



FCC RADIO TEST REPORT

Applicant : Ubiquiti Inc.
Address : 685 Third Avenue, New York, New York 10017, USA
Equipment : G3 Touch Wall
Model No. : UTP-G3-Touch-Wall
Trade Name : UBIQUITI
FCC ID : SWX-UG3W

I HEREBY CERTIFY THAT :

The sample was received on Aug. 09, 2023 and the testing was completed on Sep. 05, 2023 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.	Issued Date	Description
23070289-TRFCC01	Sep. 13, 2023	Original
23070289-TRFCC01-A	Dec. 13, 2023	Device category Mobile (>20cm separation)



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 reduced the uncertainty risk factor from test equipment, environment and staff technicians which according to the standard on contract. Therefore, the test result will only be determined by standard requirement, measurement uncertainty evaluation is not considered.

*This EUT has been also tested and compiled with the requirement of FCC Part 15, Subpart B, recorded in a separate test report(23070289-TEFV01).



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment

Operation Frequency Range	802.11b/g/n: 2400-2483.5MHz 802.11a/n/ac:5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
Center Frequency Range	802.11b/g/n: 2412MHz~2462MHz 802.11a/n/ac:5180-5240MHz, 5260-5320MHz, 5500-5720MHz, 5745-5825MHz
Modulation Type	WLAN: 2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 5GHz: 802.11n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	DSSS, OFDM
Data Rate	WLAN: 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS7, HT20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS7, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type	ANT C:Chip Antenna
Antenna Gain	2400-2483.5MHz: ANT C: 2.70dBi 5150-5250MHz: ANT C: 3.80dBi 5250-5350MHz: ANT C: 3.80dBi 5470-5725MHz: ANT C: 2.40dBi 5725-5850MHz: ANT C: 0.90dBi

Note:

1. EUT support TPC Function.
2. BT and WLAN can simultaneously transmission.
3. EUT support Client Mode without radar detection.
4. For more details, please refer to the User's manual of the EUT.



2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT20 (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, " QRCT ver. 4.0.00201.0" 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), From PoE
2	802.11g (6Mbps) , From PoE
3	802.11n HT20 (6.5Mbps) , From PoE
4	802.11n HT40 (13.5Mbps) , From PoE
5	Power On, Power Form Adapter
caused "Test Mode 1 " generated the worst case, it was reported as the final data.	
Radiation Emissions (BELOW 1GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps), From PoE
2	802.11g (6Mbps) , From PoE
3	802.11n HT20 (6.5Mbps) , From PoE
4	802.11n HT40 (13.5Mbps) , From PoE
5	Power On, Power Form Adapter
caused "Test Mode 1" generated the worst case, it was reported as the final data.	
Radiation Emissions (1GHz ~ 25GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps) , From PoE
2	802.11g (6Mbps) , From PoE
3	802.11n HT20 (6.5Mbps) , From PoE
4	802.11n HT40 (13.5Mbps) , From PoE
caused "Test Mode 1~4" generated the worst case, they were reported as the final data.	

Note:

- There are two kinds of test voltage: AC 120V / 60Hz and AC 240V / 60Hz.
For AC Power Line Conducted Emission& Radiated Spurious Emission: AC 120V / 60Hz is worst case.



Modulation Type	TX CONFIGURATION
802.11b	1TX
802.11g	1TX
802.11n HT20	1TX
802.11n HT40	1TX



2.4 Description of Test System

RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
POE	UBIQUITI	GP-H480-050G	N/A	0.6m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
TYPE-C(Blue)	kolin	KEX-DLCP08	1m / NS	N/A
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
POE	UI	GP-M015-QC	1.2m / NS	N/A
RJ45 Cable*2	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
Adapter	hoda	TC-03	N/A	N/A
TYPE-C(Blue)	kolin	KEX-DLCP08	1m / NS	N/A
AC Power Line Conducted Emission				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
POE	UBIQUITI	GP-H480-050G	N/A	0.6m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
TYPE-C(Blue)	kolin	KEX-DLCP08	1m / NS	N/A
Adapter	hoda	TC-03	N/A	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
Frequency Range Investigated	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25,000MHz	
Test Distance	The test distance of radiated emission from antenna to EUT is 3 M.	

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2023/8/9~2023/8/17	25.6~27°C / 52~65%	Leon Huang
Radiated Emissions	3M02-NK	2023/8/9~2023/9/5	19~27°C / 51~68%	Leon Huang
AC Power Line Conducted Emission	CON01-NK	2023/09/05	25°C / 56%	Leon Huang



2.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Item	Uncertainty
AC Power Line Conduction	±3.28dB
Radiated Spurious Emission(9KHz~30MHz)	±3.5dB
Radiated Spurious Emission(30MHz~1GHz)	±5.1dB
Radiated Spurious Emission(1GHz~40GHz)	±5.2dB
Conducted Spurious Emission	±2.1dB
6dB Bandwidth	±5.4%
20dB Bandwidth	±4.4%
Occupied Bandwidth	±4.5%
Peak Output Power(Conducted Power Meter)	±1.1dB
Dwell Time / Deactivation Time	±7.6%
Power Spectral Density	±2.0dB
Duty Cycle	±3.5%
Radiated Spurious Emission(9KHz~30MHz)	±3.5dB



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	2022/11/18	2023/11/17
Active Loop Antenna	Schwarzbeck	FMZB 1513	414	2023/02/03	2024/02/02
Horn Antenna	EMCO	3115	31589	2023/03/23	2024/03/22
Horn Antenna	EMCO	3116	31970	2023/03/03	2024/03/02
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2023/07/05	2024/07/04
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2023/02/24	2024/02/23
Preamplifier	Agilent	8449B	3008A01954	2023/03/08	2024/03/07
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2022/11/11	2023/11/10
Preamplifier	EM Electronics corp.	EM330	60658	2022/10/04	2023/10/03
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2023/03/13	2024/03/12
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2023/02/25	2024/02/24
Cable-0.5m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805443/4	2023/03/07	2024/03/06
Cable-3m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805796/4	2023/03/07	2024/03/06
Cable-8m(1G-26.5G)	WOKEN	WCBA-WCA203SM	CCE1374	2023/03/07	2024/03/06
Cable-0.5m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2023/03/07	2024/03/06
Cable-3m(10M-40G)	HUBER SUHNER	SF102	804619/2	2022/10/11	2023/10/10
High Pass Filter	Warison	WFIL-H3000-18000F-03	WRJ5CFWC2J1	2023/07/03	2024/07/02
Highpass Filter	Warison	WFIL-H7500-18000F	WRQ4BFWC2J1	2023/03/13	2024/03/12
Notch Filter	Warison	WFIL-N5925-7125F-04	WRQ4BFWC4M1	2023/03/13	2024/03/12
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
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2022/11/29	2023/11/28
Power Meter	Anritsu	ML2495A	1224005	2023/03/07	2024/03/06
Power Sensor	Anritsu	MA2411B	1207295	2023/03/07	2024/03/06
Attenuator	KEYSIGHT	8491B	MY39250703	2023/03/08	2024/03/07



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	101200	2022/12/09	2023/12/08
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	8127-568	2023/05/10	2024/05/09
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	101933	2022/09/29	2023/09/28
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130605	2023/09/05	2024/09/04
E3	AUDIX	v8.2014-8-6	RK-000531	NA	NA



4. Antenna Requirements

4.1 Antenna Construction and Directional Gain

Antenna Type	ANT C:Chip Antenna
Antenna Gain	2400-2483.5MHz: ANT C: 2.7dBi



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 C63.10-2013. 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

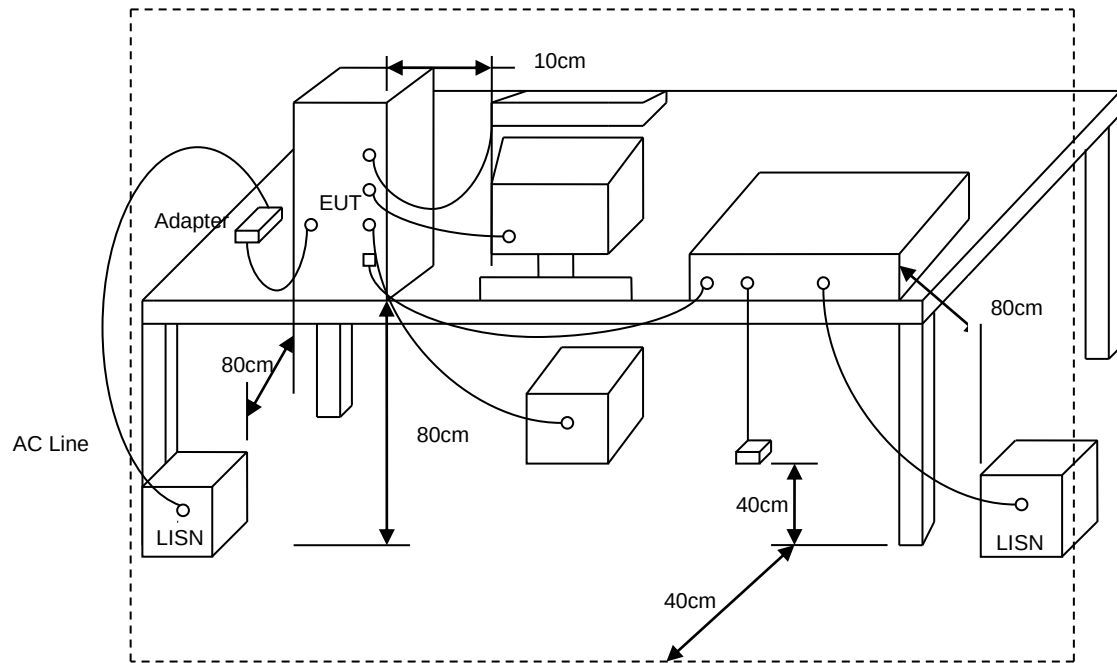
*Decreases with the logarithm of the frequency.

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.



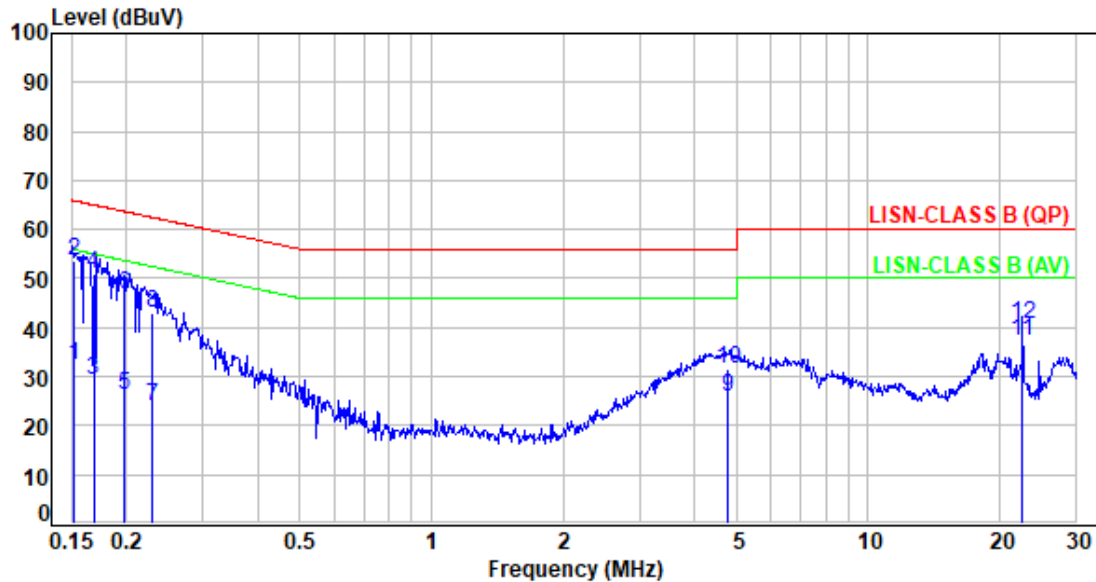
5.3 Typical Test Setup





5.4 Test Result and Data

Power	: AC 120V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 1		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.97	22.22	32.19	55.92	-23.73	Average	P
2	0.15	9.97	43.48	53.45	65.92	-12.47	QP	P
3	0.17	9.97	19.43	29.40	55.04	-25.64	Average	P
4	0.17	9.97	40.94	50.91	65.04	-14.13	QP	P
5	0.20	9.97	16.29	26.26	53.69	-27.43	Average	P
6	0.20	9.97	36.69	46.66	63.69	-17.03	QP	P
7	0.23	9.97	13.81	23.78	52.45	-28.67	Average	P
8	0.23	9.97	32.92	42.89	62.45	-19.56	QP	P
9	4.75	10.26	15.77	26.03	46.00	-19.97	Average	P
10	4.75	10.26	21.18	31.44	56.00	-24.56	QP	P
11	22.53	10.78	26.33	37.11	50.00	-12.89	Average	P
12	22.53	10.78	29.92	40.70	60.00	-19.30	QP	P

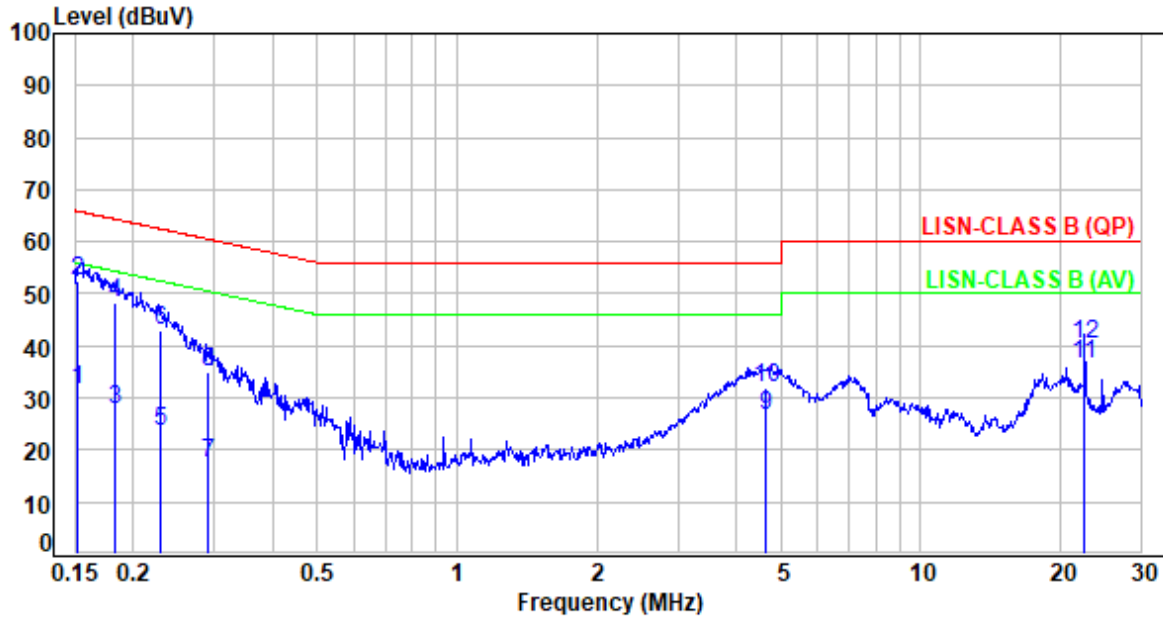
Note: Level=Reading+Factor

Margin=Level-Limit

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



Power	: AC 120V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 1		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	P/F
1	0.15	9.97	21.74	31.71	55.90	-24.19	Average	P
2	0.15	9.97	42.62	52.59	65.90	-13.31	QP	P
3	0.18	9.96	17.64	27.60	54.35	-26.75	Average	P
4	0.18	9.96	38.40	48.36	64.35	-15.99	QP	P
5	0.23	9.96	13.57	23.53	52.46	-28.93	Average	P
6	0.23	9.96	33.01	42.97	62.46	-19.49	QP	P
7	0.29	9.96	7.65	17.61	50.54	-32.93	Average	P
8	0.29	9.96	25.04	35.00	60.54	-25.54	QP	P
9	4.64	10.18	16.47	26.65	46.00	-19.35	Average	P
10	4.64	10.18	21.71	31.89	56.00	-24.11	QP	P
11	22.53	10.75	25.77	36.52	50.00	-13.48	Average	P
12	22.53	10.75	29.48	40.23	60.00	-19.77	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

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. 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.
- e. 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.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. 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.
- h. 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.
- i. "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

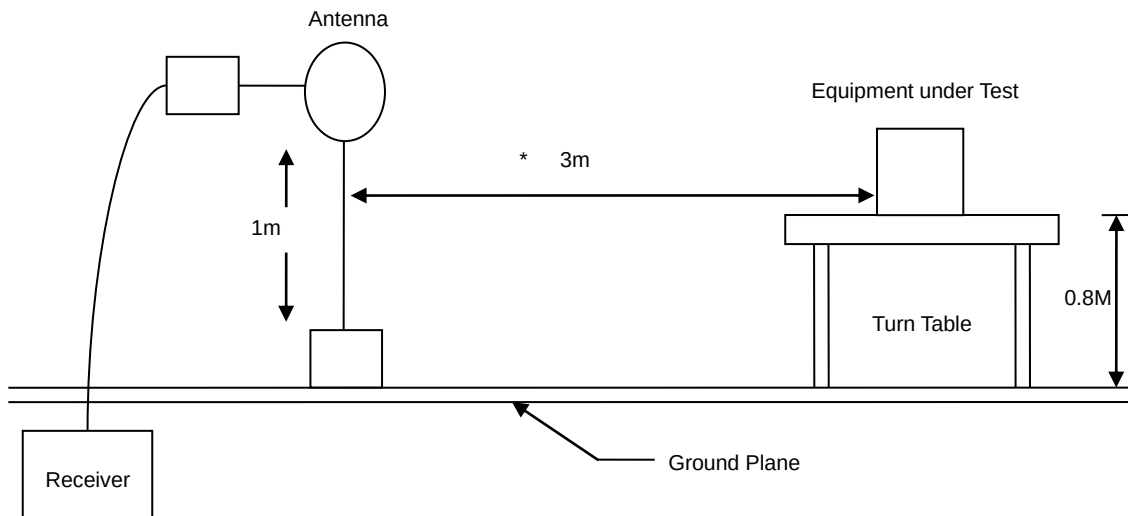
Note:

- 1.The supporting fixture shall permit orientation of the EUT in each of three orthogonal axis positions such that emissions from the EUT are maximized.
(Y-AXIS is the worst.)
- 2.Due to the test software function limit the operation band setting(200dBuV/m).
There's no corresponding limitation in the actual test item.

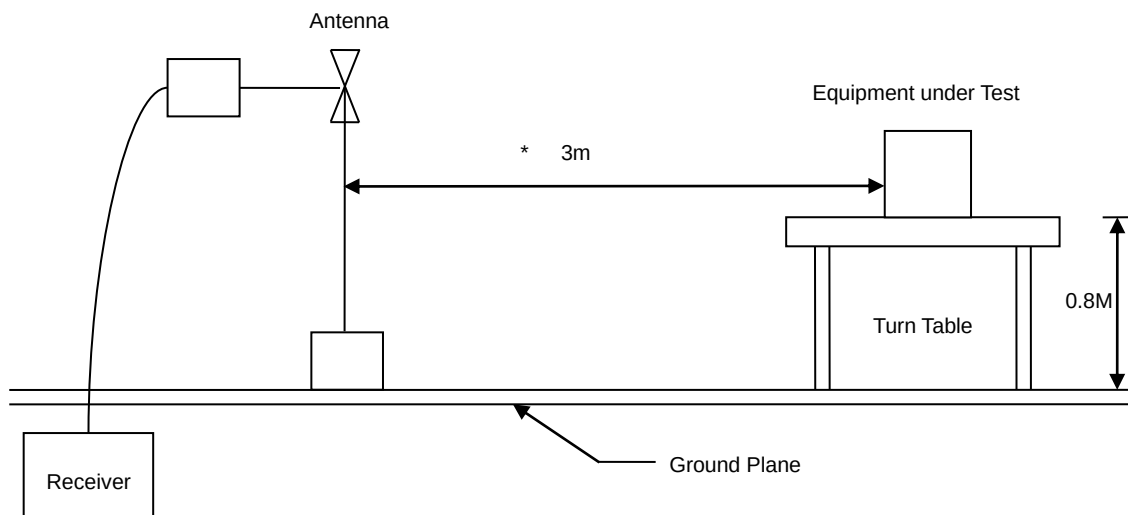


6.3 Typical Test Setup

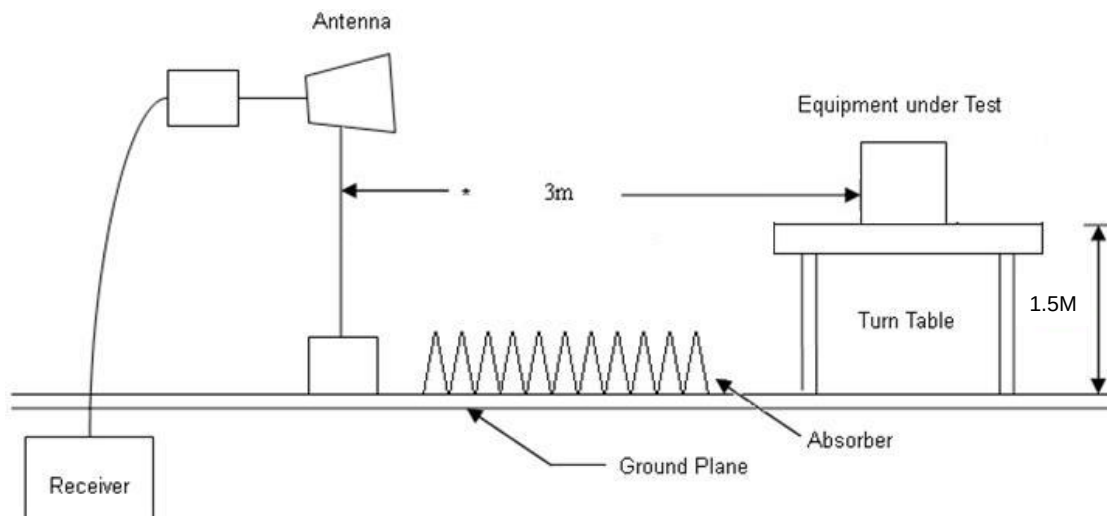
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



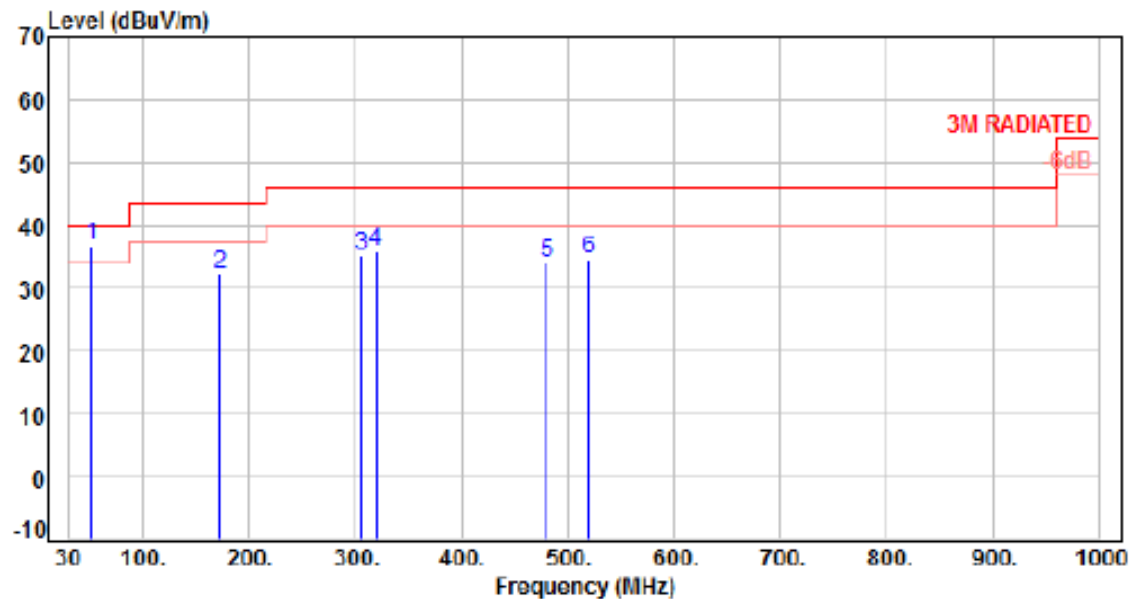


6.4 Test Result and Data (9KHz ~ 30MHz)

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

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

Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	51.34	-10.53	47.30	36.77	40.00	-3.23	Peak	400	0	P
2	171.62	-11.43	43.84	32.41	43.50	-11.09	Peak	400	0	P
3	305.48	-9.93	45.33	35.40	46.00	-10.60	Peak	400	0	P
4	319.06	-9.48	45.41	35.93	46.00	-10.07	Peak	400	0	P
5	480.08	-5.62	39.86	34.24	46.00	-11.76	Peak	400	0	P
6	518.88	-4.59	39.21	34.62	46.00	-11.38	Peak	400	0	P

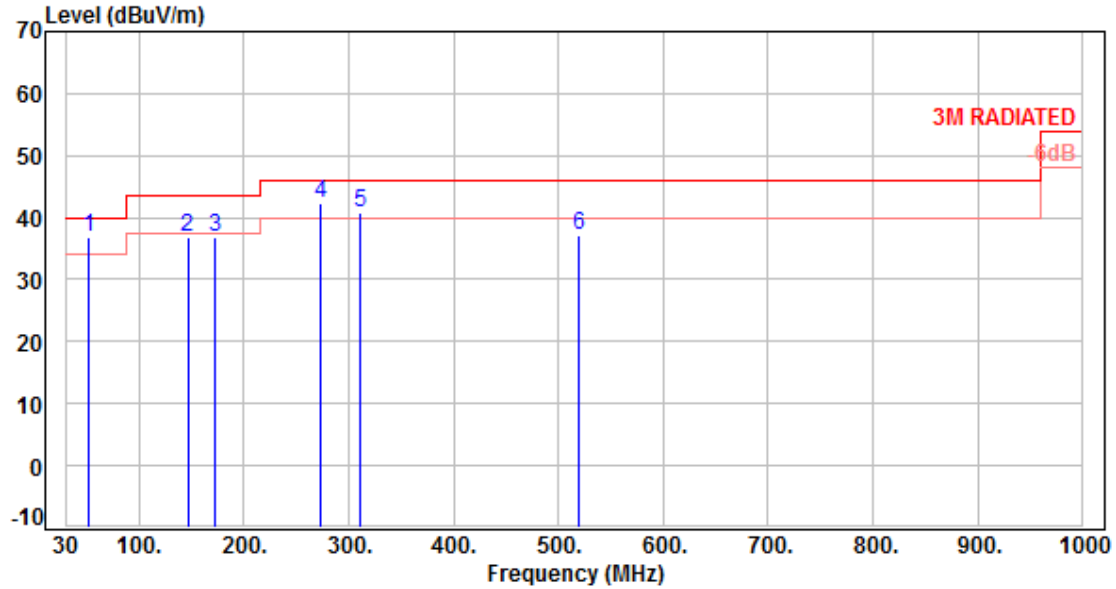
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	51.34	-10.53	47.31	36.78	40.00	-3.22	QP	319	56	P
2	146.40	-10.86	47.69	36.83	43.50	-6.67	Peak	400	360	P
3	171.62	-11.43	48.38	36.95	43.50	-6.55	Peak	400	360	P
4	272.50	-11.03	53.48	42.45	46.00	-3.55	QP	100	149	P
5	311.30	-9.74	50.44	40.70	46.00	-5.30	Peak	400	360	P
6	518.88	-4.59	41.60	37.01	46.00	-8.99	Peak	400	360	P

Note: Level=Reading+Factor

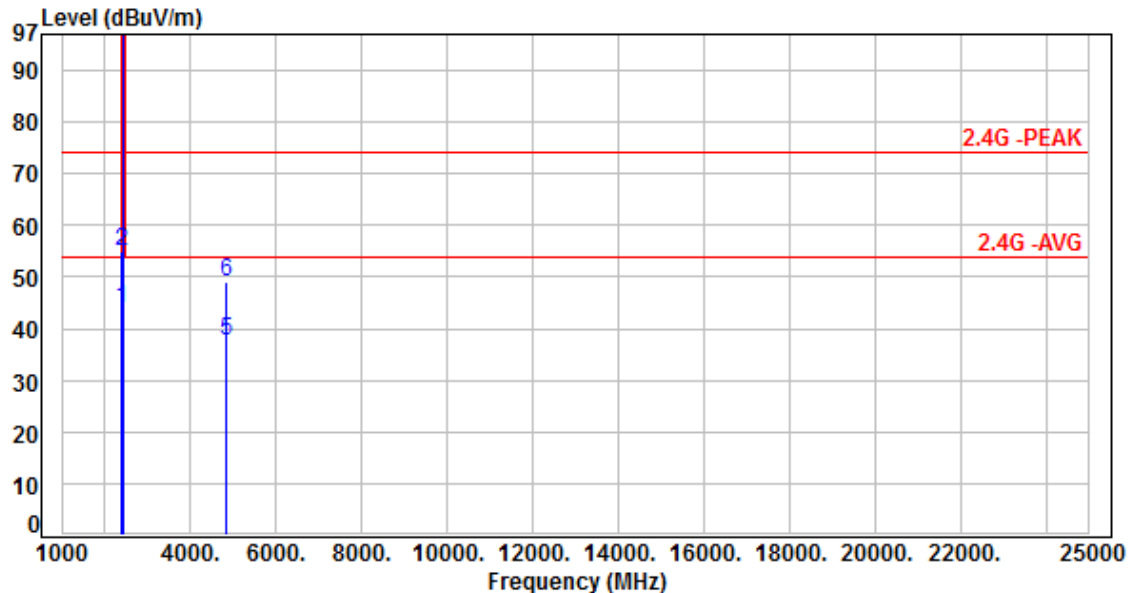
Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



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

Power	:	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	-2.12	45.96	43.84	54.00	-10.16	Average	109	205	P
2	2390.00	-2.12	56.98	54.86	74.00	-19.14	Peak	109	205	P
3	2412.00	-2.10	105.58	103.48	200.00	-96.52	Average	109	205	P
4	2412.00	-2.10	108.60	106.50	200.00	-93.50	Peak	109	205	P
5	4824.00	6.09	31.58	37.67	54.00	-16.33	Average	359	235	P
6	4824.00	6.09	42.89	48.98	74.00	-25.02	Peak	359	235	P

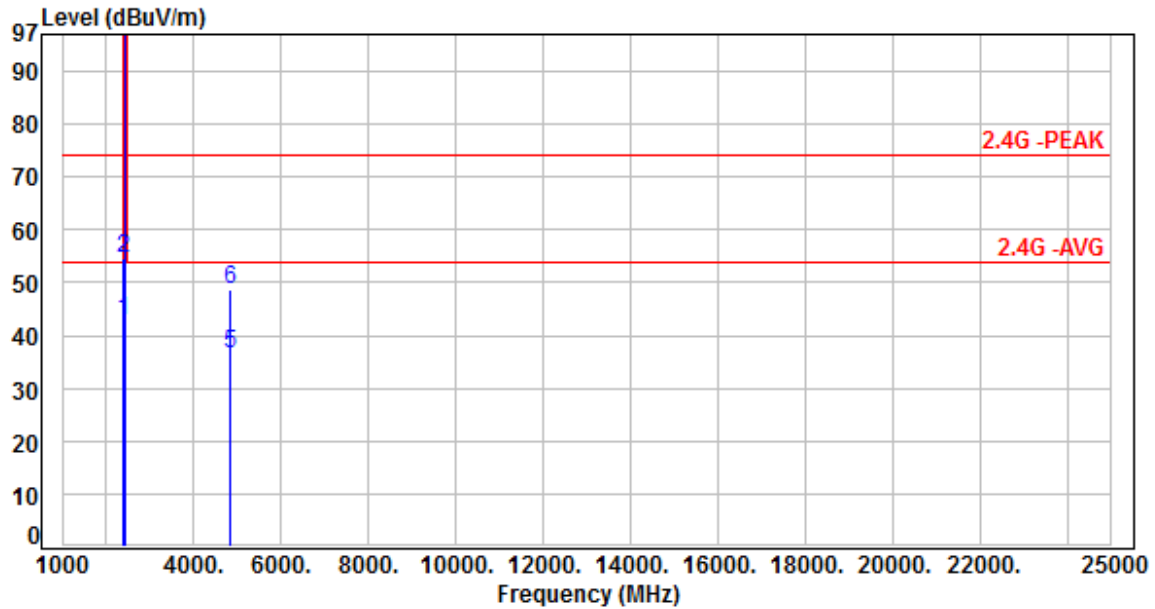
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	44.91	42.79	54.00	-11.21	Average	155	207	P
2	2390.00	-2.12	56.67	54.55	74.00	-19.45	Peak	155	207	P
3	2412.00	-2.10	103.37	101.27	200.00	-98.73	Average	155	207	P
4	2412.00	-2.10	105.99	103.89	200.00	-96.11	Peak	155	207	P
5	4824.00	6.09	30.48	36.57	54.00	-17.43	Average	100	104	P
6	4824.00	6.09	42.78	48.87	74.00	-25.13	Peak	100	104	P

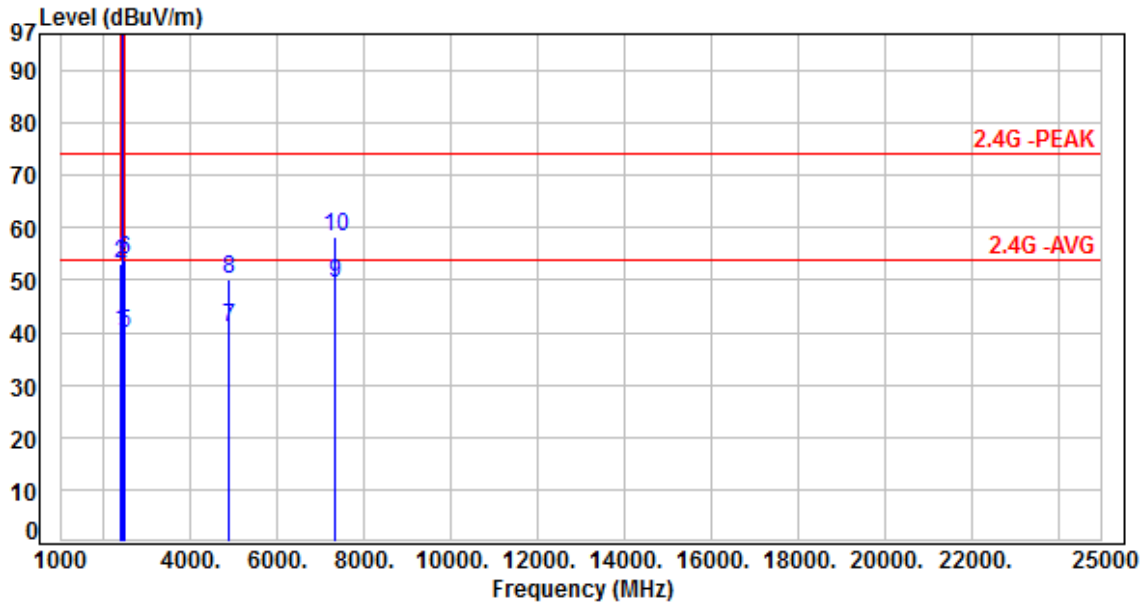
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	42.43	40.31	54.00	-13.69	Average	127	156	P
2	2390.00	-2.12	55.35	53.23	74.00	-20.77	Peak	127	156	P
3	2437.00	-2.07	104.93	102.86	200.00	-97.14	Average	127	156	P
4	2437.00	-2.07	107.56	105.49	200.00	-94.51	Peak	127	156	P
5	2483.50	-1.98	41.84	39.86	54.00	-14.14	Average	127	156	P
6	2483.50	-1.98	55.97	53.99	74.00	-20.01	Peak	127	156	P
7	4874.00	6.36	34.42	40.78	54.00	-13.22	Average	276	180	P
8	4874.00	6.36	43.65	50.01	74.00	-23.99	Peak	276	180	P
9	7311.00	11.42	38.02	49.44	54.00	-4.56	Average	336	182	P
10	7311.00	11.42	46.85	58.27	74.00	-15.73	Peak	336	182	P

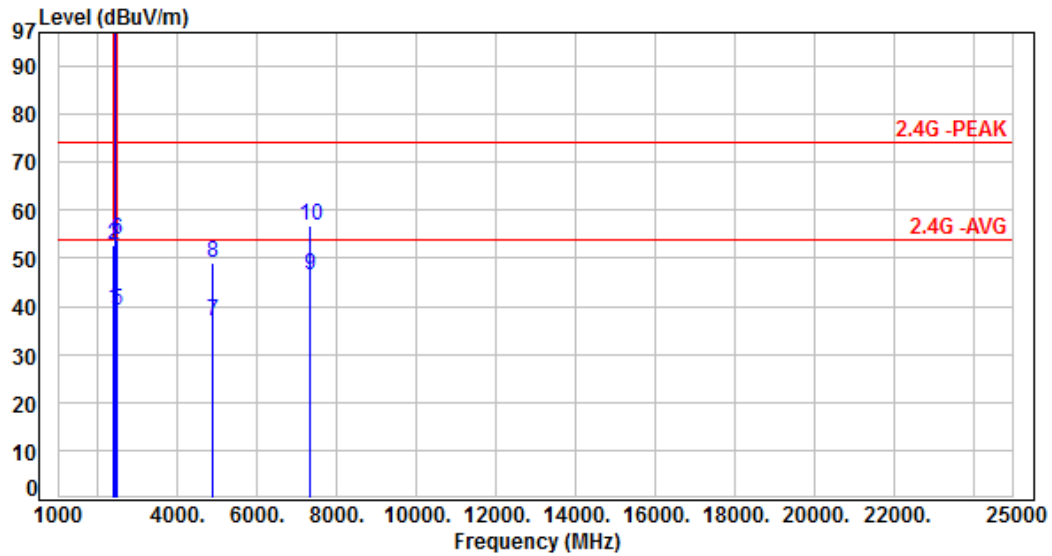
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	41.46	39.34	54.00	-14.66	Average	122	206	P
2	2390.00	-2.12	54.77	52.65	74.00	-21.35	Peak	122	206	P
3	2437.00	-2.07	102.84	100.77	200.00	-99.23	Average	122	206	P
4	2437.00	-2.07	105.51	103.44	200.00	-96.56	Peak	122	206	P
5	2483.50	-1.98	41.24	39.26	54.00	-14.74	Average	122	206	P
6	2483.50	-1.98	55.91	53.93	74.00	-20.07	Peak	122	206	P
7	4874.00	6.36	30.52	36.88	54.00	-17.12	Average	108	197	P
8	4874.00	6.36	42.72	49.08	74.00	-24.92	Peak	108	197	P
9	7311.00	11.42	34.89	46.31	54.00	-7.69	Average	235	211	P
10	7311.00	11.42	45.53	56.95	74.00	-17.05	Peak	235	211	P

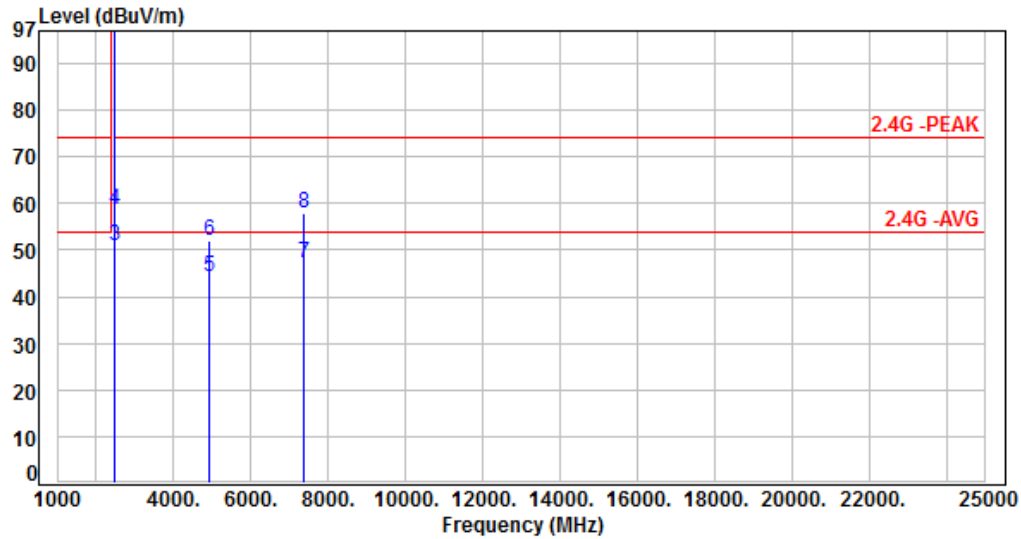
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	2462.00	-2.02	104.63	102.61	200.00	-97.39	Average	125	159	P
2	2462.00	-2.02	107.26	105.24	200.00	-94.76	Peak	125	159	P
3	2483.50	-1.98	52.81	50.83	54.00	-3.17	Average	125	159	P
4	2483.50	-1.98	60.48	58.50	74.00	-15.50	Peak	125	159	P
5	4924.00	6.48	37.71	44.19	54.00	-9.81	Average	227	179	P
6	4924.00	6.48	45.68	52.16	74.00	-21.84	Peak	227	179	P
7	7386.00	11.53	35.69	47.22	54.00	-6.78	Average	135	170	P
8	7386.00	11.53	46.35	57.88	74.00	-16.12	Peak	135	170	P

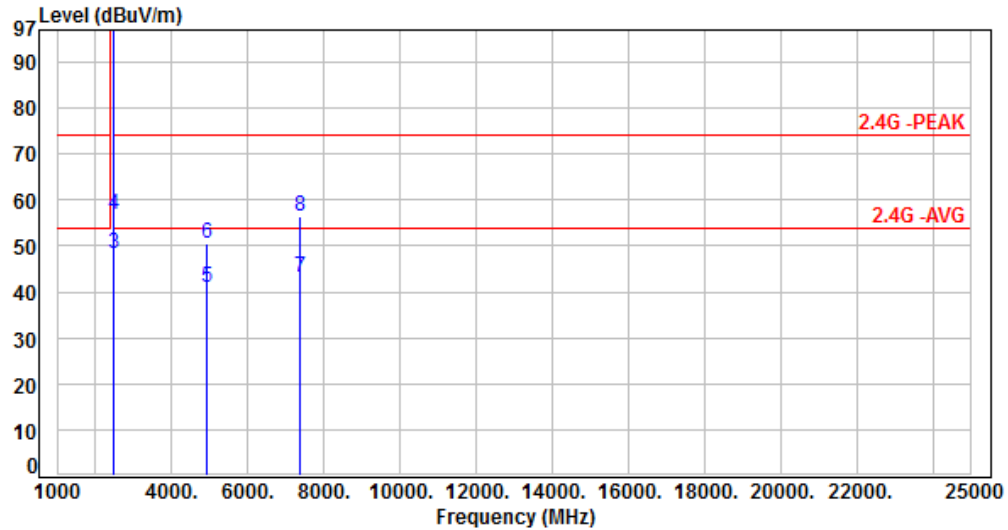
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	2462.00	-2.02	101.62	99.60	200.00	-100.40	Average	209	211	P
2	2462.00	-2.02	104.29	102.27	200.00	-97.73	Peak	209	211	P
3	2483.50	-1.98	50.17	48.19	54.00	-5.81	Average	209	211	P
4	2483.50	-1.98	58.62	56.64	74.00	-17.36	Peak	209	211	P
5	4924.00	6.48	34.57	41.05	54.00	-12.95	Average	103	197	P
6	4924.00	6.48	43.91	50.39	74.00	-23.61	Peak	103	197	P
7	7386.00	11.53	31.58	43.11	54.00	-10.89	Average	100	249	P
8	7386.00	11.53	44.84	56.37	74.00	-17.63	Peak	100	249	P

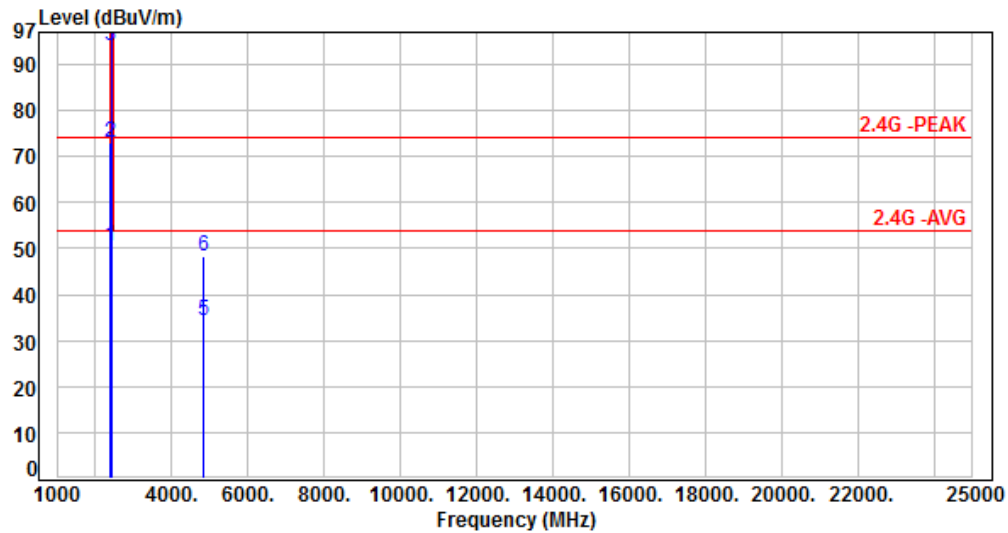
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	52.69	50.57	54.00	-3.43	Average	204	207	P
2	2390.00	-2.12	74.98	72.86	74.00	-1.14	Peak	204	207	P
3	2412.00	-2.10	96.12	94.02	200.00	-105.98	Average	204	207	P
4	2412.00	-2.10	110.49	108.39	200.00	-91.61	Peak	204	207	P
5	4824.00	6.09	28.26	34.35	54.00	-19.65	Average	100	126	P
6	4824.00	6.09	42.41	48.50	74.00	-25.50	Peak	100	126	P

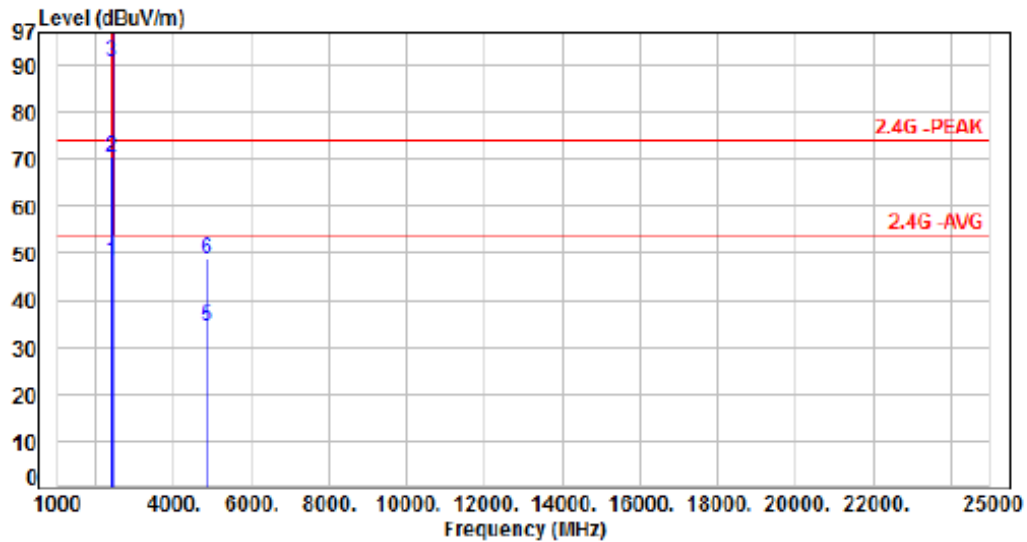
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	50.26	48.14	54.00	-5.86	Average	156	205	P
2	2390.00	-2.12	72.41	70.29	74.00	-3.71	Peak	156	205	P
3	2412.00	-2.10	92.99	90.89	200.00	-109.11	Average	156	205	P
4	2412.00	-2.10	107.14	105.04	200.00	-94.96	Peak	156	205	P
5	4824.00	6.09	28.20	34.29	54.00	-19.71	Average	100	94	P
6	4824.00	6.09	42.61	48.70	74.00	-25.30	Peak	100	94	P

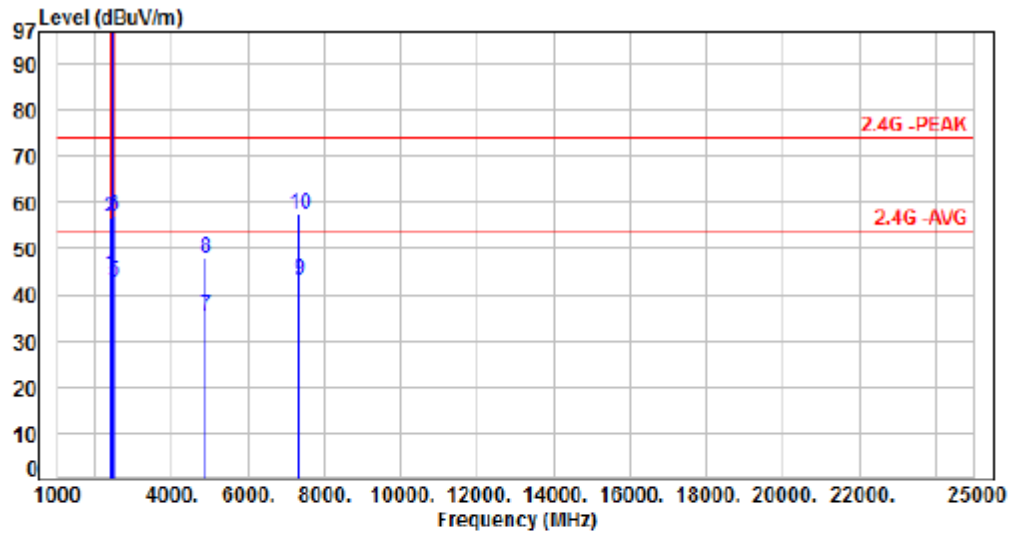
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	46.26	44.14	54.00	-9.86	Average	134	303	P
2	2390.00	-2.12	59.00	56.88	74.00	-17.12	Peak	134	303	P
3	2437.00	-2.07	99.14	97.07	200.00	-102.93	Average	134	303	P
4	2437.00	-2.07	109.63	107.56	200.00	-92.44	Peak	134	303	P
5	2483.50	-1.98	44.86	42.88	54.00	-11.12	Average	134	303	P
6	2483.50	-1.98	59.24	57.26	74.00	-16.74	Peak	134	303	P
7	4874.00	6.36	28.90	35.26	54.00	-18.74	Average	100	172	P
8	4874.00	6.36	41.67	48.03	74.00	-25.97	Peak	100	172	P
9	7311.00	11.42	31.87	43.29	54.00	-10.71	Average	158	176	P
10	7311.00	11.42	46.19	57.61	74.00	-16.39	Peak	158	176	P

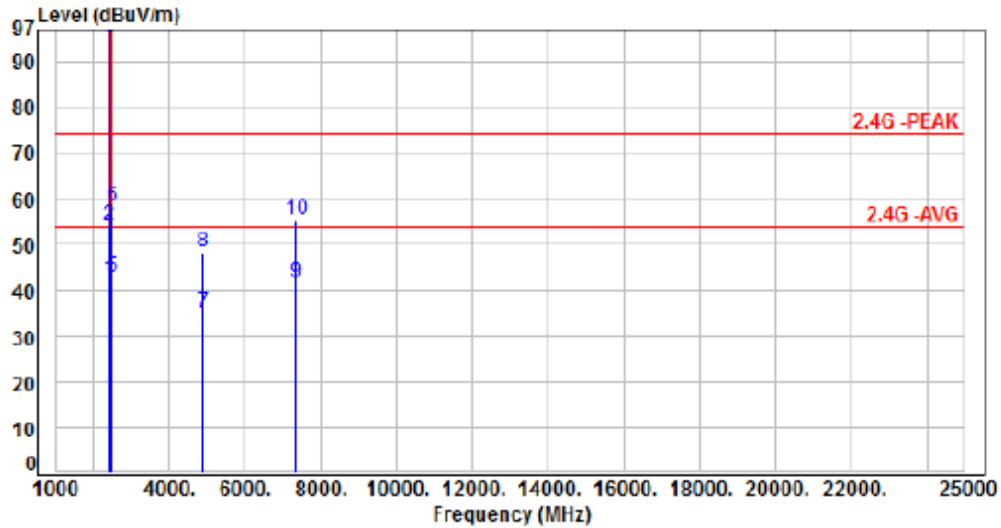
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	44.63	42.51	54.00	-11.49	Average	218	209	P
2	2390.00	-2.12	56.26	54.14	74.00	-19.86	Peak	218	209	P
3	2437.00	-2.07	97.12	95.05	200.00	-104.95	Average	218	209	P
4	2437.00	-2.07	107.76	105.69	200.00	-94.31	Peak	218	209	P
5	2483.50	-1.98	44.78	42.80	54.00	-11.20	Average	218	209	P
6	2483.50	-1.98	60.30	58.32	74.00	-15.68	Peak	218	209	P
7	4874.00	6.36	28.62	34.98	54.00	-19.02	Average	100	143	P
8	4874.00	6.36	41.86	48.22	74.00	-25.78	Peak	100	143	P
9	7311.00	11.42	30.29	41.71	54.00	-12.29	Average	100	128	P
10	7311.00	11.42	43.88	55.30	74.00	-18.70	Peak	100	128	P

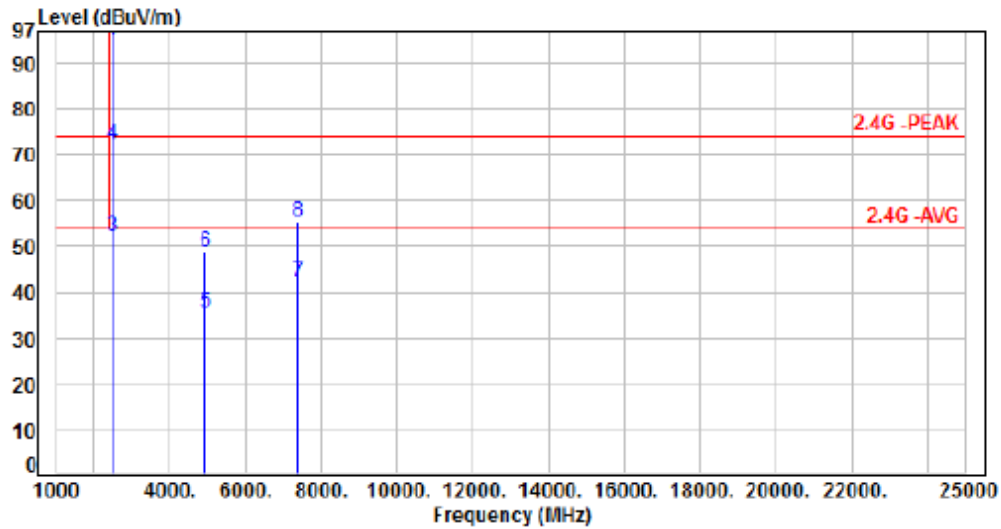
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	2462.00	-2.02	97.25	95.23	200.00	-104.77	Average	123	158	P
2	2462.00	-2.02	108.21	106.19	200.00	-93.81	Peak	123	158	P
3	2483.50	-1.98	53.85	51.87	54.00	-2.13	Average	123	158	P
4	2483.50	-1.98	74.23	72.25	74.00	-1.75	Peak	123	158	P
5	4924.00	6.48	28.80	35.28	54.00	-18.72	Average	100	36	P
6	4924.00	6.48	42.35	48.83	74.00	-25.17	Peak	100	36	P
7	7386.00	11.53	30.42	41.95	54.00	-12.05	Average	100	148	P
8	7386.00	11.53	43.84	55.37	74.00	-18.63	Peak	100	148	P

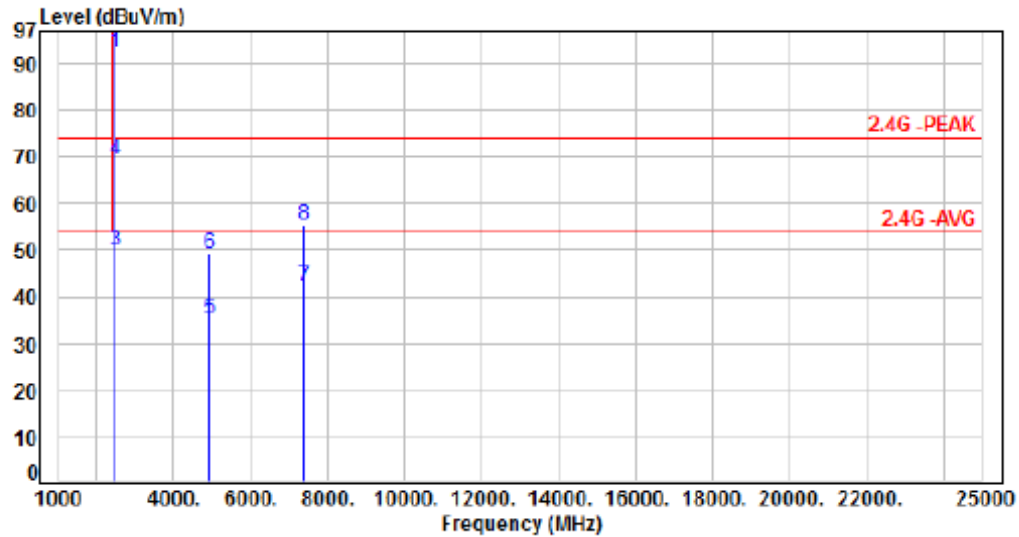
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	2462.00	-2.02	94.60	92.58	200.00	-107.42	Average	142	206	P
2	2462.00	-2.02	105.31	103.29	200.00	-96.71	Peak	142	206	P
3	2483.50	-1.98	51.70	49.72	54.00	-4.28	Average	142	206	P
4	2483.50	-1.98	71.24	69.26	74.00	-4.74	Peak	142	206	P
5	4924.00	6.48	28.71	35.19	54.00	-18.81	Average	100	196	P
6	4924.00	6.48	42.59	49.07	74.00	-24.93	Peak	100	196	P
7	7386.00	11.53	30.43	41.96	54.00	-12.04	Average	100	188	P
8	7386.00	11.53	43.75	55.28	74.00	-18.72	Peak	100	188	P

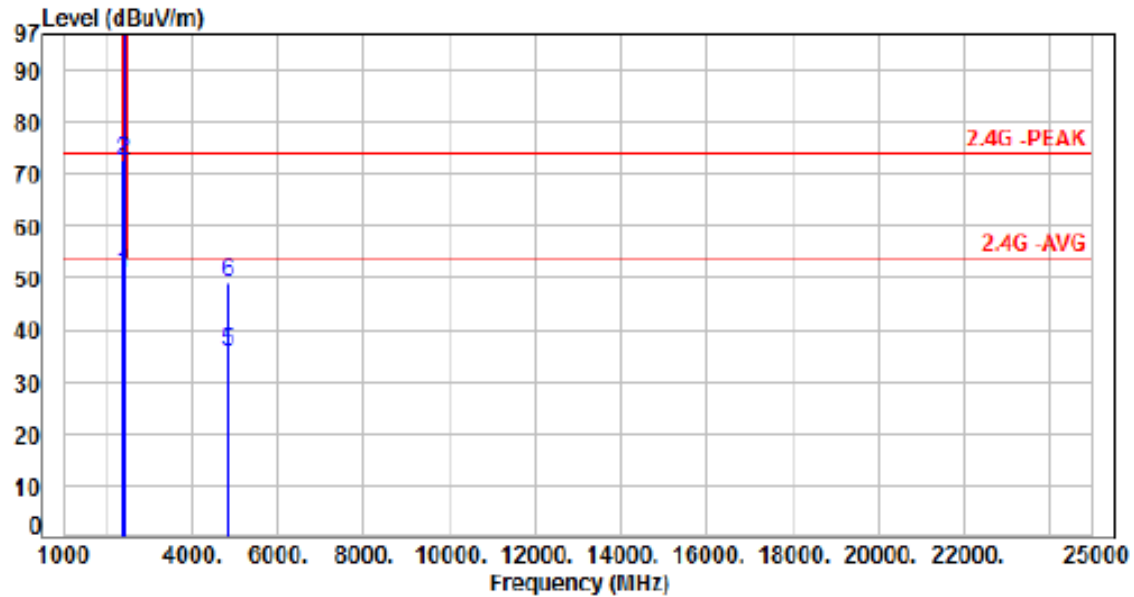
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	52.87	50.75	54.00	-3.25	Average	111	204	P
2	2390.00	-2.12	74.65	72.53	74.00	-1.47	Peak	111	204	P
3	2412.00	-2.10	97.45	95.35	200.00	-104.65	Average	111	204	P
4	2412.00	-2.10	107.07	104.97	200.00	-95.03	Peak	111	204	P
5	4824.00	6.09	29.77	35.86	54.00	-18.14	Average	100	58	P
6	4824.00	6.09	42.94	49.03	74.00	-24.97	Peak	100	58	P

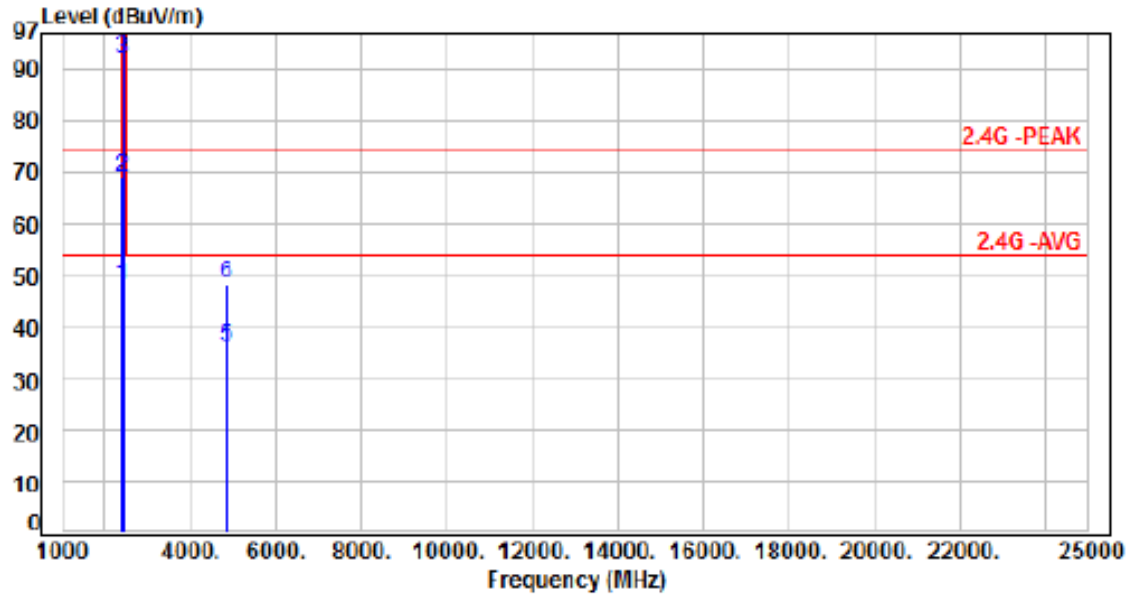
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	50.05	47.93	54.00	-6.07	Average	100	205	P
2	2390.00	-2.12	71.19	69.07	74.00	-4.93	Peak	100	205	P
3	2412.00	-2.10	94.03	91.93	200.00	-108.07	Average	100	205	P
4	2412.00	-2.10	103.48	101.38	200.00	-98.62	Peak	100	205	P
5	4824.00	6.09	29.88	35.97	54.00	-18.03	Average	100	112	P
6	4824.00	6.09	42.40	48.49	74.00	-25.51	Peak	100	112	P

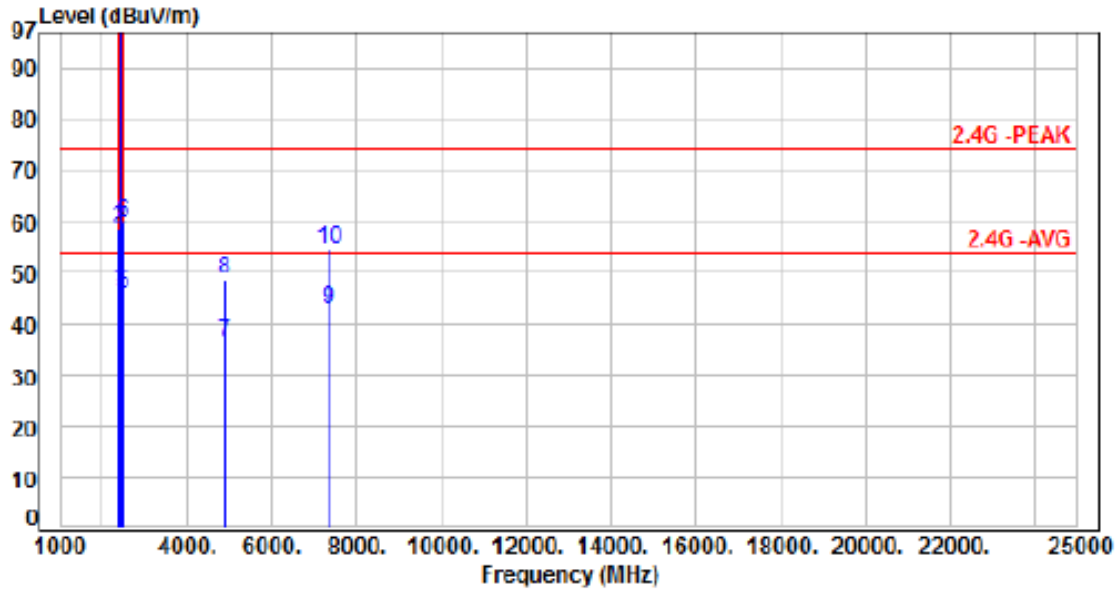
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	48.52	46.40	54.00	-7.60	Average	139	201	P
2	2390.00	-2.12	60.86	58.74	74.00	-15.26	Peak	139	201	P
3	2437.00	-2.07	99.71	97.64	200.00	-102.36	Average	139	201	P
4	2437.00	-2.07	109.48	107.41	200.00	-92.59	Peak	139	201	P
5	2483.50	-1.98	47.58	45.60	54.00	-8.40	Average	139	201	P
6	2483.50	-1.98	61.62	59.64	74.00	-14.36	Peak	139	201	P
7	4874.00	6.36	29.98	36.34	54.00	-17.66	Average	100	305	P
8	4874.00	6.36	42.38	48.74	74.00	-25.26	Peak	100	305	P
9	7311.00	11.42	31.52	42.94	54.00	-11.06	Average	100	159	P
10	7311.00	11.42	43.22	54.64	74.00	-19.36	Peak	100	159	P

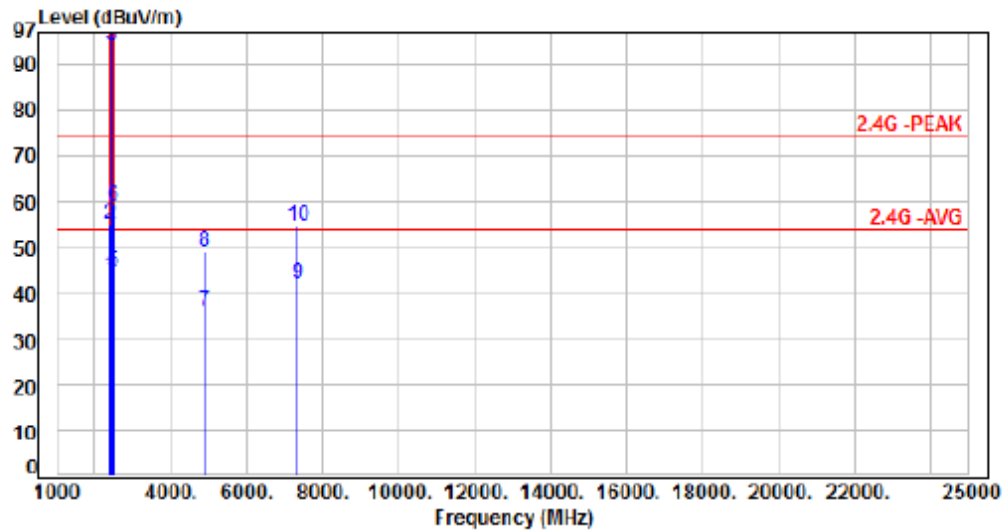
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	45.83	43.71	54.00	-10.29	Average	105	202	P
2	2390.00	-2.12	57.03	54.91	74.00	-19.09	Peak	105	202	P
3	2437.00	-2.07	95.95	93.88	200.00	-106.12	Average	105	202	P
4	2437.00	-2.07	105.73	103.65	200.00	-96.34	Peak	105	202	P
5	2483.50	-1.98	46.44	44.46	54.00	-9.54	Average	105	202	P
6	2483.50	-1.98	61.08	59.10	74.00	-14.90	Peak	105	202	P
7	4874.00	6.36	29.67	36.03	54.00	-17.97	Average	100	278	P
8	4874.00	6.36	42.86	49.22	74.00	-24.78	Peak	100	278	P
9	7311.00	11.42	30.76	42.18	54.00	-11.82	Average	100	128	P
10	7311.00	11.42	43.31	54.73	74.00	-19.27	Peak	100	128	P

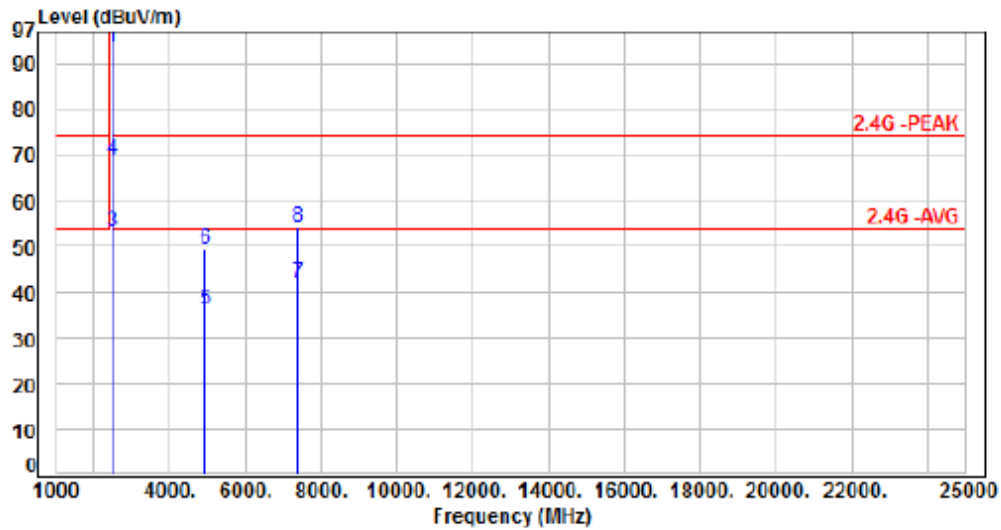
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	2462.00	-2.02	95.82	93.80	200.00	-106.20	Average	177	205	P
2	2462.00	-2.02	105.54	103.52	200.00	-96.48	Peak	177	205	P
3	2483.50	-1.98	54.95	52.97	54.00	-1.03	Average	177	205	P
4	2483.50	-1.98	70.84	68.86	74.00	-5.14	Peak	177	205	P
5	4924.00	6.48	29.66	36.14	54.00	-17.86	Average	100	174	P
6	4924.00	6.48	43.00	49.48	74.00	-24.52	Peak	100	174	P
7	7386.00	11.53	30.49	42.02	54.00	-11.98	Average	100	52	P
8	7386.00	11.53	42.86	54.39	74.00	-19.61	Peak	100	52	P

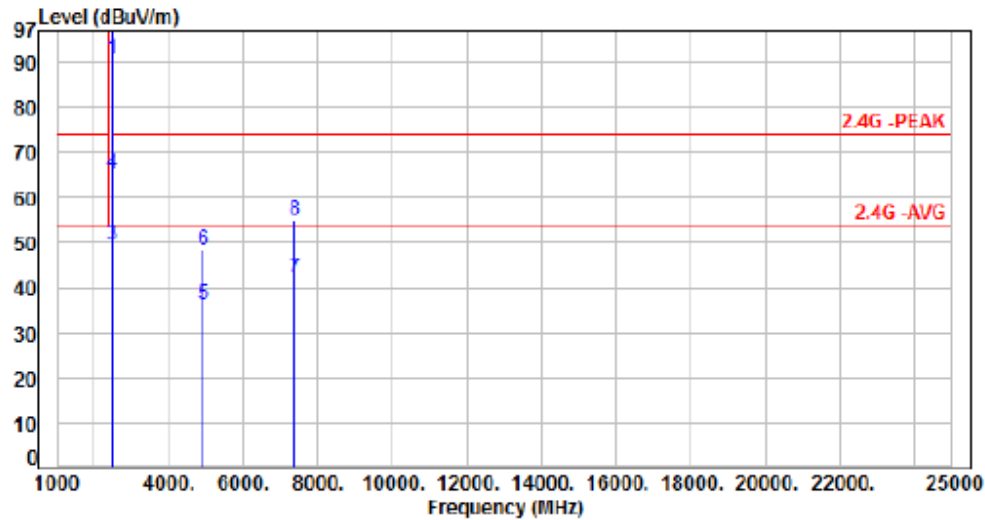
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	2462.00	-2.02	92.73	90.71	200.00	-109.29	Average	100	213	P
2	2462.00	-2.02	102.47	100.45	200.00	-99.55	Peak	100	213	P
3	2483.50	-1.98	51.54	49.56	54.00	-4.44	Average	100	213	P
4	2483.50	-1.98	67.41	65.43	74.00	-8.57	Peak	100	213	P
5	4924.00	6.48	29.53	36.01	54.00	-17.99	Average	100	135	P
6	4924.00	6.48	42.00	48.48	74.00	-25.52	Peak	100	135	P
7	7386.00	11.53	30.53	42.06	54.00	-11.94	Average	100	282	P
8	7386.00	11.53	43.42	54.95	74.00	-19.05	Peak	100	282	P

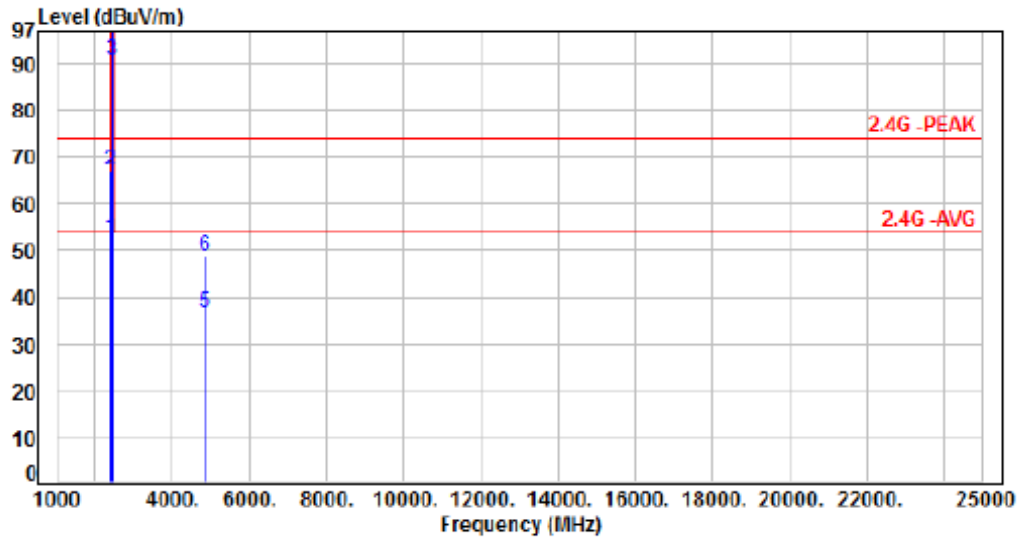
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	54.39	52.27	54.00	-1.73	Average	106	202	P
2	2390.00	-2.12	69.27	67.15	74.00	-6.85	Peak	106	202	P
3	2422.00	-2.08	92.91	90.83	200.00	-109.17	Average	106	202	P
4	2422.00	-2.08	102.76	100.68	200.00	-99.32	Peak	106	202	P
5	4844.00	6.23	30.39	36.62	54.00	-17.38	Average	100	218	P
6	4844.00	6.23	42.60	48.83	74.00	-25.17	Peak	100	218	P

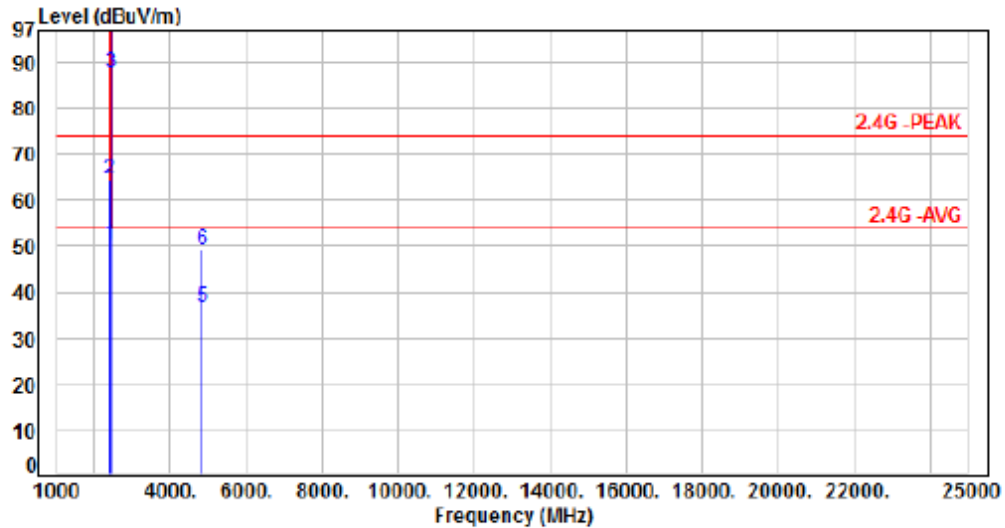
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	52.22	50.10	54.00	-3.90	Average	100	205	P
2	2390.00	-2.12	66.66	64.54	74.00	-9.46	Peak	100	205	P
3	2422.00	-2.08	89.70	87.62	200.00	-112.38	Average	100	205	P
4	2422.00	-2.08	99.66	97.58	200.00	-102.42	Peak	100	205	P
5	4844.00	6.23	30.38	36.61	54.00	-17.39	Average	100	266	P
6	4844.00	6.23	42.84	49.07	74.00	-24.93	Peak	100	266	P

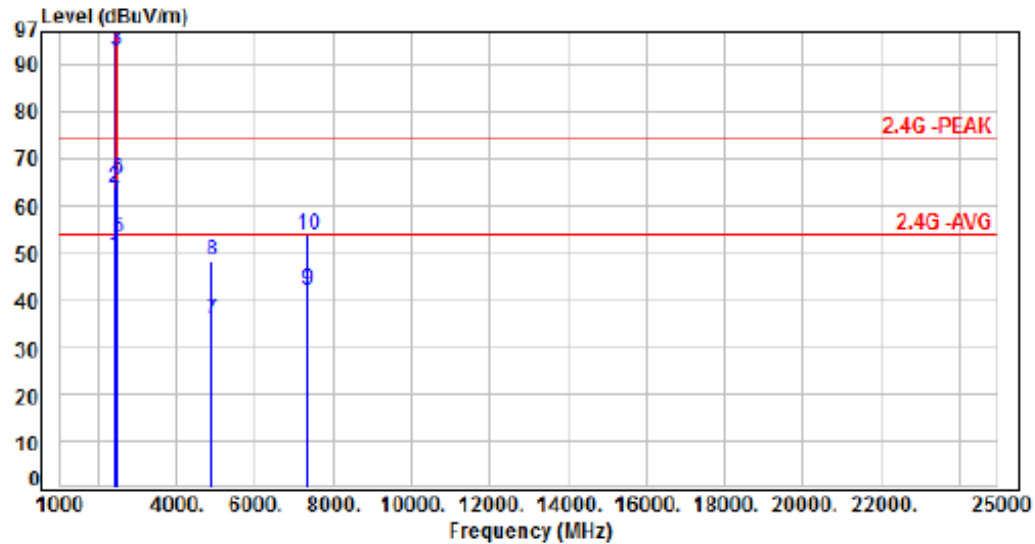
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	-2.12	51.61	49.49	54.00	-4.51	Average	160	205	P
2	2390.00	-2.12	65.79	63.67	74.00	-10.33	Peak	160	205	P
3	2437.00	-2.07	94.84	92.77	200.00	-107.23	Average	160	205	P
4	2437.00	-2.07	104.07	102.00	200.00	-98.00	Peak	160	205	P
5	2483.50	-1.98	54.92	52.94	54.00	-1.06	Average	160	205	P
6	2483.50	-1.98	67.75	65.77	74.00	-8.23	Peak	160	205	P
7	4874.00	6.36	29.51	35.87	54.00	-18.13	Average	100	143	P
8	4874.00	6.36	41.83	48.19	74.00	-25.81	Peak	100	143	P
9	7311.00	11.42	30.75	42.17	54.00	-11.83	Average	100	105	P
10	7311.00	11.42	42.61	54.03	74.00	-19.97	Peak	100	105	P

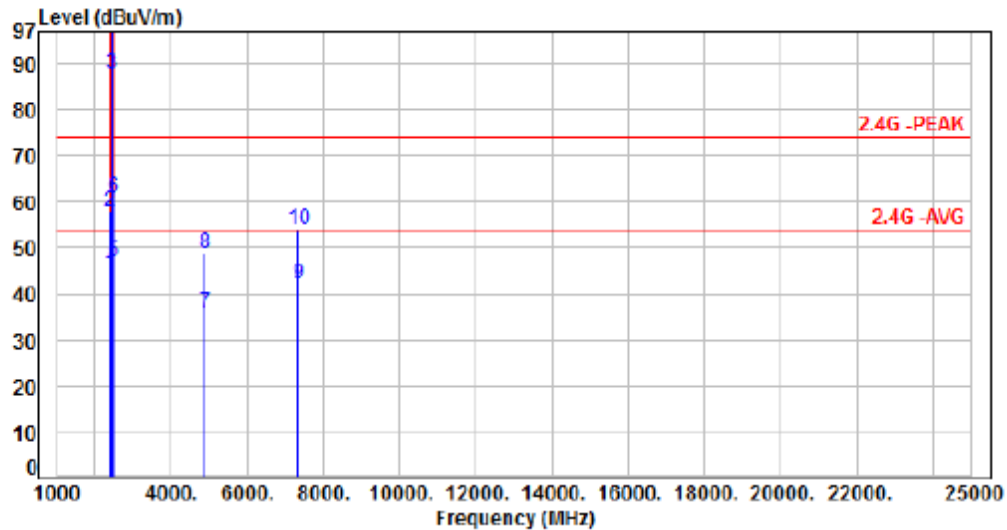
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	-2.12	46.53	44.41	54.00	-9.59	Average	100	260	P
2	2390.00	-2.12	59.94	57.82	74.00	-16.18	Peak	100	260	P
3	2437.00	-2.07	89.83	87.76	200.00	-112.24	Average	100	260	P
4	2437.00	-2.07	99.46	97.39	200.00	-102.61	Peak	100	260	P
5	2483.50	-1.98	48.97	46.99	54.00	-7.01	Average	100	260	P
6	2483.50	-1.98	62.73	60.75	74.00	-13.25	Peak	100	260	P
7	4874.00	6.36	29.59	35.95	54.00	-18.05	Average	100	69	P
8	4874.00	6.36	42.35	48.71	74.00	-25.29	Peak	100	69	P
9	7311.00	11.42	30.71	42.13	54.00	-11.87	Average	100	302	P
10	7311.00	11.42	42.52	53.94	74.00	-20.06	Peak	100	302	P

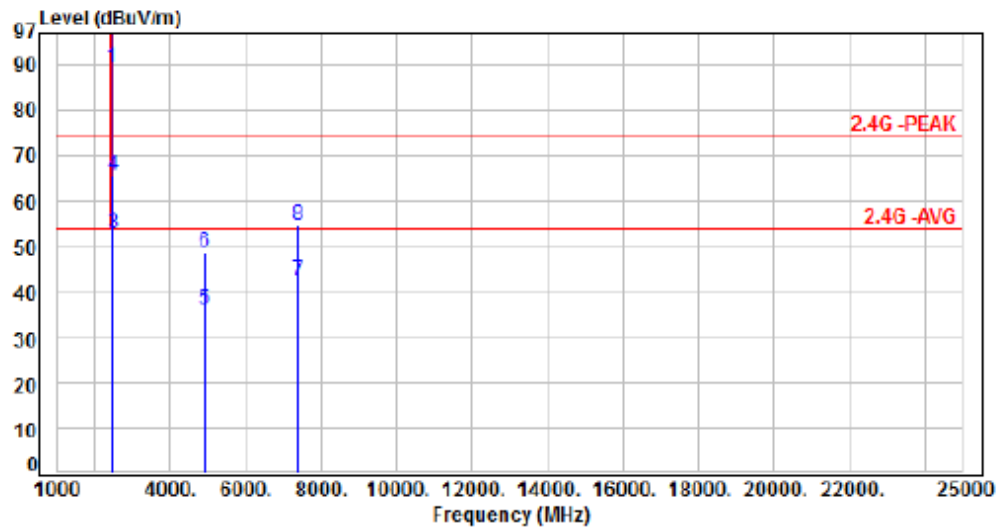
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	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	2452.00	-2.05	91.20	89.15	200.00	-110.85	Average	238	14	P
2	2452.00	-2.05	100.34	98.29	200.00	-101.71	Peak	238	14	P
3	2483.50	-1.98	54.60	52.62	54.00	-1.38	Average	238	14	P
4	2483.50	-1.98	67.80	65.82	74.00	-8.18	Peak	238	14	P
5	4904.00	6.46	29.77	36.23	54.00	-17.77	Average	100	86	P
6	4904.00	6.46	42.25	48.71	74.00	-25.29	Peak	100	86	P
7	7356.00	11.52	31.01	42.53	54.00	-11.47	Average	100	42	P
8	7356.00	11.52	42.99	54.51	74.00	-19.49	Peak	100	42	P

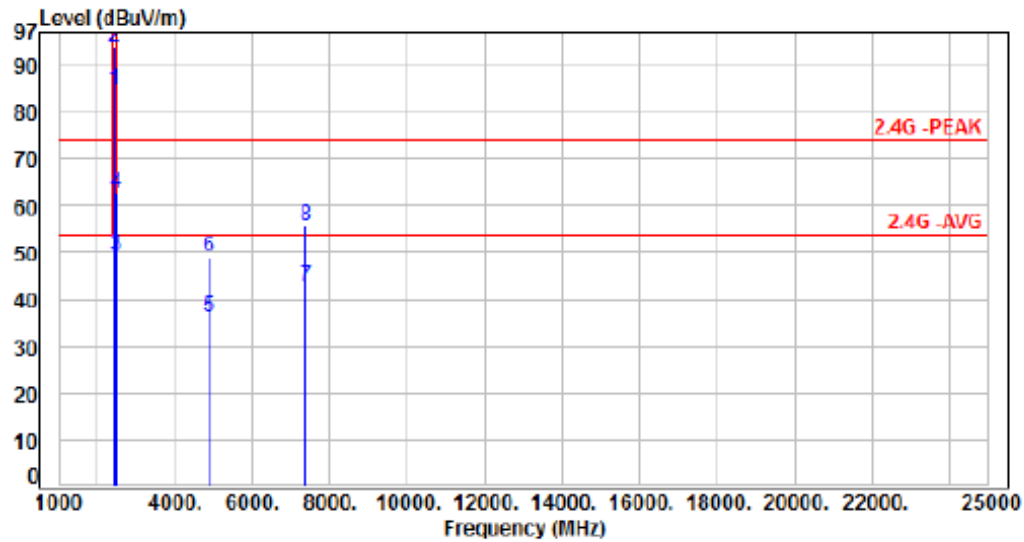
Note: Level=Reading+factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: 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	2452.00	-2.05	86.83	84.78	200.00	-115.22	Average	130	209	P
2	2452.00	-2.05	95.95	93.90	200.00	-106.10	Peak	130	209	P
3	2483.50	-1.98	51.38	49.40	54.00	-4.60	Average	130	209	P
4	2483.50	-1.98	64.65	62.67	74.00	-11.33	Peak	130	209	P
5	4904.00	6.46	29.82	36.28	54.00	-17.72	Average	100	126	P
6	4904.00	6.46	42.74	49.20	74.00	-24.80	Peak	100	126	P
7	7356.00	11.52	31.11	42.63	54.00	-11.37	Average	100	219	P
8	7356.00	11.52	44.18	55.70	74.00	-18.30	Peak	100	219	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

According to the methods defined in ANSI C63.10-2013 Section 11.11.1

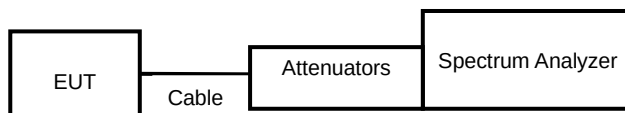
Below -20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.11.2 & 11.11.3

- 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 20dB relative to the maximum measured in-band peak PSD level.
- The band edges was measured and recorded.

7.3 Test Setup Layout

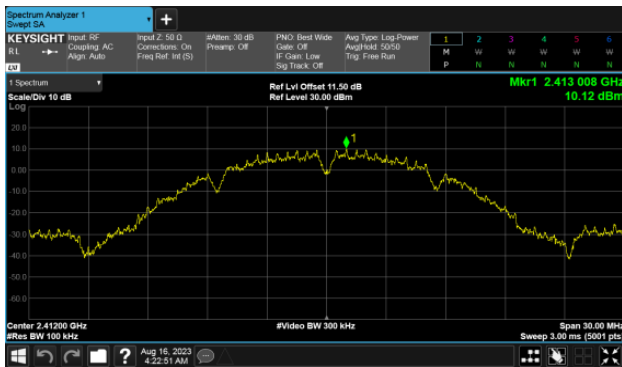


7.4 Test Result and Data

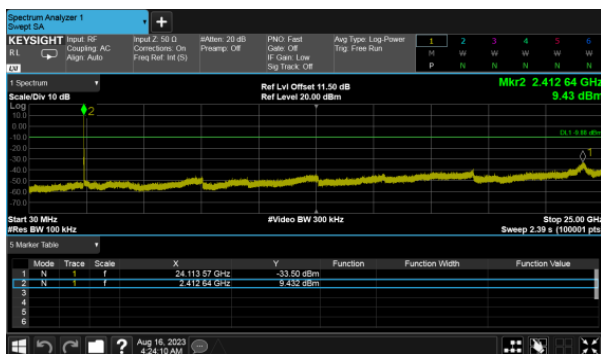
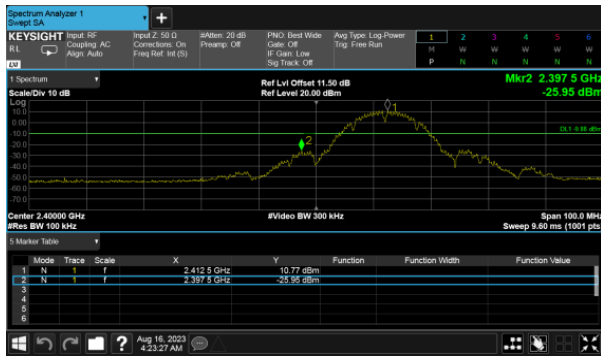
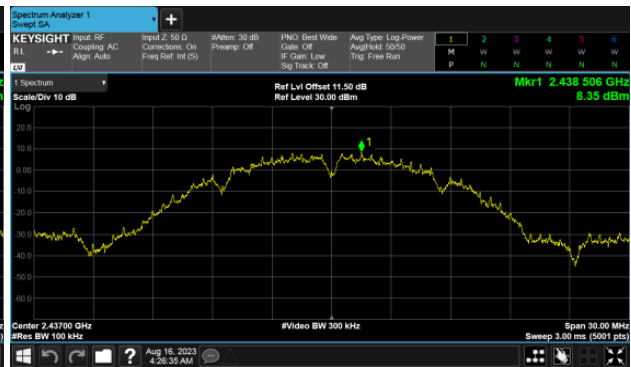
Note: Test plots refers to the following pages.



Modulation Type: 802.11b CH01

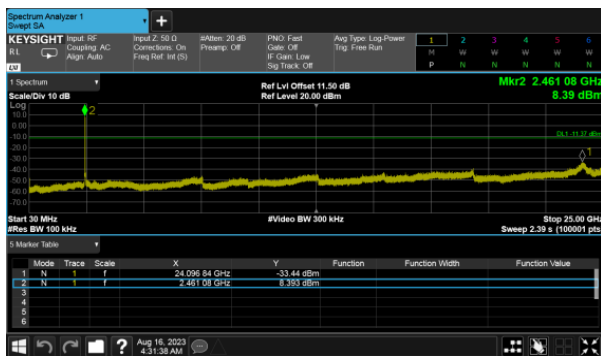
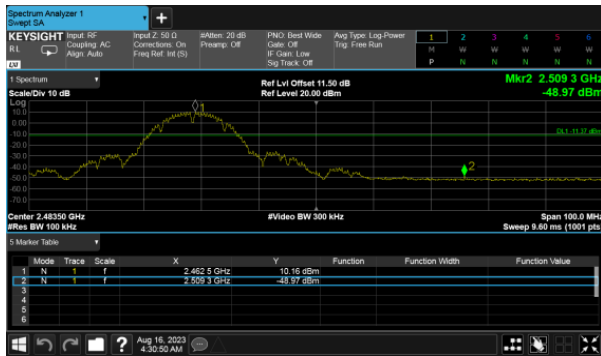
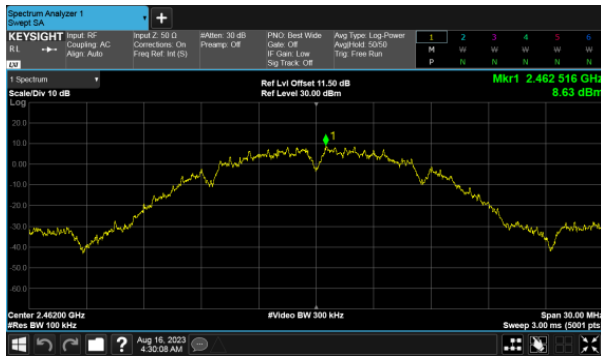


Modulation Type: 802.11b CH06



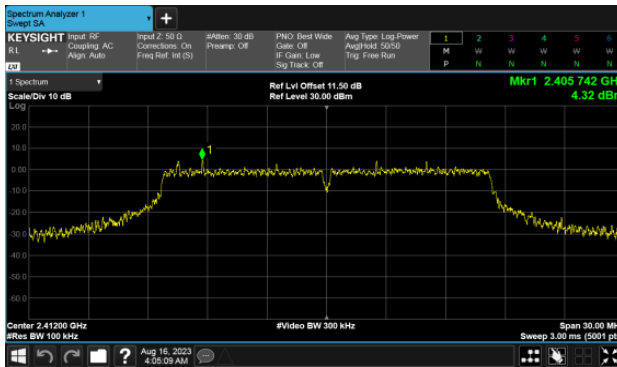


Modulation Type: 802.11b CH11

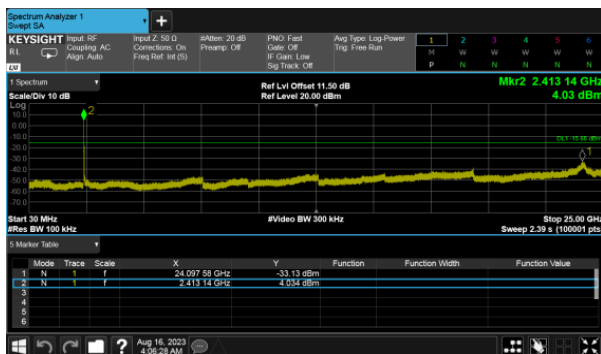
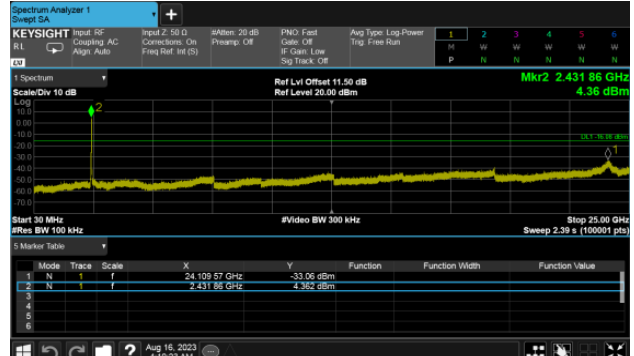
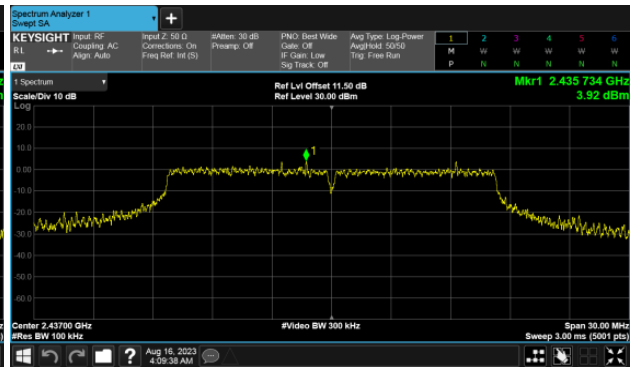




Modulation Type: 802.11g CH01

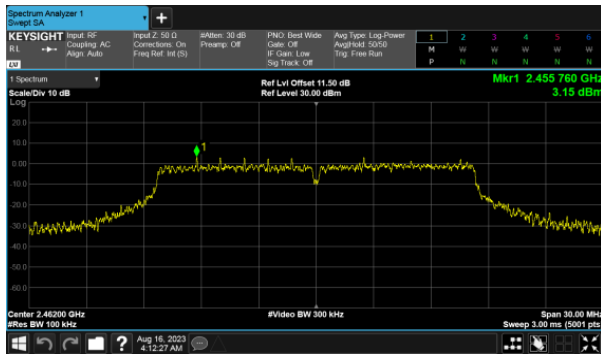


Modulation Type: 802.11g CH06



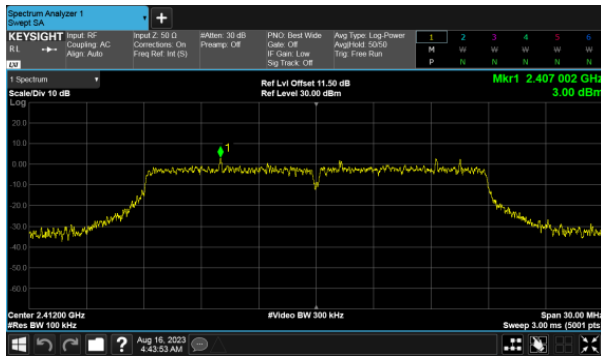


Modulation Type: 802.11g CH11

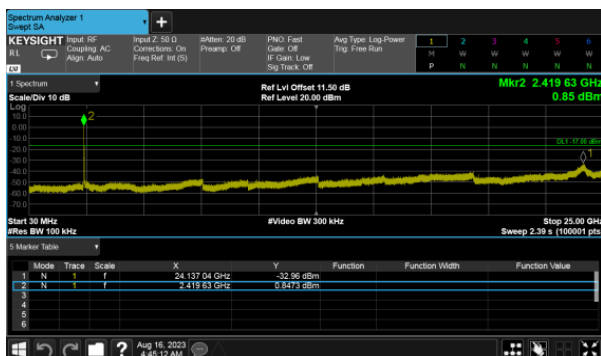
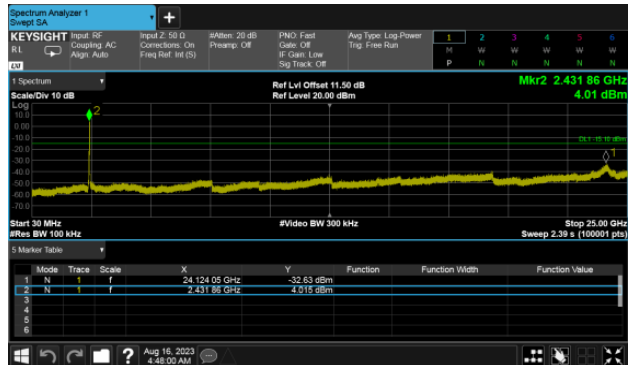
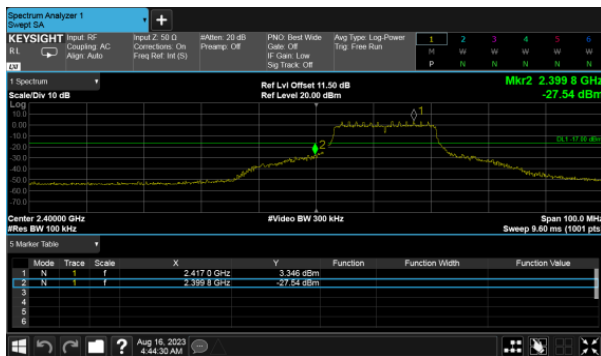
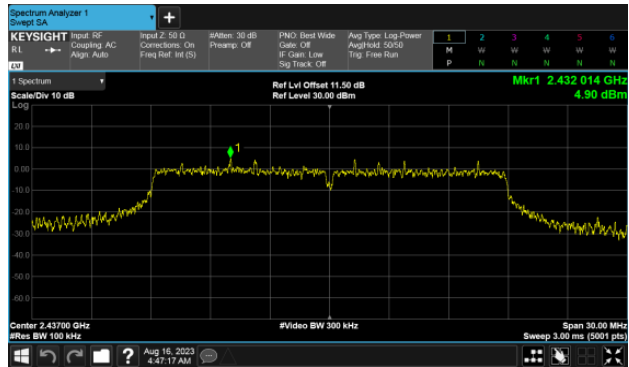




Modulation Type: 802.11n HT20 CH01

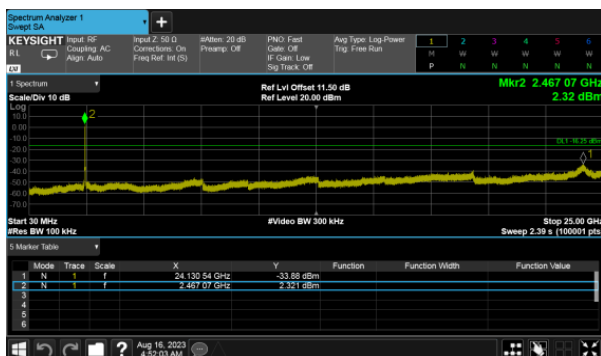
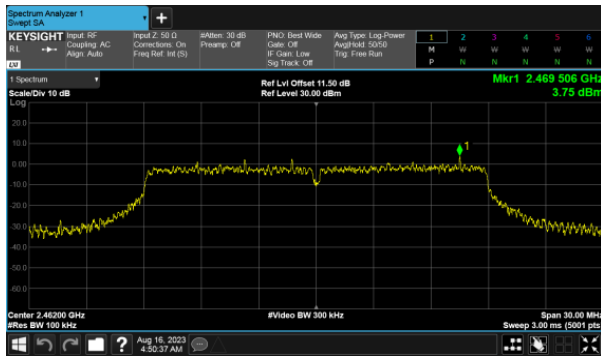


Modulation Type: 802.11n HT20 CH06



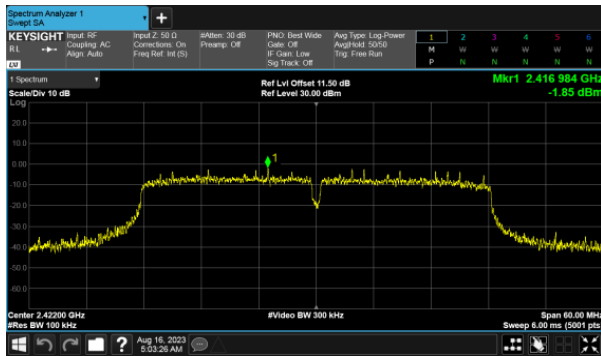


Modulation Type: 802.11n HT20 CH11

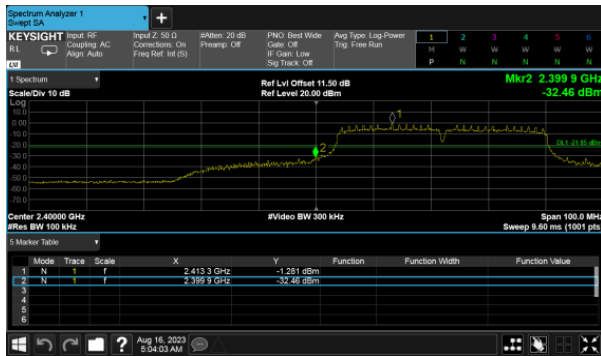
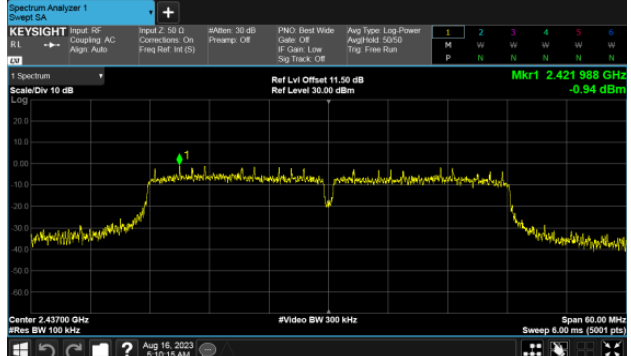




Modulation Type: 802.11n HT40 CH03

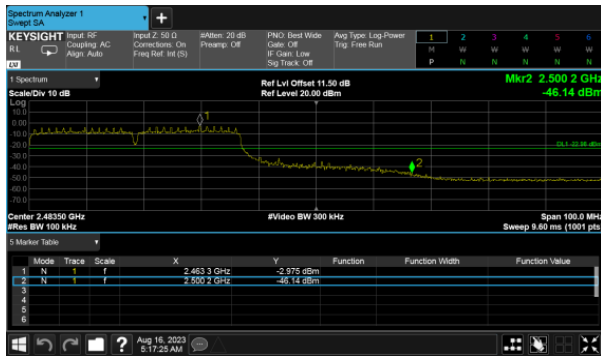
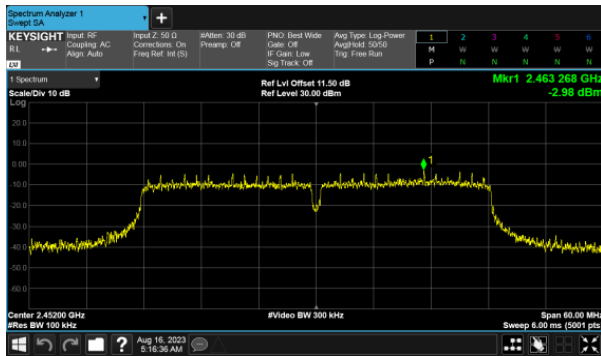


Modulation Type: 802.11n HT40 CH06





Modulation Type: 802.11n HT40 CH09





8. On Time, Duty Cycle and Measurement methods

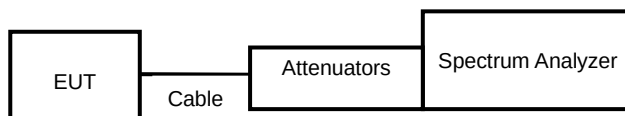
8.1 Test Limit

None; for reporting purposes only.

8.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.6
Zero-Span Spectrum Analyzer Method.

8.3 Test Setup Layout

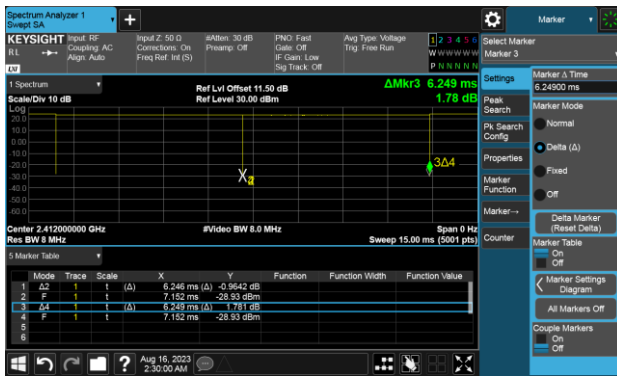


8.4 Test Result and Data

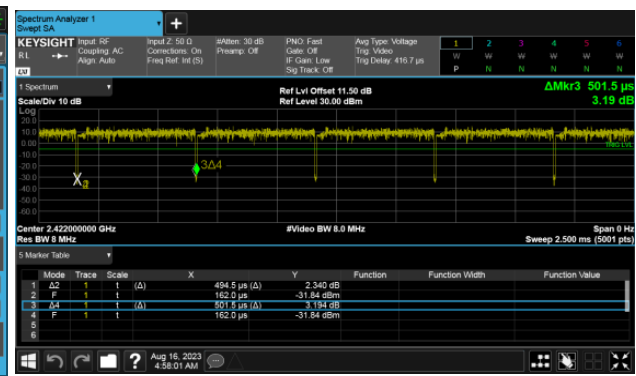
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b,1M	6.246	6.249	99.95%
11g,6M	1.035	1.040	99.52%
11n HT20	0.979	0.984	99.49%
11n HT40	0.495	0.502	98.60%



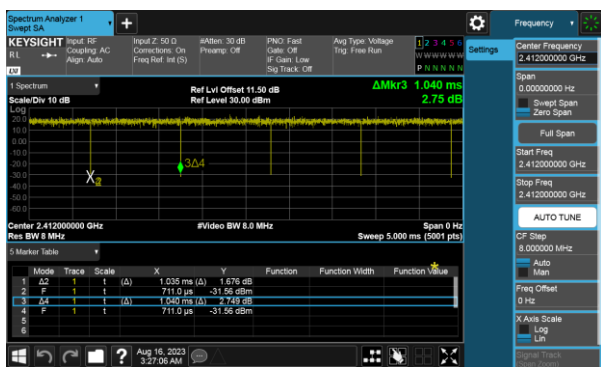
Modulation Type: 802.11b(1Mbps)



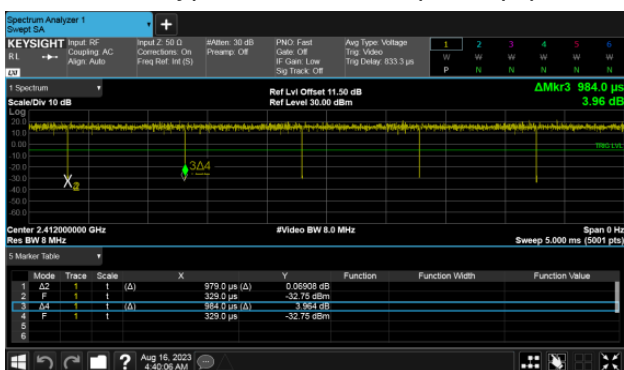
Modulation Type: 802.11n HT40(13.5Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11n HT20(6.5Mbps)





9. 6dB Bandwidth Measurement Data

9.1 Test Limit

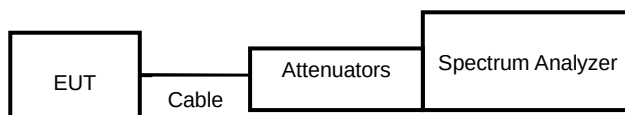
The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

9.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.8

- 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

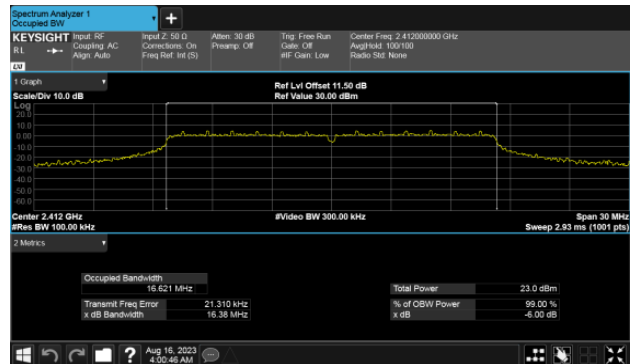
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
			ANT C	
11b	1	2412	9.07	0.5
	6	2437	8.58	0.5
	11	2462	8.59	0.5
11g	1	2412	16.38	0.5
	6	2437	16.39	0.5
	11	2462	16.38	0.5
11n HT20	1	2412	17.58	0.5
	6	2437	17.60	0.5
	11	2462	17.59	0.5
11n HT40	3	2422	35.14	0.5
	6	2437	35.34	0.5
	9	2452	35.19	0.5



Modulation Type: 802.11b CH01



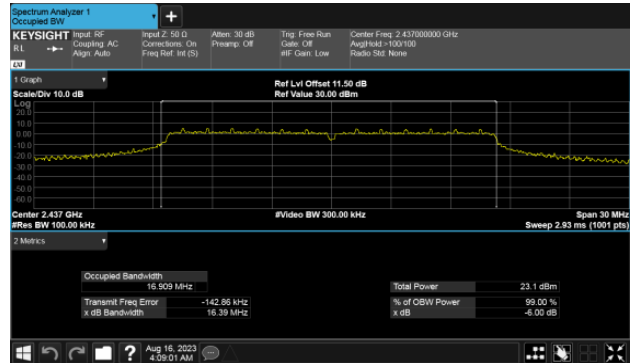
Modulation Type: 802.11g CH01



Modulation Type: 802.11b CH06



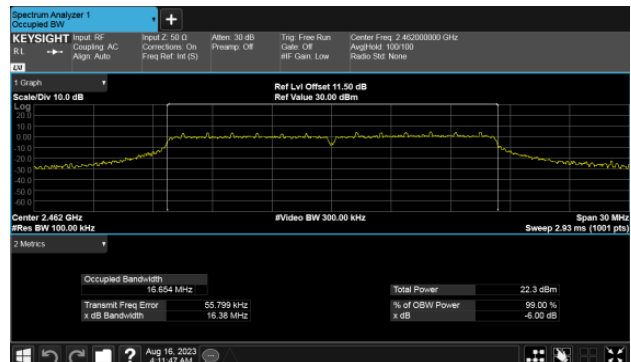
Modulation Type: 802.11g CH06



Modulation Type: 802.11b CH11

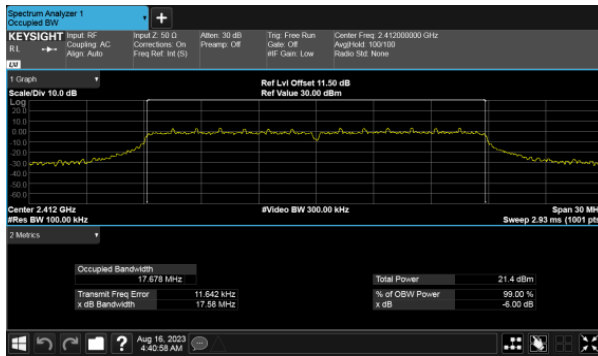


Modulation Type: 802.11g CH11

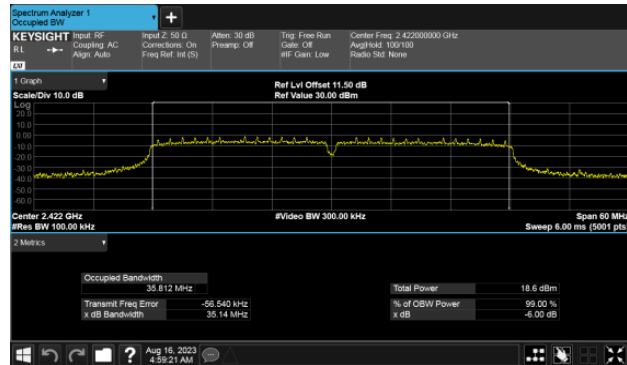




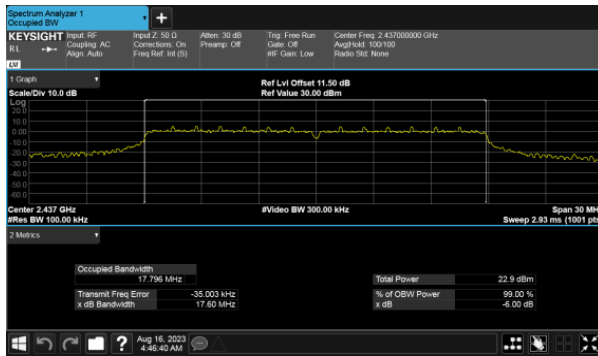
Modulation Type: 802.11n HT20 CH01



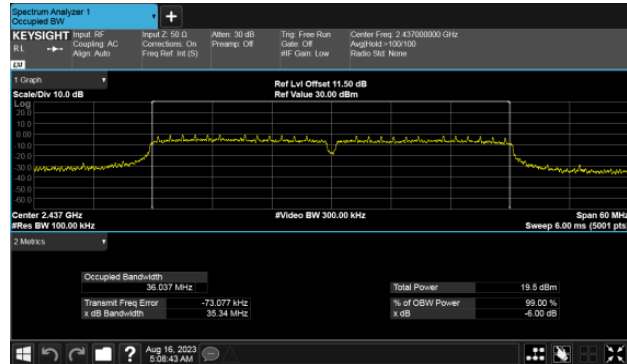
Modulation Type: 802.11n HT40 CH03



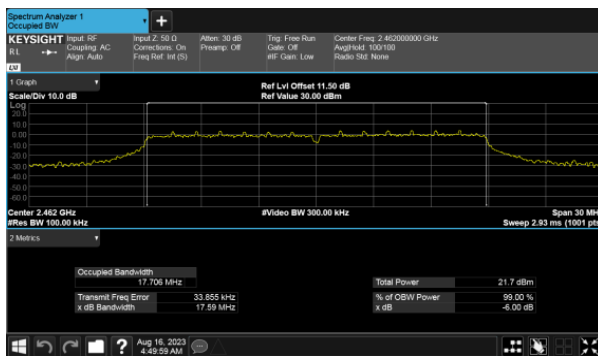
Modulation Type: 802.11n HT20 CH06



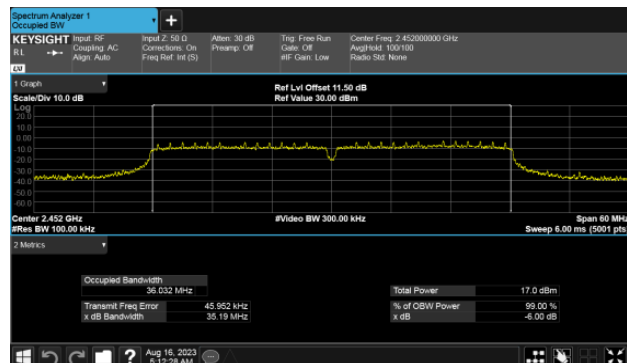
Modulation Type: 802.11n HT40 CH06



Modulation Type: 802.11n HT20 CH11



Modulation Type: 802.11n HT40 CH09





10. Maximum Peak and Average Output Power

10.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

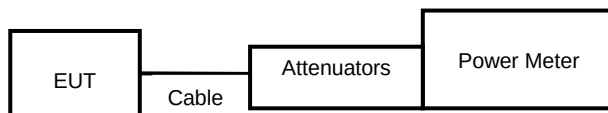
If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.9.2.3.2

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

Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(peak) output power (dBm)	Total PK power (dBm)	Total PK power (mW)	Power Limit (dBm)
				ANT C			
20.5	11b	1	2412	22.36	22.36	172.187	30.00
19		6	2437	21.73	21.73	148.936	30.00
19.5		11	2462	22.05	22.05	160.325	30.00
19	11g	1	2412	23.31	23.31	214.289	30.00
19		6	2437	23.10	23.10	204.174	30.00
18		11	2462	23.05	23.05	201.837	30.00
17.5	11n HT20	1	2412	23.28	23.28	212.814	30.00
19		6	2437	23.17	23.17	207.491	30.00
17.5		11	2462	23.18	23.18	207.970	30.00
15	11n HT40	3	2422	21.49	21.49	140.929	30.00
16.5		6	2437	21.86	21.86	153.462	30.00
13.5		9	2452	20.15	20.15	103.514	30.00



Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)	Total AV power (dBm)	Total AV power (mW)	Powe Limit (dBm)
				ANT C			
20.5	11b	1	2412	19.96	19.96	99.083	NA
19		6	2437	19.20	19.20	83.176	NA
19.5		11	2462	19.55	19.55	90.157	NA
19	11g	1	2412	16.56	16.56	45.290	NA
19		6	2437	16.91	16.91	49.091	NA
18		11	2462	15.92	15.92	39.084	NA
17.5	11n HT20	1	2412	15.33	15.33	34.119	NA
19		6	2437	17.08	17.08	51.050	NA
17.5		11	2462	15.47	15.47	35.237	NA
15	11n HT40	3	2422	13.02	13.02	20.045	NA
16.5		6	2437	13.85	13.85	24.266	NA
13.5		9	2452	11.20	11.20	13.183	NA

Note: Average power is for reference only.



11. Power Spectral Density

11.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

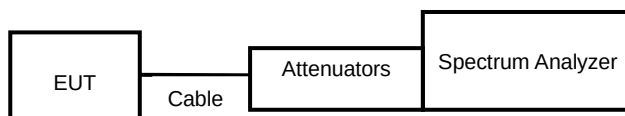
If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

11.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.10

- The transmitter output was connected to spectrum analyzer.
- The spectrum analyzer's resolution bandwidth were set at 3kHz RBW and 10KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.
- The power spectral density was measured and recorded.

11.3 Test Setup Layout



11.4 Test Result and Data

Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)	Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT C				
11b	1	2412	-4.13	-4.13	0.00	-4.13	8.00
	6	2437	-4.87	-4.87	0.00	-4.87	8.00
	11	2462	-4.39	-4.39	0.00	-4.39	8.00
11g	1	2412	-9.68	-9.68	0.00	-9.68	8.00
	6	2437	-10.29	-10.29	0.00	-10.29	8.00
	11	2462	-10.66	-10.66	0.00	-10.66	8.00
11n HT20	1	2412	-11.31	-11.31	0.00	-11.31	8.00
	6	2437	-10.28	-10.28	0.00	-10.28	8.00
	11	2462	-11.27	-11.27	0.00	-11.27	8.00
11n HT40	3	2422	-14.5	-14.50	0.00	-14.50	8.00
	6	2437	-14.42	-14.42	0.00	-14.42	8.00
	9	2452	-17.32	-17.32	0.00	-17.32	8.00