



FCC RADIO TEST REPORT

Applicant : LT Security Inc

Address : 17333 Freedom Way, City of
Industry, California, United States, 91748

Equipment : WIFI doorbell

Model No. : LXDB4I-WIFI

Trade Name : N/A

FCC ID : 2A2TG-LXDB4I

I HEREBY CERTIFY THAT :

The sample was received on Dec. 25, 2025 and the testing was completed on Jan. 15, 2026 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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History of this test report

Report No.	Issued Date	Description
25120476-TRDFCC02	Jan. 16, 2026	Original



1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024

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

*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

Equipment	WIFI doorbell
Model Name	LXDB4I-WIFI
Model Discrepancy	N/A
Frequency Range	BLE/ WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5250MHz, 5250MHz-5350MHz, 5470MHz -5725MHz, 5725MHz -5850MHz
Modulation Type	BLE: GFSK 2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 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
Data Rate	BLE: GFSK: 1Mbps, 2Mbps, 125kbps, 500kbps WIFI 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0-MCS7, HT20 802.11ax: MCS0-MCS11, HE20 WIFI 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0-MCS7, HT20/HT40 802.11ac: MCS0-MCS9, VHT20/40 802.11ax: MCS0-MCS11, HE20/HE40
Working Temperature	-25°C to 55°C
EUT Power Rating:	10-24 VDC/14-24 VAC, 1.0 A; 5V/DC 2A

Note:

1. EUT support Client mode without radar detection.
2. The EUT not support TPC
3. 802.11ax only support full RU.
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 HT 20, 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	---	---

Note: Channels remarked * are selected to perform test.



2.3 Test Mode and Test Software

- During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
- The complete test system included support units and EUT for RF test.
- An executive program, "SecureCRT.exe (Ver.: 6.2.3.313)" under WIN10 system was executed to transmit and receive data via Wireless.
- 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) for 120V
2	802.11g (6Mbps) for 120V
3	802.11n HT20 (6.5Mbps) for 120V
4	802.11ax HE20 (7.3Mbps) for 120V
5	802.11ax HE20 (7.3Mbps) for 240V
caused "Test Mode 4 at CH06:2437" generated the worst case, it was reported as the final data.	
Radiated emission (Below 1GHz)	
Test Mode	Operating Description
1	802.11b (1Mbps)
2	802.11g (6Mbps)
3	802.11n HT20 (6.5Mbps)
4	802.11ax HE20 (7.3Mbps)
caused "Test Mode 4 at CH06:2437" generated the worst case, it was reported as the final data.	
Radiated emission (1GHz ~ 25GHz)	
1	802.11b (1Mbps)
2	802.11g (6Mbps)
3	802.11n HT20 (6.5Mbps)
4	802.11ax HE20 (7.3Mbps)
caused "Test Mode 1~2,4" generated the worst case, it was reported as the final data.	

Modulation Type	TX CONFIGURATION
802.11b	1TX
802.11g	1TX
802.11n HT20	1TX
802.11ax HE20	1TX
* 802.11ax covers 802.11n, due to same modulation. 802.11ax mode is the worst case for final tests except RF output power test after pretesting all modulation type.	

**2.4 Description of Test System**

AC Power Line Conducted Emission					
Equipment	Brand	Model	Serial No	Length/Type	Power cord/Length/Type
Notebook	AUAS	P2430U	GBNXC13 M064467	N/A	Adapter / 1.8m / NS
testfixture	YD-TECH	MCS-73 LV	N/A	N/A	N/A
Adapter	Datong	PWC-48028	24120544	N/A	N/A
Type C To C(white)	kolin	KEX-DLCP52	N/A	1M/NS	N/A
Radiated Emissions (Below 1G) / Radiated Emissions (Above 1G) / RF Conducted					
Notebook	AUAS	P2430U	GBNXC13 M064467	N/A	Adapter / 1.8m / NS
testfixture	YD-TECH	MCS-73 LV	N/A	N/A	N/A
USB Cable (A to B)	BENEVO	BUSB0301AMFB	N/A	0.8m / NS	N/A
Adapter	Datong	PWC-48028	24120544	N/A	N/A
Type C To C(white)	kolin	KEX-DLCP52	N/A	1M/NS	N/A



2.5 General Information of Test

Organization	Cerpass Technology Corp.		
☒ 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 9 kHz 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	2026/01/13~2026/01/15	24.8~25°C / 48~53%	Leon Huang
Radiated Emissions	3M03-NK	2026/01/06~2026/01/15	17.4~20.4°C / 55~58%	Leon Huang
AC Power Line Conducted Emission	CON02-NK	2026/01/15	17.7°C / 57%	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(150kHz~30MHz)	±3.2dB
Radiated Spurious Emission(9kHz~30MHz)	±3.4dB
Radiated Spurious Emission(30MHz~1GHz)	±5.2dB
Radiated Spurious Emission(1GHz~25GHz)	±5.2dB
Conducted Spurious Emission	±2.1dB
6dB Bandwidth	±4.4%
20dB Bandwidth	±4.5%
Occupied Bandwidth	±4.4%
Peak Output Power(Conducted Power Meter)	±1.1dB
Dwell Time / Deactivation Time	±3.5%
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	A020514-1	2025/06/11	2026/06/10
Active Loop Antenna	EMCO	6507	00040855	2025/04/28	2026/04/27
Horn Antenna	EMCO	3116	31974	2025/10/07	2026/10/06
Horn Antenna	Schwarzbeck	BBHA 9120 D	2203	2025/03/07	2026/03/06
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	101329	2025/06/10	2026/06/09
EMI Receiver	ROHDE & SCHWARZ	ESR7	101906	2025/05/19	2026/05/18
Preamplifier	Agilent	8449B	3008A01954	2025/02/12	2026/02/11
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2025/10/13	2026/10/12
Preamplifier	EM Electronics corp.	EM330	60611	2025/03/28	2026/03/27
Cable-4m(9k-3G)	EMEC	RG-223	18274M	2025/07/02	2026/07/01
Cable-8m(10M-26.5G)	HUBER SUHNER	SF126E	587396/126E	2025/10/15	2026/10/14
Cable-3m(10M-26.5G)	HUBER SUHNER	SF126E	587399/126E	2025/10/15	2026/10/14
Cable-1m(10M-40G)	HUBER SUHNER	SF102	804619/2	2025/10/13	2026/10/12
Cable-1m(10M-40G)	HUBER SUHNER	SF102	804398/2	2025/10/13	2026/10/12
Cable-1m(1G-26.5G)	HUBER SUHNER	SF126E	589848/126E	2025/10/15	2026/10/14
Cable-4m(30M-1G)	HUBER SUHNER	RG-214	02953M	2025/07/11	2026/07/10
Cable-1m(30M-1G)	HUBER SUHNER	RG-214	05094M	2025/07/11	2026/07/10
Cable-9m(30M-1G)	HUBER SUHNER	RG-214	00402M	2025/07/11	2026/07/10
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA
High Pass Filter	Warison	WFIL-H3000-18000F-03	WR377WC2B1	2025/10/15	2026/10/14
Highpass Filter	WOKEN	WFIL-H7000-18000F-01	WR377WC2B2	2025/10/15	2026/10/14

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200207	2025/04/23	2026/04/22
Attenuator	KEYSIGHT	8491B	MY39250703	2025/02/12	2026/02/11
Power Meter	Anritsu	ML2495A	1224005	2025/02/12	2026/02/11
Power Sensor	Anritsu	MA2411B	1207295	2025/02/12	2026/02/11

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	ESR7	101906	2025/05/19	2026/05/18
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	1197	2025/02/26	2026/02/25
Two-Line V-Network	ROHDE & SCHWARZ	ENV216	101584	2025/02/26	2026/02/25
Cable-4m(9k-3G)	EMEC	RG-223	18274M	2025/07/02	2026/07/01
E3	AUDIX	v8.2014-8-6	RK-000536	NA	NA



4. Antenna Requirements

4.1 Antenna Construction and Directional Gain

Antenna Type	Built-in Antenna
Antenna Gain	3.50dBi



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 C63.10-2020+Cor.1-2023 and ANSI C63.10a-2024. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

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

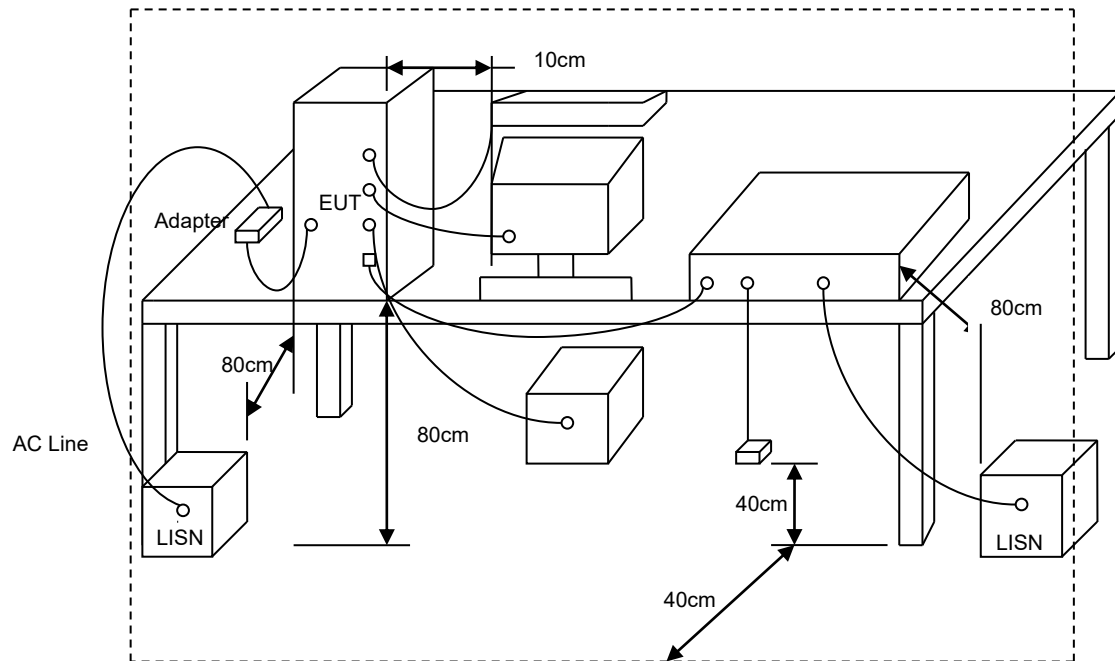
*Decreases with the logarithm of the frequency.

5.2 Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



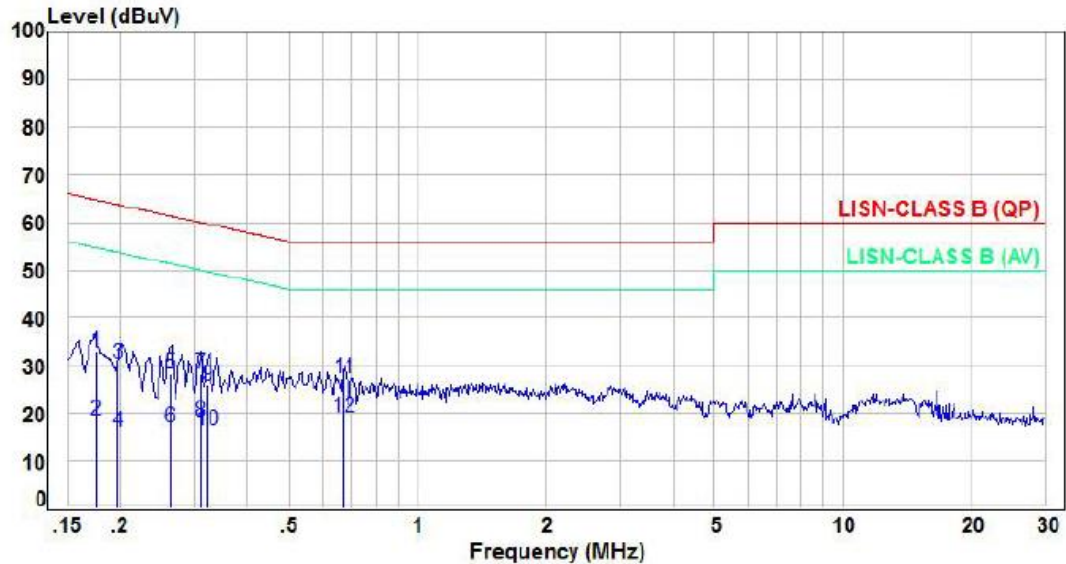
5.3 Typical Test Setup





5.4 Test Result and Data

Power	:	From Adapter (AC 120V/60Hz)	Pol/Phase	:	LINE
Test Mode	:	Mode 4		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1758	9.54	23.40	32.94	64.68	-31.74	QP	P
2	0.1758	9.54	8.93	18.47	54.68	-36.21	Average	P
3	0.1973	9.53	20.96	30.49	63.72	-33.23	QP	P
4	0.1973	9.53	6.63	16.16	53.72	-37.56	Average	P
5	0.2627	9.54	18.77	28.31	61.35	-33.04	QP	P
6	0.2627	9.54	7.61	17.15	51.35	-34.20	Average	P
7	0.3088	9.54	18.60	28.14	60.00	-31.86	QP	P
8	0.3088	9.54	8.73	18.27	50.00	-31.73	Average	P
9	0.3203	9.54	16.41	25.95	59.70	-33.75	QP	P
10	0.3203	9.54	7.01	16.55	49.70	-33.15	Average	P
11	0.6709	9.57	17.88	27.45	56.00	-28.55	QP	P
12	0.6709	9.57	9.47	19.04	46.00	-26.96	Average	P

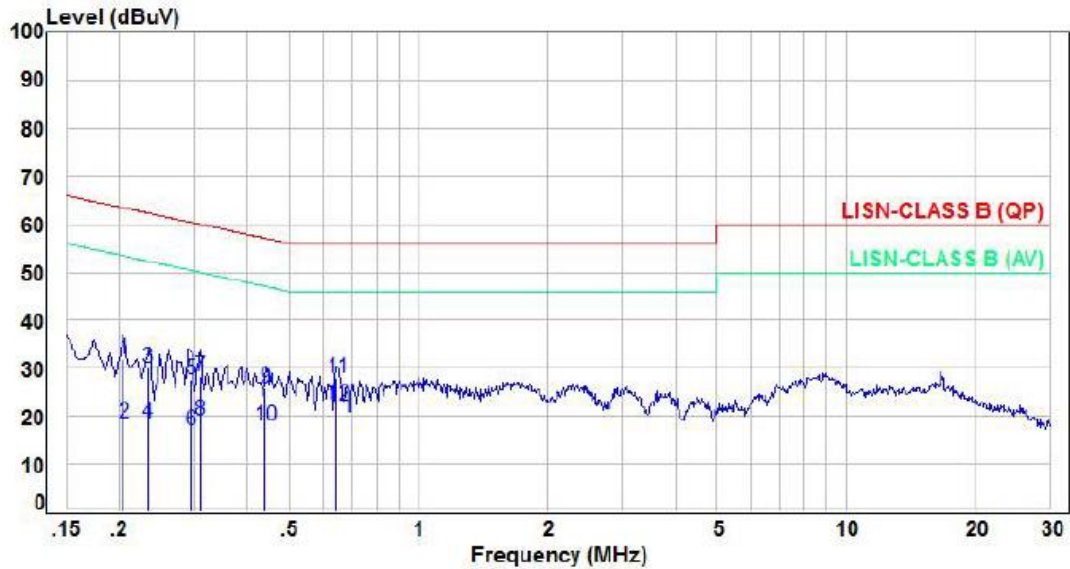
Note: Level=Reading+Factor

Margin=Level-Limit

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



Power	:	From Adapter (AC 120V/60Hz)	Pol/Phase	:	NEUTRAL
Test Mode	:	Mode 4		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2045	9.55	22.34	31.89	63.42	-31.53	QP	P
2	0.2045	9.55	9.04	18.59	53.42	-34.83	Average	P
3	0.2335	9.56	20.46	30.02	62.32	-32.30	QP	P
4	0.2335	9.56	8.99	18.55	52.32	-33.77	Average	P
5	0.2933	9.57	18.00	27.57	60.43	-32.86	QP	P
6	0.2933	9.57	7.57	17.14	50.43	-33.29	Average	P
7	0.3095	9.57	18.58	28.15	59.98	-31.83	QP	P
8	0.3095	9.57	9.55	19.12	49.98	-30.86	Average	P
9	0.4387	9.59	16.19	25.78	57.09	-31.31	QP	P
10	0.4387	9.59	8.31	17.90	47.09	-29.19	Average	P
11	0.6456	9.62	18.49	28.11	56.00	-27.89	QP	P
12	0.6456	9.62	12.44	22.06	46.00	-23.94	Average	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.

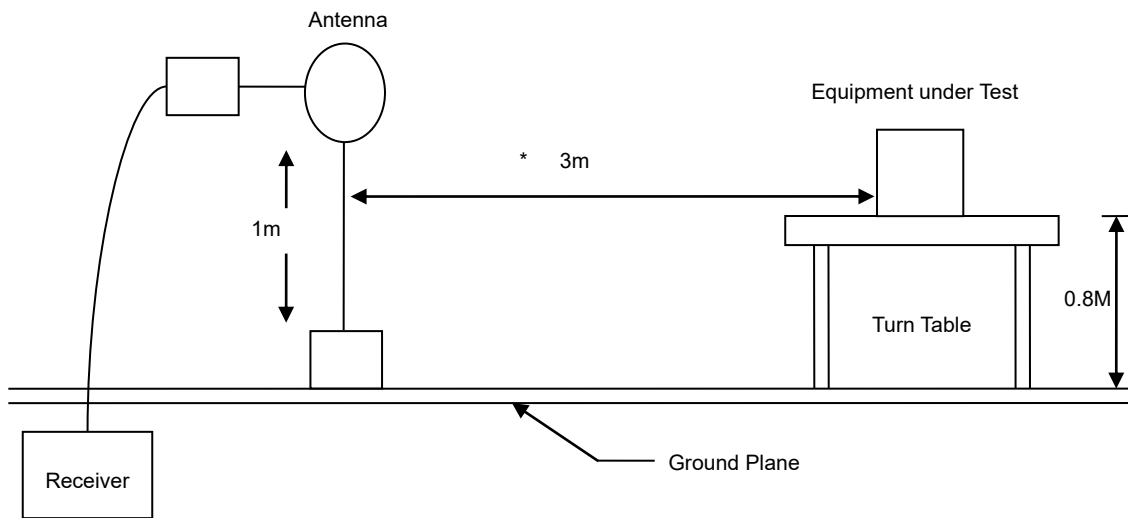
Note:

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

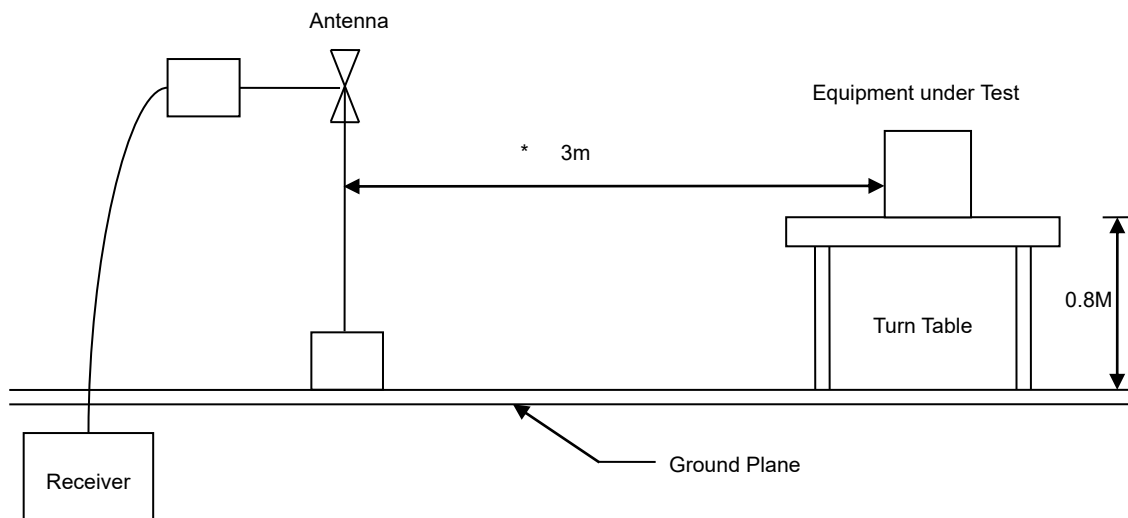


6.3 Typical Test Setup

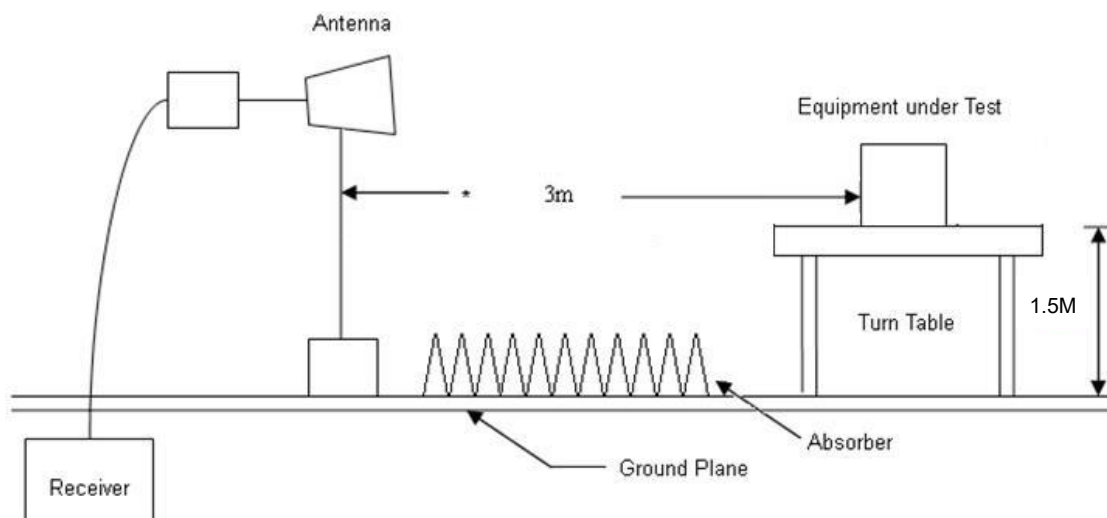
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



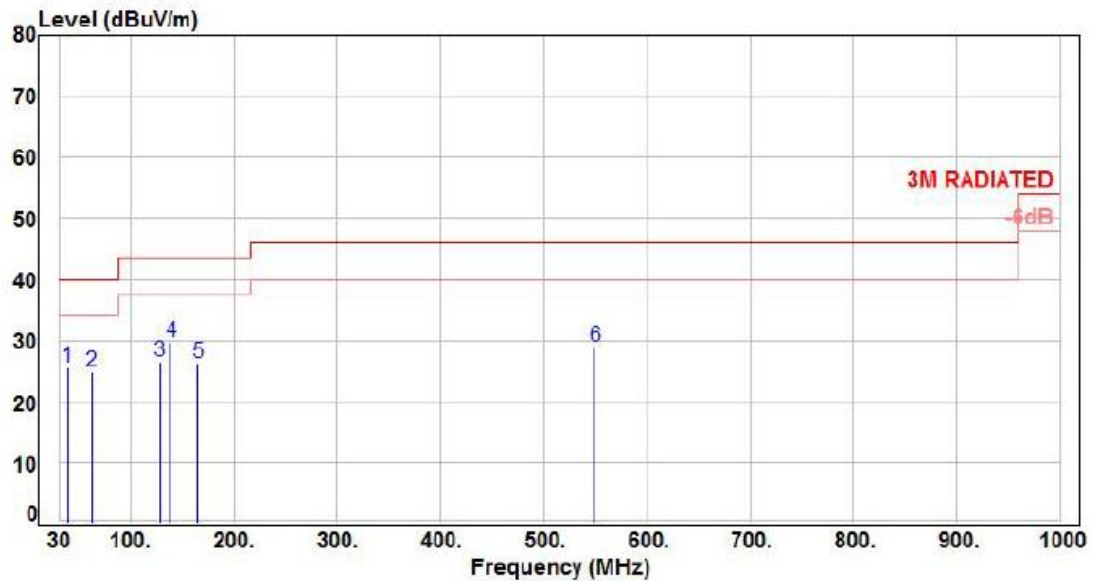


6.4 Test Result and Data (9KHz ~ 30MHz)

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

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

Power	:	From Adapter (AC 120V/60Hz)	Pol/Phase	:	VERTICAL
Test Mode	:	Mode 4		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	38.73	-8.81	34.28	25.47	40.00	-14.53	Peak	100	357	P
2	62.01	-15.14	39.91	24.77	40.00	-15.23	Peak	100	342	P
3	127.97	-8.47	34.96	26.49	43.50	-17.01	Peak	100	250	P
4	138.64	-8.73	38.50	29.77	43.50	-13.73	Peak	100	117	P
5	164.83	-10.43	36.74	26.31	43.50	-17.19	Peak	100	5	P
6	549.92	-2.64	31.57	28.93	46.00	-17.07	Peak	100	294	P

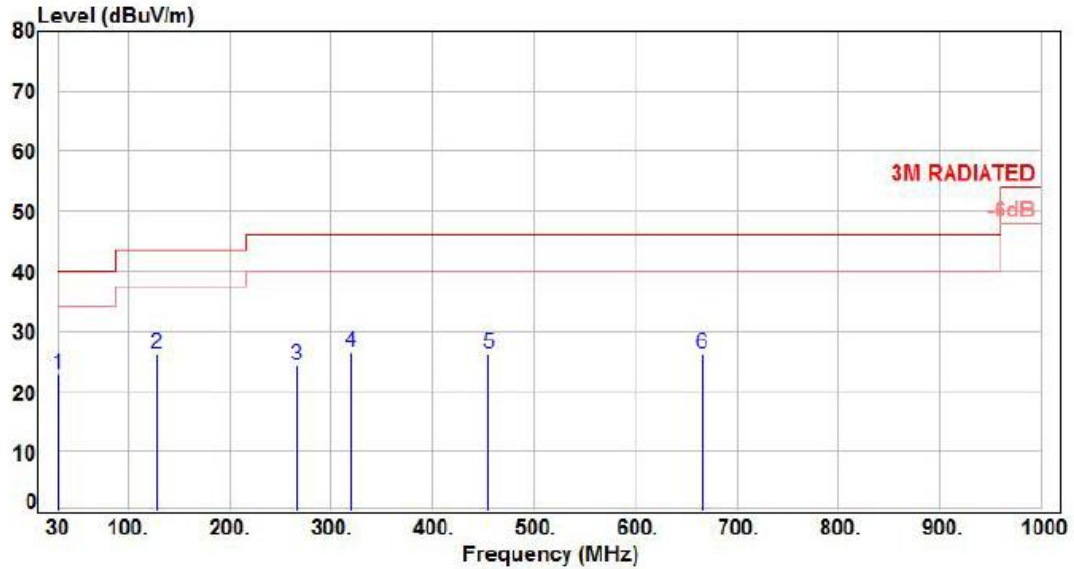
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	:	From Adapter (AC 120V/60Hz)	Pol/Phase	:	HORIZONTAL
Test Mode	:	Mode 4		:	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	30.00	-3.06	26.01	22.95	40.00	-17.05	Peak	100	4	P
2	127.97	-8.47	34.83	26.36	43.50	-17.14	Peak	100	360	P
3	265.71	-8.88	33.24	24.36	46.00	-21.64	Peak	100	18	P
4	319.06	-7.88	34.28	26.40	46.00	-19.60	Peak	100	299	P
5	454.86	-4.32	30.61	26.29	46.00	-19.71	Peak	100	252	P
6	665.35	-0.75	27.07	26.32	46.00	-19.68	Peak	100	270	P

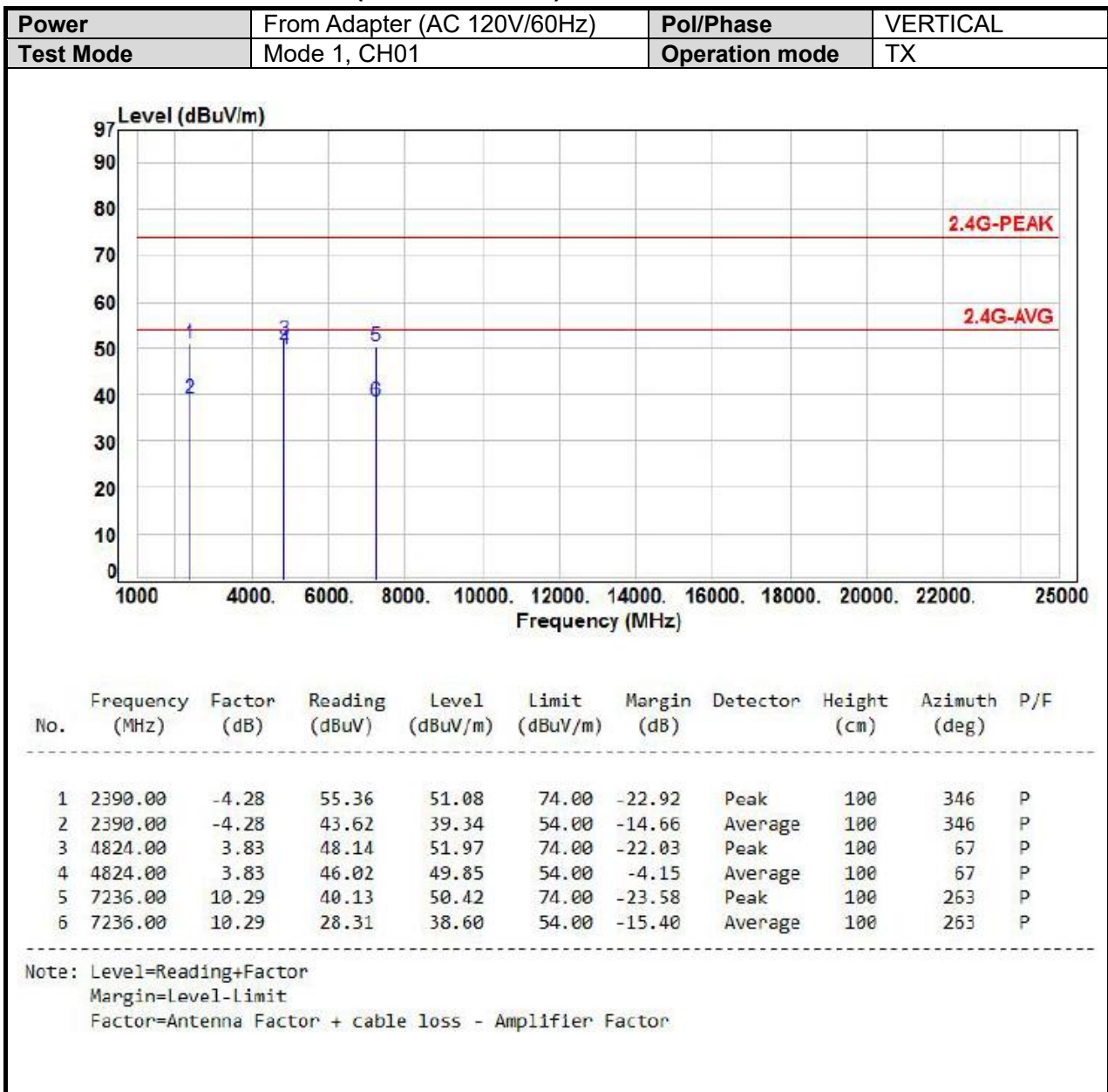
Note: Level=Reading+Factor

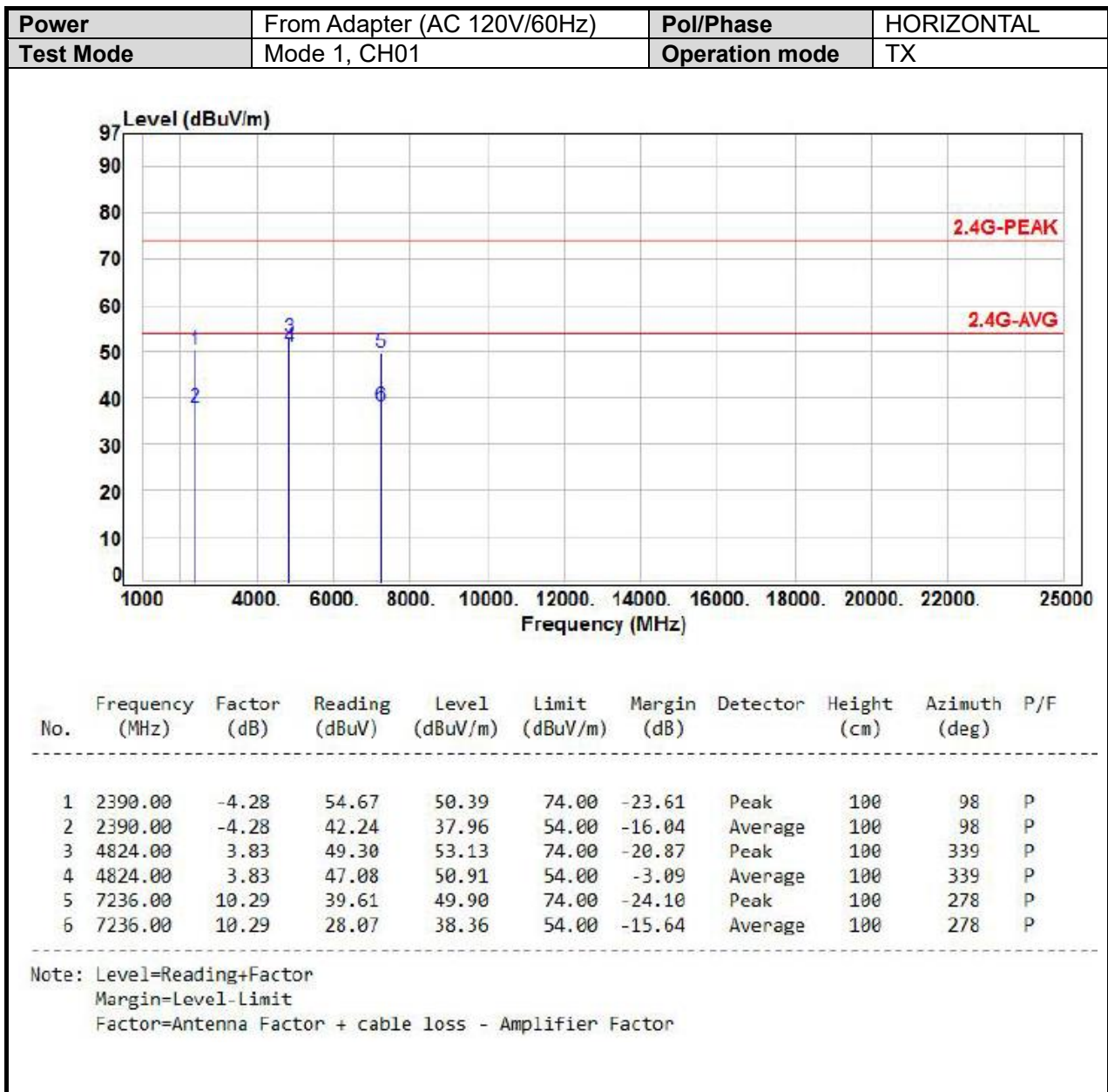
Margin=Level-Limit

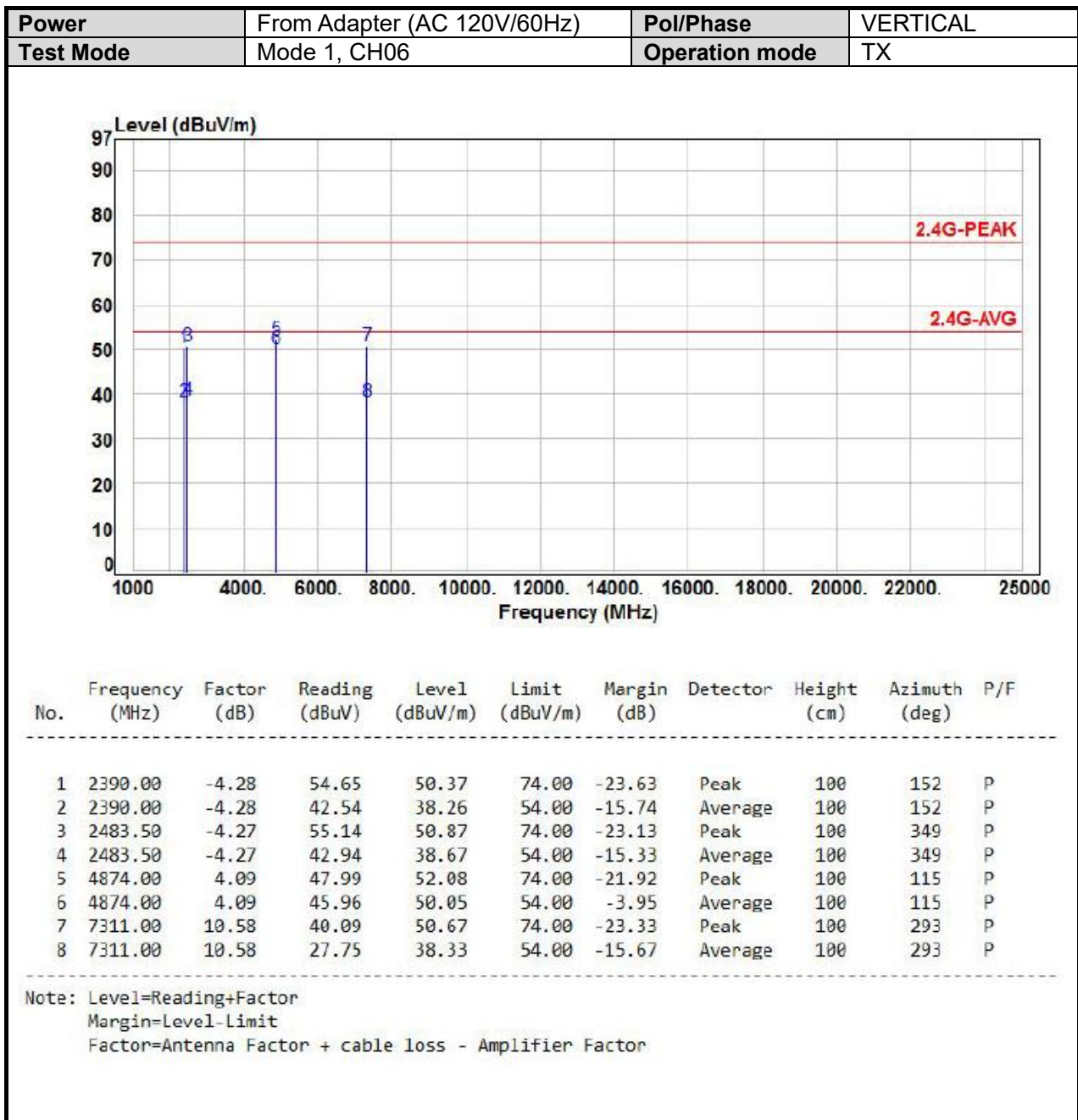
Factor=Antenna Factor + cable loss - Amplifier Factor

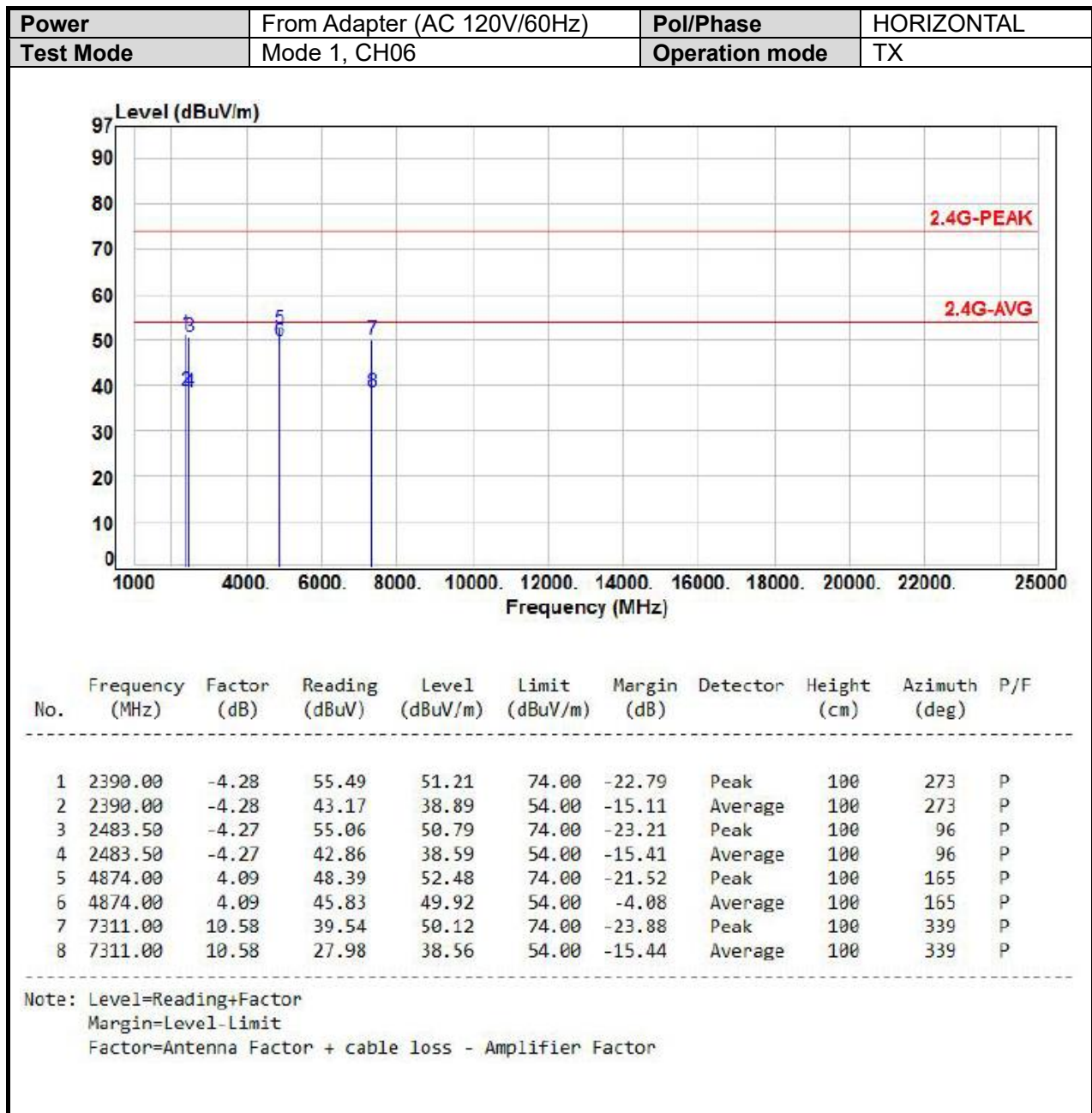


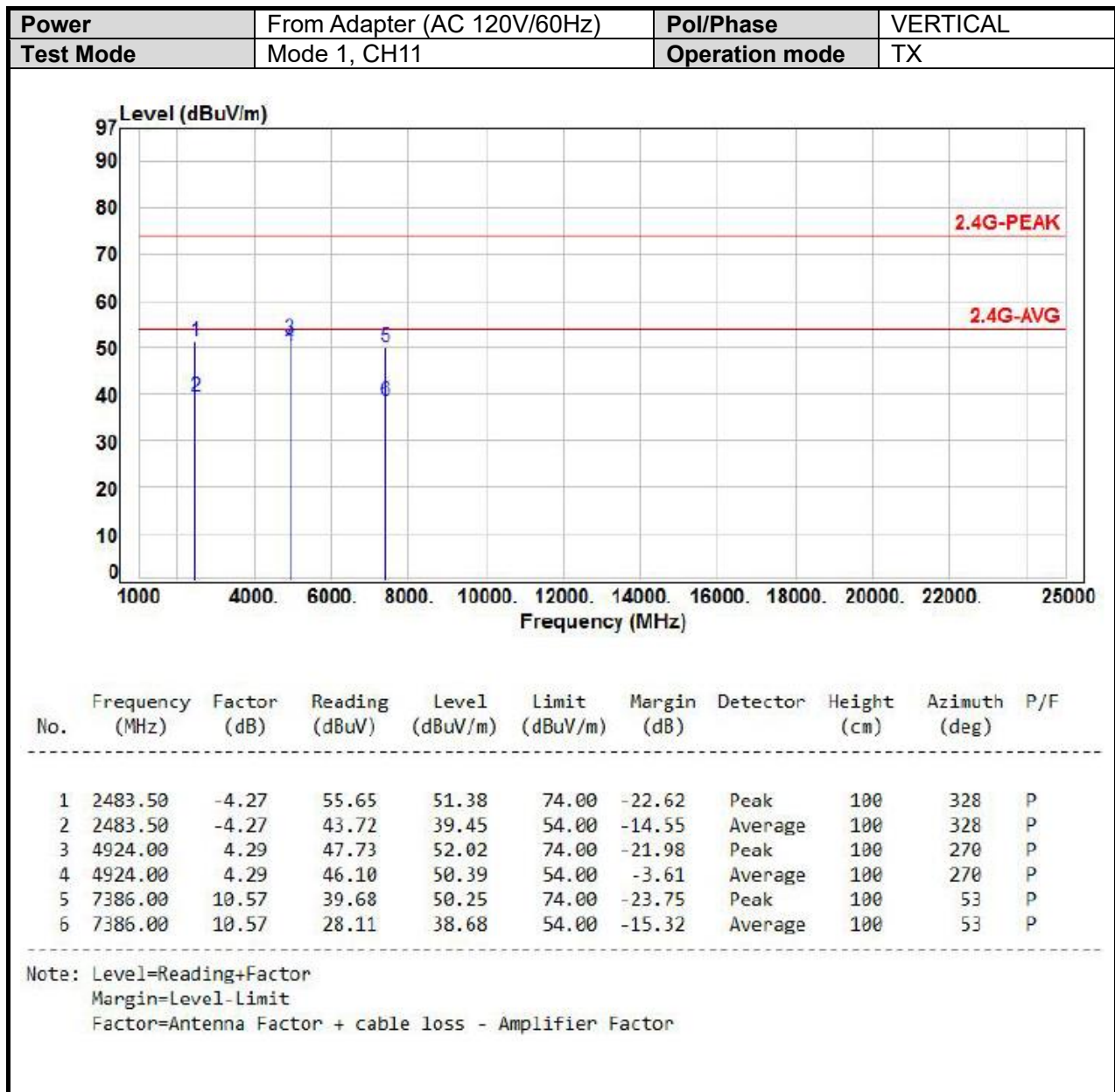
6.6 Test Result and Data (1GHz ~ 25GHz)

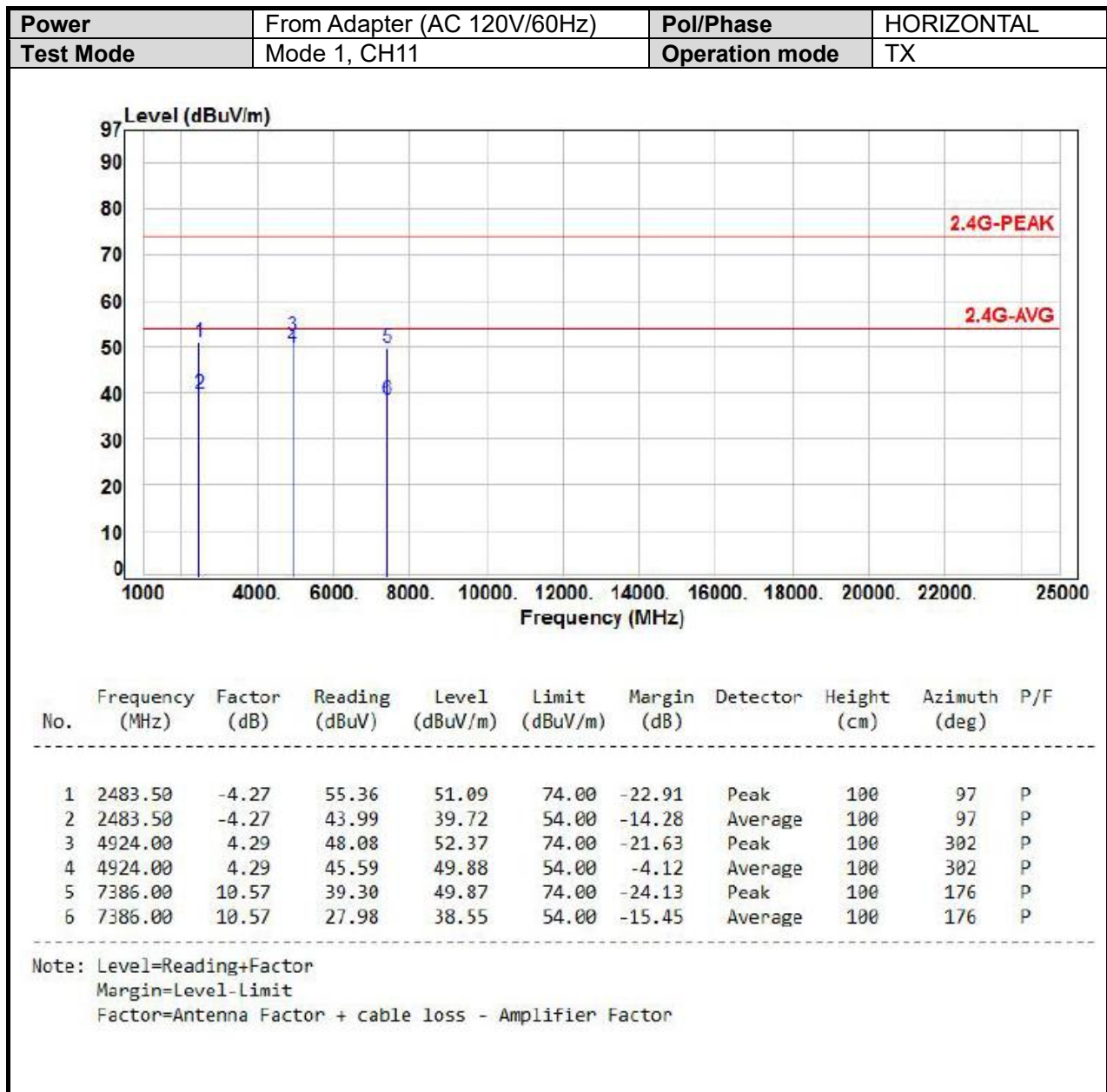


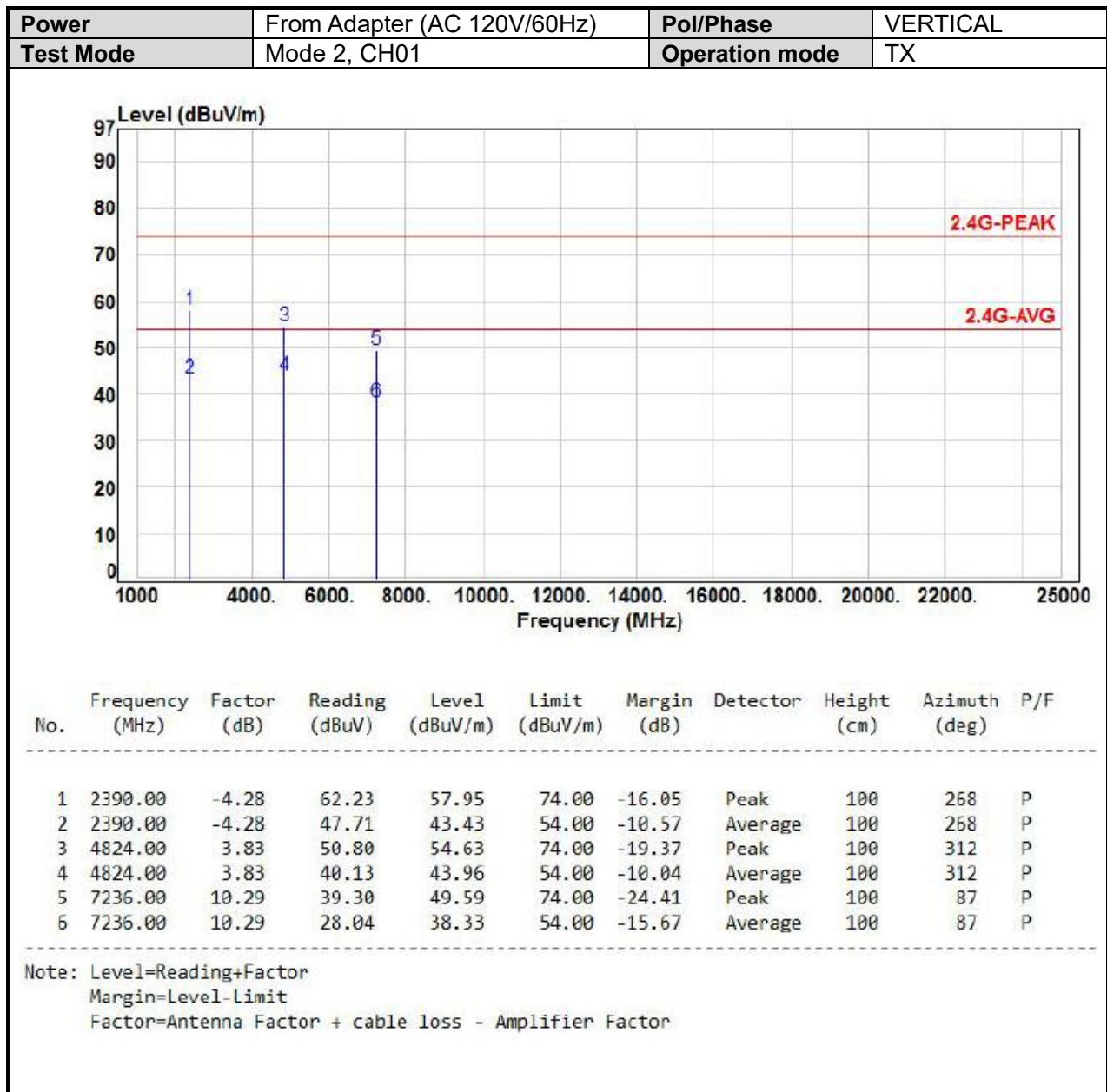


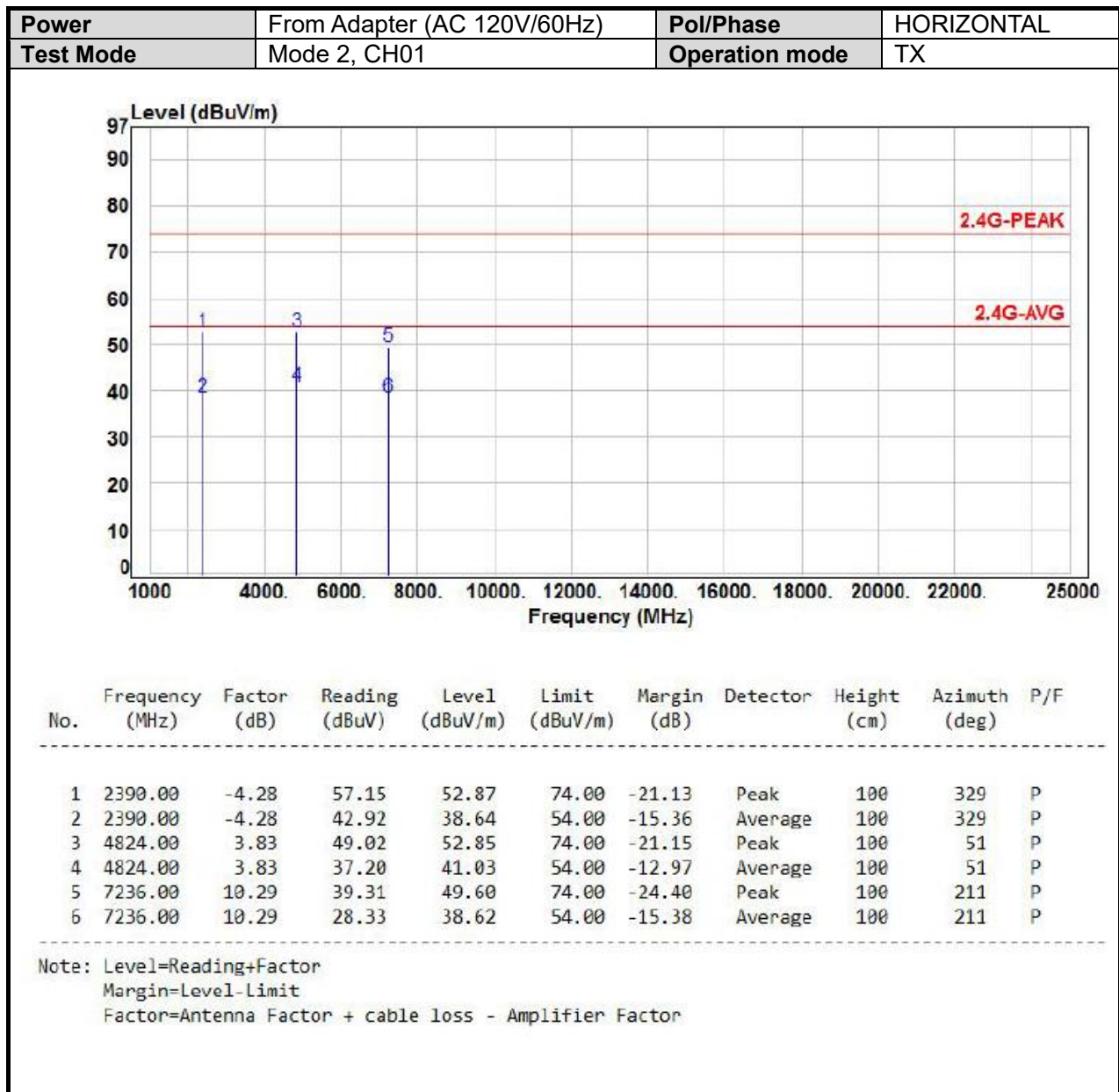


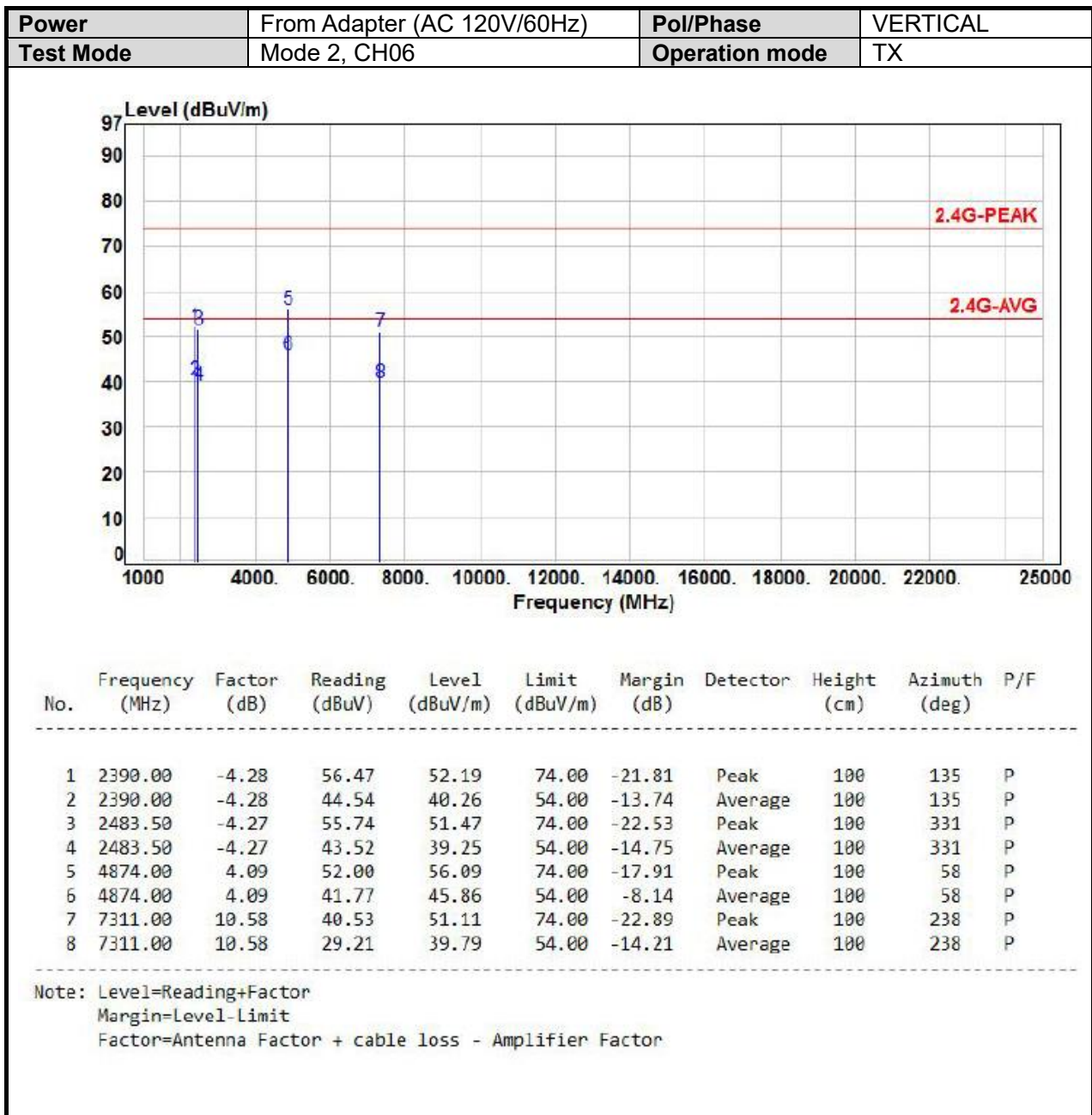


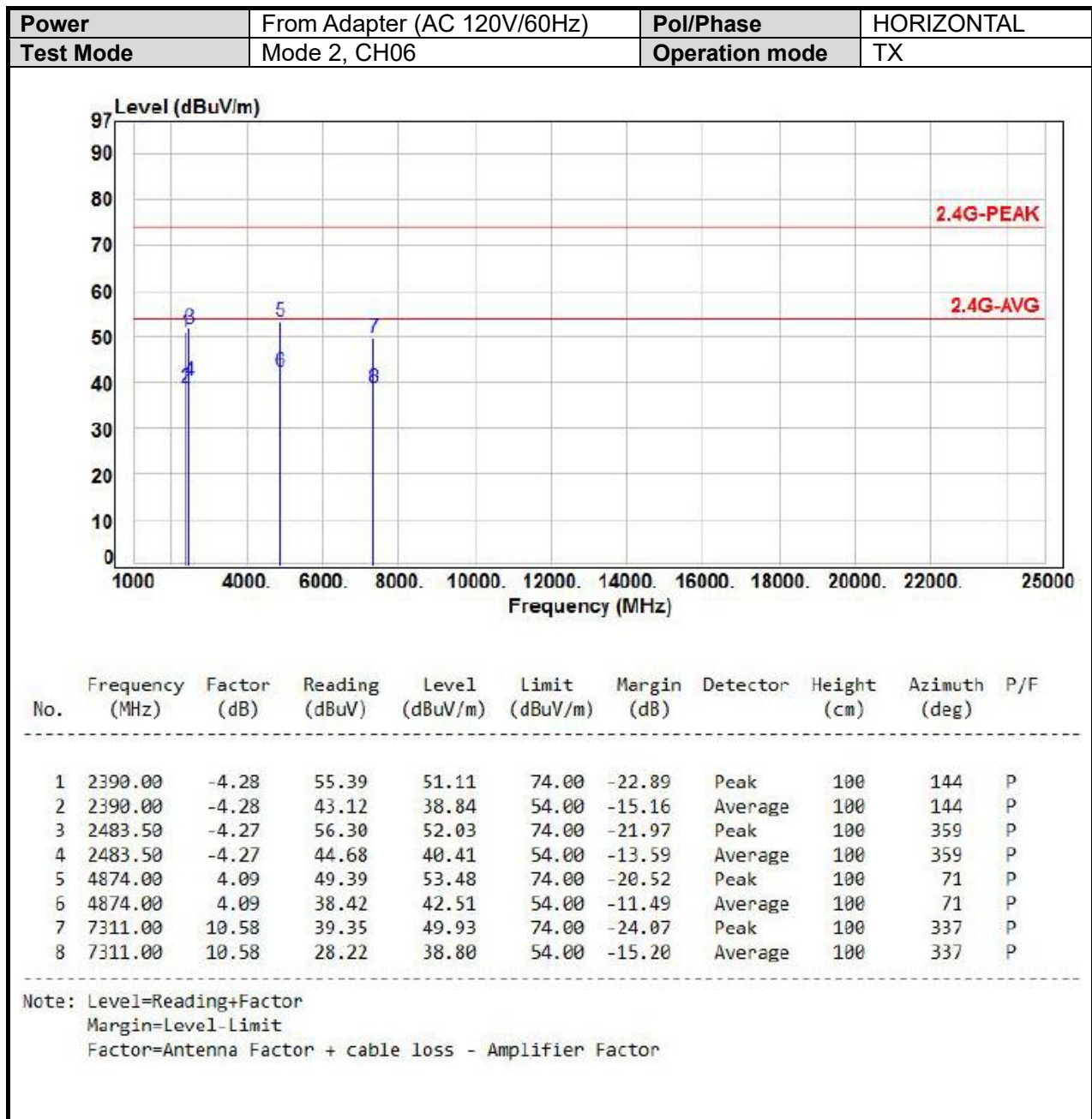


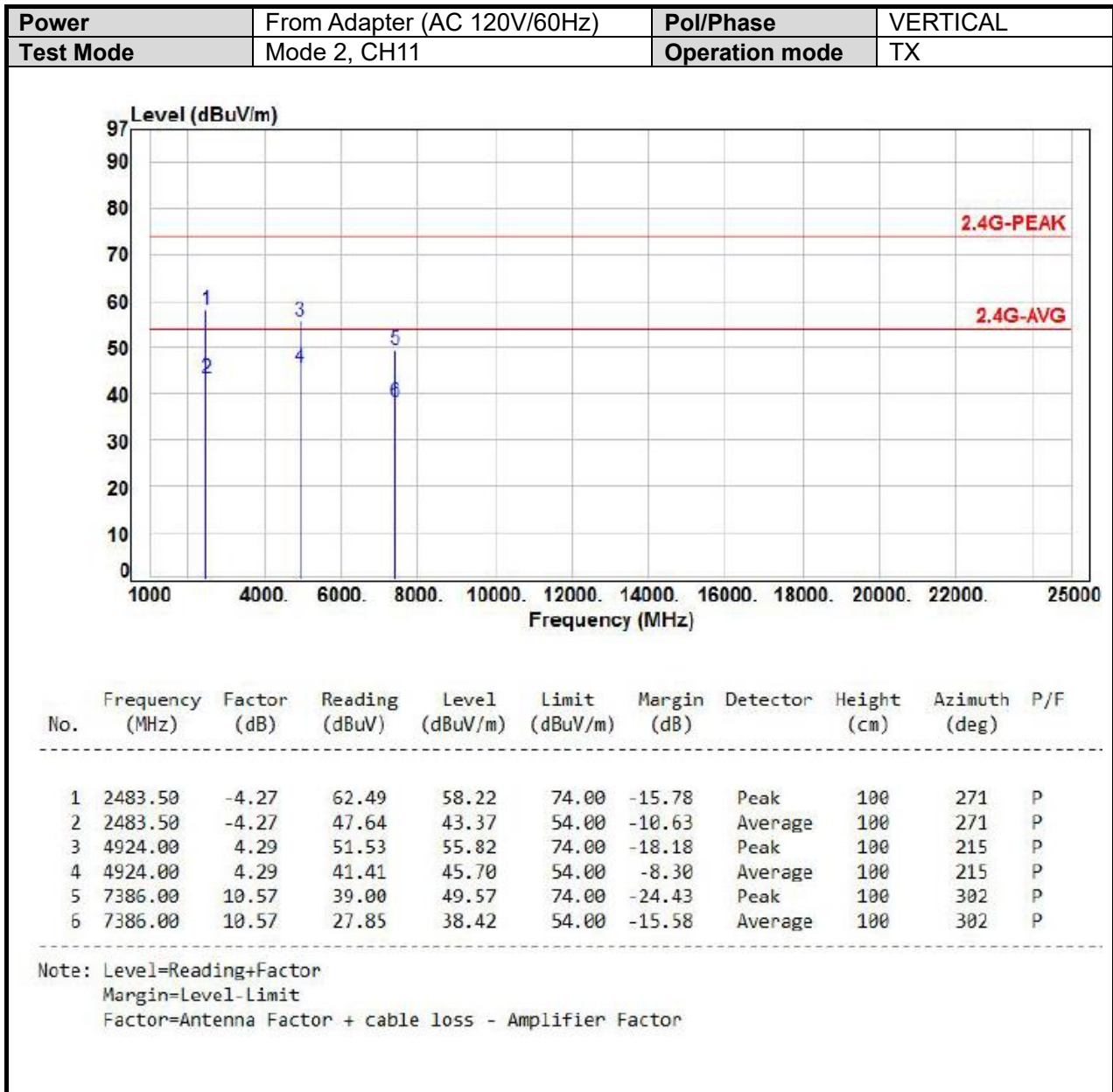


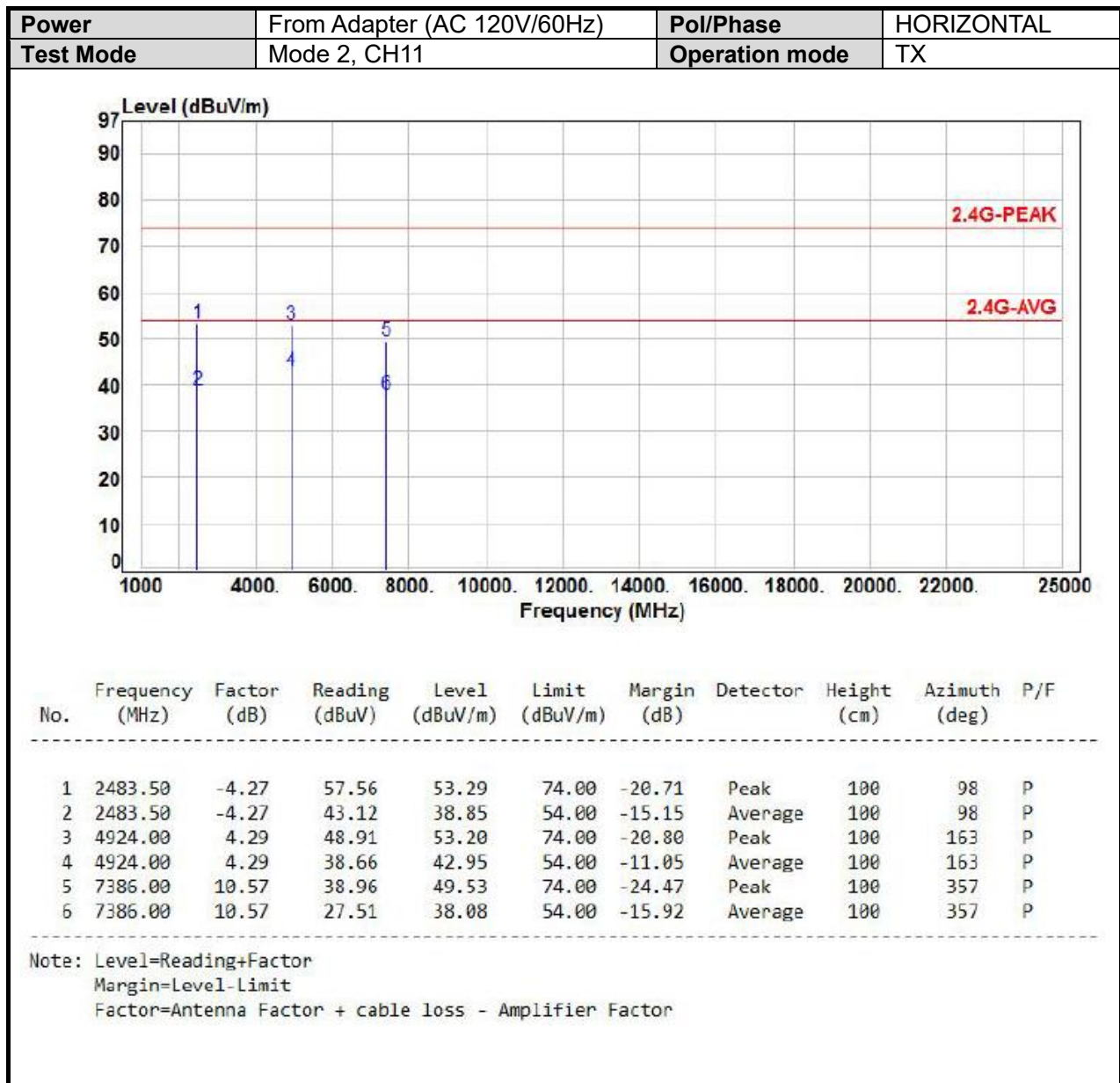


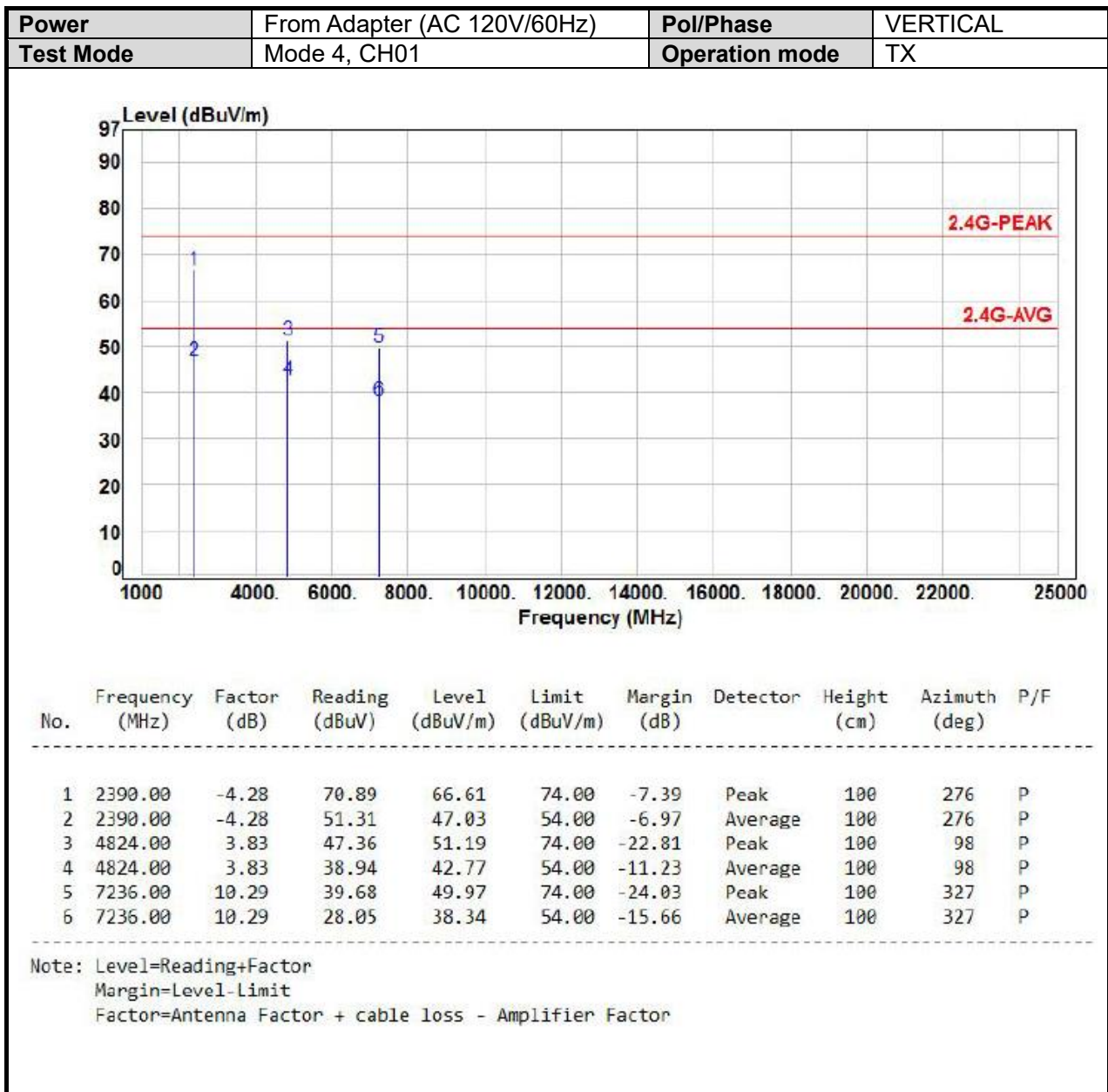


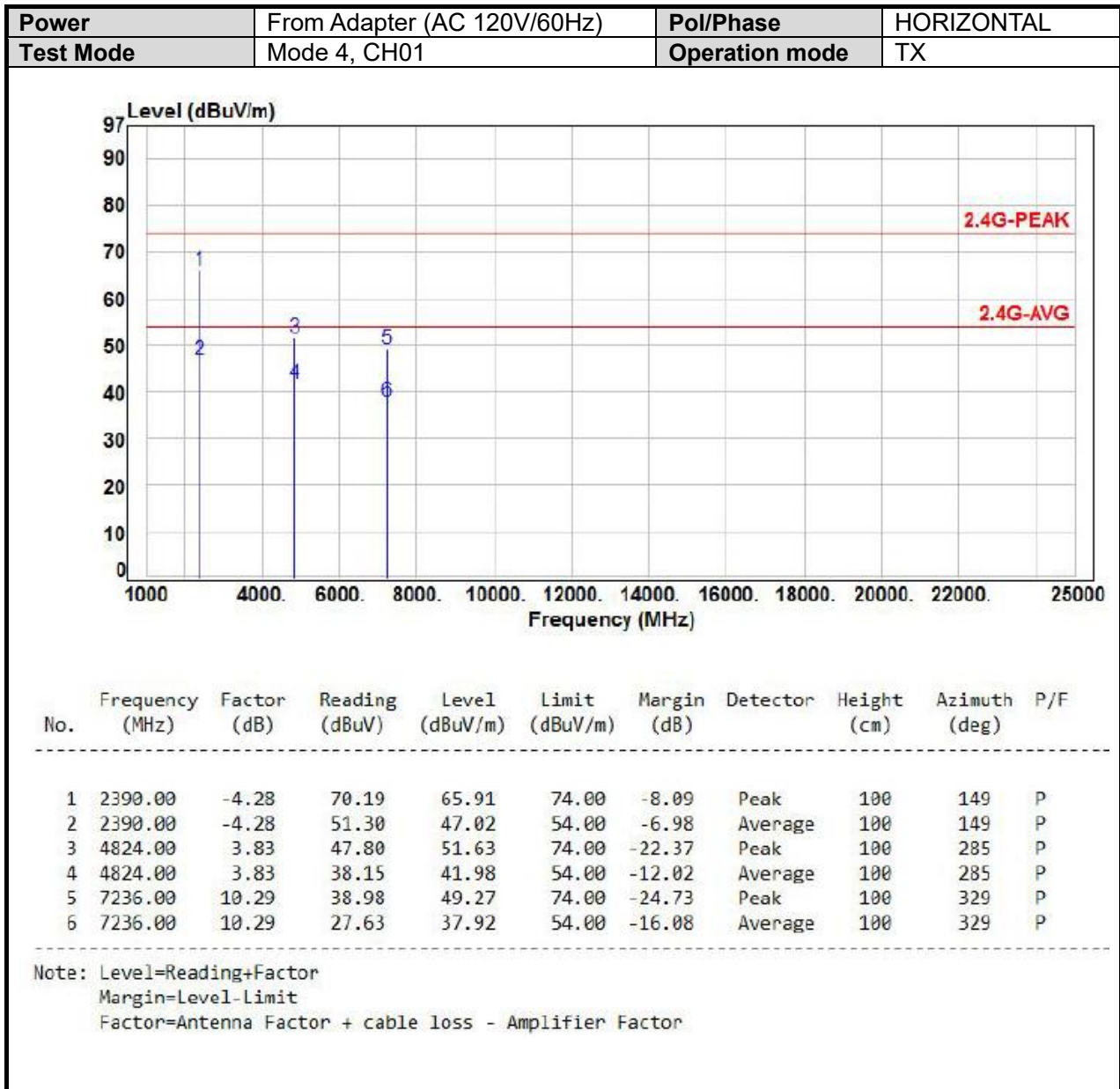


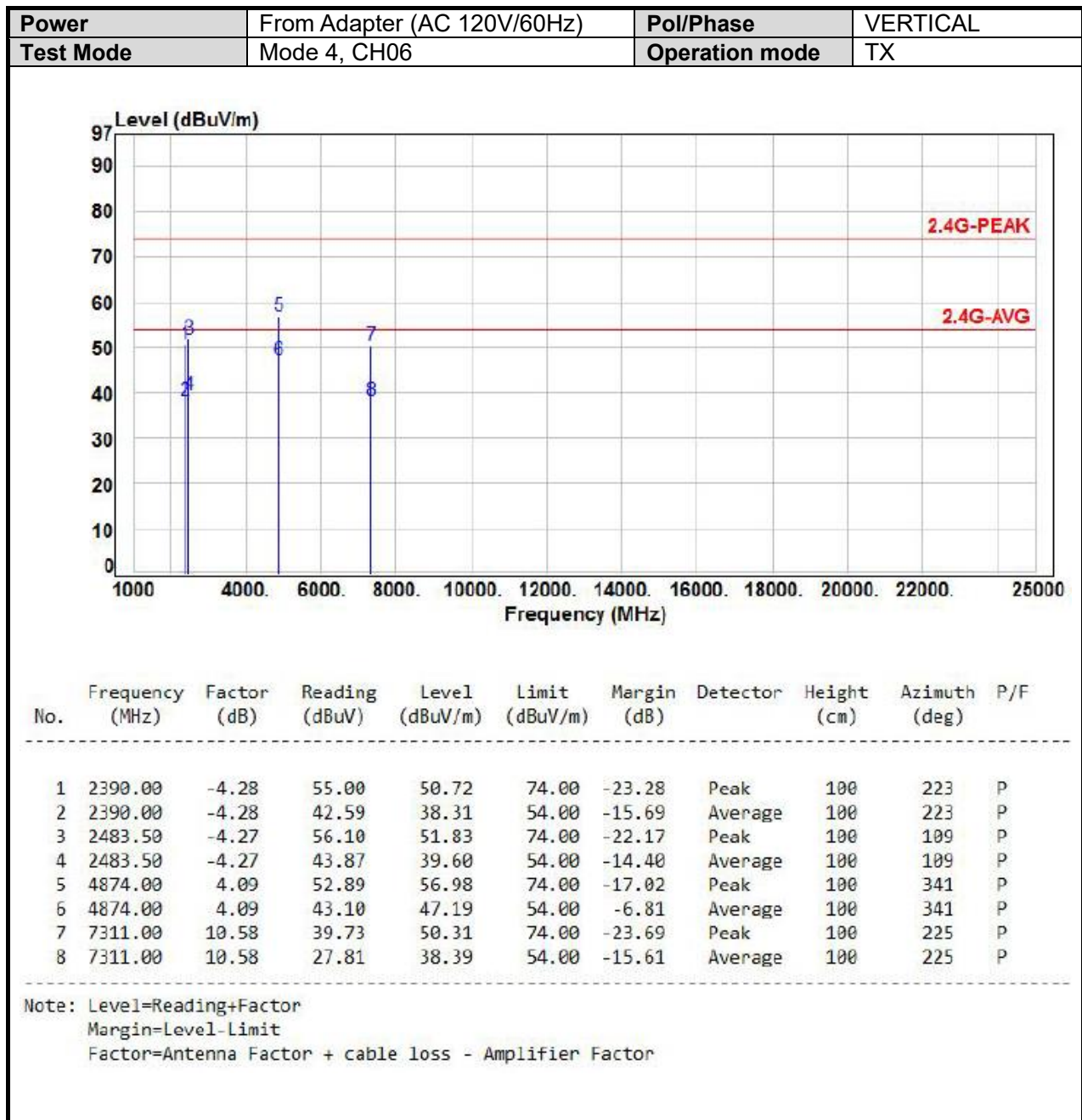


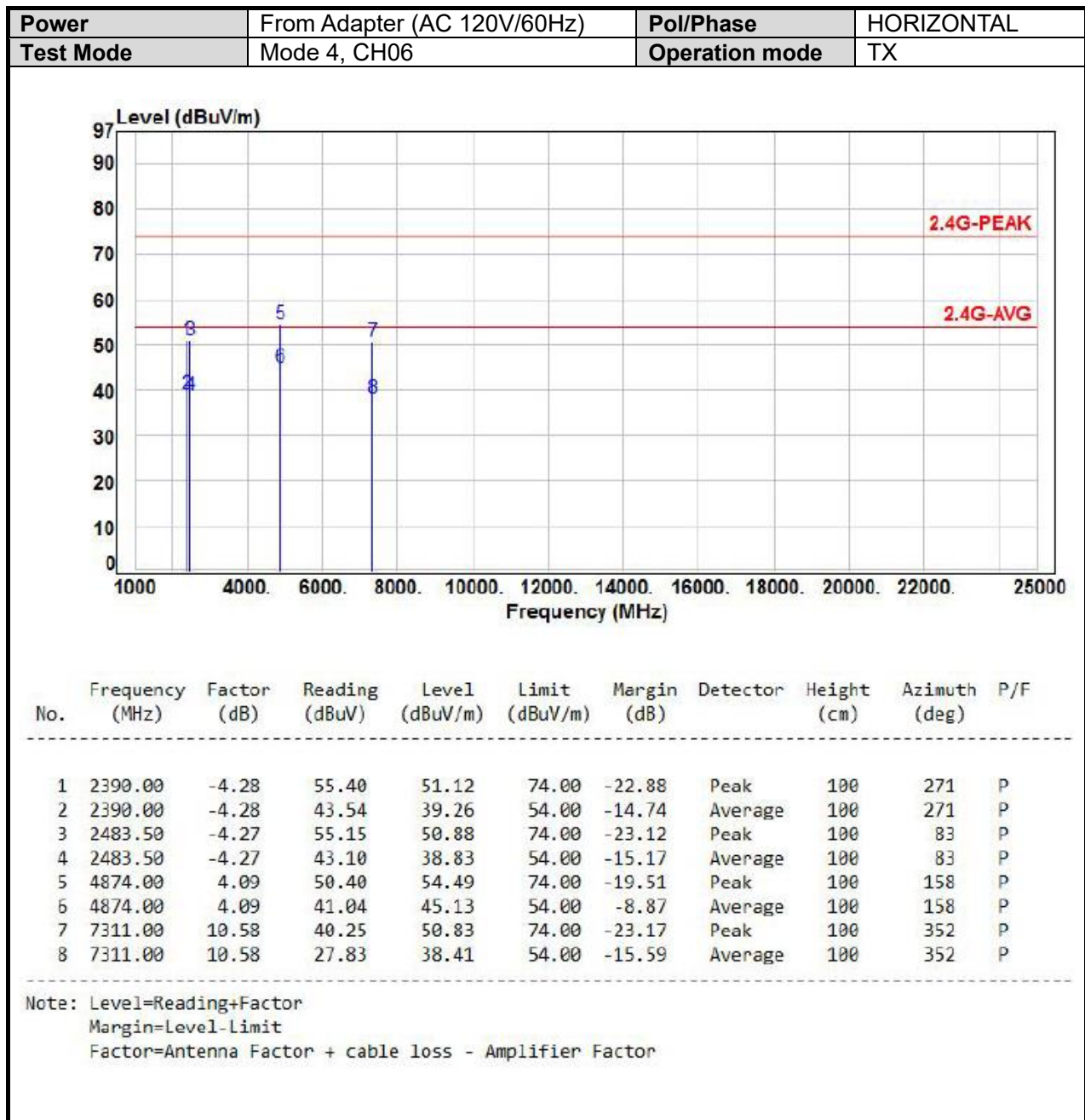


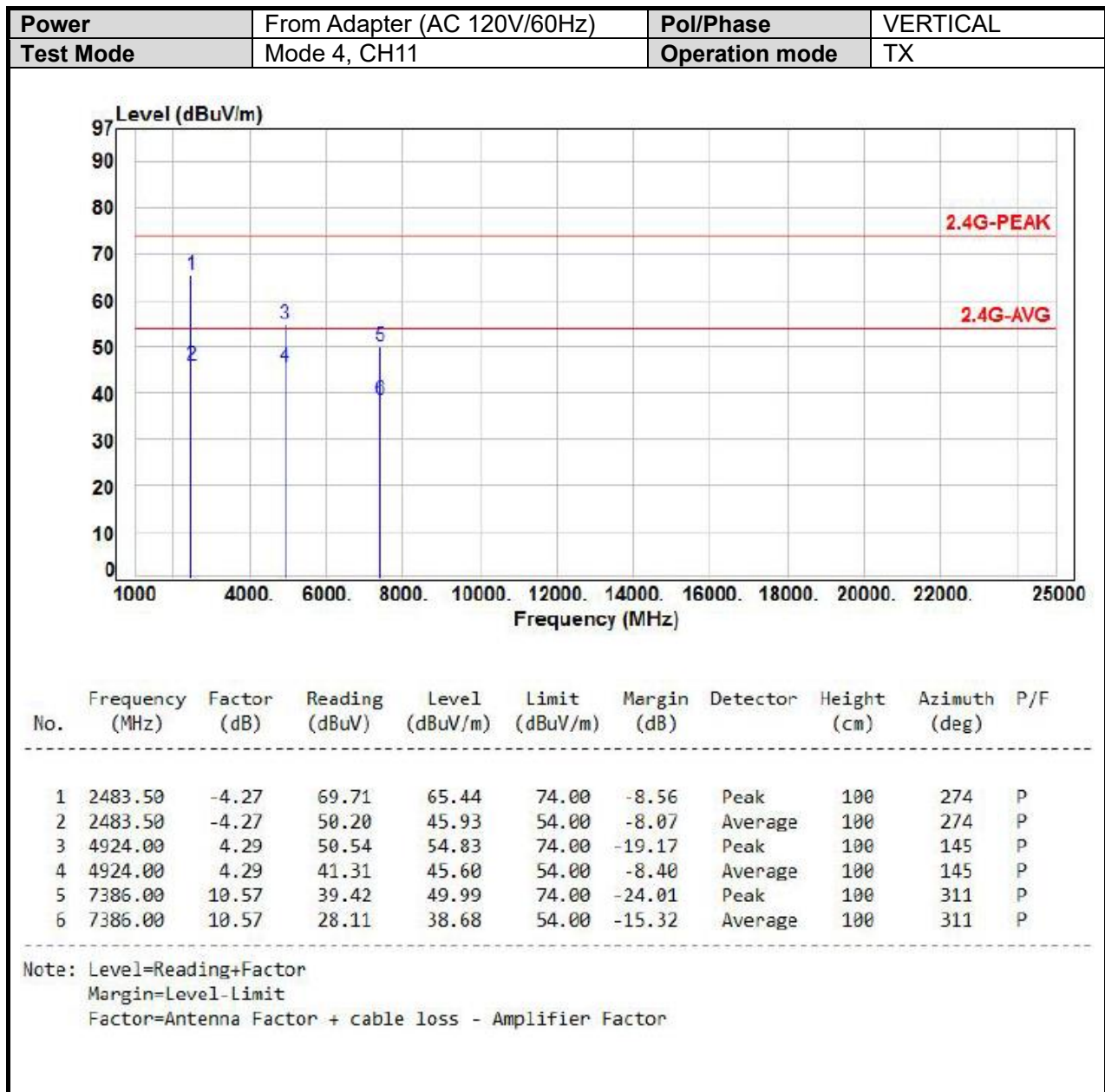


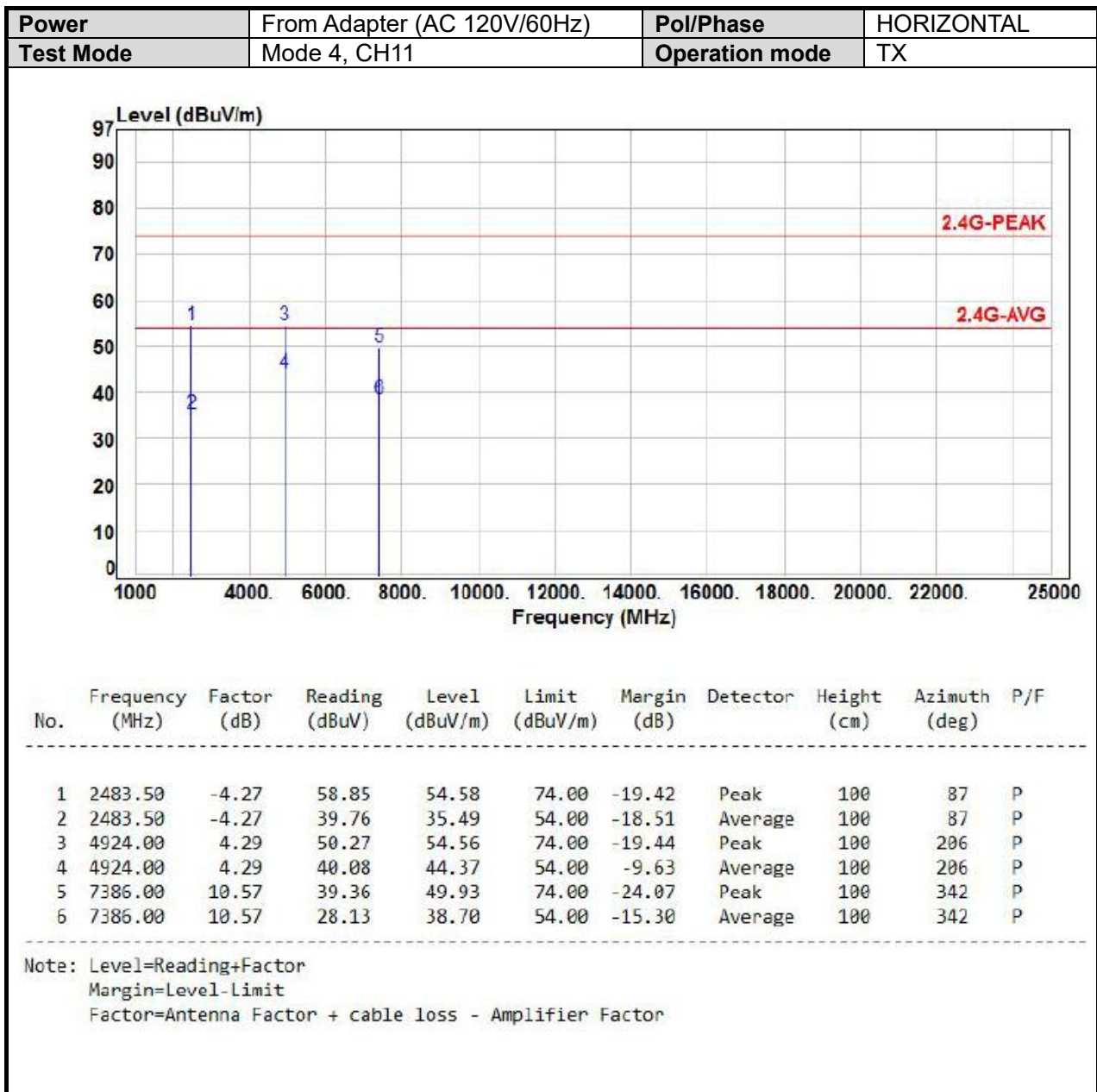














6.7 Restricted Bands of Operation

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 C63.10-2020 Section 11.11.1

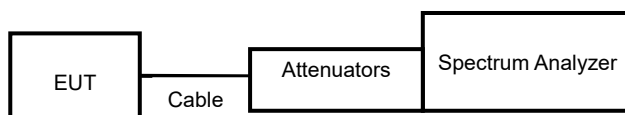
Below -20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

According to the methods defined in ANSI C63.10-2020 Section 11.11.2 & 11.11.3

- The transmitter output was connected to the spectrum analyzer via a low loss cable.
- Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- Peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20dB relative to the maximum measured in-band peak PSD level.
- The band edges was measured and recorded.

7.3 Test Setup Layout

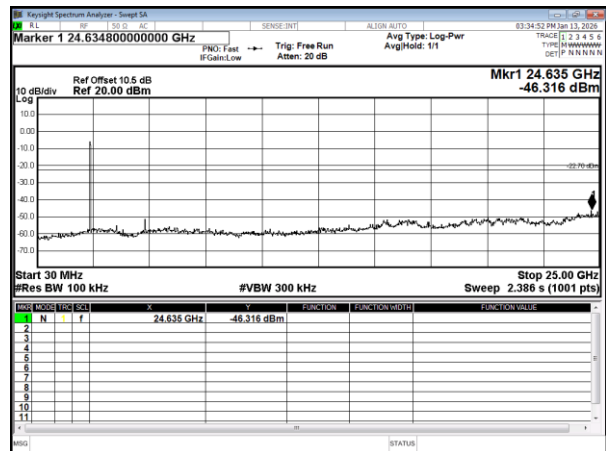
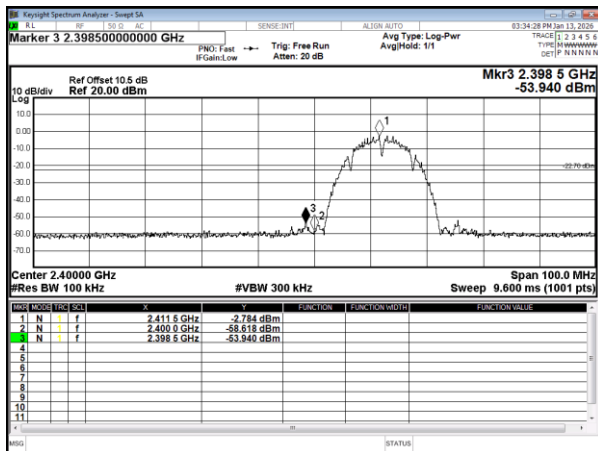


7.4 Test Result and Data

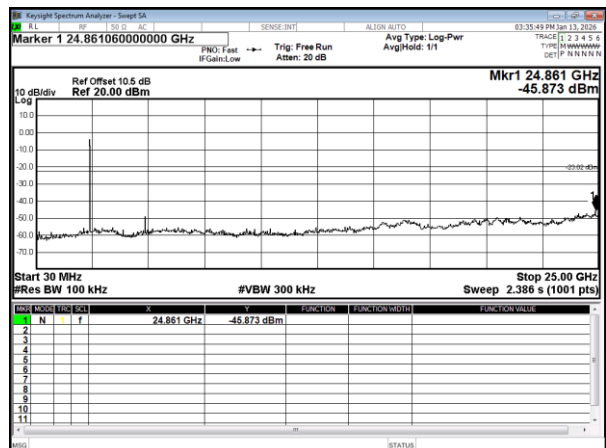
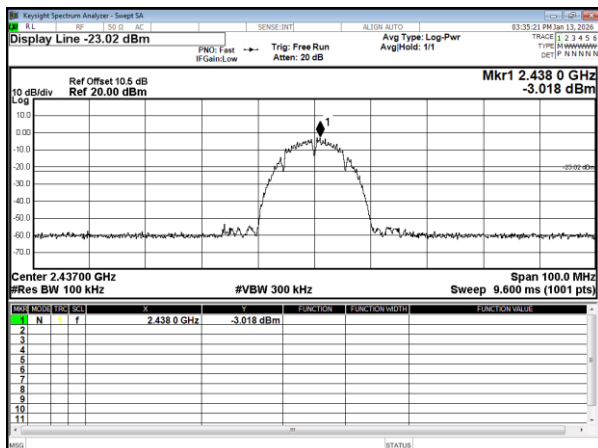
Note: Test plots refers to the following pages.



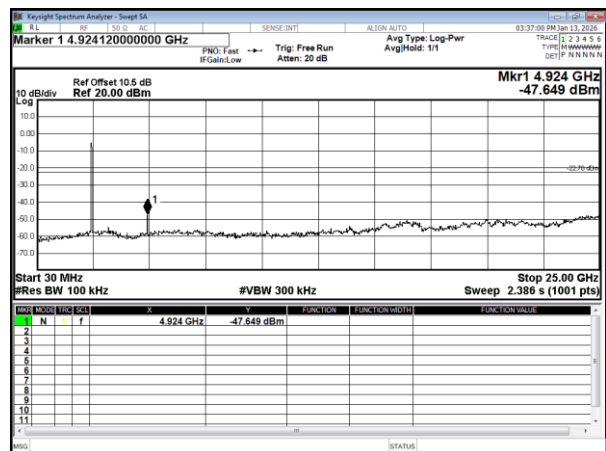
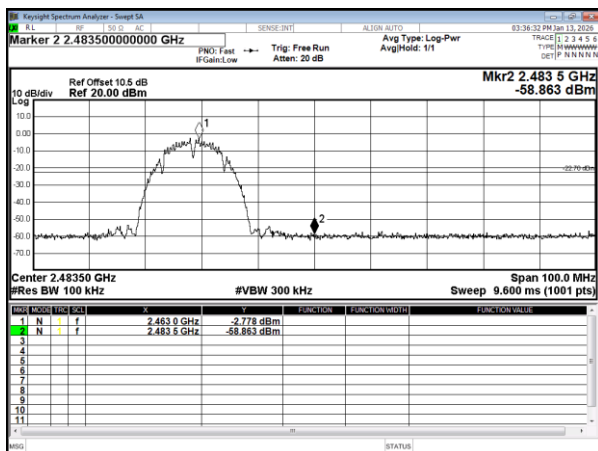
Modulation Standard: 802.11b
Channel: 01



Modulation Standard: 802.11b
Channel: 06

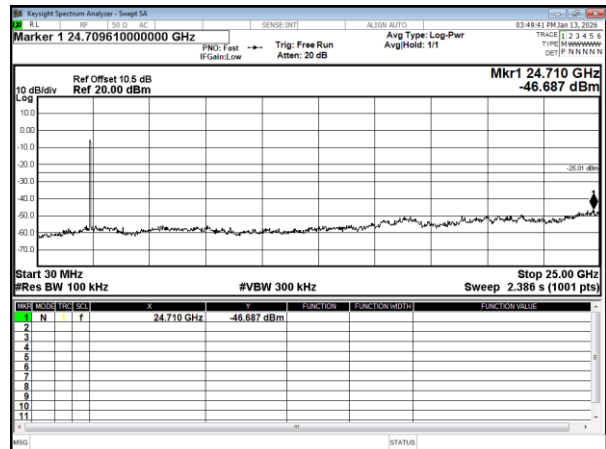
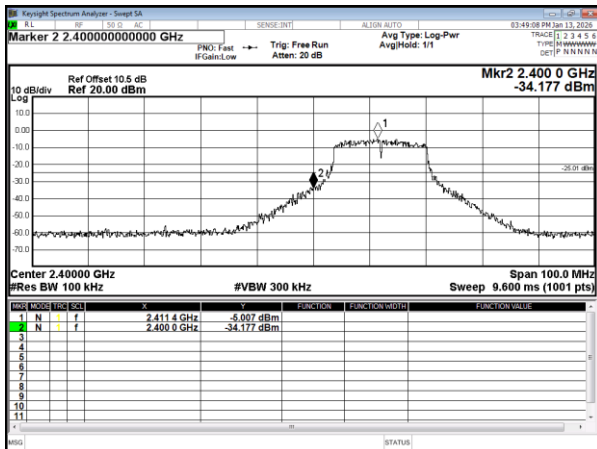


Modulation Standard: 802.11b
Channel: 11

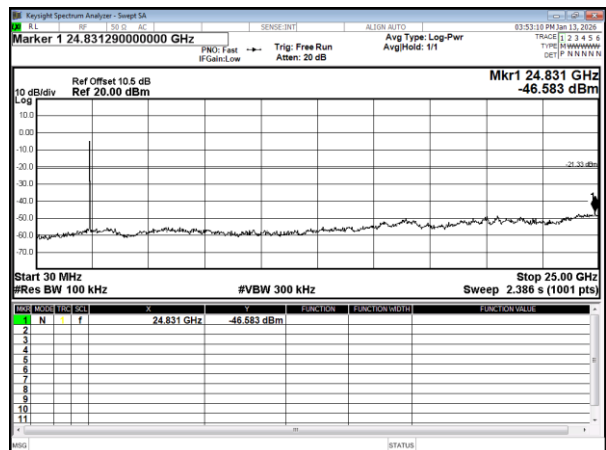
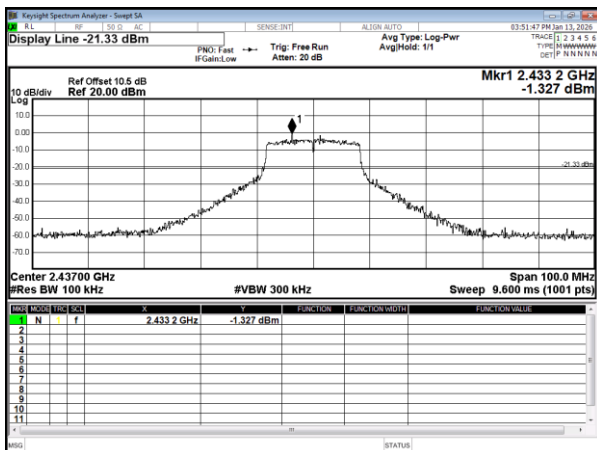




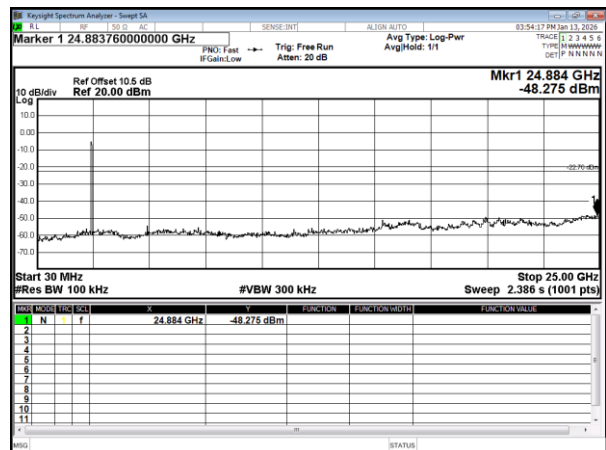
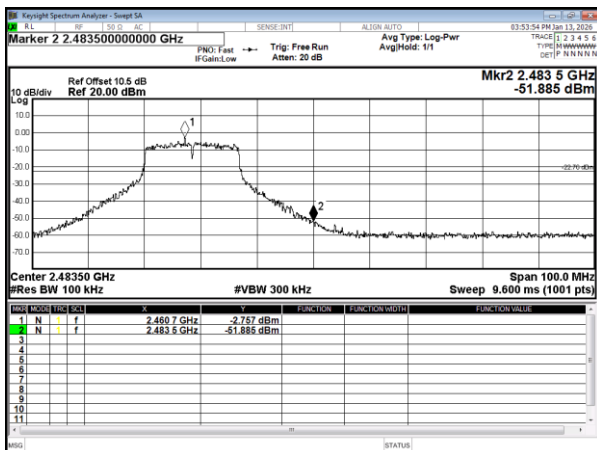
Modulation Standard: 802.11g
Channel: 01



Modulation Standard: 802.11g
Channel: 06

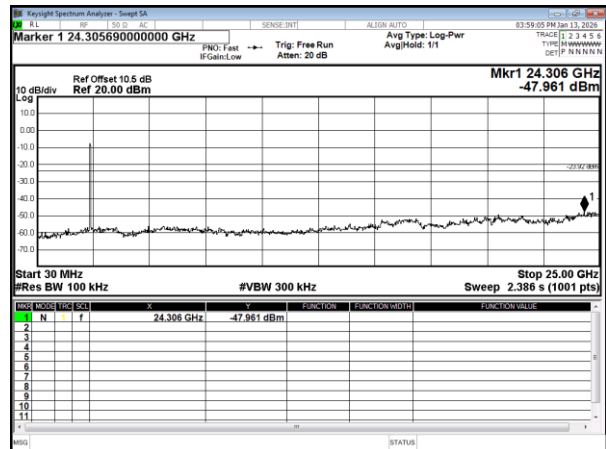
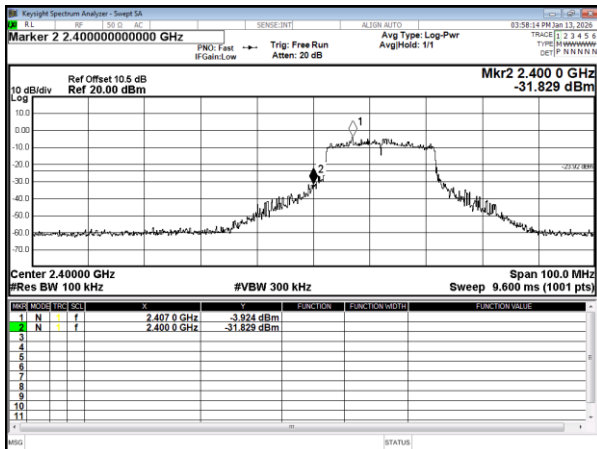


Modulation Standard: 802.11g
Channel: 11

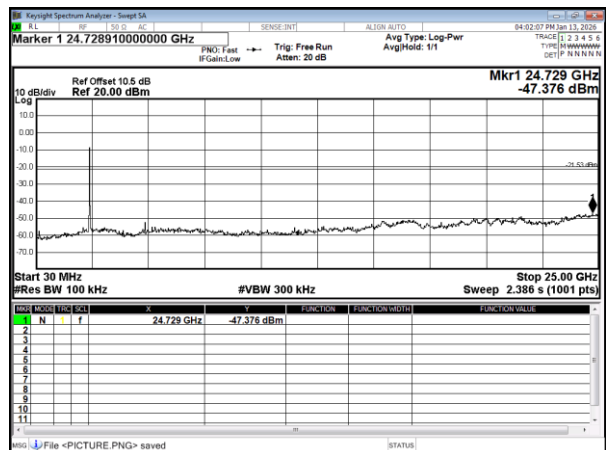
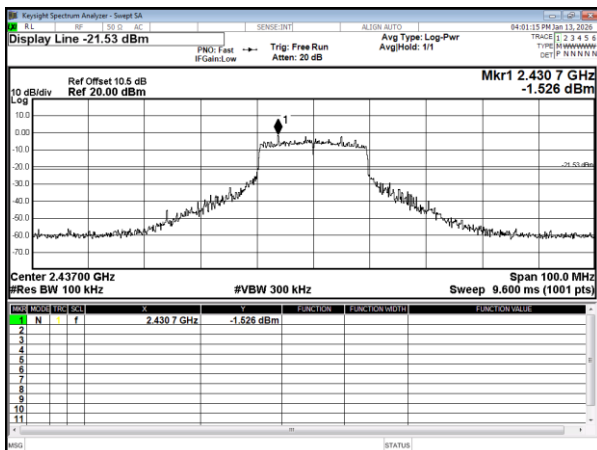




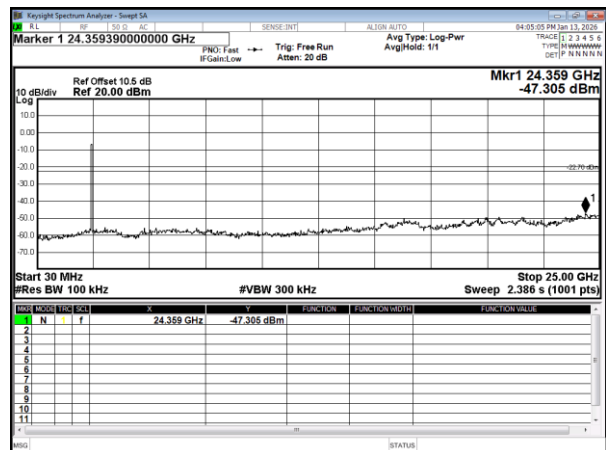
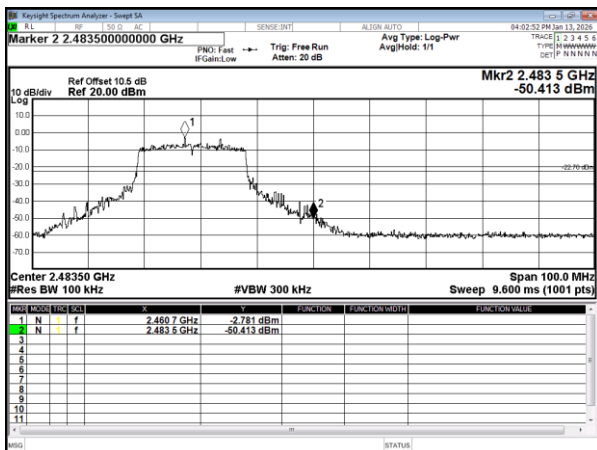
Modulation Standard: 802.11ax HE20
Channel: 01



Modulation Standard: 802.11ax HE20
Channel: 06



Modulation Standard: 802.11ax HE20
Channel: 11





8. On Time, Duty Cycle and Measurement methods

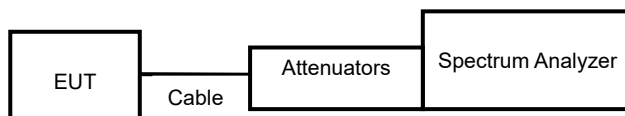
8.1 Test Limit

None; for reporting purposes only.

8.2 Test Procedure

According to the methods defined in ANSI C63.10-2020 Section 11.6
Zero-Span Spectrum Analyzer Method.

8.3 Test Setup Layout

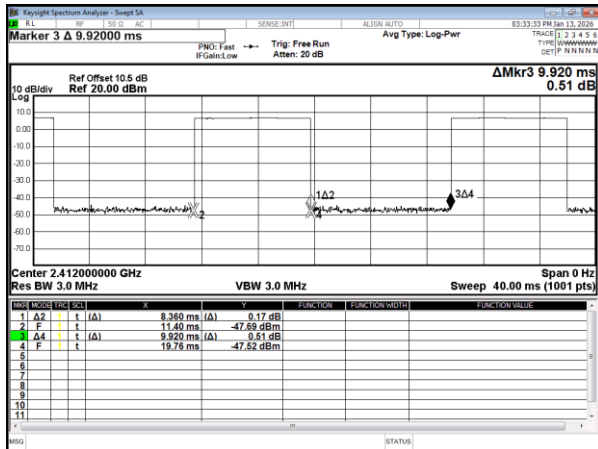


8.4 Test Result and Data

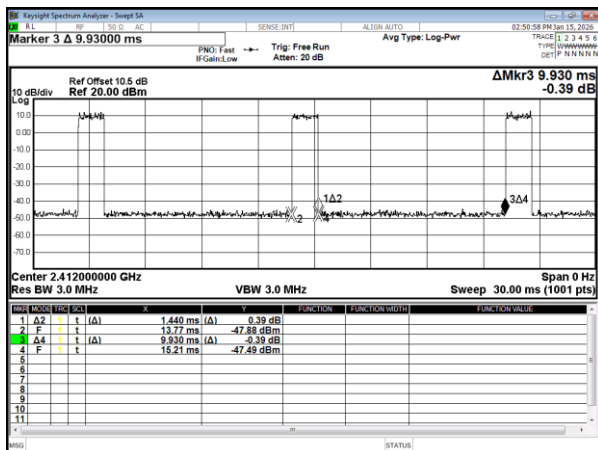
Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11b	8.360	18.280	45.73%
802.11g	1.440	11.370	12.66%
11ax HE20	1.170	11.040	10.60%



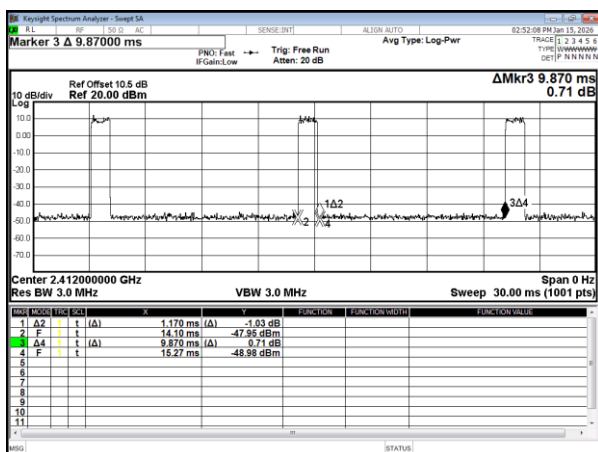
Modulation Type: 802.11b(1Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11ax HE20 (7.3Mbps)





9. 6dB Bandwidth Measurement Data

9.1 Test Limit

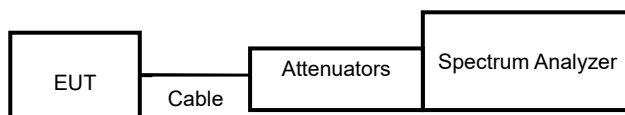
The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

9.2 Test Procedures

According to the methods defined in ANSI C63.10-2020 Section 11.8

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.
- The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- The 6dB Bandwidth was measured and recorded.

9.3 Test Setup Layout

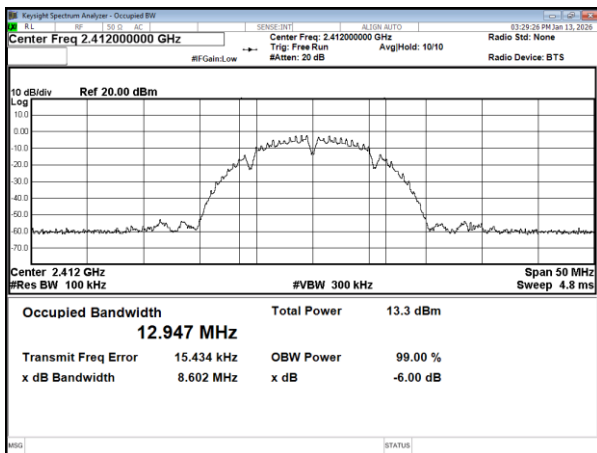


**9.4 Test Result and Data**

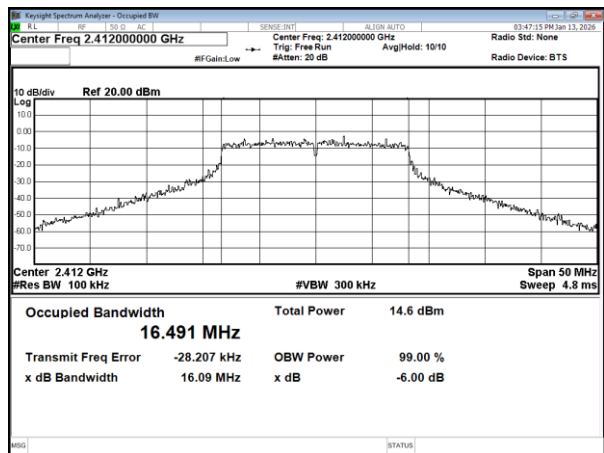
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
IEEE 802.11b	01	2412	8.60	0.5
	06	2437	9.05	0.5
	11	2462	8.60	0.5
IEEE 802.11g	01	2412	16.09	0.5
	06	2437	16.36	0.5
	11	2462	16.37	0.5
IEEE 802.11ax HE20	01	2412	19.06	0.5
	06	2437	18.69	0.5
	11	2462	17.68	0.5



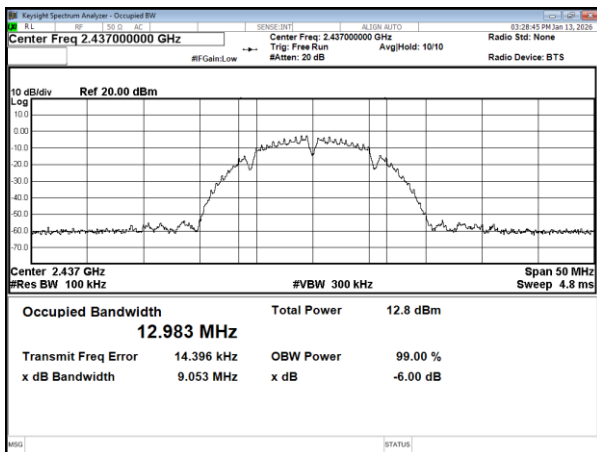
Modulation Type: 802.11b
CH01



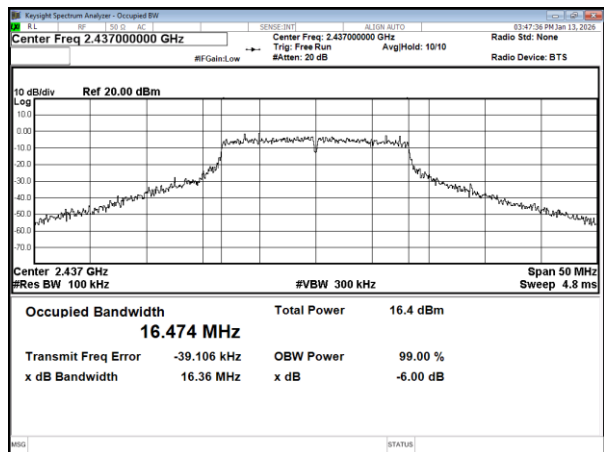
Modulation Type: 802.11g
CH01



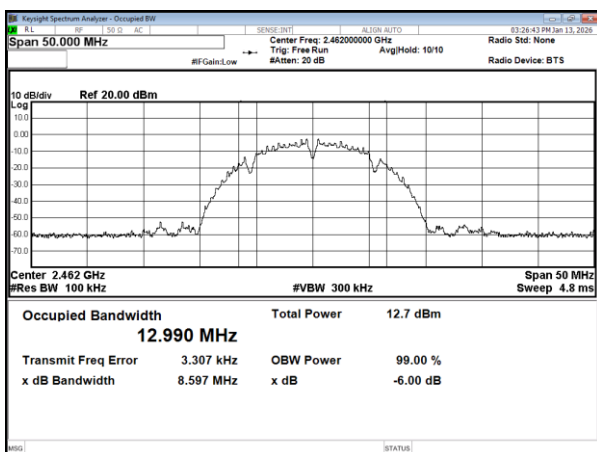
CH06



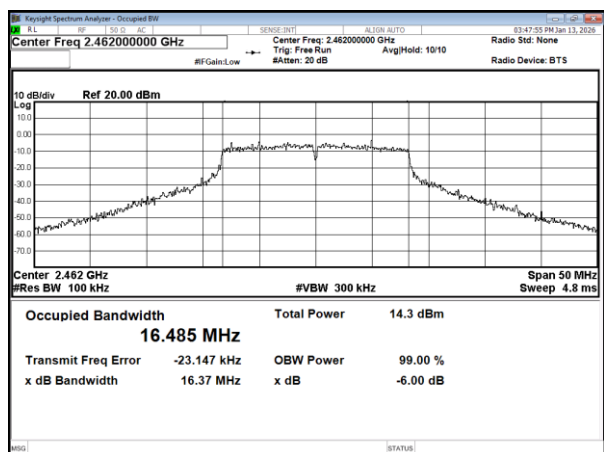
CH06



CH11

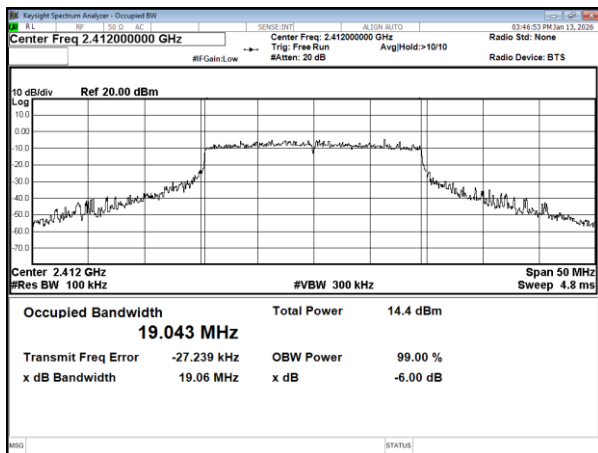


CH11

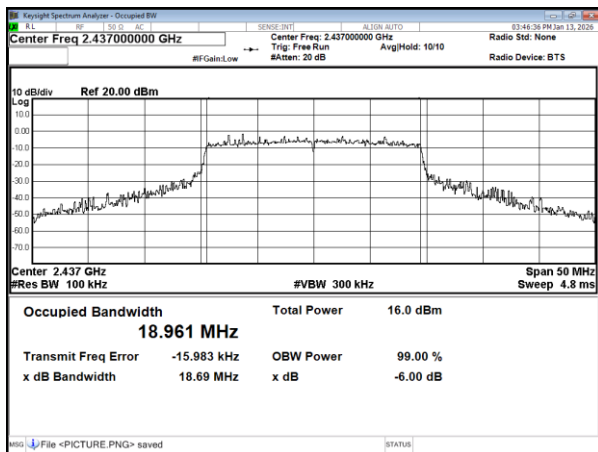




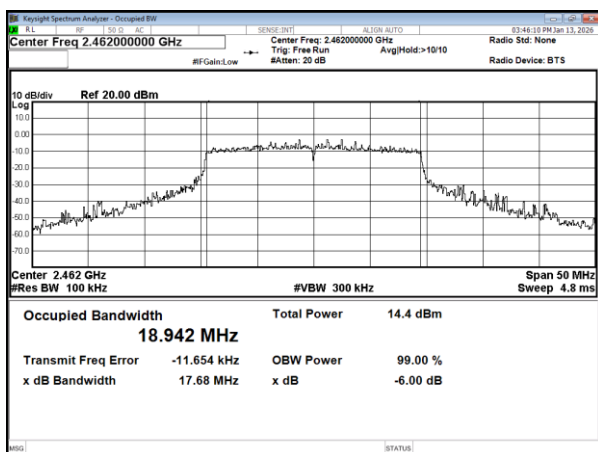
Modulation Type: IEEE 802.11ax HE20
CH01



CH06



CH1





10. Maximum Peak Output Power

10.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

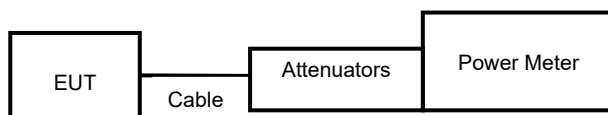
If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.2 Test Procedures

According to the methods defined in ANSI C63.10-2020 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**

Power Setting	Modulation Type	Channel	Frequency (MHz)	Conducted (peak) output power (dBm)	Conducted (peak) output power (mW)	Power Limit (dBm)
8	IEEE 802.11b	1	2412	8.940	7.834	30.00
8		6	2437	8.620	7.278	30.00
8		11	2462	8.490	7.063	30.00
Default	IEEE 802.11g	1	2412	12.470	17.660	30.00
Default		6	2437	13.690	23.388	30.00
Default		11	2462	11.990	15.812	30.00
Default	11n HT20	1	2412	11.900	15.488	30.00
Default		6	2437	13.870	24.378	30.00
Default		11	2462	11.570	14.355	30.00
Default	IEEE 802.11ax HE20	1	2412	12.400	17.378	30.00
Default		6	2437	14.550	28.510	30.00
Default		11	2462	12.290	16.943	30.00



11. Power Spectral Density

11.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

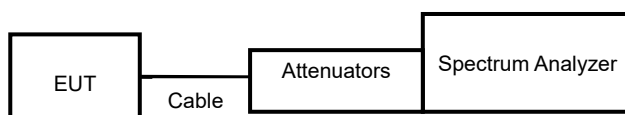
If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

11.2 Test Procedures

According to the methods defined in ANSI C63.10-2020 Section 11.10

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

11.3 Test Setup Layout

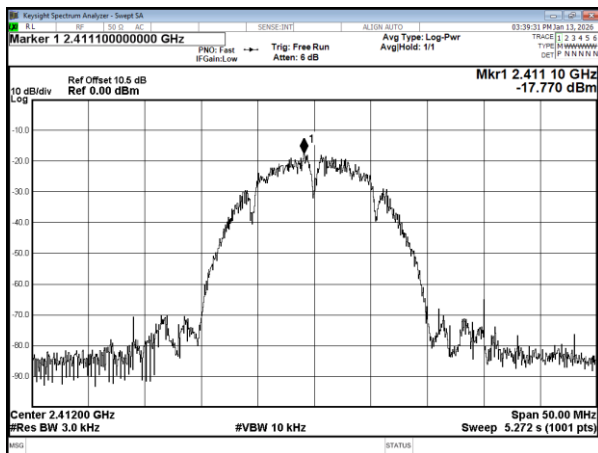


**11.4 Test Result and Data**

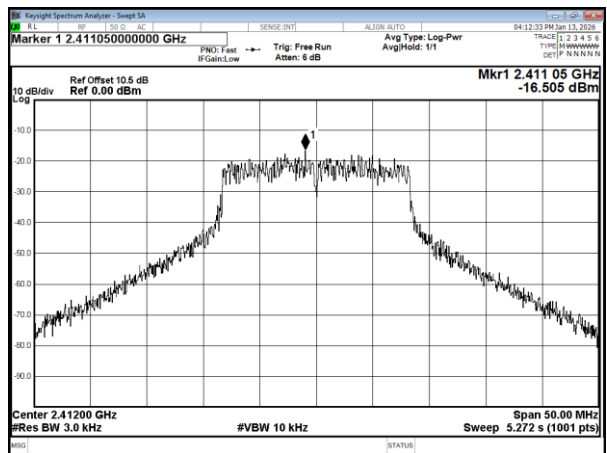
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)	Limit (dBm)
IEEE 802.11b	1	2412	-17.770	8.00
	6	2437	-17.401	8.00
	11	2462	-17.574	8.00
IEEE 802.11g	1	2412	-16.505	8.00
	6	2437	-15.513	8.00
	11	2462	-17.951	8.00
IEEE 802.11ax HE20	1	2412	-18.087	8.00
	6	2437	-16.099	8.00
	11	2462	-16.583	8.00



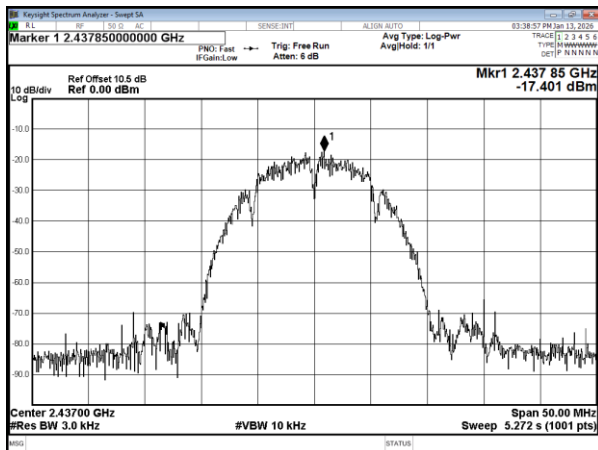
Modulation Type: IEEE 802.11b
CH01



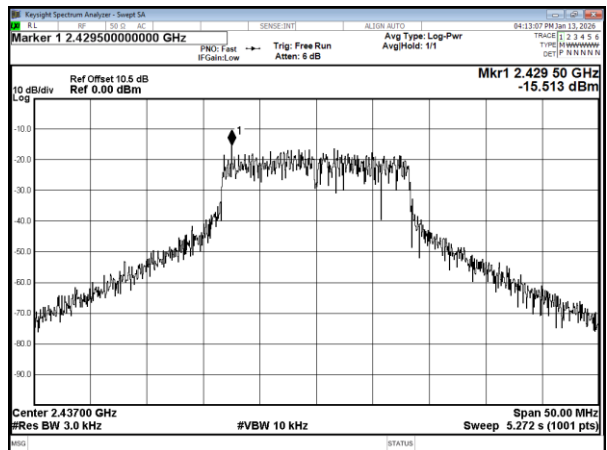
Modulation Type: IEEE 802.11g
CH01



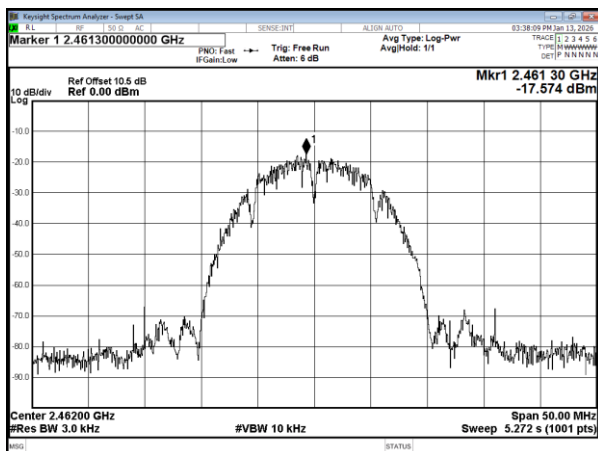
CH06



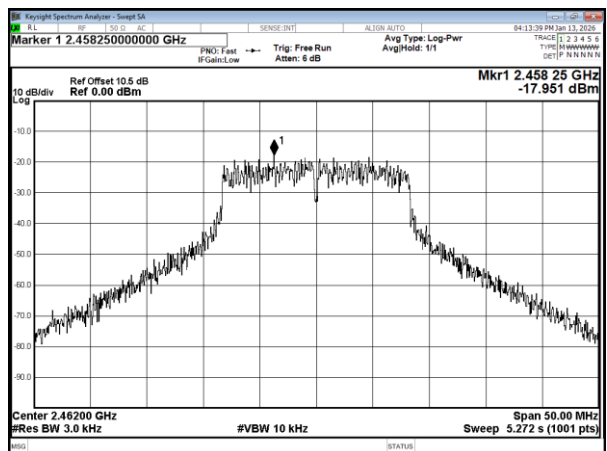
CH06



CH11

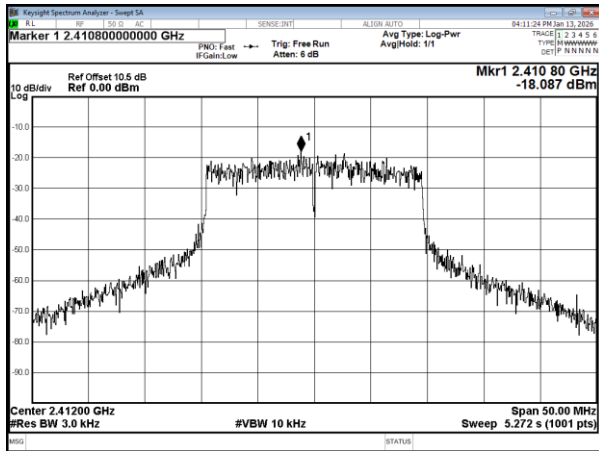


CH11

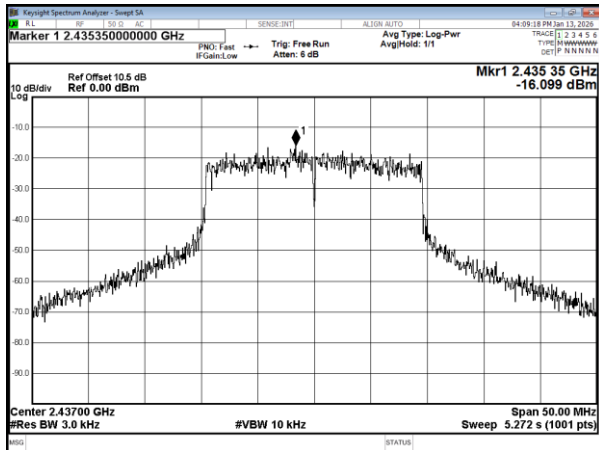




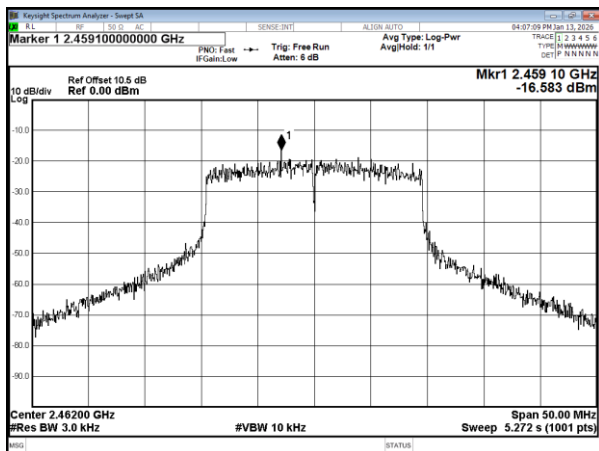
Modulation Type: IEEE 802.11ax HE20
CH01



CH06



CH11



-----THE END OF REPORT-----