

# FCC Radio Test Report

## FCC ID: TE7KC400

**This report concerns: Original Grant**

**Project No.** : 2006C100  
**Equipment** : Kasa Spot, 24/7 Recording  
**Brand Name** : tp-link  
**Test Model** : KC400  
**Series Model** : NA  
**Applicant** : TP-Link Technologies Co., Ltd.  
**Address** : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China  
**Manufacturer** : TP-Link Technologies Co., Ltd.  
**Address** : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China  
**Date of Receipt** : Jul. 01, 2020  
**Date of Test** : Jul. 04, 2020~Jul. 31, 2020  
**Issued Date** : Aug. 17, 2020  
**Report Version** : R01  
**Test Sample** : Engineering Sample No.: DG2020061810 for conducted, DG202006189 for radiated  
**Standard(s)** : FCC Part15, Subpart C (15.247)  
ANSI C63.10-2013  
FCC KDB 558074 D01 15.247 Meas Guidance v05r02

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



Prepared by : Simon Ling



Approved by : Ethan Ma



Certificate #5123.02

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

Tel: +86-769-8318-3000

Web: www.newbtl.com

**Declaration**

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

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

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

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

**BTL's** laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

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

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

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

<b>Table of Contents</b>	<b>Page</b>
<b>REPORT ISSUED HISTORY</b>	<b>6</b>
<b>1 . SUMMARY OF TEST RESULTS</b>	<b>7</b>
1.1 TEST FACILITY	8
1.2 MEASUREMENT UNCERTAINTY	8
1.3 TEST ENVIRONMENT CONDITIONS	9
<b>2 . GENERAL INFORMATION</b>	<b>10</b>
2.1 GENERAL DESCRIPTION OF EUT	10
2.2 DESCRIPTION OF TEST MODES	11
2.3 PARAMETERS OF TEST SOFTWARE	12
2.4 DUTY CYCLE	13
2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	14
2.6 SUPPORT UNITS	14
<b>3 . AC POWER LINE CONDUCTED EMISSIONS TEST</b>	<b>15</b>
3.1 LIMIT	15
3.2 TEST PROCEDURE	15
3.3 DEVIATION FROM TEST STANDARD	15
3.4 TEST SETUP	16
3.5 EUT OPERATION CONDITIONS	16
3.6 TEST RESULTS	16
<b>4 . RADIATED EMISSIONS TEST</b>	<b>17</b>
4.1 LIMIT	17
4.2 TEST PROCEDURE	18
4.3 DEVIATION FROM TEST STANDARD	18
4.4 TEST SETUP	19
4.5 EUT OPERATION CONDITIONS	20
4.6 TEST RESULTS - 9 KHZ TO 30 MHZ	20
4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ	20
4.8 TEST RESULTS - ABOVE 1000 MHZ	20
<b>5 . BANDWIDTH TEST</b>	<b>21</b>
5.1 LIMIT	21
5.2 TEST PROCEDURE	21
5.3 DEVIATION FROM STANDARD	21
5.4 TEST SETUP	21

<b>Table of Contents</b>	<b>Page</b>
5.5 EUT OPERATION CONDITIONS	21
5.6 TEST RESULTS	21
<b>6 . MAXIMUM AVERAGE OUTPUT POWER TEST</b>	<b>22</b>
6.1 LIMIT	22
6.2 TEST PROCEDURE	22
6.3 DEVIATION FROM STANDARD	22
6.4 TEST SETUP	22
6.5 EUT OPERATION CONDITIONS	22
6.6 TEST RESULTS	22
<b>7 . CONDUCTED SPURIOUS EMISSIONS</b>	<b>23</b>
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 TEST RESULTS	23
<b>8 . POWER SPECTRAL DENSITY TEST</b>	<b>24</b>
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 TEST RESULTS	24
<b>9 . MEASUREMENT INSTRUMENTS LIST</b>	<b>25</b>
<b>10 . EUT TEST PHOTO</b>	<b>27</b>
<b>APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS</b>	<b>32</b>
<b>APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ</b>	<b>35</b>
<b>APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ</b>	<b>40</b>
<b>APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ</b>	<b>43</b>
<b>APPENDIX E - BANDWIDTH</b>	<b>104</b>
<b>APPENDIX F – MAXIMUM AVERAGE OUTPUT POWER</b>	<b>108</b>
<b>APPENDIX G - CONDUCTED SPURIOUS EMISSIONS</b>	<b>110</b>

Table of Contents	Page
<b>APPENDIX H - POWER SPECTRAL DENSITY</b>	<b>114</b>

**REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	Aug. 11, 2020
R01	Modify the comments of the organization.	Aug. 17, 2020

## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical 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 Average Output Power	APPENDIX F	PASS	-----
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS	-----
15.247(e)	Power Spectral Density	APPENDIX H	PASS	-----
15.203	Antenna Requirement	-----	PASS	Note(2)

Note:

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

## 1.1 TEST FACILITY

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

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

## 1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The BTL measurement uncertainty as below table:

### A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.60

### B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9kHz ~ 30MHz	V	3.79
		9kHz ~ 30MHz	H	3.57
		30MHz ~ 200MHz	V	4.88
		30MHz ~ 200MHz	H	4.14
		200MHz ~ 1,000MHz	V	4.62
		200MHz ~ 1,000MHz	H	4.80
		1GHz ~ 6GHz	-	4.58
		6GHz ~ 18GHz	-	5.18
		18GHz ~ 26.5GHz	-	3.62
		26.5GHz ~ 40GHz	-	4.00

### C. Other Measurement:

Parameter	Uncertainty
Bandwidth	±3.8 %
Maximum Average Output Power	±0.95 dB
Conducted Spurious Emission	±2.71 dB
Power Spectral Density	±0.86 dB
Temperature	±0.08 °C
Time	±0.58 %
Supply voltages	±0.3 %

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




**1.3 TEST ENVIRONMENT CONDITIONS**

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	53%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-9K-30MHz	25°C	60%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-30 MHz to 1GHz	22°C	54%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-Above 1000 MHz	24°C	60%	DC 5V	Sheldon Ou
Bandwidth	24°C	55%	DC 5V	Hayden Chen
Maximum Average output power	24°C	55%	DC 5V	Laughing Zhang
Conducted Spurious Emissions	24°C	55%	DC 5V	Hayden Chen
Power Spectral Density	24°C	55%	DC 5V	Hayden Chen

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Kasa Spot, 24/7 Recording
Brand Name	tp-link
Test Model	KC400
Series Model	NA
Model Difference(s)	NA
Power Source	DC Voltage supplied from AC adapter. Model: A8-501000
Power Rating	I/P: 100-240V~ 50/60Hz 0.2A Max. O/P: 5V  1A
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 72.2 Mbps
Maximum Average Output Power	IEEE 802.11b: 18.27 dBm (0.0671 W) IEEE 802.11g: 18.01 dBm (0.0632 W) IEEE 802.11n (HT20): 20.27 dBm (0.1064 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 IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Internal	N/A	3.59	N/A

## 2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N20 Mode Channel 06
Mode 5	TX B Mode Channel 01/02/06/10/11
Mode 6	TX G Mode Channel 01/02/06/10/11
Mode 7	TX N-20 MHz Mode Channel 01/02/06/10/11

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

<b>AC power line conducted emissions test</b>	
Final Test Mode:	Description
Mode 4	TX N20 Mode Channel 06

<b>Radiated emissions test - Below 1GHz</b>	
Final Test Mode:	Description
Mode 4	TX N20 Mode Channel 06

<b>Radiated emissions test- Above 1GHz</b>	
Final Test Mode:	Description
Mode 5	TX B Mode Channel 01/02/06/10/11
Mode 6	TX G Mode Channel 01/02/06/10/11
Mode 7	TX N-20 MHz Mode Channel 01/02/06/10/11

<b>Conducted test</b>	
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

**NOTE:**

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

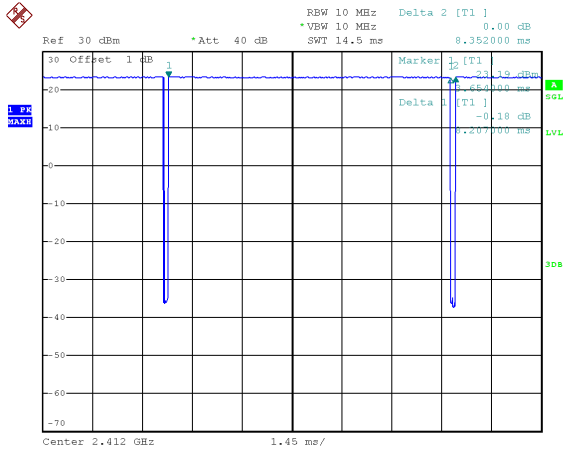
**2.3 PARAMETERS OF TEST SOFTWARE**

Test Software	MPTool V1.0.0.10		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	37	38	38
IEEE 802.11g	45	54	48
IEEE 802.11n (HT20)	44	59	45

## 2.4 DUTY CYCLE

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

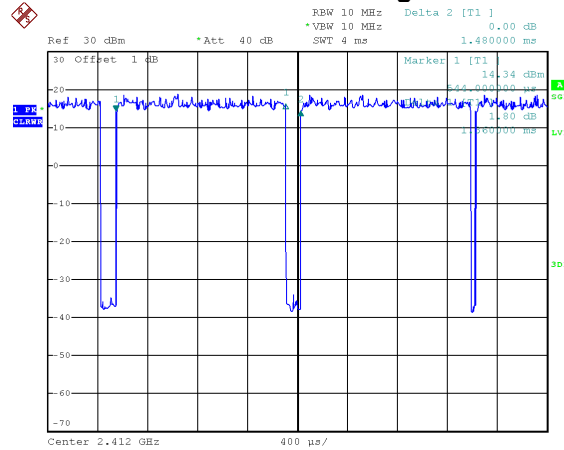
**IEEE 802.11b**



Date: 9.JUL.2020 16:32:36

Duty cycle =  $8.207 \text{ ms} / 8.352 \text{ ms} = 98.26\%$   
 Duty Factor =  $10 \log(1/\text{Duty cycle}) = 0.00$

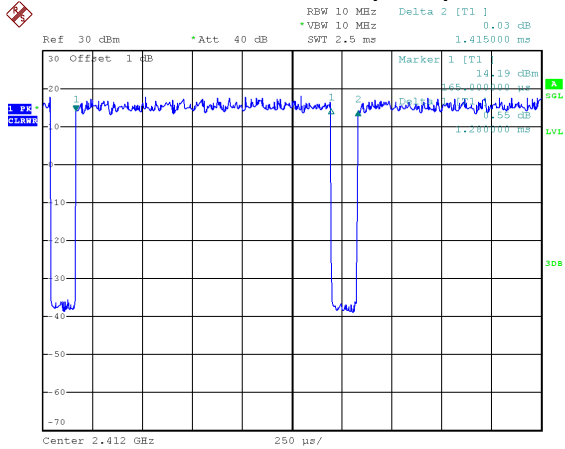
**IEEE 802.11g**



Date: 9.JUL.2020 16:33:50

Duty cycle =  $1.360 \text{ ms} / 1.480 \text{ ms} = 91.89\%$   
 Duty Factor =  $10 \log(1/\text{Duty cycle}) = 0.37$

**IEEE 802.11n (HT20)**



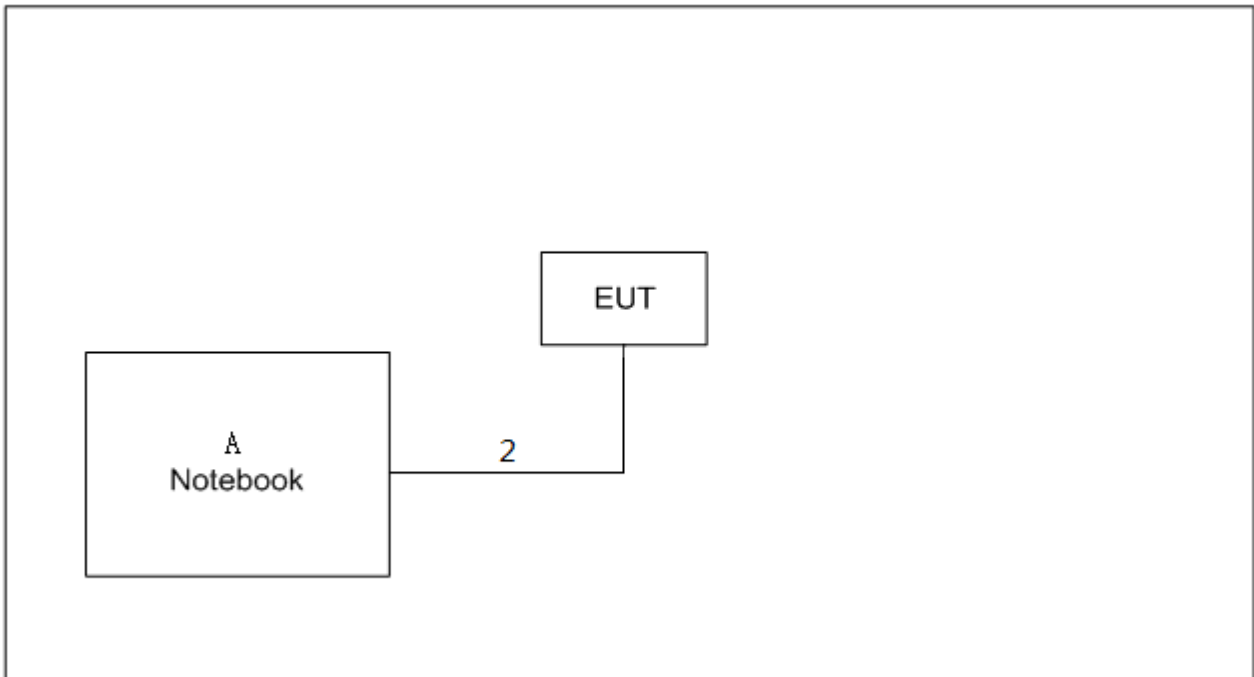
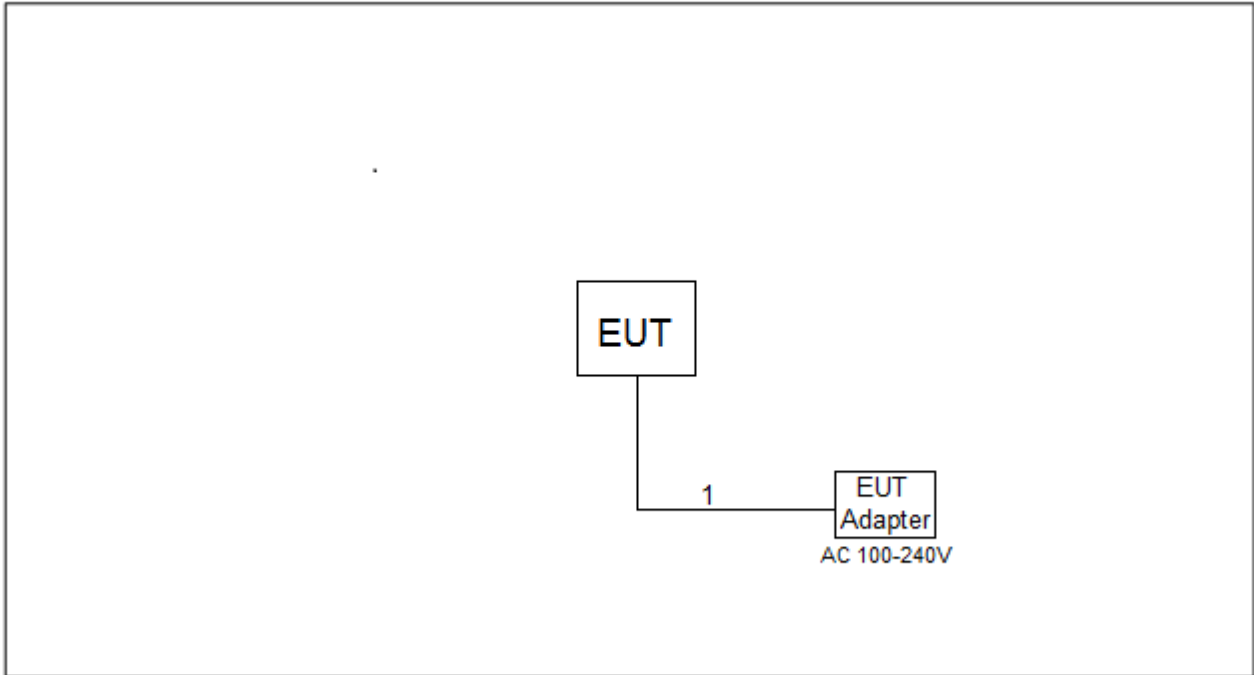
Date: 9.JUL.2020 16:34:36

Duty cycle =  $1.280 \text{ ms} / 1.415 \text{ ms} = 90.46\%$   
 Duty Factor =  $10 \log(1/\text{Duty cycle}) = 0.44$

**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  $< 98\%$ ).

## 2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



## 2.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Dell	Inspiron 15-7559	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	USB Cable	YES	NO	2.95m
2	USB Cable	YES	NO	1m

### 3. AC POWER LINE CONDUCTED EMISSIONS TEST

#### 3.1 LIMIT

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

**NOTE:**

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

The following table is the setting of the receiver

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

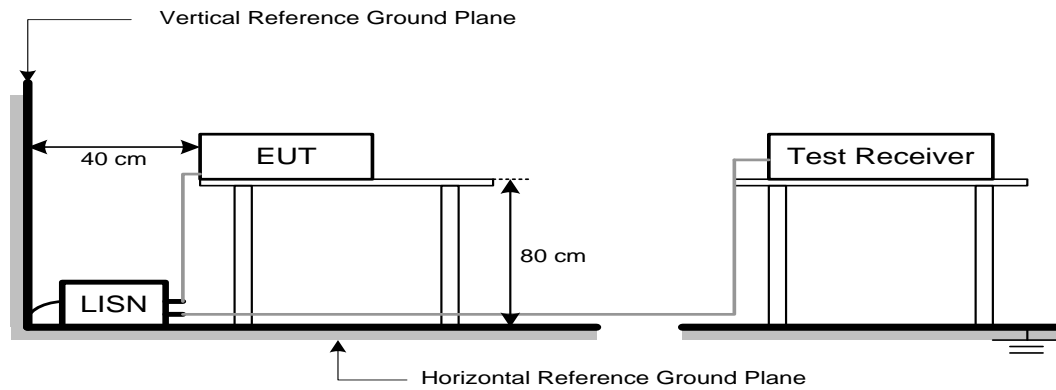
#### 3.2 TEST PROCEDURE

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

#### 3.3 DEVIATION FROM TEST STANDARD

No deviation

### 3.4 TEST SETUP



### 3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

### 3.6 TEST RESULTS

Please refer to the APPENDIX A.



## 4. RADIATED EMISSIONS TEST

### 4.1 LIMIT

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

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

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

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

#### NOTE:

- (1) The limit for radiated test was performed according to FCC 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

## 4.2 TEST PROCEDURE

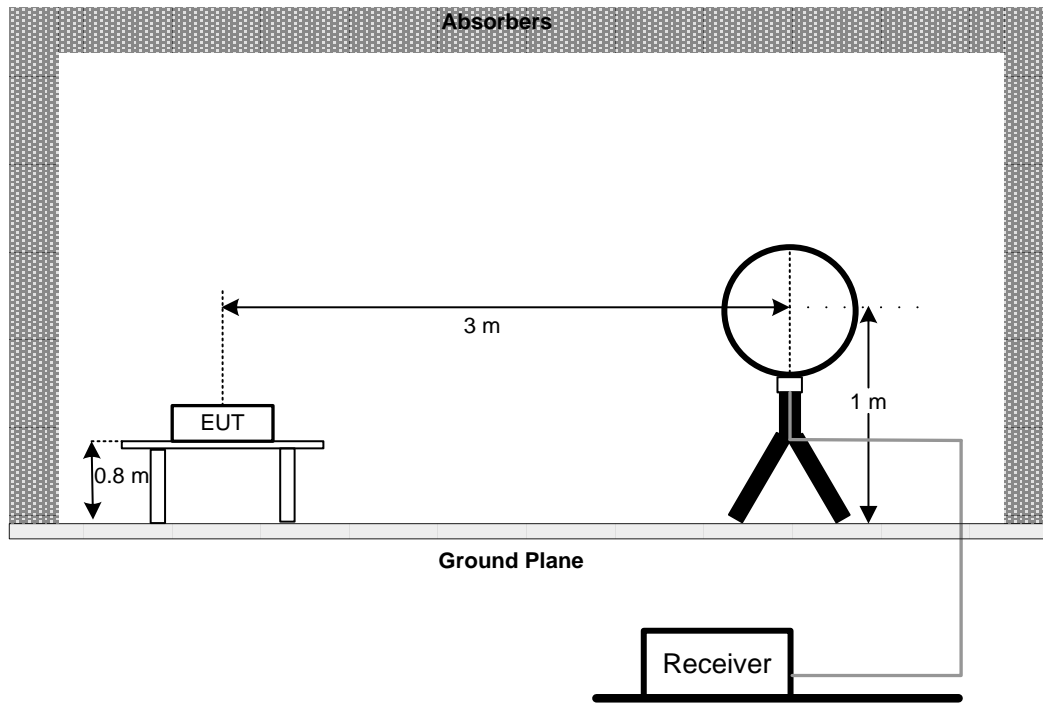
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b. The measuring distance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

## 4.3 DEVIATION FROM TEST STANDARD

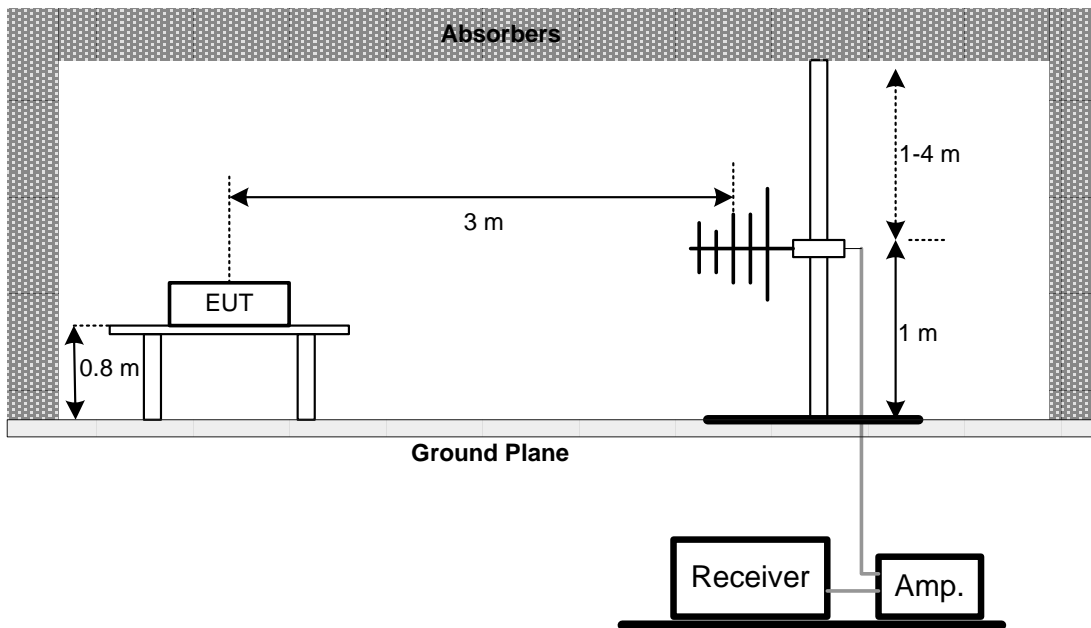
No deviation

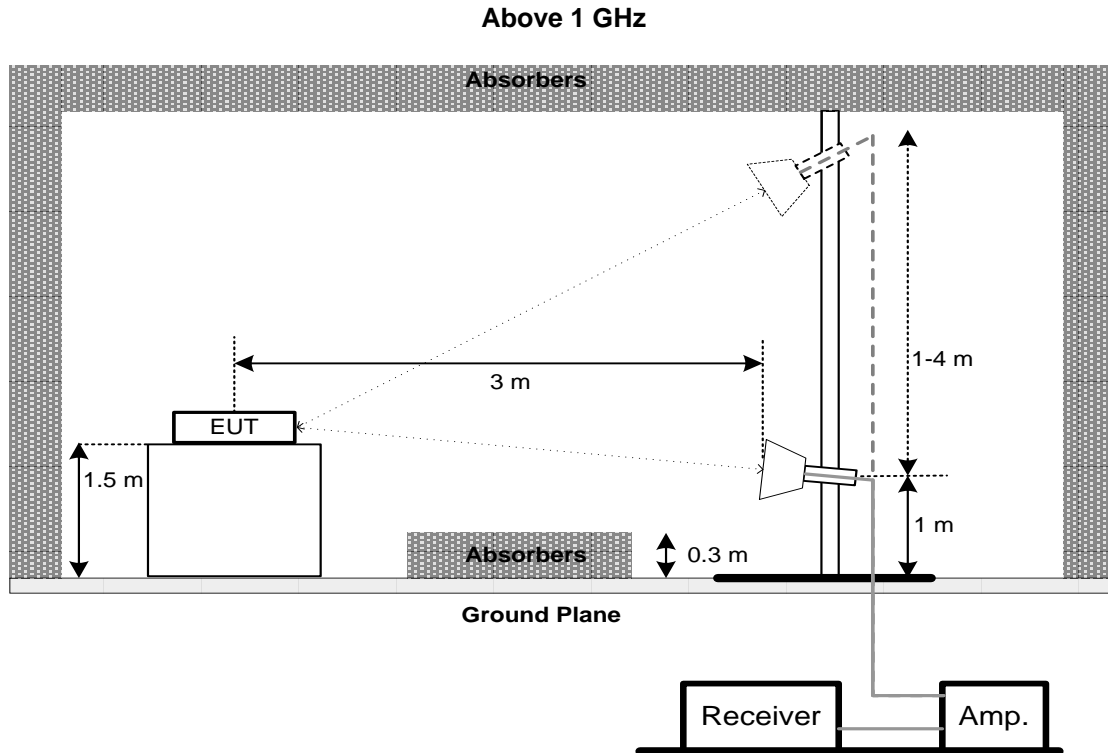
**4.4 TEST SETUP**

**9 kHz-30 MHz**



**30 MHz to 1 GHz**





#### 4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 4.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B

Remark:

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

#### 4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

#### 4.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

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

## 5. BANDWIDTH TEST

### 5.1 LIMIT

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

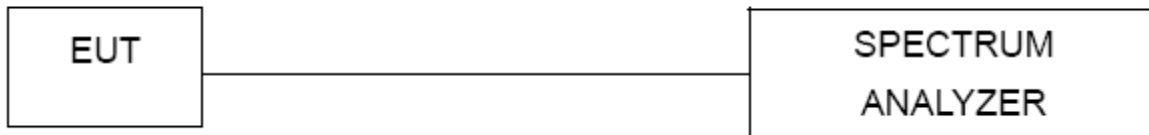
### 5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting:  
For 6 dB Bandwidth : RBW= 100 kHz, VBW=300 kHz, Sweep time = auto.  
For 99% Emission Bandwidth B/G/N-20 Mode: RBW= 300 KHz, VBW=1 MHz, Sweep time = 2.5 ms.
- The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

### 5.3 DEVIATION FROM STANDARD

No deviation.

### 5.4 TEST SETUP



### 5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 5.6 TEST RESULTS

Please refer to the APPENDIX E.

## 6. MAXIMUM AVERAGE OUTPUT POWER TEST

### 6.1 LIMIT

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

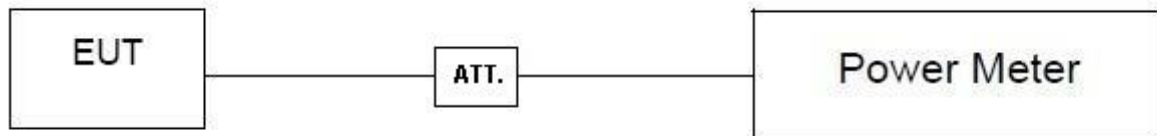
### 6.2 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.2.3.1 (for AVG power) of ANSI C63.10-2013.

### 6.3 DEVIATION FROM STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 6.6 TEST RESULTS

Please refer to the APPENDIX F.

## 7. CONDUCTED SPURIOUS EMISSIONS

### 7.1 LIMIT

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

### 7.2 TEST PROCEDURE

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

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 7.6 TEST RESULTS

Please refer to the APPENDIX G.

## 8. POWER SPECTRAL DENSITY TEST

### 8.1 LIMIT

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

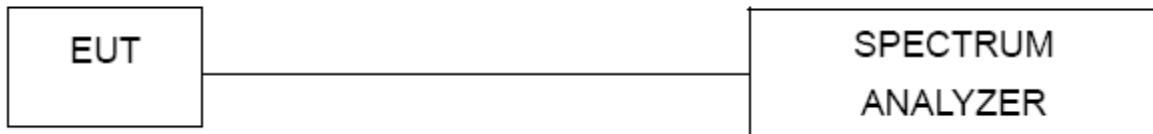
### 8.2 TEST PROCEDURE

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

### 8.3 DEVIATION FROM STANDARD

No deviation.

### 8.4 TEST SETUP



### 8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 8.6 TEST RESULTS

Please refer to the APPENDIX H.



**9. MEASUREMENT INSTRUMENTS LIST**

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Feb. 28, 2021
2	LISN	EMCO	3816/2	52765	Mar. 01, 2021
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 28, 2021
4	50Ω Terminator	SHX	TF5-3	15041305	Mar. 01, 2021
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 10, 2021
7	Shielded Room	ETS-LINDGREN	8.5*4.5*3m	N/A	N/A
8	Temperature and humidity Measurement	TANITA	TT-492	N/A	Apr. 20, 2021

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	EM	EM-6876-1	230	Apr. 16, 2021
2	Cable	N/A	RG 213/U	N/A	May 29, 2021
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 28, 2021
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021
6	Temperature and humidity Measurement	TANITA	TT-492	N/A	Apr. 20, 2021

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, 2021
2*	Amplifier*	HP	8447D	2944A09673	Aug. 11, 2021
3	Receiver	Agilent	N9038A	MY52130039	Jul. 25, 2021
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 22, 2021
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
8	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021
9	Temperature and humidity Measurement	TANITA	TT-492	N/A	Apr. 20, 2021

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	May 12, 2021
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jul. 07, 2021
3	Amplifier	Agilent	8449B	3008A02333	Mar. 01, 2021
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 07, 2021
5	Receiver	Agilent	N9038A	MY52130039	Jul. 25, 2021
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	N/A	EMC104-SM-SM-6000	N/A	May 09, 2021
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	Filter	STI	STI15-9912	N/A	Jul. 25, 2021
11	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021
12	Temperature and humidity Measurement	TANITA	TT-492	N/A	Apr. 20, 2021

Bandwidth & Antenna Conducted Spurious Emissions & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Jul. 25, 2021
2	RF Cable	Tongkaichuan	N/A	N/A	N/A
3	DC Block	Mini	N/A	N/A	N/A
4	Temperature and humidity Measurement	TANITA	TT-492	N/A	Apr. 20, 2021

Maximum Average Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Aug. 07, 2021
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jul. 25, 2021
3	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 11, 2021
4	RF Cable	Tongkaichuan	N/A	N/A	N/A
5	Temperature and humidity Measurement	TANITA	TT-492	N/A	Apr. 20, 2021

Remark: "N/A" denotes no model name, serial no. or calibration specified.

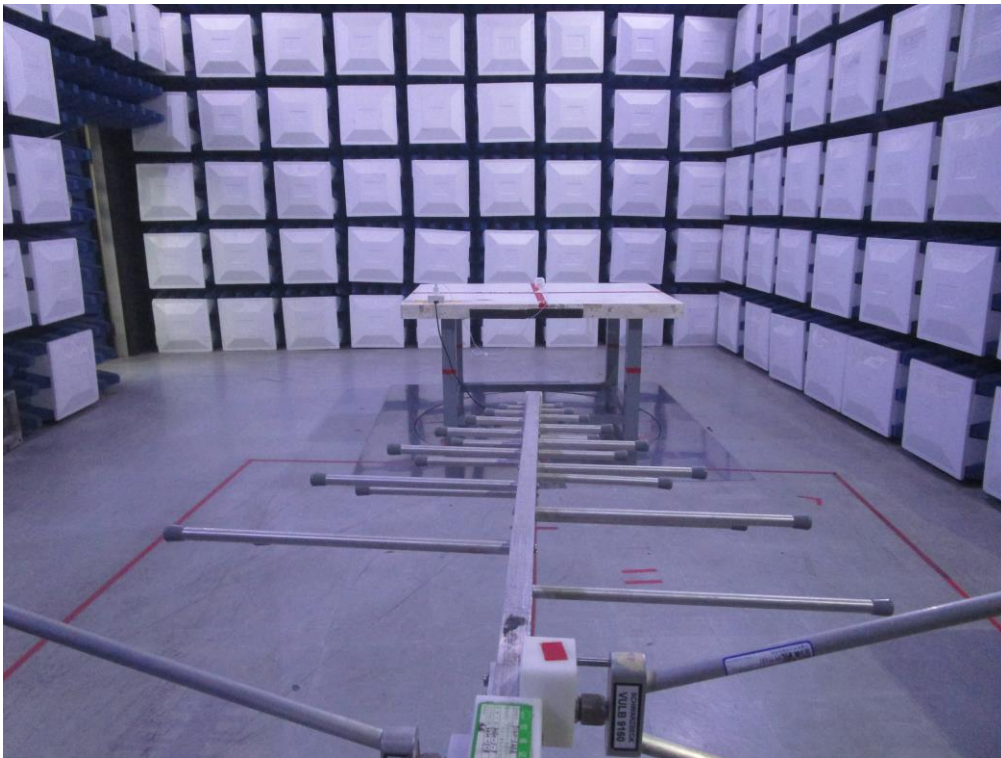
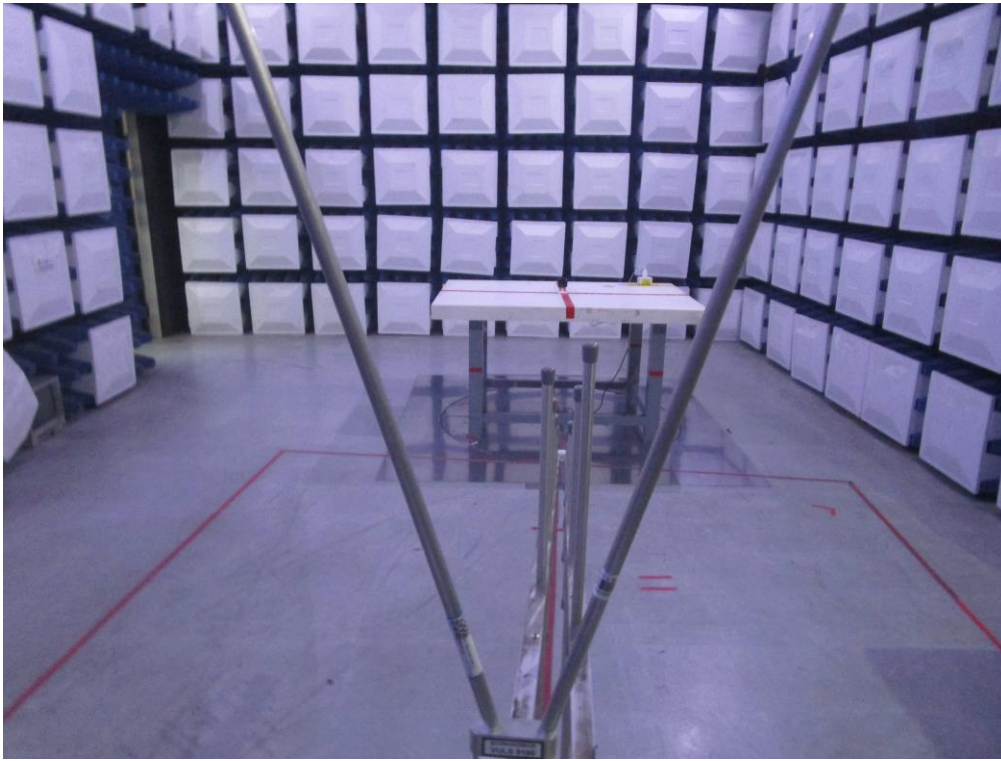
"\*\*" calibration period of equipment list is three year.

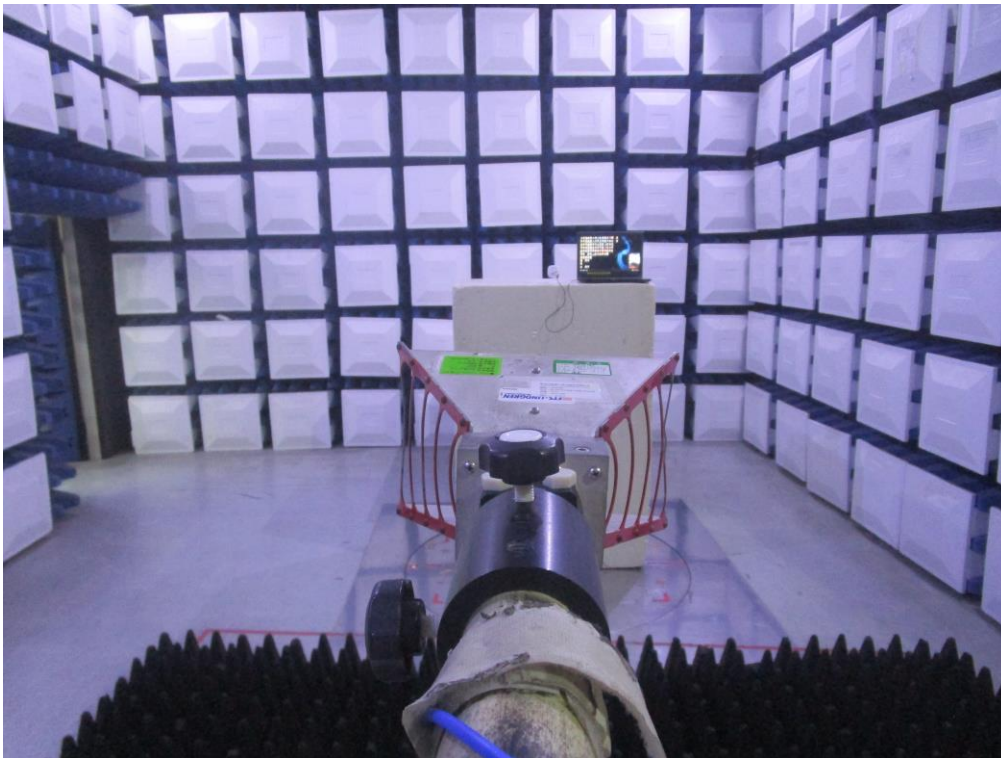
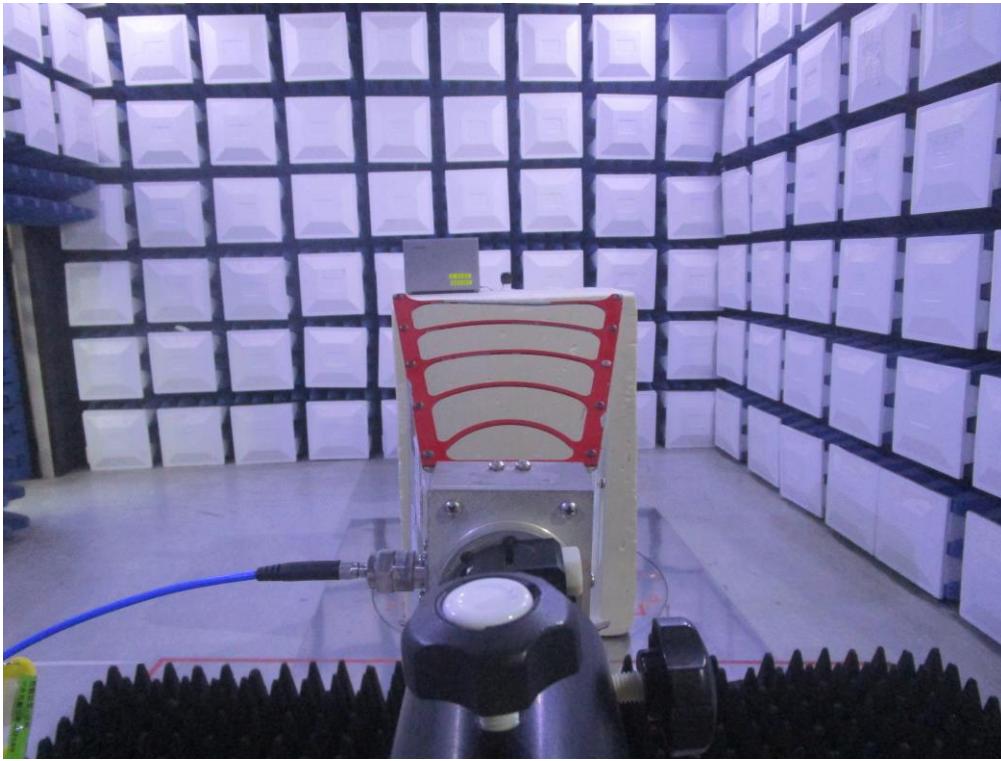
Except \* item, all calibration period of equipment list is one year.

**10. EUT TEST PHOTO****AC Power Line Conducted Emissions Test Photos**

**Radiated Emissions Test Photos****9 kHz to 30 MHz**

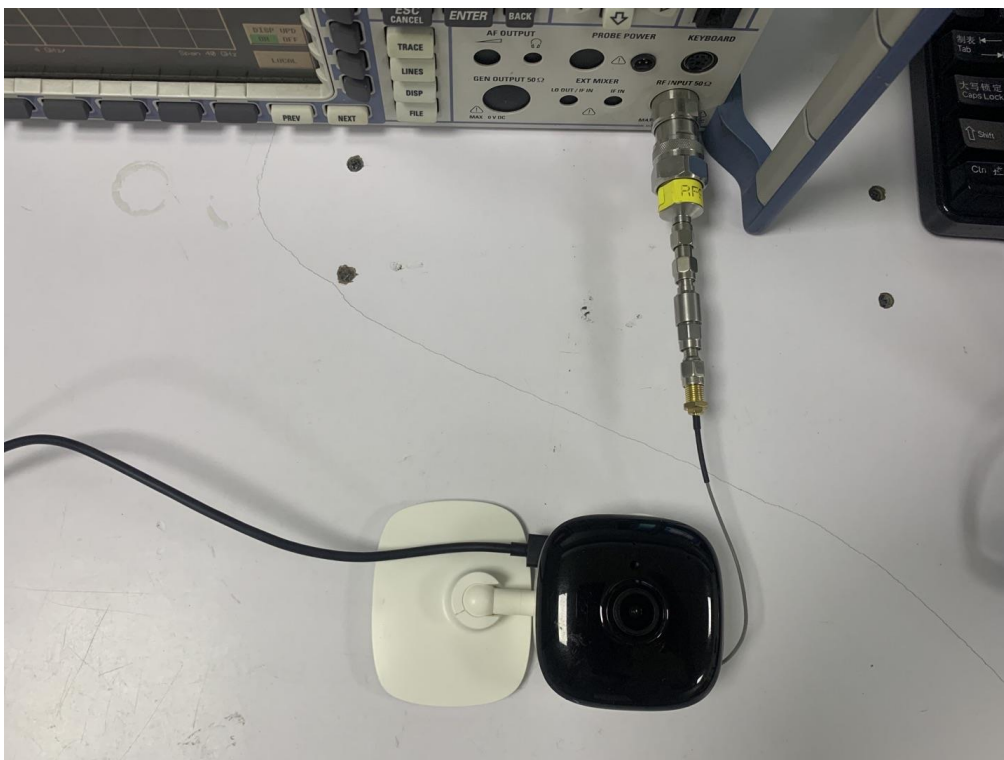


**Radiated Emissions Test Photos****30 MHz to 1 GHz**

**Radiated Emissions Test Photos****Above 1 GHz**



## Conducted measurement test Photos

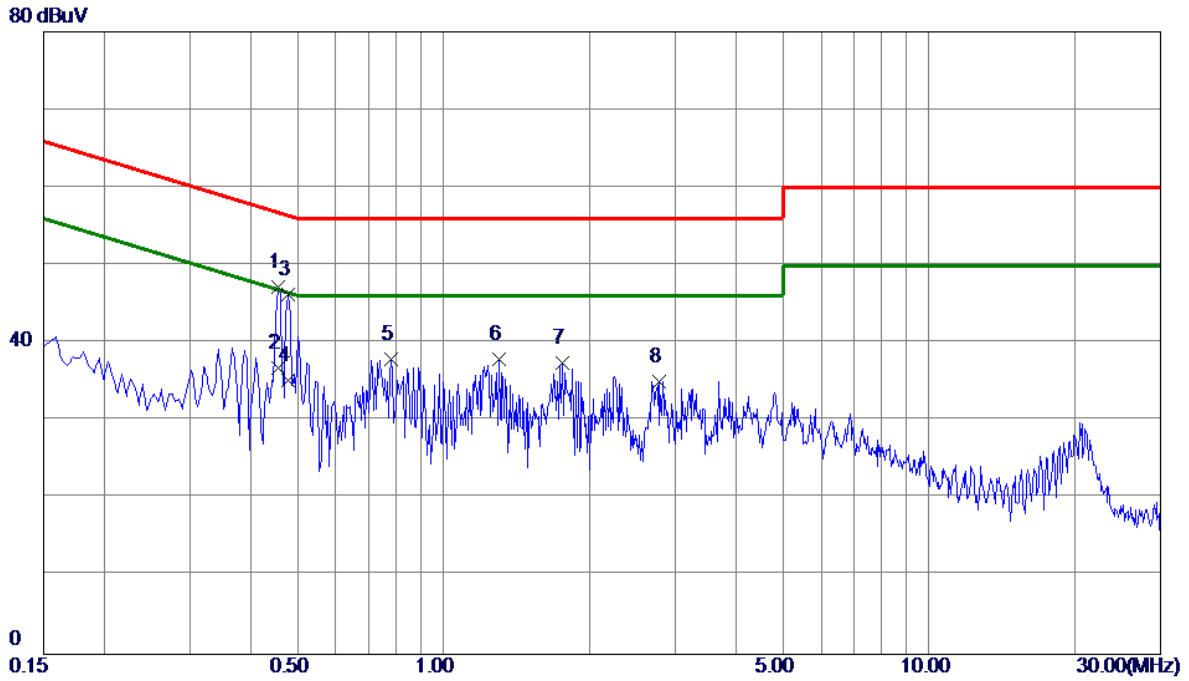


## **APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS**



Test Mode: TX N20 Mode Channel 06

### Line



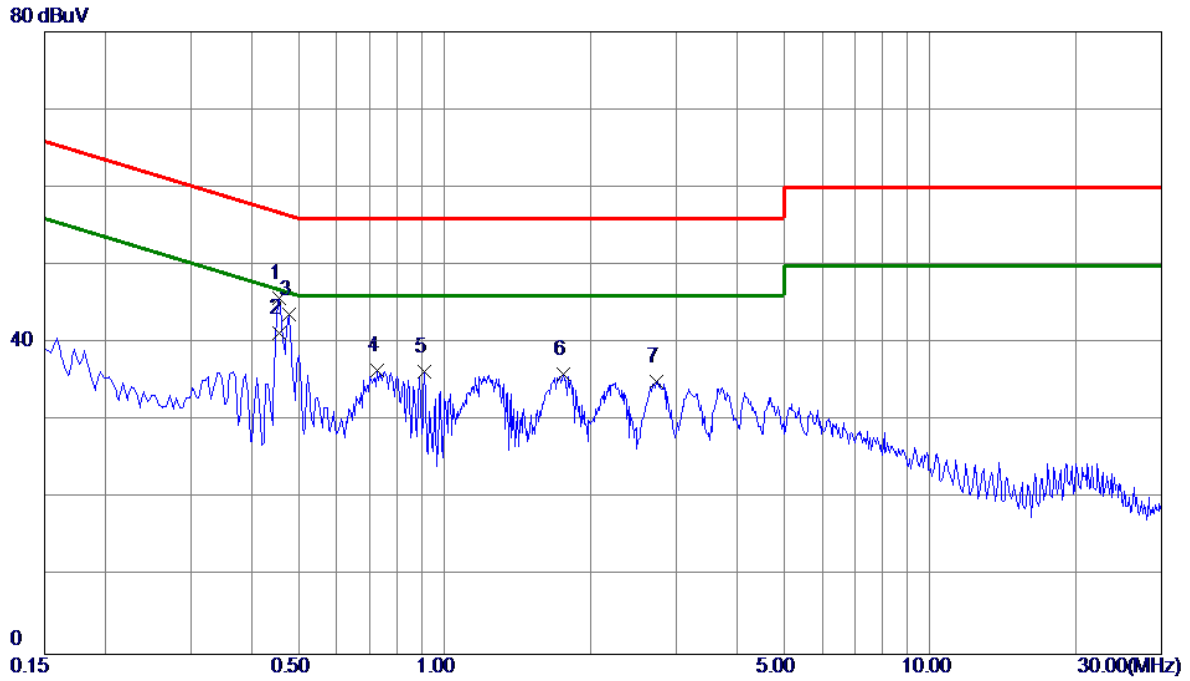
No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1 *	0.4560	37.28	9.94	47.22	56.77	-9.55	Peak	
2	0.4560	26.80	9.94	36.74	46.77	-10.03	AVG	
3	0.4785	36.23	9.94	46.17	56.37	-10.20	Peak	
4	0.4785	25.21	9.94	35.15	46.37	-11.22	AVG	
5	0.7799	28.02	9.96	37.98	56.00	-18.02	Peak	
6	1.3020	27.85	10.03	37.88	56.00	-18.12	Peak	
7	1.7610	27.44	10.07	37.51	56.00	-18.49	Peak	
8	2.7869	24.91	10.16	35.07	56.00	-20.93	Peak	

**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	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.4560	35.70	10.12	45.82	56.77	-10.95	Peak	
2 *	0.4560	31.20	10.12	41.32	46.77	-5.45	AVG	
3	0.4785	33.51	10.13	43.64	56.37	-12.73	Peak	
4	0.7260	26.31	10.14	36.45	56.00	-19.55	Peak	
5	0.9105	26.04	10.27	36.31	56.00	-19.69	Peak	
6	1.7565	25.54	10.39	35.93	56.00	-20.07	Peak	
7	2.7285	24.62	10.49	35.11	56.00	-20.89	Peak	

**REMARKS:**

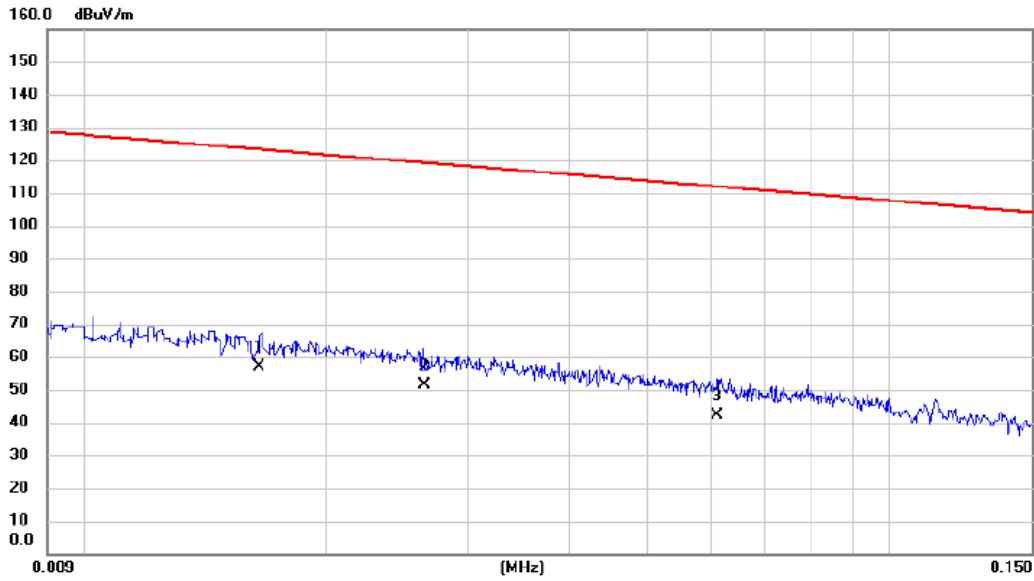
(1) Measurement Value = Reading Level + Correct Factor.

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

## **APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ**

Test Mode: TX N20 Mode Channel 06

Ant 0°



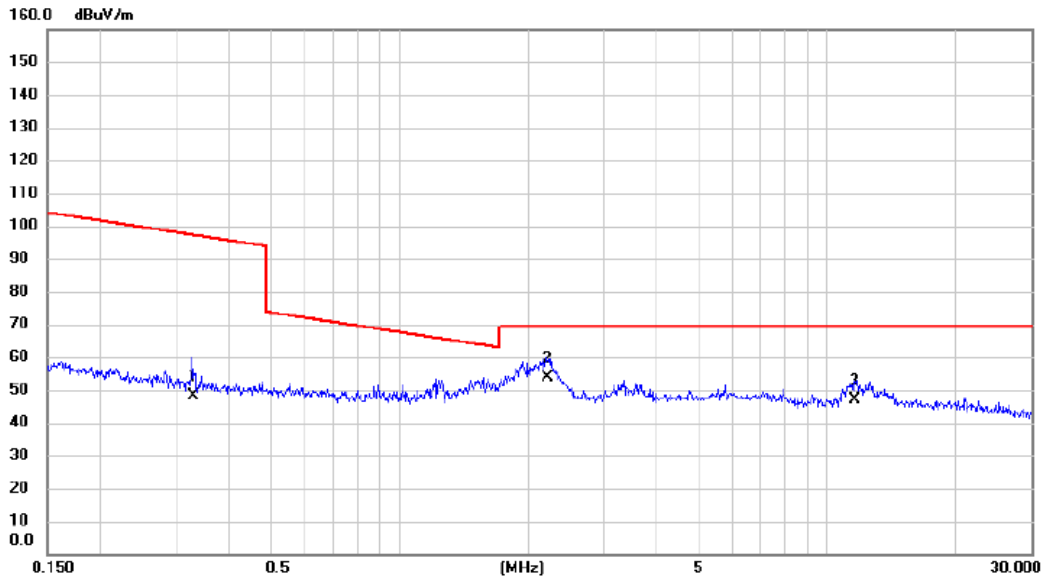
No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.017	35.60	21.30	56.90	123.26	-66.36	AVG	
2		0.026	30.28	21.08	51.36	119.14	-67.78	AVG	
3		0.061	21.26	20.97	42.23	111.88	-69.65	AVG	

REMARKS:

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

Test Mode: TX N20 Mode Channel 06

Ant 0°



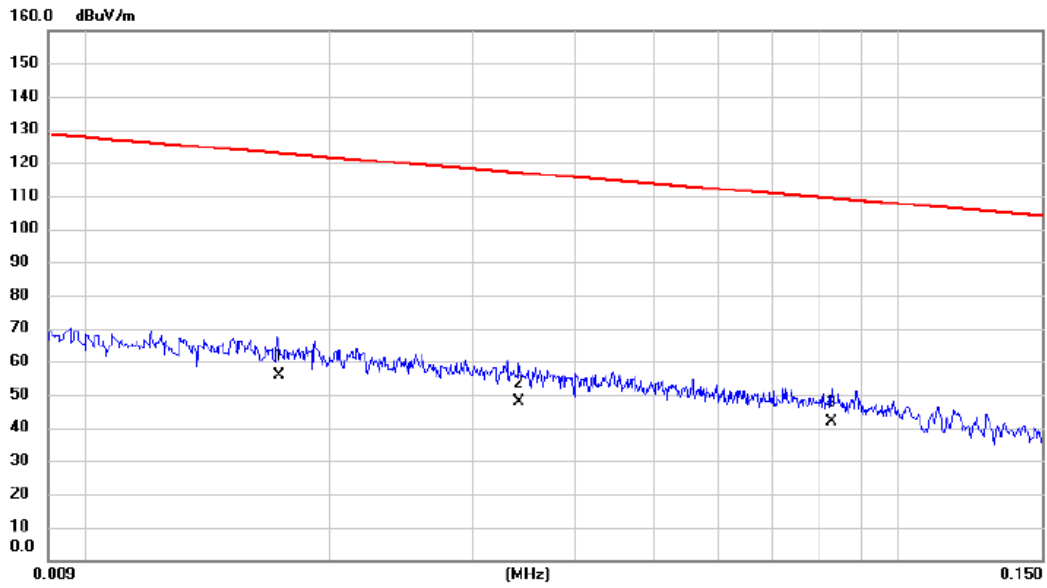
No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.329	27.46	20.83	48.29	97.27	-48.98	AVG	
2	*	2.213	31.84	21.84	53.68	69.54	-15.86	QP	
3		11.621	24.67	22.53	47.20	69.54	-22.34	QP	

REMARKS:

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

Test Mode: TX N20 Mode Channel 06

**Ant 90°**



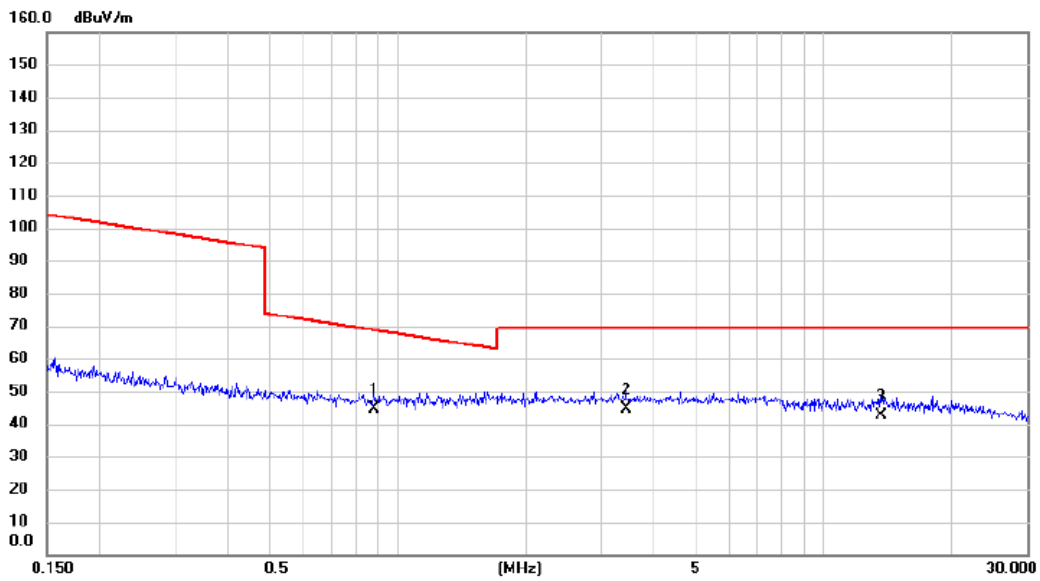
No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.017	34.58	21.26	55.84	122.84	-67.00	AVG	
2		0.034	26.71	21.04	47.75	116.92	-69.17	AVG	
3		0.083	20.94	20.95	41.89	109.25	-67.36	AVG	

**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/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.880	23.17	21.49	44.66	68.71	-24.05	QP	
2		3.436	22.61	21.85	44.46	69.54	-25.08	QP	
3		13.623	19.86	22.79	42.65	69.54	-26.89	QP	

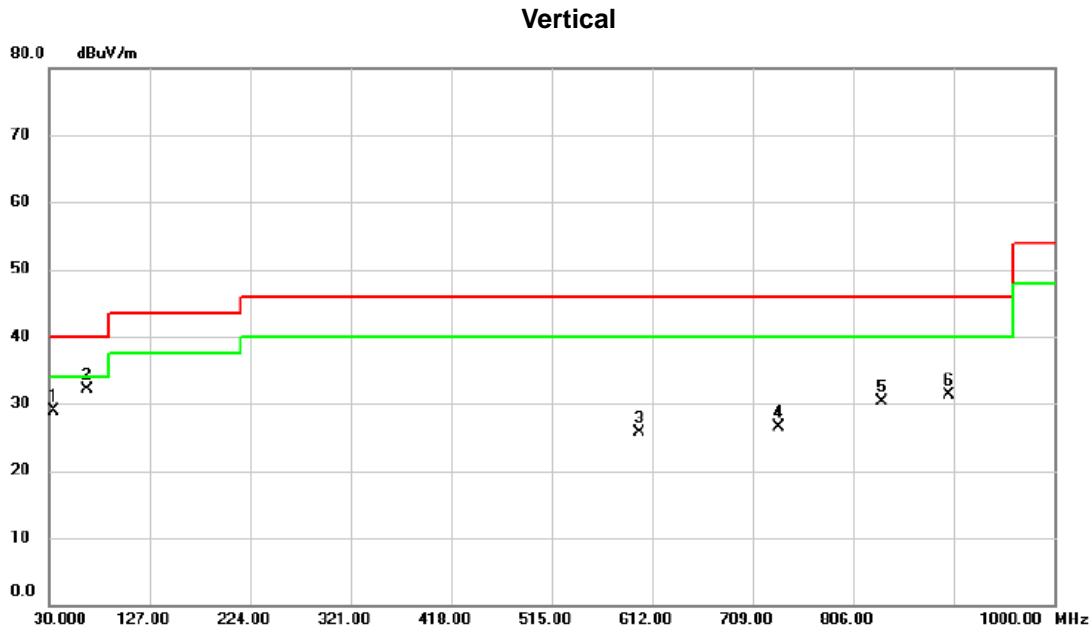
**REMARKS:**

- (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



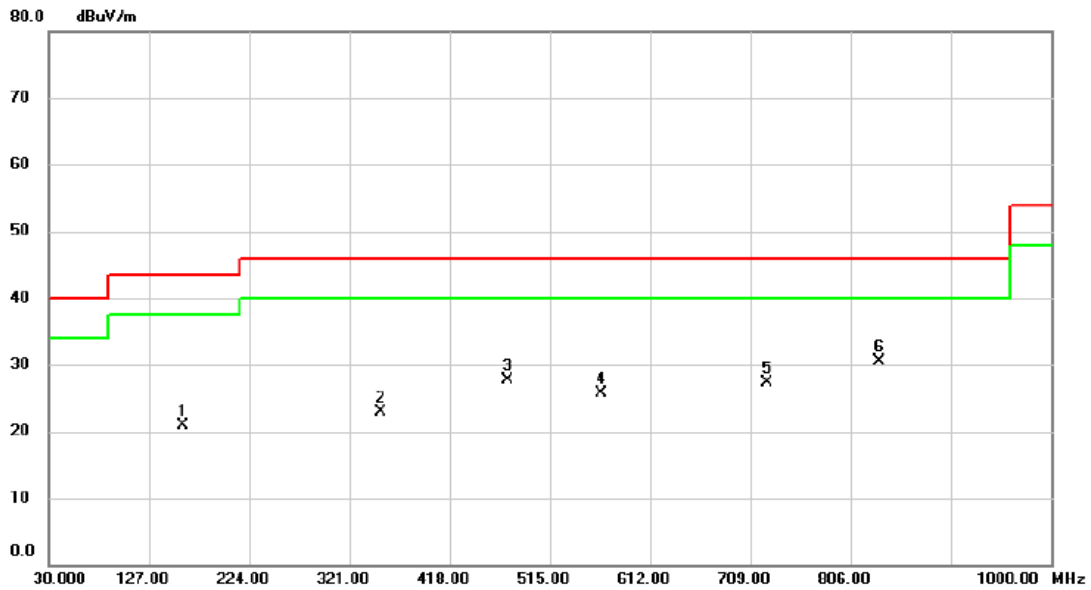
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		33.880	43.74	-14.80	28.94	40.00	-11.06	peak	
2	*	66.860	47.27	-15.25	32.02	40.00	-7.98	peak	
3		599.390	31.08	-5.37	25.71	46.00	-20.29	peak	
4		734.220	29.78	-3.32	26.46	46.00	-19.54	peak	
5		834.130	32.27	-1.99	30.28	46.00	-15.72	peak	
6		898.150	32.44	-1.18	31.26	46.00	-14.74	peak	

**REMARKS:**

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

Test Mode: TX N20 Mode Channel 06

### Horizontal



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	159.980	31.64	-10.67	20.97	43.50	-22.53	peak	
2	351.070	33.08	-10.17	22.91	46.00	-23.09	peak	
3	474.260	35.16	-7.46	27.70	46.00	-18.30	peak	
4	564.470	32.11	-6.39	25.72	46.00	-20.28	peak	
5	725.490	30.76	-3.39	27.37	46.00	-18.63	peak	
6 *	833.160	32.45	-2.01	30.44	46.00	-15.56	peak	

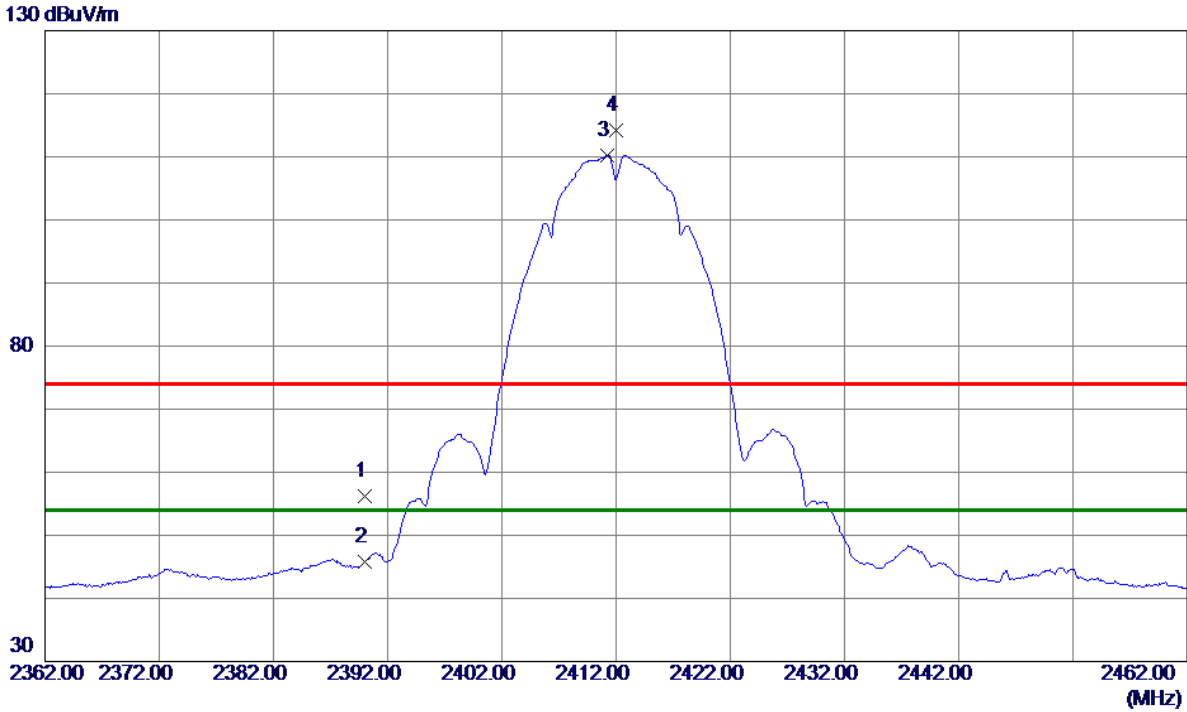
**REMARKS:**

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

## **APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ**

Test Mode: TX B Mode 2412 MHz

### Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	45.66	10.50	56.16	74.00	-17.84	Peak	
2	2390.0000	35.30	10.50	45.80	54.00	-8.20	AVG	
3 *	2411.2000	99.65	10.56	110.21	54.00	56.21	AVG	No Limit
4	2412.0000	103.60	10.56	114.16	74.00	40.16	Peak	No Limit

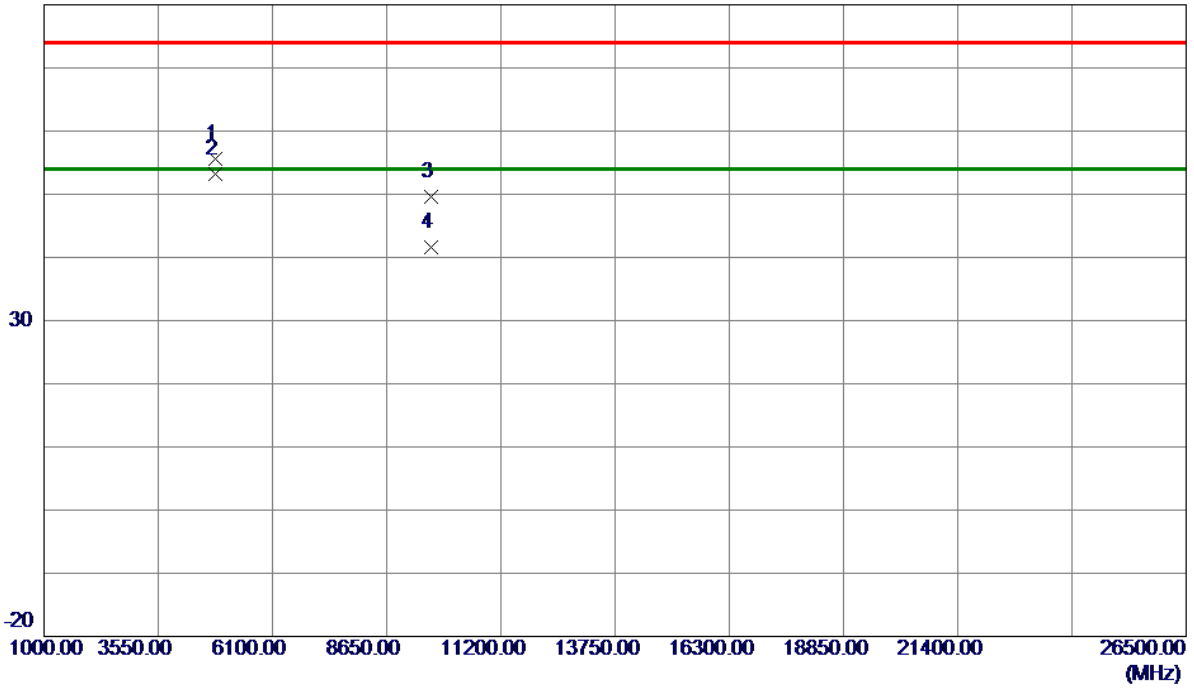
**REMARKS:**

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

Test Mode: TX B Mode 2412 MHz

### Vertical

80 dBuV/m



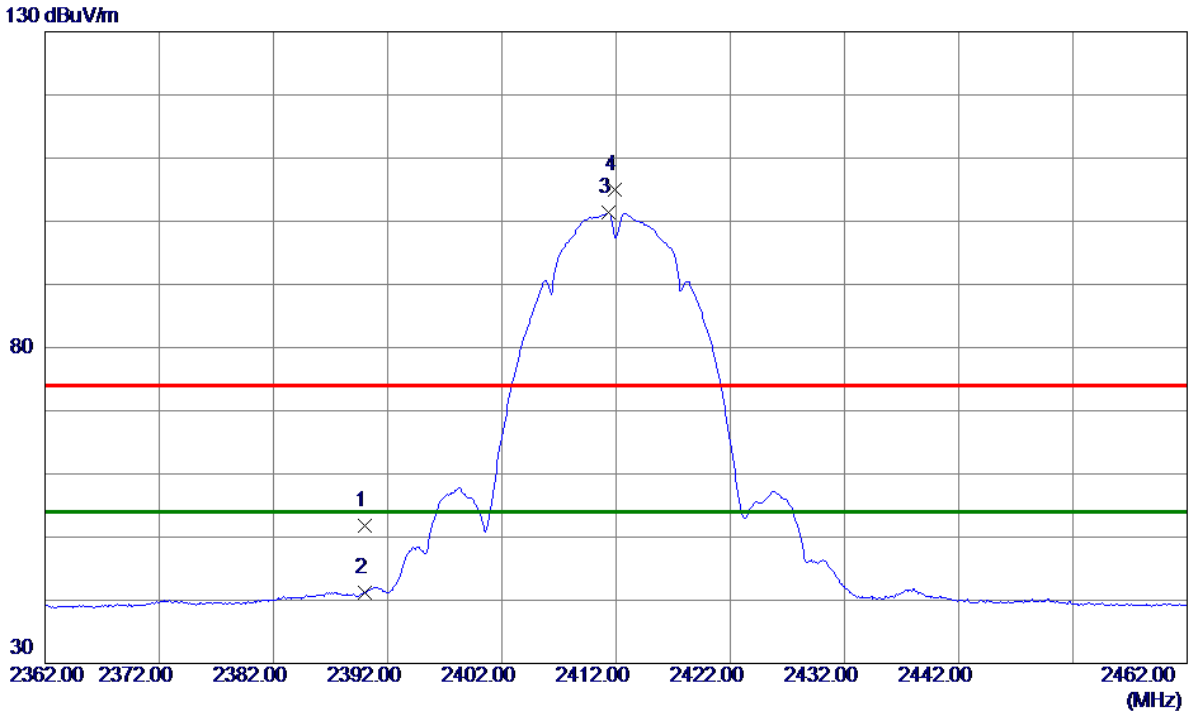
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.9750	49.02	6.53	55.55	74.00	-18.45	Peak	
2 *	4824.0050	46.68	6.53	53.21	54.00	-0.79	AVG	
3	9647.8000	36.02	13.58	49.60	74.00	-24.40	Peak	
4	9648.0050	28.11	13.58	41.69	54.00	-12.31	AVG	

**REMARKS:**

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

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	2390.0000	41.28	10.50	51.78	74.00	-22.22	Peak	
2	2390.0000	30.79	10.50	41.29	54.00	-12.71	AVG	
3 *	2411.3000	90.77	10.56	101.33	54.00	47.33	AVG	No Limit
4	2411.9000	94.48	10.56	105.04	74.00	31.04	Peak	No Limit

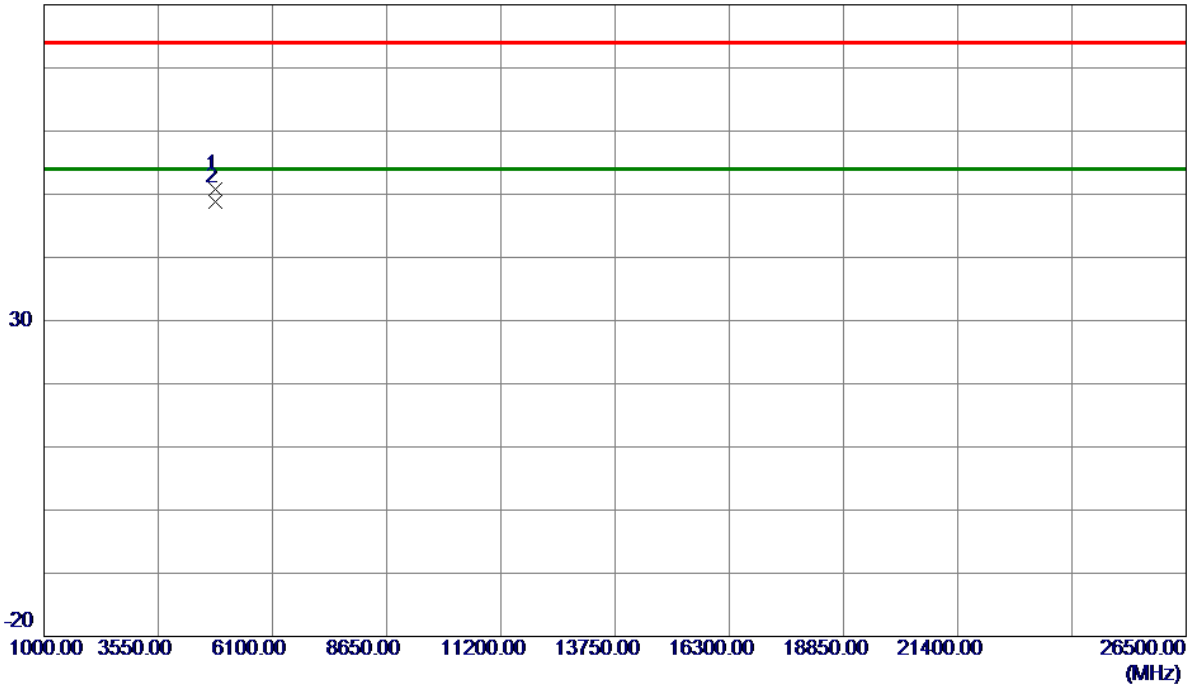
**REMARKS:**

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

Test Mode: TX B Mode 2412 MHz

### 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	4823.9750	44.25	6.53	50.78	74.00	-23.22	Peak	
2 *	4824.0050	42.25	6.53	48.78	54.00	-5.22	AVG	

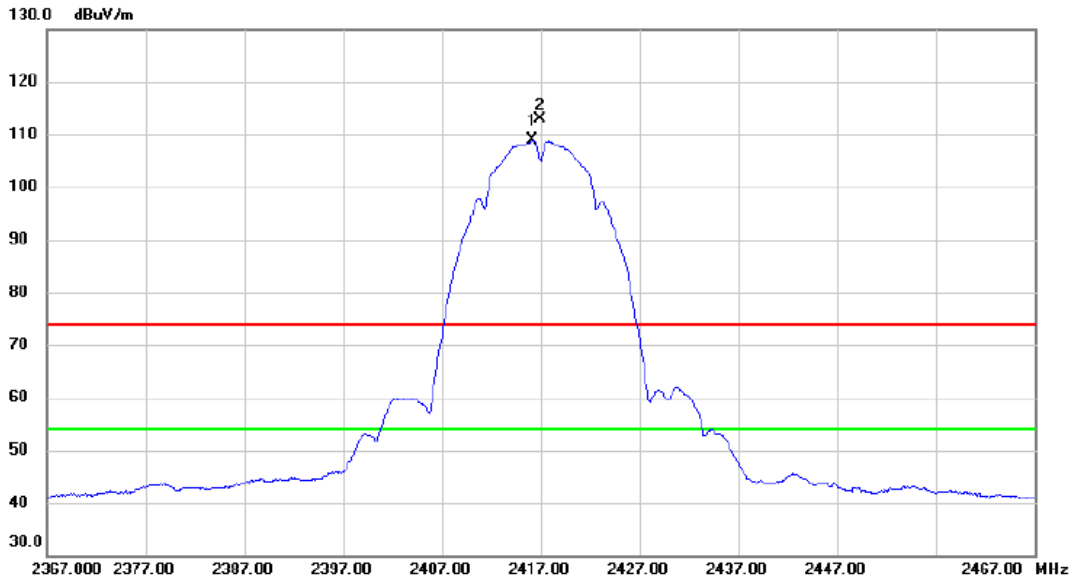
**REMARKS:**

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

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

Test Mode: TX B Mode 2417 MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	2416.200	98.36	10.57	108.93	54.00	54.93	AVG	No Limit
2	X	2416.900	102.30	10.57	112.87	74.00	38.87	peak	No Limit

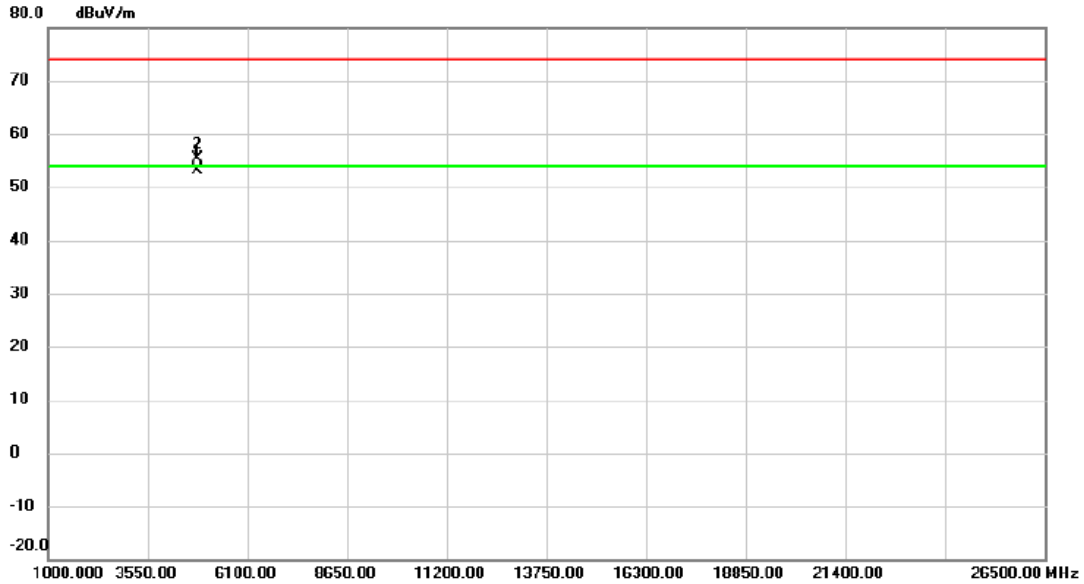
**REMARKS:**

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



Test Mode: TX B Mode 2417 MHz

### Vertical



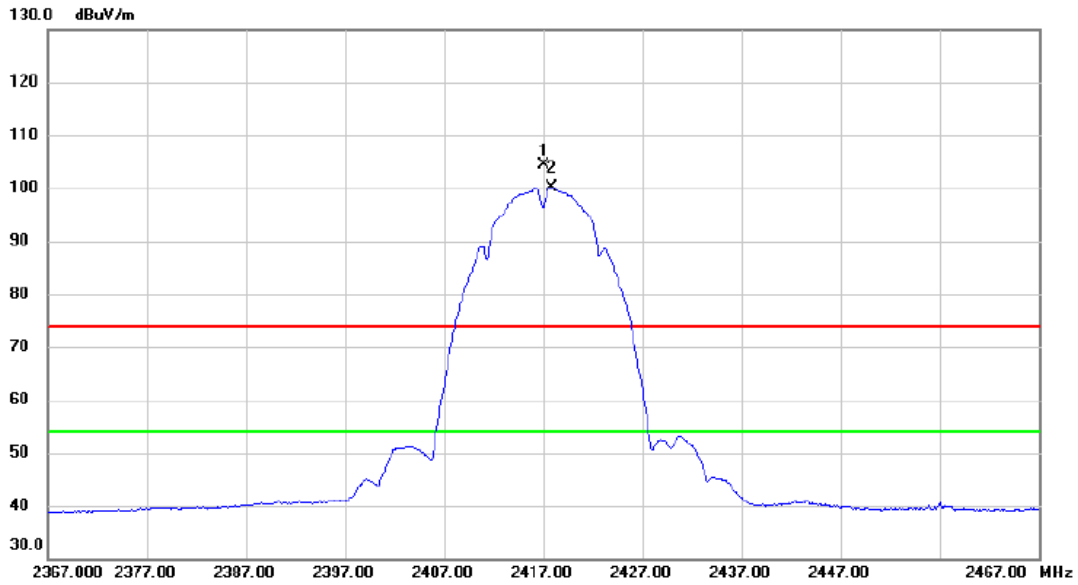
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	4833.990	46.63	6.54	53.17	54.00	-0.83	AVG	
2		4834.095	48.90	6.54	55.44	74.00	-18.56	peak	

**REMARKS:**

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

Test Mode: TX B Mode 2417 MHz

### Horizontal



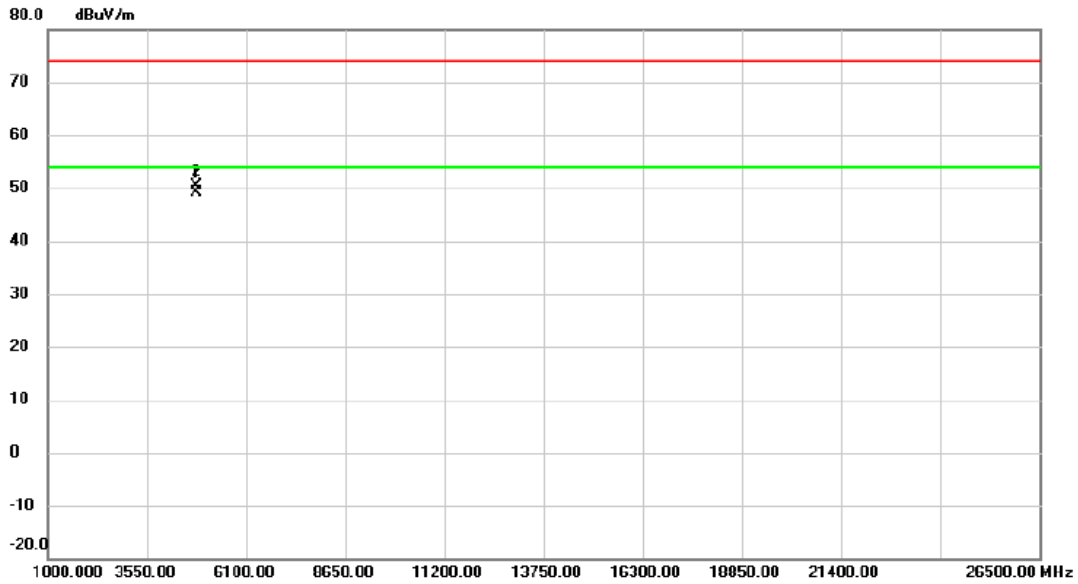
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2417.100	93.72	10.57	104.29	74.00	30.29	peak	No Limit
2	*	2417.800	89.61	10.57	100.18	54.00	46.18	AVG	No Limit

**REMARKS:**

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

Test Mode: TX B Mode 2417 MHz

### Horizontal



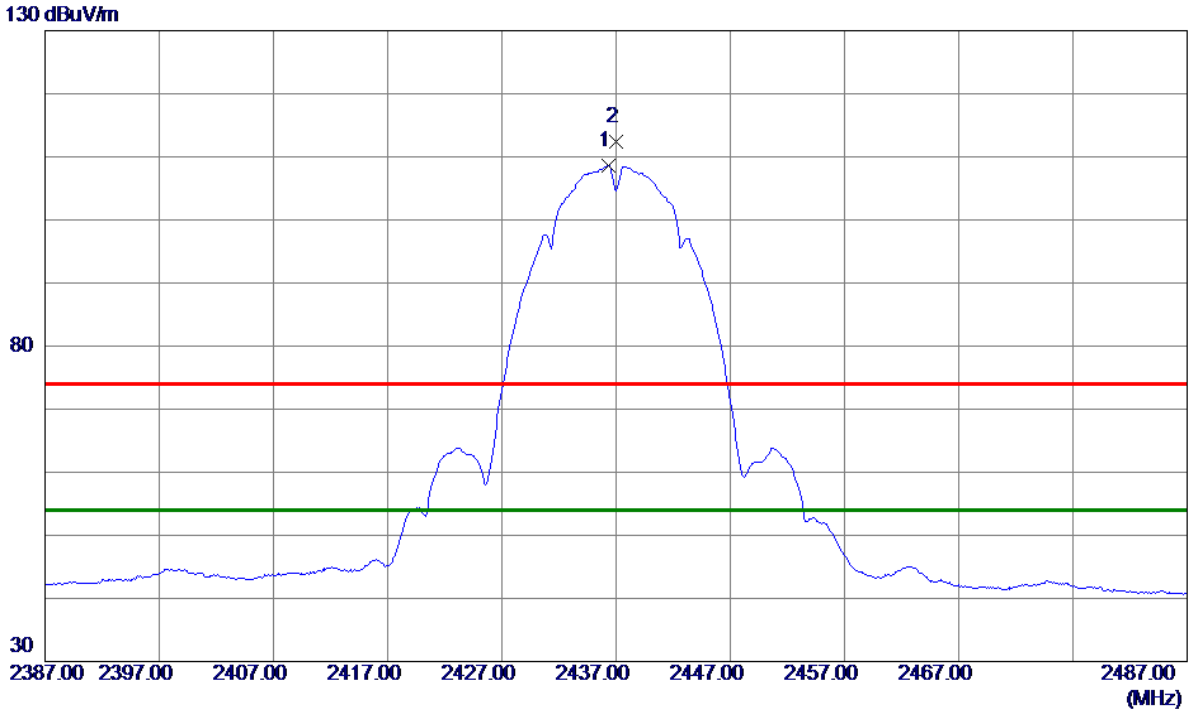
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	4833.990	42.57	6.54	49.11	54.00	-4.89	AVG	
2		4834.095	43.85	6.54	50.39	74.00	-23.61	peak	

**REMARKS:**

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

Test Mode: TX B 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 *	2436.3000	98.04	10.63	108.67	54.00	54.67	AVG	No Limit
2	2437.0000	101.81	10.63	112.44	74.00	38.44	Peak	No Limit

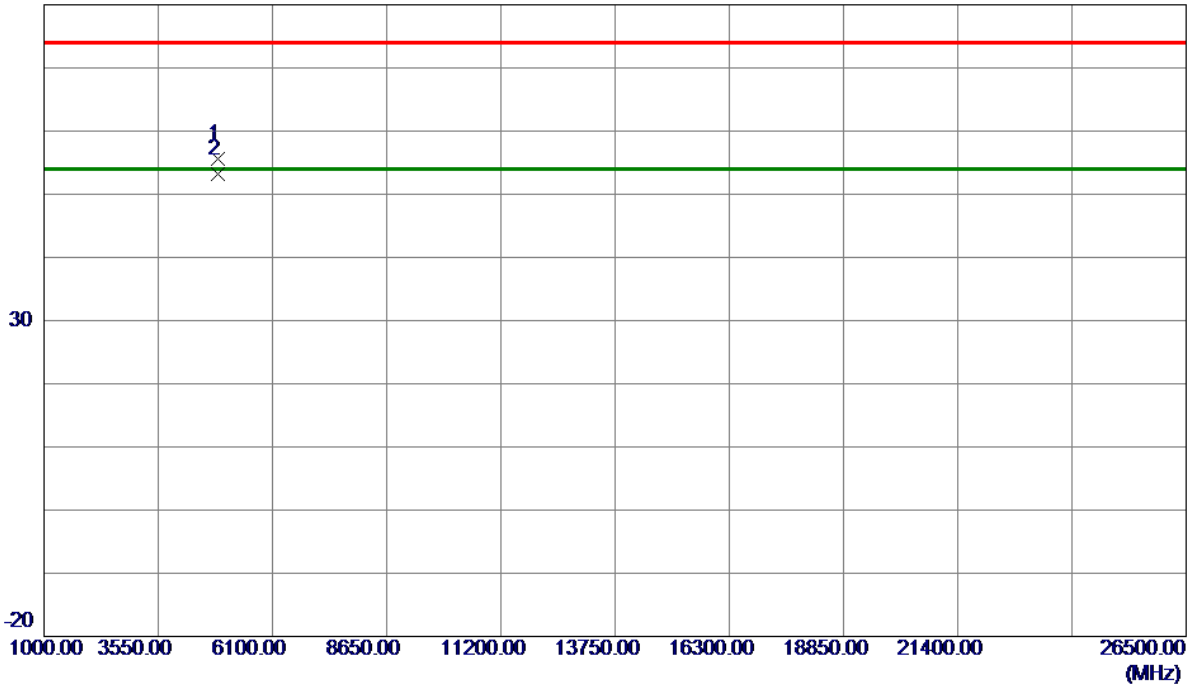
**REMARKS:**

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

Test Mode: TX B Mode 2437 MHz

### Vertical

80 dBuV/m



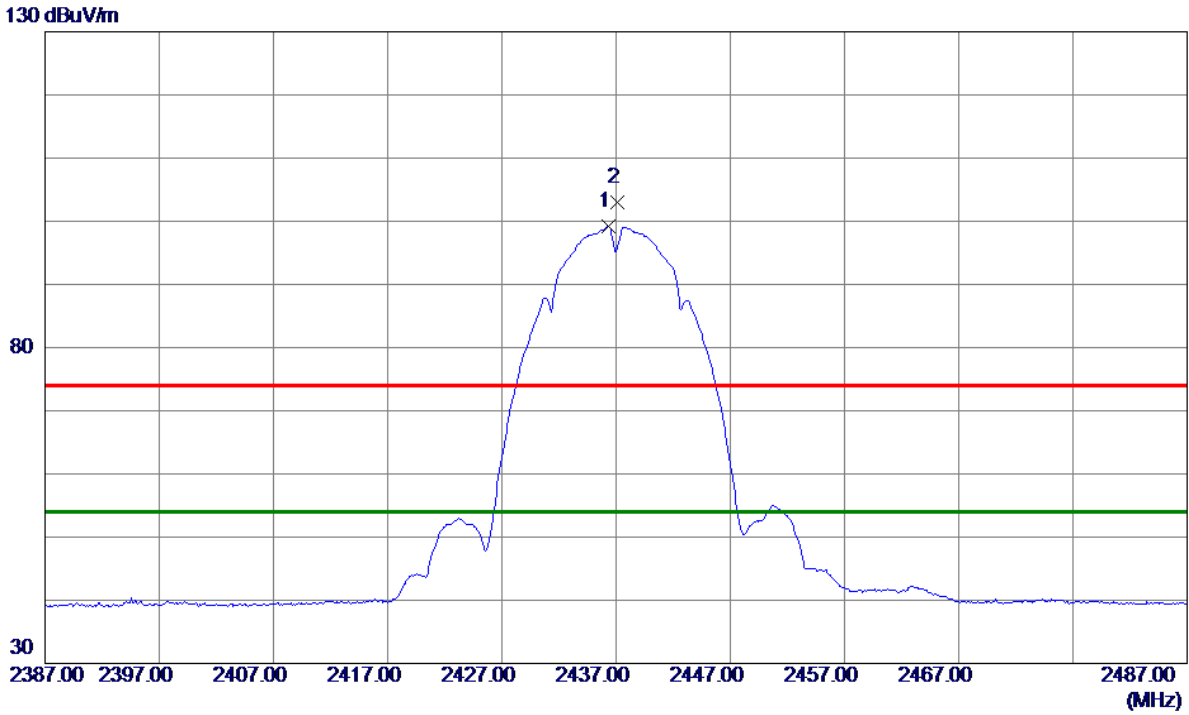
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.9450	48.99	6.65	55.64	74.00	-18.36	Peak	
2 *	4874.0150	46.63	6.65	53.28	54.00	-0.72	AVG	

**REMARKS:**

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

Test Mode: TX B 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 *	2436.3000	88.55	10.63	99.18	54.00	45.18	AVG	No Limit
2	2437.1000	92.39	10.63	103.02	74.00	29.02	Peak	No Limit

**REMARKS:**

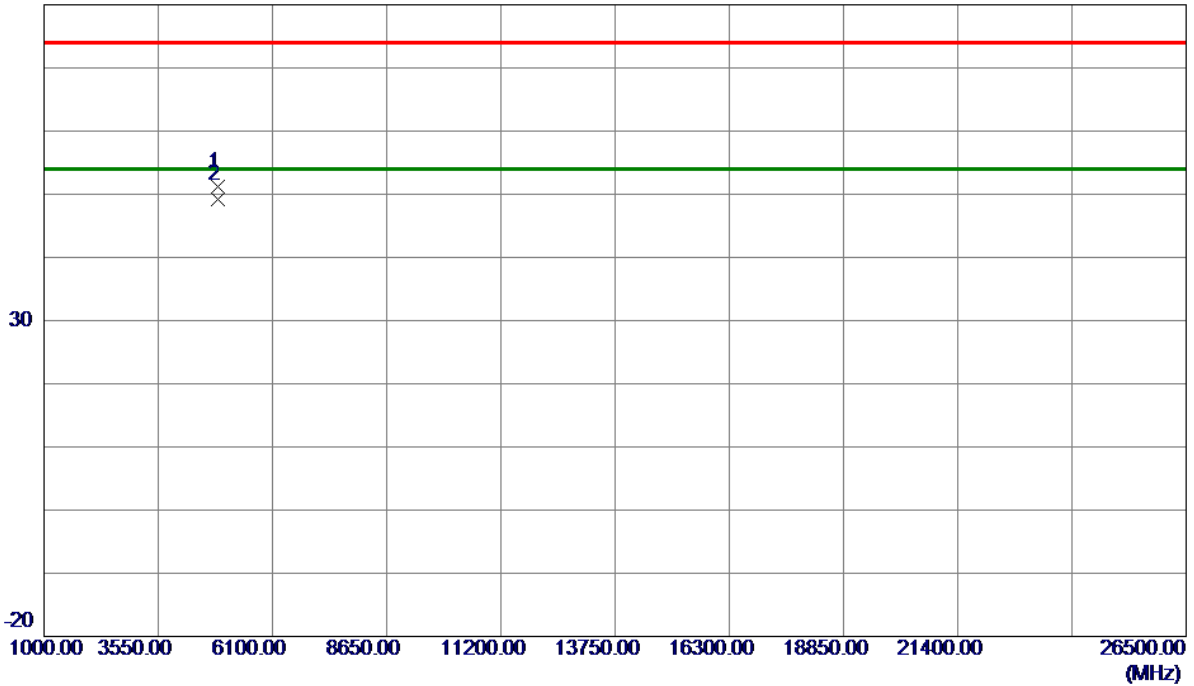
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX B Mode 2437 MHz

### 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	4873.9450	44.58	6.65	51.23	74.00	-22.77	Peak	
2 *	4874.0150	42.54	6.65	49.19	54.00	-4.81	AVG	

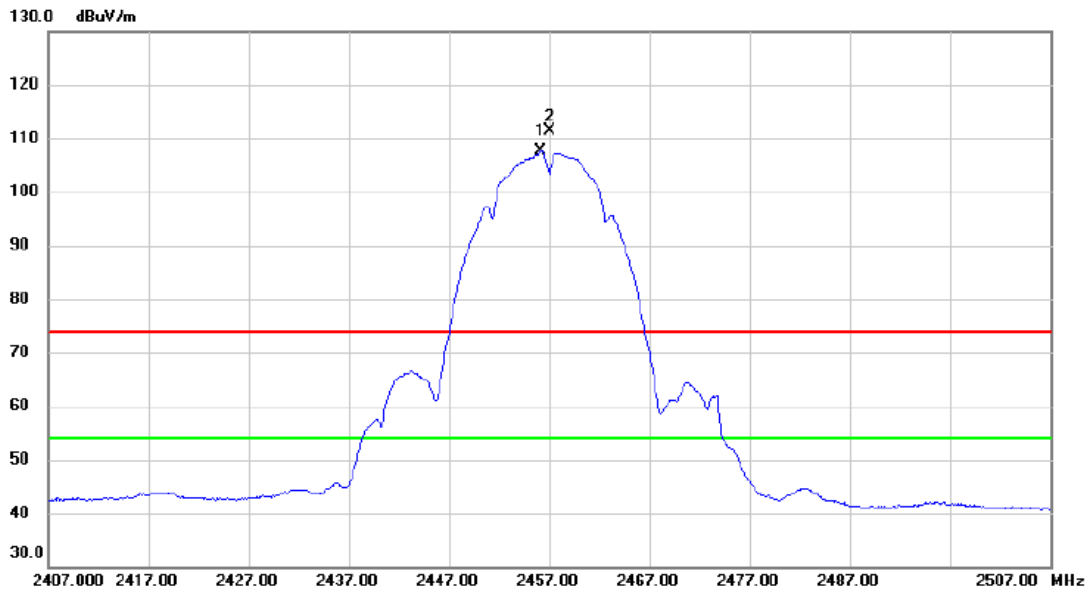
**REMARKS:**

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

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

Test Mode: TX B Mode 2457 MHz

### Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2456.200	96.90	10.68	107.58	54.00	53.58	AVG	No Limit
2	X	2457.000	100.63	10.69	111.32	74.00	37.32	peak	No Limit

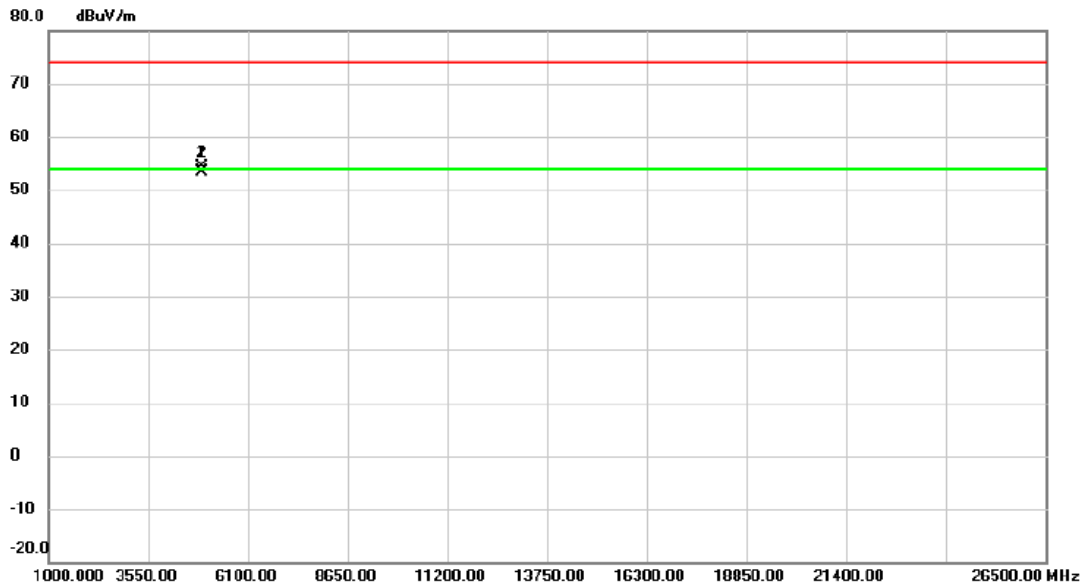
**REMARKS:**

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



Test Mode: TX B Mode 2457 MHz

### Vertical



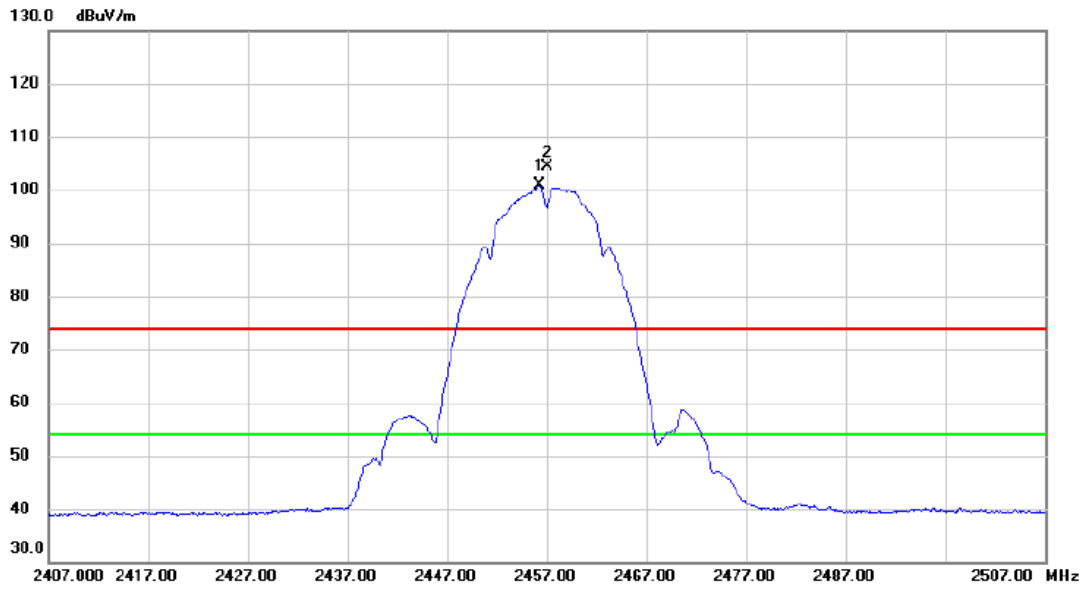
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4914.000	47.61	6.75	54.36	74.00	-19.64	peak	
2	*	4914.020	46.54	6.75	53.29	54.00	-0.71	AVG	

**REMARKS:**

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

Test Mode: TX B Mode 2457 MHz

### Horizontal



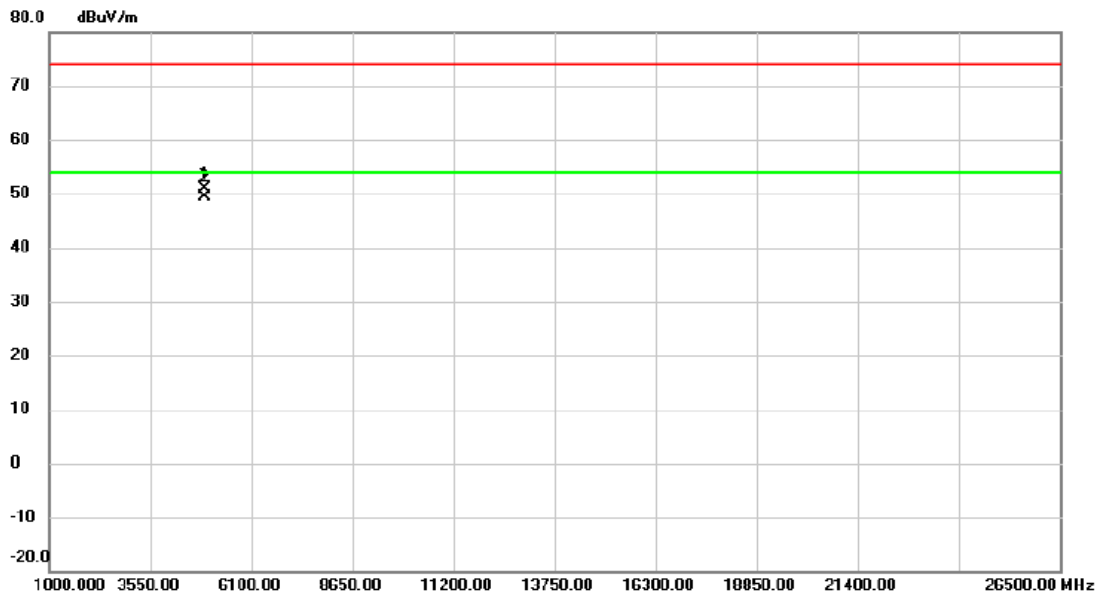
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	2456.300	90.16	10.68	100.84	54.00	46.84	AVG	No Limit
2	X	2457.000	93.73	10.69	104.42	74.00	30.42	peak	No Limit

**REMARKS:**

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

Test Mode: TX B Mode 2457 MHz

### Horizontal



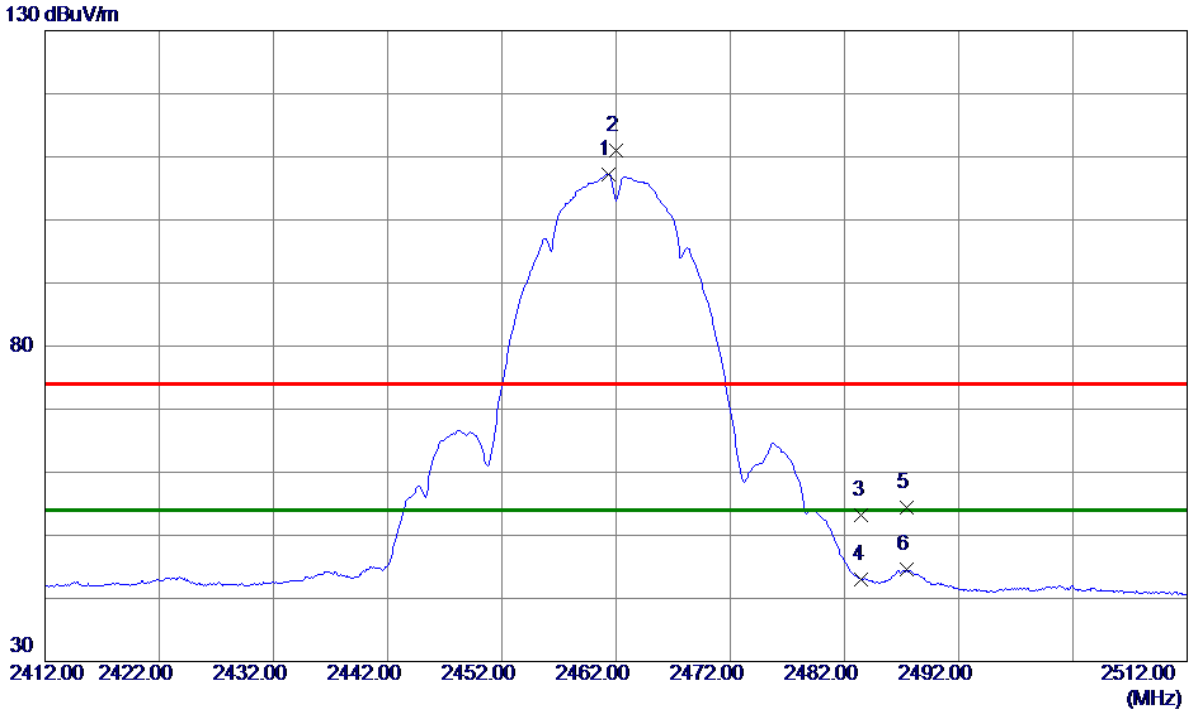
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4914.000	44.25	6.75	51.00	74.00	-23.00	peak	
2	*	4914.020	42.58	6.75	49.33	54.00	-4.67	AVG	

**REMARKS:**

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

Test Mode: TX B Mode 2462 MHz

### Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2461.3000	96.59	10.70	107.29	54.00	53.29	AVG	No Limit
2	2462.0000	100.26	10.70	110.96	74.00	36.96	Peak	No Limit
3	2483.5000	42.38	10.76	53.14	74.00	-20.86	Peak	
4	2483.5000	32.20	10.76	42.96	54.00	-11.04	AVG	
5	2487.4000	43.55	10.77	54.32	74.00	-19.68	Peak	
6	2487.4000	33.74	10.77	44.51	54.00	-9.49	AVG	

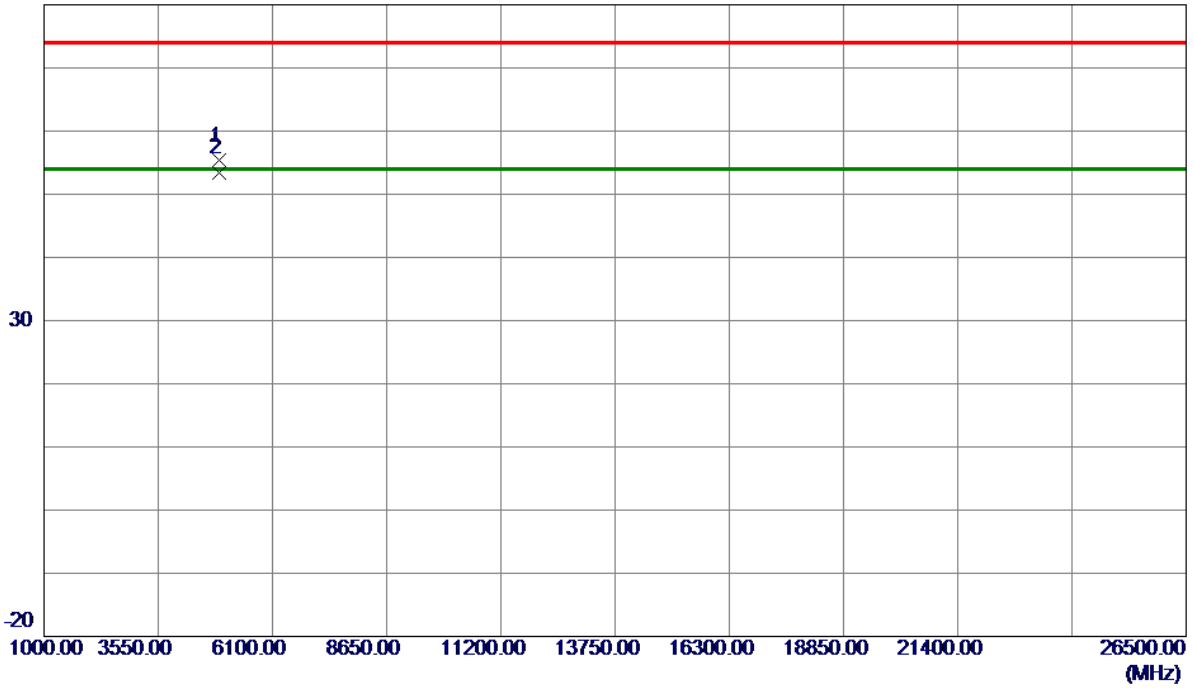
**REMARKS:**

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

Test Mode: TX B Mode 2462 MHz

### Vertical

80 dBuV/m



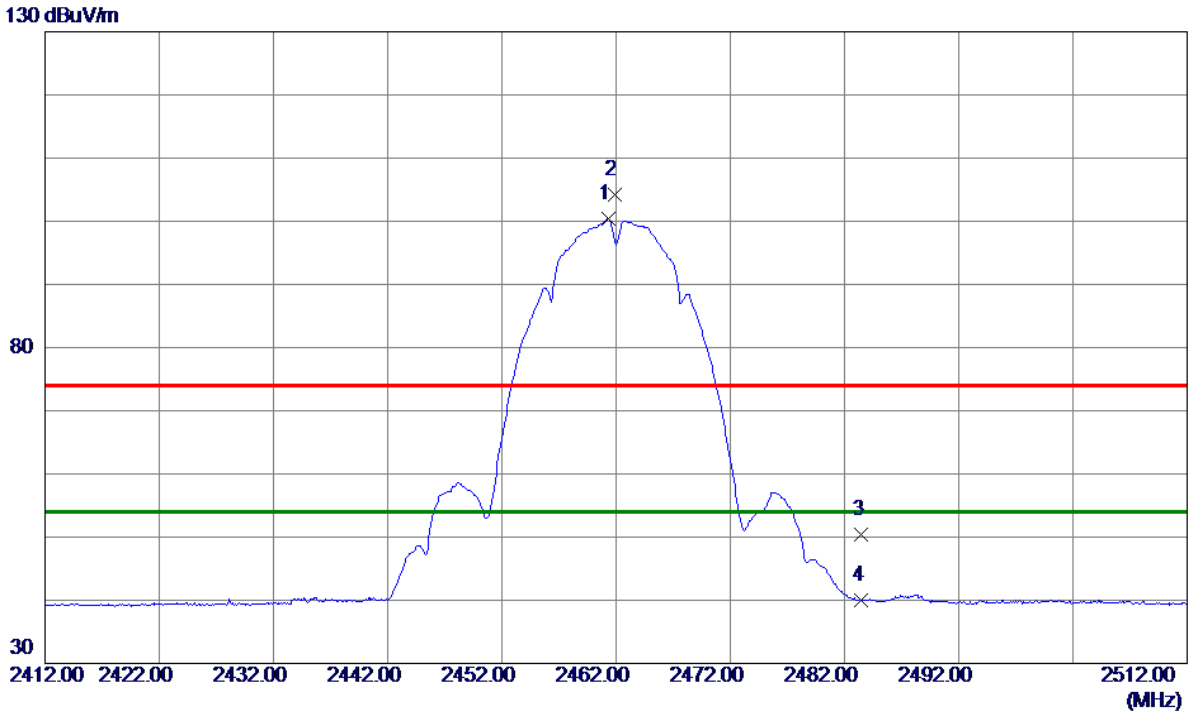
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.8849	48.53	6.77	55.30	74.00	-18.70	Peak	
2 *	4924.0000	46.65	6.77	53.42	54.00	-0.58	AVG	

**REMARKS:**

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

Test Mode: TX B 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 *	2461.3000	89.63	10.70	100.33	54.00	46.33	AVG	No Limit
2	2461.9000	93.43	10.70	104.13	74.00	30.13	Peak	No Limit
3	2483.5000	39.61	10.76	50.37	74.00	-23.63	Peak	
4	2483.5000	29.23	10.76	39.99	54.00	-14.01	AVG	

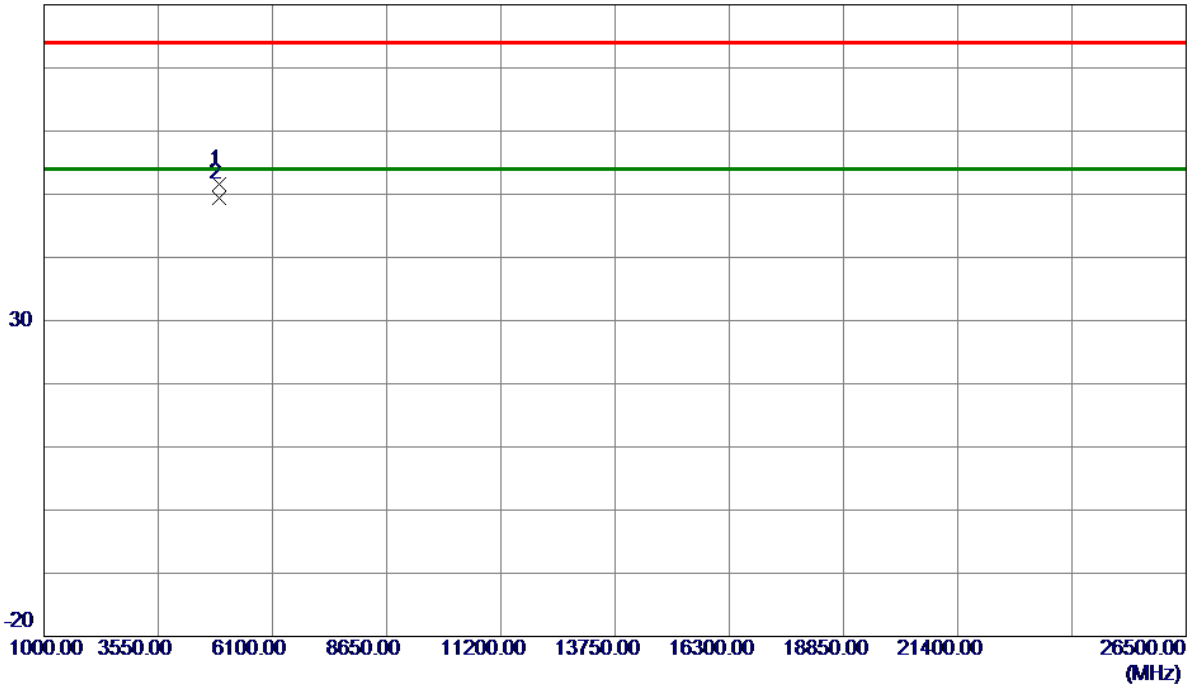
**REMARKS:**

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

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	4923.8849	44.75	6.77	51.52	74.00	-22.48	Peak	
2 *	4924.0000	42.57	6.77	49.34	54.00	-4.66	AVG	

**REMARKS:**

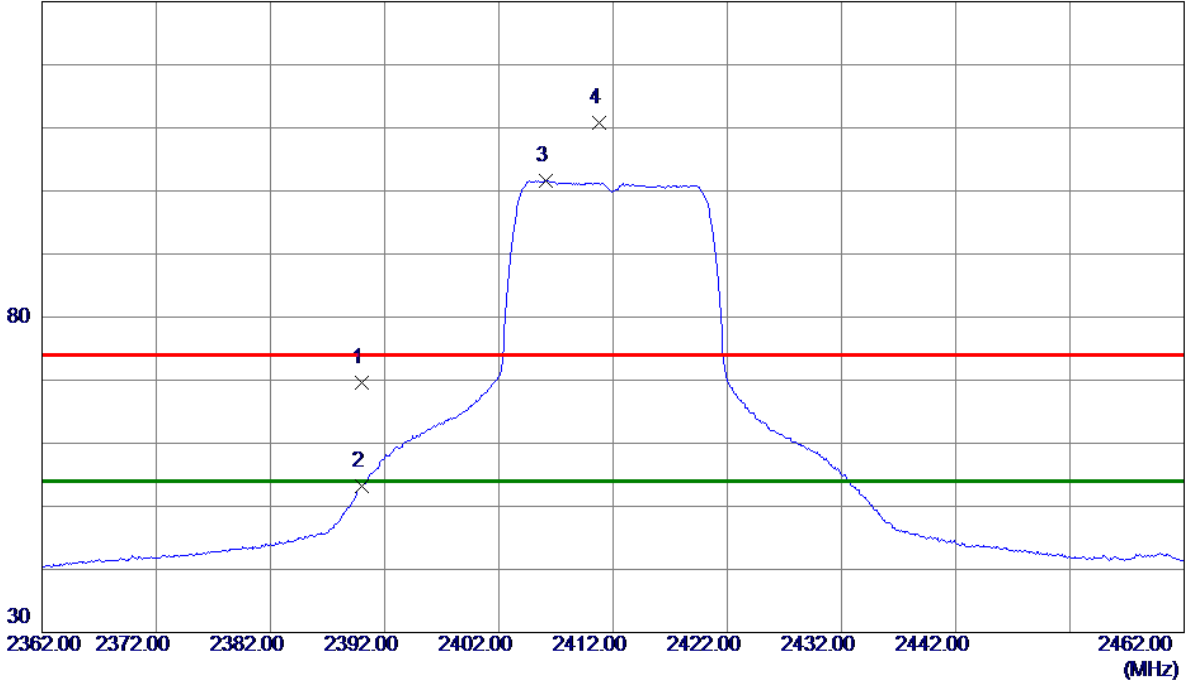
(1) Measurement Value = Reading Level + Correct Factor.

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

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	59.12	10.50	69.62	74.00	-4.38	Peak	
2	2390.0000	42.64	10.50	53.14	54.00	-0.86	AVG	
3 *	2406.1000	91.11	10.54	101.65	54.00	47.65	AVG	No Limit
4	2410.8000	100.19	10.55	110.74	74.00	36.74	Peak	No Limit

**REMARKS:**

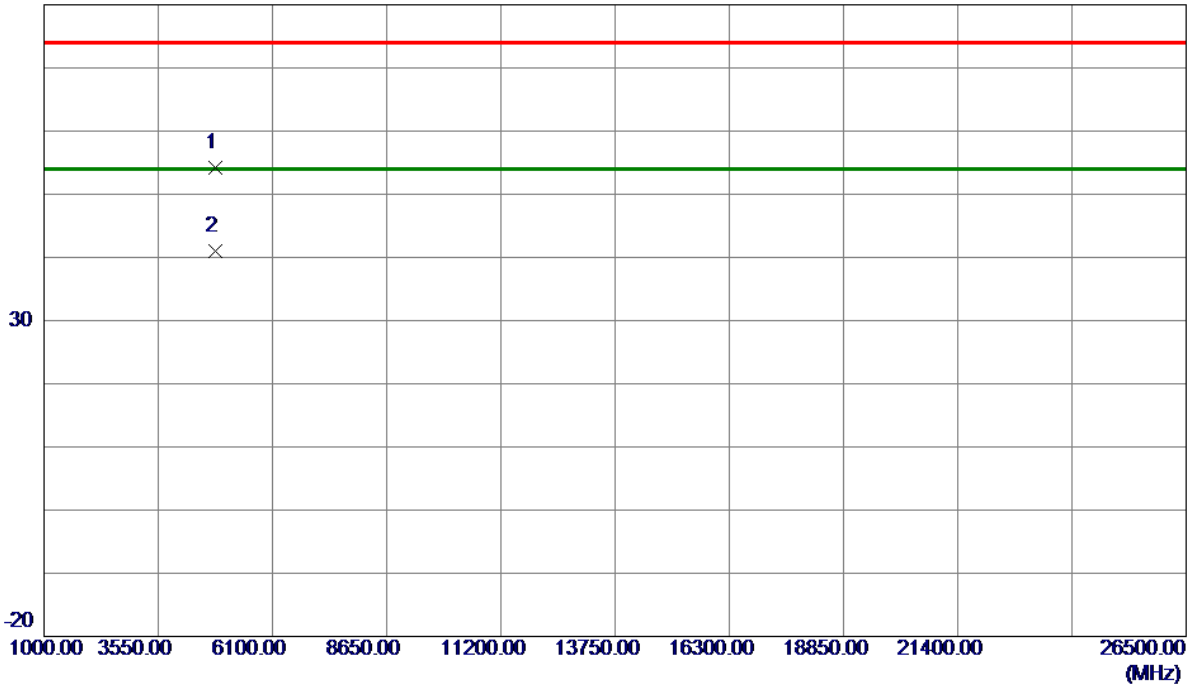
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode: TX G Mode 2412 MHz

### Vertical

80 dBuV/m



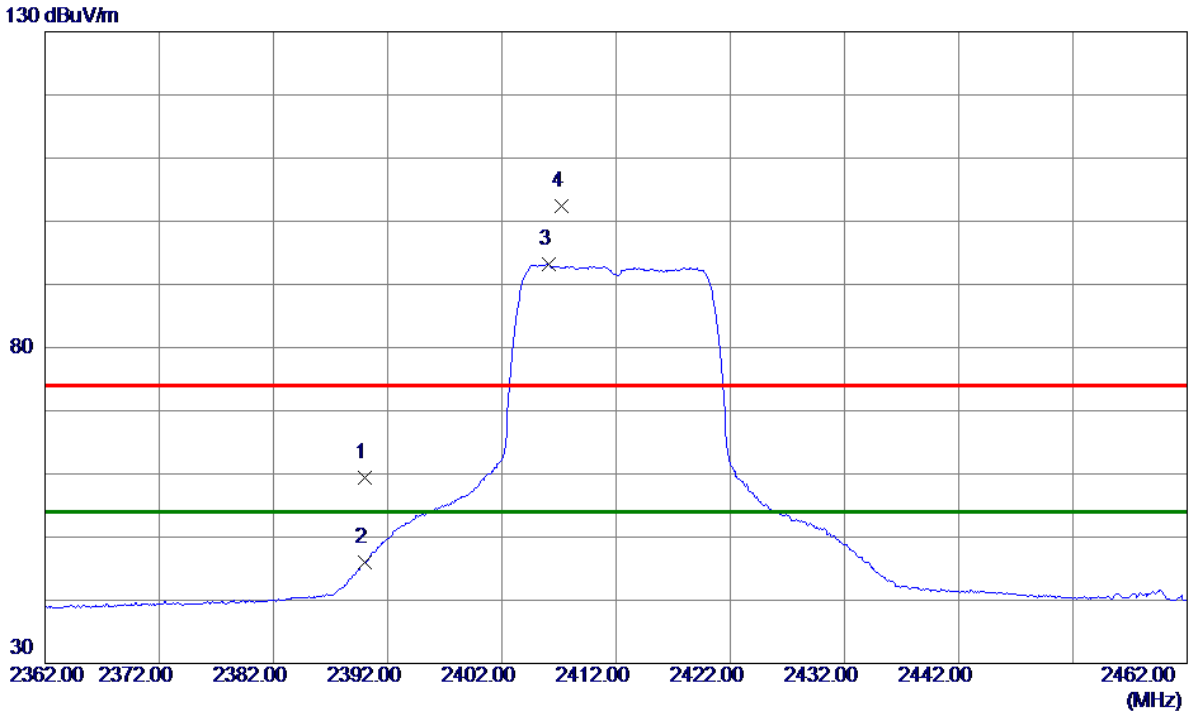
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4822.6100	47.73	6.52	54.25	74.00	-19.75	Peak	
2 *	4824.2700	34.43	6.53	40.96	54.00	-13.04	AVG	

**REMARKS:**

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

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	48.98	10.50	59.48	74.00	-14.52	Peak	
2	2390.0000	35.55	10.50	46.05	54.00	-7.95	AVG	
3 *	2406.1000	82.64	10.54	93.18	54.00	39.18	AVG	No Limit
4	2407.2000	91.85	10.54	102.39	74.00	28.39	Peak	No Limit

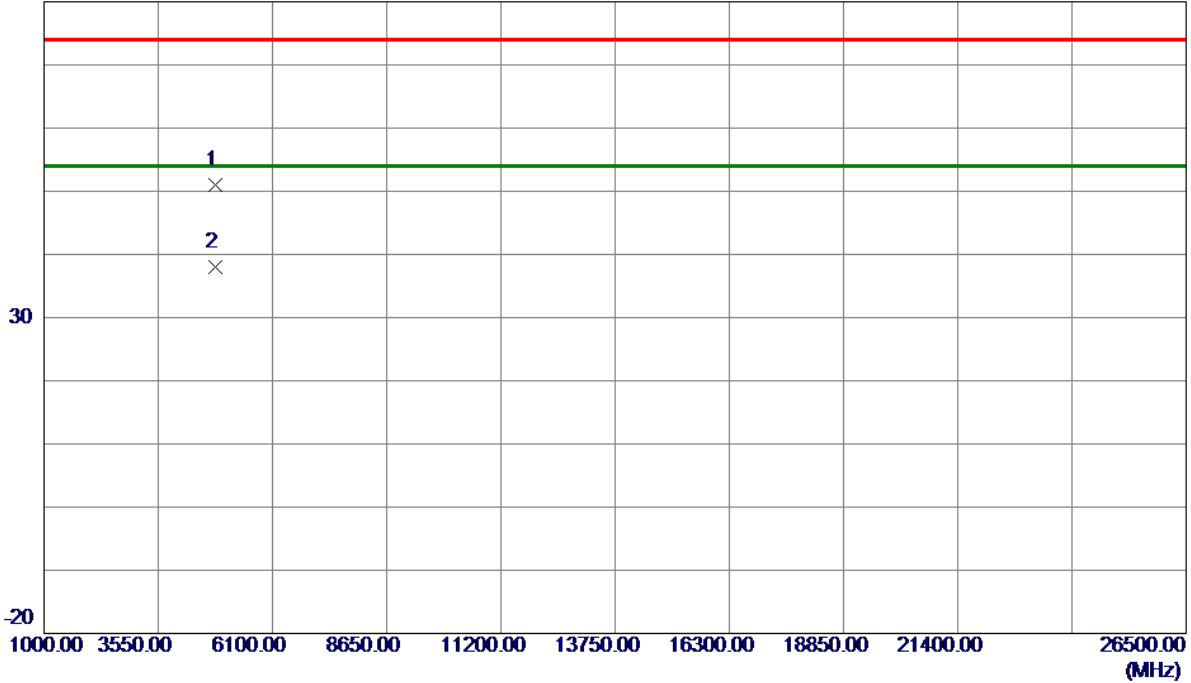
**REMARKS:**

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

Test Mode: TX G Mode 2412 MHz

### 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	4822.6100	44.57	6.52	51.09	74.00	-22.91	Peak	
2 *	4824.2700	31.54	6.53	38.07	54.00	-15.93	AVG	

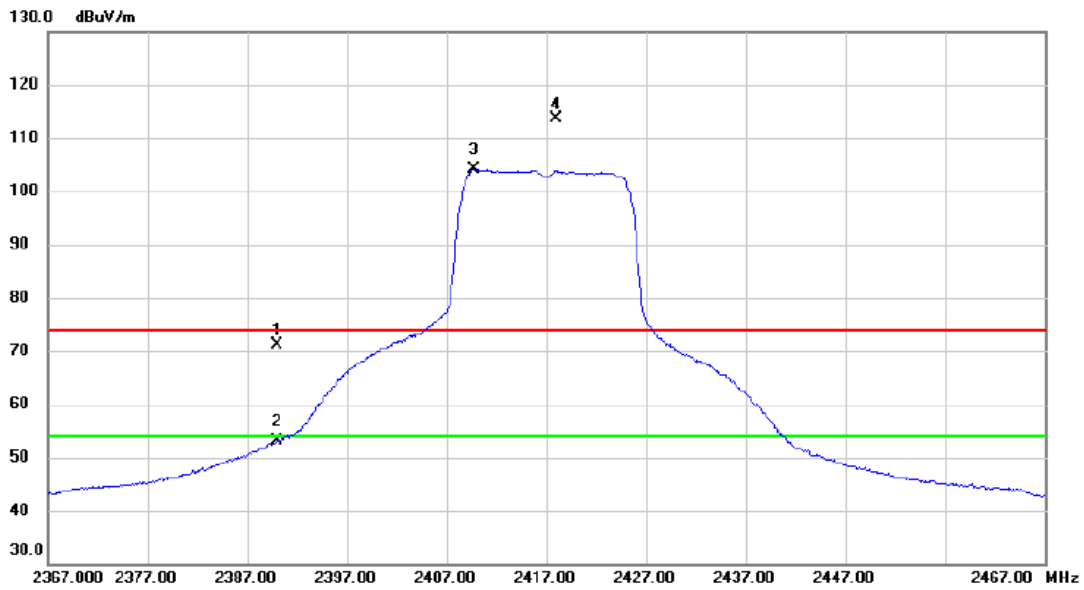
**REMARKS:**

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

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

Test Mode: TX G Mode 2417 MHz

### Vertical



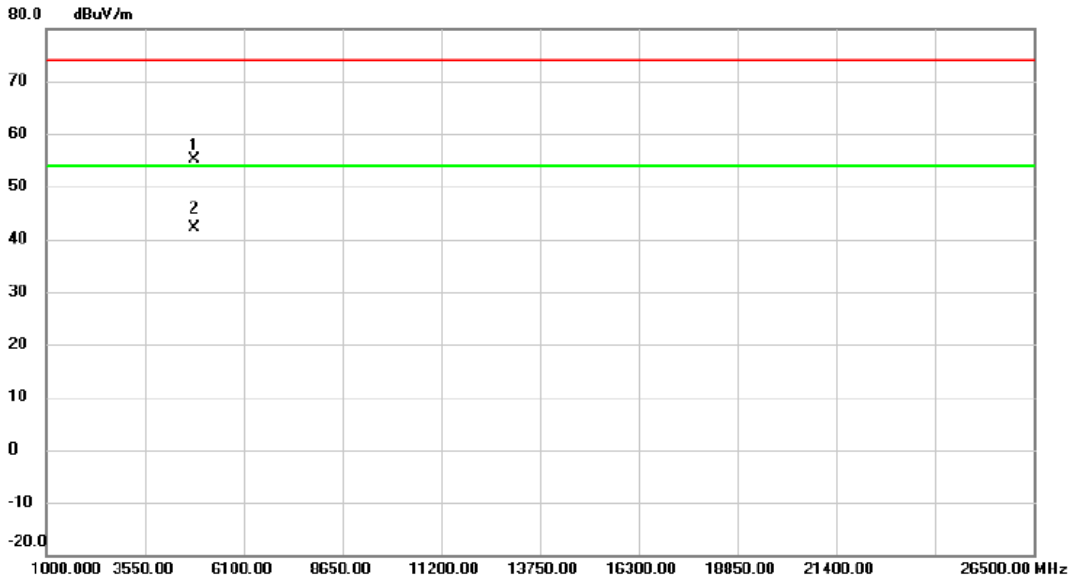
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	60.59	10.50	71.09	74.00	-2.91	peak	
2		2390.000	42.62	10.50	53.12	54.00	-0.88	AVG	
3	*	2409.700	93.52	10.56	104.08	54.00	50.08	AVG	No Limit
4	X	2418.000	102.94	10.57	113.51	74.00	39.51	peak	No Limit

**REMARKS:**

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

Test Mode: TX G Mode 2417 MHz

### Vertical



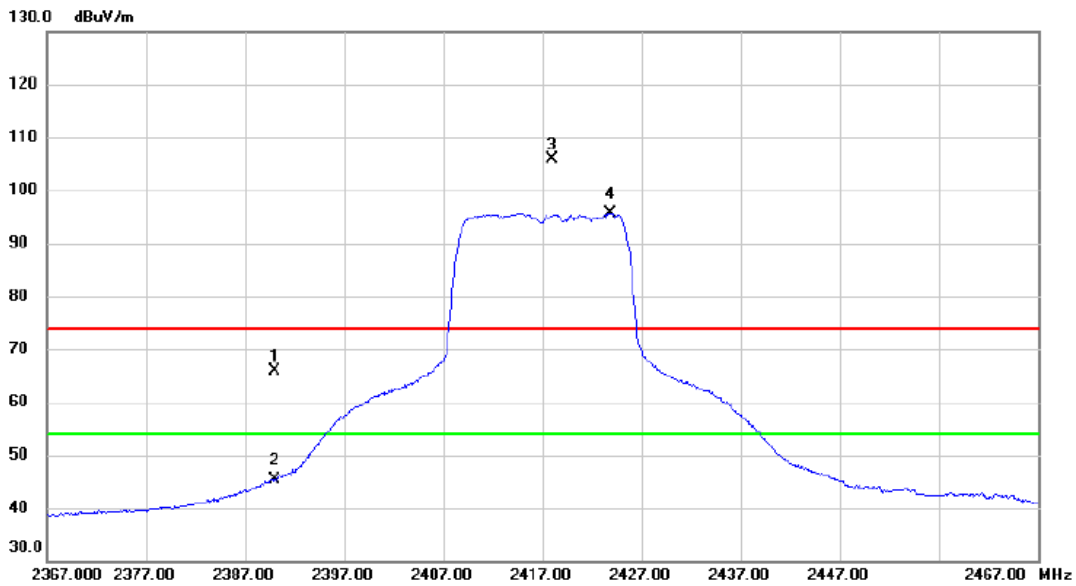
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4834.000	48.54	6.54	55.08	74.00	-18.92	peak	
2	*	4834.000	35.58	6.54	42.12	54.00	-11.88	AVG	

**REMARKS:**

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

Test Mode: TX G Mode 2417 MHz

### Horizontal



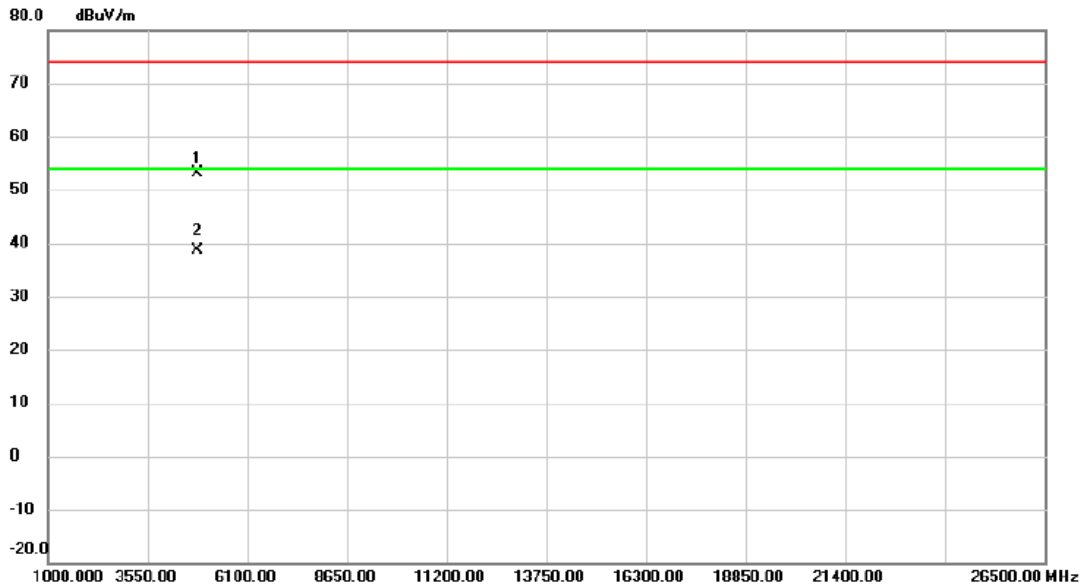
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.000	55.28	10.50	65.78	74.00	-8.22	peak	
2	2390.000	34.89	10.50	45.39	54.00	-8.61	AVG	
3 X	2418.000	95.40	10.57	105.97	74.00	31.97	peak	No Limit
4 *	2423.900	85.15	10.59	95.74	54.00	41.74	AVG	No Limit

**REMARKS:**

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

Test Mode: TX G Mode 2417 MHz

### Horizontal



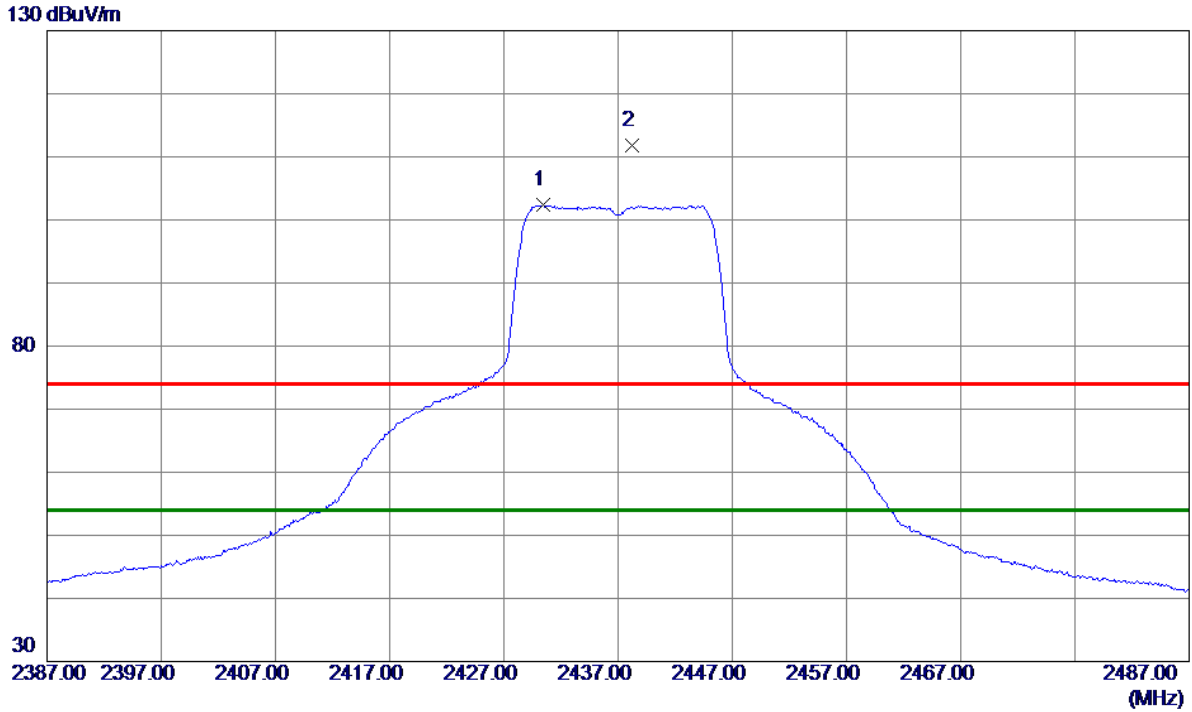
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4834.000	46.51	6.54	53.05	74.00	-20.95	peak	
2	*	4834.000	32.14	6.54	38.68	54.00	-15.32	AVG	

**REMARKS:**

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

Test Mode: TX G 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 *	2430.4000	91.72	10.61	102.33	54.00	48.33	AVG	No Limit
2	2438.2000	101.13	10.63	111.76	74.00	37.76	Peak	No Limit

**REMARKS:**

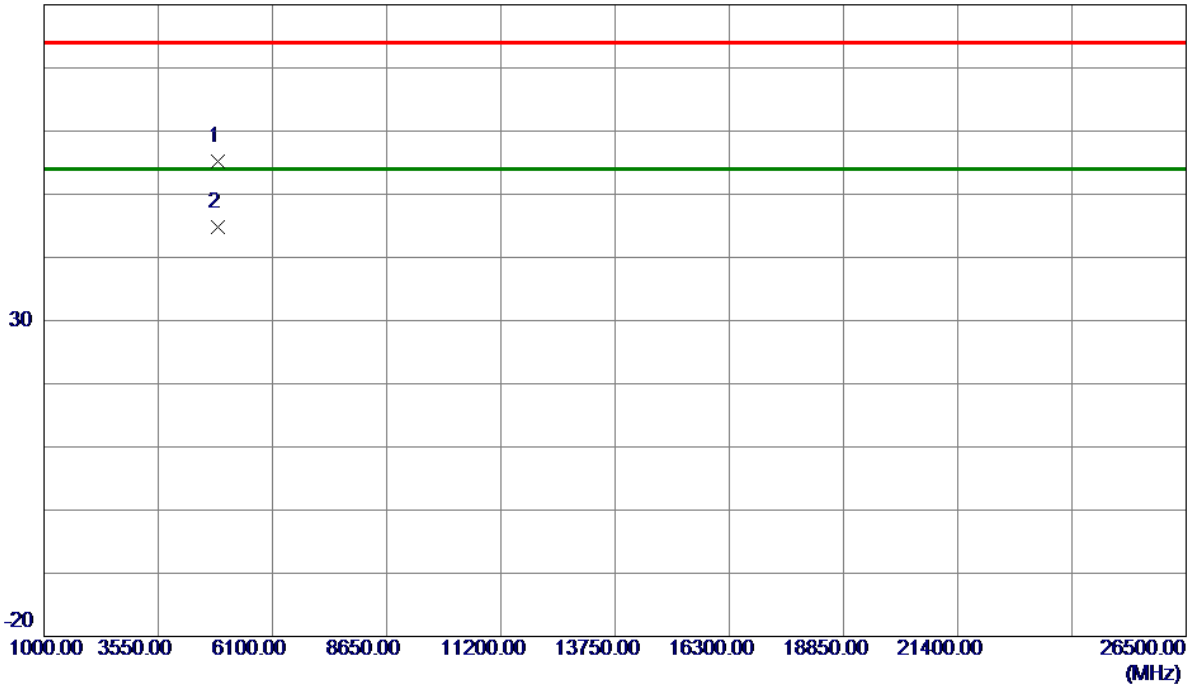
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode: TX G Mode 2437 MHz

### Vertical

80 dBuV/m



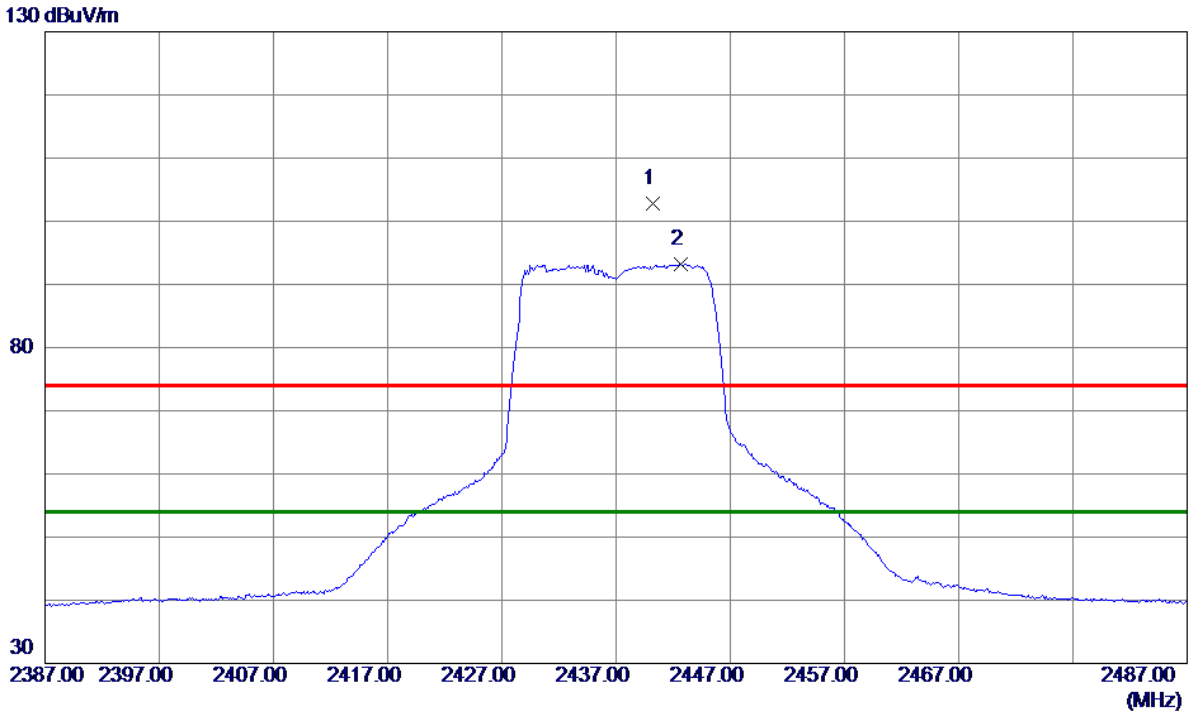
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.0000	48.58	6.65	55.23	74.00	-18.77	Peak	
2 *	4874.0000	38.14	6.65	44.79	54.00	-9.21	AVG	

**REMARKS:**

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

Test Mode: TX G 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	2440.2000	92.10	10.64	102.74	74.00	28.74	Peak	No Limit
2 *	2442.7000	82.59	10.65	93.24	54.00	39.24	AVG	No Limit

**REMARKS:**

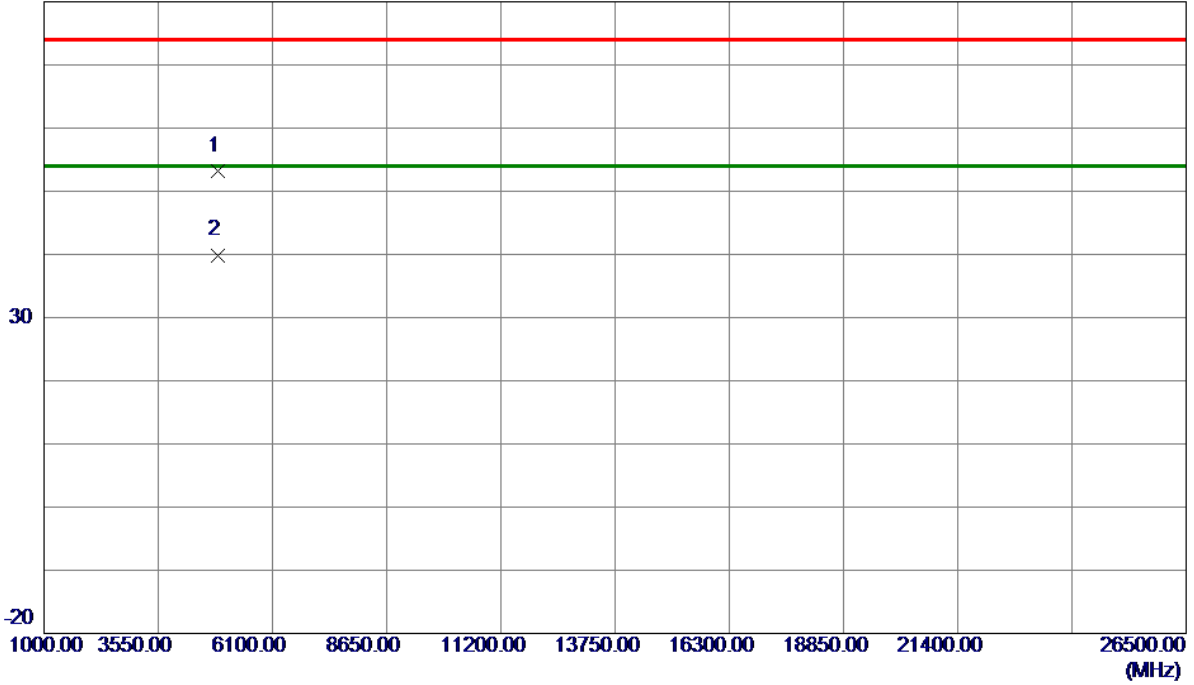
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2437 MHz

### 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	4874.0000	46.51	6.65	53.16	74.00	-20.84	Peak	
2 *	4874.0000	33.25	6.65	39.90	54.00	-14.10	AVG	

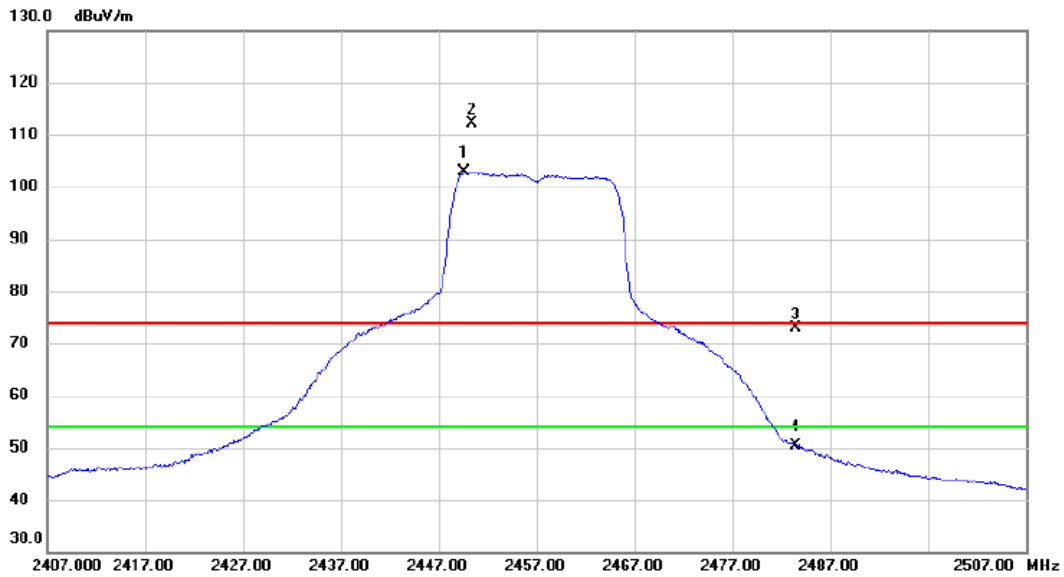
**REMARKS:**

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

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

Test Mode: TX G Mode 2457 MHz

### Vertical



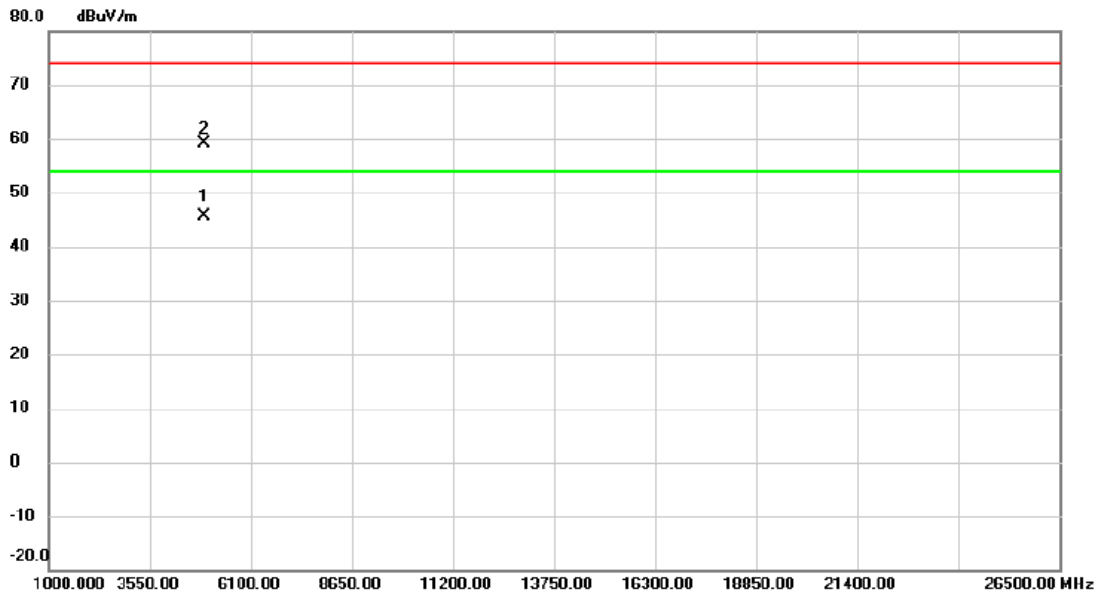
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	2449.600	92.10	10.67	102.77	54.00	48.77	AVG	No Limit
2	X	2450.400	101.42	10.66	112.08	74.00	38.08	peak	No Limit
3		2483.500	62.12	10.76	72.88	74.00	-1.12	peak	
4		2483.500	39.60	10.76	50.36	54.00	-3.64	AVG	

**REMARKS:**

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

Test Mode: TX G Mode 2457 MHz

### Vertical



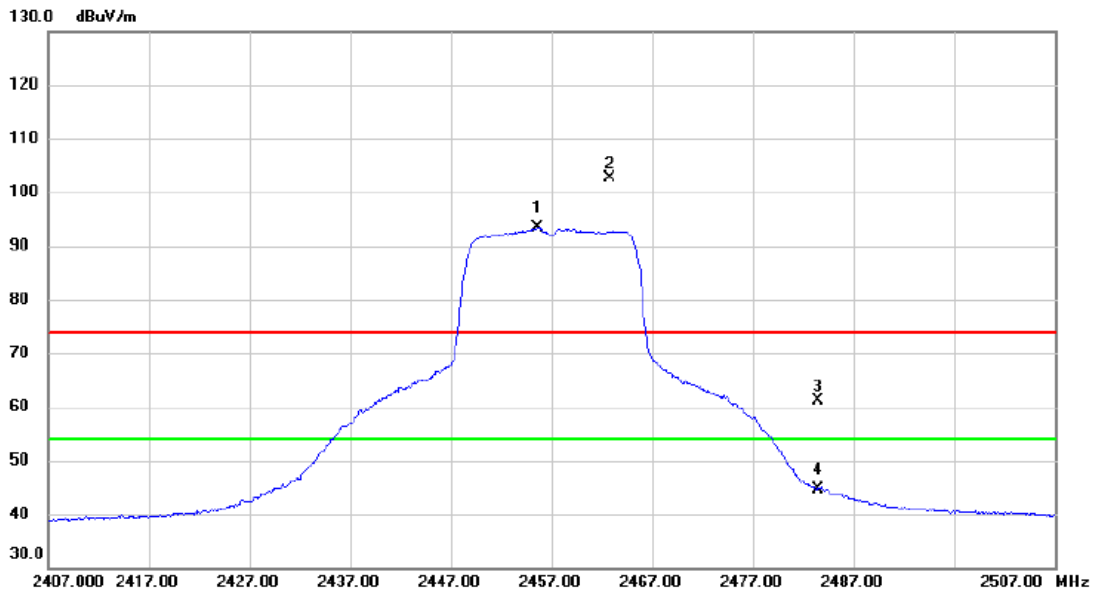
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	4915.135	38.95	6.75	45.70	54.00	-8.30	AVG	
2		4915.935	52.31	6.76	59.07	74.00	-14.93	peak	

**REMARKS:**

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

Test Mode: TX G Mode 2457 MHz

### Horizontal



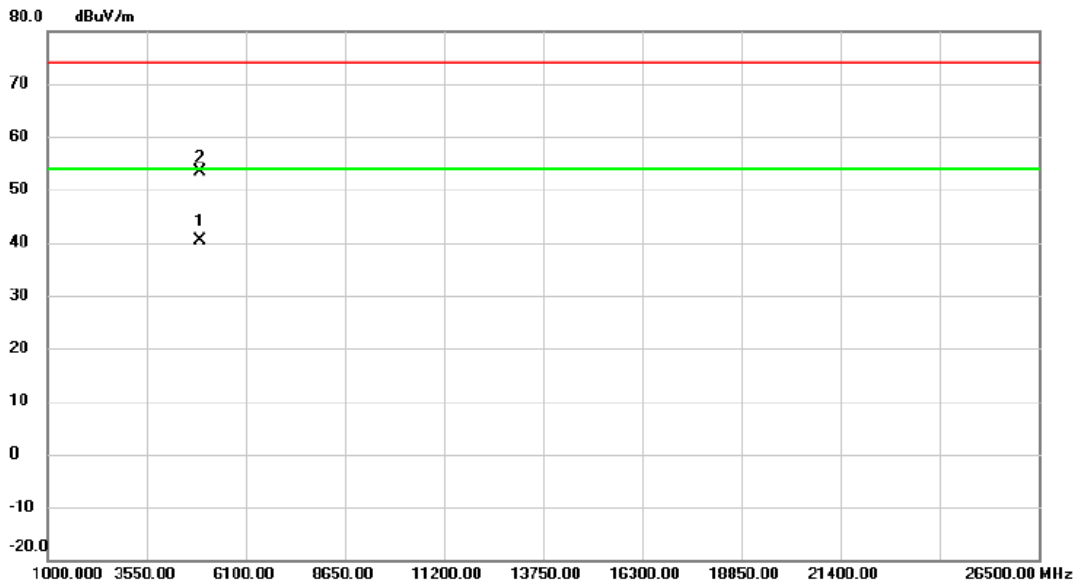
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	2455.600	82.59	10.68	93.27	54.00	39.27	AVG	No Limit
2	X	2462.800	92.04	10.71	102.75	74.00	28.75	peak	No Limit
3		2483.500	50.34	10.76	61.10	74.00	-12.90	peak	
4		2483.500	33.85	10.76	44.61	54.00	-9.39	AVG	

**REMARKS:**

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

Test Mode: TX G Mode 2457 MHz

### Horizontal



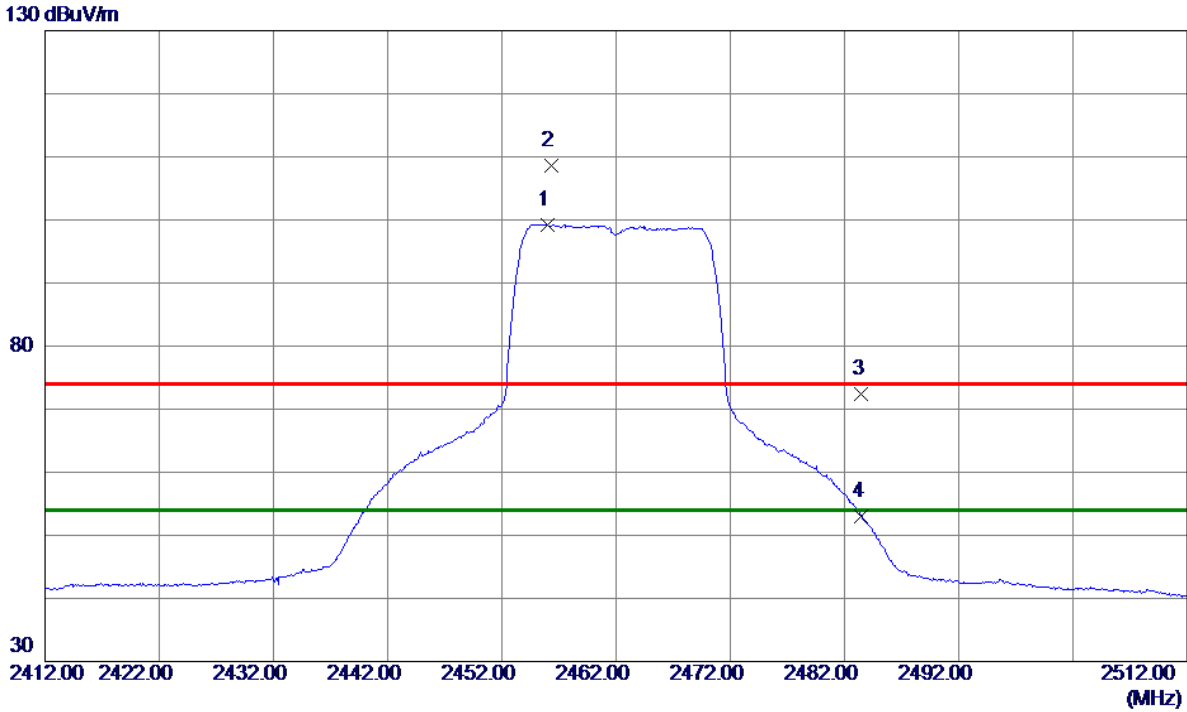
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4915.135	33.54	6.75	40.29	54.00	-13.71	AVG	
2		4915.935	46.54	6.76	53.30	74.00	-20.70	peak	

**REMARKS:**

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

Test Mode: TX G Mode 2462 MHz

### Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2456.0000	88.59	10.68	99.27	54.00	45.27	AVG	No Limit
2	2456.3000	97.83	10.68	108.51	74.00	34.51	Peak	No Limit
3	2483.5000	61.70	10.76	72.46	74.00	-1.54	Peak	
4	2483.5000	42.26	10.76	53.02	54.00	-0.98	AVG	

**REMARKS:**

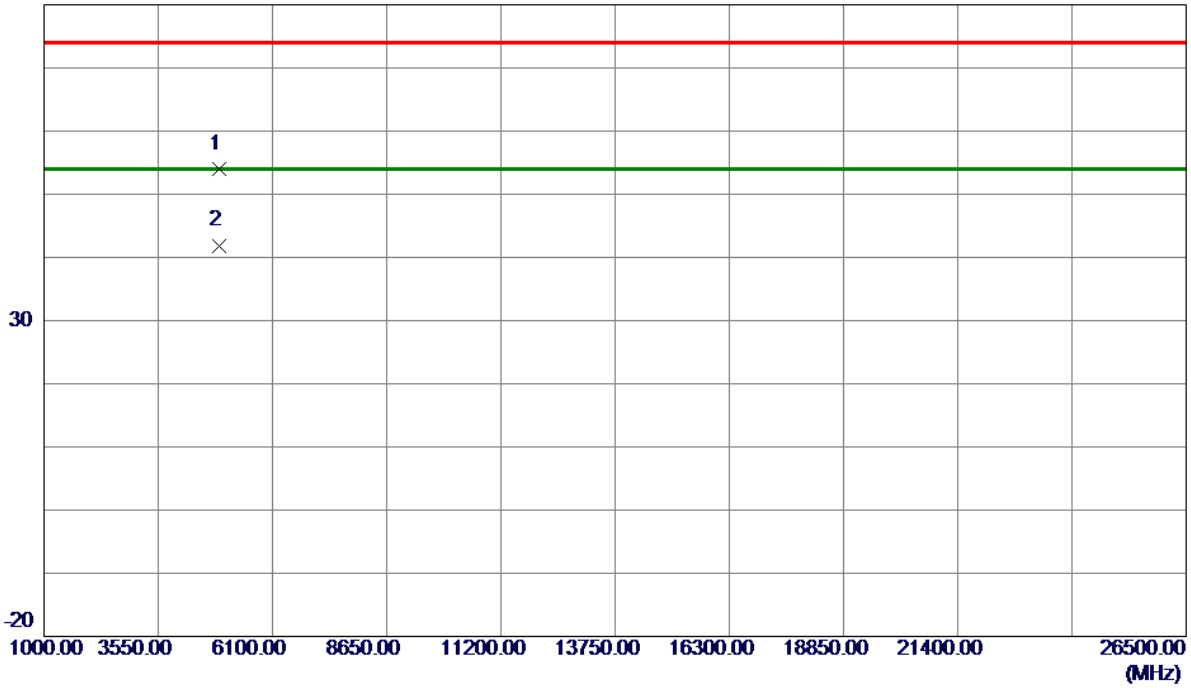
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode: TX G Mode 2462 MHz

### Vertical

80 dBuV/m



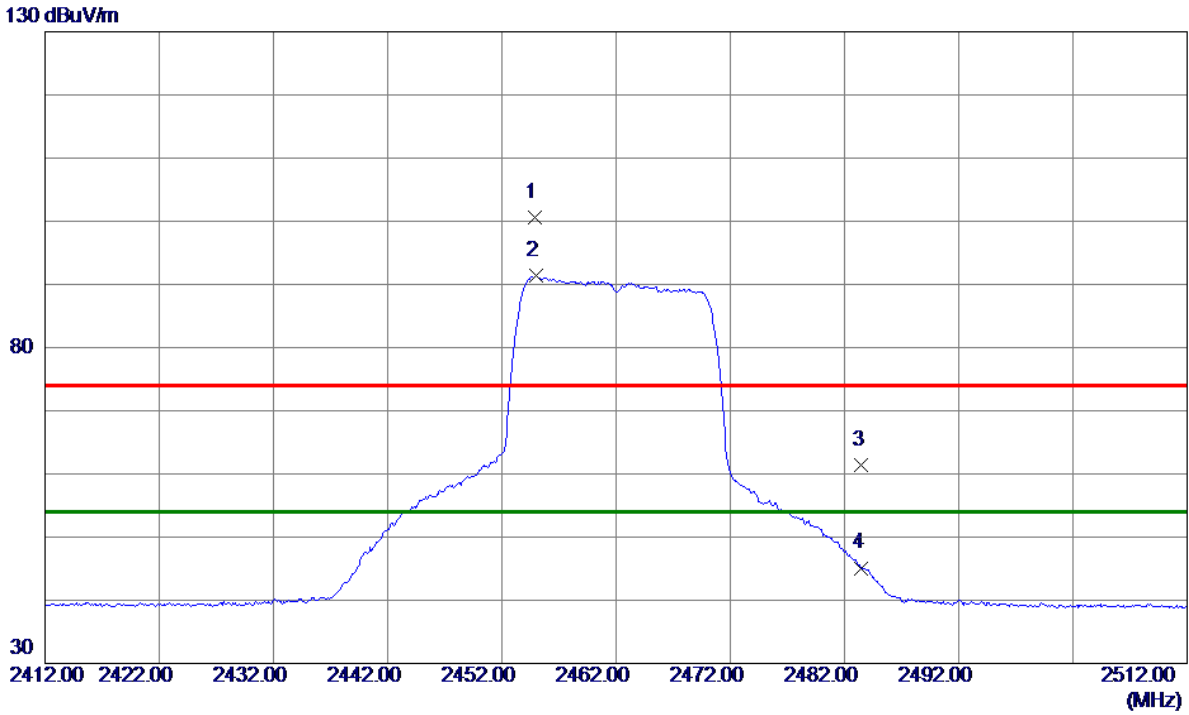
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4924.0000	47.26	6.77	54.03	74.00	-19.97	Peak	
2 *	4924.0000	35.13	6.77	41.90	54.00	-12.10	AVG	

**REMARKS:**

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

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	2454.9000	89.95	10.68	100.63	74.00	26.63	Peak	No Limit
2 *	2455.0000	80.64	10.68	91.32	54.00	37.32	AVG	No Limit
3	2483.5000	50.66	10.76	61.42	74.00	-12.58	Peak	
4	2483.5000	34.34	10.76	45.10	54.00	-8.90	AVG	

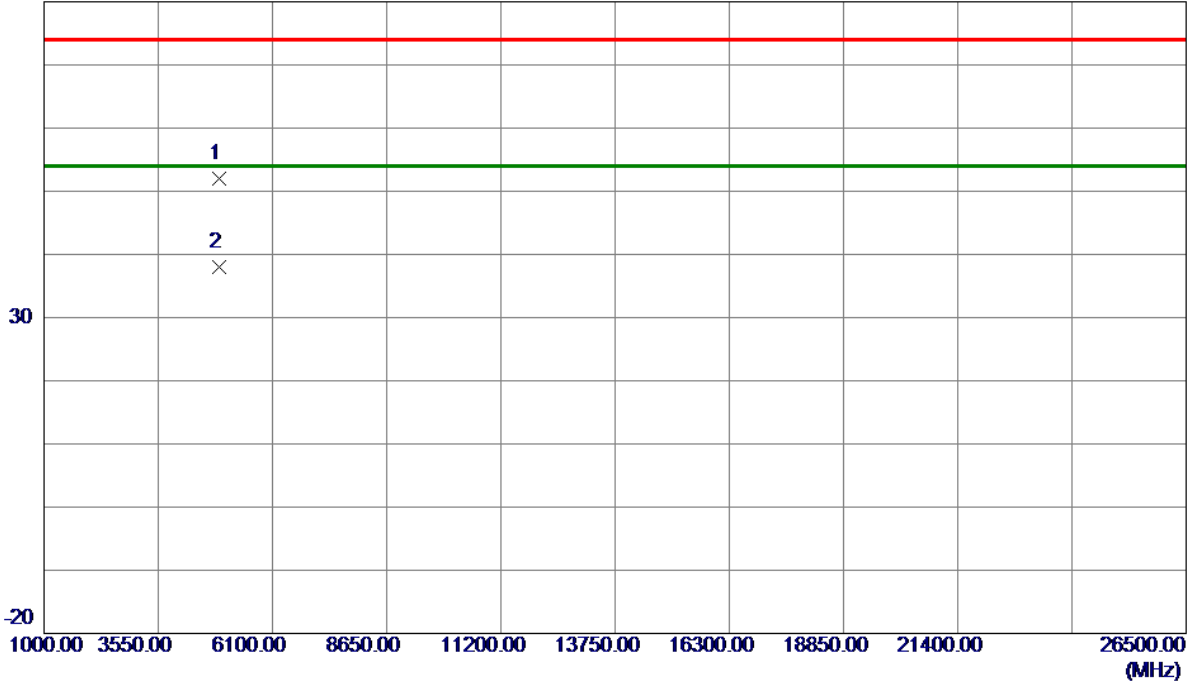
**REMARKS:**

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

Test Mode: TX G Mode 2462 MHz

### Horizontal

80 dBuV/m



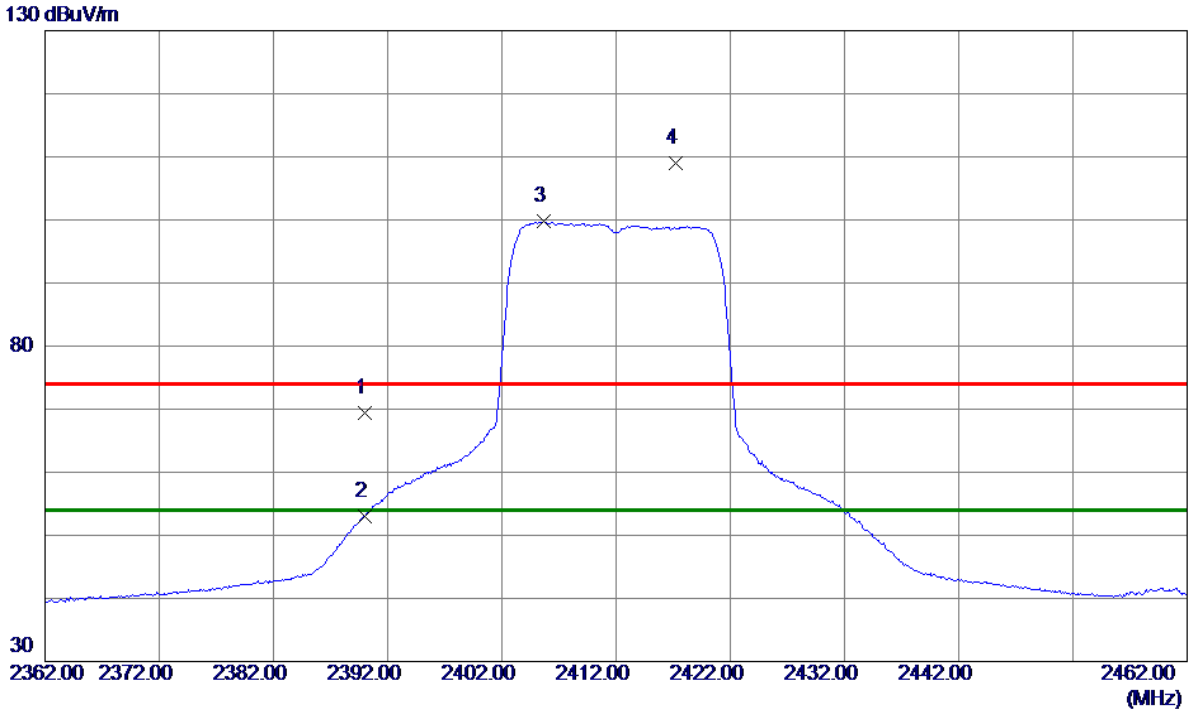
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4924.0000	45.24	6.77	52.01	74.00	-21.99	Peak	
2 *	4924.0000	31.26	6.77	38.03	54.00	-15.97	AVG	

**REMARKS:**

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

Test Mode: TX N-20M Mode 2412 MHz

### Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	58.83	10.50	69.33	74.00	-4.67	Peak	
2	2390.0000	42.56	10.50	53.06	54.00	-0.94	AVG	
3 *	2405.7000	89.17	10.54	99.71	54.00	45.71	AVG	No Limit
4	2417.2000	98.43	10.57	109.00	74.00	35.00	Peak	No Limit

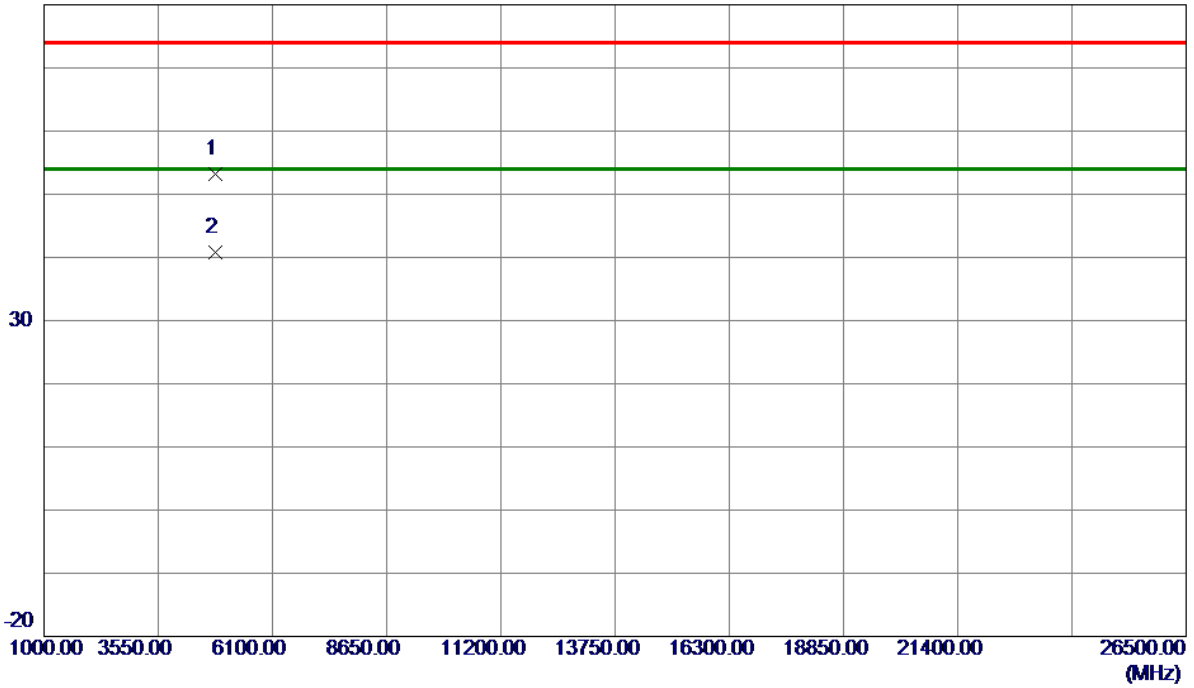
**REMARKS:**

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

Test Mode: TX N-20M Mode 2412 MHz

### Vertical

80 dBuV/m



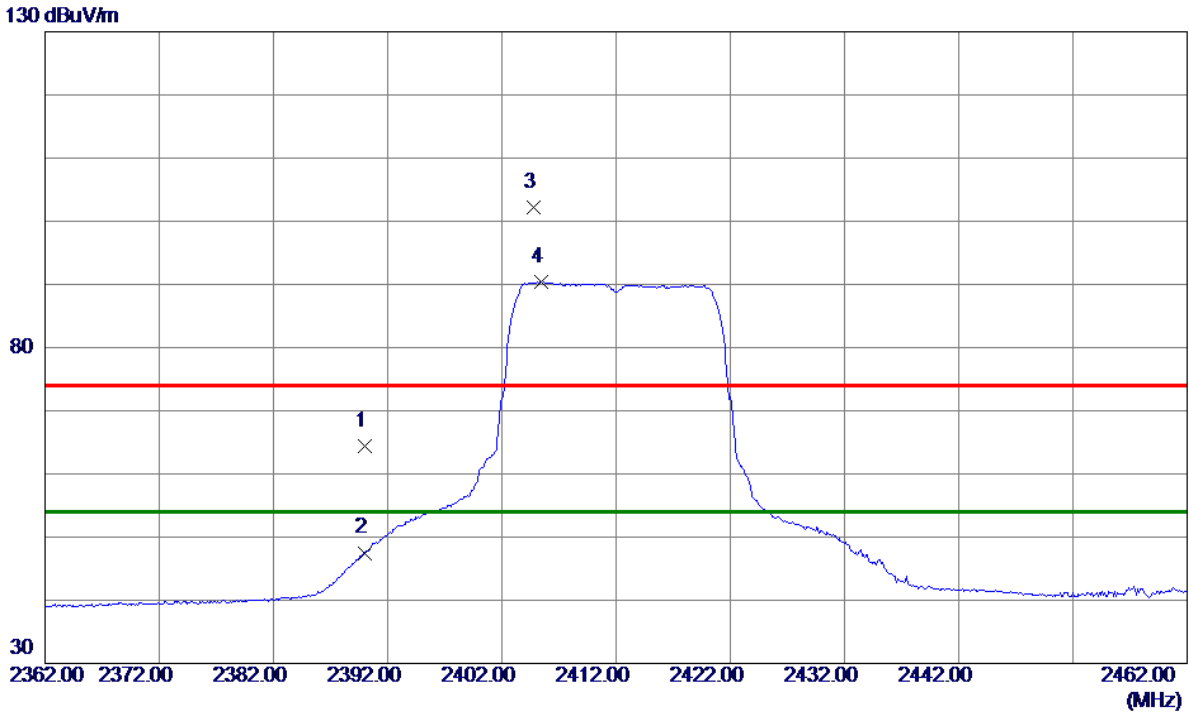
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4824.0000	46.58	6.53	53.11	74.00	-20.89	Peak	
2 *	4824.0000	34.25	6.53	40.78	54.00	-13.22	AVG	

**REMARKS:**

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

Test Mode: TX N-20M 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	53.82	10.50	64.32	74.00	-9.68	Peak	
2	2390.0000	37.00	10.50	47.50	54.00	-6.50	AVG	
3	2404.8000	91.61	10.54	102.15	74.00	28.15	Peak	No Limit
4 *	2405.4000	79.93	10.54	90.47	54.00	36.47	AVG	No Limit

**REMARKS:**

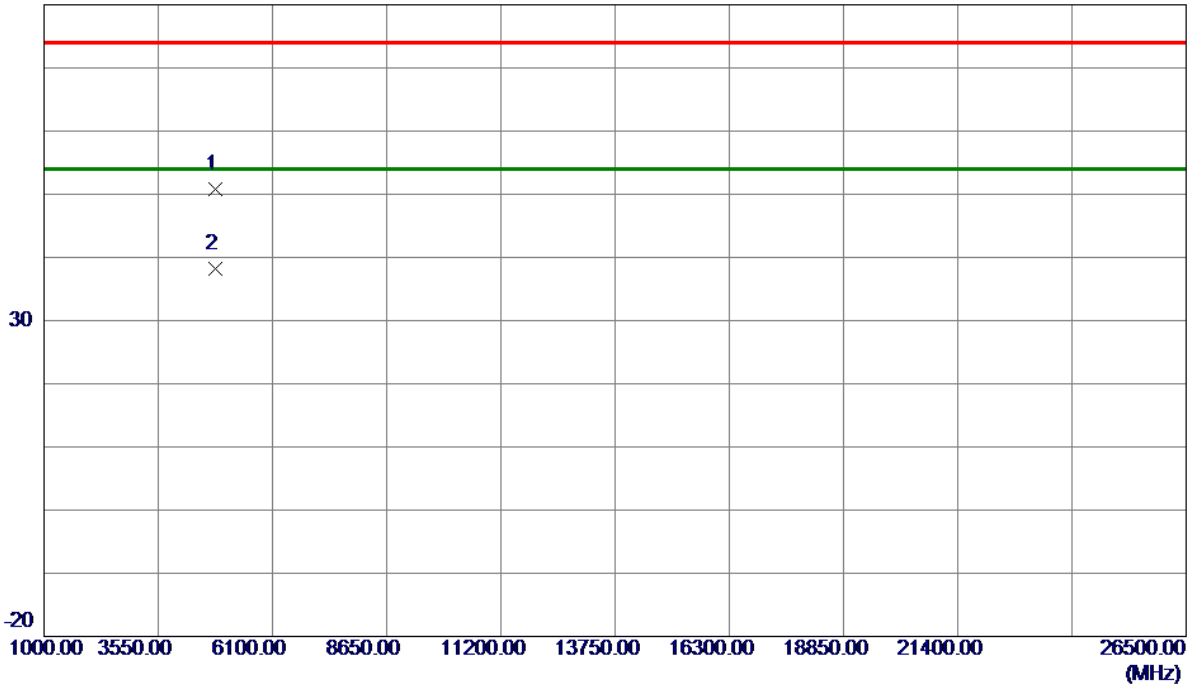
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX N-20M Mode 2412 MHz

### Horizontal

80 dBuV/m



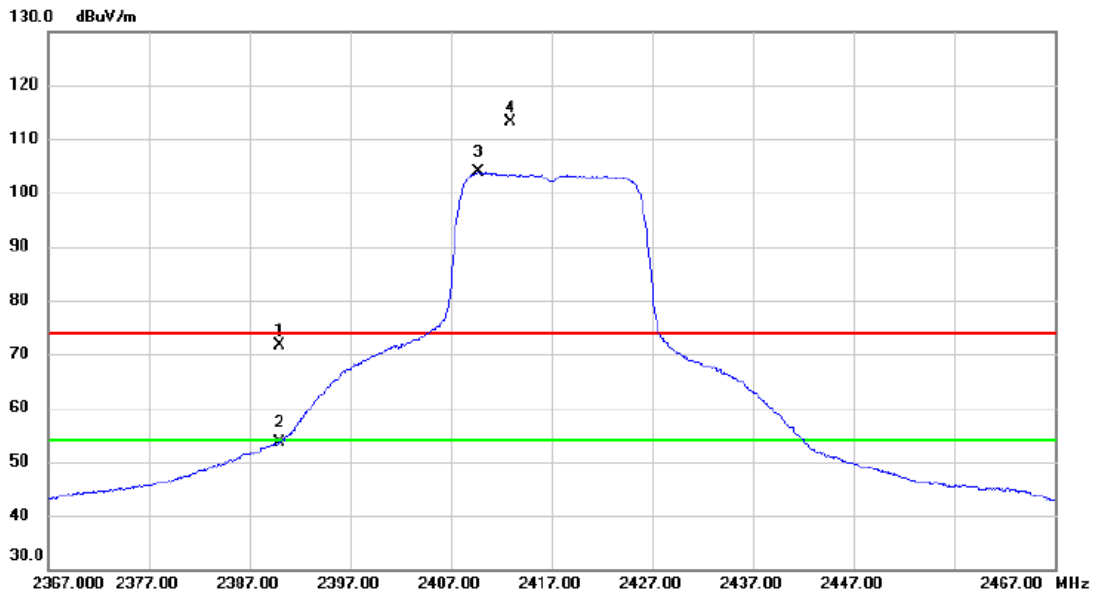
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4824.0000	44.36	6.53	50.89	74.00	-23.11	Peak	
2 *	4824.0000	31.58	6.53	38.11	54.00	-15.89	AVG	

**REMARKS:**

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

Test Mode: TX N-20M Mode 2417 MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	61.18	10.50	71.68	74.00	-2.32	peak	
2		2390.000	43.05	10.50	53.55	54.00	-0.45	AVG	
3	*	2409.700	93.27	10.56	103.83	54.00	49.83	AVG	No Limit
4	X	2412.900	102.65	10.56	113.21	74.00	39.21	peak	No Limit

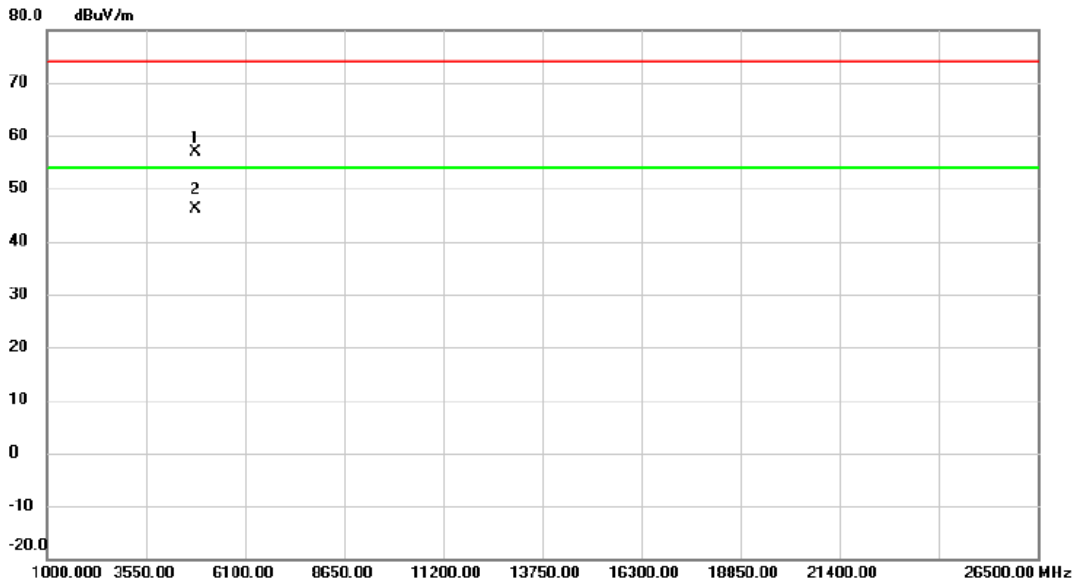
**REMARKS:**

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



Test Mode: TX N-20M Mode 2417 MHz

### Vertical



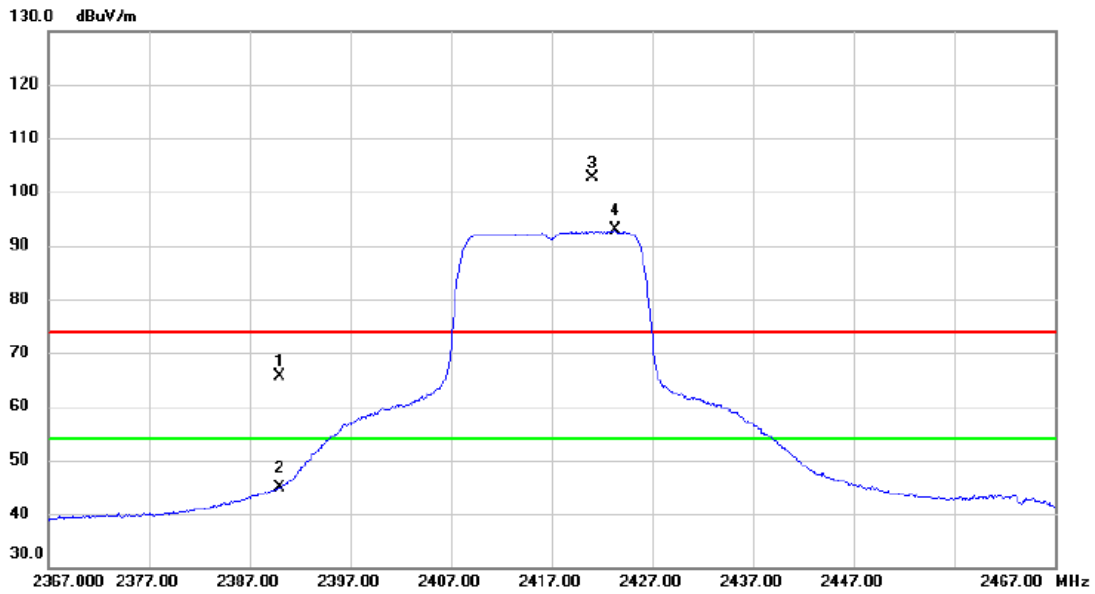
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4834.000	50.25	6.54	56.79	74.00	-17.21	peak	
2 *	4834.000	39.54	6.54	46.08	54.00	-7.92	AVG	

**REMARKS:**

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

Test Mode: TX N-20M Mode 2417 MHz

### Horizontal



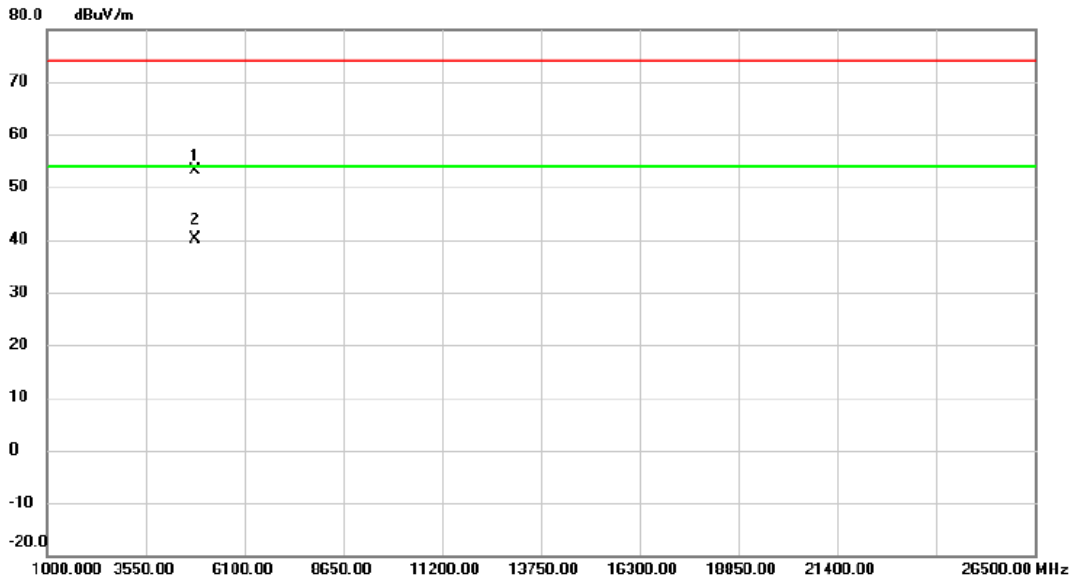
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	55.12	10.50	65.62	74.00	-8.38	peak	
2		2390.000	34.27	10.50	44.77	54.00	-9.23	AVG	
3	X	2421.100	92.08	10.59	102.67	74.00	28.67	peak	No Limit
4	*	2423.300	82.17	10.59	92.76	54.00	38.76	AVG	No Limit

**REMARKS:**

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

Test Mode: TX N-20M Mode 2417 MHz

### Horizontal



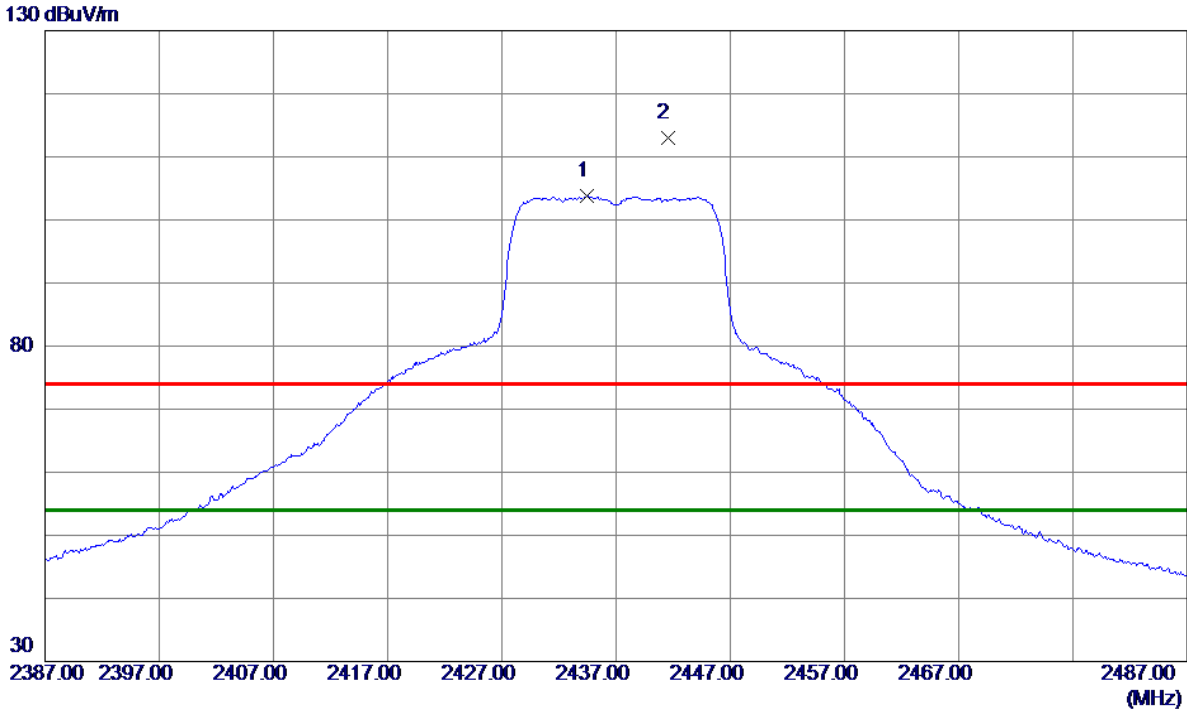
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4834.000	46.51	6.54	53.05	74.00	-20.95	peak	
2 *	4834.000	33.54	6.54	40.08	54.00	-13.92	AVG	

**REMARKS:**

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

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 *	2434.4000	93.19	10.62	103.81	54.00	49.81	AVG	No Limit
2	2441.5000	102.33	10.64	112.97	74.00	38.97	Peak	No Limit

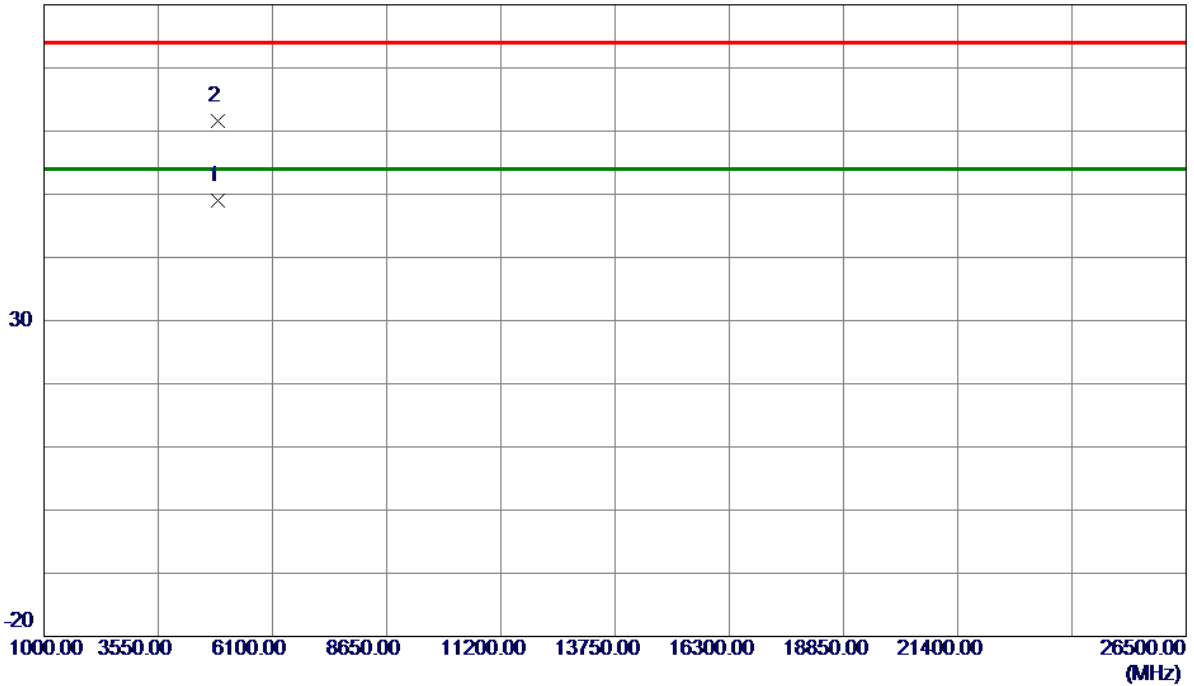
**REMARKS:**

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

Test Mode: TX N-20M Mode 2437 MHz

### Vertical

80 dBuV/m



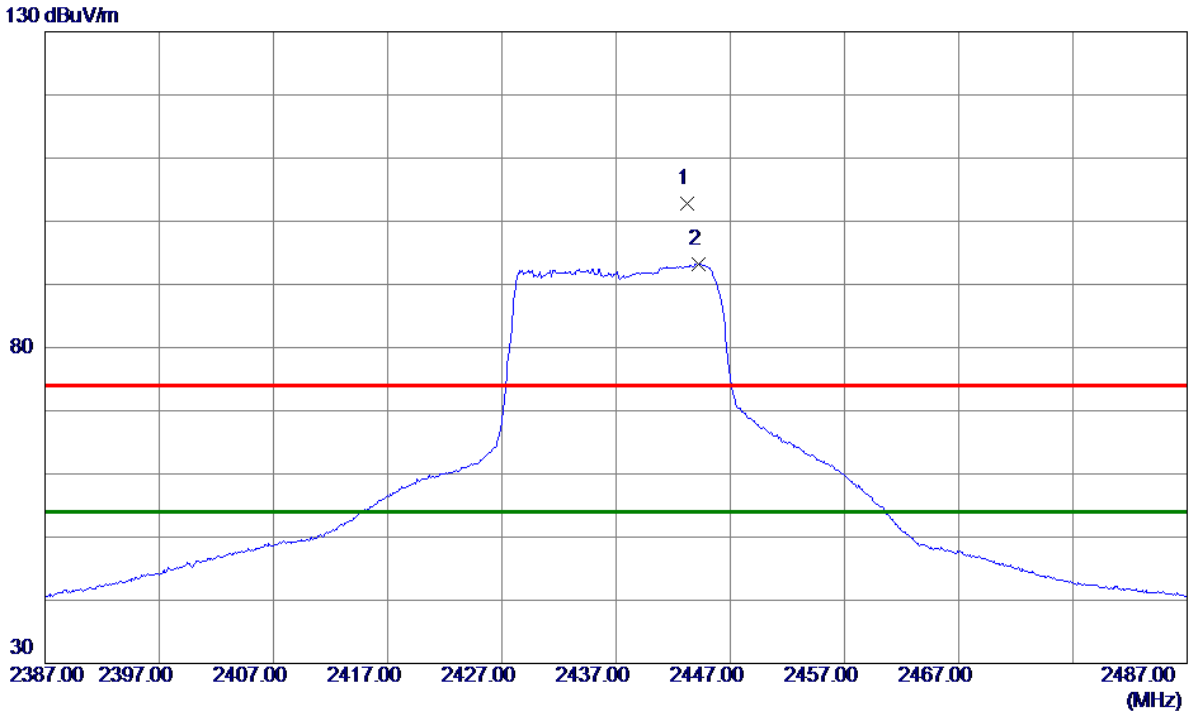
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4874.4300	42.37	6.65	49.02	54.00	-4.98	AVG	
2	4874.4900	54.91	6.65	61.56	74.00	-12.44	Peak	

**REMARKS:**

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

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	2443.2000	92.22	10.65	102.87	74.00	28.87	Peak	No Limit
2 *	2444.2000	82.53	10.65	93.18	54.00	39.18	AVG	No Limit

**REMARKS:**

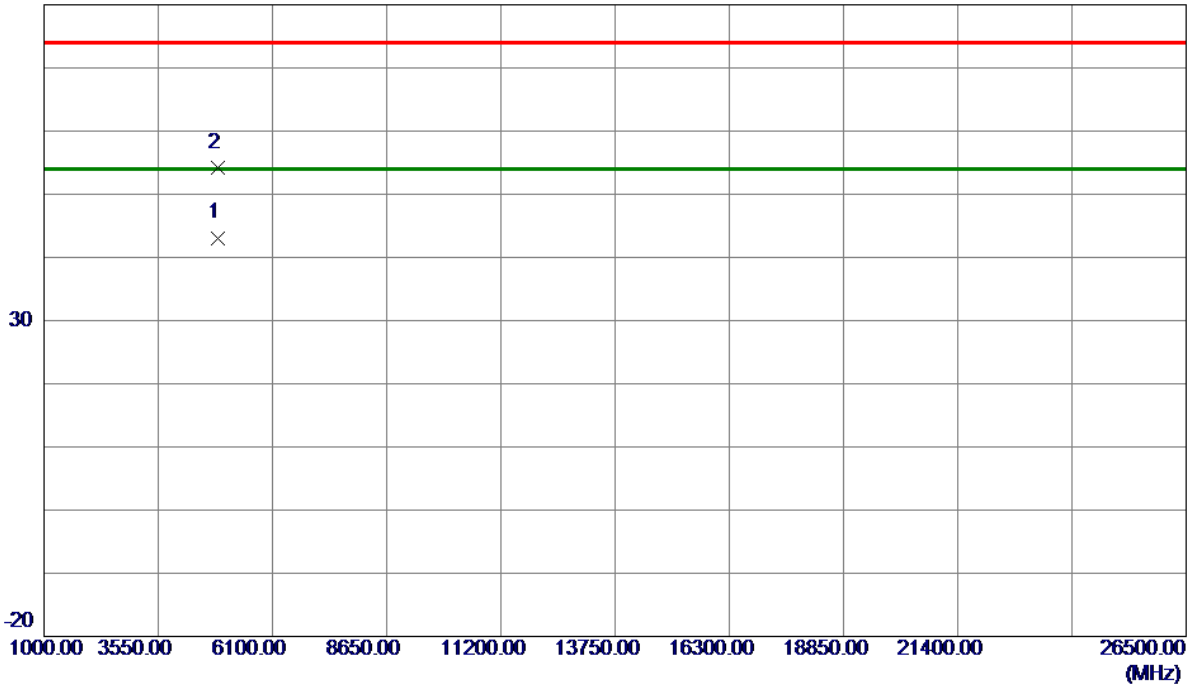
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX N-20M Mode 2437 MHz

### Horizontal

80 dBuV/m



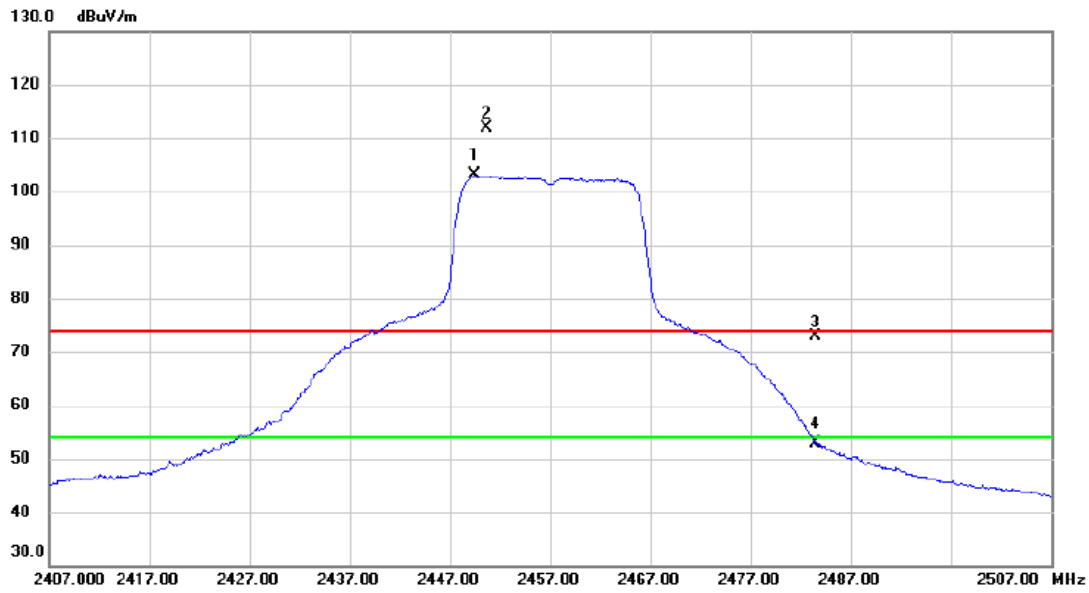
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4874.4300	36.45	6.65	43.10	54.00	-10.90	AVG	
2	4874.4900	47.58	6.65	54.23	74.00	-19.77	Peak	

**REMARKS:**

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

Test Mode: TX N-20M Mode 2457 MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	2449.400	92.35	10.67	103.02	54.00	49.02	AVG	No Limit
2	X	2450.700	101.28	10.66	111.94	74.00	37.94	peak	No Limit
3		2483.500	62.24	10.76	73.00	74.00	-1.00	peak	
4		2483.500	42.24	10.76	53.00	54.00	-1.00	AVG	

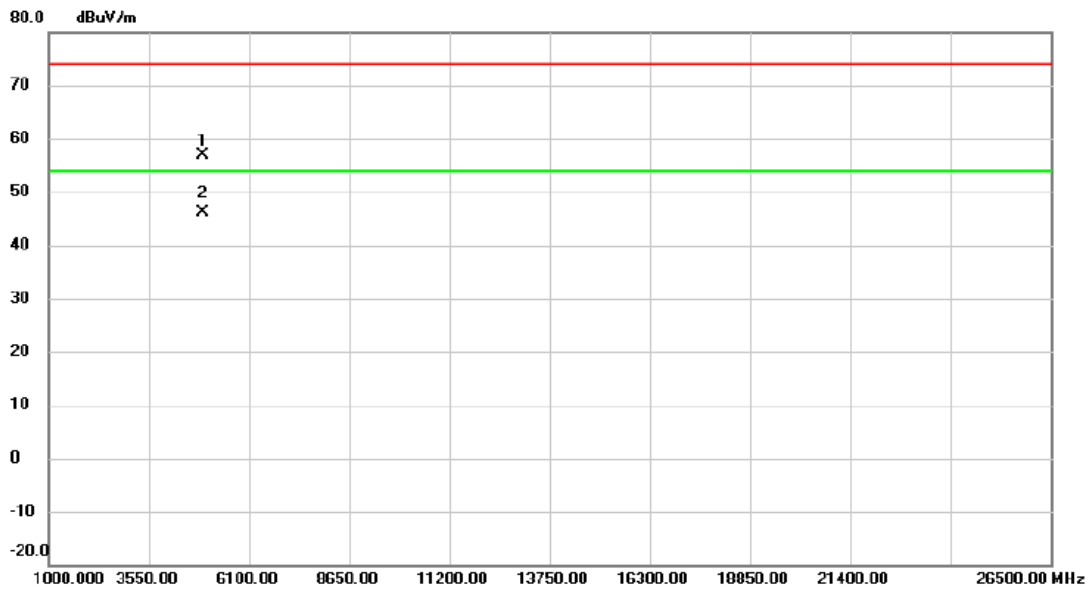
**REMARKS:**

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



Test Mode: TX N-20M Mode 2457 MHz

### Vertical



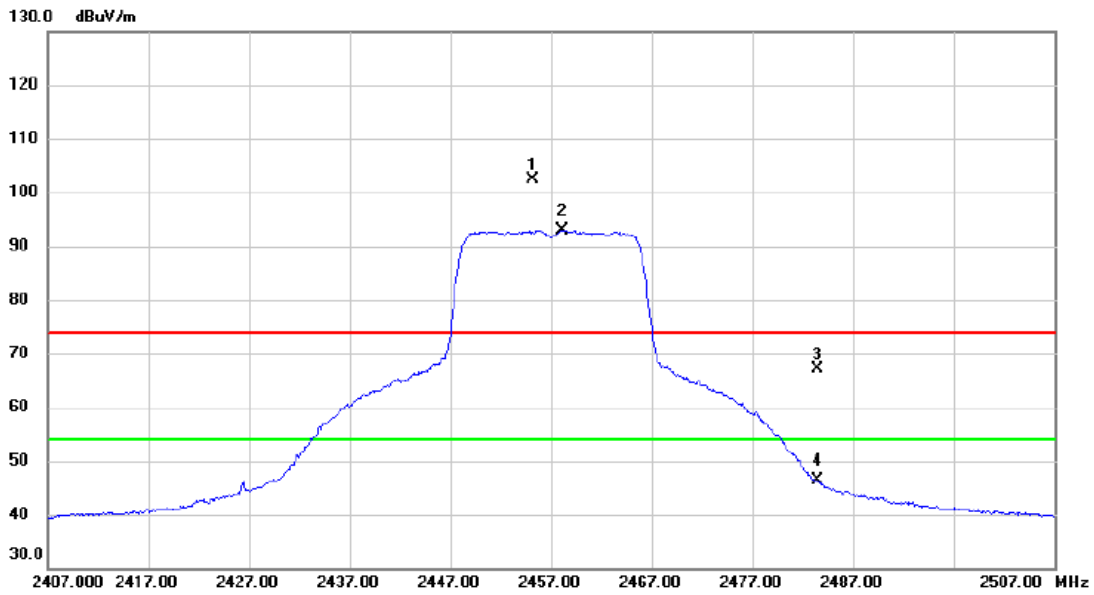
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4914.000	50.11	6.75	56.86	74.00	-17.14	peak	
2	*	4914.000	39.44	6.75	46.19	54.00	-7.81	AVG	

**REMARKS:**

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

Test Mode: TX N-20M Mode 2457 MHz

### Horizontal



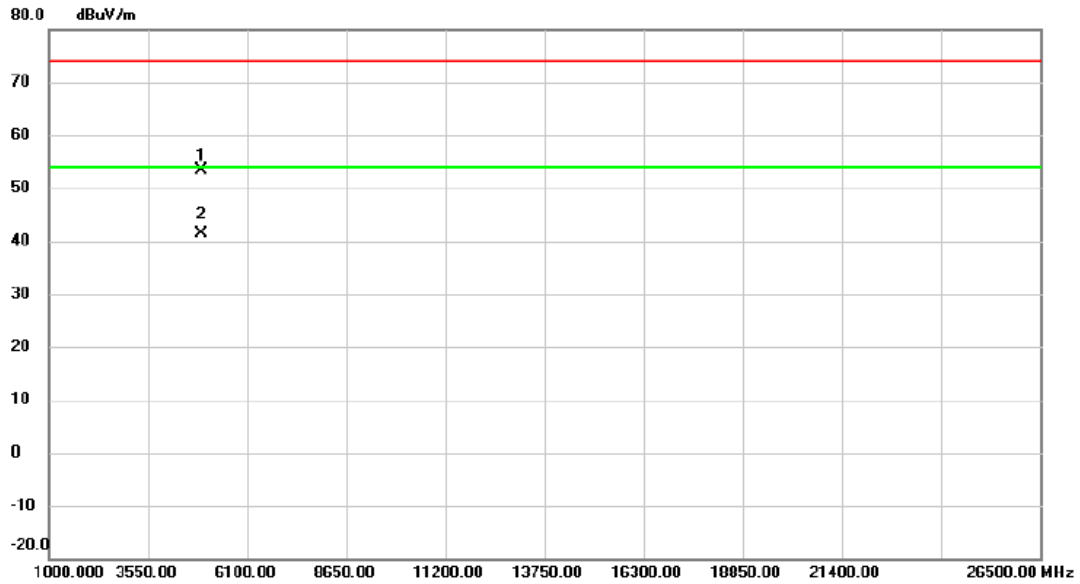
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2455.200	91.80	10.68	102.48	74.00	28.48	peak	No Limit
2	*	2458.100	82.25	10.69	92.94	54.00	38.94	AVG	No Limit
3		2483.500	56.38	10.76	67.14	74.00	-6.86	peak	
4		2483.500	35.50	10.76	46.26	54.00	-7.74	AVG	

**REMARKS:**

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

Test Mode: TX N-20M Mode 2457 MHz

### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4914.000	46.58	6.75	53.33	74.00	-20.67	peak	
2	*	4914.000	34.54	6.75	41.29	54.00	-12.71	AVG	

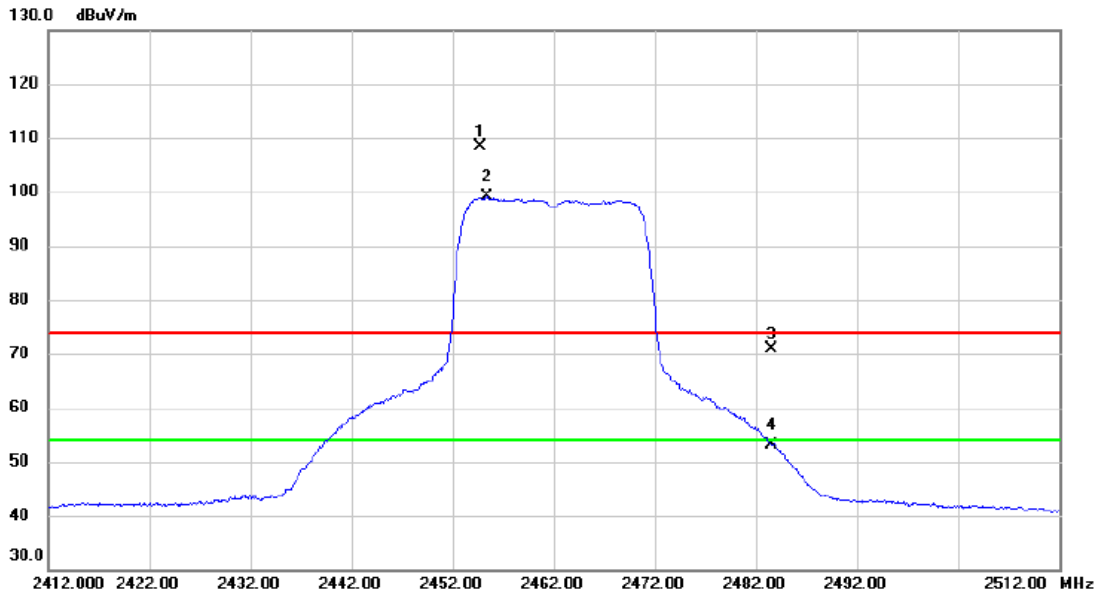
**REMARKS:**

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

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

Test Mode: TX N-20M Mode 2462 MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2454.700	97.65	10.68	108.33	74.00	34.33	peak	No Limit
2	*	2455.400	88.36	10.68	99.04	54.00	45.04	AVG	No Limit
3		2483.500	60.03	10.76	70.79	74.00	-3.21	peak	
4		2483.500	42.42	10.76	53.18	54.00	-0.82	AVG	

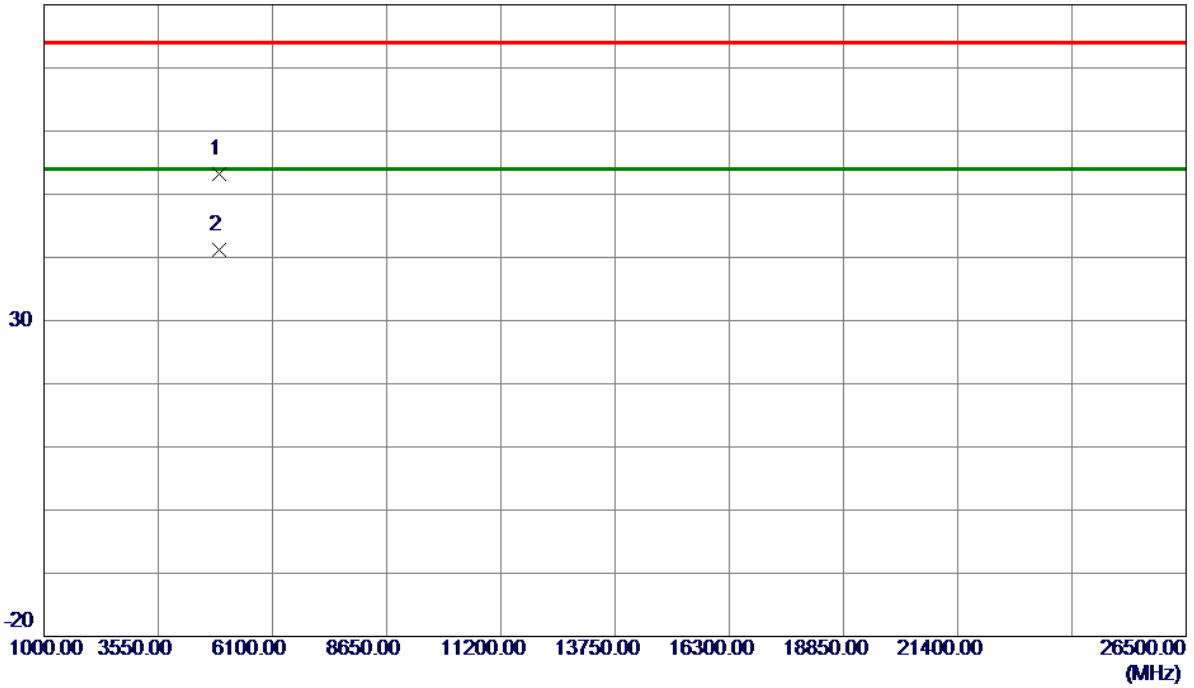
#### REMARKS:

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

Test Mode: TX N-20M Mode 2462 MHz

### Vertical

80 dBuV/m



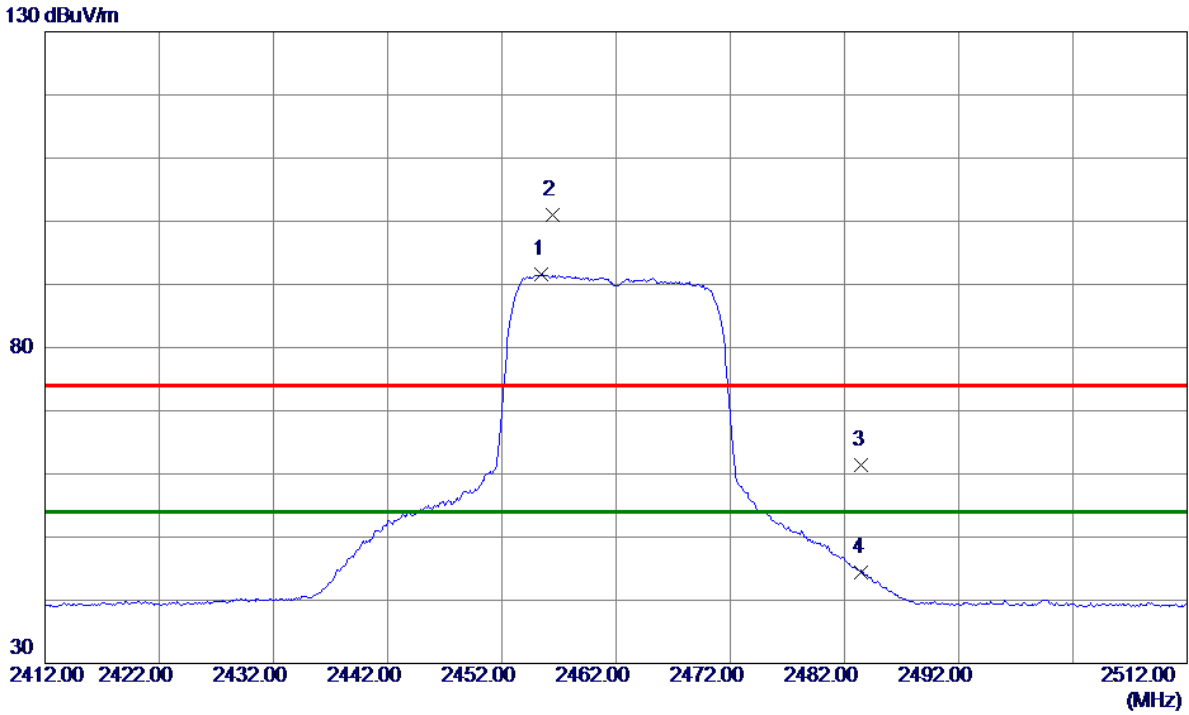
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4924.0000	46.46	6.77	53.23	74.00	-20.77	Peak	
2 *	4924.0000	34.46	6.77	41.23	54.00	-12.77	AVG	

**REMARKS:**

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

Test Mode: TX N-20M 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 *	2455.5000	80.86	10.68	91.54	54.00	37.54	AVG	No Limit
2	2456.4000	90.22	10.69	100.91	74.00	26.91	Peak	No Limit
3	2483.5000	50.60	10.76	61.36	74.00	-12.64	Peak	
4	2483.5000	33.70	10.76	44.46	54.00	-9.54	AVG	

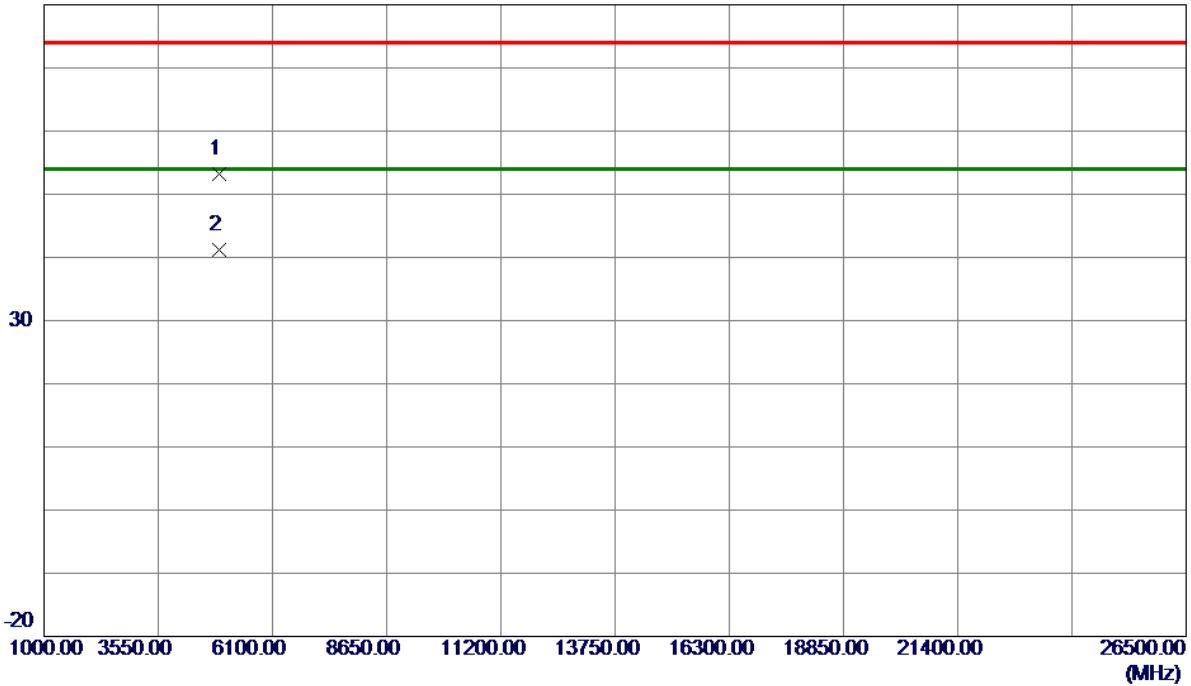
**REMARKS:**

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

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	4924.0000	46.46	6.77	53.23	74.00	-20.77	Peak	
2 *	4924.0000	34.46	6.77	41.23	54.00	-12.77	AVG	

**REMARKS:**

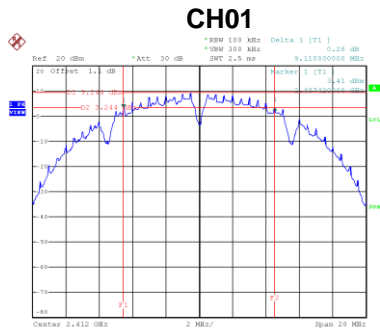
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

## APPENDIX E - BANDWIDTH

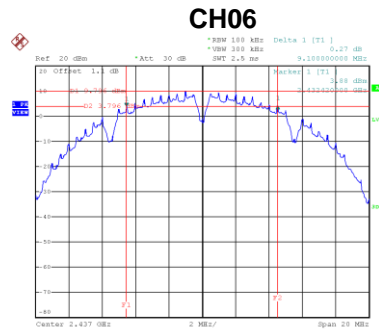


Test Mode	TX B Mode
-----------	-----------

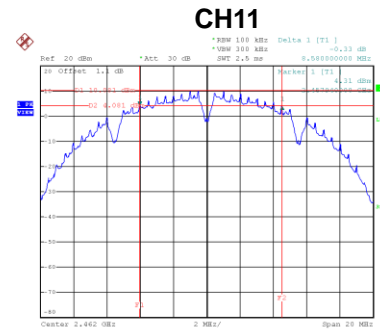
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	9.11	500	Complies
06	2437	9.10	500	Complies
11	2462	8.58	500	Complies



Date: 11.JUL.2020 11:20:13

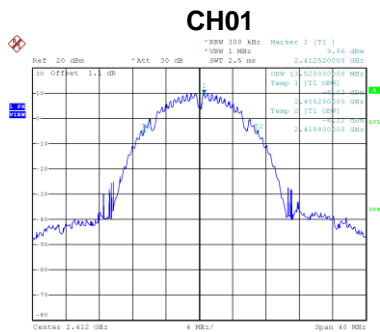


Date: 11.JUL.2020 11:22:14

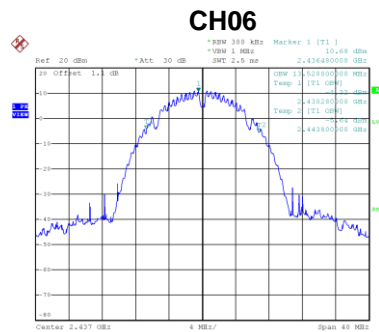


Date: 11.JUL.2020 11:23:15

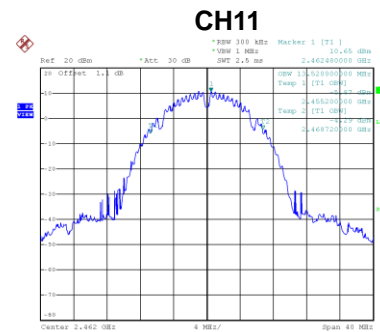
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	13.52	Complies
06	2437	13.52	Complies
11	2462	13.52	Complies



Date: 11.JUL.2020 11:20:42



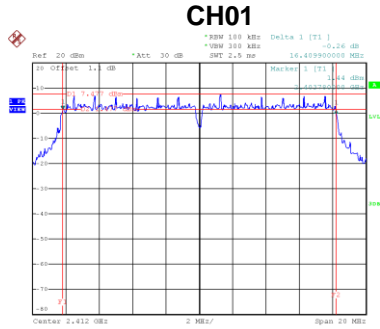
Date: 11.JUL.2020 11:22:21



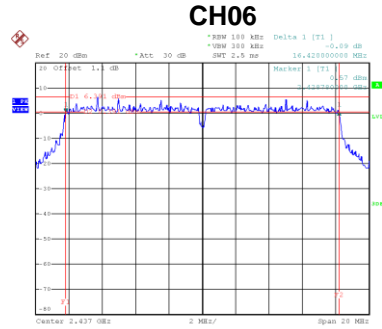
Date: 11.JUL.2020 11:23:17

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

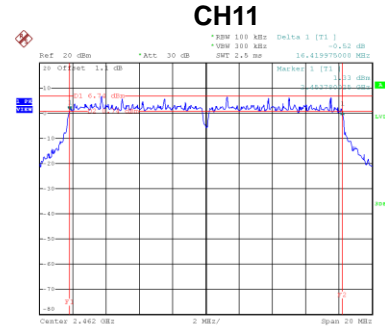
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.41	500	Complies
06	2437	16.42	500	Complies
11	2462	16.42	500	Complies



Date: 11.JUL.2020 11:26:53

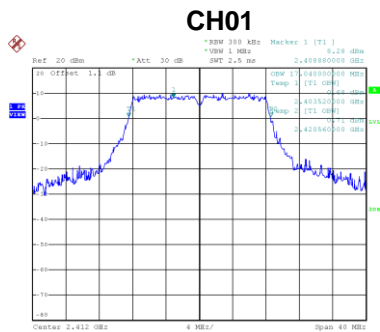


Date: 11.JUL.2020 11:28:26

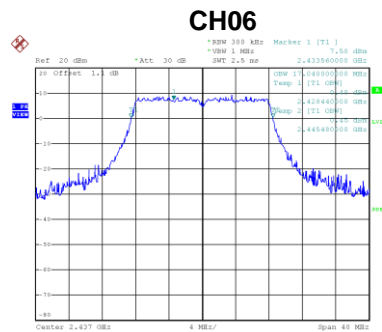


Date: 11.JUL.2020 11:30:16

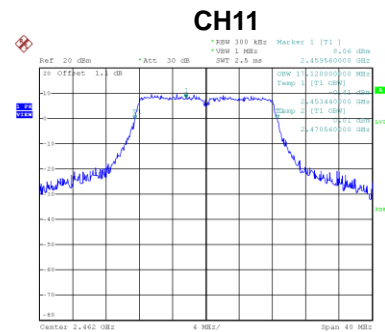
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	17.04	Complies
06	2437	17.04	Complies
11	2462	17.12	Complies



Date: 11.JUL.2020 11:27:01



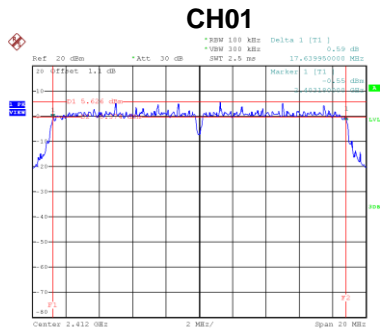
Date: 11.JUL.2020 11:28:34



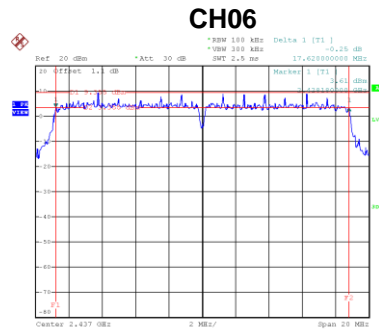
Date: 11.JUL.2020 11:30:23

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

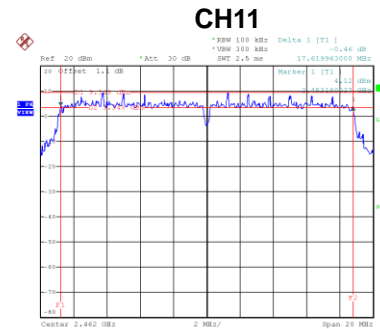
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.64	500	Complies
06	2437	17.62	500	Complies
11	2462	17.62	500	Complies



Date: 11.JUL.2020 11:31:58

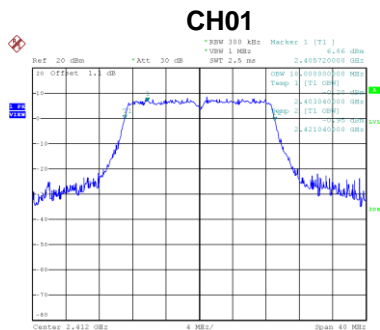


Date: 11.JUL.2020 11:33:14

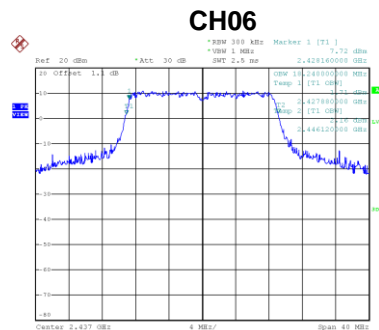


Date: 11.JUL.2020 11:33:35

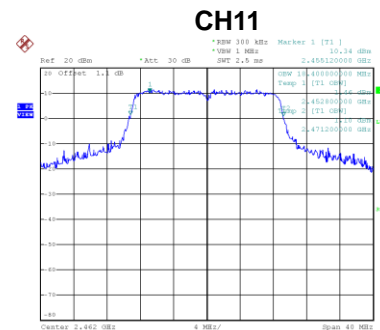
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	18.00	Complies
06	2437	18.24	Complies
11	2462	18.40	Complies



Date: 11.JUL.2020 11:32:06



Date: 11.JUL.2020 11:33:22



Date: 11.JUL.2020 11:35:42

## **APPENDIX F – MAXIMUM AVERAGE OUTPUT POWER**

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

Channel	Frequency (MHz)	AVG Output Power (dBm)	Duty Factor	AVG Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.12	0.00	18.12	30.00	1.0000	Complies
06	2437	18.13	0.00	18.13	30.00	1.0000	Complies
11	2462	18.27	0.00	18.27	30.00	1.0000	Complies

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

Channel	Frequency (MHz)	AVG Output Power (dBm)	Duty Factor	AVG Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	16.18	0.37	16.55	30.00	1.0000	Complies
06	2437	17.64	0.37	18.01	30.00	1.0000	Complies
11	2462	16.39	0.37	16.76	30.00	1.0000	Complies

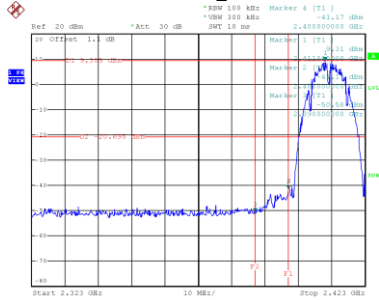
Test Mode	TX N-20M Mode
-----------	---------------

Channel	Frequency (MHz)	AVG Output Power (dBm)	Duty Factor	AVG Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	15.11	0.44	15.55	30.00	1.0000	Complies
06	2437	19.83	0.44	20.27	30.00	1.0000	Complies
11	2462	15.12	0.44	15.56	30.00	1.0000	Complies

## **APPENDIX G - CONDUCTED SPURIOUS EMISSIONS**

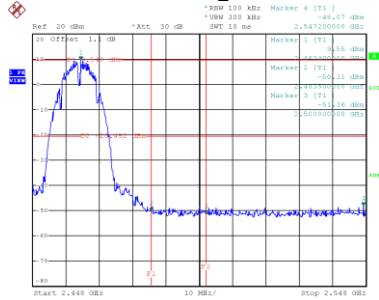
Test Mode TX B Mode

### Bandedge-CH01



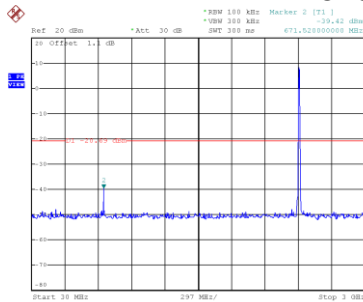
Date: 11.JUL.2020 11:20:49

### Bandedge-CH11

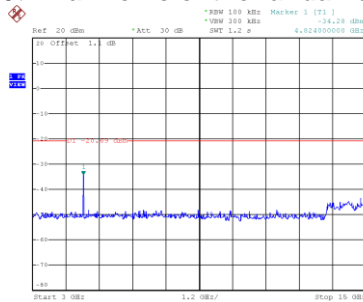


Date: 11.JUL.2020 11:24:05

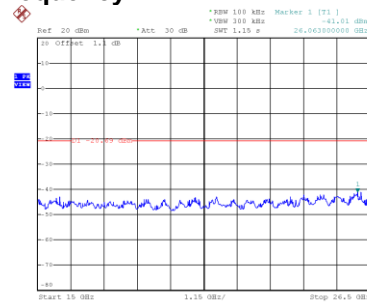
### CH01 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:21:03

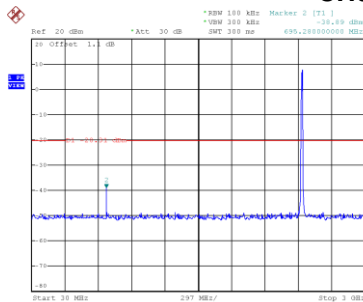


Date: 11.JUL.2020 11:21:11

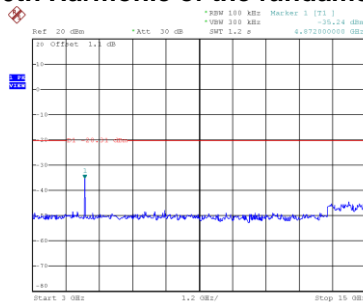


Date: 11.JUL.2020 11:21:18

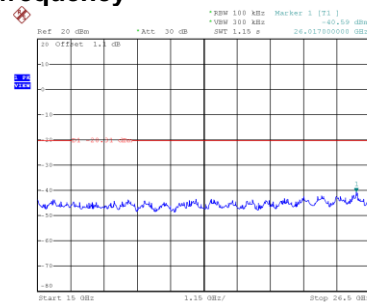
### CH06 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:22:43

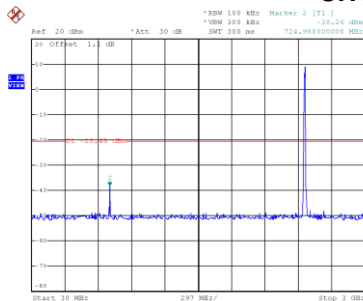


Date: 11.JUL.2020 11:22:50

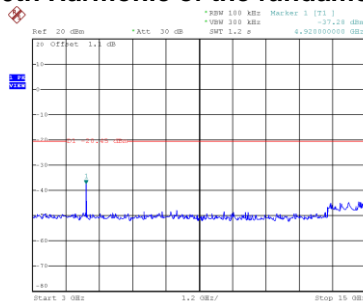


Date: 11.JUL.2020 11:22:58

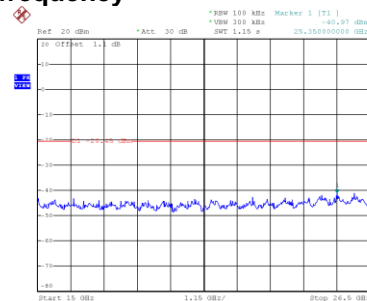
### CH11 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:24:18



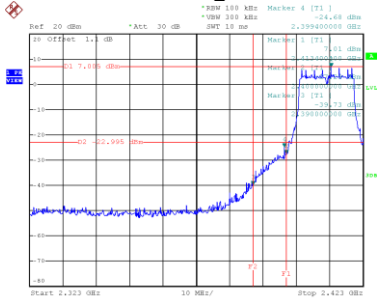
Date: 11.JUL.2020 11:24:26



Date: 11.JUL.2020 11:24:34

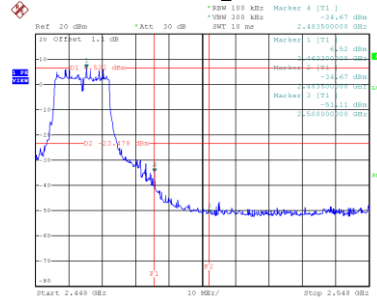
Test Mode TX G Mode

### Bandedge-CH01



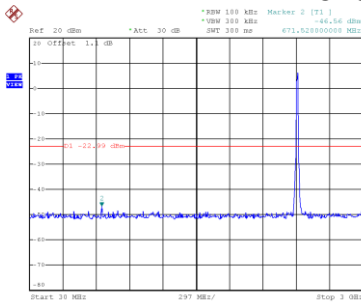
Date: 11.JUL.2020 11:27:09

### Bandedge-CH11

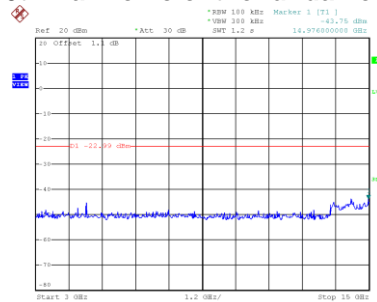


Date: 11.JUL.2020 11:30:31

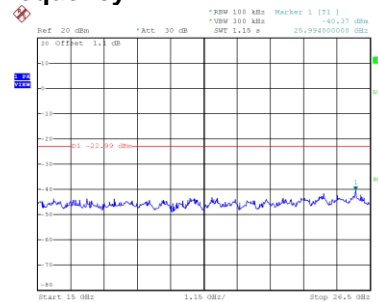
### CH01 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:27:22

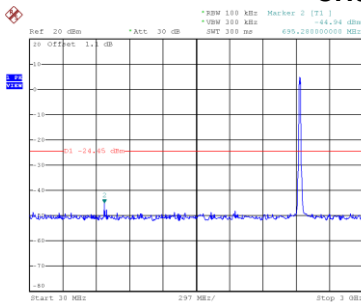


Date: 11.JUL.2020 11:27:30

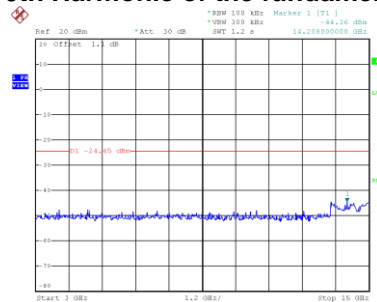


Date: 11.JUL.2020 11:27:37

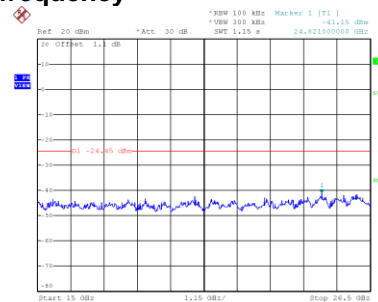
### CH06 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:28:55

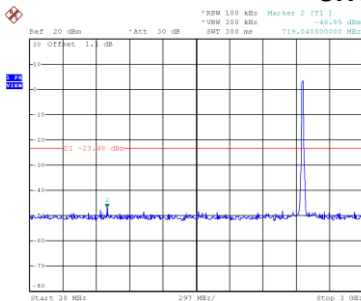


Date: 11.JUL.2020 11:29:03

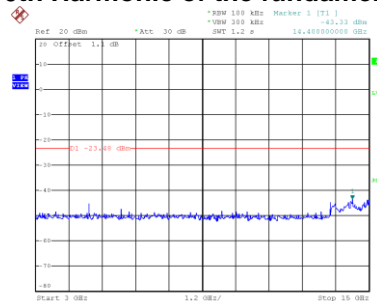


Date: 11.JUL.2020 11:29:11

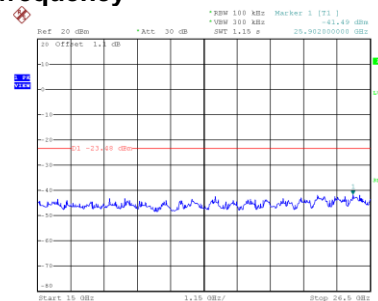
### CH11 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:30:44



Date: 11.JUL.2020 11:30:52

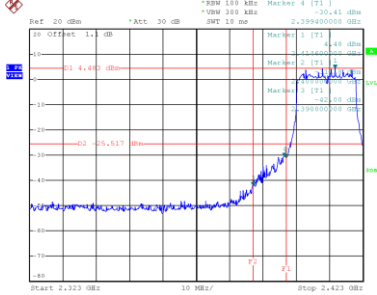


Date: 11.JUL.2020 11:31:00



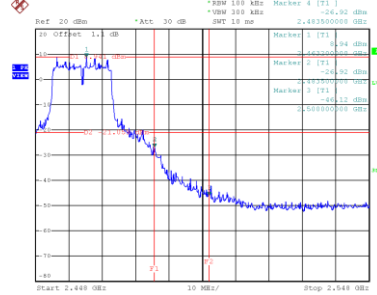
Test Mode TX N-20M Mode

### Bandedge-CH01



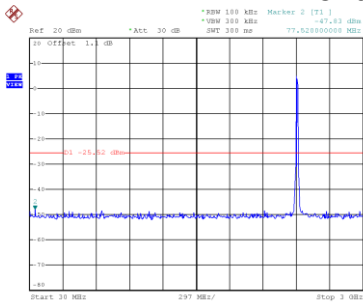
Date: 11.JUL.2020 11:32:13

### Bandedge-CH11

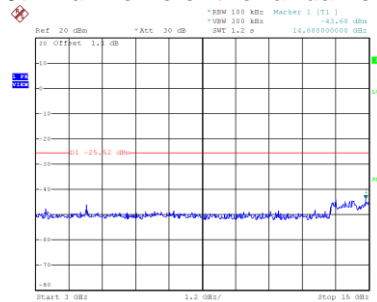


Date: 11.JUL.2020 11:35:50

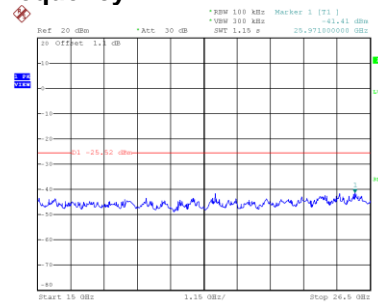
### CH01 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:32:27

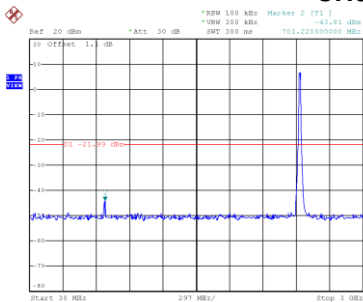


Date: 11.JUL.2020 11:32:35

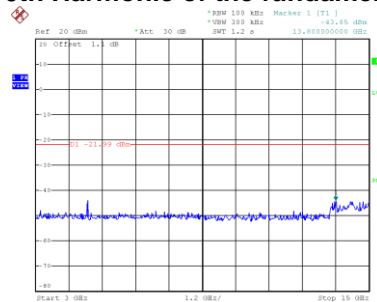


Date: 11.JUL.2020 11:32:42

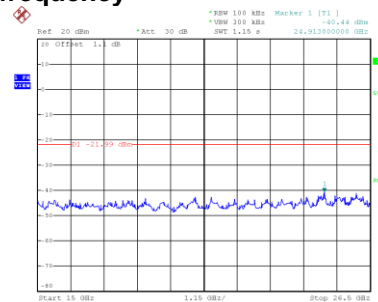
### CH06 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:33:43

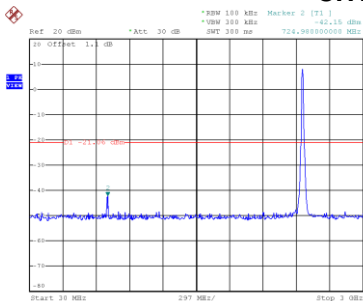


Date: 11.JUL.2020 11:33:51

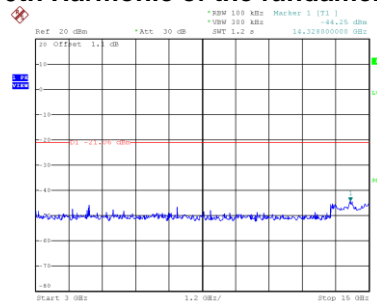


Date: 11.JUL.2020 11:33:59

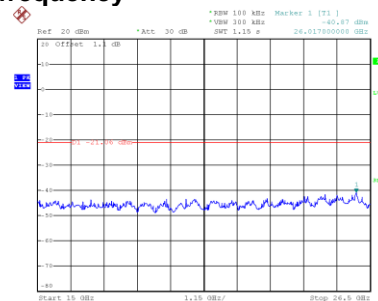
### CH11 – 10th Harmonic of the fundamental frequency



Date: 11.JUL.2020 11:36:03



Date: 11.JUL.2020 11:36:11

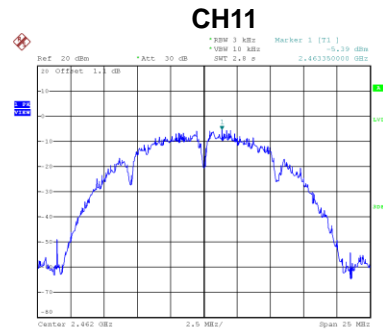
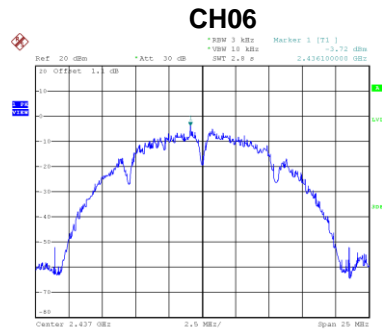
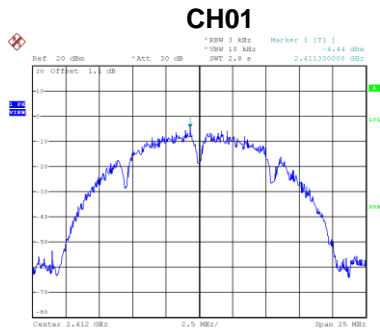


Date: 11.JUL.2020 11:36:19

## **APPENDIX H - POWER SPECTRAL DENSITY**

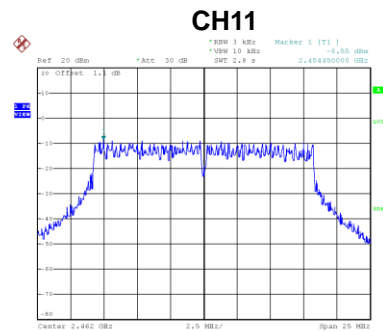
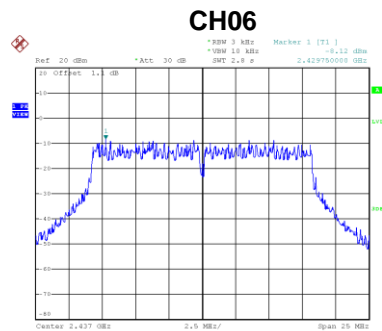
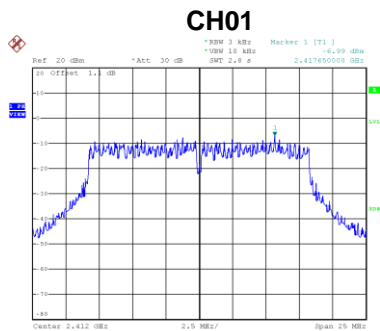
Test Mode	TX B Mode
-----------	-----------

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-4.44	8	Complies
06	2437	-3.72	8	Complies
11	2462	-5.39	8	Complies



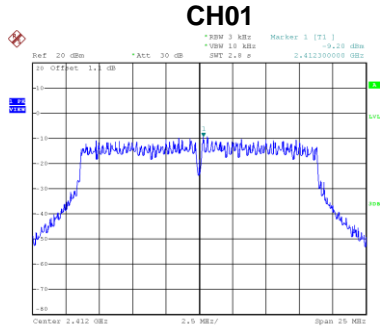
Test Mode	TX G Mode
-----------	-----------

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-6.99	8	Complies
06	2437	-8.12	8	Complies
11	2462	-8.55	8	Complies

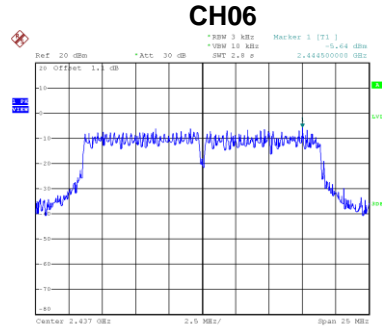


Test Mode	TX N-20M Mode
-----------	---------------

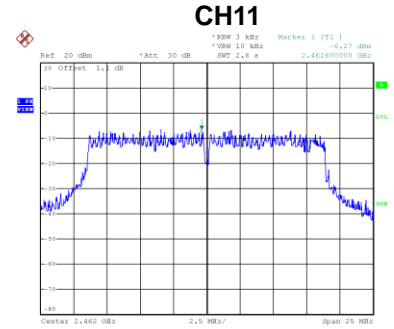
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-9.20	8	Complies
06	2437	-5.64	8	Complies
11	2462	-6.27	8	Complies



Date: 11..JUL.2020 11:32:52



Date: 11..JUL.2020 11:35:01



Date: 11..JUL.2020 11:36:28

**End of Test Report**