



FCC RADIO TEST REPORT

Applicant : Ubiquiti Inc.
Address : 685 Third Avenue, New York, New York 10017, USA
Equipment : Display Cast Lite
Model No. : UC-Cast-Lite
Trade Name : UBIQUITI
FCC ID : SWX-UCCASTL

I HEREBY CERTIFY THAT :

The sample was received on Jun. 12, 2024 and the testing was completed on Nov. 19, 2024 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
24060106-TRFCC03	Nov. 22, 2024	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)	. 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.



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Frequency Range	BT / BLE: 2400-2483.5MHz 802.11b/g/n: 2400-2483.5MHz 802.11a/n/ac/ax: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
Center Frequency Range	BT / BLE: 2402-2480MHz 802.11b/g/n: 2412MHz~2462MHz 802.11a/n/ac/ax: 5180-5240MHz, 5260-5320MHz, 5500-5720MHz, 5745-5825MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 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 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Modulation Technology	FHSS, DTS, DSSS, OFDM, OFDMA
Data Rate	BT: GFSK: 1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK: 3Mbps BLE: GFSK: 1Mbps WLAN: 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80 802.11ax: MCS0 – MCS11, HE20/40/80
Antenna Type	Dipole Antenna
Antenna Gain	For BT / BLE: 2400MHz~2483.5MHz: ANT A: -1.00dBi For WLAN: 2400MHz~2483.5MHz: ANT A: -1.00dBi, ANT B: -1.00dBi 5150MHz~5250MHz: ANT A: 5.00dBi, ANT B: 5.00dBi 5250MHz~5350MHz: ANT A: 5.00dBi, ANT B: 5.00dBi 5470MHz~5725MHz: ANT A: 5.00dBi, ANT B: 5.00dBi 5725MHz~5850MHz: ANT A: 5.00dBi, ANT B: 5.00dBi
Type C Adapter	UBIQUITI /R0097US

Note:

1. EUT support TPC Function.
2. EUT supports DFS Client Mode, without radar detection.
3. 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	---	---



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, "wl Command" 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 System
2	802.11g (6Mbps) , From System
3	802.11n HT20 (6.5Mbps) , From System
4	Normal Mode, From Adapter
caused "Test Mode 2" generated the worst case, it was reported as the final data.	
Radiation Emissions (9KHz ~30MHz & 30MHz ~ 1GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps) , From System
2	802.11g (6Mbps) , From System
3	802.11n HT20 (6.5Mbps) , From System
4	Normal Mode, From Adapter
caused "Test Mode 2" generated the worst case, they were reported as the final data.	
Radiation Emissions (1GHz ~ 25GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps) , From System
2	802.11g (6Mbps) , From System
3	802.11n HT20 (6.5Mbps) , From System
caused "Test Mode 1~3" 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, AC 240V / 60Hz is worst case.

For Radiated Spurious Emission(Below 1GHz), AC 240V / 60Hz is worst case.

The EUT incorporates a MIMO function

Modulation Type	TX CONFIGURATION
802.11b	2TX
802.11g	2TX
802.11n HT20	2TX



2.4 Description of Test System

RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	N/A
Type-c USB	kolin	KEX-DLCP08	1m / NS	N/A
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	DELL	Latitude E5470	N/A	Adapter / 1.8m / NS
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	DELL	Latitude E5470	N/A	Adapter / 1.8m / NS
TYPE-C(Blue)	kolin	KEX-DLCP08	1m / NS	N/A



2.5 General Information of Test

☒ Test Site	CerpPASS 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 9kHz 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	2024/07/26	24.1°C / 63%	Leon Huang
RF Conducted	RFCON01-NK	2024/08/09	28.6°C / 40%	Leon Huang
RF Conducted	RFCON01-NK	2024/08/10	27.9°C / 37%	Leon Huang
Radiated Emissions	3M02-NK	2024/08/05	29.1°C / 46%	Park Chen
Radiated Emissions	3M02-NK	2024/08/08	21.8°C / 46%	Park Chen
Radiated Emissions	3M02-NK	2024/11/19	19.8°C / 46%	Park Chen
AC Power Line Conducted Emission	CON02-NK	2024/08/14	24°C / 62%	Park Chen
AC Power Line Conducted Emission	CON02-NK	2024/11/14	25°C / 60%	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(150K~30MHz)	±3.12dB
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%



3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)(2024/08/06-2024/08/08)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Bilog Antenna	Schwarzbeck	VULB9168	369	2024/02/19	2025/02/18
Active Loop Antenna	Schwarzbeck	FMZB 1513	414	2024/01/16	2025/01/15
Horn Antenna	EMCO	3115	31589	2024/02/26	2025/02/25
Horn Antenna	EMCO	3116	31974	2023/10/16	2024/10/15
EMI Receiver	ROHDE & SCHWARZ	ESR 7	101906	2024/05/13	2025/05/12
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2023/08/15	2024/08/14
Preamplifier	Agilent	8449B	3008A01954	2024/03/01	2025/02/28
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2023/10/13	2024/10/12
Preamplifier	EM Electronics corp.	EM330	60659	2024/02/17	2025/02/16
Cable-6m(9k~300M)	N/A	EMC5D-BM-BM-6	130606	2024/03/13	2025/03/12
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2024/02/23	2025/02/22
Cable-0.5m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805443/4	2024/03/05	2025/03/04
Cable-3m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805796/4	2024/03/05	2025/03/04
Cable-8m(1G-26.5G)	WOKEN	WCBA-WCA203SM	CCE1374	2024/03/05	2025/03/04
Cable-1m(1G-40G)	HUBER SUHNER	HUBER SUHNER / SF102	804398/2	2023/10/12	2024/10/11
Cable-3m(1G-40G)	HUBER SUHNER	HUBER SUHNER / SF102	804619/2	2023/10/12	2024/10/11
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA
Highpass Filter	WOKEN	WFIL-H3000-18000F-03	WR377WC2B1	2023/08/17	2024/08/16
Notch Filter	Warison	WFIL-N5925-7125F-04	WRQ4BFWC4M1	2024/03/11	2025/03/10
Hipass Filter	Warison	WFIL-H7500-18000F	WRQ4BFWC2J1	2024/03/11	2025/03/10



Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)(2024/11/19)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Bilog Antenna	Schwarzbeck	VULB9168	369	2024/02/19	2025/02/18
Active Loop Antenna	Schwarzbeck	FMZB 1513	414	2024/01/16	2025/01/15
Horn Antenna	EMCO	3115	31589	2024/02/26	2025/02/25
Horn Antenna	EMCO	3116	31970	2024/02/23	2025/02/22
EMI Receiver	ROHDE & SCHWARZ	ESR 7	101906	2024/05/13	2025/05/12
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	101329	2024/07/16	2025/07/15
Preamplifier	Agilent	8449B	3008A01954	2024/03/01	2025/02/28
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2024/10/15	2025/10/14
Preamplifier	EM Electronics corp.	EM330	60659	2024/02/17	2025/02/16
Cable-4m(9k-3G)	EMEC	RG-223	18274M	2024/08/08	2025/08/07
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2024/02/23	2025/02/22
Cable-0.5m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805443/4	2024/03/05	2025/03/04
Cable-3m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805796/4	2024/03/05	2025/03/04
Cable-8m(1G-26.5G)	WOKEN	WCBA-WCA203SM	CCE1374	2024/03/05	2025/03/04
Cable-1m(1G-40G)	HUBER SUHNER	HUBER SUHNER / SF102	804398/2	2024/10/14	2025/10/13
Cable-3m(1G-40G)	HUBER SUHNER	HUBER SUHNER / SF102	804619/2	2024/10/14	2025/10/13
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA
Highpass Filter	Warison	WFIL-H3000-18000F-03	WRJ5CFWC2J1	2024/07/03	2025/07/02
Notch Filter	Warison	WFIL-N5925-7125F-04	WRQ4BFWC4M1	2024/03/11	2025/03/10
Hipass Filter	Warison	WFIL-H7500-18000F	WRQ4BFWC2J1	2024/03/11	2025/03/10

Test Item	RF Conducted				
Test Site	RFCON02-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2023/11/06	2024/11/05
Power Meter	Anritsu	ML2495A	1224005	2024/02/17	2025/02/16
Power Sensor	Anritsu	MA2411B	1207295	2024/02/17	2025/02/16
Attenuator	KEYSIGHT	8491B	MY39250703	2024/02/20	2025/02/19



Test Item	AC Power Line Conducted Emission				
Test Site	CON02-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	ROHDE & SCHWARZ	ESR 7	101906	2024/05/13	2025/05/12
Cable-4m(9k-3G)	EMEC	RG-223	18274M	2024/08/08	2025/08/07
Two-Line V-Network	ROHDE & SCHWARZ	ENV216	102185	2024/08/27	2025/08/26
E3	AUDIX	v8.2014-8-6	RK-000536	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	Dipole Antenna
Antenna Gain	2400-2500MHz: ANT A: -1.00dBi, ANT B: -1.00dBi

For Power directional gain= $G_{ant} = -1.00$ dBi

For PSD directional gain = 2.10 dBi

*MIMO type: Cyclic Delay Diversity (CDD) mode.



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

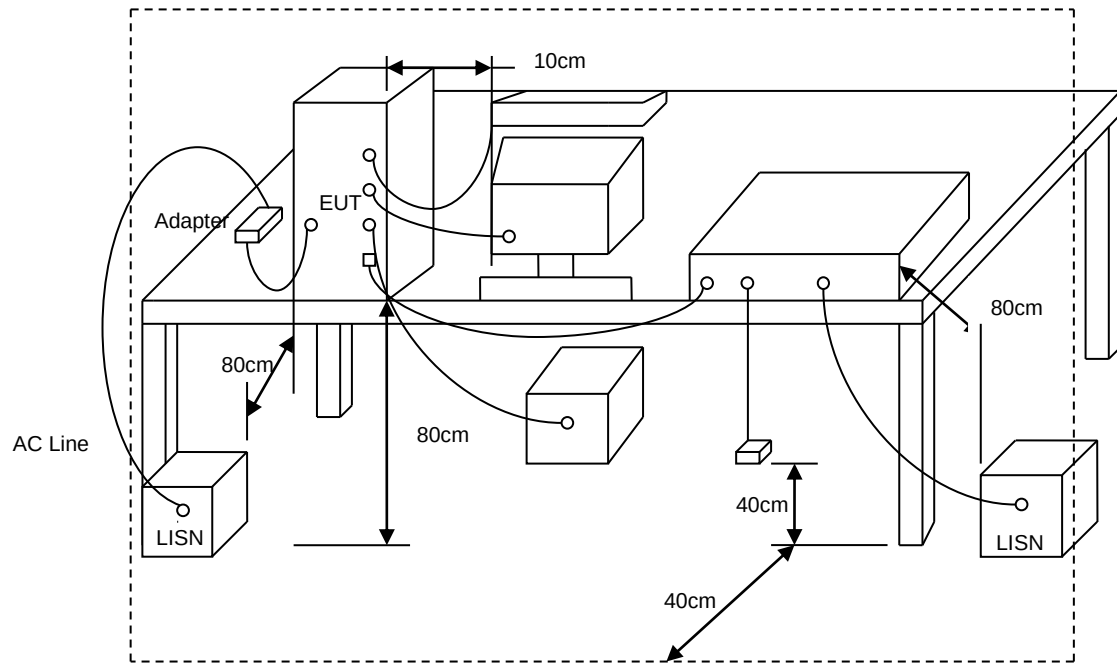
*Decreases with the logarithm of the frequency.

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.



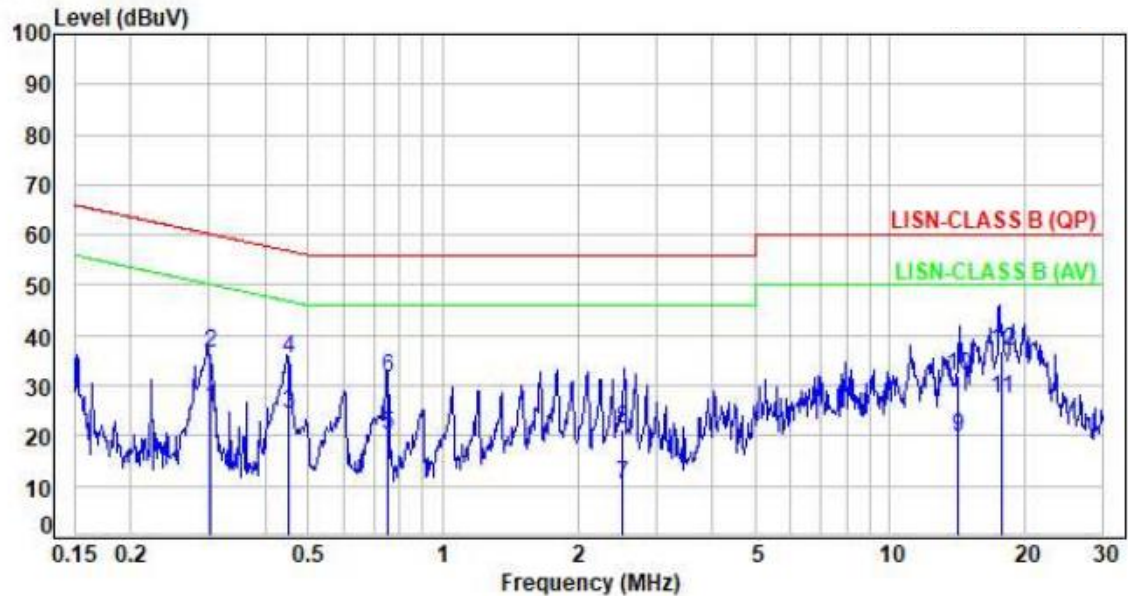
5.3 Typical Test Setup





5.4 Test Result and Data

Power	: AC 240V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 2		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3006	9.89	15.57	25.46	50.23	-24.77	Average	P
2	0.3006	9.89	26.48	36.37	60.23	-23.86	QP	P
3	0.4503	9.90	14.41	24.31	46.87	-22.56	Average	P
4	0.4503	9.90	25.29	35.19	56.87	-21.68	QP	P
5	0.7496	9.92	10.33	20.25	46.00	-25.75	Average	P
6	0.7496	9.92	21.65	31.57	56.00	-24.43	QP	P
7	2.5166	10.02	0.31	10.33	46.00	-35.67	Average	P
8	2.5166	10.02	11.11	21.13	56.00	-34.87	QP	P
9	14.2213	10.58	9.19	19.77	50.00	-30.23	Average	P
10	14.2213	10.58	21.38	31.96	60.00	-28.04	QP	P
11	17.7364	10.72	16.52	27.24	50.00	-22.76	Average	P
12	17.7364	10.72	26.05	36.77	60.00	-23.23	QP	P

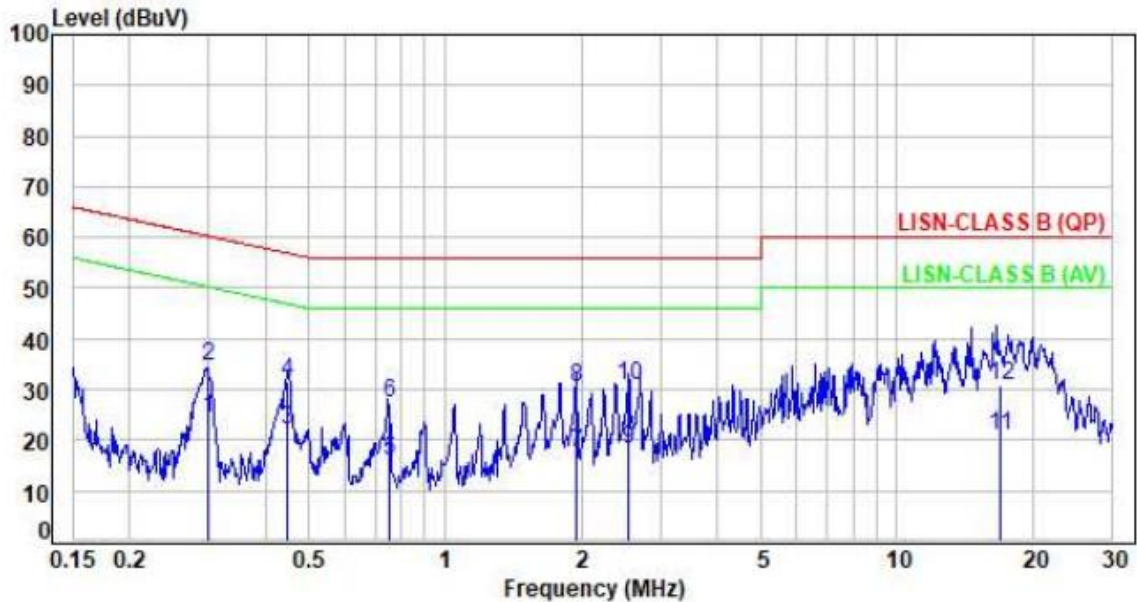
Note: Level=Reading+Factor

Margin=Level-Limit

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



Power	: AC 240V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 2		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2989	9.92	14.30	24.22	50.27	-26.05	Average	P
2	0.2989	9.92	24.68	34.60	60.27	-25.67	QP	P
3	0.4476	9.93	12.00	21.93	46.92	-24.99	Average	P
4	0.4476	9.93	21.76	31.69	56.92	-25.23	QP	P
5	0.7498	9.95	6.17	16.12	46.00	-29.88	Average	P
6	0.7498	9.95	17.49	27.44	56.00	-28.56	QP	P
7	1.9542	10.01	7.37	17.38	46.00	-28.62	Average	P
8	1.9542	10.01	20.35	30.36	56.00	-25.64	QP	P
9	2.5515	10.04	8.30	18.34	46.00	-27.66	Average	P
10	2.5515	10.04	20.66	30.70	56.00	-25.30	QP	P
11	16.9241	10.59	10.40	20.99	50.00	-29.01	Average	P
12	16.9241	10.59	20.24	30.83	60.00	-29.17	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.

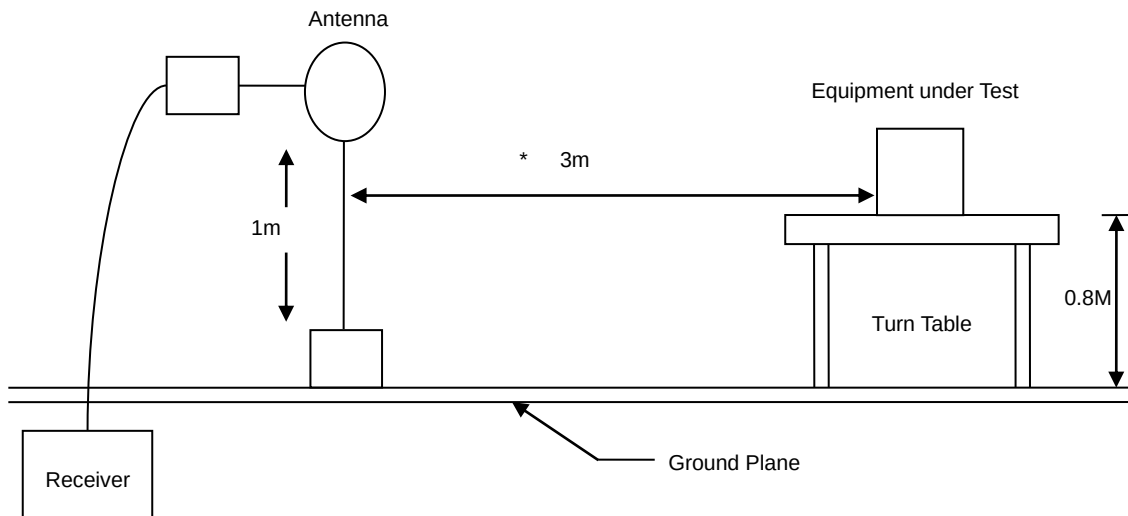
Note:

- 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.
(X-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.

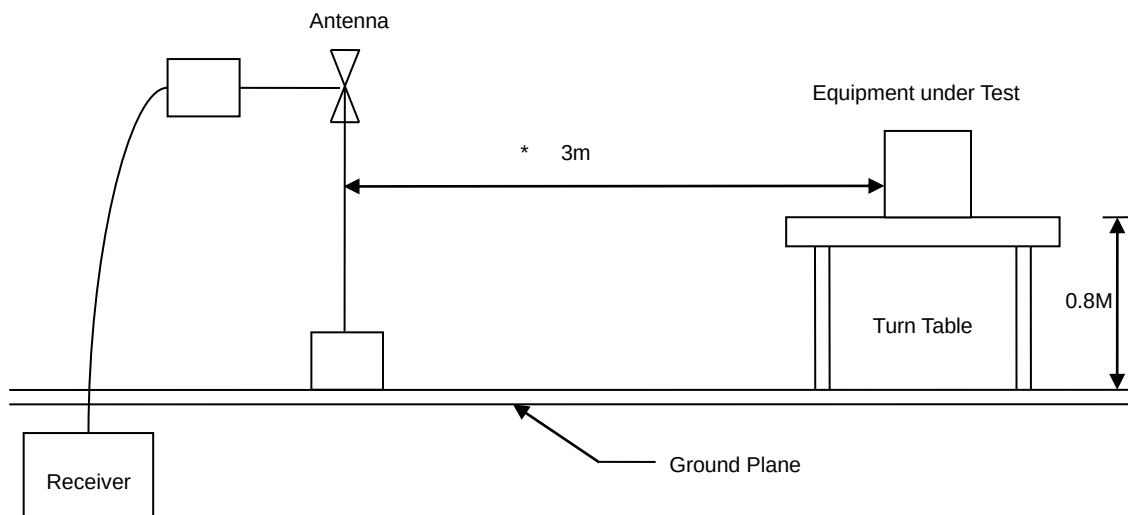


6.3 Typical Test Setup

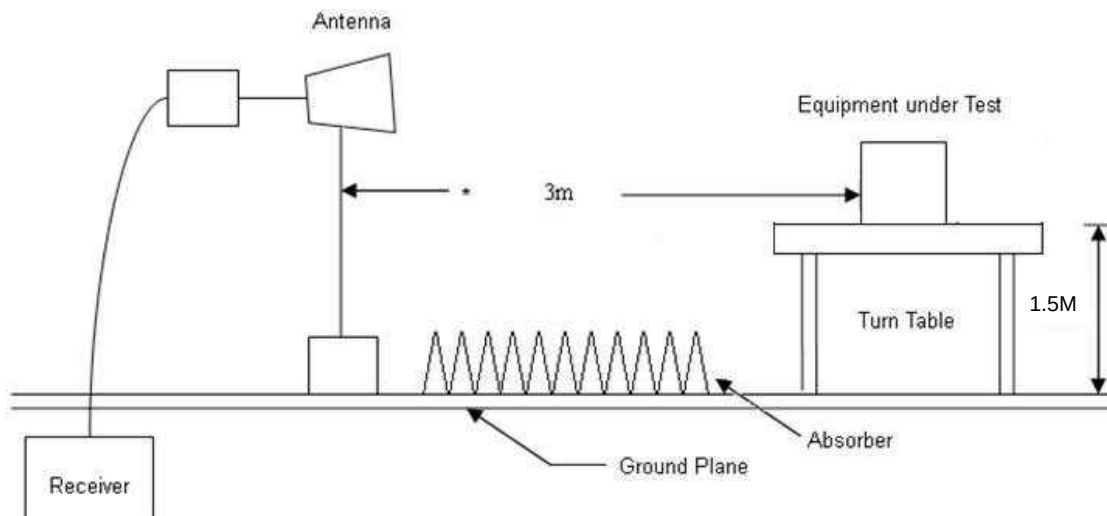
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



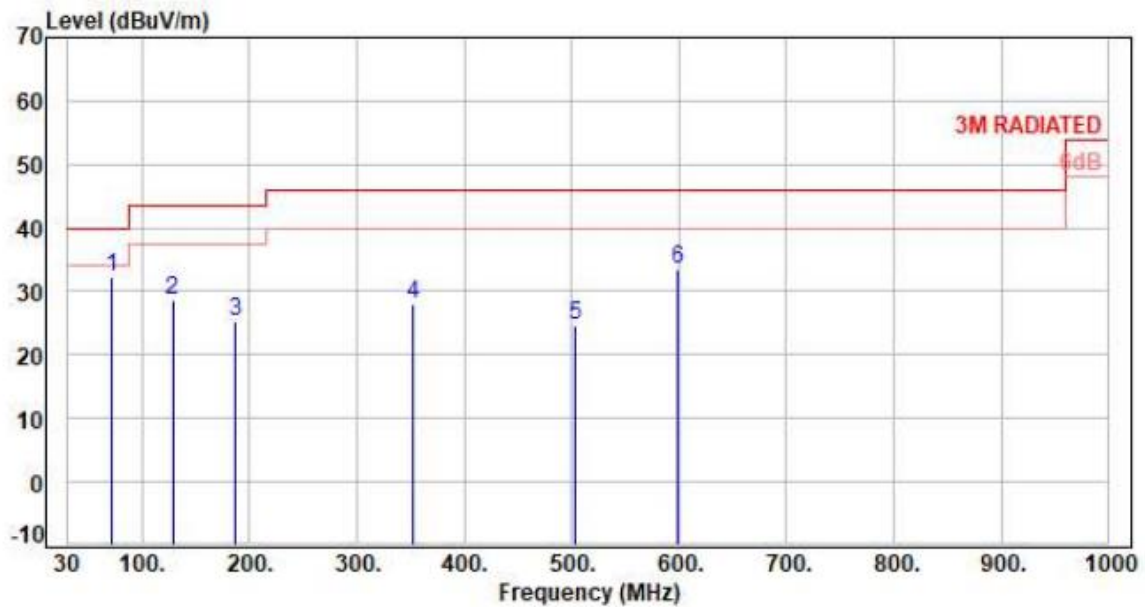


6.4 Test Result and Data (9KHz ~ 30MHz)

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

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

Power	: AC 240V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 2		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	71.73	-12.31	44.53	32.22	40.00	-7.78	Peak	100	0	P
2	128.44	-11.38	39.88	28.50	43.50	-15.00	Peak	100	0	P
3	186.22	-11.32	36.65	25.33	43.50	-18.17	Peak	100	0	P
4	353.14	-7.21	35.10	27.89	46.00	-18.11	Peak	100	0	P
5	502.94	-3.39	28.12	24.73	46.00	-21.27	Peak	100	0	P
6	599.24	-0.80	34.17	33.37	46.00	-12.63	Peak	100	0	P

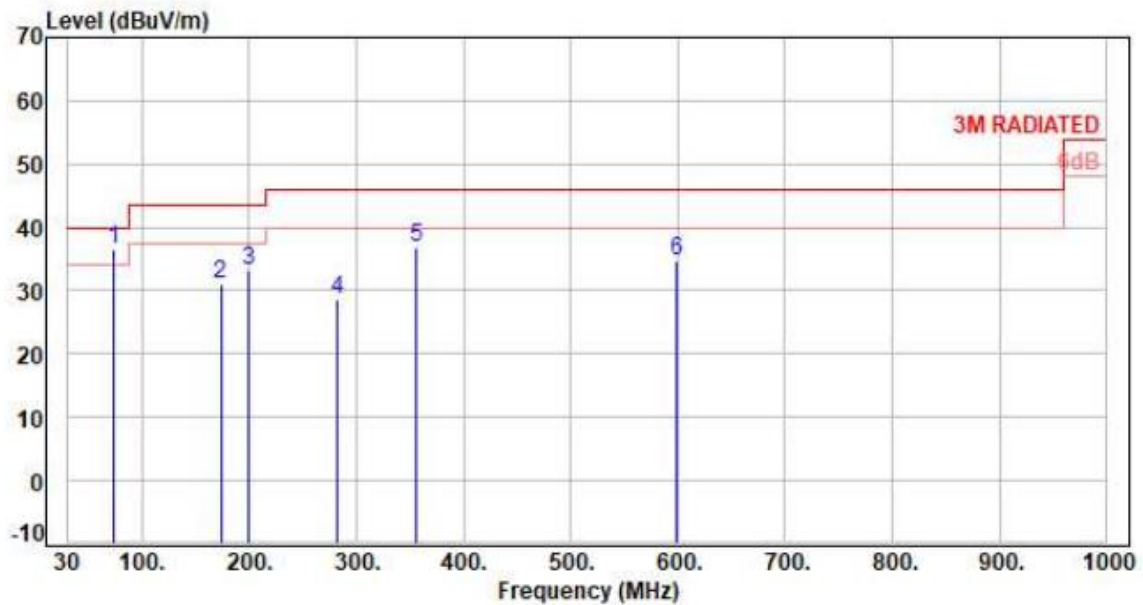
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 240V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 2		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	72.80	-12.71	49.16	36.45	40.00	-3.55	Peak	400	0	P
2	173.38	-10.05	41.06	31.01	43.50	-12.49	Peak	400	0	P
3	199.06	-12.03	45.33	33.30	43.50	-10.20	Peak	400	0	P
4	282.52	-9.08	37.84	28.76	46.00	-17.24	Peak	400	0	P
5	355.28	-7.15	43.97	36.82	46.00	-9.18	Peak	400	0	P
6	599.24	-0.80	35.50	34.70	46.00	-11.30	Peak	400	0	P

Note: Level=Reading+Factor

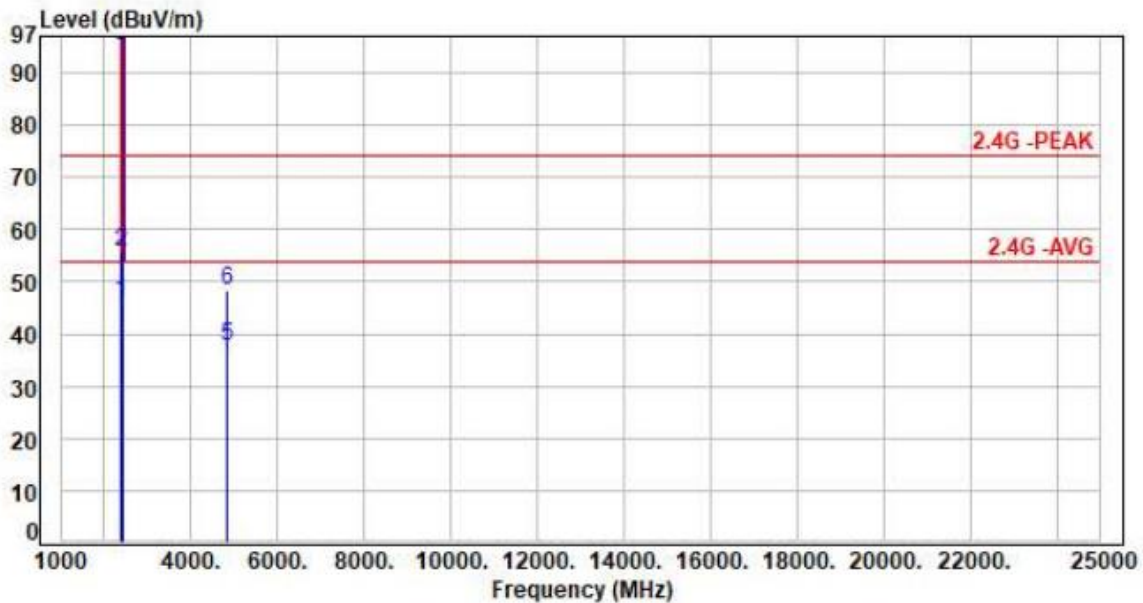
Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



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

Power	:	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	-2.33	48.45	46.12	54.00	-7.88	Average	370	271	P
2	2390.00	-2.33	57.90	55.57	74.00	-18.43	Peak	370	271	P
3	2412.00	-2.29	97.51	95.22	200.00	-104.78	Average	370	271	P
4	2412.00	-2.29	100.20	97.91	200.00	-102.09	Peak	370	271	P
5	4824.00	5.98	31.50	37.48	54.00	-16.52	Average	138	84	P
6	4824.00	5.98	42.40	48.38	74.00	-25.62	Peak	138	84	P

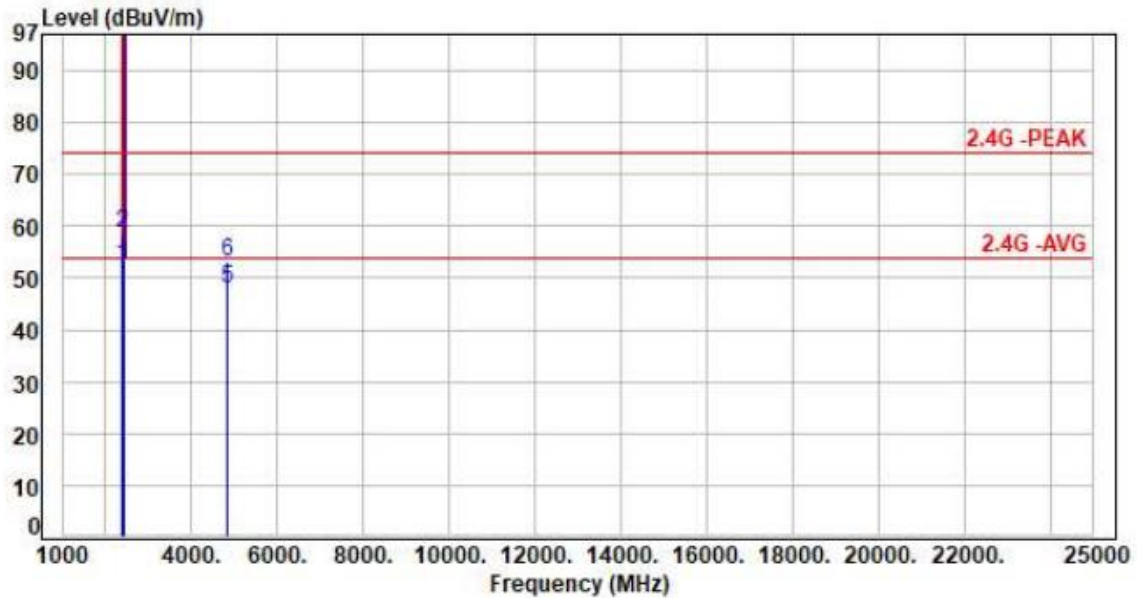
Note: Level=Reading+Factor

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	-2.33	54.60	52.27	54.00	-1.73	Average	100	206	P
2	2390.00	-2.33	60.88	58.55	74.00	-15.45	Peak	100	206	P
3	2412.00	-2.29	105.71	103.42	200.00	-96.58	Average	100	206	P
4	2412.00	-2.29	108.70	106.41	200.00	-93.59	Peak	100	206	P
5	4824.00	5.98	41.86	47.84	54.00	-6.16	Average	101	144	P
6	4824.00	5.98	47.15	53.13	74.00	-20.87	Peak	101	144	P

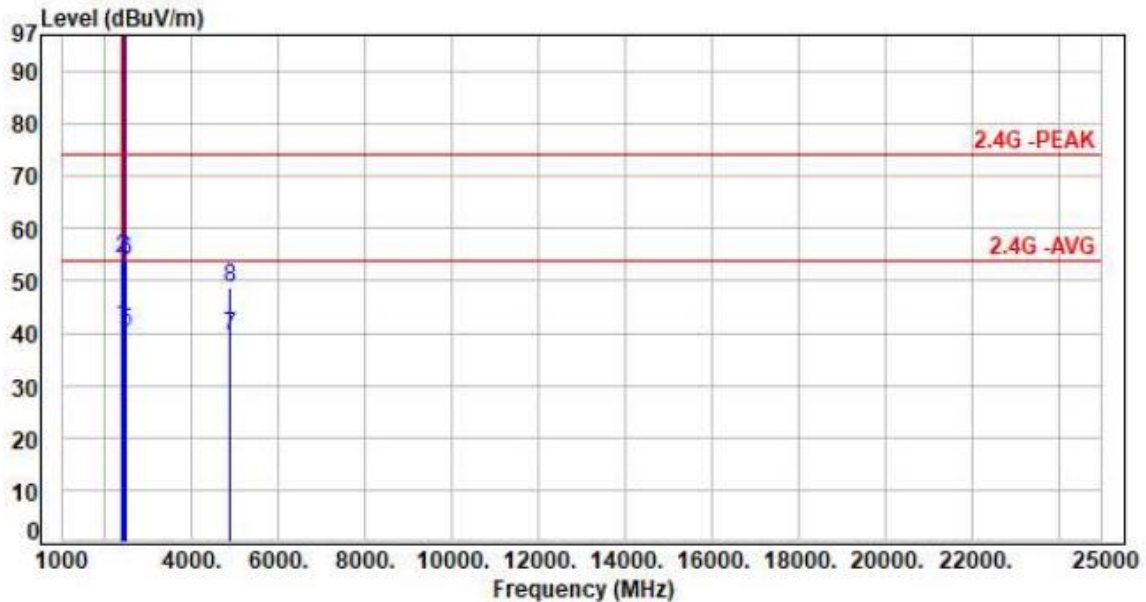
Note: Level=Reading+Factor

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	-2.33	43.63	41.30	54.00	-12.70	Average	361	253	P
2	2390.00	-2.33	56.48	54.15	74.00	-19.85	Peak	361	253	P
3	2437.00	-2.17	98.35	96.18	200.00	-103.82	Average	361	253	P
4	2437.00	-2.17	101.39	99.22	200.00	-100.78	Peak	361	253	P
5	2483.50	-2.01	42.23	40.22	54.00	-13.78	Average	361	253	P
6	2483.50	-2.01	55.94	53.93	74.00	-20.07	Peak	361	253	P
7	4874.00	6.13	33.22	39.35	54.00	-14.65	Average	110	83	P
8	4874.00	6.13	42.51	48.64	74.00	-25.36	Peak	110	83	P

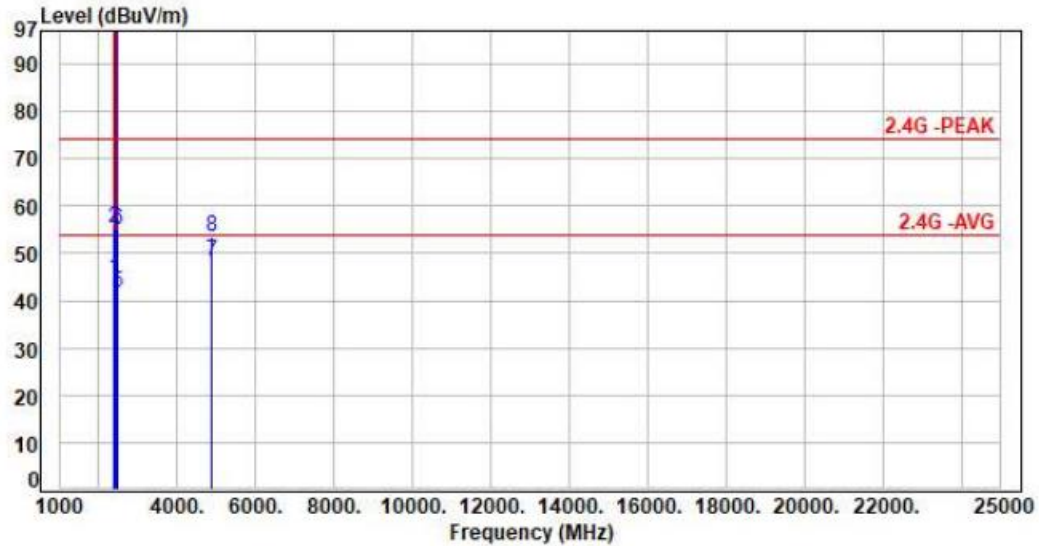
Note: Level=Reading+Factor

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	-2.33	47.02	44.69	54.00	-9.31	Average	100	208	P
2	2390.00	-2.33	57.73	55.40	74.00	-18.60	Peak	100	208	P
3	2437.00	-2.17	106.22	104.05	200.00	-95.95	Average	100	208	P
4	2437.00	-2.17	109.29	107.12	200.00	-92.88	Peak	100	208	P
5	2483.50	-2.01	43.86	41.85	54.00	-12.15	Average	100	208	P
6	2483.50	-2.01	57.12	55.11	74.00	-18.89	Peak	100	208	P
7	4874.00	6.13	42.23	48.36	54.00	-5.64	Average	100	147	P
8	4874.00	6.13	47.17	53.30	74.00	-20.70	Peak	100	147	P

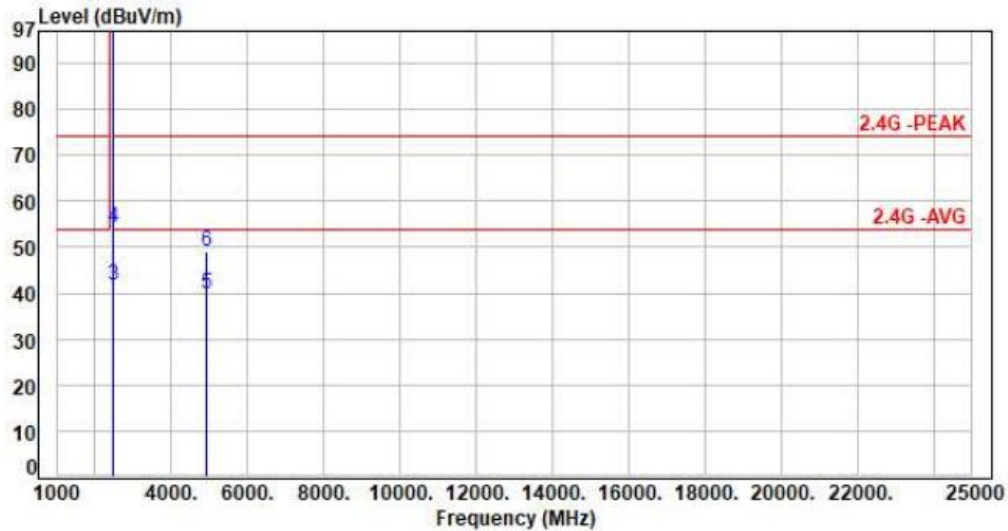
Note: Level=Reading+Factor

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	-2.04	98.04	96.00	200.00	-104.00	Average	357	243	P
2	2462.00	-2.04	100.94	98.90	200.00	-101.10	Peak	357	243	P
3	2483.50	-2.01	43.80	41.79	54.00	-12.21	Average	357	243	P
4	2483.50	-2.01	56.17	54.16	74.00	-19.84	Peak	357	243	P
5	4924.00	6.29	33.48	39.77	54.00	-14.23	Average	100	82	P
6	4924.00	6.29	42.84	49.13	74.00	-24.87	Peak	100	82	P

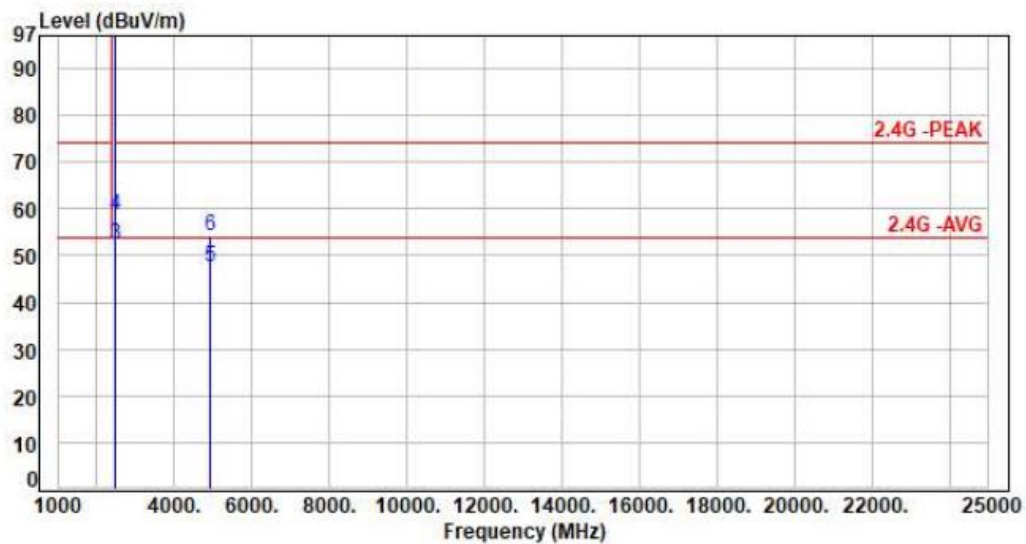
Note: Level=Reading+Factor

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	-2.04	107.15	105.11	200.00	-94.89	Average	125	206	P
2	2462.00	-2.04	110.25	108.21	200.00	-91.79	Peak	125	206	P
3	2483.50	-2.01	54.20	52.19	54.00	-1.81	Average	125	206	P
4	2483.50	-2.01	60.54	58.53	74.00	-15.47	Peak	125	206	P
5	4924.00	6.29	41.23	47.52	54.00	-6.48	Average	100	151	P
6	4924.00	6.29	47.84	54.13	74.00	-19.87	Peak	100	151	P

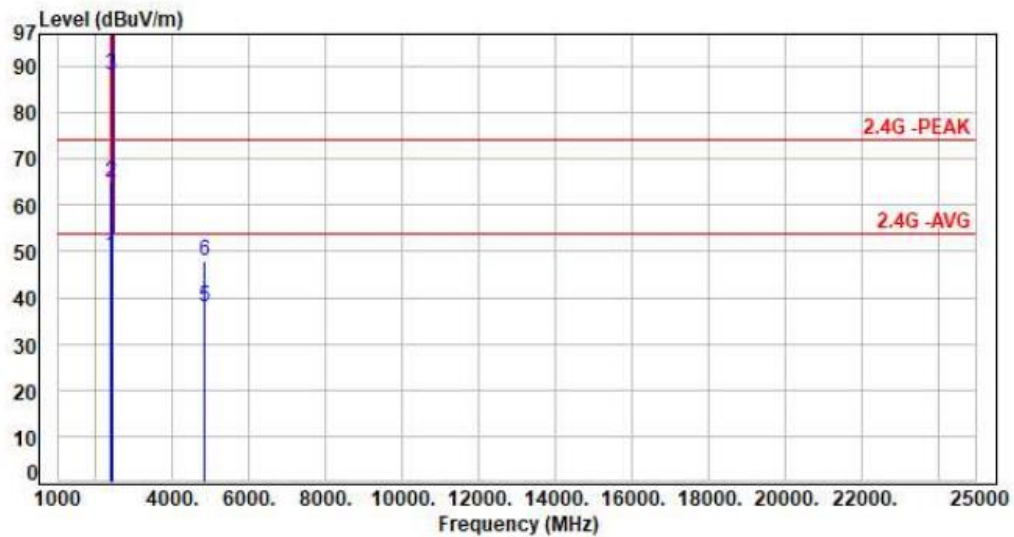
Note: Level=Reading+Factor

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	-2.33	51.45	49.12	54.00	-4.88	Average	321	260	P
2	2390.00	-2.33	67.17	64.84	74.00	-9.16	Peak	321	260	P
3	2412.00	-2.29	90.42	88.13	200.00	-111.87	Average	321	260	P
4	2412.00	-2.29	100.15	97.86	200.00	-102.14	Peak	321	260	P
5	4824.00	5.98	32.17	38.15	54.00	-15.85	Average	100	85	P
6	4824.00	5.98	41.81	47.79	74.00	-26.21	Peak	100	85	P

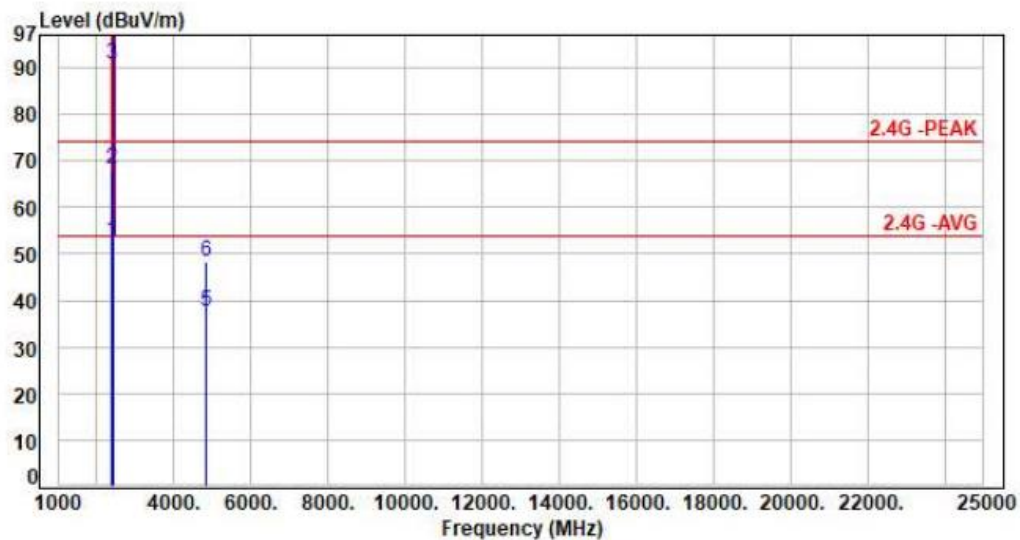
Note: Level=Reading+Factor

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	-2.33	55.16	52.83	54.00	-1.17	Average	100	206	P
2	2390.00	-2.33	70.70	68.37	74.00	-5.63	Peak	100	206	P
3	2412.00	-2.29	93.10	90.81	200.00	-109.19	Average	100	206	P
4	2412.00	-2.29	106.45	104.16	200.00	-95.84	Peak	100	206	P
5	4824.00	5.98	31.65	37.63	54.00	-16.37	Average	100	148	P
6	4824.00	5.98	42.29	48.27	74.00	-25.73	Peak	100	148	P

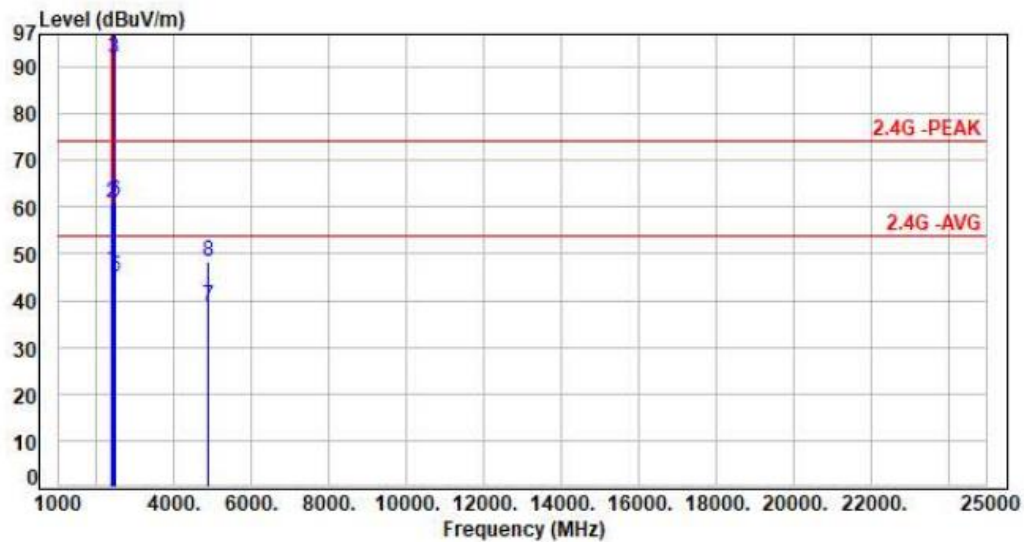
Note: Level=Reading+Factor

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	-2.33	48.86	46.53	54.00	-7.47	Average	360	253	P
2	2390.00	-2.33	63.05	60.72	74.00	-13.28	Peak	360	253	P
3	2437.00	-2.17	93.95	91.78	200.00	-108.22	Average	360	253	P
4	2437.00	-2.17	104.56	102.39	200.00	-97.61	Peak	360	253	P
5	2483.50	-2.01	46.94	44.93	54.00	-9.07	Average	360	253	P
6	2483.50	-2.01	63.34	61.33	74.00	-12.67	Peak	360	253	P
7	4874.00	6.13	32.49	38.62	54.00	-15.38	Average	100	81	P
8	4874.00	6.13	42.14	48.27	74.00	-25.73	Peak	100	81	P

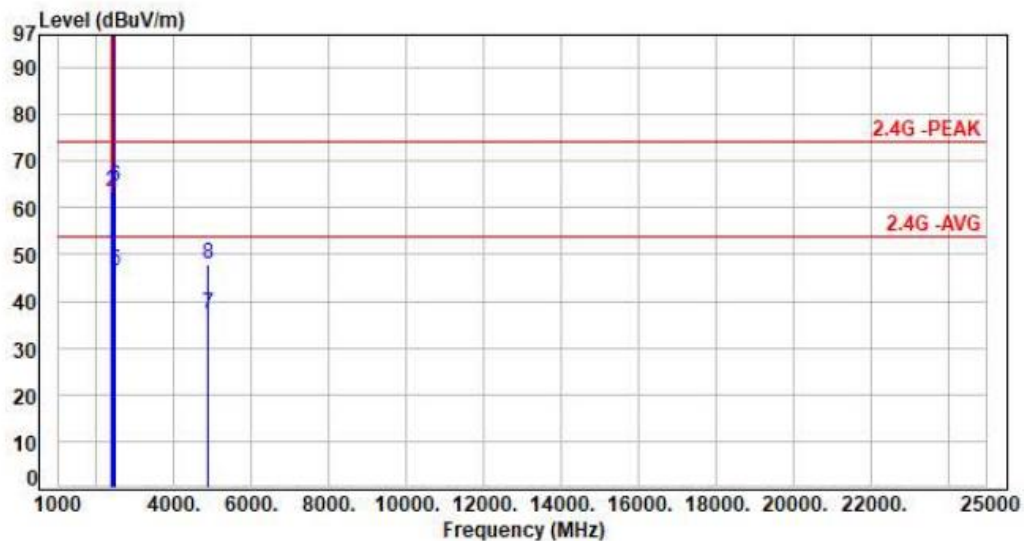
Note: Level=Reading+Factor

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	-2.33	52.53	50.20	54.00	-3.80	Average	264	198	P
2	2390.00	-2.33	65.95	63.62	74.00	-10.38	Peak	264	198	P
3	2437.00	-2.17	98.49	96.32	200.00	-103.68	Average	264	198	P
4	2437.00	-2.17	110.44	108.27	200.00	-91.73	Peak	264	198	P
5	2483.50	-2.01	48.59	46.58	54.00	-7.42	Average	264	198	P
6	2483.50	-2.01	66.54	64.53	74.00	-9.47	Peak	264	198	P
7	4874.00	6.13	31.07	37.20	54.00	-16.80	Average	100	146	P
8	4874.00	6.13	41.96	48.09	74.00	-25.91	Peak	100	146	P

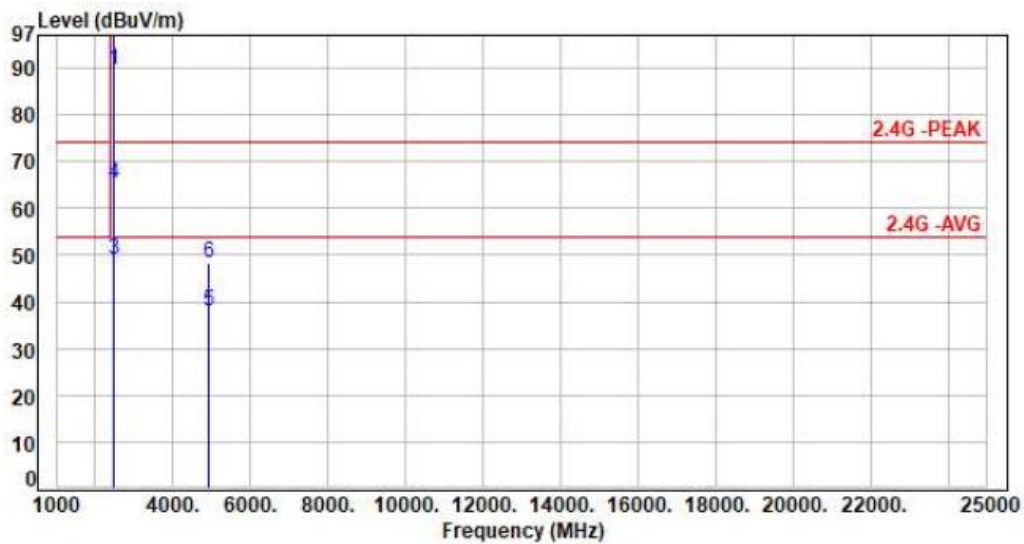
Note: Level=Reading+Factor

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	-2.04	91.78	89.74	200.00	-110.26	Average	344	256	P
2	2462.00	-2.04	101.46	99.42	200.00	-100.58	Peak	344	256	P
3	2483.50	-2.01	51.05	49.04	54.00	-4.96	Average	344	256	P
4	2483.50	-2.01	67.11	65.10	74.00	-8.90	Peak	344	256	P
5	4924.00	6.29	31.57	37.86	54.00	-16.14	Average	100	83	P
6	4924.00	6.29	42.07	48.36	74.00	-25.64	Peak	100	83	P

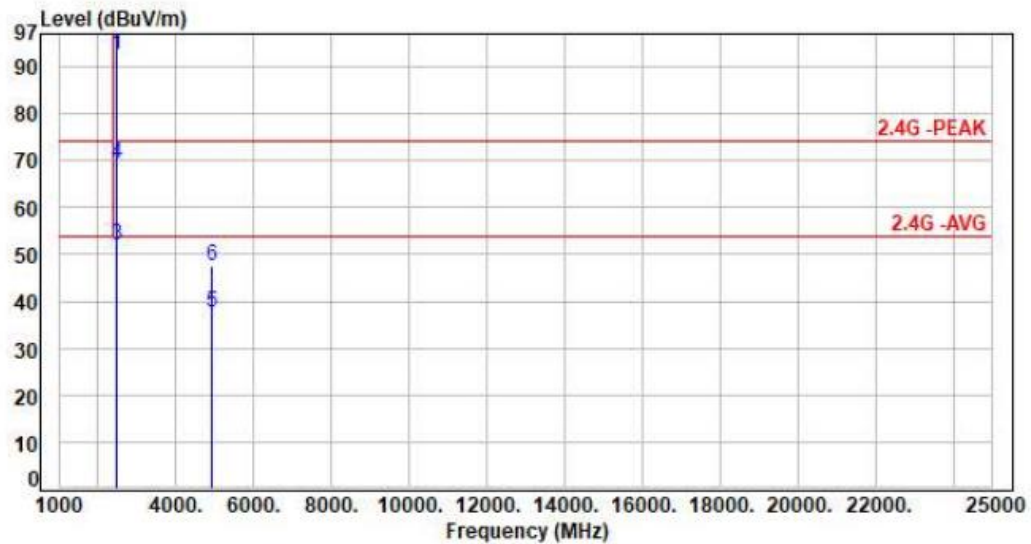
Note: Level=Reading+Factor

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	-2.04	94.64	92.60	200.00	-107.40	Average	285	207	P
2	2462.00	-2.04	108.36	106.32	200.00	-93.68	Peak	285	207	P
3	2483.50	-2.01	54.05	52.04	54.00	-1.96	Average	285	207	P
4	2483.50	-2.01	71.32	69.31	74.00	-4.69	Peak	285	207	P
5	4924.00	6.29	31.45	37.74	54.00	-16.26	Average	100	147	P
6	4924.00	6.29	41.39	47.68	74.00	-26.32	Peak	100	147	P

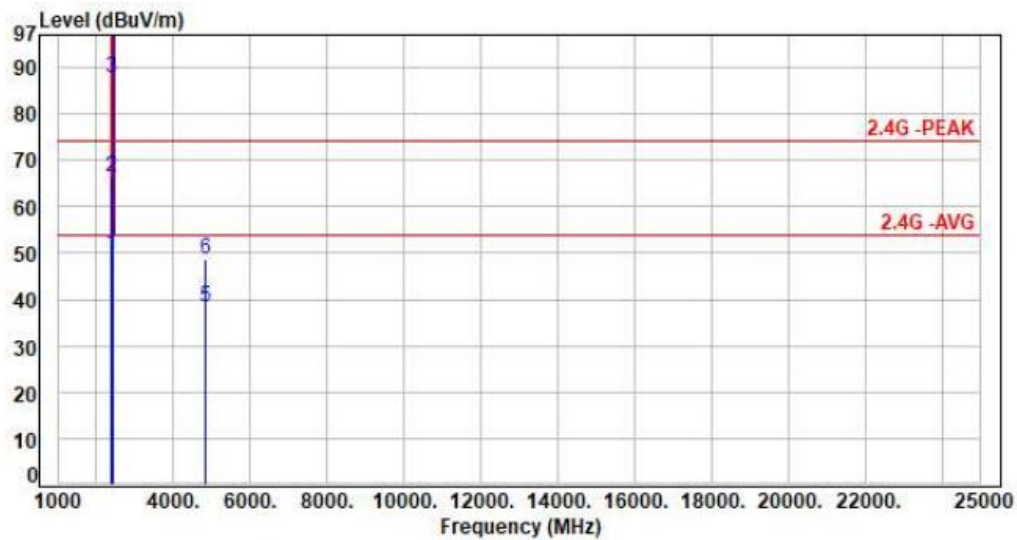
Note: Level=Reading+Factor

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	-2.33	52.08	49.75	54.00	-4.25	Average	322	260	P
2	2390.00	-2.33	68.70	66.37	74.00	-7.63	Peak	322	260	P
3	2412.00	-2.29	90.13	87.84	200.00	-112.16	Average	322	260	P
4	2412.00	-2.29	100.27	97.98	200.00	-102.02	Peak	322	260	P
5	4824.00	5.98	32.34	38.32	54.00	-15.68	Average	100	84	P
6	4824.00	5.98	42.66	48.64	74.00	-25.36	Peak	100	84	P

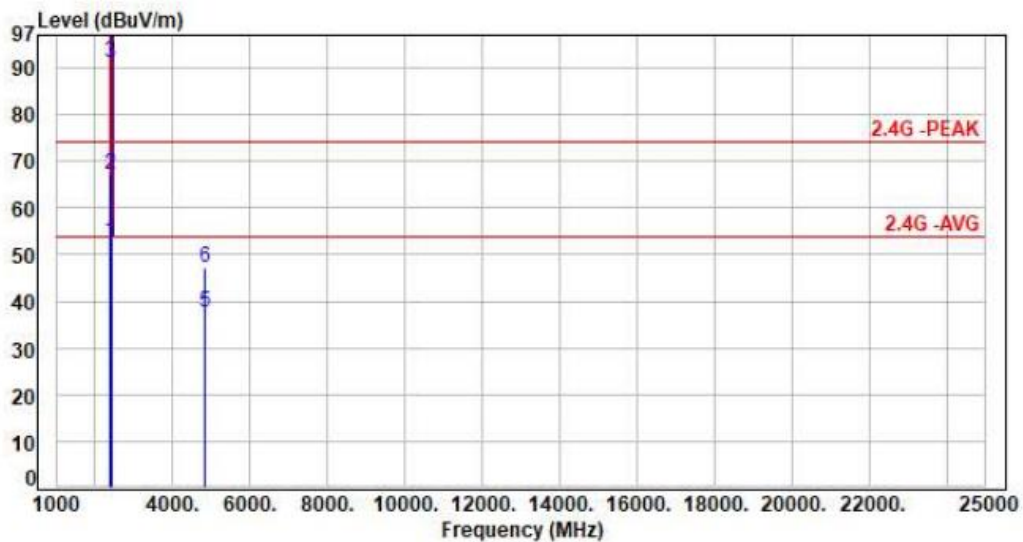
Note: Level=Reading+Factor

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	-2.33	54.93	52.60	54.00	-1.40	Average	297	207	P
2	2390.00	-2.33	69.42	67.09	74.00	-6.91	Peak	297	207	P
3	2412.00	-2.29	93.25	90.96	200.00	-109.04	Average	297	207	P
4	2412.00	-2.29	104.83	102.54	200.00	-97.46	Peak	297	207	P
5	4824.00	5.98	31.51	37.49	54.00	-16.51	Average	100	150	P
6	4824.00	5.98	41.38	47.36	74.00	-26.64	Peak	100	150	P

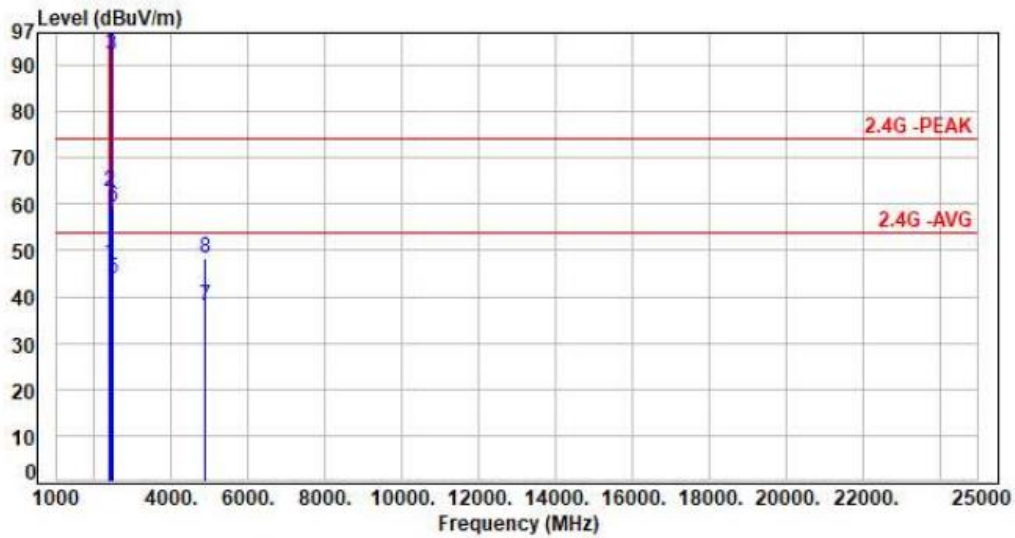
Note: Level=Reading+Factor

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	-2.33	49.57	47.24	54.00	-6.76	Average	339	241	P
2	2390.00	-2.33	64.86	62.53	74.00	-11.47	Peak	339	241	P
3	2437.00	-2.17	94.25	92.08	200.00	-107.92	Average	339	241	P
4	2437.00	-2.17	103.69	101.52	200.00	-98.48	Peak	339	241	P
5	2483.50	-2.01	46.03	44.02	54.00	-9.98	Average	339	241	P
6	2483.50	-2.01	61.46	59.45	74.00	-14.55	Peak	339	241	P
7	4874.00	6.13	31.68	37.81	54.00	-16.19	Average	100	82	P
8	4874.00	6.13	42.07	48.20	74.00	-25.80	Peak	100	82	P

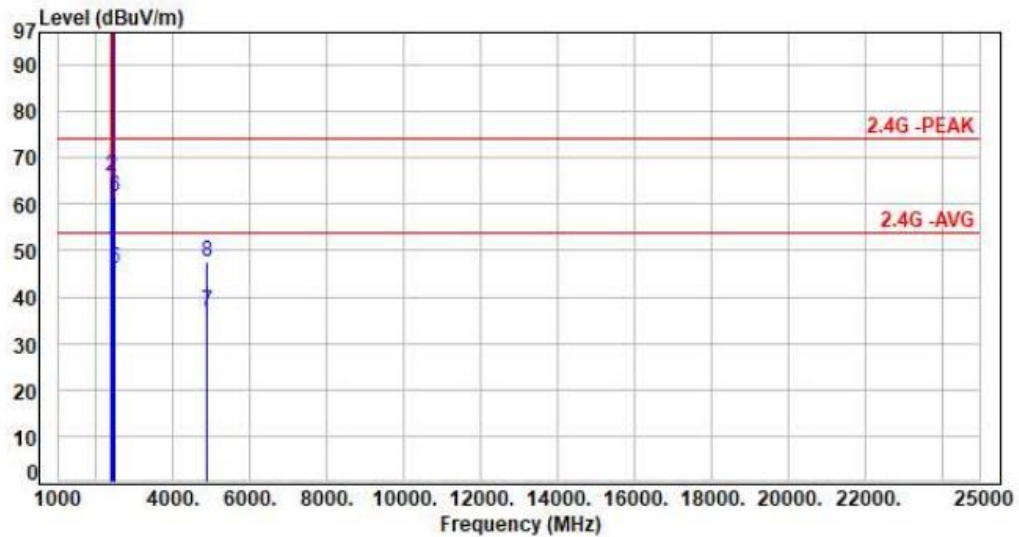
Note: Level=Reading+Factor

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	-2.33	52.40	50.07	54.00	-3.93	Average	263	208	P
2	2390.00	-2.33	68.35	66.02	74.00	-7.98	Peak	263	208	P
3	2437.00	-2.17	97.71	95.54	200.00	-104.46	Average	263	208	P
4	2437.00	-2.17	110.42	108.25	200.00	-91.75	Peak	263	208	P
5	2483.50	-2.01	48.08	46.07	54.00	-7.93	Average	263	208	P
6	2483.50	-2.01	63.70	61.69	74.00	-12.31	Peak	263	208	P
7	4874.00	6.13	30.82	36.95	54.00	-17.05	Average	100	151	P
8	4874.00	6.13	41.58	47.71	74.00	-26.29	Peak	100	151	P

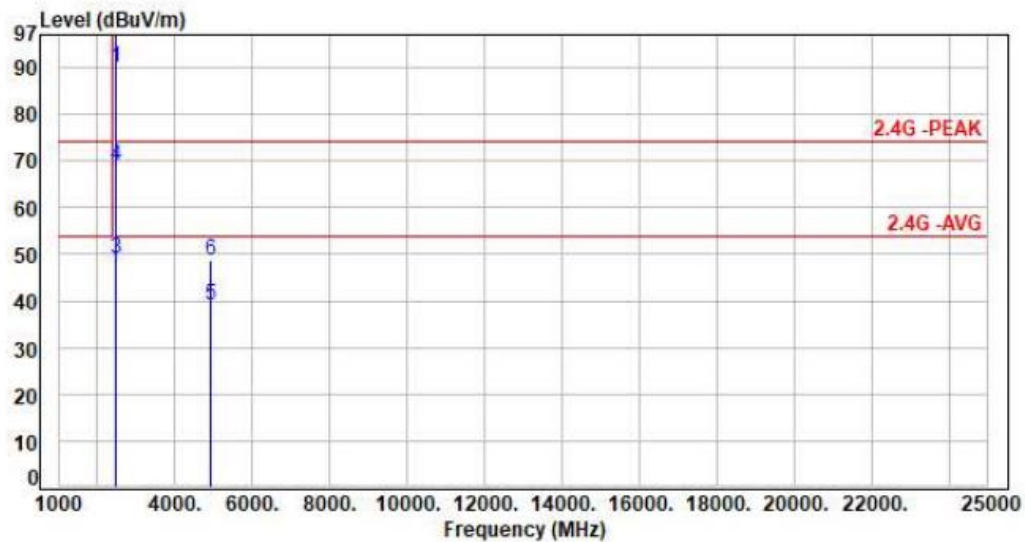
Note: Level=Reading+Factor

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	-2.04	91.92	89.88	200.00	-110.12	Average	342	255	P
2	2462.00	-2.04	102.20	100.16	200.00	-99.84	Peak	342	255	P
3	2483.50	-2.01	51.03	49.02	54.00	-4.98	Average	342	255	P
4	2483.50	-2.01	70.81	68.80	74.00	-5.20	Peak	342	255	P
5	4924.00	6.29	32.72	39.01	54.00	-14.99	Average	100	83	P
6	4924.00	6.29	42.37	48.66	74.00	-25.34	Peak	100	83	P

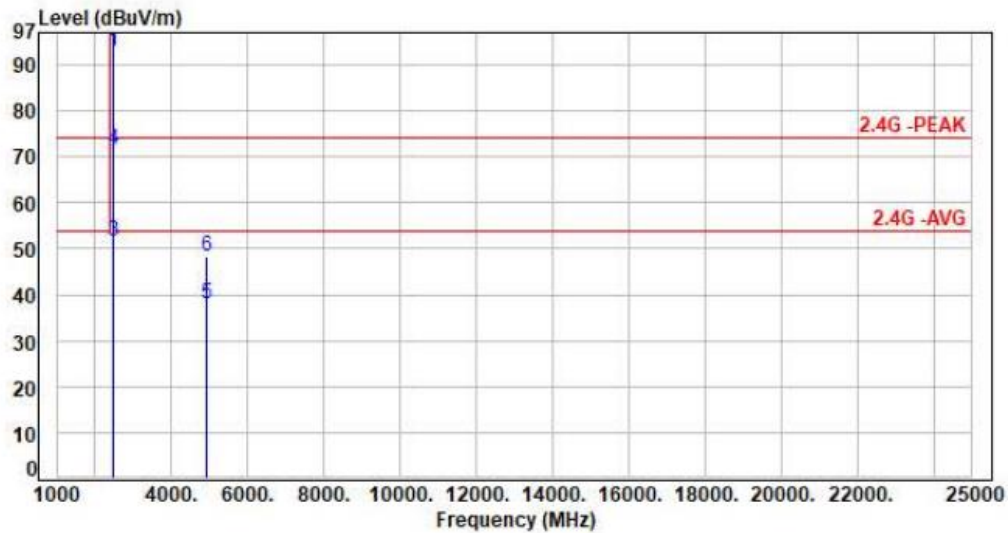
Note: Level=Reading+Factor

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	-2.04	95.16	93.12	200.00	-106.88	Average	256	204	P
2	2462.00	-2.04	108.93	106.89	200.00	-93.11	Peak	256	204	P
3	2483.50	-2.01	53.47	51.46	54.00	-2.54	Average	256	204	P
4	2483.50	-2.01	73.50	71.49	74.00	-2.51	Peak	256	204	P
5	4924.00	6.29	31.56	37.85	54.00	-16.15	Average	100	146	P
6	4924.00	6.29	41.84	48.13	74.00	-25.87	Peak	100	146	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

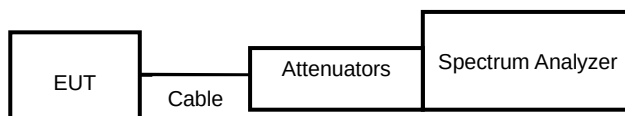
Below -30dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

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 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.

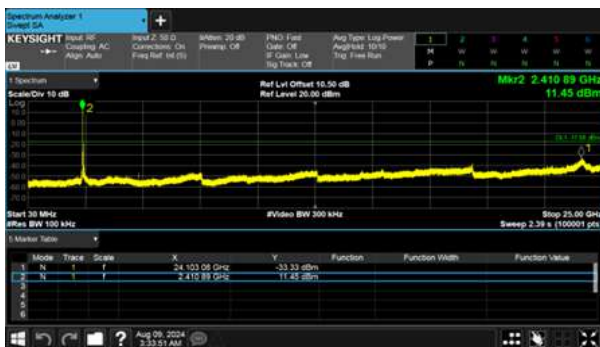
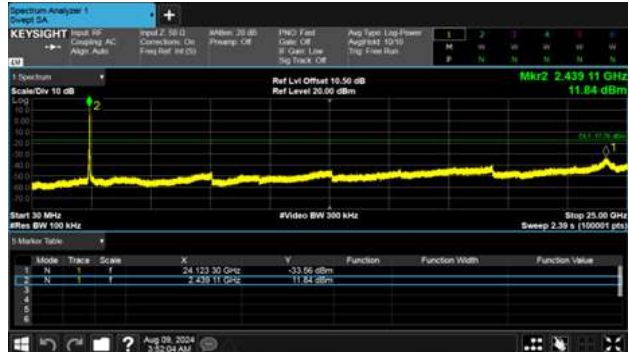


ANT A

Modulation Type: 802.11b, CH 01



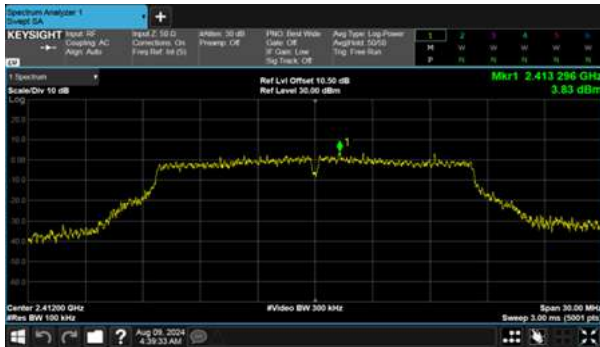
Modulation Type: 802.11b, CH 06



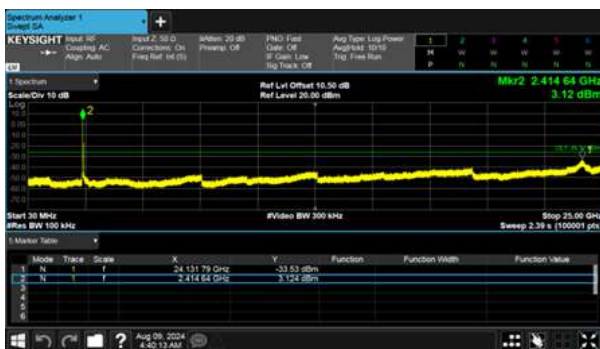
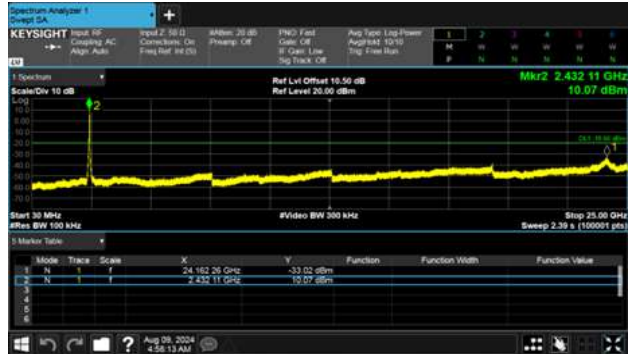
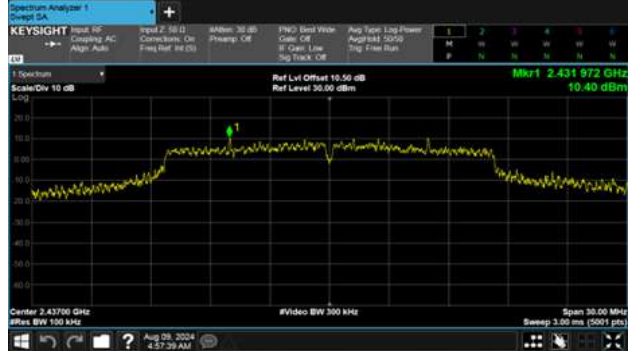


ANT A

Modulation Type: 802.11g, CH 01



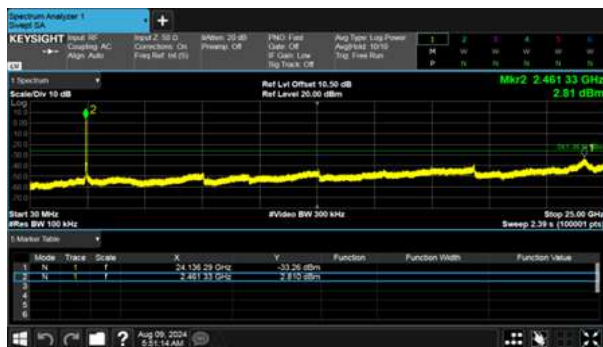
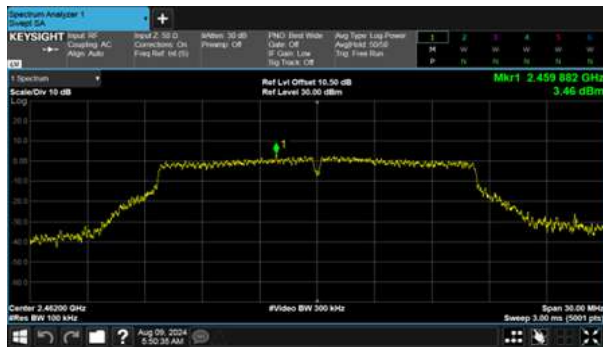
Modulation Type: 802.11g, CH 06





ANT A

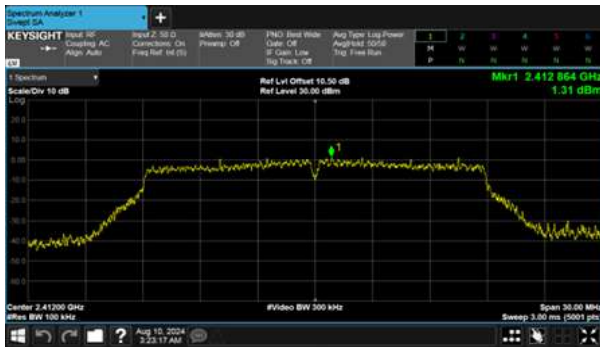
Modulation Type: 802.11g, CH 11



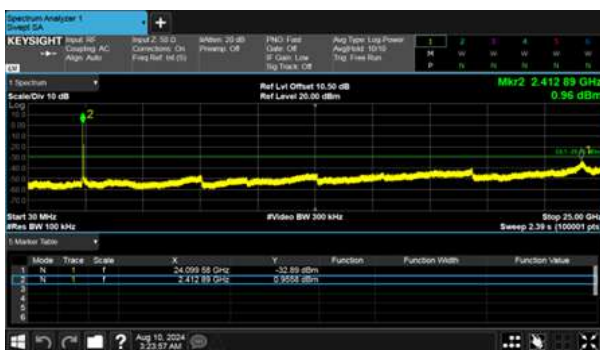
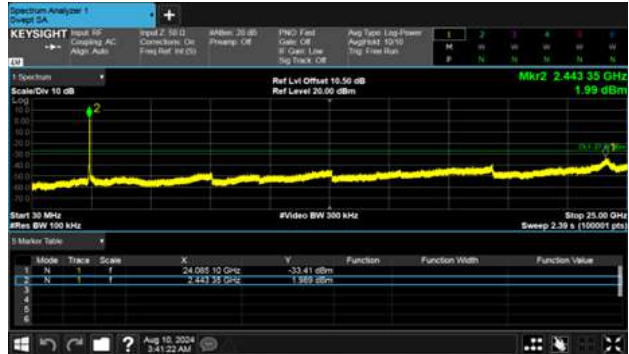
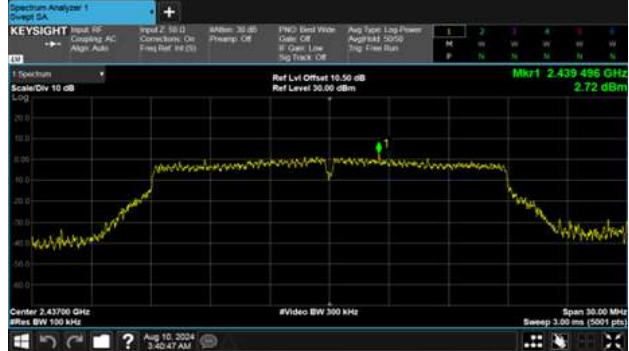


ANT A

Modulation Type: 802.11n HT20, CH01



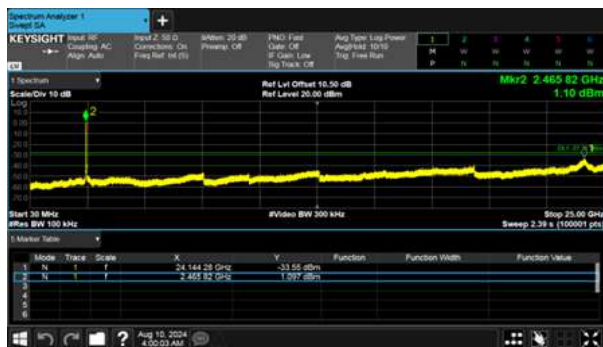
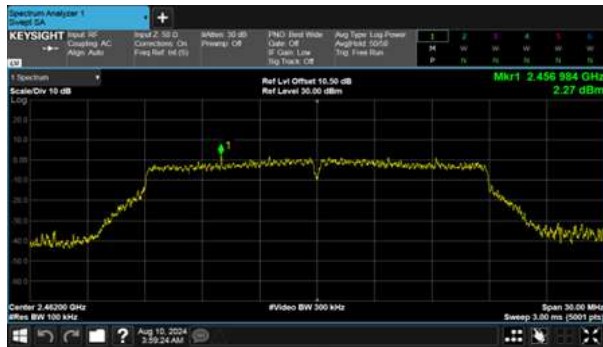
Modulation Type: 802.11n HT20, CH06





ANT A

Modulation Type: 802.11n HT20, CH11



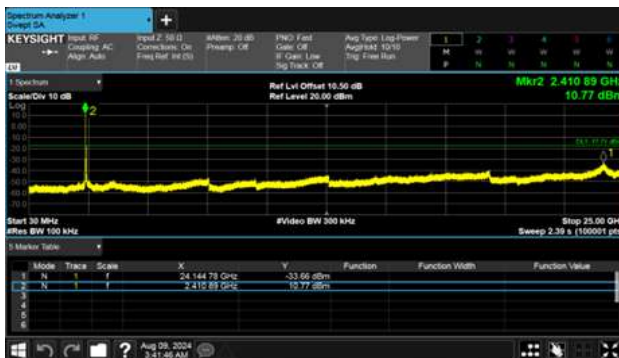
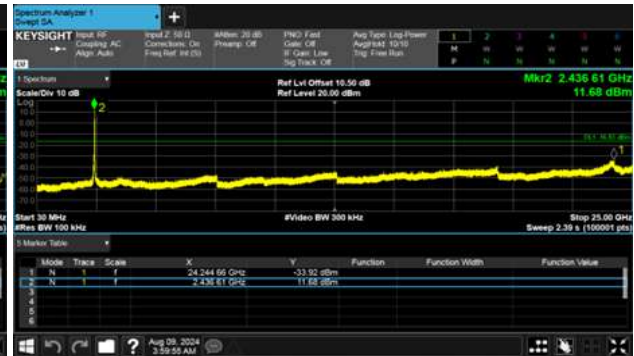


ANT B

Modulation Type: 802.11b, CH 01



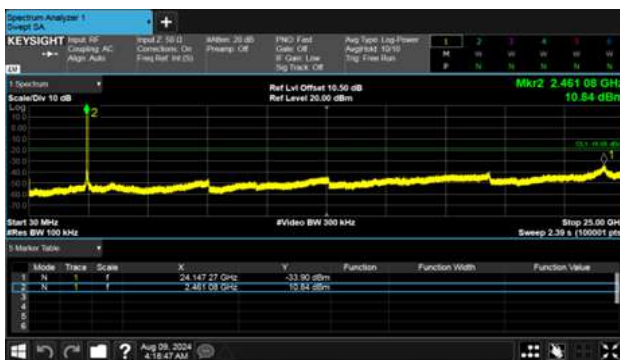
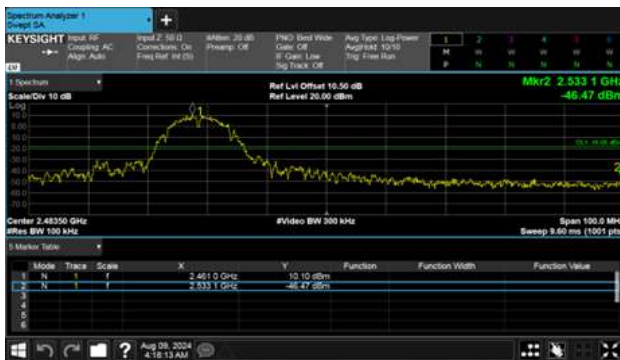
Modulation Type: 802.11b, CH 06





ANT B

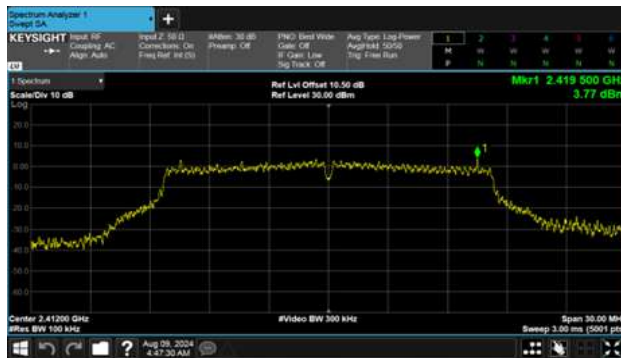
Modulation Type: 802.11b, CH 11



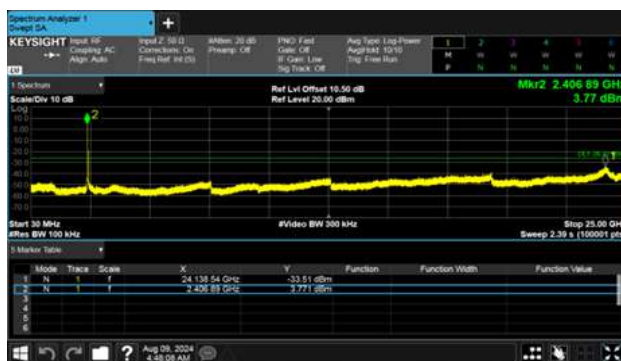
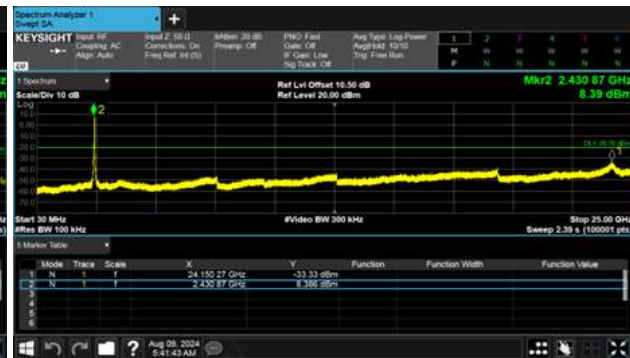
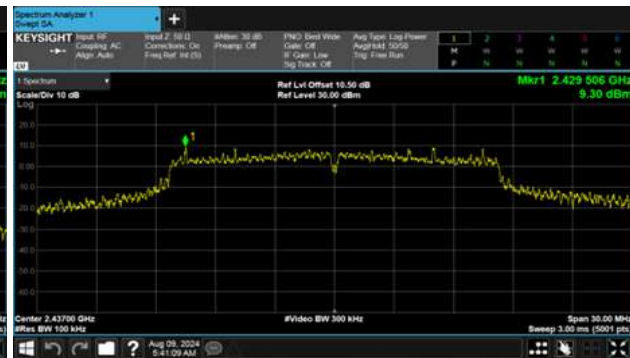


ANT B

Modulation Type: 802.11g, CH 01



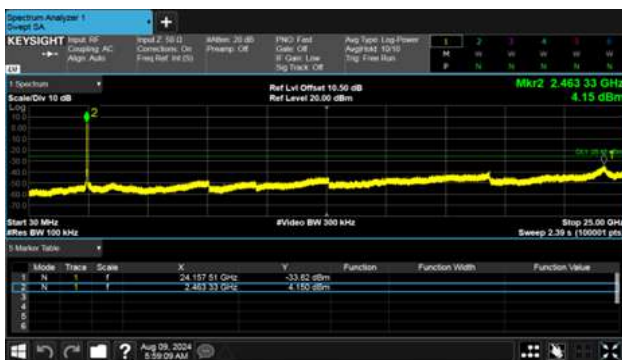
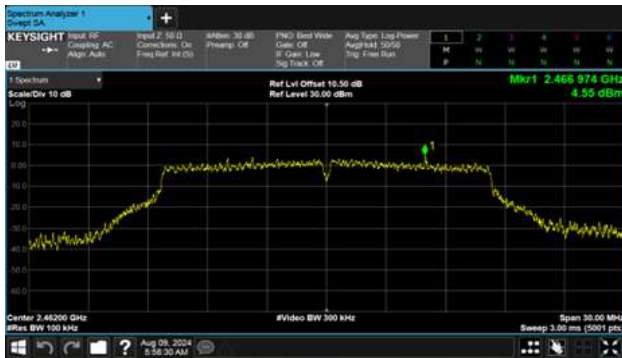
Modulation Type: 802.11g, CH 06





ANT B

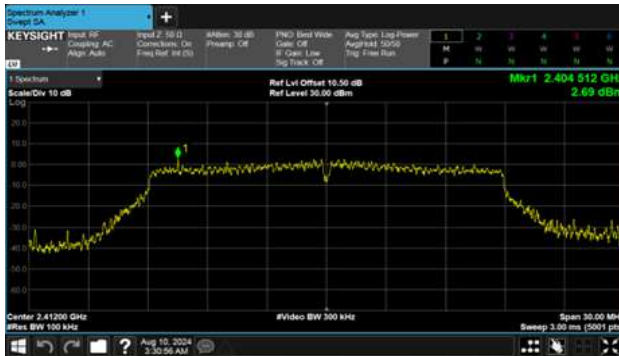
Modulation Type: 802.11g, CH 11



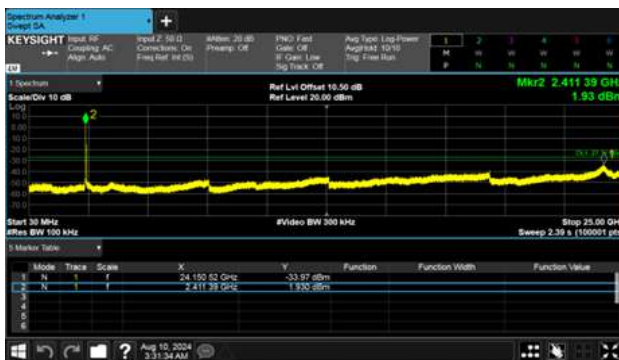
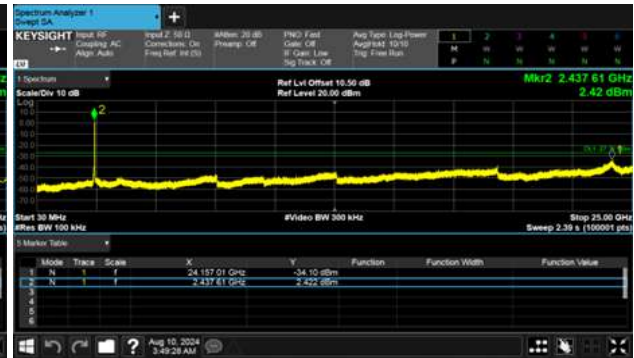
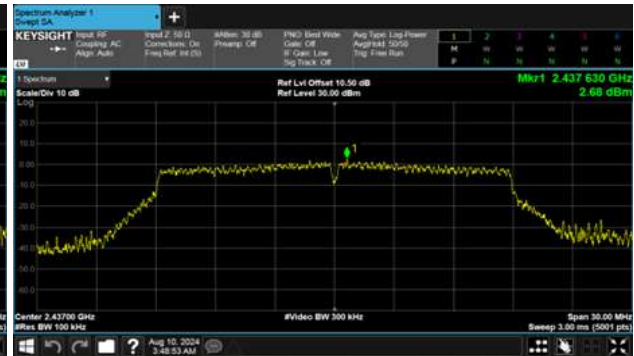


ANT B

Modulation Type: 802.11n HT20, CH01



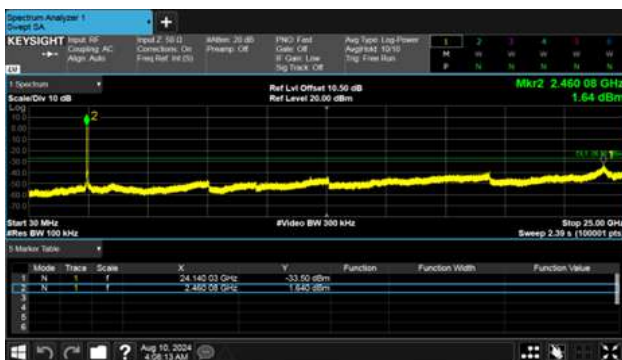
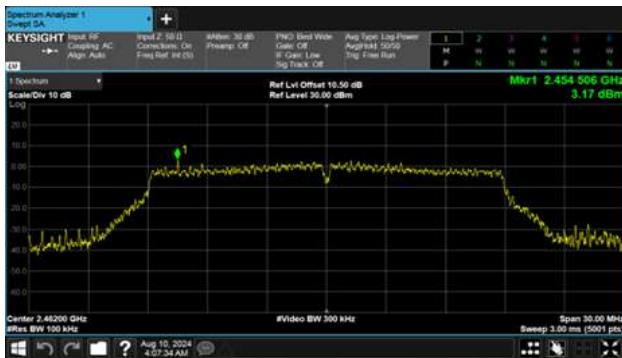
Modulation Type: 802.11n HT20, CH06





ANT B

Modulation Type: 802.11n HT20, CH11





8. On Time, Duty Cycle and Measurement methods

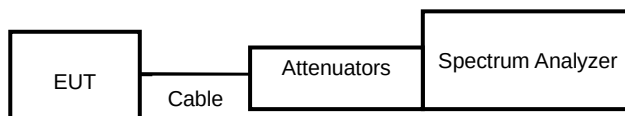
8.1 Test Limit

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	8.45	8.52	99.15%
11g,6M	1.40	1.50	93.72%
11n HT20	3.17	3.18	99.75%



Modulation Type: 802.11b(1Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11n HT20(6.5Mbps)





9. 6dB Bandwidth Measurement Data

9.1 Test Limit

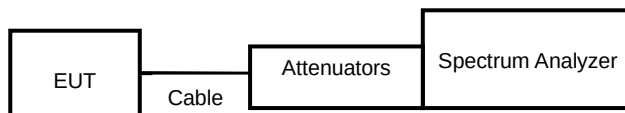
The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

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)	
			ANT A	ANT B
11b	1	2412	7.08	7.57
	6	2437	7.59	7.58
	11	2462	7.57	7.58
11g	1	2412	16.35	16.38
	6	2437	16.33	16.36
	11	2462	16.35	16.39
11n HT20	1	2412	17.38	17.64
	6	2437	17.59	17.64
	11	2462	17.60	17.63



ANT A-6dB Bandwidth
Modulation Type: 802.11b
CH01



Modulation Type: 802.11g
CH01



CH06



CH06



CH11



CH11





ANT A-6dB Bandwidth
Modulation Type: 802.11n HT20
CH01



CH06



CH11





ANT B-6dB Bandwidth
Modulation Type: 802.11b
CH01



Modulation Type: 802.11g
CH01



CH06



CH06



CH11



CH11





ANT B-6dB Bandwidth
Modulation Type: 802.11n HT20
CH01



CH06



CH11





10. Maximum Average Output Power

10.1 Test Limit

The Maximum Average Output Power Measurement is 30dBm.

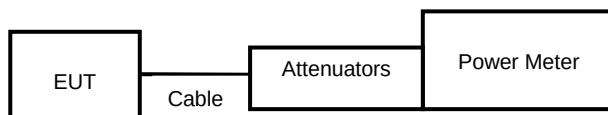
If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.2 Test Procedures

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**

Data Rate	Setting	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			
1	20	11b	1	2412	20.15	20.09	23.13	205.608	30.00
	21		6	2437	21.88	21.71	24.81	302.422	30.00
	19		11	2462	19.86	19.81	22.85	192.547	30.00
6	16	11g	1	2412	15.95	16.65	19.32	85.593	30.00
	21		6	2437	22.41	21.15	24.84	304.497	30.00
	16		11	2462	16.62	16.67	19.66	92.371	30.00
MCS0	16	11n HT20	1	2412	16.25	16.13	19.20	83.190	30.00
	21		6	2437	22.27	20.99	24.69	294.258	30.00
	16		11	2462	16.08	15.92	19.01	79.635	30.00



11. Power Spectral Density

11.1 Test Limit

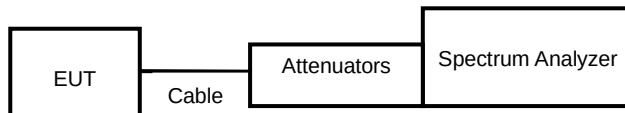
The Maximum of Power Spectral Density Measurement is 8dBm.

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

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

11.3 Test Setup Layout

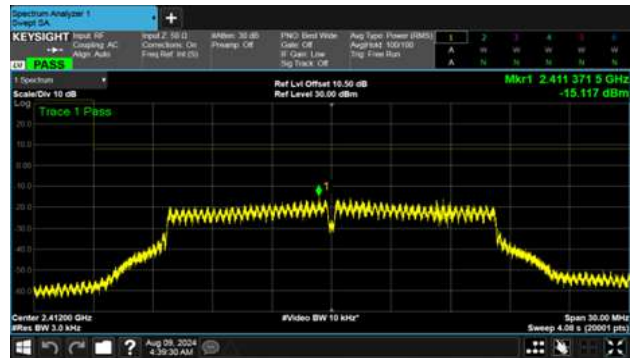


11.4 Test Result and Data

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 A	ANT B				
11b	1	2412	-11.15	-10.938	-8.03	0.00	-8.03	8.00
	6	2437	-9.748	-10.05	-6.89	0.00	-6.89	8.00
	11	2462	-11.112	-11.157	-8.12	0.00	-8.12	8.00
11g	1	2412	-15.117	-14.535	-11.81	0.28	-11.53	8.00
	6	2437	-8.923	-10.125	-6.47	0.28	-6.19	8.00
	11	2462	-14.42	-13.688	-11.03	0.28	-10.75	8.00
11n HT20	1	2412	-18.993	-18.012	-15.46	0.00	-15.46	8.00
	6	2437	-18.396	-18.013	-15.19	0.00	-15.19	8.00
	11	2462	-18.567	-17.871	-15.19	0.00	-15.19	8.00



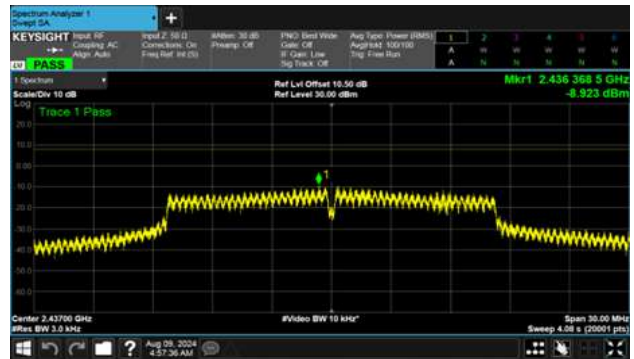
ANT A

Modulation Type: 802.11b
CH01Modulation Type: 802.11g
CH01

CH06



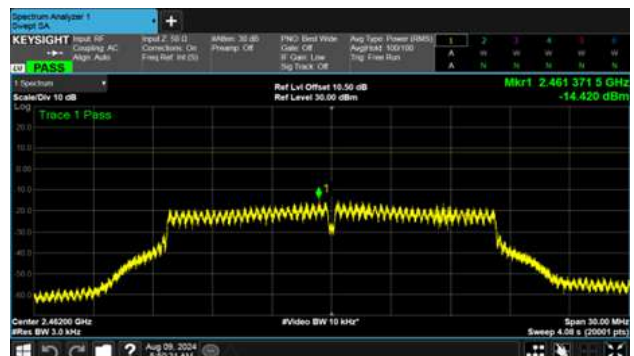
CH06



CH11

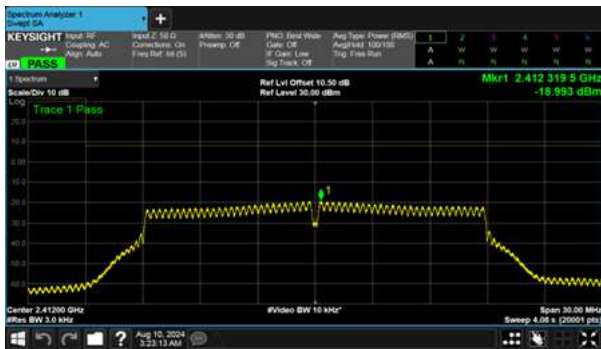


CH11

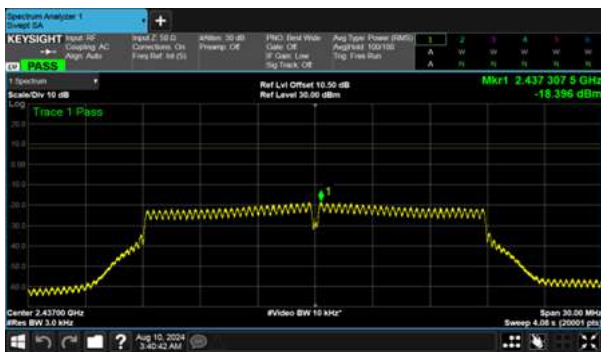




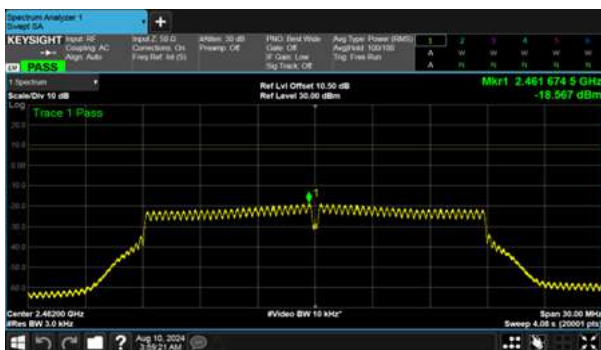
ANT A
Modulation Type: 802.11n HT20
CH01



CH06

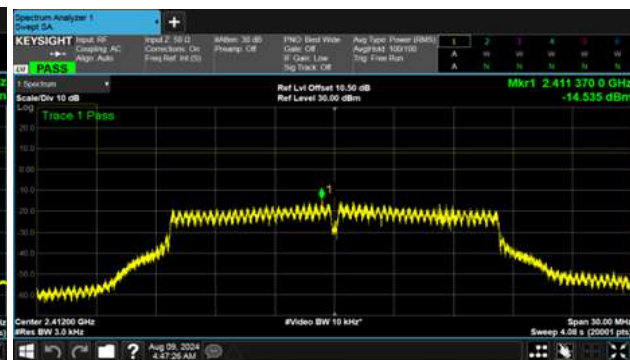


CH11





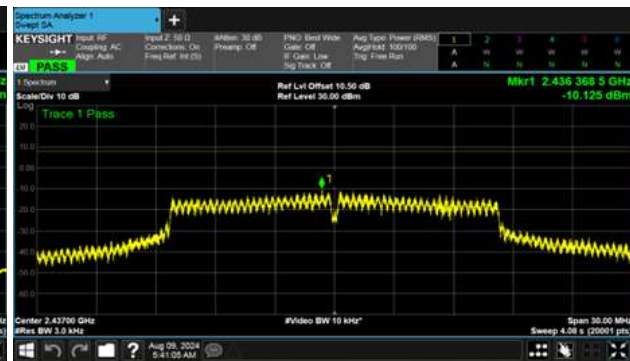
ANT B

Modulation Type: 802.11b
CH01Modulation Type: 802.11g
CH01

CH06



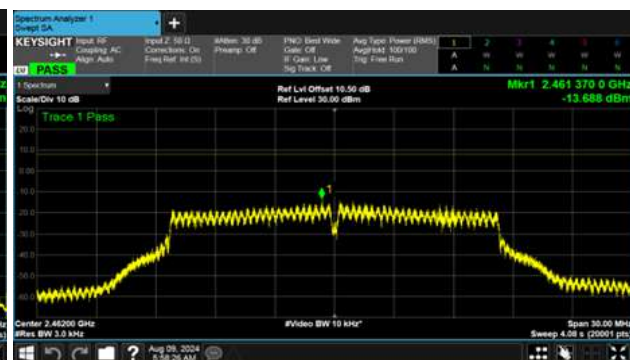
CH06



CH11

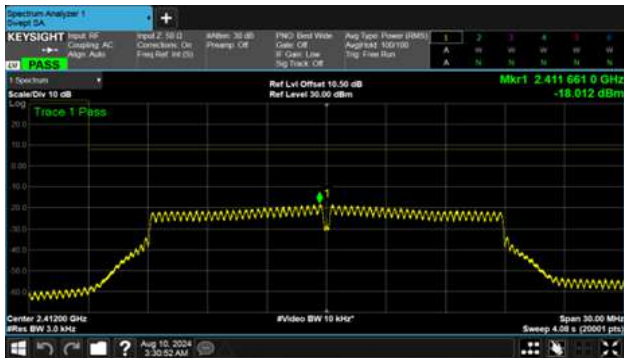


CH11

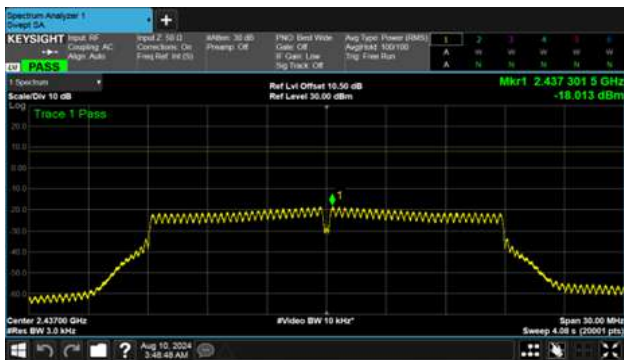




ANT B
Modulation Type: 802.11n HT20
CH01



CH06



CH11

