Certificate #7130.01

FCC Radio Test Report

FCC ID: 2A5LO-ZLTW304VAPRO

This report concerns: Original Grant

Project No.	:	2410C139
Equipment	:	Wi-Fi6 Wireless Router
Brand Name	:	TOZED KANGWEI
Test Model	:	ZLT W304VA PRO
Series Model	:	N/A
Applicant	:	Tozed Kangwei Tech Co., Ltd
Address	:	Room 1301, NO. 37 Jinlong , Nansha Street, Xiangjiang Financial Business Center, Nansha District, Guangzhou, China
Manufacturer	:	Tozed Kangwei Tech Co., Ltd
Address	:	Room 1301, NO. 37 Jinlong , Nansha Street, Xiangjiang Financial Business Center, Nansha District, Guangzhou, China
Factory	:	Tozed Kangwei Tech Co., Ltd
Address	:	Room 1301, NO. 37 Jinlong , Nansha Street, Xiangjiang Financial Business Center, Nansha District, Guangzhou, China
Date of Receipt	:	Oct. 30, 2024
Date of Test	:	Nov. 01, 2024 ~ Nov. 30, 2024
Issued Date	:	Dec. 05, 2024
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG20241030382 for AC Power Line Conducted Emissions and Radiated Emissions -9kHz to 30 MHz and output power, DG20241030379 for Radiated Emissions -30MHz to 1000MHz and Above 18000MHz, DG20241030380 for Radiated Emissions - 1000MHz to 18000MHz and other conducted.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Prepared by : Chella Zheng

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Approved by : Chay Cai

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL'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. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC17025:2017requirements, and accredited by the conformity assessment authorities listed in this test report.

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

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-1-2410C139	R00	Original Report.	Dec. 05, 2024	Valid

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:
ANSI C63.10-2013
The following reference test guidance is not within the scope of accreditation of A2LA:
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart C				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS	------
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.247(a)(2)	Bandwidth	APPENDIX E	PASS	------
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS	------
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS	------
15.247(e)	Power Spectral Density	APPENDIX H	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 TEST FACILITY

The test facilities used to collect the test data in this report:
For Radiated Emissions-1000MHz to 18000MHz test items:
Room 102 & Room 702, Building 3, No.9, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.

For other test items:
1-2/F, 4/F, Building A, 1-2/F, Building B, 3/F, Building C, No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.
BTL's Registration Number for FCC: 747969
BTL's Designation Number for FCC: CN1377

2.2 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 95.45% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.88

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	*U*,(dB)
DG-CB03 (3m)	CISPR	30MHz ~ 200MHz	V	4.40
		30MHz ~ 200MHz	H	3.62
		200MHz ~ 1,000MHz	V	4.58
		200MHz ~ 1,000MHz	H	3.98

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB18 (3m)	CISPR	1GHz ~ 6GHz	4.48
		6GHz ~ 18GHz	3.88

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB03 (1m)	CISPR	18~26.5 GHz	3.36

C. Other Measurement:

Test Item	Uncertainty
Bandwidth	0.90 %
Maximum Output Power	1.3 dB
Conducted Spurious Emission	1.9 dB
Power Spectral Density	1.4 dB
Temperature	0.8 °C
Humidity	2.2 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
AC Power Line Conducted Emissions	25°C	52%	AC 120V/60Hz	Hayden Chen	Nov. 18, 2024
Radiated Emissions -9kHz to 30 MHz	26°C	48%	AC 120V/60Hz	Hayden Chen	Nov. 11, 2024
Radiated Emissions -30MHz to 1000MHz	21°C	53%	AC 120V/60Hz	Calvin Wen	Nov. 20, 2024
Radiated Emissions -Above 1000MHz	23°C	45%	AC 120V/60Hz	Drew Tan	Nov. 18, 2024
	22°C	50%	AC 120V/60Hz	Calvin Wen	Nov. 15, 2024
Bandwidth	24°C	48%	AC 120V/60Hz	Parker Yang	Nov. 20, 2024
Maximum Output Power	25°C	51-60%	AC 120V/60Hz	Alex Yin	Nov. 06, 2024~ Nov. 20, 2024
Conducted Spurious Emissions	24°C	48%	AC 120V/60Hz	Parker Yang	Nov. 20, 2024
Power Spectral Density	24°C	48%	AC 120V/60Hz	Parker Yang	Nov. 20, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wi-Fi6 Wireless Router
Brand Name	TOZED KANGWEI
Test Model	ZLT W304VA PRO
Series Model	N/A
Model Difference(s)	N/A
Software Version	1.0
Hardware Version	TZ7.823.835A
Power Source	DC Voltage supplied from AC adapter. Model: SA240V-240100U
Power Rating	I/P: 100-240V ~ 50/60Hz 0.8A Max O/P: 24V ⎓ 1A
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM IEEE 802.11ax: OFDMA
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 IEEE 802.11ax: up to 573.6 Mbps
Maximum Output Power	IEEE 802.11ax(HE40): 18.48 dBm (0.0705 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20), IEEE 802.11ax(HE20) CH03 - CH09 for IEEE 802.11n(HT40), IEEE 802.11ax(HE40)							
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. Antenna Specification:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	ZTX	01.52303336	Dipole	IPEX	4.44
2	ZTX	01.52303337	Dipole	IPEX	4.84

Note:

1) This EUT supports MIMO/CDD, any transmit signals are correlated with each other, so Directional gain=10log[($10^{G1/20}$+$10^{G2/20}$+...$10^{GN/20}$)^2/N]dBi, that is Directional gain=10log[($10^{4.44/20}$+$10^{4.84/20}$)^2/2]dBi =7.65. So, the output power limit is 30-(7.65-6)=28.35, the power spectral density limit is 8-(7.65-6)=6.35.

4. Table for Antenna Configuration:

Operating Mode / TX Mode	2TX
IEEE 802.11b	V(Ant. 1 + Ant. 2)
IEEE 802.11g	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE20)	V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)	V(Ant. 1 + Ant. 2)

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 AX(HE20) Mode Channel 01/06/11
Mode 4	TX AX(HE40) Mode Channel 03/06/09
Mode 5	TX AX(HE40) Mode Channel 03

Following mode(s) was (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 AX(HE40) Mode Channel 03

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 5	TX AX(HE40) Mode Channel 03

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 AX(HE20) Mode Channel 01/06/11
Mode 4	TX AX(HE40) Mode Channel 03/06/09

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 AX(HE20) Mode Channel 01/06/11
Mode 4	TX AX(HE40) Mode Channel 03/06/09

NOTE:
(1) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
(2) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX AX(HE40) Mode Channel 03 is found to be the worst case and recorded.
(3) For radiated emission above 1 GHz test, the spurious points of 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
(4) For radiated emission Harmonic 18-26.5GHz test, only tested the worst case and recorded.
(5) For radiated emission above 1GHz test, the Vertical antennas and Horizontal antennas are evaluated, the worst case is Vertical antennas and recorded.
(6) IEEE 802.11ax mode only supports full RU, so only the full RU is evaluated and measured inside report.
(7) VHT20/VHT40 covers HT20/HT40, due to same modulation. The power 802.11n HT20 and HT40 setting for are the same or lower than 802.11ac VHT20 and HT40.

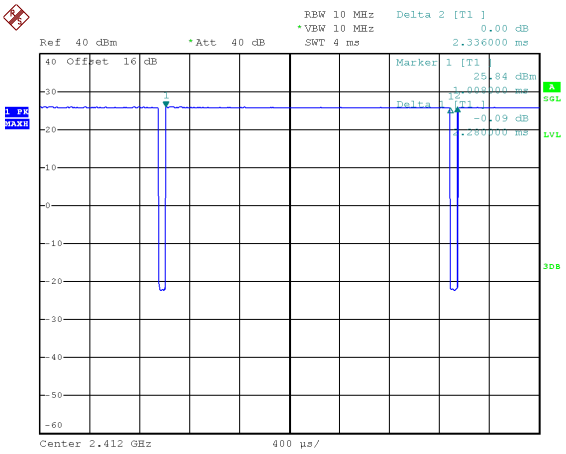
3.3 PARAMETERS OF TEST SOFTWARE

Test Software Version	QATool_UIv2.73_DLLv6.79_ap_2021.08.10		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	7	7.5	7
IEEE 802.11g	14	13.5	14
IEEE 802.11ax(HE20)	15.5	15.5	16
Frequency (MHz)	2422	2437	2452
IEEE 802.11ax(HE40)	17	17	15

3.4 DUTY CYCLE

If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.
The output power = measured power + duty factor.

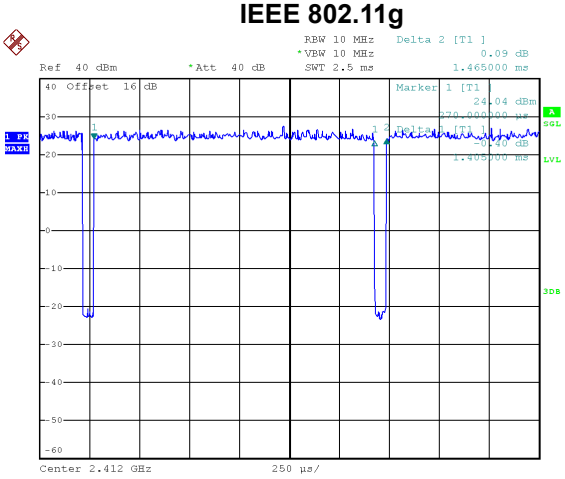
IEEE 802.11b



Date: 20.NOV.2024 20:05:19

Duty cycle = 2.280 ms / 2.336 ms = 97.60%
Duty Factor = 10 log(1/Duty cycle) = 0.11

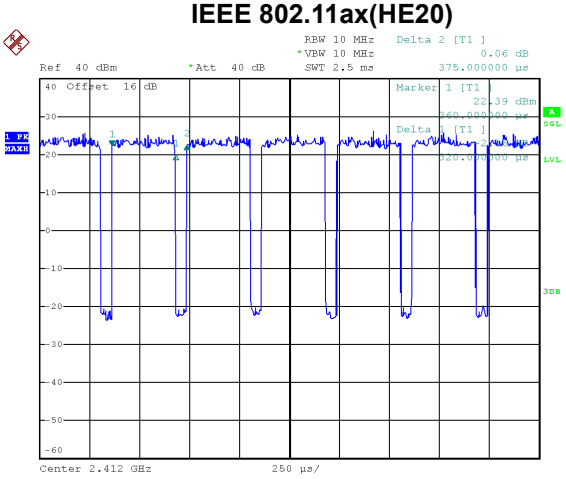
IEEE 802.11g



Date: 20.NOV.2024 20:05:47

Duty cycle = 1.405 ms / 1.465 ms = 95.90%
Duty Factor = 10 log(1/Duty cycle) = 0.18

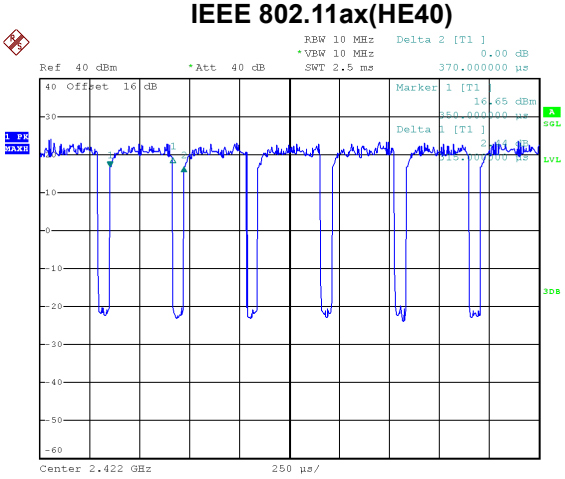
IEEE 802.11ax(HE20)



Date: 20.NOV.2024 20:09:48

Duty cycle = 0.320 ms / 0.375 ms = 85.33%
Duty Factor = 10 log(1/Duty cycle) = 0.69

IEEE 802.11ax(HE40)



Date: 20.NOV.2024 20:10:27

Duty cycle = 0.315 ms / 0.370 ms = 85.14%
Duty Factor = 10 log(1/Duty cycle) = 0.70

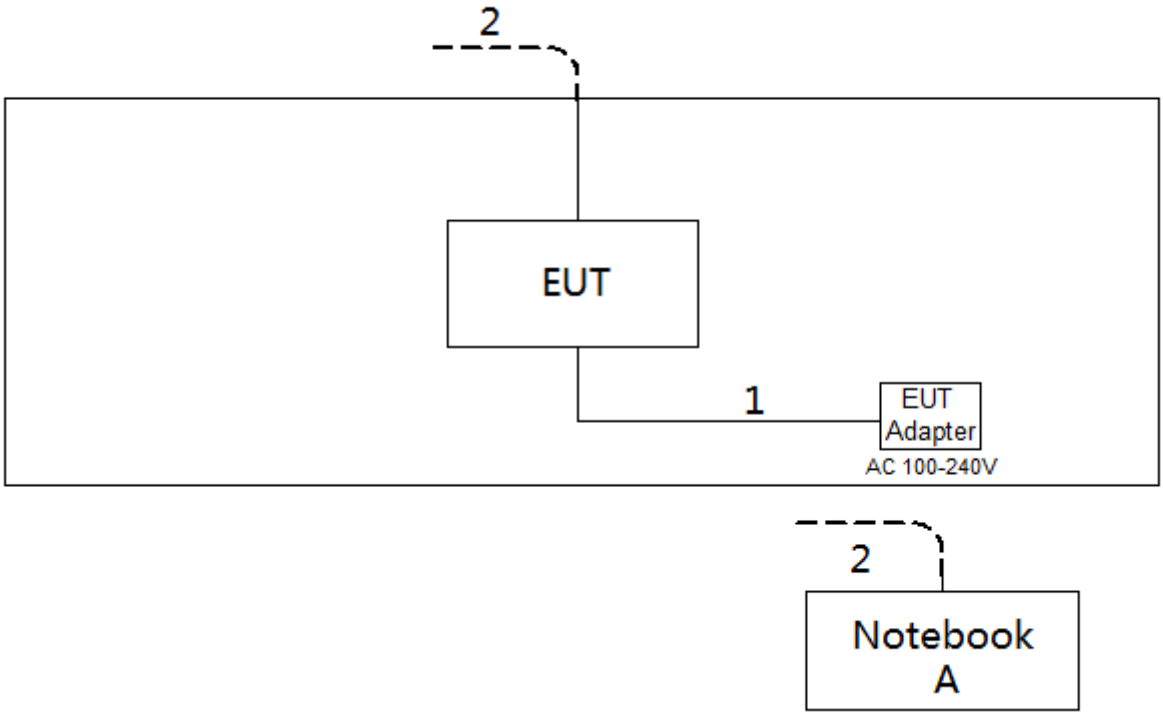
NOTE:
For IEEE 802.11b:
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 439 Hz.

For IEEE 802.11g:
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 712 Hz.

For IEEE 802.11ax(HE20):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3125 Hz.

For IEEE 802.11ax(HE40):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3175 Hz.

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Honor	14SER5 3500	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.5m
2	RJ45 Cable	NO	NO	10m

3.7 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain is provided by the manufacturer.
2) Except for AC power line conducted emissions and radiated emissions, the results of all test items include cable losses. Part of the cable losses (1.0dB) are provided by the manufacturer, while the other parts of the cable losses are provided by the testing laboratory.

4. AC POWER LINE CONDUCTED EMISSIONS

4.1 LIMIT

Frequency of Emission (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 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.

4.2 TEST 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.
e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

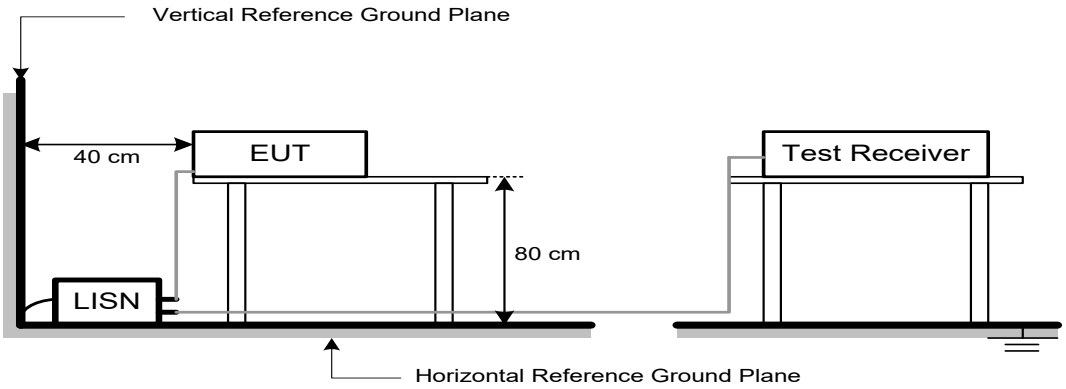
The following table is the setting of the receiver:

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

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS

Please refer to the APPENDIX A.

5. RADIATED EMISSIONS

5.1 LIMIT

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

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

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 (Above 1000 MHz)

Frequency (MHz)	Band edge/ Harmonic at 3m (dBμV/m)		Harmonic at 1m (dBμV/m)	
	Peak	Average	Peak	Average
Above 1000	74	54	83.5 (Note 4)	63.5 (Note 4)

NOTE:

(1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

(4)

$$FS_{\text{limit}} = FS_{\max} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log ($d_{limit}/d_{measure}$)=20log (3/1)=9.5 dB.
FS_{limit}: Harmonic at 3m Peak and Average limit.
FS_{max}:Harmonic at 1m Peak and Average Maximum value.
d_{limit}:Harmonic at 3m test distance.
$d_{measure}$:HarmonicActual test distance.

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 or 1m 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 1 GHz.
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 1 GHz)
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 1 GHz)
i. For the actual test configuration, please refer to the related Item -EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

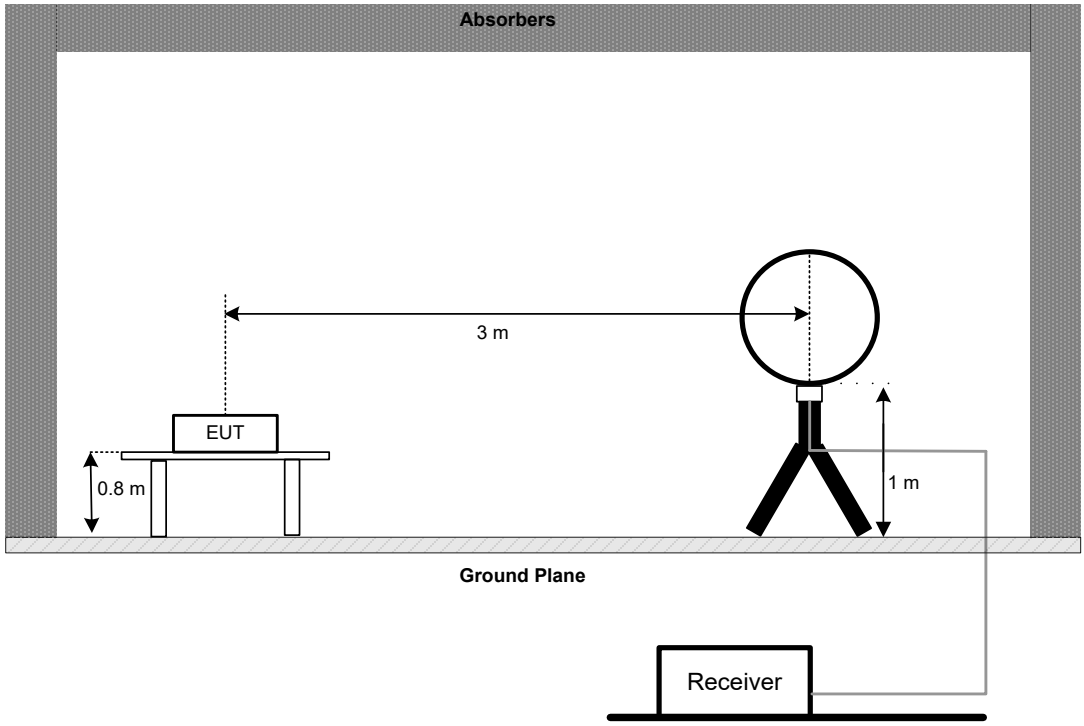
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	1 GHz~26.5 GHz for PK/AVG detector

5.3 DEVIATION FROM TEST STANDARD

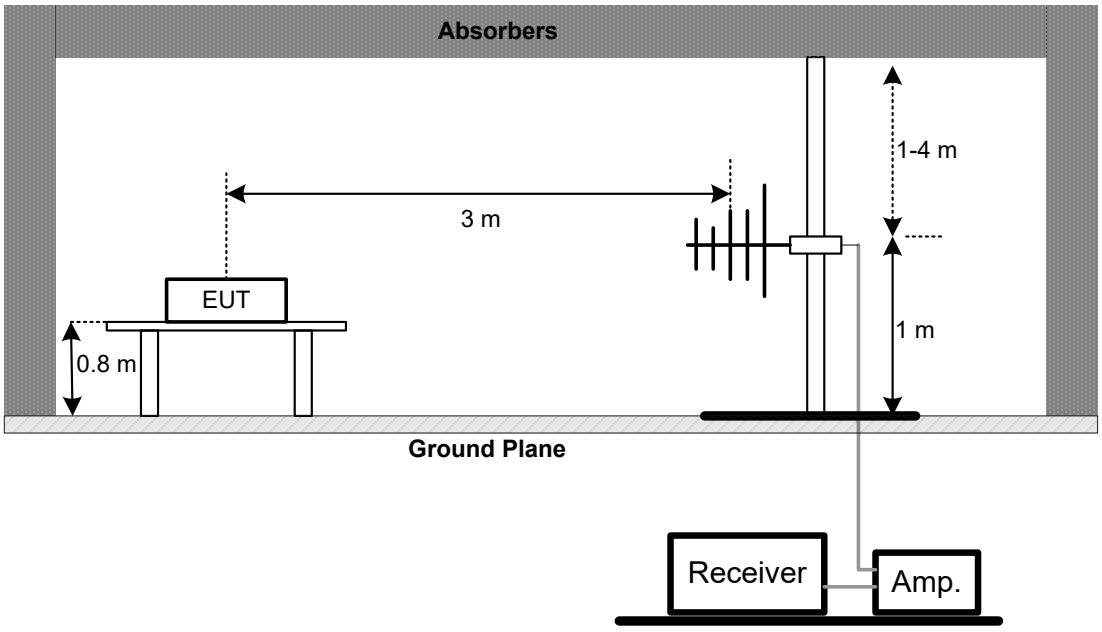
No deviation.

5.4 TEST SETUP

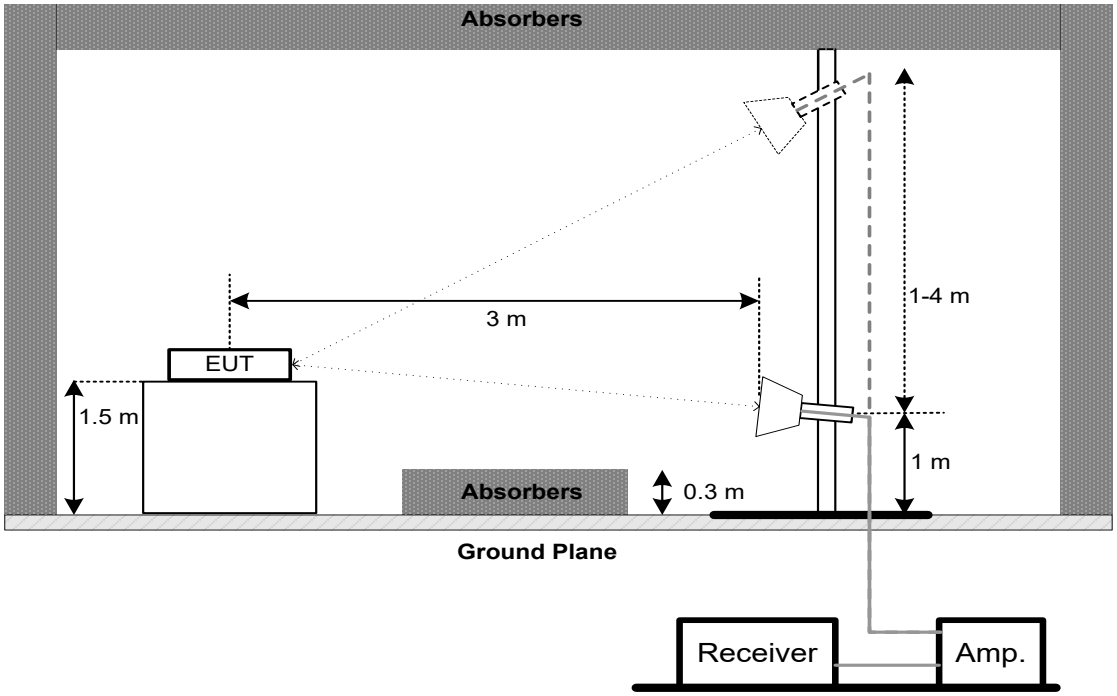
9 kHz to 30 MHz



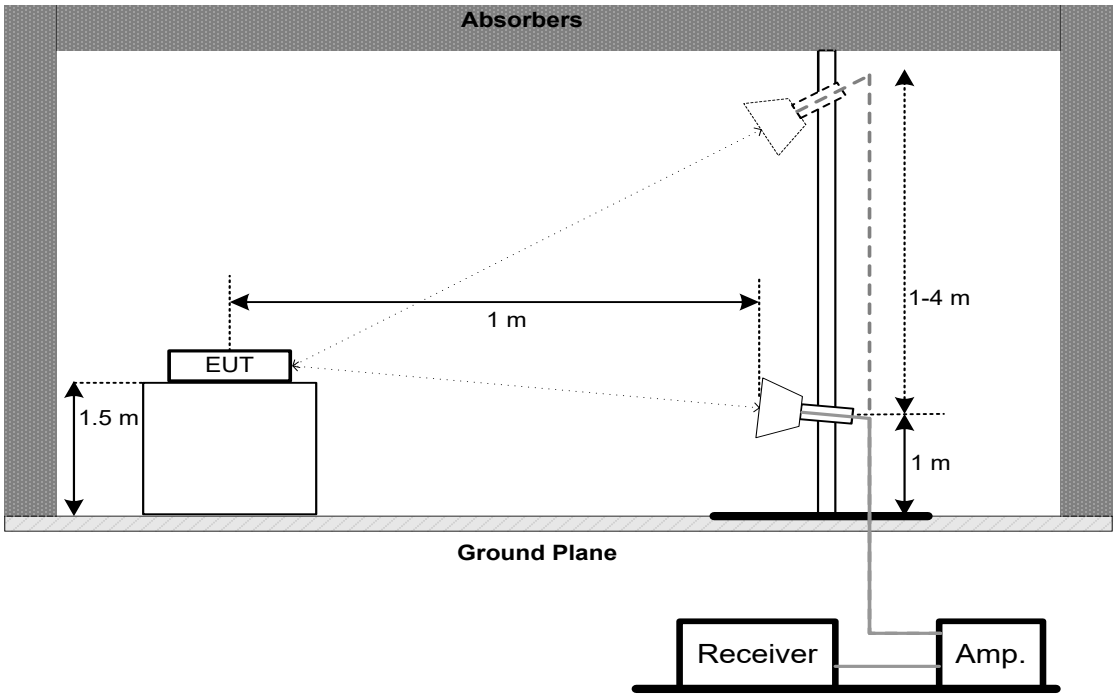
30 MHz to 1 GHz



Above 1 GHz
Band edge & Harmonic(1 GHz to 18 GHz)



Harmonic(18 GHz to 26.5 GHz)



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B.

Remark:

(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

5.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

6. BANDWIDTH

6.1 LIMIT

Section	Test Item	Limit
FCC 15.247(a)(2)	6 dB Bandwidth	Minimum 500 kHz
	99% Emission Bandwidth	-

6.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. The following table is the setting of the spectrum analyzer:

For 6 dB Bandwidth:

Spectrum Parameters	Setting
Span Frequency	> Measurement Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

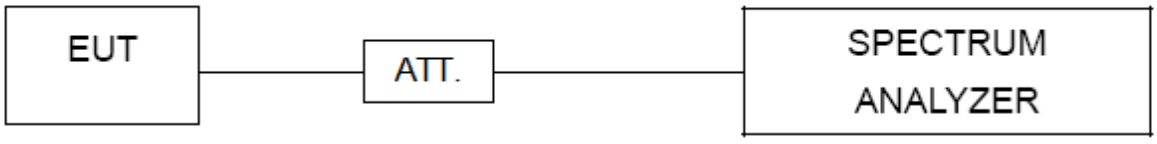
For 99% Emission Bandwidth:

Spectrum Parameters	Setting
Span Frequency	Between 1.5 times and 5.0 times the OBW
RBW	300 kHz For 20MHz 1 MHz For 40MHz
VBW	1 MHz For 20MHz 3 MHz For 40MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX E.

7. MAXIMUM OUTPUT POWER

7.1 LIMIT

Section	Test Item	Limit
FCC 15.247(b)(3)	Maximum Output Power	1.0000 Watt or 30.00 dBm

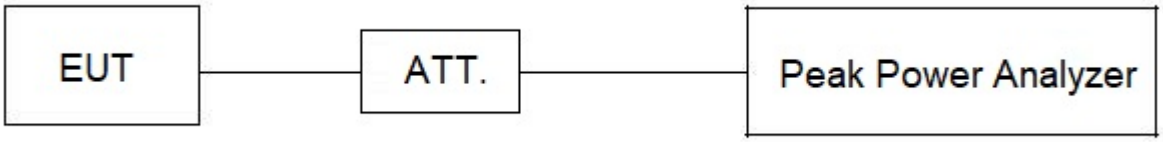
7.2 TEST PROCEDURE

a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.
b. The maximum conducted output power was performed in accordance with method 11.9.2.3.1 (for AVG power) of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX F.

8. CONDUCTED SPURIOUS EMISSIONS

8.1 LIMIT

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

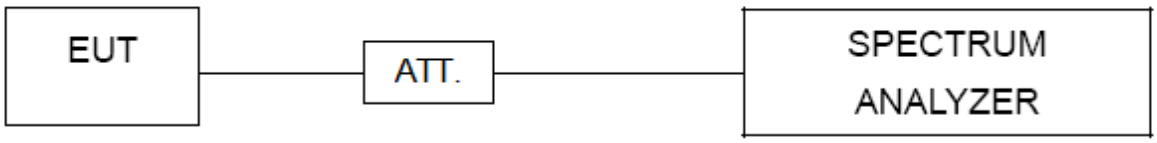
a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Start Frequency	30 MHz
Stop Frequency	26.5 GHz
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX G.

9. POWER SPECTRAL DENSITY

9.1 LIMIT

Section	Test Item	Limit
FCC 15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)

9.2 TEST PROCEDURE

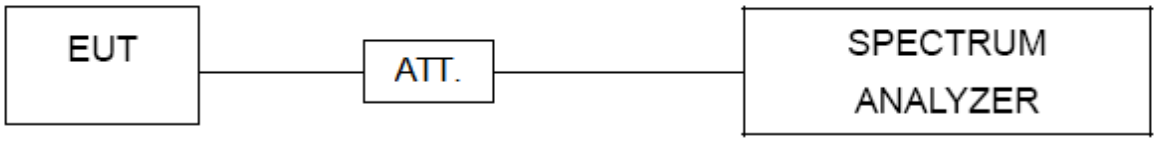
a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Span Frequency	25 MHz (20 MHz) / 60 MHz (40 MHz)
RBW	3 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULTS

Please refer to the APPENDIX H.

10. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI TEST RECEIVER	R&S	ESCI	100382	Dec. 22, 2024
2	TWO-LINE V-NETWORK	R&S	ENV216	101447	Dec. 22, 2024
3	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
4	Cable	N/A	SFT205-NMNM-9M -001	9M	Nov. 27, 2024
5	643 Shield Room	ETS	6*4*3	N/A	N/A

Radiated Emissions - 9 kHzto 30MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-NMB M-1.5M	N/A	Jun. 09, 2025
4	Cable	N/A	LMR400-NMNM-8 M	N/A	Sep. 09, 2025
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	966 Chamber room	ETS	9*6*6	N/A	May 16, 2025

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	01462	Dec. 13, 2024
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 13, 2024
3	Preamplifier	EMC INSTRUMENT	EMC001330	980998	May 31, 2025
4	Cable	RegalWay	LMR400-NMNM-12 .5m	N/A	Jun. 06, 2025
5	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jun. 06, 2025
6	Cable	RegalWay	LMR400-NMNM-0. 5m	N/A	Jun. 06, 2025
7	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
8	Positioning Controller	MF	MF-7802	N/A	N/A
8	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	CM	9*6*6	N/A	May 16, 2025

Radiated Emissions - 1GHz to 18GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Multi-Device Controller	ETS-Lindgren	N/A	N/A	N/A
2	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
3	MXA Signal Analyzer	KEYSIGHT	N9020B	MY63380204	Oct. 29, 2025
4	Cable	RegalWay	RWLP50-4.0A-SMSM-1.3M	N/A	Jan. 09, 2025
5	Cable	RegalWay	RWLP50-2.6A-3.5M2.92MRA-3M	N/A	Jan. 09, 2025
6	Cable	RegalWay	RWLP50-4.0A-SMSM-9M	N/A	Jan. 09, 2025
7	966 Chamber room	ETS	RFD-100(SVSWR)	Q2179	Jan. 09, 2025
8	Double Ridged Horn Antenna	EMC INSTRUMENT	DRH18-E	210509A18ES	Aug. 28, 2025
9	Preamplifier	EMC INSTRUMENT	EMC118A45SE	981001	May 31, 2025
10	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
11	Filter	STI	STI15-9912	N/A	Oct. 29, 2025

Radiated Emissions - Above 18GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330-K	619413	Jul. 17, 2025
2	Cable	RegalWay	RWLP50-2.6A-2.92M2.92M-1.1M	N/A	Jul. 25, 2025
3	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 25, 2025
4	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 16, 2025
5	966 Chamber room	CM	9*6*6	N/A	May 19, 2025
6	Positioning Controller	MF	MF-7802	N/A	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
8	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Aug. 20, 2025

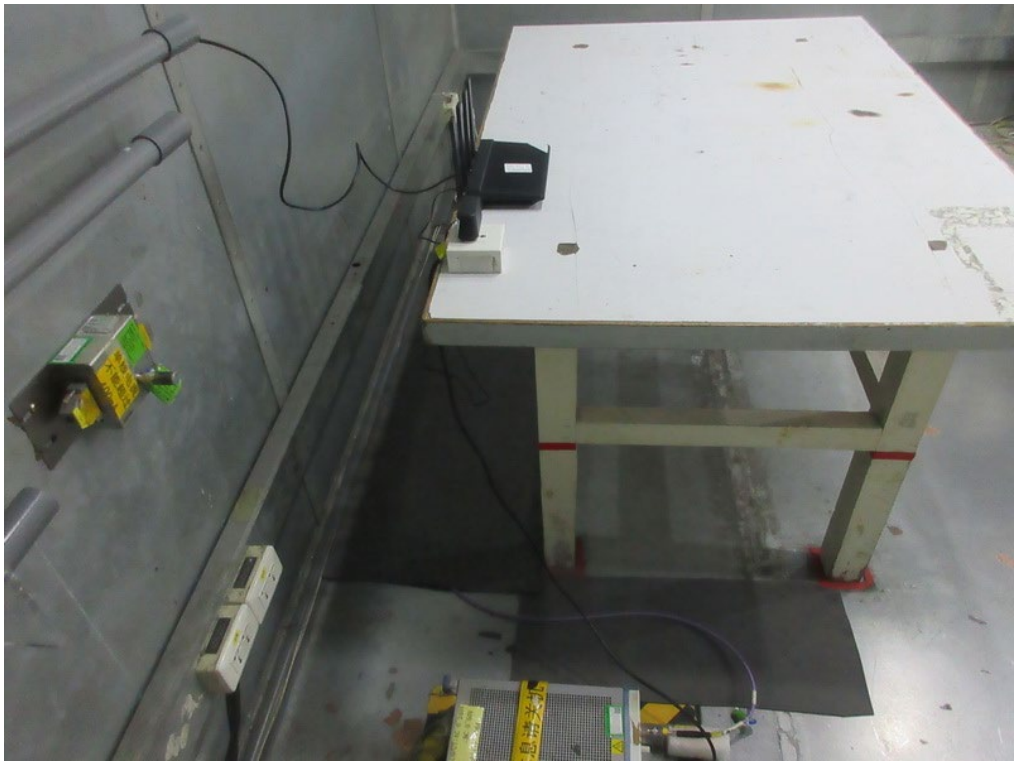
Bandwidth& Conducted Spurious Emissions& Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP38	100852	May 31, 2025
2	Measurement Software	BTL	BTL Conducted Test	N/A	N/A
3	Isolation attenuator	Z-Link	ASMA-16-18-2W	N/A	N/A

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	May 31, 2025
2	Wideband power sensor	Keysight	N1923A	MY58310004	May 31, 2025
3	Isolation attenuator	Z-Link	ASMA-10-18-2W	N/A	N/A

Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

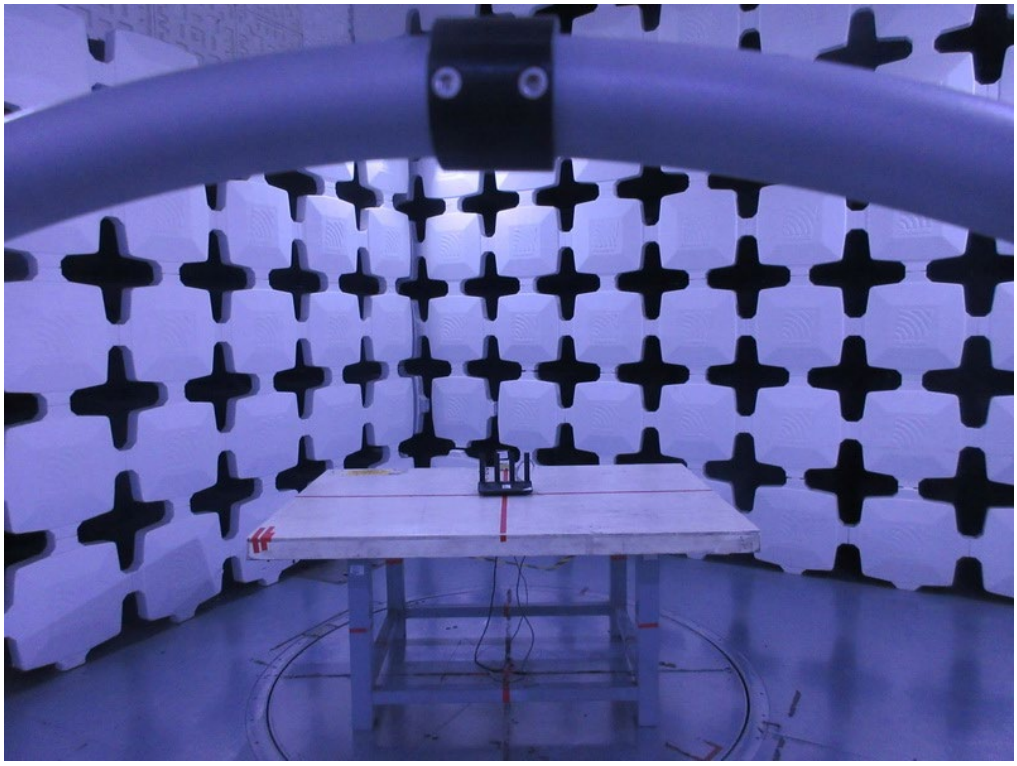
11. EUT TEST PHOTO

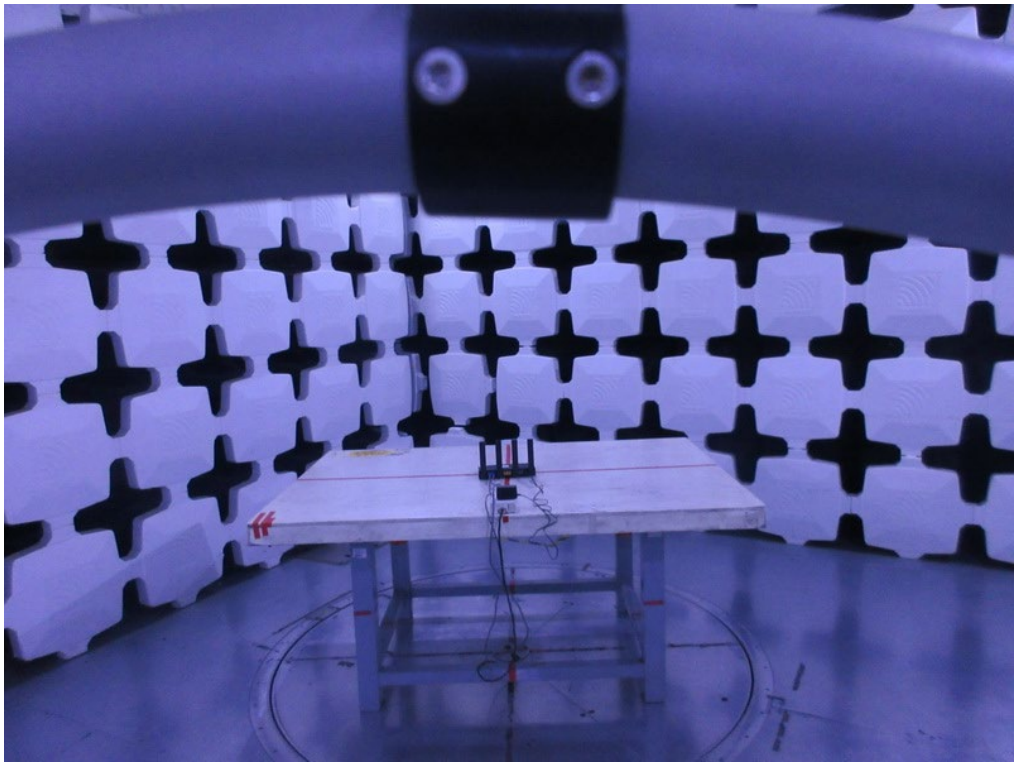
AC Power Line Conducted Emissions Test Photos



Radiated Emissions Test Photos

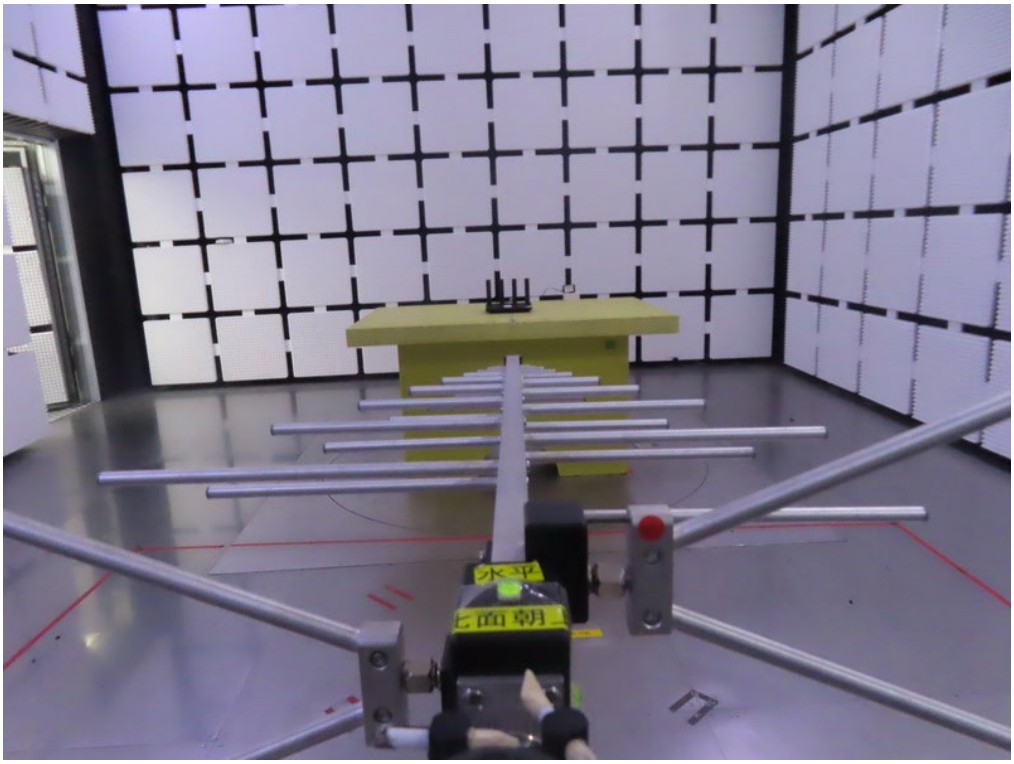
9 kHz to 30 MHz

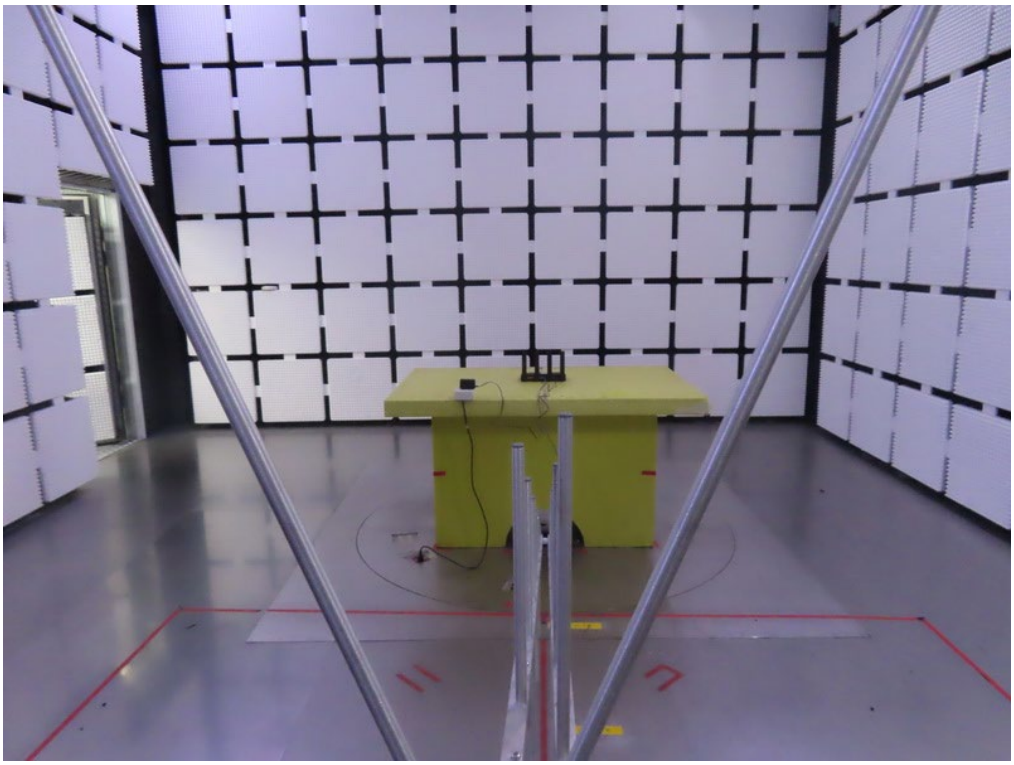




Radiated Emissions Test Photos

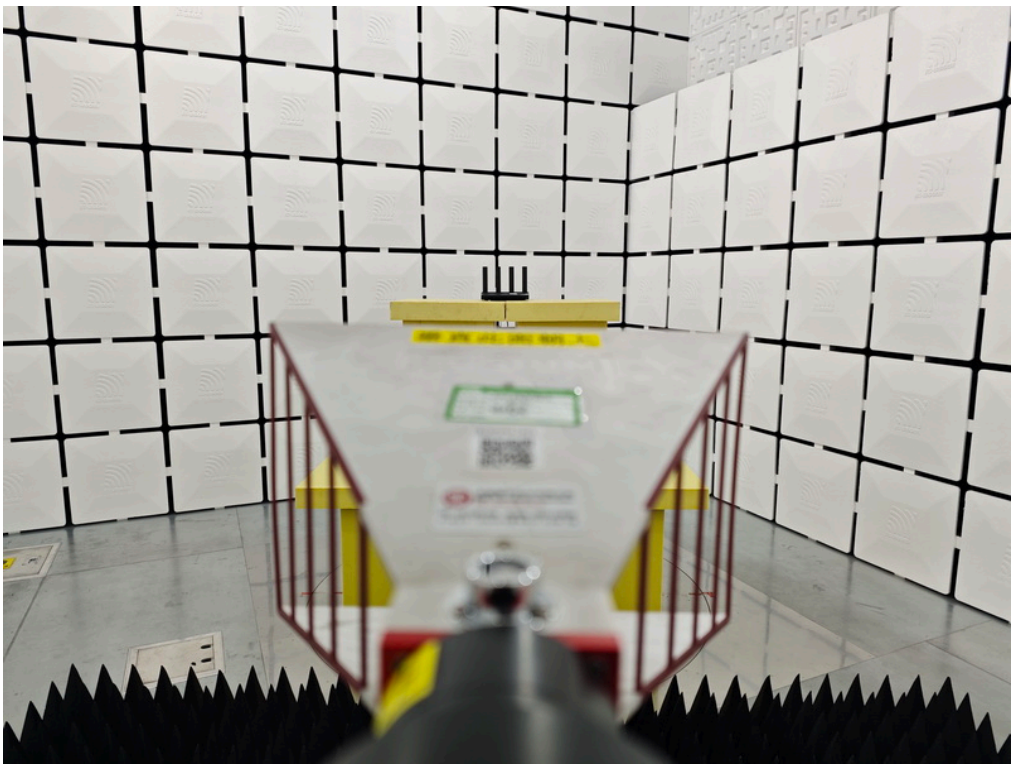
30 MHz to 1 GHz

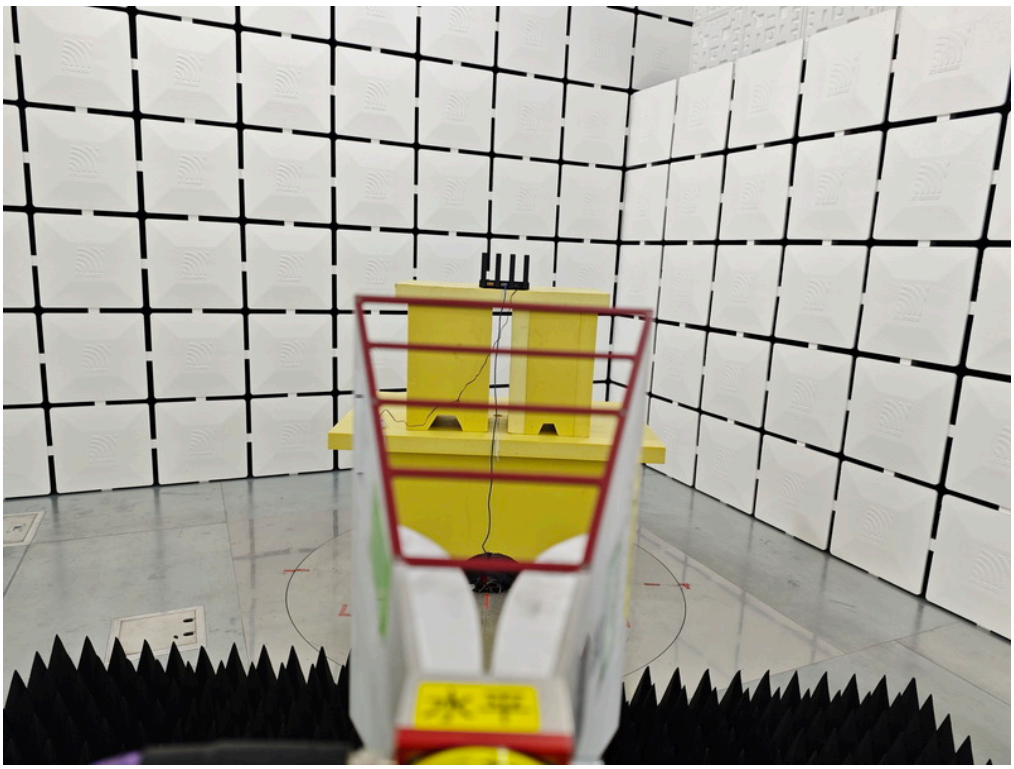




Radiated Emissions Test Photos

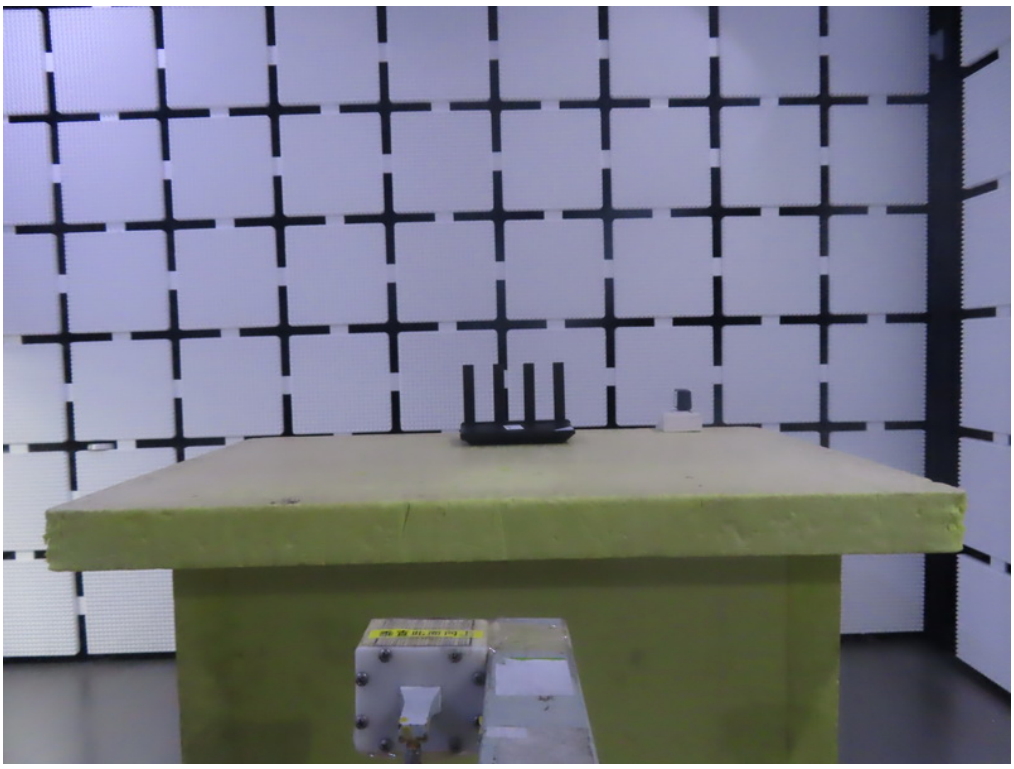
Above 1 GHz_Band edge &Harmonic(1 GHz to 18 GHz)

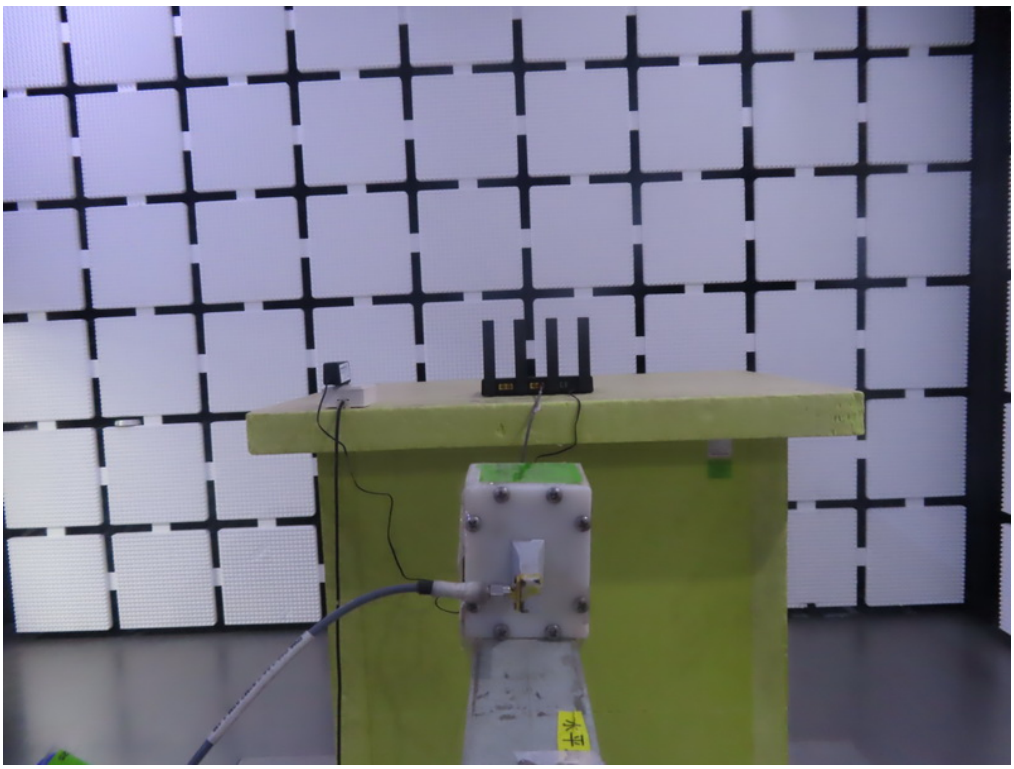




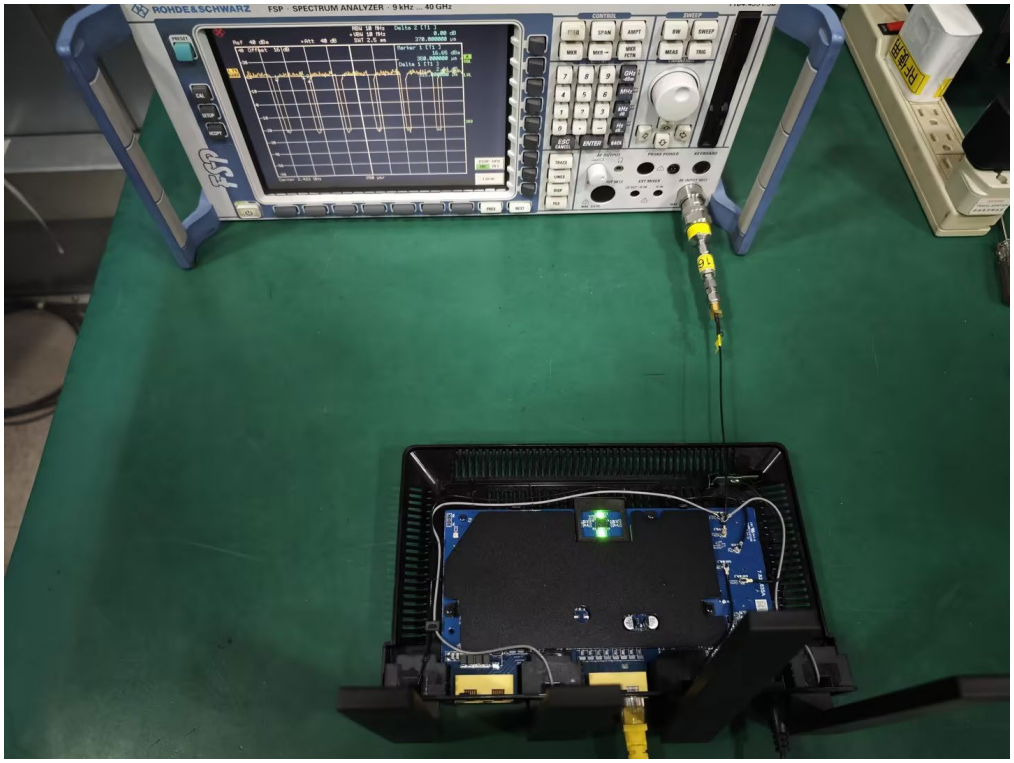
Radiated Emissions Test Photos

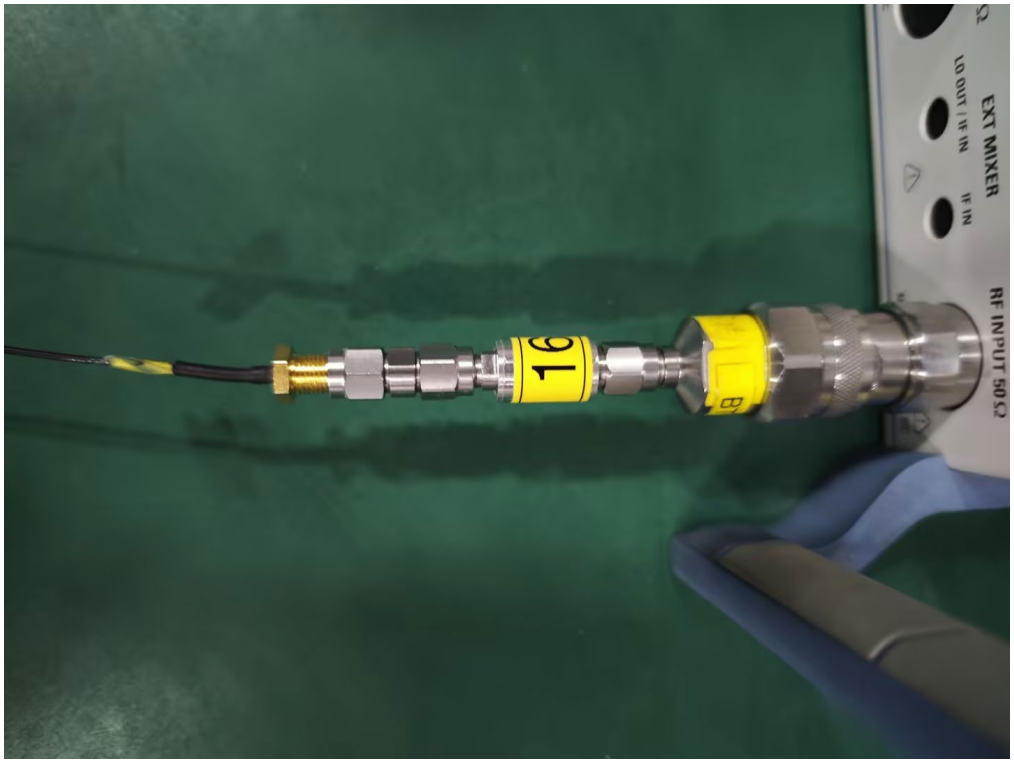
Above 1 GHz_Harmonic(18 GHz to 26.5 GHz)





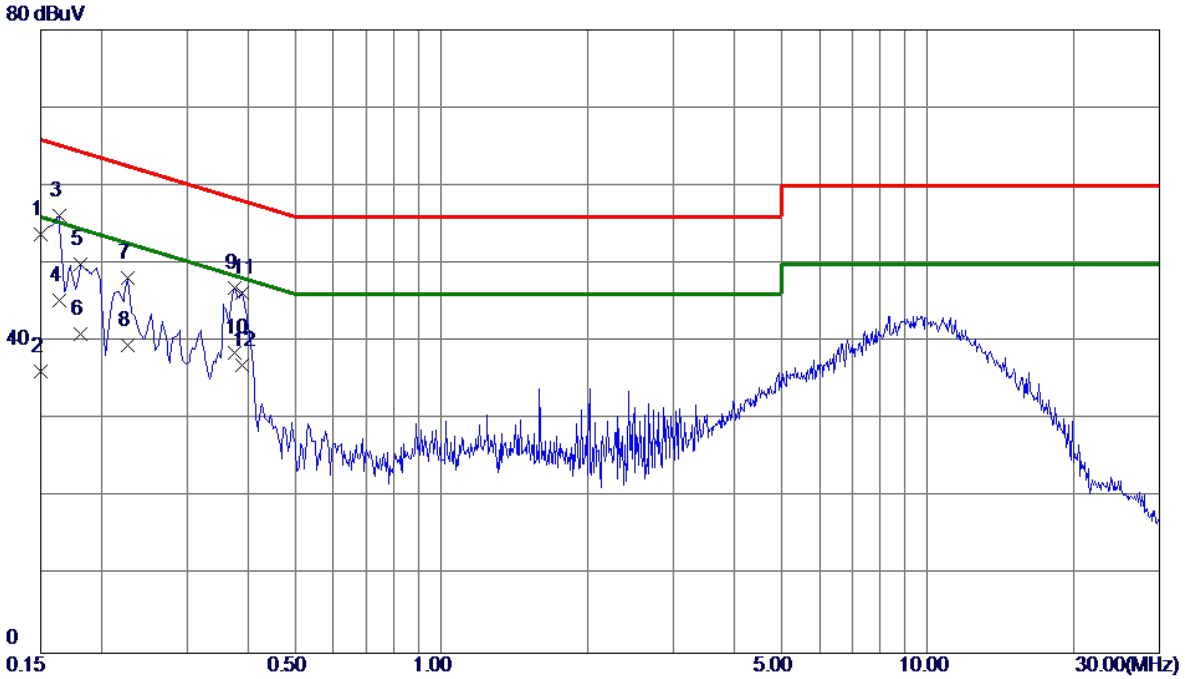
Conducted Test Photos





APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

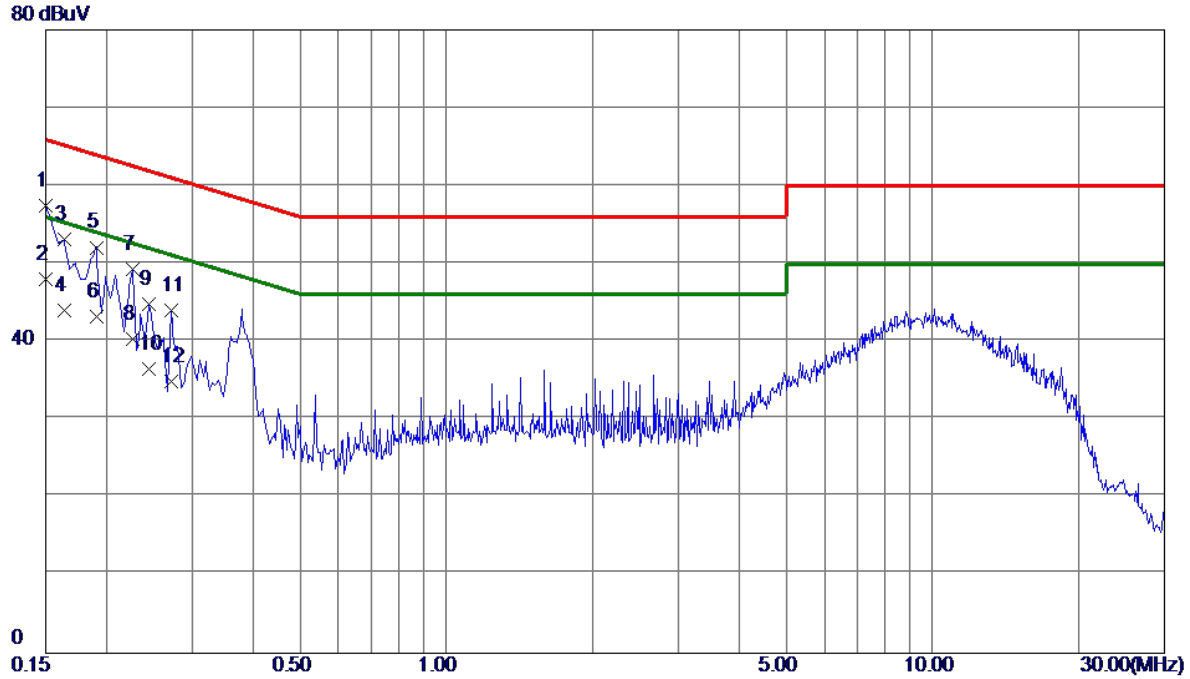
Test Mode	TX AX(HE40) Mode Channel 03	Phase	Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1500	44.05	9.70	53.75	66.00	-12.25	QP	
2	0.1500	26.40	9.70	36.10	56.00	-19.90	AVG	
3 *	0.1635	46.53	9.70	56.23	65.28	-9.05	QP	
4	0.1635	35.60	9.70	45.30	55.28	-9.98	AVG	
5	0.1815	40.17	9.70	49.87	64.42	-14.55	QP	
6	0.1815	31.20	9.70	40.90	54.42	-13.52	AVG	
7	0.2265	38.49	9.71	48.20	62.58	-14.38	QP	
8	0.2265	29.80	9.71	39.51	52.58	-13.07	AVG	
9	0.3750	37.22	9.72	46.94	58.39	-11.45	QP	
10	0.3750	28.90	9.72	38.62	48.39	-9.77	AVG	
11	0.3893	36.45	9.72	46.17	58.08	-11.91	QP	
12	0.3893	27.30	9.72	37.02	48.08	-11.06	AVG	

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

Test Mode	TX AX(HE40) Mode Channel 03	Phase	Neutral

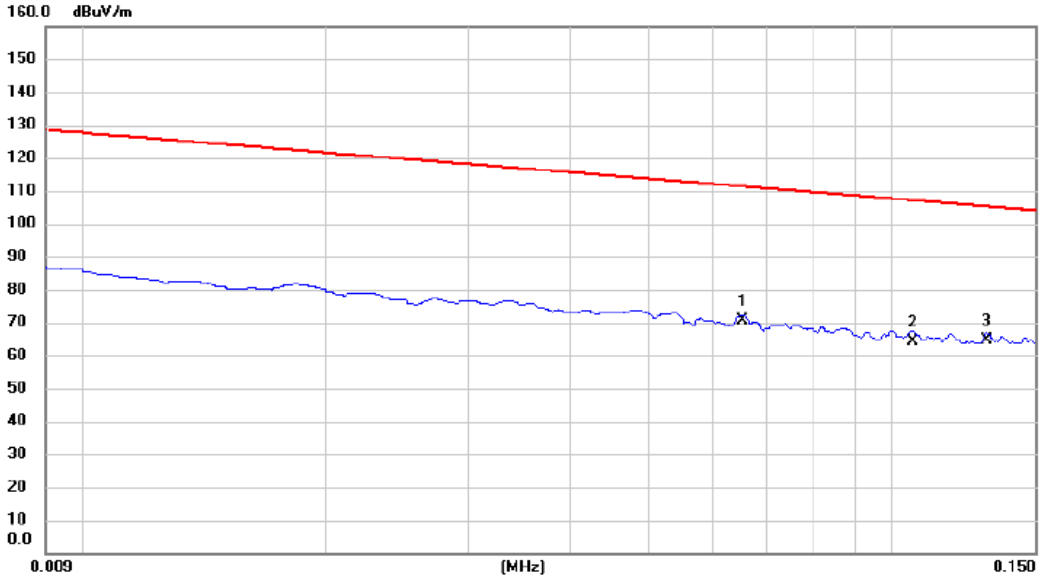


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1500	47.83	9.55	57.38	66.00	-8.62	QP	
2 *	0.1500	38.40	9.55	47.95	56.00	-8.05	AVG	
3	0.1635	43.60	9.55	53.15	65.28	-12.13	QP	
4	0.1635	34.50	9.55	44.05	55.28	-11.23	AVG	
5	0.1905	42.52	9.56	52.08	64.01	-11.93	QP	
6	0.1905	33.60	9.56	43.16	54.01	-10.85	AVG	
7	0.2265	39.78	9.57	49.35	62.58	-13.23	QP	
8	0.2265	30.70	9.57	40.27	52.58	-12.31	AVG	
9	0.2445	35.17	9.57	44.74	61.94	-17.20	QP	
10	0.2445	26.90	9.57	36.47	51.94	-15.47	AVG	
11	0.2714	34.41	9.57	43.98	61.07	-17.09	QP	
12	0.2714	25.30	9.57	34.87	51.07	-16.20	AVG	

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

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

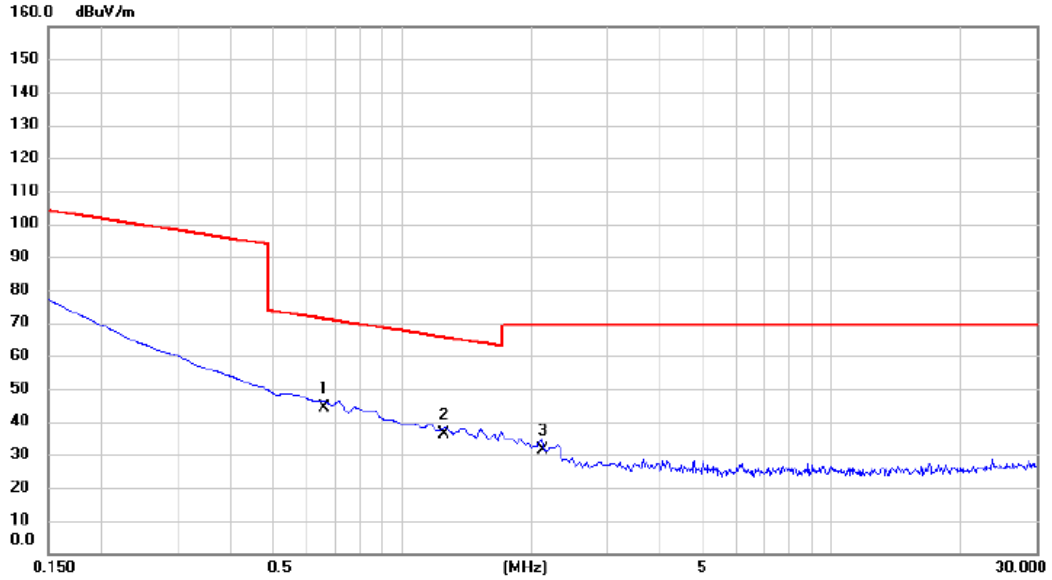
Test Mode	TX AX(HE40) Mode Channel 03	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0653	49.36	21.25	70.61	111.31	-40.70	AVG	
2		0.1060	42.93	21.32	64.25	107.10	-42.85	QP	
3		0.1310	43.16	21.29	64.45	105.26	-40.81	AVG	

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

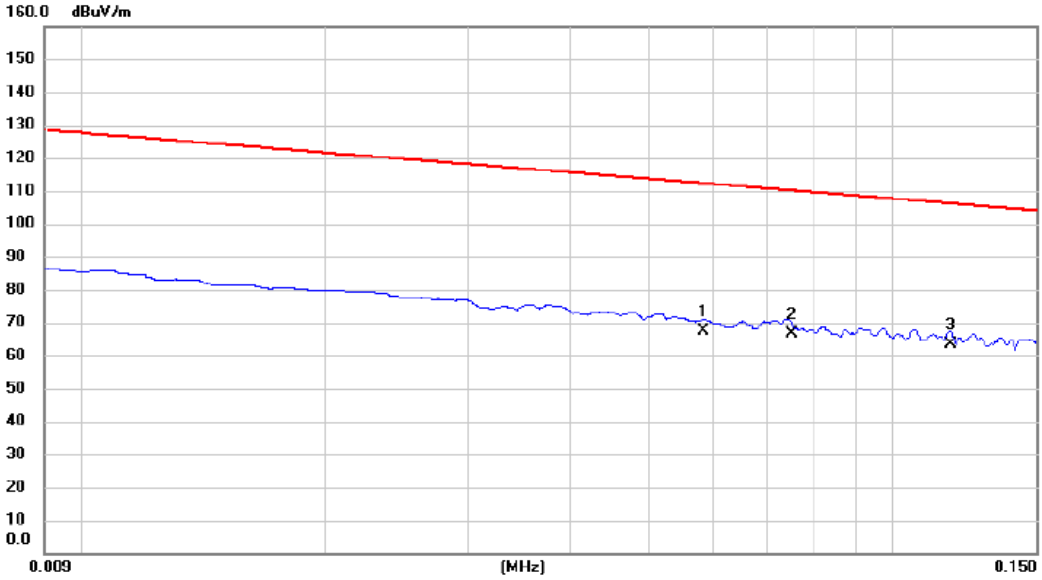
Test Mode	TX AX(HE40) Mode Channel 03	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.6574	23.03	21.12	44.15	71.25	-27.10	QP	
2		1.2545	15.09	21.16	36.25	65.63	-29.38	QP	
3		2.1326	10.35	21.11	31.46	69.54	-38.08	QP	

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

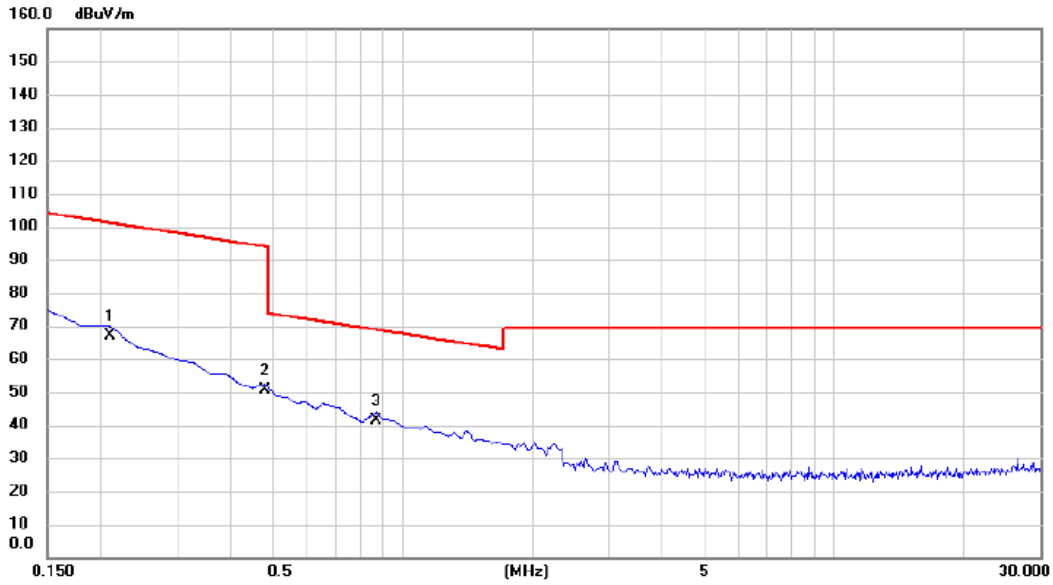
Test Mode	TX AX(HE40) Mode Channel 03	Polarization	Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0585	46.00	21.23	67.23	112.26	-45.03	AVG	
2		0.0752	45.35	21.28	66.63	110.08	-43.45	AVG	
3	*	0.1176	42.21	21.30	63.51	106.20	-42.69	AVG	

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

Test Mode	TX AX(HE40) Mode Channel 03	Polarization	Ant 90°

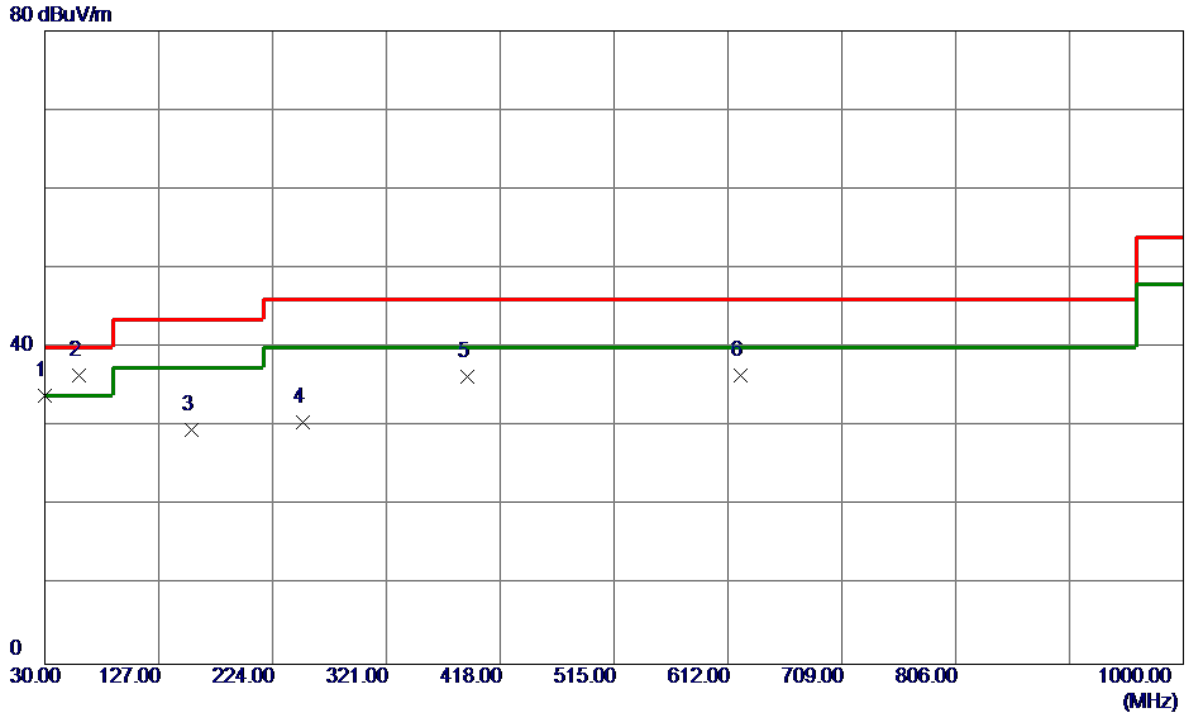


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2097	45.98	21.19	67.17	101.17	-34.00	AVG	
2		0.4783	29.36	21.06	50.42	94.01	-43.59	QP	
3	*	0.8664	20.16	21.18	41.34	68.85	-27.51	QP	

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

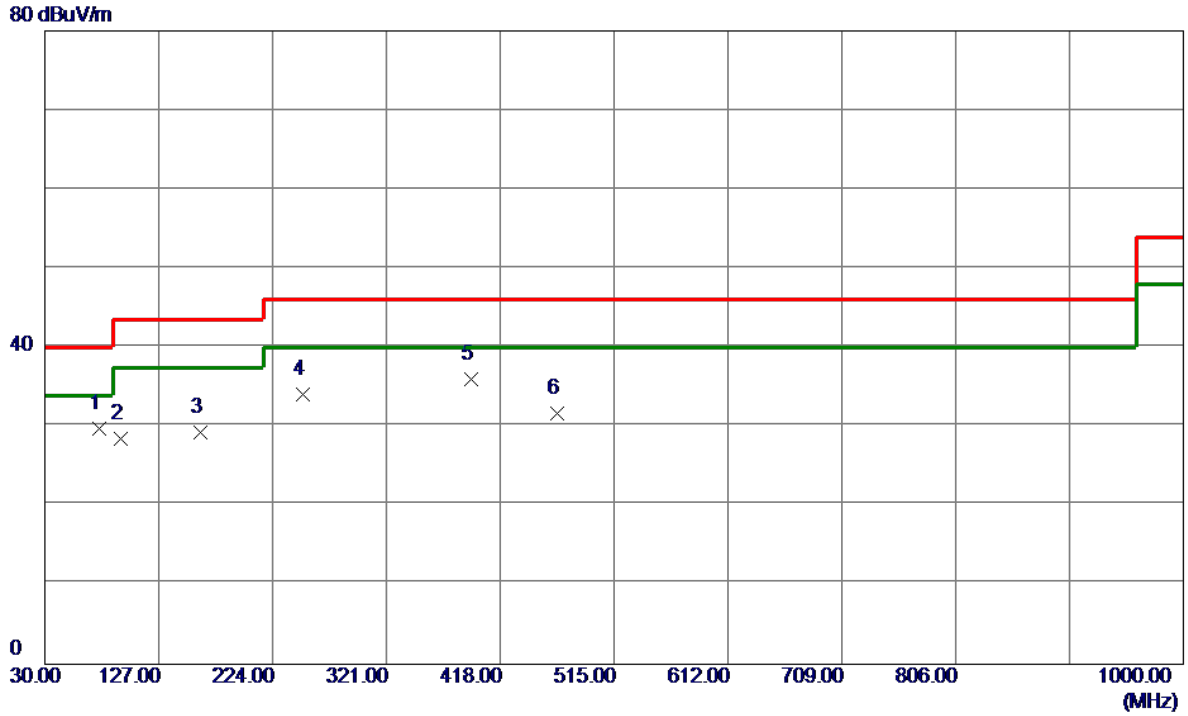
Test Mode	TX AX(HE40) Mode Channel 03	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	30.0000	47.04	-13.12	33.92	40.00	-6.08	Peak	
2 *	59.5850	48.33	-11.90	36.43	40.00	-3.57	QP	
3	155.1300	40.57	-11.00	29.57	43.52	-13.95	Peak	
4	250.1900	42.88	-12.35	30.53	46.02	-15.49	Peak	
5	390.3550	44.52	-8.22	36.30	46.02	-9.72	Peak	
6	623.1550	39.70	-3.24	36.46	46.02	-9.56	Peak	

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

Test Mode	TX AX(HE40) Mode Channel 03	Polarization	Horizontal

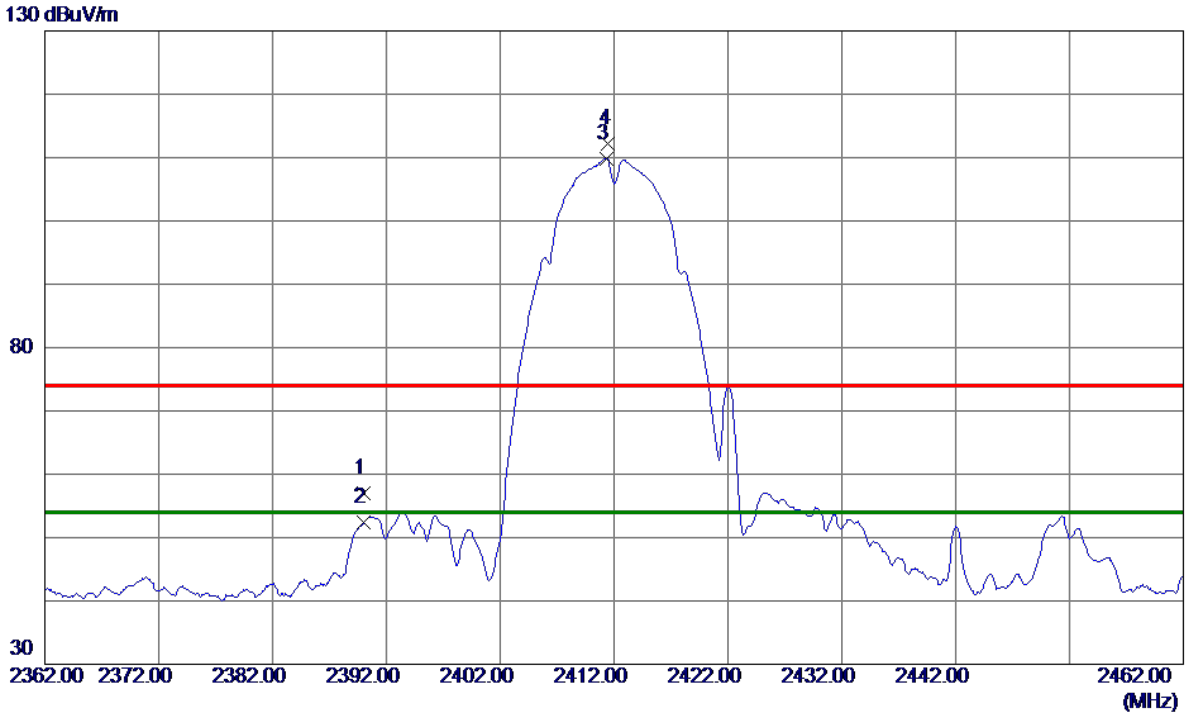


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	76.0750	44.40	-14.59	29.81	40.00	-10.19	Peak	
2	94.5050	45.25	-16.79	28.46	43.52	-15.06	Peak	
3	162.8900	40.26	-10.96	29.30	43.52	-14.22	Peak	
4	250.1900	46.41	-12.35	34.06	46.02	-11.96	Peak	
5 *	392.7800	44.23	-8.18	36.05	46.02	-9.97	Peak	
6	466.9850	38.27	-6.52	31.75	46.02	-14.27	Peak	

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

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

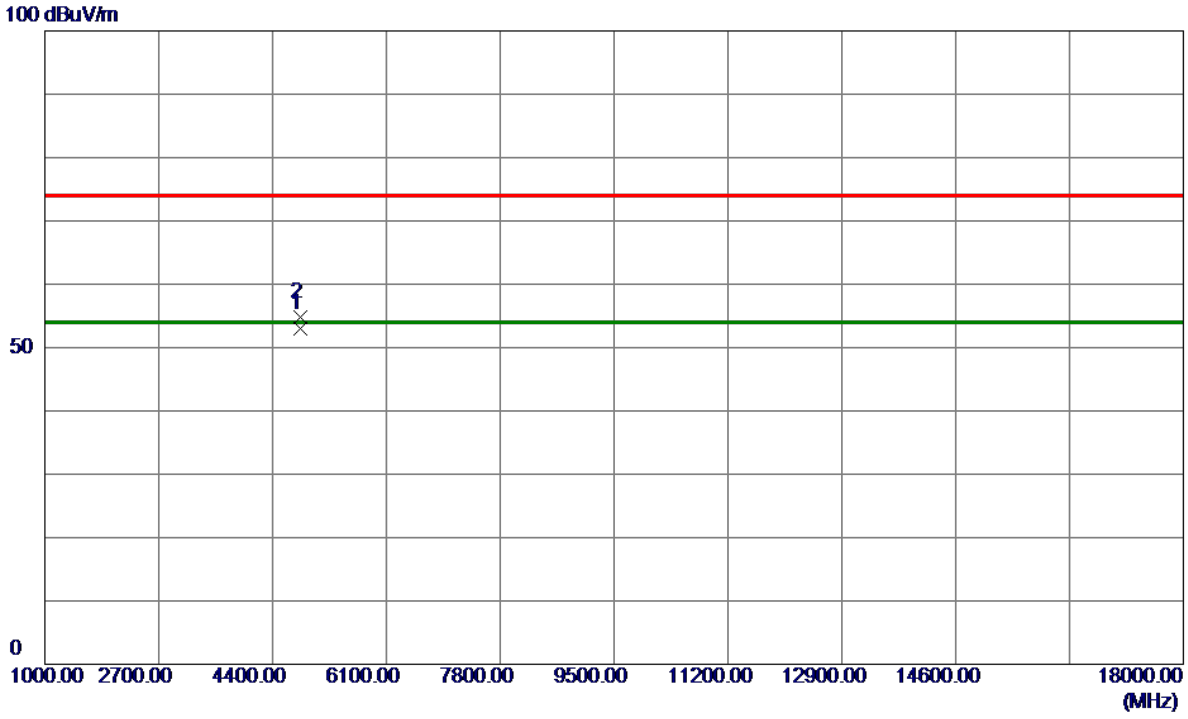
Test Mode	TX B Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	48.75	8.32	57.07	74.00	-16.93	Peak	
2	2390.0000	44.06	8.32	52.38	54.00	-1.62	AVG	
3 *	2411.3000	101.45	8.37	109.82	54.00	55.82	AVG	No Limit
4	2411.5000	103.87	8.37	112.24	74.00	38.24	Peak	No Limit

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

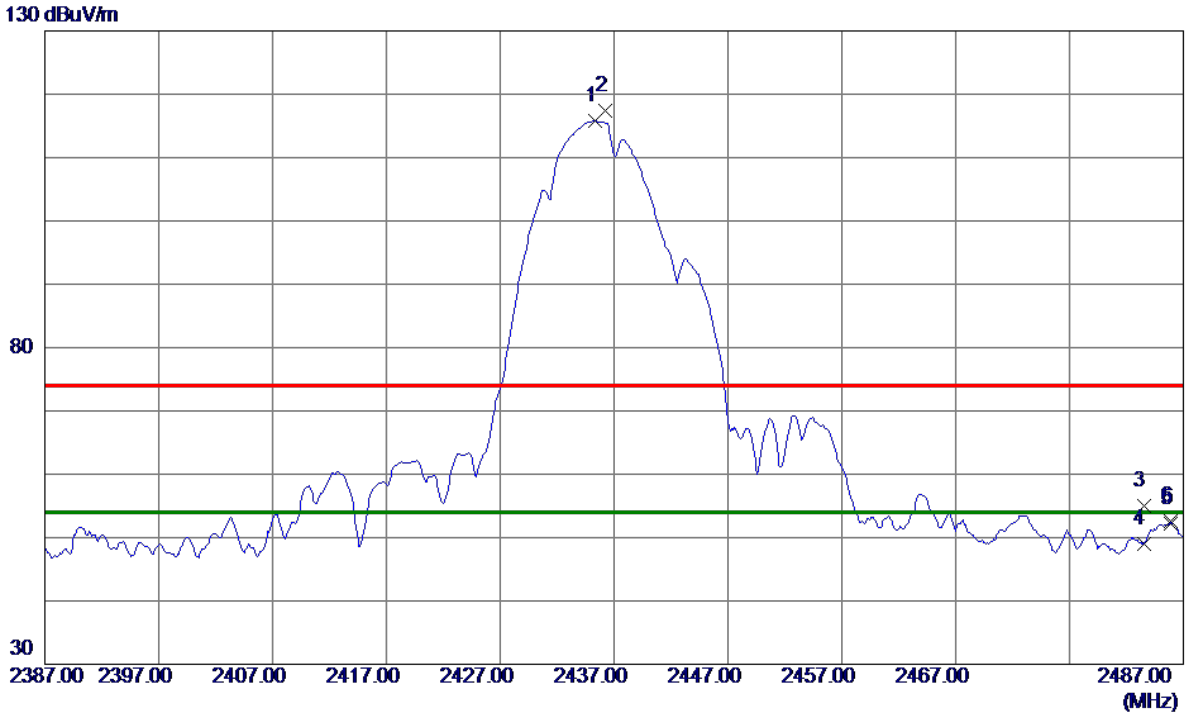
Test Mode	TX B Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4824.0000	49.58	3.48	53.06	54.00	-0.94	AVG	
2	4824.1500	51.41	3.48	54.89	74.00	-19.11	Peak	

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

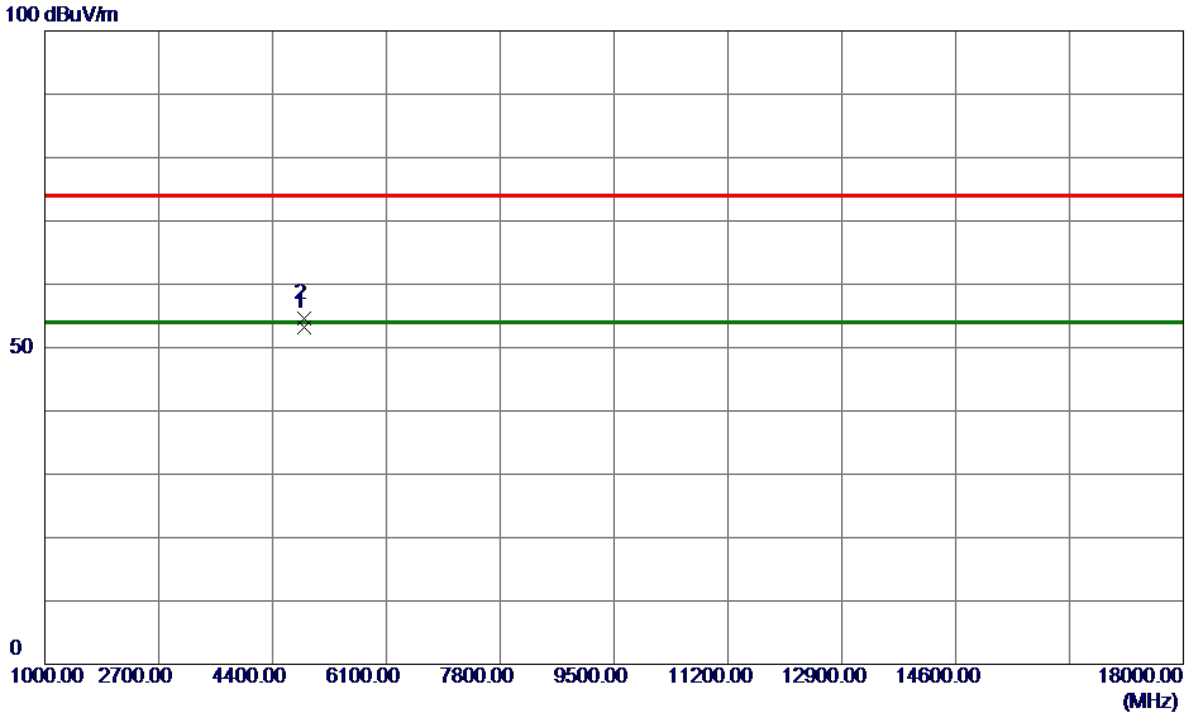
Test Mode	TX B Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435.3000	107.45	8.43	115.88	54.00	61.88	AVG	No Limit
2	2436.2000	108.98	8.43	117.41	74.00	43.41	Peak	No Limit
3	2483.5000	46.43	8.54	54.97	74.00	-19.03	Peak	
4	2483.5000	40.41	8.54	48.95	54.00	-5.05	AVG	
5	2485.9000	43.60	8.54	52.14	74.00	-21.86	Peak	
6	2485.9000	44.07	8.54	52.61	54.00	-1.39	AVG	

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

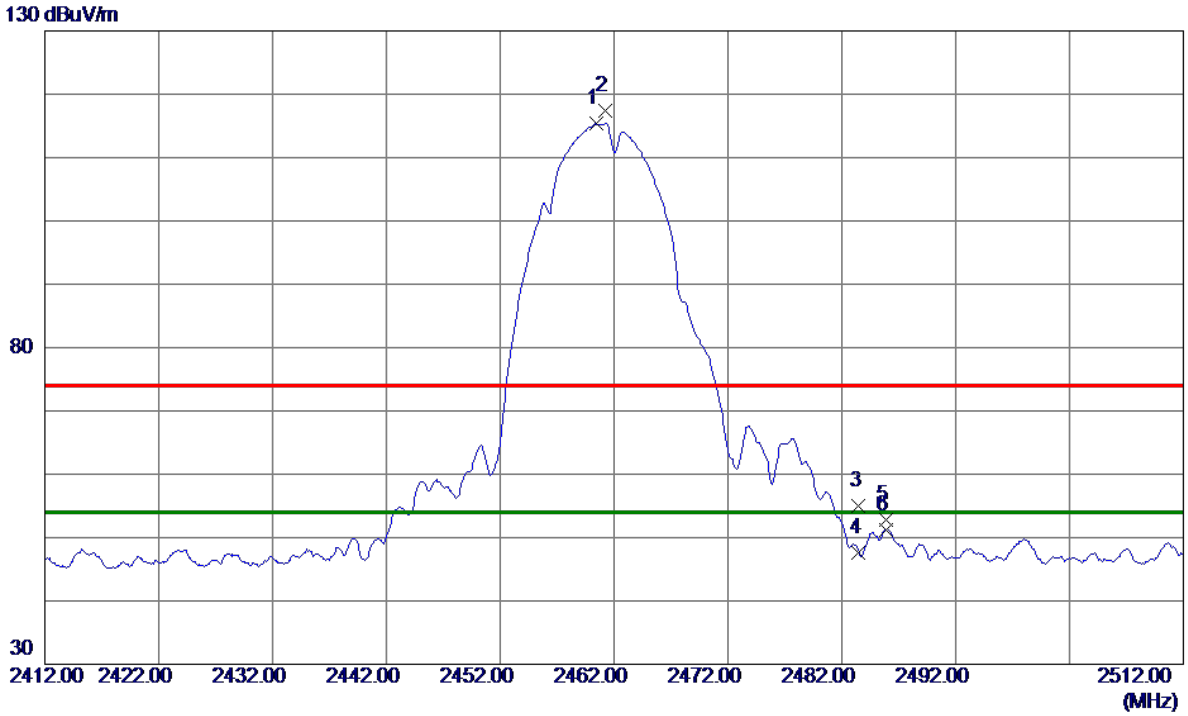
Test Mode	TX B Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4874.0000	49.73	3.56	53.29	54.00	-0.71	AVG	
2	4874.0500	51.11	3.56	54.67	74.00	-19.33	Peak	

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

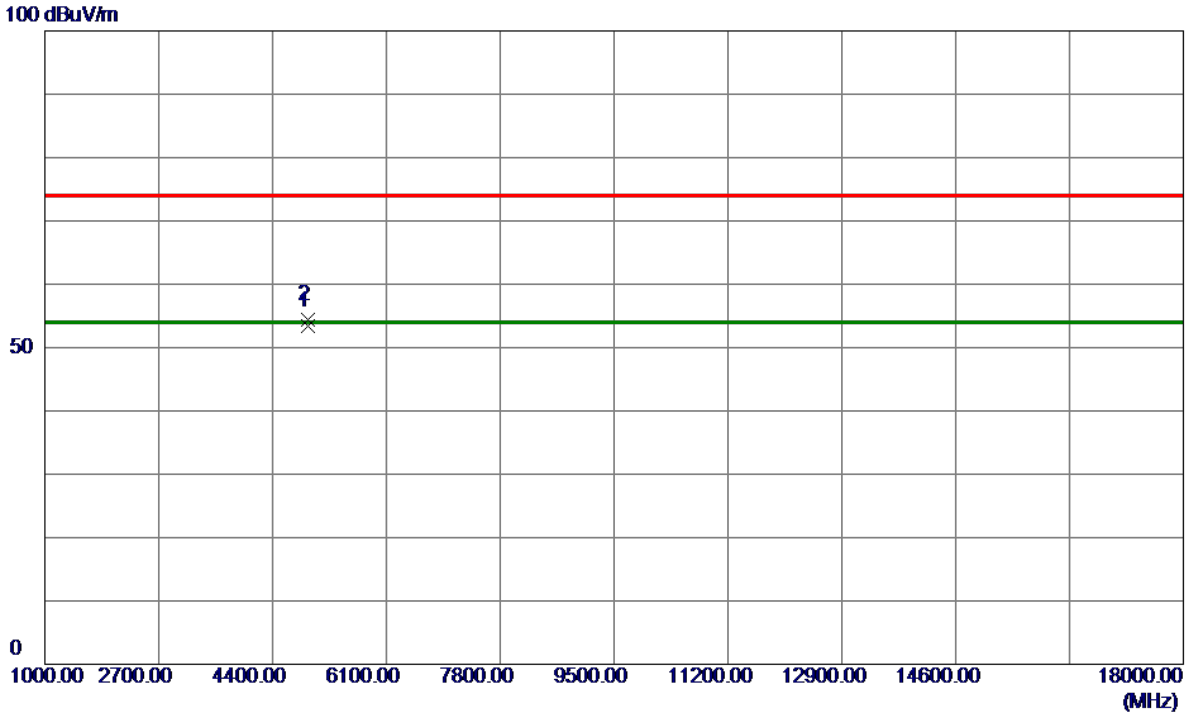
Test Mode	TX B Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.4000	106.90	8.48	115.38	54.00	61.38	AVG	No Limit
2	2461.2000	108.83	8.49	117.32	74.00	43.32	Peak	No Limit
3	2483.5000	46.51	8.54	55.05	74.00	-18.95	Peak	
4	2483.5000	38.99	8.54	47.53	54.00	-6.47	AVG	
5	2485.9000	44.29	8.54	52.83	74.00	-21.17	Peak	
6	2485.9000	42.62	8.54	51.16	54.00	-2.84	AVG	

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

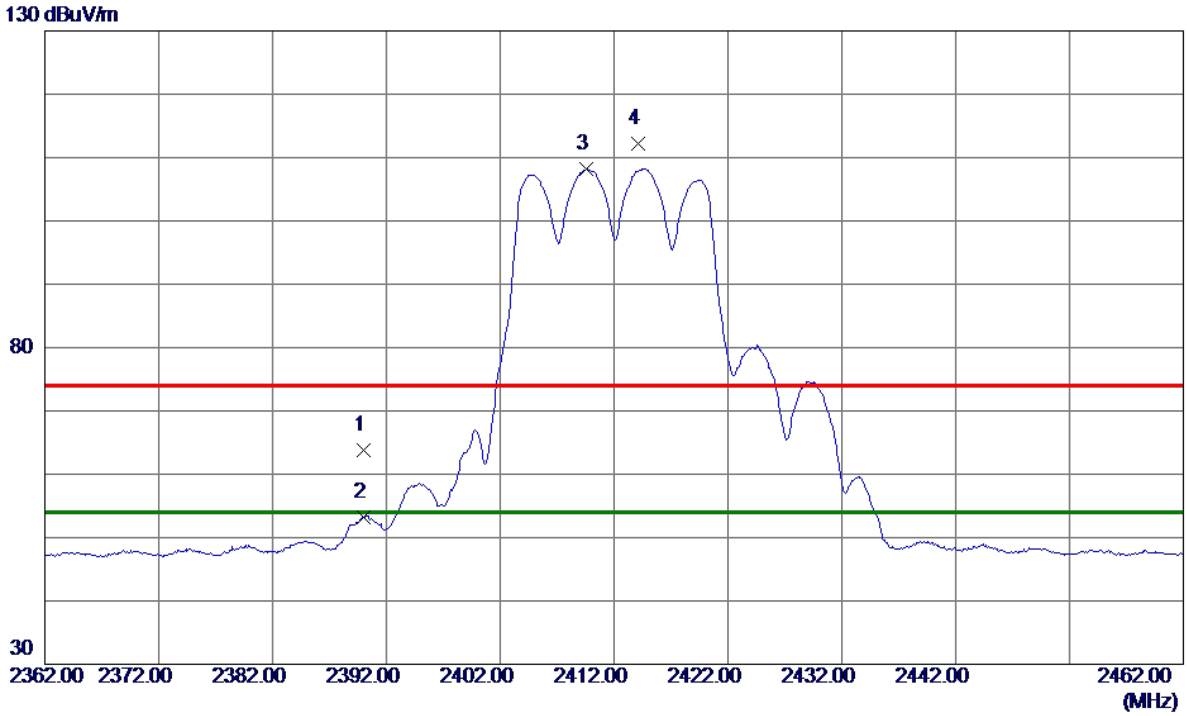
Test Mode	TX B Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.9800	49.71	3.63	53.34	54.00	-0.66	AVG	
2	4924.0000	50.81	3.63	54.44	74.00	-19.56	Peak	

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

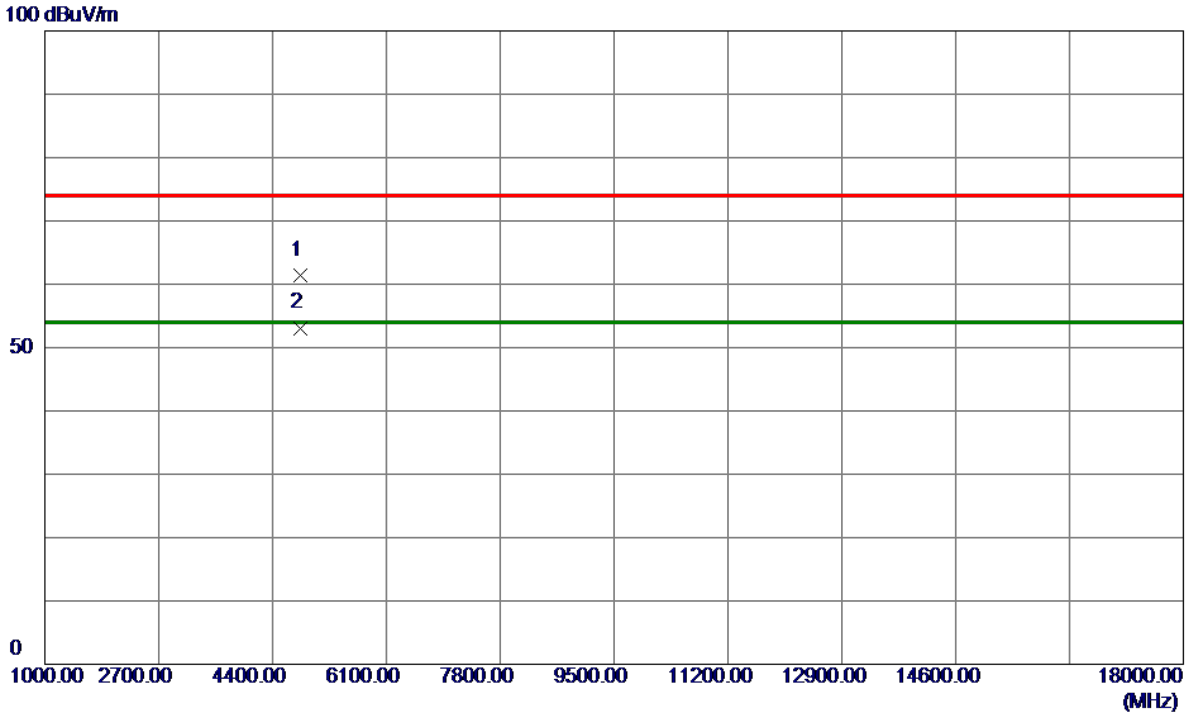
Test Mode	TX G Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	55.49	8.32	63.81	74.00	-10.19	Peak	
2	2390.0000	44.93	8.32	53.25	54.00	-0.75	AVG	
3 *	2409.6000	99.89	8.37	108.26	54.00	54.26	AVG	No Limit
4	2414.1000	103.90	8.38	112.28	74.00	38.28	Peak	No Limit

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

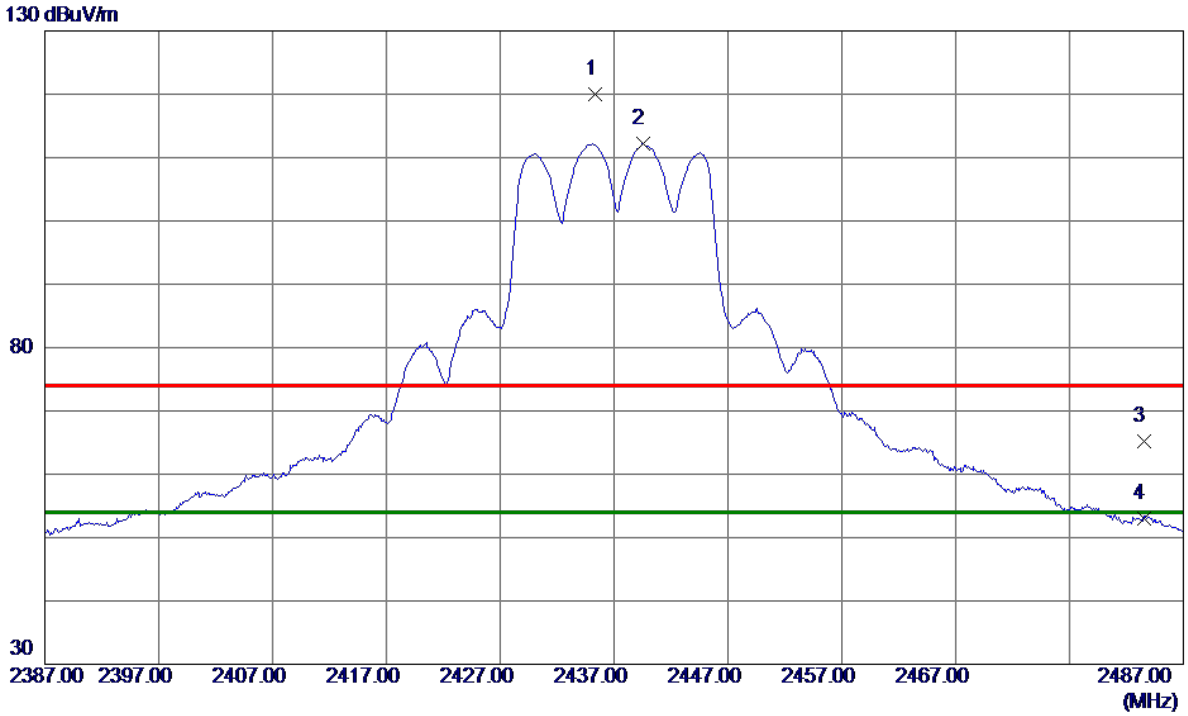
Test Mode	TX G Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.8500	58.00	3.48	61.48	74.00	-12.52	Peak	
2 *	4824.7500	49.62	3.48	53.10	54.00	-0.90	AVG	

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

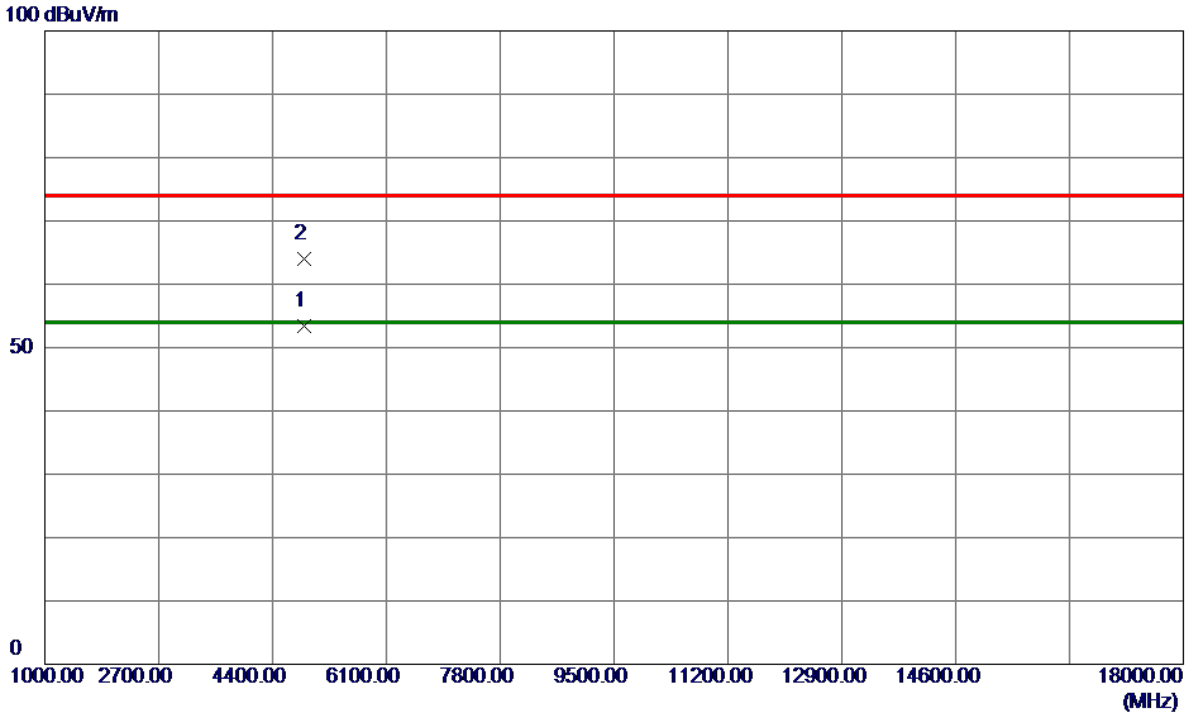
Test Mode	TX G Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2435.3000	111.47	8.43	119.90	74.00	45.90	Peak	No Limit
2 *	2439.5000	103.70	8.44	112.14	54.00	58.14	AVG	No Limit
3	2483.5000	56.63	8.54	65.17	74.00	-8.83	Peak	
4	2483.5000	44.41	8.54	52.95	54.00	-1.05	AVG	

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

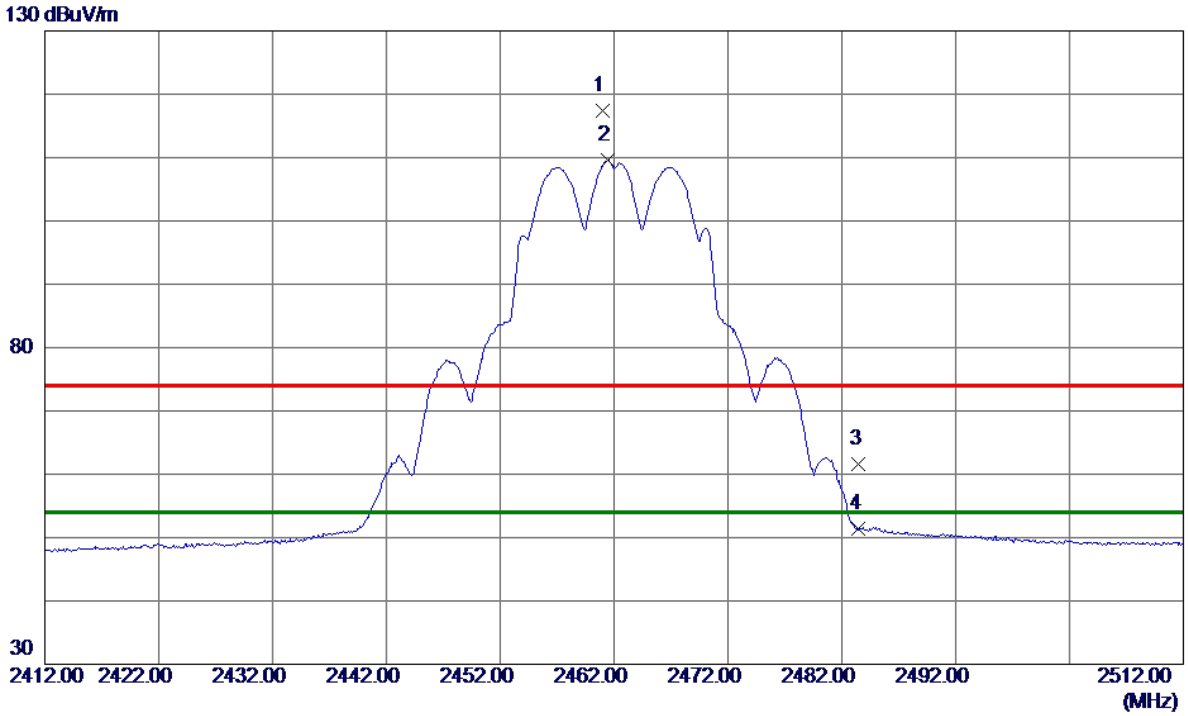
Test Mode	TX G Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4872.5000	49.79	3.55	53.34	54.00	-0.66	AVG	
2	4875.8500	60.54	3.56	64.10	74.00	-9.90	Peak	

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

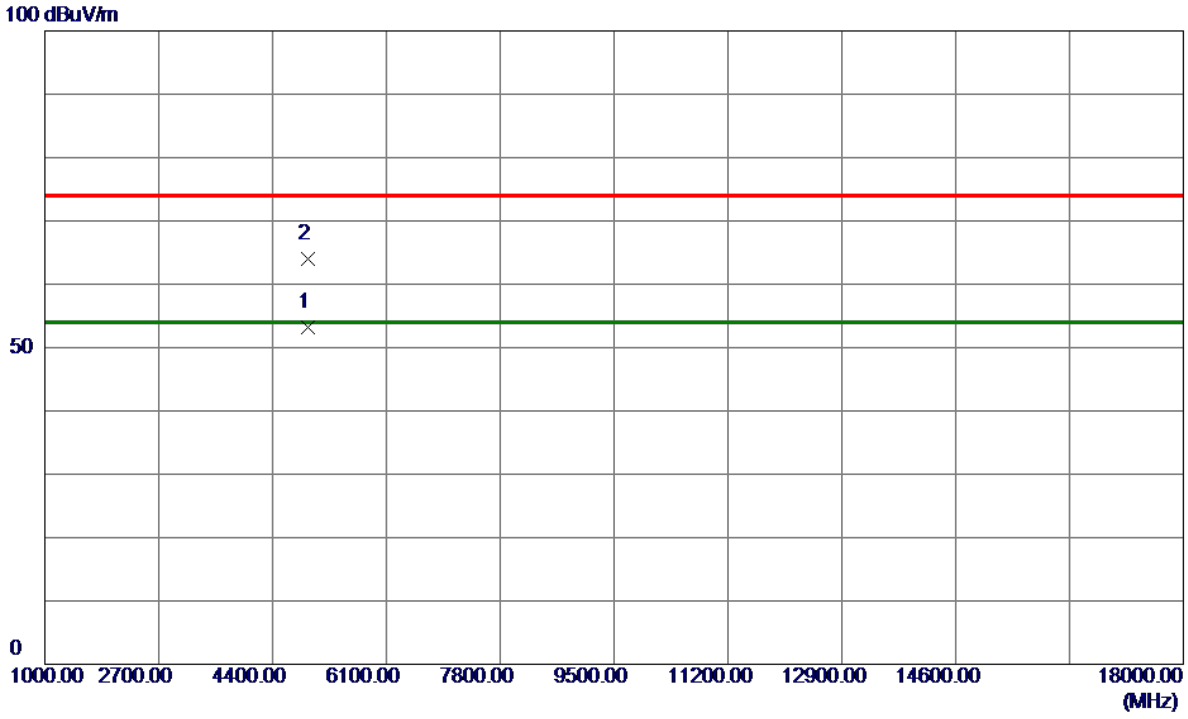
Test Mode	TX G Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461.0000	108.90	8.49	117.39	74.00	43.39	Peak	No Limit
2 *	2461.4000	101.16	8.49	109.65	54.00	55.65	AVG	No Limit
3	2483.5000	52.99	8.54	61.53	74.00	-12.47	Peak	
4	2483.5000	42.81	8.54	51.35	54.00	-2.65	AVG	

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

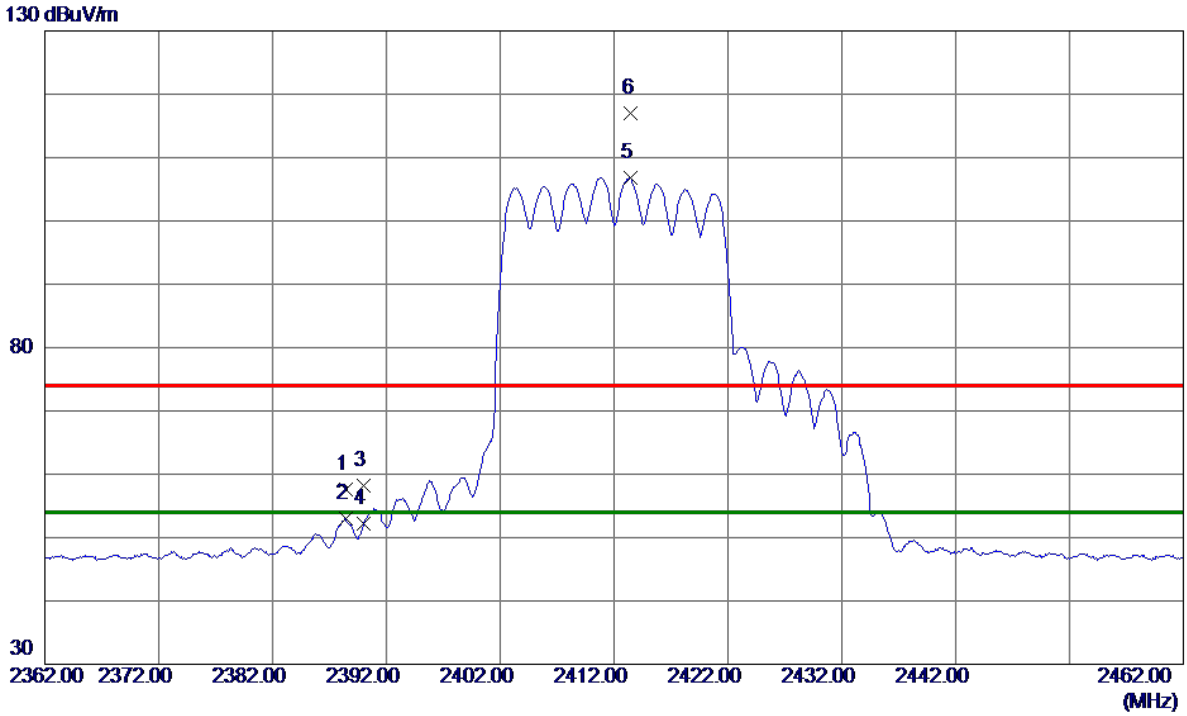
Test Mode	TX G Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4922.5000	49.55	3.63	53.18	54.00	-0.82	AVG	
2	4926.1000	60.34	3.63	63.97	74.00	-10.03	Peak	

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

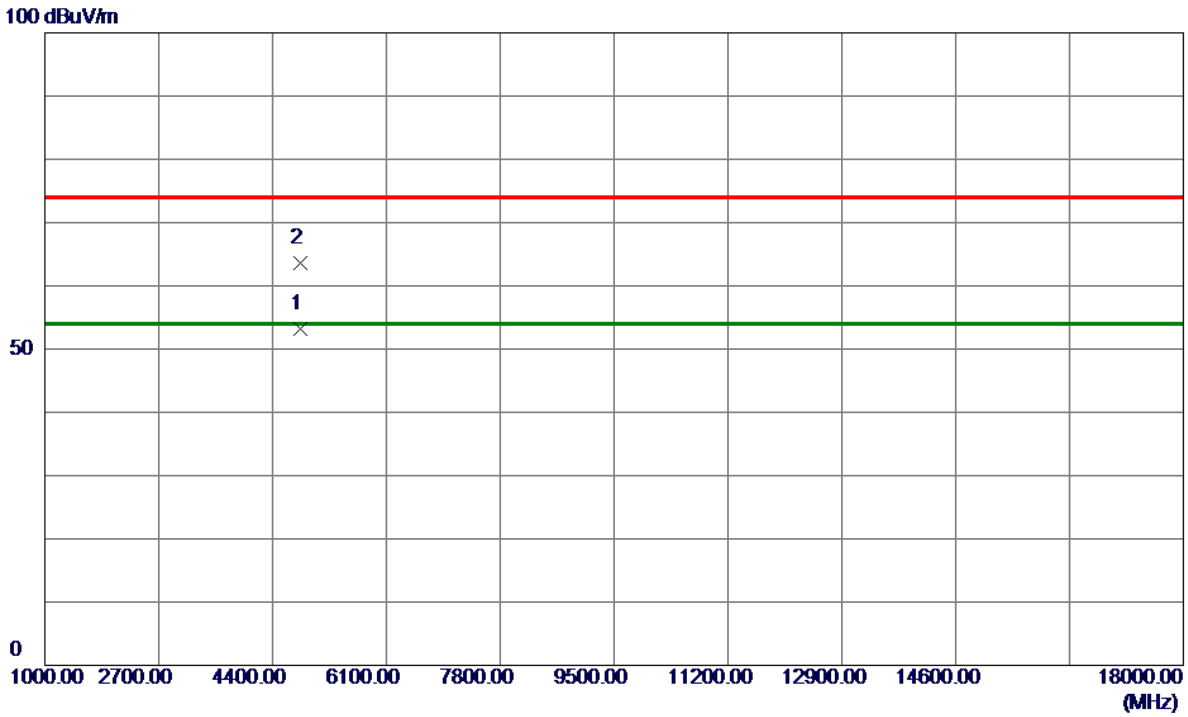
Test Mode	TX AX(HE20) Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2388.4000	49.36	8.32	57.68	74.00	-16.32	Peak	
2	2388.4000	44.68	8.32	53.00	54.00	-1.00	AVG	
3	2390.0000	49.87	8.32	58.19	74.00	-15.81	Peak	
4	2390.0000	43.83	8.32	52.15	54.00	-1.85	AVG	
5 *	2413.4000	98.41	8.38	106.79	54.00	52.79	AVG	No Limit
6	2413.5000	108.52	8.38	116.90	74.00	42.90	Peak	No Limit

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

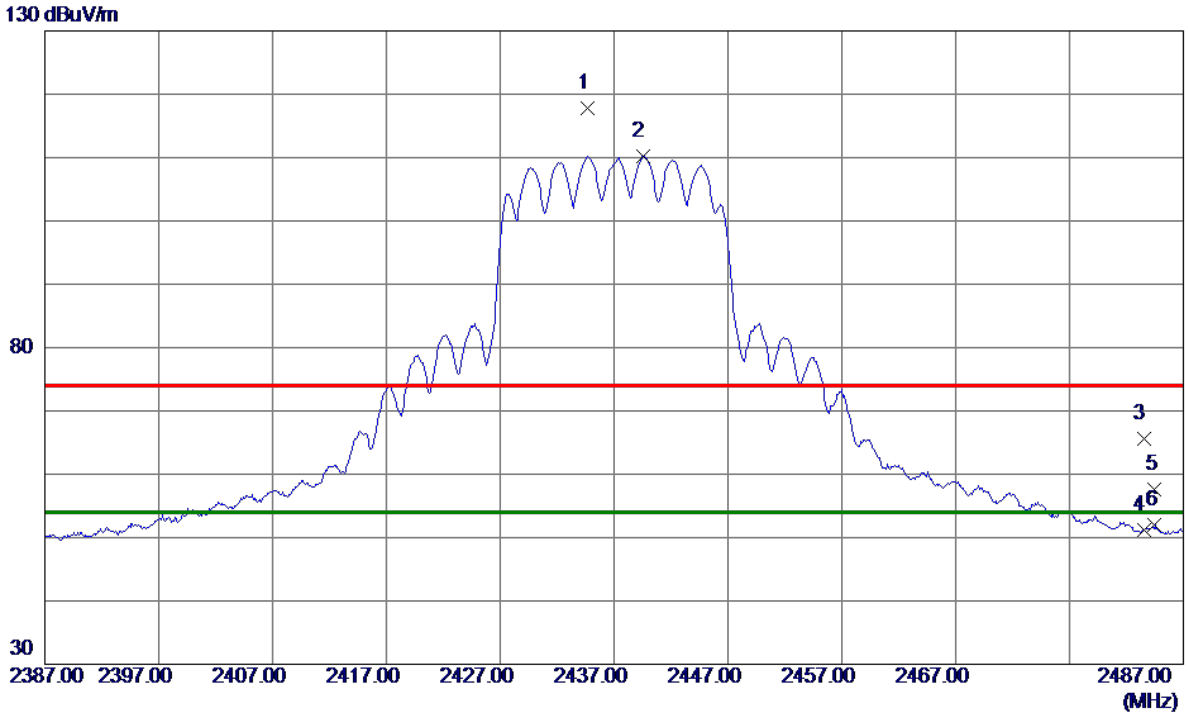
Test Mode	TX AX(HE20) Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823.4500	49.73	3.48	53.21	54.00	-0.79	AVG	
2	4823.8500	60.10	3.48	63.58	74.00	-10.42	Peak	

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

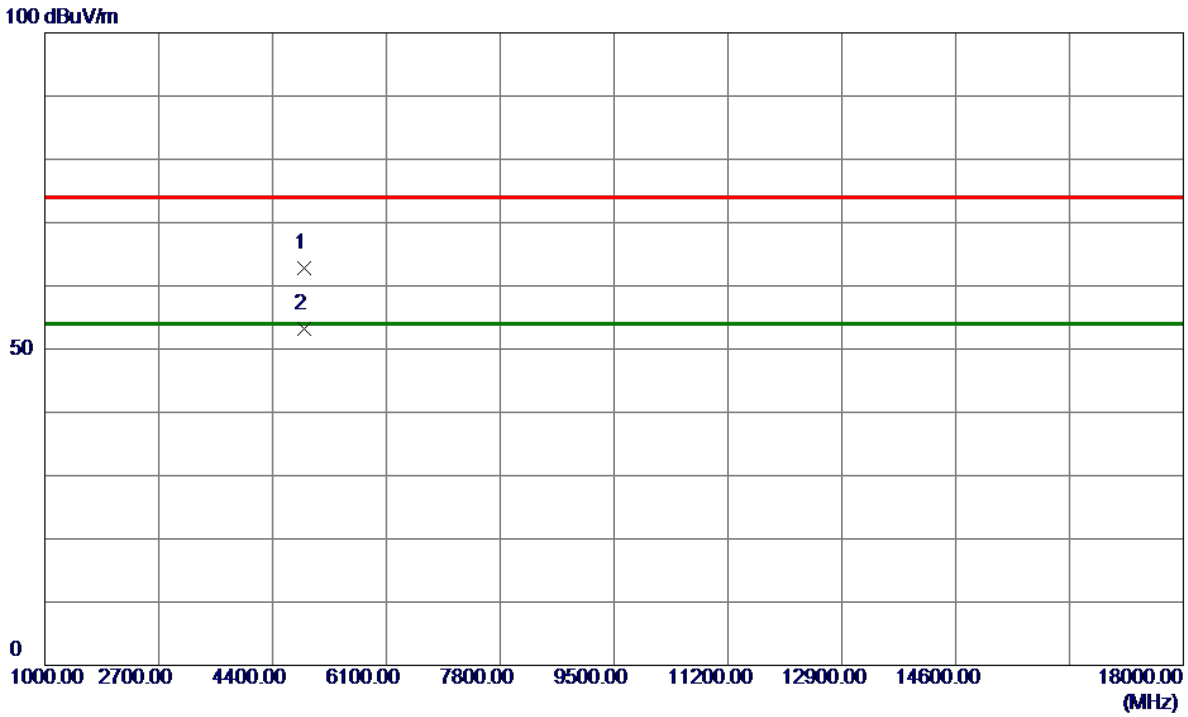
Test Mode	TX AX(HE20) Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2434.7000	109.43	8.43	117.86	74.00	43.86	Peak	No Limit
2 *	2439.5000	101.83	8.44	110.27	54.00	56.27	AVG	No Limit
3	2483.5000	57.03	8.54	65.57	74.00	-8.43	Peak	
4	2483.5000	42.57	8.54	51.11	54.00	-2.89	AVG	
5	2484.5000	48.99	8.54	57.53	74.00	-16.47	Peak	
6	2484.5000	43.41	8.54	51.95	54.00	-2.05	AVG	

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

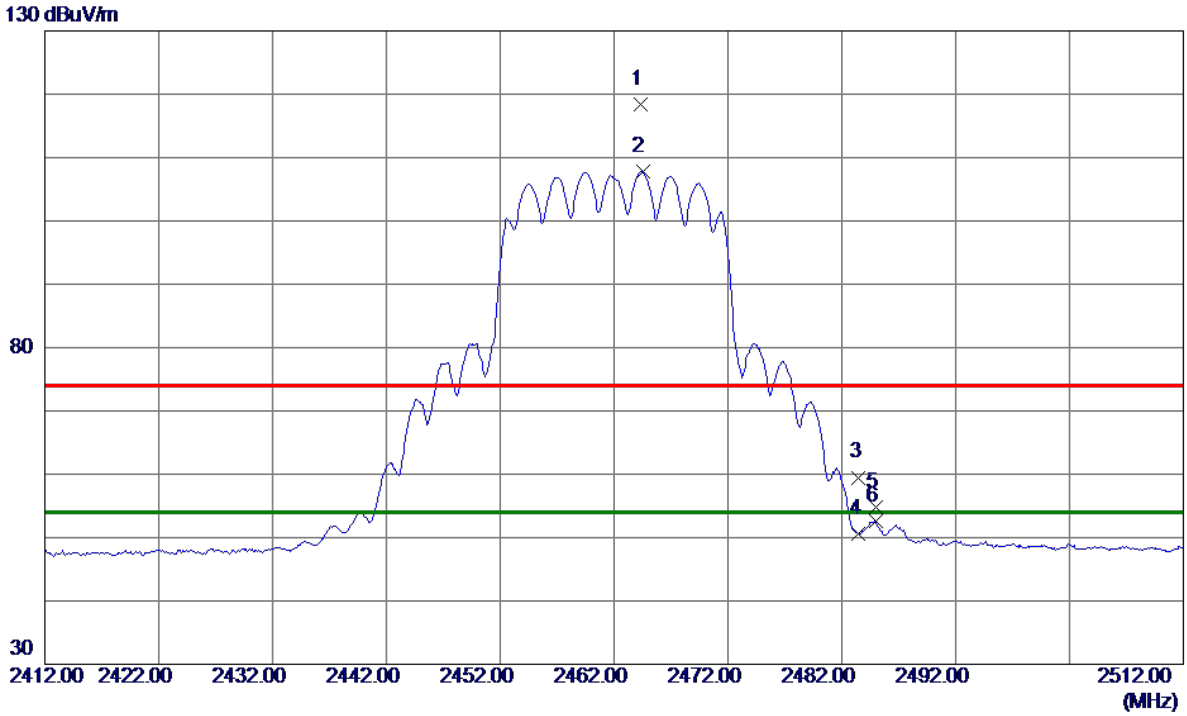
Test Mode	TX AX(HE20) Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4875.7500	59.29	3.56	62.85	74.00	-11.15	Peak	
2 *	4875.7500	49.64	3.56	53.20	54.00	-0.80	AVG	

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

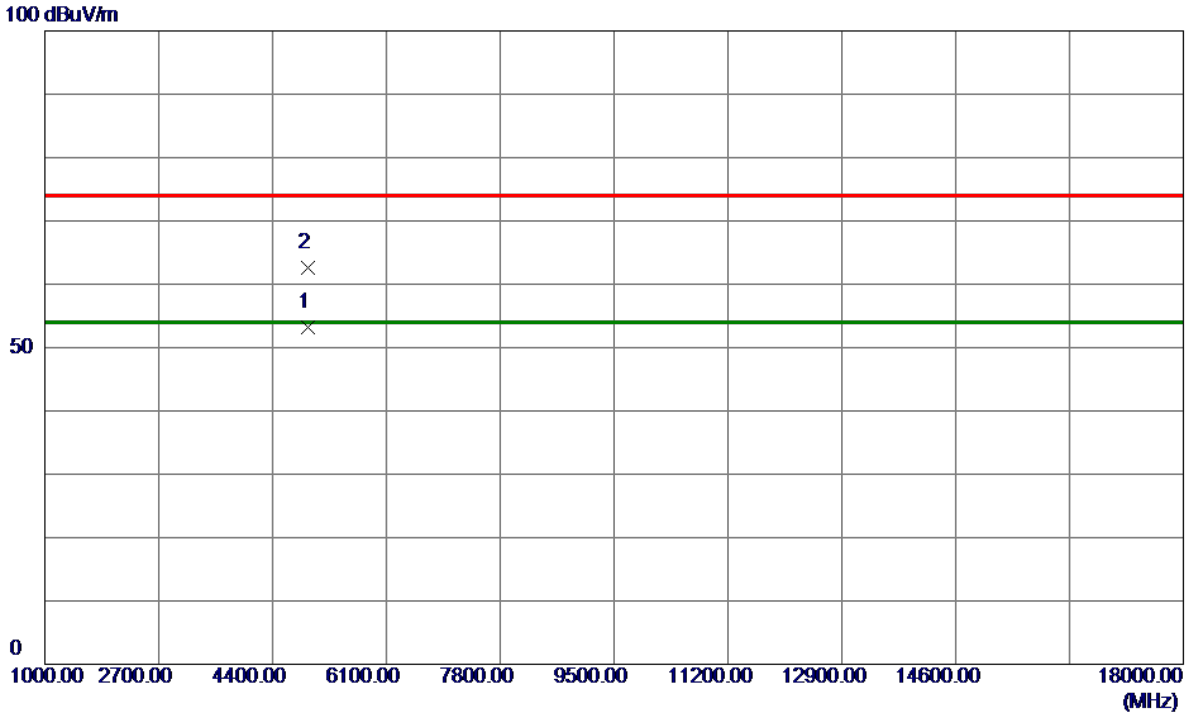
Test Mode	TX AX(HE20) Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2464.3000	109.84	8.49	118.33	74.00	44.33	Peak	No Limit
2 *	2464.5000	99.39	8.49	107.88	54.00	53.88	AVG	No Limit
3	2483.5000	50.96	8.54	59.50	74.00	-14.50	Peak	
4	2483.5000	42.02	8.54	50.56	54.00	-3.44	AVG	
5	2485.0000	46.35	8.54	54.89	74.00	-19.11	Peak	
6	2485.0000	44.00	8.54	52.54	54.00	-1.46	AVG	

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

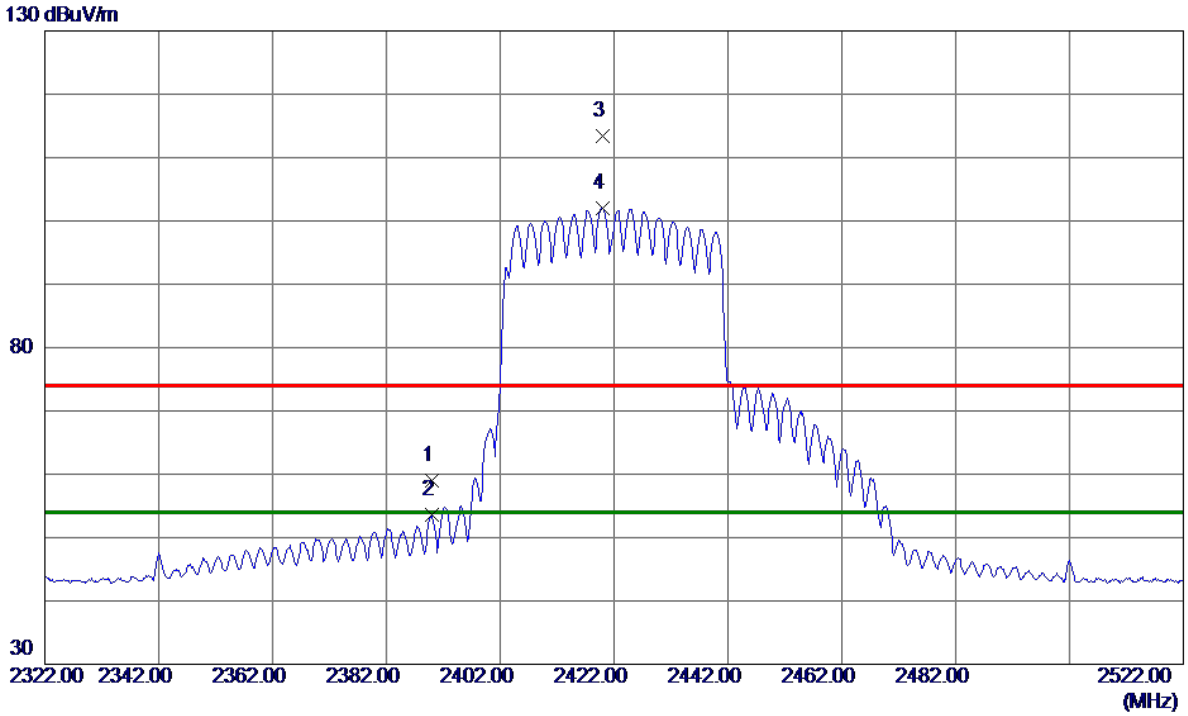
Test Mode	TX AX(HE20) Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.5000	49.62	3.63	53.25	54.00	-0.75	AVG	
2	4931.6500	58.88	3.64	62.52	74.00	-11.48	Peak	

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

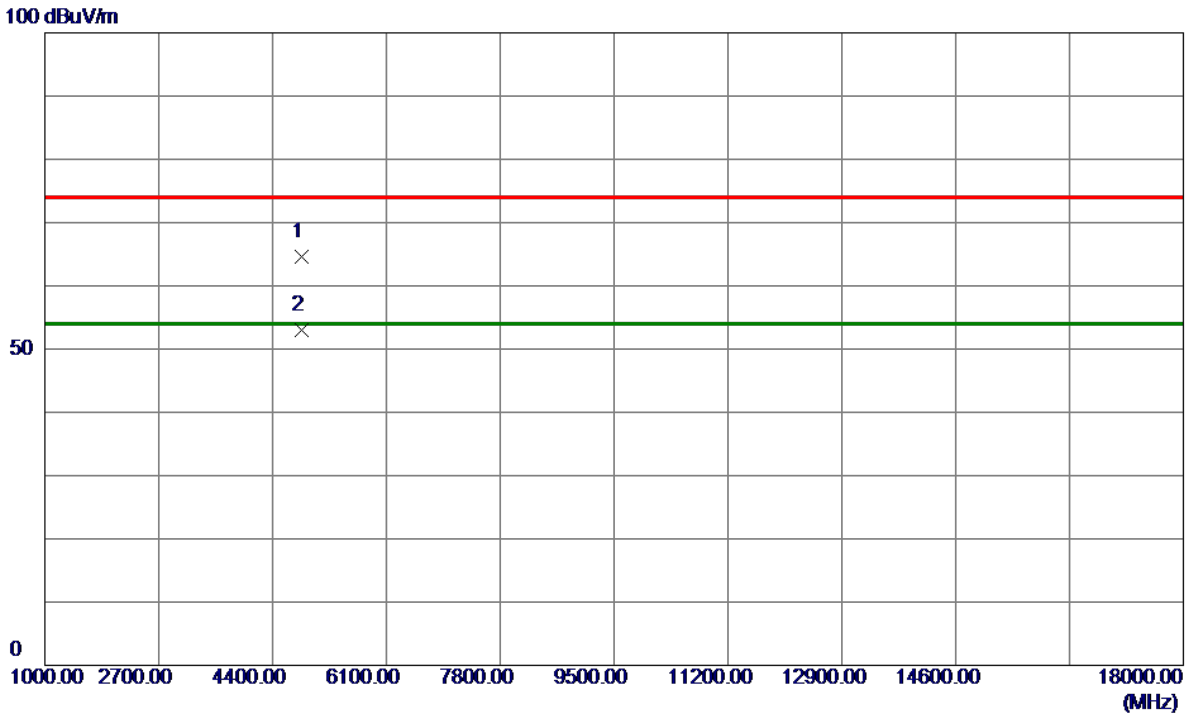
Test Mode	TX AX(HE40) Mode 2422 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	50.64	8.32	58.96	74.00	-15.04	Peak	
2	2390.0000	45.28	8.32	53.60	54.00	-0.40	AVG	
3	2420.0000	105.00	8.39	113.39	74.00	39.39	Peak	No Limit
4 *	2420.0000	93.69	8.39	102.08	54.00	48.08	AVG	No Limit

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

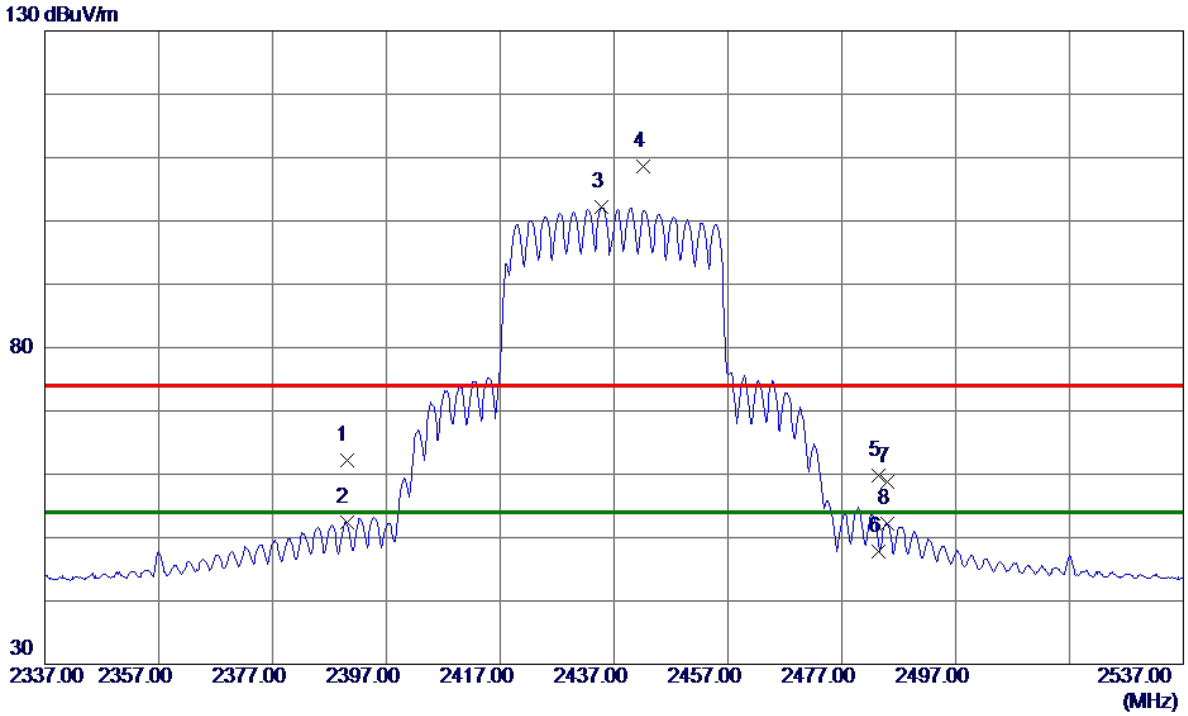
Test Mode	TX AX(HE40) Mode 2422 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4834.9500	61.02	3.50	64.52	74.00	-9.48	Peak	
2 *	4841.8000	49.51	3.51	53.02	54.00	-0.98	AVG	

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

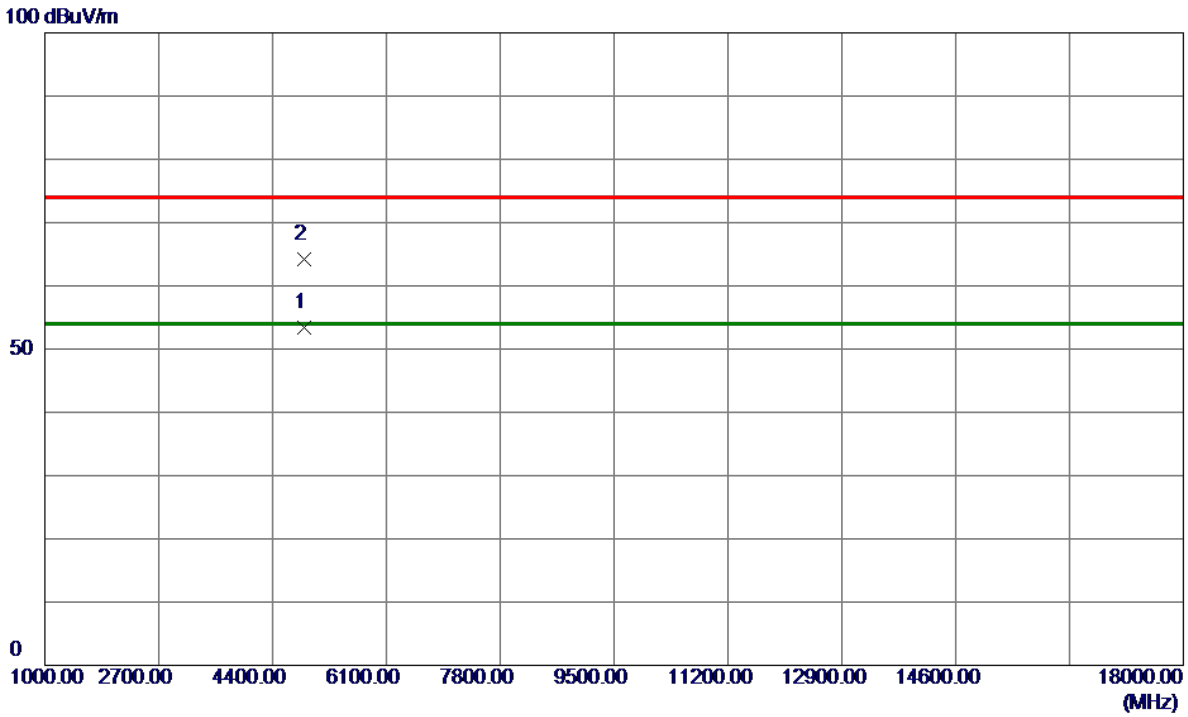
Test Mode	TX AX(HE40) Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	53.90	8.32	62.22	74.00	-11.78	Peak	
2	2390.0000	44.11	8.32	52.43	54.00	-1.57	AVG	
3 *	2434.8000	93.83	8.43	102.26	54.00	48.26	AVG	No Limit
4	2442.2000	100.17	8.44	108.61	74.00	34.61	Peak	No Limit
5	2483.5000	51.33	8.54	59.87	74.00	-14.13	Peak	
6	2483.5000	39.30	8.54	47.84	54.00	-6.16	AVG	
7	2485.0000	50.26	8.54	58.80	74.00	-15.20	Peak	
8	2485.0000	43.67	8.54	52.21	54.00	-1.79	AVG	

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

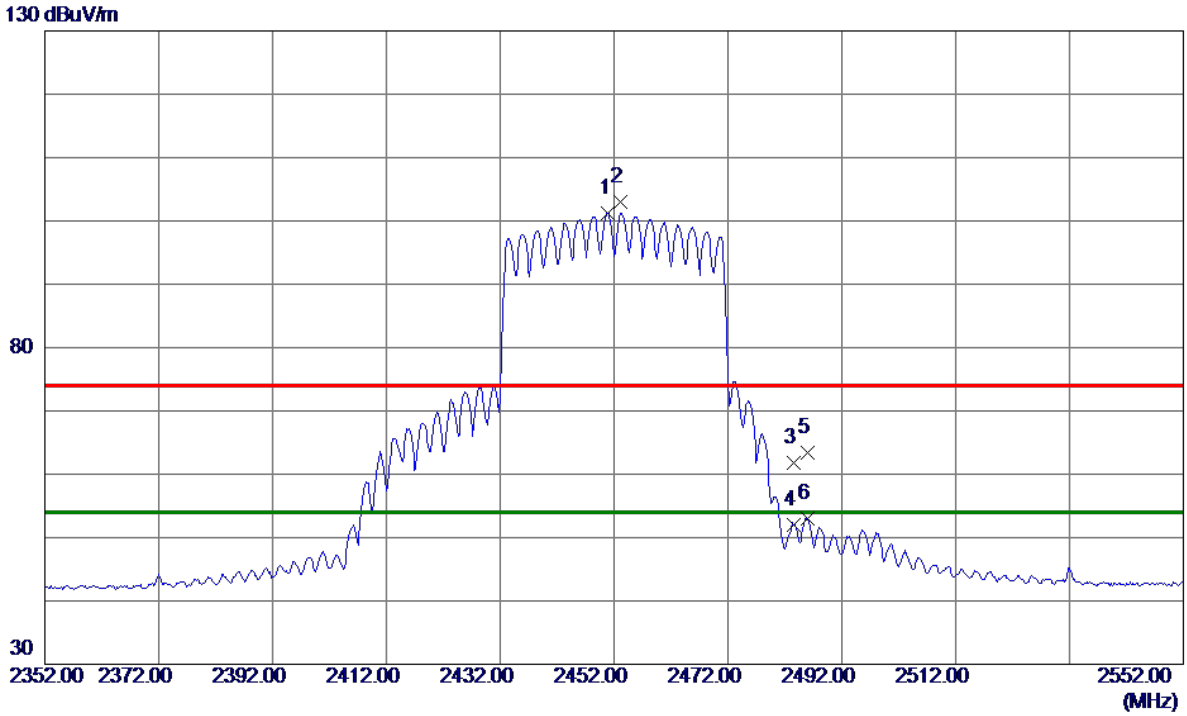
Test Mode	TX AX(HE40) Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4868.3500	49.85	3.55	53.40	54.00	-0.60	AVG	
2	4873.1500	60.61	3.55	64.16	74.00	-9.84	Peak	

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

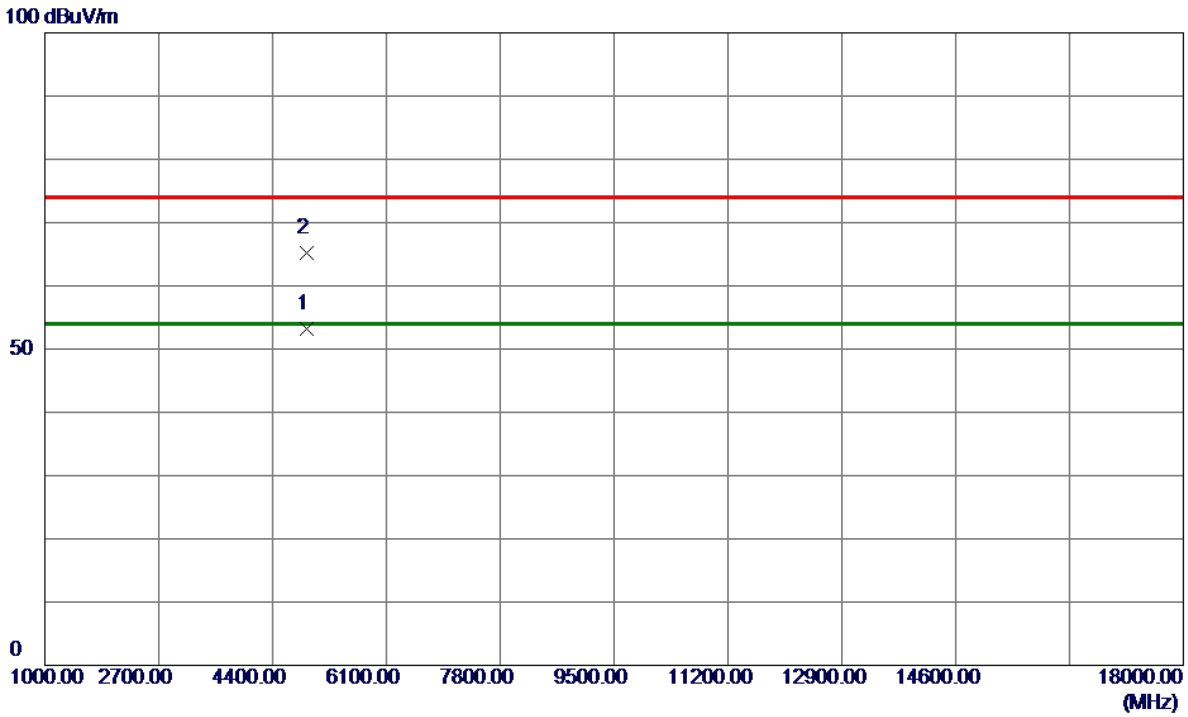
Test Mode	TX AX(HE40) Mode 2452 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2451.0000	92.83	8.46	101.29	54.00	47.29	AVG	No Limit
2	2453.2000	94.49	8.47	102.96	74.00	28.96	Peak	No Limit
3	2483.5000	53.20	8.54	61.74	74.00	-12.26	Peak	
4	2483.5000	43.50	8.54	52.04	54.00	-1.96	AVG	
5	2486.0000	54.83	8.54	63.37	74.00	-10.63	Peak	
6	2486.0000	44.55	8.54	53.09	54.00	-0.91	AVG	

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

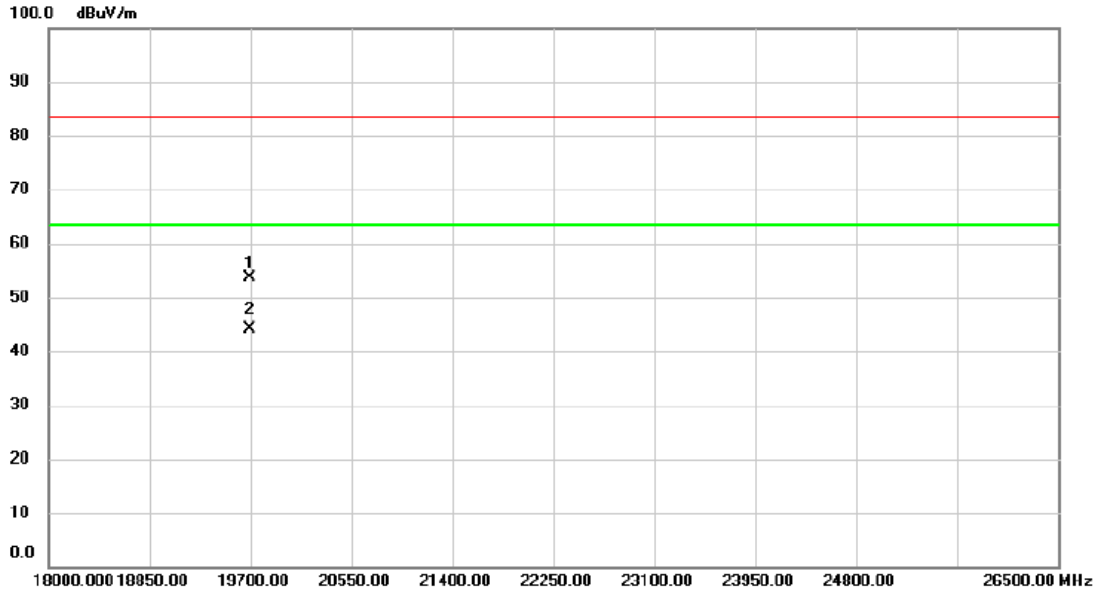
Test Mode	TX AX(HE40) Mode 2452 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4905.3000	49.59	3.60	53.19	54.00	-0.81	AVG	
2	4911.4000	61.58	3.61	65.19	74.00	-8.81	Peak	

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

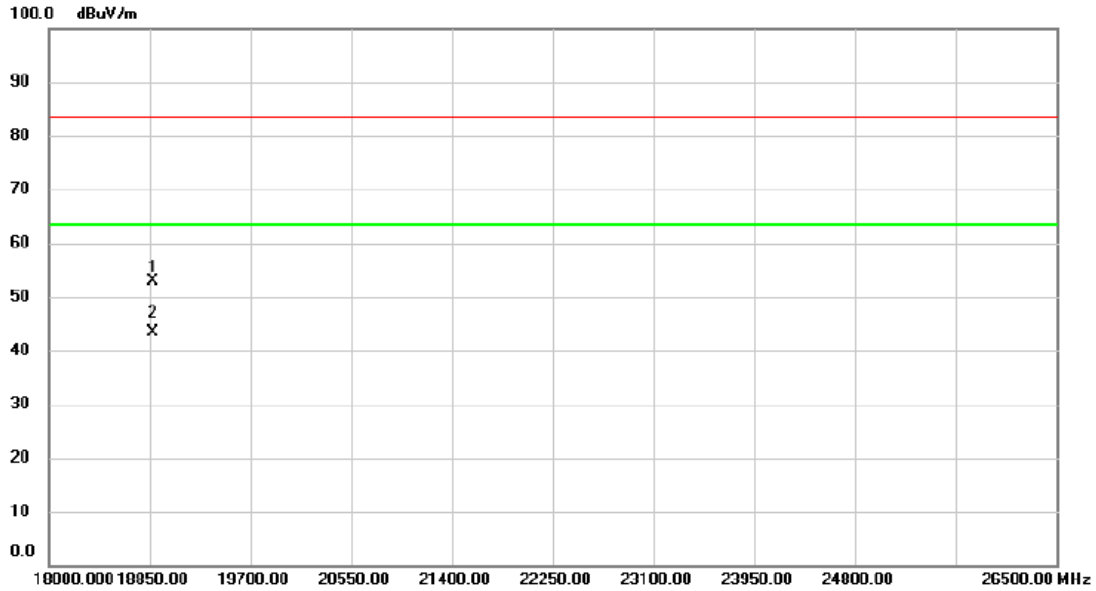
Test Mode	TX AX(HE40) Mode 2422 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19691.500	54.67	-1.04	53.63	83.50	-29.87	peak	
2	*	19691.500	45.19	-1.04	44.15	63.50	-19.35	AVG	

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

Test Mode	TX AX(HE40) Mode 2422 MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		18875.500	54.43	-1.48	52.95	83.50	-30.55	peak	
2	*	18875.500	44.82	-1.48	43.34	63.50	-20.16	AVG	

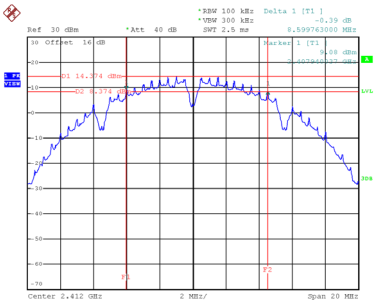
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

Test Mode	TX B Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	8.600	13.120	0.5	Complies
06	2437	8.110	12.640	0.5	Complies
11	2462	8.060	12.720	0.5	Complies

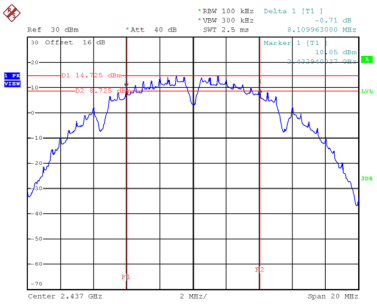
CH01



Date: 20.NOV.2024 17:14:24

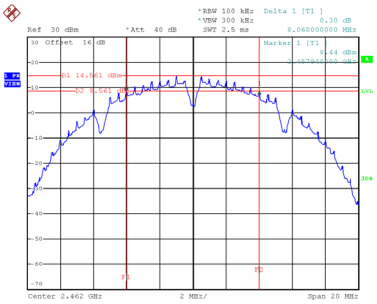
CH06

6 dB Bandwidth



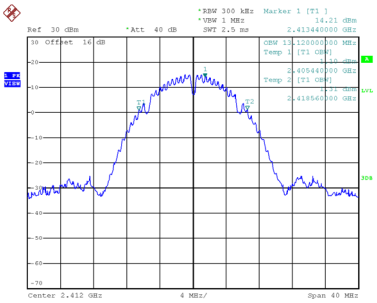
Date: 20.NOV.2024 17:17:25

CH11

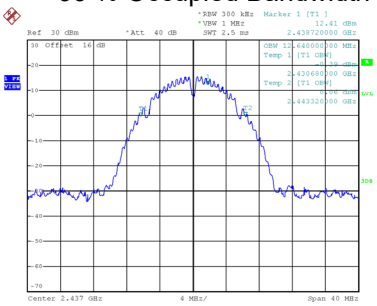


Date: 20.NOV.2024 17:20:24

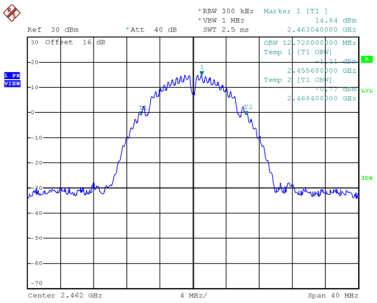
99 % Occupied Bandwidth



Date: 20.NOV.2024 17:14:31



Date: 20.NOV.2024 17:17:32

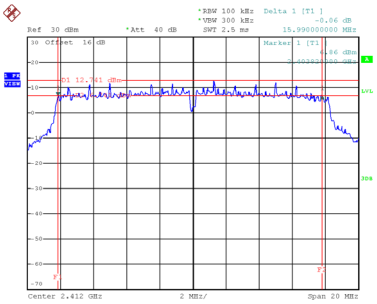


Date: 20.NOV.2024 17:20:31

Test Mode	TX G Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	15.990	19.200	0.5	Complies
06	2437	16.350	20.400	0.5	Complies
11	2462	16.380	19.680	0.5	Complies

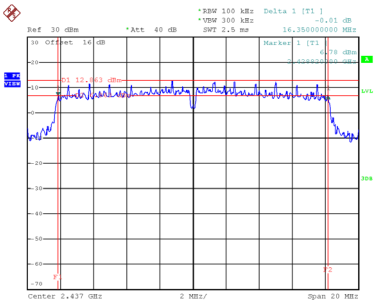
CH01



Date: 20.NOV.2024 17:22:31

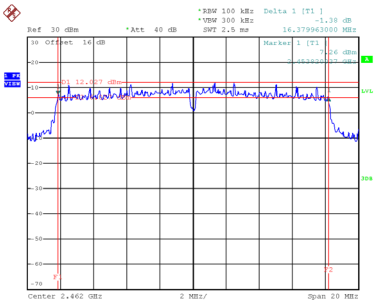
CH06

6 dB Bandwidth

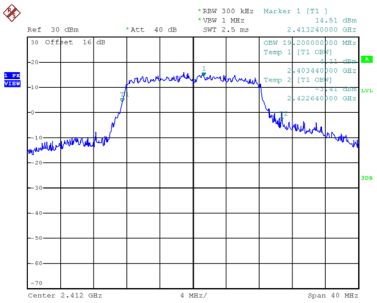


Date: 20.NOV.2024 17:26:37

CH11

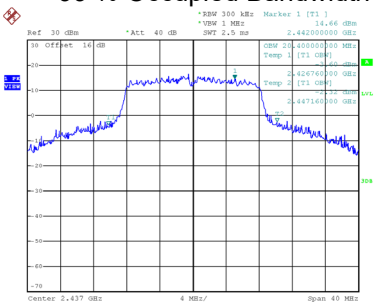


Date: 20.NOV.2024 17:28:49

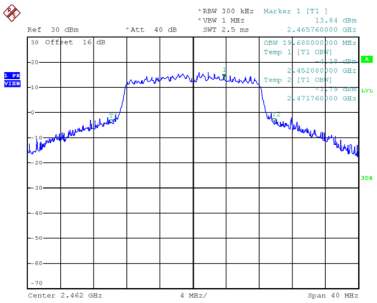


Date: 20.NOV.2024 17:22:38

99 % Occupied Bandwidth



Date: 20.NOV.2024 17:26:44

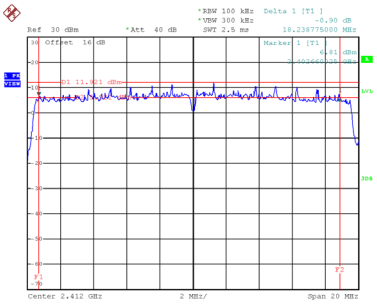


Date: 20.NOV.2024 17:28:56

Test Mode	TX AX(HE20) Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	18.239	19.280	0.5	Complies
06	2437	18.200	21.040	0.5	Complies
11	2462	17.790	19.920	0.5	Complies

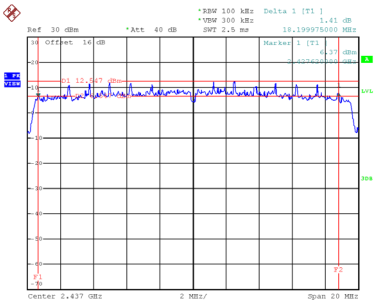
CH01



Date: 20.NOV.2024 19:06:17

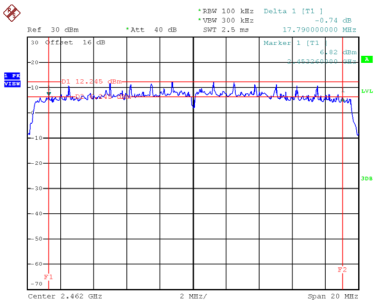
CH06

6 dB Bandwidth

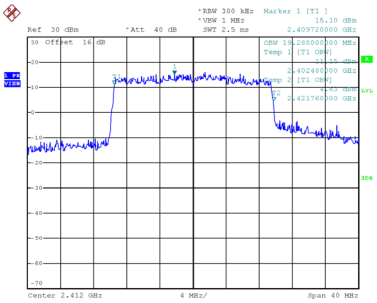


Date: 20.NOV.2024 17:52:00

CH11

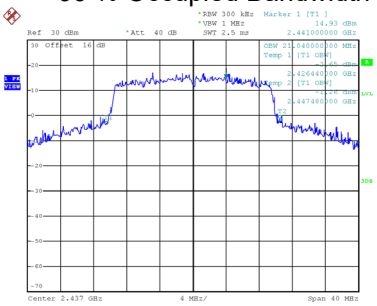


Date: 20.NOV.2024 17:57:53

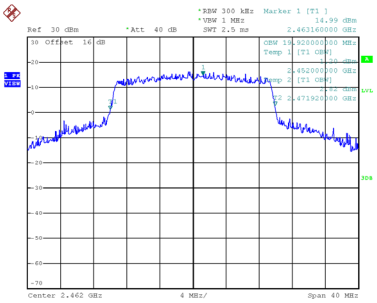


Date: 20.NOV.2024 19:06:24

99 % Occupied Bandwidth



Date: 20.NOV.2024 17:52:07

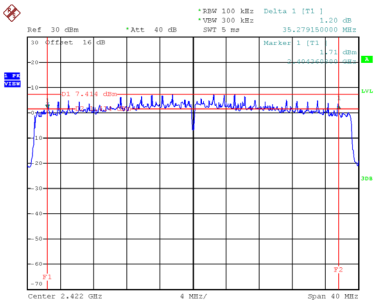


Date: 20.NOV.2024 17:58:00

Test Mode	TX AX(HE40) Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
03	2422	35.279	38.240	0.5	Complies
06	2437	35.280	47.040	0.5	Complies
09	2452	35.159	45.600	0.5	Complies

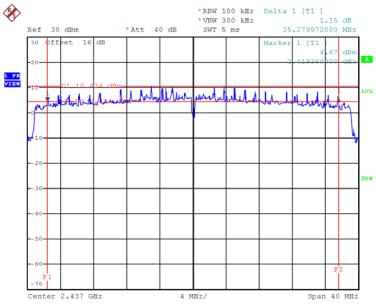
CH03



Date: 20.NOV.2024 18:07:05

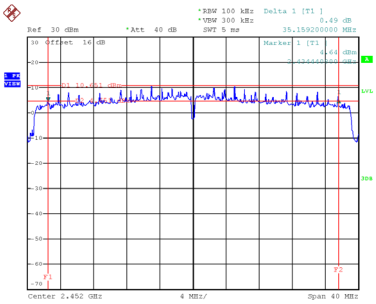
CH06

6 dB Bandwidth

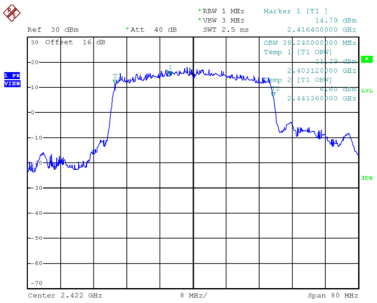


Date: 20.NOV.2024 18:08:08

CH09

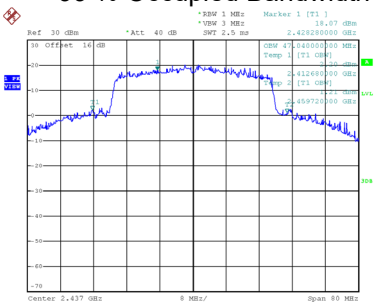


Date: 20.NOV.2024 18:10:15

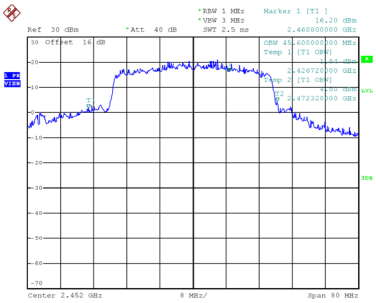


Date: 20.NOV.2024 18:07:12

99 % Occupied Bandwidth



Date: 20.NOV.2024 18:08:15



Date: 20.NOV.2024 18:10:22

APPENDIX F - MAXIMUM OUTPUT POWER

Test Mode	TX B Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	7.73	0.11	7.84	28.35	0.6839	Complies
06	2437	8.21	0.11	8.32	28.35	0.6839	Complies
11	2462	7.59	0.11	7.70	28.35	0.6839	Complies

Test Mode	TX B Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	8.10	0.11	8.21	28.35	0.6839	Complies
06	2437	8.96	0.11	9.07	28.35	0.6839	Complies
11	2462	8.16	0.11	8.27	28.35	0.6839	Complies

Test Mode	TX B Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	11.03	28.35	0.6839	Complies
06	2437	11.72	28.35	0.6839	Complies
11	2462	11.00	28.35	0.6839	Complies

Test Mode	TX G Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.18	0.18	14.36	28.35	0.6839	Complies
06	2437	13.72	0.18	13.90	28.35	0.6839	Complies
11	2462	14.21	0.18	14.39	28.35	0.6839	Complies

Test Mode	TX G Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.06	0.18	14.24	28.35	0.6839	Complies
06	2437	13.69	0.18	13.87	28.35	0.6839	Complies
11	2462	14.24	0.18	14.42	28.35	0.6839	Complies

Test Mode	TX G Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.31	28.35	0.6839	Complies
06	2437	16.90	28.35	0.6839	Complies
11	2462	17.42	28.35	0.6839	Complies

Test Mode	TX AX(HE20) Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	13.82	0.69	14.51	28.35	0.6839	Complies
06	2437	13.83	0.69	14.52	28.35	0.6839	Complies
11	2462	14.43	0.69	15.12	28.35	0.6839	Complies

Test Mode	TX AX(HE20) Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.15	0.69	14.84	28.35	0.6839	Complies
06	2437	14.11	0.69	14.80	28.35	0.6839	Complies
11	2462	14.67	0.69	15.36	28.35	0.6839	Complies

Test Mode	TX AX(HE20) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.69	28.35	0.6839	Complies
06	2437	17.67	28.35	0.6839	Complies
11	2462	18.25	28.35	0.6839	Complies

Test Mode	TX AX(HE40) Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	14.69	0.70	15.39	28.35	0.6839	Complies
06	2437	14.70	0.70	15.40	28.35	0.6839	Complies
09	2452	12.63	0.70	13.33	28.35	0.6839	Complies

Test Mode	TX AX(HE40) Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	14.85	0.70	15.55	28.35	0.6839	Complies
06	2437	14.83	0.70	15.53	28.35	0.6839	Complies
09	2452	13.01	0.70	13.71	28.35	0.6839	Complies

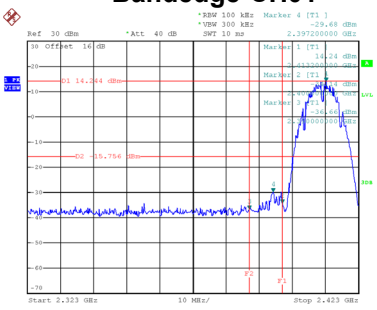
Test Mode	TX AX(HE40) Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	18.48	28.35	0.6839	Complies
06	2437	18.47	28.35	0.6839	Complies
09	2452	16.53	28.35	0.6839	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

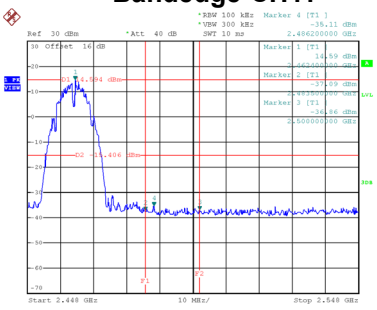
Test Mode	TX B Mode_Ant. 1

Bandedge-CH01



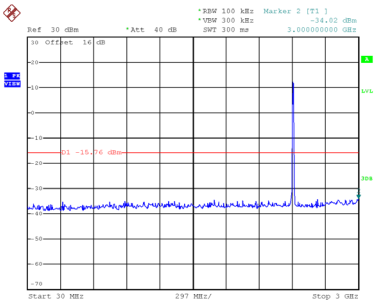
Date: 20.NOV.2024 17:14:55

Bandedge-CH11

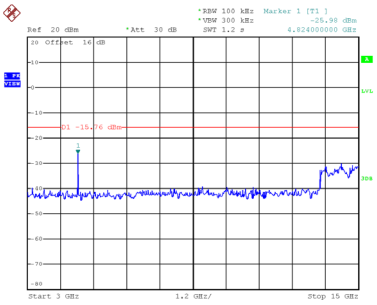


Date: 20.NOV.2024 17:20:38

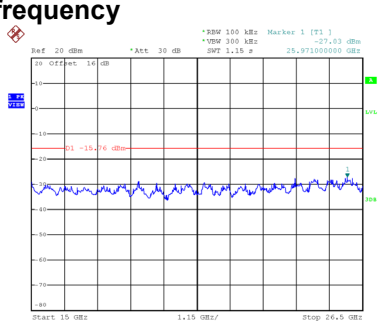
CH01 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 17:15:08

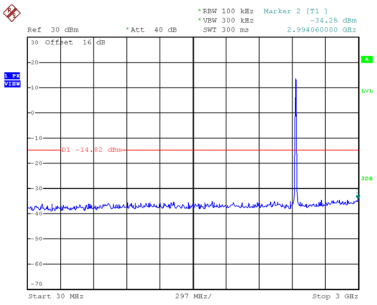


Date: 20.NOV.2024 17:15:59

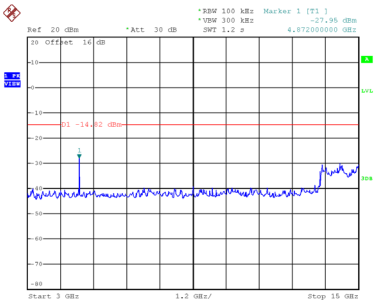


Date: 20.NOV.2024 17:16:07

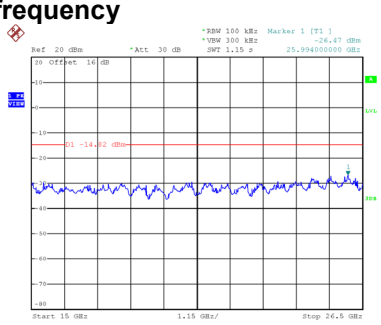
CH06 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 17:17:52

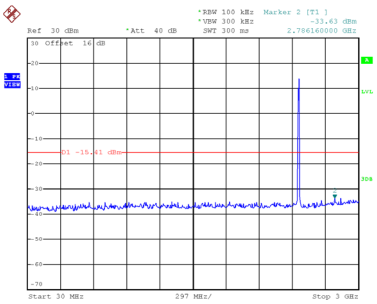


Date: 20.NOV.2024 17:18:25

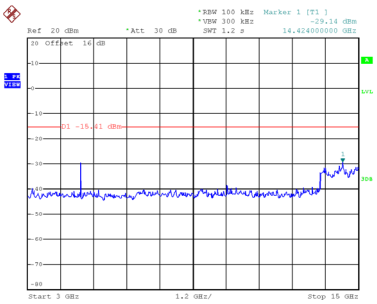


Date: 20.NOV.2024 17:18:33

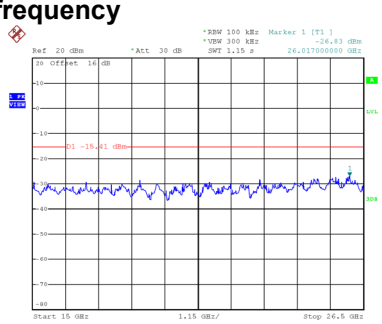
CH11 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 17:20:51



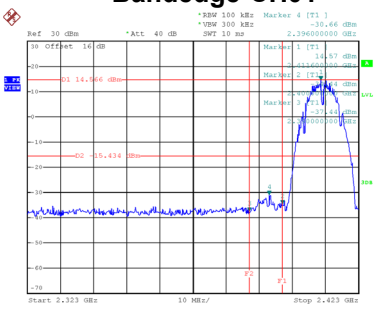
Date: 20.NOV.2024 17:21:24



Date: 20.NOV.2024 17:21:31

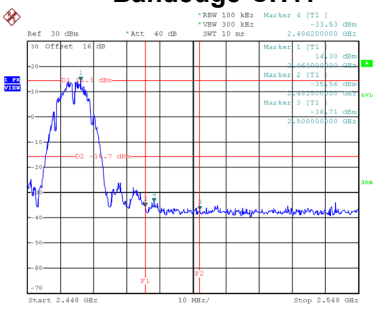
Test Mode	TX B Mode_Ant. 2

Bandedge-CH01



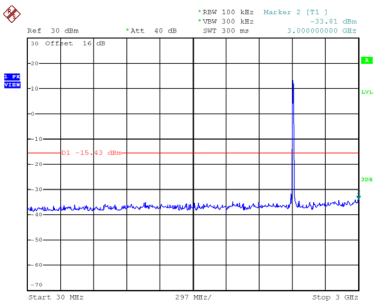
Date: 20.NOV.2024 18:15:44

Bandedge-CH11

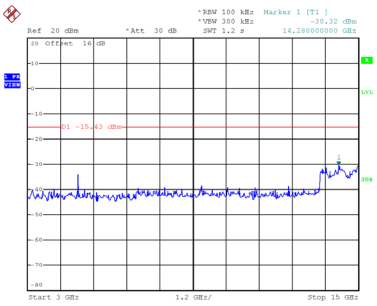


Date: 20.NOV.2024 18:21:04

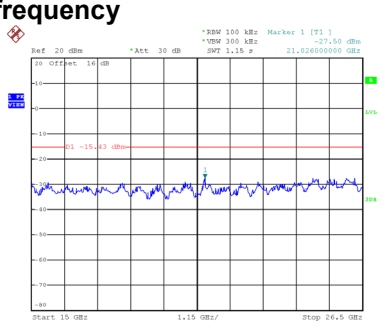
CH01 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 18:15:58

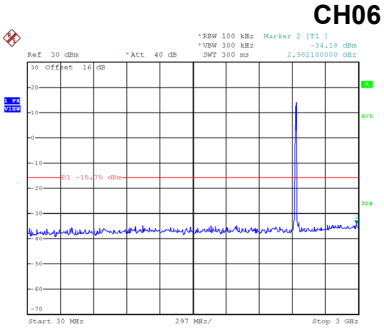


Date: 20.NOV.2024 18:17:13

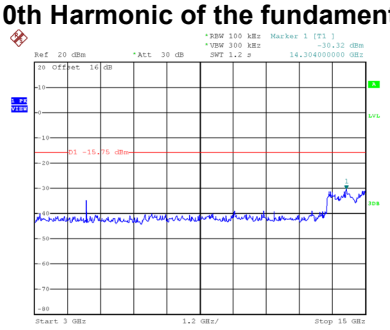


Date: 20.NOV.2024 18:17:20

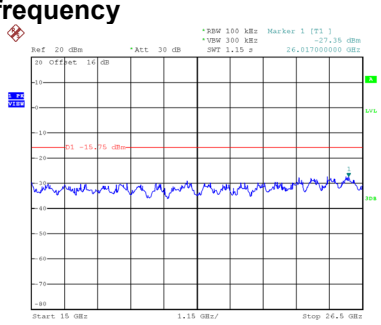
CH06 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 18:18:54

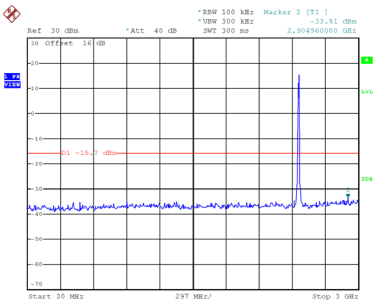


Date: 20.NOV.2024 18:19:24

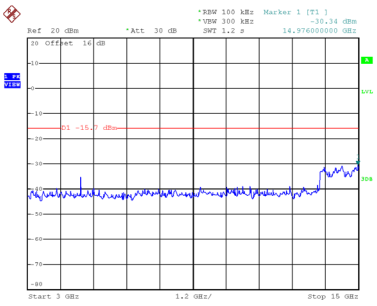


Date: 20.NOV.2024 18:19:31

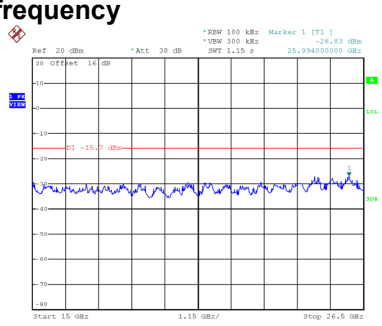
CH11 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 18:21:17



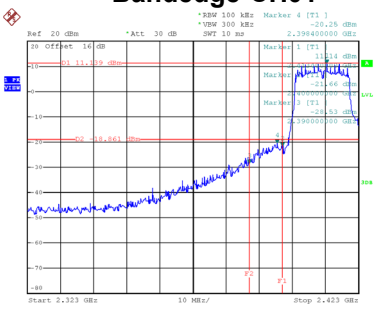
Date: 20.NOV.2024 18:21:41



Date: 20.NOV.2024 18:21:49

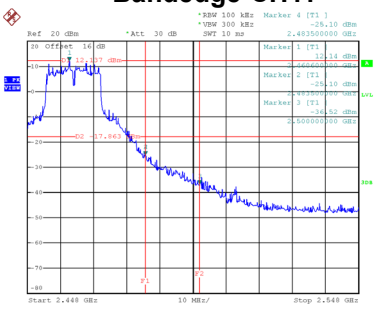
Test Mode	TX G Mode_Ant. 1

Bandedge-CH01



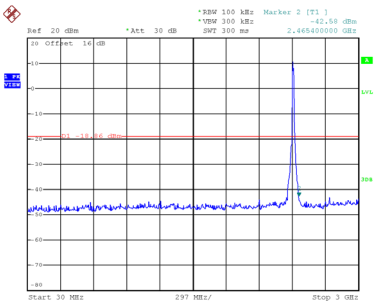
Date: 20.NOV.2024 17:23:56

Bandedge-CH11

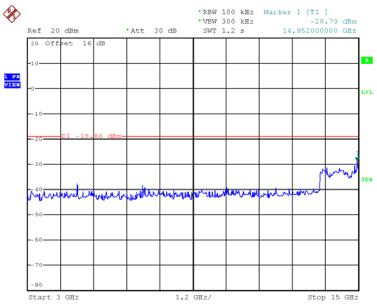


Date: 20.NOV.2024 17:29:48

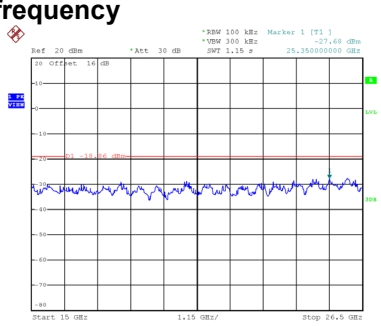
CH01 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 17:24:09

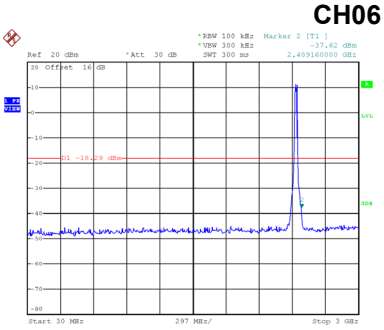


Date: 20.NOV.2024 17:25:08

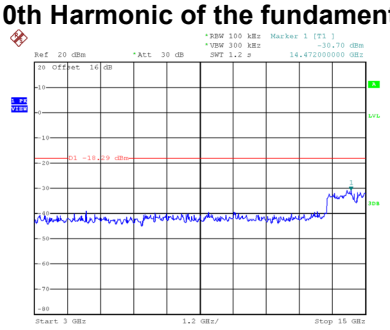


Date: 20.NOV.2024 17:25:16

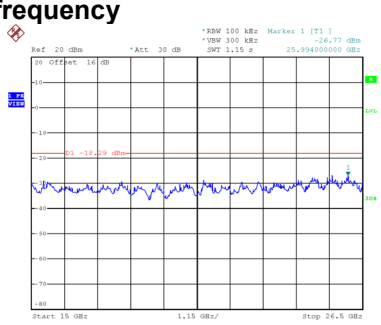
CH06 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 17:27:47

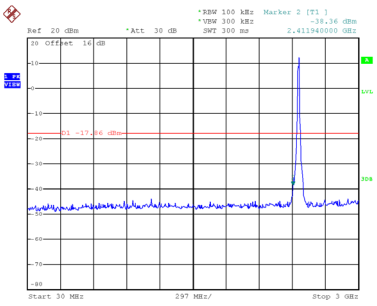


Date: 20.NOV.2024 17:27:54

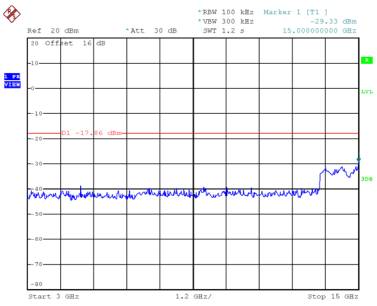


Date: 20.NOV.2024 17:28:01

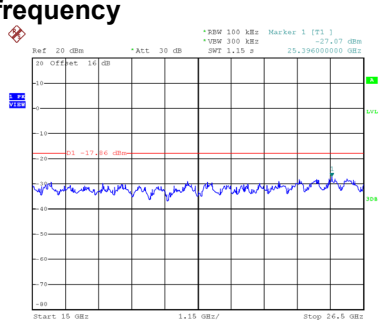
CH11 – 10th Harmonic of the fundamental frequency



Date: 20.NOV.2024 17:30:01



Date: 20.NOV.2024 17:30:08



Date: 20.NOV.2024 17:30:15