FCC Radio Test Report

FCC ID: XU8TEW816DRM

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

Project No.	:	1503C269
Equipment	:	AC750 Wireless VDSL2/ADSL2+ Modem Router
Model Name	:	TEW-816DRM
Applicant	:	TRENDnet, Inc.
Address	:	20675 Manhattan Place, Torrance, CA 90501

Date of Receipt	:	Mar. 31, 2015
Date of Test	:	Mar. 31, 2015 ~ May 27, 2015
Issued Date	:	May 28, 2015
Tested by	:	BTL Inc.

Testing Engineer : (David Mao)

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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 the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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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.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1503C269	Original Issue.	May 28, 2015

1. CERTIFICATION

Equipment	:	AC750 Wireless VDSL2/ADSL2+ Modem Router
Brand Name	:	TRENDnet
Model Name	:	TEW-816DRM
Applicant	:	TRENDnet, Inc.
Manufacturer	:	TRENDnet, Inc.
Address	:	20675 Manhattan Place, Torrance, CA 90501
Date of Test	:	Mar. 31, 2015 ~ May 27, 2015
Test Sample	:	ENGINEERING SAMPLE
Standard(s)	:	FCC Part15, Subpart C: 2014 (15.247) / ANSI C63.4-2009

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-1-1503C269) 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: 2014			
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) The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v03r02 (Measurement Guidelines of DTS)

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)	Note
DG-C02	CISPR	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)	Note
DG-CB03	CISPR	9KHz~30MHz	V	3.79	
		9KHz~30MHz	H	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	AC750 Wireless VDSL2/ADSL2+ Modem Router	
Brand Name	TRENDnet®	
Model Name	TEW-816DRM	
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 300 Mbps
	Output Power (Max.)	802.11b: 17.04dBm 802.11g: 19.92 dBm 802.11n(20MHz): 23.36 dBm 802.11n(40MHz): 23.28 dBm
Power Source	DC voltage supplied from AC/DC adapter. Manufacturer: Shenzhen Gongjin Electronics Co.Ltd. Model:S18B72-120A150-0K	
Power Rating	I/P:AC 100-240V 50/60Hz Max. 0.7A O/P: DC 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)
0	N/A	N/A	Printed	N/A	3
1	N/A	N/A	Printed	N/A	3

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.

(2) ANT 0 was the worst case for 1TX.

4.

Operating Mode / TX Mode	1TX	2TX
802.11b	V (ANT 0)	-
802.11g	V (ANT 0)	-
802.11n(20MHz)	-	V (ANT 0 + ANT 1)
802.11n(40MHz)	-	V (ANT 0 + ANT 1)

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

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.

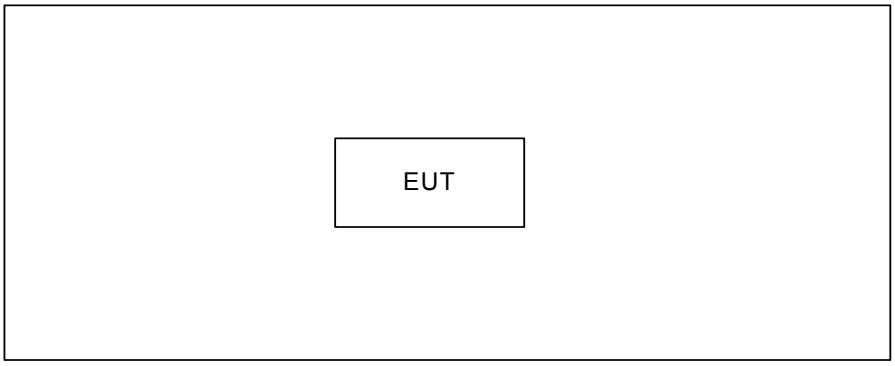
(4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

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

Test software version	Duck_1_1-9		
Frequency (MHz)	2412	2437	2462
802.11b	9	10	9
802.11g	12	12	11
802.11n (20MHz)	10	14	8
Frequency	2422	2437	2452
802.11n (40MHz)	0F	16	8

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.	Note
-	-	-	-	-	-	

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	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

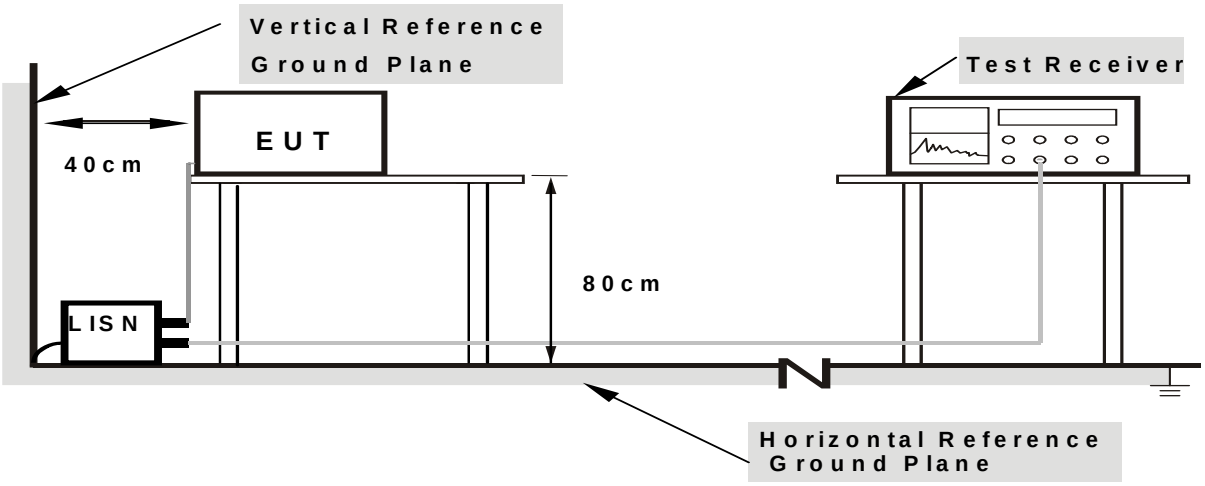
4.1.2 TEST PROCEDURE

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 configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

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

20dB in any 100 KHz bandwidth outside the operating frequency band. 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)	RBW 1MHz VBW 3MHz peak detector for Pk value RMS detector for AV value

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

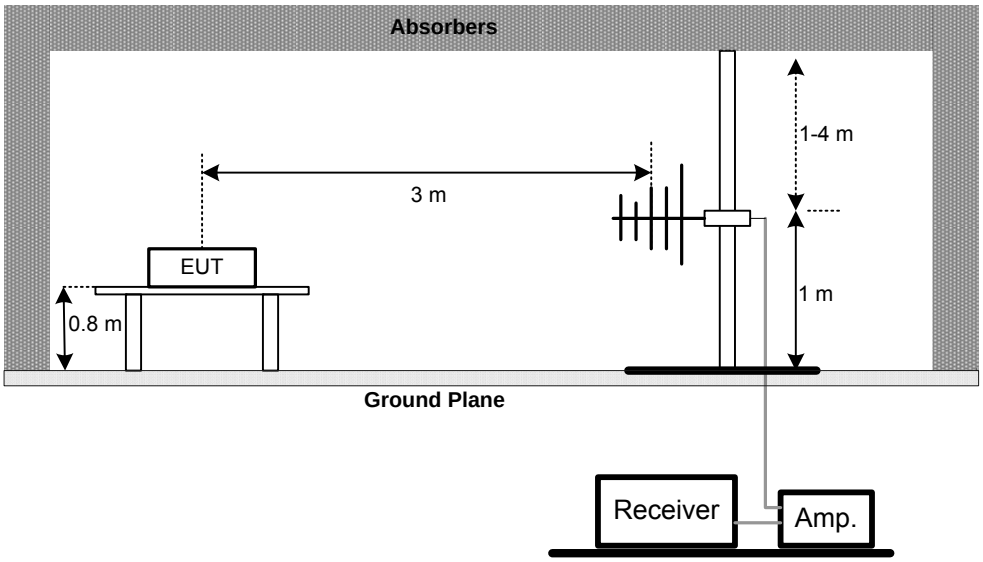
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-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 0.8 m; 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. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

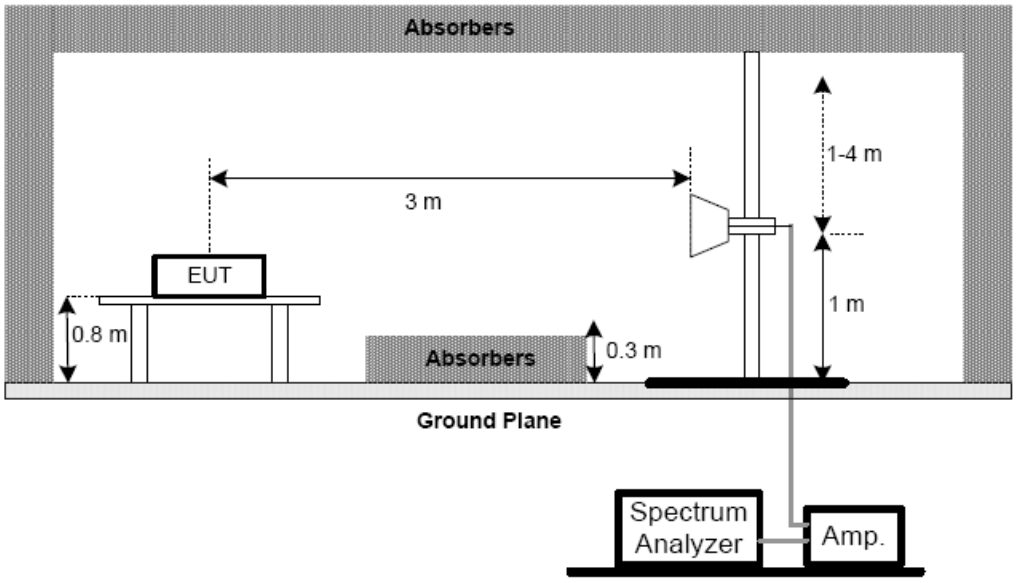
No deviation

4.2.4 TEST SETUP

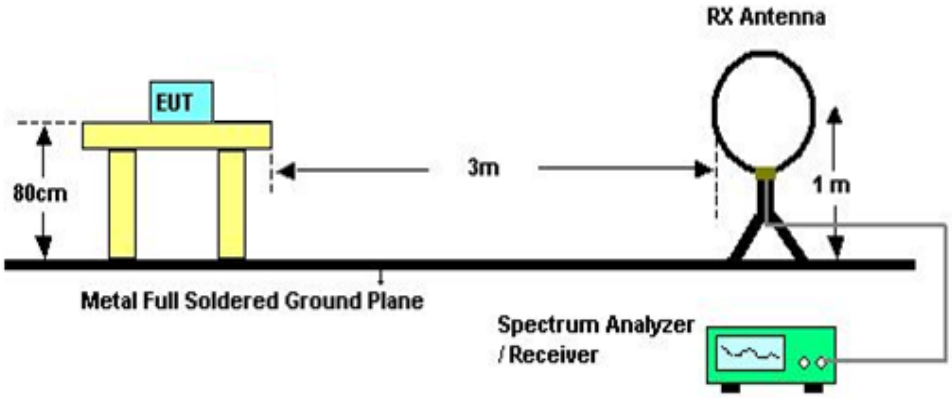
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.5** Unless otherwise a special operating condition is specified in the follows during the testing.

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

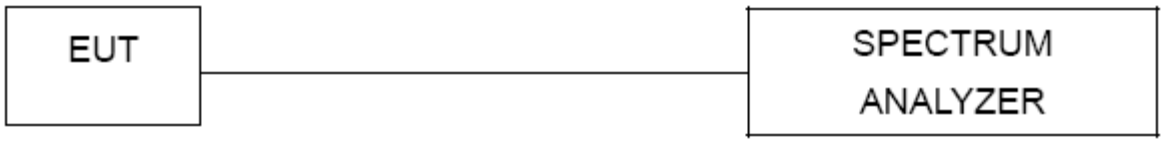
5.1.1 TEST PROCEDURE

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 tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

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

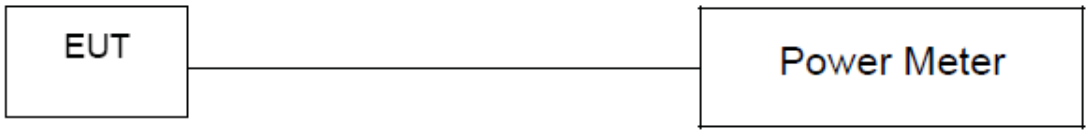
6.1.1 TEST PROCEDURE

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 v03r02.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.
Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

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 intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

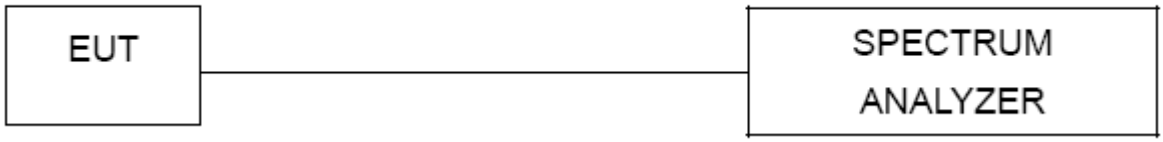
7.1.1 TEST PROCEDURE

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.

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

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

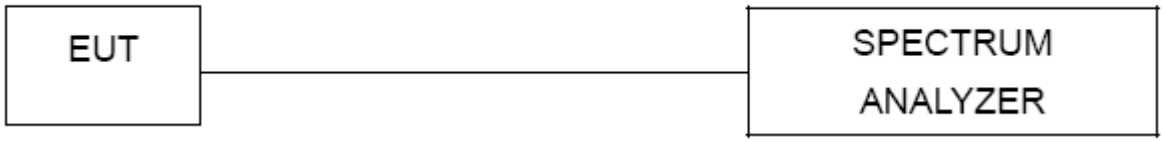
8.1.1 TEST PROCEDURE

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 tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 EUT TEST CONDITIONS

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

8.1.6 TEST RESULTS

Please refer to the Attachment H.

9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	Mar. 28, 2016
2	LISN	R&S	ENV216	101447	Mar. 28, 2016
3	Test Cable	N/A	C_17	N/A	Mar. 13, 2016
4	EMI TEST RECEIVER	R&S	ESCS30	833364/017	Mar. 28, 2016
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 28, 2016
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. 28, 2016
2	Amplifier	HP	8447D	2944A09673	Nov. 17, 2015
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Controller	CT	SC100	N/A	N/A
6	Antenna	ETS	3115	00075789	Mar. 28, 2016
7	Amplifier	Agilent	8449B	3008A02274	Nov. 02, 2015
8	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
9	Test Cable	N/A	C-68	N/A	Jul. 01, 2015
10	Controller	CT	SC100	N/A	N/A
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Mar. 28, 2016
12	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 28, 2016
13	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 16, 2015
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	ANRITSU	ML2495A	1128009	Mar. 28, 2016
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 28, 2016

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

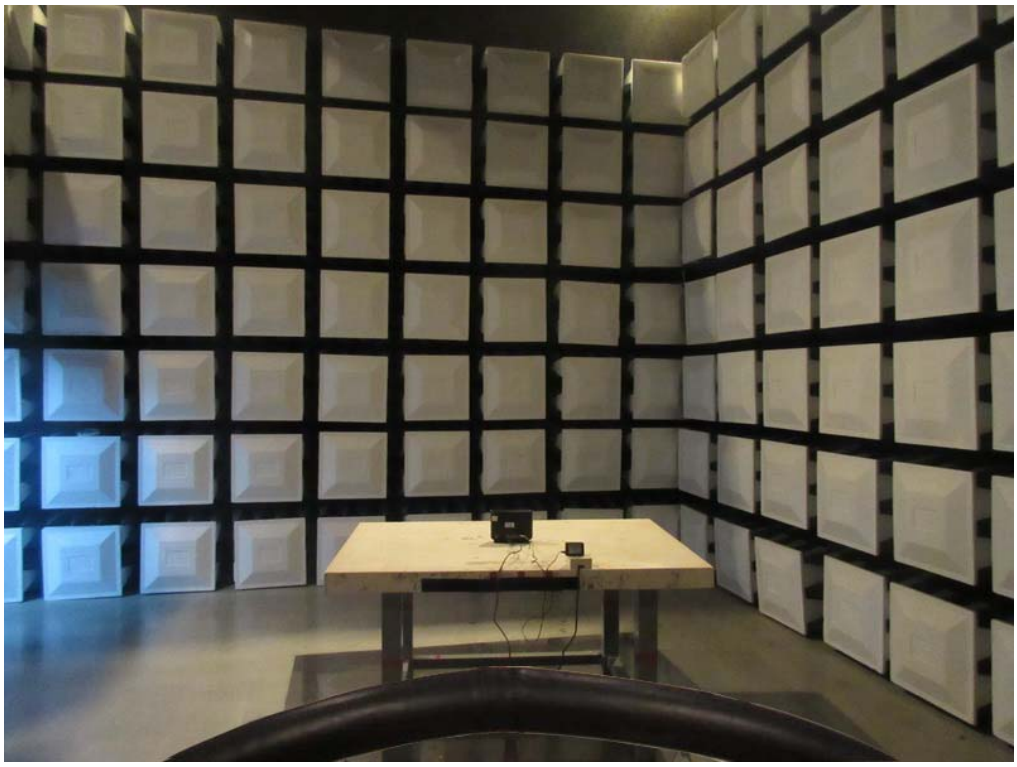
Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

10. EUT TEST PHOTO

Conducted Measurement Photos

Radiated Measurement Photos

9KHz to 30MHz



Radiated Measurement Photos

30MHz to 1000MHz

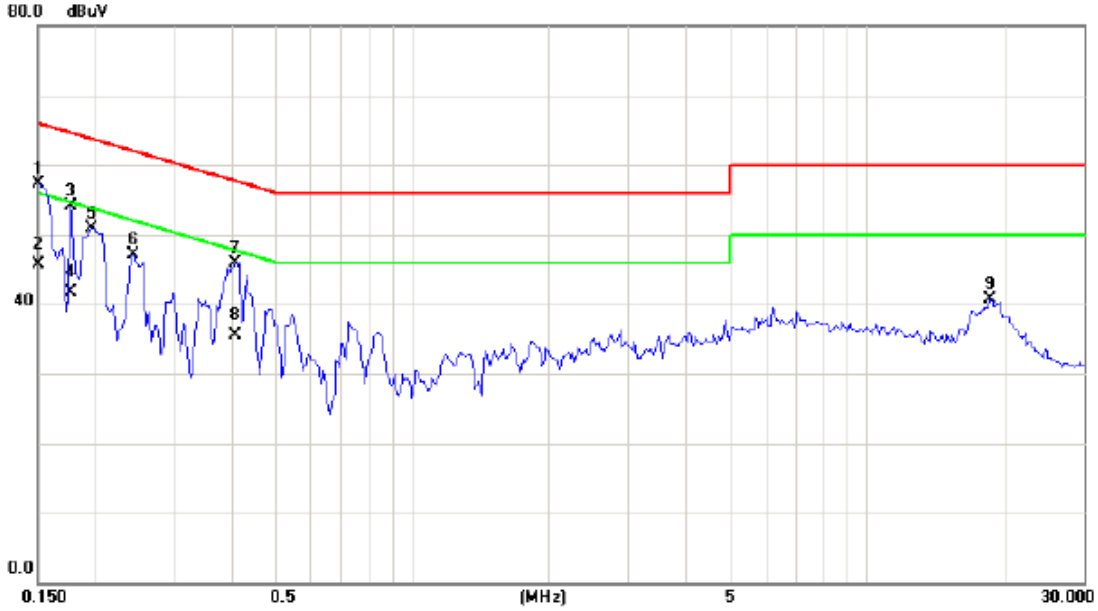
Radiated Measurement Photos

Above 1000MHz

ATTACHMENT A - CONDUCTED EMISSION

Test Mode :	TX MODE

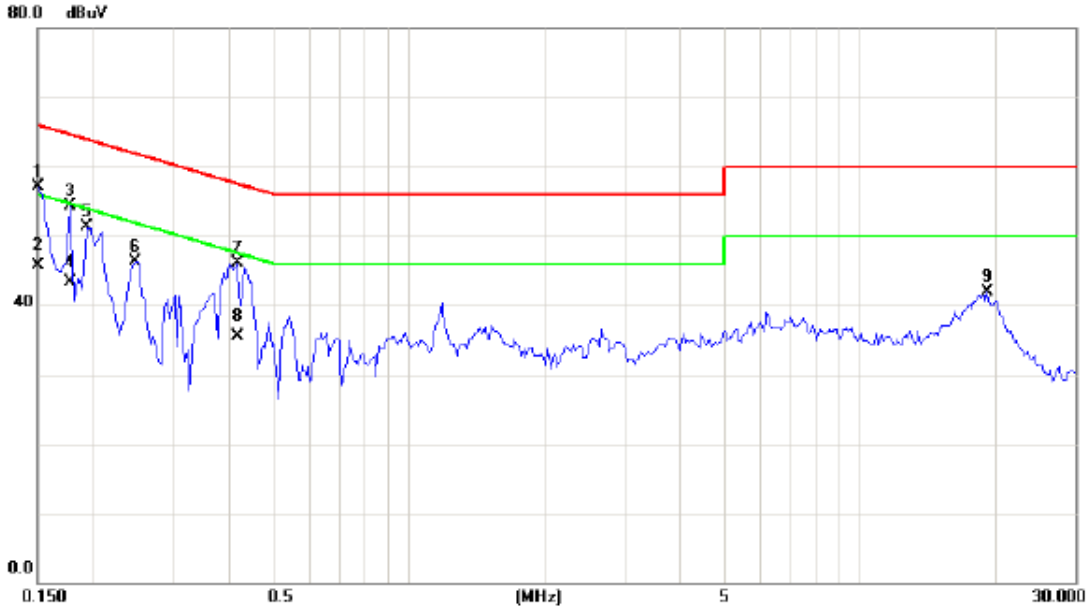
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	47.93	9.45	57.38	66.00	-8.62	peak	
2		0.1500	36.16	9.45	45.61	56.00	-10.39	AVG	
3		0.1773	44.57	9.46	54.03	64.61	-10.58	peak	
4		0.1773	32.16	9.46	41.62	54.61	-12.99	AVG	
5		0.1968	41.46	9.47	50.93	63.74	-12.81	peak	
6		0.2436	37.65	9.49	47.14	61.97	-14.83	peak	
7		0.4078	36.34	9.56	45.90	57.69	-11.79	peak	
8		0.4078	25.97	9.56	35.53	47.69	-12.16	AVG	
9		18.6992	30.98	9.72	40.70	60.00	-19.30	peak	

Test Mode :	TX MODE

Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	47.48	9.56	57.04	66.00	-8.96	peak	
2		0.1500	36.19	9.56	45.75	56.00	-10.25	AVG	
3		0.1773	44.81	9.55	54.36	64.61	-10.25	peak	
4		0.1773	33.69	9.55	43.24	54.61	-11.37	AVG	
5		0.1930	41.67	9.54	51.21	63.91	-12.70	peak	
6		0.2476	36.70	9.54	46.24	61.84	-15.60	peak	
7		0.4156	36.64	9.54	46.18	57.54	-11.36	peak	
8		0.4156	25.97	9.54	35.51	47.54	-12.03	AVG	
9		19.1953	32.10	9.71	41.81	60.00	-18.19	peak	

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

Test Mode:	TX Mode 2412MHz

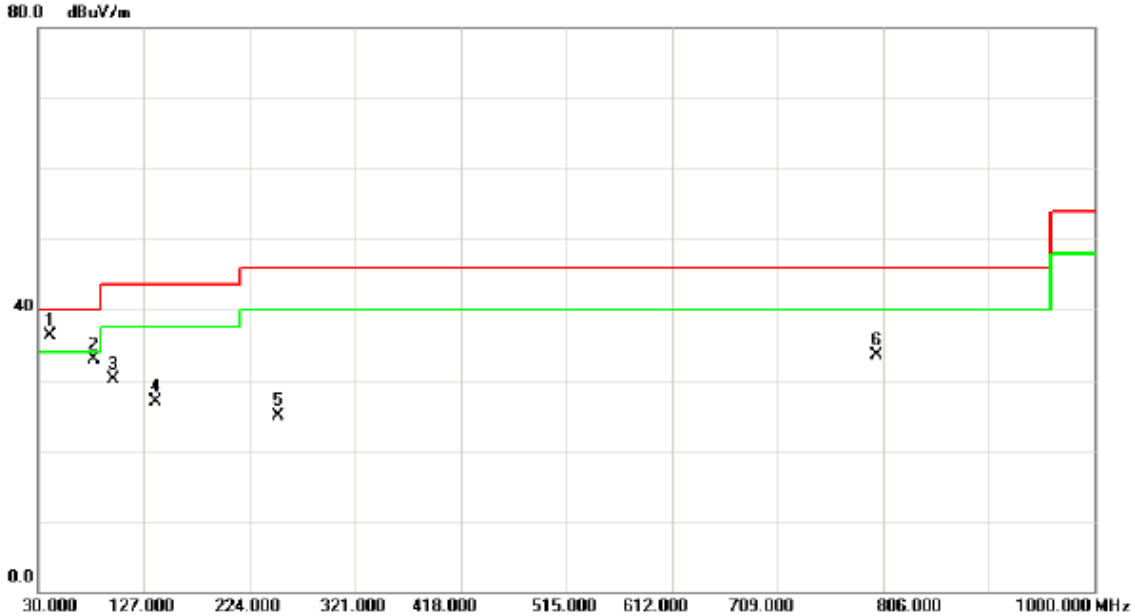
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit(QP) (dBuV/m)	Margin (dB)	Note
0.0094	0°	7.21	24.97	32.18	108.18	-75.99	AVG
0.0094	0°	9.48	24.97	34.45	128.18	-93.72	PEAK
0.0237	0°	5.25	24.07	29.32	100.11	-70.79	AVG
0.0237	0°	7.29	24.07	31.36	120.11	-88.75	PEAK
0.0318	0°	5.48	23.55	29.03	97.56	-68.52	AVG
0.0318	0°	7.38	23.55	30.93	117.56	-86.62	PEAK
0.0429	0°	3.51	22.85	26.36	94.96	-68.60	AVG
0.0429	0°	5.64	22.85	28.49	114.96	-86.47	PEAK
0.4912	0°	17.74	19.82	37.56	73.78	-36.22	QP
1.7156	0°	25.99	19.53	45.52	69.54	-24.02	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit(QP) (dBuV/m)	Margin (dB)	Note
0.0094	90°	6.03	24.30	30.33	128.18	-97.85	AVG
0.0094	90°	8.19	24.30	32.49	148.18	-115.69	PEAK
0.0237	90°	4.61	24.07	28.68	120.11	-91.43	AVG
0.0237	90°	6.92	24.07	30.99	140.11	-109.12	PEAK
0.0318	90°	3.06	23.55	26.61	117.56	-90.94	AVG
0.0318	90°	6.08	23.55	29.63	137.56	-107.92	PEAK
0.0429	90°	0.31	22.85	23.16	114.96	-91.80	AVG
0.0429	90°	3.31	22.85	26.16	134.96	-108.80	PEAK
0.4912	90°	19.13	19.82	38.95	73.78	-34.83	QP
1.7156	90°	24.22	19.53	43.75	69.54	-25.79	QP

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

Test Mode:	TX B MODE CHANNEL 01

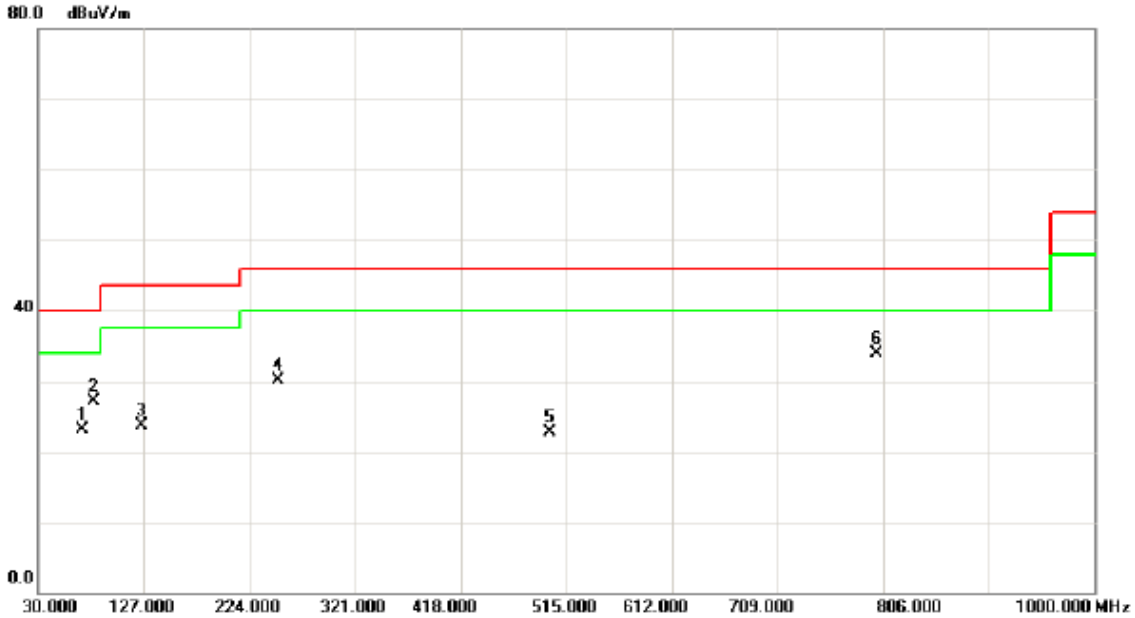
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	40.6700	50.43	-14.16	36.27	40.00	-3.73	peak	
2		81.4100	50.09	-17.23	32.86	40.00	-7.14	peak	
3		98.8700	46.58	-16.55	30.03	43.50	-13.47	peak	
4		138.6400	40.03	-13.15	26.88	43.50	-16.62	peak	
5		250.1900	39.00	-14.02	24.98	46.00	-21.02	peak	
6		800.1800	36.39	-2.89	33.50	46.00	-12.50	peak	

Test Mode:	TX B MODE CHANNEL 01

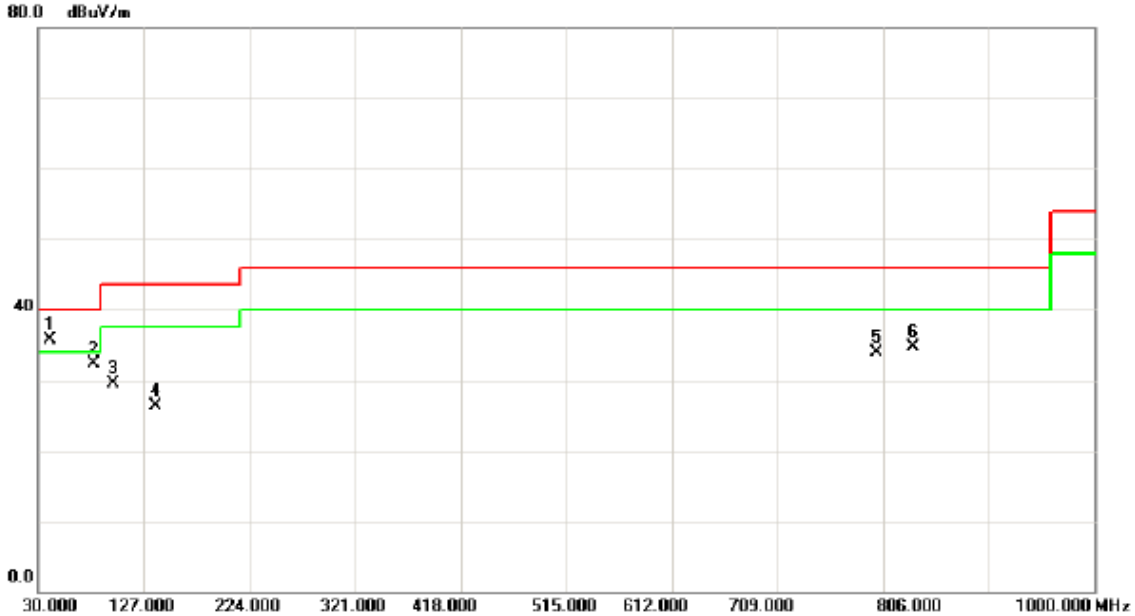
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		70.7400	39.47	-16.30	23.17	40.00	-16.83	peak	
2		81.4100	44.31	-17.23	27.08	40.00	-12.92	peak	
3		125.0600	37.40	-13.62	23.78	43.50	-19.72	peak	
4		250.1900	44.16	-14.02	30.14	46.00	-15.86	peak	
5		500.4500	33.17	-10.50	22.67	46.00	-23.33	peak	
6	*	800.1800	36.80	-2.89	33.91	46.00	-12.09	peak	

Test Mode:	TX B MODE CHANNEL 06

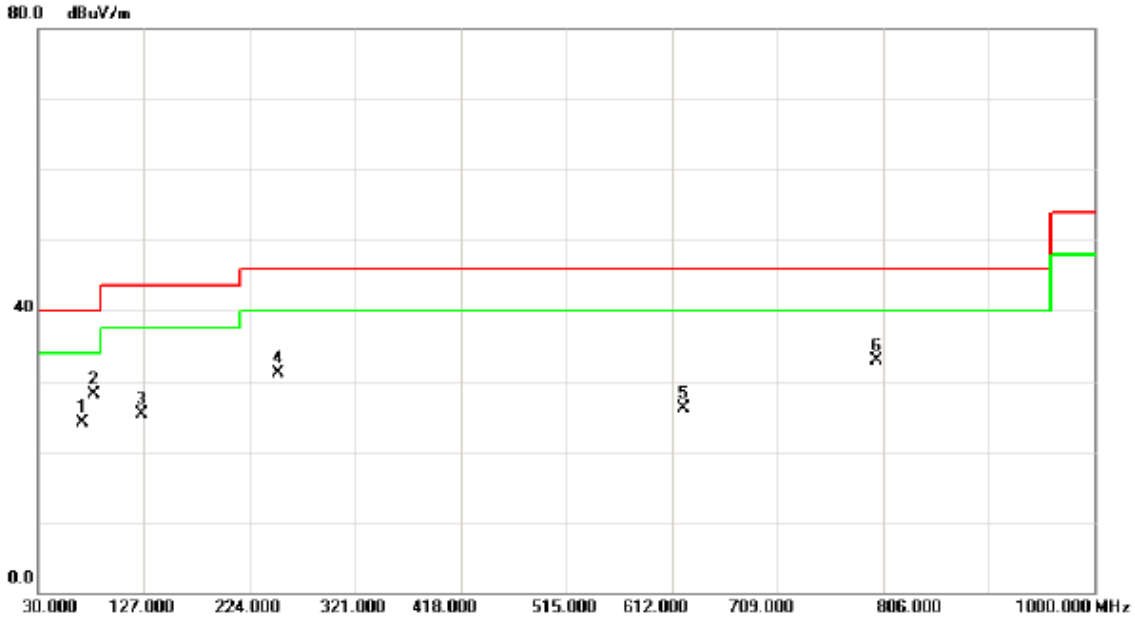
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	40.6700	49.93	-14.16	35.77	40.00	-4.23	peak	
2		81.4100	49.59	-17.23	32.36	40.00	-7.64	peak	
3		98.8700	46.08	-16.55	29.53	43.50	-13.97	peak	
4		138.6400	39.53	-13.15	26.38	43.50	-17.12	peak	
5		800.1800	36.89	-2.89	34.00	46.00	-12.00	peak	
6		833.1600	37.73	-3.06	34.67	46.00	-11.33	peak	

Test Mode:	TX B MODE CHANNEL 06

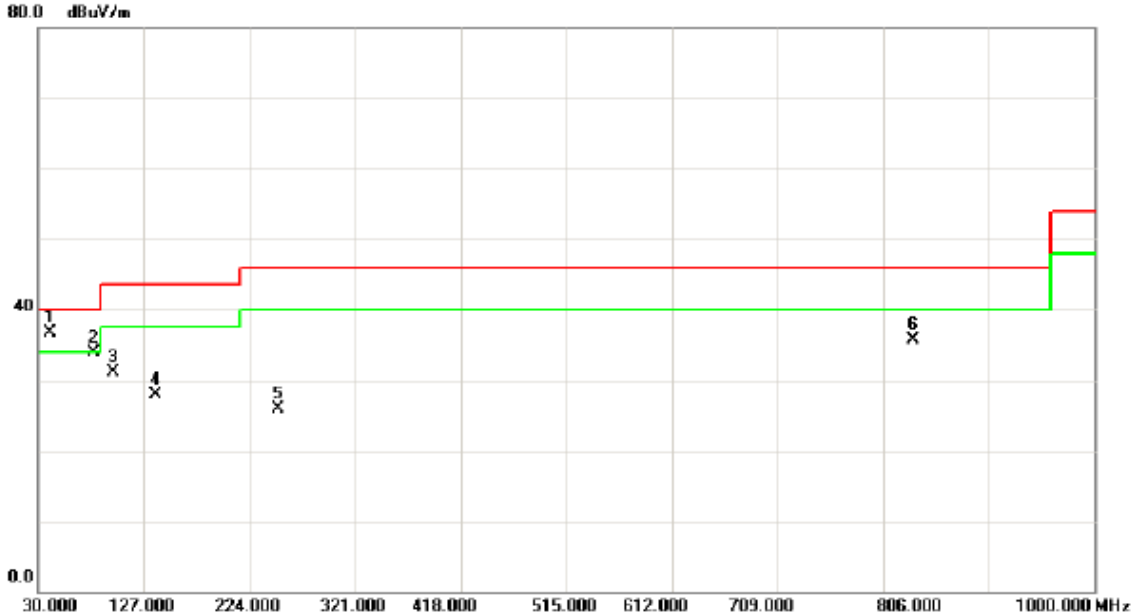
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		70.7400	40.47	-16.30	24.17	40.00	-15.83	peak	
2	*	81.4100	45.31	-17.23	28.08	40.00	-11.92	peak	
3		125.0600	38.90	-13.62	25.28	43.50	-18.22	peak	
4		250.1900	45.16	-14.02	31.14	46.00	-14.86	peak	
5		622.6700	32.75	-6.66	26.09	46.00	-19.91	peak	
6		800.1800	35.80	-2.89	32.91	46.00	-13.09	peak	

Test Mode:	TX B MODE CHANNEL 11

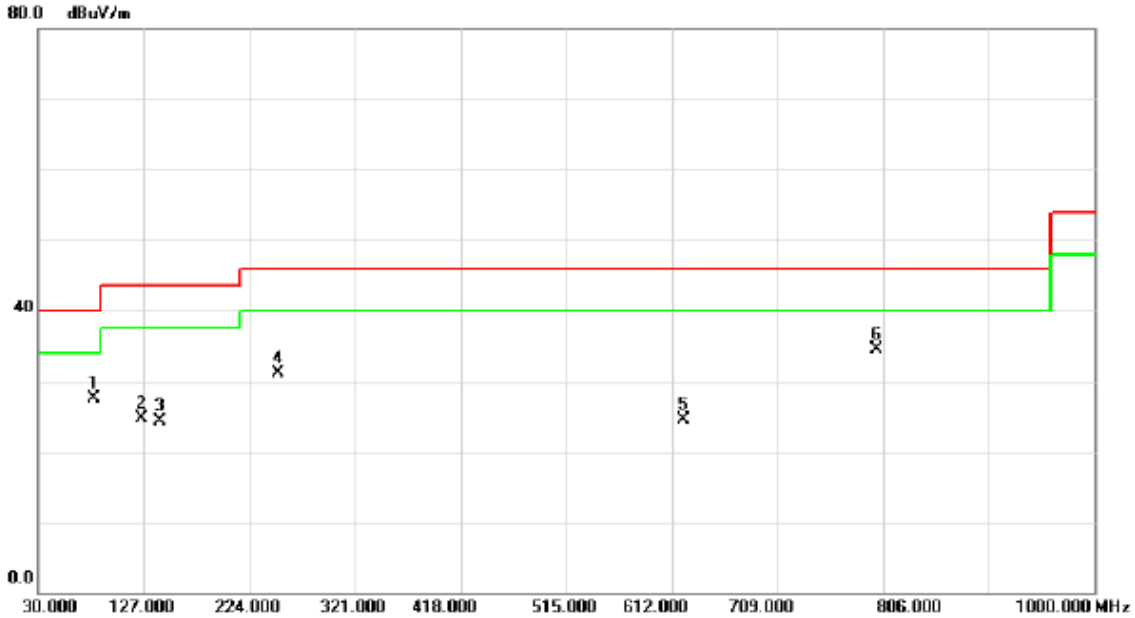
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	40.6700	50.93	-14.16	36.77	40.00	-3.23	peak	
2		81.4100	51.09	-17.23	33.86	40.00	-6.14	peak	
3		98.8700	47.58	-16.55	31.03	43.50	-12.47	peak	
4		138.6400	41.03	-13.15	27.88	43.50	-15.62	peak	
5		250.1900	40.00	-14.02	25.98	46.00	-20.02	peak	
6		833.1600	38.73	-3.06	35.67	46.00	-10.33	peak	

Test Mode:	TX B MODE CHANNEL 11

Horizontal

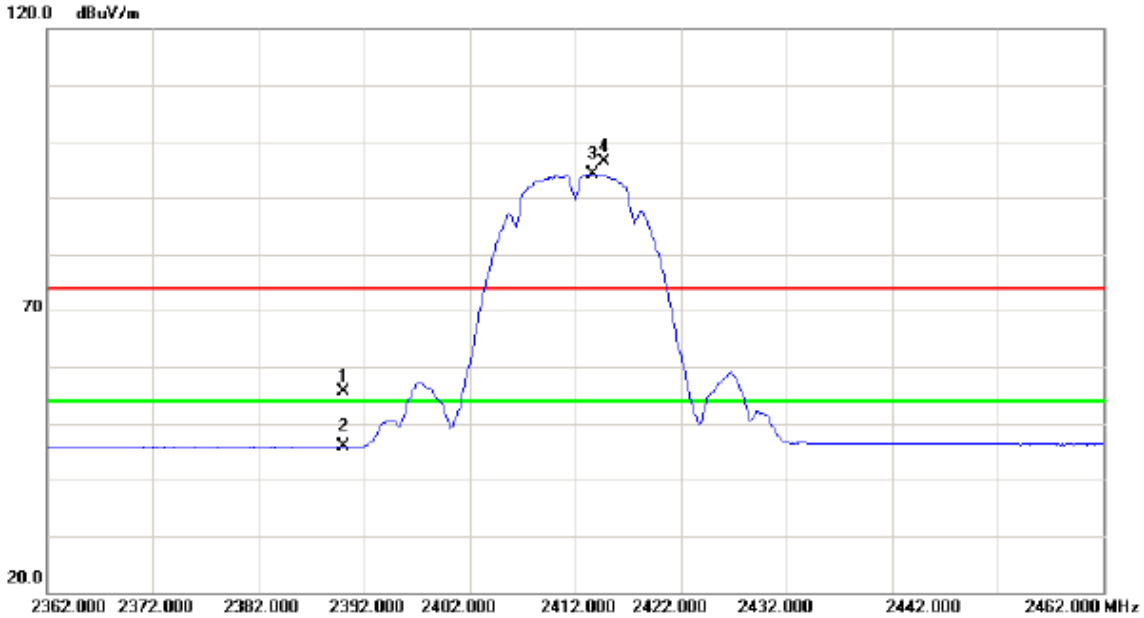


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		81.4100	44.81	-17.23	27.58	40.00	-12.42	peak	
2		125.0600	38.40	-13.62	24.78	43.50	-18.72	peak	
3		141.5500	37.41	-13.16	24.25	43.50	-19.25	peak	
4		250.1900	45.16	-14.02	31.14	46.00	-14.86	peak	
5		622.6700	31.25	-6.66	24.59	46.00	-21.41	peak	
6	*	800.1800	37.30	-2.89	34.41	46.00	-11.59	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

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

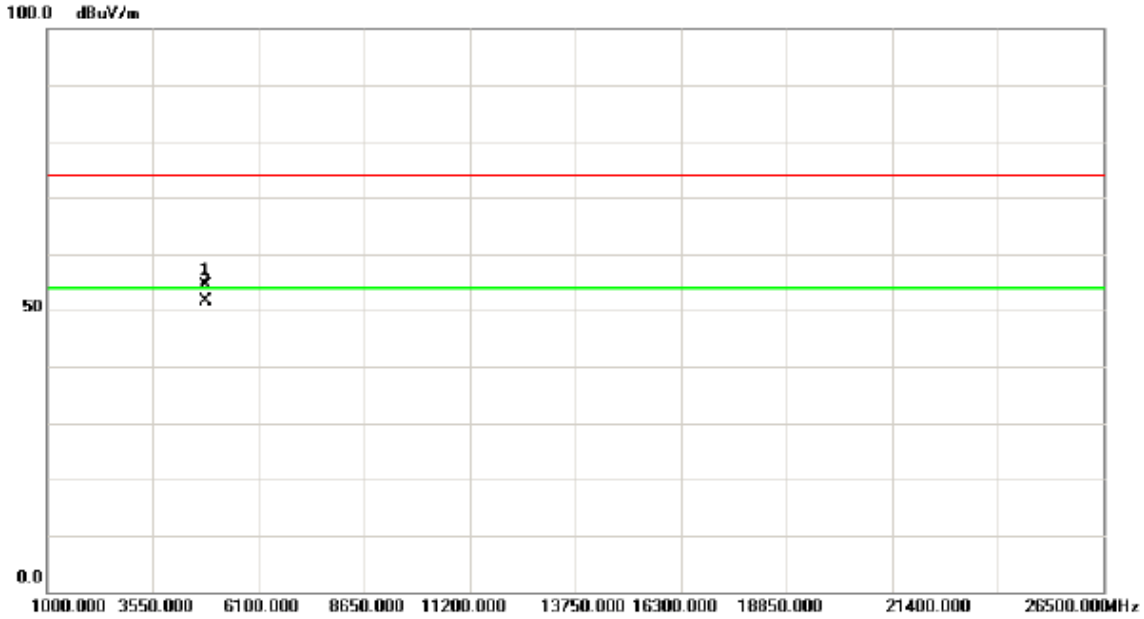
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.85	31.88	55.73	74.00	-18.27	peak	
2		2390.000	13.99	31.88	45.87	54.00	-8.13	AVG	
3	*	2413.700	62.32	31.91	94.23	54.00	40.23	AVG	No Limit
4	X	2414.700	64.55	31.91	96.46	74.00	22.46	peak	No Limit

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

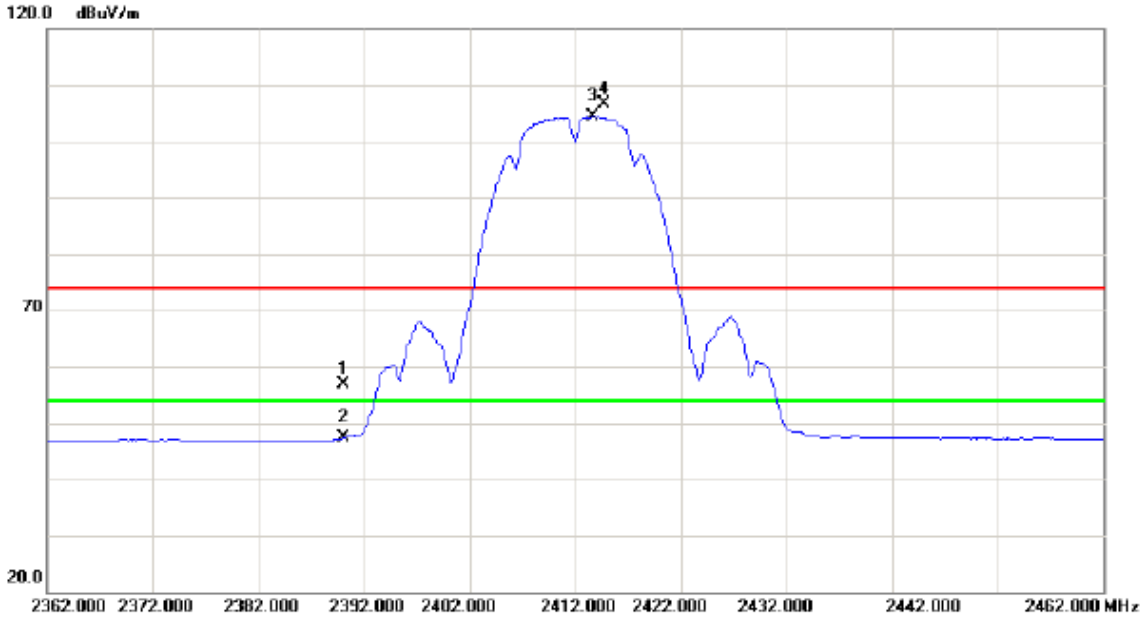
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.900	50.83	3.62	54.45	74.00	-19.55	peak	
2	*	4824.020	48.05	3.62	51.67	54.00	-2.33	AVG	

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

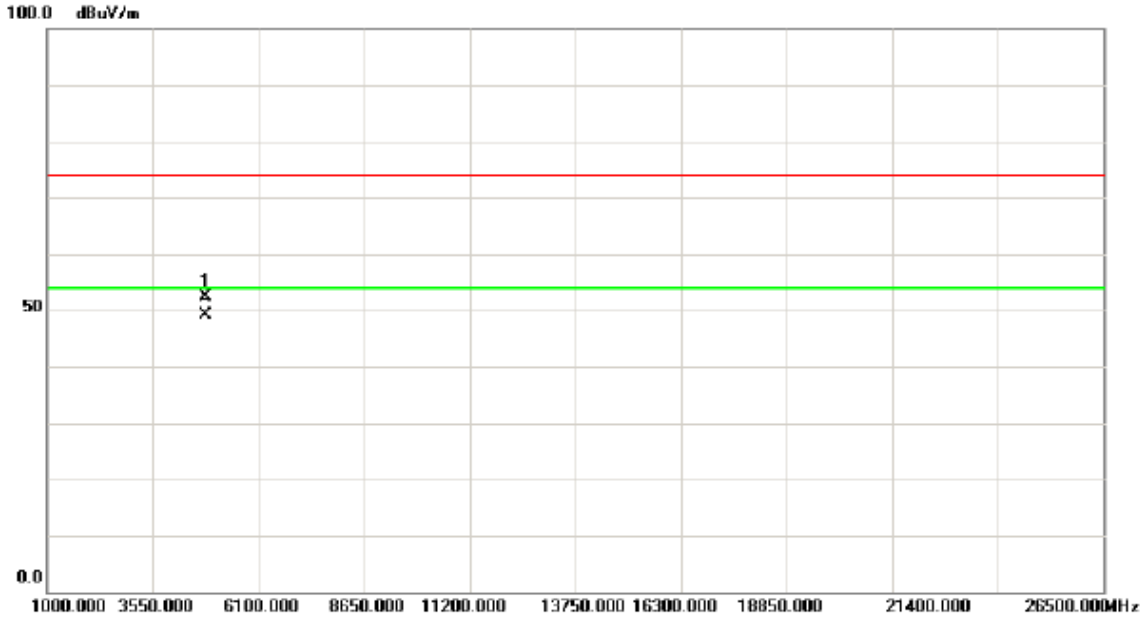
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.96	31.88	56.84	74.00	-17.16	peak	
2		2390.000	15.44	31.88	47.32	54.00	-6.68	AVG	
3	*	2413.700	72.50	31.91	104.41	54.00	50.41	AVG	No Limit
4	X	2414.700	74.67	31.91	106.58	74.00	32.58	peak	No Limit

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

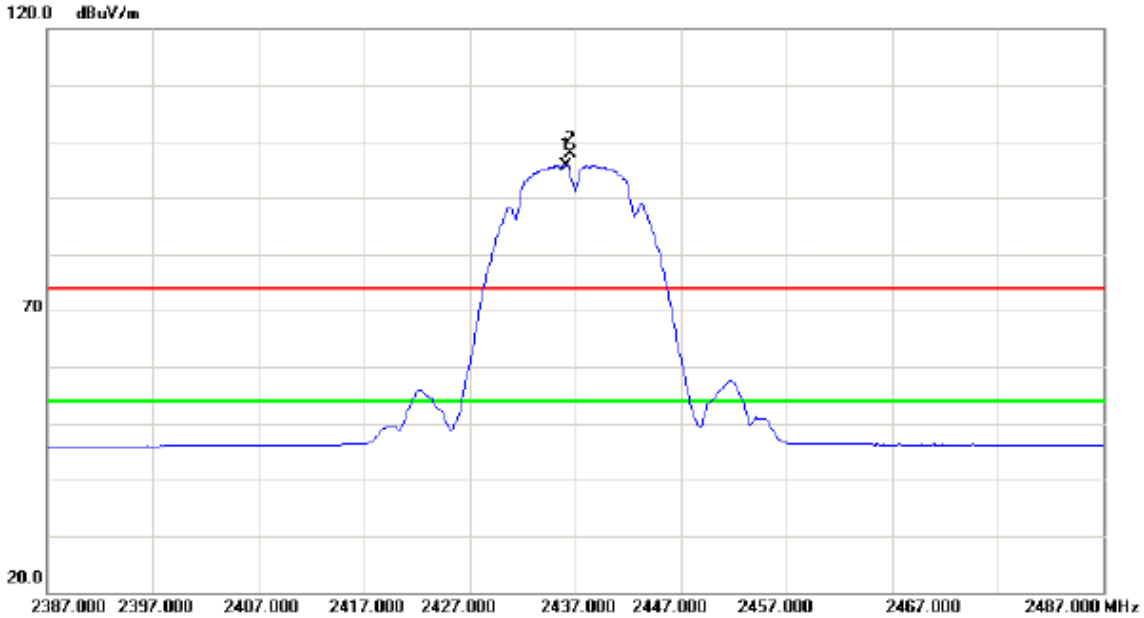
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.800	48.66	3.62	52.28	74.00	-21.72	peak	
2	*	4823.900	45.43	3.62	49.05	54.00	-4.95	AVG	

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

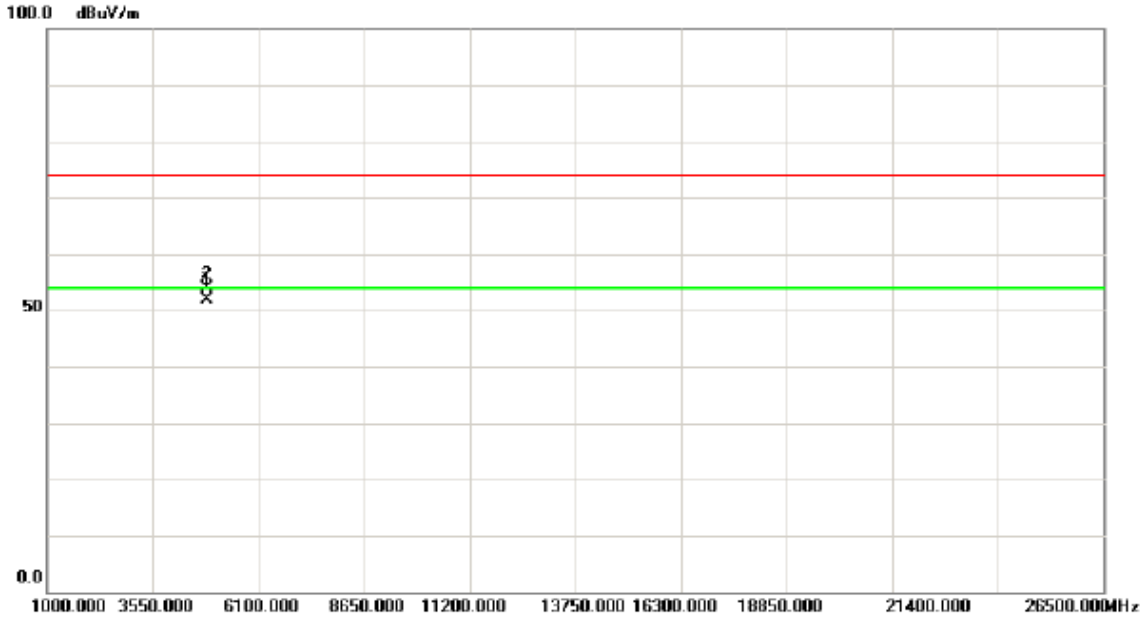
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2436.200	63.72	31.94	95.66	54.00	41.66	AVG	No Limit
2	X	2436.600	66.04	31.94	97.98	74.00	23.98	peak	No Limit

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

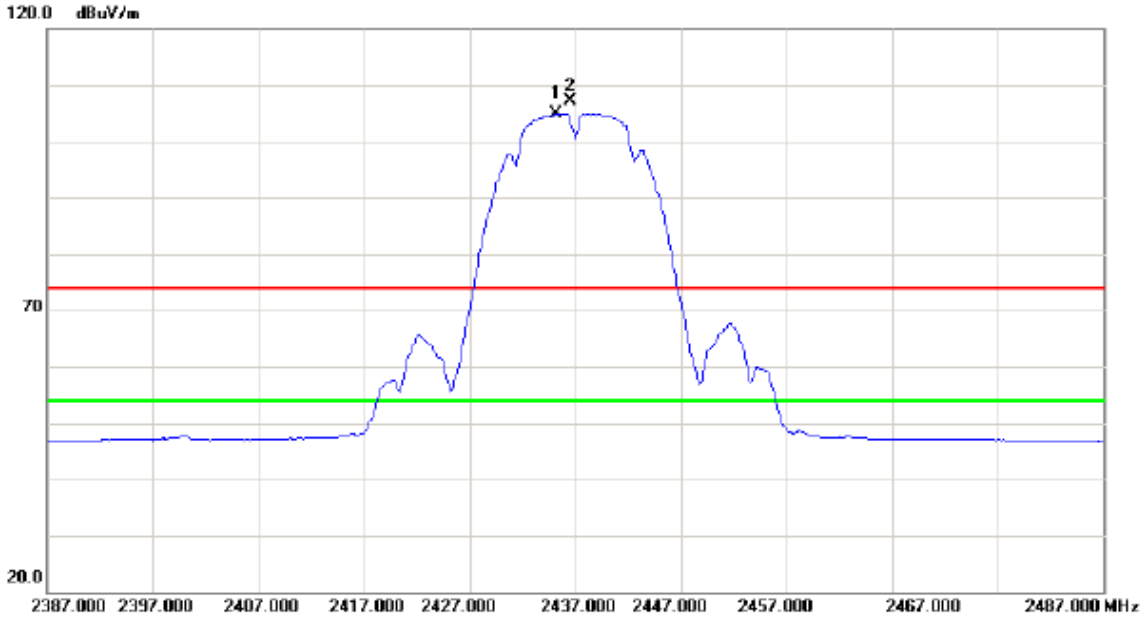
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4873.940	48.10	3.72	51.82	54.00	-2.18	AVG	
2		4873.980	50.09	3.72	53.81	74.00	-20.19	peak	

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

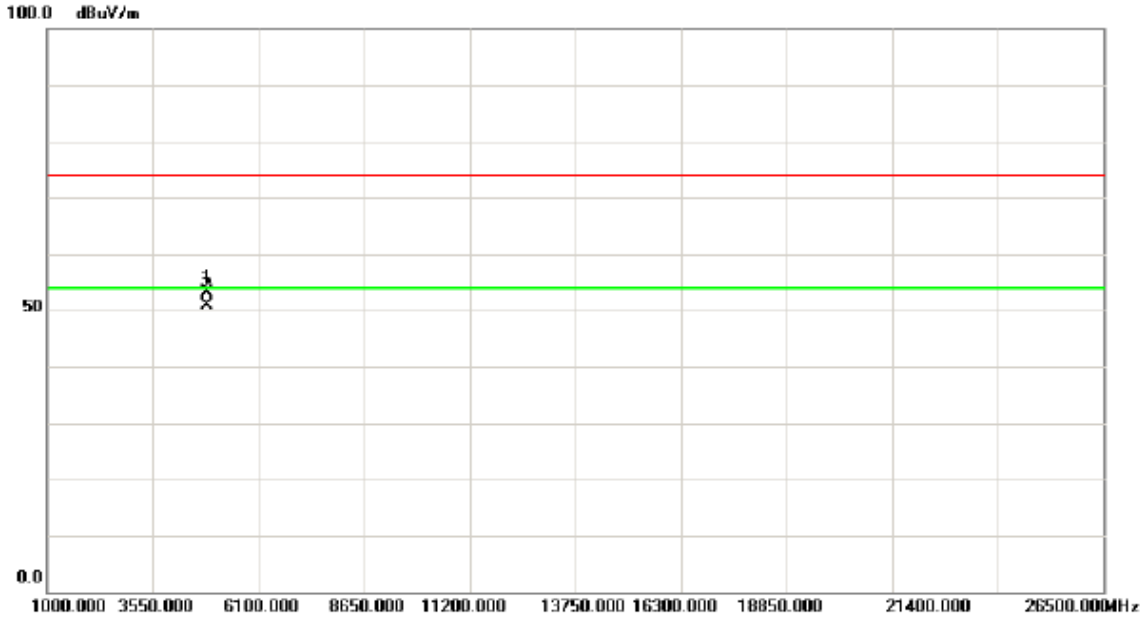
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2435.200	73.01	31.94	104.95	54.00	50.95	AVG	No Limit
2	X	2436.600	75.27	31.94	107.21	74.00	33.21	peak	No Limit

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

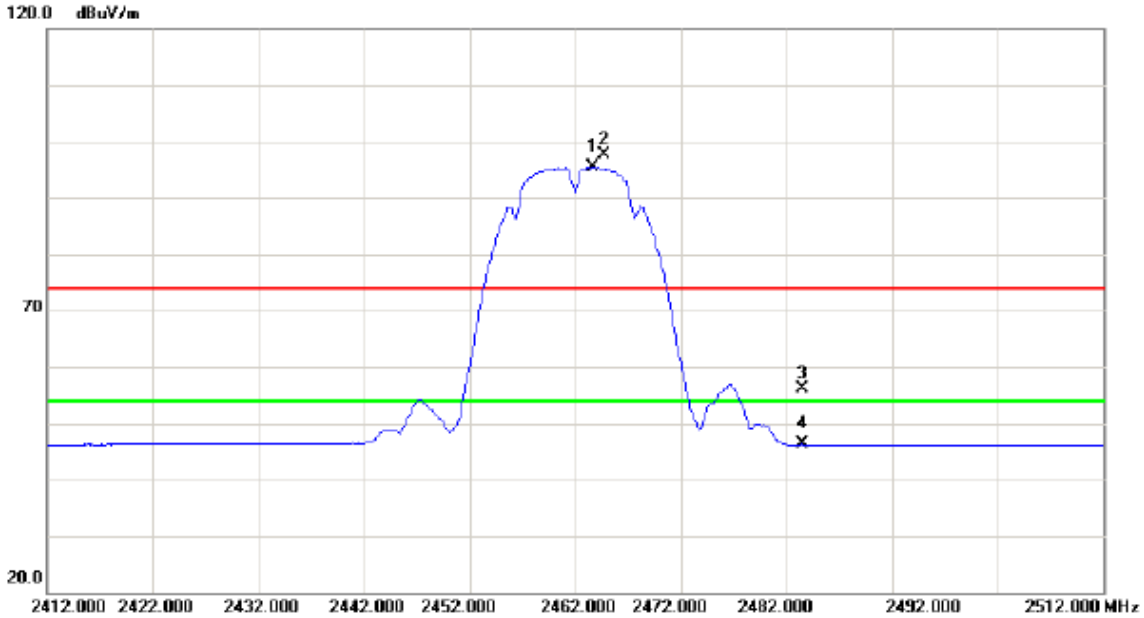
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.920	49.36	3.72	53.08	74.00	-20.92	peak	
2	*	4873.980	47.23	3.72	50.95	54.00	-3.05	AVG	

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

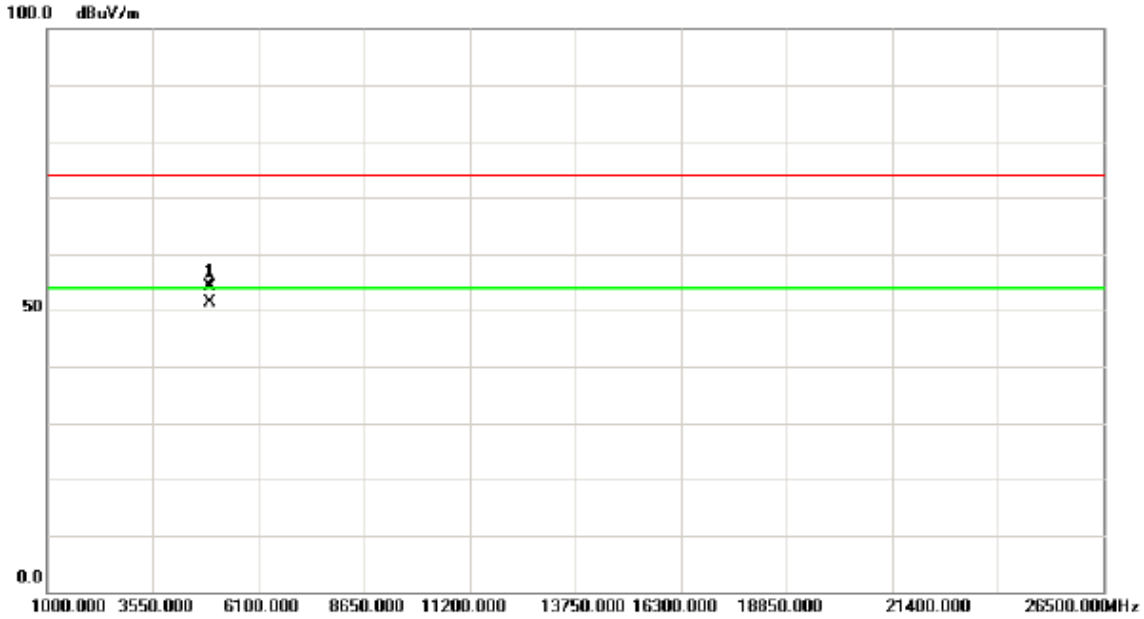
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2463.700	63.46	31.98	95.44	54.00	41.44	AVG	No Limit
2	X	2464.700	65.69	31.98	97.67	74.00	23.67	peak	No Limit
3		2483.500	24.19	32.01	56.20	74.00	-17.80	peak	
4		2483.500	14.26	32.01	46.27	54.00	-7.73	AVG	

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

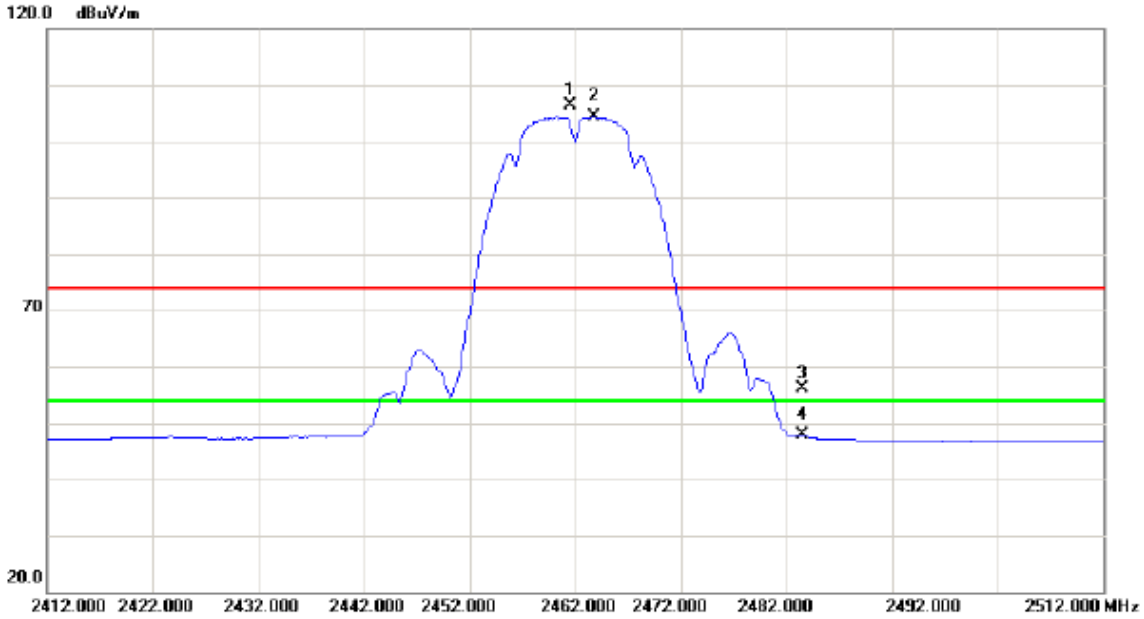
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.960	50.43	3.80	54.23	74.00	-19.77	peak	
2	*	4923.960	47.60	3.80	51.40	54.00	-2.60	AVG	

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

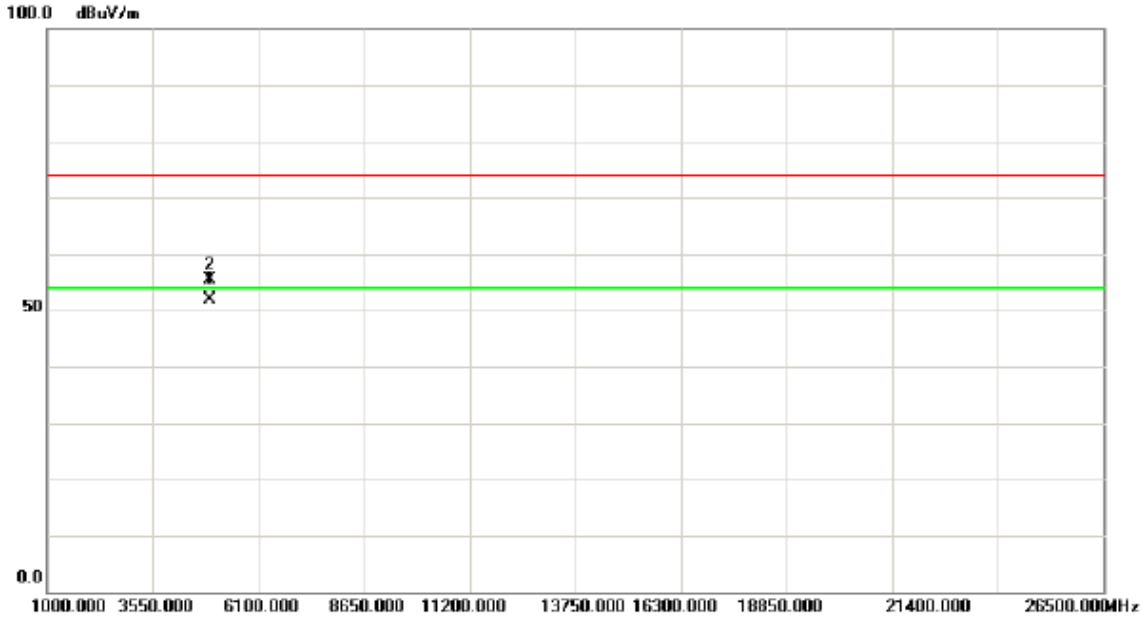
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2461.600	74.52	31.98	106.50	74.00	32.50	peak	No Limit
2	*	2463.800	72.33	31.98	104.31	54.00	50.31	AVG	No Limit
3		2483.500	24.01	32.01	56.02	74.00	-17.98	peak	
4		2483.500	15.92	32.01	47.93	54.00	-6.07	AVG	

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

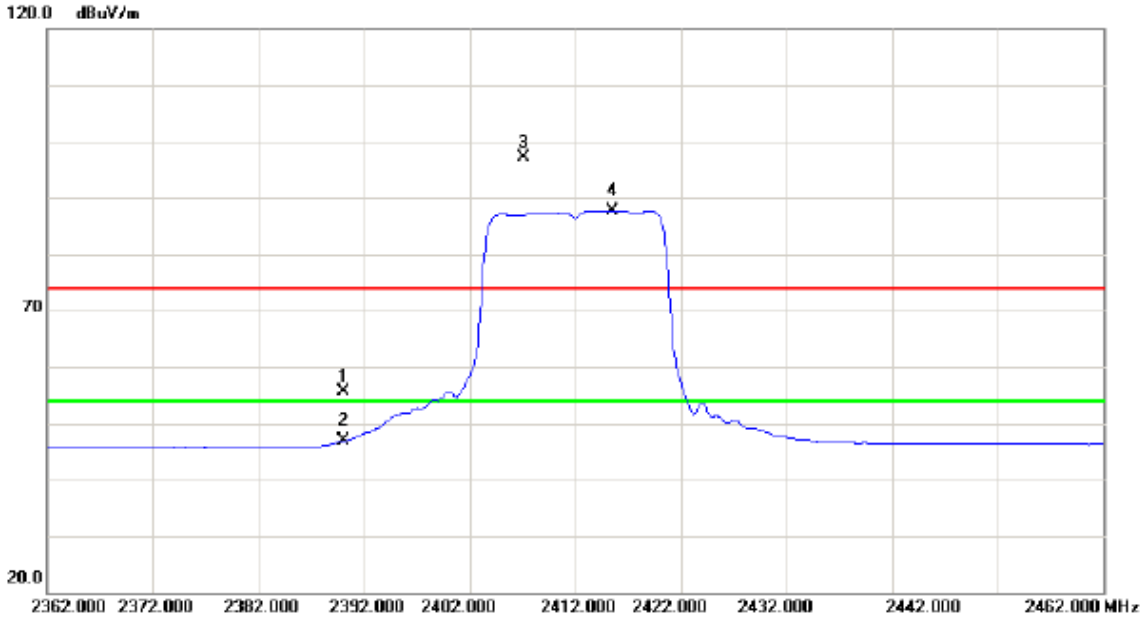
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4923.940	48.08	3.80	51.88	54.00	-2.12	AVG	
2		4924.000	51.51	3.80	55.31	74.00	-18.69	peak	

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

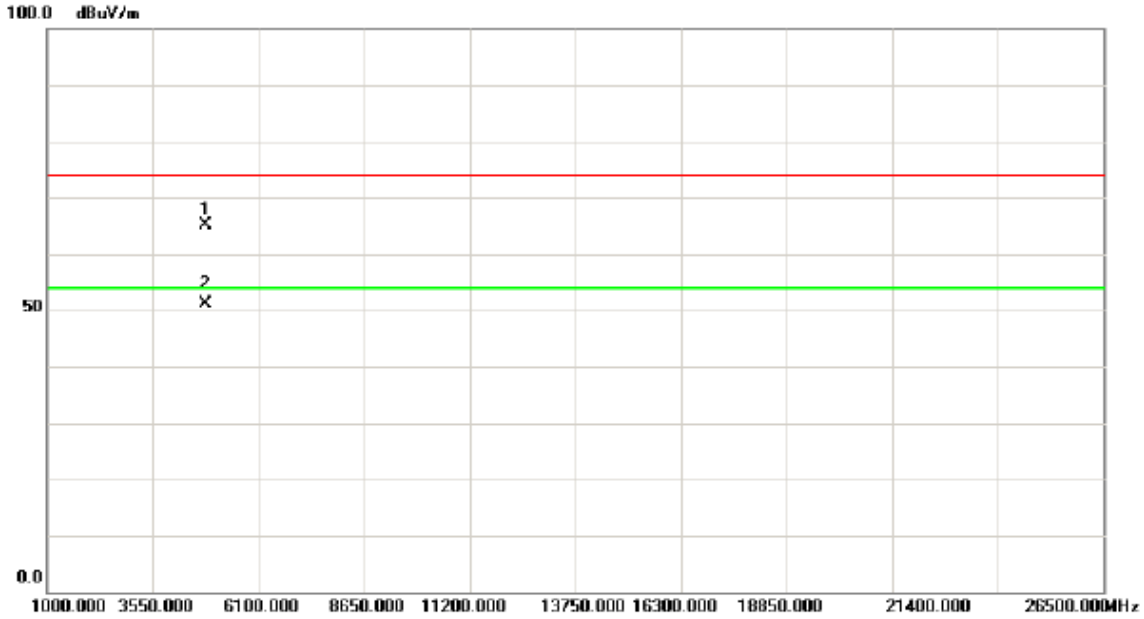
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.85	31.88	55.73	74.00	-18.27	peak	
2		2390.000	14.96	31.88	46.84	54.00	-7.16	AVG	
3	X	2407.200	65.33	31.91	97.24	74.00	23.24	peak	No Limit
4	*	2415.500	55.78	31.91	87.69	54.00	33.69	AVG	No Limit

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

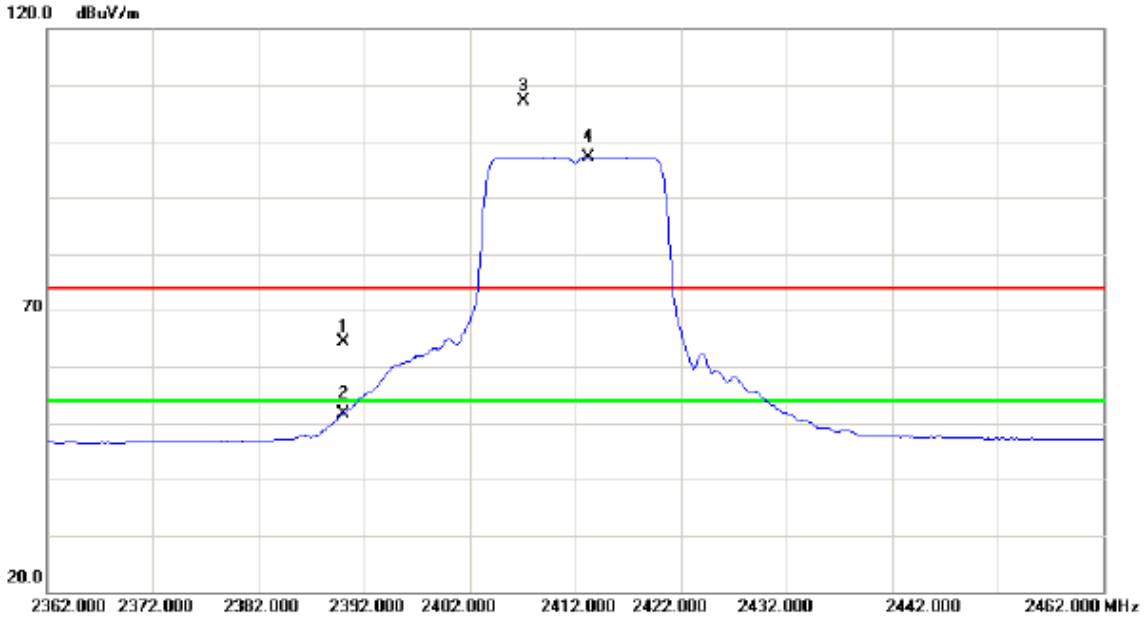
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4825.880	61.49	3.62	65.11	74.00	-8.89	peak	
2	*	4826.000	47.41	3.62	51.03	54.00	-2.97	AVG	

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

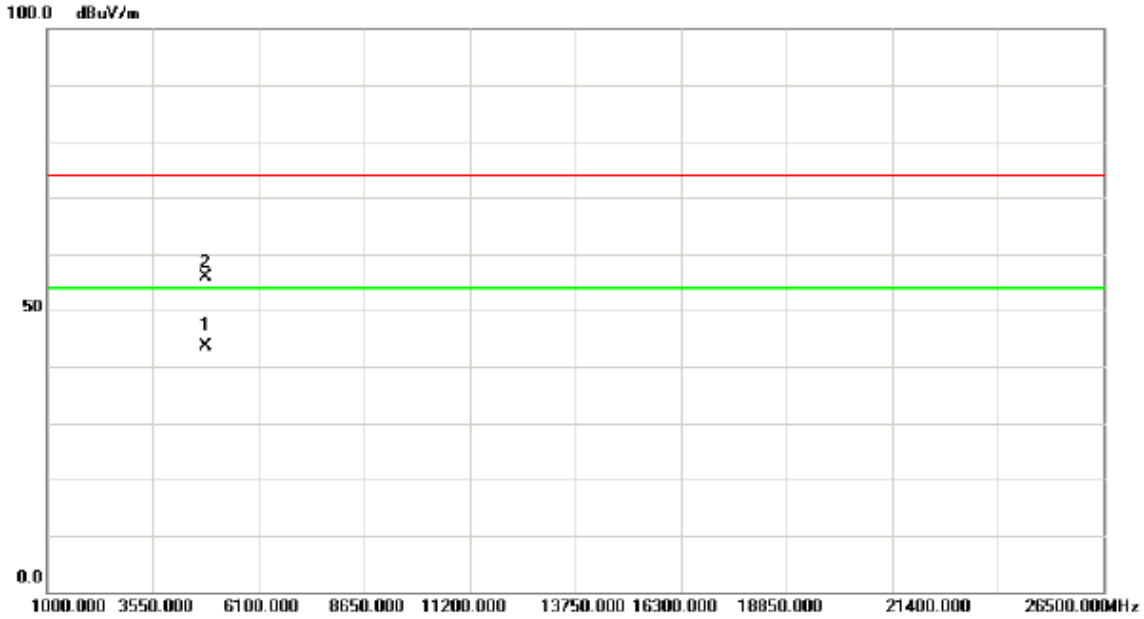
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.51	31.88	64.39	74.00	-9.61	peak	
2		2390.000	19.74	31.88	51.62	54.00	-2.38	AVG	
3	X	2407.200	75.16	31.91	107.07	74.00	33.07	peak	No Limit
4	*	2413.300	65.30	31.91	97.21	54.00	43.21	AVG	No Limit

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

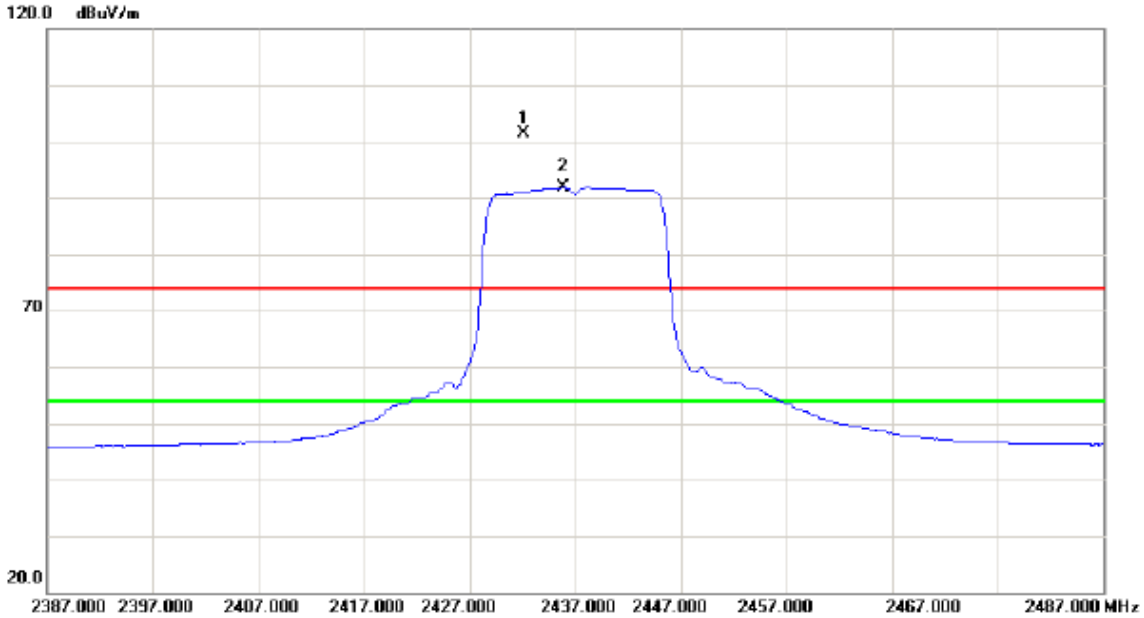
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4823.960	40.01	3.62	43.63	54.00	-10.37	AVG	
2		4825.880	52.31	3.62	55.93	74.00	-18.07	peak	

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

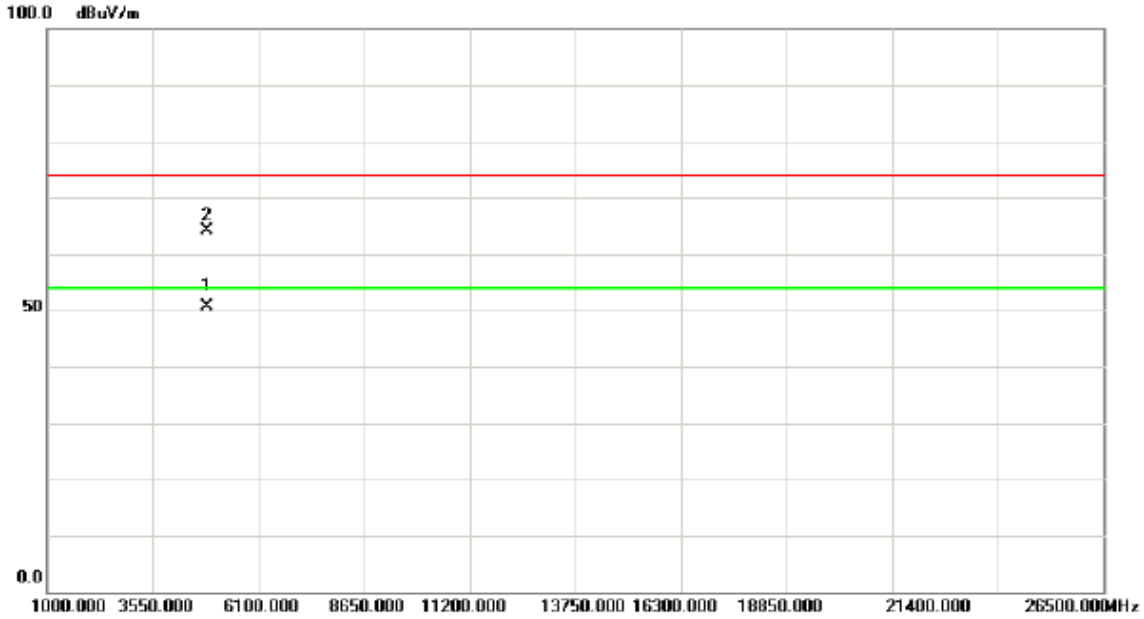
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2432.200	69.49	31.94	101.43	74.00	27.43	peak	No Limit
2	*	2435.900	59.84	31.94	91.78	54.00	37.78	AVG	No Limit

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

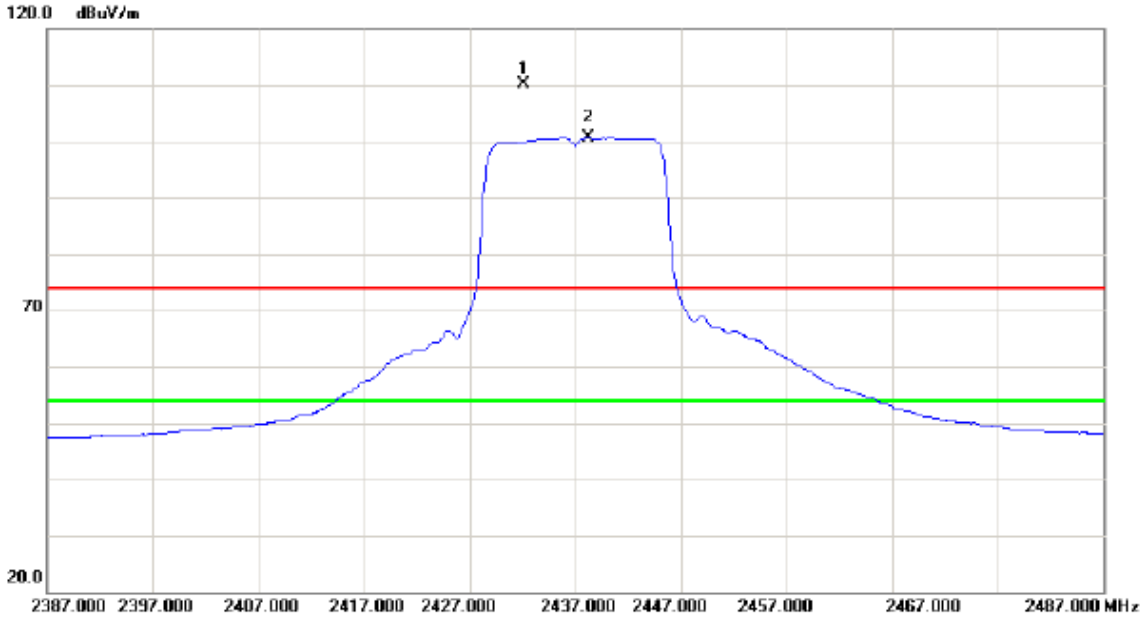
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4874.000	46.84	3.72	50.56	54.00	-3.44	AVG	
2		4874.200	60.49	3.72	64.21	74.00	-9.79	peak	

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

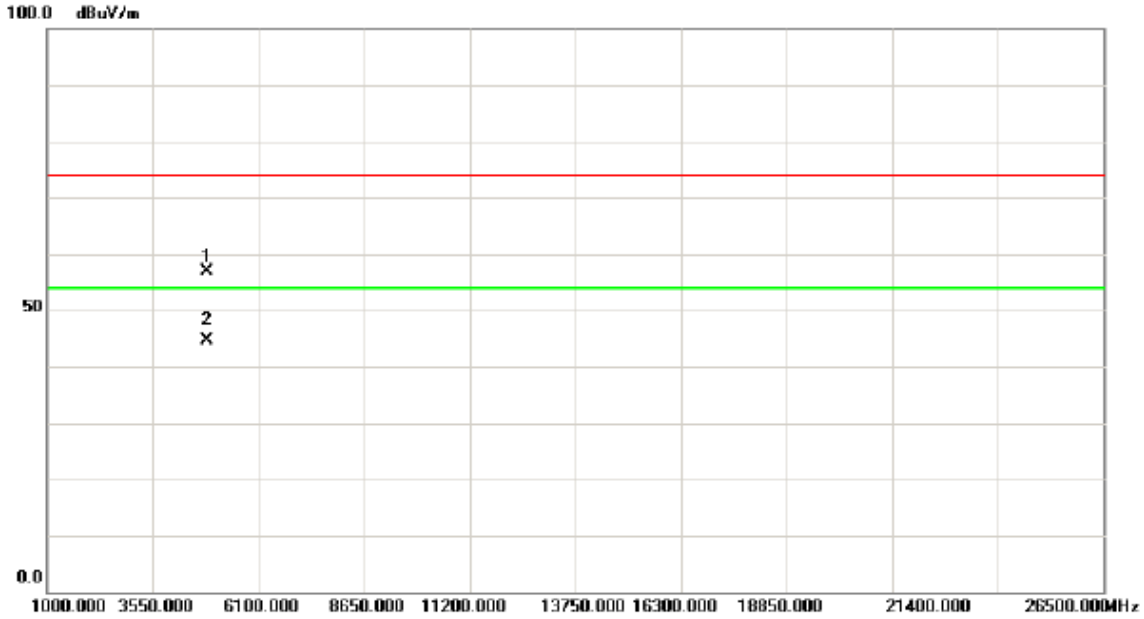
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2432.100	78.31	31.94	110.25	74.00	36.25	peak	No Limit
2	*	2438.300	68.61	31.94	100.55	54.00	46.55	AVG	No Limit

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

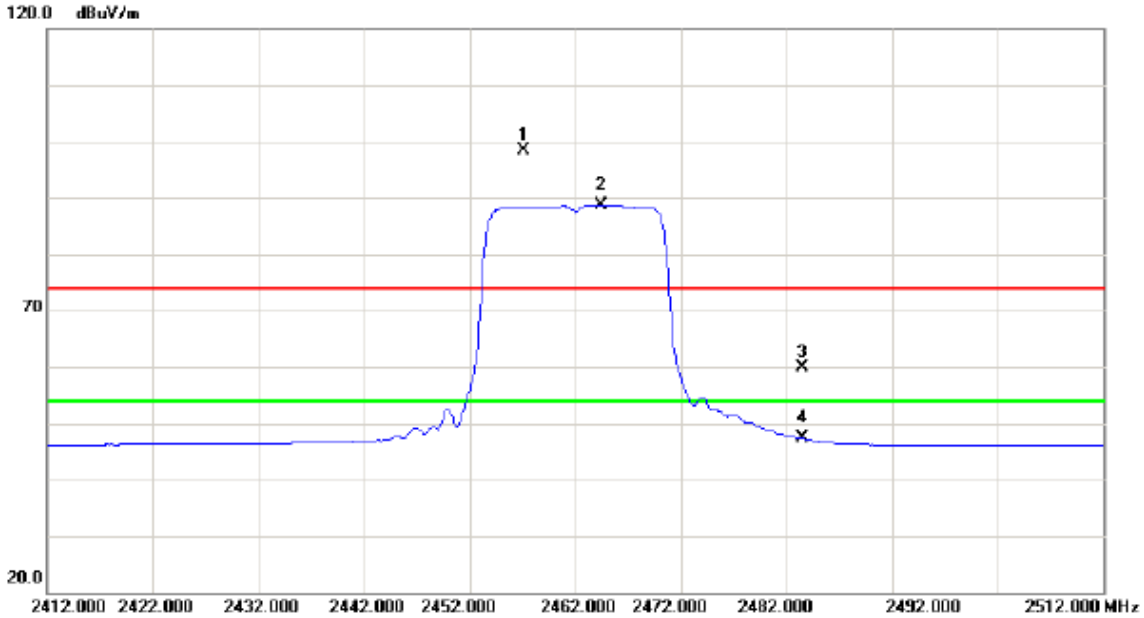
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.050	53.21	3.72	56.93	74.00	-17.07	peak	
2	*	4874.250	40.91	3.72	44.63	54.00	-9.37	AVG	

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

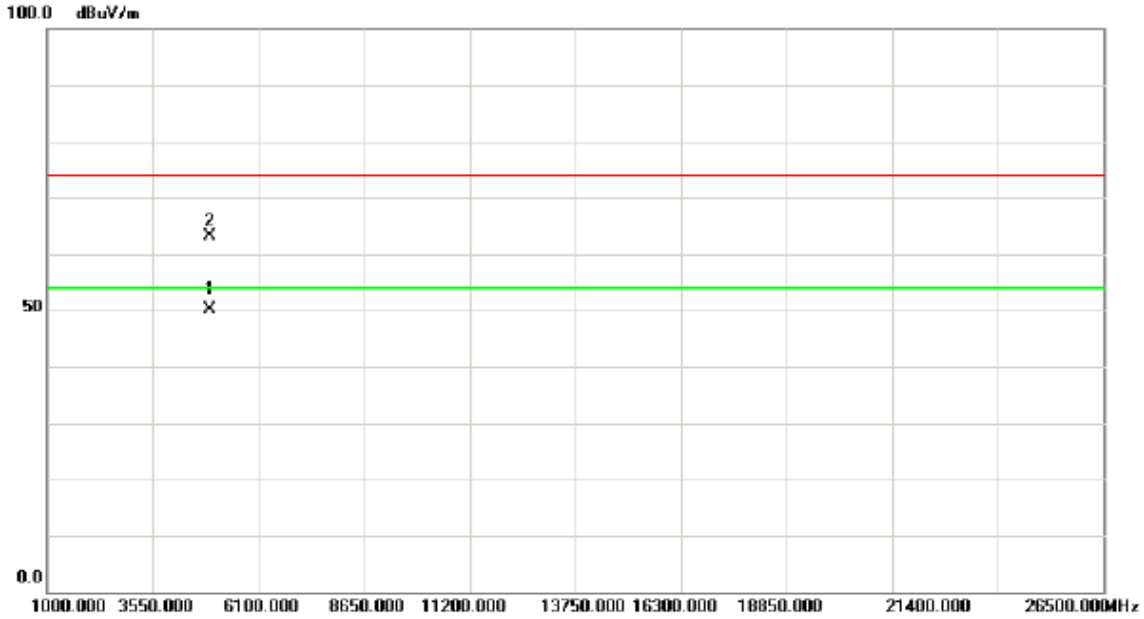
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2457.200	66.49	31.98	98.47	74.00	24.47	peak	No Limit
2	*	2464.400	56.70	31.98	88.68	54.00	34.68	AVG	No Limit
3		2483.500	27.86	32.01	59.87	74.00	-14.13	peak	
4		2483.500	15.28	32.01	47.29	54.00	-6.71	AVG	

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

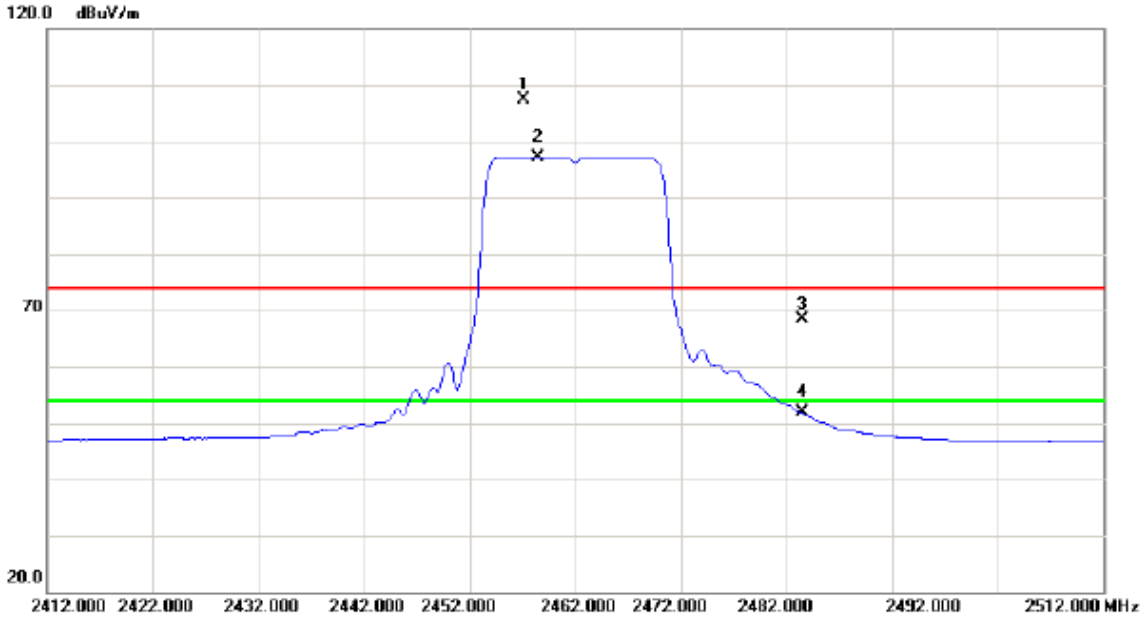
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4924.360	46.23	3.80	50.03	54.00	-3.97	AVG	
2		4924.500	59.31	3.80	63.11	74.00	-10.89	peak	

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

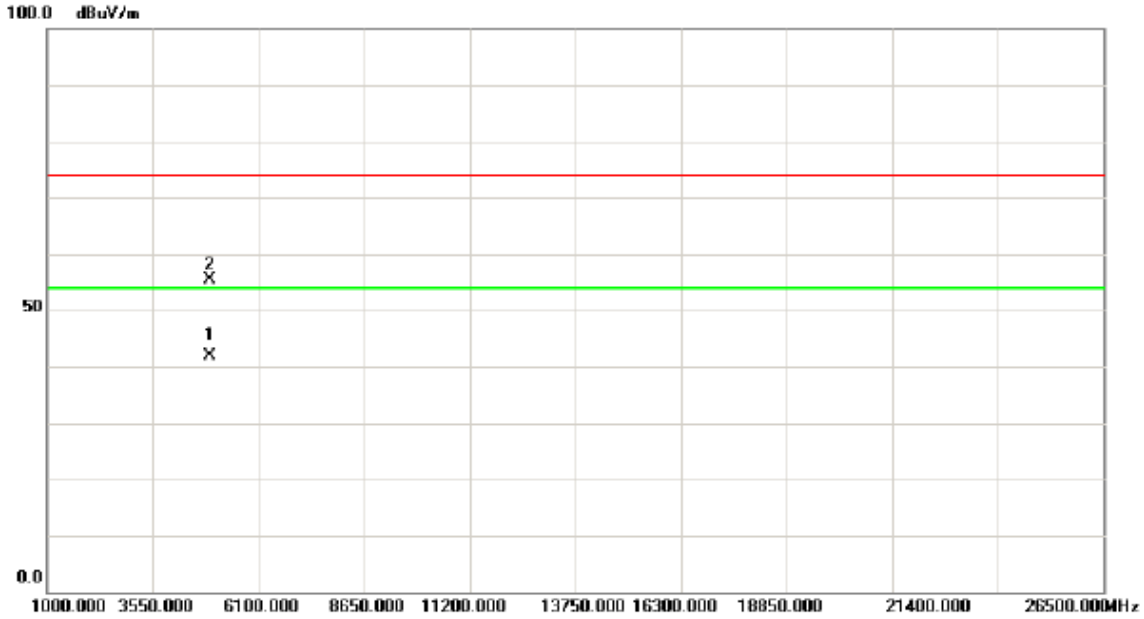
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2457.100	75.43	31.98	107.41	74.00	33.41	peak	No Limit
2	*	2458.400	65.24	31.98	97.22	54.00	43.22	AVG	No Limit
3		2483.500	36.27	32.01	68.28	74.00	-5.72	peak	
4		2483.500	19.84	32.01	51.85	54.00	-2.15	AVG	

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

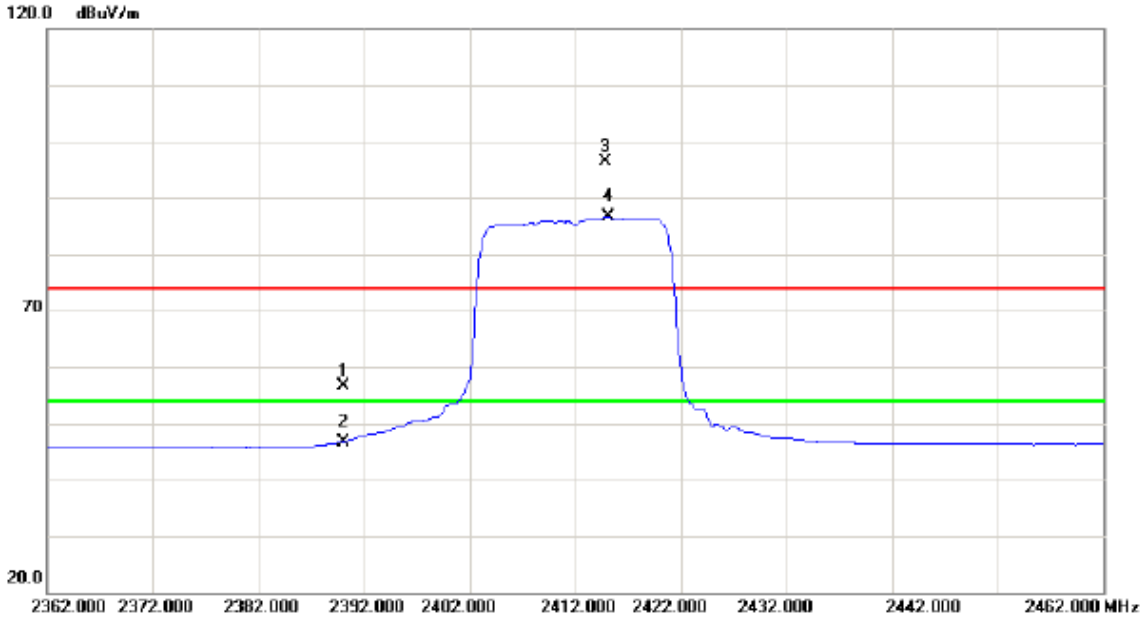
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4924.250	38.13	3.80	41.93	54.00	-12.07	AVG	
2		4924.630	51.51	3.80	55.31	74.00	-18.69	peak	

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

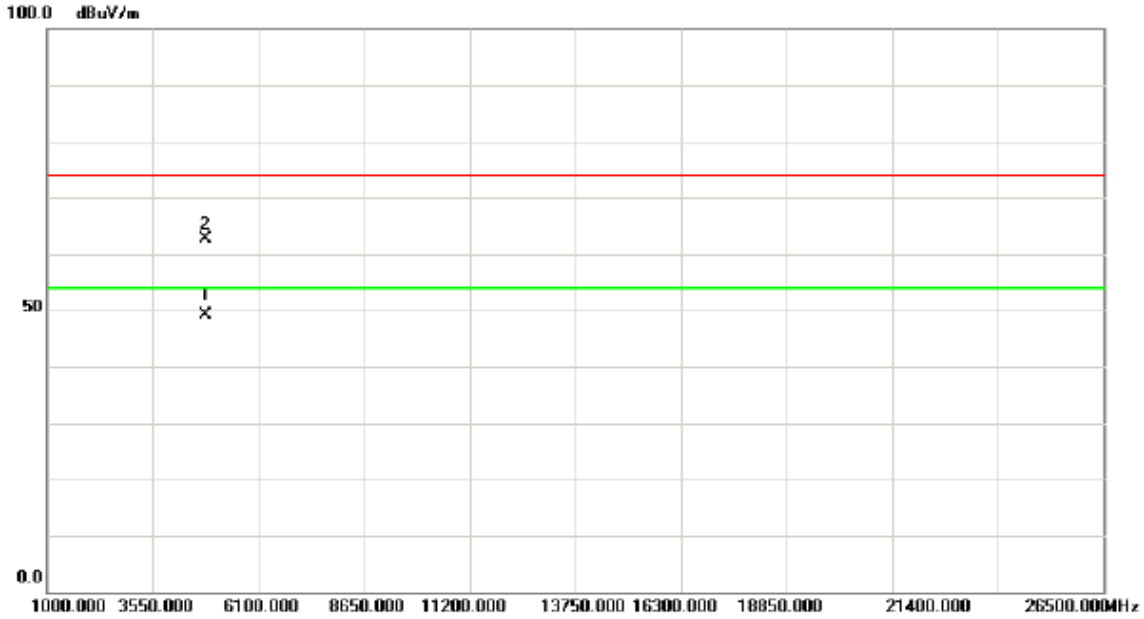
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.78	31.88	56.66	74.00	-17.34	peak	
2		2390.000	14.85	31.88	46.73	54.00	-7.27	AVG	
3	X	2414.900	64.56	31.91	96.47	74.00	22.47	peak	No Limit
4	*	2415.100	54.67	31.91	86.58	54.00	32.58	AVG	No Limit

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

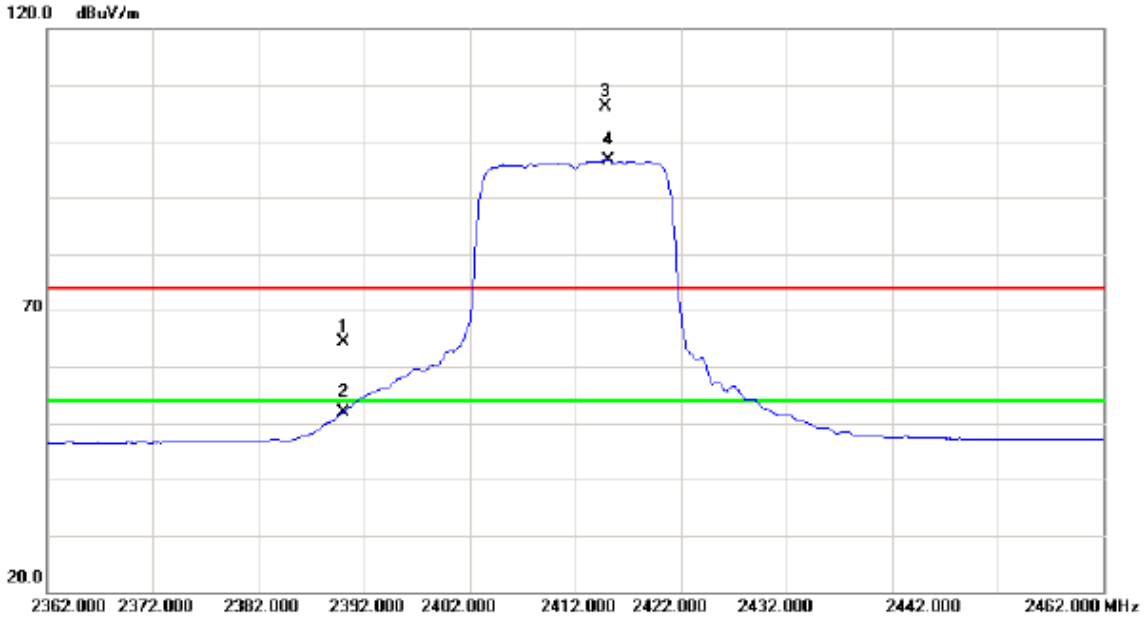
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4822.440	45.62	3.62	49.24	54.00	-4.76	AVG	
2		4822.800	59.00	3.62	62.62	74.00	-11.38	peak	

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

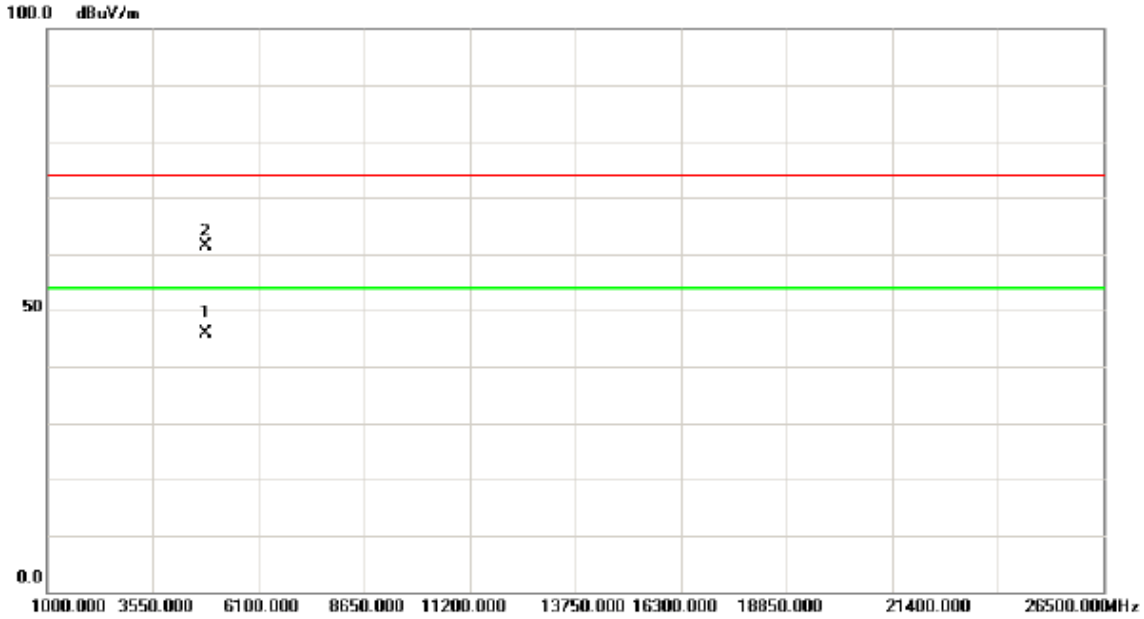
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.40	31.88	64.28	74.00	-9.72	peak	
2		2390.000	20.02	31.88	51.90	54.00	-2.10	AVG	
3	X	2414.800	74.14	31.91	106.05	74.00	32.05	peak	No Limit
4	*	2415.100	64.71	31.91	96.62	54.00	42.62	AVG	No Limit

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

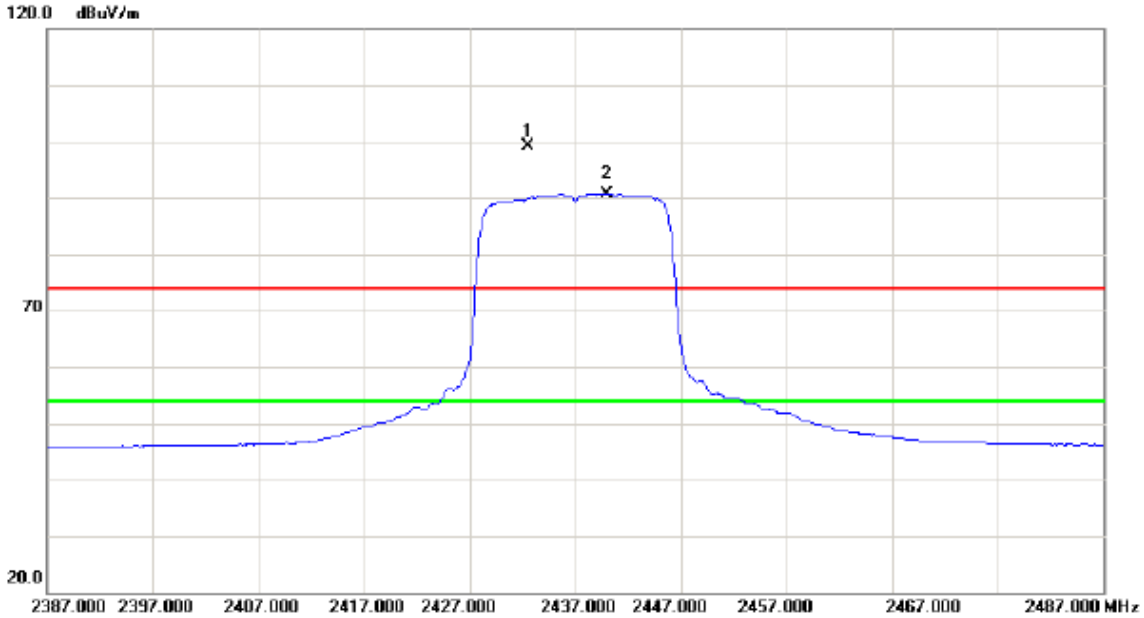
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4822.520	42.28	3.62	45.90	54.00	-8.10	AVG	
2		4823.120	57.68	3.62	61.30	74.00	-12.70	peak	

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

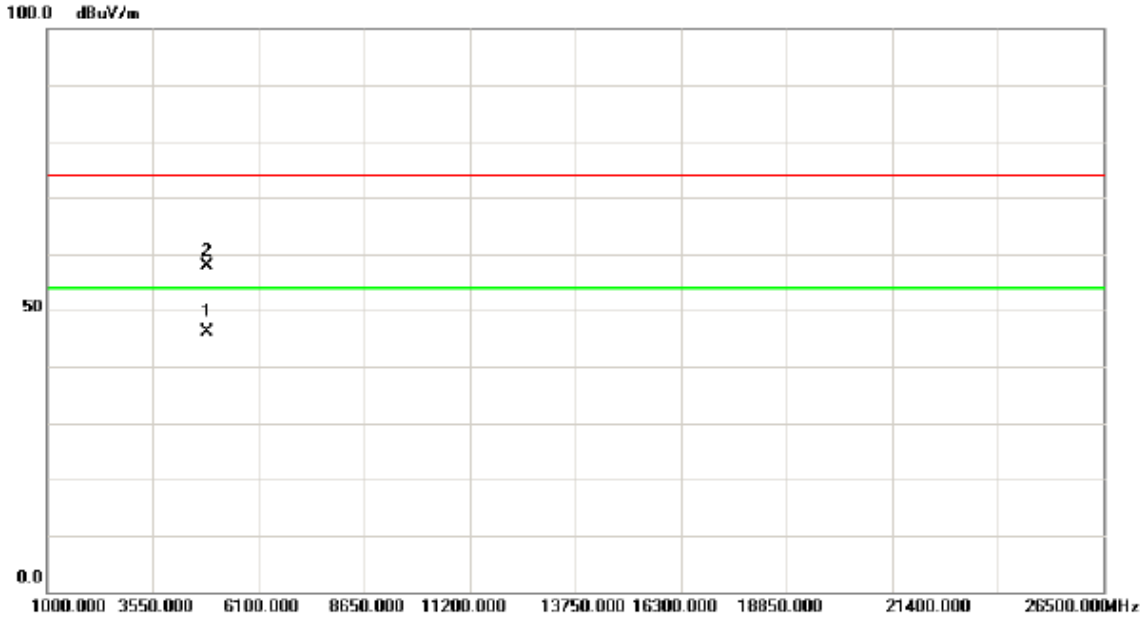
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2432.600	67.26	31.94	99.20	74.00	25.20	peak	No Limit
2	*	2440.000	58.80	31.95	90.75	54.00	36.75	AVG	No Limit

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

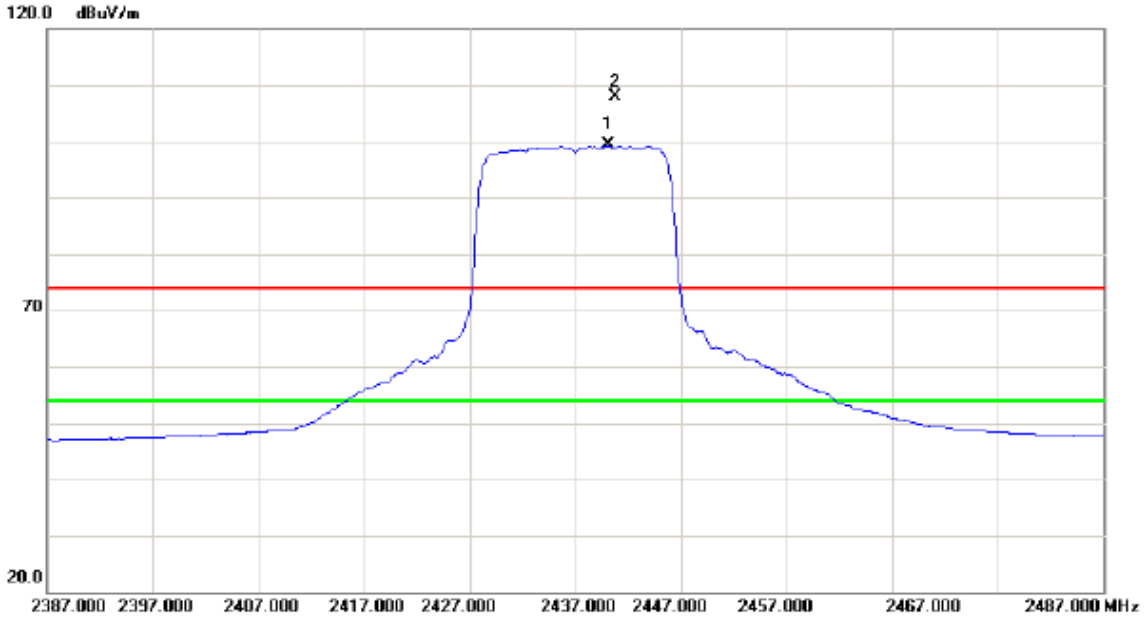
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4874.090	42.52	3.72	46.24	54.00	-7.76	AVG	
2		4874.350	54.13	3.72	57.85	74.00	-16.15	peak	

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

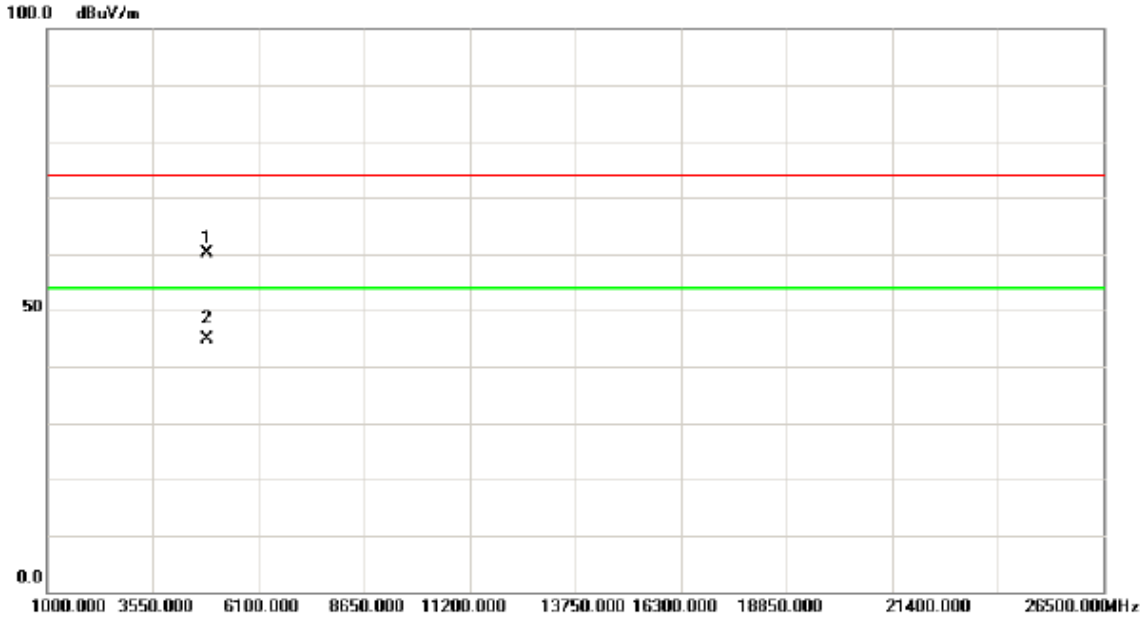
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2440.100	67.31	31.95	99.26	54.00	45.26	AVG	No Limit
2	X	2440.800	75.89	31.95	107.84	74.00	33.84	peak	No Limit

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

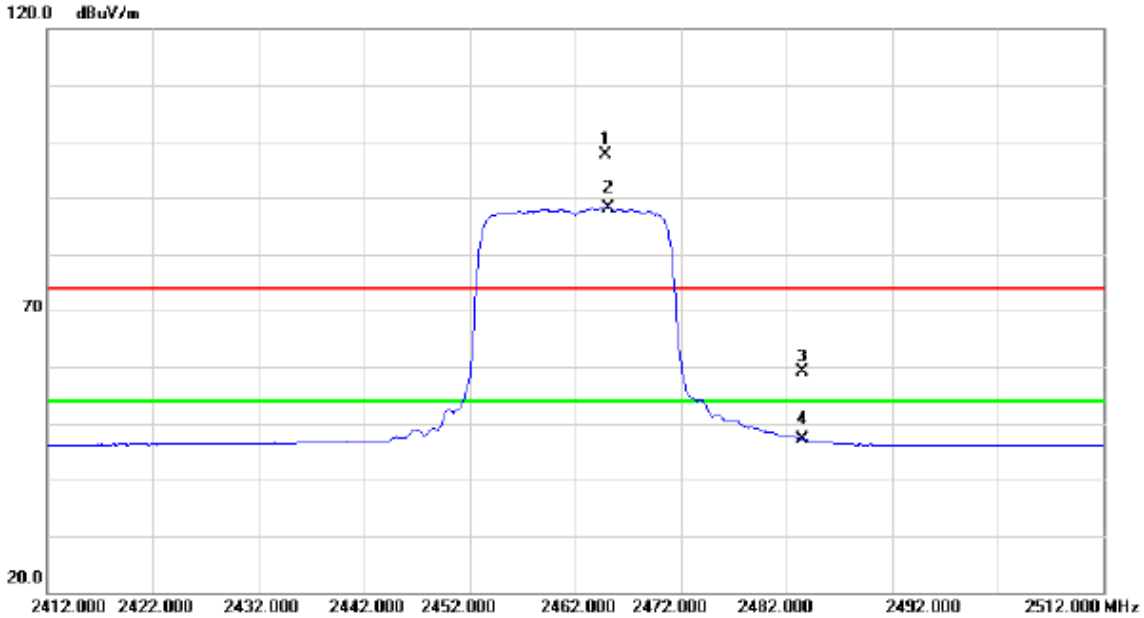
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.130	56.39	3.72	60.11	74.00	-13.89	peak	
2	*	4874.240	41.13	3.72	44.85	54.00	-9.15	AVG	

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

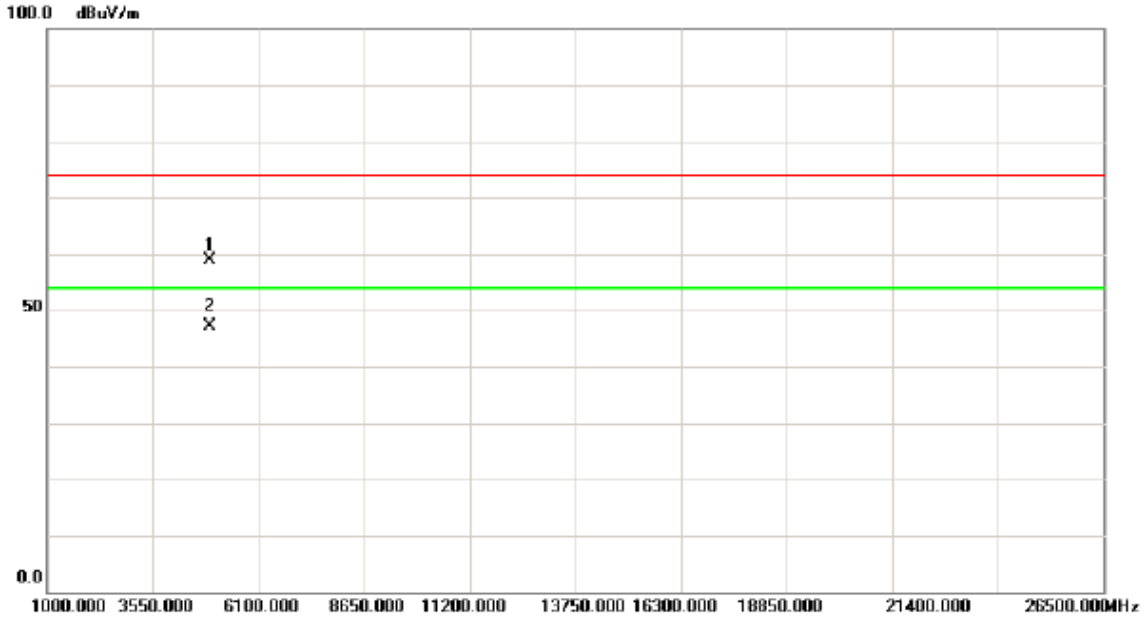
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2464.900	65.65	31.98	97.63	74.00	23.63	peak	No Limit
2	*	2465.200	56.24	31.98	88.22	54.00	34.22	AVG	No Limit
3		2483.500	27.13	32.01	59.14	74.00	-14.86	peak	
4		2483.500	15.19	32.01	47.20	54.00	-6.80	AVG	

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

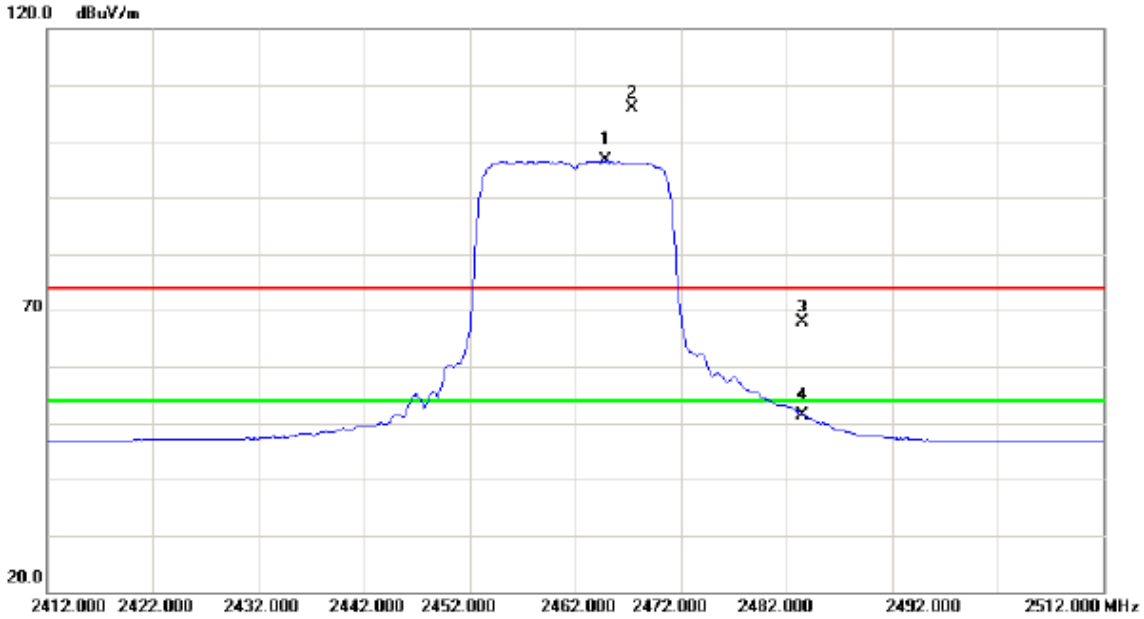
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.910	55.16	3.80	58.96	74.00	-15.04	peak	
2	*	4924.310	43.34	3.80	47.14	54.00	-6.86	AVG	

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

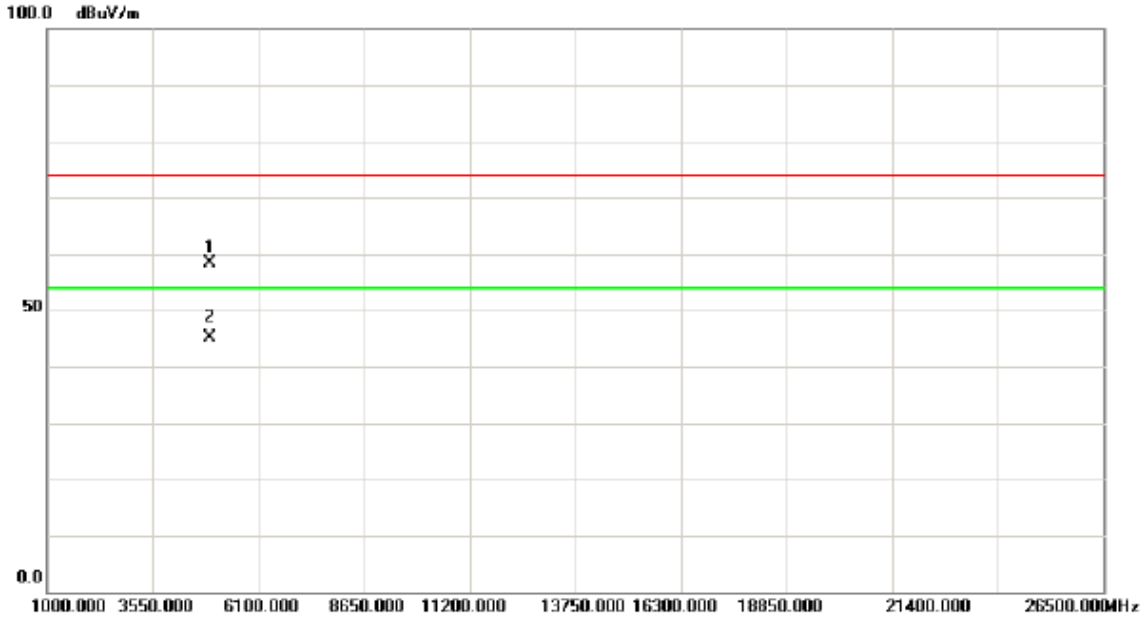
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2464.900	64.58	31.98	96.56	54.00	42.56	AVG	No Limit
2	X	2467.400	73.92	31.98	105.90	74.00	31.90	peak	No Limit
3		2483.500	35.80	32.01	67.81	74.00	-6.19	peak	
4		2483.500	19.45	32.01	51.46	54.00	-2.54	AVG	

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

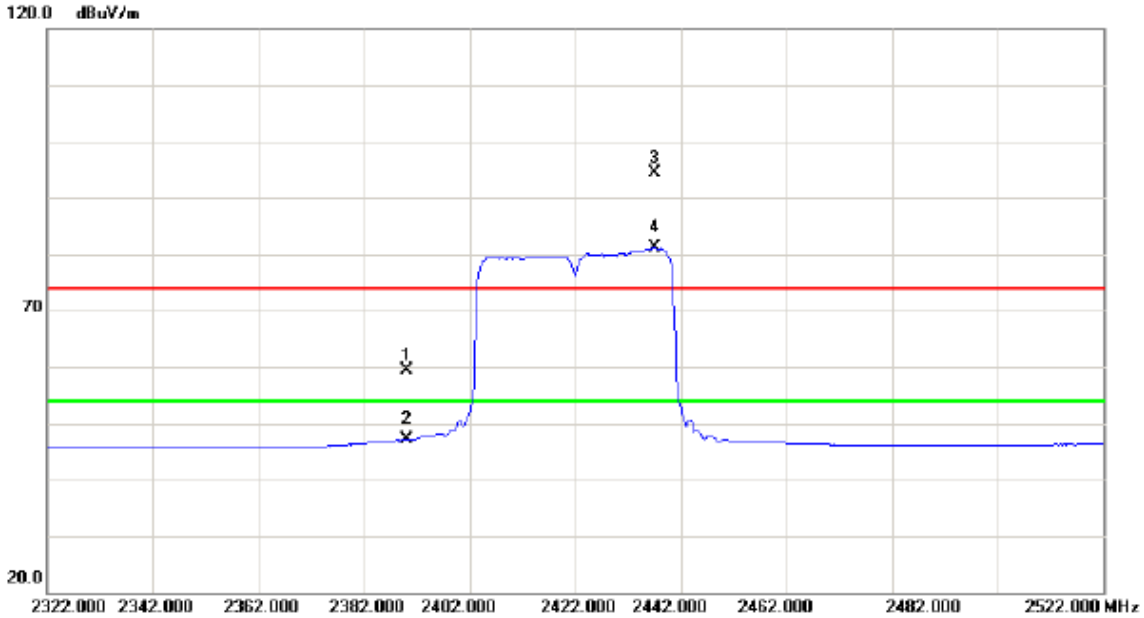
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.680	54.50	3.80	58.30	74.00	-15.70	peak	
2	*	4924.810	41.35	3.80	45.15	54.00	-8.85	AVG	

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

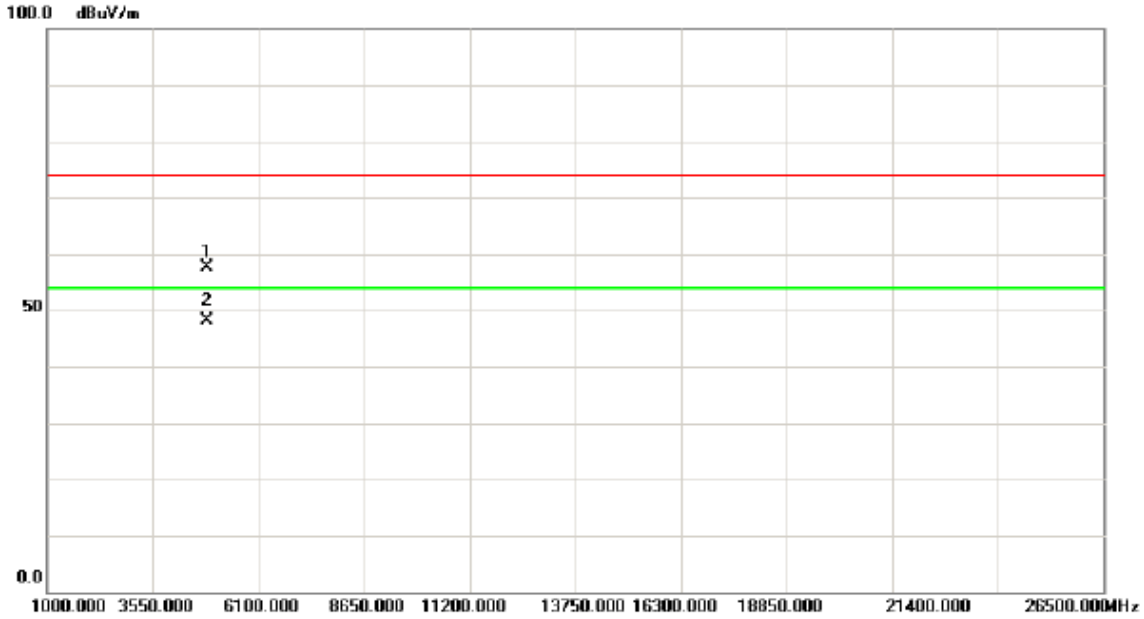
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	27.51	31.88	59.39	74.00	-14.61	peak	
2		2390.000	15.17	31.88	47.05	54.00	-6.95	AVG	
3	X	2437.000	62.44	31.94	94.38	74.00	20.38	peak	No Limit
4	*	2437.000	49.19	31.94	81.13	54.00	27.13	AVG	No Limit

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

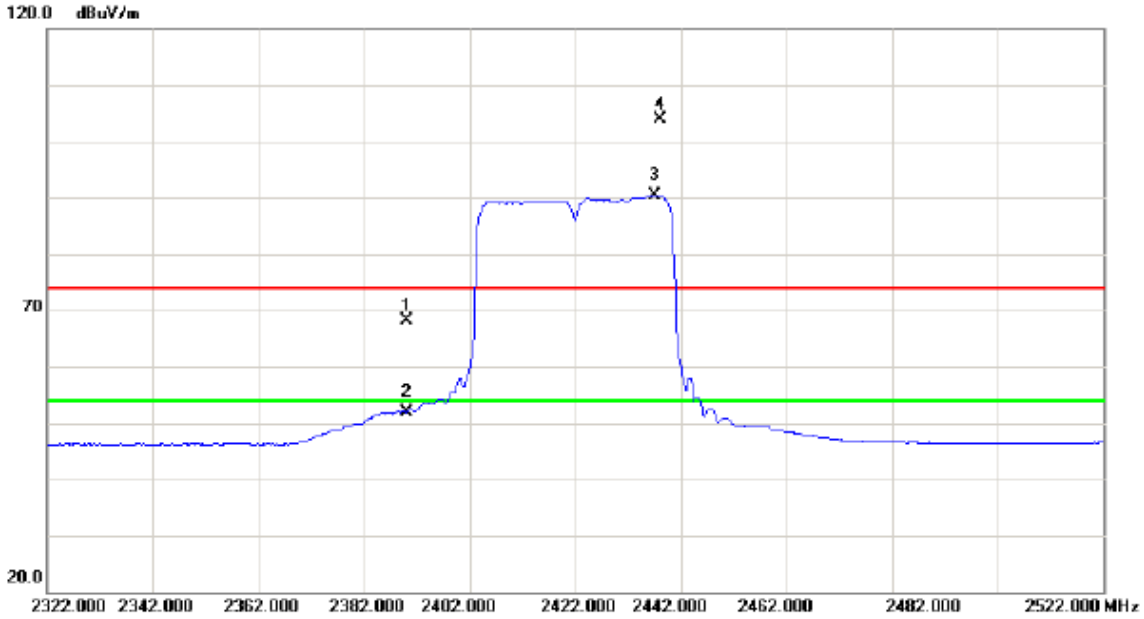
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4844.160	53.96	3.66	57.62	74.00	-16.38	peak	
2	*	4844.380	44.58	3.66	48.24	54.00	-5.76	AVG	

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

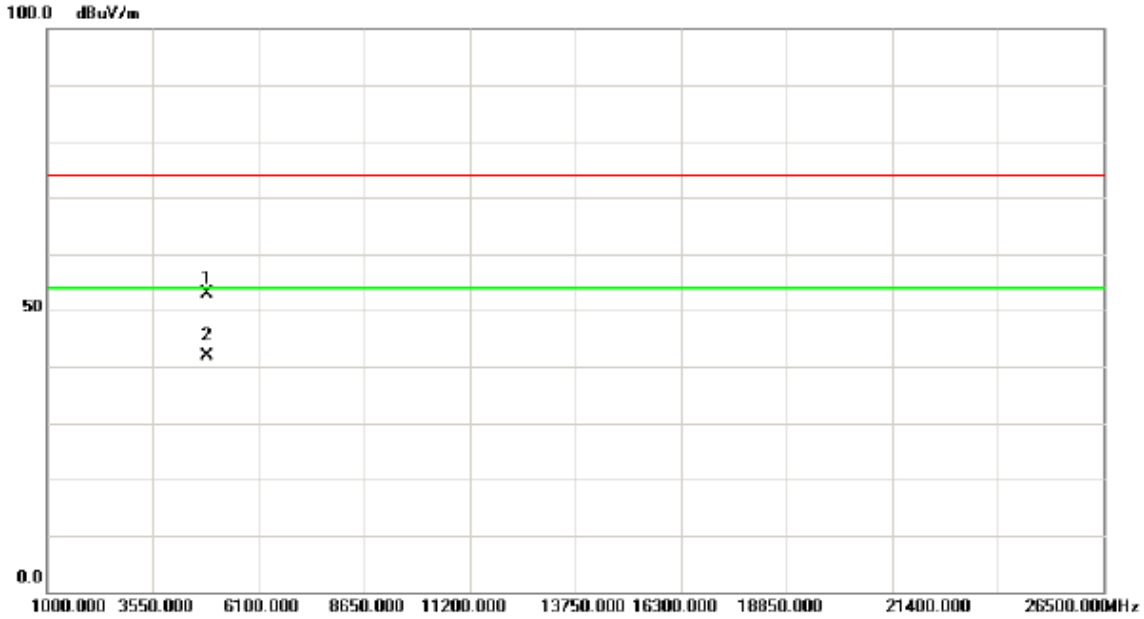
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	36.37	31.88	68.25	74.00	-5.75	peak	
2		2390.000	20.10	31.88	51.98	54.00	-2.02	AVG	
3	*	2437.000	58.42	31.94	90.36	54.00	36.36	AVG	No Limit
4	X	2438.000	71.95	31.94	103.89	74.00	29.89	peak	No Limit

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

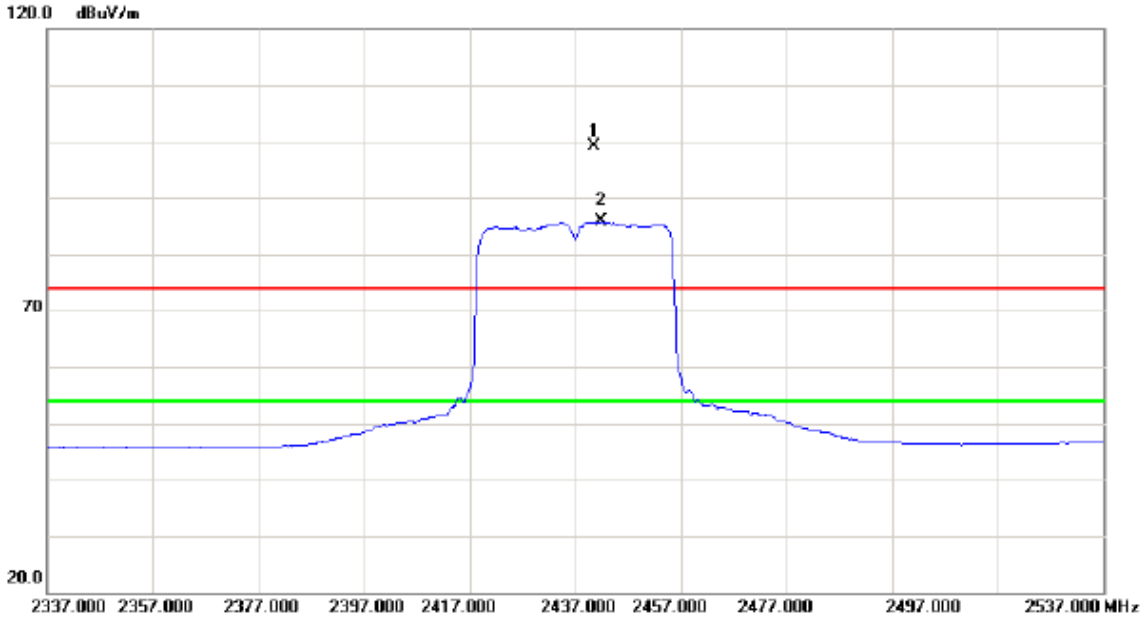
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4843.180	49.19	3.66	52.85	74.00	-21.15	peak	
2	*	4844.090	38.12	3.66	41.78	54.00	-12.22	AVG	

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

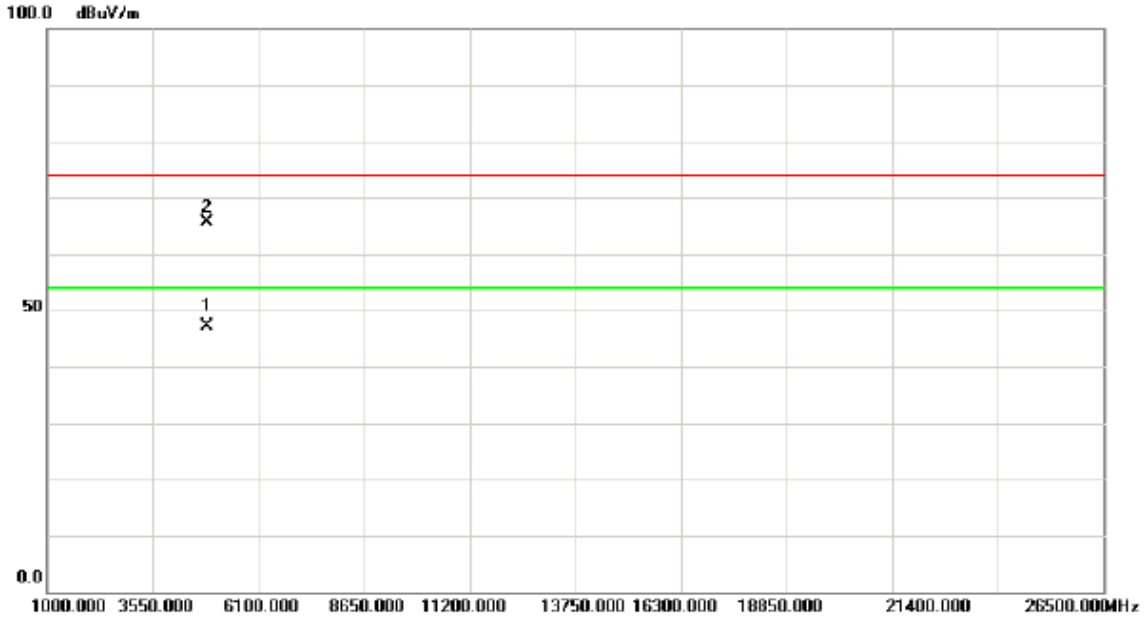
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2440.600	67.21	31.95	99.16	74.00	25.16	peak	No Limit
2	*	2442.000	53.82	31.95	85.77	54.00	31.77	AVG	No Limit

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

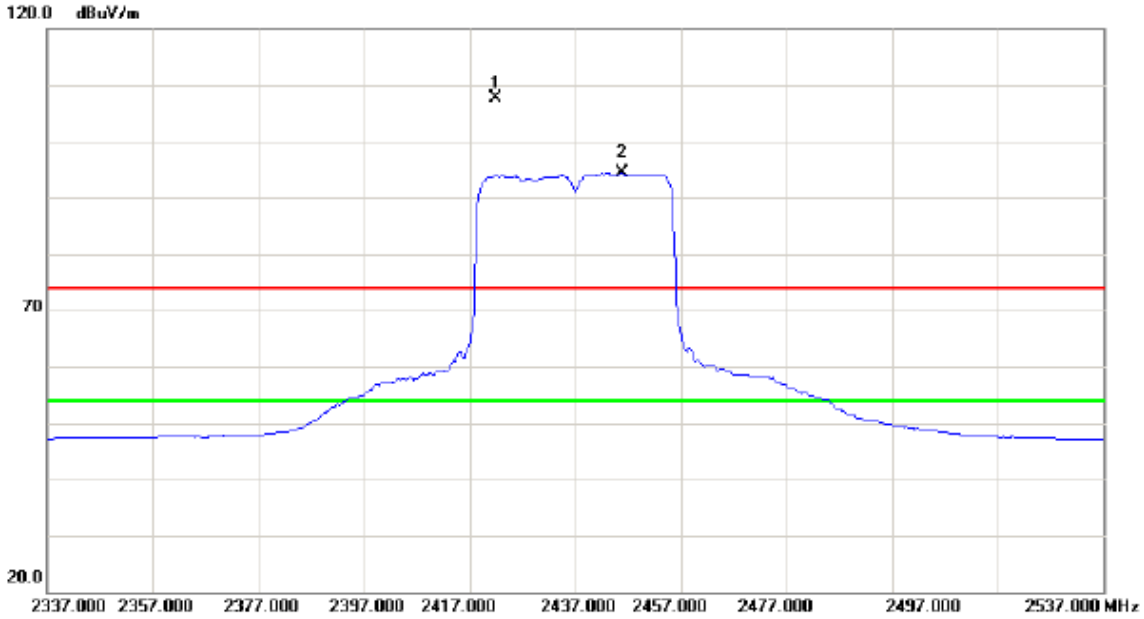
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4867.940	43.50	3.71	47.21	54.00	-6.79	AVG	
2		4871.660	62.03	3.71	65.74	74.00	-8.26	peak	

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

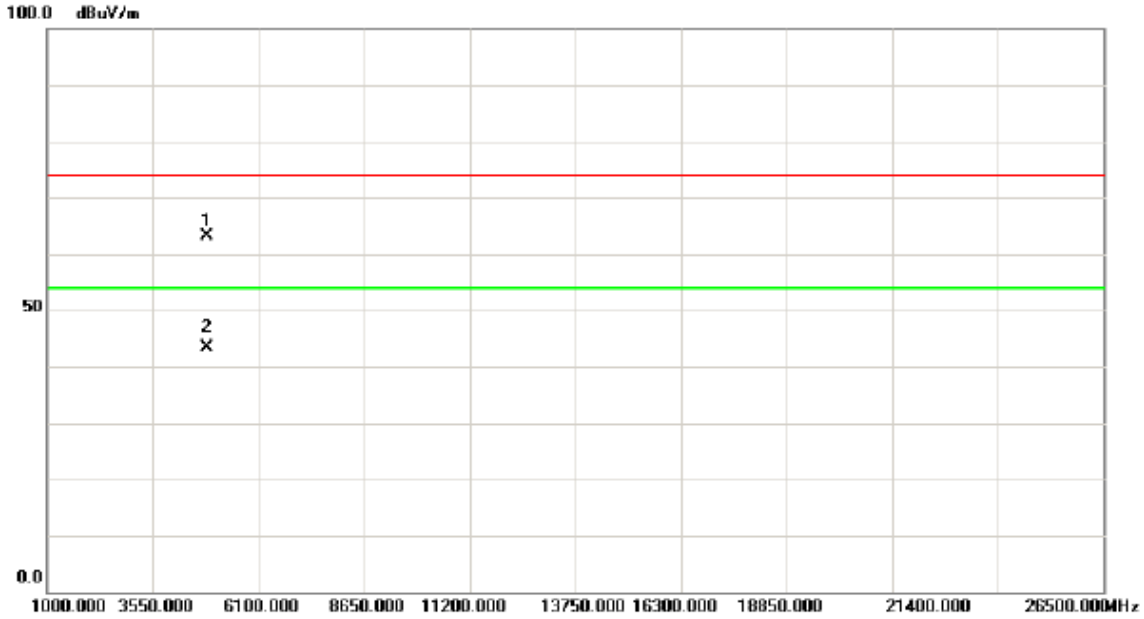
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2422.000	75.64	31.92	107.56	74.00	33.56	peak	No Limit
2	*	2445.800	62.39	31.96	94.35	54.00	40.35	AVG	No Limit

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

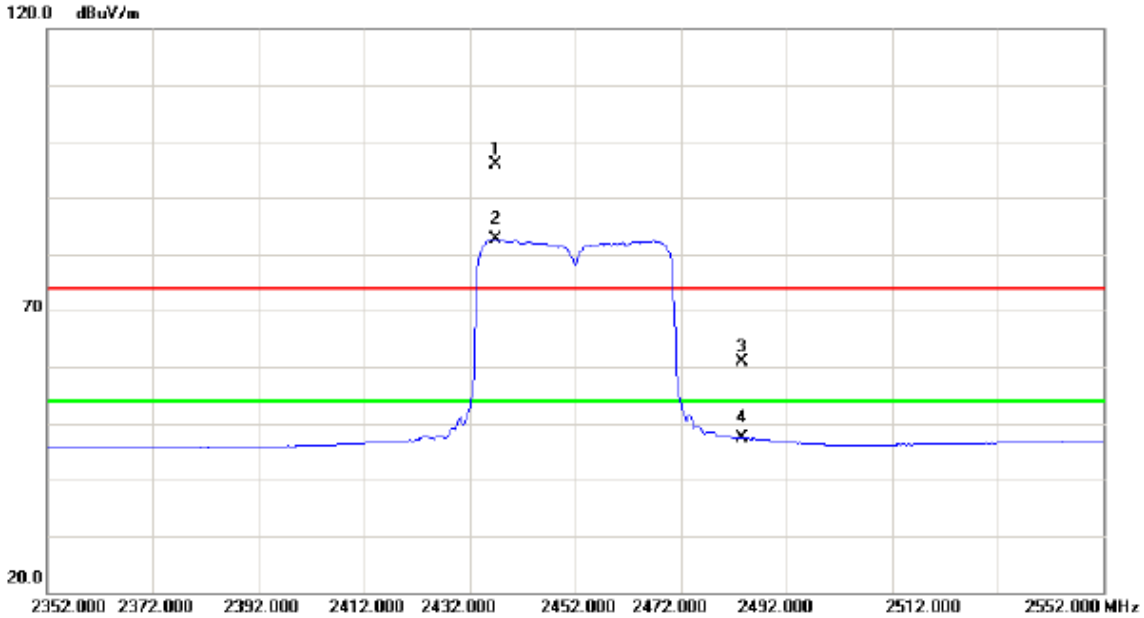
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4871.600	59.38	3.71	63.09	74.00	-10.91	peak	
2	*	4872.620	39.58	3.72	43.30	54.00	-10.70	AVG	

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

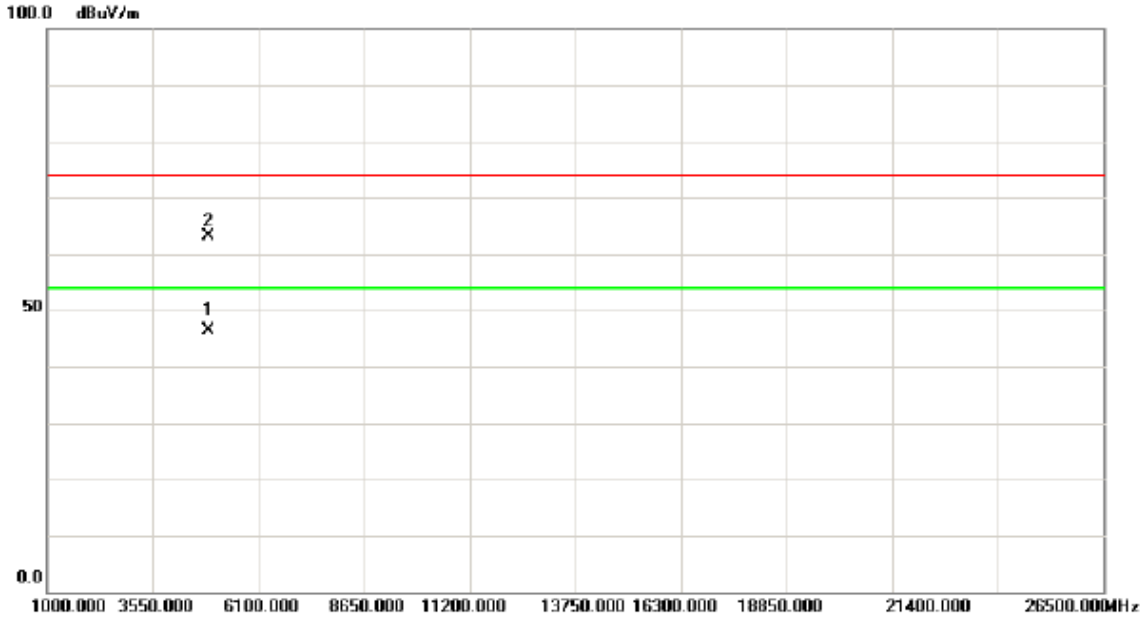
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2436.800	63.84	31.94	95.78	74.00	21.78	peak	No Limit
2	*	2436.800	50.66	31.94	82.60	54.00	28.60	AVG	No Limit
3		2483.500	28.98	32.01	60.99	74.00	-13.01	peak	
4		2483.500	15.35	32.01	47.36	54.00	-6.64	AVG	

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

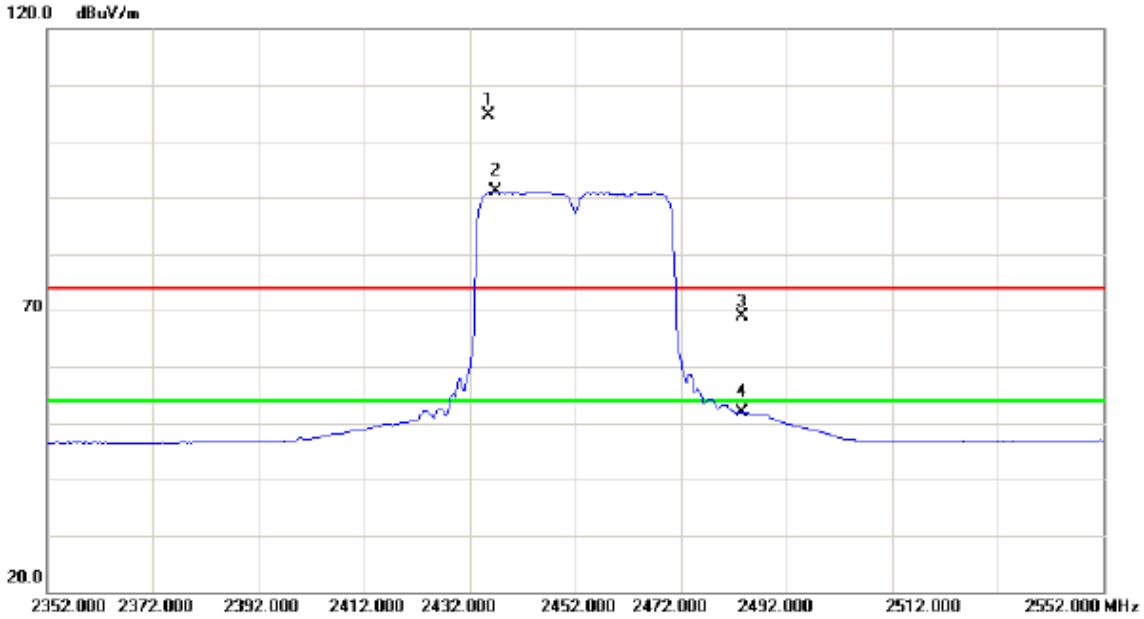
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4903.670	42.68	3.77	46.45	54.00	-7.55	AVG	
2		4904.090	59.31	3.77	63.08	74.00	-10.92	peak	

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

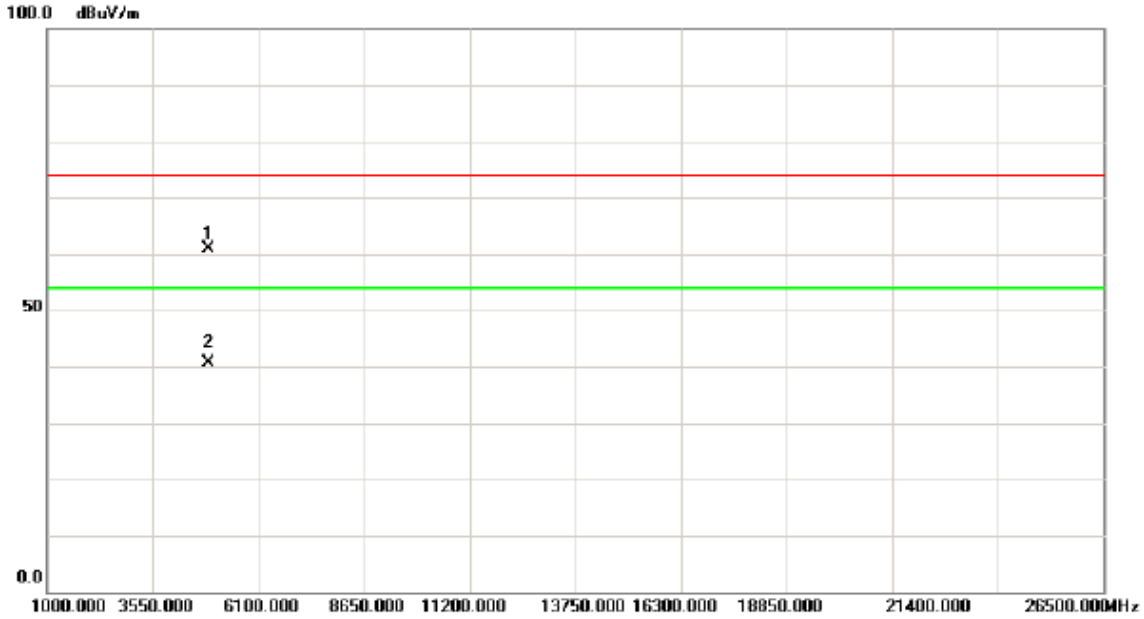
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2435.600	72.75	31.94	104.69	74.00	30.69	peak	No Limit
2	*	2436.800	59.25	31.94	91.19	54.00	37.19	AVG	No Limit
3		2483.500	36.82	32.01	68.83	74.00	-5.17	peak	
4		2483.500	19.94	32.01	51.95	54.00	-2.05	AVG	

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

Horizontal



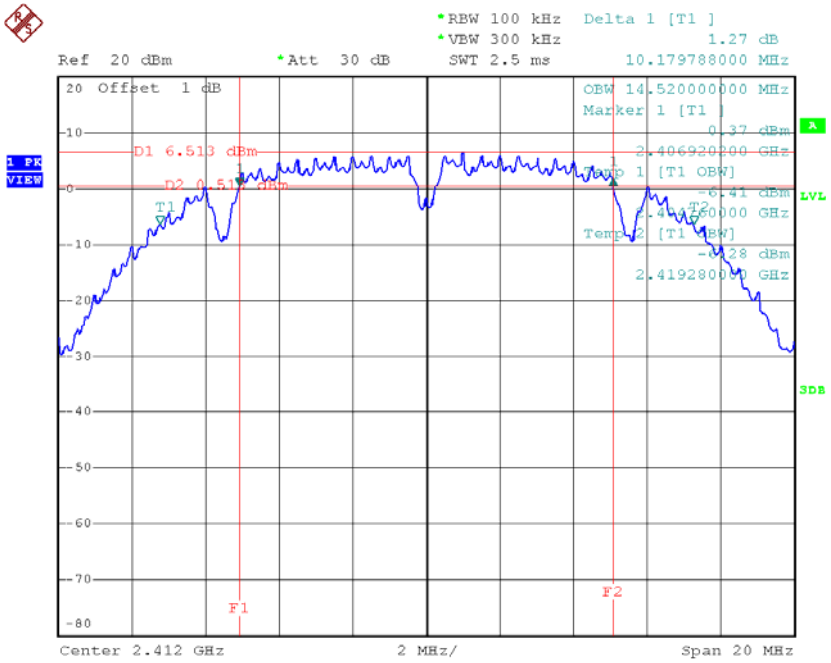
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4901.370	57.19	3.76	60.95	74.00	-13.05	peak	
2		4906.170	36.87	3.77	40.64	54.00	-13.36	AVG	

ATTACHMENT E - BANDWIDTH

Test Mode : TX B Mode_CH01/06/11

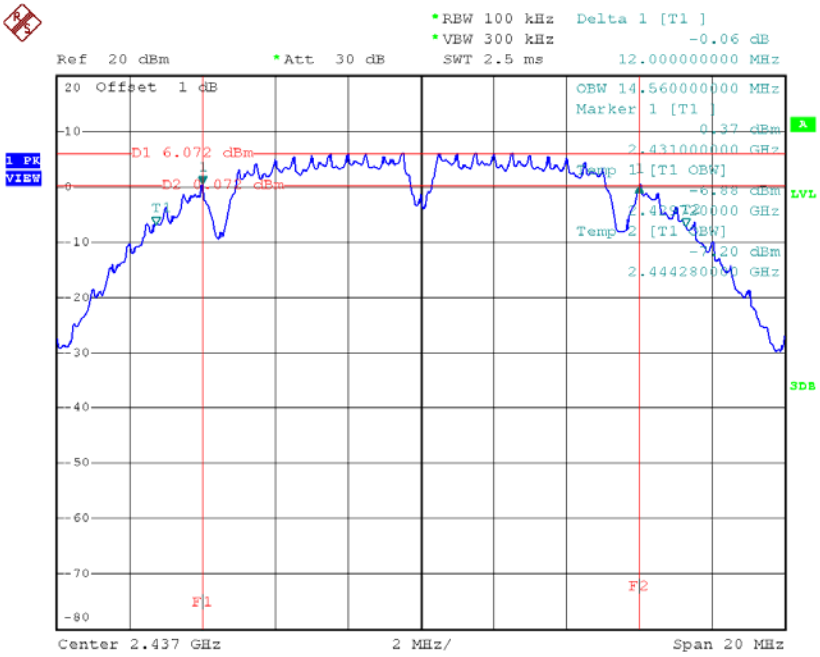
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	10.18	14.52	500	Complies
2437	12.00	14.56	500	Complies
2462	12.00	14.52	500	Complies

TX CH01



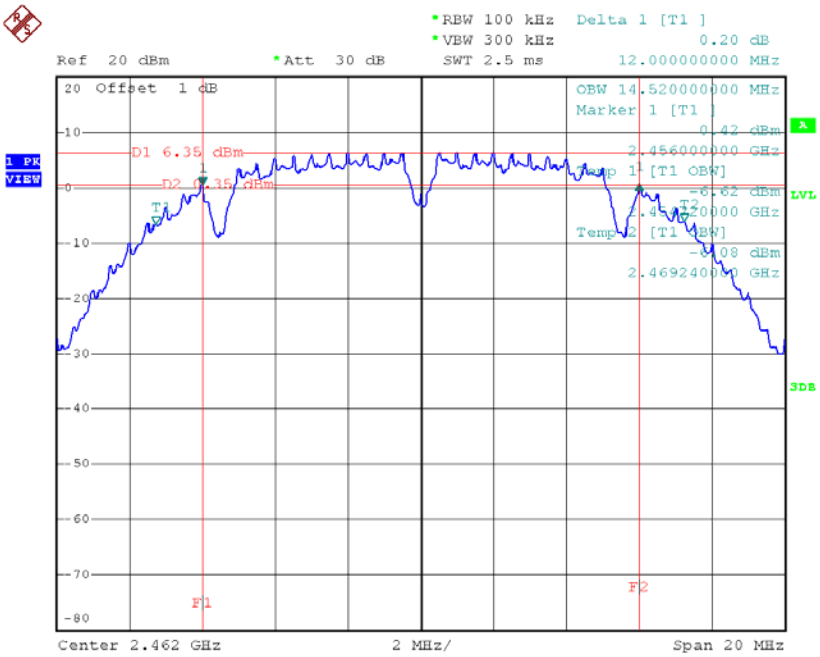
Date: 8.APR.2015 14:30:29

TX CH06



Date: 8.APR.2015 14:31:25

TX CH11

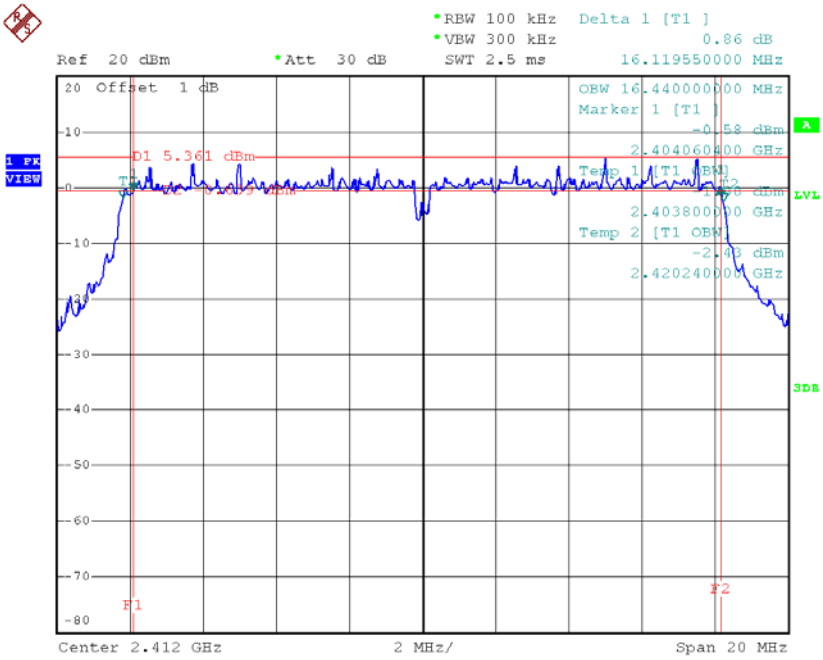


Date: 8.APR.2015 14:33:32

Test Mode: TX G Mode_CH01/06/11

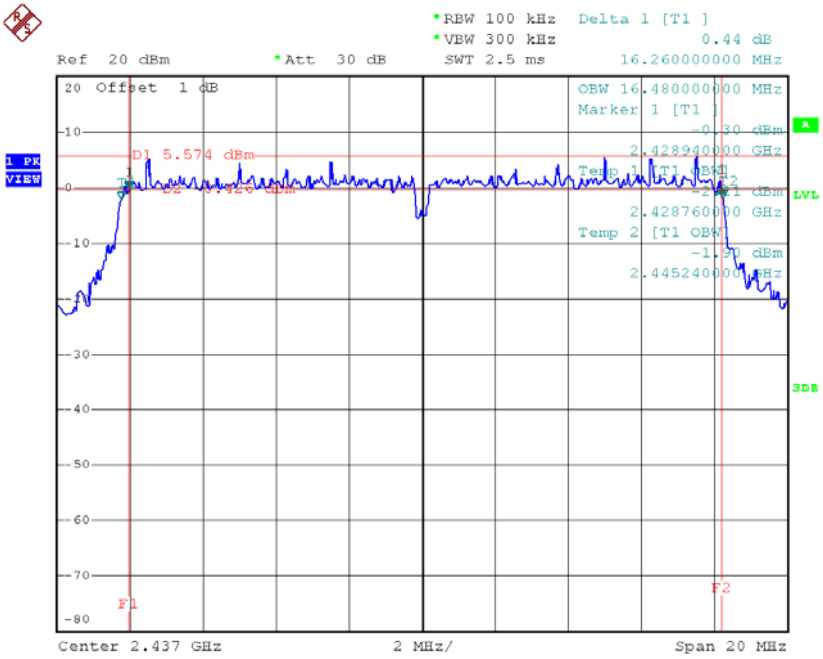
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.12	16.44	500	Complies
2437	16.26	16.48	500	Complies
2462	16.38	16.48	500	Complies

TX CH01



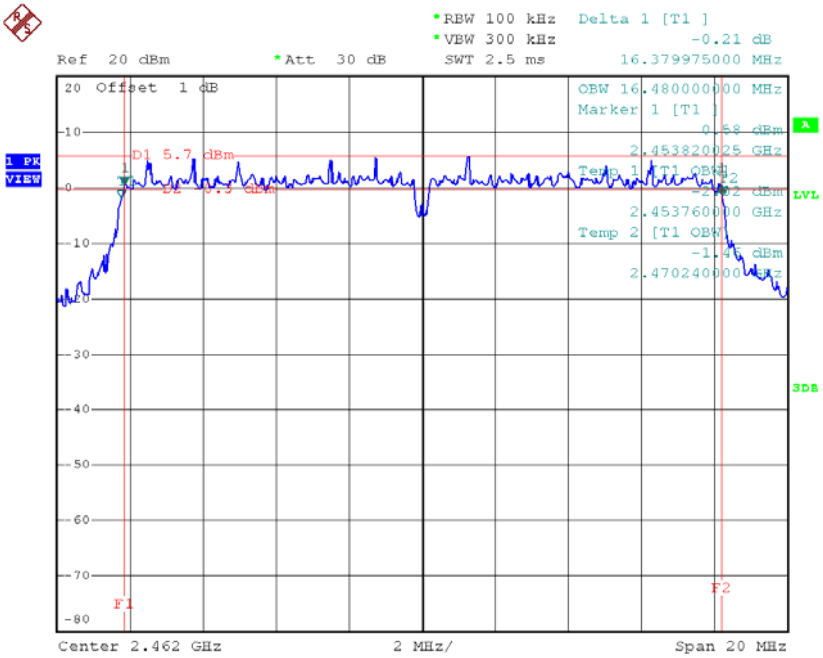
Date: 8.APR.2015 14:34:31

TX CH06



Date: 8.APR.2015 14:35:26

TX CH11

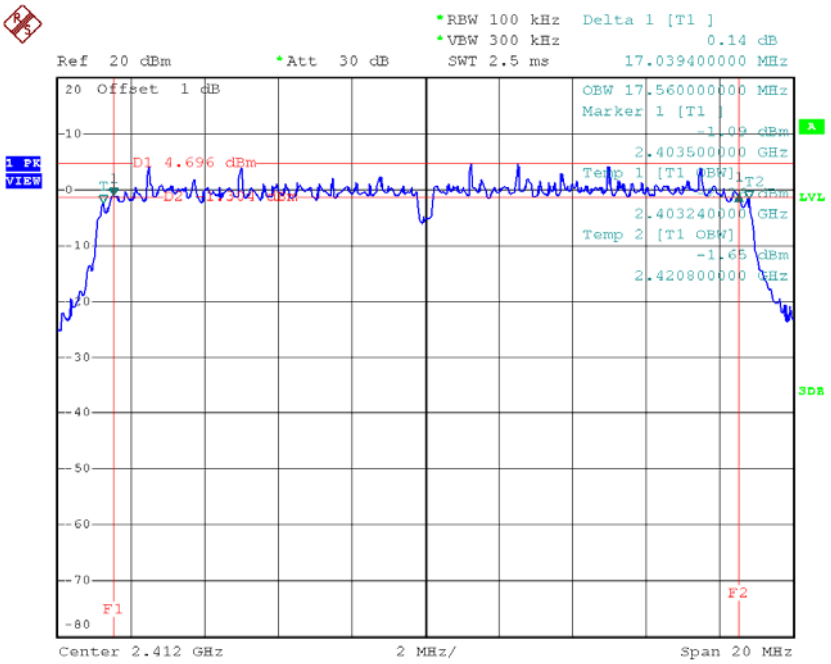


Date: 8.APR.2015 14:36:13

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

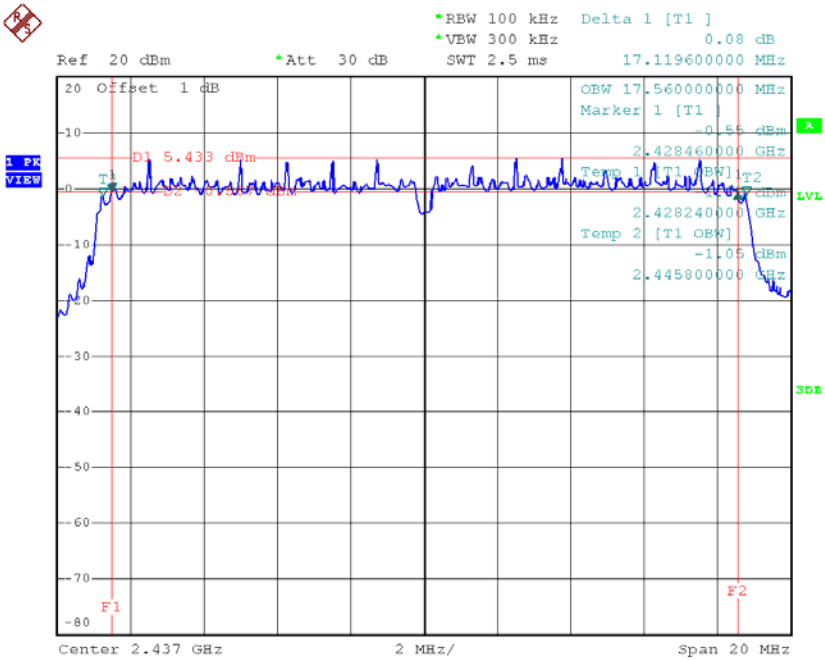
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.04	17.56	500	Complies
2437	17.12	17.56	500	Complies
2462	17.00	17.56	500	Complies

TX CH01



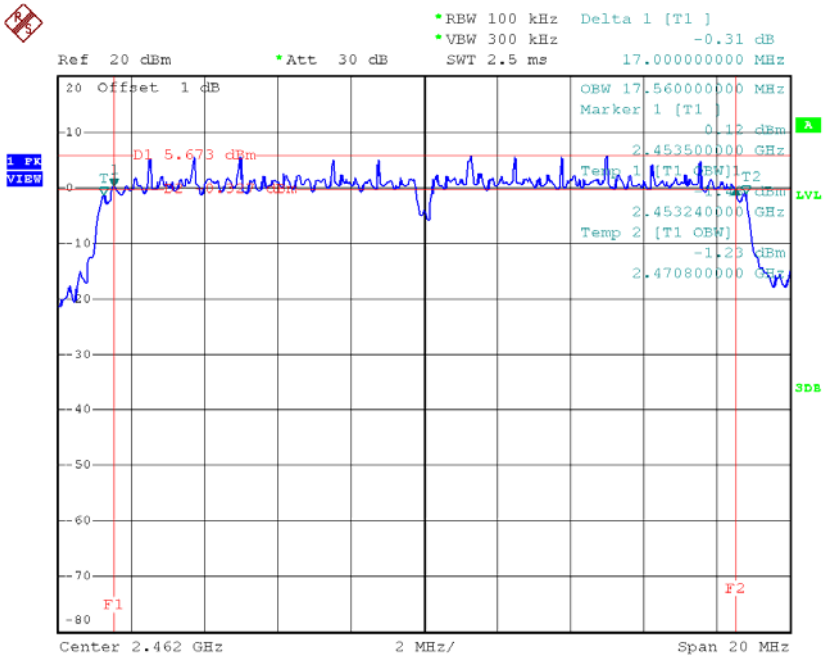
Date: 8.APR.2015 14:37:28

TX CH06



Date: 8.APR.2015 14:38:39

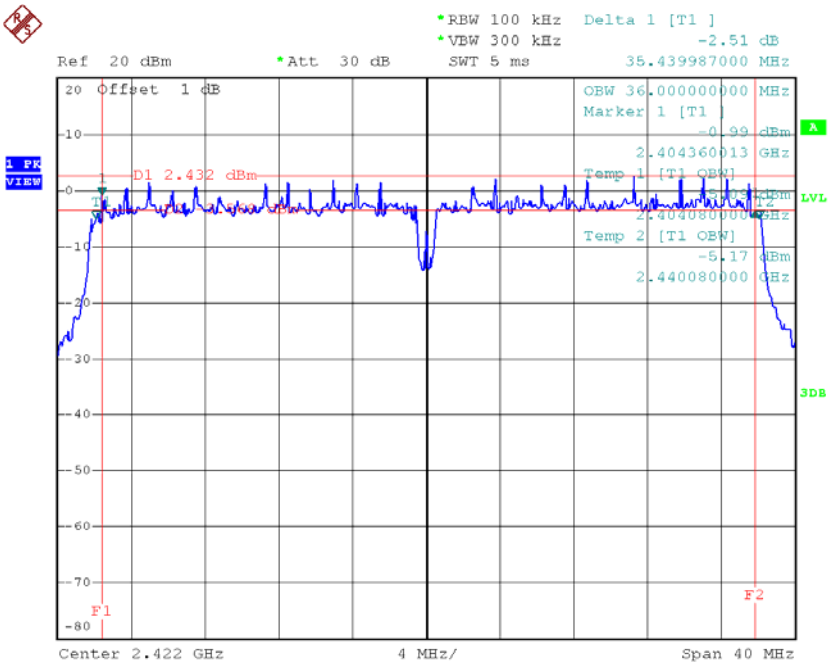
TX CH11



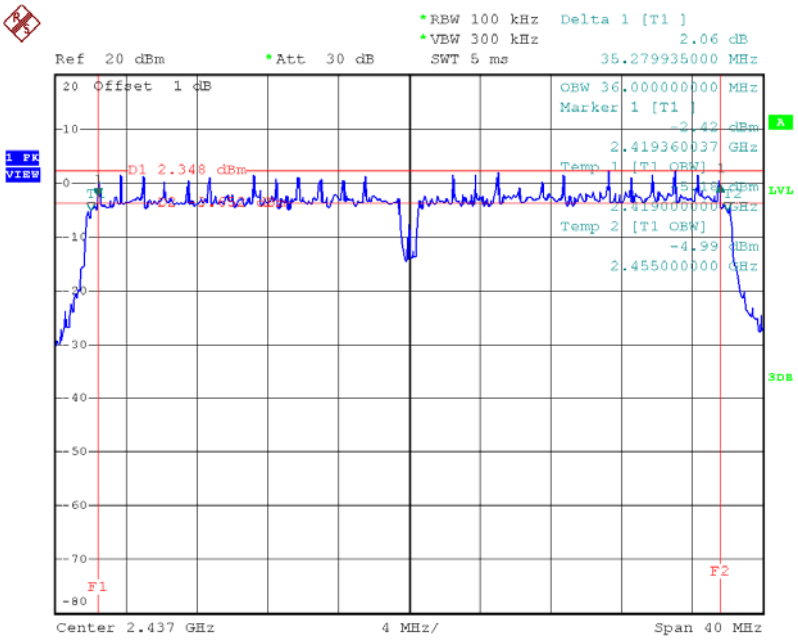
Date: 8.APR.2015 14:39:36

Test Mode : TX N-40MHz Mode_CH03/06/09				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	35.44	36.00	500	Complies
2437	35.28	36.00	500	Complies
2452	35.19	36.08	500	Complies

TX CH03

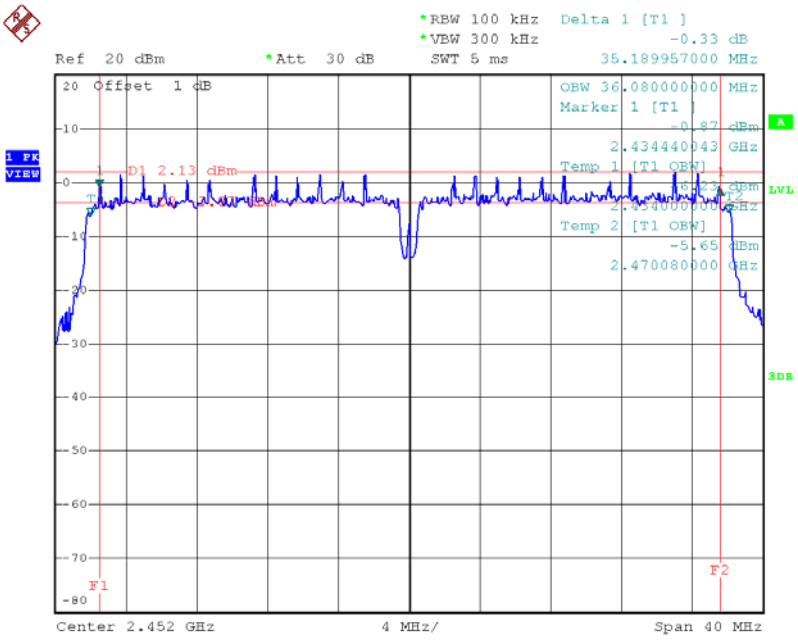


TX CH06



Date: 8.APR.2015 14:41:52

TX CH09



Date: 8.APR.2015 14:42:43

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	16.47	0.04	30.00	1.00	Complies
2437	17.04	0.05	30.00	1.00	Complies
2462	16.97	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	19.34	0.09	30.00	1.00	Complies
2437	19.92	0.10	30.00	1.00	Complies
2462	19.85	0.10	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11_ANT 0					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	20.54	0.11	30.00	1.00	Complies
2437	20.39	0.11	30.00	1.00	Complies
2462	20.15	0.10	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	20.16	0.10	30.00	1.00	Complies
2437	20.07	0.10	30.00	1.00	Complies
2462	20.13	0.10	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	23.36	0.22	30.00	1.00	Complies
2437	23.24	0.21	30.00	1.00	Complies
2462	23.15	0.21	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09_ANT 0					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	18.57	0.07	30.00	1.00	Complies
2437	20.49	0.11	30.00	1.00	Complies
2452	18.61	0.07	30.00	1.00	Complies

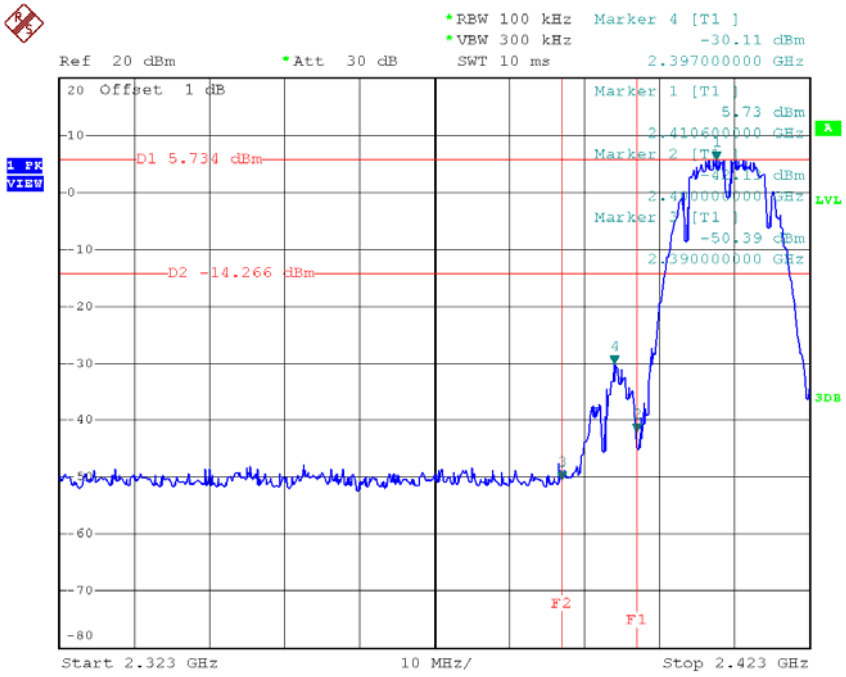
Test Mode :TX N40 Mode_CH03/06/09_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	18.06	0.06	30.00	1.00	Complies
2437	20.03	0.10	30.00	1.00	Complies
2452	15.38	0.03	30.00	1.00	Complies

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	21.33	0.14	30.00	1.00	Complies
2437	23.28	0.21	30.00	1.00	Complies
2452	20.30	0.11	30.00	1.00	Complies

ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

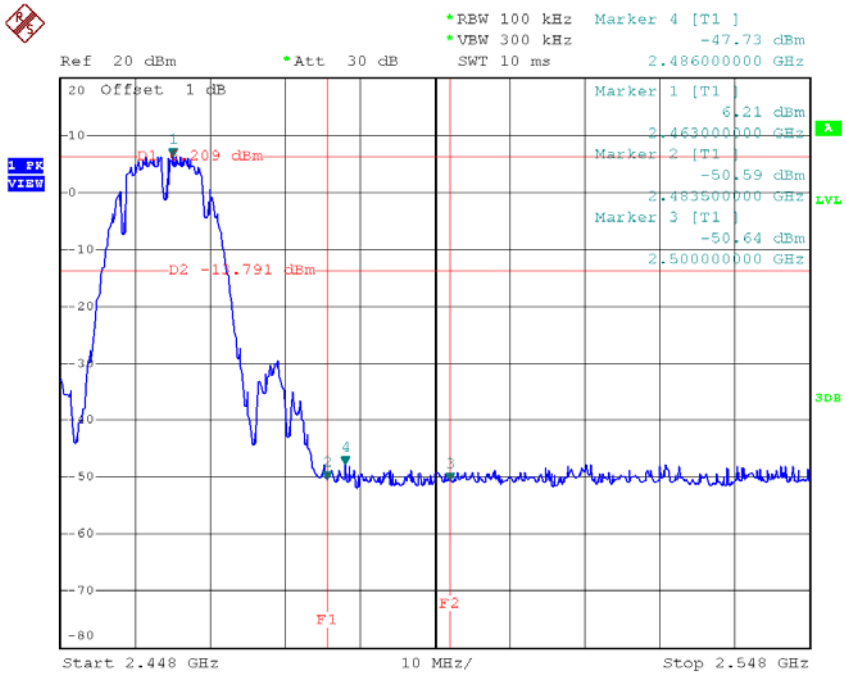
Test Mode :	**TX B Mode**

TX B mode CH01



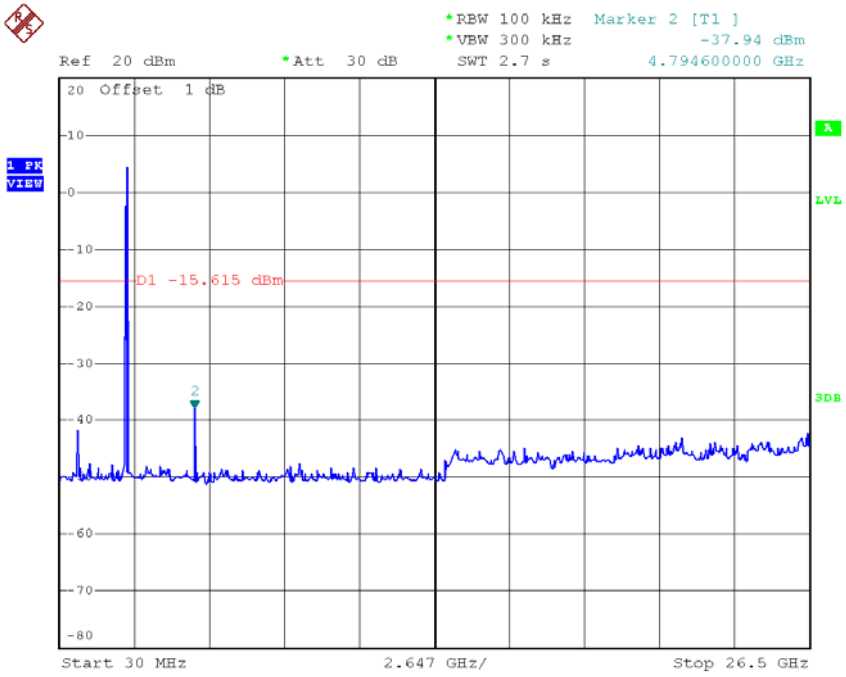
Date: 8.APR.2015 14:30:50

TX B mode CH11



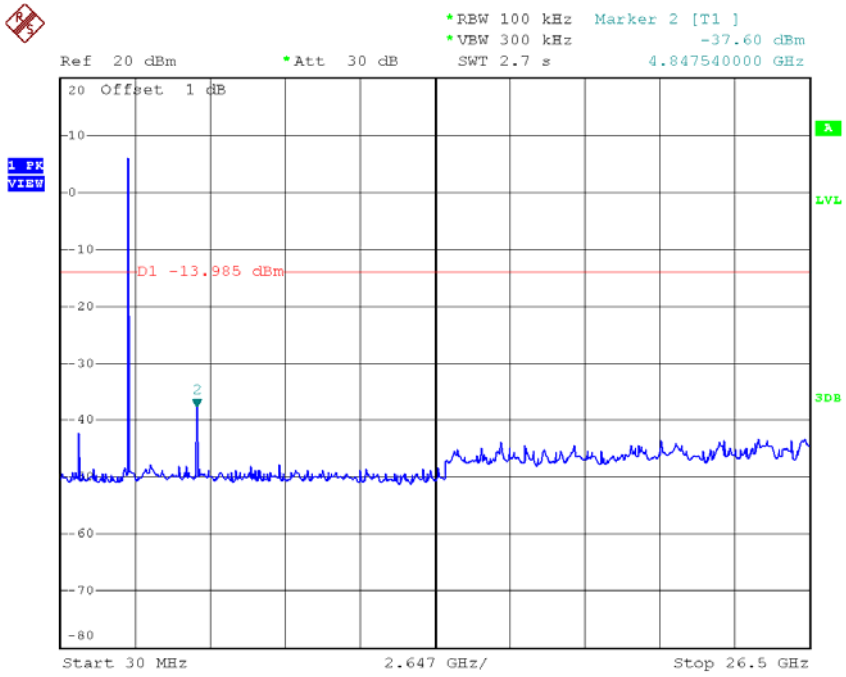
Date: 8.APR.2015 14:33:53

TX B mode CH01 (10 Harmonic of the frequency)



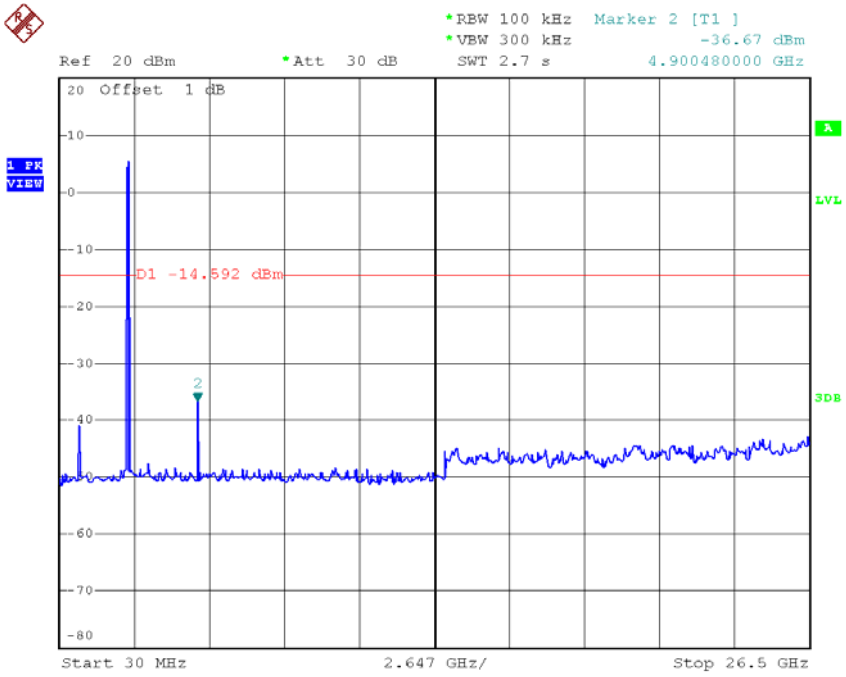
Date: 8.APR.2015 14:30:42

TX B mode CH06 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:31:38

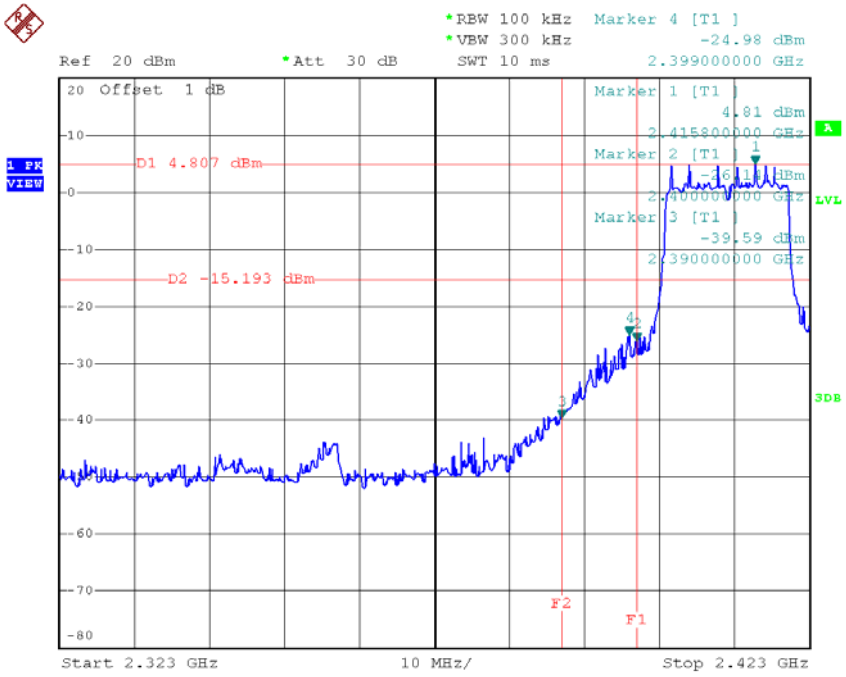
TX B mode CH11 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:33:46

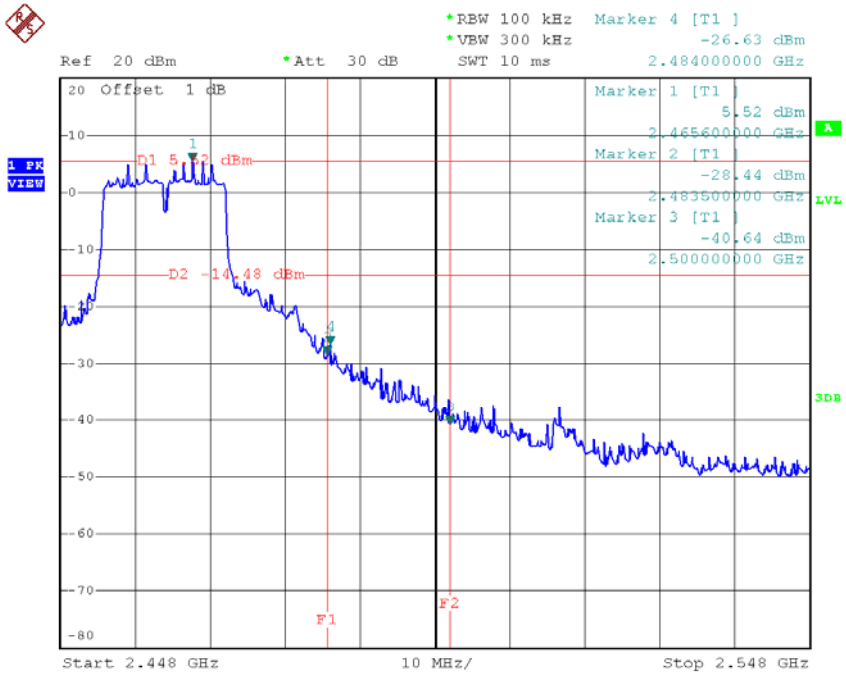
Test Mode :	**TX G Mode**

TX G mode CH01



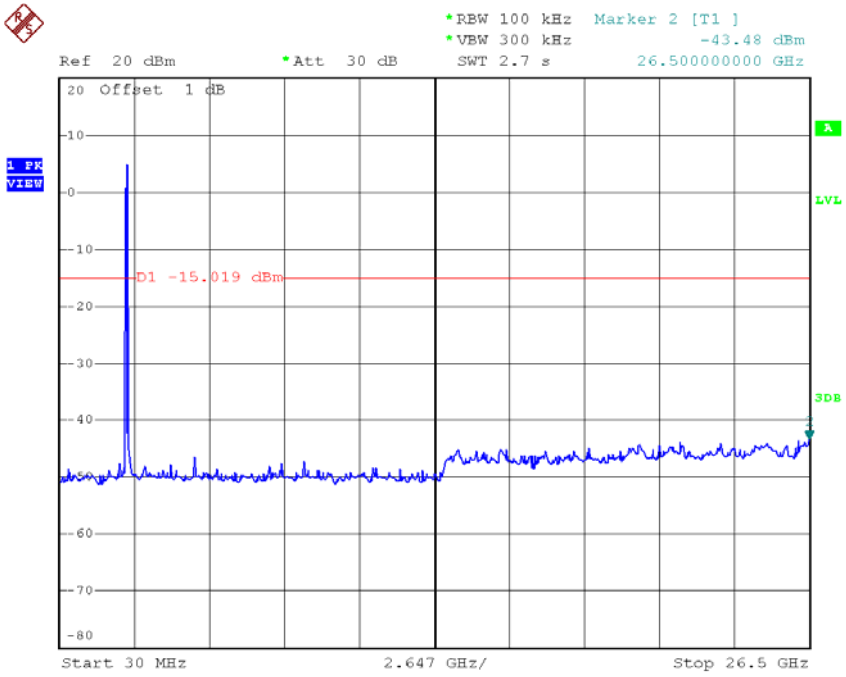
Date: 8.APR.2015 14:34:53

TX G mode CH11



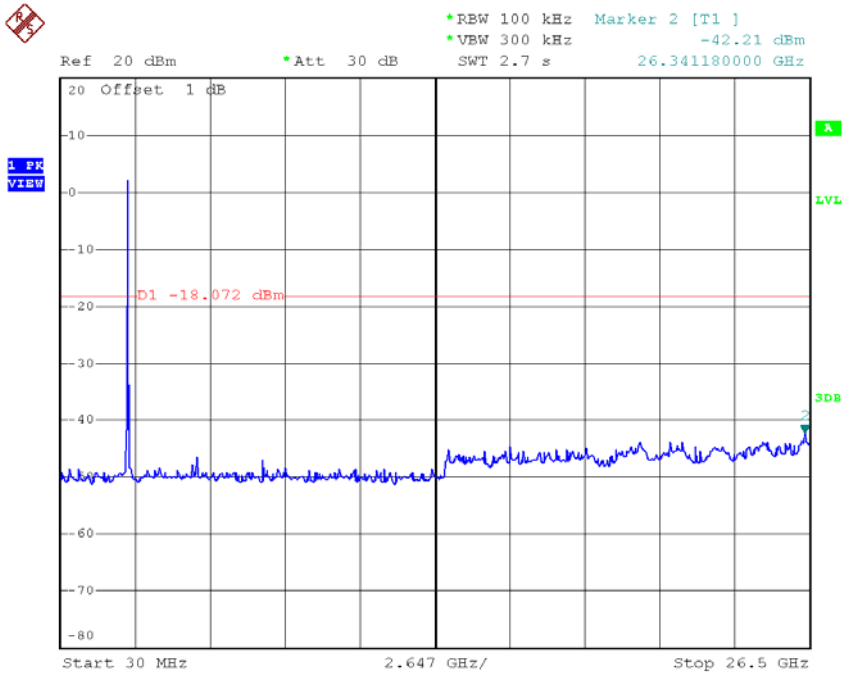
Date: 8.APR.2015 14:36:34

TX G mode CH01 (10 Harmonic of the frequency)



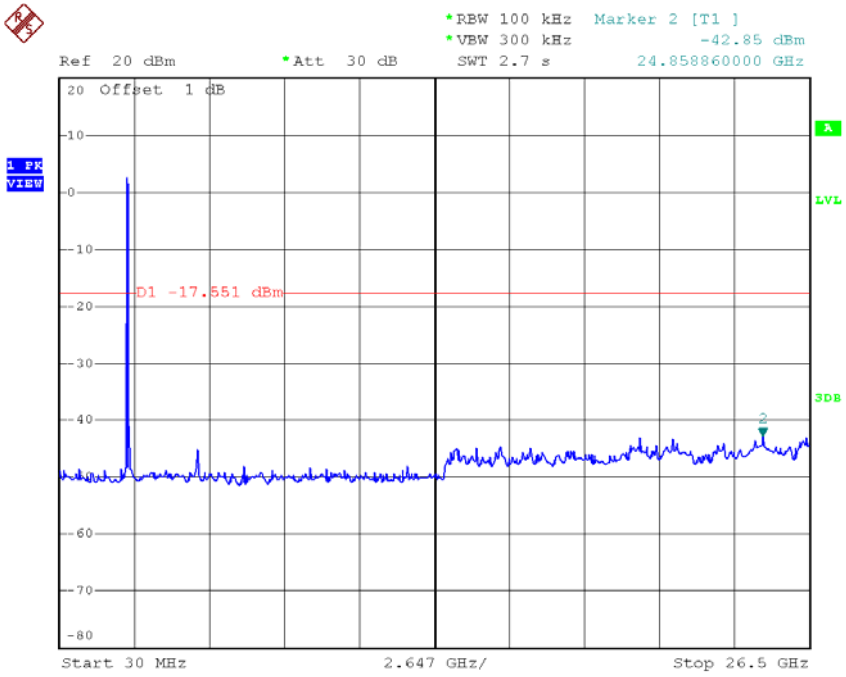
Date: 8.APR.2015 14:34:45

TX G mode CH06 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:35:39

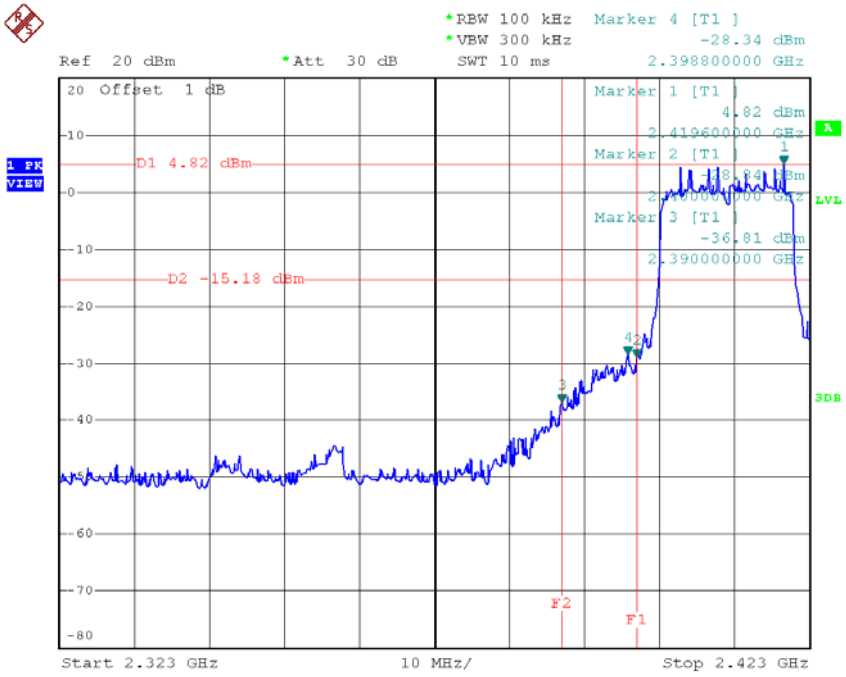
TX G mode CH11 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:36:26

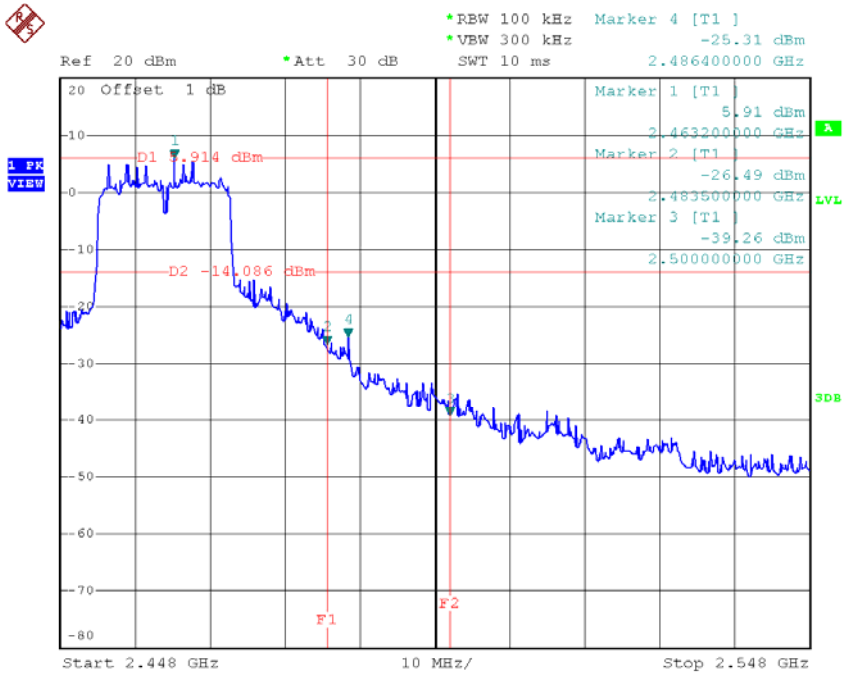
Test Mode :	**TX N-20M Mode_ANT 0**

TX HT20 mode CH01



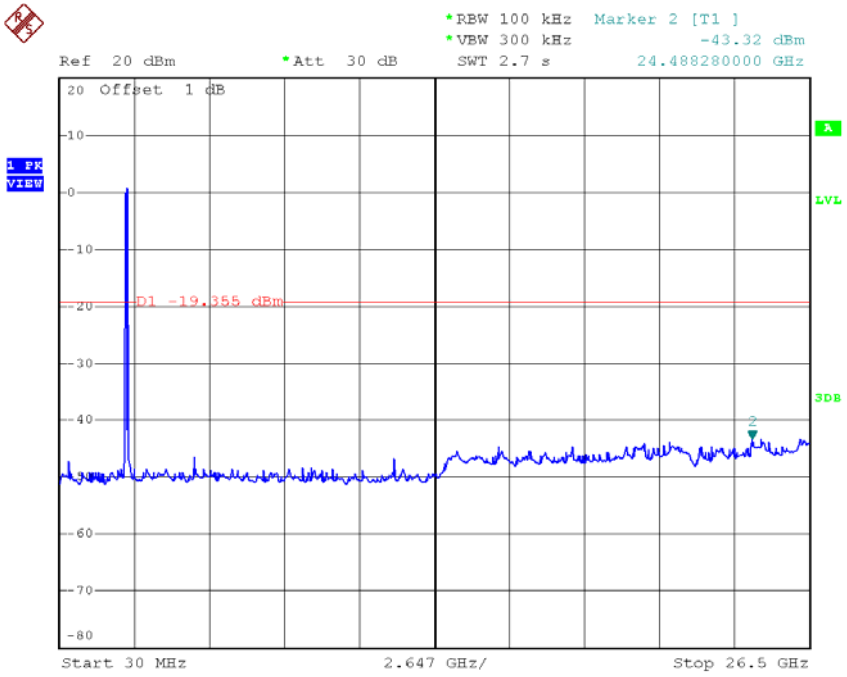
Date: 8.APR.2015 14:37:49

TX HT20 mode CH11



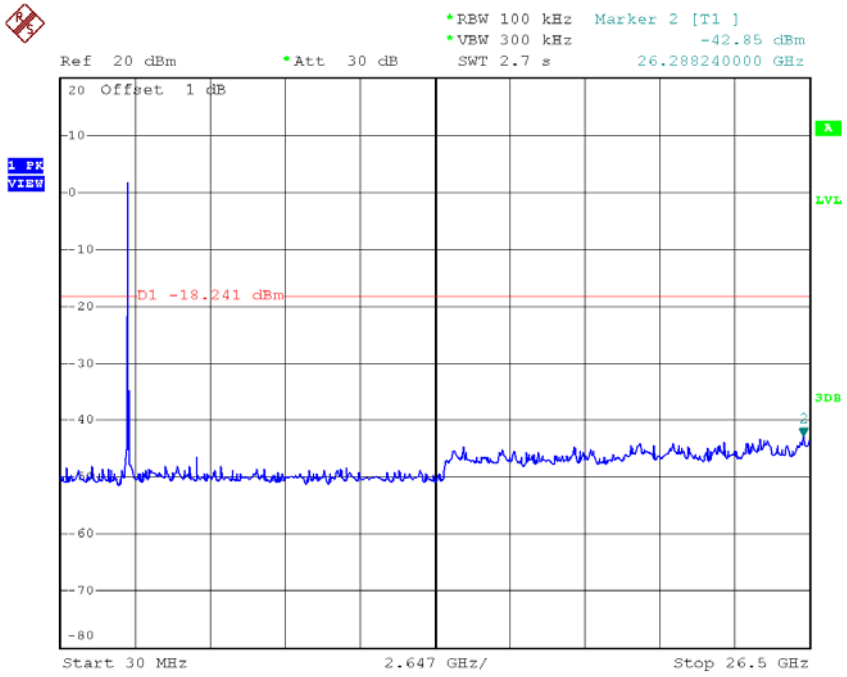
Date: 8.APR.2015 14:39:57

TX HT20 mode CH01 (10 Harmonic of the frequency)



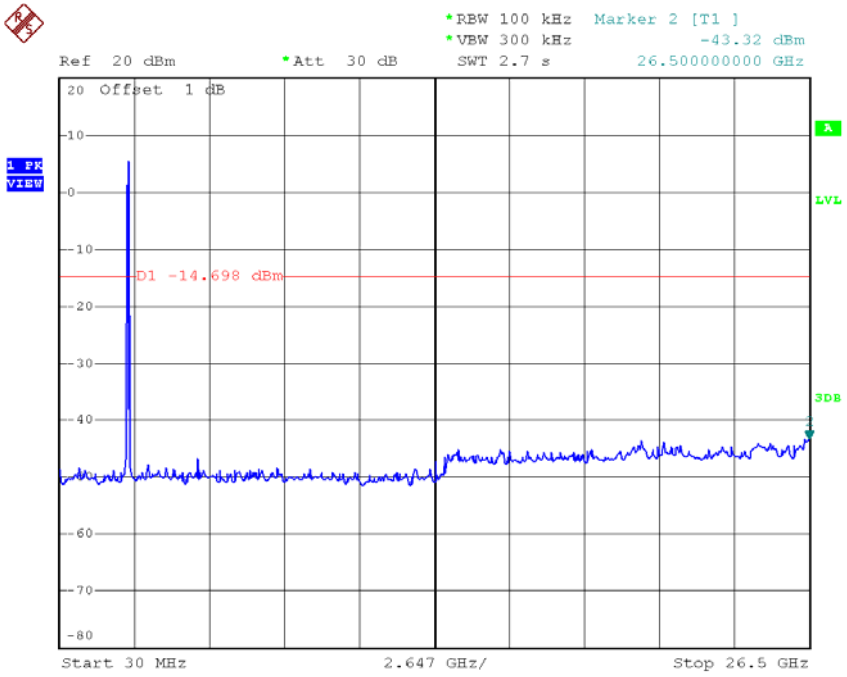
Date: 8.APR.2015 14:37:42

TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:38:53

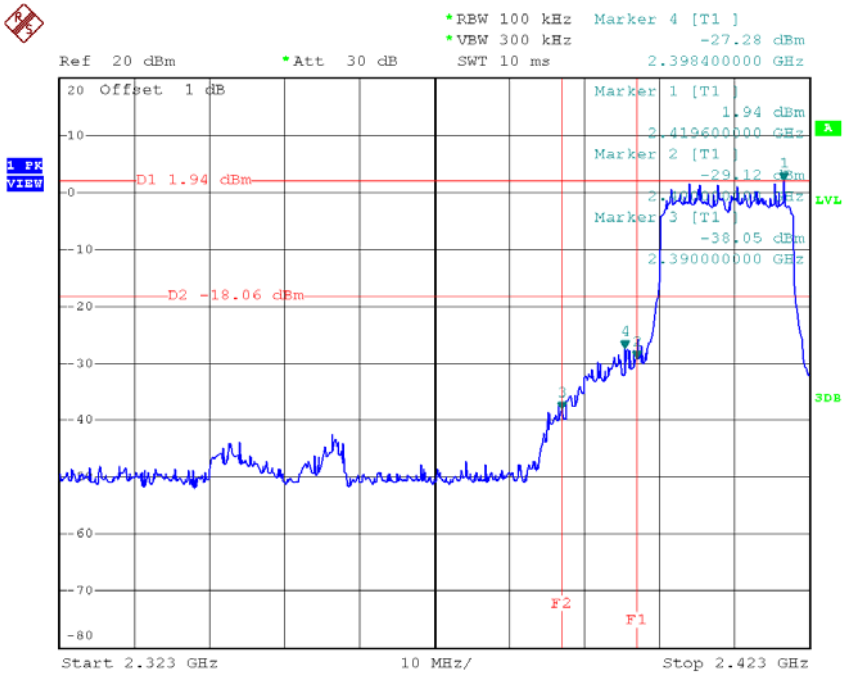
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:39:49

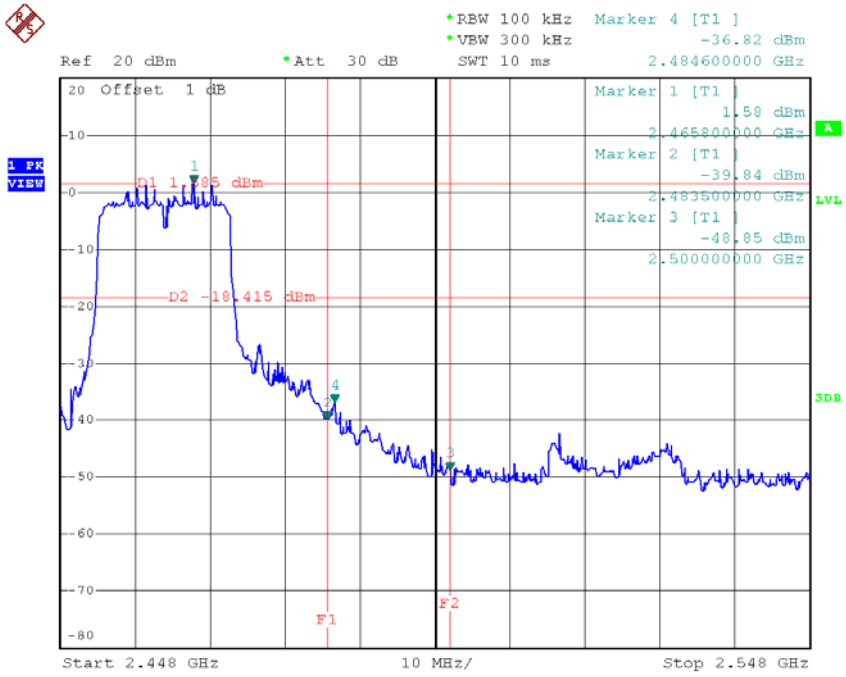
Test Mode :	**TX N-20M Mode_ANT 1**

TX HT20 mode CH01



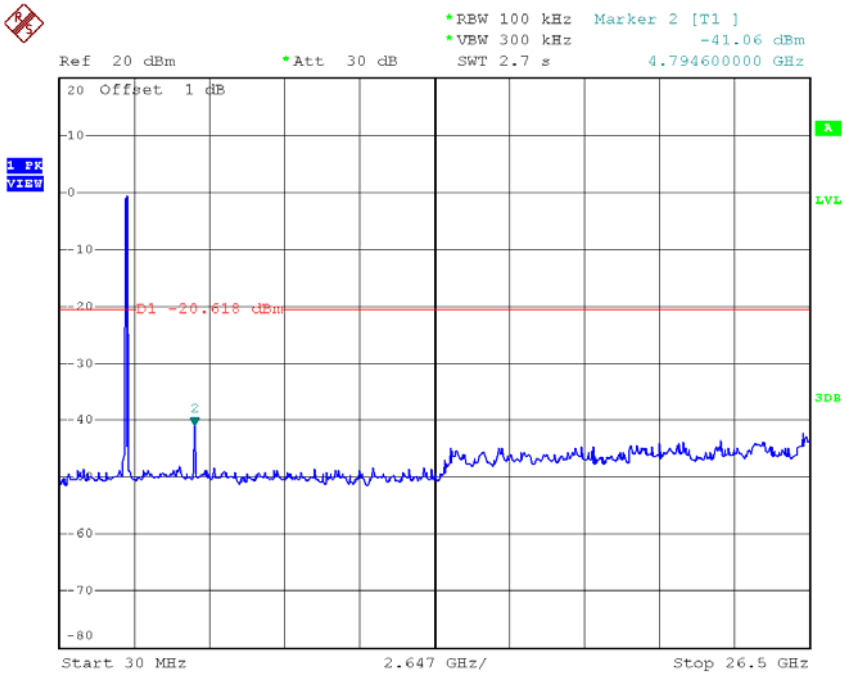
Date: 8.APR.2015 14:44:49

TX HT20 mode CH11



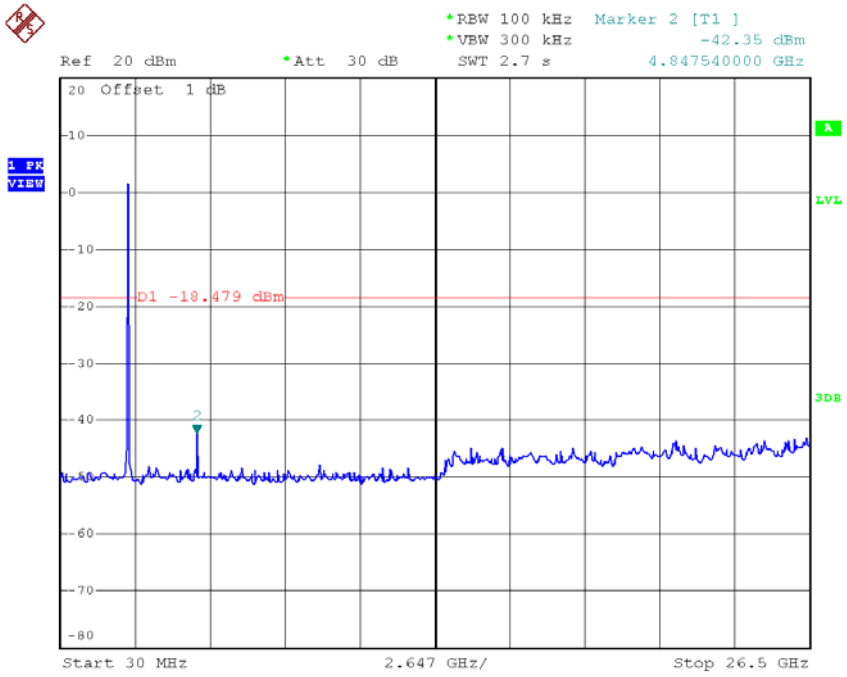
Date: 8.APR.2015 14:46:58

TX HT20 mode CH01 (10 Harmonic of the frequency)



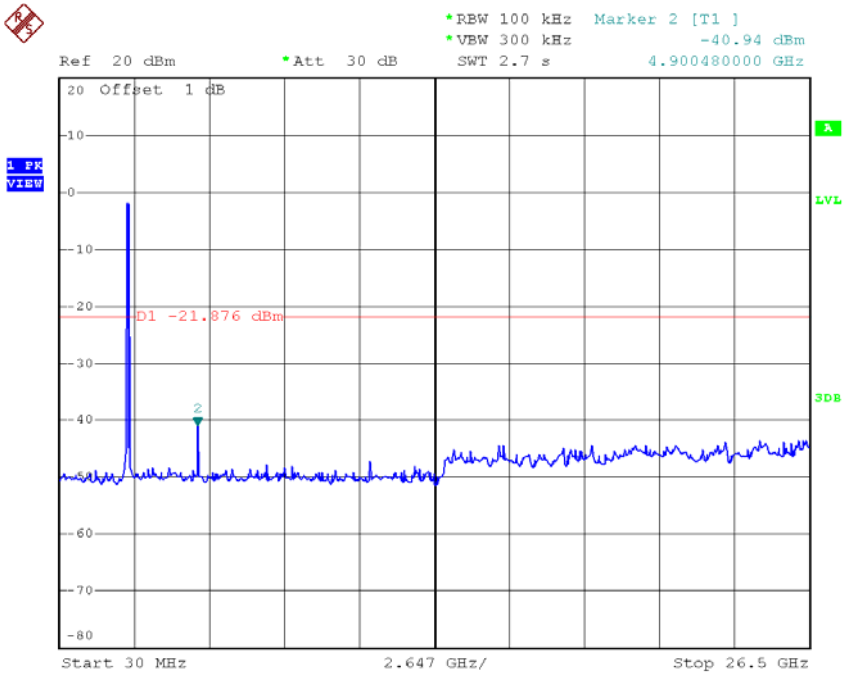
Date: 8.APR.2015 14:44:42

TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:46:04

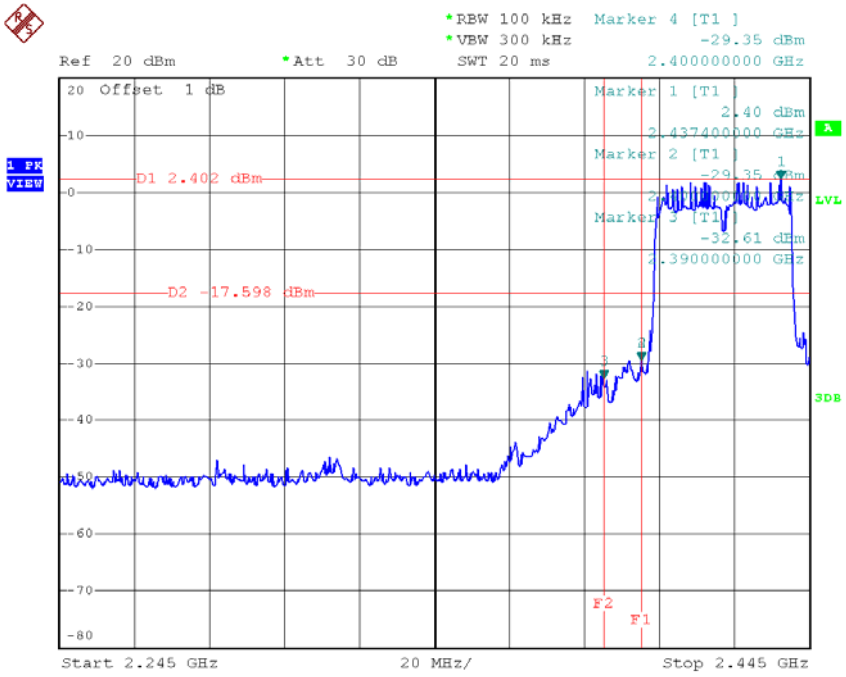
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:46:50

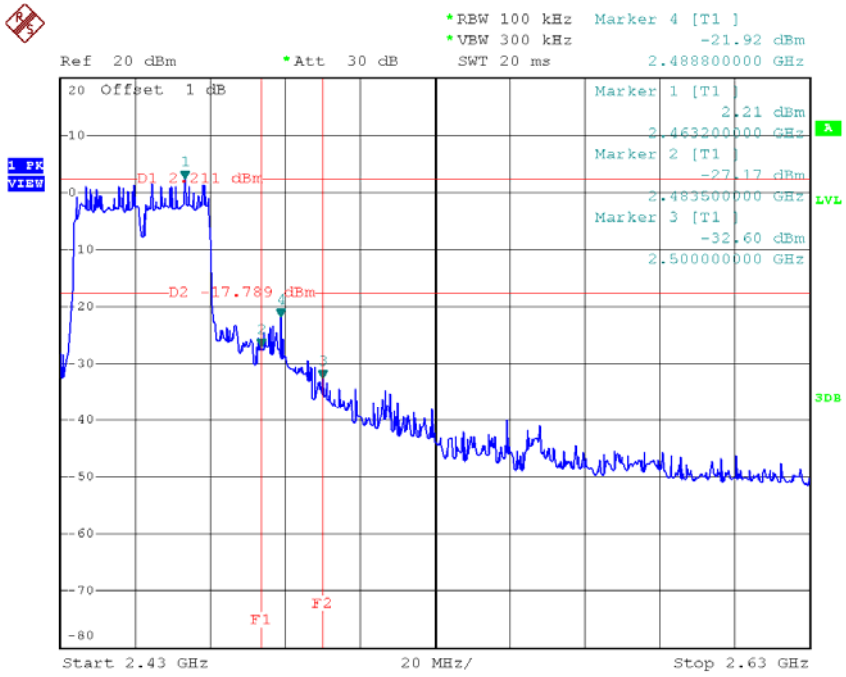
Test Mode :	**TX N-40M Mode_ANT 0**

TX HT40 mode CH03



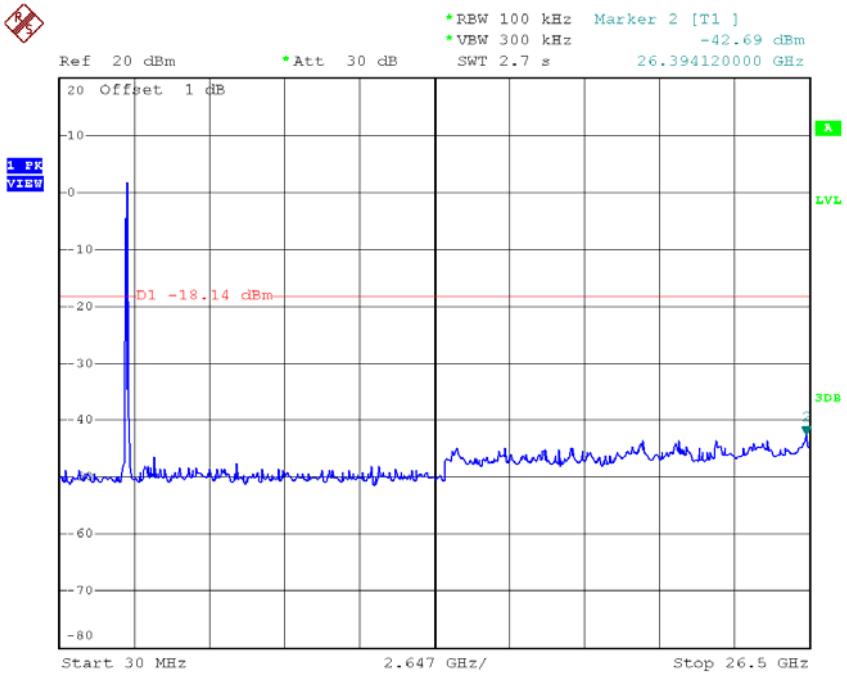
Date: 8.APR.2015 14:41:14

TX HT40 mode CH09



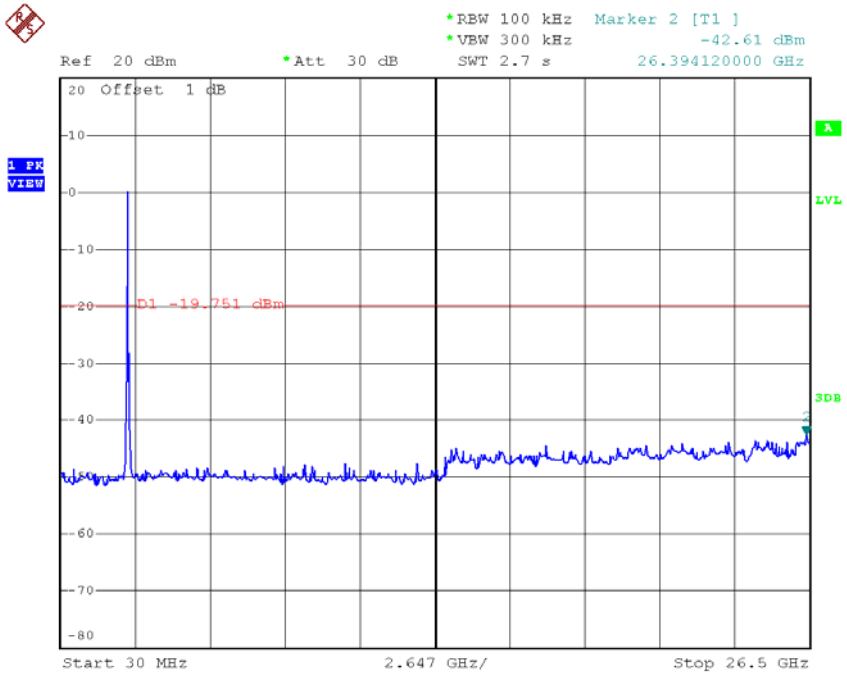
Date: 8.APR.2015 14:43:04

TX HT40 mode CH03 (10 Harmonic of the frequency)



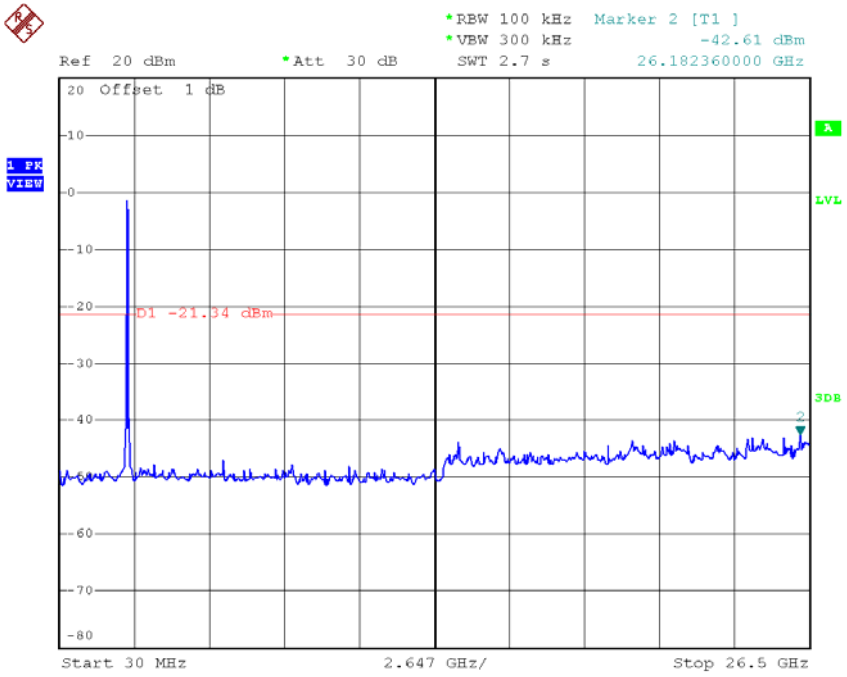
Date: 8.APR.2015 14:41:07

TX HT40 mode CH06 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:42:06

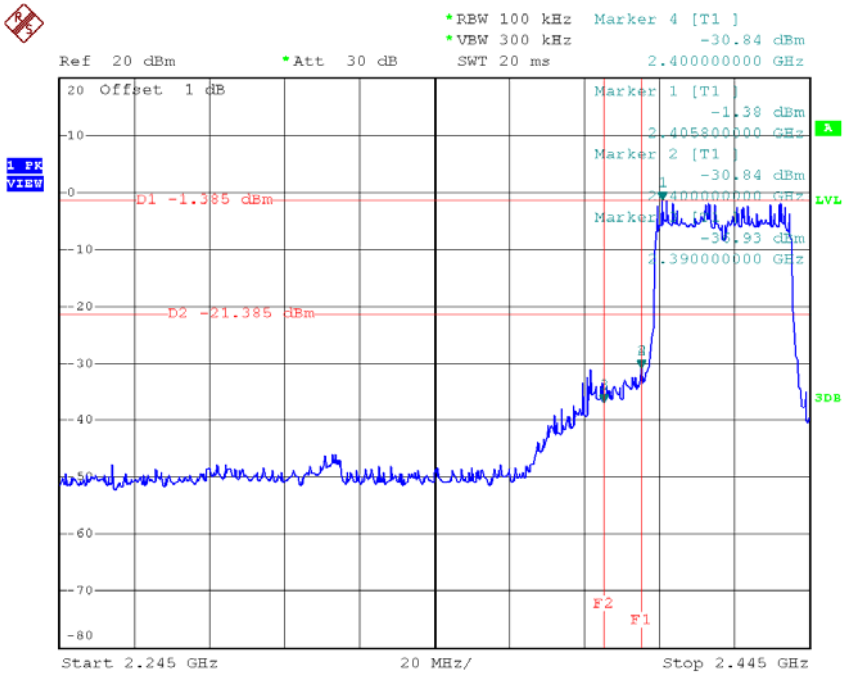
TX HT40 mode CH09 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:42:57

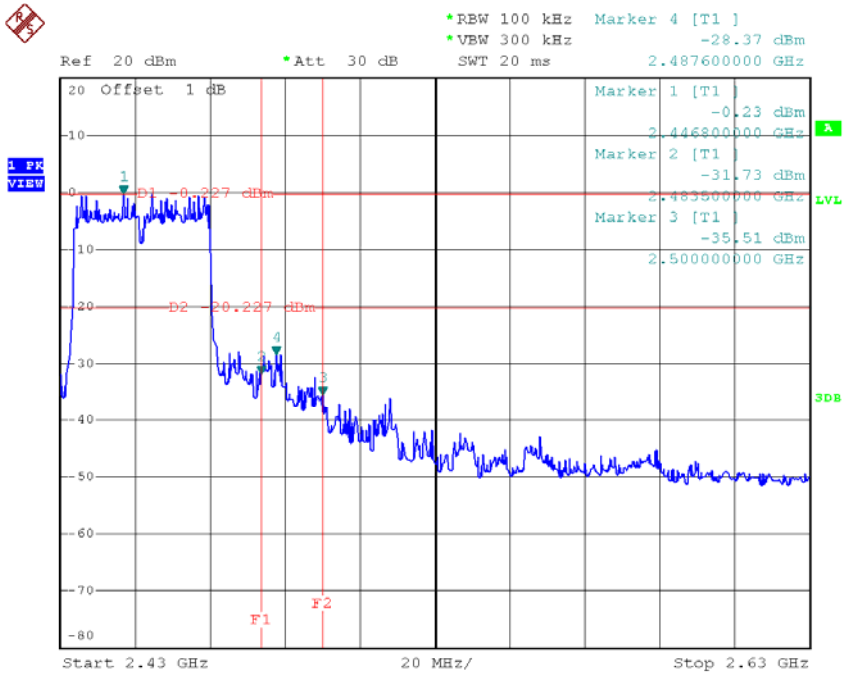
Test Mode :	**TX N-40M Mode_ANT 1**

TX HT40 mode CH03



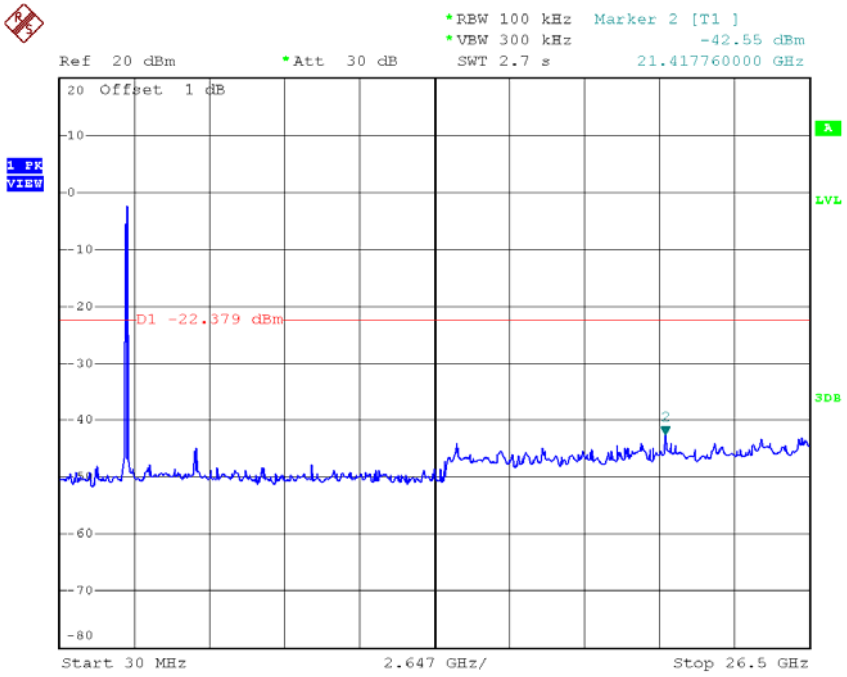
Date: 8.APR.2015 14:48:02

TX HT40 mode CH09



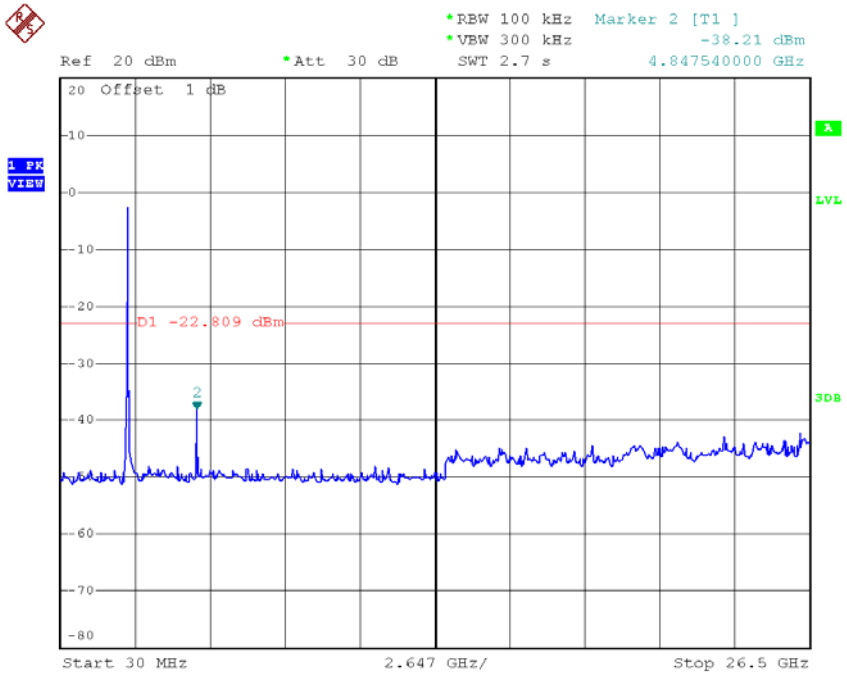
Date: 8.APR.2015 14:49:43

TX HT40 mode CH03 (10 Harmonic of the frequency)



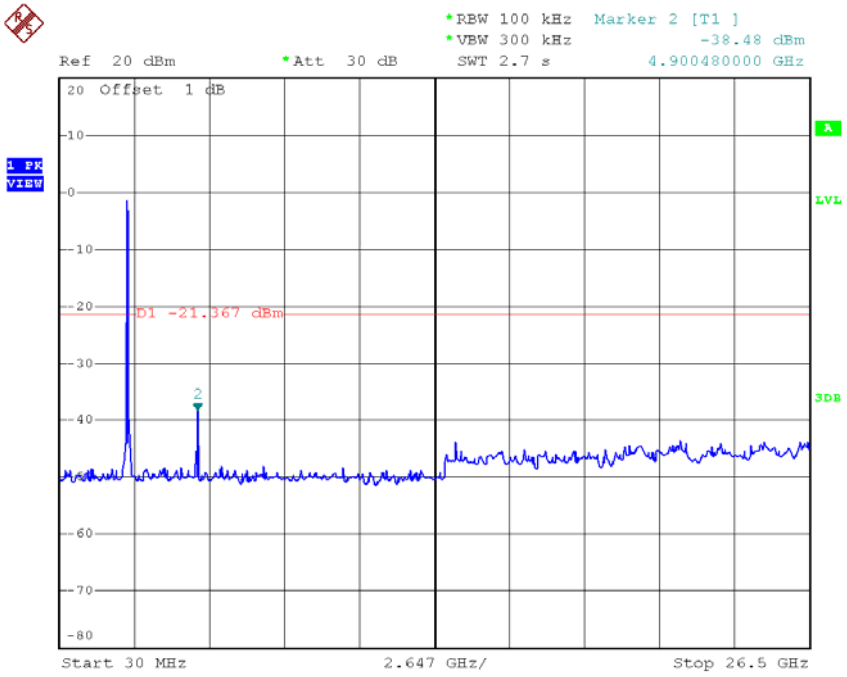
Date: 8.APR.2015 14:47:55

TX HT40 mode CH06 (10 Harmonic of the frequency)



Date: 8.APR.2015 14:48:48

TX HT40 mode CH09 (10 Harmonic of the frequency)



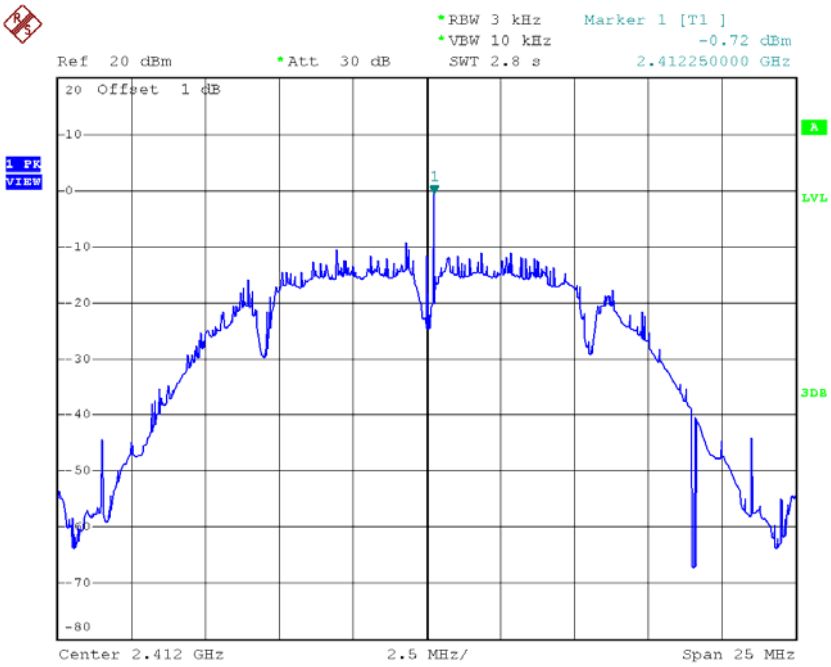
Date: 8.APR.2015 14:49:36

ATTACHMENT H - POWER SPECTRAL DENSITY

Test Mode :TX B Mode_CH01/06/11_ANT 0

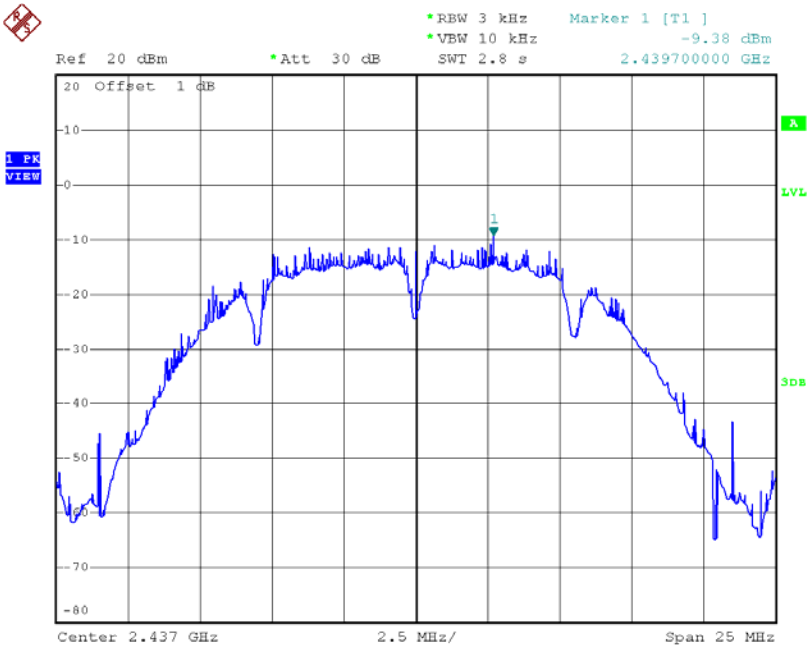
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-0.72	0.85	8.00	Complies
2437	-9.38	0.12	8.00	Complies
2462	4.10	2.57	8.00	Complies

TX CH01



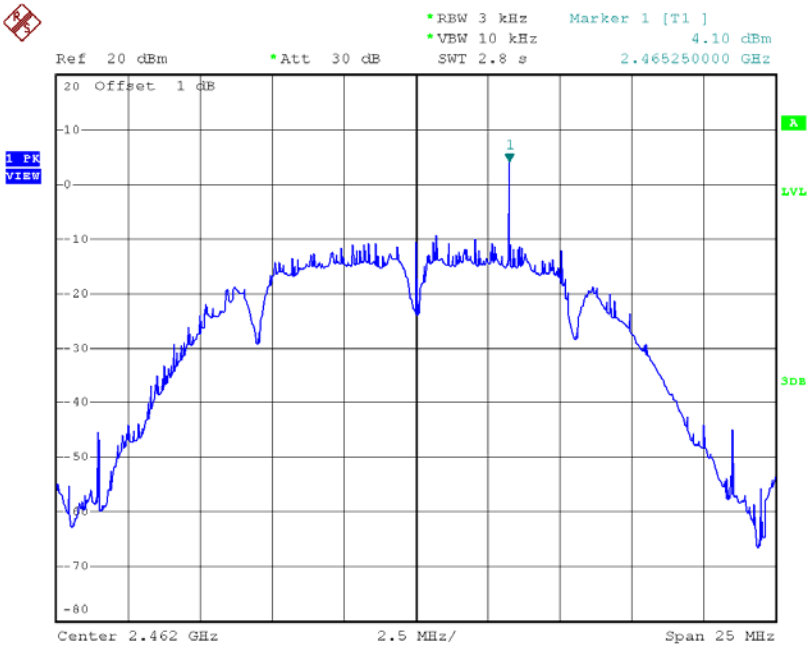
Date: 8.APR.2015 14:30:59

TX CH06



Date: 8.APR.2015 14:31:47

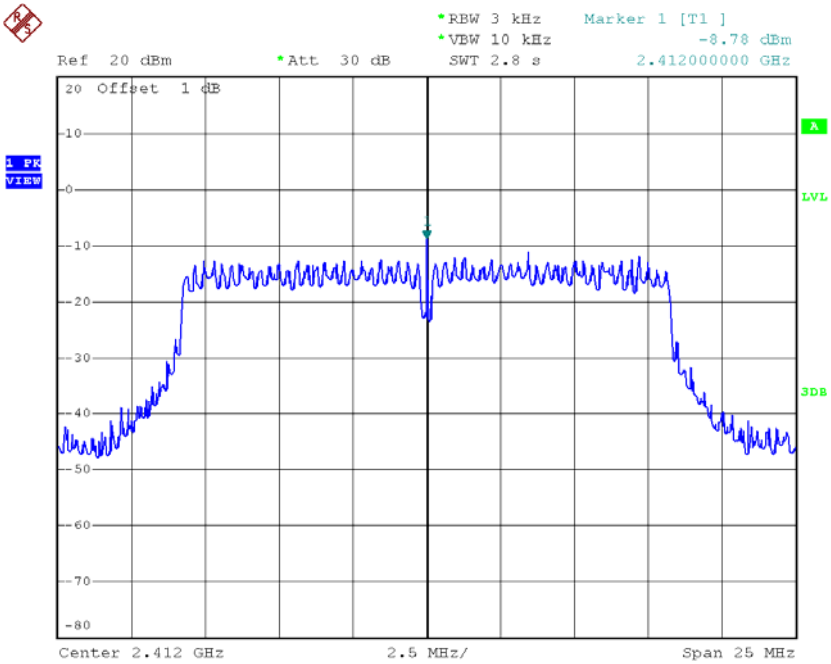
TX CH11



Date: 8.APR.2015 14:34:02

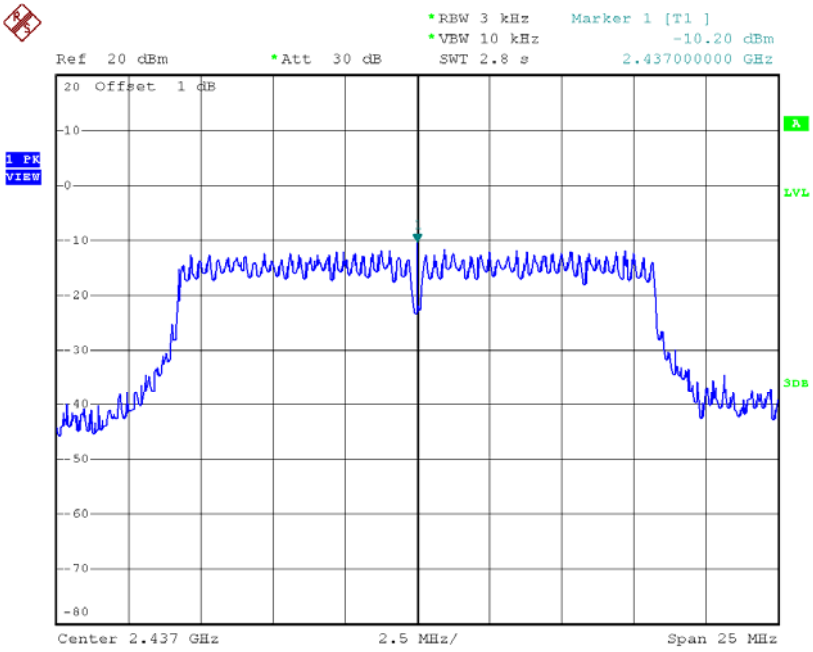
Test Mode :TX G Mode_CH01/06/11_ANT 0				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-8.78	0.13	8.00	Complies
2437	-10.20	0.10	8.00	Complies
2462	-8.92	0.13	8.00	Complies

TX CH01



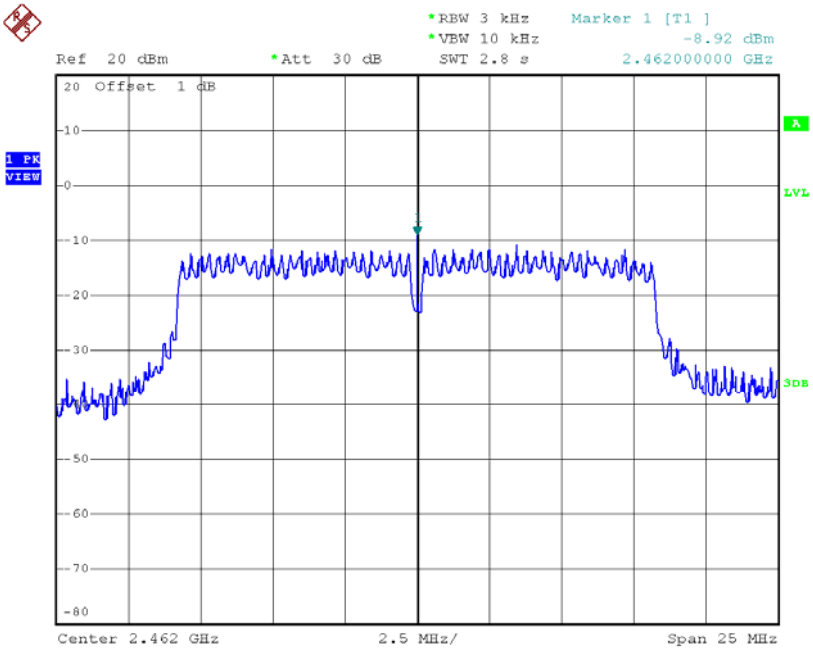
Date: 8.APR.2015 14:35:02

TX CH06



Date: 8.APR.2015 14:35:48

TX CH11

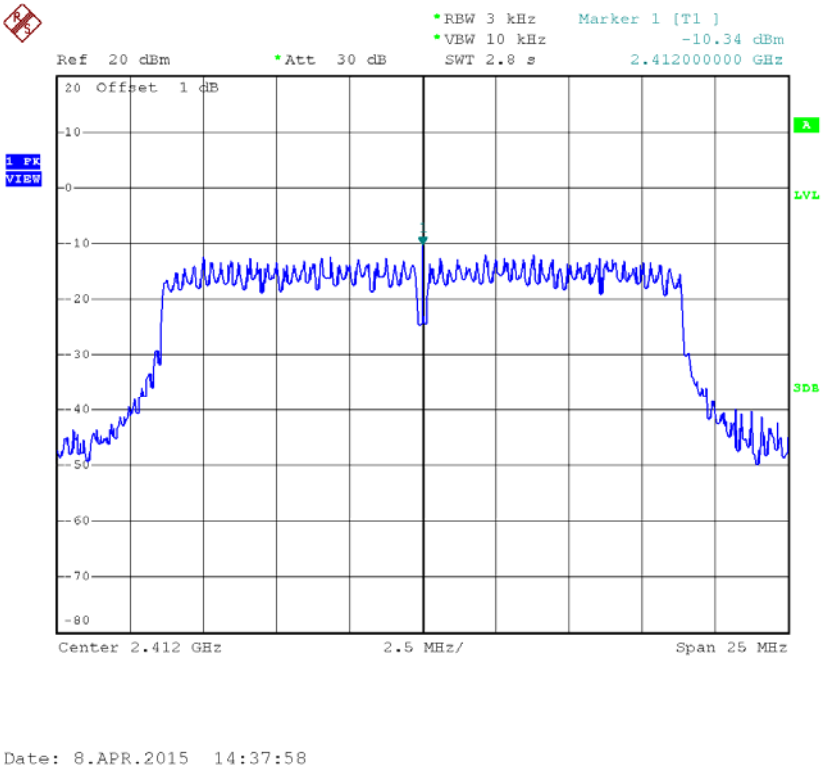


Date: 8.APR.2015 14:36:43

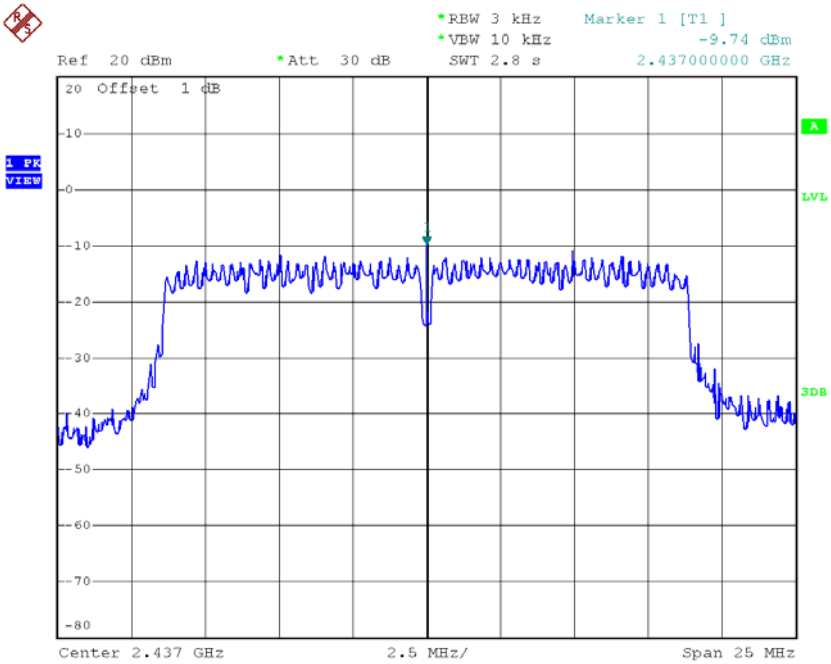
Test Mode : TX N-20M Mode_CH01/06/11_ANT 0

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-10.34	0.09	8.00	Complies
2437	-9.74	0.11	8.00	Complies
2462	-9.24	0.12	8.00	Complies

TX CH01

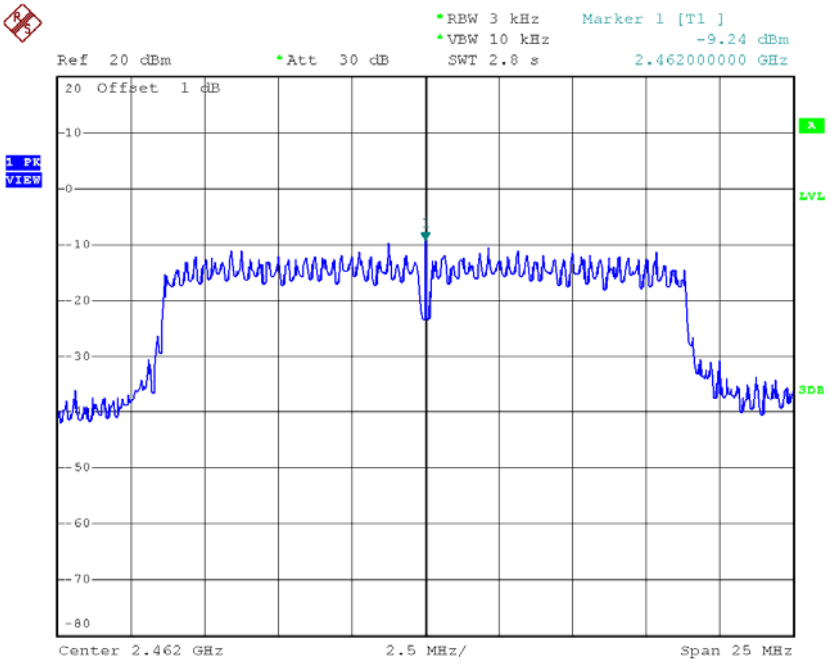


TX CH06



Date: 8.APR.2015 14:39:02

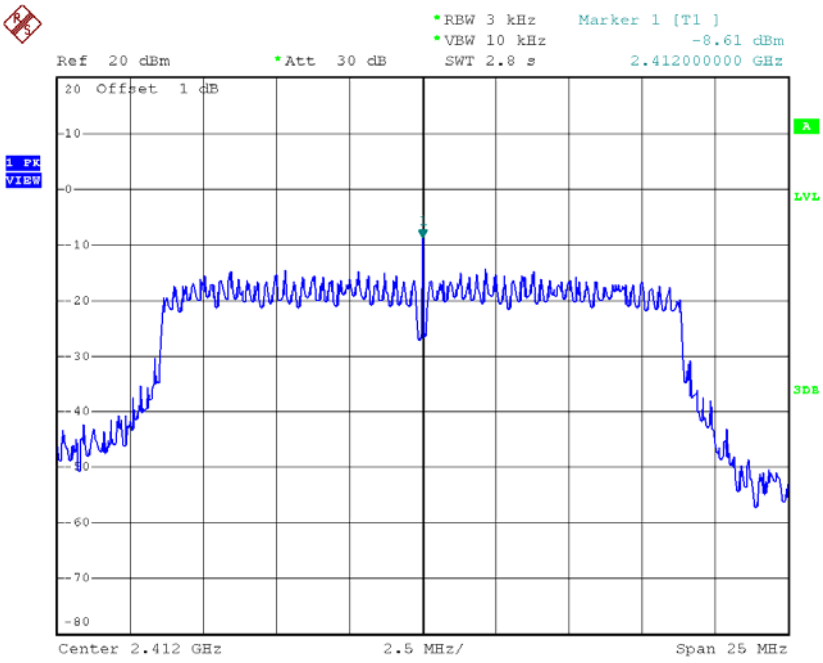
TX CH11



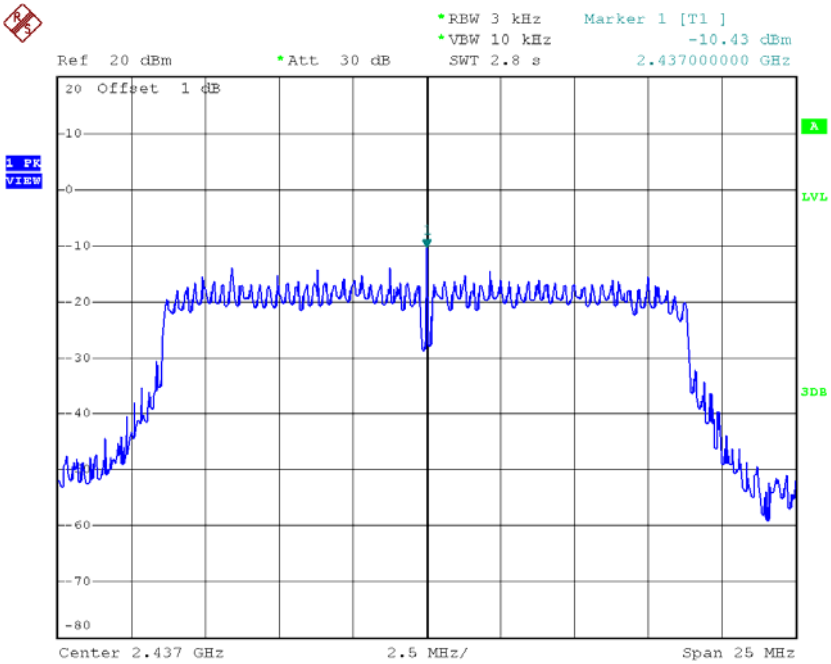
Date: 8.APR.2015 14:40:05

Test Mode : TX N-20M Mode_CH01/06/11_ANT 1				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-8.61	0.14	8.00	Complies
2437	-10.43	0.09	8.00	Complies
2462	-10.43	0.09	8.00	Complies

TX CH01

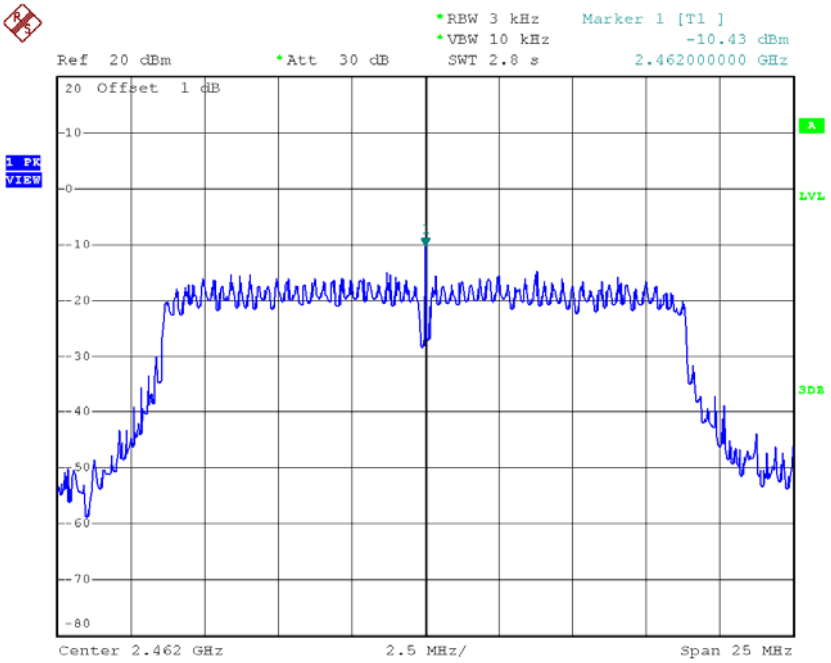


TX CH06



Date: 8.APR.2015 14:46:12

TX CH11



Date: 8.APR.2015 14:47:07

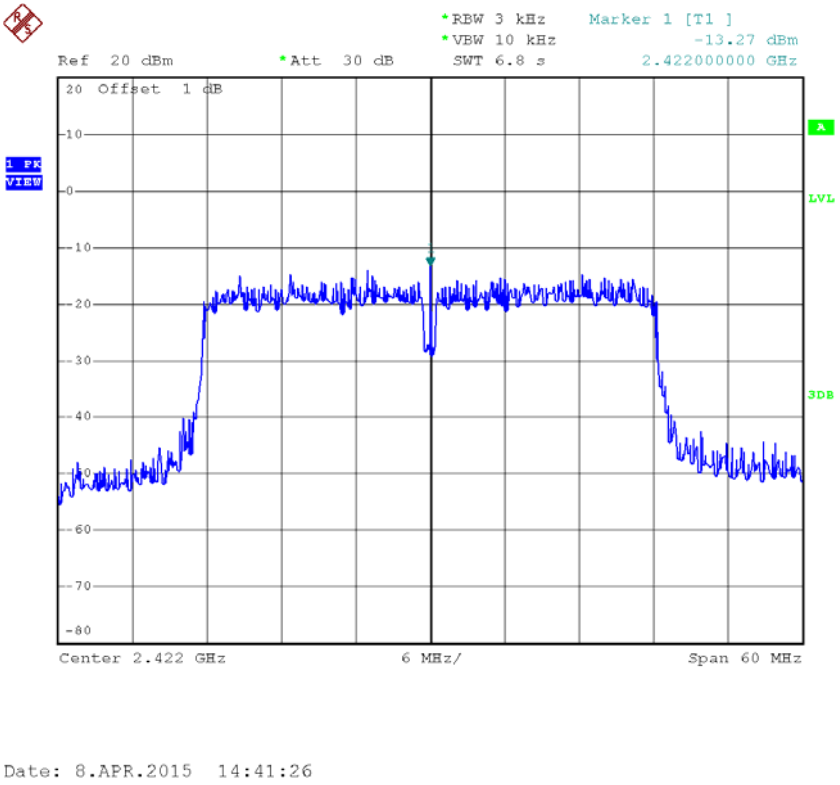
Test Mode : TX N-20M Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-6.38	0.23	8.00	Complies
2437	-7.06	0.20	8.00	Complies
2462	-6.78	0.21	8.00	Complies

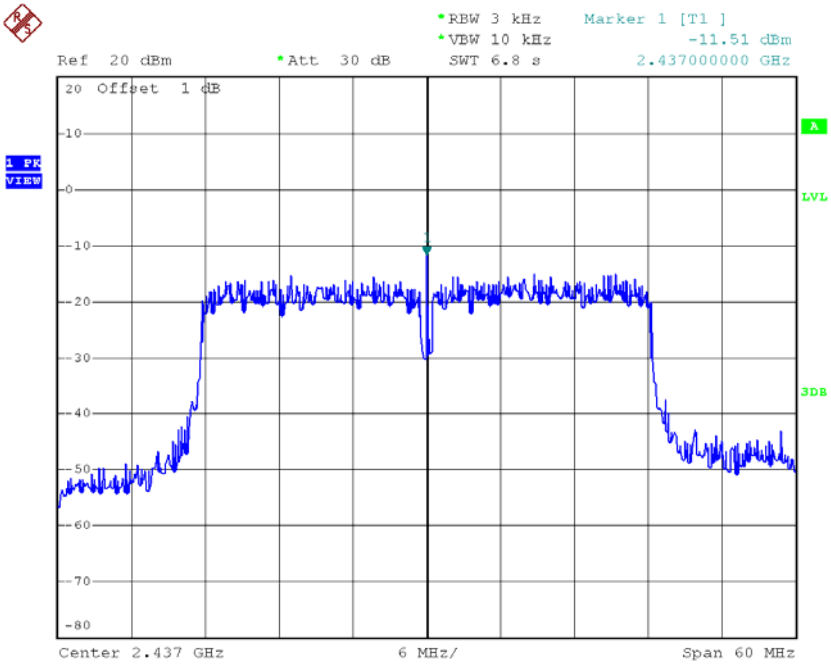
Test Mode : TX N-40M Mode_CH03/06/09_ANT 0

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-13.27	0.05	8.00	Complies
2437	-11.51	0.07	8.00	Complies
2452	-13.43	0.05	8.00	Complies

TX CH03

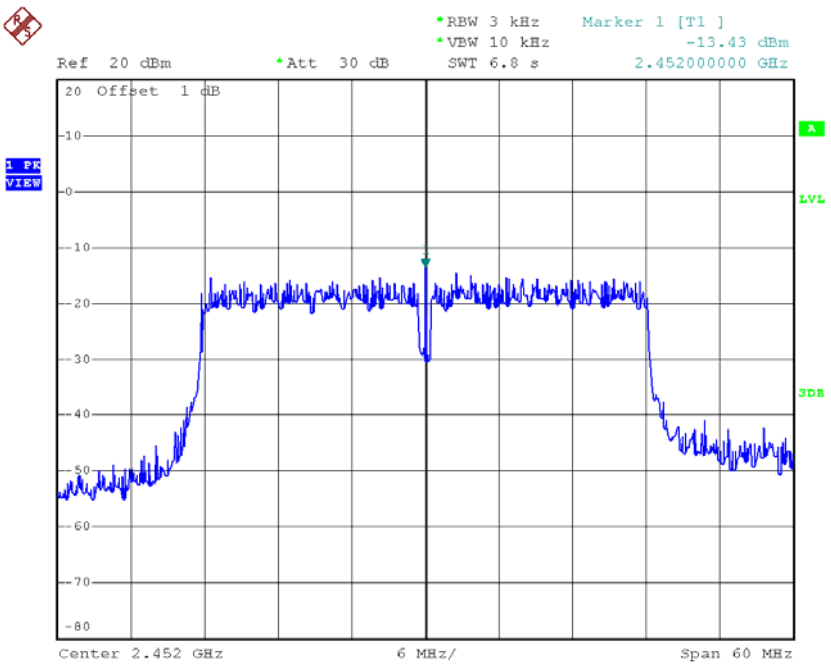


TX CH06



Date: 8.APR.2015 14:42:18

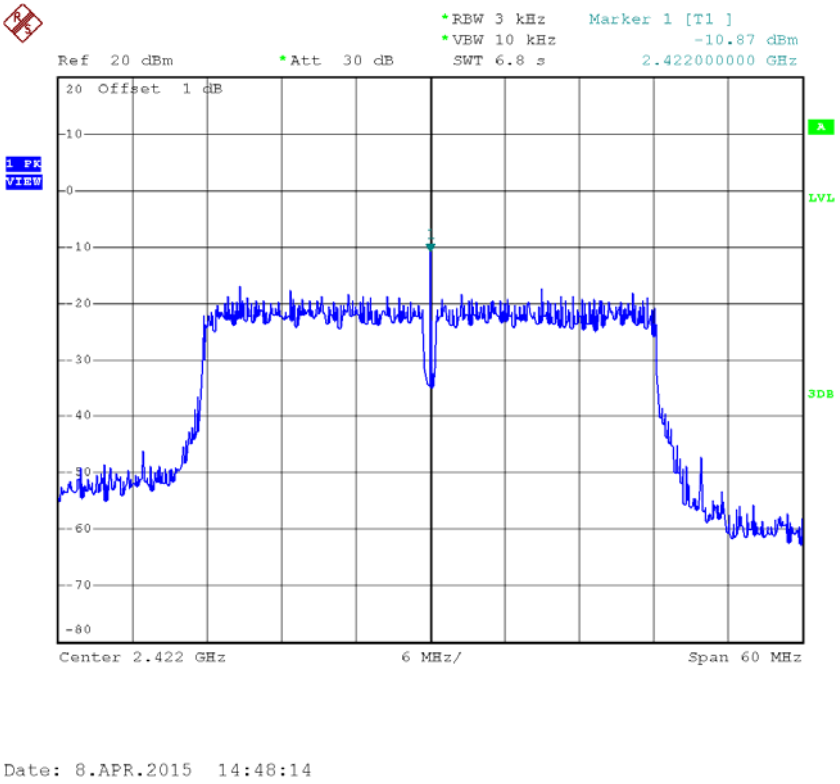
TX CH09



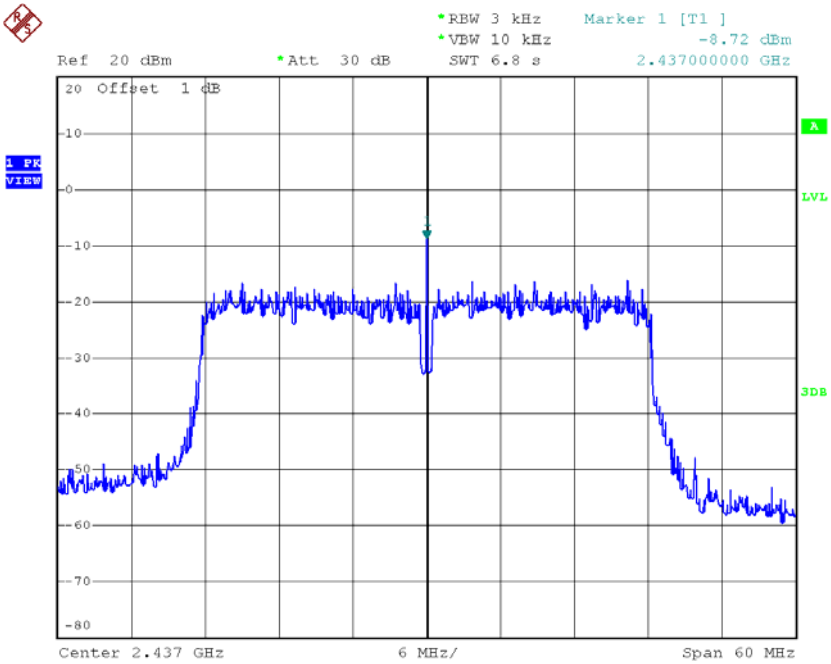
Date: 8.APR.2015 14:43:16

Test Mode : TX N-40M Mode_CH03/06/09_ANT 1				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-10.87	0.08	8.00	Complies
2437	-8.72	0.13	8.00	Complies
2452	-8.76	0.13	8.00	Complies

TX CH03

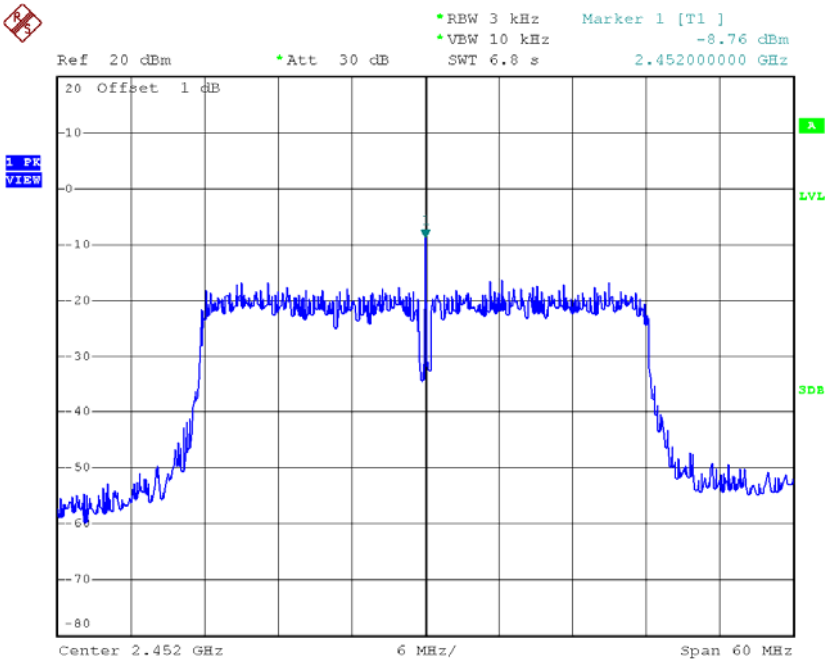


TX CH06



Date: 8.APR.2015 14:49:00

TX CH09



Date: 8.APR.2015 14:49:55

Test Mode : TX N-40M Mode_CH03/06/09_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-8.89	0.13	8.00	Complies
2437	-6.88	0.20	8.00	Complies
2452	-7.48	0.18	8.00	Complies