FCC Radio Test Report

FCC ID: 2AXJ4KL420

This report concerns: Class II Permissive Change

Project No.	:	2109C206A
Equipment	:	1) Kasa Smart Light Strip, Multicolor 2) Tapo Smart Light Strip, Multicolor
Brand Name	:	1) tp-link 2) tp-link, tapo
Model Name	:	1) KL420L5
Series Model	:	2) Tapo L920-10, Tapo L920-5, Tapo L930-5, Tapo L930-10
Applicant	:	TP-Link Corporation Limited
Address	:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer	:	TP-Link Corporation Limited
Address	:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong
Date of Receipt	:	Sep. 28, 2021 Feb. 24, 2022
Date of Test	:	Oct. 11, 2021 ~ Oct. 18, 2021 Feb. 25, 2022 ~ Mar. 02, 2022
Issued Date	:	Mar. 30, 2022
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG2021092859 for conducted, DG2021092860 & DG20220120163 for radiated.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart C FCC KDB 558074 D01 15.247 Meas Guidance v05r02 ANSI C63.10-2013

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

Chella Zheng

Prepared by : Chella Zheng

Chay . Cai

Approved by : Chay Cai

TESTING CERT #5123.02

Add: No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792
People's Republic of China
Tel: +86-769-8318-3000
Web: www.newbtl.com

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** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, 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/IEC 17025** requirements, 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.

Table of Contents Page

REPORT ISSUED HISTORY 6

1 . SUMMARY OF TEST RESULTS 7

1.1 TEST FACILITY 8

1.2 MEASUREMENT UNCERTAINTY 8

1.3 TEST ENVIRONMENT CONDITIONS 9

2 . GENERAL INFORMATION 10

2.1 GENERAL DESCRIPTION OF EUT 10

2.2 DESCRIPTION OF TEST MODES 12

2.3 PARAMETERS OF TEST SOFTWARE 13

2.4 DUTY CYCLE 14

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 15

2.6 SUPPORT UNITS 15

3 . AC POWER LINE CONDUCTED EMISSIONS 16

3.1 LIMIT 16

3.2 TEST PROCEDURE 16

3.3 DEVIATION FROM TEST STANDARD 16

3.4 TEST SETUP 17

3.5 EUT OPERATION CONDITIONS 17

3.6 TEST RESULTS 17

4 . RADIATED EMISSIONS 18

4.1 LIMIT 18

4.2 TEST PROCEDURE 19

4.3 DEVIATION FROM TEST STANDARD 20

4.4 TEST SETUP 20

4.5 EUT OPERATION CONDITIONS 21

4.6 TEST RESULTS - 9 KHZ TO 30 MHZ 21

4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ 21

4.8 TEST RESULTS - ABOVE 1000 MHZ 21

5 . BANDWIDTH 22

5.1 LIMIT 22

5.2 TEST PROCEDURE 22

5.3 DEVIATION FROM STANDARD 22

5.4 TEST SETUP 22

Table of Contents Page

5.5 EUT OPERATION CONDITIONS 22
5.6 TEST RESULTS 22
6 . MAXIMUM AVERAGE OUTPUT POWER 23
6.1 LIMIT 23
6.2 TEST PROCEDURE 23
6.3 DEVIATION FROM STANDARD 23
6.4 TEST SETUP 23
6.5 EUT OPERATION CONDITIONS 23
6.6 TEST RESULTS 23
7 . CONDUCTED SPURIOUS EMISSIONS 24
7.1 LIMIT 24
7.2 TEST PROCEDURE 24
7.3 DEVIATION FROM STANDARD 24
7.4 TEST SETUP 24
7.5 EUT OPERATION CONDITIONS 24
7.6 TEST RESULTS 24
8 . POWER SPECTRAL DENSITY 25
8.1 LIMIT 25
8.2 TEST PROCEDURE 25
8.3 DEVIATION FROM STANDARD 25
8.4 TEST SETUP 25
8.5 EUT OPERATION CONDITIONS 25
8.6 TEST RESULTS 25
9 . MEASUREMENT INSTRUMENTS LIST 26
10 . EUT TEST PHOTO 28
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS 33
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ 36
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ 41
APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ 44
APPENDIX E - BANDWIDTH 105
APPENDIX F - MAXIMUM AVERAGE OUTPUT POWER 109
APPENDIX G - CONDUCTED SPURIOUS EMISSIONS 111

Table of Contents Page

APPENDIX H - POWER SPECTRAL DENSITY **118**

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Compared with original report (BTL-FCCP-1-2109C206), added series models (Model: Tapo L920-5, Tapo L930-5, Tapo L930-10). Based on model difference(s) in section 2.1, so AC Power Line Conducted Emissions and Radiated Emissions Below 1GHz items for series models (Model: Tapo L930-5, Tapo L930-10) are re-evaluated. It is found that radiated emissions (30MHz to 1000MHz) became worse. So in this report only updated the data for radiated emissions (30MHz to 1000MHz) of Tapo L930-10. Other are kept the same.	Mar. 30, 2022

1. 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 Average 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.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China.
BTL's Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

1.2 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% 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	2.60

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9kHz ~ 30MHz	-	3.02
		30MHz ~ 200MHz	V	4.36
		30MHz ~ 200MHz	H	3.32
		200MHz ~ 1,000MHz	V	4.08
		200MHz ~ 1,000MHz	H	3.96
		1GHz ~ 6GHz	-	3.80
		6GHz ~ 18GHz	-	4.82
		18GHz ~ 26.5GHz	-	3.62
		26.5GHz ~ 40GHz	-	4.00

C. Other Measurement:

Test Item	Uncertainty
Bandwidth	±3.8 %
Maximum Output Power	±0.95 dB
Conducted Spurious Emission	±2.71 dB
Power Spectral Density	±0.86 dB
Temperature	±0.08 °C
Humidity	±1.5%

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	53%	AC 120V/60Hz	Laughing Zhang
Radiated Emissions-9kHz to 30 MHz	25°C	60%	AC 120V/60Hz	Jakyri Wen
Radiated Emissions-30MHz to 1000MHz	21°C	58%	AC 120V/60Hz	Jakyri Wen
Radiated Emissions-Above 1000MHz	26°C	52%	AC 120V/60Hz	Laughing Zhang
Bandwidth	22°C	51%	AC 120V/60Hz	Grani Zhou
Maximum Average Output Power	22°C	51%	AC 120V/60Hz	Silly Zheng
Conducted Spurious Emissions	22°C	51%	AC 120V/60Hz	Grani Zhou
Power Spectral Density	22°C	51%	AC 120V/60Hz	Grani Zhou

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	1) Kasa Smart Light Strip, Multicolor 2) Tapo Smart Light Strip, Multicolor
Brand Name	1) tp-link 2) tp-link, tapo
Model Name	1) KL420L5
Series Model	2) Tapo L920-10, Tapo L920-5, Tapo L930-5, Tapo L930-10
Model Difference(s)	For model Tapo L920-10 and Tapo L930-5, Tapo L930-10: Model Tapo L930-5, Tapo L930-10 only differ in power supply and the size of flash (The power specification of Tapo L930-5, Tapo L930-10 is smaller than that of Tapo L920-10, and the load current of Tapo L930-5, Tapo L930-10 light bar is also smaller than Tapo L920-10). For model KL420L5 and Tapo L920-5: Only differ in product name, model name and brand name. Please refer to note 4.
Power Source	DC voltage supplied from AC adapter. 1) Model: T120150-2B1 2) Model: S042-1A120330VU 3) Model: T120100-2B1 4) Model: T120200-2B1
Power Rating	1) I/P: 100-240V~ 50/60Hz 0.6A O/P: 12V ⎓ 1.5A 2) I/P: 100-240V~ 50/60Hz, 1.0A O/P: 12.0V ⎓ 3.3A 3) I/P: 100-240V~ 50/60Hz, 0.3A O/P: 12V ⎓ 1A 4) I/P: 100-240V~ 50/60Hz, 0.8A O/P: 12V ⎓ 2.0A
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	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 72.2 Mbps
Maximum Average Output Power	IEEE 802.11g: 18.49 dBm (0.0706 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)							
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	Model Name	Antenna Type	Connector	Gain (dBi)
1	tp-link	N/A	Internal	N/A	2.5

Note: The antenna gain is provided by the manufacturer.

4. Model Difference(s):

Model Name	Equipment	Brand	Power Rating	Length	Flash
KL420L5	Kasa Smart Light Strip, Multicolor	tp-link	I/P: 100-240V~ 50/60Hz 0.6A O/P: 12V ⎓ 1.5A	5m	2MB
Tapo L920-5	Tapo Smart Light Strip, Multicolor	tp-link, tapo	I/P: 100-240V~ 50/60Hz 0.6A O/P: 12V ⎓ 1.5A	5m	
Tapo L920-10	Tapo Smart Light Strip, Multicolor	tp-link, tapo	I/P: 100-240V~ 50/60Hz, 1.0A O/P: 12.0V ⎓ 3.3A	10m	
Tapo L930-5	Tapo Smart Light Strip, Multicolor	tp-link, tapo	I/P: 100-240V~ 50/60Hz, 0.3A O/P: 12V ⎓ 1A	5m	4MB
Tapo L930-10	Tapo Smart Light Strip, Multicolor	tp-link, tapo	I/P: 100-240V~ 50/60Hz, 0.8A O/P: 12V ⎓ 2.0A	10m	

2.2 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(HT20) Mode Channel 01/06/11
Mode 4	TX G Mode Channel 11
Mode 5	TX B Mode Channel 01/02/06/10/11
Mode 6	TX G Mode Channel 01/02/06/10/11
Mode 7	TX N(HT20) Mode Channel 01/02/06/10/11

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 4	TX G Mode Channel 11

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 4	TX G Mode Channel 11

Radiated emissions test- Above 1GHz	
Final Test Mode	Description
Mode 5	TX B Mode Channel 01/02/06/10/11
Mode 6	TX G Mode Channel 01/02/06/10/11
Mode 7	TX N(HT20) Mode Channel 01/02/06/10/11

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(HT20) Mode Channel 01/06/11

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 G Mode Channel 11 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 AC power line conducted emissions and radiated emissions test, model KL420L5 and Tapo L920-10 are tested, the worst case is model KL420L5 and recorded. Other test items are tested with model KL420L5.

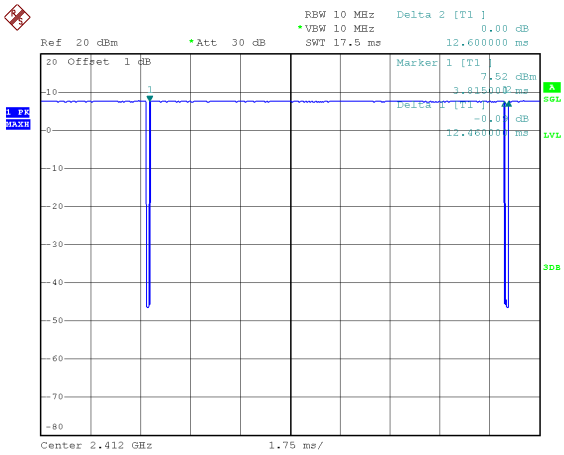
2.3 PARAMETERS OF TEST SOFTWARE

Test Software Version	UI_mptool

2.4 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.

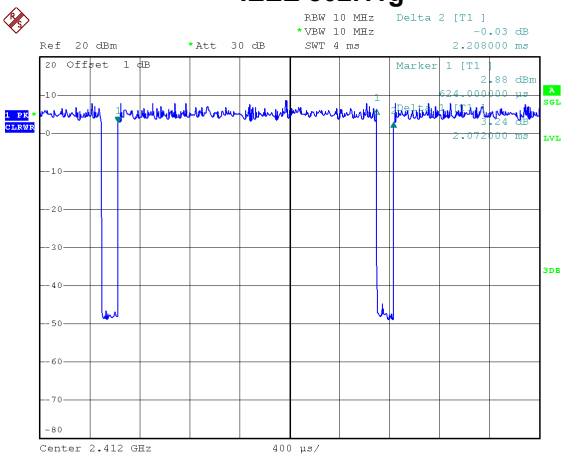
IEEE 802.11b



Date: 13.OCT.2021 05:10:28

Duty cycle = 12.460 ms / 12.600 ms = 98.89%
Duty Factor = 10 log(1/Duty cycle) = 0.00

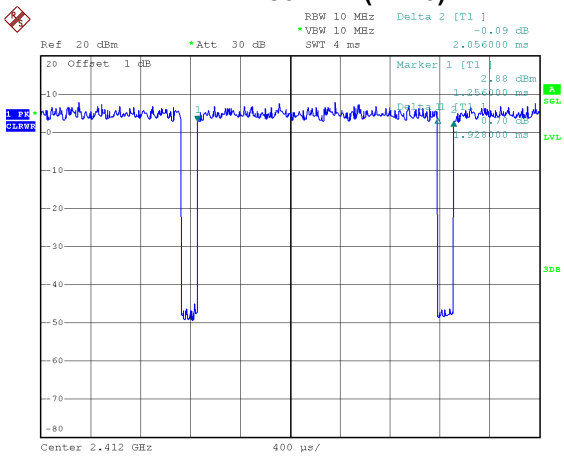
IEEE 802.11g



Date: 13.OCT.2021 05:10:44

Duty cycle = 2.072 ms / 2.208 ms = 93.84%
Duty Factor = 10 log(1/Duty cycle) = 0.28

IEEE 802.11n(HT20)



Date: 13.OCT.2021 05:11:04

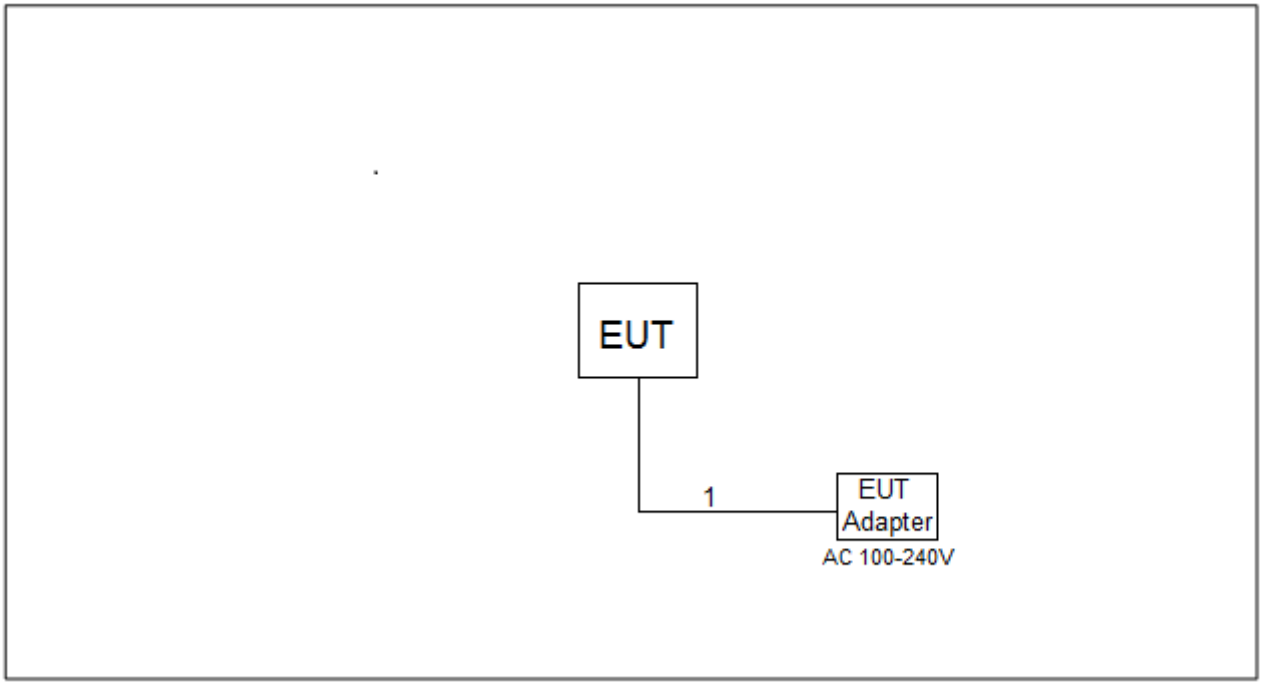
Duty cycle = 1.928 ms / 2.056 ms = 93.77%
Duty Factor = 10 log(1/Duty cycle) = 0.28

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 1 kHz.

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 483 Hz.

For IEEE 802.11n(HT20):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 519 Hz.

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.2m

3. AC POWER LINE CONDUCTED EMISSIONS

3.1 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.

3.2 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.

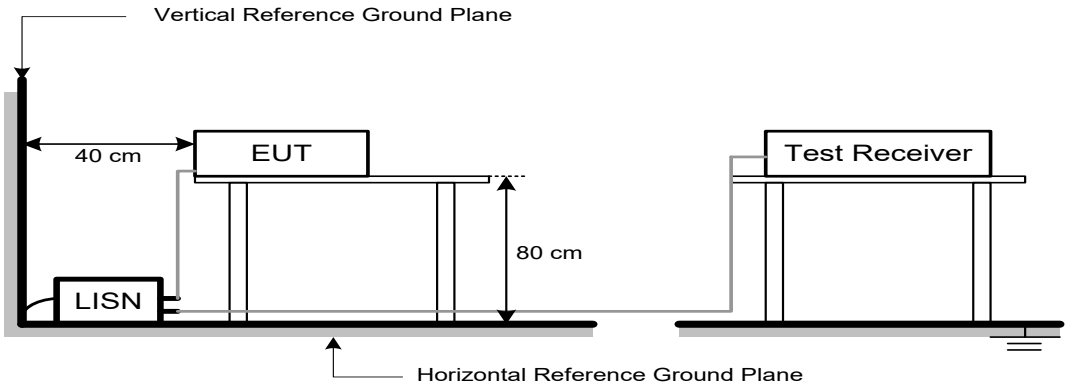
The following table is the setting of the receiver:

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

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULTS

Please refer to the APPENDIX A.

4. RADIATED EMISSIONS

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

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).

4.2 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 1 GHz)
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 1 GHz)
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

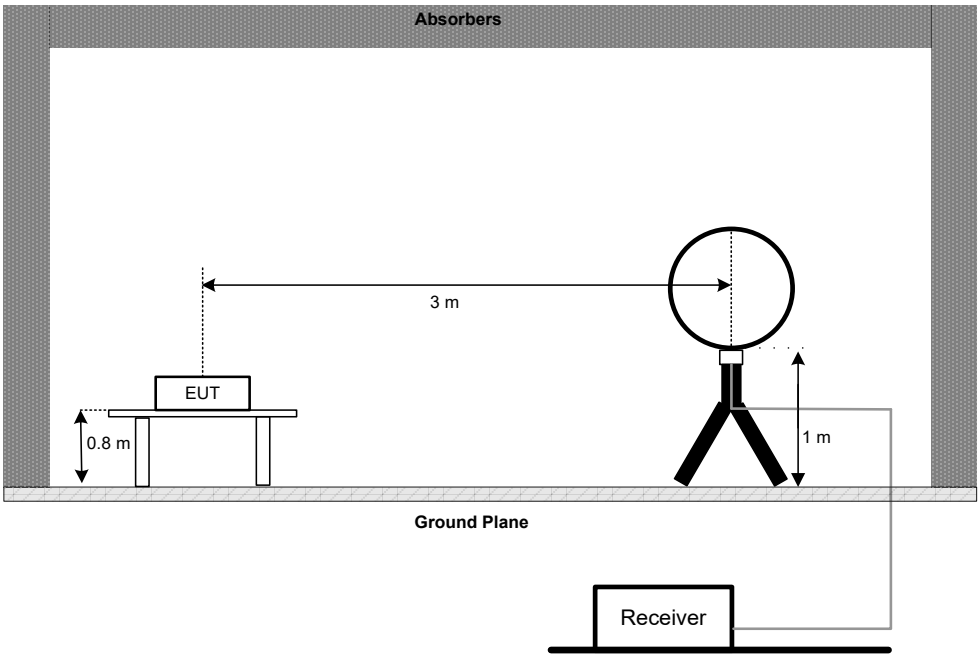
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

4.3 DEVIATION FROM TEST STANDARD

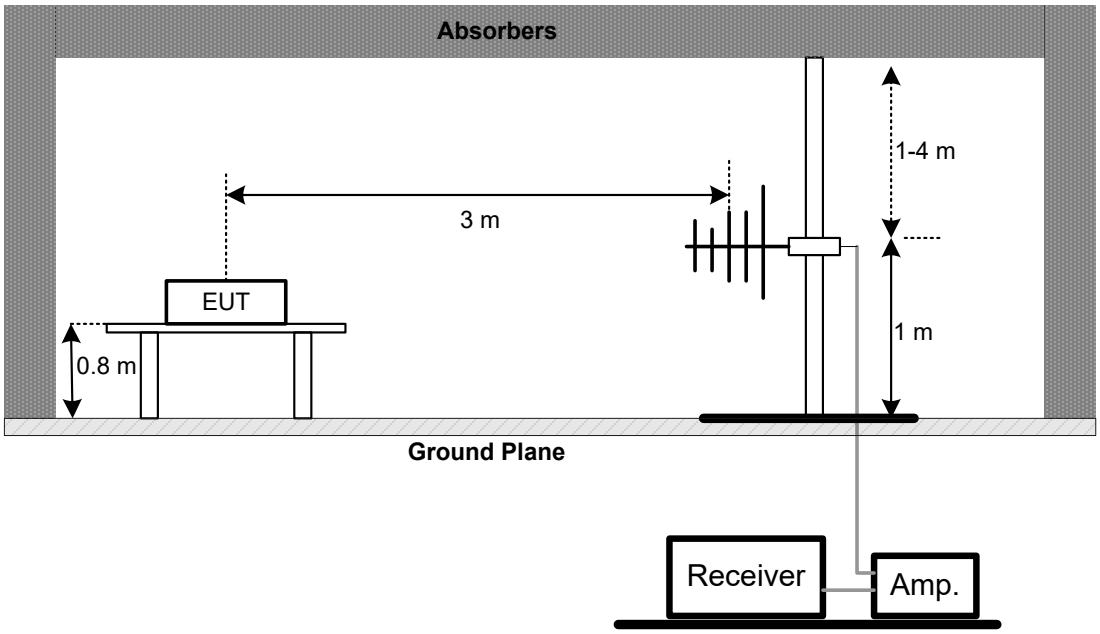
No deviation.

4.4 TEST SETUP

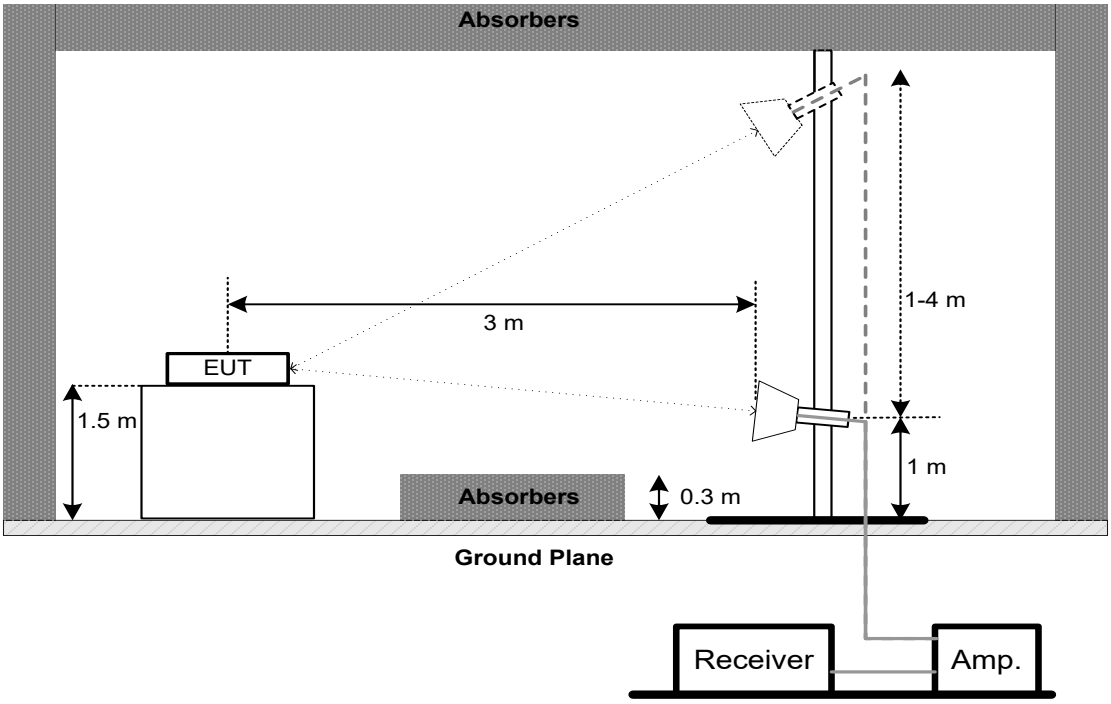
9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 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.

4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

4.8 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.

5. BANDWIDTH

5.1 LIMIT

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

5.2 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

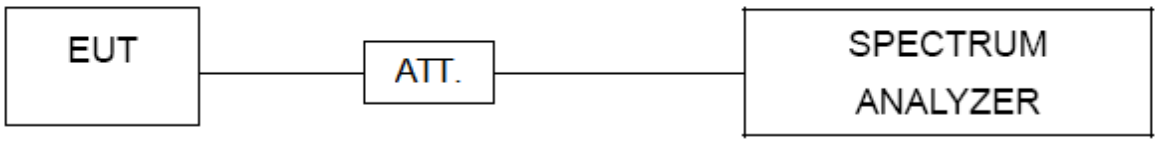
For 99% Emission Bandwidth:

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

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.

6. MAXIMUM AVERAGE OUTPUT POWER

6.1 LIMIT

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

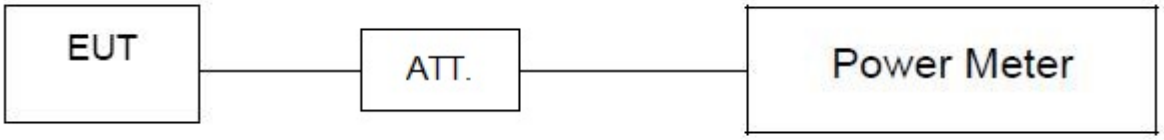
6.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter 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 of ANSI C63.10-2013.

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 F.

7. CONDUCTED SPURIOUS EMISSIONS

7.1 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.

7.2 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 Reference Level:

Spectrum Parameters	Setting
Span Frequency	⩾ 1.5 times the bandwidth.
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

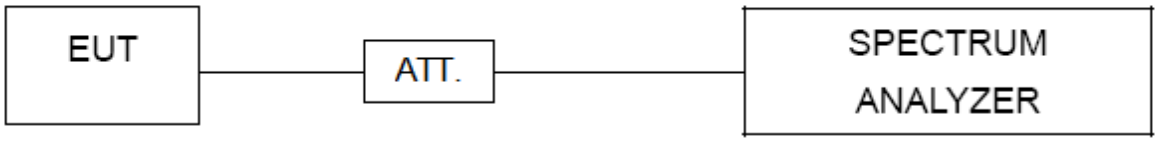
For Emission Level:

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

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 G.

8. POWER SPECTRAL DENSITY

8.1 LIMIT

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

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.

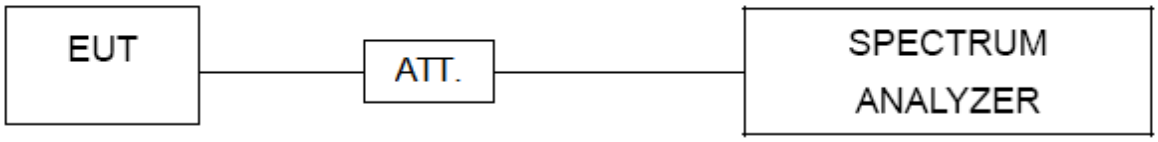
b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Span Frequency	1.5 times the DTS bandwidth
RBW	3 kHz
VBW	10 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 H.

9. 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	Feb. 28, 2022
2	LISN	EMCO	3816/2	52765	Feb. 27, 2022
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 27, 2022
4	50Ω Terminator	SHX	TF5-3	15041305	Feb. 27, 2022
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 09, 2022
7	643 Shield Room	ETS	6*4*3m	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Loop Antenna	EM	EM-6876-1	230	Apr. 28, 2022
2	Cable	N/A	RG 213/U	N/A	May 27, 2022
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 27, 2022
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chambe Room	RM	9*6*6m	N/A	Jul. 24, 2022

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 15, 2022
2	Amplifier	HP	8447D	2944A08742	Jan. 22, 2023
3	Cable	emci	LMR-400	N/A	Nov. 30, 2022
4	Controller	CT	SC100	N/A	N/A
5	Controller	MF	MF-7802	MF780208416	N/A
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Receiver	Agilent	N9038A	MY52130039	Jan. 22, 2023
8	966 Chambe Room	RM	9*6*6m	N/A	Jul. 24, 2022

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	May 10, 2022
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2022
3	Amplifier	Agilent	8449B	3008A02584	Jul. 10, 2022
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Feb. 28, 2022
5	Receiver	Agilent	N9038A	MY52130039	Mar. 19, 2022
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	N/A	EMC104-SM-SM-6 000	N/A	Oct. 15, 2022
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	Filter	STI	STI15-9912	N/A	Jul. 10, 2022
11	966 Chambe Room	RM	9*6*6m	N/A	Jul. 24, 2022

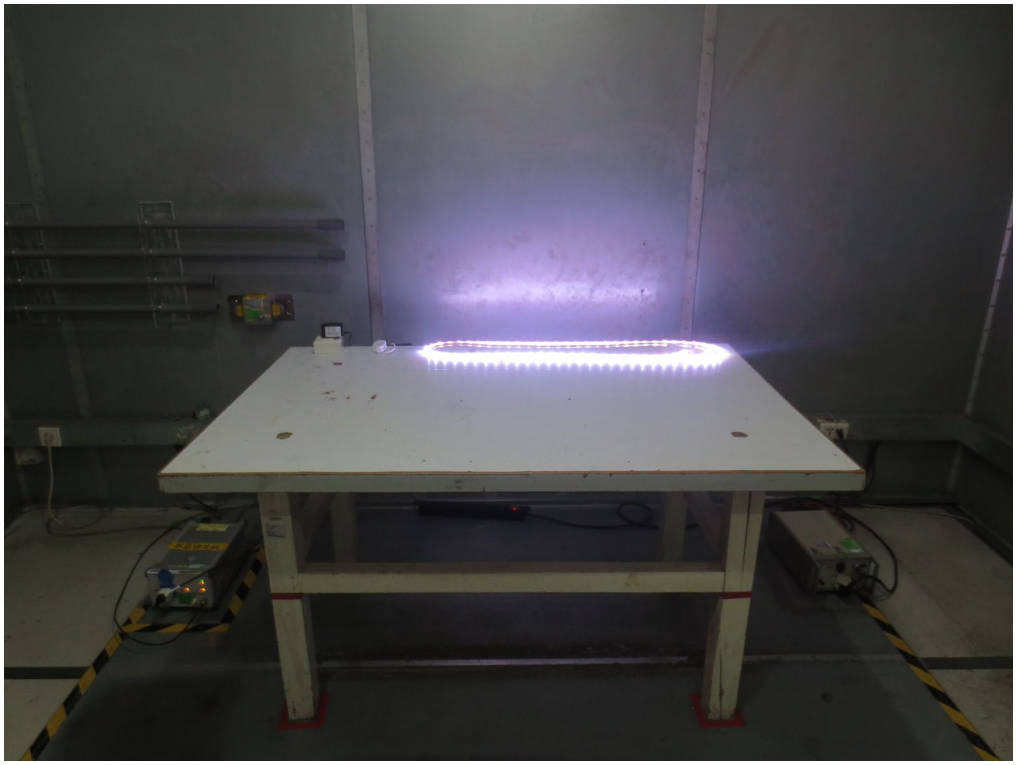
Bandwidth & Conducted Spurious Emissions & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Jul. 10, 2022
2	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 07, 2022
3	RF Cable	Tongkaichuan	N/A	N/A	N/A
4	DC Block	Mini	N/A	N/A	N/A

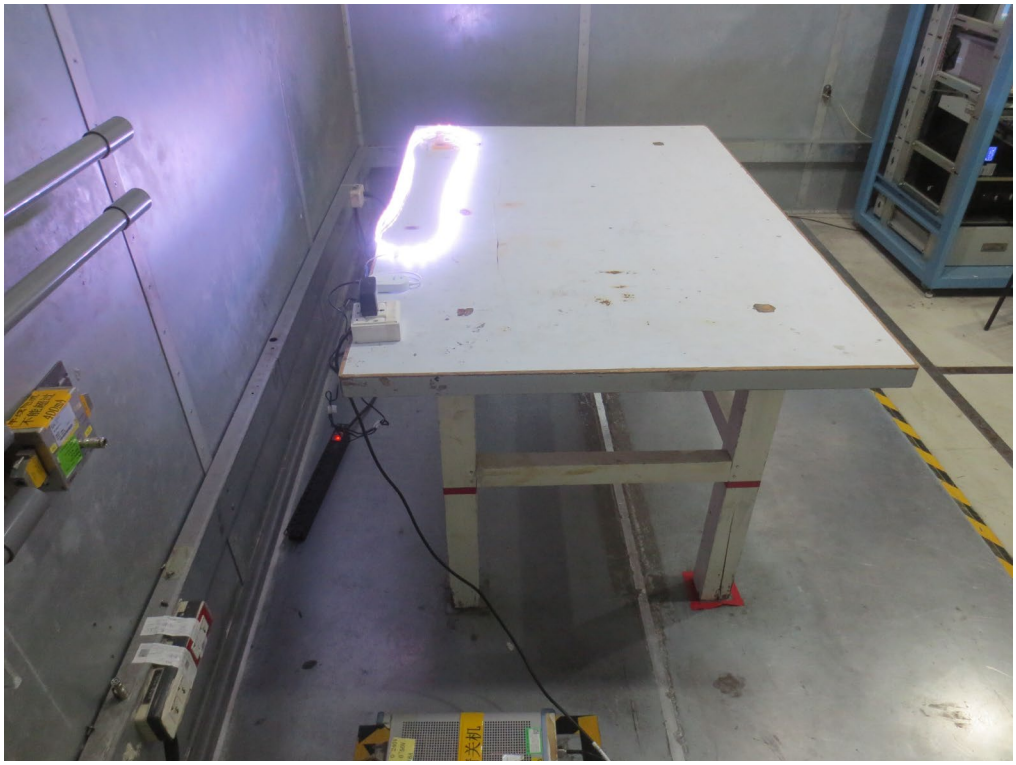
Maximum Average Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Jul. 10, 2022
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jul. 10, 2022
3	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 07, 2022
4	RF Cable	Tongkaichuan	N/A	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.

10. EUT TEST PHOTO

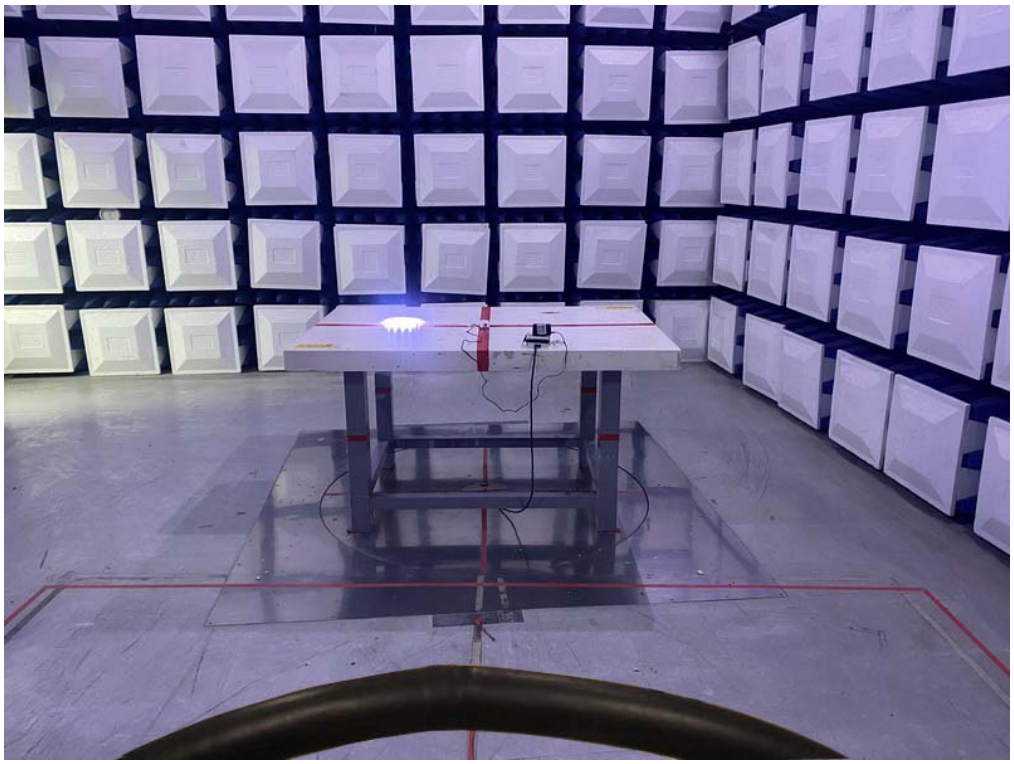
AC Power Line Conducted Emissions Test Photos

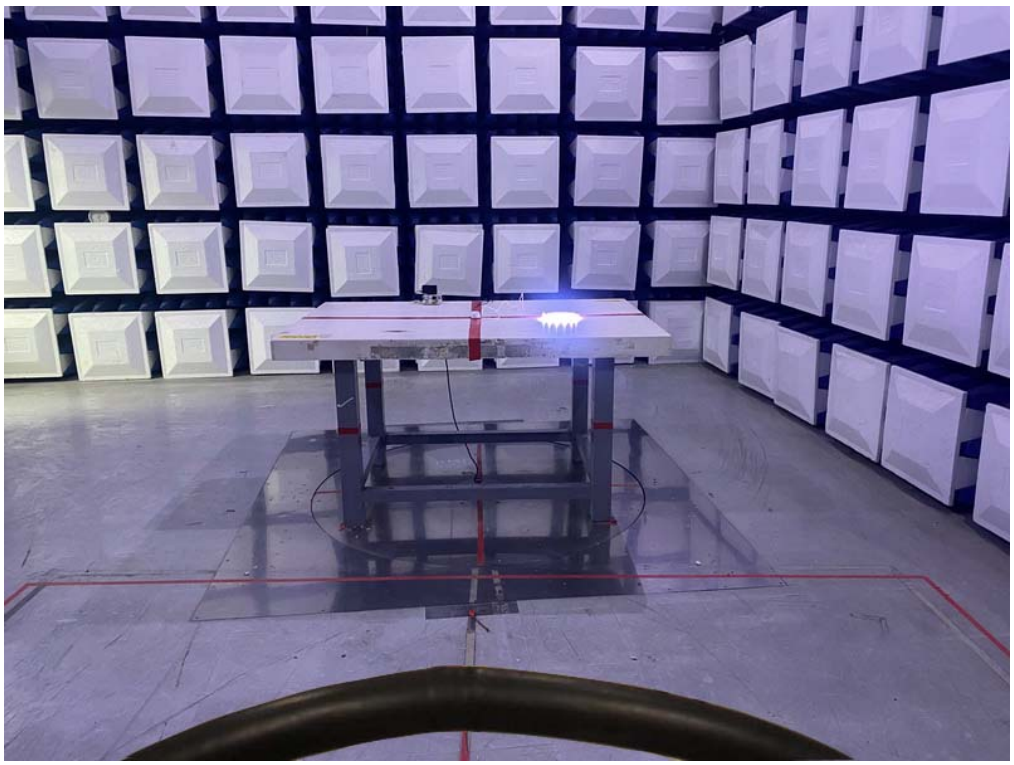




Radiated Emissions Test Photos

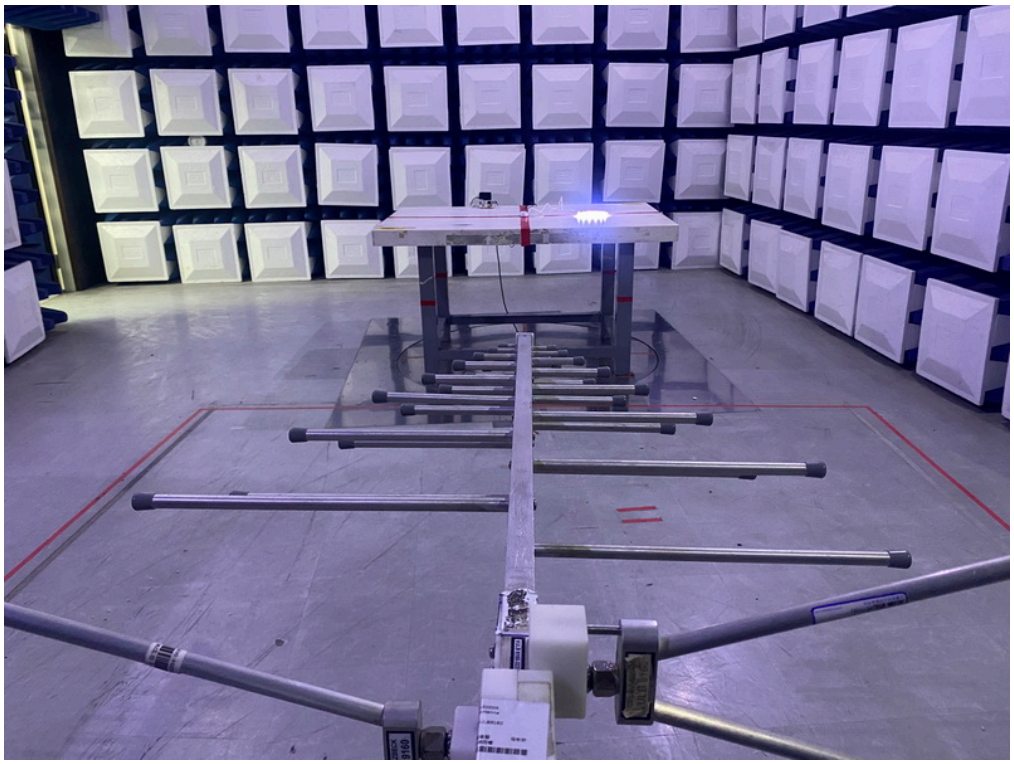
9 kHz to 30 MHz

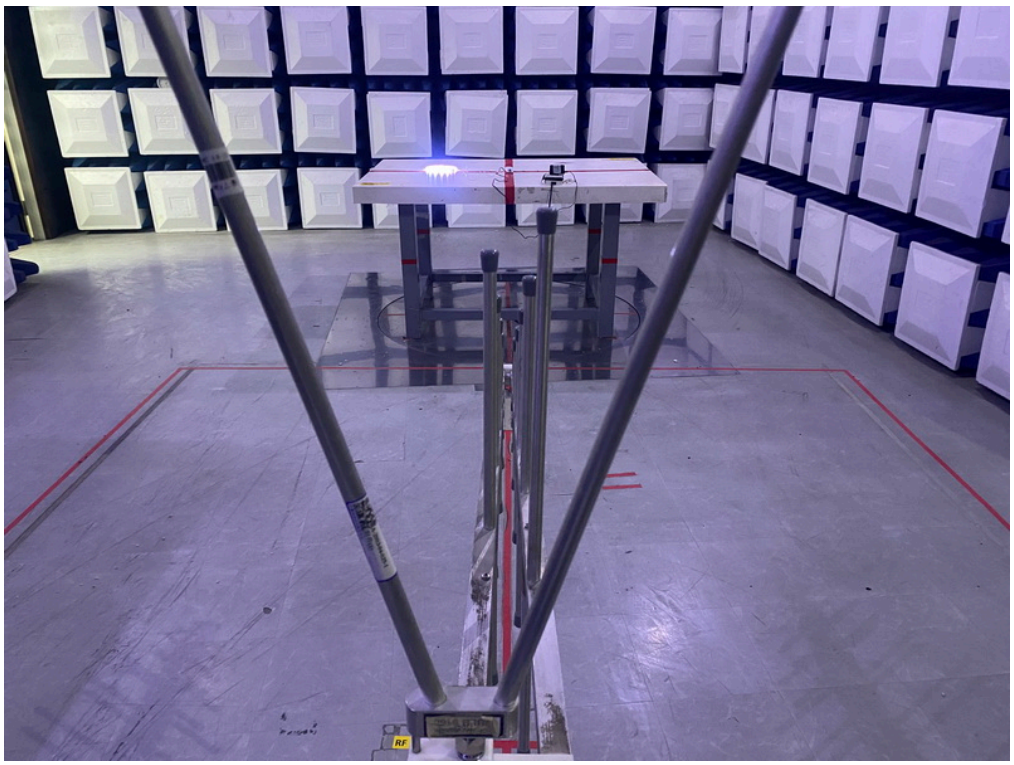




Radiated Emissions Test Photos

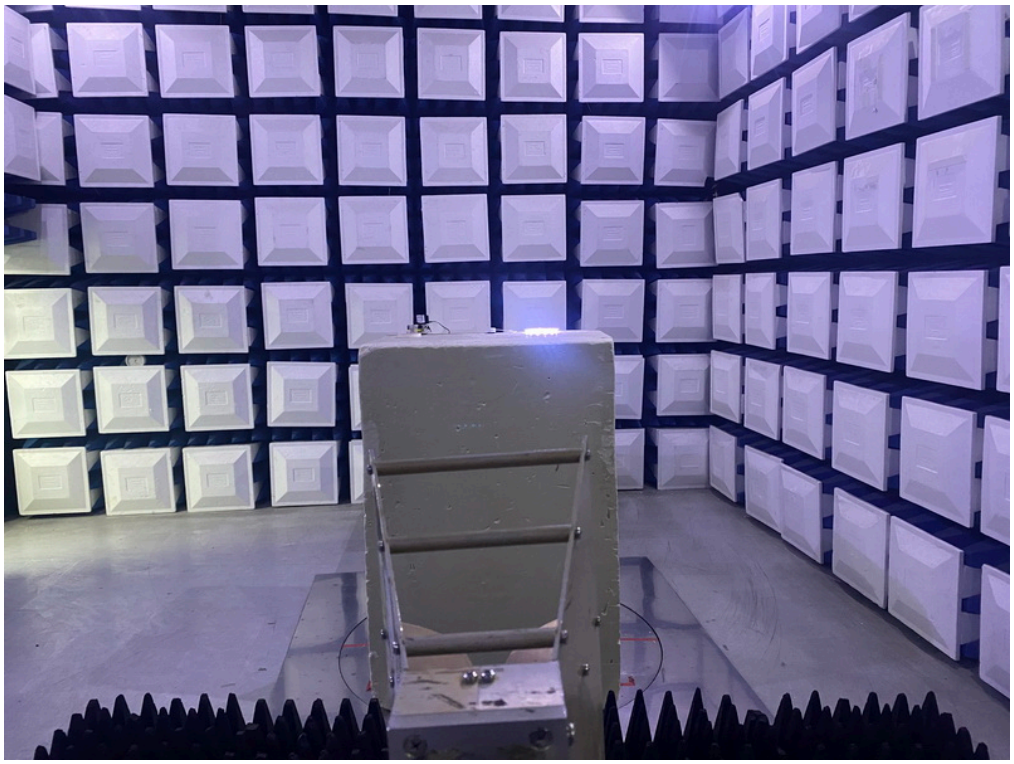
30 MHz to 1 GHz

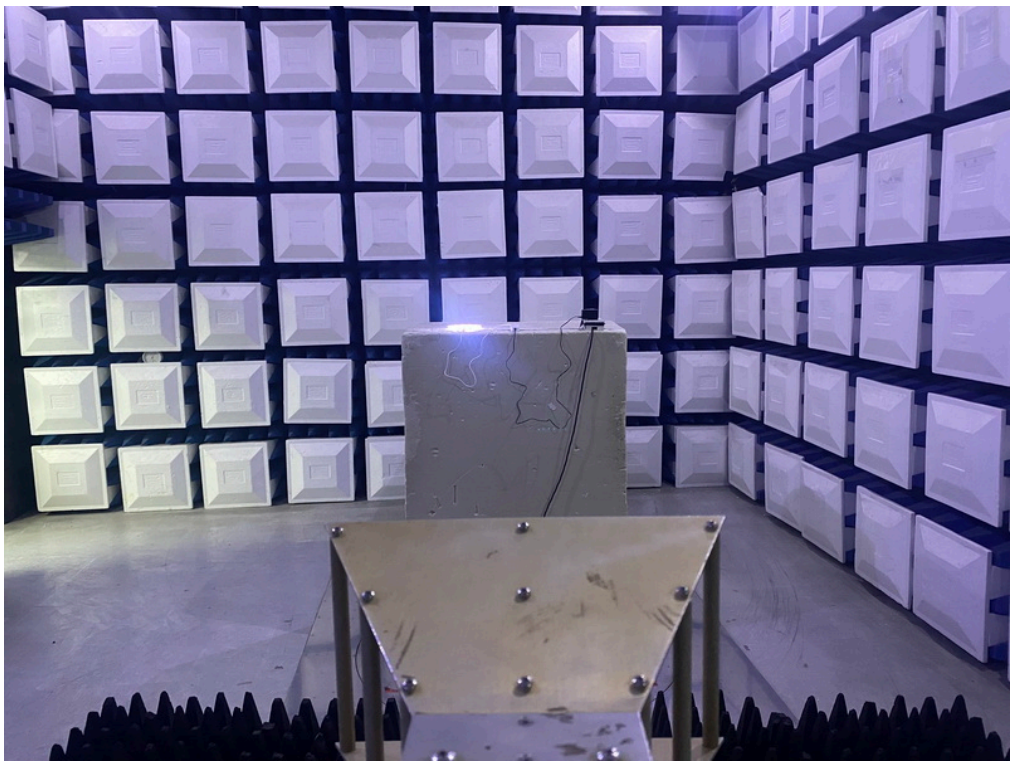




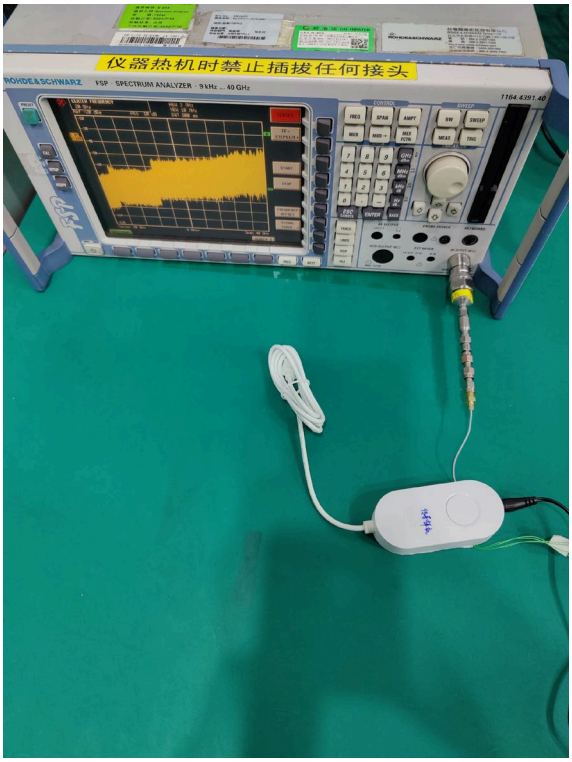
Radiated Emissions Test Photos

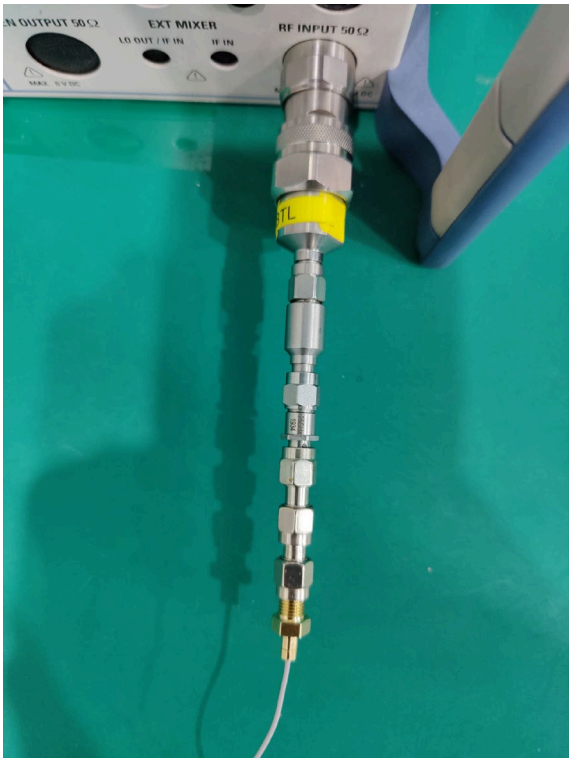
Above 1 GHz





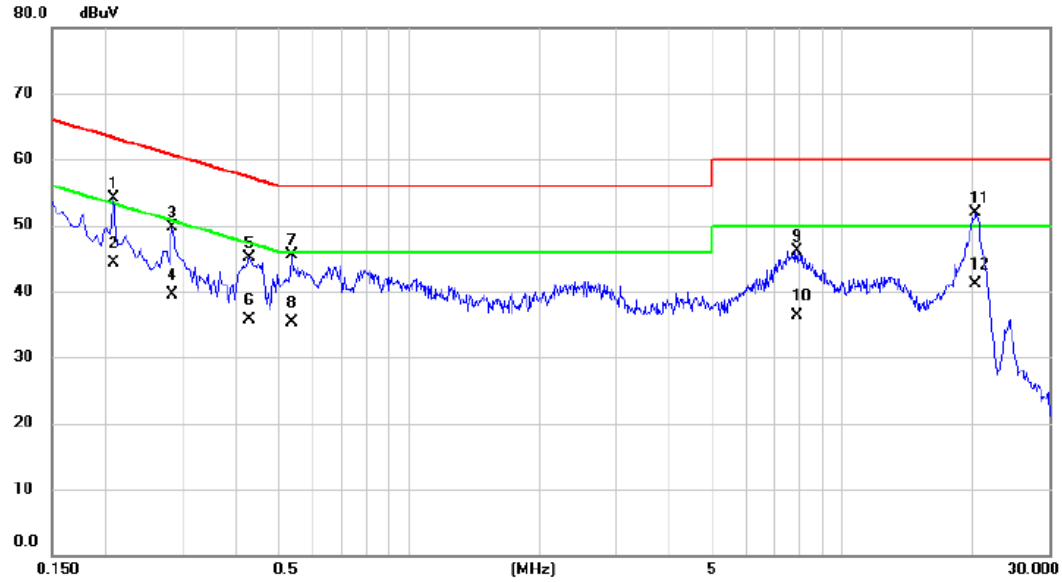
Conducted Test Photos





APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

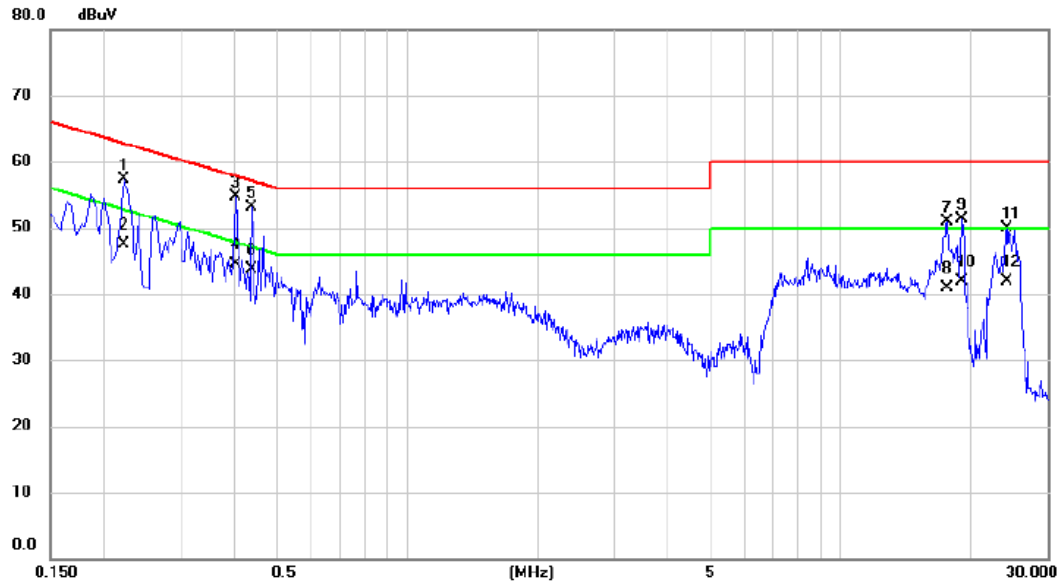
Test Mode	TX G Mode Channel 11	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2085	44.15	9.90	54.05	63.26	-9.21	peak	
2		0.2085	34.50	9.90	44.40	53.26	-8.86	AVG	
3		0.2850	39.88	9.88	49.76	60.67	-10.91	peak	
4		0.2850	29.60	9.88	39.48	50.67	-11.19	AVG	
5		0.4290	35.21	9.91	45.12	57.27	-12.15	peak	
6		0.4290	25.70	9.91	35.61	47.27	-11.66	AVG	
7		0.5370	35.60	9.93	45.53	56.00	-10.47	peak	
8		0.5370	25.40	9.93	35.33	46.00	-10.67	AVG	
9		7.8630	35.69	10.50	46.19	60.00	-13.81	peak	
10		7.8630	25.80	10.50	36.30	50.00	-13.70	AVG	
11	*	20.3055	40.93	10.88	51.81	60.00	-8.19	peak	
12		20.3055	30.20	10.88	41.08	50.00	-8.92	AVG	

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

Test Mode	TX G Mode Channel 11	Phase	Neutral

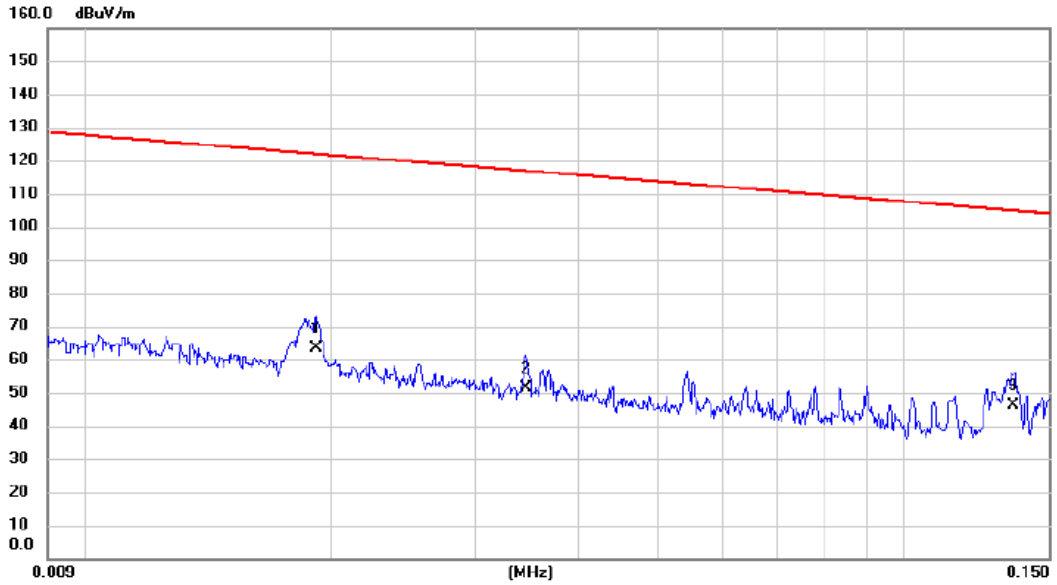


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2220	47.40	9.99	57.39	62.74	-5.35	peak	
2		0.2220	37.50	9.99	47.49	52.74	-5.25	AVG	
3	*	0.4020	44.72	10.07	54.79	57.81	-3.02	peak	
4		0.4020	34.50	10.07	44.57	47.81	-3.24	AVG	
5		0.4380	43.09	10.09	53.18	57.10	-3.92	peak	
6		0.4380	33.60	10.09	43.69	47.10	-3.41	AVG	
7		17.5694	39.87	11.12	50.99	60.00	-9.01	peak	
8		17.5694	29.80	11.12	40.92	50.00	-9.08	AVG	
9		19.0680	40.23	11.16	51.39	60.00	-8.61	peak	
10		19.0680	30.70	11.16	41.86	50.00	-8.14	AVG	
11		24.1080	38.54	11.32	49.86	60.00	-10.14	peak	
12		24.1080	30.50	11.32	41.82	50.00	-8.18	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 G Mode Channel 11	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0192	48.64	14.66	63.30	121.94	-58.64	AVG			
2		0.0345	37.49	14.08	51.57	116.85	-65.28	AVG			
3	*	0.1356	32.58	13.78	46.36	104.96	-58.60	AVG			

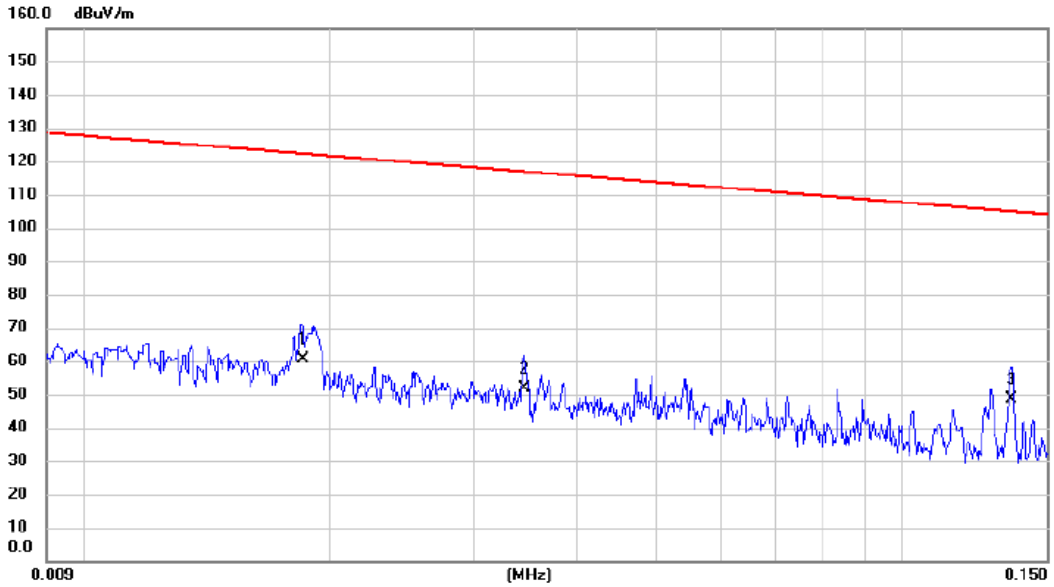
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX G Mode Channel 11	Polarization	Ant 0°

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.4397	48.63	13.61	62.24	94.74	-32.50	AVG			
2		2.1326	34.69	12.21	46.90	69.54	-22.64	QP			
3	*	3.7198	38.74	12.01	50.75	69.54	-18.79	QP			

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

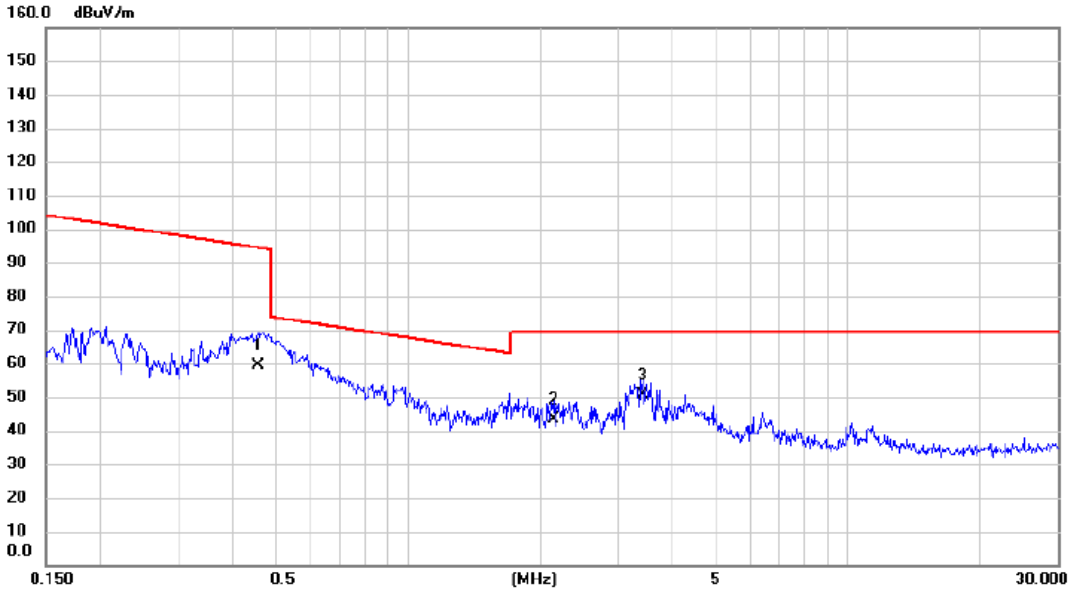
Test Mode	TX G Mode Channel 11	Polarization	Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0185	45.87	14.88	60.75	122.26	-61.51	AVG			
2		0.0345	37.86	14.08	51.94	116.85	-64.91	AVG			
3	*	0.1358	34.79	13.77	48.56	104.95	-56.39	AVG			

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

Test Mode	TX G Mode Channel 11	Polarization	Ant 90°

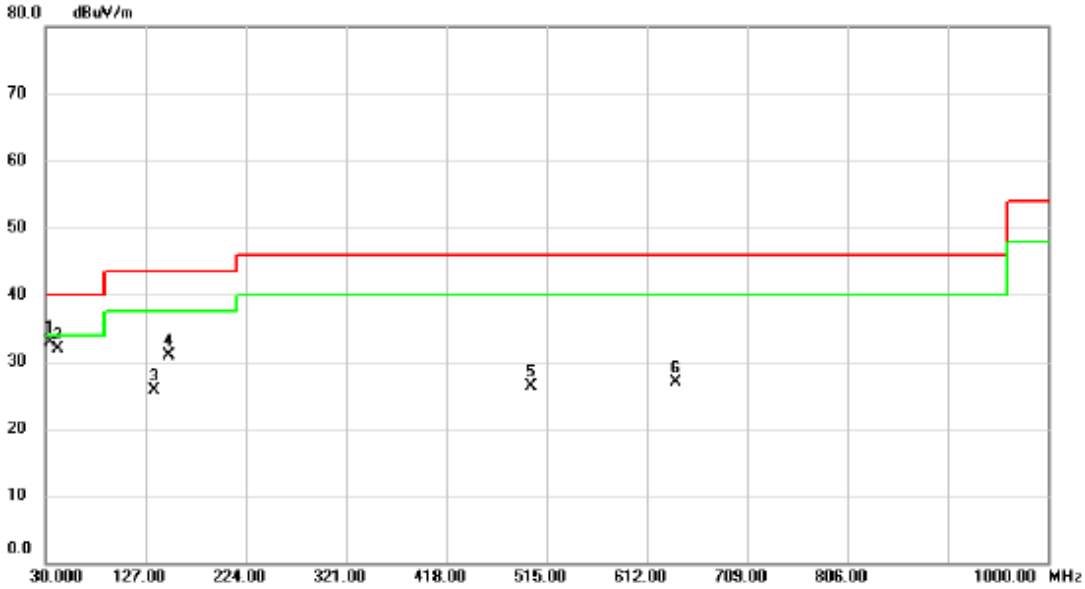


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.4564	45.97	13.60	59.57	94.42	-34.85	AVG			
2		2.1440	31.25	12.20	43.45	69.54	-26.09	QP			
3	*	3.4174	38.54	11.99	50.53	69.54	-19.01	QP			

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

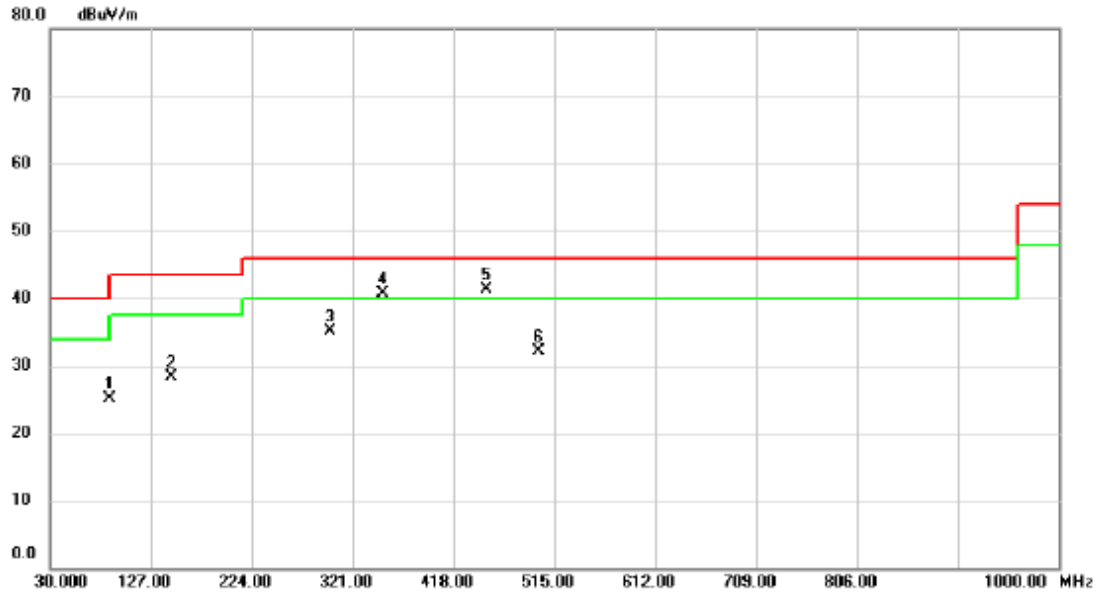
Test Mode	TX G Mode Channel 11	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	33.880	47.36	-14.40	32.96	40.00	-7.04	peak	
2		42.610	45.10	-13.25	31.85	40.00	-8.15	peak	
3		135.730	39.74	-14.04	25.70	43.50	-17.80	peak	
4		149.310	43.89	-13.06	30.83	43.50	-12.67	peak	
5		499.965	33.21	-6.93	26.28	46.00	-19.72	peak	
6		640.130	31.36	-4.47	26.89	46.00	-19.11	peak	

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

Test Mode	TX G Mode Channel 11	Polarization	Horizontal

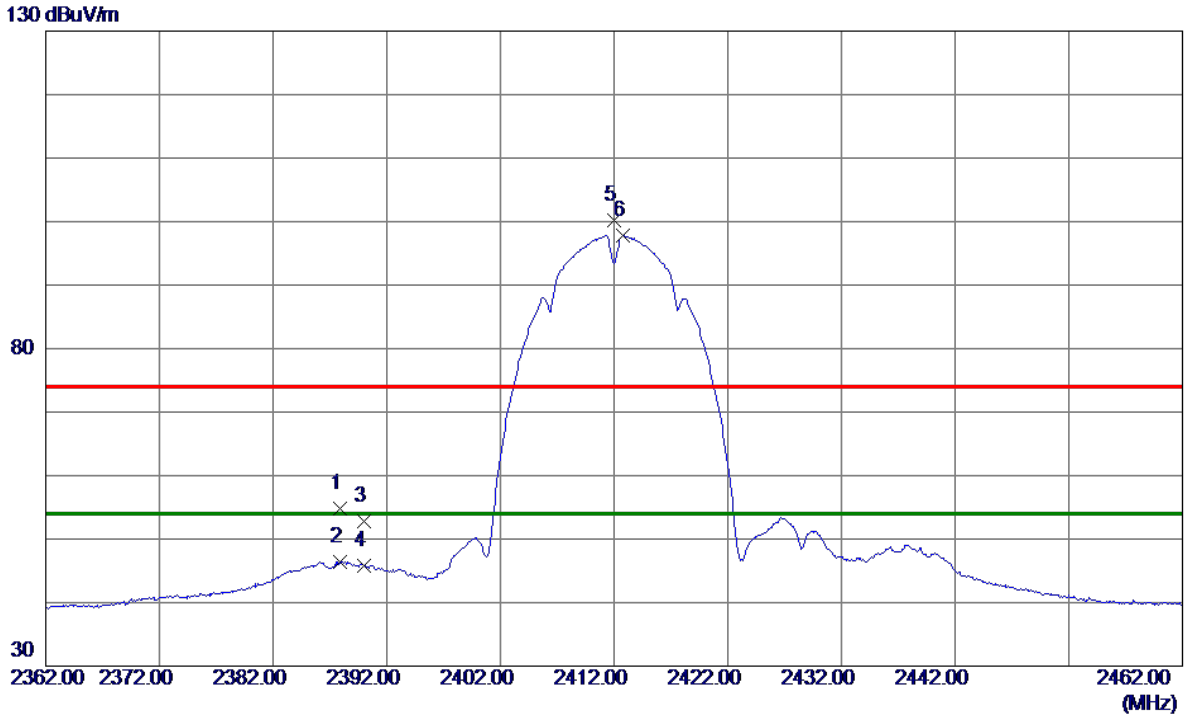


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		87.715	42.70	-17.55	25.15	40.00	-14.85	peak	
2		147.370	41.43	-13.20	28.23	43.50	-15.27	peak	
3		300.145	46.32	-11.17	35.15	46.00	-10.85	peak	
4	!	350.100	51.08	-10.34	40.74	46.00	-5.26	peak	
5	*	450.010	49.26	-7.87	41.39	46.00	-4.61	peak	
6		499.965	39.05	-6.93	32.12	46.00	-13.88	peak	

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

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

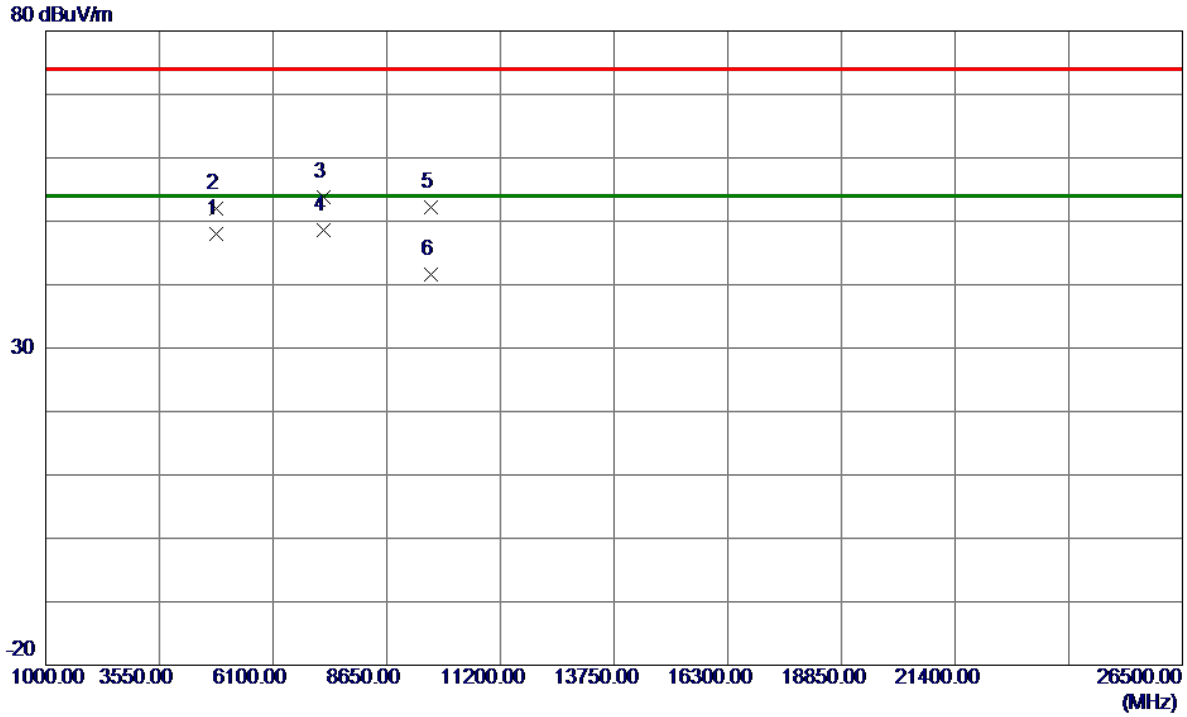
Test Mode	TX B Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2387.9000	46.56	8.30	54.86	74.00	-19.14	Peak	
2	2387.9000	38.12	8.30	46.42	54.00	-7.58	AVG	
3	2390.0000	44.58	8.31	52.89	74.00	-21.11	Peak	
4	2390.0000	37.49	8.31	45.80	54.00	-8.20	AVG	
5	2412.0000	91.88	8.33	100.21	74.00	26.21	Peak	No Limit
6 *	2412.8000	89.46	8.33	97.79	54.00	43.79	AVG	No Limit

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

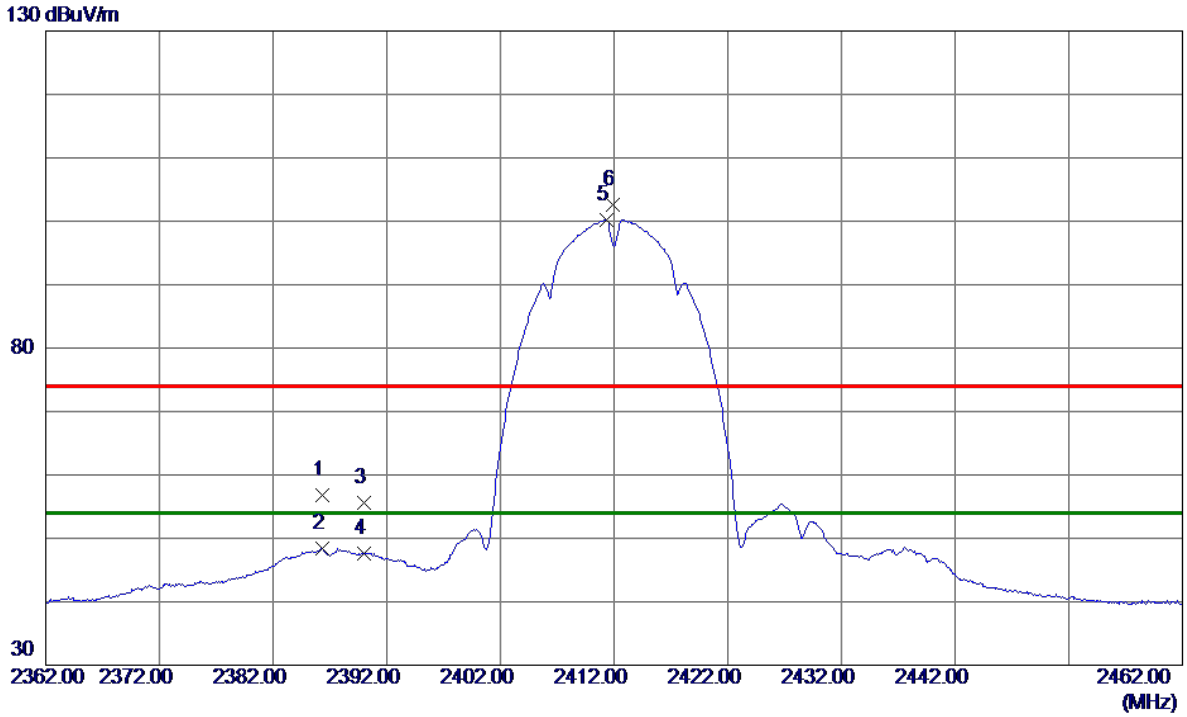
Test Mode	TX B Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.9980	42.84	5.23	48.07	54.00	-5.93	AVG	
2	4824.0219	46.80	5.23	52.03	74.00	-21.97	Peak	
3	7235.8100	43.27	10.60	53.87	74.00	-20.13	Peak	
4 *	7236.6500	37.92	10.60	48.52	54.00	-5.48	AVG	
5	9646.5279	39.82	12.42	52.24	74.00	-21.76	Peak	
6	9647.7600	29.20	12.42	41.62	54.00	-12.38	AVG	

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

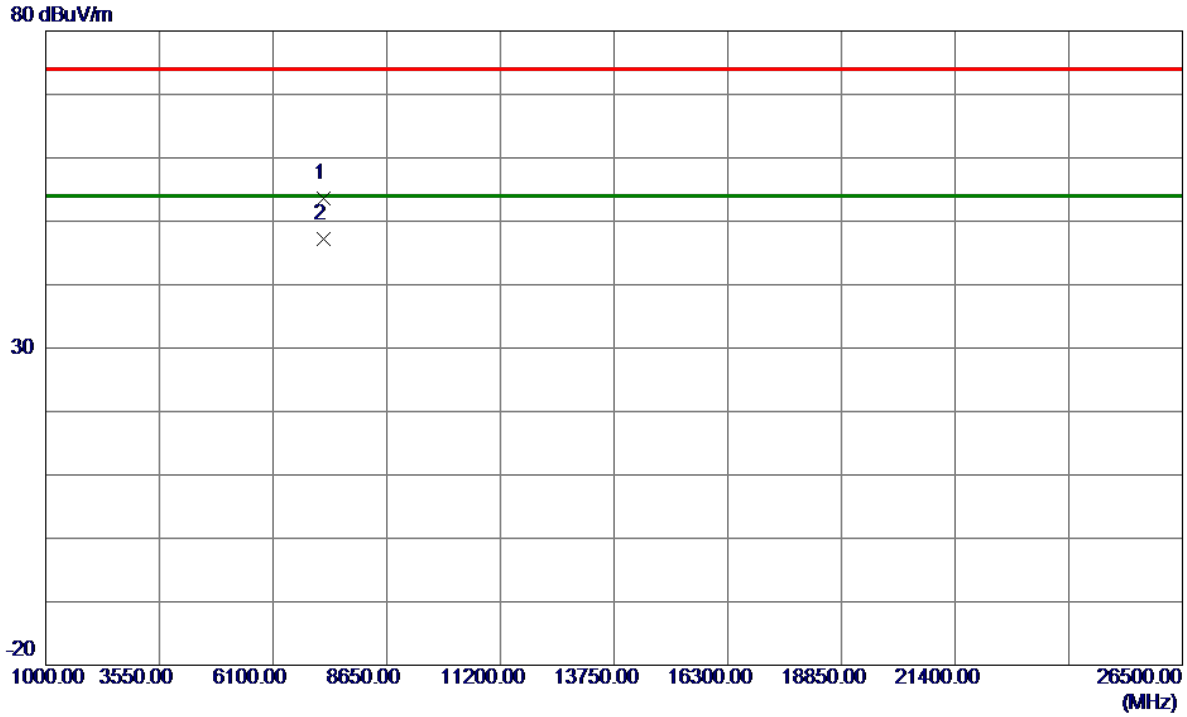
Test Mode	TX B Mode 2412 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2386.3000	48.51	8.30	56.81	74.00	-17.19	Peak	
2	2386.3000	40.10	8.30	48.40	54.00	-5.60	AVG	
3	2390.0000	47.26	8.31	55.57	74.00	-18.43	Peak	
4	2390.0000	39.28	8.31	47.59	54.00	-6.41	AVG	
5 *	2411.3000	91.92	8.33	100.25	54.00	46.25	AVG	No Limit
6	2411.9000	94.21	8.33	102.54	74.00	28.54	Peak	No Limit

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

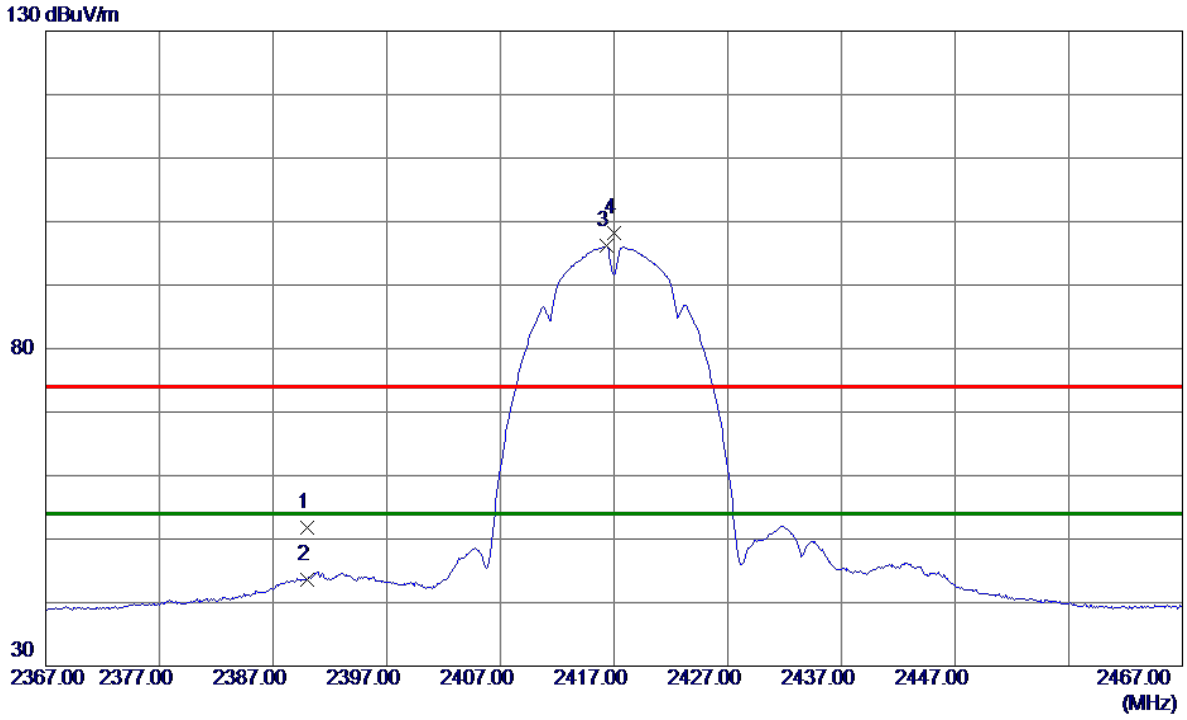
Test Mode	TX B Mode 2412 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7236.3290	42.96	10.60	53.56	74.00	-20.44	Peak	
2 *	7236.8030	36.62	10.60	47.22	54.00	-6.78	AVG	

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

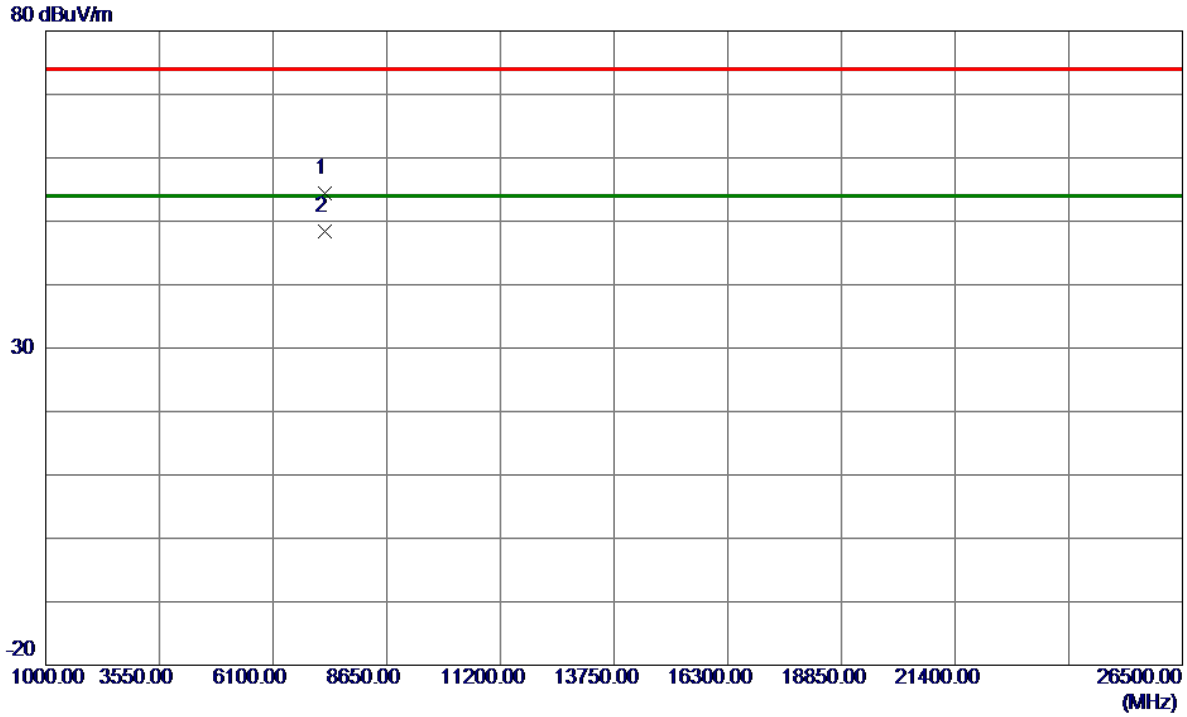
Test Mode	TX B Mode 2417 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	43.54	8.31	51.85	74.00	-22.15	Peak	
2	2390.0000	35.37	8.31	43.68	54.00	-10.32	AVG	
3 *	2416.3000	87.77	8.34	96.11	54.00	42.11	AVG	No Limit
4	2417.0000	89.85	8.34	98.19	74.00	24.19	Peak	No Limit

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

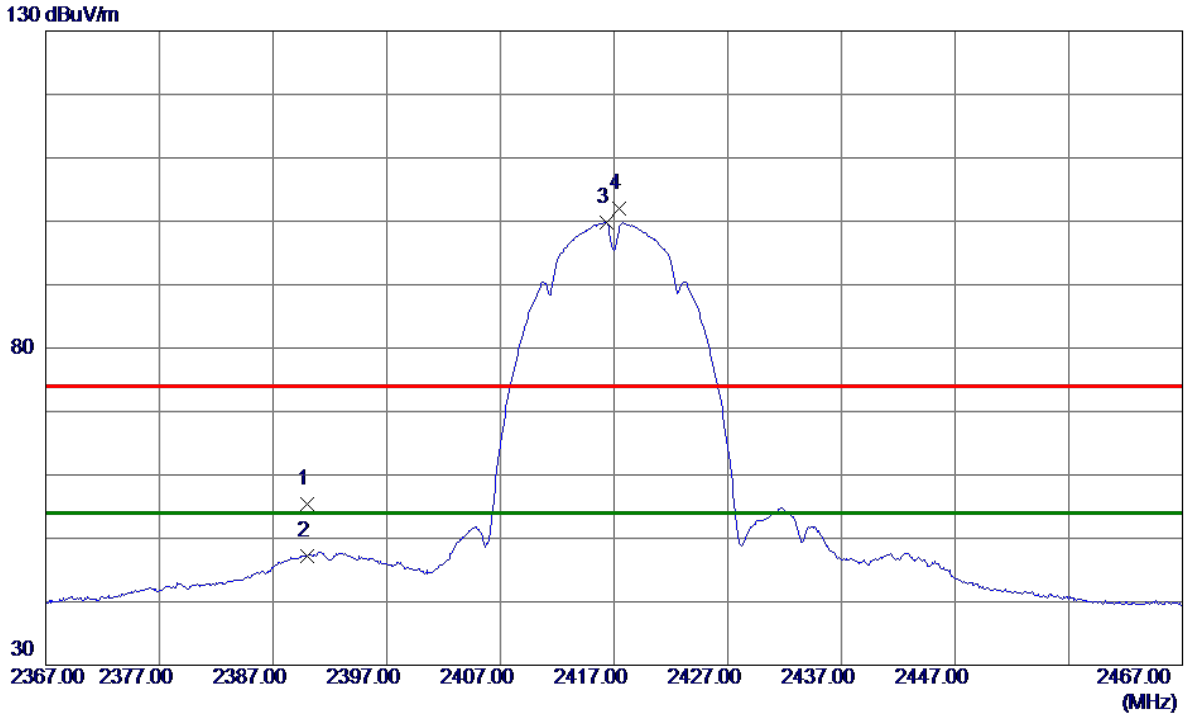
Test Mode	TX B Mode 2417 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7251.3100	43.74	10.62	54.36	74.00	-19.64	Peak	
2 *	7251.7650	37.79	10.62	48.41	54.00	-5.59	AVG	

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

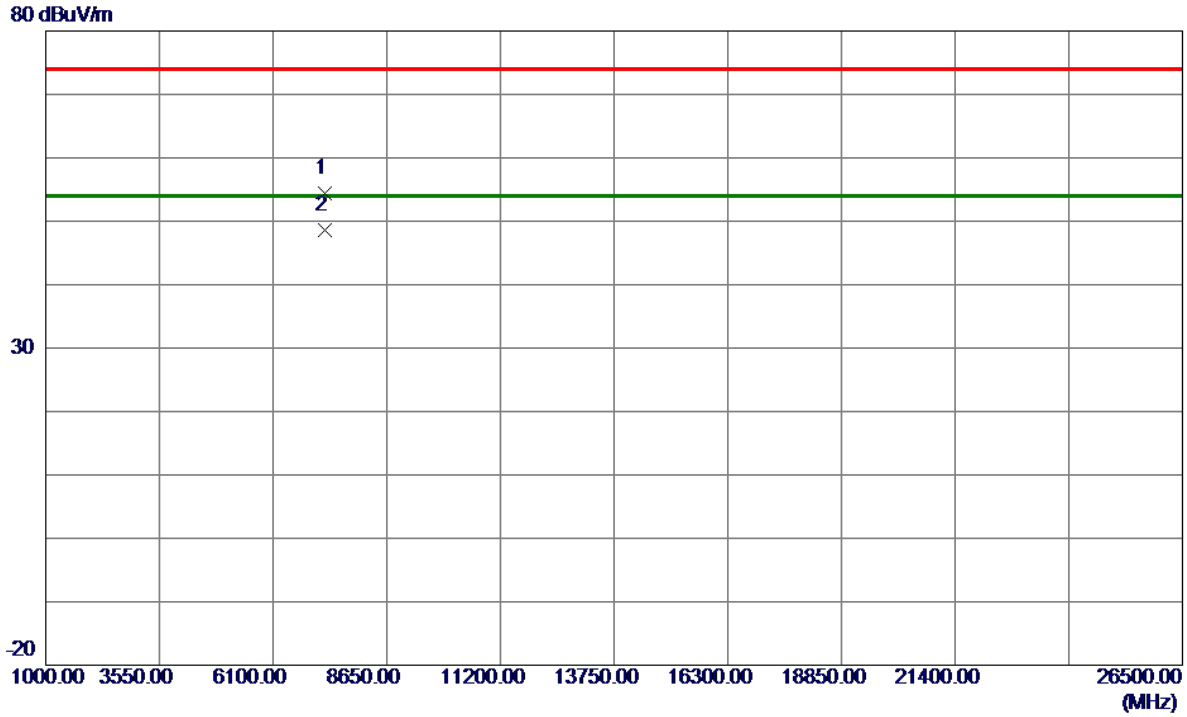
Test Mode	TX B Mode 2417 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	47.07	8.31	55.38	74.00	-18.62	Peak	
2	2390.0000	38.88	8.31	47.19	54.00	-6.81	AVG	
3 *	2416.3000	91.51	8.34	99.85	54.00	45.85	AVG	No Limit
4	2417.4000	93.64	8.34	101.98	74.00	27.98	Peak	No Limit

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

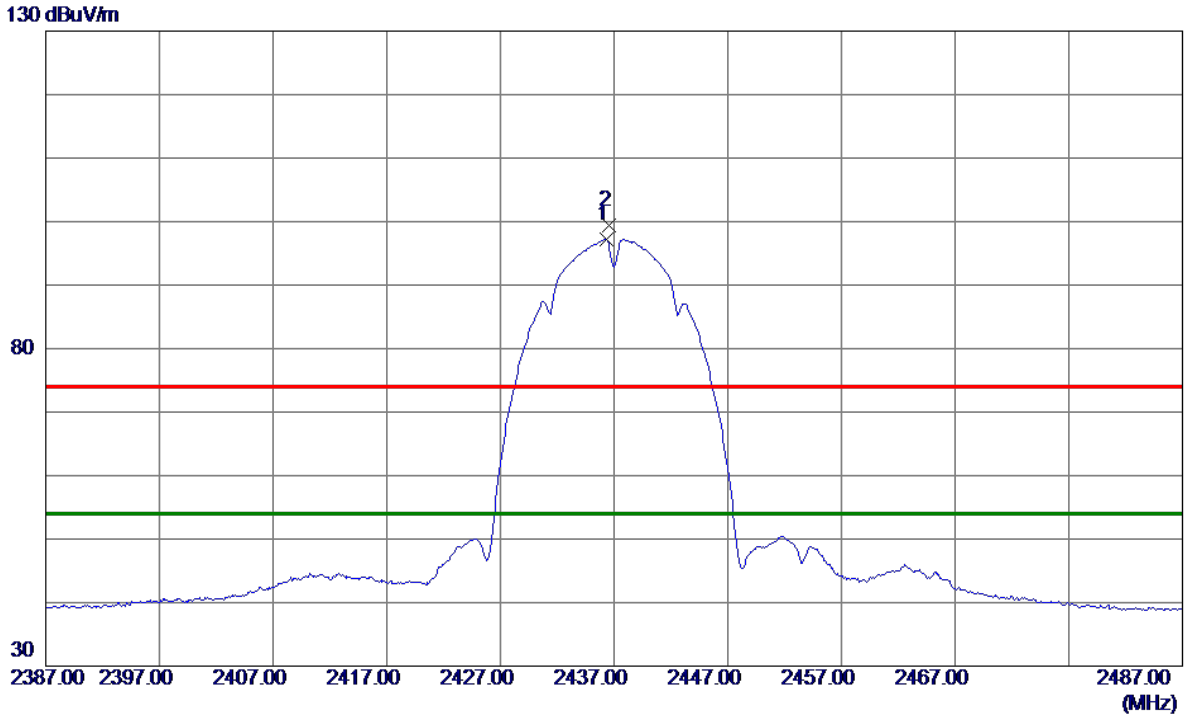
Test Mode	TX B Mode 2417 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7251.3800	43.81	10.62	54.43	74.00	-19.57	Peak	
2 *	7251.7750	38.04	10.62	48.66	54.00	-5.34	AVG	

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

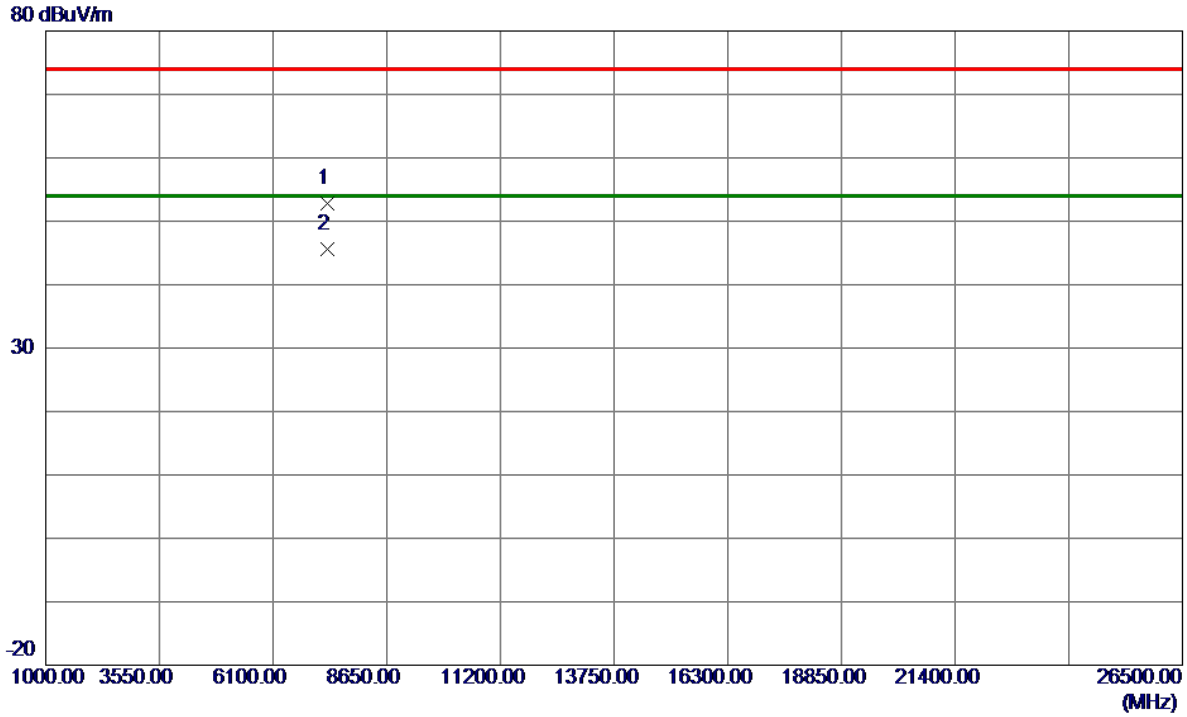
Test Mode	TX B Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436.3000	88.83	8.36	97.19	54.00	43.19	AVG	No Limit
2	2436.6000	90.99	8.36	99.35	74.00	25.35	Peak	No Limit

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

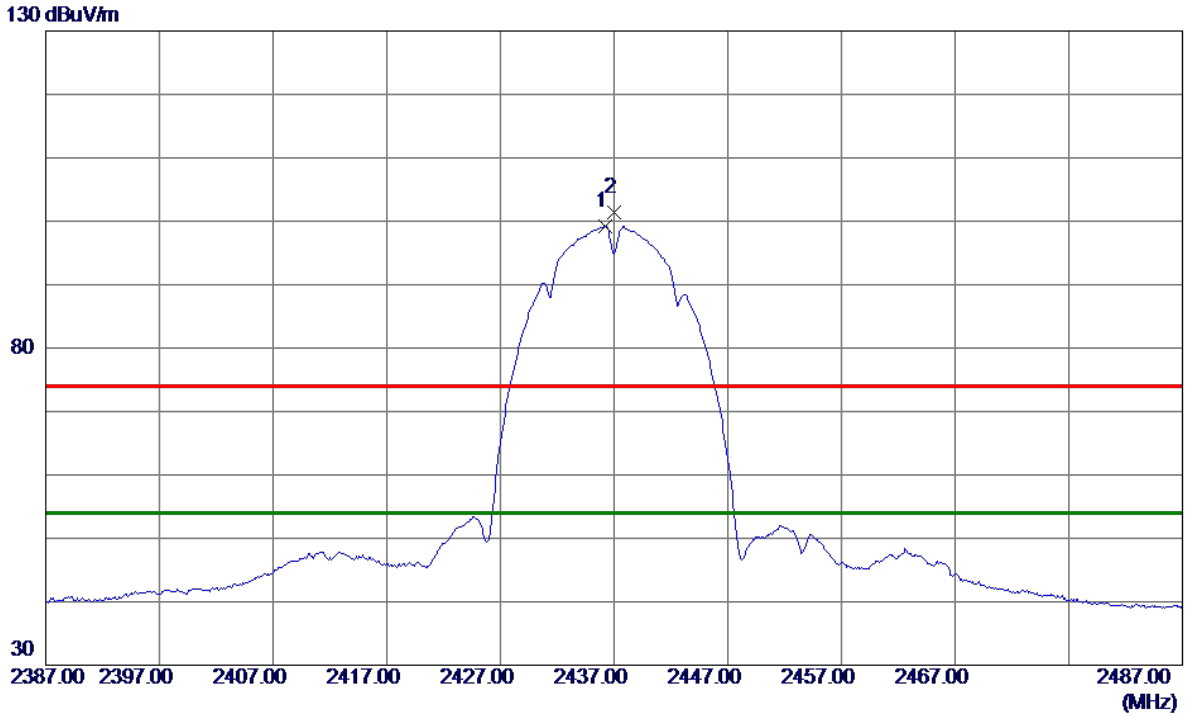
Test Mode	TX B Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7310.4500	42.05	10.69	52.74	74.00	-21.26	Peak	
2 *	7311.8550	34.93	10.70	45.63	54.00	-8.37	AVG	

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

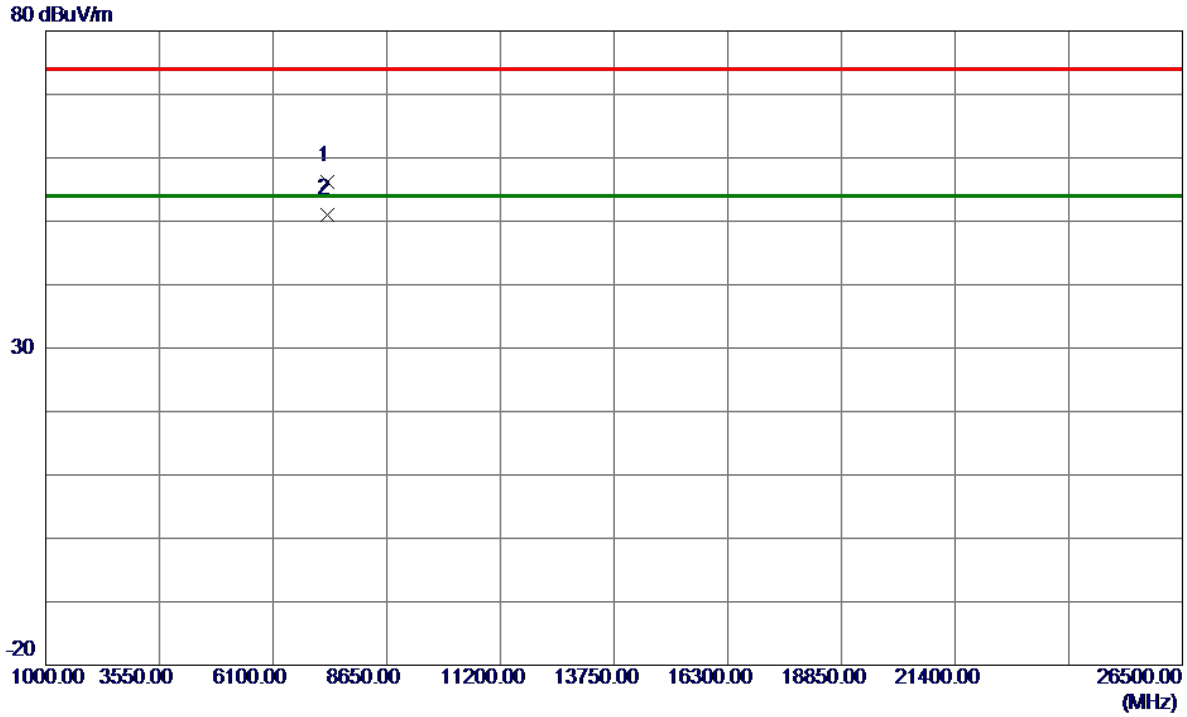
Test Mode	TX B Mode 2437 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436.2000	90.85	8.36	99.21	54.00	45.21	AVG	No Limit
2	2437.0000	93.01	8.36	101.37	74.00	27.37	Peak	No Limit

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

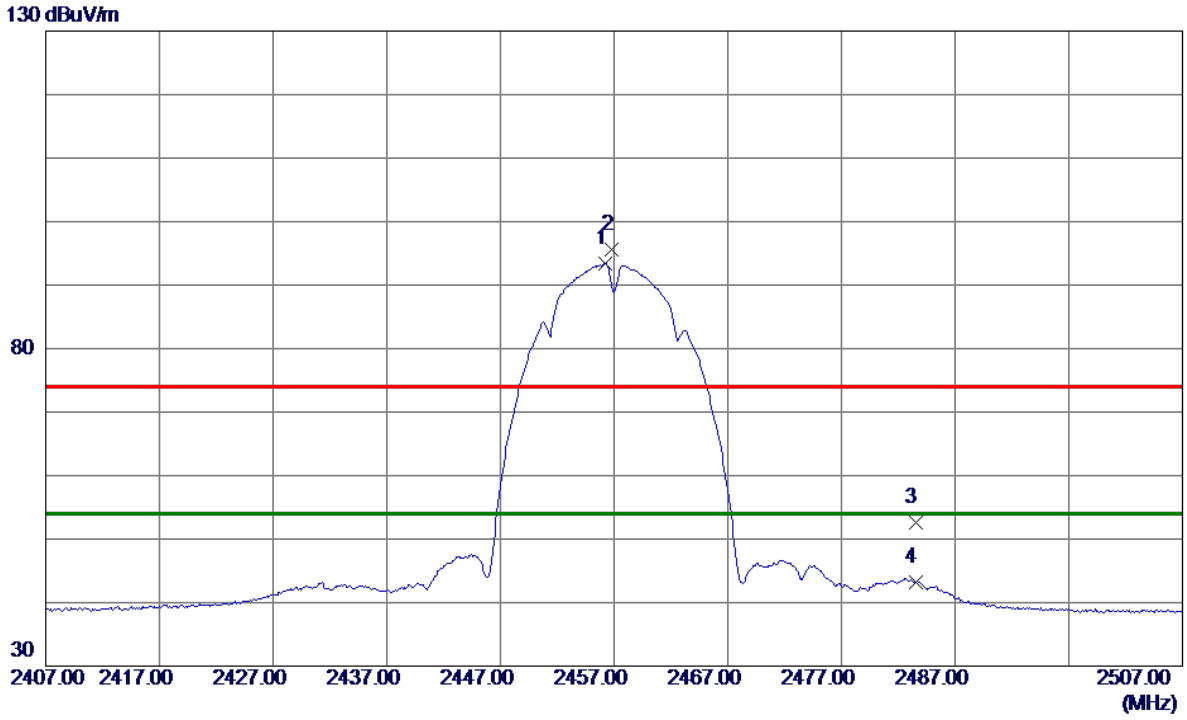
Test Mode	TX B Mode 2437 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7311.1250	45.61	10.69	56.30	74.00	-17.70	Peak	
2 *	7311.8450	40.40	10.70	51.10	54.00	-2.90	AVG	

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

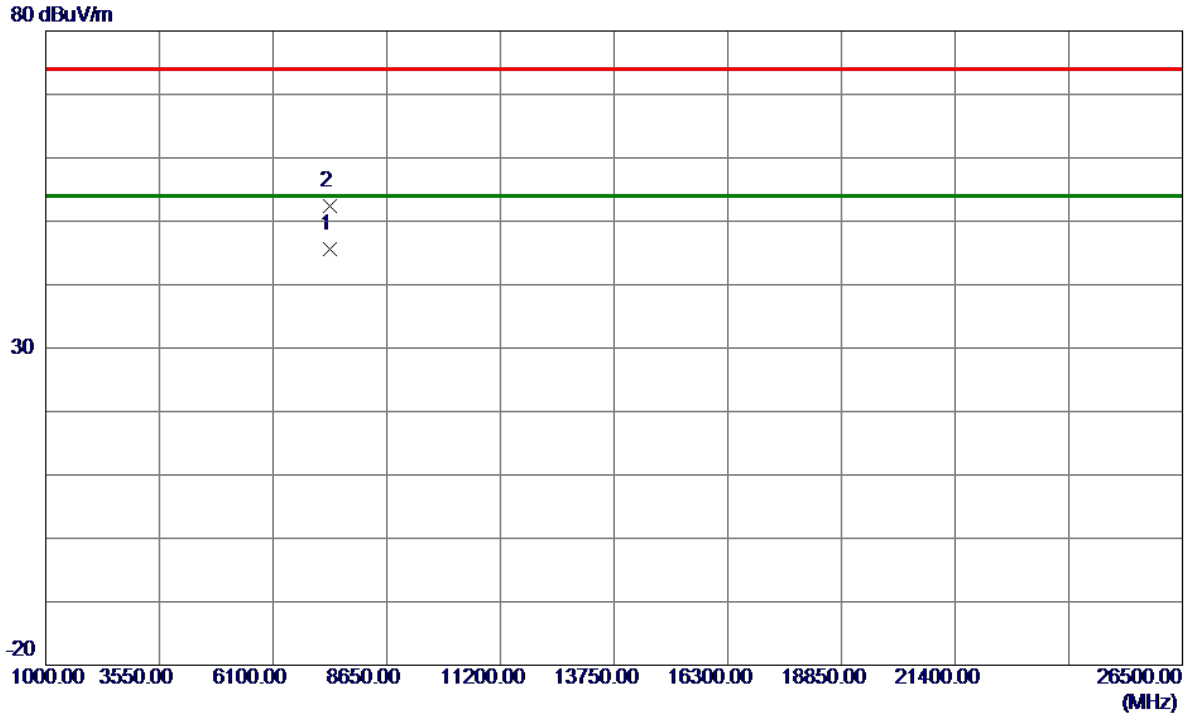
Test Mode	TX B Mode 2457 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2456.2000	84.98	8.39	93.37	54.00	39.37	AVG	No Limit
2	2456.8000	87.23	8.39	95.62	74.00	21.62	Peak	No Limit
3	2483.5000	44.10	8.42	52.52	74.00	-21.48	Peak	
4	2483.5000	34.77	8.42	43.19	54.00	-10.81	AVG	

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

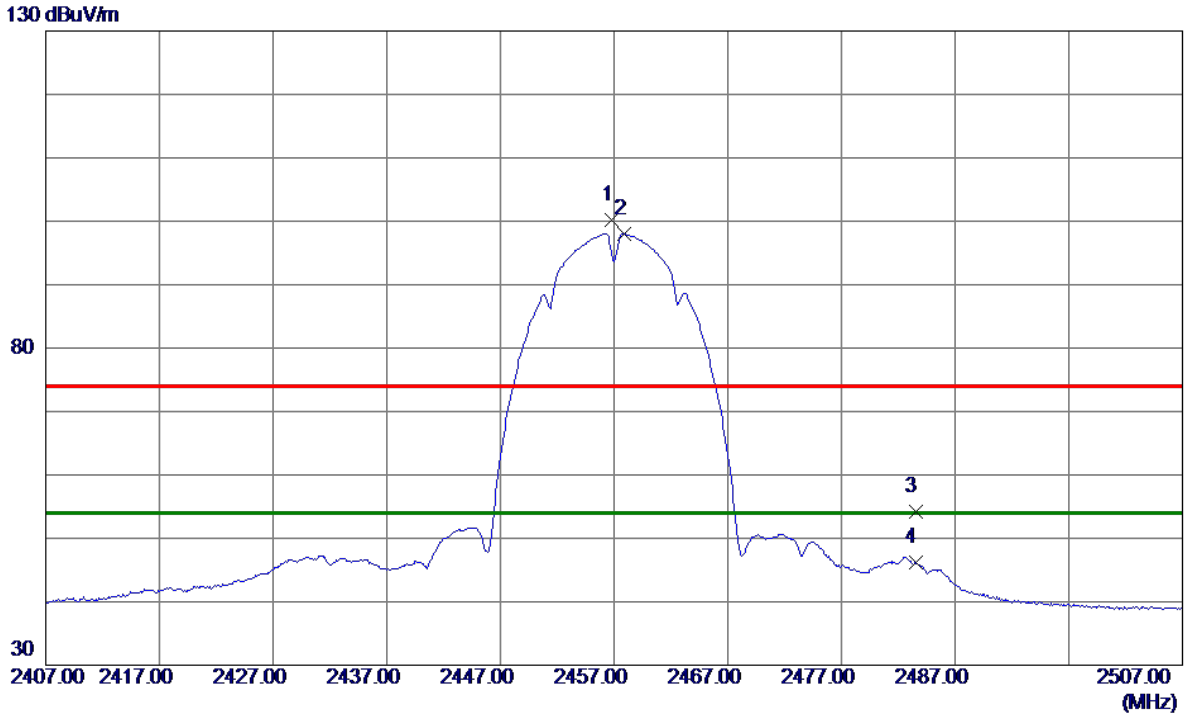
Test Mode	TX B Mode 2457 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7371.7500	34.85	10.77	45.62	54.00	-8.38	AVG	
2	7372.5300	41.61	10.77	52.38	74.00	-21.62	Peak	

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

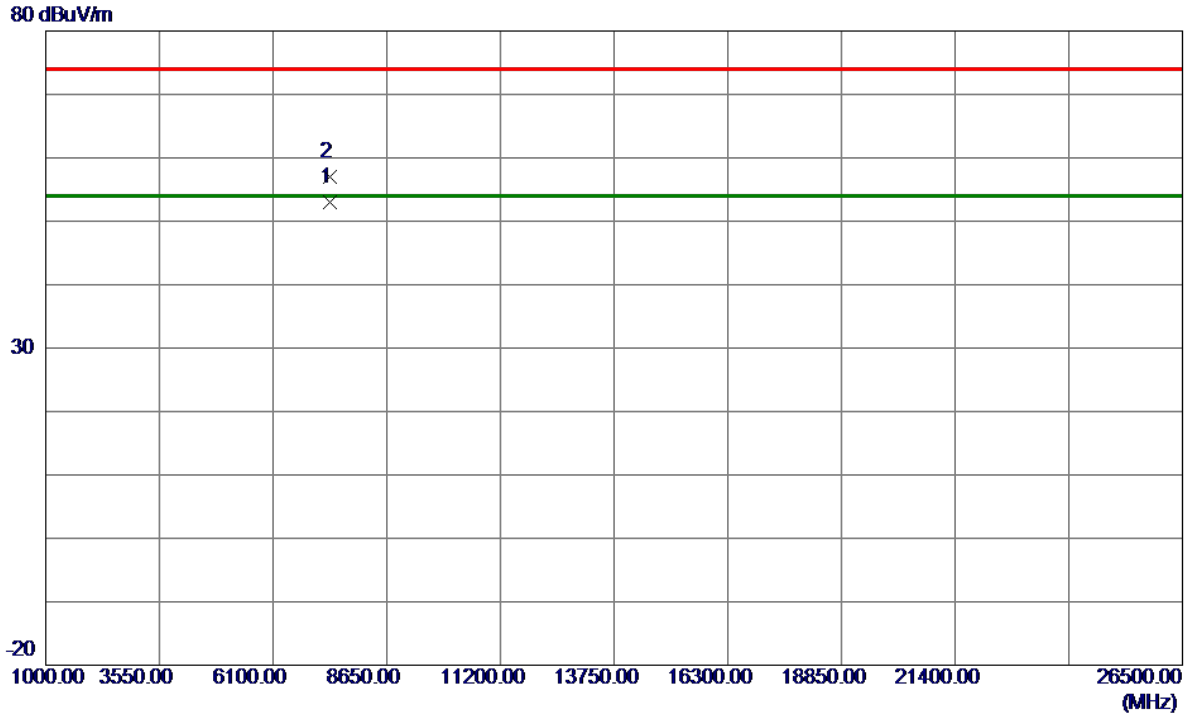
Test Mode	TX B Mode 2457 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2456.8000	91.88	8.39	100.27	74.00	26.27	Peak	No Limit
2 *	2457.9000	89.69	8.39	98.08	54.00	44.08	AVG	No Limit
3	2483.5000	45.78	8.42	54.20	74.00	-19.80	Peak	
4	2483.5000	37.85	8.42	46.27	54.00	-7.73	AVG	

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

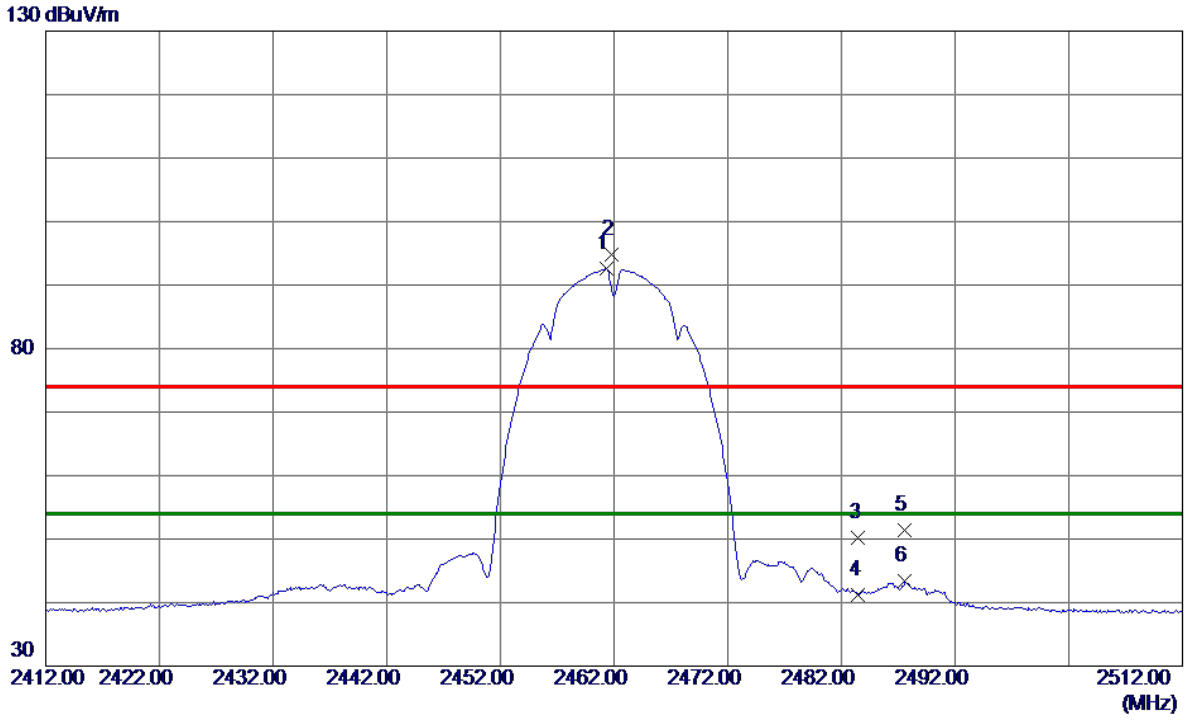
Test Mode	TX B Mode 2457 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7371.7300	42.18	10.77	52.95	54.00	-1.05	AVG	
2	7372.0300	46.20	10.77	56.97	74.00	-17.03	Peak	

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

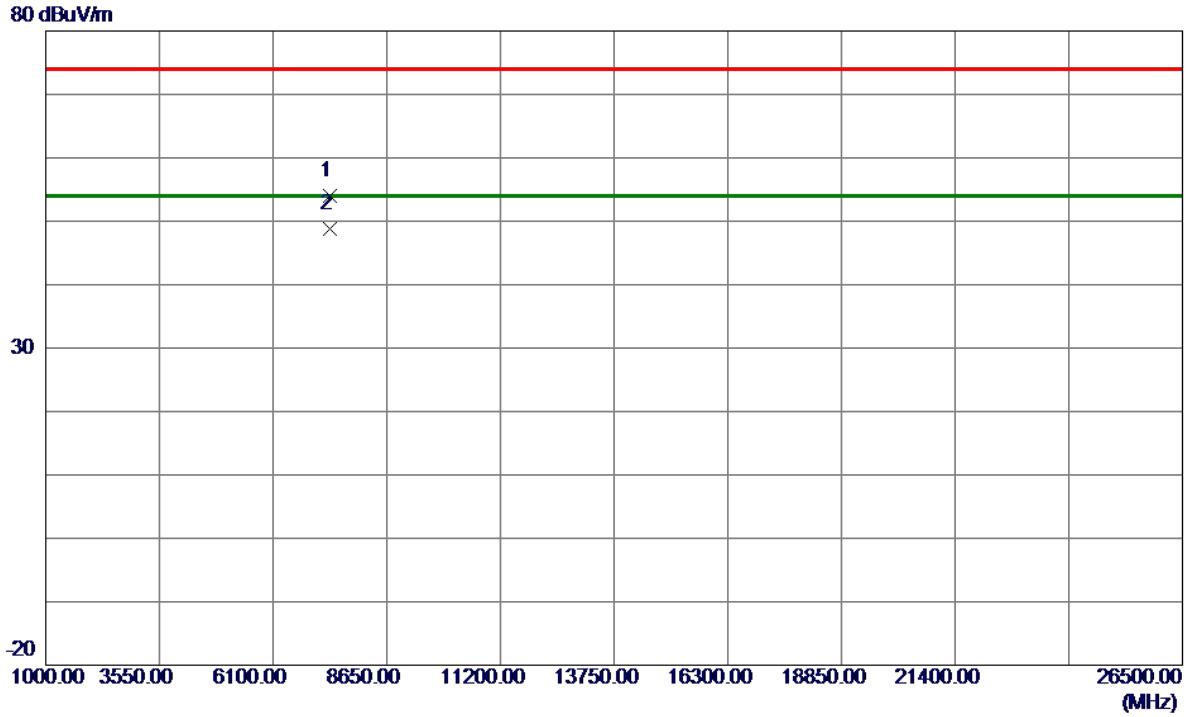
Test Mode	TX B Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461.3000	84.19	8.40	92.59	54.00	38.59	AVG	No Limit
2	2461.8000	86.33	8.40	94.73	74.00	20.73	Peak	No Limit
3	2483.5000	41.70	8.42	50.12	74.00	-23.88	Peak	
4	2483.5000	32.72	8.42	41.14	54.00	-12.86	AVG	
5	2487.6000	42.90	8.43	51.33	74.00	-22.67	Peak	
6	2487.6000	34.88	8.43	43.31	54.00	-10.69	AVG	

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

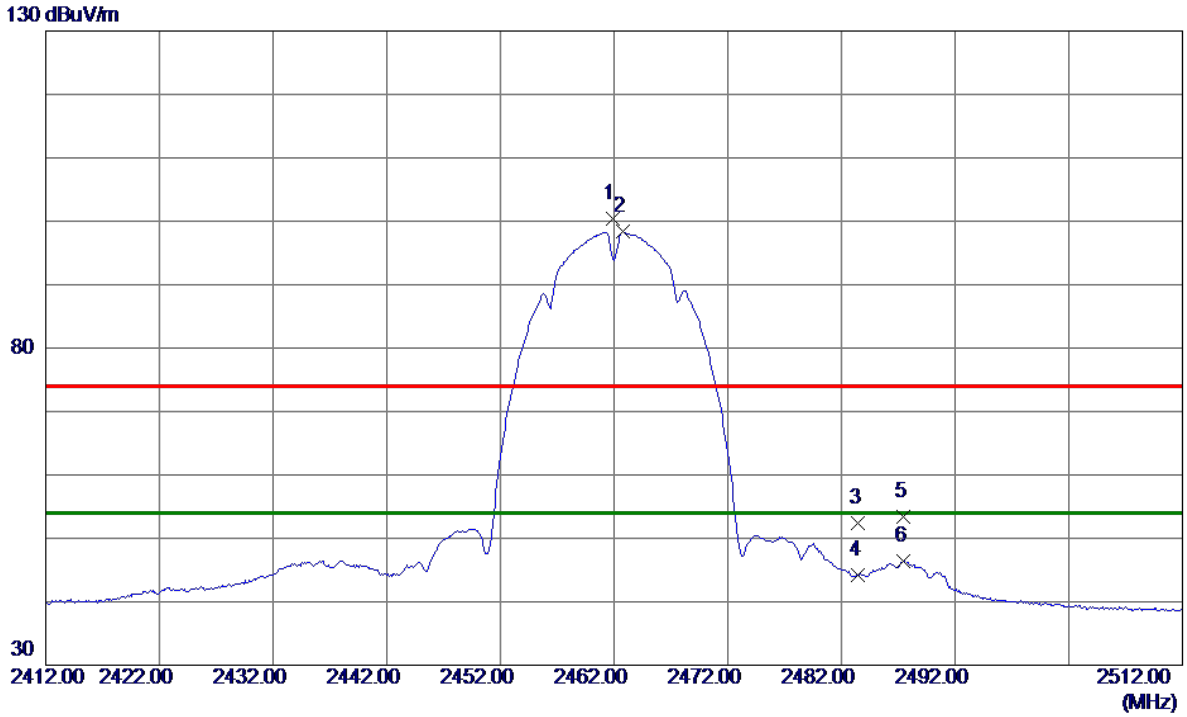
Test Mode	TX B Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7385.0900	43.22	10.79	54.01	74.00	-19.99	Peak	
2 *	7386.7700	38.02	10.79	48.81	54.00	-5.19	AVG	

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

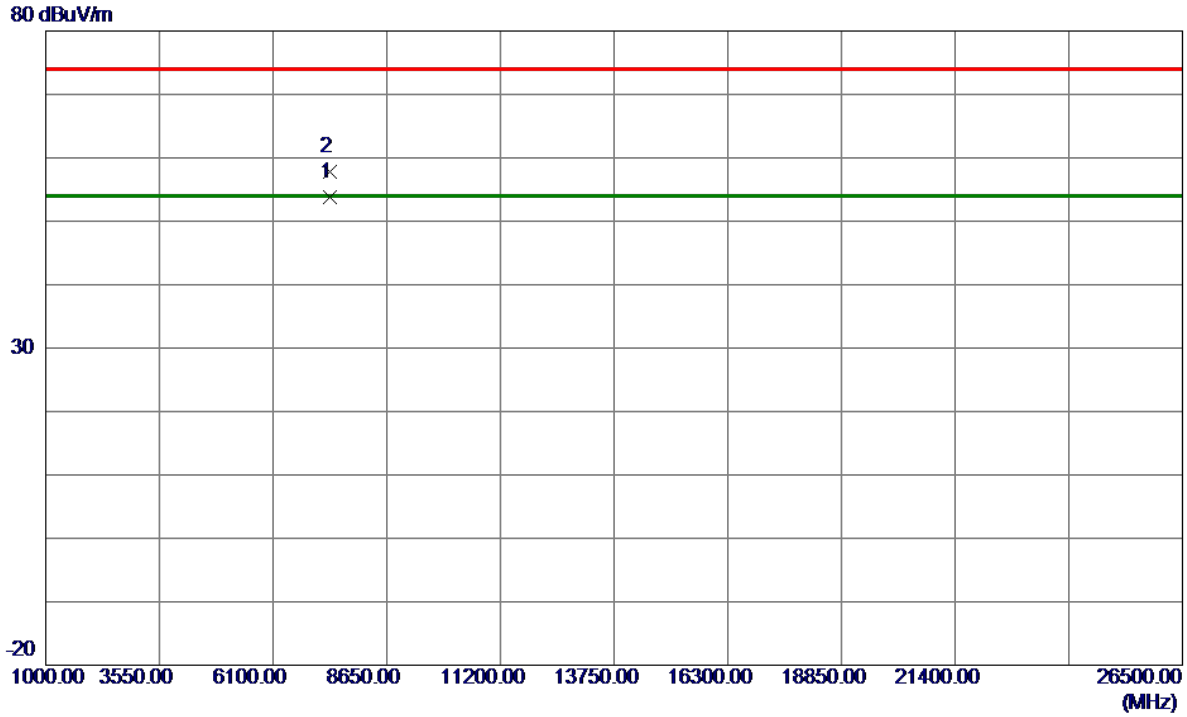
Test Mode	TX B Mode 2462 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461.9000	92.05	8.40	100.45	74.00	26.45	Peak	No Limit
2 *	2462.8000	89.94	8.40	98.34	54.00	44.34	AVG	No Limit
3	2483.5000	44.05	8.42	52.47	74.00	-21.53	Peak	
4	2483.5000	35.85	8.42	44.27	54.00	-9.73	AVG	
5	2487.5000	44.98	8.43	53.41	74.00	-20.59	Peak	
6	2487.5000	37.99	8.43	46.42	54.00	-7.58	AVG	

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

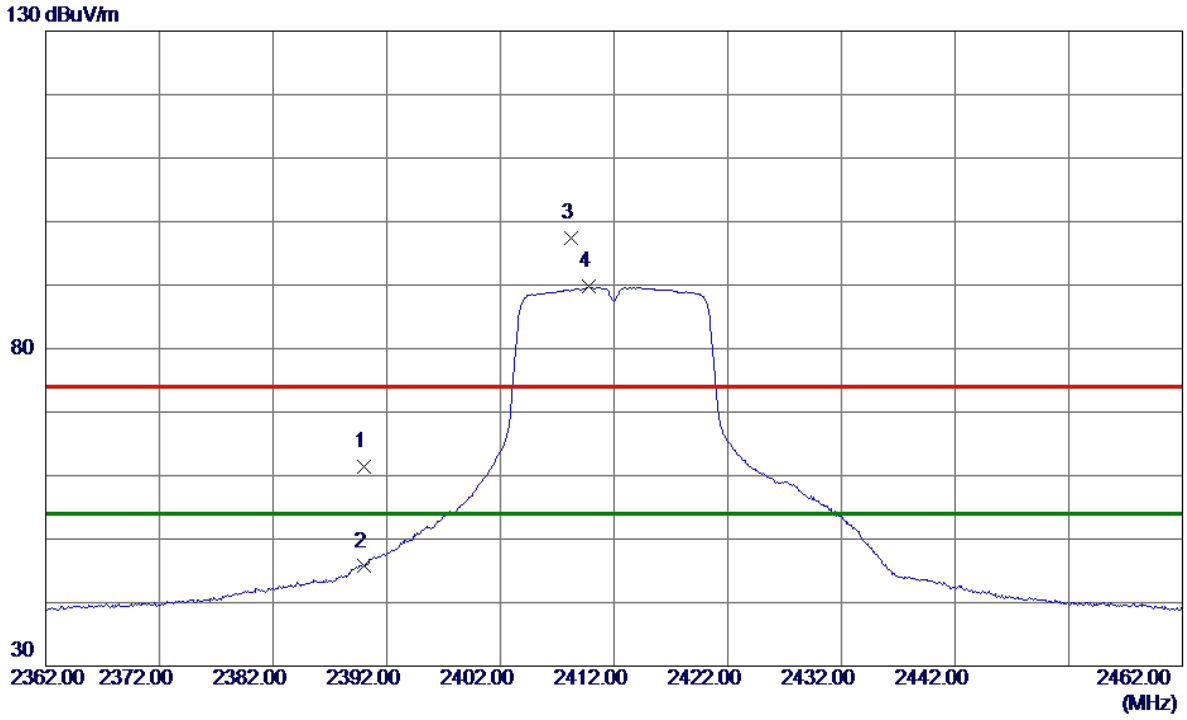
Test Mode	TX B Mode 2462 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7385.1900	42.99	10.79	53.78	54.00	-0.22	AVG	
2	7386.1500	47.08	10.79	57.87	74.00	-16.13	Peak	

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

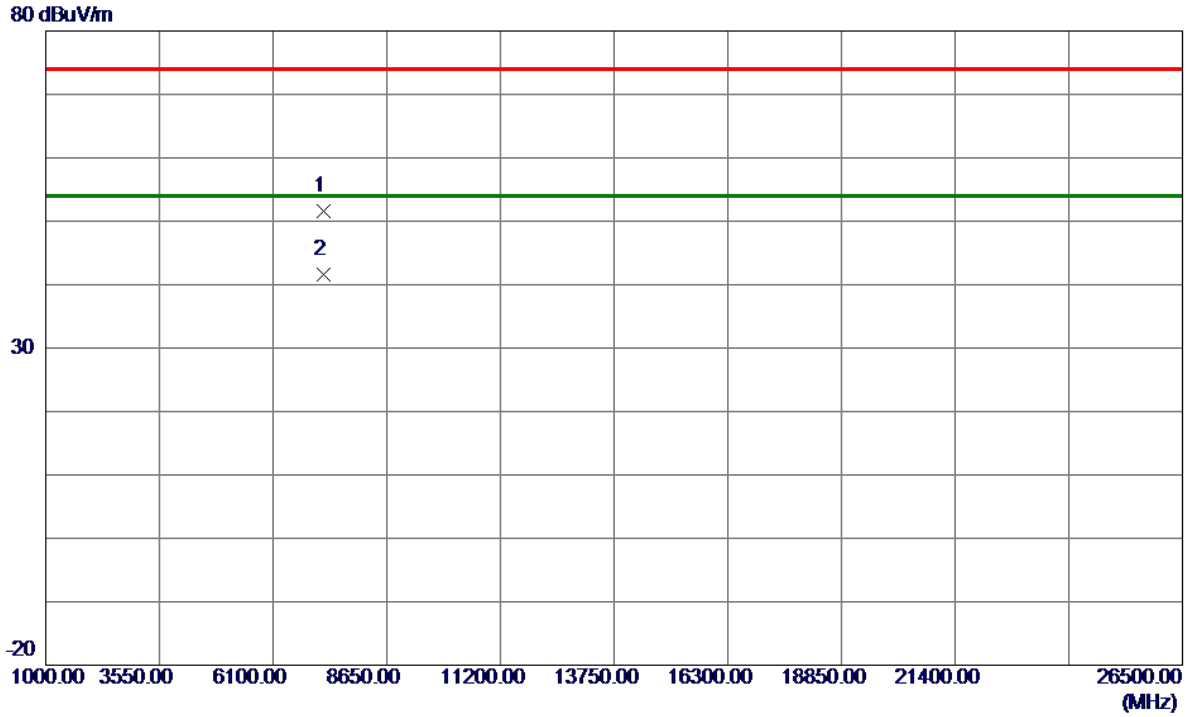
Test Mode	TX G Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	53.13	8.31	61.44	74.00	-12.56	Peak	
2	2390.0000	37.39	8.31	45.70	54.00	-8.30	AVG	
3	2408.2000	89.05	8.33	97.38	74.00	23.38	Peak	No Limit
4 *	2409.8000	81.38	8.33	89.71	54.00	35.71	AVG	No Limit

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

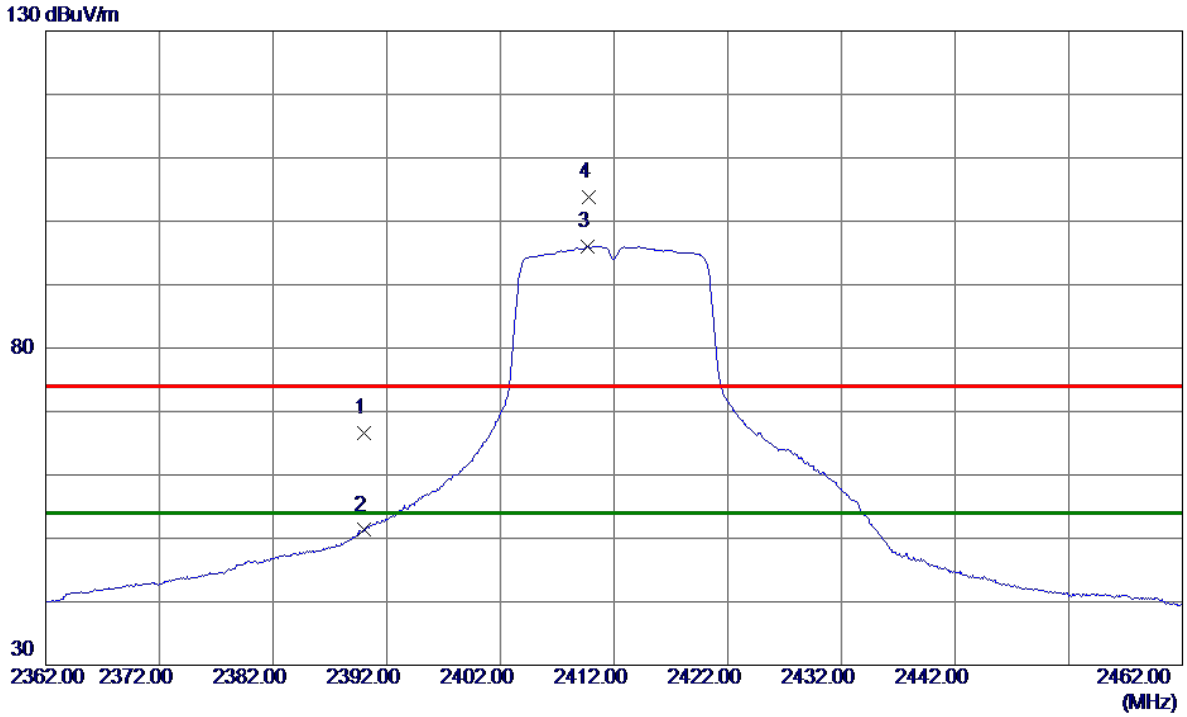
Test Mode	TX G Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7232.6400	41.08	10.59	51.67	74.00	-22.33	Peak	
2 *	7236.4000	30.99	10.60	41.59	54.00	-12.41	AVG	

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

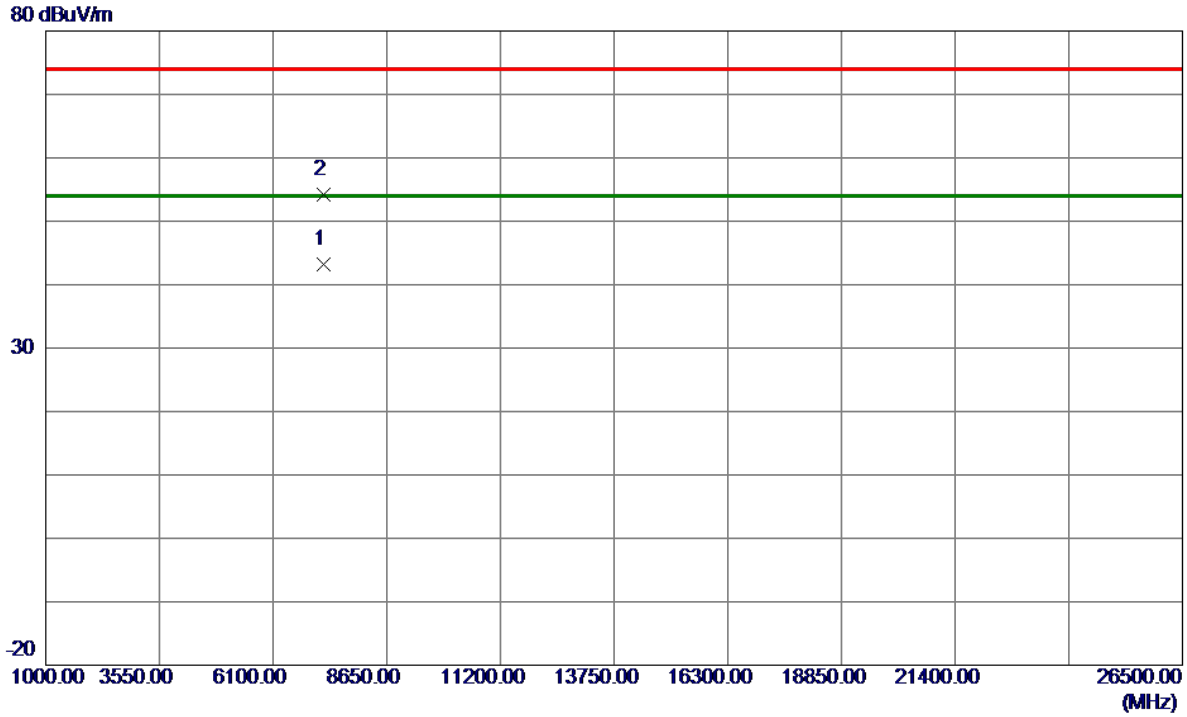
Test Mode	TX G Mode 2412 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	58.25	8.31	66.56	74.00	-7.44	Peak	
2	2390.0000	42.99	8.31	51.30	54.00	-2.70	AVG	
3 *	2409.7000	87.71	8.33	96.04	54.00	42.04	AVG	No Limit
4	2409.8000	95.43	8.33	103.76	74.00	29.76	Peak	No Limit

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

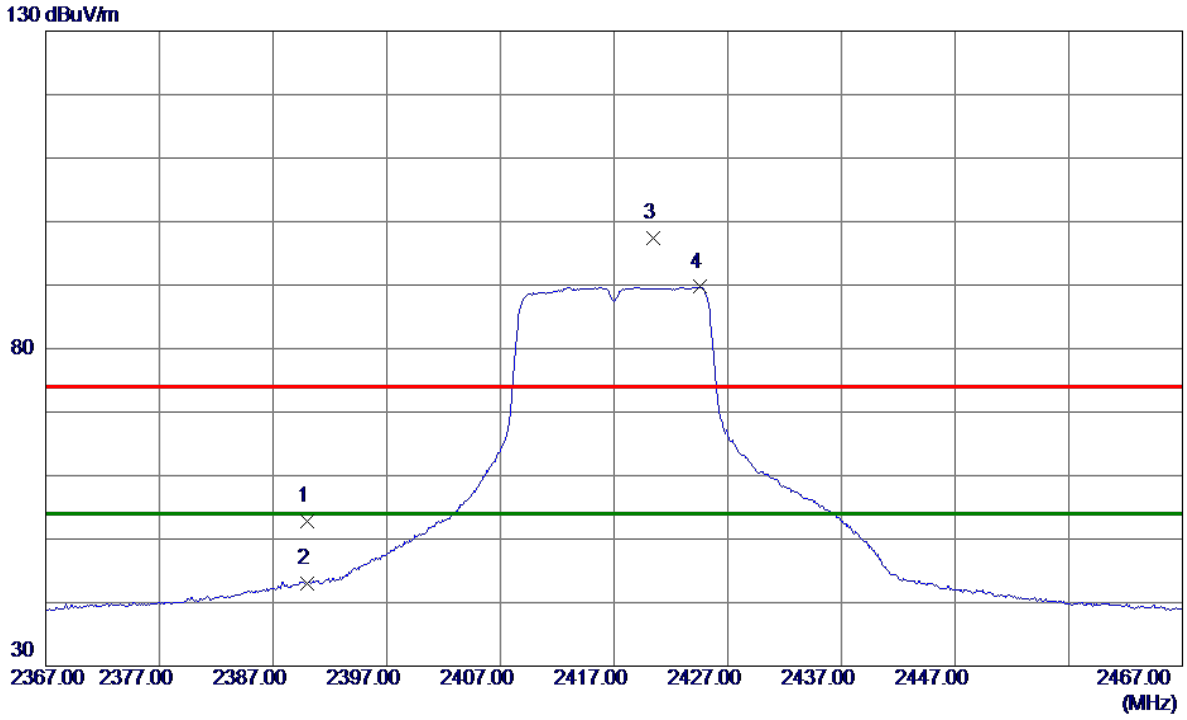
Test Mode	TX G Mode 2412 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7234.7600	32.69	10.60	43.29	54.00	-10.71	AVG	
2	7240.8800	43.69	10.60	54.29	74.00	-19.71	Peak	

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

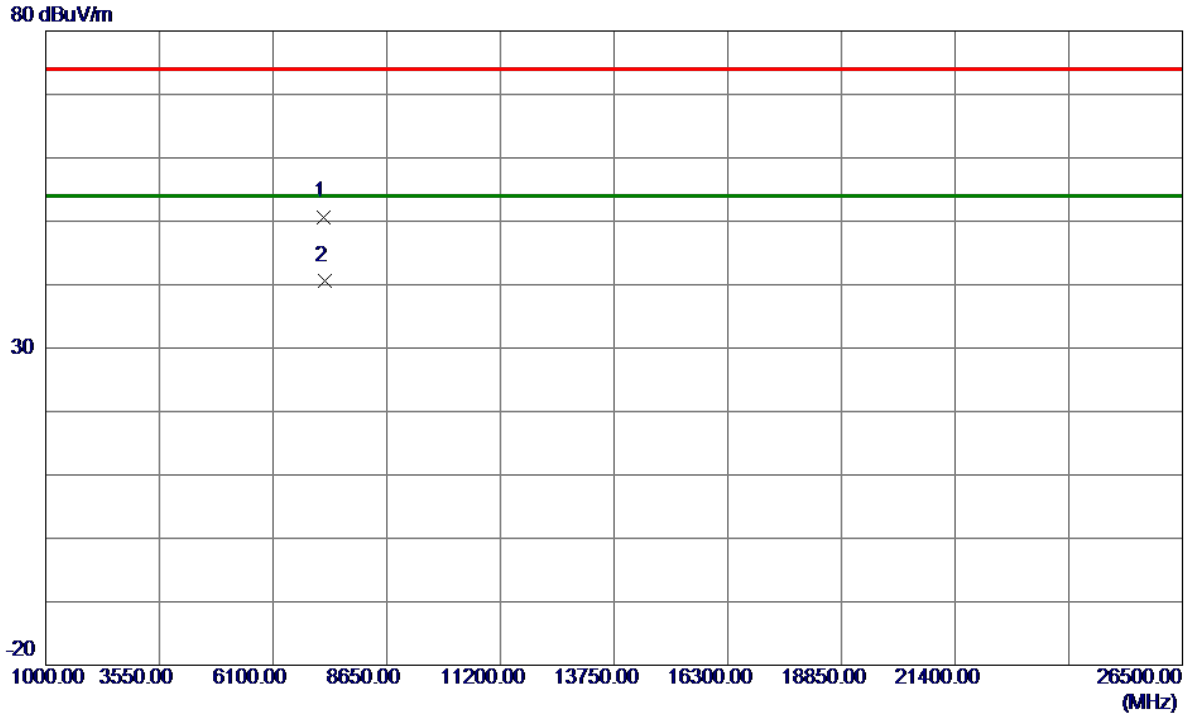
Test Mode	TX G Mode 2417 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	44.50	8.31	52.81	74.00	-21.19	Peak	
2	2390.0000	34.73	8.31	43.04	54.00	-10.96	AVG	
3	2420.4000	89.02	8.34	97.36	74.00	23.36	Peak	No Limit
4 *	2424.6000	81.35	8.35	89.70	54.00	35.70	AVG	No Limit

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

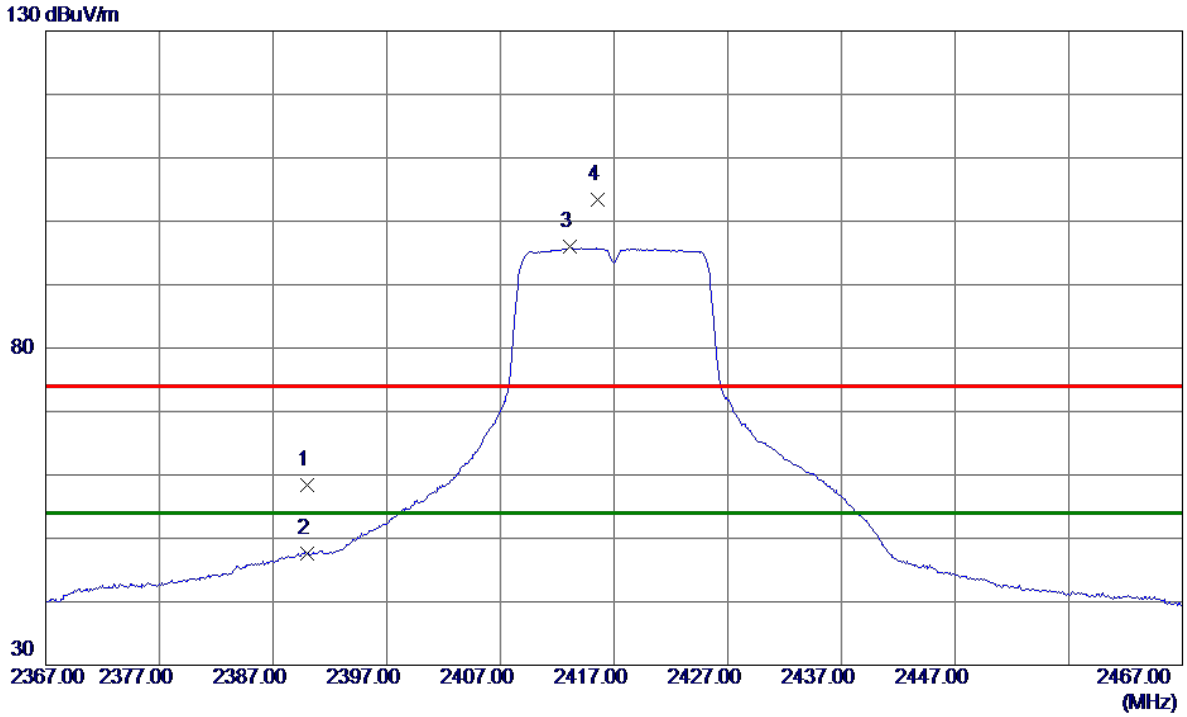
Test Mode	TX G Mode 2417 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7245.0000	40.09	10.61	50.70	74.00	-23.30	Peak	
2 *	7248.1500	29.94	10.61	40.55	54.00	-13.45	AVG	

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

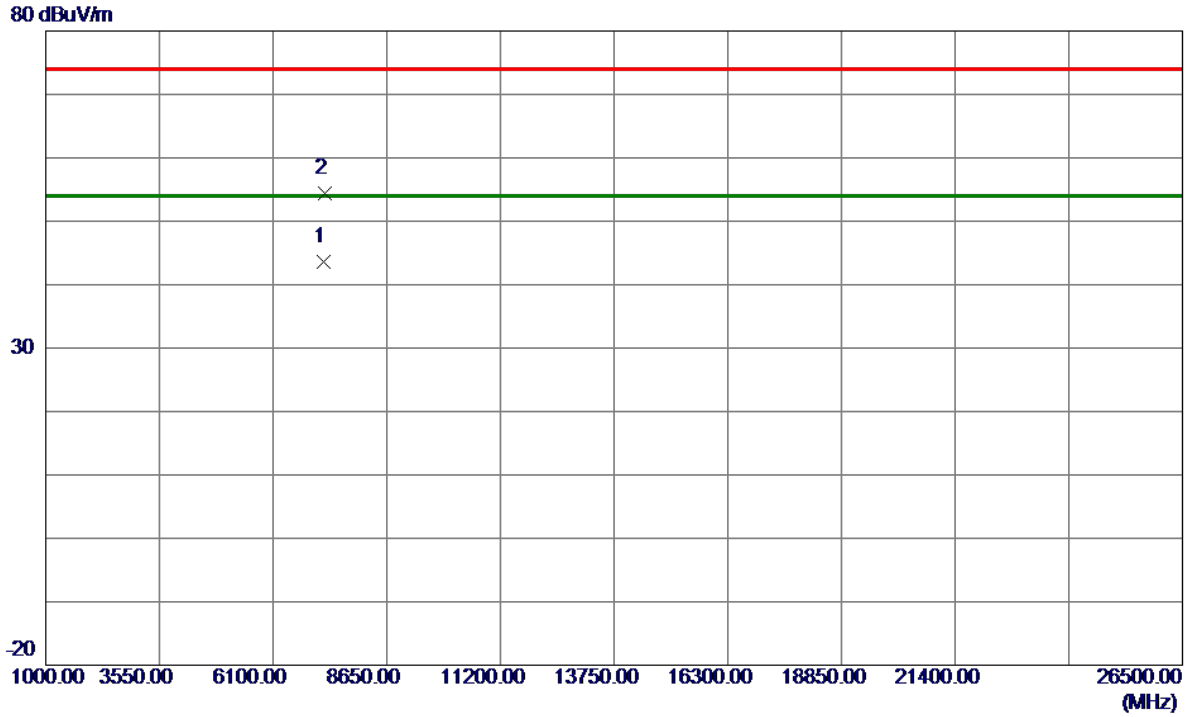
Test Mode	TX G Mode 2417 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	50.09	8.31	58.40	74.00	-15.60	Peak	
2	2390.0000	39.27	8.31	47.58	54.00	-6.42	AVG	
3 *	2413.1000	87.58	8.33	95.91	54.00	41.91	AVG	No Limit
4	2415.6000	95.13	8.34	103.47	74.00	29.47	Peak	No Limit

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

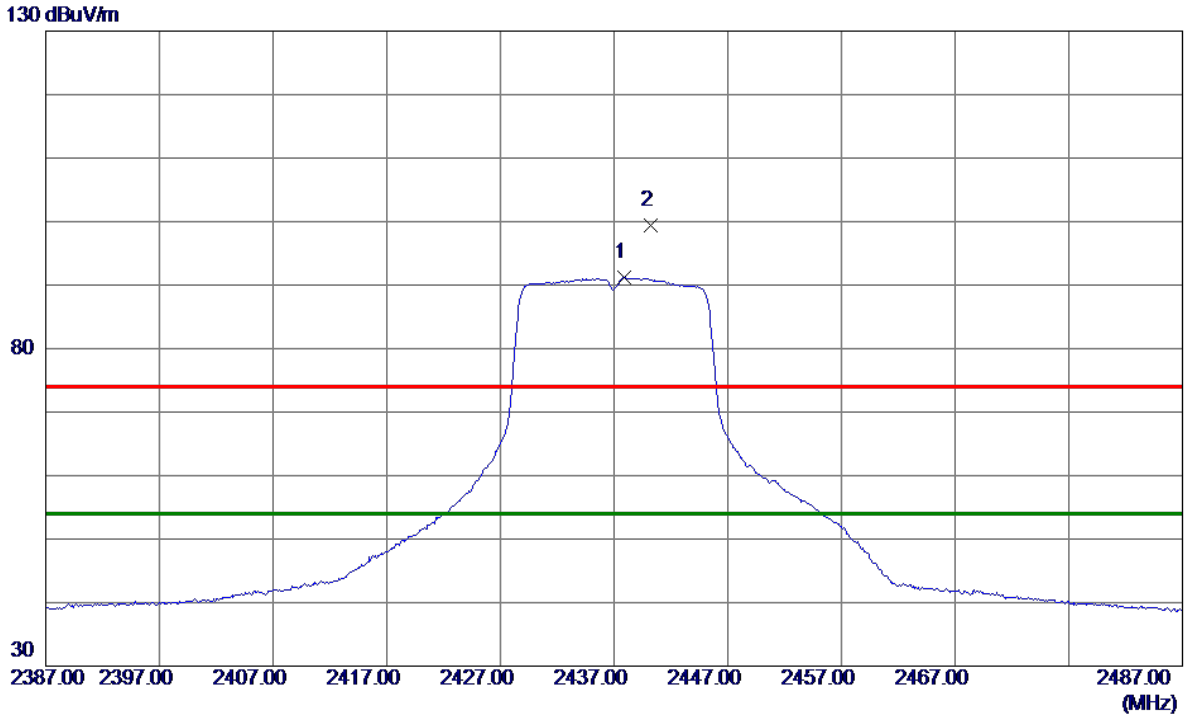
Test Mode	TX G Mode 2417 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7247.3000	33.05	10.61	43.66	54.00	-10.34	AVG	
2	7251.9000	43.72	10.62	54.34	74.00	-19.66	Peak	

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

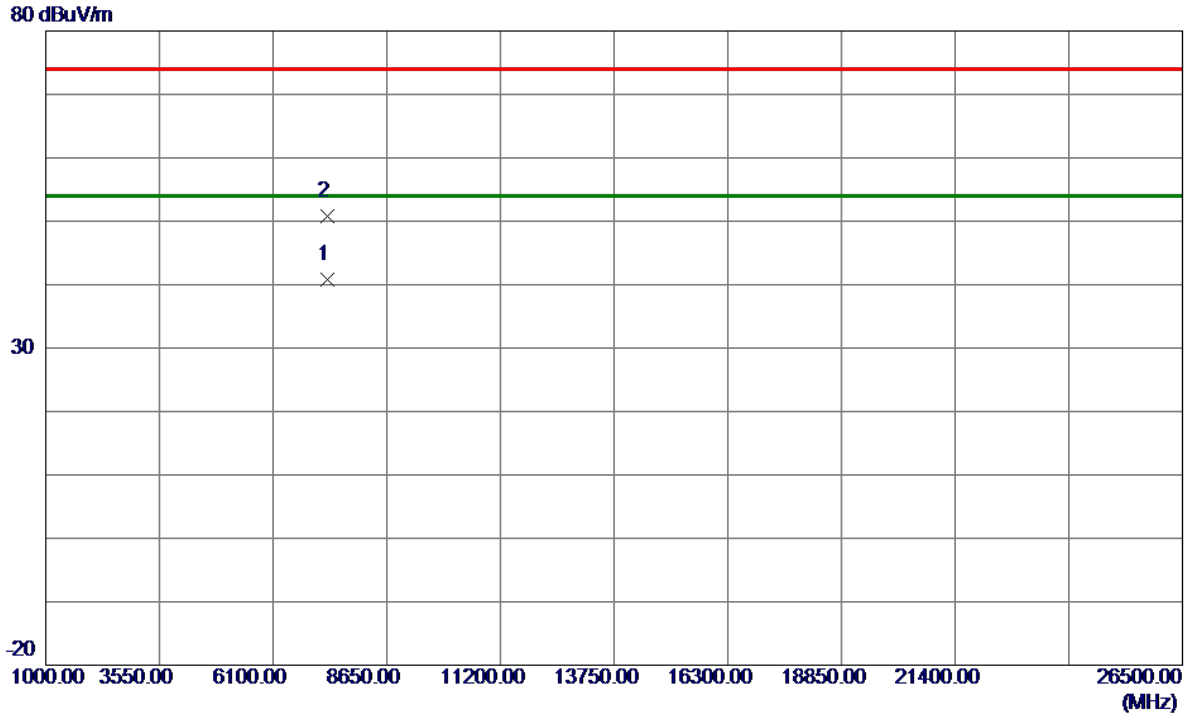
Test Mode	TX G Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437.9000	82.85	8.37	91.22	54.00	37.22	AVG	No Limit
2	2440.2000	91.05	8.37	99.42	74.00	25.42	Peak	No Limit

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

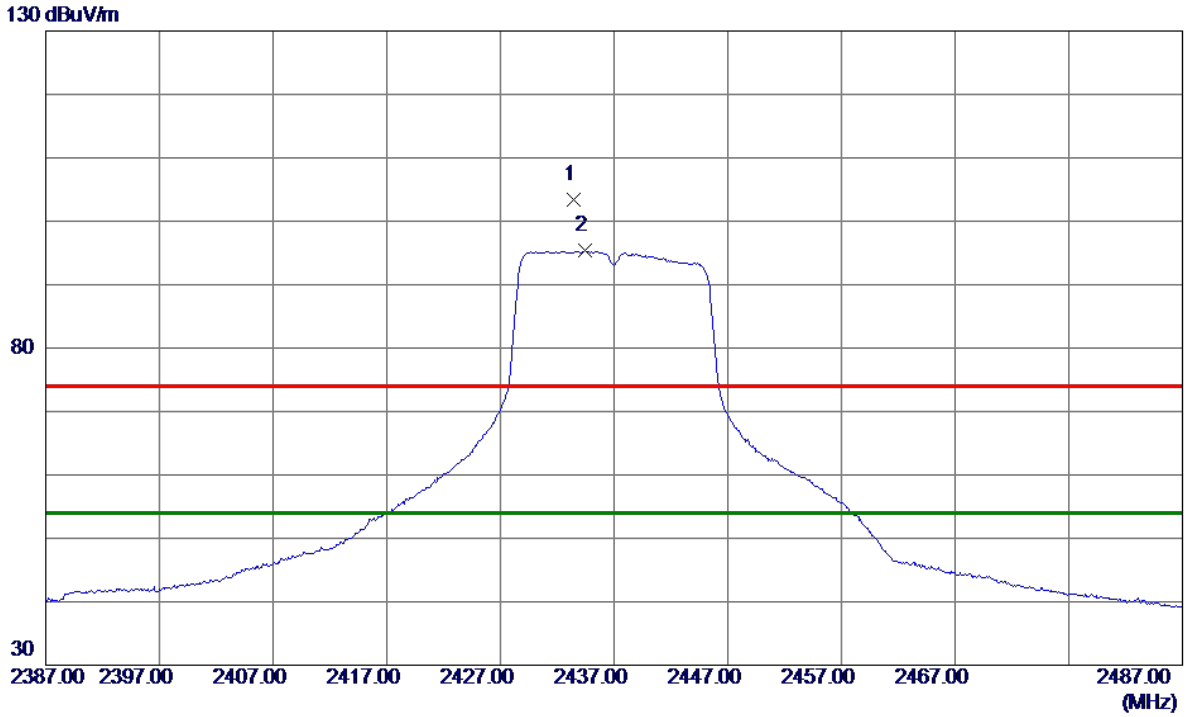
Test Mode	TX G Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7314.0000	30.16	10.70	40.86	54.00	-13.14	AVG	
2	7316.4000	40.16	10.70	50.86	74.00	-23.14	Peak	

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

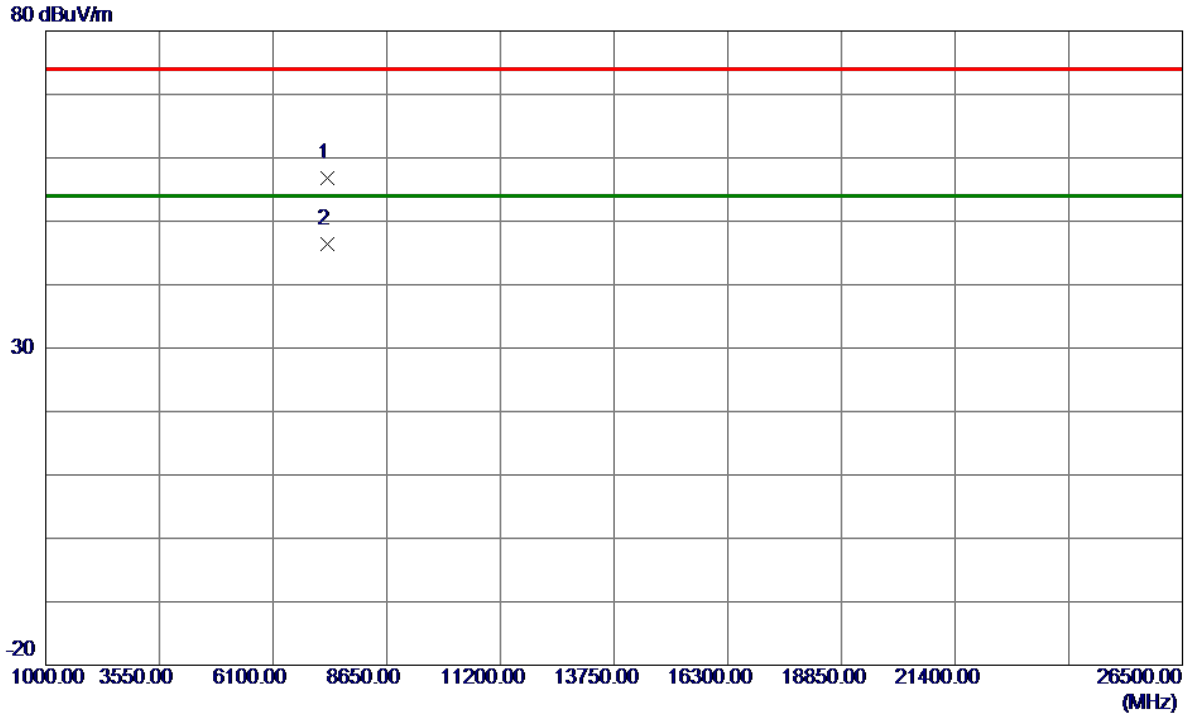
Test Mode	TX G Mode 2437 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2433.4000	94.96	8.36	103.32	74.00	29.32	Peak	No Limit
2 *	2434.4000	86.99	8.36	95.35	54.00	41.35	AVG	No Limit

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

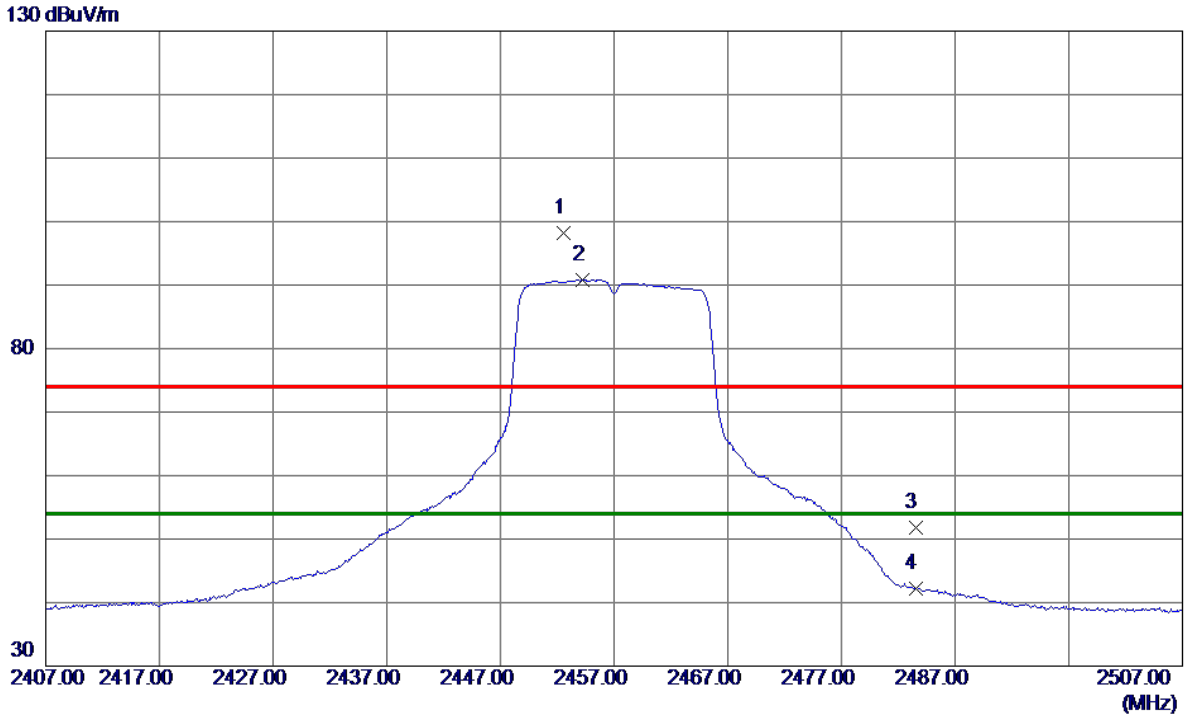
Test Mode	TX G Mode 2437 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7313.1000	46.01	10.70	56.71	74.00	-17.29	Peak	
2 *	7314.0000	35.73	10.70	46.43	54.00	-7.57	AVG	

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

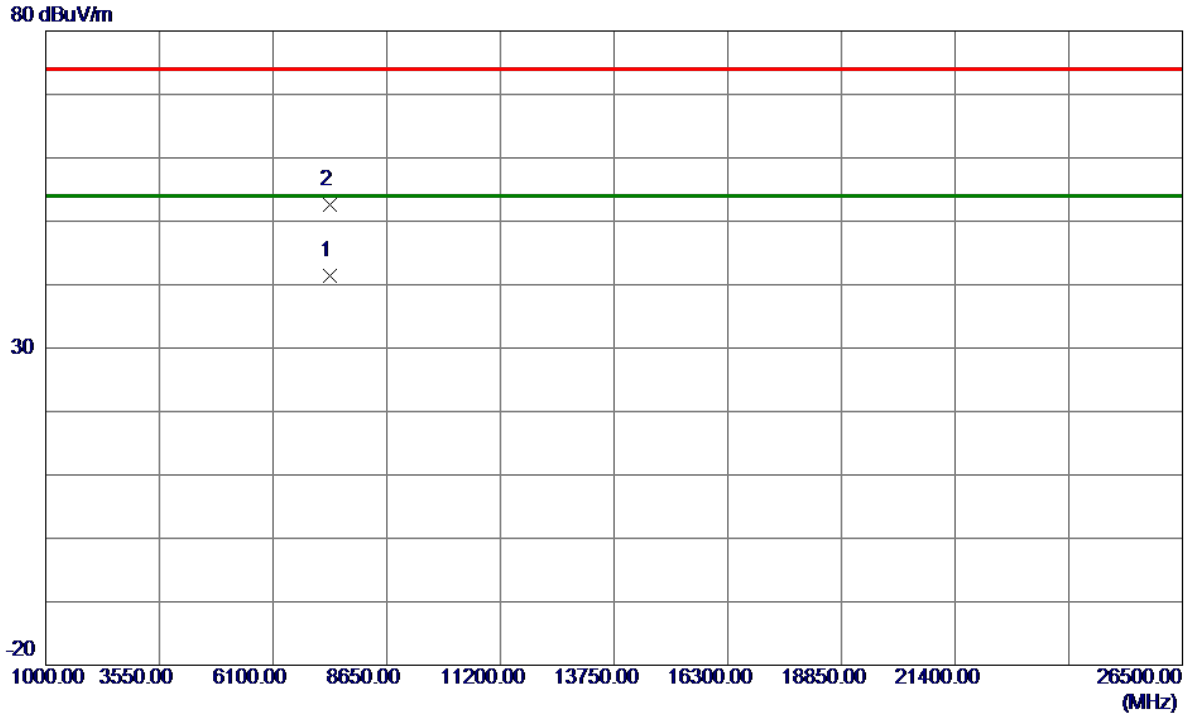
Test Mode	TX G Mode 2457 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2452.6000	89.91	8.38	98.29	74.00	24.29	Peak	No Limit
2 *	2454.2000	82.45	8.39	90.84	54.00	36.84	AVG	No Limit
3	2483.5000	43.44	8.42	51.86	74.00	-22.14	Peak	
4	2483.5000	33.83	8.42	42.25	54.00	-11.75	AVG	

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

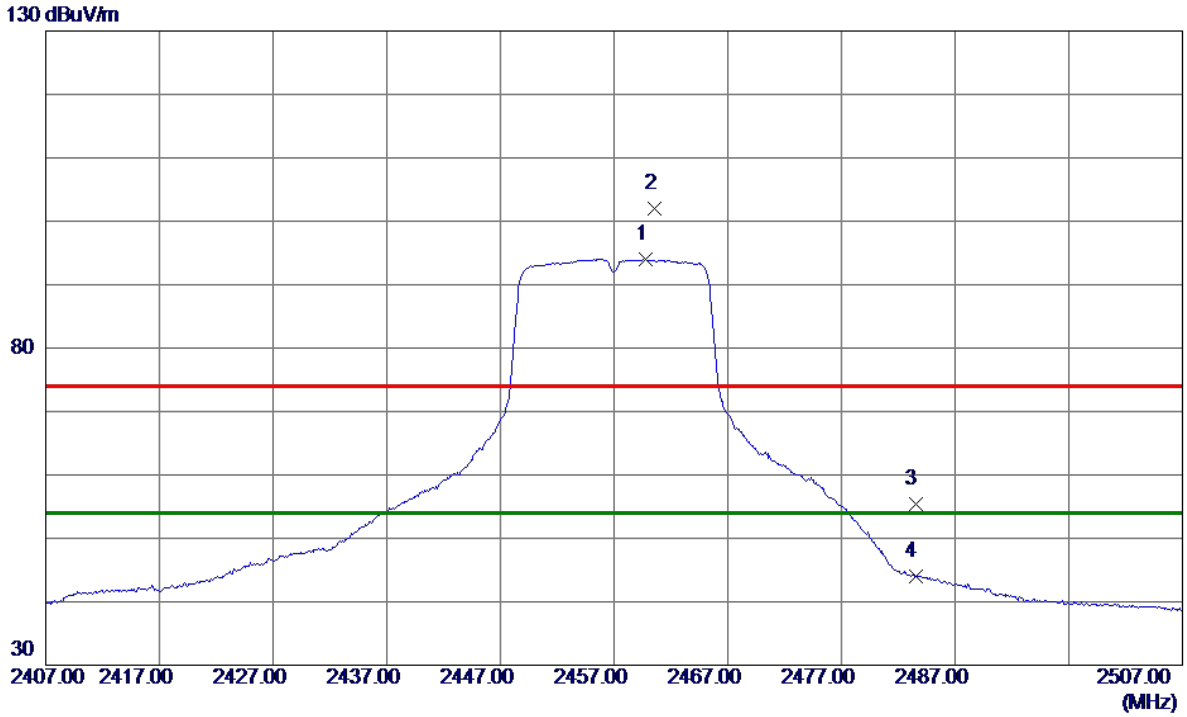
Test Mode	TX G Mode 2457 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7369.9600	30.72	10.77	41.49	54.00	-12.51	AVG	
2	7377.2600	41.77	10.78	52.55	74.00	-21.45	Peak	

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

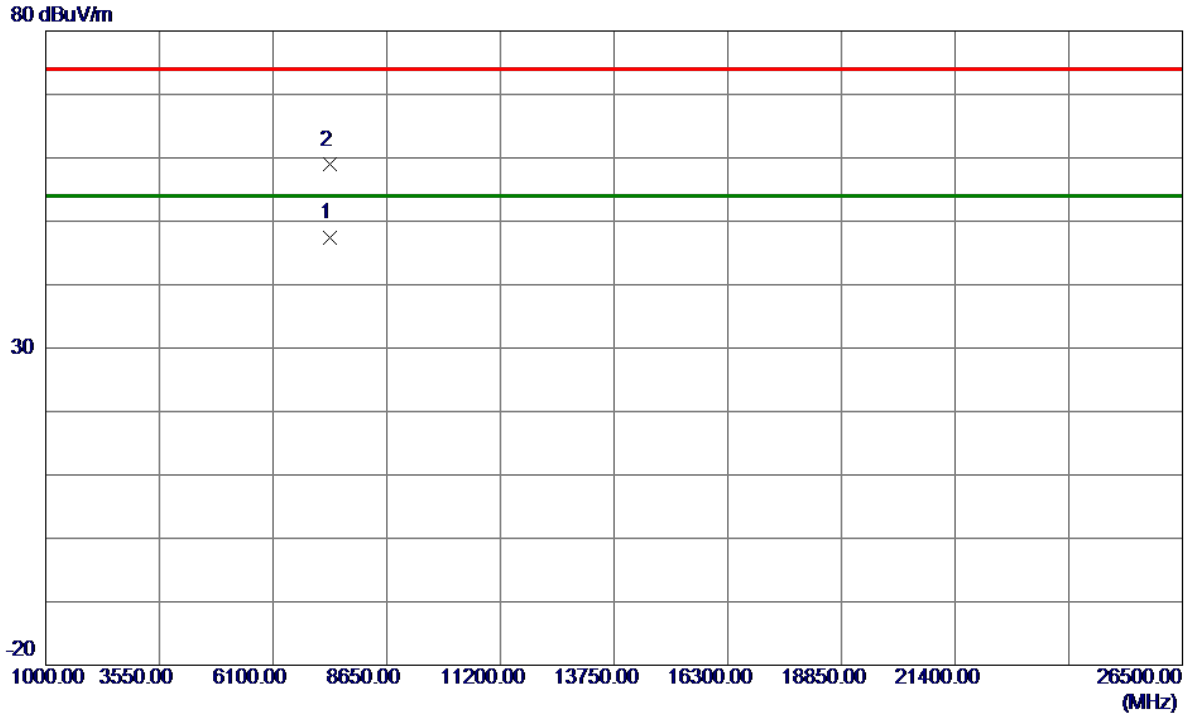
Test Mode	TX G Mode 2457 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2459.8000	85.63	8.39	94.02	54.00	40.02	AVG	No Limit
2	2460.6000	93.61	8.39	102.00	74.00	28.00	Peak	No Limit
3	2483.5000	47.05	8.42	55.47	74.00	-18.53	Peak	
4	2483.5000	35.52	8.42	43.94	54.00	-10.06	AVG	

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

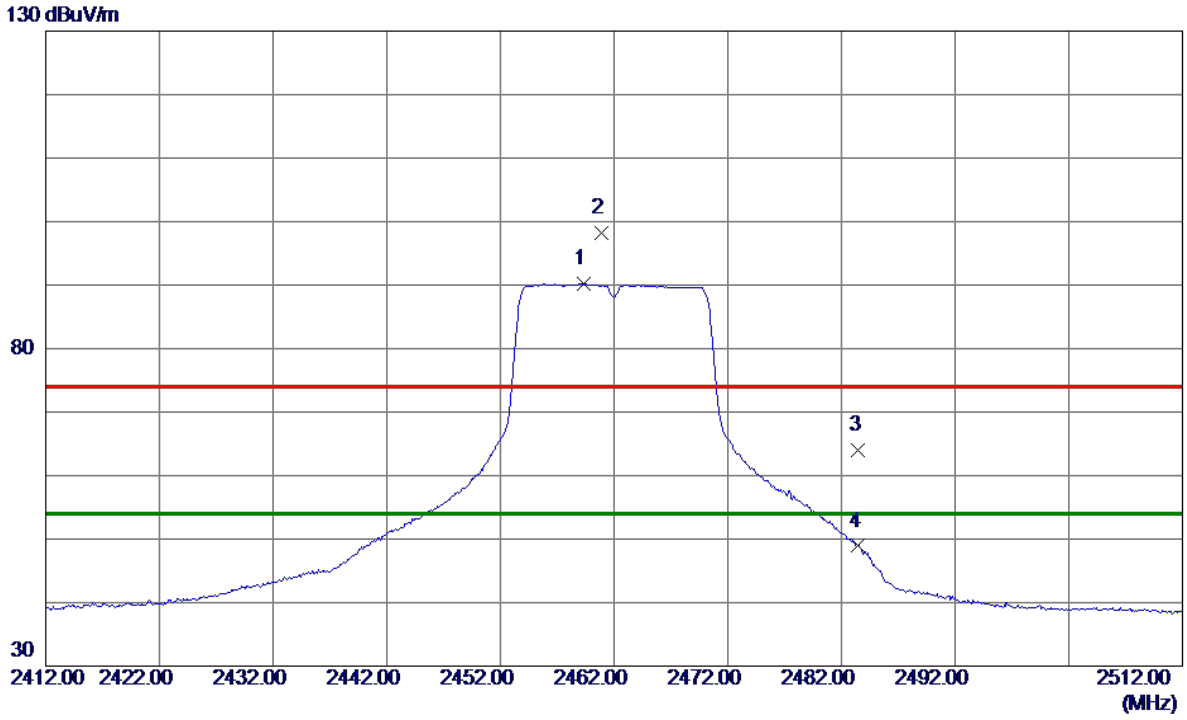
Test Mode	TX G Mode 2457 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7372.6000	36.57	10.77	47.34	54.00	-6.66	AVG	
2	7374.0400	48.12	10.78	58.90	74.00	-15.10	Peak	

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

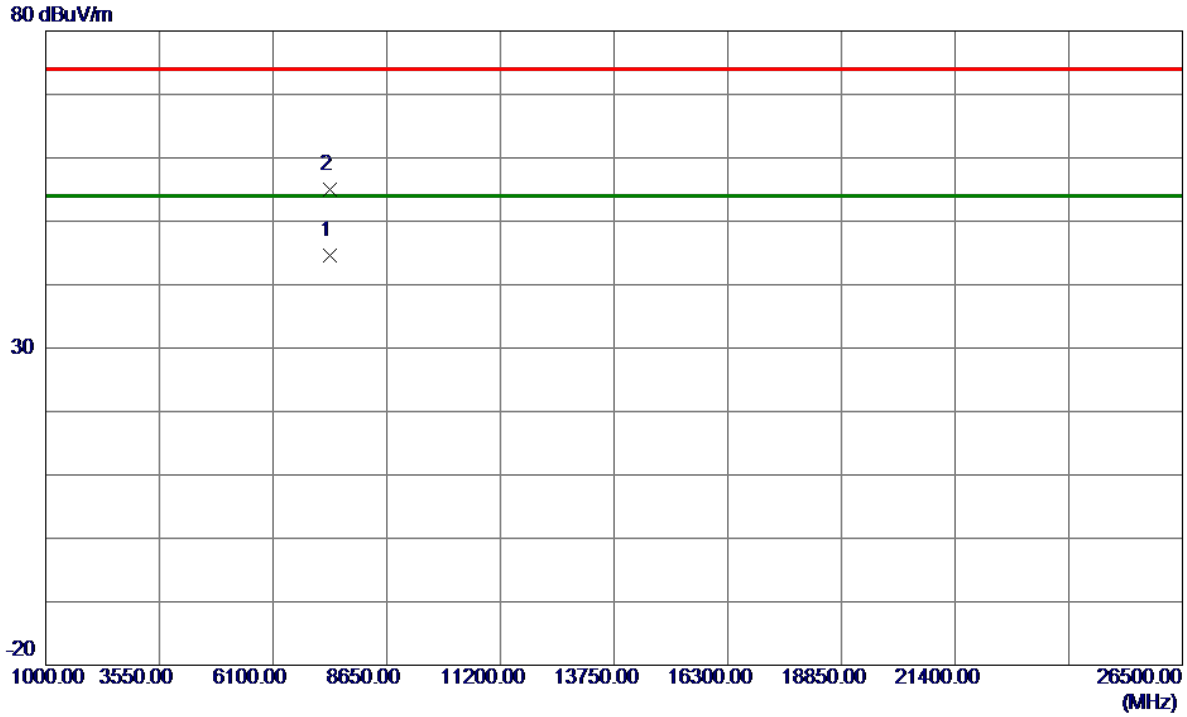
Test Mode	TX G Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2459.3000	81.88	8.39	90.27	54.00	36.27	AVG	No Limit
2	2460.9000	89.80	8.40	98.20	74.00	24.20	Peak	No Limit
3	2483.5000	55.56	8.42	63.98	74.00	-10.02	Peak	
4	2483.5000	40.48	8.42	48.90	54.00	-5.10	AVG	

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

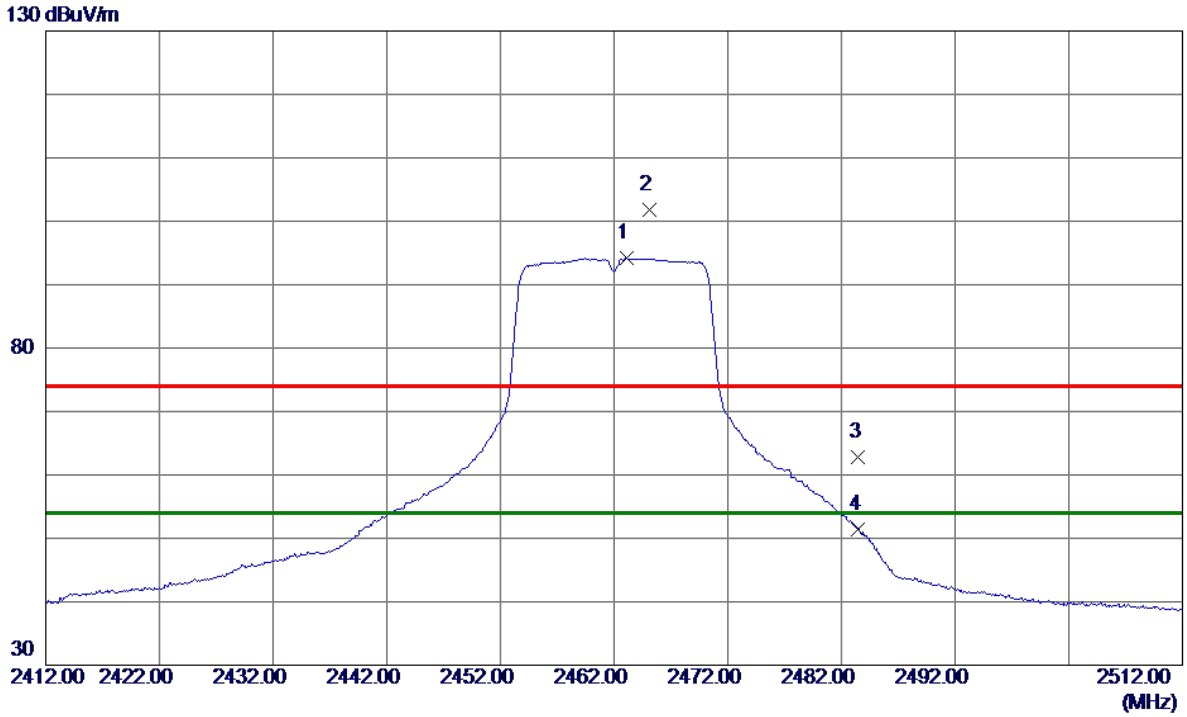
Test Mode	TX G Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7384.7600	33.73	10.79	44.52	54.00	-9.48	AVG	
2	7385.6600	44.22	10.79	55.01	74.00	-18.99	Peak	

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

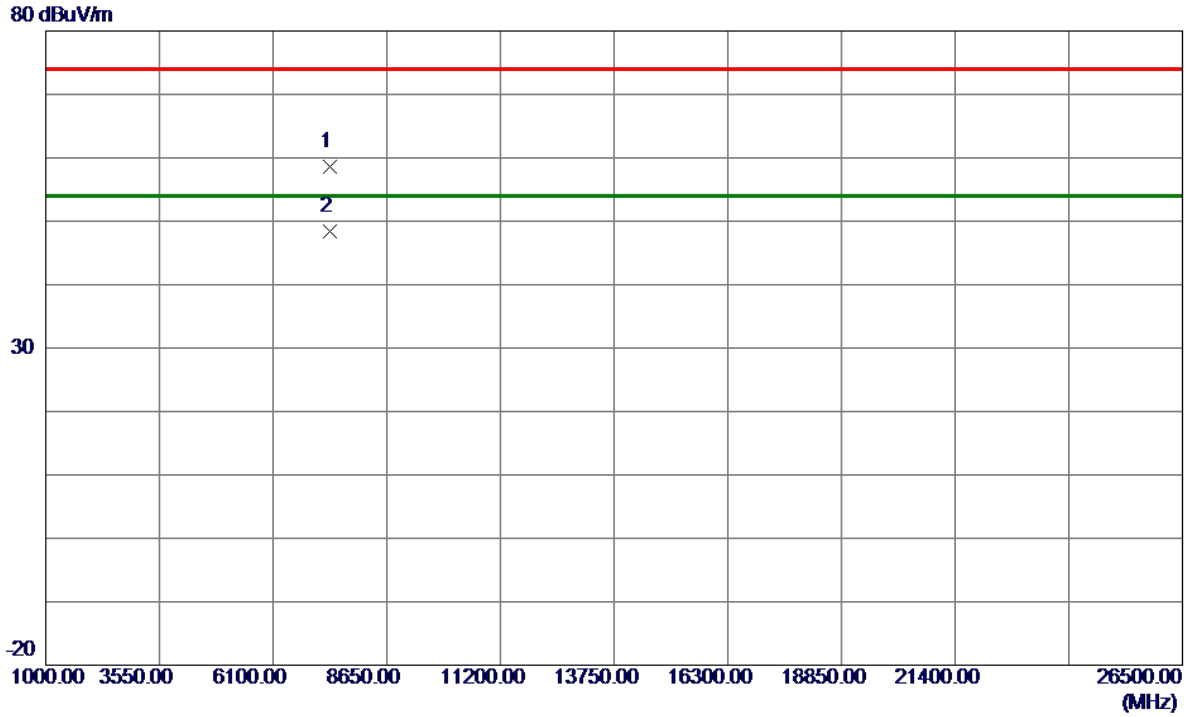
Test Mode	TX G Mode 2462 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2463.1000	85.74	8.40	94.14	54.00	40.14	AVG	No Limit
2	2465.1000	93.40	8.40	101.80	74.00	27.80	Peak	No Limit
3	2483.5000	54.30	8.42	62.72	74.00	-11.28	Peak	
4	2483.5000	43.00	8.42	51.42	54.00	-2.58	AVG	

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

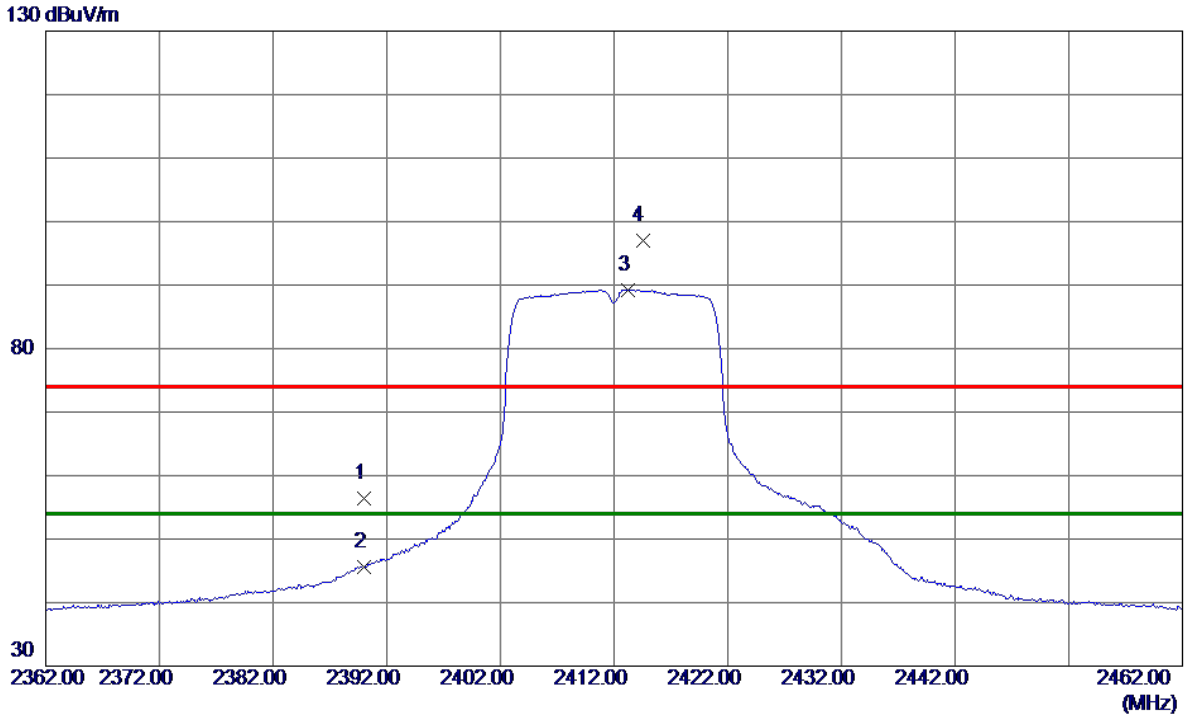
Test Mode	TX G Mode 2462 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7379.2000	47.89	10.78	58.67	74.00	-15.33	Peak	
2 *	7385.0800	37.54	10.79	48.33	54.00	-5.67	AVG	

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

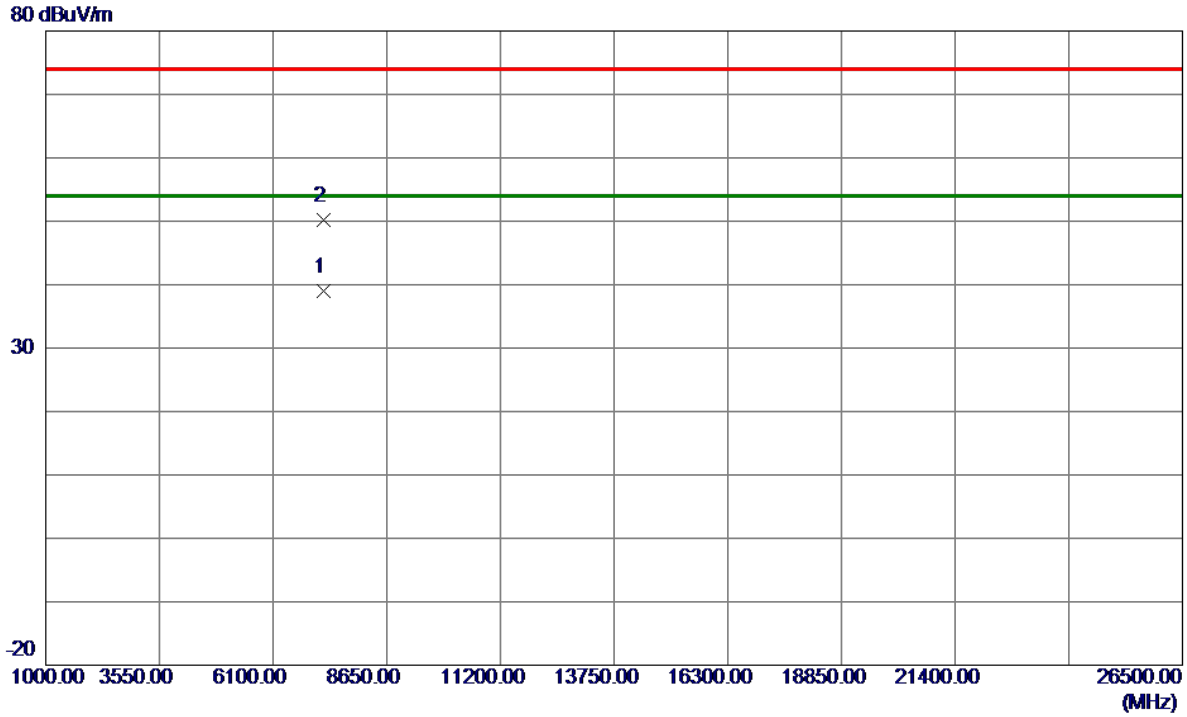
Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	48.14	8.31	56.45	74.00	-17.55	Peak	
2	2390.0000	37.27	8.31	45.58	54.00	-8.42	AVG	
3 *	2413.2000	80.95	8.33	89.28	54.00	35.28	AVG	No Limit
4	2414.5000	88.56	8.34	96.90	74.00	22.90	Peak	No Limit

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

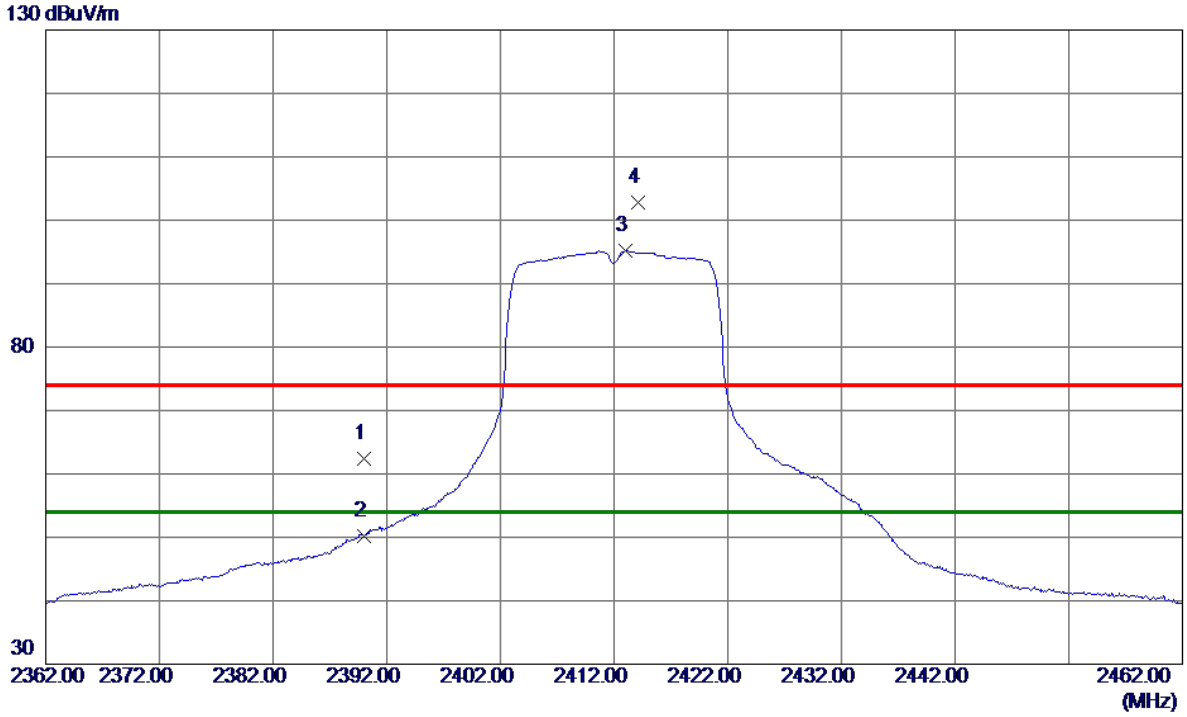
Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7228.7800	28.31	10.59	38.90	54.00	-15.10	AVG	
2	7233.0600	39.51	10.59	50.10	74.00	-23.90	Peak	

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

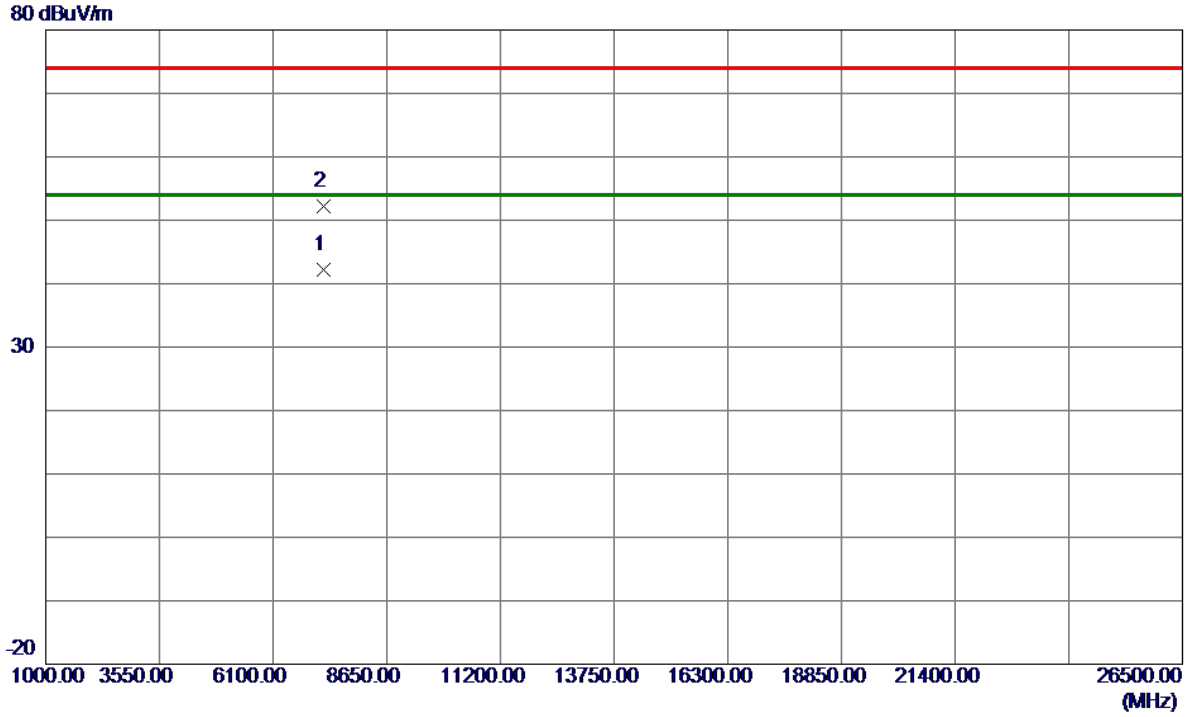
Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	54.02	8.31	62.33	74.00	-11.67	Peak	
2	2390.0000	41.97	8.31	50.28	54.00	-3.72	AVG	
3 *	2413.0000	86.78	8.33	95.11	54.00	41.11	AVG	No Limit
4	2414.1000	94.42	8.34	102.76	74.00	28.76	Peak	No Limit

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

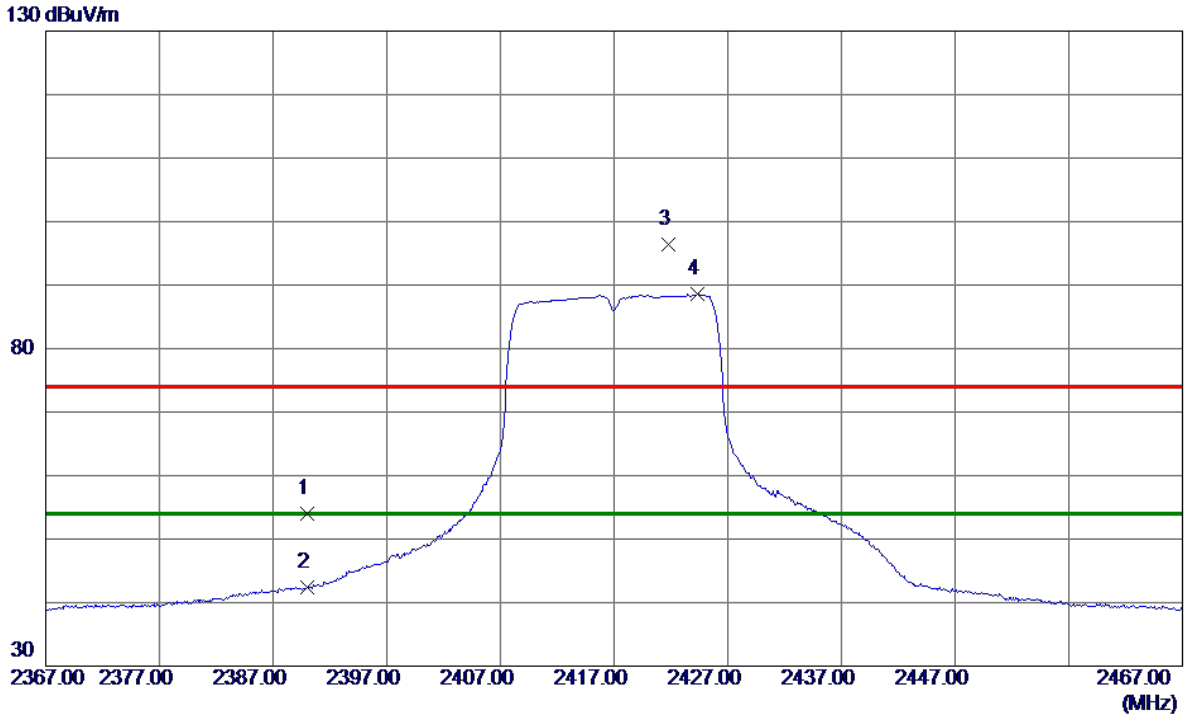
Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7236.8800	31.52	10.60	42.12	54.00	-11.88	AVG	
2	7243.6200	41.57	10.61	52.18	74.00	-21.82	Peak	

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

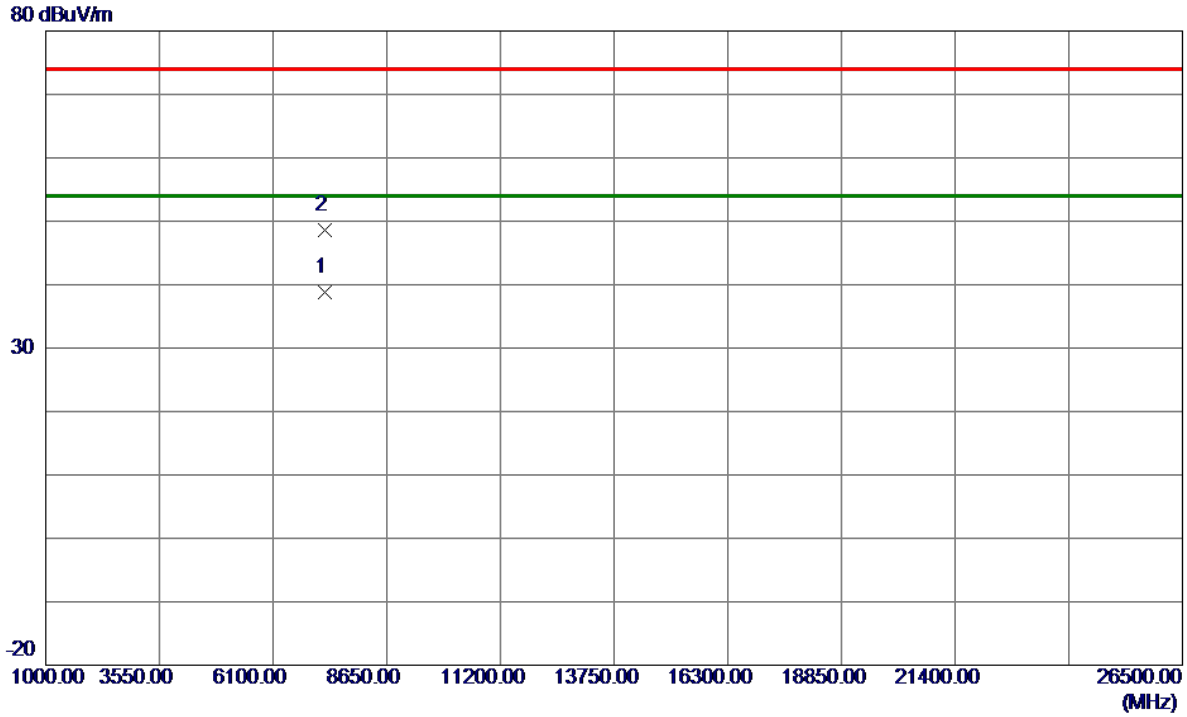
Test Mode	TX N(HT20) Mode 2417 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	45.76	8.31	54.07	74.00	-19.93	Peak	
2	2390.0000	34.03	8.31	42.34	54.00	-11.66	AVG	
3	2421.8000	88.00	8.35	96.35	74.00	22.35	Peak	No Limit
4 *	2424.3000	80.17	8.35	88.52	54.00	34.52	AVG	No Limit

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

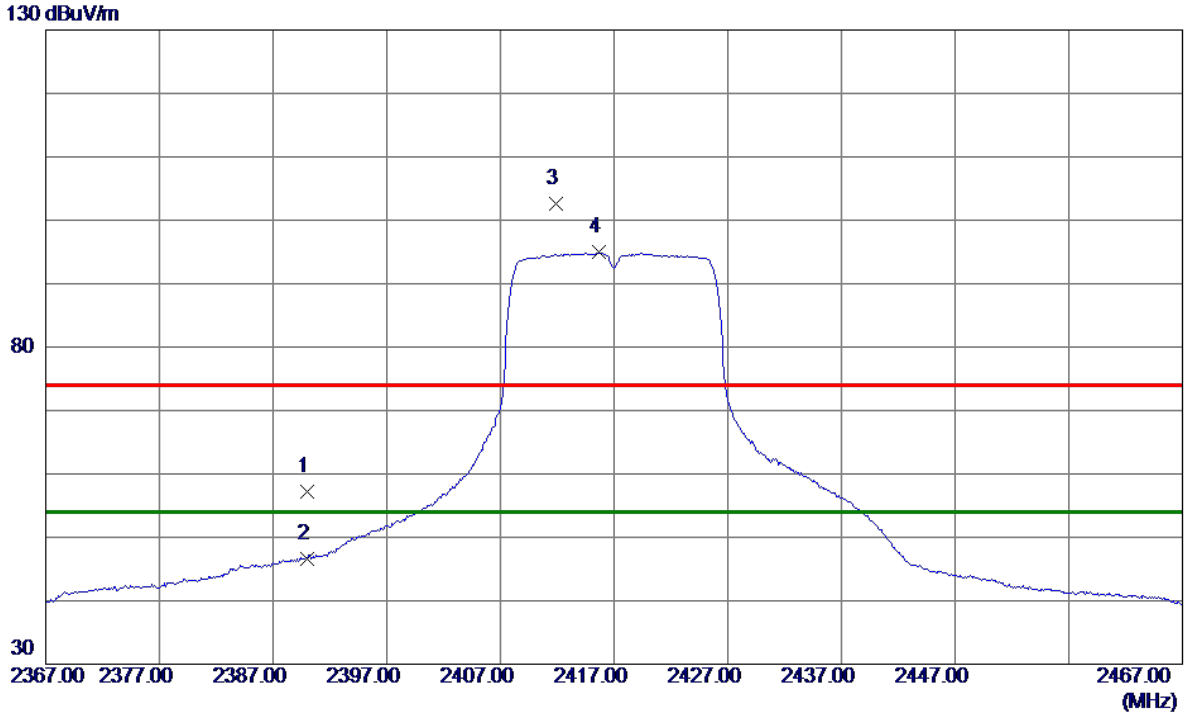
Test Mode	TX N(HT20) Mode 2417 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7247.8500	28.23	10.61	38.84	54.00	-15.16	AVG	
2	7251.0500	37.91	10.62	48.53	74.00	-25.47	Peak	

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

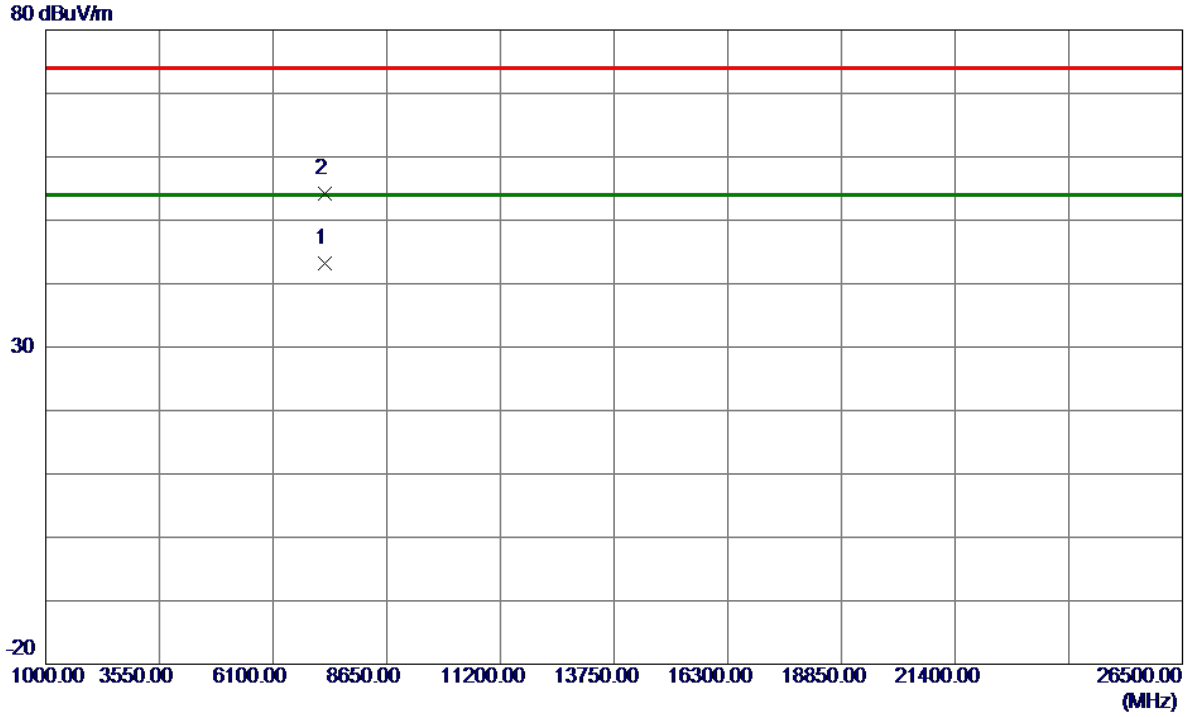
Test Mode	TX N(HT20) Mode 2417 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	48.86	8.31	57.17	74.00	-16.83	Peak	
2	2390.0000	38.26	8.31	46.57	54.00	-7.43	AVG	
3	2411.9000	94.20	8.33	102.53	74.00	28.53	Peak	No Limit
4 *	2415.7000	86.56	8.34	94.90	54.00	40.90	AVG	No Limit

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

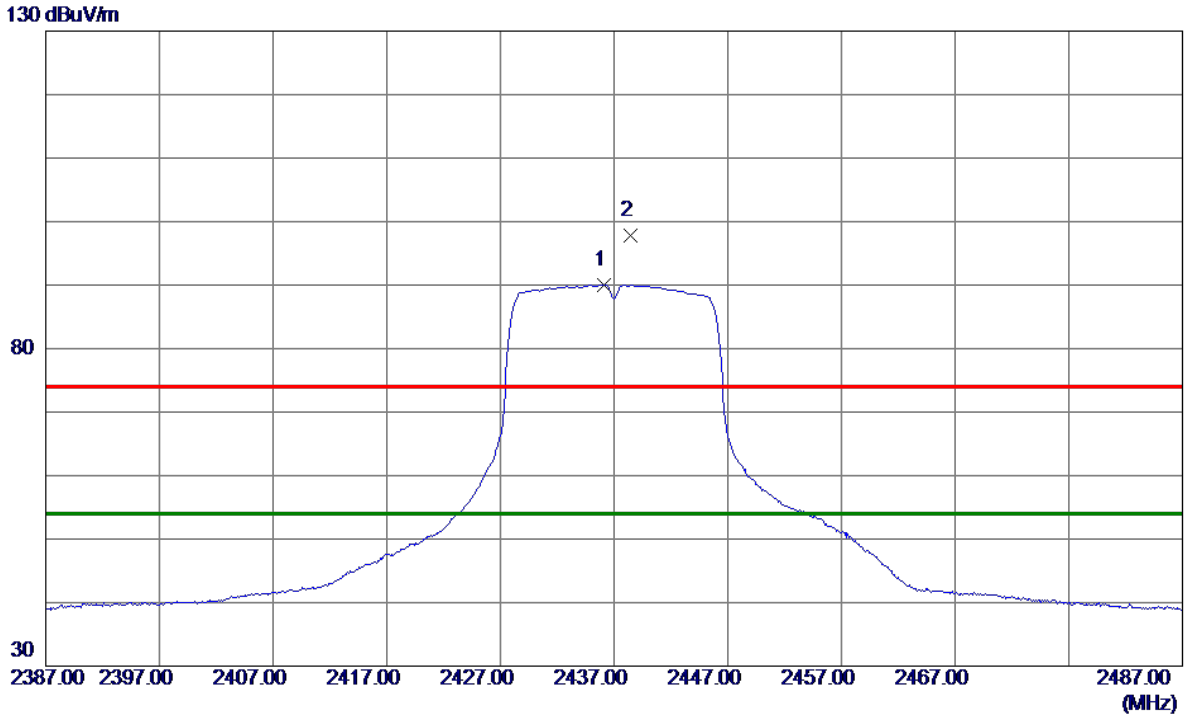
Test Mode	TX N(HT20) Mode 2417 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7250.5500	32.66	10.62	43.28	54.00	-10.72	AVG	
2	7254.7000	43.56	10.62	54.18	74.00	-19.82	Peak	

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

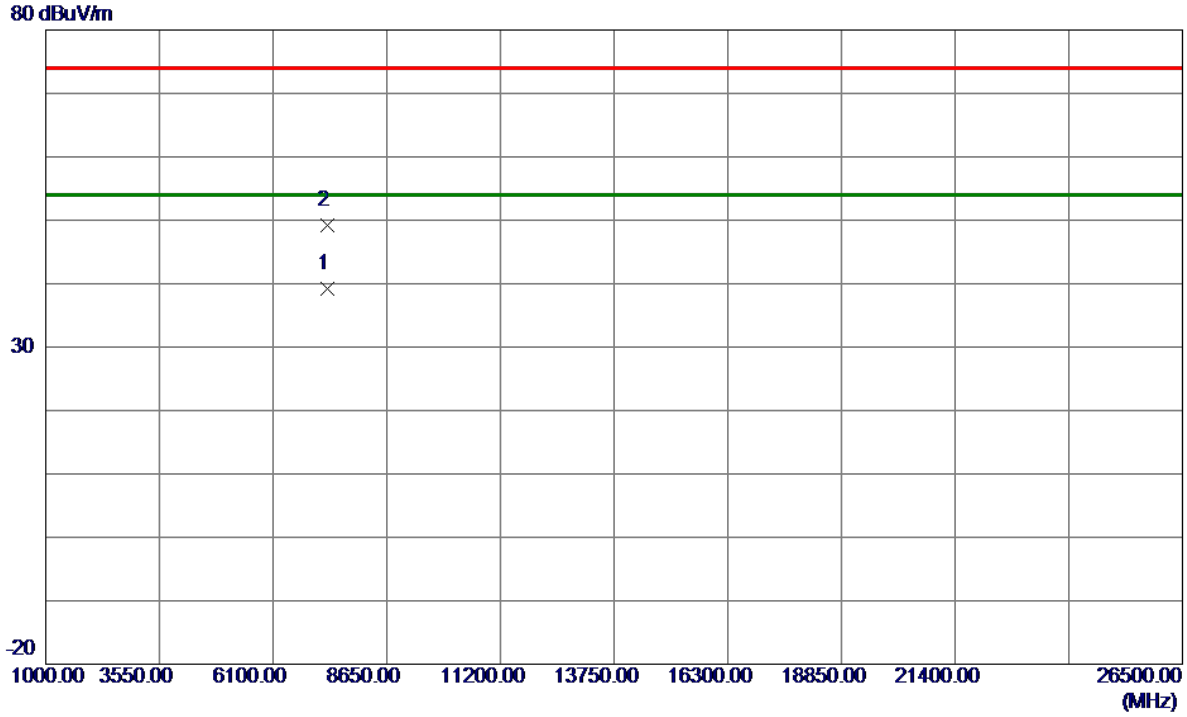
Test Mode	TX N(HT20) Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436.1000	81.73	8.36	90.09	54.00	36.09	AVG	No Limit
2	2438.4000	89.47	8.37	97.84	74.00	23.84	Peak	No Limit

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

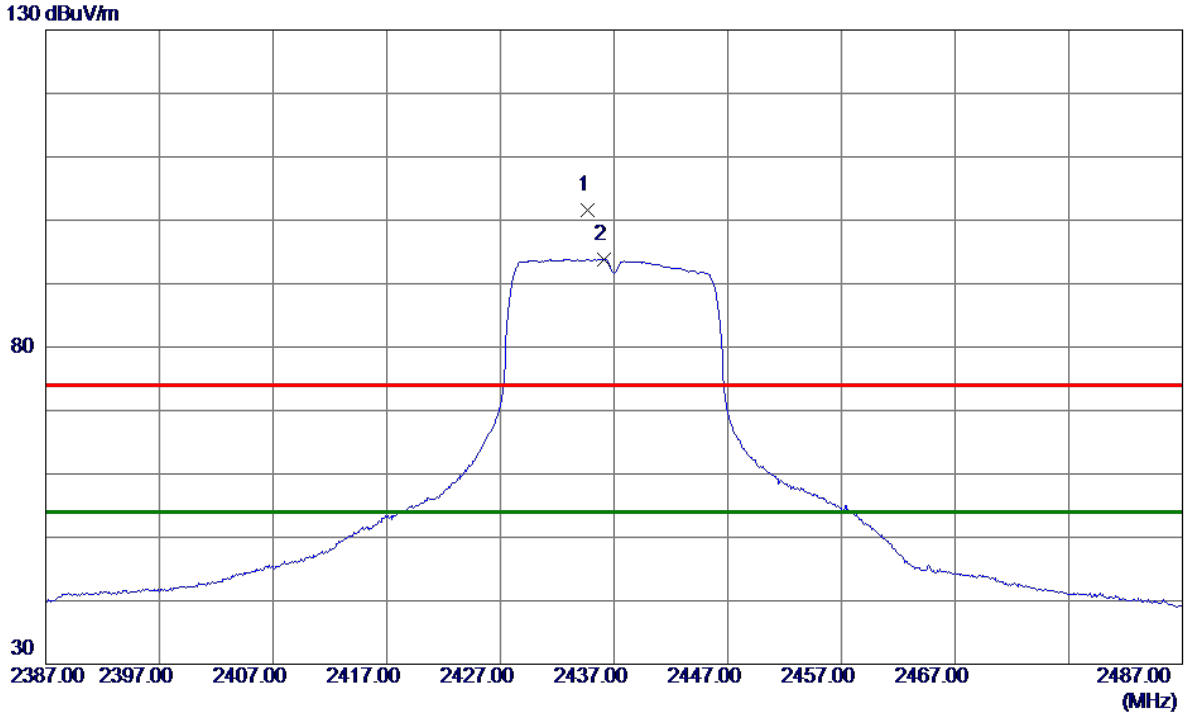
Test Mode	TX N(HT20) Mode 2437 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7315.4000	28.49	10.70	39.19	54.00	-14.81	AVG	
2	7316.3500	38.41	10.70	49.11	74.00	-24.89	Peak	

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

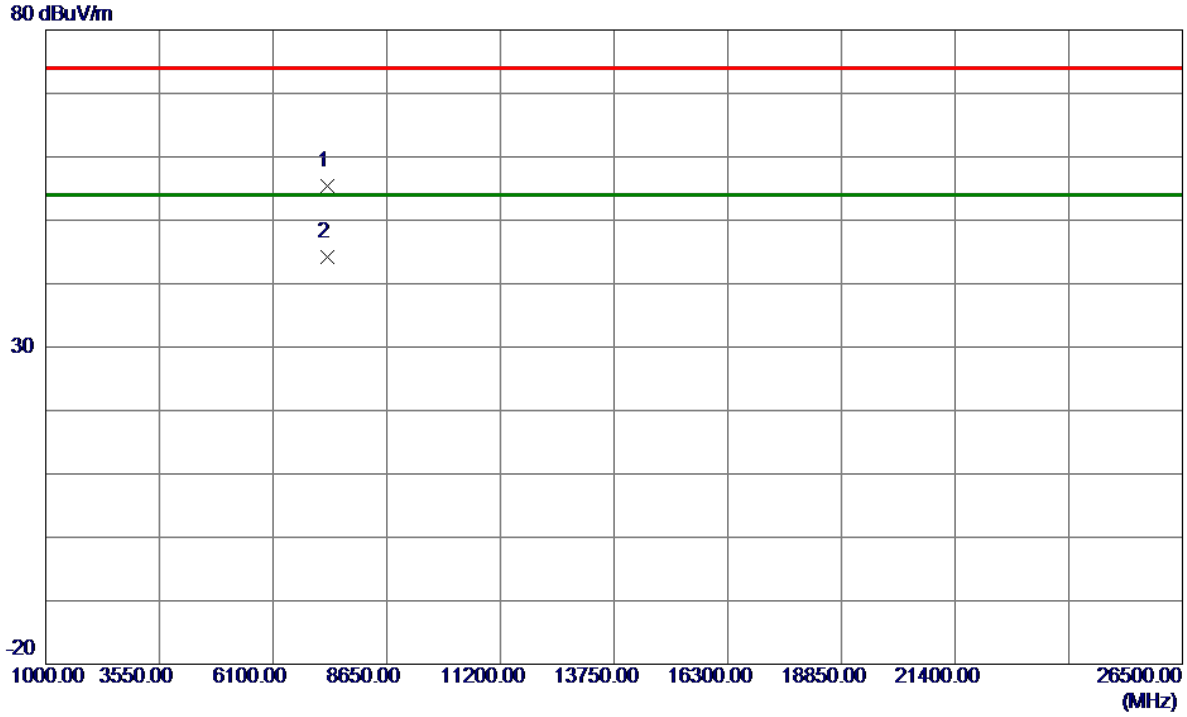
Test Mode	TX N(HT20) Mode 2437 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2434.7000	93.33	8.36	101.69	74.00	27.69	Peak	No Limit
2 *	2436.1000	85.52	8.36	93.88	54.00	39.88	AVG	No Limit

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

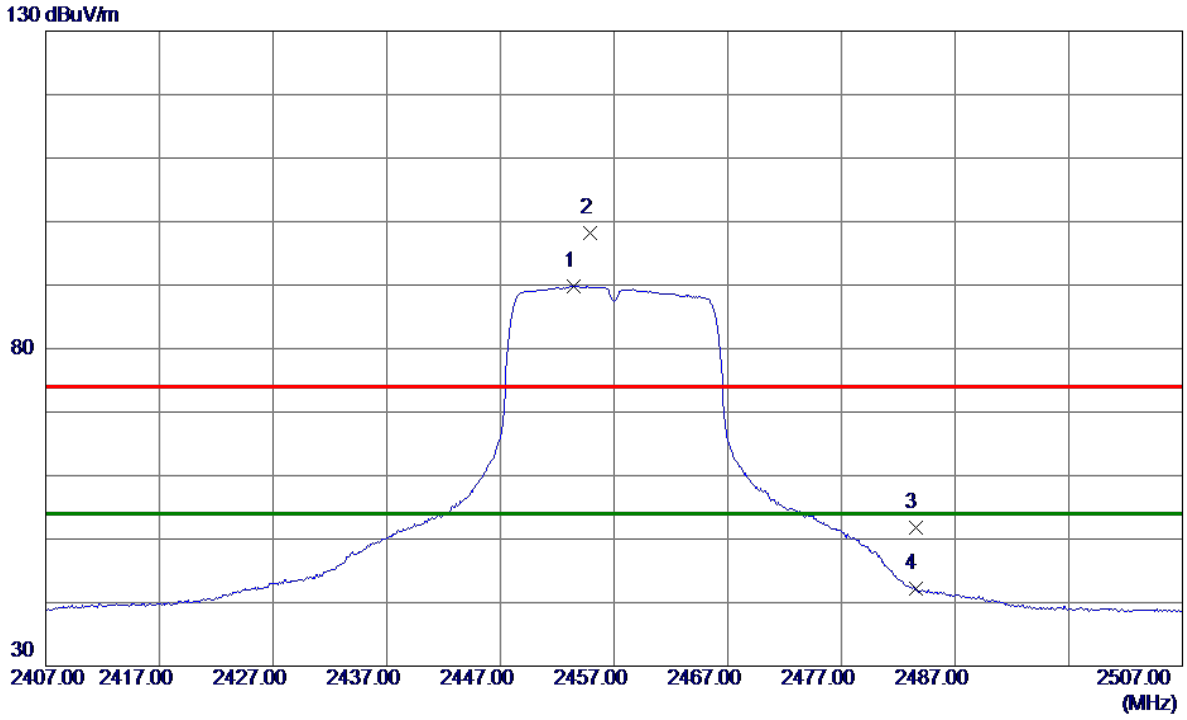
Test Mode	TX N(HT20) Mode 2437 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7307.4000	44.63	10.69	55.32	74.00	-18.68	Peak	
2 *	7315.0000	33.59	10.70	44.29	54.00	-9.71	AVG	

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

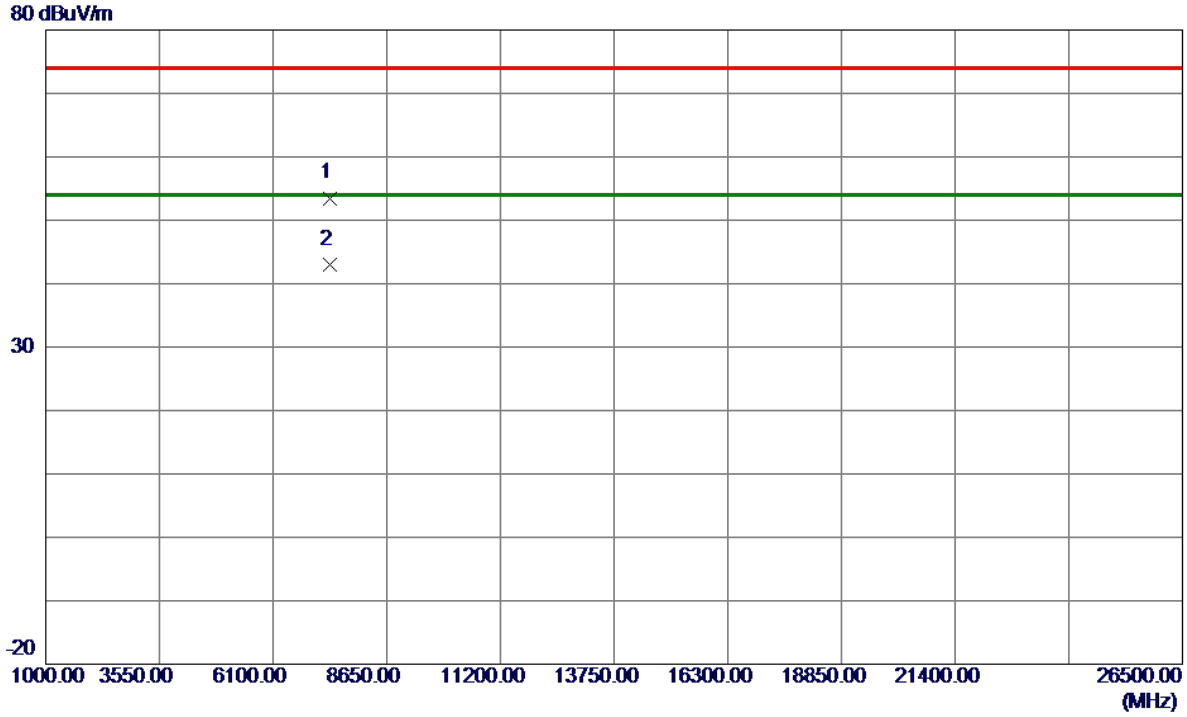
Test Mode	TX N(HT20) Mode 2457 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2453.4000	81.39	8.39	89.78	54.00	35.78	AVG	No Limit
2	2454.9000	89.80	8.39	98.19	74.00	24.19	Peak	No Limit
3	2483.5000	43.42	8.42	51.84	74.00	-22.16	Peak	
4	2483.5000	33.73	8.42	42.15	54.00	-11.85	AVG	

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

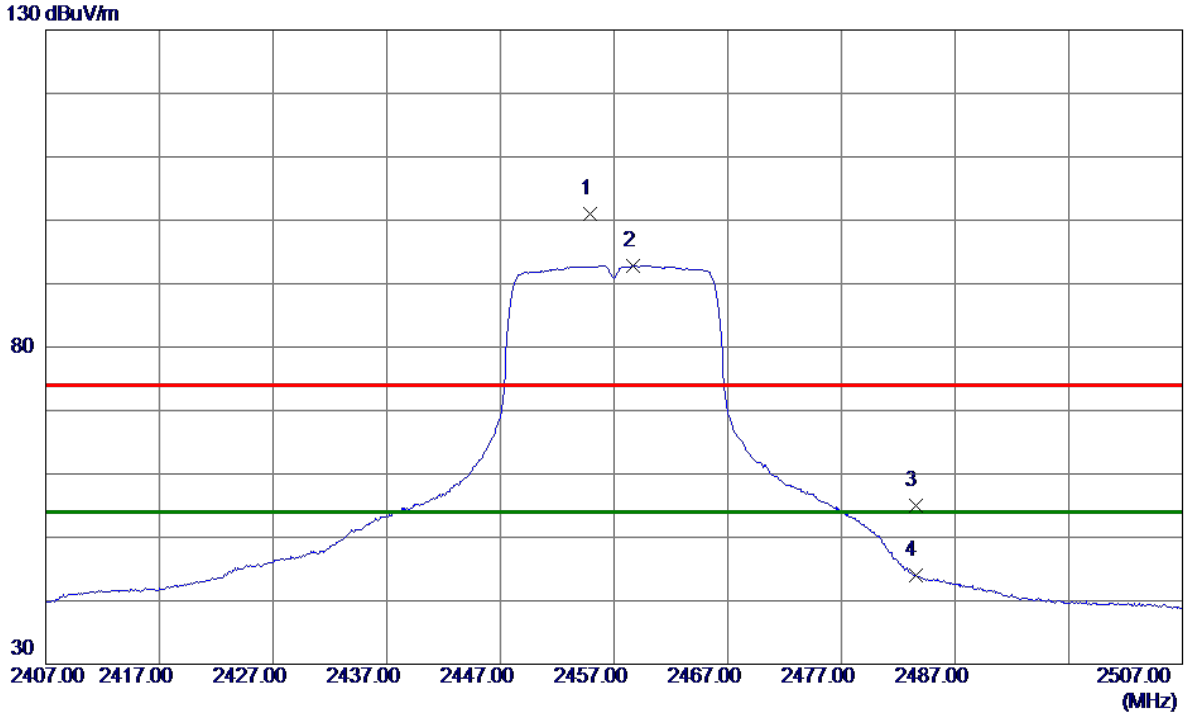
Test Mode	TX N(HT20) Mode 2457 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7371.6500	42.73	10.77	53.50	74.00	-20.50	Peak	
2 *	7371.6500	32.19	10.77	42.96	54.00	-11.04	AVG	

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

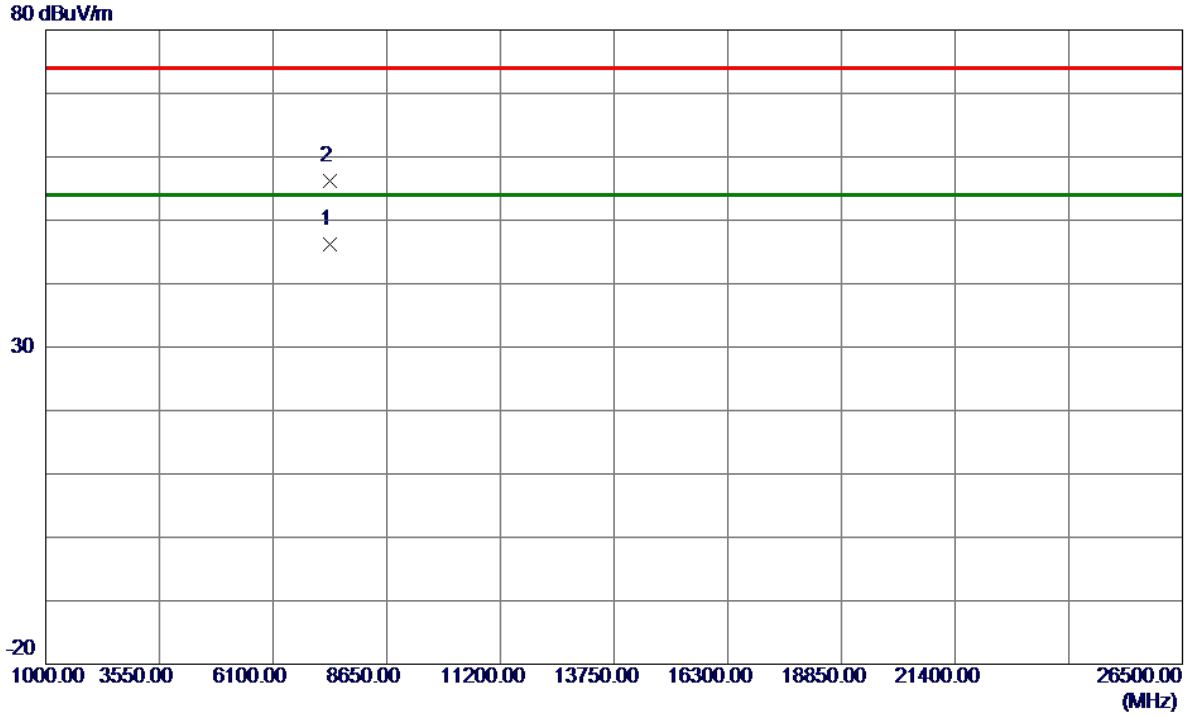
Test Mode	TX N(HT20) Mode 2457 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2454.9000	92.66	8.39	101.05	74.00	27.05	Peak	No Limit
2 *	2458.7000	84.47	8.39	92.86	54.00	38.86	AVG	No Limit
3	2483.5000	46.63	8.42	55.05	74.00	-18.95	Peak	
4	2483.5000	35.56	8.42	43.98	54.00	-10.02	AVG	

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

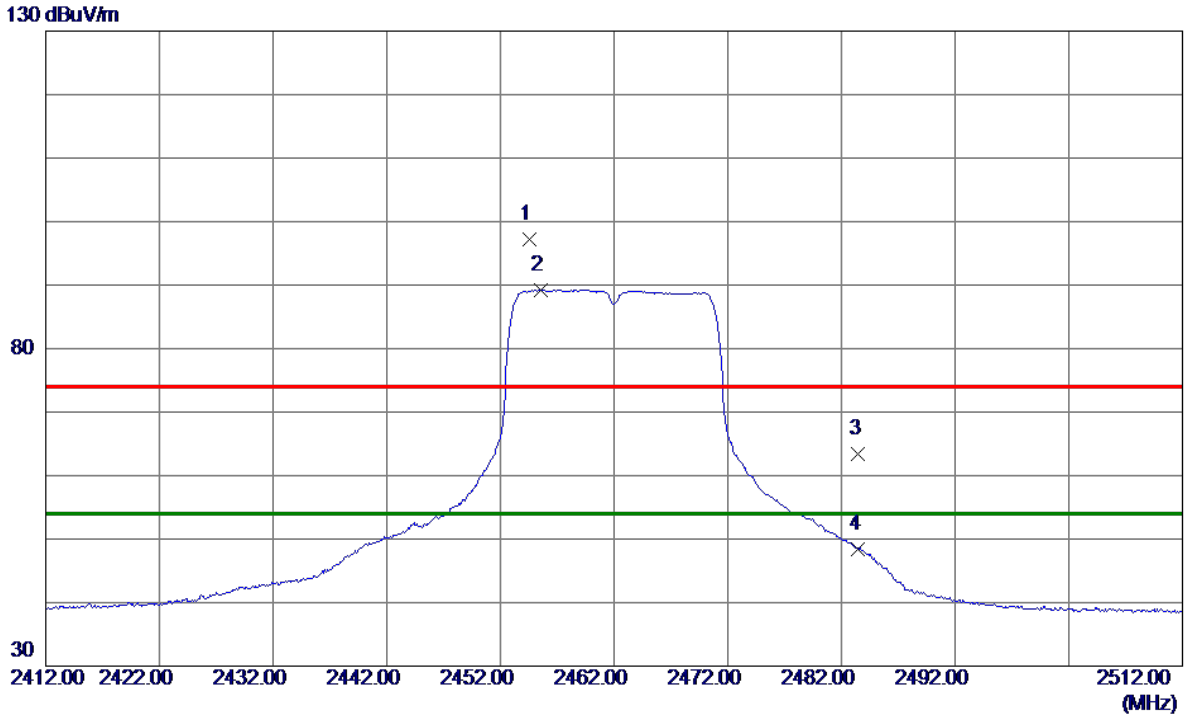
Test Mode	TX N(HT20) Mode 2457 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7372.2000	35.35	10.77	46.12	54.00	-7.88	AVG	
2	7377.8500	45.48	10.78	56.26	74.00	-17.74	Peak	

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

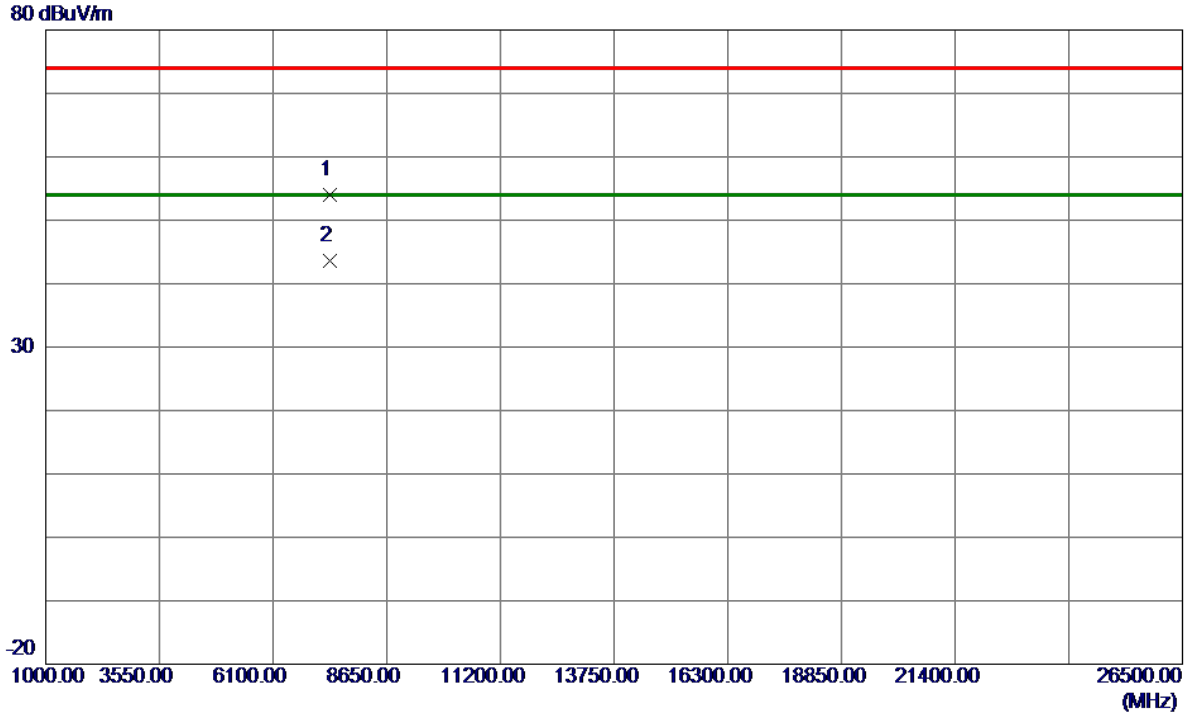
Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2454.6000	88.86	8.39	97.25	74.00	23.25	Peak	No Limit
2 *	2455.6000	80.90	8.39	89.29	54.00	35.29	AVG	No Limit
3	2483.5000	54.99	8.42	63.41	74.00	-10.59	Peak	
4	2483.5000	39.92	8.42	48.34	54.00	-5.66	AVG	

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

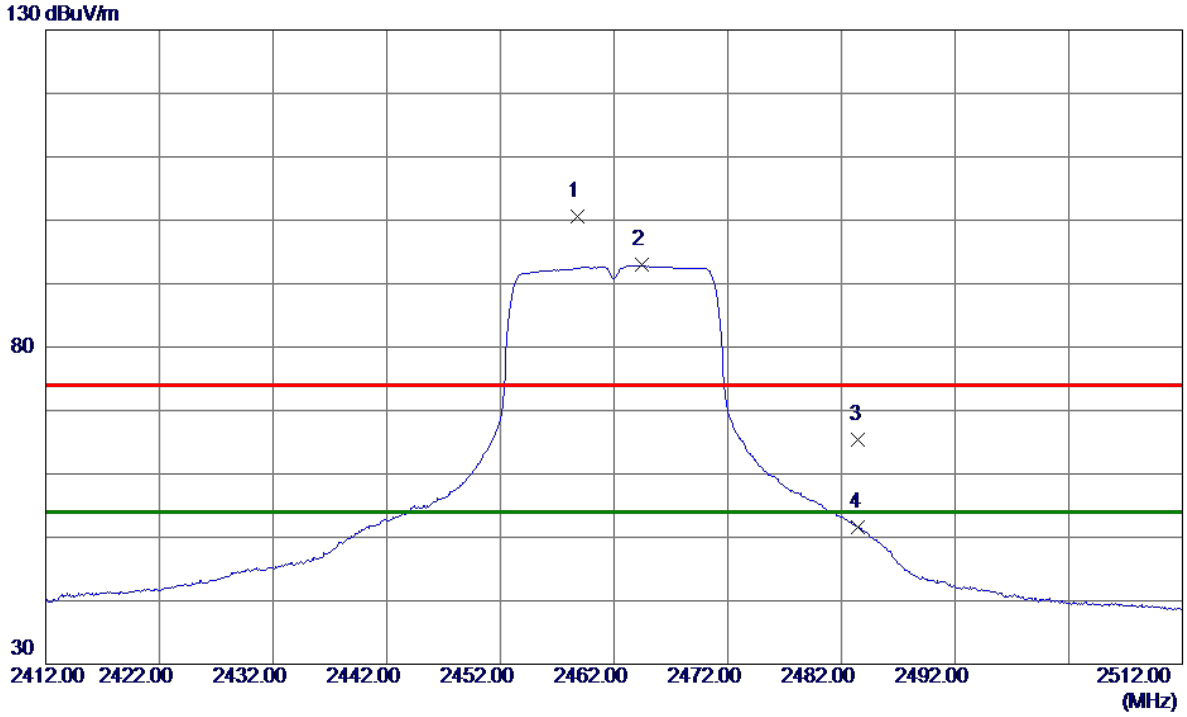
Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7384.6000	43.19	10.79	53.98	74.00	-20.02	Peak	
2 *	7386.0000	32.76	10.79	43.55	54.00	-10.45	AVG	

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

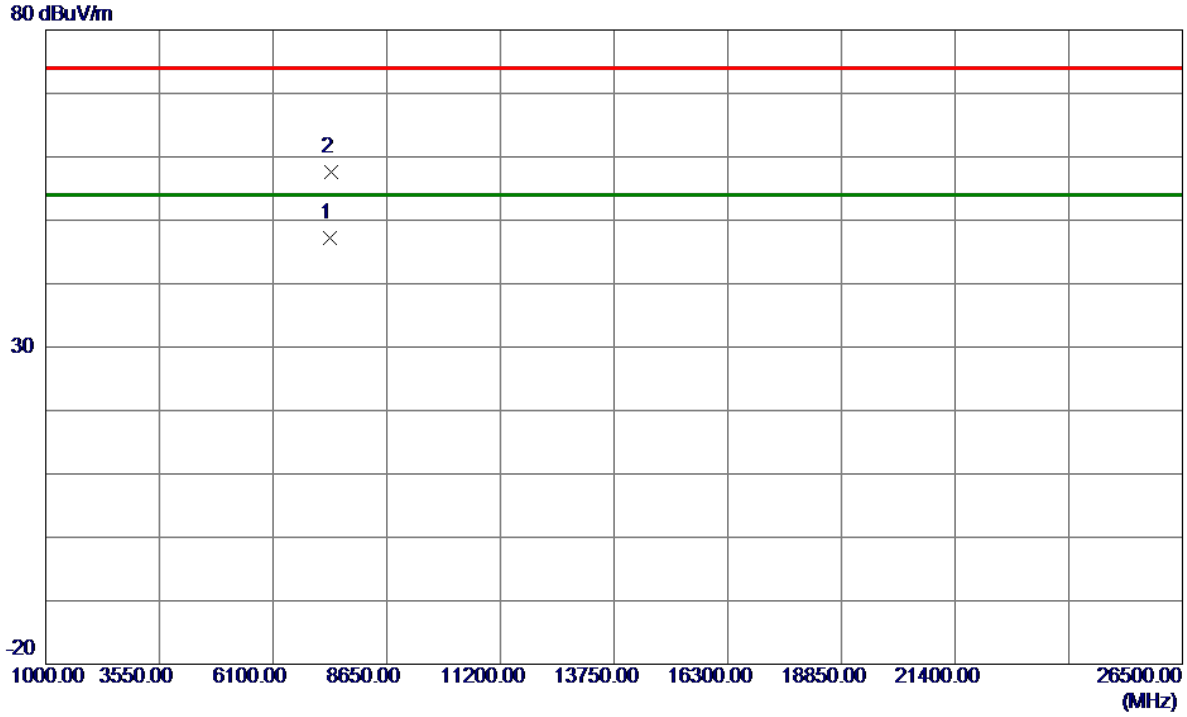
Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2458.8000	92.26	8.39	100.65	74.00	26.65	Peak	No Limit
2 *	2464.4000	84.50	8.40	92.90	54.00	38.90	AVG	No Limit
3	2483.5000	57.04	8.42	65.46	74.00	-8.54	Peak	
4	2483.5000	43.10	8.42	51.52	54.00	-2.48	AVG	

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

Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7385.6500	36.40	10.79	47.19	54.00	-6.81	AVG	
2	7395.0500	46.84	10.80	57.64	74.00	-16.36	Peak	

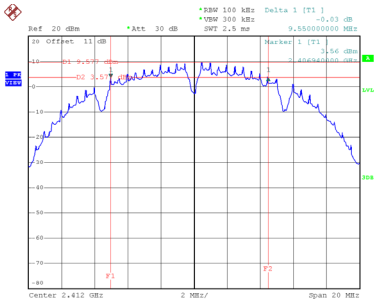
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

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	9.55	14.16	0.50	Complies
06	2437	10.10	14.16	0.50	Complies
11	2462	9.12	14.16	0.50	Complies

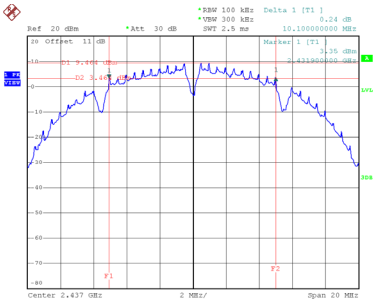
CH01



Date: 14.OCT.2021 18:58:30

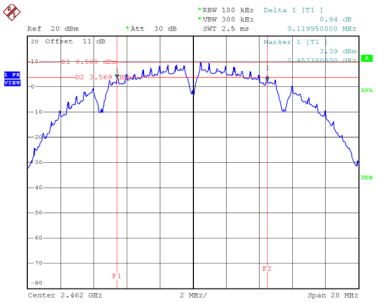
CH06

6 dB Bandwidth

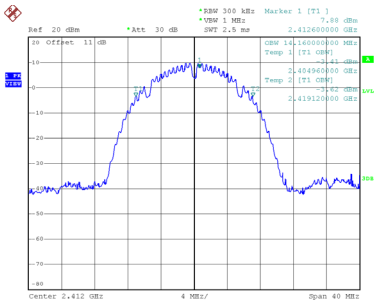


Date: 14.OCT.2021 19:00:38

CH11

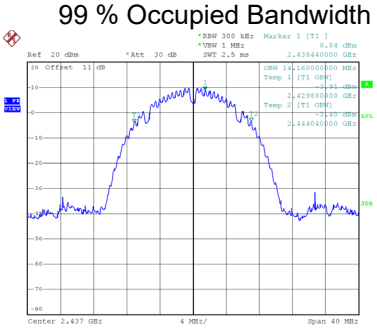


Date: 14.OCT.2021 19:03:08

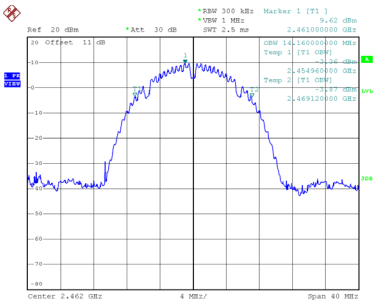


Date: 14.OCT.2021 18:58:39

99 % Occupied Bandwidth



Date: 14.OCT.2021 19:00:46



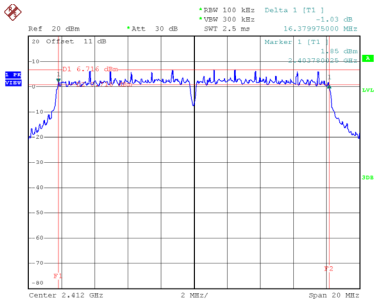
Date: 14.OCT.2021 19:03:17

Test Mode	TX G Mode

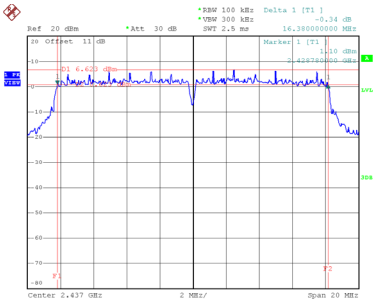
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	16.38	17.12	0.50	Complies
06	2437	16.38	17.12	0.50	Complies
11	2462	16.36	17.28	0.50	Complies

CH01 **CH06** **CH11**

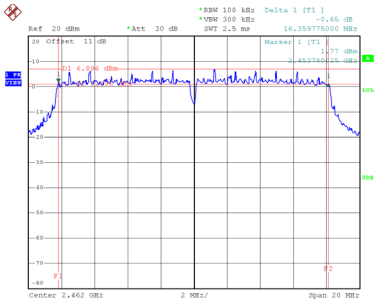
6 dB Bandwidth



Date: 14.OCT.2021 19:05:18

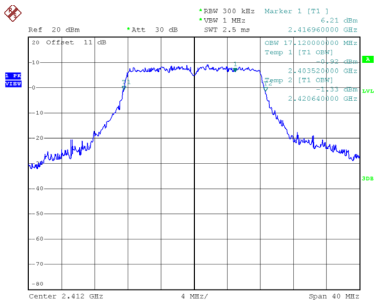


Date: 14.OCT.2021 19:07:15

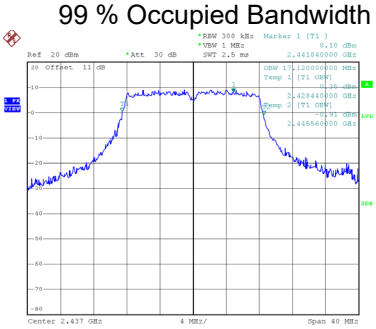


Date: 14.OCT.2021 19:08:55

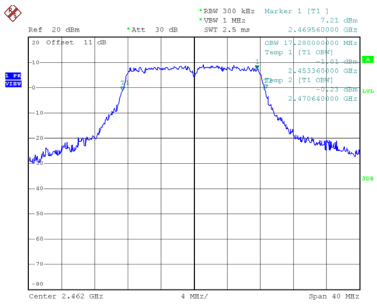
99 % Occupied Bandwidth



Date: 14.OCT.2021 19:05:27



Date: 14.OCT.2021 19:07:24



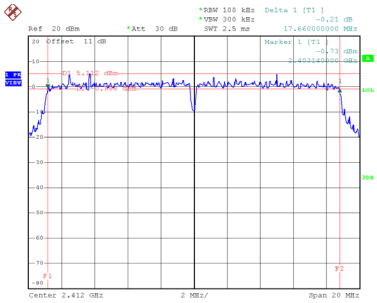
Date: 14.OCT.2021 19:09:04

Test Mode	TX N(HT20) Mode

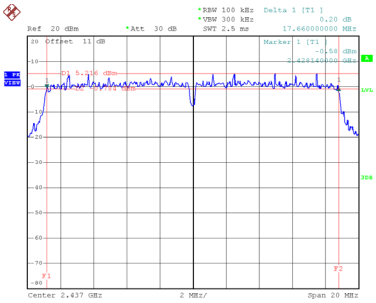
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	17.66	18.16	0.50	Complies
06	2437	17.66	18.08	0.50	Complies
11	2462	17.62	18.08	0.50	Complies

CH01 **CH06** **CH11**

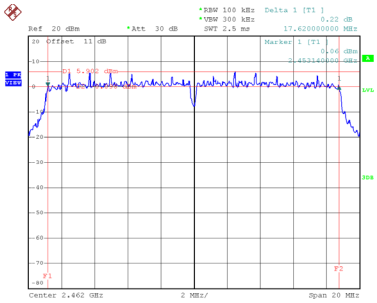
6 dB Bandwidth



Date: 14.OCT.2021 19:10:28

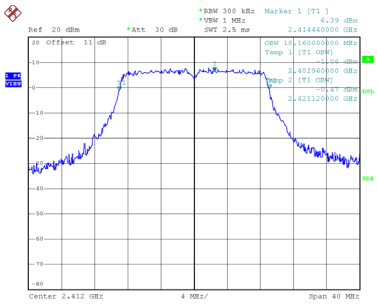


Date: 14.OCT.2021 19:12:32

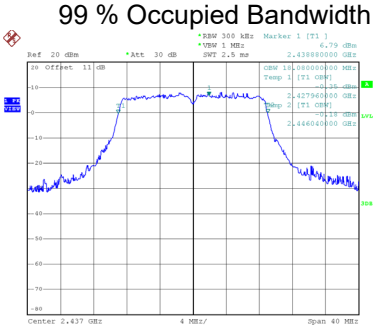


Date: 14.OCT.2021 19:14:03

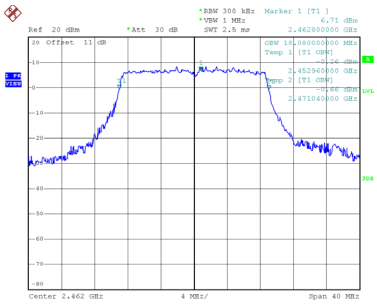
99 % Occupied Bandwidth



Date: 14.OCT.2021 19:10:36



Date: 14.OCT.2021 19:12:41



Date: 14.OCT.2021 19:14:12

APPENDIX F - MAXIMUM AVERAGE OUTPUT POWER

Test Mode	TX B Mode

Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.13	0.00	18.13	30.00	1.0000	Complies
06	2437	18.17	0.00	18.17	30.00	1.0000	Complies
11	2462	18.28	0.00	18.28	30.00	1.0000	Complies

Test Mode	TX G Mode

Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.09	0.28	18.37	30.00	1.0000	Complies
06	2437	18.17	0.28	18.45	30.00	1.0000	Complies
11	2462	18.21	0.28	18.49	30.00	1.0000	Complies

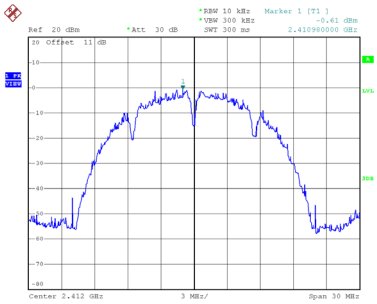
Test Mode	TX N(HT20) Mode

Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.08	0.28	17.36	30.00	1.0000	Complies
06	2437	17.13	0.28	17.41	30.00	1.0000	Complies
11	2462	17.26	0.28	17.54	30.00	1.0000	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

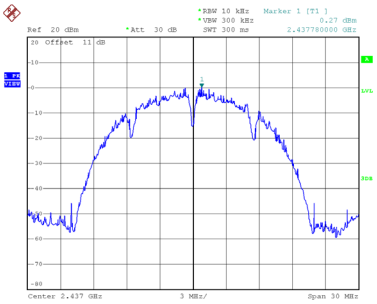
Test Mode	TX B Mode

Reference Level-CH01



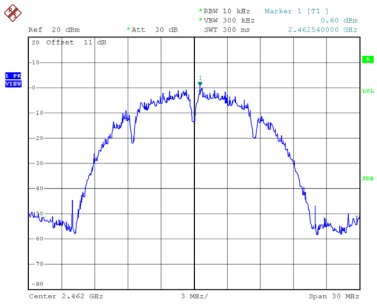
Date: 14.OCT.2021 19:24:32

Reference Level-CH06



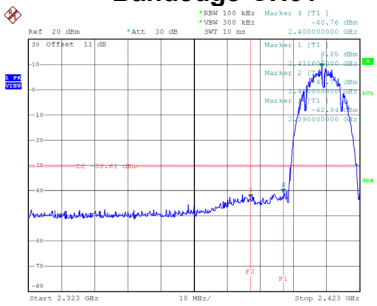
Date: 14.OCT.2021 19:24:47

Reference Level-CH11



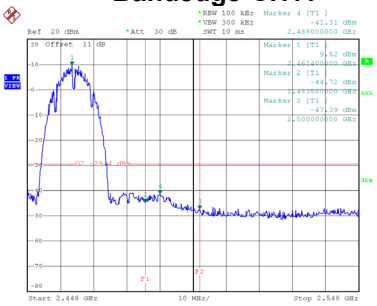
Date: 14.OCT.2021 19:25:00

Bandedge-CH01



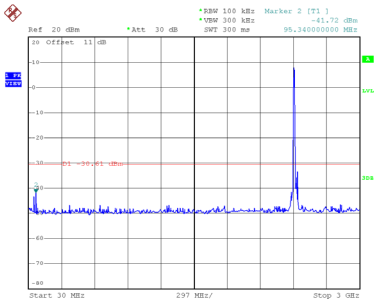
Date: 14.OCT.2021 19:31:01

Bandedge-CH11

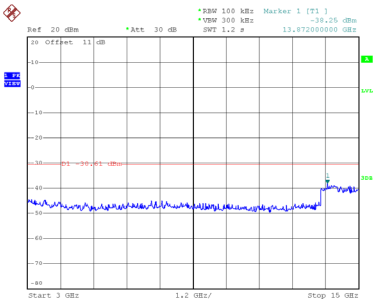


Date: 14.OCT.2021 19:32:38

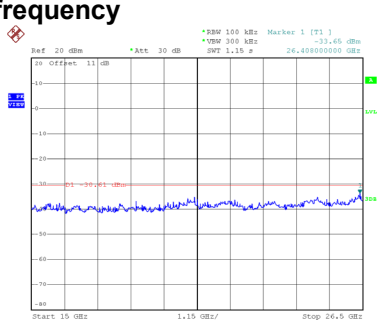
CH01 – 10th Harmonic of the fundamental frequency



Date: 14.OCT.2021 19:51:57

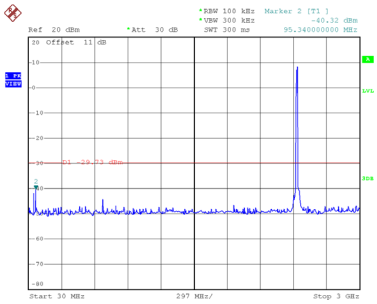


Date: 14.OCT.2021 19:52:07

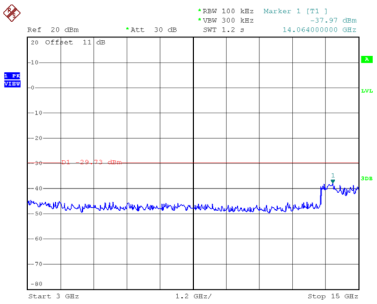


Date: 14.OCT.2021 19:52:16

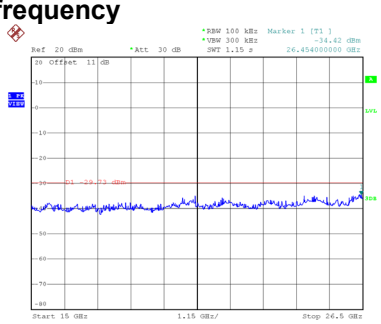
CH06 – 10th Harmonic of the fundamental frequency



Date: 14.OCT.2021 19:52:37

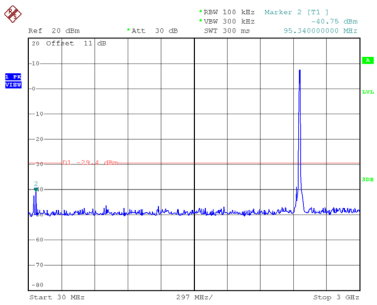


Date: 14.OCT.2021 19:52:47

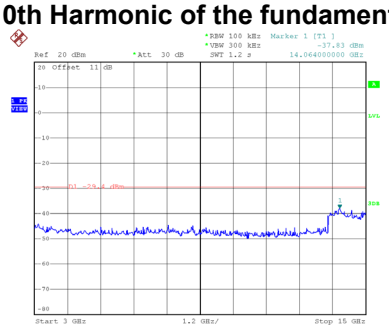


Date: 14.OCT.2021 19:52:56

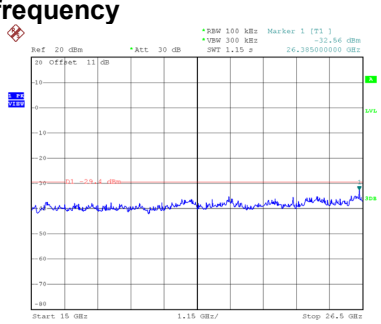
CH11 – 10th Harmonic of the fundamental frequency



Date: 14.OCT.2021 19:53:19



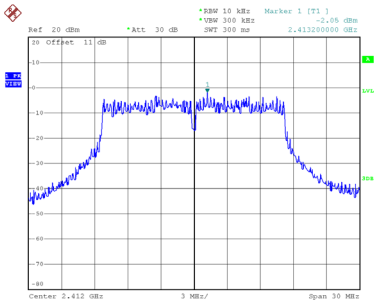
Date: 14.OCT.2021 19:53:28



Date: 14.OCT.2021 19:53:38

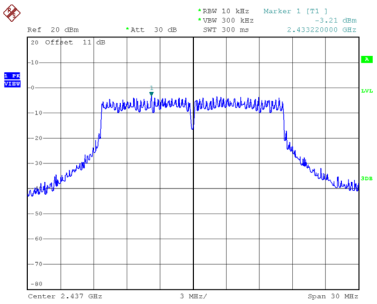
Test Mode	TX G Mode

Reference Level-CH01



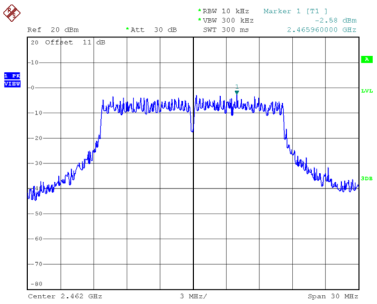
Date: 14.OCT.2021 19:25:18

Reference Level-CH06



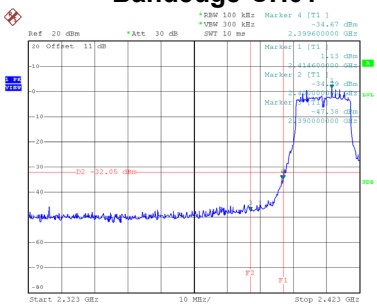
Date: 14.OCT.2021 19:25:33

Reference Level-CH11



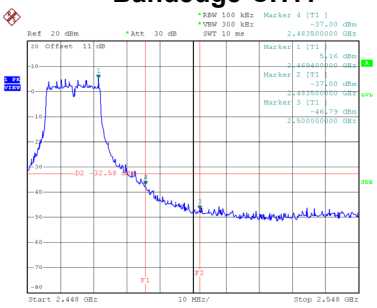
Date: 14.OCT.2021 19:25:49

Bandedge-CH01



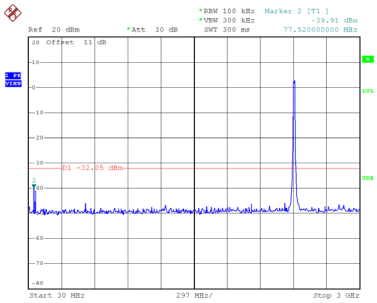
Date: 14.OCT.2021 19:37:09

Bandedge-CH11

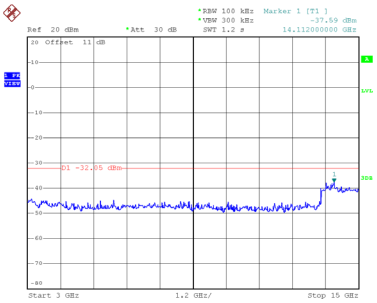


Date: 14.OCT.2021 19:40:13

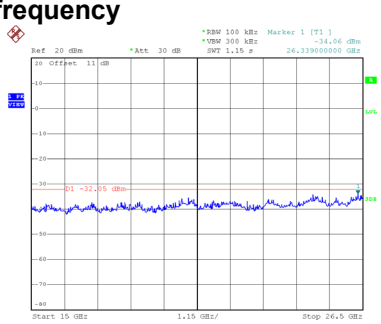
CH01 – 10th Harmonic of the fundamental frequency



Date: 14.OCT.2021 19:54:07

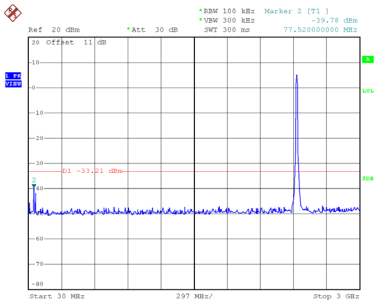


Date: 14.OCT.2021 19:54:17

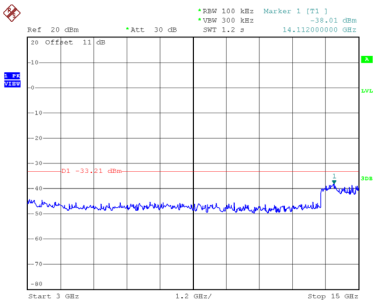


Date: 14.OCT.2021 19:54:27

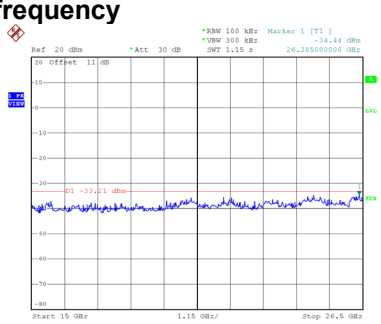
CH06 – 10th Harmonic of the fundamental frequency



Date: 14.OCT.2021 19:54:48

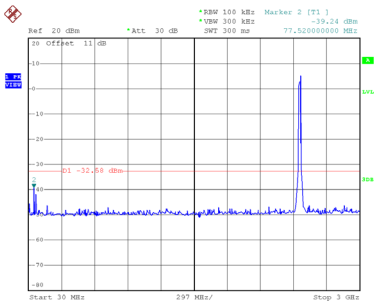


Date: 14.OCT.2021 19:54:58

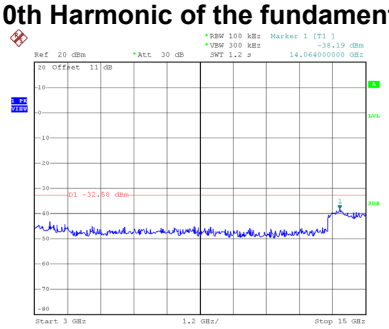


Date: 14.OCT.2021 19:55:07

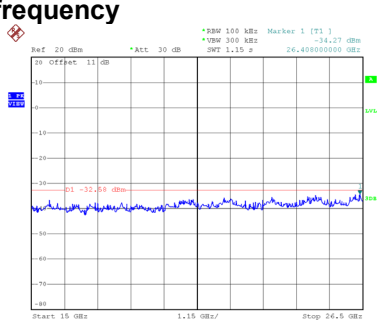
CH11 – 10th Harmonic of the fundamental frequency



Date: 14.OCT.2021 19:55:29



Date: 14.OCT.2021 19:55:39



Date: 14.OCT.2021 19:55:48