FCC Radio Test Report

FCC ID: T58WF2180R

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

Project No.	:	1607C233
Equipment	:	AC600 Wireless Dual Band USB Adapter
Model Name	:	WF2180
Applicant	:	NETIS SYSTEMS CO., LTD
Address	:	4F&5F R&D Building, Oriental Cyberport, High-Tech Industrial Park, Nanshan, Shenzhen, China.

Date of Receipt	:	Jul. 22, 2016
Date of Test	:	Jul. 22, 2016 ~ Aug. 29, 2016
Issued Date	:	Aug. 30, 2016
Tested by	:	BTL Inc.

Testing Engineer : Shawn xiao
(Shawn Xiao)

Technical Manager : David Mao
(David Mao)

Authorized Signatory : Steven Lu
(Steven Lu)

BTL INC.

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

Declaration

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

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

BTL's report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **BTL-self**, extracts from the test report shall not be reproduced except in full with **BTL**'s authorized written approval.

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

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.

Table of Contents Page

1 . CERTIFICATION 6

2 . SUMMARY OF TEST RESULTS 7

2.1 TEST FACILITY 8

2.2 MEASUREMENT UNCERTAINTY 8

3 . GENERAL INFORMATION 9

3.1 GENERAL DESCRIPTION OF EUT 9

3.2 DESCRIPTION OF TEST MODES 10

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING 12

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 13

3.5 DESCRIPTION OF SUPPORT UNITS 13

4 . EMC EMISSION TEST 14

4.1 CONDUCTED EMISSION MEASUREMENT 14

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS 14

4.1.2 TEST PROCEDURE 14

4.1.3 DEVIATION FROM TEST STANDARD 14

4.1.4 TEST SETUP 15

4.1.5 EUT OPERATING CONDITIONS 15

4.1.6 EUT TEST CONDITIONS 15

4.1.7 TEST RESULTS 15

4.2 RADIATED EMISSION MEASUREMENT 16

4.2.1 RADIATED EMISSION LIMITS 16

4.2.2 TEST PROCEDURE 17

4.2.3 DEVIATION FROM TEST STANDARD 17

4.2.4 TEST SETUP 18

4.2.5 EUT OPERATING CONDITIONS 19

4.2.6 EUT TEST CONDITIONS 19

4.2.7 TEST RESULTS (9KHZ TO 30MHZ) 20

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ) 20

4.2.9 TEST RESULTS (ABOVE 1000 MHZ) 20

5 . BANDWIDTH TEST 21

5.1 APPLIED PROCEDURES 21

5.1.1 TEST PROCEDURE 21

5.1.2 DEVIATION FROM STANDARD 21

5.1.3 TEST SETUP 21

5.1.4 EUT OPERATION CONDITIONS 21

5.1.5 EUT TEST CONDITIONS 21

5.1.6 TEST RESULTS 21

6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST 22

6.1 APPLIED PROCEDURES / LIMIT 22
6.1.1 TEST PROCEDURE 22
6.1.2 DEVIATION FROM STANDARD 22
6.1.3 TEST SETUP 22
6.1.4 EUT OPERATION CONDITIONS 22
6.1.5 EUT TEST CONDITIONS 22
6.1.6 TEST RESULTS 22
7 . ANTENNA CONDUCTED SPURIOUS EMISSION 23
7.1 APPLIED PROCEDURES / LIMIT 23
7.1.1 TEST PROCEDURE 23
7.1.2 DEVIATION FROM STANDARD 23
7.1.3 TEST SETUP 23
7.1.4 EUT OPERATION CONDITIONS 23
7.1.5 EUT TEST CONDITIONS 23
7.1.6 TEST RESULTS 23
8 . POWER SPECTRAL DENSITY TEST 24
8.1 APPLIED PROCEDURES / LIMIT 24
8.1.1 TEST PROCEDURE 24
8.1.2 DEVIATION FROM STANDARD 24
8.1.3 TEST SETUP 24
8.1.4 EUT OPERATION CONDITIONS 24
8.1.5 EUT TEST CONDITIONS 24
8.1.6 TEST RESULTS 24
9 . MEASUREMENT INSTRUMENTS LIST 25
10 . EUT TEST PHOTO 27
ATTACHMENT A - CONDUCTED EMISSION 31
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ) 34
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ) 36
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ) 43
ATTACHMENT E - BANDWIDTH 92
ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER 101
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION 103
ATTACHMENT H - POWER SPECTRAL DENSITY 128

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1607C233	Original Issue.	Aug. 30, 2016

1. CERTIFICATION

Equipment	:	AC600 Wireless Dual Band USB Adapter
Brand Name	:	netis
Model Name	:	WF2180
Applicant	:	NETIS SYSTEMS CO., LTD
Manufacturer	:	Shenzhen Netcore Industrial Ltd.
Address	:	4F&5F R&D Building, Oriental Cyberport, High-Tech Industrial Park, Nanshan, Shenzhen, China.
Factory	:	Dongguan City Netcore Network Technology Co.,Ltd.
Address	:	No.10-1,Sankeng Road,Qinghutou,Tangxia Town,Dongguan City
Date of Test	:	Jul. 22, 2016 ~ Aug. 29, 2016
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-1-1607C233) 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	
15.209/15.205	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	AC600 Wireless Dual Band USB Adapter	
Brand Name	netis	
Model Name	WF2180	
Model Difference	N/A	
Product Description	Operation Frequency	2412~2462 MHz
	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 150 Mbps
	Output Power (Max.)	802.11b: 18.12dBm 802.11g: 23.55dBm 802.11n(20MHz): 22.61dBm 802.11n(40MHz): 21.71dBm
Power Source	Supplied from PC USB port.	
Power Rating	DC 5V	

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	Internal	N/A	0

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.

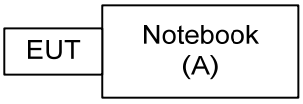
(4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

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	MPTOOL		
Frequency (MHz)	2412	2437	2462
802.11b	36	35	34
802.11g	45	45	44
802.11n (20MHz)	43	43	43
Frequency (MHz)	2422	2437	2452
802.11n (40MHz)	42	45	39

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	EB22953787	DOC	E46L

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	-

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

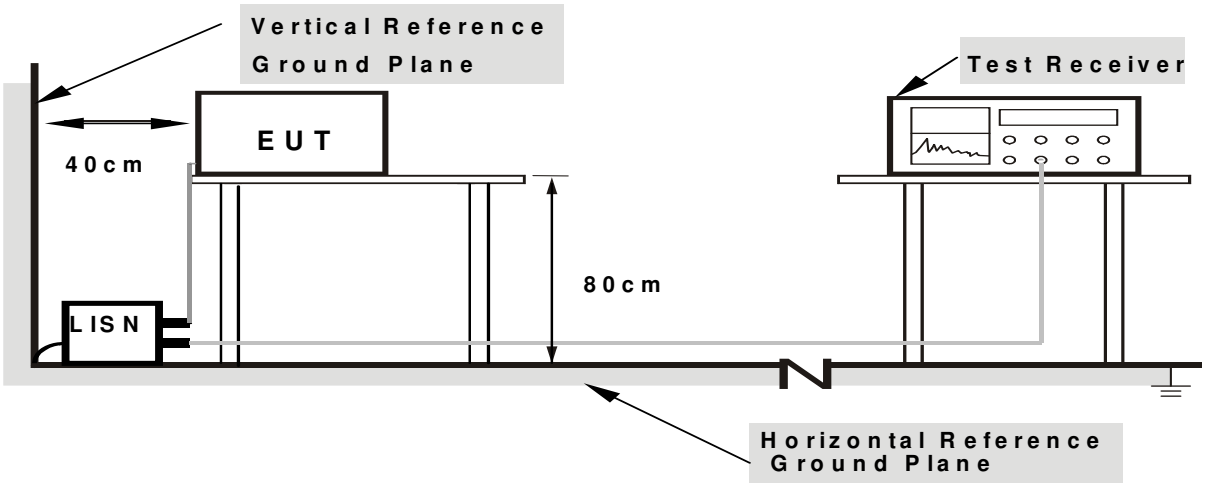
4.1.2 TEST PROCEDURE

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

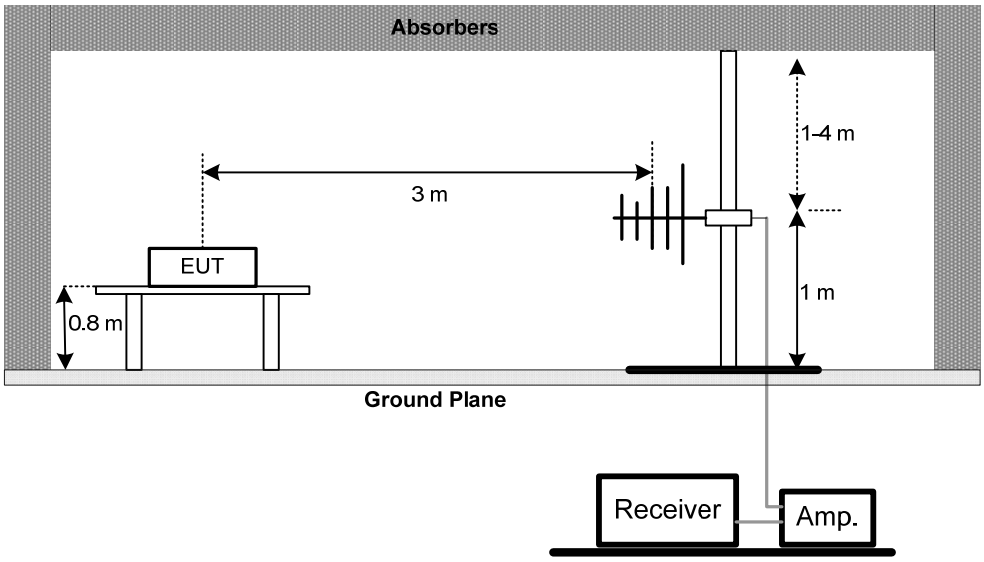
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance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

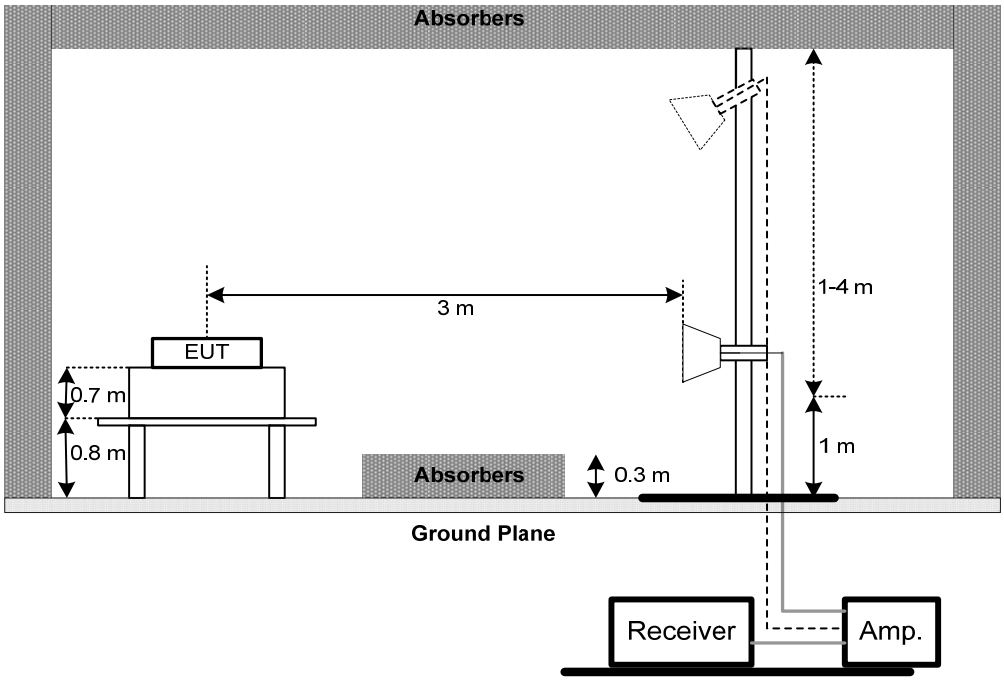
No deviation

4.2.4 TEST SETUP

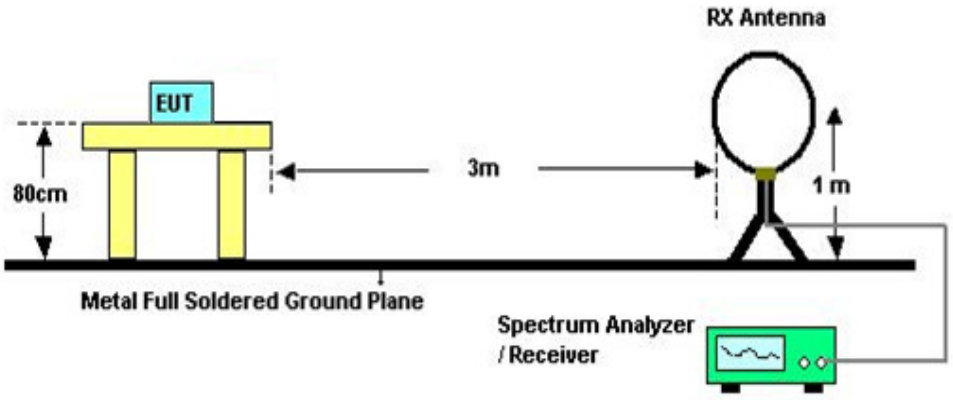
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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: DC 5V

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

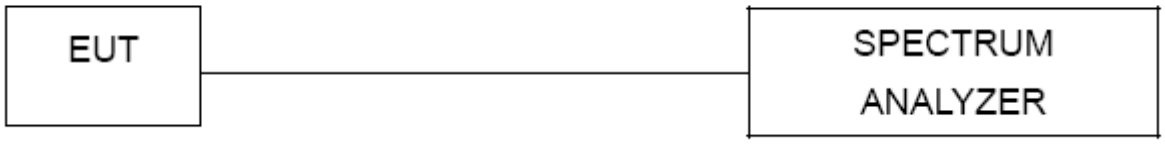
5.1.1 TEST PROCEDURE

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: DC 5V

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 v03r05.

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: DC 5V

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.

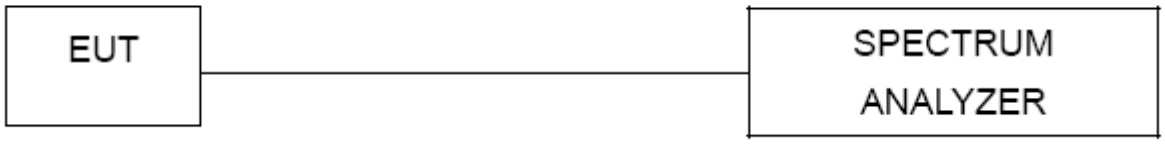
7.1.1 TEST PROCEDURE

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: DC 5V

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

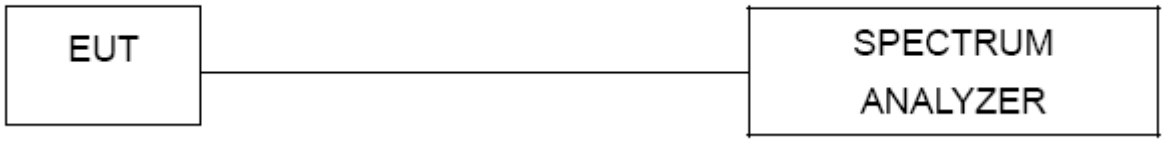
8.1.1 TEST PROCEDURE

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: DC 5V

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. 27, 2017
2	LISN	R&S	ENV216	101447	Mar. 27, 2017
3	Test Cable	emci	RG223(9KHz -30MHz)	C_17	Mar. 10, 2017
4	EMI Test Receiver	R&S	ESCI	100382	Mar. 27, 2017
5	50Ω Terminator	SHX	TF2-3G-A	08122901	Mar. 27, 2017
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. 27, 2017
2	Amplifier	HP	8447D	2944A09673	Nov. 09, 2016
3	Receiver	AGILENT	N9038A	MY52130039	Oct. 11, 2016
4	Test Cable	emci	LMR-400(30MHz-1GHz)	C-01	Jun. 26, 2017
5	Control	CT	SC100	N/A	N/A
6	Position Control	MF	MF-7802	MF780208416	N/A
7	Antenna	ETS	3115	00075789	Mar. 27, 2017
8	Amplifier	Agilent	8449B	3008A02274	Nov. 01, 2016
9	Receiver	AGILENT	N9038A	MY52130039	Oct. 11, 2016
10	Test Cable	emci	EMC104-SM-SM-10000(1GHz-26.5GHz)	C-68	Jun. 26, 2017
11	Controller	CT	SC100	N/A	N/A
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Apr. 23, 2017
13	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 27, 2017
14	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Sep. 07, 2016
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	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Oct. 26, 2016
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Oct. 26, 2016

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017

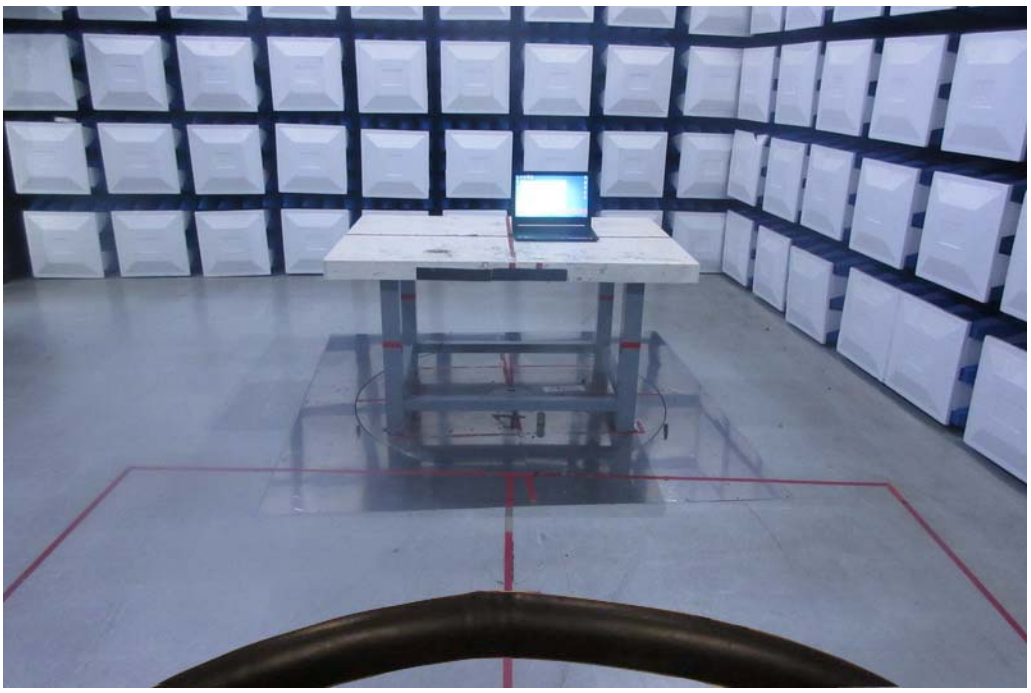
Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017

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

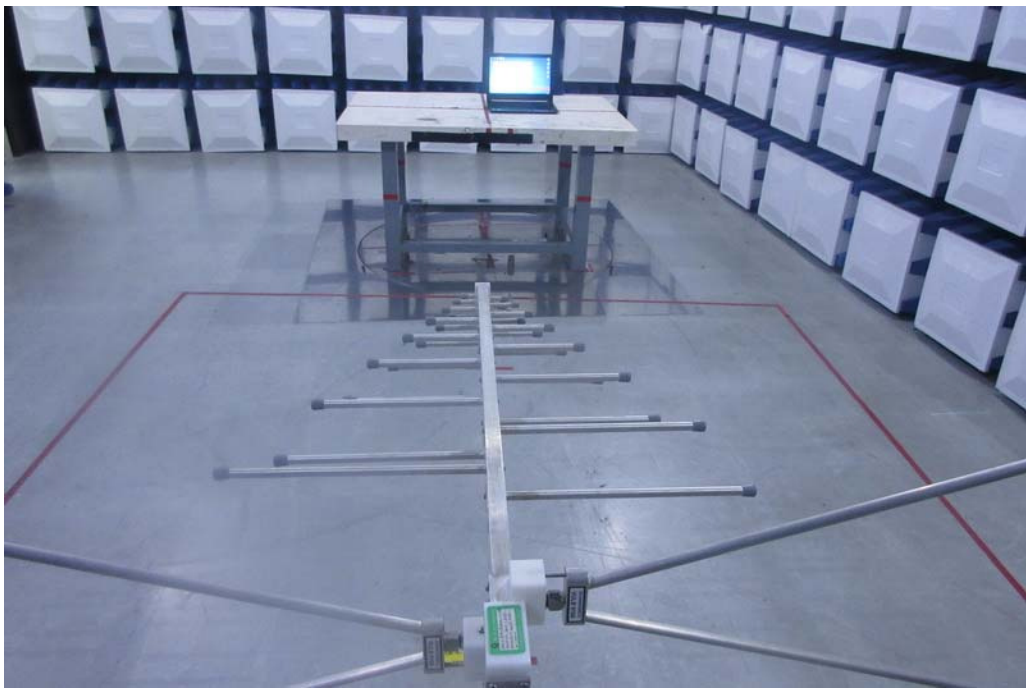
10. EUT TEST PHOTO

Conducted Measurement Photos

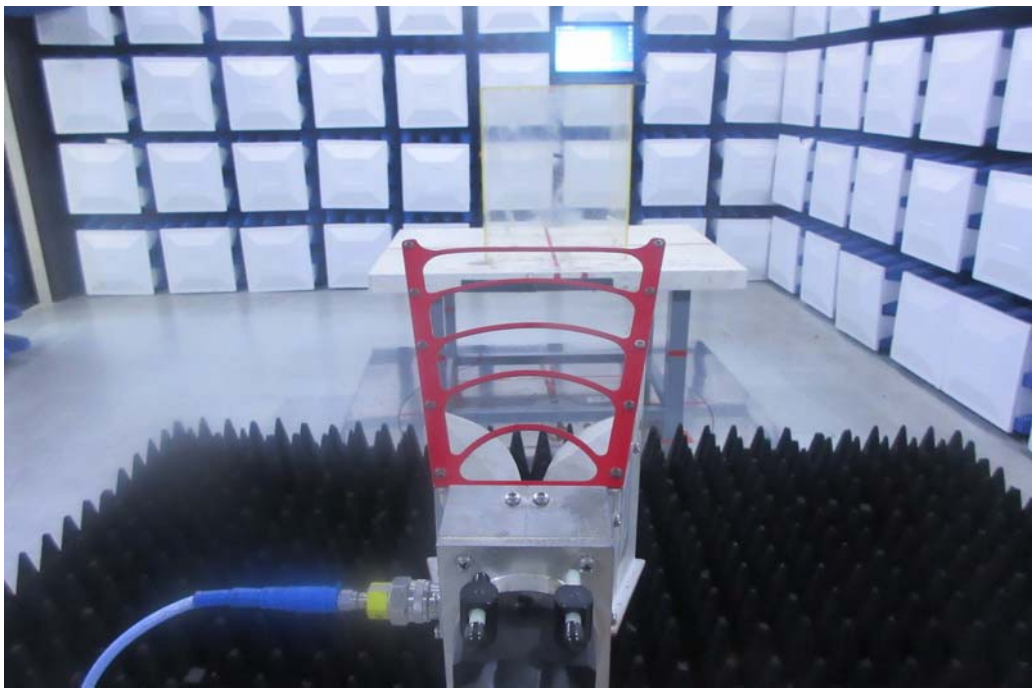
Radiated Measurement Photos
9KHz to 30MHz

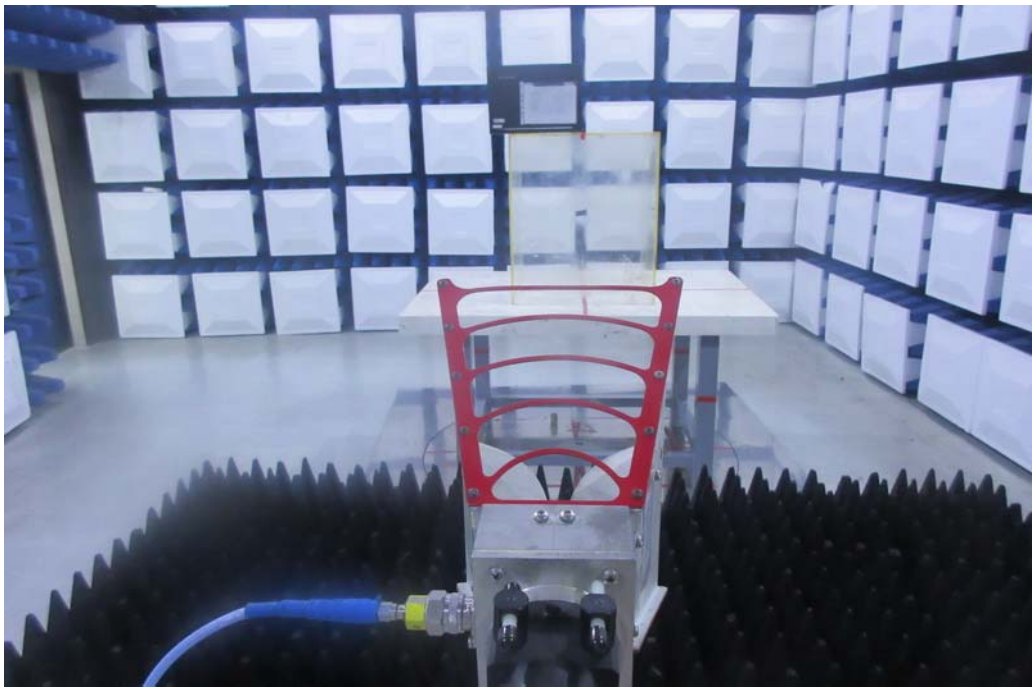


Radiated Measurement Photos
30MHz to 1000MHz



Radiated Measurement Photos
Above 1000MHz

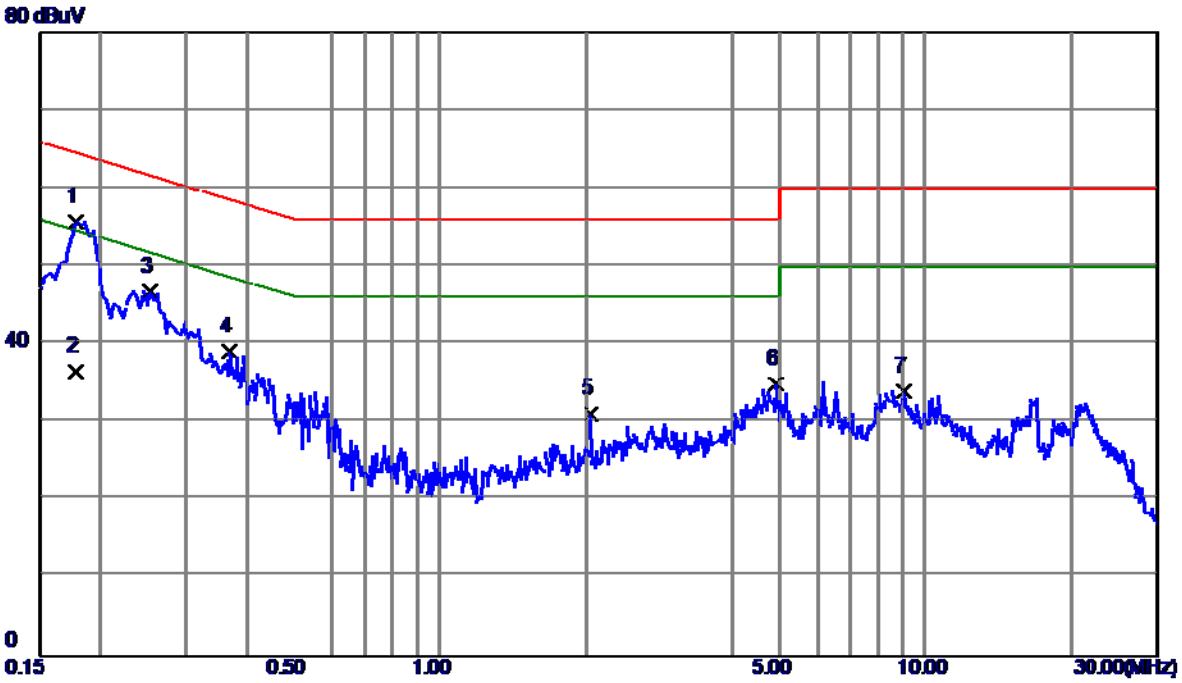




ATTACHMENT A - CONDUCTED EMISSION

Test Mode :	Normal Link

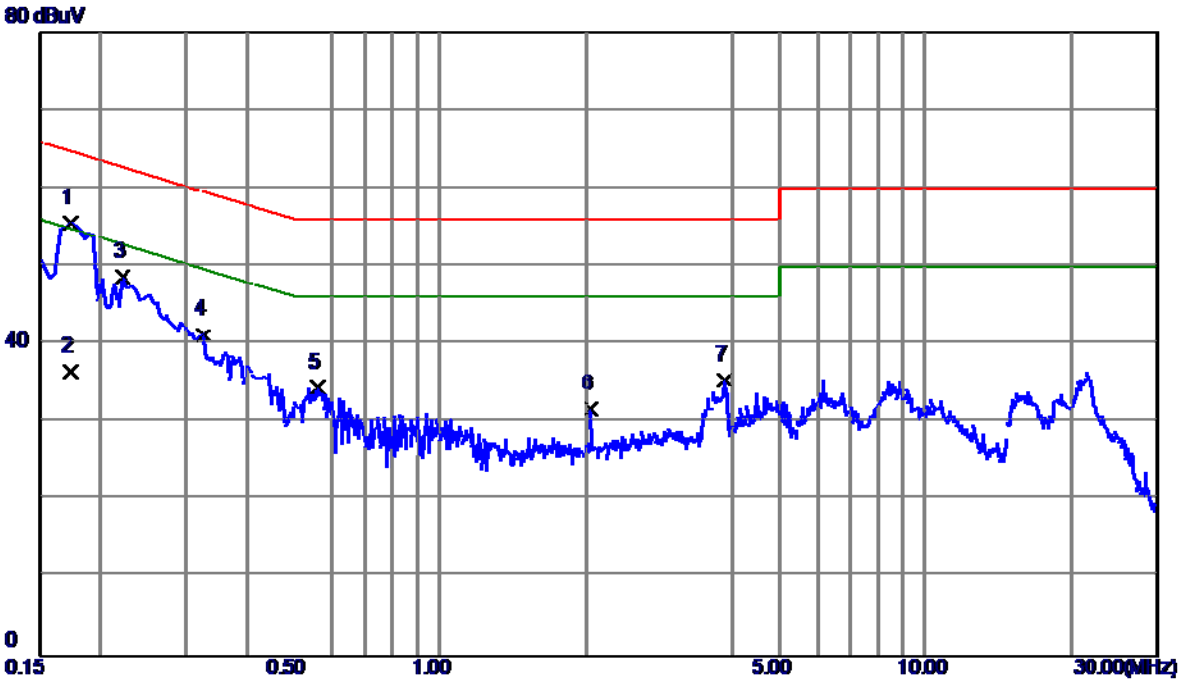
Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1780	46.17	9.53	55.70	64.58	-8.88	Peak	
2	0.1780	26.90	9.53	36.43	54.58	-18.15	AVG	
3	0.2540	37.21	9.53	46.74	61.63	-14.89	Peak	
4	0.3700	29.44	9.54	38.98	58.50	-19.52	Peak	
5	2.0500	21.20	9.91	31.11	56.00	-24.89	Peak	
6	4.9300	24.93	10.00	34.93	56.00	-21.07	Peak	
7	9.0420	23.74	10.20	33.94	60.00	-26.06	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 *	0.1740	46.13	9.44	55.57	64.77	-9.20	Peak	
2	0.1740	27.09	9.44	36.53	54.77	-18.24	AVG	
3	0.2220	39.11	9.53	48.64	62.74	-14.10	Peak	
4	0.3260	31.67	9.53	41.20	59.55	-18.35	Peak	
5	0.5620	24.92	9.44	34.36	56.00	-21.64	Peak	
6	2.0500	22.05	9.70	31.75	56.00	-24.25	Peak	
7	3.8620	25.51	9.88	35.39	56.00	-20.61	Peak	

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

Test Mode:	TX B MODE CHANNEL 01

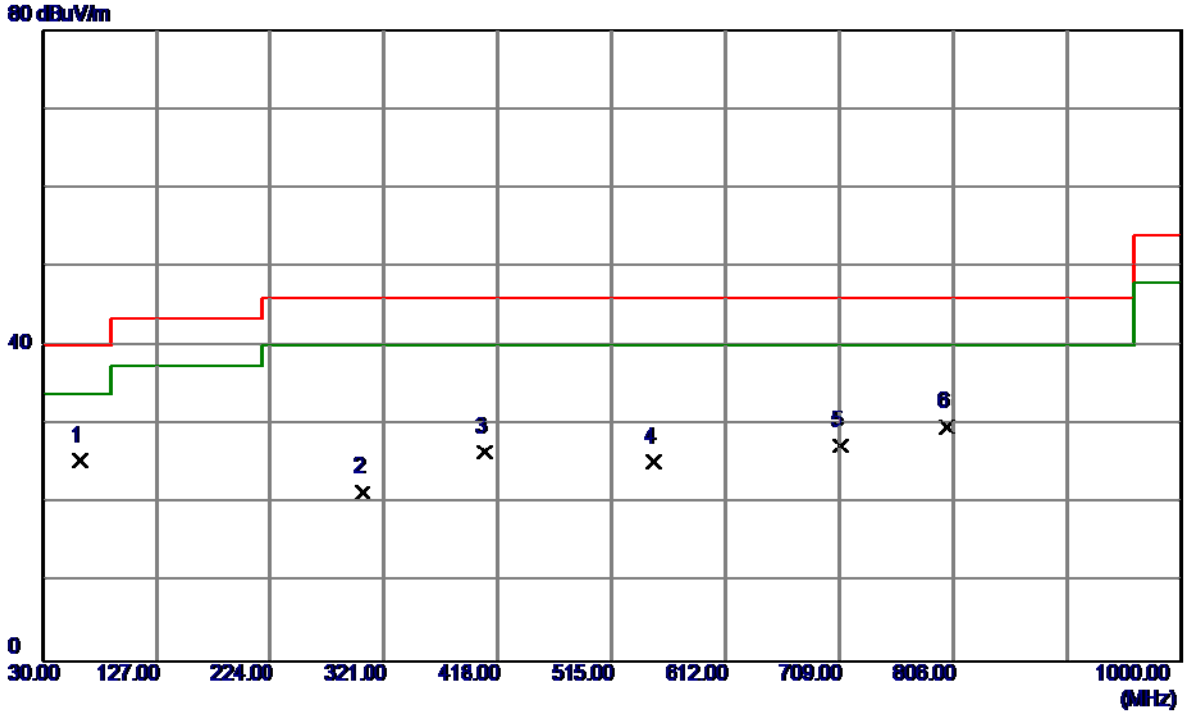
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0092	0°	13.62	24.9840	38.6040	128.3285	-89.7245	AVG
0.0092	0°	14.34	24.9840	39.3240	148.3285	-109.0045	PEAK
0.0289	0°	6.88	23.7363	30.6163	118.3863	-87.7699	AVG
0.0289	0°	8.28	23.7363	32.0163	138.3863	-106.3699	PEAK
0.036	0°	3.36	23.2867	26.6467	116.4782	-89.8315	AVG
0.036	0°	5.67	23.2867	28.9567	136.4782	-107.5215	PEAK
0.0581	0°	1.52	22.2380	23.7580	112.3207	-88.5627	AVG
0.0581	0°	2.5	22.2380	24.7380	132.3207	-107.5827	PEAK
0.509	0°	19.57	19.8288	39.3988	73.4699	-34.0711	QP
1.9524	0°	23.8	19.5048	43.3048	69.5400	-26.2352	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0122	90°	13.42	24.3000	37.7200	125.8770	-88.1570	AVG
0.0122	90°	14.81	24.3000	39.1100	145.8770	-106.7670	PEAK
0.0257	90°	7.32	23.9390	31.2590	119.4056	-88.1466	AVG
0.0257	90°	8.95	23.9390	32.8890	139.4056	-106.5166	PEAK
0.0439	90°	5.34	22.7863	28.1263	114.7549	-86.6286	AVG
0.0439	90°	6.27	22.7863	29.0563	134.7549	-105.6986	PEAK
0.0579	90°	1.5	22.2420	23.7420	112.3507	-88.6087	AVG
0.0579	90°	2.7	22.2420	24.9420	132.3507	-107.4087	PEAK
0.6254	90°	22.57	20.2013	42.7713	71.6811	-28.9098	QP
2.054	90°	24.49	19.4676	43.9576	69.5400	-25.5824	QP

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

Test Mode:	TX B MODE CHANNEL 01

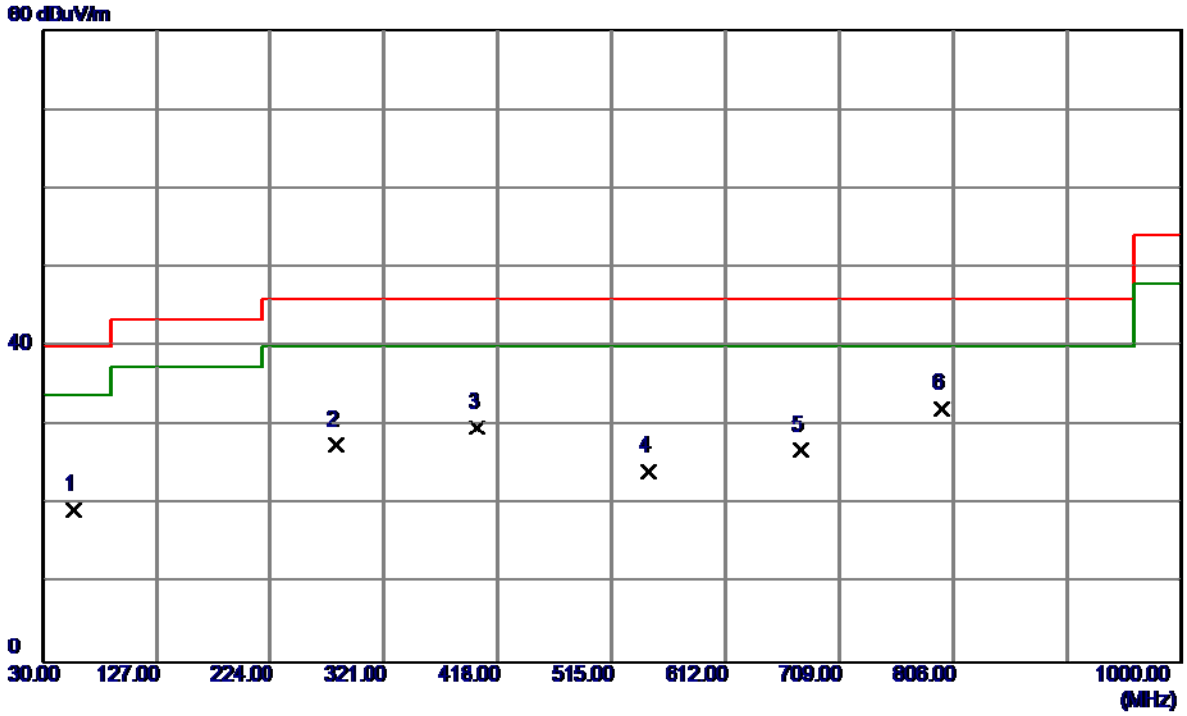
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	62.0100	39.75	-14.36	25.39	40.00	-14.61	Peak	
2	302.5700	32.08	-10.64	21.44	46.00	-24.56	Peak	
3	407.3299	35.02	-8.45	26.57	46.00	-19.43	Peak	
4	550.8900	30.80	-5.46	25.34	46.00	-20.66	Peak	
5	709.9699	30.58	-3.27	27.31	46.00	-18.69	Peak	
6	800.1800	30.69	-1.00	29.69	46.00	-16.31	Peak	

Test Mode:	TX B MODE CHANNEL 01

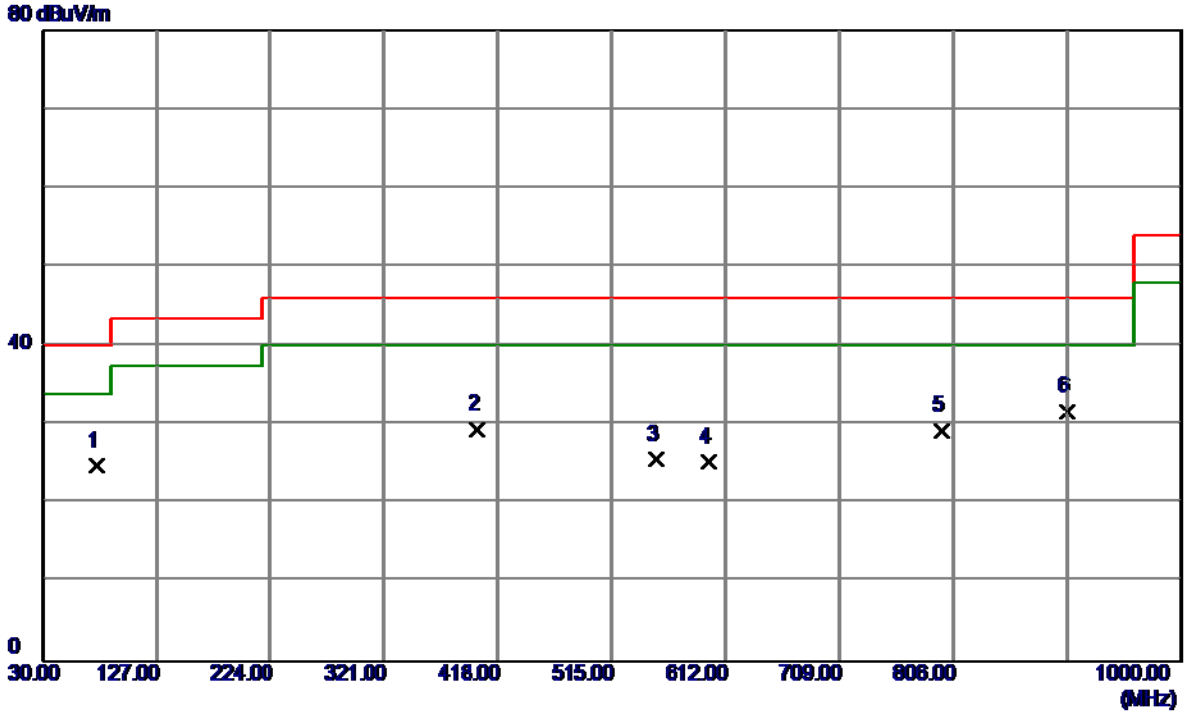
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	57.1600	33.06	-13.64	19.42	40.00	-20.58	Peak	
2	280.2600	39.87	12.39	27.48	46.00	18.52	Peak	
3	400.5400	38.16	-8.40	29.76	46.00	-16.24	Peak	
4	546.0400	29.92	-5.82	24.10	46.00	-21.90	Peak	
5	676.9900	31.02	-4.19	26.83	46.00	-19.17	Peak	
6 *	796.3000	33.26	-1.15	32.11	46.00	-13.89	Peak	

Test Mode:	TX B MODE CHANNEL 06

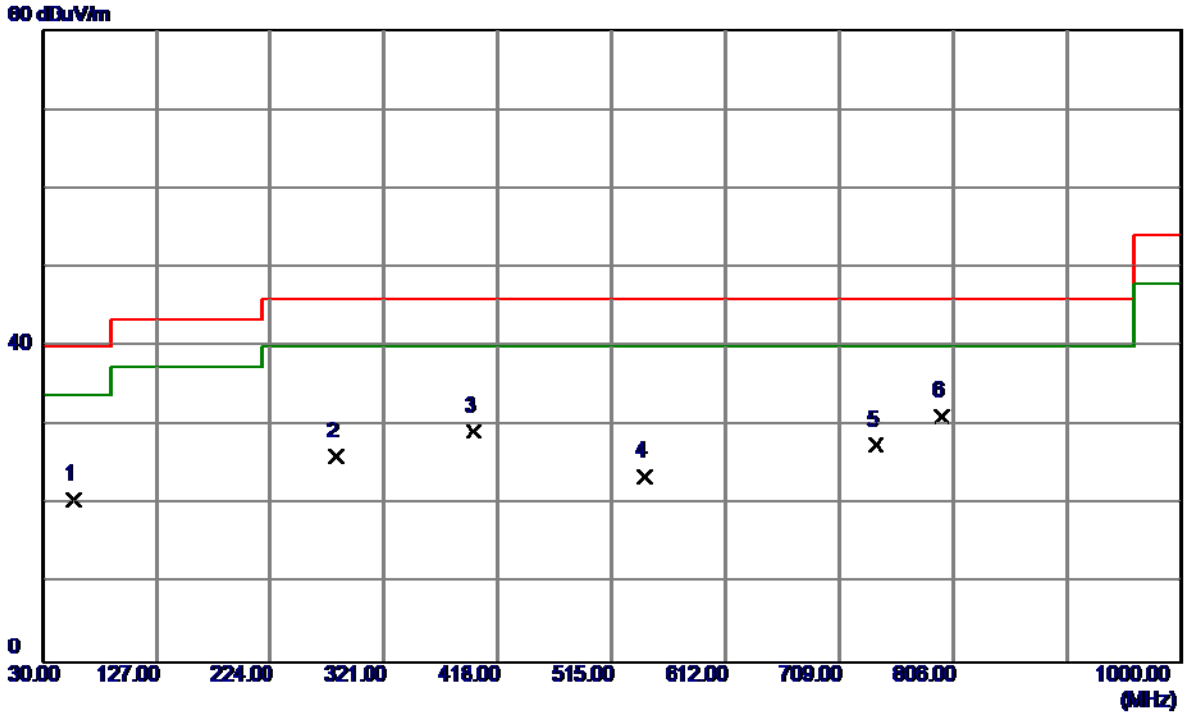
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	76.5600	41.28	-16.49	24.79	40.00	-15.21	Peak	
2	400.5400	37.83	-8.40	29.43	46.00	-16.57	Peak	
3	552.8300	31.13	-5.56	25.57	46.00	-20.43	Peak	
4	598.4200	33.21	-7.93	25.28	46.00	-20.72	Peak	
5	796.3000	30.42	-1.15	29.27	46.00	-16.73	Peak	
6 *	903.0000	30.32	1.33	31.65	46.00	-14.35	Peak	

Test Mode:	TX B MODE CHANNEL 06

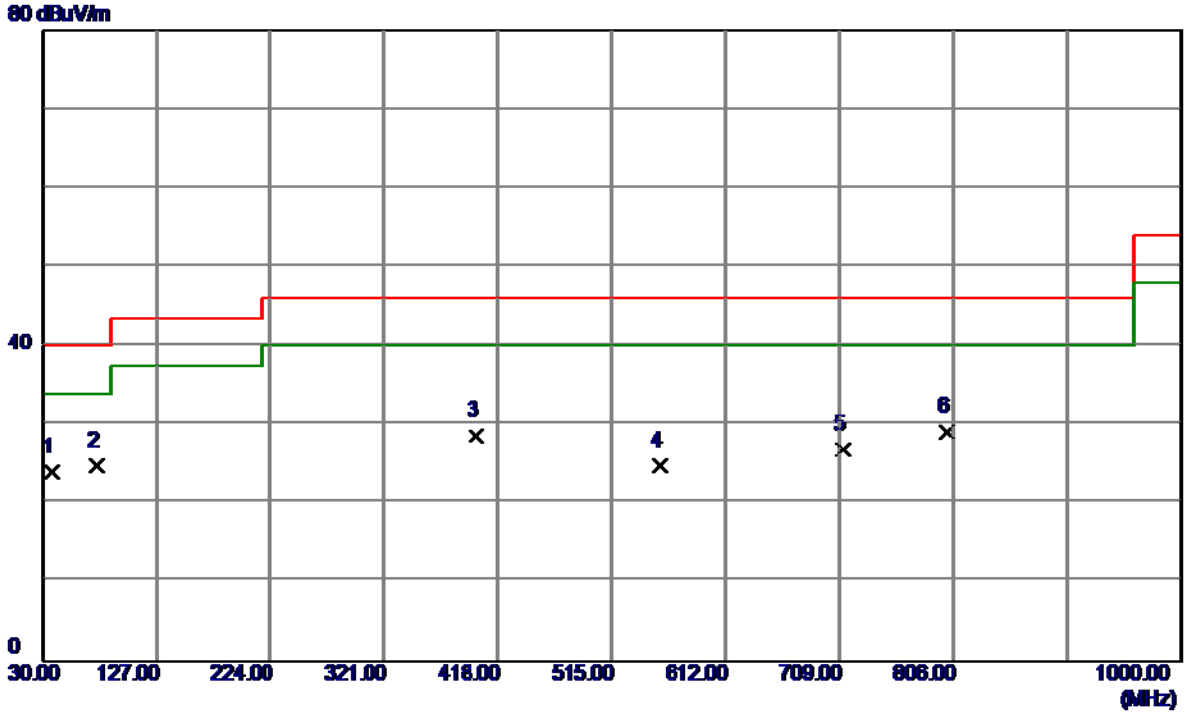
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	57.1600	34.29	-13.64	20.65	40.00	-19.35	Peak	
2	280.2600	38.50	12.39	26.11	46.00	19.89	Peak	
3	397.6300	37.79	-8.56	29.23	46.00	-16.77	Peak	
4	543.1300	29.70	-6.12	23.58	46.00	-22.42	Peak	
5	740.0400	30.67	-3.21	27.46	46.00	-18.54	Peak	
6 *	796.3000	32.39	-1.15	31.24	46.00	-14.76	Peak	

Test Mode:	TX B MODE CHANNEL 11

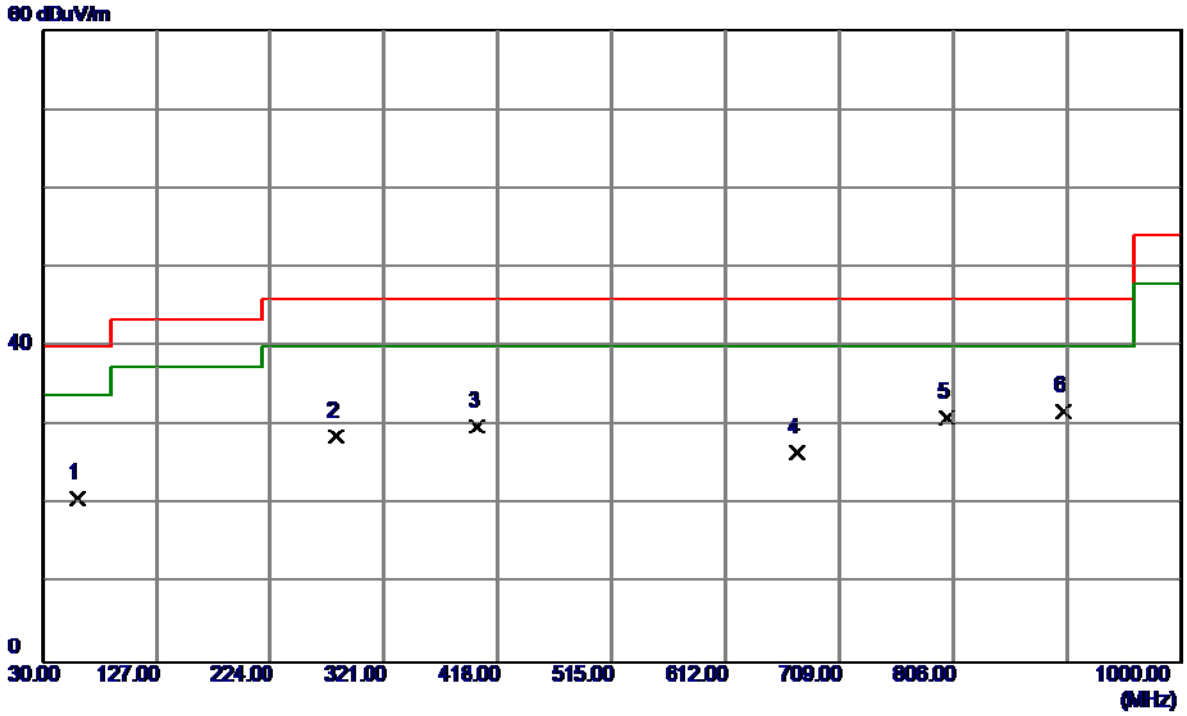
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	37.7599	38.10	-14.13	23.97	40.00	-16.03	Peak	
2 *	76.5600	41.33	-16.49	24.84	40.00	-15.16	Peak	
3	399.5700	37.08	-8.43	28.65	46.00	-17.35	Peak	
4	555.7400	30.58	-5.71	24.87	46.00	-21.13	Peak	
5	711.9099	30.15	-3.27	26.88	46.00	-19.12	Peak	
6	800.1800	30.18	-1.00	29.18	46.00	-16.82	Peak	

Test Mode:	TX B MODE CHANNEL 11

Horizontal

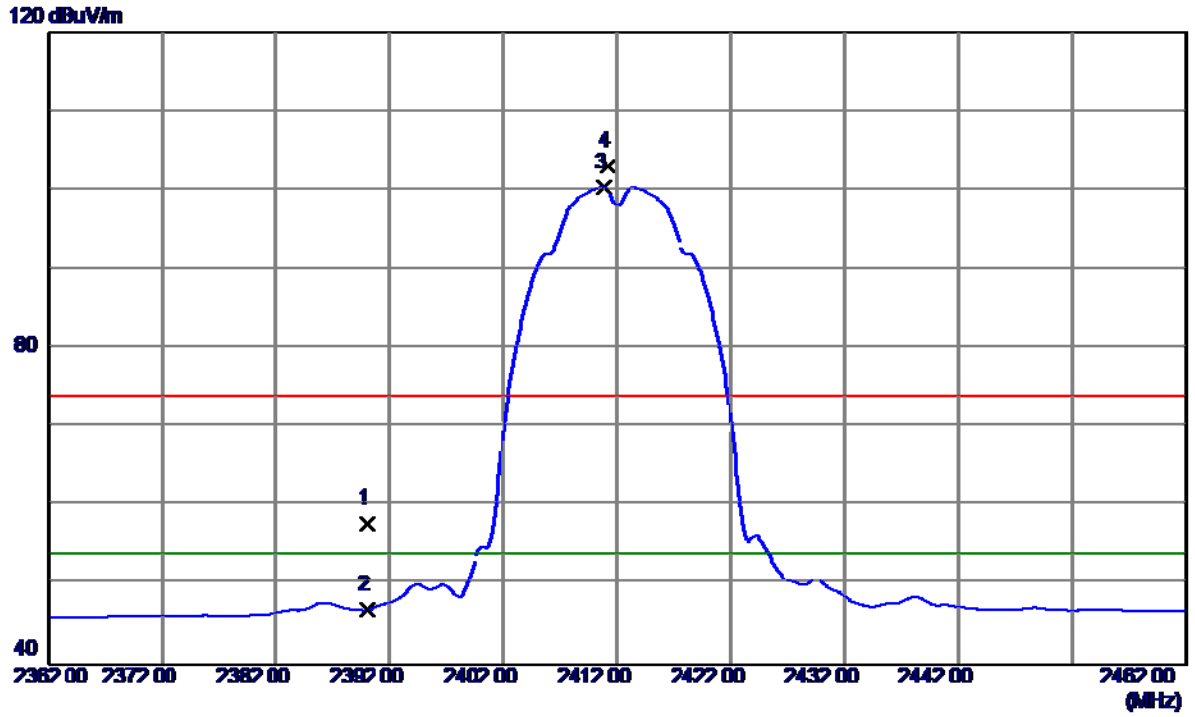


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	60.0700	34.60	-13.79	20.81	40.00	-19.19	Peak	
2	280.2600	40.96	12.39	28.57	46.00	17.43	Peak	
3	400.5400	38.32	-8.40	29.92	46.00	-16.08	Peak	
4	673.1100	30.95	-4.34	26.61	46.00	-19.39	Peak	
5	800.1800	32.02	-1.00	31.02	46.00	-14.98	Peak	
6 *	900.0900	30.44	1.33	31.77	46.00	-14.23	Peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

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

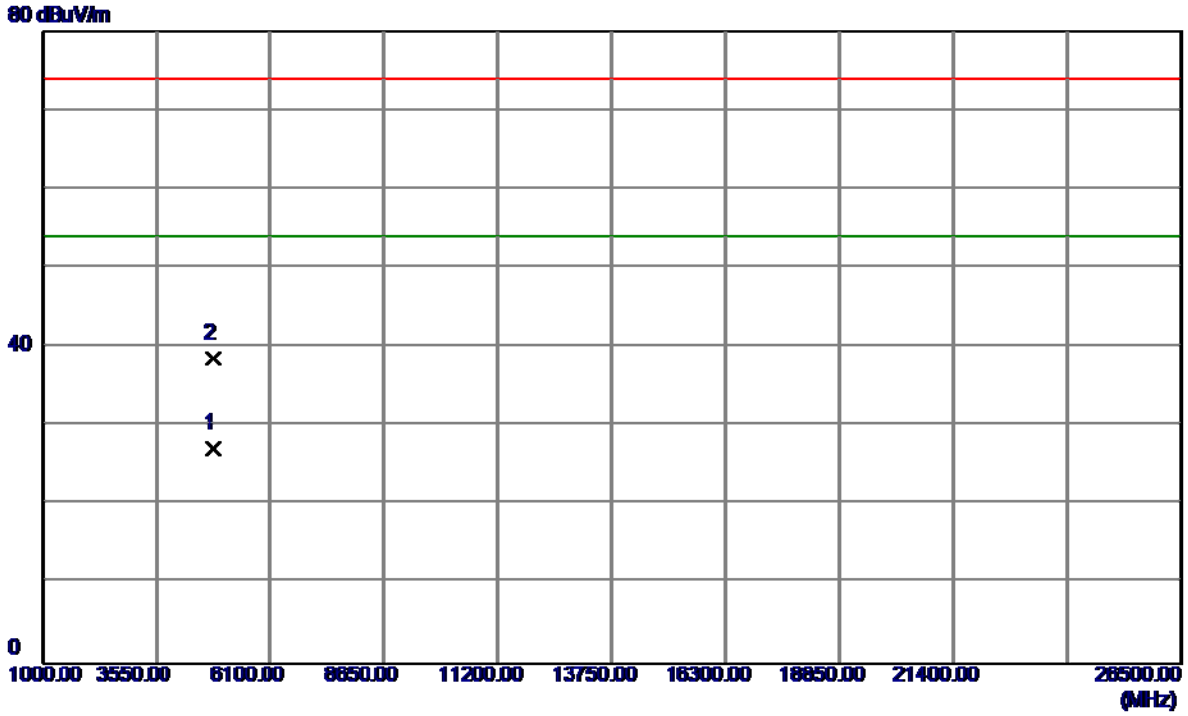
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	24.71	33.01	57.72	74.00	-16.28	Peak	
2	2390.0000	13.80	33.01	46.81	54.00	-7.19	AVG	
3 *	2410.9000	67.27	33.10	100.37	54.00	46.37	AVG	No Limit
4	2411.2000	69.99	33.10	103.09	74.00	29.09	Peak	No Limit

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

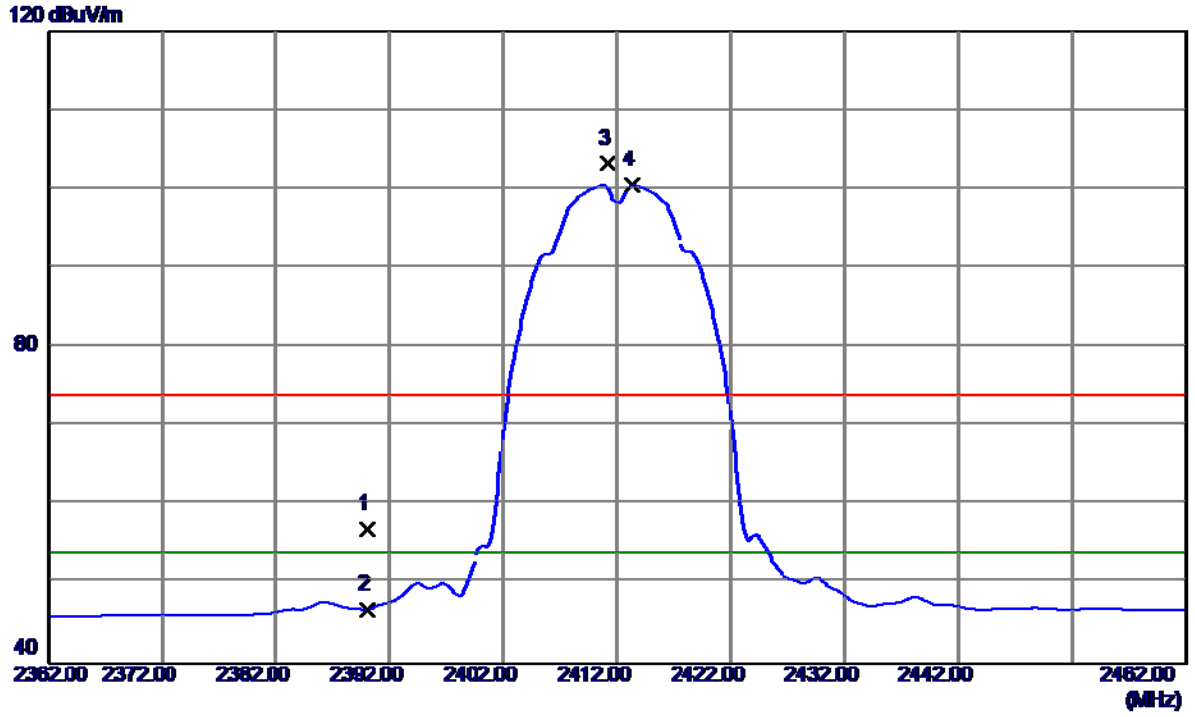
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823.9350	22.34	4.85	27.19	54.00	-26.81	AVG	
2	4824.0200	33.78	4.85	38.63	74.00	-35.37	Peak	

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

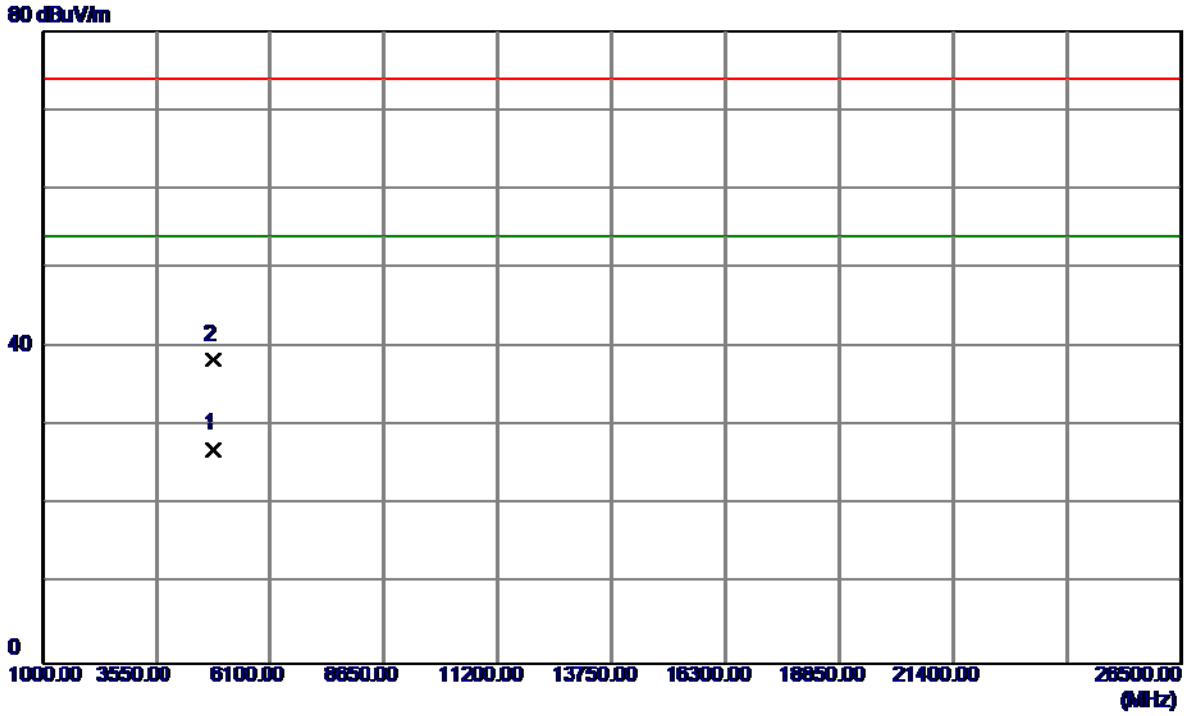
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	23.97	33.01	56.98	74.00	-17.02	Peak	
2	2390.0000	13.77	33.01	46.78	54.00	-7.22	AVG	
3	2411.2000	70.15	33.10	103.25	74.00	29.25	Peak	No Limit
4 *	2413.3000	67.39	33.11	100.50	54.00	46.50	AVG	No Limit

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

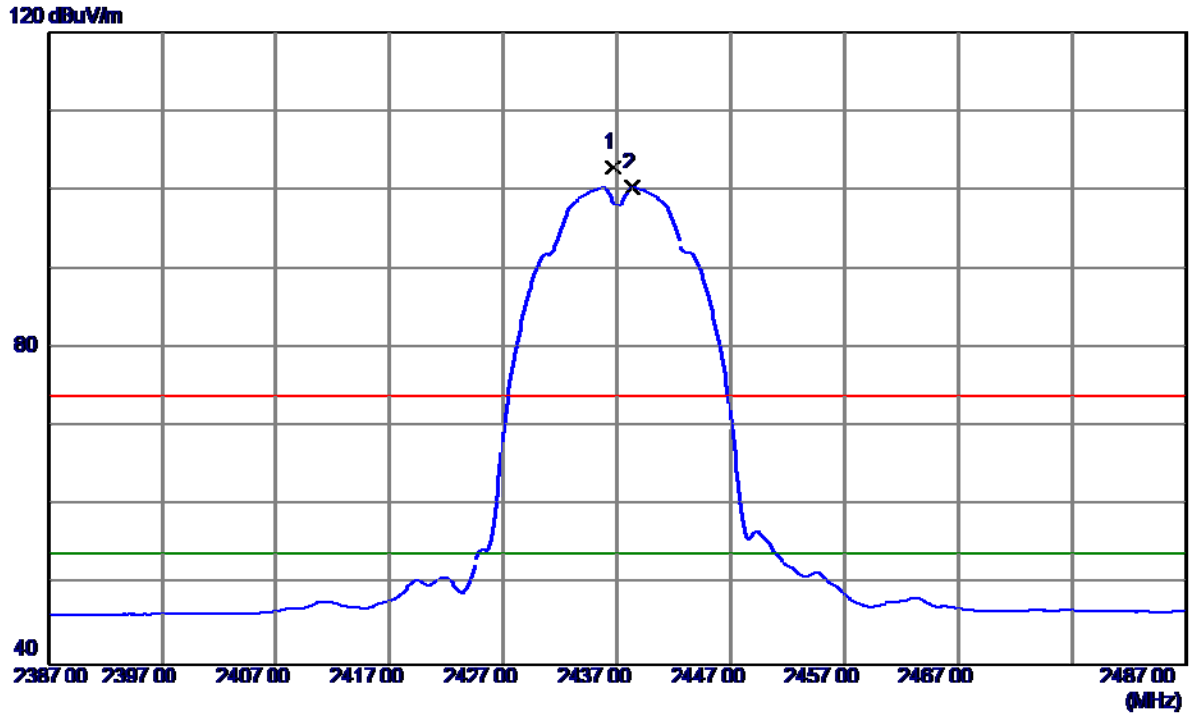
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4824.0650	22.27	4.85	27.12	54.00	-26.88	AVG	
2	4824.1050	33.50	4.85	38.35	74.00	-35.65	Peak	

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

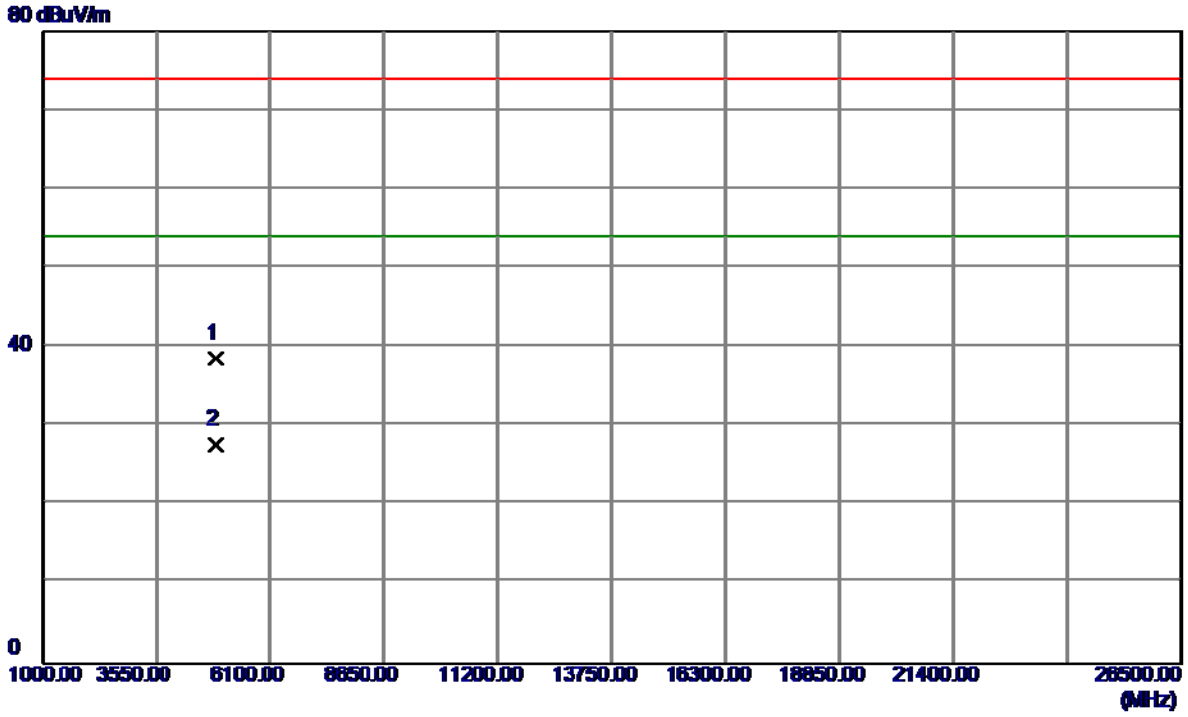
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2436.7000	69.72	33.21	102.93	74.00	28.93	Peak	No Limit
2 *	2438.3000	67.10	33.21	100.31	54.00	46.31	AVG	No Limit

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

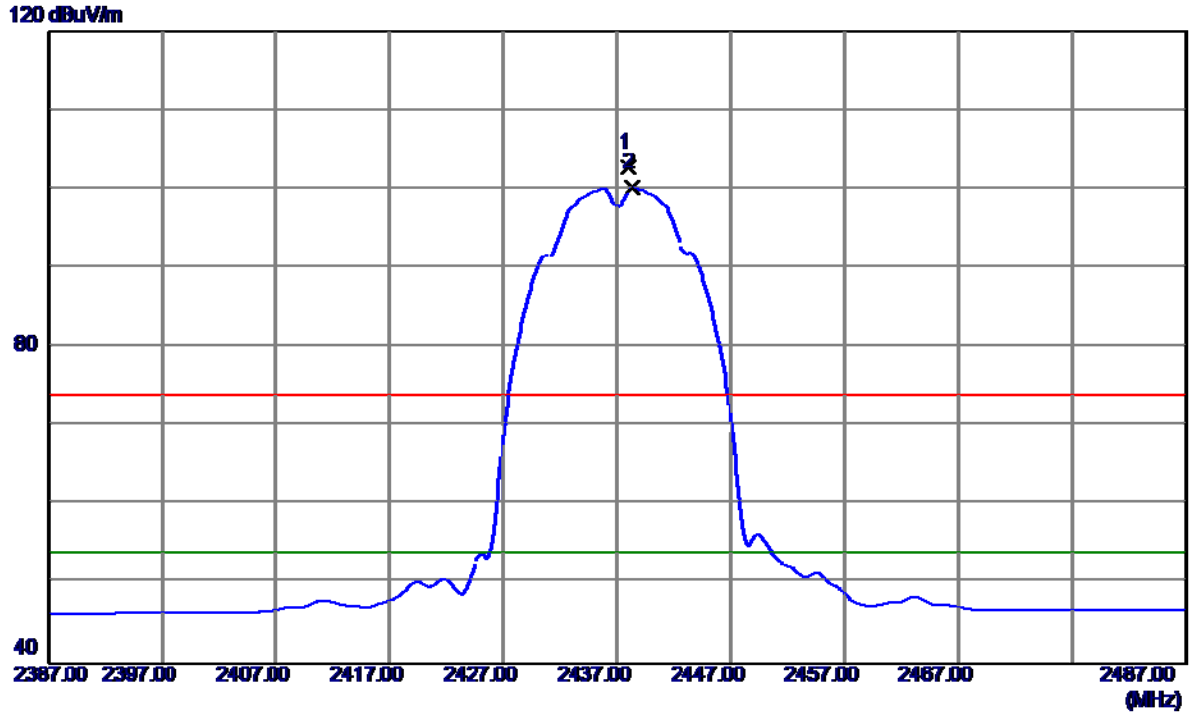
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0099	33.52	5.07	38.59	74.00	-35.41	Peak	
2 *	4874.0650	22.64	5.07	27.71	54.00	-26.29	AVG	

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

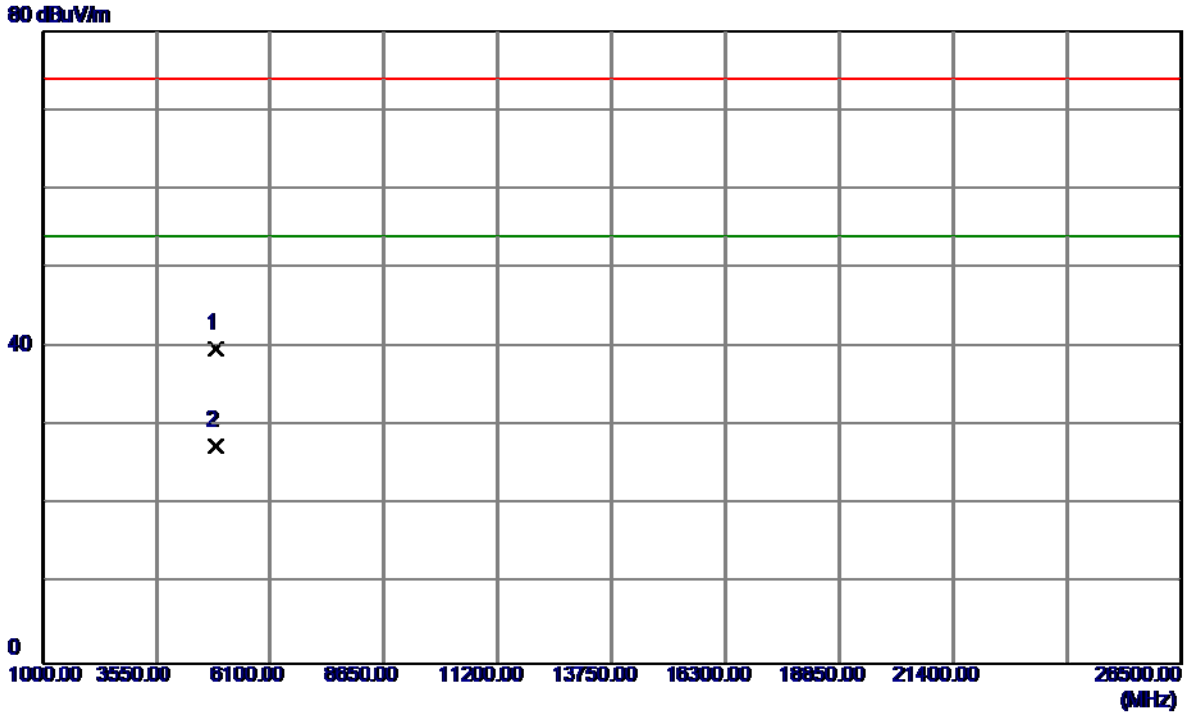
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2438.0000	69.50	33.21	102.71	74.00	28.71	Peak	No Limit
2 *	2438.3000	66.89	33.21	100.10	54.00	46.10	AVG	No Limit

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

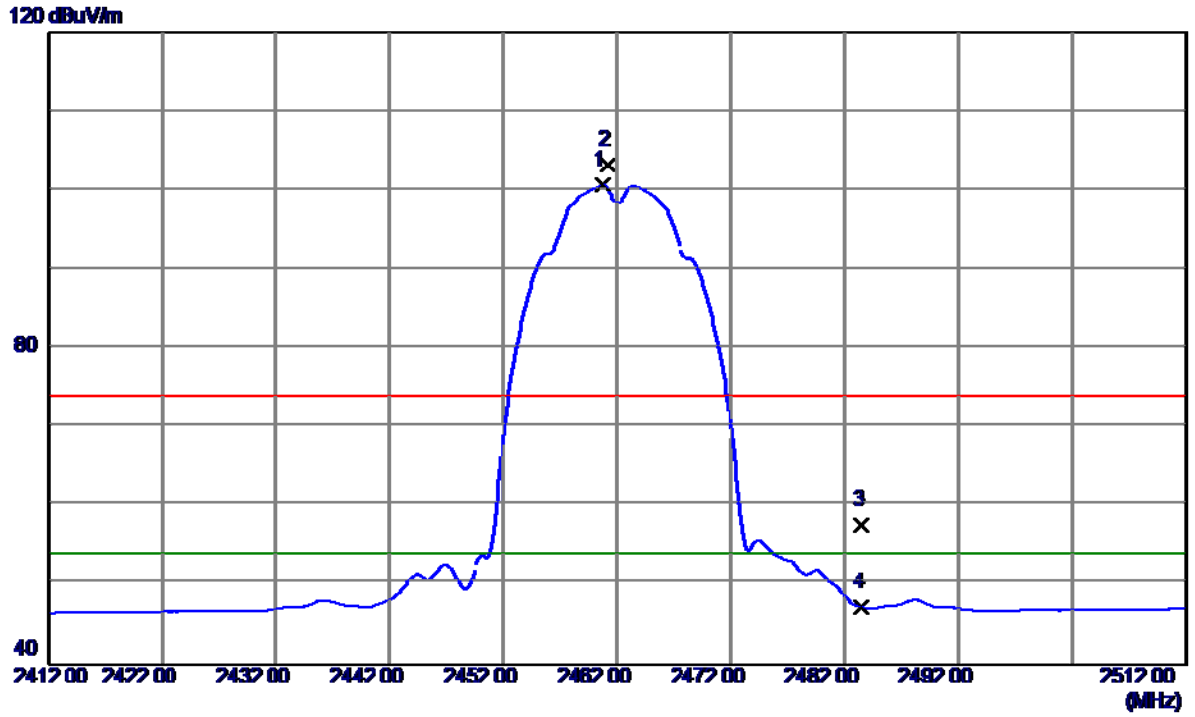
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873.9000	34.78	5.07	39.85	74.00	-34.15	Peak	
2 *	4873.9750	22.49	5.07	27.56	54.00	-26.44	AVG	

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

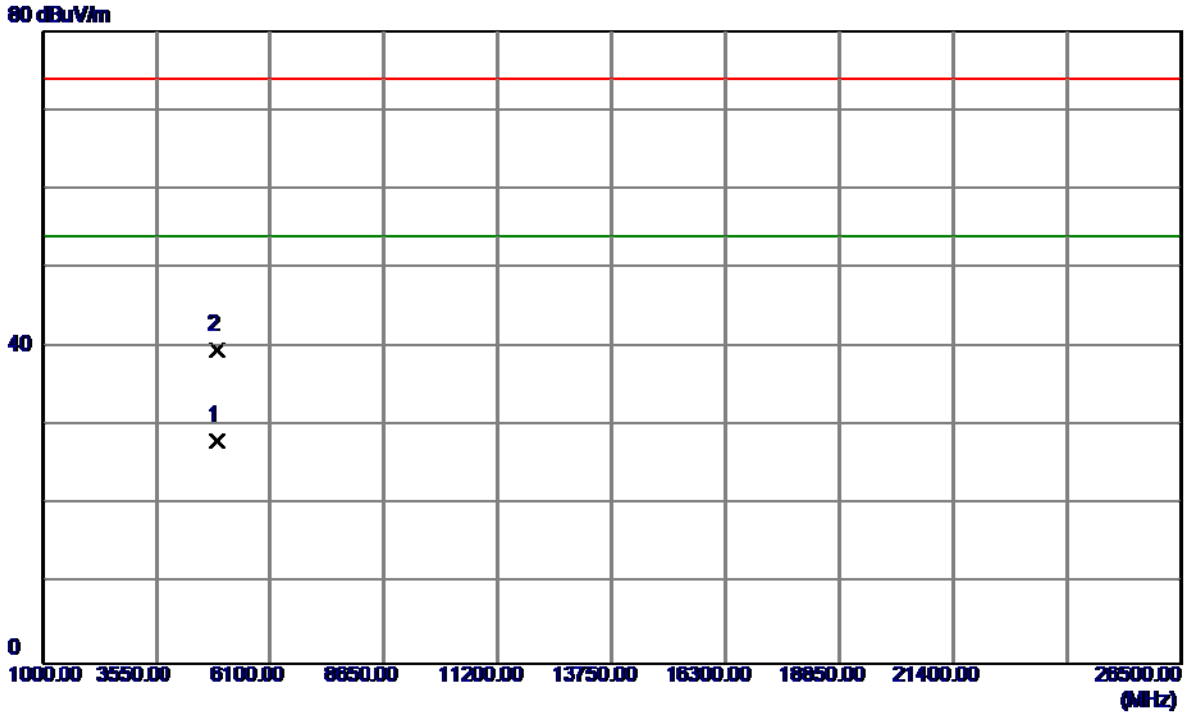
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.8000	67.26	33.31	100.57	54.00	46.57	AVG	No Limit
2	2461.2000	69.89	33.31	103.20	74.00	29.20	Peak	No Limit
3	2483.5000	24.18	33.40	57.58	74.00	-16.42	Peak	
4	2483.5000	13.73	33.40	47.13	54.00	-6.87	AVG	

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

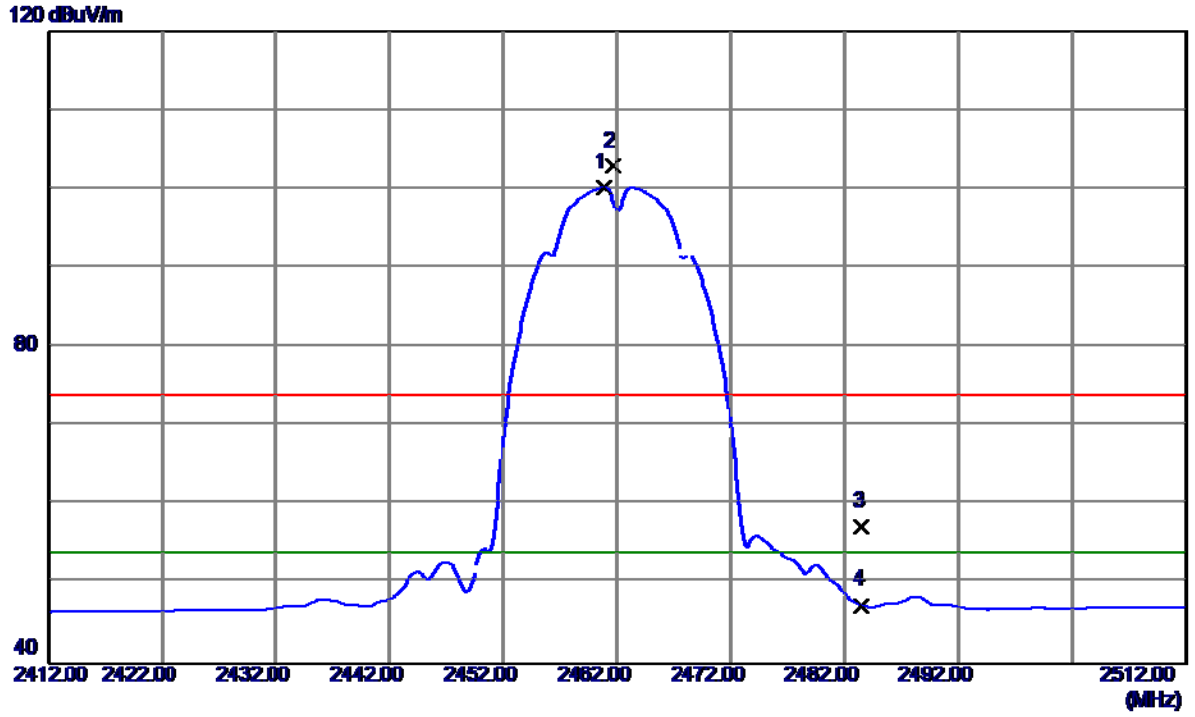
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4924.0550	22.88	5.28	28.16	54.00	-25.84	AVG	
2	4924.0700	34.45	5.28	39.73	74.00	-34.27	Peak	

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

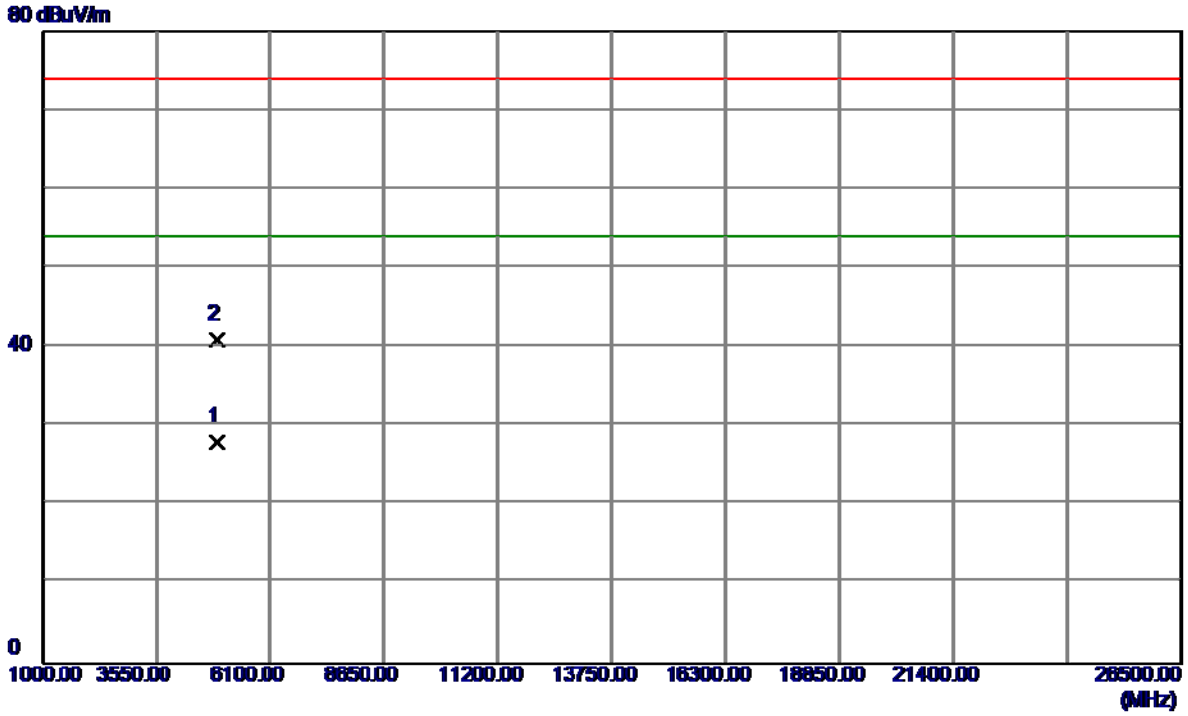
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.9000	66.90	33.31	100.21	54.00	46.21	AVG	No Limit
2	2461.7000	69.58	33.31	102.89	74.00	28.89	Peak	No Limit
3	2483.5000	23.83	33.40	57.23	74.00	-16.77	Peak	
4	2483.5000	13.88	33.40	47.28	54.00	-6.72	AVG	

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

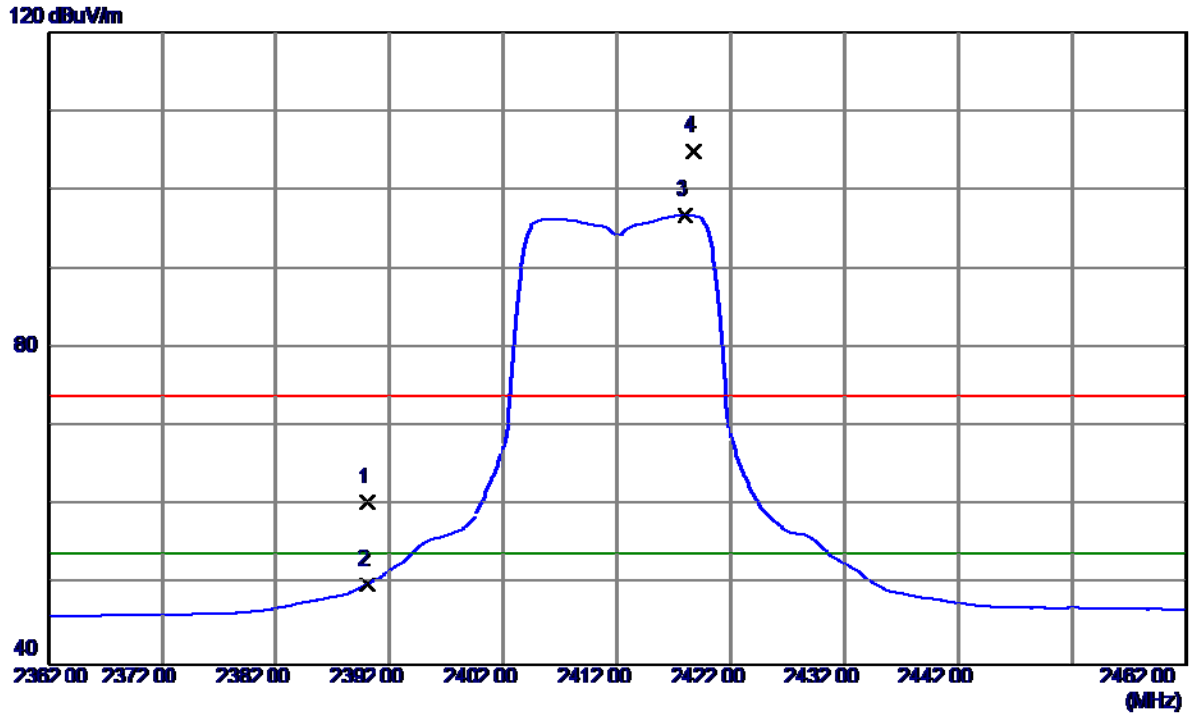
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.9650	22.70	5.28	27.98	54.00	-26.02	AVG	
2	4924.0750	35.64	5.28	40.92	74.00	-33.08	Peak	

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

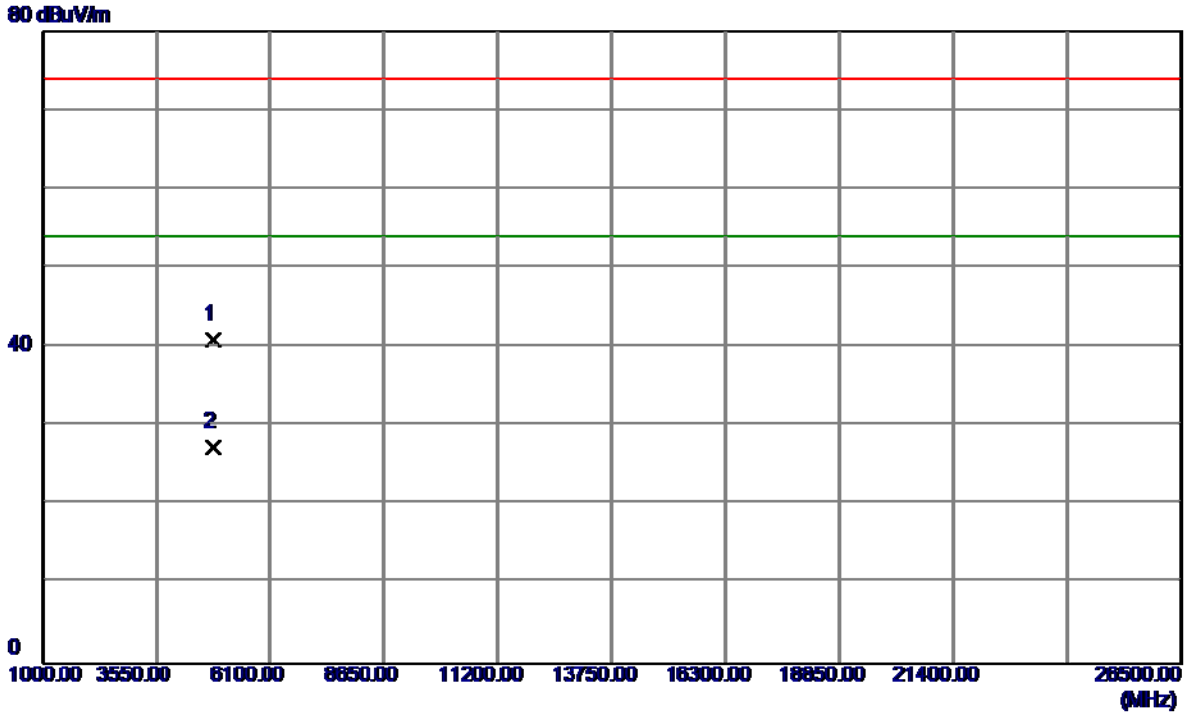
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.47	33.01	60.48	74.00	-13.52	Peak	
2	2390.0000	17.08	33.01	50.09	54.00	-3.91	AVG	
3 *	2418.0000	63.73	33.13	96.86	54.00	42.86	AVG	No Limit
4	2418.8000	71.80	33.13	104.93	74.00	30.93	Peak	No Limit

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

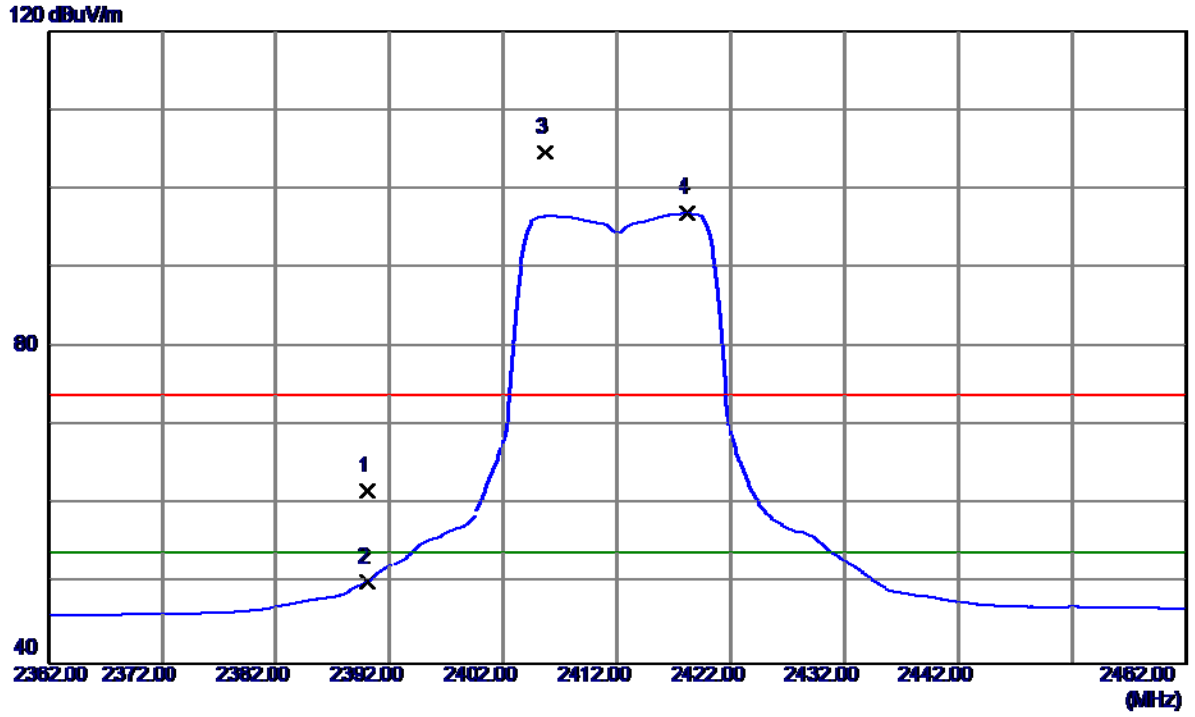
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.9200	36.16	4.85	41.01	74.00	-32.99	Peak	
2 *	4823.9450	22.44	4.85	27.29	54.00	-26.71	AVG	

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

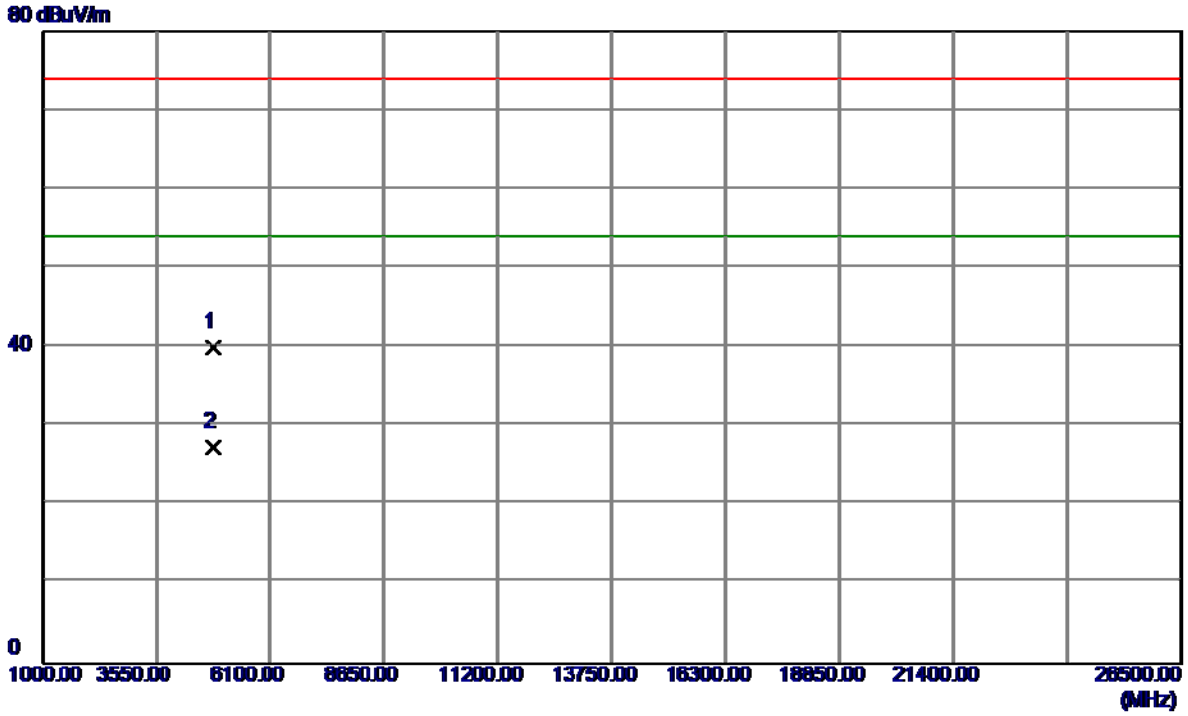
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.78	33.01	61.79	74.00	-12.21	Peak	
2	2390.0000	17.27	33.01	50.28	54.00	-3.72	AVG	
3	2405.7000	71.62	33.08	104.70	74.00	30.70	Peak	No Limit
4 *	2418.2000	63.78	33.13	96.91	54.00	42.91	AVG	No Limit

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

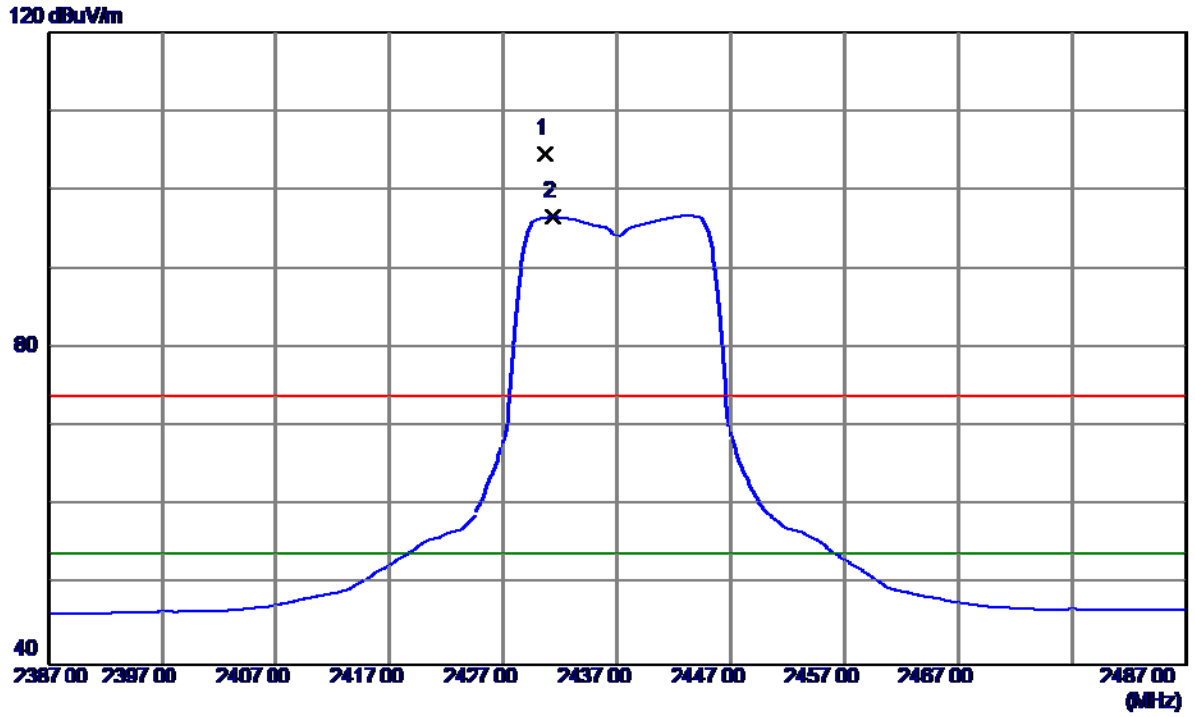
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.8300	35.20	4.85	40.05	74.00	-33.95	Peak	
2 *	4823.9250	22.48	4.85	27.33	54.00	-26.67	AVG	

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

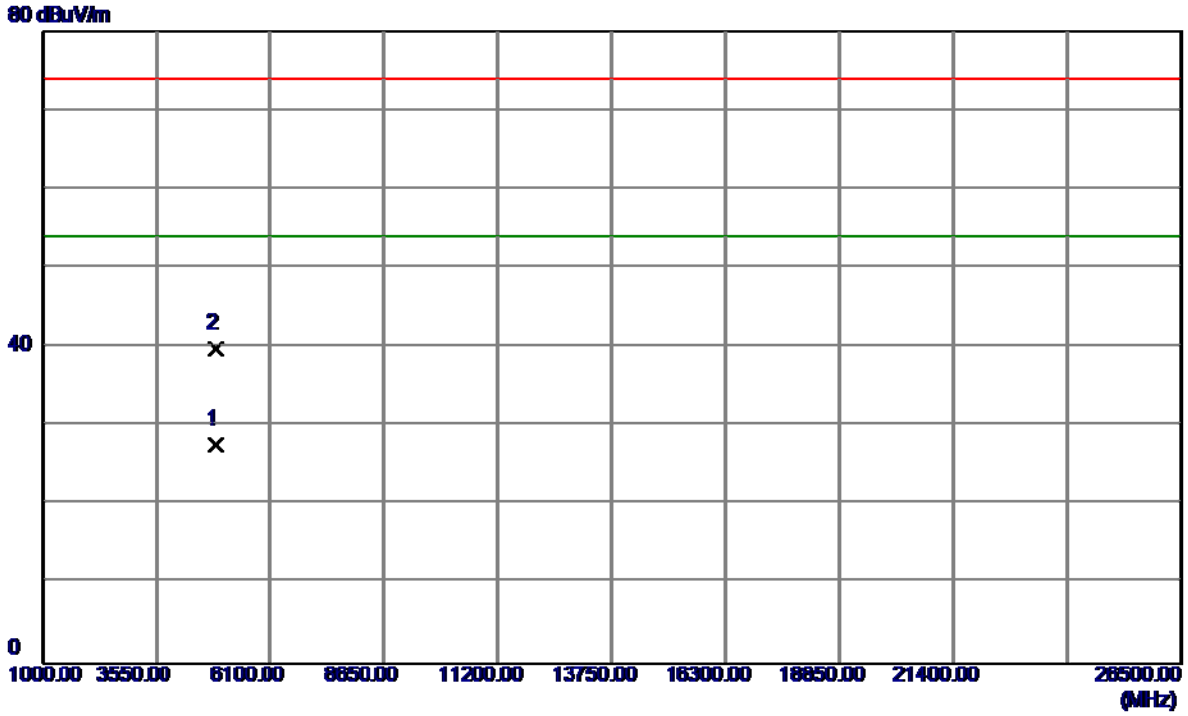
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2430.7000	71.45	33.18	104.63	74.00	30.63	Peak	No Limit
2 *	2431.3000	63.40	33.18	96.58	54.00	42.58	AVG	No Limit

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

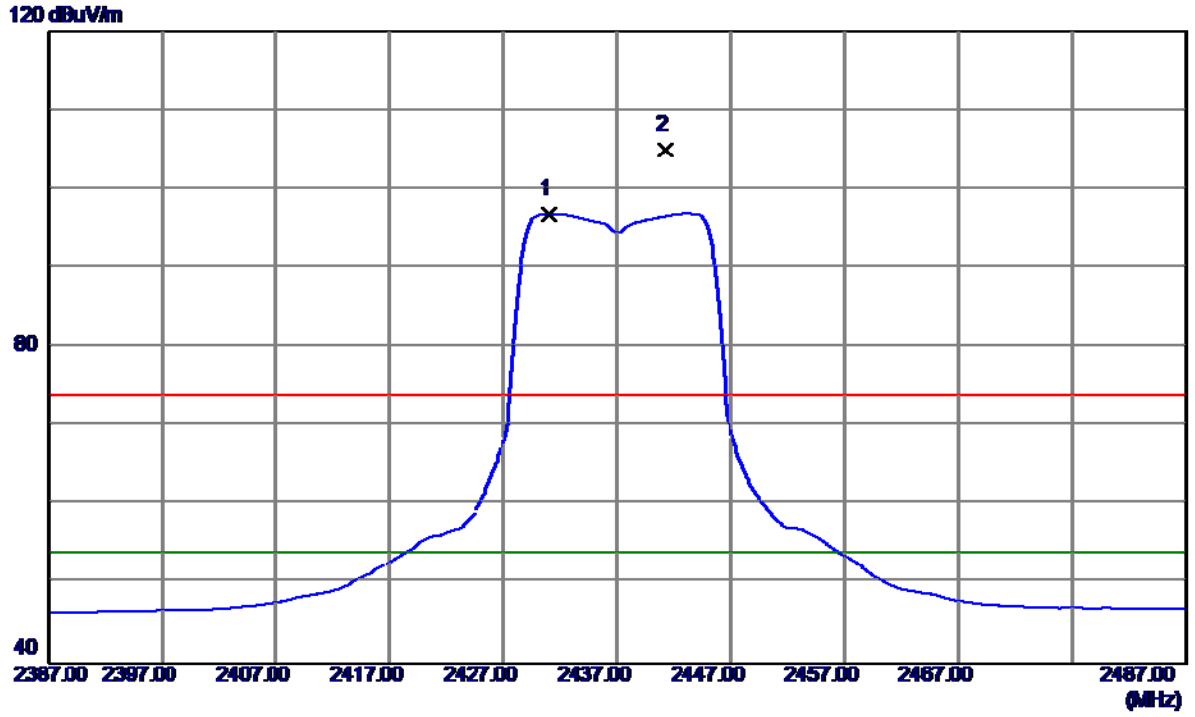
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.9550	22.63	5.07	27.70	54.00	-26.30	AVG	
2	4874.0250	34.76	5.07	39.83	74.00	-34.17	Peak	

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

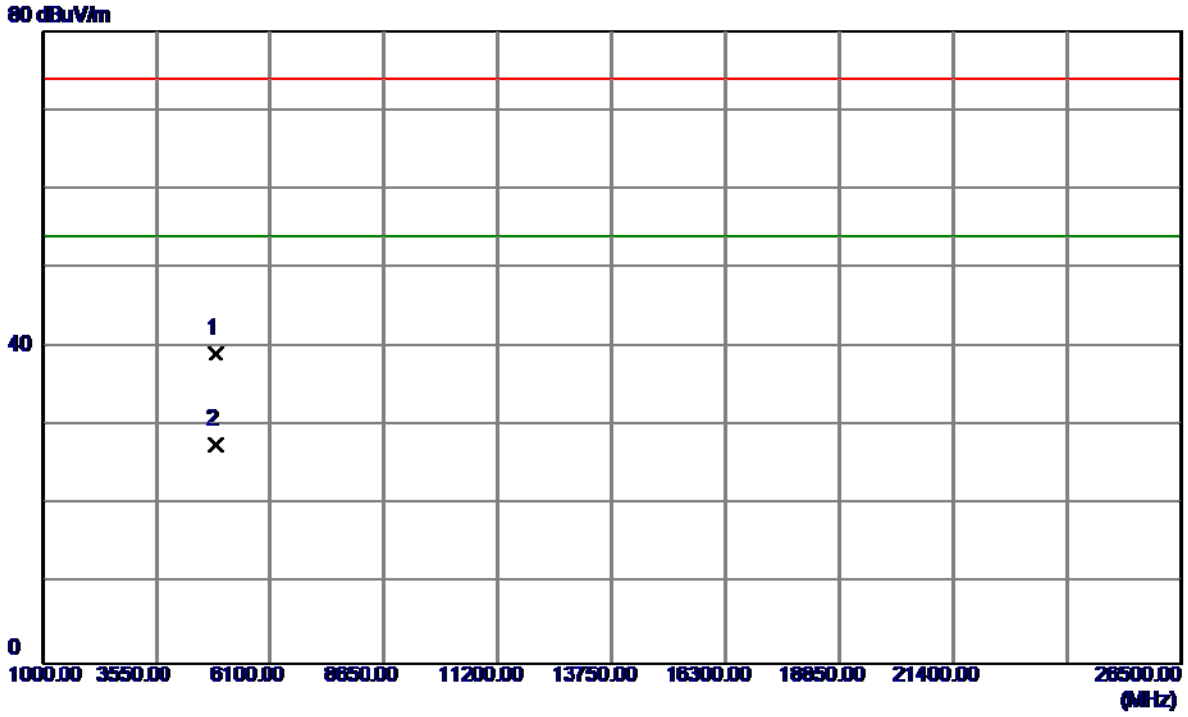
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2431.0000	63.67	33.18	96.85	54.00	42.85	AVG	No Limit
2	2441.2000	71.73	33.22	104.95	74.00	30.95	Peak	No Limit

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

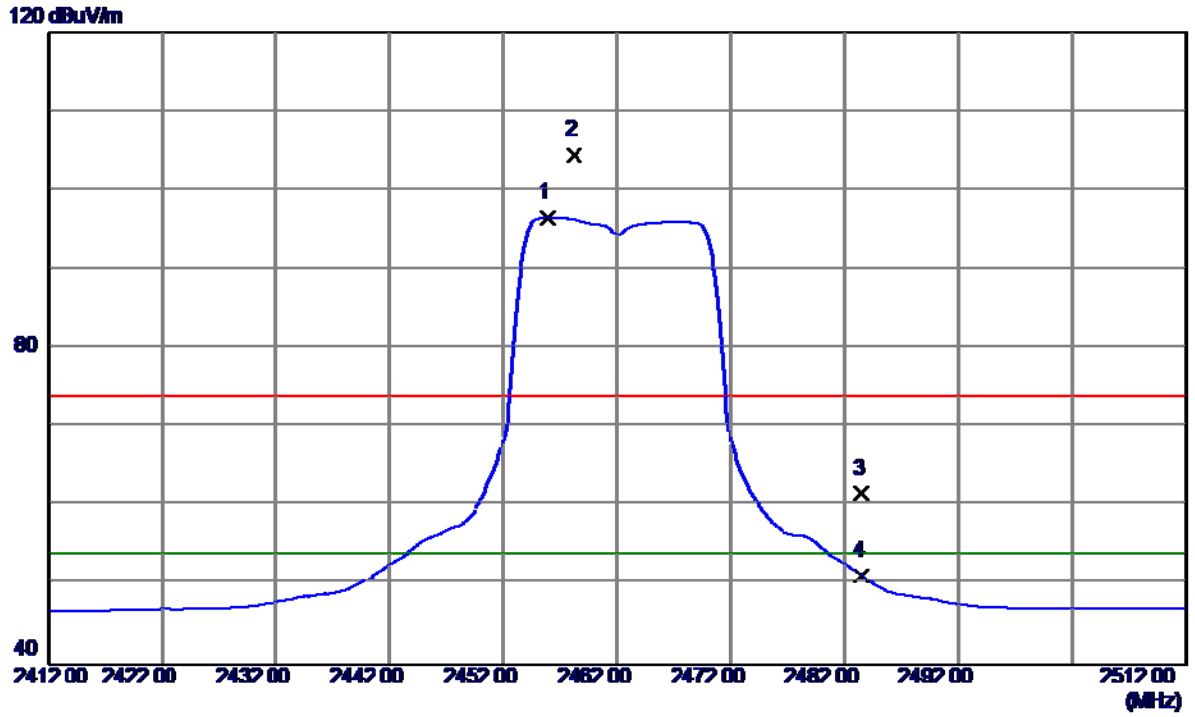
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0250	34.06	5.07	39.13	74.00	-34.87	Peak	
2 *	4874.0400	22.58	5.07	27.65	54.00	-26.35	AVG	

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

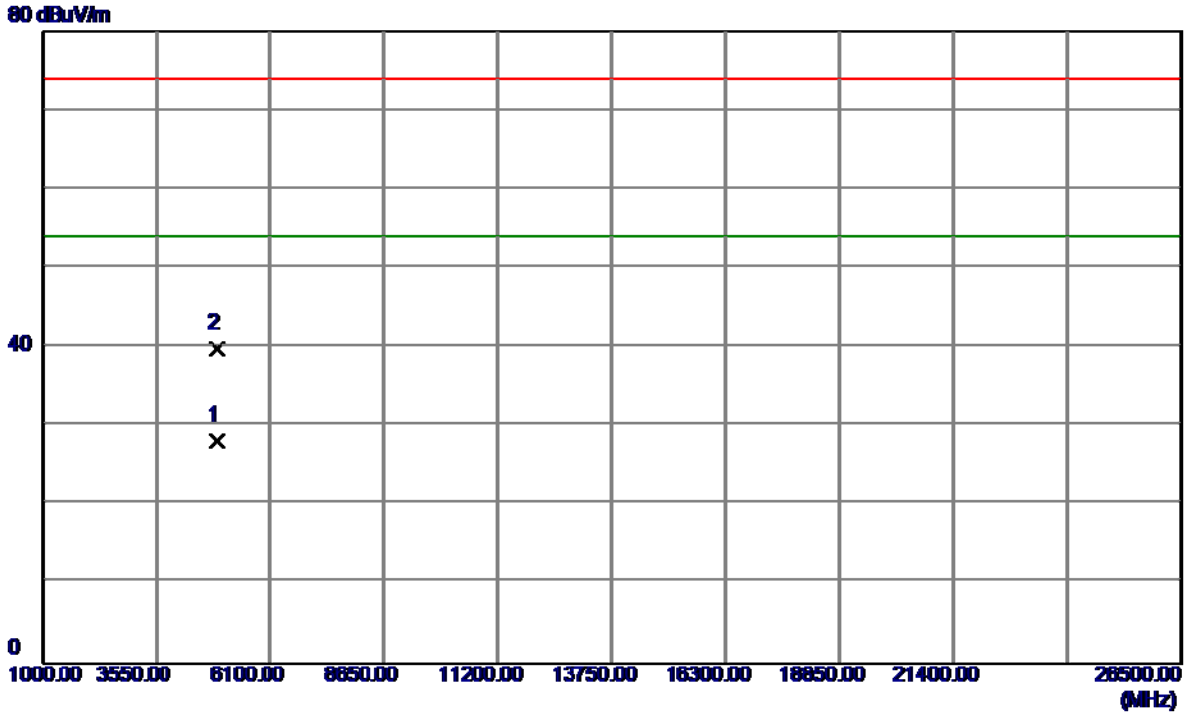
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2455.9000	63.25	33.29	96.54	54.00	42.54	AVG	No Limit
2	2458.2000	71.19	33.30	104.49	74.00	30.49	Peak	No Limit
3	2483.5000	28.14	33.40	61.54	74.00	-12.46	Peak	
4	2483.5000	17.87	33.40	51.27	54.00	-2.73	AVG	

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

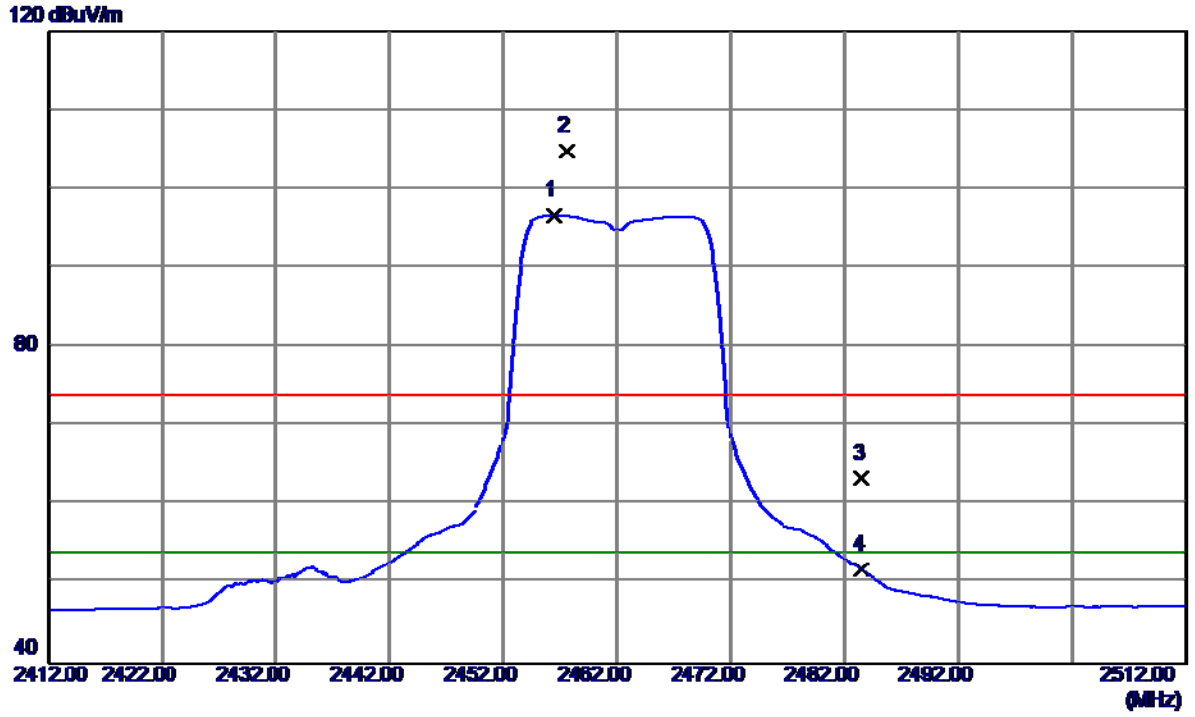
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.9600	22.91	5.28	28.19	54.00	-25.81	AVG	
2	4924.0500	34.64	5.28	39.92	74.00	-34.08	Peak	

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

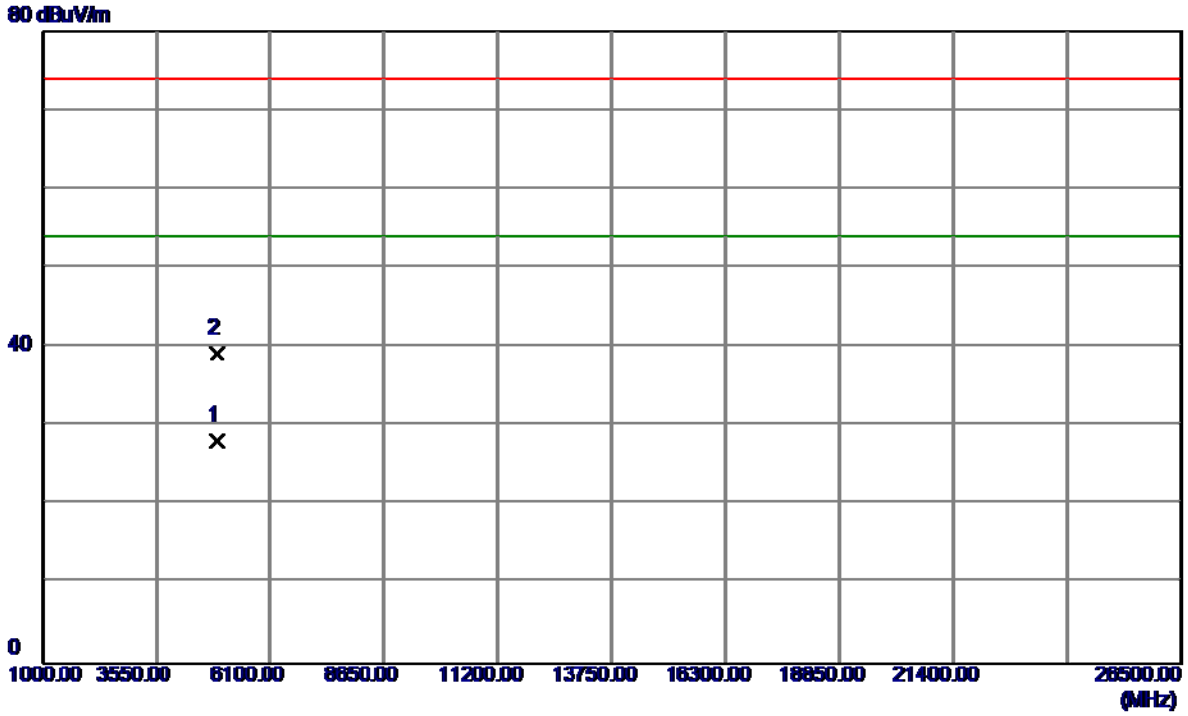
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2456.4000	63.42	33.29	96.71	54.00	42.71	AVG	No Limit
2	2457.6000	71.46	33.29	104.75	74.00	30.75	Peak	No Limit
3	2483.5000	30.03	33.40	63.43	74.00	-10.57	Peak	
4	2483.5000	18.38	33.40	51.78	54.00	-2.22	AVG	

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

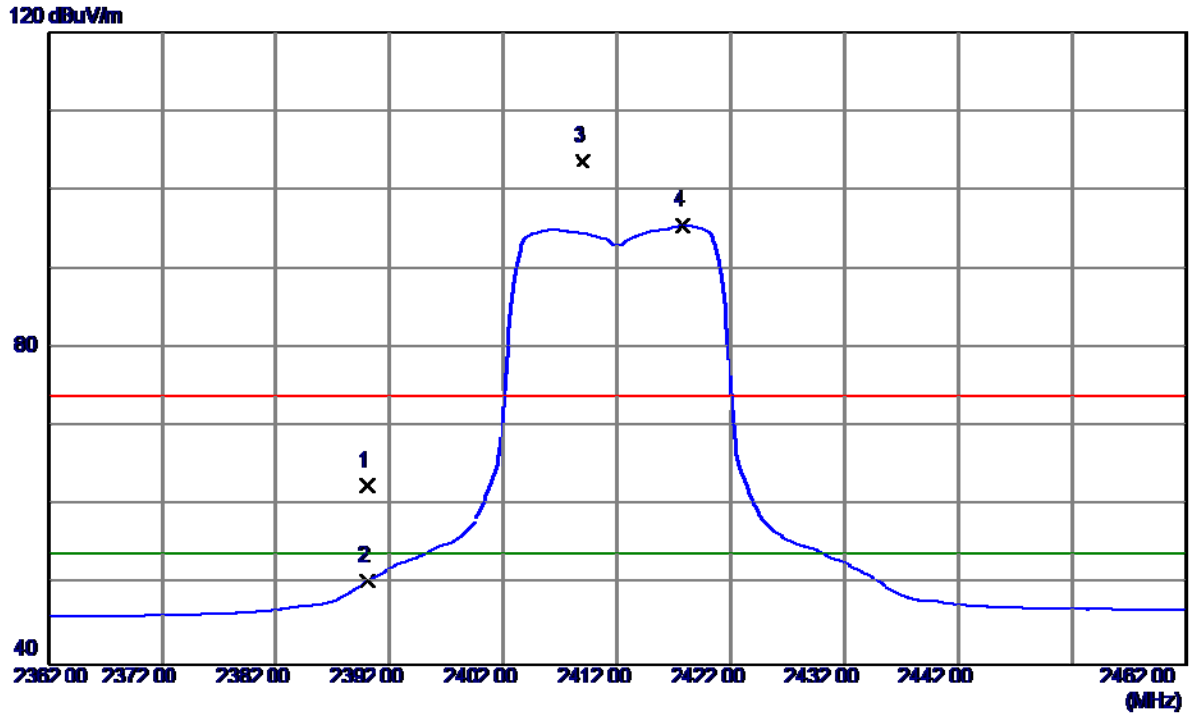
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.9650	22.85	5.28	28.13	54.00	-25.87	AVG	
2	4924.0850	33.88	5.28	39.16	74.00	-34.84	Peak	

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

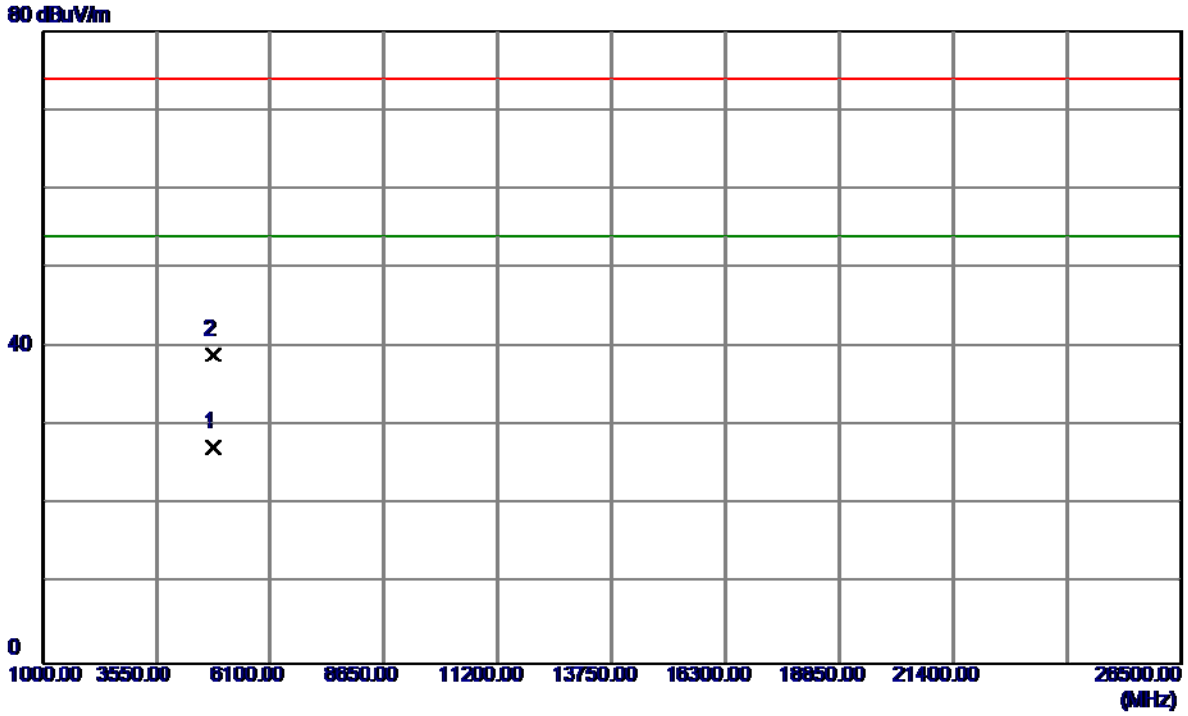
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	29.59	33.01	62.60	74.00	-11.40	Peak	
2	2390.0000	17.56	33.01	50.57	54.00	-3.43	AVG	
3	2409.0000	70.55	33.09	103.64	74.00	29.64	Peak	No Limit
4 *	2417.8000	62.43	33.13	95.56	54.00	41.56	AVG	No Limit

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

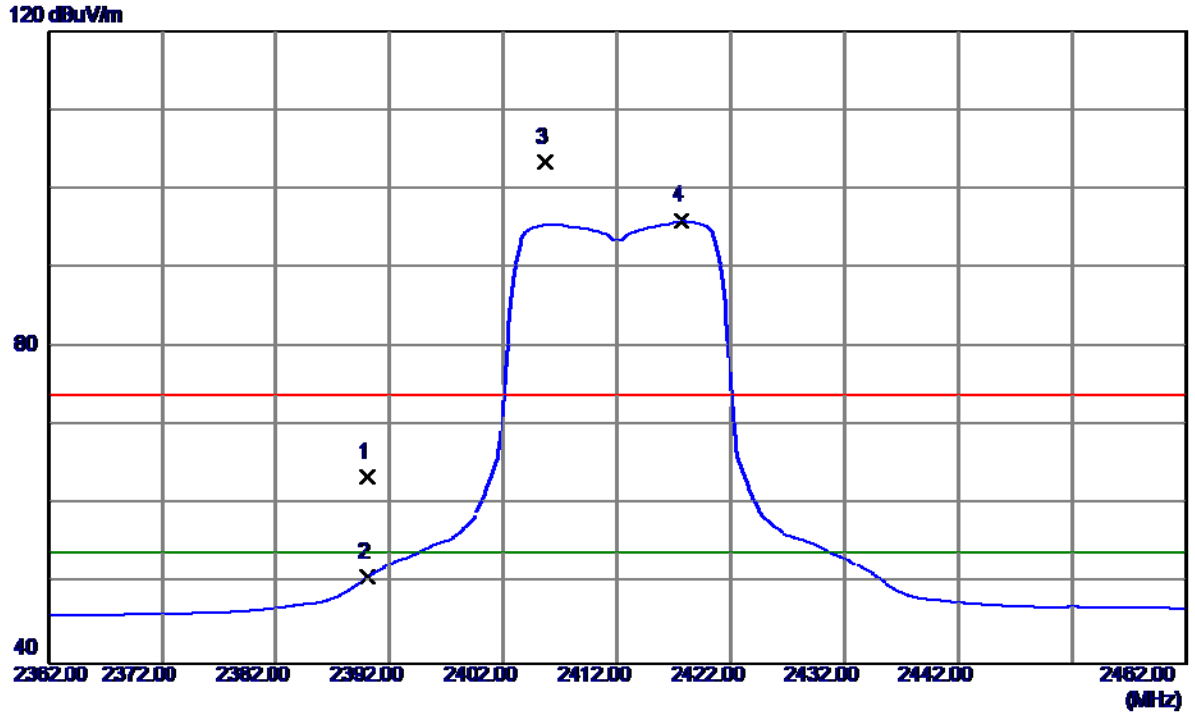
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823.9400	22.47	4.85	27.32	54.00	-26.68	AVG	
2	4823.9800	34.19	4.85	39.04	74.00	-34.96	Peak	

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

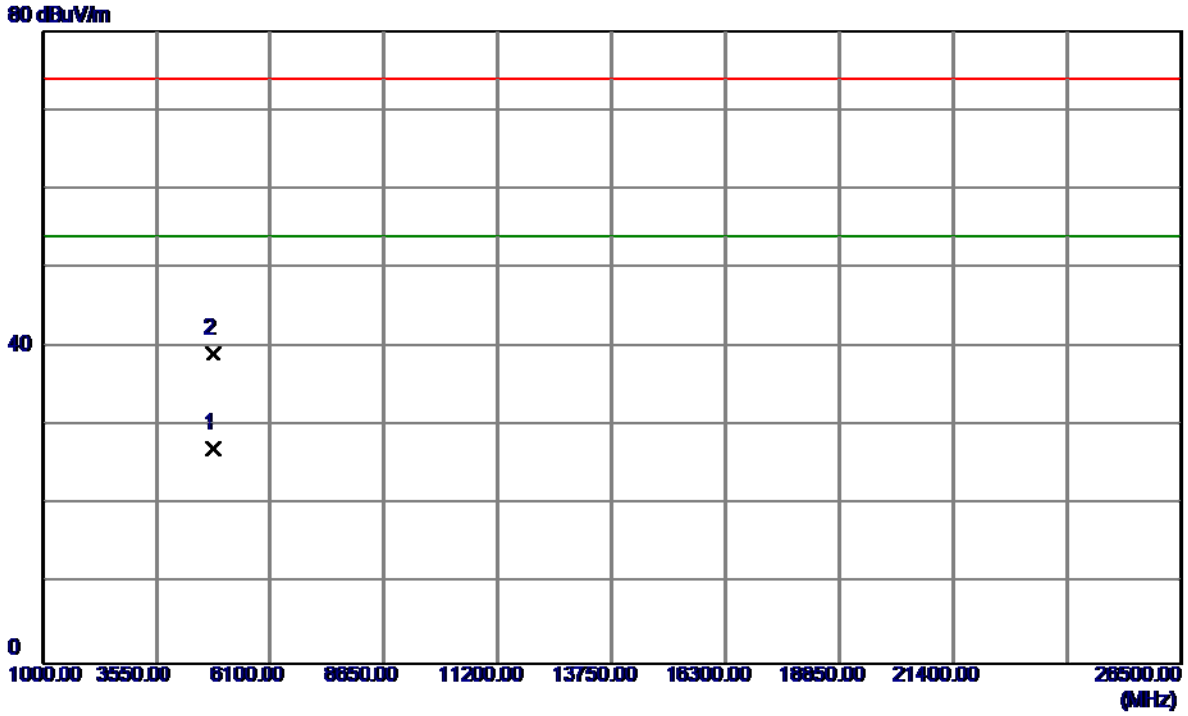
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	30.44	33.01	63.45	74.00	-10.55	Peak	
2	2390.0000	17.87	33.01	50.88	54.00	-3.12	AVG	
3	2405.7000	70.29	33.08	103.37	74.00	29.37	Peak	No Limit
4 *	2417.7000	62.83	33.13	95.96	54.00	41.96	AVG	No Limit

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

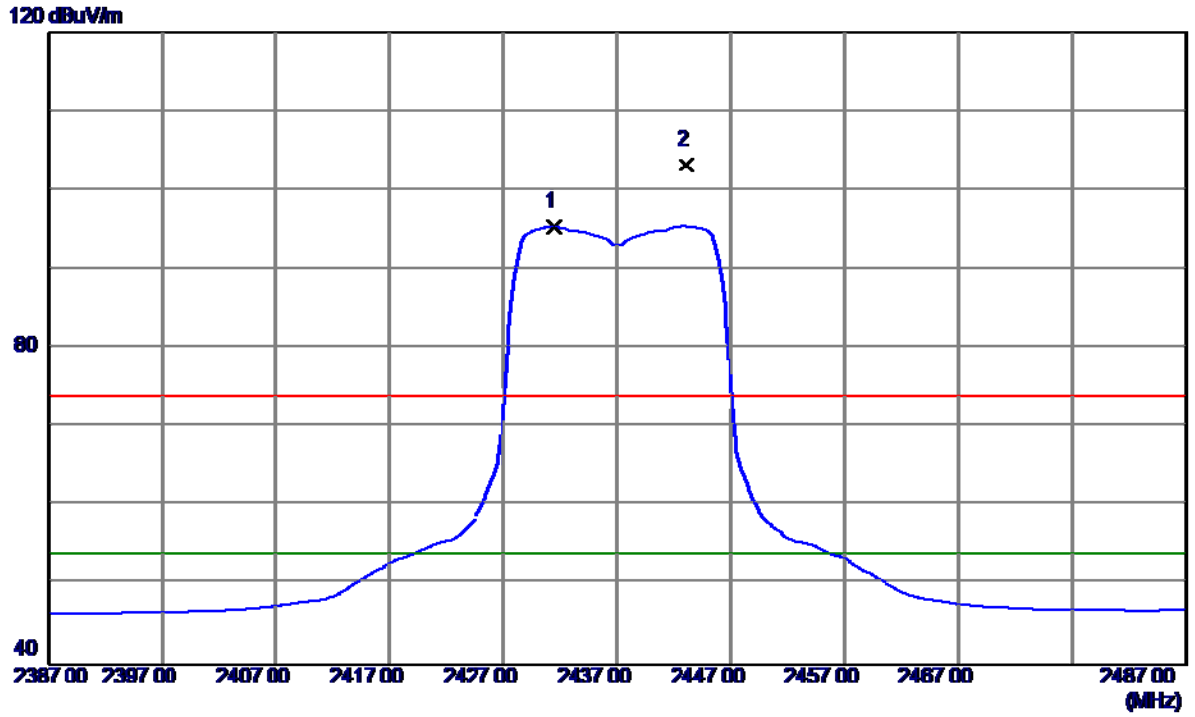
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823.9450	22.28	4.85	27.13	54.00	-26.87	AVG	
2	4824.1100	34.31	4.85	39.16	74.00	-34.84	Peak	

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

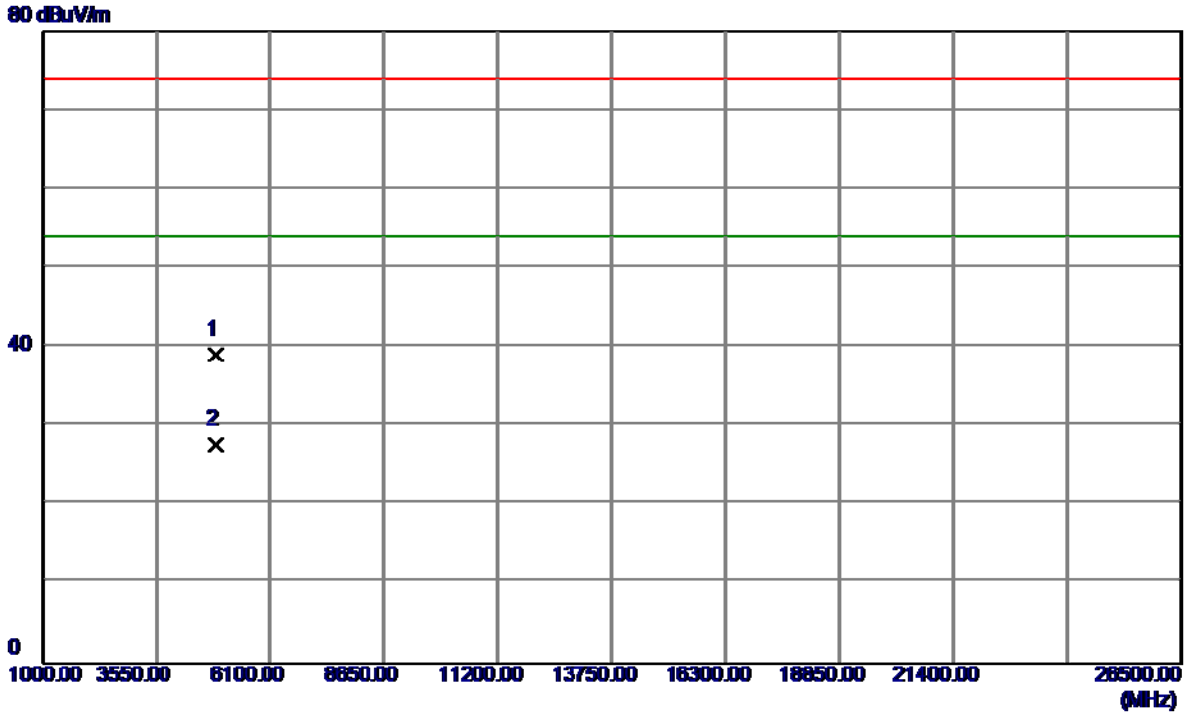
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2431.4000	62.21	33.18	95.39	54.00	41.39	AVG	No Limit
2	2443.1000	70.02	33.23	103.25	74.00	29.25	Peak	No Limit

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

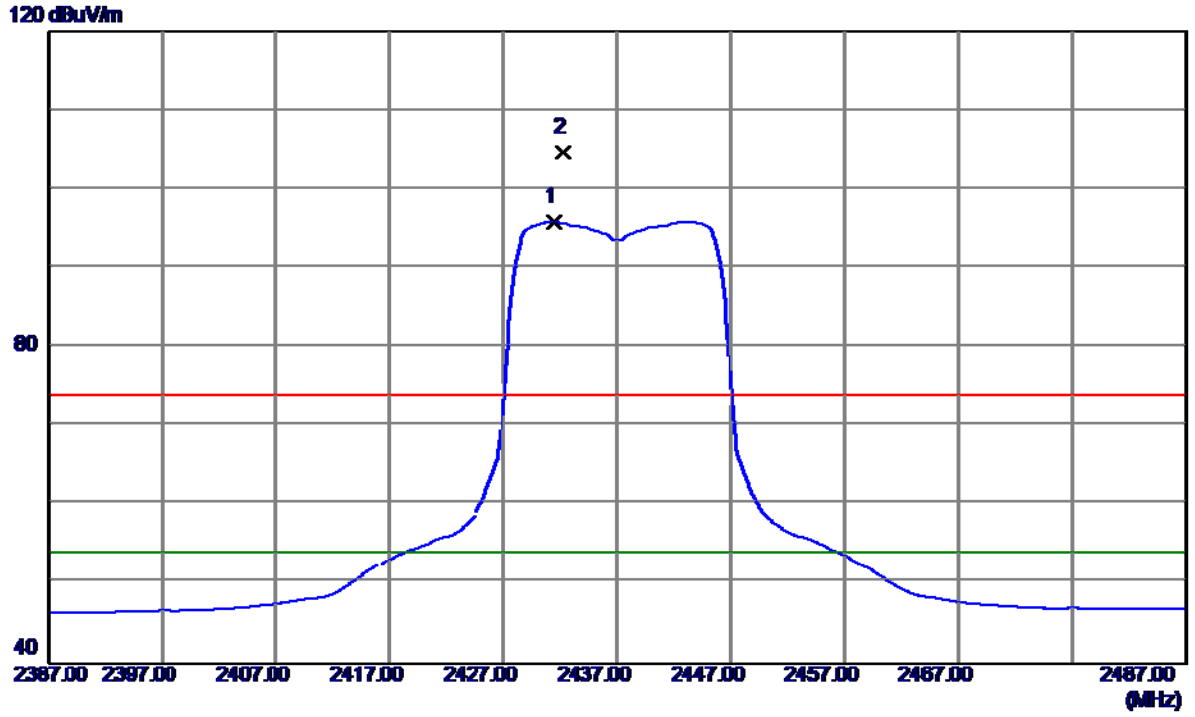
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0600	33.98	5.07	39.05	74.00	-34.95	Peak	
2 *	4874.0600	22.67	5.07	27.74	54.00	-26.26	AVG	

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

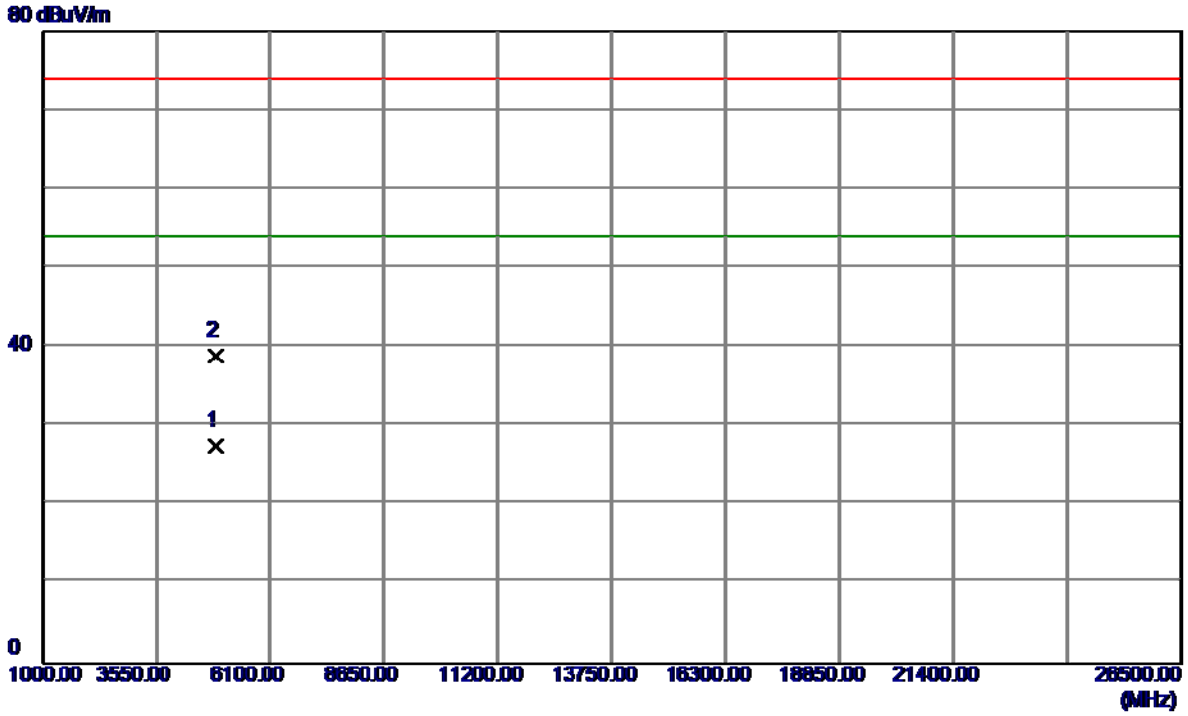
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2431.4000	62.70	33.18	95.88	54.00	41.88	AVG	No Limit
2	2432.2000	71.40	33.19	104.59	74.00	30.59	Peak	No Limit

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

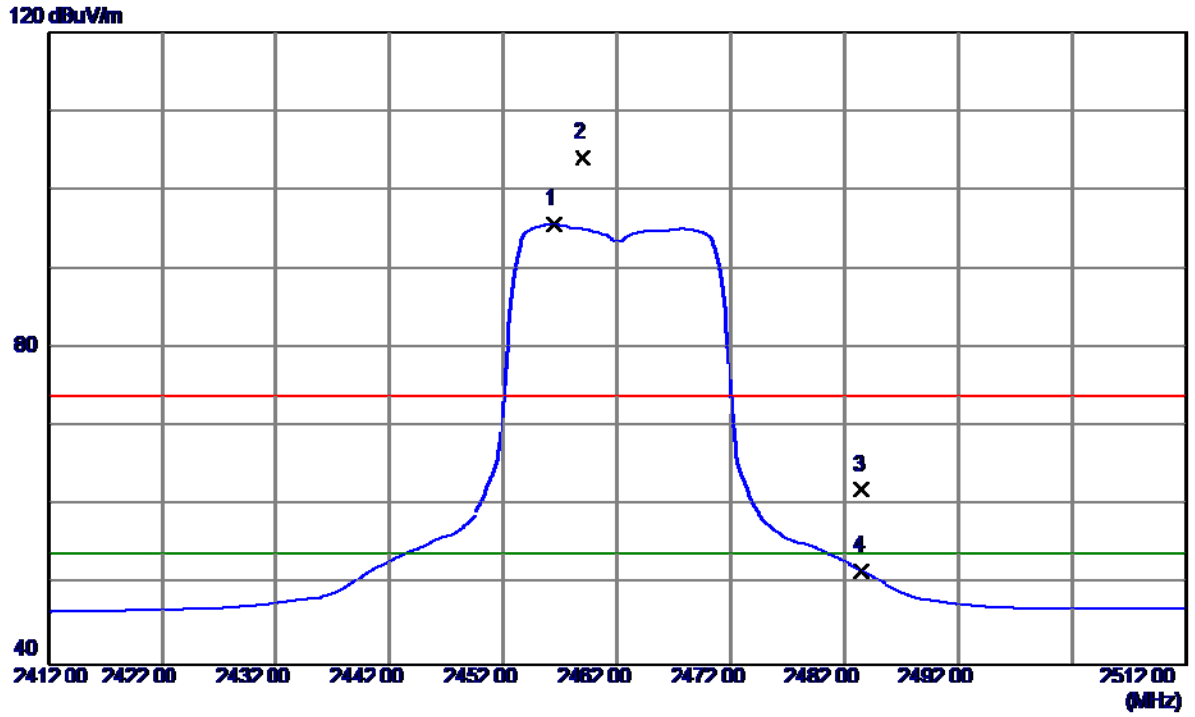
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.9750	22.48	5.07	27.55	54.00	-26.45	AVG	
2	4873.9850	33.86	5.07	38.93	74.00	-35.07	Peak	

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

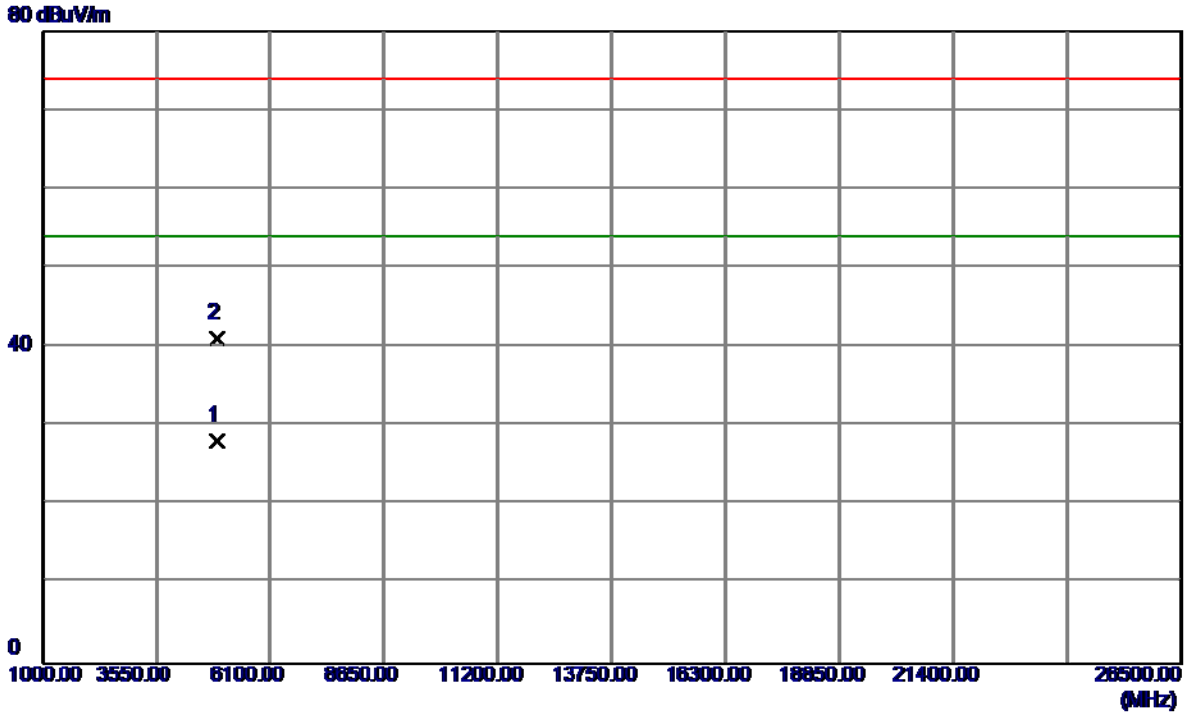
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2456.4000	62.43	33.29	95.72	54.00	41.72	AVG	No Limit
2	2459.0000	70.89	33.30	104.19	74.00	30.19	Peak	No Limit
3	2483.5000	28.68	33.40	62.08	74.00	-11.92	Peak	
4	2483.5000	18.43	33.40	51.83	54.00	-2.17	AVG	

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

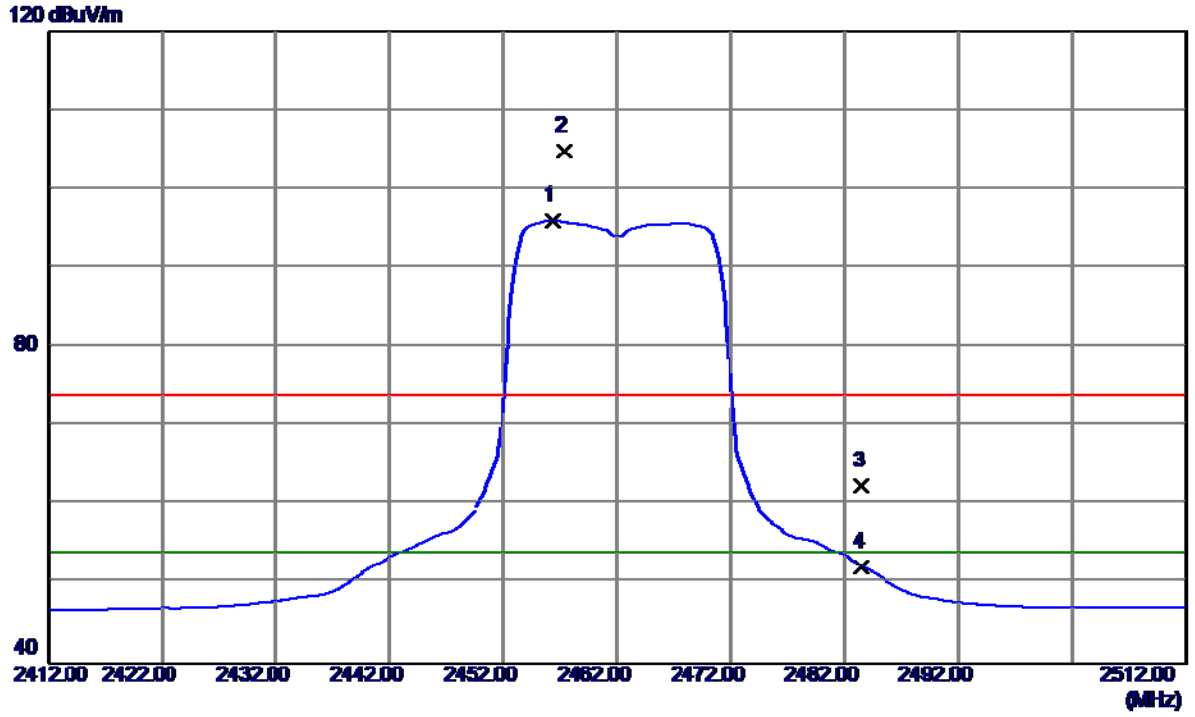
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.9550	22.95	5.28	28.23	54.00	-25.77	AVG	
2	4924.0099	35.87	5.28	41.15	74.00	-32.85	Peak	

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

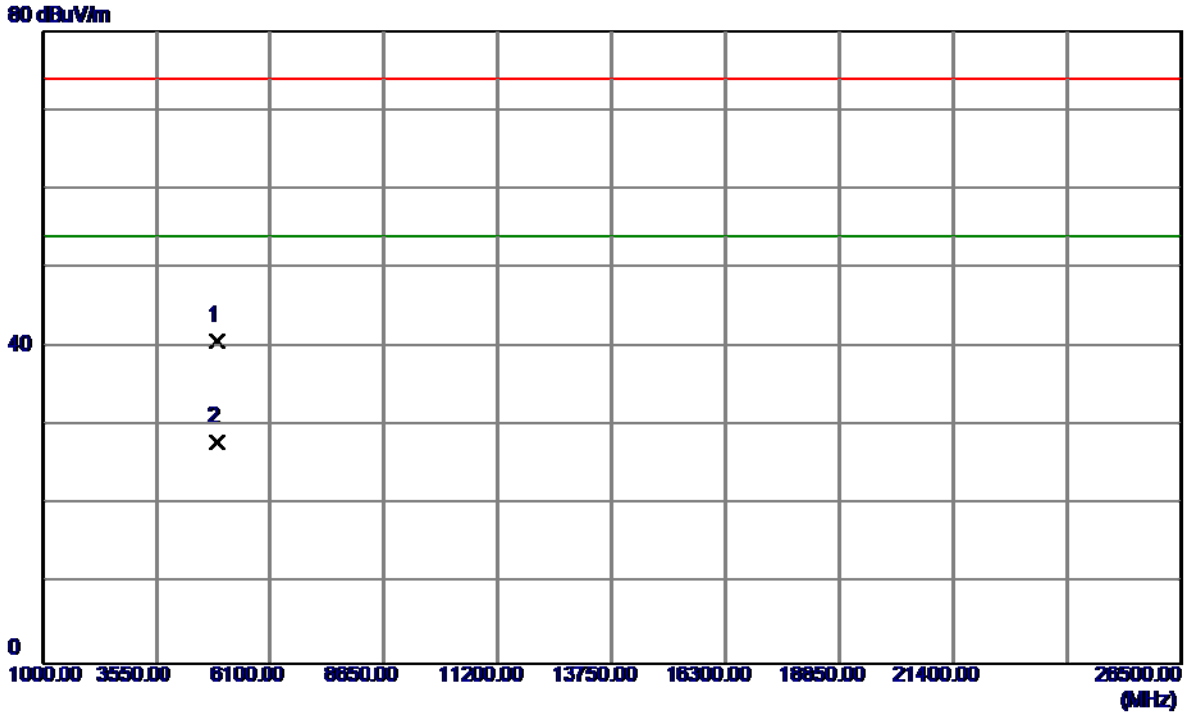
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2456.3000	62.78	33.29	96.07	54.00	42.07	AVG	No Limit
2	2457.3000	71.45	33.29	104.74	74.00	30.74	Peak	No Limit
3	2483.5000	29.00	33.40	62.40	74.00	-11.60	Peak	
4	2483.5000	18.82	33.40	52.22	54.00	-1.78	AVG	

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

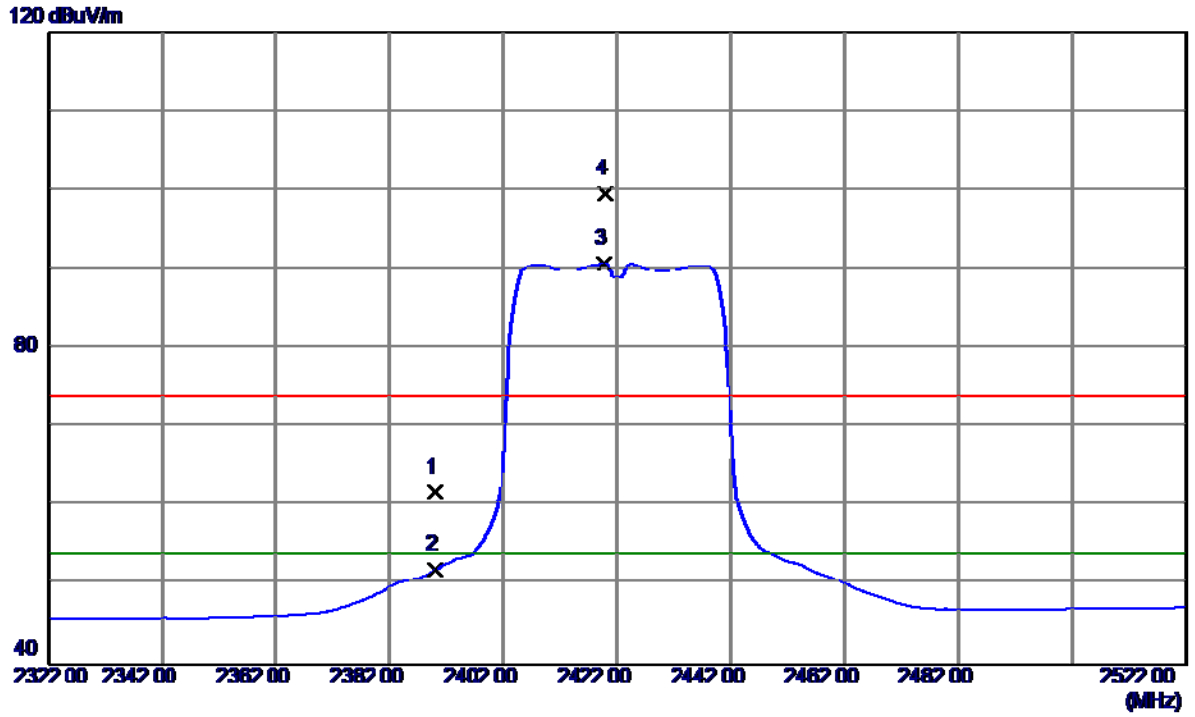
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924.0200	35.53	5.28	40.81	74.00	-33.19	Peak	
2 *	4924.0250	22.75	5.28	28.03	54.00	-25.97	AVG	

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

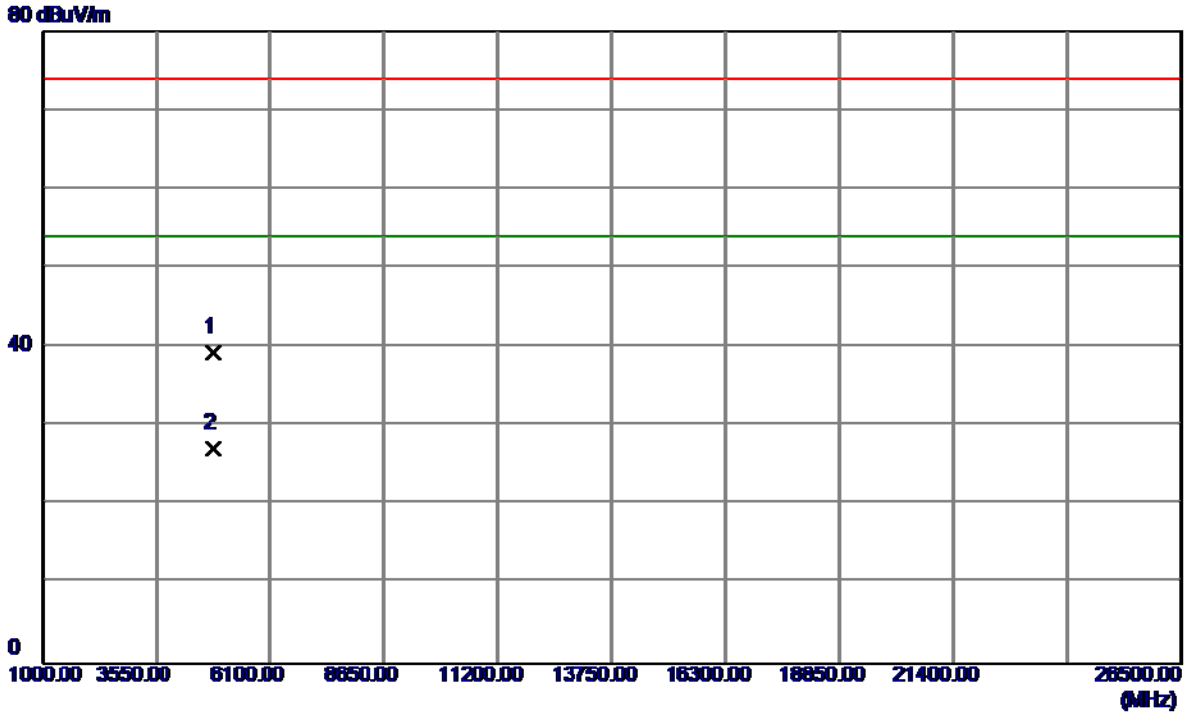
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.68	33.01	61.69	74.00	-12.31	Peak	
2	2390.0000	18.96	33.01	51.97	54.00	-2.03	AVG	
3 *	2419.8000	57.59	33.13	90.72	54.00	36.72	AVG	No Limit
4	2420.0000	66.36	33.14	99.50	74.00	25.50	Peak	No Limit

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

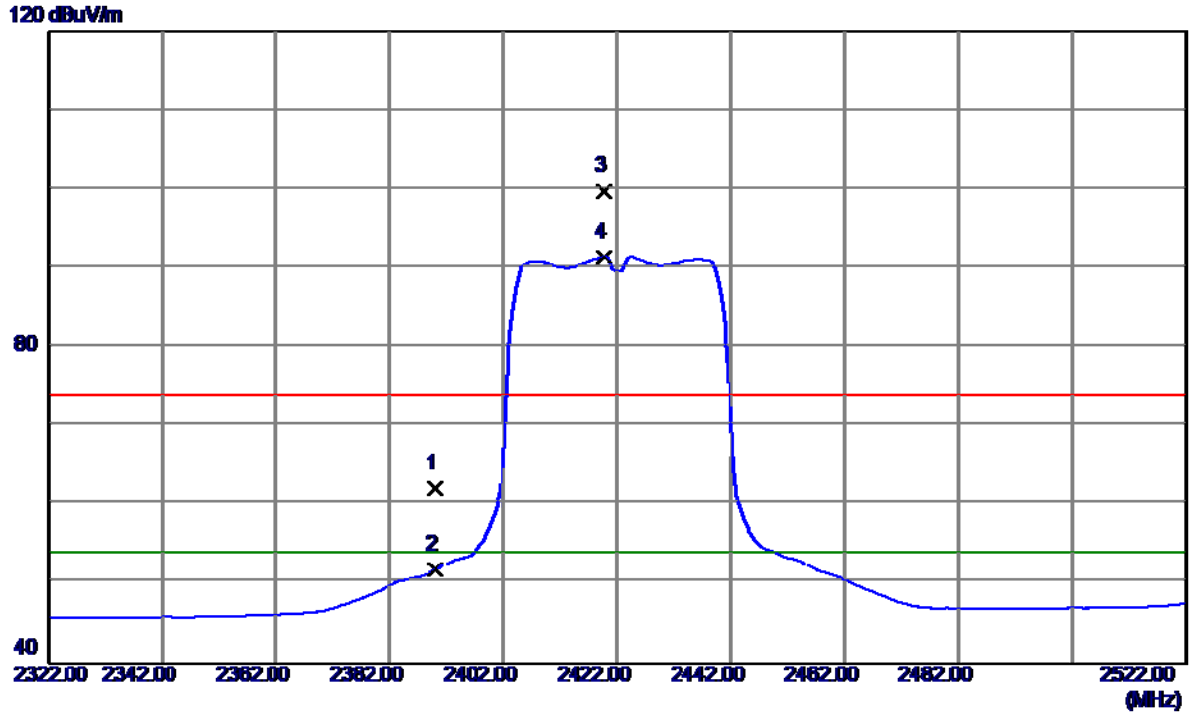
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.8950	34.47	4.85	39.32	74.00	-34.68	Peak	
2 *	4824.0700	22.30	4.85	27.15	54.00	-26.85	AVG	

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

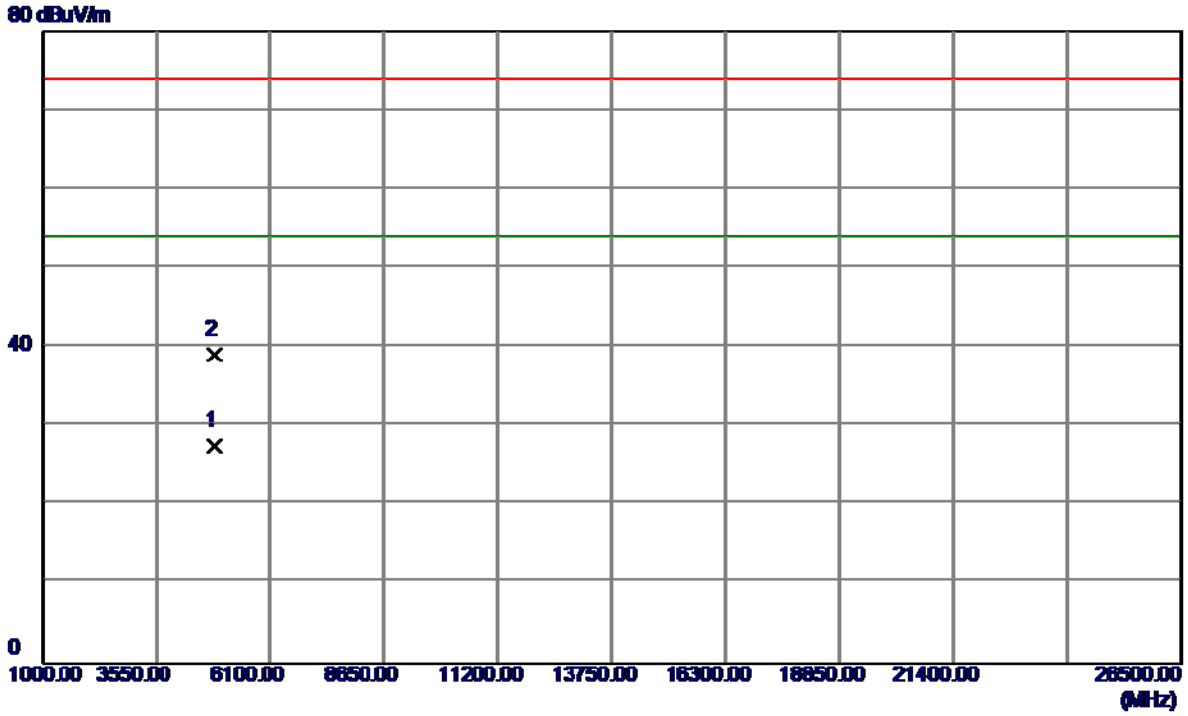
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	29.08	33.01	62.09	74.00	-11.91	Peak	
2	2390.0000	18.90	33.01	51.91	54.00	-2.09	AVG	
3	2419.8000	66.53	33.13	99.66	74.00	25.66	Peak	No Limit
4 *	2419.8000	58.18	33.13	91.31	54.00	37.31	AVG	No Limit

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

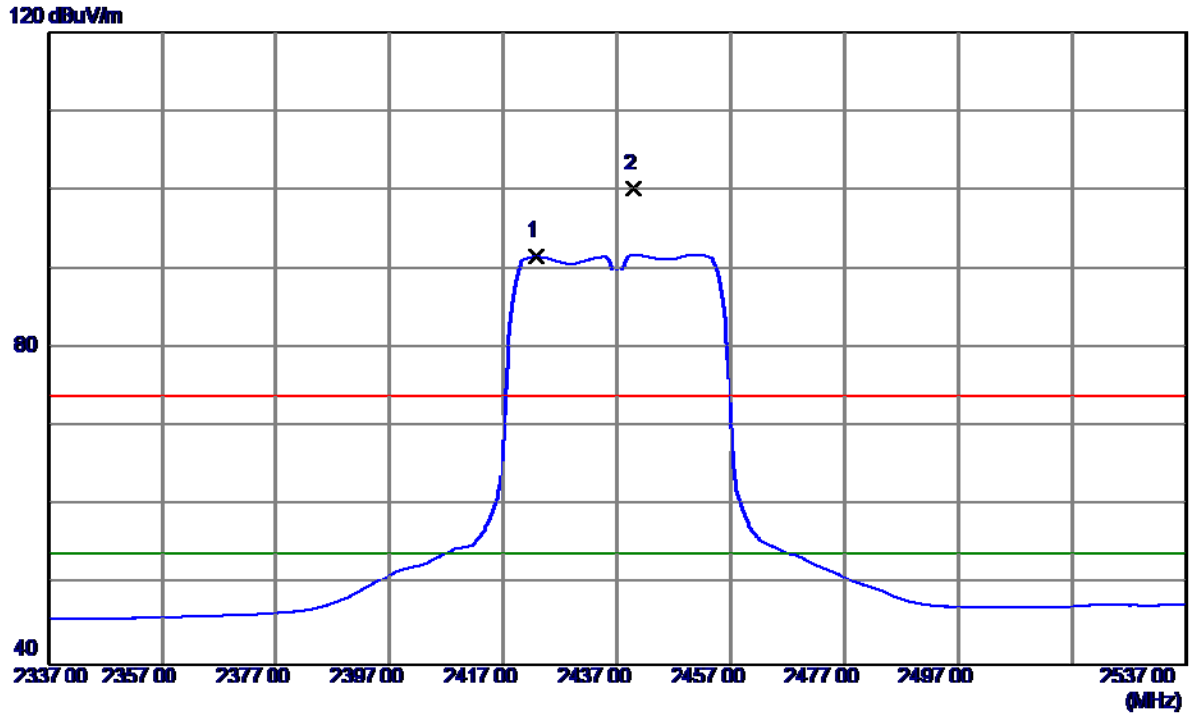
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4843.9300	22.52	4.94	27.46	54.00	-26.54	AVG	
2	4843.9850	34.08	4.94	39.02	74.00	-34.98	Peak	

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

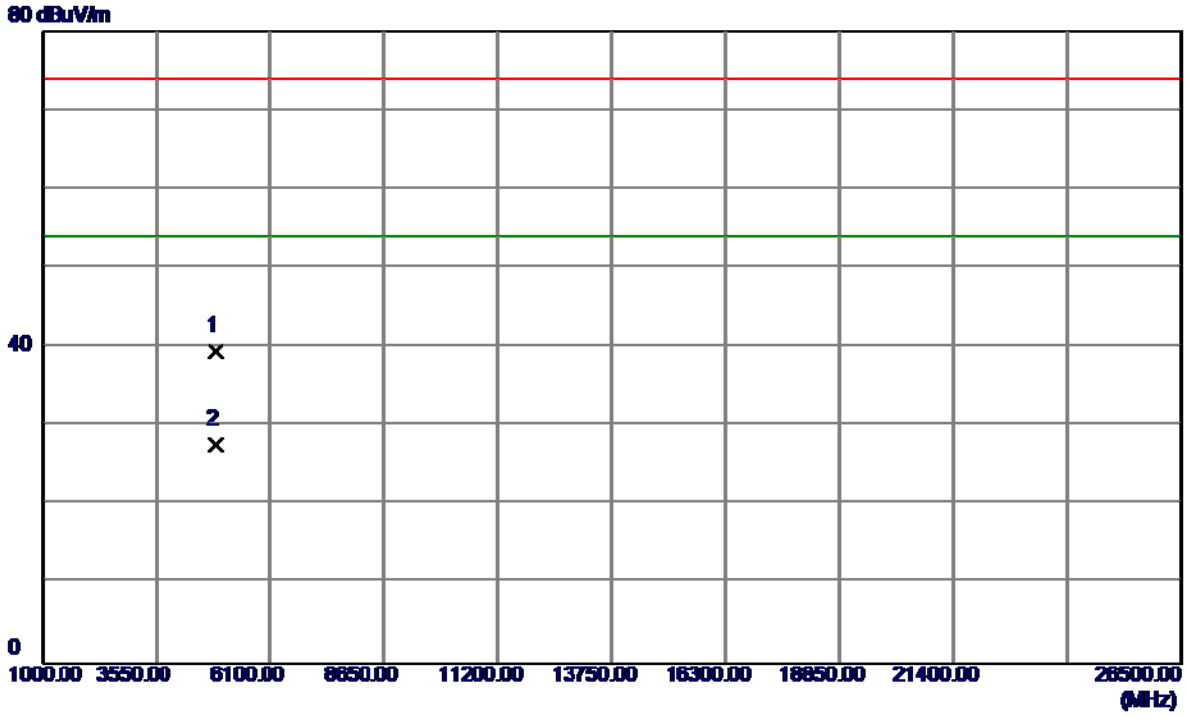
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2422.8000	58.48	33.15	91.63	54.00	37.63	AVG	No Limit
2	2439.8000	66.93	33.22	100.15	74.00	26.15	Peak	No Limit

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

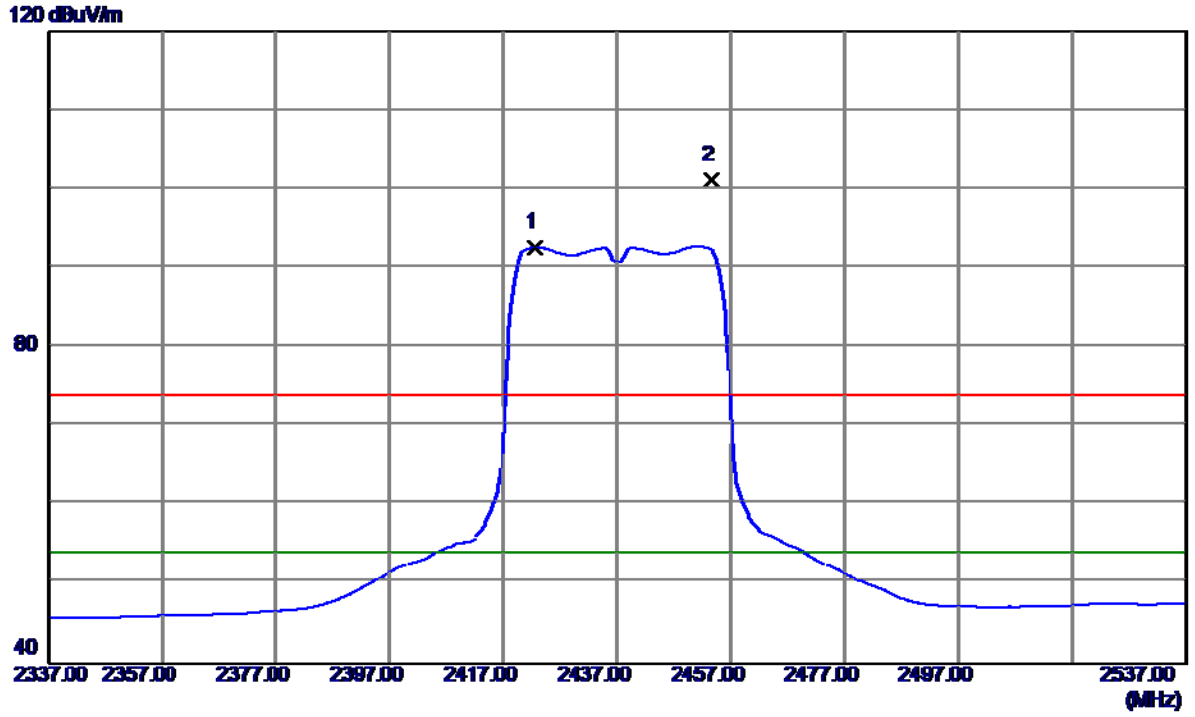
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0250	34.40	5.07	39.47	74.00	-34.53	Peak	
2 *	4874.0650	22.58	5.07	27.65	54.00	-26.35	AVG	

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

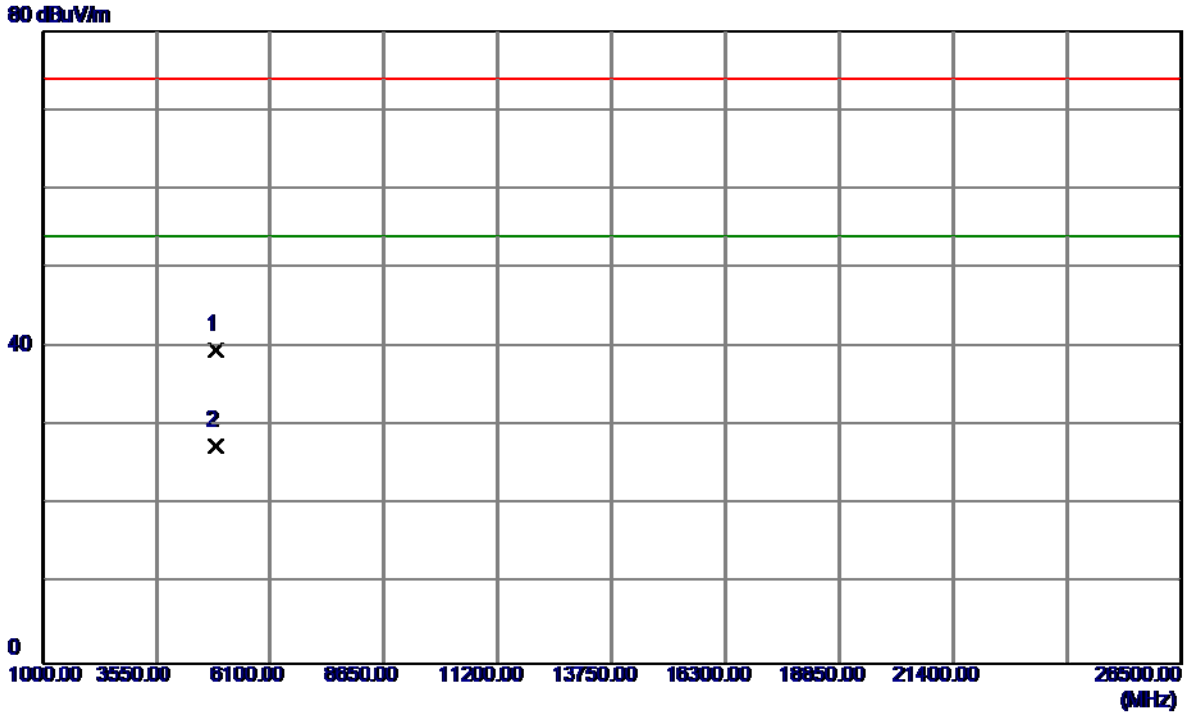
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2422.6000	59.51	33.15	92.66	54.00	38.66	AVG	No Limit
2	2453.6000	67.91	33.28	101.19	74.00	27.19	Peak	No Limit

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

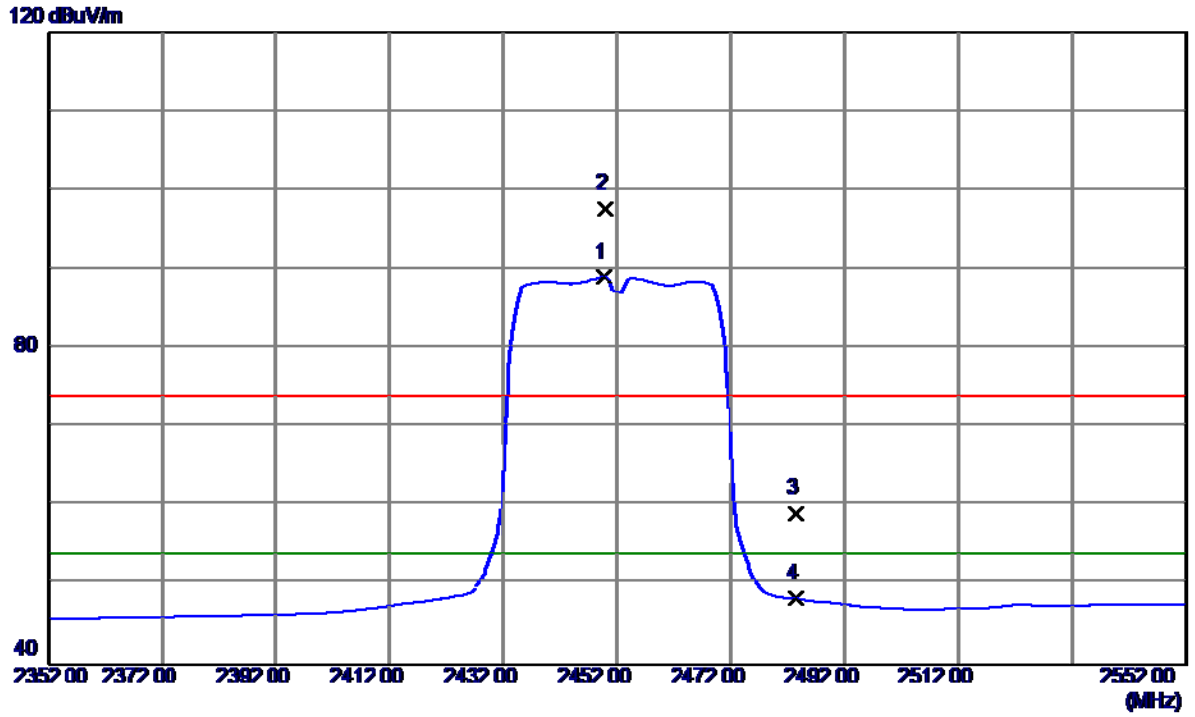
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873.9200	34.66	5.07	39.73	74.00	-34.27	Peak	
2 *	4874.0650	22.50	5.07	27.57	54.00	-26.43	AVG	

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

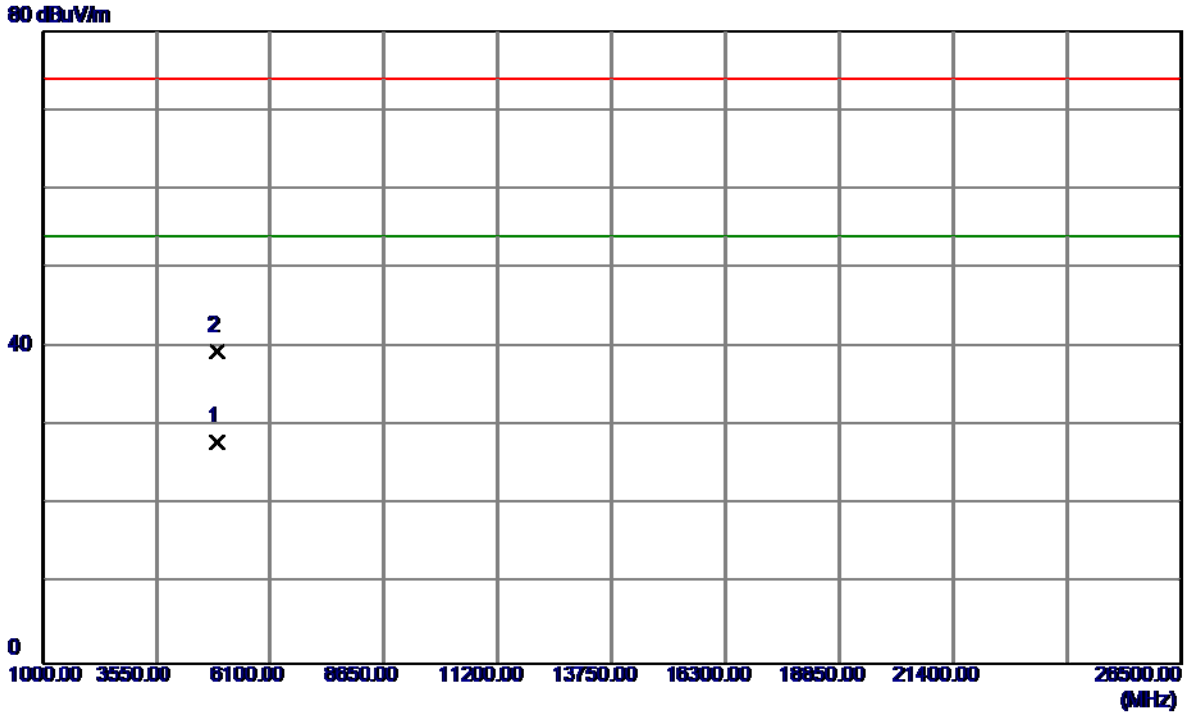
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2449.8000	55.67	33.26	88.93	54.00	34.93	AVG	No Limit
2	2450.0000	64.27	33.26	97.53	74.00	23.53	Peak	No Limit
3	2483.5000	25.59	33.40	58.99	74.00	-15.01	Peak	
4	2483.5000	14.87	33.40	48.27	54.00	-5.73	AVG	

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

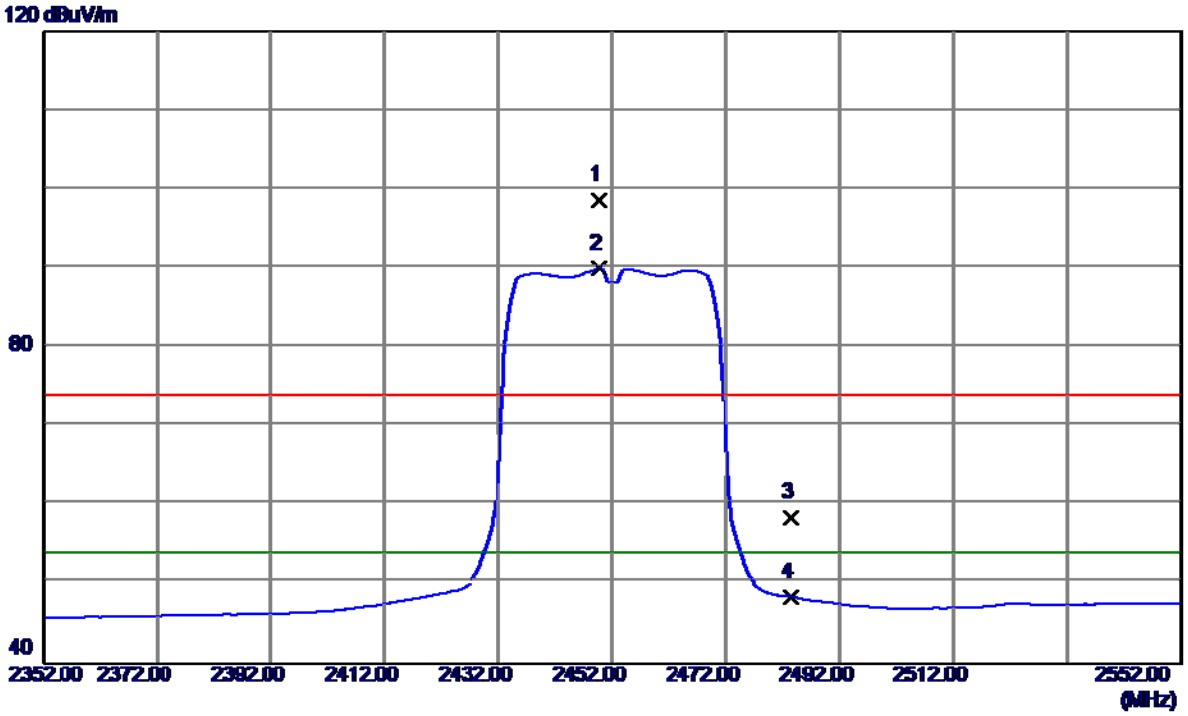
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4903.9350	22.87	5.19	28.06	54.00	-25.94	AVG	
2	4903.9500	34.33	5.19	39.52	74.00	-34.48	Peak	

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

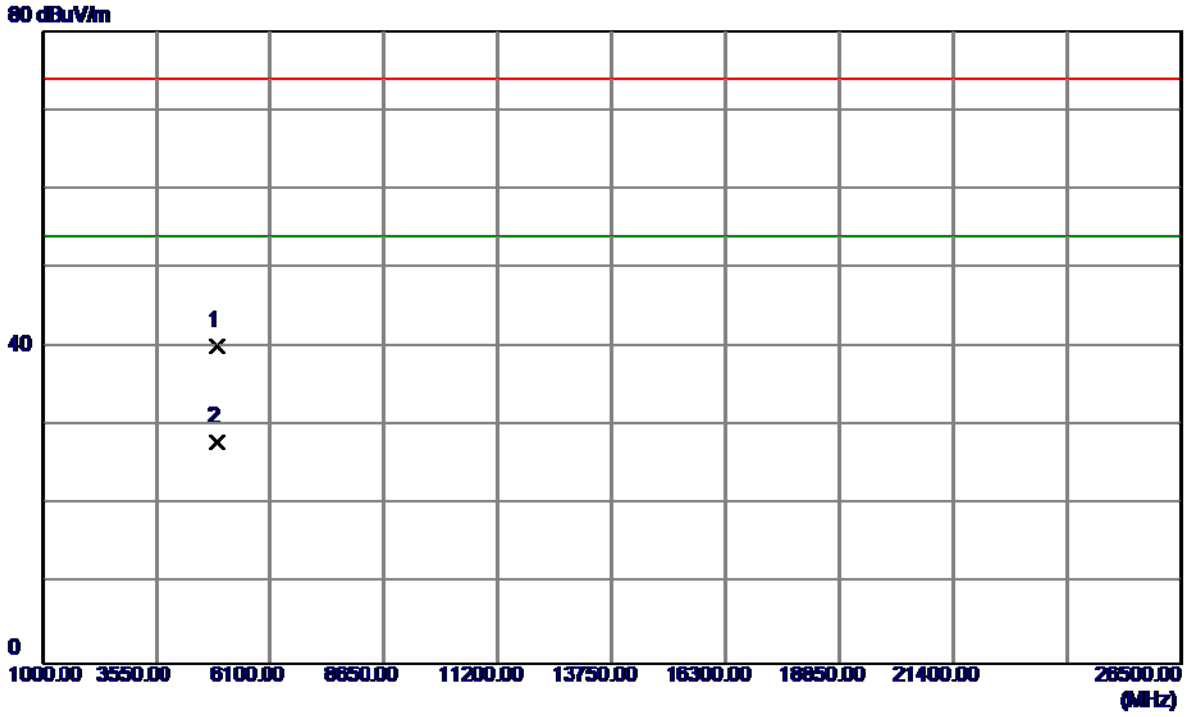
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2449.8000	65.34	33.26	98.60	74.00	24.60	Peak	No Limit
2 *	2449.8000	56.63	33.26	89.89	54.00	35.89	AVG	No Limit
3	2483.5000	24.93	33.40	58.33	74.00	-15.67	Peak	
4	2483.5000	14.97	33.40	48.37	54.00	-5.63	AVG	

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

Horizontal



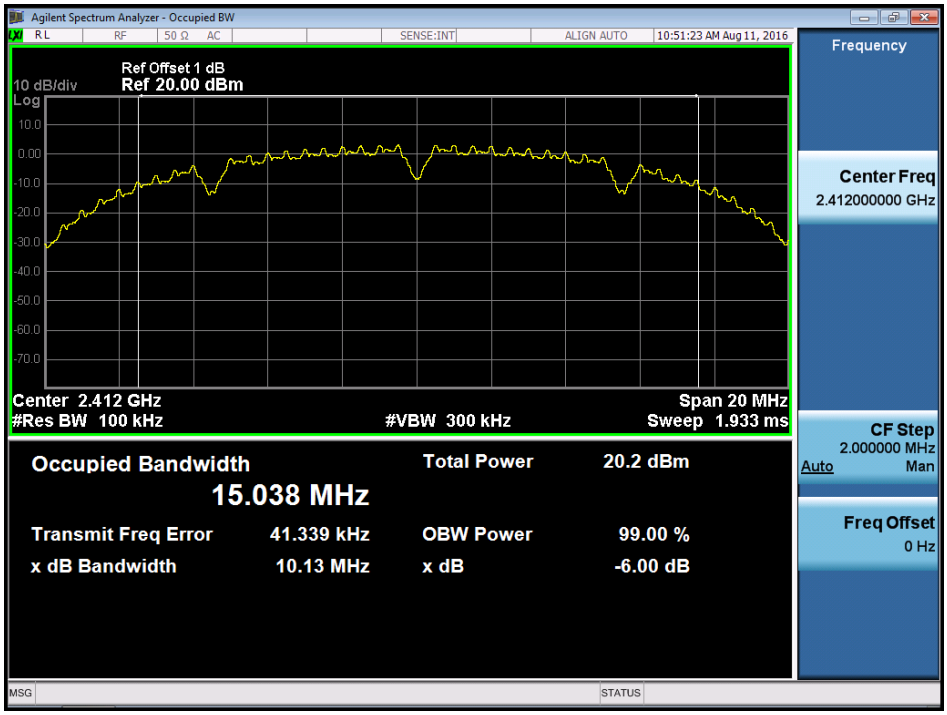
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4904.0200	34.97	5.19	40.16	74.00	-33.84	Peak	
2 *	4904.0299	22.83	5.19	28.02	54.00	-25.98	AVG	

ATTACHMENT E - BANDWIDTH

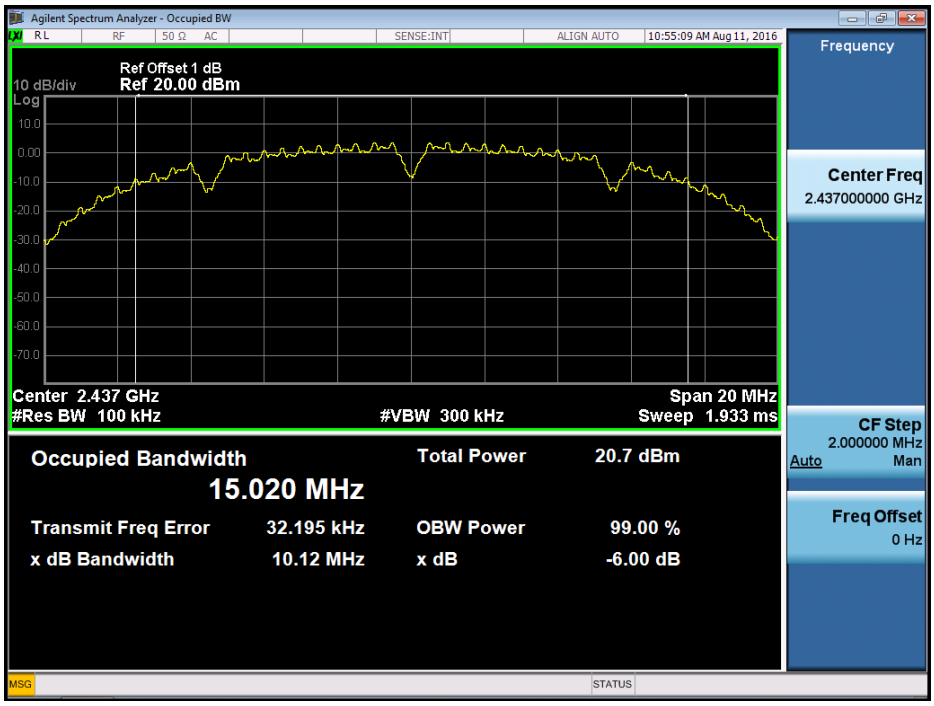
Test Mode : TX B Mode_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	10.13	15.04	500	Complies
2437	10.12	15.02	500	Complies
2462	10.13	15.01	500	Complies

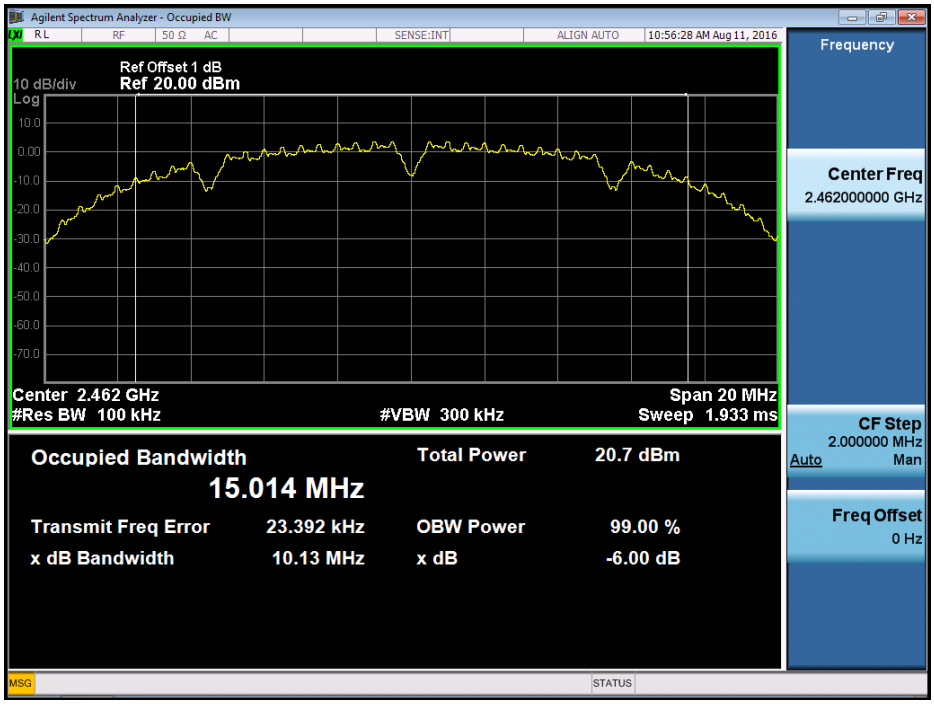
TX CH01



TX CH06

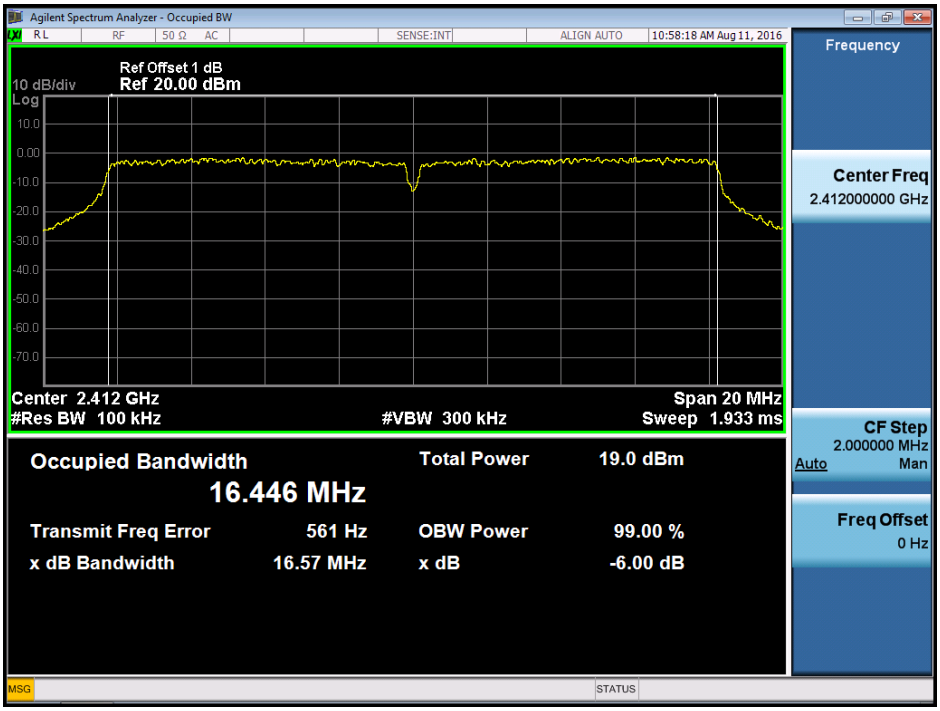


TX CH11

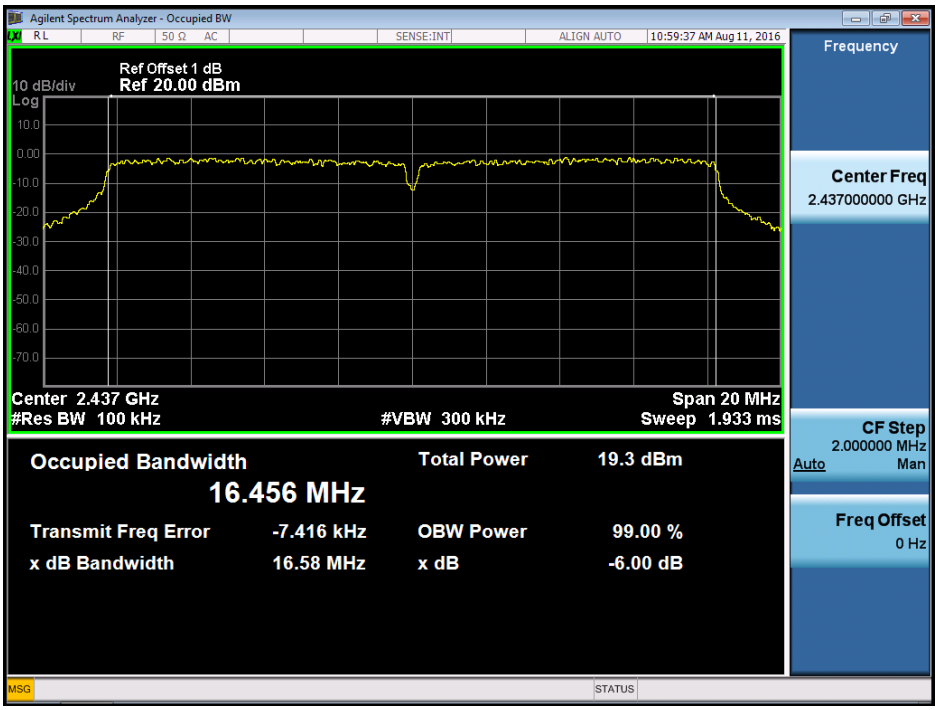


Test Mode: TX G Mode_CH01/06/11				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.57	16.45	500	Complies
2437	16.58	16.46	500	Complies
2462	16.57	16.47	500	Complies

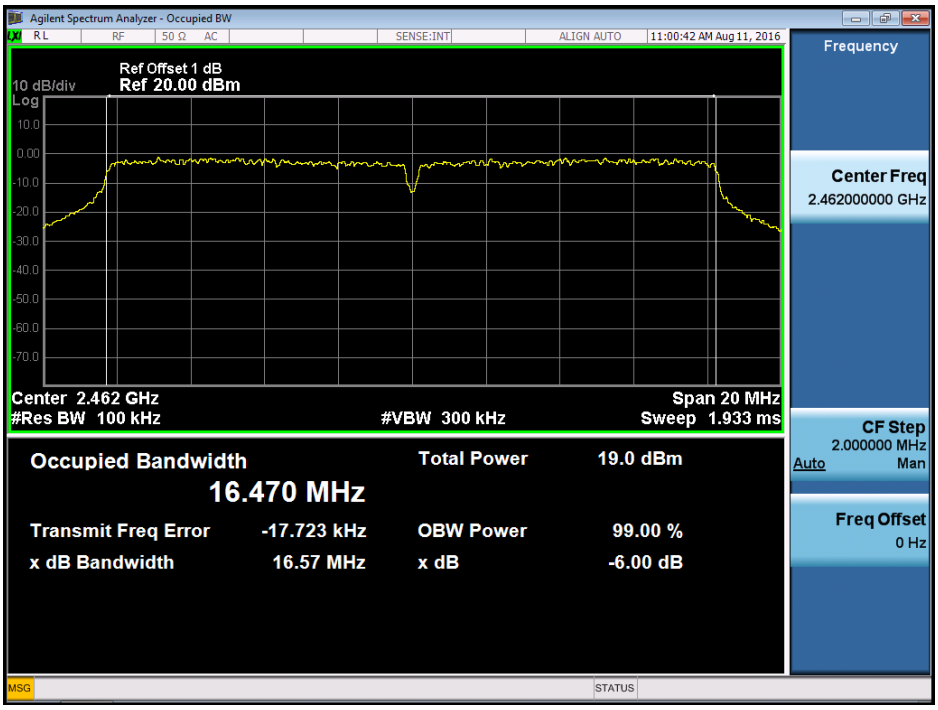
TX CH01



TX CH06

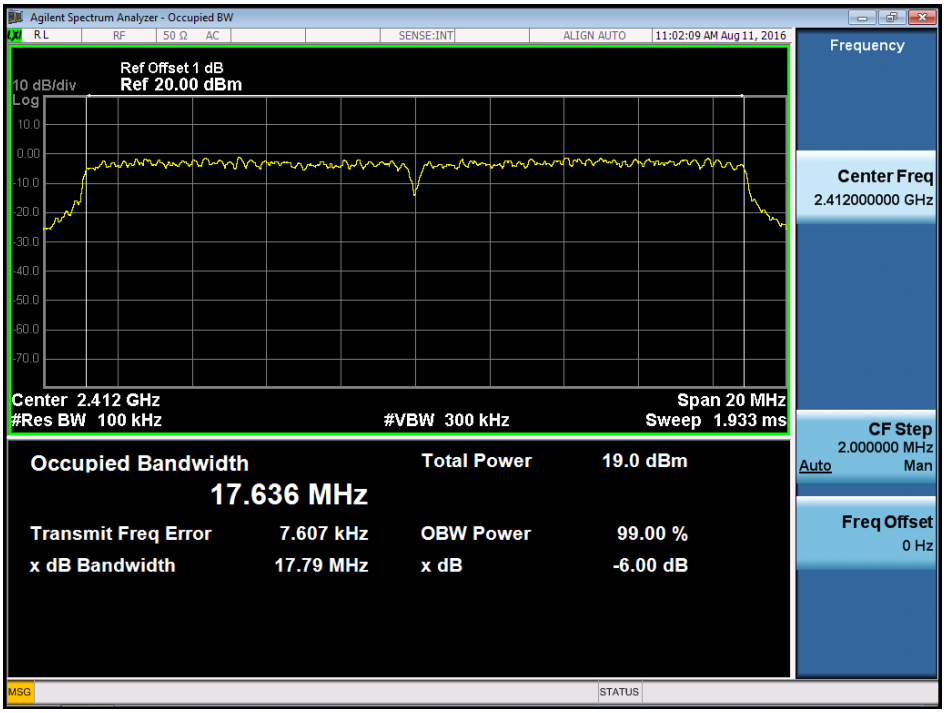


TX CH11

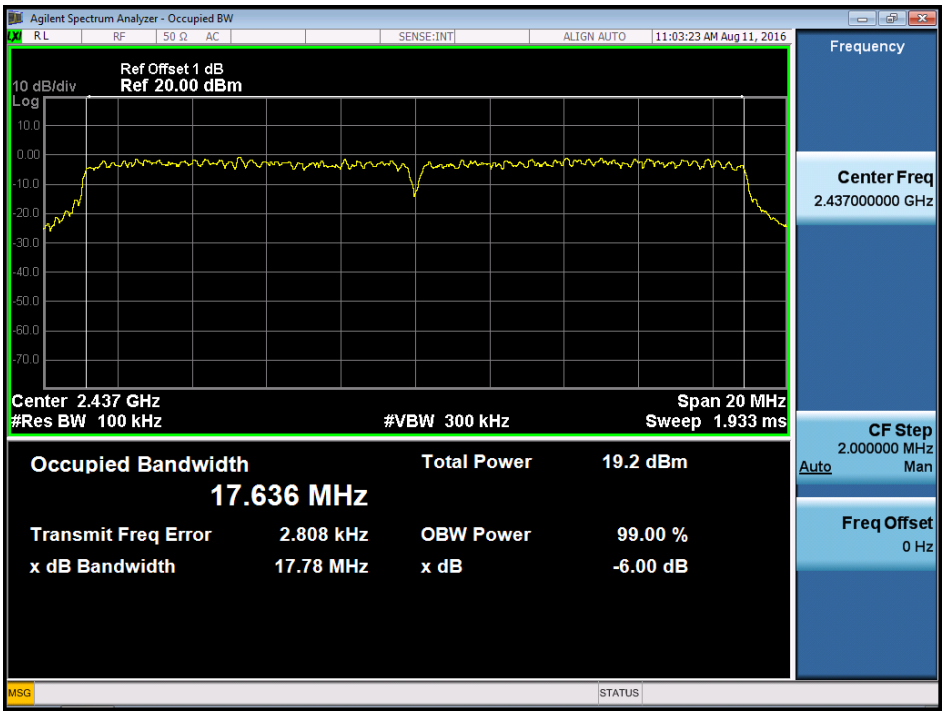


Test Mode : TX N-20MHz Mode_CH01/06/11				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.79	17.64	500	Complies
2437	17.78	17.64	500	Complies
2462	17.79	17.63	500	Complies

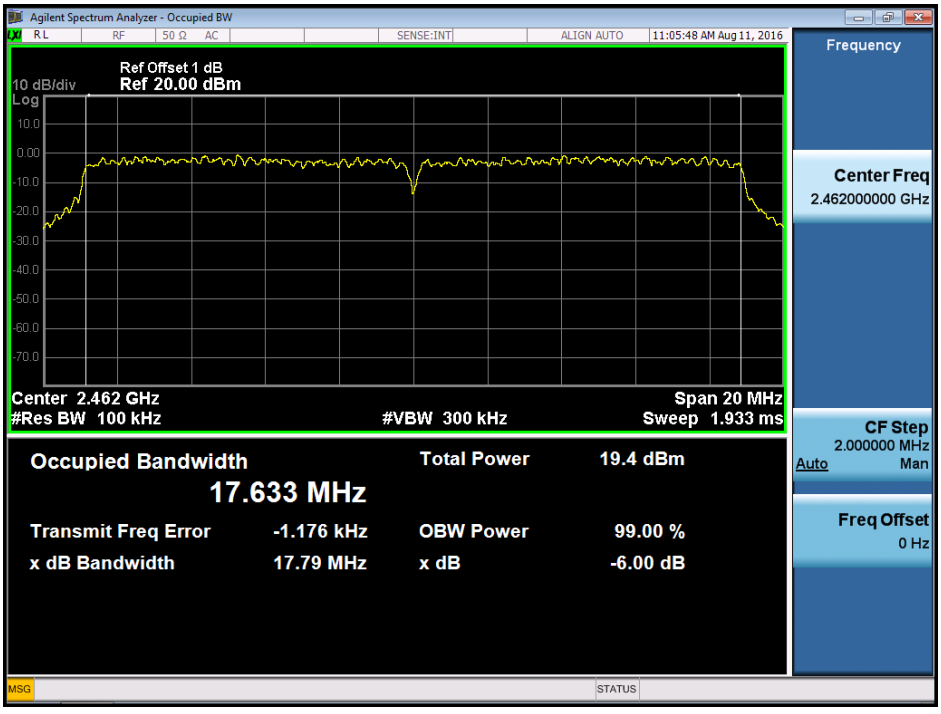
TX CH01



TX CH06

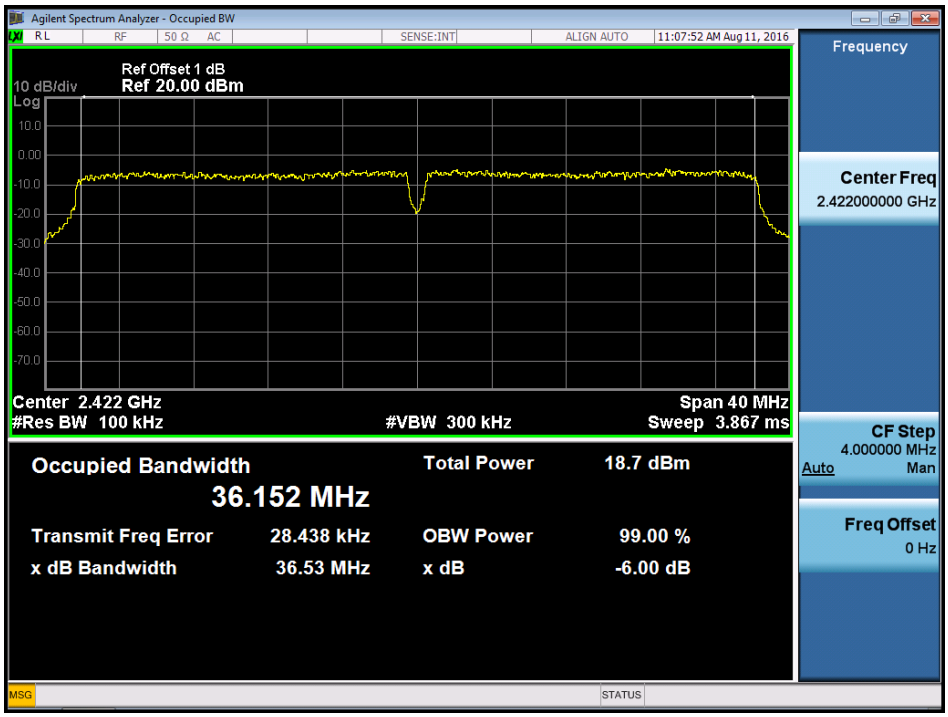


TX CH11

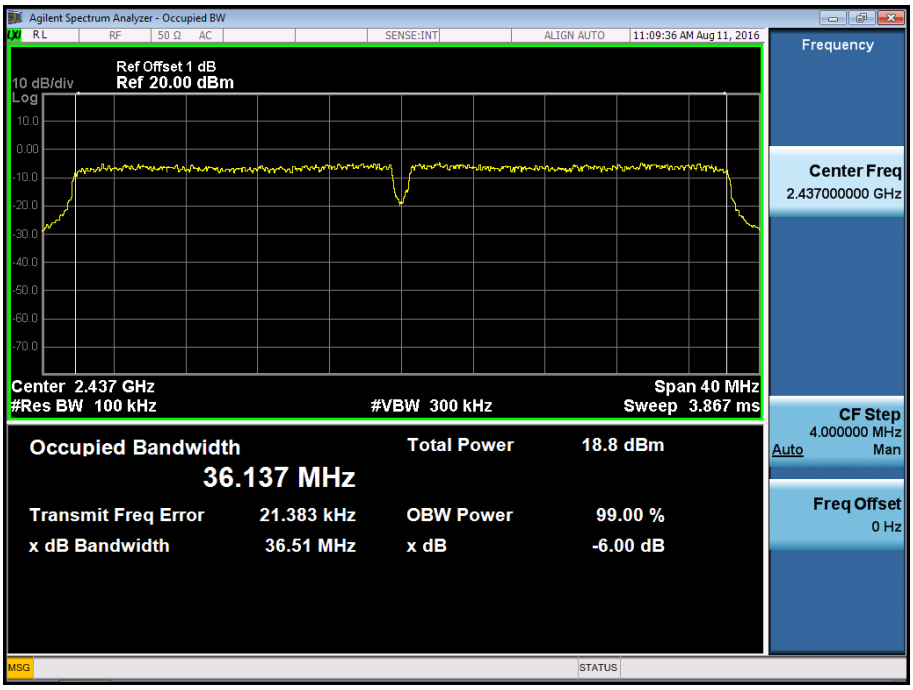


Test Mode : TX N-40MHz Mode_CH03/06/09				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	36.53	36.15	500	Complies
2437	36.51	36.14	500	Complies
2452	36.51	36.15	500	Complies

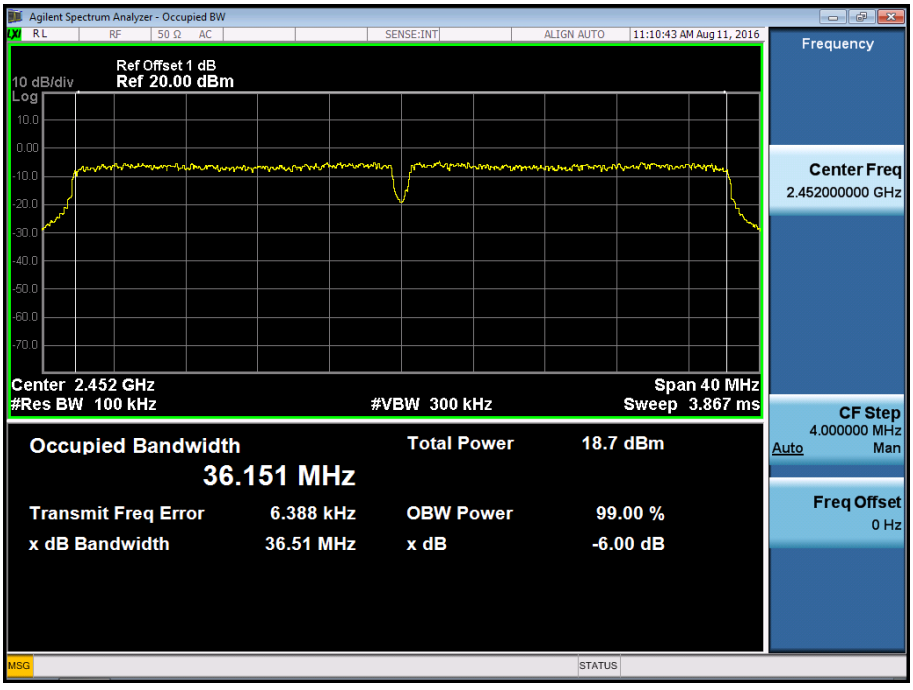
TX CH03



TX CH06



TX CH09



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	18.12	0.06	30.00	1.00	Complies
2437	17.06	0.05	30.00	1.00	Complies
2462	16.78	0.05	30.00	1.00	Complies

Test Mode :TX G Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	23.55	0.23	30.00	1.00	Complies
2437	23.51	0.22	30.00	1.00	Complies
2462	23.41	0.22	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	22.41	0.17	30.00	1.00	Complies
2437	22.53	0.18	30.00	1.00	Complies
2462	22.61	0.18	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	20.61	0.12	30.00	1.00	Complies
2437	21.71	0.15	30.00	1.00	Complies
2452	19.02	0.08	30.00	1.00	Complies

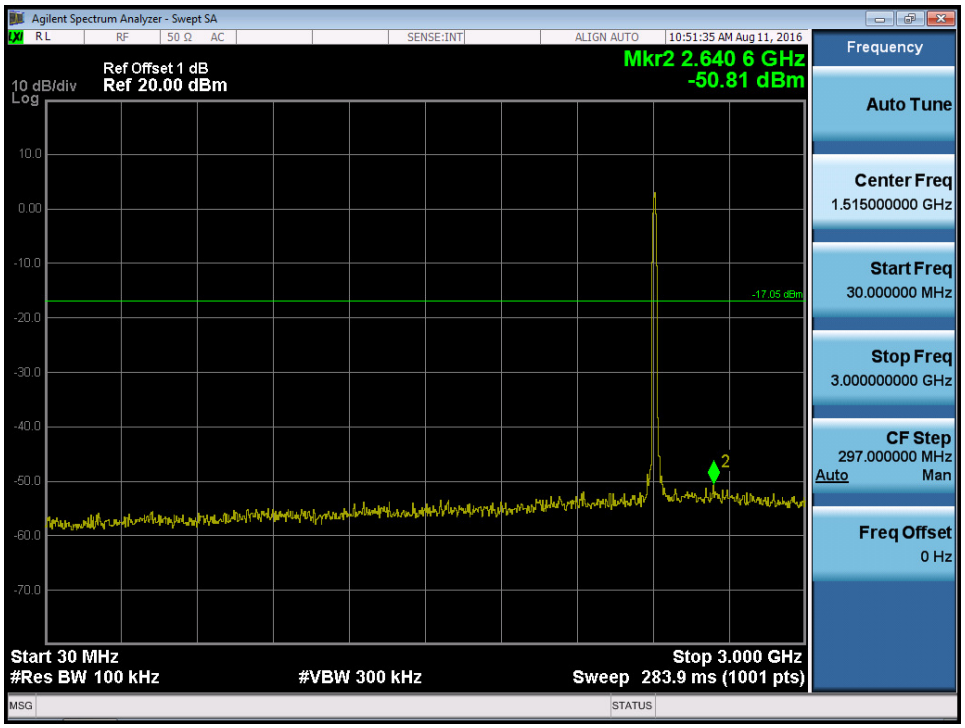
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

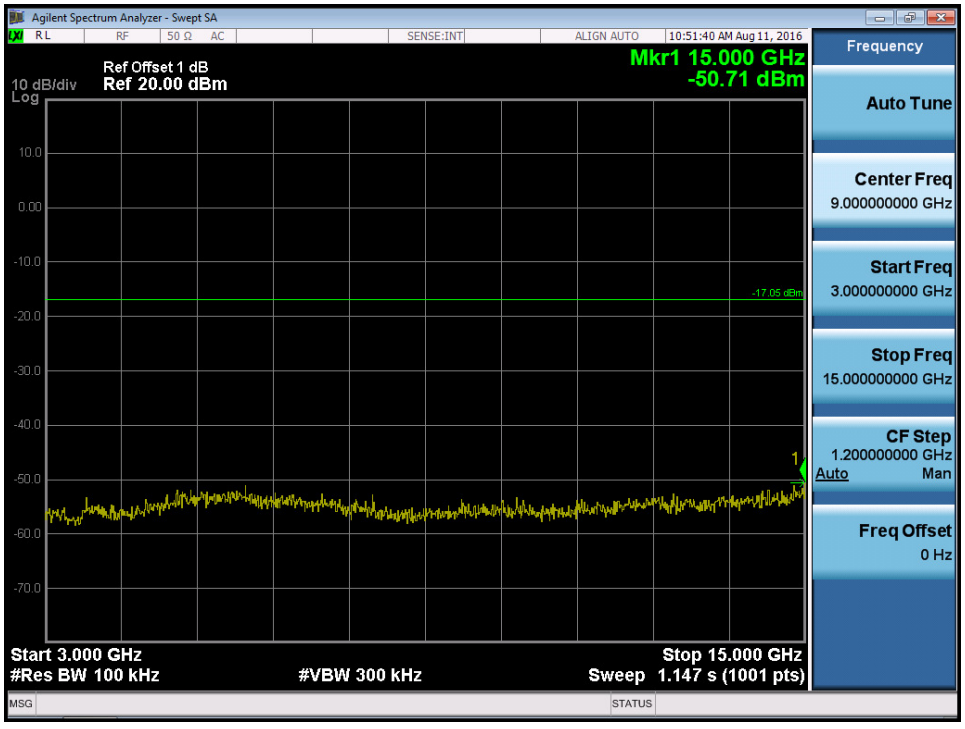
Test Mode :	TX B Mode

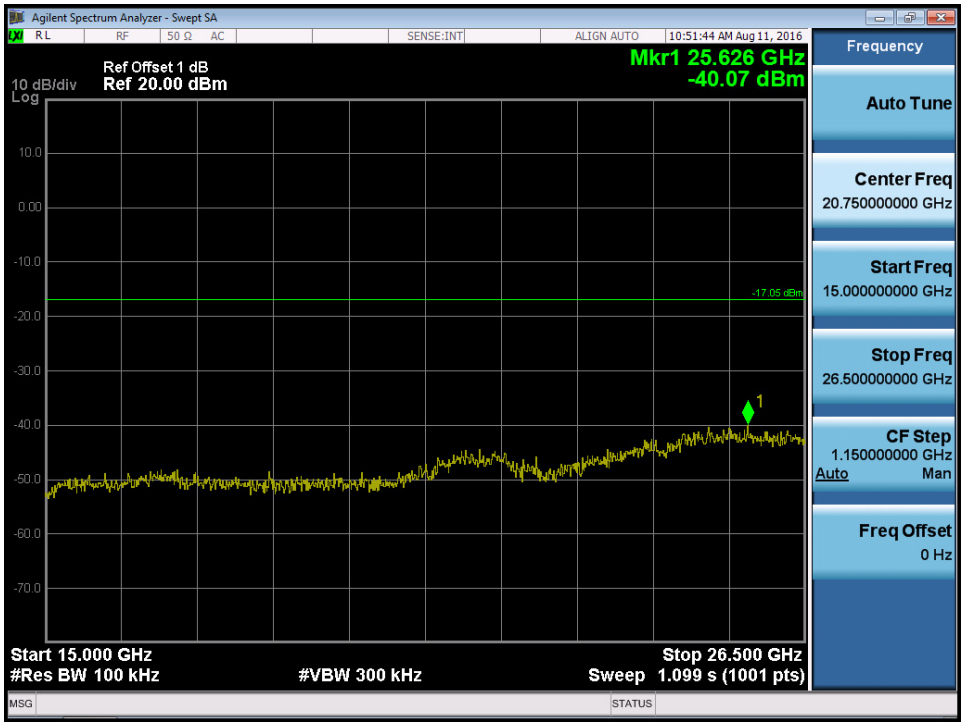
TX B mode CH01

TX B mode CH11

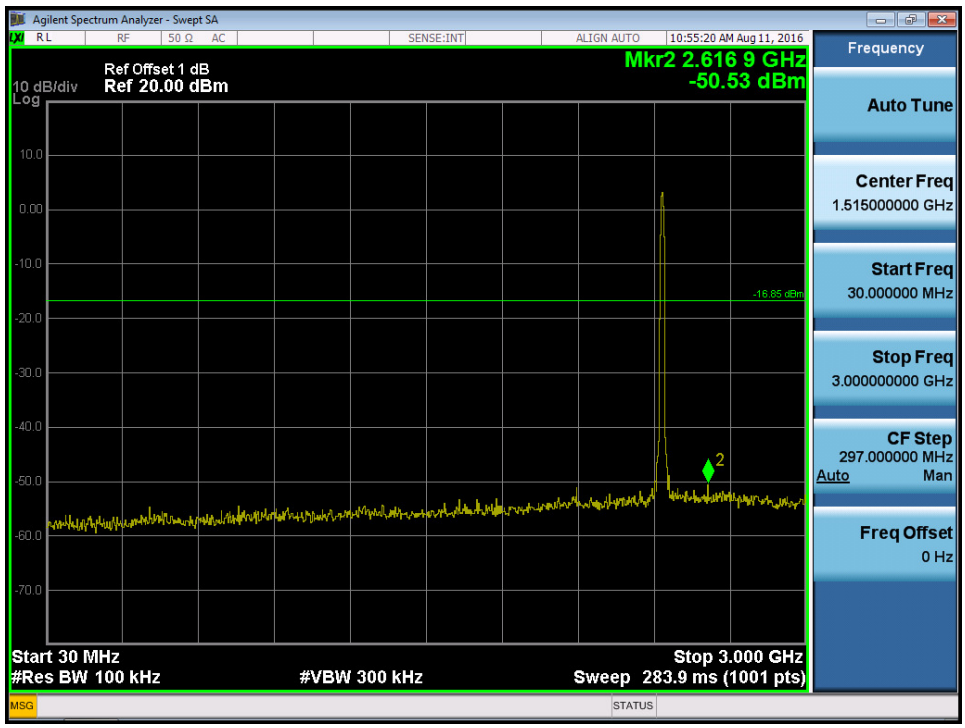
TX B mode CH01 (10 Harmonic of the frequency)

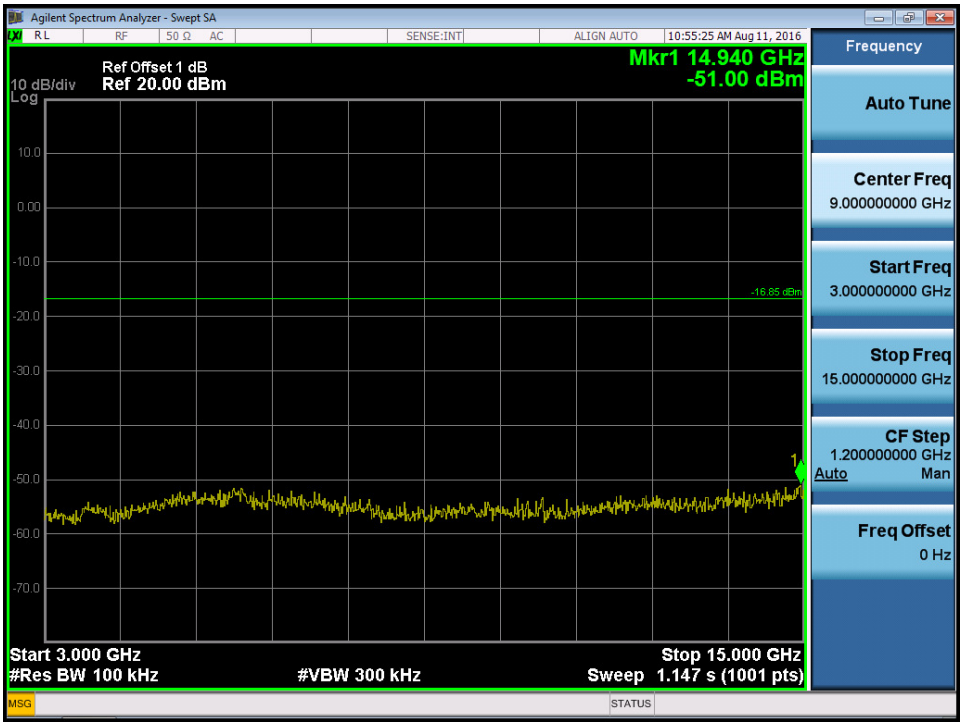






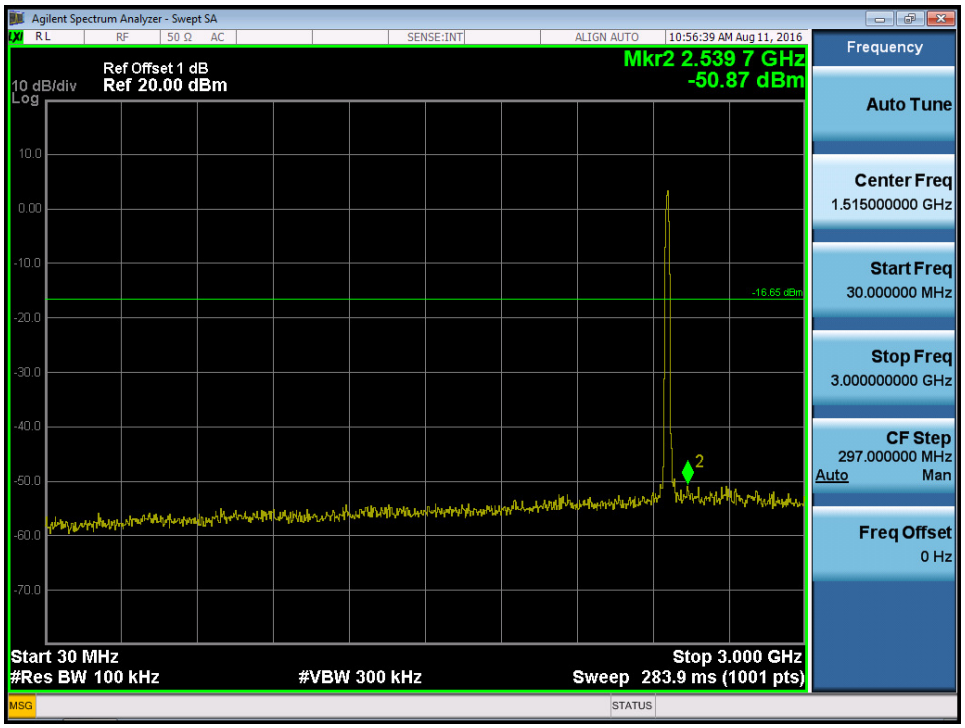
TX B mode CH06 (10 Harmonic of the frequency)

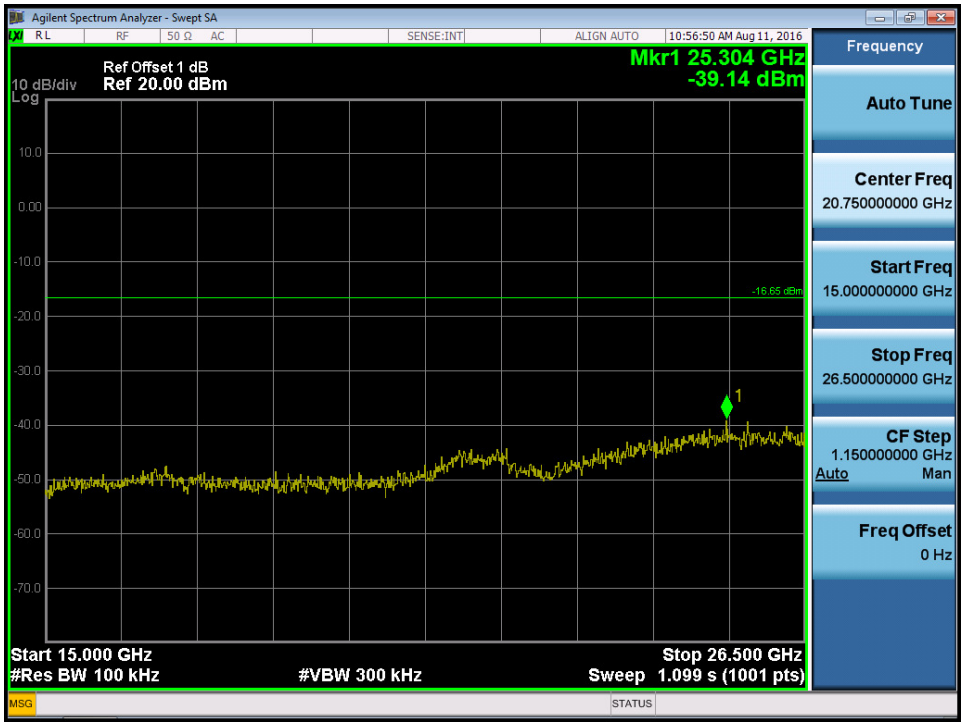



Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
10:55:25 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 14.940 GHz
-51.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-16.85 dBm
1
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 1.147 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
9.000000000 GHz
Start Freq
3.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
1.200000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
10:55:30 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 24.890 GHz
-40.49 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-16.85 dBm
1
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz

TX B mode CH11 (10 Harmonic of the frequency)



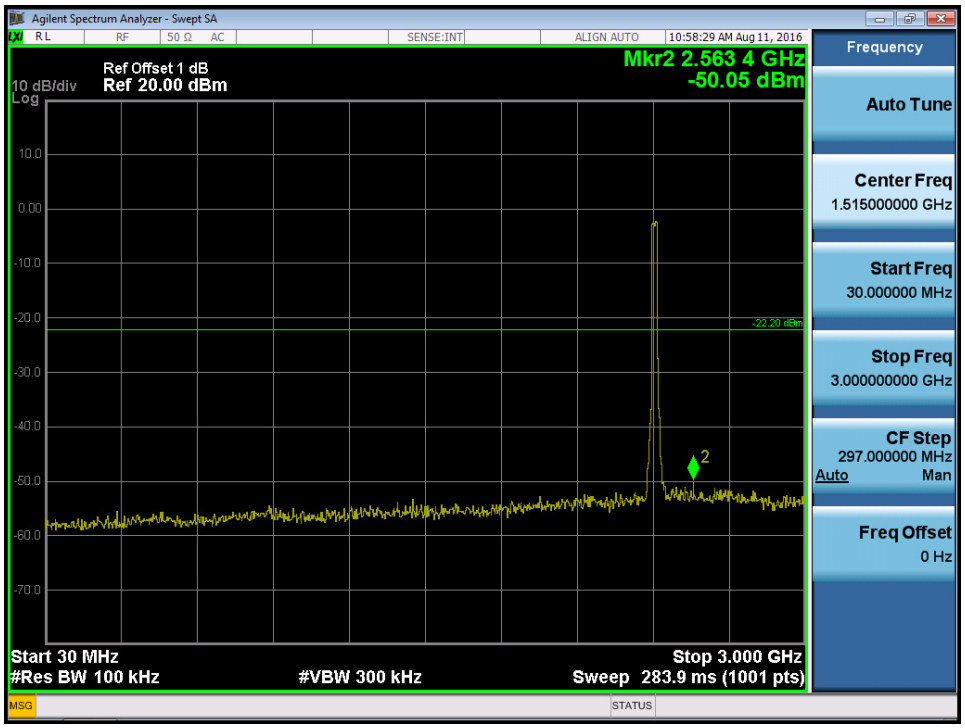

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
10:56:50 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div Ref 20.00 dBm
Log
Mkr1 25.304 GHz
-39.14 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-16.65 dBm
1
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz

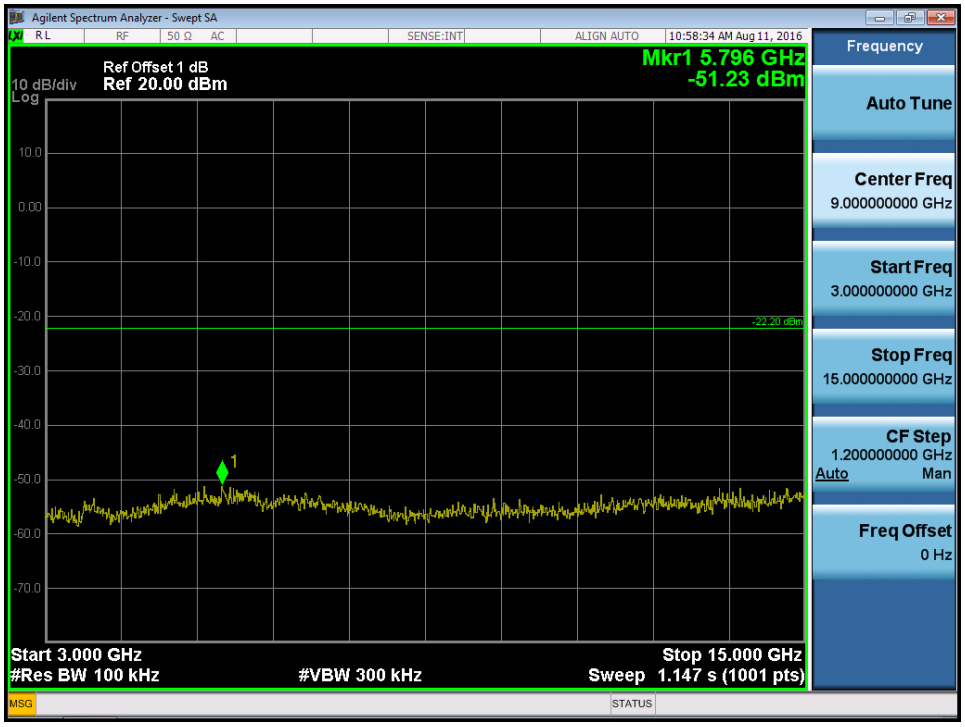
Test Mode :	TX G Mode

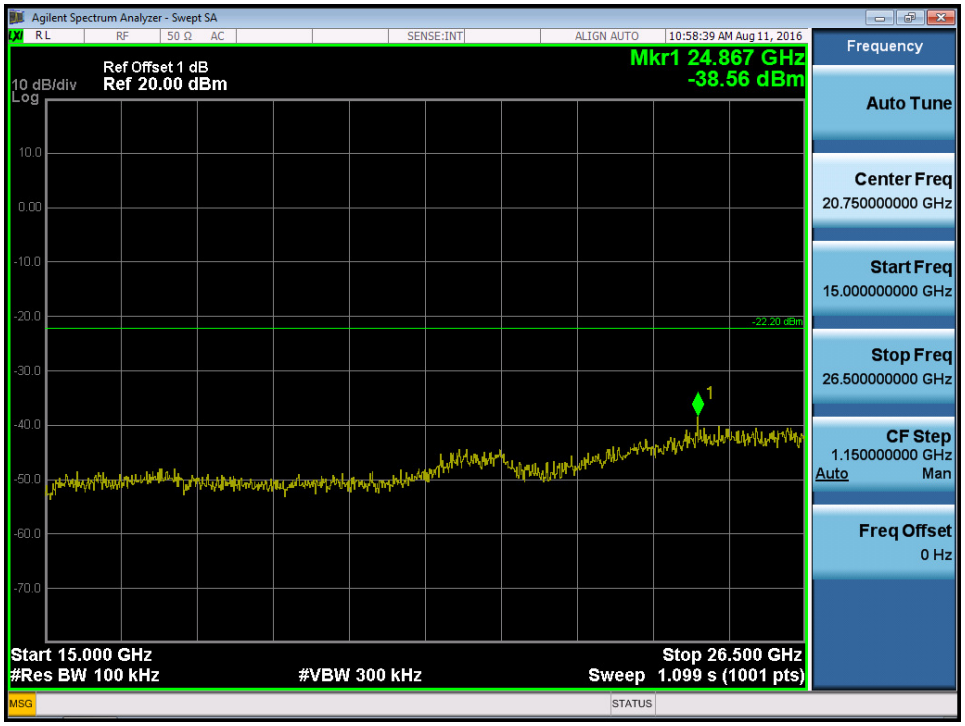
TX G mode CH01

TX G mode CH11

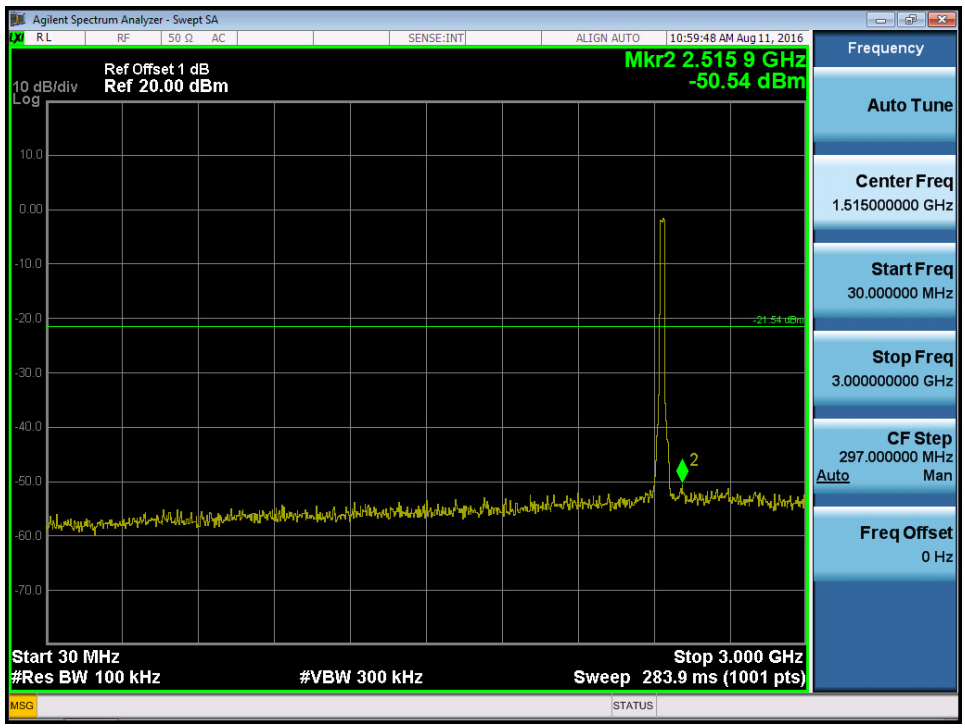
TX G mode CH01 (10 Harmonic of the frequency)

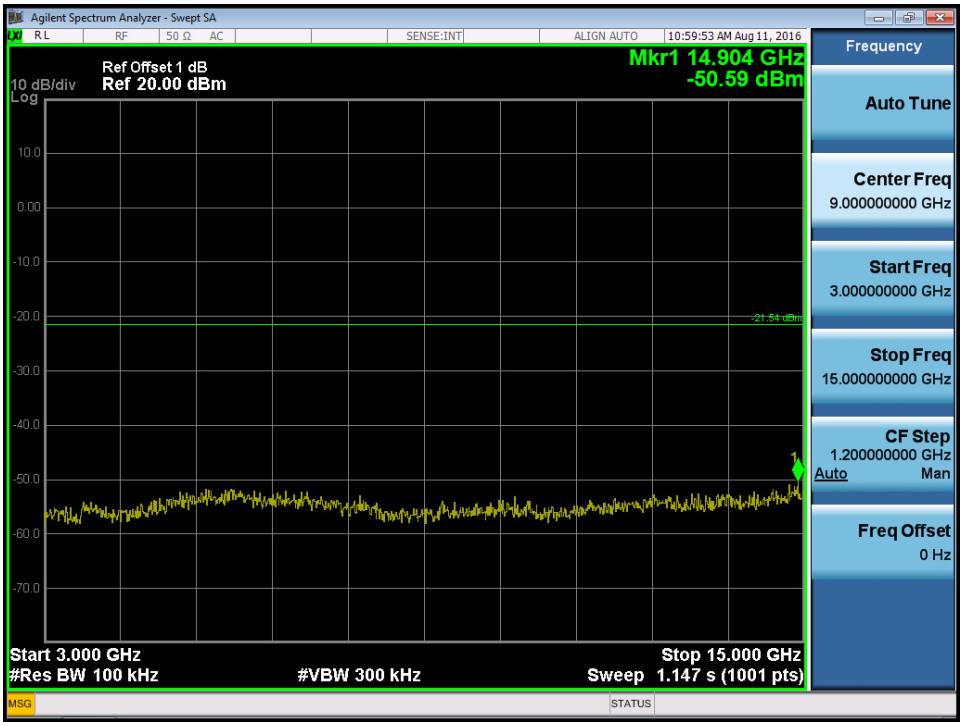






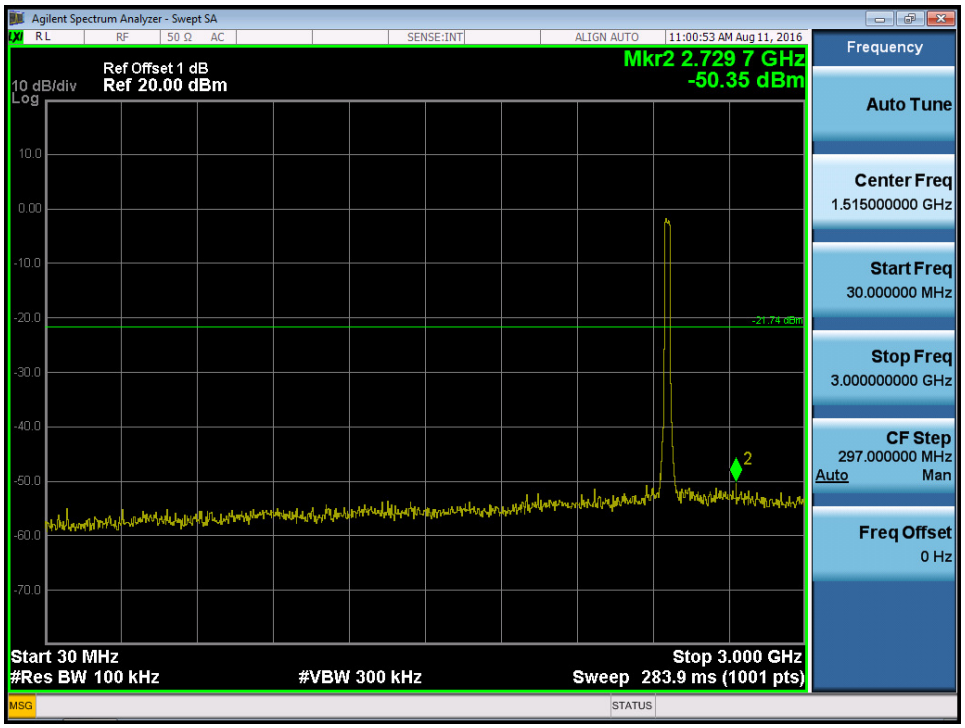
TX G mode CH06 (10 Harmonic of the frequency)

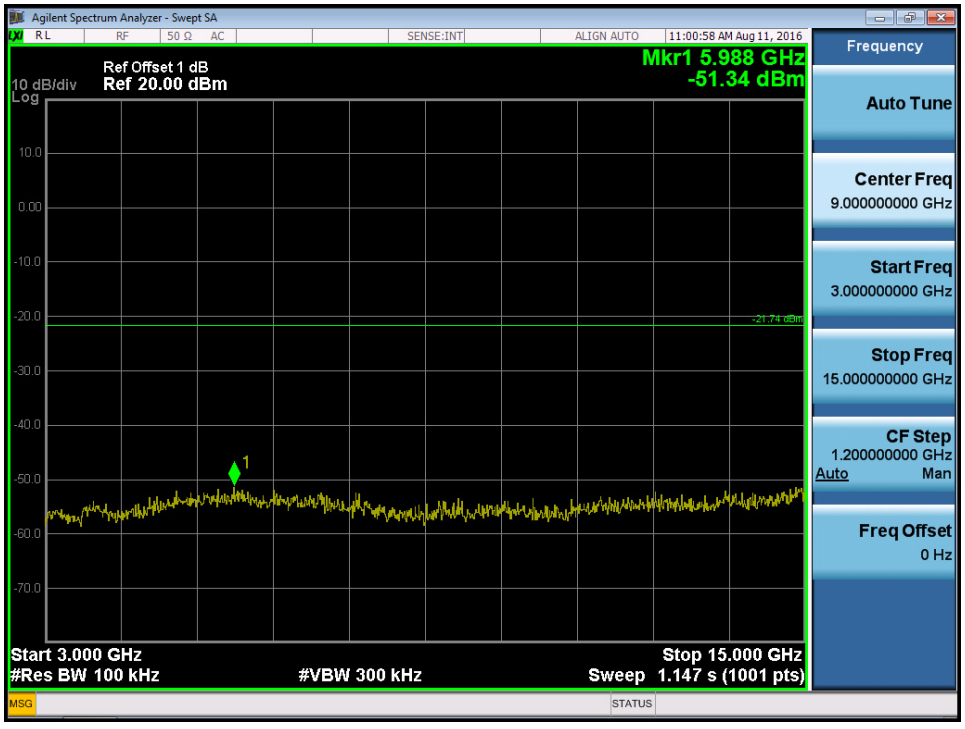



Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
10:59:53 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 14.904 GHz
-50.59 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-21.54 dBm
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 1.147 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
9.000000000 GHz
Start Freq
3.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
1.200000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
10:59:58 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 25.385 GHz
-40.18 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-21.54 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz

TX G mode CH11 (10 Harmonic of the frequency)



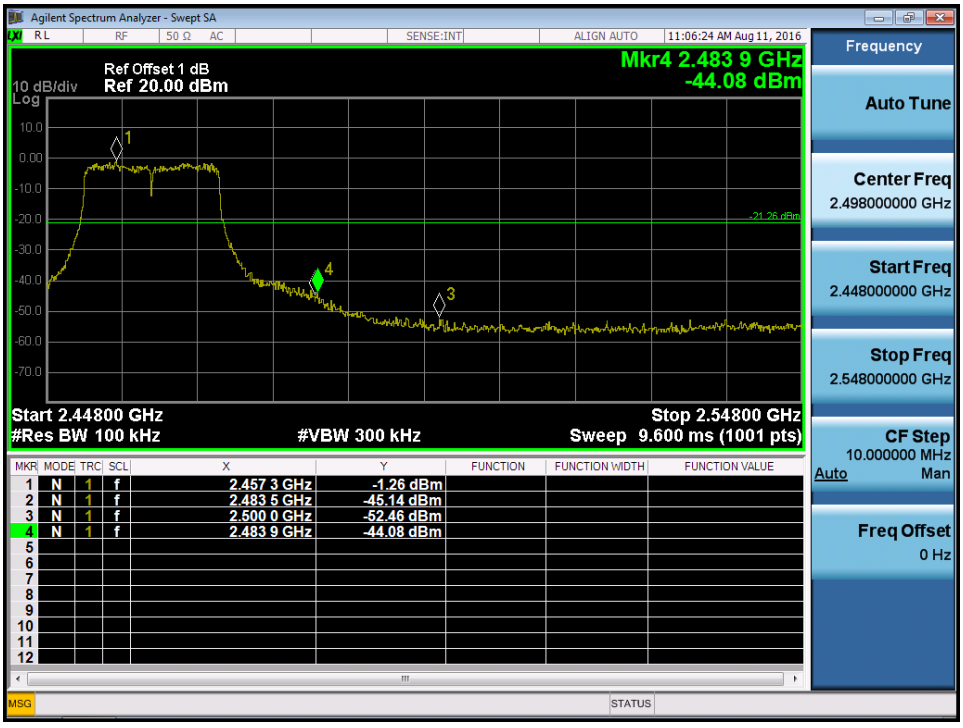



Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:01:03 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div Ref 20.00 dBm
Log
Mkr1 26.362 GHz
-39.90 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-21.74 dBm
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

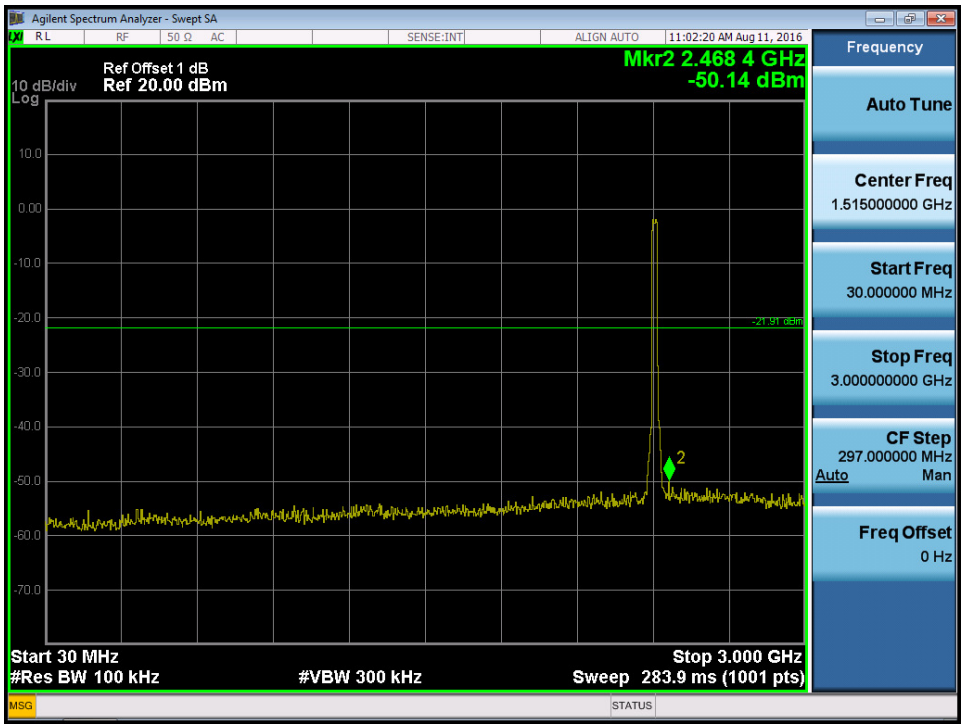
Test Mode :	TX N-20M Mode

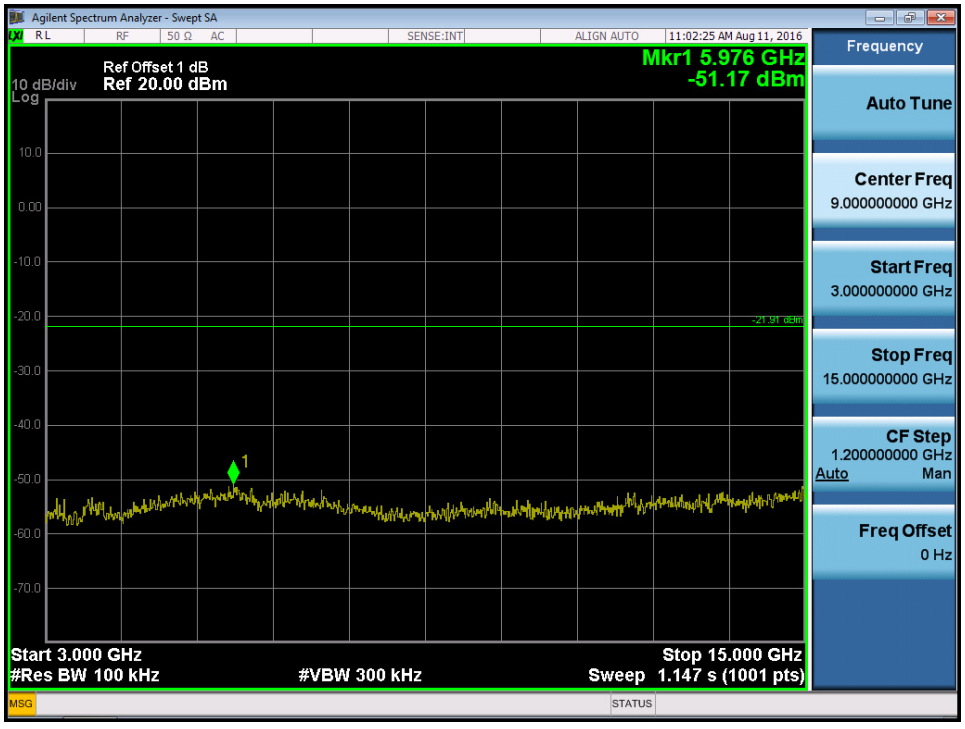
TX HT20 mode CH01

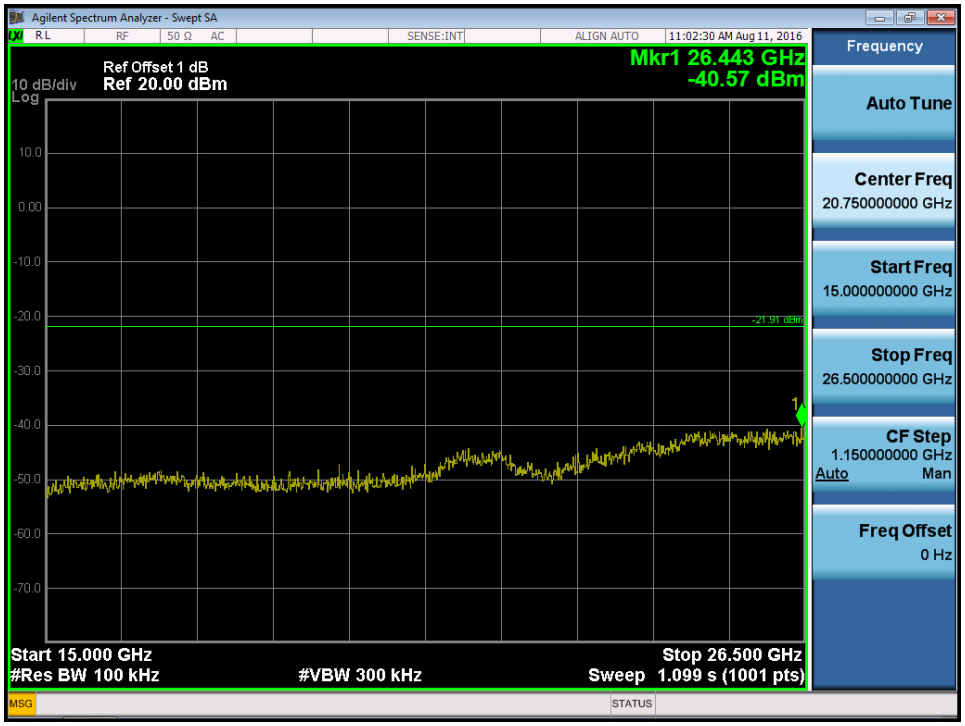
TX HT20 mode CH11



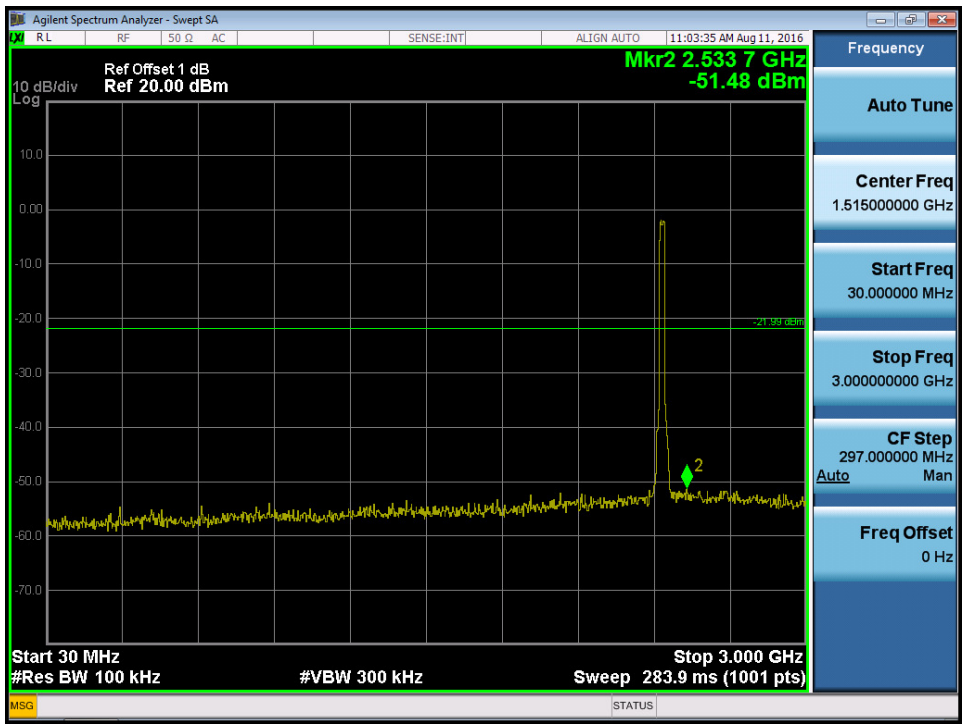
TX HT20 mode CH01 (10 Harmonic of the frequency)







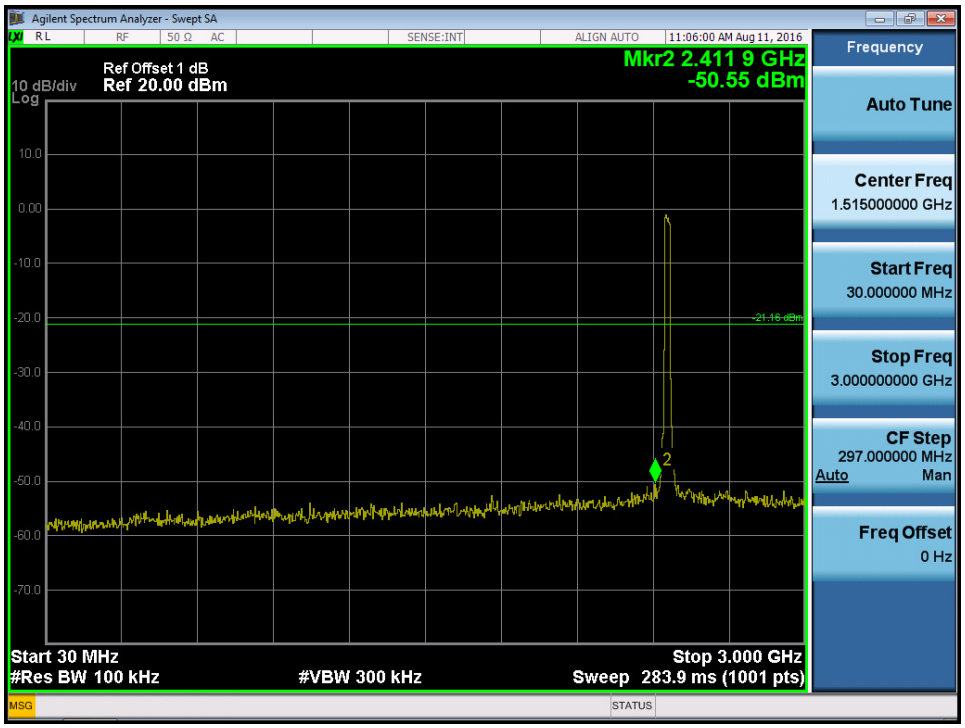
TX HT20 mode CH06 (10 Harmonic of the frequency)

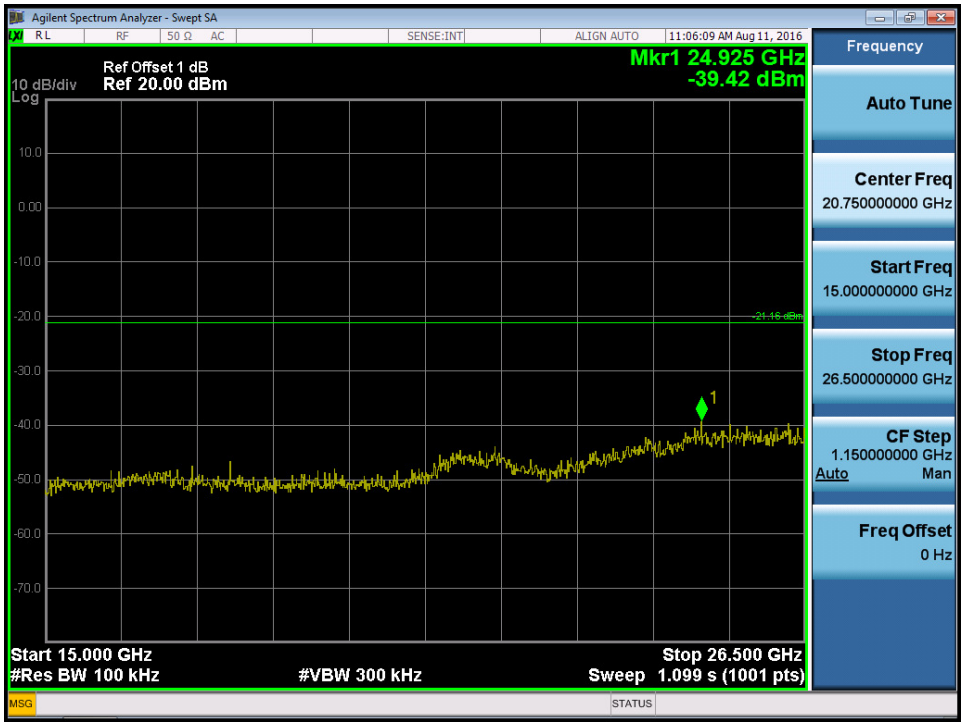



Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:03:40 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 14.988 GHz
-51.02 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 1.147 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
9.000000000 GHz
Start Freq
3.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
1.200000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:03:45 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 24.787 GHz
-39.66 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz

TX HT20 mode CH11 (10 Harmonic of the frequency)



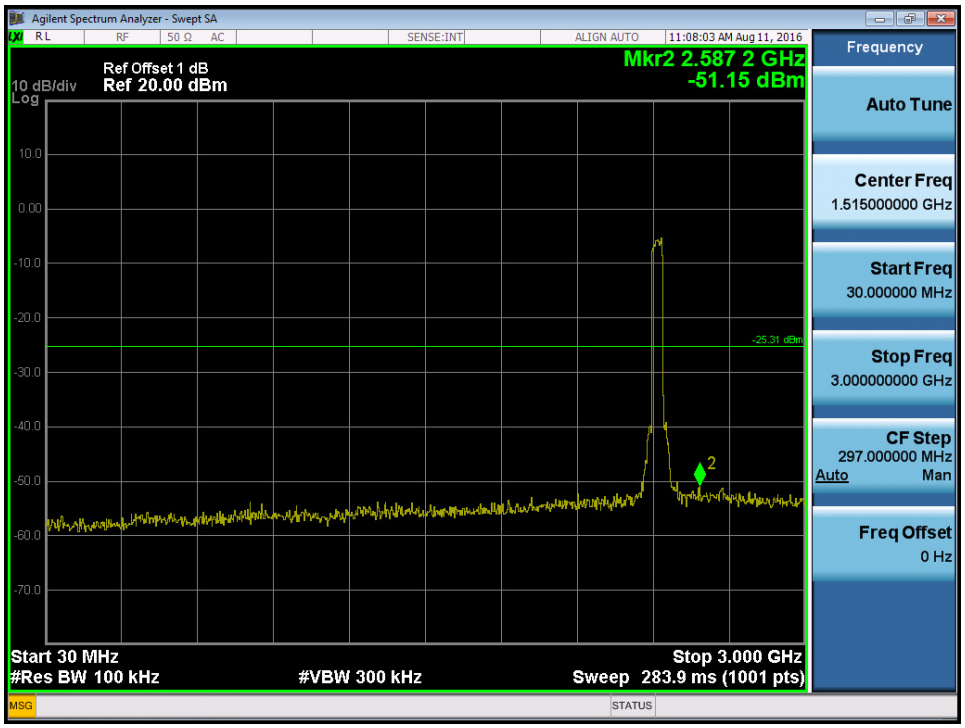

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:06:09 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div Ref 20.00 dBm
Log
Mkr1 24.925 GHz
-39.42 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-21.46 dBm
1
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz

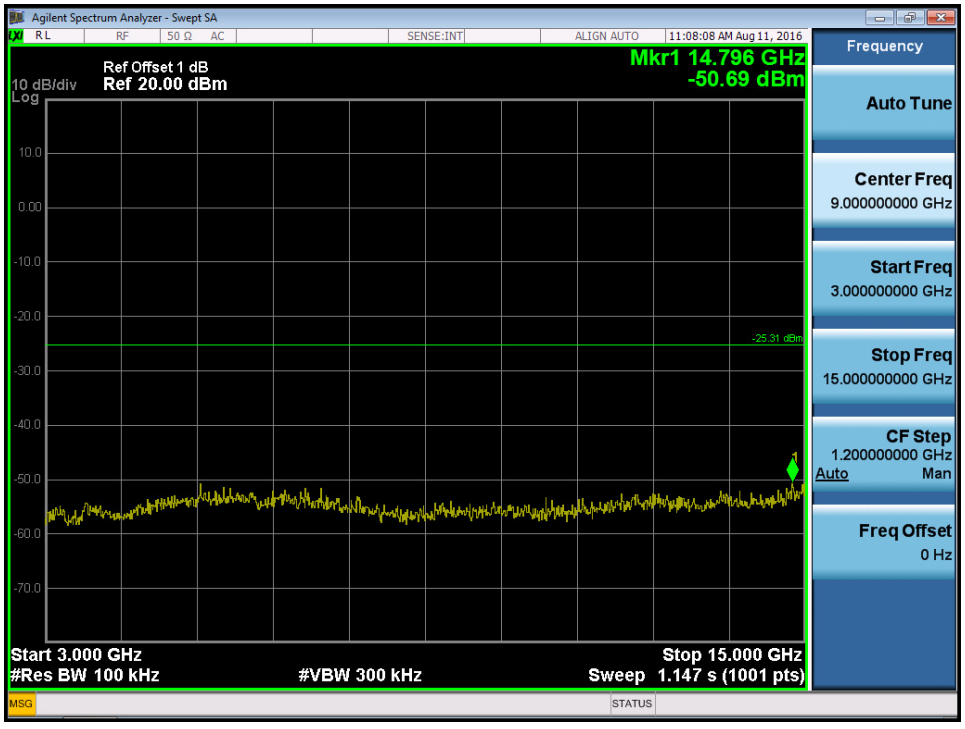
Test Mode :	TX N-40M Mode

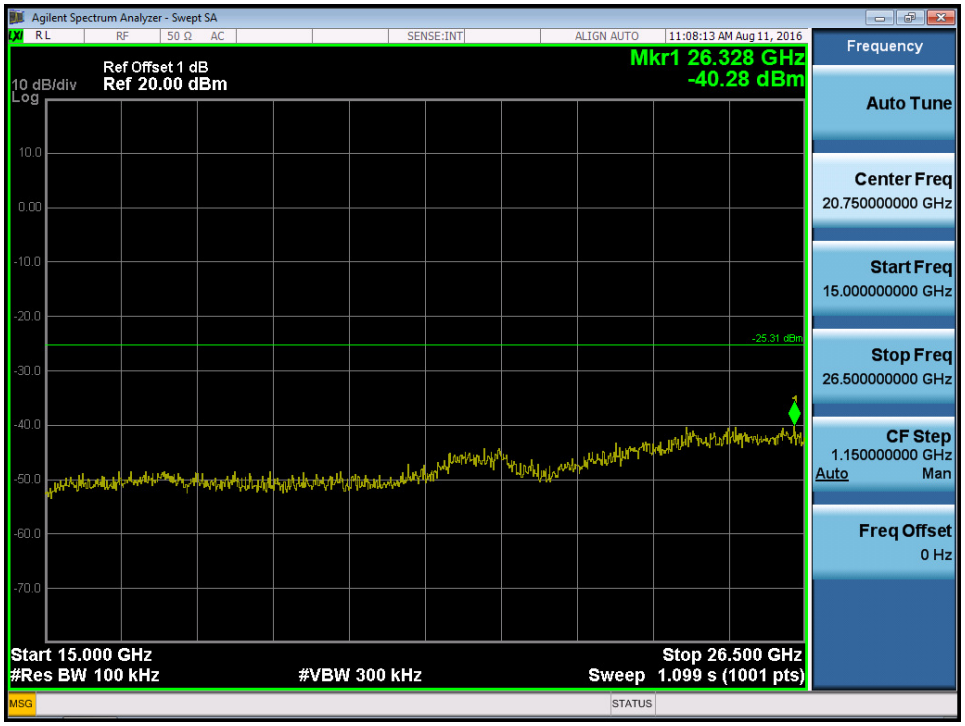
TX HT40 mode CH03

TX HT40 mode CH09

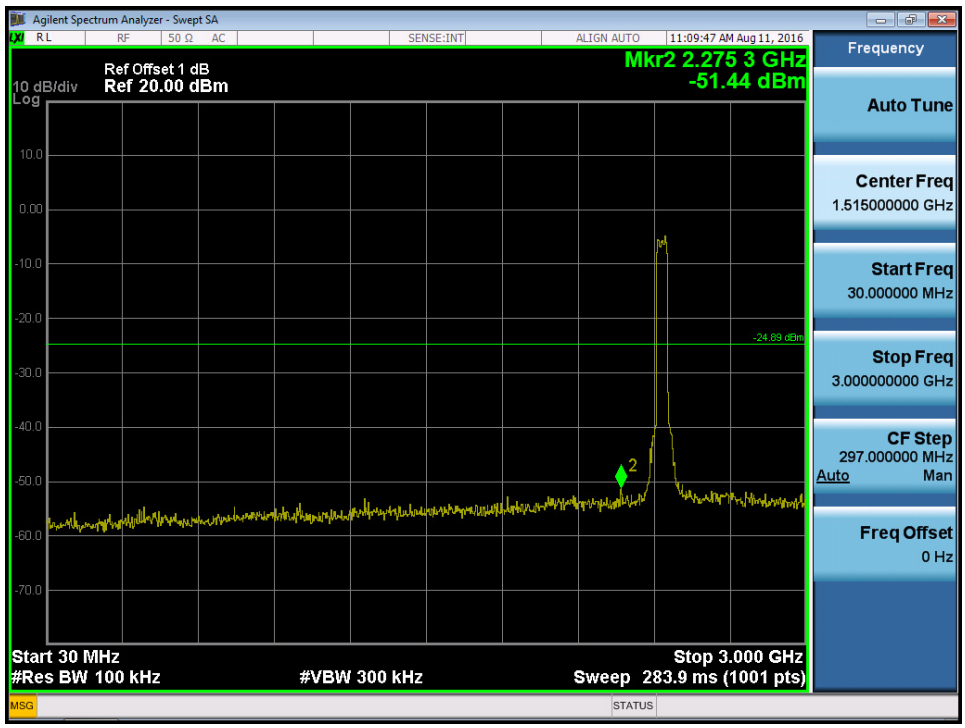
TX HT40 mode CH03 (10 Harmonic of the frequency)

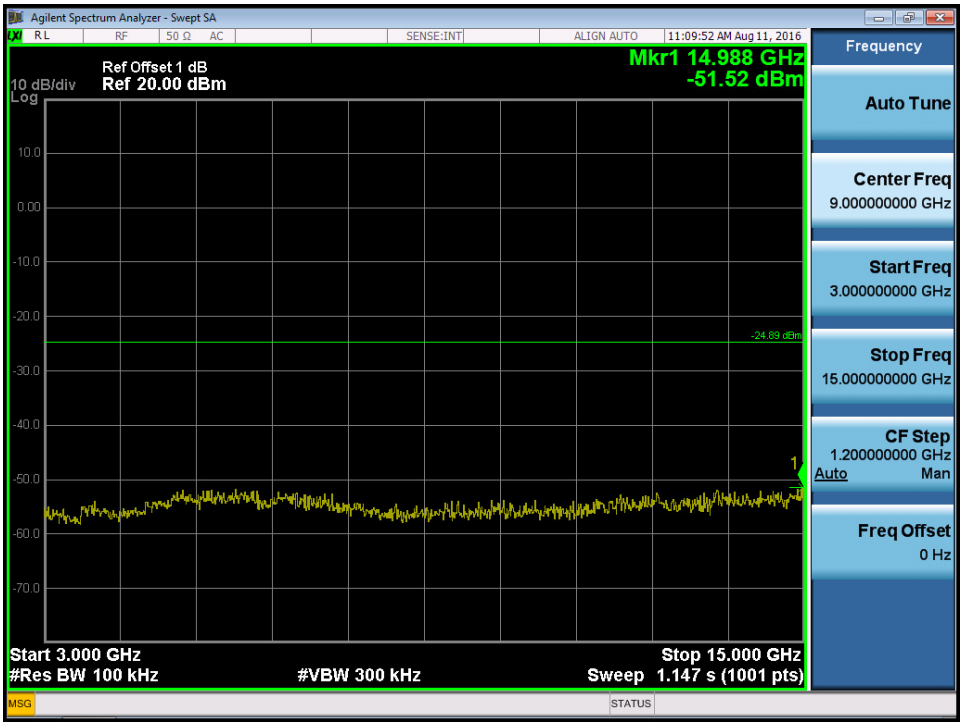


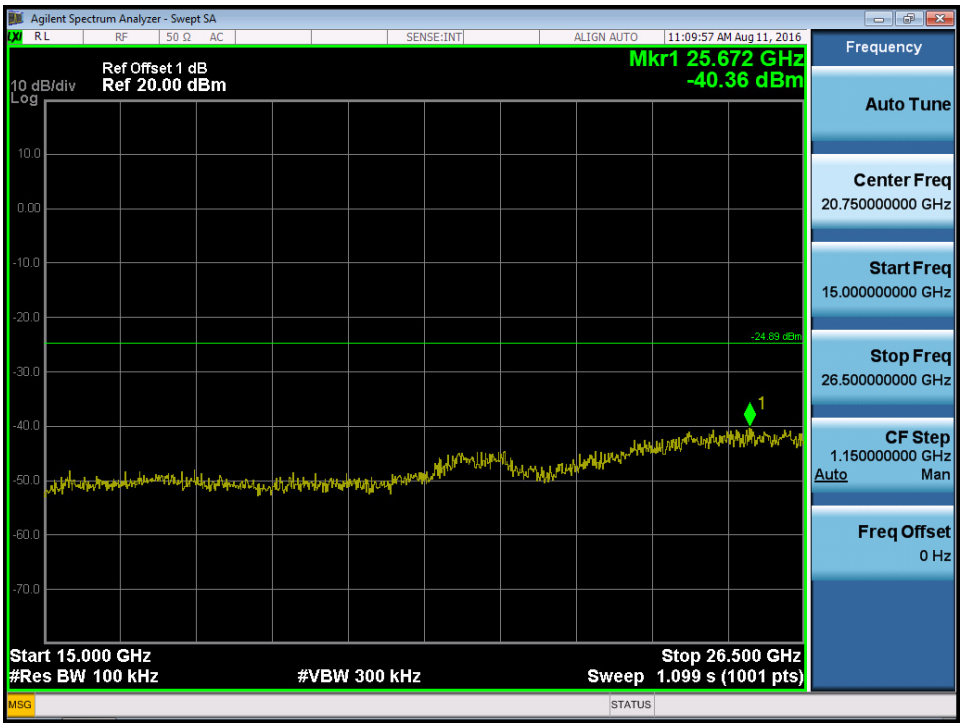




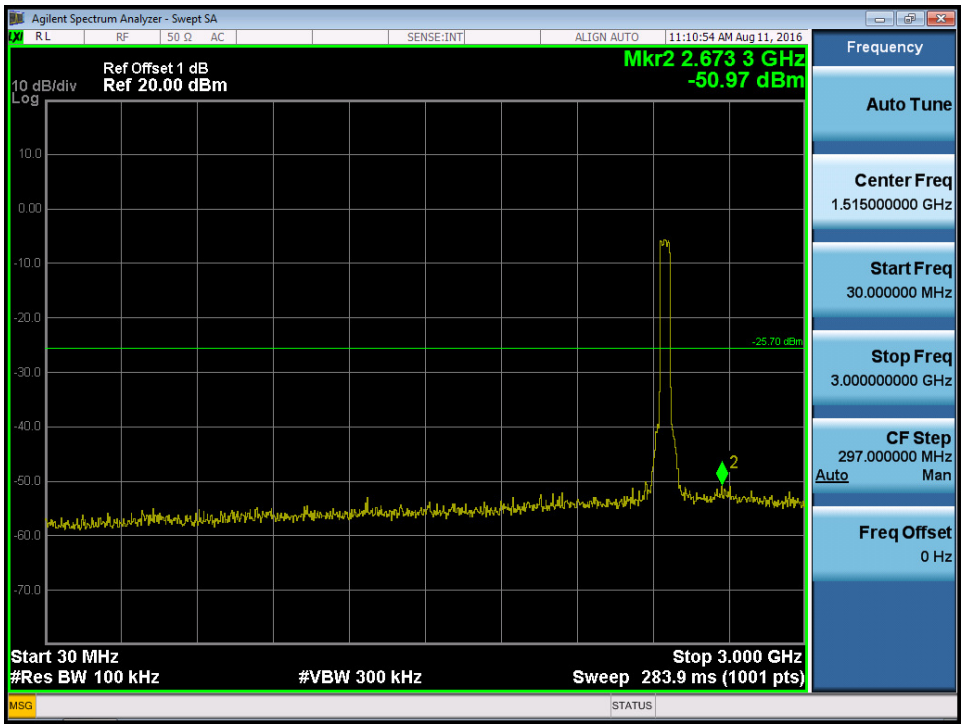
TX HT40 mode CH06 (10 Harmonic of the frequency)

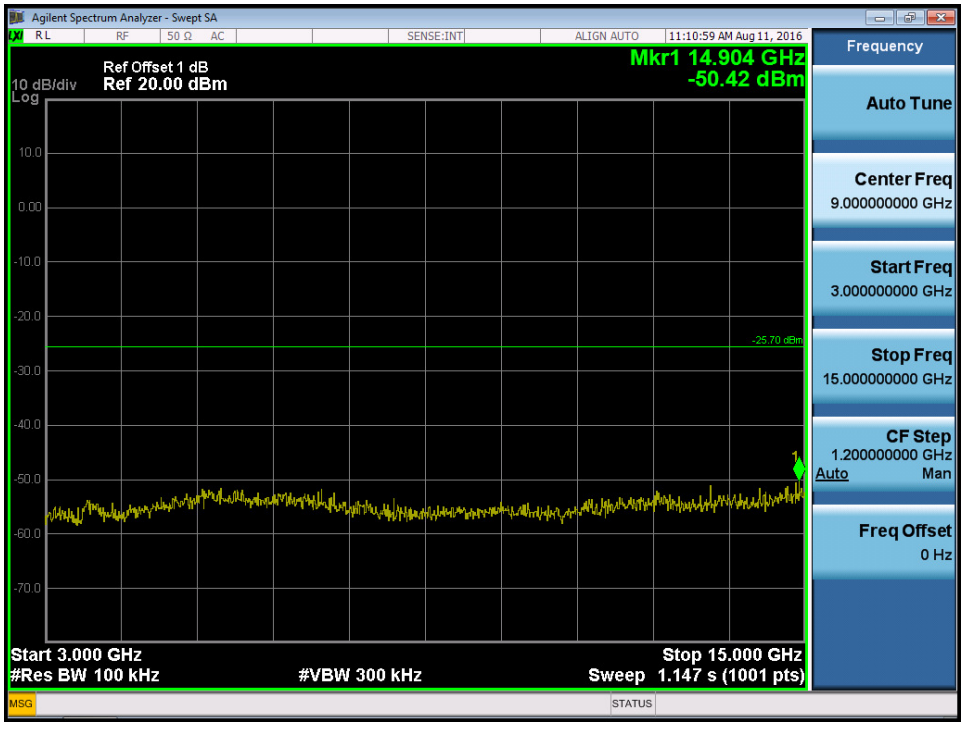



Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:09:52 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 14.988 GHz
-51.52 dBm
10.0
0.00
-10.0
-20.0
-24.89 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
Start 3.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 15.000 GHz
Sweep 1.147 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
9.000000000 GHz
Start Freq
3.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
1.200000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:09:57 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 25.672 GHz
-40.36 dBm
10.0
0.00
-10.0
-20.0
-24.89 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz

TX HT40 mode CH09 (10 Harmonic of the frequency)






Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
11:11:04 AM Aug 11, 2016
Ref Offset 1 dB
10 dB/div Ref 20.00 dBm
Log
Mkr1 25.293 GHz
-40.19 dBm
10.0
0.00
-10.0
-20.0
-25.70 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
1
Start 15.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 GHz
Sweep 1.099 s (1001 pts)
Frequency
Auto Tune
Center Freq
20.750000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
1.150000000 GHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

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	-17.20	0.0191	8.00	Complies
2437	-16.93	0.0203	8.00	Complies
2462	-16.99	0.0200	8.00	Complies

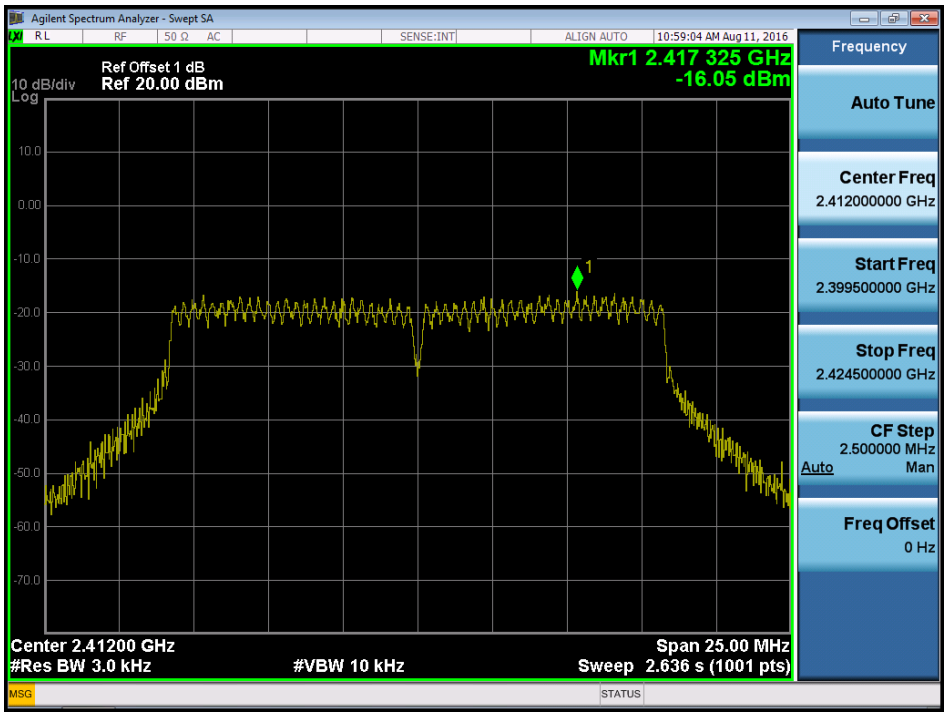
TX CH01

TX CH06

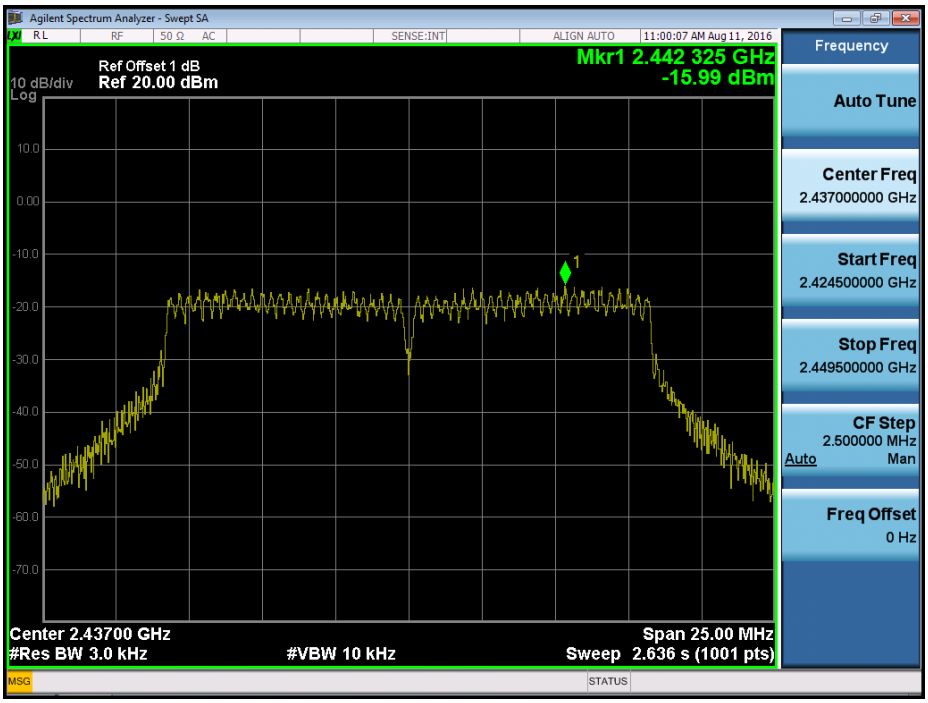
TX CH11

Test Mode :TX G Mode_CH01/06/11				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-16.05	0.0248	8.00	Complies
2437	-15.99	0.0252	8.00	Complies
2462	-15.80	0.0263	8.00	Complies

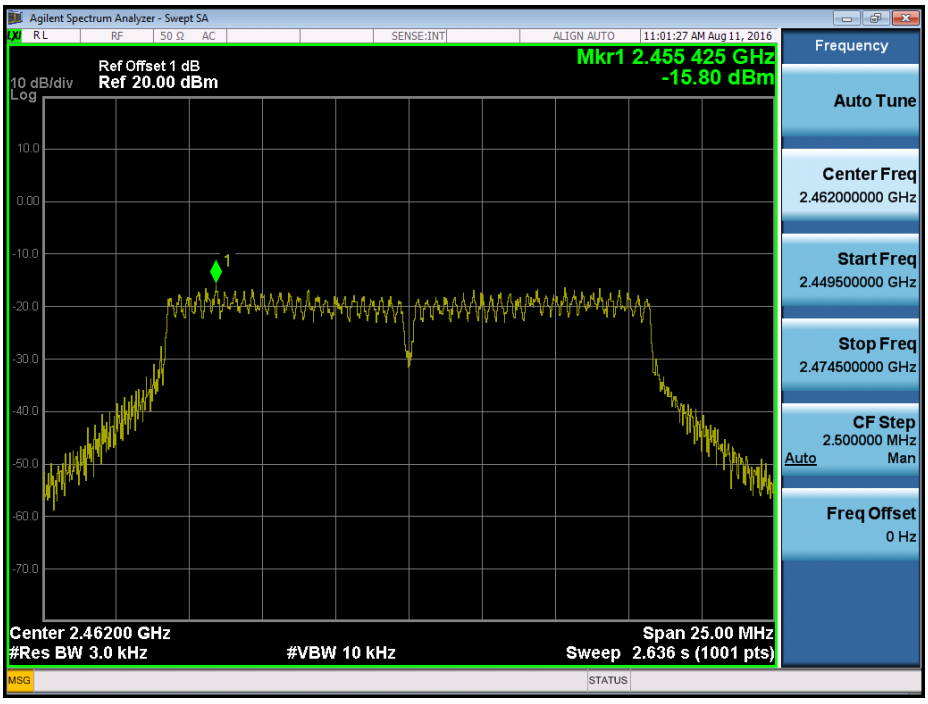
TX CH01



TX CH06



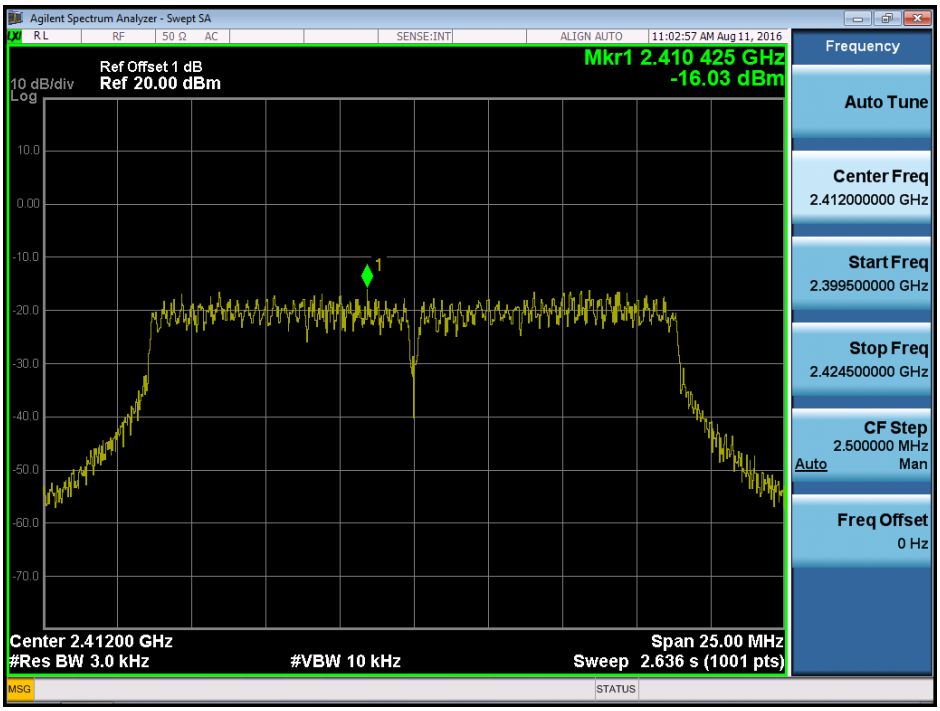
TX CH11



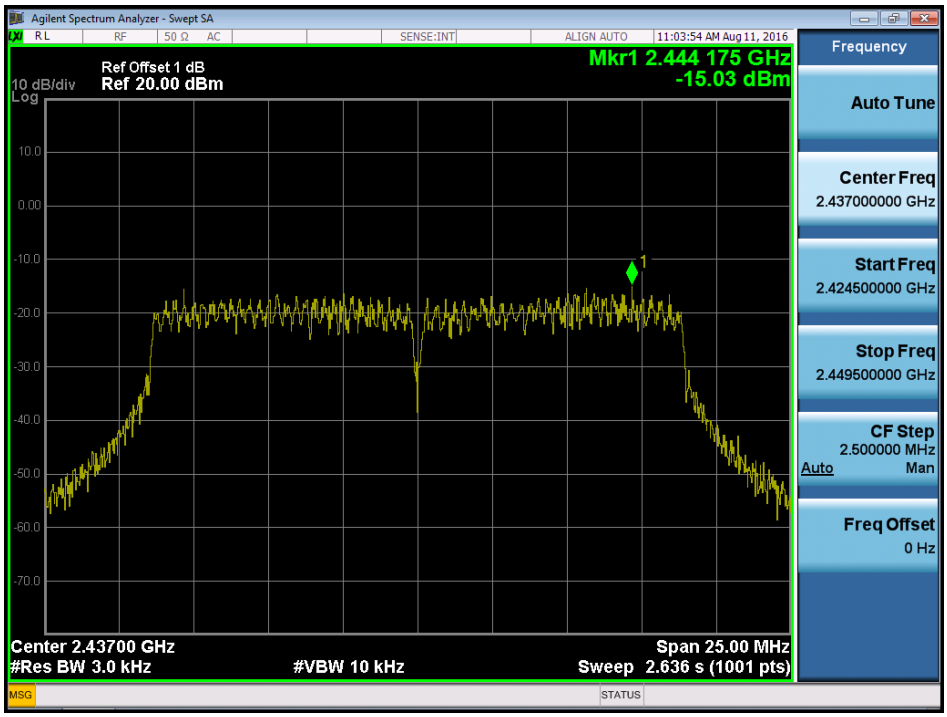
Test Mode : TX N-20M Mode_CH01/06/11

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-16.03	0.0249	8.00	Complies
2437	-15.03	0.0314	8.00	Complies
2462	-15.04	0.0313	8.00	Complies

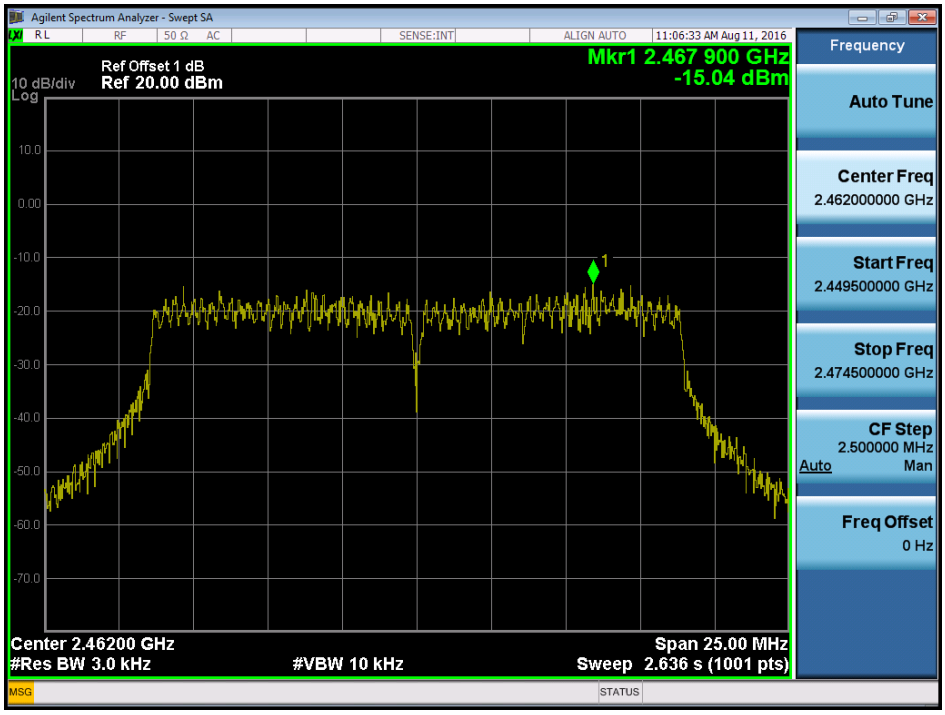
TX CH01



TX CH06

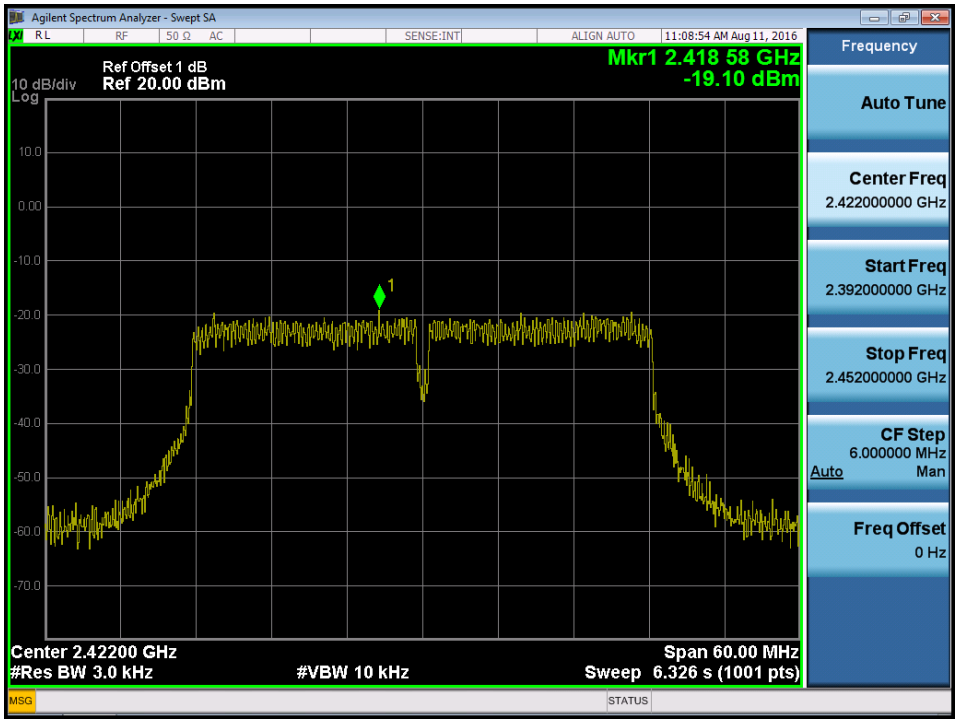


TX CH11

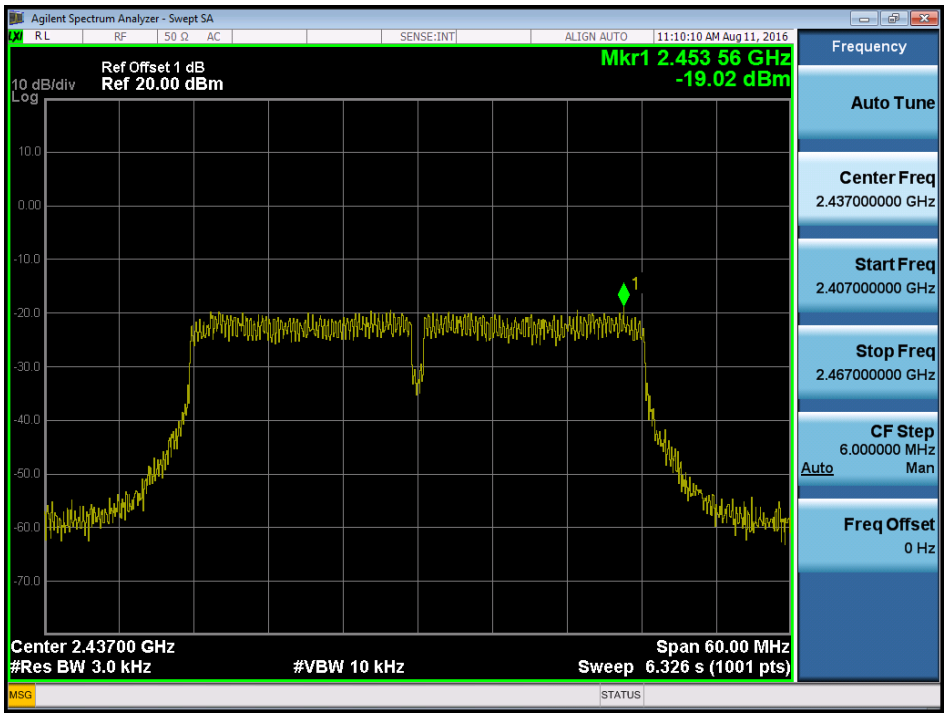


Test Mode : TX N-40M Mode_CH03/06/09				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-19.10	0.0123	8.00	Complies
2437	-19.02	0.0125	8.00	Complies
2452	-18.23	0.0150	8.00	Complies

TX CH03



TX CH06



TX CH09