FCC RADIO TEST REPORT

Applicant	:	Ubiquiti Inc.
Address	:	685 Third Avenue, New York, New York 10017, USA
Equipment	:	UniFi G3 Touch Pro
Model No.	:	UTP-G3-Touch-Pro
Trade Name	:	UBIQUITI
FCC ID	:	SWX-UG3TP

I HEREBY CERTIFY THAT :

The sample was received on Aug. 23, 2023 and the testing was completed on Sep. 13, 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
23080247-TRFCC03	Oct. 31, 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)	. Maximum Peak and Average Output Power	PASS
15.247(e)	. Power Spectral Density	PASS
2.1091	. Radio Frequency Exposure	PASS

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

2. Test Configuration of Equipment under Test

2.1 Feature of Equipment

Operation Frequency Range	BT / BLE: 2400-2483.5MHz 802.11b/g/n: 2400-2483.5MHz 802.11a/n/ac:5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
Center Frequency Range	BT / BLE: 2402-2480MHz 802.11b/g/n: 2412MHz~2462MHz 802.11a/n/ac:5180-5240MHz, 5260-5320MHz, 5500-5720MHz, 5745-5825MHz
Modulation Type	BT: GFSK, π/4-DQPSK, 8DPSK BLE: GFSK WLAN: 2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 5GHz: 802.11n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	FHSS, DTS, DSSS, OFDM
Data Rate	BT: GFSK: 1Mbps, π/4-DQPSK: 2Mbps, 8DPSK: 3Mbps BLE: GFSK: 1Mbps WLAN: 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS7, HT20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS7, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type	ANT A :PIFA Antenna ANT B :Chip Antenna
Antenna Gain	2400MHz~2483.5MHz: ANT A :2.5dBi, For BLE 2400MHz~2483.5MHz: ANT B :1.8dBi .For BT / BLE 2400-2483.5MHz: ANT B: 1.8dBi 5150-5250MHz: ANT B: 3.00dBi 5250-5350MHz: ANT B: 3.00dBi 5470-5725MHz: ANT B: 3.00dBi 5725-5850MHz: ANT B: 3.00dBi

Note:
1. EUT support TPC Function.
2. BT and WLAN can simultaneously transmission.
3. EUT support Client Mode without radar detection.
4.For Chip:Nordic+(Chip:nRF5340) Only Support BLE, use ANT A
For Chip:WCN3680 Support BT and BLE and WLAN, use ANT B
5. For more details, please refer to the User's manual of the EUT.

2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT20 (2412MHz~2462MHz)

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

802.11n HT40(2422MHz~2452MHz)

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

Note: Channels remarked * are selected to perform test.

2.3 Test Mode and Test Software

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

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

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

2.4 Description of Test System

RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
3 Prong AC Power Cable	UI	NEMA5	0.6m / NS	N/A
POE	UBIQUITI	GP-H480-050G	N/A	0.6m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
Micro USB(Blue)	kolin	KEX-DLCP07	1m / NS	N/A
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
POE	UBIQUITI	GP-H480-050G	N/A	0.6m / NS
3 Prong AC Power Cable	UI	NEMA5	0.6m / NS	N/A
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
Micro USB(Blue)	kolin	KEX-DLCP07	1m / NS	N/A
AC Power Line Conducted Emission				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	lenovo	S1GL2W	N/A	Adapter / 1.8m / NS
POE	UBIQUITI	GP-H480-050G	N/A	0.6m / NS
3 Prong AC Power Cable	UI	NEMA5	0.6m / NS	N/A
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
Micro USB(Blue)	kolin	KEX-DLCP07	1m / 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.	

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2023/8/31~2023/9/13	25.9~27.5℃ / 48~56%	Leon Huang
Radiated Emissions	3M03-NK	2023/09/07	23℃ / 42%	Leon Huang
AC Power Line Conducted Emission	CON02-NK	2023/09/12	23℃ / 66%	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)	±3.5dB
Radiated Spurious Emission(30MHz~1GHz)	±5.1dB
Radiated Spurious Emission(1GHz~40GHz)	±5.2dB
Conducted Spurious Emission	±2.1dB
6dB Bandwidth	±5.4%
20dB Bandwidth	±4.4%
Occupied Bandwidth	±4.5%
Peak Output Power(Conducted Power Meter)	±1.1dB
Dwell Time / Deactivation Time	±7.6%
Power Spectral Density	±2.0dB
Duty Cycle	±3.5%

3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M03-NK)				
Instrument	**Manufacturer**	**Model No**	**Serial No**	**Calibration Date**	**Valid Date**
Bilog Antenna	Sunol	JB1	A020514-2	2023/06/26	2024/06/25
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	101402	2023/03/02	2024/03/01
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2023/08/16	2024/08/15
Preamplifier	Agilent	8449B	3008A01954	2023/03/08	2024/03/07
Preamplifier	EM Electronics corp.	EM330	60820	2022/11/11	2023/11/10
Cable-1m(30M-1G)	HUBER SUHNER	RG-214	05094M	2023/09/04	2024/09/03
Cable-4m(30M-1G)	HUBER SUHNER	RG-214	02953M	2023/05/08	2024/05/07
Cable-9m(30M-1G)	HUBER SUHNER	RG-214	00402M	2023/09/04	2024/09/03
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130606	2023/03/13	2024/03/12
Cable-1m(1G-26.5G)	HUBER SUHNER	SF126E	589849/126E	2022/11/09	2023/11/08
Cable-3m(10M-26.5G)	HUBER SUHNER	SF126E	587398/126E	2022/10/07	2023/10/06
Cable-8m(10M-26.5G)	HUBER SUHNER	SF126E	587396/126E	2022/10/07	2023/10/06
Cable-0.5m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2023/03/07	2024/03/06
Cable-3m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	MY2608/2	2023/03/07	2024/03/06
High Pass Filter	Warison	WFIL-H3000-18000F-03	WRJ5CFWC2J1	2023/07/03	2024/07/02
Highpass Filter	Warison	WFIL-H7500-18000F	WRQ4BFWC2J1	2023/03/13	2024/03/12
Notch Filter	Warison	WFIL-N5925-7125F-04	WRQ4BFWC4M1	2023/03/13	2024/03/12
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA

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

Test Item	AC Power Line Conducted Emission				
Test Site	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
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2023/07/05	2024/07/04

4. Antenna Requirements

4.1 Antenna Construction and Directional Gain

Antenna Type	ANT B :Chip Antenna
Antenna Gain	2400-2483.5MHz: ANT B: 1.8dBi

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.

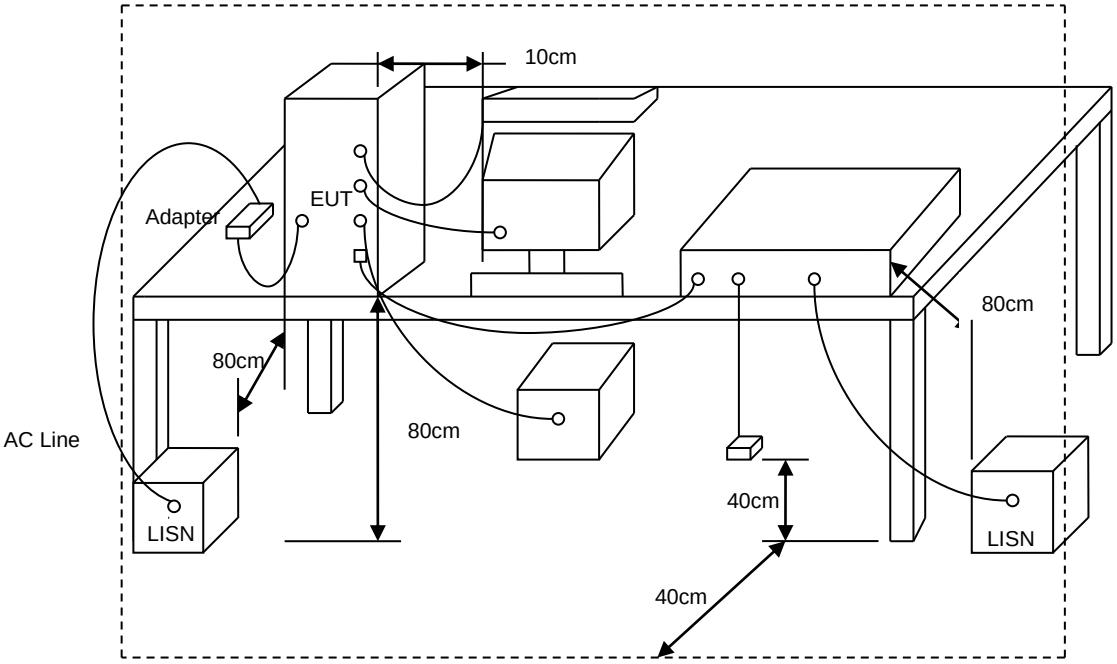
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2 Test Procedures

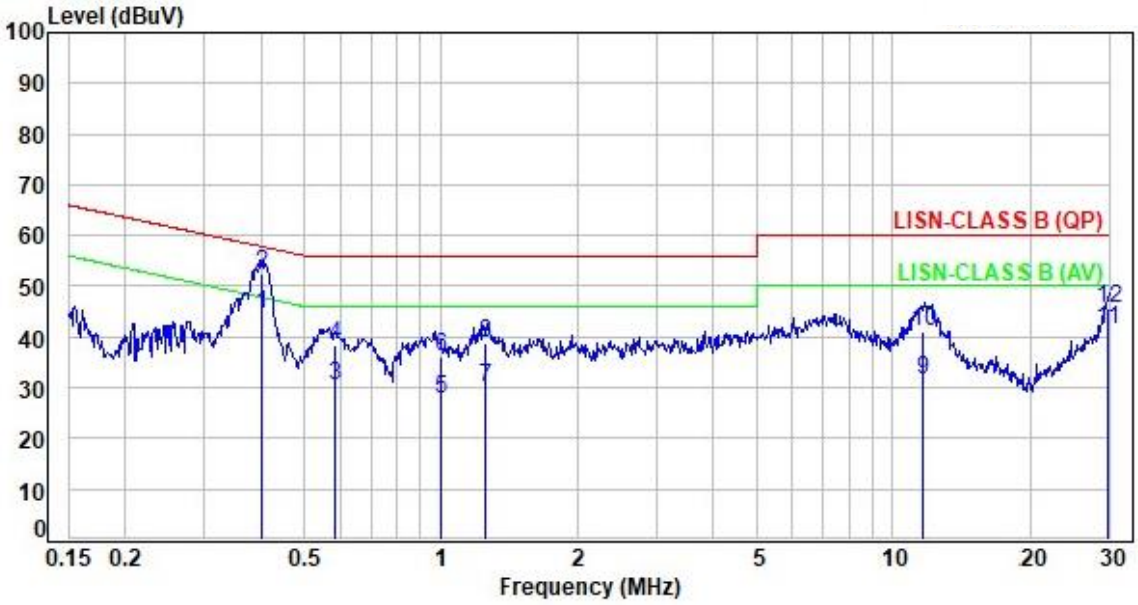
a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.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

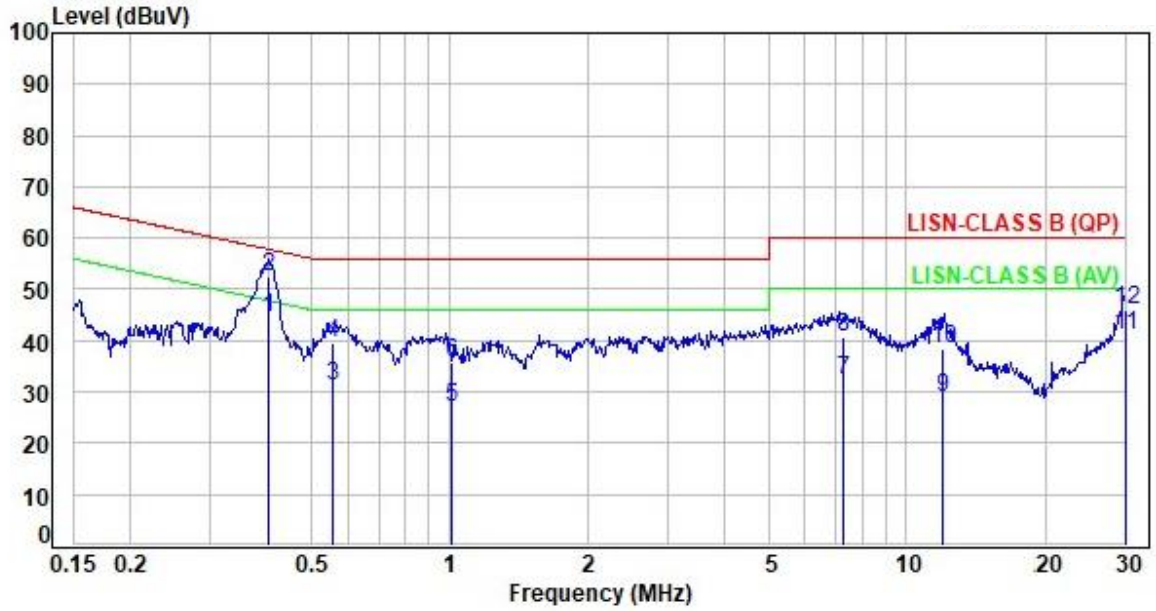
Power	:	AC 120V / 60Hz	Pol/Phase	:	LINE
Test Mode	:	Mode 2		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.40	9.66	34.86	44.52	47.82	-3.30	Average	P
2	0.40	9.66	42.81	52.47	57.82	-5.35	QP	P
3	0.58	9.65	20.89	30.54	46.00	-15.46	Average	P
4	0.58	9.65	28.69	38.34	56.00	-17.66	QP	P
5	1.00	9.64	17.98	27.62	46.00	-18.38	Average	P
6	1.00	9.64	26.30	35.94	56.00	-20.06	QP	P
7	1.25	9.66	20.19	29.85	46.00	-16.15	Average	P
8	1.25	9.66	29.09	38.75	56.00	-17.25	QP	P
9	11.70	9.86	21.76	31.62	50.00	-18.38	Average	P
10	11.70	9.86	31.35	41.21	60.00	-18.79	QP	P
11	29.68	9.95	31.46	41.41	50.00	-8.59	Average	P
12	29.68	9.95	35.78	45.73	60.00	-14.27	QP	P

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

Power	:	AC 120V / 60Hz	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 2		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.40	9.57	34.94	44.51	47.81	-3.30	Average	P
2	0.40	9.57	42.85	52.42	57.81	-5.39	QP	P
3	0.56	9.58	21.49	31.07	46.00	-14.93	Average	P
4	0.56	9.58	30.08	39.66	56.00	-16.34	QP	P
5	1.01	9.60	17.31	26.91	46.00	-19.09	Average	P
6	1.01	9.60	26.14	35.74	56.00	-20.26	QP	P
7	7.26	9.76	22.65	32.41	50.00	-17.59	Average	P
8	7.26	9.76	30.80	40.56	60.00	-19.44	QP	P
9	12.04	9.85	18.90	28.75	50.00	-21.25	Average	P
10	12.04	9.85	28.49	38.34	60.00	-21.66	QP	P
11	29.91	10.09	30.90	40.99	50.00	-9.01	Average	P
12	29.91	10.09	35.73	45.82	60.00	-14.18	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.

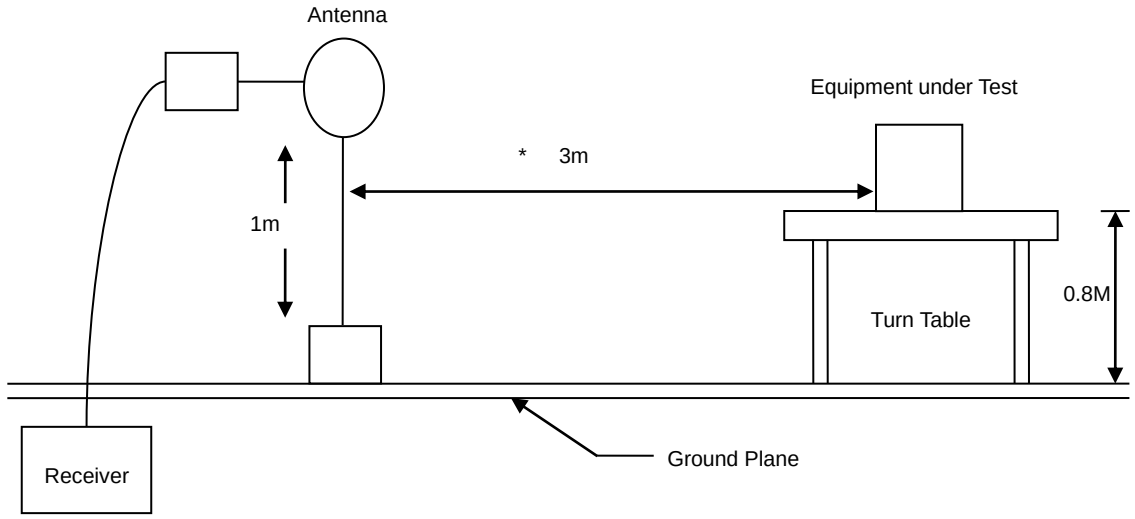
Note:

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.

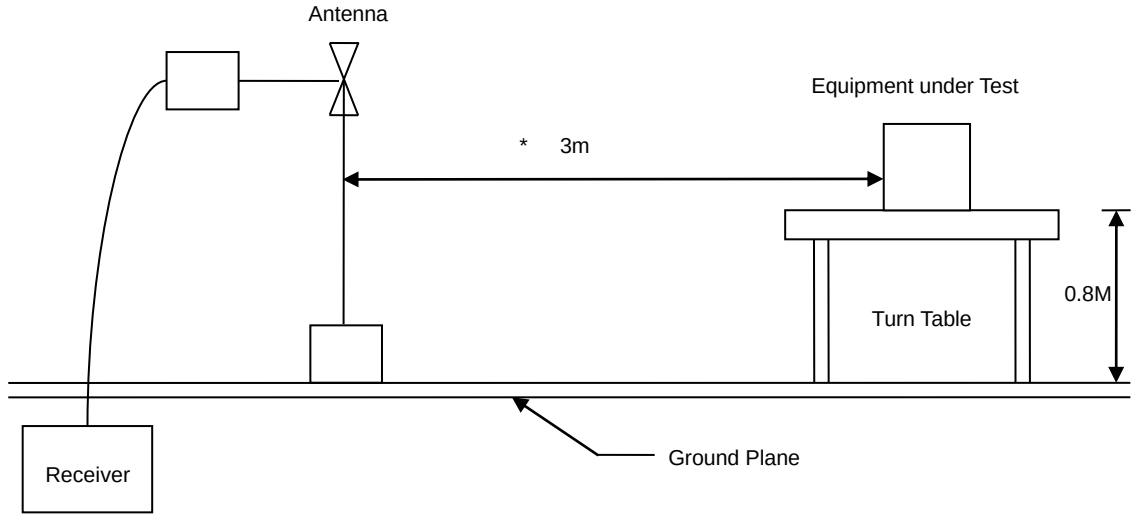
2.Due to the test software function limit the operation band setting(200dBuV/m). There's no corresponding limitation in the actual test item.

6.3 Typical Test Setup

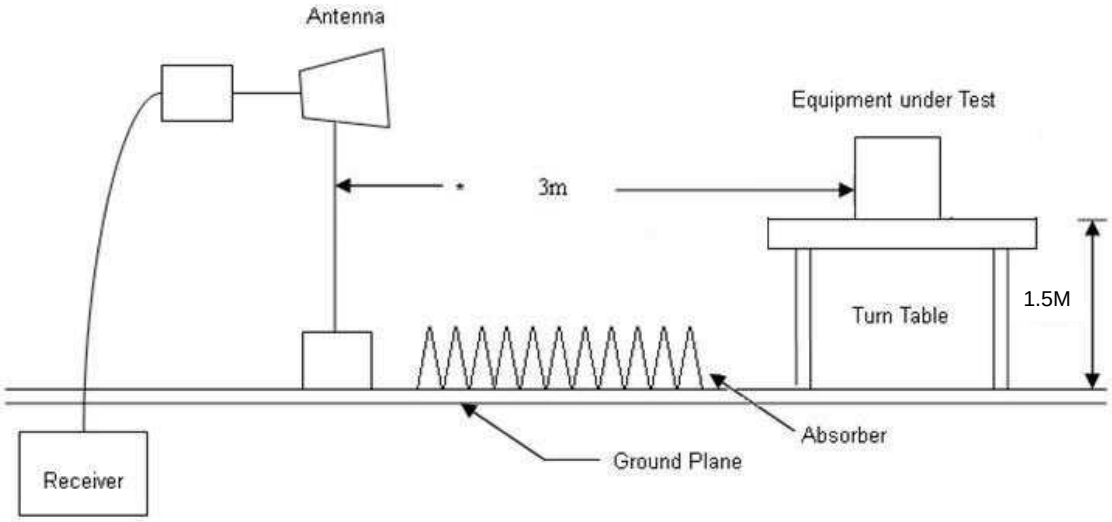
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

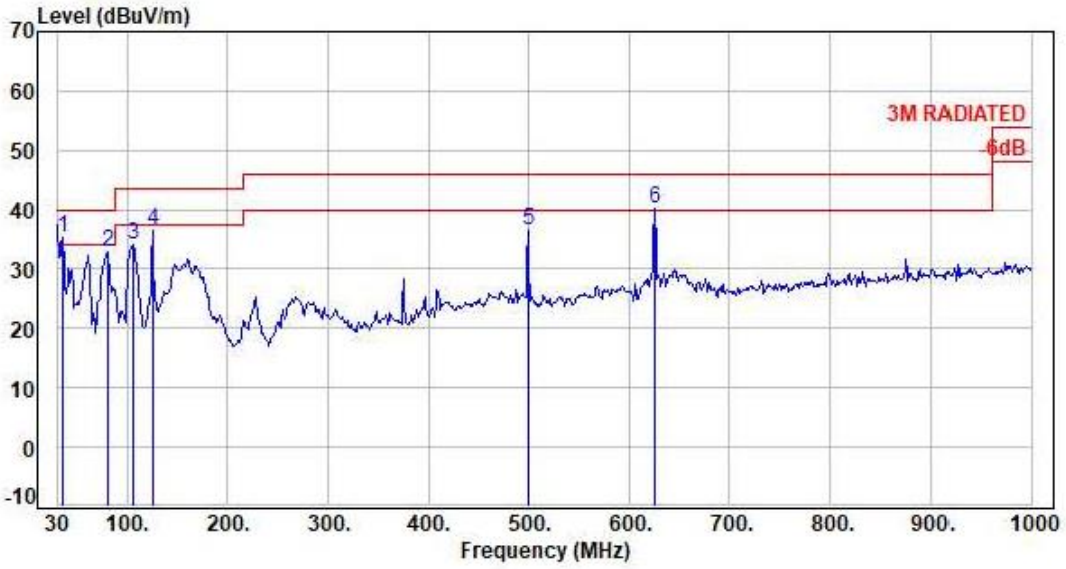


6.4 Test Result and Data (9KHz ~ 30MHz)

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

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

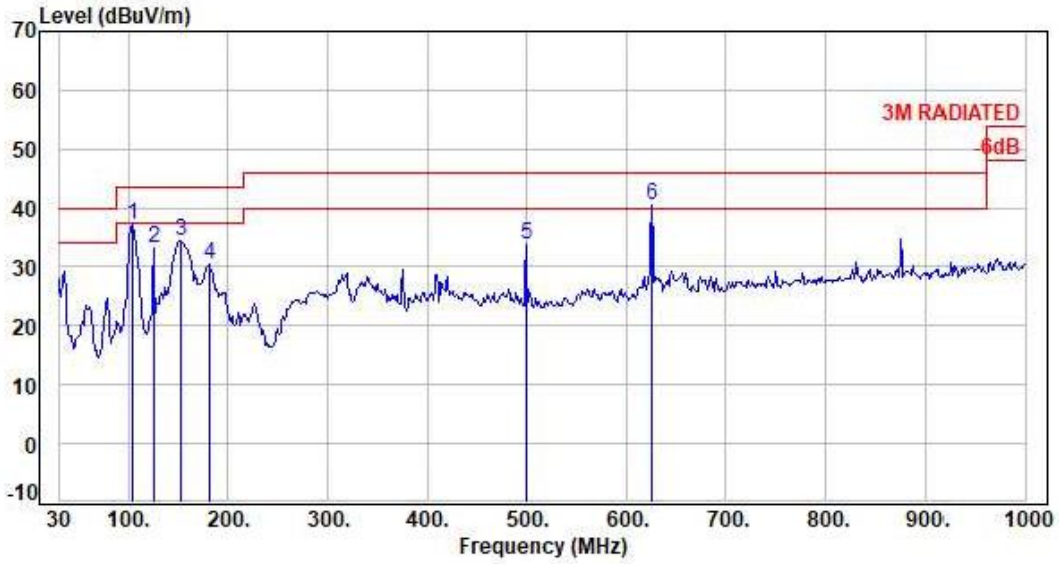
Test Mode : 1TX 11g CH01 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	35.82	-7.98	43.44	35.46	40.00	-4.54	Peak	400	0	P
2	80.44	-17.54	50.33	32.79	40.00	-7.21	Peak	400	0	P
3	105.66	-12.87	46.84	33.97	43.50	-9.53	Peak	400	0	P
4	125.06	-10.68	47.26	36.58	43.50	-6.92	Peak	400	0	P
5	499.48	-4.97	41.54	36.57	46.00	-9.43	Peak	400	0	P
6	625.58	-2.70	42.76	40.06	46.00	-5.94	Peak	400	0	P

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

Test Mode : 1TX 11g CH01 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal

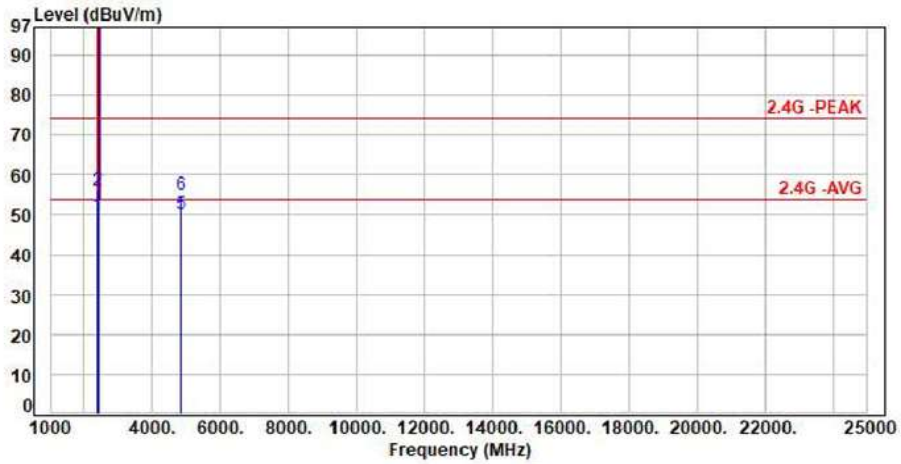


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	103.72	-13.29	50.52	37.23	43.50	-6.27	Peak	400	0	P
2	125.06	-10.68	43.96	33.28	43.50	-10.22	Peak	400	0	P
3	152.22	-12.16	46.62	34.46	43.50	-9.04	Peak	400	0	P
4	181.32	-13.04	43.42	30.38	43.50	-13.12	Peak	400	0	P
5	499.48	-4.97	38.90	33.93	46.00	-12.07	Peak	400	0	P
6	625.58	-2.70	43.12	40.42	46.00	-5.58	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)

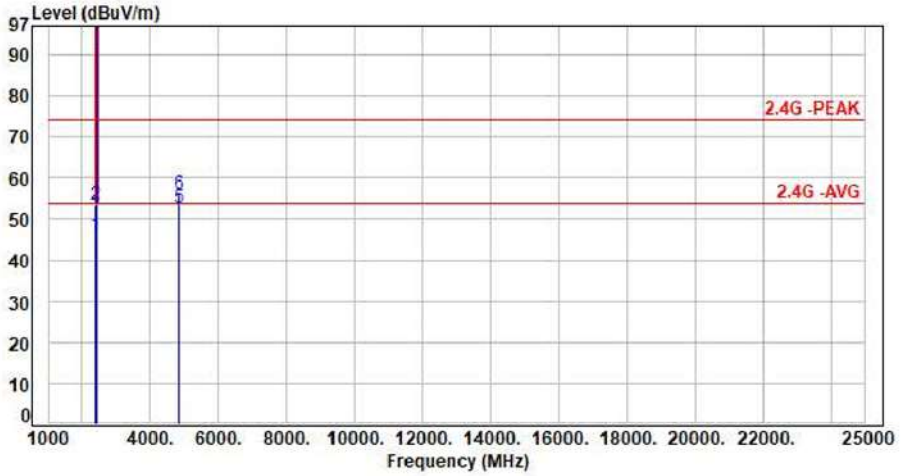
Test Mode : 1TX 11b CH01 1Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	52.77	49.72	54.00	-4.28	Average	389	193	P
2	2390.00	-3.05	59.16	56.11	74.00	-17.89	Peak	389	193	P
3	2412.00	-3.03	106.87	103.84	200.00	-96.16	Average	389	193	P
4	2412.00	-3.03	109.52	106.49	200.00	-93.51	Peak	389	193	P
5	4824.00	4.84	45.23	50.07	54.00	-3.93	Average	100	278	P
6	4824.00	4.84	50.18	55.02	74.00	-18.98	Peak	100	278	P

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

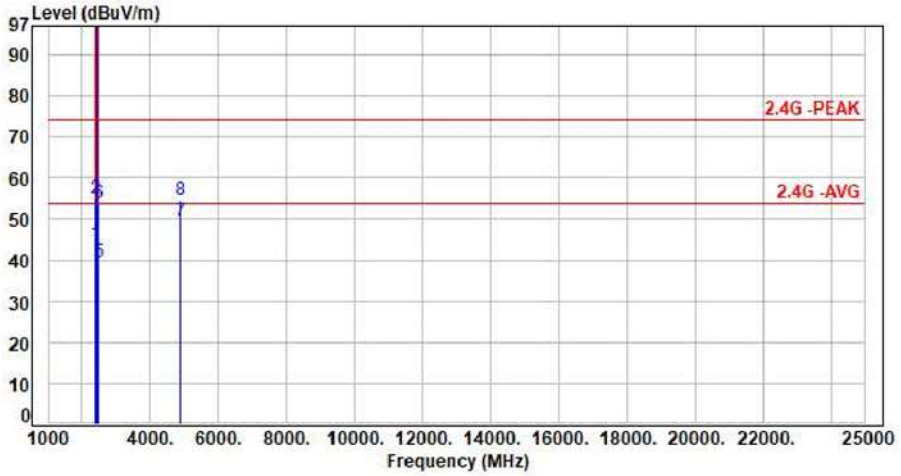
Test Mode : 1TX 11b CH01 1Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	49.19	46.14	54.00	-7.86	Average	100	217	P
2	2390.00	-3.05	56.61	53.56	74.00	-20.44	Peak	100	217	P
3	2412.00	-3.03	105.34	102.31	200.00	-97.69	Average	100	217	P
4	2412.00	-3.03	107.98	104.95	200.00	-95.05	Peak	100	217	P
5	4824.00	4.84	48.04	52.88	54.00	-1.12	Average	100	278	P
6	4824.00	4.84	51.31	56.15	74.00	-17.85	Peak	100	278	P

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

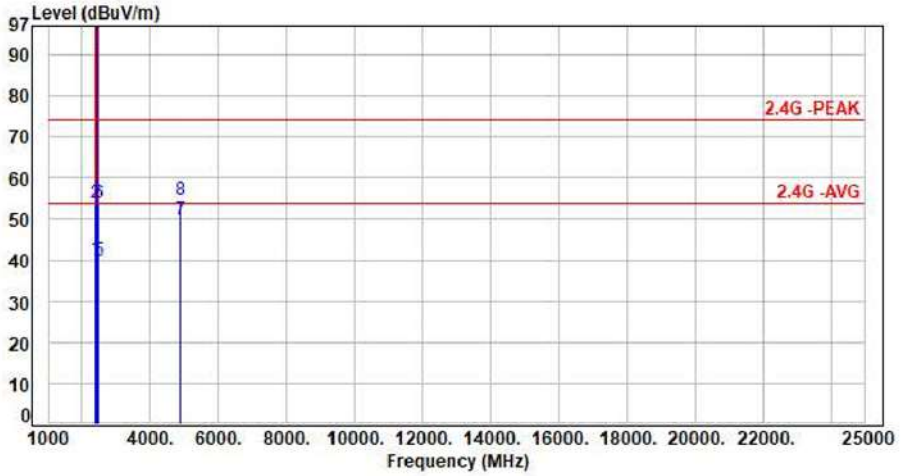
Test Mode : 1TX 11b CH06 1Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	46.80	43.75	54.00	-10.25	Average	384	197	P
2	2390.00	-3.05	57.84	54.79	74.00	-19.21	Peak	384	197	P
3	2437.00	-3.00	105.66	102.66	200.00	-97.34	Average	384	197	P
4	2437.00	-3.00	108.37	105.37	200.00	-94.63	Peak	384	197	P
5	2483.50	-2.92	42.43	39.51	54.00	-14.49	Average	384	197	P
6	2483.50	-2.92	56.75	53.83	74.00	-20.17	Peak	384	197	P
7	4874.00	5.10	44.49	49.59	54.00	-4.41	Average	100	267	P
8	4874.00	5.10	49.33	54.43	74.00	-19.57	Peak	100	267	P

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

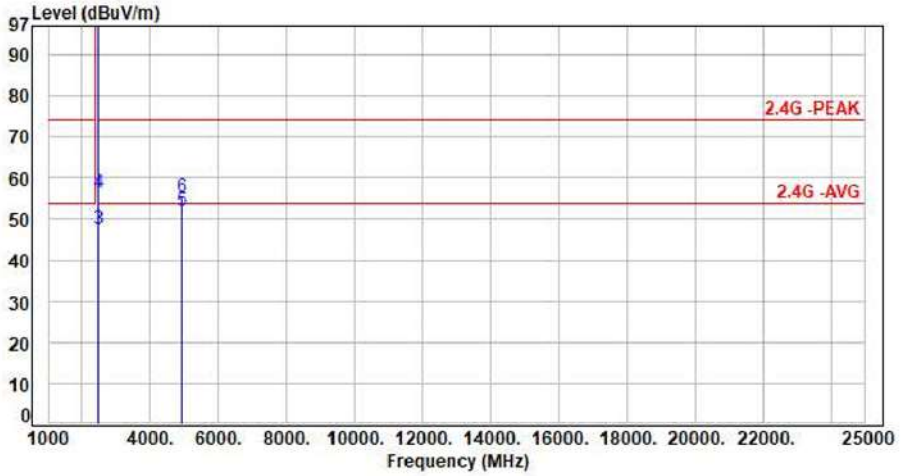
Test Mode : 1TX 11b CH06 1Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	43.17	40.12	54.00	-13.88	Average	119	221	P
2	2390.00	-3.05	56.82	53.77	74.00	-20.23	Peak	119	221	P
3	2437.00	-3.00	104.17	101.17	200.00	-98.83	Average	119	221	P
4	2437.00	-3.00	107.05	104.05	200.00	-95.95	Peak	119	221	P
5	2483.50	-2.92	42.75	39.83	54.00	-14.17	Average	119	221	P
6	2483.50	-2.92	56.65	53.73	74.00	-20.27	Peak	119	221	P
7	4874.00	5.10	44.86	49.96	54.00	-4.04	Average	100	277	P
8	4874.00	5.10	49.65	54.75	74.00	-19.25	Peak	100	277	P

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

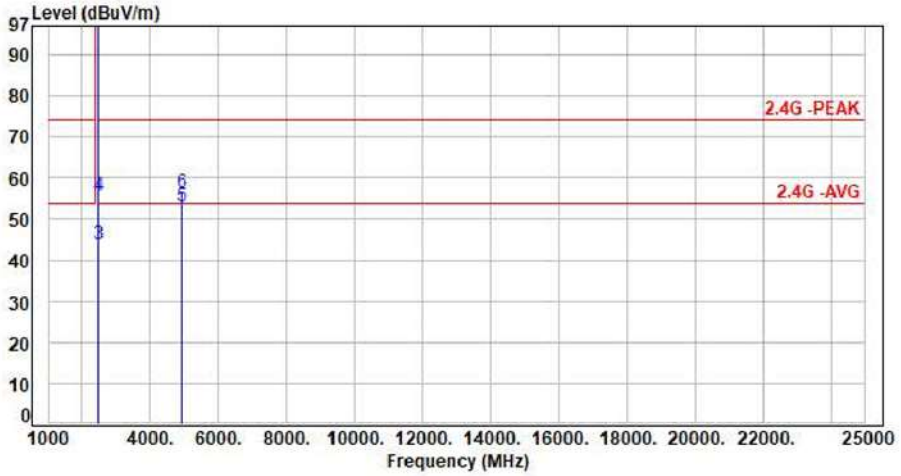
Test Mode : 1TX 11b CH11 1Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-2.96	103.17	100.21	200.00	-99.79	Average	377	197	P
2	2462.00	-2.96	105.82	102.86	200.00	-97.14	Peak	377	197	P
3	2483.50	-2.92	50.47	47.55	54.00	-6.45	Average	377	197	P
4	2483.50	-2.92	59.29	56.37	74.00	-17.63	Peak	377	197	P
5	4924.00	5.21	46.62	51.83	54.00	-2.17	Average	100	264	P
6	4924.00	5.21	50.26	55.47	74.00	-18.53	Peak	100	264	P

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

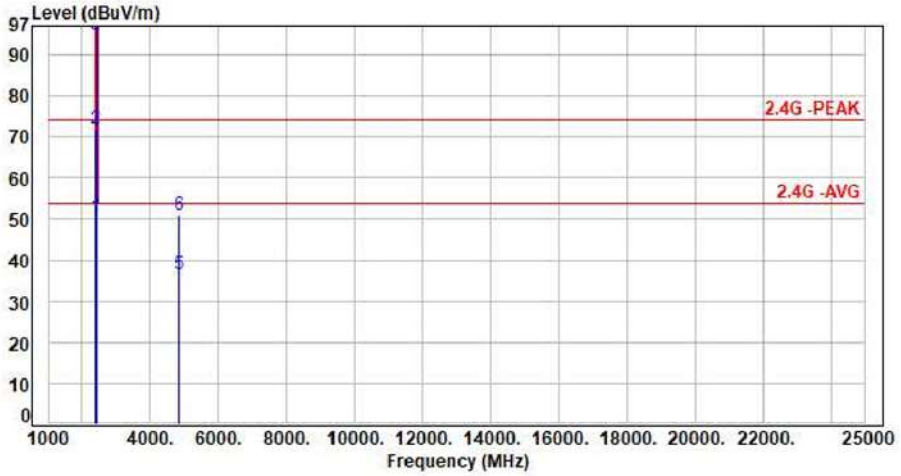
Test Mode : 1TX 11b CH11 1Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-2.96	101.04	98.08	200.00	-101.92	Average	125	222	P
2	2462.00	-2.96	103.68	100.72	200.00	-99.28	Peak	125	222	P
3	2483.50	-2.92	46.90	43.98	54.00	-10.02	Average	125	222	P
4	2483.50	-2.92	58.75	55.83	74.00	-18.17	Peak	125	222	P
5	4924.00	5.21	47.75	52.96	54.00	-1.04	Average	100	271	P
6	4924.00	5.21	51.29	56.50	74.00	-17.50	Peak	100	271	P

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

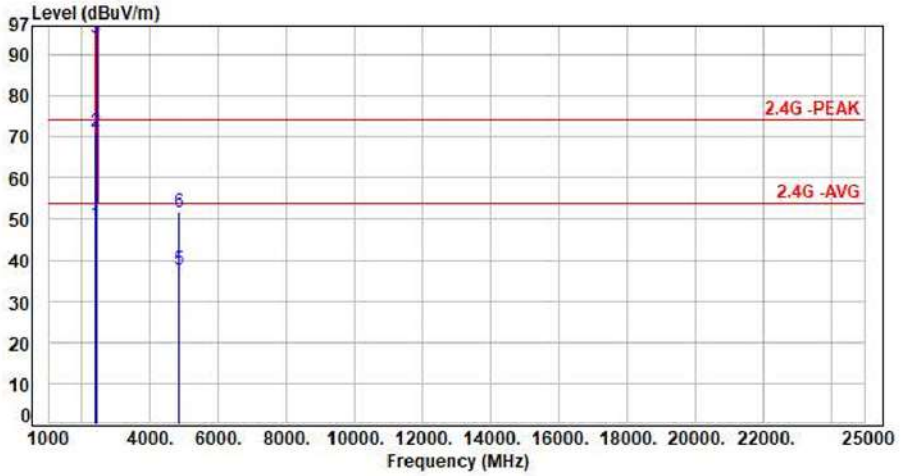
Test Mode : 1TX 11g CH01 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	53.46	50.41	54.00	-3.59	Average	385	195	P
2	2390.00	-3.05	75.10	72.05	74.00	-1.95	Peak	385	195	P
3	2412.00	-3.03	97.86	94.83	200.00	-105.17	Average	385	195	P
4	2412.00	-3.03	109.29	106.26	200.00	-93.74	Peak	385	195	P
5	4824.00	4.84	31.75	36.59	54.00	-17.41	Average	100	274	P
6	4824.00	4.84	45.96	50.80	74.00	-23.20	Peak	100	274	P

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

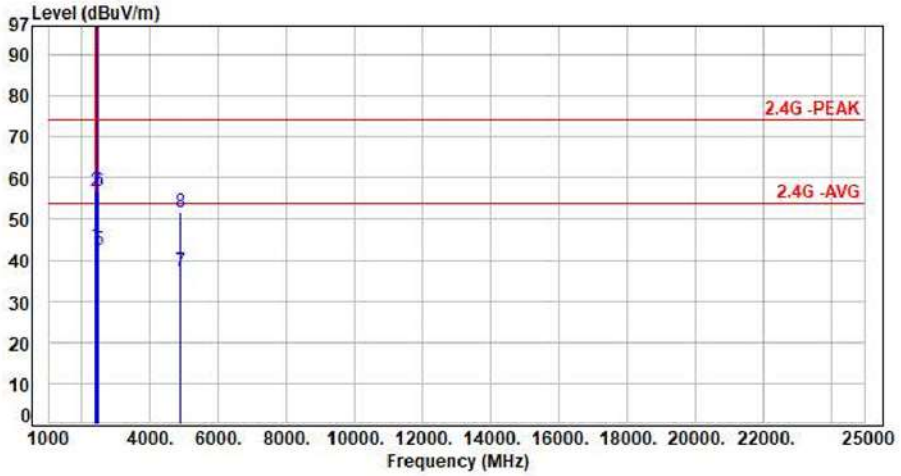
Test Mode : 1TX 11g CH01 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	51.56	48.51	54.00	-5.49	Average	385	215	P
2	2390.00	-3.05	74.36	71.31	74.00	-2.69	Peak	385	215	P
3	2412.00	-3.03	97.04	94.01	200.00	-105.99	Average	385	215	P
4	2412.00	-3.03	108.53	105.50	200.00	-94.50	Peak	385	215	P
5	4824.00	4.84	32.93	37.77	54.00	-16.23	Average	100	278	P
6	4824.00	4.84	46.98	51.82	74.00	-22.18	Peak	100	278	P

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

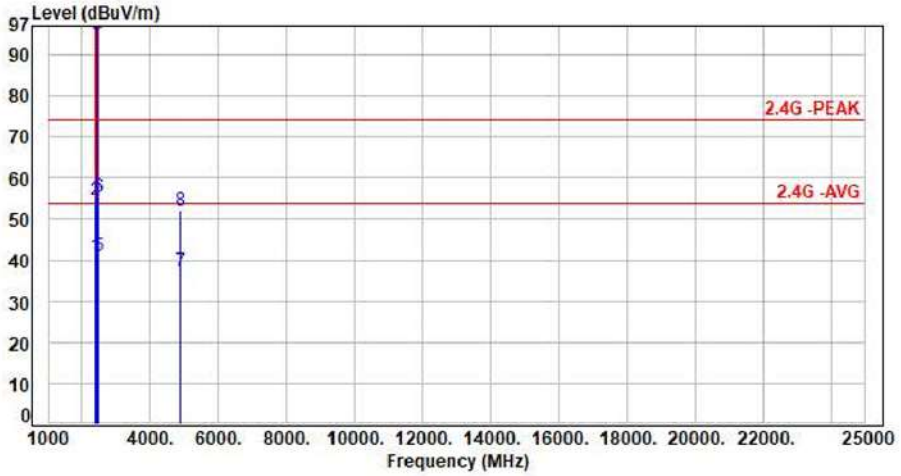
Test Mode : 1TX 11g CH06 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	46.52	43.47	54.00	-10.53	Average	384	195	P
2	2390.00	-3.05	59.70	56.65	74.00	-17.35	Peak	384	195	P
3	2437.00	-3.00	99.24	96.24	200.00	-103.76	Average	384	195	P
4	2437.00	-3.00	110.54	107.54	200.00	-92.46	Peak	384	195	P
5	2483.50	-2.92	45.39	42.47	54.00	-11.53	Average	384	195	P
6	2483.50	-2.92	59.63	56.71	74.00	-17.29	Peak	384	195	P
7	4874.00	5.10	32.16	37.26	54.00	-16.74	Average	100	277	P
8	4874.00	5.10	46.44	51.54	74.00	-22.46	Peak	100	277	P

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

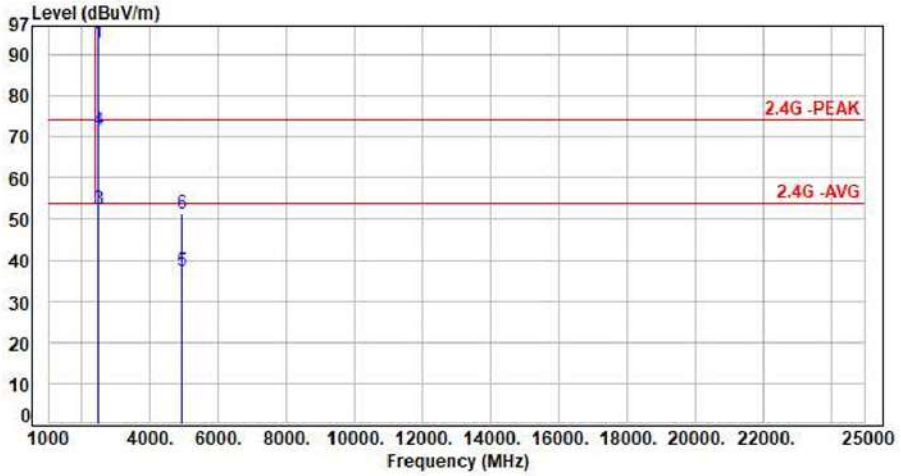
Test Mode : 1TX 11g CH06 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	44.08	41.03	54.00	-12.97	Average	383	214	P
2	2390.00	-3.05	57.56	54.51	74.00	-19.49	Peak	383	214	P
3	2437.00	-3.00	97.67	94.67	200.00	-105.33	Average	383	214	P
4	2437.00	-3.00	109.24	106.24	200.00	-93.76	Peak	383	214	P
5	2483.50	-2.92	43.80	40.88	54.00	-13.12	Average	383	214	P
6	2483.50	-2.92	58.19	55.27	74.00	-18.73	Peak	383	214	P
7	4874.00	5.10	32.09	37.19	54.00	-16.81	Average	100	274	P
8	4874.00	5.10	47.02	52.12	74.00	-21.88	Peak	100	274	P

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

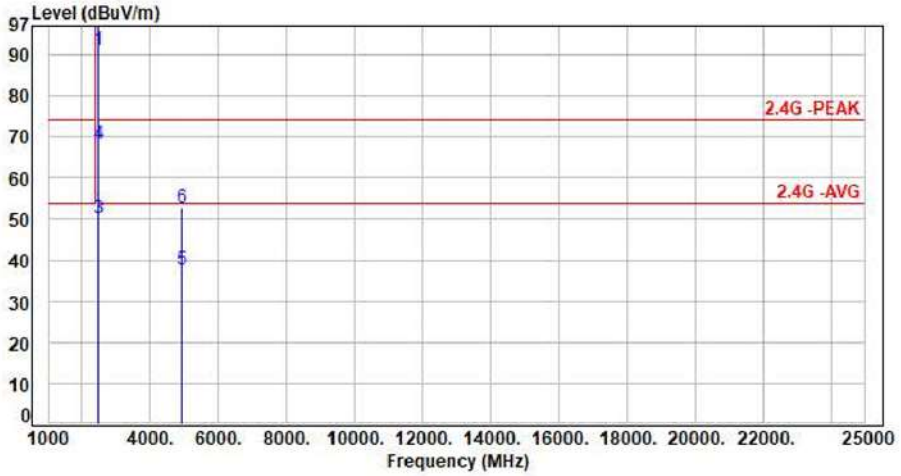
Test Mode : 1TX 11g CH11 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-2.96	95.85	92.89	200.00	-107.11	Average	375	198	P
2	2462.00	-2.96	106.99	104.03	200.00	-95.97	Peak	375	198	P
3	2483.50	-2.92	55.18	52.26	54.00	-1.74	Average	375	198	P
4	2483.50	-2.92	74.50	71.58	74.00	-2.42	Peak	375	198	P
5	4924.00	5.21	32.01	37.22	54.00	-16.78	Average	100	271	P
6	4924.00	5.21	46.09	51.30	74.00	-22.70	Peak	100	271	P

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

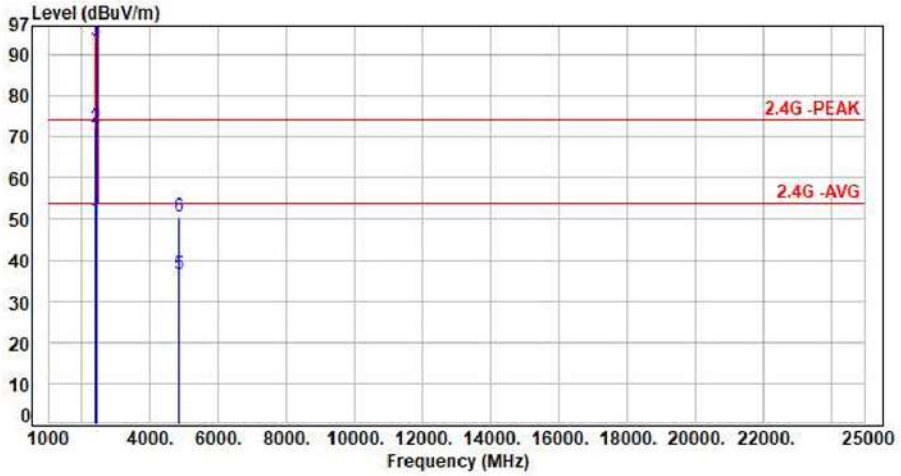
Test Mode : 1TX 11g CH11 6Mbps
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-2.96	94.17	91.21	200.00	-108.79	Average	371	213	P
2	2462.00	-2.96	106.13	103.17	200.00	-96.83	Peak	371	213	P
3	2483.50	-2.92	53.25	50.33	54.00	-3.67	Average	371	213	P
4	2483.50	-2.92	70.98	68.06	74.00	-5.94	Peak	371	213	P
5	4924.00	5.21	32.53	37.74	54.00	-16.26	Average	100	276	P
6	4924.00	5.21	47.49	52.70	74.00	-21.30	Peak	100	276	P

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

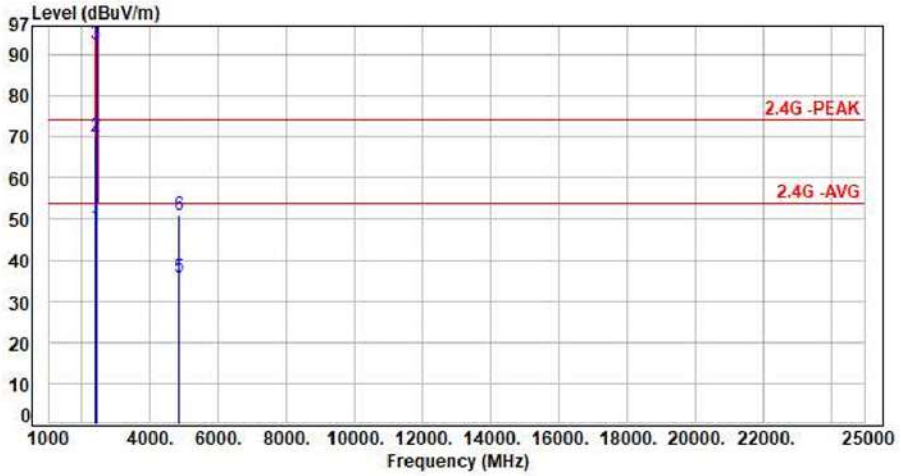
Test Mode : 1TX 11n20 CH01 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	52.67	49.62	54.00	-4.38	Average	383	191	P
2	2390.00	-3.05	75.44	72.39	74.00	-1.61	Peak	383	191	P
3	2412.00	-3.03	96.33	93.30	200.00	-106.70	Average	383	191	P
4	2412.00	-3.03	107.75	104.72	200.00	-95.28	Peak	383	191	P
5	4824.00	4.84	31.52	36.36	54.00	-17.64	Average	100	274	P
6	4824.00	4.84	45.62	50.46	74.00	-23.54	Peak	100	274	P

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

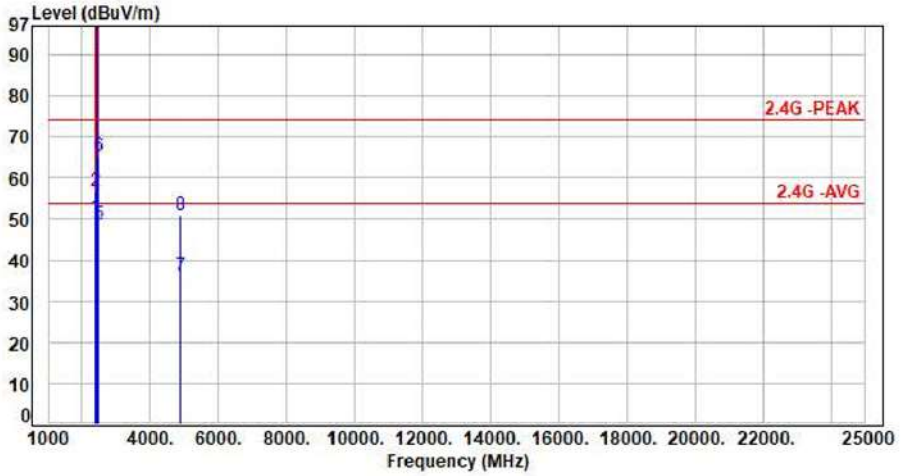
Test Mode : 1TX 11n20 CH01 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	50.93	47.88	54.00	-6.12	Average	387	213	P
2	2390.00	-3.05	73.09	70.04	74.00	-3.96	Peak	387	213	P
3	2412.00	-3.03	95.52	92.49	200.00	-107.51	Average	387	213	P
4	2412.00	-3.03	107.07	104.04	200.00	-95.96	Peak	387	213	P
5	4824.00	4.84	31.04	35.88	54.00	-18.12	Average	100	270	P
6	4824.00	4.84	46.07	50.91	74.00	-23.09	Peak	100	270	P

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

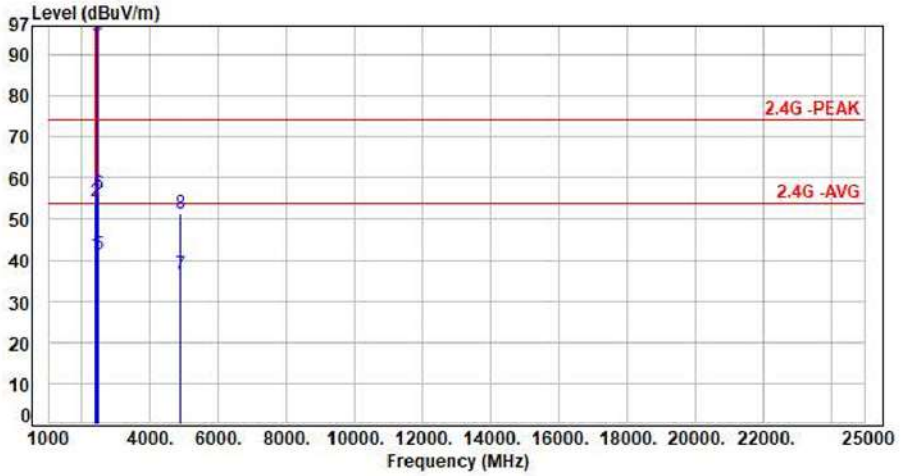
Test Mode : 1TX 11n20 CH06 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	53.62	50.57	54.00	-3.43	Average	389	195	P
2	2390.00	-3.05	60.01	56.96	74.00	-17.04	Peak	389	195	P
3	2437.00	-3.00	98.87	95.87	200.00	-104.13	Average	389	195	P
4	2437.00	-3.00	109.87	106.87	200.00	-93.13	Peak	389	195	P
5	2483.50	-2.92	51.74	48.82	54.00	-5.18	Average	389	195	P
6	2483.50	-2.92	68.04	65.12	74.00	-8.88	Peak	389	195	P
7	4874.00	5.10	31.19	36.29	54.00	-17.71	Average	100	274	P
8	4874.00	5.10	45.92	51.02	74.00	-22.98	Peak	100	274	P

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

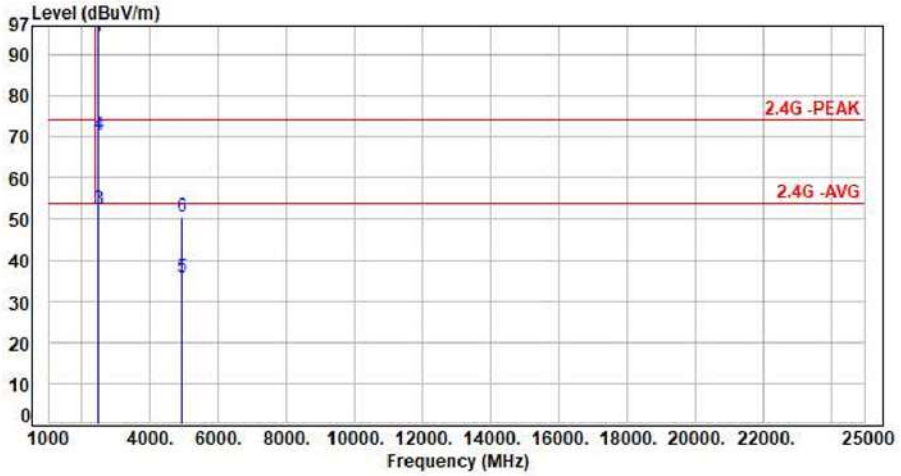
Test Mode : 1TX 11n20 CH06 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	44.53	41.48	54.00	-12.52	Average	382	215	P
2	2390.00	-3.05	57.29	54.24	74.00	-19.76	Peak	382	215	P
3	2437.00	-3.00	97.41	94.41	200.00	-105.59	Average	382	215	P
4	2437.00	-3.00	108.93	105.93	200.00	-94.07	Peak	382	215	P
5	2483.50	-2.92	44.25	41.33	54.00	-12.67	Average	382	215	P
6	2483.50	-2.92	58.94	56.02	74.00	-17.98	Peak	382	215	P
7	4874.00	5.10	31.26	36.36	54.00	-17.64	Average	100	280	P
8	4874.00	5.10	46.30	51.40	74.00	-22.60	Peak	100	280	P

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

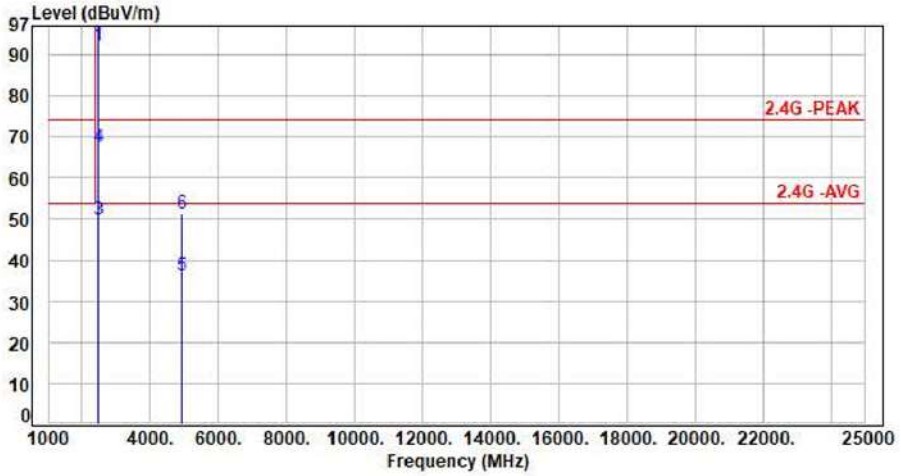
Test Mode : 1TX 11n20 CH11 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-2.96	97.47	94.51	200.00	-105.49	Average	377	198	P
2	2462.00	-2.96	108.76	105.80	200.00	-94.20	Peak	377	198	P
3	2483.50	-2.92	55.32	52.40	54.00	-1.60	Average	377	198	P
4	2483.50	-2.92	73.54	70.62	74.00	-3.38	Peak	377	198	P
5	4924.00	5.21	30.56	35.77	54.00	-18.23	Average	100	275	P
6	4924.00	5.21	45.36	50.57	74.00	-23.43	Peak	100	275	P

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

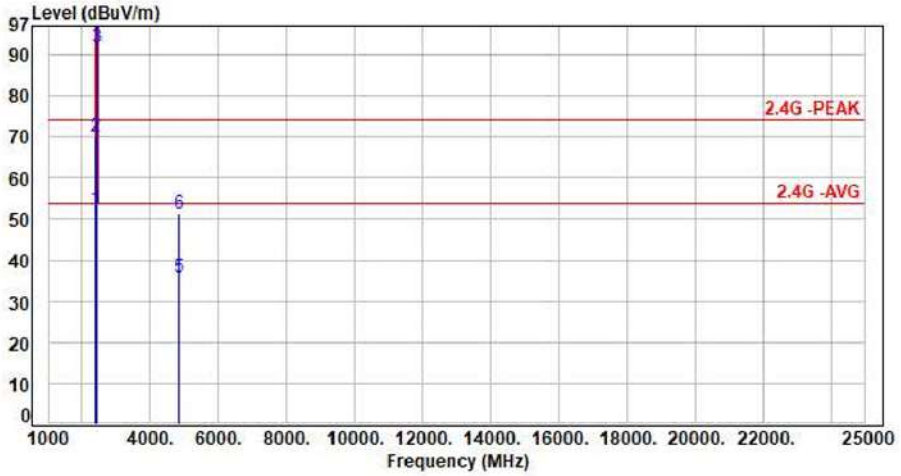
Test Mode : 1TX 11n20 CH11 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-2.96	95.22	92.26	200.00	-107.74	Average	123	223	P
2	2462.00	-2.96	106.60	103.64	200.00	-96.36	Peak	123	223	P
3	2483.50	-2.92	52.82	49.90	54.00	-4.10	Average	123	223	P
4	2483.50	-2.92	70.54	67.62	74.00	-6.38	Peak	123	223	P
5	4924.00	5.21	30.87	36.08	54.00	-17.92	Average	100	276	P
6	4924.00	5.21	45.89	51.10	74.00	-22.90	Peak	100	276	P

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

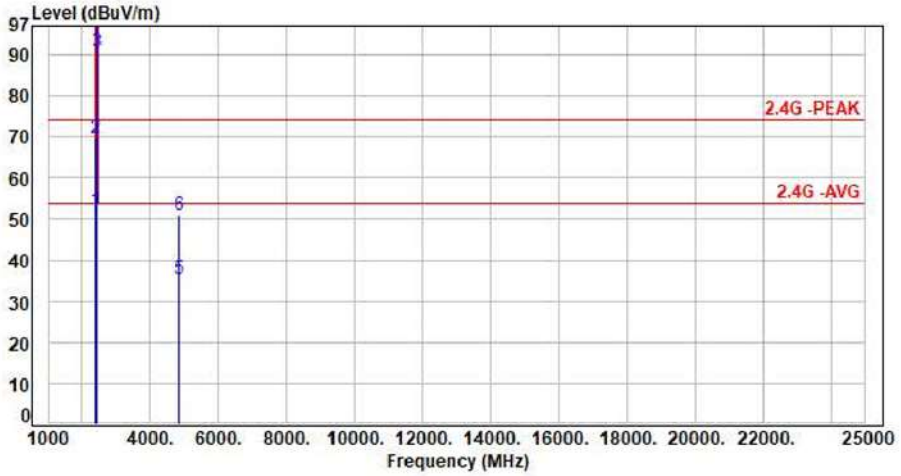
Test Mode : 1TX 11n40 CH03 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	55.30	52.25	54.00	-1.75	Average	386	196	P
2	2390.00	-3.05	73.22	70.17	74.00	-3.83	Peak	386	196	P
3	2422.00	-3.02	94.98	91.96	200.00	-108.04	Average	386	196	P
4	2422.00	-3.02	108.84	105.82	200.00	-94.18	Peak	386	196	P
5	4844.00	4.97	30.83	35.80	54.00	-18.20	Average	100	279	P
6	4844.00	4.97	46.31	51.28	74.00	-22.72	Peak	100	279	P

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

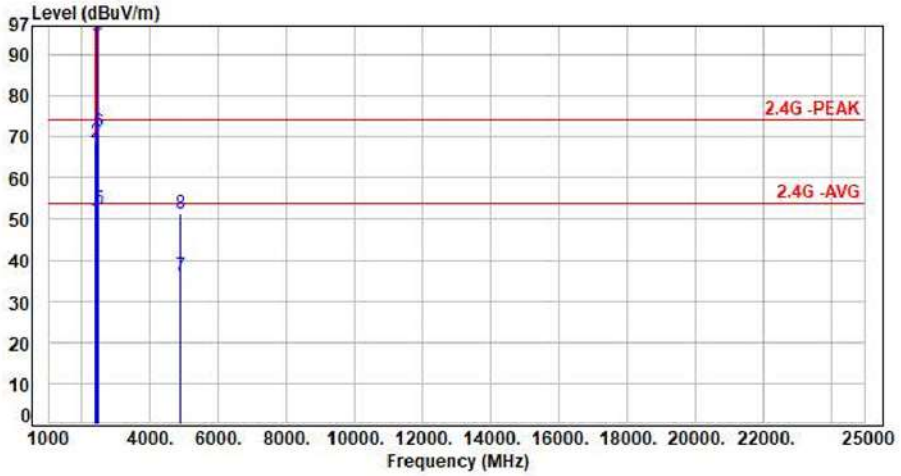
Test Mode : 1TX 11n40 CH03 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	55.01	51.96	54.00	-2.04	Average	103	218	P
2	2390.00	-3.05	72.69	69.64	74.00	-4.36	Peak	103	218	P
3	2422.00	-3.02	93.63	90.61	200.00	-109.39	Average	103	218	P
4	2422.00	-3.02	104.92	101.90	200.00	-98.10	Peak	103	218	P
5	4844.00	4.97	30.29	35.26	54.00	-18.74	Average	100	273	P
6	4844.00	4.97	45.84	50.81	74.00	-23.19	Peak	100	273	P

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

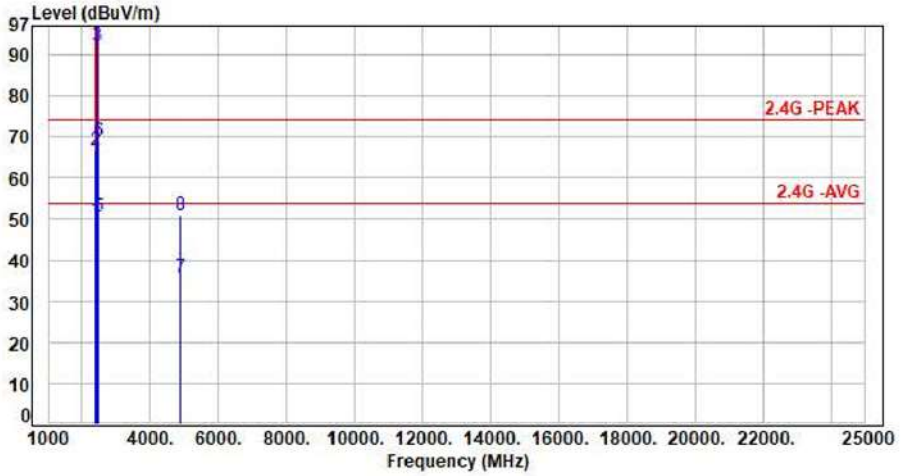
Test Mode : 1TX 11n40 CH06 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-3.05	53.00	49.95	54.00	-4.05	Average	385	195	P
2	2390.00	-3.05	71.61	68.56	74.00	-5.44	Peak	385	195	P
3	2437.00	-3.00	97.24	94.24	200.00	-105.76	Average	385	195	P
4	2437.00	-3.00	110.09	107.09	200.00	-92.91	Peak	385	195	P
5	2483.50	-2.92	55.44	52.52	54.00	-1.48	Average	385	195	P
6	2483.50	-2.92	74.01	71.09	74.00	-2.91	Peak	385	195	P
7	4874.00	5.10	30.93	36.03	54.00	-17.97	Average	100	278	P
8	4874.00	5.10	46.30	51.40	74.00	-22.60	Peak	100	278	P

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

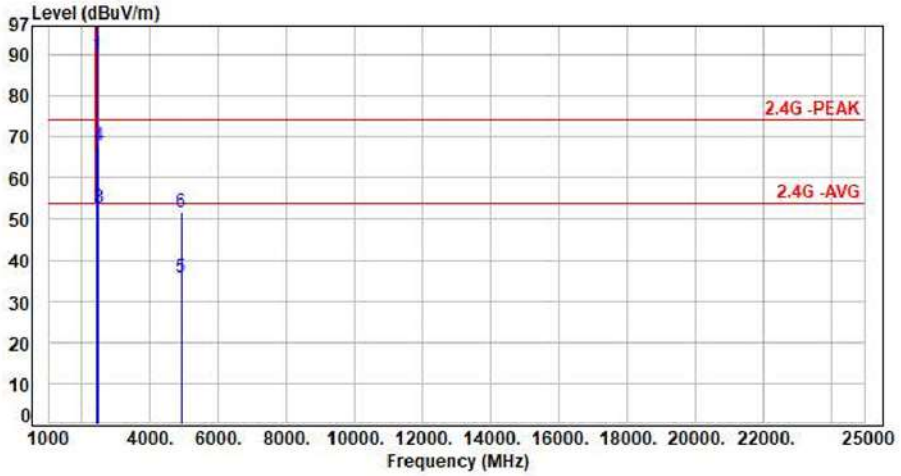
Test Mode : 1TX 11n40 CH06 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Horizontal



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	-3.05	52.79	49.74	54.00	-4.26	Average	100	218	P
2	2390.00	-3.05	69.71	66.66	74.00	-7.34	Peak	100	218	P
3	2437.00	-3.00	95.34	92.34	200.00	-107.66	Average	100	218	P
4	2437.00	-3.00	107.71	104.71	200.00	-95.29	Peak	100	218	P
5	2483.50	-2.92	53.57	50.65	54.00	-3.35	Average	100	218	P
6	2483.50	-2.92	71.84	68.92	74.00	-5.08	Peak	100	218	P
7	4874.00	5.10	30.79	35.89	54.00	-18.11	Average	100	273	P
8	4874.00	5.10	45.97	51.07	74.00	-22.93	Peak	100	273	P

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

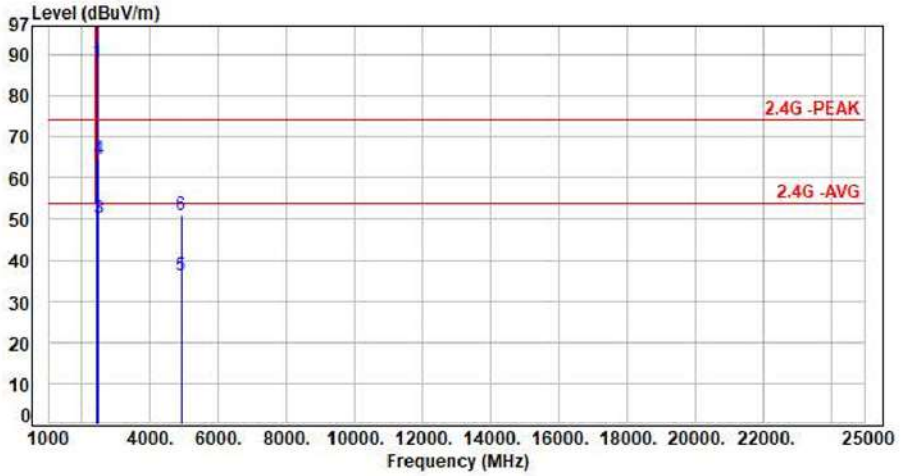
Test Mode : 1TX 11n40 CH09 MCS0
Voltage : From POE(POE AC 120V/60Hz)
Pol : Vertical



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	-2.99	92.87	89.88	200.00	-110.12	Average	381	197	P
2	2452.00	-2.99	105.62	102.63	200.00	-97.37	Peak	381	197	P
3	2483.50	-2.92	55.55	52.63	54.00	-1.37	Average	381	197	P
4	2483.50	-2.92	70.94	68.02	74.00	-5.98	Peak	381	197	P
5	4904.00	5.20	30.52	35.72	54.00	-18.28	Average	100	277	P
6	4904.00	5.20	46.32	51.52	74.00	-22.48	Peak	100	277	P

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

Test Mode : 1TX 11n40 CH09 MCS0
Voltage : From POE(POE AC 120V/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	-2.99	91.07	88.08	200.00	-111.92	Average	376	217	P
2	2452.00	-2.99	102.12	99.13	200.00	-100.87	Peak	376	217	P
3	2483.50	-2.92	52.94	50.02	54.00	-3.98	Average	376	217	P
4	2483.50	-2.92	67.54	64.62	74.00	-9.38	Peak	376	217	P
5	4904.00	5.20	30.81	36.01	54.00	-17.99	Average	100	274	P
6	4904.00	5.20	45.77	50.97	74.00	-23.03	Peak	100	274	P

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

6.7 Restricted Bands of Operation

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

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

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

7. Test of Conducted Spurious Emission

7.1 Test Limit

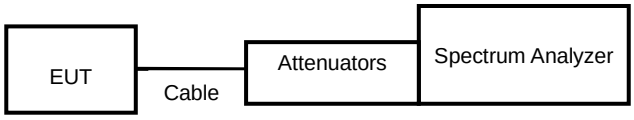
According to the methods defined in ANSI C63.10-2013 Section 11.11.1
Below –20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

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

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

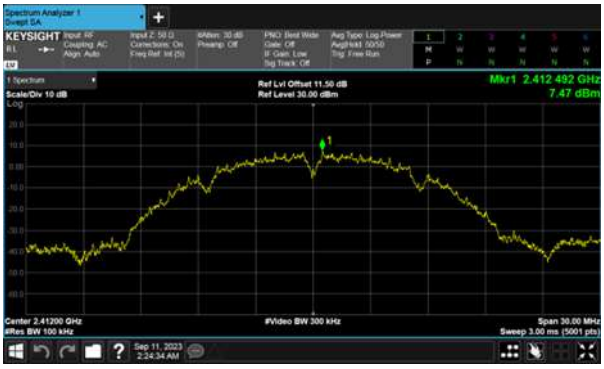
7.3 Test Setup Layout



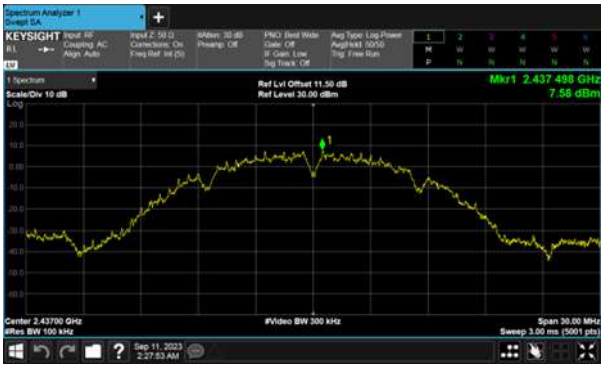
7.4 Test Result and Data

Note: Test plots refers to the following pages.

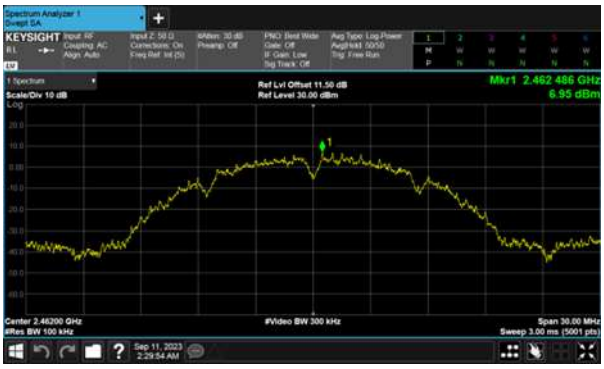
Modulation Type: 802.11b CH01



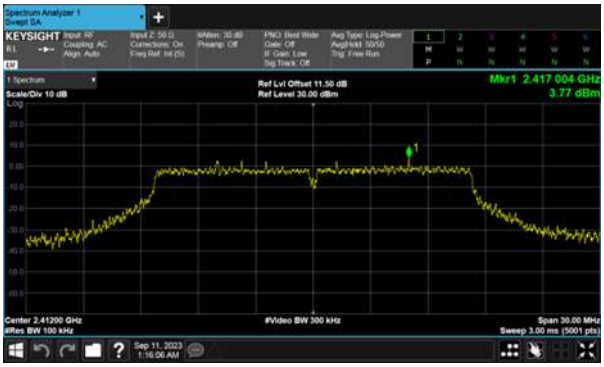
Modulation Type: 802.11b CH06



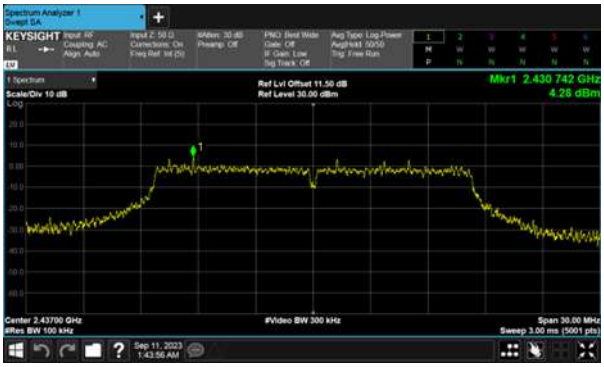
Modulation Type: 802.11b CH11
Non-Beamforming, ANT A

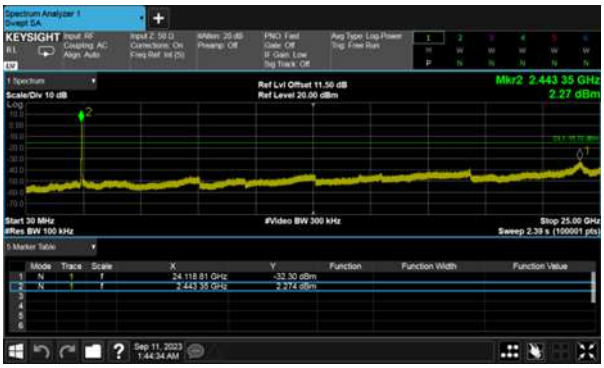


Modulation Type: 802.11g CH01

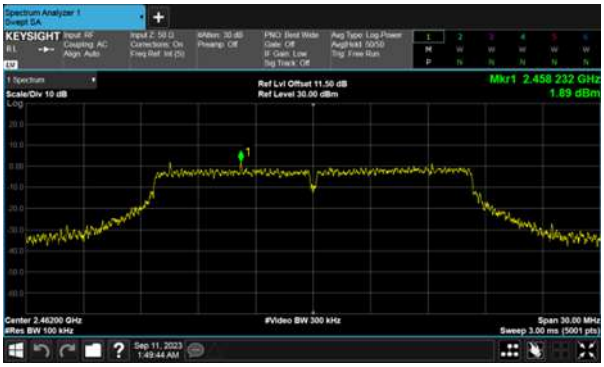


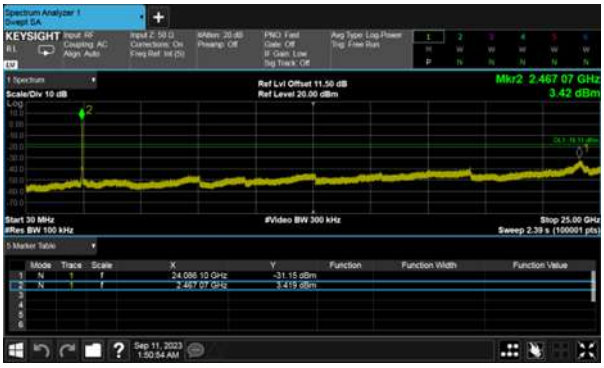
Modulation Type: 802.11g CH06



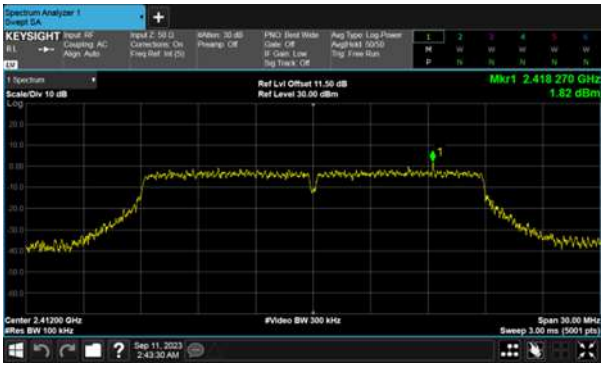


Modulation Type: 802.11g CH11

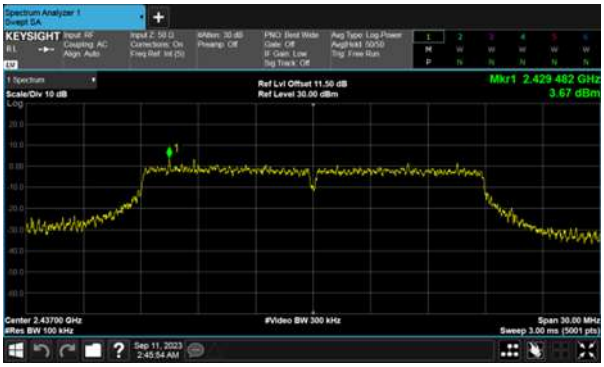


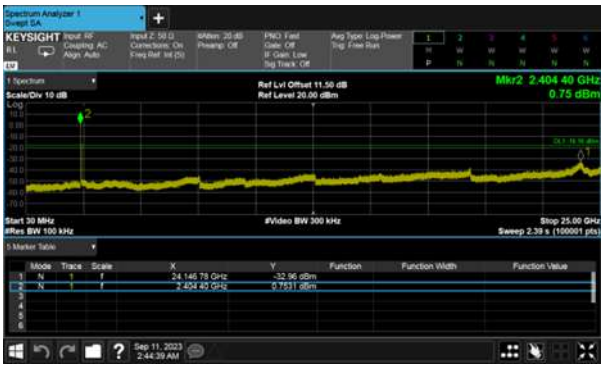


Modulation Type: 802.11n HT20 CH01

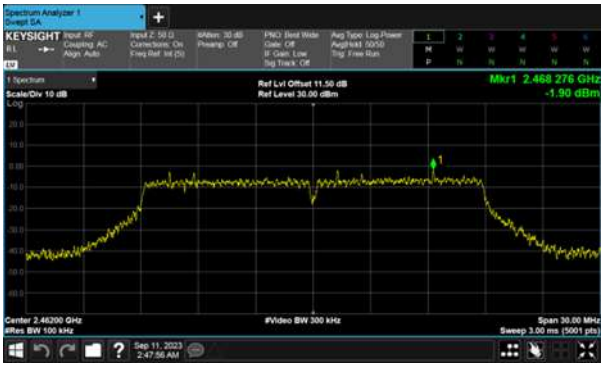


Modulation Type: 802.11n HT20 CH06

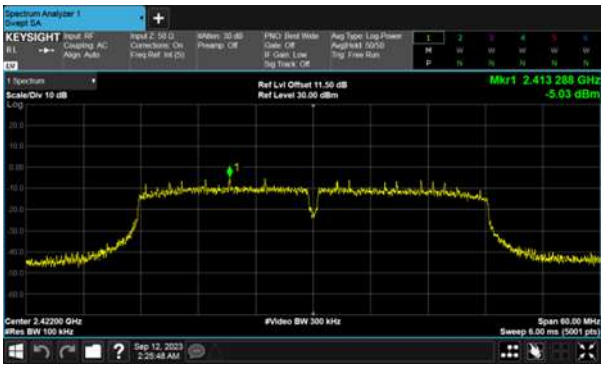




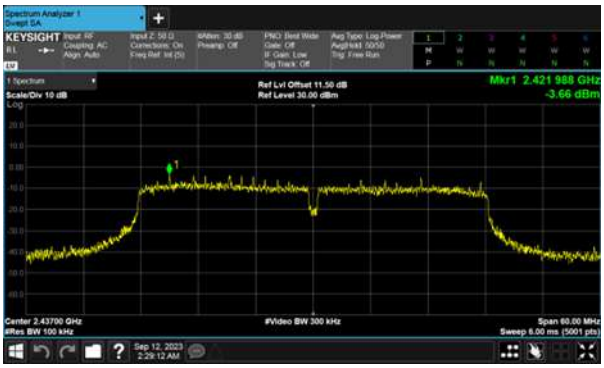
Modulation Type: 802.11n HT20 CH11



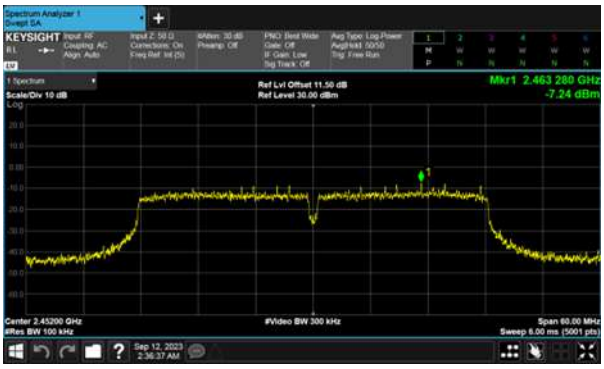
Modulation Type: 802.11n HT40 CH03

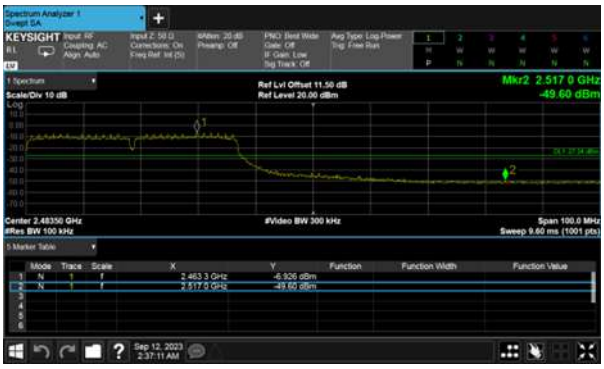


Modulation Type: 802.11n HT40 CH06



Modulation Type: 802.11n HT40 CH09





8. On Time, Duty Cycle and Measurement methods

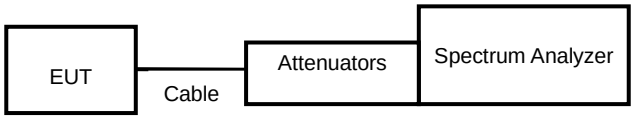
8.1 Test Limit

None; for reporting purposes only.

8.2 Test Procedure

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

8.3 Test Setup Layout



8.4 Test Result and Data

Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b,1M	50.00	50.00	100.00%
11g,6M	1.36	1.37	99.71%
11n HT20	1.28	1.28	99.61%
11n HT40	0.50	0.50	99.92%

Modulation Type: 802.11b(1Mbps)

Modulation Type: 802.11n HT40(13.5Mbps)

Modulation Type: 802.11g(6Mbps)

Modulation Type: 802.11n HT20(6.5Mbps)

9. 6dB Bandwidth Measurement Data

9.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

9.2 Test Procedures

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

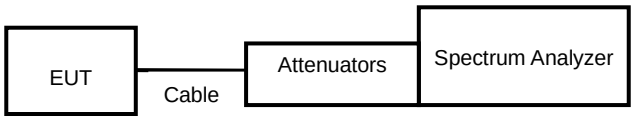
a. The transmitter output was connected to the spectrum analyzer.

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 B	
11b	1	2412	8.59	0.5
	6	2437	8.58	0.5
	11	2462	8.10	0.5
11g	1	2412	16.39	0.5
	6	2437	16.38	0.5
	11	2462	16.39	0.5
11n HT20	1	2412	17.60	0.5
	6	2437	17.58	0.5
	11	2462	17.37	0.5
11n HT40	3	2422	35.14	0.5
	6	2437	35.45	0.5
	9	2452	35.45	0.5

Modulation Type: 802.11b
CH01

Modulation Type: 802.11g
CH01

CH06

CH06

CH11

CH11

Modulation Type: 802.11n HT20
CH01

Modulation Type: 802.11n HT40
CH03

CH06

CH06

CH1

CH09

10. Maximum Peak and Average Output Power

10.1 Test Limit

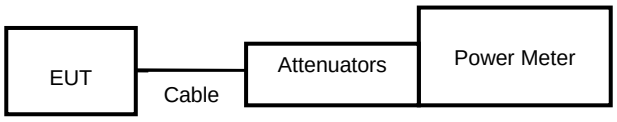
The Maximum Peak Output Power Measurement is 30dBm.
If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.2 Test Procedures

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

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

10.3 Test Setup Layout



10.4 Test Result and Data

Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(peak) output power (dBm)	Total PK power (dBm)	Total PK power (mW)	Powe Limit (dBm)
				ANT B			
18	11b	1	2412	19.40	19.40	87.096	30.00
18		6	2437	19.55	19.55	90.157	30.00
17		11	2462	18.08	18.08	64.269	30.00
18	11g	1	2412	22.39	22.39	173.380	30.00
18		6	2437	22.30	22.30	169.824	30.00
17.5		11	2462	21.68	21.68	147.231	30.00
16.5	11n HT20	1	2412	21.45	21.45	139.637	30.00
18		6	2437	22.30	22.30	169.824	30.00
12.5		11	2462	17.40	17.40	54.954	30.00
12	11n HT40	3	2422	16.45	16.45	44.157	30.00
12		6	2437	17.60	17.60	57.544	30.00
9		9	2452	14.68	14.68	29.376	30.00

Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)	Total AV power (dBm)	Total AV power (mW)	Powe Limit (dBm)
				ANT B			
18	11b	1	2412	16.85	16.85	48.417	NA
18		6	2437	16.94	16.94	49.431	NA
17		11	2462	15.47	15.47	35.237	NA
18	11g	1	2412	14.96	14.96	31.333	NA
18		6	2437	15.04	15.04	31.915	NA
17.5		11	2462	13.67	13.67	23.281	NA
16.5	11n HT20	1	2412	13.46	13.46	22.182	NA
18		6	2437	15.09	15.09	32.285	NA
12.5		11	2462	8.95	8.95	7.852	NA
12	11n HT40	3	2422	8.31	8.31	6.776	NA
12		6	2437	9.57	9.57	9.057	NA
9		9	2452	6.69	6.69	4.667	NA

Note: Average power is for reference only.

11. Power Spectral Density

11.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

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

11.2 Test Procedures

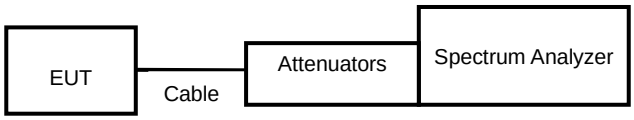
According to the methods defined in ANSI C63.10-2013 Section 11.10

a. The transmitter output was connected to spectrum analyzer.

b. The spectrum analyzer's resolution bandwidth were set at 3kHz RBW and 10KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.

c. The power spectral density was measured and recorded.

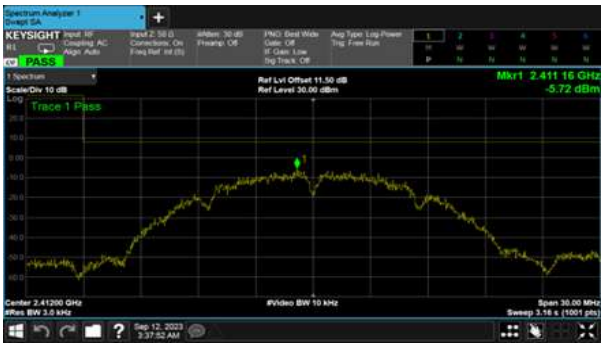
11.3 Test Setup Layout



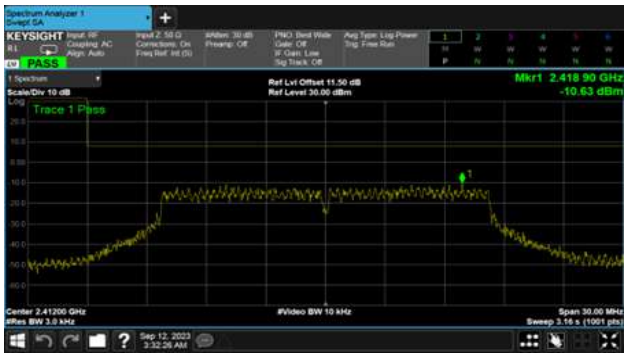
11.4 Test Result and Data

Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)	Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT B				
11b	1	2412	-5.72	-5.72	0.00	-5.72	8.00
	6	2437	-5.77	-5.77	0.00	-5.77	8.00
	11	2462	-6.96	-6.96	0.00	-6.96	8.00
11g	1	2412	-10.63	-10.63	0.00	-10.63	8.00
	6	2437	-10.65	-10.65	0.00	-10.65	8.00
	11	2462	-11.43	-11.43	0.00	-11.43	8.00
11n HT20	1	2412	-12.21	-12.21	0.00	-12.21	8.00
	6	2437	-10.76	-10.76	0.00	-10.76	8.00
	11	2462	-16.48	-16.48	0.00	-16.48	8.00
11n HT40	3	2422	-14.252	-14.25	0.00	-14.25	8.00
	6	2437	-12.508	-12.51	0.00	-12.51	8.00
	9	2452	-16.52	-16.52	0.00	-16.52	8.00

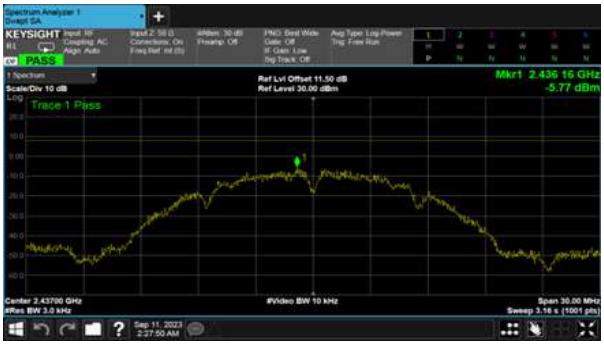
Modulation Type: 802.11b
CH01



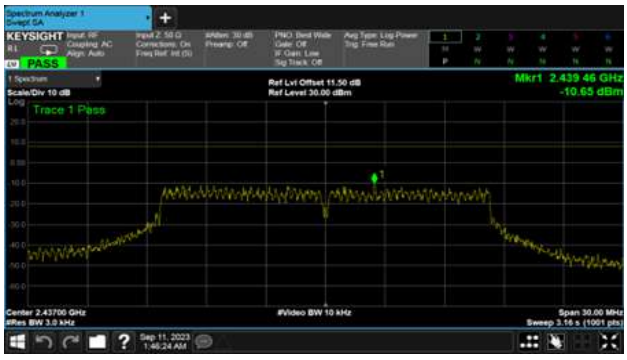
Modulation Type: 802.11g
CH01



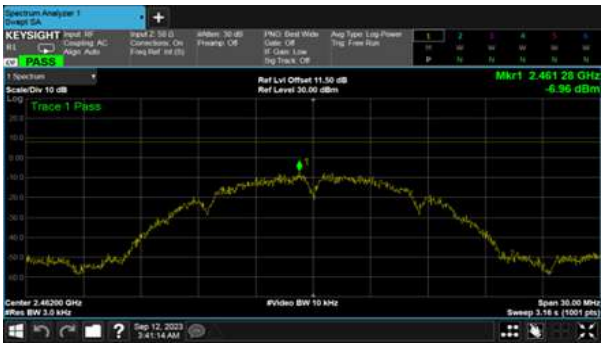
CH06



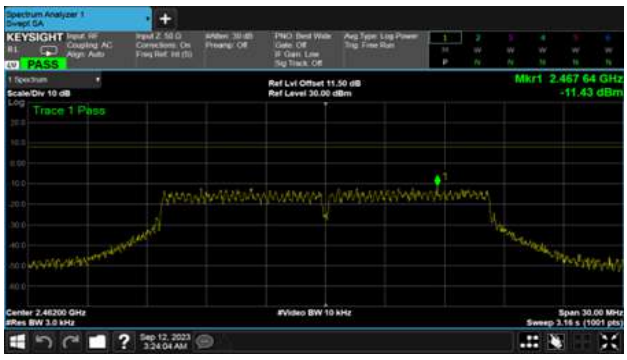
CH06



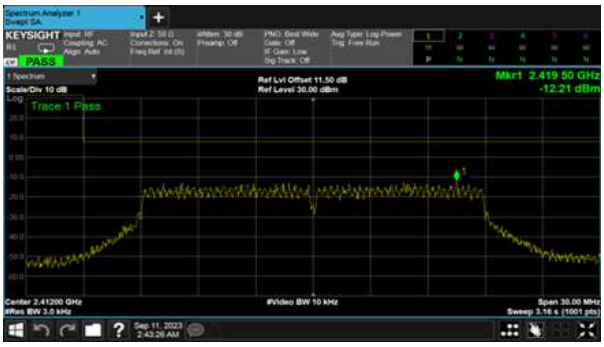
CH11



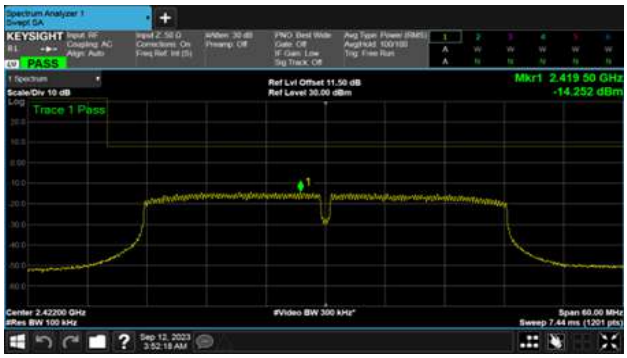
CH11



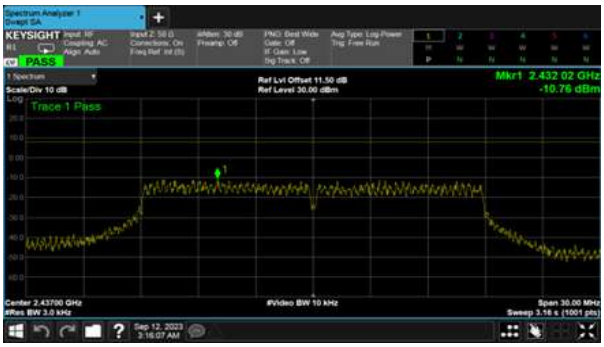
Modulation Type: 802.11n HT20
CH01



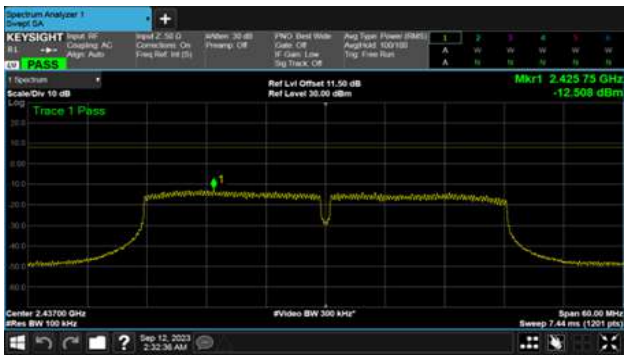
Modulation Type: 802.11n HT40
CH03



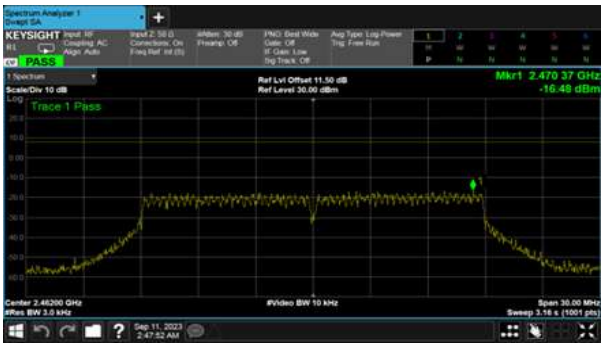
CH06



CH06



CH11



CH09