

FCC Radio Test Report

FCC ID: 2A4G9-005**The report concerns: Original Grant**

Report Reference No.: 22EFS06096 06371
Date Sample(s) Received: 2022-07-18
Date of Tested: From 2022-07-19 to 2022-08-02
Date of issue: 2022-08-02
Testing Laboratory.....: DongGuanShuoXin Electronic Technology Co., Ltd.
Address: Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, Guangdong, China

Applicant's name.....: ZHENGZHOU DI YUN WANG LUO KE JI YOU XIAN GONG SI
Address: No.2602, 26th Floor, Block B, Dongfang Building No. 198-19 Songshan South Road, Erqi District,Zhengzhou, Henan, China
Manufacturer: TDC Power Products Co., Ltd.

Equipment: Wi-Fi Low Voltage Landscape Transformer
Trade Mark: 1)  ; 2) 
Model: TLA-120-12W-1 WiFi 2Gen; TLA-200-12W-1 WiFi 2Gen; TLA-300-12WA2-1 WiFi 2Gen.
Ratings: Input: 120V~60Hz 1.2A For TLA-120-12W-1 WiFi 2Gen; 120V~60Hz 2A For TLA-200-12W-1 WiFi 2Gen; 120V~60Hz 3A For TLA-300-12WA2-1 WiFi 2Gen.
Output: 12V~ 120W max For TLA-120-12W-1 WiFi 2Gen; 12V~ 200W max For TLA-200-12W-1 WiFi 2Gen; 12V~ or 14V~ 300W max For TLA-300-12WA2-1 WiFi 2Gen.

Test Engineer:


Blue Qiu

Responsible Engineer :


Smile Wang

Authorized Signatory:

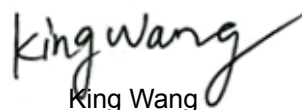

King Wang

Table of Contents	Page
1 TEST REPORT DECLARE	4
2 SUMMARY OF TEST RESULTS	5
2.1 MEASUREMENT UNCERTAINTY	6
3 GENERAL INFORMATION	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 DESCRIPTION OF TEST MODES	8
3.3 PARAMETERS OF TEST SOFTWARE	9
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	10
3.5 SUPPORT UNITS	10
3.6 TEST ENVIRONMENT CONDITIONS	10
3.7 DUTY CYCLE	10
4 AC POWER LINE CONDUCTED EMISSIONS TEST	11
4.1 LIMIT	11
4.2 TEST PROCEDURE	11
4.3 MEASUREMENT INSTRUMENTS LIST	11
4.4 TESTSETUP	12
4.5 EUT OPERATION CONDITIONS	12
4.6 TEST RESULTS	13
5 RADIATED EMISSIONSTEST	15
5.1 LIMIT	15
5.2 TEST PROCEDURE	16
5.3 MEASUREMENT INSTRUMENTS LIST	17
5.4 TESTSETUP	17
5.5 EUT OPERATIONCONDITIONS	18
5.6 TEST RESULTS - 9KHZ TO 30MHZ	19
5.7 TEST RESULTS - 30MHZTO 1000MHZ	20
5.8 TEST RESULTS- ABOVE 1000MHZ(BAND EDGE)	22
5.9 TEST RESULTS- ABOVE 1000MHZ(HARMONIC)	38
6 BANDWIDTH TEST	62
6.1 LIMIT	62
6.2 TEST PROCEDURE AND SETTING	62
6.3 MEASUREMENT INSTRUMENTS LIST	62
6.4 TEST SETUP	62

Table of Contents	Page
6.5 EUT OPERATION CONDITIONS	62
6.6 TESTRESULTS	63
7 MAXIMUM OUTPUT POWER TEST	71
7.1 LIMIT	71
7.2 TEST PROCEDURE AND SETTING	71
7.3 MEASUREMENT INSTRUMENTS LIST	71
7.4 TEST SETUP	71
7.5 EUT OPERATION CONDITIONS	71
7.6 TESTRESULTS	72
8 CONDUCTED SPURIOUS EMISSIONS	73
8.1 LIMIT	73
8.2 TEST PROCEDURE AND SETTING	73
8.3 MEASUREMENT INSTRUMENTS LIST	73
8.4 TEST SETUP	73
8.5 EUT OPERATION CONDITIONS	73
8.6 TESTRESULTS	74
9 POWER SPECTRAL DENSITY TEST	78
9.1 LIMIT	78
9.2 TEST PROCEDURE AND SETTING	78
9.3 MEASUREMENT INSTRUMENTS LIST	78
9.4 TEST SETUP	78
9.5 EUT OPERATION CONDITIONS	78
9.6 TESTRESULTS	79

1TEST REPORT DECLARE

Applicant	ZHENGZHOU DI YUN WANG LUO KE JI YOU XIAN GONG SI
Address	No.2602, 26th Floor, Block B, Dongfang Building No. 198-19 Songshan South Road, Erqi District,Zhengzhou, Henan, China
Manufacturer	TDC Power Products Co., Ltd.
Address	Dong Hang 3rd. Industrial District, Dong Hang, Dong Guan City, Guang dong Province, China
Factory	TDC Power Products Co., Ltd.
Address	Dong Hang 3rd. Industrial District, Dong Hang, Dong Guan City, Guang dong Province, China
Equipment	Wi-Fi Low Voltage Landscape Transformer
Model No.	TLA-120-12W-1 WiFi 2Gen; TLA-200-12W-1 WiFi 2Gen; TLA-300-12WA2-1 WiFi 2Gen.
Trade Mark	1)  ; 2)  .
Standard	FCC Part15, Subpart C (15.247) ANSI C63.10-2013

We Declare:

The equipment described above is tested by DongGuan ShuoXin Electronic Technology Co., Ltd(ATT). and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and DongGuan ShuoXin Electronic Technology Co., Ltd.(ATT) is assumed of full responsibility for the accuracy and completeness of these tests.

ATT is not responsible for the sampling stage, so the results only apply to the sample as received.

ATT's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. ATT shall have no liability for any declarations, inferences or generalizations drawn by the client or others from ATT issued reports.

2 SUMMARY OF TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below:

Standard(s) Section	Test Item	Judgment	Remark
FCC			
15.207	AC Power Line Conducted Emissions	PASS	-----
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	PASS	-----
15.247(a)(2)	Bandwidth	PASS	-----
15.247(b)(3)	Maximum Output Power	PASS	-----
15.247(d)	Conducted Spurious Emission	PASS	-----
15.247(e)	Power Spectral Density	PASS	-----
15.203	Antenna Requirement	PASS	Note(2)

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

2.1 MEASUREMENT UNCERTAINTY

Test Item	Uncertainty
Uncertainty for Conduction emission test (9kHz-150kHz)	3.7 dB
Uncertainty for Conduction emission test (150kHz-30MHz)	3.3 dB
Uncertainty for Radiation Emission test (30MHz-200MHz)	4.60 dB (Polarize: V)
	4.60 dB (Polarize: H)
Uncertainty for Radiation Emission test (200MHz-1GHz)	6.10 dB (Polarize: V)
	5.08 dB (Polarize: H)
Uncertainty for Radiation Emission test (1GHz-6GHz)	5.01 dB (Polarize: V)
	5.01 dB (Polarize: H)
Uncertainty for Radiation Emission test (6GHz-18GHz)	5.26 dB (Polarize: V)
	5.26 dB (Polarize: H)
Uncertainty for Radiation Emission test (18GHz-40GHz)	5.06 dB (Polarize: V)
	5.06 dB (Polarize: H)
Uncertainty for radio frequency	$\pm 0.048\text{kHz}$
Uncertainty for conducted RF Power	$\pm 0.32\text{dB}$

Note:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Test Facility:

The Test site used by DongGuan ShuoXin Electronic Technology Co., Ltd. to collect test data is located on the Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China

The test facility is recognized, certified, or accredited by the following organizations:

Item	Registration No.	Expiration Date
CNAS	L3098	2024-08-27
A2LA	4893.01	2022-08-31
Innovation, Science and Economic Development Canada (ISED)	11033A CAB identifier:CN0083	2022-08-31
Federal Communications Commission (FCC)	171688 Designation No.:CN1235	2022-08-31

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wi-Fi Low Voltage Landscape Transformer	
Brand Name	1)  ; 2) 	
Test Model	TLA-120-12W-1 WiFi 2Gen	
Series Model	TLA-120-12W-1 WiFi 2Gen; TLA-200-12W-1 WiFi 2Gen; TLA-300-12WA2-1 WiFi 2Gen.	
Model Difference(s)	The differences between models are the same except for the differences in model name and output rating.	
Hardware Version	V1.0	
Software Version	V1.0	
Power Source	Supplied from AC power network.	
Power Rating	120V~60Hz 1.2A For TLA-120-12W-1 WiFi 2Gen; 120V~60Hz 2A For TLA-200-12W-1 WiFi 2Gen; 120V~60Hz 3A For TLA-300-12WA2-1 WiFi 2Gen.	
Operation Frequency	2412 MHz~ 2462 MHz; 2422 MHz~ 2452 MHz	
Modulation Technology	IEEE 802.11b:DSSS IEEE 802.11g:OFDM IEEE 802.11n:OFDM	
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps	
Operating Mode	IEEE 802.11b:1TX IEEE 802.11g:1TX IEEE 802.11n (HT20):1TX IEEE 802.11n (HT40):1TX	
Antenna Information	Antenna Type: Dipole	Maximum Peak Gain:1.5dBi
Max. Output Power	IEEE 802.11b: 17.49dBm(0.0561W) IEEE 802.11g: 18.91dBm(0.1574W) IEEE 802.11n (HT20): 17.31dBm(0.0538W) IEEE 802.11n (HT40): 15.76dBm(0.0378W)	

Note:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20) CH03-CH09 for IEEE 802.11n (HT40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel03/06/09
Mode 5	TX G Mode Channel 01

Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Final Test Mode	Description
Mode 5	TX G Mode Channel 01

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 5	TX G Mode Channel 01

Radiated emissions test- Above 1GHz	
Final Test Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel03/06/09

Conducted test	
Final Test Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel03/06/09

NOTE:

(1) The measurements are performed at the high, middle, low available channels.

(2) 802.11b mode: DBPSK (1Mbps)

802.11g mode: OFDM (6Mbps)

802.11n HT20 mode : BPSK (13Mbps)

802.11n HT40mode : BPSK (27Mbps)

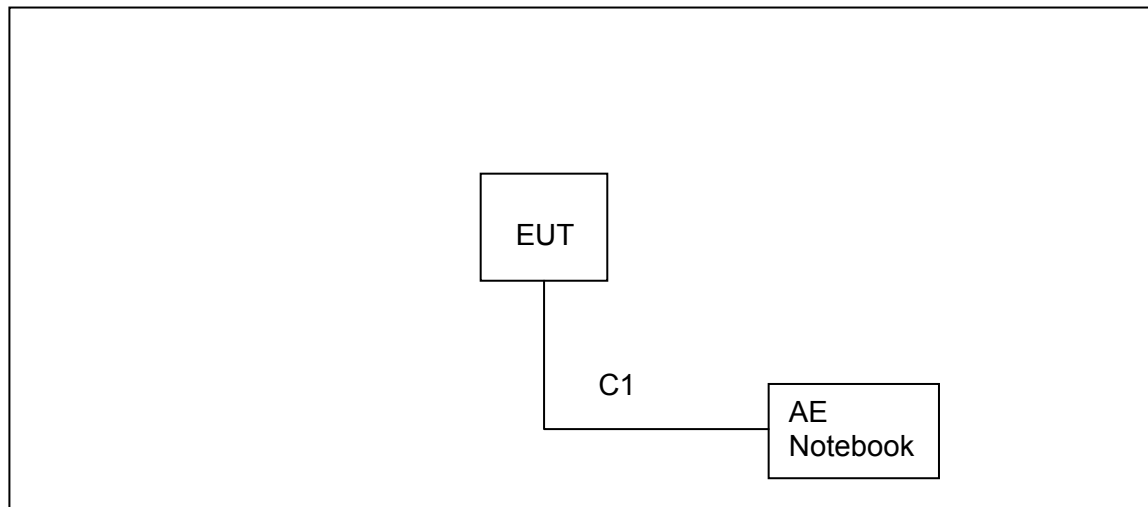
For radiated emission tests, the highest output powers were set for final test.

(3) For radiated emission below 1GHz and AC power line conducted emissions test, the IEEE 802.11n20 channel 11 is found to be the worst case and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

Test Software	Beken Wi-Fi Test Tool V1.9.0		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	Auto	Auto	Auto
IEEE 802.11g	Auto	Auto	Auto
IEEE 802.11n (HT20)	Auto	Auto	Auto
Test Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	Auto	Auto	Auto

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
AE	Notebook	Lenovo	/	/

Item	Cable Type	Shielded Type	Ferrite Core	Length
C1	DC Cable	NO	NO	0.8m

3.6 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage
AC Power Line Conducted Emissions	22.6°C	53%	AC 120V/60Hz
Radiated Emissions-9K-30MHz	23.5°C	61%	AC 120V/60Hz
Radiated Emissions-30 MHz to 1GHz	23.6°C	62%	AC 120V/60Hz
Radiated Emissions-Above 1000 MHz	23.6°C	62%	AC 120V/60Hz
Bandwidth	23.6°C	61%	AC 120V/60Hz
Maximum Output Power	23.6°C	61%	AC 120V/60Hz
Conducted Spurious Emission	23.6°C	61%	AC 120V/60Hz
Power Spectral Density	23.6°C	61%	AC 120V/60Hz

3.7 DUTY CYCLE

All tests were performed under the condition of 100% Duty Cycle

4AC POWER LINE CONDUCTED EMISSIONS TEST**4.1LIMIT**

Frequency of Emission (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 -0.50	66to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

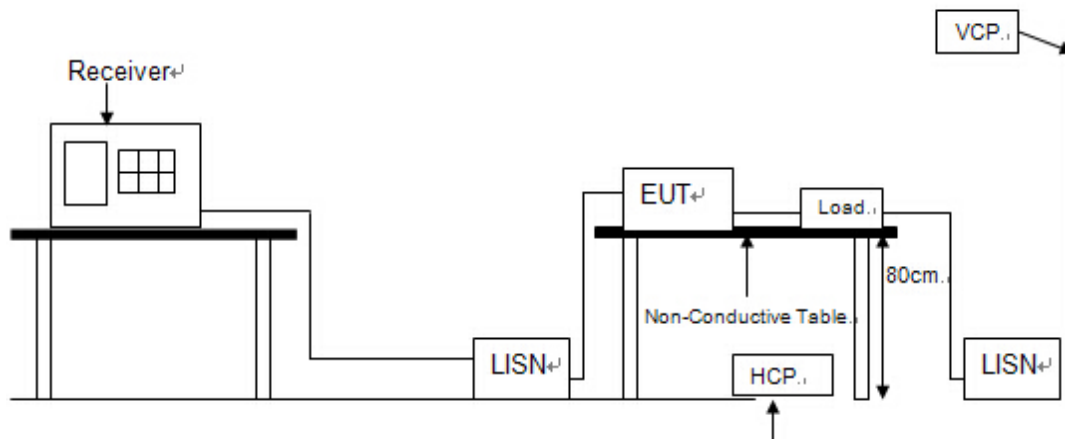
4.2TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.

4.3MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Pulse Limiter	MTS-systemtechnik	MTS-IMP-136	261115-010-0024	12/19/2022
2	EMI Test Receiver	R&S	ESCI	101308	12/17/2022
3	LISN	AFJ	LS16	16011103219	05/26/2023
4	LISN	Schwarzbeck	NSLK 8127	8127-432	12/17/2022
5	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

4.4TESTSETUP



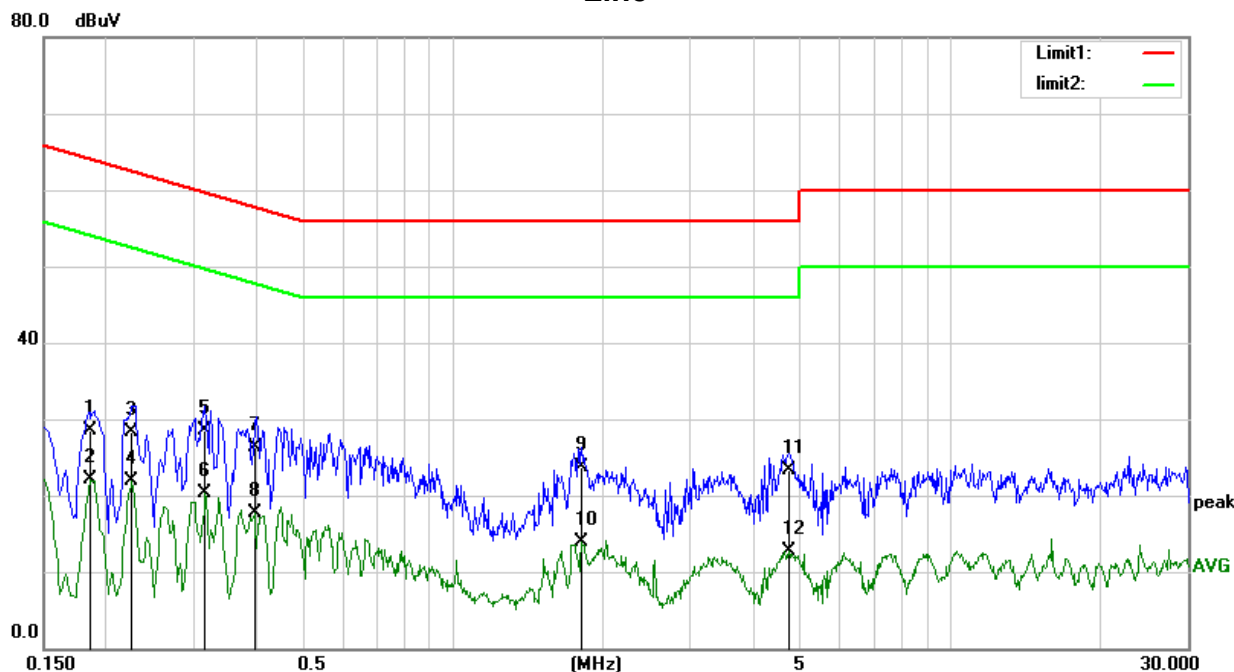
4.5EUT OPERATION CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it).The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.6 TEST RESULTS

Test Mode: TX G Mode Channel 01, AC 120V/60Hz

Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dB	Over dB	Detector	Comment
1		0.1860	19.15	9.41	28.56	64.21	-35.65	QP	
2		0.1860	12.62	9.41	22.03	54.21	-32.18	AVG	
3		0.2260	18.66	9.58	28.24	62.59	-34.35	QP	
4		0.2260	12.41	9.58	21.99	52.59	-30.60	AVG	
5		0.3180	19.00	9.56	28.56	59.76	-31.20	QP	
6	*	0.3180	10.75	9.56	20.31	49.76	-29.45	AVG	
7		0.3980	16.49	9.77	26.26	57.89	-31.63	QP	
8		0.3980	7.93	9.77	17.70	47.89	-30.19	AVG	
9		1.8140	14.16	9.63	23.79	56.00	-32.21	QP	
10		1.8140	4.26	9.63	13.89	46.00	-32.11	AVG	
11		4.7339	13.56	9.68	23.24	56.00	-32.76	QP	
12		4.7339	3.00	9.68	12.68	46.00	-33.32	AVG	

*:Maximum data x:Over limit !:over margin

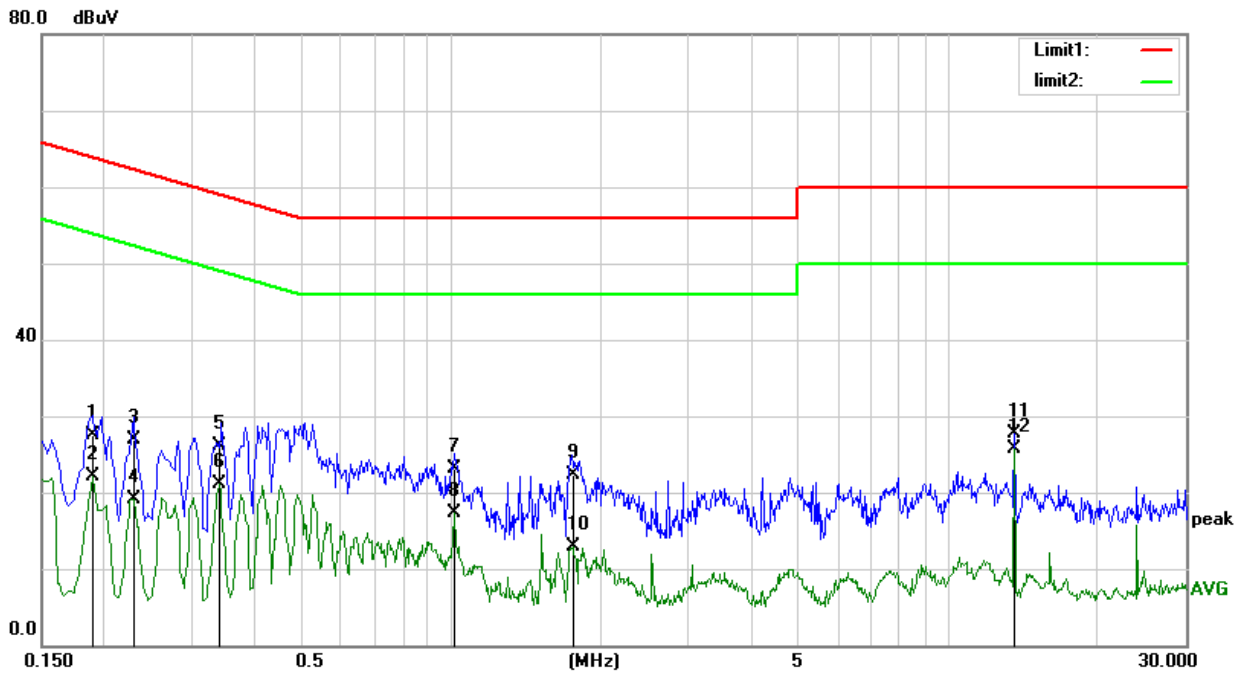
Remarks:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX G Mode Channel 01, AC 120V/60Hz

Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dB	Over dB	Detector	Comment
1		0.1900	18.14	9.45	27.59	64.03	-36.44	QP	
2		0.1900	12.75	9.45	22.20	54.03	-31.83	AVG	
3		0.2300	17.37	9.58	26.95	62.45	-35.50	QP	
4		0.2300	9.61	9.58	19.19	52.45	-33.26	AVG	
5		0.3420	16.58	9.57	26.15	59.15	-33.00	QP	
6		0.3420	11.58	9.57	21.15	49.15	-28.00	AVG	
7		1.0140	13.40	9.76	23.16	56.00	-32.84	QP	
8		1.0140	7.58	9.76	17.34	46.00	-28.66	AVG	
9		1.7580	12.66	9.63	22.29	56.00	-33.71	QP	
10		1.7580	3.34	9.63	12.97	46.00	-33.03	AVG	
11		13.5619	17.81	9.85	27.66	60.00	-32.34	QP	
12	*	13.5619	15.87	9.85	25.72	50.00	-24.28	AVG	

*:Maximum data x:Over limit !:over margin

Remarks:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

5 RADIATED EMISSION TEST

5.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a) and RSS-Gen 8.10, then the 15.209(a) and RSS-Gen 8.9 limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000MHz)

Frequency (MHz)	Field Strength (microvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-30 MHz)

Frequency (MHz)	Magnetic field strength (H-Field) (μ A/m)	Measurement Distance (meters)
0.009-0.490	6.37/F(kHz)	300
0.490-1.705	6.37/F(kHz)	30
1.705-30.0	0.08	30

LIMITS OF RADIATED EMISSION MEASUREMENT (30 MHz-1000MHz)

Frequency (MHz)	Field Strength (μ V/m at 3m)
30-88	100
88-216	150
216-960	200
Above 960	500

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m at 3 m)	
	Peak	Average
Above 1000	74	54

NOTE:

- (1) The limit for radiated test was performed according to FCC PART 15C and RSS-247.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (μ V/m).

5.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. The test result is calculated as the following:
 - (1) Result = Reading + Correct Factor
 - (2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
 - (3) Margin = Result - Limit

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

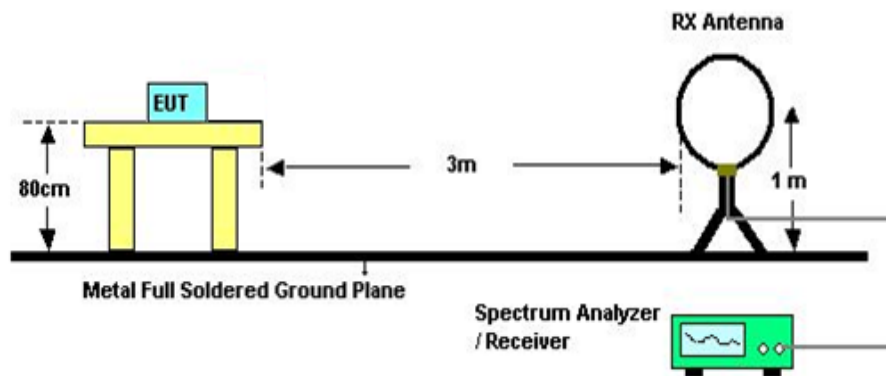
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

5.3 MEASUREMENT INSTRUMENTS LIST

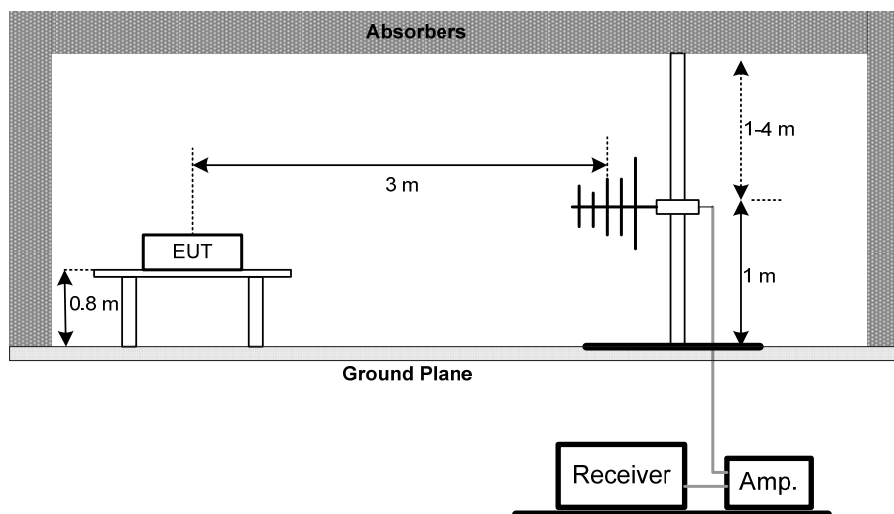
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	101307	12/17/2022
2	Spectrum Analyzer	Agilent	E4407B	US40240708	11/16/2022
3	Loop antenna	SCHWARZBECK K	FMZB1519	1519-062	12/17/2022
4	Broadband antenna	SCHWARZBECK	VULB9168	VULB9168-192	08/05/2022
5	HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D 1065	04/18/2023
6	Preamplifier Amplifier	HP	8447F	3113A05680	12/19/2022
7	PRE-AMPLIFIER	CY	EMC011830	980136	04/18/2023
8	RF Cable	R&S	Test Cable 4	4	12/19/2022
9	RF Cable	R&S	Test Cable 5	5	12/19/2022
10	RF Cable	R&S	Test Cable 9	9	04/18/2023
11	RF Cable	R&S	Test Cable 10	10	12/19/2022
12	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

5.4 TEST SETUP

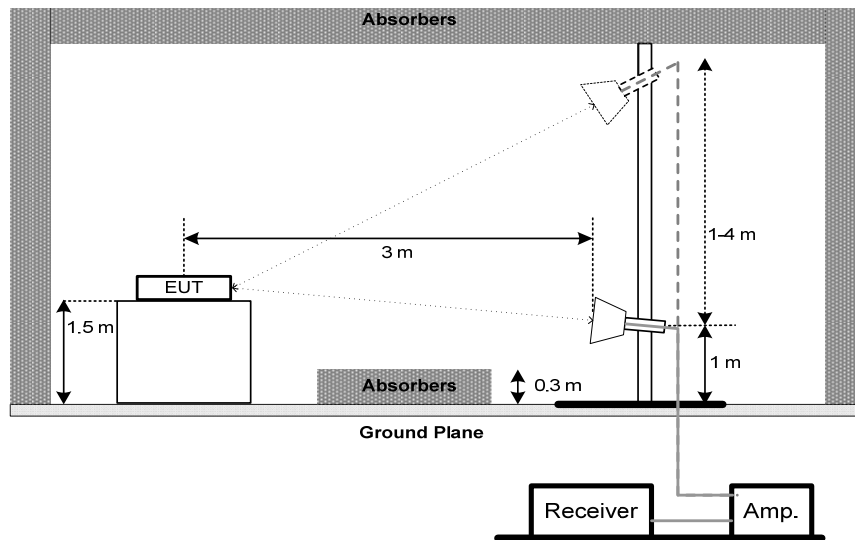
9 kHz-30 MHz



30 MHz to 1 GHz



Above 1 GHz



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS - 9kHz TO 30MHz

Test Mode:	TX G Mode Channel 01
------------	----------------------

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

Note:

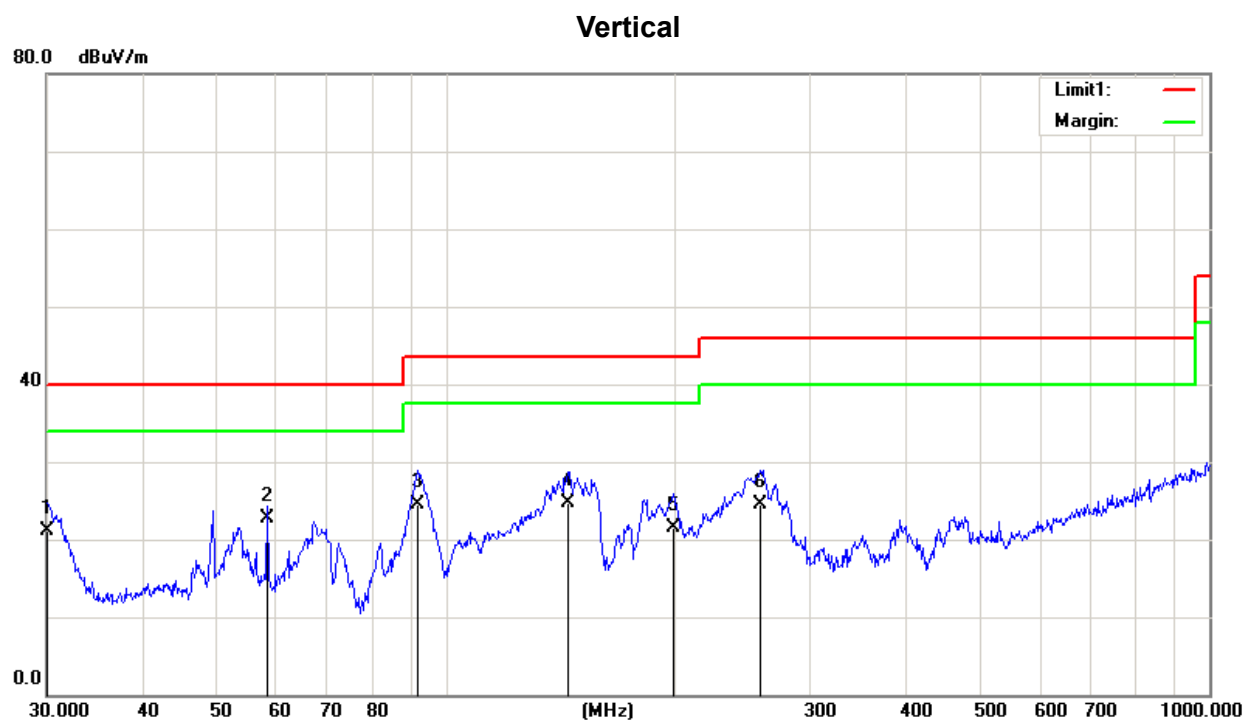
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $20 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor

5.7 TEST RESULTS - 30MHz TO 1000MHz

Test Mode : TX G Mode Channel 01

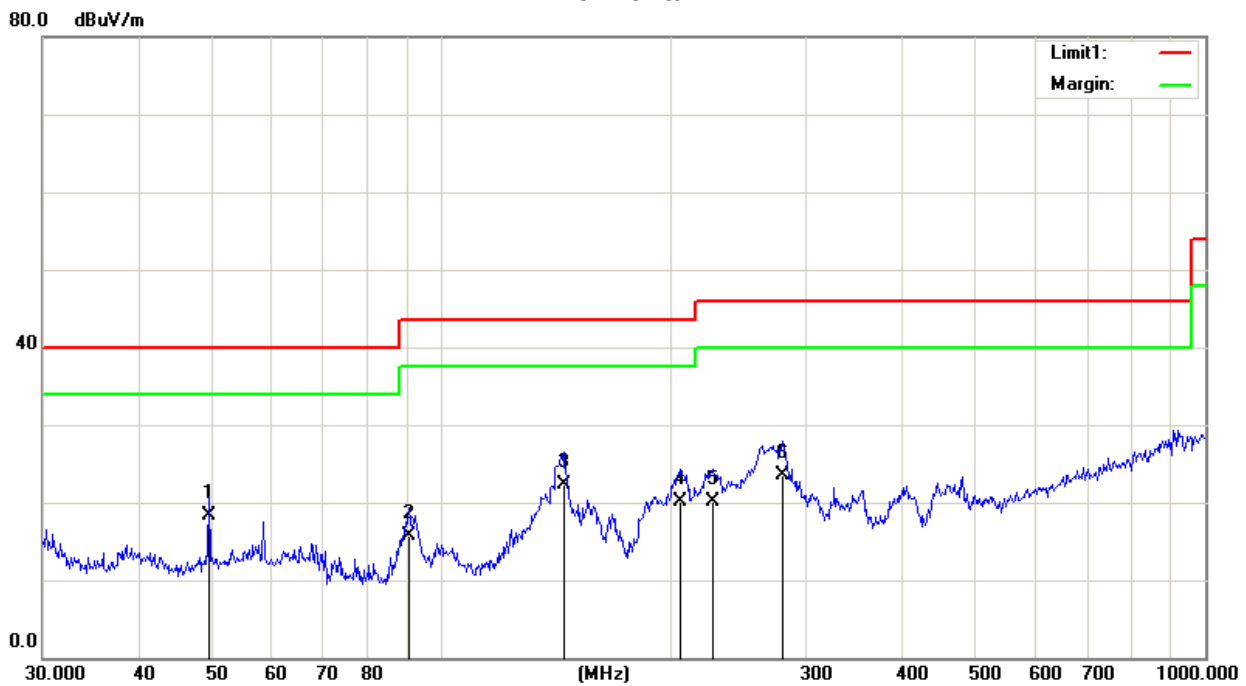


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		30.0000	32.55	-11.43	21.12	40.00	-18.88	QP	100	298
2	*	58.4074	35.86	-13.21	22.65	40.00	-17.35	QP	108	1
3		91.8162	40.86	-16.35	24.51	43.50	-18.99	QP	100	285
4		144.3348	38.04	-13.43	24.61	43.50	-18.89	QP	200	326
5		198.5879	34.09	-12.66	21.43	43.50	-22.07	QP	100	1
6		258.3263	32.16	-7.59	24.57	46.00	-21.43	QP	100	126

*:Maximum data x:Over limit !:over margin

Test Mode : TX G Mode Channel 01

Horizontal

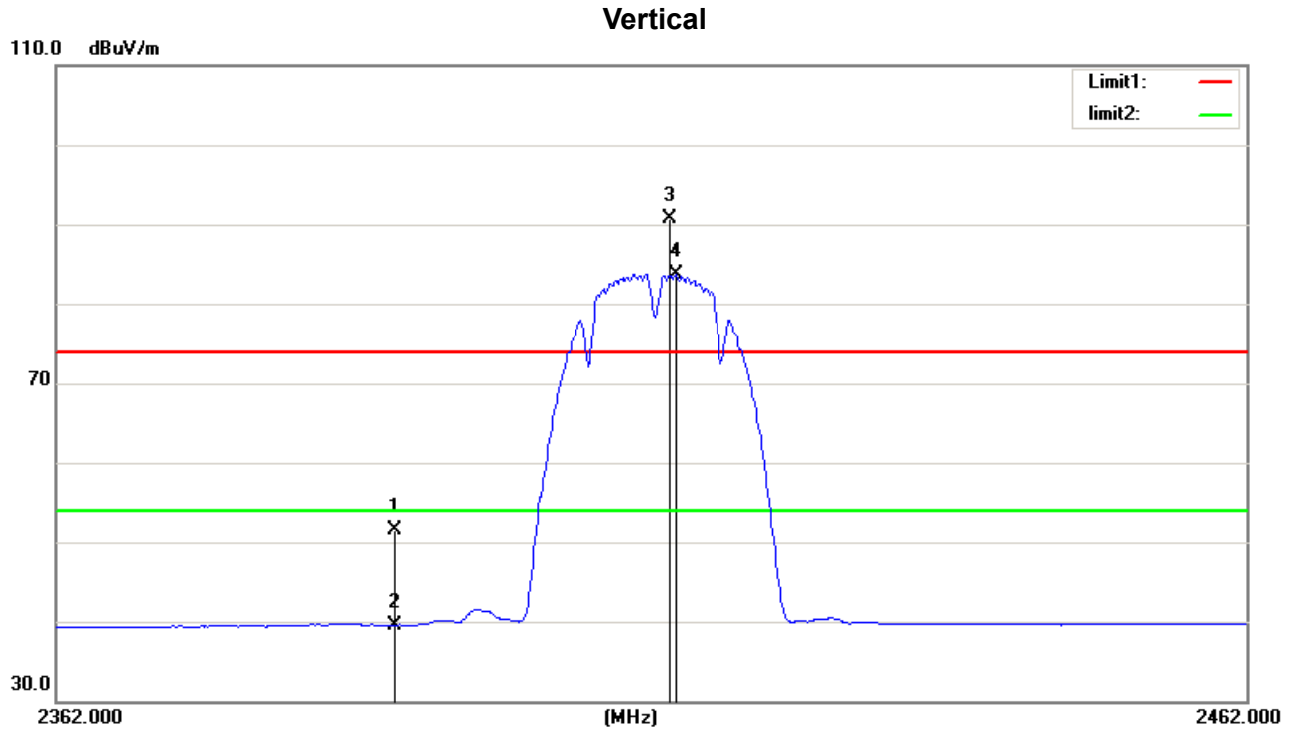


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		49.5328	33.52	-15.28	18.24	40.00	-21.76	400	286	
2		90.5374	34.01	-18.37	15.64	43.50	-27.86	200	110	
3	*	144.3348	36.60	-14.29	22.31	43.50	-21.19	300	148	
4		204.9551	31.34	-11.28	20.06	43.50	-23.44	200	308	
5		226.0994	29.65	-9.52	20.13	46.00	-25.87	100	332	
6		279.0436	29.32	-5.89	23.43	46.00	-22.57	100	236	

*:Maximum data x:Over limit !:over margin

5.8 TEST RESULTS- ABOVE 1000MHz(BAND EDGE)

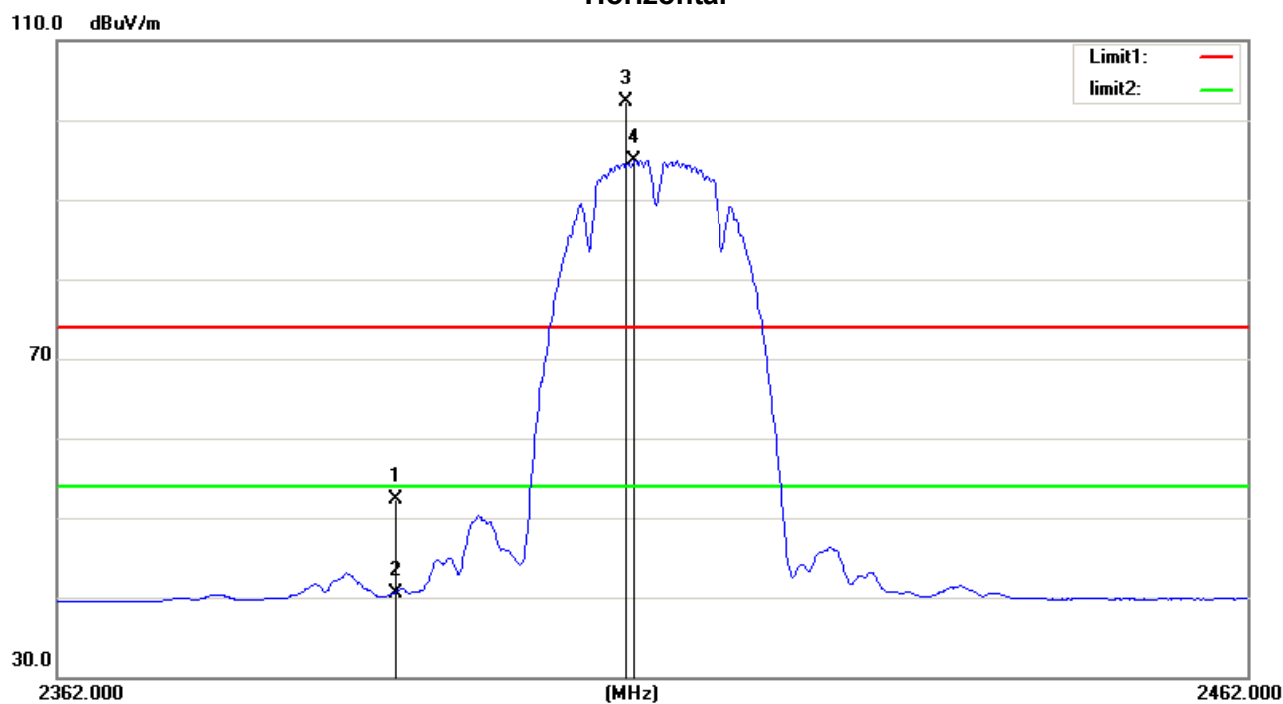
Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	22.02	29.47	51.49	74.00	-22.51	peak	150	246
2	2390.000	10.07	29.47	39.54	54.00	-14.46	AVG	150	246
3	2413.000	61.19	29.53	90.72	/	/	peak	150	246
4	2413.500	54.20	29.54	83.74	/	/	AVG	150	246

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz

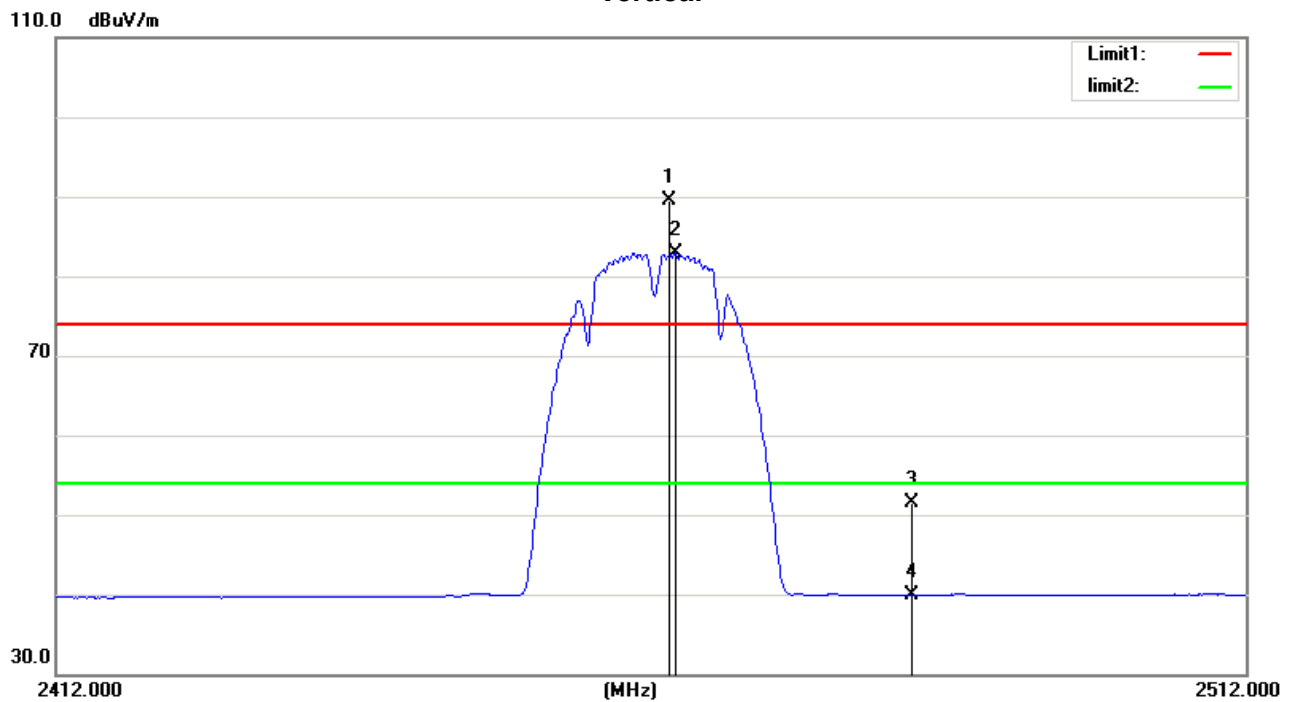
Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	22.90	29.47	52.37	74.00	-21.63	peak	150	80
2	2390.000	11.09	29.47	40.56	54.00	-13.44	AVG	150	80
3	2409.300	72.86	29.52	102.38	/	/	peak	150	80
4	2410.000	65.40	29.53	94.93	/	/	AVG	150	80

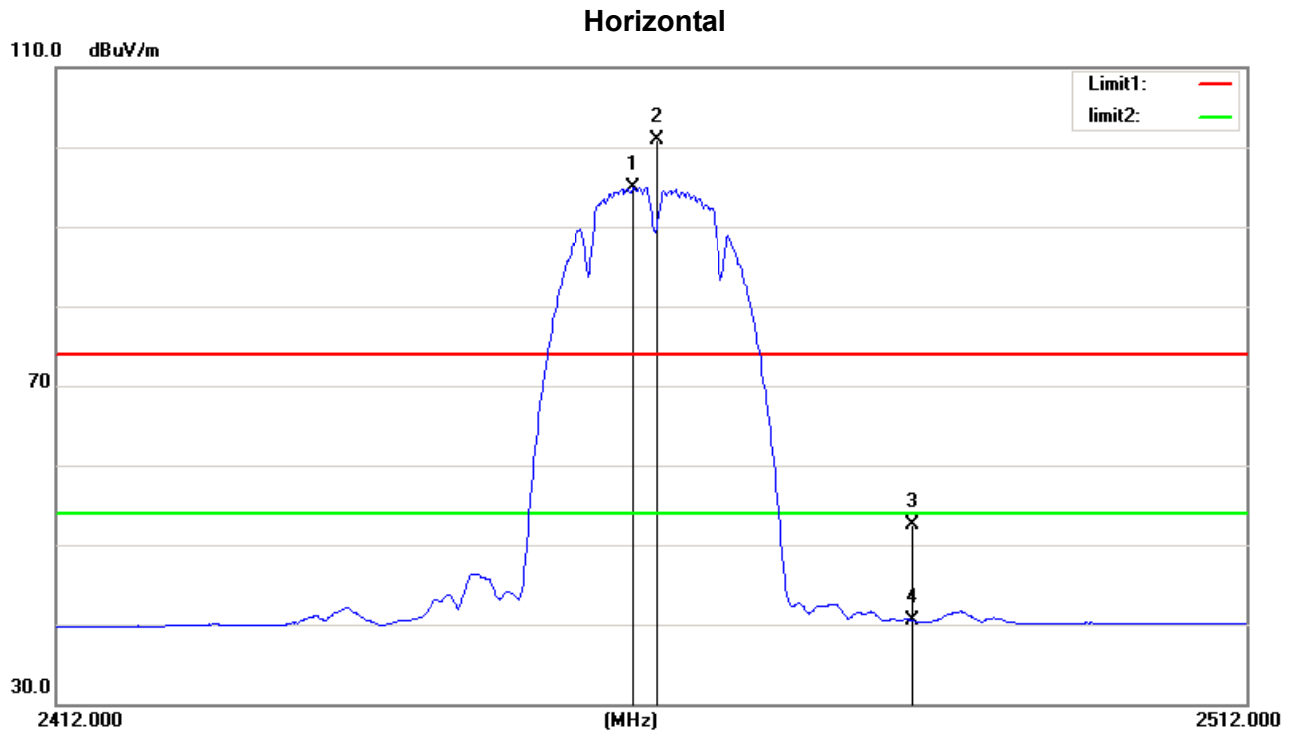
Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2463.000	59.77	29.67	89.44	/	/	peak	150	271
2	2463.500	53.30	29.68	82.98	/	/	AVG	150	271
3	2483.500	21.79	29.73	51.52	74.00	-22.48	peak	150	271
4	2483.500	10.18	29.73	39.91	54.00	-14.09	AVG	150	271

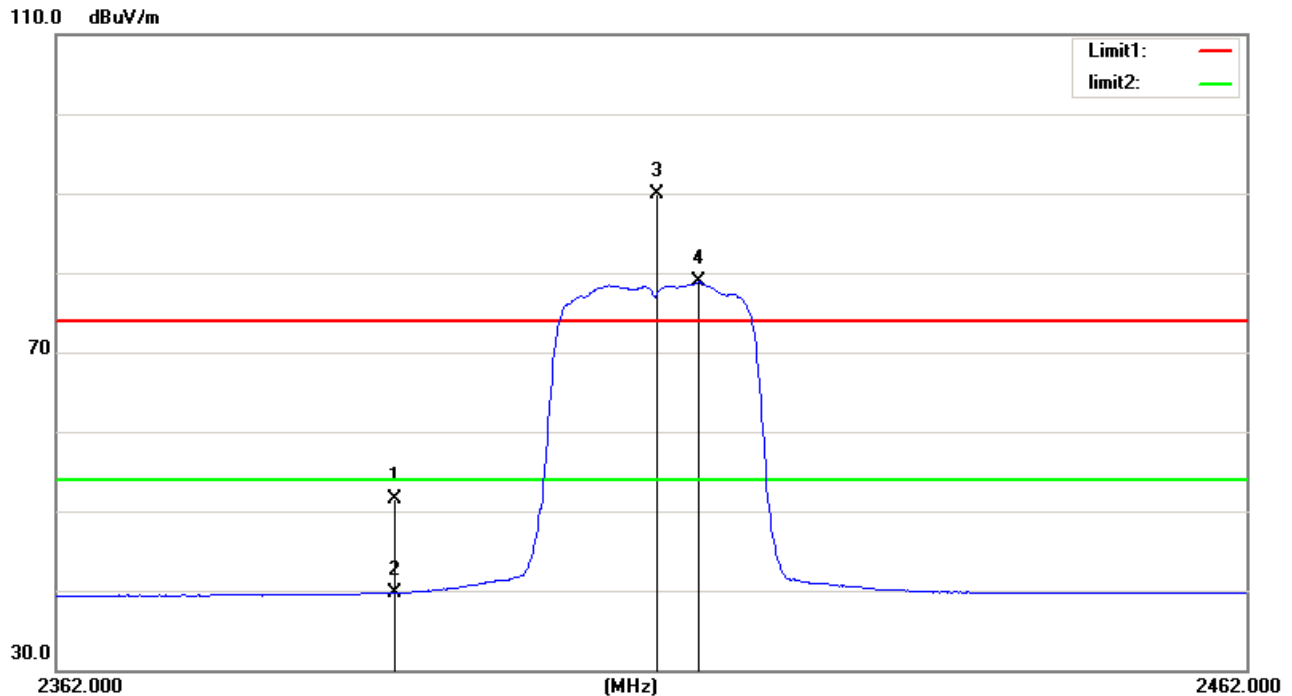
Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2460.000	65.33	29.67	95.00	/	/	AVG	150	70
2	2461.900	71.32	29.67	100.99	/	/	peak	150	70
3	2483.500	22.70	29.73	52.43	74.00	-21.57	peak	150	70
4	2483.500	10.76	29.73	40.49	54.00	-13.51	AVG	150	70

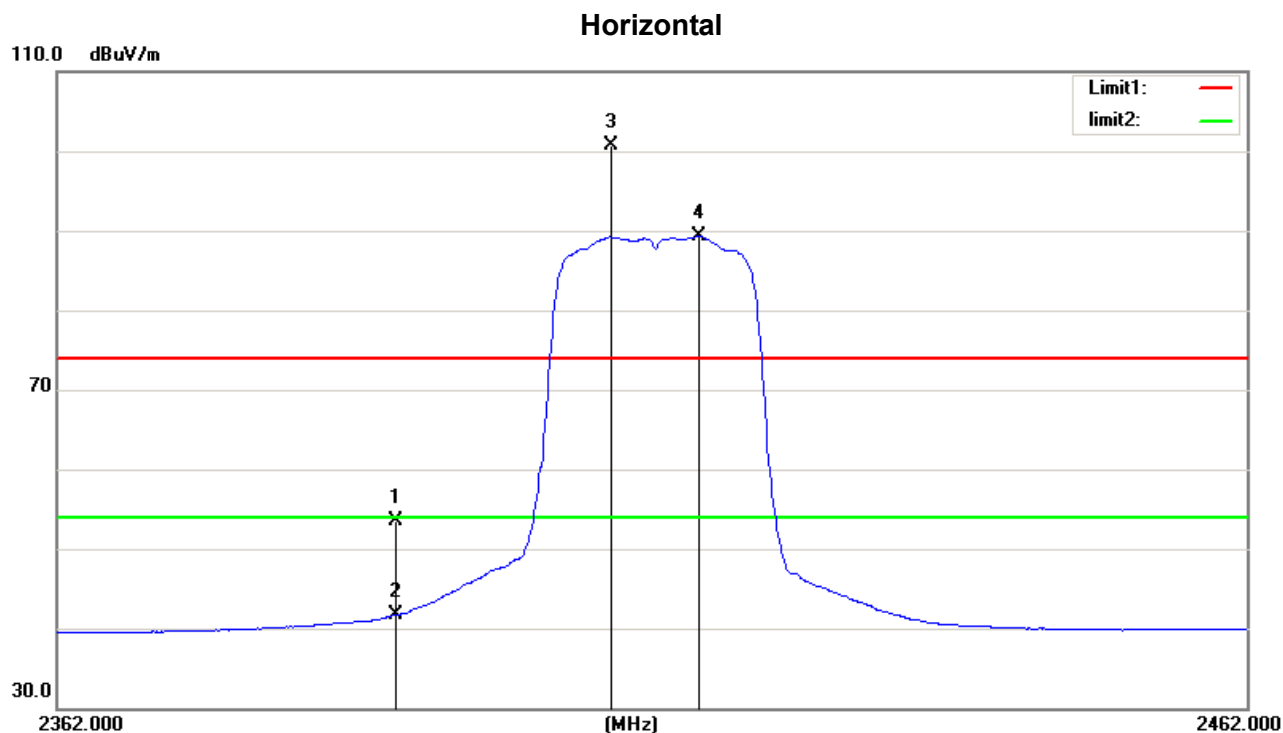
Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	21.97	29.47	51.44	74.00	-22.56	peak	150	79
2	2390.000	10.28	29.47	39.75	54.00	-14.25	AVG	150	79
3	2411.900	60.32	29.53	89.85	/	/	peak	150	79
4	2415.400	49.27	29.54	78.81	/	/	AVG	150	79

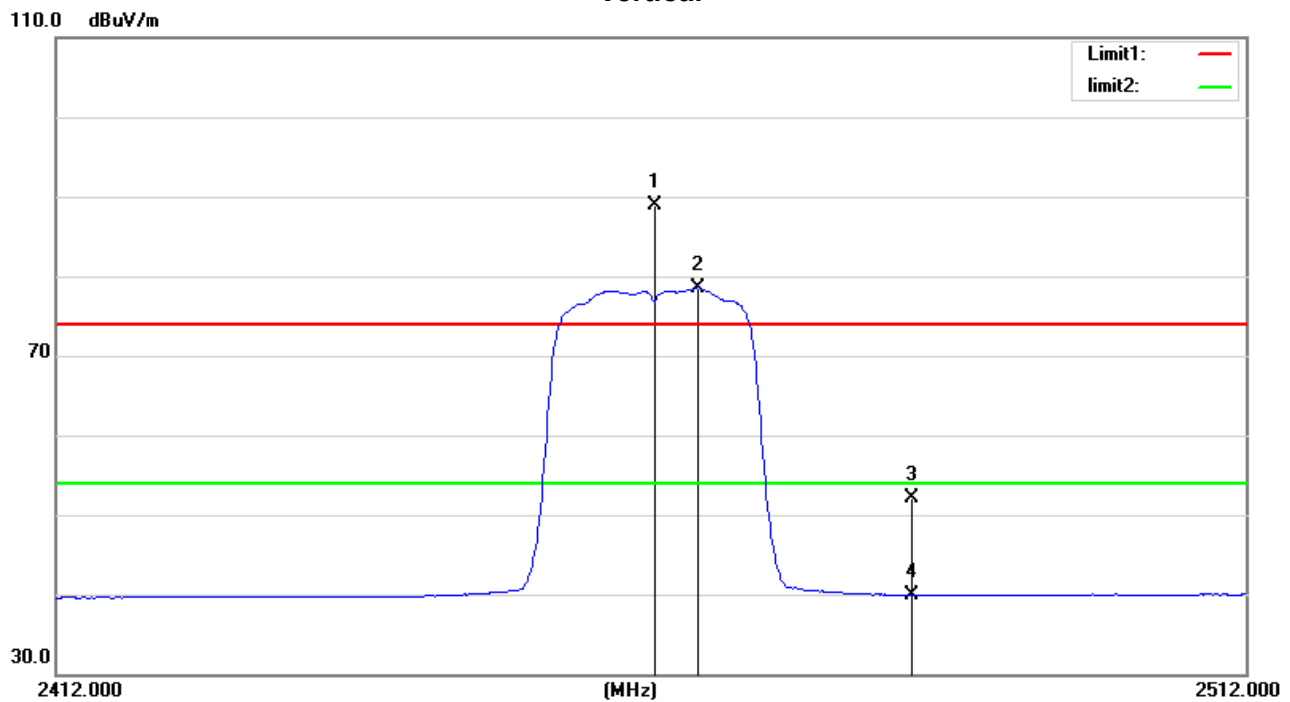
Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	23.99	29.47	53.46	74.00	-20.54	peak	150	190
2	2390.000	12.19	29.47	41.66	54.00	-12.34	AVG	150	190
3	2408.100	71.16	29.52	100.68	/	/	peak	150	190
4	2415.400	59.85	29.54	89.39	/	/	AVG	150	190

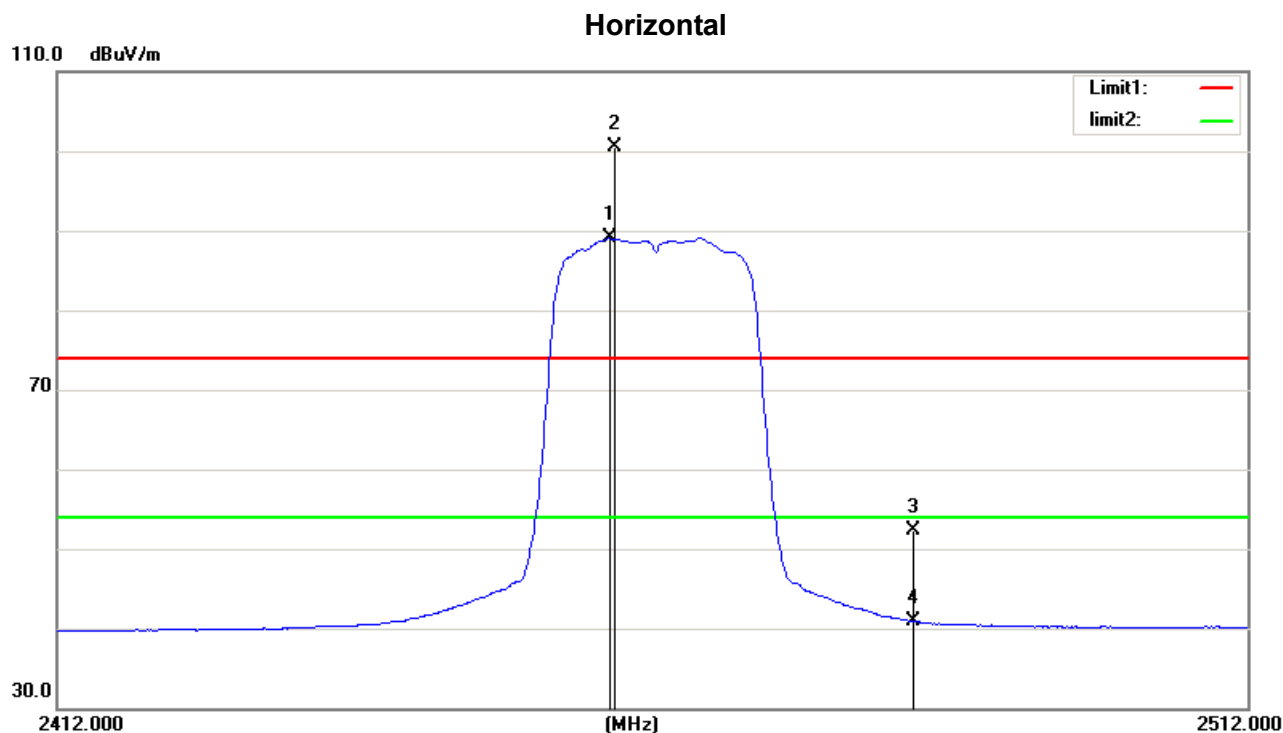
Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz

Vertical



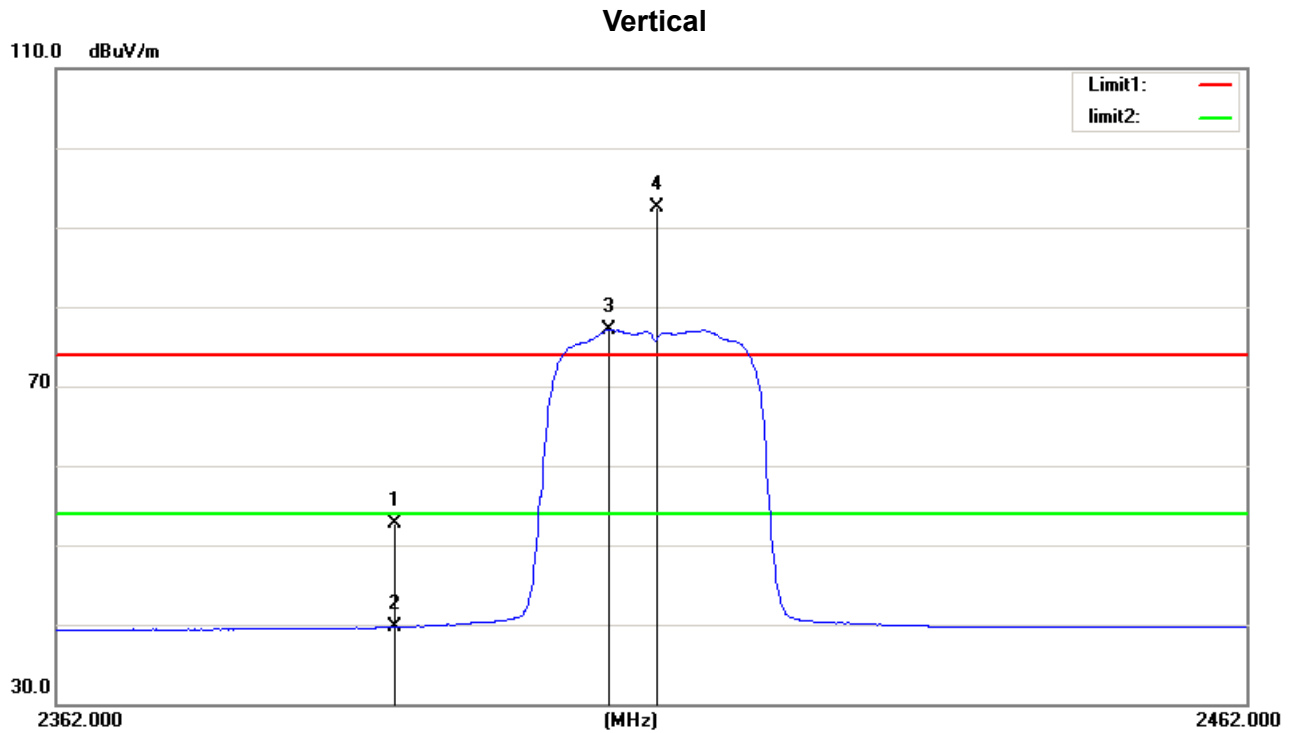
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2461.800	59.19	29.67	88.86	/	/	peak	150	273
2	2465.400	48.92	29.68	78.60	/	/	AVG	150	273
3	2483.500	22.32	29.73	52.05	74.00	-21.95	peak	150	273
4	2483.500	10.23	29.73	39.96	54.00	-14.04	AVG	150	273

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz



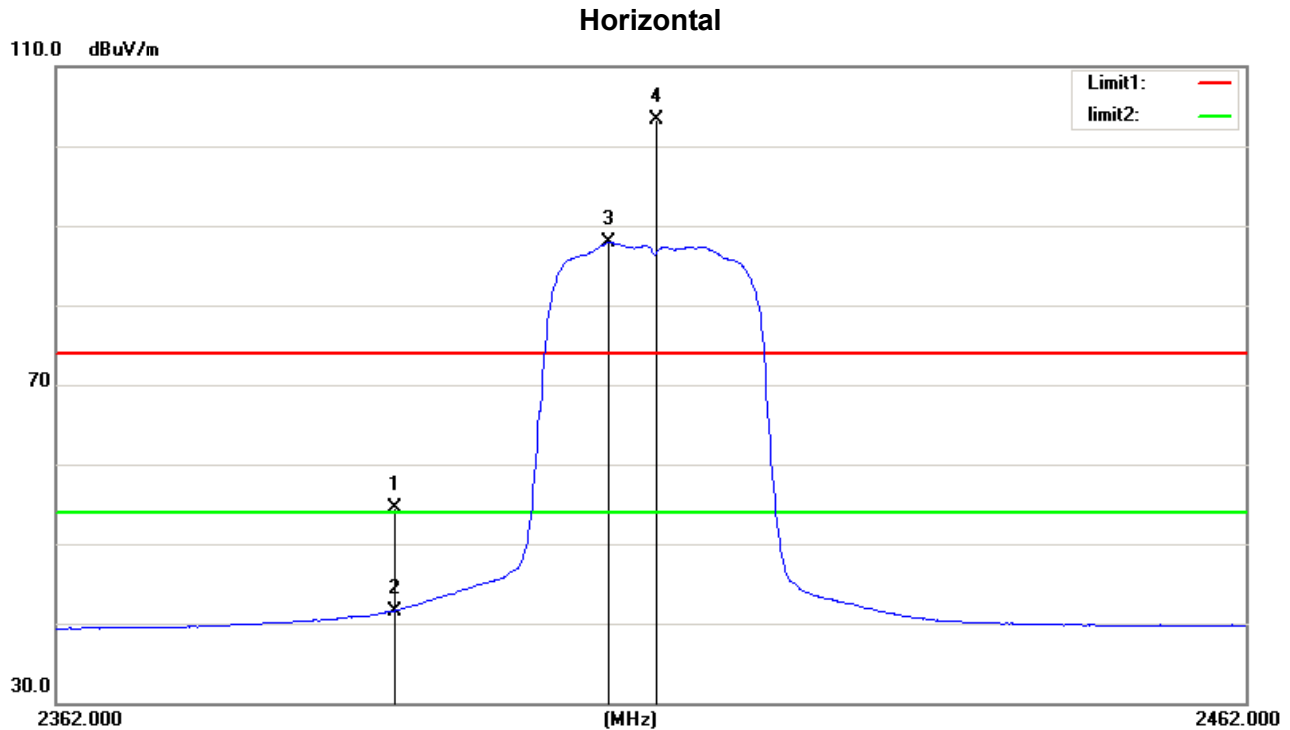
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2457.900	59.40	29.66	89.06	/	/	AVG	150	68
2	2458.200	70.82	29.66	100.48	/	/	peak	150	68
3	2483.500	22.55	29.73	52.28	74.00	-21.72	peak	150	68
4	2483.500	11.19	29.73	40.92	54.00	-13.08	AVG	150	68

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2412 MHz



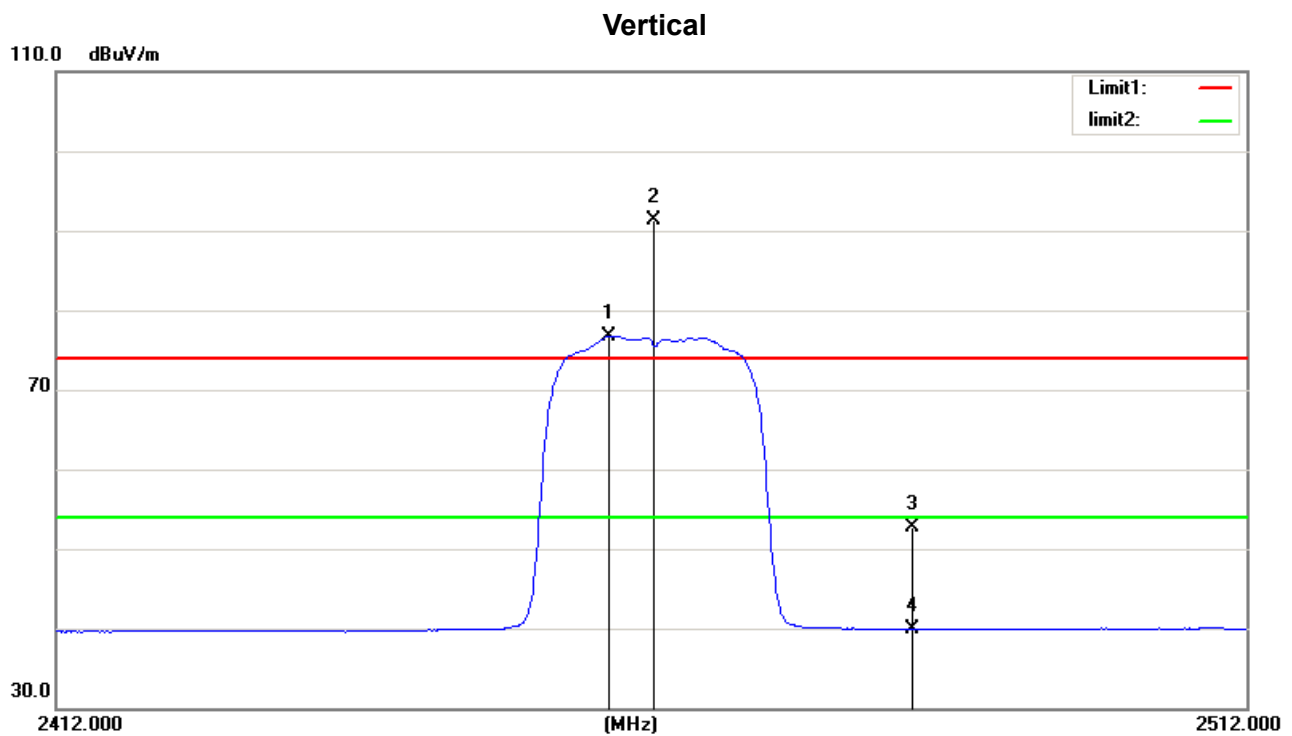
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	23.29	29.47	52.76	74.00	-21.24	peak	150	190
2	2390.000	10.21	29.47	39.68	54.00	-14.32	AVG	150	190
3	2408.000	47.61	29.52	77.13	/	/	AVG	150	190
4	2411.900	62.96	29.53	92.49	/	/	peak	150	190

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2412 MHz



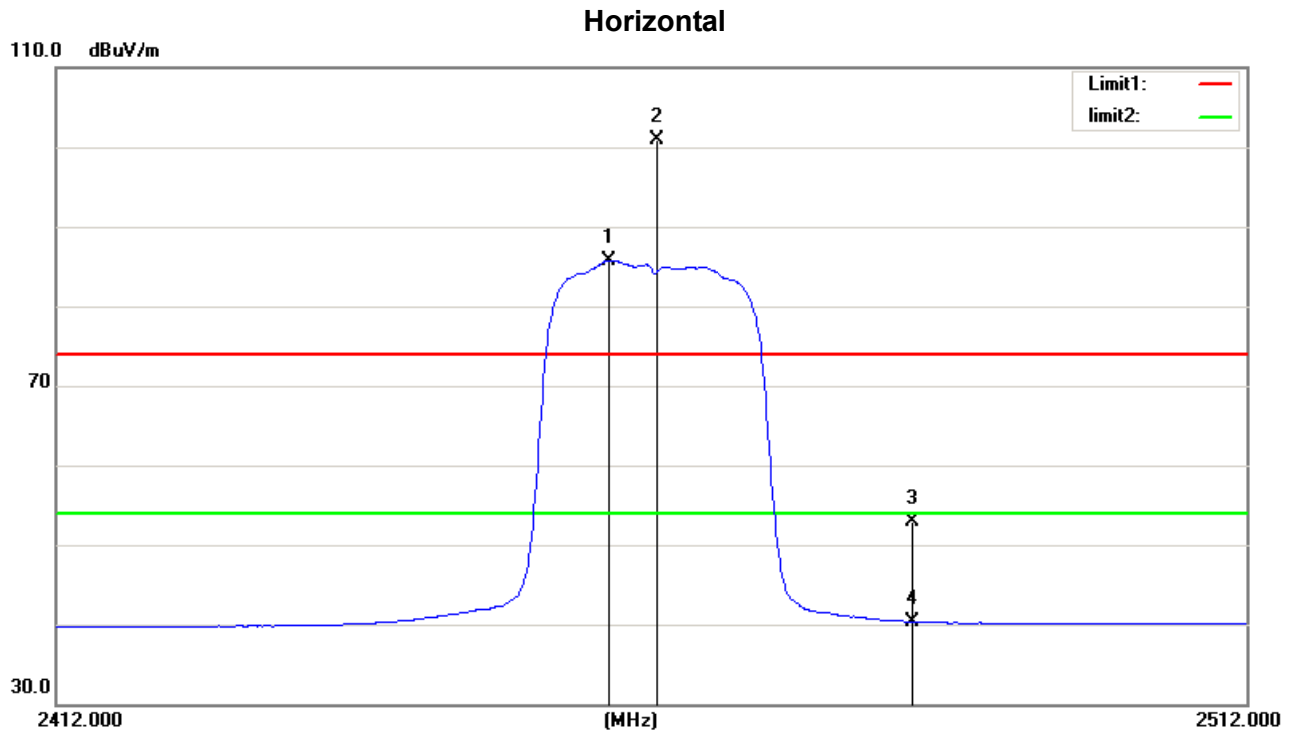
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	25.02	29.47	54.49	74.00	-19.51	peak	150	285
2	2390.000	12.10	29.47	41.57	54.00	-12.43	AVG	150	285
3	2408.000	58.37	29.52	87.89	/	/	AVG	150	285
4	2411.900	73.78	29.53	103.31	/	/	peak	150	285

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2462 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2458.000	47.12	29.66	76.78	/	/	AVG	150	274
2	2461.700	61.57	29.67	91.24	/	/	peak	150	274
3	2483.500	22.90	29.73	52.63	74.00	-21.37	peak	150	274
4	2483.500	10.17	29.73	39.90	54.00	-14.10	AVG	150	274

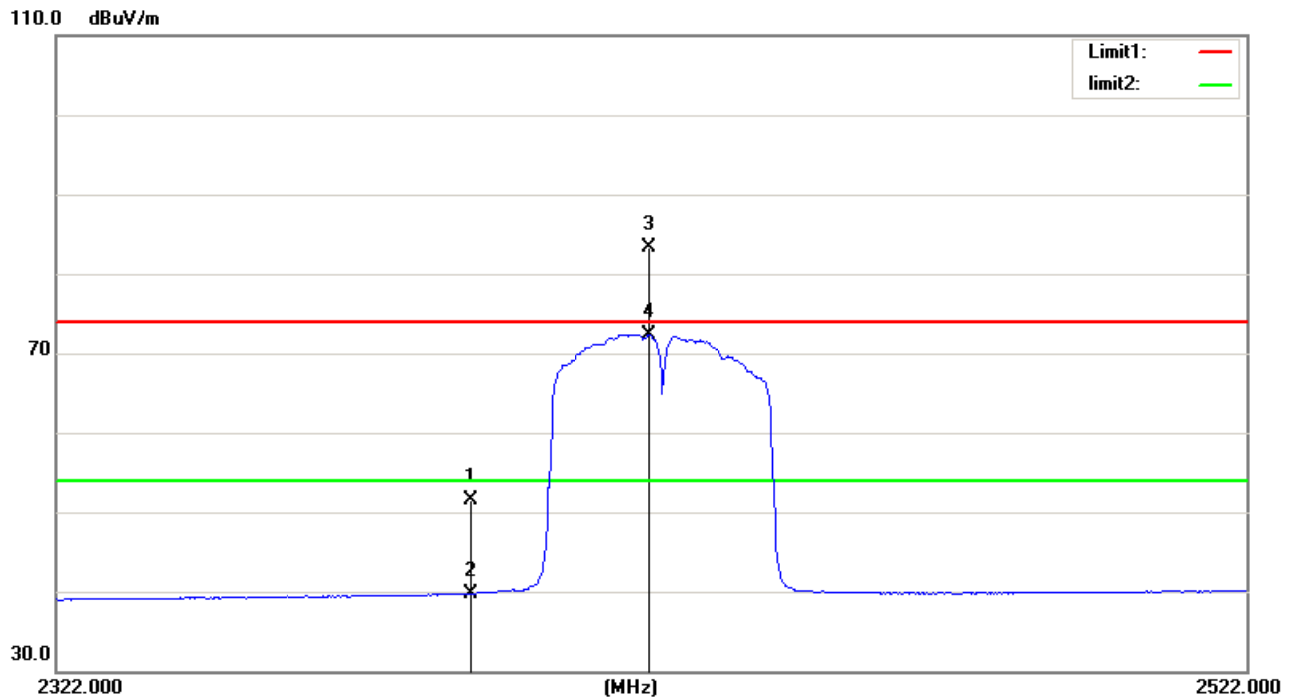
Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2462 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2458.000	56.11	29.66	85.77	/	/	AVG	150	311
2	2461.900	71.27	29.67	100.94	/	/	peak	150	311
3	2483.500	23.14	29.73	52.87	74.00	-21.13	peak	150	311
4	2483.500	10.55	29.73	40.28	54.00	-13.72	AVG	150	311

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2422MHz

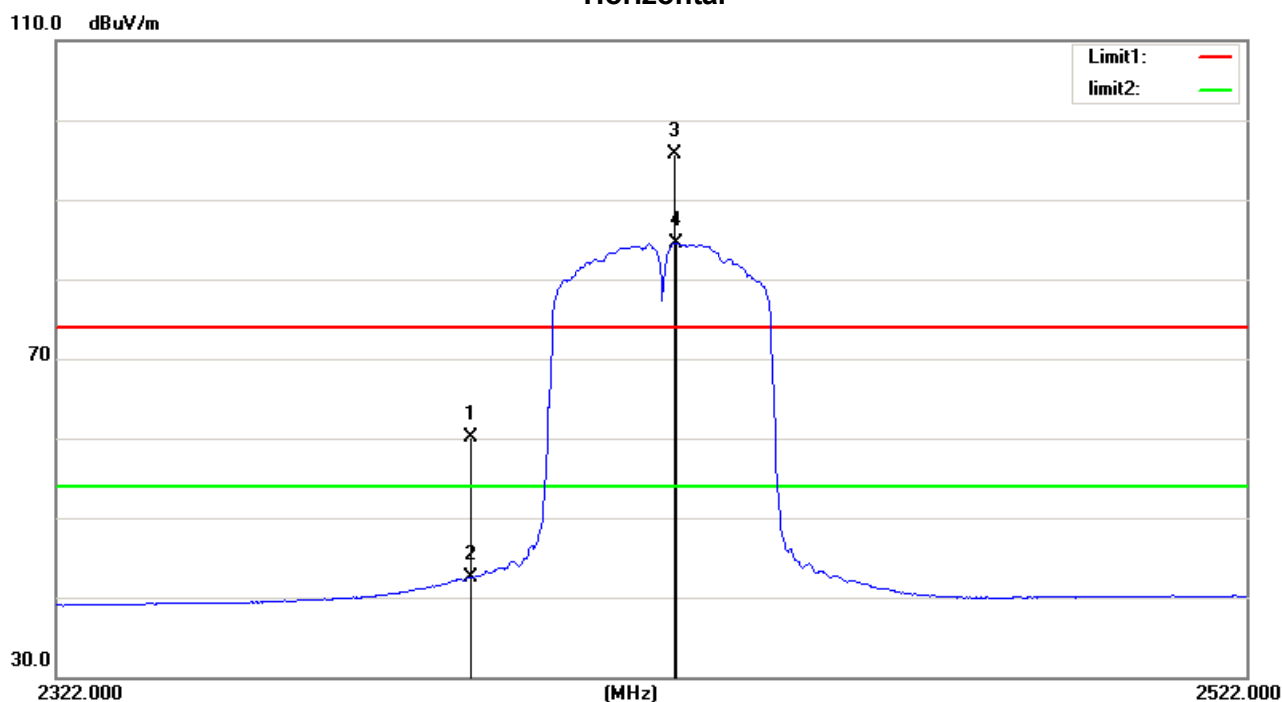
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	21.96	29.47	51.43	74.00	-22.57	peak	150	197
2	2390.000	10.31	29.47	39.78	54.00	-14.22	AVG	150	197
3	2419.600	53.84	29.55	83.39	/	/	peak	150	197
4	2419.600	42.84	29.55	72.39	/	/	AVG	150	197

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2422MHz

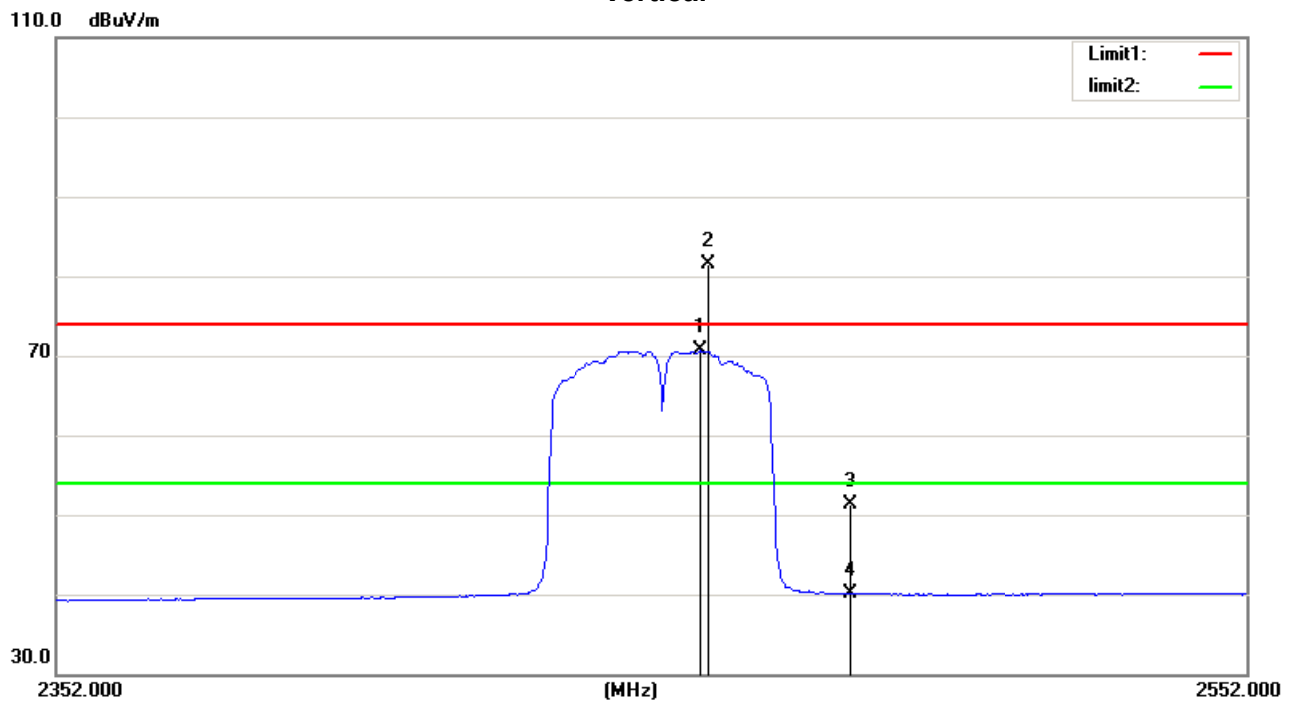
Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2390.000	30.58	29.47	60.05	74.00	-13.95	peak	150	67
2	2390.000	13.03	29.47	42.50	54.00	-11.50	AVG	150	67
3	2423.800	66.14	29.57	95.71	/	/	peak	150	67
4	2424.000	55.01	29.57	84.58	/	/	AVG	150	67

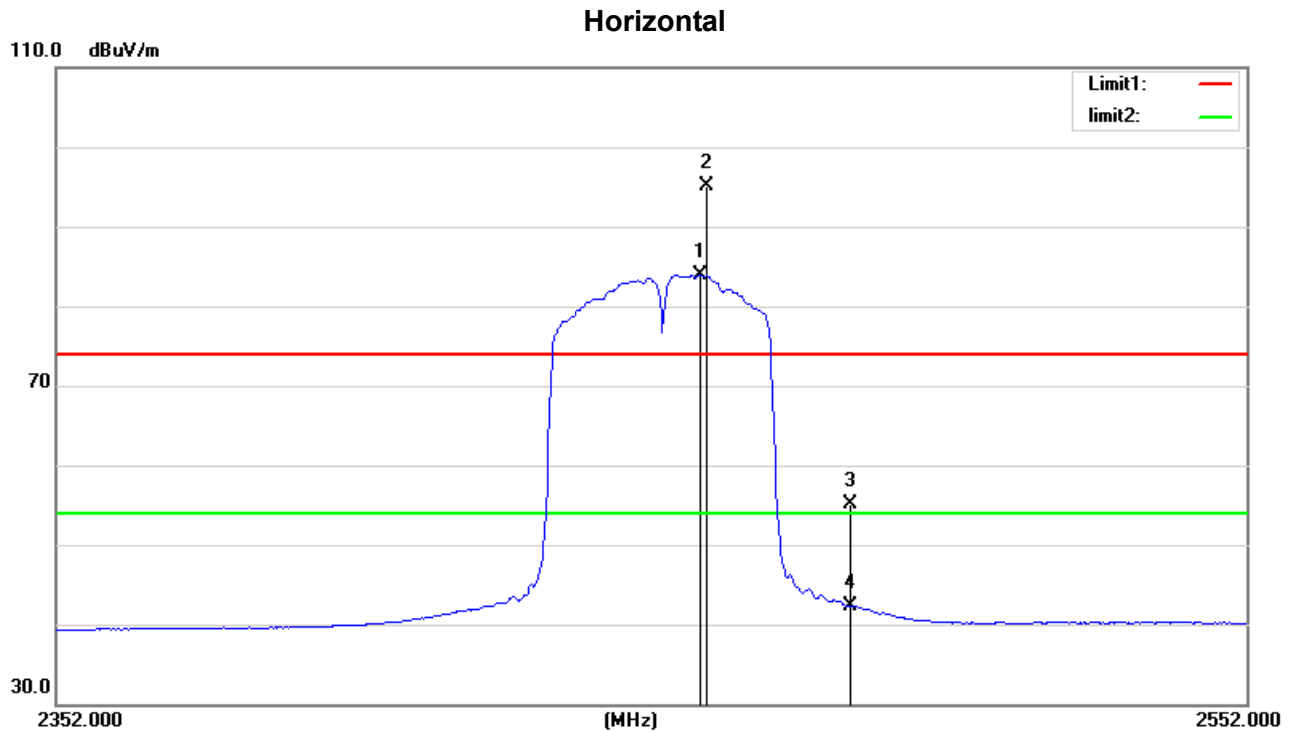
Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2452 MHz

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2458.000	40.96	29.66	70.62	/	/	AVG	150	247
2	2459.400	51.82	29.66	81.48	/	/	peak	150	247
3	2483.500	21.48	29.73	51.21	74.00	-22.79	peak	150	247
4	2483.500	10.39	29.73	40.12	54.00	-13.88	AVG	150	247

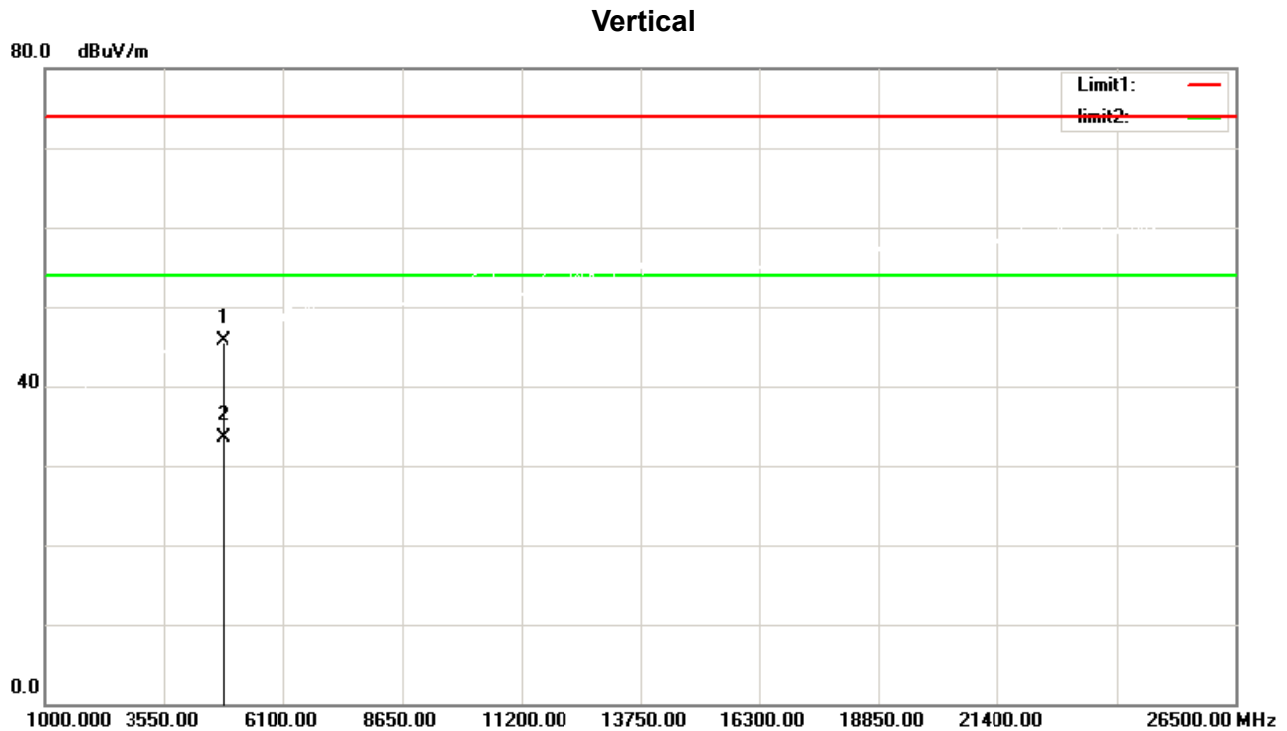
Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2452 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	2458.000	54.28	29.66	83.94	/	/	AVG	150	84
2	2459.200	65.51	29.66	95.17	/	/	peak	150	84
3	2483.500	25.31	29.73	55.04	74.00	-18.96	peak	150	84
4	2483.500	12.66	29.73	42.39	54.00	-11.61	AVG	150	84

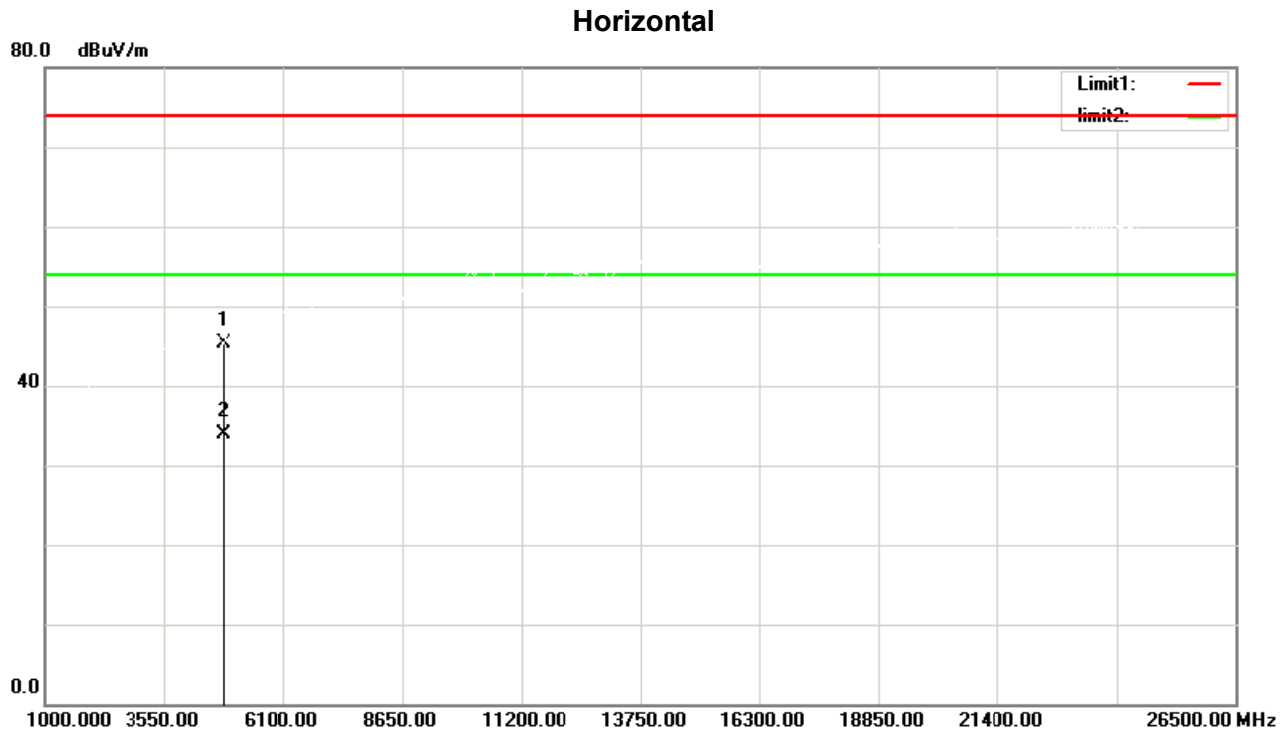
5.9TEST RESULTS- ABOVE 1000MHz(HARMONIC)

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz



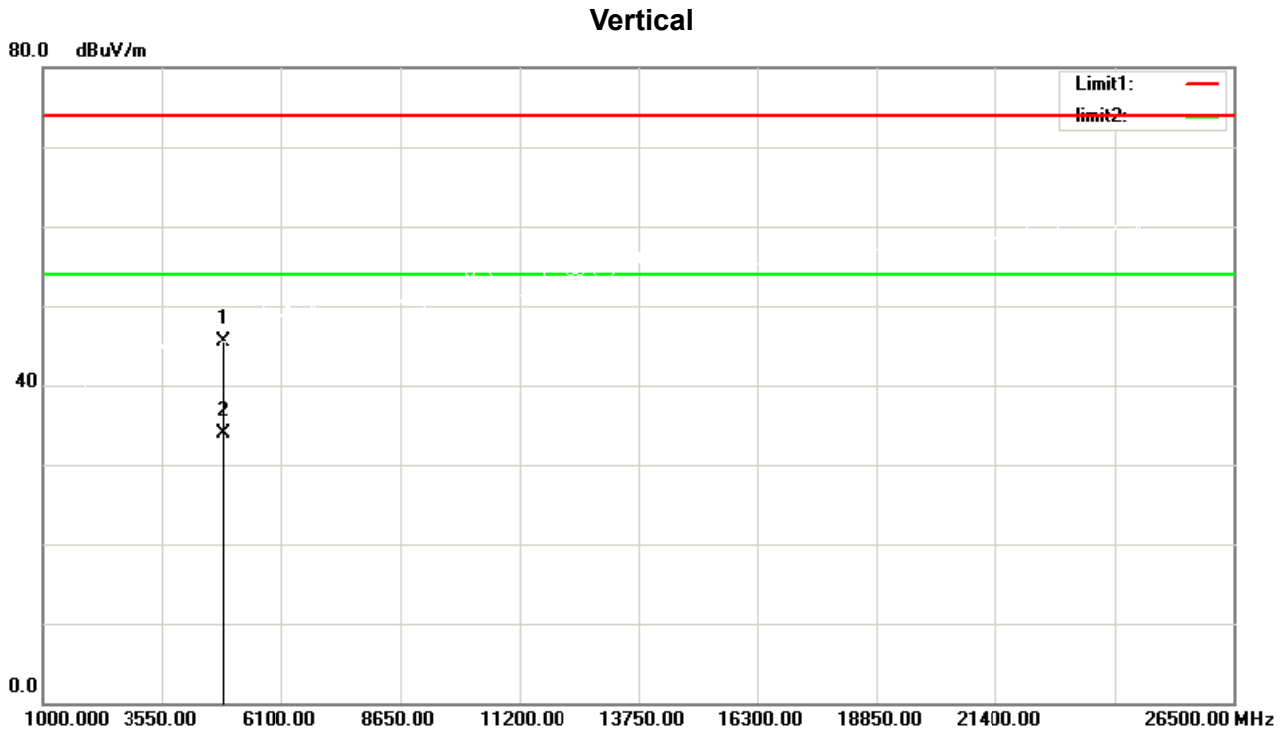
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4824.000	53.65	-7.99	45.66	74.00	-28.34	peak	150	132
2	4824.000	41.47	-7.99	33.48	54.00	-20.52	AVG	150	132

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz



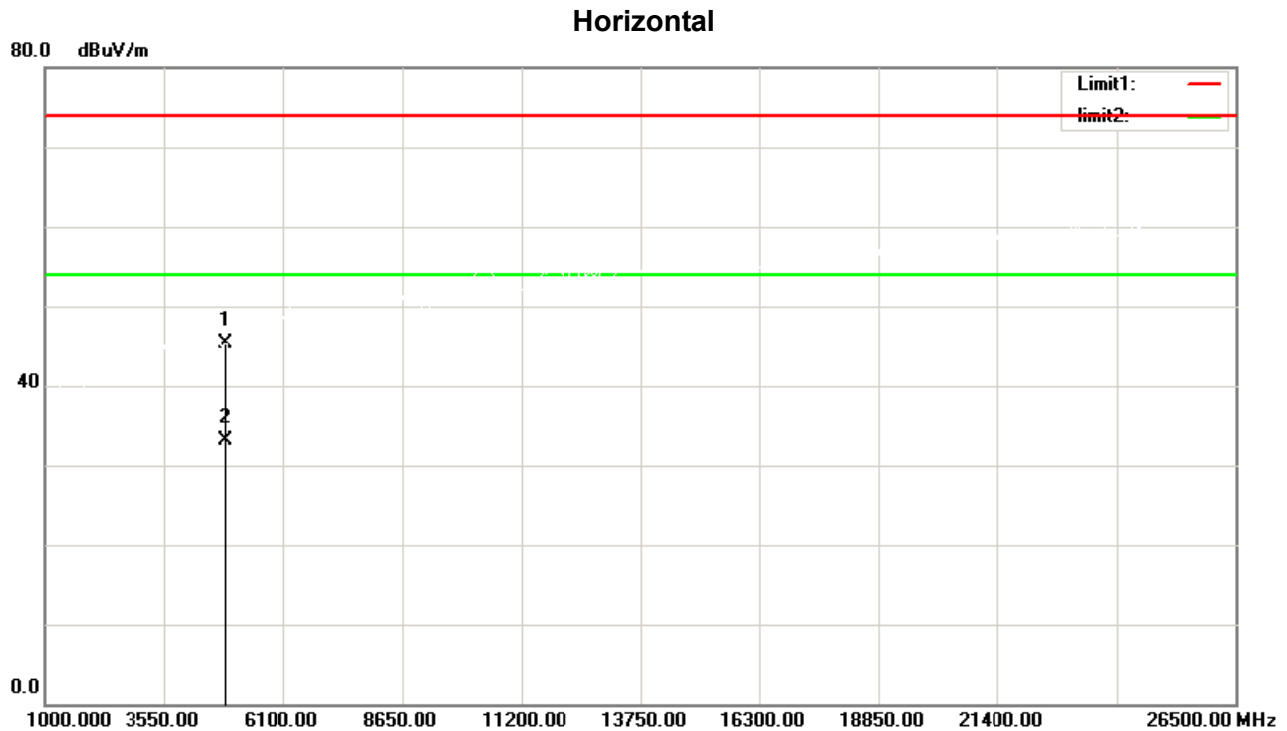
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4824.000	53.27	-7.99	45.28	74.00	-28.72	peak	150	25
2	4824.000	41.83	-7.99	33.84	54.00	-20.16	AVG	150	25

Orthogonal Axis	X
Test Mode:	TX B Mode 2437 MHz



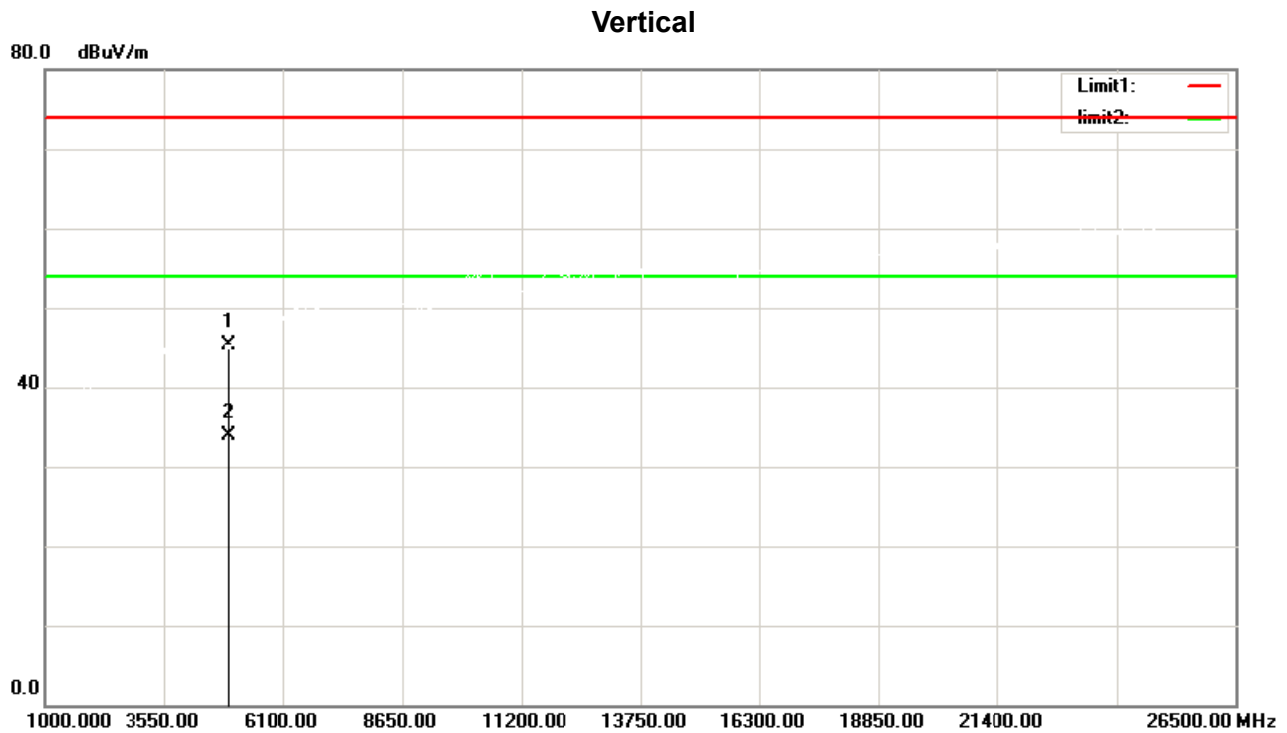
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	53.36	-7.89	45.47	74.00	-28.53	peak	150	256
2	4874.000	41.74	-7.89	33.85	54.00	-20.15	AVG	150	256

Orthogonal Axis	X
Test Mode:	TX B Mode 2437 MHz



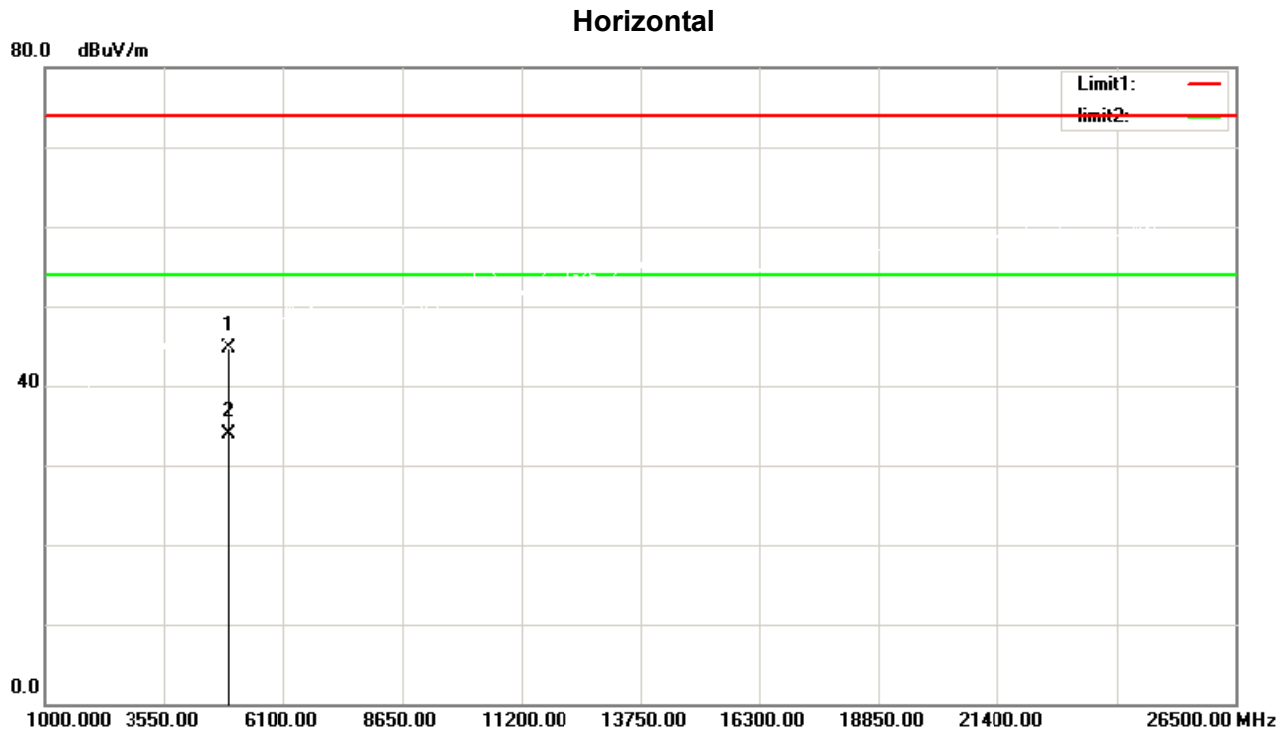
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	53.16	-7.89	45.27	74.00	-28.73	peak	150	114
2	4874.000	41.06	-7.89	33.17	54.00	-20.83	AVG	150	114

Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz



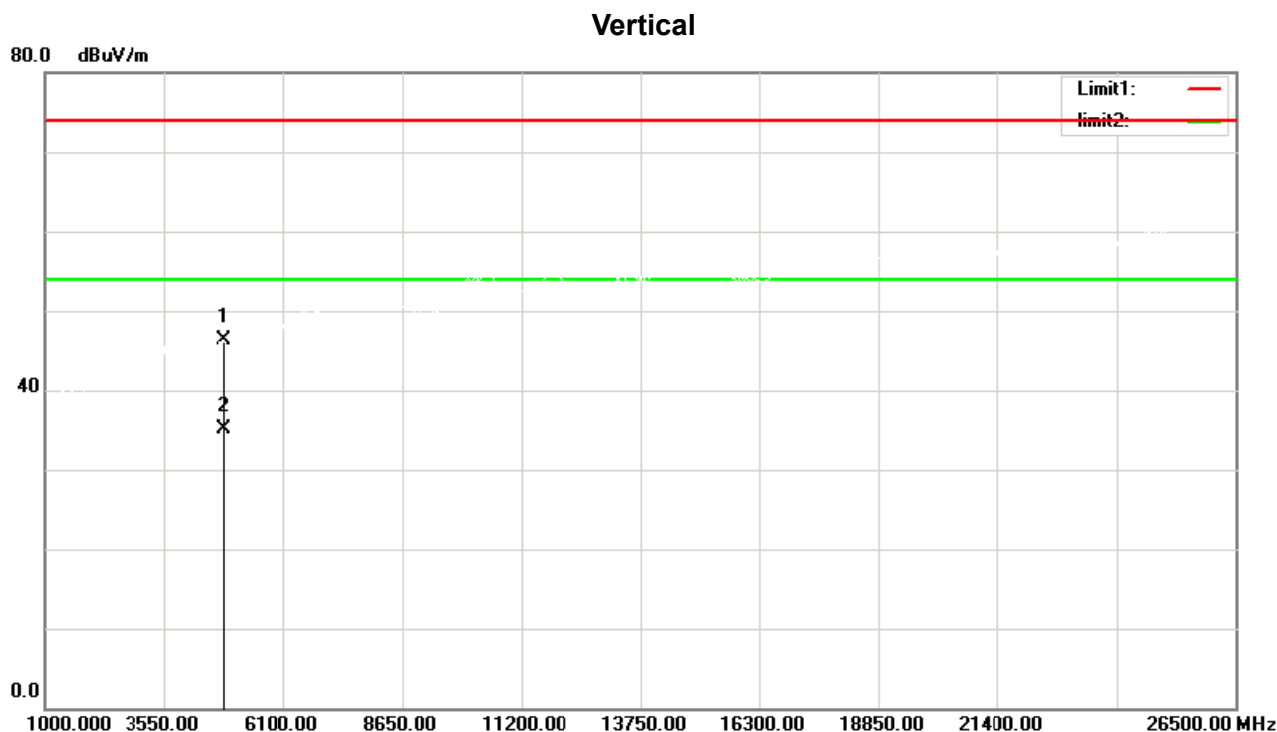
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4924.000	53.06	-7.78	45.28	74.00	-28.72	peak	150	1
2	4924.000	41.65	-7.78	33.87	54.00	-20.13	AVG	150	1

Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz



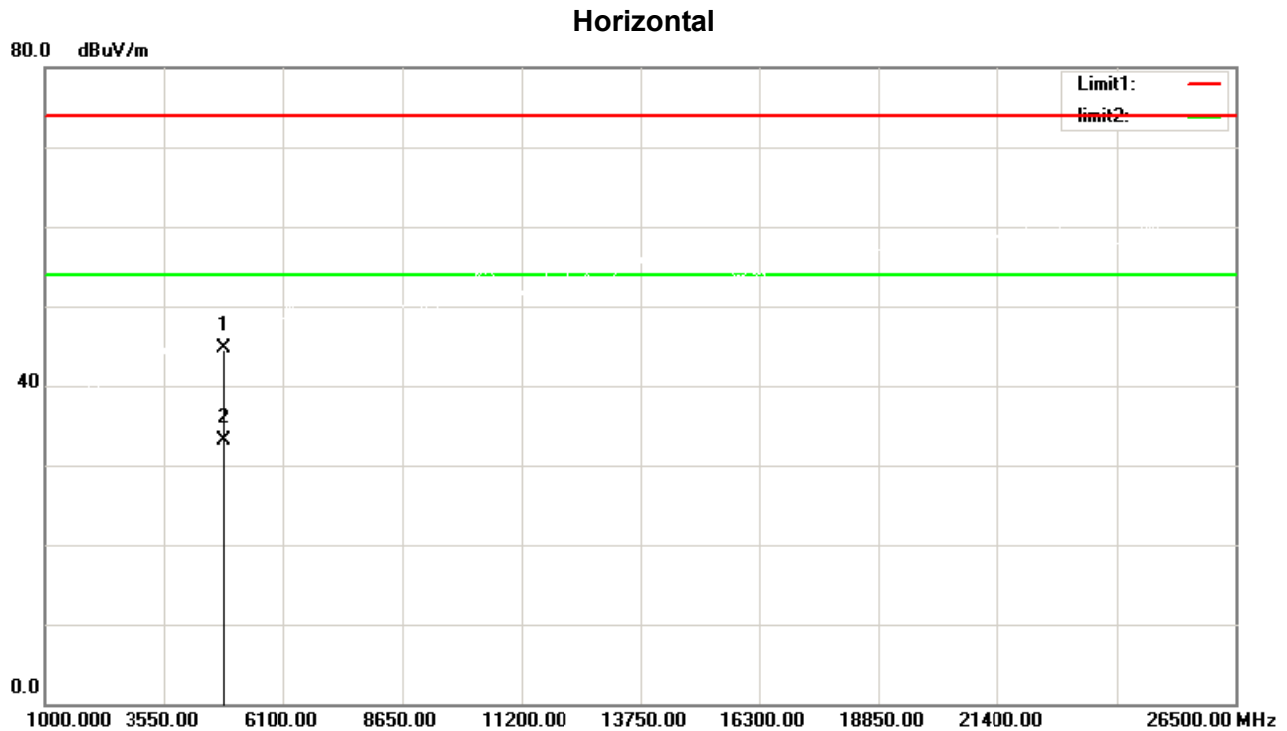
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4924.000	52.48	-7.78	44.70	74.00	-29.30	peak	150	12
2	4924.000	41.70	-7.78	33.92	54.00	-20.08	AVG	150	12

Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz



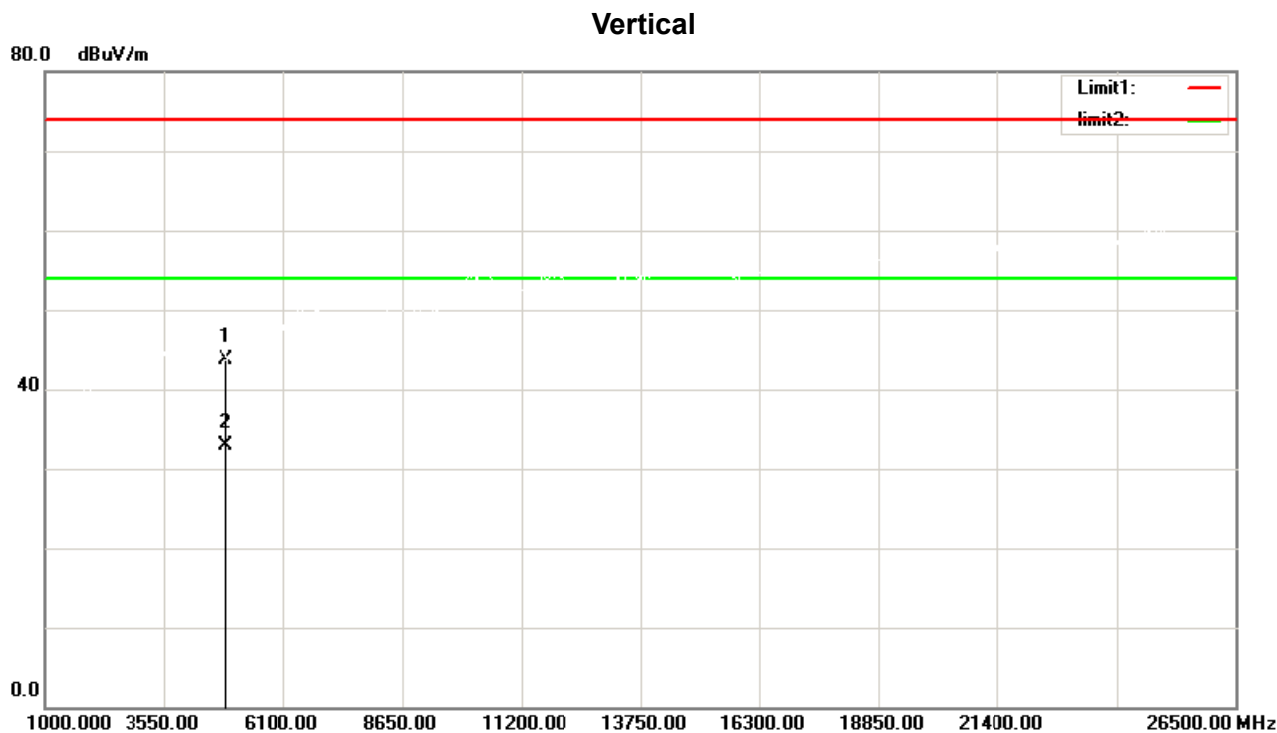
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4824.000	54.21	-7.99	46.22	74.00	-27.78	peak	150	23
2	4824.000	43.18	-7.99	35.19	54.00	-18.81	AVG	150	23

Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz



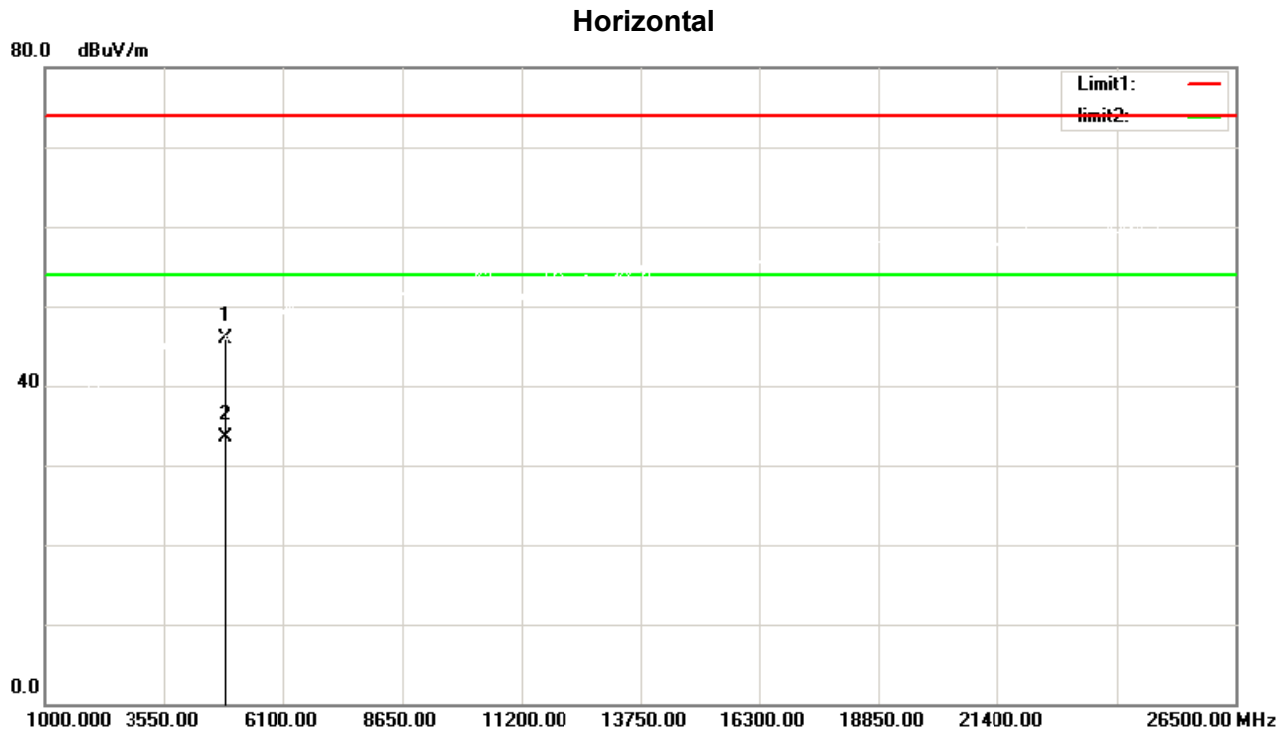
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4824.000	52.70	-7.99	44.71	74.00	-29.29	peak	150	258
2	4824.000	41.05	-7.99	33.06	54.00	-20.94	AVG	150	258

Orthogonal Axis	X
Test Mode:	TX G Mode 2437 MHz



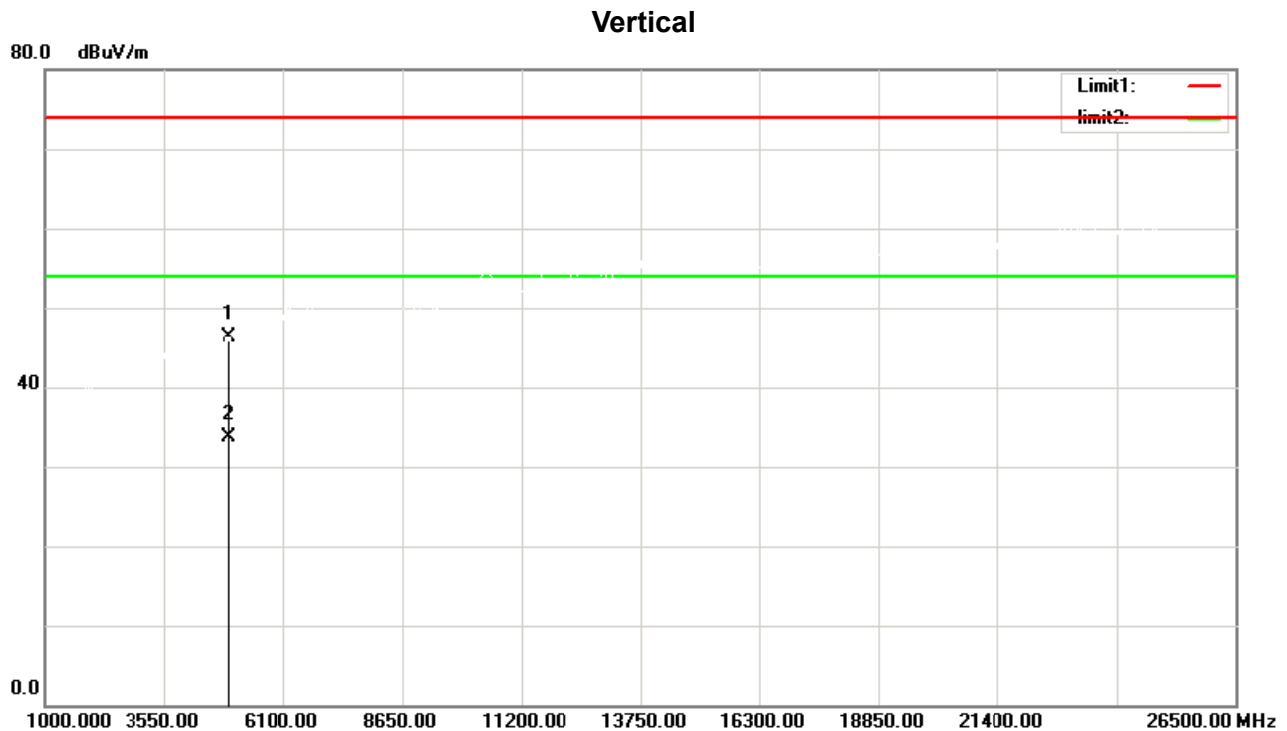
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	51.53	-7.89	43.64	74.00	-30.36	peak	150	2
2	4874.000	40.87	-7.89	32.98	54.00	-21.02	AVG	150	2

Orthogonal Axis	X
Test Mode:	TX G Mode 2437 MHz



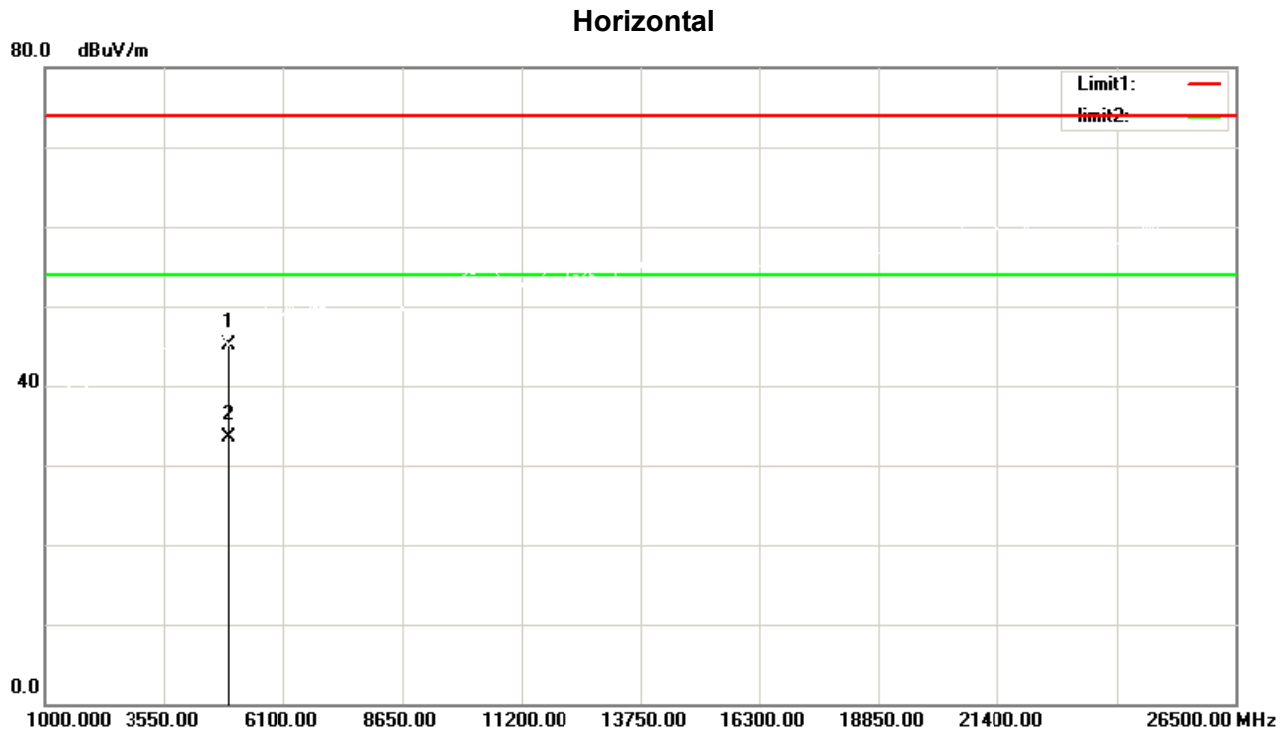
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	53.76	-7.89	45.87	74.00	-28.13	peak	150	13
2	4874.000	41.31	-7.89	33.42	54.00	-20.58	AVG	150	13

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz



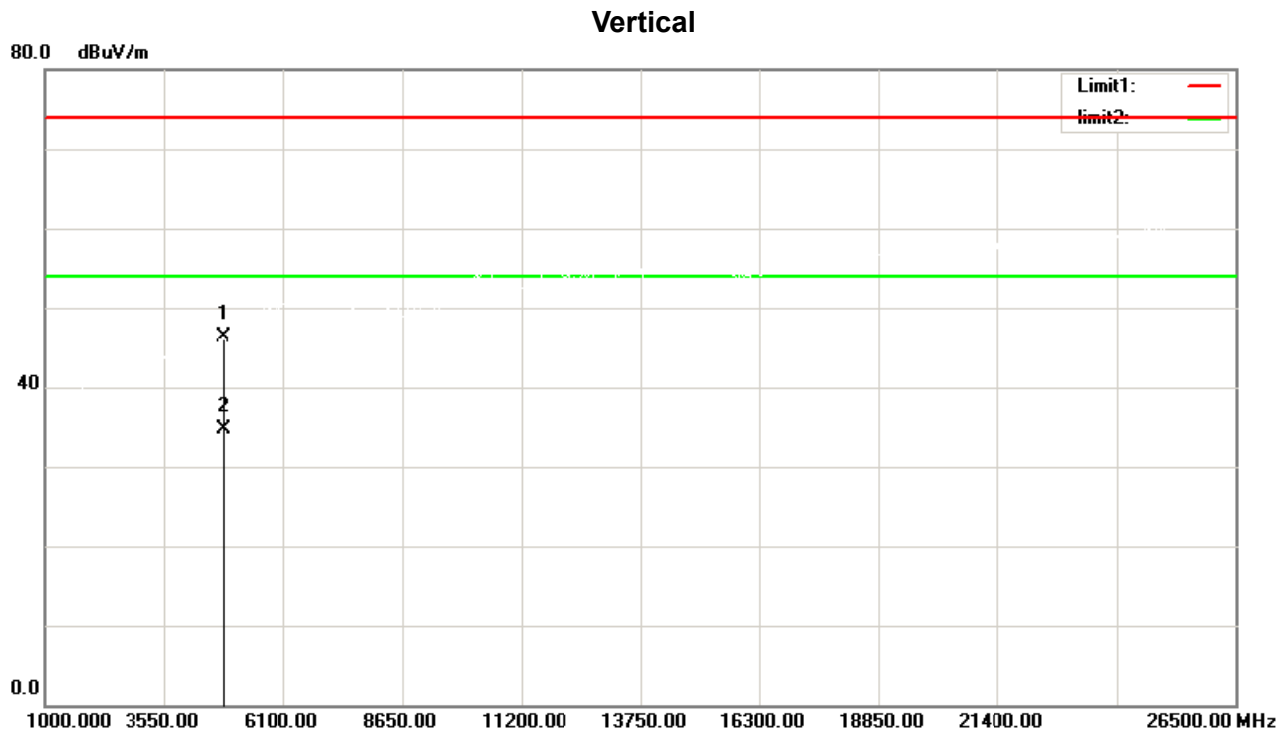
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4924.000	54.06	-7.78	46.28	74.00	-27.72	peak	150	236
2	4924.000	41.57	-7.78	33.79	54.00	-20.21	AVG	150	236

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz



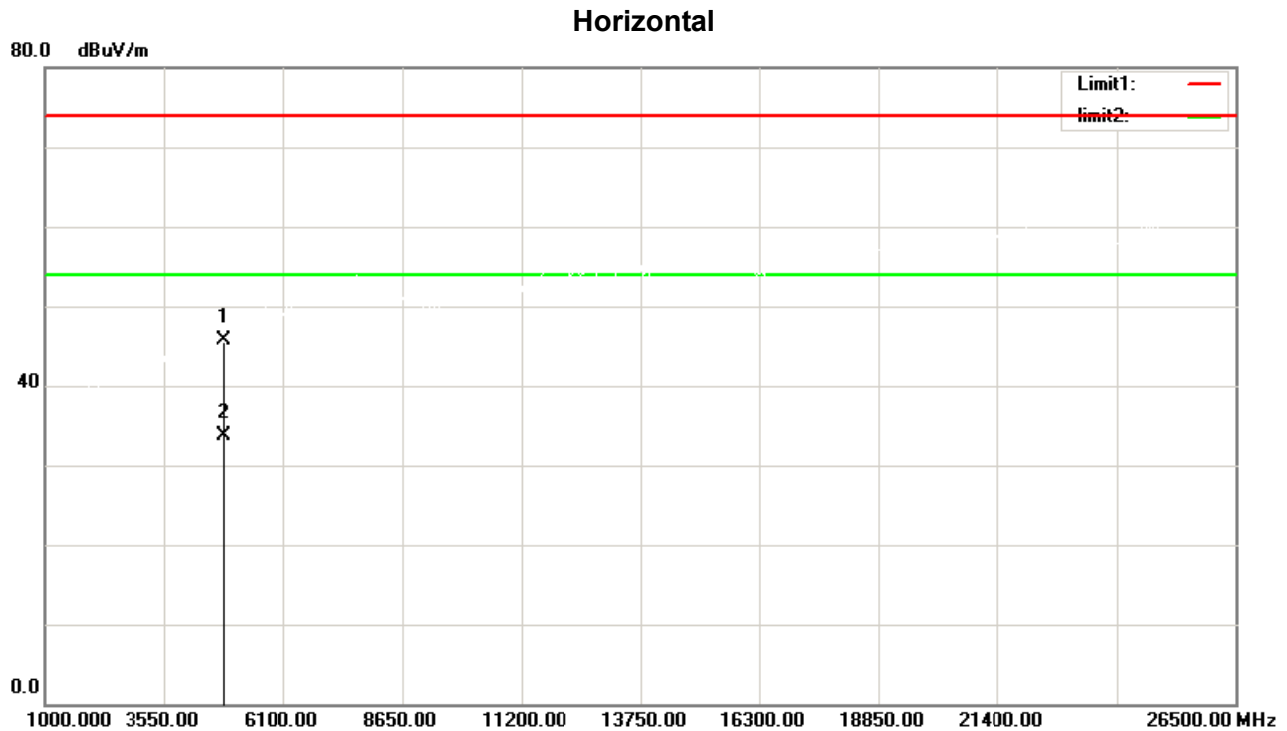
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4924.000	52.98	-7.78	45.20	74.00	-28.80	peak	150	22
2	4924.000	41.36	-7.78	33.58	54.00	-20.42	AVG	150	22

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2412 MHz



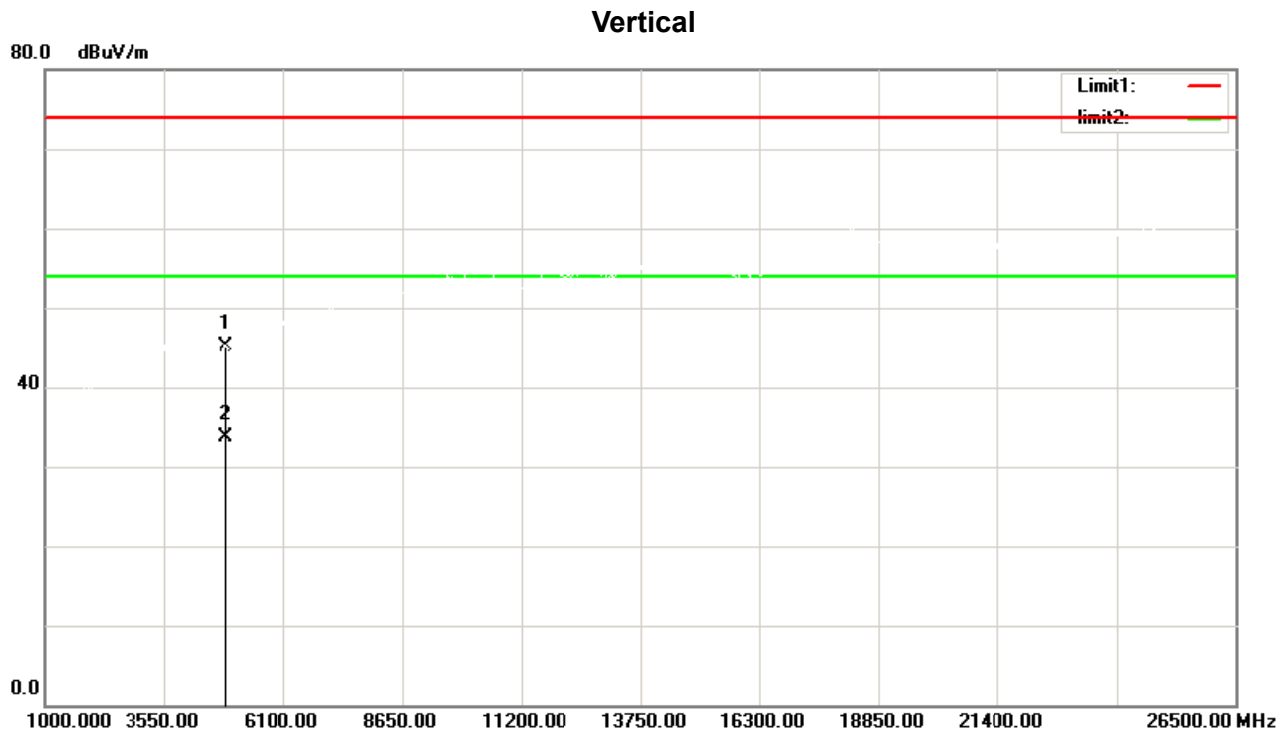
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4824.000	54.21	-7.99	46.22	74.00	-27.78	peak	150	147
2	4824.000	42.60	-7.99	34.61	54.00	-19.39	AVG	150	147

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2412 MHz



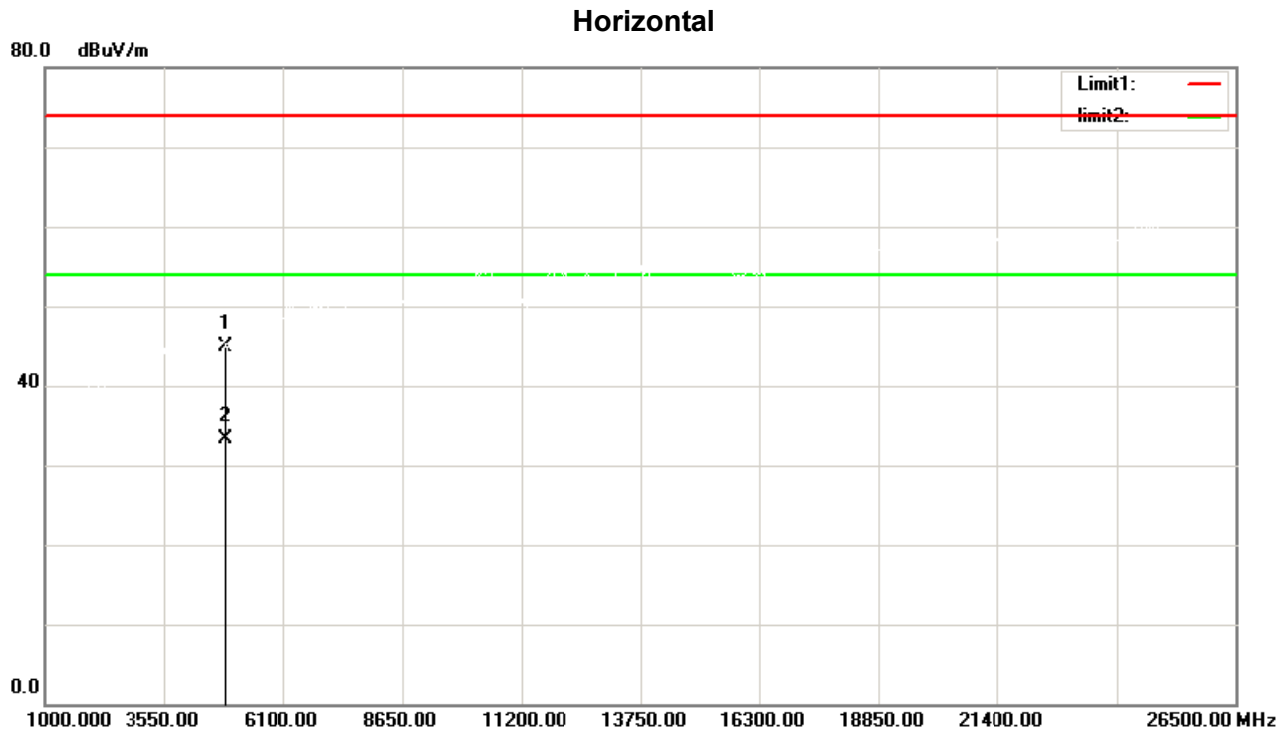
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4824.000	53.70	-7.99	45.71	74.00	-28.29	peak	150	235
2	4824.000	41.66	-7.99	33.67	54.00	-20.33	AVG	150	235

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2437 MHz



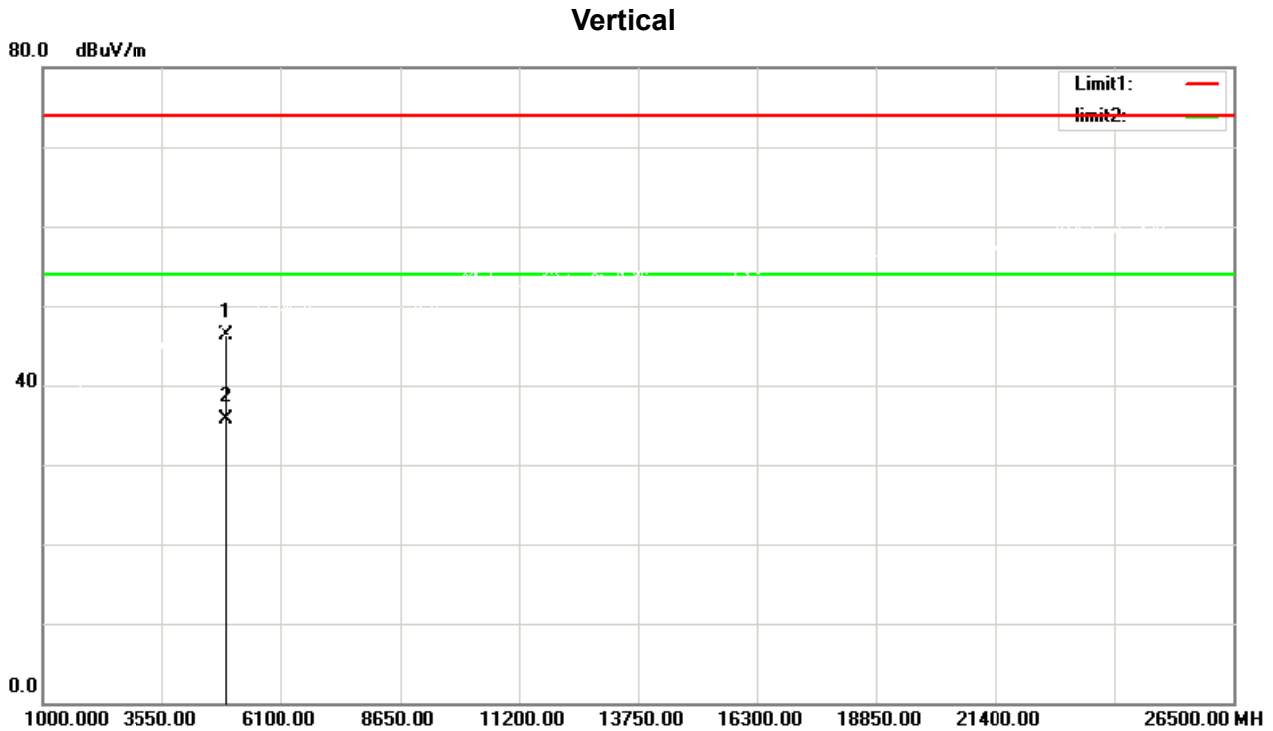
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	53.03	-7.89	45.14	74.00	-28.86	peak	150	25
2	4874.000	41.57	-7.89	33.68	54.00	-20.32	AVG	150	25

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2437 MHz



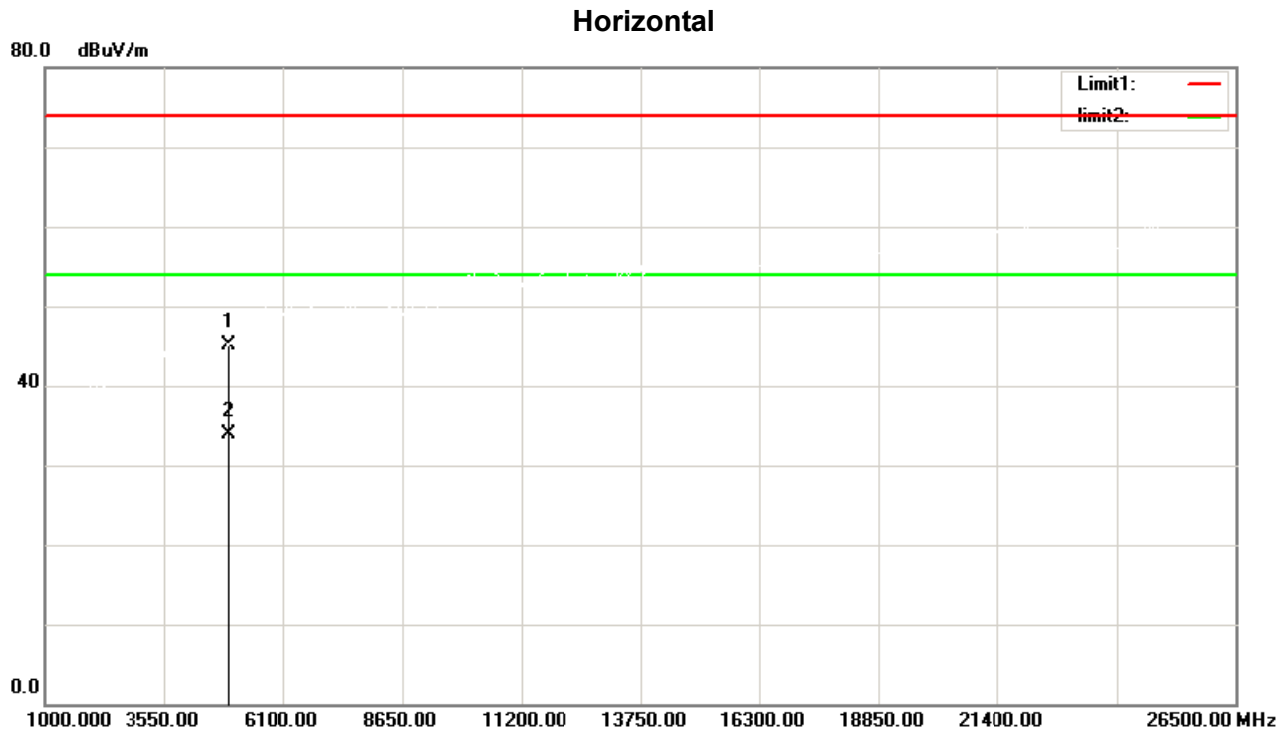
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	52.76	-7.89	44.87	74.00	-29.13	peak	150	75
2	4874.000	41.18	-7.89	33.29	54.00	-20.71	AVG	150	75

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2462 MHz



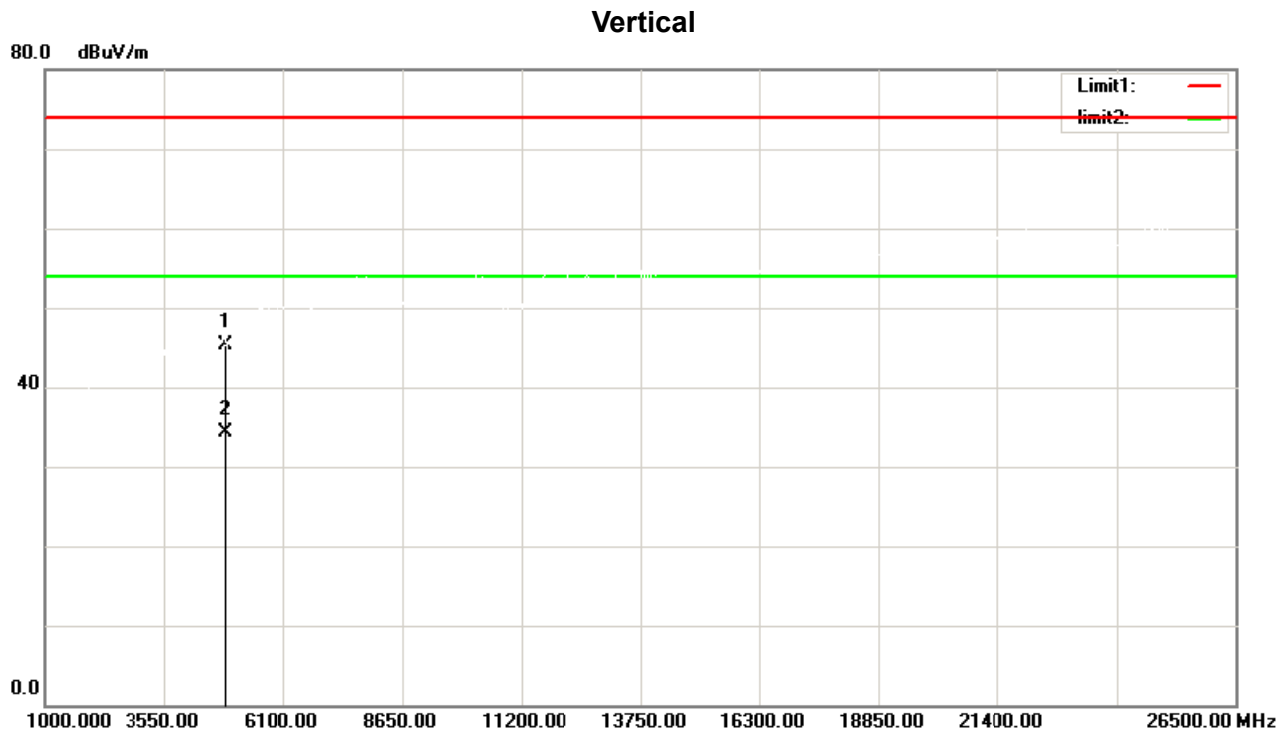
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4924.000	54.06	-7.78	46.28	74.00	-27.72	peak	150	26
2	4924.000	43.50	-7.78	35.72	54.00	-18.28	AVG	150	26

Orthogonal Axis	X
Test Mode:	TX N-20M Mode 2462 MHz



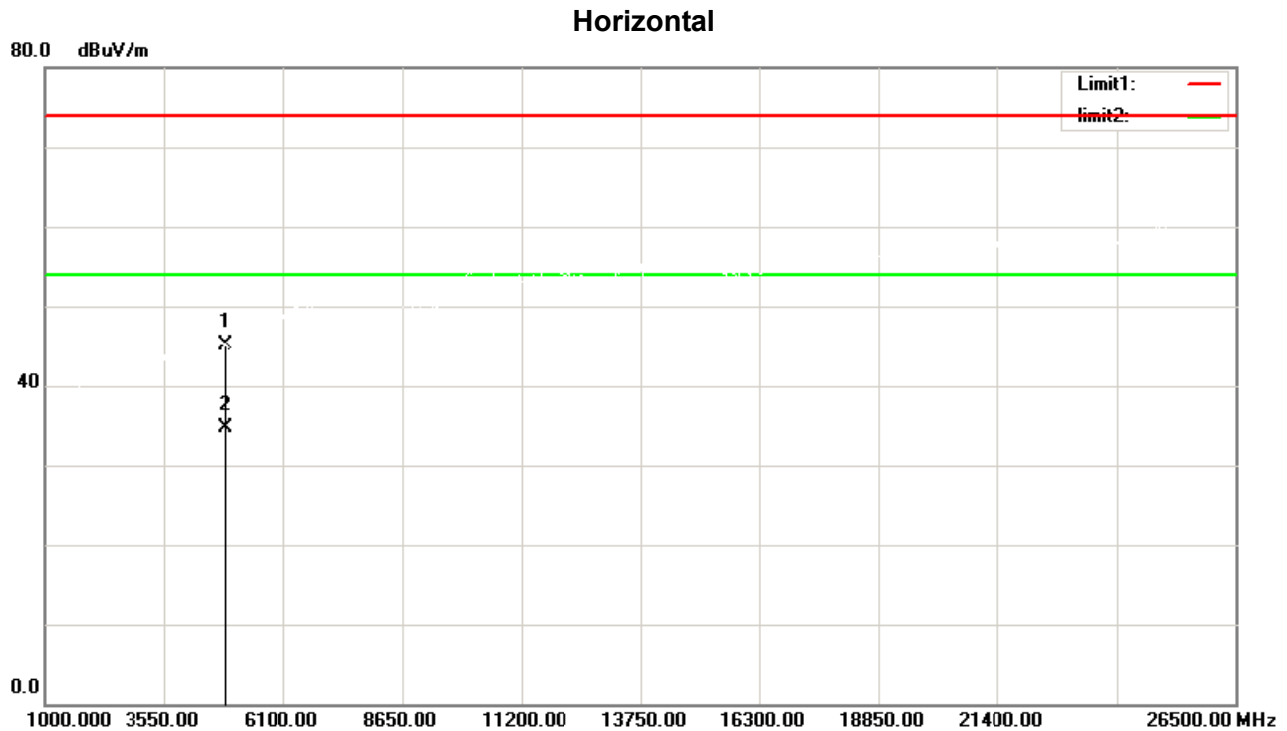
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4924.000	52.98	-7.78	45.20	74.00	-28.80	peak	150	77
2	4924.000	41.60	-7.78	33.82	54.00	-20.18	AVG	150	77

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2422MHz



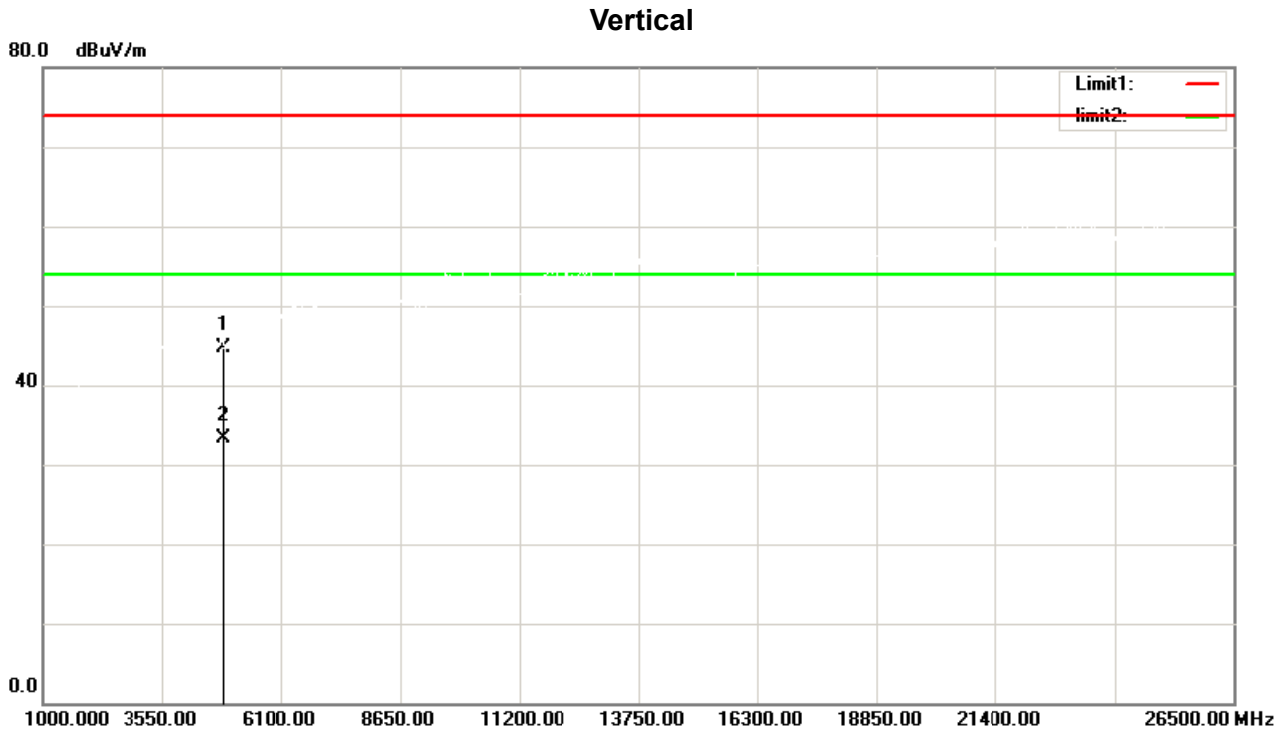
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4844.000	53.31	-7.94	45.37	74.00	-28.63	peak	150	65
2	4844.000	42.20	-7.94	34.26	54.00	-19.74	AVG	150	65

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2422MHz



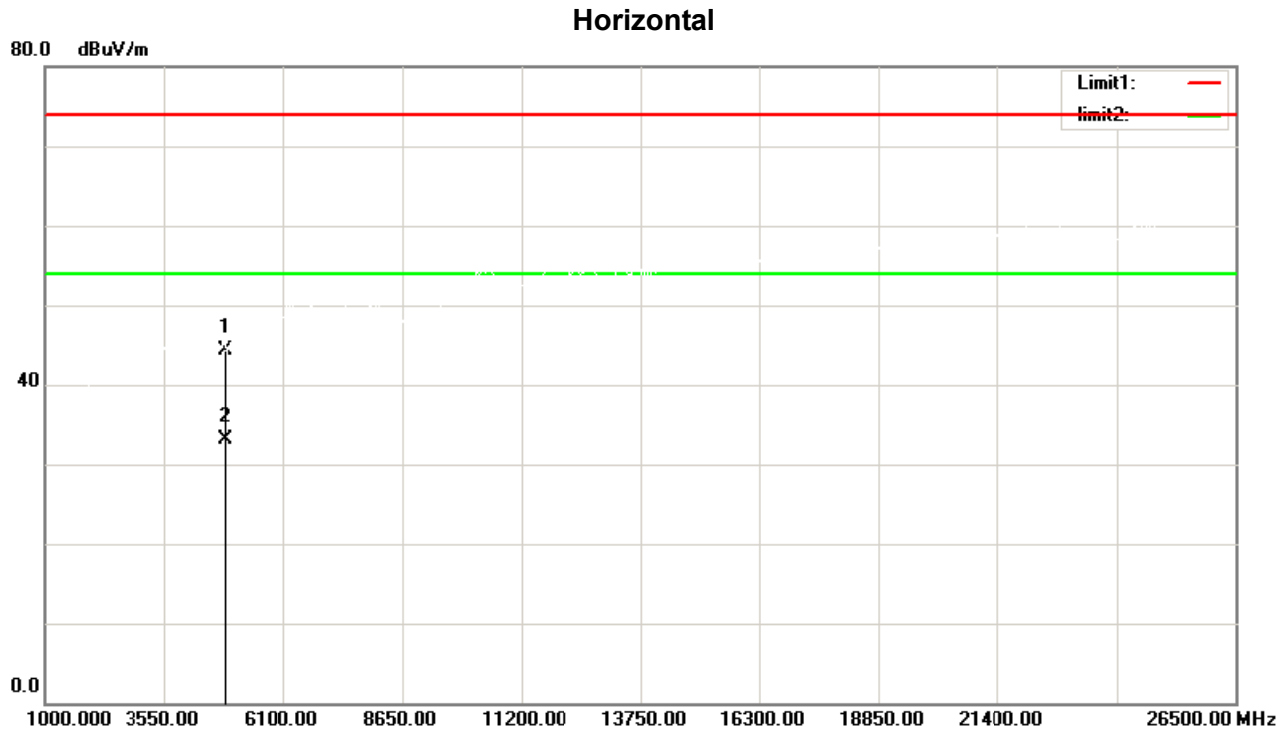
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4844.000	53.08	-7.94	45.14	74.00	-28.86	peak	150	36
2	4844.000	42.63	-7.94	34.69	54.00	-19.31	AVG	150	36

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2437 MHz



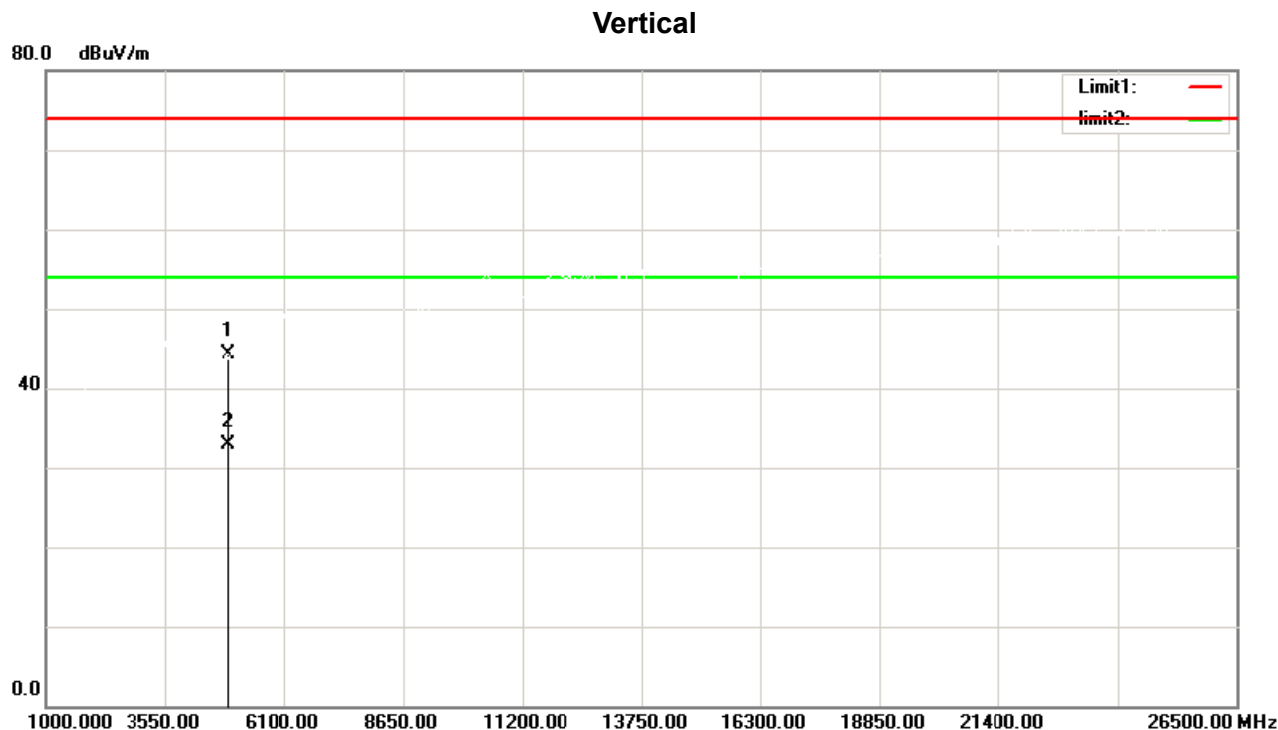
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	52.53	-7.89	44.64	74.00	-29.36	peak	150	54
2	4874.000	41.15	-7.89	33.26	54.00	-20.74	AVG	150	54

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2437 MHz



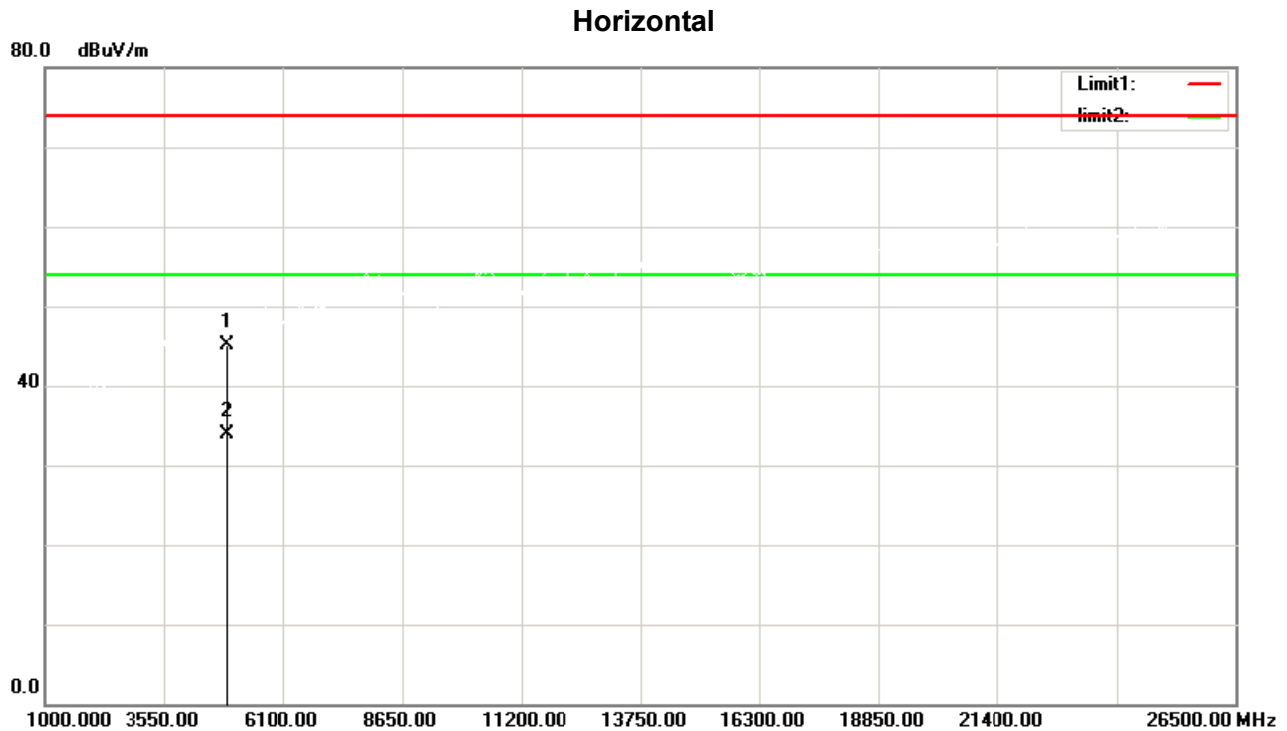
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4874.000	52.26	-7.89	44.37	74.00	-29.63	peak	150	58
2	4874.000	40.90	-7.89	33.01	54.00	-20.99	AVG	150	58

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2452 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4904.000	52.10	-7.82	44.28	74.00	-29.72	peak	150	74
2	4904.000	40.71	-7.82	32.89	54.00	-21.11	AVG	150	74

Orthogonal Axis	X
Test Mode:	TX N-40M Mode 2452 MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Antenna Height	Table Degree
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		cm	Degree
1	4904.000	53.02	-7.82	45.20	74.00	-28.80	peak	150	35
2	4904.000	41.78	-7.82	33.96	54.00	-20.04	AVG	150	35

6BANDWIDTH TEST

6.1LIMIT

FCC Part15, Subpart C (15.247)&RSS-Gen and RSS-247		
Section	Test Item	Limit
15.247(a)(2)	6dB Bandwidth	Minimum 500 kHz
	99% Emission Bandwidth	-

6.2TEST PROCEDURE AND SETTING

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- For 6dB Bandwidth Spectrum setting:RBW= 100KHz, VBW=300KHz, Sweep time = 2.5ms.
For 99% OBW Spectrum Setting: RBW= 300KHz, VBW=1MHz,Sweep time = 2.5ms.
- The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

6.3MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2023/05/26
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

6.4TEST SETUP



6.5EUT OPERATION CONDITIONS

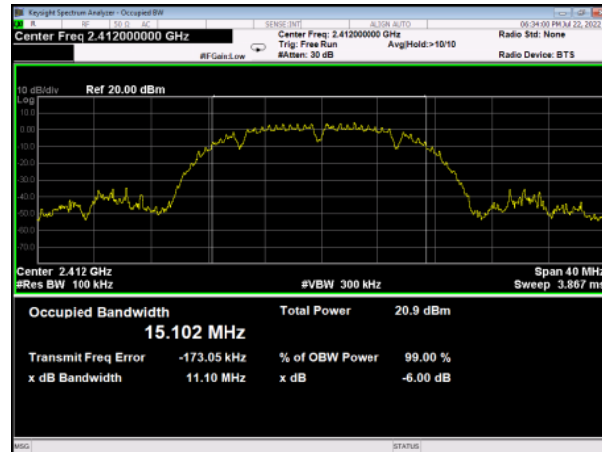
The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

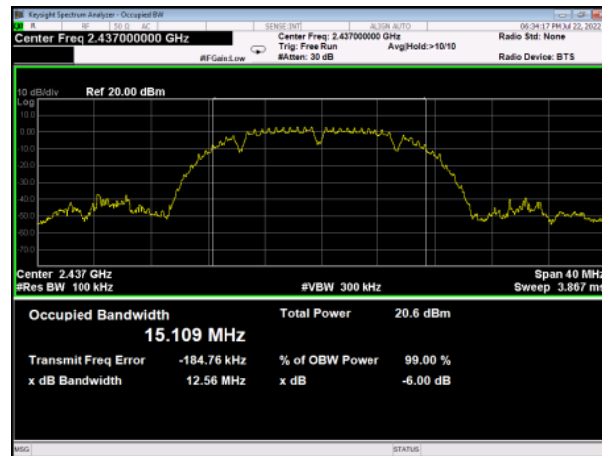
TX B Mode					
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Emission Bandwidth(MHz)	6dB Bandwidth Min. Limit(kHz)	Result
01	2412	11.10	15.185	500	PASS
06	2437	12.56	15.187	500	PASS
11	2462	12.56	15.148	500	PASS

6dB

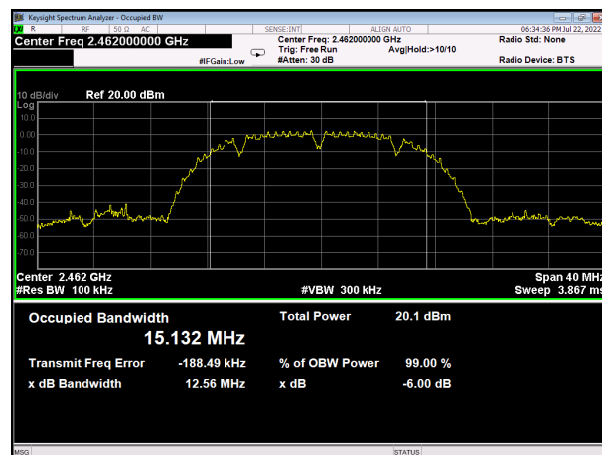
CH01



CH06

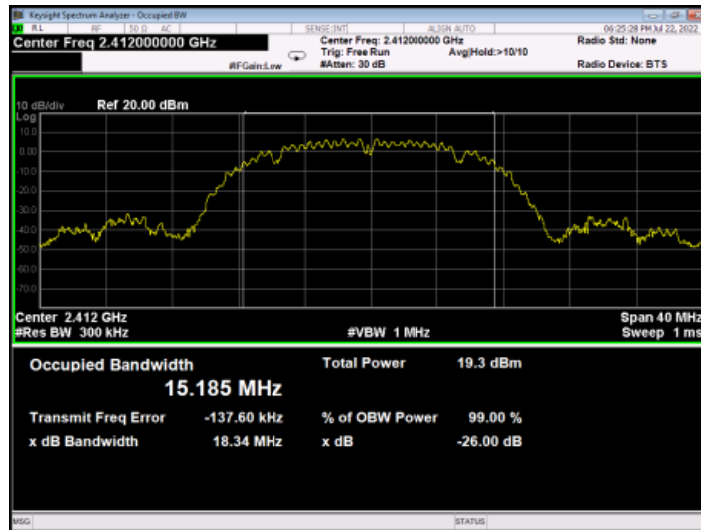


CH11

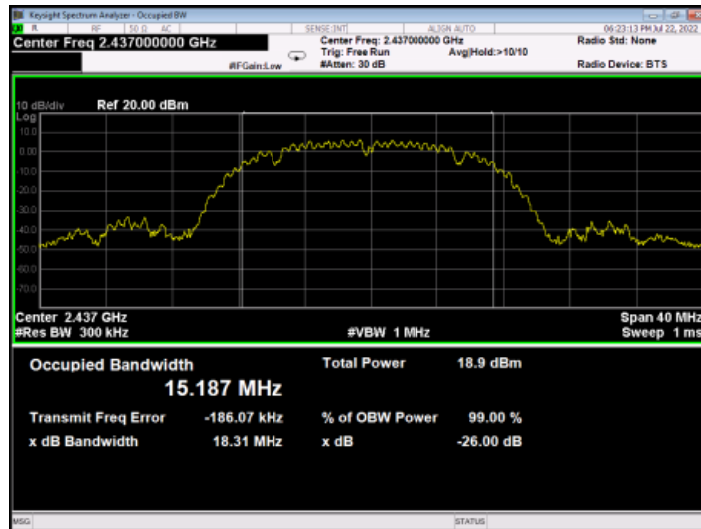


99%

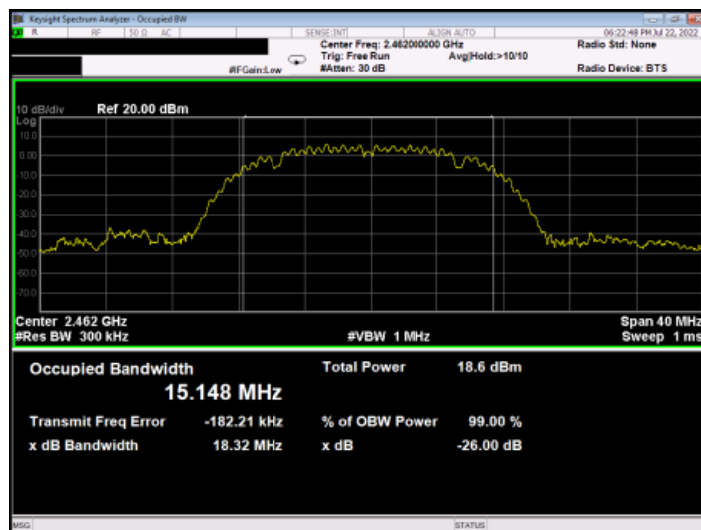
CH01



CH06



CH11

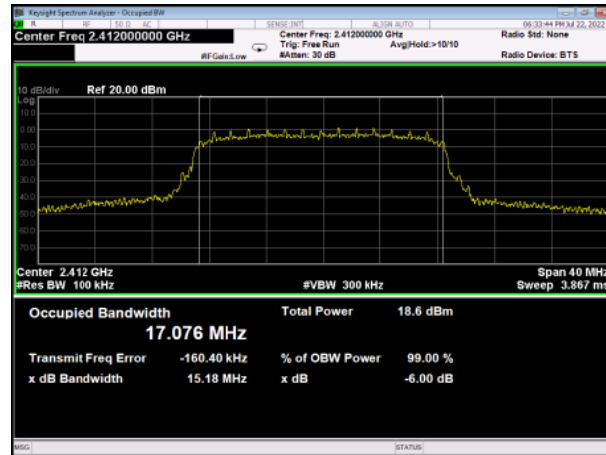


TX G Mode

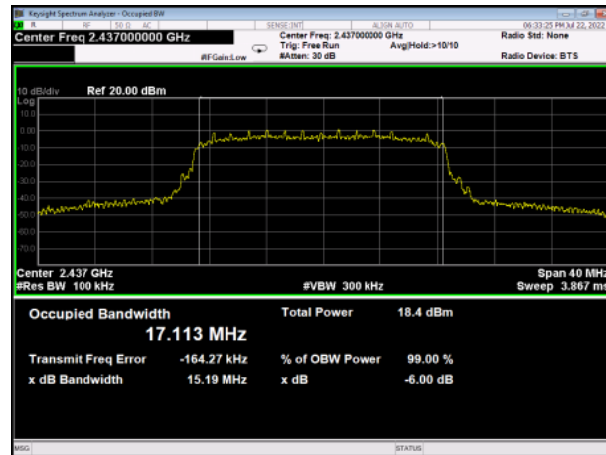
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Emission Bandwidth(MHz)	6dB Bandwidth Min. Limit(kHz)	Result
01	2412	15.18	17.408	500	PASS
06	2437	15.19	17.404	500	PASS
11	2462	15.17	17.407	500	PASS

6dB

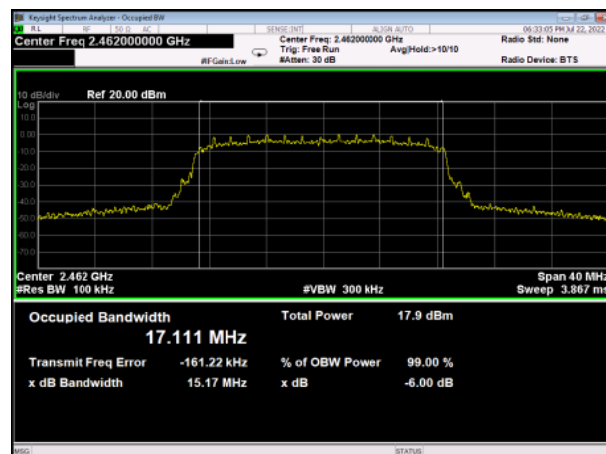
CH01



CH06

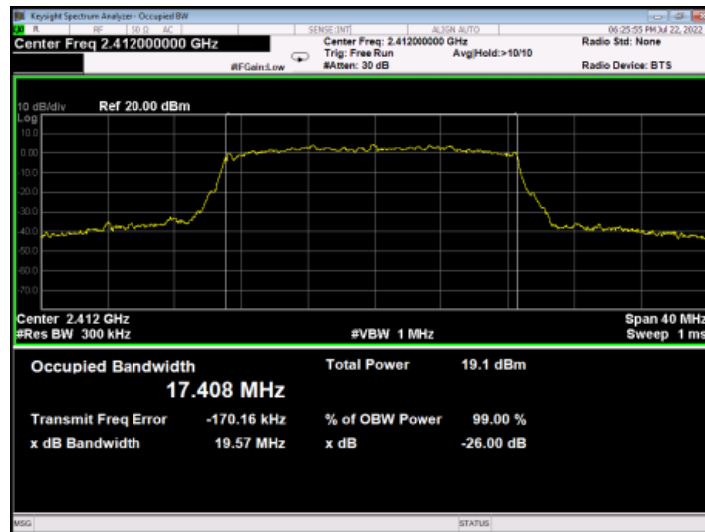


CH11

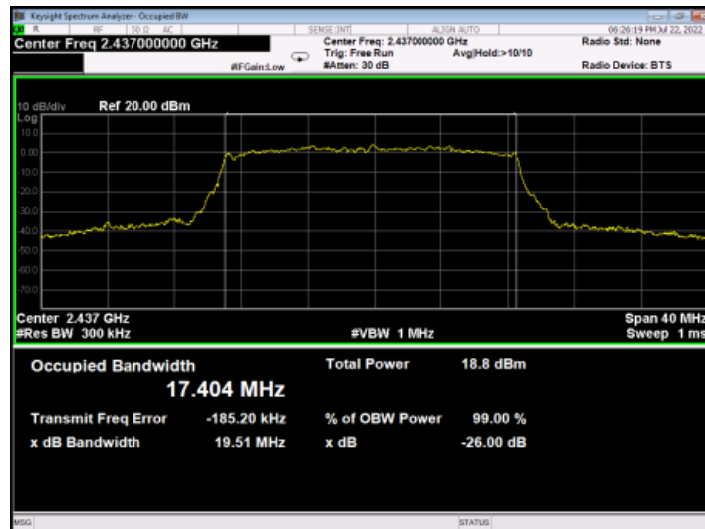


99%

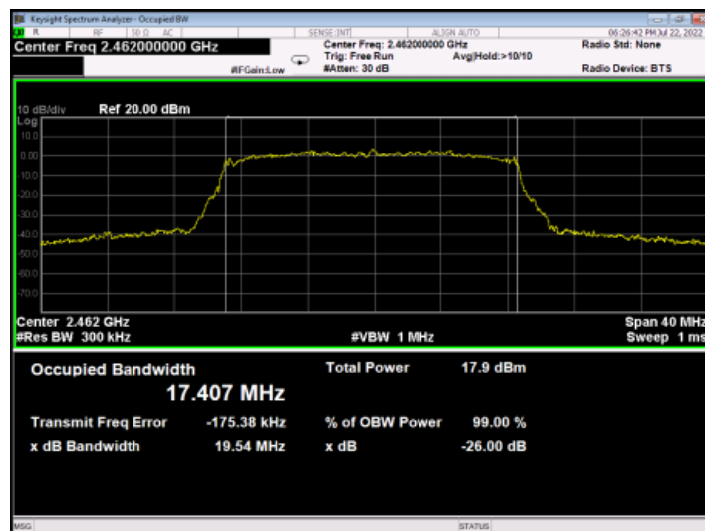
CH01



CH06



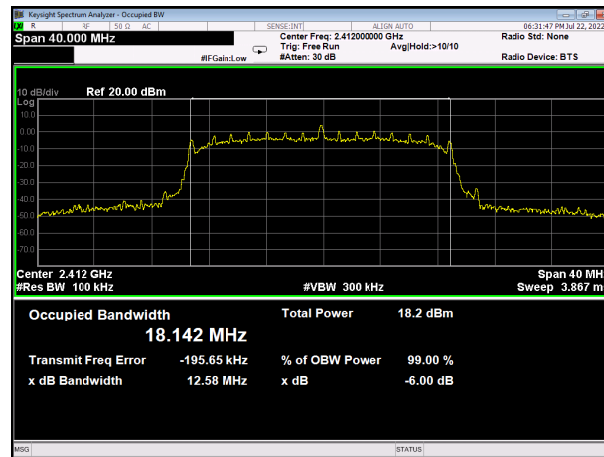
CH11



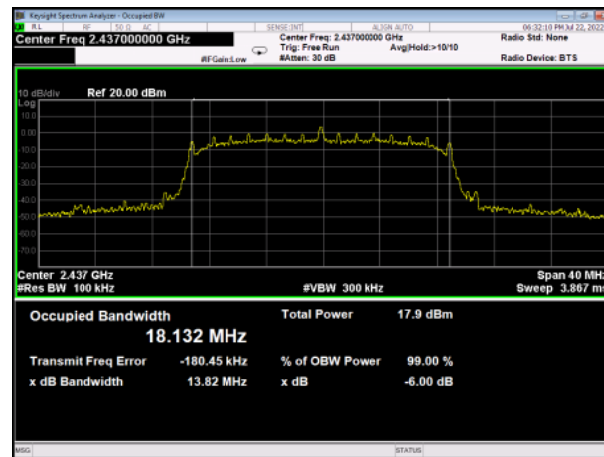
TX N (HT20) Mode					
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Emission Bandwidth(MHz)	6dB Bandwidth Min. Limit(kHz)	Result
01	2412	12.58	18.316	500	PASS
06	2437	13.82	18.293	500	PASS
11	2462	15.04	18.309	500	PASS

6dB

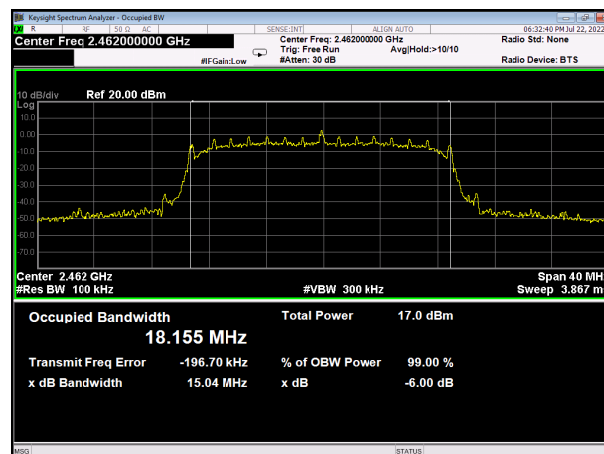
CH01



CH06

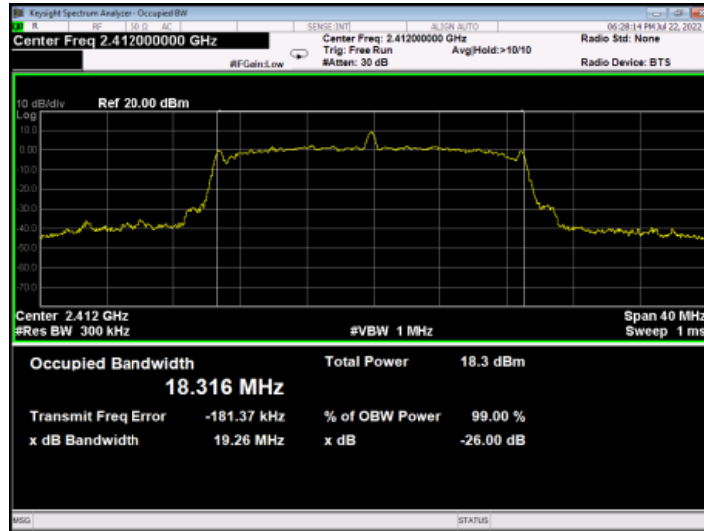


CH11

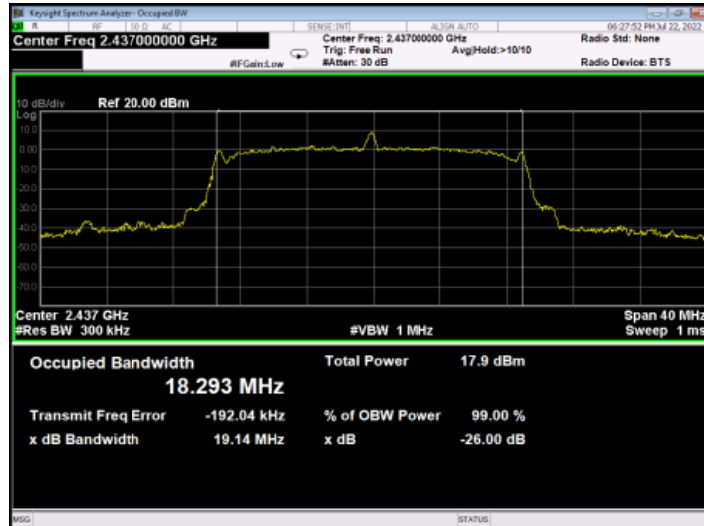


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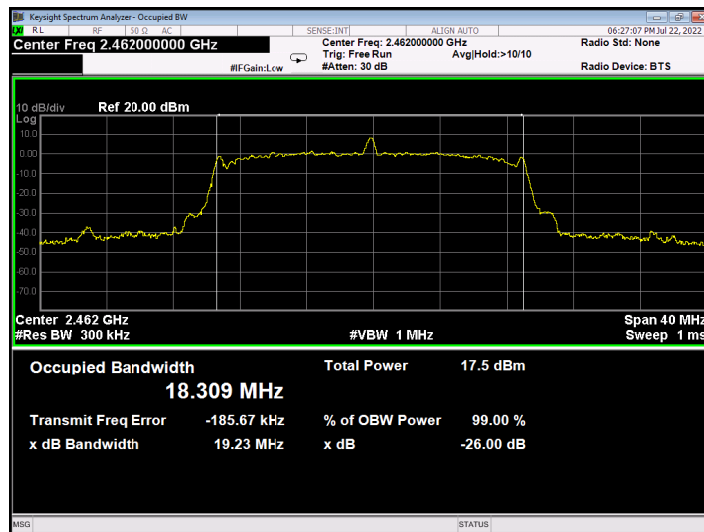
CH01



CH06



CH11

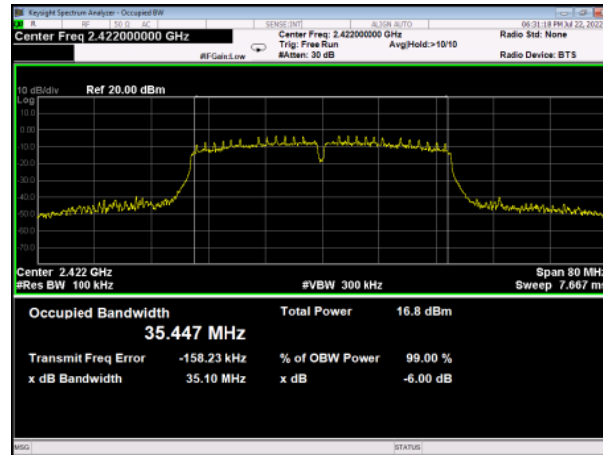


TX N (HT40) Mode

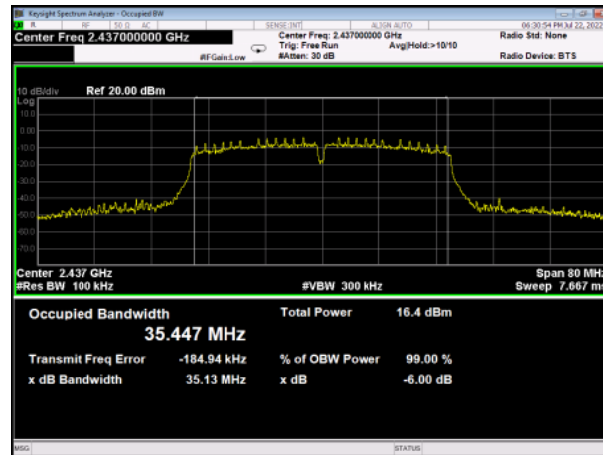
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Emission Bandwidth(MHz)	6dB Bandwidth Min. Limit(kHz)	Result
03	2422	35.10	35.641	500	PASS
06	2437	35.13	35.662	500	PASS
09	2452	35.15	35.661	500	PASS

6dB

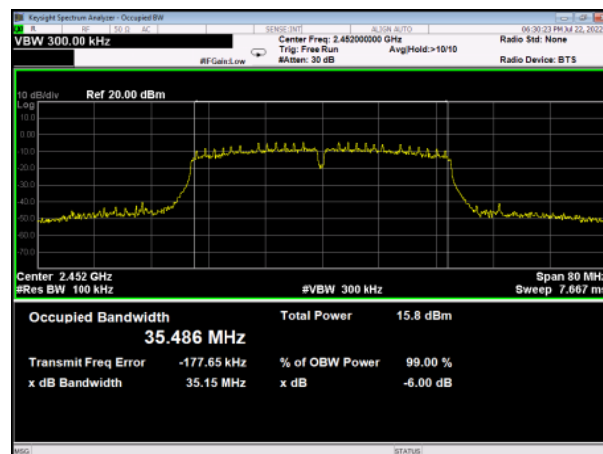
CH03



CH06

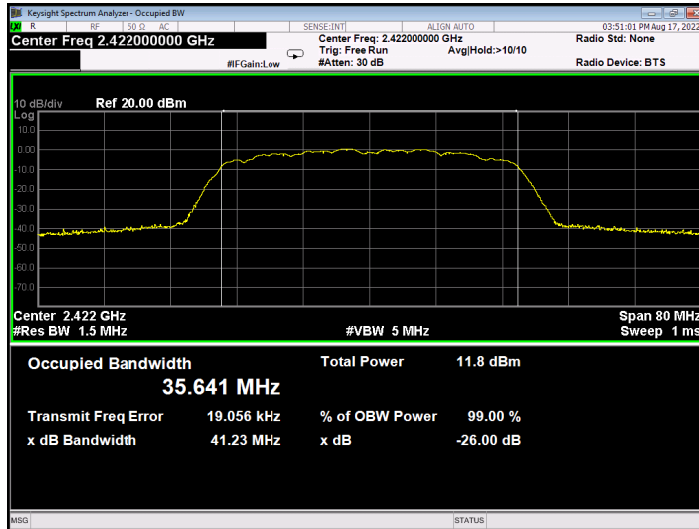


CH09

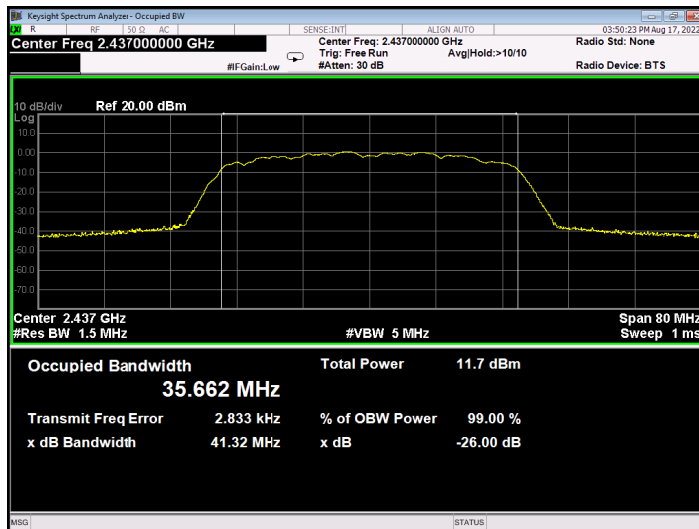


99%

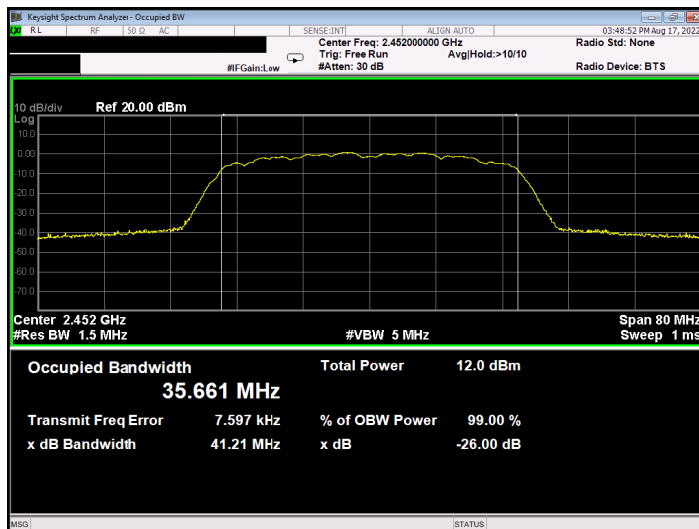
CH01



CH06



CH11



7 MAXIMUM OUTPUT POWER TEST

7.1 LIMIT

FCC Part15, Subpart C (15.247)&RSS-247		
Section	Test Item	Limit
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm

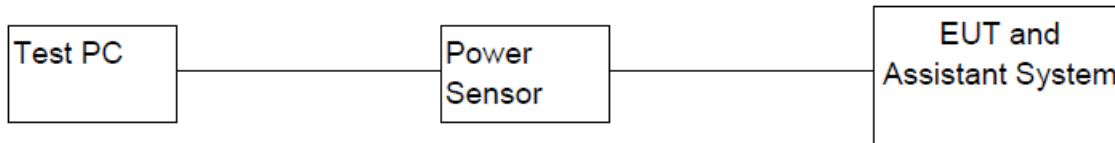
7.2 TEST PROCEDURE AND SETTING

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.1.3 of ANSI C63.10-2013.and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

7.3 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Power Sensor	KEYSIGHT	U2021XA	MY55240009	2023/05/26
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Micable	C10-01-01-1	100309	N/A
4	Test Software	KEYSIGHT	Power Panel	V3.11	N/A

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

TX B Mode_Ant 1				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (W)	Result
01	2412	17.49	0.0561	PASS
06	2437	16.69	0.0467	PASS
11	2462	15.74	0.0375	PASS
Limit	30dBm / 1W			

TX G Mode_Ant 1				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (W)	Result
01	2412	18.91	0.1574	PASS
06	2437	18.62	0.1442	PASS
11	2462	18.01	0.1567	PASS
Limit	30dBm / 1W			

TX N (HT20)_Ant 1				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (W)	Result
01	2412	17.31	0.0538	PASS
06	2437	17.03	0.0505	PASS
11	2462	16.26	0.0423	PASS
Limit	30dBm / 1W			

TX N (HT40)_Ant 1				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (W)	Result
03	2422	15.76	0.0378	PASS
06	2437	15.22	0.0333	PASS
09	2452	14.78	0.0301	PASS
Limit	30dBm / 1W			

8 CONDUCTED SPURIOUS EMISSIONS

8.1 LIMIT

For FCC

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required.

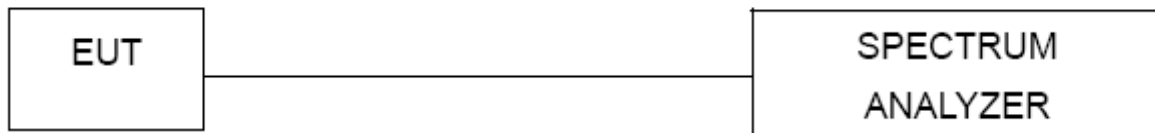
8.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = Auto.

8.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2023/05/26
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

8.4 TEST SETUP



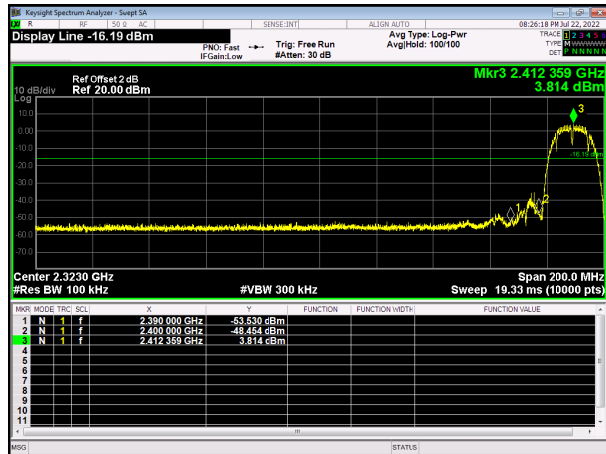
8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

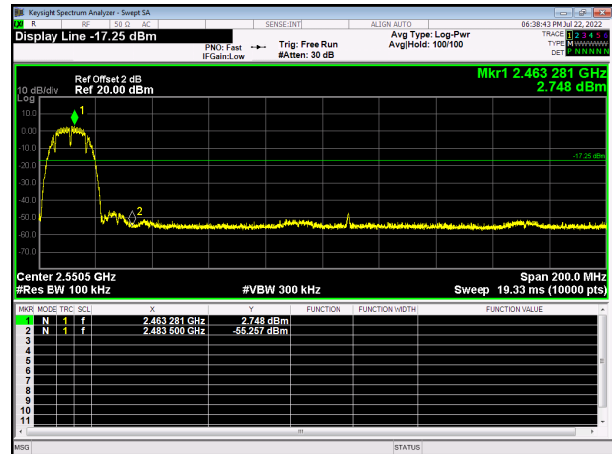
8.6 TEST RESULTS

TX B Mode_Ant 1

Bandedge-CH01

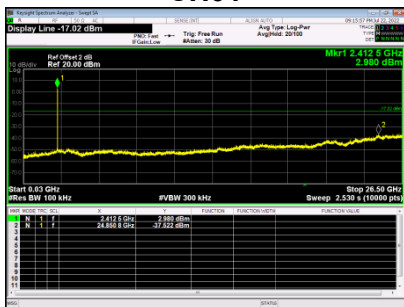


Bandedge-CH11

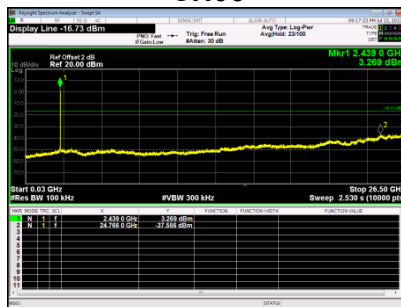


10th Harmonic of the fundamental frequency

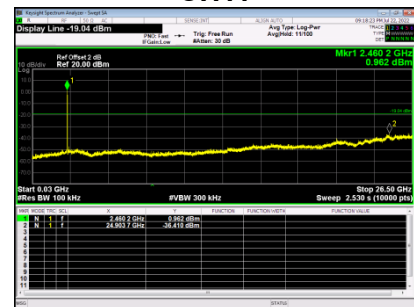
CH01



CH06

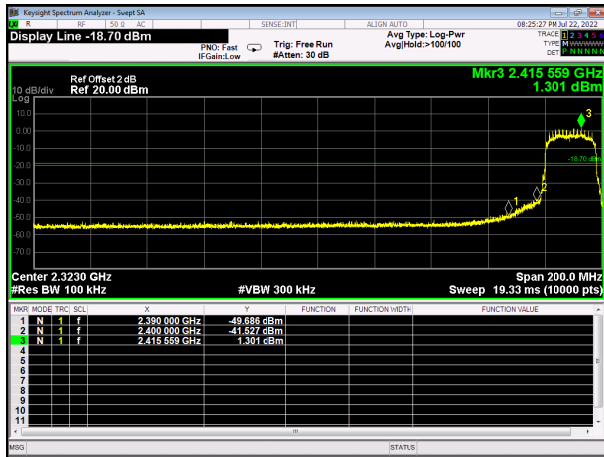


CH11

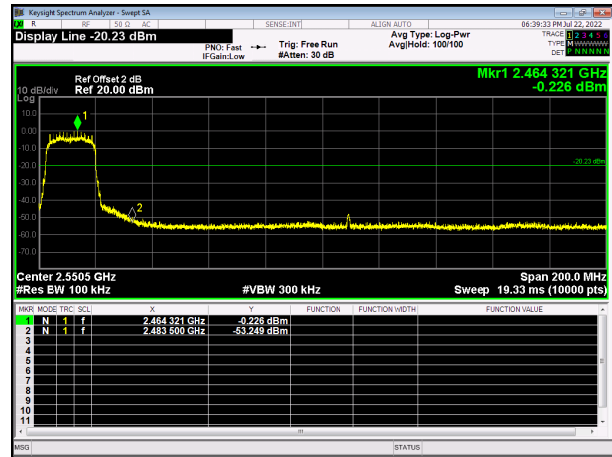


TX G Mode_Ant 1

Bandedge-CH01

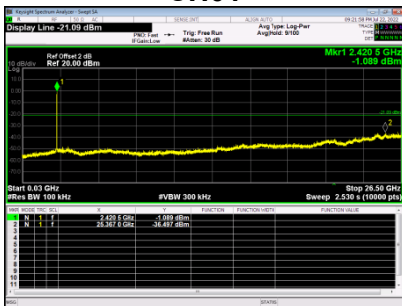


Bandedge-CH11

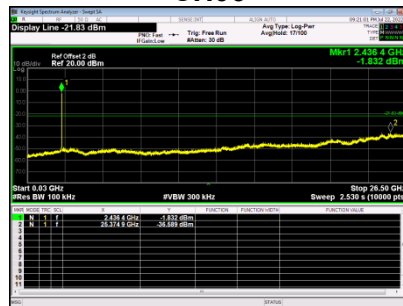


10th Harmonic of the fundamental frequency

CH01



CH06

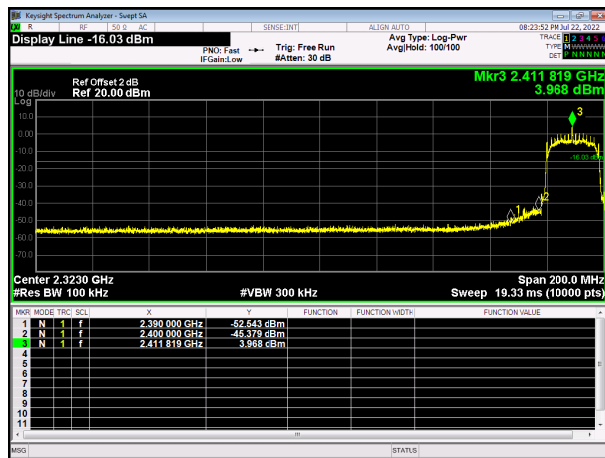


CH11

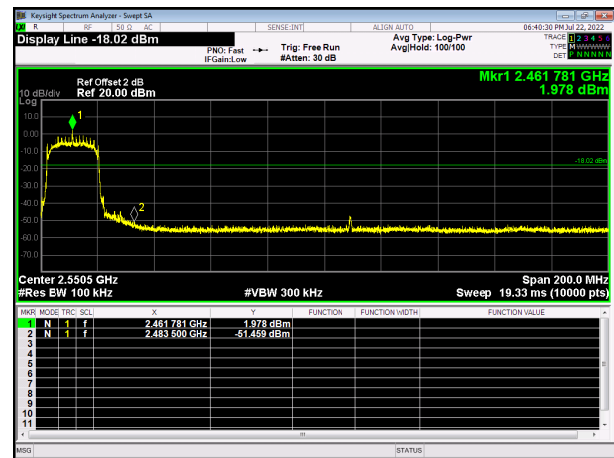


TX N (HT20) Mode _Ant 1

Bandedge-CH01

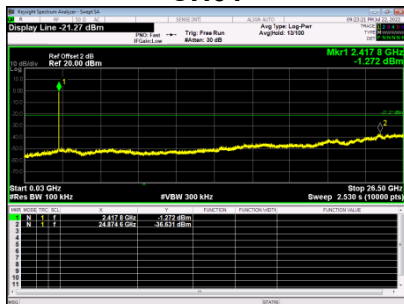


Bandedge-CH11

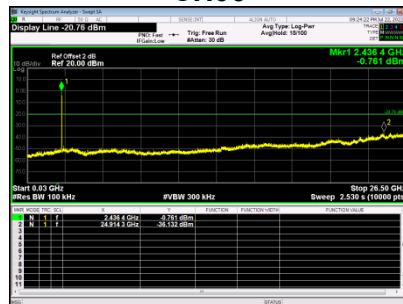


10th Harmonic of the fundamental frequency

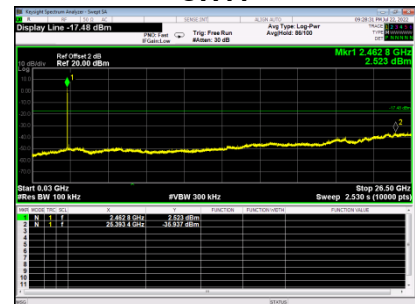
CH01



CH06

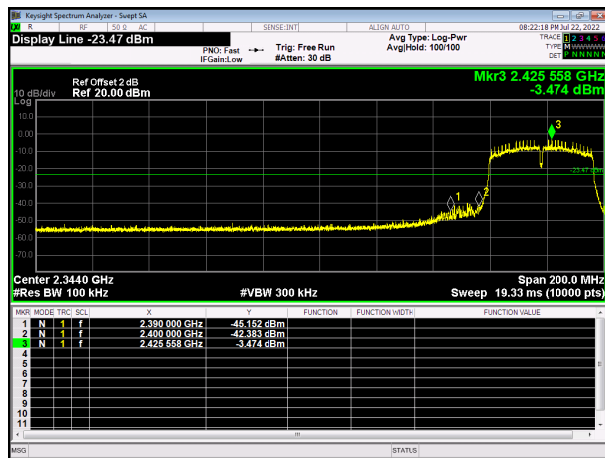


CH11

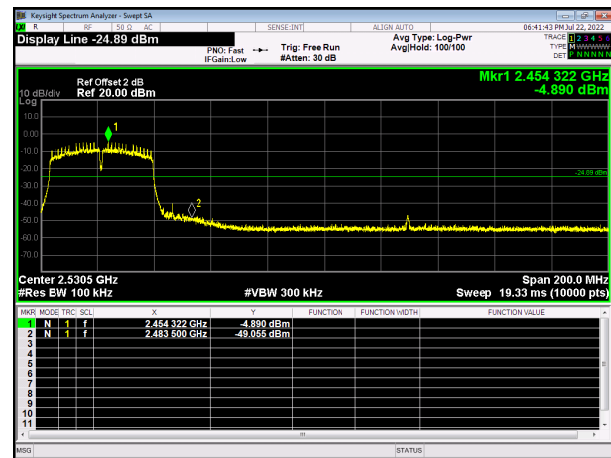


TX N (HT40) Mode _Ant 1

Bandedge-CH01



Bandedge-CH11



10th Harmonic of the fundamental frequency

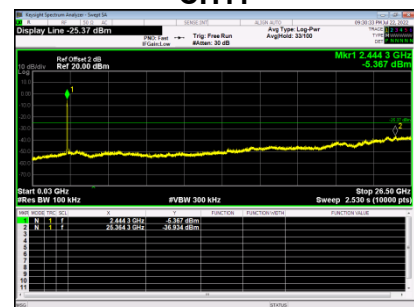
CH01



CH06



CH11



9 POWER SPECTRAL DENSITY TEST

9.1 LIMIT

FCC Part15, Subpart C (15.247)&RSS-247		
Section	Test Item	Limit
15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)

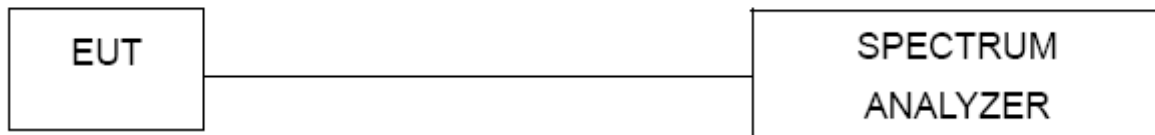
9.2 TEST PROCEDURE AND SETTING

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW=3 kHz, VBW=10 kHz, Sweep time = Auto.
- The Power Spectral Density was performed in accordance with method11.10.2 of ANSI C63.10-2013.

9.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2023/05/26
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

9.4 TEST SETUP



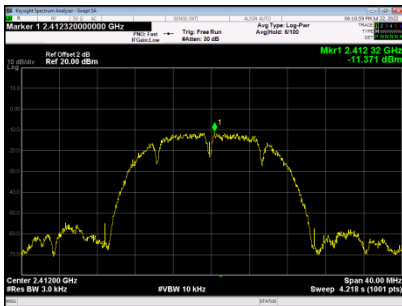
9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

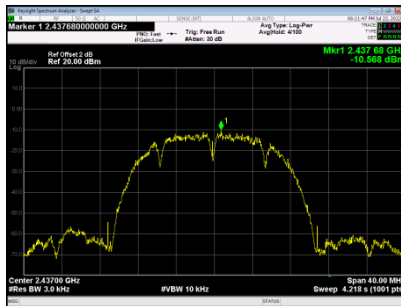
9.6 TEST RESULTS

TX B Mode_Ant 1				
Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit: <dBm/3KHz	Result
01	2412	-11.371	8	PASS
06	2437	-10.568	8	PASS
11	2462	-12.101	8	PASS

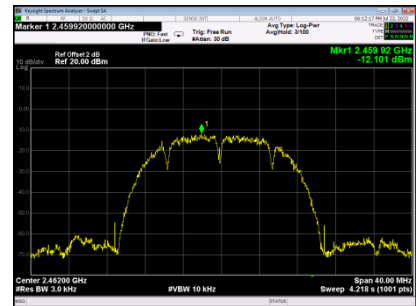
CH01



CH06

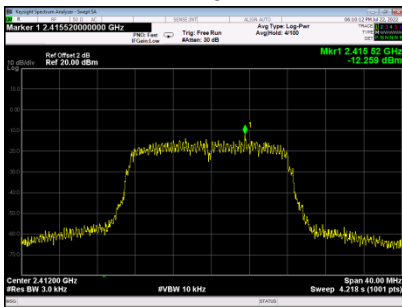


CH11

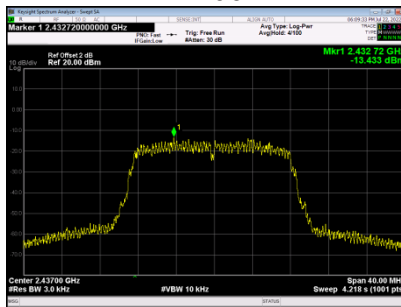


TX G Mode_Ant 1				
Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit: <dBm/3KHz	Result
01	2412	-12.259	8	PASS
06	2437	-13.433	8	PASS
11	2462	-13.404	8	PASS

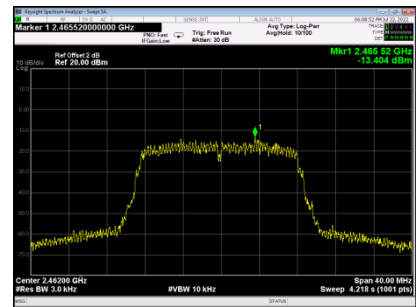
CH01



CH06



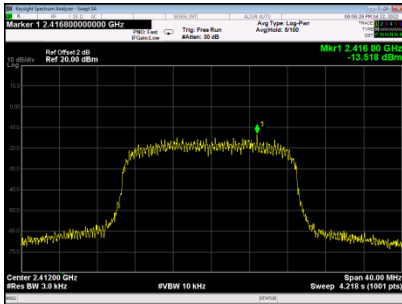
CH11



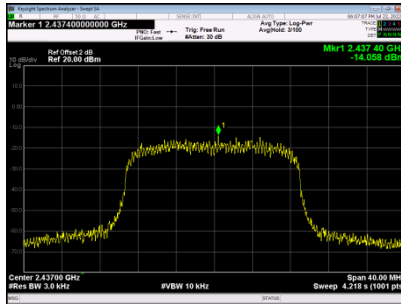
TX N (HT20) Mode_Ant 1

Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit: <dBm/3KHz	Result
01	2412	-13.518	8	PASS
06	2437	-14.058	8	PASS
11	2462	-14.784	8	PASS

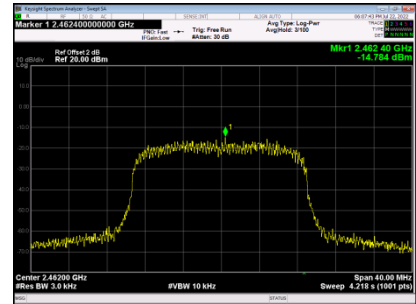
CH01



CH06



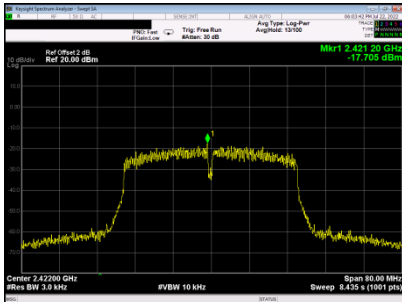
CH11



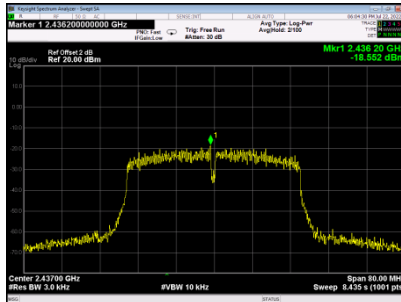
TX N (HT40) Mode_Ant 1

Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit: <dBm/3KHz	Result
03	2412	-17.705	8	PASS
06	2437	-18.552	8	PASS
09	2452	-19.049	8	PASS

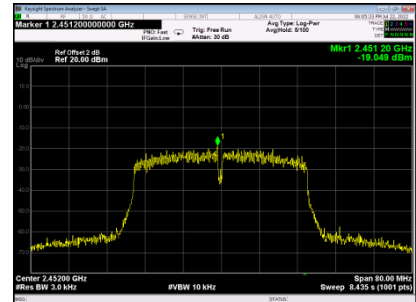
CH03



CH06



CH09



END OF TEST REPORT