

# FCC Radio Test Report

## FCC ID: OGX-A3105A

This report concerns (check one): ☒ Original Grant ☐ Class I Change ☐ Class II Change

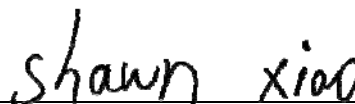
Project No. : 1711C035  
Equipment : Android Box  
Test Model : A3105A  
Series Model : N/A  
Applicant : Guangzhou Shiyuan Electronics Co., Ltd  
Address : NO.6 Fourth Yunpu Road, Huangpu District,  
Guangzhou

Date of Receipt : Nov. 07, 2017  
Date of Test : Nov. 07, 2017 ~ Nov. 27, 2017  
Issued Date : Nov. 28, 2017  
Tested by : BTL Inc.

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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.

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## REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-3-1711C035	Original Issue.	Nov. 28, 2017

## 1. CERTIFICATION

Equipment : Android Box  
Brand Name : N/A  
Test Model : A3105A  
Series Model : N/A  
Applicant : Guangzhou Shiyuan Electronics Co., Ltd  
Manufacturer : Guangzhou Shiyuan Electronics Co., Ltd  
Address : NO.6 Fourth Yunpu Road, Huangpu District, Guangzhou  
Factory : Huizhou Champion Asia Digital Technology Co,Ltd  
Address : SanDong Town Digital Industry Park No 25,Huizhou City, Guangdong  
Province, China  
Date of Test : Nov. 07, 2017 ~ Nov. 27, 2017  
Test Sample : Engineering Sample  
Standard(s) : FCC Part15, Subpart C:(15.247) / ANSI C63.10-2013

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

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-3-1711C035) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP according to the ISO-17025 quality assessment standard and technical standard(s).

**Test results included in this report is only for the WLAN 2.4G part.**

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C			
Standard(s) Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247(d)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	6dB Bandwidth	PASS	
15.247(b)(3)	Peak Output Power	PASS	
15.247(e)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
15.247(d)/ 15.205/ 15.209	Transmitter Radiated Emissions	PASS	

NOTE:

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

## 2.1 TEST FACILITY

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

BTL's test firm number for FCC: 854385

BTL's designation number for FCC: CN5020

## 2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty figures shall be calculated according the methods described in the ETSI TR 100 028 and shall correspond to an expansion factor (coverage factor)  $k=1.96$  or  $k=2$ (which provide confidence levels of respectively 90% and 95.45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)). Measurement Uncertainty for a Level of Confidence of 95 %,  $U=2 \times U_c(y)$ .

The BTL measurement uncertainty as below table:

### A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150 KHz ~ 30MHz	2.32

### B. Radiated Measurement:

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	3.82
		30MHz ~ 200MHz	H	3.78
		200MHz ~ 1,000MHz	V	4.10
		200MHz ~ 1,000MHz	H	4.06
		1GHz~18GHz	V	3.12
		1GHz~18GHz	H	3.68
		18GHz~40GHz	V	4.15
		18GHz~40GHz	H	4.14

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



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Android Box	
Brand Name	N/A	
Test Model	A3105A	
Series Model	N/A	
Model Difference	N/A	
Product Description	Operation Frequency	2412~2462 MHz
	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 150 Mbps
	Output Power (Max.)	802.11b: 19.18dBm 802.11g: 25.2dBm 802.11n(20MHz): 25.28dBm
Power Source	DC voltage supplied from AC/DC adapter. Brand/ Model: FLYPOWER / PS12F120K1000UD	
Power Rating	I/P: AC 100-240V 50/60Hz 0.35A    O/P: DC 12V 1000mA	

Note:

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

#### 2. Channel List:

CH01 - CH11 for 802.11b, 802.11g, 802.11n(20MHz)							
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. Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	2

### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

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-20MHZ MODE CHANNEL 01/06/11
Mode 4	Normal Link

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 4	Normal Link

For Radiated Test	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

For Band Edge Test	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

6dB Spectrum Bandwidth	
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-20MHZ MODE CHANNEL 01/06/11

Maximum Conducted Output Power	
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-20MHZ MODE CHANNEL 01/06/11

Power Spectral Density	
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-20MHZ MODE CHANNEL 01/06/11

**Note:**

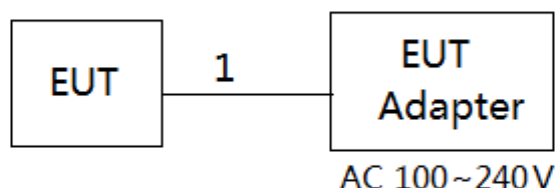
- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: DBPSK (1Mbps)  
802.11g mode: OFDM (6Mbps)  
802.11n HT20 mode : BPSK (6.5Mbps)  
For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.
- (4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

### 3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software version	RF Test Tool		
Frequency (MHz)	2412	2437	2462
802.11b	64	64	64
802.11g	48	64	48
802.11n (20MHz)	46	64	48

### 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

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

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.5m	DC Cable

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	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 limit of " \* " decreases with the logarithm of the frequency
- (2) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
 Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

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

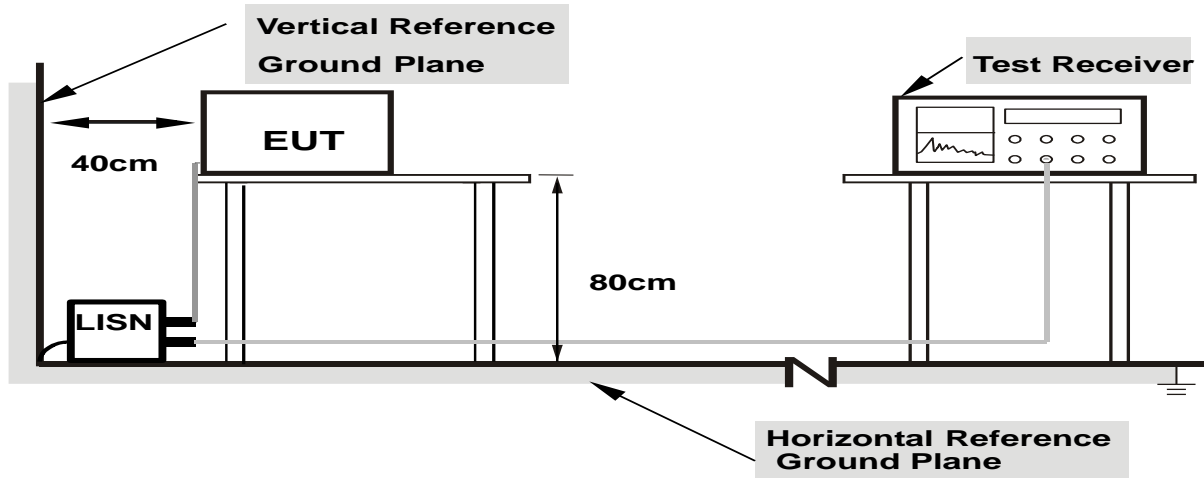
#### 4.1.2 TEST PROCEDURE

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

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.4 TEST SETUP



- Note:** 1.Support units were connected to second LISN.  
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

#### 4.1.5 EUT OPERATING CONDITIONS

The EUT was placed on the test table and programmed in normal function.

#### 4.1.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 4.1.7 TEST RESULTS

Please refer to the Appendix A.

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS

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 (9KHz-1000MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

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

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

#### Notes:

- (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).
- (4) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
 Margin Level = Measurement Value - Limit Value

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

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

#### 4.2.2 TEST PROCEDURE

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

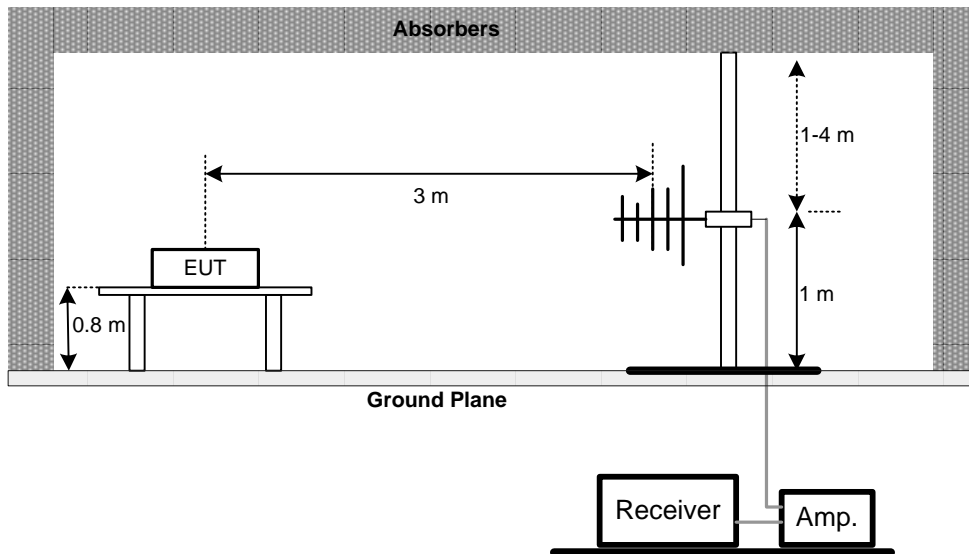
#### 4.2.3 DEVIATION FROM TEST STANDARD

No deviation

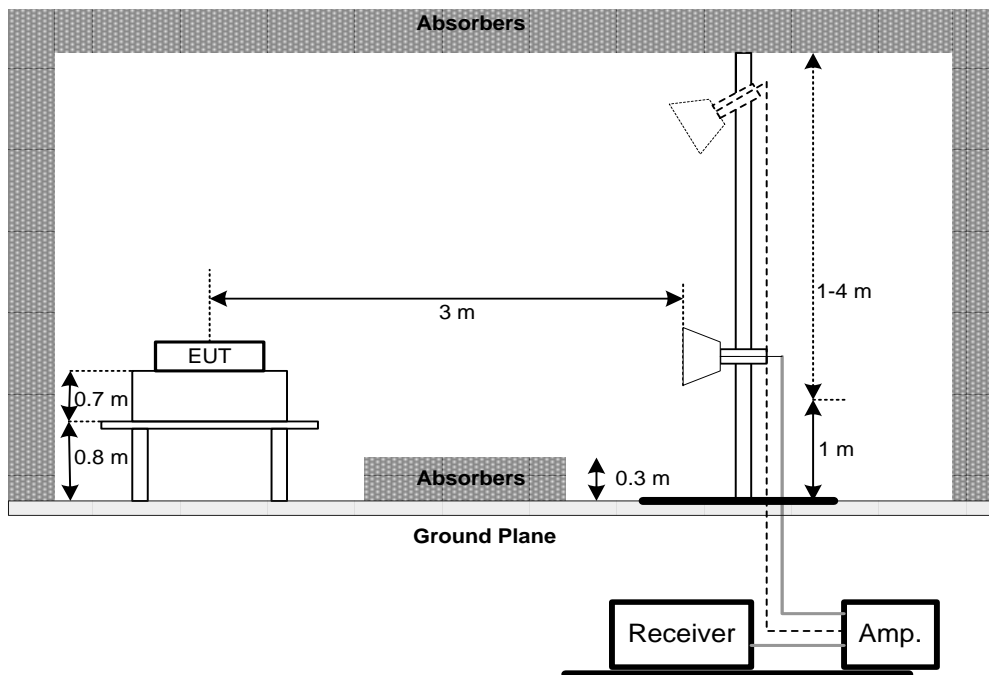


#### 4.2.4 TEST SETUP

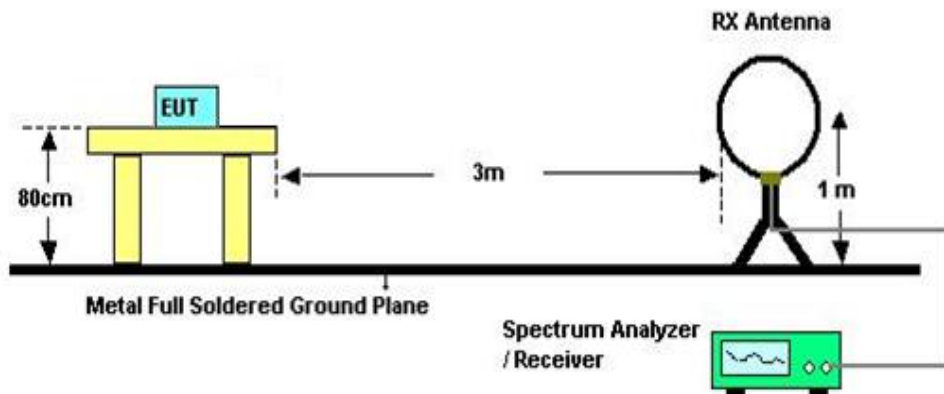
##### (A) Radiated Emission Test Set-Up Frequency Below 1 GHz



##### (B) Radiated Emission Test Set-Up Frequency Above 1 GHz



(C) For Radiated Emissions Below 30MHz



#### 4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 4.2.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

#### 4.2.8 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix C.

#### 4.2.9 TEST RESULTS (ABOVE 1000MHZ)

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 APPLIED PROCEDURES

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	2400-2483.5	PASS

#### 5.1.1 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= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

#### 5.1.2 DEVIATION FROM STANDARD

No deviation.

#### 5.1.3 TEST SETUP



#### 5.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 5.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 5.1.6 TEST RESULTS

Please refer to the Appendix E.

## 6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

### 6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS

#### 6.1.1 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance.

#### 6.1.2 DEVIATION FROM STANDARD

No deviation.

#### 6.1.3 TEST SETUP



#### 6.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 6.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 6.1.6 TEST RESULTS

Please refer to the Appendix F.

## 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits.

#### 7.1.1 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= 100KHz, VBW=300KHz, Sweep time = Auto.
- Offset=antenna gain+cable loss

#### 7.1.2 DEVIATION FROM STANDARD

No deviation.

#### 7.1.3 TEST SETUP



#### 7.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 7.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 7.1.6 TEST RESULTS

Please refer to the Appendix G.

## 8. POWER SPECTRAL DENSITY TEST

### 8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

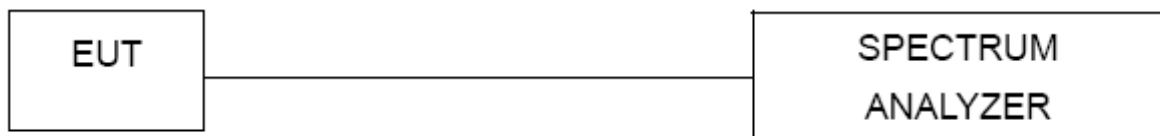
#### 8.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

#### 8.1.2 DEVIATION FROM STANDARD

No deviation.

#### 8.1.3 TEST SETUP



#### 8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 8.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 8.1.6 TEST RESULTS

Please refer to the Appendix H.

## 9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 26, 2018
2	LISN	EMCO	3816/2	52765	Mar. 26, 2018
3	50Ω Terminator	SHX	TF2-3G-A	8122901	Mar. 26, 2018
4	TWO-LINE V-NETWORK	R&S	ENV216	101447	Mar. 26, 2018
5	Cable	N/A	RG223	12m	Aug. 20, 2018
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emission Measurement - Below 1GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 26, 2018
2	Amplifier	HP	8447D	2944A09673	Aug. 20, 2018
3	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	Jun. 26, 2018
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	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 20, 2018

### Radiated Emission Measurement - Above 1GHz

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 26, 2018
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 08, 2018
3	Amplifier	Agilent	8449B	3008A02274	May. 16, 2018
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 26, 2018
5	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018
6	Antenna	EM	EM-6876-1	230	Jul. 07, 2018
7	Controller	CT	SC100	N/A	N/A
8	Controller	MF	MF-7802	MF780208416	N/A
9	Cable	emci	EMC104-SM-SM-1 2000(12m)	N/A	Jun. 26, 2018
10	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

### 6dB Bandwidth

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

### Peak Output Power

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	ANRITSU	ML2495A	1128009	Mar. 26, 2018
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 26, 2018

### Antenna Conducted Spurious Emission

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

### Power Spectral Density

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

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

All calibration period of equipment list is one year.



## 10. EUT TEST PHOTO

### Conducted Measurement Photos



## Radiated Measurement Photos

9KHz to 30MHz



## Radiated Measurement Photos

30MHz to 1000MHz





## Radiated Measurement Photos

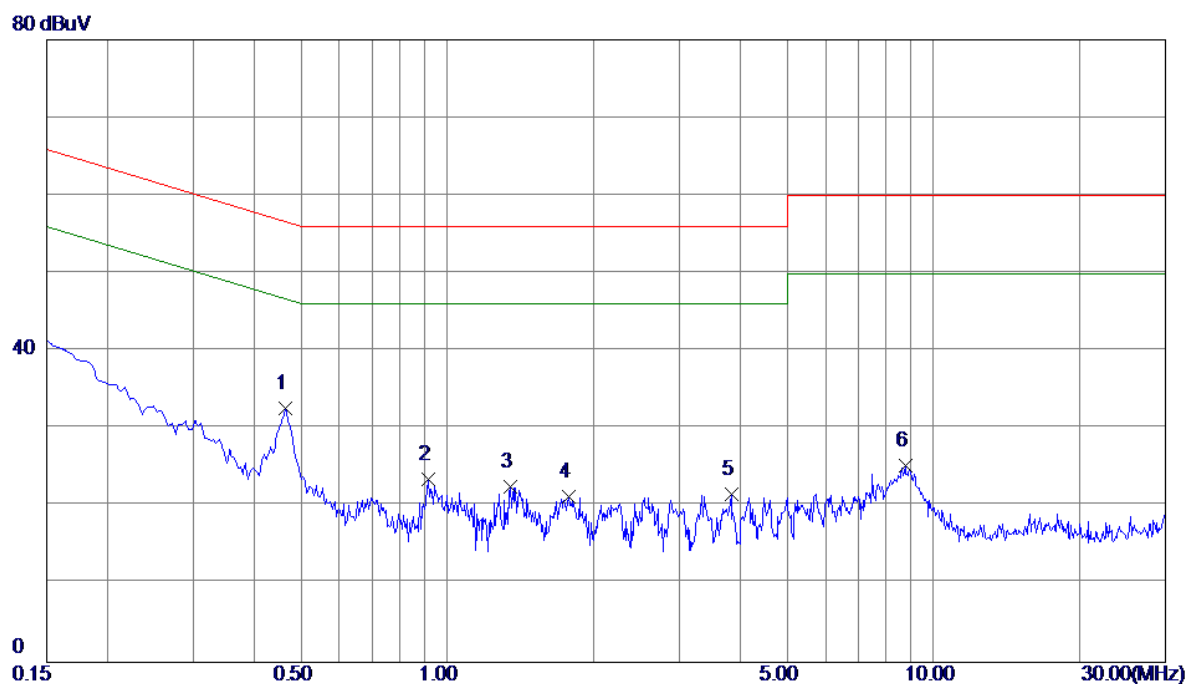
### Above 1000MHz



## APPENDIX A - CONDUCTED EMISSION

Test Mode : Normal Link

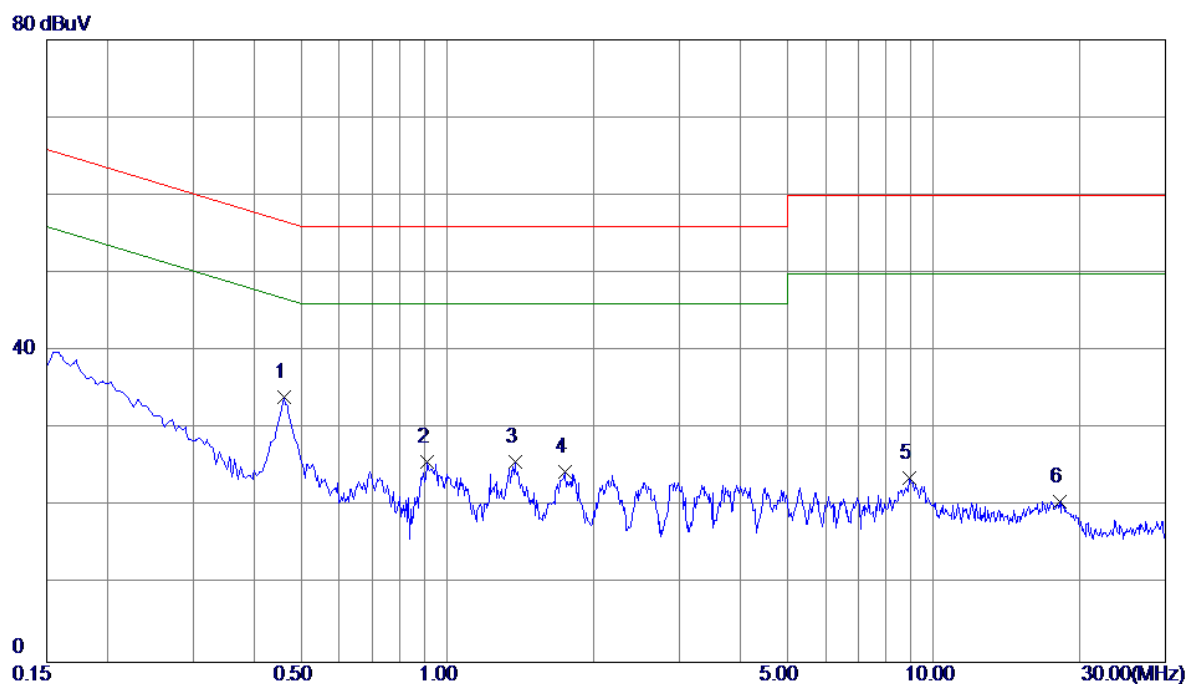
# Line



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1 *	0.4650	22.85	9.80	32.65	56.60	-23.95	Peak	
2	0.9150	13.64	9.85	23.49	56.00	-32.51	Peak	
3	1.3515	12.70	9.89	22.59	56.00	-33.41	Peak	
4	1.7790	11.34	9.91	21.25	56.00	-34.75	Peak	
5	3.8355	11.55	10.02	21.57	56.00	-34.43	Peak	
6	8.7450	15.03	10.26	25.29	60.00	-34.71	Peak	

Test Mode : Normal Link

### Neutral



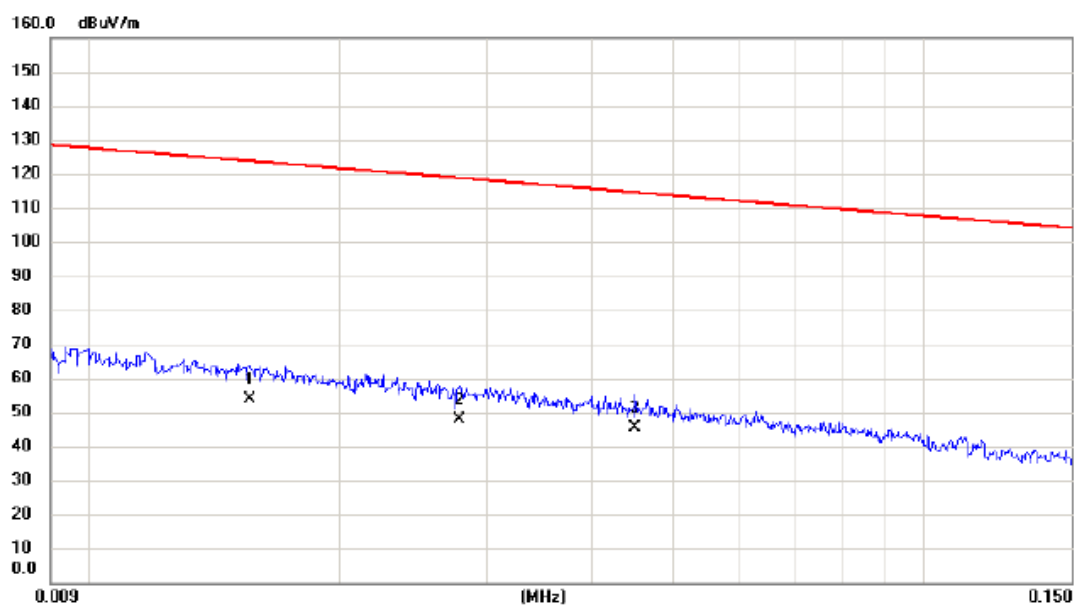
No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1 *	0.4605	24.39	9.69	34.08	56.68	-22.60	Peak	
2	0.9105	15.98	9.74	25.72	56.00	-30.28	Peak	
3	1.3785	16.06	9.77	25.83	56.00	-30.17	Peak	
4	1.7430	14.68	9.82	24.50	56.00	-31.50	Peak	
5	8.9385	13.52	10.21	23.73	60.00	-36.27	Peak	
6	18.2220	10.00	10.71	20.71	60.00	-39.29	Peak	

## APPENDIX B - RADIATED EMISSION (9KHZ TO 30MHZ)



Test Mode: TX Mode

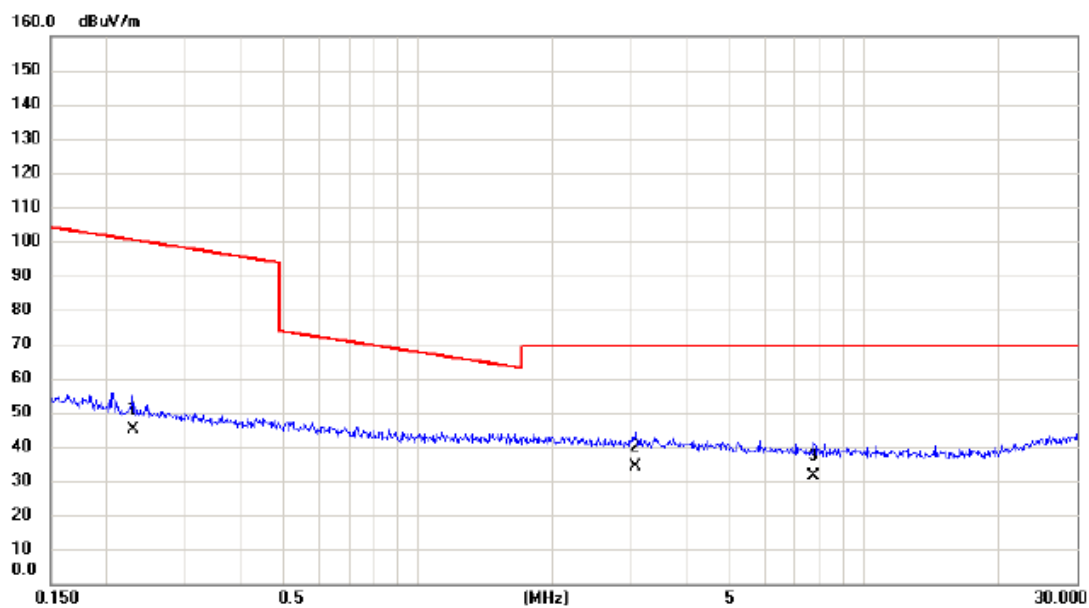
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0156	33.42	20.19	53.61	123.74	-70.13	AVG	
2		0.0278	28.36	19.39	47.75	118.72	-70.97	AVG	
3	*	0.0451	26.54	18.87	45.41	114.52	-69.11	AVG	

Test Mode: TX Mode

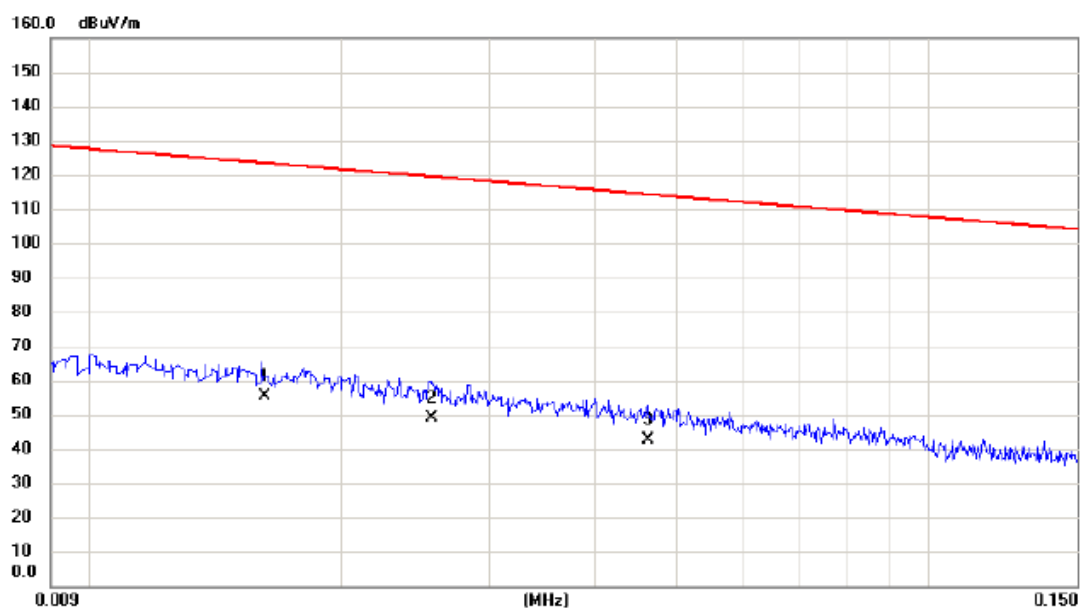
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2292	28.20	16.71	44.91	100.40	-55.49	AVG	
2	*	3.0738	18.80	15.21	34.01	69.54	-35.53	QP	
3		7.7278	17.24	14.03	31.27	69.54	-38.27	QP	

Test Mode: TX Mode

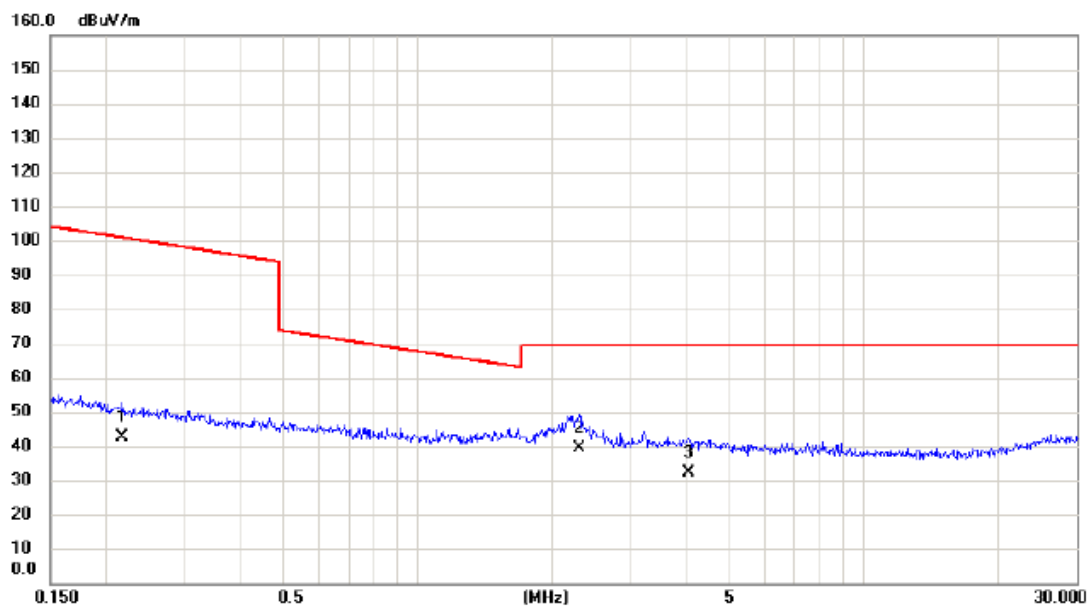
Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.0162	35.33	20.11	55.44	123.41	-67.97	AVG	
2		0.0256	29.57	19.45	49.02	119.44	-70.42	AVG	
3		0.0463	23.91	18.83	42.74	114.29	-71.55	AVG	

Test Mode: TX Mode

Ant 90°



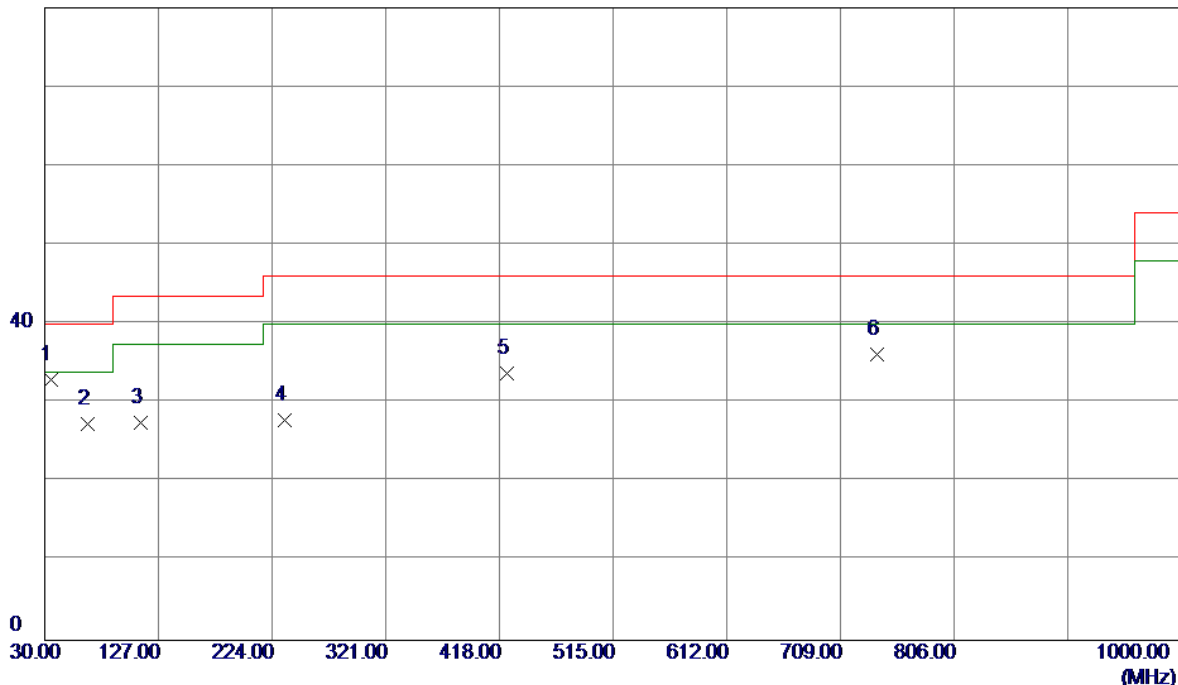
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2174	25.73	16.75	42.48	100.86	-58.38	AVG	
2	*	2.2968	24.09	15.43	39.52	69.54	-30.02	QP	
3		4.0490	17.16	14.92	32.08	69.54	-37.46	QP	

## APPENDIX C - RADIATED EMISSION (30MHZ TO 1000MHZ)

Test Mode: TX B MODE CHANNEL 01

Vertical

80 dBuV/m

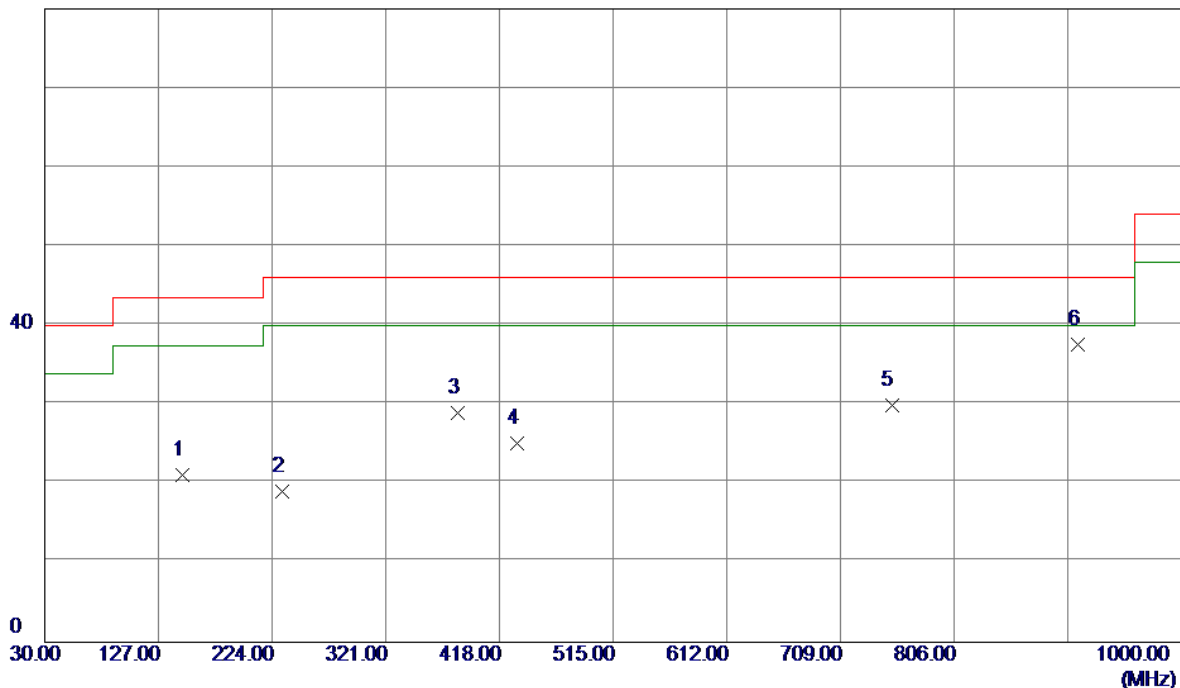


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	34.8500	47.57	-14.62	32.95	40.00	-7.05	Peak	
2	66.8600	42.99	-15.67	27.32	40.00	-12.68	Peak	
3	111.4800	43.55	-16.07	27.48	43.50	-16.02	Peak	
4	234.6700	42.07	-14.24	27.83	46.00	-18.17	Peak	
5	424.7900	44.36	-10.66	33.70	46.00	-12.30	Peak	
6	740.0400	38.96	-2.74	36.22	46.00	-9.78	Peak	

Test Mode: TX B MODE CHANNEL 01

### Horizontal

80 dBuV/m

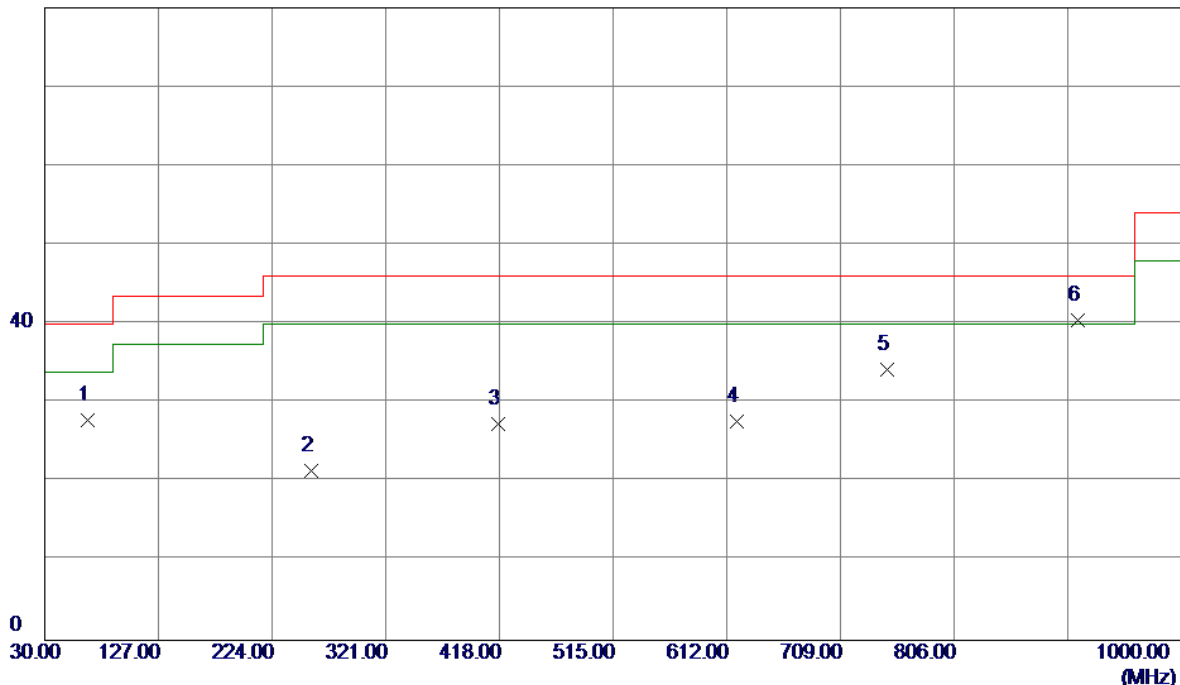


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	147.3700	34.88	-13.71	21.17	43.50	-22.33	Peak	
2	232.7300	33.27	-14.19	19.08	46.00	-26.92	Peak	
3	382.1099	40.50	-11.57	28.93	46.00	-17.07	Peak	
4	433.5200	35.53	-10.41	25.12	46.00	-20.88	Peak	
5	752.6500	32.33	-2.39	29.94	46.00	-16.06	Peak	
6 *	911.7300	36.37	1.26	37.63	46.00	-8.37	Peak	

Test Mode: TX B MODE CHANNEL 06

### Vertical

80 dBuV/m



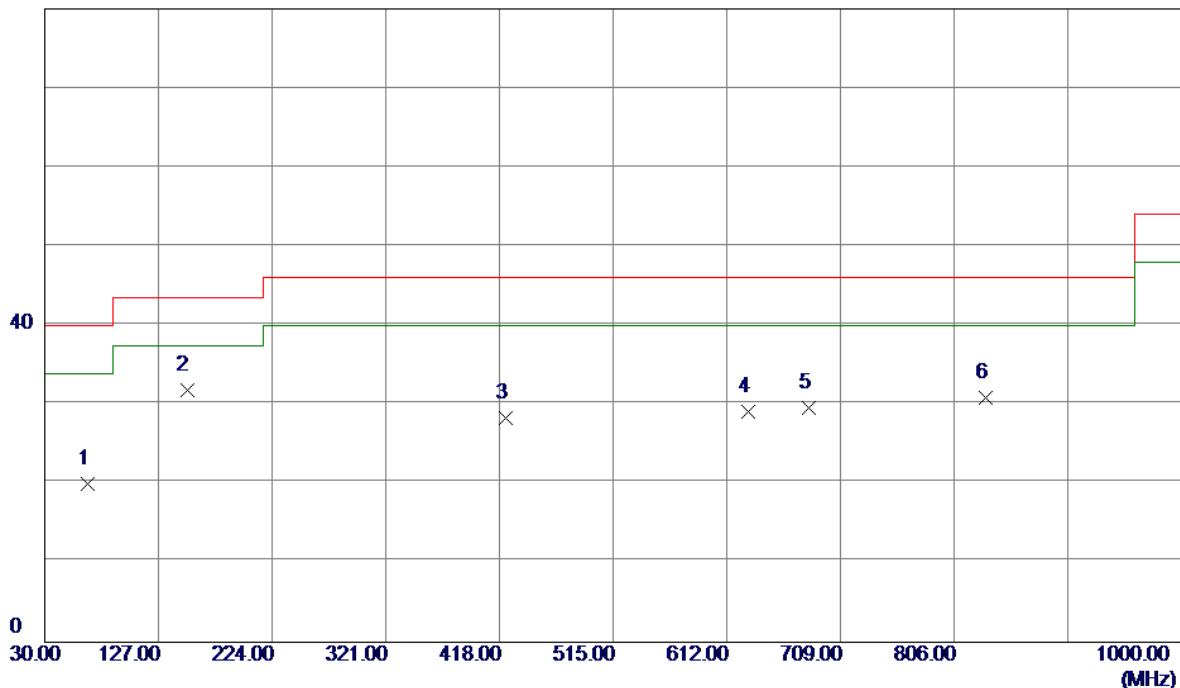
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	66.8600	43.46	-15.67	27.79	40.00	-12.21	Peak	
2	256.9800	36.92	-15.46	21.46	46.00	-24.54	Peak	
3	417.0300	38.28	-10.88	27.40	46.00	-18.60	Peak	
4	620.7300	33.72	-6.03	27.69	46.00	-18.31	Peak	
5	748.7700	36.70	-2.48	34.22	46.00	-11.78	Peak	
6 *	911.7300	39.29	1.26	40.55	46.00	-5.45	Peak	



Test Mode: TX B MODE CHANNEL 06

### Horizontal

80 dBuV/m

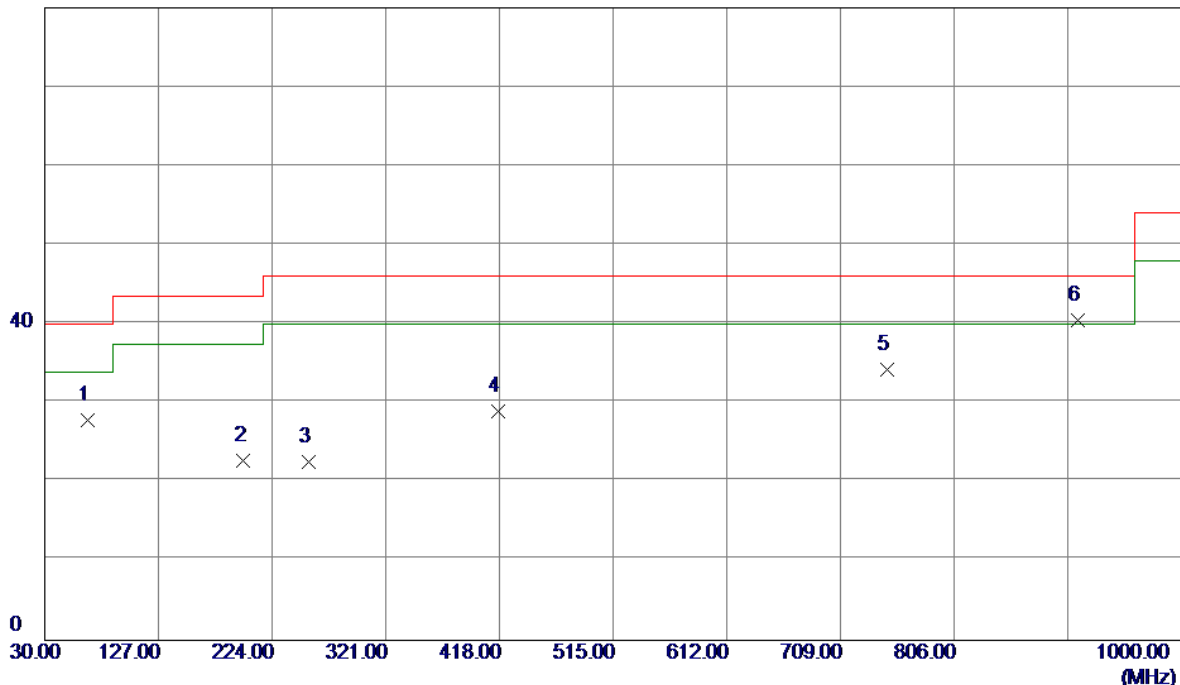


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	66.8600	35.74	-15.67	20.07	40.00	-19.93	Peak	
2 *	151.2500	45.22	-13.45	31.77	43.50	-11.73	Peak	
3	423.8200	39.01	-10.68	28.33	46.00	-17.67	Peak	
4	630.4300	35.01	-5.84	29.17	46.00	-16.83	Peak	
5	681.8400	34.05	-4.50	29.55	46.00	-16.45	Peak	
6	833.1599	31.40	-0.46	30.94	46.00	-15.06	Peak	

Test Mode: TX B MODE CHANNEL 11

### Vertical

80 dBuV/m

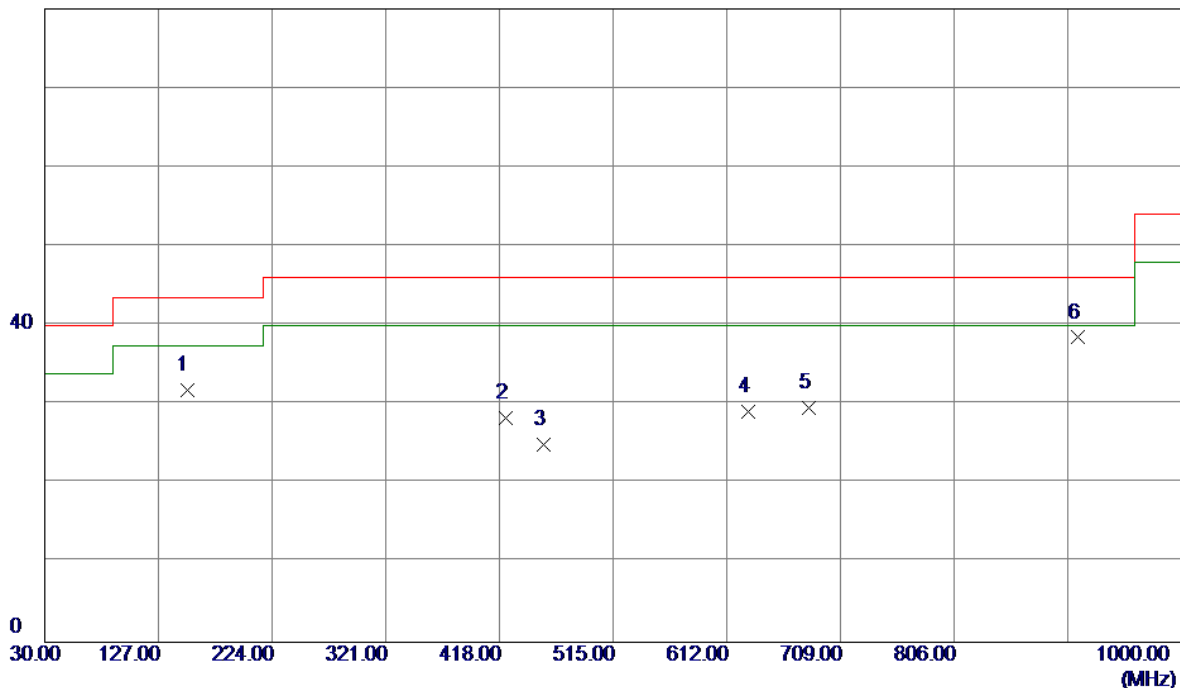


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	66.8600	43.46	-15.67	27.79	40.00	-12.21	Peak	
2	199.7500	36.50	-13.73	22.77	43.50	-20.73	Peak	
3	255.0400	37.91	-15.30	22.61	46.00	-23.39	Peak	
4	417.0300	39.91	-10.88	29.03	46.00	-16.97	Peak	
5	748.7700	36.70	-2.48	34.22	46.00	-11.78	Peak	
6 *	911.7300	39.29	1.26	40.55	46.00	-5.45	Peak	

Test Mode: TX B MODE CHANNEL 11

# Horizontal

80 dBuV/m



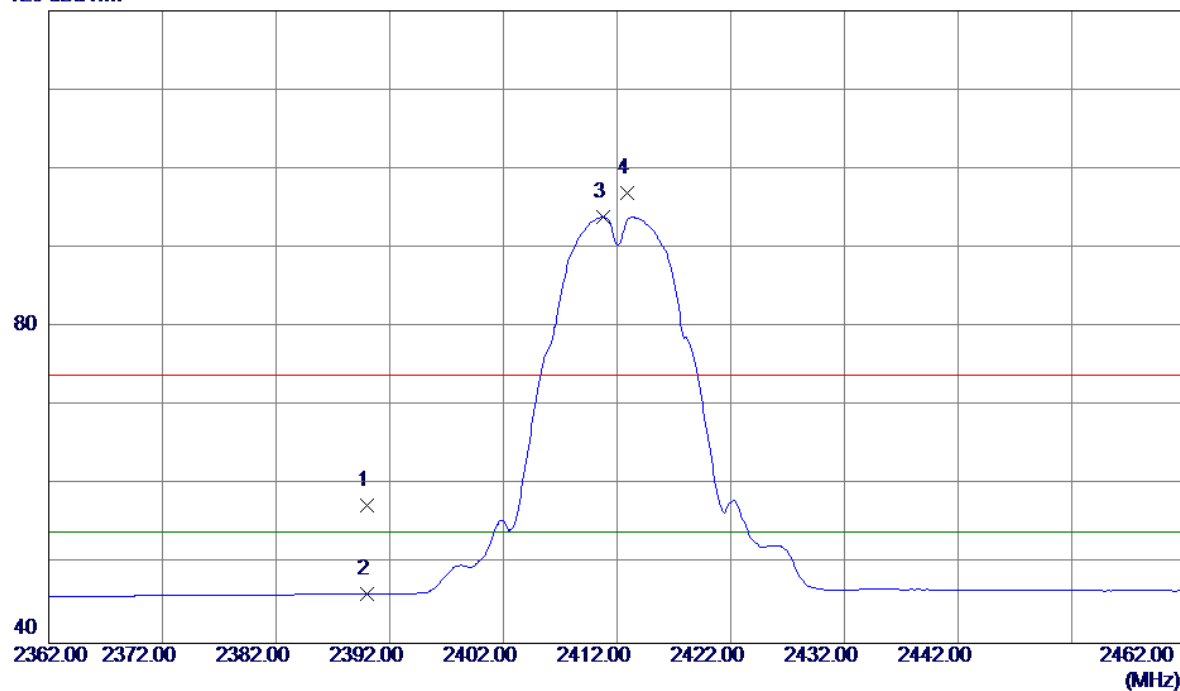
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	151.2500	45.22	-13.45	31.77	43.50	-11.73	Peak	
2	423.8200	39.01	-10.68	28.33	46.00	-17.67	Peak	
3	455.8300	34.81	-9.80	25.01	46.00	-20.99	Peak	
4	630.4300	35.01	-5.84	29.17	46.00	-16.83	Peak	
5	681.8400	34.05	-4.50	29.55	46.00	-16.45	Peak	
6 *	911.7300	37.22	1.26	38.48	46.00	-7.52	Peak	

## APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

### Vertical

120 dBuV/m

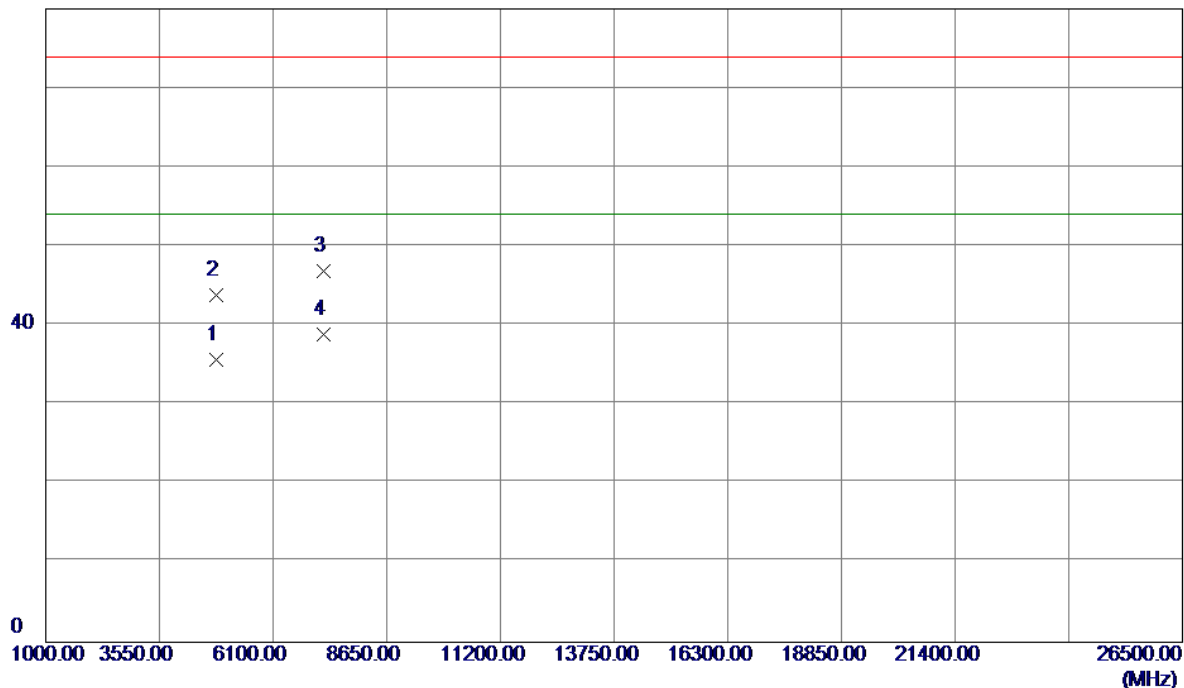


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	24.39	33.06	57.45	74.00	-16.55	Peak	
2	2390.0000	13.18	33.06	46.24	54.00	-7.76	AVG	
3 *	2410.8000	60.76	33.13	93.89	54.00	39.89	AVG	No Limit
4	2412.9000	63.76	33.14	96.90	74.00	22.90	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

### Vertical

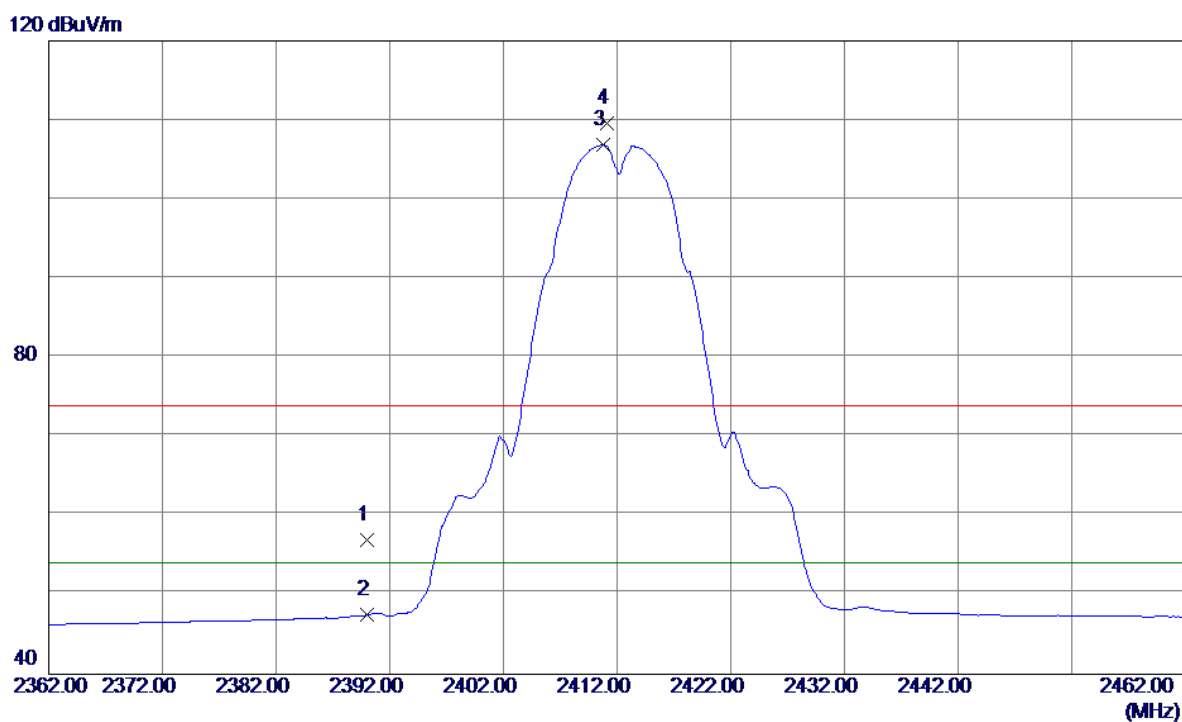
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4824.0360	29.01	6.66	35.67	54.00	-18.33	AVG	
2	4824.0440	37.23	6.66	43.89	74.00	-30.11	Peak	
3	7235.7400	33.68	13.16	46.84	74.00	-27.16	Peak	
4 *	7236.9800	25.74	13.16	38.90	54.00	-15.10	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

### Horizontal

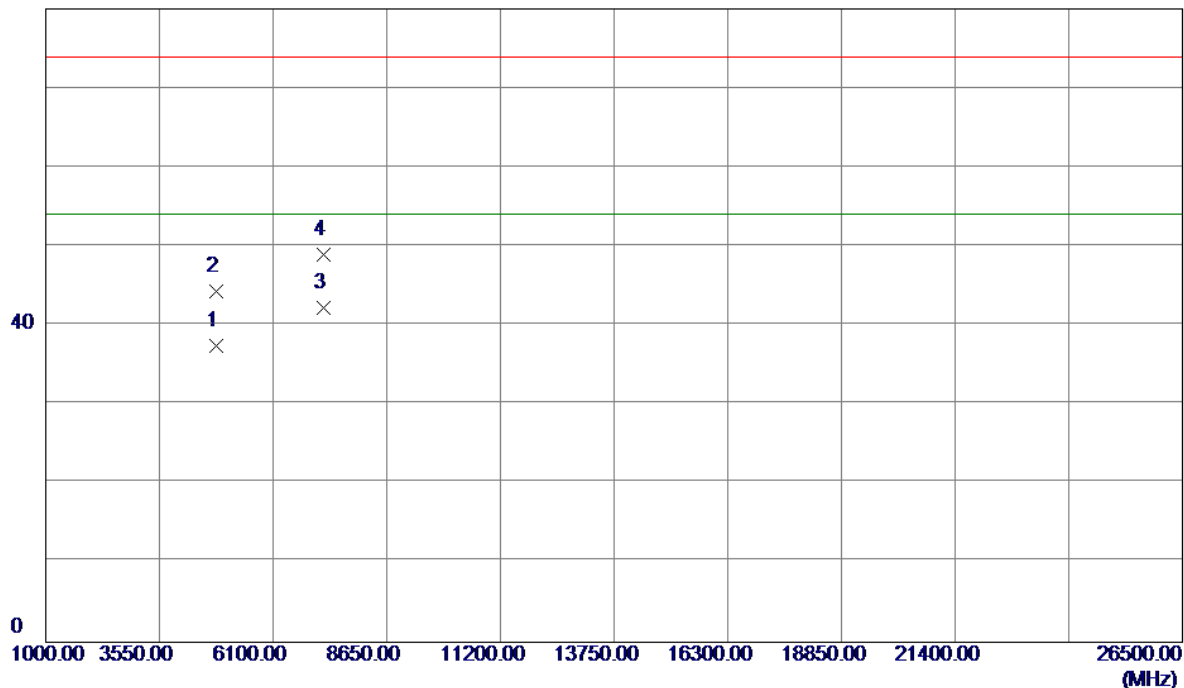


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	23.93	33.06	56.99	74.00	-17.01	Peak	
2	2390.0000	14.43	33.06	47.49	54.00	-6.51	AVG	
3 *	2410.8000	73.73	33.13	106.86	54.00	52.86	AVG	No Limit
4	2411.1000	76.52	33.14	109.66	74.00	35.66	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

### Horizontal

80 dBuV/m



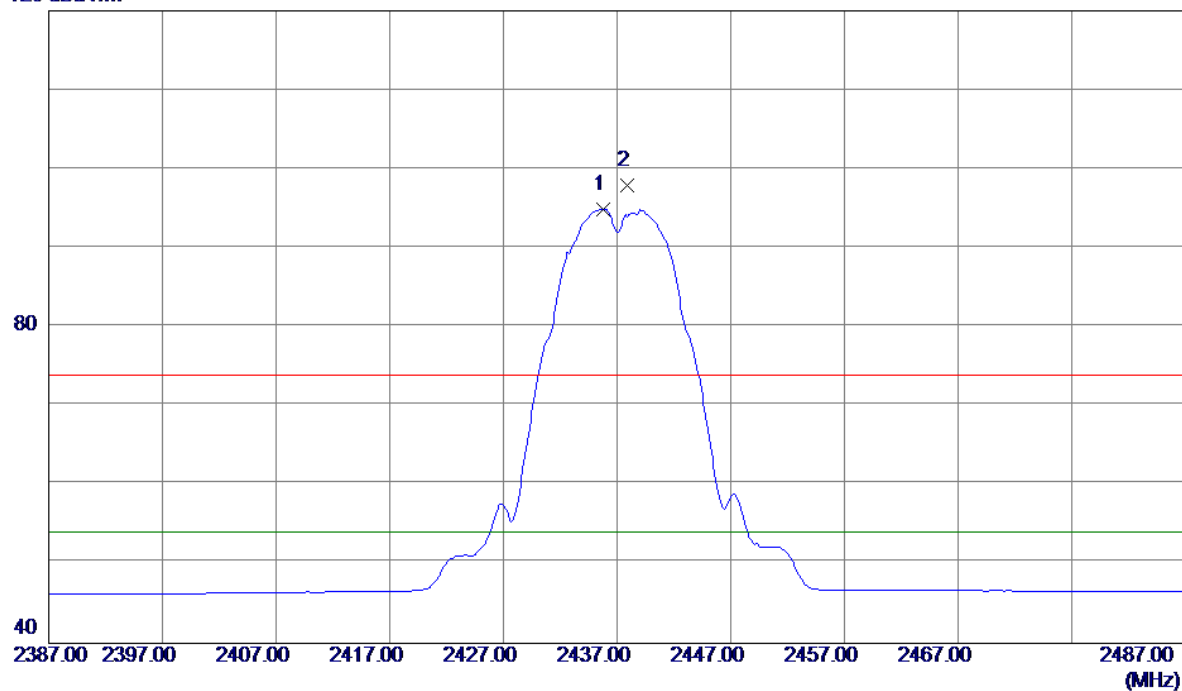
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4824.0000	30.74	6.66	37.40	54.00	-16.60	AVG	
2	4824.1640	37.60	6.66	44.26	74.00	-29.74	Peak	
3 *	7235.2000	29.09	13.16	42.25	54.00	-11.75	AVG	
4	7237.7400	35.86	13.16	49.02	74.00	-24.98	Peak	



Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

### Vertical

120 dBuV/m

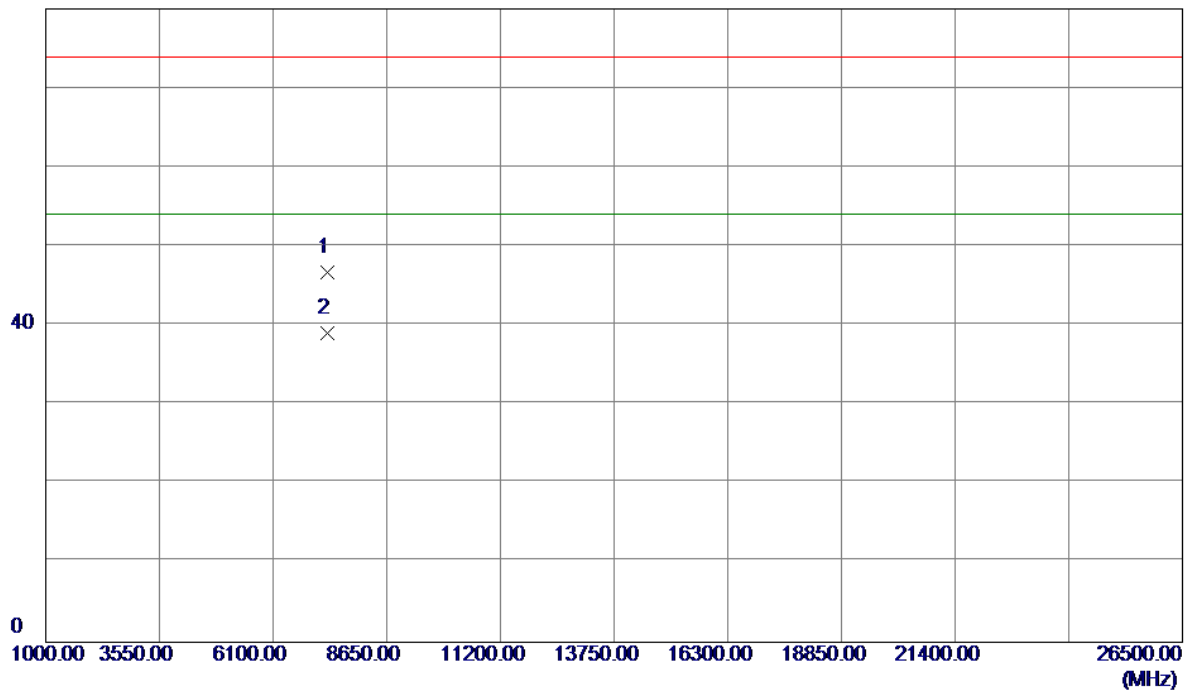


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2435.8000	61.72	33.23	94.95	54.00	40.95	AVG	No Limit
2	2437.9000	64.71	33.24	97.95	74.00	23.95	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

### Vertical

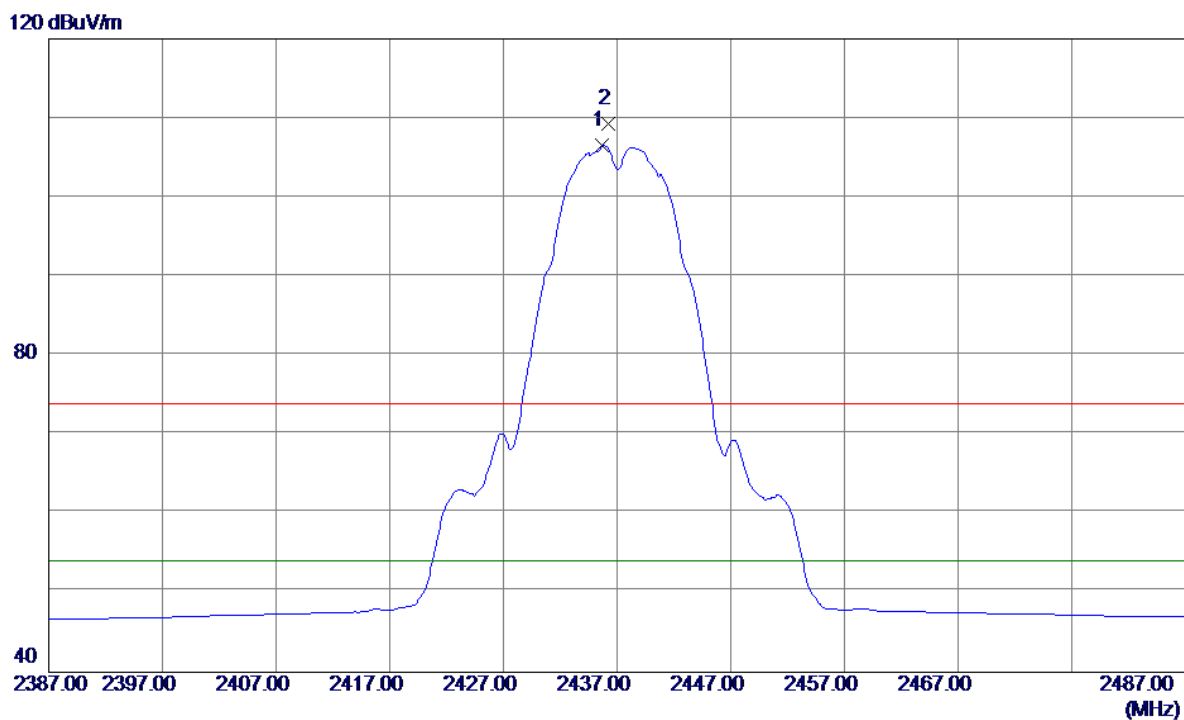
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7308.8200	33.44	13.21	46.65	74.00	-27.35	Peak	
2 *	7311.7600	25.79	13.21	39.00	54.00	-15.00	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

### Horizontal

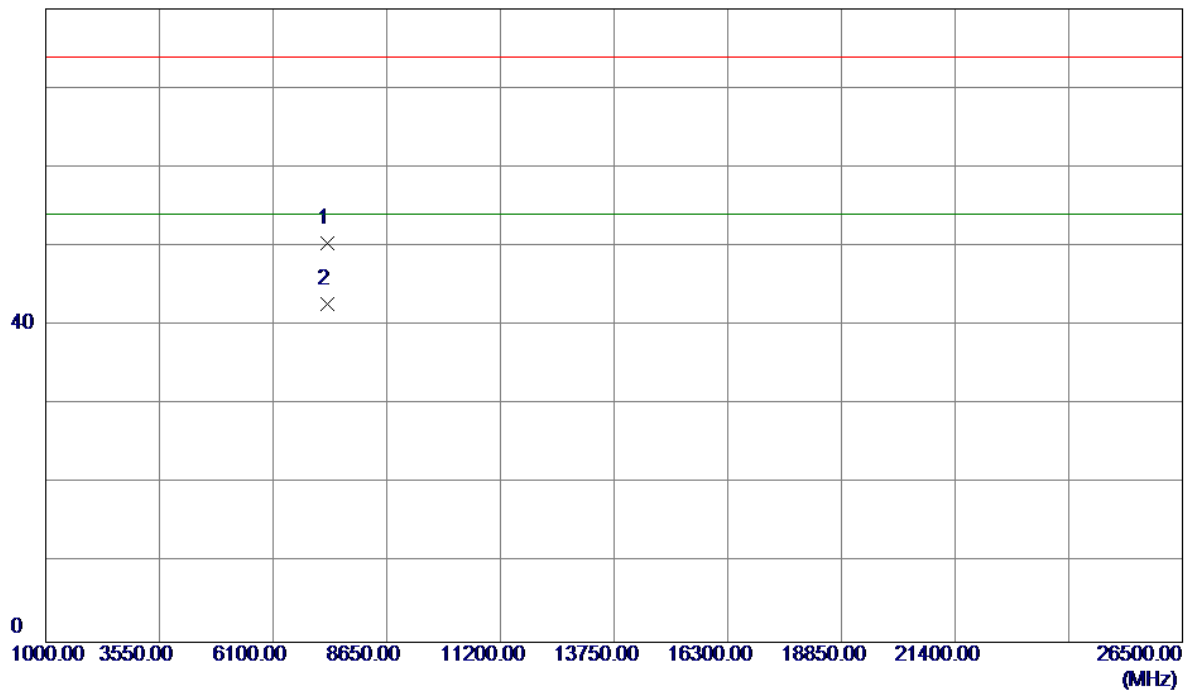


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2435.7000	73.33	33.23	106.56	54.00	52.56	AVG	No Limit
2	2436.2000	76.08	33.23	109.31	74.00	35.31	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

### Horizontal

80 dBuV/m

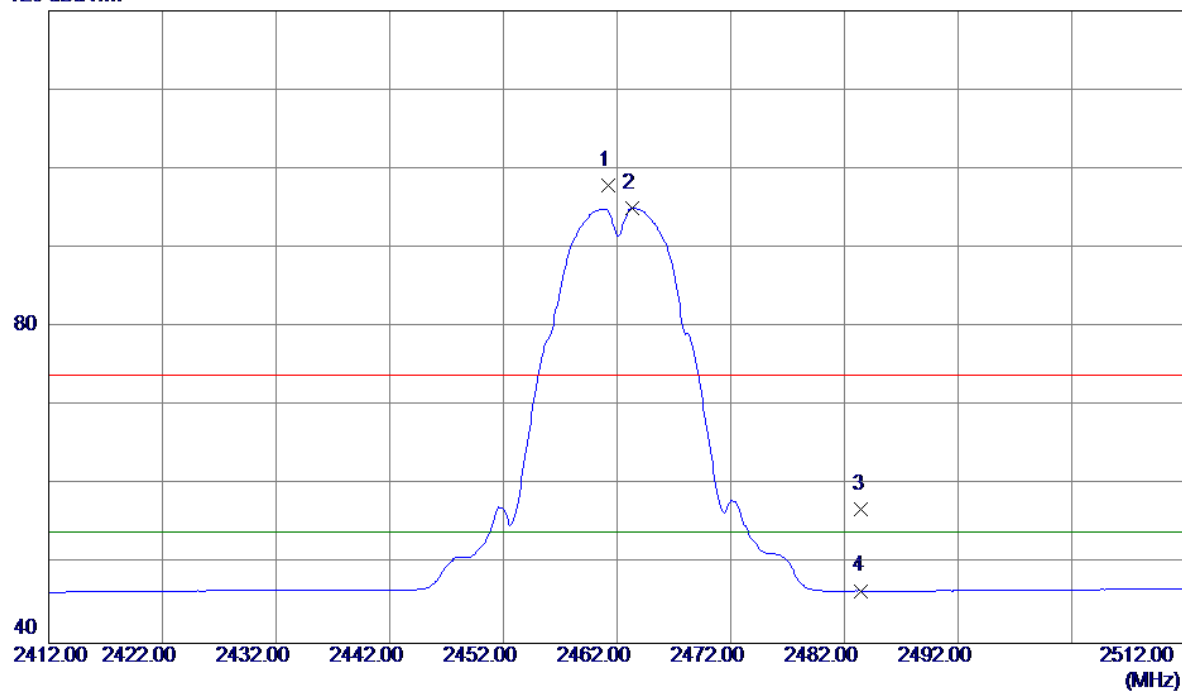


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7308.9200	37.21	13.21	50.42	74.00	-23.58	Peak	
2 *	7310.1000	29.53	13.21	42.74	54.00	-11.26	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

### Vertical

120 dBuV/m

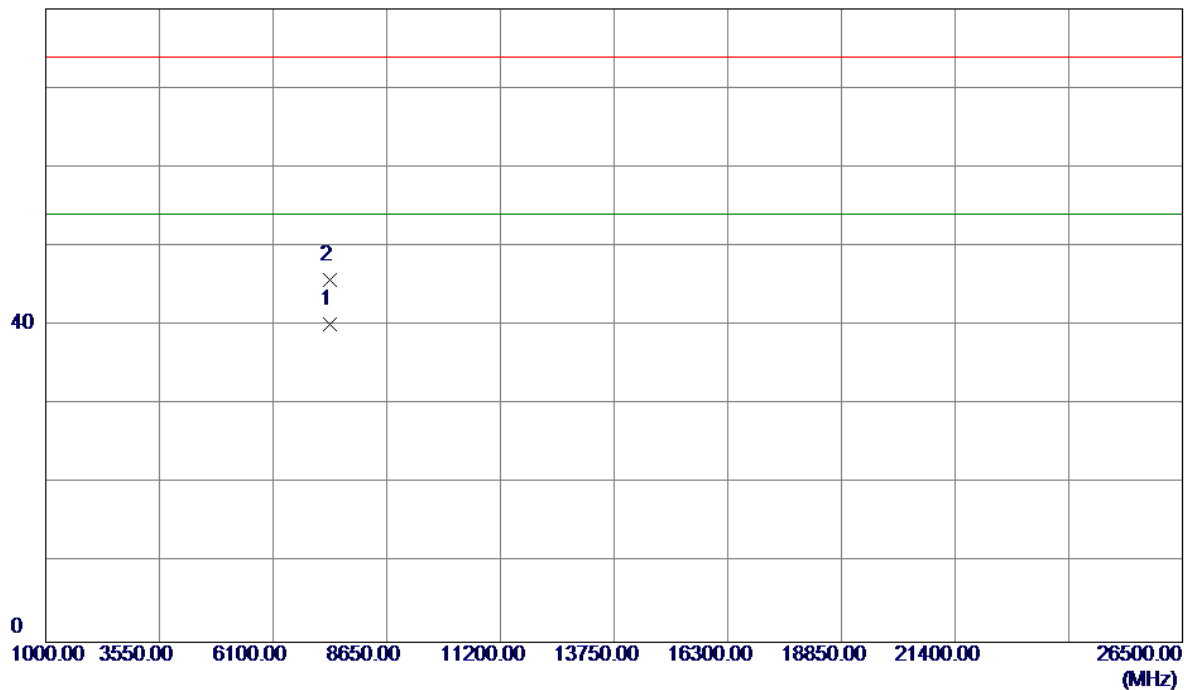


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2461.2000	64.59	33.32	97.91	74.00	23.91	Peak	No Limit
2 *	2463.3000	61.71	33.33	95.04	54.00	41.04	AVG	No Limit
3	2483.5000	23.49	33.41	56.90	74.00	-17.10	Peak	
4	2483.5000	13.23	33.41	46.64	54.00	-7.36	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

### Vertical

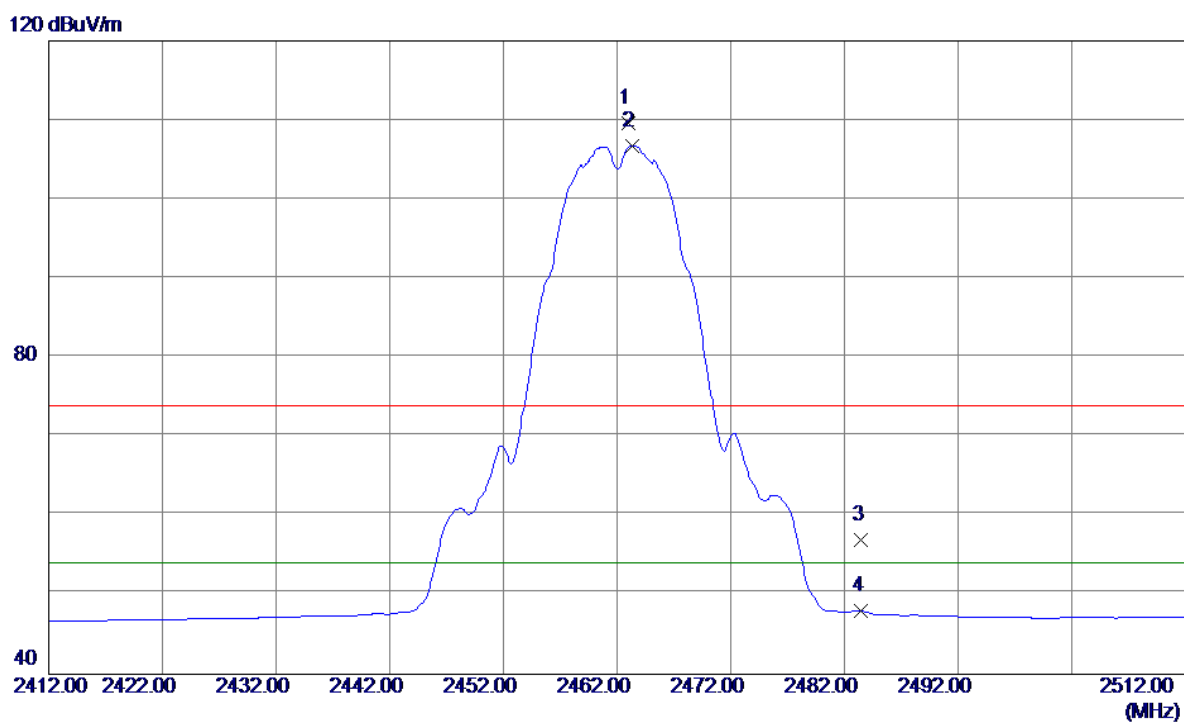
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	7385.2000	26.89	13.27	40.16	54.00	-13.84	AVG	
2	7387.6200	32.50	13.27	45.77	74.00	-28.23	Peak	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

### Horizontal

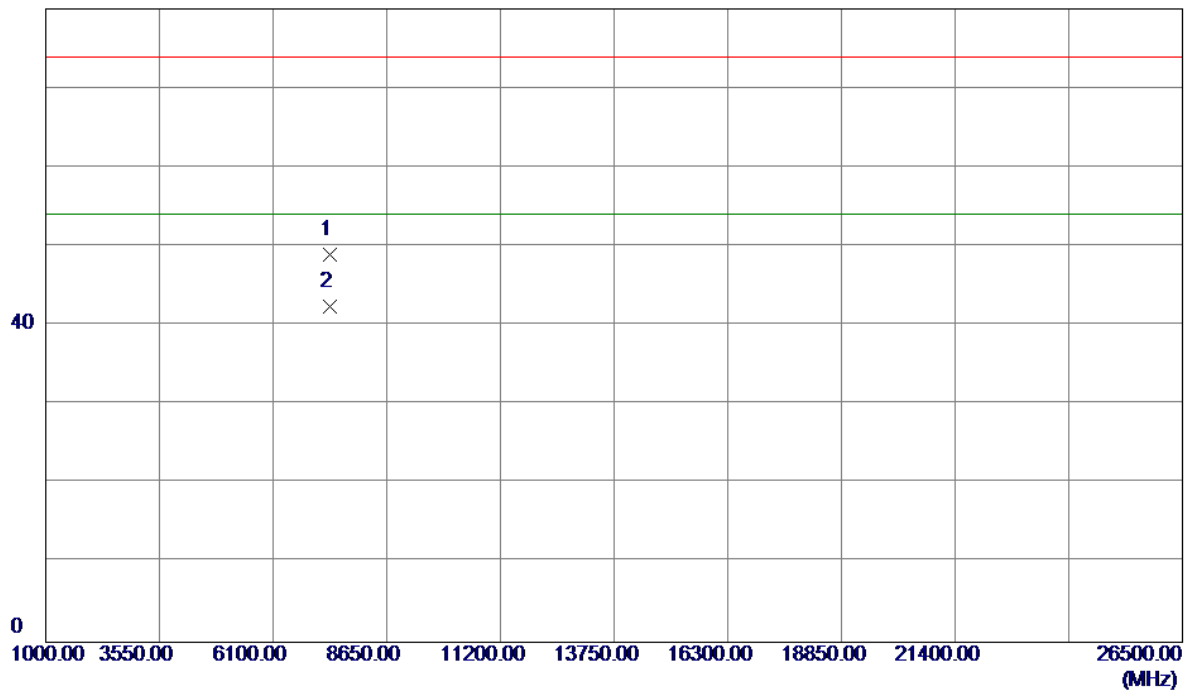


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2463.0000	76.23	33.33	109.56	74.00	35.56	Peak	No Limit
2 *	2463.3000	73.43	33.33	106.76	54.00	52.76	AVG	No Limit
3	2483.5000	23.58	33.41	56.99	74.00	-17.01	Peak	
4	2483.5000	14.57	33.41	47.98	54.00	-6.02	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

### Horizontal

80 dBuV/m



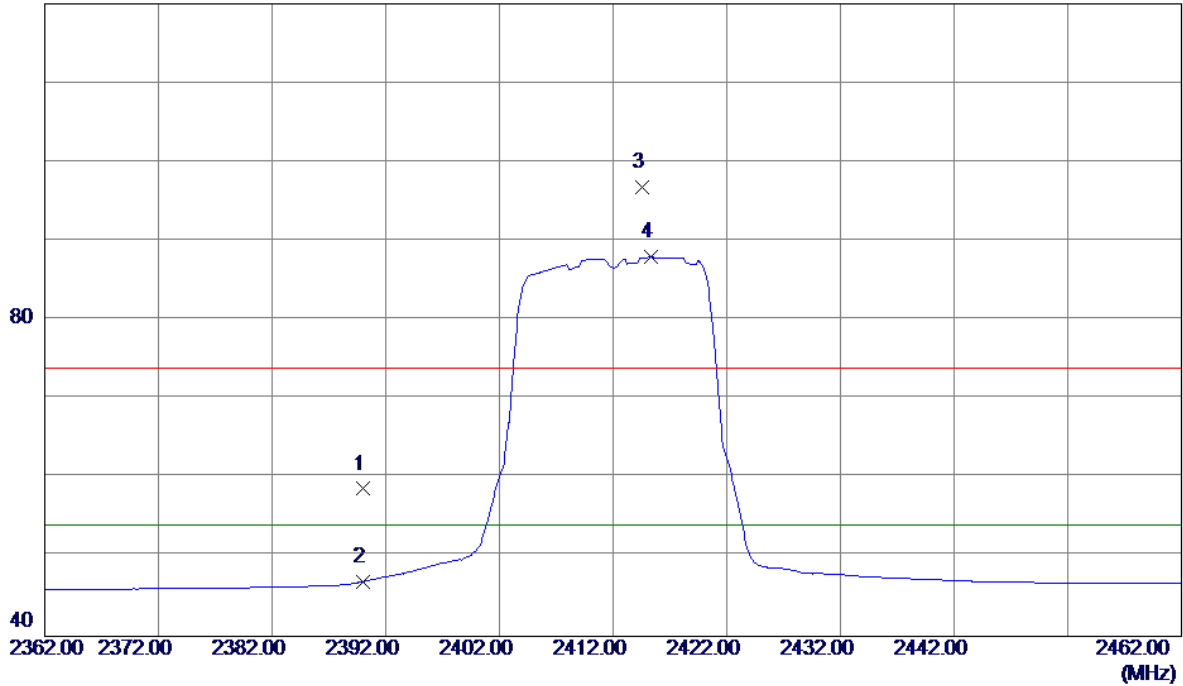
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7384.7000	35.66	13.27	48.93	74.00	-25.07	Peak	
2 *	7385.1000	29.14	13.27	42.41	54.00	-11.59	AVG	



Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

### Vertical

120 dBuV/m

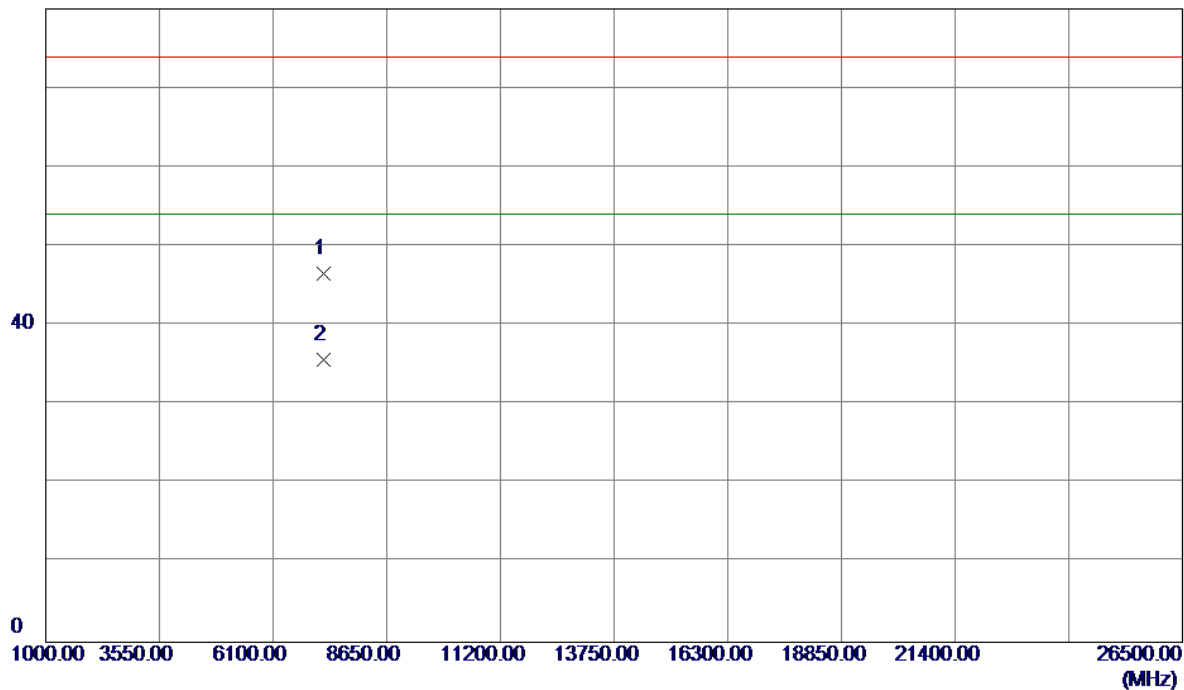


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	25.58	33.06	58.64	74.00	-15.36	Peak	
2	2390.0000	13.86	33.06	46.92	54.00	-7.08	AVG	
3	2414.6000	63.73	33.15	96.88	74.00	22.88	Peak	No Limit
4 *	2415.3000	54.78	33.15	87.93	54.00	33.93	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

### Vertical

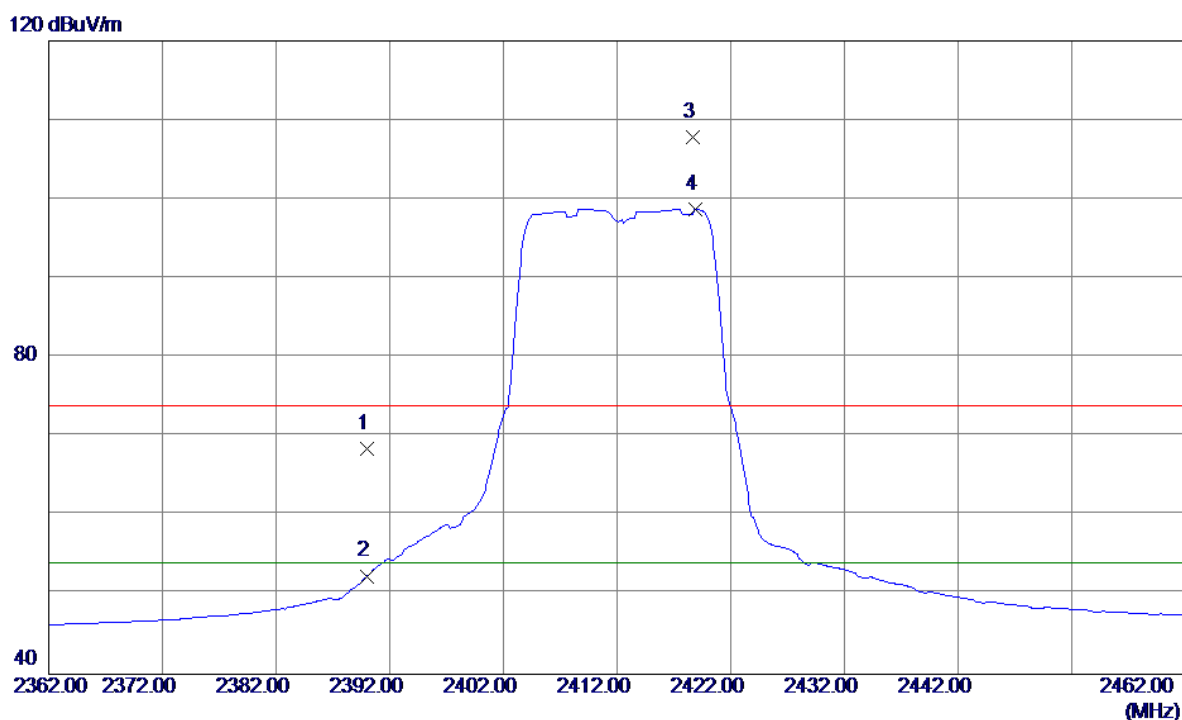
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7232.4200	33.38	13.15	46.53	74.00	-27.47	Peak	
2 *	7235.1000	22.54	13.16	35.70	54.00	-18.30	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

# Horizontal

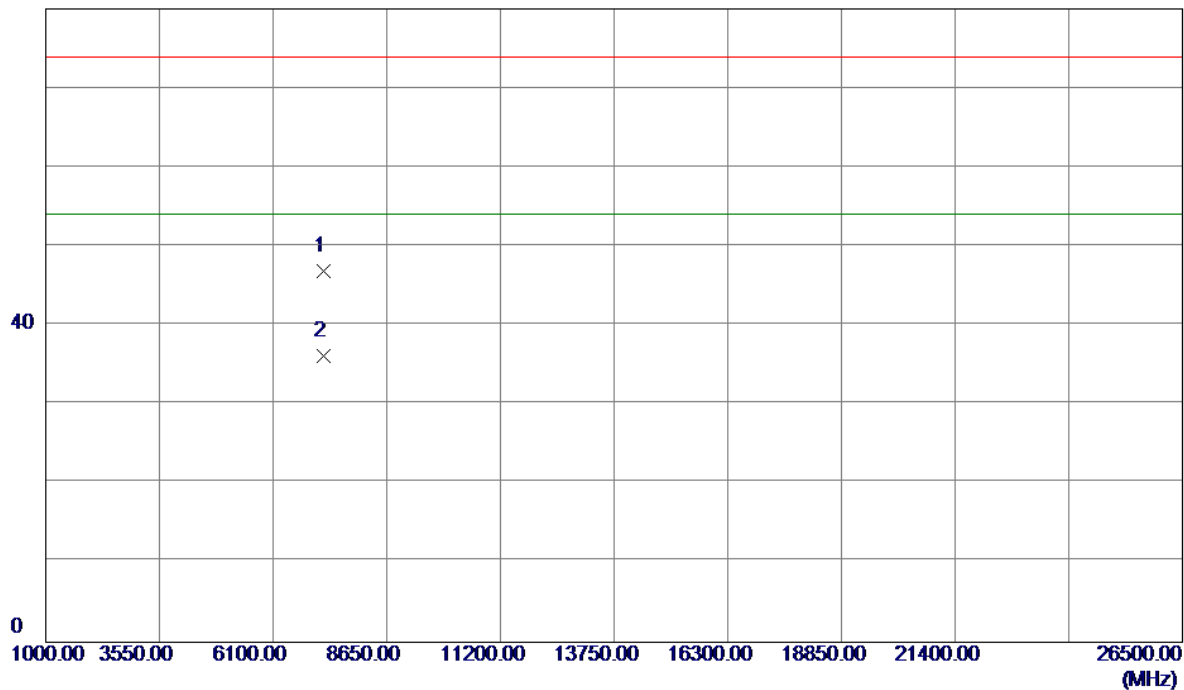


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	35.44	33.06	68.50	74.00	-5.50	Peak	
2	2390.0000	19.34	33.06	52.40	54.00	-1.60	AVG	
3	2418.7000	74.61	33.16	107.77	74.00	33.77	Peak	No Limit
4 *	2418.9000	65.56	33.16	98.72	54.00	44.72	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

### Horizontal

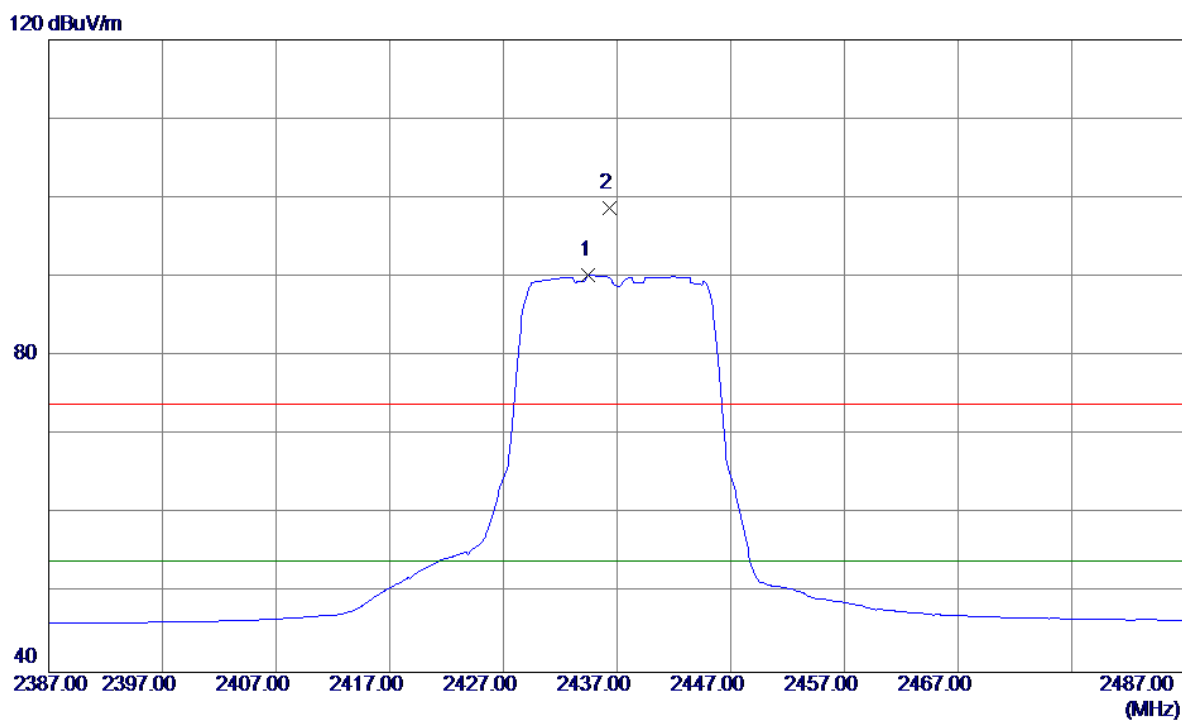
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7235.2000	33.70	13.16	46.86	74.00	-27.14	Peak	
2 *	7239.1200	23.04	13.16	36.20	54.00	-17.80	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

### Vertical

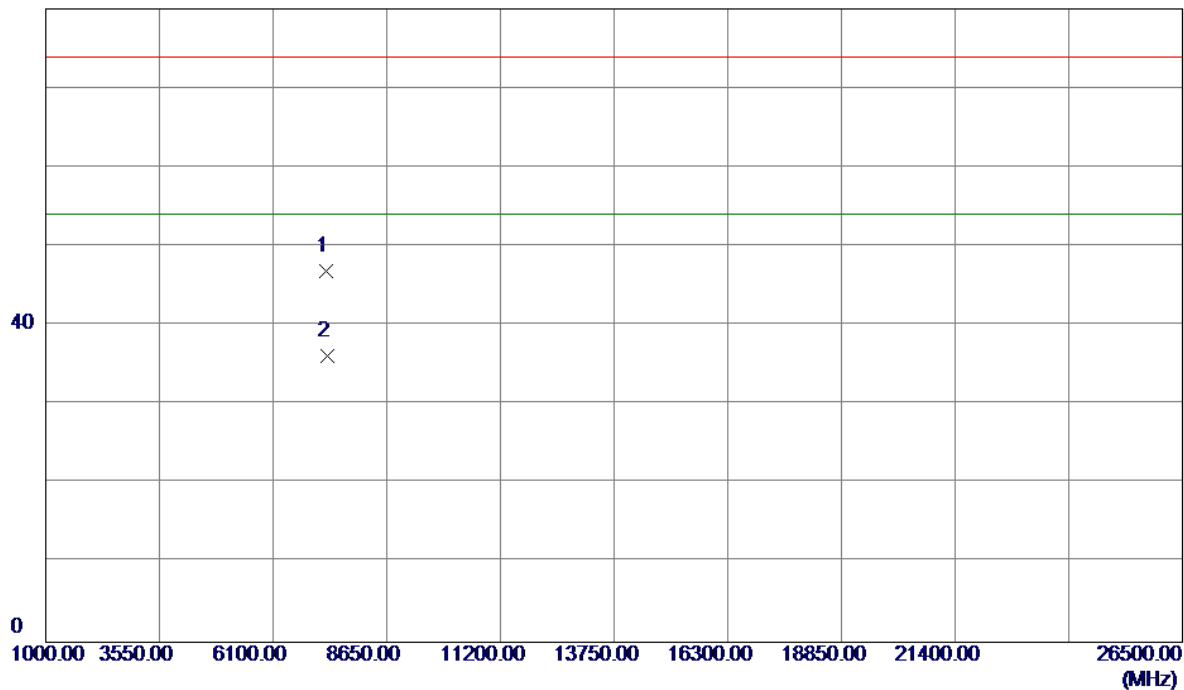


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2434.5000	56.99	33.22	90.21	54.00	36.21	AVG	No Limit
2	2436.3000	65.52	33.23	98.75	74.00	24.75	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

### Vertical

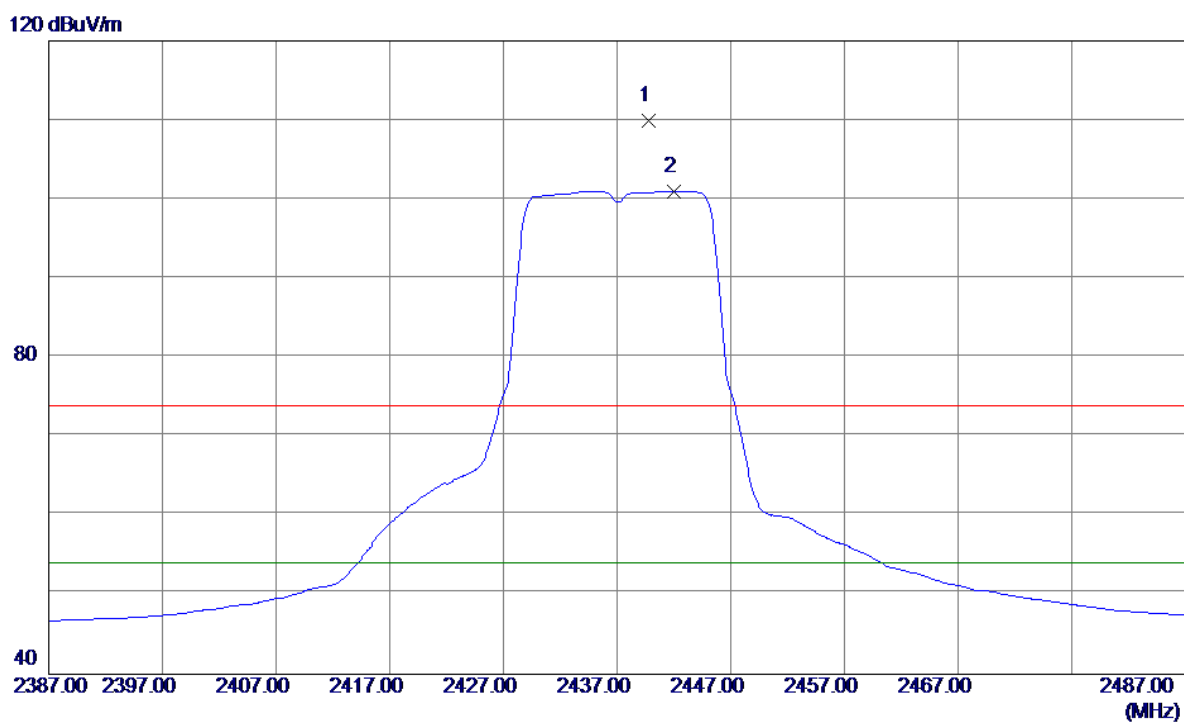
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7301.6200	33.65	13.21	46.86	74.00	-27.14	Peak	
2 *	7309.0200	22.94	13.21	36.15	54.00	-17.85	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

### Horizontal

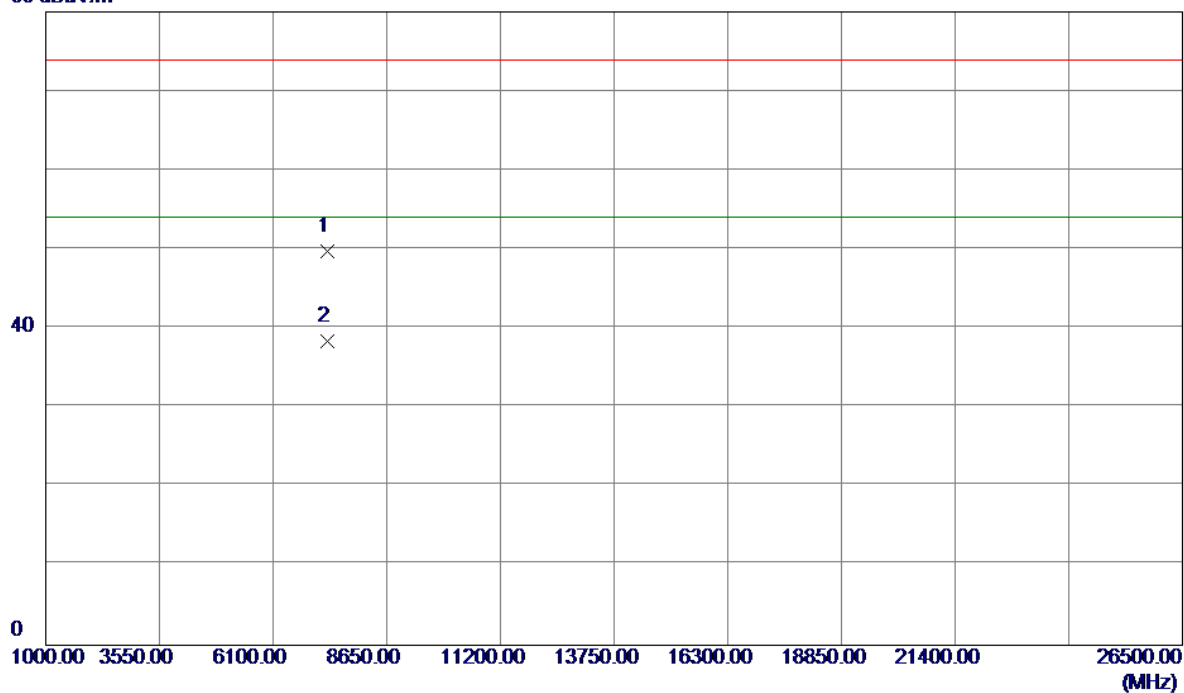


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2439.8000	76.73	33.24	109.97	74.00	35.97	Peak	No Limit
2 *	2442.0000	67.72	33.25	100.97	54.00	46.97	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

### Horizontal

80 dBuV/m



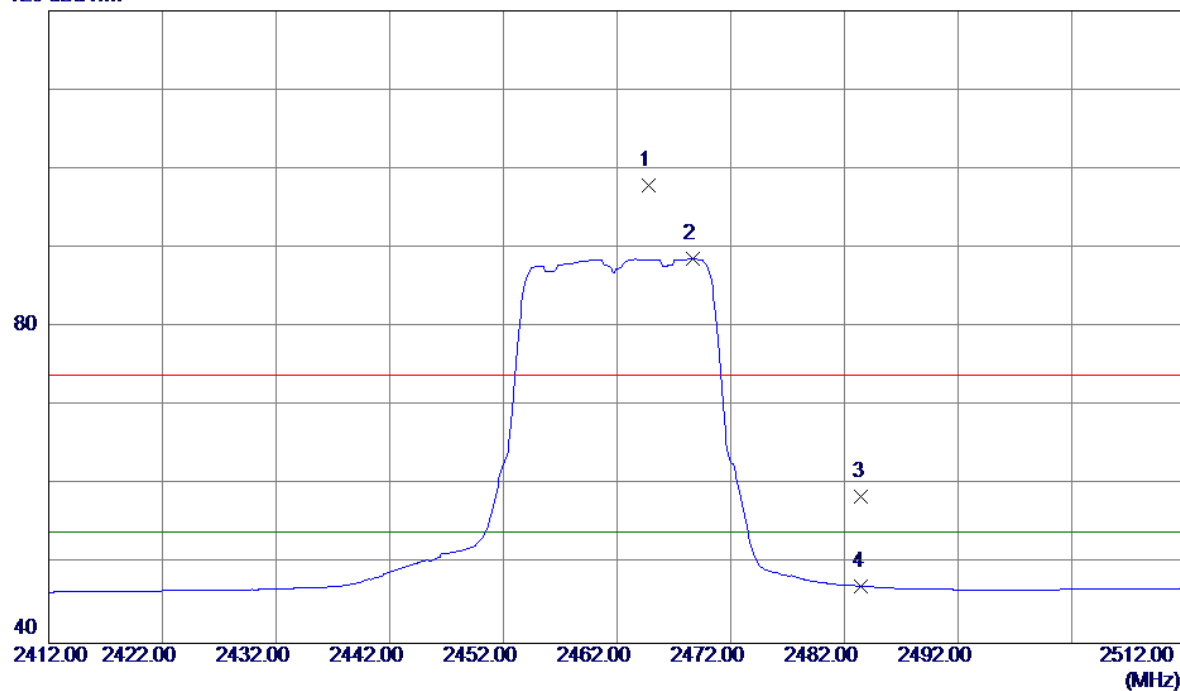
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7308.4000	36.59	13.21	49.80	74.00	-24.20	Peak	
2 *	7311.6200	25.15	13.21	38.36	54.00	-15.64	AVG	



Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

# Vertical

120 dBuV/m

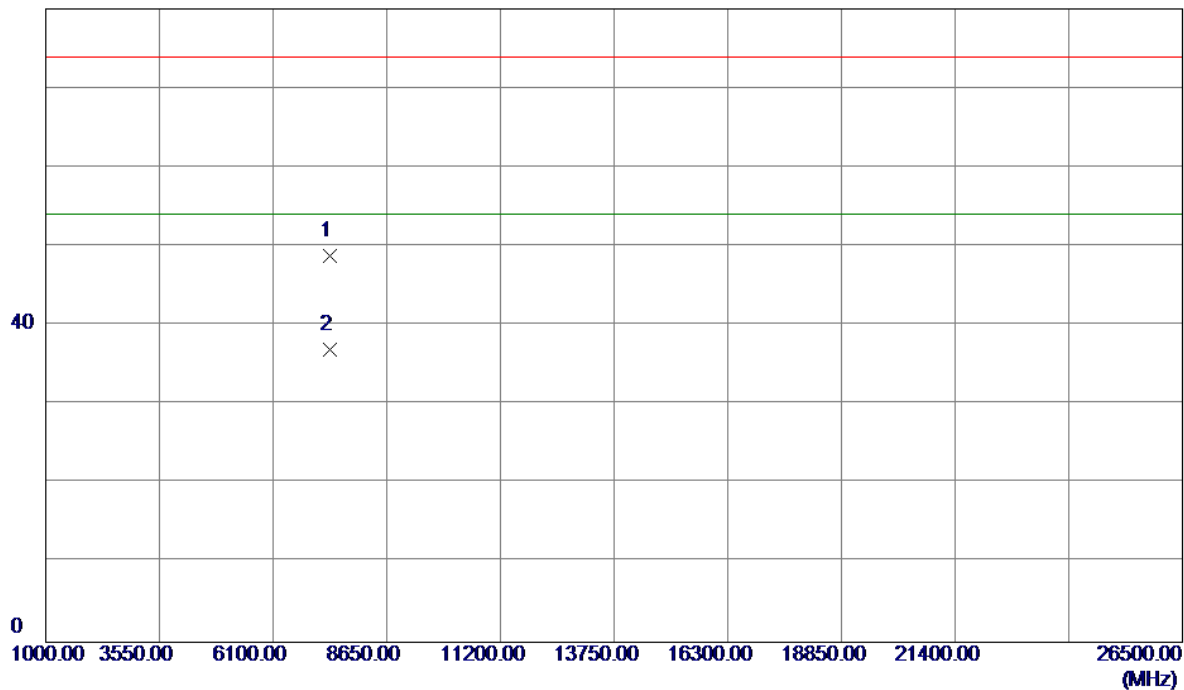


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2464.8000	64.58	33.34	97.92	74.00	23.92	Peak	No Limit
2 *	2468.7000	55.24	33.35	88.59	54.00	34.59	AVG	No Limit
3	2483.5000	25.08	33.41	58.49	74.00	-15.51	Peak	
4	2483.5000	13.82	33.41	47.23	54.00	-6.77	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

### Vertical

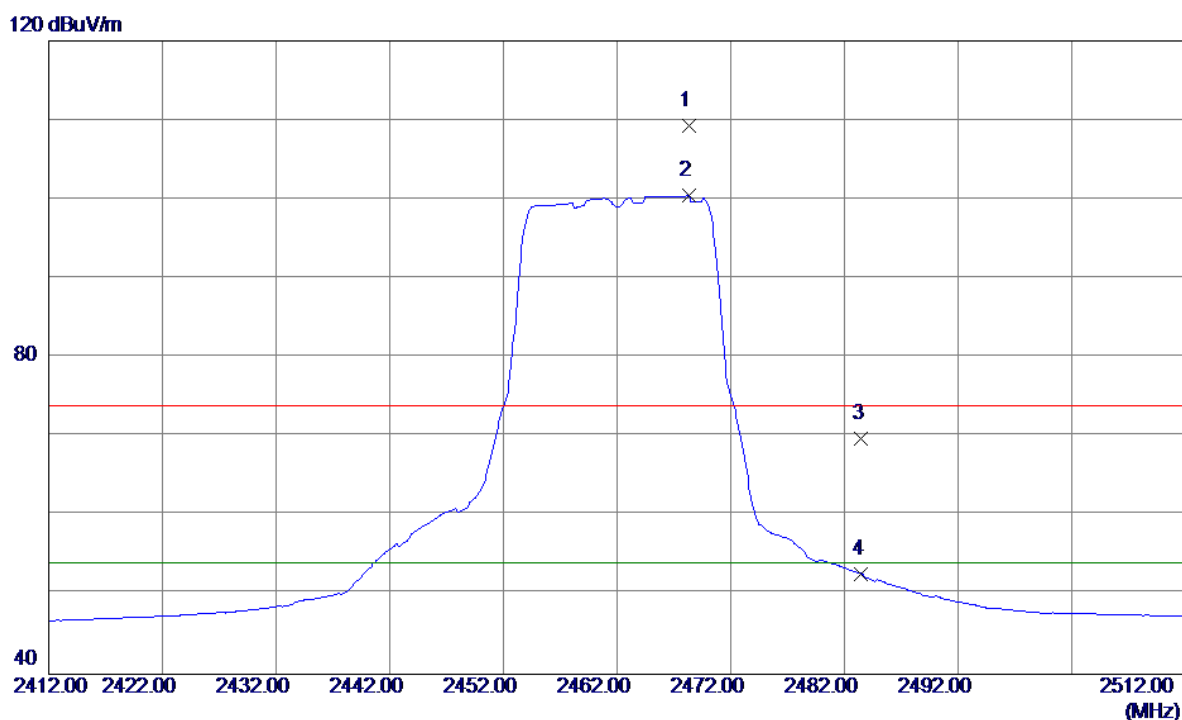
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7382.0400	35.57	13.27	48.84	74.00	-25.16	Peak	
2 *	7386.8200	23.74	13.27	37.01	54.00	-16.99	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

# Horizontal

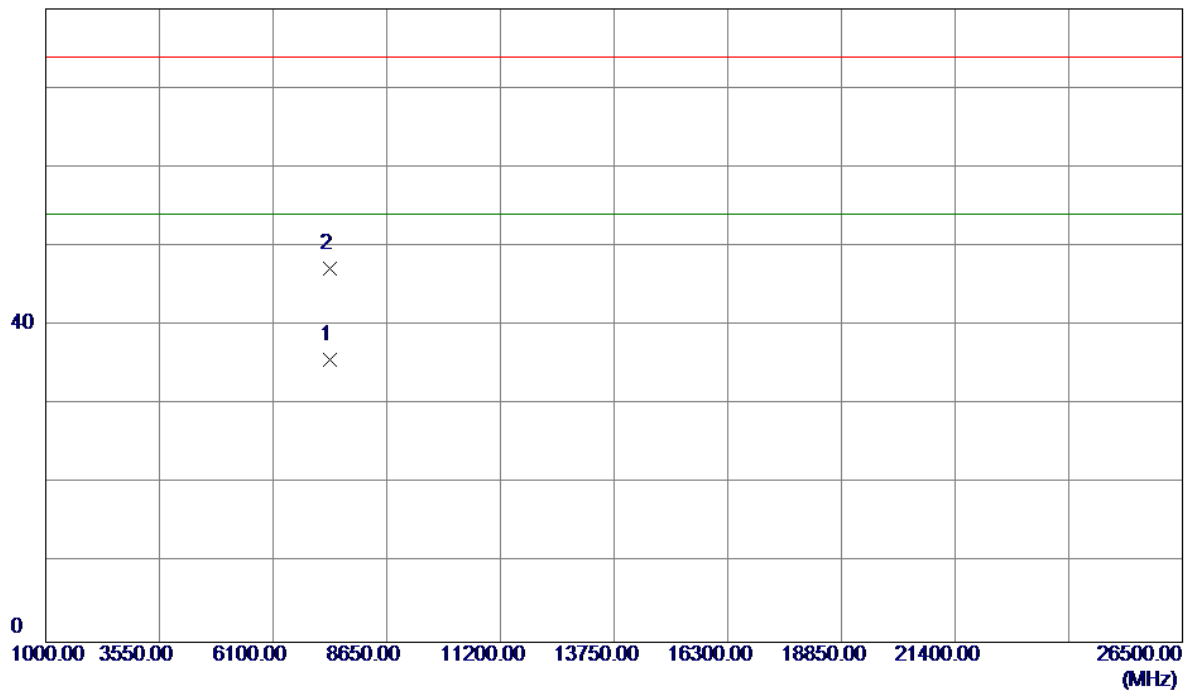


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2468.3000	75.96	33.35	109.31	74.00	35.31	Peak	No Limit
2 *	2468.3000	67.08	33.35	100.43	54.00	46.43	AVG	No Limit
3	2483.5000	36.37	33.41	69.78	74.00	-4.22	Peak	
4	2483.5000	19.29	33.41	52.70	54.00	-1.30	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

### Horizontal

80 dBuV/m

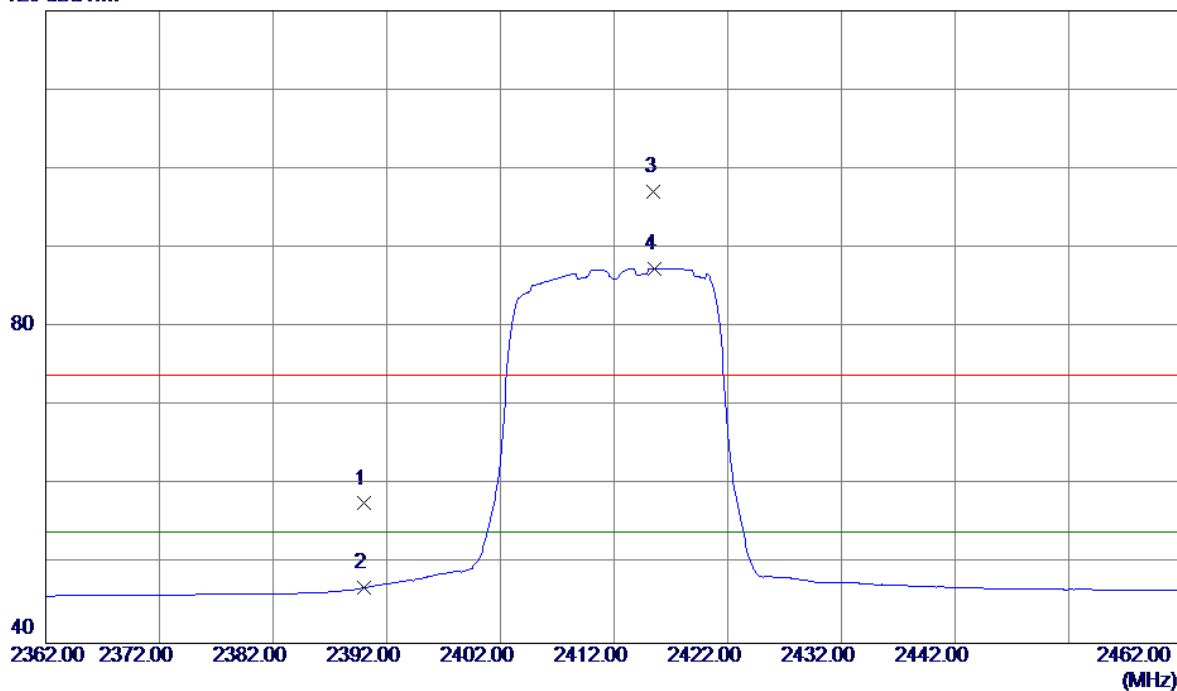


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	7385.4000	22.34	13.27	35.61	54.00	-18.39	AVG	
2	7387.9800	33.89	13.27	47.16	74.00	-26.84	Peak	

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

### Vertical

120 dBuV/m

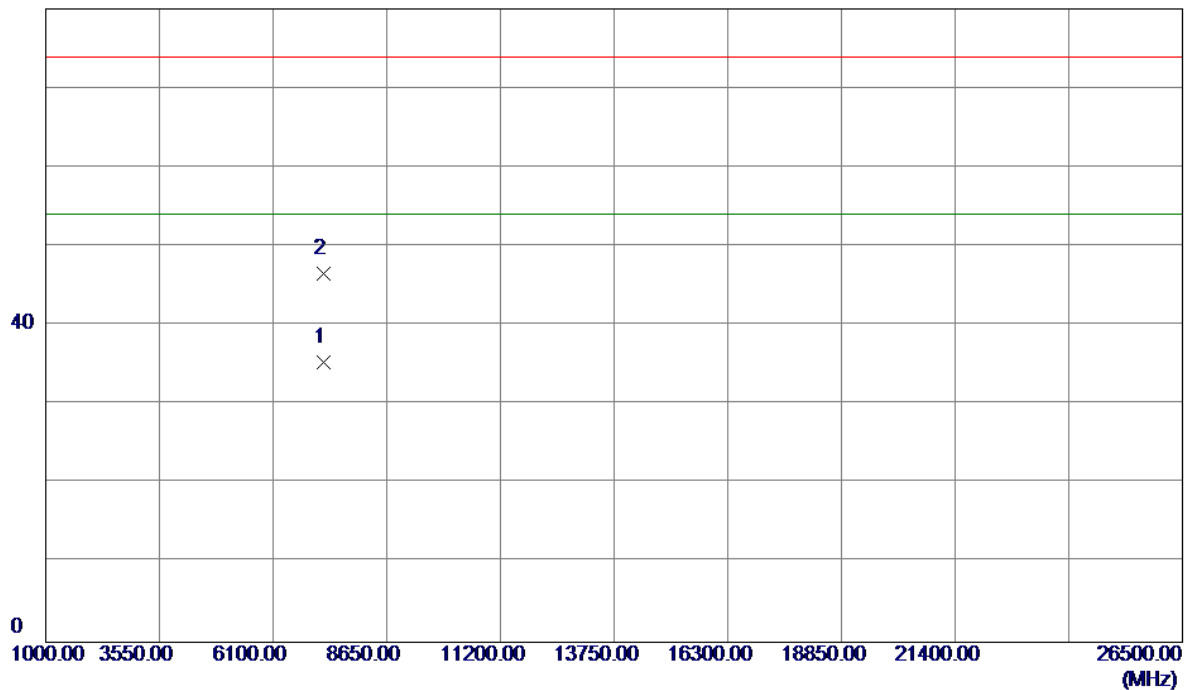


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	24.62	33.06	57.68	74.00	-16.32	Peak	
2	2390.0000	13.96	33.06	47.02	54.00	-6.98	AVG	
3	2415.5000	63.99	33.15	97.14	74.00	23.14	Peak	No Limit
4 *	2415.6000	54.26	33.15	87.41	54.00	33.41	AVG	No Limit

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

### Vertical

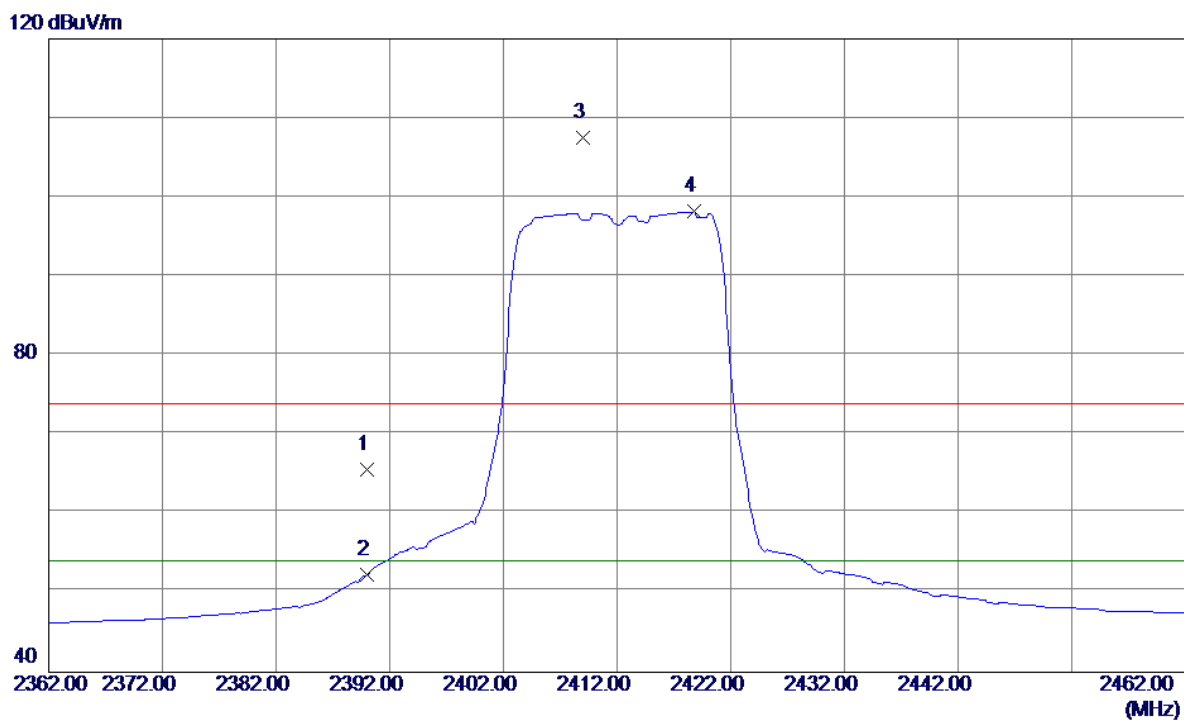
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	7235.8200	22.24	13.16	35.40	54.00	-18.60	AVG	
2	7241.9800	33.42	13.16	46.58	74.00	-27.42	Peak	

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

### Horizontal

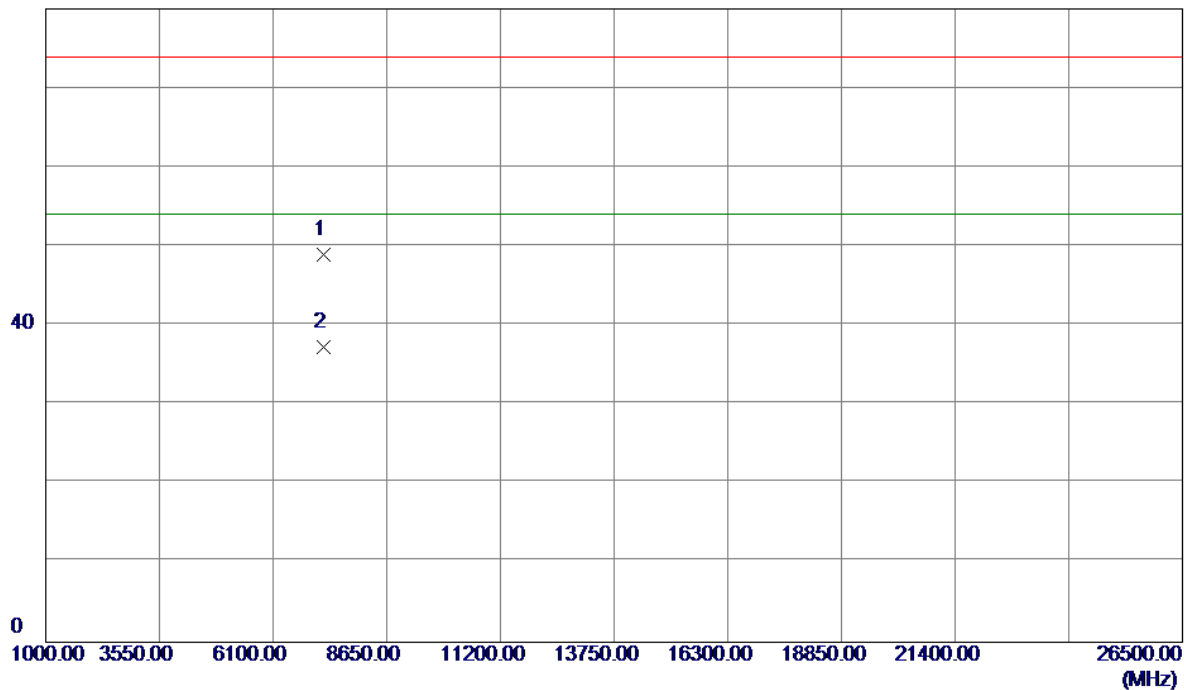


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	32.53	33.06	65.59	74.00	-8.41	Peak	
2	2390.0000	19.23	33.06	52.29	54.00	-1.71	AVG	
3	2409.0000	74.32	33.13	107.45	74.00	33.45	Peak	No Limit
4 *	2418.8000	65.01	33.16	98.17	54.00	44.17	AVG	No Limit

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

### Horizontal

80 dBuV/m

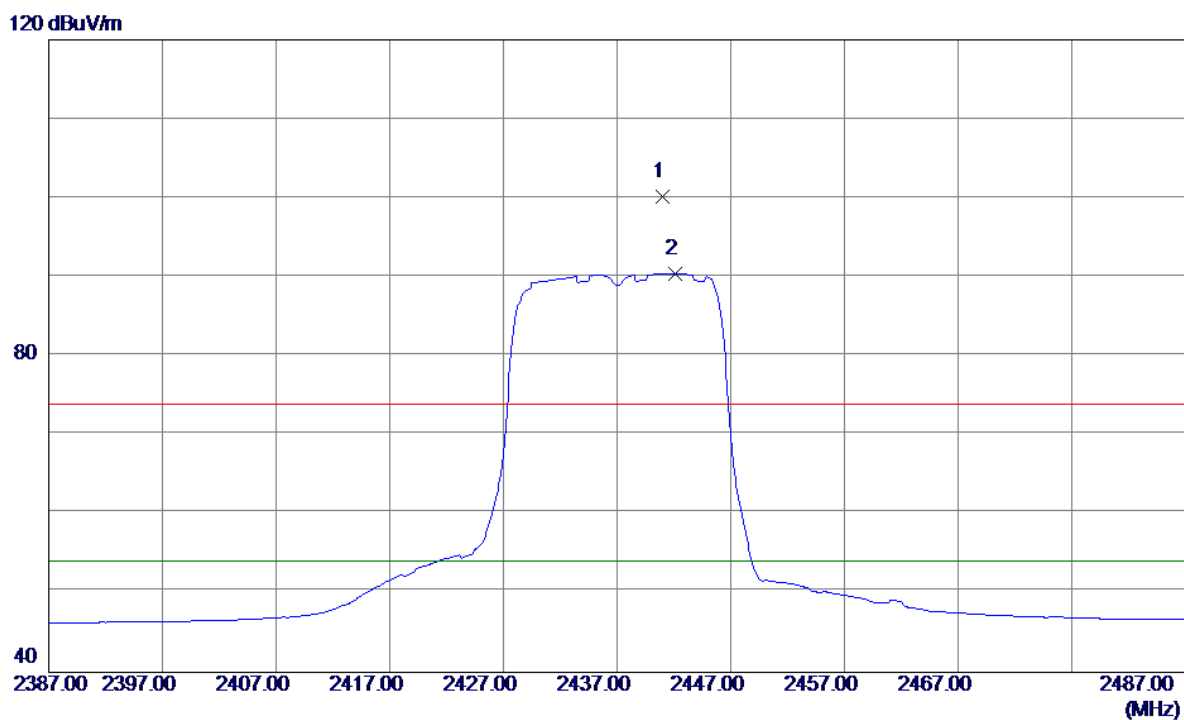


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7234.7400	35.77	13.16	48.93	74.00	-25.07	Peak	
2 *	7235.4400	24.17	13.16	37.33	54.00	-16.67	AVG	



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

### Vertical

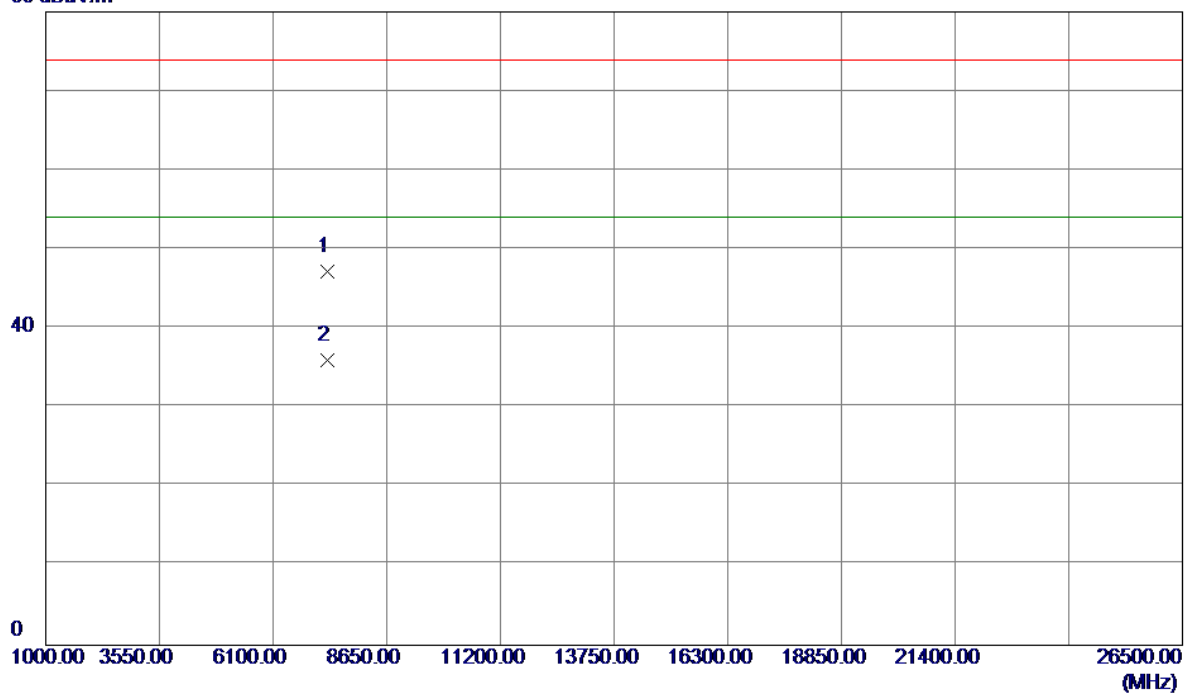


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2441.0000	66.87	33.25	100.12	74.00	26.12	Peak	No Limit
2 *	2442.1000	57.16	33.25	90.41	54.00	36.41	AVG	No Limit

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

### Vertical

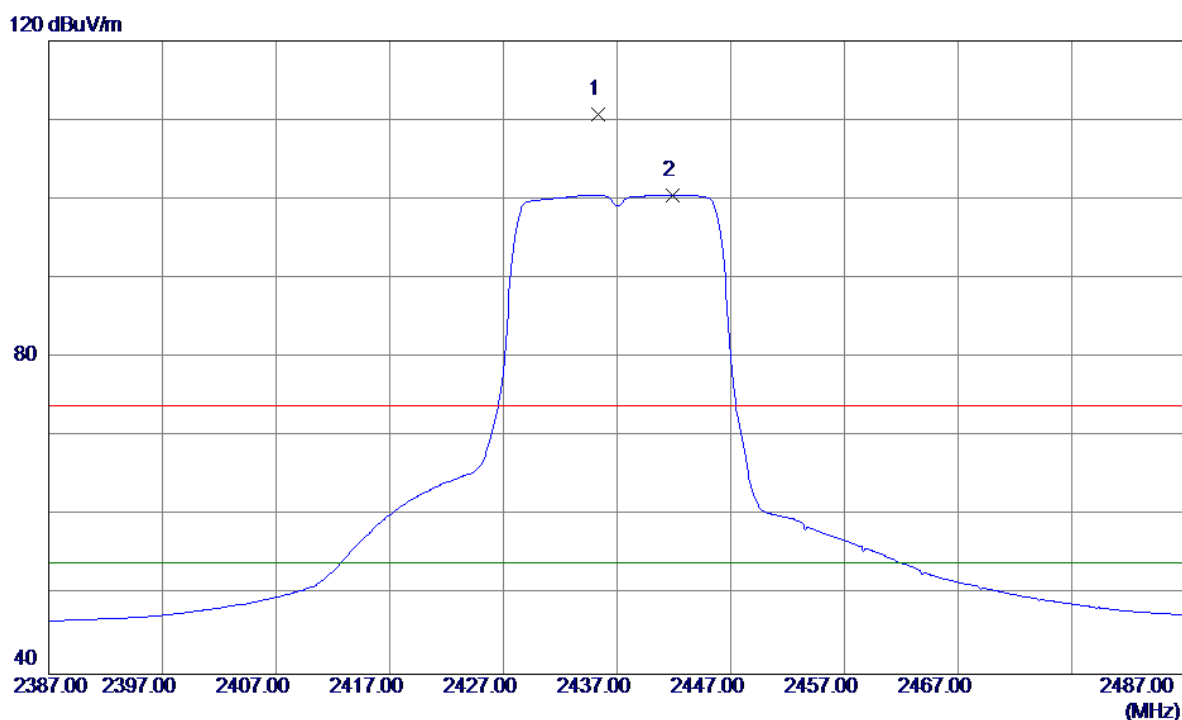
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7307.3600	33.97	13.21	47.18	74.00	-26.82	Peak	
2 *	7311.5000	22.84	13.21	36.05	54.00	-17.95	AVG	

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

### Horizontal

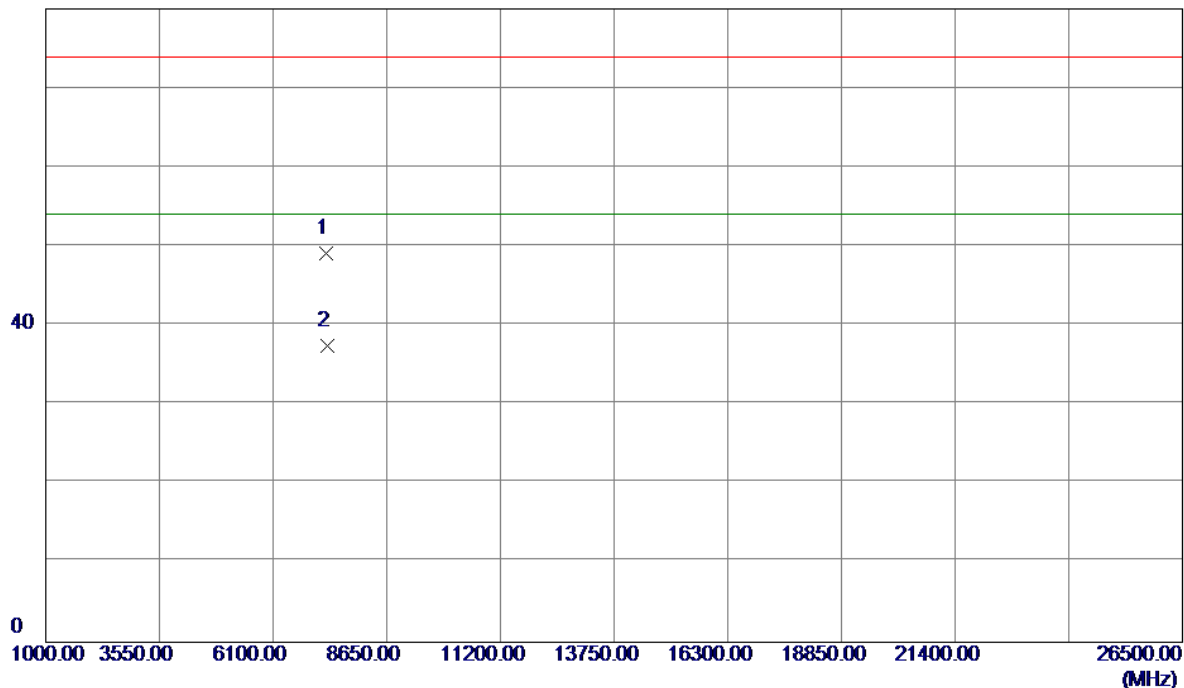


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2435.3000	77.55	33.23	110.78	74.00	36.78	Peak	No Limit
2 *	2441.9000	67.28	33.25	100.53	54.00	46.53	AVG	No Limit

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

### Horizontal

80 dBuV/m

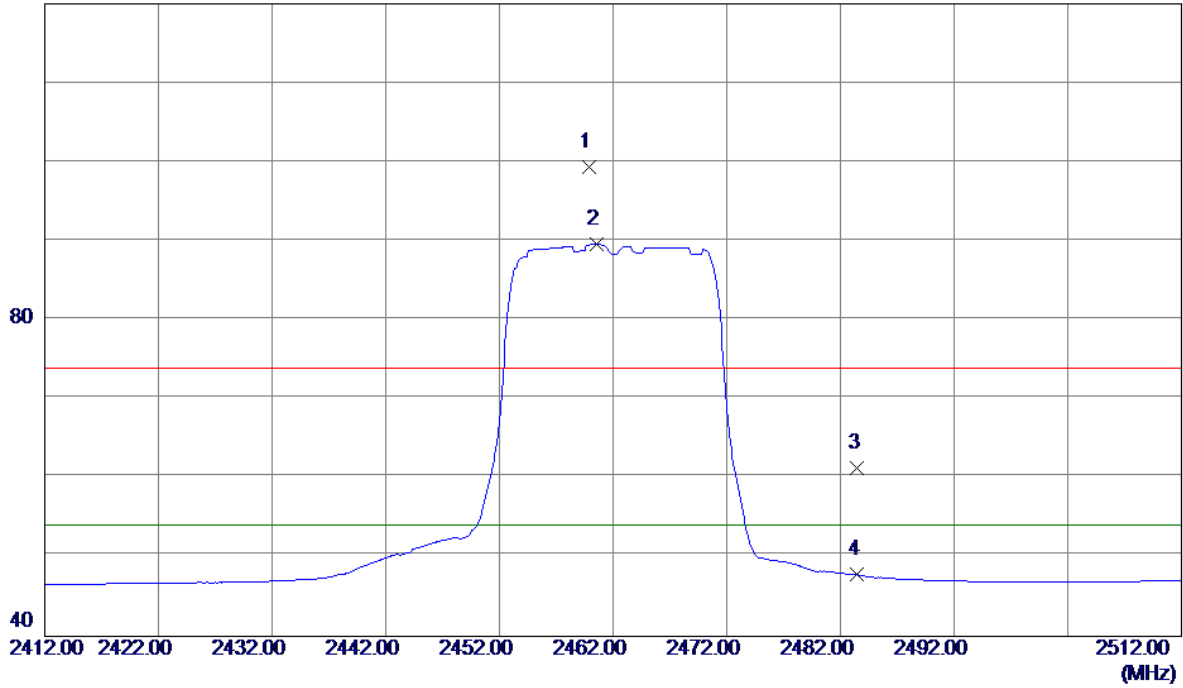


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7301.4000	35.89	13.21	49.10	74.00	-24.90	Peak	
2 *	7307.1400	24.28	13.21	37.49	54.00	-16.51	AVG	

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

### Vertical

120 dBuV/m

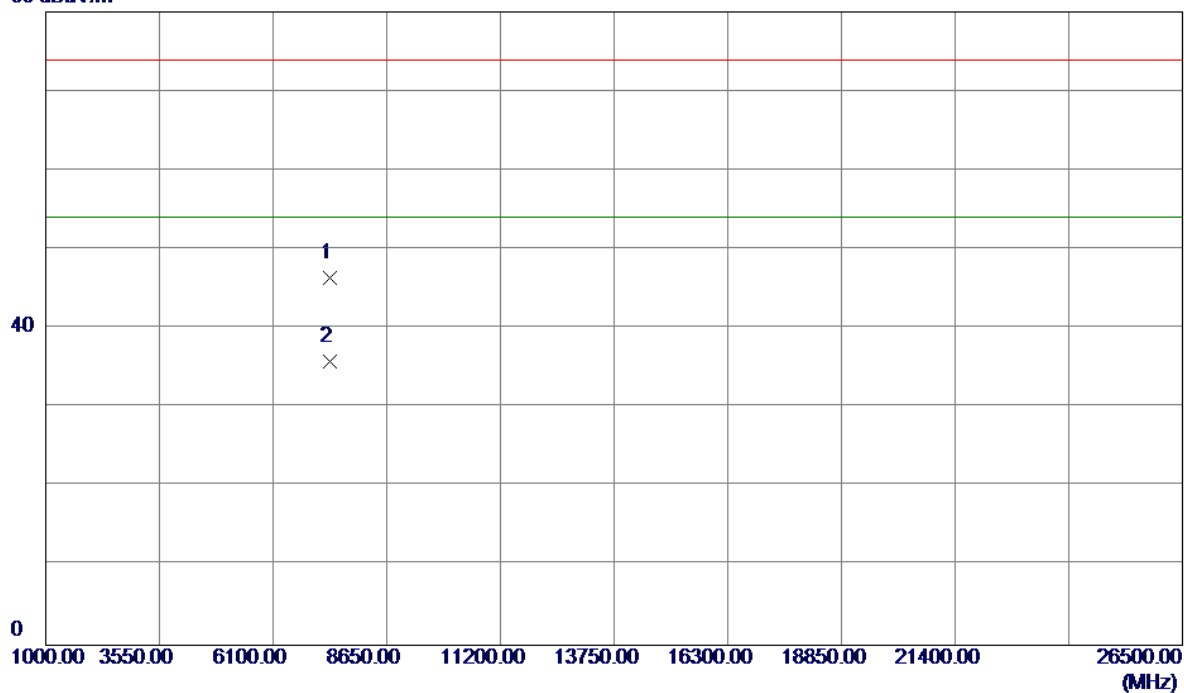


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2459.9000	65.97	33.32	99.29	74.00	25.29	Peak	No Limit
2 *	2460.6000	56.23	33.32	89.55	54.00	35.55	AVG	No Limit
3	2483.5000	27.86	33.41	61.27	74.00	-12.73	Peak	
4	2483.5000	14.36	33.41	47.77	54.00	-6.23	AVG	

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

### Vertical

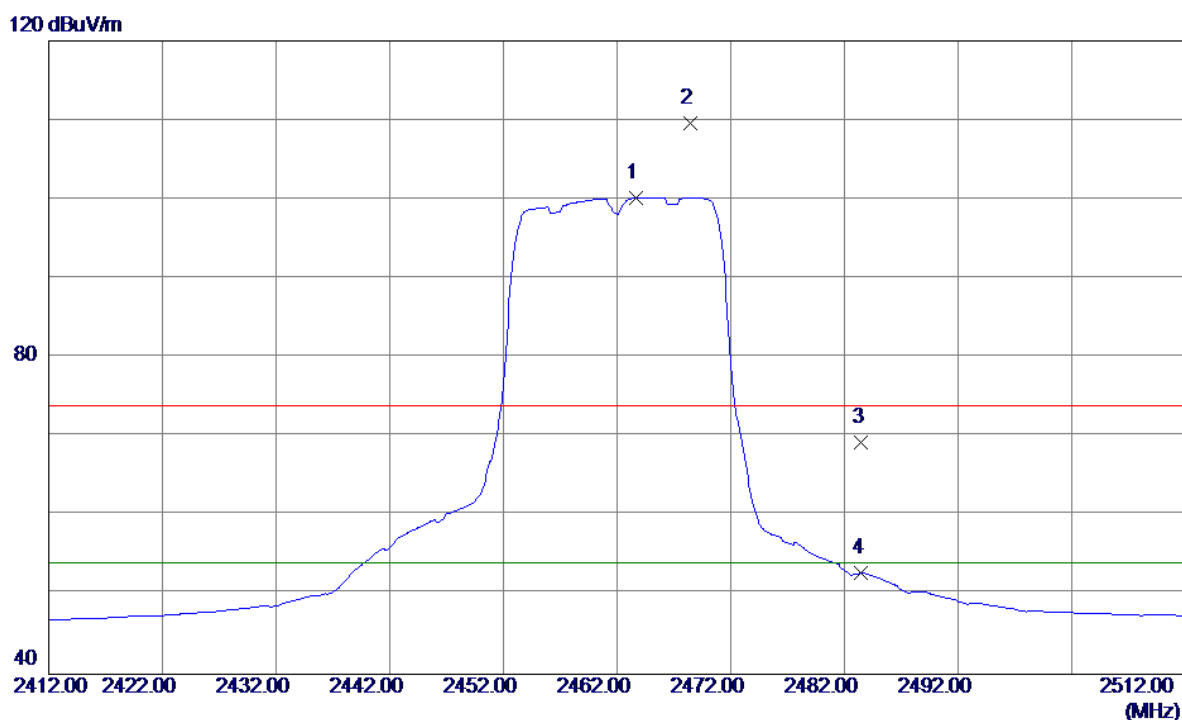
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7382.8600	33.20	13.27	46.47	74.00	-27.53	Peak	
2 *	7386.3200	22.51	13.27	35.78	54.00	-18.22	AVG	

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

# Horizontal

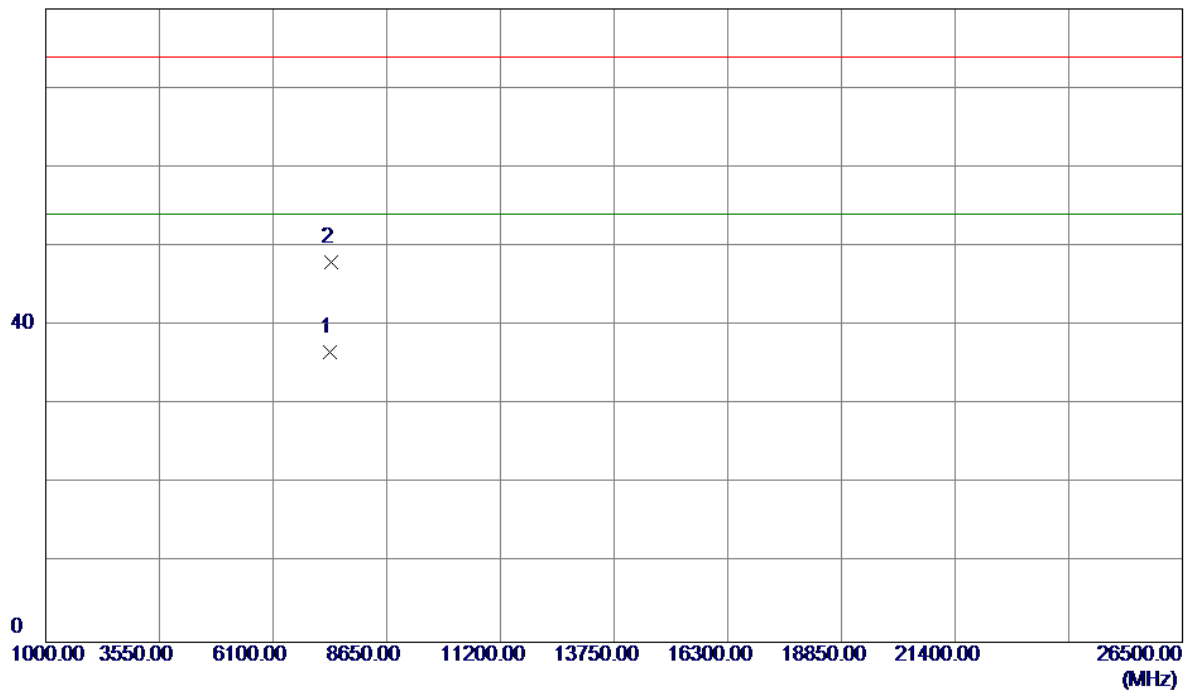


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2463.7000	66.85	33.33	100.18	54.00	46.18	AVG	No Limit
2	2468.4000	76.20	33.35	109.55	74.00	35.55	Peak	No Limit
3	2483.5000	35.90	33.41	69.31	74.00	-4.69	Peak	
4	2483.5000	19.36	33.41	52.77	54.00	-1.23	AVG	

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

### 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 *	7385.6200	23.40	13.27	36.67	54.00	-17.33	AVG	
2	7392.3800	34.66	13.27	47.93	74.00	-26.07	Peak	

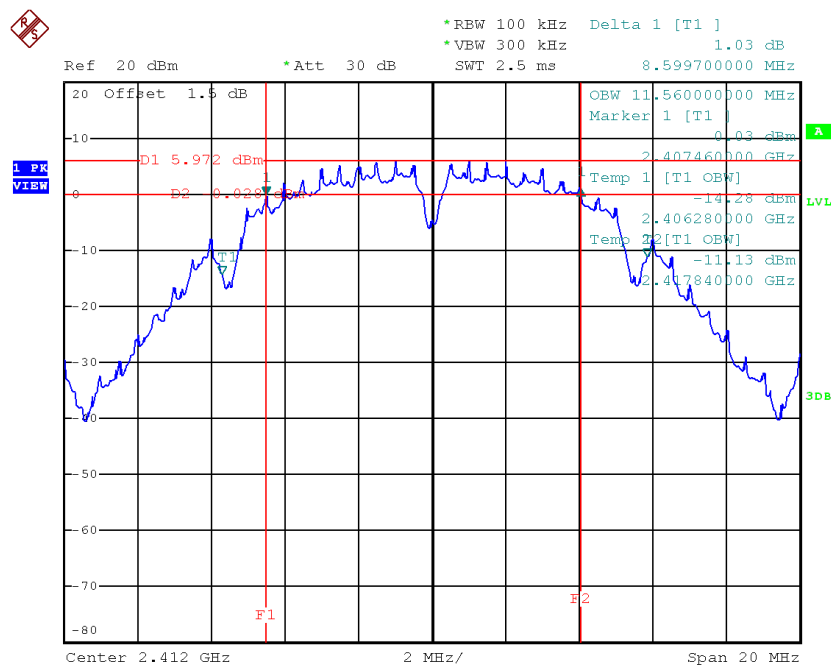


## APPENDIX E - BANDWIDTH

Test Mode : TX B Mode\_CH01/06/11

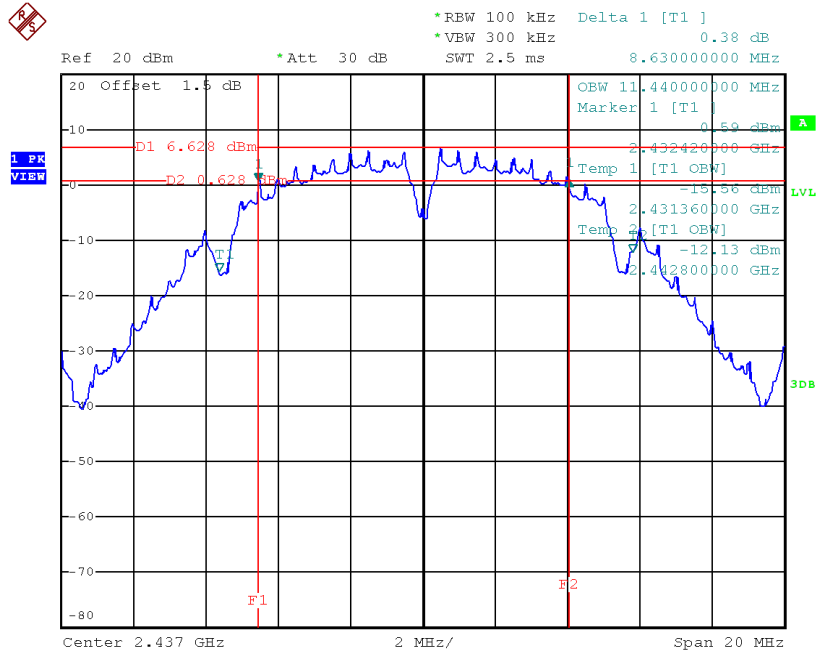
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.6	11.56	500	Complies
2437	8.63	11.44	500	Complies
2462	8.14	11.6	500	Complies

TX CH01



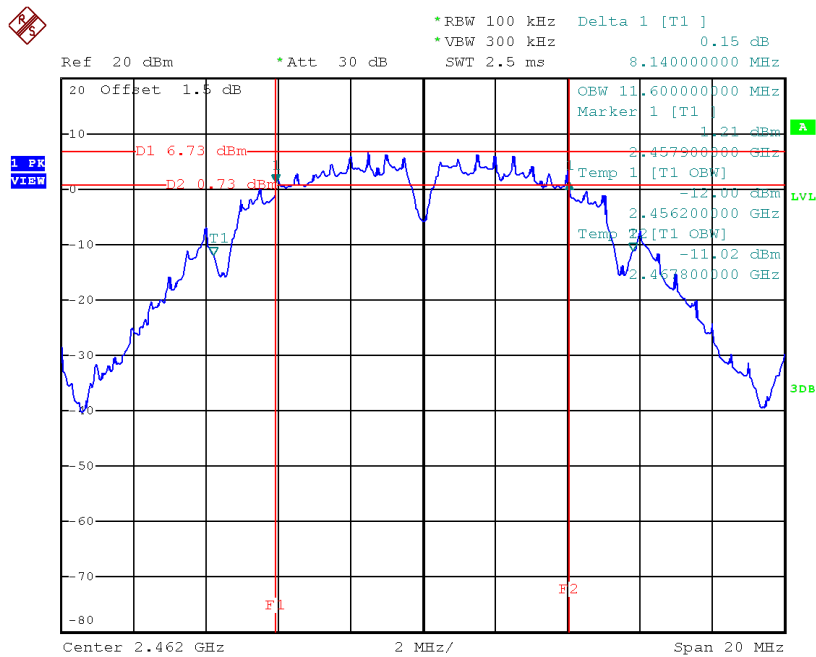
Date: 23.NOV.2017 19:35:55

### TX CH06



Date: 23.NOV.2017 19:37:23

### TX CH11

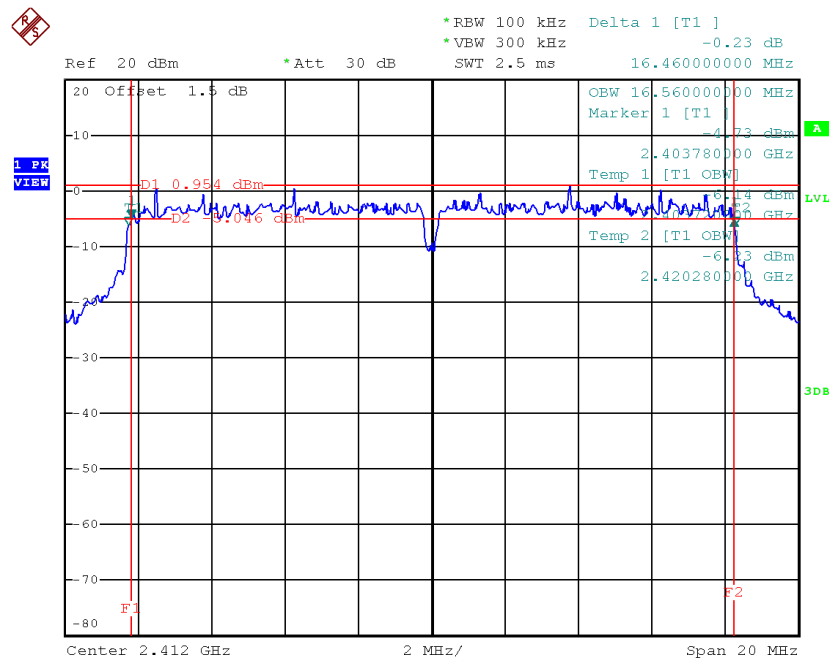


Date: 23.NOV.2017 19:39:42

Test Mode: TX G Mode\_CH01/06/11

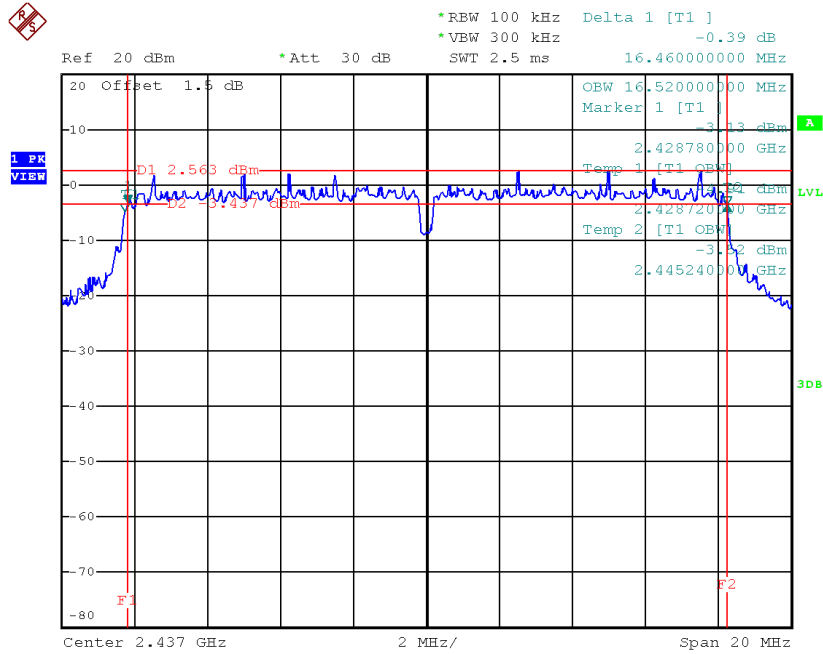
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.46	16.56	500	Complies
2437	16.46	16.52	500	Complies
2462	16.43	16.52	500	Complies

TX CH01



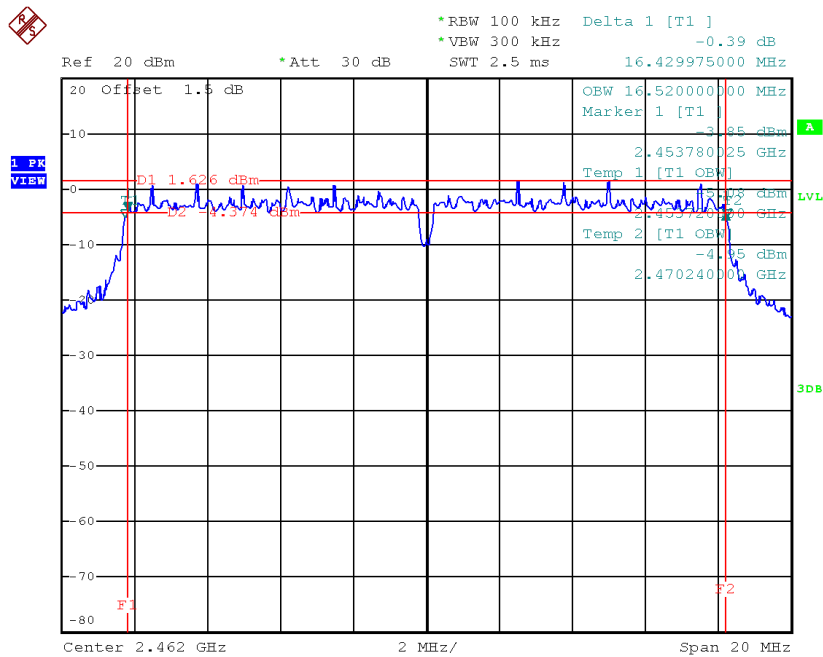
Date: 23.NOV.2017 19:41:11

### TX CH06



Date: 23.NOV.2017 19:44:24

### TX CH11

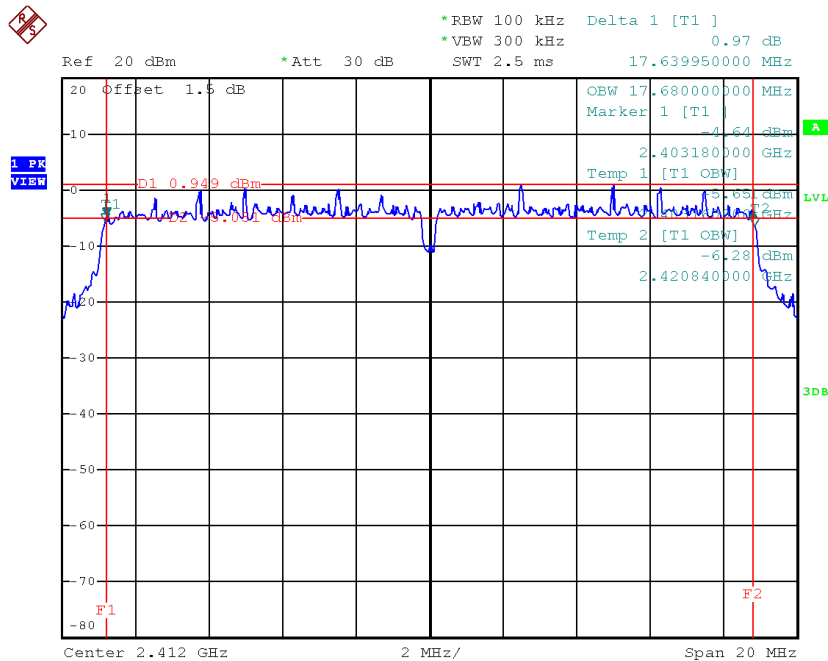


Date: 23.NOV.2017 19:46:26

Test Mode : TX N-20MHz Mode\_CH01/06/11

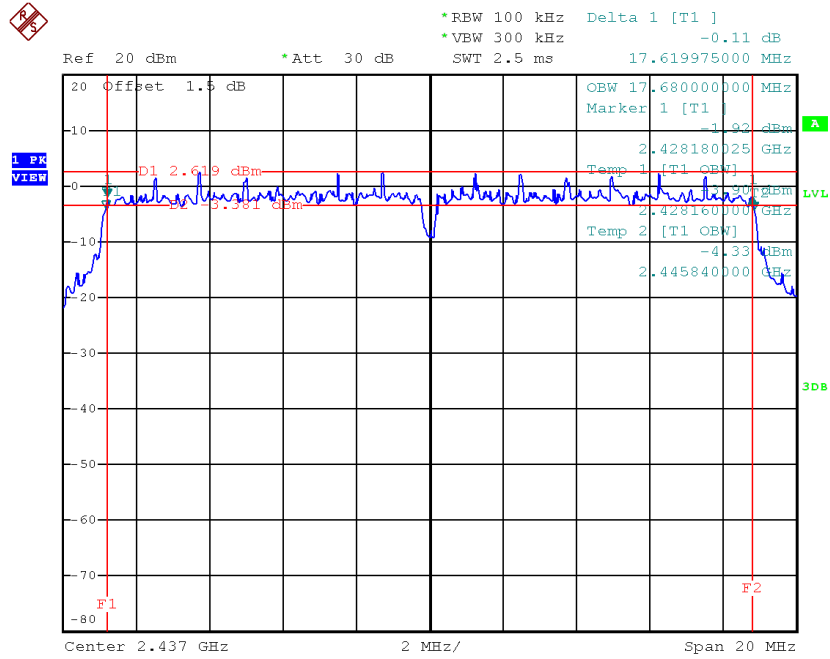
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.64	17.68	500	Complies
2437	17.62	17.68	500	Complies
2462	17.64	17.72	500	Complies

TX CH01



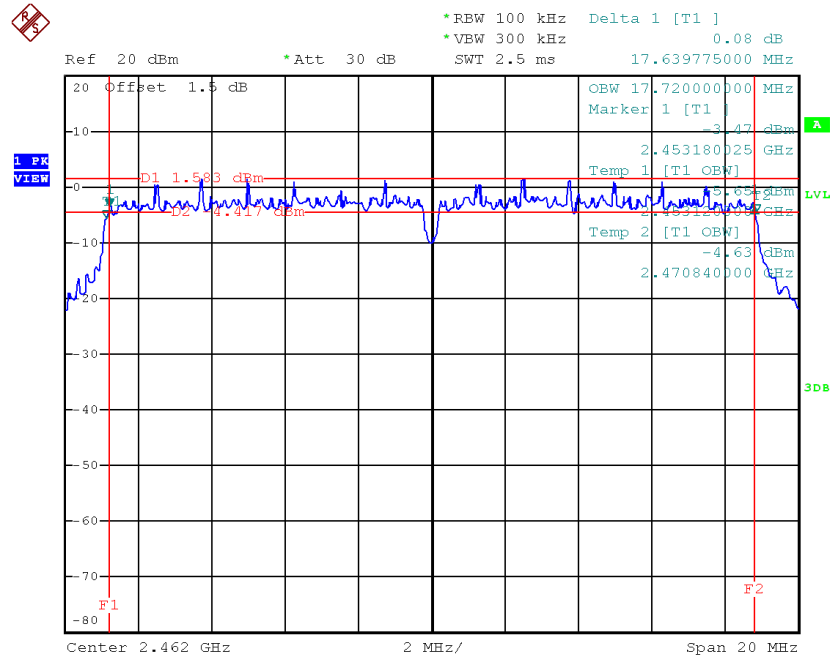
Date: 23.NOV.2017 19:48:33

### TX CH06



Date: 23.NOV.2017 19:49:48

### TX CH11



Date: 23.NOV.2017 19:51:44

## APPENDIX F - MAXIMUM PEAK CONDUCTED OUTPUT POWER



**Test Mode :TX B Mode\_CH01/06/11**

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	18.59	0.07	30.00	1.00	Complies
2437	19.15	0.08	30.00	1.00	Complies
2462	19.18	0.08	30.00	1.00	Complies

**Test Mode :TX G Mode\_CH01/06/11**

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	23.17	0.21	30.00	1.00	Complies
2437	25.20	0.33	30.00	1.00	Complies
2462	23.78	0.24	30.00	1.00	Complies

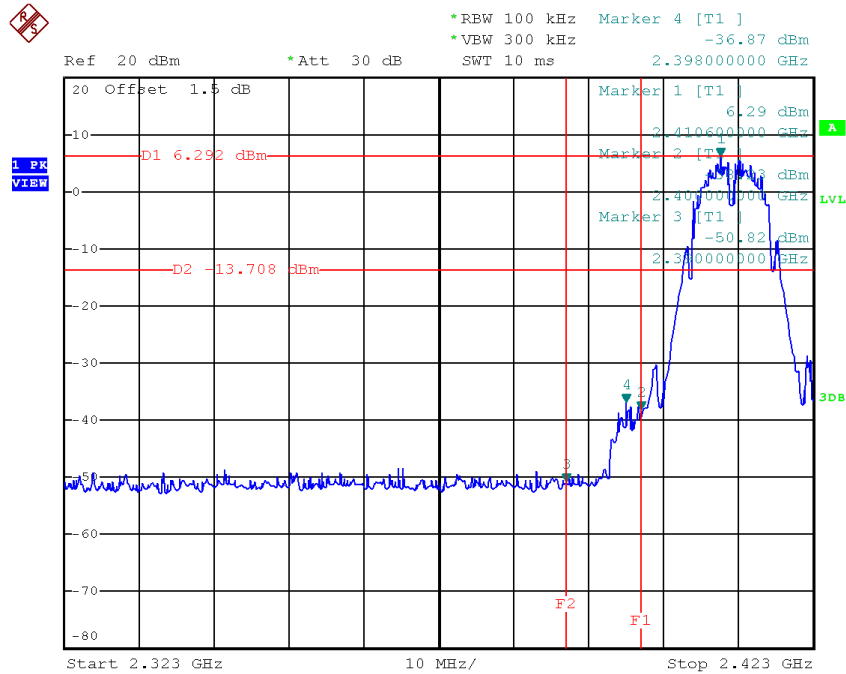
**Test Mode :TX N20 Mode\_CH01/06/11**

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	23.31	0.21	30.00	1.00	Complies
2437	25.28	0.34	30.00	1.00	Complies
2462	24.09	0.26	30.00	1.00	Complies

## APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION

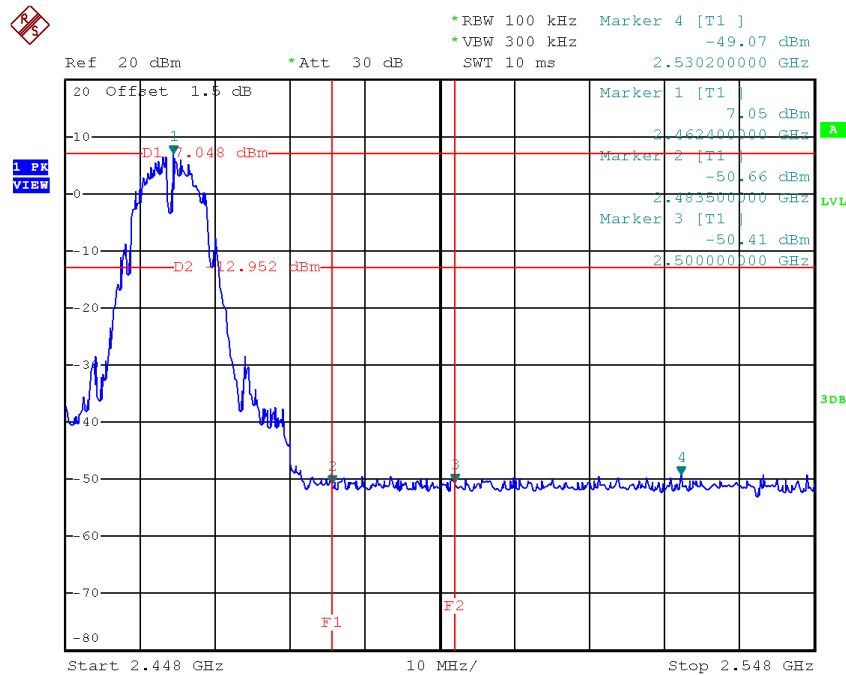
Test Mode : TX B Mode

### TX B mode CH01



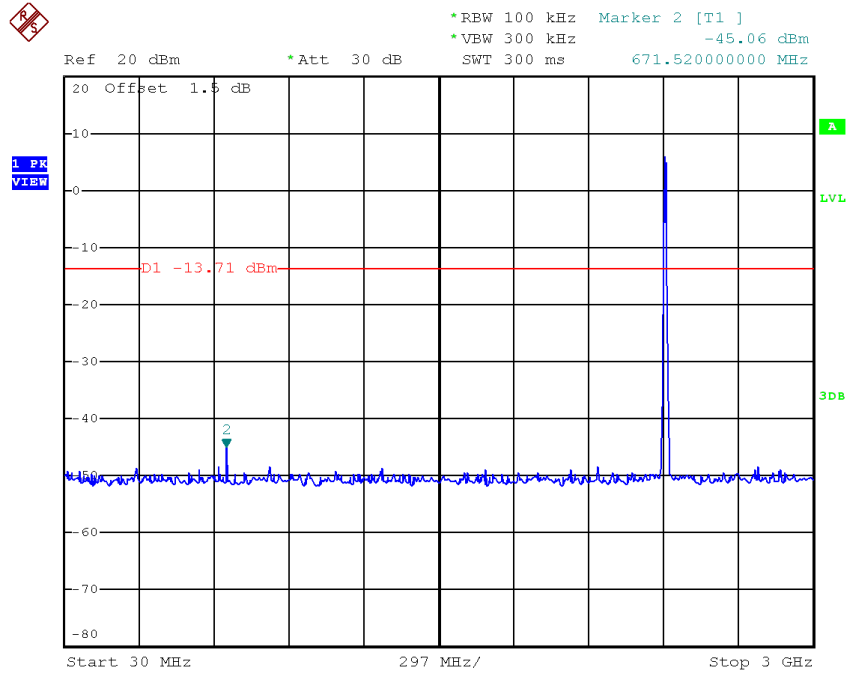
Date: 23.NOV.2017 19:36:03

### TX B mode CH11

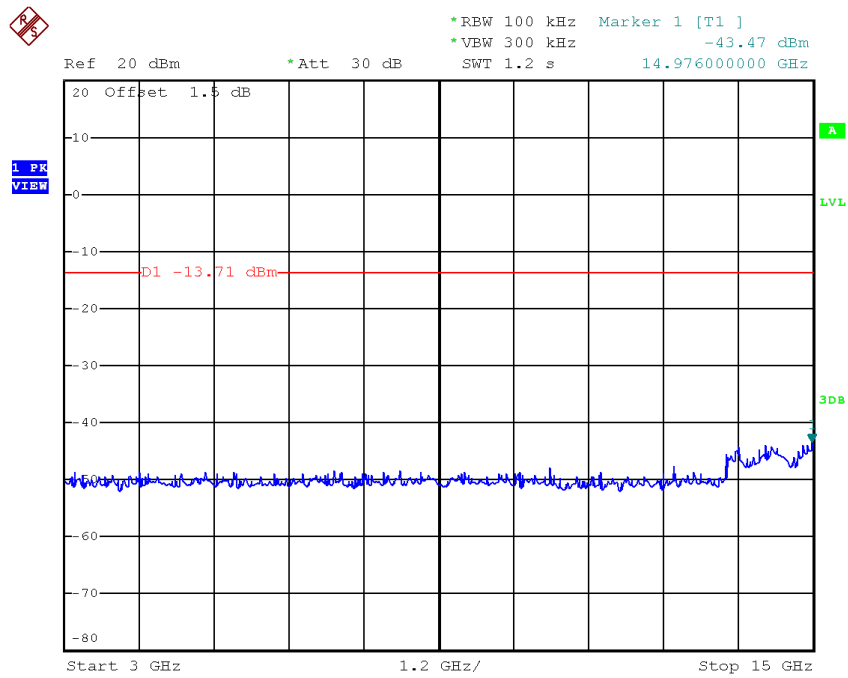


Date: 23.NOV.2017 19:39:50

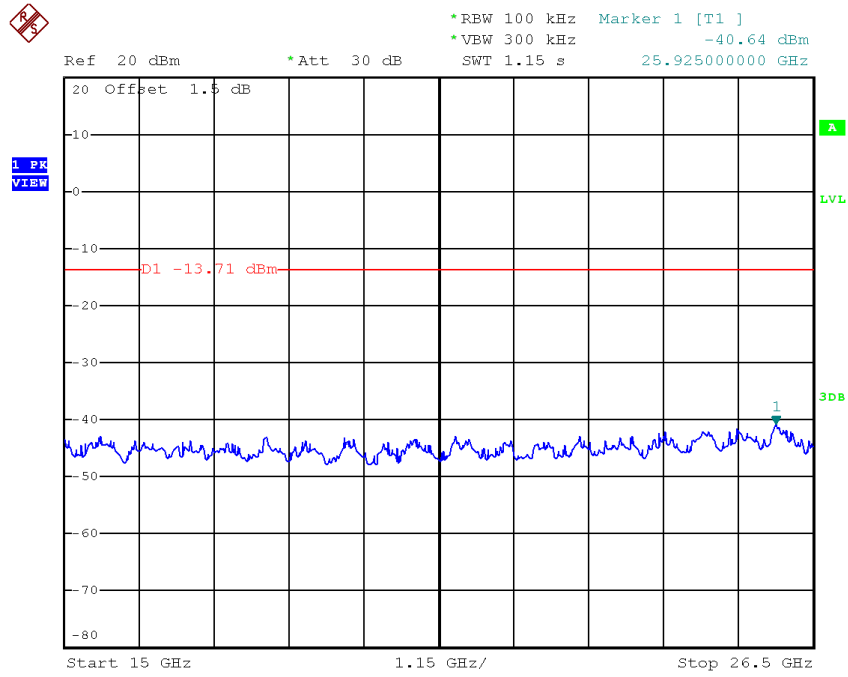
### TX B mode CH01 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:36:17

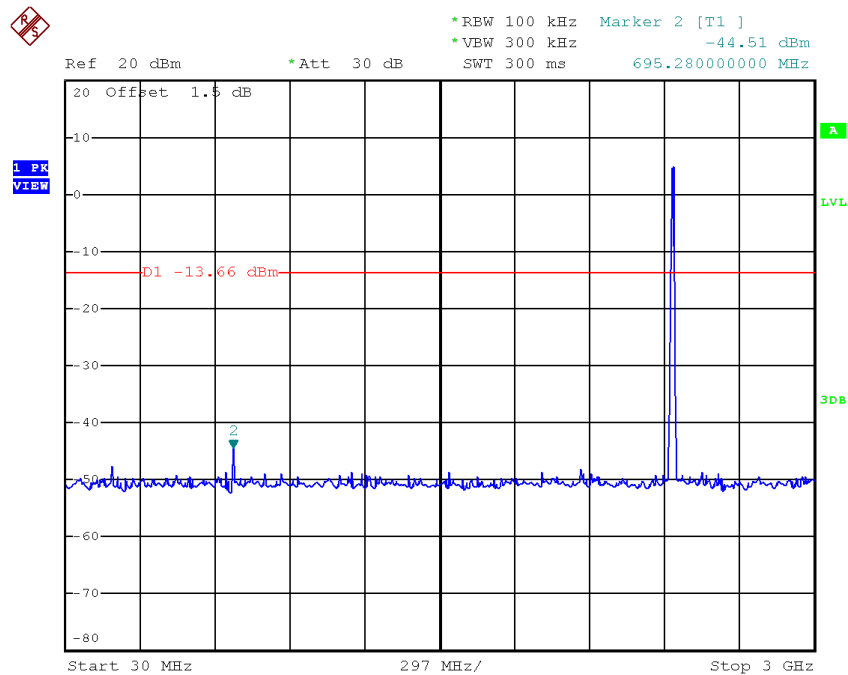


Date: 23.NOV.2017 19:36:25

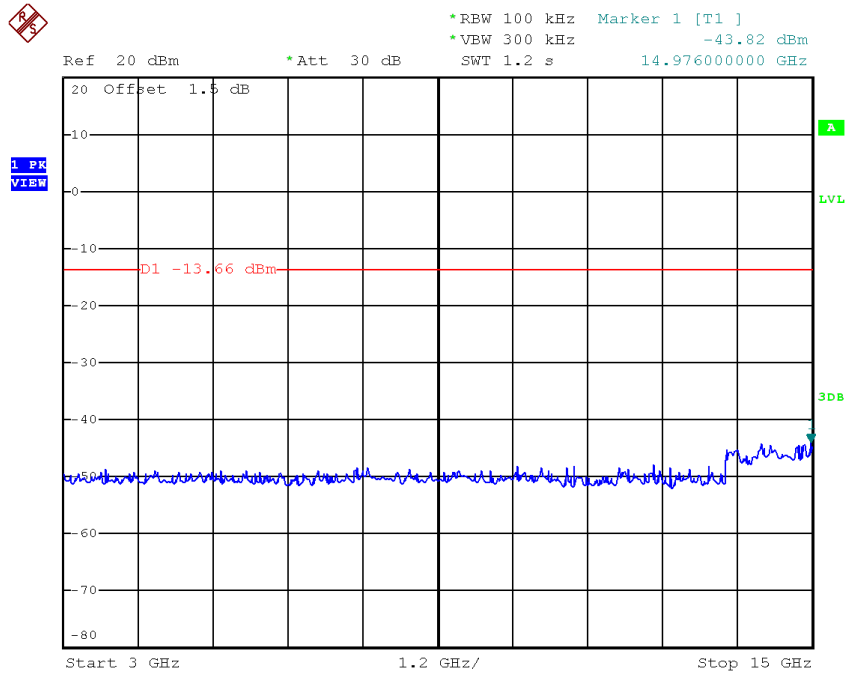


Date: 23.NOV.2017 19:36:33

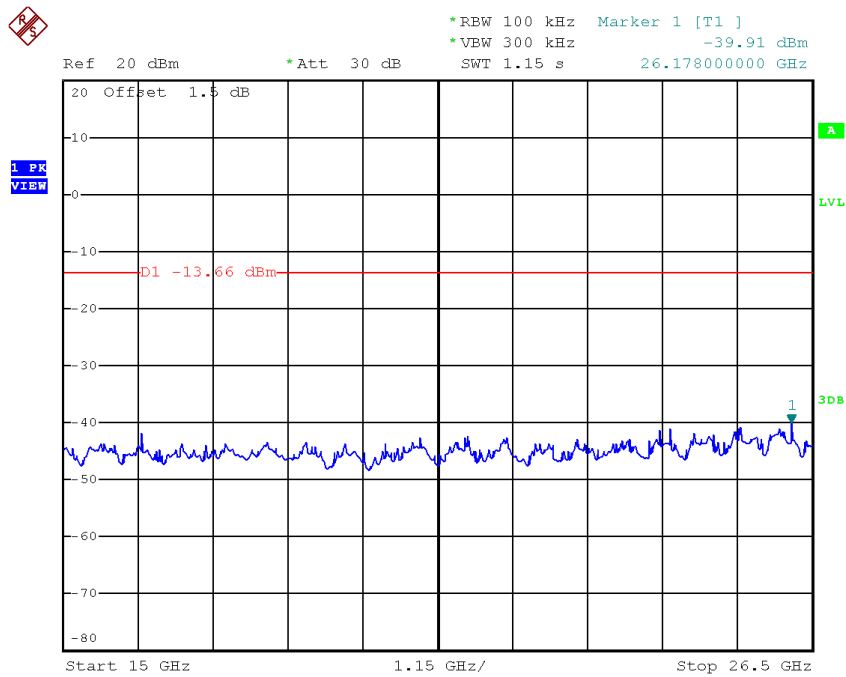
### TX B mode CH06 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:37:45

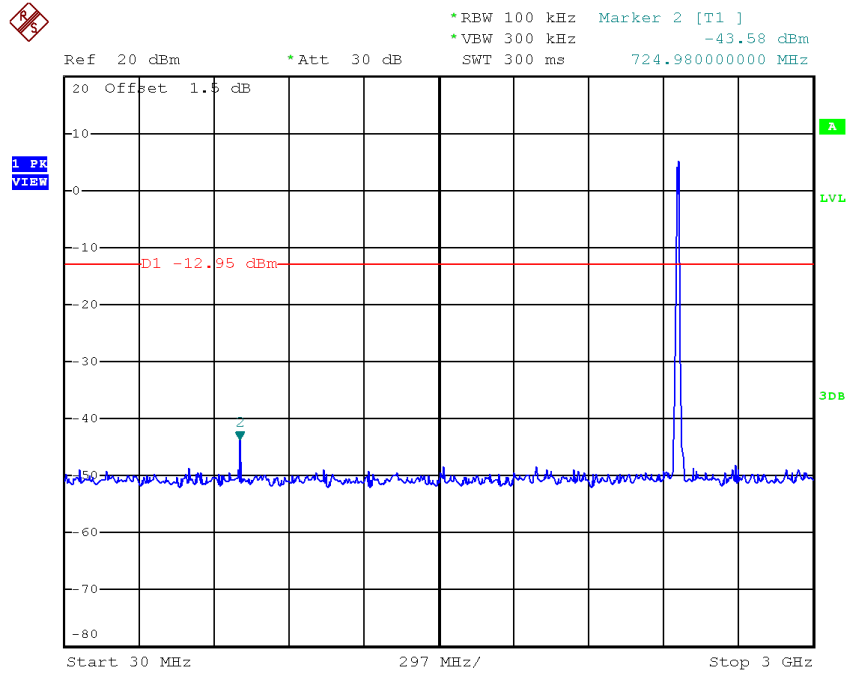


Date: 23.NOV.2017 19:37:53

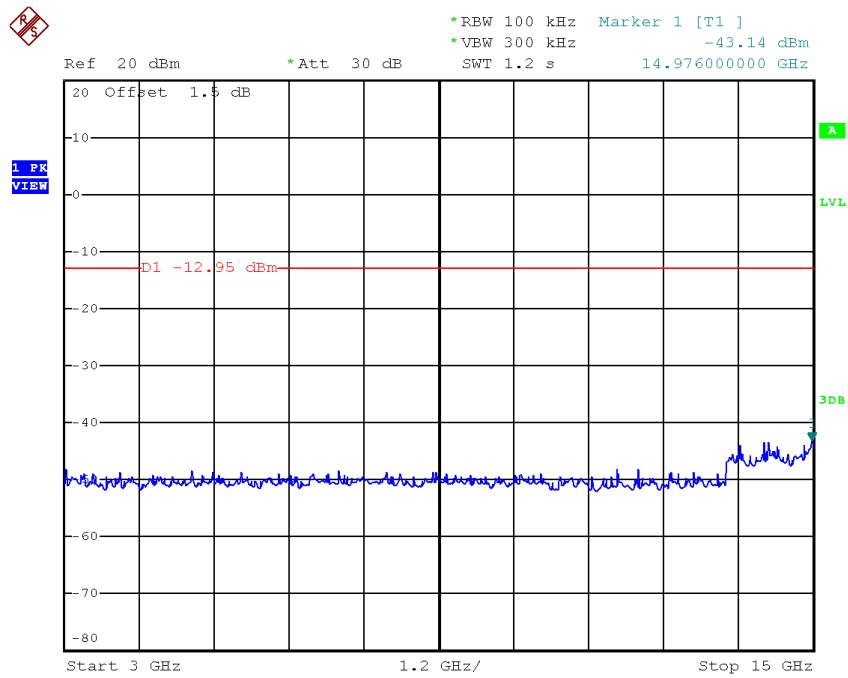


Date: 23.NOV.2017 19:38:01

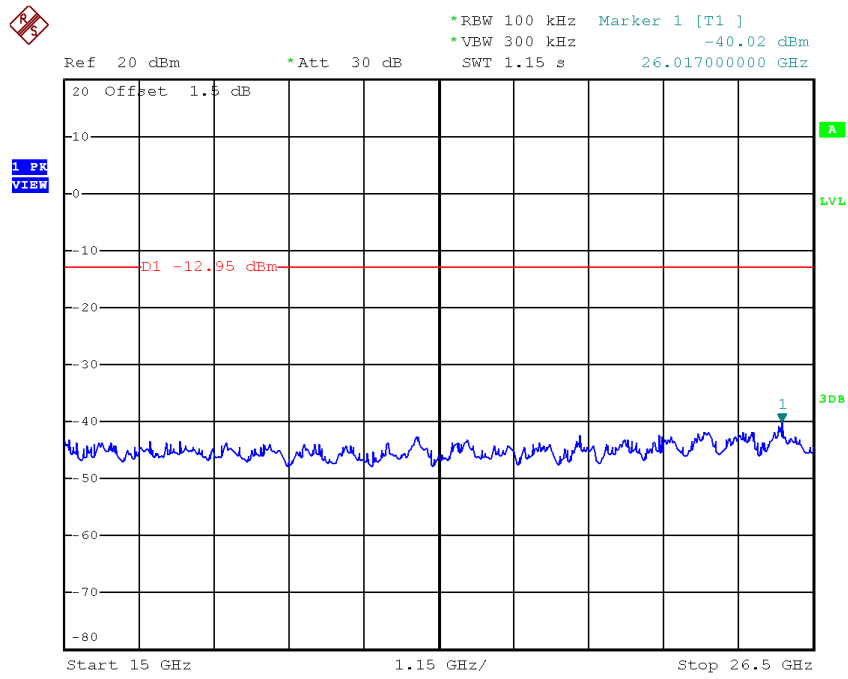
### TX B mode CH11 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:40:04



Date: 23.NOV.2017 19:40:12

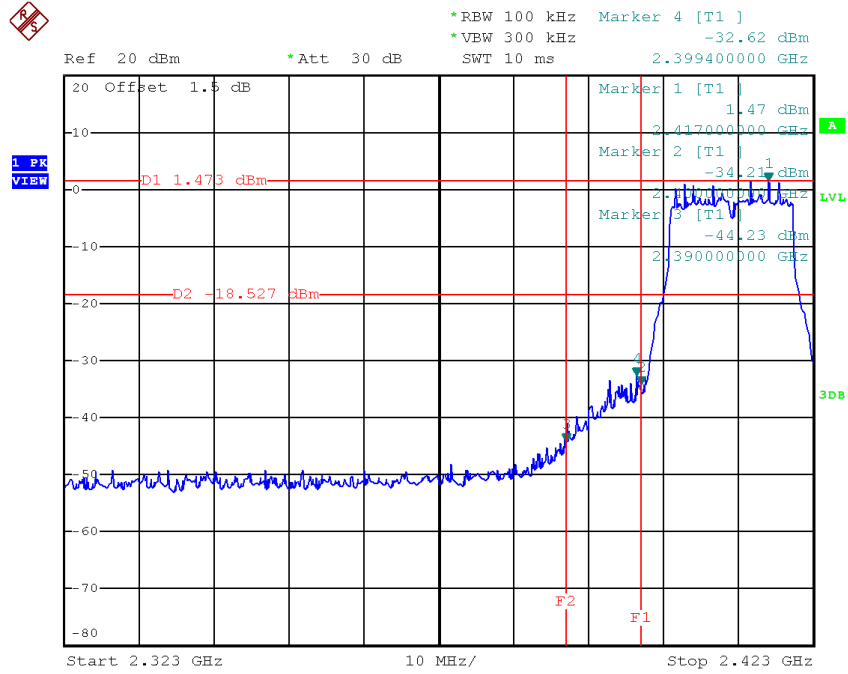


Date: 23.NOV.2017 19:40:20



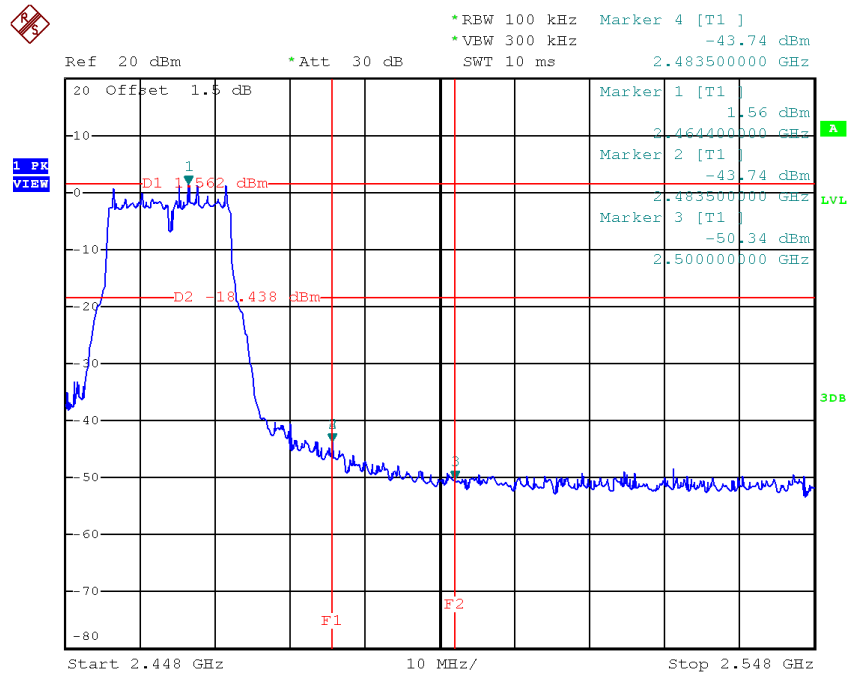
Test Mode : TX G Mode

### TX G mode CH01



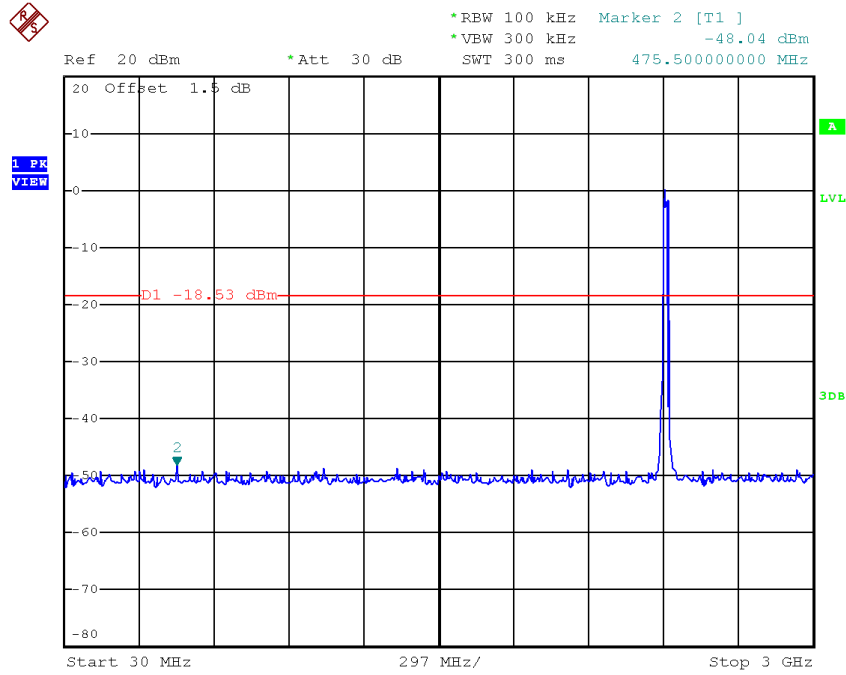
Date: 23.NOV.2017 19:41:19

### TX G mode CH11

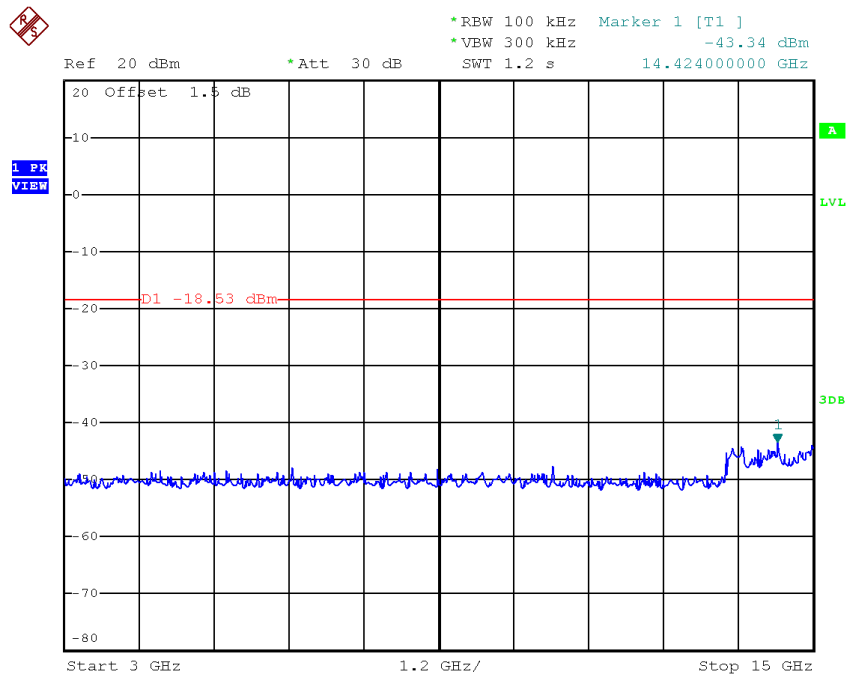


Date: 23.NOV.2017 19:46:34

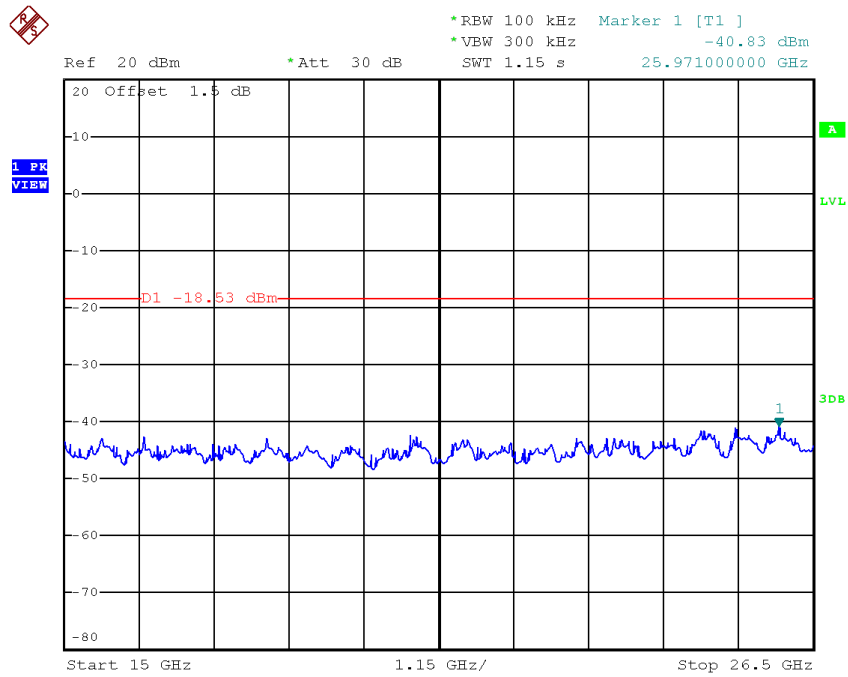
# TX G mode CH01 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:41:33

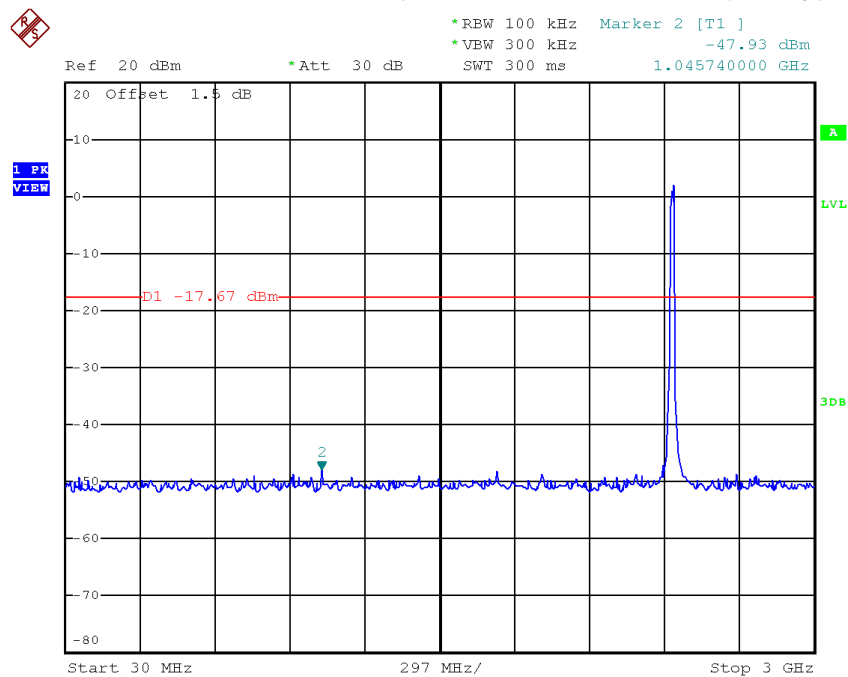


Date: 23.NOV.2017 19:41:41

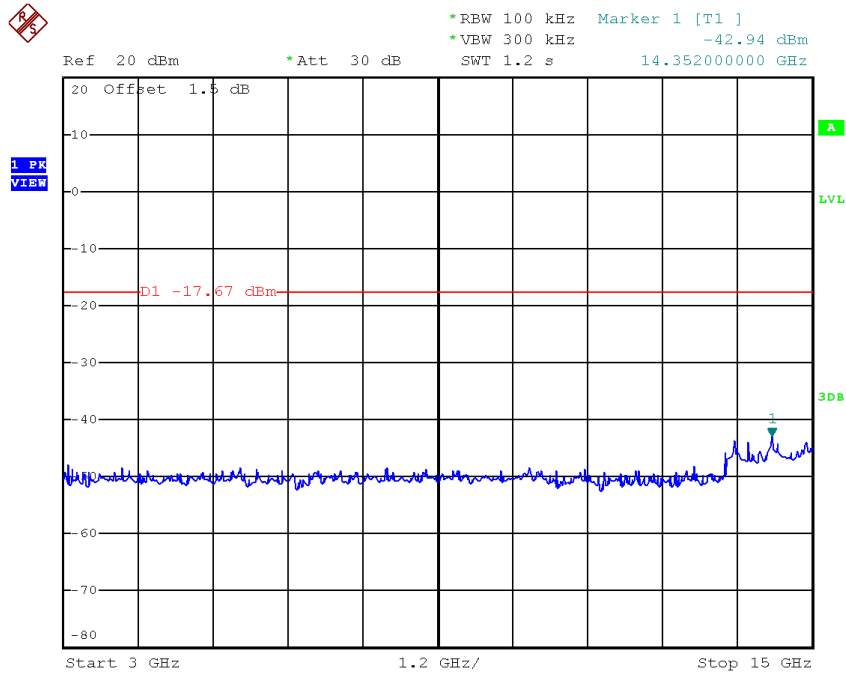


Date: 23.NOV.2017 19:41:48

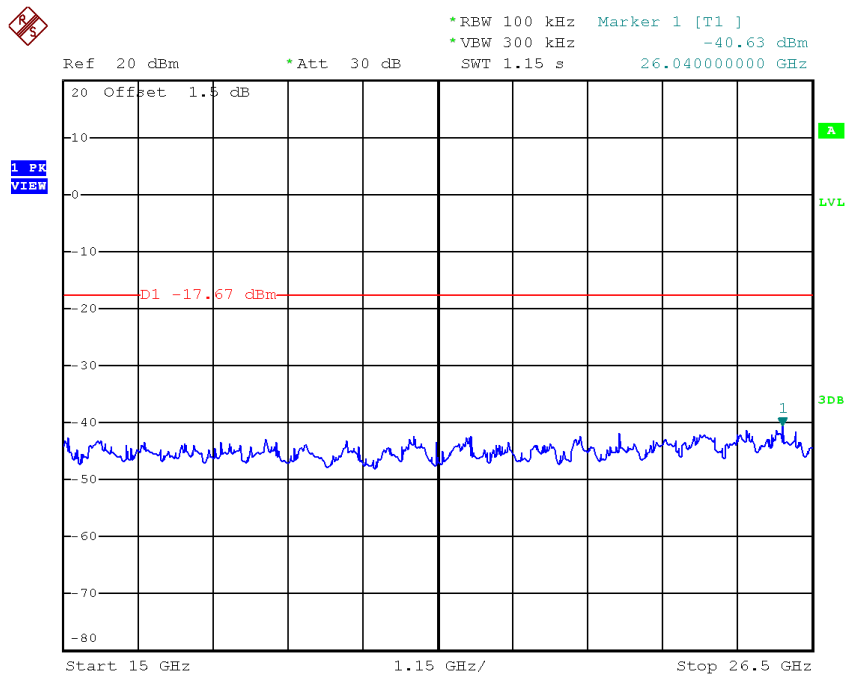
### TX G mode CH06 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:44:45

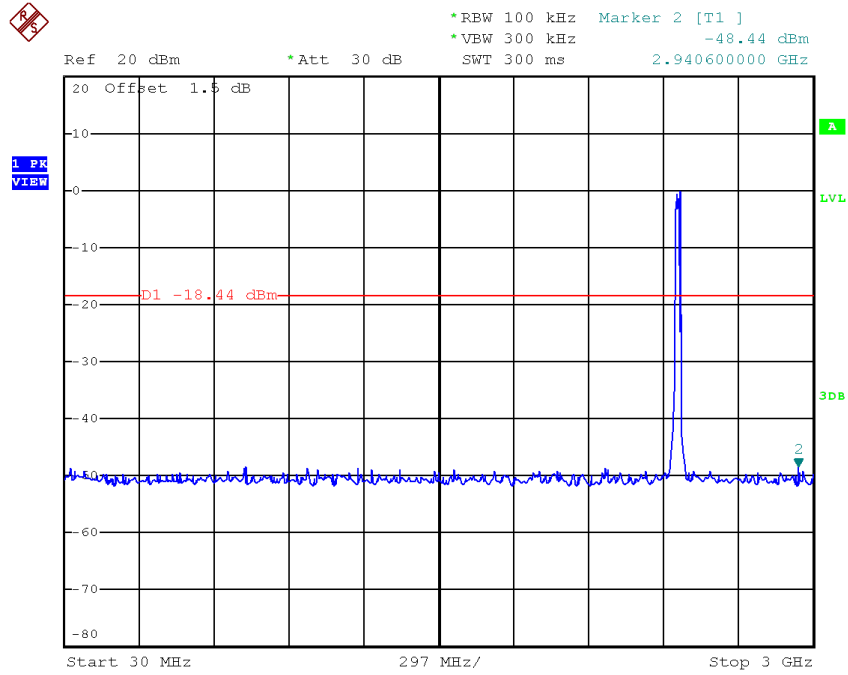


Date: 23.NOV.2017 19:44:53

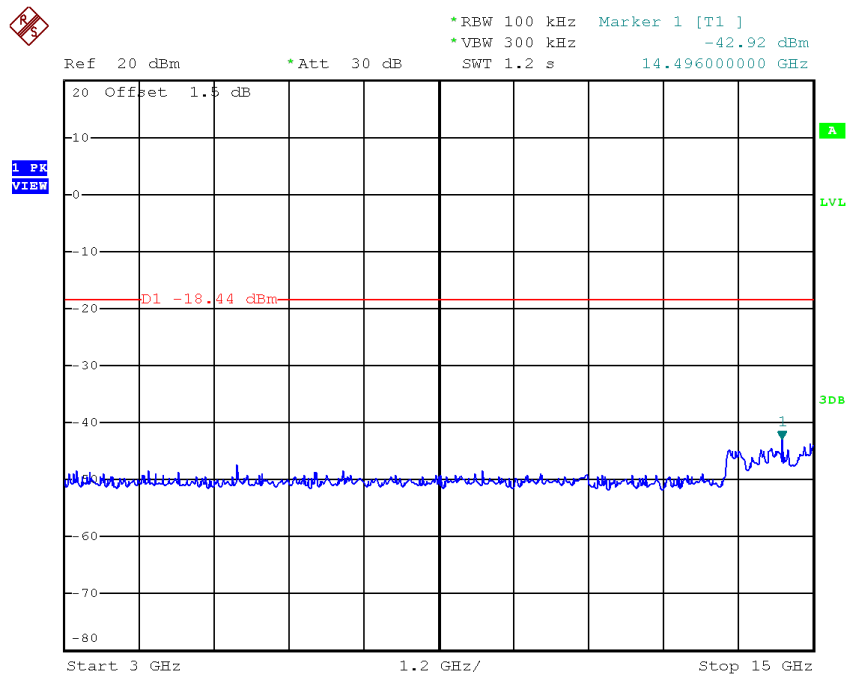


Date: 23.NOV.2017 19:45:01

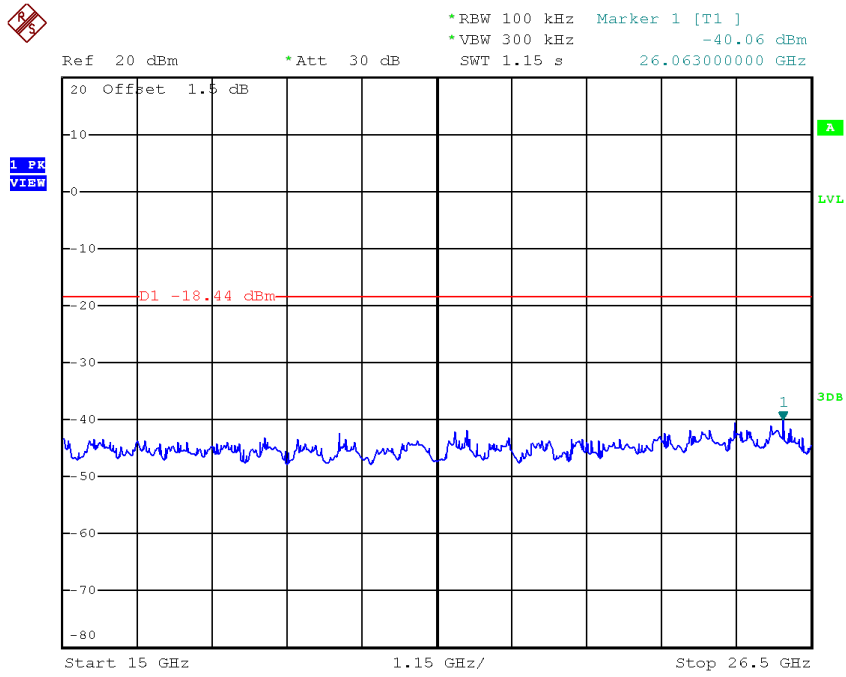
### TX G mode CH11 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:46:48



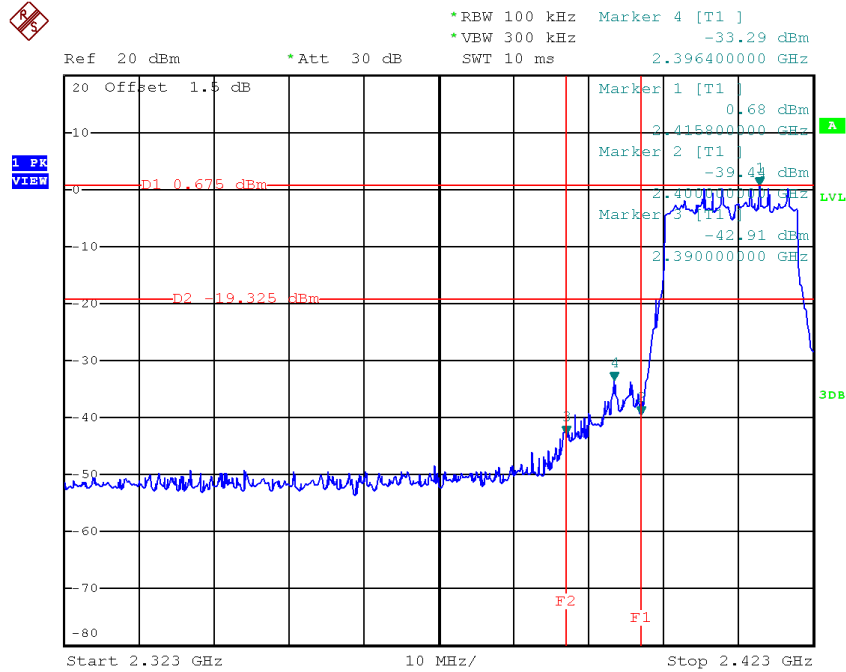
Date: 23.NOV.2017 19:46:55



Date: 23.NOV.2017 19:47:03

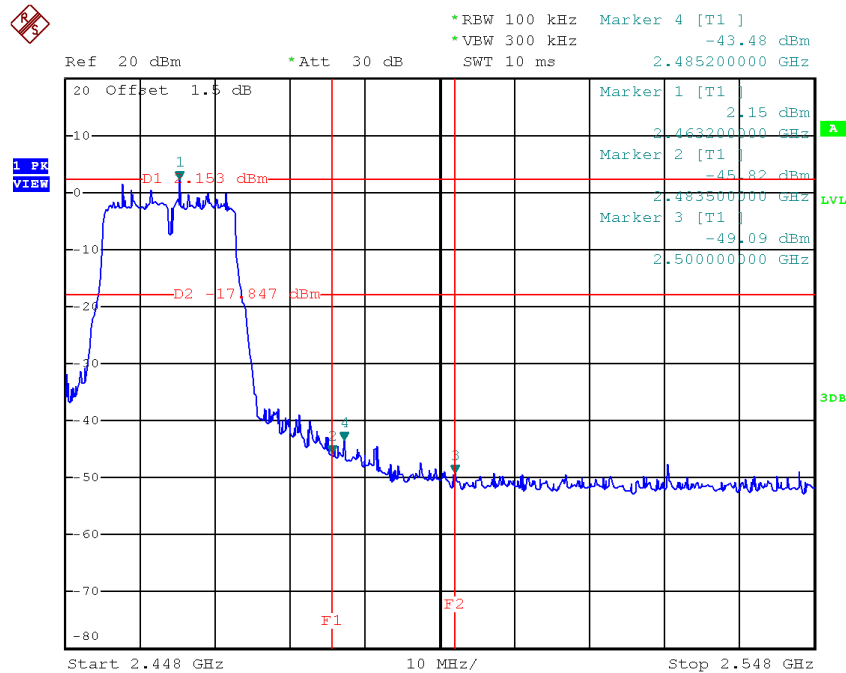
Test Mode : TX N-20M Mode

### TX HT20 mode CH01



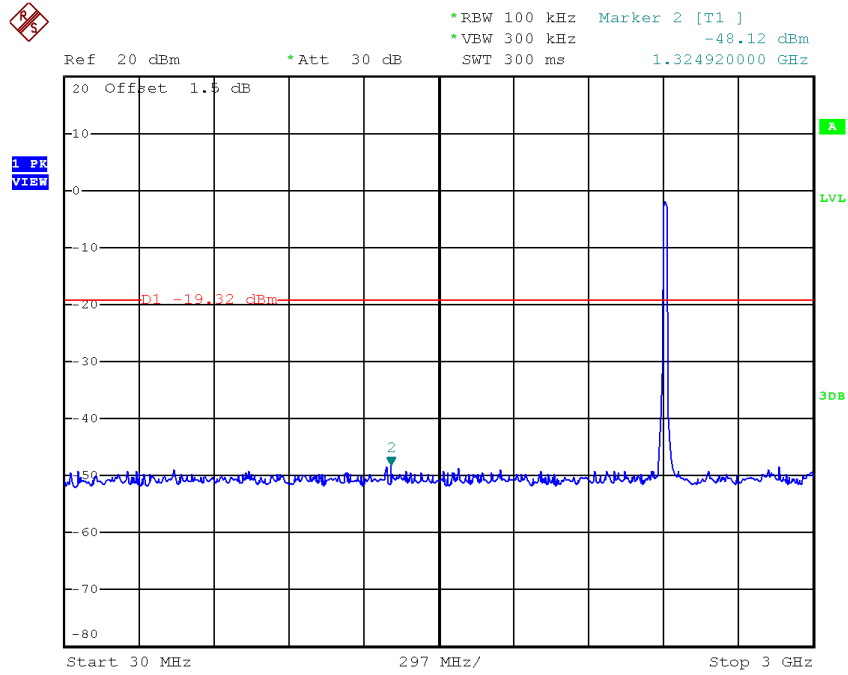
Date: 23.NOV.2017 19:48:41

### TX HT20 mode CH11

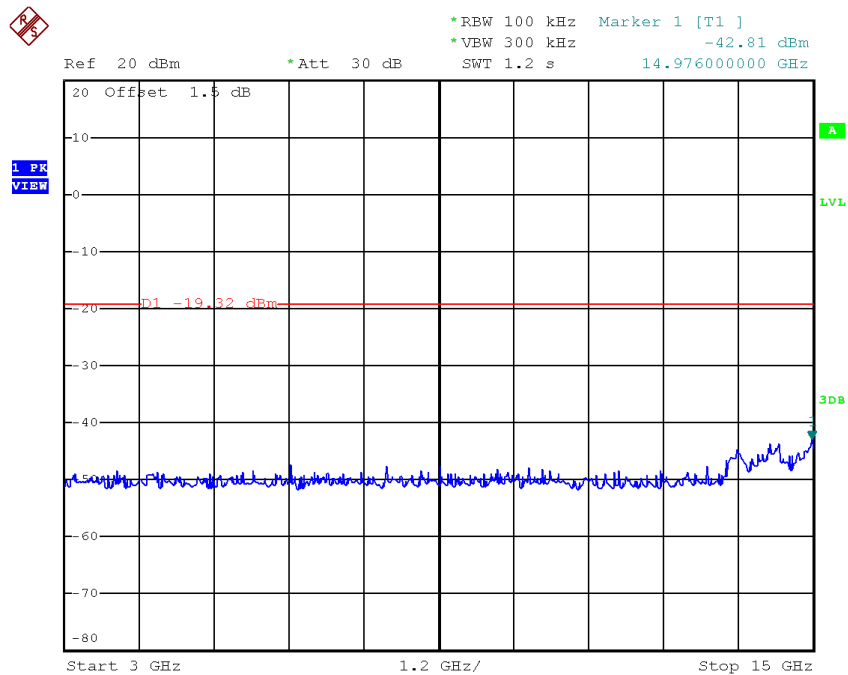


Date: 23.NOV.2017 19:51:52

### TX HT20 mode CH01 (10 Harmonic of the frequency)

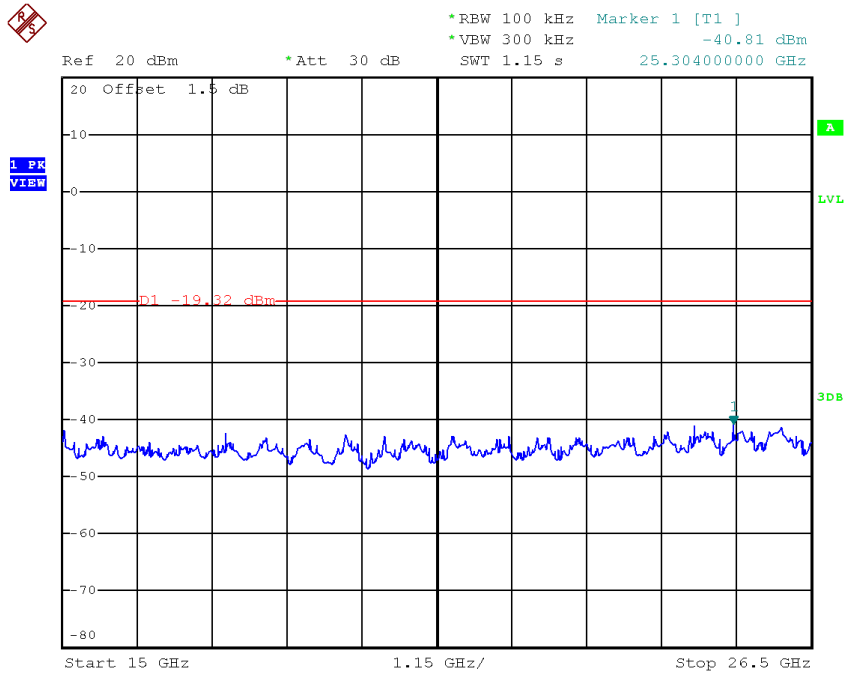


Date: 23.NOV.2017 19:48:54



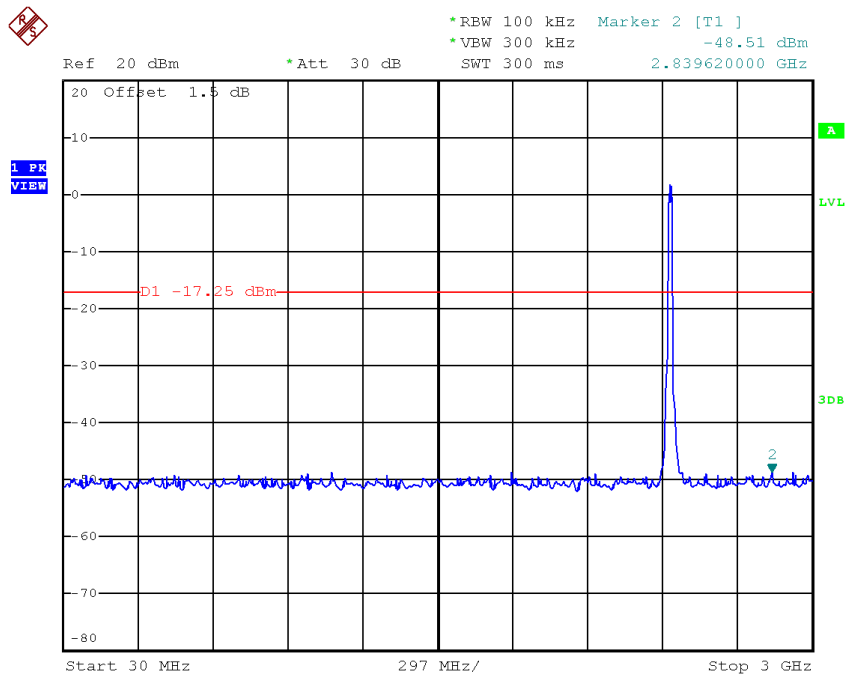
Date: 23.NOV.2017 19:49:02



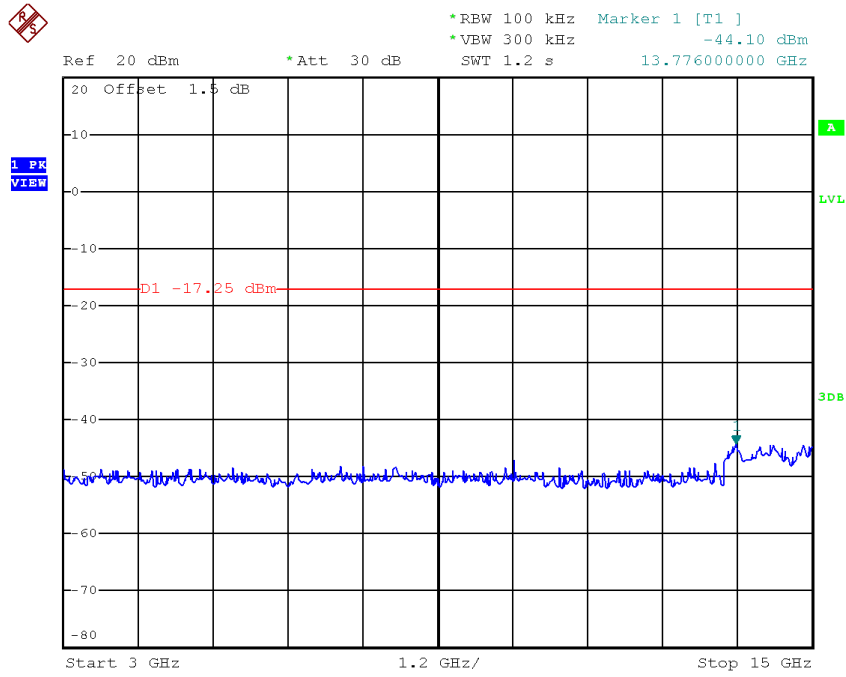


Date: 23.NOV.2017 19:49:10

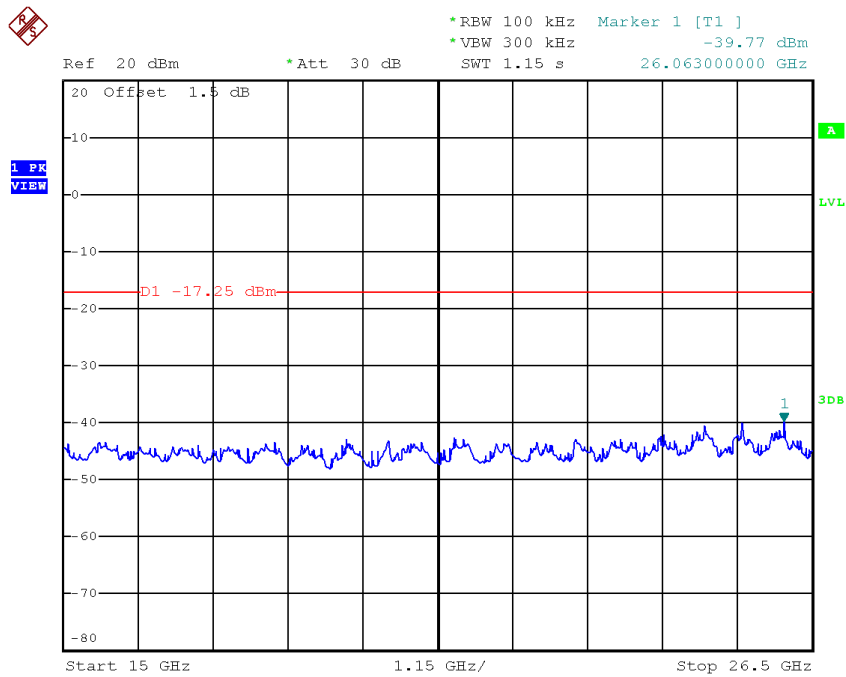
### TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:50:09

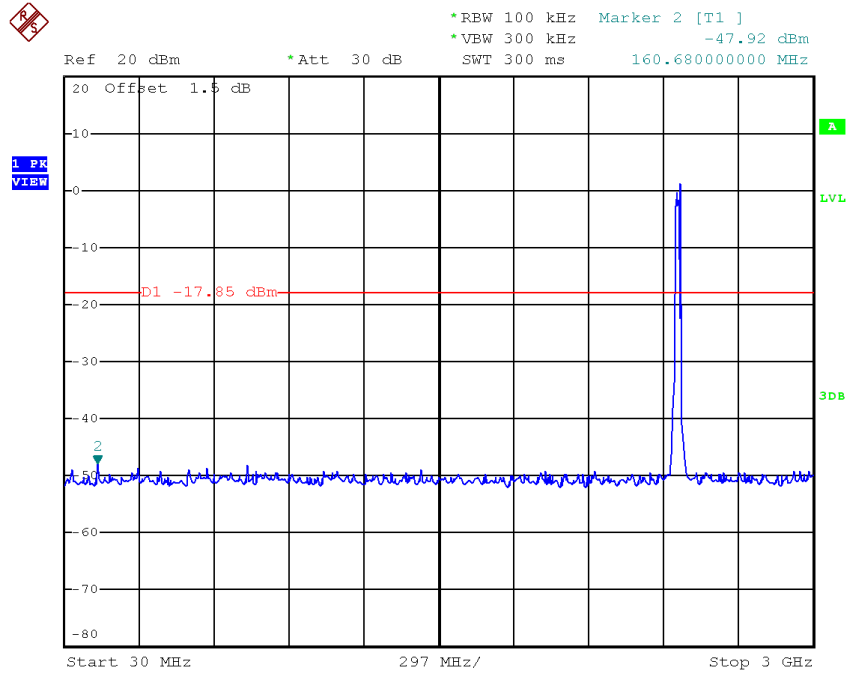


Date: 23.NOV.2017 19:50:17

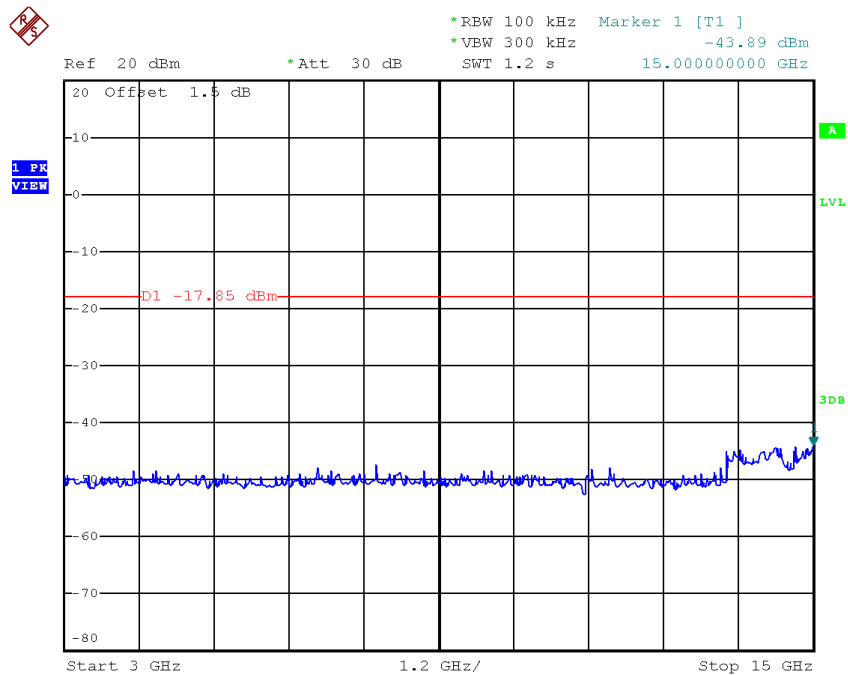


Date: 23.NOV.2017 19:50:25

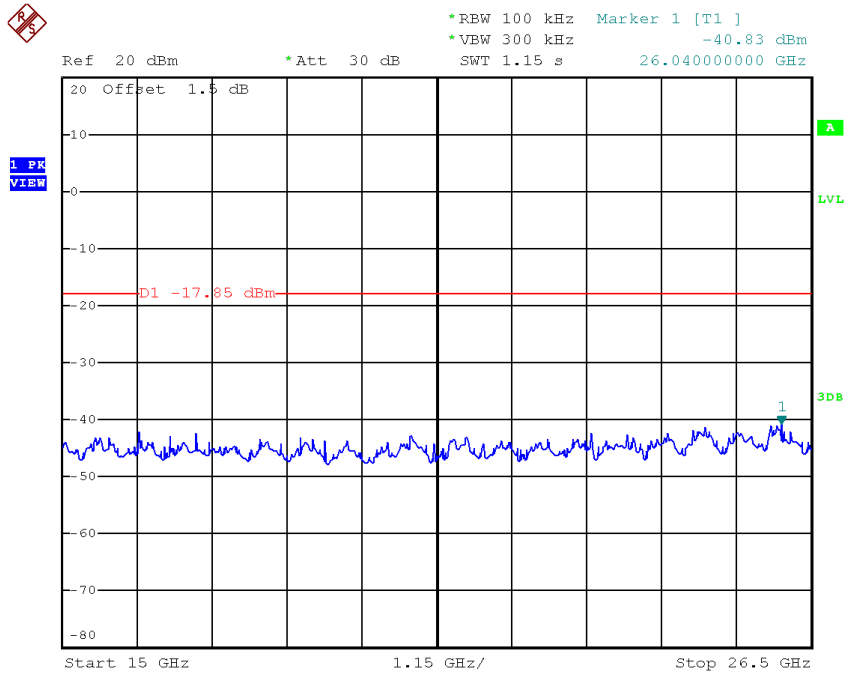
### TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 23.NOV.2017 19:52:06



Date: 23.NOV.2017 19:52:14



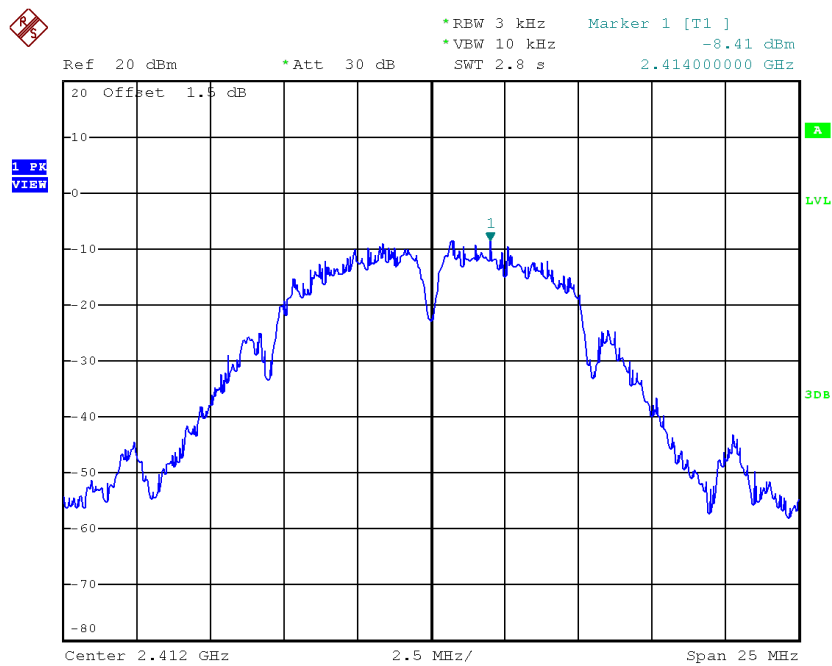
Date: 23.NOV.2017 19:52:22

## APPENDIX H - POWER SPECTRAL DENSITY

Test Mode :TX B Mode\_CH01/06/11

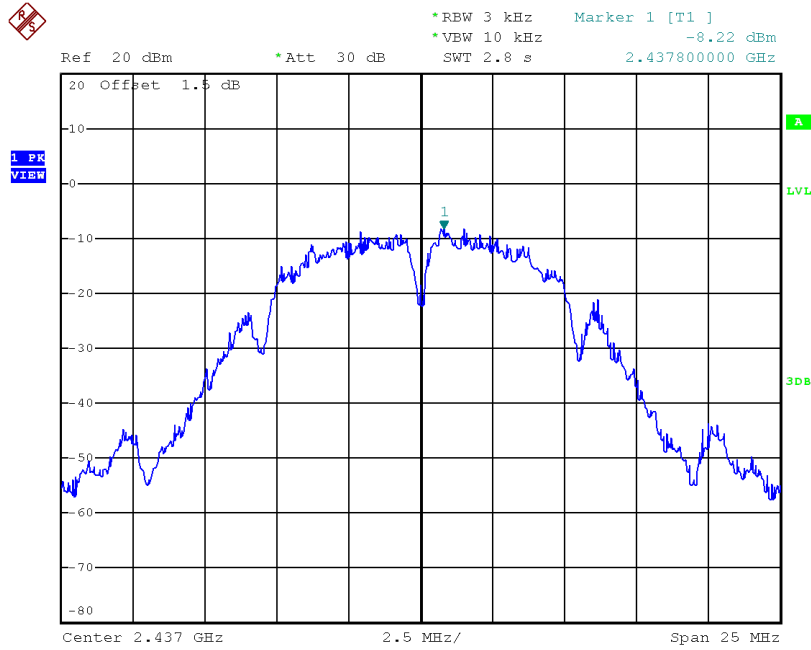
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-8.41	0.1442	8.00	Complies
2437	-8.22	0.1507	8.00	Complies
2462	-5.43	0.2864	8.00	Complies

TX CH01



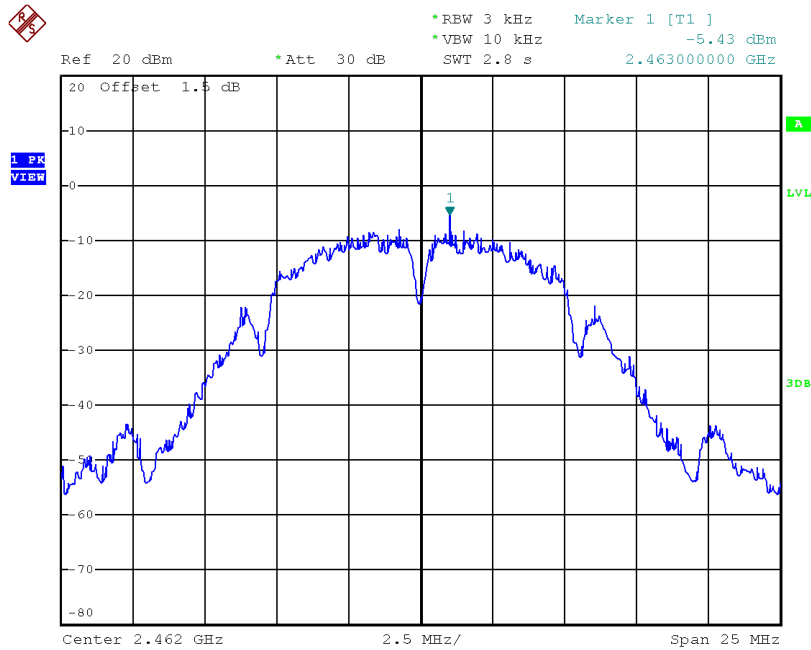
Date: 23.NOV.2017 19:36:42

### TX CH06



Date: 23.NOV.2017 19:39:04

### TX CH11

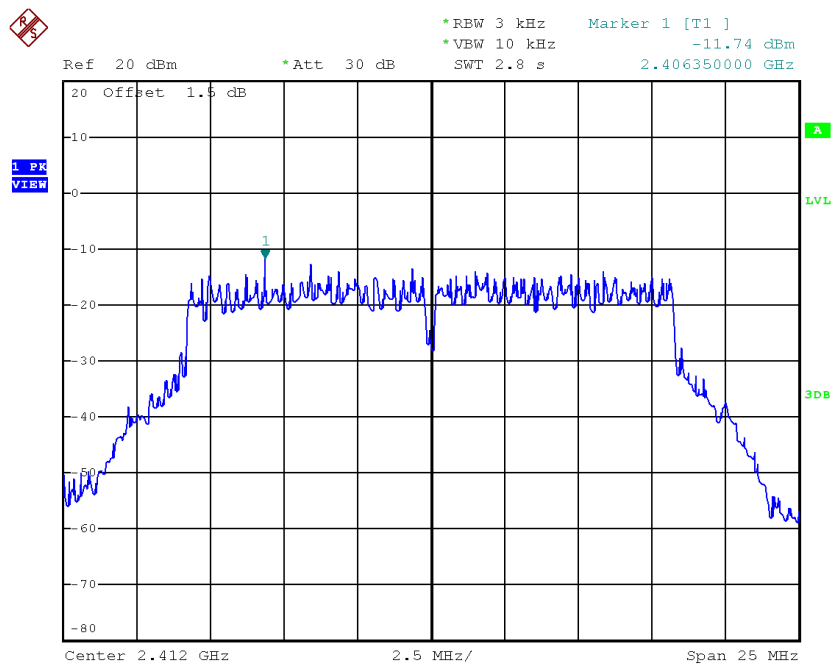


Date: 23.NOV.2017 19:40:35

Test Mode :TX G Mode\_CH01/06/11

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.74	0.0670	8.00	Complies
2437	-11.84	0.0655	8.00	Complies
2462	-11.51	0.0706	8.00	Complies

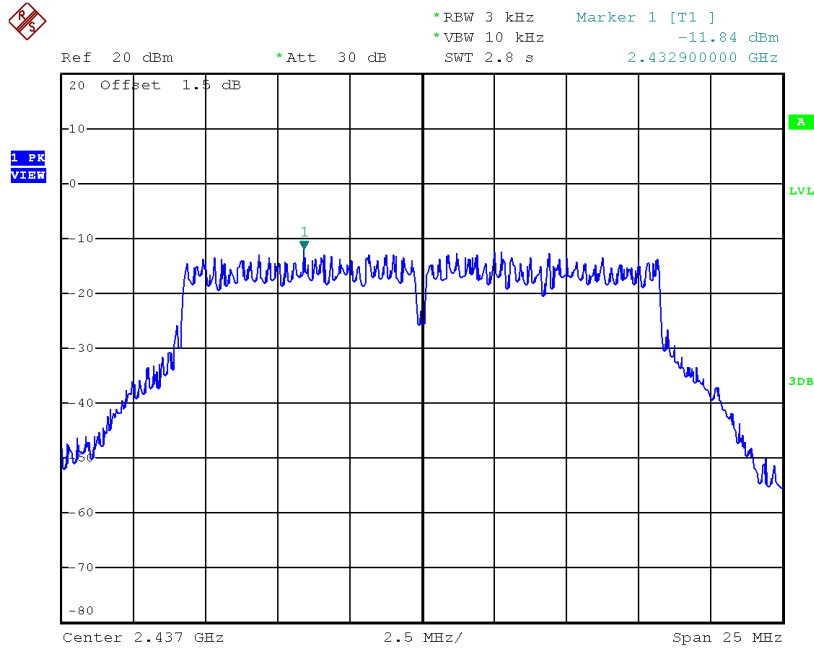
TX CH01



Date: 23.NOV.2017 19:44:01

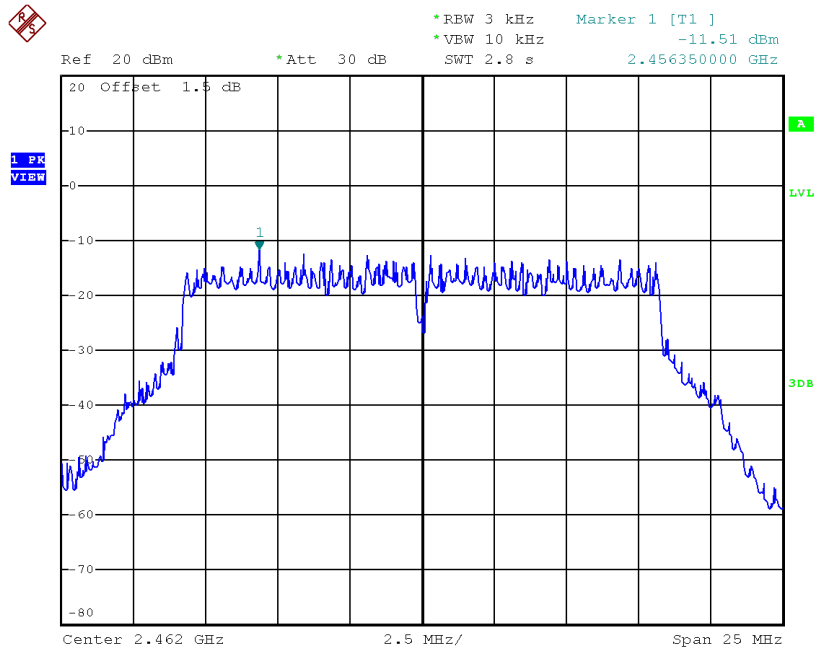


### TX CH06



Date: 23.NOV.2017 19:45:12

### TX CH11

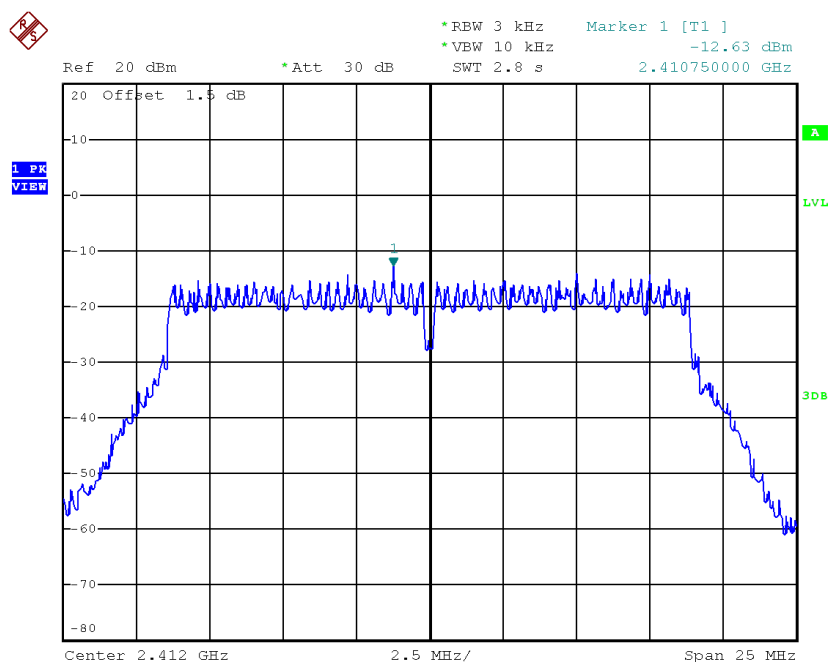


Date: 23.NOV.2017 19:47:15

Test Mode : TX N-20M Mode\_CH01/06/11

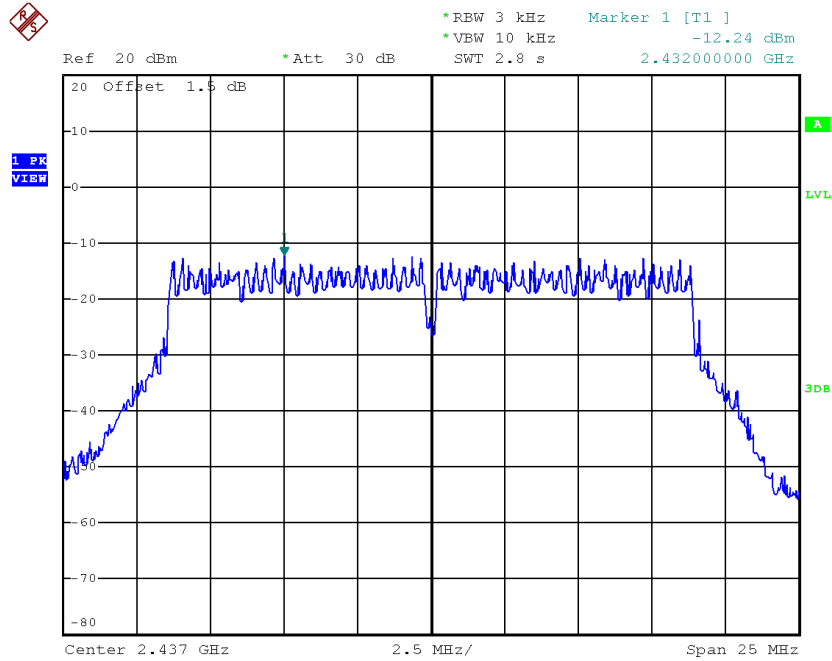
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-12.63	0.0546	8.00	Complies
2437	-12.24	0.0597	8.00	Complies
2462	-13.20	0.0479	8.00	Complies

TX CH01



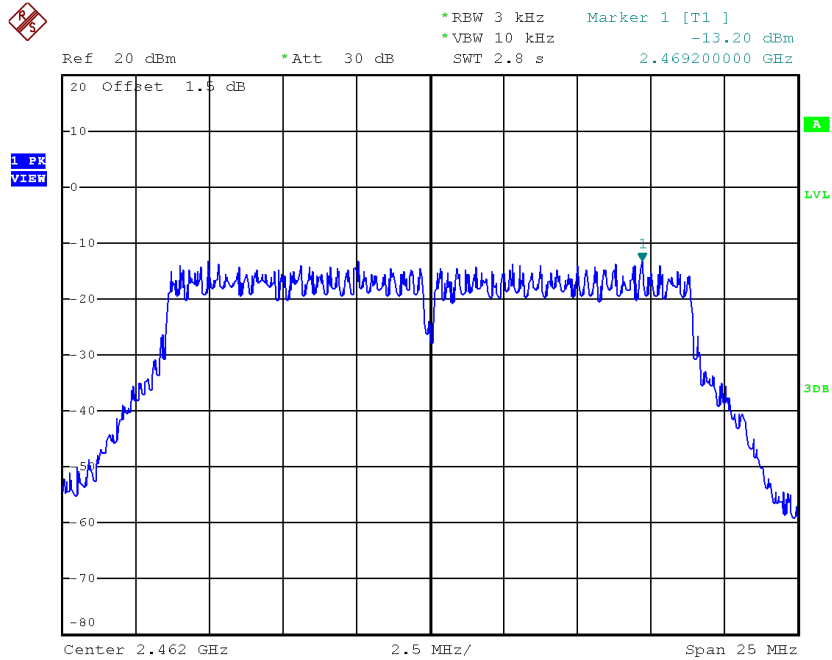
Date: 23.NOV.2017 19:49:21

### TX CH06



Date: 23.NOV.2017 19:50:36

### TX CH11



Date: 23.NOV.2017 19:52:33