FCC Radio Test Report

FCC ID: 2AC8OCOUNTER

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

Project No.	:	1702C035
Equipment	:	Smiirl counter
Test Model	:	SMIIRL COUNTER FACEBOOK 7D
Series Model	:	SMIIRL COUNTER FACEBOOK 5D, SMIIRL COUNTER INSTAGRAM 7D, SMIIRL COUNTER INSTAGRAM 5D, SMIIRL COUNTER CUSTOM 7D, SMIIRL COUNTER CUSTOM 5D
Applicant	:	Smiirl
Address	:	10 rue de Penthievre Paris 75008 France

Date of Receipt	:	Feb. 09, 2017
Date of Test	:	Feb. 09, 2017 ~ Jul. 10, 2017
Issued Date	:	Jul. 11, 2017
Tested by	:	BTL Inc.

Testing Engineer : Vitas zhou
(Vitas Zhou)

Technical Manager : David Mao
(David Mao)

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(Steven Lu)

BTL INC.

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Declaration

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

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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.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1702C035	Original Issue.	Jul. 11, 2017

1. CERTIFICATION

Equipment	:	Smiirl counter
Brand Name	:	Smiirl
Test Model	:	SMIIRL COUNTER FACEBOOK 7D
Series Model	:	SMIIRL COUNTER FACEBOOK 5D, SMIIRL COUNTER INSTAGRAM 7D, SMIIRL COUNTER INSTAGRAM 5D, SMIIRL COUNTER CUSTOM 7D, SMIIRL COUNTER CUSTOM 5D
Applicant	:	Smiirl
Manufacturer	:	Smiirl
Address	:	10 rue de Penthievre Paris 75008 France
Factory	:	Aztech Communication Device (DG) Ltd
Address	:	Jiu Jiang Shui Village, Chang Ping Town, Dong Guan City, Guang Dong Province, China.
Date of Test	:	Feb. 09, 2017 ~ Jul. 10, 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-1-1702C035) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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: 319330

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement y ± U, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

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	Smiirl counter	
Brand Name	Smiirl	
Test Model	SMIIRL COUNTER FACEBOOK 7D	
Series Model	SMIIRL COUNTER FACEBOOK 5D, SMIIRL COUNTER INSTAGRAM 7D, SMIIRL COUNTER INSTAGRAM 5D, SMIIRL COUNTER CUSTOM 7D, SMIIRL COUNTER CUSTOM 5D	
Model Difference	2 motor with cards	
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: 21.86dBm 802.11g: 24.34dBm 802.11n(20MHz): 24.64dBm 802.11n(40MHz): 24.09dBm
Power Source	DC voltage supplied from AC/DC adapter. Brand/ Model: AMIGO / AMS35-0501000F	
Power Rating	I/P: 100-240V~50/60Hz 0.5A O/P: 5V ⎓ 1.0A	

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) CH03 – CH09 for 802.11n(40MHz)							
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	Chip	N/A	2
2	N/A	N/A	Chip	N/A	2

Note: Only one antenna is used for transmitting and the other one is used for receiving only.

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	TX N-40MHZ MODE CHANNEL 03/06/09
Mode 5	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 5	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
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09

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
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09

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
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09

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
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09

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
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09

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)
802.11n HT40 mode : BPSK (13.5Mbps)
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.

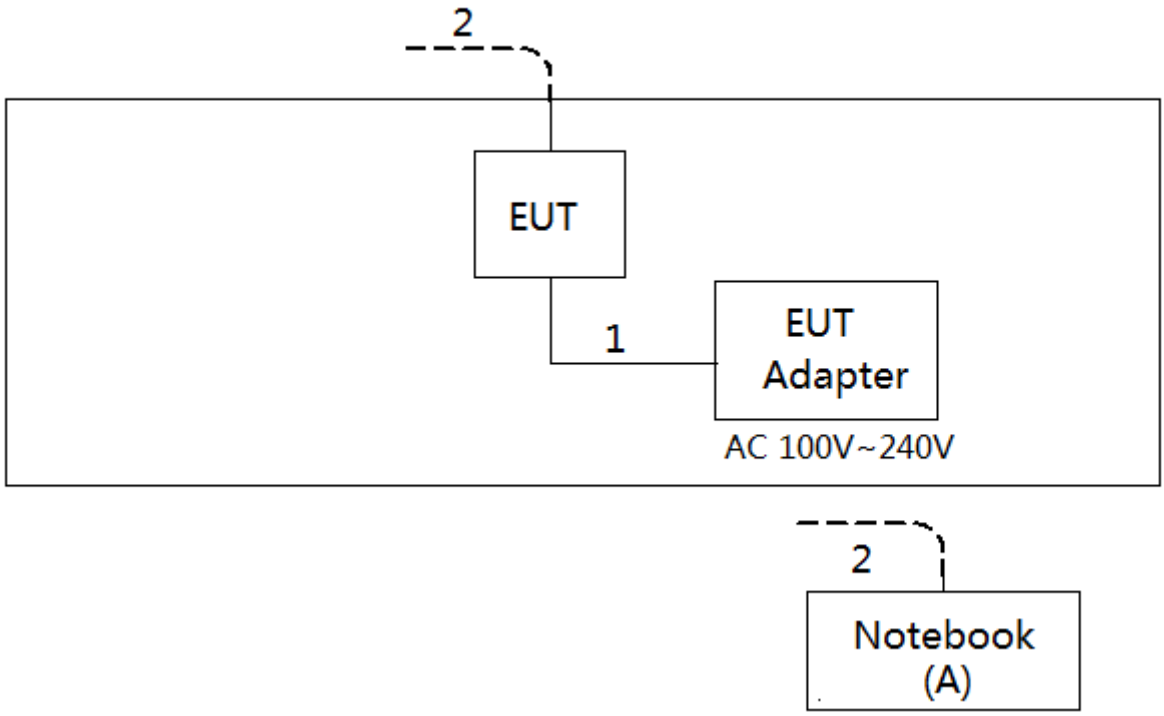
(4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

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	artgui.exe		
Frequency (MHz)	2412	2437	2462
802.11b	14	15	15
802.11g	14	15	14
802.11n (20MHz)	14	15	15
Frequency	2422	2437	2452
802.11n (40MHz)	14	15	14

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.
A	NOTEBOOK	Dell 745	DCSM	DOC	G7K832X

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

Note:

(1) For detachable type I/O cable should be specified the length in m in『Length』column.

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

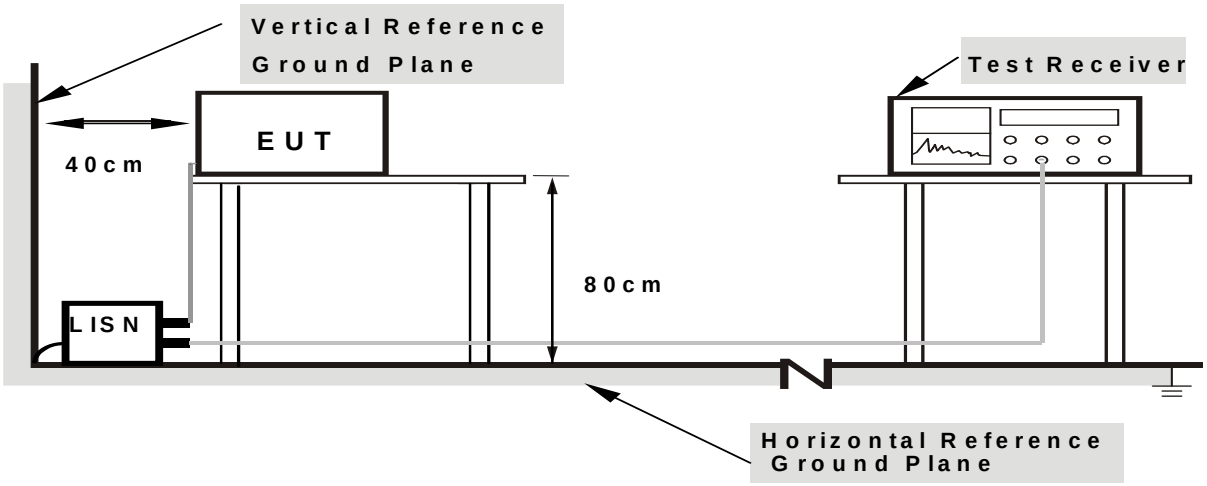
4.1.2 TEST PROCEDURE

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 equipments 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 Attachment 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

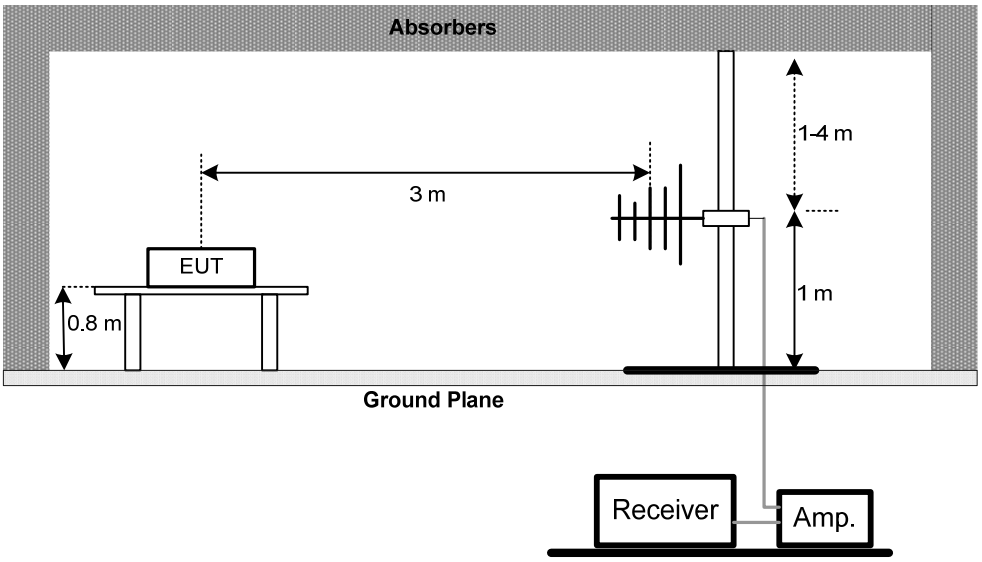
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
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 1GHz)
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 1GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

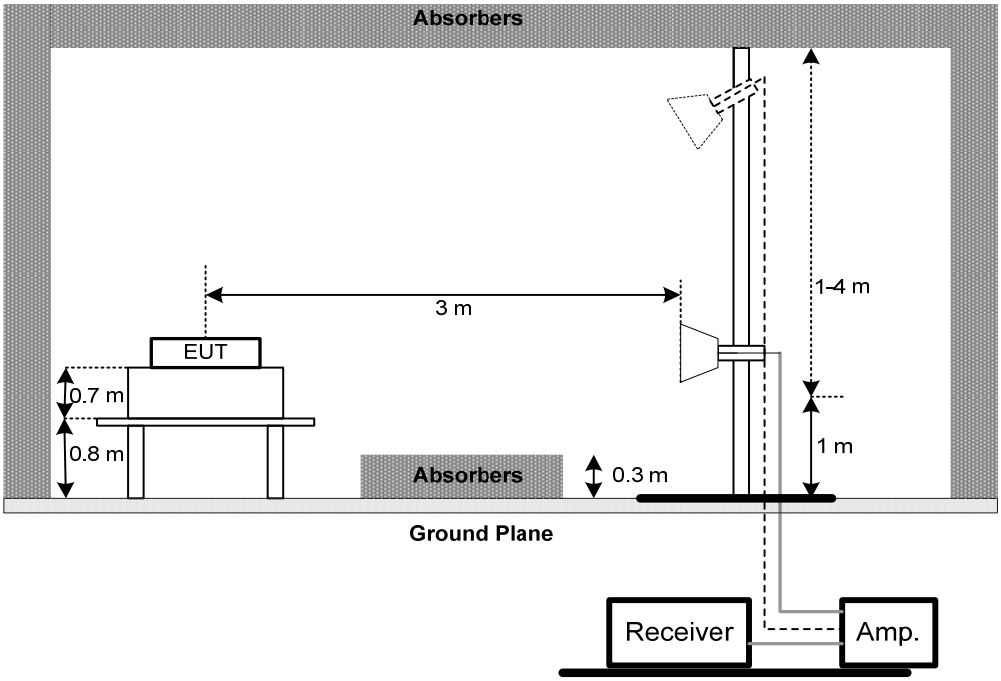
No deviation

4.2.4 TEST SETUP

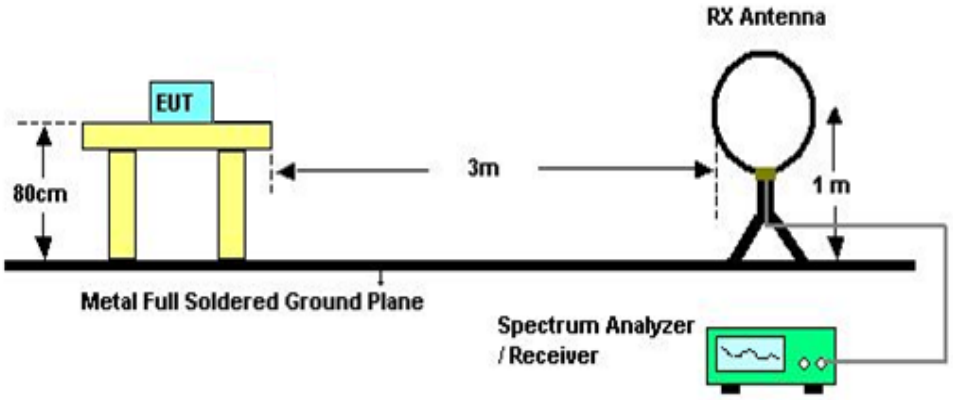
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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 Attachment 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 (specific distance / test distance) (dB).
(3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment 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

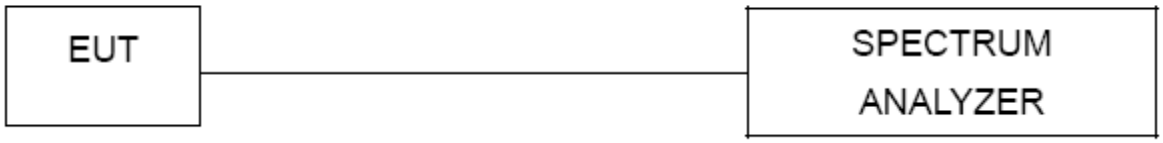
5.1.1 TEST PROCEDURE

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= 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 Attachment 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

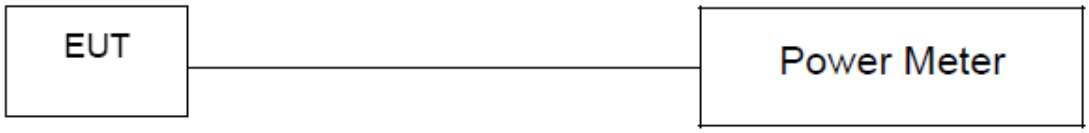
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
b. 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 Attachment 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.

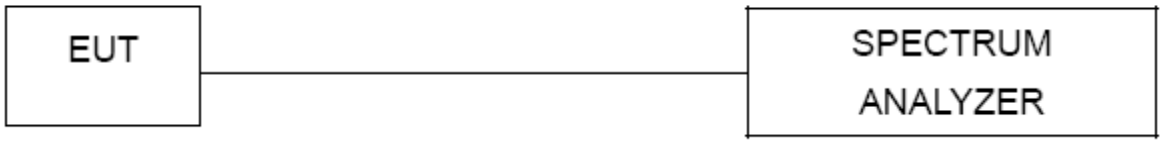
7.1.1 TEST PROCEDURE

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= 100KHz, VBW=300KHz, Sweep time = Auto.
c. 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 Attachment 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

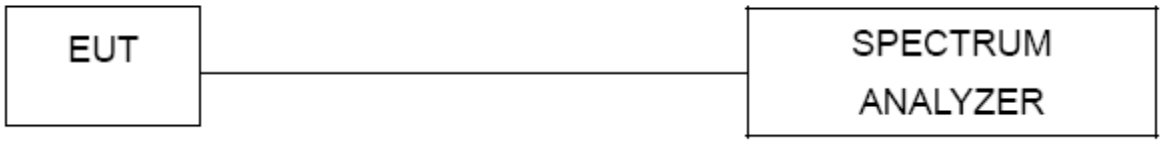
8.1.1 TEST PROCEDURE

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=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 Attachment H.

9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	0052765	Mar. 26, 2018
2	LISN	R&S	ENV216	101447	Mar. 26, 2018
3	Test Cable	emci	RG223(9KHz -30MHz)	C_17	Oct. 20, 2017
4	EMI Test Receiver	R&S	ESCI	100382	Mar. 26, 2018
5	50Ω Terminator	SHX	TF2-3G-A	08122901	Mar. 26, 2018
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1 -01	N/A	N/A

Radiated Emission Measurement					
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	Oct. 20, 2017
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 04, 2017
4	Test Cable	emci	LMR-400(30MHz-1GHz)	C-01	Jun. 26, 2018
5	Control	CT	SC100	N/A	N/A
6	Position Control	MF	MF-7802	MF780208416	N/A
7	Antenna	ETS	3115	00075789	Mar. 26, 2018
8	Amplifier	Agilent	8449B	3008A02274	May 16, 2018
9	Receiver	AGILENT	N9038A	MY52130039	Sep. 04, 2017
10	Test Cable	emci	EMC104-SM-SM-10000(1GHz－26.5GHz)	C-68	Jun. 26, 2018
11	Controller	CT	SC100	N/A	N/A
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 08, 2018
13	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 26, 2018
14	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Sep. 06, 2017
15	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Sep. 04, 2017

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Sep. 04, 2017
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Sep. 04, 2017

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Sep. 04, 2017

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Sep. 04, 2017

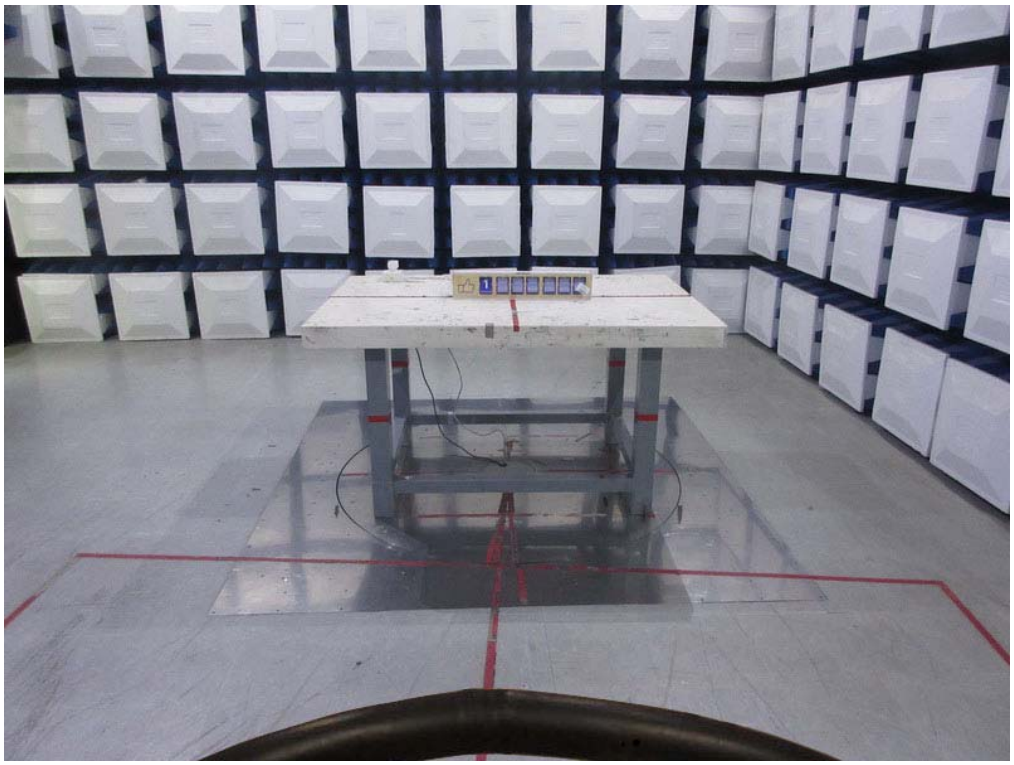
Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

10. EUT TEST PHOTO

Conducted Measurement Photos

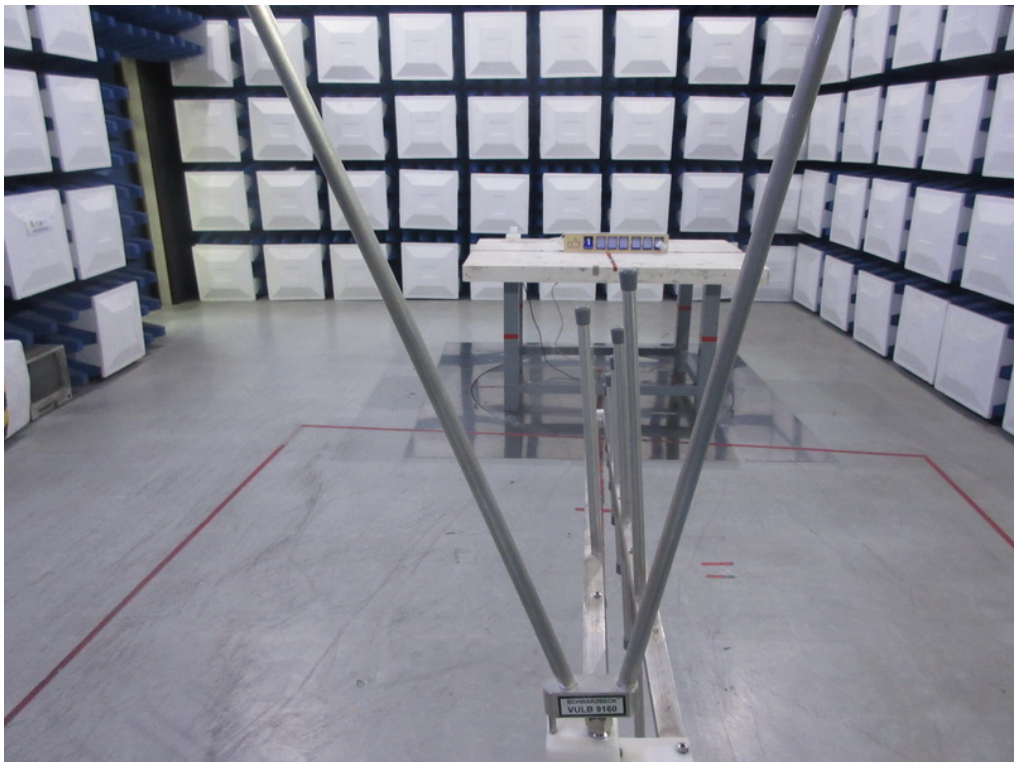
Radiated Measurement Photos

9KHz to 30MHz



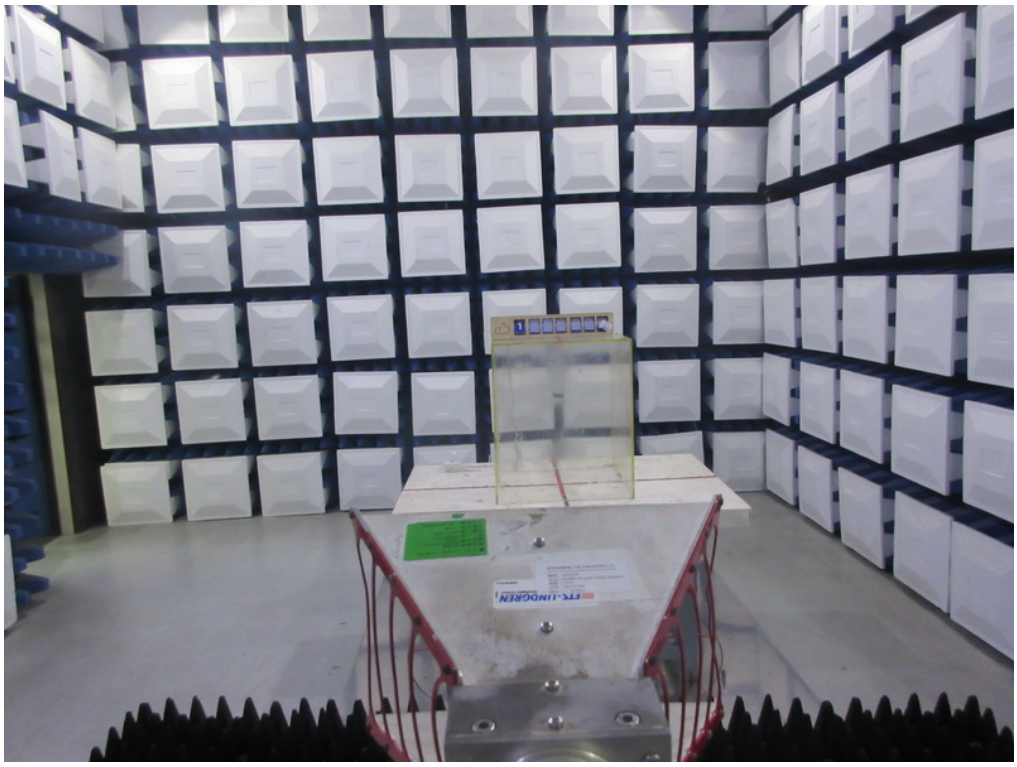
Radiated Measurement Photos

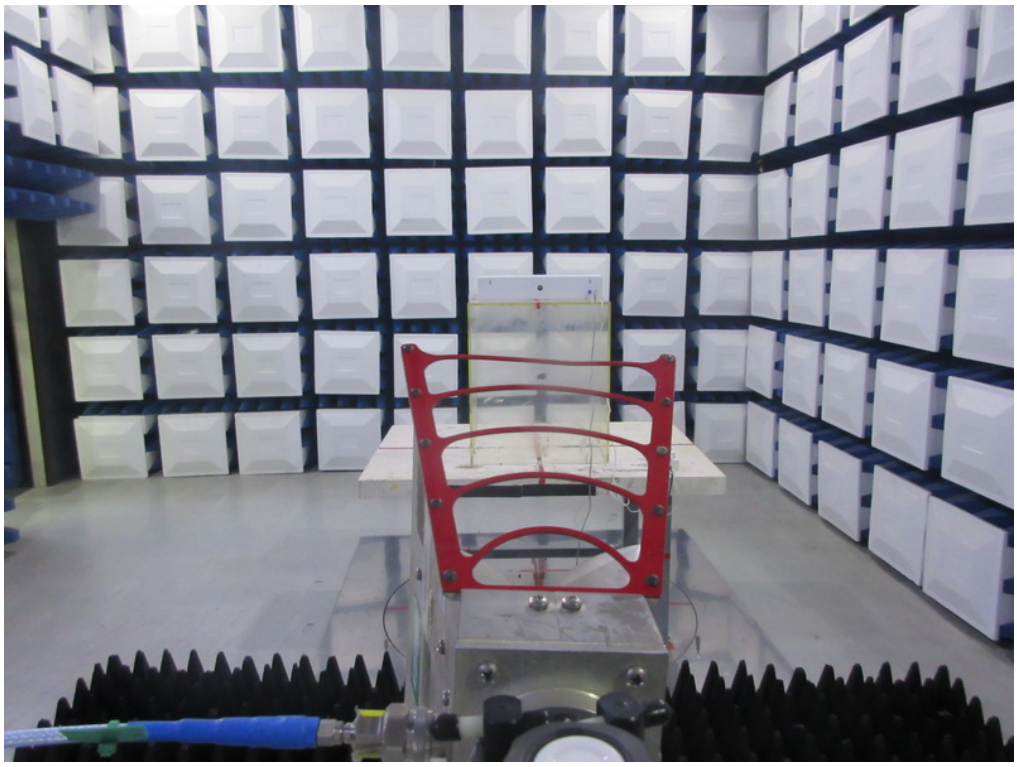
30MHz to 1000MHz



Radiated Measurement Photos

Above 1000MHz

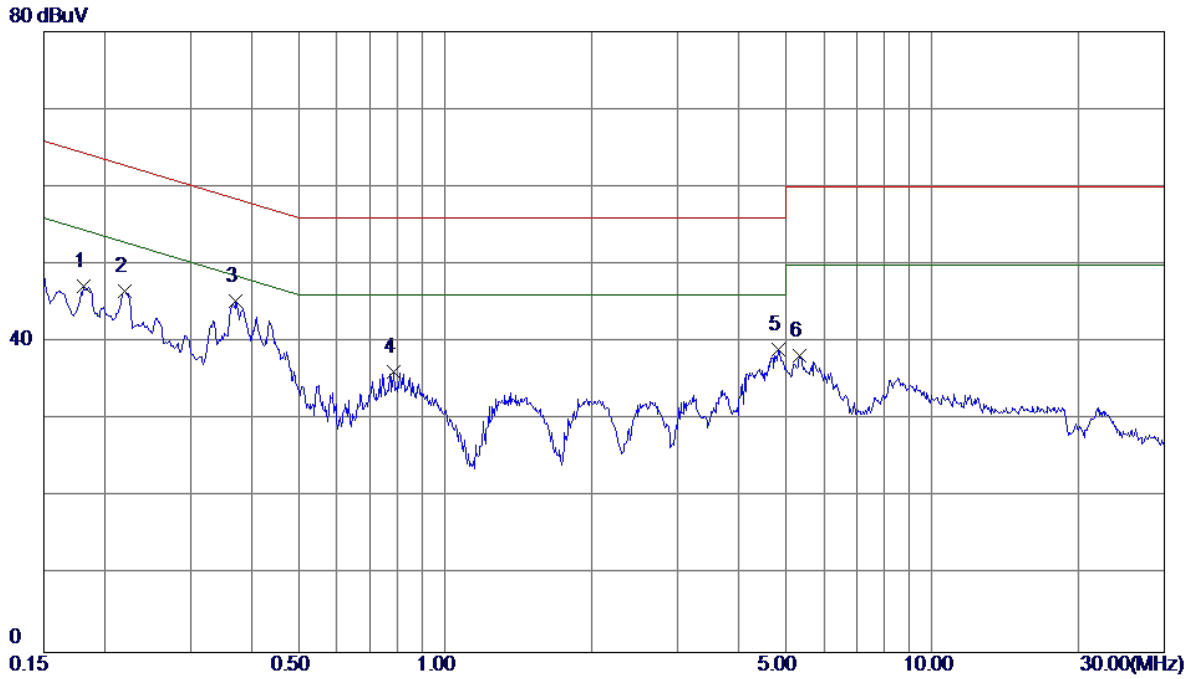




ATTACHMENT A - CONDUCTED EMISSION

Test Mode :	Normal Link

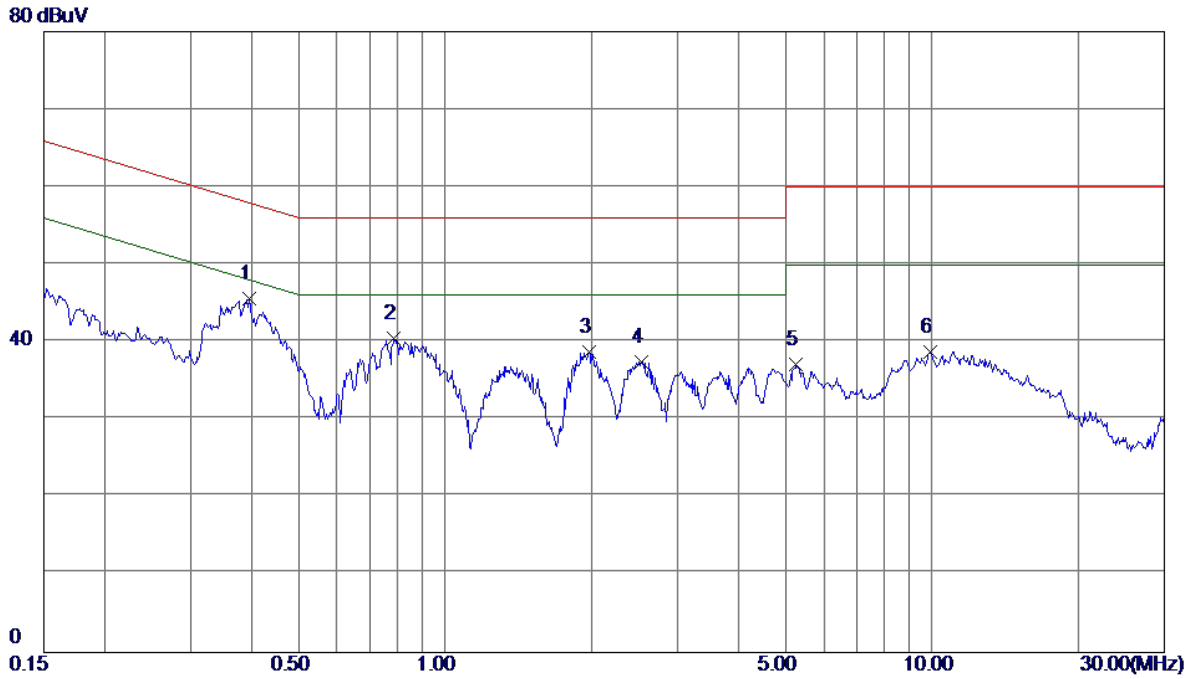
Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1814	37.50	9.66	47.16	64.42	-17.26	Peak	
2	0.2197	36.79	9.72	46.51	62.83	-16.32	Peak	
3 *	0.3724	35.32	9.91	45.23	58.45	-13.22	Peak	
4	0.7842	26.05	10.08	36.13	56.00	-19.87	Peak	
5	4.8254	28.87	10.10	38.97	56.00	-17.03	Peak	
6	5.3452	28.16	10.12	38.28	60.00	-21.72	Peak	

Test Mode :	Normal Link

Neutral

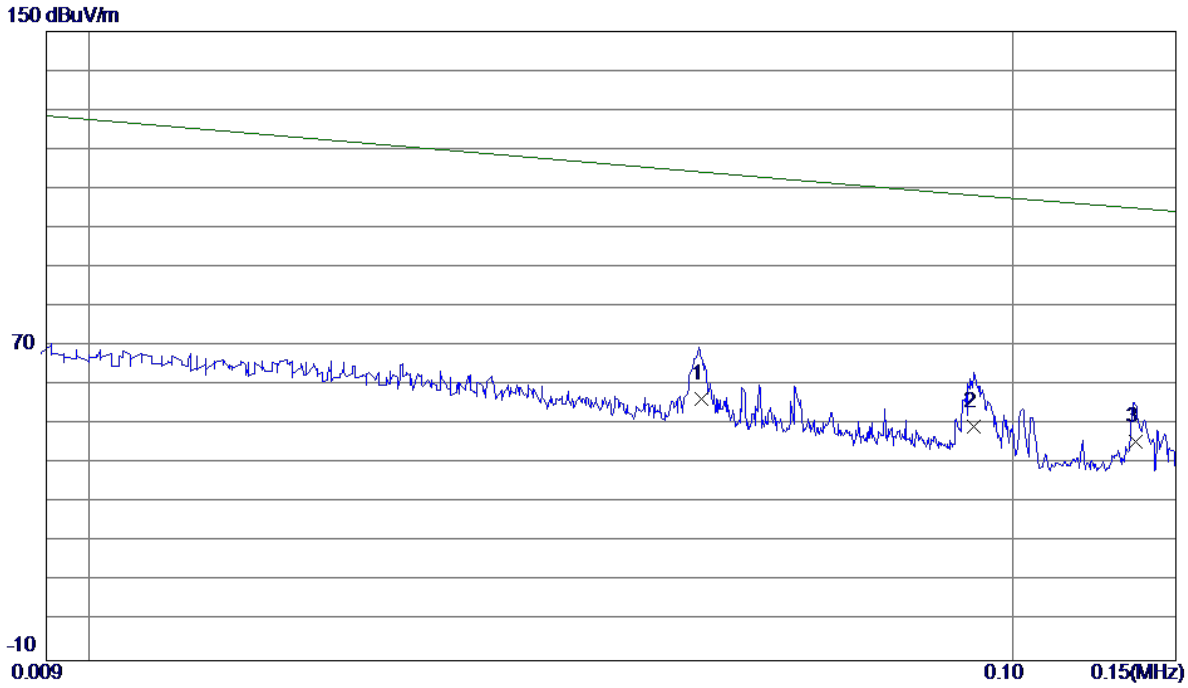


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.3951	35.89	9.76	45.65	57.96	-12.31	Peak	
2	0.7842	30.67	9.88	40.55	56.00	-15.45	Peak	
3	1.9740	28.68	10.07	38.75	56.00	-17.25	Peak	
4	2.5326	27.38	10.09	37.47	56.00	-18.53	Peak	
5	5.2552	26.83	10.31	37.14	60.00	-22.86	Peak	
6	9.9240	28.49	10.26	38.75	60.00	-21.25	Peak	

ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)

Test Mode:	TX B MODE CHANNEL 01

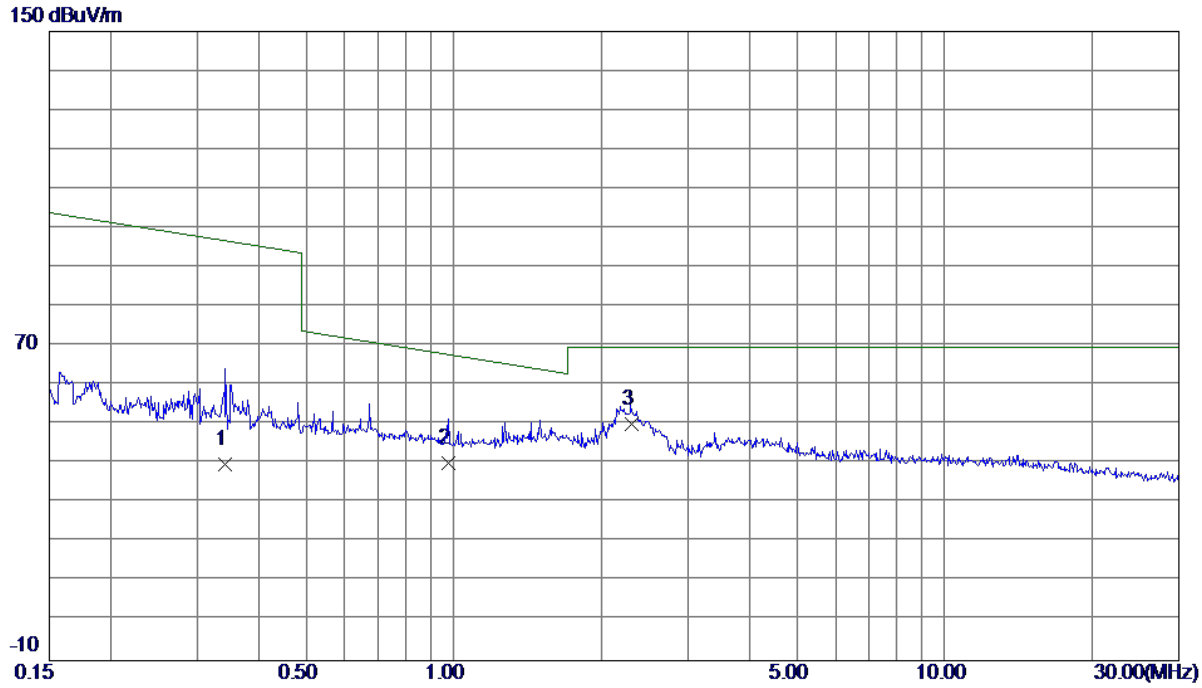
Ant 0°



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0460	36.21	20.32	56.53	119.36	-62.83	AVG	
2 *	0.0907	30.60	18.84	49.44	108.45	-59.01	AVG	
3	0.1356	27.10	18.65	45.75	105.91	-60.16	AVG	

Test Mode:	TX B MODE CHANNEL 01

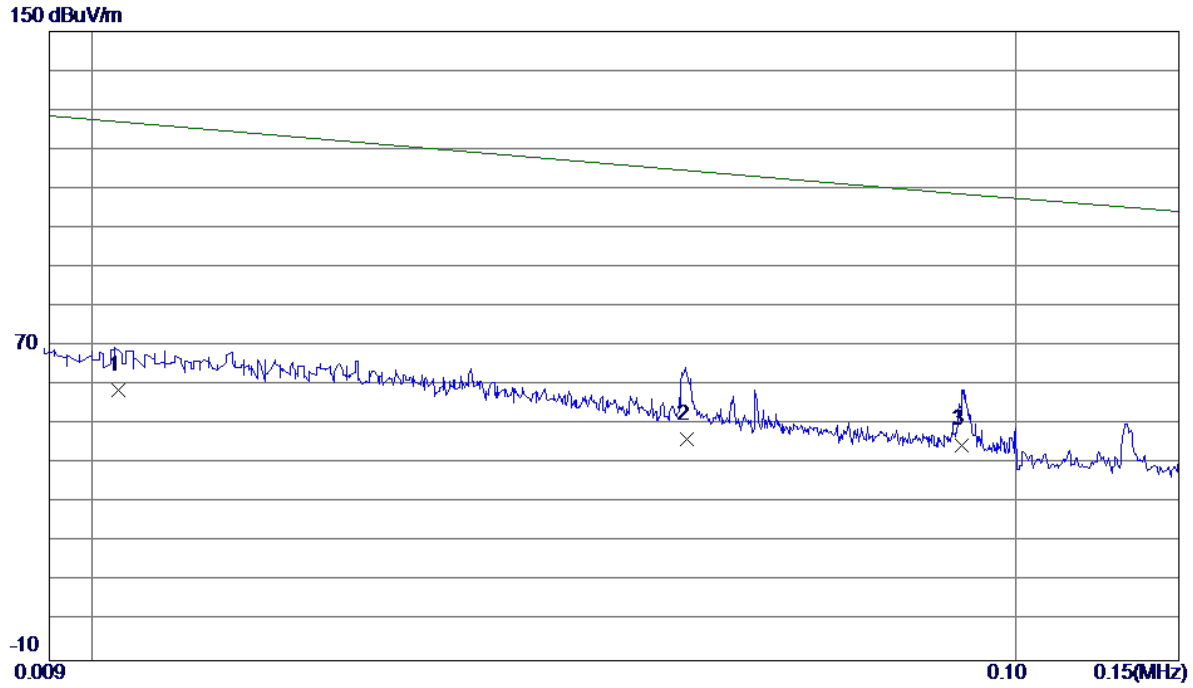
Ant 0°



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.3428	21.50	18.55	40.05	98.83	-58.78	AVG	
2	0.9735	22.50	17.76	40.26	69.49	-29.23	QP	
3 *	2.2968	32.69	17.53	50.22	69.54	-19.32	QP	

Test Mode:	TX B MODE CHANNEL 01

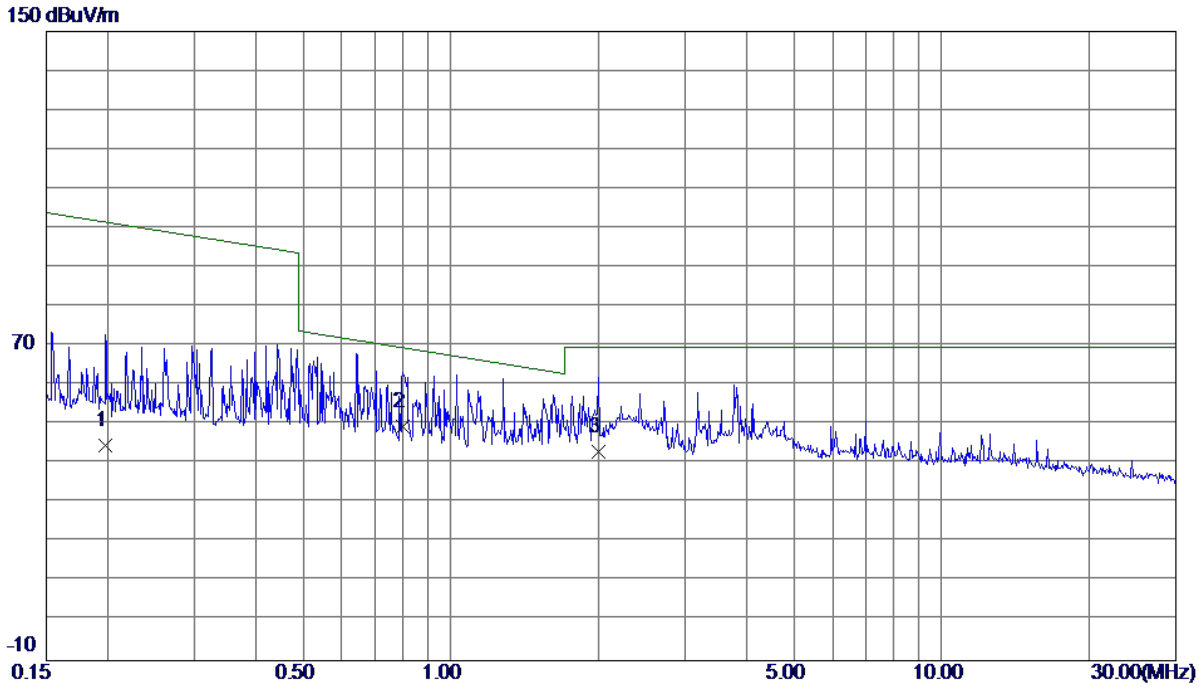
Ant 90°



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0107	34.60	24.08	58.68	128.08	-69.40	AVG	
2	0.0440	25.70	20.56	46.26	119.85	-73.59	AVG	
3 *	0.0874	25.90	18.98	44.88	109.14	-64.26	AVG	

Test Mode:	TX B MODE CHANNEL 01

Ant 90°

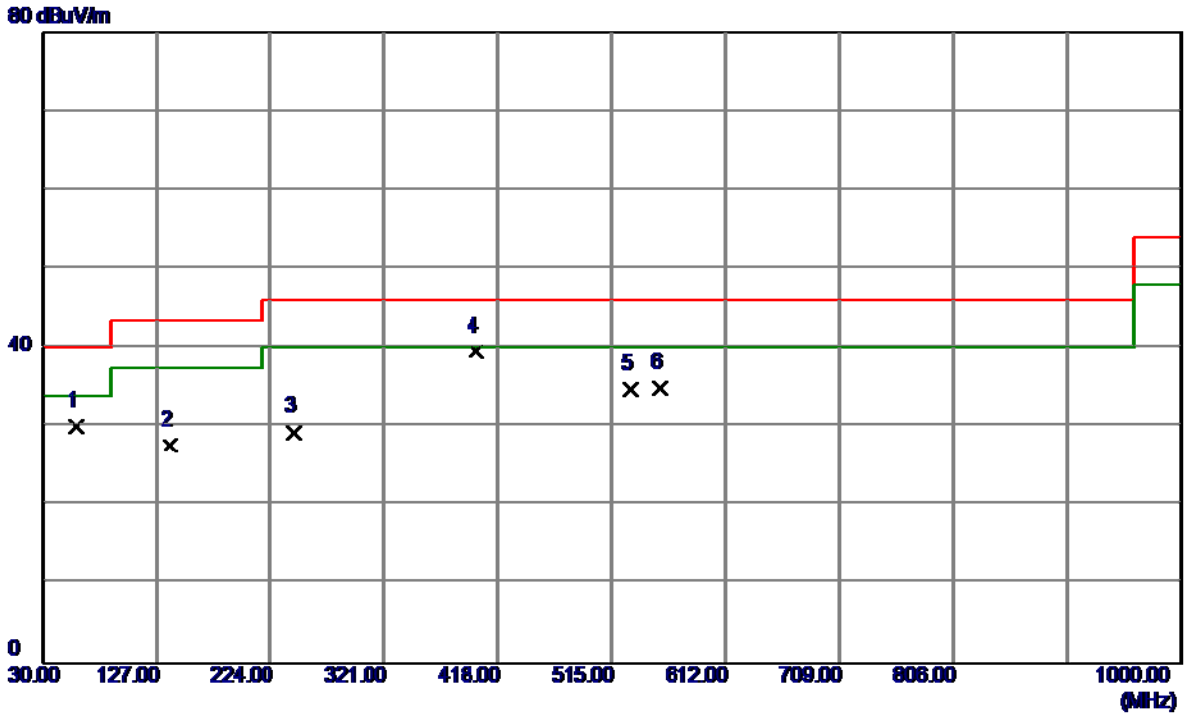


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.1976	26.09	18.70	44.79	103.79	-59.00	AVG	
2 *	0.8002	31.20	18.32	49.52	71.03	-21.51	QP	
3	2.0011	25.11	17.90	43.01	69.54	-26.53	QP	

ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)

Test Mode:	TX B MODE CHANNEL 01

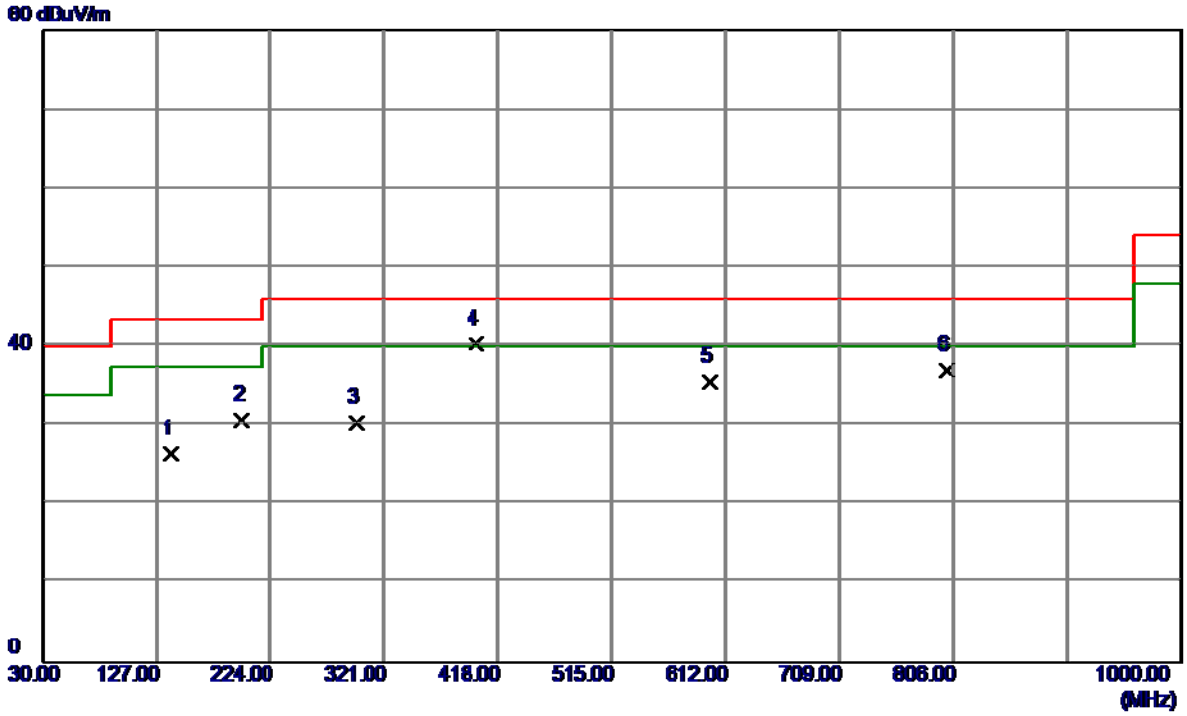
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		59.100	38.90	-8.81	30.09	40.00	-9.91	peak	
2		138.640	36.41	-8.68	27.73	43.50	-15.77	peak	
3		244.370	38.05	-8.69	29.36	46.00	-16.64	peak	
4	*	399.570	44.19	-4.71	39.48	46.00	-6.52	peak	
5		531.490	37.44	-2.79	34.65	46.00	-11.35	peak	
6		555.740	37.26	-2.35	34.91	46.00	-11.09	peak	

Test Mode:	TX B MODE CHANNEL 01

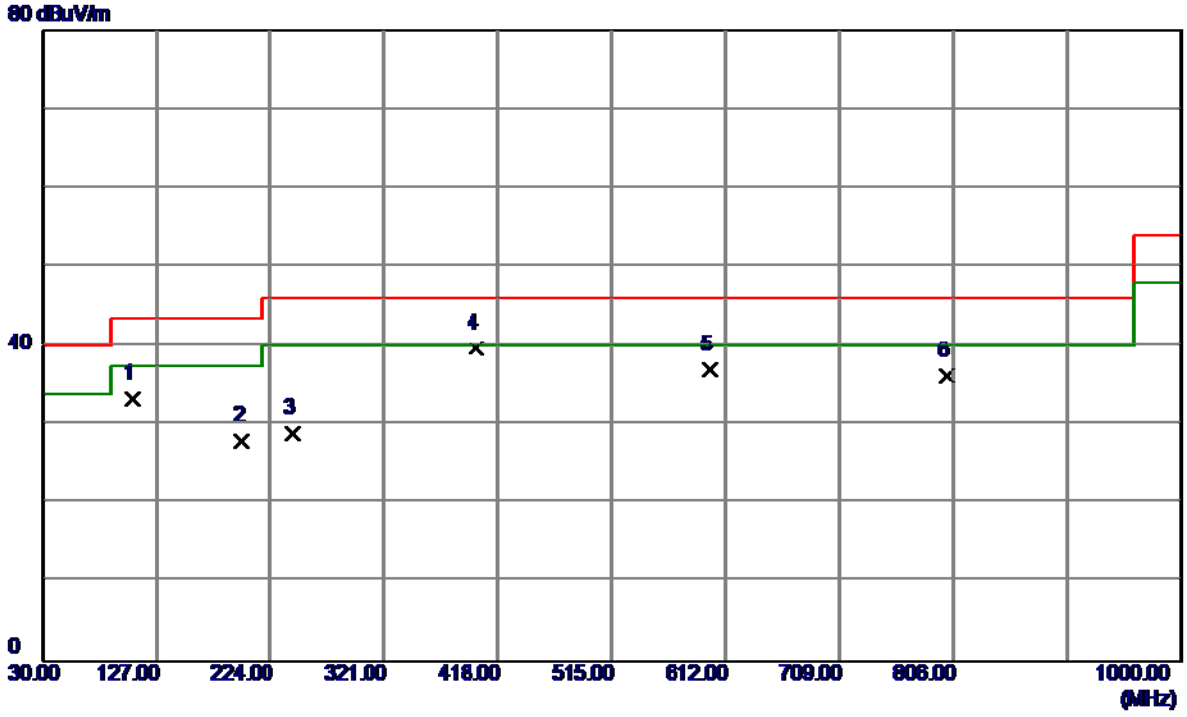
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		139.610	34.95	-8.56	26.39	43.50	-17.11	peak	
2		199.750	41.17	-10.38	30.79	43.50	-12.71	peak	
3		297.720	36.95	-6.48	30.47	46.00	-15.53	peak	
4	*	399.570	44.99	-4.71	40.28	46.00	-5.72	peak	
5		599.390	36.83	-1.25	35.58	46.00	-10.42	peak	
6		800.180	34.90	2.02	36.92	46.00	-9.08	peak	

Test Mode:	TX B MODE CHANNEL 06

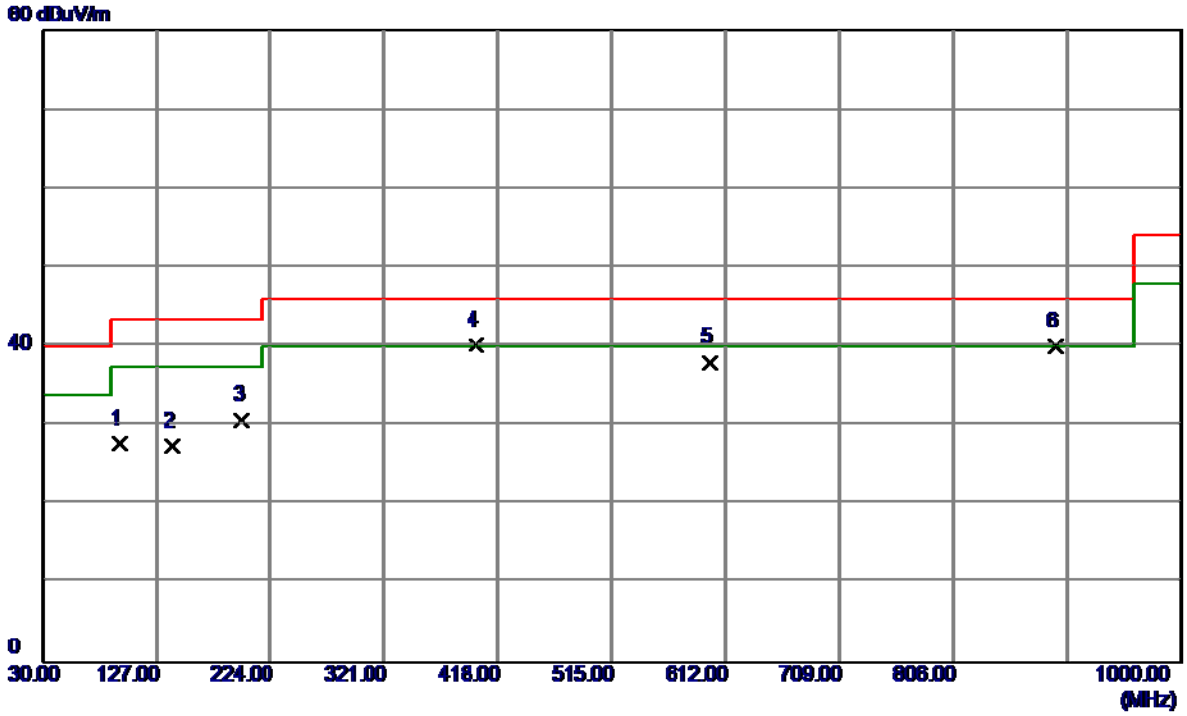
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		95.960	41.23	-13.52	27.71	43.50	-15.79	peak	
2		140.580	35.93	-8.51	27.42	43.50	-16.08	peak	
3		199.750	41.07	-10.38	30.69	43.50	-12.81	peak	
4	*	399.570	44.91	-4.71	40.20	46.00	-5.80	peak	
5		599.390	39.10	-1.25	37.85	46.00	-8.15	peak	
6		893.300	36.27	3.72	39.99	46.00	-6.01	peak	

Test Mode:	TX B MODE CHANNEL 06

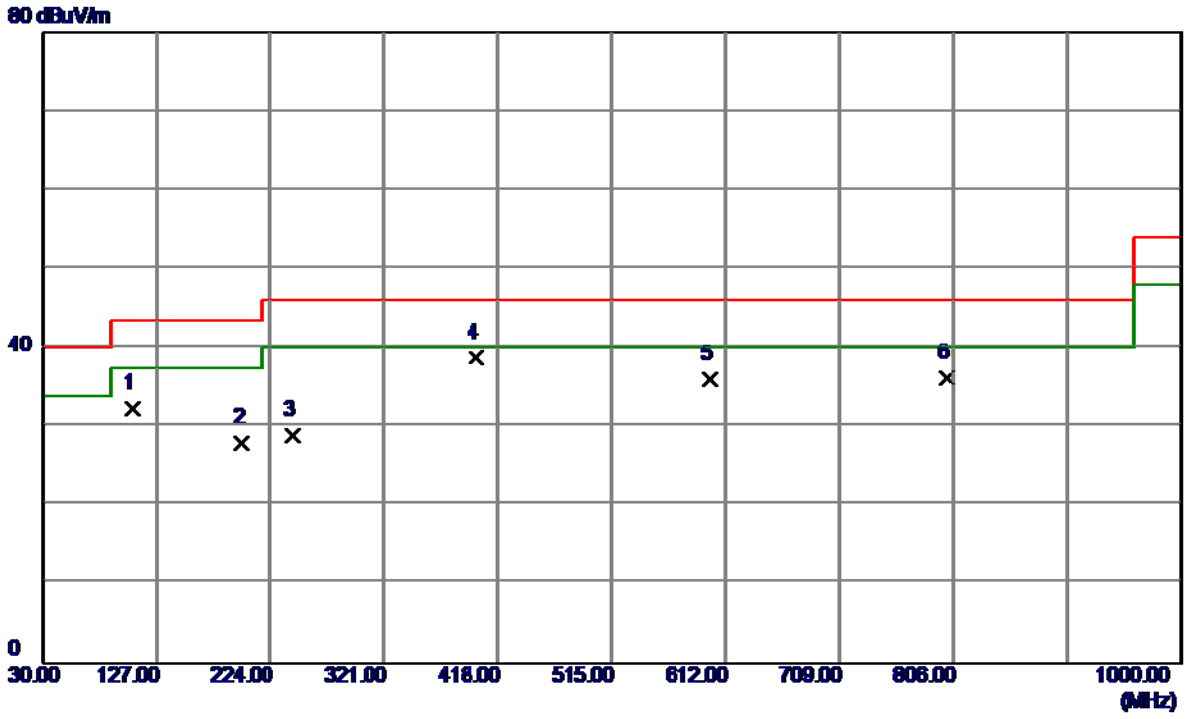
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		106.630	44.52	-11.19	33.33	43.50	-10.17	peak	
2		199.750	38.33	-10.38	27.95	43.50	-15.55	peak	
3		243.400	37.76	-8.73	29.03	46.00	-16.97	peak	
4	*	399.570	44.37	-4.71	39.66	46.00	-6.34	peak	
5		599.390	38.28	-1.25	37.03	46.00	-8.97	peak	
6		800.180	34.09	2.02	36.11	46.00	-9.89	peak	

Test Mode:	TX B MODE CHANNEL 11

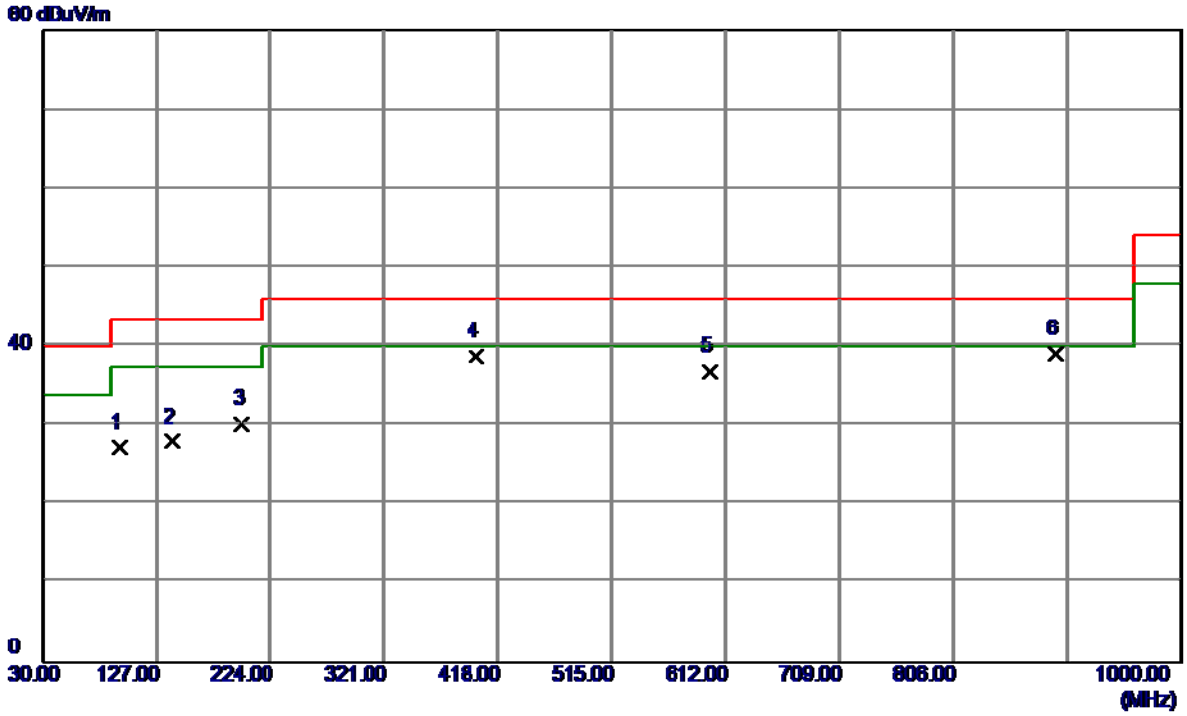
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		106.630	43.52	-11.19	32.33	43.50	-11.17	peak	
2		199.750	38.33	-10.38	27.95	43.50	-15.55	peak	
3		243.400	37.76	-8.73	29.03	46.00	-16.97	peak	
4	*	399.570	43.37	-4.71	38.66	46.00	-7.34	peak	
5		599.390	37.28	-1.25	36.03	46.00	-9.97	peak	
6		800.180	34.09	2.02	36.11	46.00	-9.89	peak	

Test Mode:	TX B MODE CHANNEL 11

Horizontal

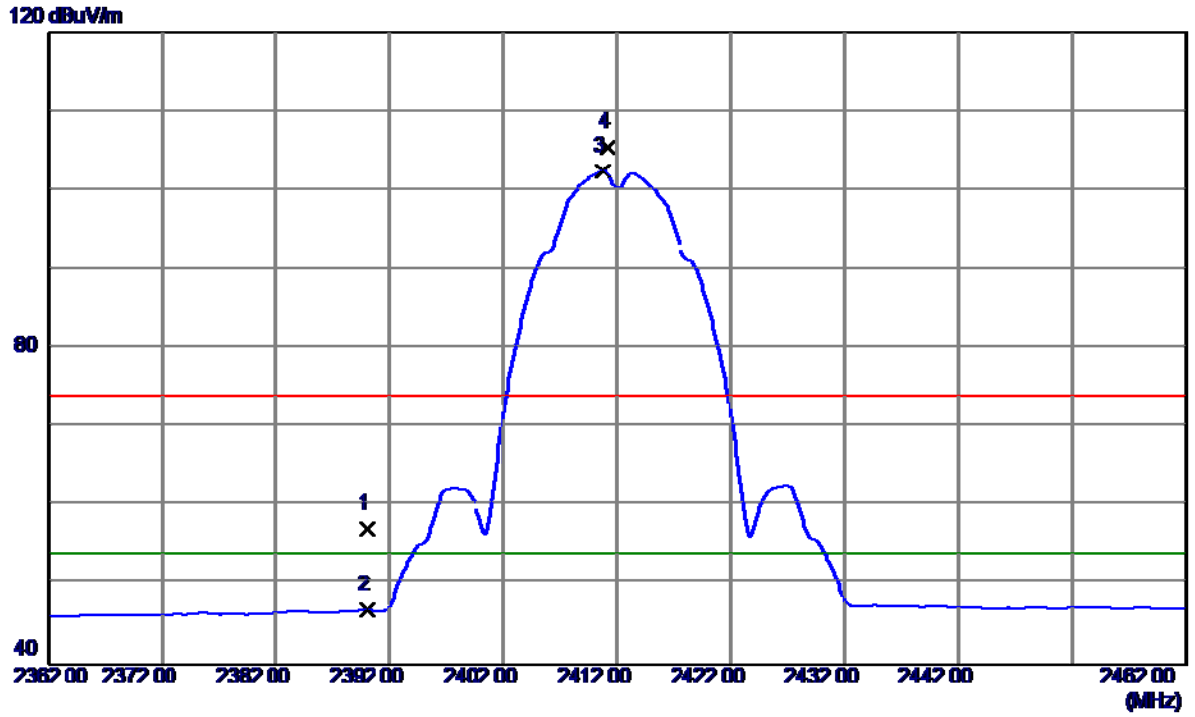


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		95.960	40.73	-13.52	27.21	43.50	-16.29	peak	
2		140.580	36.43	-8.51	27.92	43.50	-15.58	peak	
3		199.750	40.57	-10.38	30.19	43.50	-13.31	peak	
4		399.570	43.41	-4.71	38.70	46.00	-7.30	peak	
5		599.390	38.10	-1.25	36.85	46.00	-9.15	peak	
6	*	893.300	35.27	3.72	38.99	46.00	-7.01	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

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

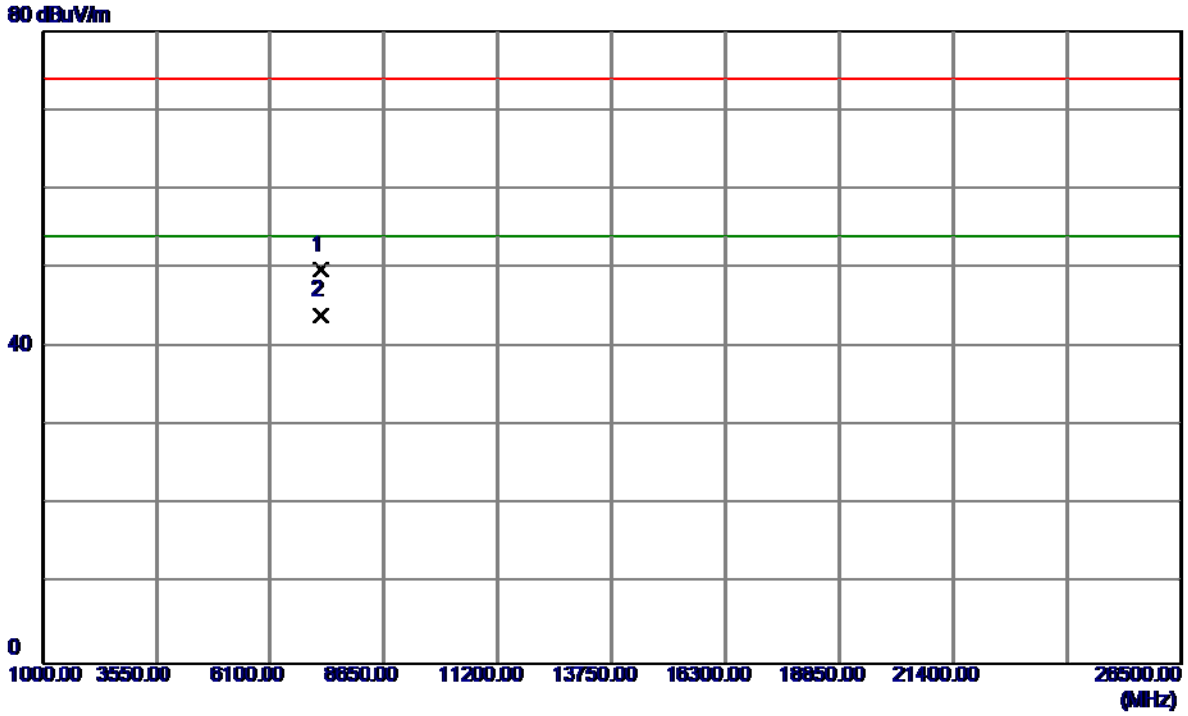
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	24.03	33.15	57.18	74.00	-16.82	Peak	
2	2390.0000	13.66	33.15	46.81	54.00	-7.19	AVG	
3 *	2410.8000	69.15	33.28	102.43	54.00	48.43	AVG	No Limit
4	2411.2000	72.12	33.29	105.41	74.00	31.41	Peak	No Limit

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

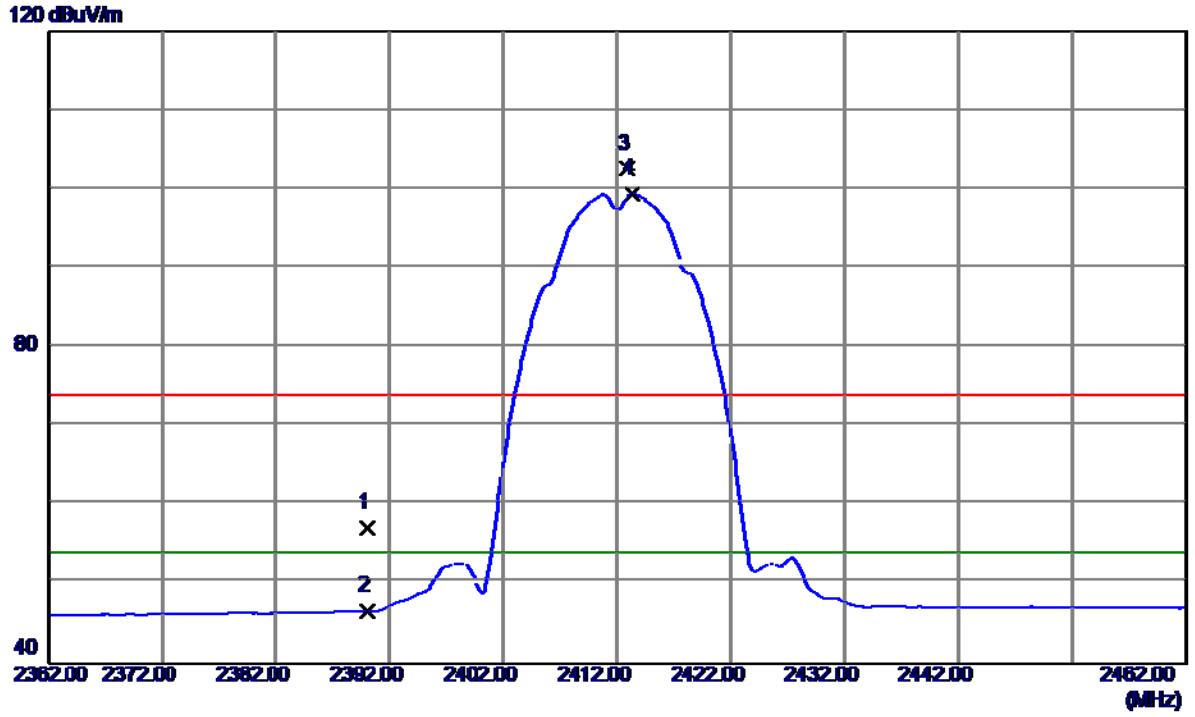
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7235.4600	37.89	11.82	49.71	74.00	-24.29	Peak	
2 *	7236.1500	32.24	11.82	44.06	54.00	-9.94	AVG	

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

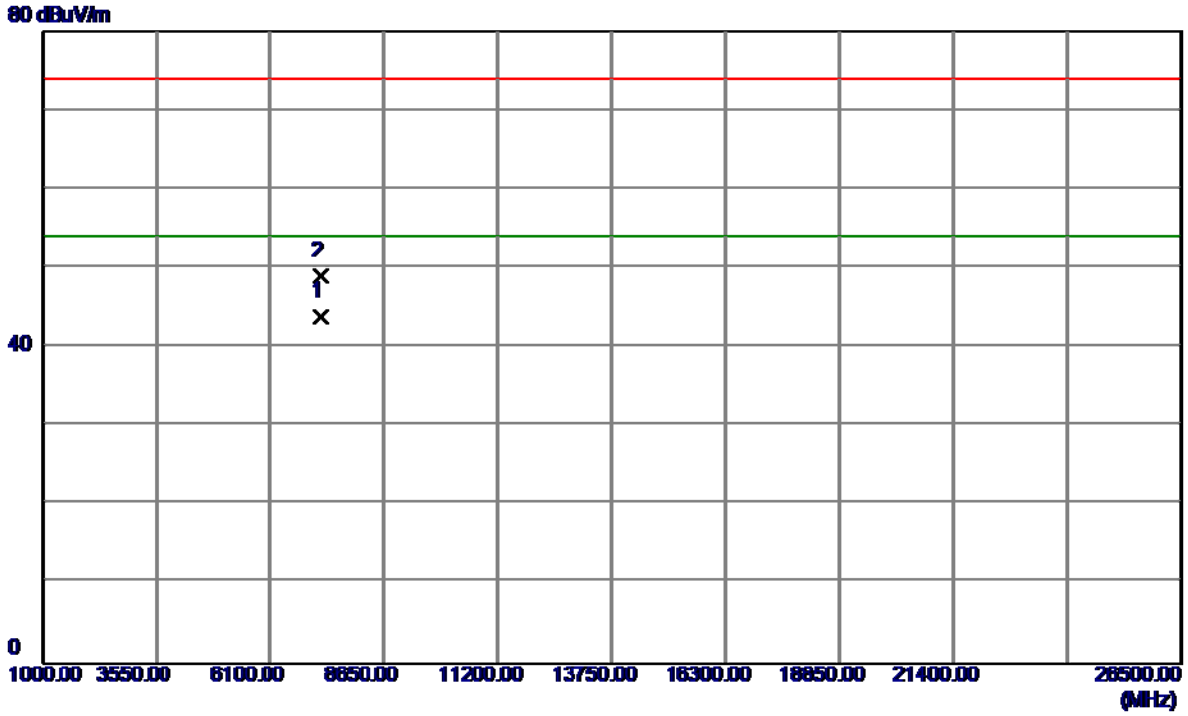
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	23.91	33.15	57.06	74.00	-16.94	Peak	
2	2390.0000	13.38	33.15	46.53	54.00	-7.47	AVG	
3	2412.9000	69.30	33.30	102.60	74.00	28.60	Peak	No Limit
4 *	2413.3000	66.12	33.30	99.42	54.00	45.42	AVG	No Limit

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

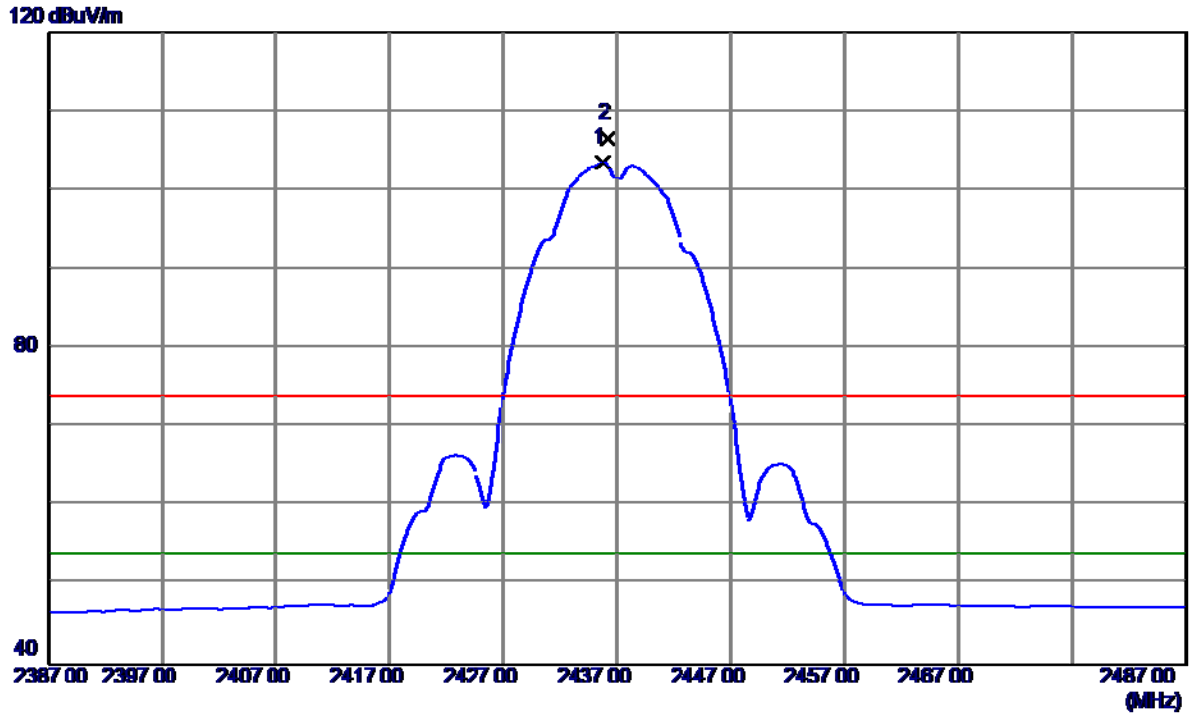
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7235.1700	33.48	10.38	43.86	54.00	-10.14	AVG	
2	7235.2800	38.63	10.39	49.02	74.00	-24.98	Peak	

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

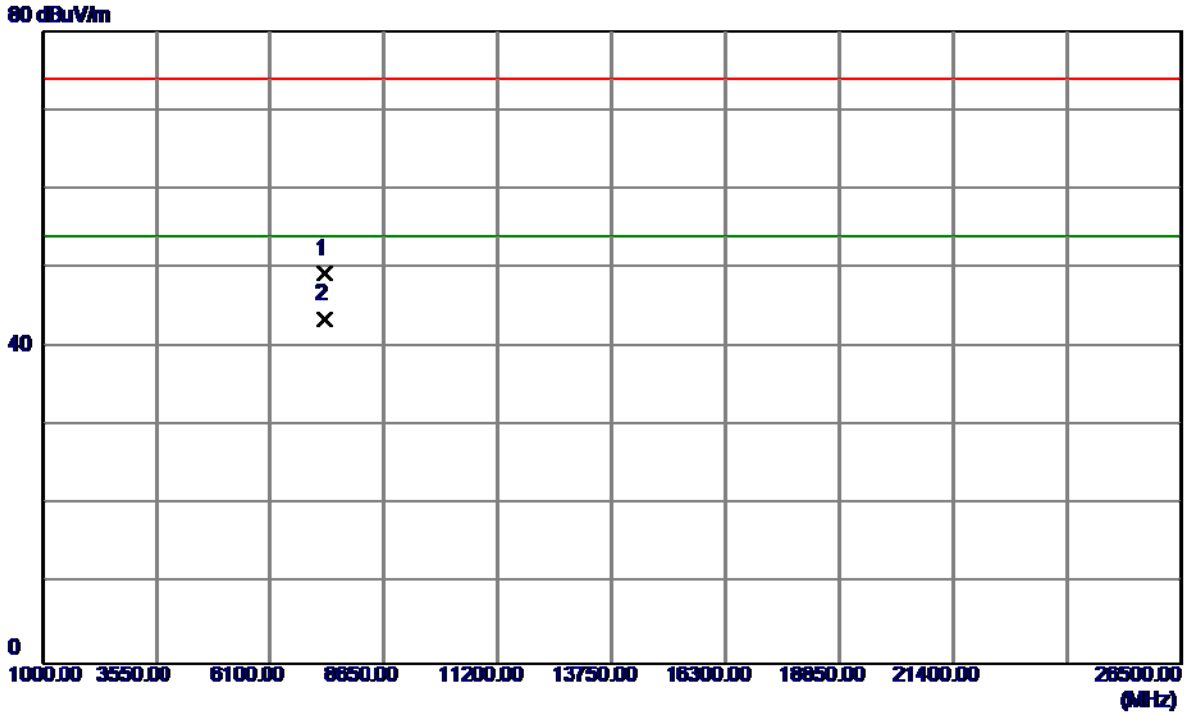
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435.8000	70.12	33.45	103.57	54.00	49.57	AVG	No Limit
2	2436.2000	73.10	33.45	106.55	74.00	32.55	Peak	No Limit

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

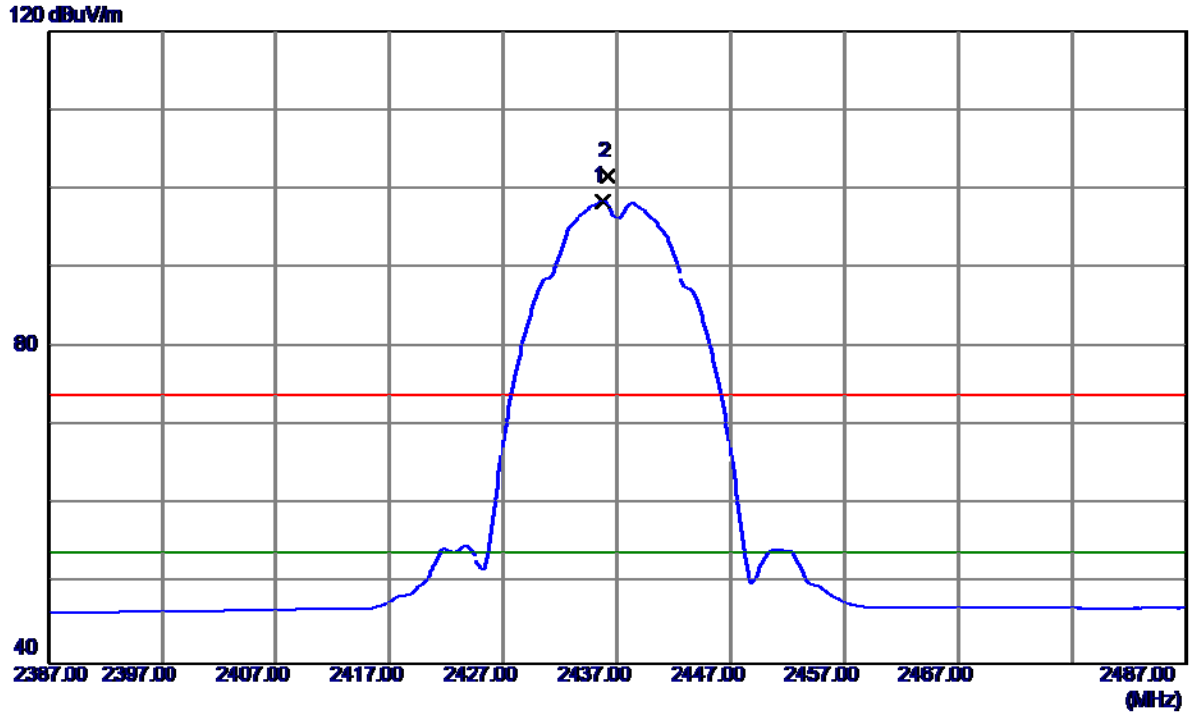
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7310.1200	37.36	11.97	49.33	74.00	-24.67	Peak	
2 *	7310.6000	31.52	11.97	43.49	54.00	-10.51	AVG	

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

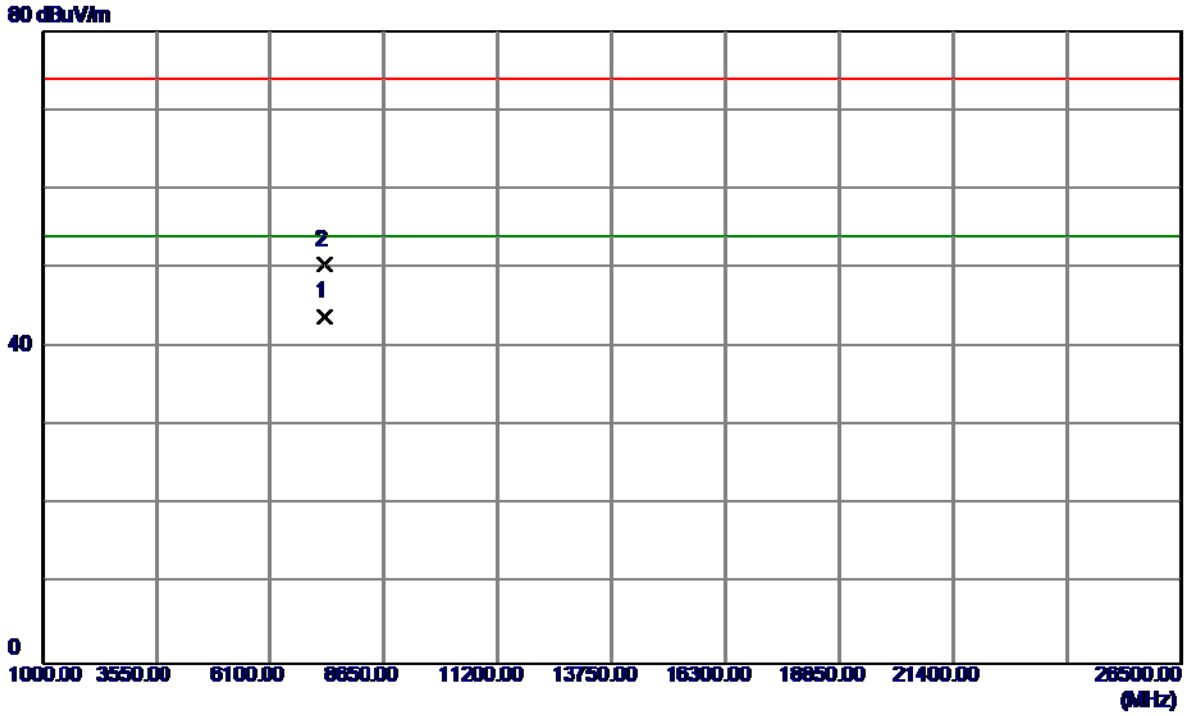
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435.8000	65.02	33.45	98.47	54.00	44.47	AVG	No Limit
2	2436.2000	68.17	33.45	101.62	74.00	27.62	Peak	No Limit

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

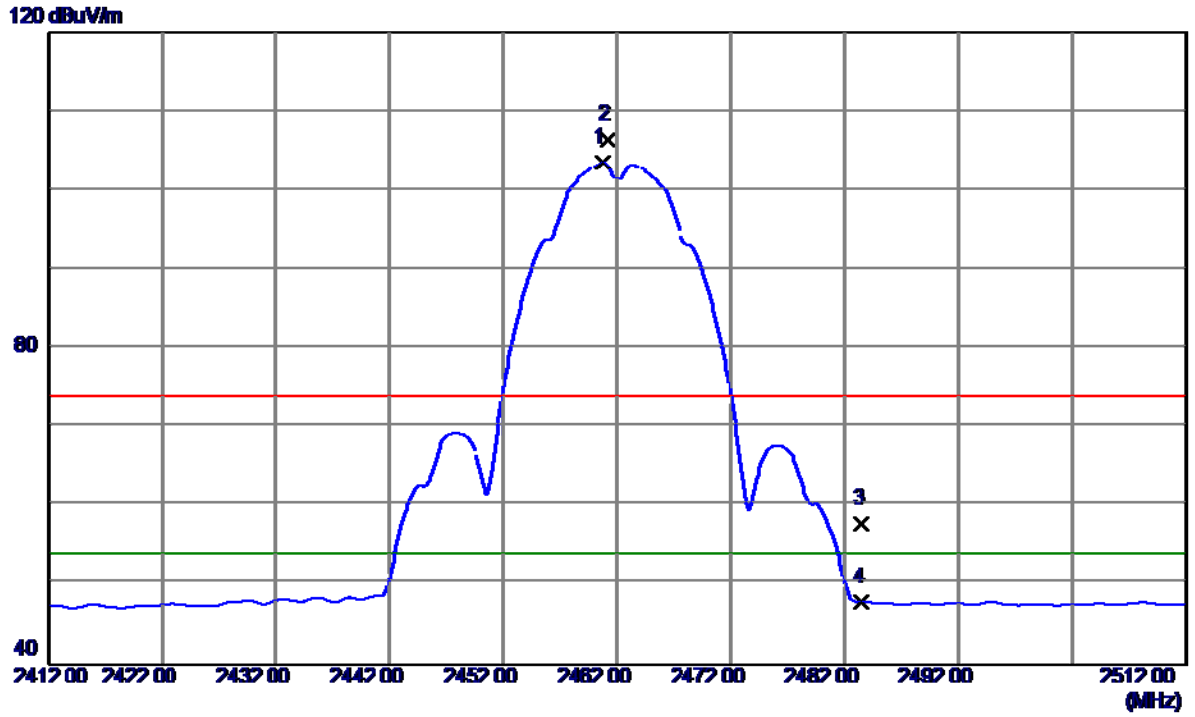
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7310.1300	33.19	10.71	43.90	54.00	-10.10	AVG	
2	7310.3500	39.64	10.72	50.36	74.00	-23.64	Peak	

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

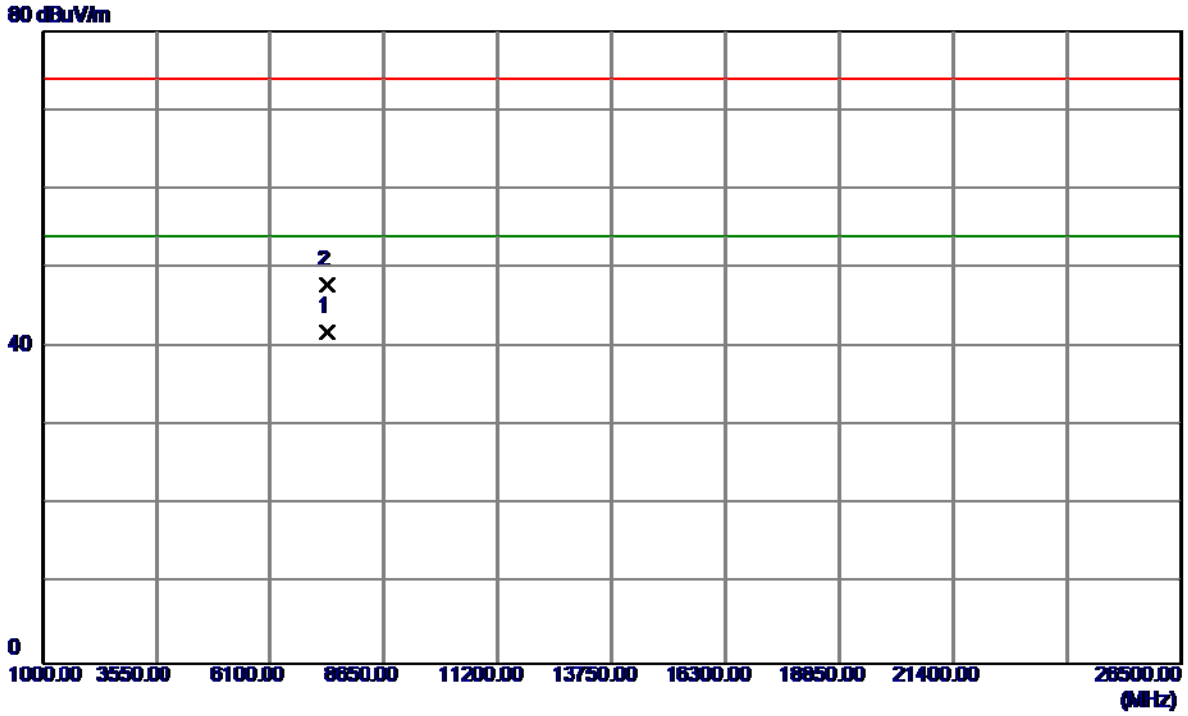
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.8000	69.88	33.61	103.49	54.00	49.49	AVG	No Limit
2	2461.2000	72.83	33.61	106.44	74.00	32.44	Peak	No Limit
3	2483.5000	24.07	33.76	57.83	74.00	-16.17	Peak	
4	2483.5000	14.07	33.76	47.83	54.00	-6.17	AVG	

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

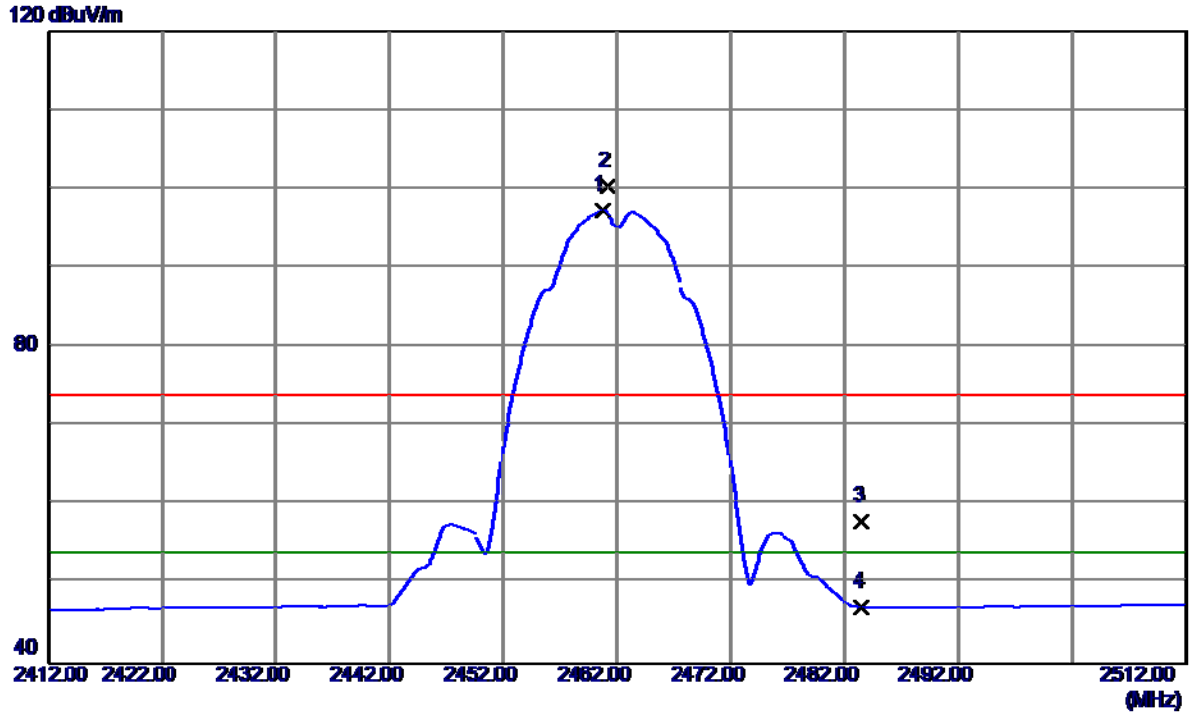
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7385.9400	29.84	12.12	41.96	54.00	-12.04	AVG	
2	7386.2400	35.65	12.12	47.77	74.00	-26.23	Peak	

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

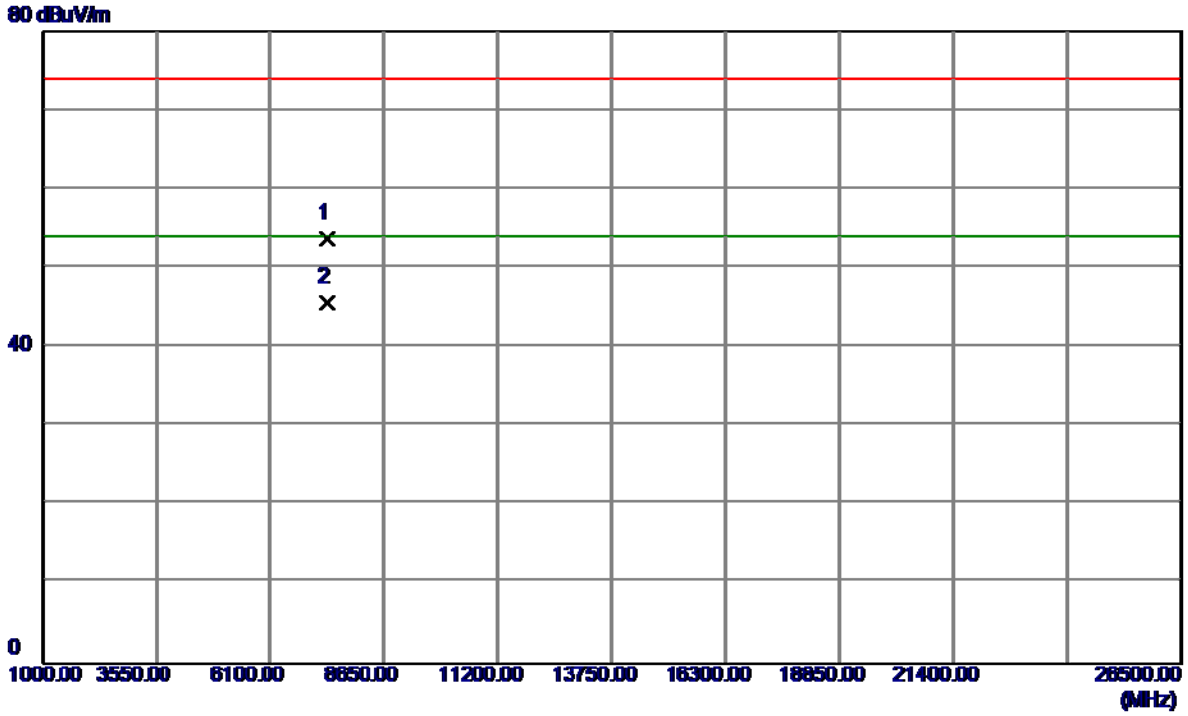
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.8000	63.72	33.61	97.33	54.00	43.33	AVG	No Limit
2	2461.2000	66.72	33.61	100.33	74.00	26.33	Peak	No Limit
3	2483.5000	24.11	33.76	57.87	74.00	-16.13	Peak	
4	2483.5000	13.31	33.76	47.07	54.00	-6.93	AVG	

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

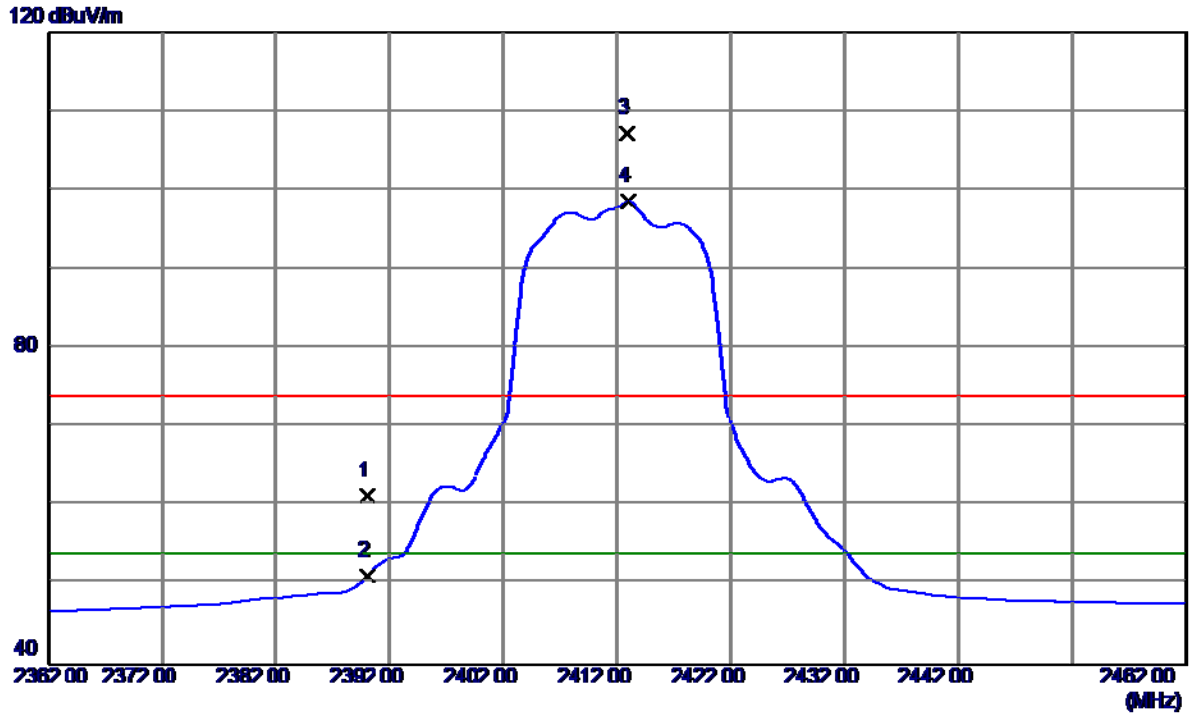
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7386.2500	42.67	11.05	53.72	74.00	-20.28	Peak	
2 *	7386.3700	34.51	11.05	45.56	54.00	-8.44	AVG	

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

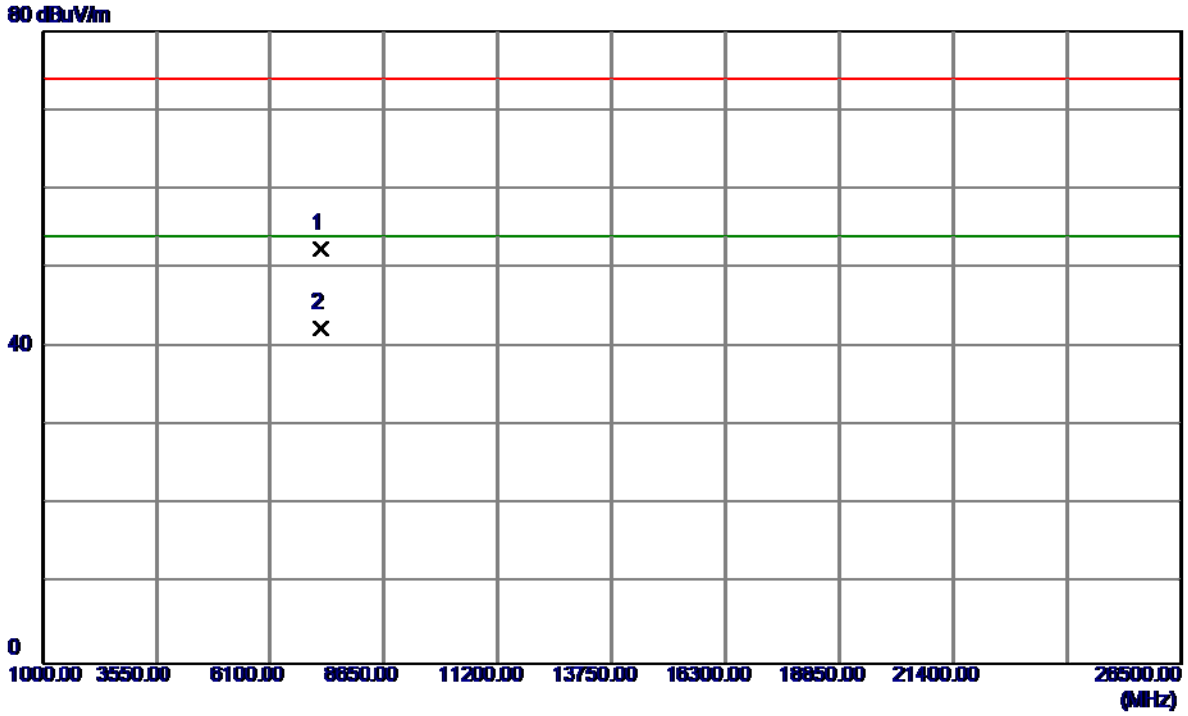
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.19	33.15	61.34	74.00	-12.66	Peak	
2	2390.0000	18.03	33.15	51.18	54.00	-2.82	AVG	
3	2412.9000	73.94	33.30	107.24	74.00	33.24	Peak	No Limit
4 *	2413.0000	65.21	33.30	98.51	54.00	44.51	AVG	No Limit

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

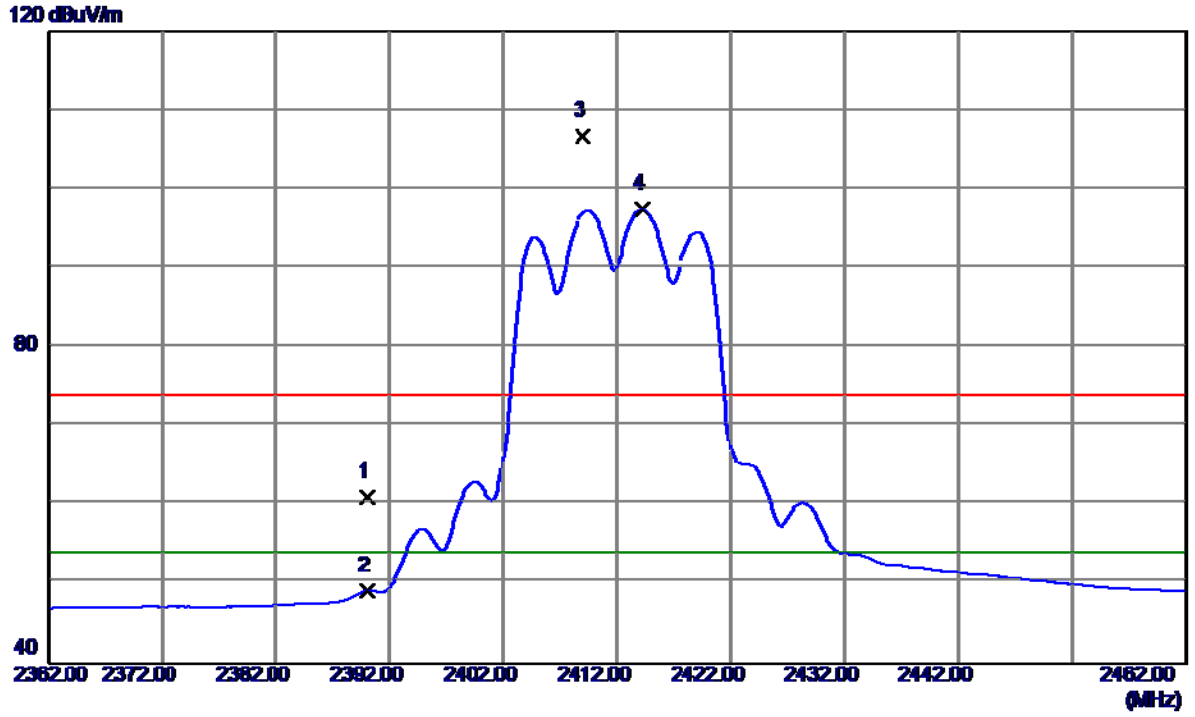
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7234.1600	40.70	11.82	52.52	74.00	-21.48	Peak	
2 *	7236.5700	30.63	11.82	42.45	54.00	-11.55	AVG	

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

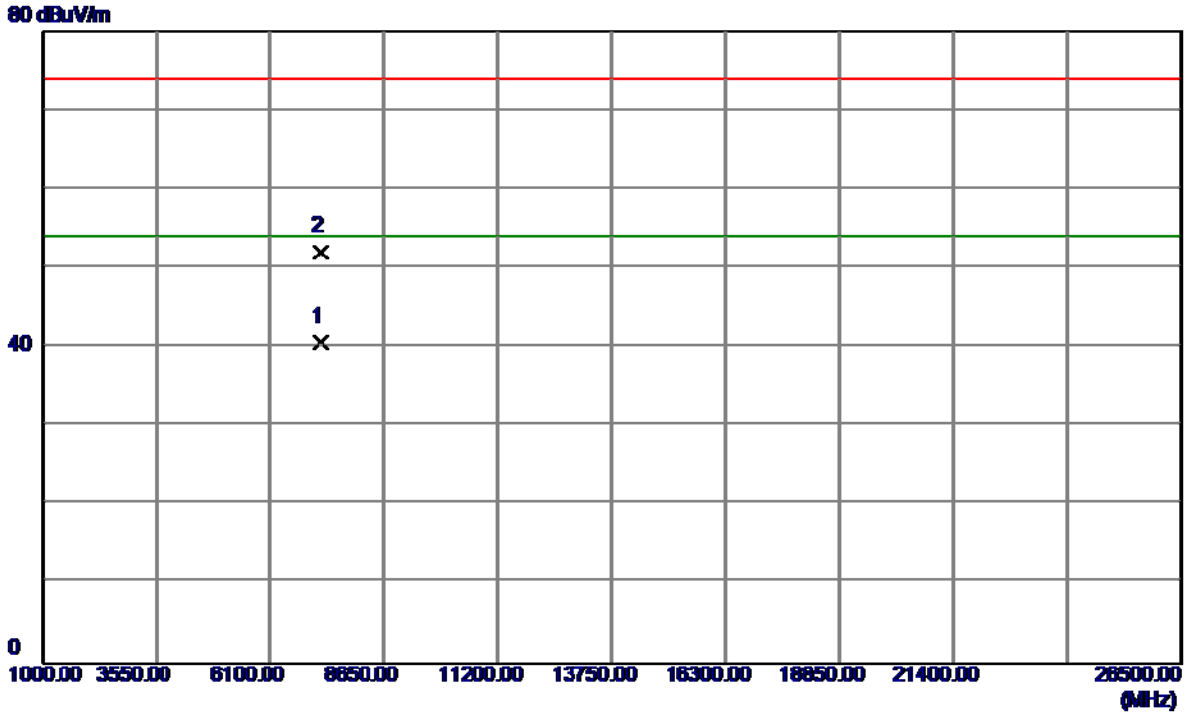
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.76	33.15	60.91	74.00	-13.09	Peak	
2	2390.0000	15.98	33.15	49.13	54.00	-4.87	AVG	
3	2409.0000	73.48	33.27	106.75	74.00	32.75	Peak	No Limit
4 *	2414.2000	64.08	33.31	97.39	54.00	43.39	AVG	No Limit

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

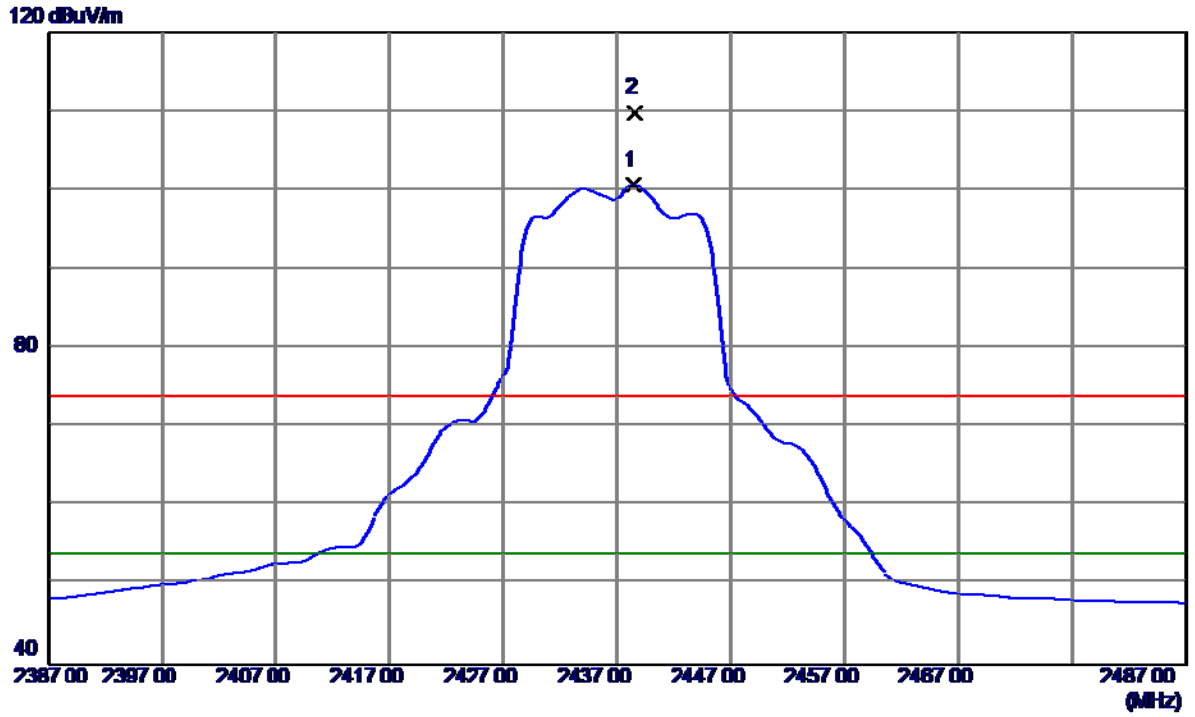
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7237.1800	30.18	10.39	40.57	54.00	-13.43	AVG	
2	7238.4900	41.68	10.40	52.08	74.00	-21.92	Peak	

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

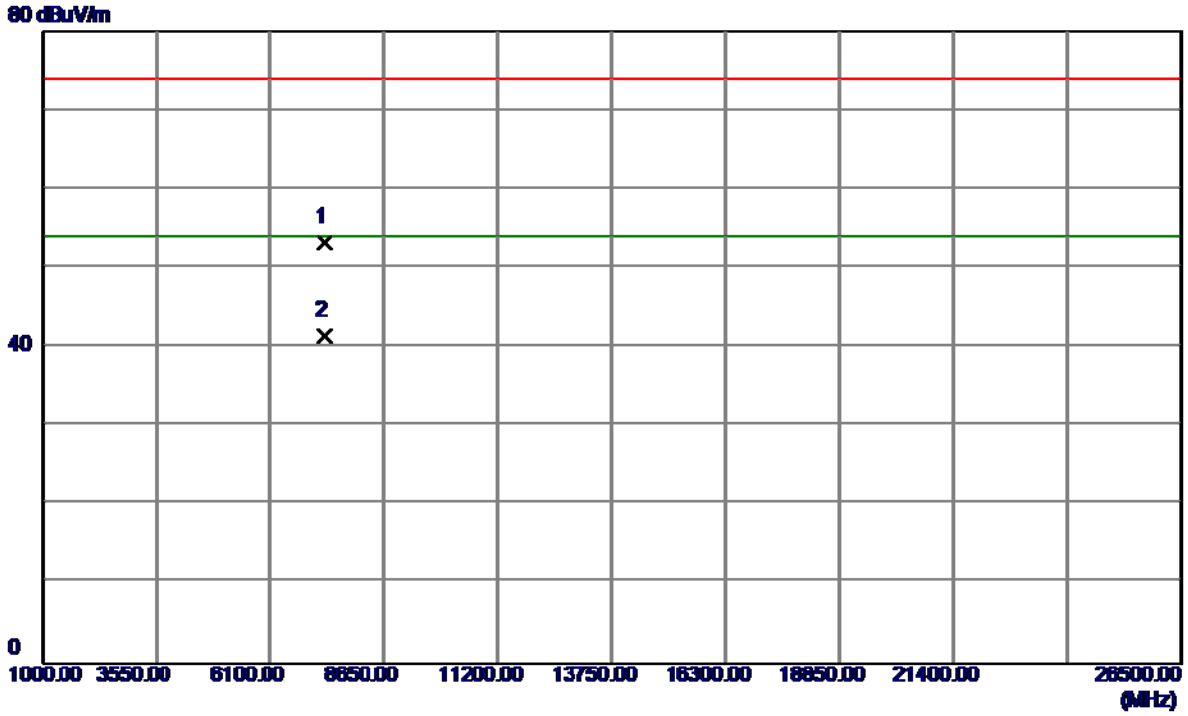
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2438.4000	67.14	33.46	100.60	54.00	46.60	AVG	No Limit
2	2438.6000	76.35	33.47	109.82	74.00	35.82	Peak	No Limit

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

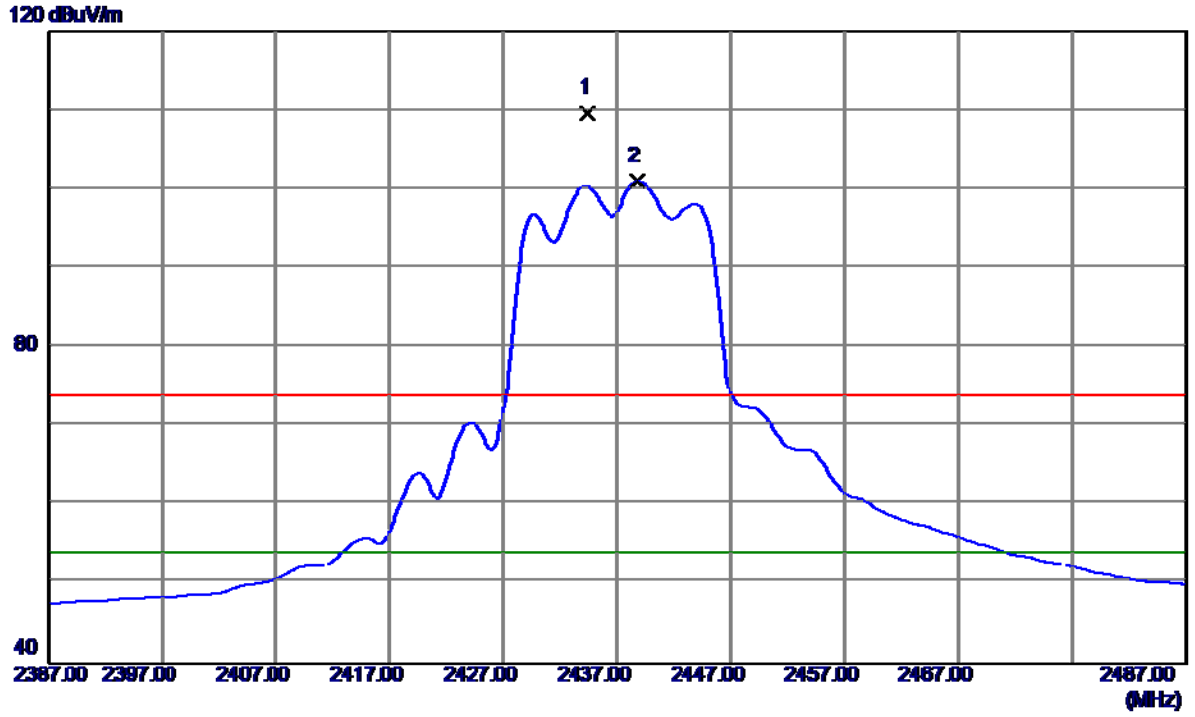
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7309.2600	41.23	11.97	53.20	74.00	-20.80	Peak	
2 *	7315.4000	29.46	11.98	41.44	54.00	-12.56	AVG	

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

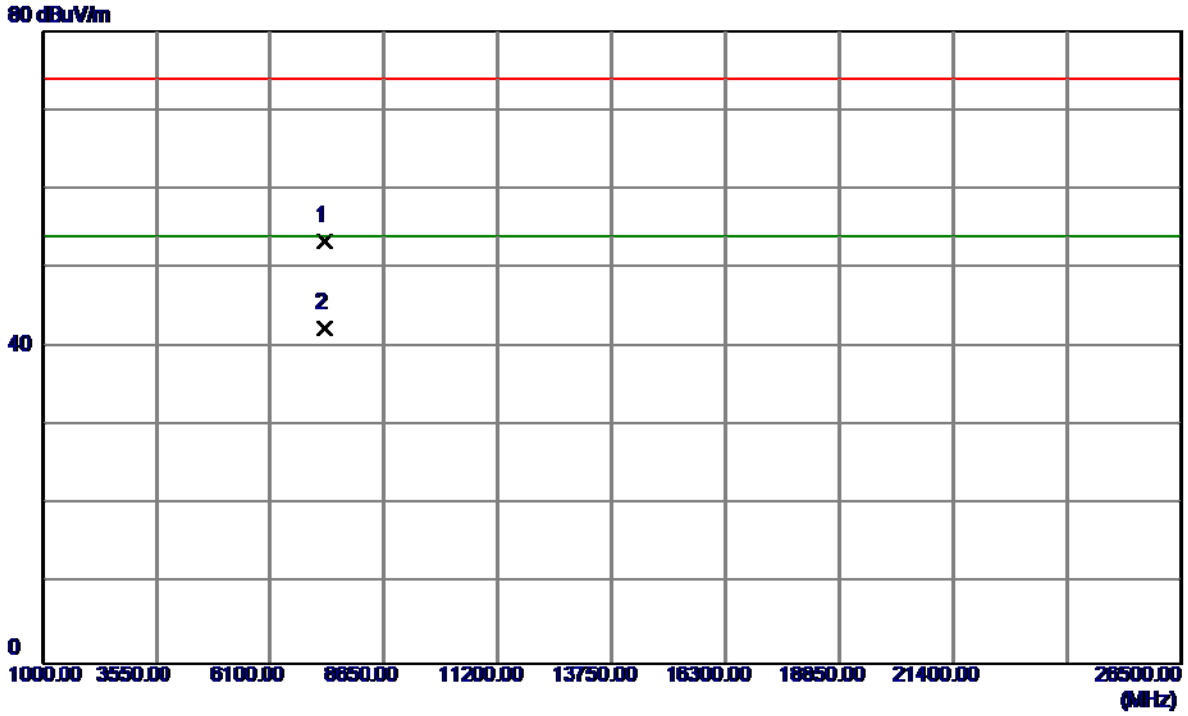
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2434.5000	76.21	33.44	109.65	74.00	35.65	Peak	No Limit
2 *	2438.8000	67.43	33.47	100.90	54.00	46.90	AVG	No Limit

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

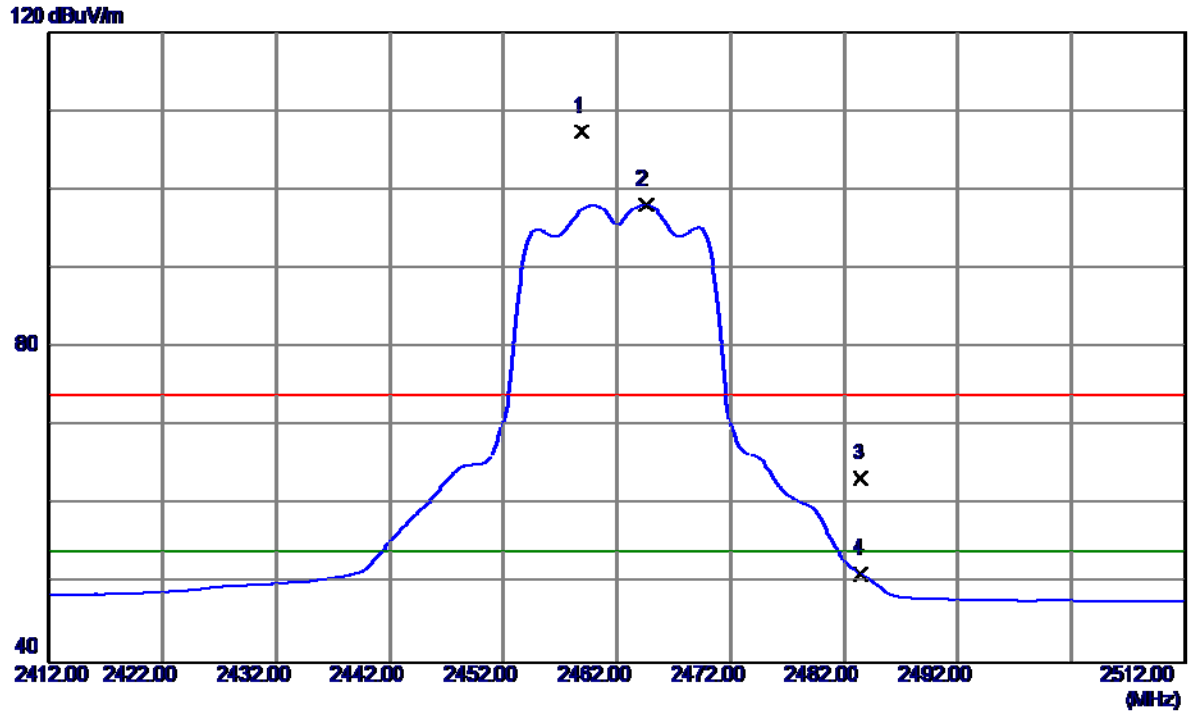
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7312.2400	42.65	10.72	53.37	74.00	-20.63	Peak	
2 *	7312.7100	31.68	10.73	42.41	54.00	-11.59	AVG	

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

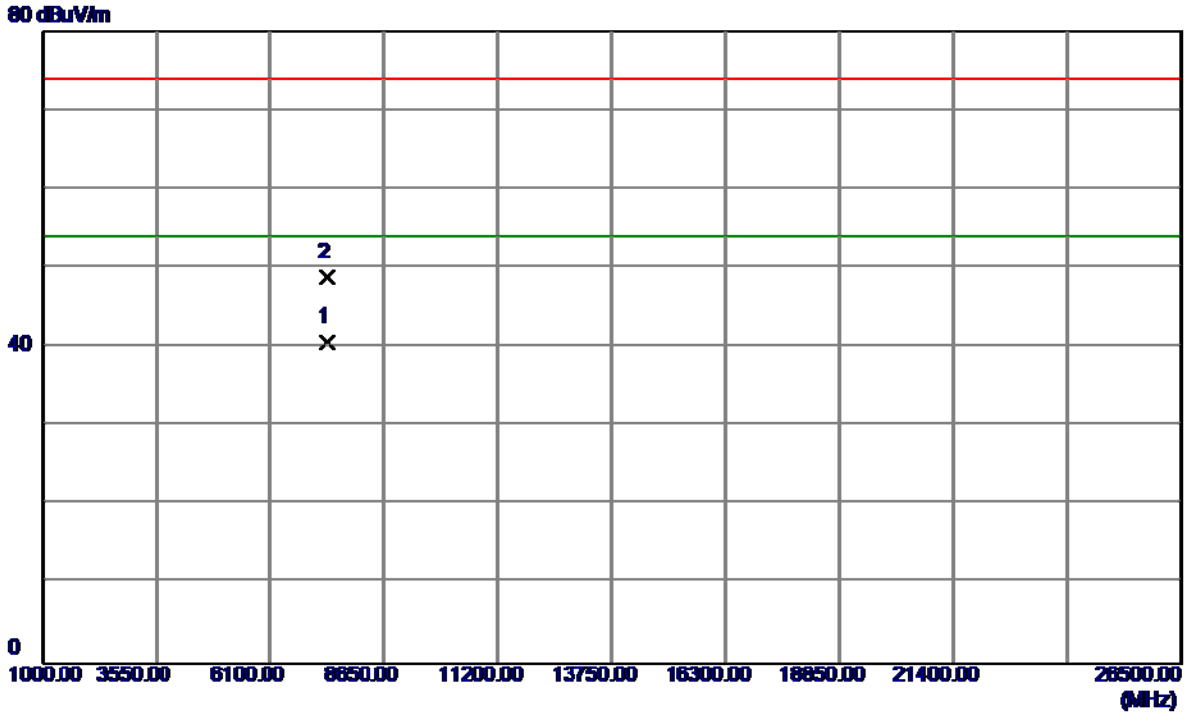
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2458.9000	73.78	33.60	107.38	74.00	33.38	Peak	No Limit
2 *	2464.5000	64.47	33.64	98.11	54.00	44.11	AVG	No Limit
3	2483.5000	29.54	33.76	63.30	74.00	-10.70	Peak	
4	2483.5000	17.45	33.76	51.21	54.00	-2.79	AVG	

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

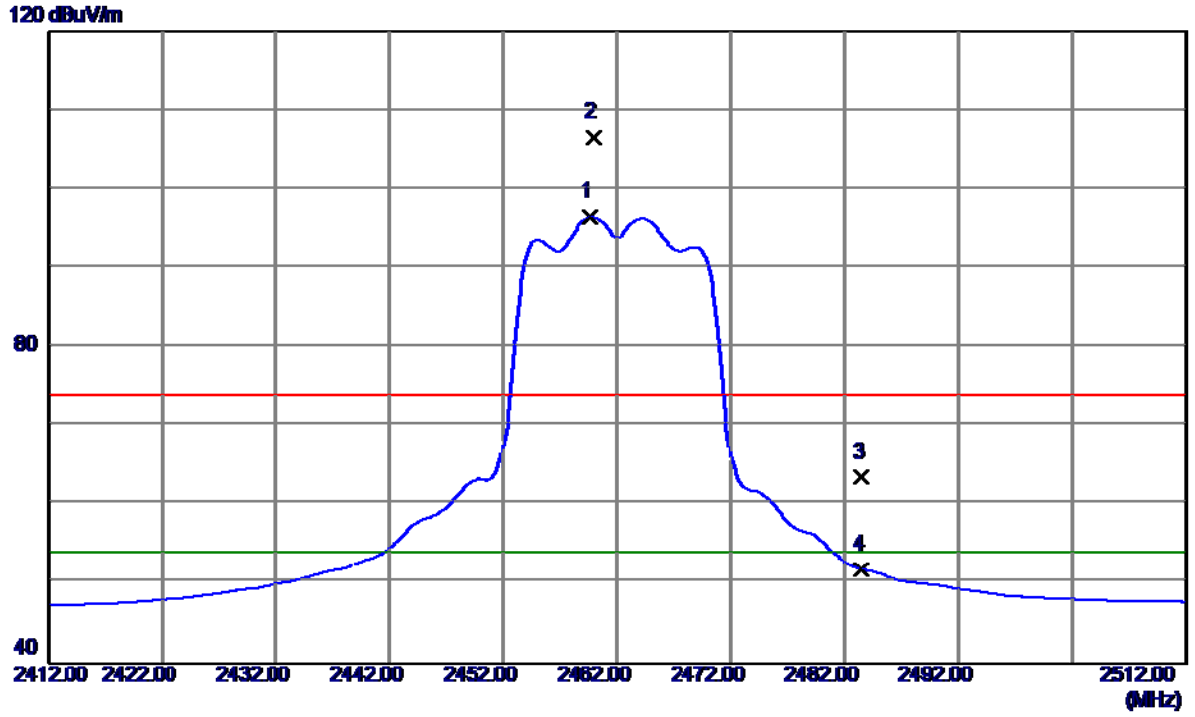
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7385.1500	28.45	12.12	40.57	54.00	-13.43	AVG	
2	7386.5400	36.61	12.12	48.73	74.00	-25.27	Peak	

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

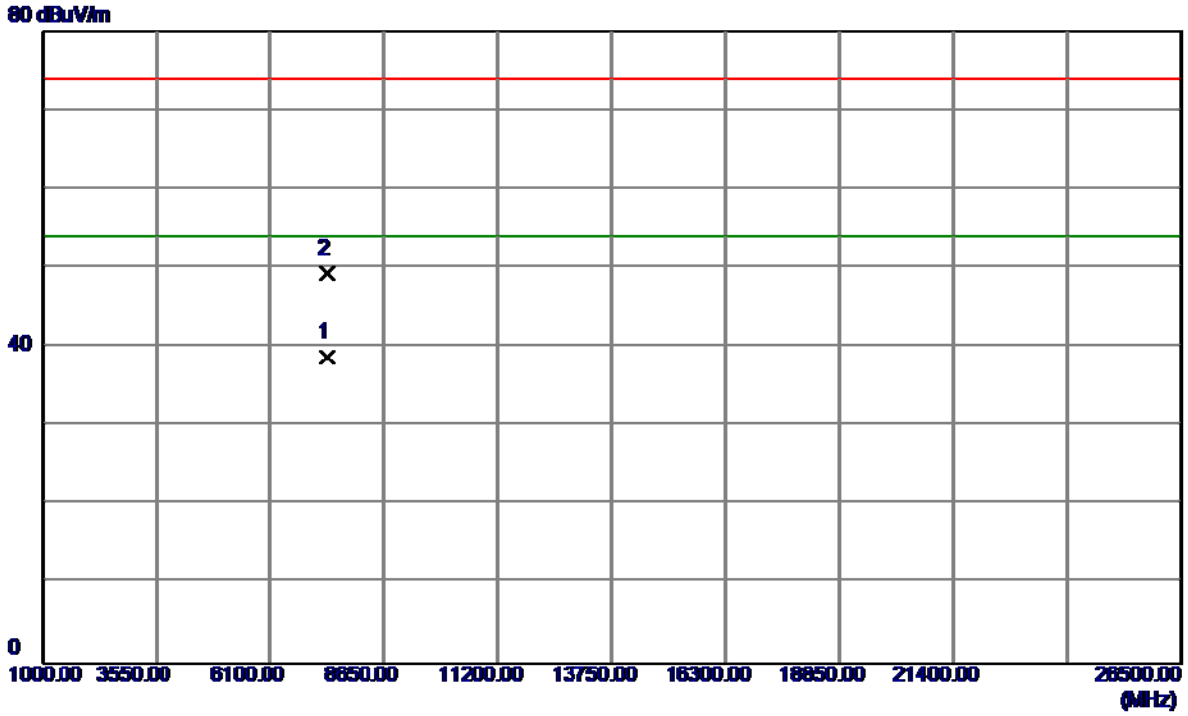
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2459.7000	62.83	33.60	96.43	54.00	42.43	AVG	No Limit
2	2460.0000	72.89	33.61	106.50	74.00	32.50	Peak	No Limit
3	2483.5000	29.74	33.76	63.50	74.00	-10.50	Peak	
4	2483.5000	18.11	33.76	51.87	54.00	-2.13	AVG	

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

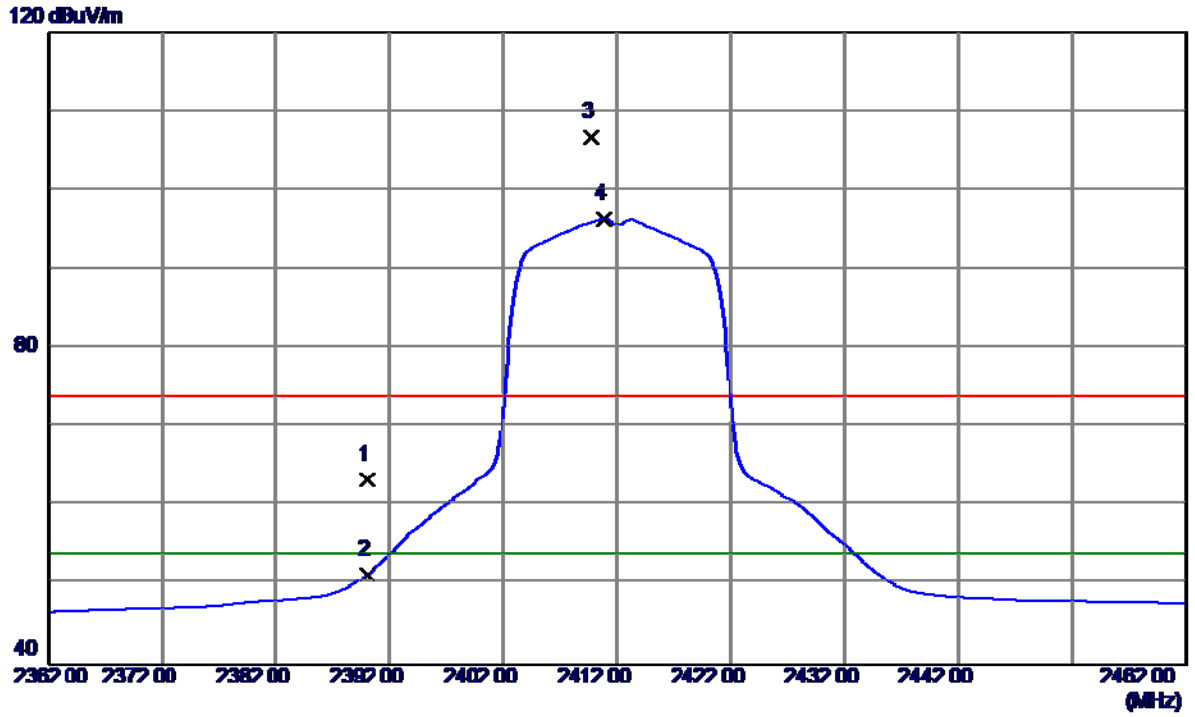
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7388.2500	27.64	11.06	38.70	54.00	-15.30	AVG	
2	7388.7600	38.15	11.06	49.21	74.00	-24.79	Peak	

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

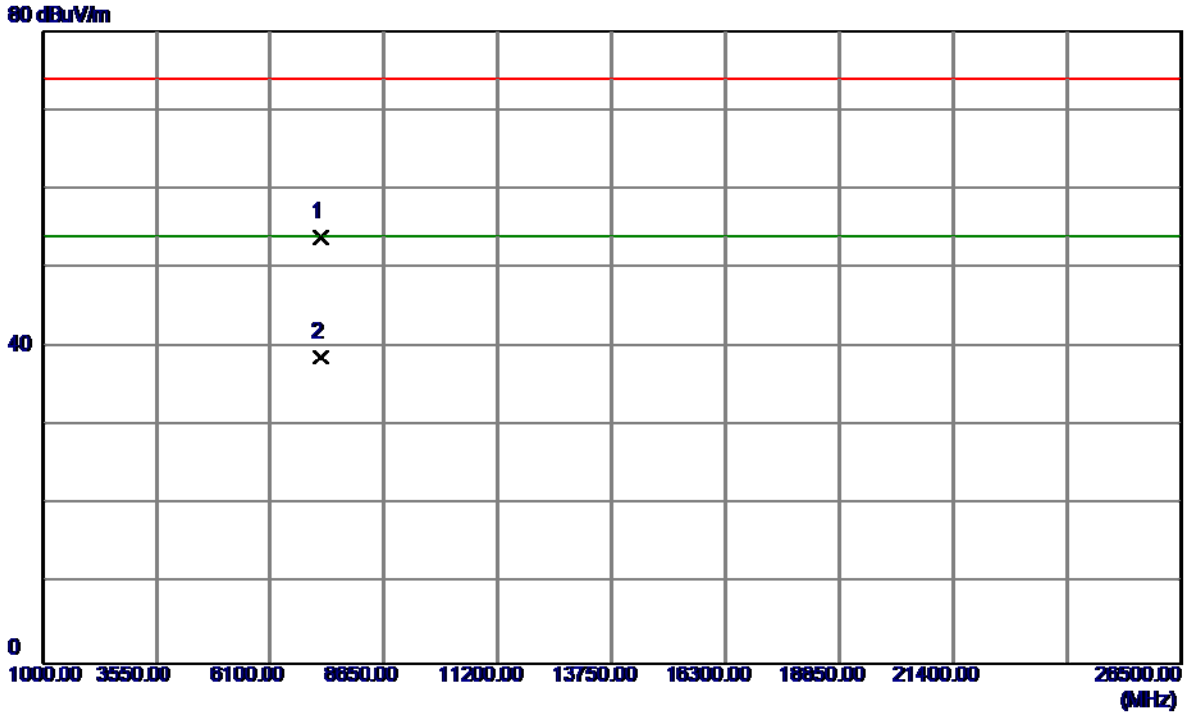
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	30.16	33.15	63.31	74.00	-10.69	Peak	
2	2390.0000	18.23	33.15	51.38	54.00	-2.62	AVG	
3	2409.8000	73.38	33.28	106.66	74.00	32.66	Peak	No Limit
4 *	2410.9000	63.10	33.28	96.38	54.00	42.38	AVG	No Limit

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

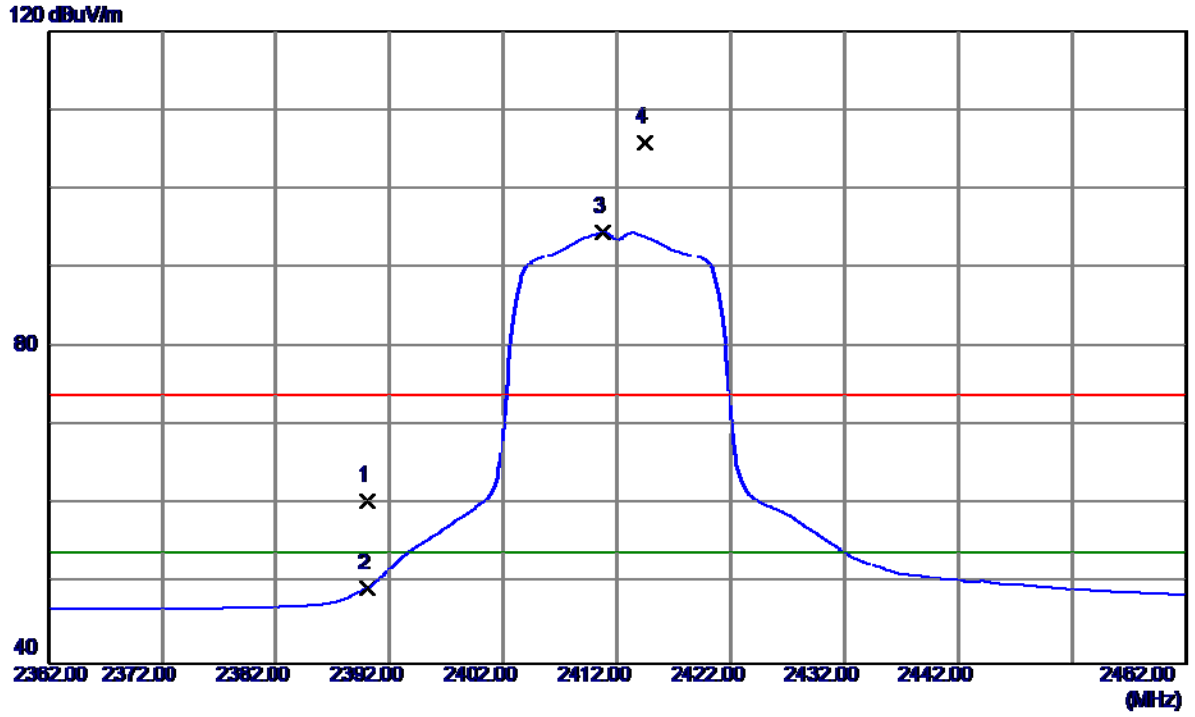
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7232.1000	42.12	11.81	53.93	74.00	-20.07	Peak	
2 *	7234.6900	26.88	11.82	38.70	54.00	-15.30	AVG	

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

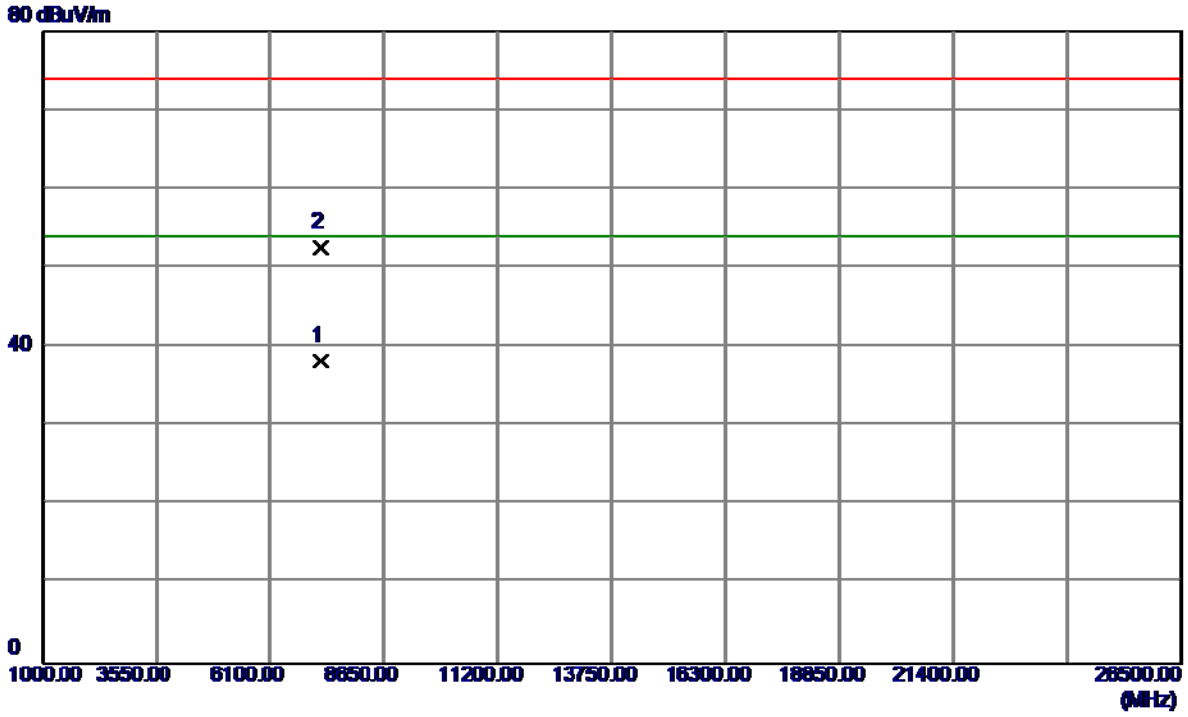
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.28	33.15	60.43	74.00	-13.57	Peak	
2	2390.0000	16.34	33.15	49.49	54.00	-4.51	AVG	
3 *	2410.8000	61.27	33.28	94.55	54.00	40.55	AVG	No Limit
4	2414.4000	72.57	33.31	105.88	74.00	31.88	Peak	No Limit

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

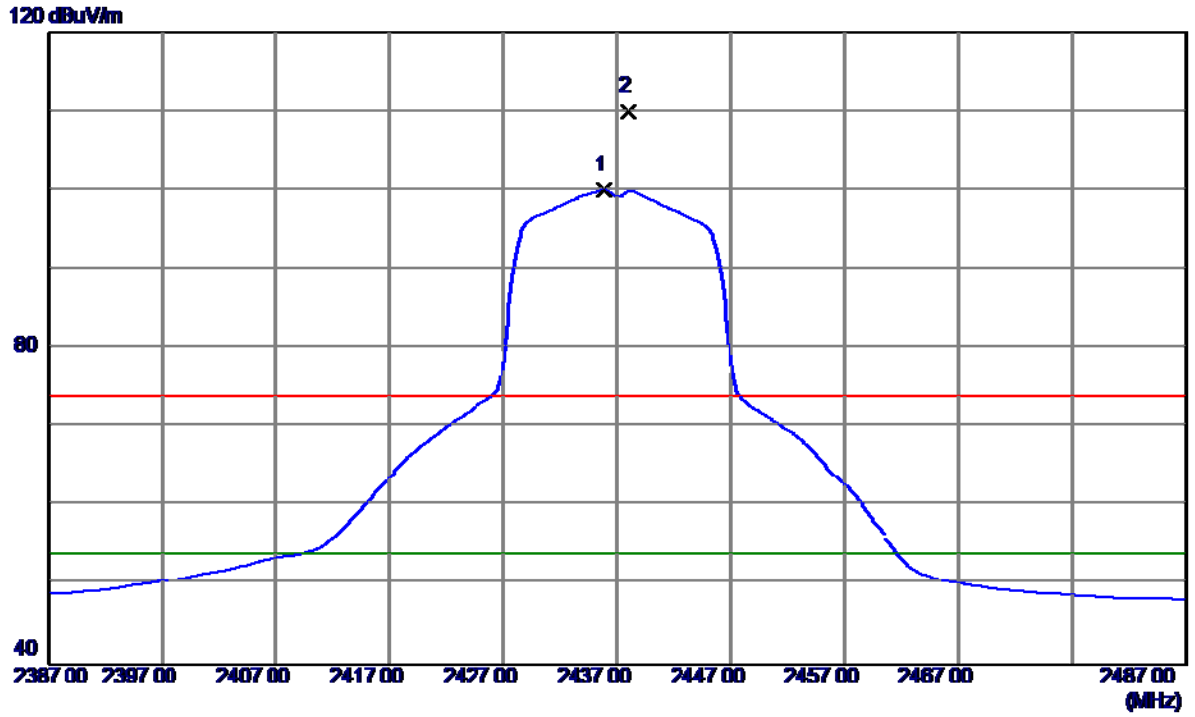
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7237.1300	27.84	10.39	38.23	54.00	-15.77	AVG	
2	7237.6700	42.18	10.40	52.58	74.00	-21.42	Peak	

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

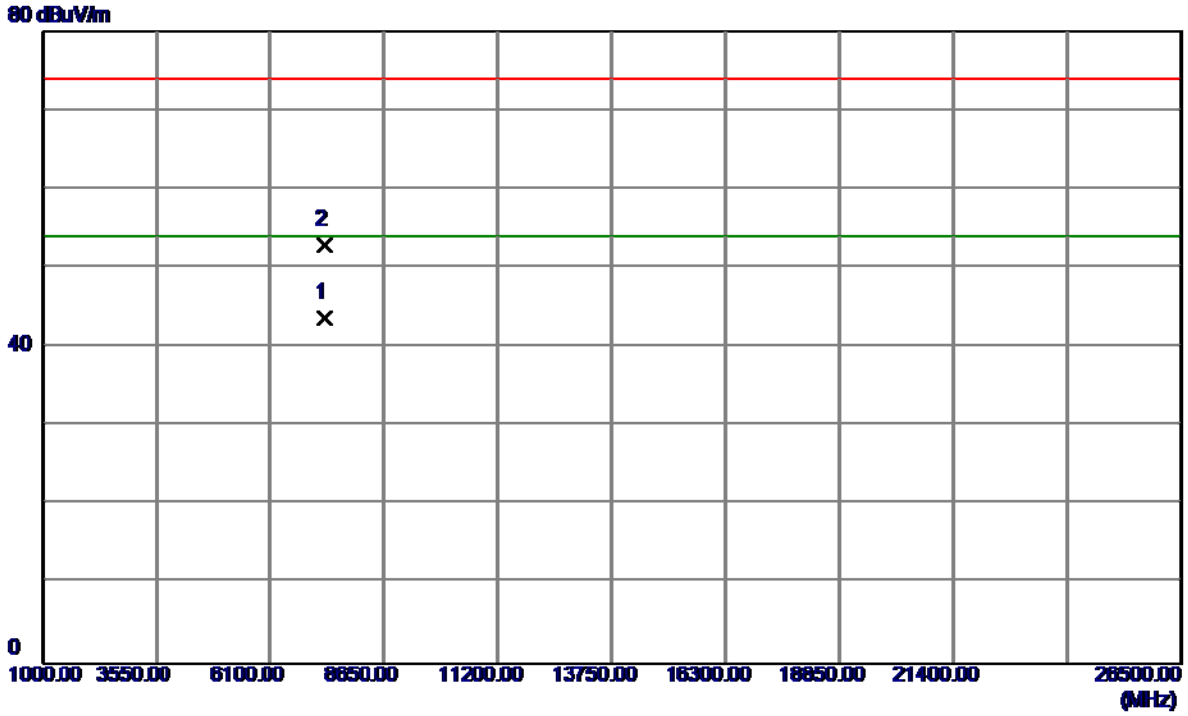
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435.9000	66.51	33.45	99.96	54.00	45.96	AVG	No Limit
2	2438.0000	76.46	33.46	109.92	74.00	35.92	Peak	No Limit

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

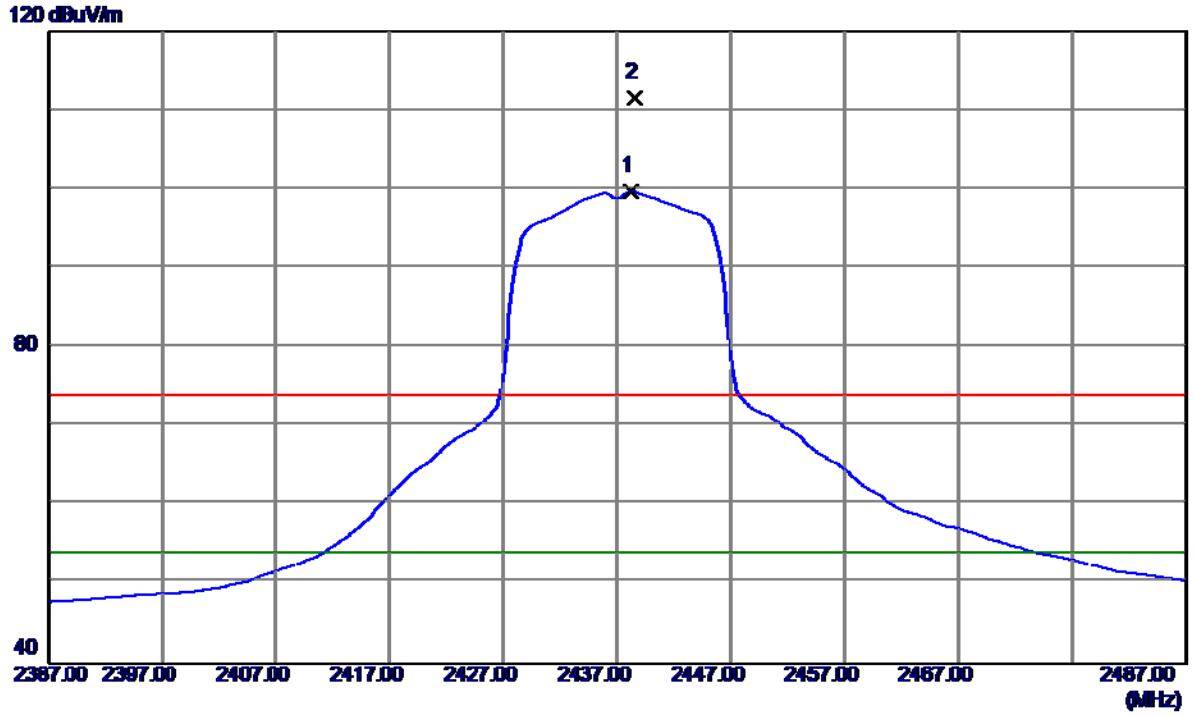
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7306.3700	31.71	11.96	43.67	54.00	-10.33	AVG	
2	7310.4900	40.99	11.97	52.96	74.00	-21.04	Peak	

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

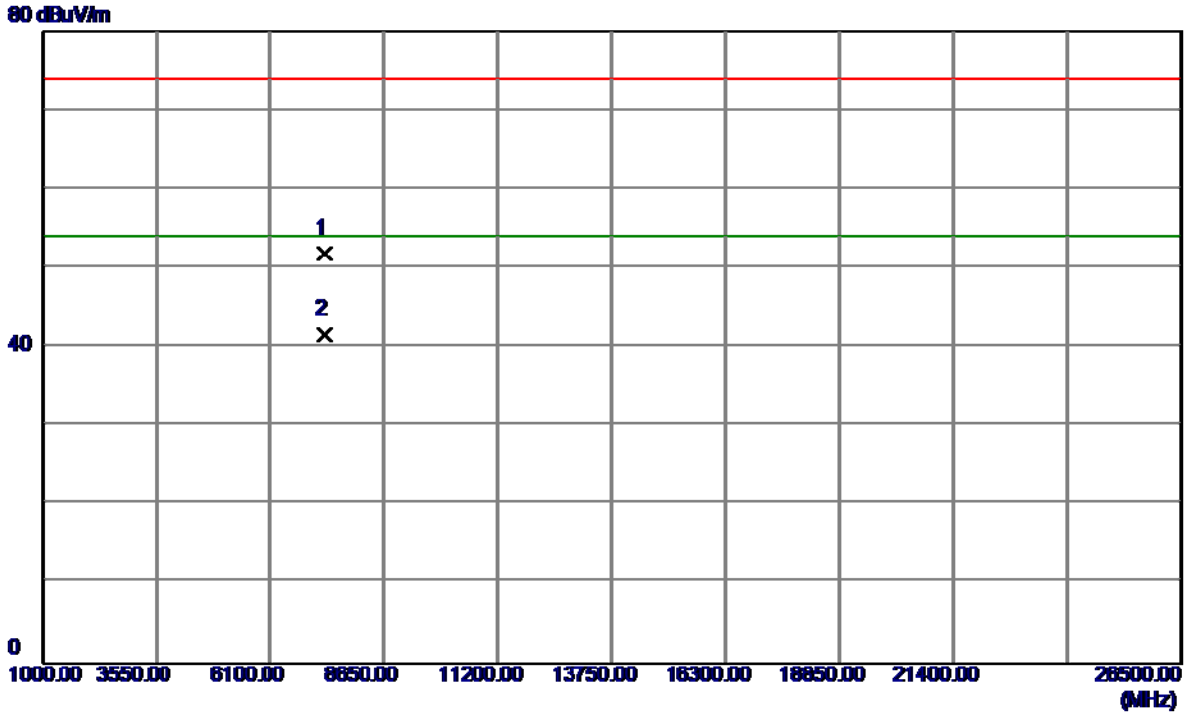
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2438.2000	66.22	33.46	99.68	54.00	45.68	AVG	No Limit
2	2438.6000	78.01	33.47	111.48	74.00	37.48	Peak	No Limit

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

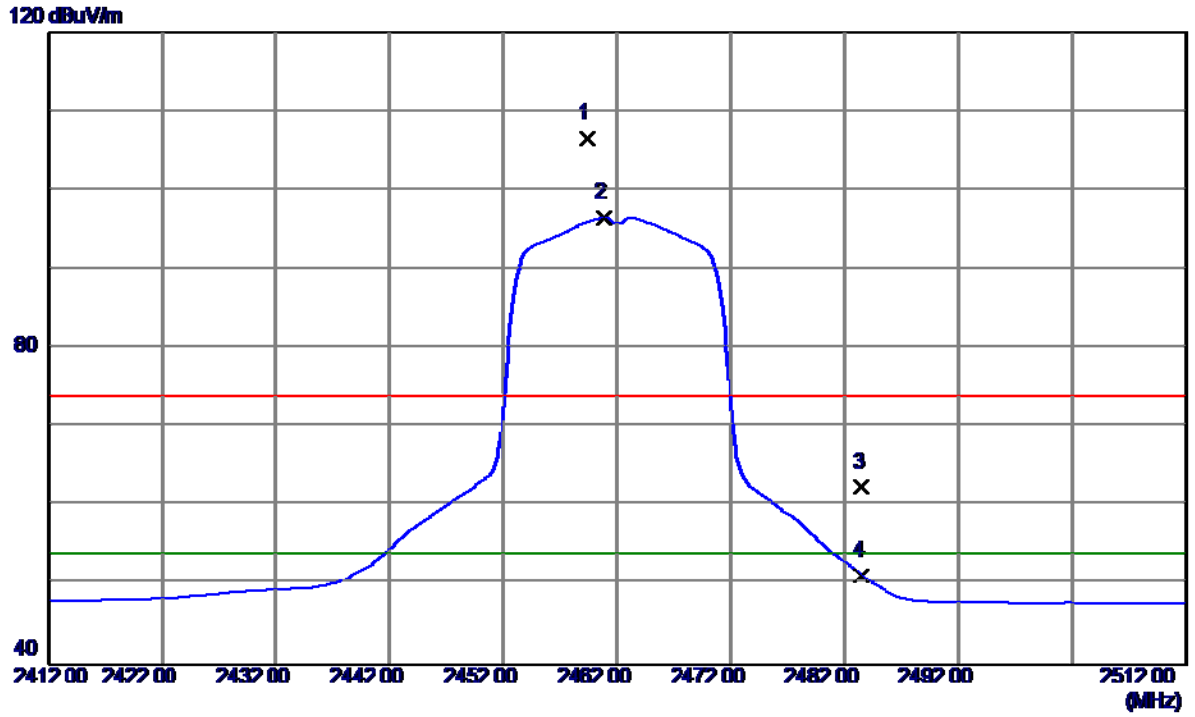
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7311.2400	41.05	10.72	51.77	74.00	-22.23	Peak	
2 *	7313.9000	30.80	10.73	41.53	54.00	-12.47	AVG	

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

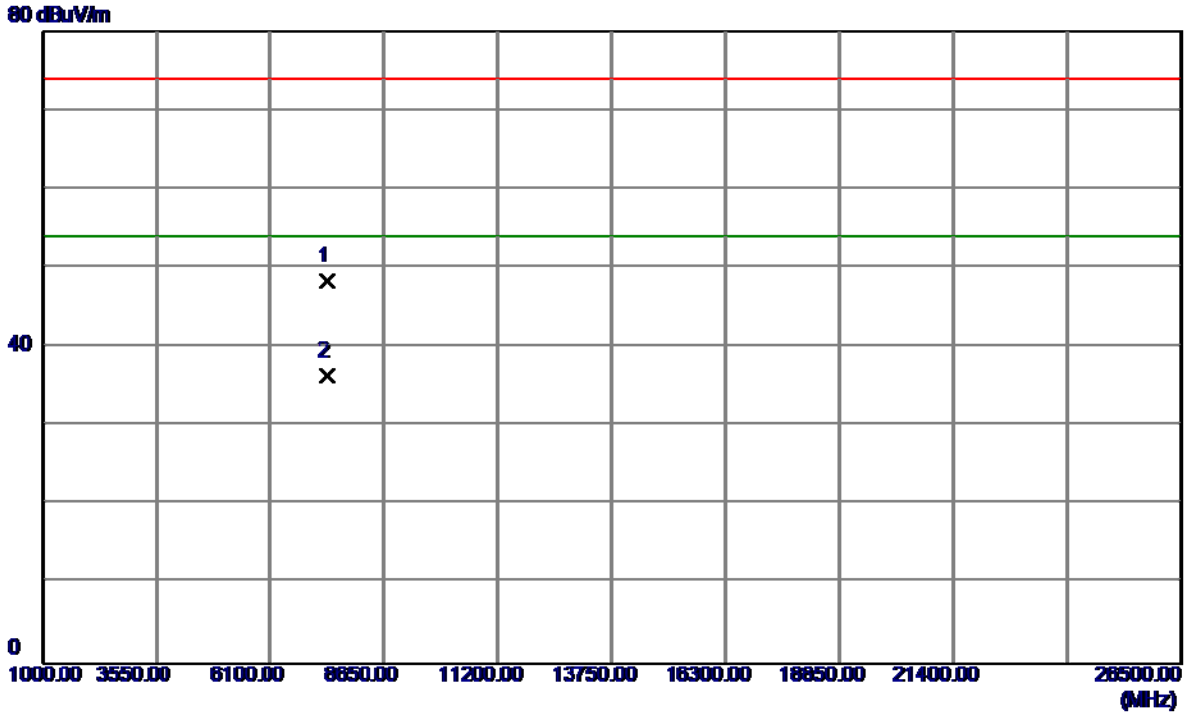
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2459.4000	73.02	33.60	106.62	74.00	32.62	Peak	No Limit
2 *	2460.9000	62.93	33.61	96.54	54.00	42.54	AVG	No Limit
3	2483.5000	28.62	33.76	62.38	74.00	-11.62	Peak	
4	2483.5000	17.51	33.76	51.27	54.00	-2.73	AVG	

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

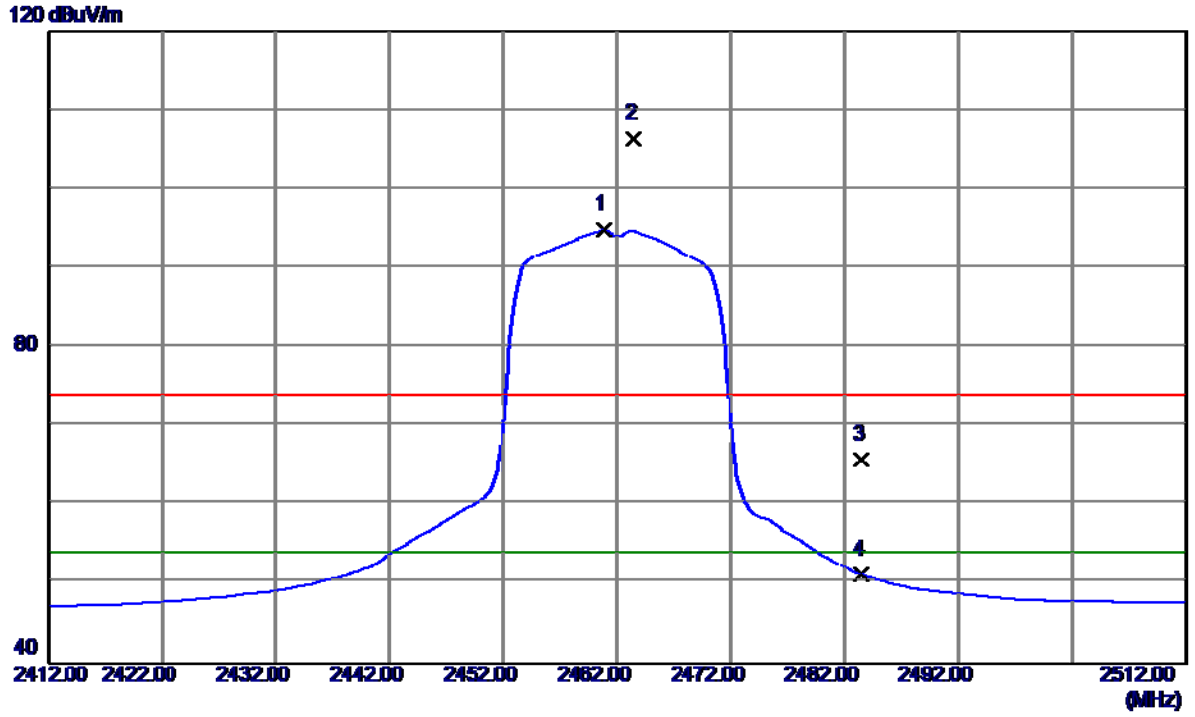
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7386.2700	36.18	12.12	48.30	74.00	-25.70	Peak	
2 *	7388.1700	24.12	12.13	36.25	54.00	-17.75	AVG	

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

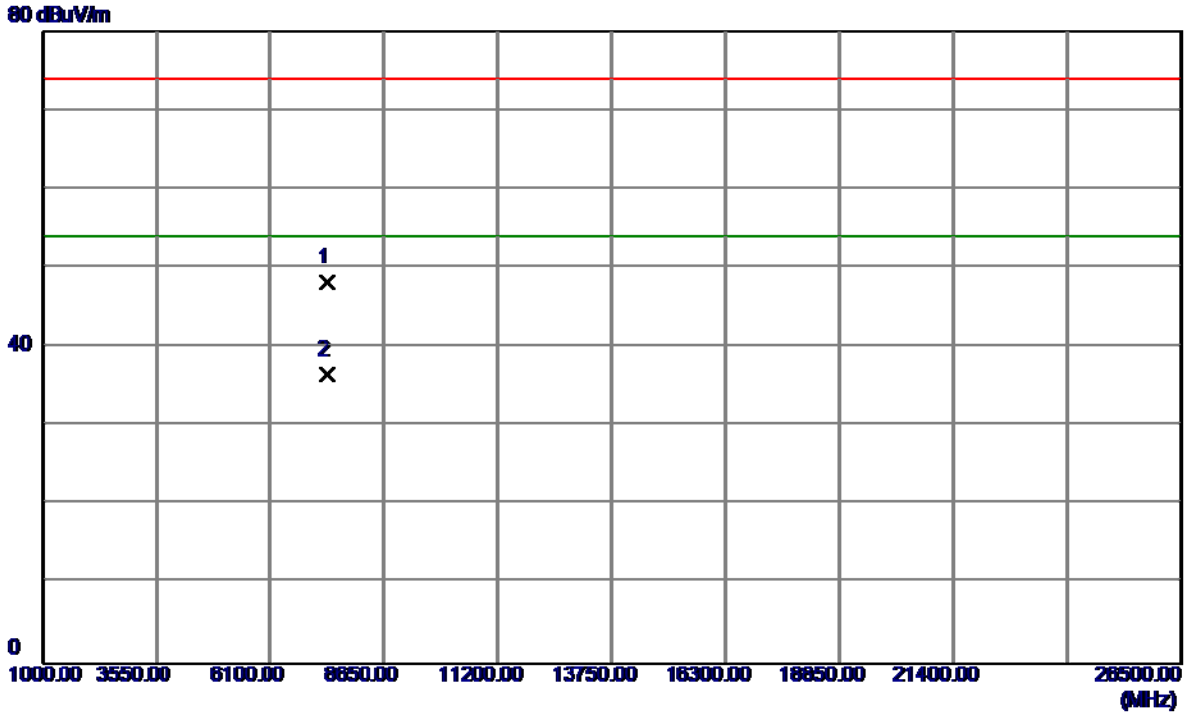
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.9000	61.20	33.61	94.81	54.00	40.81	AVG	No Limit
2	2463.5000	72.71	33.63	106.34	74.00	32.34	Peak	No Limit
3	2483.5000	31.93	33.76	65.69	74.00	-8.31	Peak	
4	2483.5000	17.40	33.76	51.16	54.00	-2.84	AVG	

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

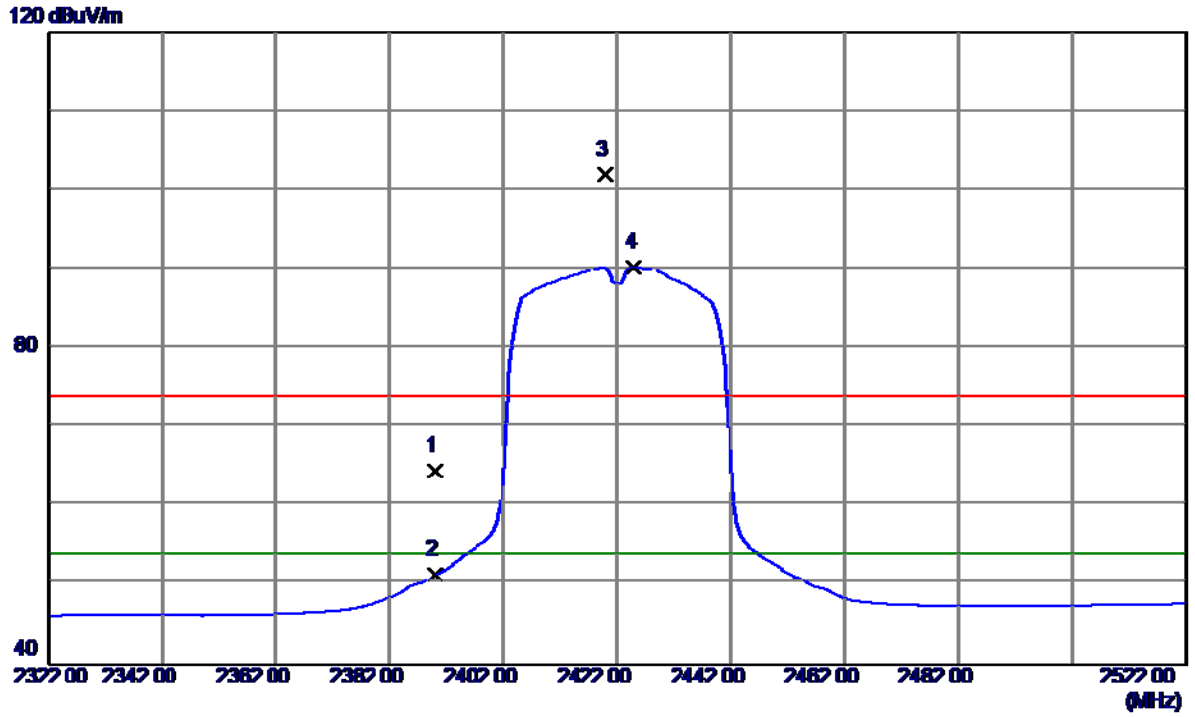
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7382.1500	37.16	11.03	48.19	74.00	-25.81	Peak	
2 *	7386.4500	25.48	11.05	36.53	54.00	-17.47	AVG	

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

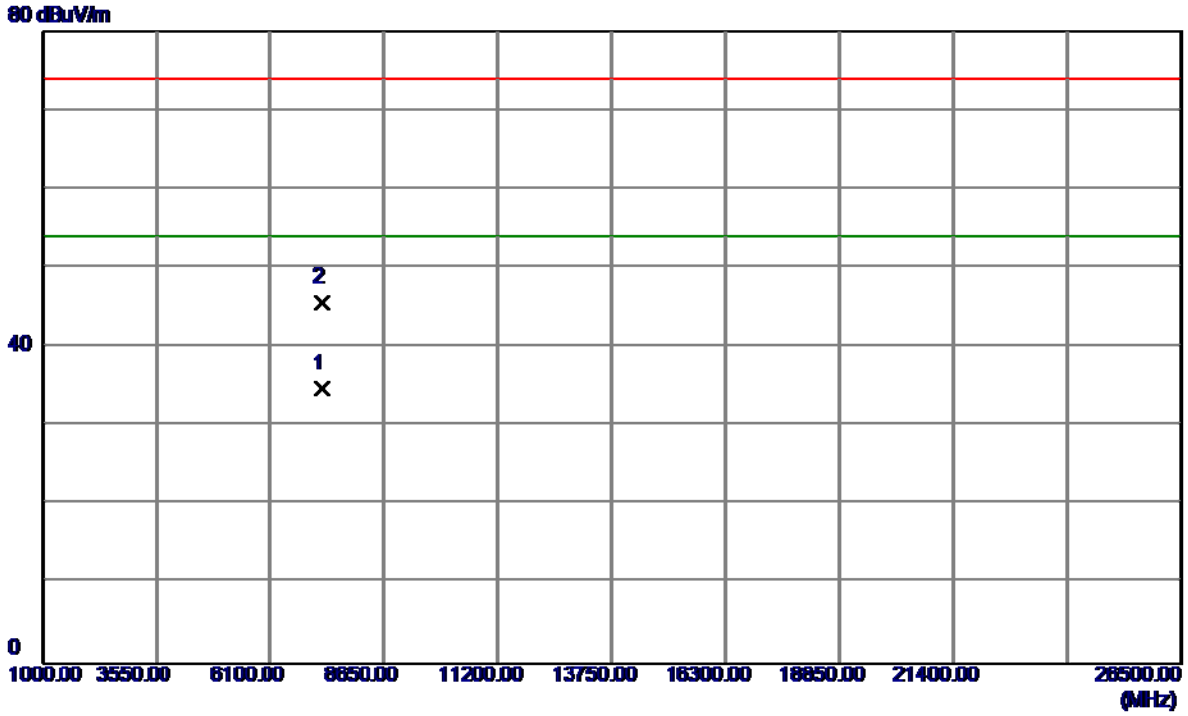
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	31.28	33.15	64.43	74.00	-9.57	Peak	
2	2390.0000	18.14	33.15	51.29	54.00	-2.71	AVG	
3	2420.0000	68.53	33.34	101.87	74.00	27.87	Peak	No Limit
4 *	2425.0000	56.90	33.38	90.28	54.00	36.28	AVG	No Limit

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

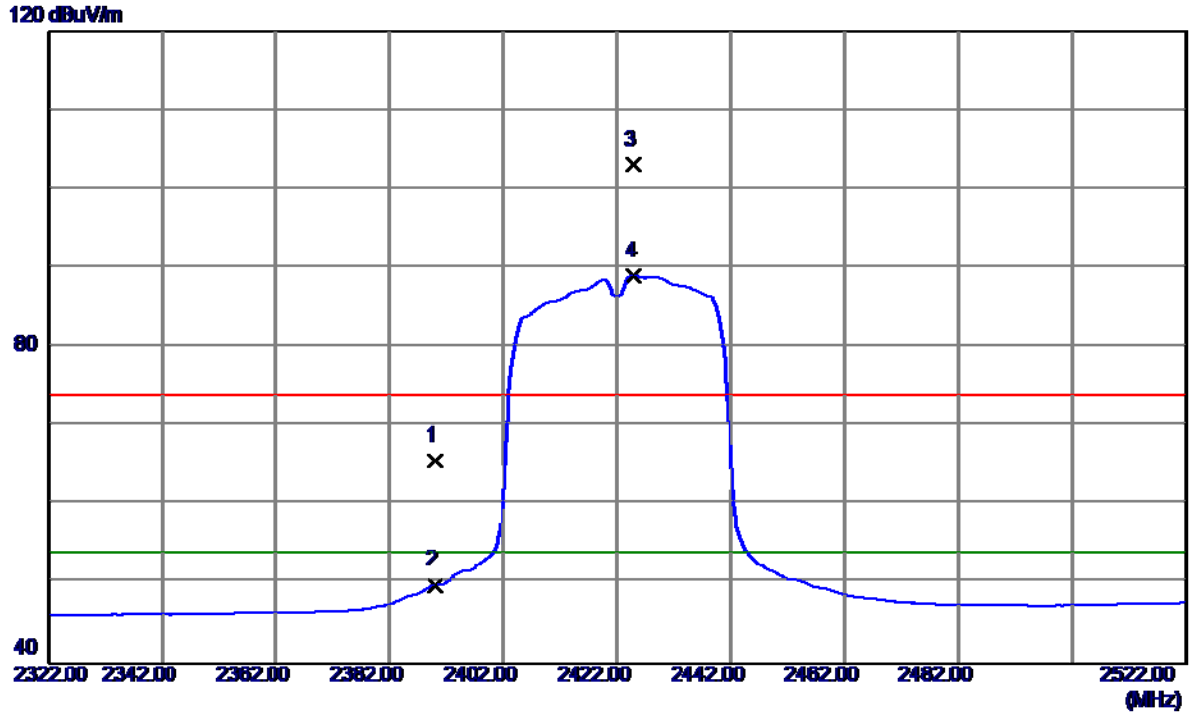
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7263.1200	22.83	11.88	34.71	54.00	-19.29	AVG	
2	7273.9000	33.66	11.90	45.56	74.00	-28.44	Peak	

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

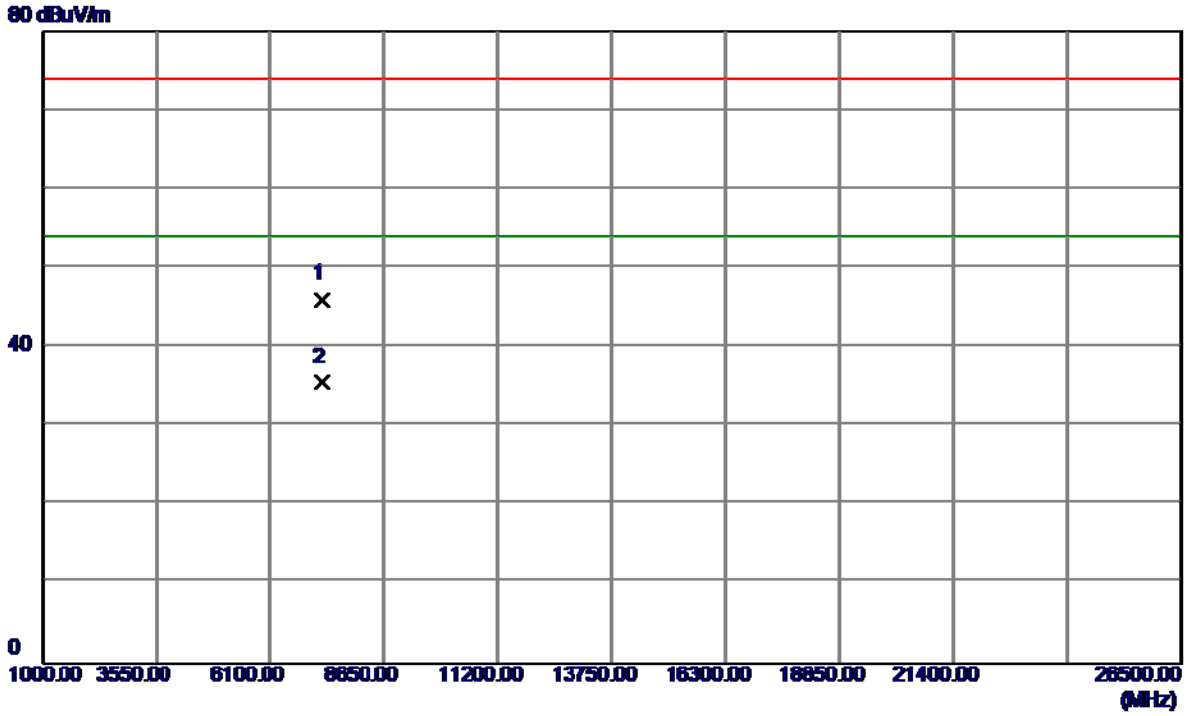
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	32.44	33.15	65.59	74.00	-8.41	Peak	
2	2390.0000	16.69	33.15	49.84	54.00	-4.16	AVG	
3	2424.8000	69.67	33.38	103.05	74.00	29.05	Peak	No Limit
4 *	2425.0000	55.63	33.38	89.01	54.00	35.01	AVG	No Limit

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

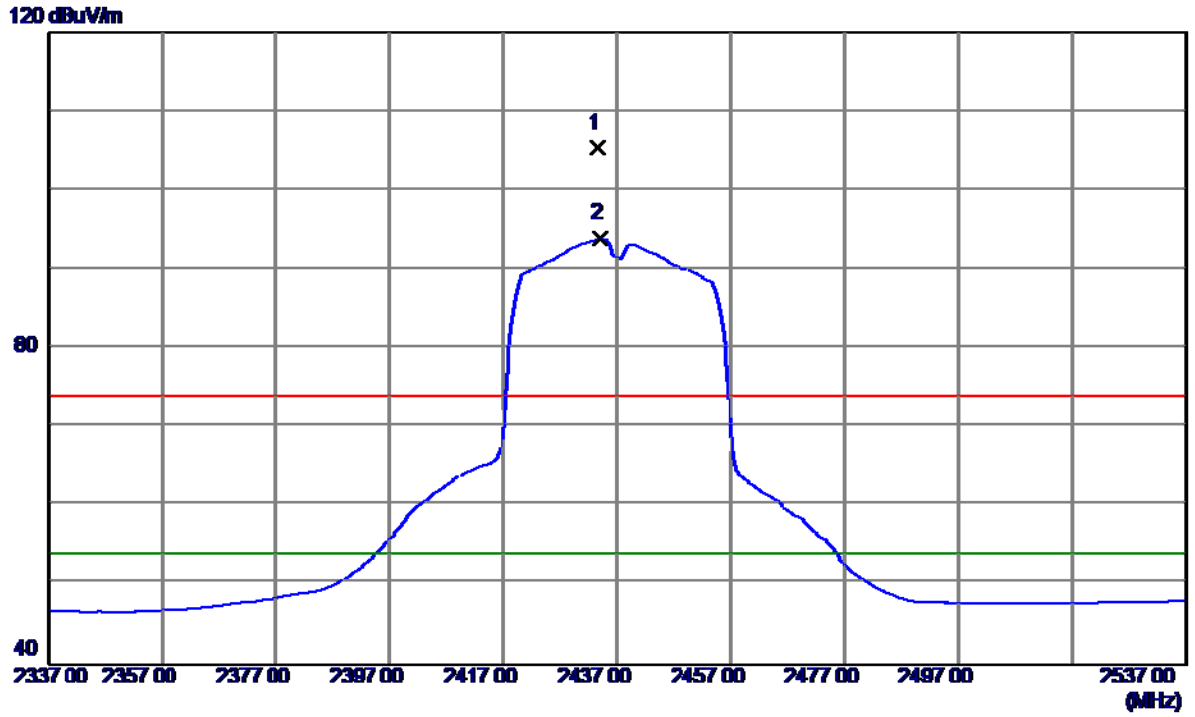
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7263.7150	34.12	11.88	46.00	74.00	-28.00	Peak	
2 *	7267.8400	23.57	11.89	35.46	54.00	-18.54	AVG	

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

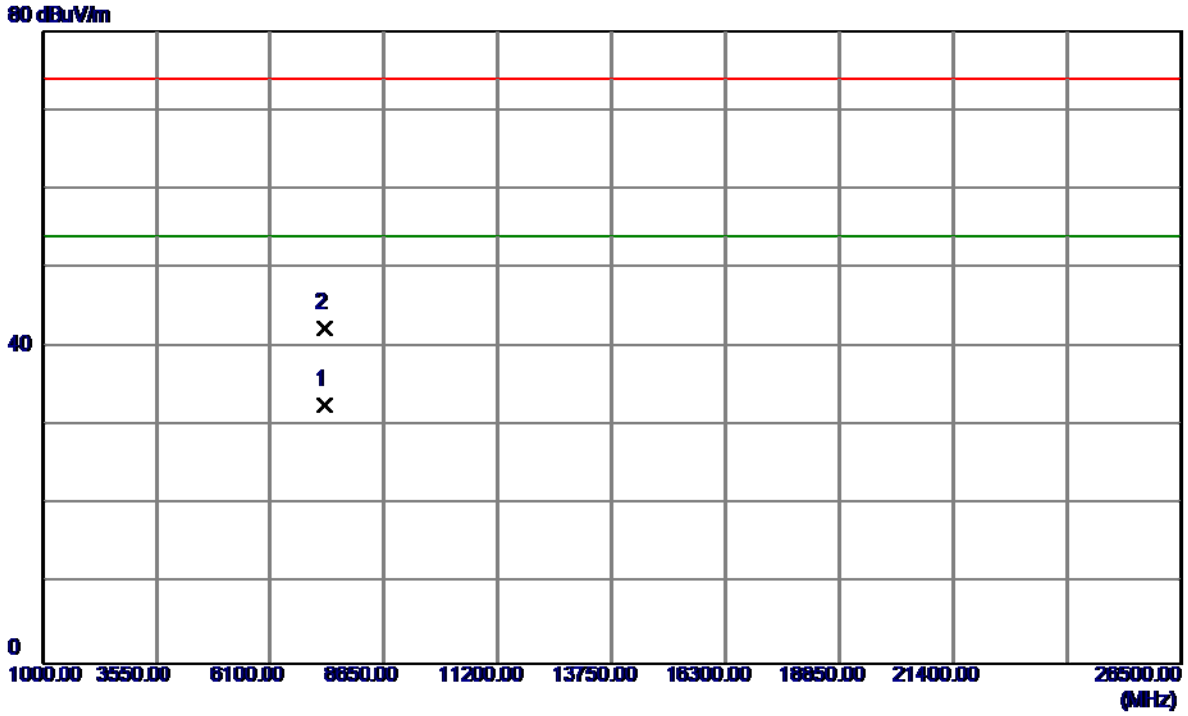
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2433.6000	71.93	33.43	105.36	74.00	31.36	Peak	No Limit
2 *	2434.2000	60.41	33.44	93.85	54.00	39.85	AVG	No Limit

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

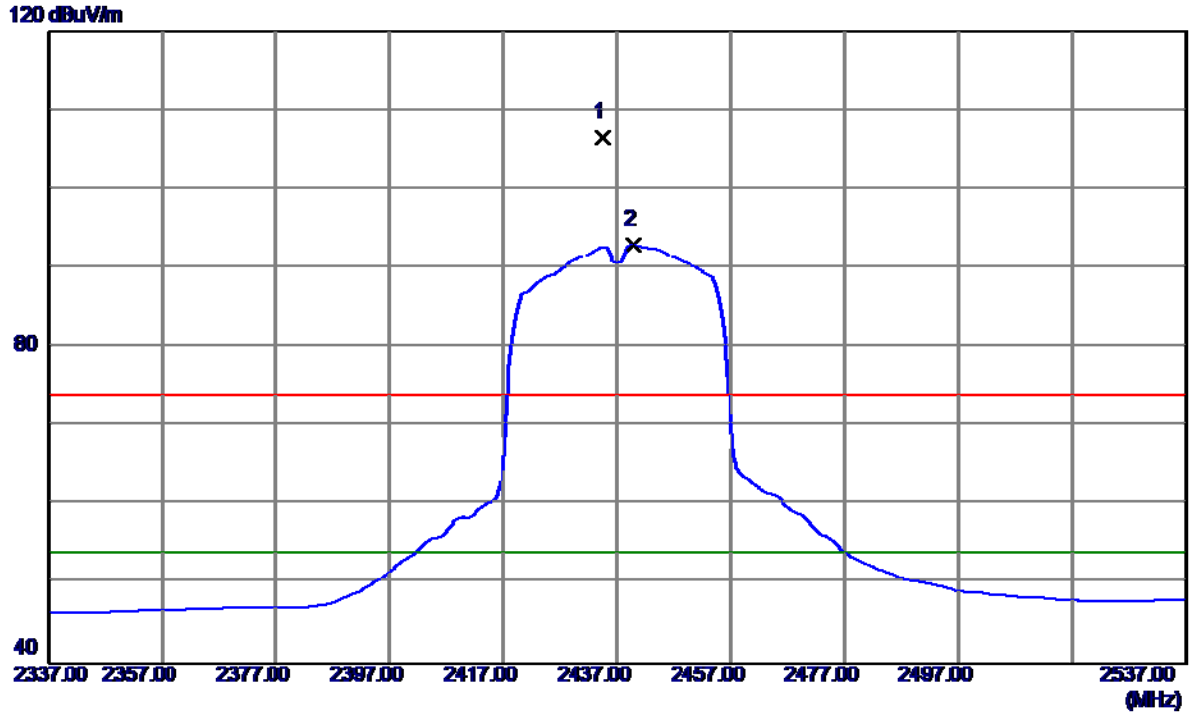
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7305.2000	20.69	11.96	32.65	54.00	-21.35	AVG	
2	7307.3400	30.46	11.96	42.42	74.00	-31.58	Peak	

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

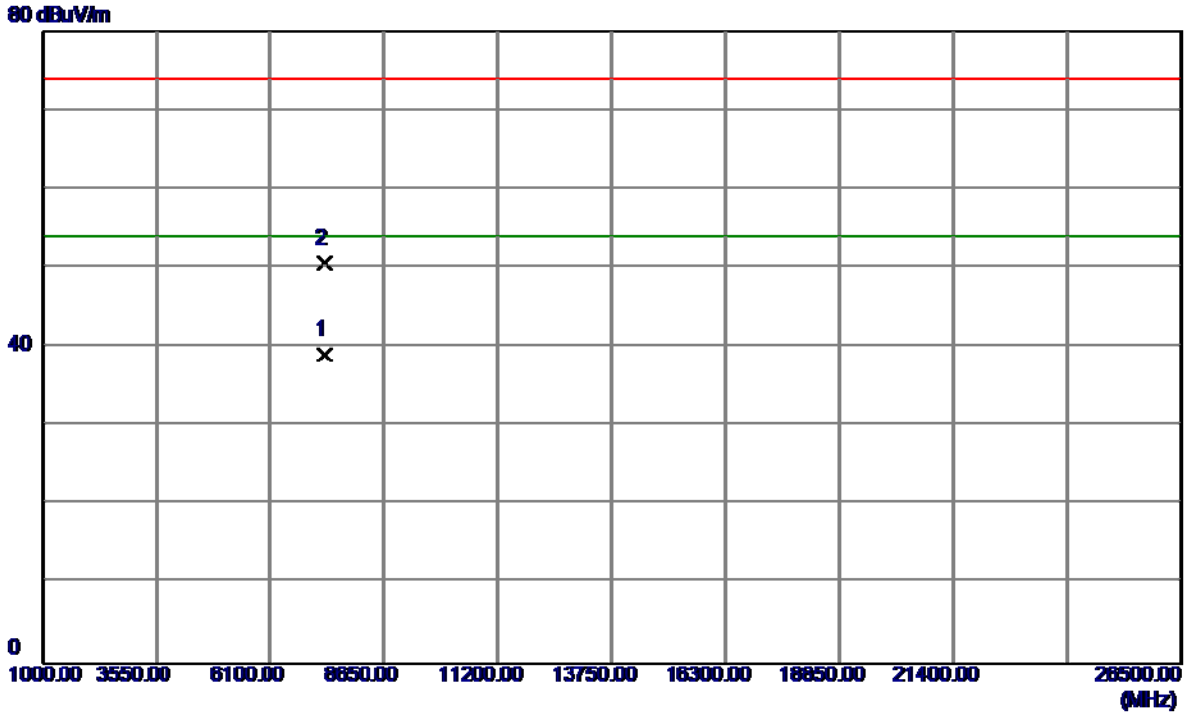
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2434.6000	73.11	33.44	106.55	74.00	32.55	Peak	No Limit
2 *	2439.8000	59.47	33.47	92.94	54.00	38.94	AVG	No Limit

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

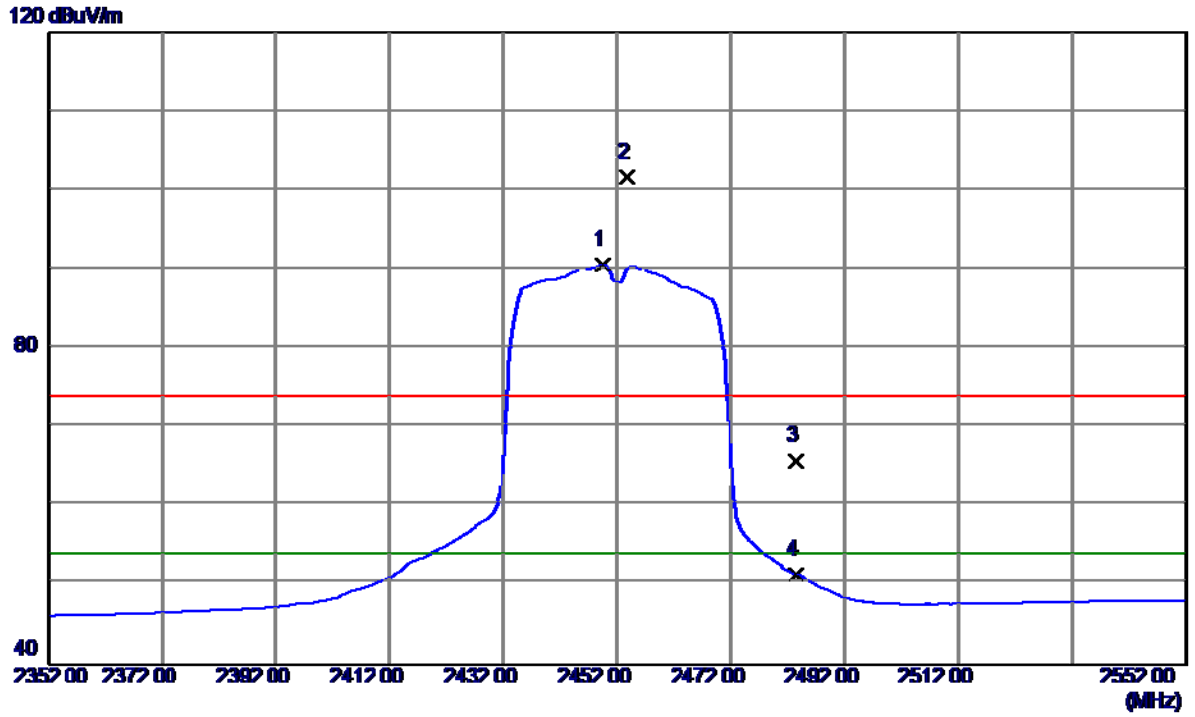
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7310.1500	27.14	11.97	39.11	54.00	-14.89	AVG	
2	7311.6200	38.64	11.97	50.61	74.00	-23.39	Peak	

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

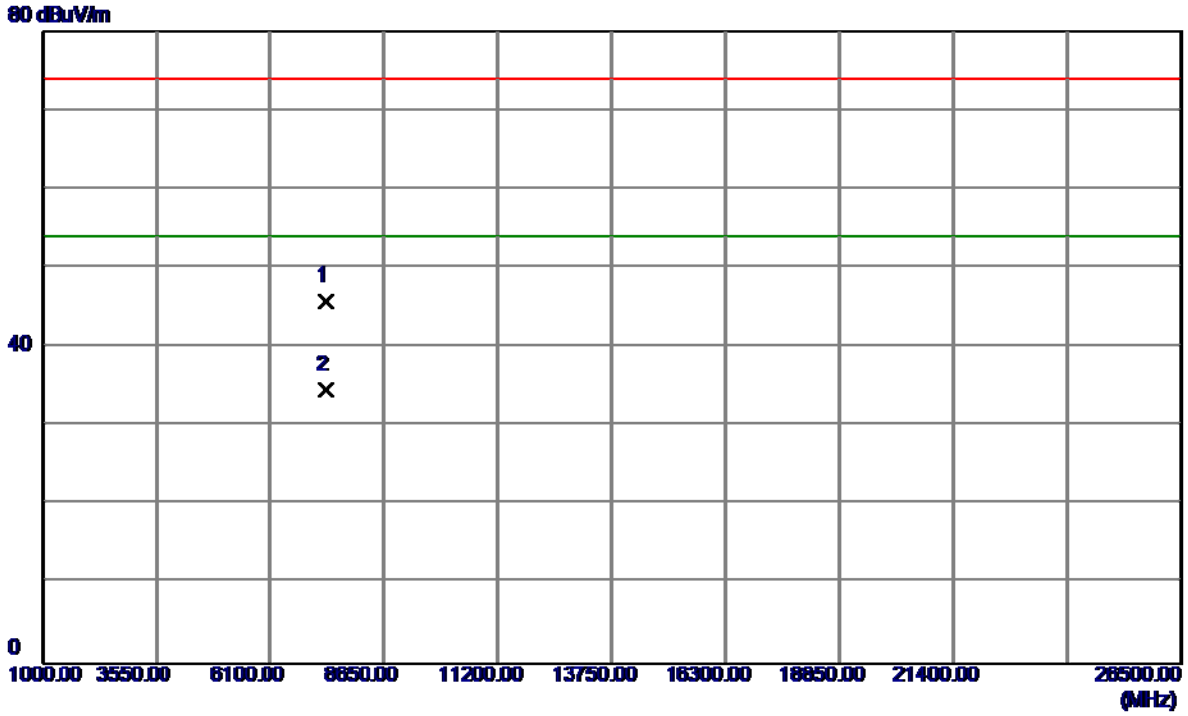
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2449.6000	56.99	33.54	90.53	54.00	36.53	AVG	No Limit
2	2453.8000	68.06	33.57	101.63	74.00	27.63	Peak	No Limit
3	2483.5000	32.07	33.76	65.83	74.00	-8.17	Peak	
4	2483.5000	17.67	33.76	51.43	54.00	-2.57	AVG	

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

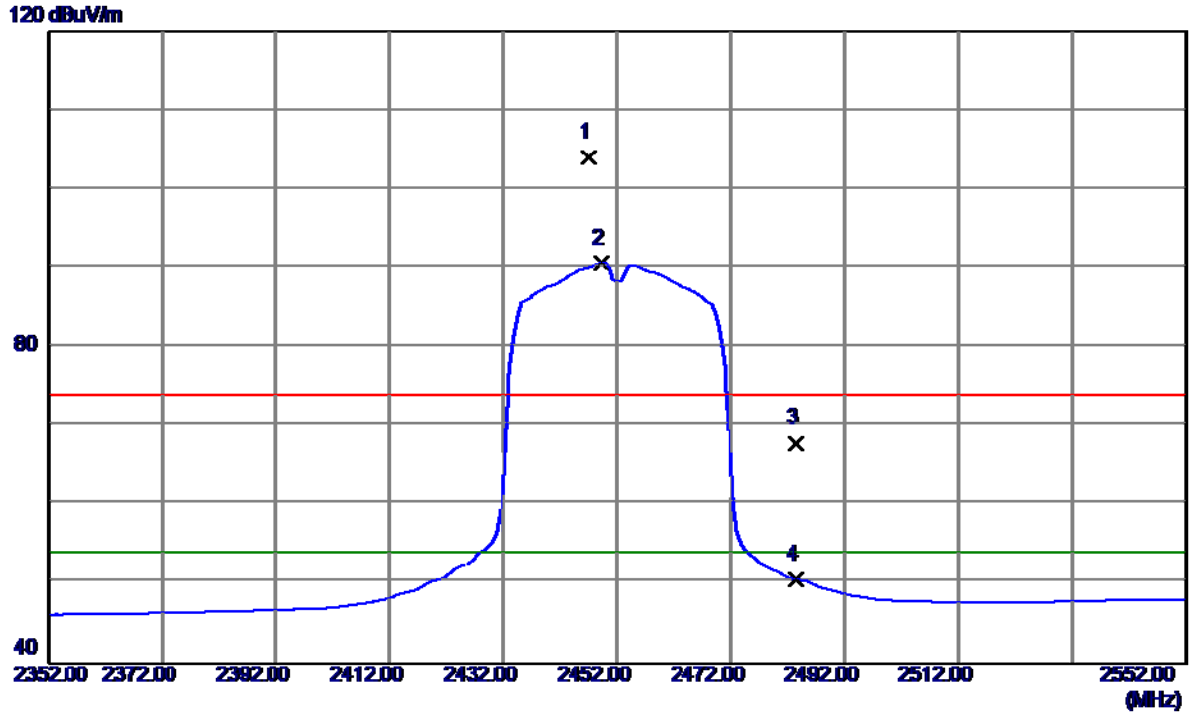
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7350.1400	33.78	12.05	45.83	74.00	-28.17	Peak	
2 *	7352.6700	22.44	12.06	34.50	54.00	-19.50	AVG	

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

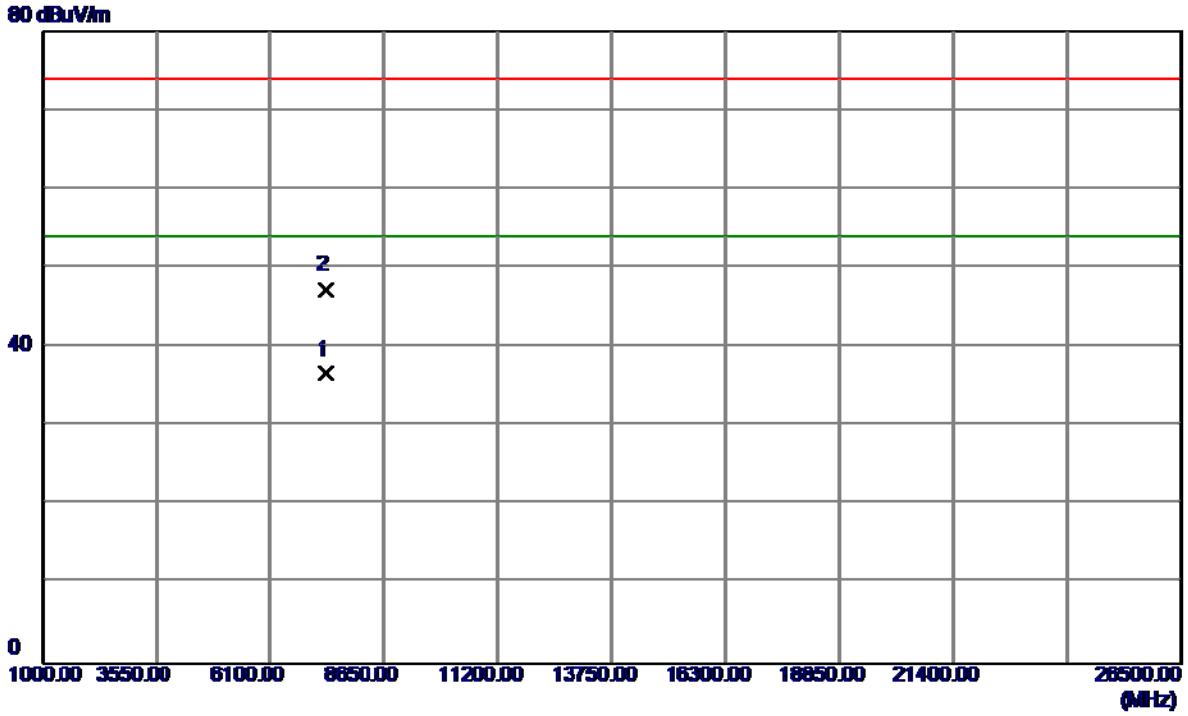
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2447.2000	70.47	33.52	103.99	74.00	29.99	Peak	No Limit
2 *	2449.4000	57.04	33.54	90.58	54.00	36.58	AVG	No Limit
3	2483.5000	34.01	33.76	67.77	74.00	-6.23	Peak	
4	2483.5000	16.82	33.76	50.58	54.00	-3.42	AVG	

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

Horizontal



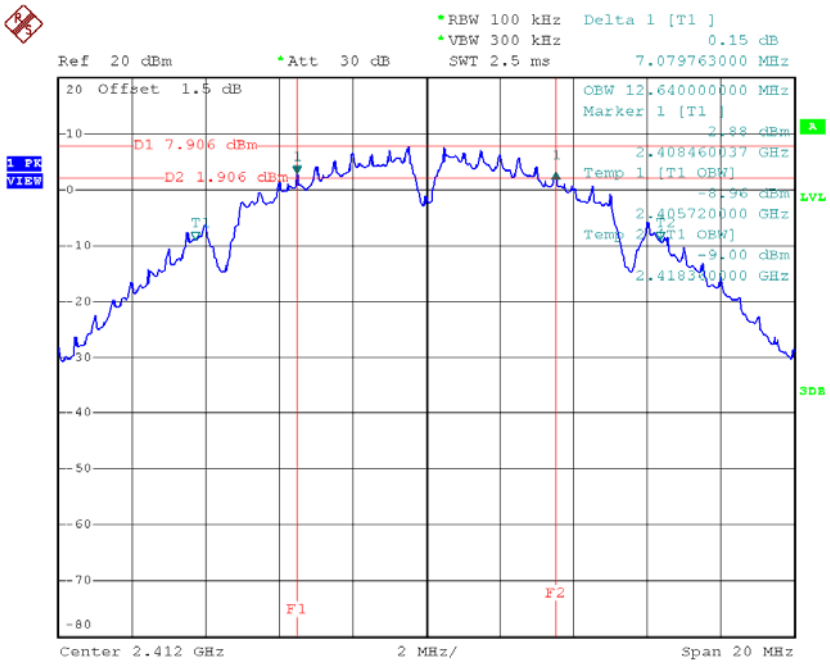
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7353.5400	24.50	12.06	36.56	54.00	-17.44	AVG	
2	7354.4700	35.16	12.06	47.22	74.00	-26.78	Peak	

ATTACHMENT E - BANDWIDTH

Test Mode : TX B Mode_CH01/06/11

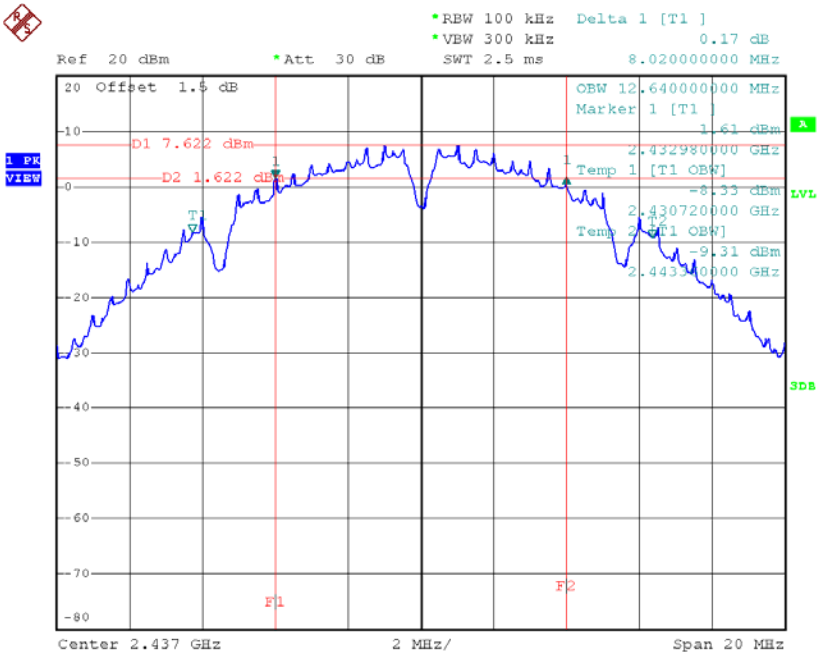
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	7.08	12.64	500	Complies
2437	8.02	12.64	500	Complies
2462	6.65	12.56	500	Complies

TX CH01



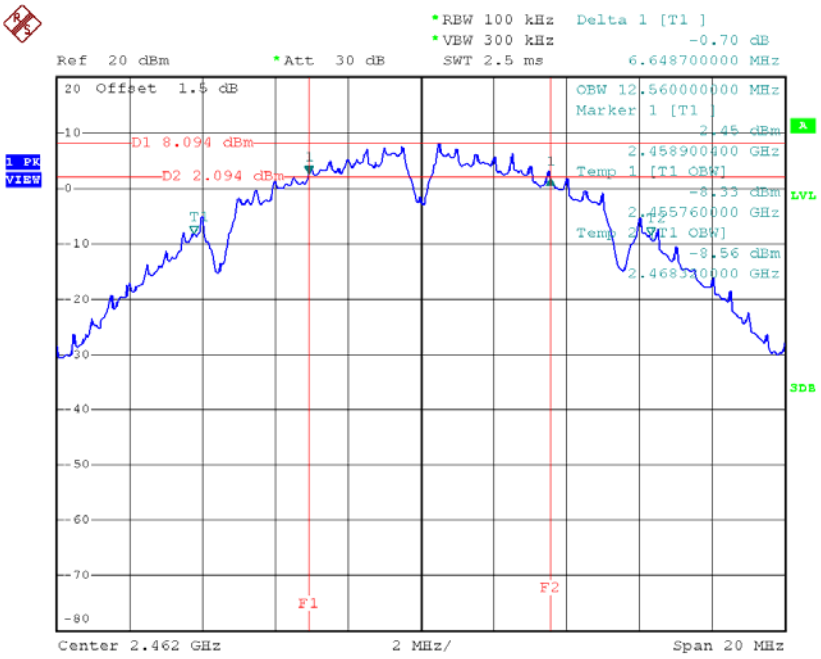
Date: 15.APR.2017 10:51:06

TX CH06



Date: 15.APR.2017 10:53:05

TX CH11

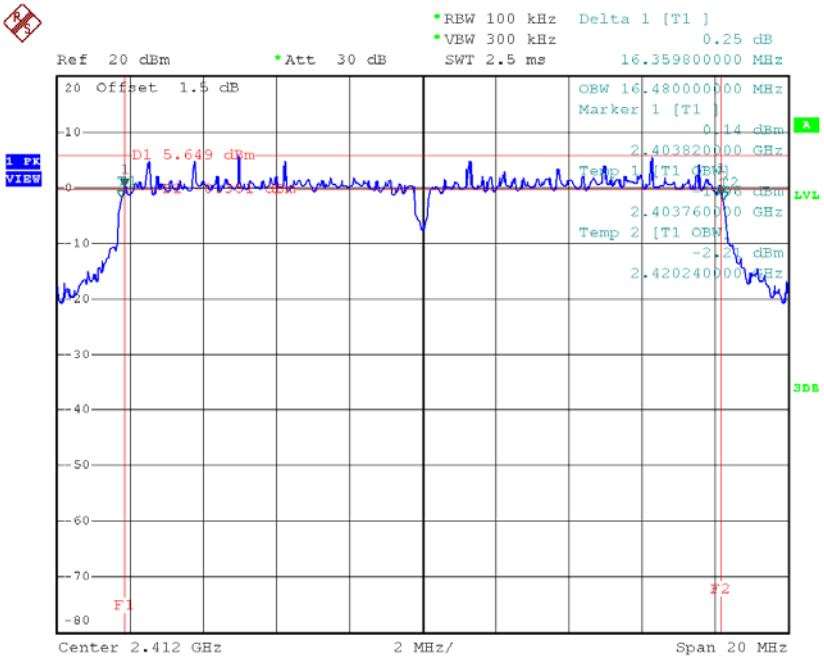


Date: 15.APR.2017 10:59:44

Test Mode: TX G Mode_CH01/06/11

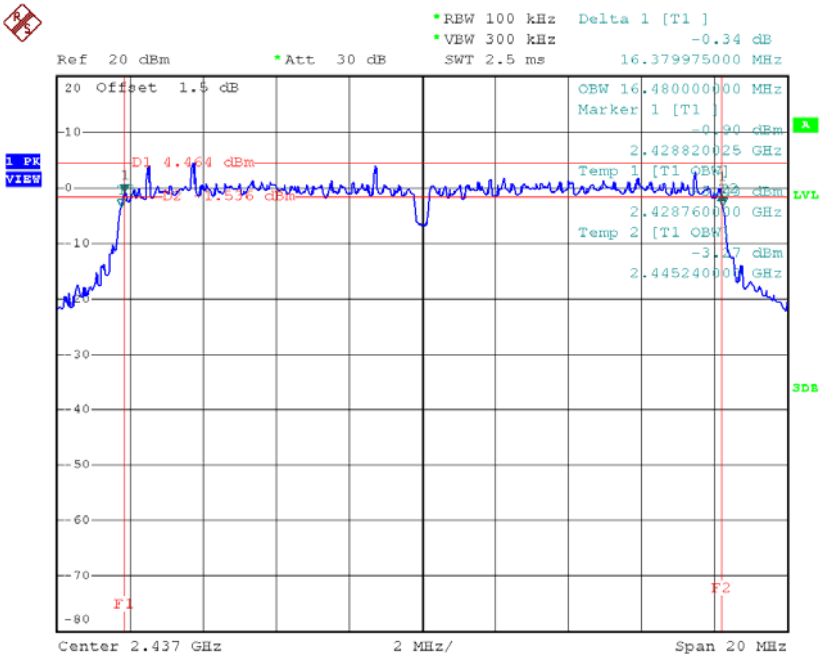
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.36	16.48	500	Complies
2437	16.38	16.48	500	Complies
2462	16.38	16.48	500	Complies

TX CH01



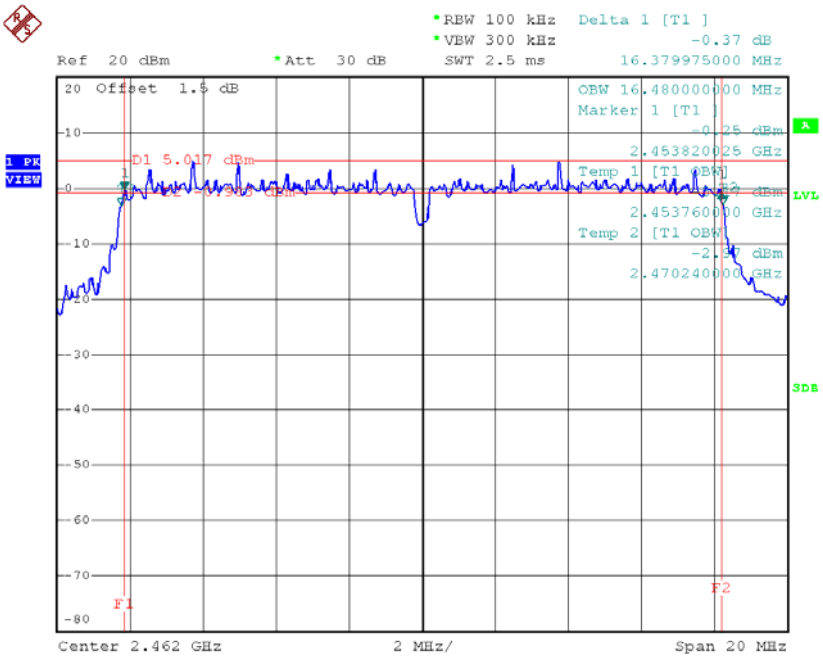
Date: 15.APR.2017 11:02:00

TX CH06



Date: 15.APR.2017 11:04:34

TX CH11

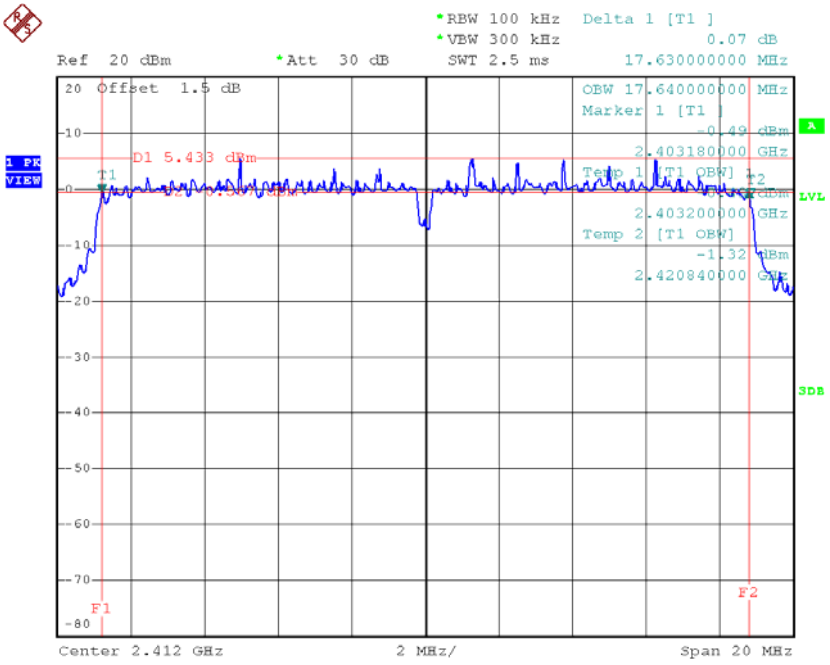


Date: 15.APR.2017 11:06:36

Test Mode : TX N-20MHz Mode_CH01/06/11

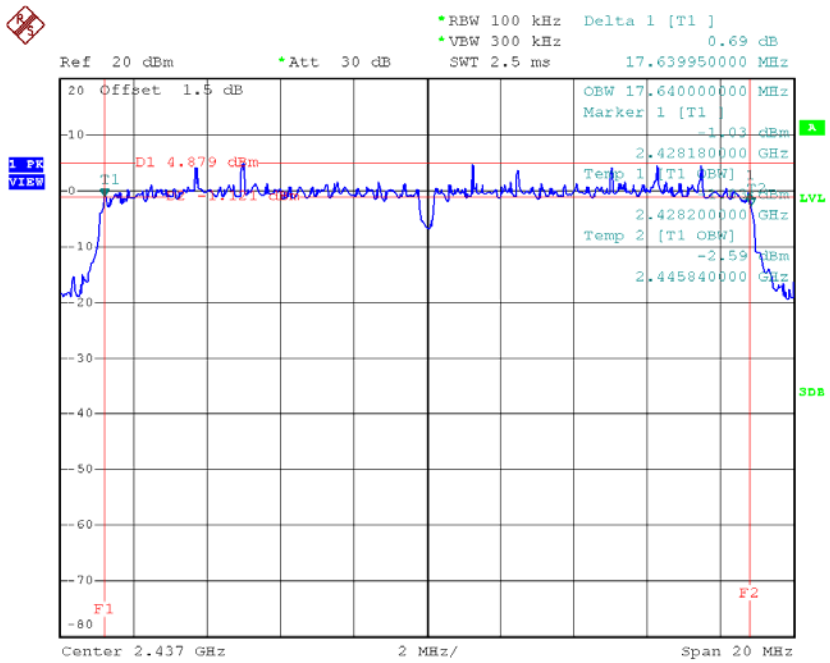
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.63	17.64	500	Complies
2437	17.64	17.64	500	Complies
2462	17.64	17.64	500	Complies

TX CH01



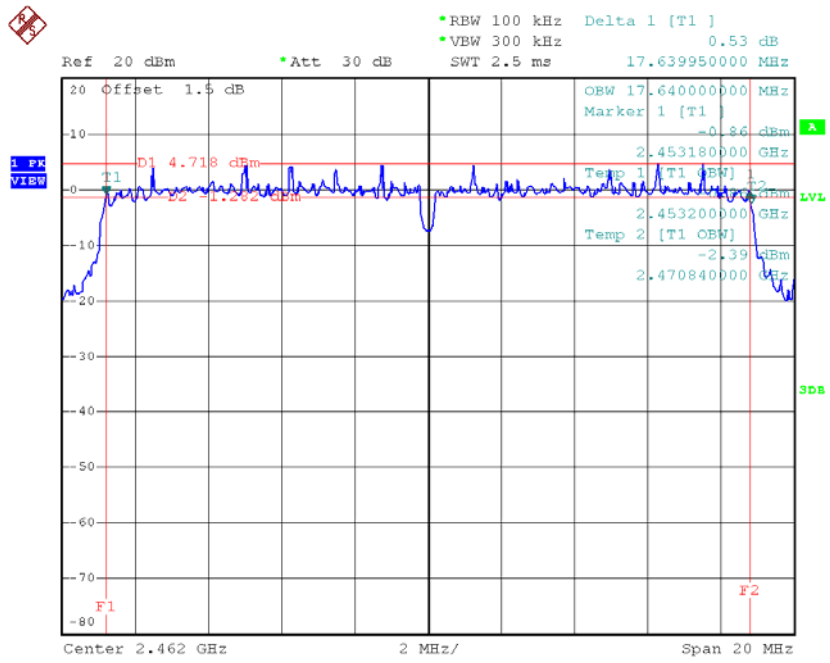
Date: 15.APR.2017 11:08:20

TX CH06



Date: 15.APR.2017 11:18:12

TX CH11

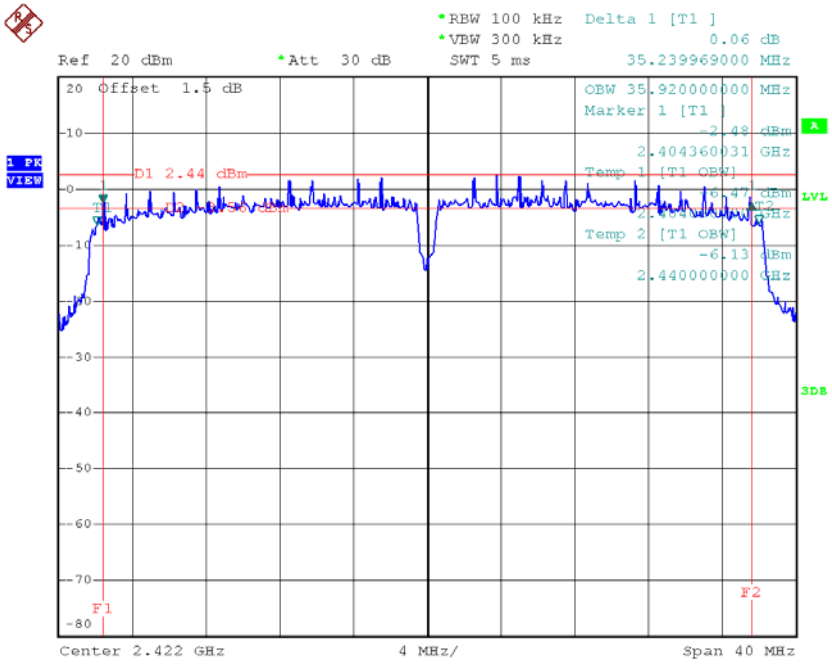


Date: 15.APR.2017 11:21:06

Test Mode : TX N-40MHz Mode_CH03/06/09

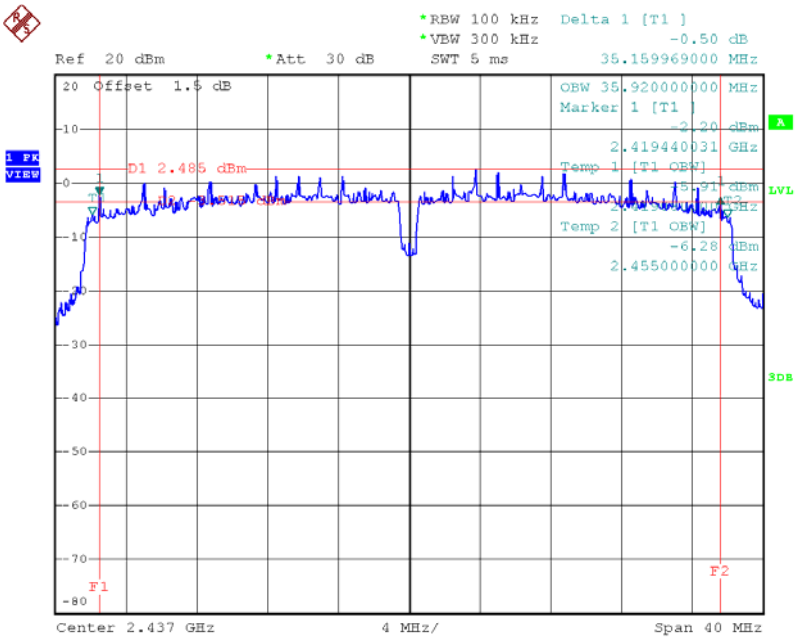
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	35.24	35.92	500	Complies
2437	35.16	35.92	500	Complies
2452	35.19	35.92	500	Complies

TX CH03



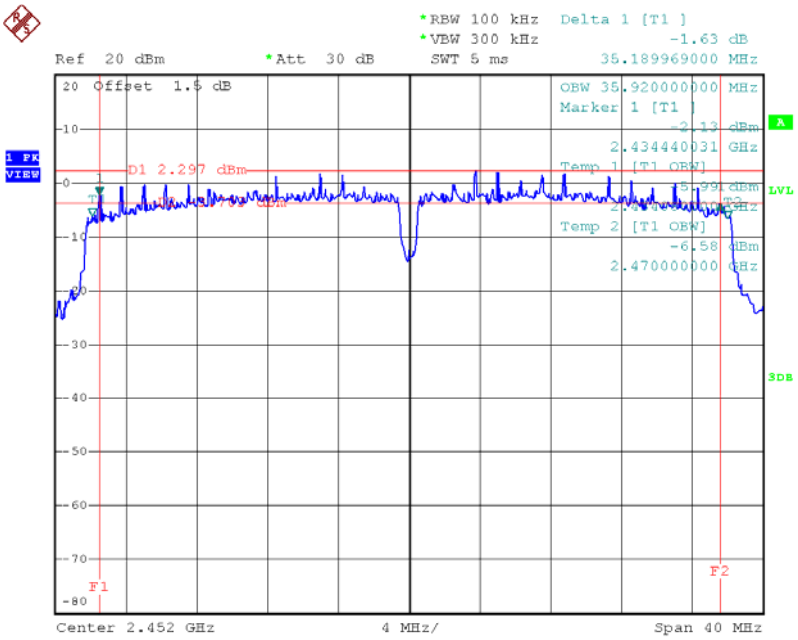
Date: 15.APR.2017 11:23:36

TX CH06



Date: 15.APR.2017 11:25:50

TX CH09



Date: 15.APR.2017 11:27:07

ATTACHMENT 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	21.86	0.15	30.00	1.00	Complies
2437	21.78	0.15	30.00	1.00	Complies
2462	21.73	0.15	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	24.34	0.27	30.00	1.00	Complies
2437	24.17	0.26	30.00	1.00	Complies
2462	24.18	0.26	30.00	1.00	Complies

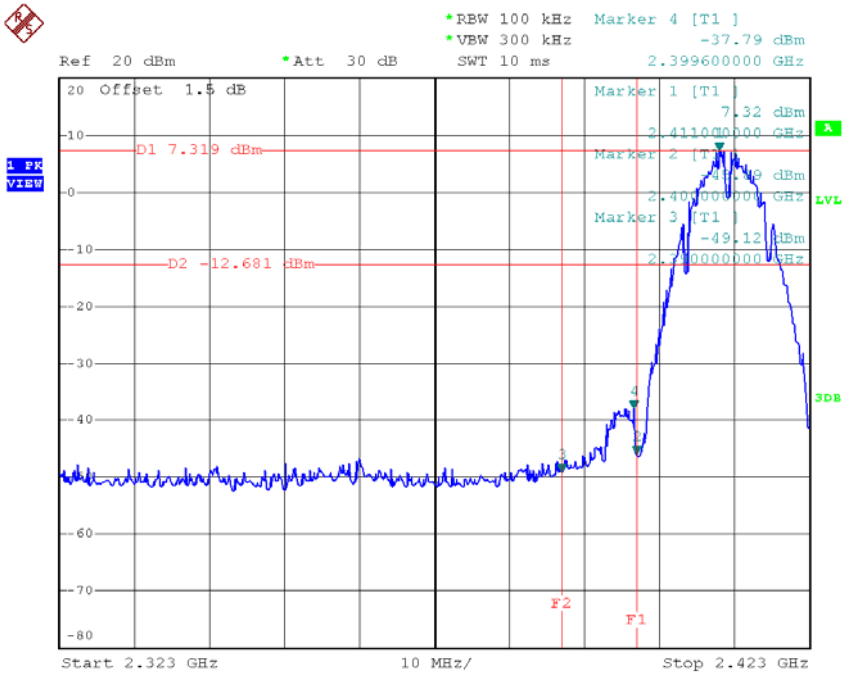
Test Mode :TX N20 Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	23.80	0.24	30.00	1.00	Complies
2437	24.23	0.26	30.00	1.00	Complies
2462	24.64	0.29	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	23.74	0.24	30.00	1.00	Complies
2437	24.09	0.26	30.00	1.00	Complies
2452	24.04	0.25	30.00	1.00	Complies

ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

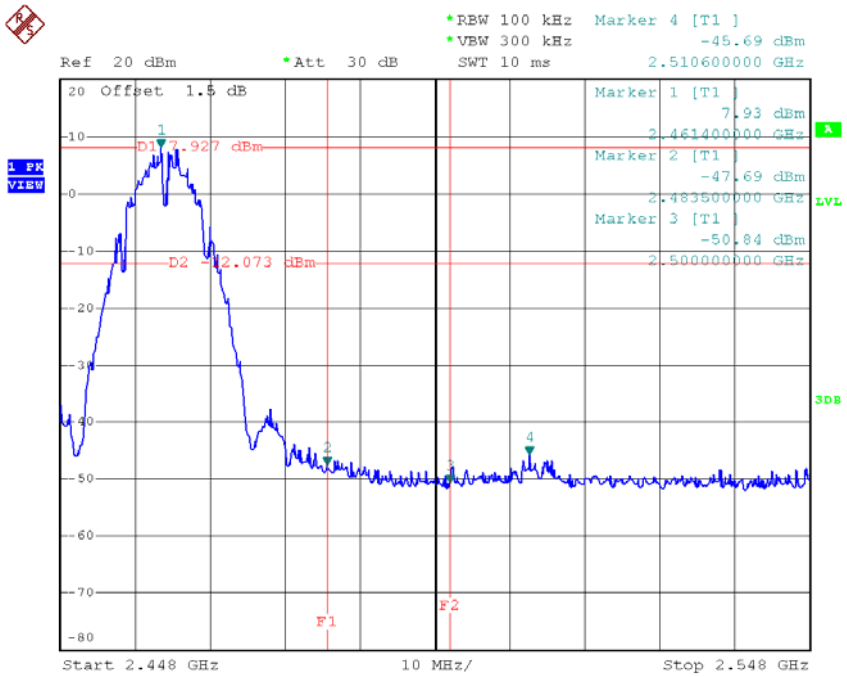
Test Mode :	TX B Mode

TX B mode CH01



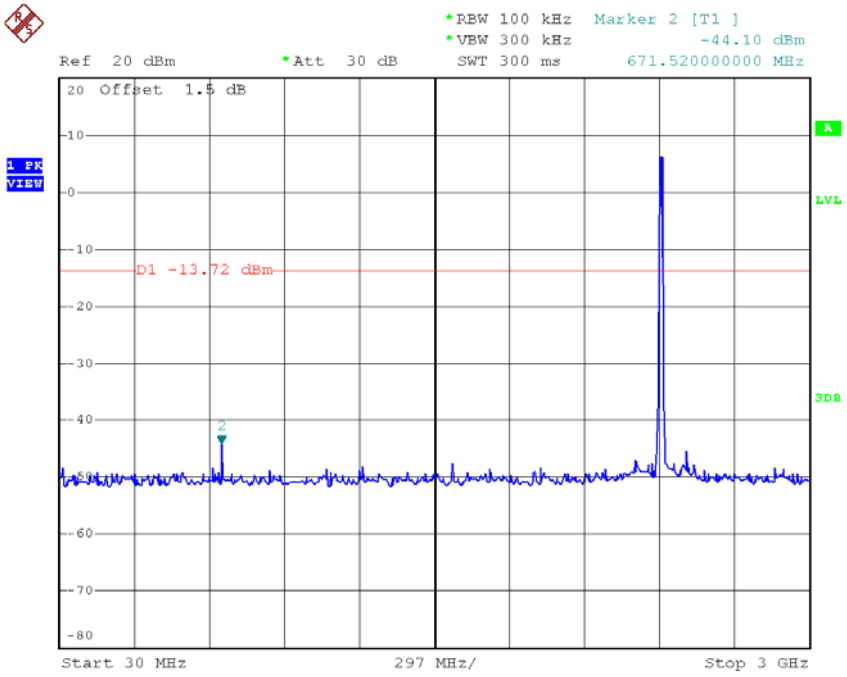
Date: 15.APR.2017 10:51:45

TX B mode CH11

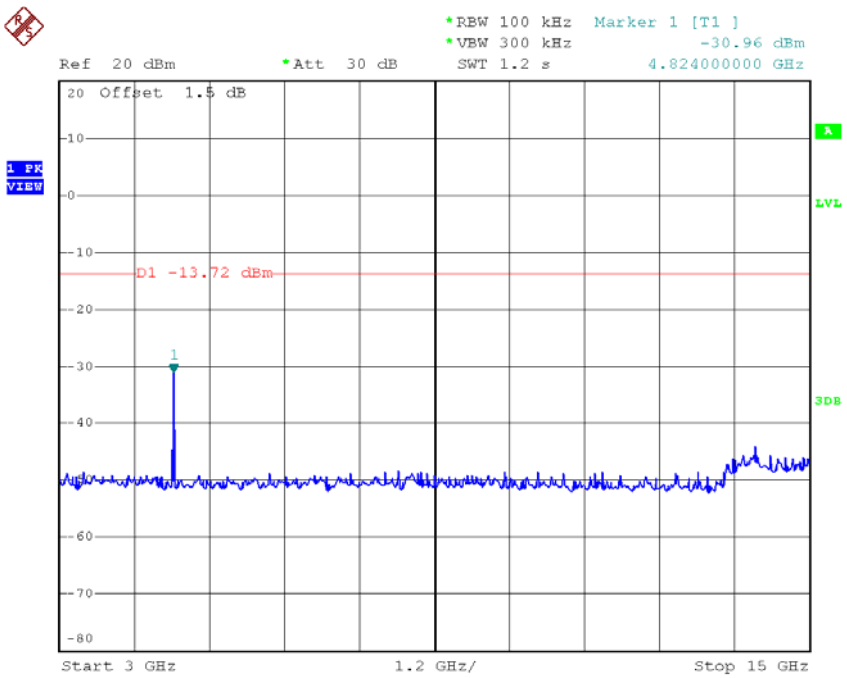


Date: 15.APR.2017 11:00:23

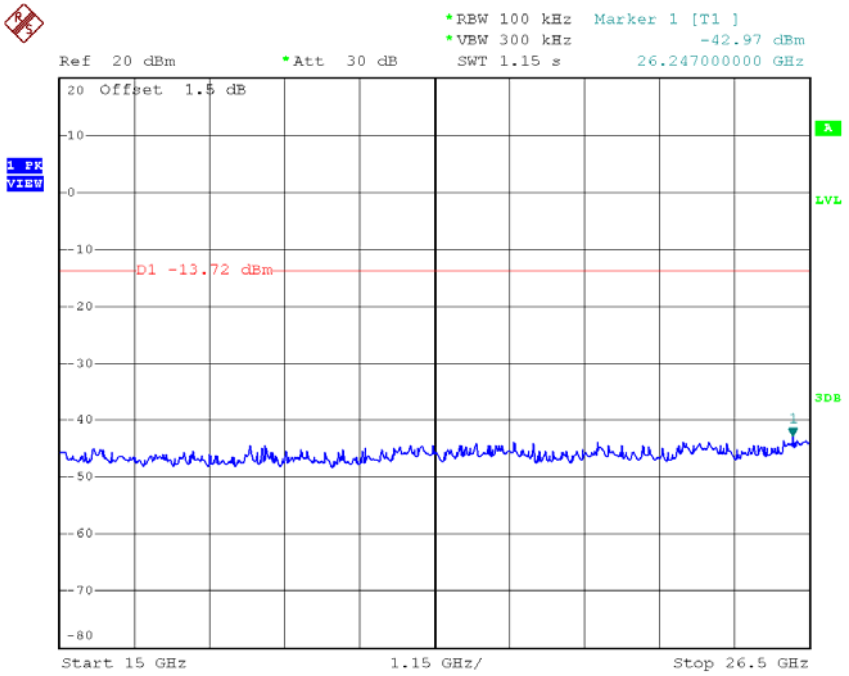
TX B mode CH01 (10 Harmonic of the frequency)



Date: 15.APR.2017 10:51:20

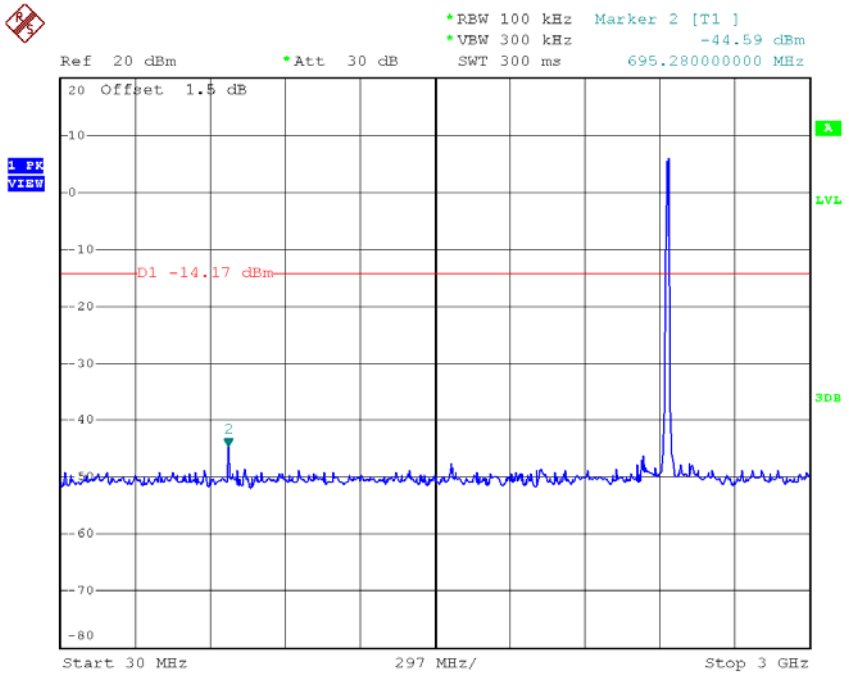


Date: 15.APR.2017 10:51:29



Date: 15.APR.2017 10:51:37

TX B mode CH06 (10 Harmonic of the frequency)



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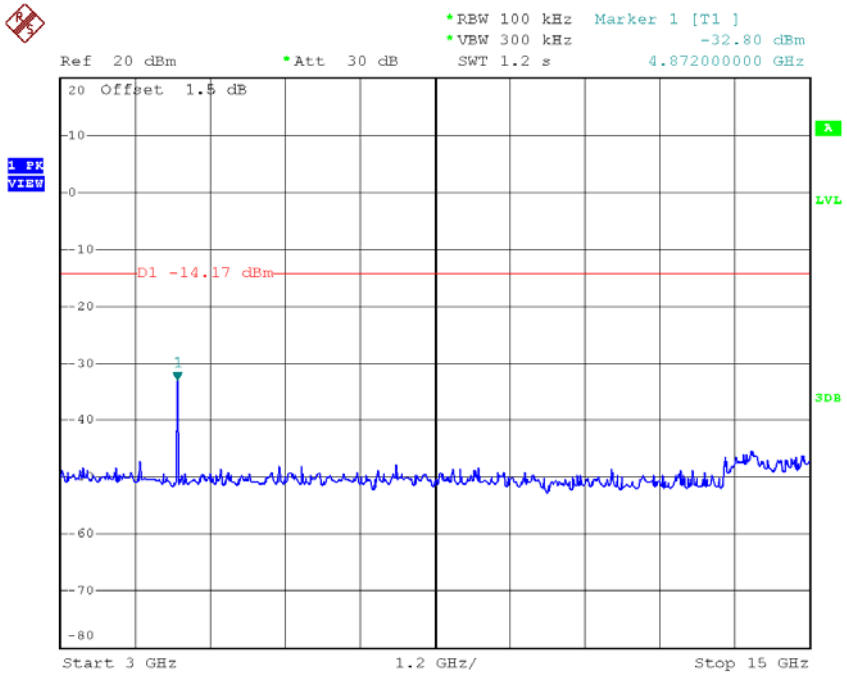
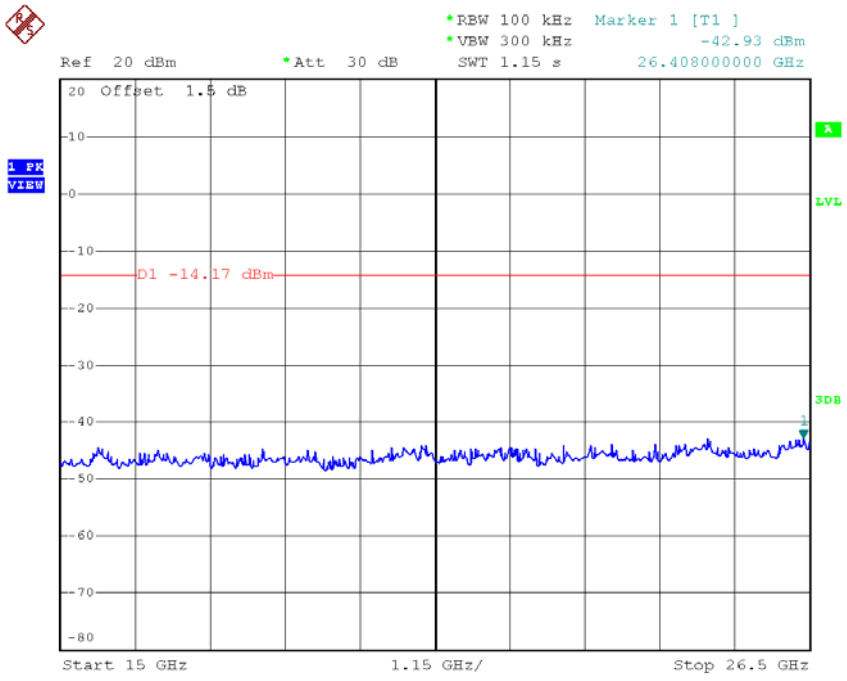
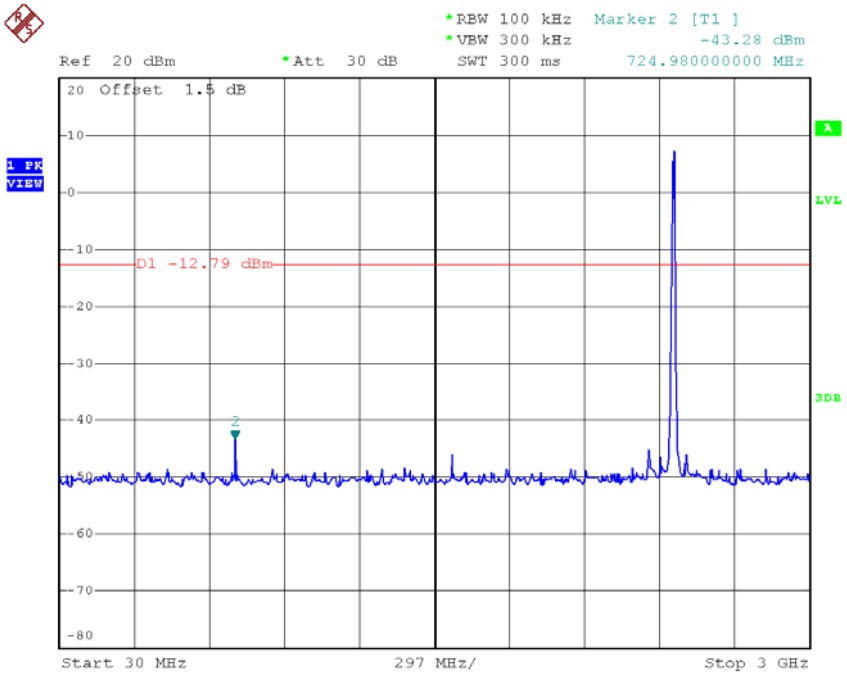


Date: 15.APR.2017 10:53:27

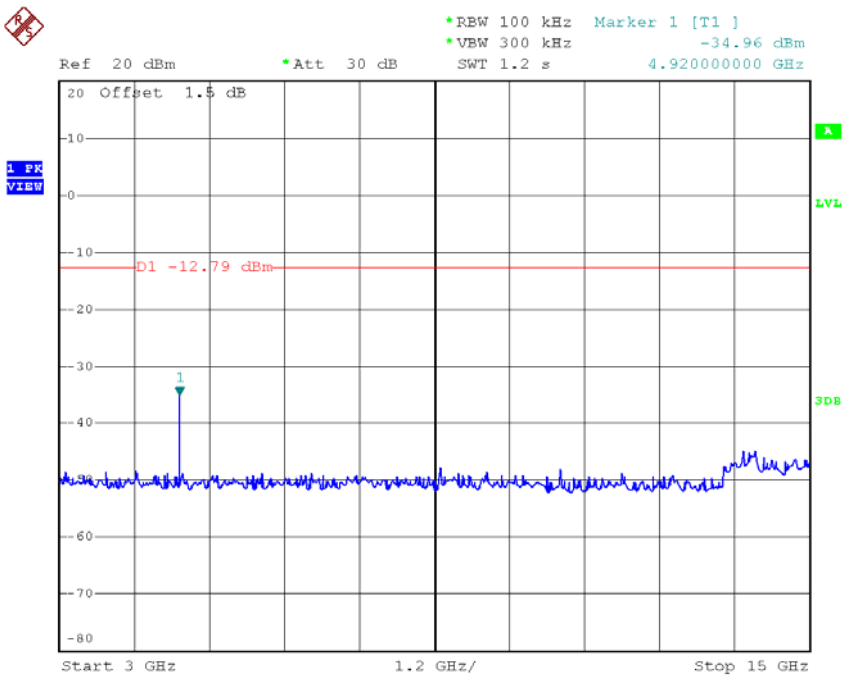


Date: 15.APR.2017 10:53:35

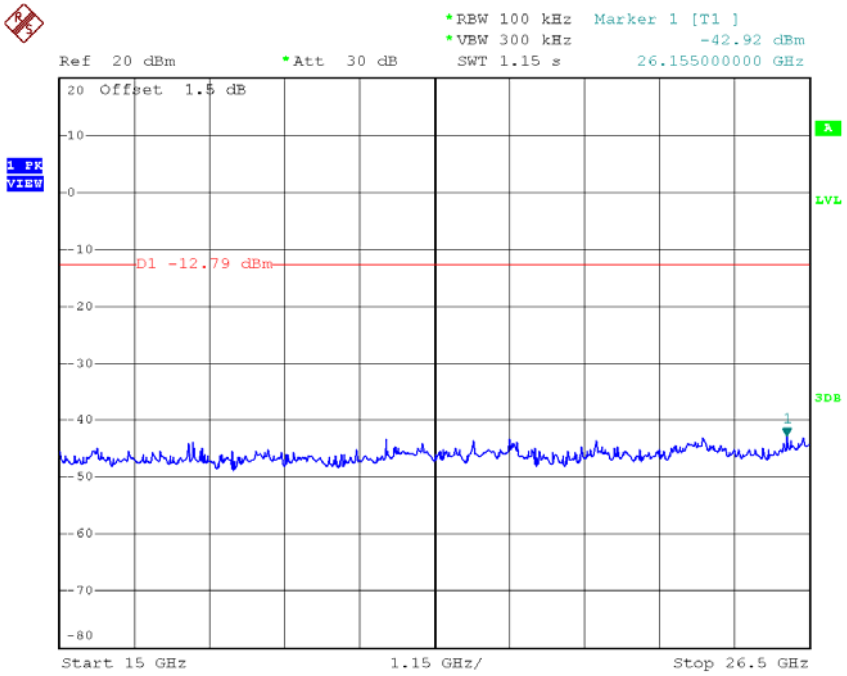
TX B mode CH11 (10 Harmonic of the frequency)



Date: 15.APR.2017 10:59:58



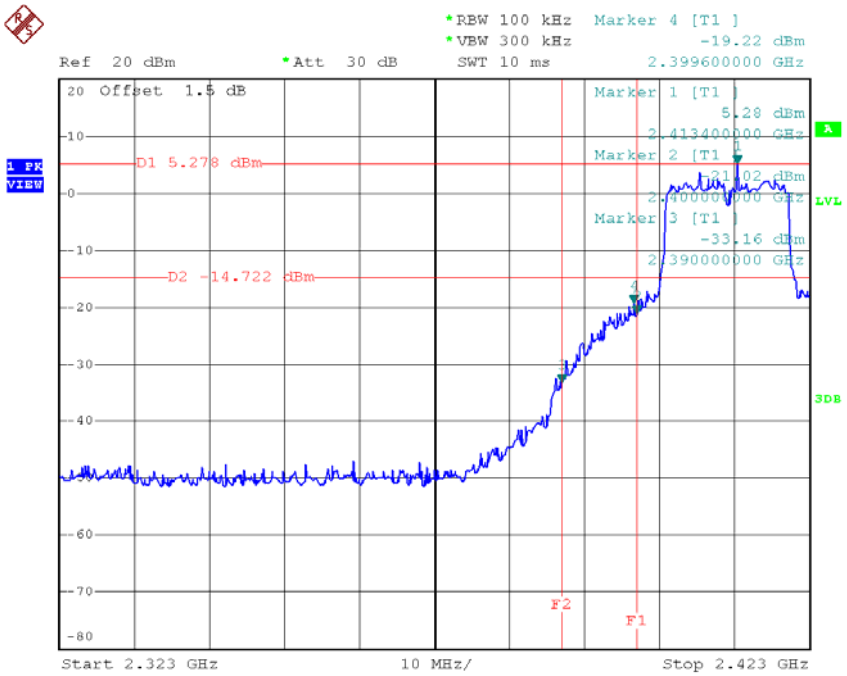
Date: 15.APR.2017 11:00:07



Date: 15.APR.2017 11:00:15

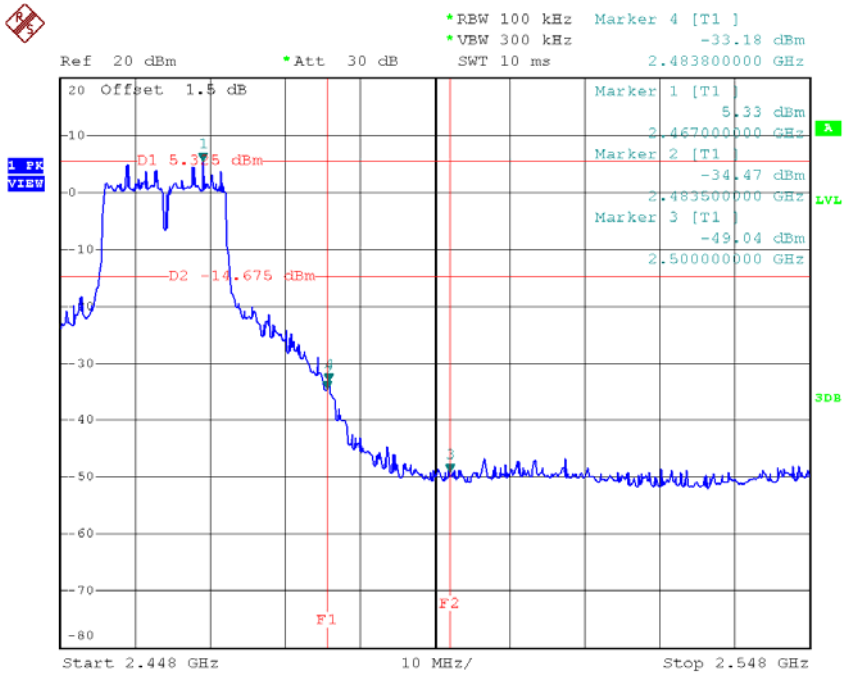
Test Mode :	TX G Mode

TX G mode CH01



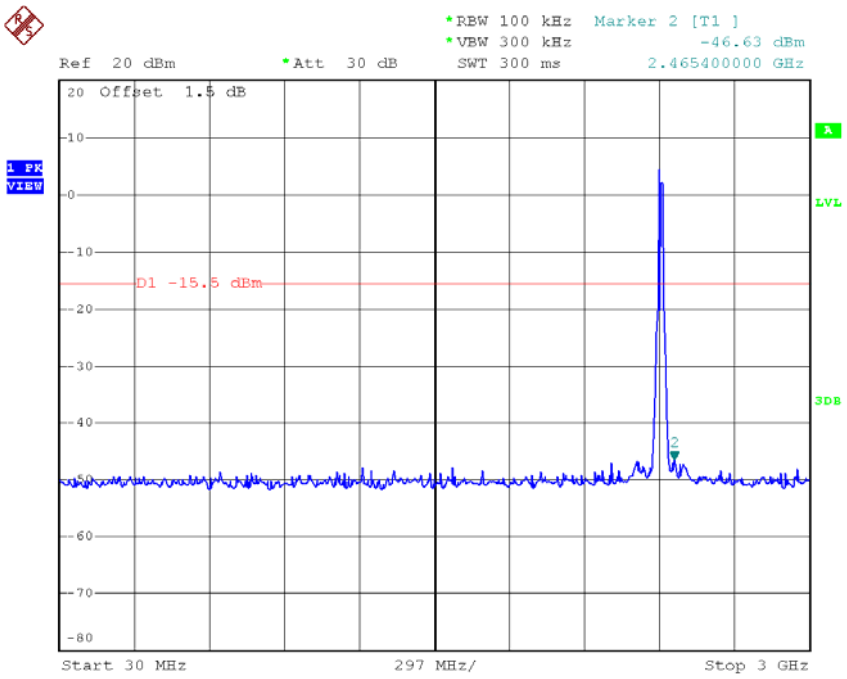
Date: 15.APR.2017 11:02:39

TX G mode CH11

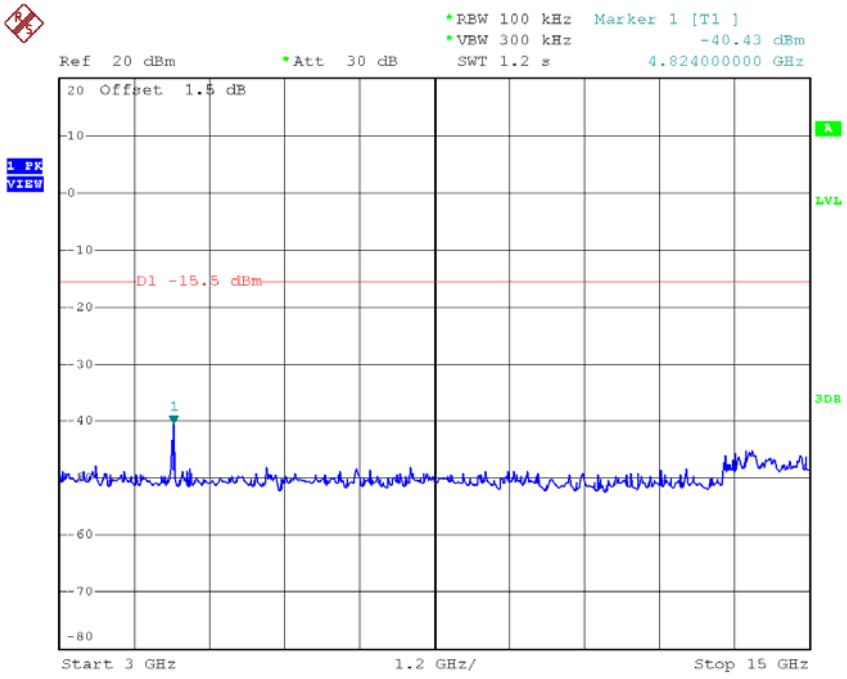


Date: 15.APR.2017 11:07:15

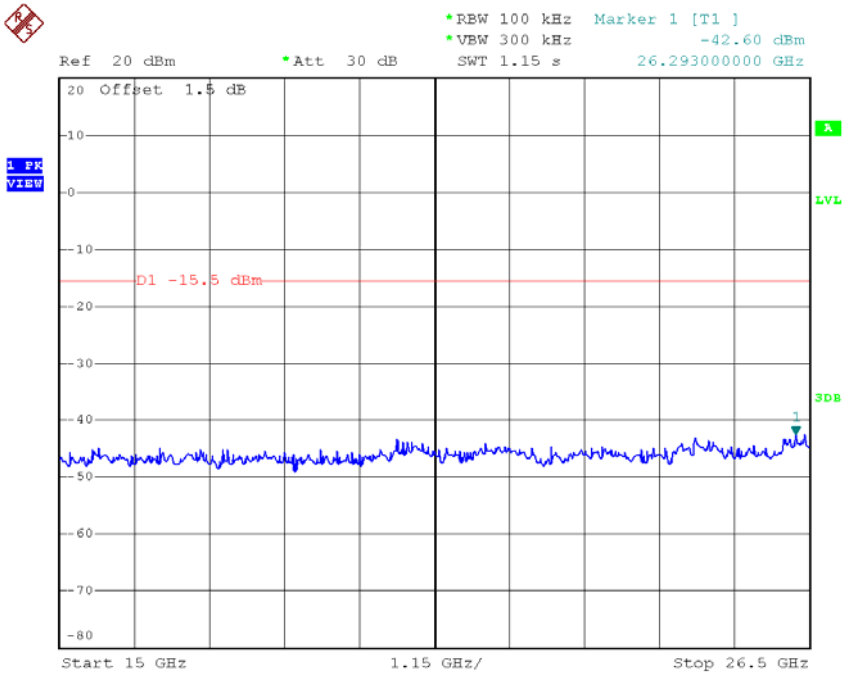
TX G mode CH01 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:02:14

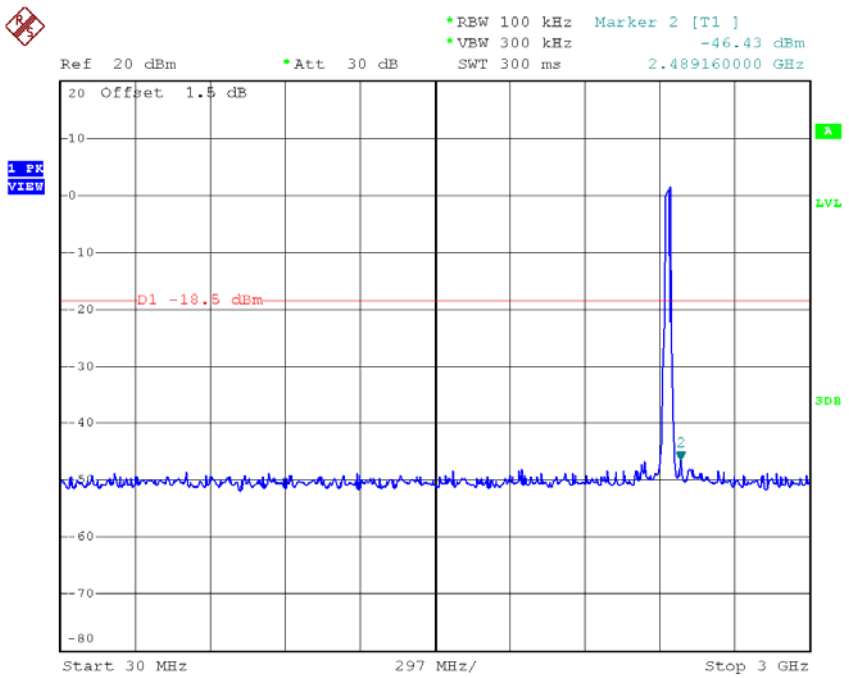


Date: 15.APR.2017 11:02:23

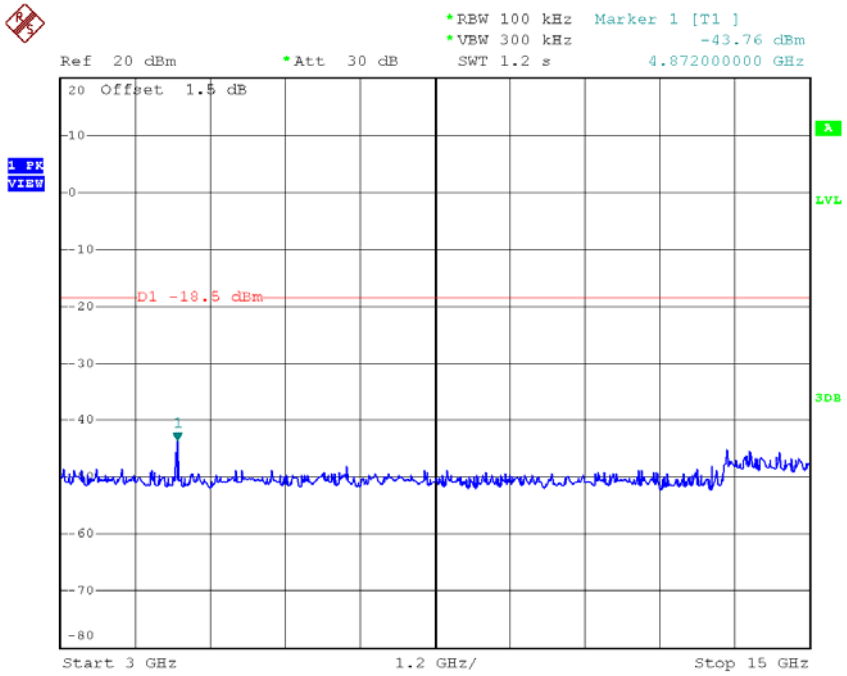


Date: 15.APR.2017 11:02:31

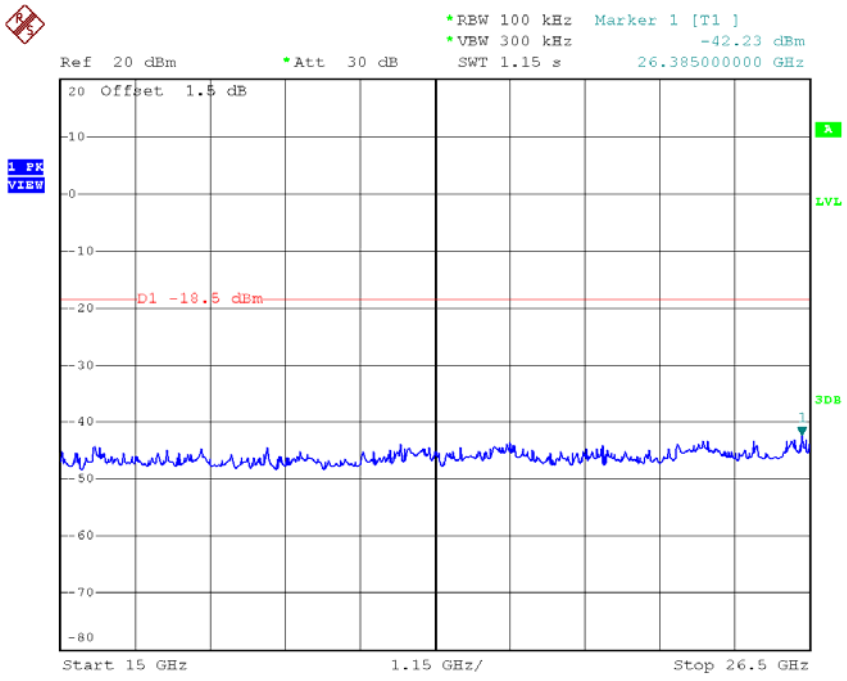
TX G mode CH06 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:04:49

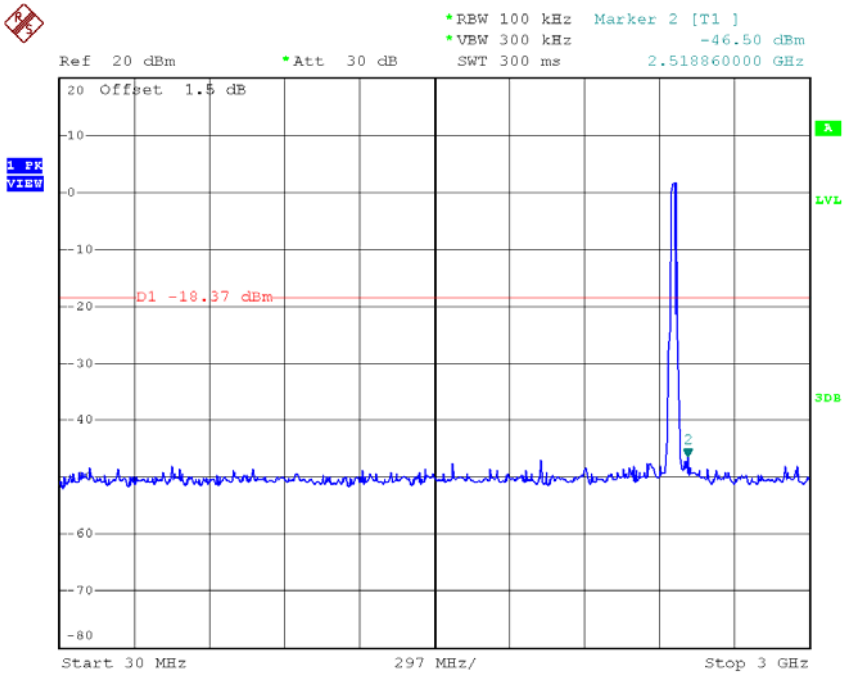


Date: 15.APR.2017 11:04:57

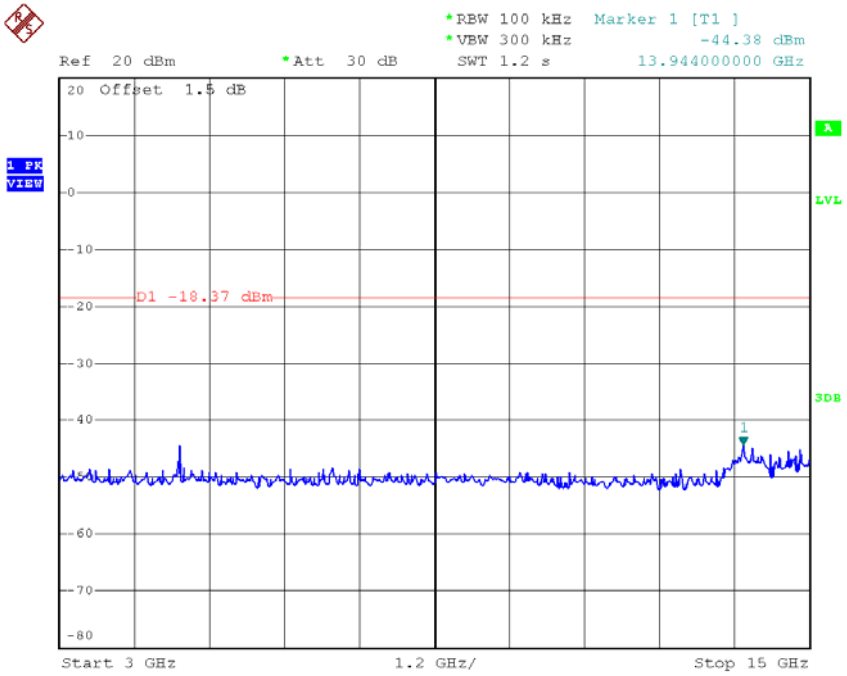


Date: 15.APR.2017 11:05:06

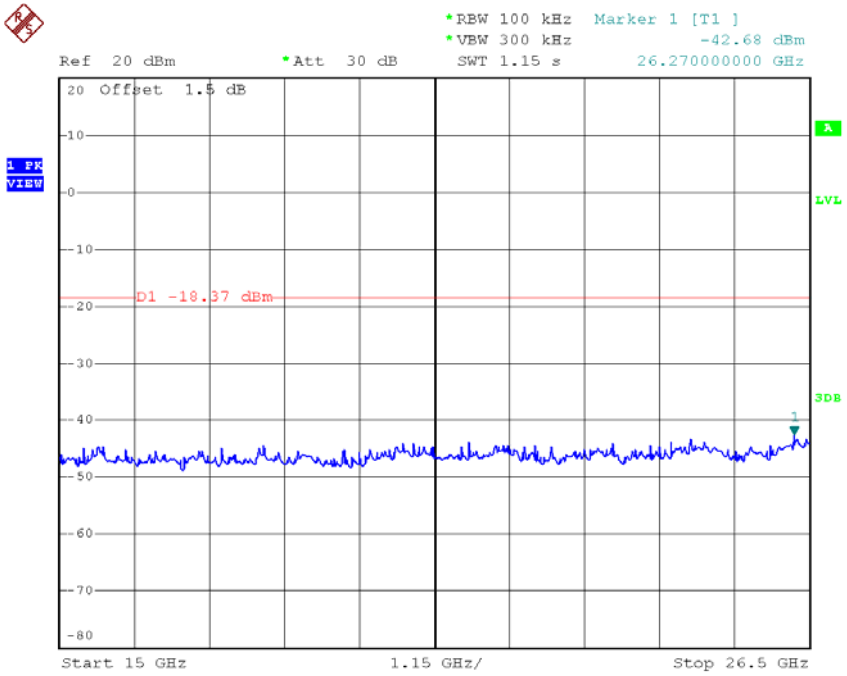
TX G mode CH11 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:06:50



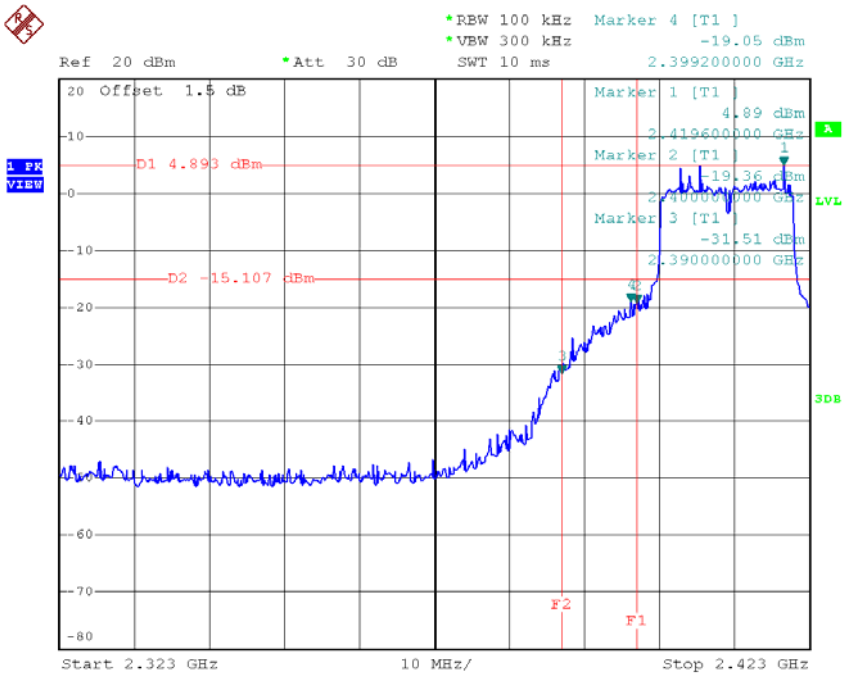
Date: 15.APR.2017 11:06:59



Date: 15.APR.2017 11:07:07

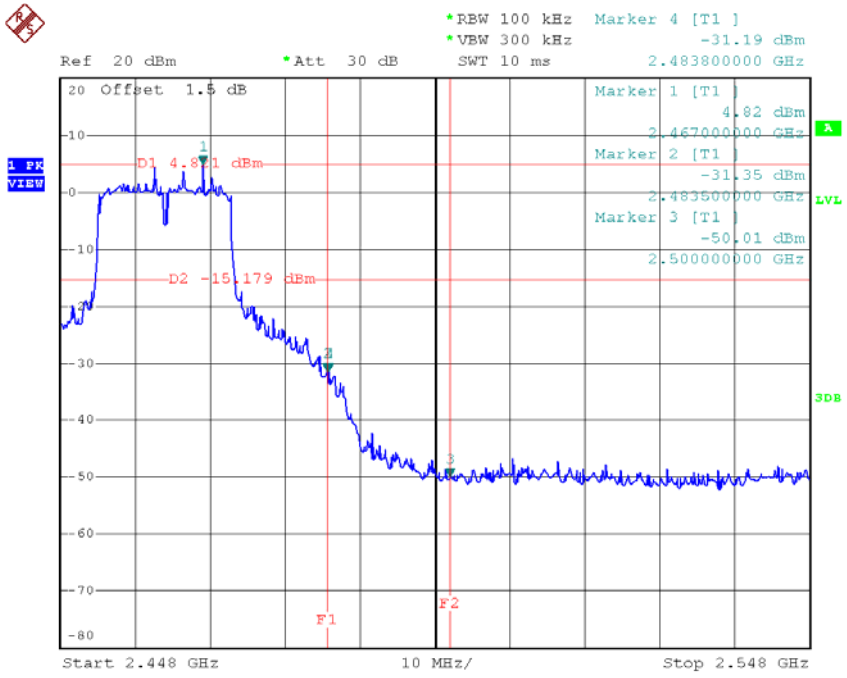
Test Mode :	TX N-20M Mode

TX HT20 mode CH01



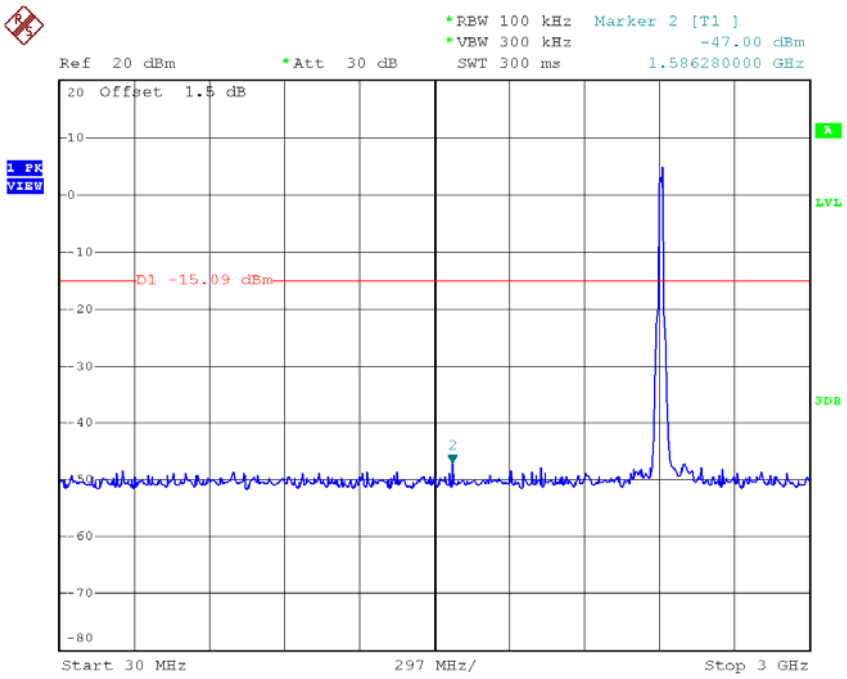
Date: 15.APR.2017 11:08:59

TX HT20 mode CH11

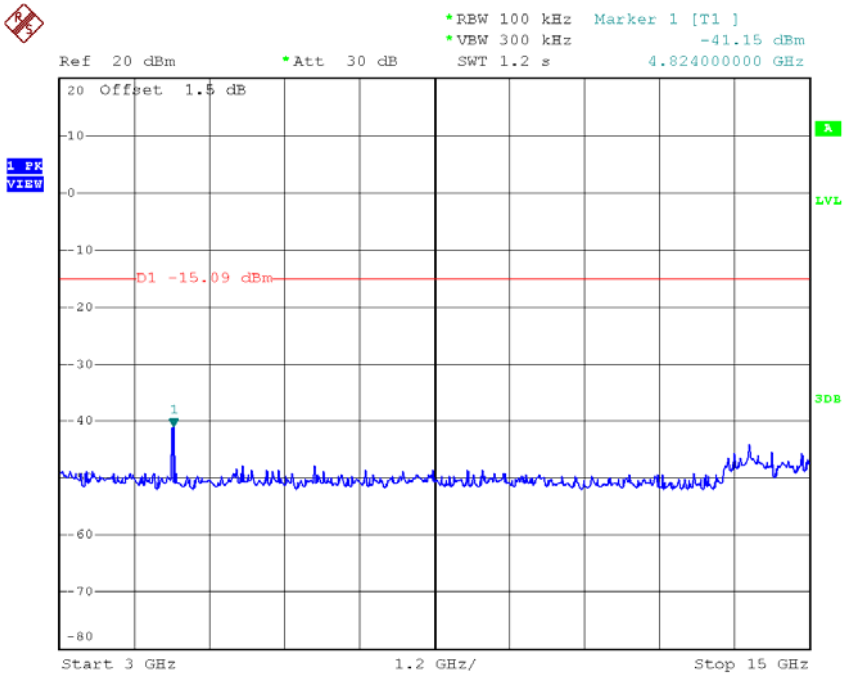


Date: 15.APR.2017 11:21:45

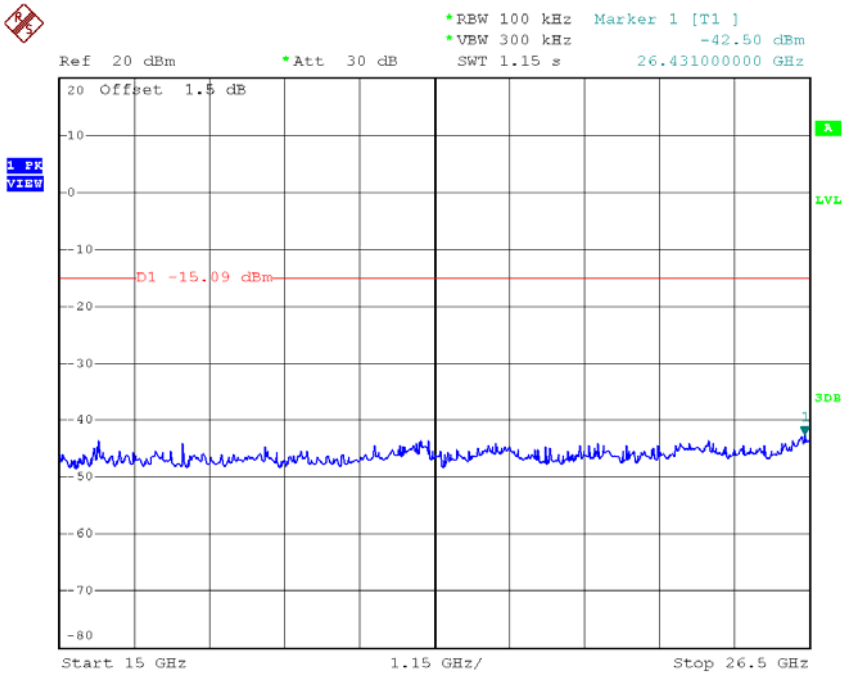
TX HT20 mode CH01 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:08:34

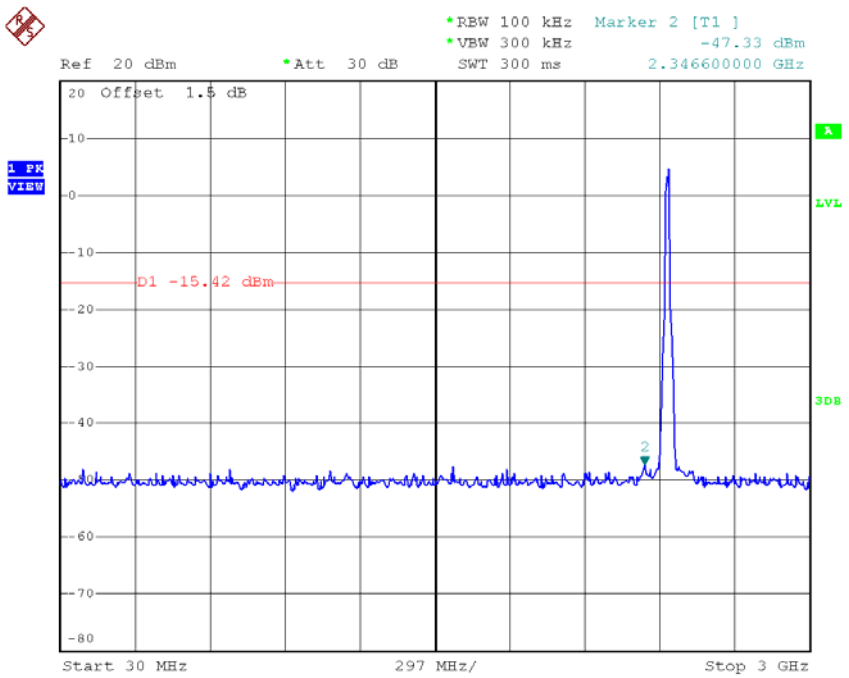


Date: 15.APR.2017 11:08:43

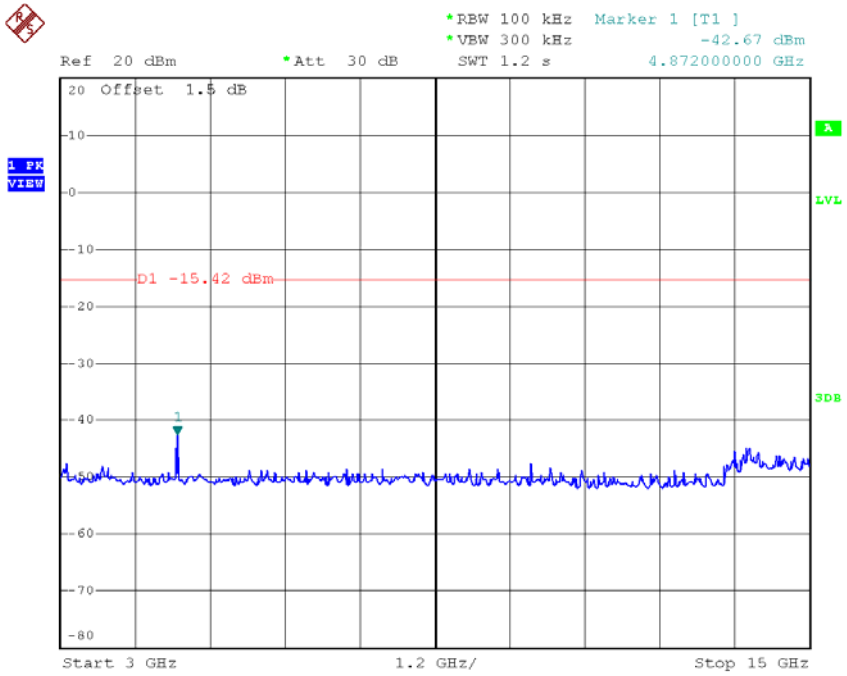


Date: 15.APR.2017 11:08:51

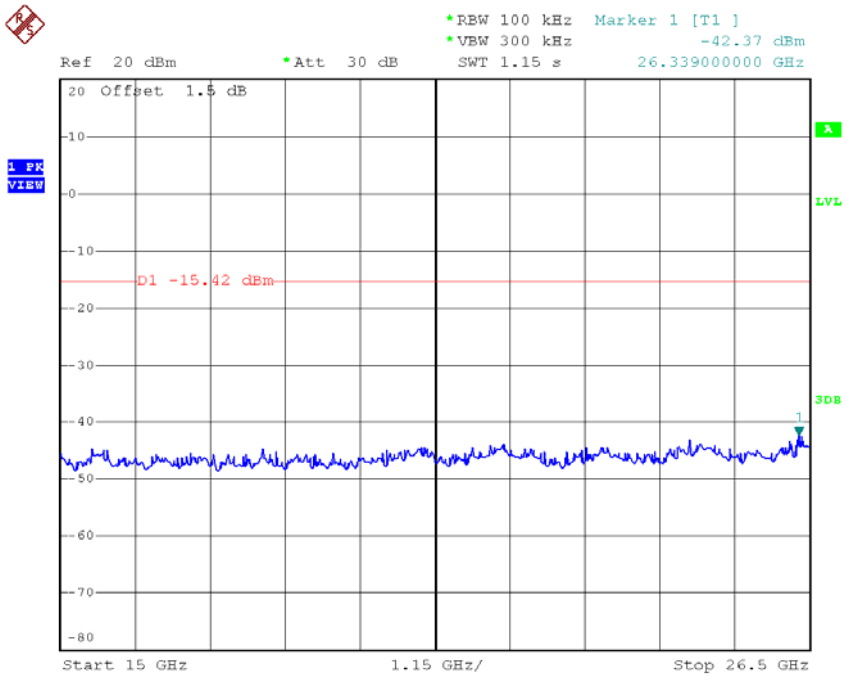
TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:18:26

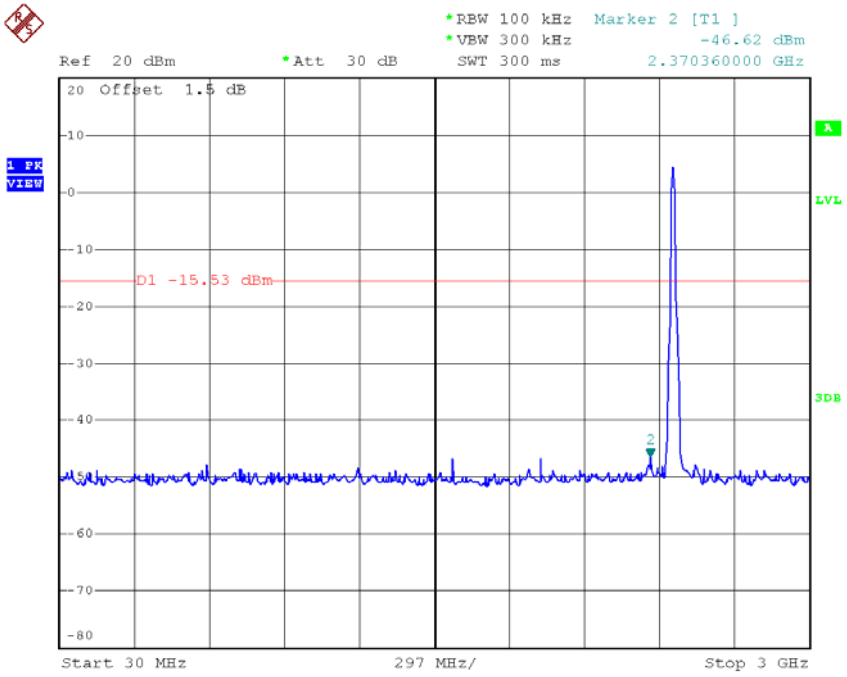


Date: 15.APR.2017 11:18:35

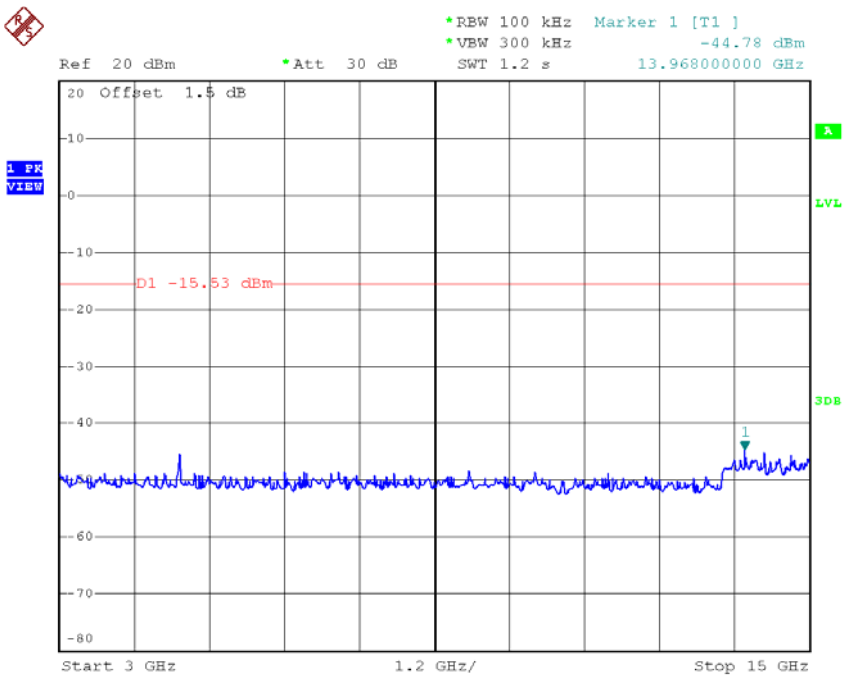


Date: 15.APR.2017 11:18:43

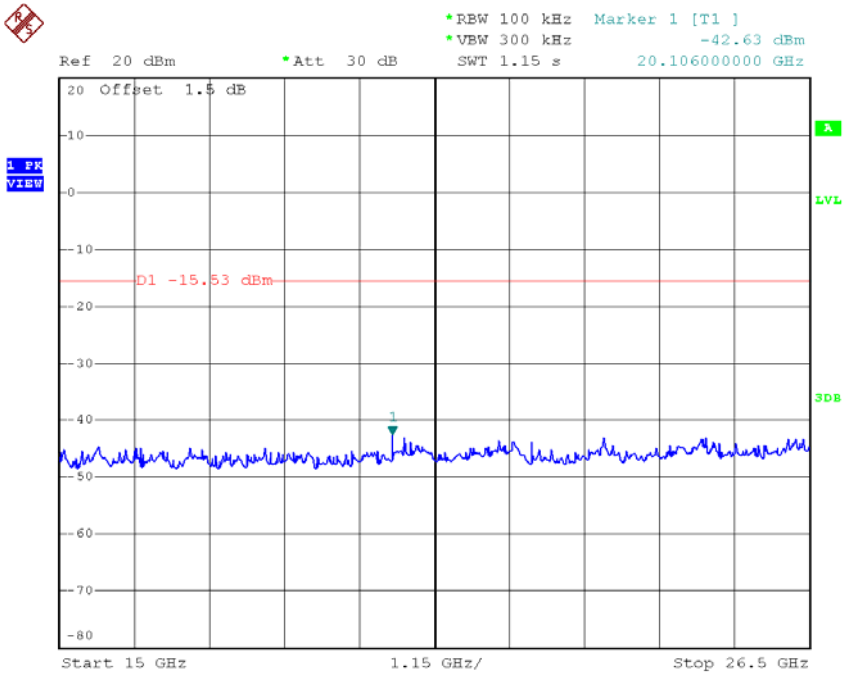
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:21:20



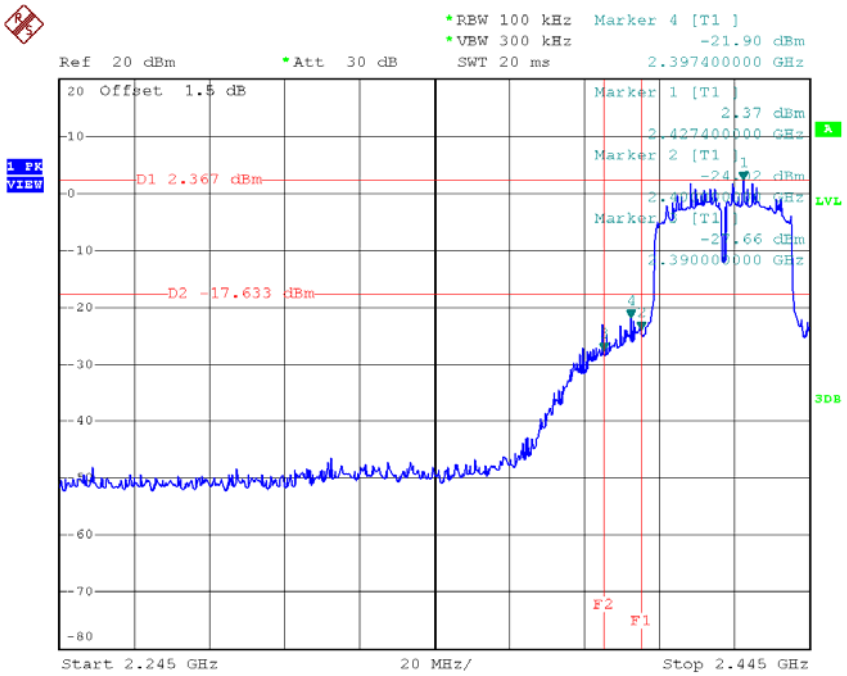
Date: 15.APR.2017 11:21:28



Date: 15.APR.2017 11:21:37

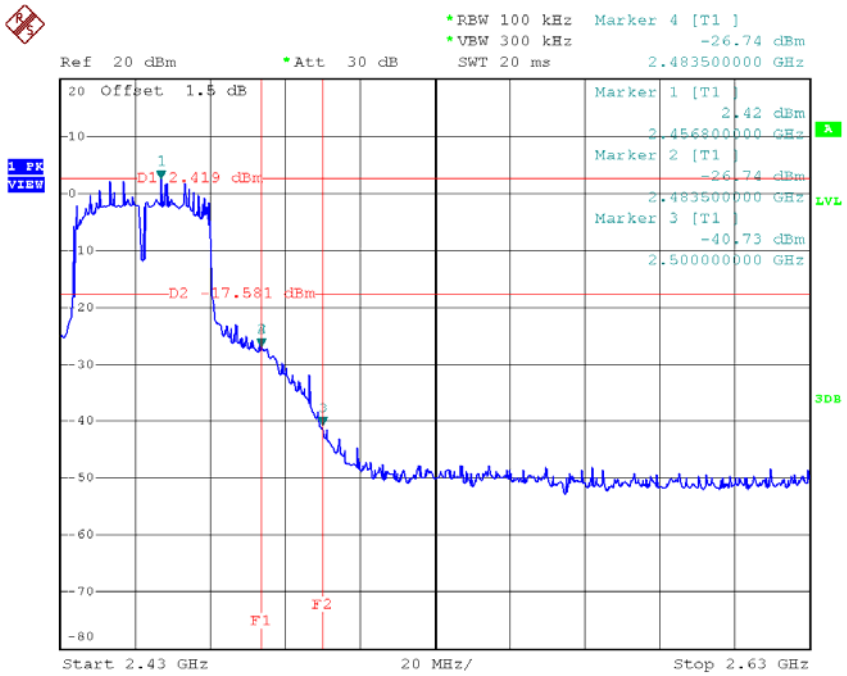
Test Mode :	TX N-40M Mode

TX HT40 mode CH03



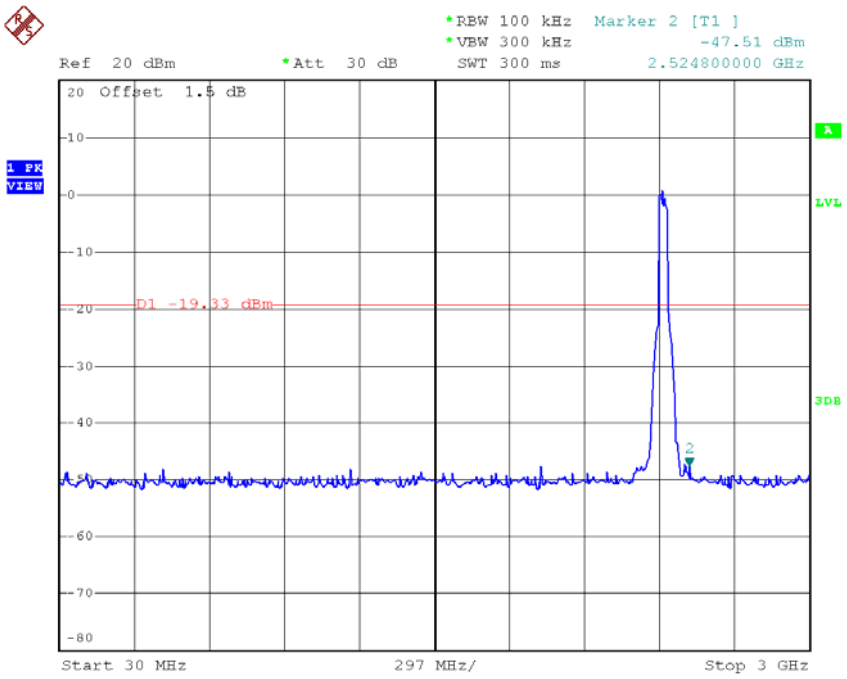
Date: 15.APR.2017 11:24:15

TX HT40 mode CH09

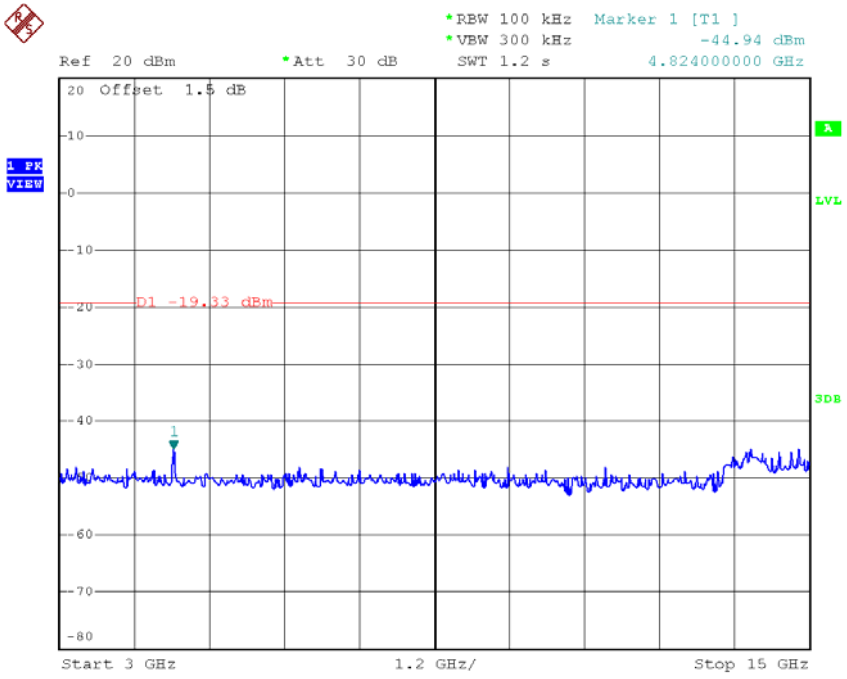


Date: 15.APR.2017 11:27:46

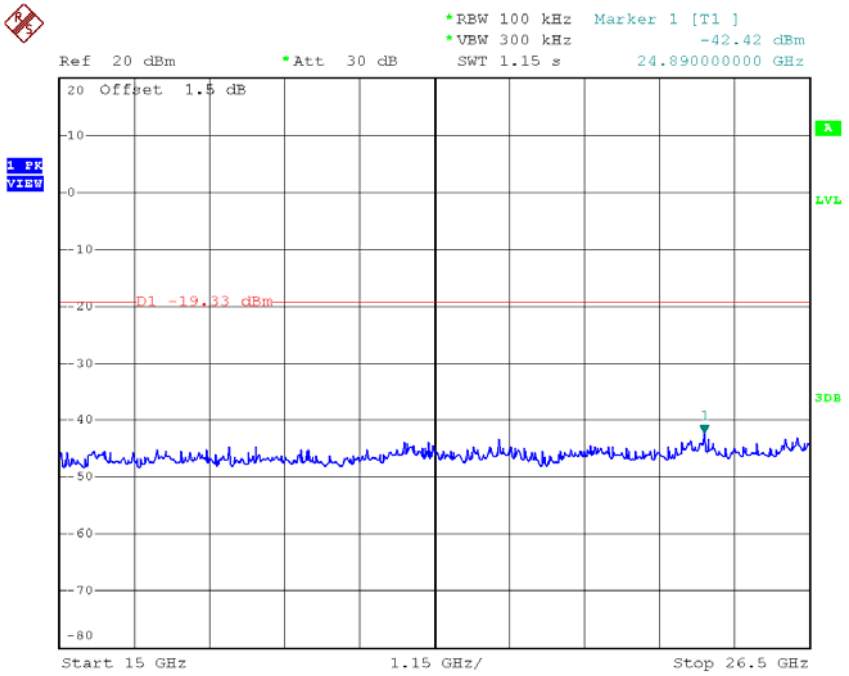
TX HT40 mode CH03 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:23:50

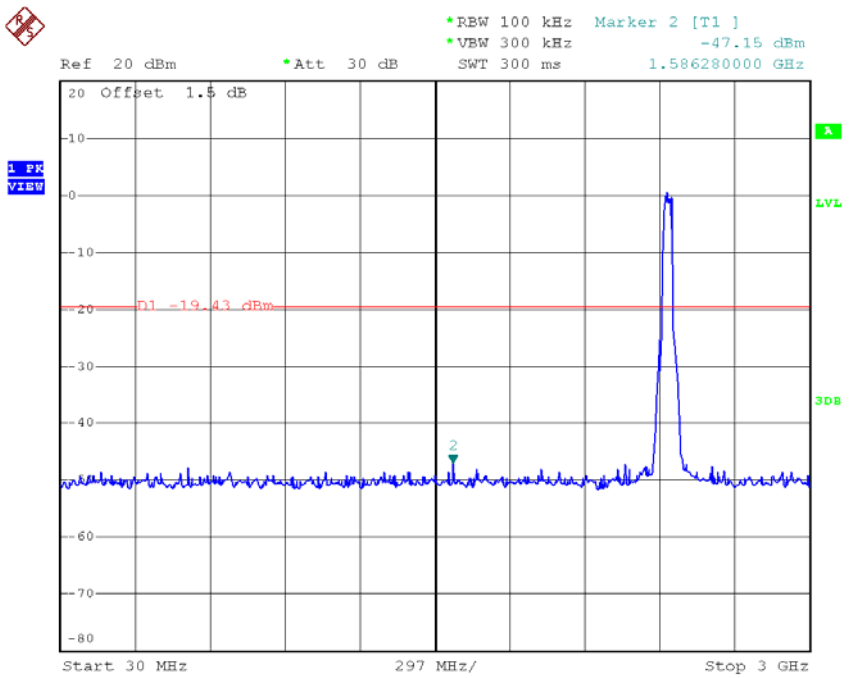


Date: 15.APR.2017 11:23:59

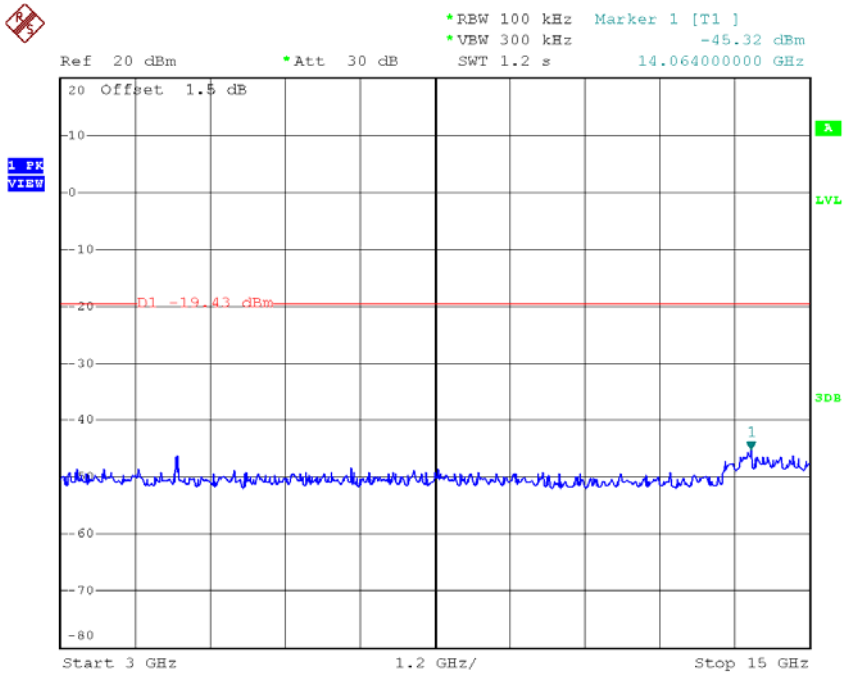


Date: 15.APR.2017 11:24:07

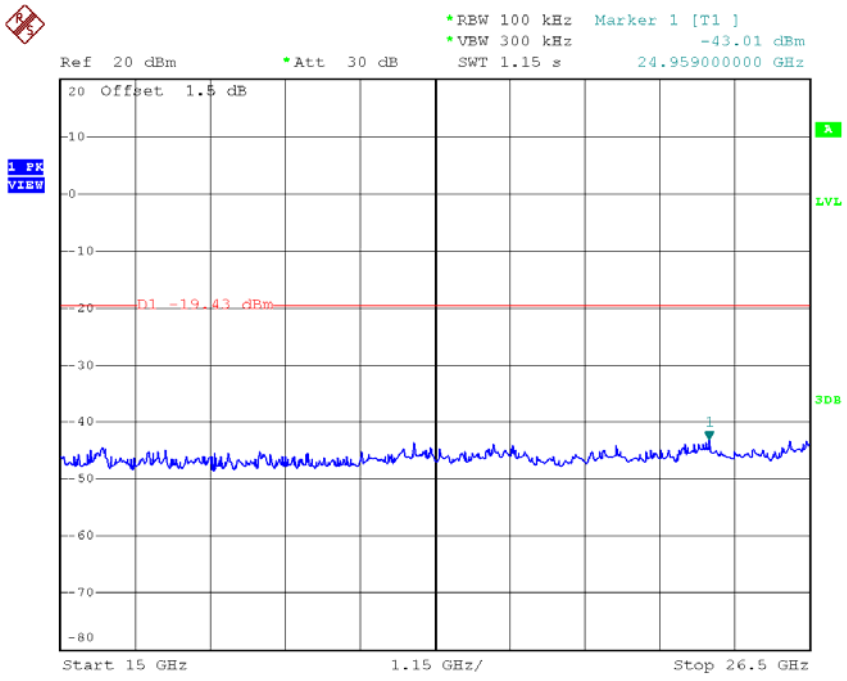
TX HT40 mode CH06 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:26:04

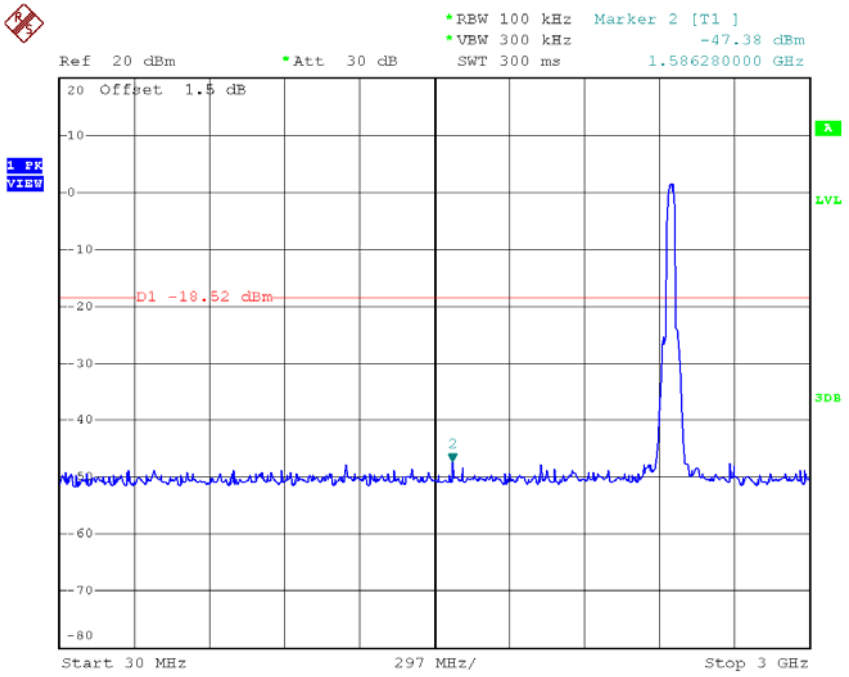


Date: 15.APR.2017 11:26:12

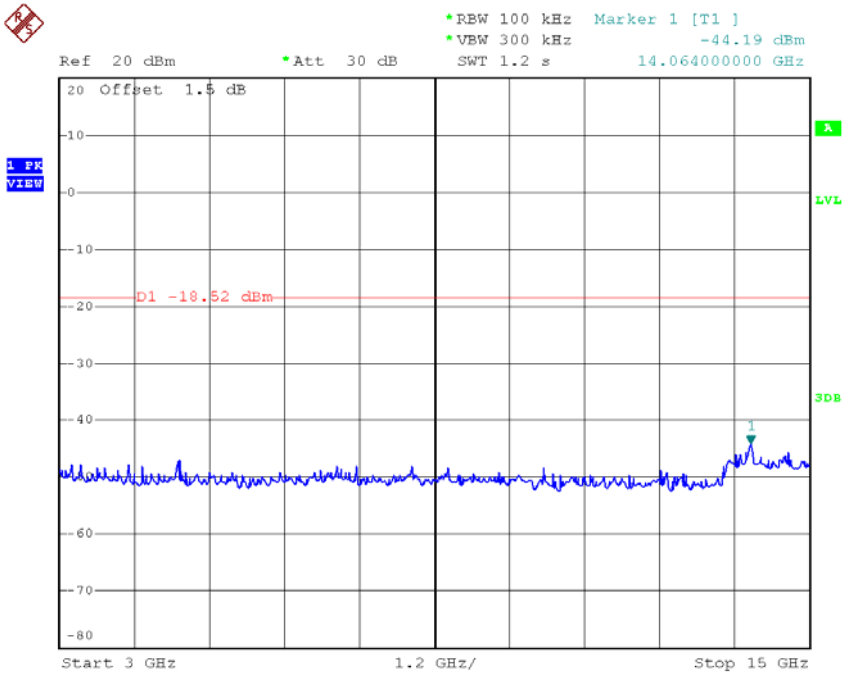


Date: 15.APR.2017 11:26:21

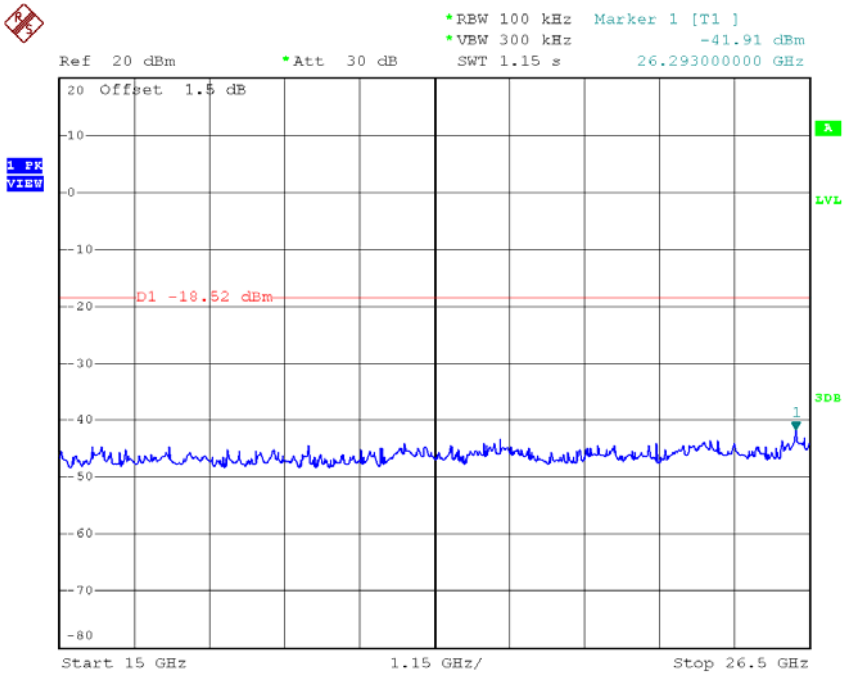
TX HT40 mode CH09 (10 Harmonic of the frequency)



Date: 15.APR.2017 11:27:21



Date: 15.APR.2017 11:27:29



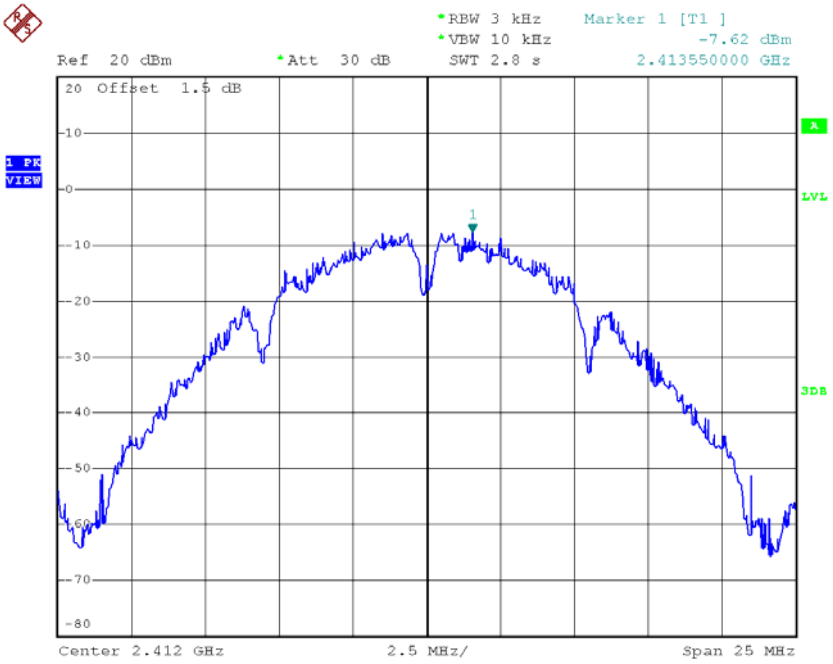
Date: 15.APR.2017 11:27:38

ATTACHMENT H - POWER SPECTRAL DENSITY

Test Mode :TX B Mode_CH01/06/11

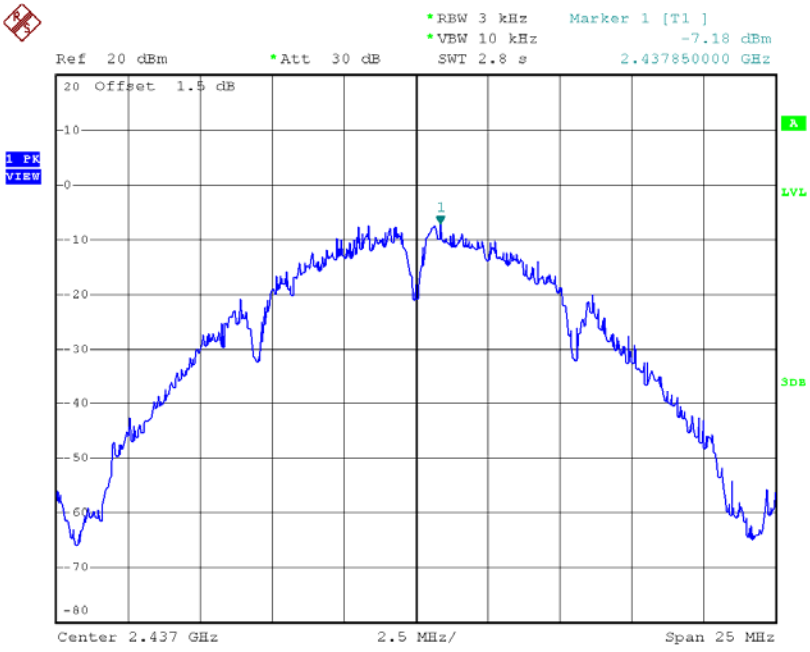
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-7.62	0.1730	8.00	Complies
2437	-7.18	0.1914	8.00	Complies
2462	-6.88	0.2051	8.00	Complies

TX CH01



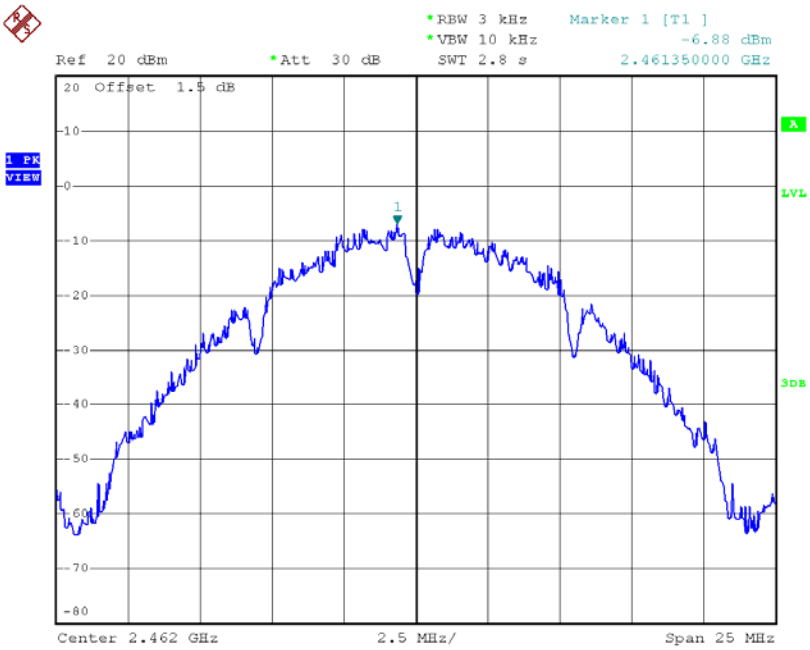
Date: 15.APR.2017 10:51:54

TX CH06



Date: 15.APR.2017 10:53:44

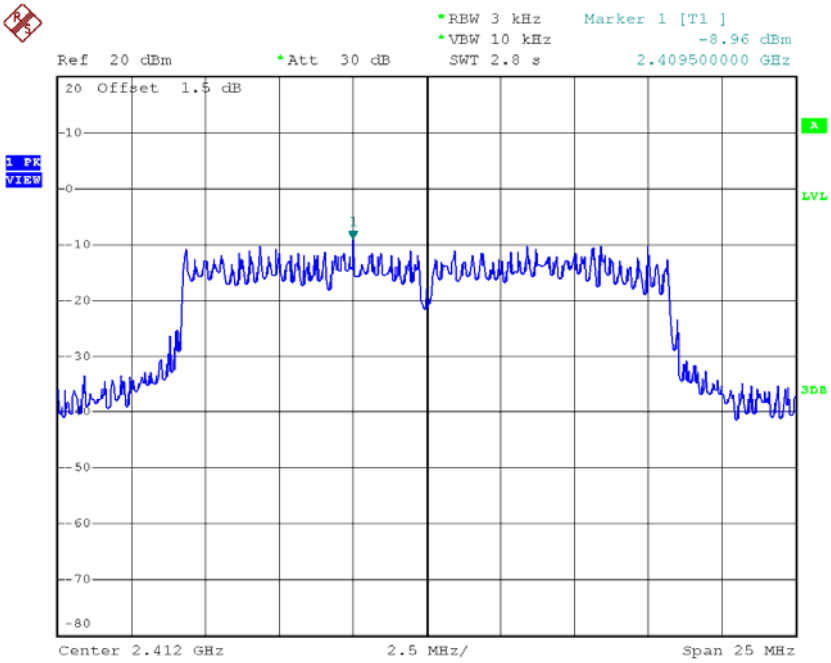
TX CH11



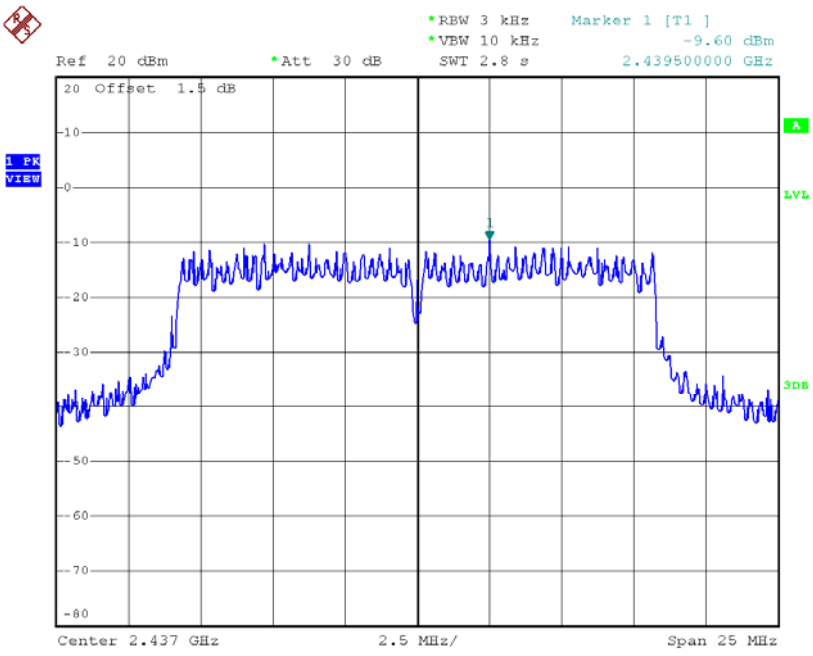
Date: 15.APR.2017 11:00:32

Test Mode :TX G Mode_CH01/06/11				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-8.96	0.1271	8.00	Complies
2437	-9.60	0.1096	8.00	Complies
2462	-10.44	0.0904	8.00	Complies

TX CH01

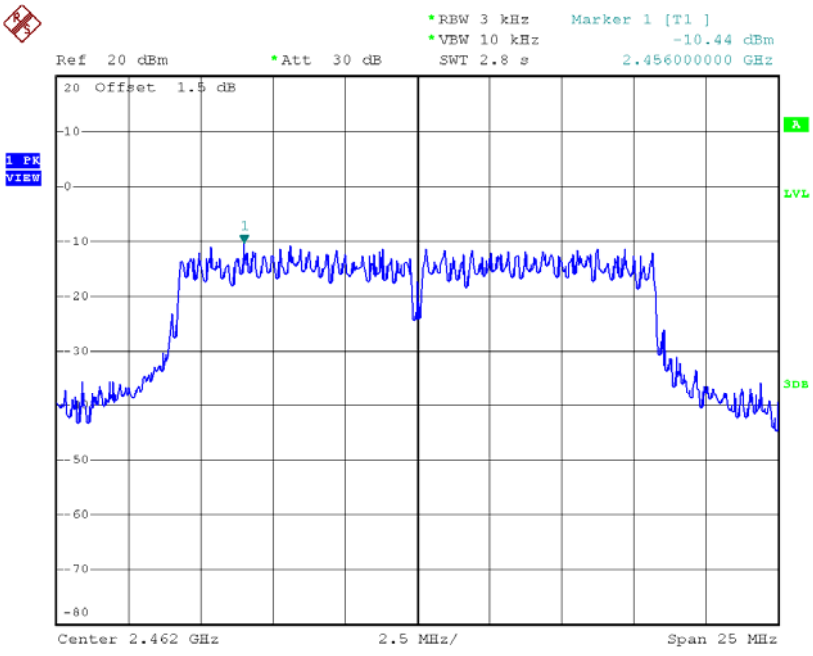


TX CH06



Date: 15.APR.2017 11:05:15

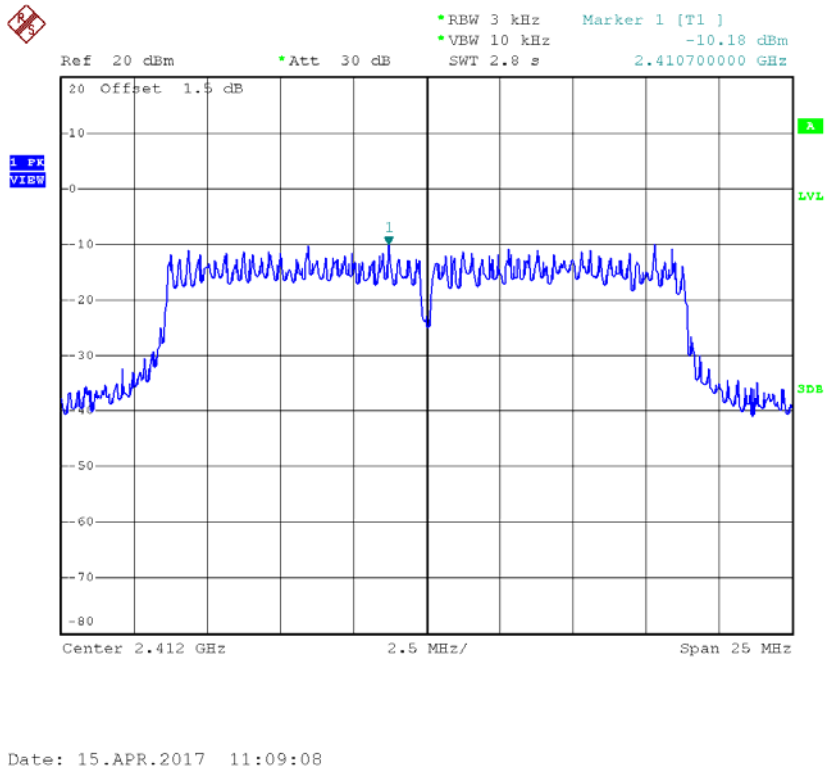
TX CH11



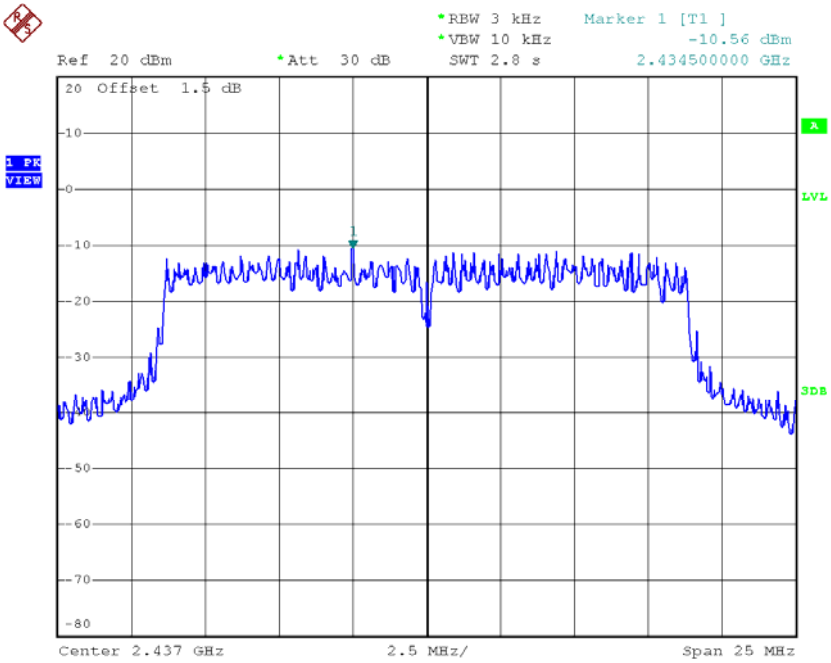
Date: 15.APR.2017 11:07:24

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	-10.18	0.0959	8.00	Complies
2437	-10.56	0.0879	8.00	Complies
2462	-10.96	0.0802	8.00	Complies

TX CH01

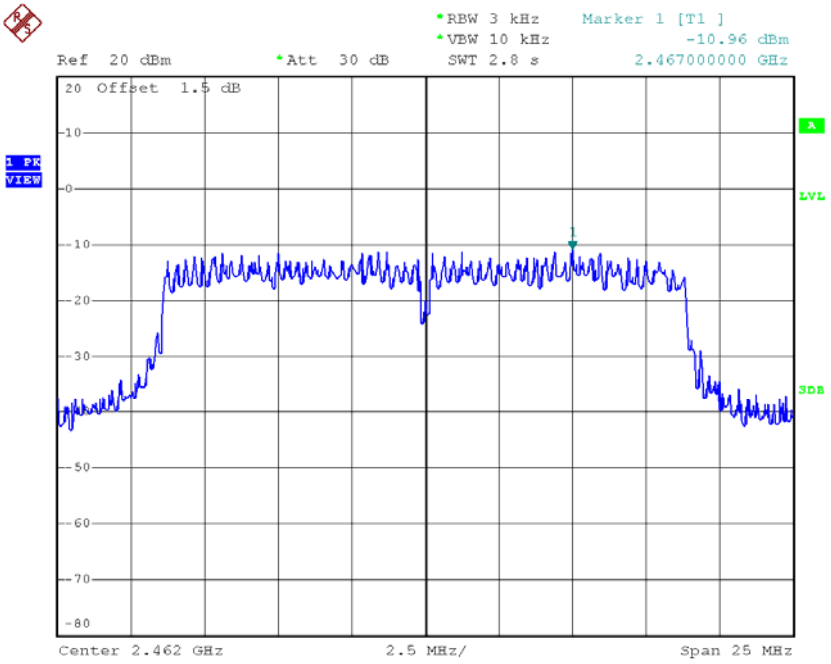


TX CH06



Date: 15.APR.2017 11:18:52

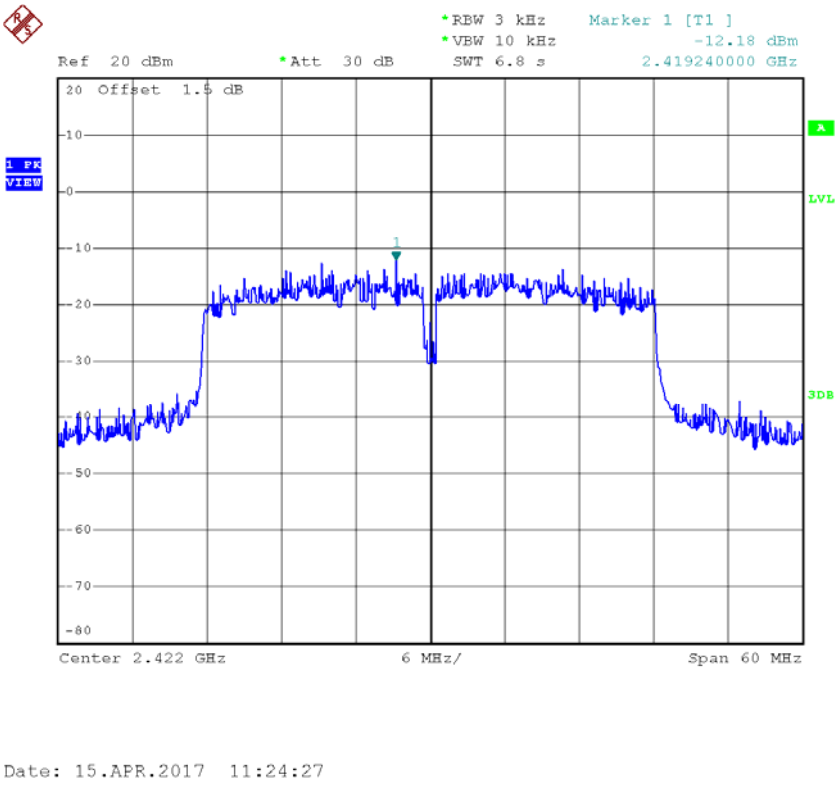
TX CH11



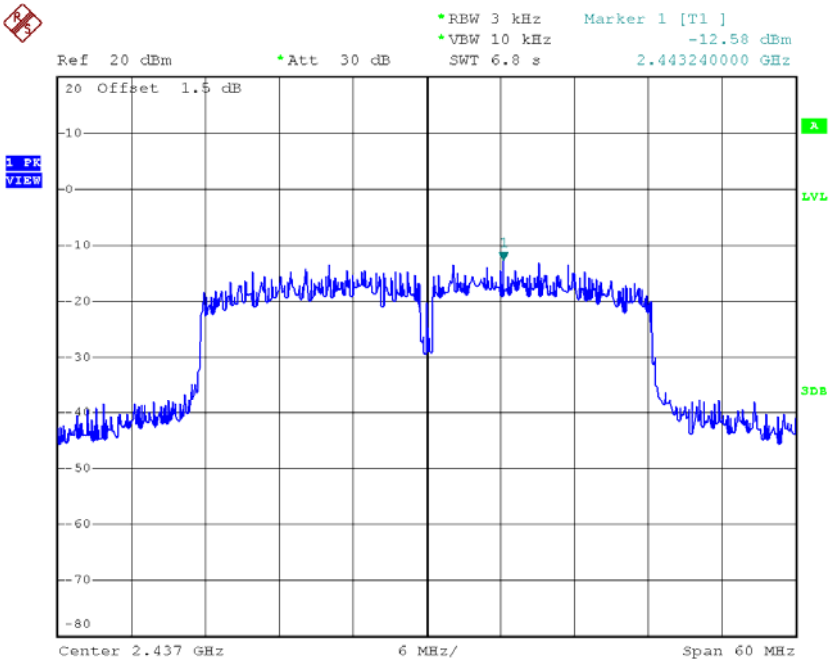
Date: 15.APR.2017 11:21:54

Test Mode : TX N-40M Mode_CH03/06/09				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-12.18	0.0605	8.00	Complies
2437	-12.58	0.0552	8.00	Complies
2452	-12.48	0.0565	8.00	Complies

TX CH03

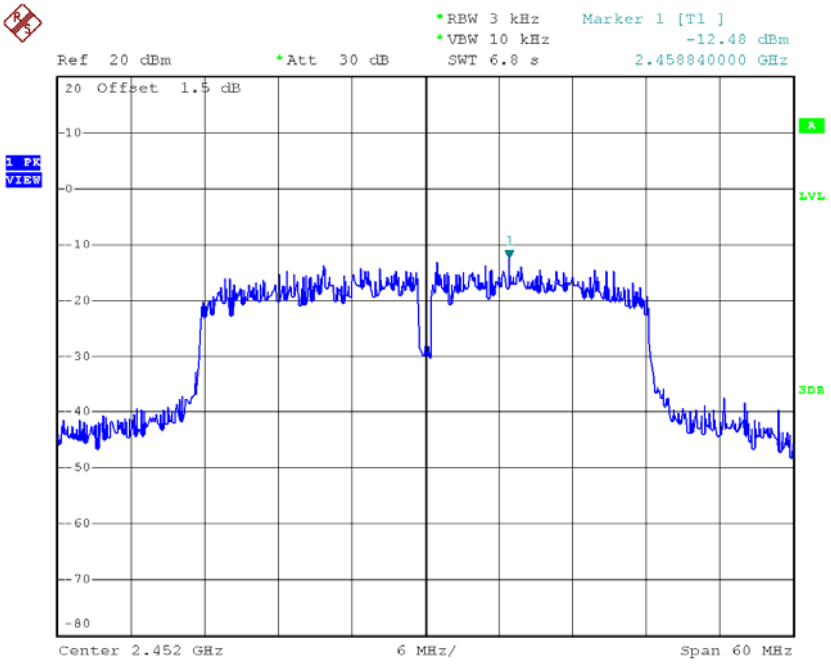


TX CH06



Date: 15.APR.2017 11:26:33

TX CH09



Date: 15.APR.2017 11:27:57