FCC RADIO TEST REPORT

Applicant	:	D-Link Corporation
Address	:	14420 Myford Road Suite 100, Irvine, California 92606, United States
Equipment	:	Nuclias Cloud Managed AXE5400 Access Point
Model No.	:	DBA-X5480P
Trade Name	:	D-Link
FCC ID	:	KA2APX5480A1

I HEREBY CERTIFY THAT :

The sample was received on May. 06, 2024 and the testing was completed on Jul. 16, 2024 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

Contents

History of this test report

Report No.	Issued Date	Description
24040457-TRFCC01	Jul. 16, 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

Operation Frequency Range	2.4GHz: 802.11b/g/n(TurboQAM)/ax: 2400-2483.5MHz 5GHz: 802.11a/n/ac/ax: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz 6GHz: 802.11a/ax: 5925~6425MHz, 6425~6525MHz 6525~6875MHz, 6875~7125MHz
Center Frequency Range	2.4GHz: 802.11b/g/n(TurboQAM)/ax:2412MHz-2462MHz 5GHz: 802.11a/n/ac/ax: 5180-5240MHz,5260-5320MHz, 5500-5720MHz, 5745-5825MHz 6GHz: 802.11a/ax: 5955~6415MHz, 6435~6515MHz 6535~6855MHz, 6895~7115MHz
Modulation Type	2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM, 256QAM(TurboQAM) 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 5GHz: 802.11n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 6GHz: 802.11a: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Modulation Technology	DSSS, OFDM, OFDMA
Data Rate	2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 MCS0 – MCS9, VHT20/40(TurboQAM) 802.11ax: MCS0 – MCS11,HE20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80/160 802.11ax: MCS0 – MCS11,HE20/40/80/160 6GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11ax: MCS0 – MCS11,HE20/40/80/160
Antenna Type	PIFA Antenna
Antenna Gain	2400-2490MHz: ANT 1: 3.2dBi, ANT 2: 2.9dBi 5150-5200MHz: ANT 3: 4.6dBi, ANT 4: 4.5dBi 5200-5400MHz: ANT 3: 4.9dBi, ANT 4: 4.3dBi 5400-5700MHz: ANT 3: 5.0dBi, ANT 4: 5.2dBi 5700-5850MHz: ANT 3: 5.2dBi, ANT 4: 5.3dBi 5925-6400MHz: ANT 5: 5.3dBi, ANT 6: 4.8dBi 6400-6500MHz: ANT 5: 5.1dBi, ANT 6: 4.4dBi 6600-6800MHz: ANT 5: 5.1dBi, ANT 6: 4.9dBi 6900-7125MHz: ANT 5: 5.3dBi, ANT 6: 5.2dBi
Adapter	Brand: Asian Power Devices Inc. Model: WA-30P12R
Firmware Number	0.00.003B

Note:
1. The EUT support TPC Mode
2. The EUT support AP Mode(Master)
3. EUT Type: Low-power Indoor AP(6ID)
4. WLAN 2.4G 802.11n Support TurboQAM
5. WLAN 2.4G 802.11ax & 5GHz 802.11ac / 11ax support & 6GHz 802.11ax support beamforming Function.
6. The EUT Only Support Full RU.
7. The device does not support Channel Puncturing or Bandwidth Reduction mechanisms.
8. 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, VHT20, 802.11ax HE20 (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, VHT40, 802.11ax HE40 (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

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.10.

b. The complete test system included remote workstation and EUT for RF test. The remote workstation included Notebook.

c. An executive program, ” QSPR ver. 5.0-00200” under Windows OS system was executed to transmit and receive data via WLAN.

d. 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), TX Mode
2	802.11g (6Mbps), TX Mode
3	802.11n HT20 (6.5Mbps), TX Mode
4	802.11n HT40 (13.5Mbps), TX Mode
5	802.11n VHT20(TurboQAM) (6.5Mbps), TX Mode
6	802.11n VHT40(TurboQAM) (13.5Mbps), TX Mode
7	802.11ax HE20 (7.3Mbps), TX Mode
8	802.11ax HE40 (14.6Mbps), TX Mode
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), TX Mode
2	802.11g (6Mbps), TX Mode
3	802.11n HT20 (6.5Mbps), TX Mode
4	802.11n HT40 (13.5Mbps), TX Mode
5	802.11n VHT20(TurboQAM) (6.5Mbps), TX Mode
6	802.11n VHT40(TurboQAM) (13.5Mbps), TX Mode
7	802.11ax HE20 (7.3Mbps), TX Mode
8	802.11ax HE40 (14.6Mbps), TX Mode
caused “Test Mode 2” generated the worst case, it was reported as the final data.	
Radiation Emissions (1GHz ~ 25GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps), TX Mode
2	802.11g (6Mbps), TX Mode
3	802.11n HT20 (6.5Mbps), TX Mode
4	802.11n HT40 (13.5Mbps), TX Mode
5	802.11n VHT20(TurboQAM) (6.5Mbps), TX Mode
6	802.11n VHT40(TurboQAM) (13.5Mbps), TX Mode
7	802.11ax HE20 (7.3Mbps), TX Mode
8	802.11ax HE40 (14.6Mbps), TX Mode
caused “Test Mode 1,2,7,8” generated the worst case, they were reported as the final data.	

Note:
1. There are two kinds of EUT Power Type: Power From Adapter and Power From PoE
   After engineering evaluation, Adapter is worst case, hence, is used at test report.
2. There are two kinds of test voltage: AC 120V / 60Hz and AC 240V / 60Hz.
   For AC Power Line Conducted Emission, AC 120V / 60Hz is worst case.
   For Radiated Spurious Emission, AC 120V / 60Hz is worst case.
3. The EUT supports non-beamforming and beamforming function, after engineering evaluation, non-beamforming generated the worst case, it was reported as the final data.

The EUT incorporates a MIMO function

Modulation Type	TX CONFIGURATION
802.11b	2TX
802.11g	2TX
802.11n HT20	2TX
802.11n HT40	2TX
802.11n VHT20(TurboQAM)	2TX
802.11n VHT40(TurboQAM)	2TX
802.11ax HE20	2TX
802.11ax HE40	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
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	DELL	Latitude E5470	N/A	Adapter / 1.8m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	15m / NS	N/A
POE	Bluewave	JS-100GT	N/A	N/A
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / 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
RJ45 Cable	TE CONNECTIVITY	CAT5E	15m / NS	N/A
POE	Bluewave	JS-100GT	N/A	N/A
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A

2.5 General Information of Test

☒ Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel: +886-3-3226-888 Fax: +886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
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.	

Non-beamforming

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2024/05/25	26.7°C / 52%	Leon Huang
RF Conducted	RFCON01-NK	2024/05/27	26.3°C / 45%	Leon Huang
RF Conducted	RFCON01-NK	2024/06/11	24.5°C / 41%	Leon Huang
RF Conducted	RFCON01-NK	2024/6/13~2024/6/14	24.6~25.7°C / 44~46%	Leon Huang
Radiated Emissions	3M02-NK	2024/05/20	23.6°C / 56%	Leon Huang
Radiated Emissions	3M02-NK	2024/06/13	20.2°C / 53%	Park Chen
AC Power Line Conducted Emission	CON02-NK	2024/05/24	22.4°C / 54%	Park Chen

Beamforming

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2024/06/14	24.6°C / 46%	Leon Huang
RF Conducted	RFCON01-NK	2024/07/15	26.8°C / 55%	Leon Huang
RF Conducted	RFCON01-NK	2024/07/16	26.6°C / 59%	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~25GHz)	±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)				
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	ESCI	101423	2023/07/05	2024/07/04
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-4m(9k-3G)	EMEC	RG-223	18274M	2023/07/31	2024/07/30
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
High Pass Filter	Warison	WFIL-H3000-18000F-03	WRJ5CFWC2J1	2023/07/03	2024/07/02

Test Item	RF Conducted				
Test Site	RFCON01-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	ESCI	101423	2023/07/05	2024/07/04
TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	102185	2023/08/29	2024/08/28
Cable-4m(9k-3G)	EMEC	RG-223	18274M	2023/07/31	2024/07/30
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	PIFA Antenna
Antenna Gain	2400-2490MHz: ANT 1: 3.2dBi, ANT 2: 2.9dBi

(Non-Beamforming)

2400-2490MHz
For Power directional gain= G_{ant}= 3.20 dBi
For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$
= 6.06 (dBi)
*MIMO type: Cyclic Delay Diversity (CDD) mode.

(Beamforming)

For Power directional gain= Gant= 6.06 dBi
For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$
= 6.06 (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.

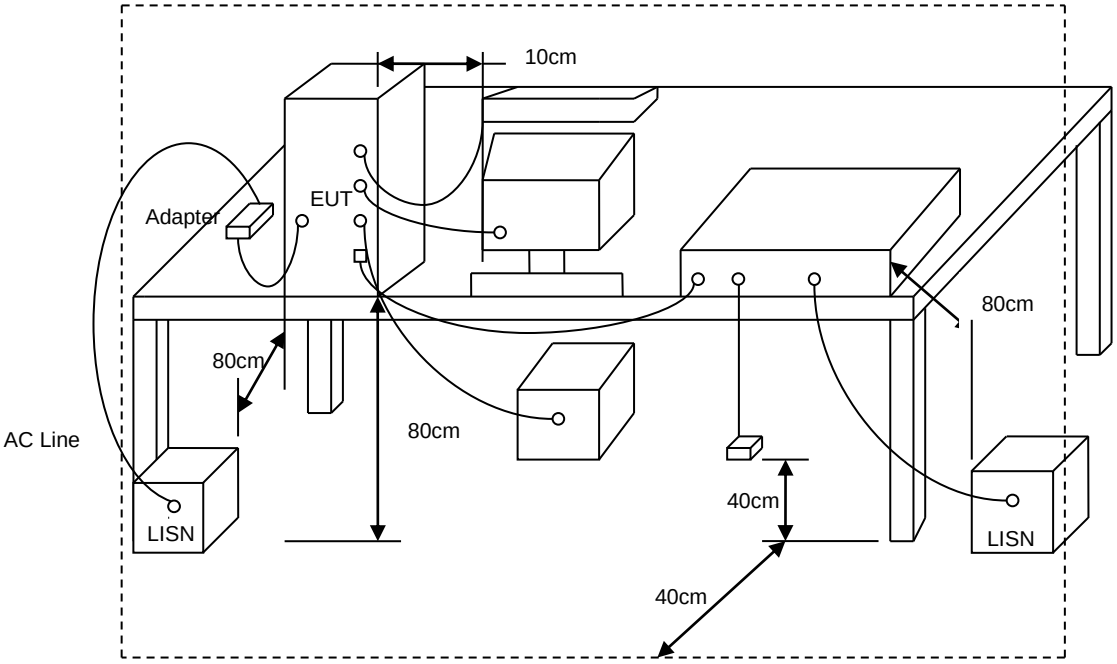
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2 Test Procedures

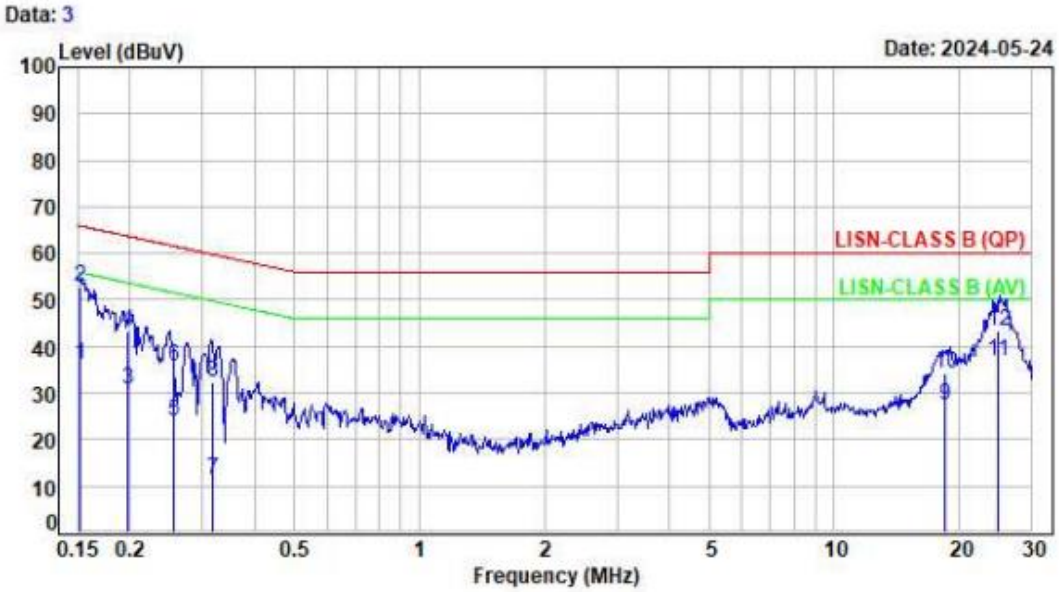
a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. 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

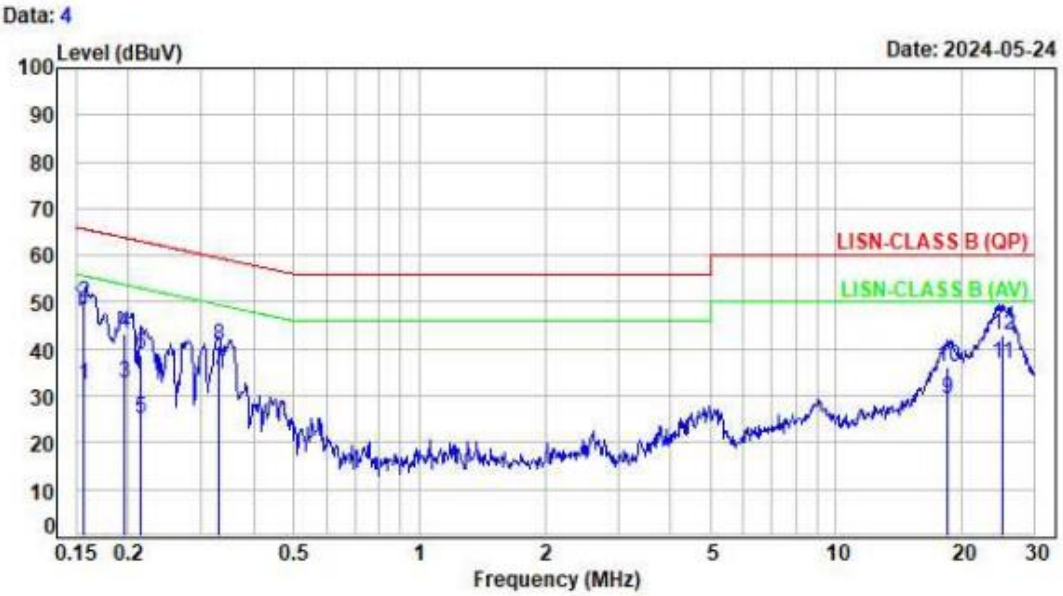
Test Mode : 2TX 11g CH06 6Mbps
Voltage : From Adapter(AC 120V/60Hz)
Phase : Line



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1524	9.66	26.55	36.21	55.87	-19.66	Average	P
2	0.1524	9.66	43.16	52.82	65.87	-13.05	QP	P
3	0.1976	9.64	21.10	30.74	53.71	-22.97	Average	P
4	0.1976	9.64	33.61	43.25	63.71	-20.46	QP	P
5	0.2564	9.64	14.13	23.77	51.55	-27.78	Average	P
6	0.2564	9.64	26.10	35.74	61.55	-25.81	QP	P
7	0.3158	9.65	1.66	11.31	49.82	-38.51	Average	P
8	0.3158	9.65	22.81	32.46	59.82	-27.36	QP	P
9	18.4566	9.93	17.44	27.37	50.00	-22.63	Average	P
10	18.4566	9.93	24.31	34.24	60.00	-25.76	QP	P
11	24.8263	9.94	26.81	36.75	50.00	-13.25	Average	P
12	24.8263	9.94	33.51	43.45	60.00	-16.55	QP	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=(LISN or ISN or Current Probe)Factor + Cable Loss

Test Mode : 2TX 11g CH06 6Mbps
Voltage : From Adapter(AC 120V/60Hz)
Phase : Neutral



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1568	9.56	22.89	32.45	55.63	-23.18	Average	P
2	0.1568	9.56	40.09	49.65	65.63	-15.98	QP	P
3	0.1968	9.59	23.00	32.59	53.75	-21.16	Average	P
4	0.1968	9.59	33.85	43.44	63.75	-20.31	QP	P
5	0.2143	9.59	15.34	24.93	53.04	-28.11	Average	P
6	0.2143	9.59	29.23	38.82	63.04	-24.22	QP	P
7	0.3308	9.57	25.79	35.36	49.43	-14.07	Average	P
8	0.3308	9.57	31.05	40.62	59.43	-18.81	QP	P
9	18.4505	9.95	19.43	29.38	50.00	-20.62	Average	P
10	18.4505	9.95	26.08	36.03	60.00	-23.97	QP	P
11	24.9944	10.04	26.75	36.79	50.00	-13.21	Average	P
12	24.9944	10.04	33.11	43.15	60.00	-16.85	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.

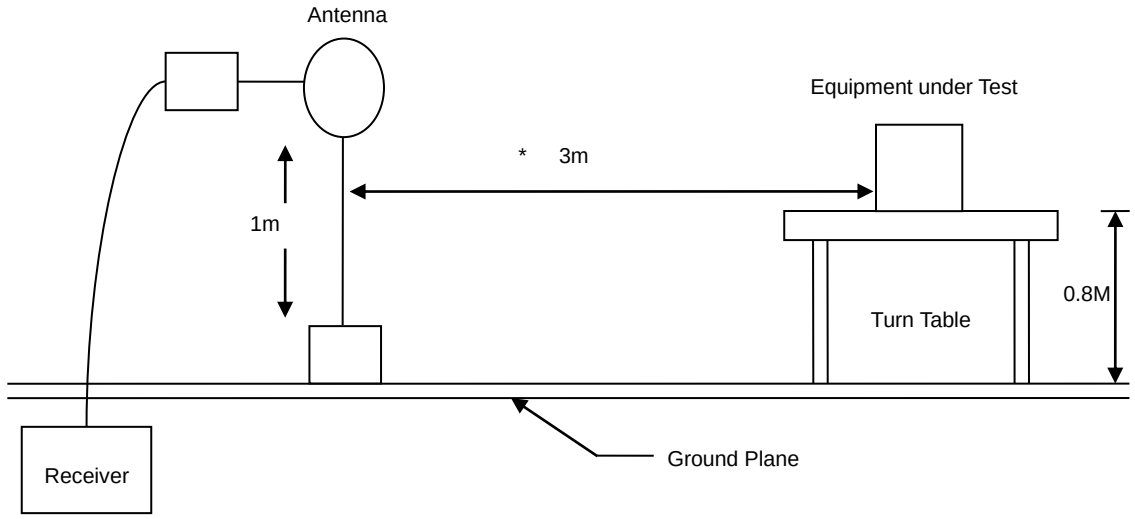
Note:

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.)

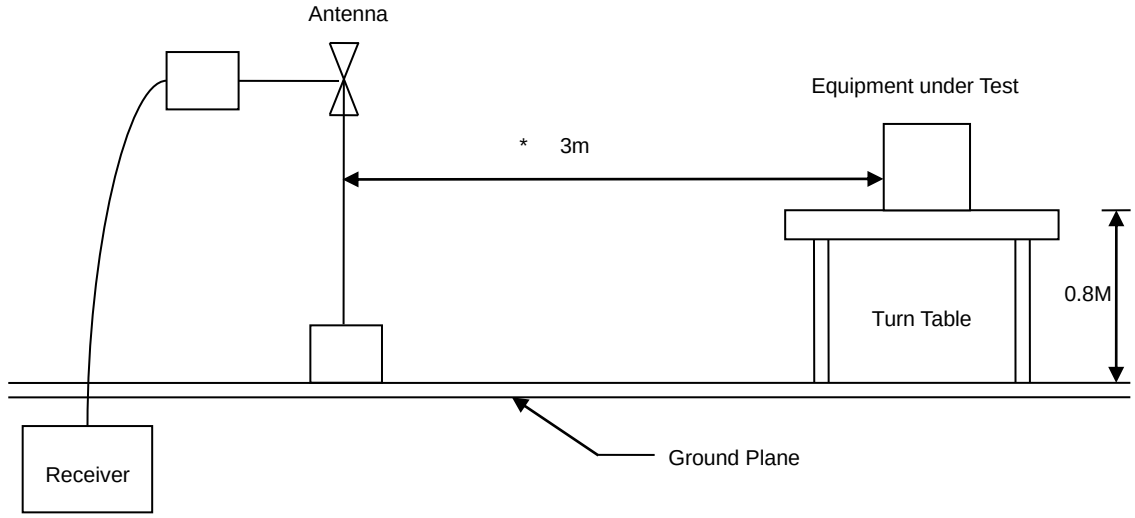
2.Due to the test software function limit the operation band setting(200dBuV/m).
There's no corresponding limitation in the actual test item.

6.3 Typical Test Setup

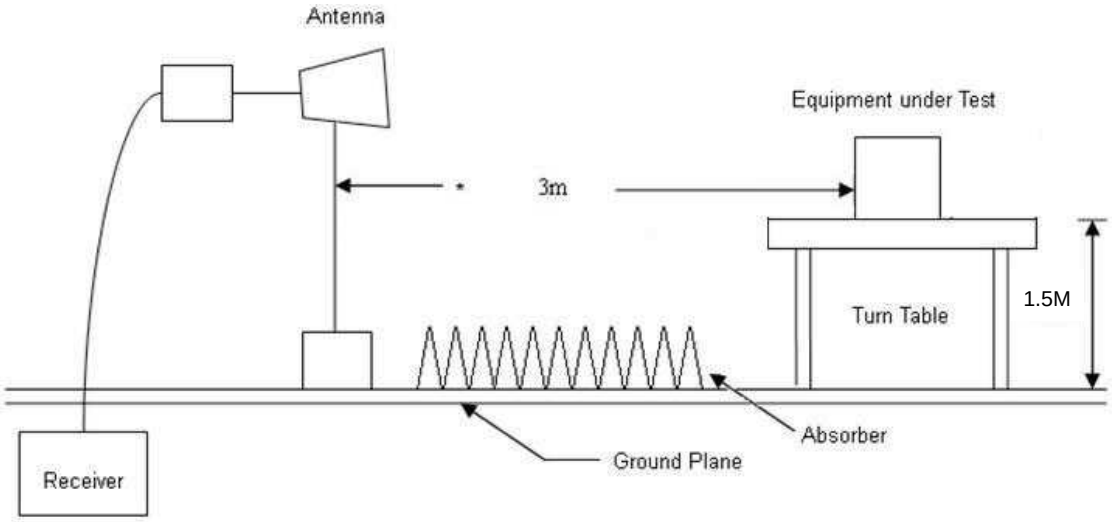
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

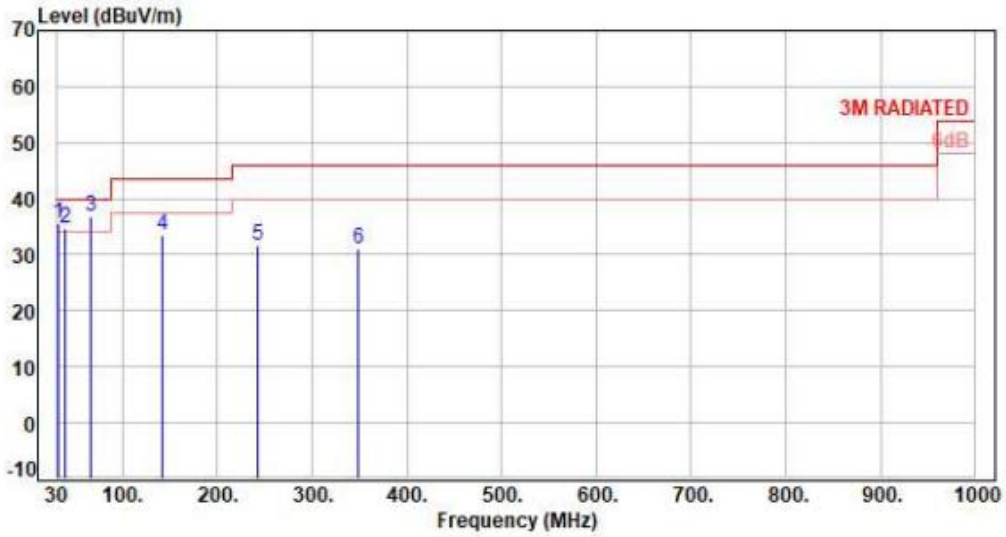


6.4 Test Result and Data (9KHz ~ 30MHz)

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

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

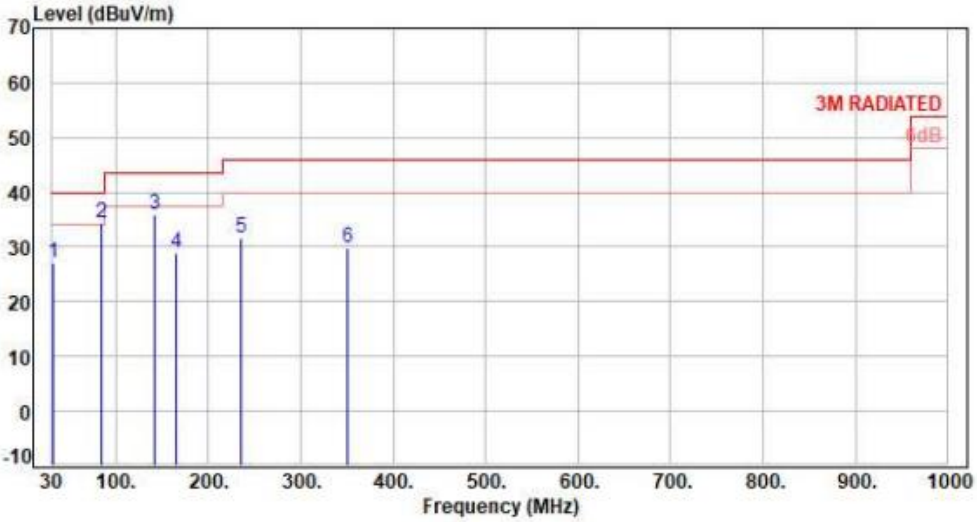
Test Mode : 2TX 11g CH06 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	31.94	-10.04	45.71	35.67	40.00	-4.33	Peak	400	360	P
2	39.98	-9.78	44.50	34.72	40.00	-5.28	QP	100	210	P
3	66.86	-10.99	47.92	36.93	40.00	-3.07	Peak	400	360	P
4	142.52	-9.93	43.43	33.50	43.50	-10.00	Peak	400	360	P
5	243.40	-10.35	42.11	31.76	46.00	-14.24	Peak	400	360	P
6	348.16	-7.26	38.28	31.02	46.00	-14.98	Peak	400	360	P

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

Test Mode : 2TX 11g CH06 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal

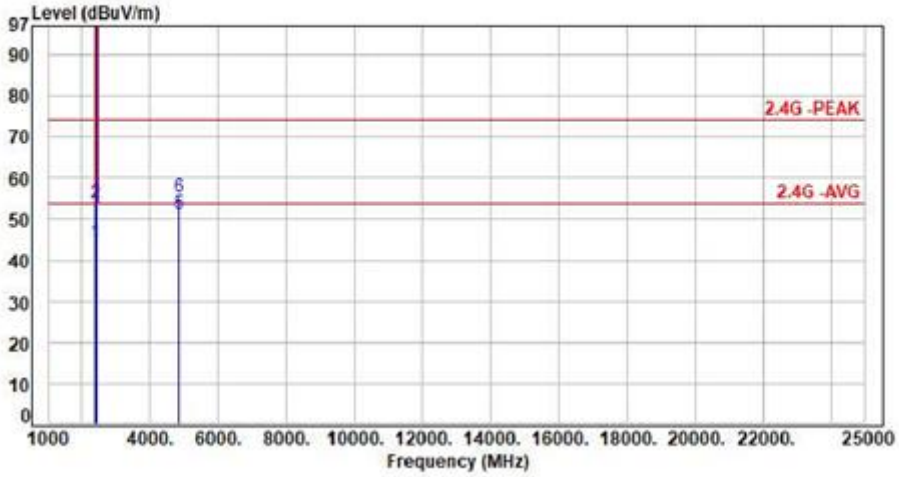


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	31.94	-10.04	37.27	27.23	40.00	-12.77	Peak	400	360	P
2	84.32	-15.52	50.07	34.55	40.00	-5.45	Peak	400	360	P
3	142.52	-9.93	45.83	35.90	43.50	-7.60	Peak	400	360	P
4	165.80	-9.46	38.45	28.99	43.50	-14.51	Peak	400	360	P
5	235.64	-10.69	42.39	31.70	46.00	-14.30	Peak	400	360	P
6	350.10	-7.29	37.20	29.91	46.00	-16.09	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)

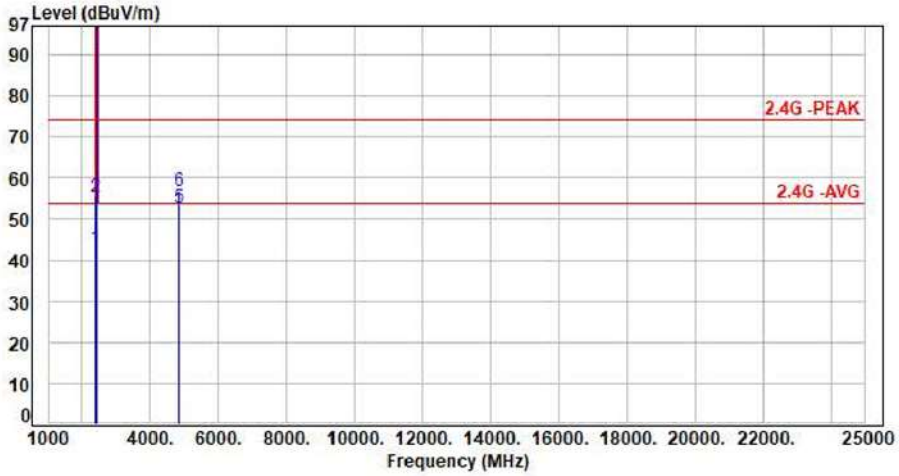
Test Mode : 2TX 11b CH01 1Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	46.74	44.41	54.00	-9.59	Average	100	26	P
2	2390.00	-2.33	56.03	53.70	74.00	-20.30	Peak	100	26	P
3	2412.00	-2.29	105.56	103.27	200.00	-96.73	Average	100	26	P
4	2412.00	-2.29	108.54	106.25	200.00	-93.75	Peak	100	26	P
5	4824.00	6.08	45.01	51.09	54.00	-2.91	Average	192	6	P
6	4824.00	6.08	49.24	55.32	74.00	-18.68	Peak	192	6	P

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

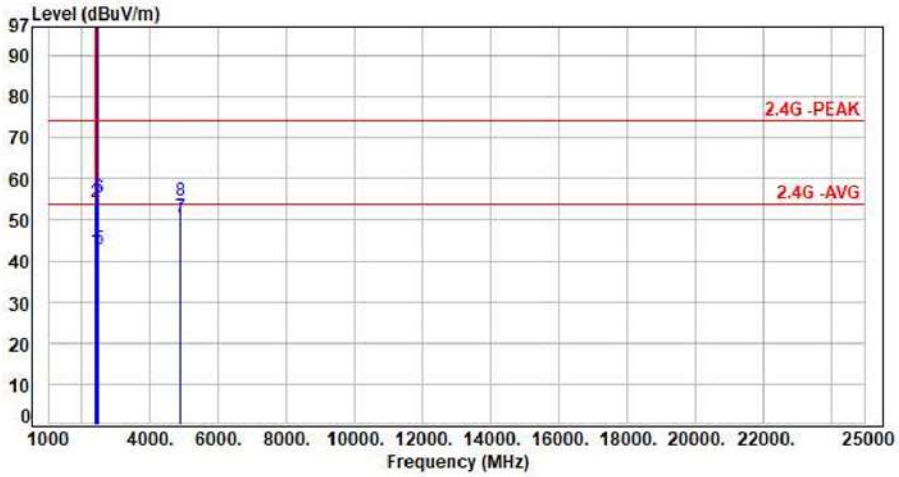
Test Mode : 2TX 11b CH01 1Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	45.05	42.72	54.00	-11.28	Average	130	48	P
2	2390.00	-2.33	57.54	55.21	74.00	-18.79	Peak	130	48	P
3	2412.00	-2.29	108.96	106.67	200.00	-93.33	Average	130	48	P
4	2412.00	-2.29	110.20	107.91	200.00	-92.09	Peak	130	48	P
5	4824.00	6.08	46.56	52.64	54.00	-1.36	Average	100	29	P
6	4824.00	6.08	50.69	56.77	74.00	-17.23	Peak	100	29	P

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

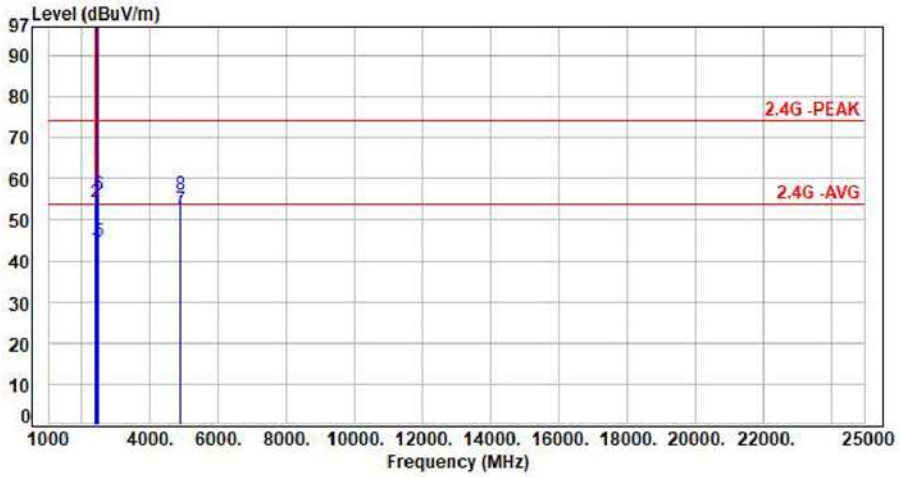
Test Mode : 2TX 11b CH06 1Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	44.65	42.32	54.00	-11.68	Average	120	145	P
2	2390.00	-2.33	56.56	54.23	74.00	-19.77	Peak	120	145	P
3	2437.00	-2.17	106.27	104.10	200.00	-95.90	Average	120	145	P
4	2437.00	-2.17	109.08	106.91	200.00	-93.09	Peak	120	145	P
5	2483.50	-2.01	44.88	42.87	54.00	-11.13	Average	120	145	P
6	2483.50	-2.01	57.27	55.26	74.00	-18.74	Peak	120	145	P
7	4874.00	6.23	44.34	50.57	54.00	-3.43	Average	212	360	P
8	4874.00	6.23	48.32	54.55	74.00	-19.45	Peak	212	360	P

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

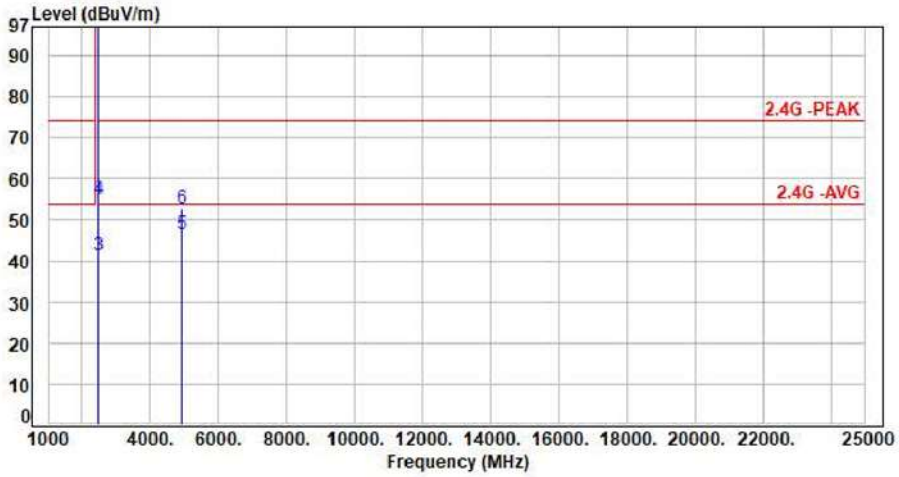
Test Mode : 2TX 11b CH06 1Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	45.16	42.83	54.00	-11.17	Average	119	338	P
2	2390.00	-2.33	56.47	54.14	74.00	-19.86	Peak	119	338	P
3	2437.00	-2.17	109.15	106.98	200.00	-93.02	Average	119	338	P
4	2437.00	-2.17	111.85	109.68	200.00	-90.32	Peak	119	338	P
5	2483.50	-2.01	46.50	44.49	54.00	-9.51	Average	119	338	P
6	2483.50	-2.01	57.93	55.92	74.00	-18.08	Peak	119	338	P
7	4874.00	6.23	46.25	52.48	54.00	-1.52	Average	100	34	P
8	4874.00	6.23	49.78	56.01	74.00	-17.99	Peak	100	34	P

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

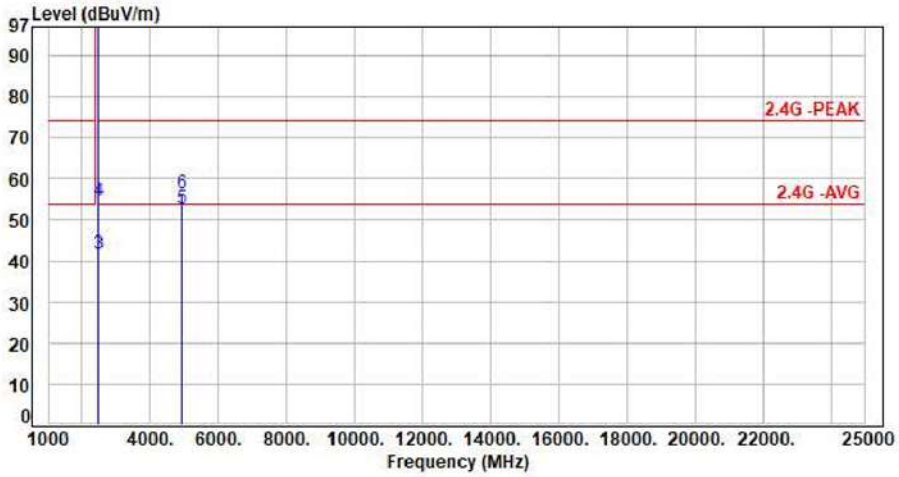
Test Mode : 2TX 11b CH11 1Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	103.67	101.63	200.00	-98.37	Average	142	147	P
2	2462.00	-2.04	106.51	104.47	200.00	-95.53	Peak	142	147	P
3	2483.50	-2.01	43.17	41.16	54.00	-12.84	Average	142	147	P
4	2483.50	-2.01	56.80	54.79	74.00	-19.21	Peak	142	147	P
5	4924.00	6.40	40.21	46.61	54.00	-7.39	Average	371	62	P
6	4924.00	6.40	46.19	52.59	74.00	-21.41	Peak	371	62	P

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

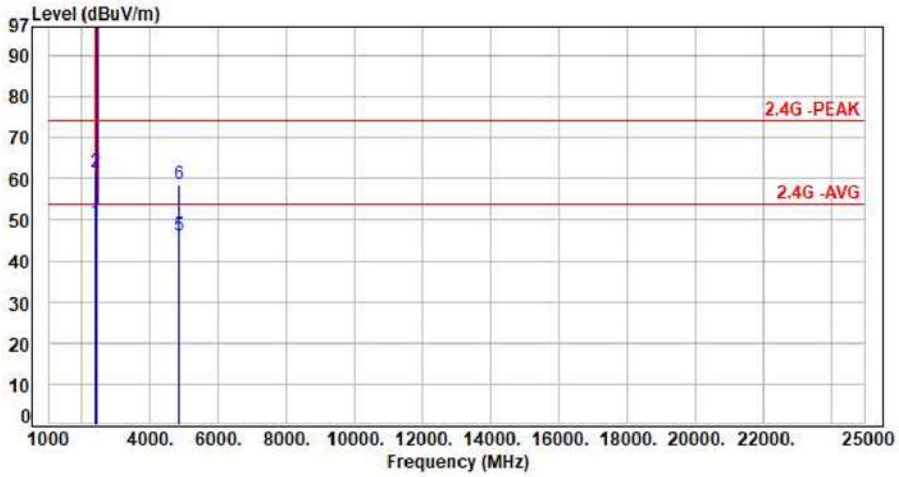
Test Mode : 2TX 11b CH11 1Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	106.77	104.73	200.00	-95.27	Average	114	339	P
2	2462.00	-2.04	109.50	107.46	200.00	-92.54	Peak	114	339	P
3	2483.50	-2.01	43.53	41.52	54.00	-12.48	Average	114	339	P
4	2483.50	-2.01	56.42	54.41	74.00	-19.59	Peak	114	339	P
5	4924.00	6.40	46.39	52.79	54.00	-1.21	Average	329	19	P
6	4924.00	6.40	50.07	56.47	74.00	-17.53	Peak	329	19	P

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

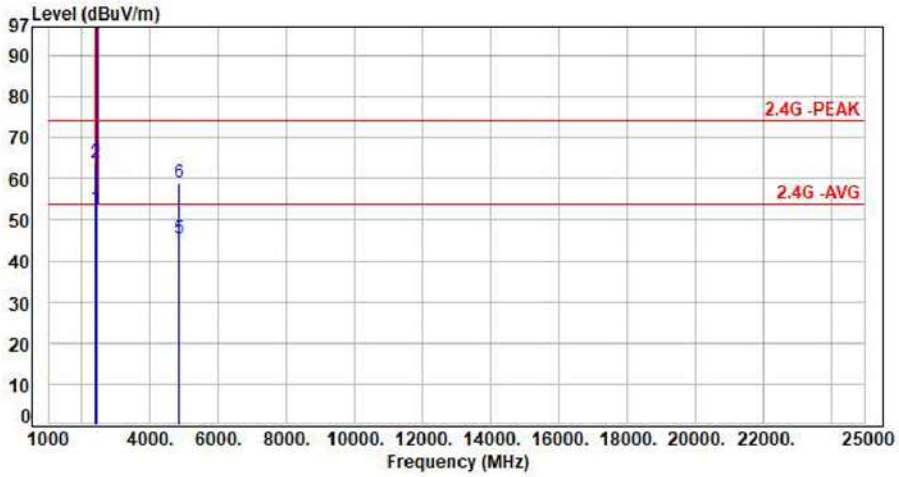
Test Mode : 2TX 11g CH01 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	51.67	49.34	54.00	-4.66	Average	150	29	P
2	2390.00	-2.33	63.94	61.61	74.00	-12.39	Peak	150	29	P
3	2412.00	-2.29	107.89	105.60	200.00	-94.40	Average	150	29	P
4	2412.00	-2.29	117.22	114.93	200.00	-85.07	Peak	150	29	P
5	4824.00	6.08	40.17	46.25	54.00	-7.75	Average	100	360	P
6	4824.00	6.08	52.65	58.73	74.00	-15.27	Peak	100	360	P

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

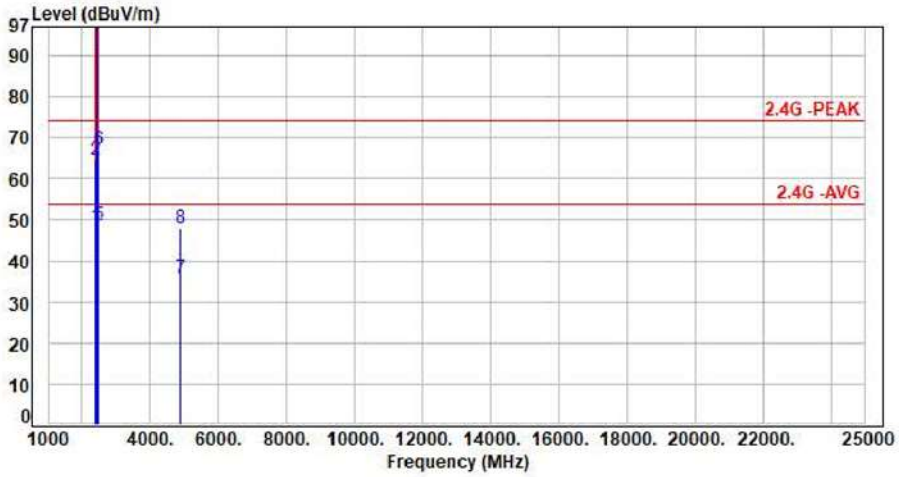
Test Mode : 2TX 11g CH01 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	54.92	52.59	54.00	-1.41	Average	298	53	P
2	2390.00	-2.33	66.12	63.79	74.00	-10.21	Peak	298	53	P
3	2412.00	-2.29	110.71	108.42	200.00	-91.58	Average	298	53	P
4	2412.00	-2.29	119.42	117.13	200.00	-82.87	Peak	298	53	P
5	4824.00	6.08	39.44	45.52	54.00	-8.48	Average	111	360	P
6	4824.00	6.08	53.07	59.15	74.00	-14.85	Peak	111	360	P

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

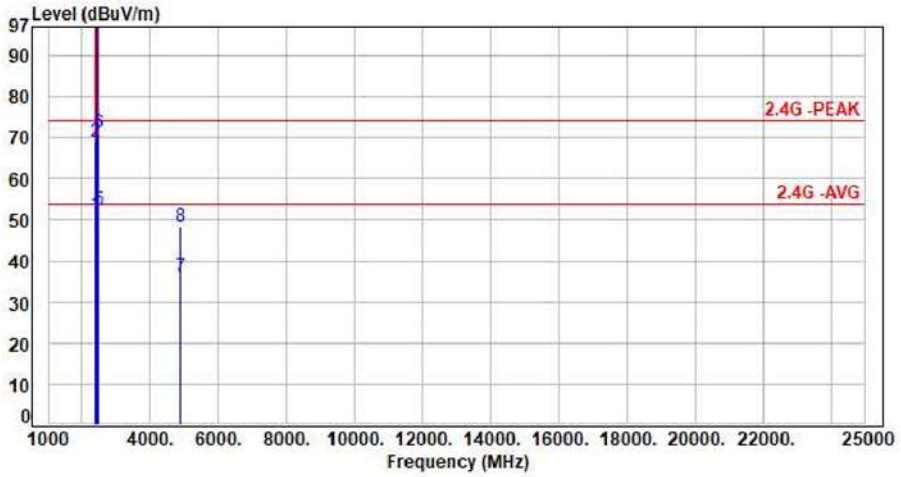
Test Mode : 2TX 11g CH06 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	50.69	48.36	54.00	-5.64	Average	100	35	P
2	2390.00	-2.33	66.86	64.53	74.00	-9.47	Peak	100	35	P
3	2437.00	-2.17	109.61	107.44	200.00	-92.56	Average	100	35	P
4	2437.00	-2.17	119.84	117.67	200.00	-82.33	Peak	100	35	P
5	2483.50	-2.01	50.81	48.80	54.00	-5.20	Average	100	35	P
6	2483.50	-2.01	69.01	67.00	74.00	-7.00	Peak	100	35	P
7	4874.00	6.23	29.69	35.92	54.00	-18.08	Average	100	352	P
8	4874.00	6.23	41.58	47.81	74.00	-26.19	Peak	100	352	P

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

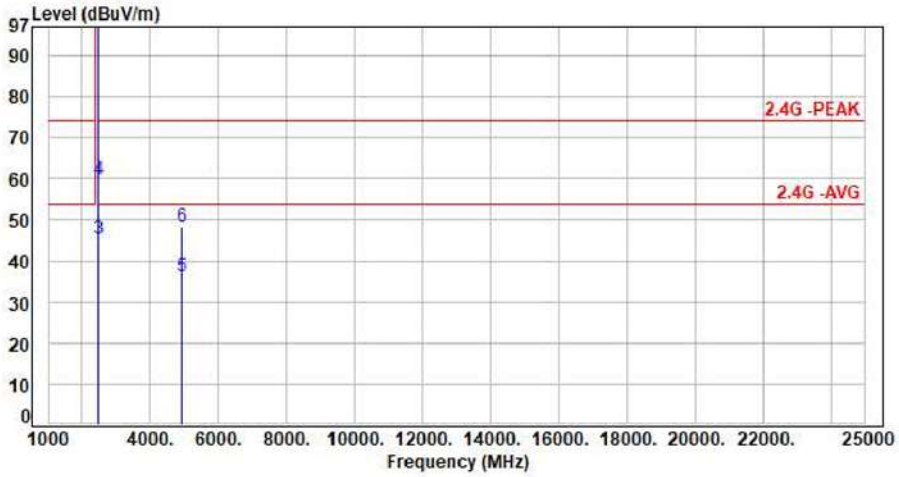
Test Mode : 2TX 11g CH06 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	53.61	51.28	54.00	-2.72	Average	230	47	P
2	2390.00	-2.33	71.37	69.04	74.00	-4.96	Peak	230	47	P
3	2437.00	-2.17	111.19	109.02	200.00	-90.98	Average	230	47	P
4	2437.00	-2.17	121.79	119.62	200.00	-80.38	Peak	230	47	P
5	2483.50	-2.01	54.41	52.40	54.00	-1.60	Average	230	47	P
6	2483.50	-2.01	73.20	71.19	74.00	-2.81	Peak	230	47	P
7	4874.00	6.23	29.84	36.07	54.00	-17.93	Average	100	349	P
8	4874.00	6.23	41.97	48.20	74.00	-25.80	Peak	100	349	P

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

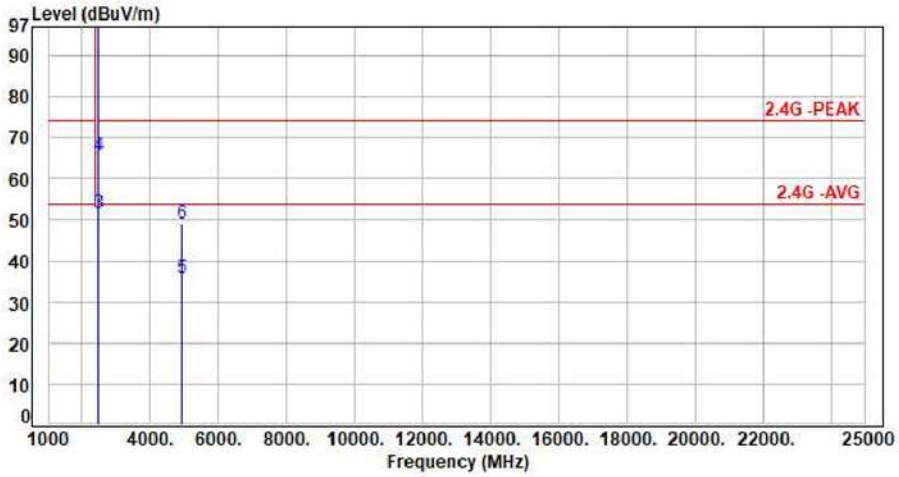
Test Mode : 2TX 11g CH11 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	106.50	104.46	200.00	-95.54	Average	100	35	P
2	2462.00	-2.04	117.16	115.12	200.00	-84.88	Peak	100	35	P
3	2483.50	-2.01	47.55	45.54	54.00	-8.46	Average	100	35	P
4	2483.50	-2.01	61.82	59.81	74.00	-14.19	Peak	100	35	P
5	4924.00	6.40	29.74	36.14	54.00	-17.86	Average	100	355	P
6	4924.00	6.40	41.92	48.32	74.00	-25.68	Peak	100	355	P

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

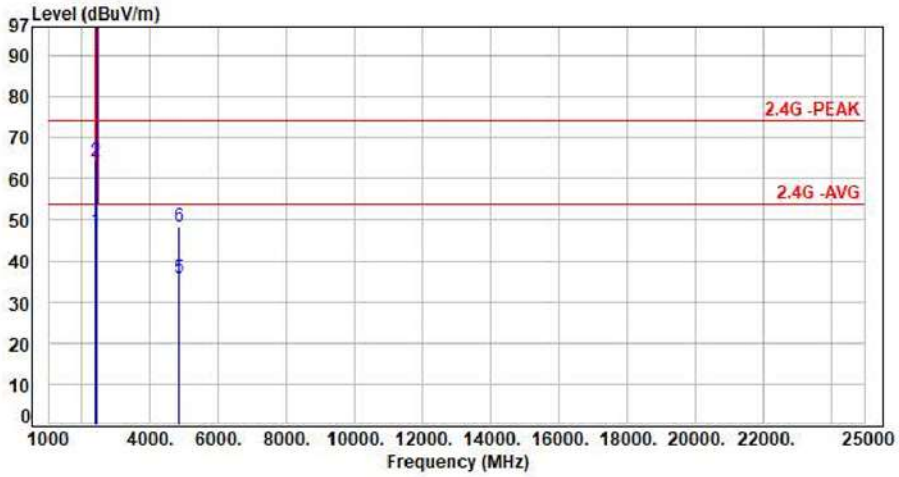
Test Mode : 2TX 11g CH11 6Mbps
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	109.31	107.27	200.00	-92.73	Average	201	55	P
2	2462.00	-2.04	119.92	117.88	200.00	-82.12	Peak	201	55	P
3	2483.50	-2.01	53.70	51.69	54.00	-2.31	Average	201	55	P
4	2483.50	-2.01	67.65	65.64	74.00	-8.36	Peak	201	55	P
5	4924.00	6.40	29.50	35.90	54.00	-18.10	Average	100	348	P
6	4924.00	6.40	42.52	48.92	74.00	-25.08	Peak	100	348	P

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

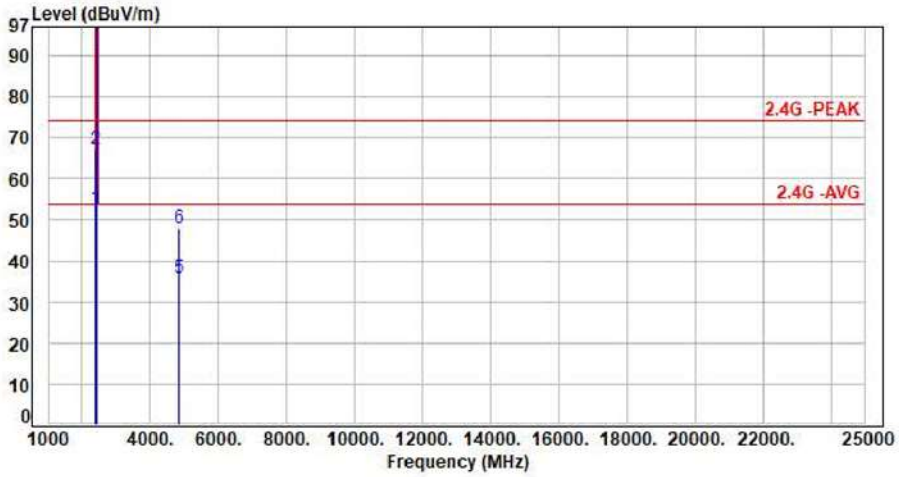
Test Mode : 2TX 11ax20 CH01 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	49.54	47.21	54.00	-6.79	Average	103	33	P
2	2390.00	-2.33	66.53	64.20	74.00	-9.80	Peak	103	33	P
3	2412.00	-2.29	105.84	103.55	200.00	-96.45	Average	103	33	P
4	2412.00	-2.29	120.05	117.76	200.00	-82.24	Peak	103	33	P
5	4824.00	6.08	29.51	35.59	54.00	-18.41	Average	100	360	P
6	4824.00	6.08	42.16	48.24	74.00	-25.76	Peak	100	360	P

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

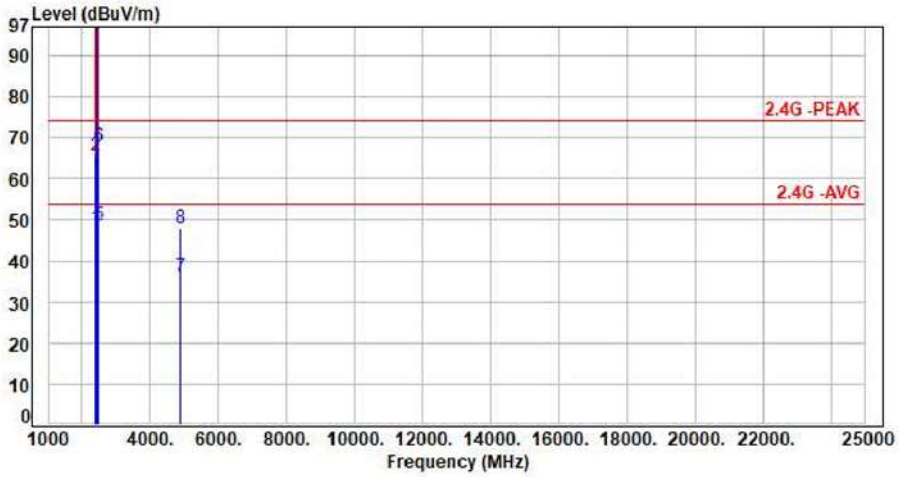
Test Mode : 2TX 11ax20 CH01 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	54.95	52.62	54.00	-1.38	Average	266	48	P
2	2390.00	-2.33	69.56	67.23	74.00	-6.77	Peak	266	48	P
3	2412.00	-2.29	108.61	106.32	200.00	-93.68	Average	266	48	P
4	2412.00	-2.29	122.35	120.06	200.00	-79.94	Peak	266	48	P
5	4824.00	6.08	29.57	35.65	54.00	-18.35	Average	100	345	P
6	4824.00	6.08	41.80	47.88	74.00	-26.12	Peak	100	345	P

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

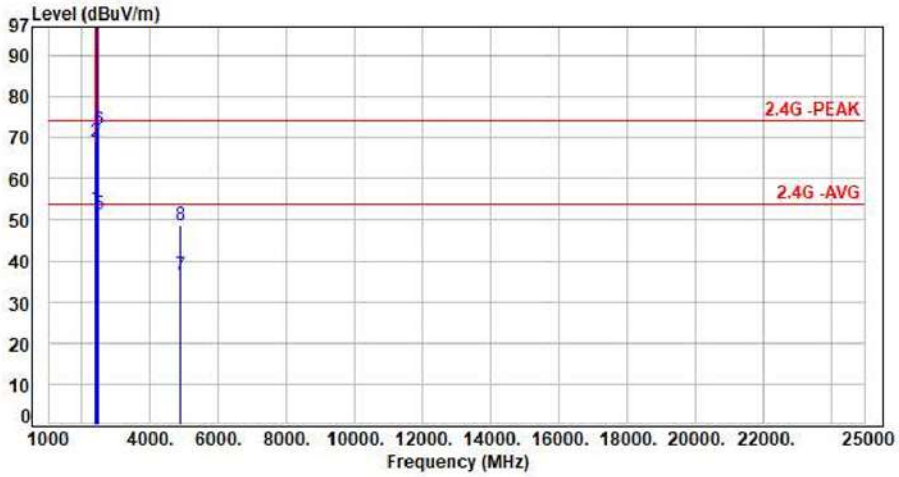
Test Mode : 2TX 11ax20 CH06 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	50.17	47.84	54.00	-6.16	Average	142	33	P
2	2390.00	-2.33	68.08	65.75	74.00	-8.25	Peak	142	33	P
3	2437.00	-2.17	108.63	106.46	200.00	-93.54	Average	142	33	P
4	2437.00	-2.17	121.49	119.32	200.00	-80.68	Peak	142	33	P
5	2483.50	-2.01	50.59	48.58	54.00	-5.42	Average	142	33	P
6	2483.50	-2.01	69.79	67.78	74.00	-6.22	Peak	142	33	P
7	4874.00	6.23	29.94	36.17	54.00	-17.83	Average	100	357	P
8	4874.00	6.23	41.67	47.90	74.00	-26.10	Peak	100	357	P

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

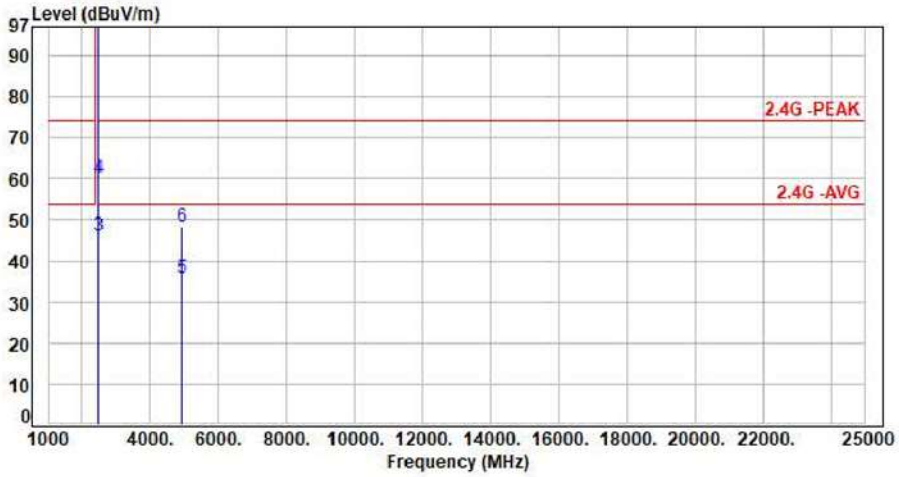
Test Mode : 2TX 11ax20 CH06 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	54.90	52.57	54.00	-1.43	Average	201	50	P
2	2390.00	-2.33	71.45	69.12	74.00	-4.88	Peak	201	50	P
3	2437.00	-2.17	111.48	109.31	200.00	-90.69	Average	201	50	P
4	2437.00	-2.17	124.87	122.70	200.00	-77.30	Peak	201	50	P
5	2483.50	-2.01	53.27	51.26	54.00	-2.74	Average	201	50	P
6	2483.50	-2.01	73.83	71.82	74.00	-2.18	Peak	201	50	P
7	4874.00	6.23	30.24	36.47	54.00	-17.53	Average	100	341	P
8	4874.00	6.23	42.59	48.82	74.00	-25.18	Peak	100	341	P

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

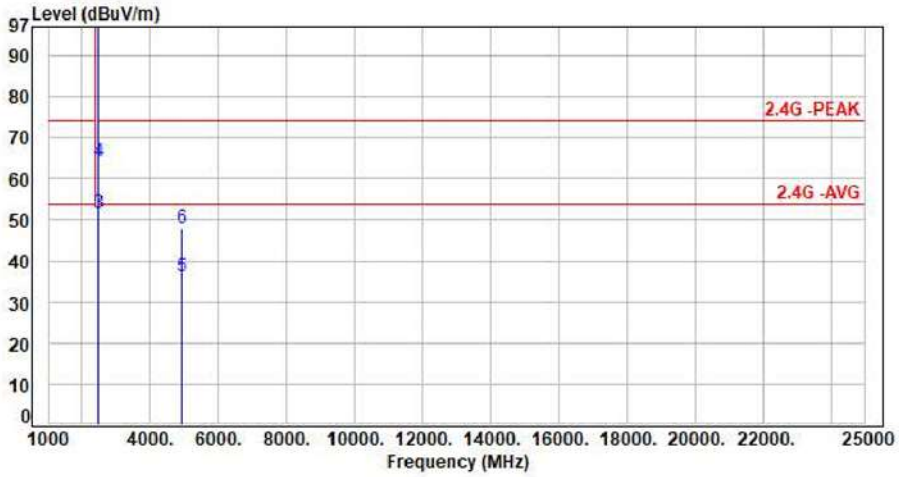
Test Mode : 2TX 11ax20 CH11 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	104.51	102.47	200.00	-97.53	Average	100	32	P
2	2462.00	-2.04	118.25	116.21	200.00	-83.79	Peak	100	32	P
3	2483.50	-2.01	48.25	46.24	54.00	-7.76	Average	100	32	P
4	2483.50	-2.01	62.12	60.11	74.00	-13.89	Peak	100	32	P
5	4924.00	6.40	29.27	35.67	54.00	-18.33	Average	100	358	P
6	4924.00	6.40	41.83	48.23	74.00	-25.77	Peak	100	358	P

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

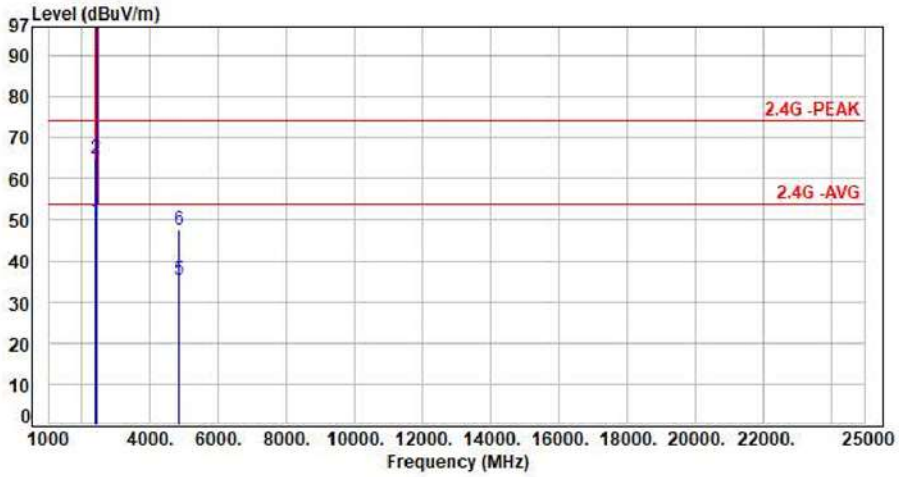
Test Mode : 2TX 11ax20 CH11 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	107.29	105.25	200.00	-94.75	Average	100	47	P
2	2462.00	-2.04	121.43	119.39	200.00	-80.61	Peak	100	47	P
3	2483.50	-2.01	53.58	51.57	54.00	-2.43	Average	100	47	P
4	2483.50	-2.01	66.35	64.34	74.00	-9.66	Peak	100	47	P
5	4924.00	6.40	29.69	36.09	54.00	-17.91	Average	100	341	P
6	4924.00	6.40	41.57	47.97	74.00	-26.03	Peak	100	341	P

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

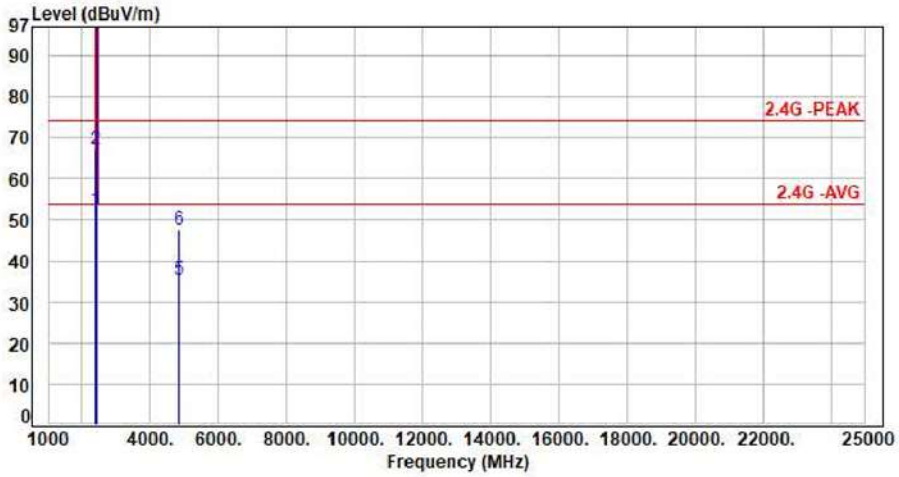
Test Mode : 2TX 11ax40 CH03 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	52.13	49.80	54.00	-4.20	Average	100	33	P
2	2390.00	-2.33	67.41	65.08	74.00	-8.92	Peak	100	33	P
3	2422.00	-2.19	101.57	99.38	200.00	-100.62	Average	100	33	P
4	2422.00	-2.19	114.69	112.50	200.00	-87.50	Peak	100	33	P
5	4844.00	6.14	29.39	35.53	54.00	-18.47	Average	100	352	P
6	4844.00	6.14	41.39	47.53	74.00	-26.47	Peak	100	352	P

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

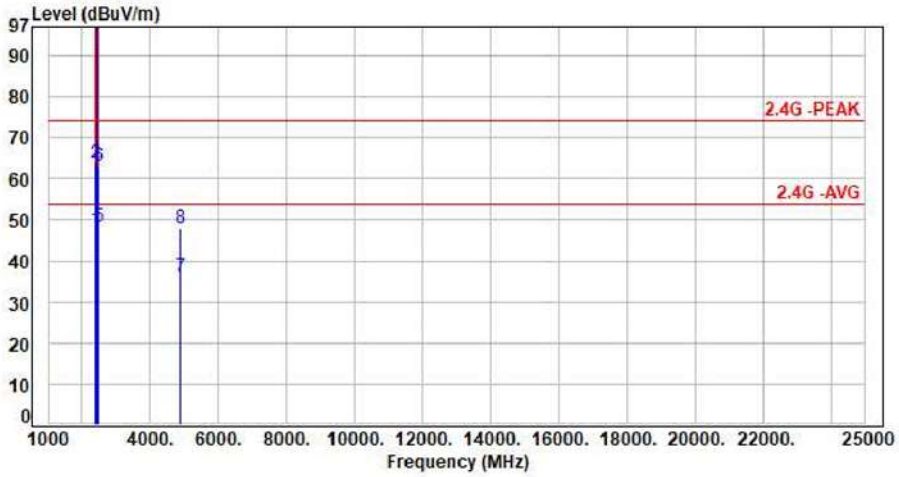
Test Mode : 2TX 11ax40 CH03 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	54.65	52.32	54.00	-1.68	Average	261	49	P
2	2390.00	-2.33	69.42	67.09	74.00	-6.91	Peak	261	49	P
3	2422.00	-2.19	103.61	101.42	200.00	-98.58	Average	261	49	P
4	2422.00	-2.19	116.53	114.34	200.00	-85.66	Peak	261	49	P
5	4844.00	6.14	29.37	35.51	54.00	-18.49	Average	100	347	P
6	4844.00	6.14	41.28	47.42	74.00	-26.58	Peak	100	347	P

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

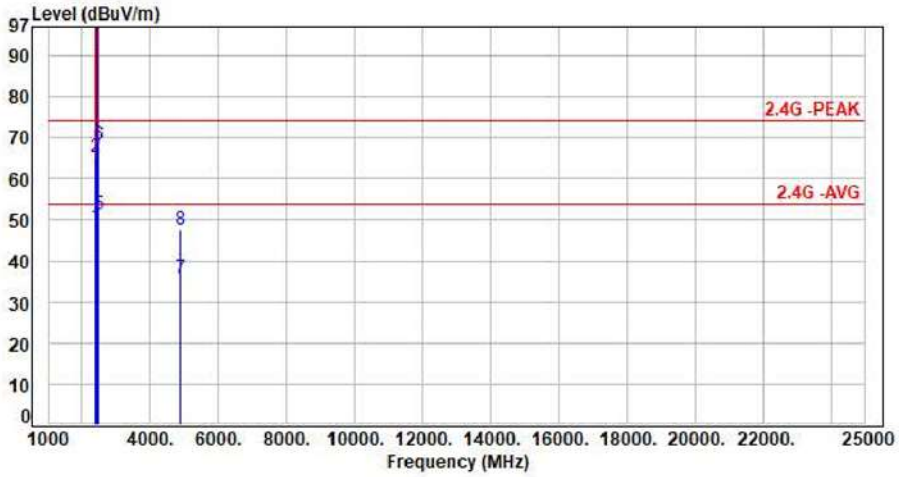
Test Mode : 2TX 11ax40 CH06 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	49.93	47.60	54.00	-6.40	Average	100	34	P
2	2390.00	-2.33	65.98	63.65	74.00	-10.35	Peak	100	34	P
3	2437.00	-2.17	102.61	100.44	200.00	-99.56	Average	100	34	P
4	2437.00	-2.17	115.63	113.46	200.00	-86.54	Peak	100	34	P
5	2483.50	-2.01	50.22	48.21	54.00	-5.79	Average	100	34	P
6	2483.50	-2.01	65.24	63.23	74.00	-10.77	Peak	100	34	P
7	4874.00	6.23	29.83	36.06	54.00	-17.94	Average	100	360	P
8	4874.00	6.23	41.74	47.97	74.00	-26.03	Peak	100	360	P

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

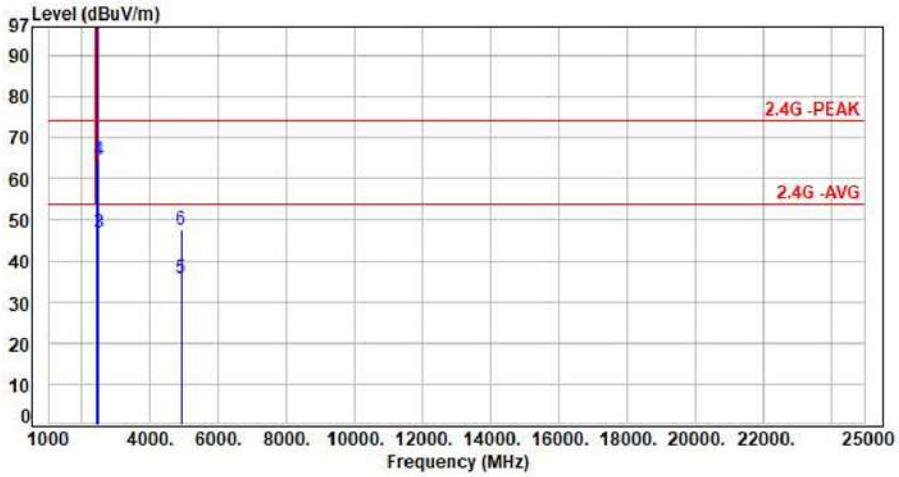
Test Mode : 2TX 11ax40 CH06 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	50.78	48.45	54.00	-5.55	Average	288	47	P
2	2390.00	-2.33	67.79	65.46	74.00	-8.54	Peak	288	47	P
3	2437.00	-2.17	105.17	103.00	200.00	-97.00	Average	288	47	P
4	2437.00	-2.17	118.24	116.07	200.00	-83.93	Peak	288	47	P
5	2483.50	-2.01	53.11	51.10	54.00	-2.90	Average	288	47	P
6	2483.50	-2.01	70.07	68.06	74.00	-5.94	Peak	288	47	P
7	4874.00	6.23	29.68	35.91	54.00	-18.09	Average	100	344	P
8	4874.00	6.23	41.48	47.71	74.00	-26.29	Peak	100	344	P

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

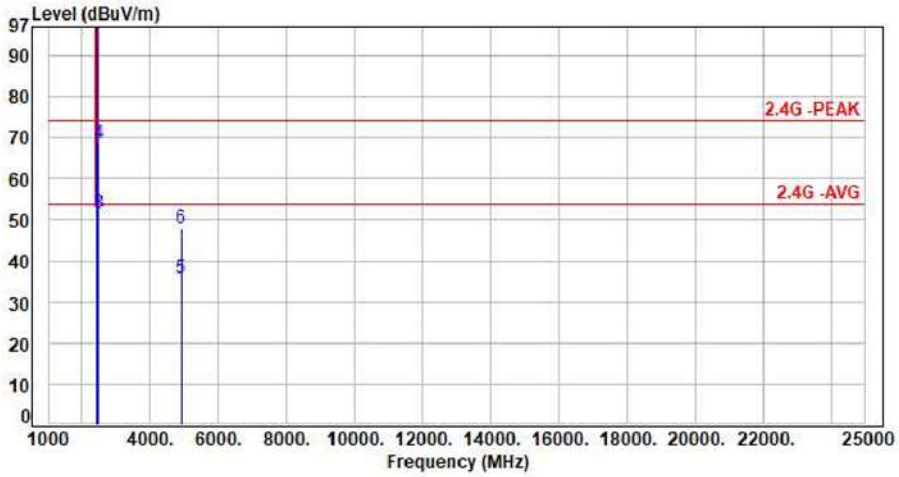
Test Mode : 2TX 11ax40 CH09 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



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	-2.13	100.87	98.74	200.00	-101.26	Average	100	35	P
2	2452.00	-2.13	114.15	112.02	200.00	-87.98	Peak	100	35	P
3	2483.50	-2.01	48.77	46.76	54.00	-7.24	Average	100	35	P
4	2483.50	-2.01	66.42	64.41	74.00	-9.59	Peak	100	35	P
5	4904.00	6.34	29.32	35.66	54.00	-18.34	Average	100	357	P
6	4904.00	6.34	41.28	47.62	74.00	-26.38	Peak	100	357	P

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

Test Mode : 2TX 11ax40 CH09 NSS1 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



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	-2.13	102.63	100.50	200.00	-99.50	Average	228	57	P
2	2452.00	-2.13	115.65	113.52	200.00	-86.48	Peak	228	57	P
3	2483.50	-2.01	53.52	51.51	54.00	-2.49	Average	228	57	P
4	2483.50	-2.01	70.60	68.59	74.00	-5.41	Peak	228	57	P
5	4904.00	6.34	29.47	35.81	54.00	-18.19	Average	100	342	P
6	4904.00	6.34	41.65	47.99	74.00	-26.01	Peak	100	342	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

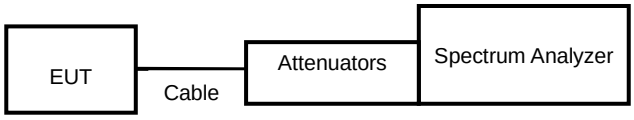
According to the methods defined in ANSI C63.10-2013 Section 11.11.1
Below –30dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

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

a. The transmitter output was connected to the spectrum analyzer via a low loss cable.
b. 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.
c. 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.
d. The band edges was measured and recorded.

7.3 Test Setup Layout

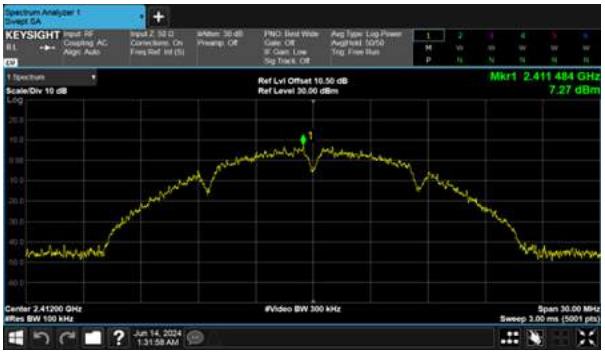


7.4 Test Result and Data

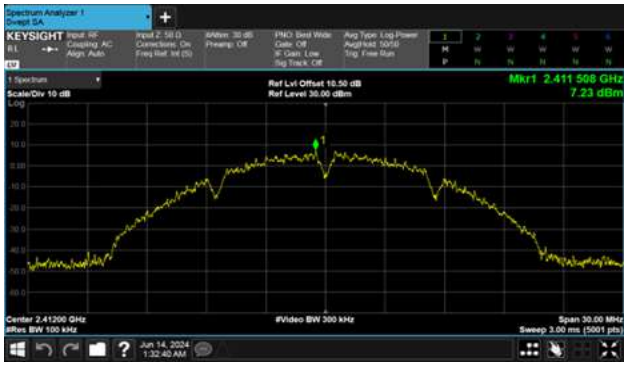
Note: Test plots refers to the following pages.

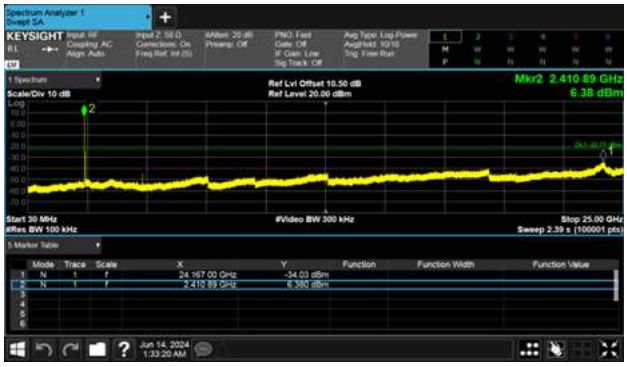
Non-Beamforming
Modulation Type: 802.11b CH01

ANT 1



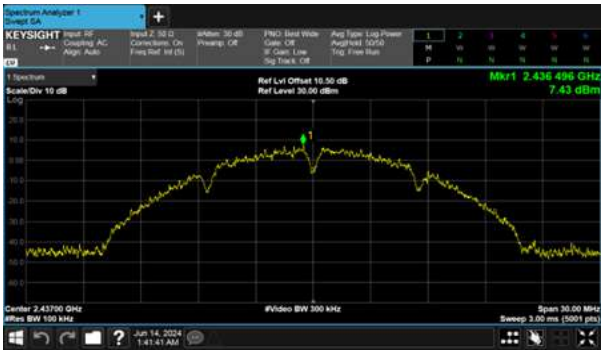
ANT 2



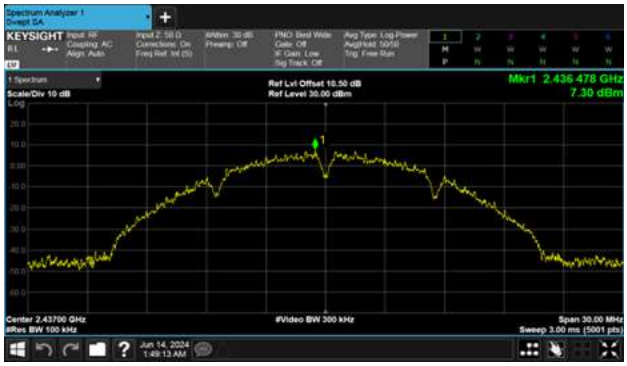


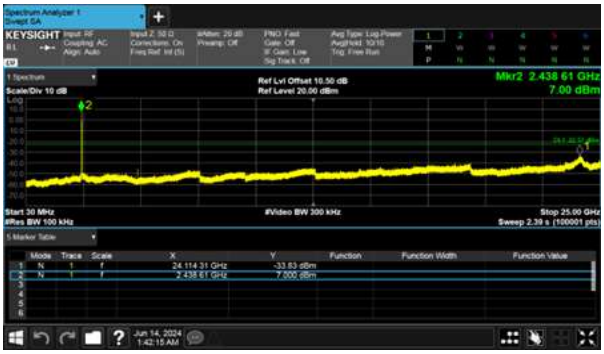
Non-Beamforming
Modulation Type: 802.11b CH06

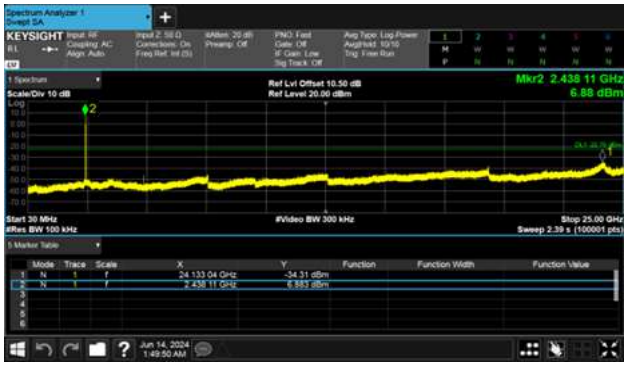
ANT 1



ANT 2

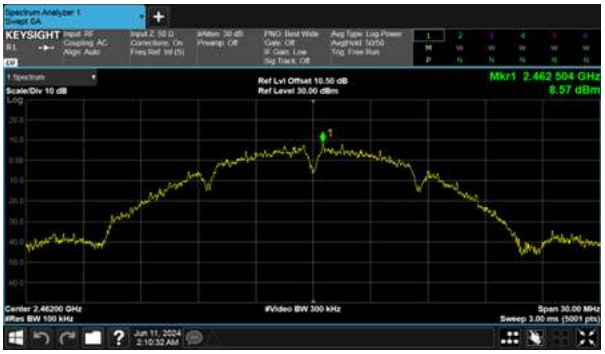




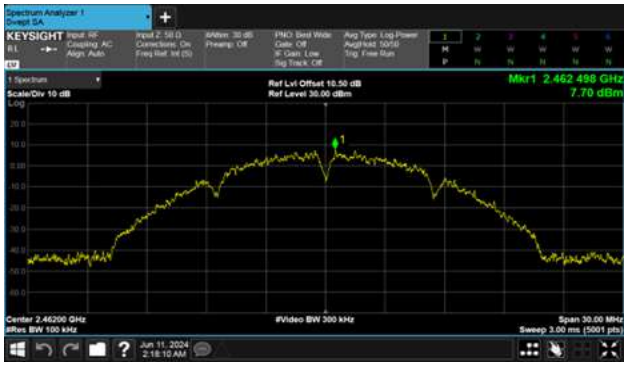


Non-Beamforming
Modulation Type: 802.11b CH11

ANT 1

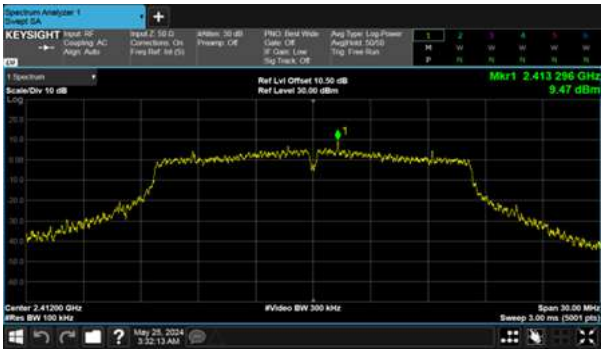


ANT 2

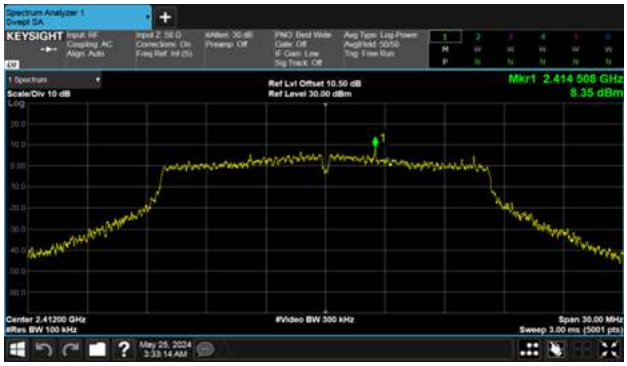


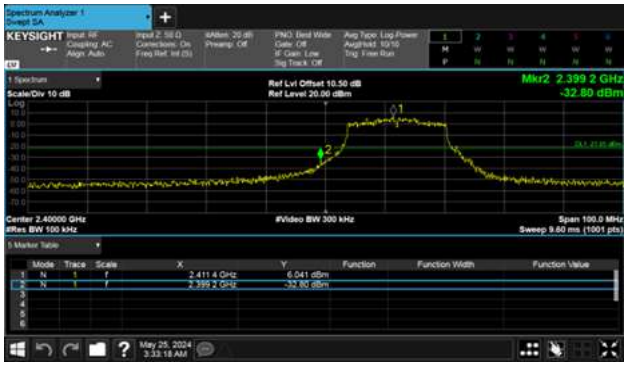
Non-Beamforming
Modulation Type: 802.11g CH01

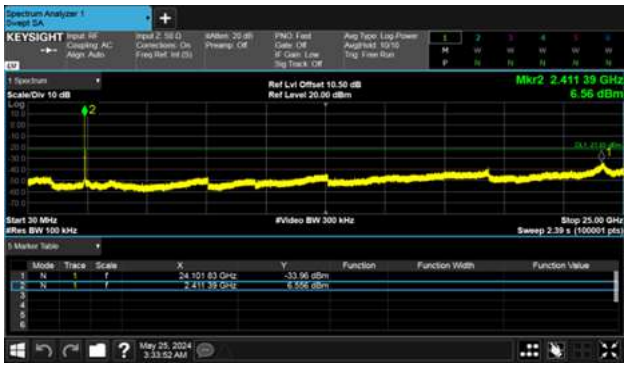
ANT 1



ANT 2

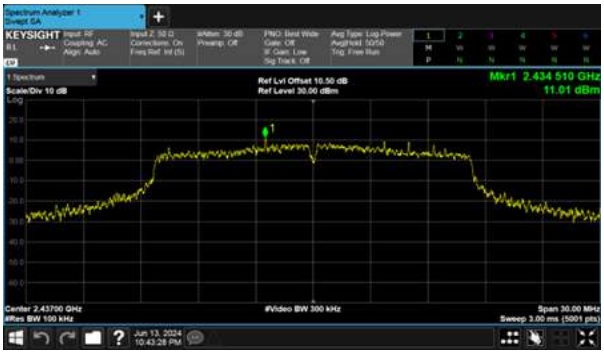




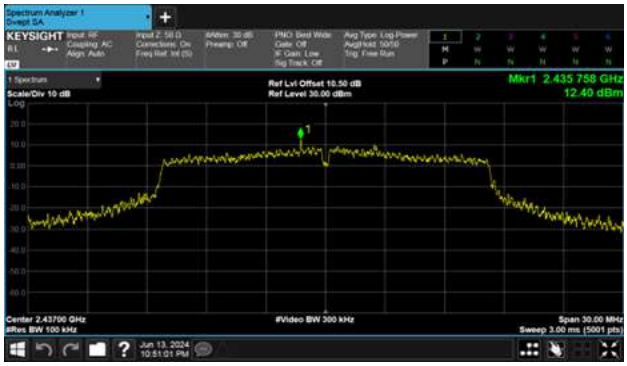


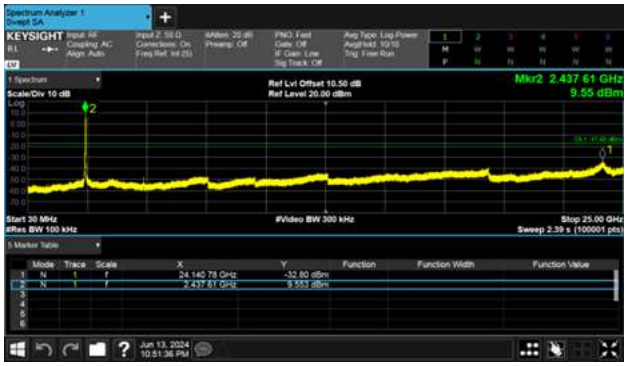
Non-Beamforming
Modulation Type: 802.11g CH06

ANT 1



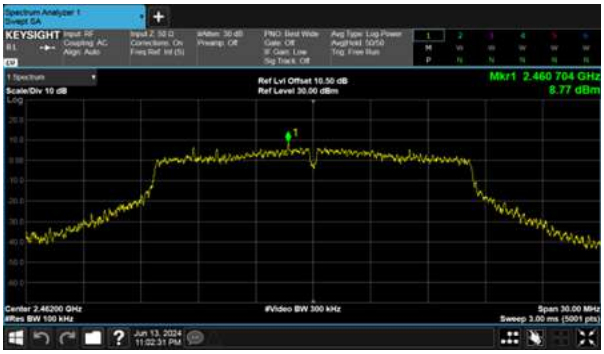
ANT 2



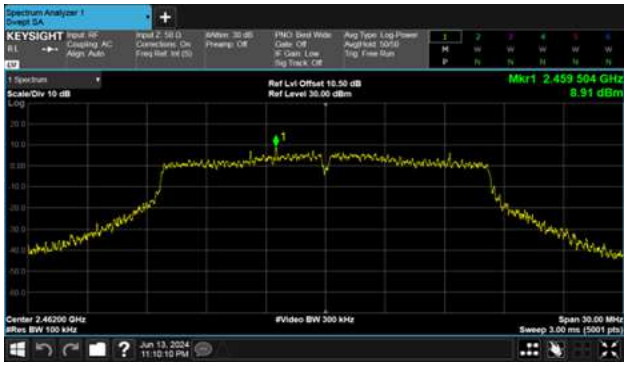


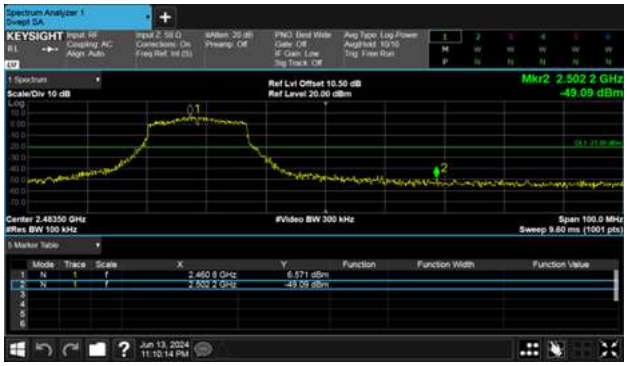
Non-Beamforming
Modulation Type: 802.11g CH11

ANT 1



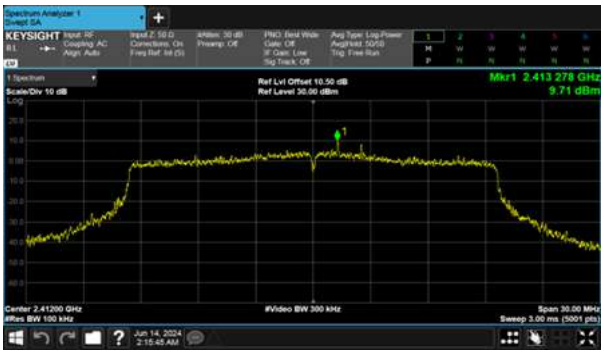
ANT 2



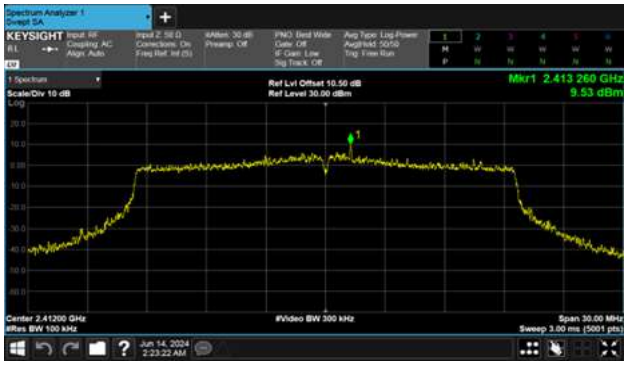


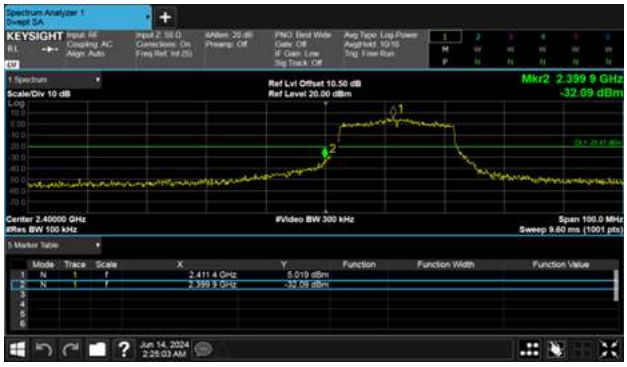
Non-Beamforming
Modulation Type: 802.11ax HE20 CH01

ANT 1



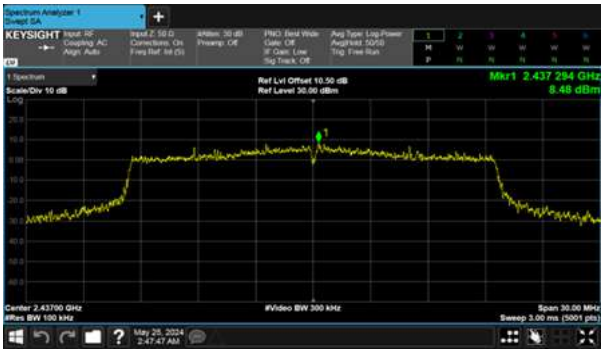
ANT 2



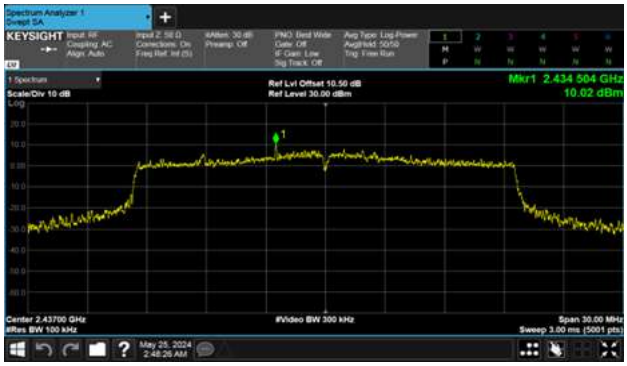


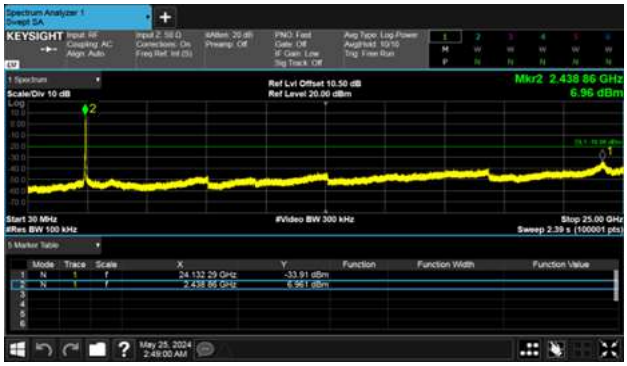
Non-Beamforming
Modulation Type: 802.11ax HE20 CH06

ANT 1



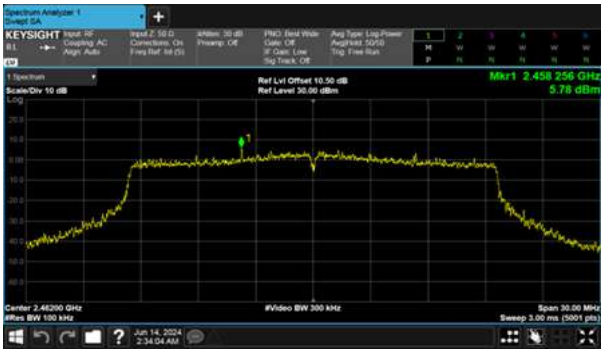
ANT 2



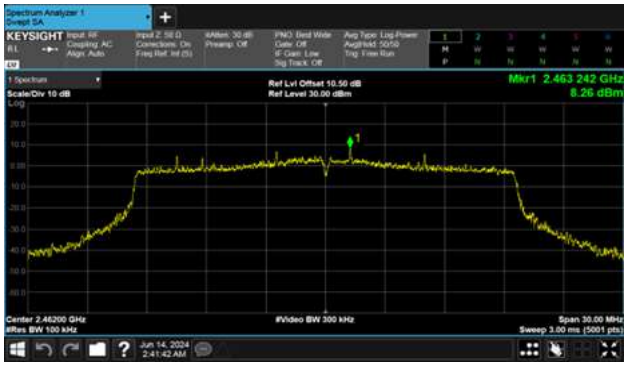


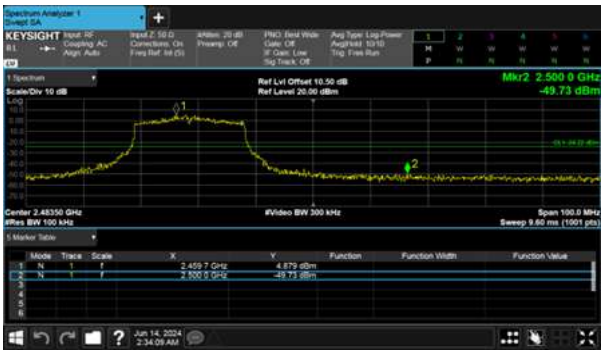
Non-Beamforming
Modulation Type: 802.11ax HE20 CH11

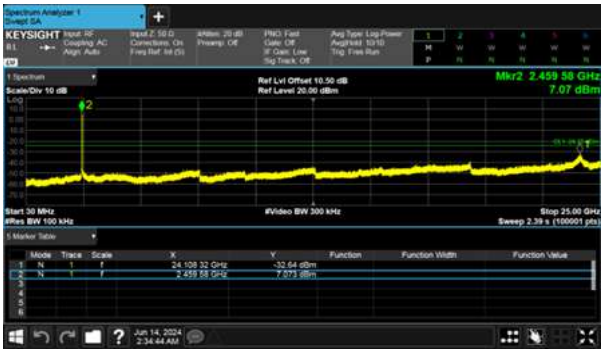
ANT 1

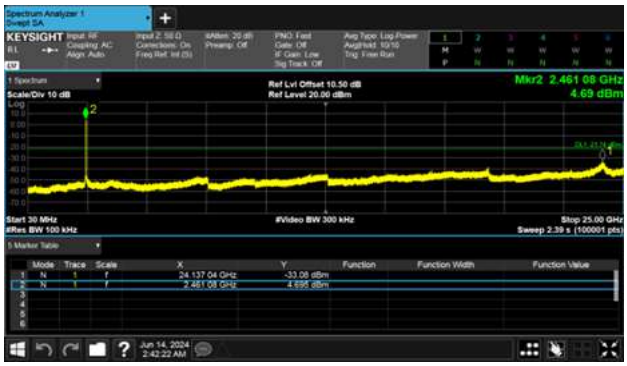


ANT 2



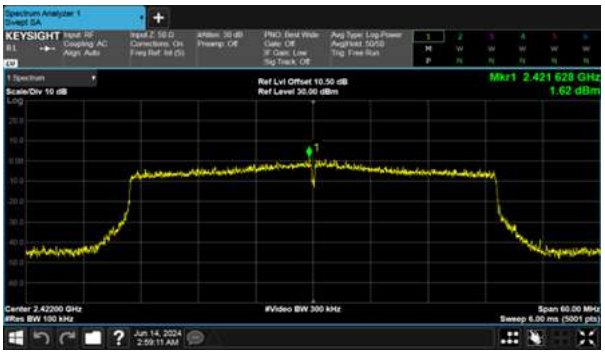




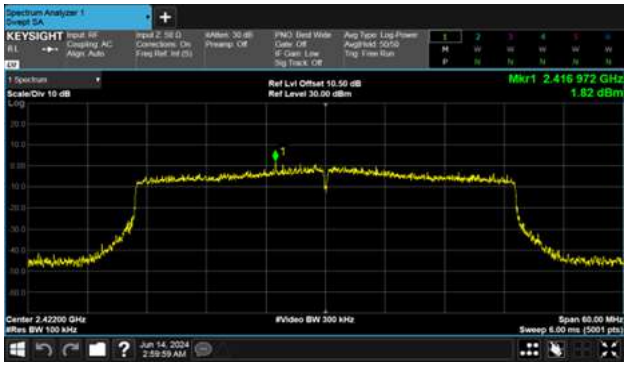


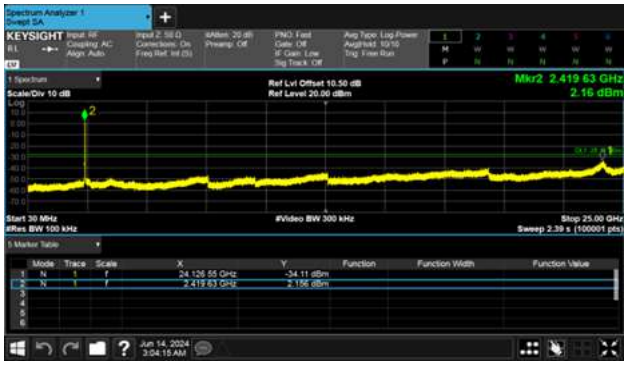
Non-Beamforming
Modulation Type: 802.11ax HE40 CH03

ANT 1



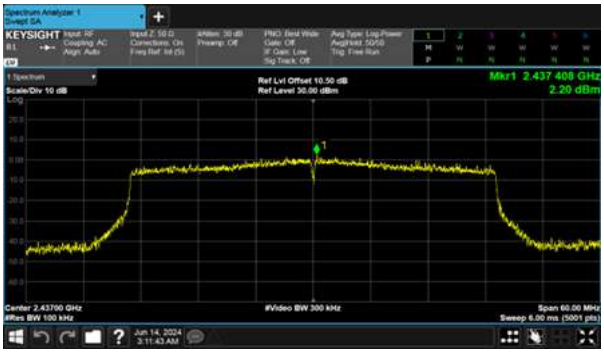
ANT 2



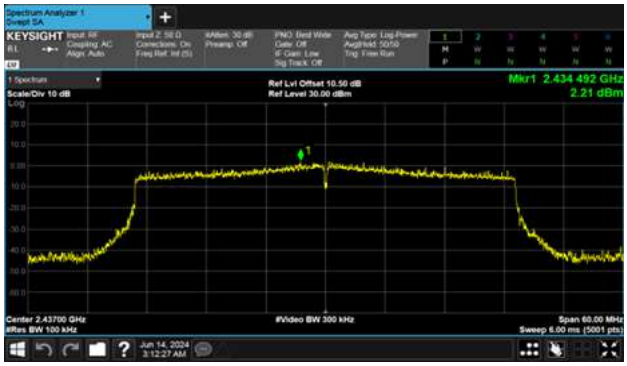


Non-Beamforming
Modulation Type: 802.11ax HE40 CH06

ANT 1

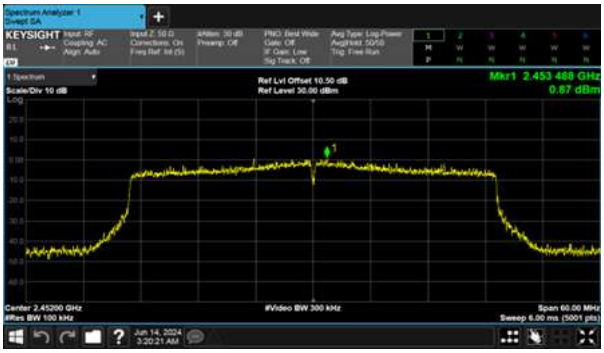


ANT 2

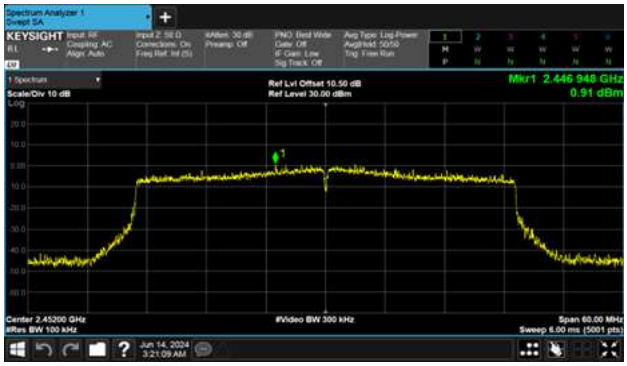


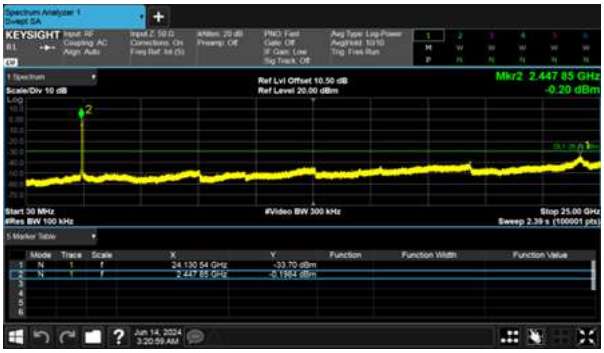
Non-Beamforming
Modulation Type: 802.11ax HE40 CH09

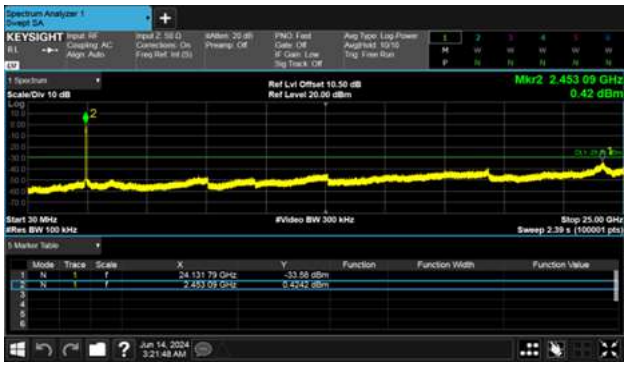
ANT 1



ANT 2







8. On Time, Duty Cycle and Measurement methods

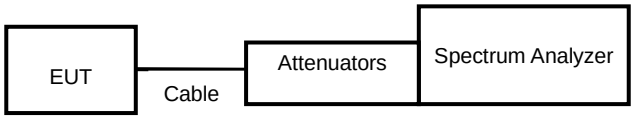
8.1 Test Limit

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

Non-beamforming

Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b,1M	0.692	0.702	98.60%
11g,6M	1.982	1.992	99.50%
11ax HE20	5.456	5.460	99.93%
11ax HE40	5.460	5.464	99.93%

Beamforming

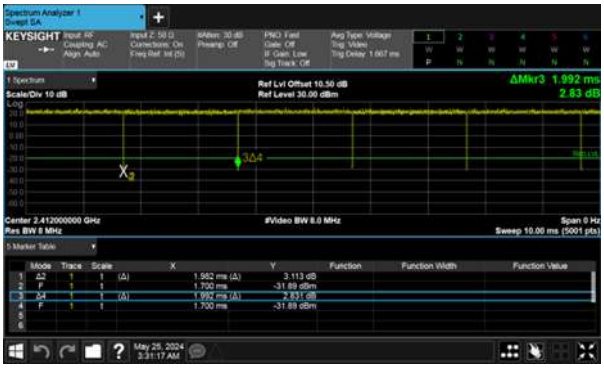
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11ax HE20	5.460	5.464	99.93%
11ax HE40	5.456	5.460	99.93%

Non-beamforming

Modulation Type: 802.11b(1Mbps)

Modulation Type: 802.11ax HE40(14.6Mbps)

Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11ax HE20(7.3Mbps)

Beamforming

Modulation Type: 802.11ax HE20(7.3Mbps)

Modulation Type: 802.11ax HE40(14.6Mbps)

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

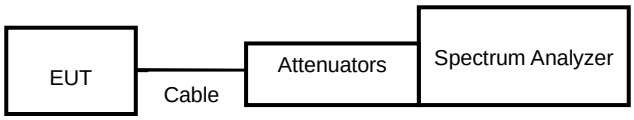
a. The transmitter output was connected to the spectrum analyzer.

b. Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.

c. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

d. 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 1	ANT 2	
11b	1	2412	8.07	8.07	0.5
	6	2437	8.07	8.03	0.5
	11	2462	8.07	8.07	0.5
11g	1	2412	15.12	15.13	0.5
	6	2437	15.11	15.09	0.5
	11	2462	15.11	15.10	0.5
11ax HE20	1	2412	15.12	15.12	0.5
	6	2437	15.07	15.07	0.5
	11	2462	15.12	15.10	0.5
11ax HE40	3	2422	32.75	32.55	0.5
	6	2437	32.58	33.84	0.5
	9	2452	33.81	33.88	0.5

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11b CH01
ANT 1

Modulation Type: 802.11b CH06
ANT 1

ANT 2

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11b CH11
ANT 1

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11g CH01
ANT 1

Modulation Type: 802.11g CH06
ANT 1

ANT 2

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11g CH11
ANT 1

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11ax HE20 CH01
ANT 1

Modulation Type: 802.11ax HE20 CH06
ANT 1

ANT 2

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11ax HE20 CH11
ANT 1

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11ax HE40 CH03
ANT 1

Modulation Type: 802.11ax HE40 CH06
ANT 1

ANT 2

ANT 2

6dB Bandwidth, Non-Beamforming
Modulation Type: 802.11ax HE40 CH09
ANT 1

ANT 2

10. Maximum Average Output Power

10.1 Test Limit

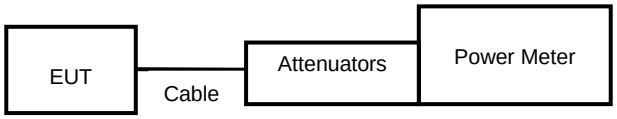
The Maximum Average Output Power Measurement is 30dBm.
If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

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

Non Beamforming

Data Rate	Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Powe Limit (dBm)
					ANT 1	ANT 2			
1	16	11b	1	2412	16.45	16.52	19.50	89.032	30.00
	16		6	2437	16.60	16.63	19.63	91.734	30.00
	16		11	2462	16.58	16.56	19.58	90.789	30.00
6	18	11g	1	2412	18.63	18.42	21.54	142.448	30.00
	21		6	2437	21.36	21.26	24.32	270.432	30.00
	18.5		11	2462	18.92	18.87	21.91	155.073	30.00
NSS1-MCS0	18	11ax HE20	1	2412	18.17	18.04	21.12	129.294	30.00
	20		6	2437	20.28	20.22	23.26	211.856	30.00
	17		11	2462	17.12	17.15	20.15	103.403	30.00
NSS1-MCS0	15.5	11ax HE40	3	2422	15.63	15.82	18.74	74.754	30.00
	17		6	2437	17.20	17.14	20.18	104.241	30.00
	15.5		9	2452	15.78	15.66	18.73	74.657	30.00

Beamforming

Data Rate	Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Powe Limit (dBm)
					ANT 1	ANT 2			
NSS1-MCS0	14.5	11ax HE20	1	2412	14.79	14.65	17.73	59.304	29.94
	16.5		6	2437	16.84	16.92	19.89	97.510	29.94
	13		11	2462	13.59	13.72	16.67	46.406	29.94
NSS1-MCS0	12	11ax HE40	3	2422	12.34	12.47	15.42	34.800	29.94
	13.5		6	2437	13.87	13.95	16.92	49.209	29.94
	12		9	2452	12.35	12.48	15.43	34.880	29.94

11. Power Spectral Density

11.1 Test Limit

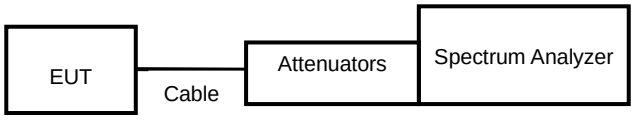
The Maximum of Power Spectral Density Measurement is 8dBm.

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

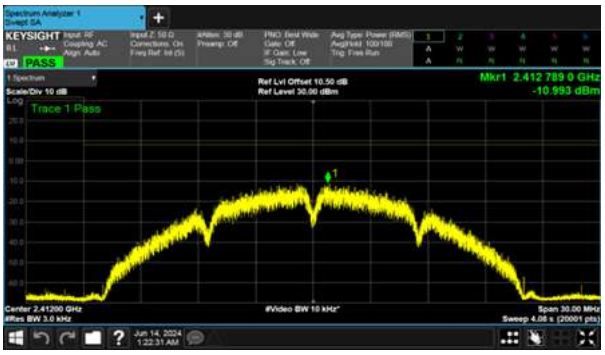


11.4 Test Result and Data

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 1	ANT 2				
11b	1	2412	-10.993	-10.852	-7.91	0.00	-7.91	7.94
	6	2437	-11.552	-11.549	-8.54	0.00	-8.54	7.94
	11	2462	-11.157	-10.926	-8.03	0.00	-8.03	7.94
11g	1	2412	-12.472	-12.664	-9.56	0.00	-9.56	7.94
	6	2437	-9.357	-9.489	-6.41	0.00	-6.41	7.94
	11	2462	-11.657	-11.757	-8.70	0.00	-8.70	7.94
11ax HE20	1	2412	-15.587	-15.456	-12.51	0.00	-12.51	7.94
	6	2437	-13.781	-13.619	-10.69	0.00	-10.69	7.94
	11	2462	-16.468	-16.421	-13.43	0.00	-13.43	7.94

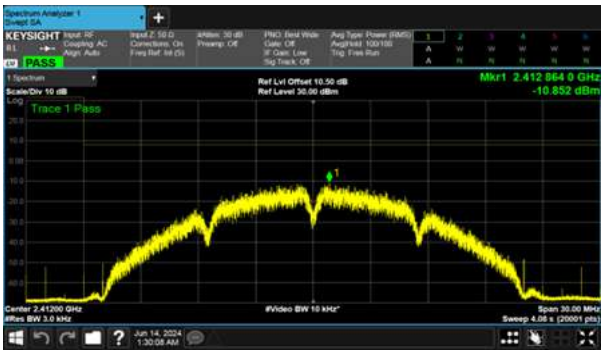
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 100KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT 1	ANT 2				
11ax HE40	3	2422	-6.531	-6.778	-3.64	0.00	-3.64	7.94
	6	2437	-5.328	-4.902	-2.10	0.00	-2.10	7.94
	9	2452	-6.576	-6.772	-3.66	0.00	-3.66	7.94

Modulation Type: 802.11b CH01
ANT 1



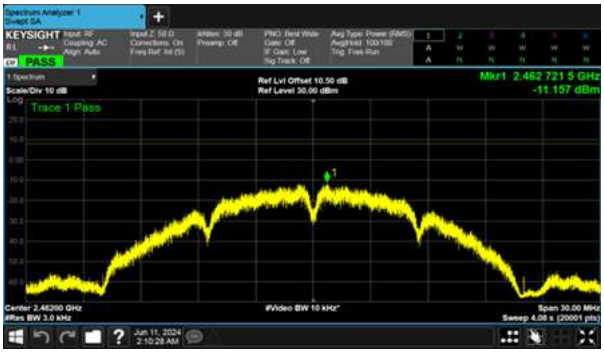
Modulation Type: 802.11b CH06
ANT 1

ANT 2

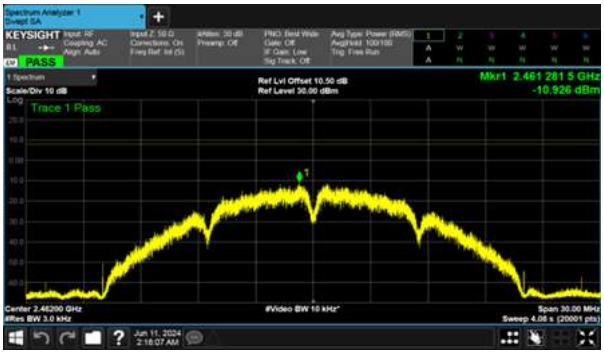


ANT 2

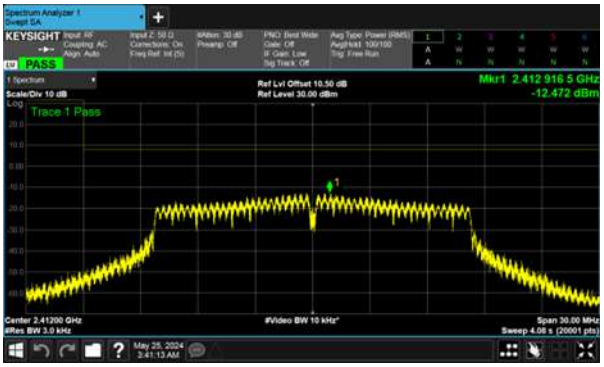
Modulation Type: 802.11b CH11
ANT 1



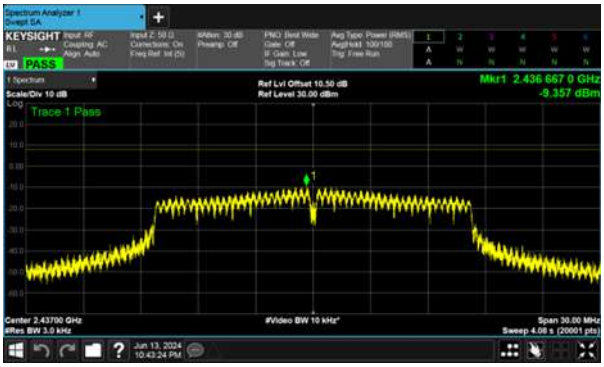
ANT 2



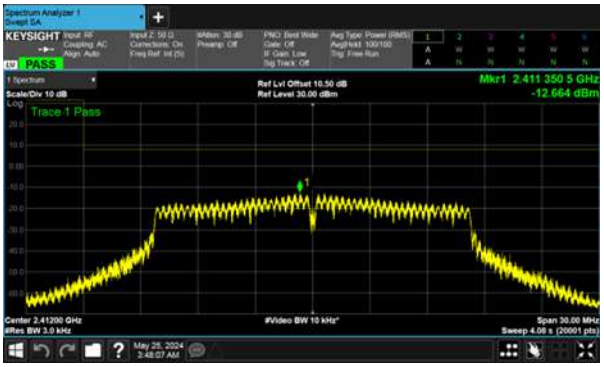
Modulation Type: 802.11g CH01
ANT 1



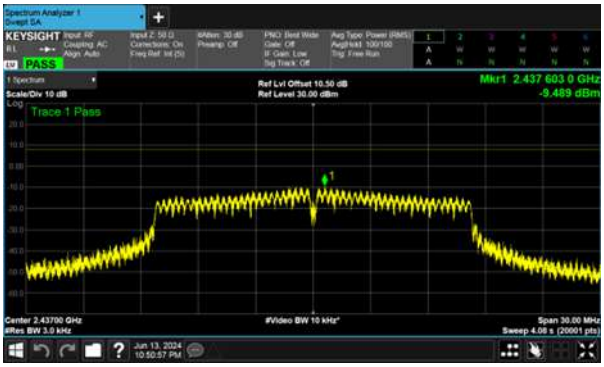
Modulation Type: 802.11g CH06
ANT 1



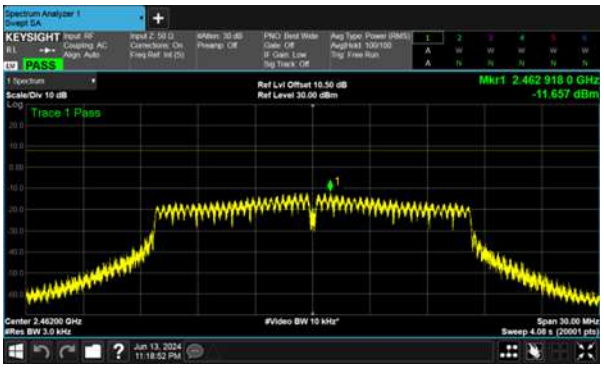
ANT 2



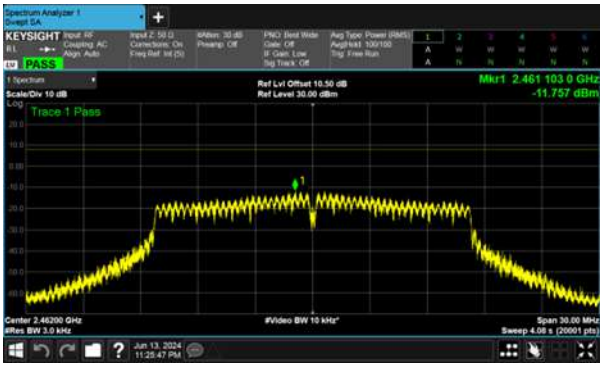
ANT 2



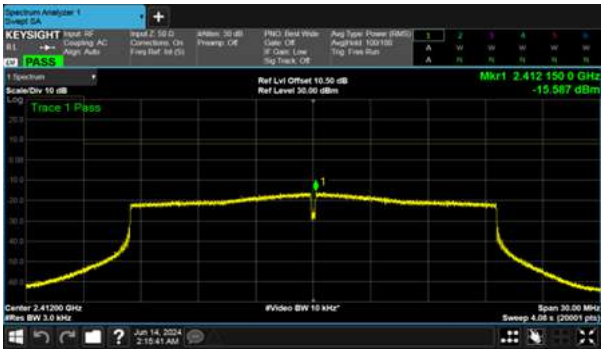
Modulation Type: 802.11g CH11
ANT 1



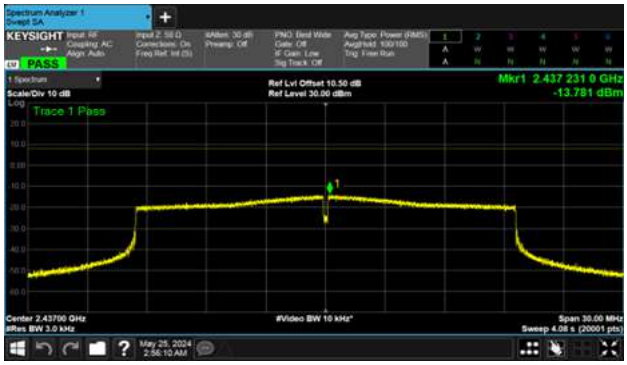
ANT 2



Modulation Type: 802.11ax HE20 CH01
ANT 1



Modulation Type: 802.11ax HE20 CH06
ANT 1



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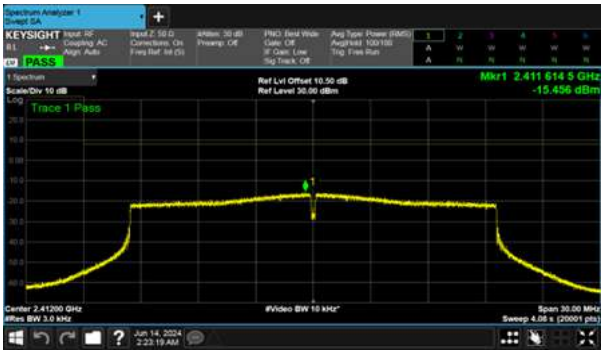

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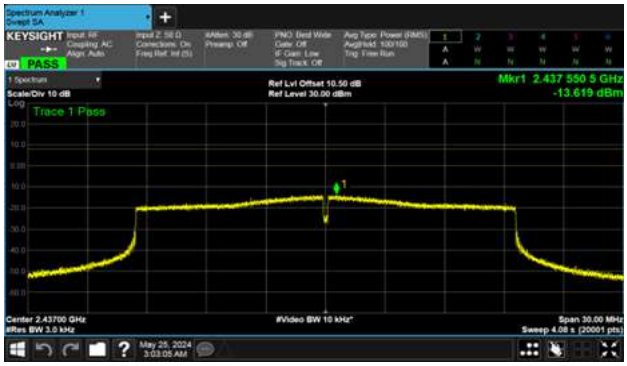
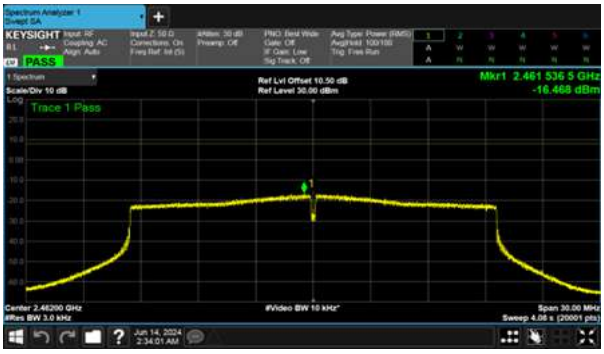
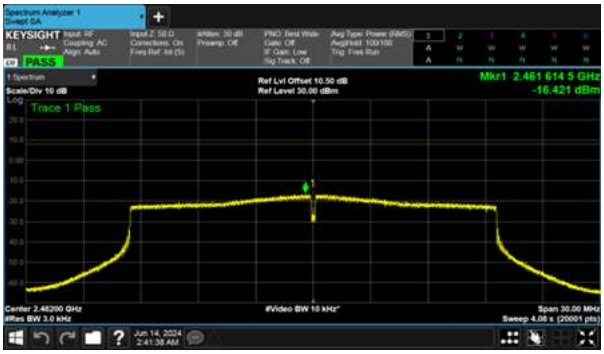


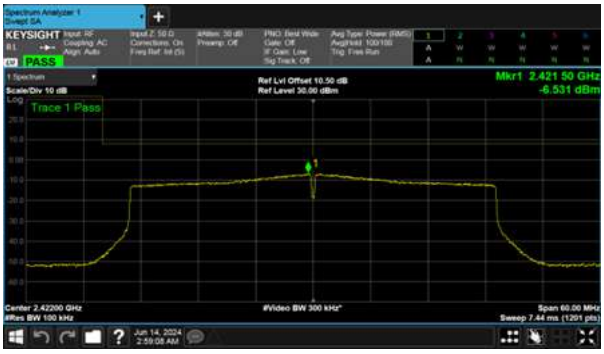
Modulation Type: 802.11ax HE20 CH11
ANT 1



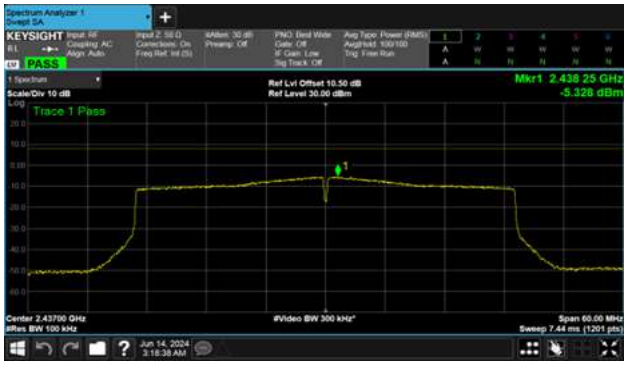
ANT 2



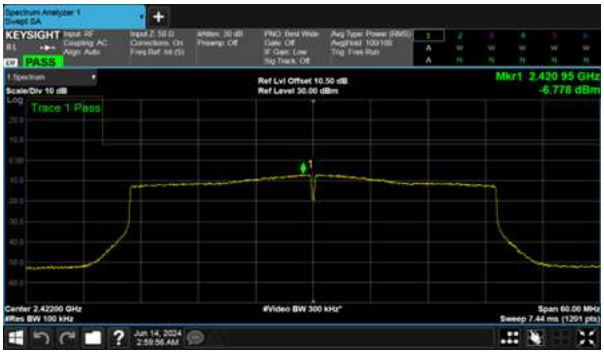
Modulation Type: 802.11ax HE40 CH03
ANT 1



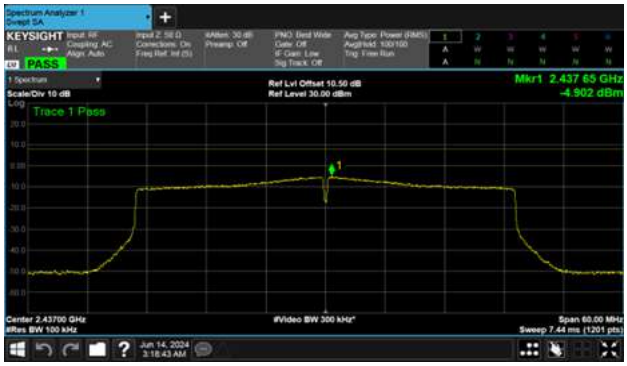
Modulation Type: 802.11ax HE40 CH06
ANT 1



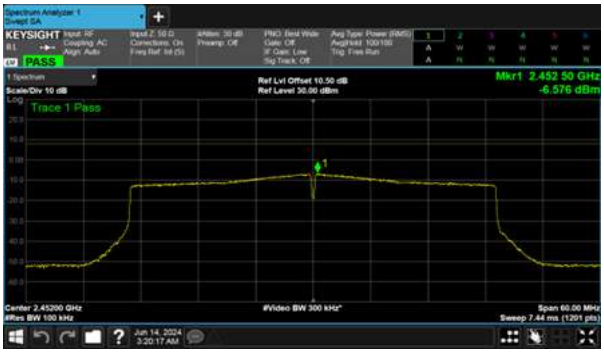
ANT 2



ANT 2



Modulation Type: 802.11ax HE40 CH09
ANT 1



ANT 2