FCC RADIO TEST REPORT

Applicant	:	Micro-Star Int'l Co.,Ltd.
Address	:	No.69, Lide St., Zhonghe Dist. New Taipei City 235 Taiwan
Equipment	:	WiFi USB Adapter
Model No.	:	GUAXE54
Trade Name	:	msi
FCC ID	:	I4L-GUAXE54

I HEREBY CERTIFY THAT :

The sample was received on Jun. 16, 2023 and the testing was completed on Sep. 04, 2023 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
23060172-TRFCC01	Sep. 11, 2023	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

*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(Turbo QAM)/ax: 2400-2483.5MHz 5GHz:802.11a/n/ac/ax: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz 6GHz:802.11ax: 6105MHz~6425MHz, 6425MHz~6525MHz 6525MHz~6875MHz, 6875MHz~7125MHz
Center Frequency Range	2.4GHz:802.11b/g/n(Turbo QAM)/ax: 2412MHz-2462MHz 5GHz :802.11a/n/ac/ax: 5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745-5825MHz 6GHz: 802.11ax: 6115MHz~6415MHz, 6435MHz~6515MHz 6535MHz~6855MHz,6875MHz~7115MHz
Modulation Type	2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM, 256QAM(Turbo QAM) 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 5GHz: 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 6GHz: 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(Turbo QAM) 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: 802.11ax: MCS0 – MCS11, HE20/40/80/160
Antenna Type	PCB Antenna
Antenna Gain	2400-2490MHz: ANT A: 1.40 dBi, ANT B: 1.70 dBi 5150-5200MHz: ANT A: 3.00 dBi, ANT B: 3.50 dBi 5300-5400MHz: ANT A: 2.90 dBi, ANT B: 2.80 dBi 5500-5700MHz: ANT A: 2.40 dBi, ANT B: 2.10 dBi 5700-5850MHz: ANT A: 1.20 dBi, ANT B: 1.50 dBi 6100~6400MHz: ANT A: 3.30 dBi, ANT B: 3.20 dBi 6400~6500MHz: ANT A: 3.30 dBi, ANT B: 3.30 dBi 6500~6800MHz: ANT A: 3.90 dBi, ANT B: 3.40 dBi 6900~7125MHz: ANT A: 4.00 dBi, ANT B: 3.50 dBi
USB cradle	Brand: msi, Model: GUAXE54C

Note:
1. WLAN 2.4G 802.11n Support TurboQAM.
2. EUT support TPC Function.
3. EUT support Client Mode without radar detection.
4. For more details, please refer to the User's manual of the EUT.

2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT20, 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, ” AX MPTOOL ver. V1.1.27” 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) , From System (120V/60Hz)
2	802.11g (6Mbps) , From System (120V/60Hz)
3	802.11ax HE20 (7.3Mbps) , From System (120V/60Hz)
4	802.11ax HE40 (14.6Mbps) , From System (120V/60Hz)
5	802.11n HT20 (6.5Mbps) , From System (120V/60Hz)
6	802.11n HT40 (13.5Mbps) , From System (120V/60Hz)
7	VHT20 (6.5Mbps) , From System (120V/60Hz)
8	VHT40 (13.5Mbps) , From System (120V/60Hz)
caused “Test Mode 3” generated the worst case, it was reported as the final data.	
Radiation Emissions (Below 1GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps) , From System (120V/60Hz)
2	802.11g (6Mbps) , From System (120V/60Hz)
3	802.11ax HE20 (7.3Mbps) , From System (120V/60Hz)
4	802.11ax HE40 (14.6Mbps) , From System (120V/60Hz)
5	802.11n HT20 (6.5Mbps) , From System (120V/60Hz)
6	802.11n HT40 (13.5Mbps) , From System (120V/60Hz)
7	VHT20 (6.5Mbps) , From System (120V/60Hz)
8	VHT40 (13.5Mbps) , From System (120V/60Hz)
caused “Test Mode 3” 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 (120V/60Hz)
2	802.11g (6Mbps) , From System (120V/60Hz)
3	802.11ax HE20 (7.3Mbps) , From System (120V/60Hz)
4	802.11ax HE40 (14.6Mbps) From System (120V/60Hz)
5	802.11n HT20 (6.5Mbps) , From System (120V/60Hz)
6	802.11n HT40 (13.5Mbps) , From System (120V/60Hz)
7	VHT20 (6.5Mbps) , From System (120V/60Hz)
8	VHT40 (13.5Mbps) , From System (120V/60Hz)
caused “Test Mode 1~4” generated the worst case, they were reported as the final data.	

Note:
1.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(Below 1GHz), AC 120V / 60Hz is worst case.
For Radiated Spurious Emission(1GHz ~ 25GHz), AC 120V / 60Hz is worst case.
.2.There are evaluation tests with and without USB cradle, with USB cradle is worst case.

The EUT incorporates a MIMO function

Modulation Type	TX CONFIGURATION
802.11b	2TX
802.11g	2TX
802.11n HT20	2TX
802.11n HT40	2TX
VHT20	2TX
VHT40	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	Adapter / 1.8m / NS
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
AC Power Line Conducted Emission				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	ASUS	P2430U	N/A	Adapter / 1.8m / NS

2.5 General Information of Test

☒ Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel: +886-3-3226-888 Fax: +886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
Frequency Range Investigated	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25,000MHz	
Test Distance	The test distance of radiated emission from antenna to EUT is 3 M.	

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2023/6/24~2023/9/4	24.8~27.7℃ / 43~60%	Leon Huang
Radiated Emissions	3M02-NK	2023/7/24~2023/8/31	22~26.6℃ / 43~58%	Leon Huang
AC Power Line Conducted Emission	CON02-NK	2023/7/24	26℃ / 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)	±3.28dB
Radiated Spurious Emission(9KHz~30MHz)	±3.4dB
Radiated Spurious Emission(30MHz~1GHz)	±5.7dB
Radiated Spurious Emission(1GHz~25GHz)	±6.8dB
Conducted Spurious Emission	±1.8dB
6dB Bandwidth	±4.4%
20dB Bandwidth	±4.4%
Occupied Bandwidth	±4.4%
Peak Output Power(Conducted Power Meter)	±1.1dB
Dwell Time / Deactivation Time	±1.2%
Power Spectral Density	±1.8dB
Duty Cycle	±1.2%

3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)				
Instrument	**Manufacturer**	**Model No**	**Serial No**	**Calibration Date**	**Valid Date**
Bilog Antenna	Schwarzbeck	VULB9168	275	2022/11/18	2023/11/17
Active Loop Antenna	Schwarzbeck	FMZB 1513	414	2023/02/03	2024/02/02
Horn Antenna	EMCO	3115	31589	2023/03/23	2024/03/22
Horn Antenna	EMCO	3116	31970	2023/03/03	2024/03/02
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2023/07/05	2024/07/04
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2023/02/24	2024/02/23
Preamplifier	Agilent	8449B	3008A01954	2023/03/08	2024/03/07
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2022/11/11	2023/11/10
Preamplifier	EM Electronics corp.	EM330	60658	2022/10/04	2023/10/03
High Pass Filter	Warison	WFIL-H3000-18000F-03	WRJ5CFWC2J1	2023/07/03	2024/07/02
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2023/03/13	2024/03/12
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2023/02/25	2024/02/24
Cable-0.5m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805443/4	2023/03/07	2024/03/06
Cable-3m(1G-40G)	HUBER SUHNER	SUCOFLEX 104	805796/4	2023/03/07	2024/03/06
Cable-8m(1G-26.5G)	WOKEN	WCBA-WCA203SM	CCE1374	2023/03/07	2024/03/06
Cable-0.5m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2023/03/07	2024/03/06
Cable-3m(10M-40G)	HUBER SUHNER	SF102	804619/2	2022/10/11	2023/10/10
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	**Manufacturer**	**Model No**	**Serial No**	**Calibration Date**	**Valid Date**
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2022/11/29	2023/11/28
Power Meter	Anritsu	ML2495A	1224005	2023/03/07	2024/03/06
Power Sensor	Anritsu	MA2411B	1207295	2023/03/07	2024/03/06
Attenuator	KEYSIGHT	8491B	MY39250703	2023/03/08	2024/03/07

Test Item	AC Power Line Conducted Emission				
Test Site	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	2022/08/24	2023/08/23
Cable-4m(9k-3G)	EMEC	RG-223	18274M	2022/07/27	2023/07/26
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	PCB Antenna
Antenna Gain	2400-2490MHz: ANT A: 1.4dBi, ANT B: 1.7dBi

2412-2462MHz
For Power directional gain= G_{ant}= 1.7 dBi
For PSD directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}$]
= 4.56 (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.

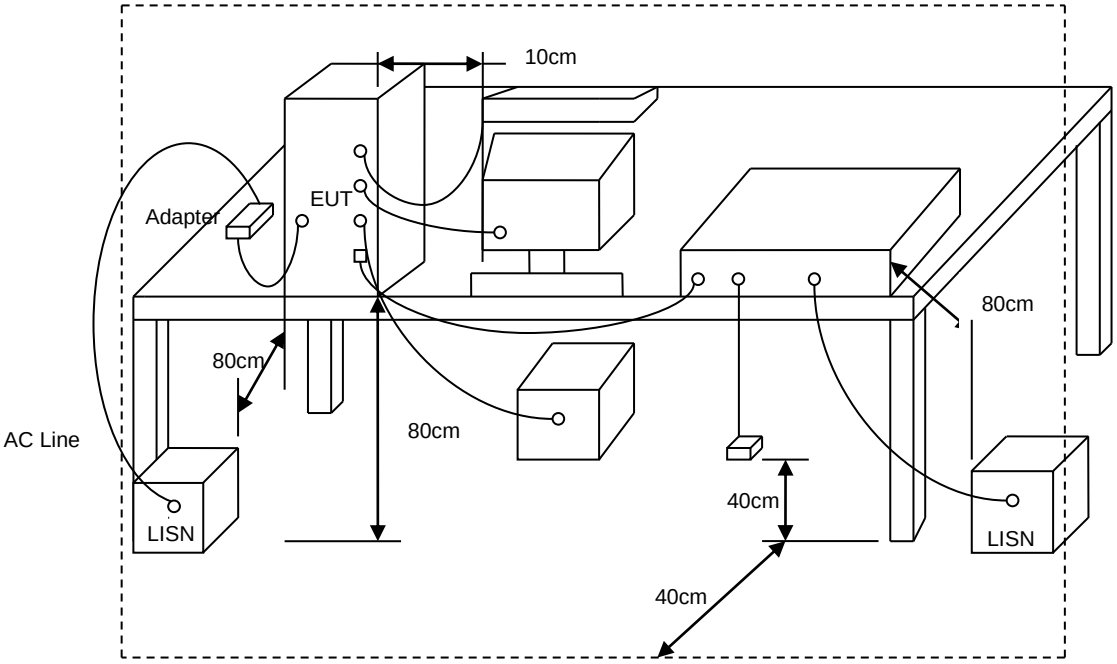
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2 Test Procedures

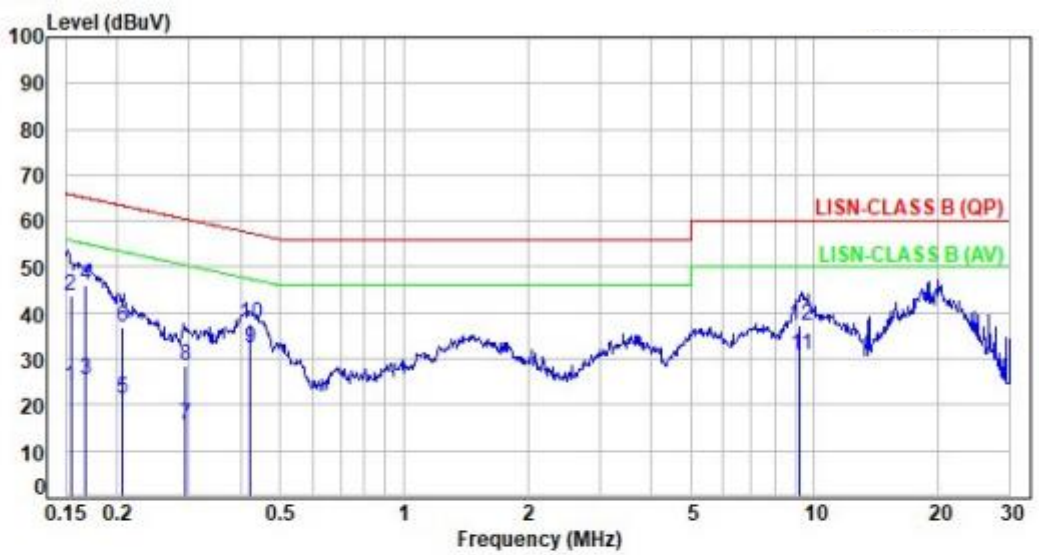
a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
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

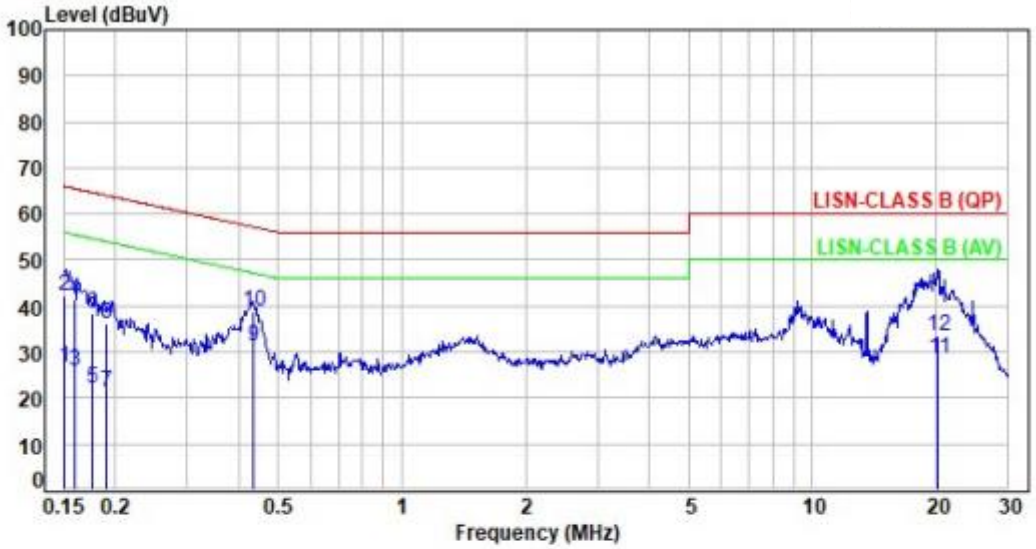
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	LINE
Test Mode	:	Mode 3		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.62	14.35	23.97	55.78	-31.81	Average	P
2	0.15	9.62	34.07	43.69	65.78	-22.09	QP	P
3	0.17	9.62	15.80	25.42	55.08	-29.66	Average	P
4	0.17	9.62	36.30	45.92	65.08	-19.16	QP	P
5	0.21	9.61	11.52	21.13	53.34	-32.21	Average	P
6	0.21	9.61	27.27	36.88	63.34	-26.46	QP	P
7	0.29	9.63	5.87	15.50	50.41	-34.91	Average	P
8	0.29	9.63	18.92	28.55	60.41	-31.86	QP	P
9	0.42	9.63	22.55	32.18	47.40	-15.22	Average	P
10	0.42	9.63	28.14	37.77	57.40	-19.63	QP	P
11	9.25	9.84	21.02	30.86	50.00	-19.14	Average	P
12	9.25	9.84	27.24	37.08	60.00	-22.92	QP	P

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

Power	:	From System (AC120V /60Hz)	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 3		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.63	16.93	26.56	55.98	-29.42	Average	P
2	0.15	9.63	32.68	42.31	65.98	-23.67	QP	P
3	0.16	9.63	16.04	25.67	55.48	-29.81	Average	P
4	0.16	9.63	31.78	41.41	65.48	-24.07	QP	P
5	0.18	9.62	12.51	22.13	54.69	-32.56	Average	P
6	0.18	9.62	28.66	38.28	64.69	-26.41	QP	P
7	0.19	9.62	11.80	21.42	53.99	-32.57	Average	P
8	0.19	9.62	26.64	36.26	63.99	-27.73	QP	P
9	0.44	9.63	21.43	31.06	47.14	-16.08	Average	P
10	0.44	9.63	29.34	38.97	57.14	-18.17	QP	P
11	20.28	9.95	18.63	28.58	50.00	-21.42	Average	P
12	20.28	9.95	23.70	33.65	60.00	-26.35	QP	P

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

6. Test of Radiated Spurious Emission

6.1 Test Limit

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

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

6.2 Test Procedures

a. The EUT was placed on a rotatable table top 0.8 meter above ground.

b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.

c. The table was rotated 360 degrees to determine the position of the highest radiation.

d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.

e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.

f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

i. “Cone of radiation” has been considered to be 3dB bandwidth of the measurement antenna.

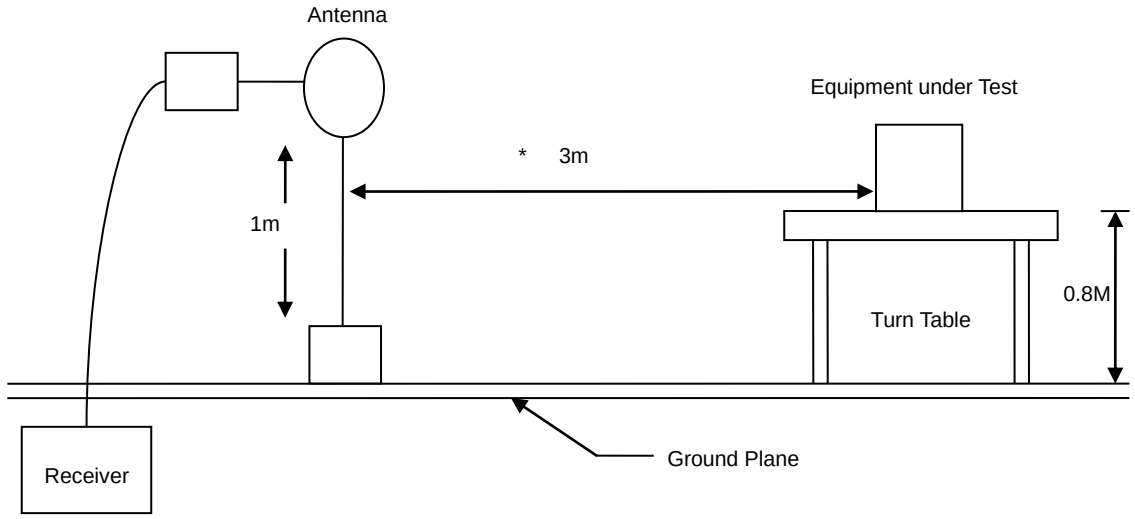
Note:

1.The supporting fixture shall permit orientation of the EUT in each of three orthogonal axis positions such that emissions from the EUT are maximized.
(Y-AXIS is the worst.)

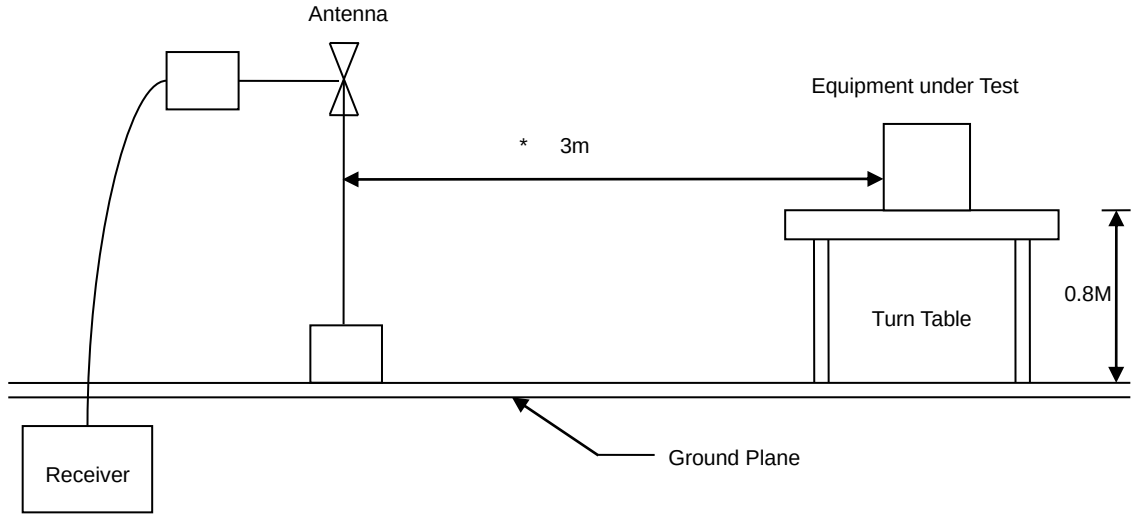
2.Due to the test software function limit the operation band setting(200dBuV/m).
There's no corresponding limitation in the actual test item.

6.3 Typical Test Setup

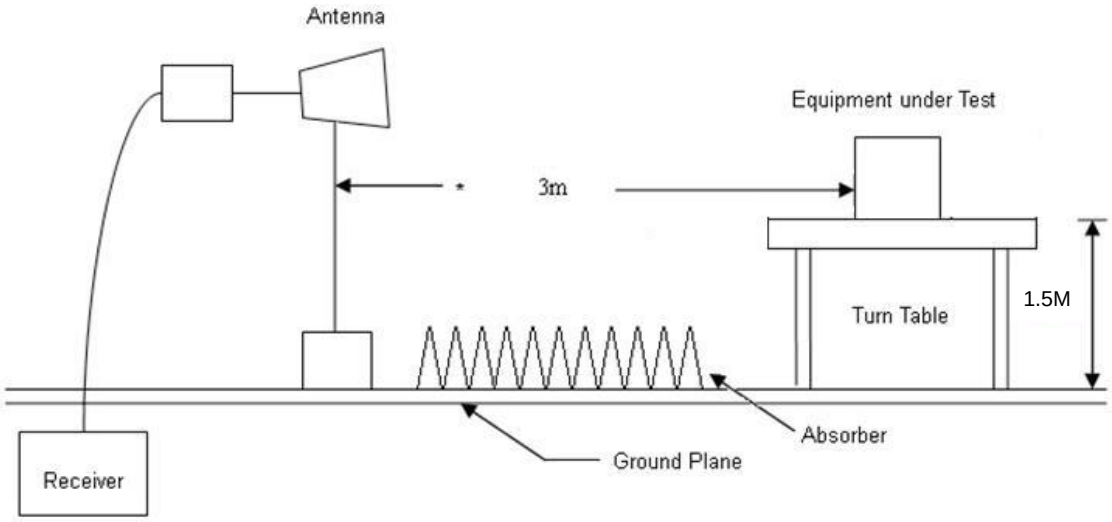
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

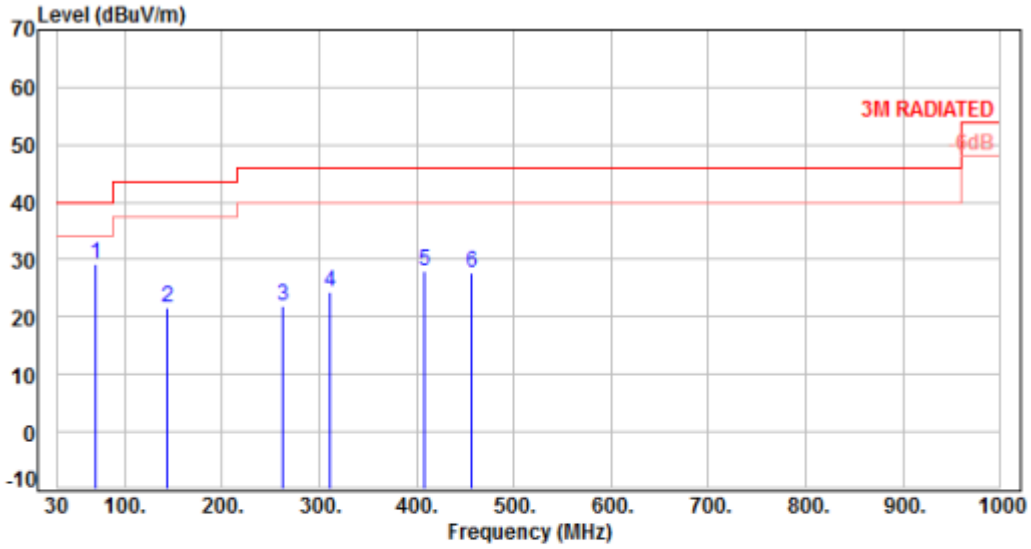


6.4 Test Result and Data (9KHz ~ 30MHz)

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

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

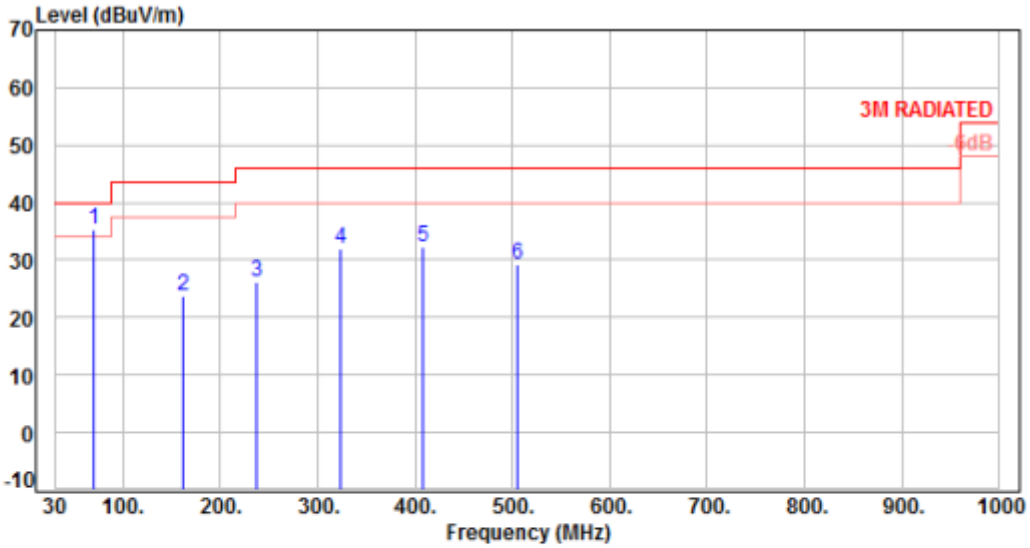
Power	:	From System (AC120V /60Hz)		Pol/Phase	:	VERTICAL	
Test Mode	:	Mode 3			:		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	70.74	-13.45	42.78	29.33	40.00	-10.67	Peak	400	0	P
2	144.46	-10.91	32.69	21.78	43.50	-21.72	Peak	400	0	P
3	262.80	-11.54	33.59	22.05	46.00	-23.95	Peak	400	0	P
4	311.30	-9.74	34.09	24.35	46.00	-21.65	Peak	400	0	P
5	408.30	-7.39	35.46	28.07	46.00	-17.93	Peak	400	0	P
6	456.80	-5.85	33.43	27.58	46.00	-18.42	Peak	400	0	P

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

Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3		:	

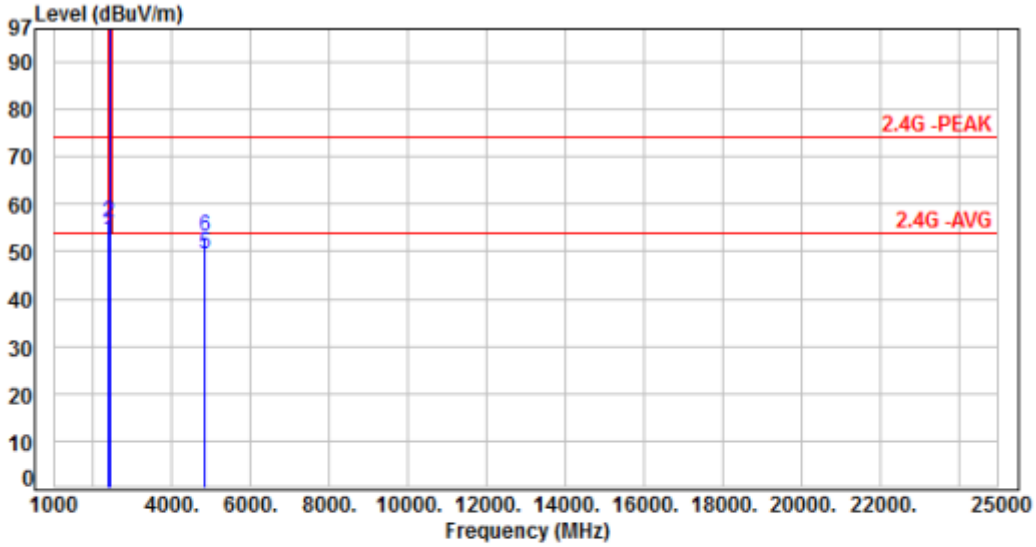


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	70.74	-13.45	48.71	35.26	40.00	-4.74	Peak	400	0	P
2	161.92	-11.09	34.82	23.73	43.50	-19.77	Peak	400	0	P
3	237.58	-12.89	39.21	26.32	46.00	-19.68	Peak	400	0	P
4	322.94	-9.33	41.25	31.92	46.00	-14.08	Peak	400	0	P
5	408.30	-7.39	39.70	32.31	46.00	-13.69	Peak	400	0	P
6	505.30	-4.84	34.03	29.19	46.00	-16.81	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)

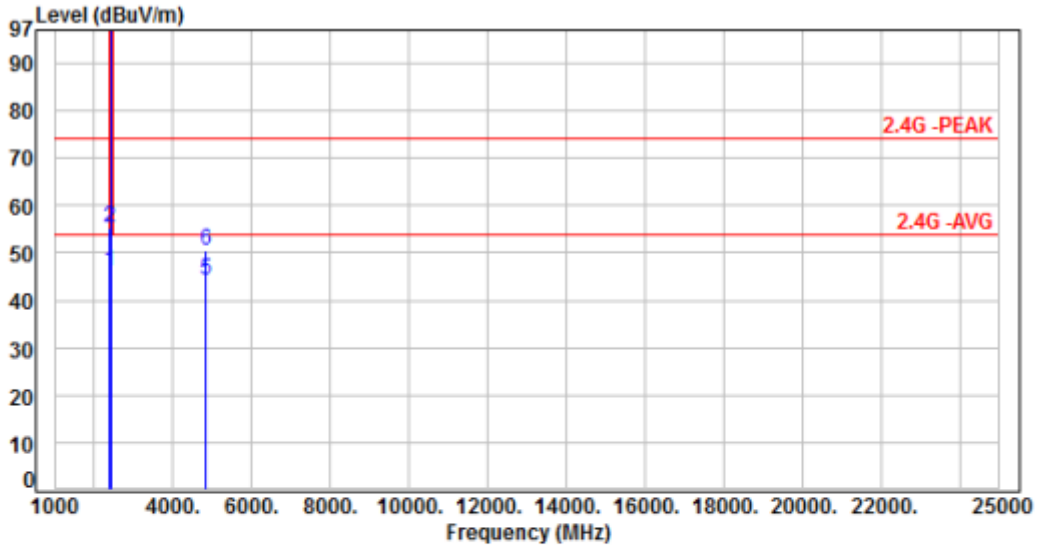
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	54.65	52.53	54.00	-1.47	Average	112	137	P
2	2390.00	-2.12	58.17	56.05	74.00	-17.95	Peak	112	137	P
3	2412.00	-2.10	111.26	109.16	200.00	-90.84	Average	112	137	P
4	2412.00	-2.10	113.18	111.08	200.00	-88.92	Peak	112	137	P
5	4824.00	6.09	43.45	49.54	54.00	-4.46	Average	125	92	P
6	4824.00	6.09	47.18	53.27	74.00	-20.73	Peak	125	92	P

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

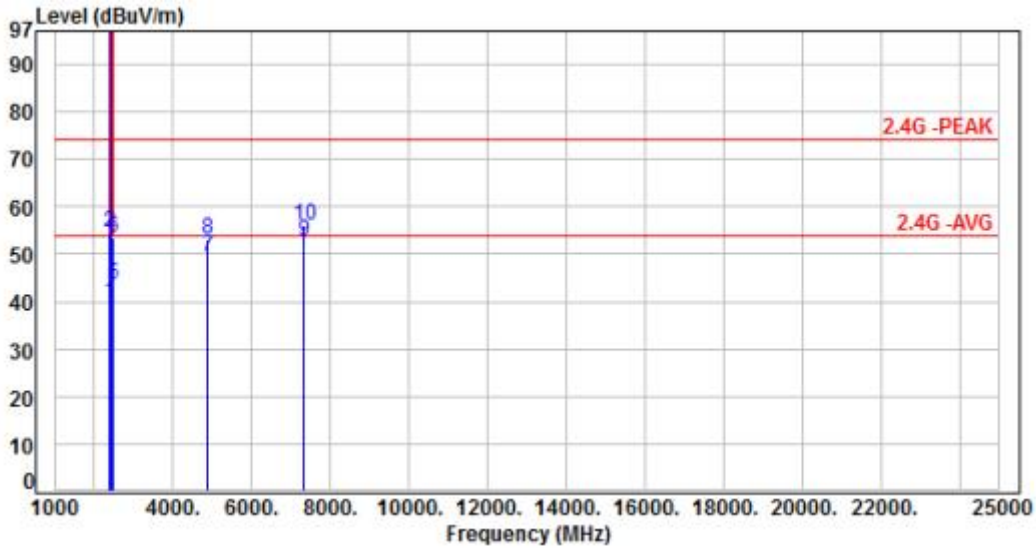
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	48.06	45.94	54.00	-8.06	Average	113	133	P
2	2390.00	-2.12	57.53	55.41	74.00	-18.59	Peak	113	133	P
3	2412.00	-2.10	109.17	107.07	200.00	-92.93	Average	113	133	P
4	2412.00	-2.10	111.17	109.07	200.00	-90.93	Peak	113	133	P
5	4824.00	6.09	38.09	44.18	54.00	-9.82	Average	100	46	P
6	4824.00	6.09	44.26	50.35	74.00	-23.65	Peak	100	46	P

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

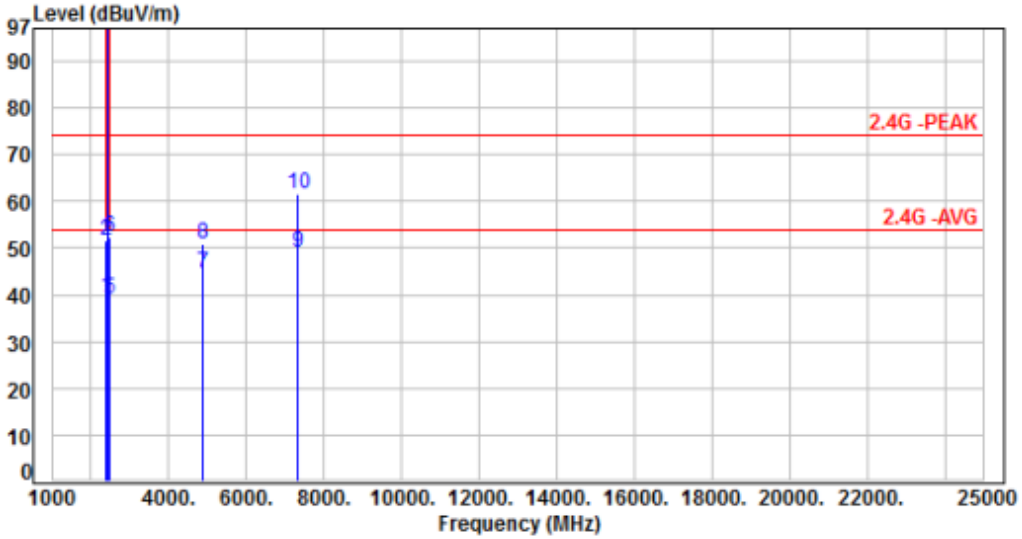
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	42.04	39.92	54.00	-14.08	Average	243	101	P
2	2390.00	-2.12	56.74	54.62	74.00	-19.38	Peak	243	101	P
3	2437.00	-2.07	110.93	108.86	200.00	-91.14	Average	243	101	P
4	2437.00	-2.07	113.78	111.71	200.00	-88.29	Peak	243	101	P
5	2483.50	-1.98	45.66	43.68	54.00	-10.32	Average	243	101	P
6	2483.50	-1.98	55.61	53.63	74.00	-20.37	Peak	243	101	P
7	4874.00	6.36	43.00	49.36	54.00	-4.64	Average	100	100	P
8	4874.00	6.36	46.75	53.11	74.00	-20.89	Peak	100	100	P
9	7311.00	11.42	41.50	52.92	54.00	-1.08	Average	104	146	P
10	7311.00	11.42	44.75	56.17	74.00	-17.83	Peak	104	146	P

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

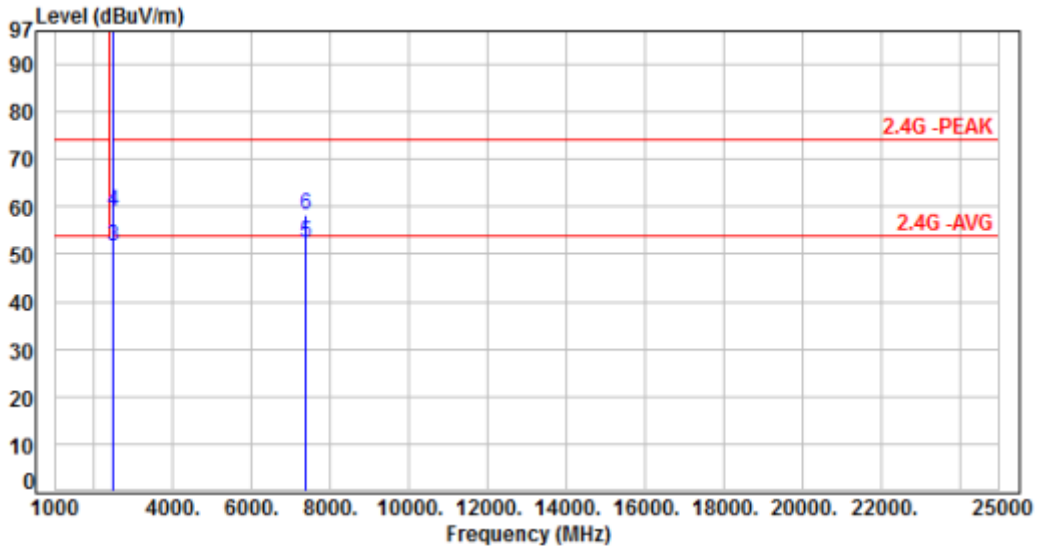
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	41.67	39.55	54.00	-14.45	Average	111	135	P
2	2390.00	-2.12	53.64	51.52	74.00	-22.48	Peak	111	135	P
3	2437.00	-2.07	108.66	106.59	200.00	-93.41	Average	111	135	P
4	2437.00	-2.07	110.46	108.39	200.00	-91.61	Peak	111	135	P
5	2483.50	-1.98	41.20	39.22	54.00	-14.78	Average	111	135	P
6	2483.50	-1.98	54.29	52.31	74.00	-21.69	Peak	111	135	P
7	4874.00	6.36	38.23	44.59	54.00	-9.41	Average	100	53	P
8	4874.00	6.36	44.38	50.74	74.00	-23.26	Peak	100	53	P
9	7311.00	11.42	37.71	49.13	54.00	-4.87	Average	143	49	P
10	7311.00	11.42	50.31	61.73	74.00	-12.27	Peak	143	49	P

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

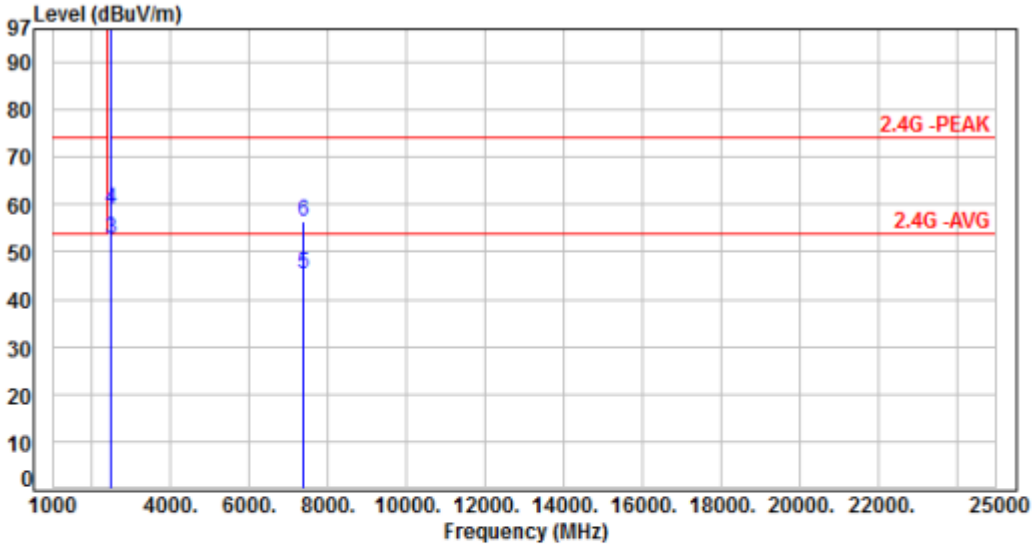
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 1, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	108.79	106.77	200.00	-93.23	Average	100	204	P
2	2462.00	-2.02	111.60	109.58	200.00	-90.42	Peak	100	204	P
3	2483.50	-1.98	53.67	51.69	54.00	-2.31	Average	100	204	P
4	2483.50	-1.98	61.13	59.15	74.00	-14.85	Peak	100	204	P
5	7386.00	11.53	41.02	52.55	54.00	-1.45	Average	104	132	P
6	7386.00	11.53	46.67	58.20	74.00	-15.80	Peak	104	132	P

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

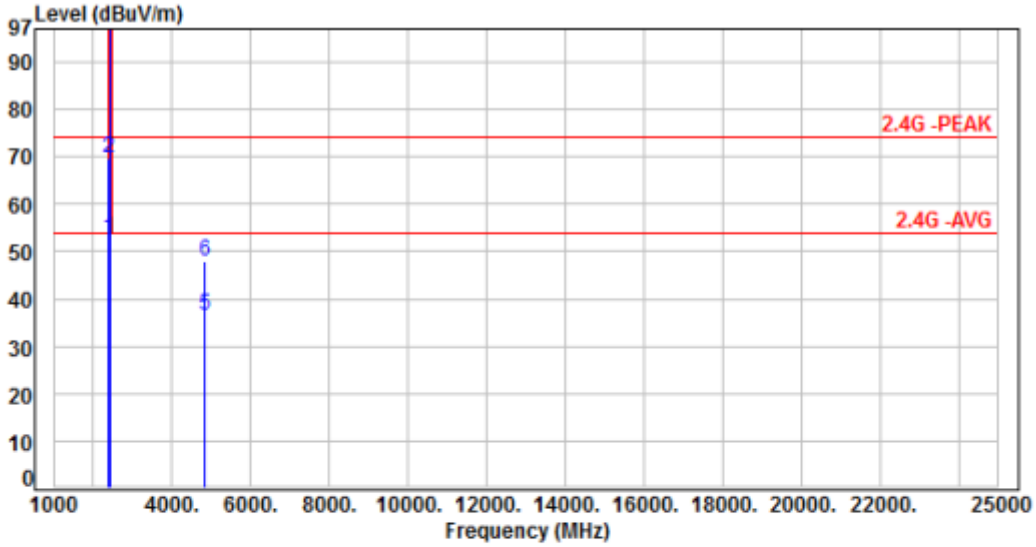
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 1, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	107.22	105.20	200.00	-94.80	Average	100	134	P
2	2462.00	-2.02	110.32	108.30	200.00	-91.70	Peak	100	134	P
3	2483.50	-1.98	54.66	52.68	54.00	-1.32	Average	100	134	P
4	2483.50	-1.98	60.93	58.95	74.00	-15.05	Peak	100	134	P
5	7386.00	11.53	33.80	45.33	54.00	-8.67	Average	208	46	P
6	7386.00	11.53	44.76	56.29	74.00	-17.71	Peak	208	46	P

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

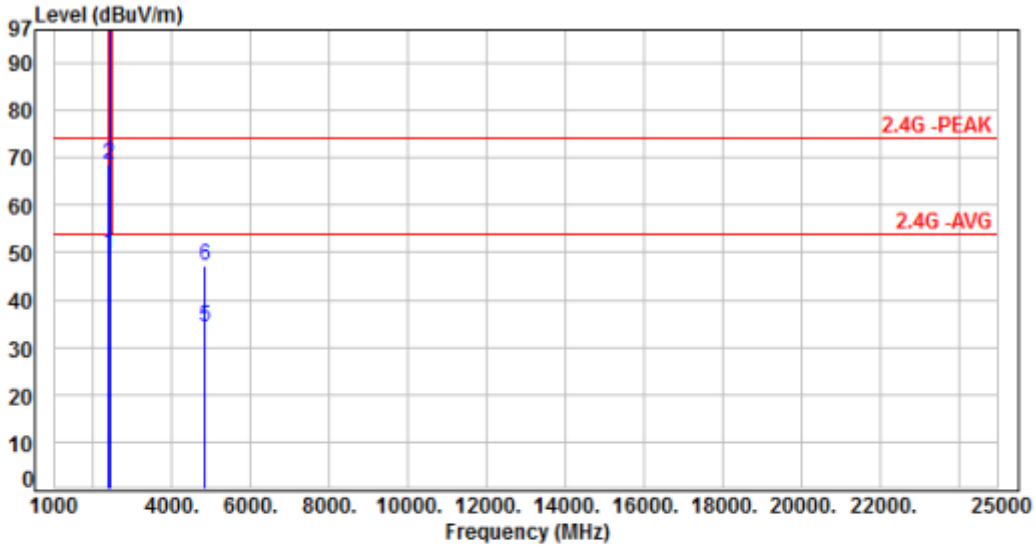
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	54.72	52.60	54.00	-1.40	Average	140	136	P
2	2390.00	-2.12	71.83	69.71	74.00	-4.29	Peak	140	136	P
3	2412.00	-2.10	104.61	102.51	200.00	-97.49	Average	140	136	P
4	2412.00	-2.10	114.69	112.59	200.00	-87.41	Peak	140	136	P
5	4824.00	6.09	30.34	36.43	54.00	-17.57	Average	100	102	P
6	4824.00	6.09	41.70	47.79	74.00	-26.21	Peak	100	102	P

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

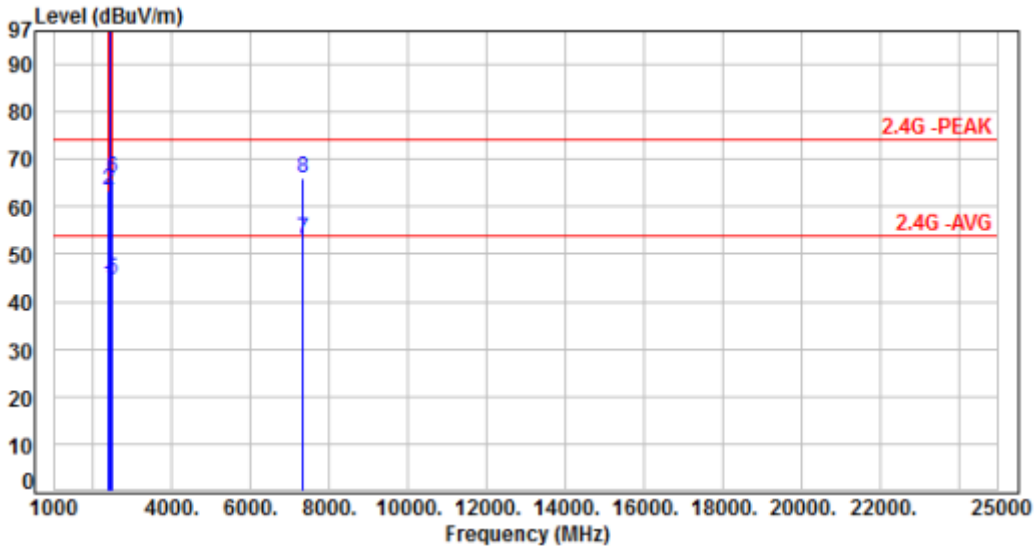
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	52.02	49.90	54.00	-4.10	Average	100	132	P
2	2390.00	-2.12	70.55	68.43	74.00	-5.57	Peak	100	132	P
3	2412.00	-2.10	102.77	100.67	200.00	-99.33	Average	100	132	P
4	2412.00	-2.10	112.79	110.69	200.00	-89.31	Peak	100	132	P
5	4824.00	6.09	28.25	34.34	54.00	-19.66	Average	100	56	P
6	4824.00	6.09	41.07	47.16	74.00	-26.84	Peak	100	56	P

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

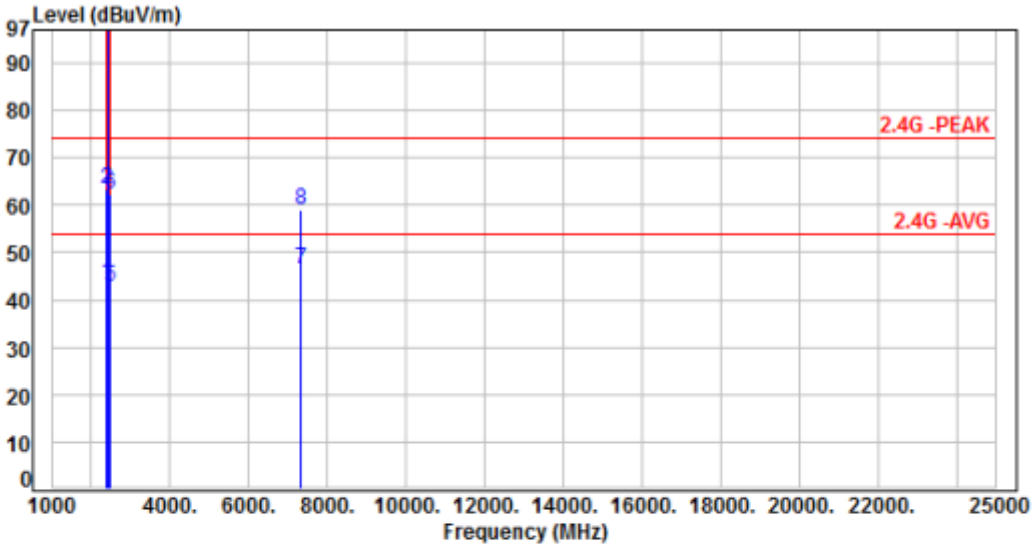
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	45.74	43.62	54.00	-10.38	Average	216	175	P
2	2390.00	-2.12	65.64	63.52	74.00	-10.48	Peak	216	175	P
3	2437.00	-2.07	107.90	105.83	200.00	-94.17	Average	216	175	P
4	2437.00	-2.07	116.40	114.33	200.00	-85.67	Peak	216	175	P
5	2483.50	-1.98	46.57	44.59	54.00	-9.41	Average	216	175	P
6	2483.50	-1.98	68.16	66.18	74.00	-7.82	Peak	216	175	P
7	7311.00	11.42	41.55	52.97	54.00	-1.03	Average	106	136	P
8	7311.00	11.42	54.70	66.12	74.00	-7.88	Peak	106	136	P

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

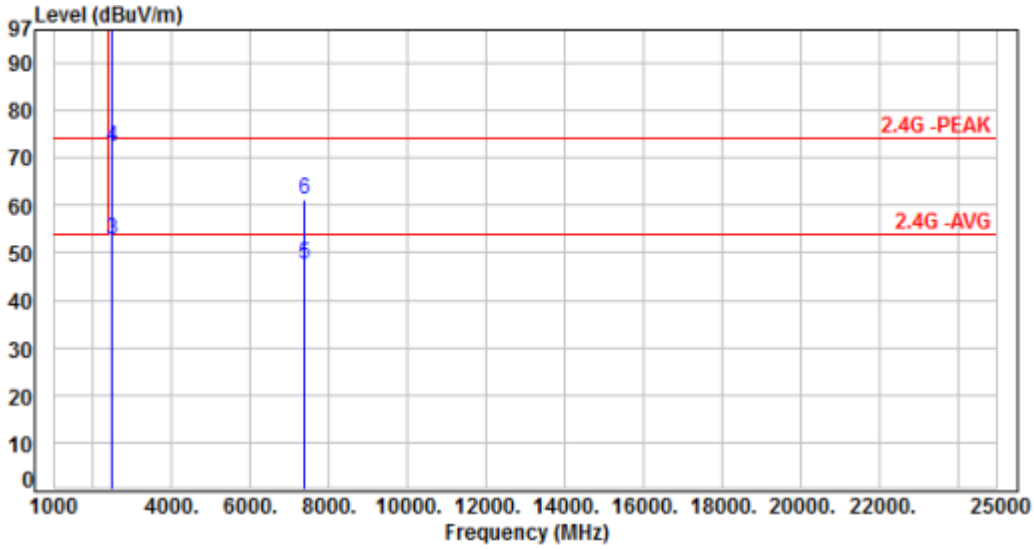
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	45.60	43.48	54.00	-10.52	Average	164	130	P
2	2390.00	-2.12	65.48	63.36	74.00	-10.64	Peak	164	130	P
3	2437.00	-2.07	105.30	103.23	200.00	-96.77	Average	164	130	P
4	2437.00	-2.07	115.69	113.62	200.00	-86.38	Peak	164	130	P
5	2483.50	-1.98	44.62	42.64	54.00	-11.36	Average	164	130	P
6	2483.50	-1.98	64.37	62.39	74.00	-11.61	Peak	164	130	P
7	7311.00	11.42	35.02	46.44	54.00	-7.56	Average	139	64	P
8	7311.00	11.42	47.73	59.15	74.00	-14.85	Peak	139	64	P

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

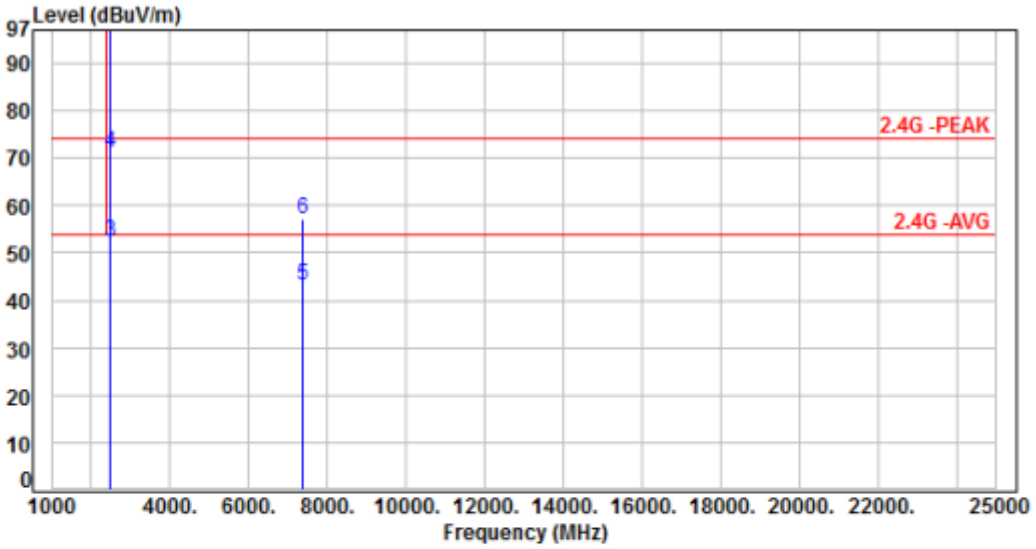
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 2, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	103.66	101.64	200.00	-98.36	Average	100	188	P
2	2462.00	-2.02	113.83	111.81	200.00	-88.19	Peak	100	188	P
3	2483.50	-1.98	54.69	52.71	54.00	-1.29	Average	100	188	P
4	2483.50	-1.98	74.27	72.29	74.00	-1.71	Peak	100	188	P
5	7386.00	11.53	36.10	47.63	54.00	-6.37	Average	104	134	P
6	7386.00	11.53	49.62	61.15	74.00	-12.85	Peak	104	134	P

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

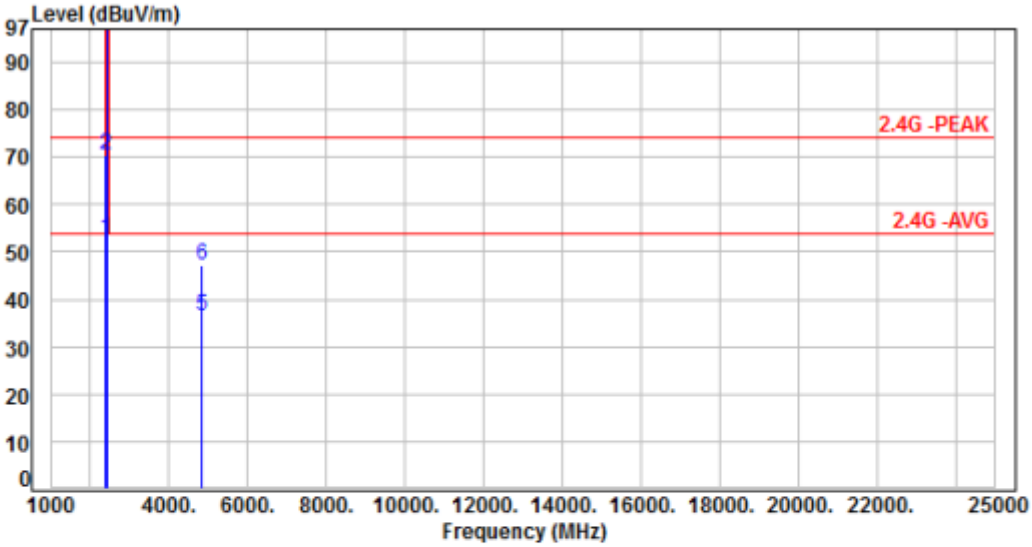
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 2, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	102.55	100.53	200.00	-99.47	Average	132	135	P
2	2462.00	-2.02	112.89	110.87	200.00	-89.13	Peak	132	135	P
3	2483.50	-1.98	54.47	52.49	54.00	-1.51	Average	132	135	P
4	2483.50	-1.98	73.13	71.15	74.00	-2.85	Peak	132	135	P
5	7386.00	11.53	31.57	43.10	54.00	-10.90	Average	100	65	P
6	7386.00	11.53	45.82	57.35	74.00	-16.65	Peak	100	65	P

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

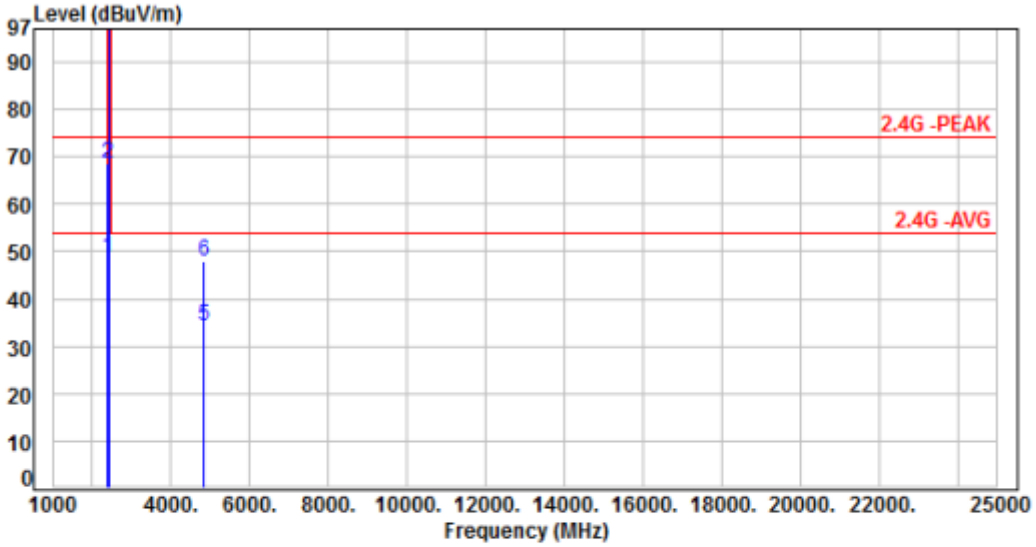
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	54.68	52.56	54.00	-1.44	Average	100	159	P
2	2390.00	-2.12	72.73	70.61	74.00	-3.39	Peak	100	159	P
3	2412.00	-2.10	103.32	101.22	200.00	-98.78	Average	100	159	P
4	2412.00	-2.10	115.63	113.53	200.00	-86.47	Peak	100	159	P
5	4824.00	6.09	30.48	36.57	54.00	-17.43	Average	100	120	P
6	4824.00	6.09	41.24	47.33	74.00	-26.67	Peak	100	120	P

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

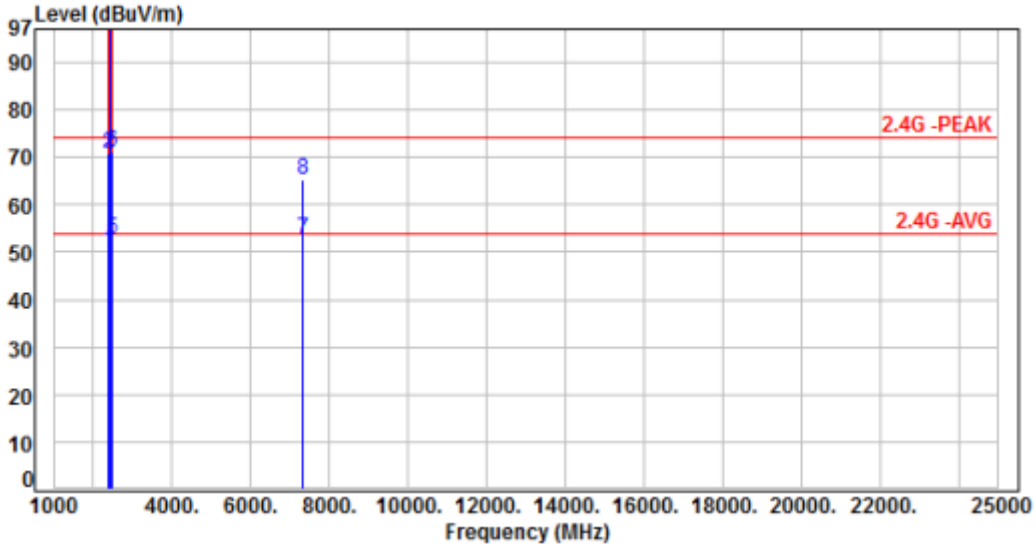
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH01		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	50.75	48.63	54.00	-5.37	Average	112	133	P
2	2390.00	-2.12	70.72	68.60	74.00	-5.40	Peak	112	133	P
3	2412.00	-2.10	101.25	99.15	200.00	-100.85	Average	112	133	P
4	2412.00	-2.10	114.65	112.55	200.00	-87.45	Peak	112	133	P
5	4824.00	6.09	28.14	34.23	54.00	-19.77	Average	100	125	P
6	4824.00	6.09	41.72	47.81	74.00	-26.19	Peak	100	125	P

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

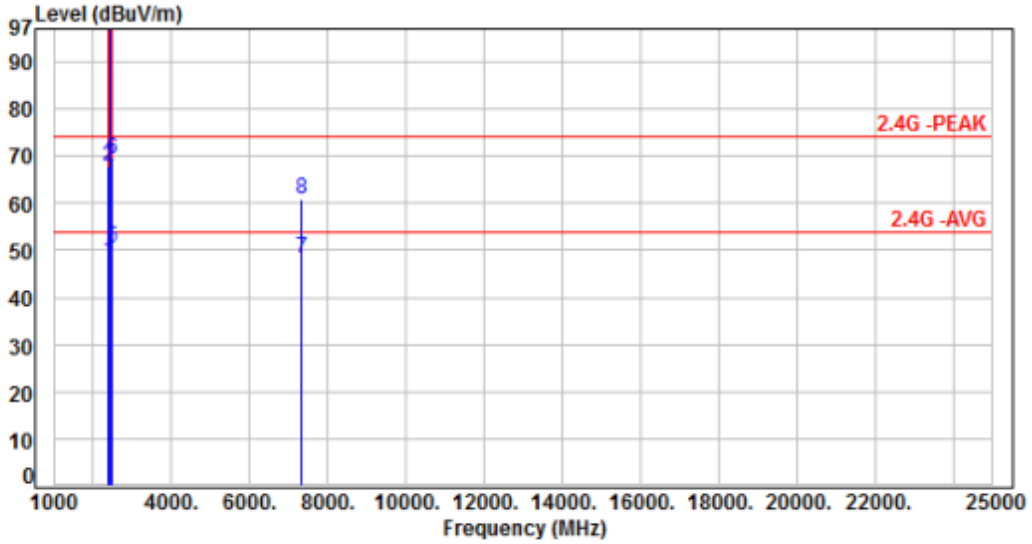
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	52.24	50.12	54.00	-3.88	Average	184	133	P
2	2390.00	-2.12	72.95	70.83	74.00	-3.17	Peak	184	133	P
3	2437.00	-2.07	109.94	107.87	200.00	-92.13	Average	184	133	P
4	2437.00	-2.07	121.22	119.15	200.00	-80.85	Peak	184	133	P
5	2483.50	-1.98	54.70	52.72	54.00	-1.28	Average	184	133	P
6	2483.50	-1.98	73.26	71.28	74.00	-2.72	Peak	184	133	P
7	7311.00	11.42	41.16	52.58	54.00	-1.42	Average	108	137	P
8	7311.00	11.42	53.78	65.20	74.00	-8.80	Peak	108	137	P

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

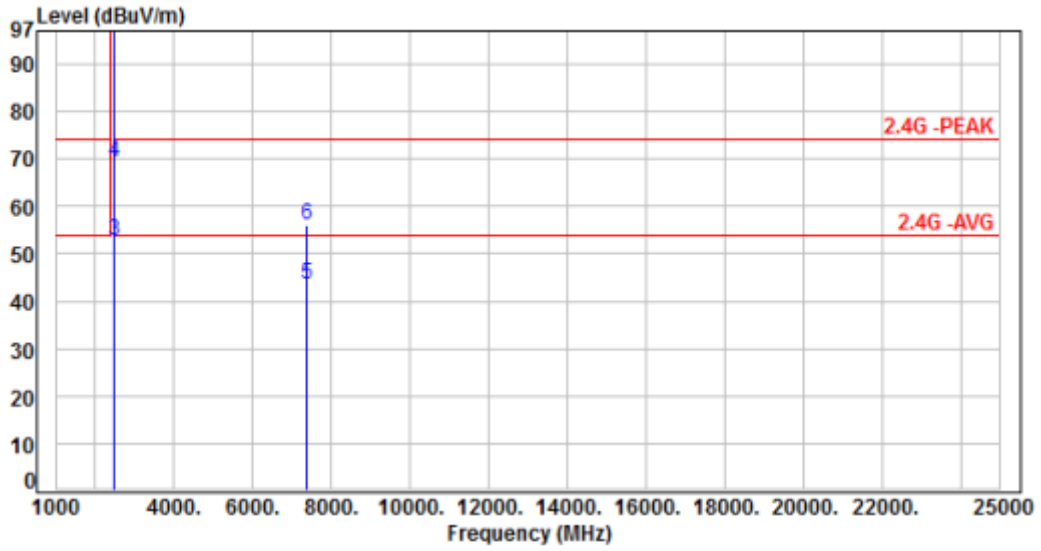
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	49.75	47.63	54.00	-6.37	Average	107	135	P
2	2390.00	-2.12	69.88	67.76	74.00	-6.24	Peak	107	135	P
3	2437.00	-2.07	105.25	103.18	200.00	-96.82	Average	107	135	P
4	2437.00	-2.07	118.82	116.75	200.00	-83.25	Peak	107	135	P
5	2483.50	-1.98	52.45	50.47	54.00	-3.53	Average	107	135	P
6	2483.50	-1.98	71.31	69.33	74.00	-4.67	Peak	107	135	P
7	7311.00	11.42	36.78	48.20	54.00	-5.80	Average	179	50	P
8	7311.00	11.42	49.47	60.89	74.00	-13.11	Peak	179	50	P

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

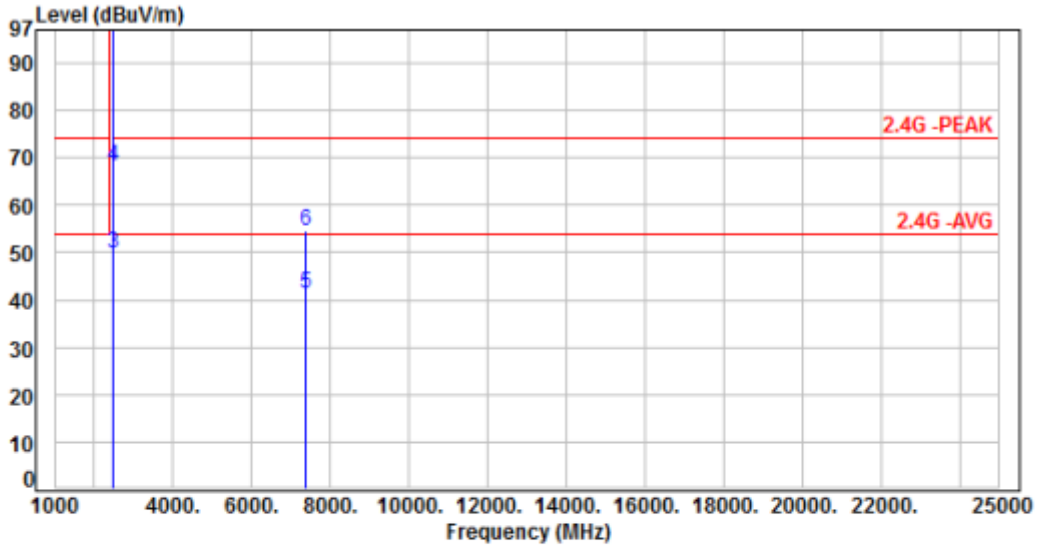
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 3, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	101.51	99.49	200.00	-100.51	Average	156	142	P
2	2462.00	-2.02	112.21	110.19	200.00	-89.81	Peak	156	142	P
3	2483.50	-1.98	54.62	52.64	54.00	-1.36	Average	156	142	P
4	2483.50	-1.98	71.16	69.18	74.00	-4.82	Peak	156	142	P
5	7386.00	11.53	31.88	43.41	54.00	-10.59	Average	100	127	P
6	7386.00	11.53	44.67	56.20	74.00	-17.80	Peak	100	127	P

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

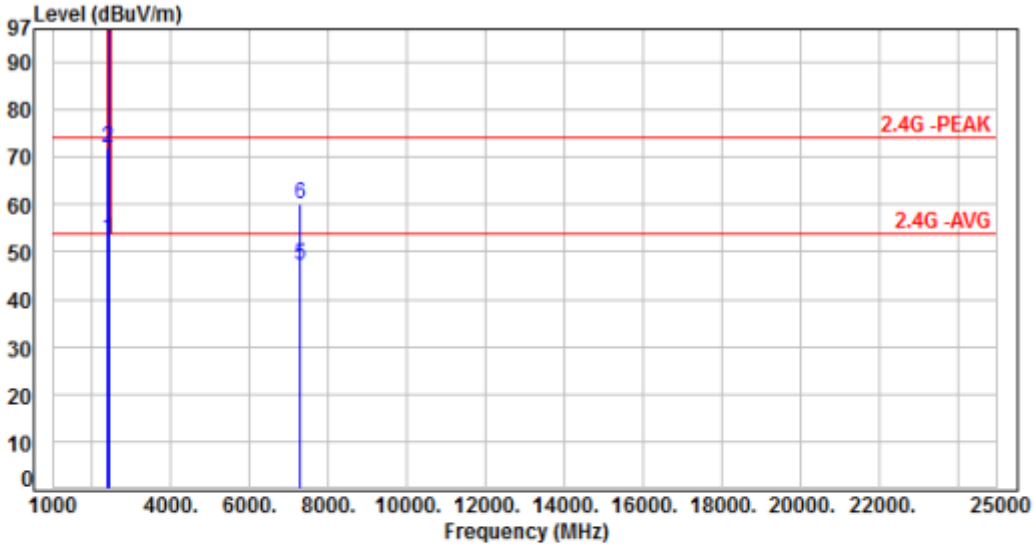
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 3, CH11		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	99.80	97.78	200.00	-102.22	Average	106	135	P
2	2462.00	-2.02	111.20	109.18	200.00	-90.82	Peak	106	135	P
3	2483.50	-1.98	51.89	49.91	54.00	-4.09	Average	106	135	P
4	2483.50	-1.98	70.36	68.38	74.00	-5.62	Peak	106	135	P
5	7386.00	11.53	29.75	41.28	54.00	-12.72	Average	100	66	P
6	7386.00	11.53	43.19	54.72	74.00	-19.28	Peak	100	66	P

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

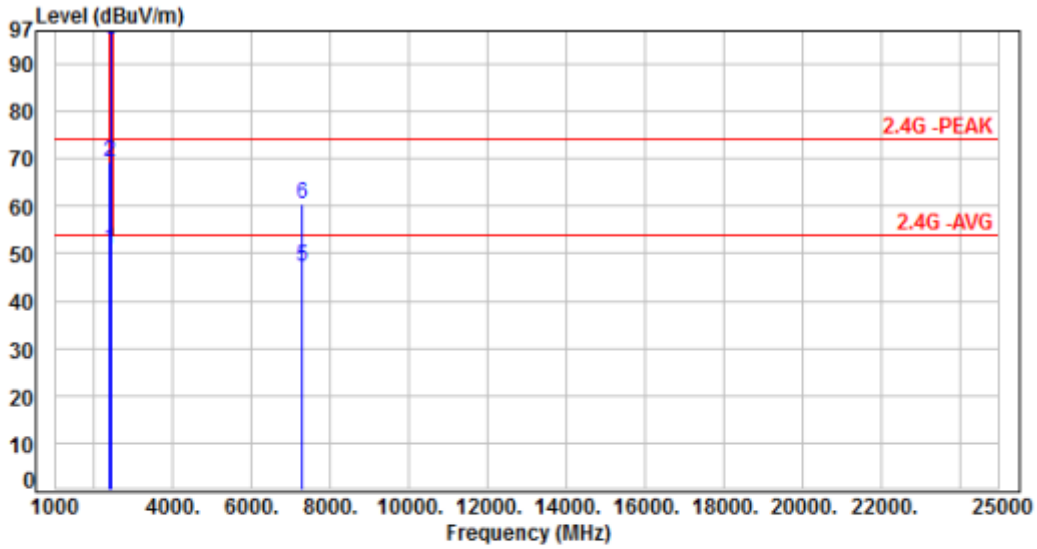
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH03		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	54.86	52.74	54.00	-1.26	Average	216	154	P
2	2390.00	-2.12	74.15	72.03	74.00	-1.97	Peak	216	154	P
3	2422.00	-2.08	99.95	97.87	200.00	-102.13	Average	216	154	P
4	2422.00	-2.08	111.44	109.36	200.00	-90.64	Peak	216	154	P
5	7266.00	11.31	35.83	47.14	54.00	-6.86	Average	100	151	P
6	7266.00	11.31	48.88	60.19	74.00	-13.81	Peak	100	151	P

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

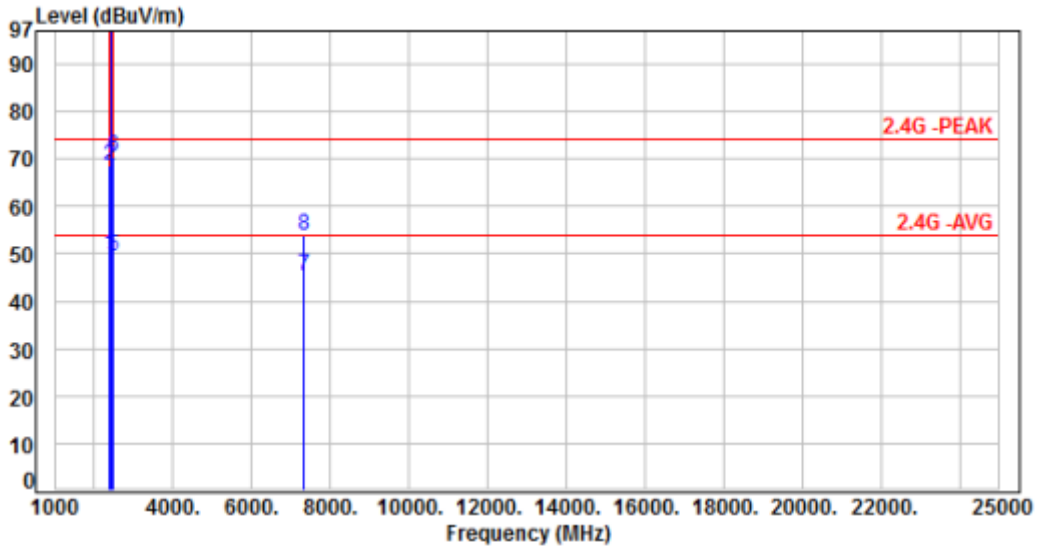
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH03		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	52.89	50.77	54.00	-3.23	Average	110	133	P
2	2390.00	-2.12	71.48	69.36	74.00	-4.64	Peak	110	133	P
3	2422.00	-2.08	97.10	95.02	200.00	-104.98	Average	110	133	P
4	2422.00	-2.08	109.68	107.60	200.00	-92.40	Peak	110	133	P
5	7266.00	11.31	35.96	47.27	54.00	-6.73	Average	100	126	P
6	7266.00	11.31	49.14	60.45	74.00	-13.55	Peak	100	126	P

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

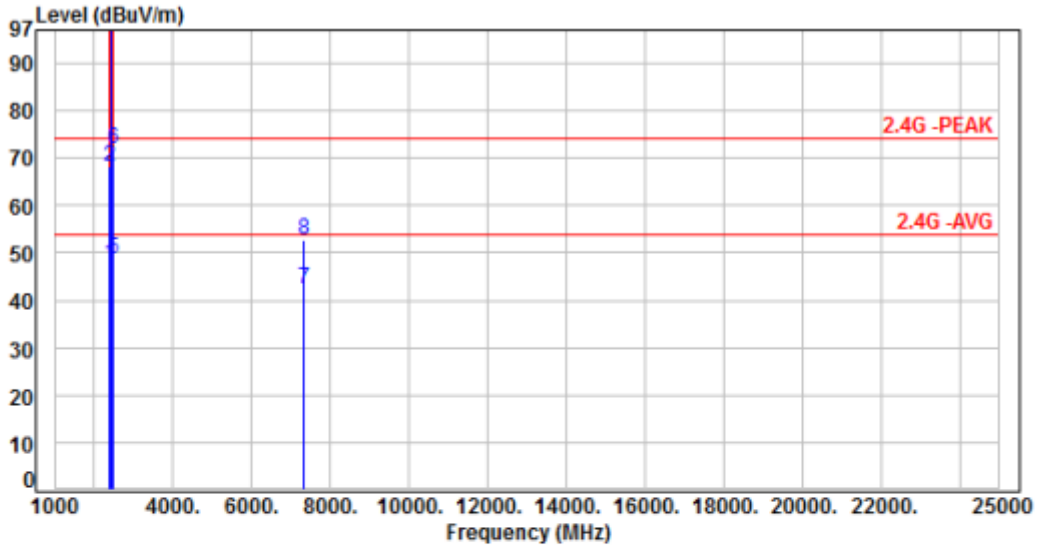
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	51.80	49.68	54.00	-4.32	Average	239	177	P
2	2390.00	-2.12	70.61	68.49	74.00	-5.51	Peak	239	177	P
3	2437.00	-2.07	100.85	98.78	200.00	-101.22	Average	239	177	P
4	2437.00	-2.07	110.50	108.43	200.00	-91.57	Peak	239	177	P
5	2483.50	-1.98	51.59	49.61	54.00	-4.39	Average	239	177	P
6	2483.50	-1.98	72.34	70.36	74.00	-3.64	Peak	239	177	P
7	7311.00	11.42	33.96	45.38	54.00	-8.62	Average	100	140	P
8	7311.00	11.42	42.36	53.78	74.00	-20.22	Peak	100	140	P

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

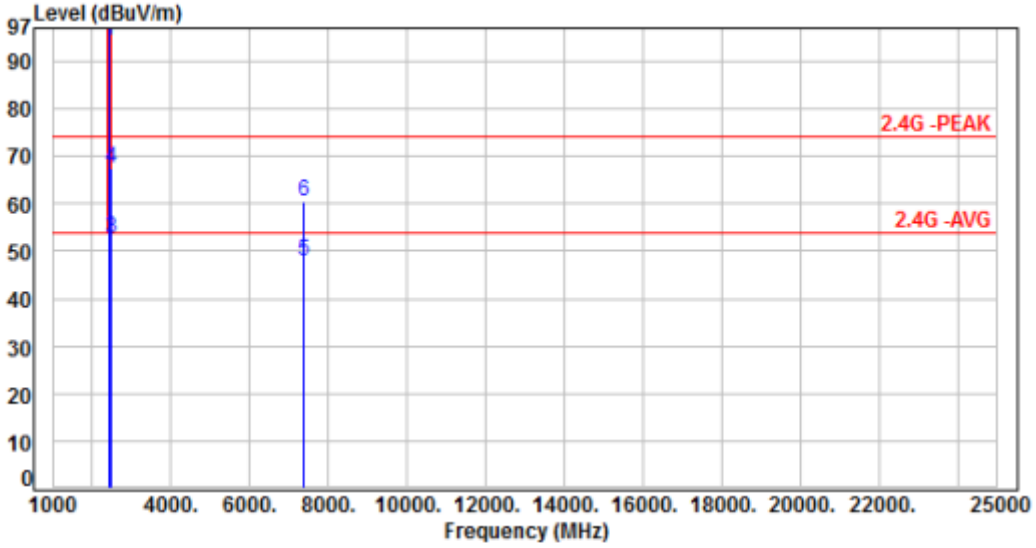
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH06		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	49.72	47.60	54.00	-6.40	Average	110	135	P
2	2390.00	-2.12	70.33	68.21	74.00	-5.79	Peak	110	135	P
3	2437.00	-2.07	98.54	96.47	200.00	-103.53	Average	110	135	P
4	2437.00	-2.07	110.87	108.80	200.00	-91.20	Peak	110	135	P
5	2483.50	-1.98	50.74	48.76	54.00	-5.24	Average	110	135	P
6	2483.50	-1.98	73.77	71.79	74.00	-2.21	Peak	110	135	P
7	7311.00	11.42	30.98	42.40	54.00	-11.60	Average	100	123	P
8	7311.00	11.42	41.27	52.69	74.00	-21.31	Peak	100	123	P

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

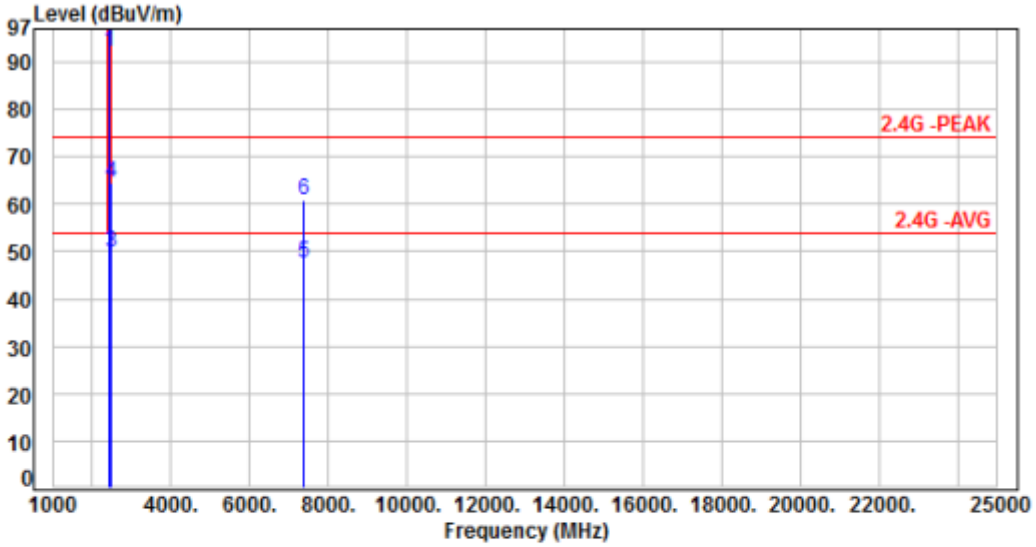
Power	:	From System (AC120V /60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4, CH09		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2452.00	-2.05	96.43	94.38	200.00	-105.62	Average	154	136	P
2	2452.00	-2.05	108.44	106.39	200.00	-93.61	Peak	154	136	P
3	2483.50	-1.98	54.62	52.64	54.00	-1.36	Average	154	136	P
4	2483.50	-1.98	69.38	67.40	74.00	-6.60	Peak	154	136	P
5	7356.00	11.52	36.31	47.83	54.00	-6.17	Average	100	132	P
6	7356.00	11.52	48.91	60.43	74.00	-13.57	Peak	100	132	P

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

Power	:	From System (AC120V /60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4, CH09		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2452.00	-2.05	94.24	92.19	200.00	-107.81	Average	107	135	P
2	2452.00	-2.05	105.45	103.40	200.00	-96.60	Peak	107	135	P
3	2483.50	-1.98	51.65	49.67	54.00	-4.33	Average	107	135	P
4	2483.50	-1.98	66.39	64.41	74.00	-9.59	Peak	107	135	P
5	7356.00	11.52	35.90	47.42	54.00	-6.58	Average	100	125	P
6	7356.00	11.52	49.20	60.72	74.00	-13.28	Peak	100	125	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

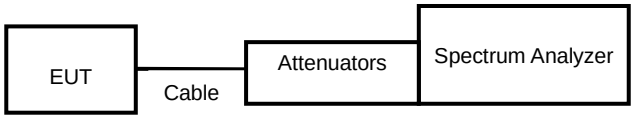
According to the methods defined in ANSI C63.10-2013 Section 11.11.1
Below –30dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

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

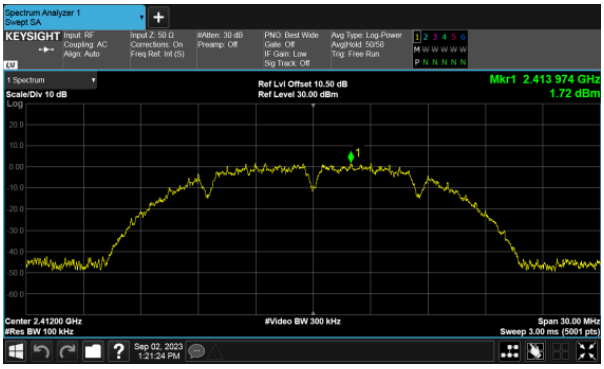


7.4 Test Result and Data

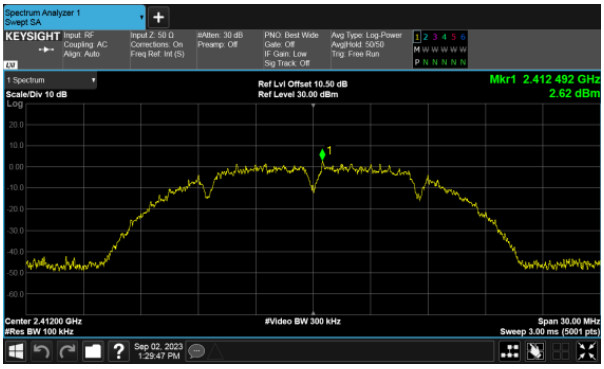
Note: Test plots refers to the following pages.

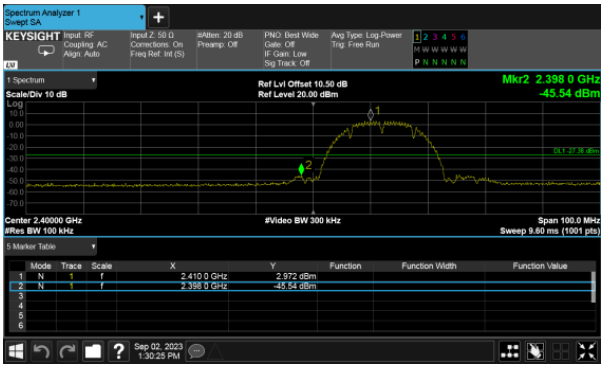
Non-Beamforming
Modulation Type: 802.11b CH01

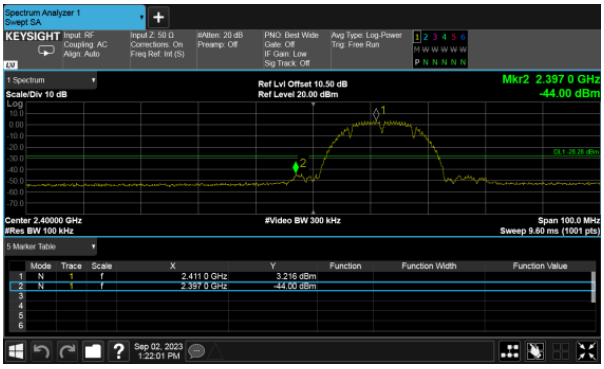
ANT A

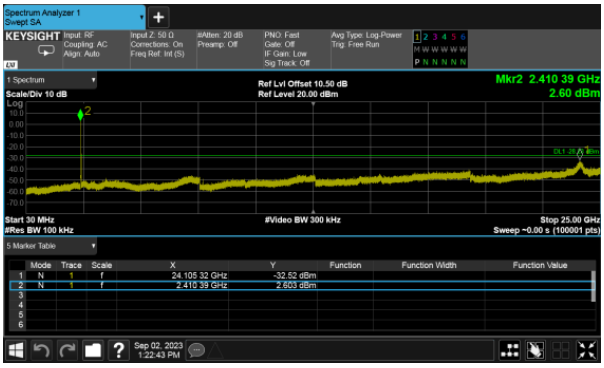


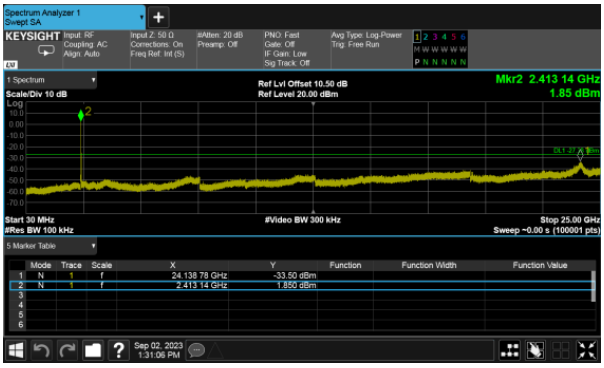
ANT B





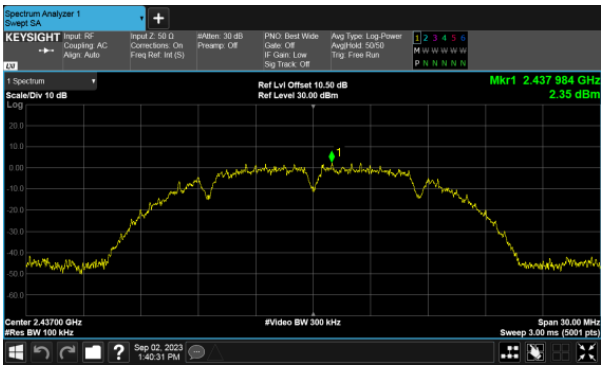




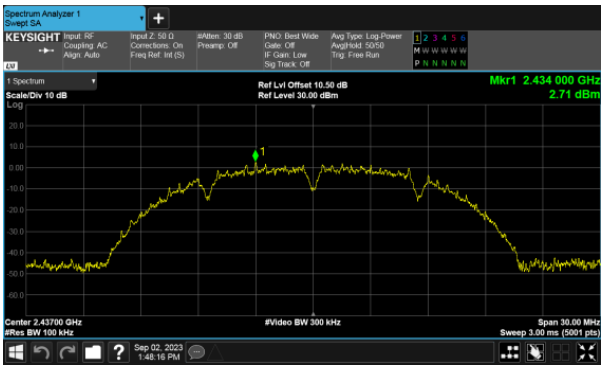


Non-Beamforming
Modulation Type: 802.11b CH06

ANT A

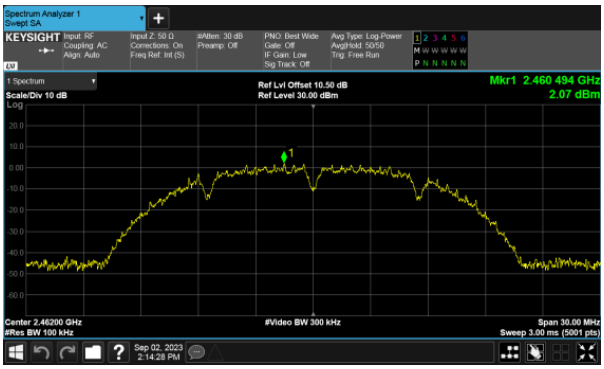


ANT B

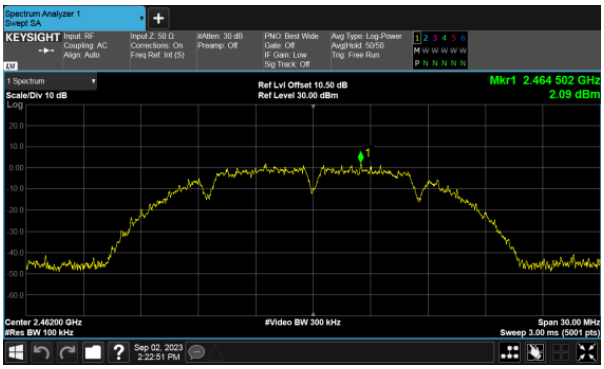


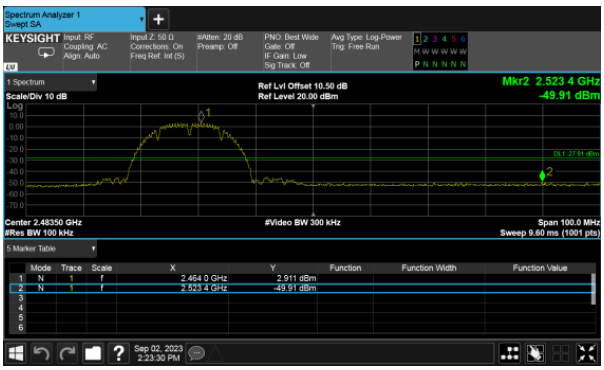
Non-Beamforming
Modulation Type: 802.11b CH11

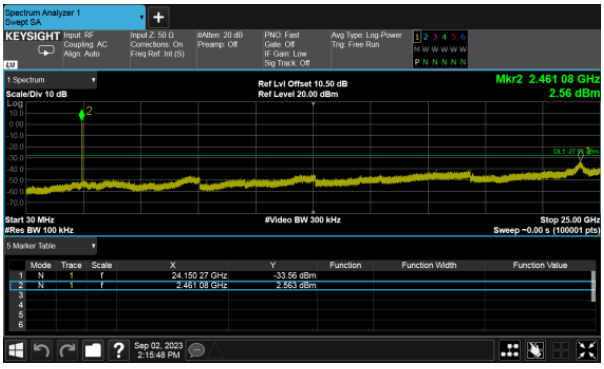
ANT A

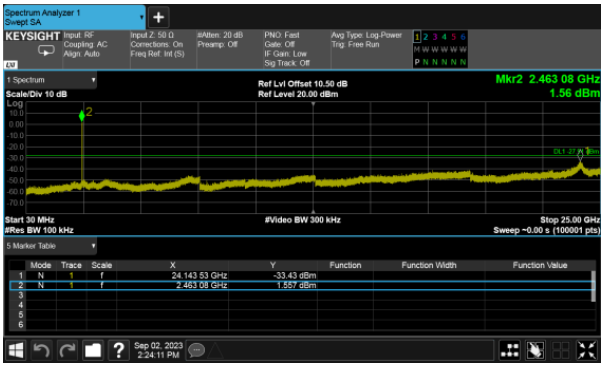


ANT B



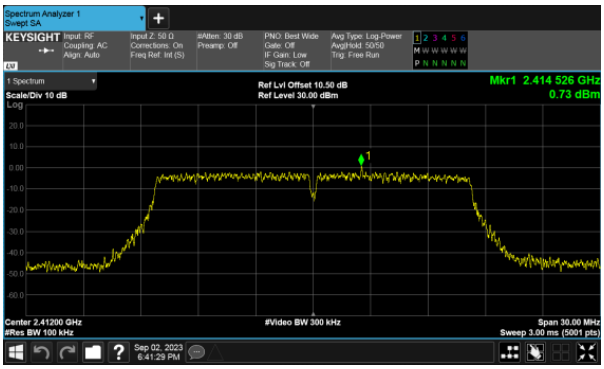




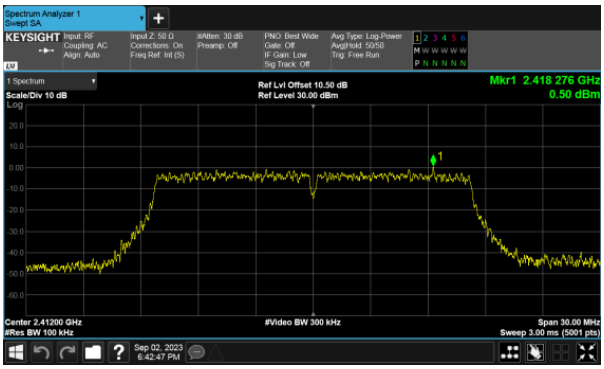


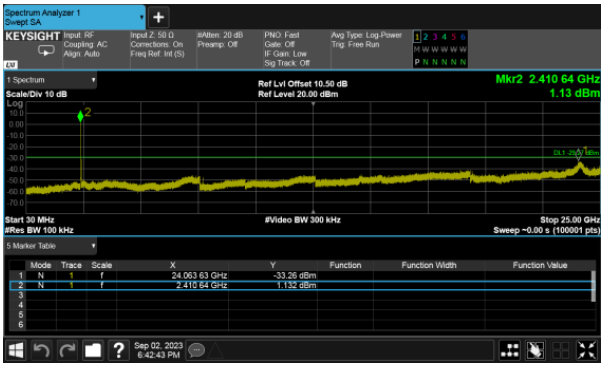
Non-Beamforming
Modulation Type: 802.11g CH01

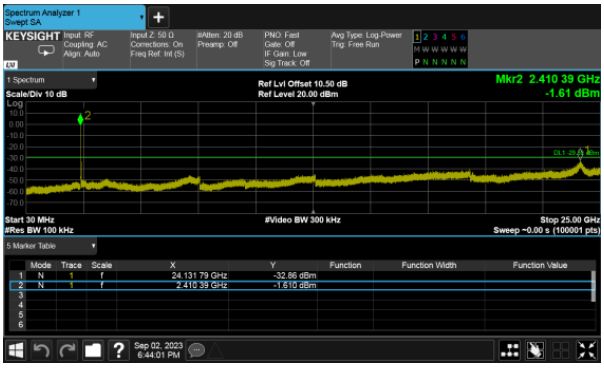
ANT A



ANT B

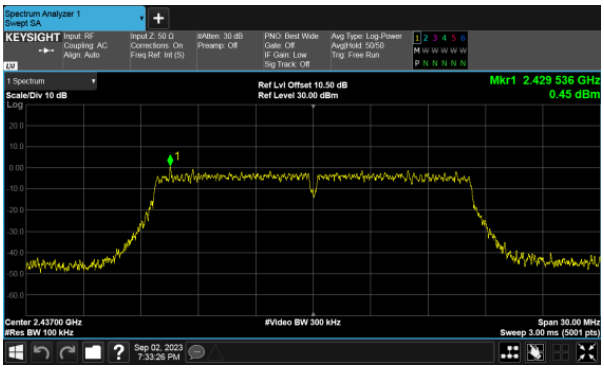




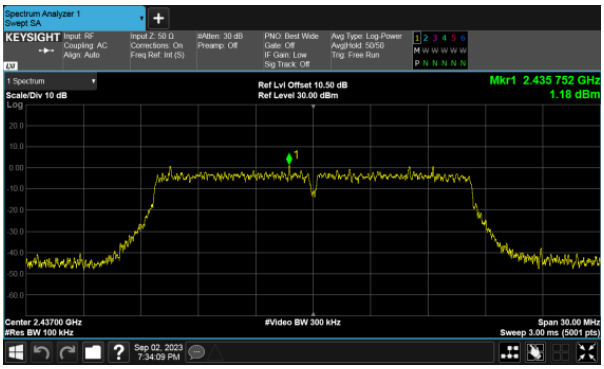


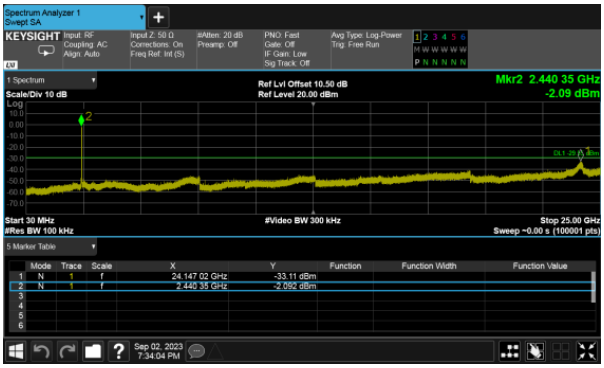
Non-Beamforming
Modulation Type: 802.11g CH06

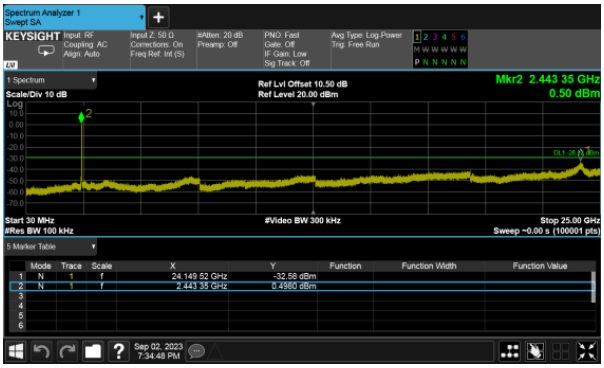
ANT A



ANT B

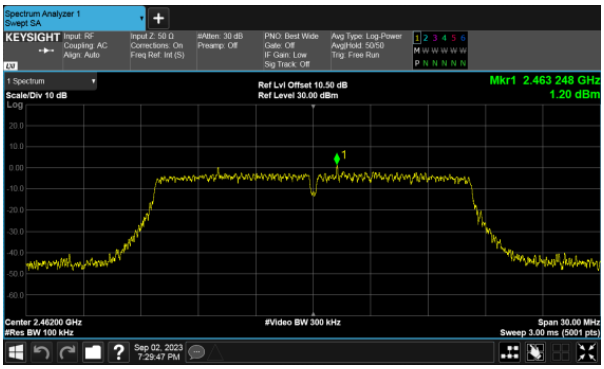




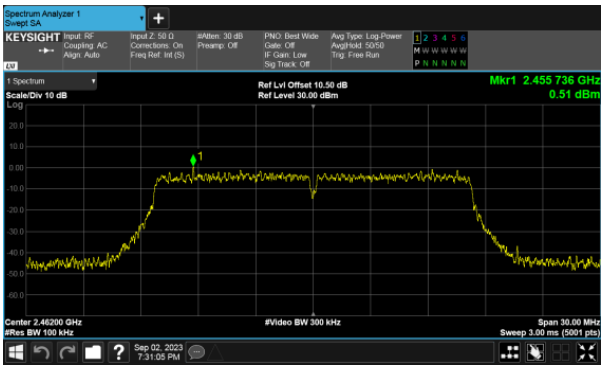


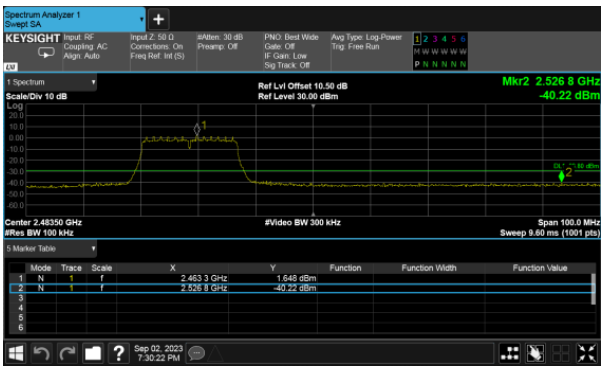
Non-Beamforming
Modulation Type: 802.11g CH11

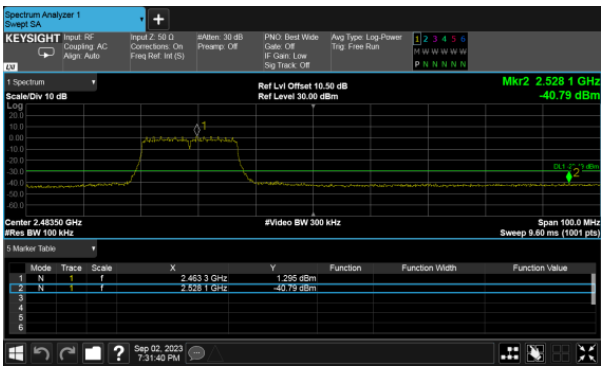
ANT A

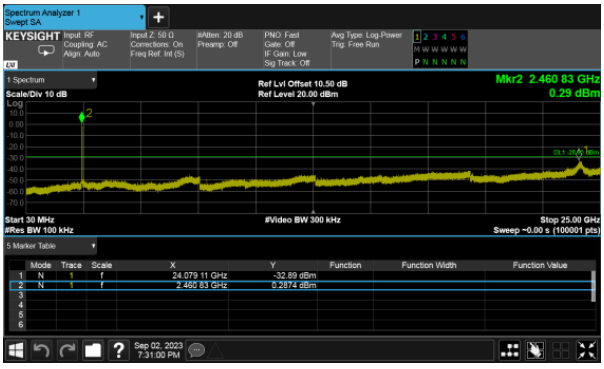


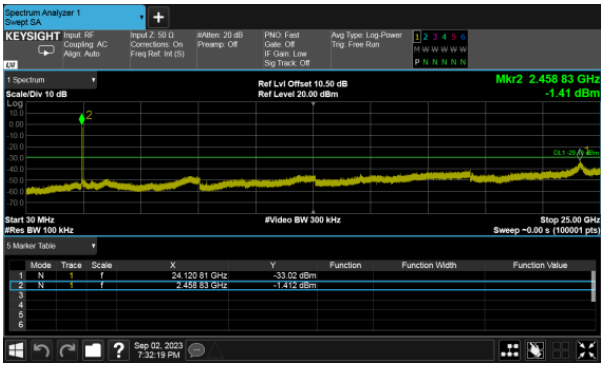
ANT B





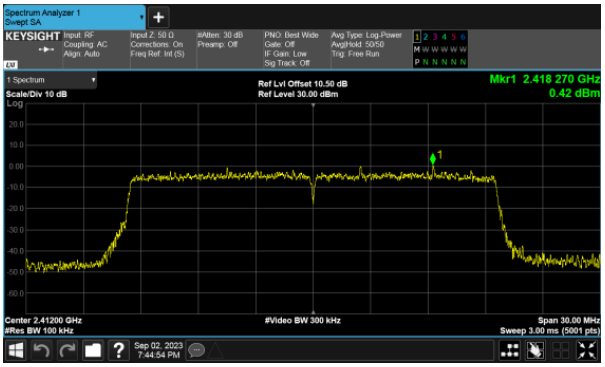




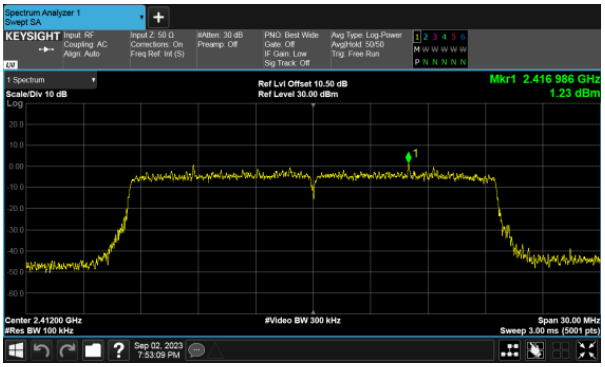


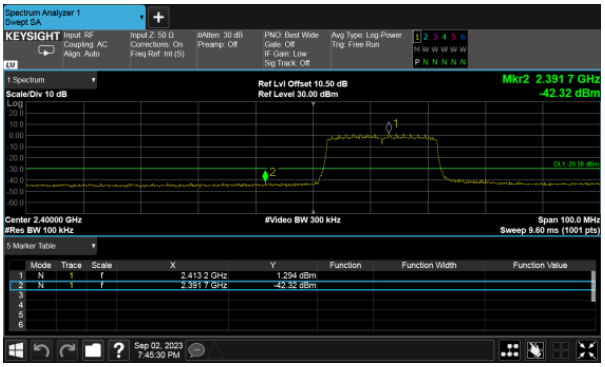
Non-Beamforming
Modulation Type: 802.11ax HE20 CH01

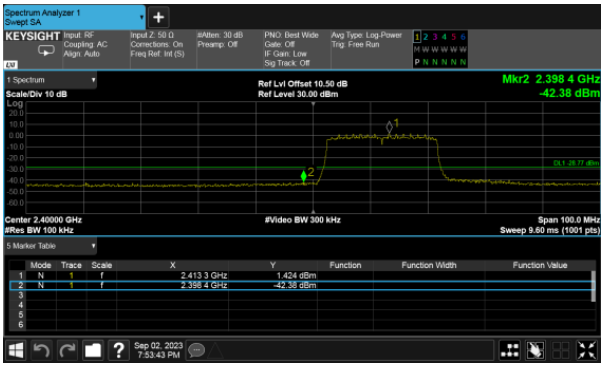
ANT A

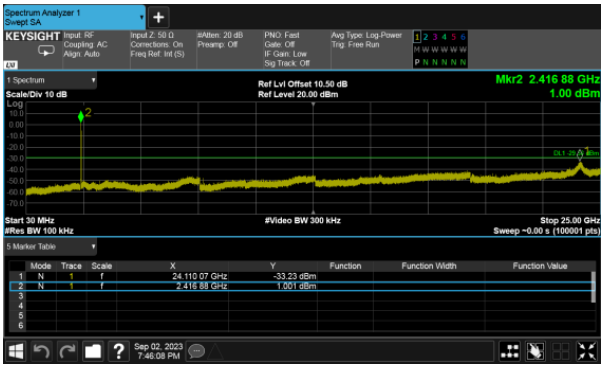


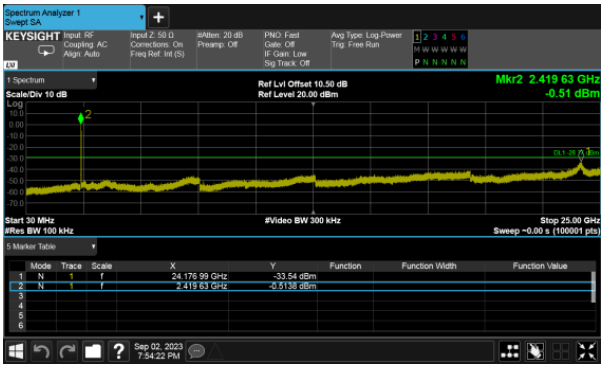
ANT B





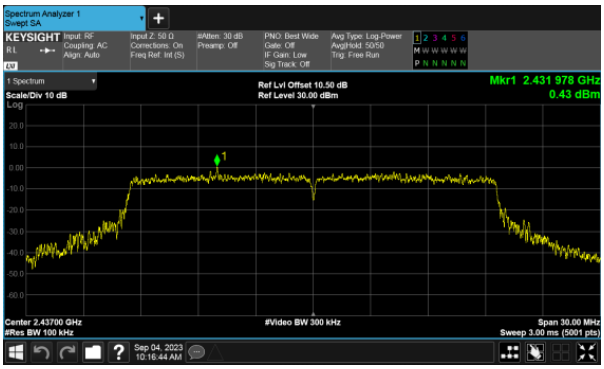




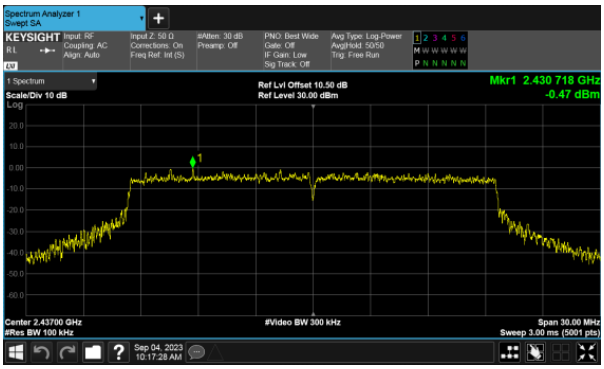


Non-Beamforming
Modulation Type: 802.11ax HE20 CH06

ANT A

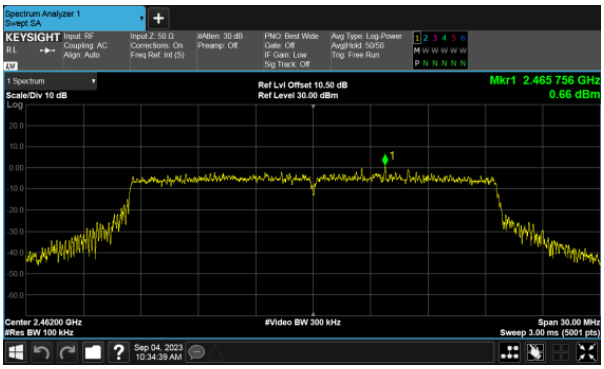


ANT B

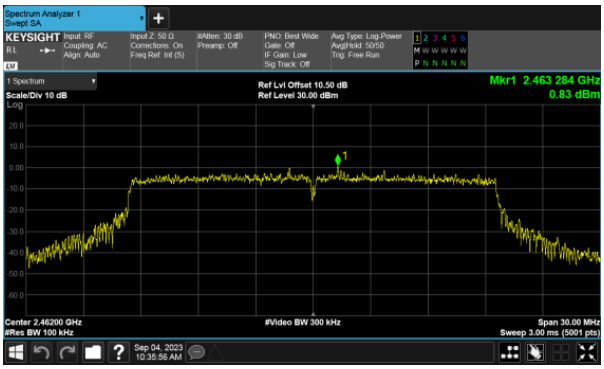


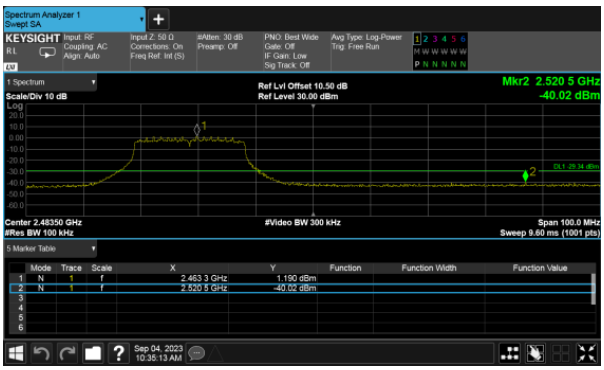
Non-Beamforming
Modulation Type: 802.11ax HE20 CH11

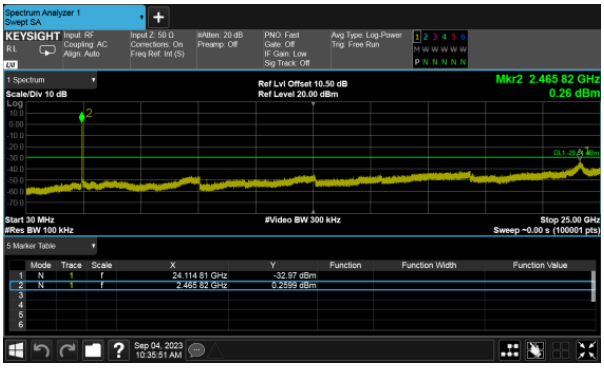
ANT A

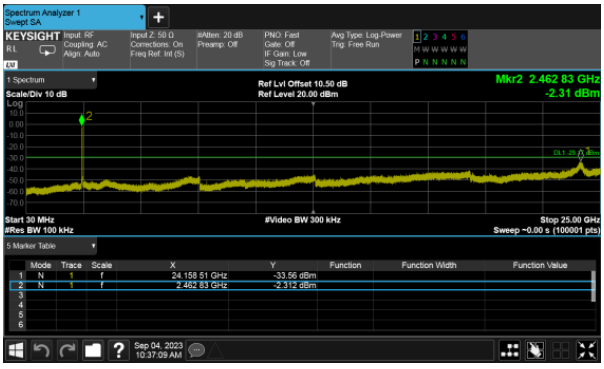


ANT B



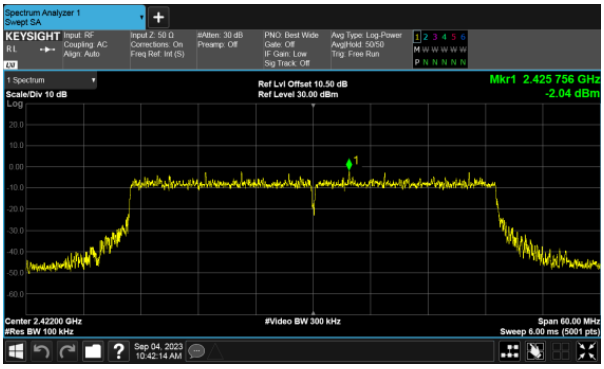




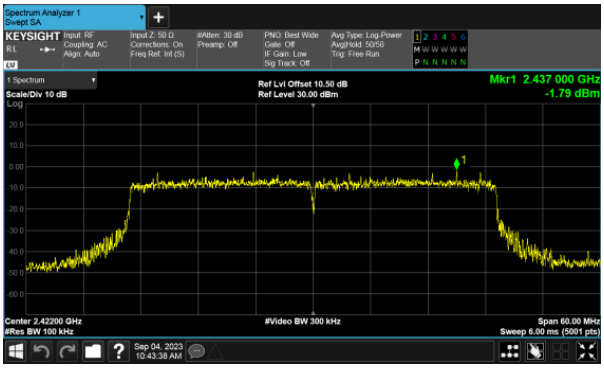


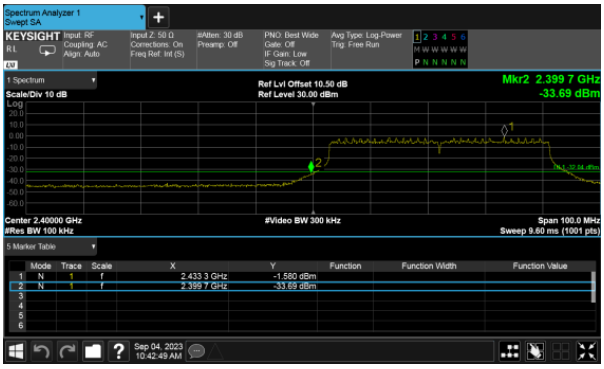
Non-Beamforming
Modulation Type: 802.11ax HE40 CH03

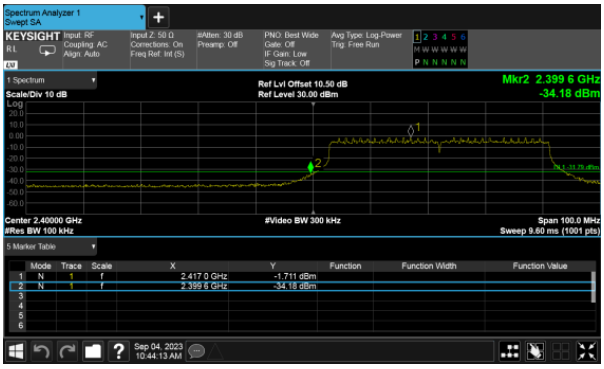
ANT A

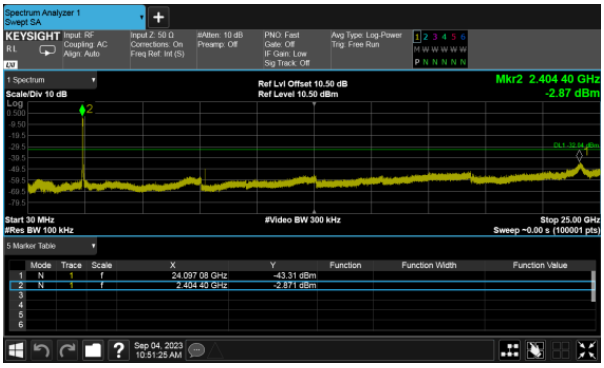


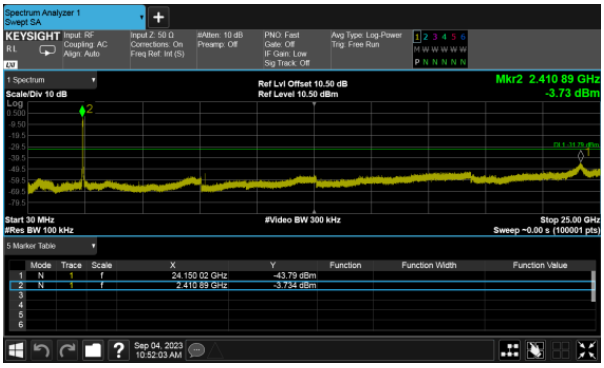
ANT B





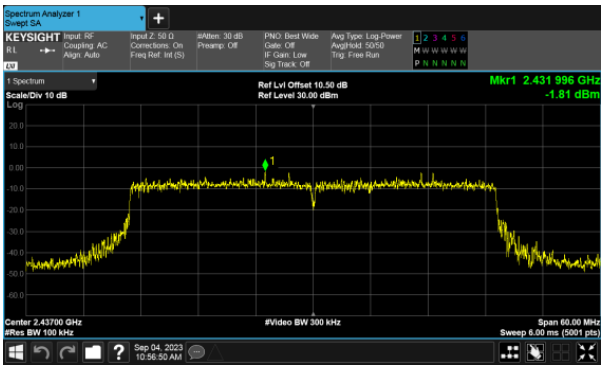






Non-Beamforming
Modulation Type: 802.11ax HE40 CH06

ANT A



ANT B