

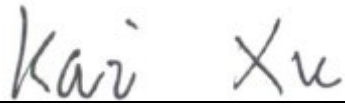
FCC Radio Test Report

FCC ID: RWO-RZ090300


This report concerns: Original Grant

Project No. : 1903C316
Equipment : Notebook
Test Model : RZ09-0300
Series Model : N/A
Applicant : Razer Inc.
Address : 201 3rd Street, Suite 900, San Francisco, CA 94103
USA

Date of Receipt : Mar. 27, 2019
Date of Test : Mar. 28, 2019 ~ Apr. 22, 2019
Issued Date : May 09, 2019
Tested by : BTL Inc.

Testing Engineer : 
(Kai Xu)

Technical Manager : 
(Steven Lu)

Authorized Signatory : 
(Ethan Ma)

B T L I N C .

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan,
Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000



Certificate #5123.02

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 . GENERAL SUMMARY	7
2 . SUMMARY OF TEST RESULTS	8
2.1 TEST FACILITY	9
2.2 MEASUREMENT UNCERTAINTY	9
3 . GENERAL INFORMATION	10
3.1 GENERAL DESCRIPTION OF EUT	10
3.2 DESCRIPTION OF TEST MODES	12
3.3 PARAMETERS OF TEST SOFTWARE	13
3.4 DUTY CYCLE	14
3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	15
3.6 SUPPORT UNITS	15
4 . AC POWER LINE CONDUCTED EMISSIONS TEST	16
4.1 LIMIT	16
4.2 TEST PROCEDURE	16
4.3 DEVIATION FROM TEST STANDARD	16
4.4 TEST SETUP	17
4.5 EUT OPERATION CONDITIONS	17
4.6 EUT TEST CONDITIONS	17
4.7 TEST RESULTS	17
5 . RADIATED EMISSIONS TEST	18
5.1 LIMIT	18
5.2 TEST PROCEDURE	19
5.3 DEVIATION FROM TEST STANDARD	19
5.4 TEST SETUP	20
5.5 EUT OPERATION CONDITIONS	21
5.6 EUT TEST CONDITIONS	21
5.7 TEST RESULTS - 9 KHZ TO 30 MHZ	21
5.8 TEST RESULTS - 30 MHZ TO 1000 MHZ	21
5.9 TEST RESULTS - ABOVE 1000 MHZ	21
6 . BANDWIDTH TEST	22
6.1 LIMIT	22
6.2 TEST PROCEDURE	22

Table of Contents	Page
6.3 DEVIATION FROM STANDARD	22
6.4 TEST SETUP	22
6.5 EUT OPERATION CONDITIONS	22
6.6 EUT TEST CONDITIONS	22
6.7 TEST RESULTS	22
7 . MAXIMUM OUTPUT POWER TEST	23
7.1 LIMIT	23
7.2 TEST PROCEDURE	23
7.3 DEVIATION FROM STANDARD	23
7.4 TEST SETUP	23
7.5 EUT OPERATION CONDITIONS	23
7.6 EUT TEST CONDITIONS	23
7.7 TEST RESULTS	23
8 . CONDUCTED SPURIOUS EMISSIONS	24
8.1 LIMIT	24
8.2 TEST PROCEDURE	24
8.3 DEVIATION FROM STANDARD	24
8.4 TEST SETUP	24
8.5 EUT OPERATION CONDITIONS	24
8.6 EUT TEST CONDITIONS	24
8.7 TEST RESULTS	24
9 . POWER SPECTRAL DENSITY TEST	25
9.1 LIMIT	25
9.2 TEST PROCEDURE	25
9.3 DEVIATION FROM STANDARD	25
9.4 TEST SETUP	25
9.5 EUT OPERATION CONDITIONS	25
9.6 EUT TEST CONDITIONS	25
9.7 TEST RESULTS	25
10 . MEASUREMENT INSTRUMENTS LIST	26
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS	28
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ	31
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ	36

Table of Contents

Page

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ	39
APPENDIX E - BANDWIDTH	88
APPENDIX F - MAXIMUM OUTPUT POWER	91
APPENDIX G - CONDUCTED SPURIOUS EMISSIONS	96
APPENDIX H - POWER SPECTRAL DENSITY	105

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	May 09, 2019

1. GENERAL SUMMARY

Equipment : Notebook
Brand Name : RAZER
Test Model : RZ09-0300
Series Model : N/A
Applicant : Razer Inc.
Manufacturer : Razer Inc.
Address : 201 3rd Street, Suite 900, San Francisco, CA 94103 USA
Date of Test : Mar. 28, 2019 ~ Apr. 22, 2019
Test Sample : Engineering Sample No.: D190303120
Standard(s) : FCC Part15, Subpart C (15.247)
ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance

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

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-3-1903C316) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

Test results included in this report are only for the WLAN 2.4 GHz part.

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15, Subpart C (15.247)				
Standard(s) Section	Test Item	Test Result	Judgment	Remark
15.207	AC Power Line Conducted Emissions	Appendix A	PASS	-----
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	Appendix B Appendix C Appendix D	PASS	-----
15.247(a)(2)	Bandwidth	Appendix E	PASS	-----
15.247(b)(3)	Maximum Output Power	Appendix F	PASS	-----
15.247(d)	Conducted Spurious Emissions	Appendix G	PASS	-----
15.247(e)	Power Spectral Density	Appendix H	PASS	-----
15.203	Antenna Requirement	-----	PASS	-----

Note:

- (1) "N/A" denotes test is not applicable in this test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% 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	150 kHz ~ 30 MHz	2.32

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9 KHz~30 MHz	V	3.79
		9 KHz~30 MHz	H	3.57
		30 MHz~200 MHz	V	3.82
		30 MHz~200 MHz	H	3.78
		200 MHz~1,000 MHz	V	4.10
		200 MHz~1,000 MHz	H	4.06
		1 GHz~18 GHz	V	3.12
		1 GHz~18 GHz	H	3.68
		18 GHz~40 GHz	V	4.15
		18 GHz~40 GHz	H	4.14

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT



Equipment	Notebook
Brand Name	RAZER
Test Model	RZ09-0300
Series Model	N/A
Model Difference(s)	N/A
Software Version	Window 10
Hardware Version	DA530_MB
Power Source	1# DC voltage supplied from AC/DC adapter. Brand / Model: RAZER / RC30-0238 2# Supplied from battery. Brand / Model: RAZER / RC30-0270
Power Rating	1# I/P: 100-240V~2.5A 50/60Hz O/P: 19.5V 10.26A 2# DC 15.4V, 4221mAh/65Wh
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 300 Mbps
Maximum Output Power	IEEE 802.11b: 21.03 dBm (0.1268 W) IEEE 802.11g: 24.31 dBm (0.2698 W) IEEE 802.11n (HT20): 24.36 dBm (0.2729 W) IEEE 802.11n (HT40): 23.17 dBm (0.2075 W)

Note:

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

CH01 - CH11 for 802.11b, 802.11g, 802.11n(20 MHz) CH03 - CH09 for 802.11n(40 MHz)							
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		BY5810-16-001-C	PIFA	IPEX	3.69
2		BY5810-16-002-C	PIFA	IPEX	2.79

Note: This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi, that is Directional gain = $10\log[(10^{3.69/20} + 10^{2.79/20})^2 / 2]$ dBi = 6.26. So, the output power limit is $30 - 6.26 + 6 = 29.74$, the power spectral density limit is $8 - 6.26 + 6 = 7.74$.

3.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09
Mode 5	TX N20 Mode Channel 06

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

AC power line conducted emissions test	
Final Test Mode:	Description
Mode 5	TX N20 Mode Channel 06

Radiated emissions test – Below 1GHz	
Final Test Mode:	Description
Mode 5	TX N20 Mode Channel 06

Radiated emissions test – Above 1GHz	
Final Test Mode:	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

Conducted test	
Final Test Mode:	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

NOTE:

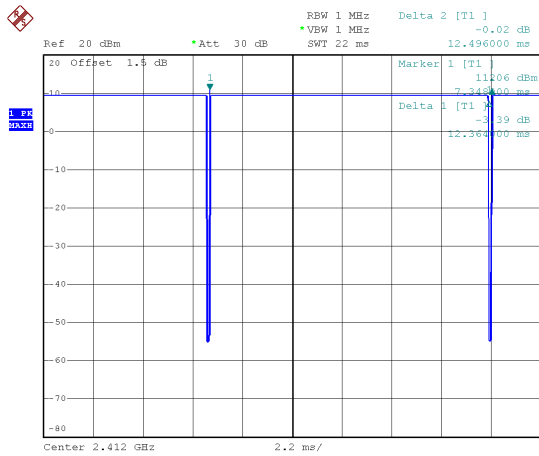
- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: DBPSK (1 Mbps)
 802.11g mode: OFDM (6 Mbps)
 802.11n HT20 mode : BPSK (13 Mbps)
 802.11n HT40 mode : BPSK (27 Mbps)
 For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated emission below 1 GHz test, the IEEE 802.11n20 channel 06 is found to be the worst case and recorded.
- (4) For radiated emission above 1 GHz test, 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.

3.3 PARAMETERS OF TEST SOFTWARE

Test Software	DRTU		
	2412	2437	2462
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	15/15	15/15	15.25/15.125
IEEE 802.11g	15.25/15.125	15.125/15.25	15.125/15.25
IEEE 802.11n (HT20)	15.75/15.25	15.125/15.125	15.375/15.125
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	13.5/13.375	13.5/13.5	13.5/13.5

3.4 DUTY CYCLE

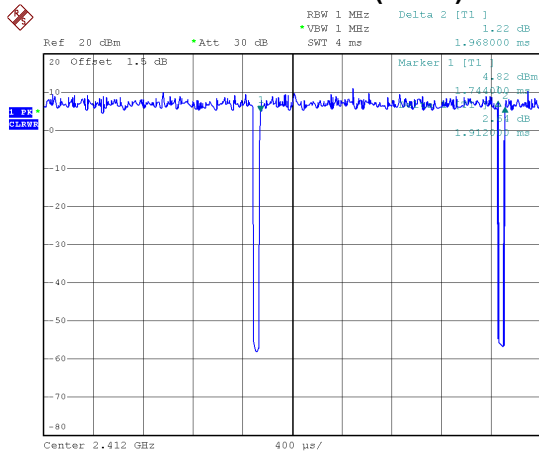
IEEE 802.11b



Date: 2.APR.2019 18:10:33

Duty cycle = 12.364 ms / 12.496 ms = 98.94%
 Duty Factor = 10 log(1/Duty cycle) = 0.00

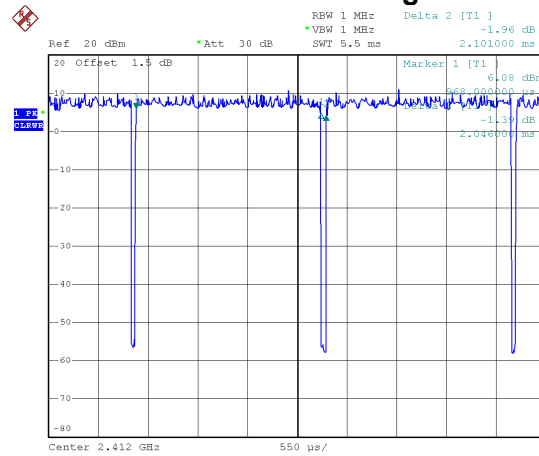
IEEE 802.11n (HT20)



Date: 2.APR.2019 18:12:30

Duty cycle = 1.912 ms / 1.968 ms = 97.15%
 Duty Factor = 10 log(1/Duty cycle) = 0.13

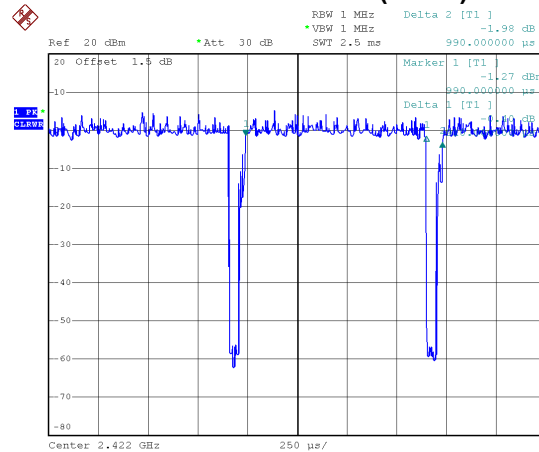
IEEE 802.11g



Date: 2.APR.2019 18:10:53

Duty cycle = 2.046 ms / 2.101 ms = 97.38%
 Duty Factor = 10 log(1/Duty cycle) = 0.12

IEEE 802.11n (HT40)



Date: 2.APR.2019 18:12:01

Duty cycle = 0.910 ms / 0.990 ms = 91.92%
 Duty Factor = 10 log(1/Duty cycle) = 0.37

NOTE:

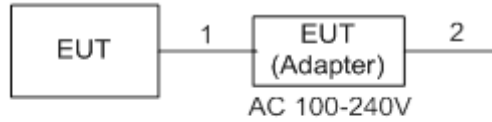
For IEEE 802.11g and IEEE 802.11n (HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

For IEEE 802.11n (HT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.6 SUPPORT UNITS

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	2m	DC Cable
2	NO	NO	1m	AC Cable

4. AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency of Emission (MHz)	Limit (dB μ V)	
	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.

The following table is the setting of the receiver

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

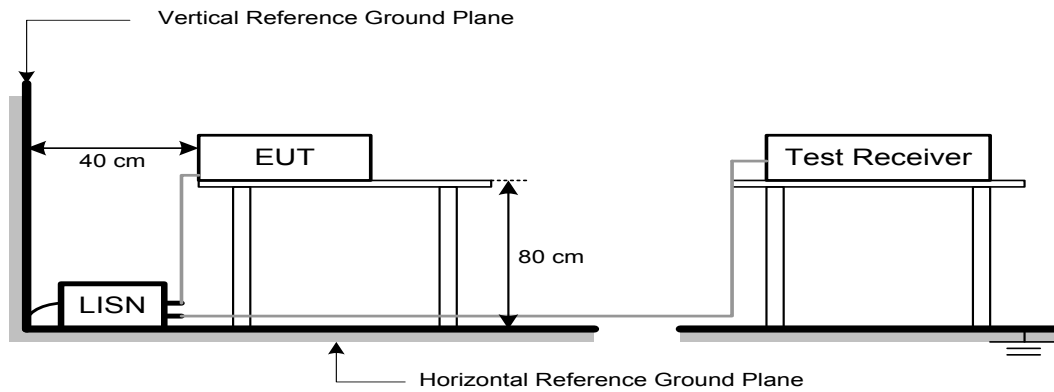
4.2 TEST PROCEDURE

- 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.

4.3 DEVIATION FROM TEST STANDARD

No deviation

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

4.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 53% Test Voltage: AC 120V/60Hz

4.7 TEST RESULTS

Please refer to the APPENDIX A.

5. RADIATED EMISSIONS TEST

5.1 LIMIT

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

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

NOTE:

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

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

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

5.2 TEST PROCEDURE

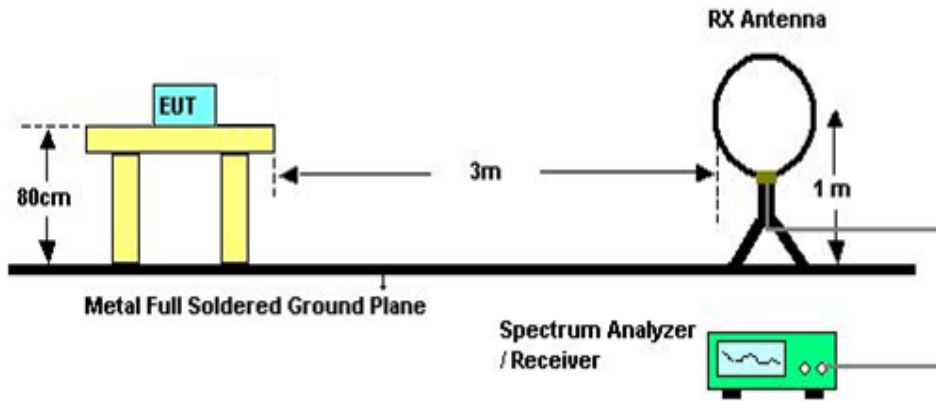
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- The measuring distance 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)
- 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.
- 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).
- 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.
- 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.
- 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)
- 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)
- For the actual test configuration, please refer to the related Item -EUT Test Photos.

5.3 DEVIATION FROM TEST STANDARD

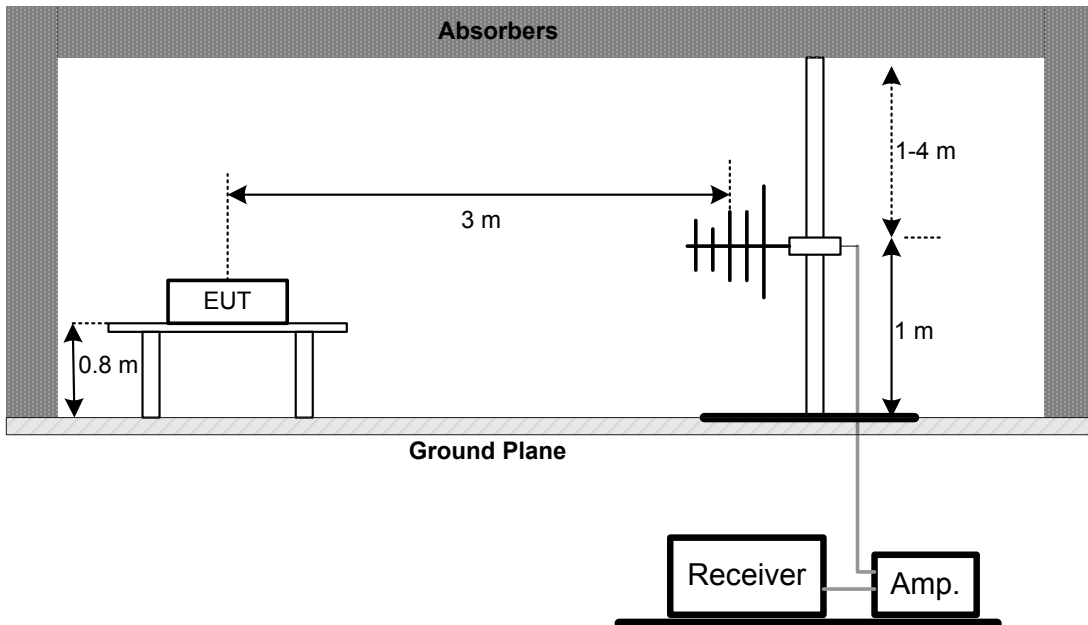
No deviation

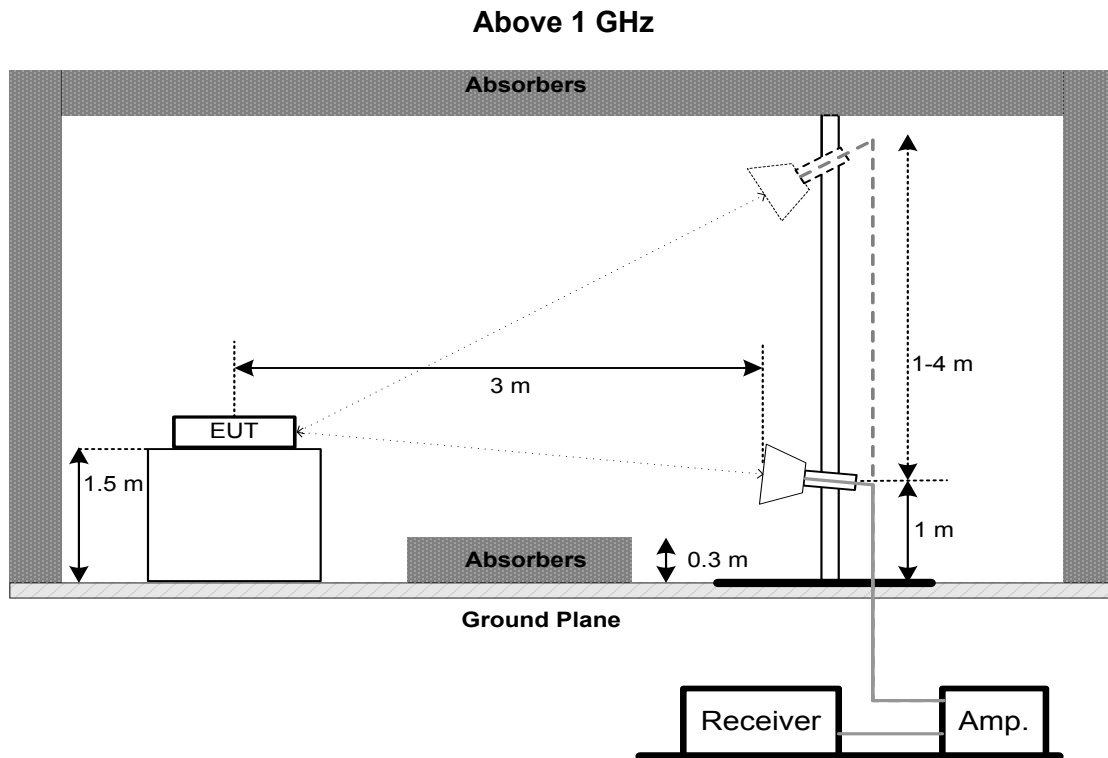
5.4 TEST SETUP

9 kHz-30 MHz



30 MHz to 1 GHz





5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 68% Test Voltage: AC 120V/60Hz

5.7 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B

Remark:

- (1) Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.8 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

5.9 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

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

6. BANDWIDTH TEST

6.1 LIMIT

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

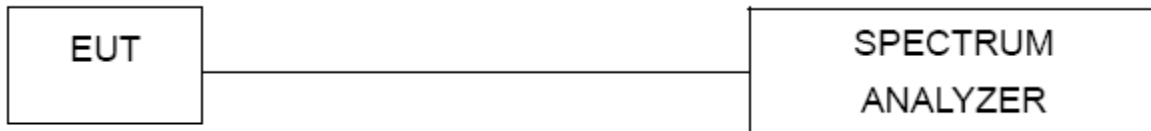
6.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = 2.5 ms.
- c. The bandwidth was performed in accordance with method 11.8 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 EUT TEST CONDITIONS

Temperature: 22.2°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

6.7 TEST RESULTS

Please refer to the APPENDIX E.

7. MAXIMUM OUTPUT POWER TEST

7.1 LIMIT

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

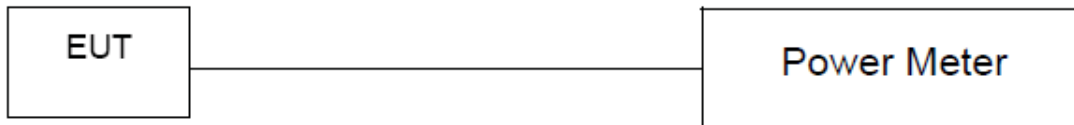
7.2 TEST PROCEDURE

- 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 11.9.1.3 of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 EUT TEST CONDITIONS

Temperature: 22.2°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

7.7 TEST RESULTS

Please refer to the APPENDIX F.

8. CONDUCTED SPURIOUS EMISSIONS

8.1 LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

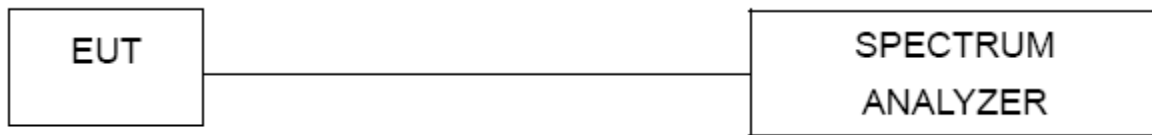
8.2 TEST PROCEDURE

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

Temperature: 22.2°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

8.7 TEST RESULTS

Please refer to the APPENDIX G.

9. POWER SPECTRAL DENSITY TEST

9.1 LIMIT

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

9.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW=3 kHz, VBW=10 kHz, Sweep time = Auto.
- c. The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 EUT TEST CONDITIONS

Temperature: 22.2°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

9.7 TEST RESULTS

Please refer to the APPENDIX H.

10. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 10, 2020
2	LISN	EMCO	3816/2	52765	Mar. 10, 2020
3	50ohm Terminator	SHX	TF5-3	15041305	Mar. 10, 2020
4	Artificial-Mains Network	SCHWARZBEC K	NSLK 8127	8127685	Mar. 10, 2020
5	TRANSIENT LIMITER	EM	EM-7600	772	Mar. 10, 2020
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Cable	N/A	RG223	12m	Mar. 12, 2020

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	Jan. 15, 2020
2	Cable	N/A	RG 213/U	C-102	Jun. 01, 2019
3	EMI Test Receiver	R&S	ESCI	100895	Mar. 10, 2020
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

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. 09, 2020
2	Amplifier	HP	8447D	2944A09673	Aug. 11, 2019
3	Receiver	Agilent	N9038A	MY52130039	Aug. 11, 2019
4	Cable	emci	LMR-400(30MHz-1GHz)(8m+5m)	N/A	May 25, 2019
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 09, 2020
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2019
3	Amplifier	Agilent	8449B	3008A02333	Mar. 10, 2020
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 10, 2020
5	Receiver	Agilent	N9038A	MY52130039	Aug. 11, 2019
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	mitron	B10-01-01-12M	18072744	Jul. 30, 2019
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 11, 2019

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series power meter	Agilent	N1911A	MY45100473	Aug. 11, 2019
2	wideband power sensor	Agilent	N1921A	MY51100041	Aug. 11, 2019

Antenna Conducted Spurious Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 11, 2019

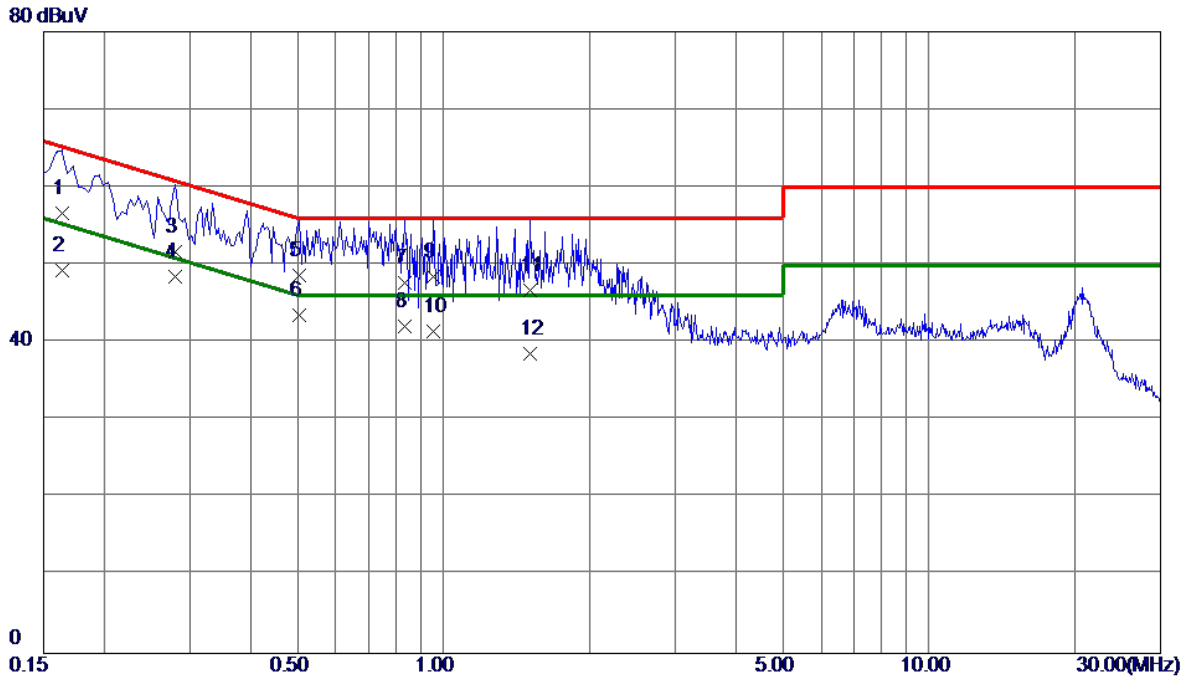
Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 11, 2019

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

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode: TX N20 MODE CHANNEL 06

Line



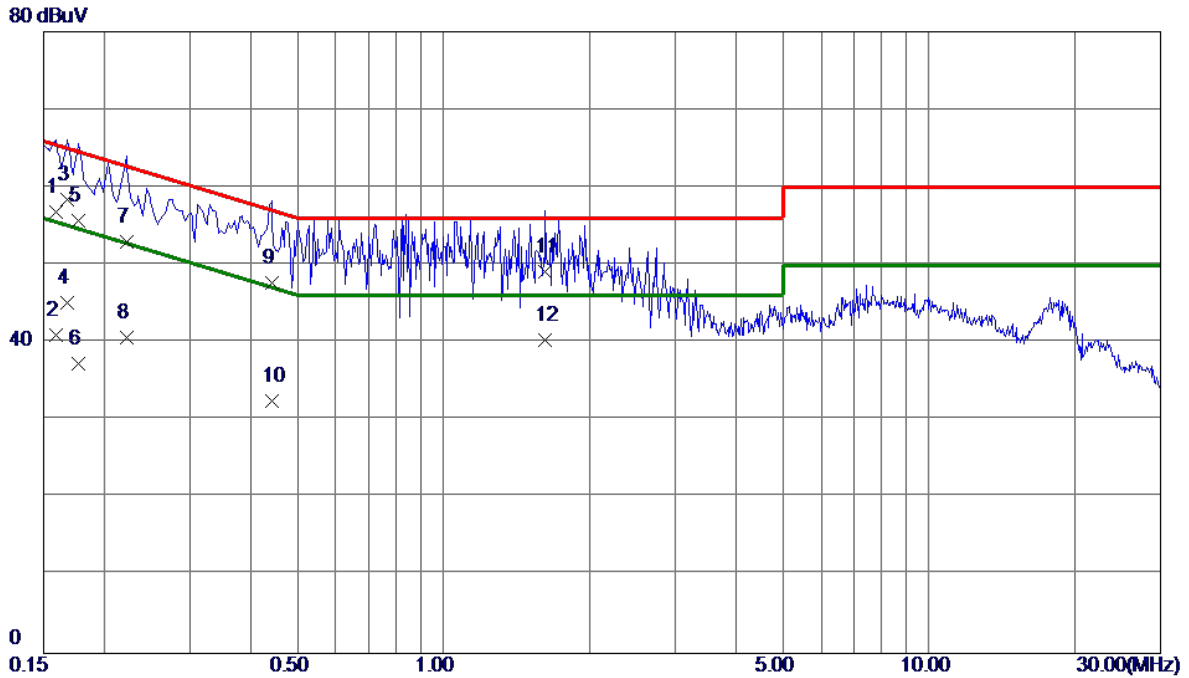
No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1635	46.80	9.82	56.62	65.28	-8.66	QP	
2	0.1635	39.40	9.82	49.22	55.28	-6.06	AVG	
3	0.2805	41.80	9.82	51.62	60.80	-9.18	QP	
4 *	0.2805	38.60	9.82	48.42	50.80	-2.38	AVG	
5	0.5055	38.90	9.79	48.69	56.00	-7.31	QP	
6	0.5055	33.70	9.79	43.49	46.00	-2.51	AVG	
7	0.8340	37.70	9.91	47.61	56.00	-8.39	QP	
8	0.8340	32.20	9.91	42.11	46.00	-3.89	AVG	
9	0.9510	38.50	9.92	48.42	56.00	-7.58	QP	
10	0.9510	31.50	9.92	41.42	46.00	-4.58	AVG	
11	1.5045	36.80	9.96	46.76	56.00	-9.24	QP	
12	1.5045	28.60	9.96	38.56	46.00	-7.44	AVG	

REMARKS:

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

Test Mode: TX N20 MODE CHANNEL 06

Neutral



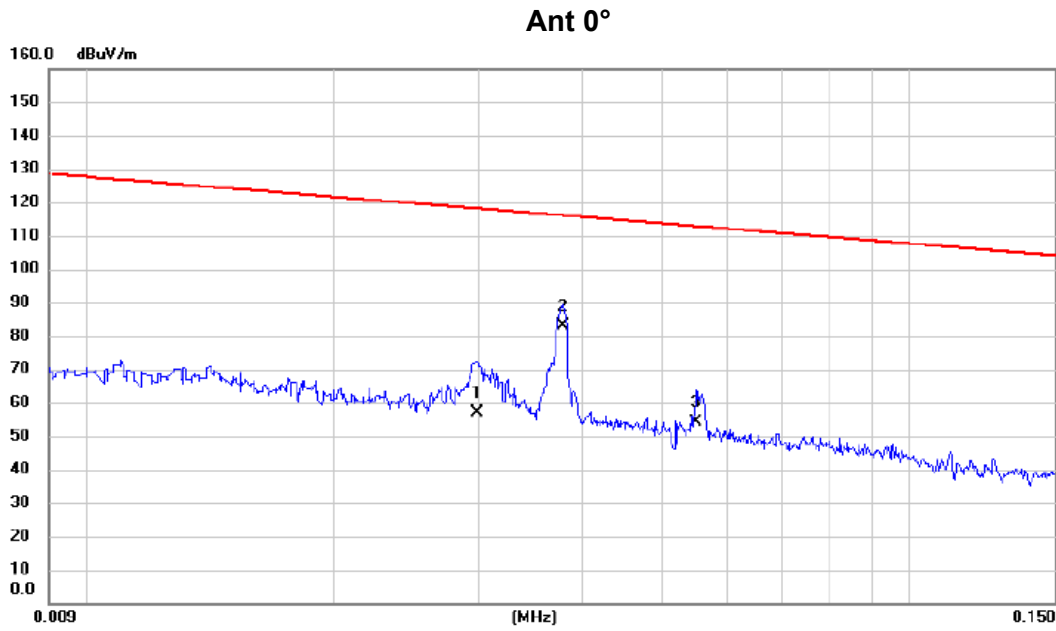
No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1590	46.90	9.91	56.81	65.52	-8.71	QP	
2	0.1590	31.00	9.91	40.91	55.52	-14.61	AVG	
3	0.1680	48.50	9.91	58.41	65.06	-6.65	QP	
4	0.1680	35.27	9.91	45.18	55.06	-9.88	AVG	
5	0.1770	45.81	9.91	55.72	64.63	-8.91	QP	
6	0.1770	27.41	9.91	37.32	54.63	-17.31	AVG	
7	0.2220	43.11	9.91	53.02	62.74	-9.72	QP	
8	0.2220	30.71	9.91	40.62	52.74	-12.12	AVG	
9	0.4425	37.79	9.95	47.74	57.01	-9.27	QP	
10	0.4425	22.59	9.95	32.54	47.01	-14.47	AVG	
11	1.6215	38.90	10.16	49.06	56.00	-6.94	QP	
12 *	1.6215	30.10	10.16	40.26	46.00	-5.74	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 N20 MODE CHANNEL 06



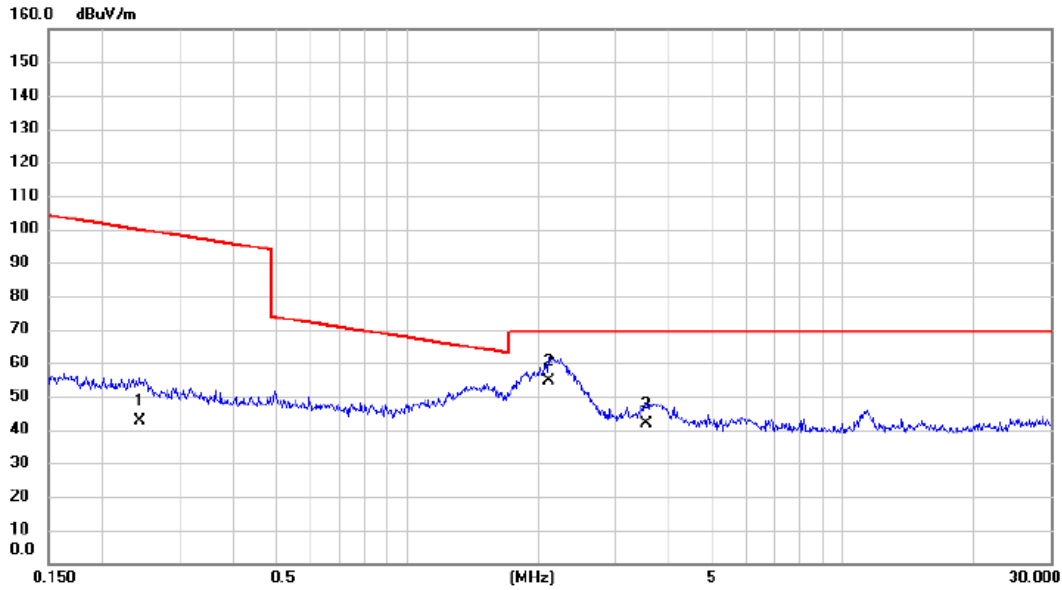
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0298	37.20	19.86	57.06	118.12	-61.06	AVG	
2	*	0.0380	63.10	19.73	82.83	116.01	-33.18	AVG	
3		0.0550	34.90	19.43	54.33	112.80	-58.47	AVG	

REMARKS:

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

Test Mode: TX N20 MODE CHANNEL 06

Ant 0°

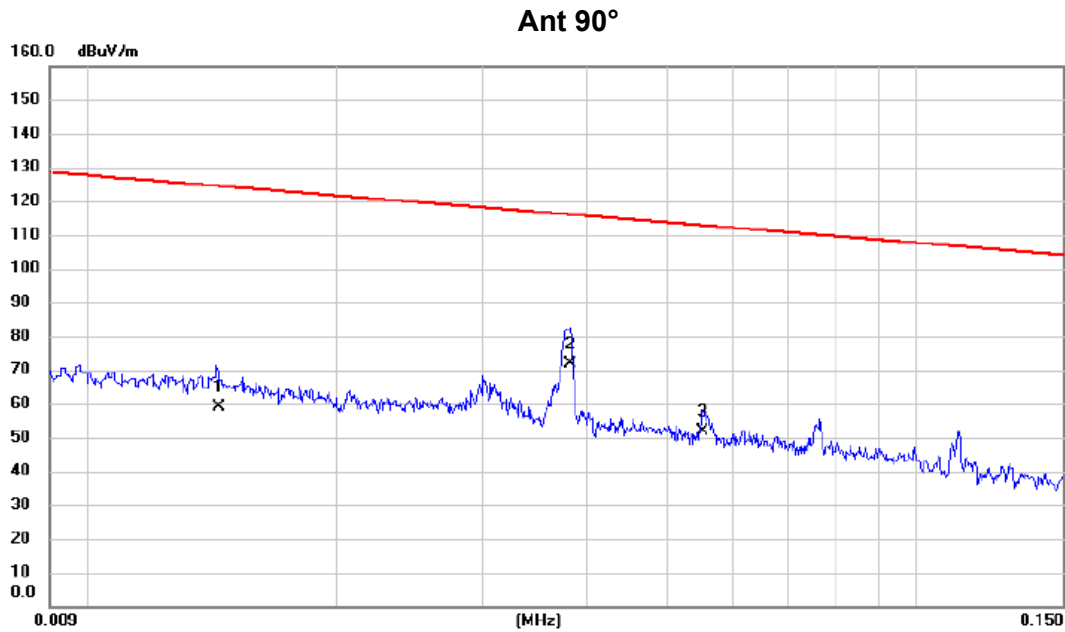


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2442	25.50	17.07	42.57	99.85	-57.28	AVG	
2	*	2.1213	37.70	17.05	54.75	69.54	-14.79	QP	
3		3.5466	25.60	16.10	41.70	69.54	-27.84	QP	

REMARKS:

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

Test Mode: TX N20 MODE CHANNEL 06



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0144	38.30	20.80	59.10	124.44	-65.34	AVG	
2	*	0.0382	52.10	19.73	71.83	115.96	-44.13	AVG	
3		0.0553	32.50	19.42	51.92	112.75	-60.83	AVG	

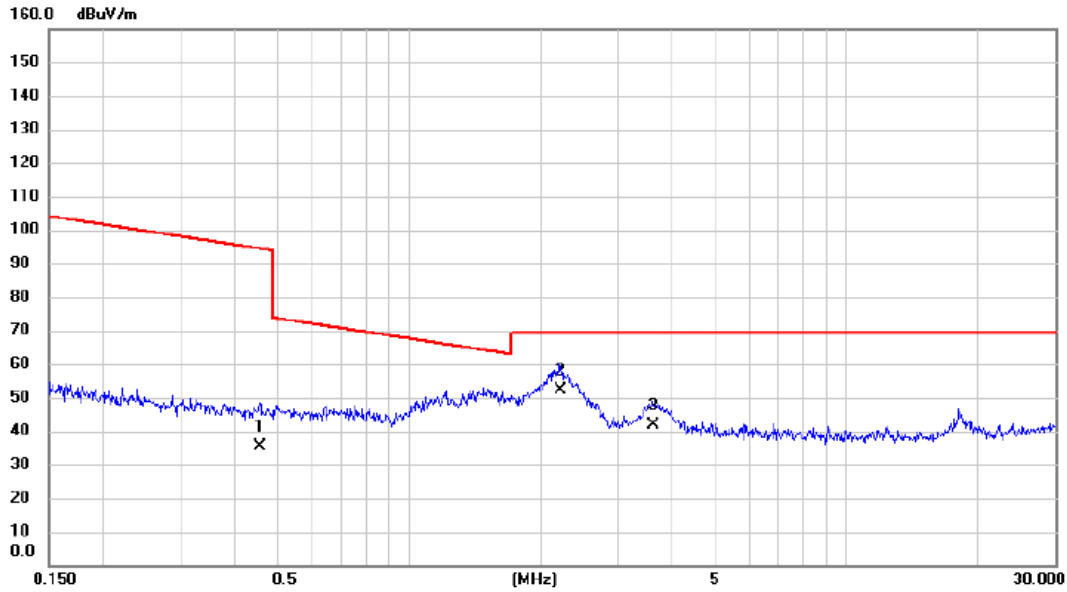
REMARKS:

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

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

Test Mode: TX N20 MODE CHANNEL 06

Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.4564	18.50	16.98	35.48	94.42	-58.94	AVG	
2	*	2.2132	35.40	16.99	52.39	69.54	-17.15	QP	
3		3.6034	25.80	16.06	41.86	69.54	-27.68	QP	

REMARKS:

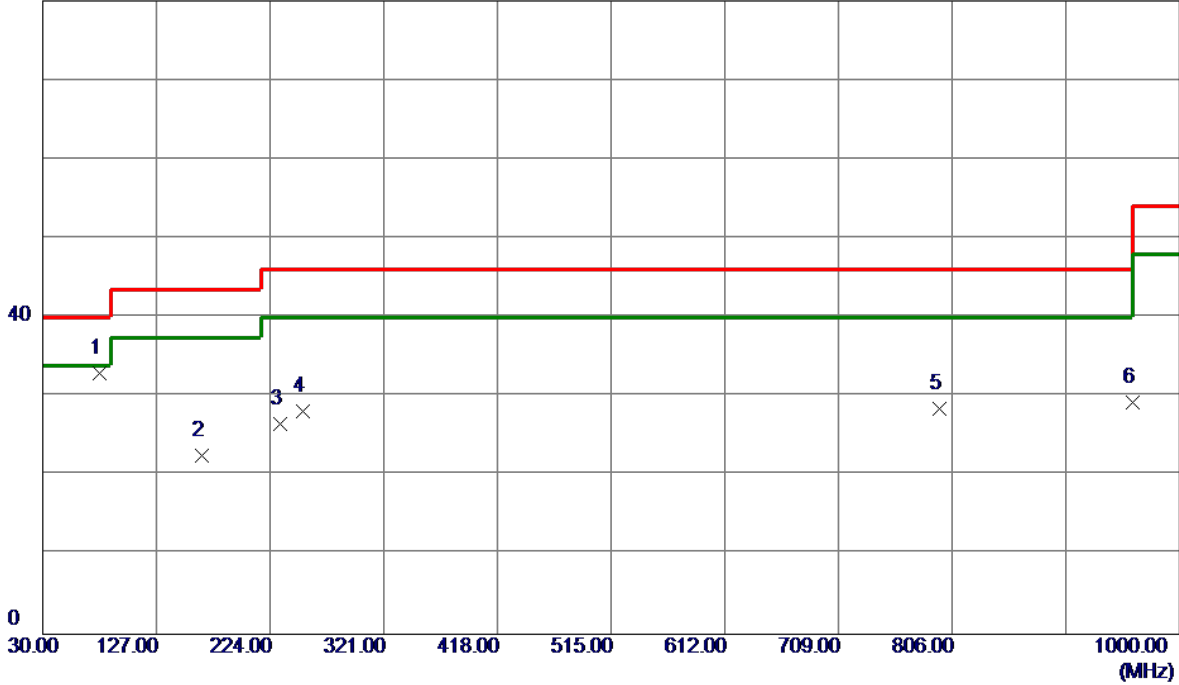
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode: TX N20 MODE CHANNEL 06

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	78.5000	51.53	-18.53	33.00	40.00	-7.00	Peak	
2	165.8000	33.49	-10.95	22.54	43.50	-20.96	Peak	
3	232.7300	41.44	-14.88	26.56	46.00	-19.44	Peak	
4	252.1300	42.33	-14.12	28.21	46.00	-17.79	Peak	
5	795.3300	29.75	-1.32	28.43	46.00	-17.57	Peak	
6	960.2300	28.14	1.17	29.31	54.00	-24.69	Peak	

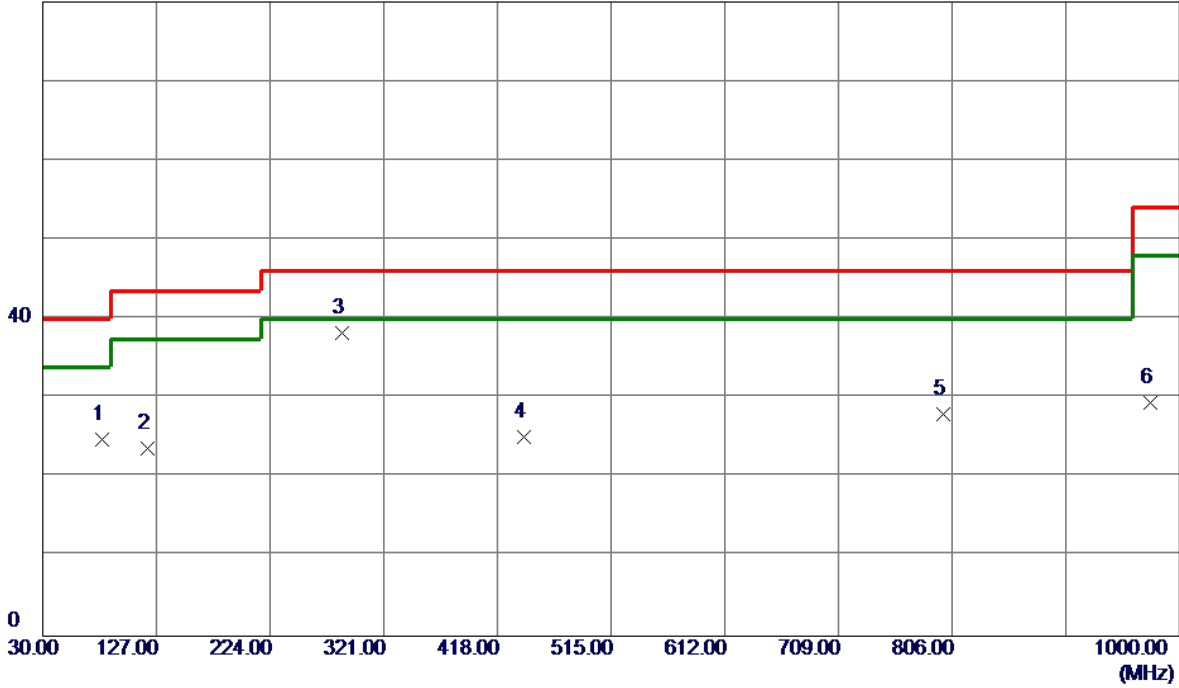
REMARKS:

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

Test Mode: TX N20 MODE CHANNEL 06

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	80.4400	43.36	-18.62	24.74	40.00	-15.26	Peak	
2	119.2400	38.44	-14.81	23.63	43.50	-19.87	Peak	
3 *	285.1099	49.36	-11.14	38.22	46.00	-7.78	Peak	
4	440.3100	32.98	-7.79	25.19	46.00	-20.81	Peak	
5	798.2400	29.18	-1.15	28.03	46.00	-17.97	Peak	
6	974.7800	28.69	0.82	29.51	54.00	-24.49	Peak	

REMARKS:

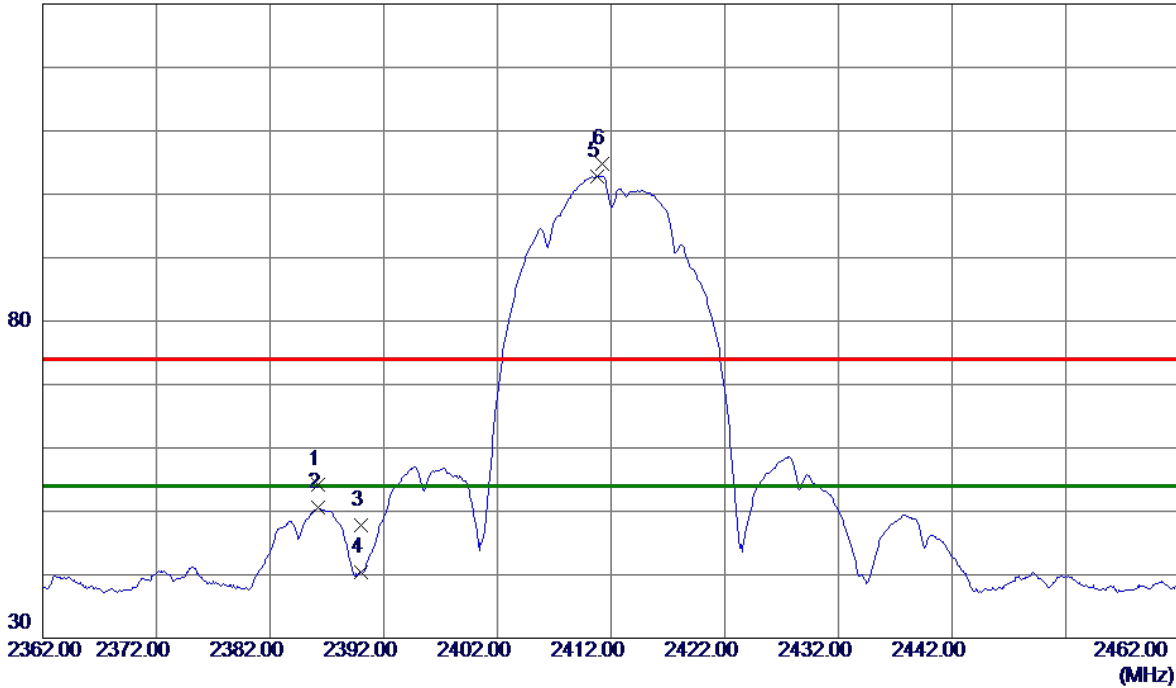
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2386.2000	47.11	7.01	54.12	74.00	-19.88	Peak	
2	2386.2000	43.50	7.01	50.51	54.00	-3.49	AVG	
3	2390.0000	40.75	7.01	47.76	74.00	-26.24	Peak	
4	2390.0000	33.45	7.01	40.46	54.00	-13.54	AVG	
5 *	2410.8000	95.81	7.02	102.83	54.00	48.83	AVG	No Limit
6	2411.2000	97.81	7.02	104.83	74.00	30.83	Peak	No Limit

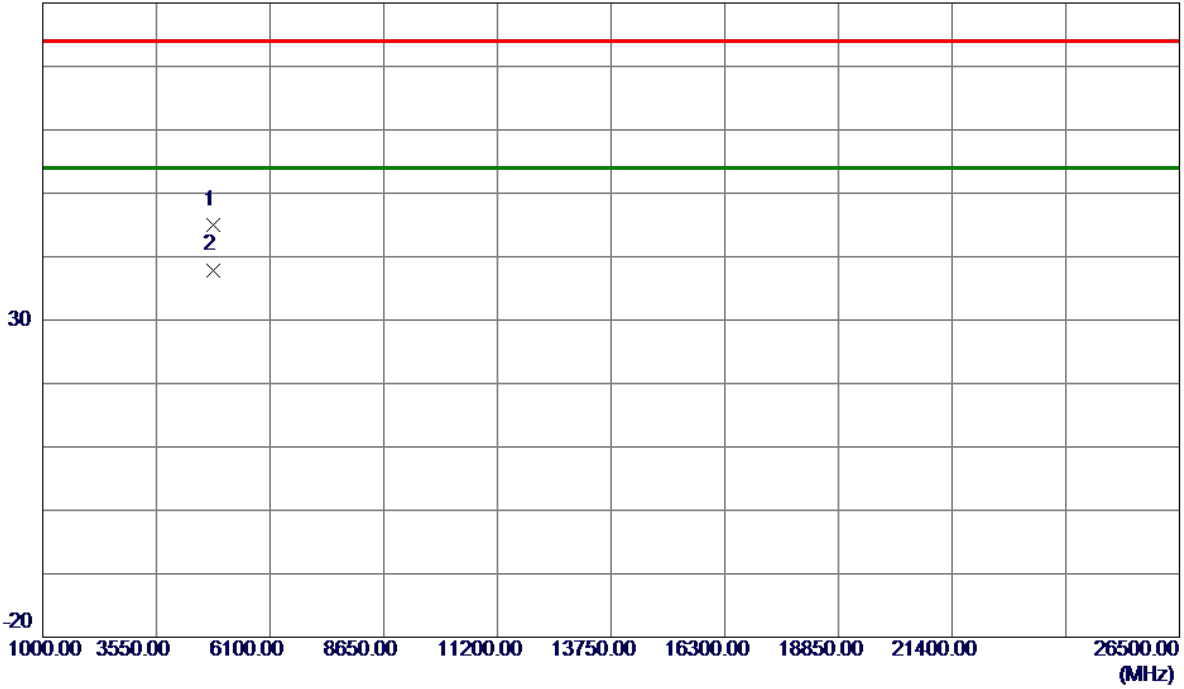
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz

Vertical

80 dBuV/m



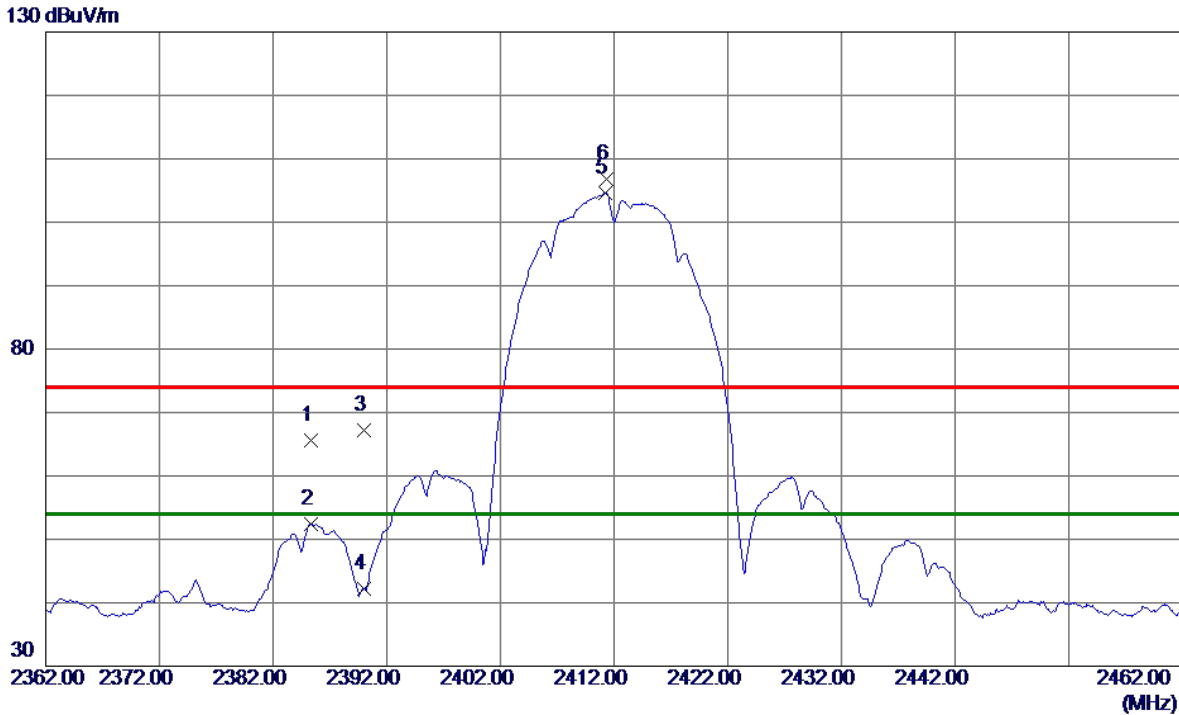
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.8480	40.85	4.23	45.08	74.00	-28.92	Peak	
2 *	4823.9680	33.67	4.23	37.90	54.00	-16.10	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2385.3000	58.56	7.01	65.57	74.00	-8.43	Peak	
2	2385.3000	45.41	7.01	52.42	54.00	-1.58	AVG	
3	2390.0000	60.11	7.01	67.12	74.00	-6.88	Peak	
4	2390.0000	35.27	7.01	42.28	54.00	-11.72	AVG	
5 *	2411.2000	97.57	7.02	104.59	54.00	50.59	AVG	No Limit
6	2411.3000	99.76	7.02	106.78	74.00	32.78	Peak	No Limit

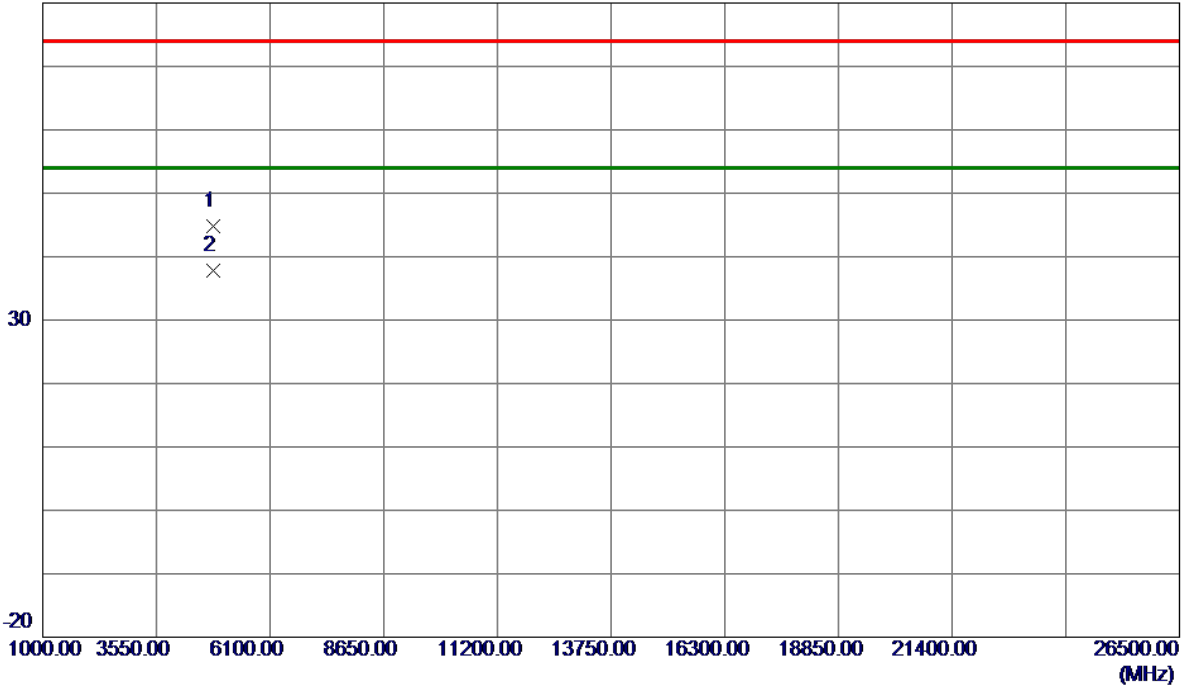
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2412 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.9480	40.56	4.23	44.79	74.00	-29.21	Peak	
2 *	4823.9900	33.61	4.23	37.84	54.00	-16.16	AVG	

REMARKS:

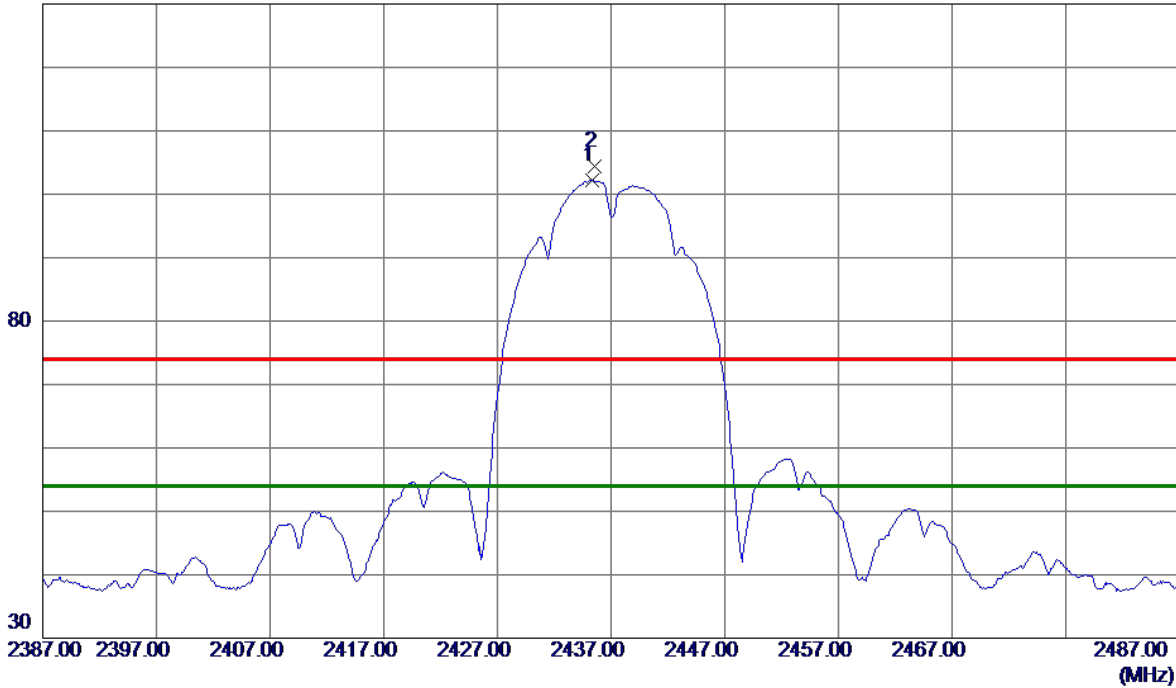
(1) Measurement Value = Reading Level + Correct Factor.

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2437 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2435.3000	95.23	7.02	102.25	54.00	48.25	AVG	No Limit
2	2435.6000	97.46	7.02	104.48	74.00	30.48	Peak	No Limit

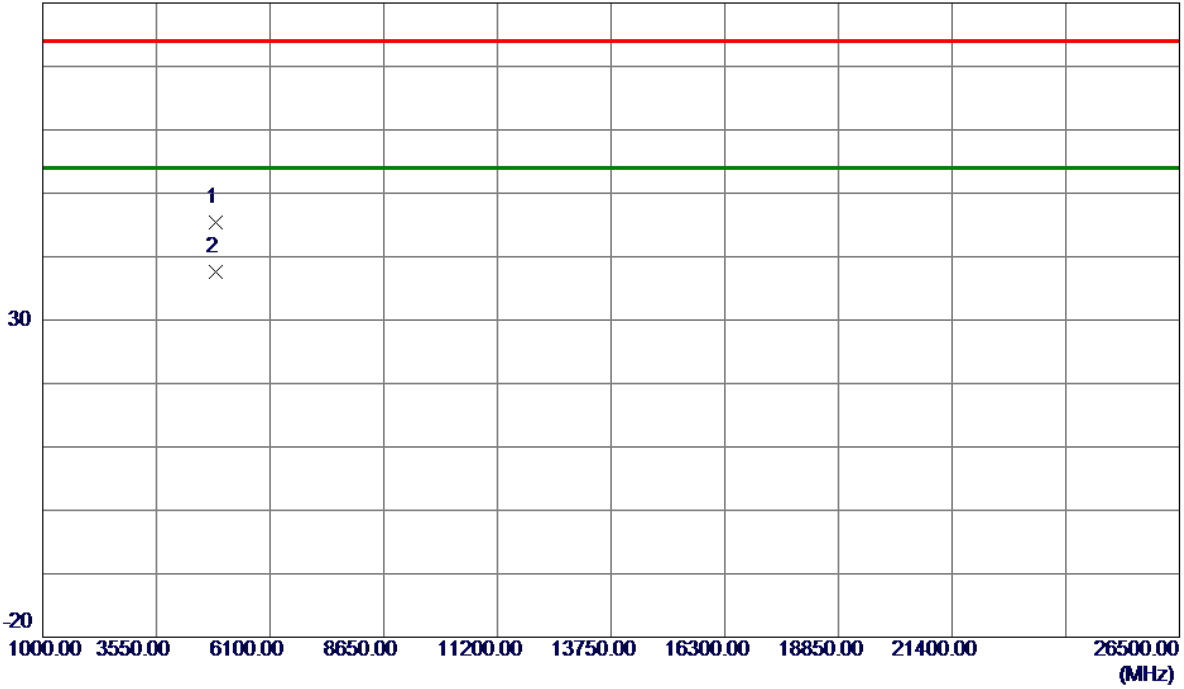
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2437 MHz

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.9340	41.04	4.34	45.38	74.00	-28.62	Peak	
2 *	4874.0099	33.17	4.34	37.51	54.00	-16.49	AVG	

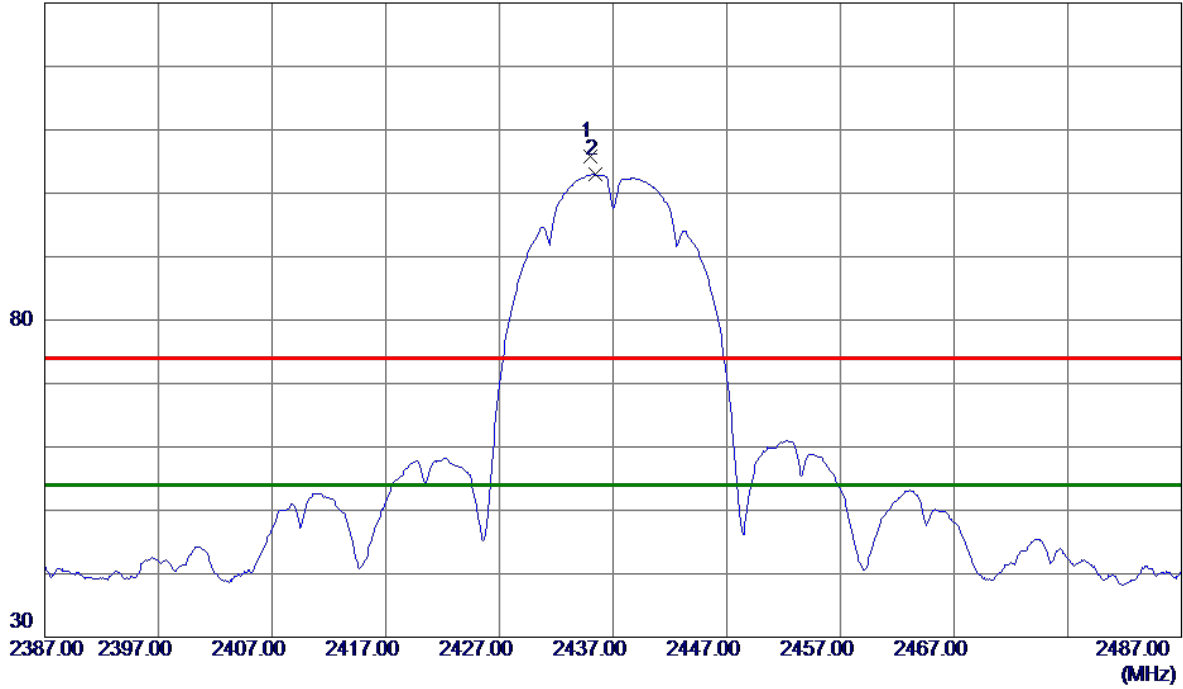
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2437 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2435.0000	98.77	7.02	105.79	74.00	31.79	Peak	No Limit
2 *	2435.4000	96.01	7.02	103.03	54.00	49.03	AVG	No Limit

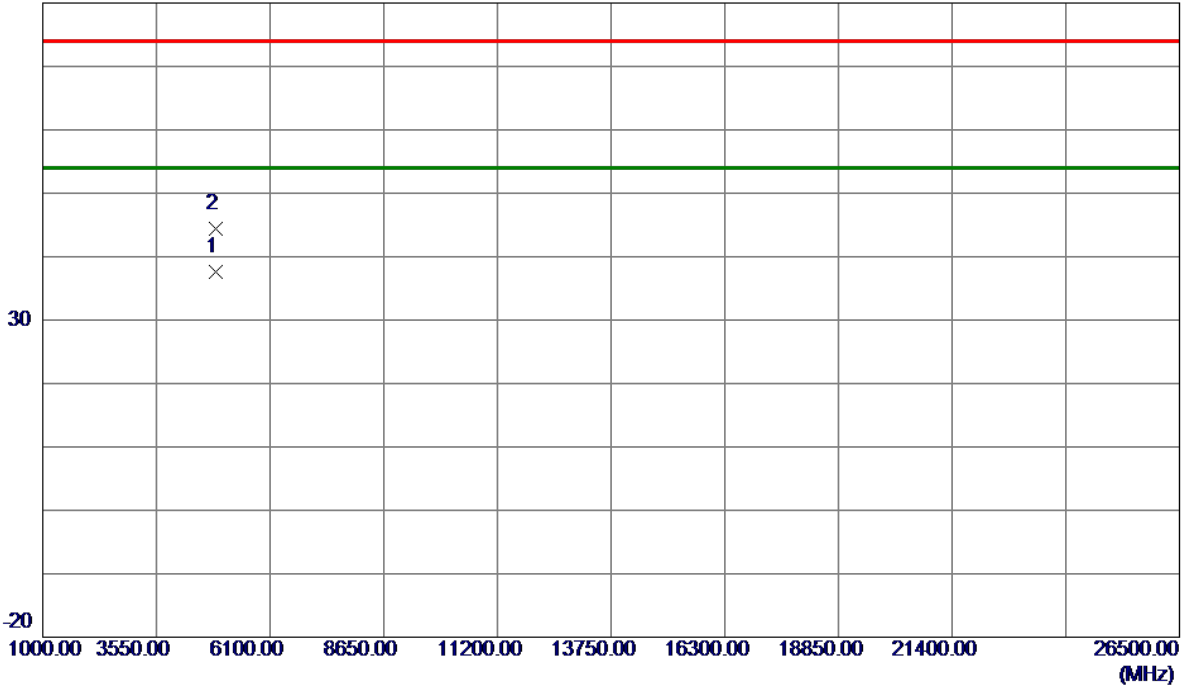
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2437 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4873.9860	33.34	4.34	37.68	54.00	-16.32	AVG	
2	4874.0259	40.06	4.34	44.40	74.00	-29.60	Peak	

REMARKS:

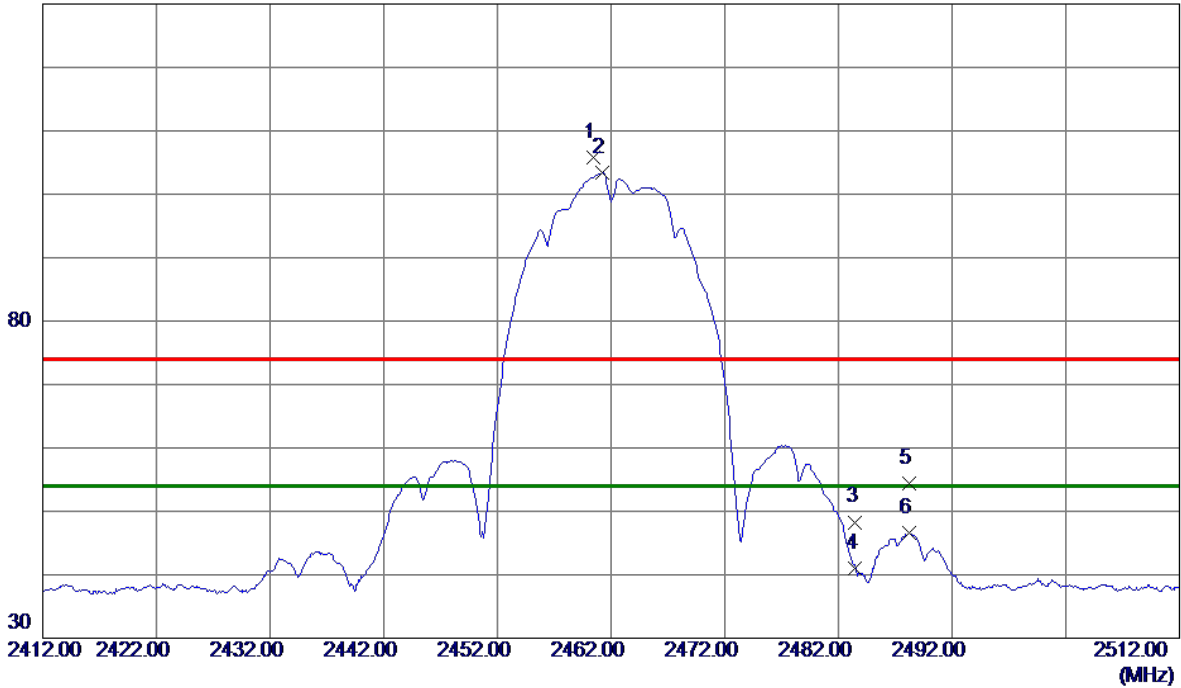
(1) Measurement Value = Reading Level + Correct Factor.

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2460.4000	98.70	7.03	105.73	74.00	31.73	Peak	No Limit
2 *	2461.2000	96.31	7.03	103.34	54.00	49.34	AVG	No Limit
3	2483.5000	41.27	7.03	48.30	74.00	-25.70	Peak	
4	2483.5000	34.02	7.03	41.05	54.00	-12.95	AVG	
5	2488.2000	47.41	7.03	54.44	74.00	-19.56	Peak	
6	2488.2000	39.49	7.03	46.52	54.00	-7.48	AVG	

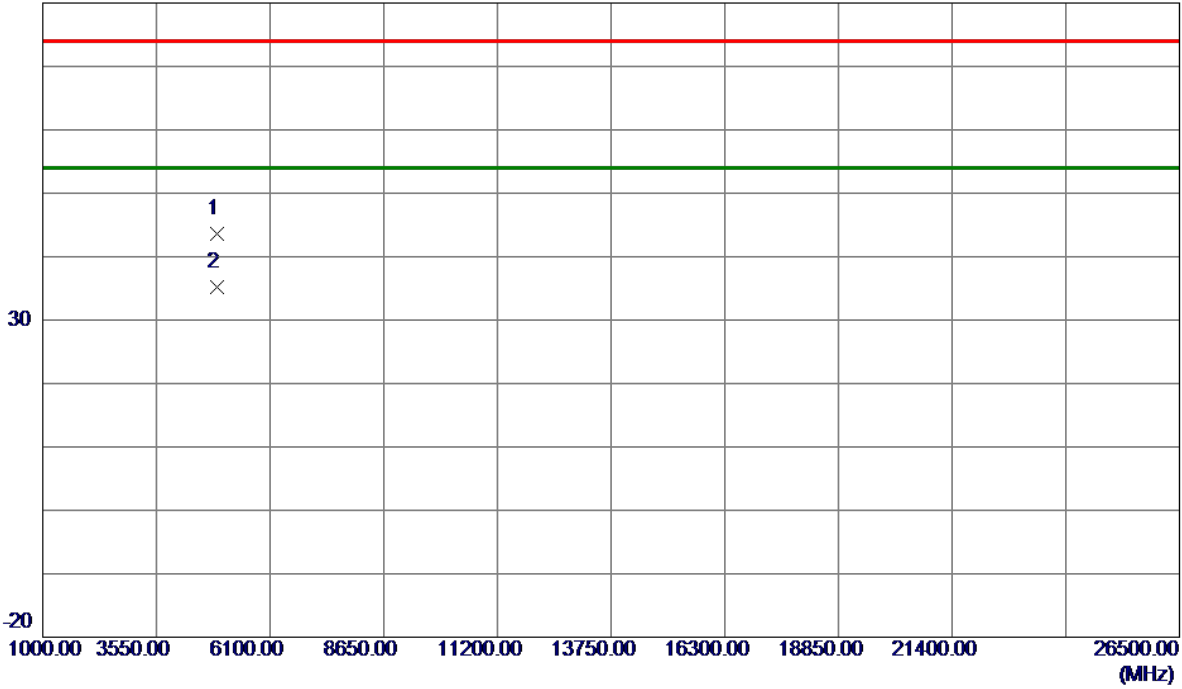
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.9060	39.18	4.44	43.62	74.00	-30.38	Peak	
2 *	4923.9480	30.84	4.44	35.28	54.00	-18.72	AVG	

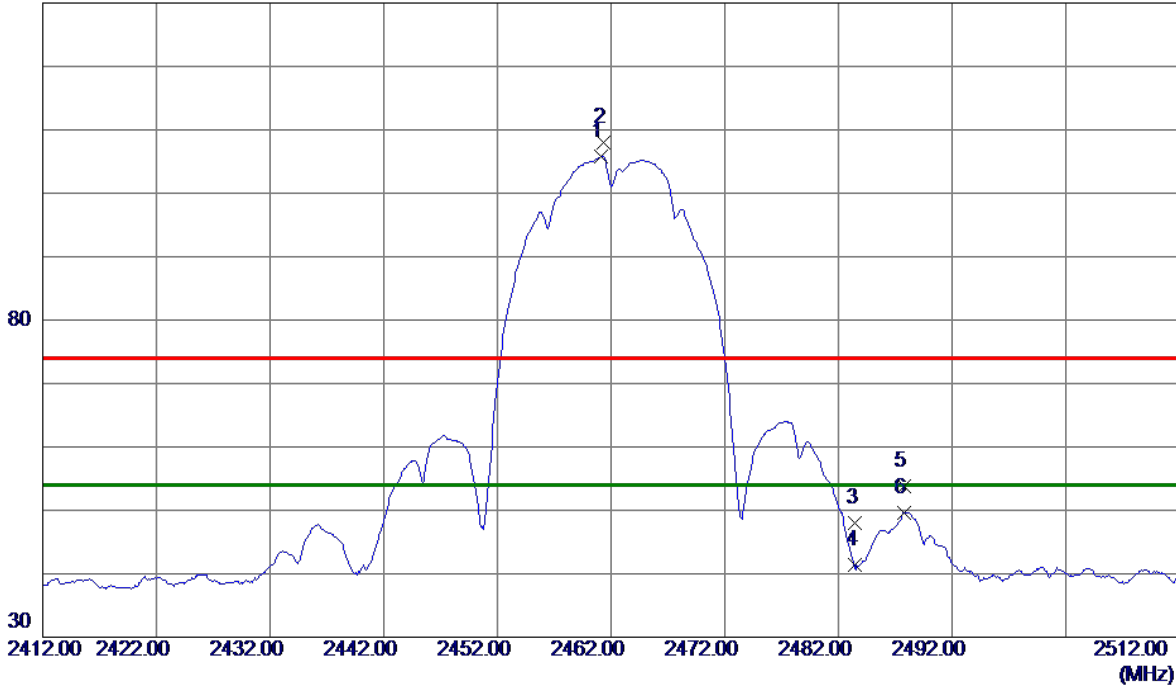
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2461.1000	98.74	7.03	105.77	54.00	51.77	AVG	No Limit
2	2461.3000	100.95	7.03	107.98	74.00	33.98	Peak	No Limit
3	2483.5000	41.04	7.03	48.07	74.00	-25.93	Peak	
4	2483.5000	34.45	7.03	41.48	54.00	-12.52	AVG	
5	2487.8000	46.76	7.03	53.79	74.00	-20.21	Peak	
6	2487.8000	42.64	7.03	49.67	54.00	-4.33	AVG	

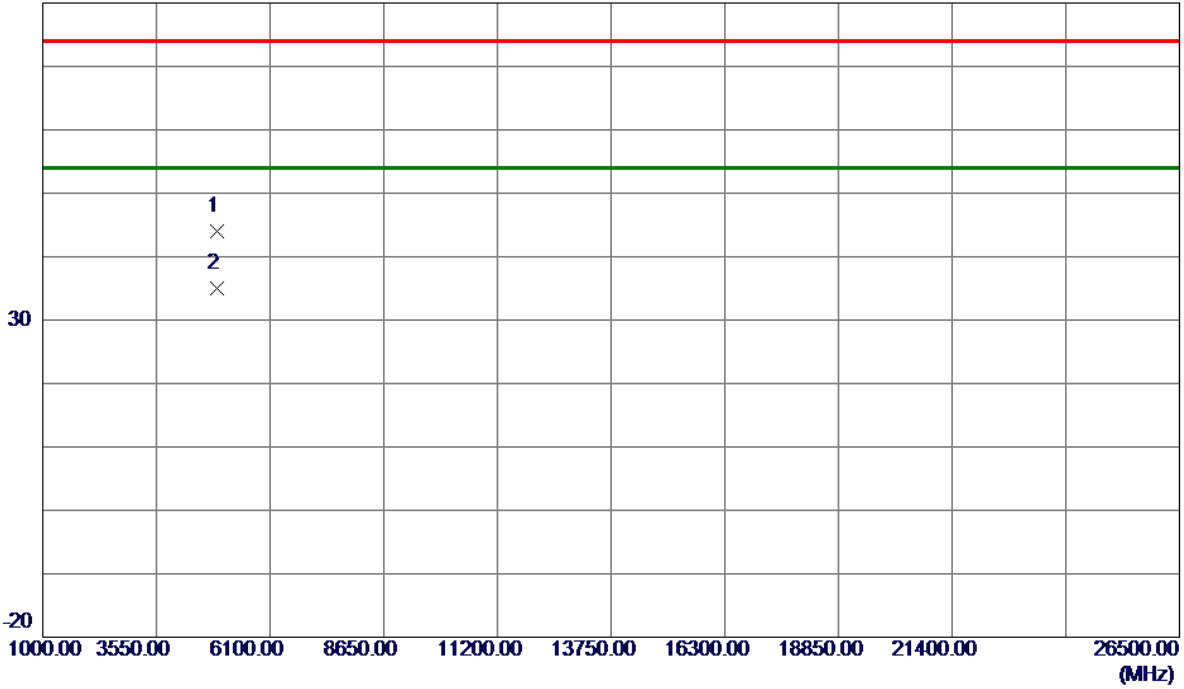
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX B Mode 2462 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.9120	39.58	4.44	44.02	74.00	-29.98	Peak	
2 *	4923.9560	30.64	4.44	35.08	54.00	-18.92	AVG	

REMARKS:

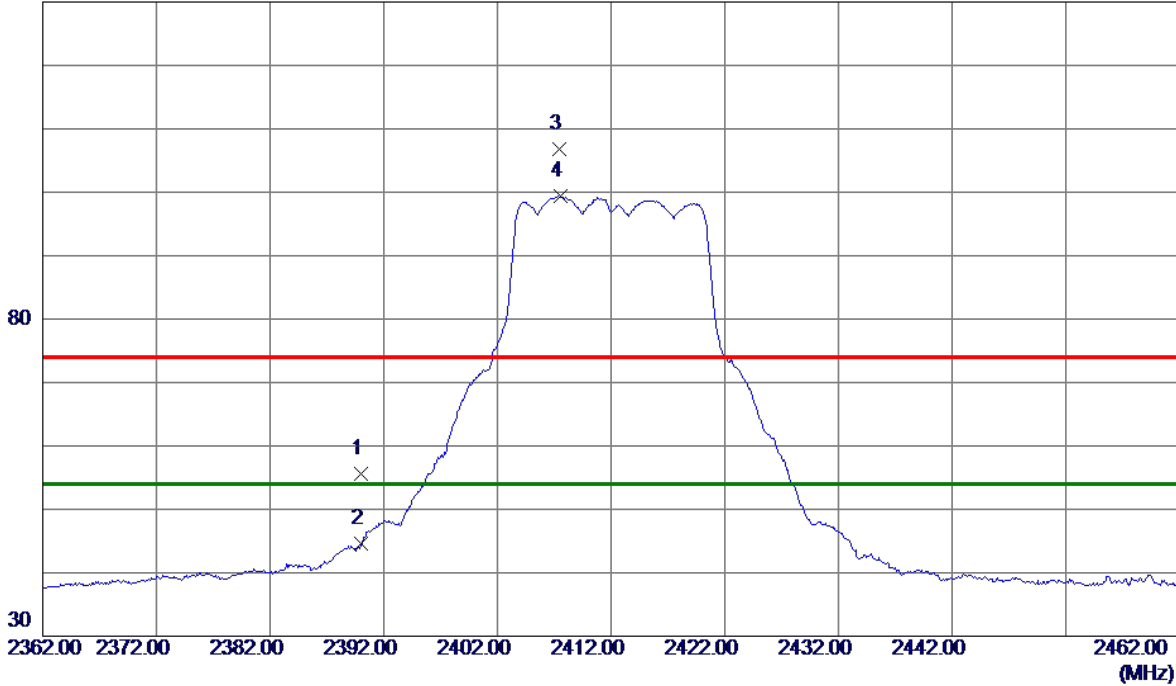
(1) Measurement Value = Reading Level + Correct Factor.

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	48.66	7.01	55.67	74.00	-18.33	Peak	
2	2390.0000	37.56	7.01	44.57	54.00	-9.43	AVG	
3	2407.4000	99.71	7.02	106.73	74.00	32.73	Peak	No Limit
4 *	2407.6000	92.33	7.02	99.35	54.00	45.35	AVG	No Limit

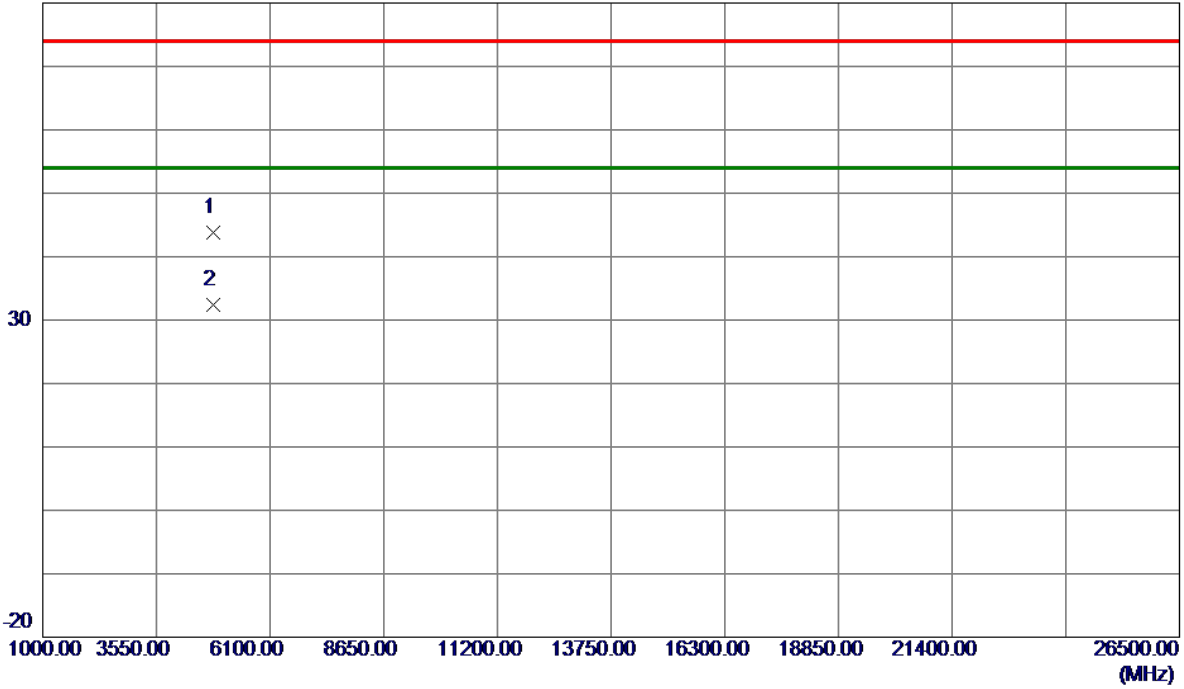
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz

Vertical

80 dBuV/m



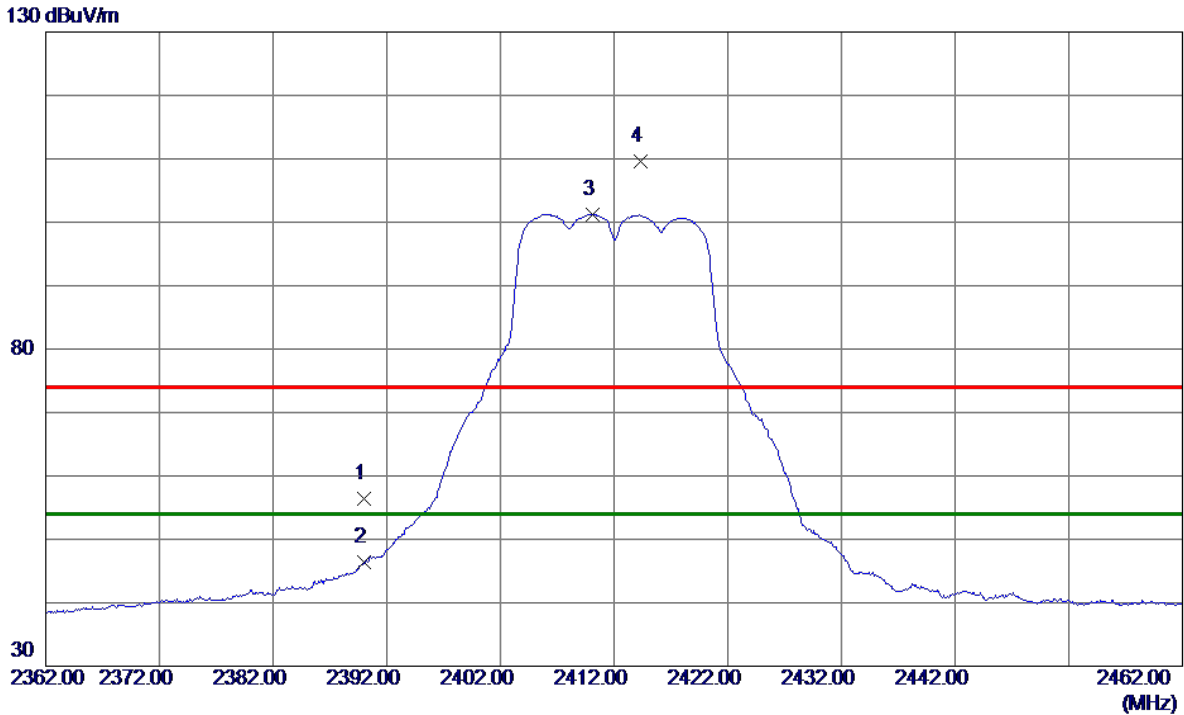
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.5600	39.62	4.23	43.85	74.00	-30.15	Peak	
2 *	4824.4540	28.10	4.23	32.33	54.00	-21.67	AVG	

REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	49.37	7.01	56.38	74.00	-17.62	Peak	
2	2390.0000	39.45	7.01	46.46	54.00	-7.54	AVG	
3 *	2410.1000	94.27	7.02	101.29	54.00	47.29	AVG	No Limit
4	2414.3000	102.54	7.02	109.56	74.00	35.56	Peak	No Limit

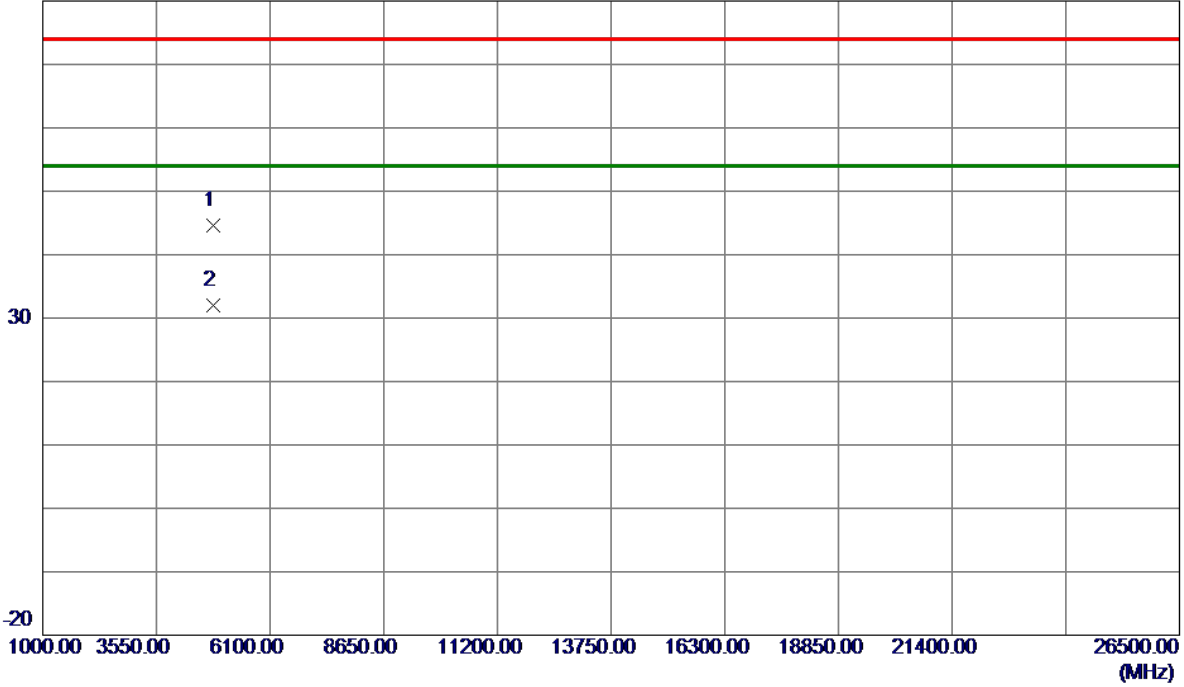
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2412 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4824.3400	40.33	4.23	44.56	74.00	-29.44	Peak	
2 *	4824.6800	27.81	4.23	32.04	54.00	-21.96	AVG	

REMARKS:

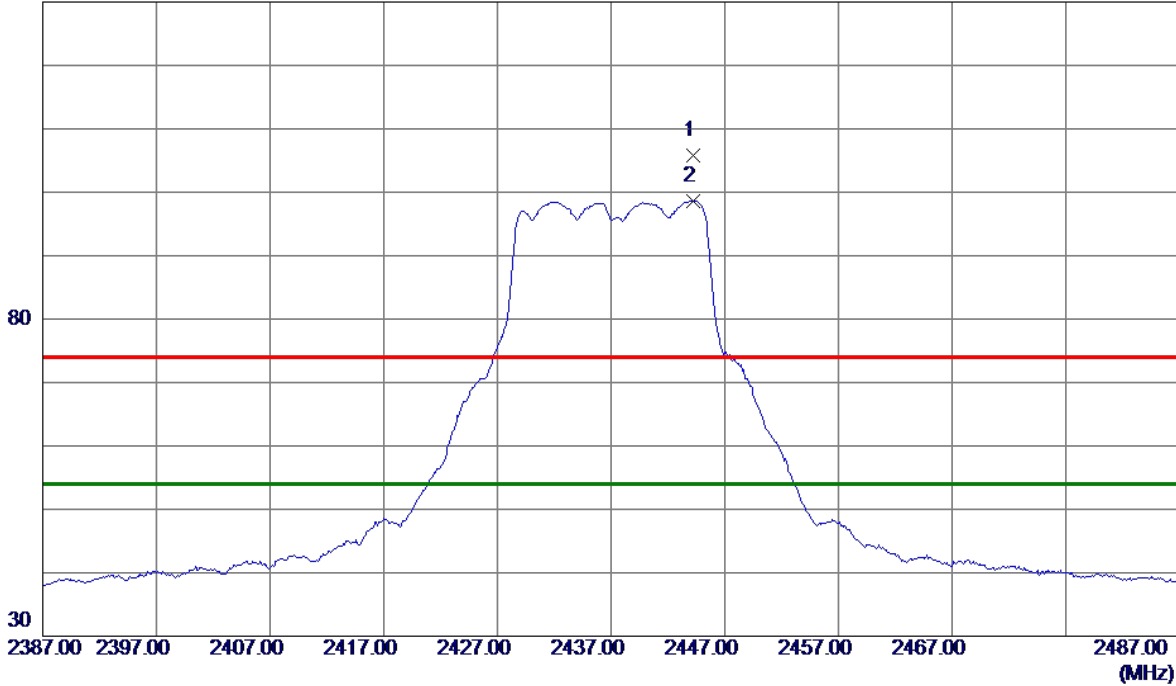
(1) Measurement Value = Reading Level + Correct Factor.

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2437 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2444.2000	98.83	7.02	105.85	74.00	31.85	Peak	No Limit
2 *	2444.2000	91.67	7.02	98.69	54.00	44.69	AVG	No Limit

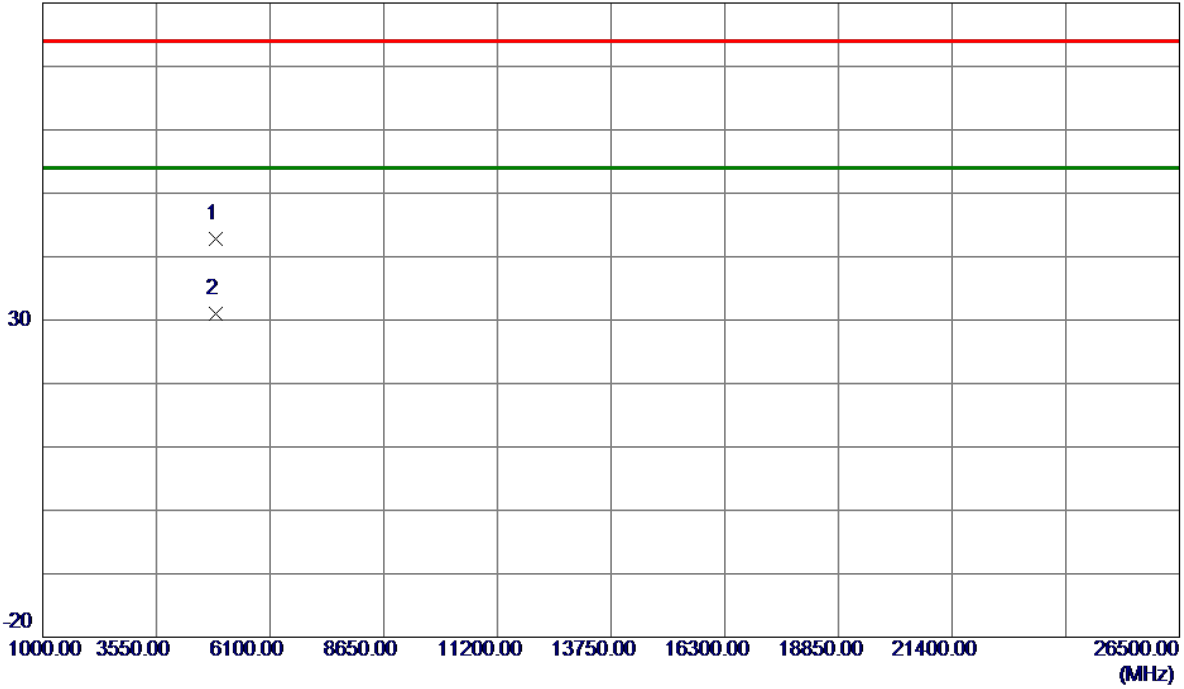
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2437 MHz

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.7540	38.49	4.34	42.83	74.00	-31.17	Peak	
2 *	4874.5760	26.59	4.34	30.93	54.00	-23.07	AVG	

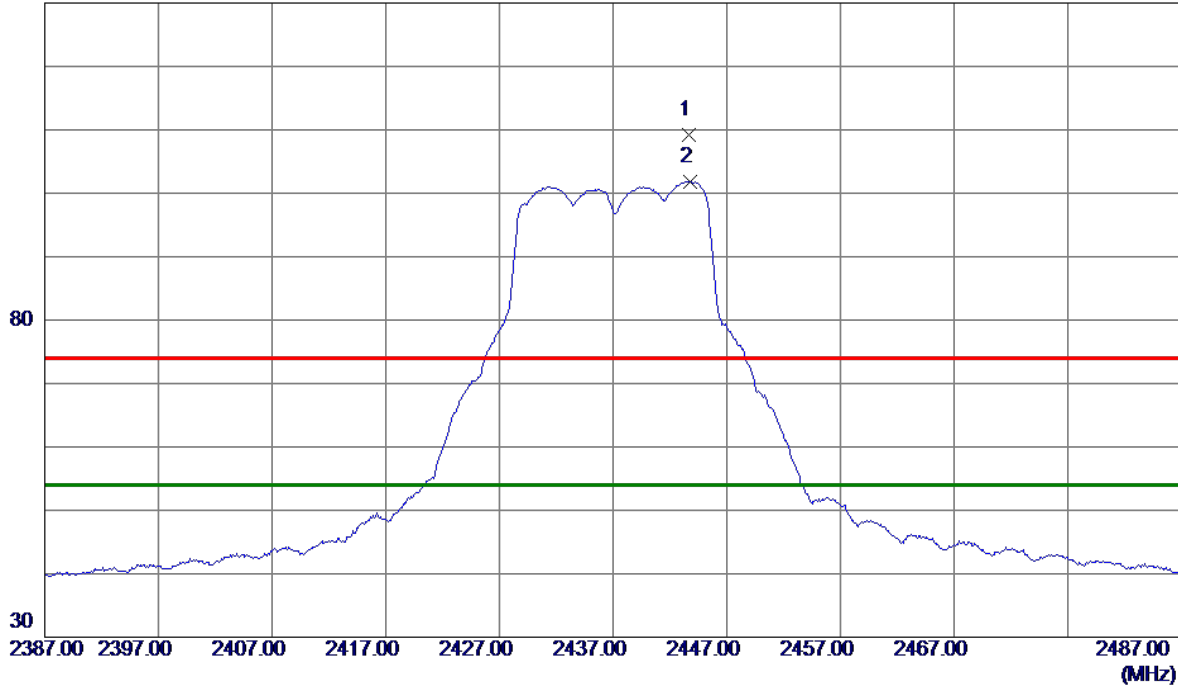
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2437 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2443.7000	102.15	7.02	109.17	74.00	35.17	Peak	No Limit
2 *	2443.8000	94.87	7.02	101.89	54.00	47.89	AVG	No Limit

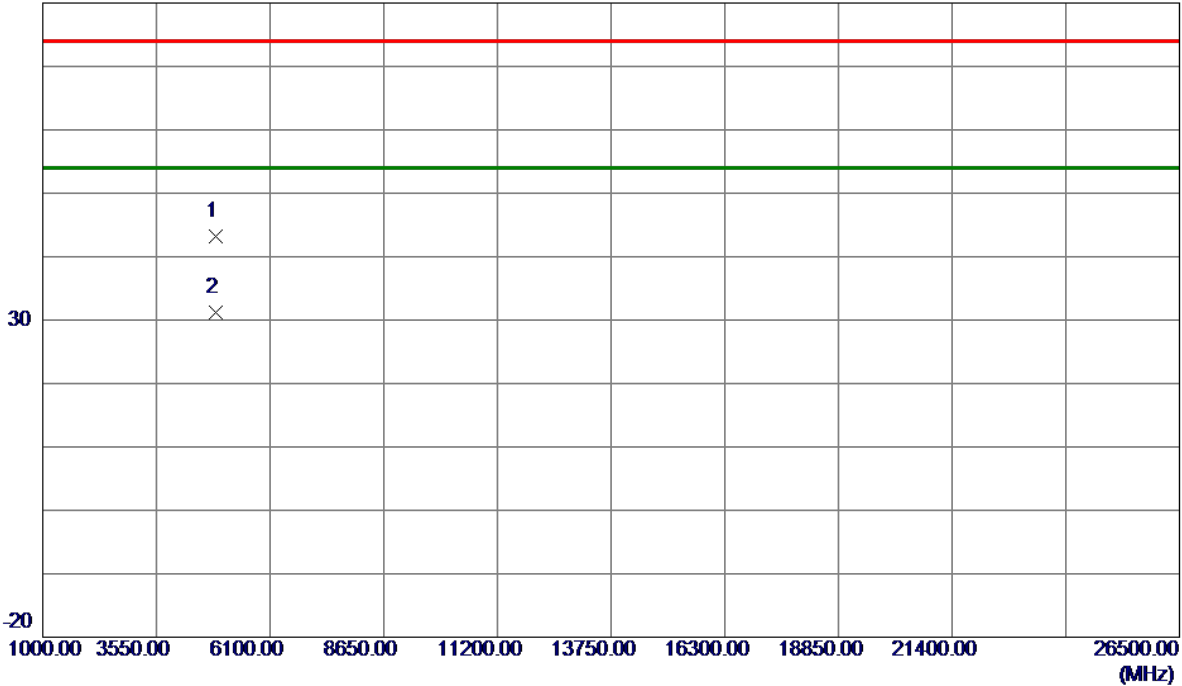
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2437 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.9100	38.83	4.34	43.17	74.00	-30.83	Peak	
2 *	4874.9820	26.79	4.34	31.13	54.00	-22.87	AVG	

REMARKS:

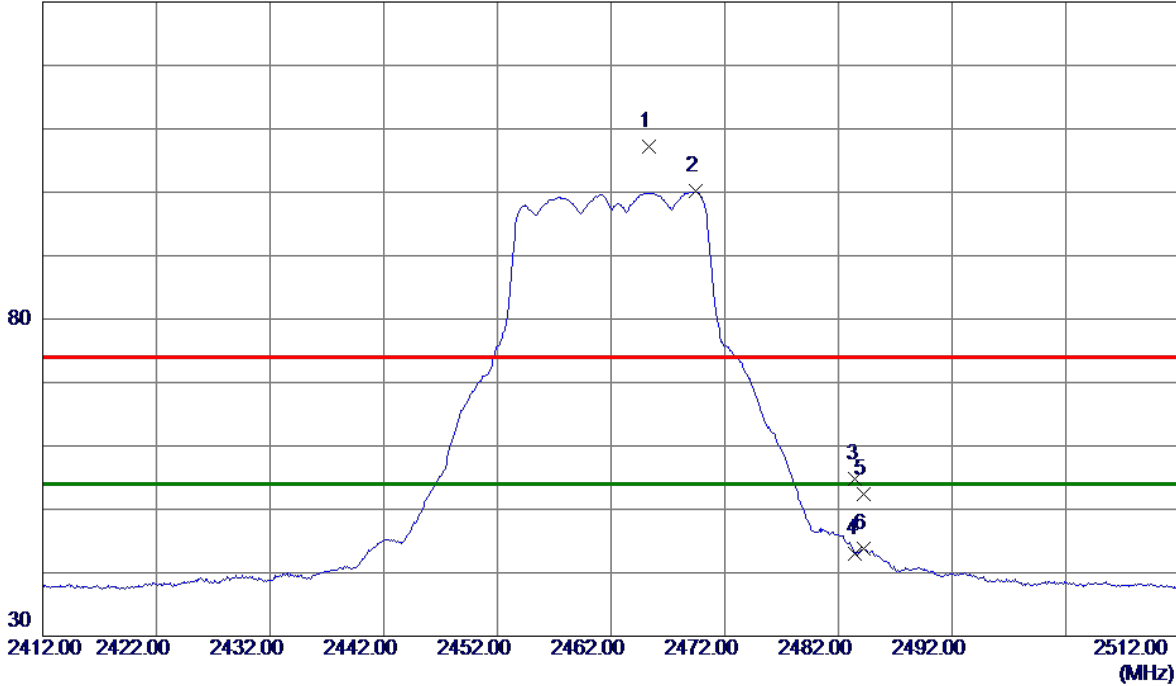
(1) Measurement Value = Reading Level + Correct Factor.

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2465.3000	100.23	7.03	107.26	74.00	33.26	Peak	No Limit
2 *	2469.4000	93.11	7.03	100.14	54.00	46.14	AVG	No Limit
3	2483.5000	47.76	7.03	54.79	74.00	-19.21	Peak	
4	2483.5000	35.95	7.03	42.98	54.00	-11.02	AVG	
5	2484.2000	45.30	7.03	52.33	74.00	-21.67	Peak	
6	2484.2000	36.85	7.03	43.88	54.00	-10.12	AVG	

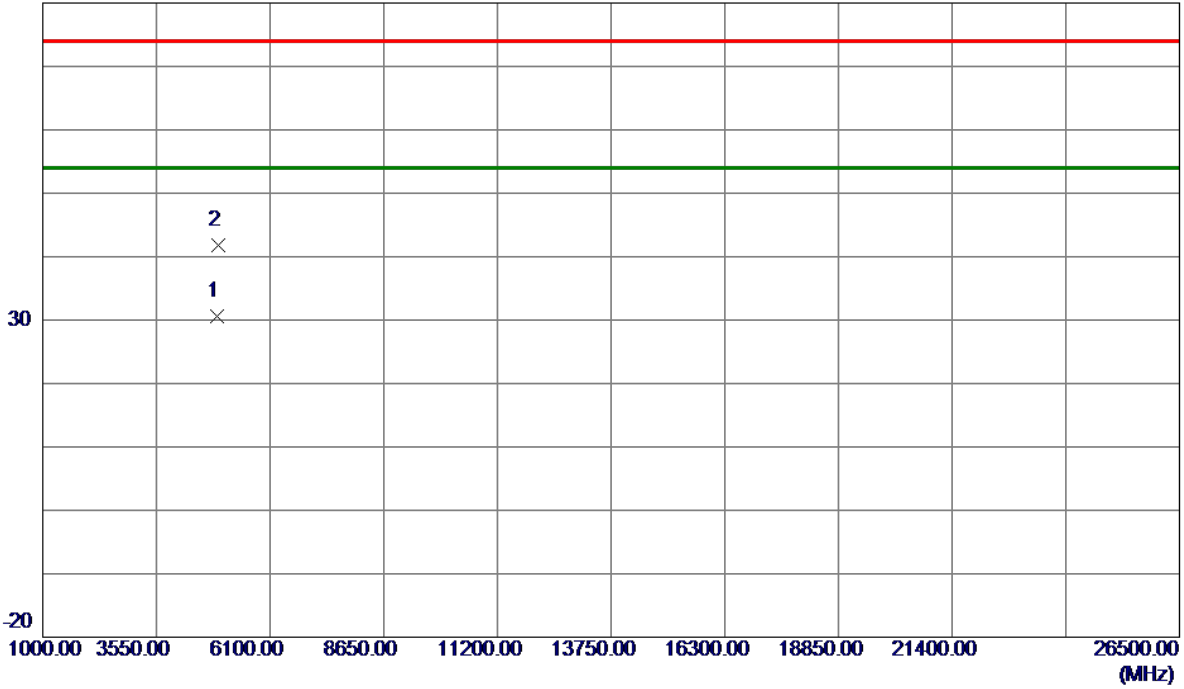
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz

Vertical

80 dBuV/m



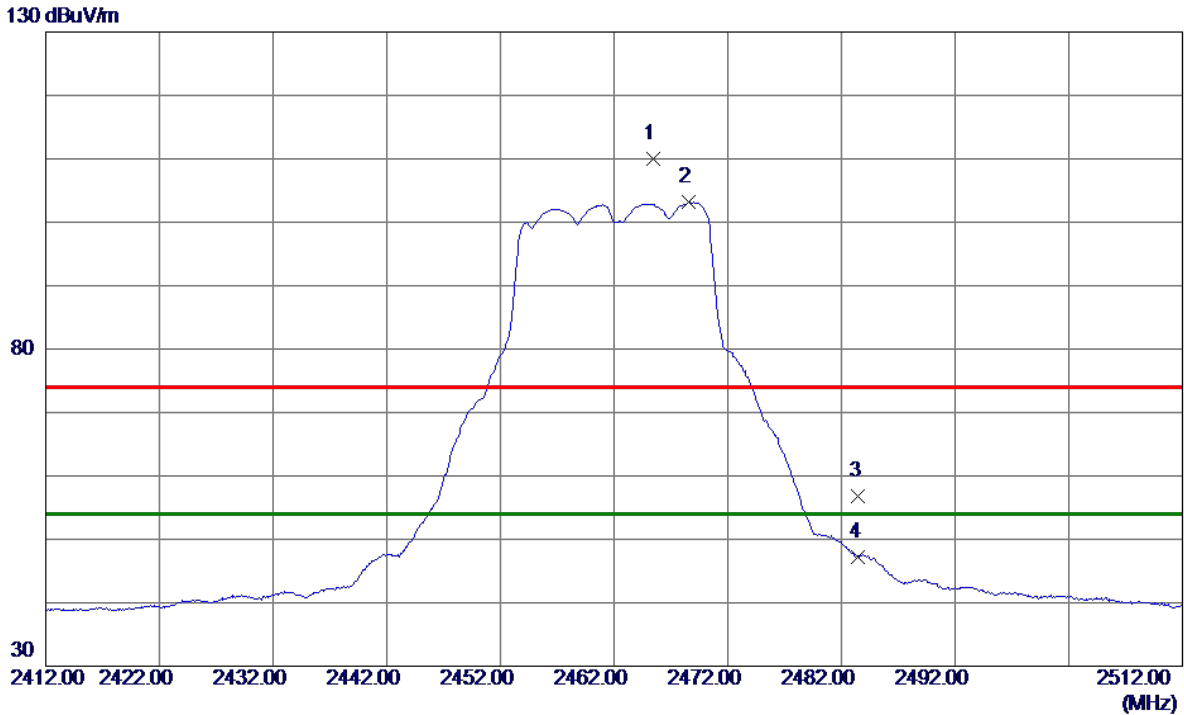
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4923.5040	26.21	4.44	30.65	54.00	-23.35	AVG	
2	4924.1840	37.27	4.44	41.71	74.00	-32.29	Peak	

REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2465.4000	102.94	7.03	109.97	74.00	35.97	Peak	No Limit
2 *	2468.6000	96.11	7.03	103.14	54.00	49.14	AVG	No Limit
3	2483.5000	49.76	7.03	56.79	74.00	-17.21	Peak	
4	2483.5000	40.26	7.03	47.29	54.00	-6.71	AVG	

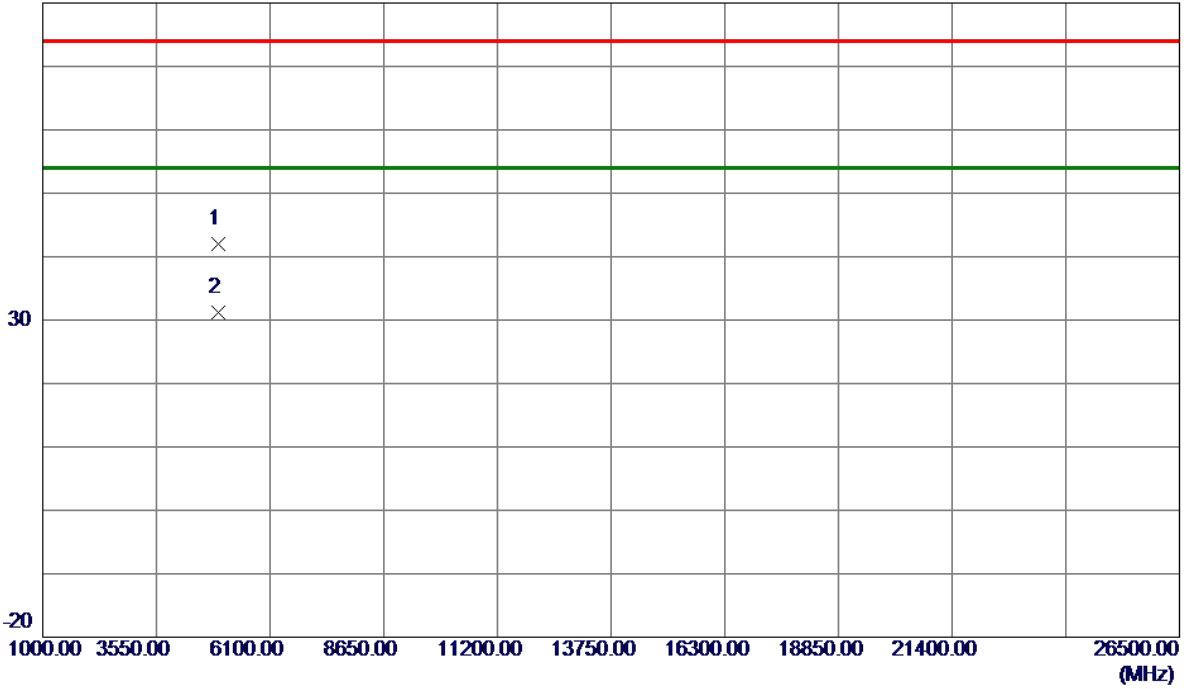
REMARKS:

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

Orthogonal Axis	X
Test Mode:	TX G Mode 2462 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4924.5379	37.58	4.44	42.02	74.00	-31.98	Peak	
2 *	4924.9560	26.76	4.44	31.20	54.00	-22.80	AVG	

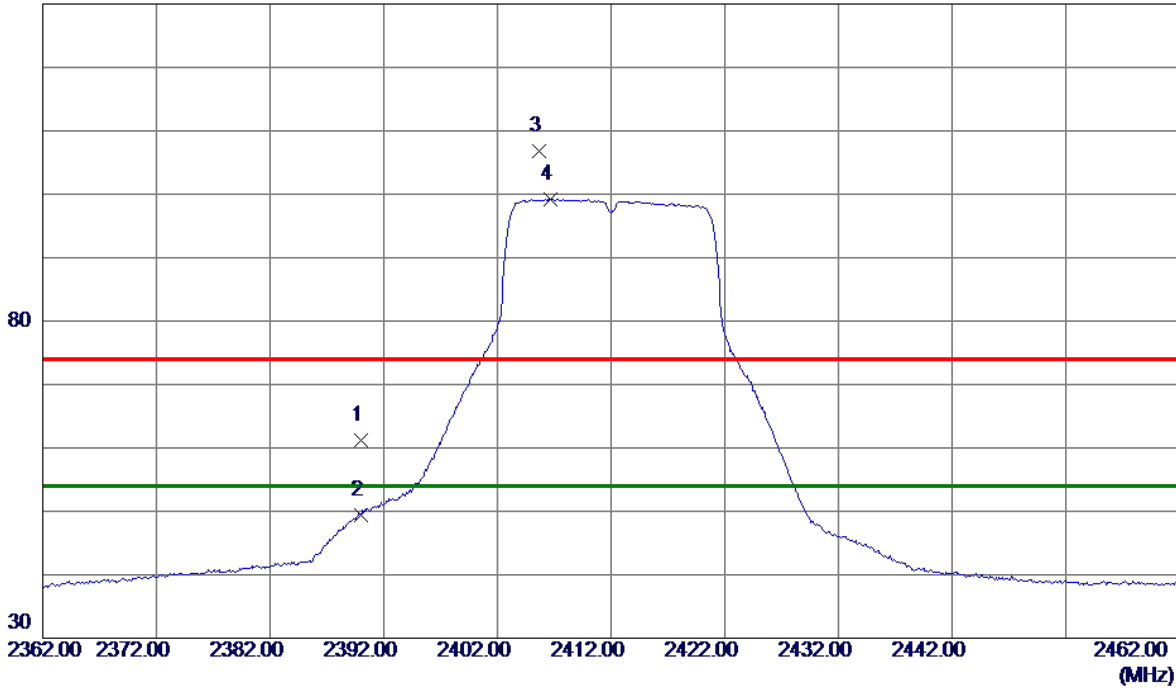
REMARKS:

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

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

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	54.10	7.01	61.11	74.00	-12.89	Peak	
2	2390.0000	42.37	7.01	49.38	54.00	-4.62	AVG	
3	2405.7000	99.76	7.02	106.78	74.00	32.78	Peak	No Limit
4 *	2406.7000	92.23	7.02	99.25	54.00	45.25	AVG	No Limit

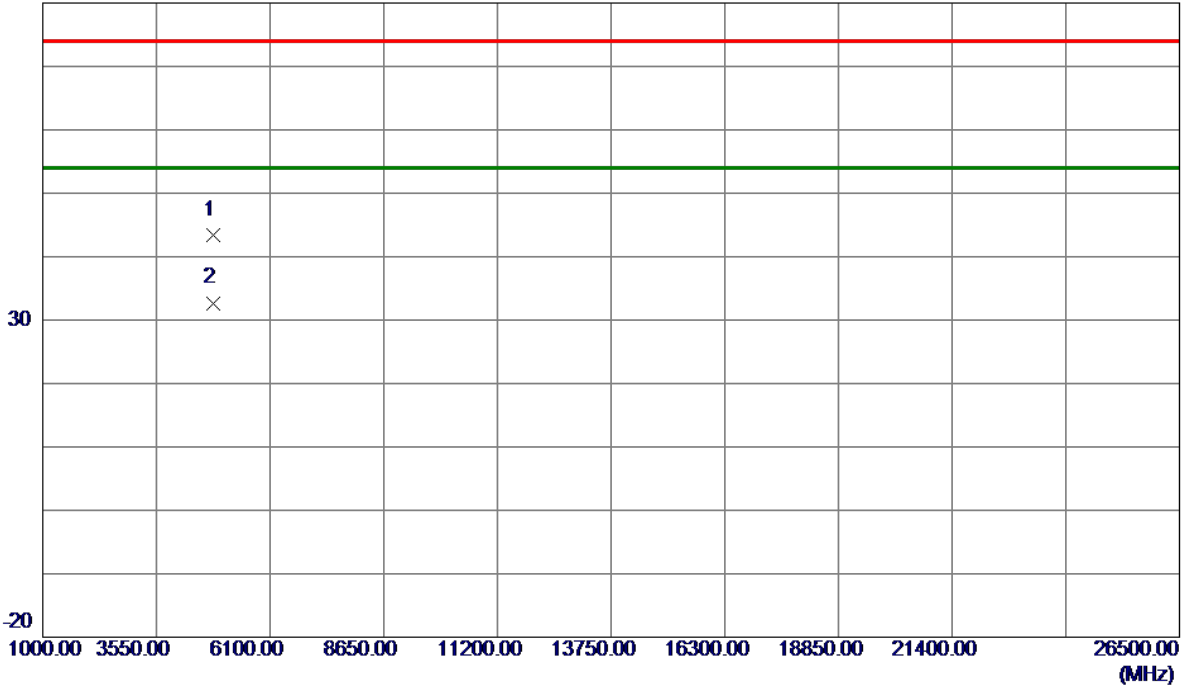
REMARKS:

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

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

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.3260	39.08	4.23	43.31	74.00	-30.69	Peak	
2 *	4823.8900	28.47	4.23	32.70	54.00	-21.30	AVG	

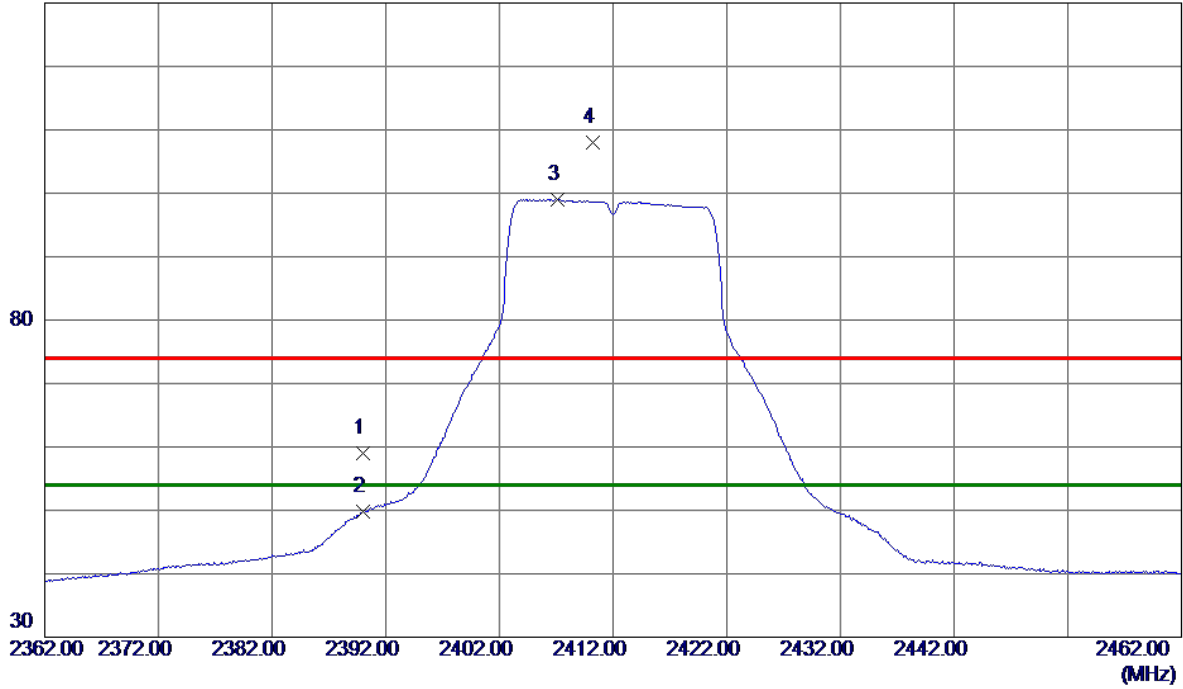
REMARKS:

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

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

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	51.97	7.01	58.98	74.00	-15.02	Peak	
2	2390.0000	42.84	7.01	49.85	54.00	-4.15	AVG	
3 *	2407.1000	91.98	7.02	99.00	54.00	45.00	AVG	No Limit
4	2410.2000	100.98	7.02	108.00	74.00	34.00	Peak	No Limit

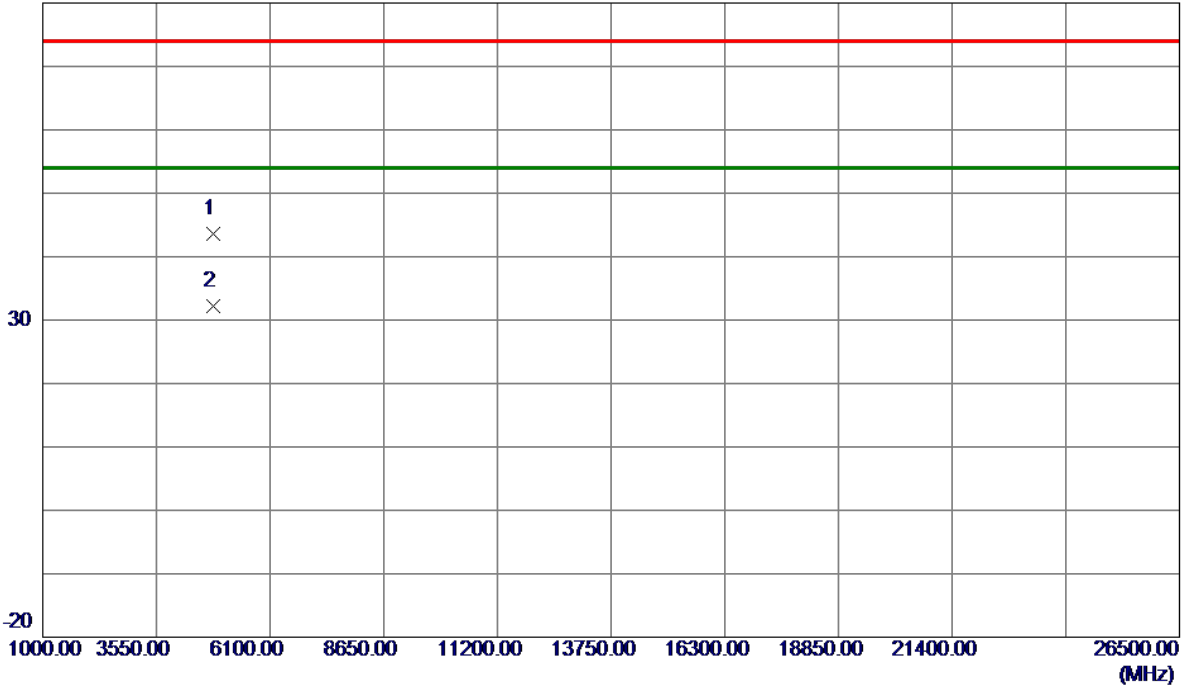
REMARKS:

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

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

Horizontal

80 dBuV/m



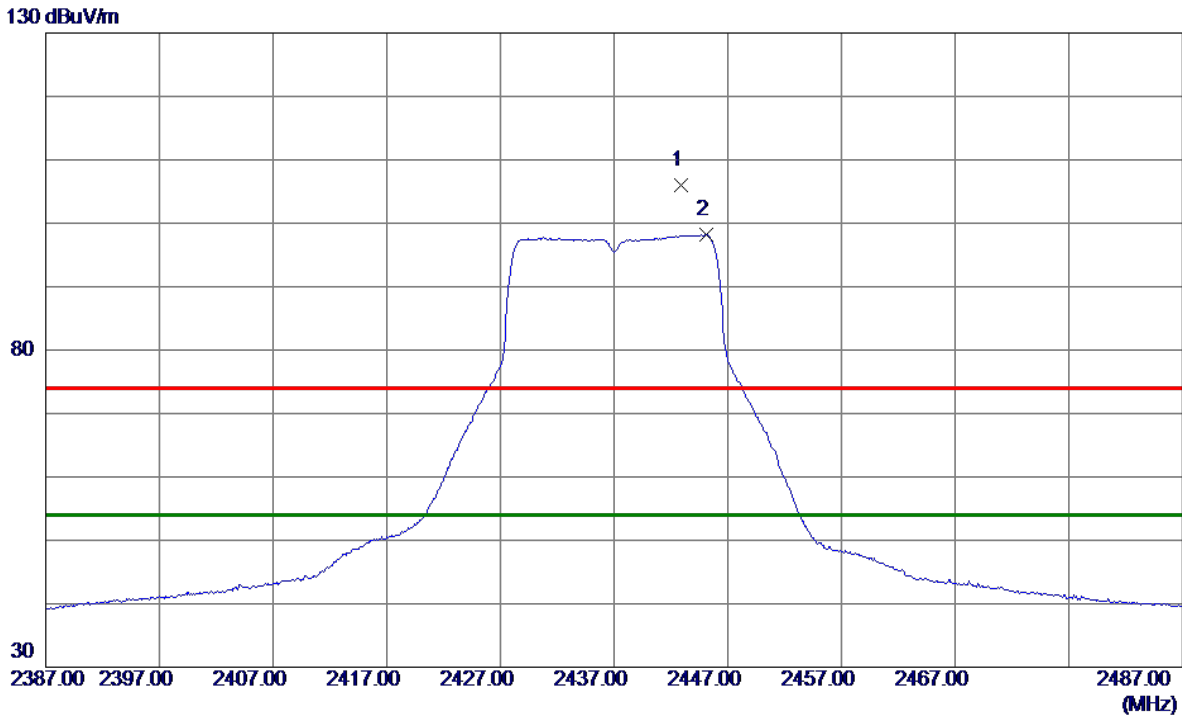
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.7960	39.35	4.23	43.58	74.00	-30.42	Peak	
2 *	4824.5099	27.95	4.23	32.18	54.00	-21.82	AVG	

REMARKS:

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

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

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2442.9000	98.97	7.02	105.99	74.00	31.99	Peak	No Limit
2 *	2445.1000	91.21	7.02	98.23	54.00	44.23	AVG	No Limit

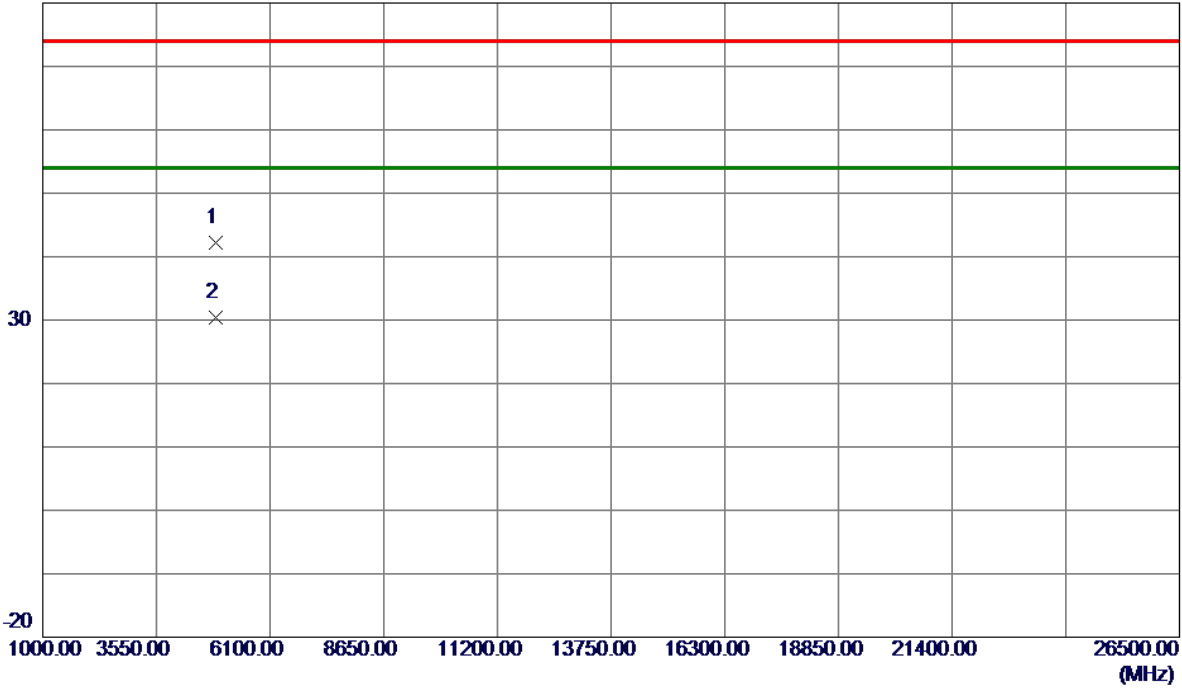
REMARKS:

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

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

Vertical

80 dBuV/m



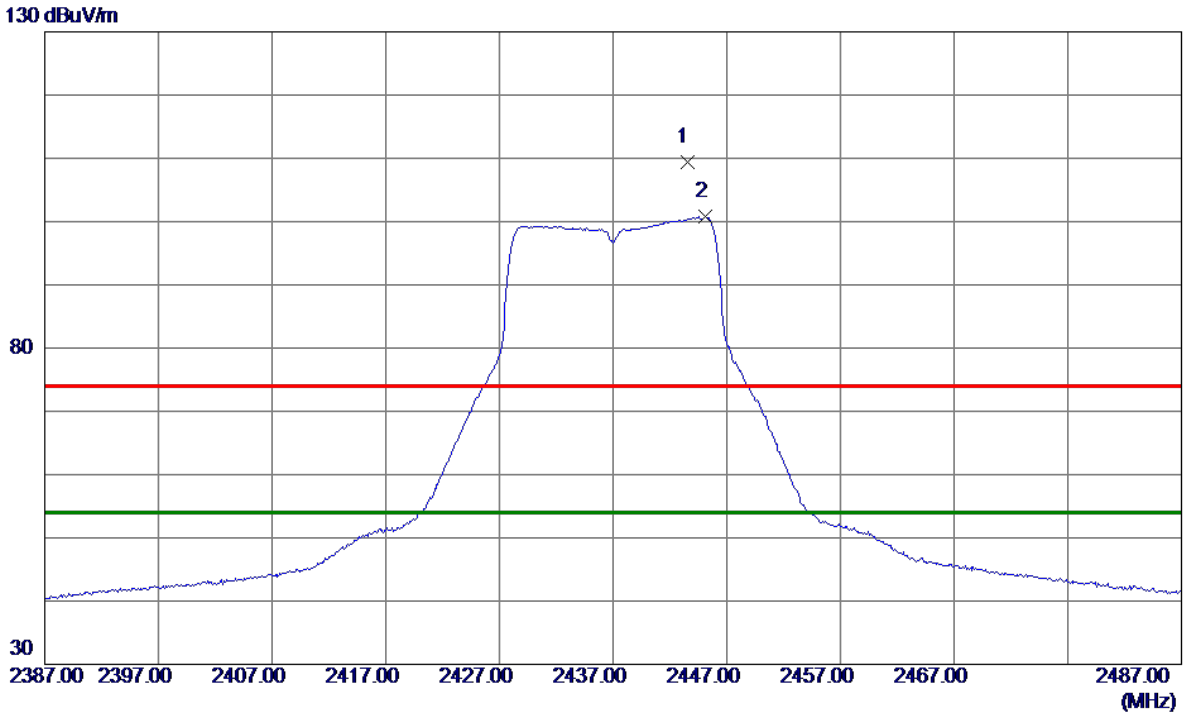
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.4840	37.94	4.34	42.28	74.00	-31.72	Peak	
2 *	4874.3100	26.12	4.34	30.46	54.00	-23.54	AVG	

REMARKS:

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

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

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2443.5000	102.46	7.02	109.48	74.00	35.48	Peak	No Limit
2 *	2445.1000	93.71	7.02	100.73	54.00	46.73	AVG	No Limit

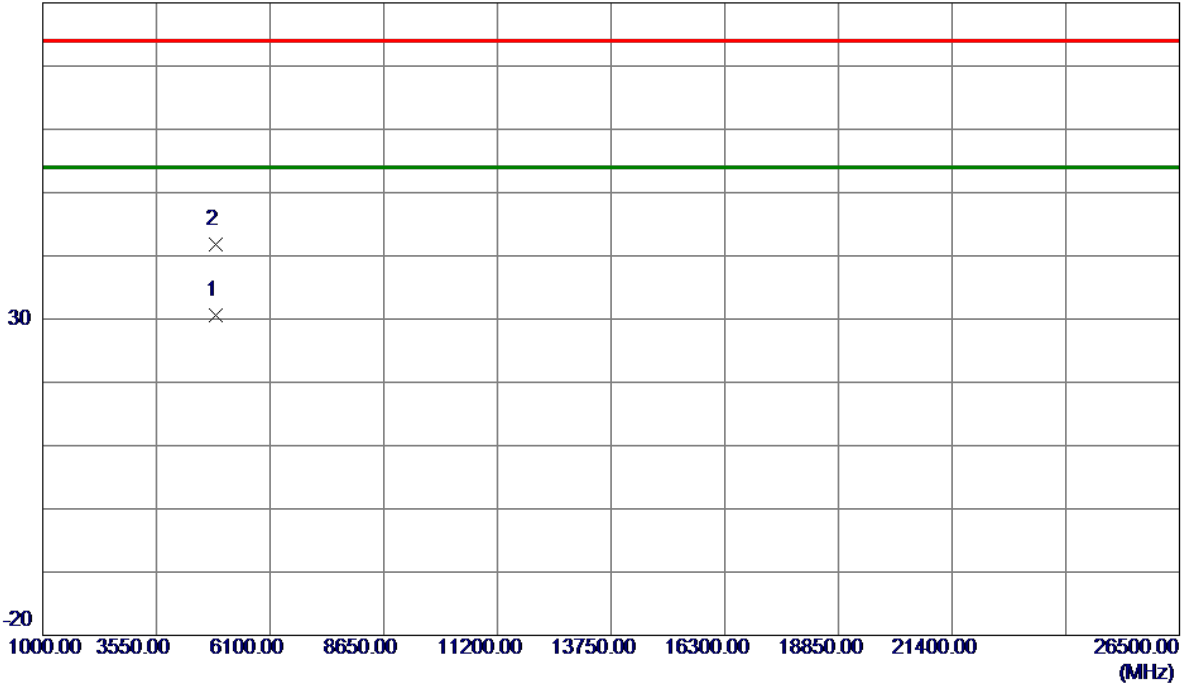
REMARKS:

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

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

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4873.0179	26.35	4.33	30.68	54.00	-23.32	AVG	
2	4874.3820	37.39	4.34	41.73	74.00	-32.27	Peak	

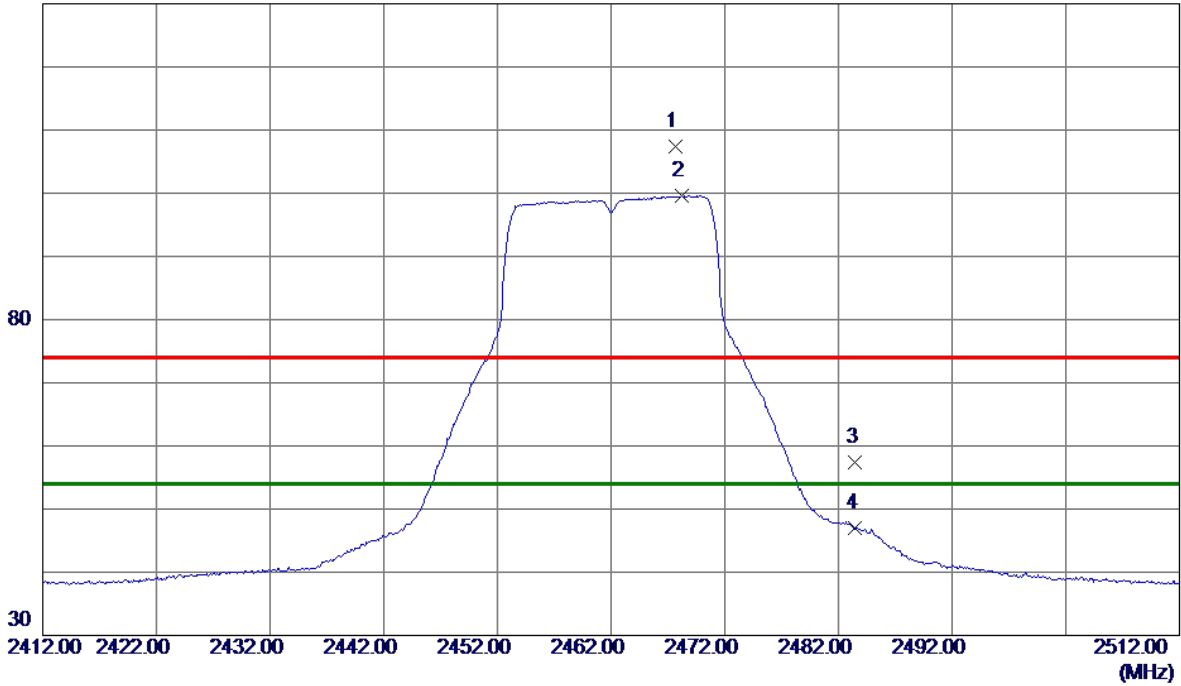
REMARKS:

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

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

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2467.7000	100.31	7.03	107.34	74.00	33.34	Peak	No Limit
2 *	2468.2000	92.58	7.03	99.61	54.00	45.61	AVG	No Limit
3	2483.5000	50.31	7.03	57.34	74.00	-16.66	Peak	
4	2483.5000	40.04	7.03	47.07	54.00	-6.93	AVG	

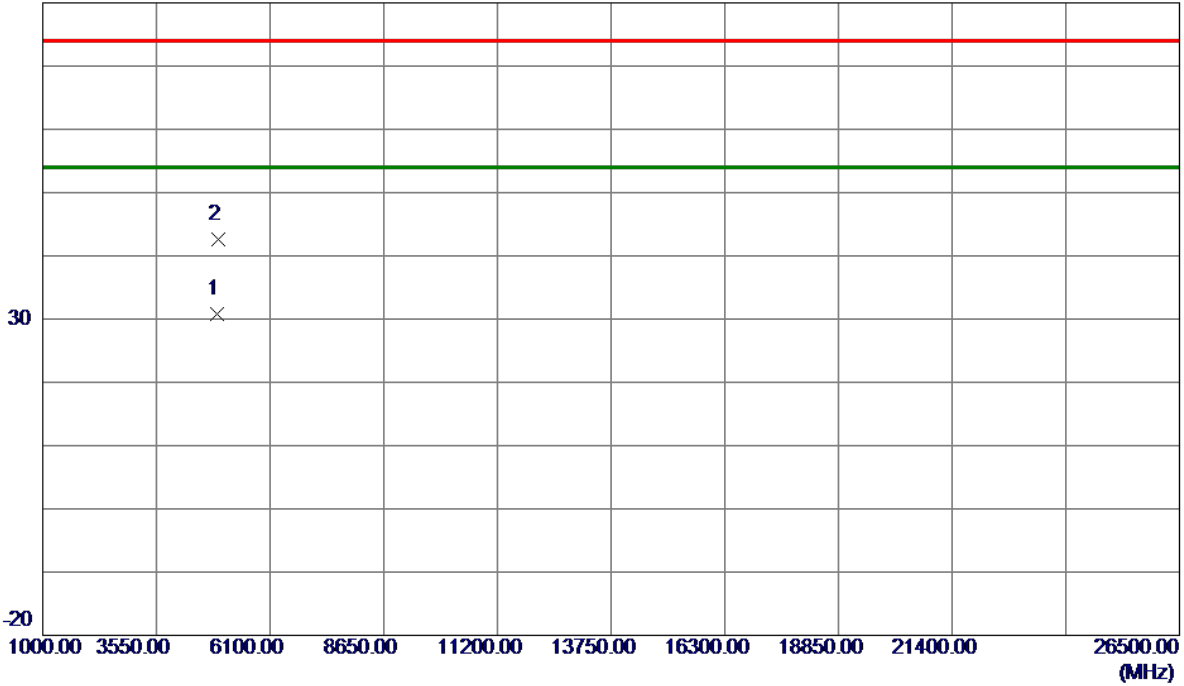
REMARKS:

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

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

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4923.3460	26.40	4.44	30.84	54.00	-23.16	AVG	
2	4924.5200	38.20	4.44	42.64	74.00	-31.36	Peak	

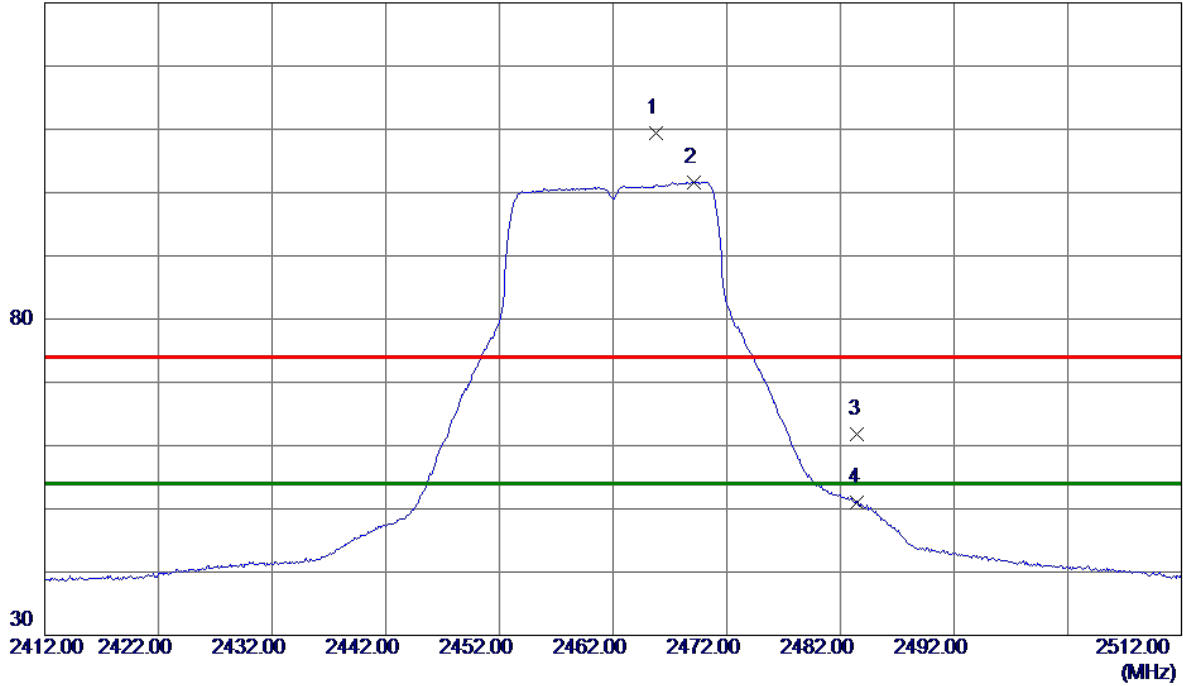
REMARKS:

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

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

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2465.8000	102.33	7.03	109.36	74.00	35.36	Peak	No Limit
2 *	2469.1000	94.65	7.03	101.68	54.00	47.68	AVG	No Limit
3	2483.5000	54.76	7.03	61.79	74.00	-12.21	Peak	
4	2483.5000	43.99	7.03	51.02	54.00	-2.98	AVG	

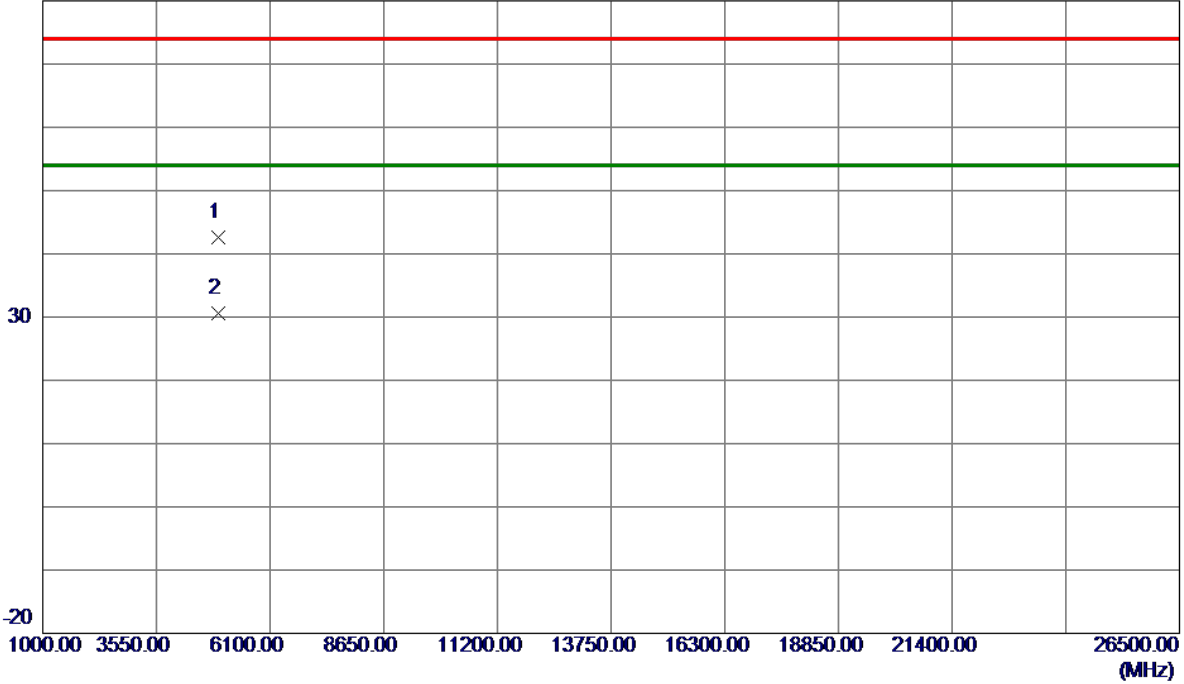
REMARKS:

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

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

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4924.2180	38.25	4.44	42.69	74.00	-31.31	Peak	
2 *	4924.4120	26.19	4.44	30.63	54.00	-23.37	AVG	

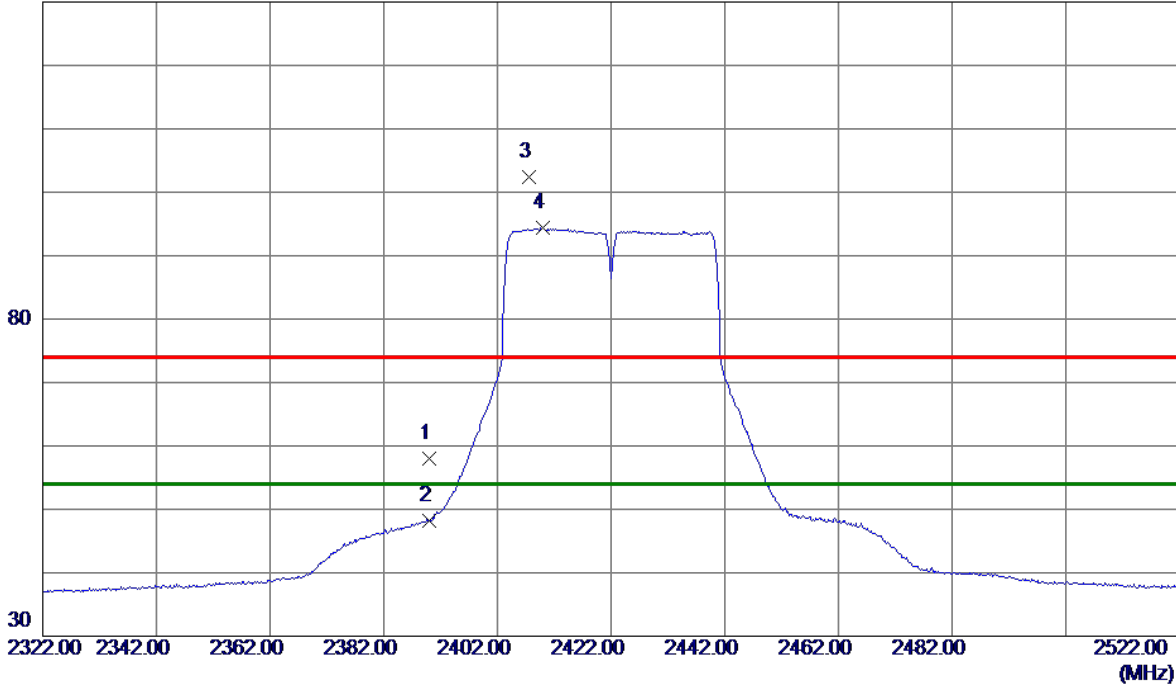
REMARKS:

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

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

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	51.04	7.01	58.05	74.00	-15.95	Peak	
2	2390.0000	41.19	7.01	48.20	54.00	-5.80	AVG	
3	2407.6000	95.44	7.02	102.46	74.00	28.46	Peak	No Limit
4 *	2410.0000	87.29	7.02	94.31	54.00	40.31	AVG	No Limit

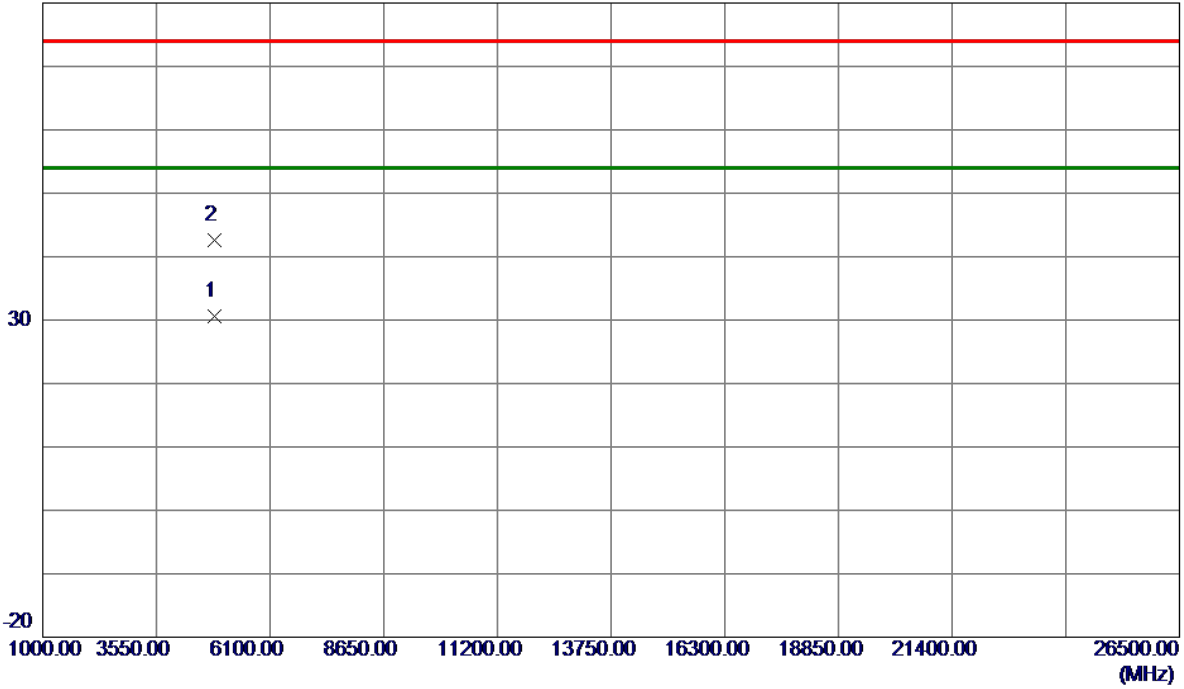
REMARKS:

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

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

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4844.2940	26.42	4.27	30.69	54.00	-23.31	AVG	
2	4844.7820	38.35	4.28	42.63	74.00	-31.37	Peak	

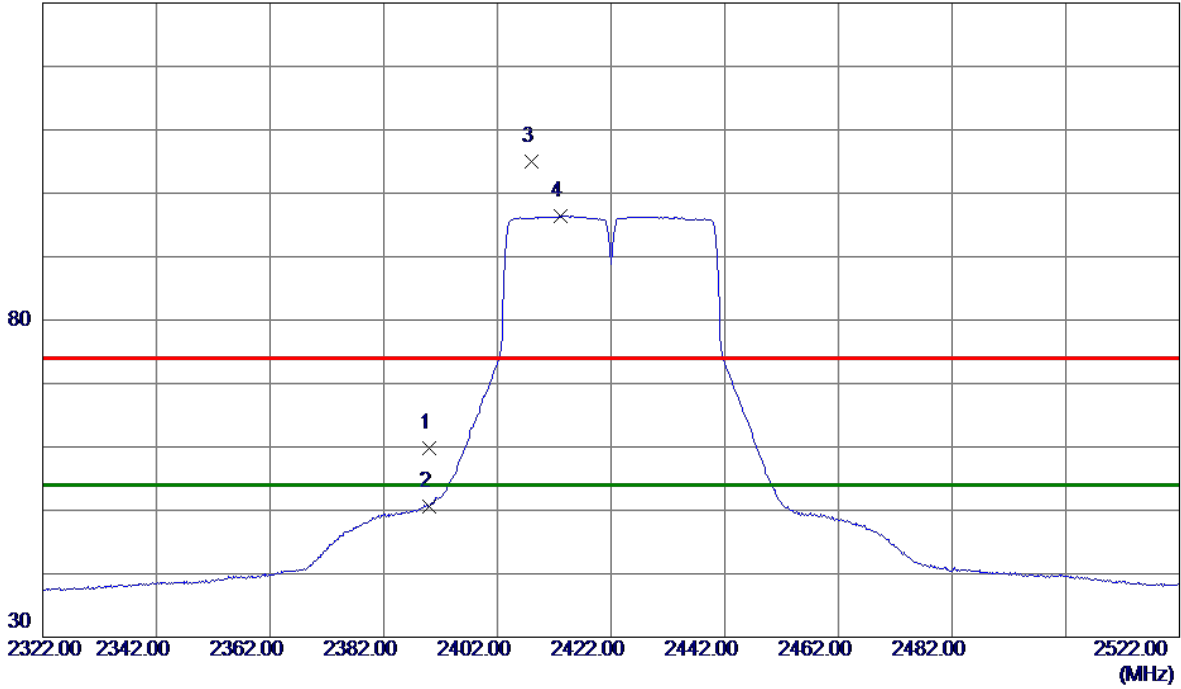
REMARKS:

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

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

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	52.84	7.01	59.85	74.00	-14.15	Peak	
2	2390.0000	43.60	7.01	50.61	54.00	-3.39	AVG	
3	2408.0000	97.98	7.02	105.00	74.00	31.00	Peak	No Limit
4 *	2413.2000	89.34	7.02	96.36	54.00	42.36	AVG	No Limit

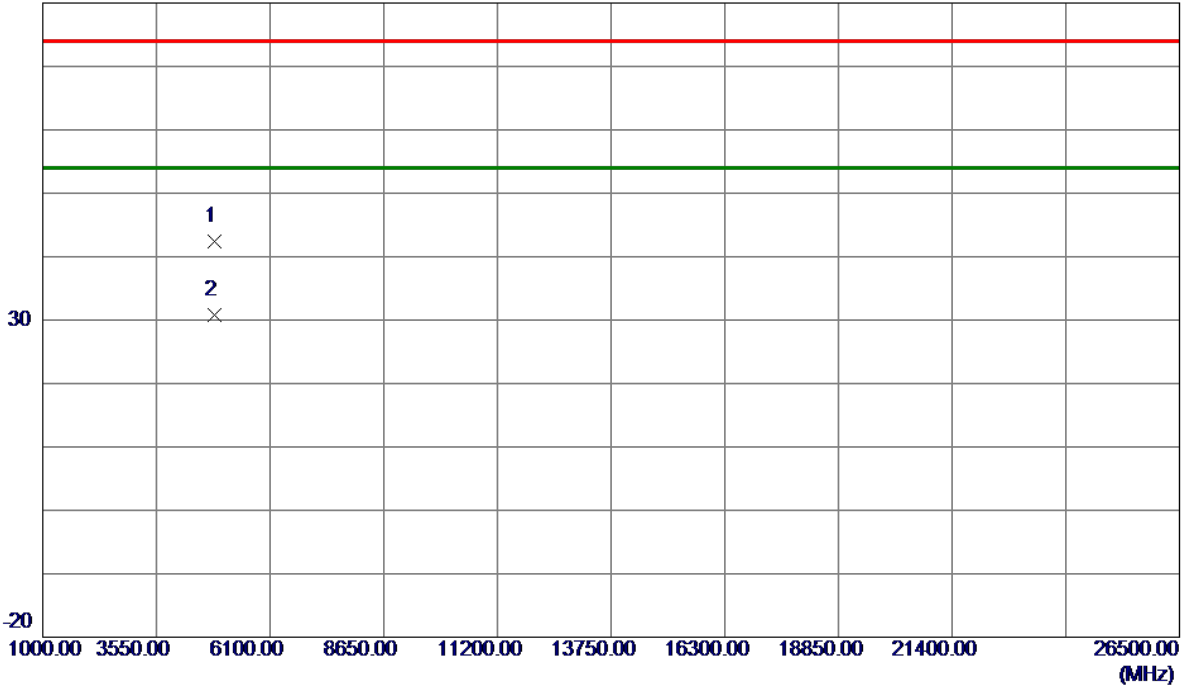
REMARKS:

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

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

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4843.6880	38.21	4.27	42.48	74.00	-31.52	Peak	
2 *	4843.8100	26.50	4.27	30.77	54.00	-23.23	AVG	

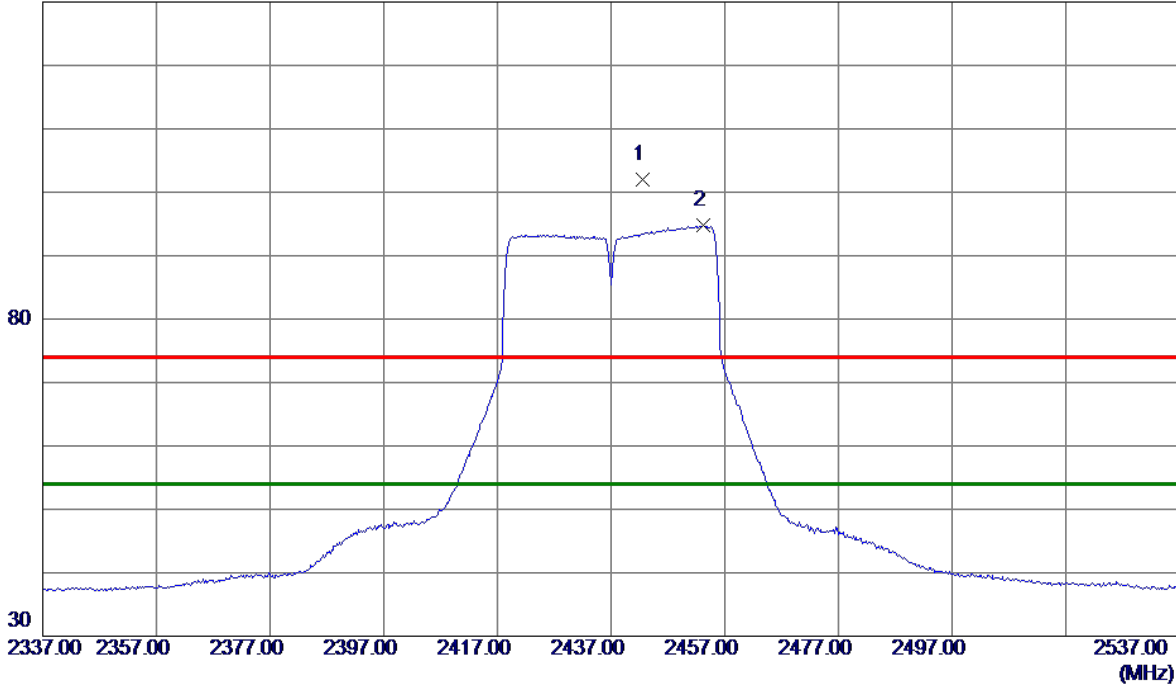
REMARKS:

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

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

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2442.6000	95.06	7.02	102.08	74.00	28.08	Peak	No Limit
2 *	2453.2000	87.82	7.03	94.85	54.00	40.85	AVG	No Limit

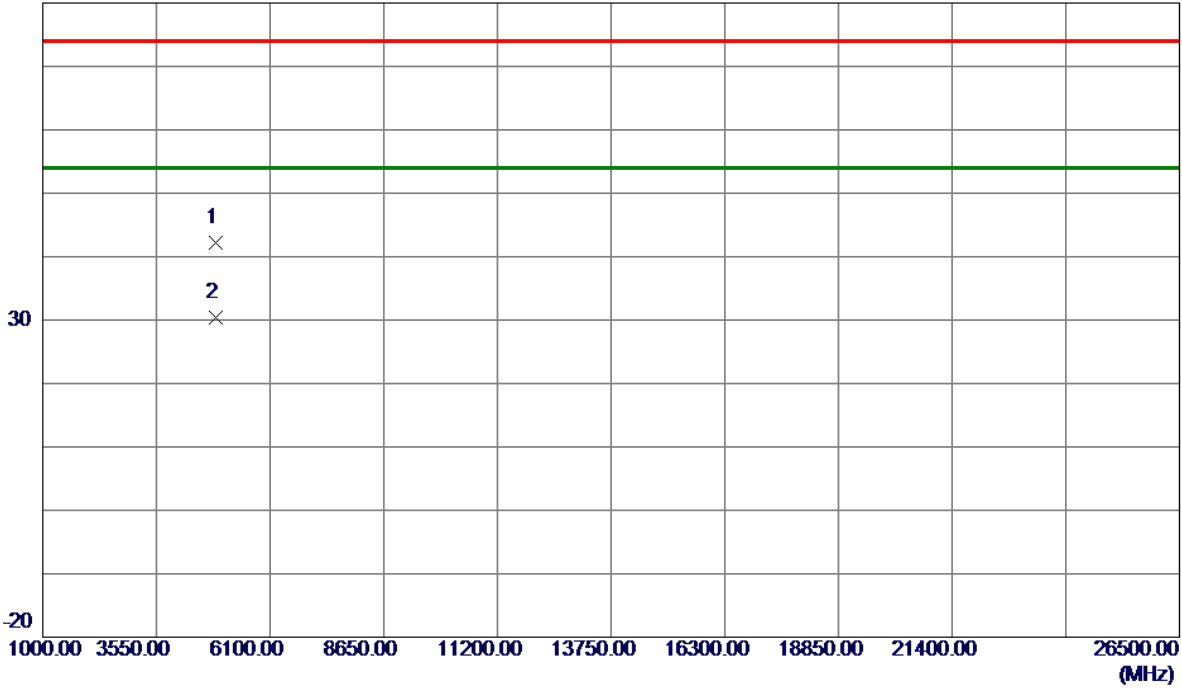
REMARKS:

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

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

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.8460	37.83	4.34	42.17	74.00	-31.83	Peak	
2 *	4873.9080	25.99	4.34	30.33	54.00	-23.67	AVG	

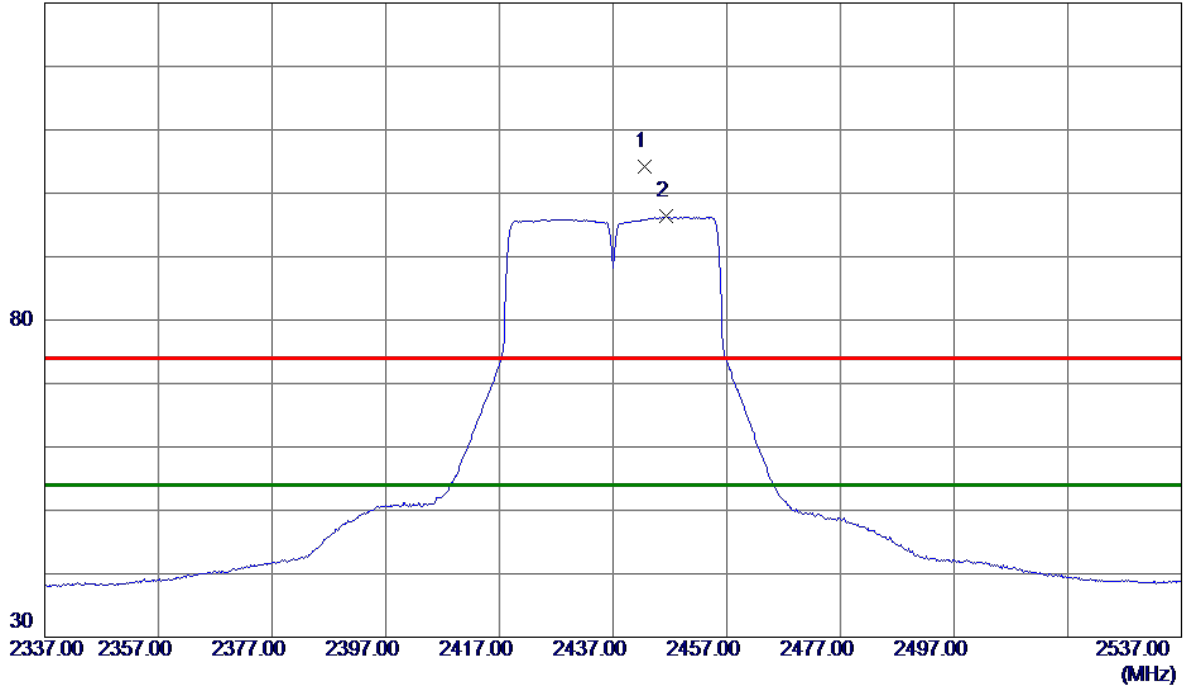
REMARKS:

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

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

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2442.6000	97.24	7.02	104.26	74.00	30.26	Peak	No Limit
2 *	2446.4000	89.31	7.02	96.33	54.00	42.33	AVG	No Limit

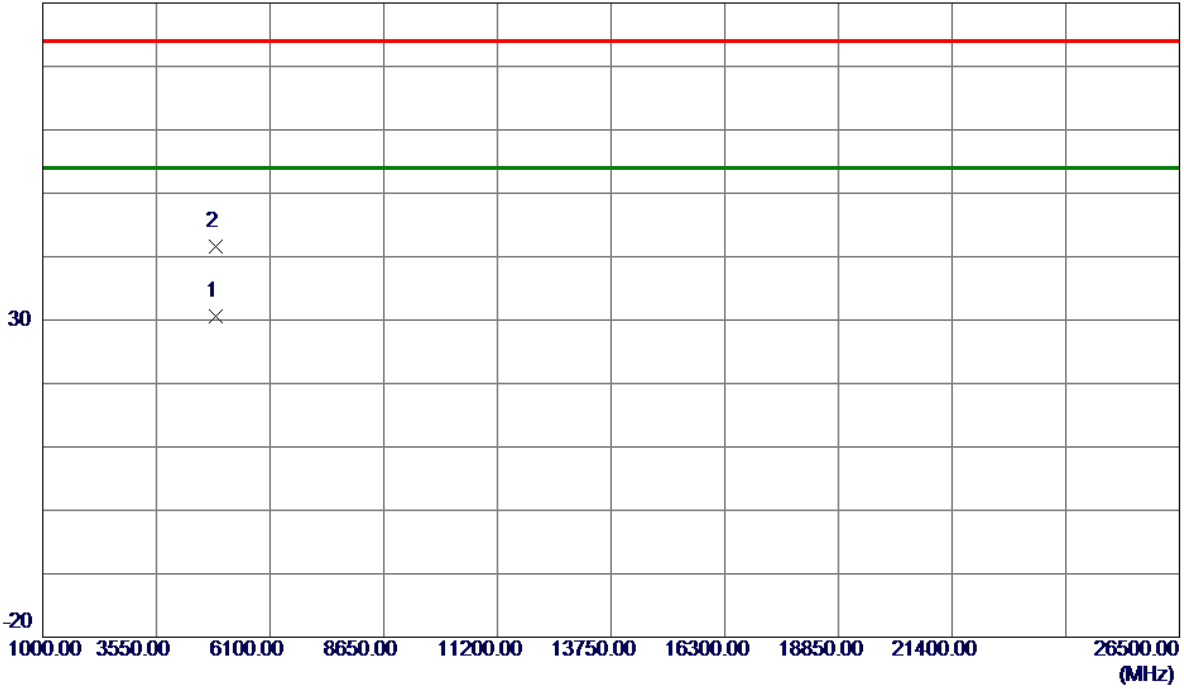
REMARKS:

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

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

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4873.0299	26.26	4.33	30.59	54.00	-23.41	AVG	
2	4874.8500	37.30	4.34	41.64	74.00	-32.36	Peak	

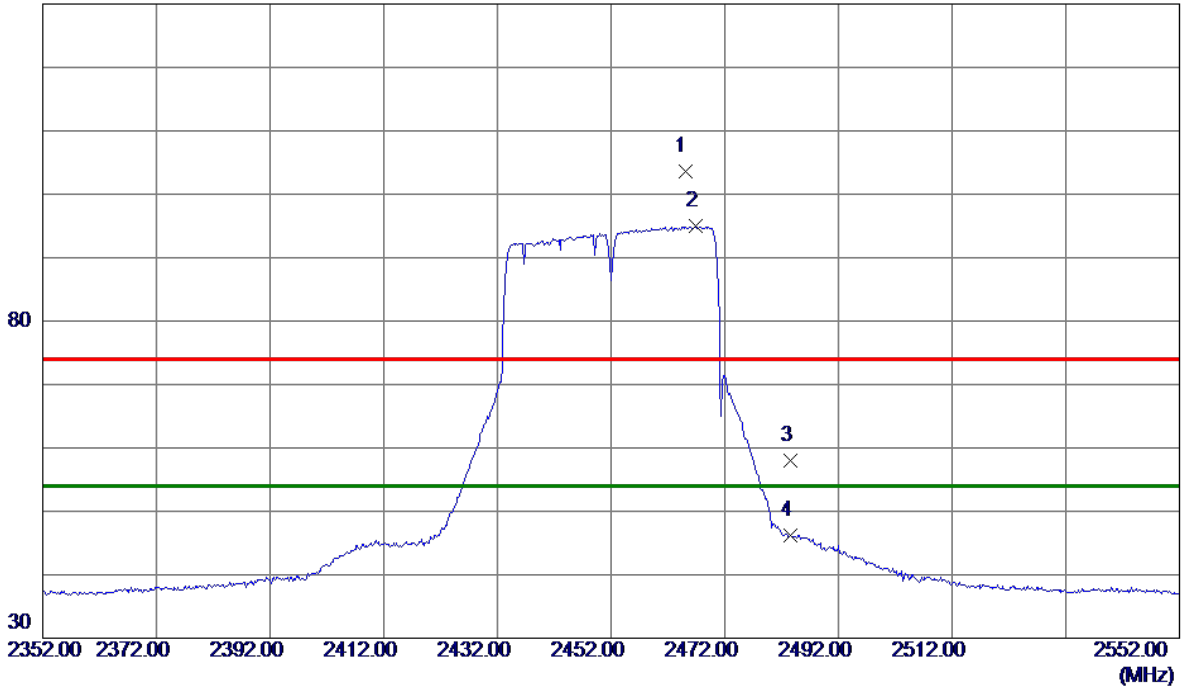
REMARKS:

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

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

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2465.0000	96.58	7.03	103.61	74.00	29.61	Peak	No Limit
2 *	2466.8000	87.87	7.03	94.90	54.00	40.90	AVG	No Limit
3	2483.5000	51.04	7.03	58.07	74.00	-15.93	Peak	
4	2483.5000	39.15	7.03	46.18	54.00	-7.82	AVG	

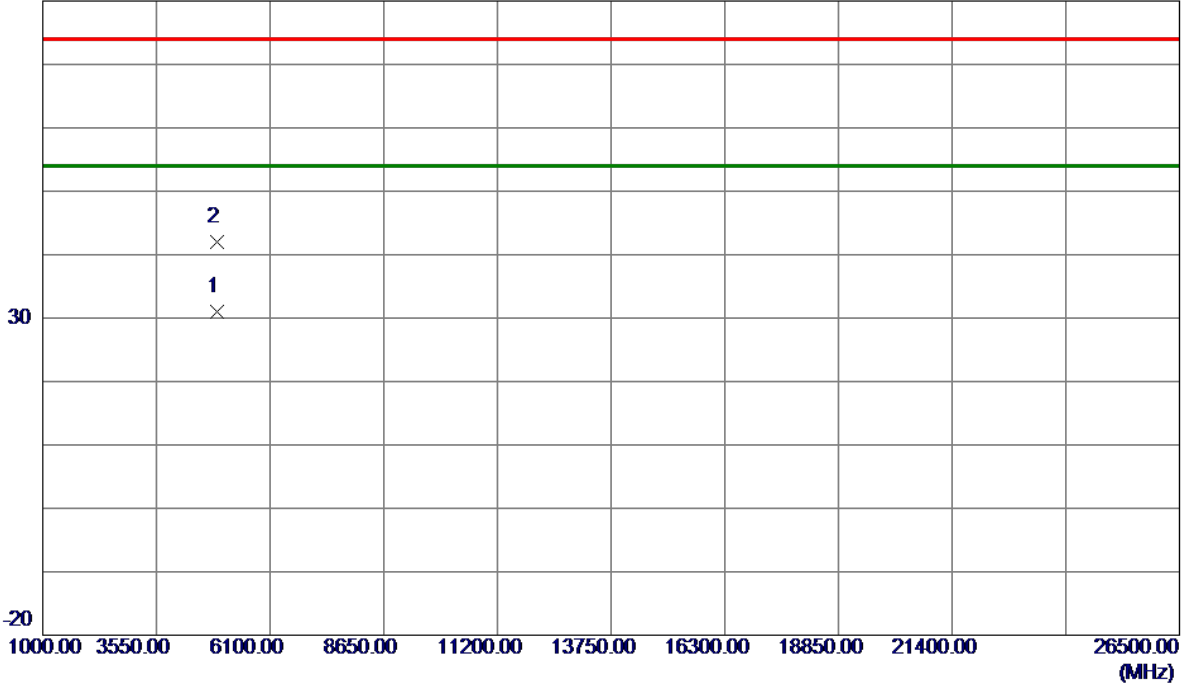
REMARKS:

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

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

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4903.0040	26.63	4.40	31.03	54.00	-22.97	AVG	
2	4904.4420	37.64	4.40	42.04	74.00	-31.96	Peak	

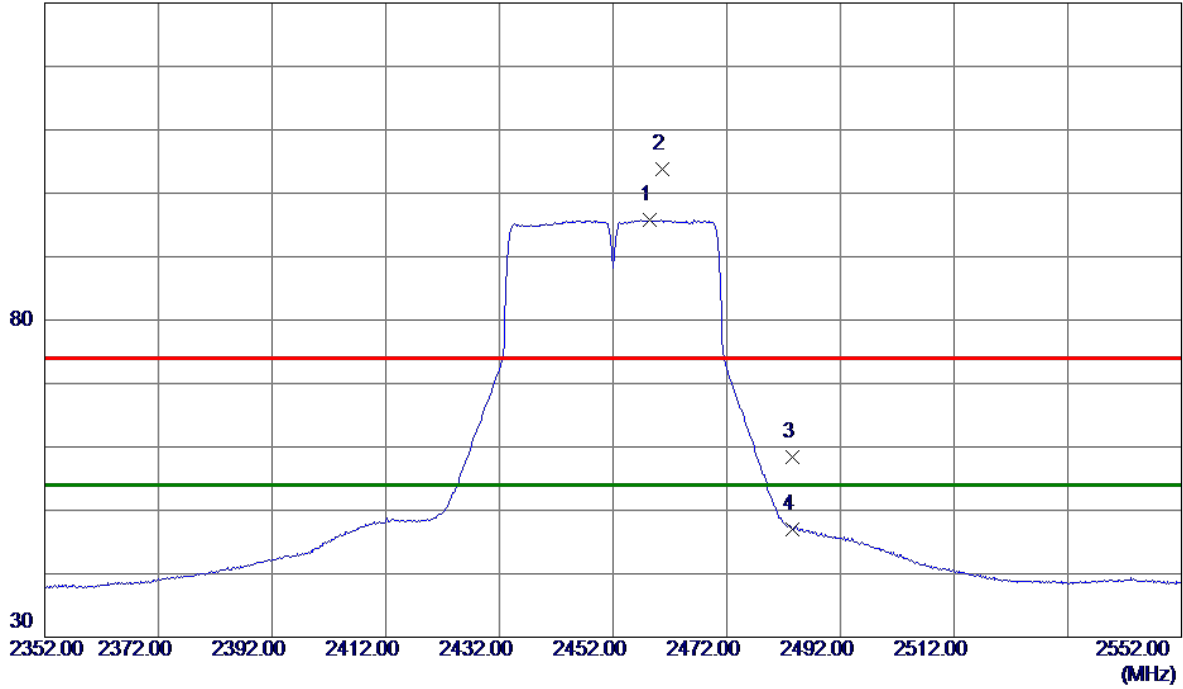
REMARKS:

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

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

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2458.4000	88.72	7.03	95.75	54.00	41.75	AVG	No Limit
2	2460.6000	96.79	7.03	103.82	74.00	29.82	Peak	No Limit
3	2483.5000	51.45	7.03	58.48	74.00	-15.52	Peak	
4	2483.5000	40.06	7.03	47.09	54.00	-6.91	AVG	

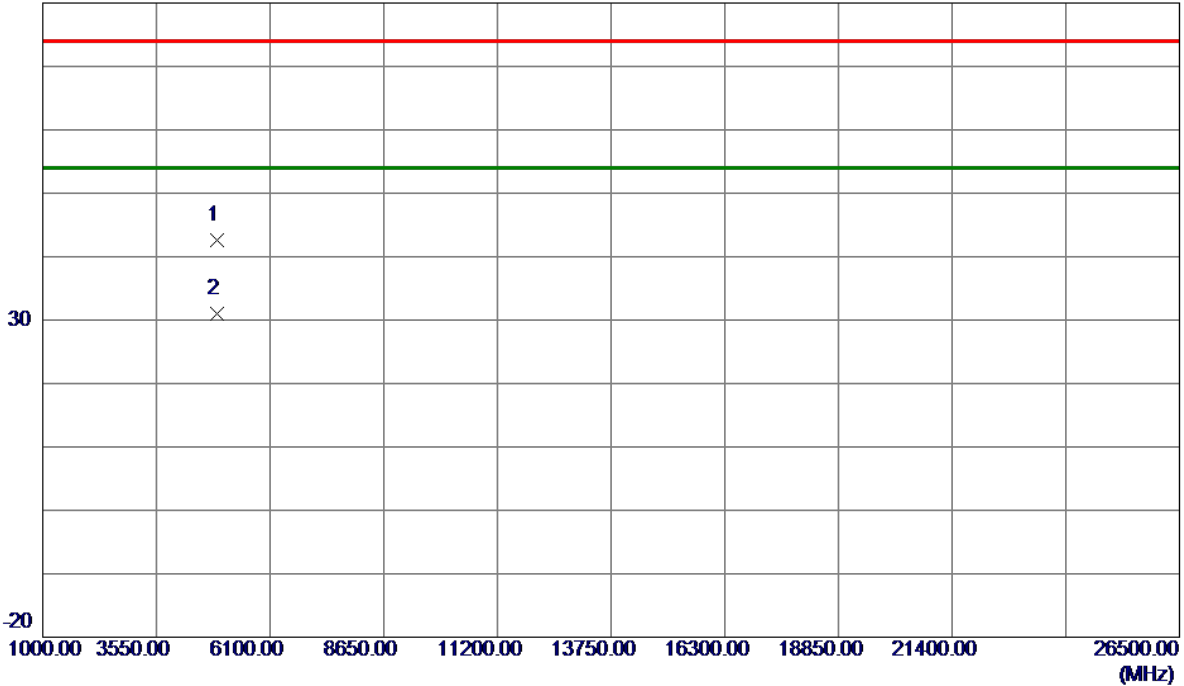
REMARKS:

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

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

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4903.8280	38.21	4.40	42.61	74.00	-31.39	Peak	
2 *	4904.9260	26.54	4.40	30.94	54.00	-23.06	AVG	

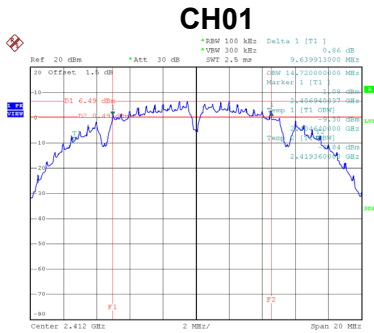
REMARKS:

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

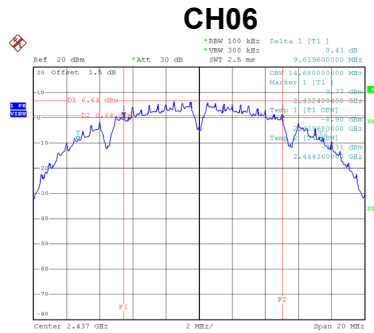
APPENDIX E - BANDWIDTH

Test Mode	TX B Mode
------------------	------------------

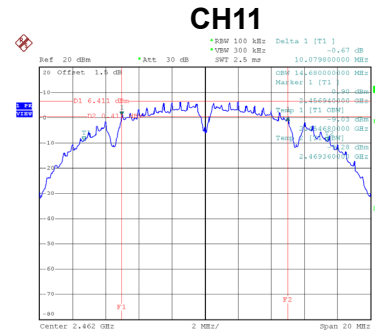
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	9.64	14.72	500	Complies
06	2437	9.62	14.68	500	Complies
11	2462	10.08	14.68	500	Complies



Date: 2.APR.2019 18:18:16



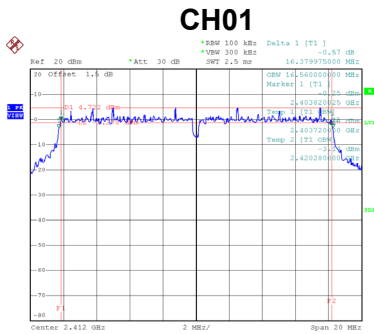
Date: 2.APR.2019 18:20:02



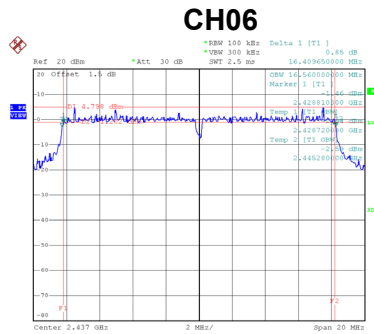
Date: 2.APR.2019 18:22:48

Test Mode	TX G Mode
------------------	------------------

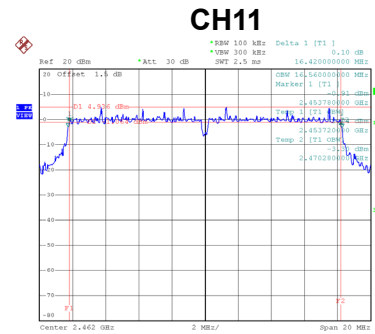
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.38	16.56	500	Complies
06	2437	16.41	16.56	500	Complies
11	2462	16.42	16.56	500	Complies



Date: 2.APR.2019 18:24:38



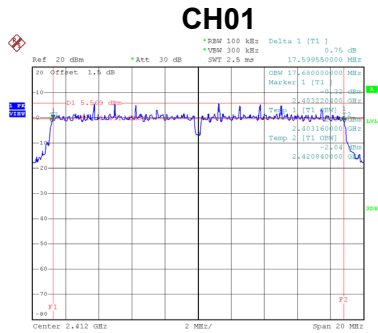
Date: 2.APR.2019 18:26:13



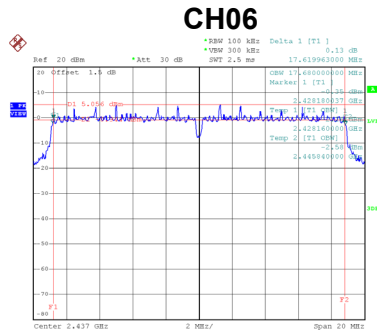
Date: 2.APR.2019 18:27:43

Test Mode	TX N-20M Mode
-----------	---------------

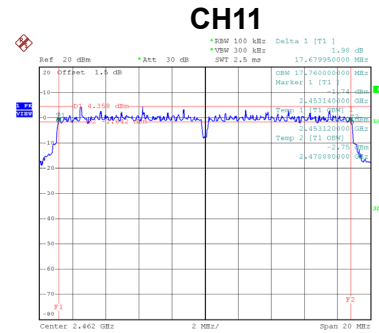
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.60	17.68	500	Complies
06	2437	17.62	17.68	500	Complies
11	2462	17.68	17.76	500	Complies



Date: 2.APR.2019 18:29:14



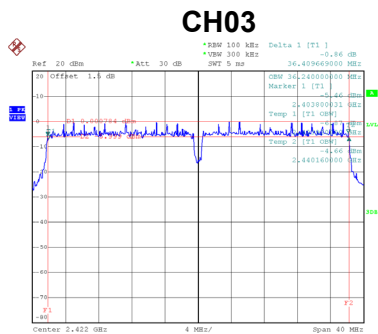
Date: 2.APR.2019 18:30:58



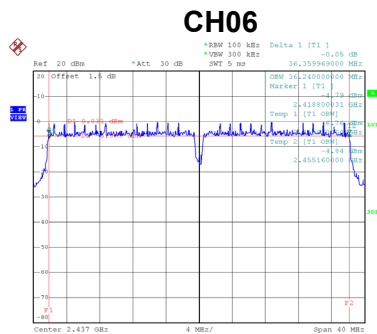
Date: 2.APR.2019 18:32:27

Test Mode	TX N-40M Mode
-----------	---------------

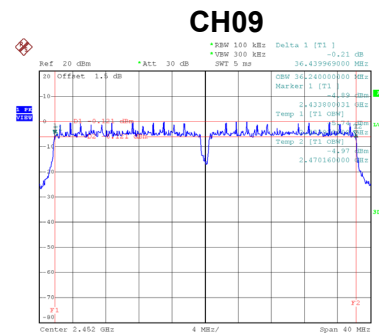
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	36.41	36.24	500	Complies
06	2437	36.36	36.24	500	Complies
09	2452	36.44	36.24	500	Complies



Date: 2.APR.2019 18:34:03



Date: 2.APR.2019 18:35:40



Date: 2.APR.2019 18:36:59

APPENDIX F - MAXIMUM OUTPUT POWER

Test Mode	TX B Mode_Ant. 1
-----------	------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.04	0.0637	29.74	0.9419	Complies
06	2437	18.12	0.0649	29.74	0.9419	Complies
11	2462	17.96	0.0625	29.74	0.9419	Complies

Test Mode	TX B Mode_Ant. 2
-----------	------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.98	0.0628	29.74	0.9419	Complies
06	2437	17.91	0.0618	29.74	0.9419	Complies
11	2462	17.81	0.0604	29.74	0.9419	Complies

Test Mode	TX B Mode_Total
-----------	-----------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.02	0.1265	29.74	0.9419	Complies
06	2437	21.03	0.1268	29.74	0.9419	Complies
11	2462	20.90	0.1230	29.74	0.9419	Complies

Test Mode	TX G Mode_Ant. 1
-----------	------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.08	0.1282	29.74	0.9419	Complies
06	2437	21.34	0.1361	29.74	0.9419	Complies
11	2462	20.95	0.1245	29.74	0.9419	Complies

Test Mode	TX G Mode_Ant. 2
-----------	------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.13	0.1297	29.74	0.9419	Complies
06	2437	21.25	0.1334	29.74	0.9419	Complies
11	2462	21.30	0.1349	29.74	0.9419	Complies

Test Mode	TX G Mode_Total
-----------	-----------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	24.12	0.2582	29.74	0.9419	Complies
06	2437	24.31	0.2698	29.74	0.9419	Complies
11	2462	24.14	0.2594	29.74	0.9419	Complies

Test Mode	TX N-20M Mode_Ant. 1
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.23	0.1327	29.74	0.9419	Complies
06	2437	21.34	0.1361	29.74	0.9419	Complies
11	2462	21.36	0.1368	29.74	0.9419	Complies

Test Mode	TX N-20M Mode_Ant. 2
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.24	0.1330	29.74	0.9419	Complies
06	2437	21.36	0.1368	29.74	0.9419	Complies
11	2462	21.21	0.1321	29.74	0.9419	Complies

Test Mode	TX N-20M Mode_Total
-----------	---------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	24.25	0.2661	29.74	0.9419	Complies
06	2437	24.36	0.2729	29.74	0.9419	Complies
11	2462	24.30	0.2692	29.74	0.9419	Complies

Test Mode	TX N-40M Mode_Ant. 1
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.88	0.0973	29.74	0.9419	Complies
06	2437	19.83	0.0962	29.74	0.9419	Complies
09	2452	19.95	0.0989	29.74	0.9419	Complies

Test Mode	TX N-40M Mode_Ant. 2
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.72	0.0938	29.74	0.9419	Complies
06	2437	20.03	0.1007	29.74	0.9419	Complies
09	2452	20.36	0.1086	29.74	0.9419	Complies

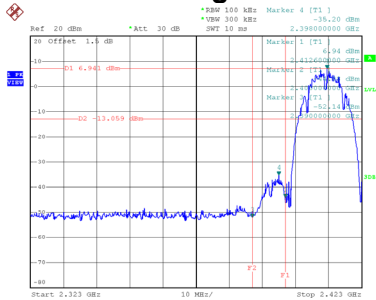
Test Mode	TX N-40M Mode_Total
-----------	---------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	22.81	0.1910	29.74	0.9419	Complies
06	2437	22.94	0.1968	29.74	0.9419	Complies
09	2452	23.17	0.2075	29.74	0.9419	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

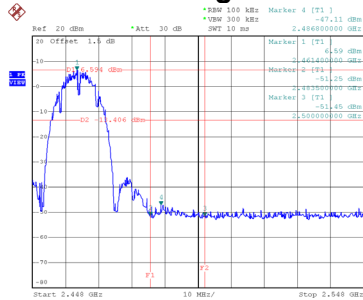
Test Mode TX B Mode_Ant. 1

Bandedge-CH01



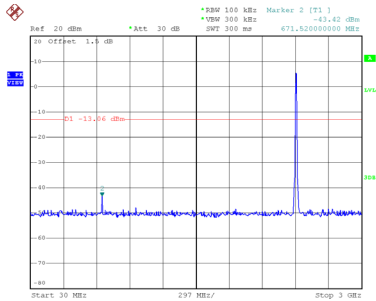
Date: 2.APR.2019 18:18:24

Bandedge-CH11

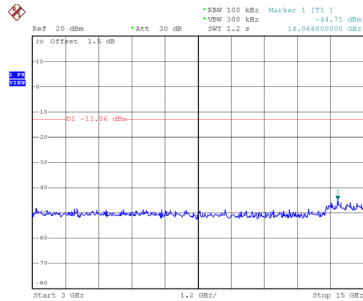


Date: 2.APR.2019 18:22:56

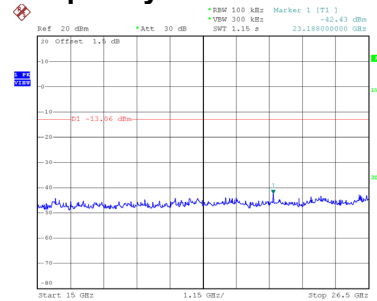
CH01 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:18:38

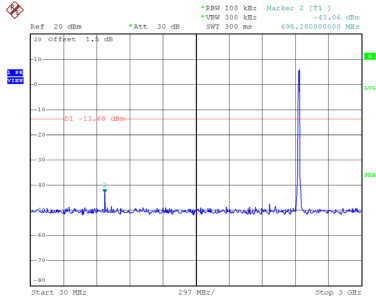


Date: 2.APR.2019 18:18:46

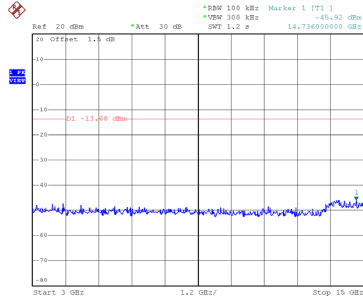


Date: 2.APR.2019 18:18:54

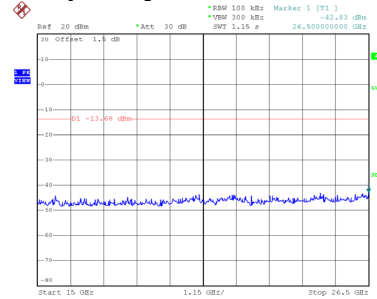
CH06 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:20:24

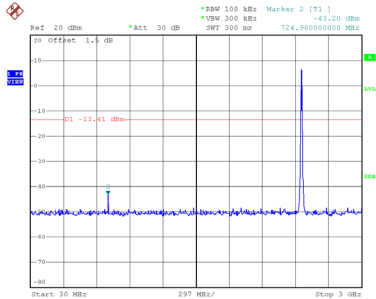


Date: 2.APR.2019 18:20:32

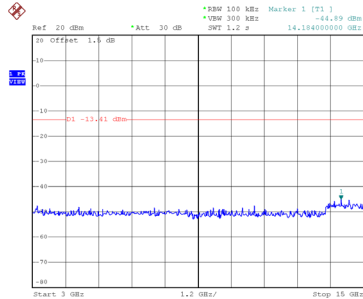


Date: 2.APR.2019 18:20:40

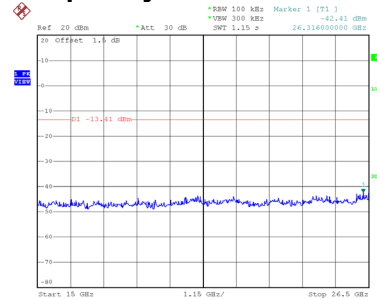
CH11 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:23:10



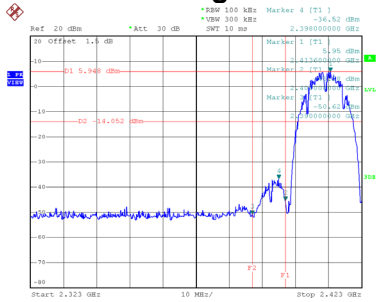
Date: 2.APR.2019 18:23:18



Date: 2.APR.2019 18:23:26

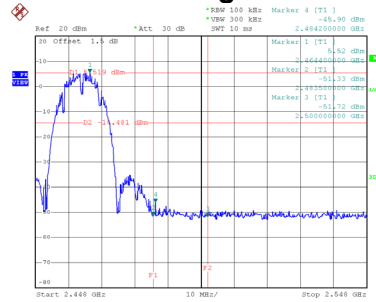
Test Mode TX B Mode_Ant. 2

Bandedge-CH01



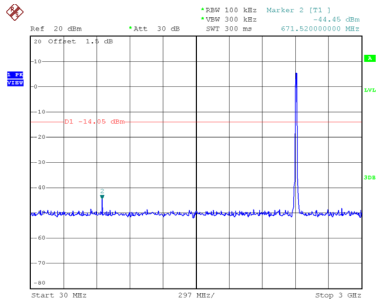
Date: 2.APR.2019 18:39:58

Bandedge-CH11

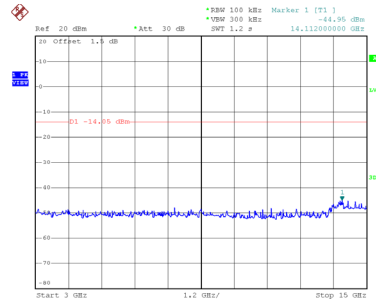


Date: 2.APR.2019 18:45:22

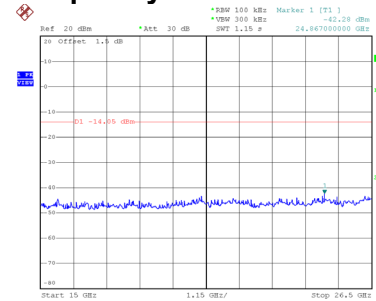
CH01 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:40:12

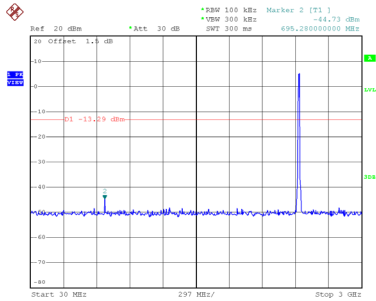


Date: 2.APR.2019 18:40:20

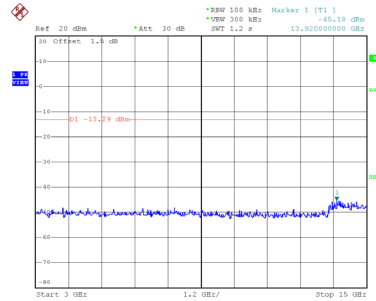


Date: 2.APR.2019 18:40:29

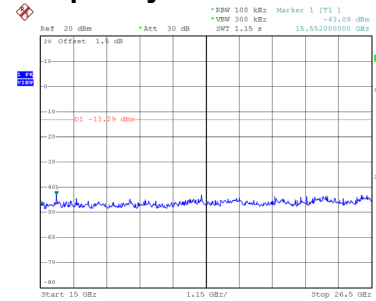
CH06 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:42:38

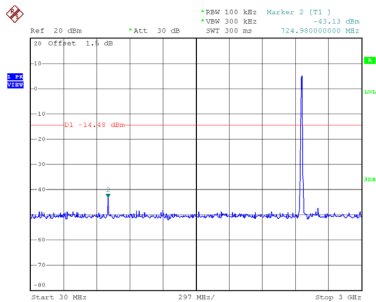


Date: 2.APR.2019 18:42:46

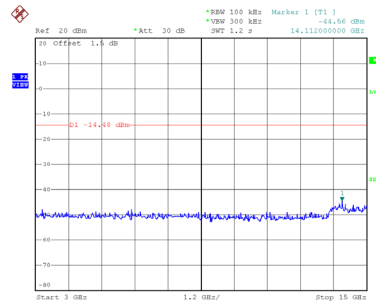


Date: 2.APR.2019 18:42:55

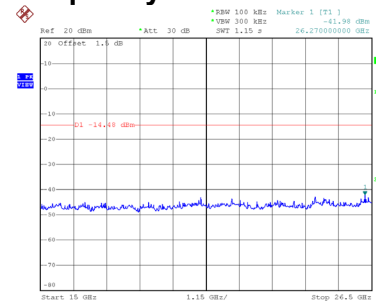
CH11 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:45:35



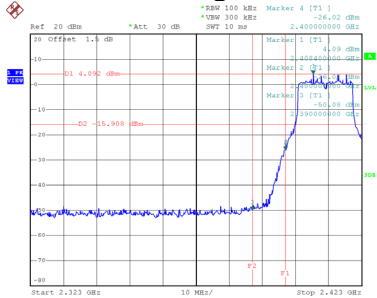
Date: 2.APR.2019 18:45:43



Date: 2.APR.2019 18:45:51

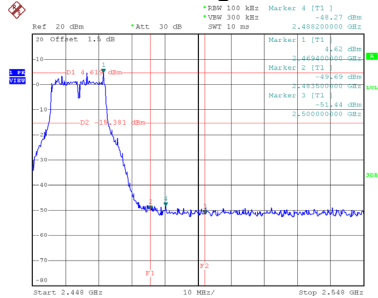
Test Mode TX G Mode_Ant. 1

Bandedge-CH01



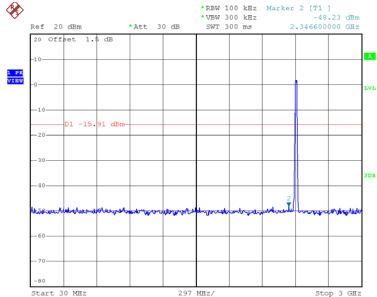
Date: 2.APR.2019 18:24:46

Bandedge-CH11

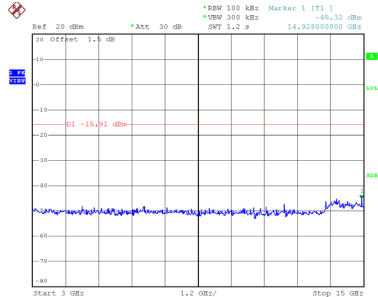


Date: 2.APR.2019 18:27:51

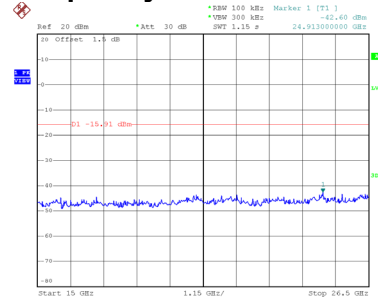
CH01 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:25:00

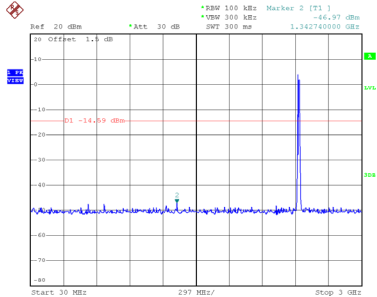


Date: 2.APR.2019 18:25:08

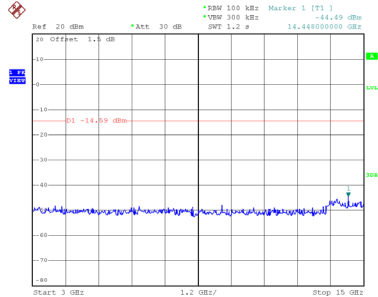


Date: 2.APR.2019 18:25:16

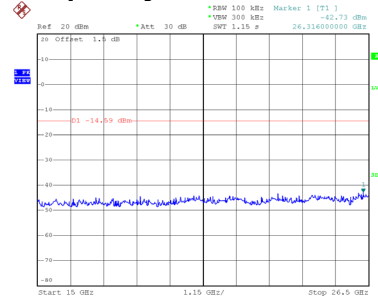
CH06 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:26:35

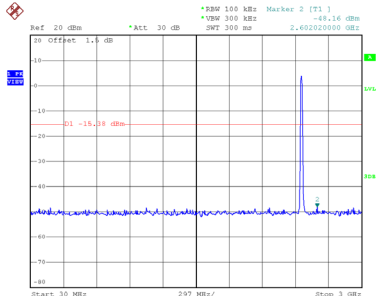


Date: 2.APR.2019 18:26:43

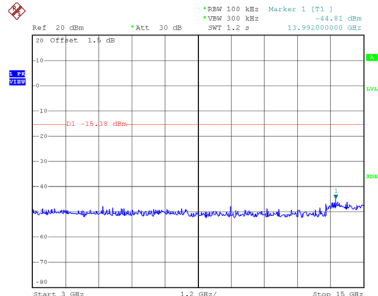


Date: 2.APR.2019 18:26:51

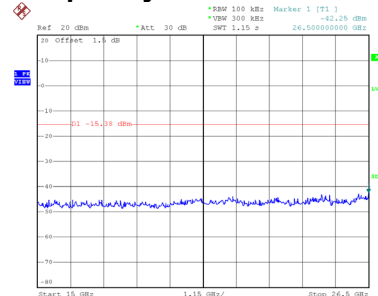
CH11 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:28:05



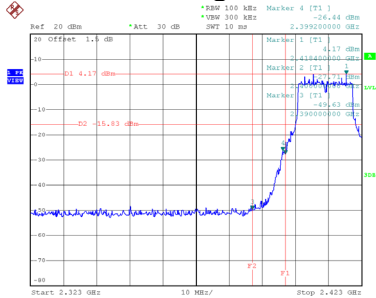
Date: 2.APR.2019 18:28:13



Date: 2.APR.2019 18:28:21

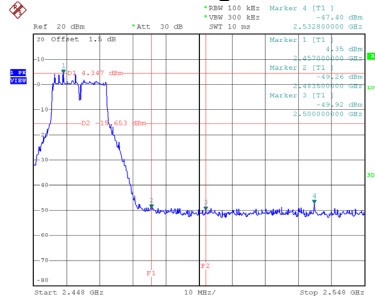
Test Mode TX G Mode_Ant. 2

Bandedge-CH01



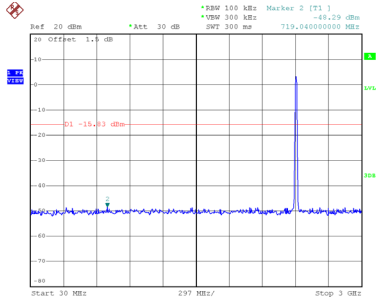
Date: 2.APR.2019 18:48:46

Bandedge-CH11

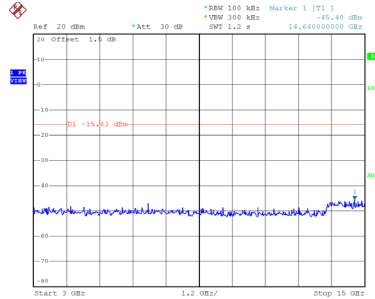


Date: 2.APR.2019 18:51:53

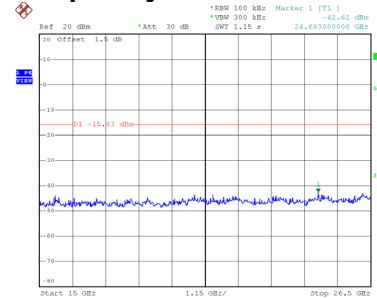
CH01 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:49:00

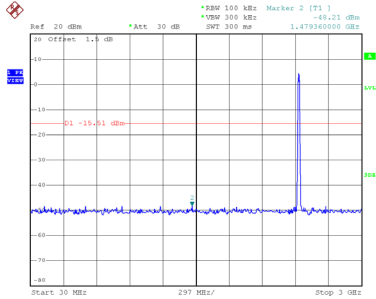


Date: 2.APR.2019 18:49:08

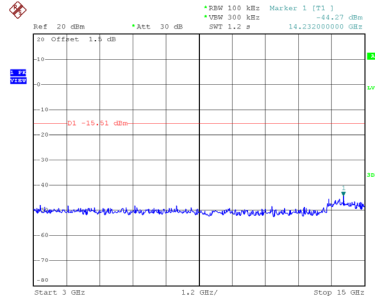


Date: 2.APR.2019 18:49:16

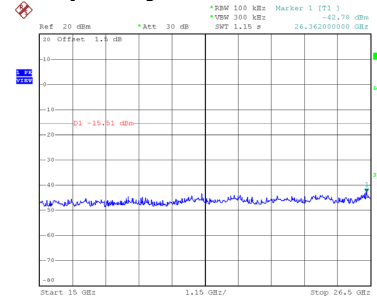
CH06 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:50:40

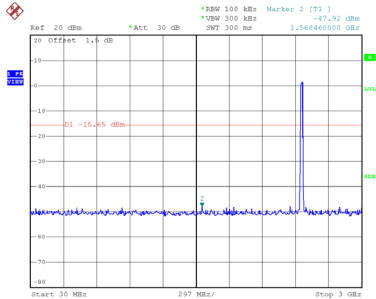


Date: 2.APR.2019 18:50:49

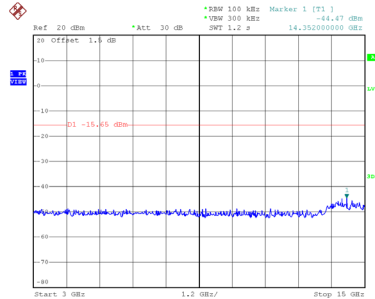


Date: 2.APR.2019 18:50:57

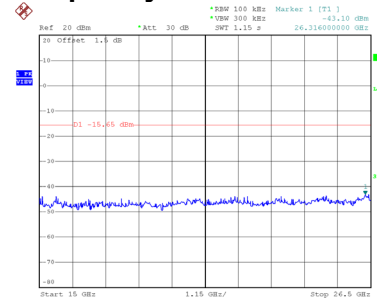
CH11 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:52:07



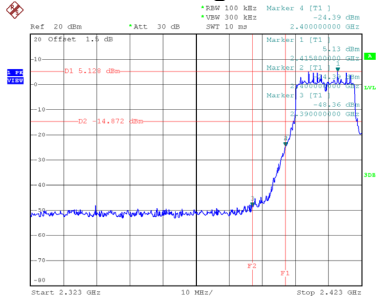
Date: 2.APR.2019 18:52:15



Date: 2.APR.2019 18:52:23

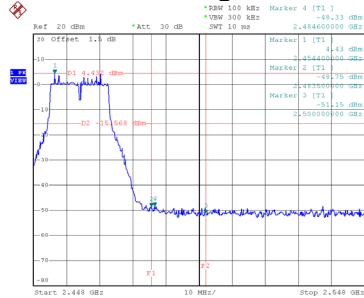
Test Mode TX N-20M Mode_Ant. 1

Bandedge-CH01



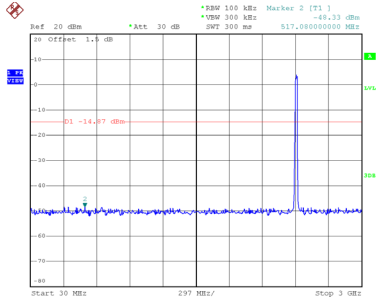
Date: 2.APR.2019 18:29:22

Bandedge-CH11

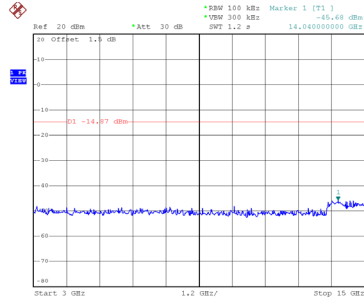


Date: 2.APR.2019 18:32:35

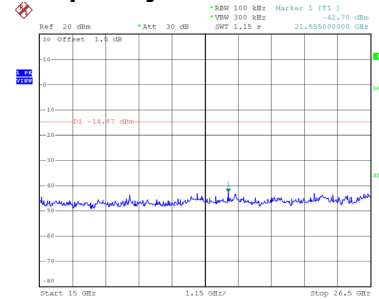
CH01 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:29:36

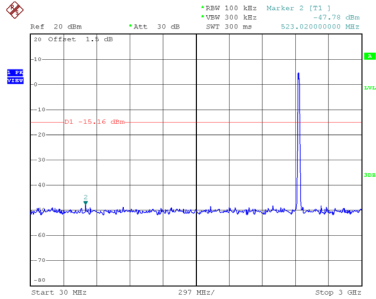


Date: 2.APR.2019 18:29:44

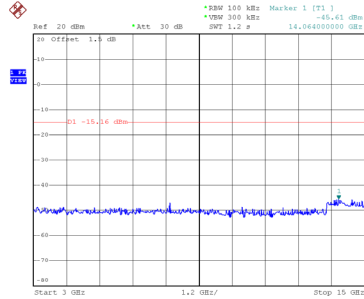


Date: 2.APR.2019 18:29:52

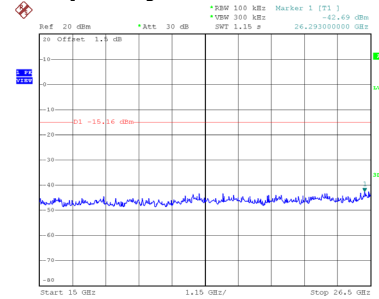
CH06 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:31:20

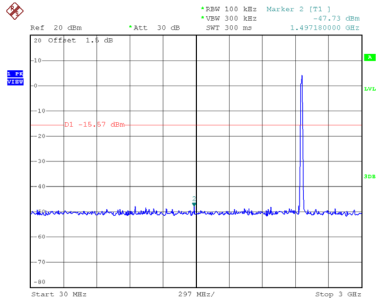


Date: 2.APR.2019 18:31:28

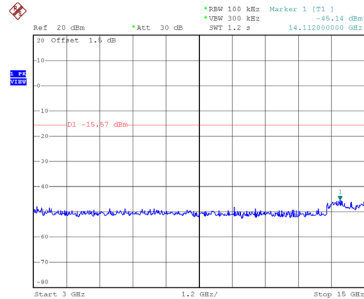


Date: 2.APR.2019 18:31:36

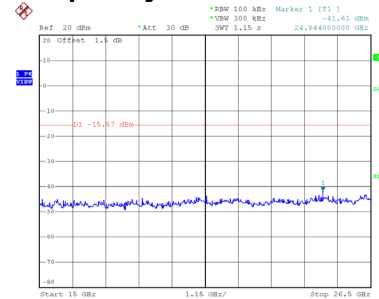
CH11 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:32:49



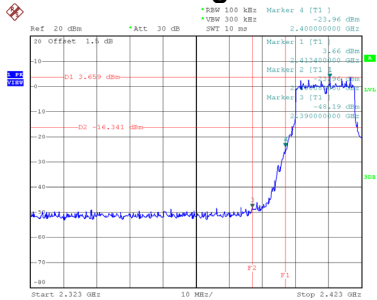
Date: 2.APR.2019 18:32:57



Date: 2.APR.2019 18:33:05

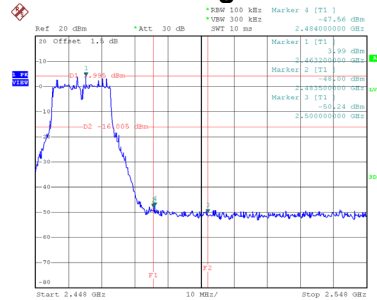
Test Mode TX N-20M Mode_Ant. 2

Bandedge-CH01



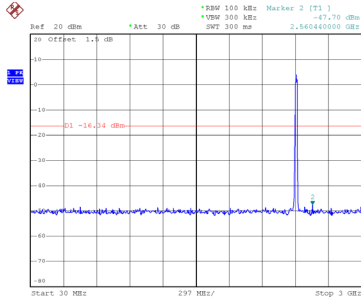
Date: 2.APR.2019 18:53:34

Bandedge-CH11

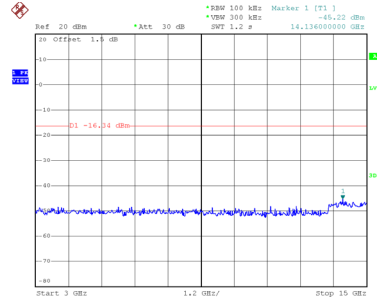


Date: 2.APR.2019 18:56:31

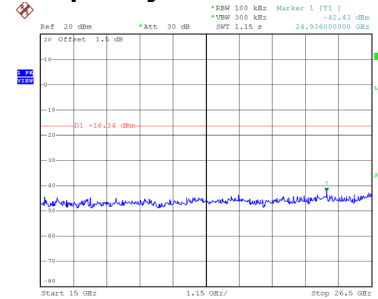
CH01 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:53:47

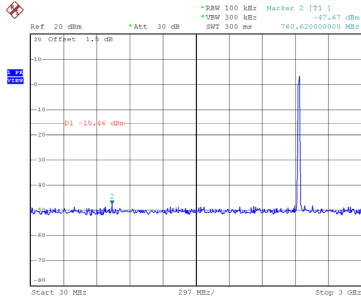


Date: 2.APR.2019 18:53:56

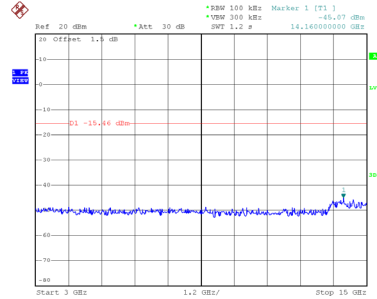


Date: 2.APR.2019 18:54:04

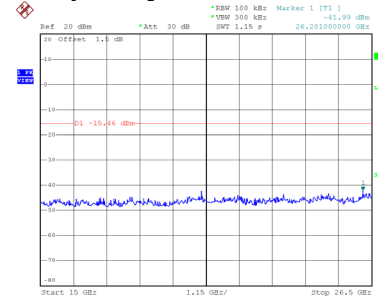
CH06 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:55:17

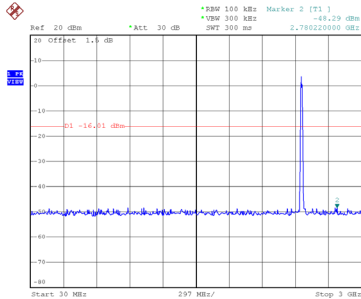


Date: 2.APR.2019 18:55:26

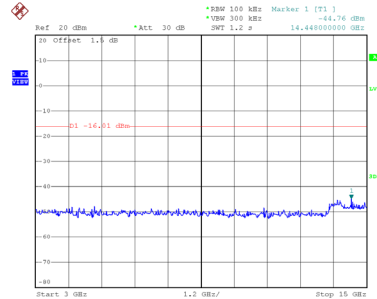


Date: 2.APR.2019 18:55:34

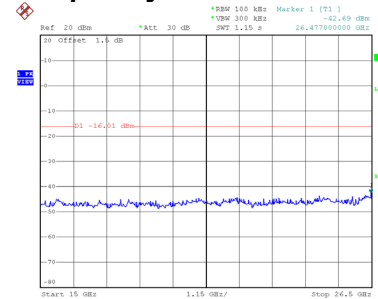
CH11 – 10th Harmonic of the fundamental frequency



Date: 2.APR.2019 18:56:45



Date: 2.APR.2019 18:56:53



Date: 2.APR.2019 18:57:02