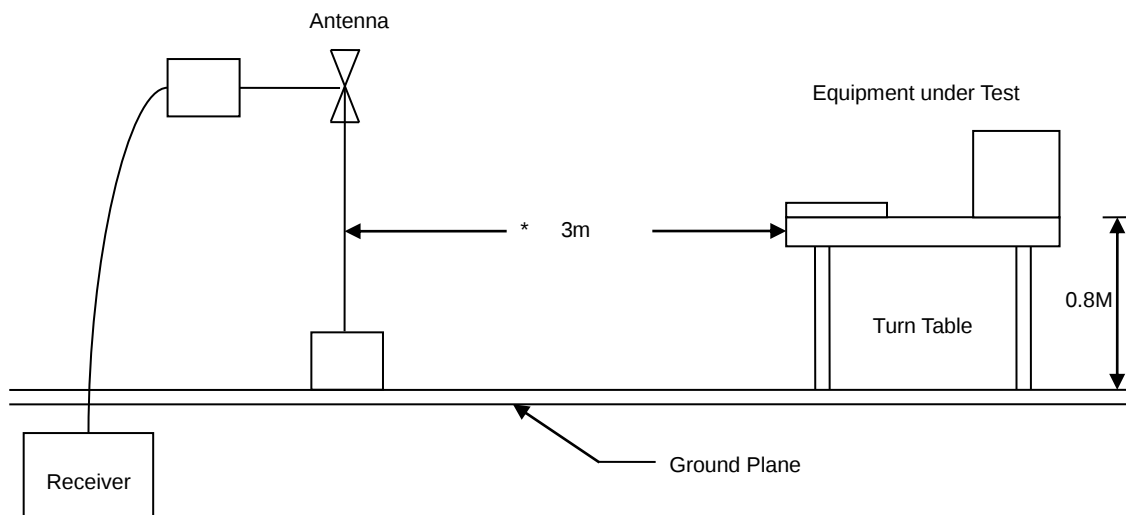


6.3 Typical Test Setup

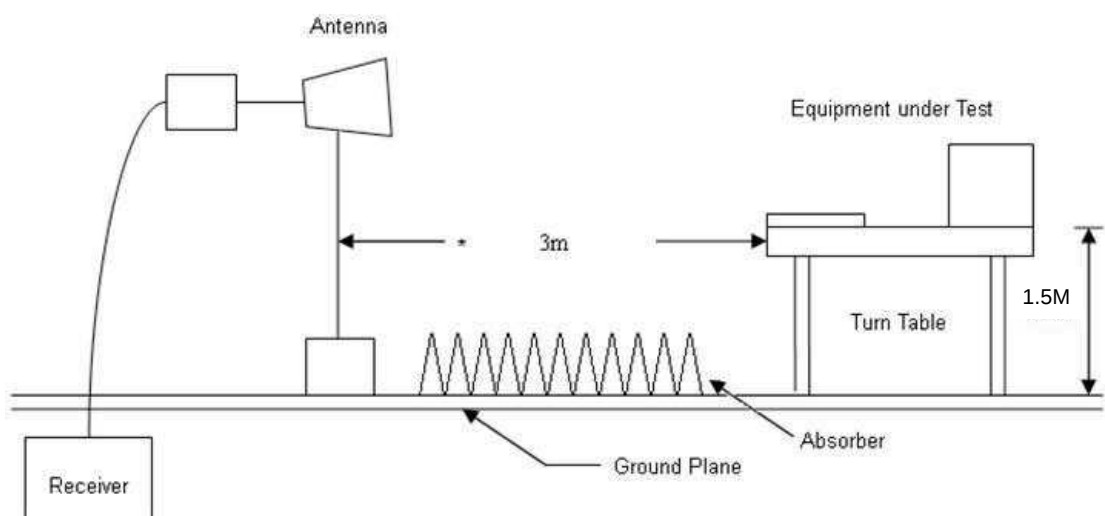
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



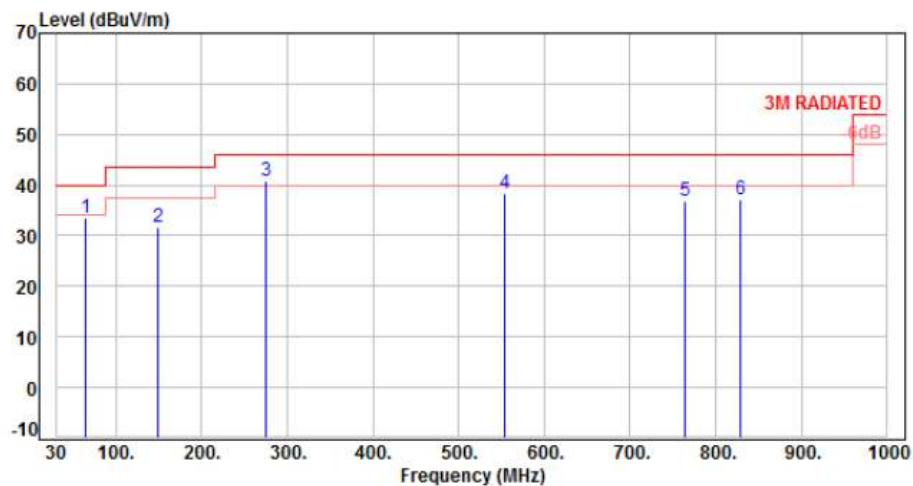


6.4 Test Result and Data (9KHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

6.5 Test Result and Data (30MHz ~ 1GHz)

Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	64.92	-10.68	44.28	33.60	40.00	-6.40	Peak	100	0	P
2	148.34	-9.51	41.17	31.66	43.50	-11.84	Peak	100	0	P
3	274.44	-9.21	49.96	40.75	46.00	-5.25	Peak	100	0	P
4	553.80	-2.46	40.79	38.33	46.00	-7.67	Peak	100	0	P
5	763.32	1.42	35.43	36.85	46.00	-9.15	Peak	100	0	P
6	829.28	2.16	35.12	37.28	46.00	-8.72	Peak	100	0	P

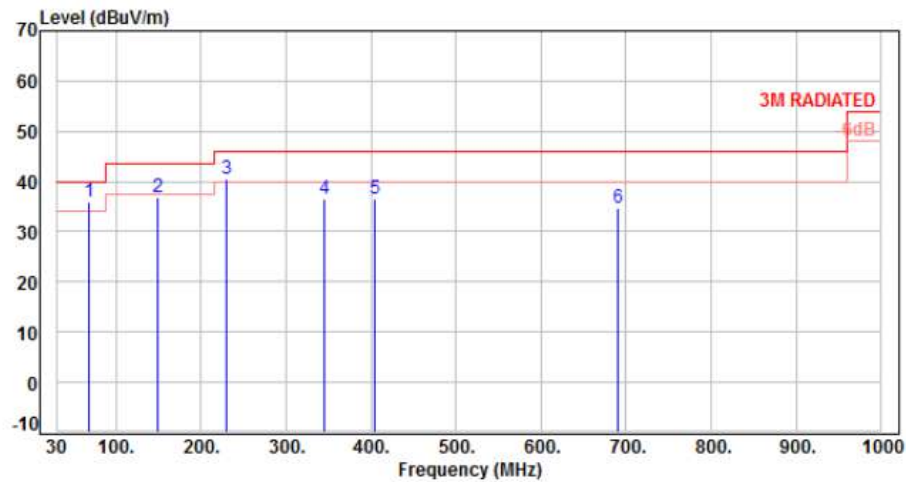
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	68.80	-11.56	47.56	36.00	40.00	-4.00	Peak	100	0	P
2	148.34	-9.51	46.30	36.79	43.50	-6.71	QP	200	155	P
3	229.82	-11.36	51.79	40.43	46.00	-5.57	Peak	100	0	P
4	344.28	-7.25	43.76	36.51	46.00	-9.49	Peak	100	0	P
5	404.42	-5.59	42.19	36.60	46.00	-9.40	Peak	100	0	P
6	689.60	-0.04	34.75	34.71	46.00	-11.29	Peak	100	0	P

Note: Level=Reading+Factor

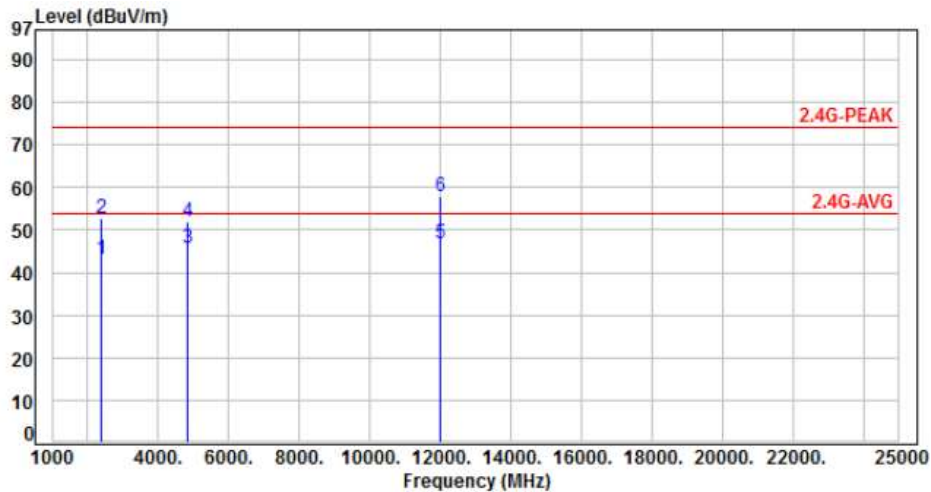
Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6.6 Test Result and Data (1GHz ~ 25GHz)

Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	46.70	43.06	54.00	-10.94	Average	304	12	P
2	2390.00	-3.64	56.25	52.61	74.00	-21.39	Peak	304	12	P
3	4824.00	3.76	42.07	45.83	54.00	-8.17	Average	100	278	P
4	4824.00	3.76	48.10	51.86	74.00	-22.14	Peak	100	278	P
5	12010.00	13.50	33.43	46.93	54.00	-7.07	Average	100	126	P
6	12010.00	13.50	44.56	58.06	74.00	-15.94	Peak	100	126	P

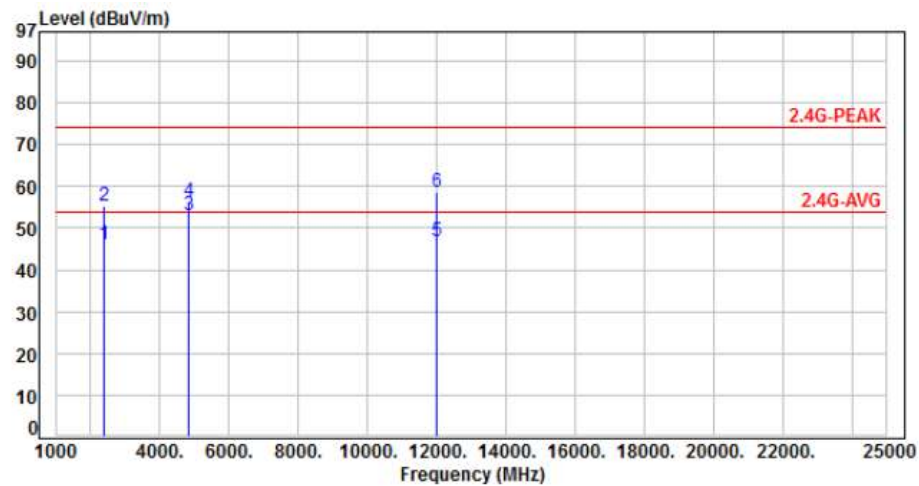
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	49.78	46.14	54.00	-7.86	Average	242	327	P
2	2390.00	-3.64	58.82	55.18	74.00	-18.82	Peak	242	327	P
3	4824.00	3.76	49.22	52.98	54.00	-1.02	Average	100	333	P
4	4824.00	3.76	52.51	56.27	74.00	-17.73	Peak	100	333	P
5	12010.00	13.50	33.44	46.94	54.00	-7.06	Average	100	117	P
6	12010.00	13.50	45.30	58.80	74.00	-15.20	Peak	100	117	P

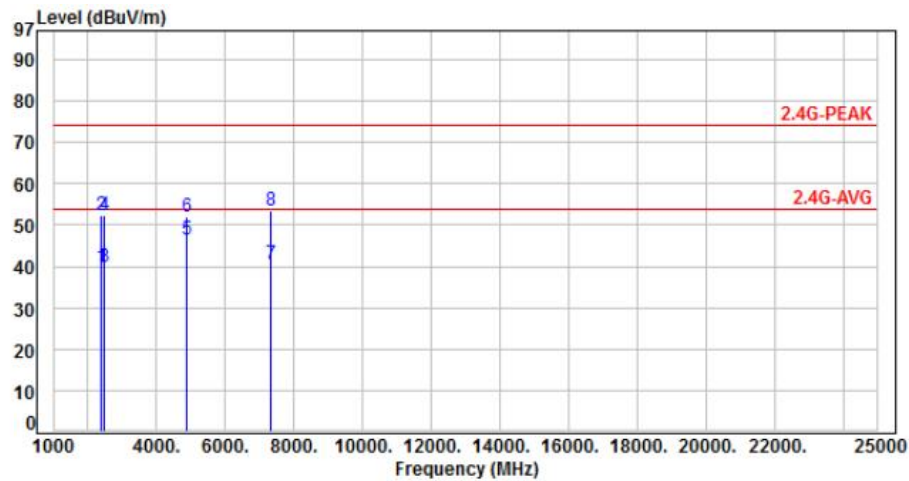
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	43.30	39.66	54.00	-14.34	Average	292	27	P
2	2390.00	-3.64	56.13	52.49	74.00	-21.51	Peak	292	27	P
3	2483.50	-3.30	43.11	39.81	54.00	-14.19	Average	292	27	P
4	2483.50	-3.30	55.79	52.49	74.00	-21.51	Peak	292	27	P
5	4874.00	3.95	42.34	46.29	54.00	-7.71	Average	100	281	P
6	4874.00	3.95	48.22	52.17	74.00	-21.83	Peak	100	281	P
7	7311.00	8.84	31.67	40.51	54.00	-13.49	Average	100	205	P
8	7311.00	8.84	44.59	53.43	74.00	-20.57	Peak	100	205	P

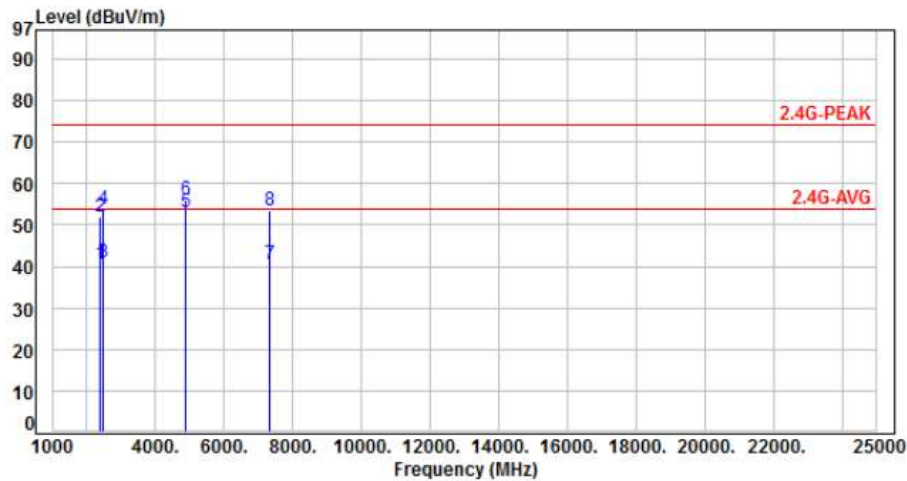
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	44.14	40.50	54.00	-13.50	Average	262	327	P
2	2390.00	-3.64	55.69	52.05	74.00	-21.95	Peak	262	327	P
3	2483.50	-3.30	44.10	40.80	54.00	-13.20	Average	262	327	P
4	2483.50	-3.30	57.20	53.90	74.00	-20.10	Peak	262	327	P
5	4874.00	3.95	49.02	52.97	54.00	-1.03	Average	100	237	P
6	4874.00	3.95	52.27	56.22	74.00	-17.78	Peak	100	237	P
7	7311.00	8.84	31.64	40.48	54.00	-13.52	Average	100	77	P
8	7311.00	8.84	44.59	53.43	74.00	-20.57	Peak	100	77	P

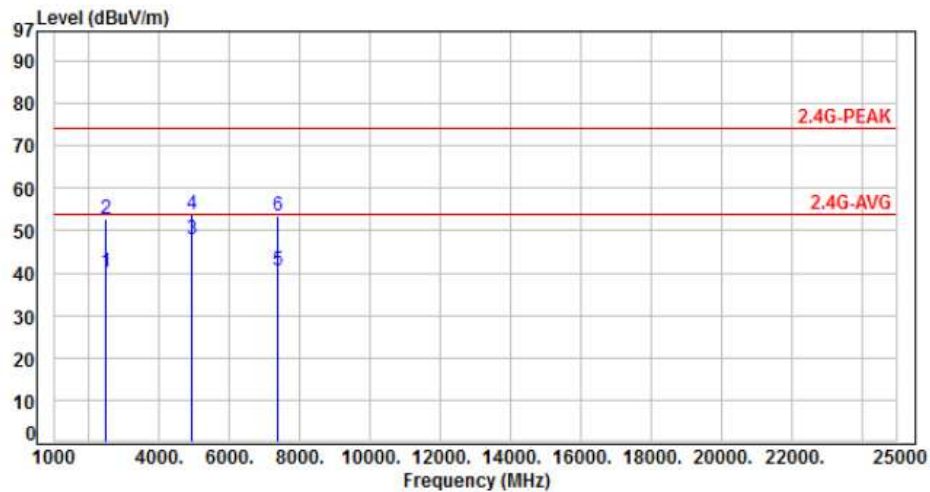
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	43.41	40.11	54.00	-13.89	Average	323	5	P
2	2483.50	-3.30	55.99	52.69	74.00	-21.31	Peak	323	5	P
3	4924.00	4.10	44.02	48.12	54.00	-5.88	Average	100	286	P
4	4924.00	4.10	49.77	53.87	74.00	-20.13	Peak	100	286	P
5	7386.00	8.94	31.76	40.70	54.00	-13.30	Average	100	208	P
6	7386.00	8.94	44.66	53.60	74.00	-20.40	Peak	100	208	P

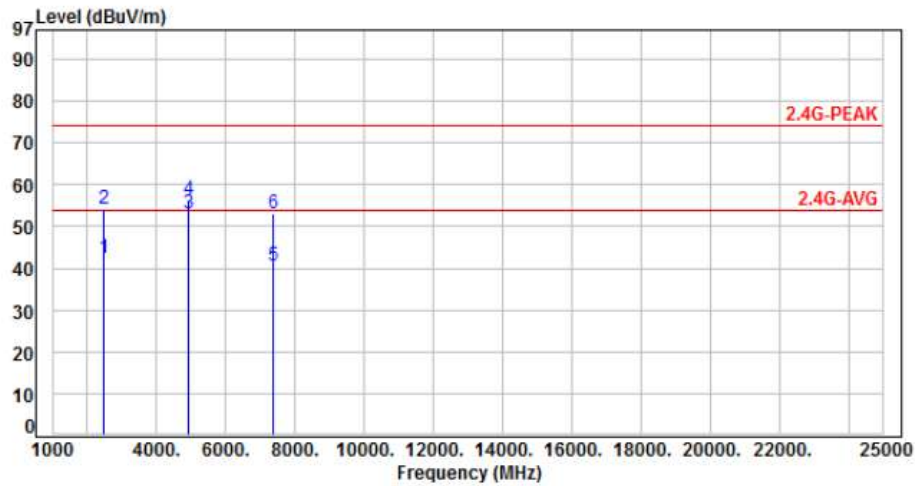
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	45.60	42.30	54.00	-11.70	Average	252	330	P
2	2483.50	-3.30	57.45	54.15	74.00	-19.85	Peak	252	330	P
3	4924.00	4.10	48.89	52.99	54.00	-1.01	Average	100	326	P
4	4924.00	4.10	52.45	56.55	74.00	-17.45	Peak	100	326	P
5	7386.00	8.94	31.58	40.52	54.00	-13.48	Average	100	81	P
6	7386.00	8.94	44.10	53.04	74.00	-20.96	Peak	100	81	P

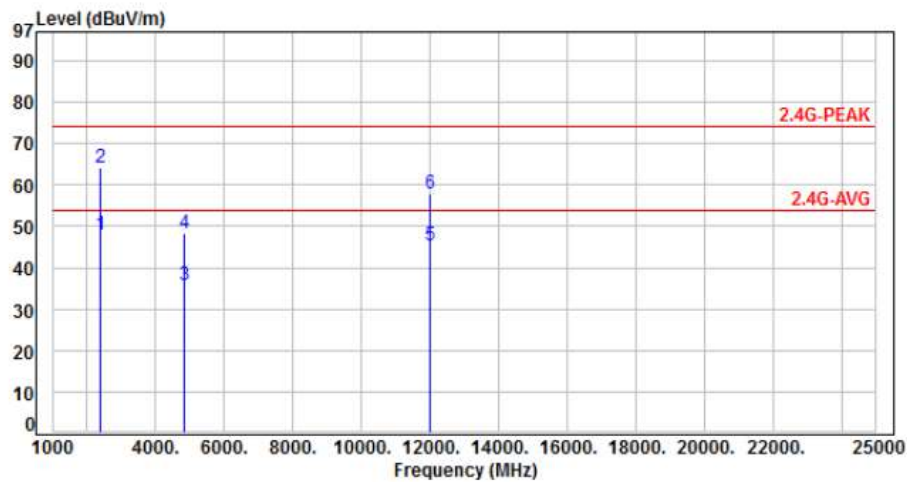
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	51.75	48.11	54.00	-5.89	Average	115	310	P
2	2390.00	-3.64	67.74	64.10	74.00	-9.90	Peak	115	310	P
3	4824.00	3.76	32.05	35.81	54.00	-18.19	Average	100	280	P
4	4824.00	3.76	44.57	48.33	74.00	-25.67	Peak	100	280	P
5	12010.00	13.50	31.70	45.20	54.00	-8.80	Average	100	215	P
6	12010.00	13.50	44.30	57.80	74.00	-16.20	Peak	100	215	P

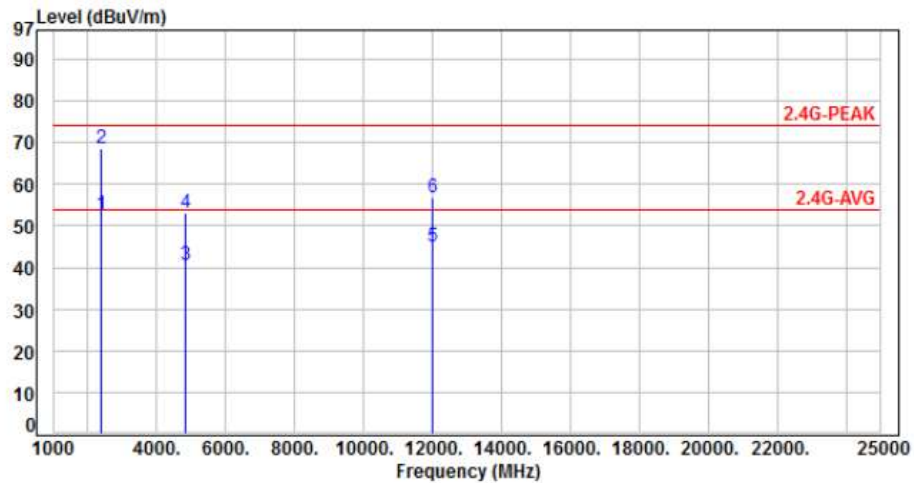
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	56.50	52.86	54.00	-1.14	Average	243	321	P
2	2390.00	-3.64	72.06	68.42	74.00	-5.58	Peak	243	321	P
3	4824.00	3.76	36.71	40.47	54.00	-13.53	Average	100	331	P
4	4824.00	3.76	49.49	53.25	74.00	-20.75	Peak	100	331	P
5	12010.00	13.50	31.60	45.10	54.00	-8.90	Average	100	125	P
6	12010.00	13.50	43.16	56.66	74.00	-17.34	Peak	100	125	P

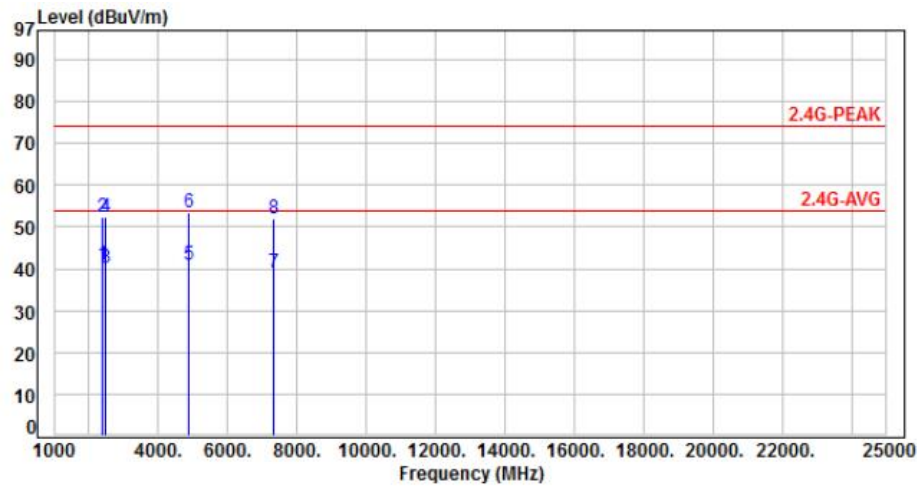
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	44.74	41.10	54.00	-12.90	Average	113	308	P
2	2390.00	-3.64	55.98	52.34	74.00	-21.66	Peak	113	308	P
3	2483.50	-3.30	43.41	40.11	54.00	-13.89	Average	113	308	P
4	2483.50	-3.30	55.65	52.35	74.00	-21.65	Peak	113	308	P
5	4874.00	3.95	37.05	41.00	54.00	-13.00	Average	100	276	P
6	4874.00	3.95	49.66	53.61	74.00	-20.39	Peak	100	276	P
7	7311.00	8.84	30.37	39.21	54.00	-14.79	Average	100	205	P
8	7311.00	8.84	43.31	52.15	74.00	-21.85	Peak	100	205	P

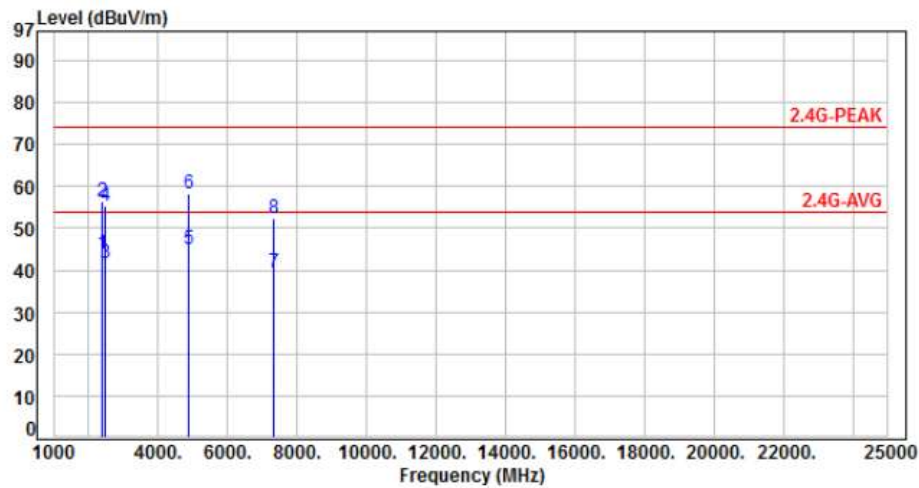
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	47.67	44.03	54.00	-9.97	Average	266	335	P
2	2390.00	-3.64	60.02	56.38	74.00	-17.62	Peak	266	335	P
3	2483.50	-3.30	45.09	41.79	54.00	-12.21	Average	285	335	P
4	2483.50	-3.30	58.49	55.19	74.00	-18.81	Peak	285	335	P
5	4874.00	3.95	41.22	45.17	54.00	-8.83	Average	100	326	P
6	4874.00	3.95	54.46	58.41	74.00	-15.59	Peak	100	326	P
7	7311.00	8.84	30.59	39.43	54.00	-14.57	Average	100	84	P
8	7311.00	8.84	43.55	52.39	74.00	-21.61	Peak	100	84	P

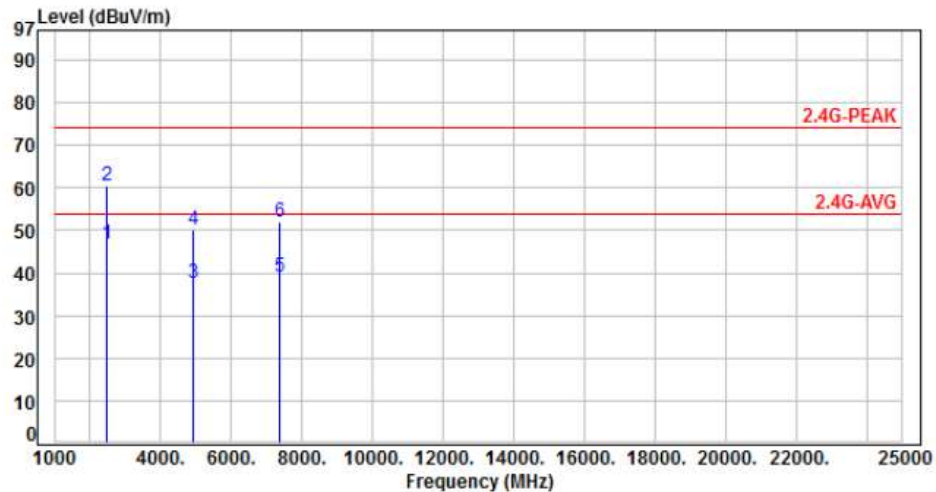
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	49.96	46.66	54.00	-7.34	Average	100	300	P
2	2483.50	-3.30	63.94	60.64	74.00	-13.36	Peak	100	300	P
3	4924.00	4.10	33.38	37.48	54.00	-16.52	Average	100	278	P
4	4924.00	4.10	45.88	49.98	74.00	-24.02	Peak	100	278	P
5	7386.00	8.94	30.26	39.20	54.00	-14.80	Average	100	209	P
6	7386.00	8.94	43.22	52.16	74.00	-21.84	Peak	100	209	P

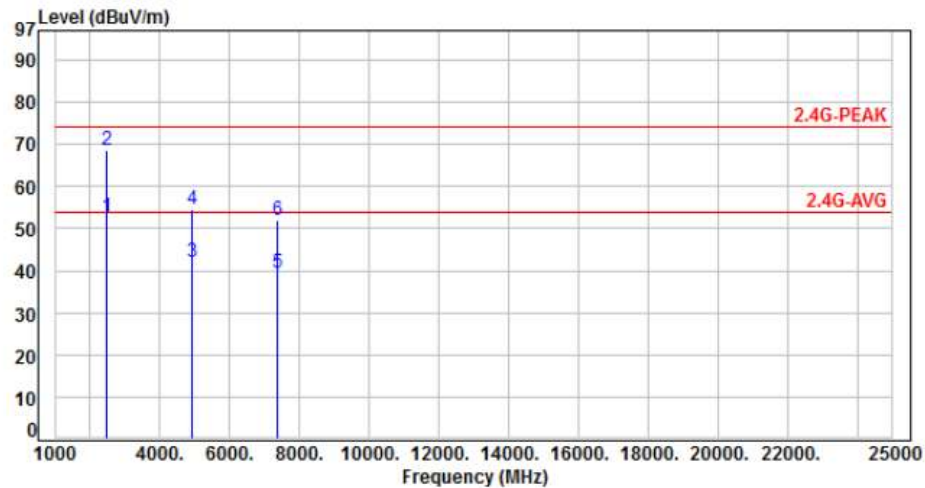
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	56.11	52.81	54.00	-1.19	Average	258	330	P
2	2483.50	-3.30	71.73	68.43	74.00	-5.57	Peak	258	330	P
3	4924.00	4.10	37.96	42.06	54.00	-11.94	Average	100	330	P
4	4924.00	4.10	50.65	54.75	74.00	-19.25	Peak	100	330	P
5	7386.00	8.94	30.41	39.35	54.00	-14.65	Average	100	80	P
6	7386.00	8.94	43.19	52.13	74.00	-21.87	Peak	100	80	P

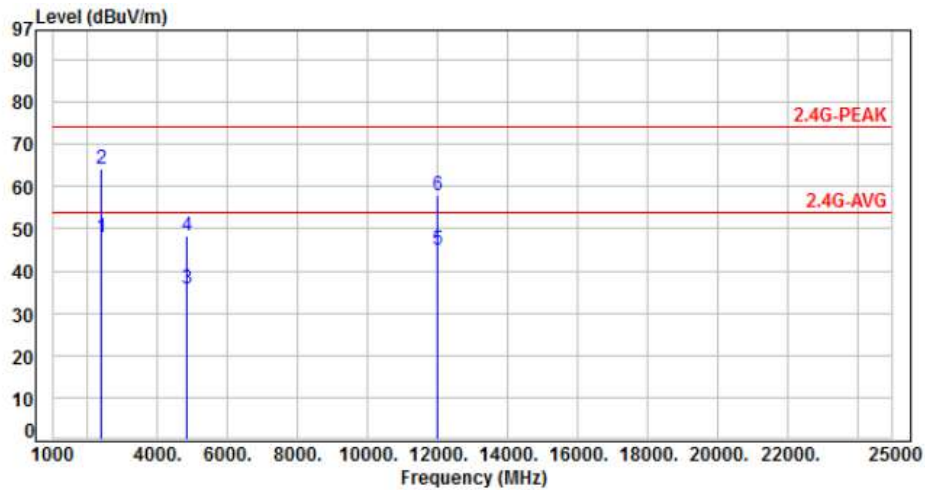
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	51.46	47.82	54.00	-6.18	Average	106	314	P
2	2390.00	-3.64	67.82	64.18	74.00	-9.82	Peak	106	314	P
3	4824.00	3.76	32.15	35.91	54.00	-18.09	Average	100	277	P
4	4824.00	3.76	44.68	48.44	74.00	-25.56	Peak	100	277	P
5	12010.00	13.50	31.52	45.02	54.00	-8.98	Average	100	212	P
6	12010.00	13.50	44.53	58.03	74.00	-15.97	Peak	100	212	P

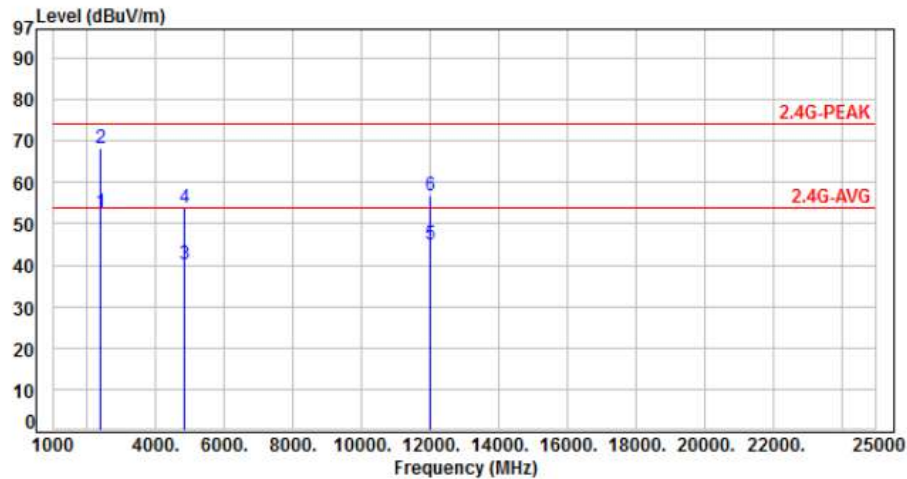
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	56.47	52.83	54.00	-1.17	Average	240	322	P
2	2390.00	-3.64	71.76	68.12	74.00	-5.88	Peak	240	322	P
3	4824.00	3.76	36.39	40.15	54.00	-13.85	Average	100	340	P
4	4824.00	3.76	50.11	53.87	74.00	-20.13	Peak	100	340	P
5	12010.00	13.50	31.49	44.99	54.00	-9.01	Average	100	127	P
6	12010.00	13.50	43.41	56.91	74.00	-17.09	Peak	100	127	P

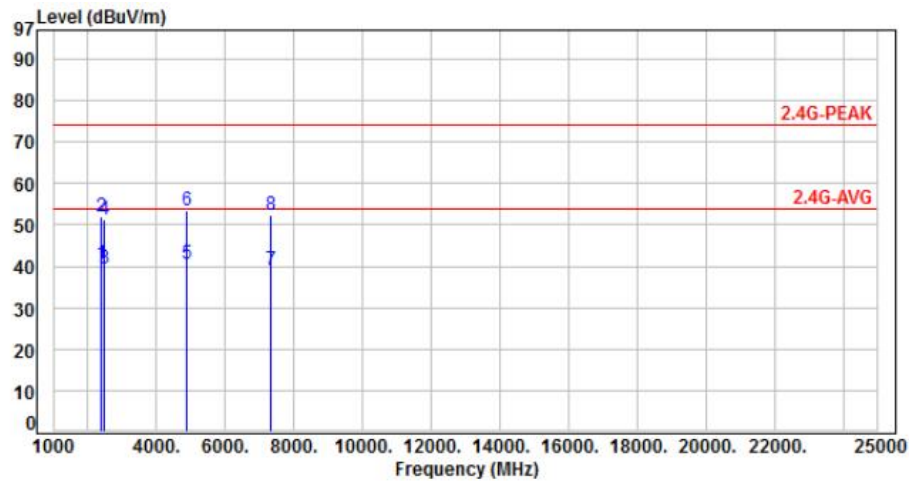
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	44.39	40.75	54.00	-13.25	Average	110	310	P
2	2390.00	-3.64	55.49	51.85	74.00	-22.15	Peak	110	310	P
3	2483.50	-3.30	42.75	39.45	54.00	-14.55	Average	110	310	P
4	2483.50	-3.30	54.67	51.37	74.00	-22.63	Peak	110	310	P
5	4874.00	3.95	36.53	40.48	54.00	-13.52	Average	100	275	P
6	4874.00	3.95	49.39	53.34	74.00	-20.66	Peak	100	275	P
7	7311.00	8.84	30.28	39.12	54.00	-14.88	Average	100	214	P
8	7311.00	8.84	43.54	52.38	74.00	-21.62	Peak	100	214	P

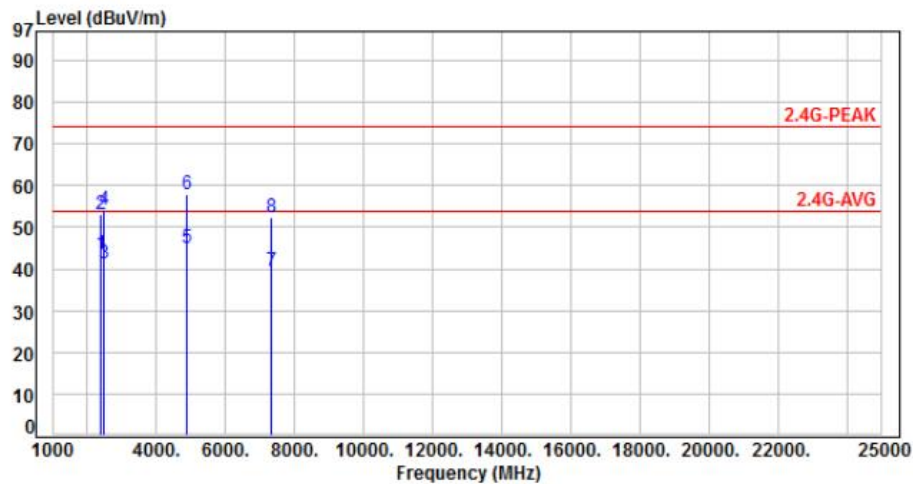
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	47.27	43.63	54.00	-10.37	Average	280	348	P
2	2390.00	-3.64	56.70	53.06	74.00	-20.94	Peak	280	348	P
3	2483.50	-3.30	44.47	41.17	54.00	-12.83	Average	281	348	P
4	2483.50	-3.30	57.40	54.10	74.00	-19.90	Peak	281	348	P
5	4874.00	3.95	40.89	44.84	54.00	-9.16	Average	100	325	P
6	4874.00	3.95	53.85	57.80	74.00	-16.20	Peak	100	325	P
7	7311.00	8.84	30.46	39.30	54.00	-14.70	Average	100	82	P
8	7311.00	8.84	43.37	52.21	74.00	-21.79	Peak	100	82	P

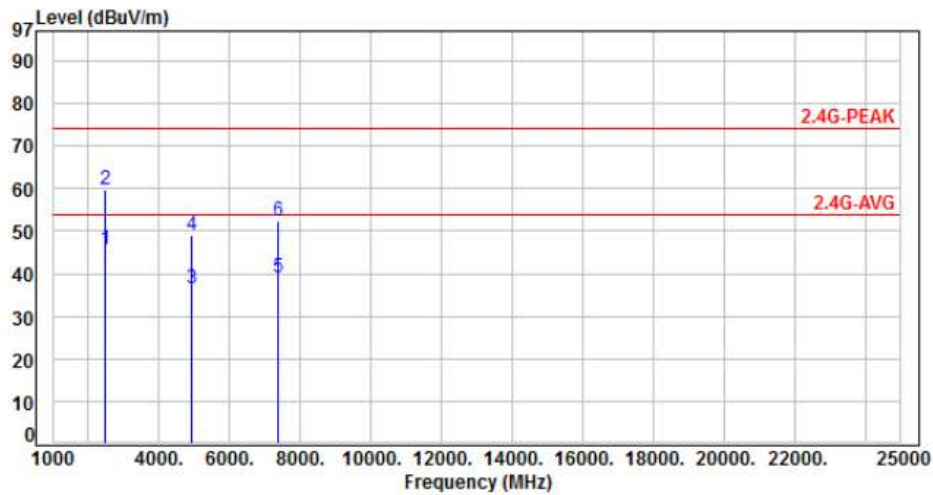
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	49.07	45.77	54.00	-8.23	Average	100	305	P
2	2483.50	-3.30	62.95	59.65	74.00	-14.35	Peak	100	305	P
3	4924.00	4.10	32.41	36.51	54.00	-17.49	Average	100	280	P
4	4924.00	4.10	44.96	49.06	74.00	-24.94	Peak	100	280	P
5	7386.00	8.94	30.29	39.23	54.00	-14.77	Average	100	225	P
6	7386.00	8.94	43.38	52.32	74.00	-21.68	Peak	100	225	P

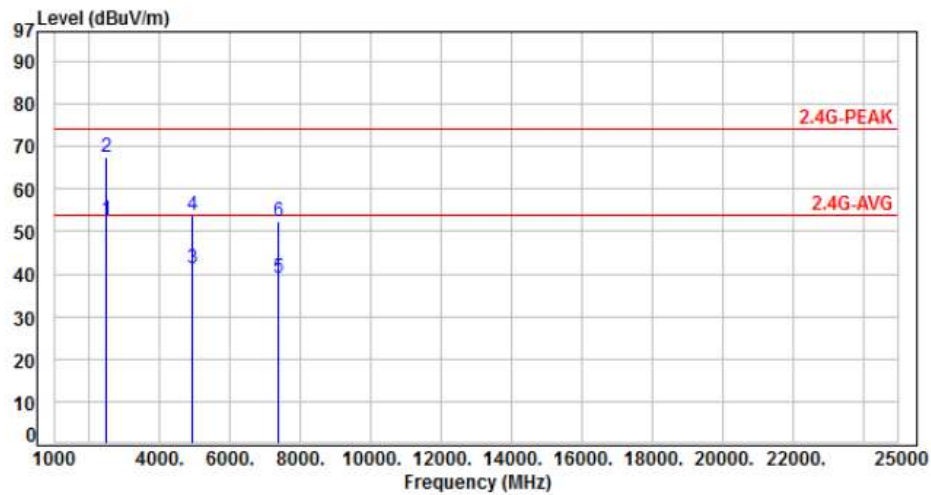
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	56.08	52.78	54.00	-1.22	Average	252	338	P
2	2483.50	-3.30	70.95	67.65	74.00	-6.35	Peak	252	338	P
3	4924.00	4.10	37.05	41.15	54.00	-12.85	Average	100	331	P
4	4924.00	4.10	49.82	53.92	74.00	-20.08	Peak	100	331	P
5	7386.00	8.94	30.33	39.27	54.00	-14.73	Average	100	78	P
6	7386.00	8.94	43.38	52.32	74.00	-21.68	Peak	100	78	P

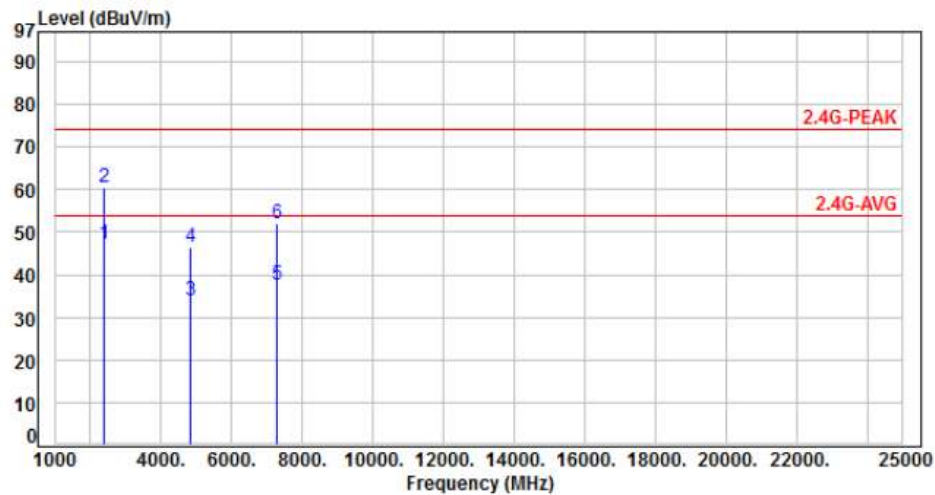
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH03		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	50.72	47.08	54.00	-6.92	Average	100	312	P
2	2390.00	-3.64	64.20	60.56	74.00	-13.44	Peak	100	312	P
3	4844.00	3.85	29.96	33.81	54.00	-20.19	Average	100	275	P
4	4844.00	3.85	42.66	46.51	74.00	-27.49	Peak	100	275	P
5	7266.00	8.62	29.18	37.80	54.00	-16.20	Average	100	211	P
6	7266.00	8.62	43.21	51.83	74.00	-22.17	Peak	100	211	P

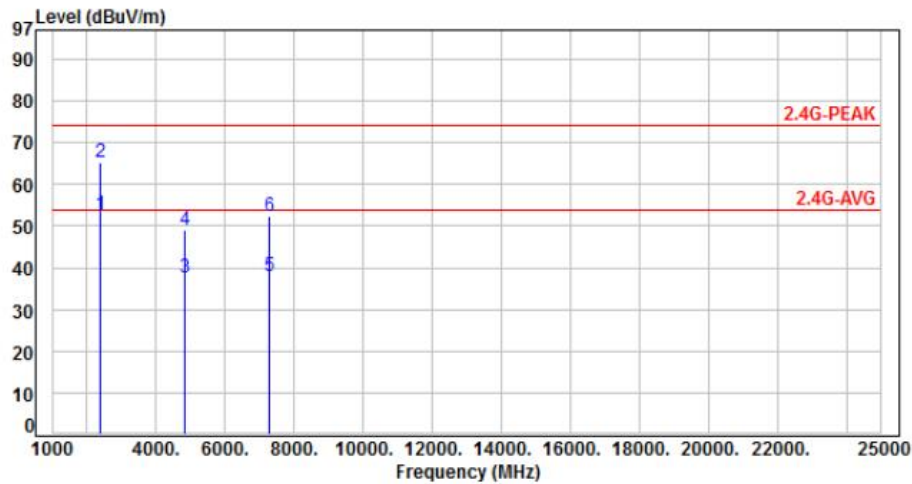
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH03		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	56.48	52.84	54.00	-1.16	Average	212	324	P
2	2390.00	-3.64	68.96	65.32	74.00	-8.68	Peak	212	324	P
3	4844.00	3.85	33.88	37.73	54.00	-16.27	Average	100	331	P
4	4844.00	3.85	45.31	49.16	74.00	-24.84	Peak	100	331	P
5	7266.00	8.62	29.52	38.14	54.00	-15.86	Average	100	86	P
6	7266.00	8.62	43.87	52.49	74.00	-21.51	Peak	100	86	P

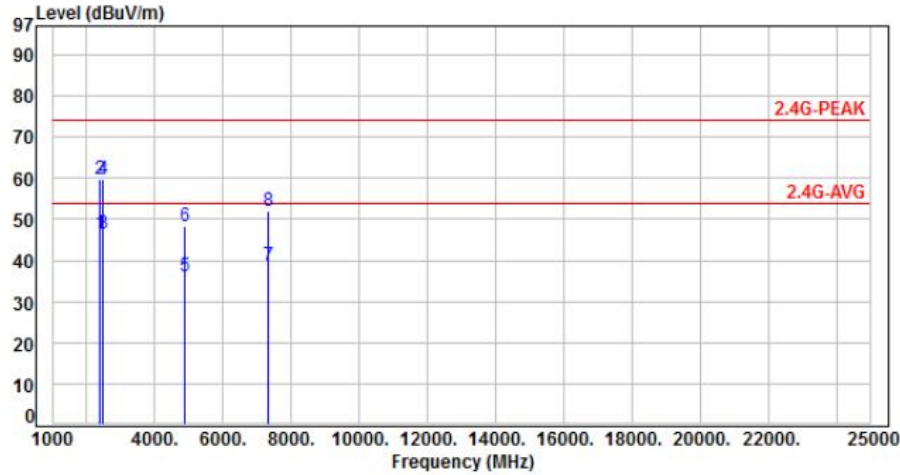
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH06		:	

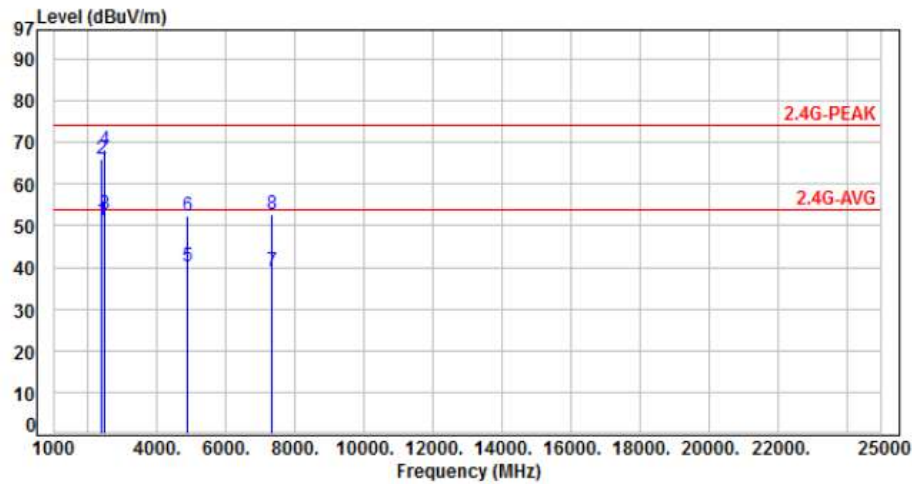


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	50.02	46.38	54.00	-7.62	Average	114	309	P
2	2390.00	-3.64	63.40	59.76	74.00	-14.24	Peak	114	309	P
3	2483.50	-3.30	49.74	46.44	54.00	-7.56	Average	114	309	P
4	2483.50	-3.30	63.19	59.89	74.00	-14.11	Peak	114	309	P
5	4874.00	3.95	32.23	36.18	54.00	-17.82	Average	100	277	P
6	4874.00	3.95	44.20	48.15	74.00	-25.85	Peak	100	277	P
7	7311.00	8.84	29.74	38.58	54.00	-15.42	Average	100	212	P
8	7311.00	8.84	43.10	51.94	74.00	-22.06	Peak	100	212	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-3.64	54.76	51.12	54.00	-2.88	Average	209	354	P
2	2390.00	-3.64	69.80	66.16	74.00	-7.84	Peak	209	354	P
3	2483.50	-3.30	56.12	52.82	54.00	-1.18	Average	194	342	P
4	2483.50	-3.30	71.57	68.27	74.00	-5.73	Peak	194	342	P
5	4874.00	3.95	36.30	40.25	54.00	-13.75	Average	100	329	P
6	4874.00	3.95	48.40	52.35	74.00	-21.65	Peak	100	329	P
7	7311.00	8.84	30.15	38.99	54.00	-15.01	Average	100	85	P
8	7311.00	8.84	44.01	52.85	74.00	-21.15	Peak	100	85	P

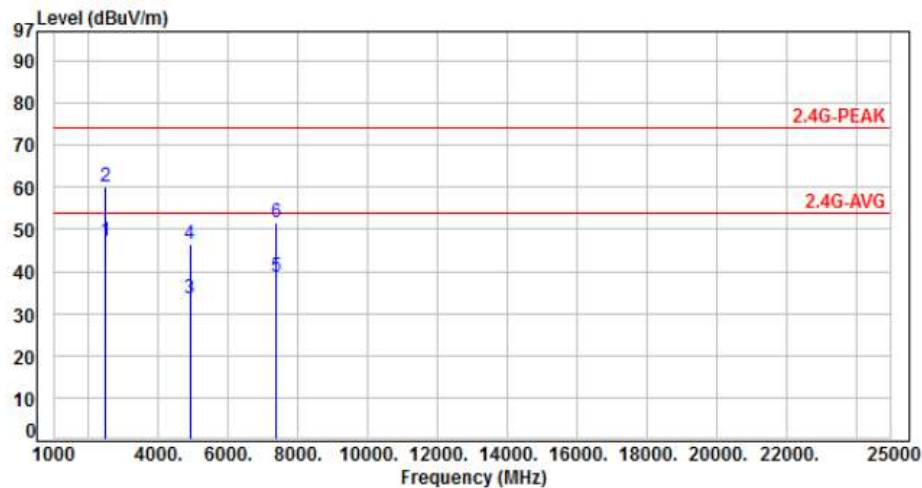
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH09		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	50.48	47.18	54.00	-6.82	Average	100	298	P
2	2483.50	-3.30	63.29	59.99	74.00	-14.01	Peak	100	298	P
3	4904.00	4.05	29.67	33.72	54.00	-20.28	Average	100	277	P
4	4904.00	4.05	42.38	46.43	74.00	-27.57	Peak	100	277	P
5	7356.00	8.86	29.69	38.55	54.00	-15.45	Average	100	223	P
6	7356.00	8.86	42.92	51.78	74.00	-22.22	Peak	100	223	P

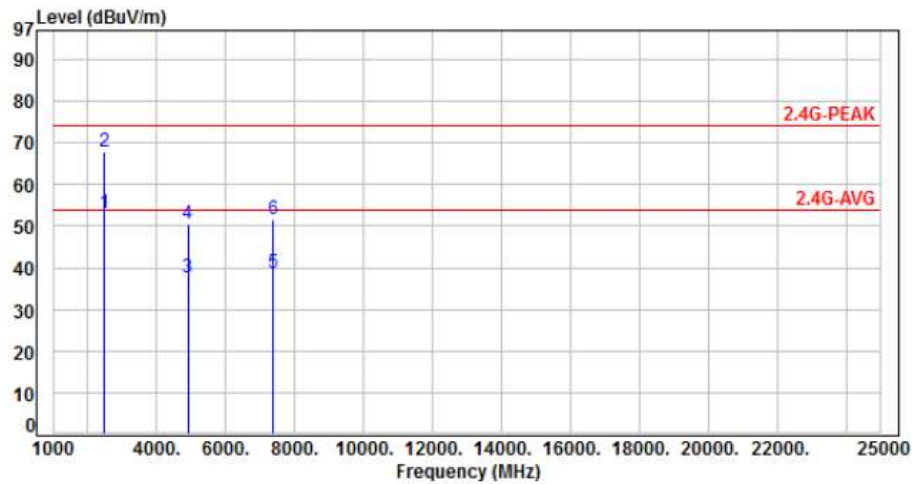
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From System (AC 120V / 60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH09		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2483.50	-3.30	56.29	52.99	54.00	-1.01	Average	194	346	P
2	2483.50	-3.30	71.04	67.74	74.00	-6.26	Peak	194	346	P
3	4904.00	4.05	33.67	37.72	54.00	-16.28	Average	100	333	P
4	4904.00	4.05	46.60	50.65	74.00	-23.35	Peak	100	333	P
5	7356.00	8.86	29.94	38.80	54.00	-15.20	Average	100	82	P
6	7356.00	8.86	42.75	51.61	74.00	-22.39	Peak	100	82	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6.7 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

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



7. Test of Conducted Spurious Emission

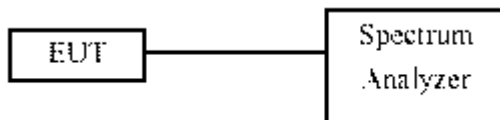
7.1 Test Limit

Below -30dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

- The transmitter output was connected to the spectrum analyzer via a low loss cable.
- Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- Peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 30dB relative to the maximum measured in-band peak PSD level.
- The band edges was measured and recorded.

7.3 Test Setup Layout



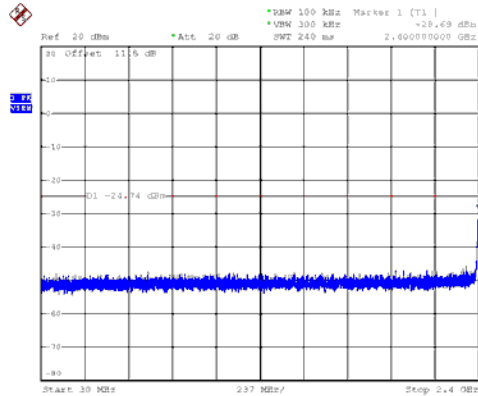
7.4 Test Result and Data

Note: Test plots refers to the following pages.

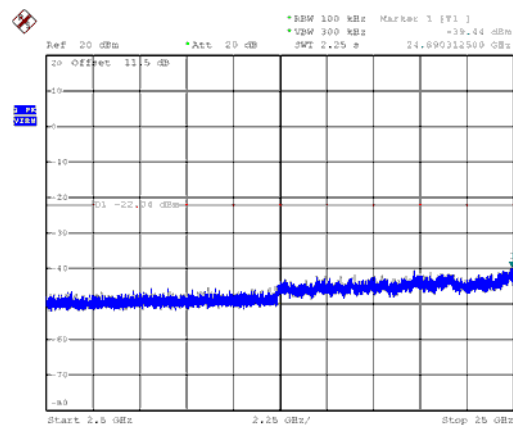
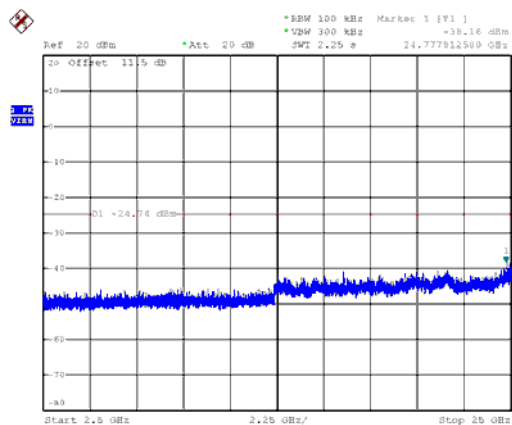
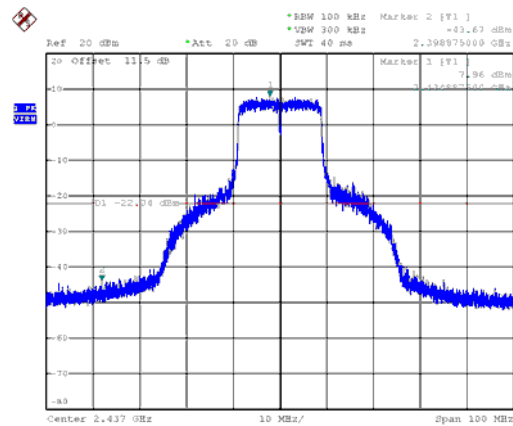
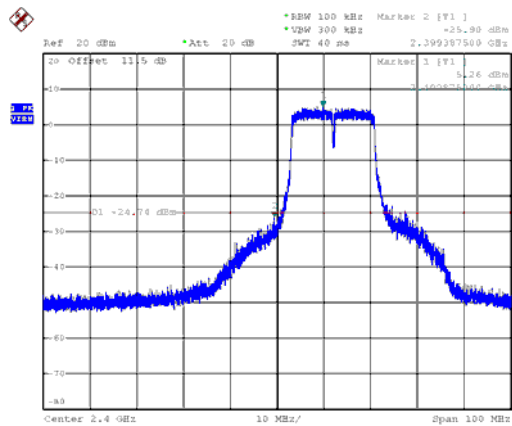
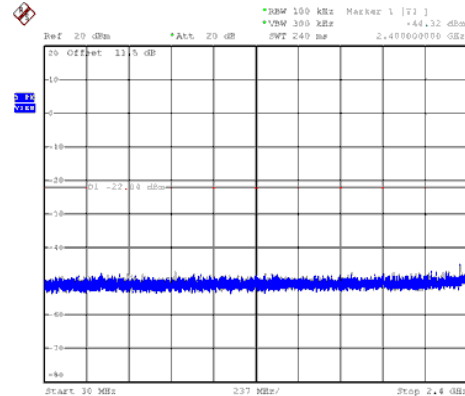


ANT A

Modulation Type: 802.11n HT20, CH01



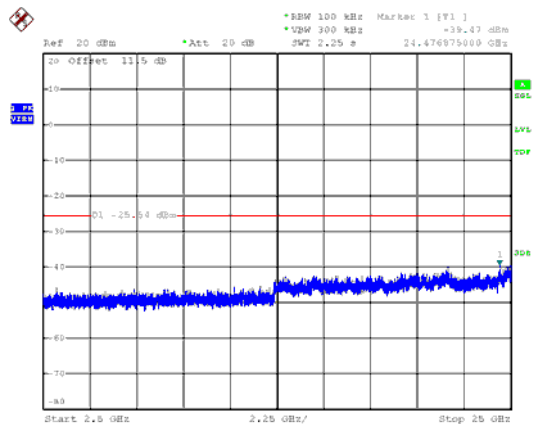
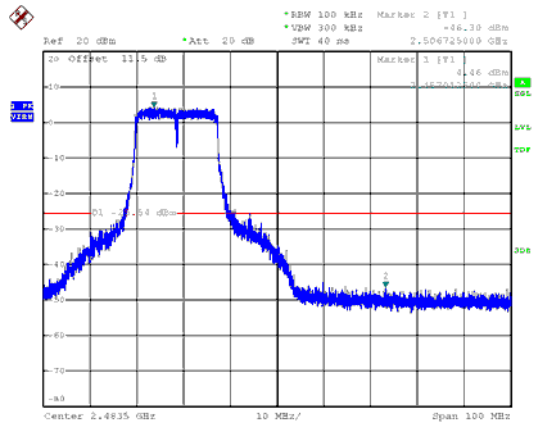
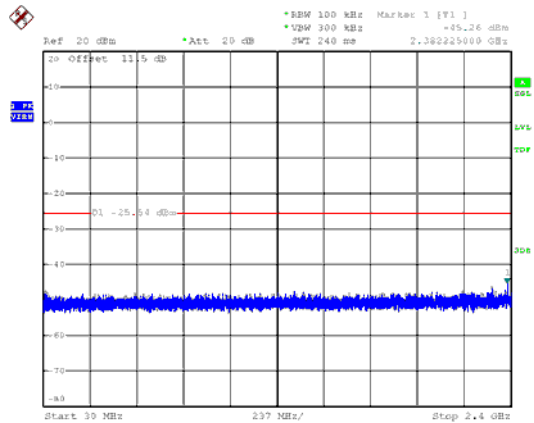
Modulation Type: 802.11n HT20, CH06





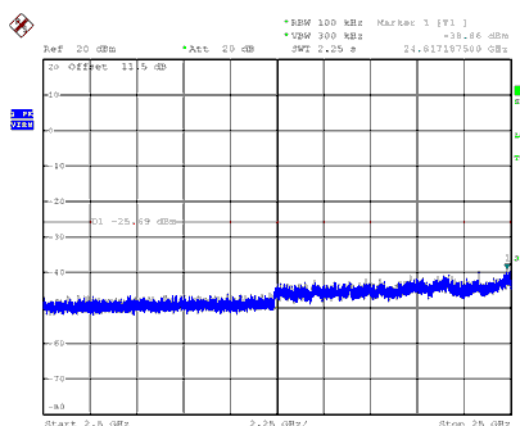
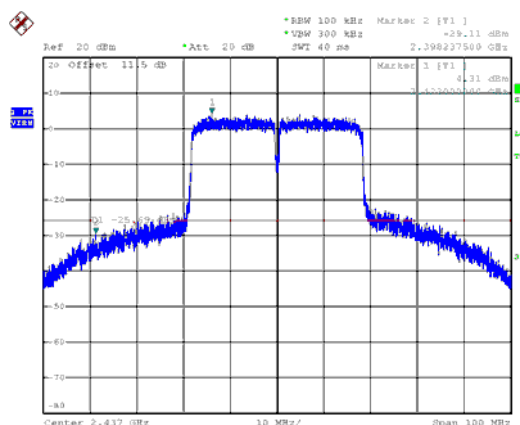
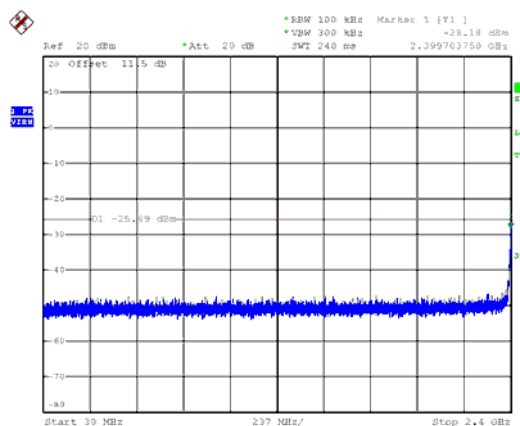
ANT A

Modulation Type: 802.11n HT20, CH11





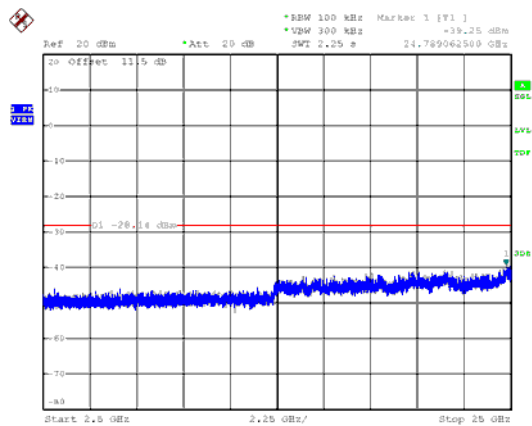
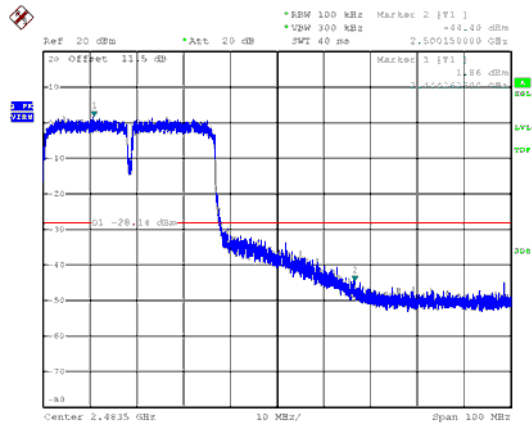
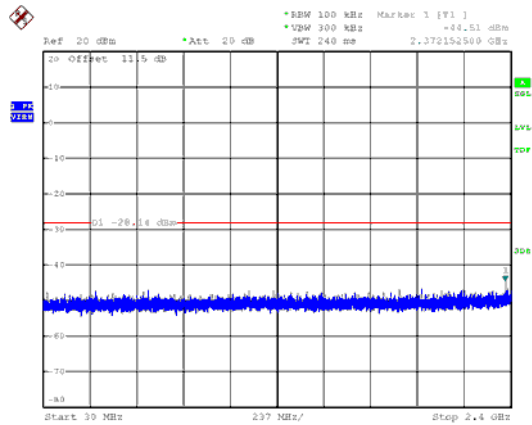
Modulation Type: 802.11n HT40, CH06





ANT A

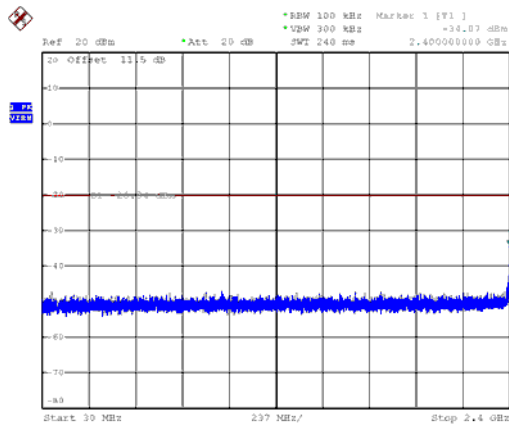
Modulation Type: 802.11n HT40, CH09



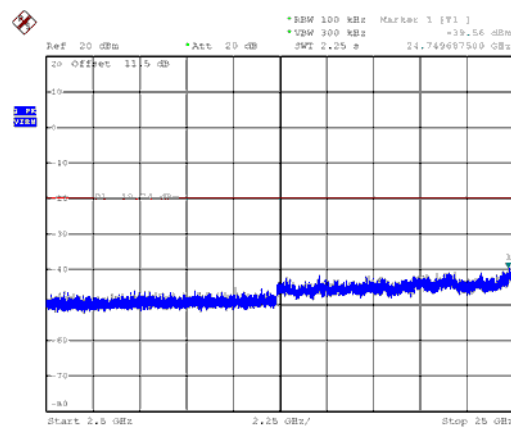
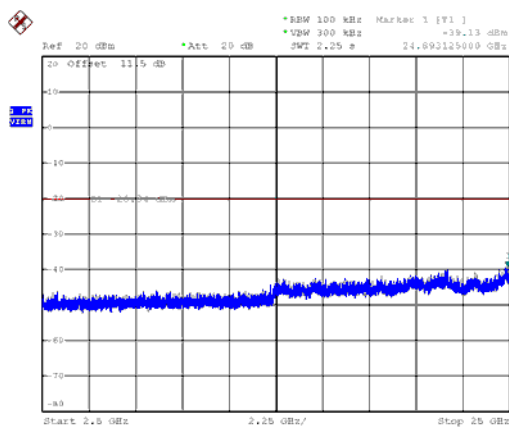
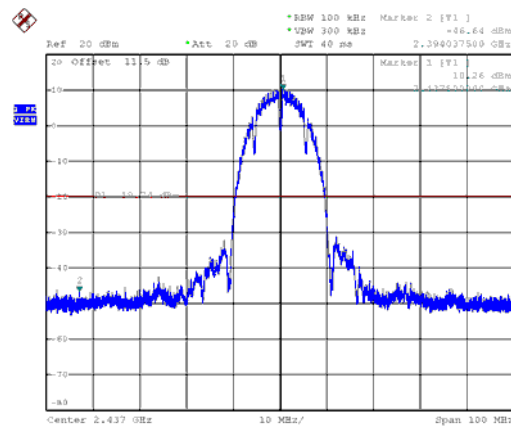
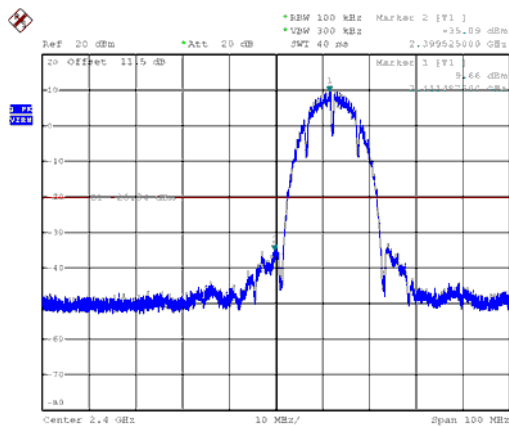
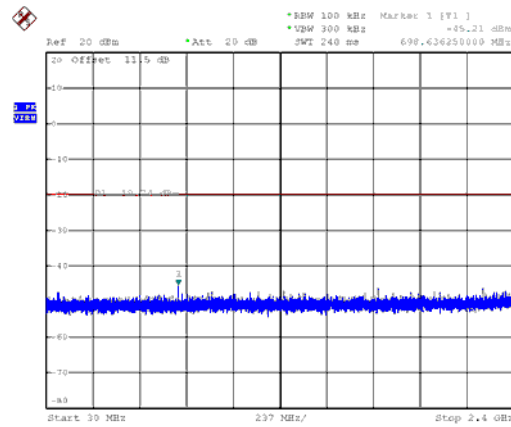


ANT B

Modulation Type: 802.11b, CH 01



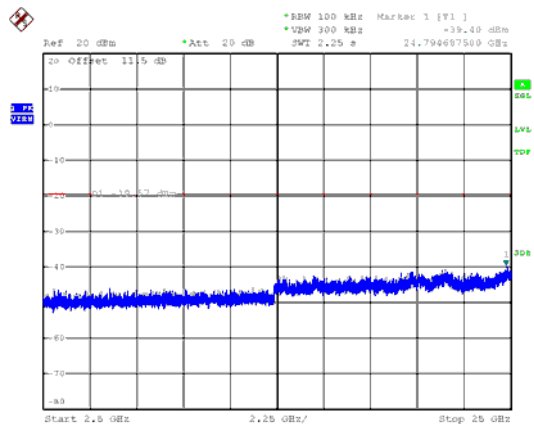
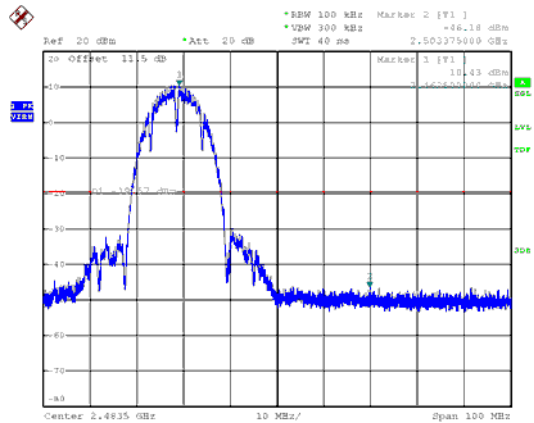
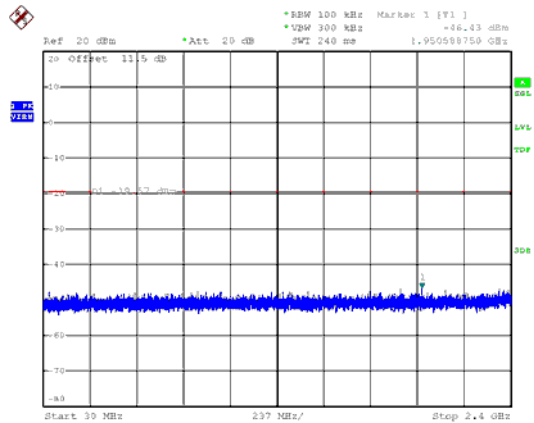
Modulation Type: 802.11b, CH 06





ANT B

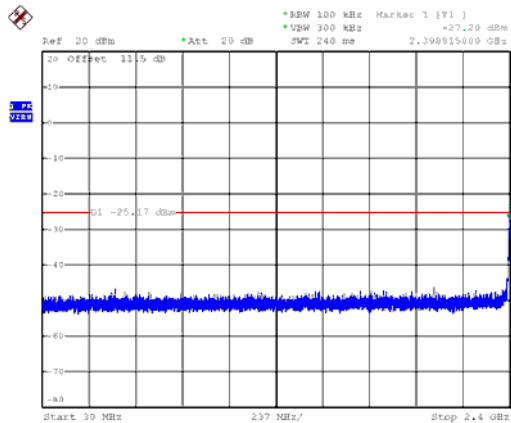
Modulation Type: 802.11b, CH 11



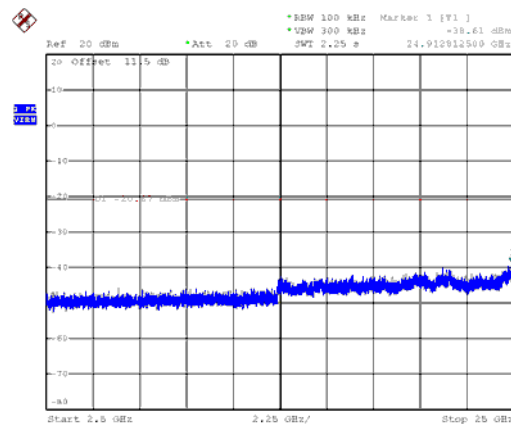
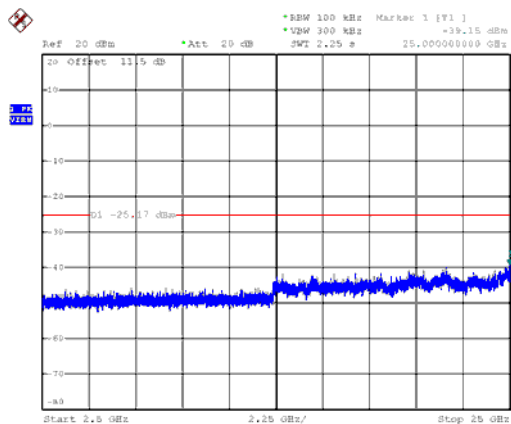
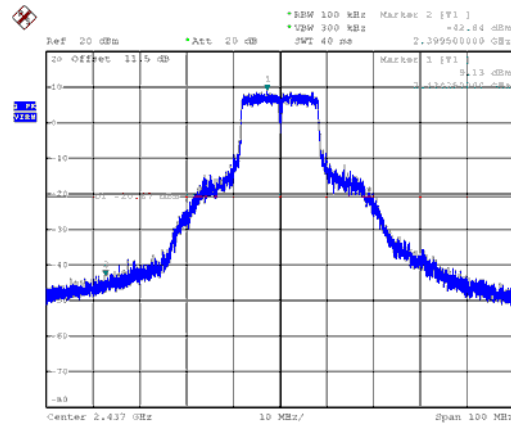
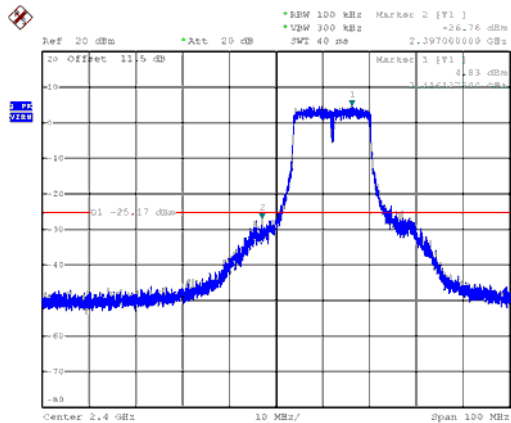
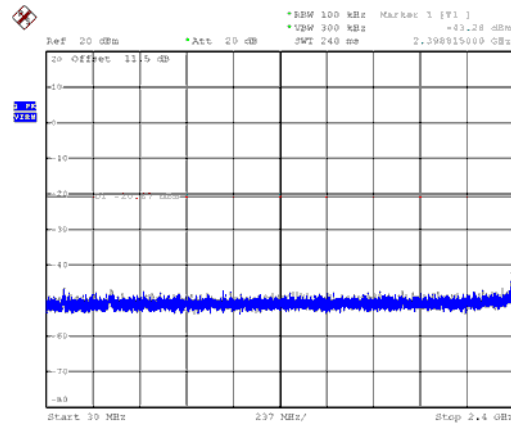


ANT B

Modulation Type: 802.11g, CH 01



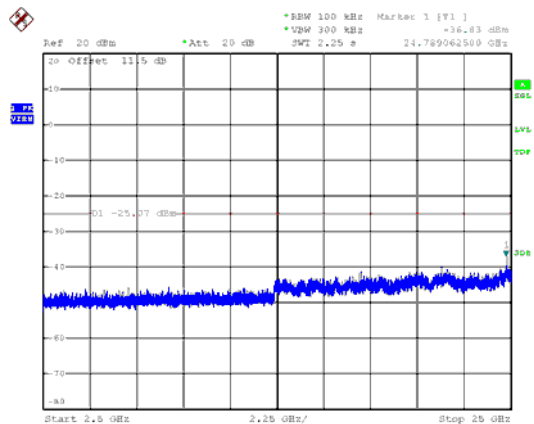
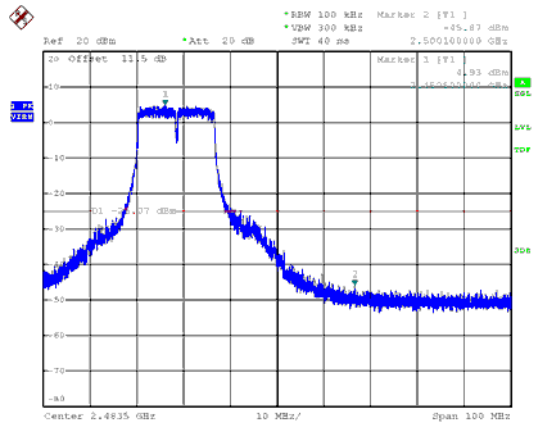
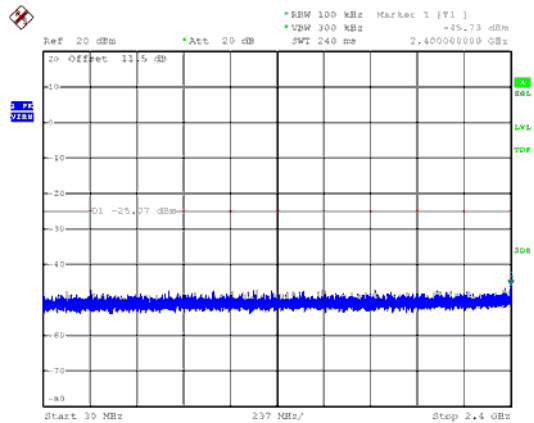
Modulation Type: 802.11g, CH 06





ANT B

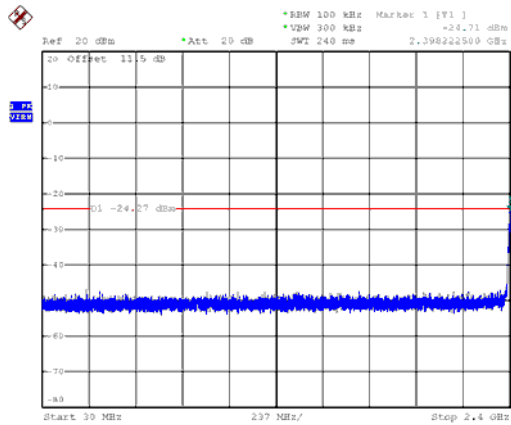
Modulation Type: 802.11g, CH 11



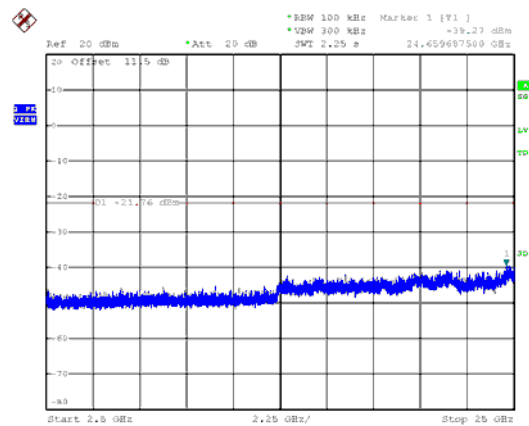
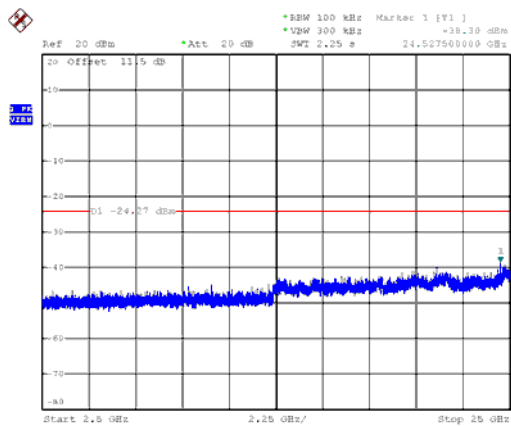
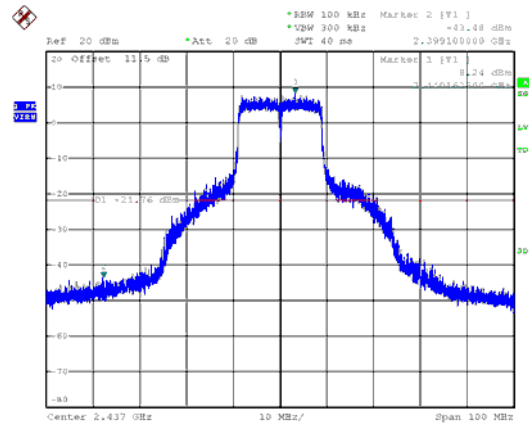
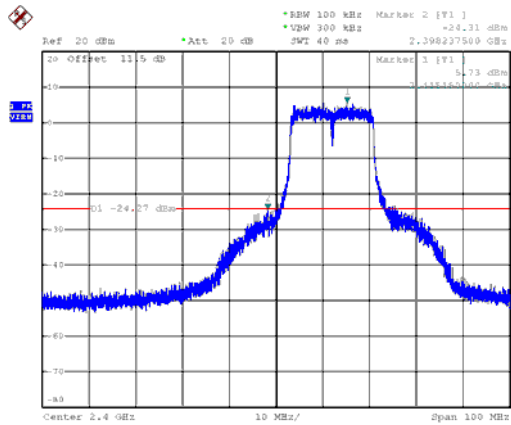
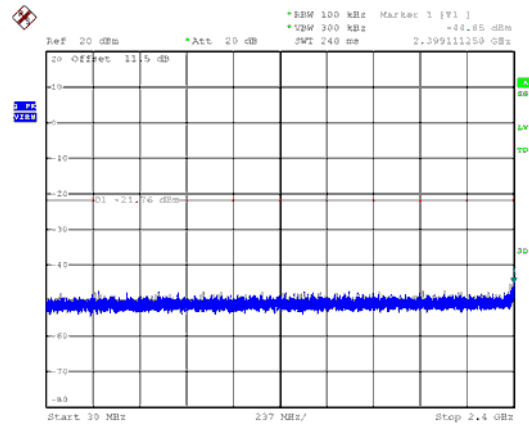


ANT B

Modulation Type: 802.11n HT20, CH01



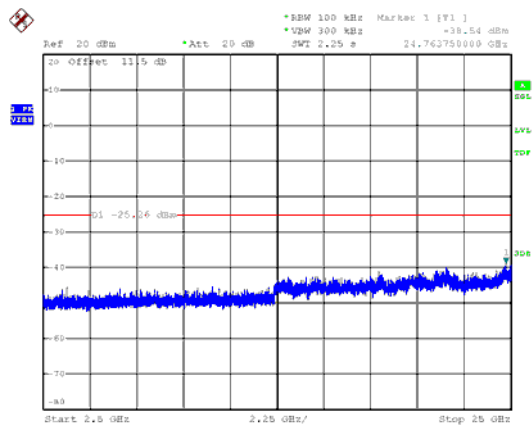
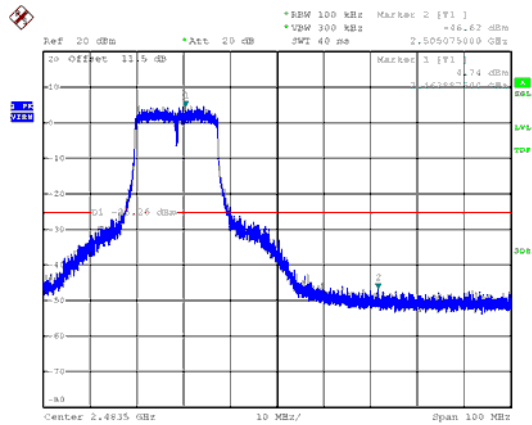
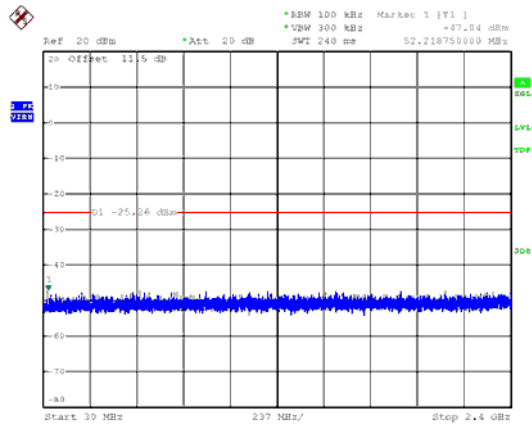
Modulation Type: 802.11n HT20, CH06





ANT B

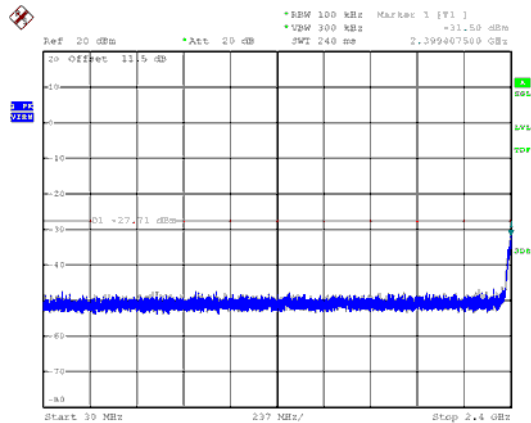
Modulation Type: 802.11n HT20, CH11



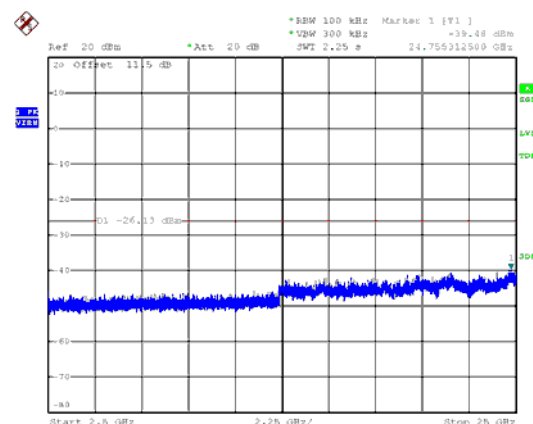
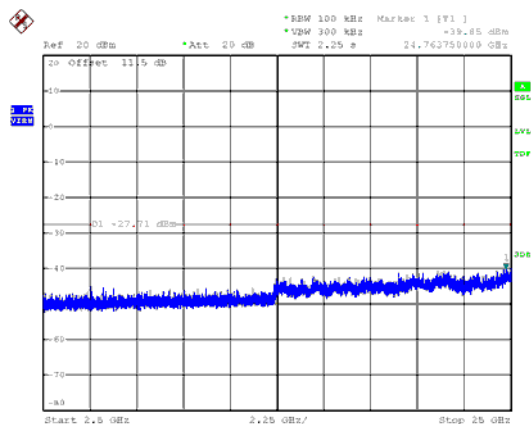
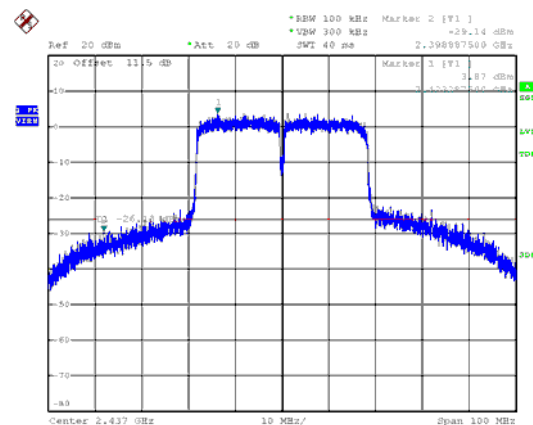
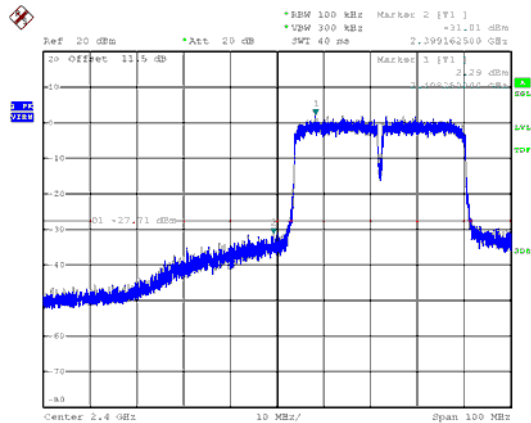
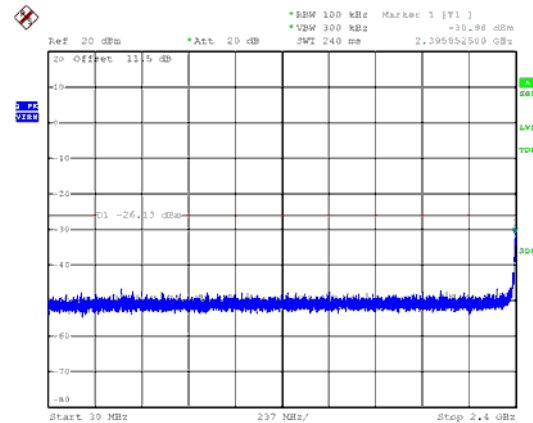


ANT B

Modulation Type: 802.11n HT40, CH03



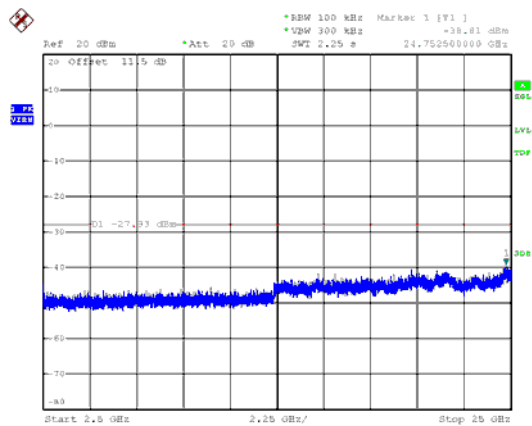
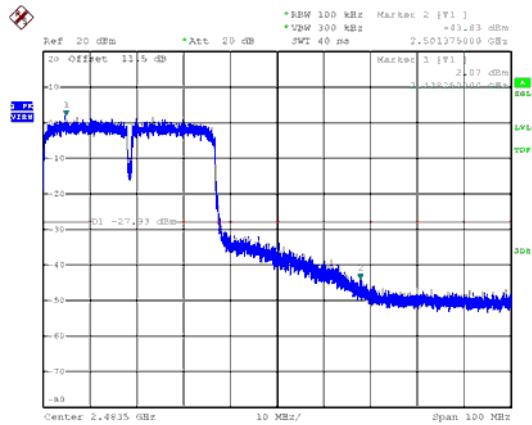
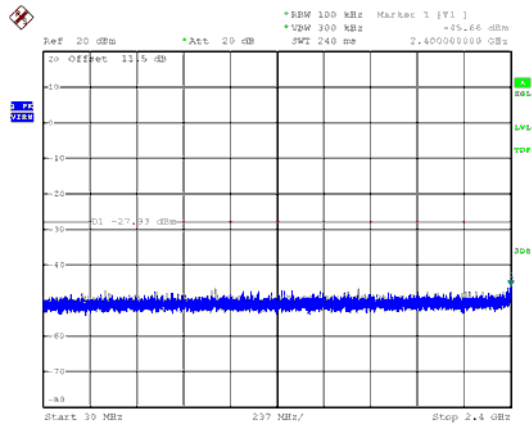
Modulation Type: 802.11n HT40, CH06





ANT B

Modulation Type: 802.11n HT40, CH09





8. On Time, Duty Cycle and Measurement methods

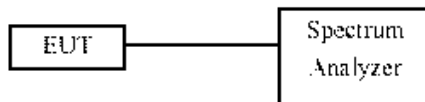
8.1 Test Limit

None; for reporting purposes only.

8.2 Test Procedure

Zero-Span Spectrum Analyzer Method.

8.3 Test Setup Layout

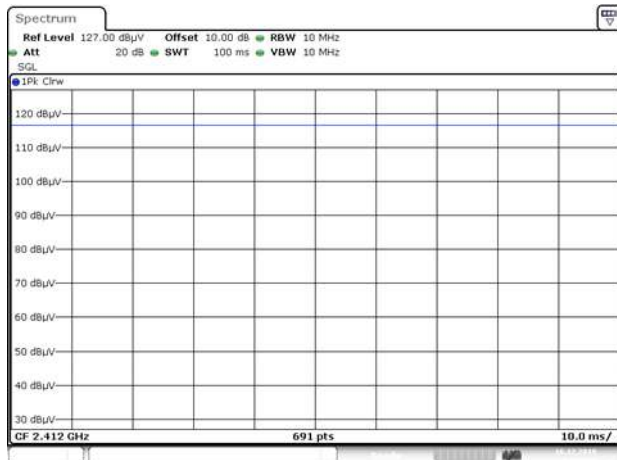


8.4 Test Result and Data

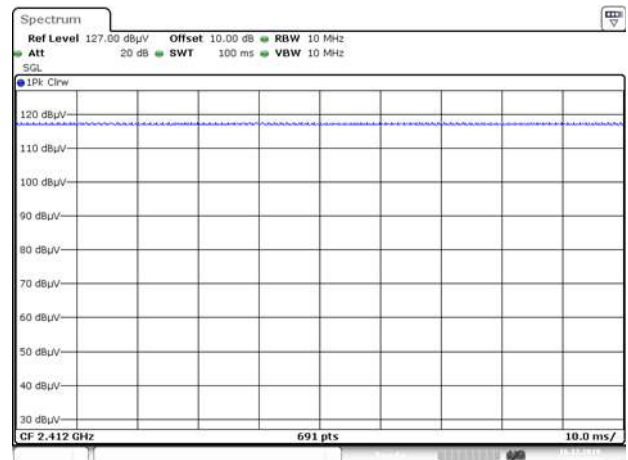
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b,1M	100.00	100.00	100.00%
11g,6M	100.00	100.00	100.00%
11n HT20	100.00	100.00	100.00%
11n HT40	100.00	100.00	100.00%



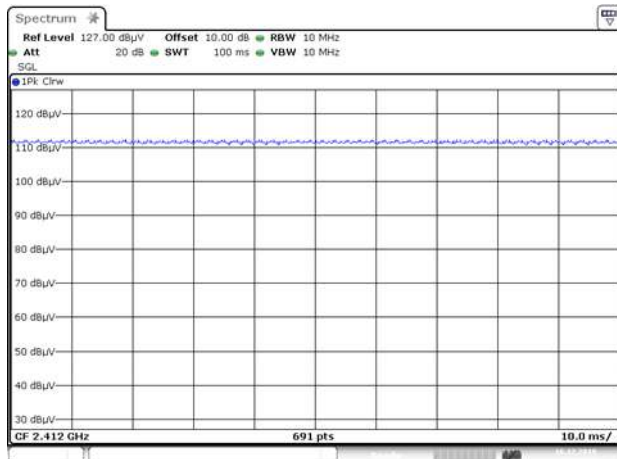
Modulation Type: 802.11b (1Mbps)



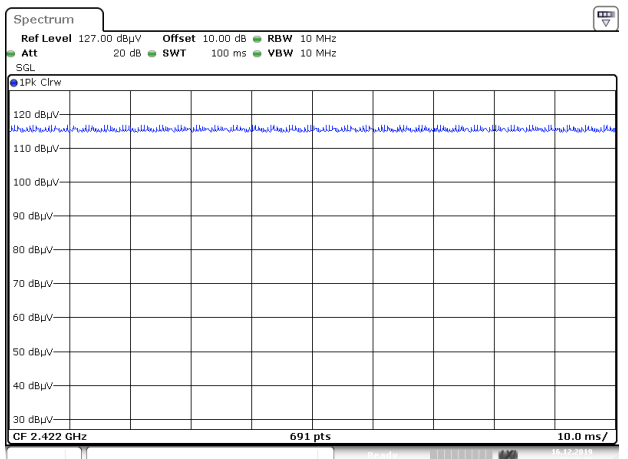
Modulation Type: 802.11g (6Mbps)



Modulation Type: 802.11n HT20 (6.5Mbps)



Modulation Type: 802.11n HT40 (13.5Mbps)





9. 6dB & 99% Bandwidth Measurement Data

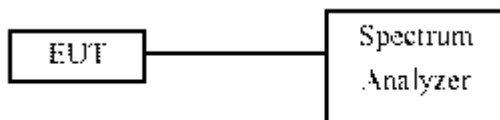
9.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

9.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.
- The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- The 6dB Bandwidth was measured and recorded.

9.3 Test Setup Layout



9.4 Test Result and Data (6dB Bandwidth)

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT A	ANT B	
11b	1	2412	---	10.10	0.5
	6	2437	---	10.10	0.5
	11	2462	---	10.05	0.5
11g	1	2412	---	16.55	0.5
	6	2437	---	16.50	0.5
	11	2462	---	16.50	0.5
11n HT20	1	2412	17.75	17.70	0.5
	6	2437	17.70	17.65	0.5
	11	2462	17.75	17.65	0.5
11n HT40	3	2422	36.40	36.40	0.5
	6	2437	36.40	36.30	0.5
	9	2452	36.30	35.90	0.5

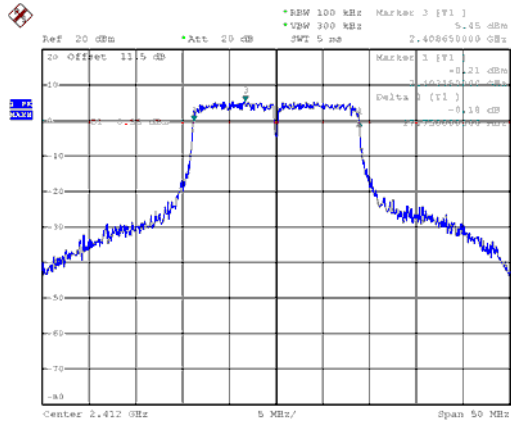


6dB Bandwidth

ANT A

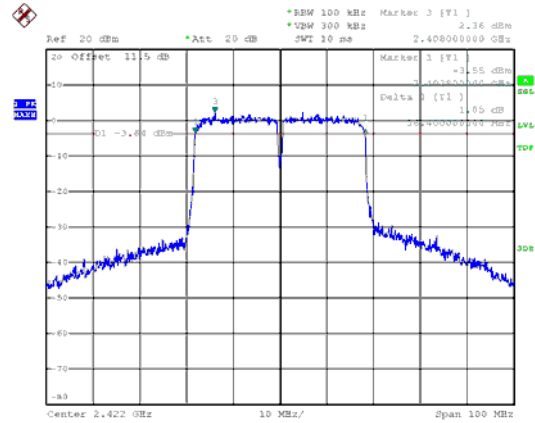
Modulation Type: 802.11n HT20

CH01

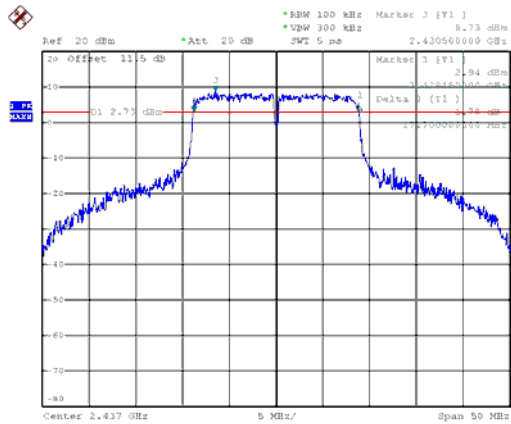


Modulation Type: 802.11n HT40

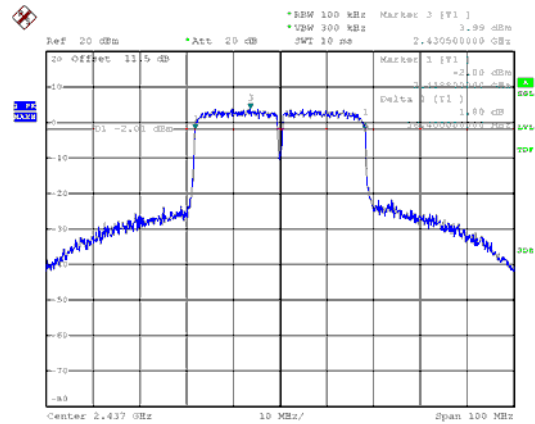
CH03



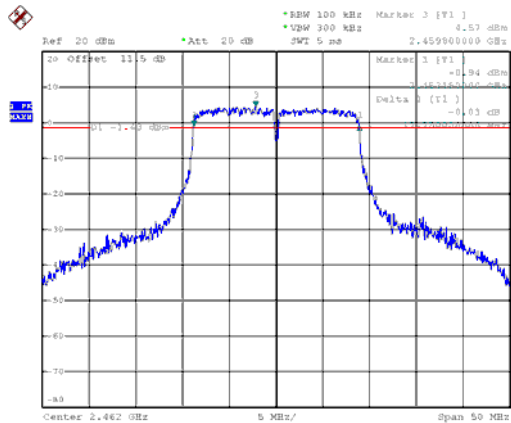
CH06



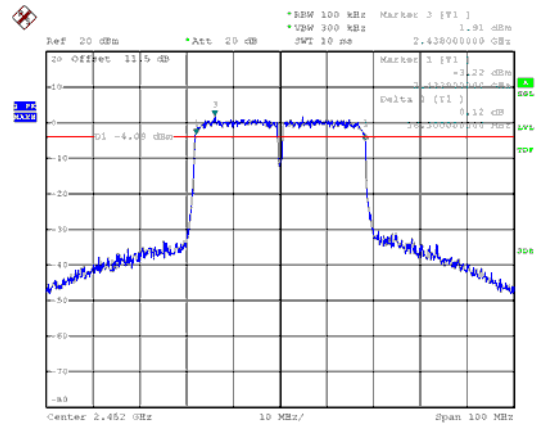
CH06



CH11



CH09

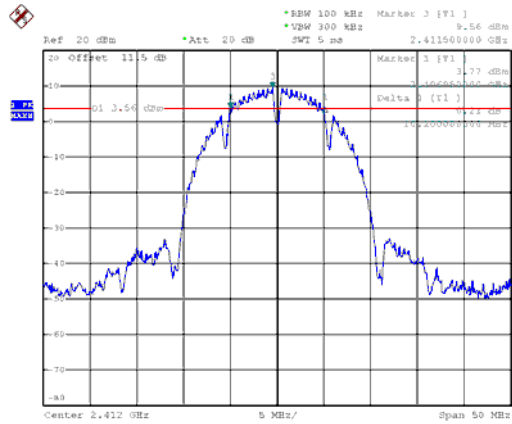




ANT B

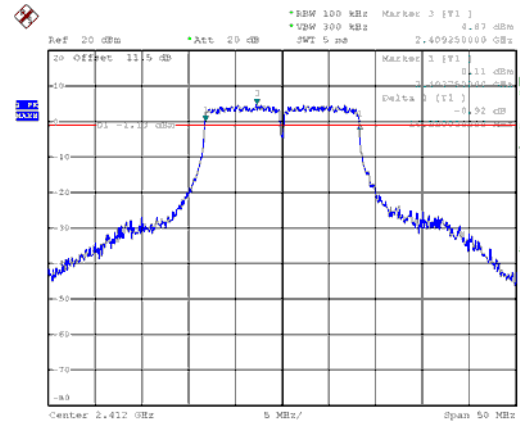
Modulation Type: 802.11b

CH01

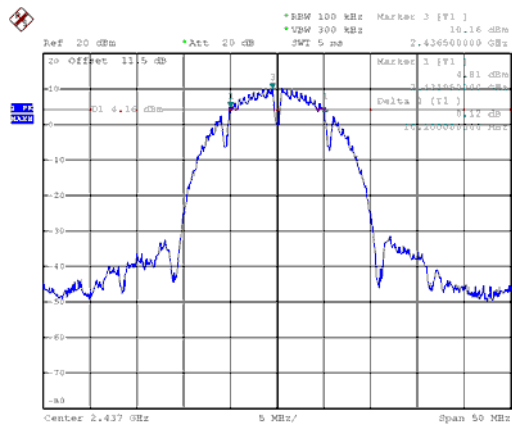


Modulation Type: 802.11g

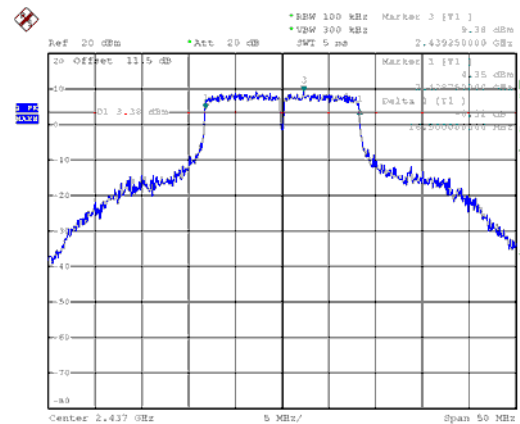
CH01



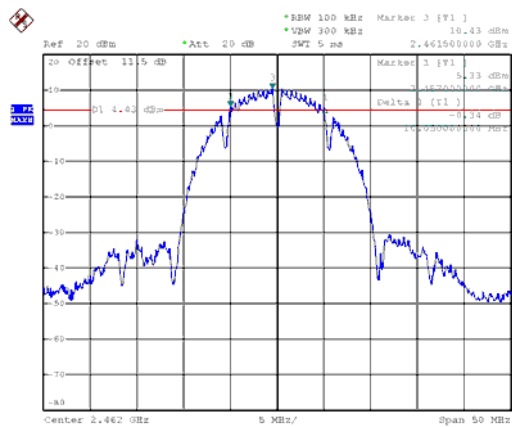
CH06



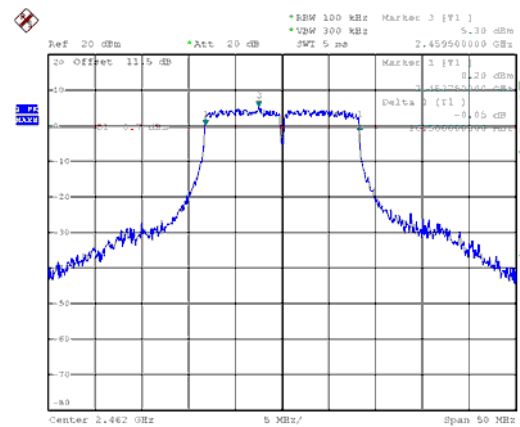
CH06



CH11

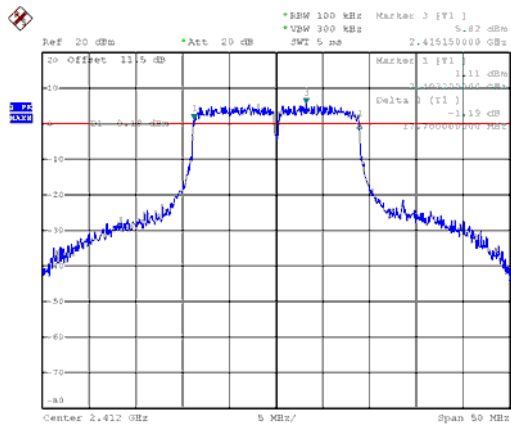
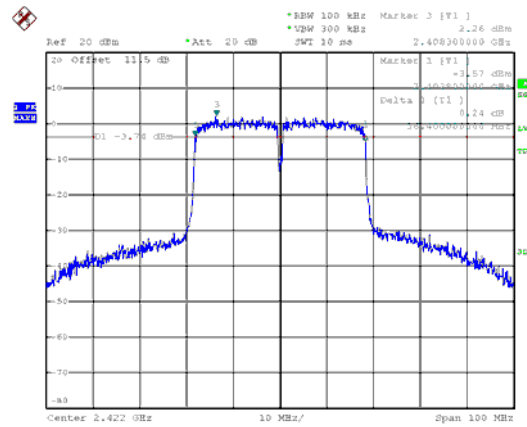


CH11

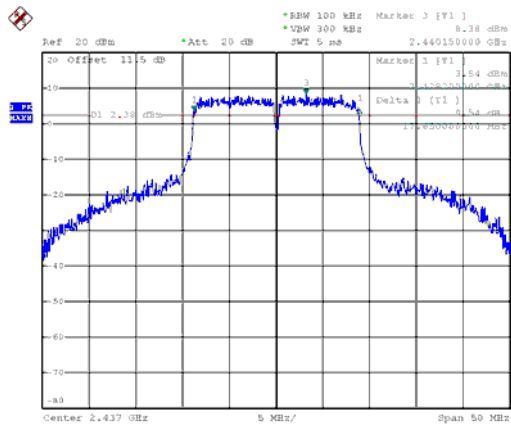




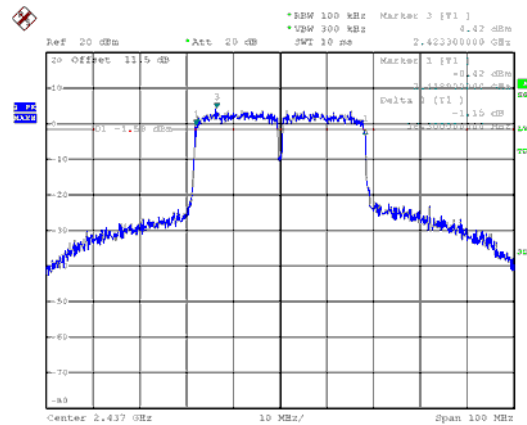
ANT B

Modulation Type: 802.11n HT20
CH01Modulation Type: 802.11n HT40
CH03

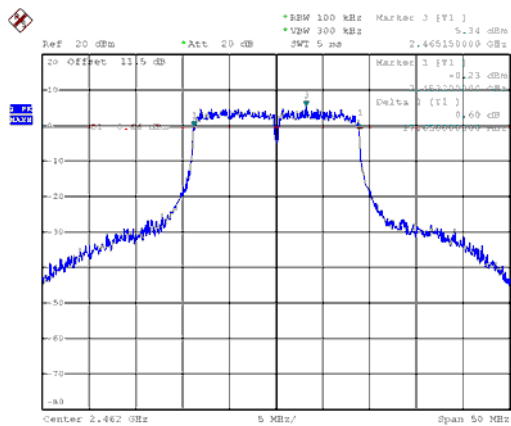
CH06



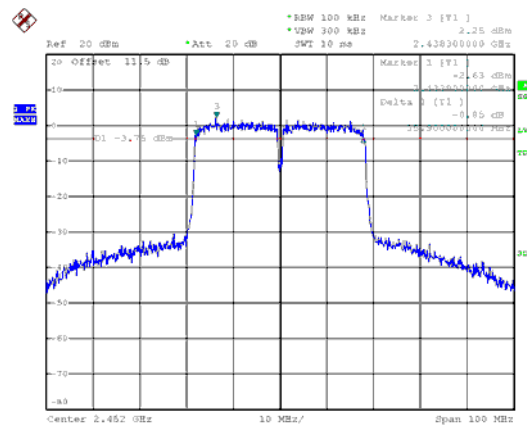
CH06



CH11



CH09





10. Maximum Average Output Power

10.1 Test Limit

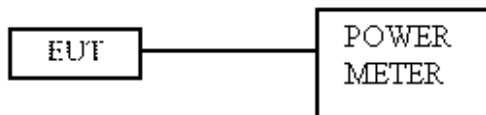
The Maximum Average Output Power Measurement is 30dBm.

If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.2 Test Procedures

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

10.3 Test Setup Layout



10.4 Test Result and Data

Power Set	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Power Limit (dBm)
				ANT A	ANT B			
38	11b	1	2412	---	19.52	19.52	89.536	30.00
40		6	2437	---	20.01	20.01	100.231	30.00
42		11	2462	---	20.43	20.43	110.408	30.00
46	11g	1	2412	---	19.01	19.01	79.616	30.00
58		6	2437	---	22.92	22.92	195.884	30.00
48		11	2462	---	19.32	19.32	85.507	30.00
50/52	11n HT20	1	2412	20.23	19.56	22.92	195.804	30.00
58/60		6	2437	21.47	21.43	24.46	279.277	30.00
50/52		11	2462	19.12	19.06	22.10	162.196	30.00
48/50	11n HT40	3	2422	18.92	18.62	21.78	150.761	30.00
54/56		6	2437	20.78	20.66	23.73	236.087	30.00
48/50		9	2452	18.58	18.16	21.39	137.574	30.00



11. Power Spectral Density

11.1 Test Limit

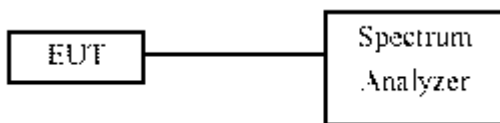
The Maximum of Power Spectral Density Measurement is 8dBm.

If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

11.2 Test Procedures

Reference to KDB558074 DTS Meas Guidance v04 D01

11.3 Test Setup Layout

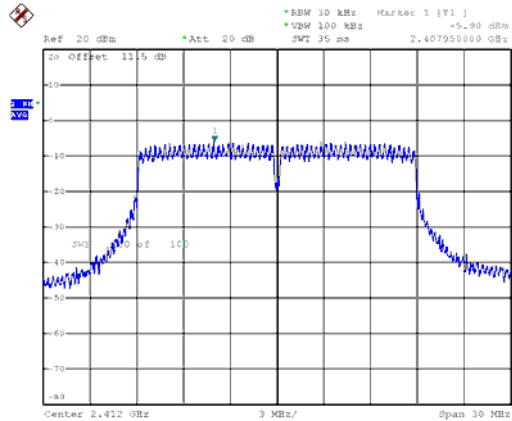


11.4 Test Result and Data

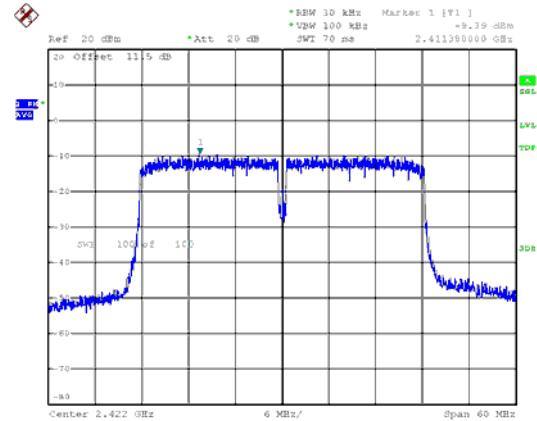
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 30KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT A	ANT B				
11b	1	2412	---	-2.98	-2.98	0.00	-2.98	8.00
	6	2437	---	-2.75	-2.75	0.00	-2.75	8.00
	11	2462	---	-2.24	-2.24	0.00	-2.24	8.00
11g	1	2412	---	-6.38	-6.38	0.00	-6.38	8.00
	6	2437	---	-2.57	-2.57	0.00	-2.57	8.00
	11	2462	---	-6.25	-6.25	0.00	-6.25	8.00
11n HT20	1	2412	-5.9	-6.84	-3.33	0.00	-3.33	8.00
	6	2437	-3.25	-4.16	-0.67	0.00	-0.67	8.00
	11	2462	-6.9	-7.55	-4.20	0.00	-4.20	8.00
11n HT40	3	2422	-9.39	-10.62	-6.95	0.00	-6.95	8.00
	6	2437	-7.49	-8.1	-4.77	0.00	-4.77	8.00
	9	2452	-10.01	-10.65	-7.31	0.00	-7.31	8.00



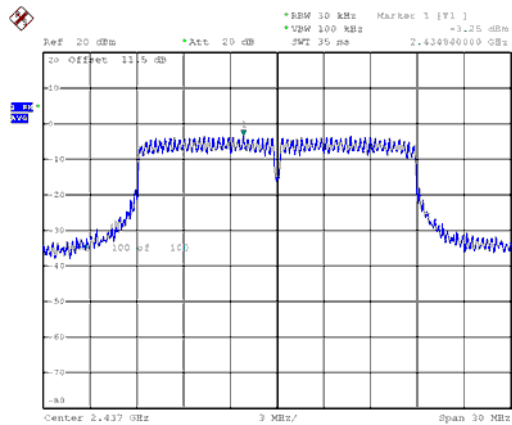
ANT A
Modulation Type: 802.11n HT20
CH01



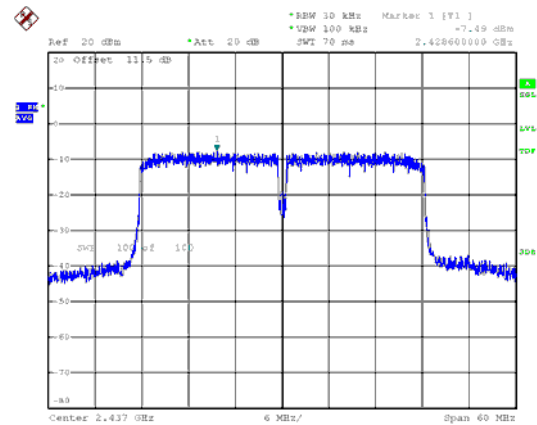
Modulation Type: 802.11n HT40
CH03



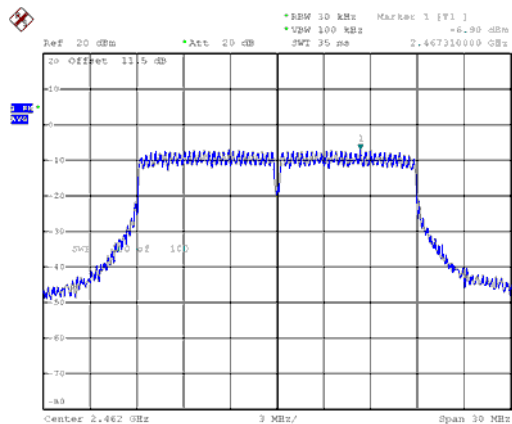
CH06



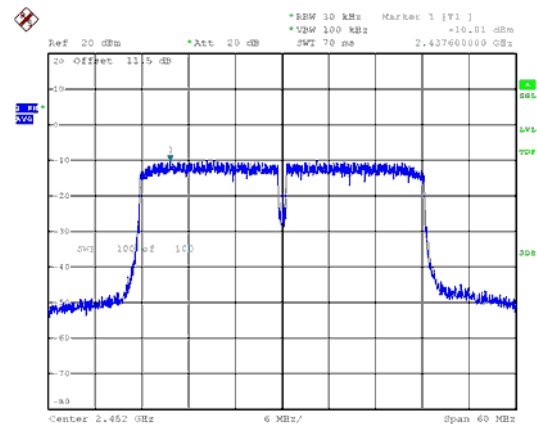
CH06



CH11

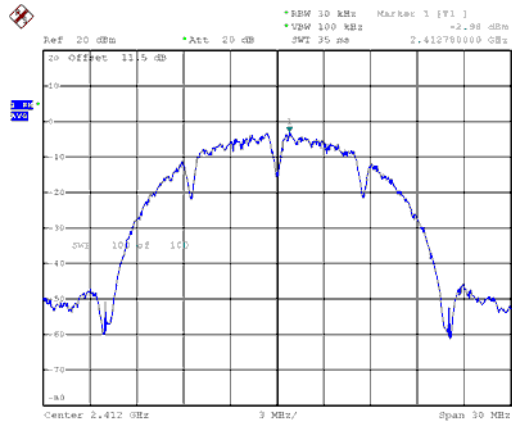


CH09

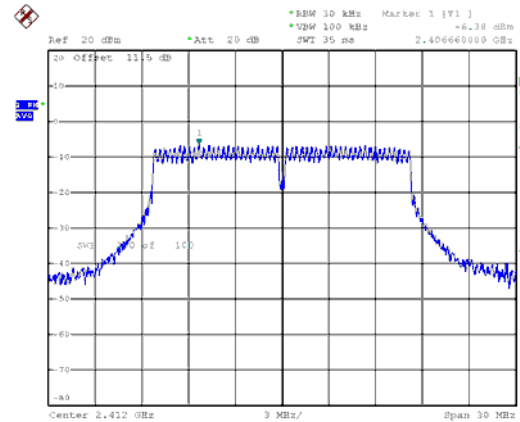




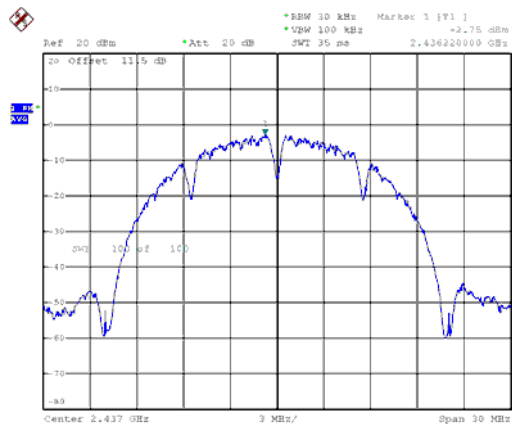
ANT B
Modulation Type: 802.11b
CH01



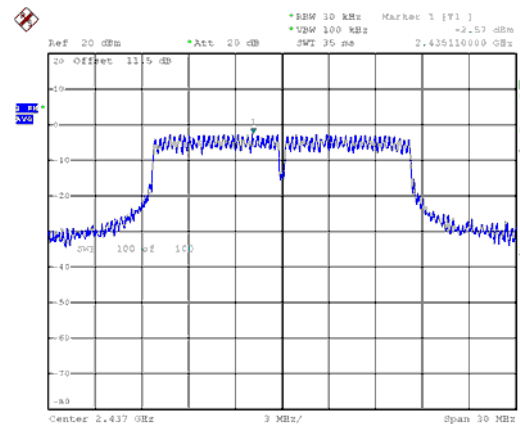
Modulation Type: 802.11g
CH01



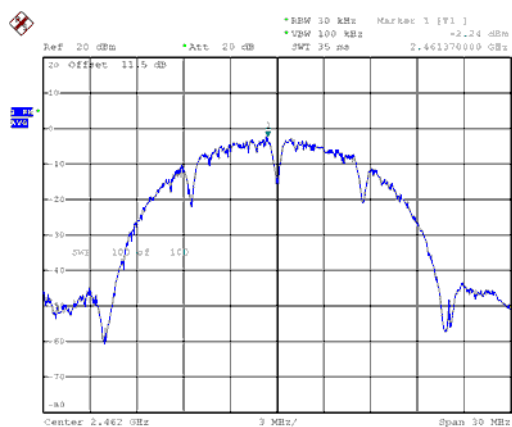
CH06



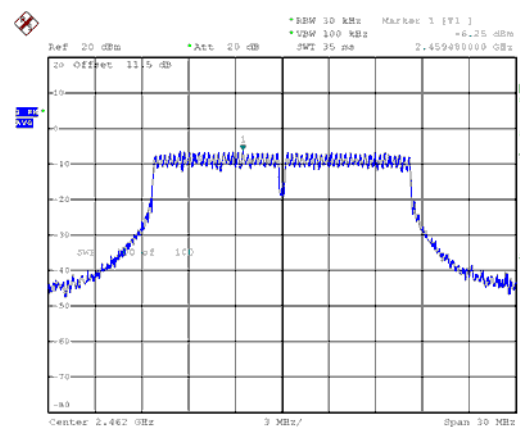
CH06



CH11

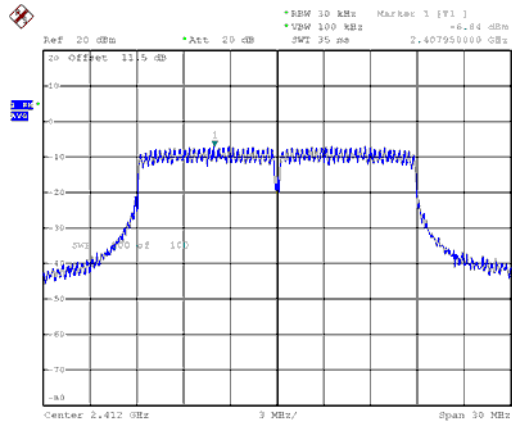


CH11

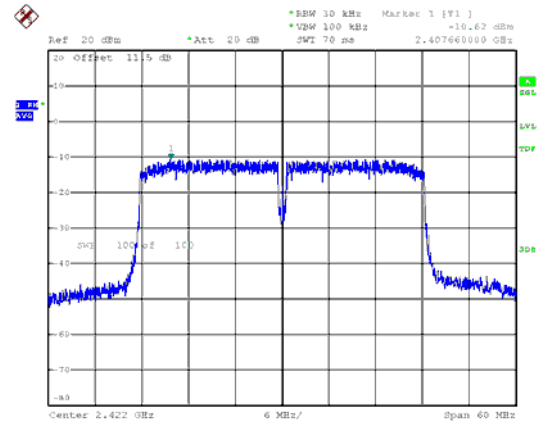




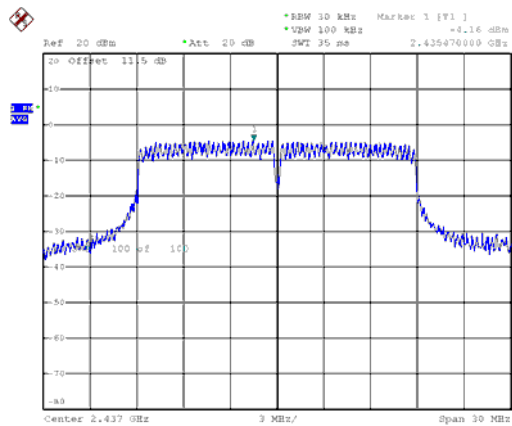
ANT B
Modulation Type: 802.11n HT20
CH01



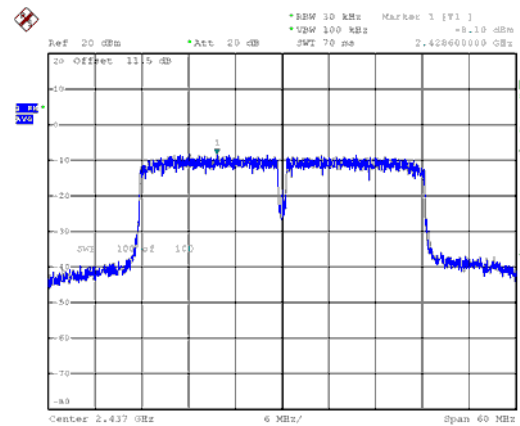
Modulation Type: 802.11n HT40
CH03



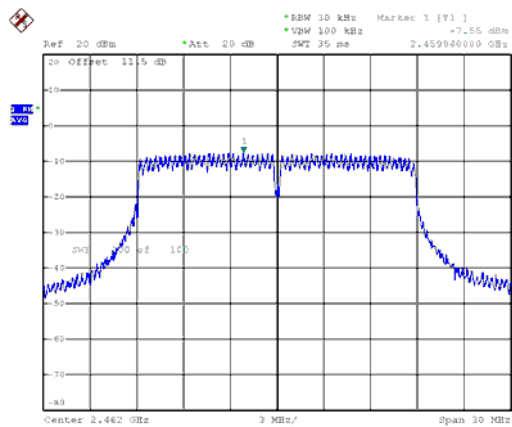
CH06



CH06



CH11



CH09

