FCC Radio Test Report

FCC ID: V7TMESH3

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

Project No.	:	1707C145
Equipment	:	Whole Home Mesh WiFi System
Model Name	:	Mesh3, MW6
Applicant	:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address	:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

Date of Receipt	:	Jul. 18, 2017
Date of Test	:	Jul. 18, 2017 ~ Aug. 02, 2017
Issued Date	:	Aug. 03, 2017
Tested by	:	BTL Inc.

Testing Engineer : Shawn Xiao
(Shawn Xiao)

Technical Manager : David Mao
(David Mao)

Authorized Signatory : Steven Lu
(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-1-1707C145	Original Issue.	Aug. 03, 2017

1. CERTIFICATION

Equipment	:	Whole Home Mesh WiFi System
Brand Name	:	Tenda
Model Name	:	Mesh3, MW6
Applicant	:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Manufacturer	:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address	:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Date of Test	:	Jul. 18, 2017 ~ Aug. 02, 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-1-1707C145) 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	Whole Home Mesh WiFi System	
Brand Name	Tenda	
Model Name	Mesh3, MW6	
Model Difference	With two or more Mesh3 in a gift box.	
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 300 Mbps
	Output Power (Max.)-Non-Beamforming	802.11b: 29.69dBm 802.11g: 29.78dBm 802.11n(20MHz): 29.55dBm 802.11n(40MHz): 29.73dBm
	Output Power (Max.)-Beamforming	802.11n(20MHz): 29.20dBm 802.11n(40MHz): 29.35dBm
Power Source	DC voltage supplied from AC/DC adapter. Model:BN067-A18012U	
Power Rating	I/P:100-240V~50/60Hz 0.6A O/P:12V ⎓ 1.5A	

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)	Note
1	N/A	N/A	PCB	N/A	2	N/A
2	N/A	N/A	PCB	N/A	2	N/A

4.

The worst case as follow:

Operating Mode / TX Mode	1TX	2TX
802.11b	V (ANT 1)	-
802.11g	V (ANT 1)	-
802.11n(20MHz)	-	V (ANT 1+ANT 2)
802.11n(40MHz)	-	V (ANT 1+ANT 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	TX N-40MHZ MODE CHANNEL 03/06/09
Mode 5	TX MODE

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	TX MODE

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 (13Mbps)
802.11n HT40 mode : BPSK (27Mbps)
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

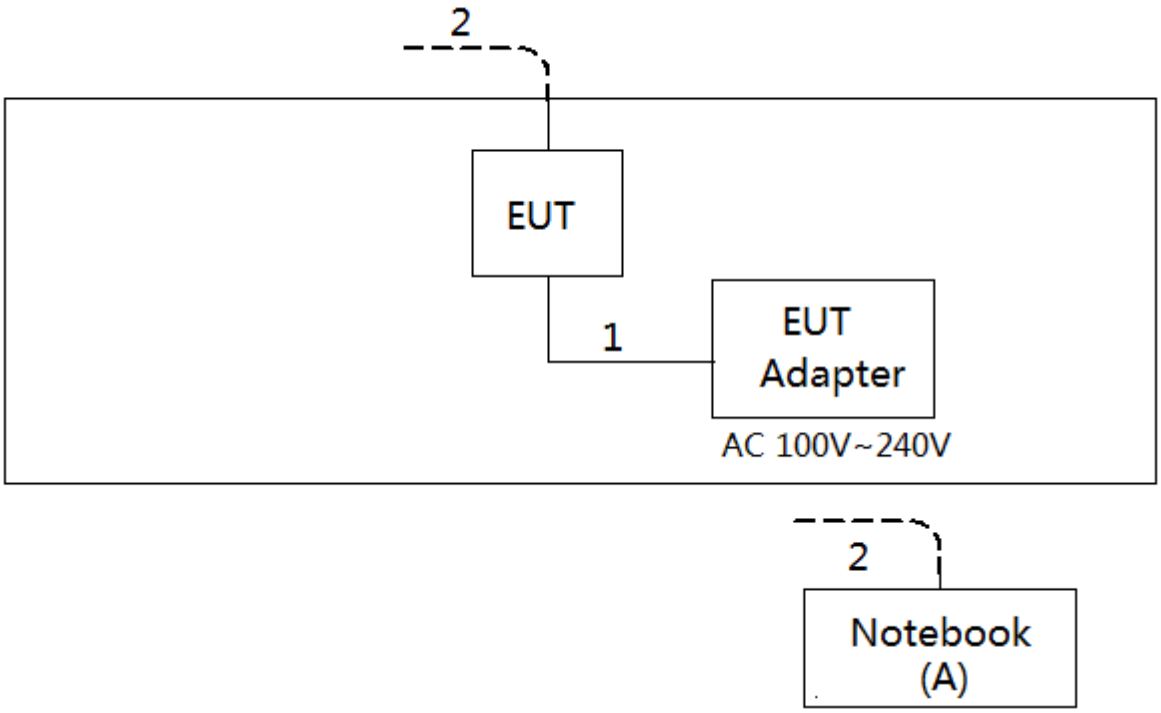
Non-Beamforming

Test software version	MP-v3.4		
Frequency (MHz)	2412	2437	2462
802.11b	26	27	28
802.11g	25	24	21
802.11n (20MHz)	22	24	26
Frequency	2422	2437	2452
802.11n (40MHz)	26	27	27

With Beamforming

Test software version	MP-v3.4		
Frequency (MHz)	2412	2437	2462
802.11b	26	27	28
802.11g	25	24	21
802.11n (20MHz)	22	24	26
Frequency	2422	2437	2452
802.11n (40MHz)	26	27	27

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	Lenovo	INSPIRON 1420	DOC	JX193A01SDC2

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.5M	DC Cable
2	NO	NO	10M	RJ-45 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

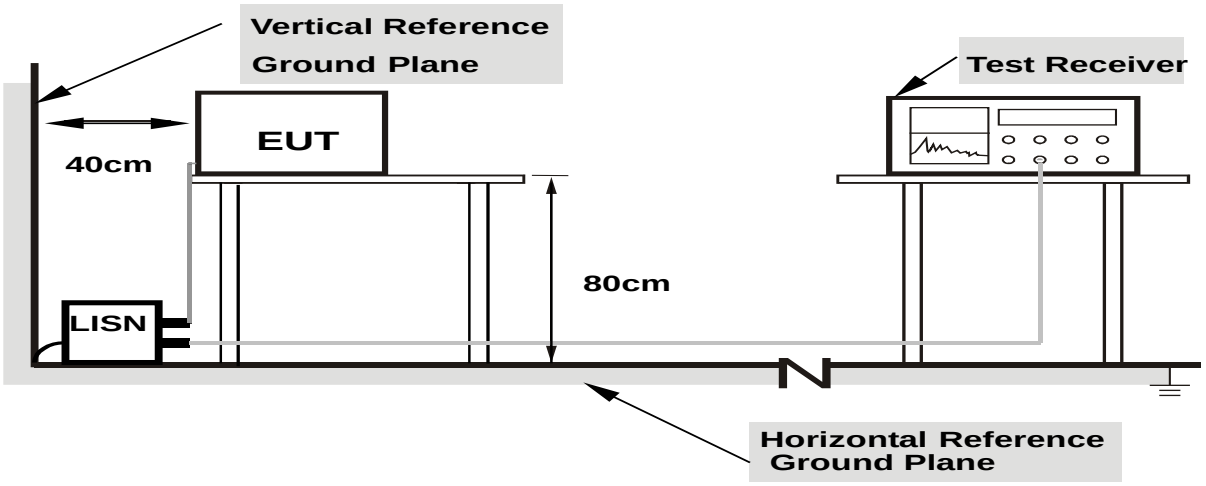
4.1.2 TEST PROCEDURE

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 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

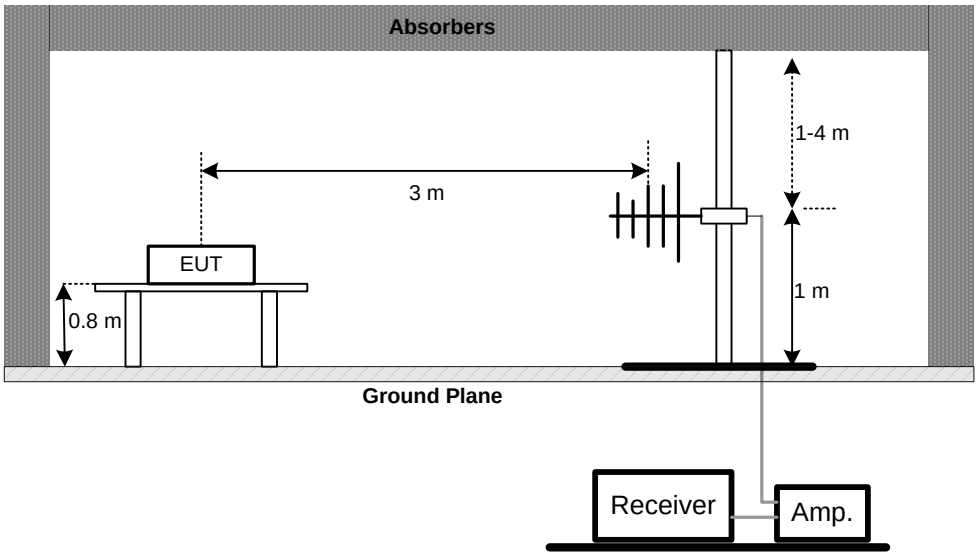
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance 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

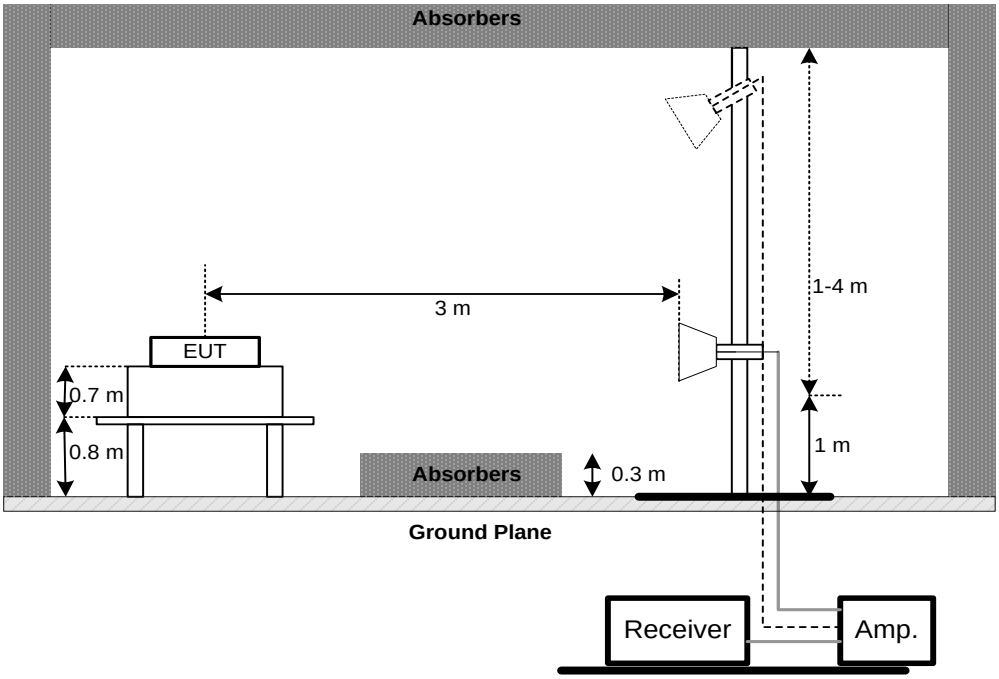
No deviation

4.2.4 TEST SETUP

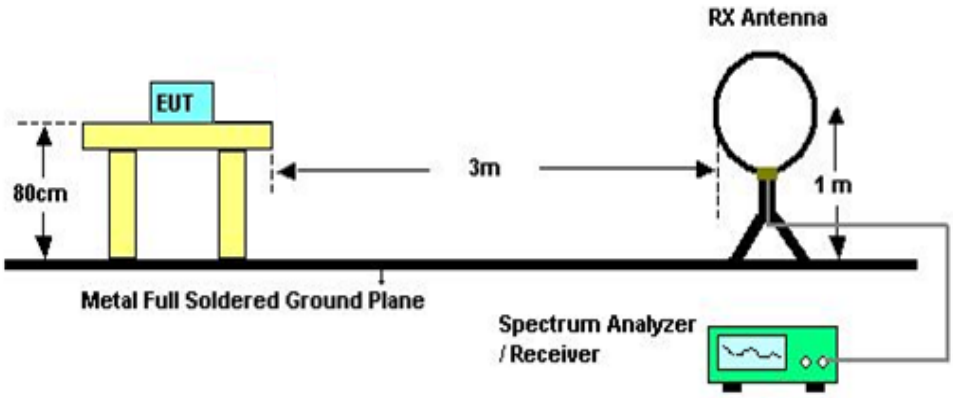
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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

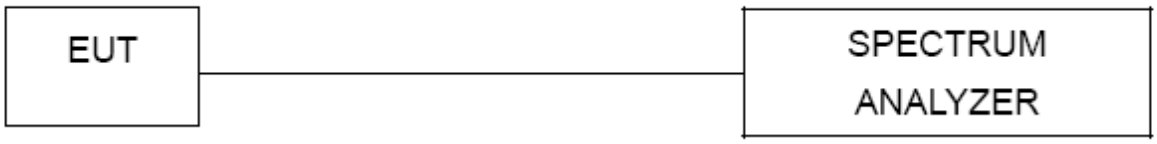
5.1.1 TEST PROCEDURE

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

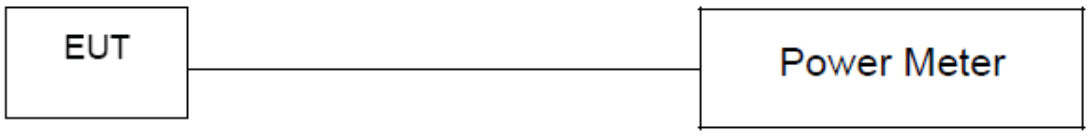
6.1.1 TEST PROCEDURE

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 and FCC KDB 662911 D01 Multiple Transmitter Output.

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.

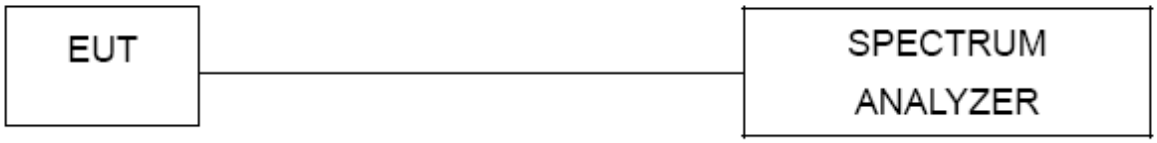
7.1.1 TEST PROCEDURE

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

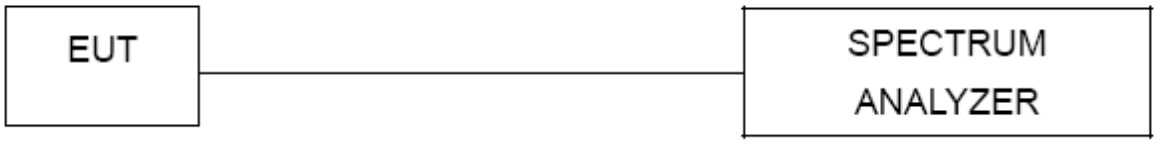
8.1.1 TEST PROCEDURE

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	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	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable		RG223	12m	Oct. 20, 2017

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	Cable	emci	LMR-400(30MHz-1GHz)(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	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 26, 2018
9	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 08, 2018
10	Amplifier	Agilent	8449B	3008A02274	May. 16, 2018
11	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 26, 2018
12	Antenna	EM	EM-6876-1	230	Jul. 07, 2018
13	Controller	MF	MF-7802	MF780208416	N/A
14	Cable	emci	EMC104-SM-SM-12000(12m)	N/A	Jun. 26, 2018
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	FSP40	100185	Sep. 04, 2017

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100895	Mar. 26, 2018
2	Antenna	EM	EM-6876-1	230	Jul. 07, 2018

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 04, 2017

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 04, 2017

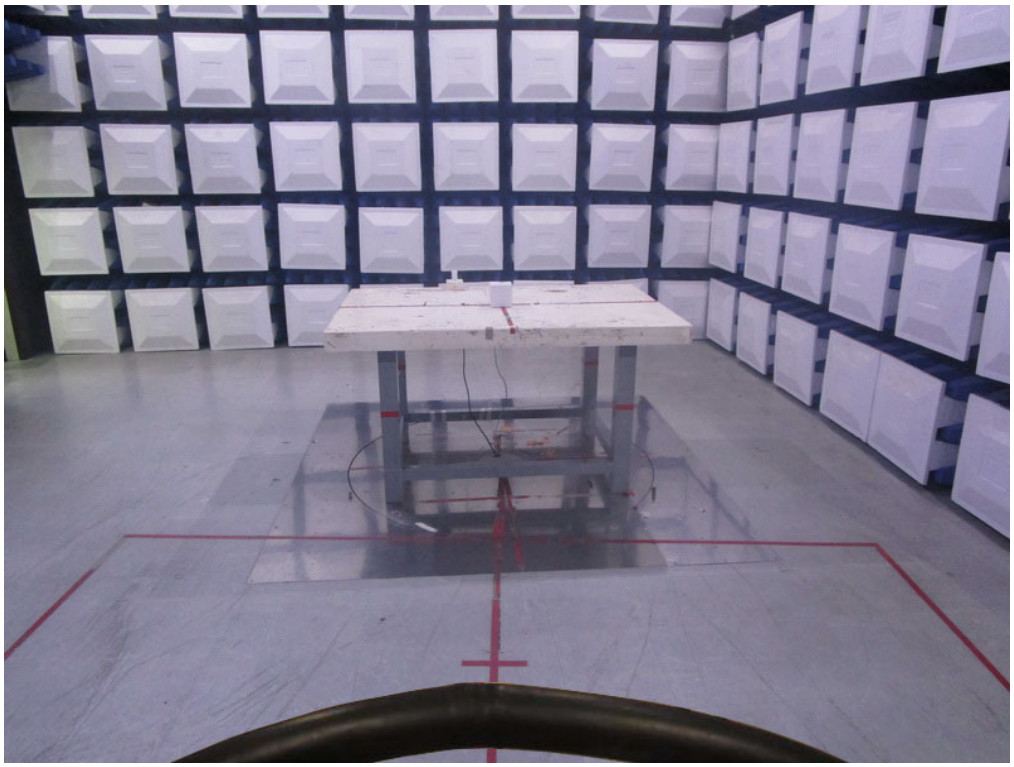
Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

10. EUT TEST PHOTO

Conducted Measurement Photos

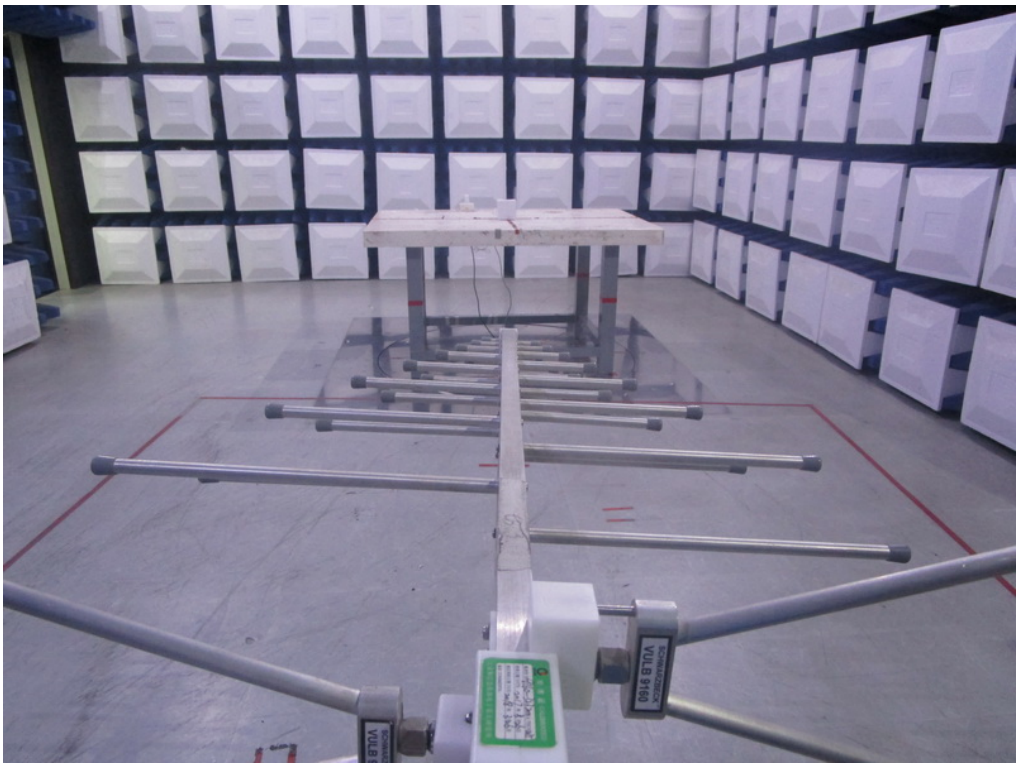
Radiated Measurement Photos

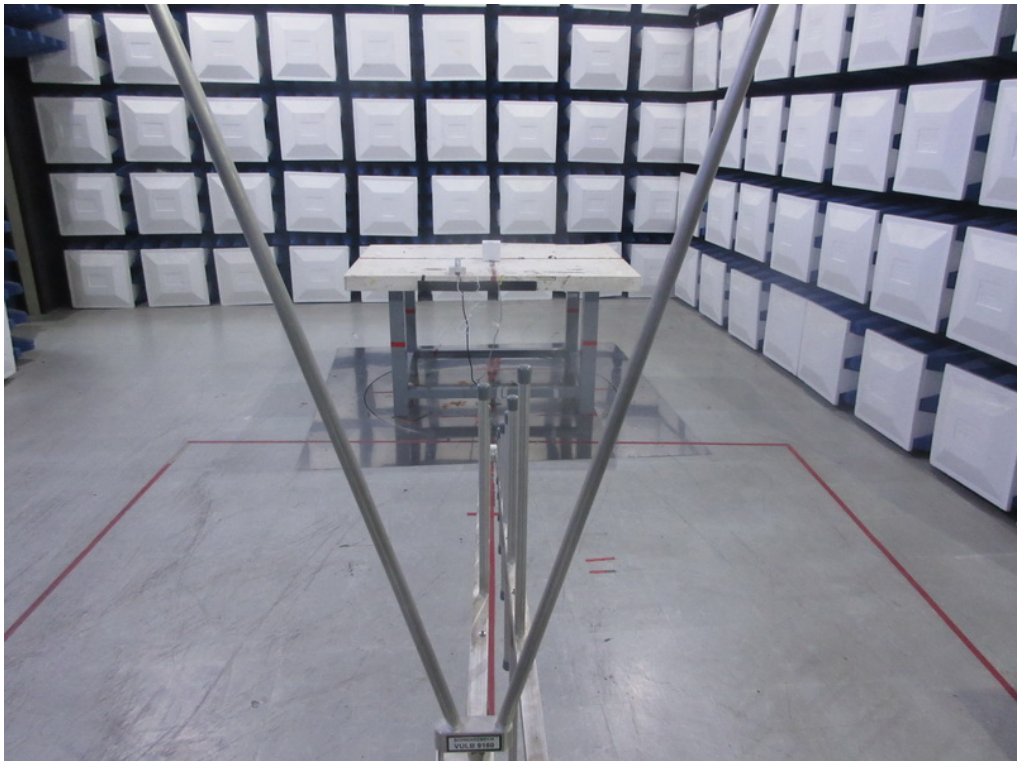
9KHz to 30MHz



Radiated Measurement Photos

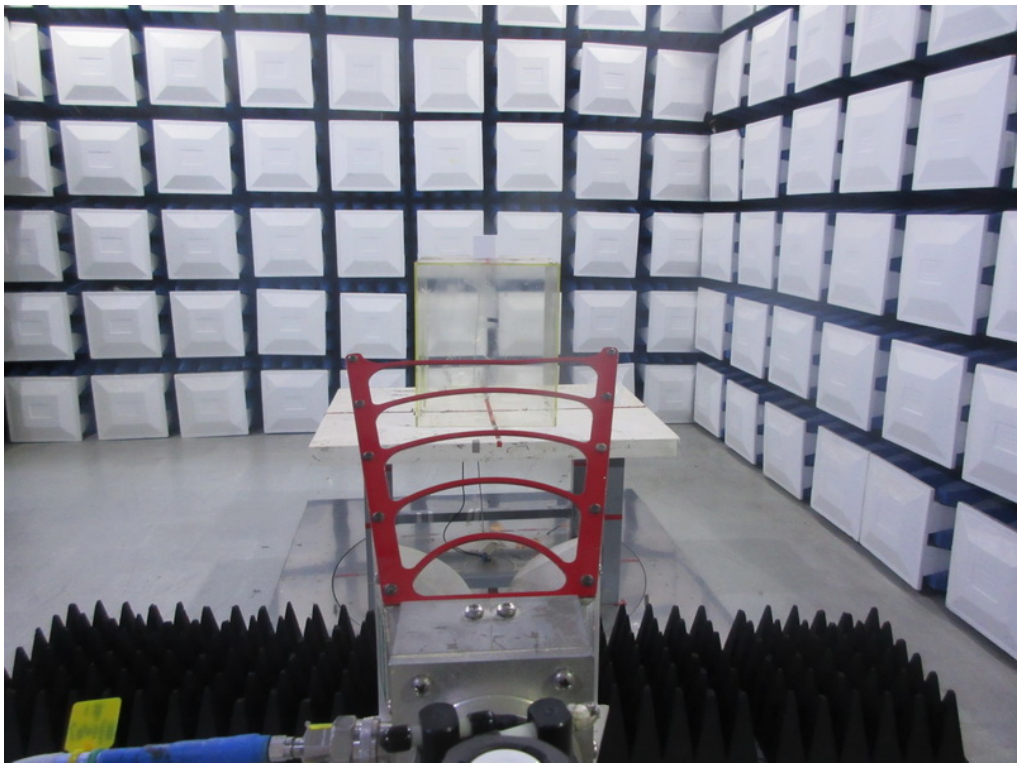
30MHz to 1000MHz

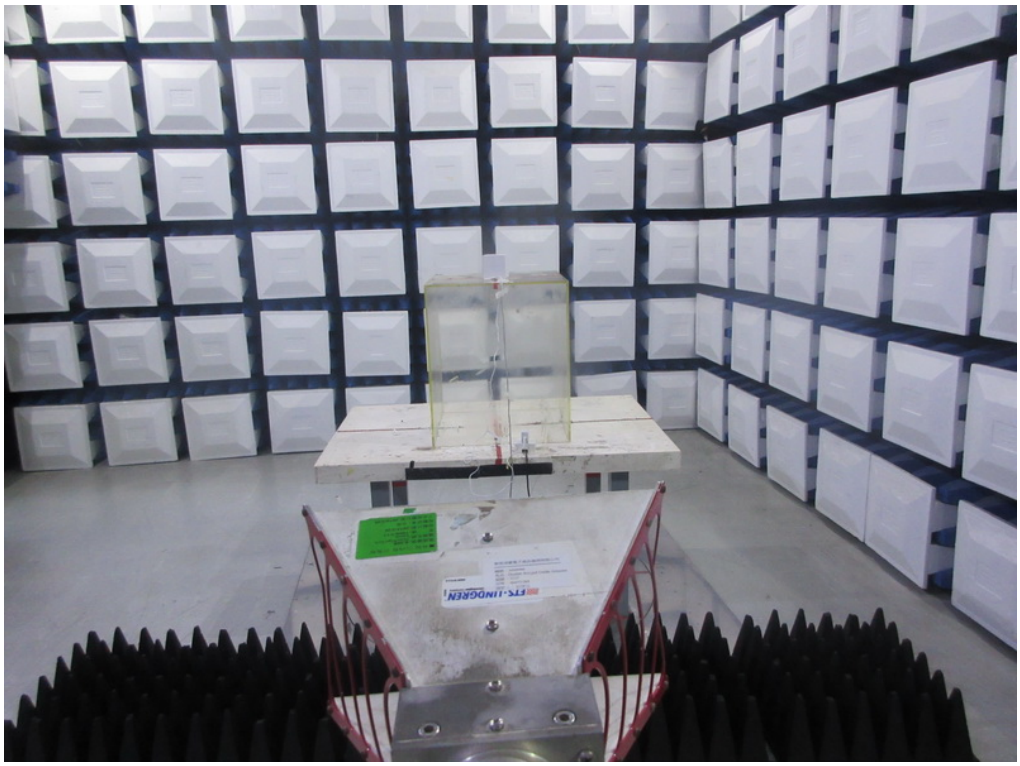




Radiated Measurement Photos

Above 1000MHz

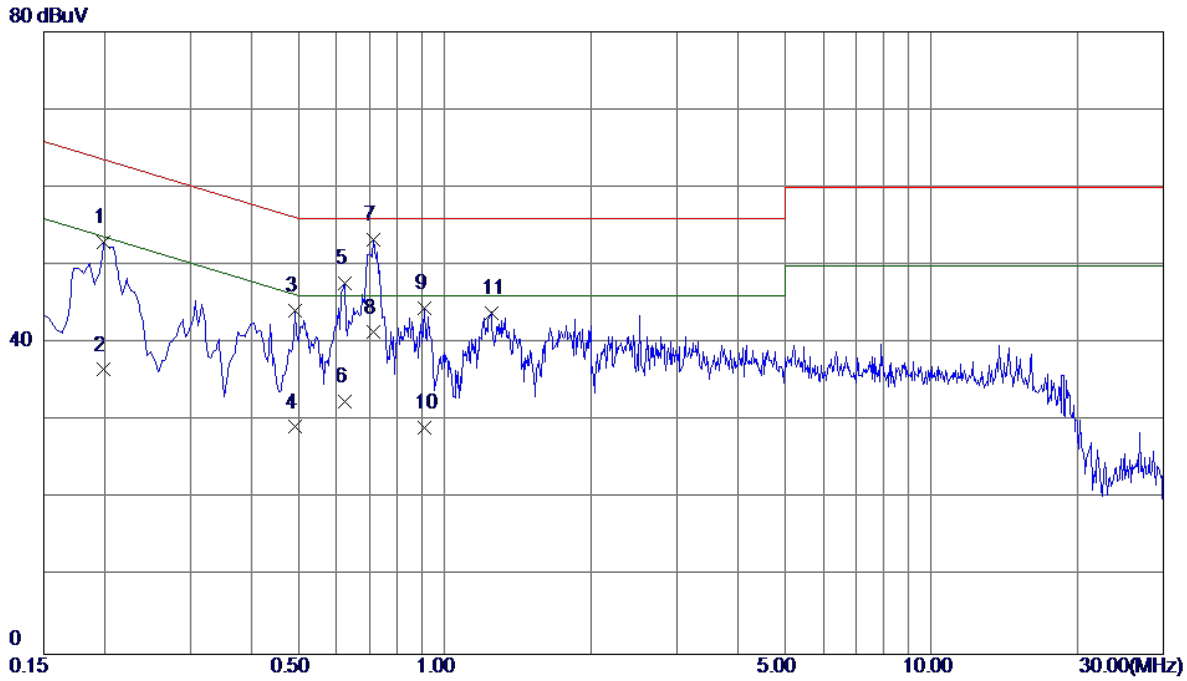




ATTACHMENT A - CONDUCTED EMISSION

Test Mode :	TX MODE

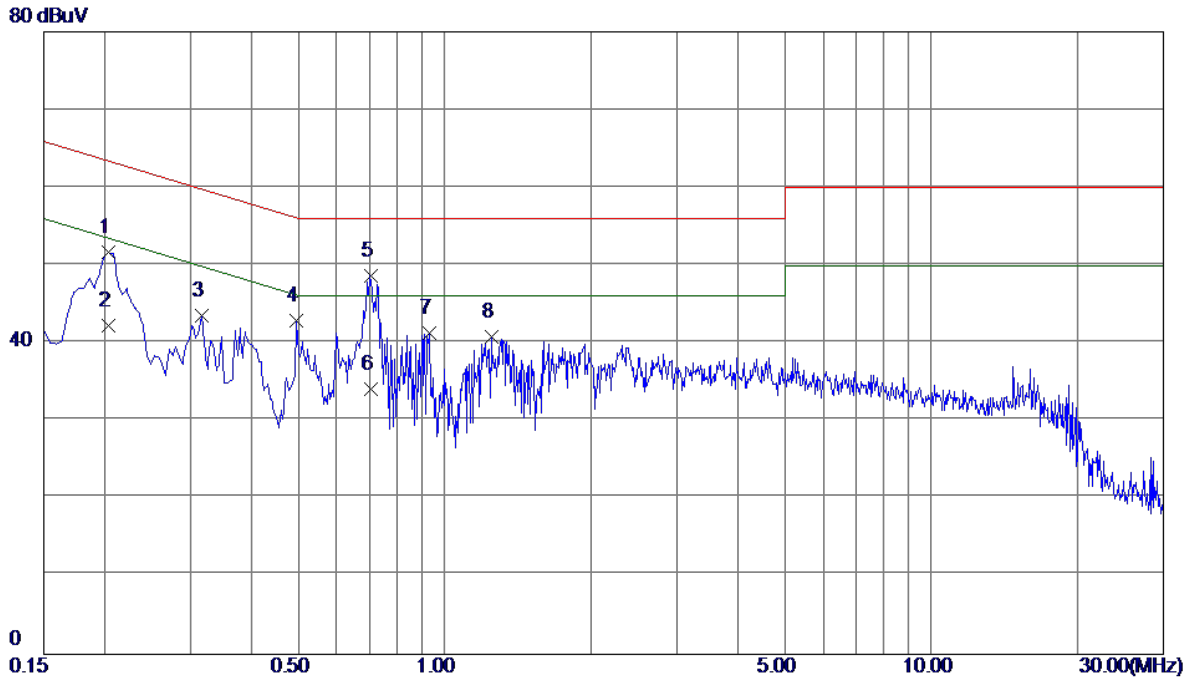
Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1995	43.12	9.76	52.88	63.63	-10.75	Peak	
2	0.1995	26.80	9.76	36.56	53.63	-17.07	AVG	
3	0.4920	34.42	9.80	44.22	56.13	-11.91	Peak	
4	0.4920	19.40	9.80	29.20	46.13	-16.93	AVG	
5	0.6225	37.86	9.81	47.67	56.00	-8.33	Peak	
6	0.6225	22.70	9.81	32.51	46.00	-13.49	AVG	
7 *	0.7125	43.50	9.82	53.32	56.00	-2.68	Peak	
8	0.7125	31.54	9.82	41.36	46.00	-4.64	AVG	
9	0.9105	34.70	9.85	44.55	56.00	-11.45	Peak	
10	0.9105	19.20	9.85	29.05	46.00	-16.95	AVG	
11	1.2480	34.04	9.88	43.92	56.00	-12.08	Peak	

Test Mode :	TX MODE

Neutral

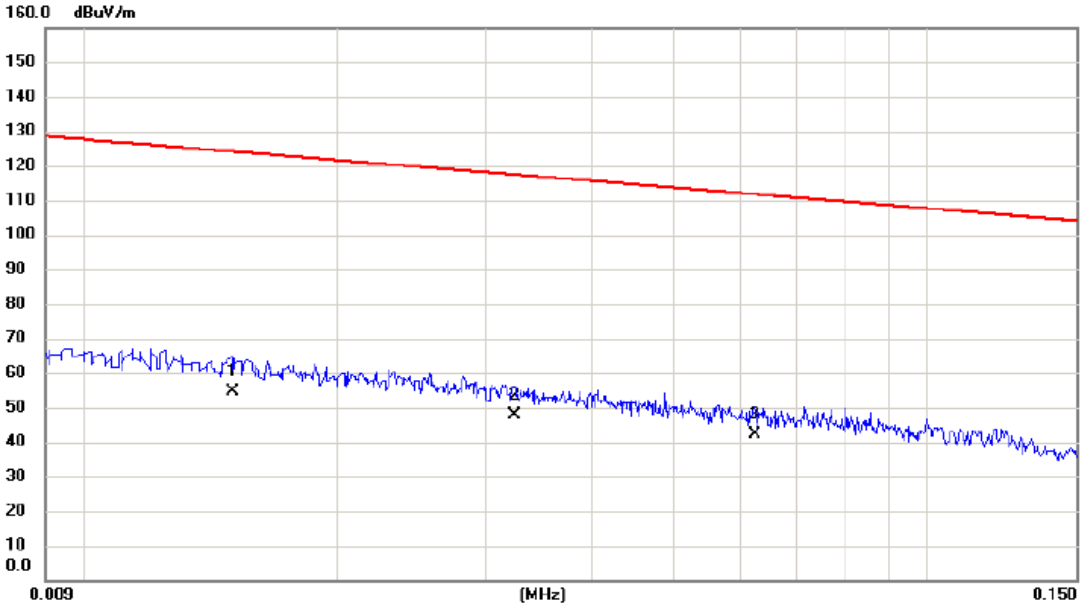


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.2040	41.93	9.69	51.62	63.45	-11.83	Peak	
2	0.2040	32.50	9.69	42.19	53.45	-11.26	AVG	
3	0.3165	33.89	9.68	43.57	59.80	-16.23	Peak	
4	0.4965	33.24	9.70	42.94	56.06	-13.12	Peak	
5 *	0.7035	38.93	9.72	48.65	56.00	-7.35	Peak	
6	0.7035	24.30	9.72	34.02	46.00	-11.98	AVG	
7	0.9330	31.57	9.74	41.31	56.00	-14.69	Peak	
8	1.2480	31.08	9.76	40.84	56.00	-15.16	Peak	

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

Test Mode:	TX B MODE CHANNEL 01

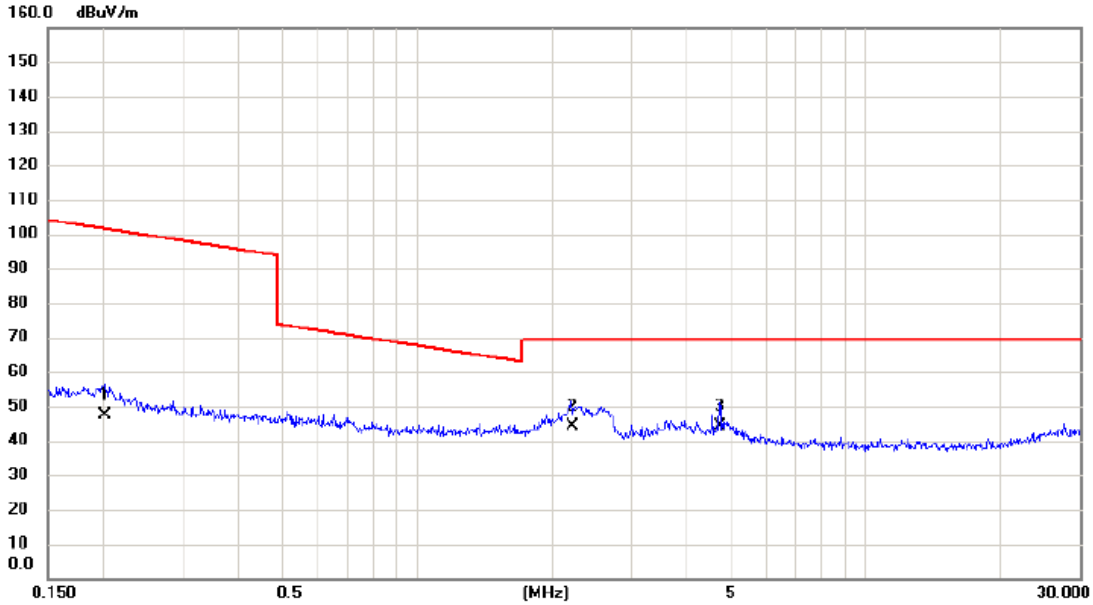
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.015	34.16	20.27	54.43	124.08	-69.65	AVG	
2		0.032	28.46	19.25	47.71	117.39	-69.68	AVG	
3	*	0.062	23.57	18.48	42.05	111.70	-69.65	AVG	

Test Mode:	TX B MODE CHANNEL 01

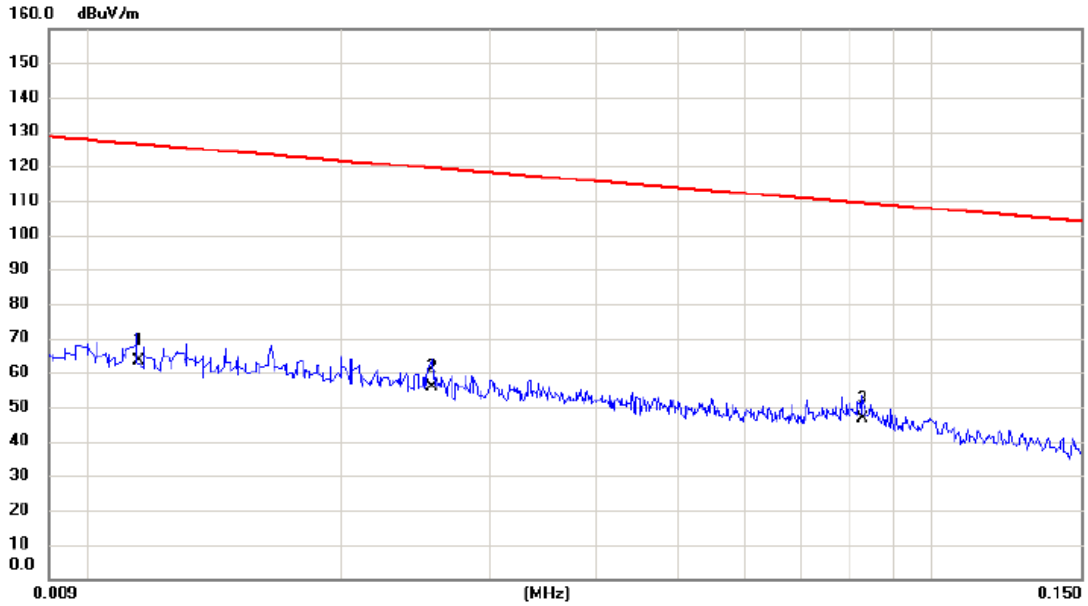
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.201	30.77	16.80	47.57	101.56	-53.99	AVG	
2	*	2.213	28.81	15.45	44.26	69.54	-25.28	QP	
3		4.721	29.54	14.53	44.07	69.54	-25.47	QP	

Test Mode:	TX B MODE CHANNEL 01

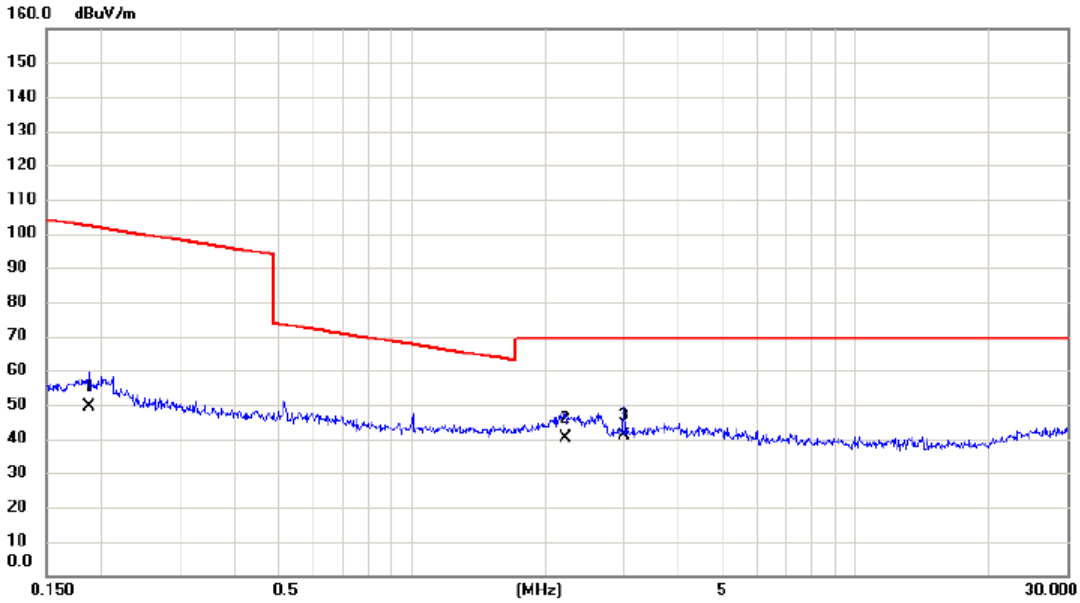
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.011	42.56	20.72	63.28	126.39	-63.11	AVG	
2		0.026	36.48	19.45	55.93	119.44	-63.51	AVG	
3	*	0.083	28.45	18.05	46.50	109.25	-62.75	AVG	

Test Mode:	TX B MODE CHANNEL 01

Ant 90°

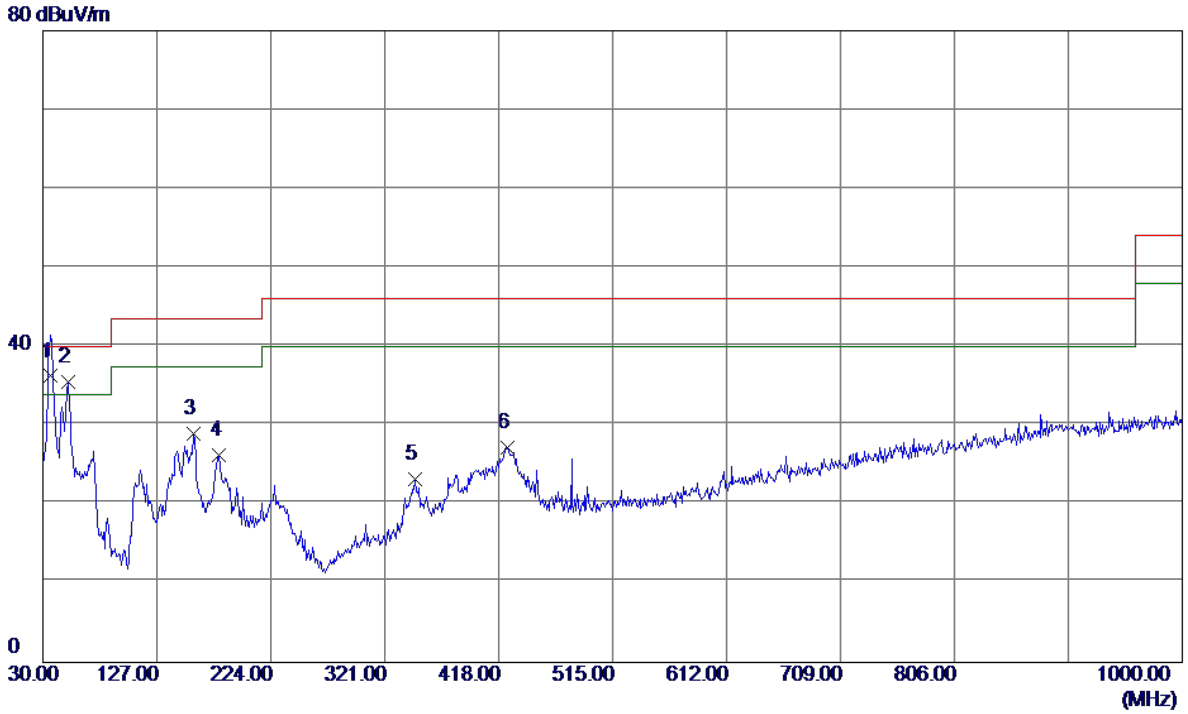


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.187	32.45	16.84	49.29	102.15	-52.86	AVG	
2		2.225	24.87	15.44	40.31	69.54	-29.23	QP	
3	*	3.009	25.96	15.23	41.19	69.54	-28.35	QP	

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

Test Mode:	TX B MODE CHANNEL 01

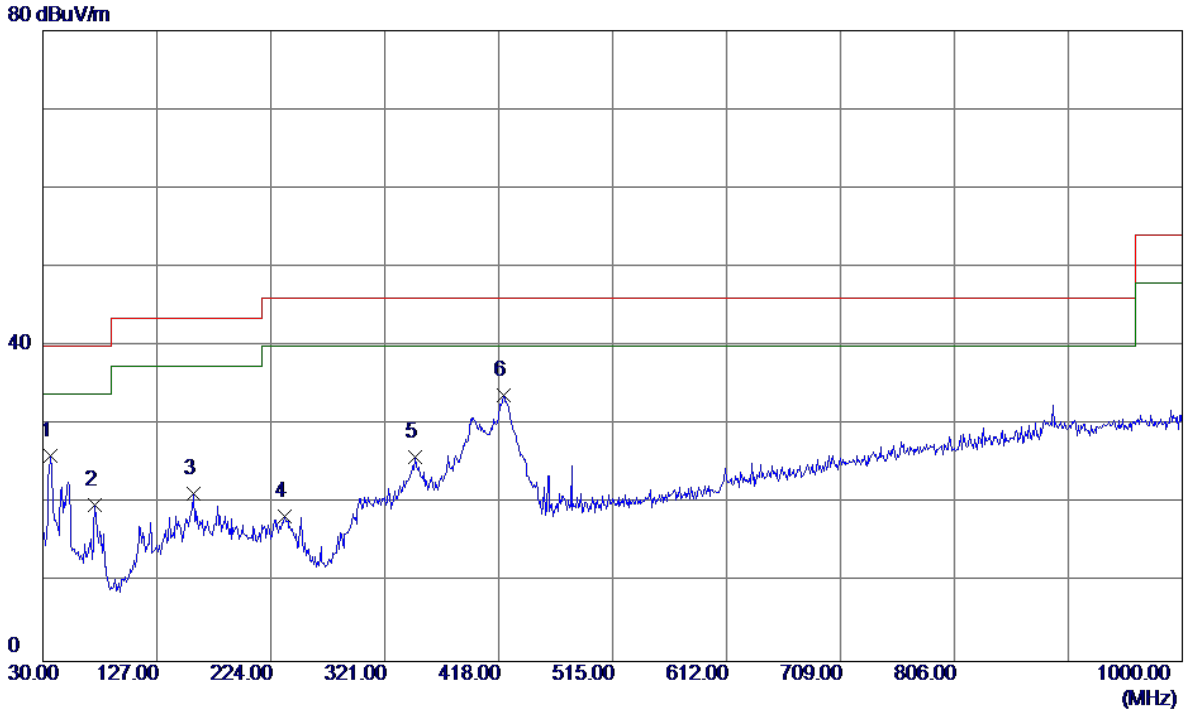
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	36.7900	50.65	-14.41	36.24	40.00	-3.76	QP	
2	51.3400	49.19	-13.70	35.49	40.00	-4.51	Peak	
3	158.0399	42.05	-13.05	29.00	43.50	-14.50	Peak	
4	180.3500	38.24	-12.07	26.17	43.50	-17.33	Peak	
5	347.1900	35.17	-12.00	23.17	46.00	-22.83	Peak	
6	425.7600	37.89	-10.63	27.26	46.00	-18.74	Peak	

Test Mode:	TX B MODE CHANNEL 01

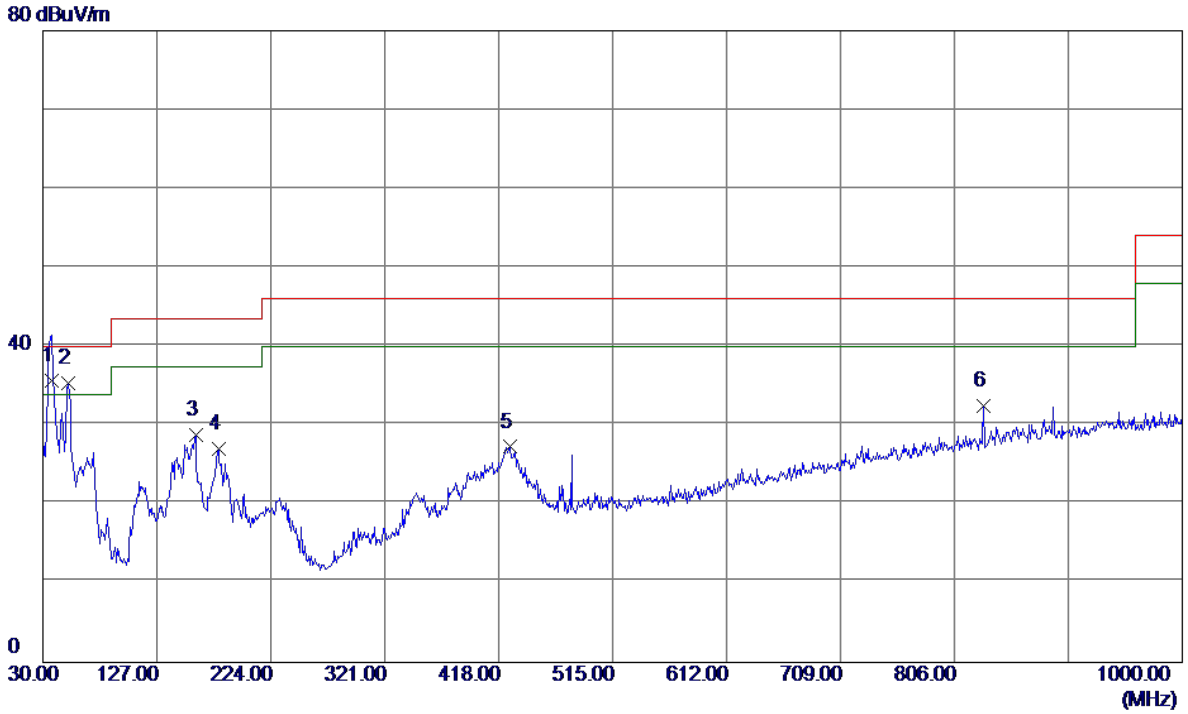
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	36.7900	40.53	-14.41	26.12	40.00	-13.88	Peak	
2	74.6200	36.84	-17.04	19.80	40.00	-20.20	Peak	
3	158.0399	34.36	-13.05	21.31	43.50	-22.19	Peak	
4	235.6400	32.72	-14.26	18.46	46.00	-27.54	Peak	
5	347.1900	37.88	-12.00	25.88	46.00	-20.12	Peak	
6 *	421.8800	44.44	-10.74	33.70	46.00	-12.30	Peak	

Test Mode:	TX B MODE CHANNEL 06

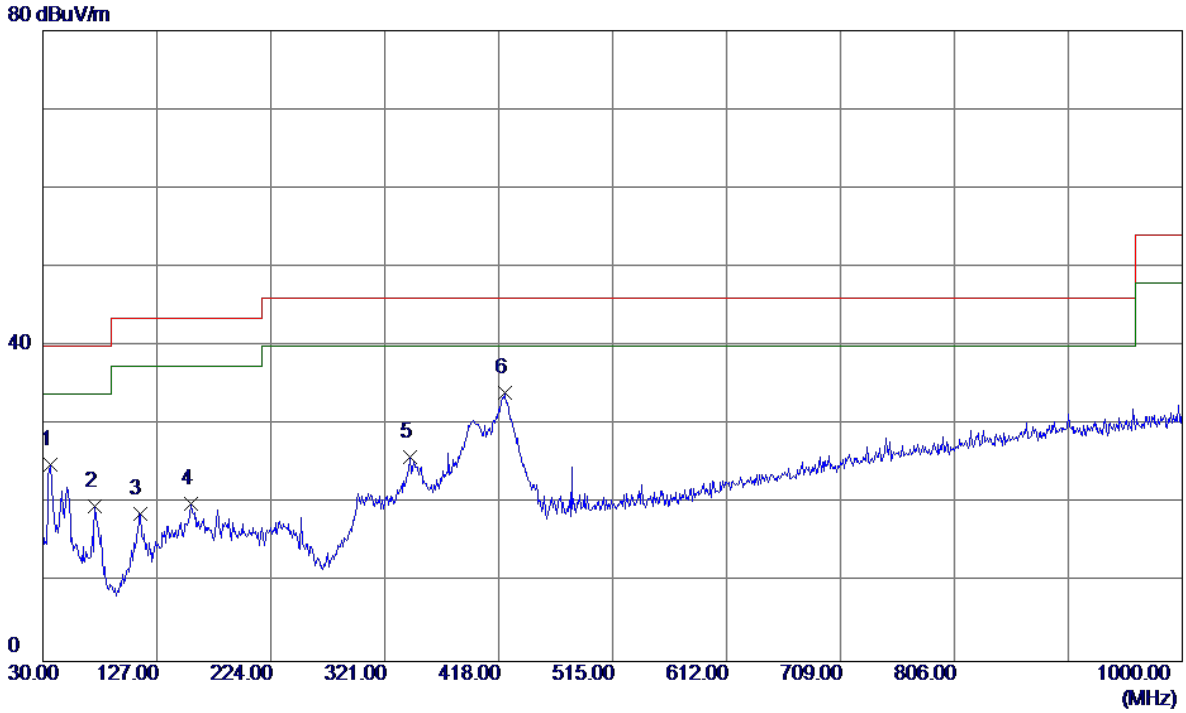
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	37.7599	49.98	-14.30	35.68	40.00	-4.32	QP	
2	51.3400	49.06	-13.70	35.36	40.00	-4.64	Peak	
3	159.9800	41.70	-12.93	28.77	43.50	-14.73	Peak	
4	179.3800	39.06	-12.06	27.00	43.50	-16.50	Peak	
5	427.7000	37.85	-10.57	27.28	46.00	-18.72	Peak	
6	831.2199	32.94	-0.51	32.43	46.00	-13.57	Peak	

Test Mode:	TX B MODE CHANNEL 06

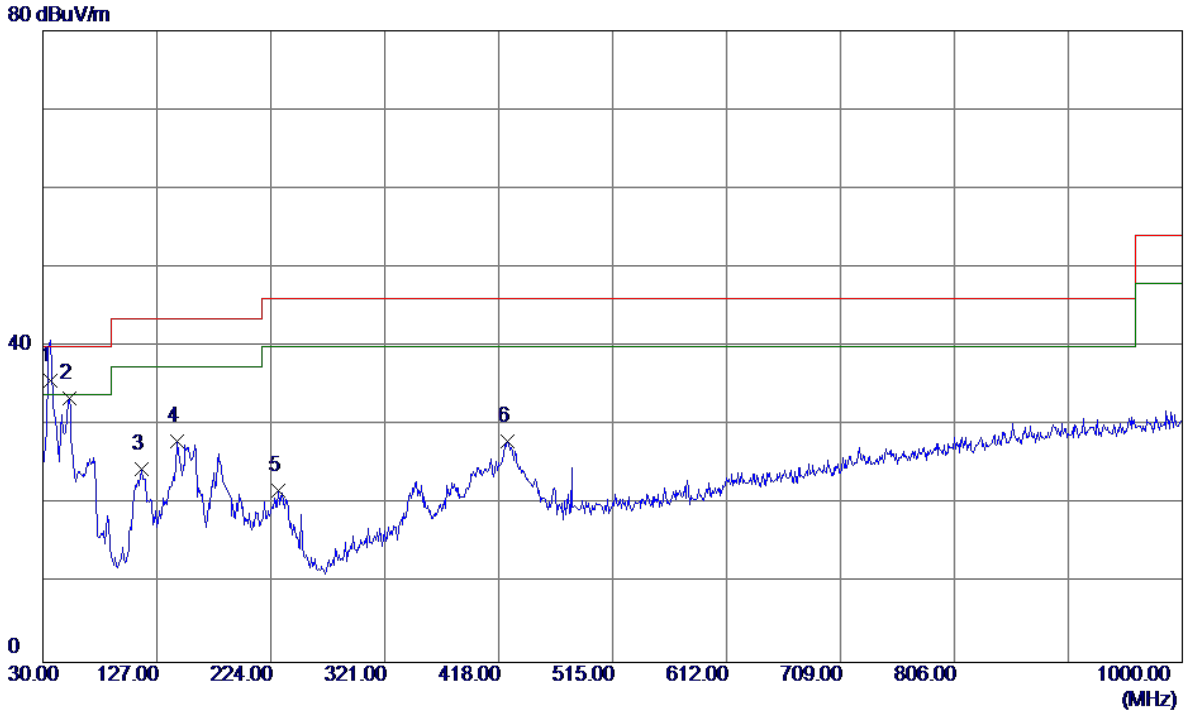
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	36.7900	39.38	-14.41	24.97	40.00	-15.03	Peak	
2	74.6200	36.68	-17.04	19.64	40.00	-20.36	Peak	
3	112.4500	34.76	-16.00	18.76	43.50	-24.74	Peak	
4	156.1000	33.10	-13.16	19.94	43.50	-23.56	Peak	
5	342.3400	38.07	-12.09	25.98	46.00	-20.02	Peak	
6 *	422.8500	44.75	-10.71	34.04	46.00	-11.96	Peak	

Test Mode:	TX B MODE CHANNEL 11

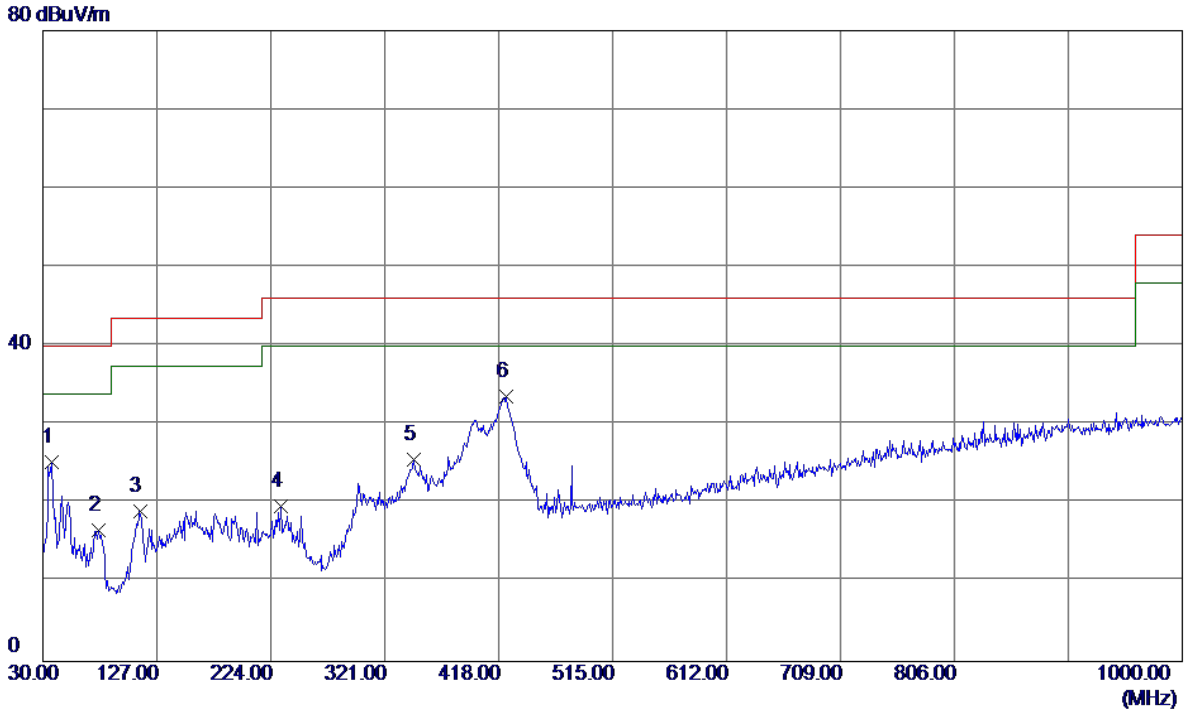
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	36.7900	50.15	-14.41	35.74	40.00	-4.26	QP	
2	52.3100	47.26	-13.79	33.47	40.00	-6.53	Peak	
3	114.3900	40.32	-15.84	24.48	43.50	-19.02	Peak	
4	144.4600	41.85	-13.91	27.94	43.50	-15.56	Peak	
5	230.7900	35.88	-14.15	21.73	46.00	-24.27	Peak	
6	425.7600	38.60	-10.63	27.97	46.00	-18.03	Peak	

Test Mode:	TX B MODE CHANNEL 11

Horizontal

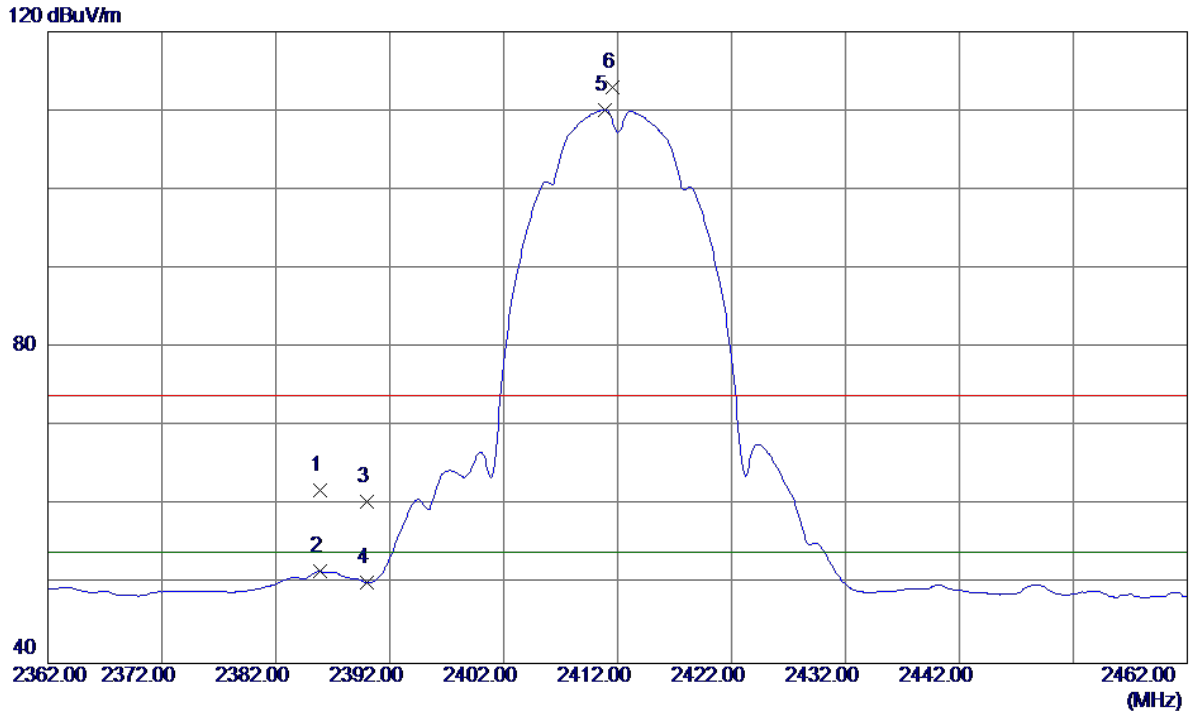


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	37.7599	39.62	-14.30	25.32	40.00	-14.68	Peak	
2	77.5300	34.37	-17.67	16.70	40.00	-23.30	Peak	
3	112.4500	35.08	-16.00	19.08	43.50	-24.42	Peak	
4	232.7300	33.83	-14.19	19.64	46.00	-26.36	Peak	
5	346.2200	37.69	-12.02	25.67	46.00	-20.33	Peak	
6 *	424.7900	44.23	-10.66	33.57	46.00	-12.43	Peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

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

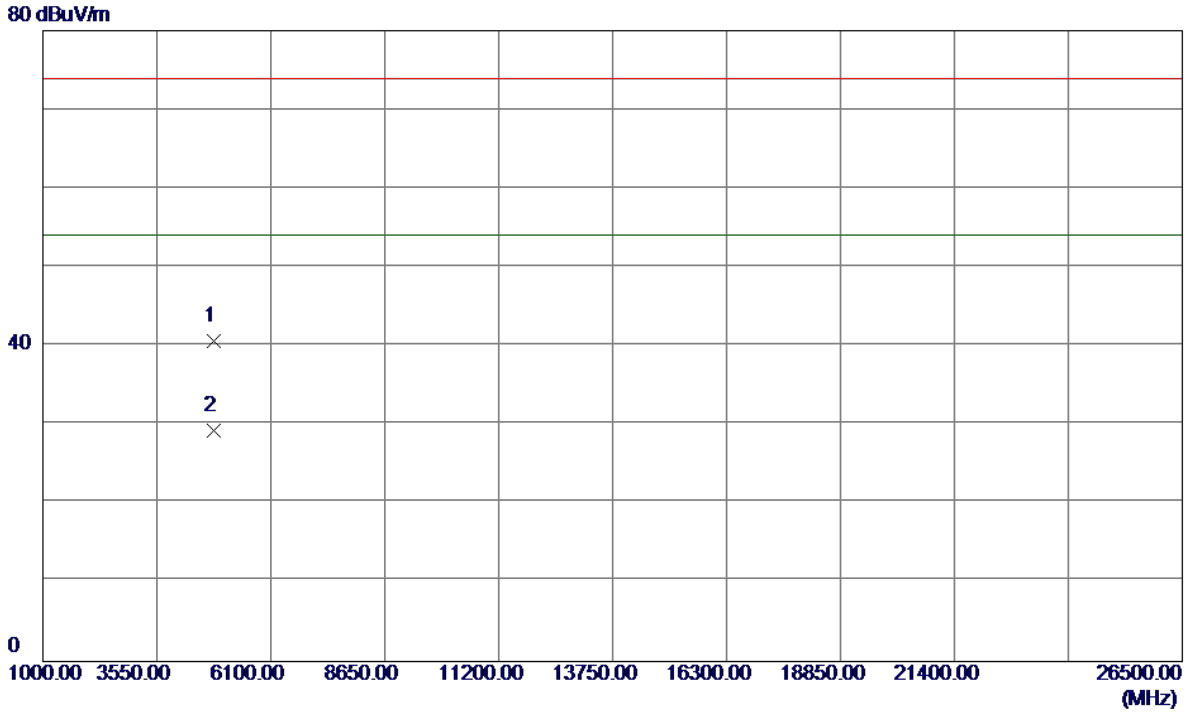
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2385.9000	28.89	33.04	61.93	74.00	-12.07	Peak	
2	2385.9000	18.58	33.04	51.62	54.00	-2.38	AVG	
3	2390.0000	27.37	33.06	60.43	74.00	-13.57	Peak	
4	2390.0000	17.16	33.06	50.22	54.00	-3.78	AVG	
5 *	2410.9000	77.02	33.13	110.15	54.00	56.15	AVG	No Limit
6	2411.6000	79.83	33.14	112.97	74.00	38.97	Peak	No Limit

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

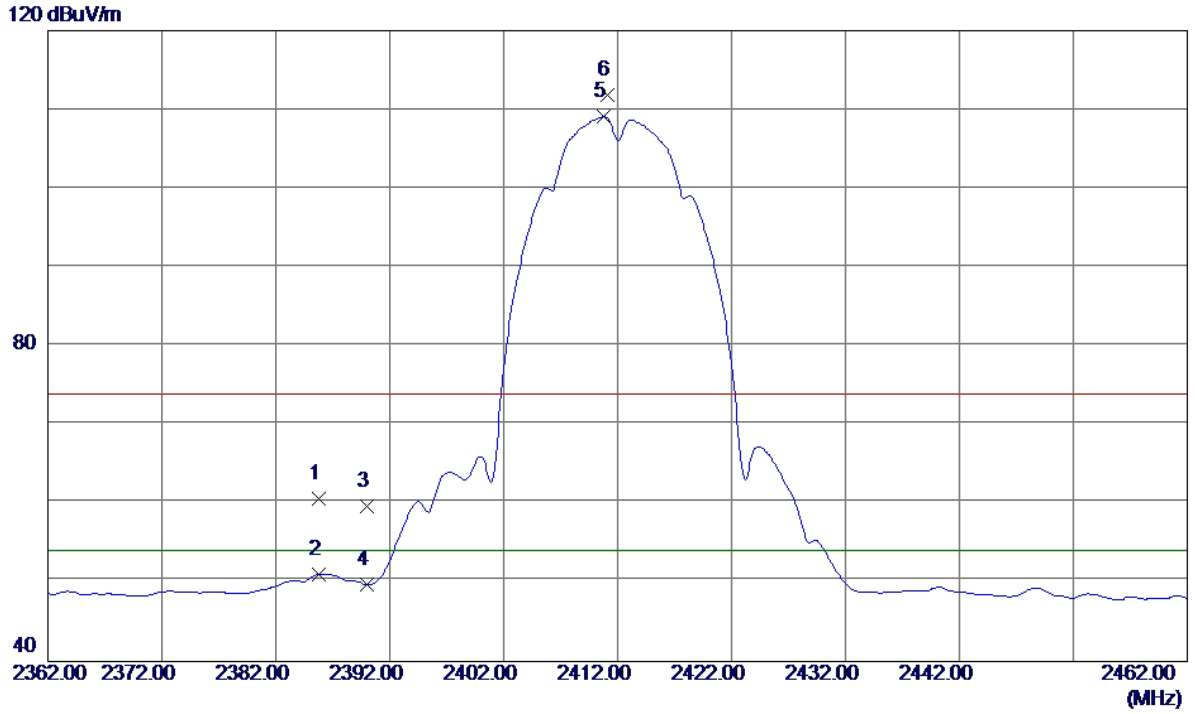
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.7790	34.36	6.32	40.68	74.00	-33.32	Peak	
2 *	4823.9310	23.03	6.32	29.35	54.00	-24.65	AVG	

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

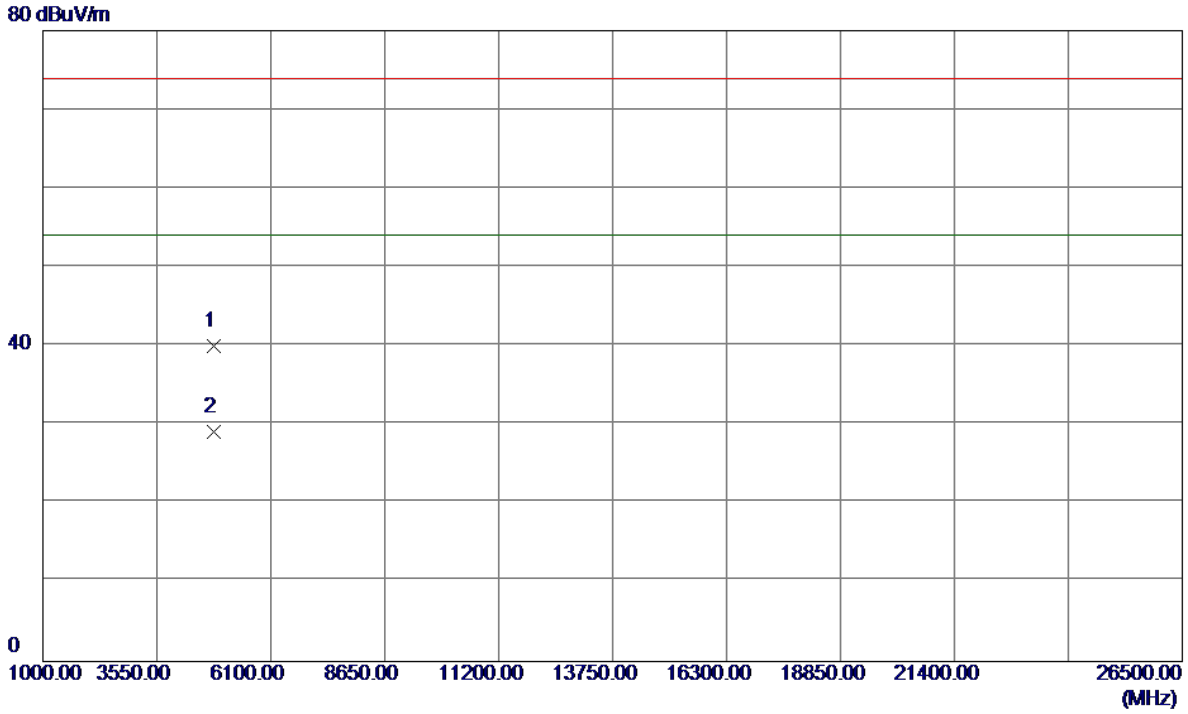
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2385.8000	27.53	33.04	60.57	74.00	-13.43	Peak	
2	2385.8000	18.02	33.04	51.06	54.00	-2.94	AVG	
3	2390.0000	26.55	33.06	59.61	74.00	-14.39	Peak	
4	2390.0000	16.64	33.06	49.70	54.00	-4.30	AVG	
5 *	2410.8000	75.94	33.13	109.07	54.00	55.07	AVG	No Limit
6	2411.1000	78.67	33.14	111.81	74.00	37.81	Peak	No Limit

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

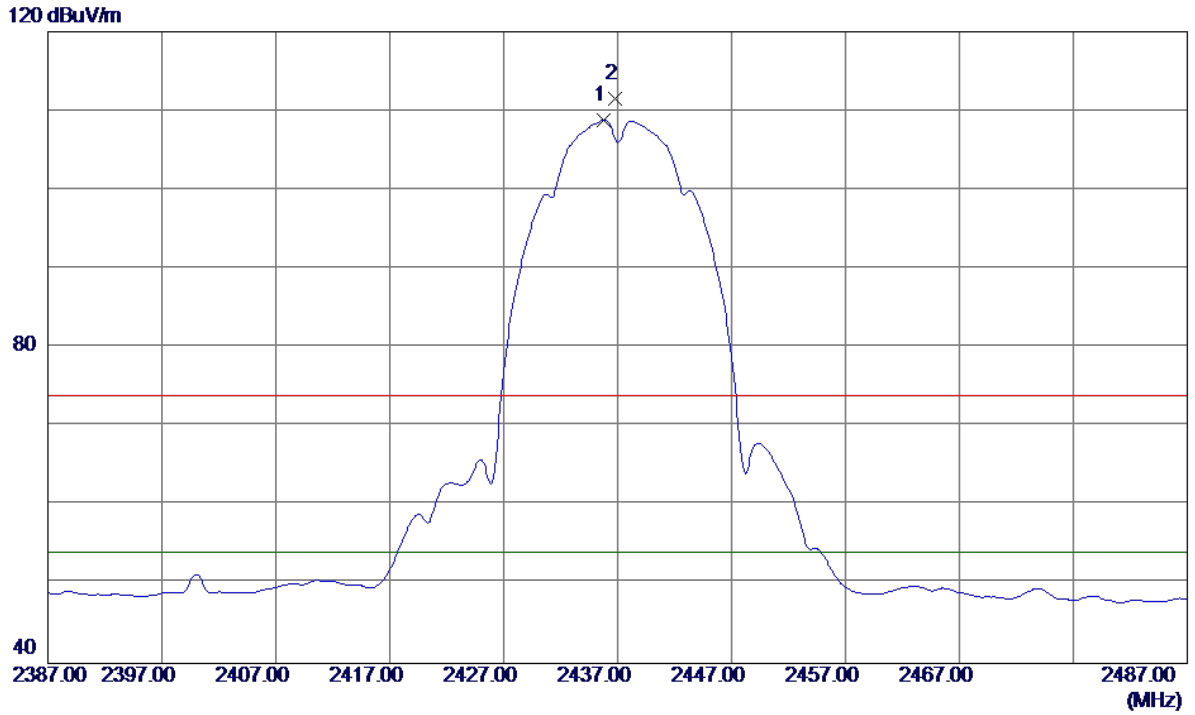
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.6220	33.75	6.32	40.07	74.00	-33.93	Peak	
2 *	4824.0050	22.81	6.32	29.13	54.00	-24.87	AVG	

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

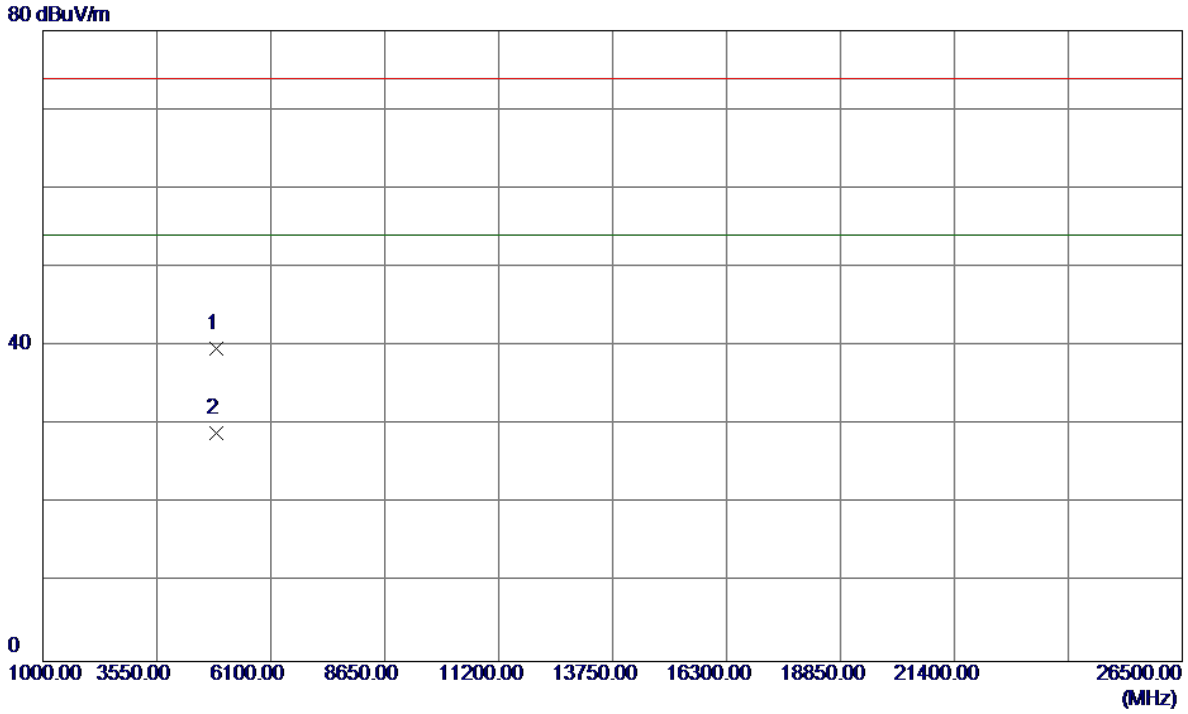
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435.8000	75.57	33.23	108.80	54.00	54.80	AVG	No Limit
2	2436.8000	78.37	33.23	111.60	74.00	37.60	Peak	No Limit

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

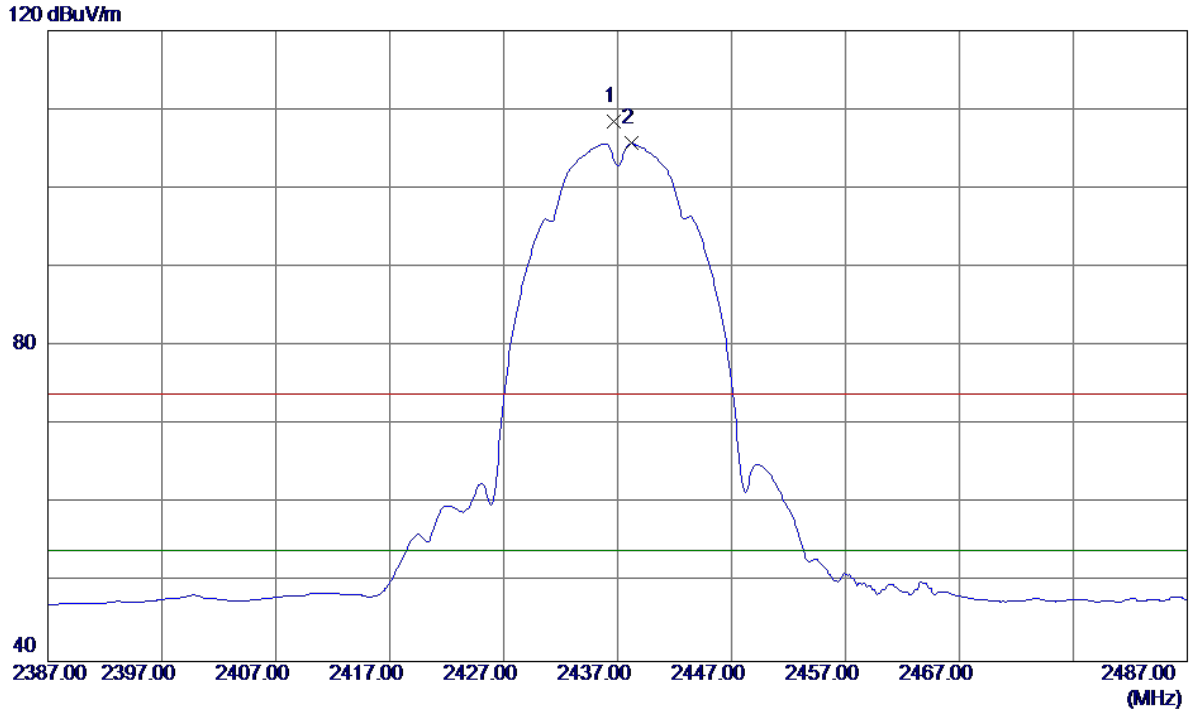
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873.8700	33.30	6.44	39.74	74.00	-34.26	Peak	
2 *	4873.8700	22.45	6.44	28.89	54.00	-25.11	AVG	

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

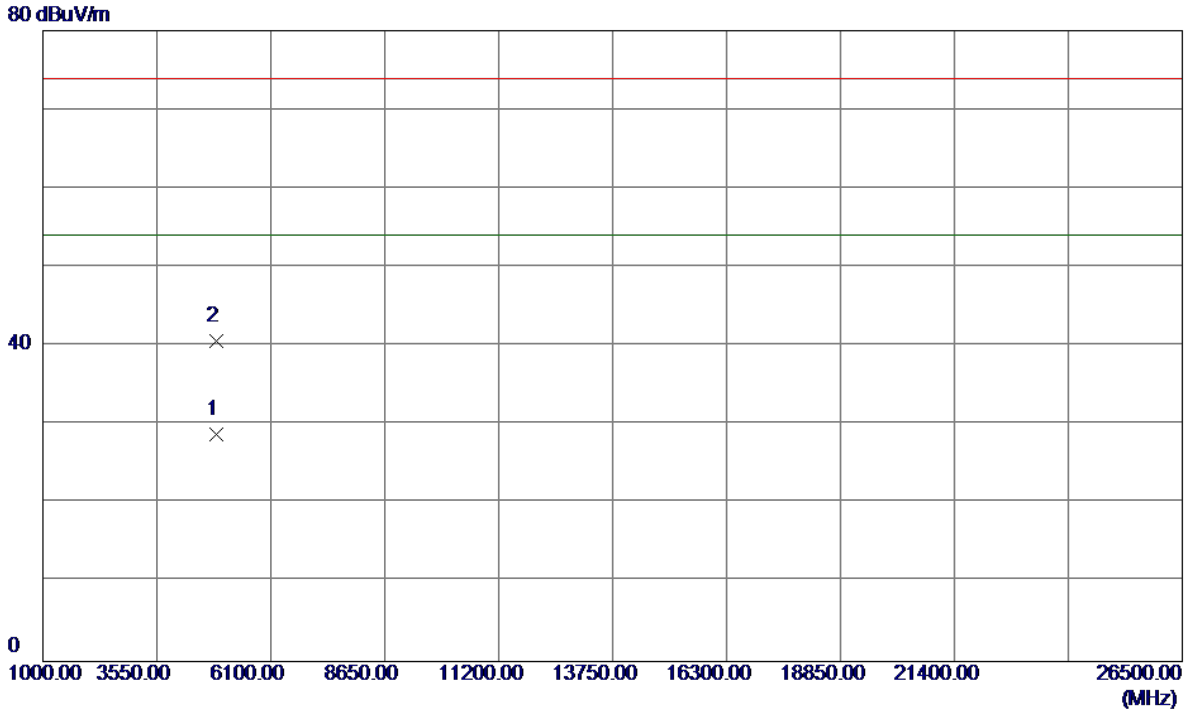
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2436.7000	75.23	33.23	108.46	74.00	34.46	Peak	No Limit
2 *	2438.2000	72.44	33.24	105.68	54.00	51.68	AVG	No Limit

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

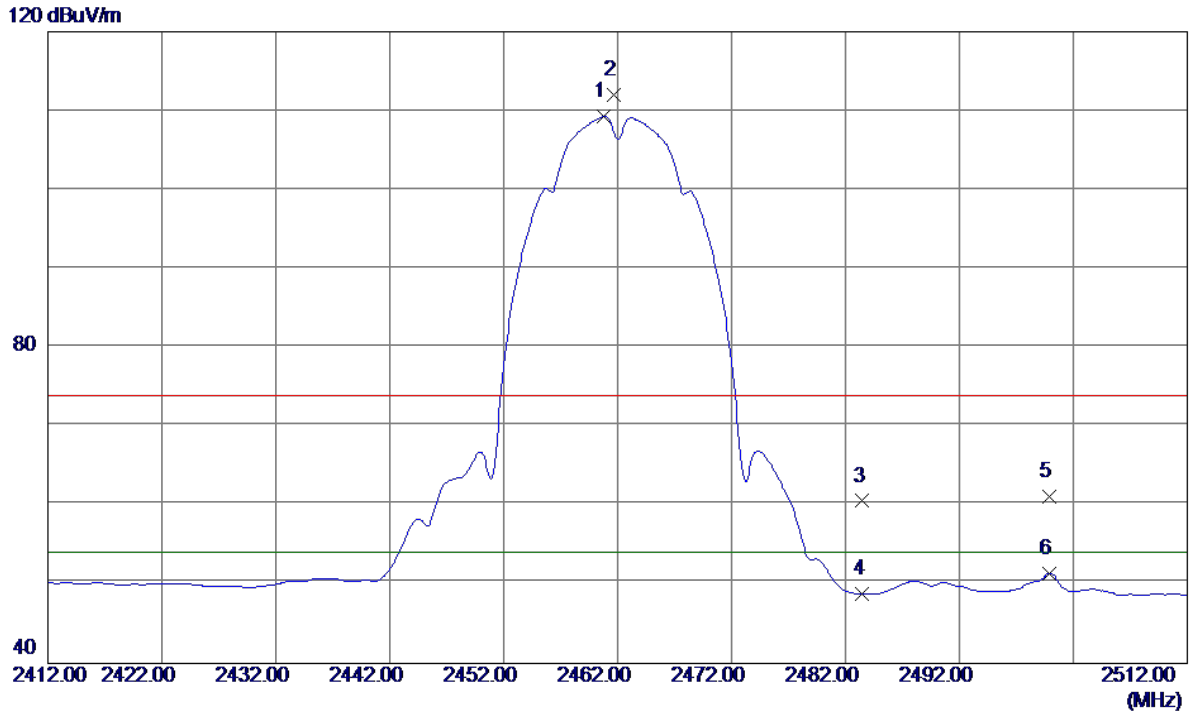
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.8060	22.40	6.44	28.84	54.00	-25.16	AVG	
2	4874.2180	34.25	6.44	40.69	74.00	-33.31	Peak	

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

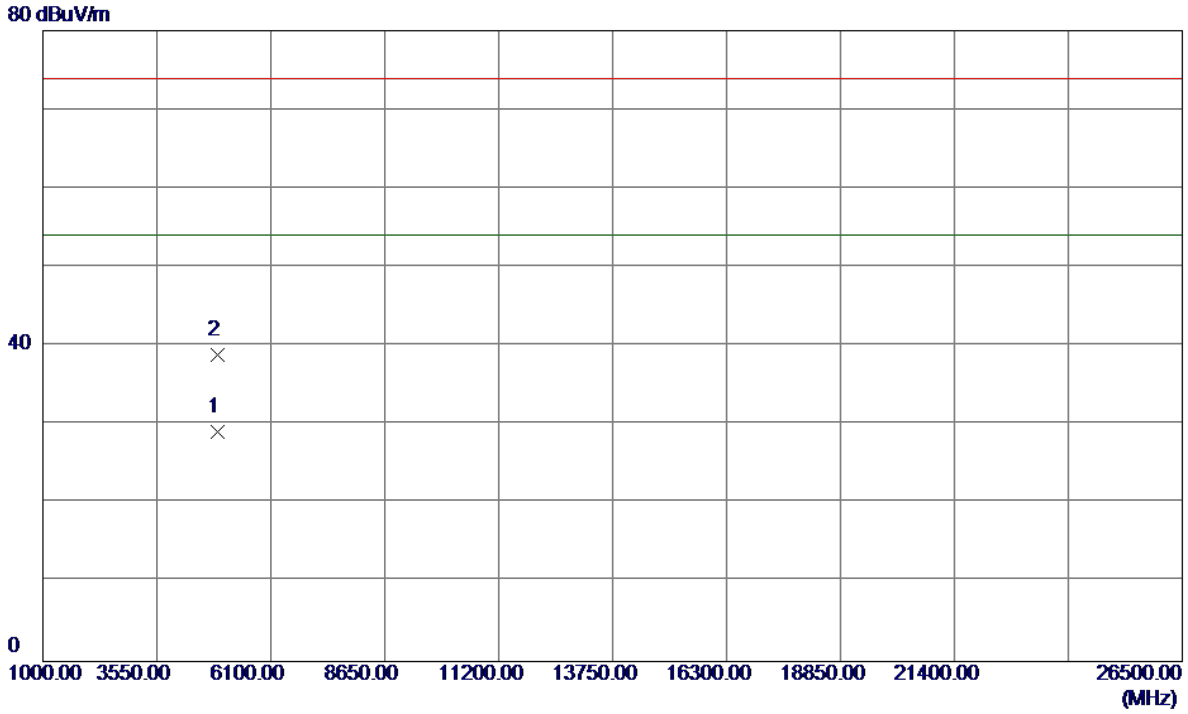
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.8000	75.94	33.32	109.26	54.00	55.26	AVG	No Limit
2	2461.7000	78.67	33.33	112.00	74.00	38.00	Peak	No Limit
3	2483.5000	27.15	33.41	60.56	74.00	-13.44	Peak	
4	2483.5000	15.39	33.41	48.80	54.00	-5.20	AVG	
5	2499.9000	27.69	33.47	61.16	74.00	-12.84	Peak	
6	2499.9000	17.88	33.47	51.35	54.00	-2.65	AVG	

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

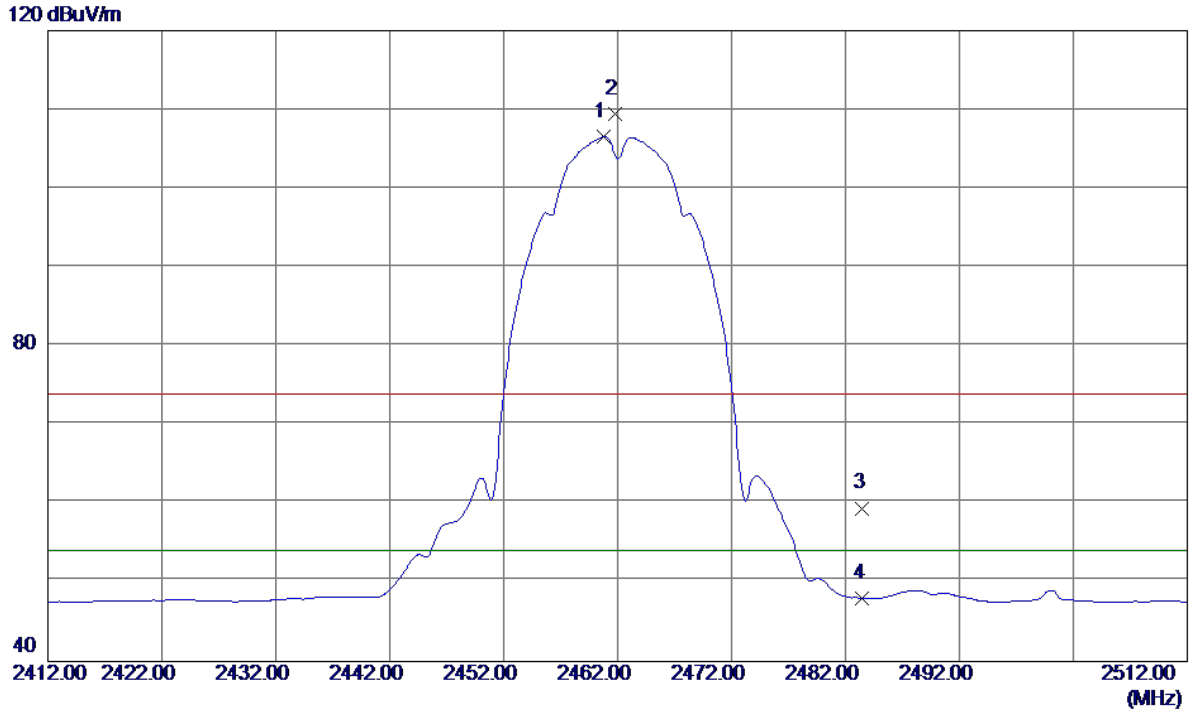
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.7670	22.57	6.57	29.14	54.00	-24.86	AVG	
2	4924.1040	32.24	6.57	38.81	74.00	-35.19	Peak	

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

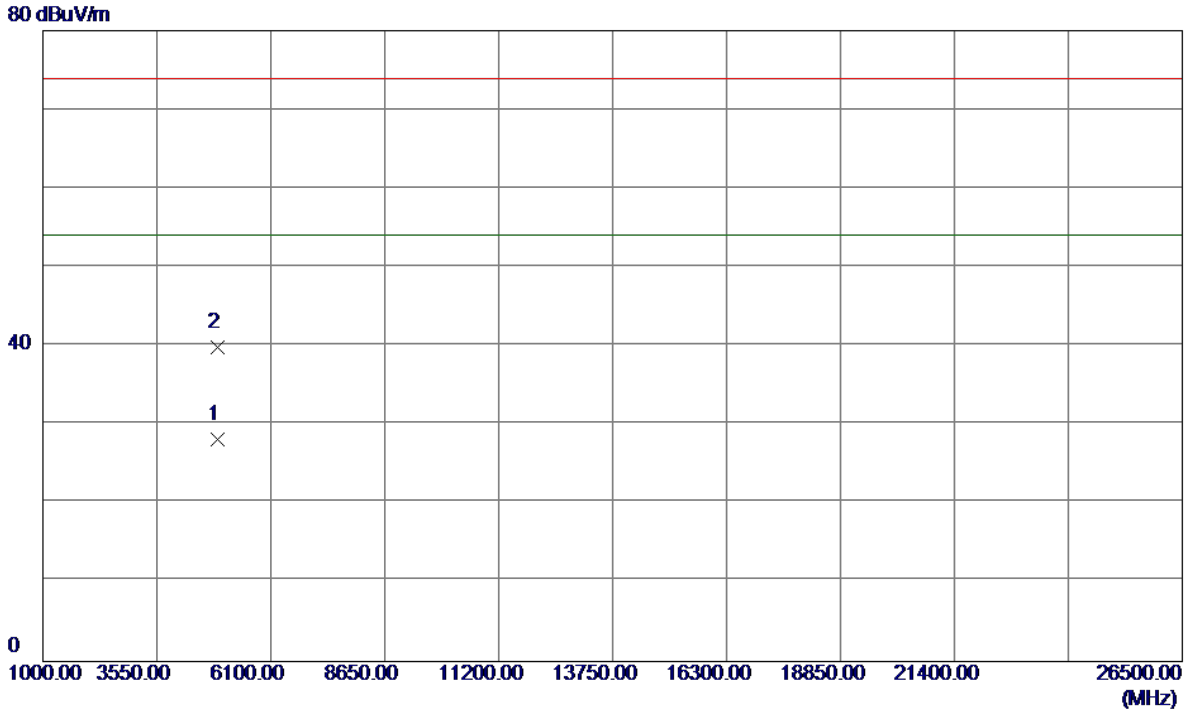
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.8000	73.23	33.32	106.55	54.00	52.55	AVG	No Limit
2	2461.8000	76.07	33.33	109.40	74.00	35.40	Peak	No Limit
3	2483.5000	26.03	33.41	59.44	74.00	-14.56	Peak	
4	2483.5000	14.63	33.41	48.04	54.00	-5.96	AVG	

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

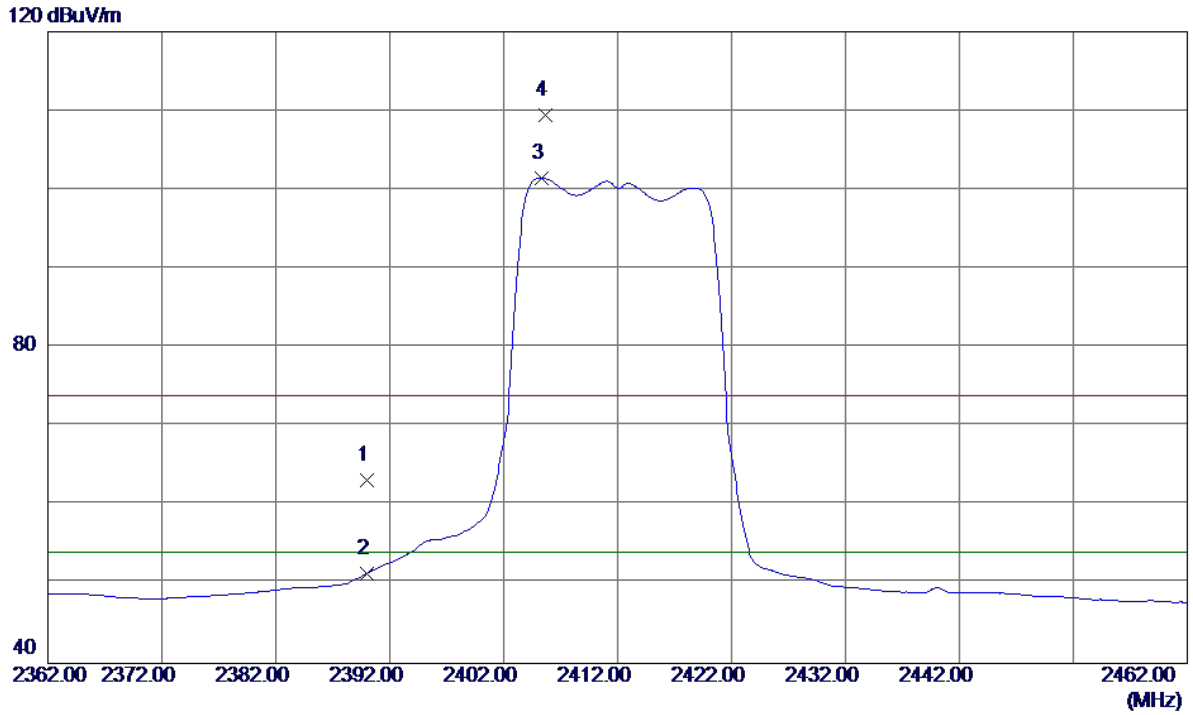
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.7650	21.63	6.57	28.20	54.00	-25.80	AVG	
2	4923.7970	33.24	6.57	39.81	74.00	-34.19	Peak	

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

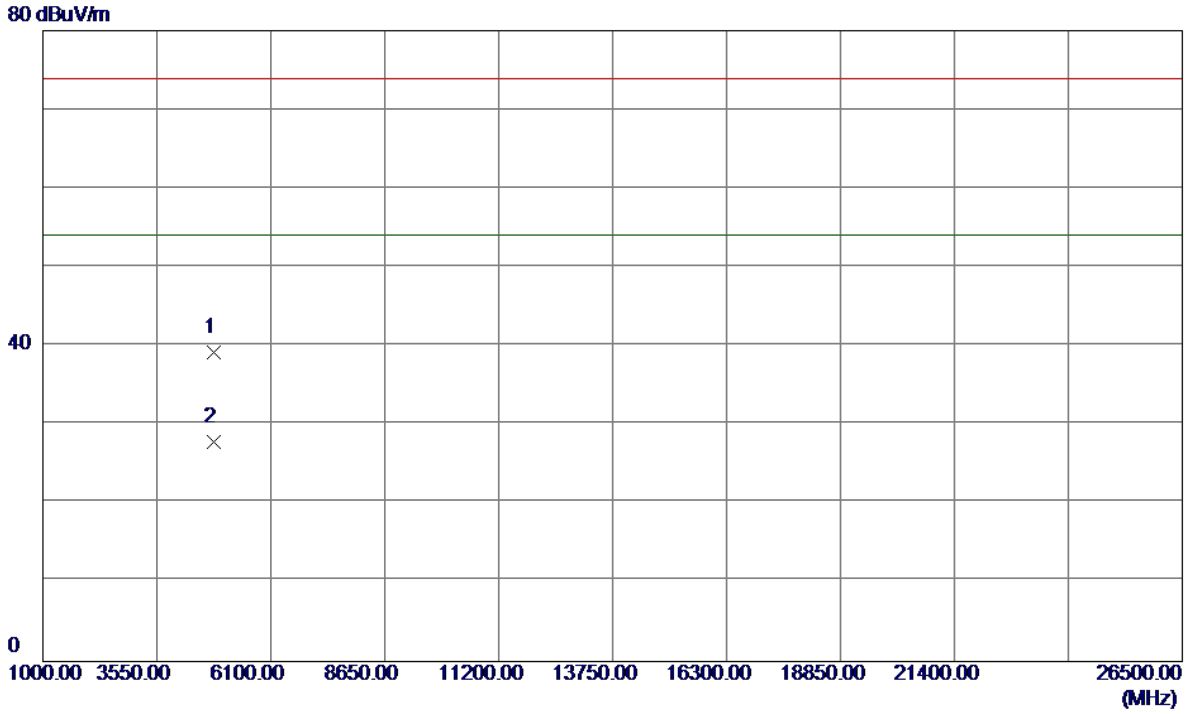
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	30.17	33.06	63.23	74.00	-10.77	Peak	
2	2390.0000	18.35	33.06	51.41	54.00	-2.59	AVG	
3 *	2405.3000	68.34	33.11	101.45	54.00	47.45	AVG	No Limit
4	2405.7000	76.40	33.12	109.52	74.00	35.52	Peak	No Limit

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

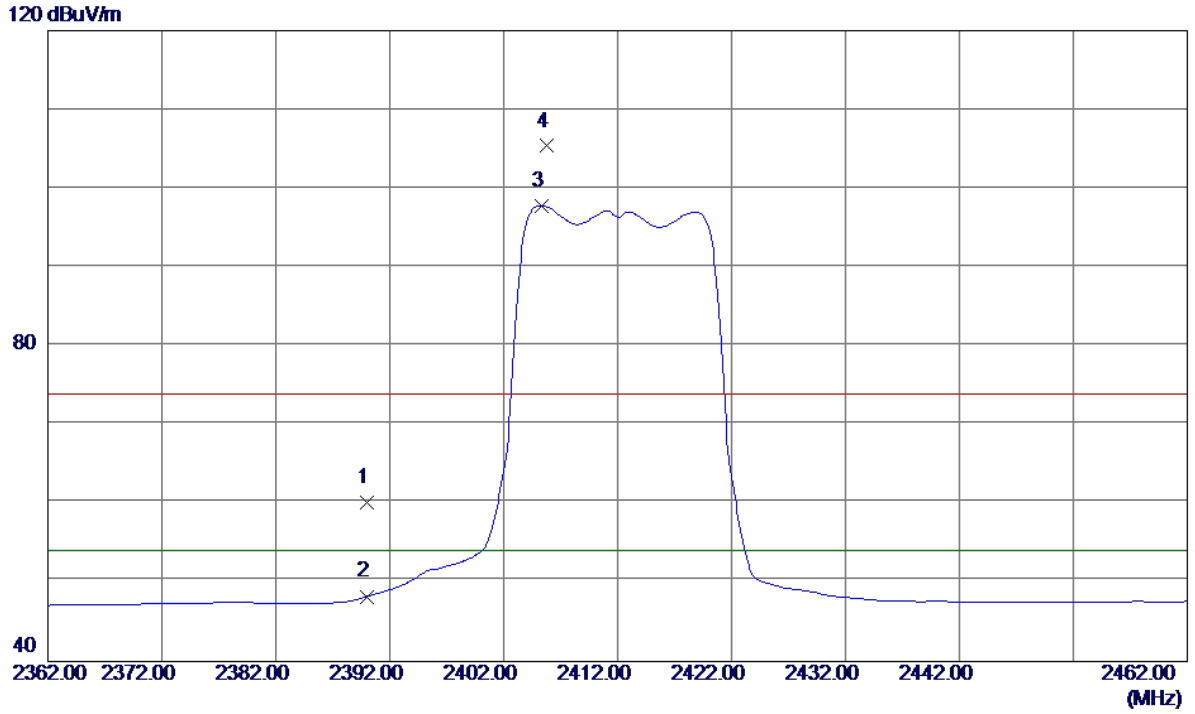
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.9049	32.86	6.32	39.18	74.00	-34.82	Peak	
2 *	4824.3889	21.50	6.32	27.82	54.00	-26.18	AVG	

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

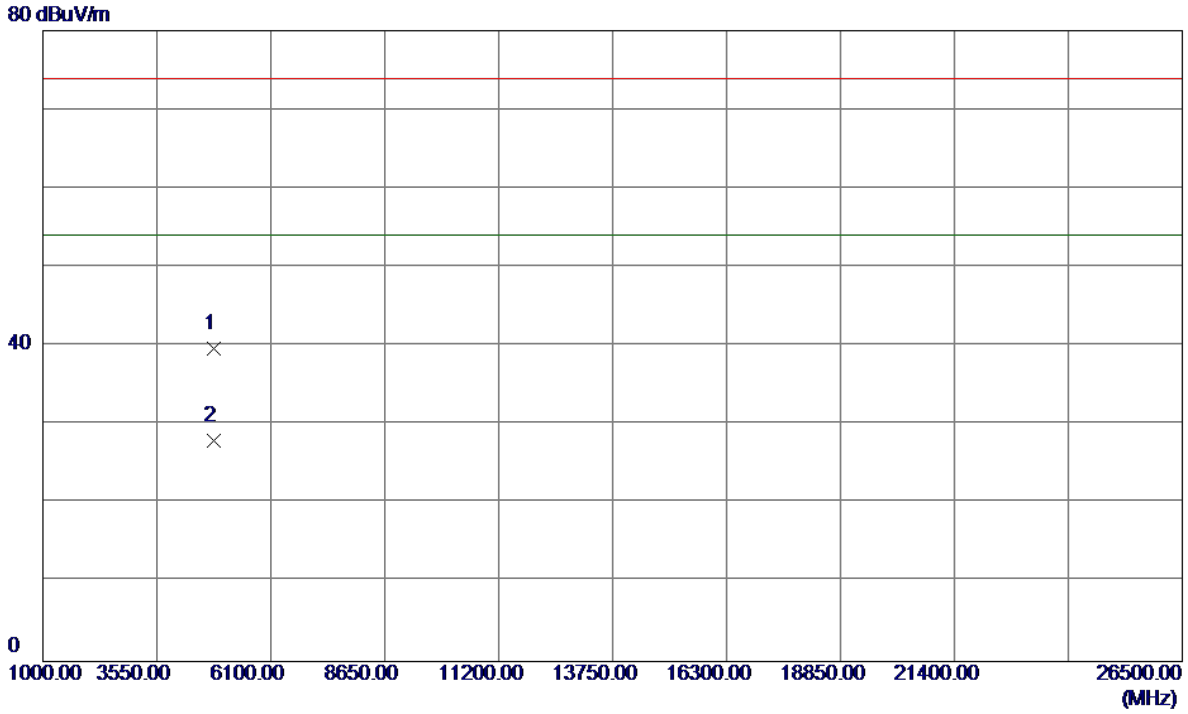
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.03	33.06	60.09	74.00	-13.91	Peak	
2	2390.0000	15.18	33.06	48.24	54.00	-5.76	AVG	
3 *	2405.3000	64.66	33.11	97.77	54.00	43.77	AVG	No Limit
4	2405.8000	72.24	33.12	105.36	74.00	31.36	Peak	No Limit

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

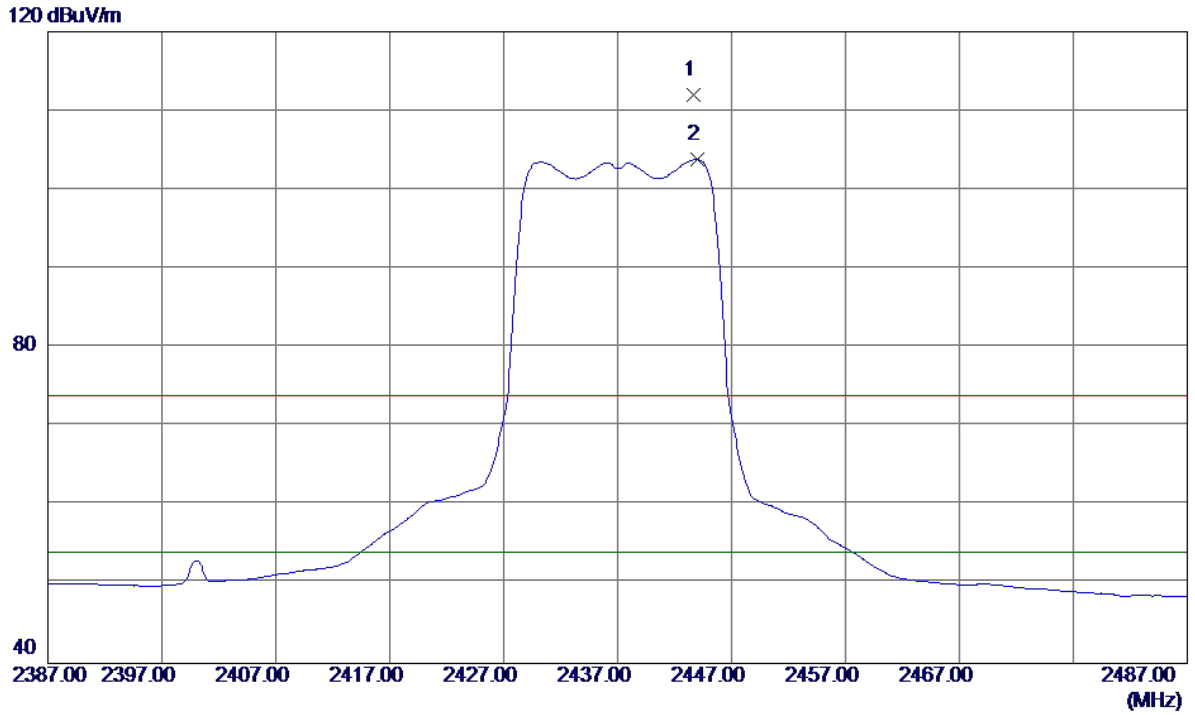
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.1570	33.34	6.32	39.66	74.00	-34.34	Peak	
2 *	4824.4089	21.74	6.32	28.06	54.00	-25.94	AVG	

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

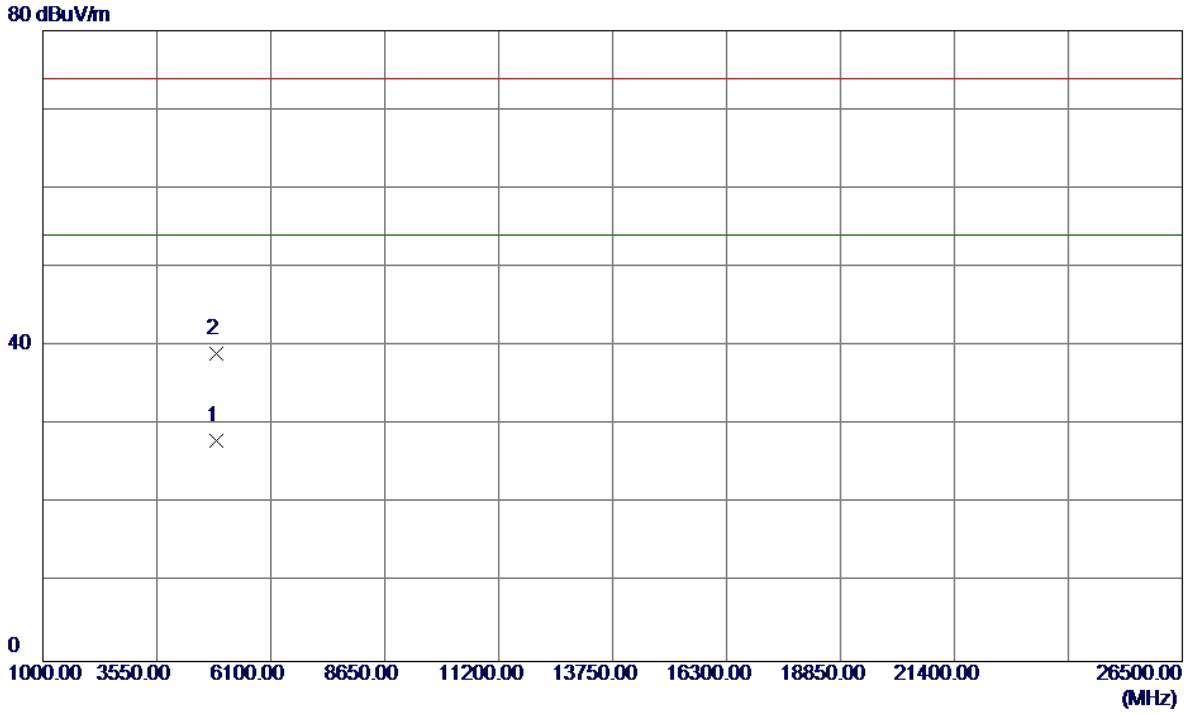
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2443.7000	78.80	33.26	112.06	74.00	38.06	Peak	No Limit
2 *	2444.0000	70.52	33.26	103.78	54.00	49.78	AVG	No Limit

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

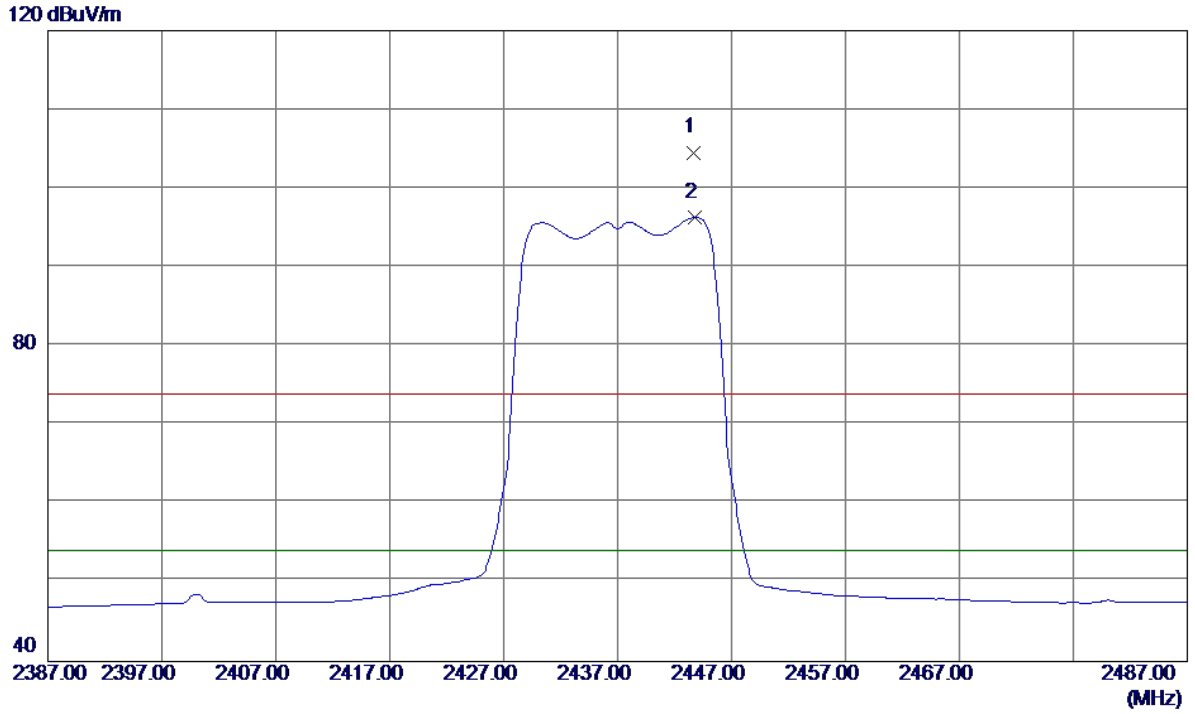
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.9020	21.49	6.44	27.93	54.00	-26.07	AVG	
2	4873.9410	32.54	6.44	38.98	74.00	-35.02	Peak	

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

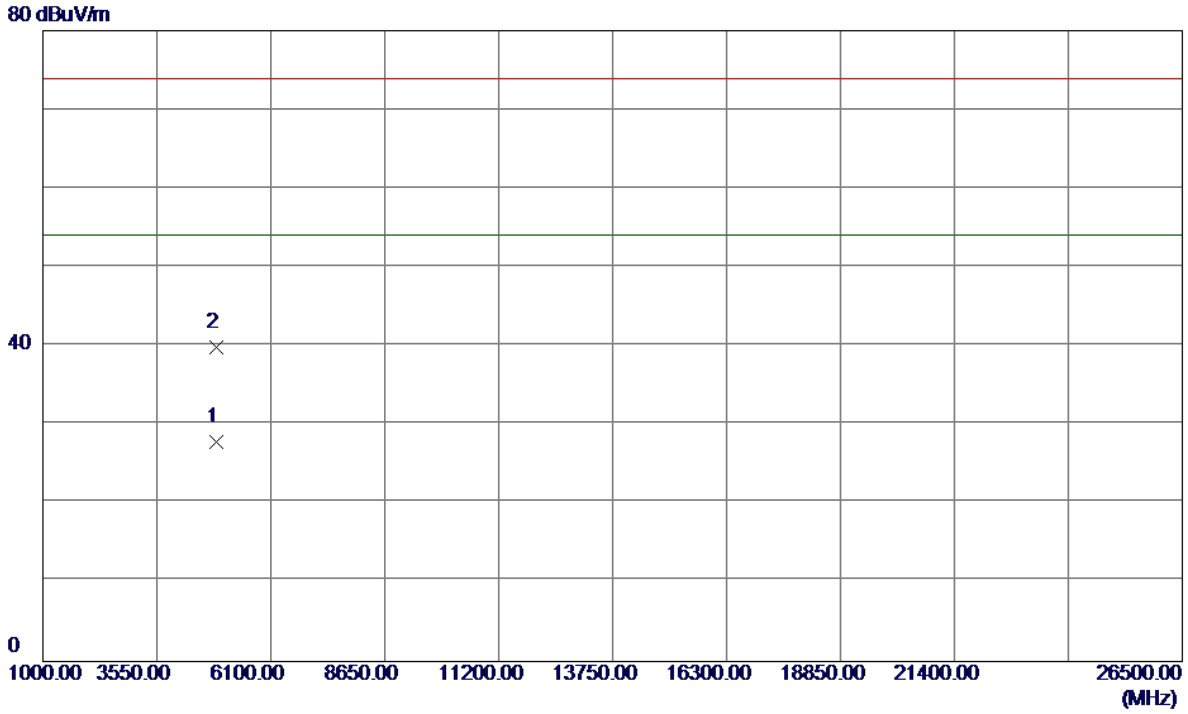
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2443.7000	71.30	33.26	104.56	74.00	30.56	Peak	No Limit
2 *	2443.8000	63.02	33.26	96.28	54.00	42.28	AVG	No Limit

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

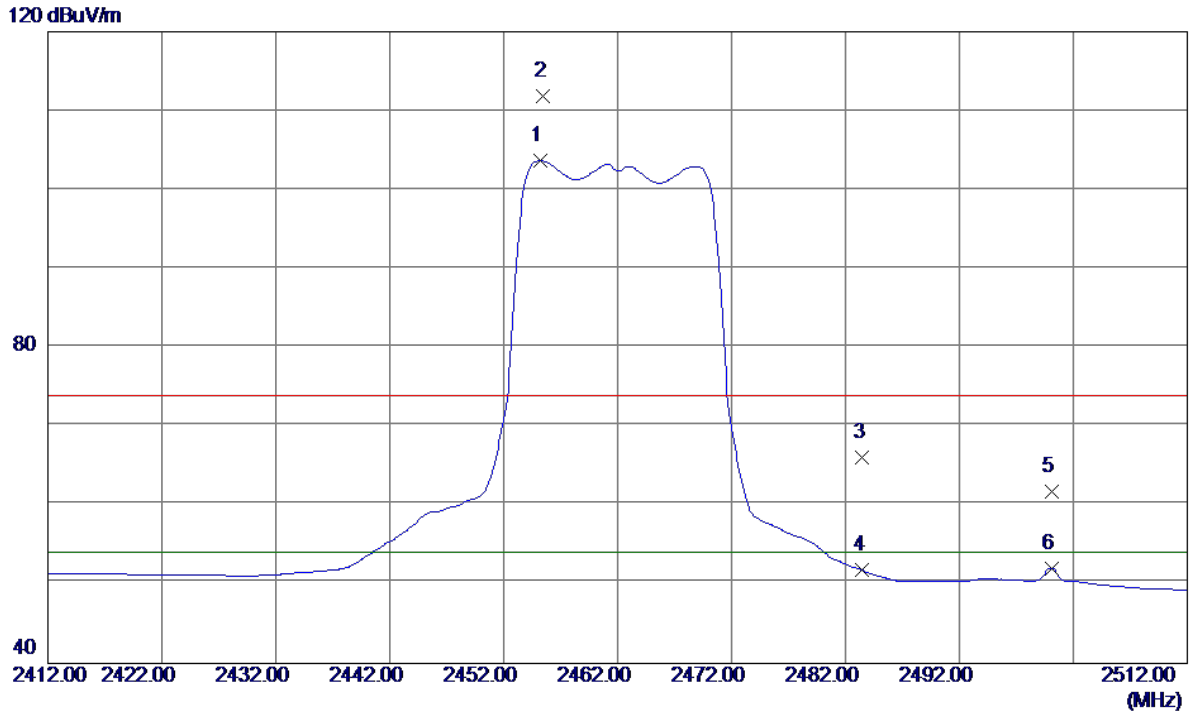
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4874.0620	21.47	6.44	27.91	54.00	-26.09	AVG	
2	4874.1680	33.37	6.44	39.81	74.00	-34.19	Peak	

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

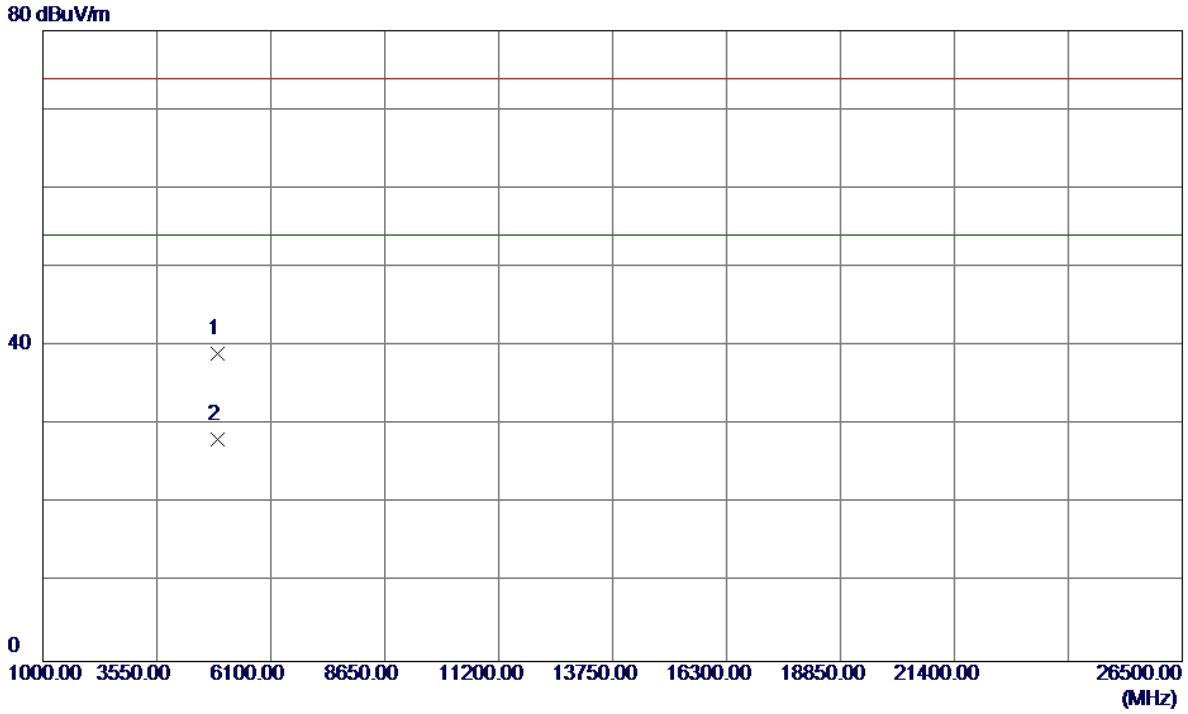
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2455.2000	70.33	33.30	103.63	54.00	49.63	AVG	No Limit
2	2455.5000	78.49	33.30	111.79	74.00	37.79	Peak	No Limit
3	2483.5000	32.60	33.41	66.01	74.00	-7.99	Peak	
4	2483.5000	18.37	33.41	51.78	54.00	-2.22	AVG	
5	2500.1000	28.26	33.47	61.73	74.00	-12.27	Peak	
6	2500.1000	18.55	33.47	52.02	54.00	-1.98	AVG	

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

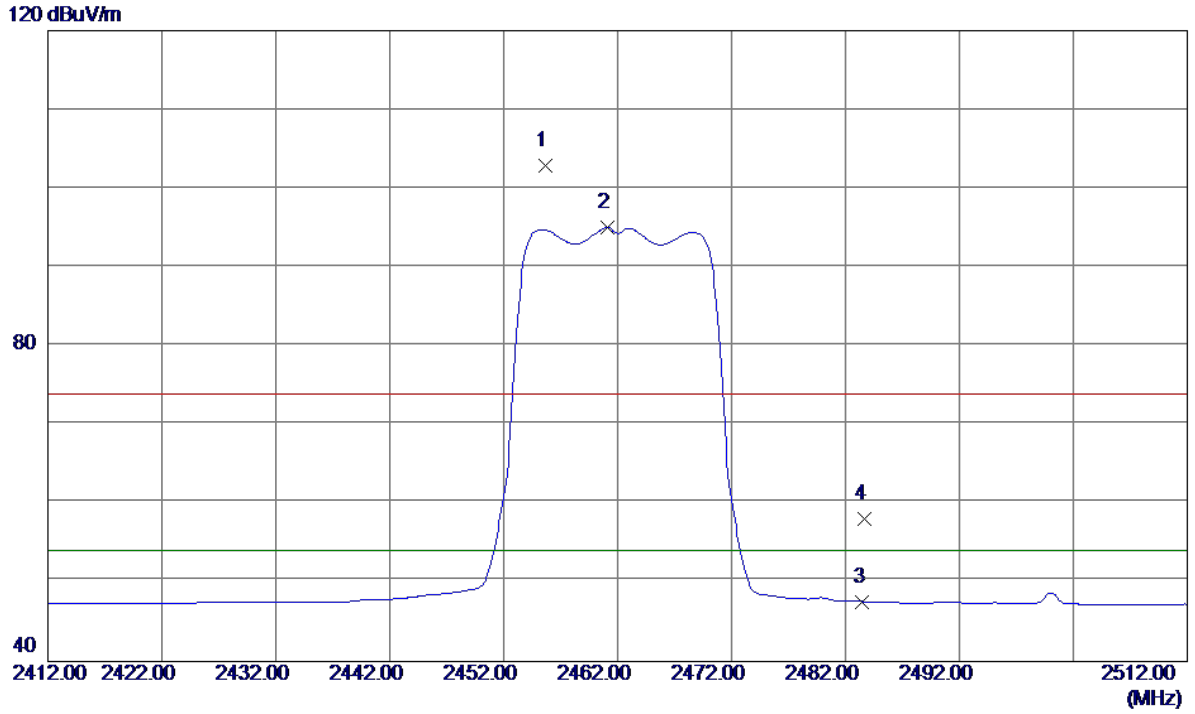
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4923.9430	32.54	6.57	39.11	74.00	-34.89	Peak	
2 *	4924.0350	21.59	6.57	28.16	54.00	-25.84	AVG	

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

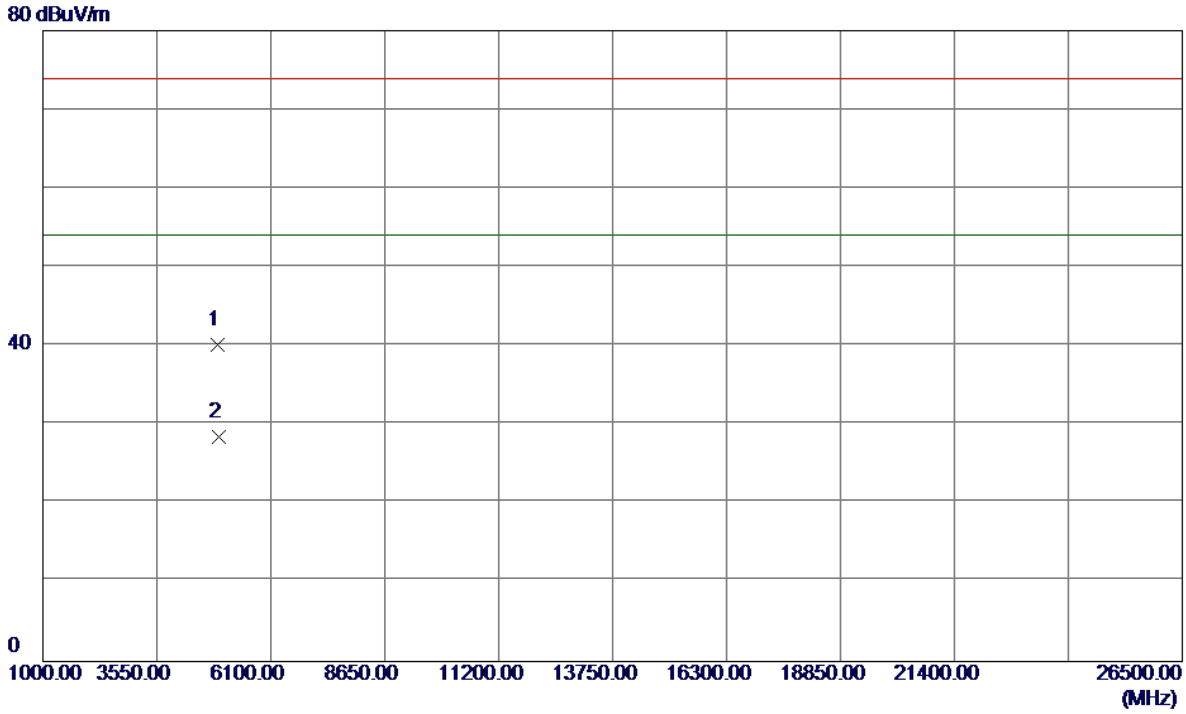
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2455.7000	69.59	33.30	102.89	74.00	28.89	Peak	No Limit
2 *	2461.1000	61.72	33.32	95.04	54.00	41.04	AVG	No Limit
3	2483.5000	14.18	33.41	47.59	54.00	-6.41	AVG	
4	2483.7000	24.60	33.41	58.01	74.00	-15.99	Peak	

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

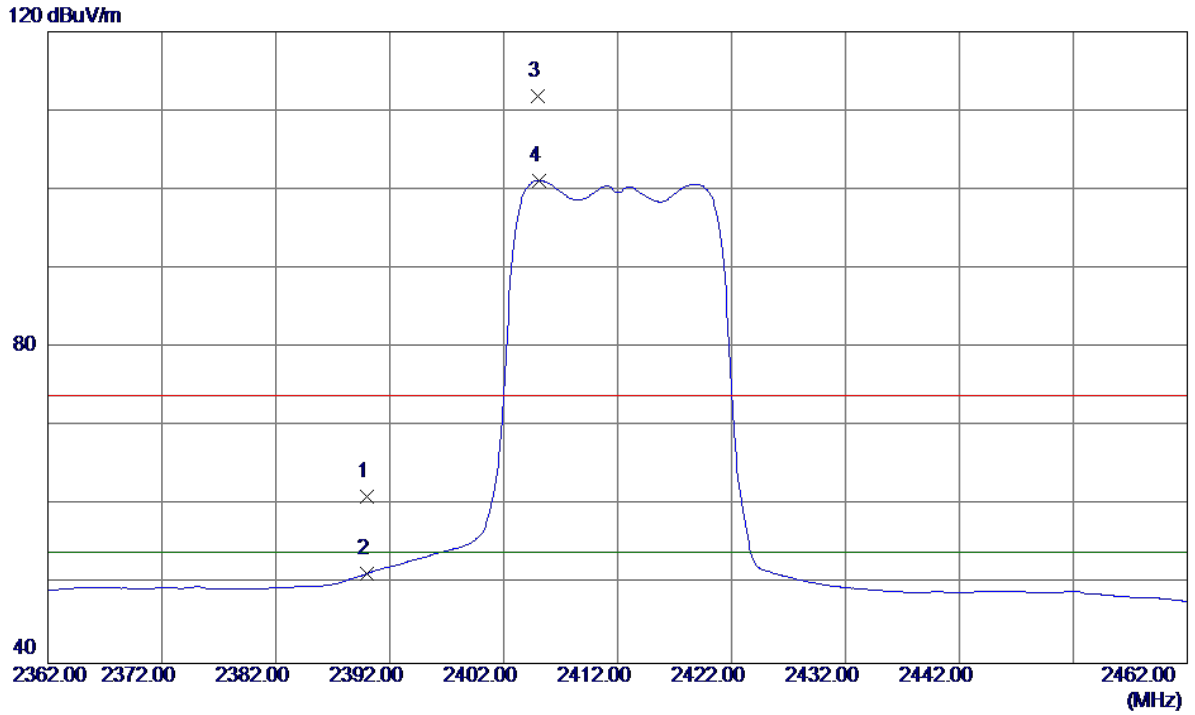
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924.0660	33.63	6.57	40.20	74.00	-33.80	Peak	
2 *	4924.2070	21.87	6.57	28.44	54.00	-25.56	AVG	

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

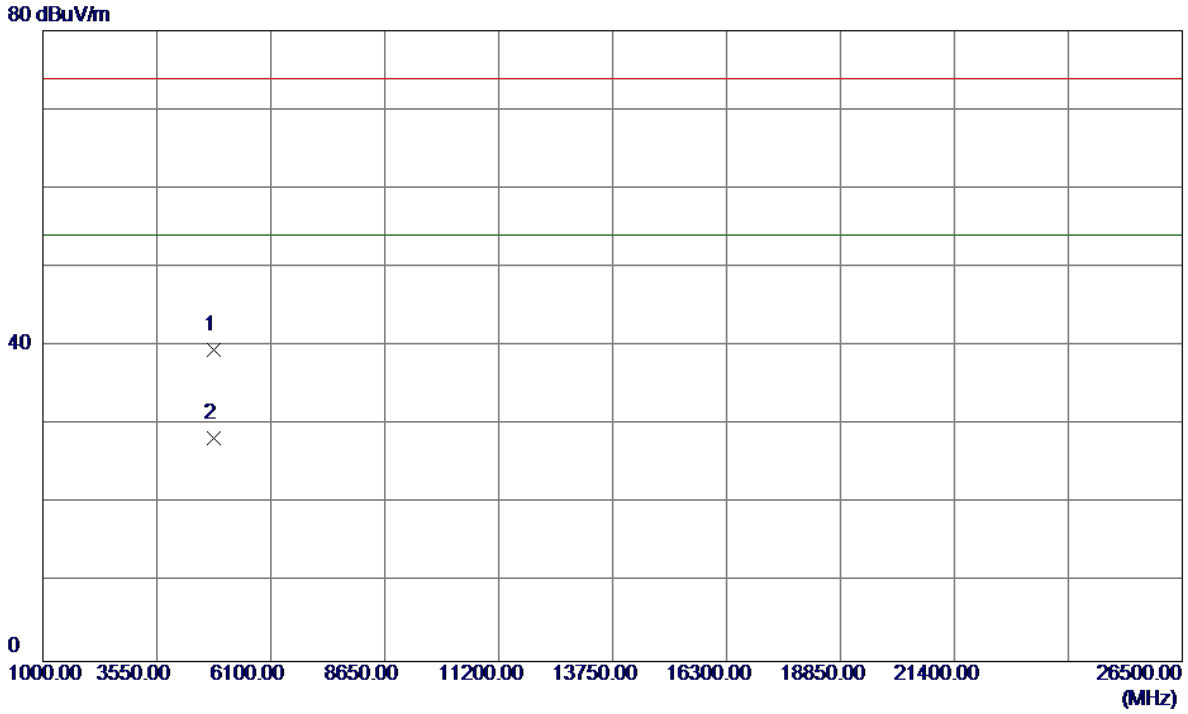
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.12	33.06	61.18	74.00	-12.82	Peak	
2	2390.0000	18.29	33.06	51.35	54.00	-2.65	AVG	
3	2405.0000	78.66	33.11	111.77	74.00	37.77	Peak	No Limit
4 *	2405.1000	68.05	33.11	101.16	54.00	47.16	AVG	No Limit

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

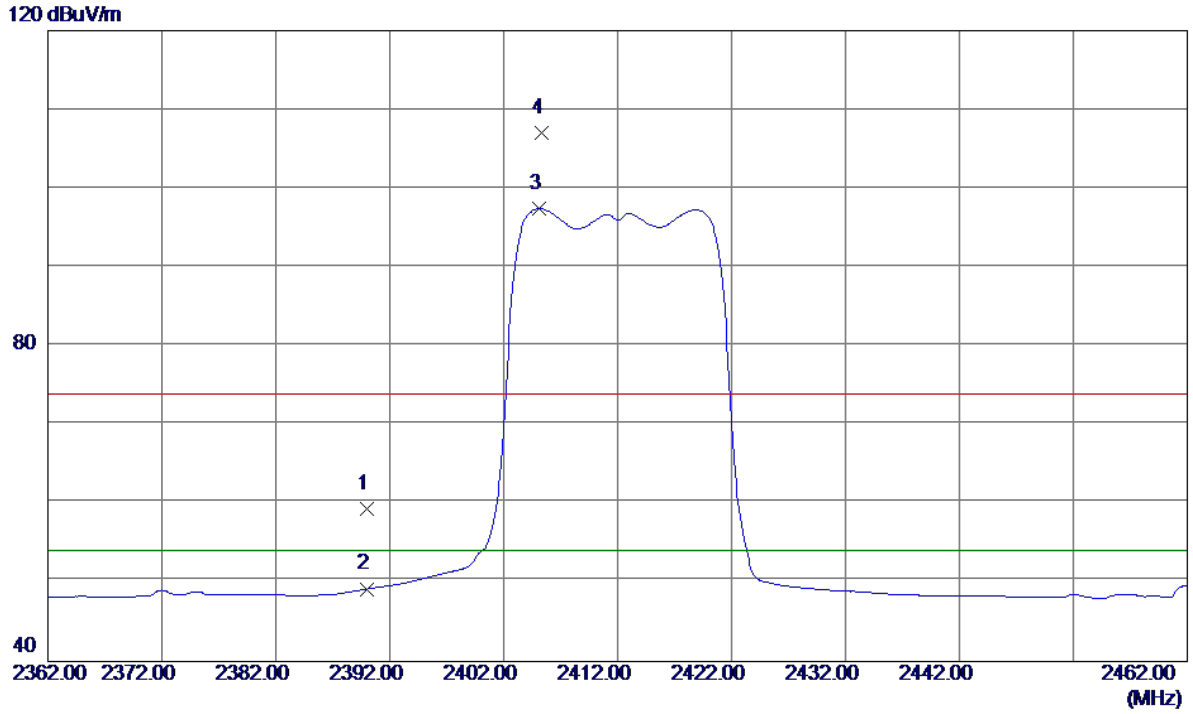
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.1720	33.25	6.32	39.57	74.00	-34.43	Peak	
2 *	4824.4210	22.06	6.32	28.38	54.00	-25.62	AVG	

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

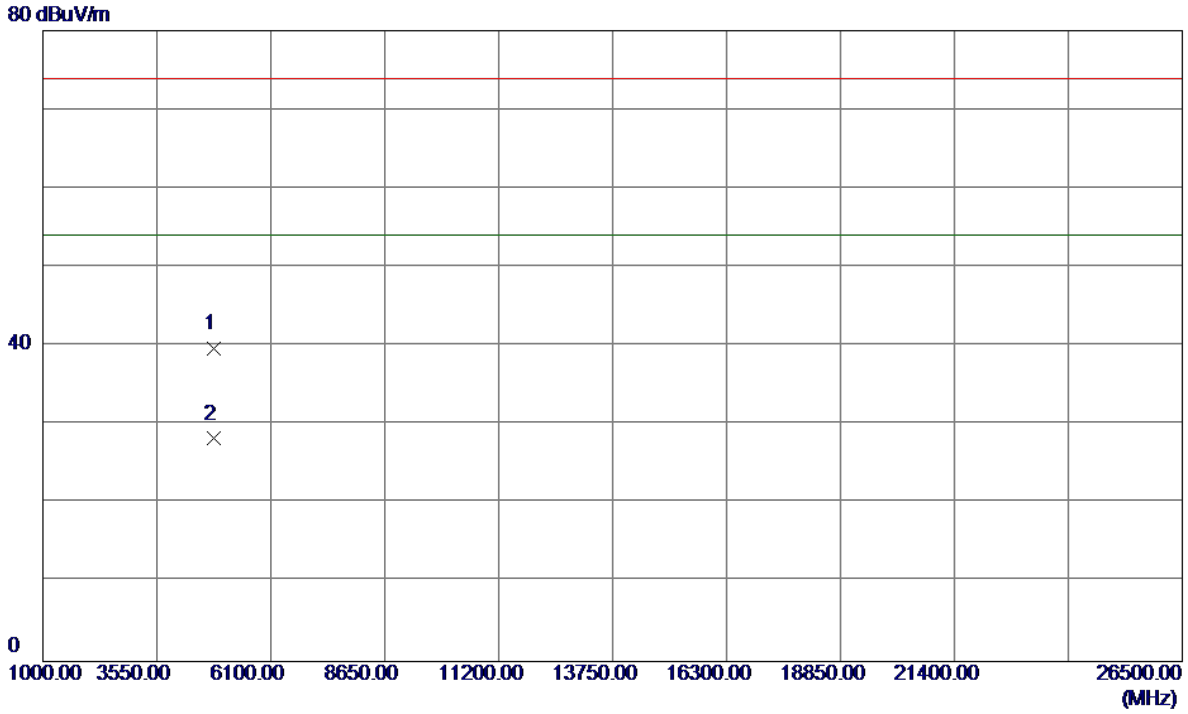
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	26.35	33.06	59.41	74.00	-14.59	Peak	
2	2390.0000	16.14	33.06	49.20	54.00	-4.80	AVG	
3 *	2405.1000	64.32	33.11	97.43	54.00	43.43	AVG	No Limit
4	2405.3000	73.98	33.11	107.09	74.00	33.09	Peak	No Limit

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

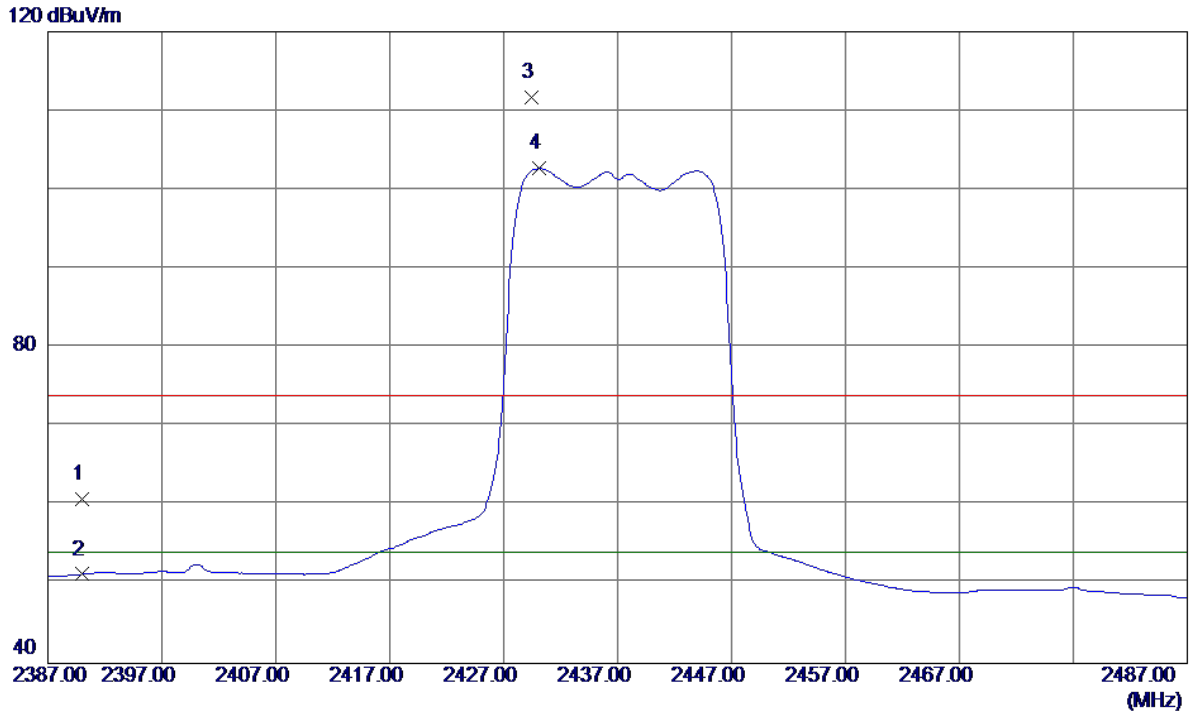
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.9100	33.44	6.32	39.76	74.00	-34.24	Peak	
2 *	4824.0160	21.92	6.32	28.24	54.00	-25.76	AVG	

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

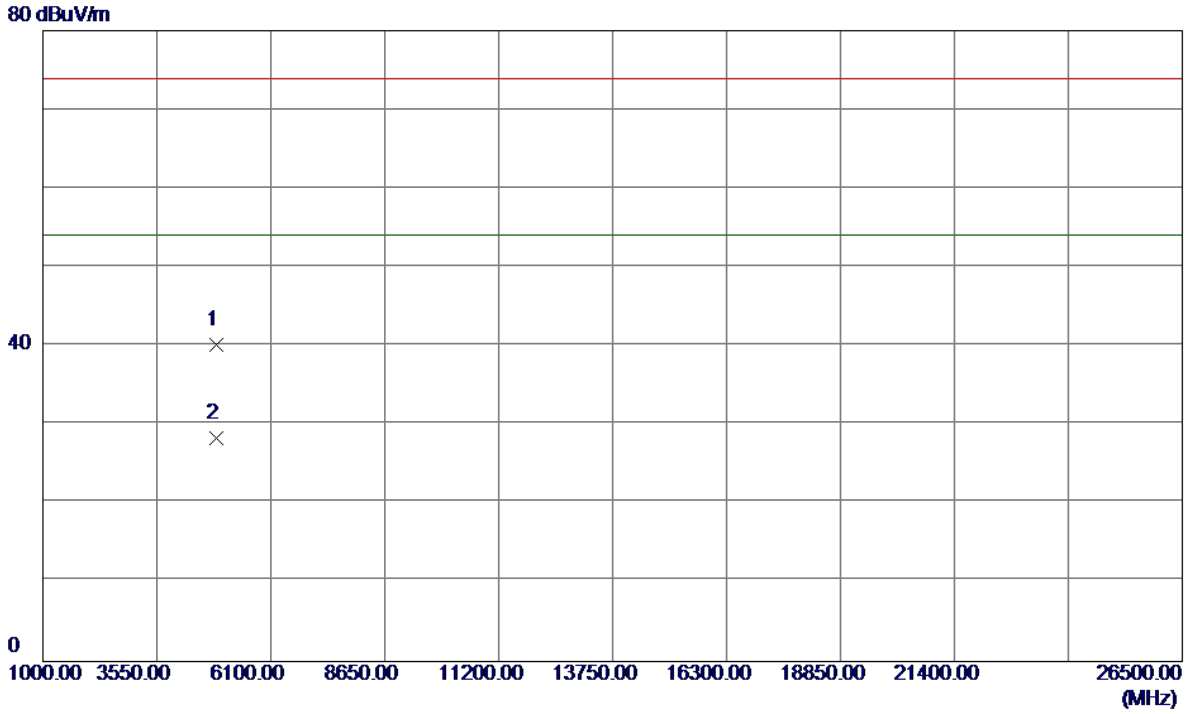
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.74	33.06	60.80	74.00	-13.20	Peak	
2	2390.0000	18.22	33.06	51.28	54.00	-2.72	AVG	
3	2429.4000	78.52	33.20	111.72	74.00	37.72	Peak	No Limit
4 *	2430.1000	69.45	33.21	102.66	54.00	48.66	AVG	No Limit

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

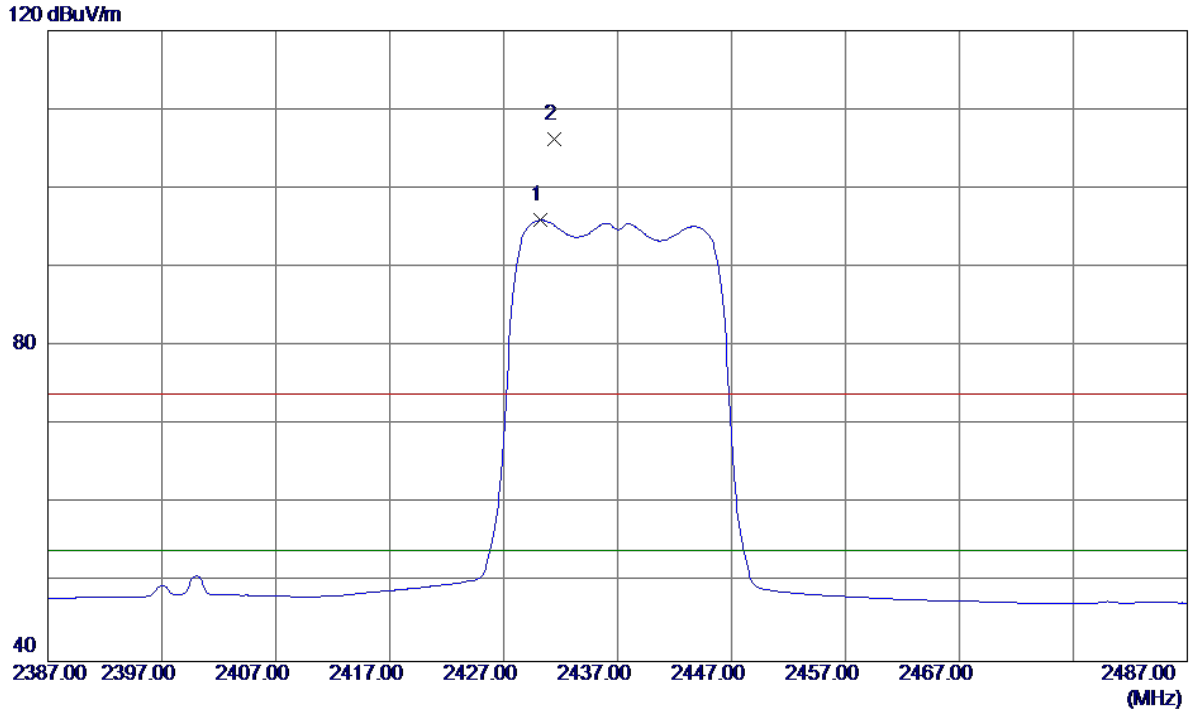
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0400	33.67	6.44	40.11	74.00	-33.89	Peak	
2 *	4874.2490	21.82	6.44	28.26	54.00	-25.74	AVG	

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

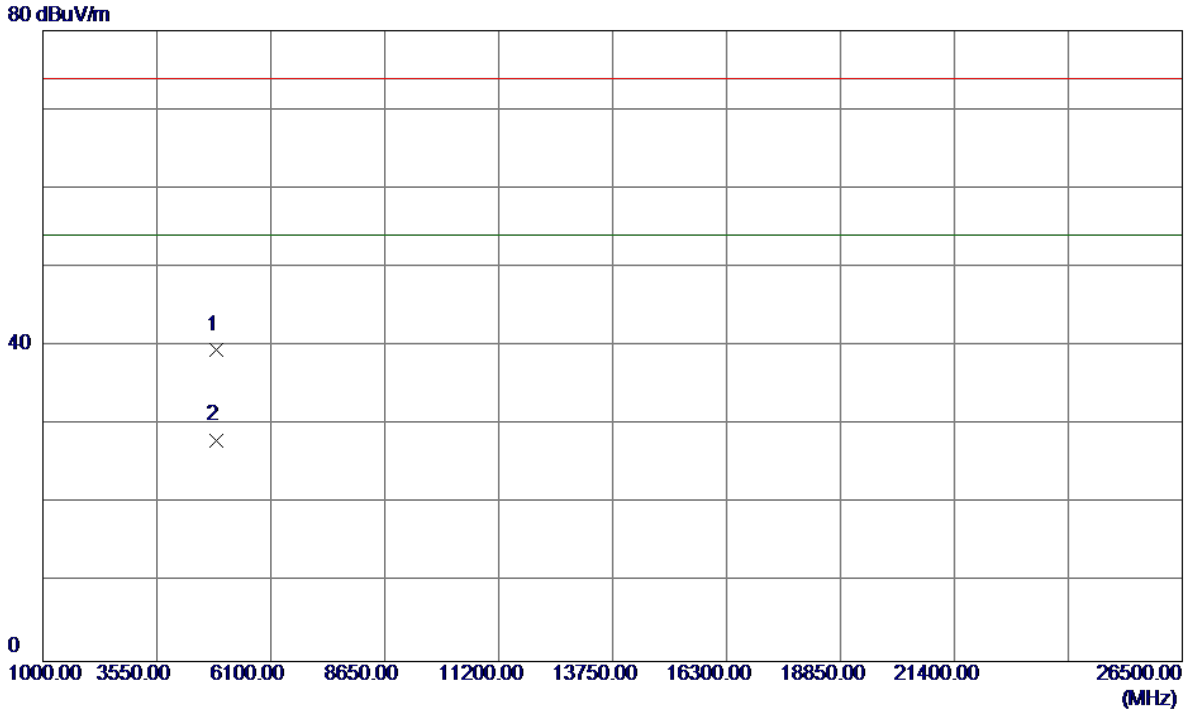
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2430.2000	62.74	33.21	95.95	54.00	41.95	AVG	No Limit
2	2431.4000	73.04	33.21	106.25	74.00	32.25	Peak	No Limit

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

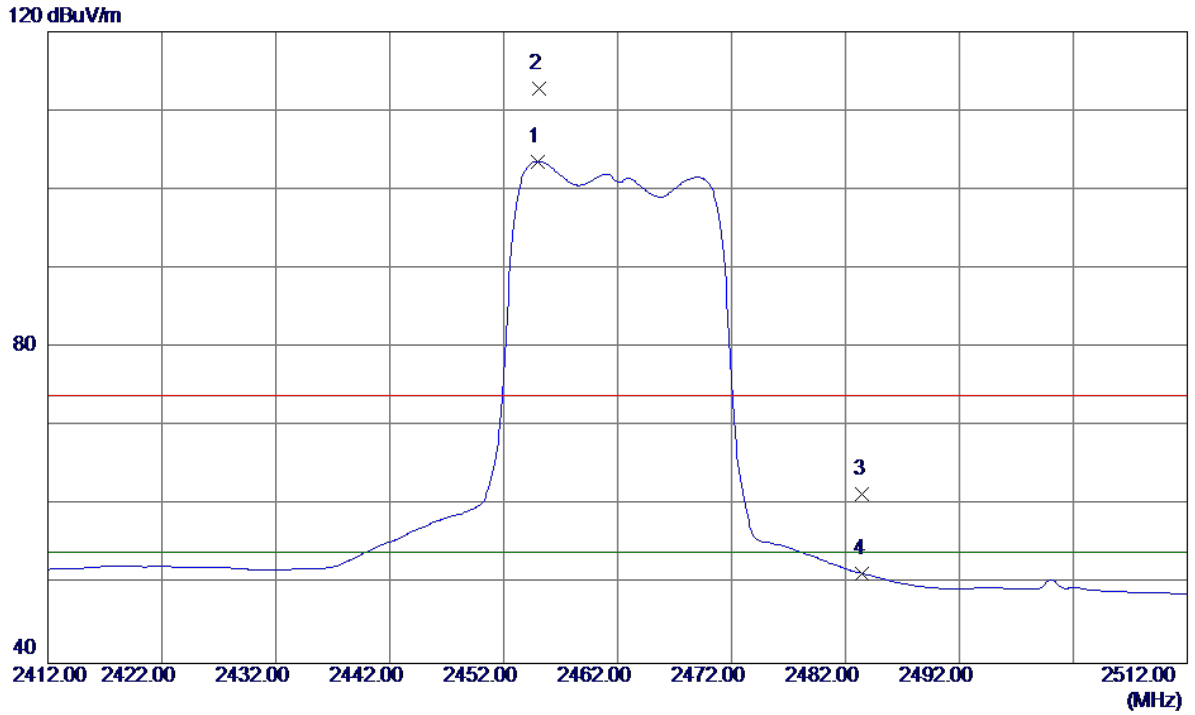
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0010	33.14	6.44	39.58	74.00	-34.42	Peak	
2 *	4874.0400	21.64	6.44	28.08	54.00	-25.92	AVG	

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

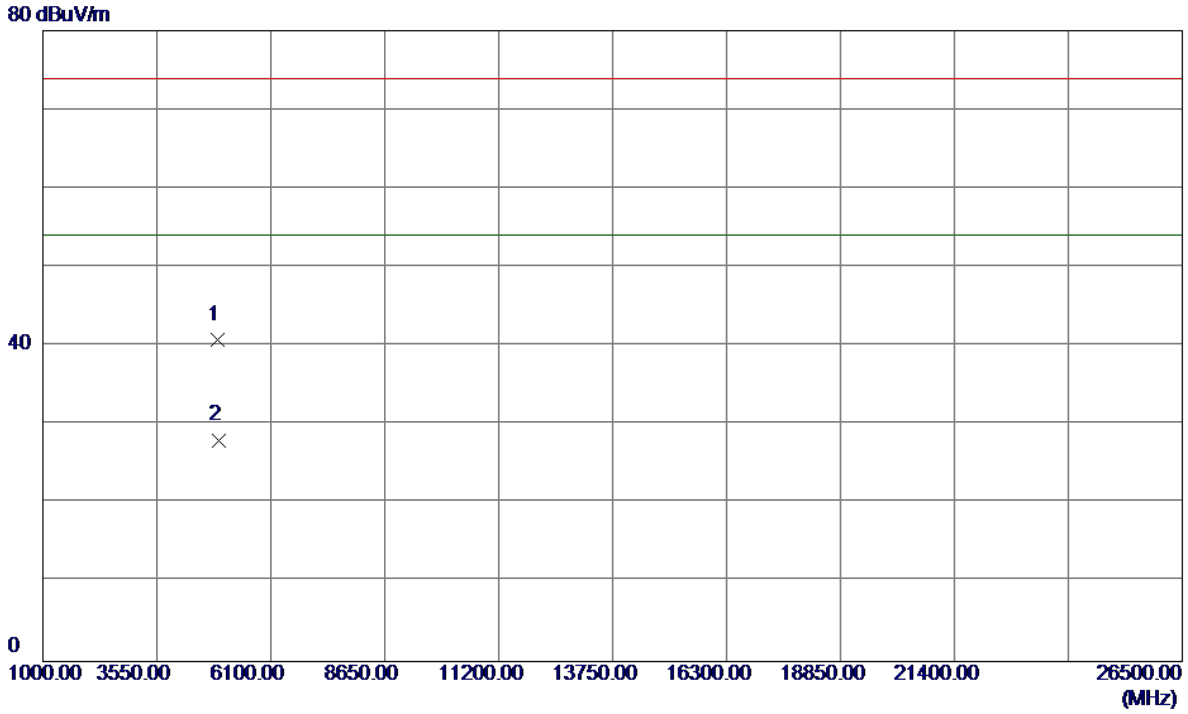
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2455.0000	70.25	33.30	103.55	54.00	49.55	AVG	No Limit
2	2455.1000	79.45	33.30	112.75	74.00	38.75	Peak	No Limit
3	2483.5000	28.05	33.41	61.46	74.00	-12.54	Peak	
4	2483.5000	17.99	33.41	51.40	54.00	-2.60	AVG	

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

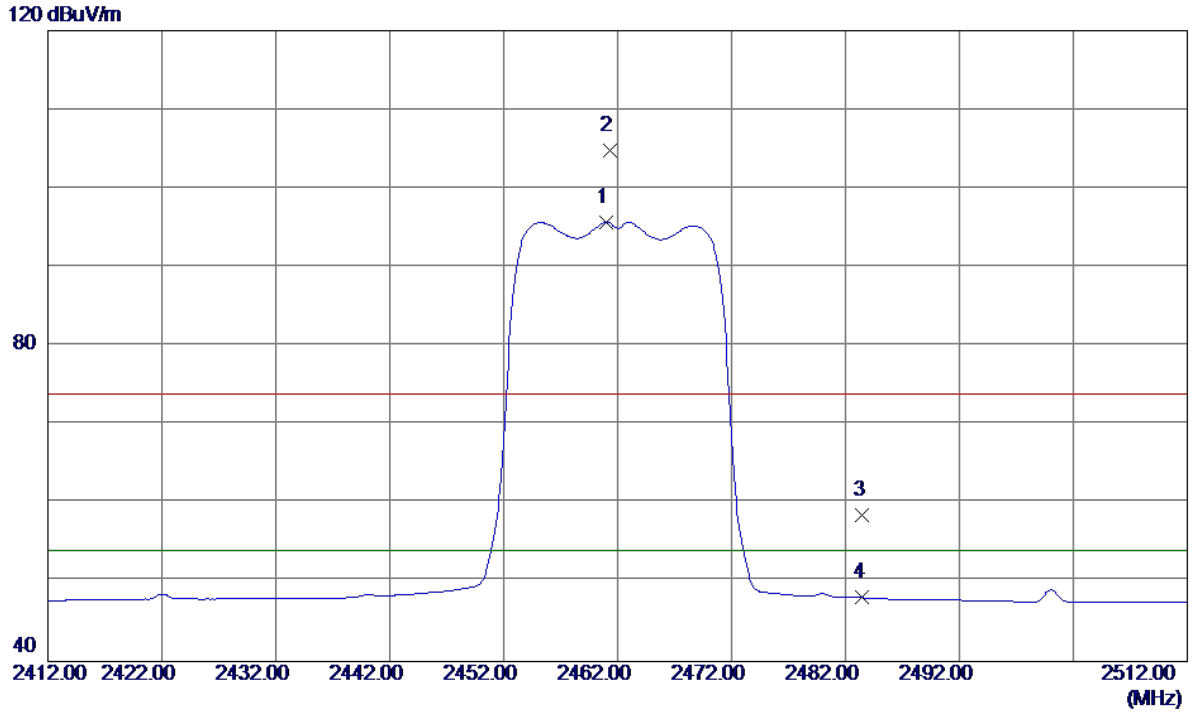
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924.1110	34.17	6.57	40.74	74.00	-33.26	Peak	
2 *	4924.3430	21.51	6.57	28.08	54.00	-25.92	AVG	

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

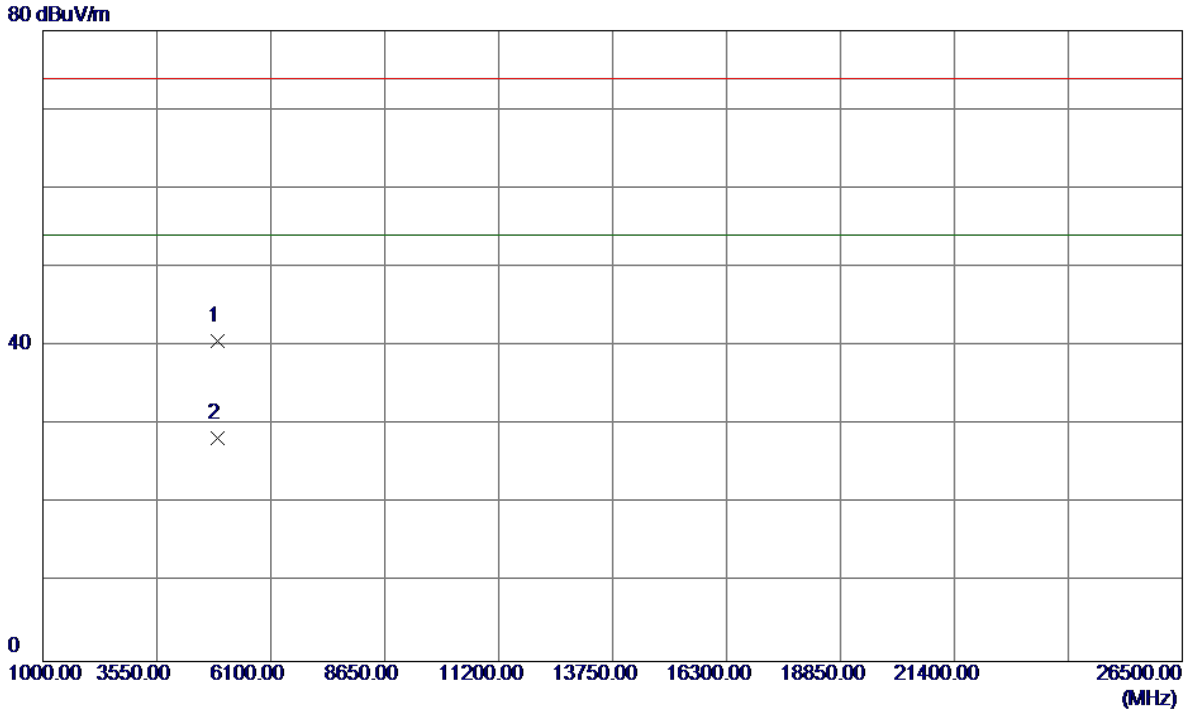
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461.0000	62.39	33.32	95.71	54.00	41.71	AVG	No Limit
2	2461.3000	71.55	33.32	104.87	74.00	30.87	Peak	No Limit
3	2483.5000	25.08	33.41	58.49	74.00	-15.51	Peak	
4	2483.5000	14.68	33.41	48.09	54.00	-5.91	AVG	

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

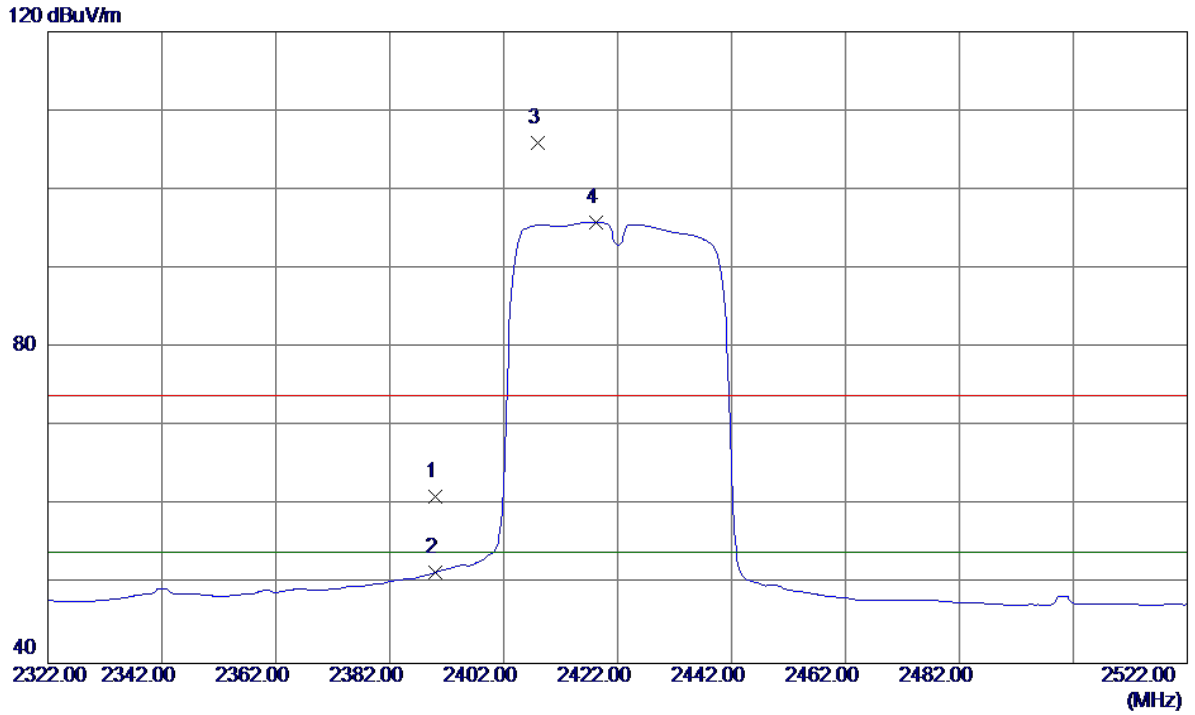
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4923.8969	34.13	6.57	40.70	74.00	-33.30	Peak	
2 *	4923.9520	21.81	6.57	28.38	54.00	-25.62	AVG	

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

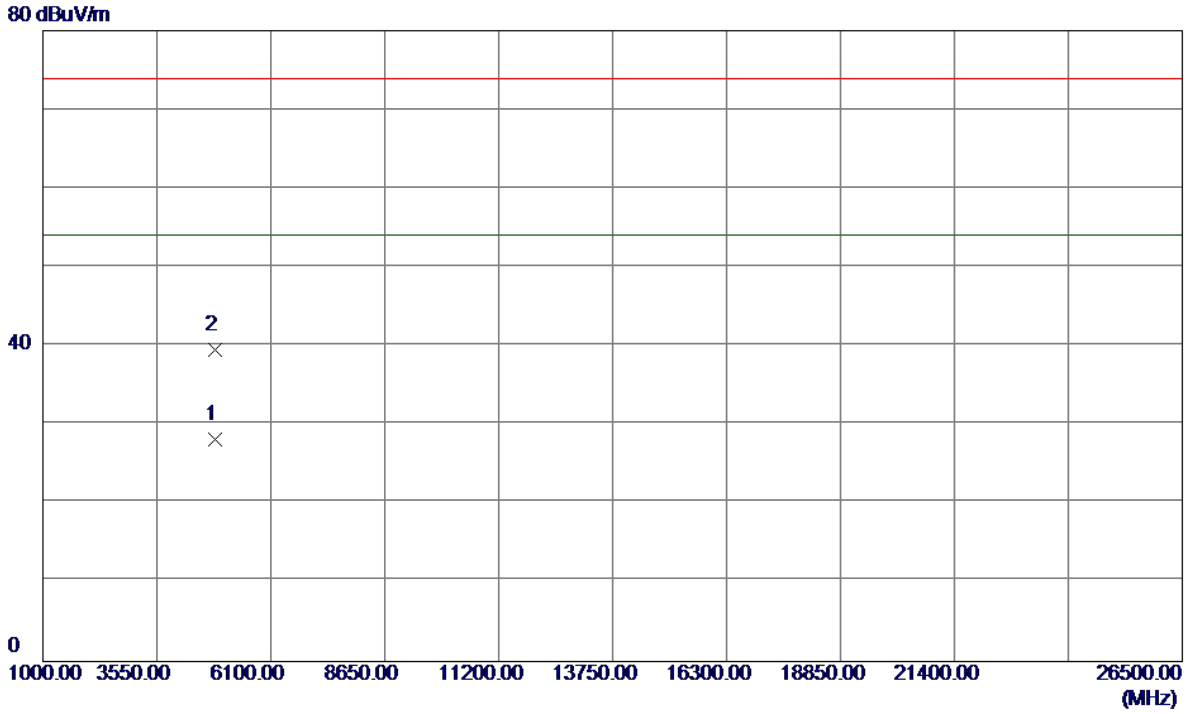
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.03	33.06	61.09	74.00	-12.91	Peak	
2	2390.0000	18.44	33.06	51.50	54.00	-2.50	AVG	
3	2408.0000	72.78	33.12	105.90	74.00	31.90	Peak	No Limit
4 *	2418.2000	62.71	33.16	95.87	54.00	41.87	AVG	No Limit

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

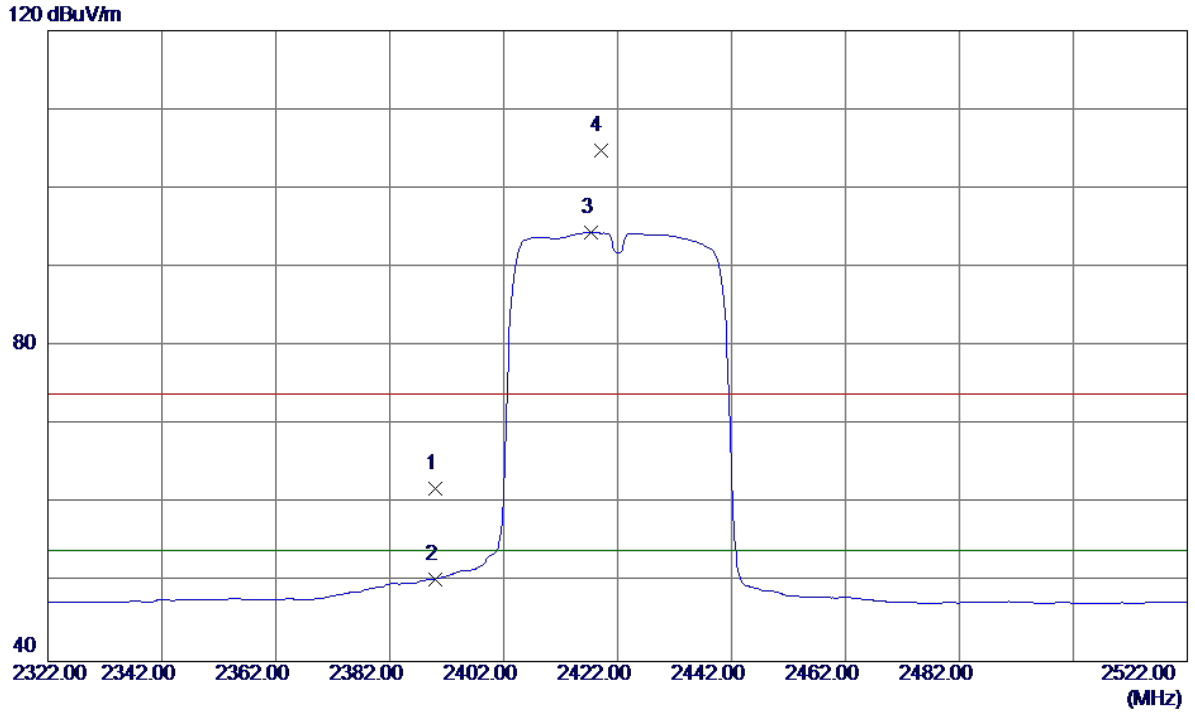
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4843.7519	21.86	6.37	28.23	54.00	-25.77	AVG	
2	4843.8590	33.12	6.37	39.49	74.00	-34.51	Peak	

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

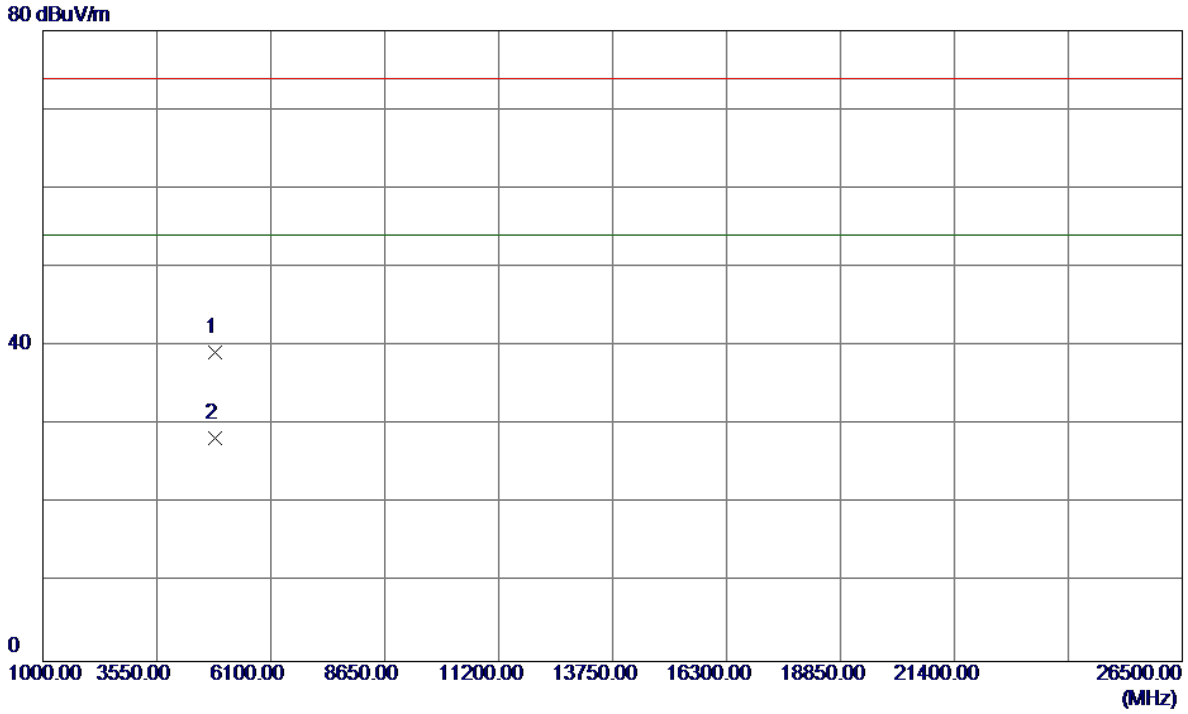
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.83	33.06	61.89	74.00	-12.11	Peak	
2	2390.0000	17.40	33.06	50.46	54.00	-3.54	AVG	
3 *	2417.4000	61.21	33.16	94.37	54.00	40.37	AVG	No Limit
4	2419.0000	71.56	33.17	104.73	74.00	30.73	Peak	No Limit

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

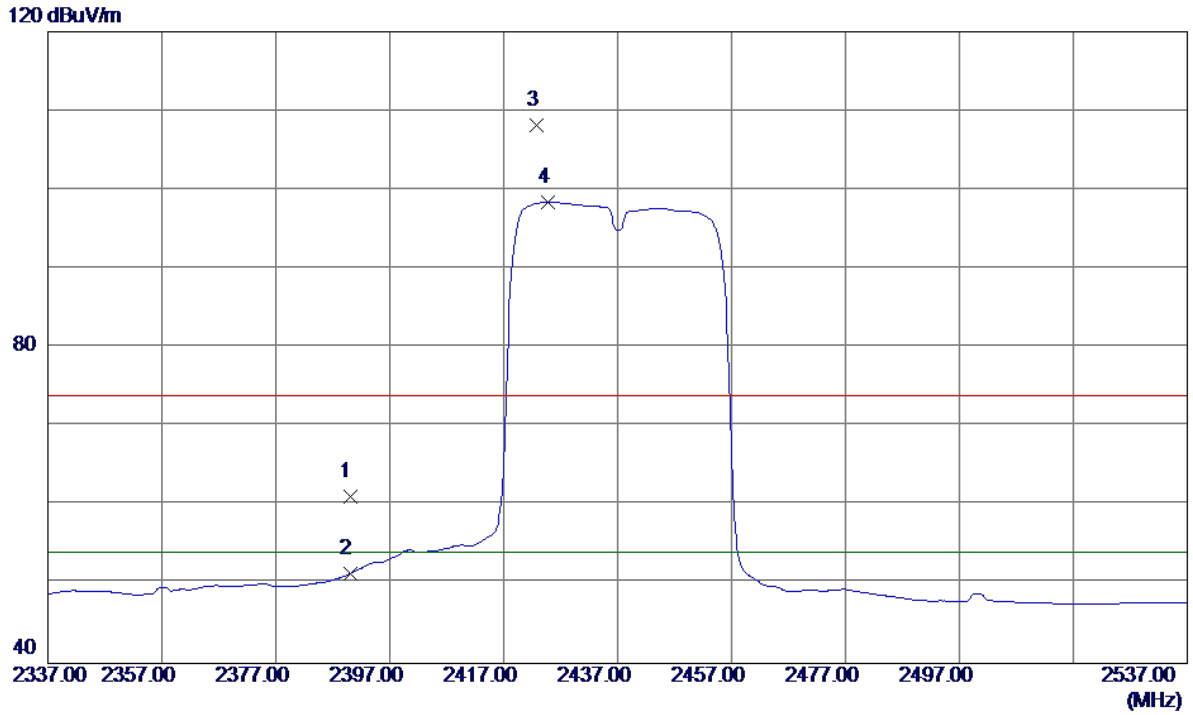
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4843.8490	32.84	6.37	39.21	74.00	-34.79	Peak	
2 *	4843.8530	21.93	6.37	28.30	54.00	-25.70	AVG	

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

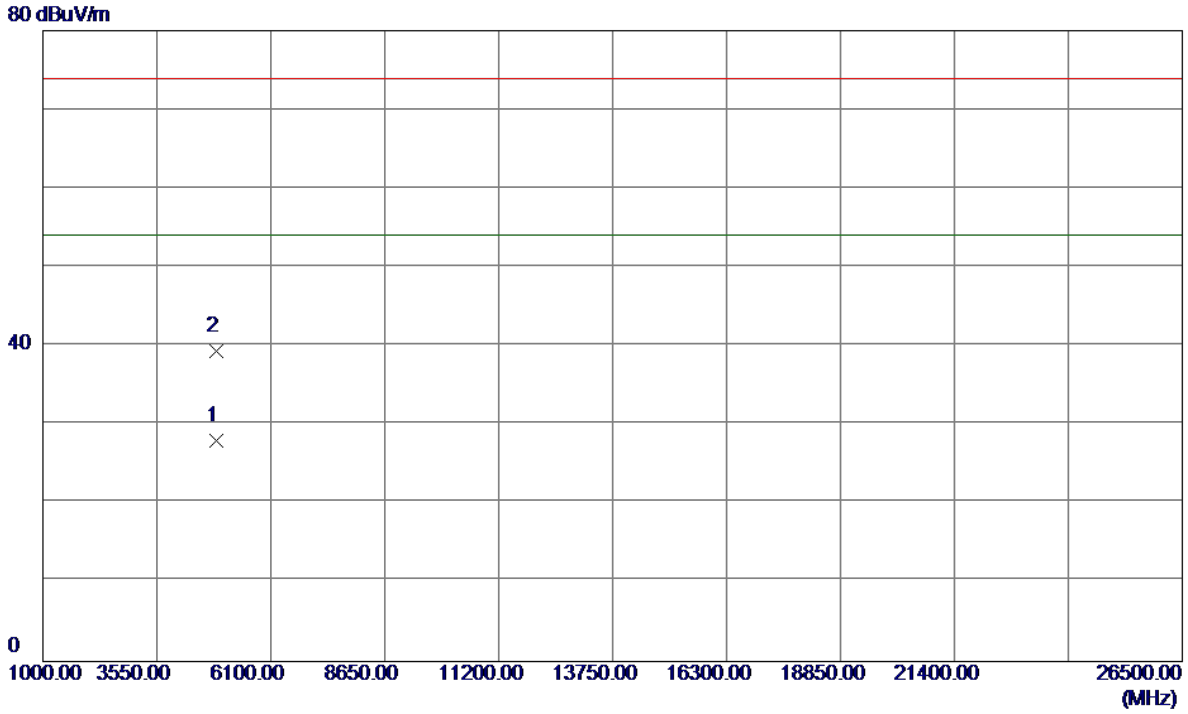
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.12	33.06	61.18	74.00	-12.82	Peak	
2	2390.0000	18.31	33.06	51.37	54.00	-2.63	AVG	
3	2422.8000	75.03	33.18	108.21	74.00	34.21	Peak	No Limit
4 *	2424.8000	65.24	33.19	98.43	54.00	44.43	AVG	No Limit

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

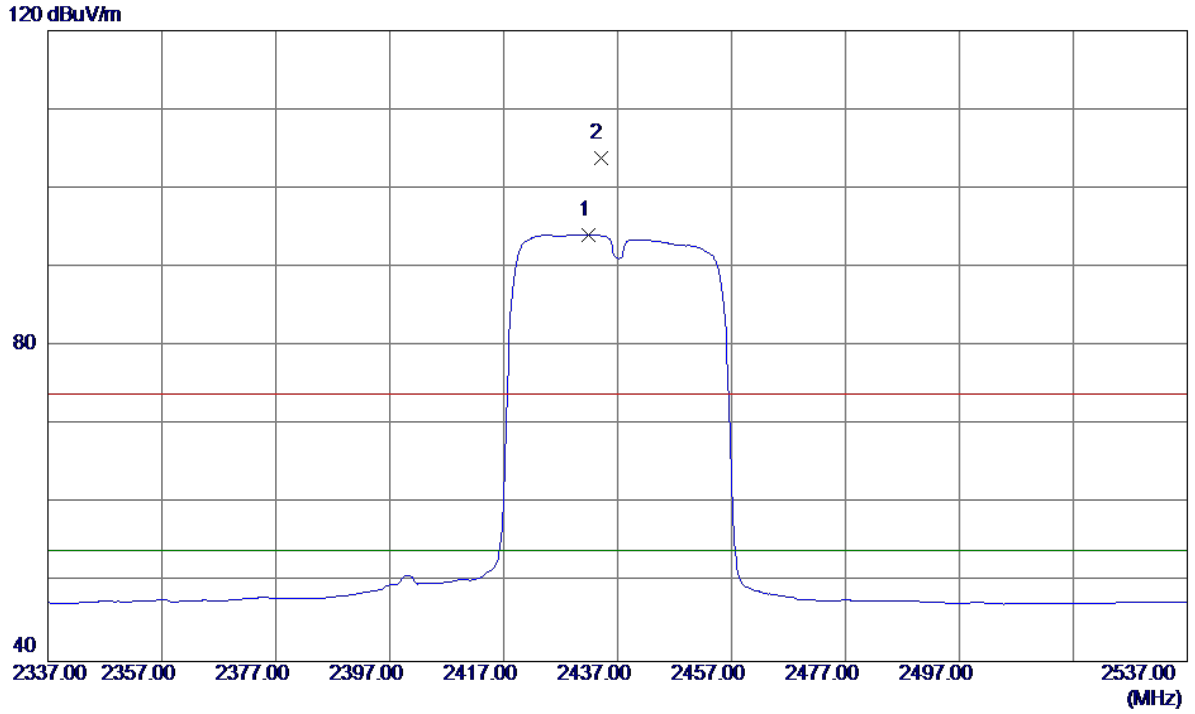
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.6549	21.59	6.44	28.03	54.00	-25.97	AVG	
2	4873.9300	32.95	6.44	39.39	74.00	-34.61	Peak	

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

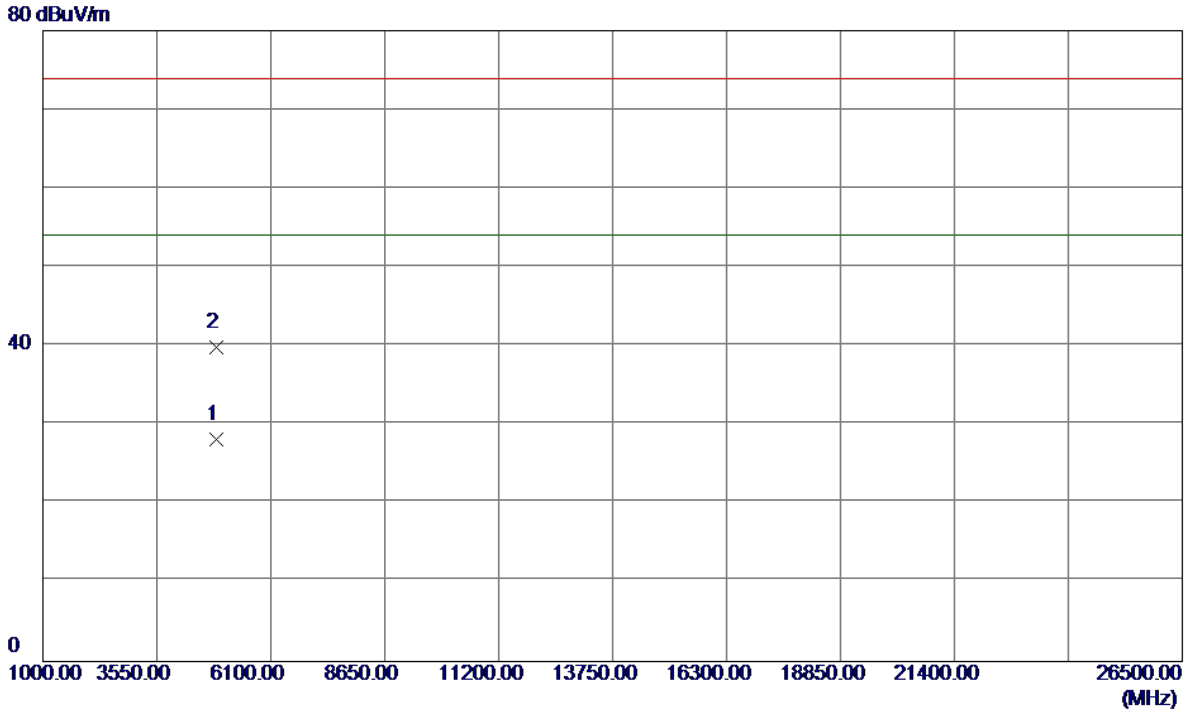
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2431.8000	60.95	33.21	94.16	54.00	40.16	AVG	No Limit
2	2434.0000	70.67	33.22	103.89	74.00	29.89	Peak	No Limit

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

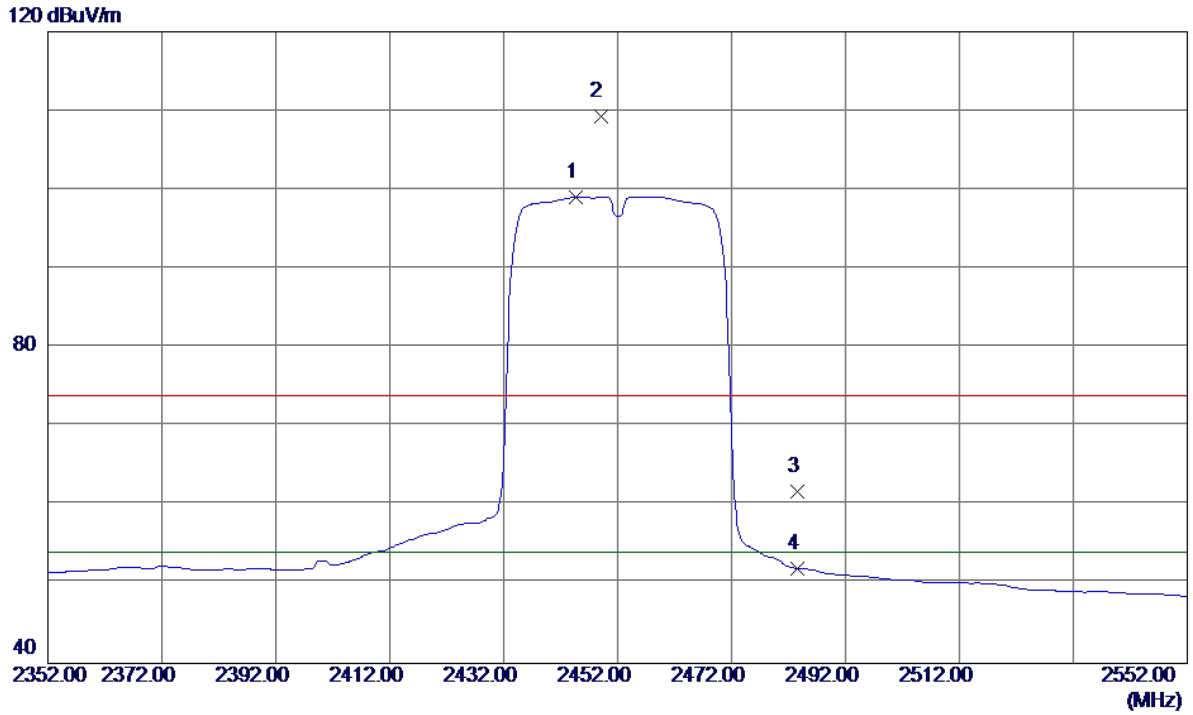
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.8050	21.78	6.44	28.22	54.00	-25.78	AVG	
2	4874.0730	33.37	6.44	39.81	74.00	-34.19	Peak	

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

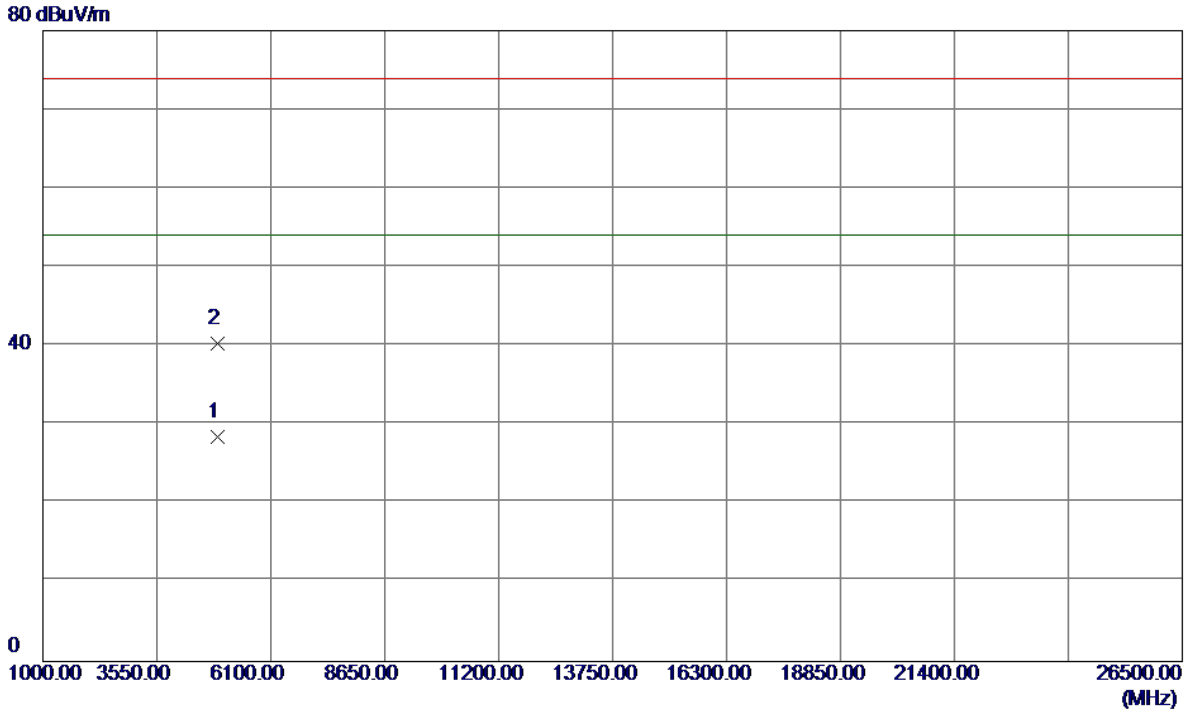
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2444.6000	65.79	33.26	99.05	54.00	45.05	AVG	No Limit
2	2449.0000	76.02	33.28	109.30	74.00	35.30	Peak	No Limit
3	2483.5000	28.30	33.41	61.71	74.00	-12.29	Peak	
4	2483.5000	18.60	33.41	52.01	54.00	-1.99	AVG	

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

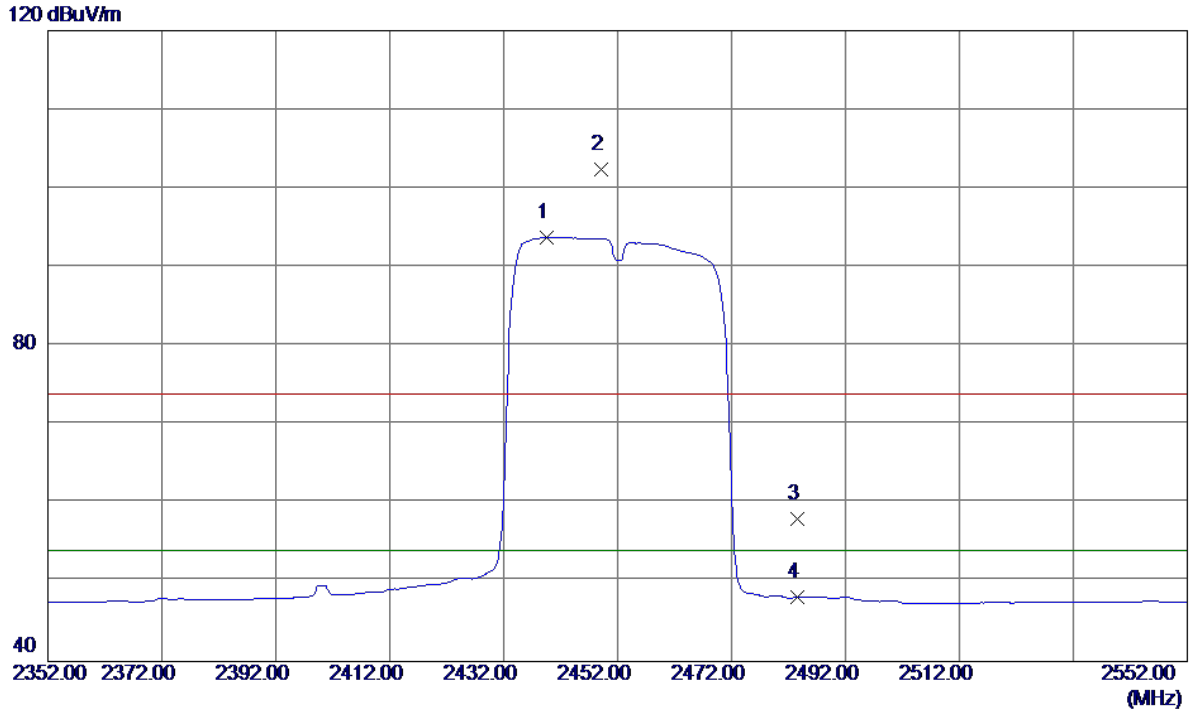
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4903.6220	21.99	6.52	28.51	54.00	-25.49	AVG	
2	4904.4070	33.79	6.52	40.31	74.00	-33.69	Peak	

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

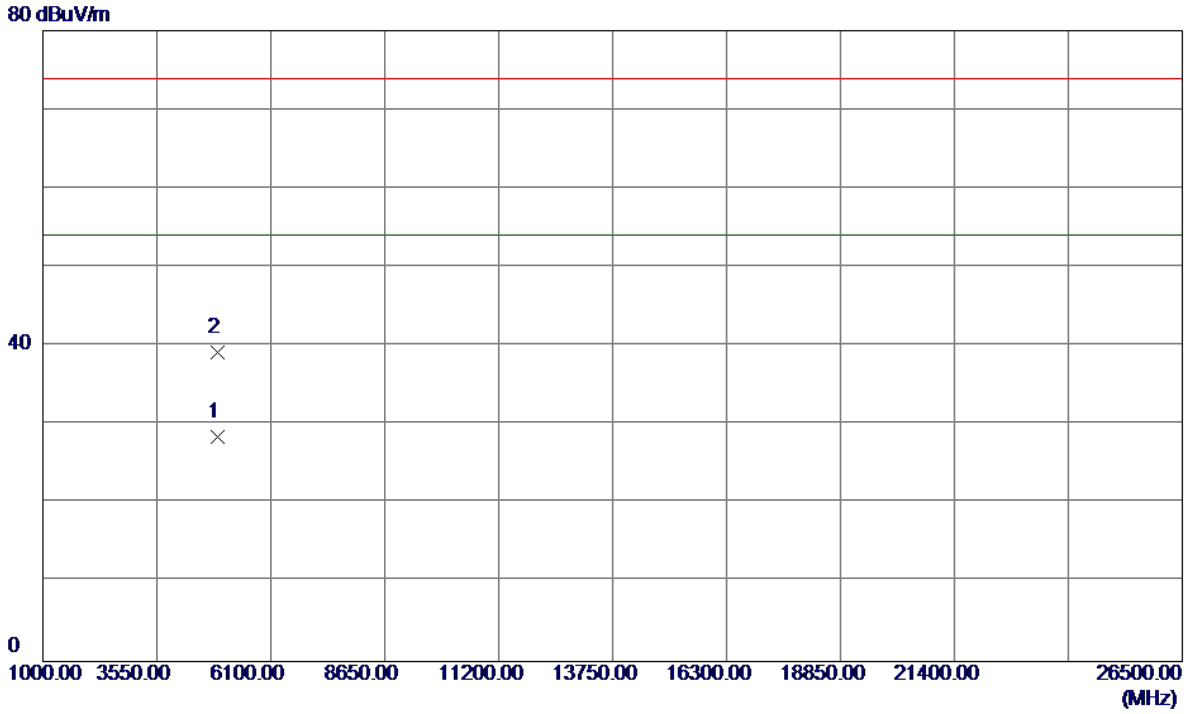
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2439.6000	60.55	33.24	93.79	54.00	39.79	AVG	No Limit
2	2449.2000	69.18	33.28	102.46	74.00	28.46	Peak	No Limit
3	2483.5000	24.64	33.41	58.05	74.00	-15.95	Peak	
4	2483.5000	14.68	33.41	48.09	54.00	-5.91	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 *	4904.0910	21.93	6.52	28.45	54.00	-25.55	AVG	
2	4904.4250	32.61	6.52	39.13	74.00	-34.87	Peak	

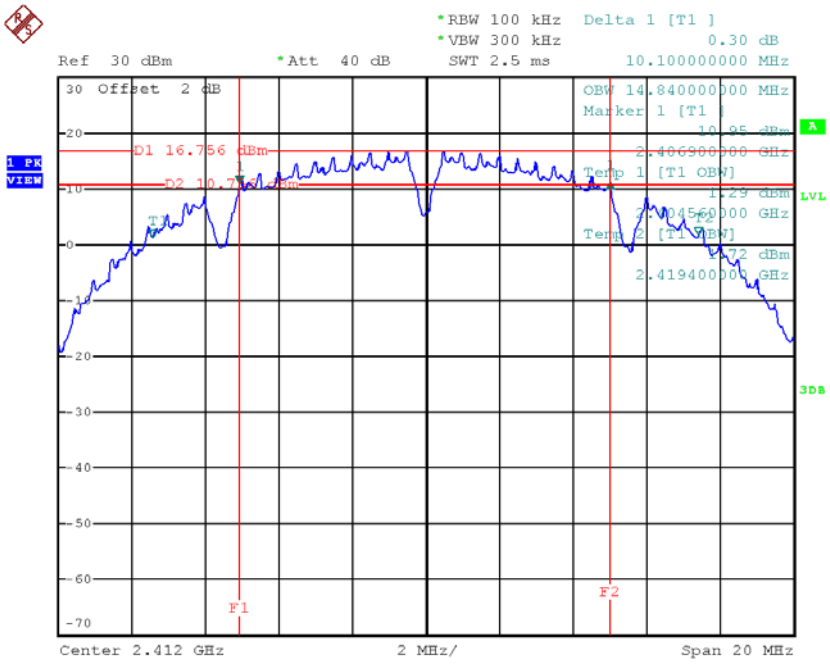
ATTACHMENT E - BANDWIDTH

Non-Beamforming

Test Mode : TX B Mode_CH01/06/11

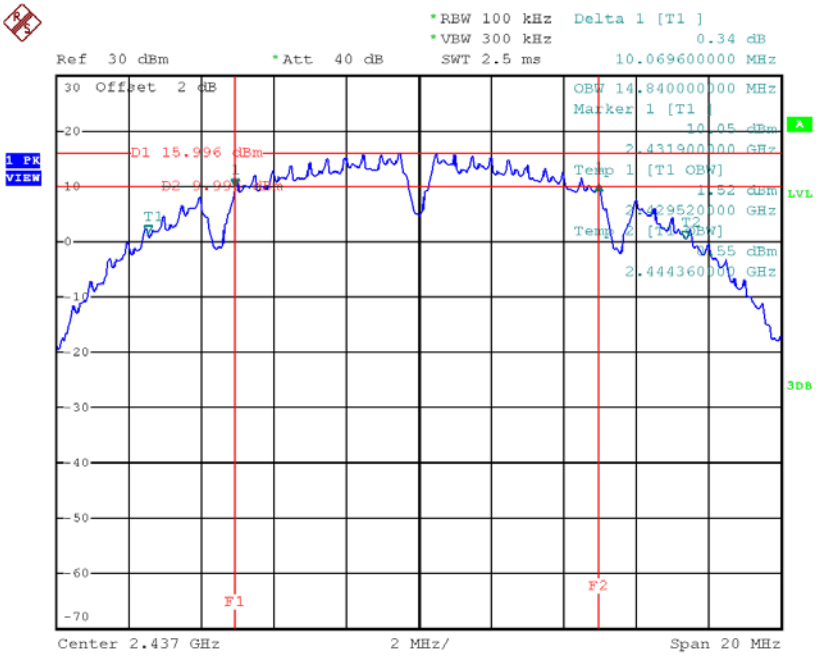
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	10.10	14.84	500	Complies
2437	10.07	14.84	500	Complies
2462	10.07	14.8	500	Complies

TX CH01



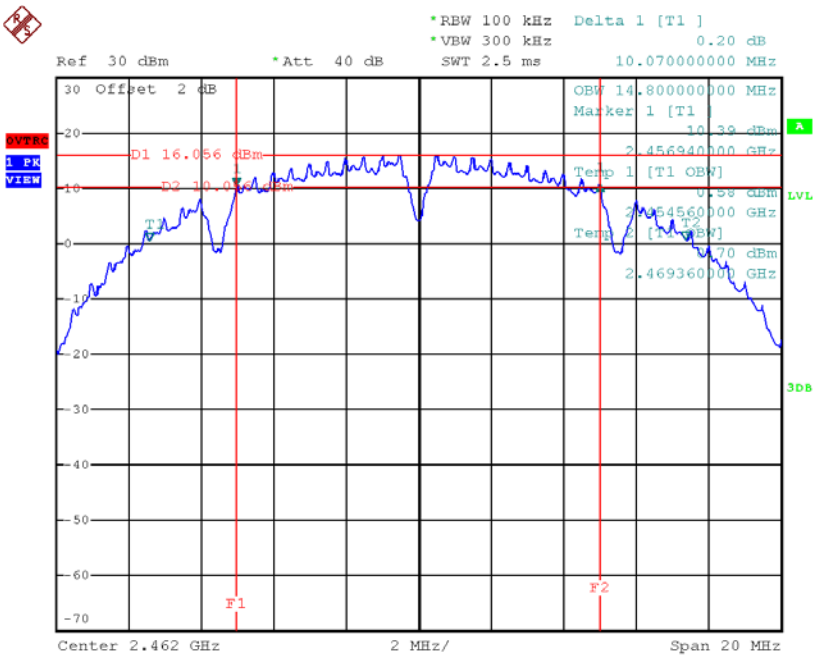
Date: 24.JUL.2017 09:52:20

TX CH06



Date: 24.JUL.2017 09:54:04

TX CH11

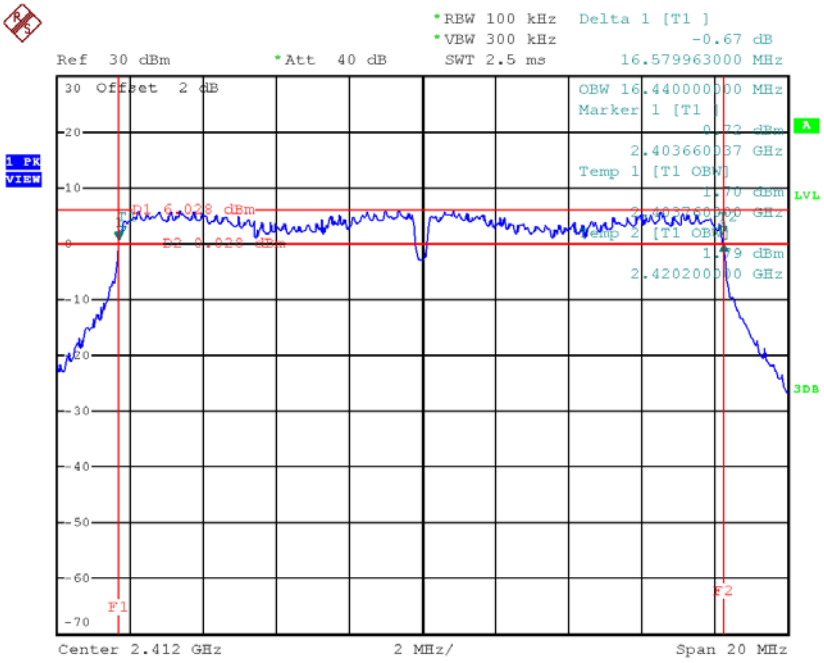


Date: 24.JUL.2017 10:05:58

Test Mode: TX G Mode_CH01/06/11

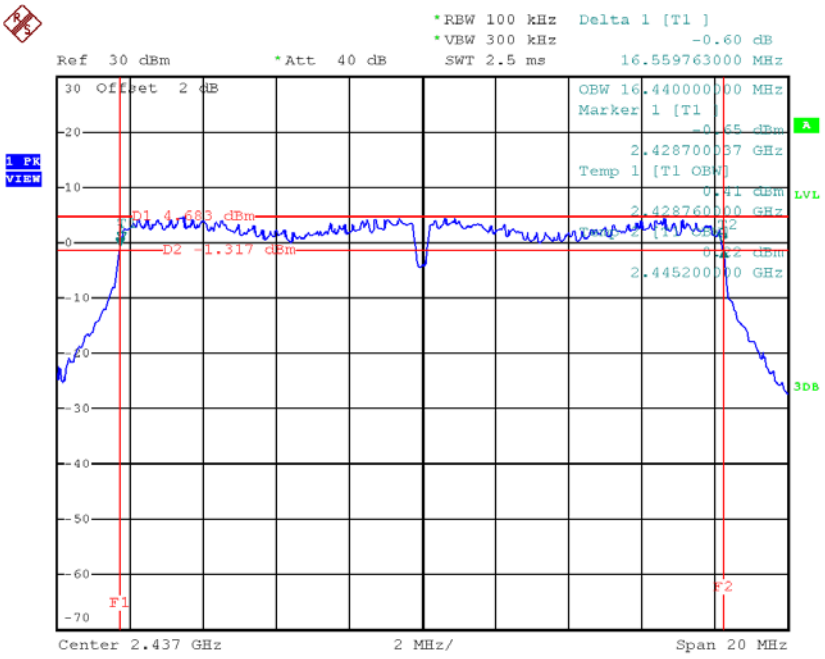
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.58	16.44	500	Complies
2437	16.56	16.44	500	Complies
2462	16.55	16.44	500	Complies

TX CH01



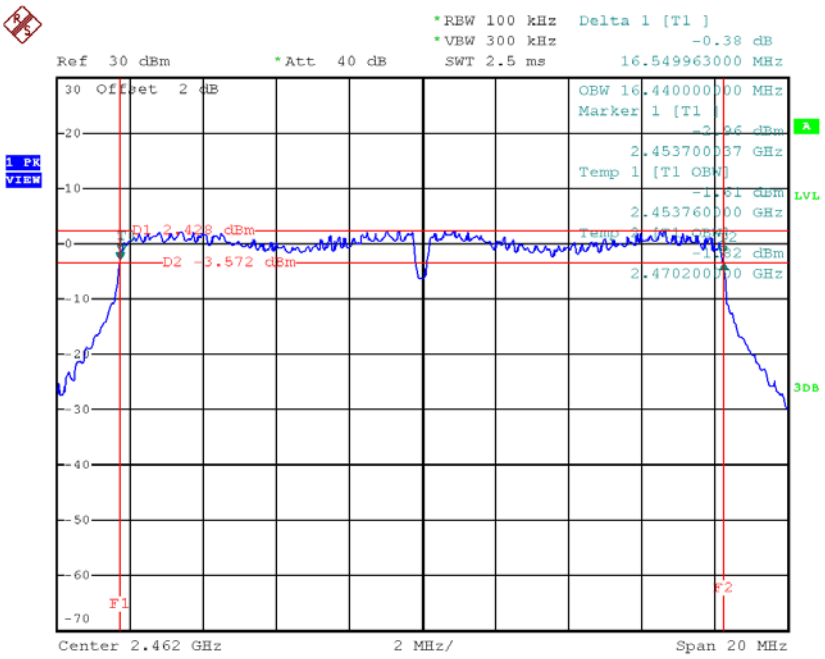
Date: 24.JUL.2017 10:07:22

TX CH06



Date: 24.JUL.2017 10:11:45

TX CH11

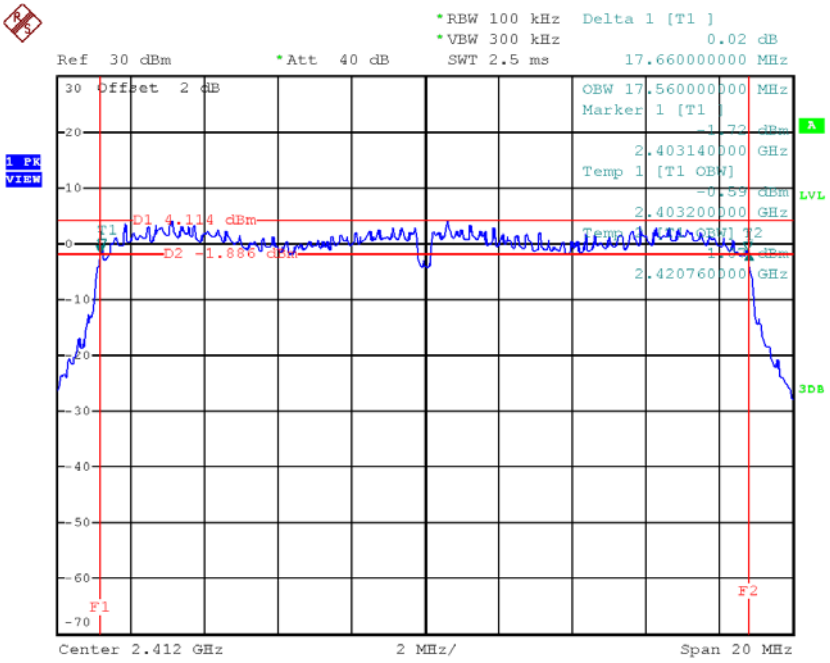


Date: 24.JUL.2017 10:12:53

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

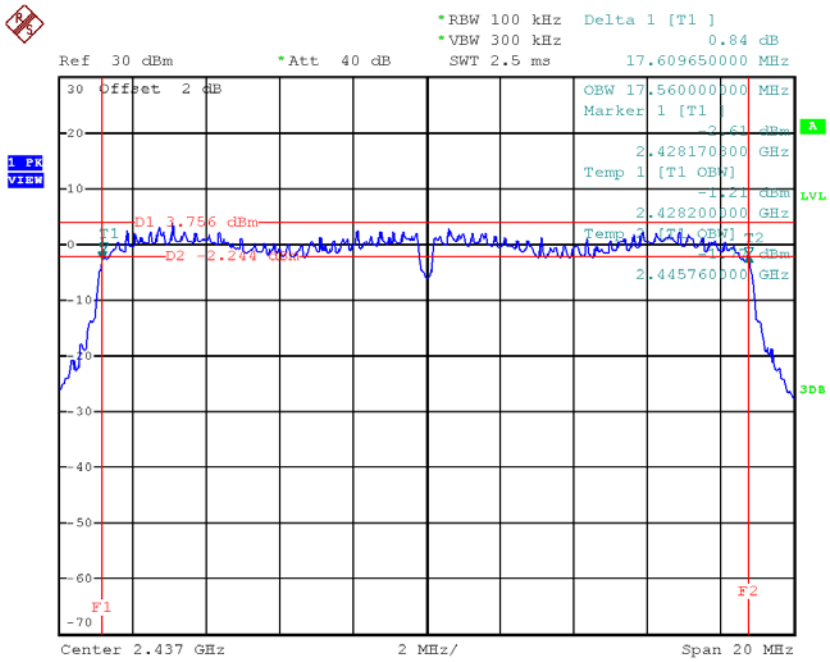
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.66	17.56	500	Complies
2437	17.61	17.56	500	Complies
2462	17.66	17.56	500	Complies

TX CH01



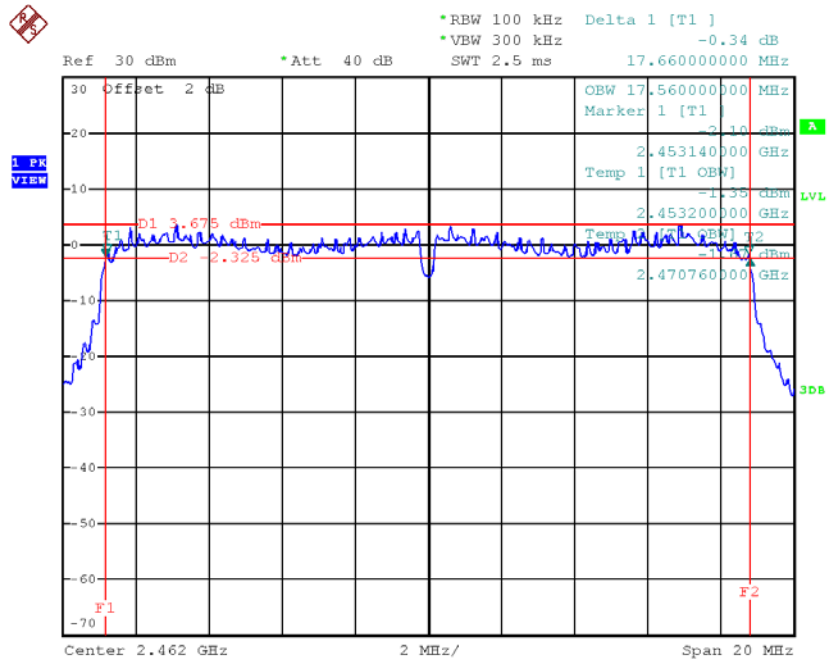
Date: 24.JUL.2017 10:14:31

TX CH06



Date: 24.JUL.2017 10:15:50

TX CH11

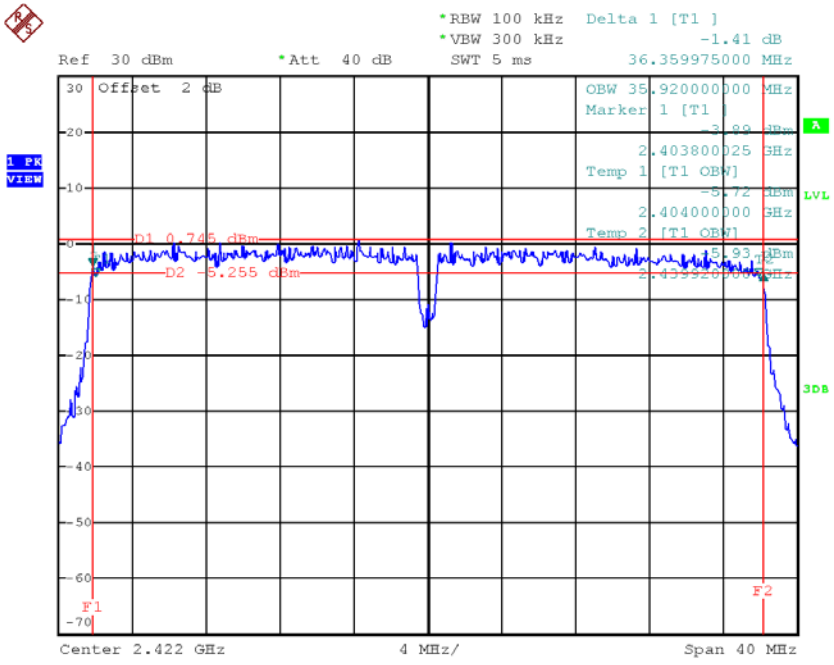


Date: 24.JUL.2017 10:17:03

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

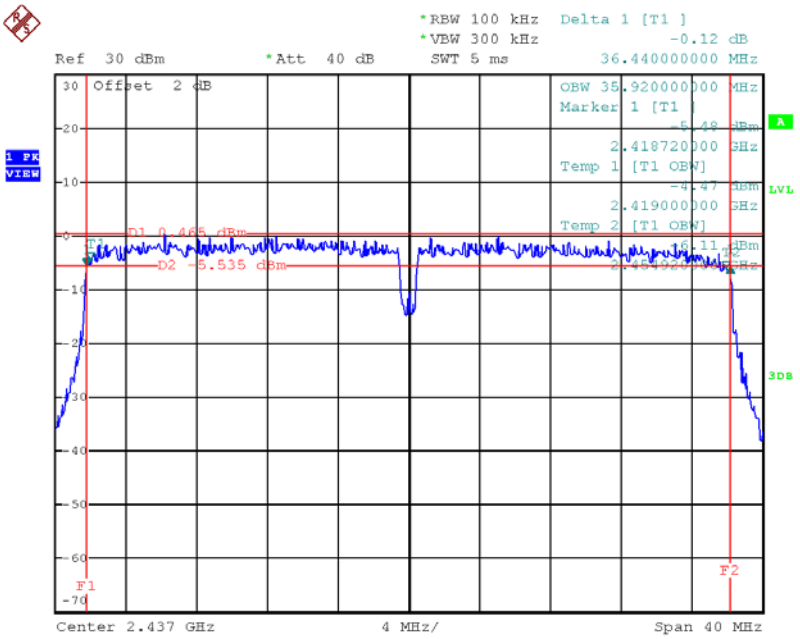
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	36.36	35.92	500	Complies
2437	36.44	35.92	500	Complies
2452	36.44	35.92	500	Complies

TX CH03



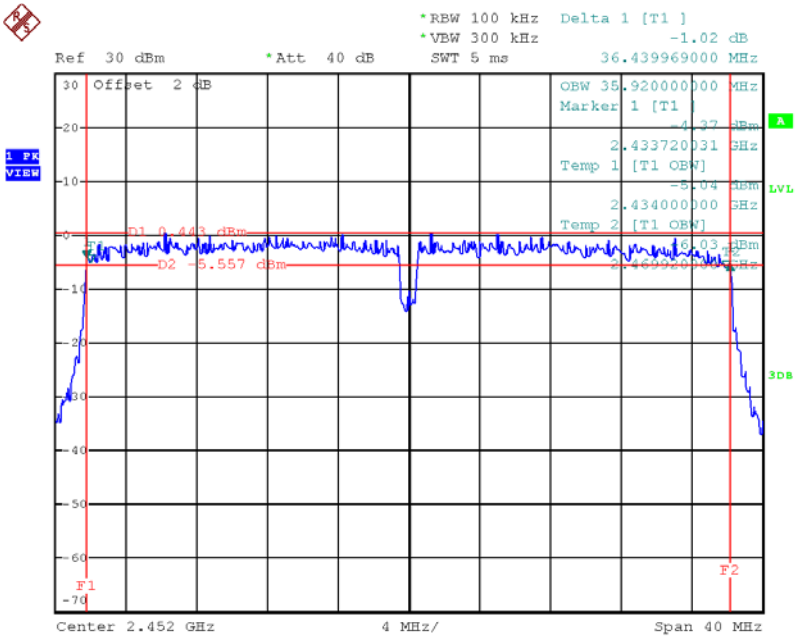
Date: 24.JUL.2017 10:22:28

TX CH06



Date: 24.JUL.2017 10:23:47

TX CH09



Date: 24.JUL.2017 10:25:04

ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER

Non-Beamforming

Test Mode :TX B Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	29.69	0.93	30.00	1.00	Complies
2437	29.26	0.84	30.00	1.00	Complies
2462	29.33	0.86	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	29.37	0.86	30.00	1.00	Complies
2437	29.78	0.95	30.00	1.00	Complies
2462	29.41	0.87	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	26.52	0.45	30.00	1.00	Complies
2437	26.48	0.44	30.00	1.00	Complies
2462	26.33	0.43	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	26.56	0.45	30.00	1.00	Complies
2437	26.26	0.42	30.00	1.00	Complies
2462	26.31	0.43	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	29.55	0.90	30.00	1.00	Complies
2437	29.38	0.87	30.00	1.00	Complies
2462	29.33	0.86	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	26.75	0.47	30.00	1.00	Complies
2437	26.57	0.45	30.00	1.00	Complies
2452	26.17	0.41	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	26.69	0.47	30.00	1.00	Complies
2437	26.36	0.43	30.00	1.00	Complies
2452	26.58	0.45	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	29.73	0.94	30.00	1.00	Complies
2437	29.48	0.89	30.00	1.00	Complies
2452	29.39	0.87	30.00	1.00	Complies

With Beamforming

Test Mode :TX N20 Mode_CH01/06/11_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	26.18	0.41	30.00	1.00	Complies
2437	26.20	0.42	30.00	1.00	Complies
2462	26.07	0.40	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	26.19	0.42	30.00	1.00	Complies
2437	26.03	0.40	30.00	1.00	Complies
2462	26.11	0.41	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	29.20	0.83	30.00	1.00	Complies
2437	29.13	0.82	30.00	1.00	Complies
2462	29.10	0.81	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	26.35	0.43	30.00	1.00	Complies
2437	26.21	0.42	30.00	1.00	Complies
2452	26.14	0.41	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	26.32	0.43	30.00	1.00	Complies
2437	26.18	0.41	30.00	1.00	Complies
2452	26.27	0.42	30.00	1.00	Complies

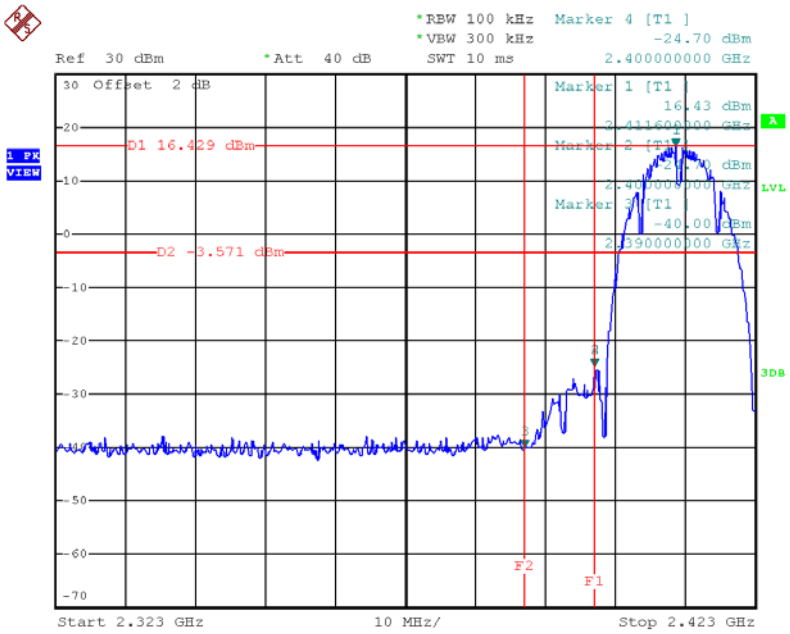
Test Mode :TX N40 Mode_CH03/06/09_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	29.35	0.86	30.00	1.00	Complies
2437	29.21	0.83	30.00	1.00	Complies
2452	29.22	0.83	30.00	1.00	Complies

ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

Non-Beamforming

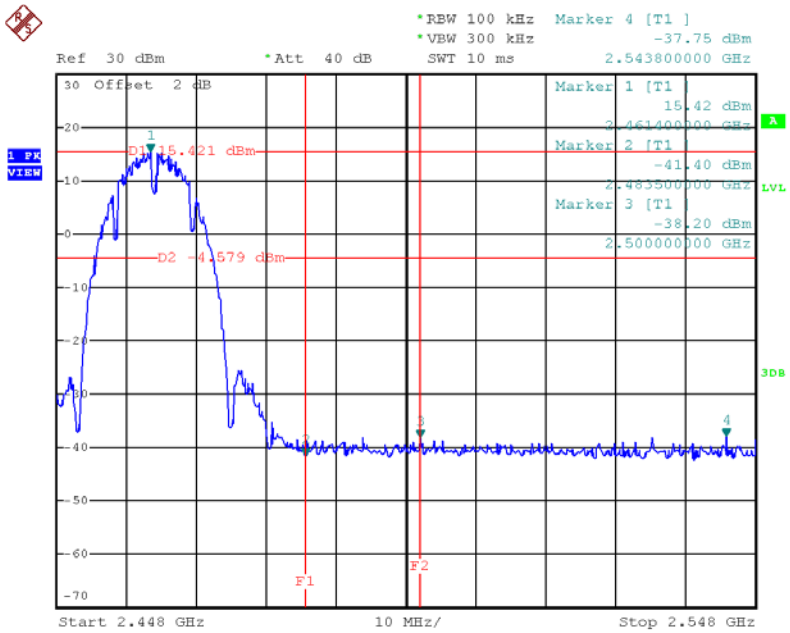
Test Mode :	TX B Mode

TX B mode CH01



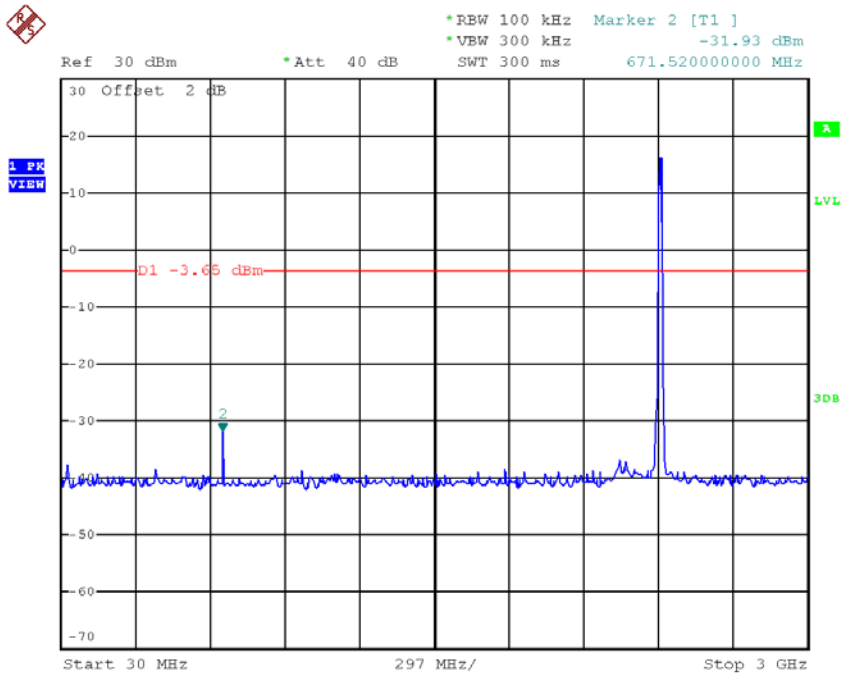
Date: 24.JUL.2017 09:52:55

TX B mode CH11

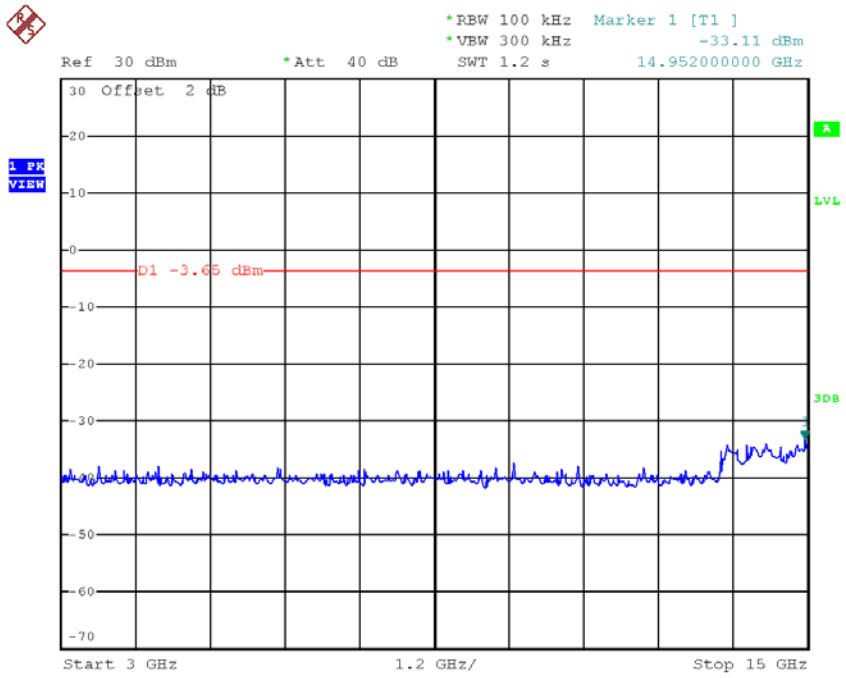


Date: 24.JUL.2017 10:06:32

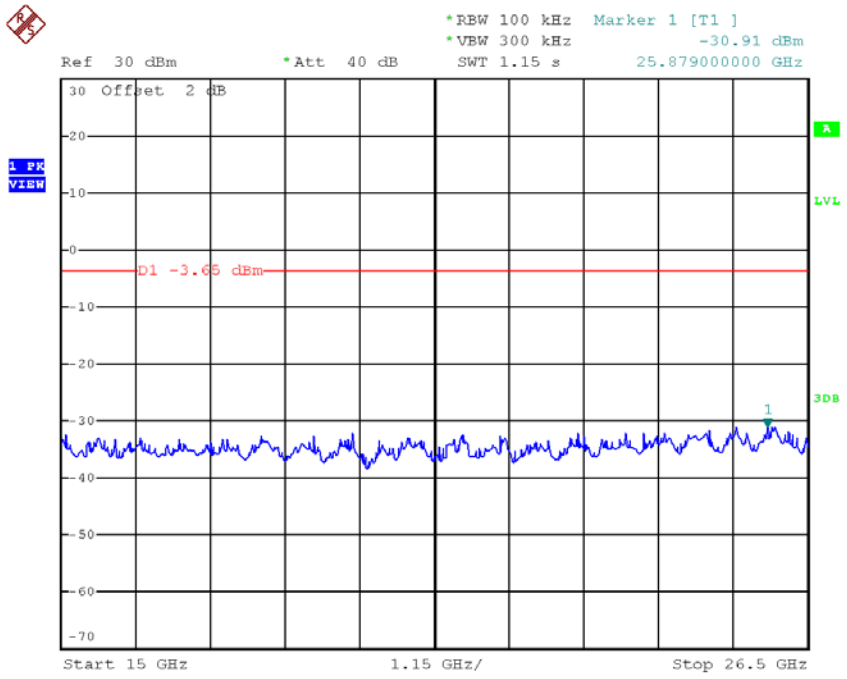
TX B mode CH01 (10 Harmonic of the frequency)



Date: 24.JUL.2017 09:52:34

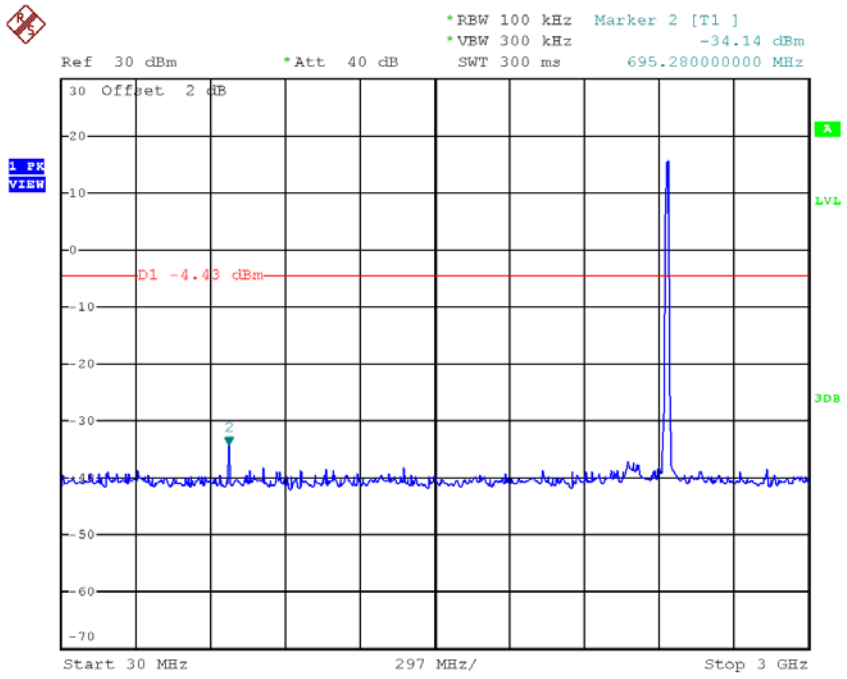


Date: 24.JUL.2017 09:52:41

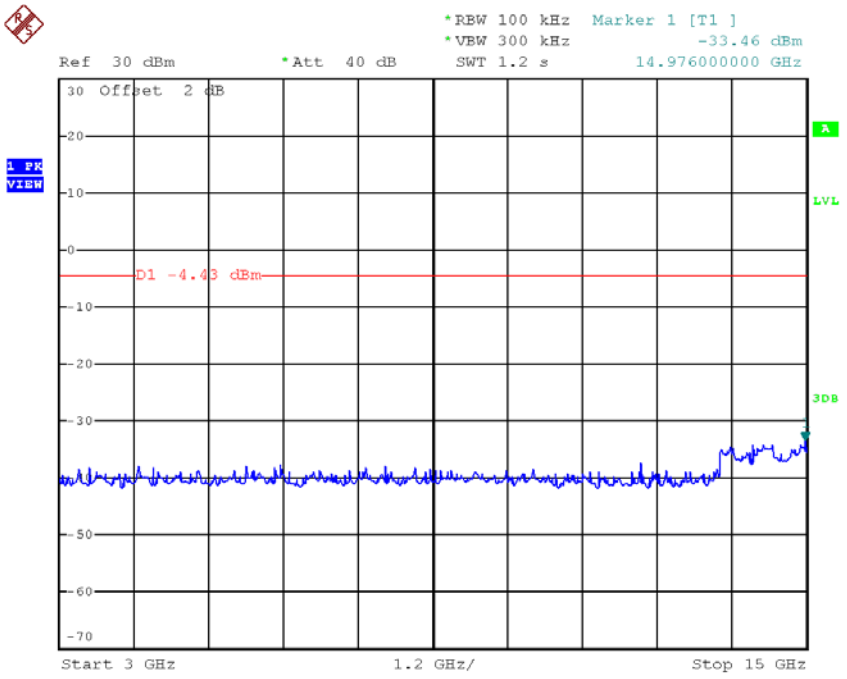


Date: 24.JUL.2017 09:52:48

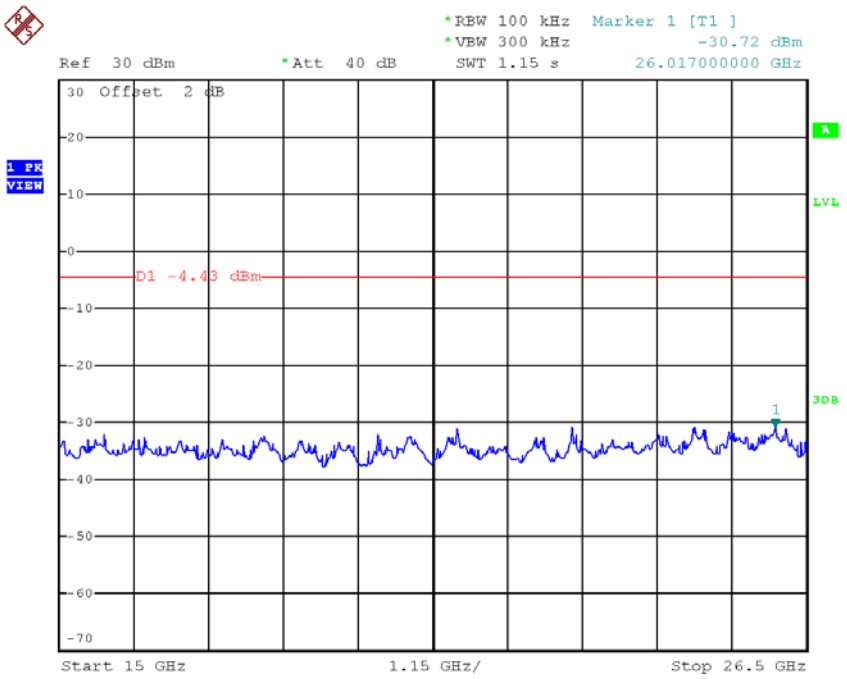
TX B mode CH06 (10 Harmonic of the frequency)



Date: 24.JUL.2017 09:54:18

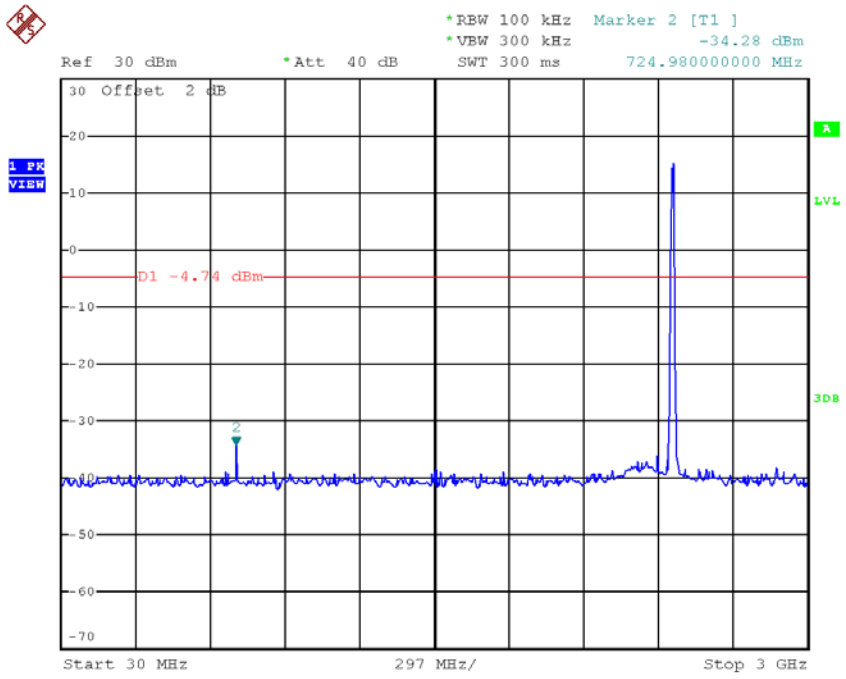


Date: 24.JUL.2017 09:54:25

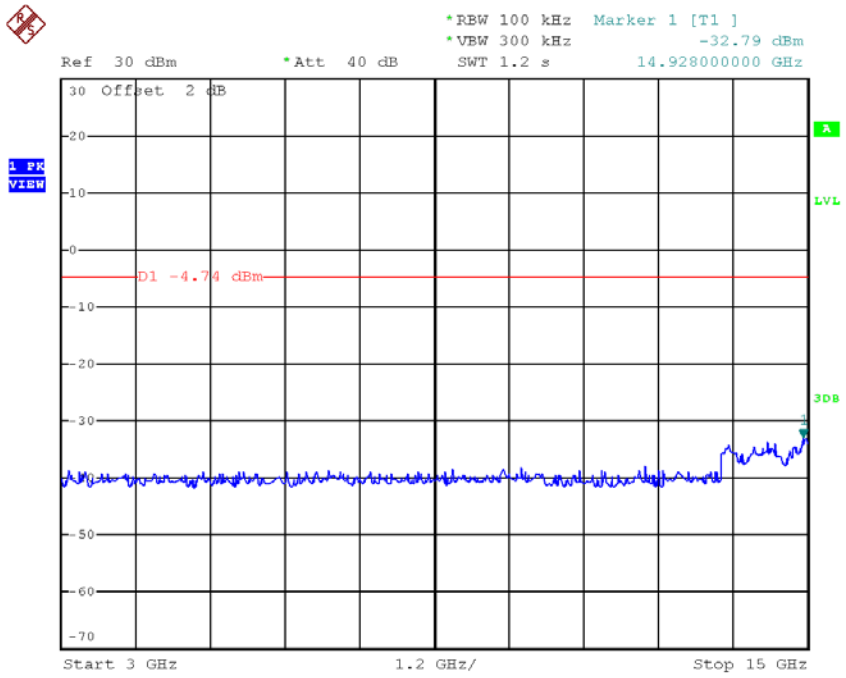


Date: 24.JUL.2017 09:54:32

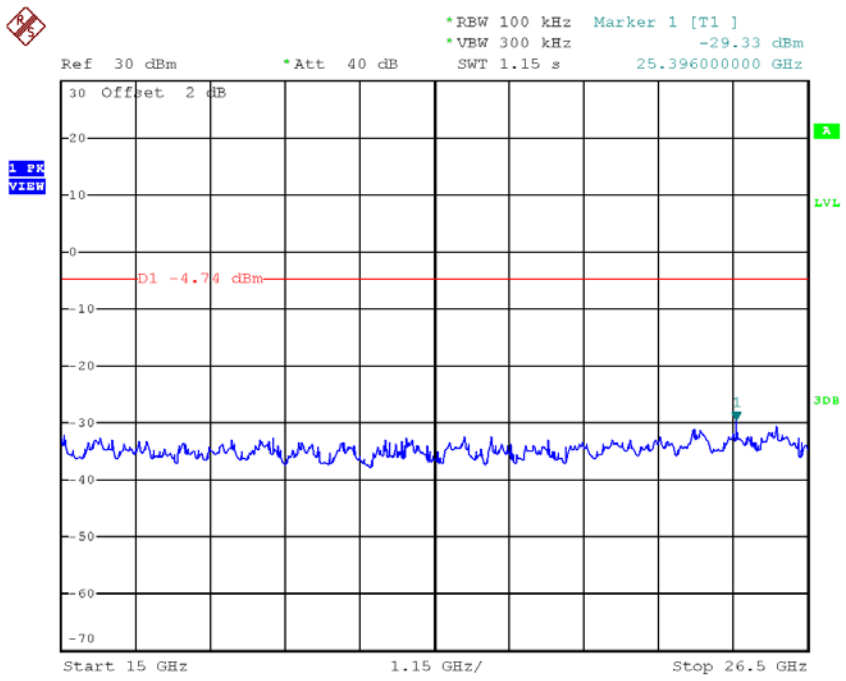
TX B mode CH11 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:06:11



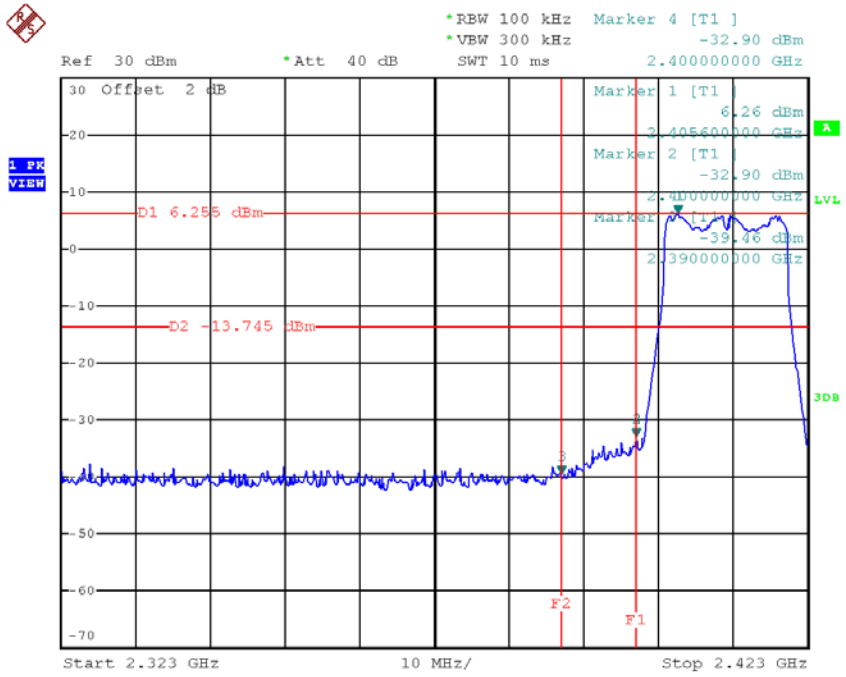
Date: 24.JUL.2017 10:06:18



Date: 24.JUL.2017 10:06:25

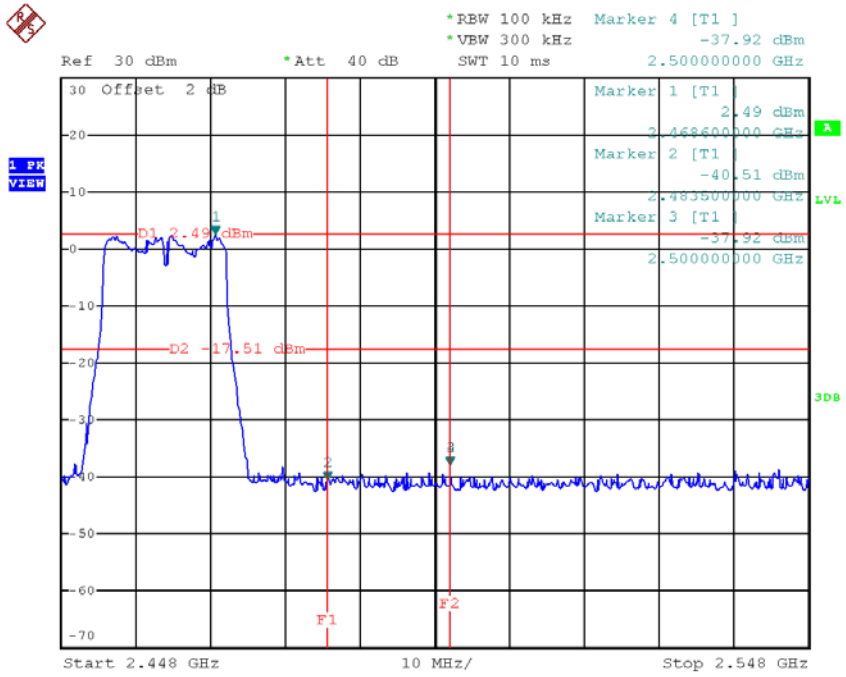
Test Mode :	TX G Mode

TX G mode CH01



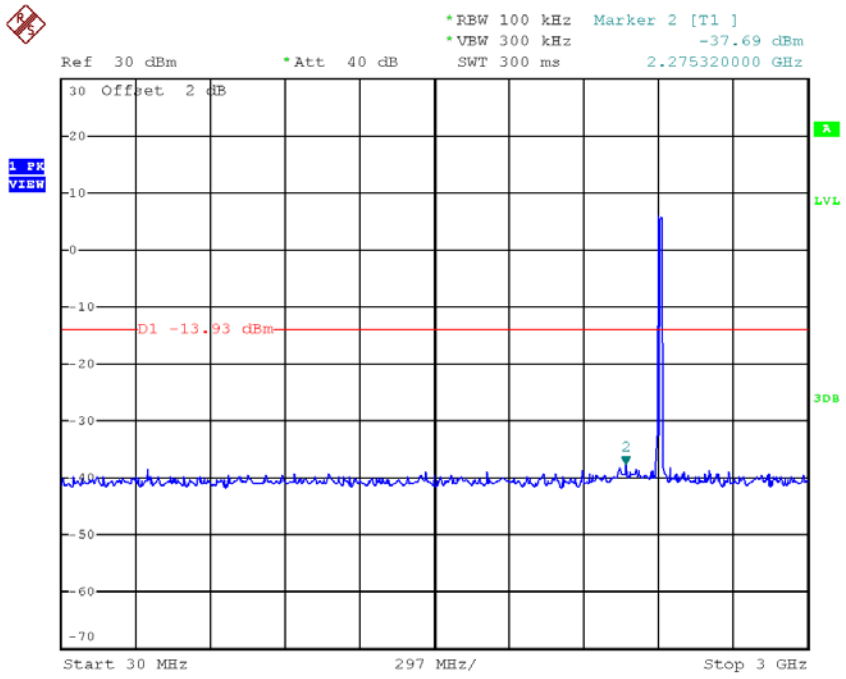
Date: 24.JUL.2017 10:07:56

TX G mode CH11

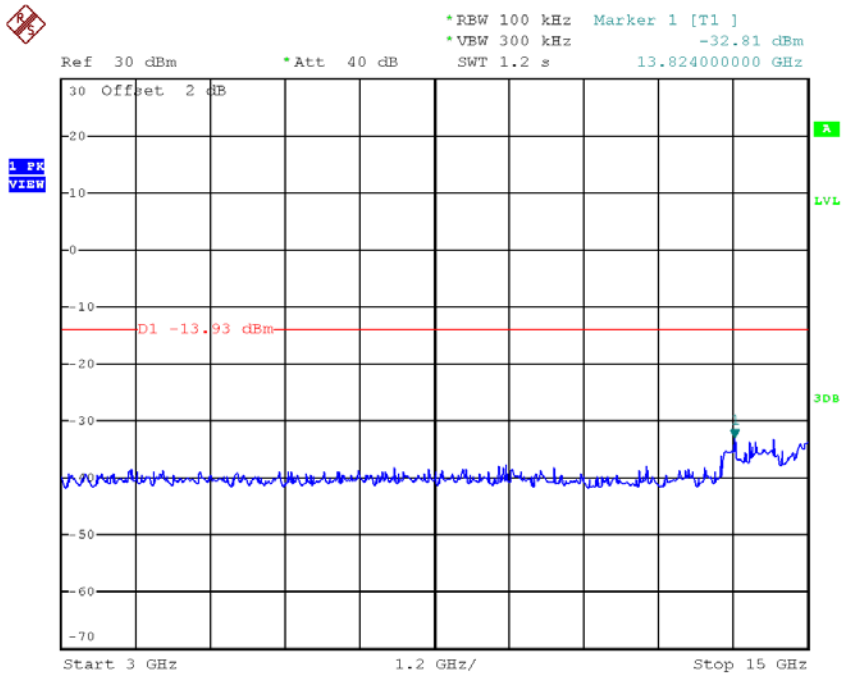


Date: 24.JUL.2017 10:13:28

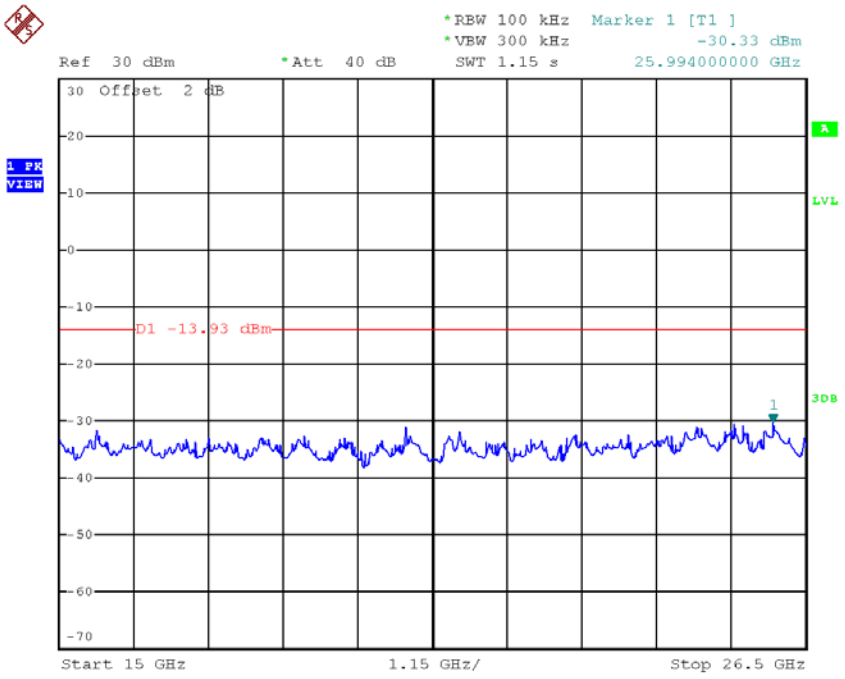
TX G mode CH01 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:07:35

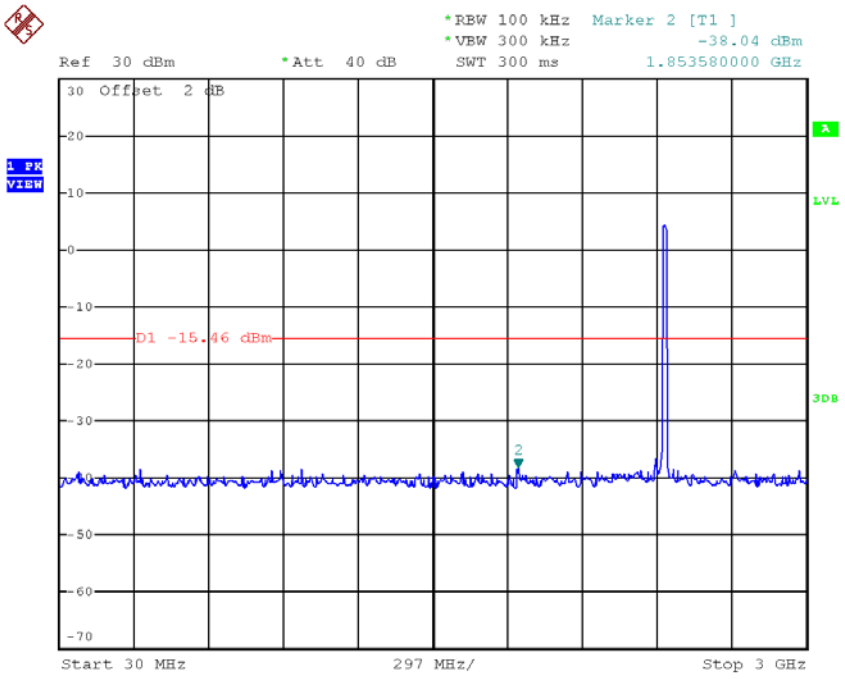


Date: 24.JUL.2017 10:07:42

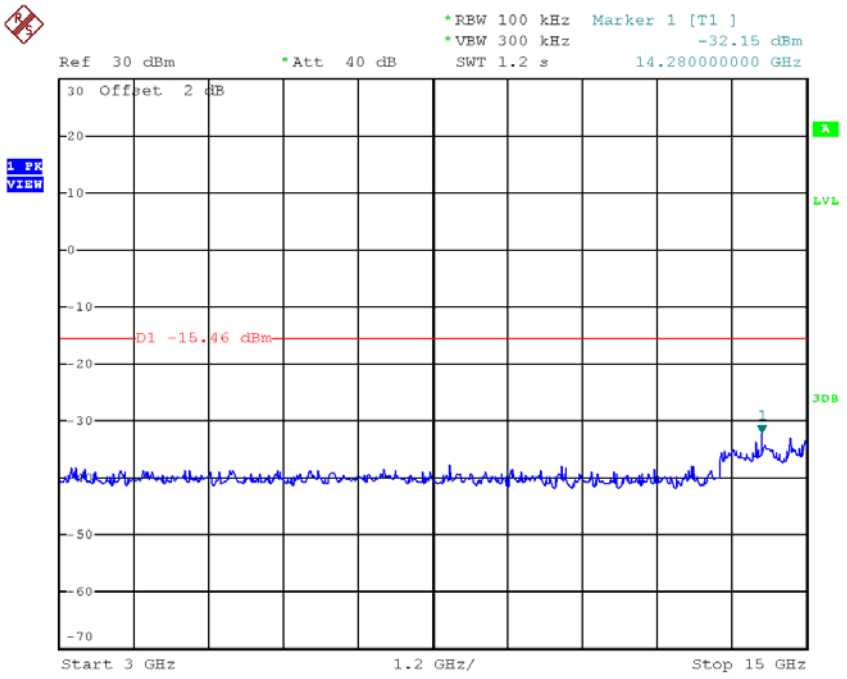


Date: 24.JUL.2017 10:07:49

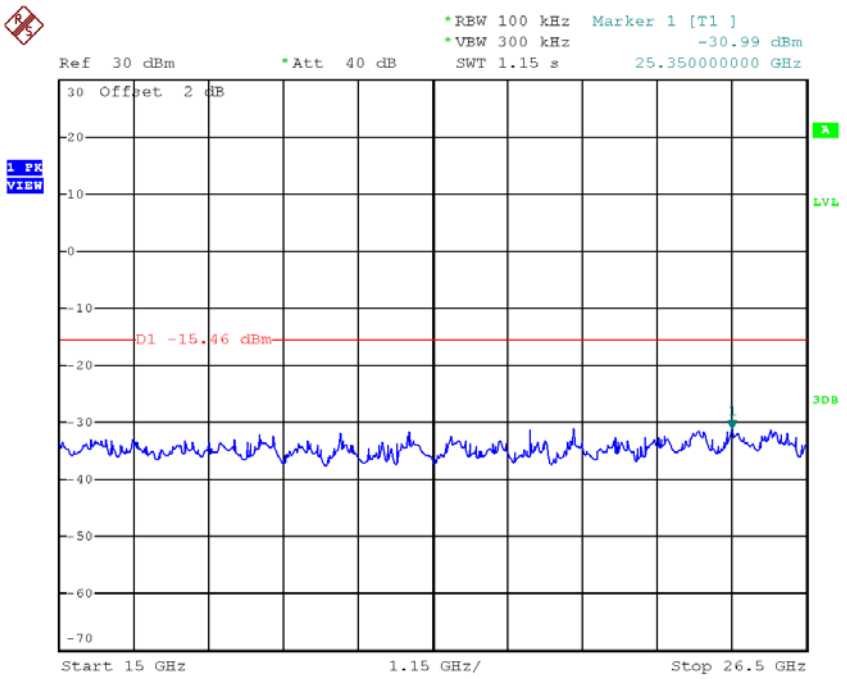
TX G mode CH06 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:11:58

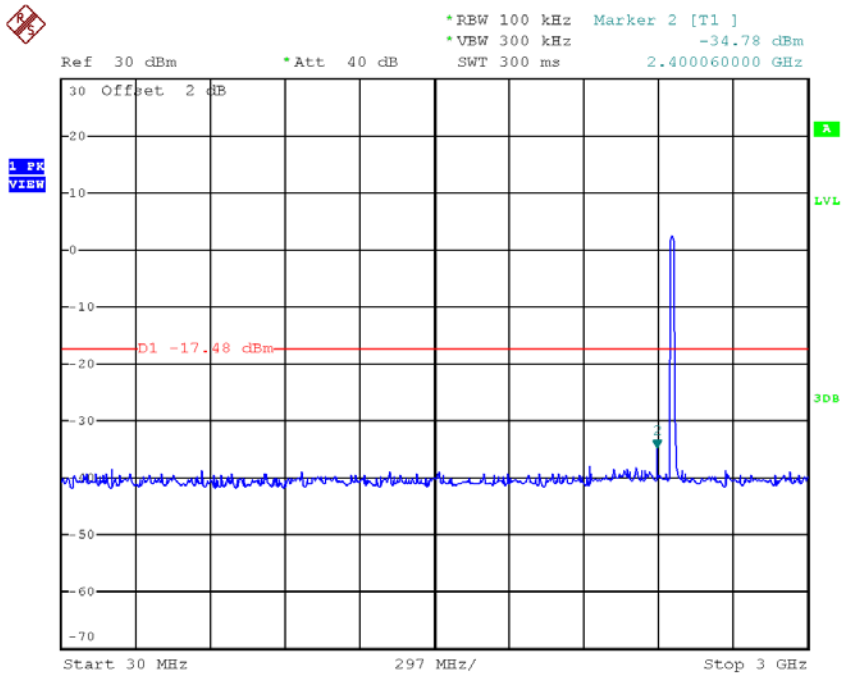


Date: 24.JUL.2017 10:12:05

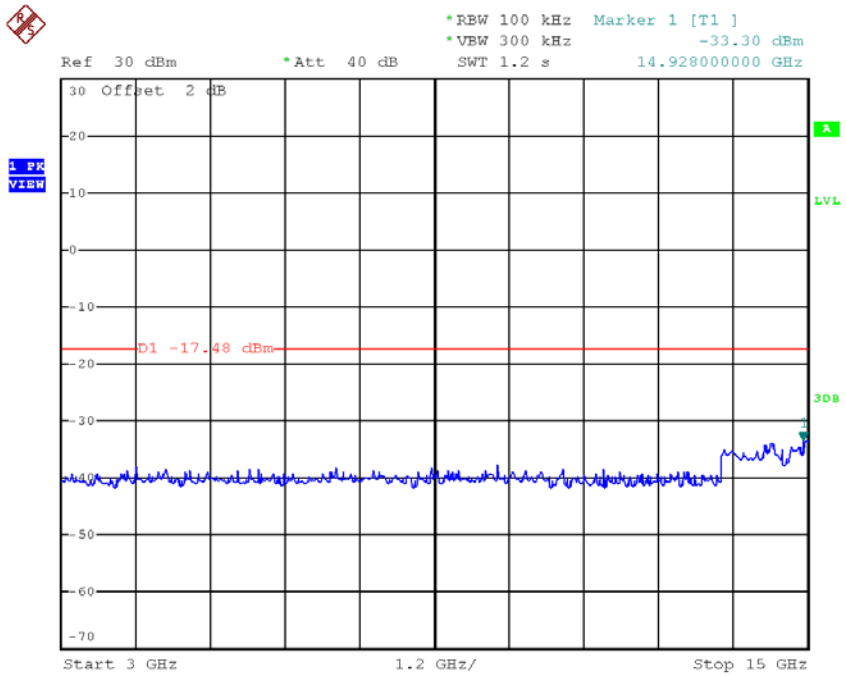


Date: 24.JUL.2017 10:12:12

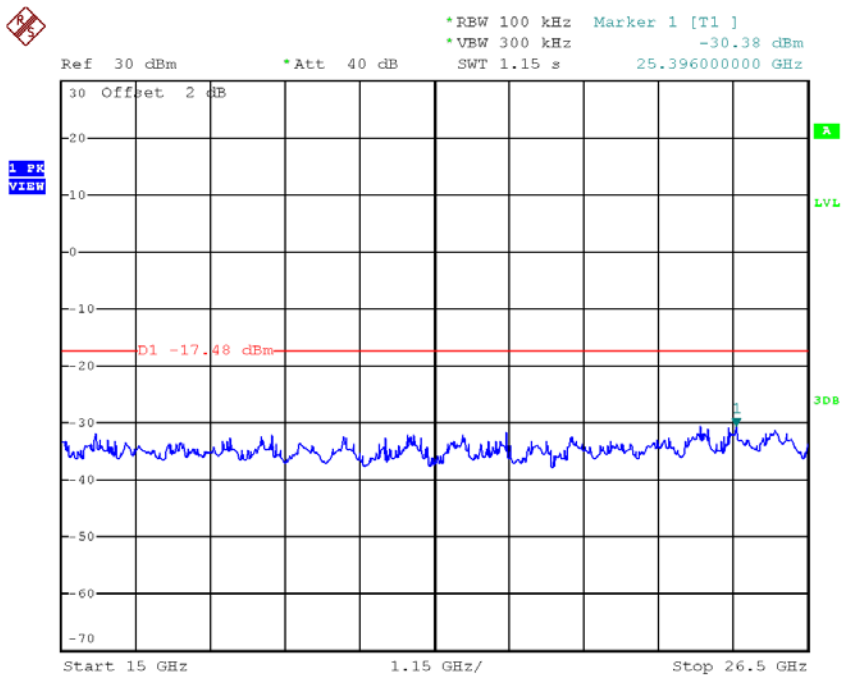
TX G mode CH11 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:13:07



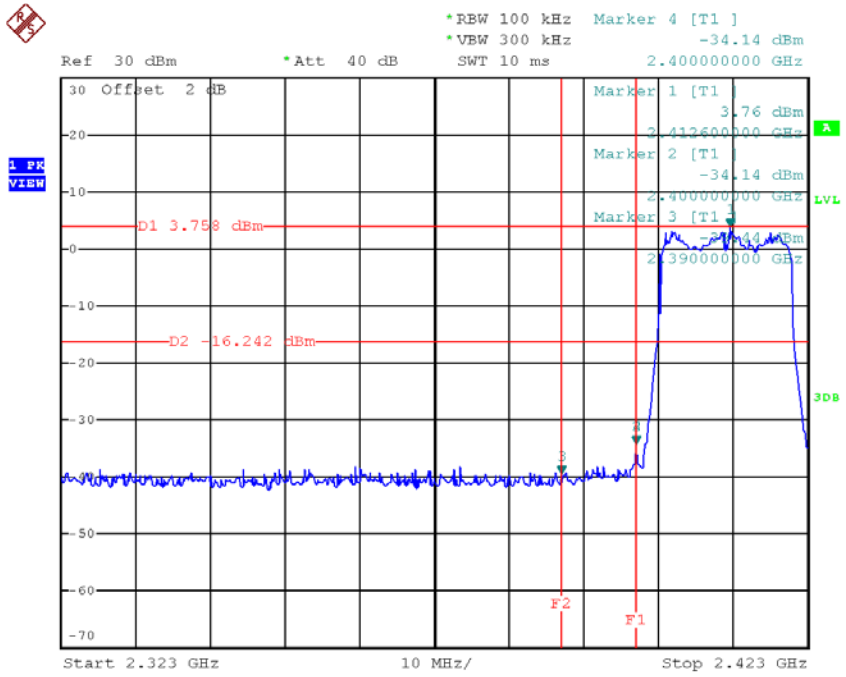
Date: 24.JUL.2017 10:13:14



Date: 24.JUL.2017 10:13:21

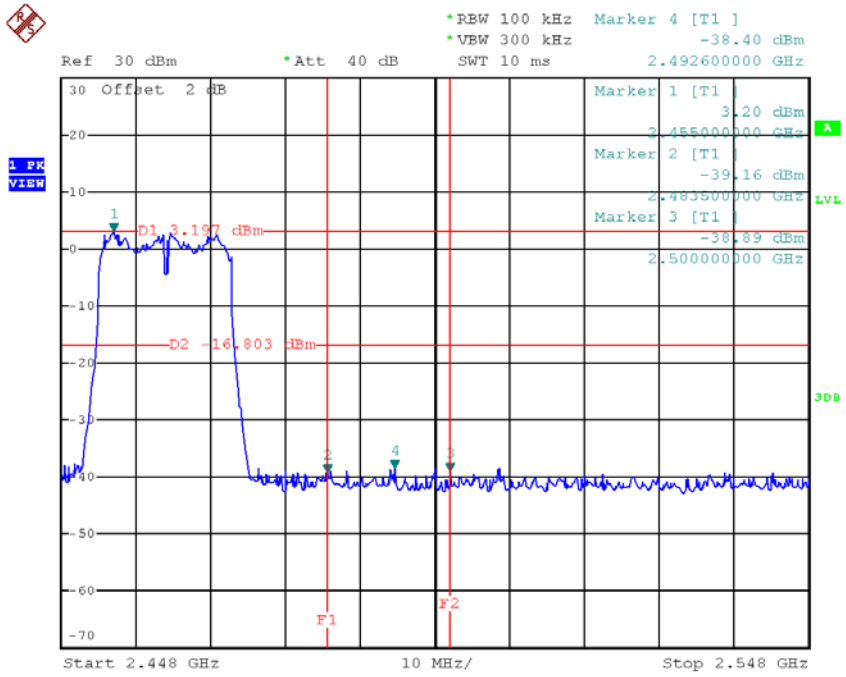
Test Mode :	TX N-20M Mode_ANT 1

TX HT20 mode CH01



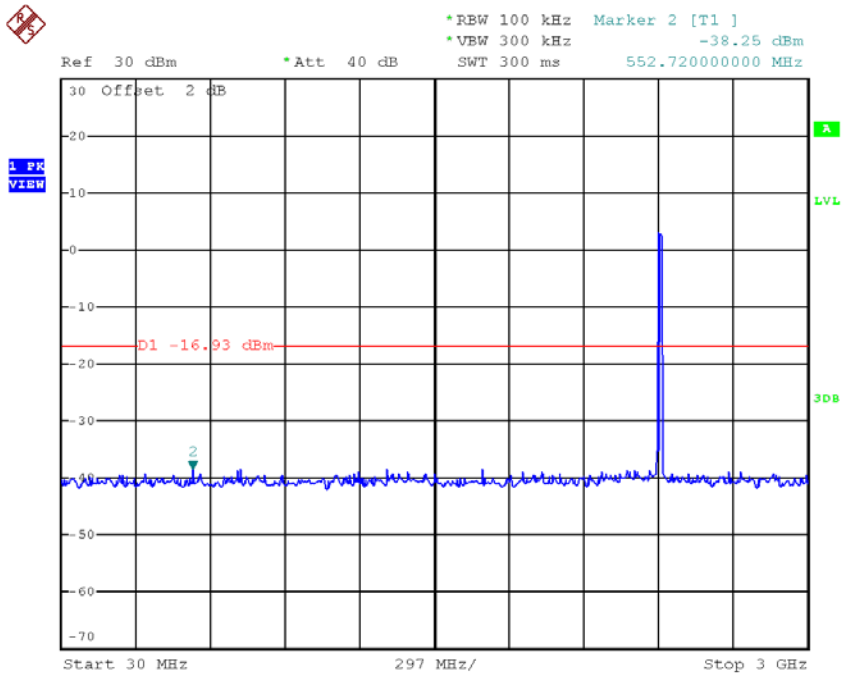
Date: 24.JUL.2017 10:15:05

TX HT20 mode CH11

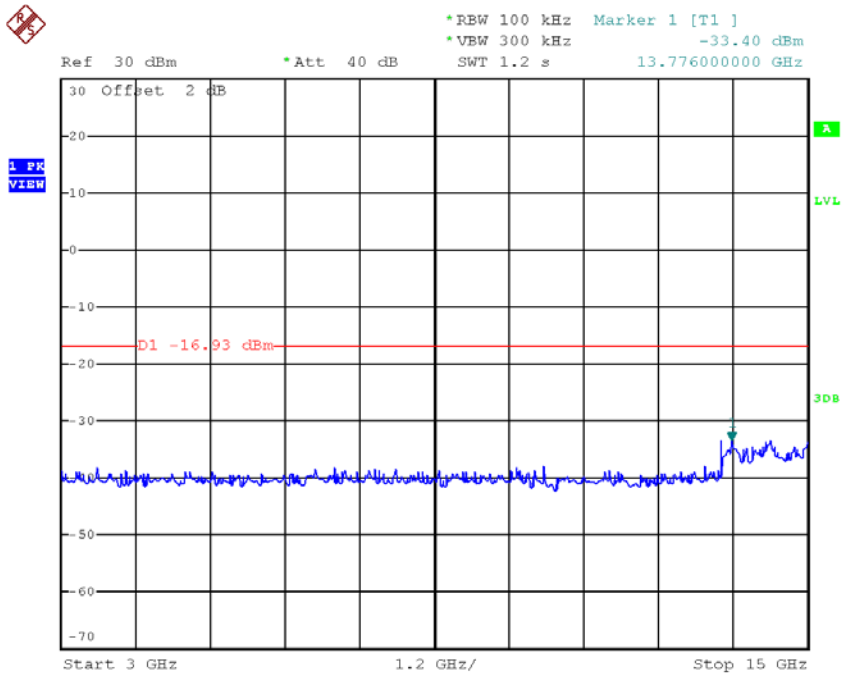


Date: 24.JUL.2017 10:17:38

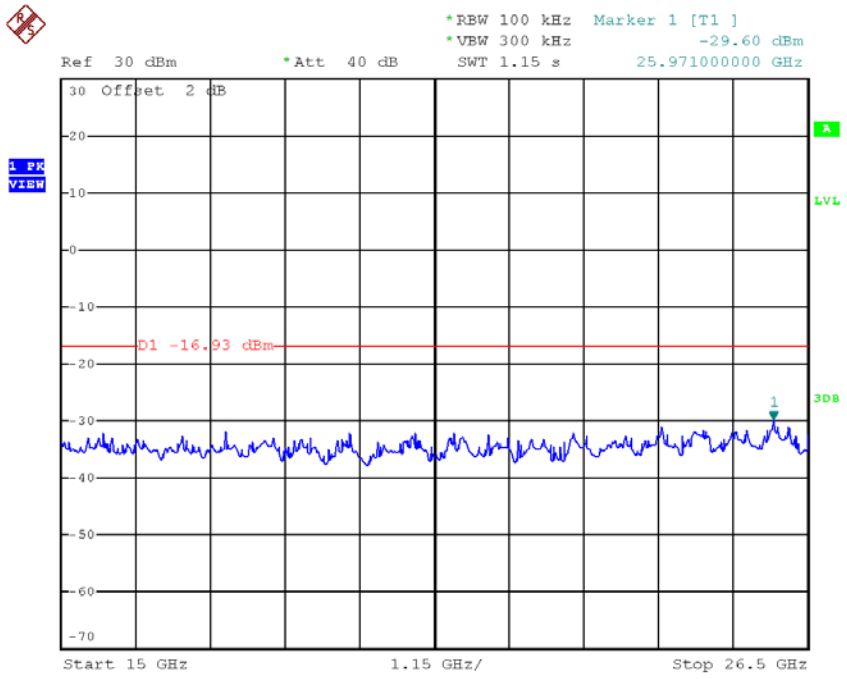
TX HT20 mode CH01 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:14:44

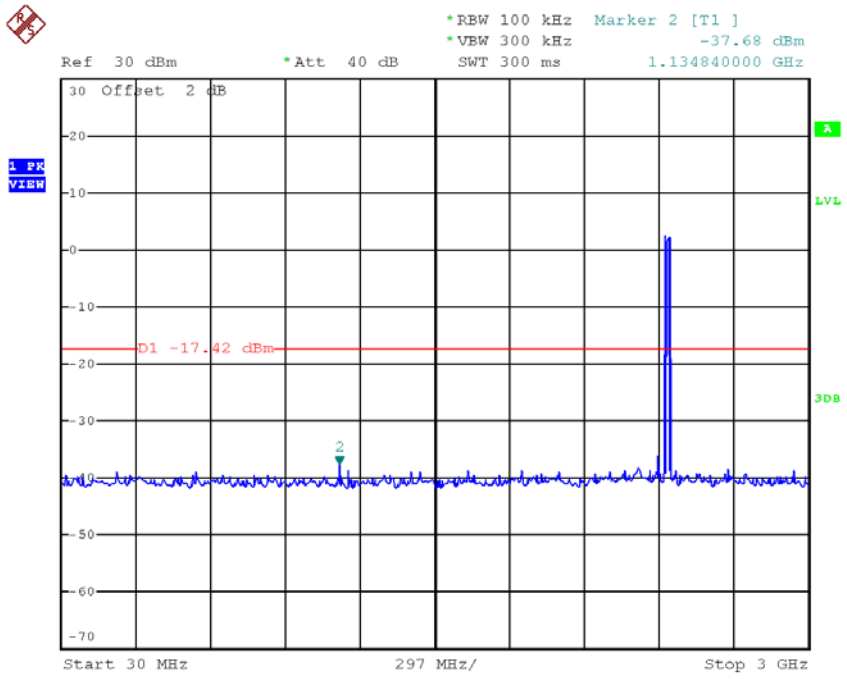


Date: 24.JUL.2017 10:14:51

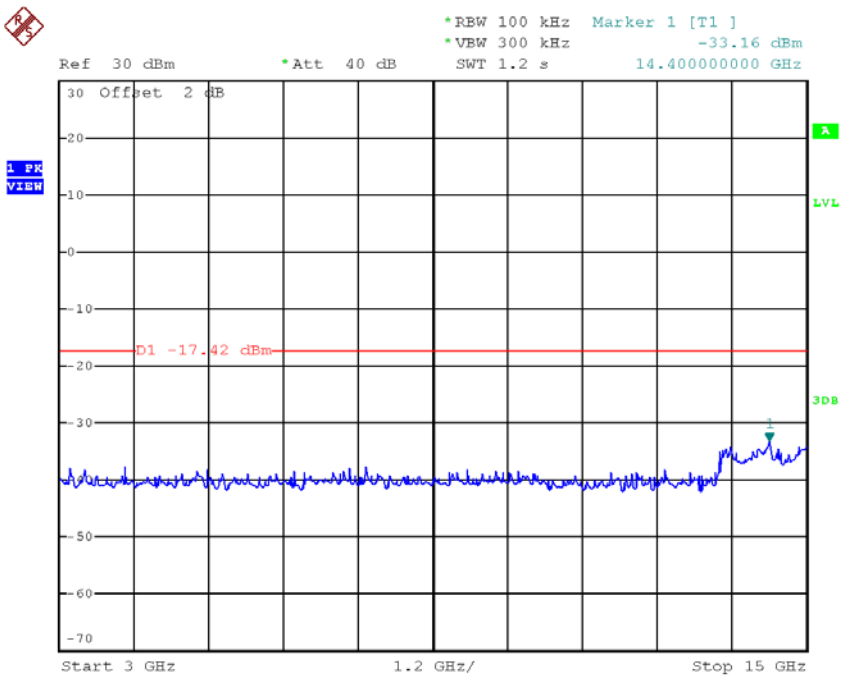


Date: 24.JUL.2017 10:14:58

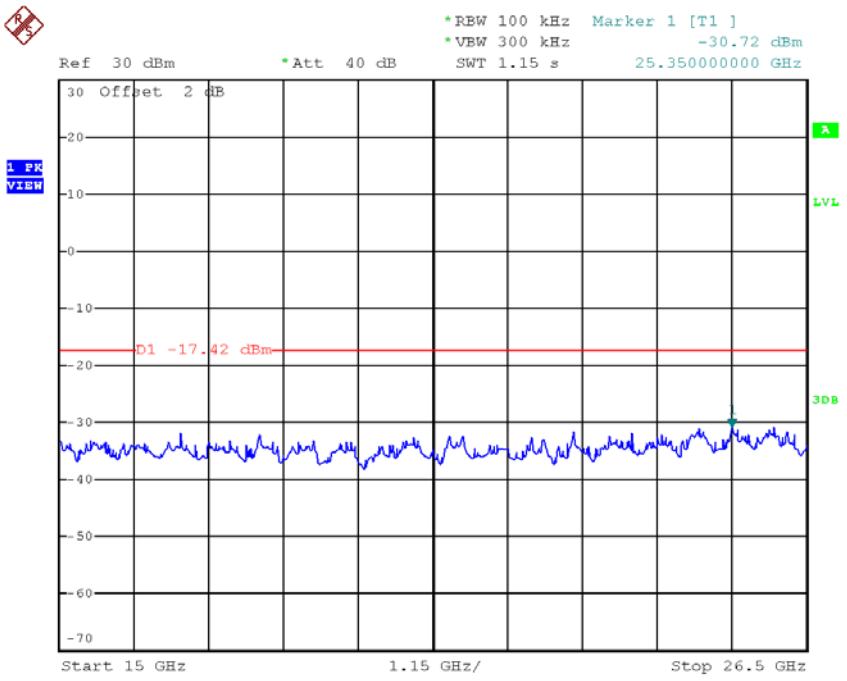
TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:16:03

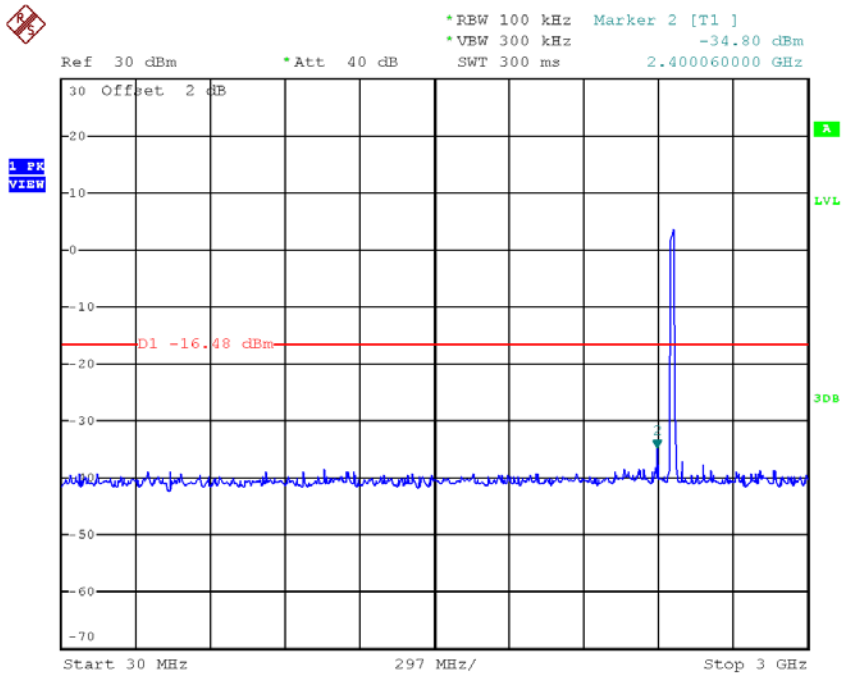


Date: 24.JUL.2017 10:16:10

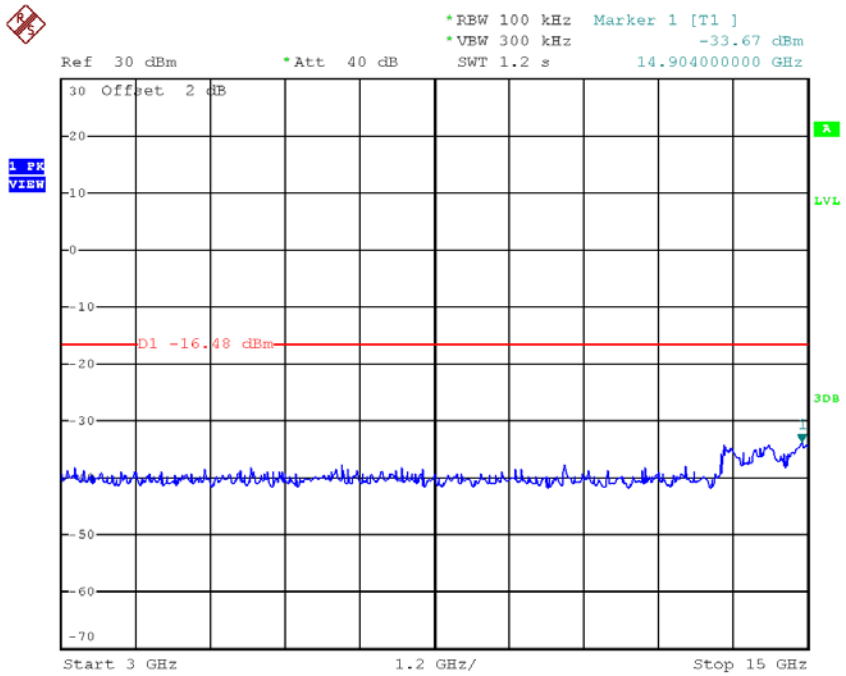


Date: 24.JUL.2017 10:16:17

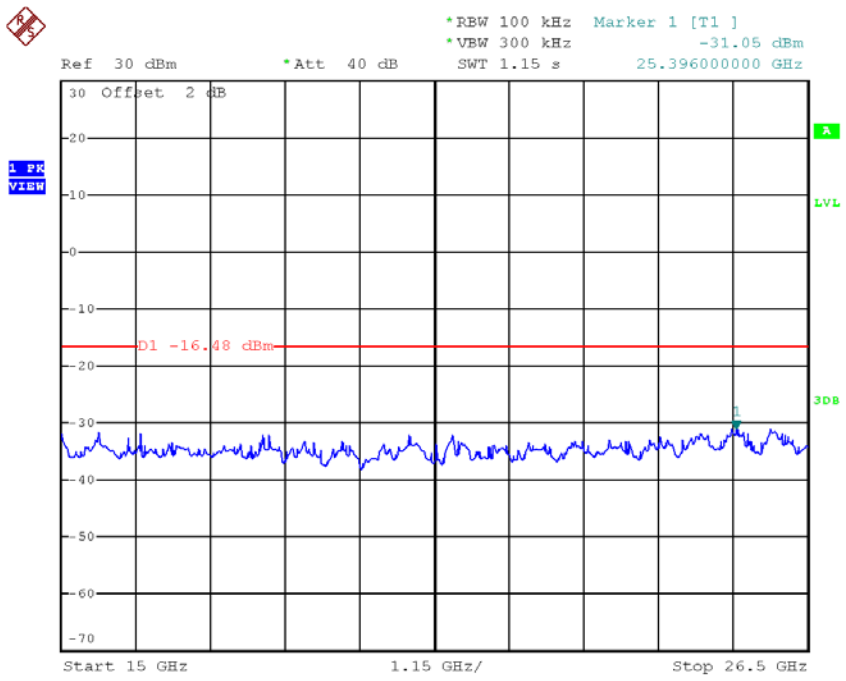
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 24.JUL.2017 10:17:16



Date: 24.JUL.2017 10:17:23



Date: 24.JUL.2017 10:17:31