



FCC Radio Test Report

FCC ID: W59XAP1210

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

Project No. : 1406C041
Equipment : High Power Wireless 300N Low Profile Access Point
Model Name : XAP-1210
Applicant : Luxul Wireless
Address : 14203 Minuteman Drive, Suite 201, Draper, UT USA

Tested by: BTL Inc. EMC Laboratory
Date of Receipt: May. 07, 2014
Date of Test: May. 07, 2014 ~ Jun. 24, 2014
Issued Date: Jun. 25, 2014

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

BTL INC.

No.3, Jinshagang 1st Road, Shixia,
Dalang Town, Dongguan, China.
TEL: 0769-8318-3000 FAX: 0769-8319-6000



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

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 reports must not be used by the client to claim product endorsement by the authorities or any agency of the 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	11
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	12
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	13
3.2 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	17
4.2.5 EUT OPERATING CONDITIONS	18
4.2.6 EUT TEST CONDITIONS	18
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	19
4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)	19
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	19
5 . BANDWIDTH TEST	20
5.1 APPLIED PROCEDURES	20
5.1.1 TEST PROCEDURE	20
5.1.2 DEVIATION FROM STANDARD	20
5.1.3 TEST SETUP	20
5.1.4 EUT OPERATION CONDITIONS	20
5.1.5 EUT TEST CONDITIONS	20
5.1.6 TEST RESULTS	20



Table of Contents

Page

6 . MAXIMUM OUTPUT POWER TEST	21
6.1 APPLIED PROCEDURES / LIMIT	21
6.1.1 TEST PROCEDURE	21
6.1.2 DEVIATION FROM STANDARD	21
6.1.3 TEST SETUP	21
6.1.4 EUT OPERATION CONDITIONS	21
6.1.5 EUT TEST CONDITIONS	21
6.1.6 TEST RESULTS	21
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	22
7.1 APPLIED PROCEDURES / LIMIT	22
7.1.1 TEST PROCEDURE	22
7.1.2 DEVIATION FROM STANDARD	22
7.1.3 TEST SETUP	22
7.1.4 EUT OPERATION CONDITIONS	22
7.1.5 EUT TEST CONDITIONS	22
7.1.6 TEST RESULTS	22
8 . POWER SPECTRAL DENSITY TEST	23
8.1 APPLIED PROCEDURES / LIMIT	23
8.1.1 TEST PROCEDURE	23
8.1.2 DEVIATION FROM STANDARD	23
8.1.3 TEST SETUP	23
8.1.4 EUT OPERATION CONDITIONS	23
8.1.5 EUT TEST CONDITIONS	23
8.1.6 TEST RESULTS	23
9 . MEASUREMENT INSTRUMENTS LIST	24
10 . EUT TEST PHOTO	26
ATTACHMENT A - CONDUCTED EMISSION	30
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	33
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	35
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)	42
ATTACHMENT E - BANDWIDTH	91
ATTACHMENT F - MAXIMUM OUTPUT POWER	104
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION	108
ATTACHMENT H - POWER SPECTRAL DENSITY	133



REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
NEI-FCCP-1-1406C041	Original Issue.	Jun. 25, 2014

1. CERTIFICATION

Equipment : High Power Wireless 300N Low Profile Access Point
Brand Name : Luxul Xen™
Model Name : XAP-1210
Applicant : Luxul Wireless
Date of Test : May. 07, 2014 ~ Jun. 24, 2014
Test Item : ENGINEERING SAMPLE
Standard(s) : FCC Part15, Subpart C(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. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1406C041) 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
FCC			
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.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3,Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792
 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 reported uncertainty of measurement $y \pm U$ 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	High Power Wireless 300N Low Profile Access Point	
Brand Name	Luxul Xen™	
Model Name	XAP-1210	
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: 24.30 dBm 802.11g: 26.27 dBm 802.11n(20MHz): 26.94 dBm 802.11n(40MHz): 25.44 dBm
Power Source	DC voltage supplied from PoE Power Supply. Model: GRT-480125A	
Power Rating	I/P: AC 100-240V~50/60Hz O/P: DC 48V 1250mA	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

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

2. Channel List:

CH 01 – CH 11 for 802.11b, 802.11g, 802.11n(20MHz) CH 03 – CH 09 for 802.11n(40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Table for Filed Antenna

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

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and one receivers (2T2R)

4.

Operating Mode	1TX	2TX
TX Mode		
802.11b	V (ANT1 or ANT 2)	-
802.11g	V (ANT 1 or ANT 2)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly 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:

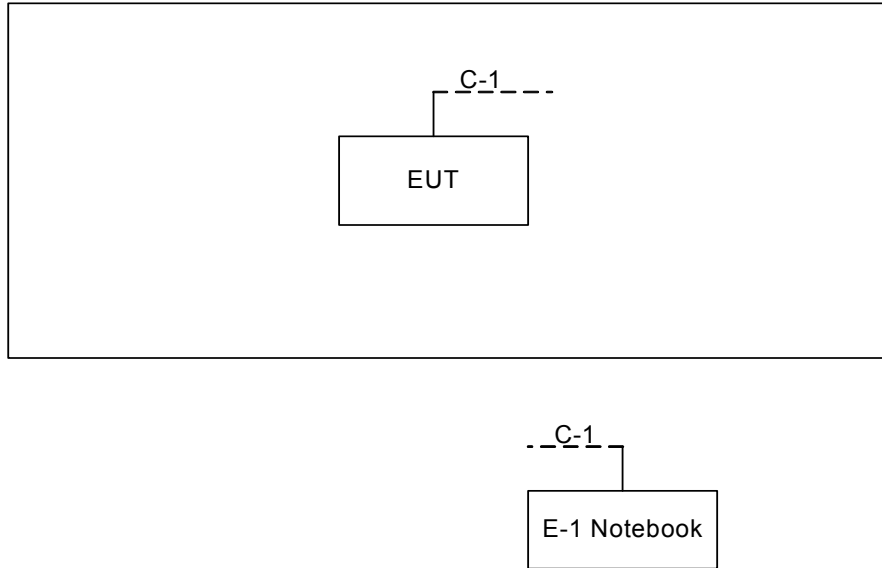
- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: DBPSK (1Mbps)
 802.11g mode: OFDM (6Mbps)
 802.11n HT20 mode : BPSK (13Mbps)
 802.11n HT40 mode : BPSK (27Mbps)
 For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.

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	Mtool		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b DSSS	85	85	85
IEEE 802.11g OFDM	73	89	69
IEEE 802.11n (20MHz)	57	70	64
Frequency	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n (40MHz)	45	64	52

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.2 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
E-1	Notebook	DELL	INSPIRON 1420	NA	NA	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	10m	RJ45 Cable

Note:

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

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

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

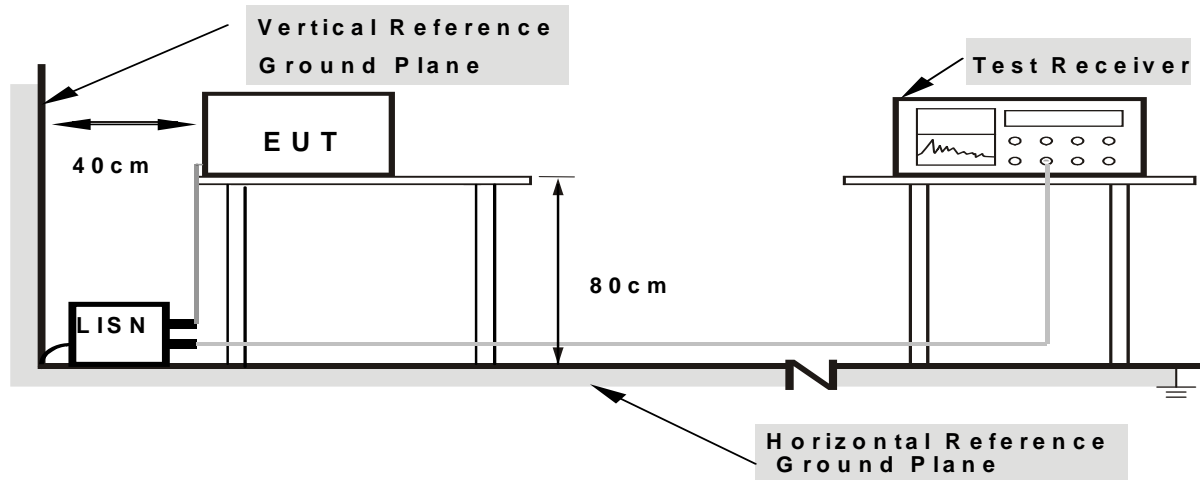
4.1.2 TEST PROCEDURE

- 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 cm 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.

Note: The EUT was pre-tested on positioned of each 3 axis. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

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).

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

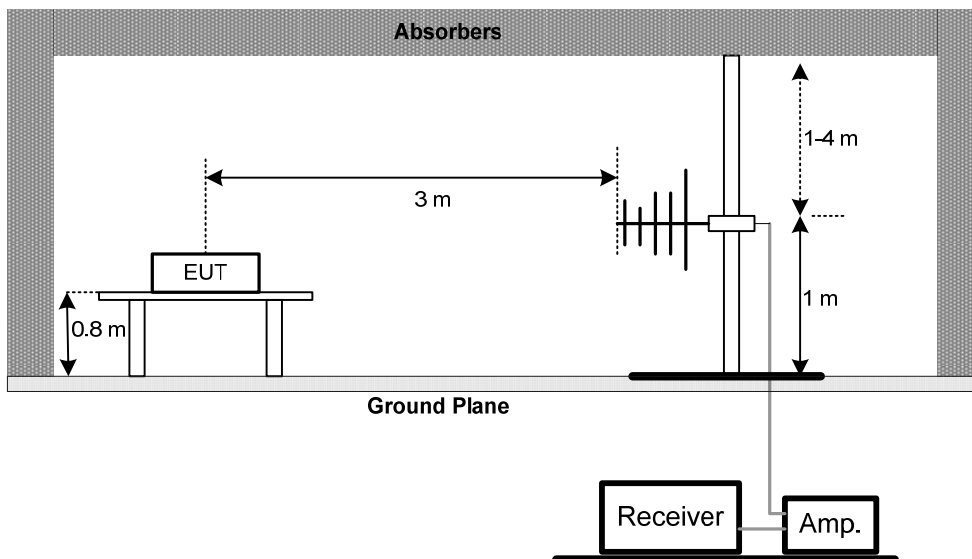
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at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

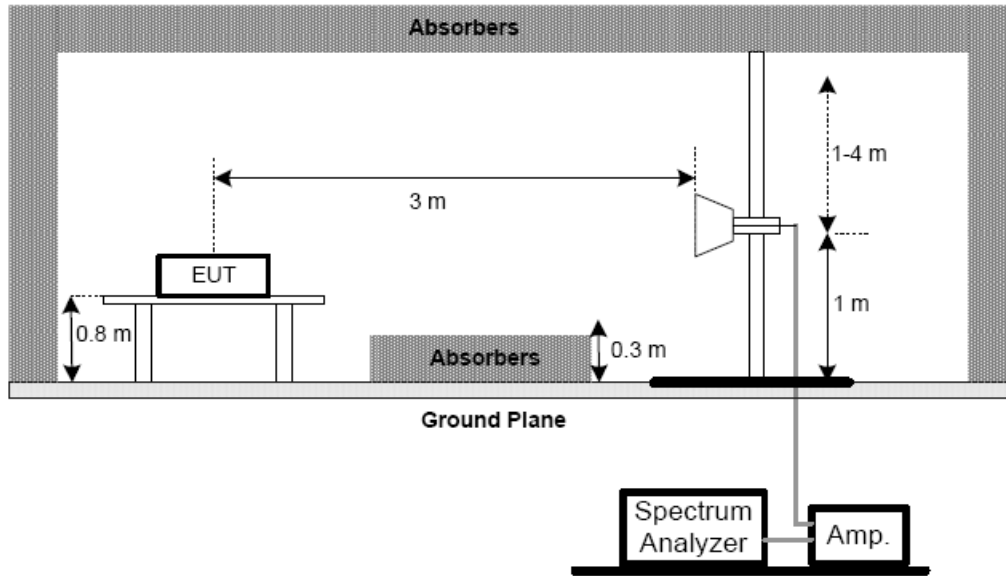
No deviation

4.2.4 TEST SETUP

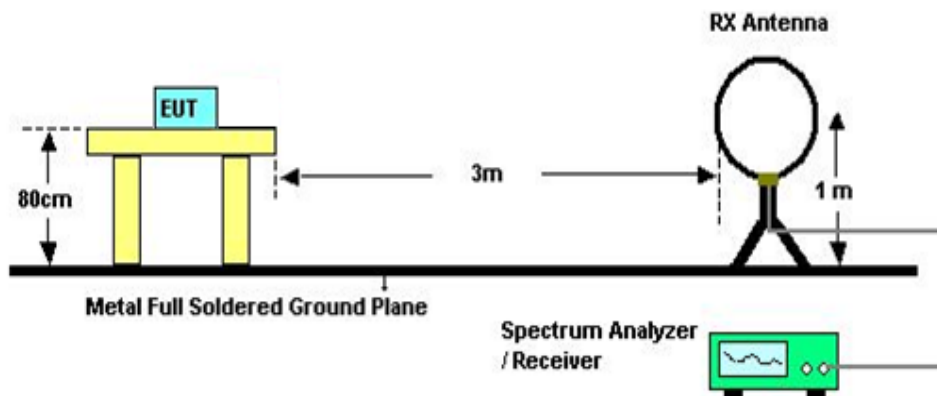
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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 4.1.6 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 = $40 \log(\text{specific distance} / \text{test distance})$ (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

5. BANDWIDTH TEST

5.1 Applied procedures

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

5.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 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 OUTPUT POWER TEST

6.1 Applied procedures / limit

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

6.1.1 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- The maximum peak conducted output power was performed in accordance with method 9.1.3 of FCC KDB 558074 D01 DTS Meas Guidance v03r01.

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 4.1.6 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 4.1.6 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 4.1.6 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. 29, 2015
2	LISN	R&S	ENV216	101447	Mar. 29, 2015
3	Test Cable	N/A	C_17	N/A	Mar. 14, 2015
4	EMI TEST RECEIVER	R&S	ESCS30	833364/017	Mar. 29, 2015
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 29, 2015

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 29, 2015
2	Amplifier	HP	8447D	2944A09673	Mar. 29, 2015
3	Test Receiver	R&S	ESCI	100382	Mar. 29, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Antenna	ETS	3115	00075789	Mar. 29, 2015
6	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015
7	Spectrum	Agilent	E4408B	US39240143	Nov. 09, 2014
8	Test Cable	HUBER+SUHNER	C-45	N/A	Mar. 29, 2015
9	Controller	CT	SC100	N/A	N/A
10	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015
11	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 29, 2015

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Apr. 24, 2015
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Apr. 24, 2015

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. 11, 2014

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

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**



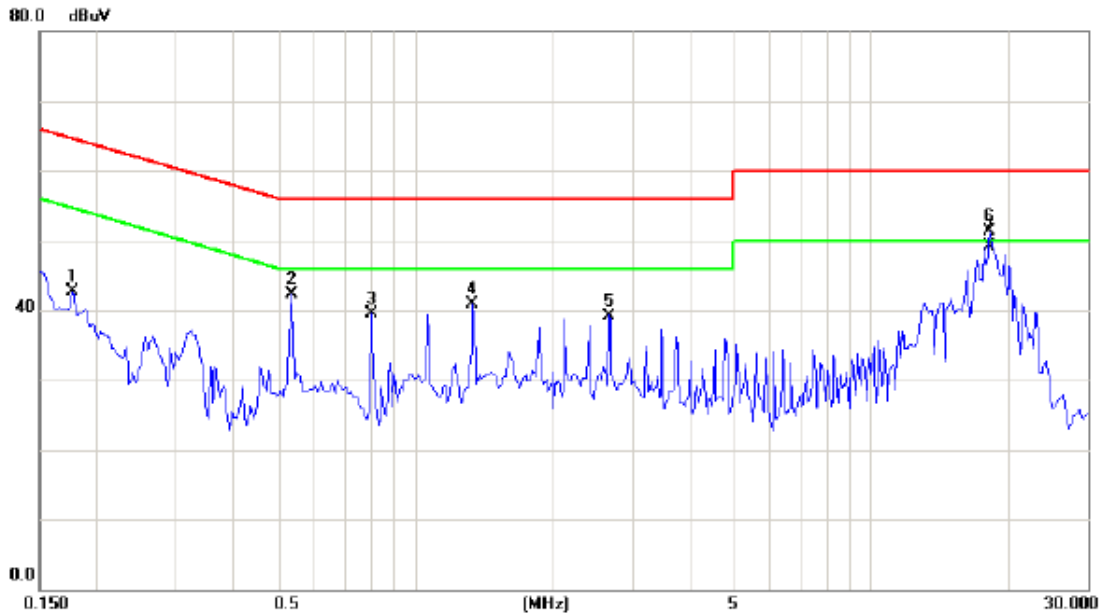
**Radiated Measurement Photos
Above 1000MHz**



ATTACHMENT A - CONDUCTED EMISSION

Test Mode : TX MODE

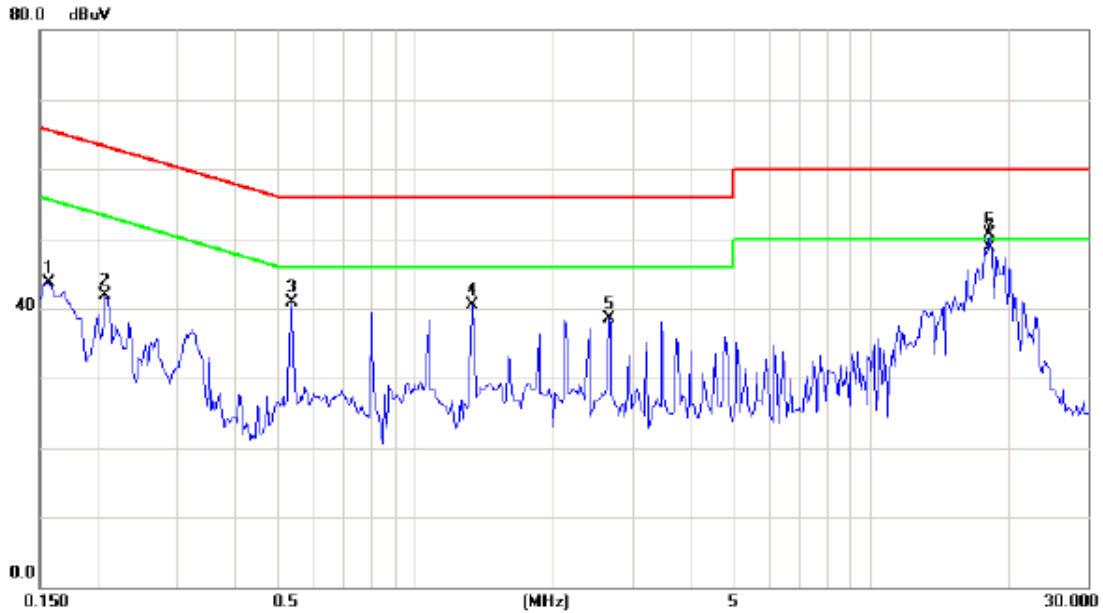
Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1773	33.18	9.53	42.71	64.61	-21.90	peak	
2		0.5367	32.70	9.68	42.38	56.00	-13.62	peak	
3		0.8023	29.94	9.65	39.59	56.00	-16.41	peak	
4		1.3414	31.14	9.70	40.84	56.00	-15.16	peak	
5		2.6773	29.46	9.74	39.20	56.00	-16.80	peak	
6		18.2422	40.86	10.37	51.23	60.00	-8.77	peak	
7	*	18.2422	38.70	10.37	49.07	50.00	-0.93	AVG	

Test Mode : TX MODE

Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1578	34.15	9.63	43.78	65.58	-21.80	peak	
2		0.2086	32.20	9.61	41.81	63.26	-21.45	peak	
3		0.5367	31.32	9.64	40.96	56.00	-15.04	peak	
4		1.3375	30.78	9.69	40.47	56.00	-15.53	peak	
5		2.6773	28.80	9.77	38.57	56.00	-17.43	peak	
6		18.2422	40.41	10.38	50.79	60.00	-9.21	peak	
7	*	18.2422	38.30	10.38	48.68	50.00	-1.32	AVG	

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

Test Mode: TX Mode 2412MHz

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0096	0°	65.15	24.30	89.45	127.93	-38.48	AVG
0.0096	0°	76.35	24.30	100.65	147.93	-47.28	PEAK
0.0192	0°	68.25	24.30	92.55	121.94	-29.39	AVG
0.0192	0°	77.35	24.30	101.65	141.94	-40.29	PEAK
0.0275	0°	57.36	23.83	81.19	118.82	-37.63	AVG
0.0275	0°	62.32	23.83	86.15	138.82	-52.67	PEAK
0.0368	0°	58.16	23.24	81.40	116.29	-34.89	AVG
0.0368	0°	67.48	23.24	90.72	136.29	-45.57	PEAK
0.5720	0°	18.92	20.03	38.95	72.46	-33.51	QP
1.7586	0°	18.95	19.52	38.47	69.54	-31.07	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0096	90°	72.35	24.30	96.65	127.99	-31.34	AVG
0.0096	90°	81.56	24.30	105.86	147.99	-42.13	PEAK
0.0261	90°	57.18	23.91	81.09	119.27	-38.18	AVG
0.0261	90°	62.35	23.91	86.26	139.27	-53.01	PEAK
0.0338	90°	58.75	23.43	82.18	117.03	-34.85	AVG
0.0338	90°	53.55	23.43	76.98	137.03	-60.05	PEAK
0.0452	90°	57.15	22.70	79.85	114.50	-34.65	AVG
0.0452	90°	68.05	22.70	90.75	134.50	-43.75	PEAK
0.4968	90°	17.75	19.81	37.56	73.68	-36.12	QP
1.7186	90°	18.63	19.53	38.16	69.54	-31.38	QP

Remark:

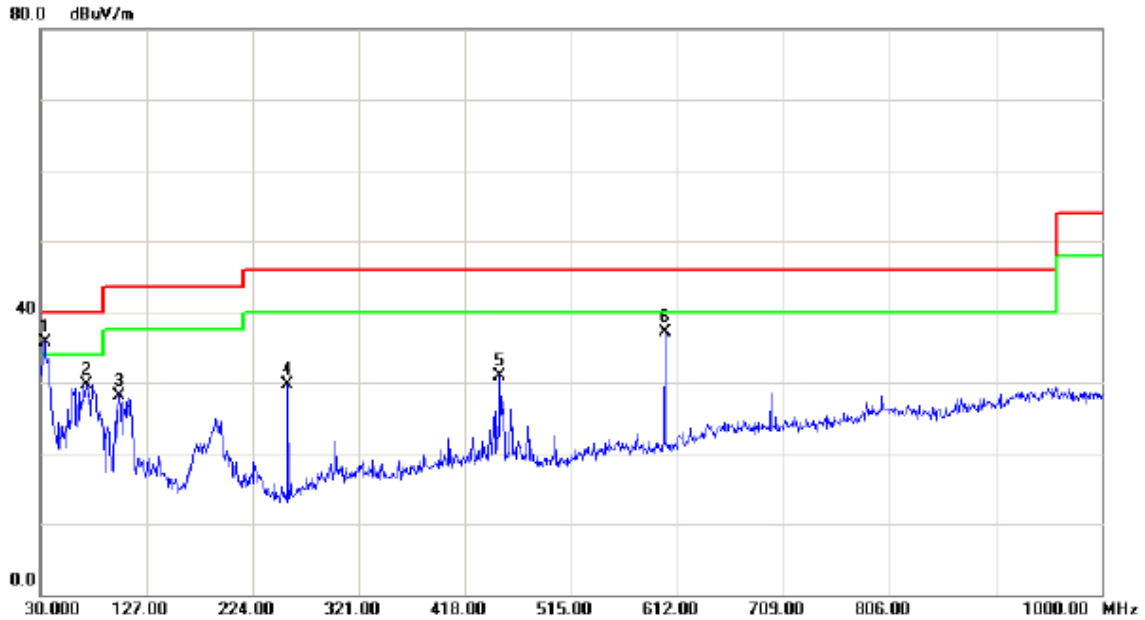
- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.



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

Test Mode: TX B MODE CHANNEL 01

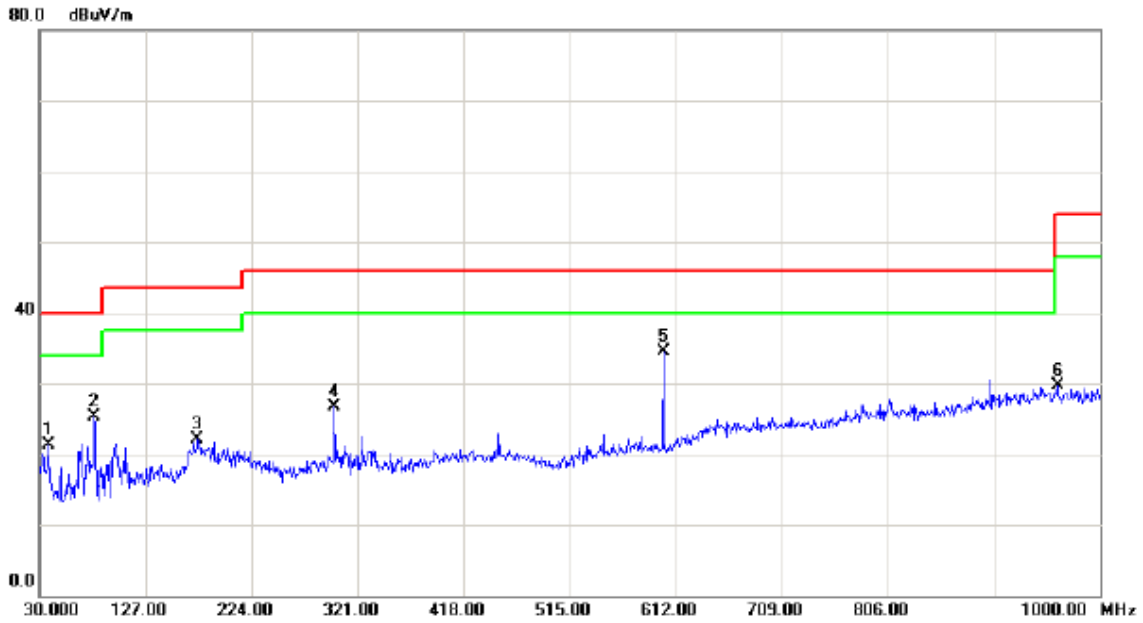
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	33.8800	50.86	-15.07	35.79	40.00	-4.21	peak	
2		71.7100	46.29	-16.53	29.76	40.00	-10.24	peak	
3		101.7800	44.52	-16.32	28.20	43.50	-15.30	peak	
4		256.0100	43.78	-14.06	29.72	46.00	-16.28	peak	
5		450.0100	39.60	-8.66	30.94	46.00	-15.06	peak	
6		600.3600	45.15	-8.08	37.07	46.00	-8.93	peak	

Test Mode: TX B MODE CHANNEL 01

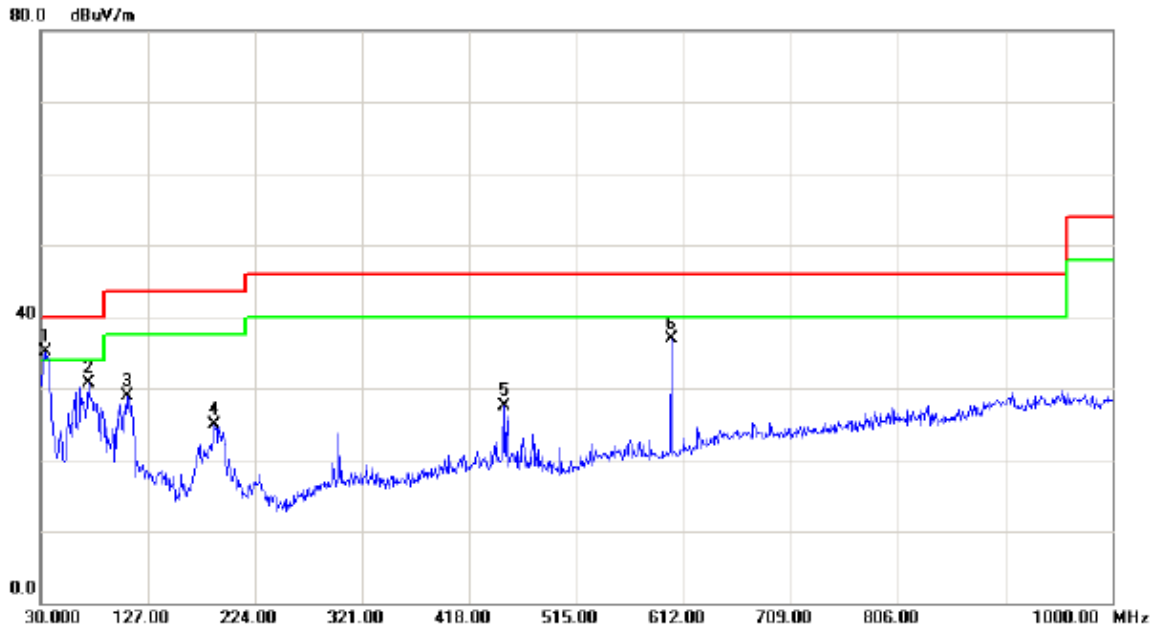
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		37.7600	35.91	-14.53	21.38	40.00	-18.62	peak	
2		79.4700	42.58	-17.28	25.30	40.00	-14.70	peak	
3		174.5300	34.99	-12.93	22.06	43.50	-21.44	peak	
4		299.6600	37.78	-11.05	26.73	46.00	-19.27	peak	
5	*	600.3600	42.54	-8.08	34.46	46.00	-11.54	peak	
6		961.2000	30.08	-0.34	29.74	54.00	-24.26	peak	

Test Mode: TX B MODE CHANNEL 06

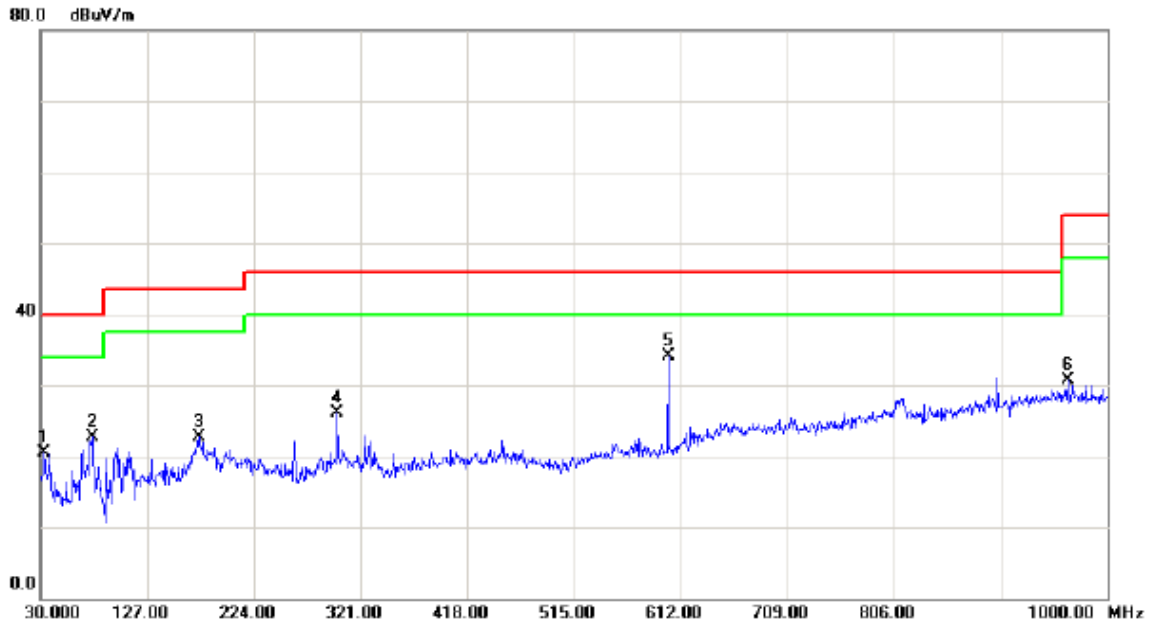
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	33.8800	50.13	-15.07	35.06	40.00	-4.94	peak	
2		72.6800	47.20	-16.59	30.61	40.00	-9.39	peak	
3		107.6000	44.51	-15.68	28.83	43.50	-14.67	peak	
4		187.1400	39.03	-14.03	25.00	43.50	-18.50	peak	
5		450.0100	36.07	-8.66	27.41	46.00	-18.59	peak	
6		600.3600	44.91	-8.08	36.83	46.00	-9.17	peak	

Test Mode: TX B MODE CHANNEL 06

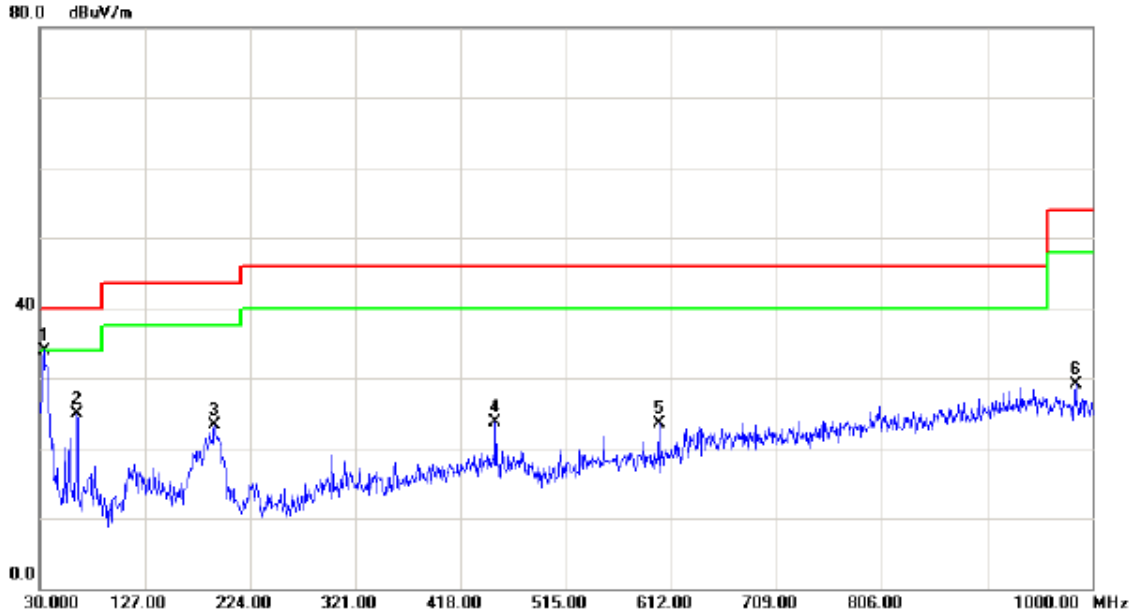
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		32.9100	35.69	-15.28	20.41	40.00	-19.59	peak	
2		76.5600	39.67	-16.95	22.72	40.00	-17.28	peak	
3		173.5600	35.62	-12.90	22.72	43.50	-20.78	peak	
4		299.6600	37.20	-11.05	26.15	46.00	-19.85	peak	
5	*	600.3600	42.22	-8.08	34.14	46.00	-11.86	peak	
6		964.1100	31.02	-0.33	30.69	54.00	-23.31	peak	

Test Mode: TX B MODE CHANNEL 11

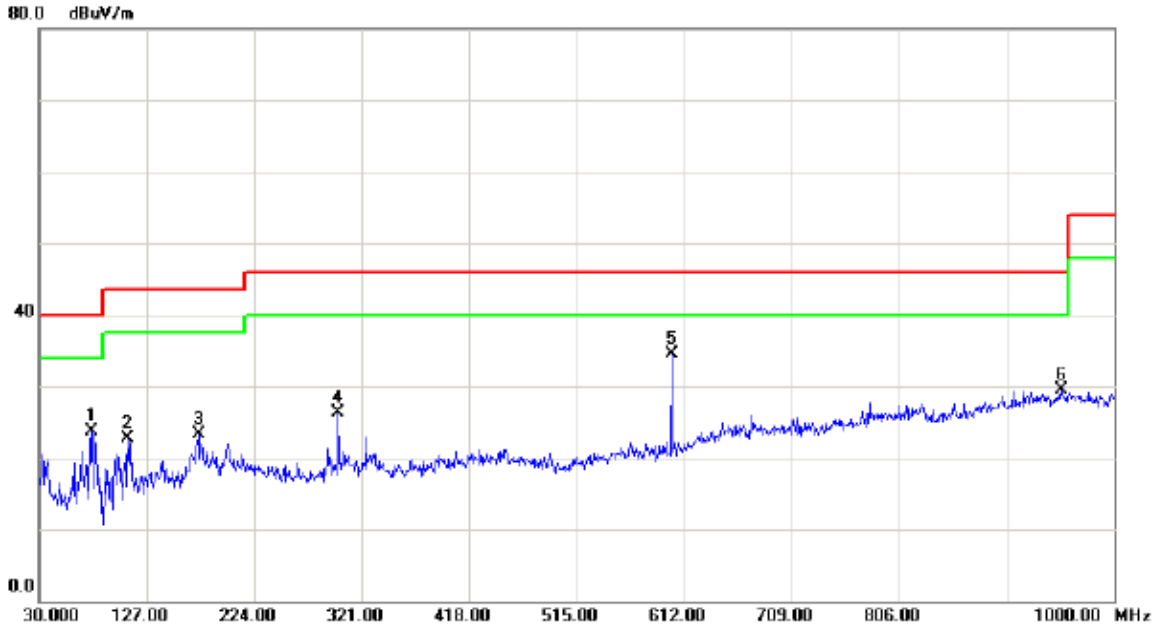
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	33.8800	48.89	-15.07	33.82	40.00	-6.18	peak	
2		63.9500	40.52	-15.64	24.88	40.00	-15.12	peak	
3		191.0200	37.74	-14.47	23.27	43.50	-20.23	peak	
4		450.0100	32.37	-8.66	23.71	46.00	-22.29	peak	
5		600.3600	31.50	-8.08	23.42	46.00	-22.58	peak	
6		984.4800	29.48	-0.40	29.08	54.00	-24.92	peak	

Test Mode: TX B MODE CHANNEL 11

Horizontal

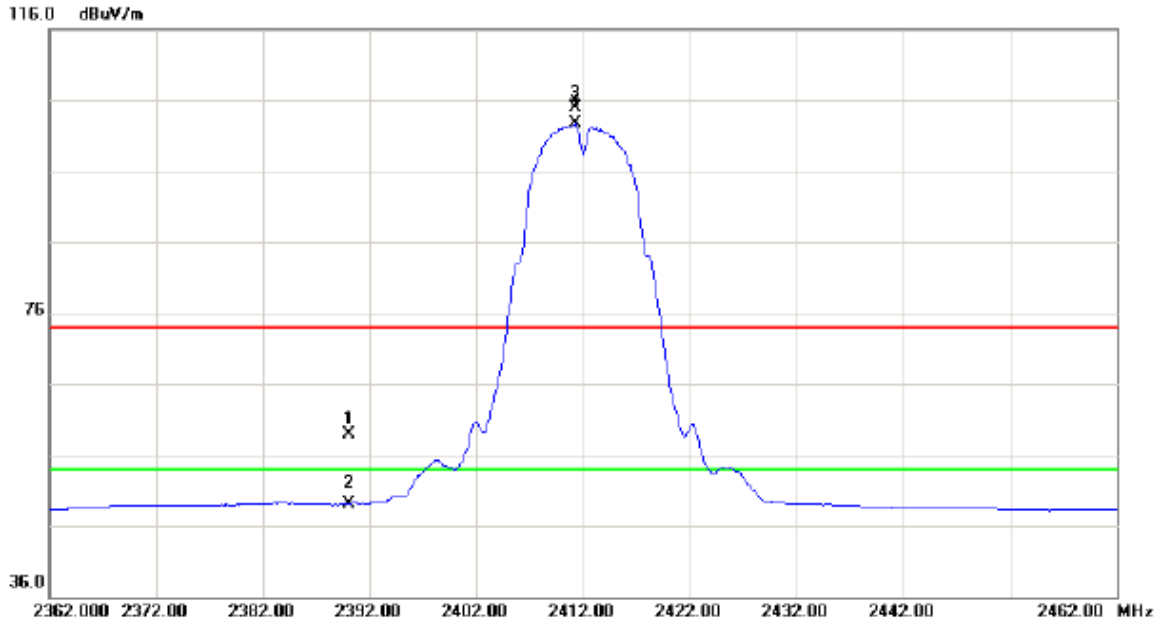


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		76.5600	40.57	-16.95	23.62	40.00	-16.38	peak	
2		109.5400	38.10	-15.46	22.64	43.50	-20.86	peak	
3		173.5600	36.26	-12.90	23.36	43.50	-20.14	peak	
4		299.6600	37.29	-11.05	26.24	46.00	-19.76	peak	
5	*	600.3600	42.67	-8.08	34.59	46.00	-11.41	peak	
6		952.4700	29.79	-0.31	29.48	46.00	-16.52	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

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

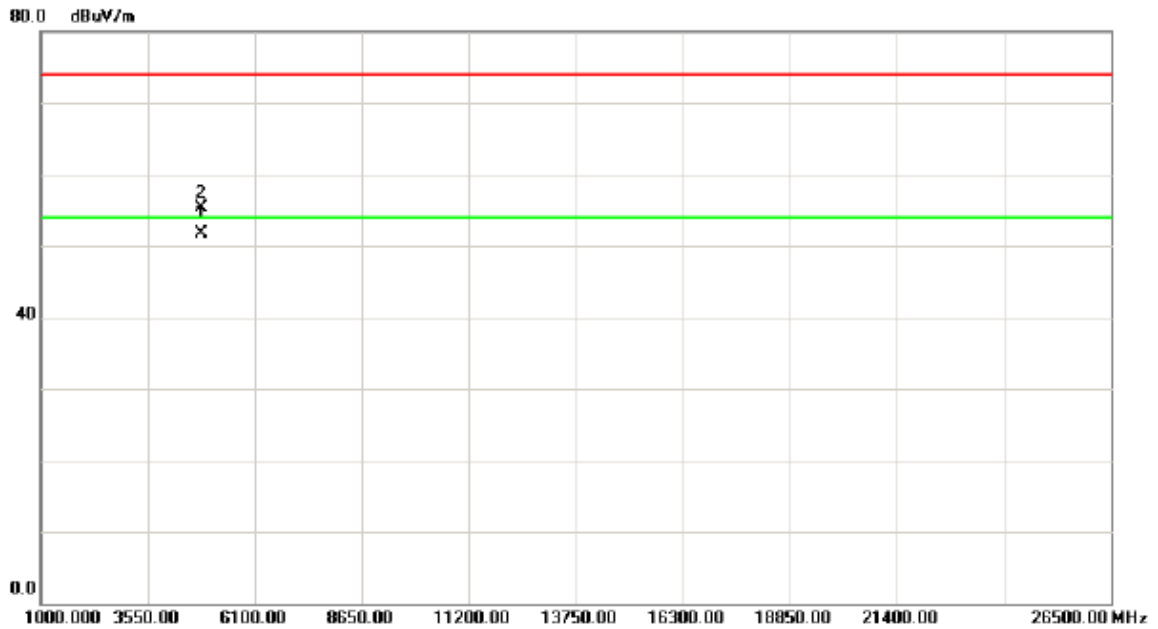
Vertical



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	2390.000	25.57	33.38	58.95	74.00	-15.05	peak	
2	2390.000	15.82	33.38	49.20	54.00	-4.80	AVG	
3 X	2411.200	71.37	33.44	104.81	74.00	30.81	peak	Fundamental frequency, no limit
4 *	2411.200	69.19	33.44	102.63	54.00	48.63	AVG	Fundamental frequency, no limit

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

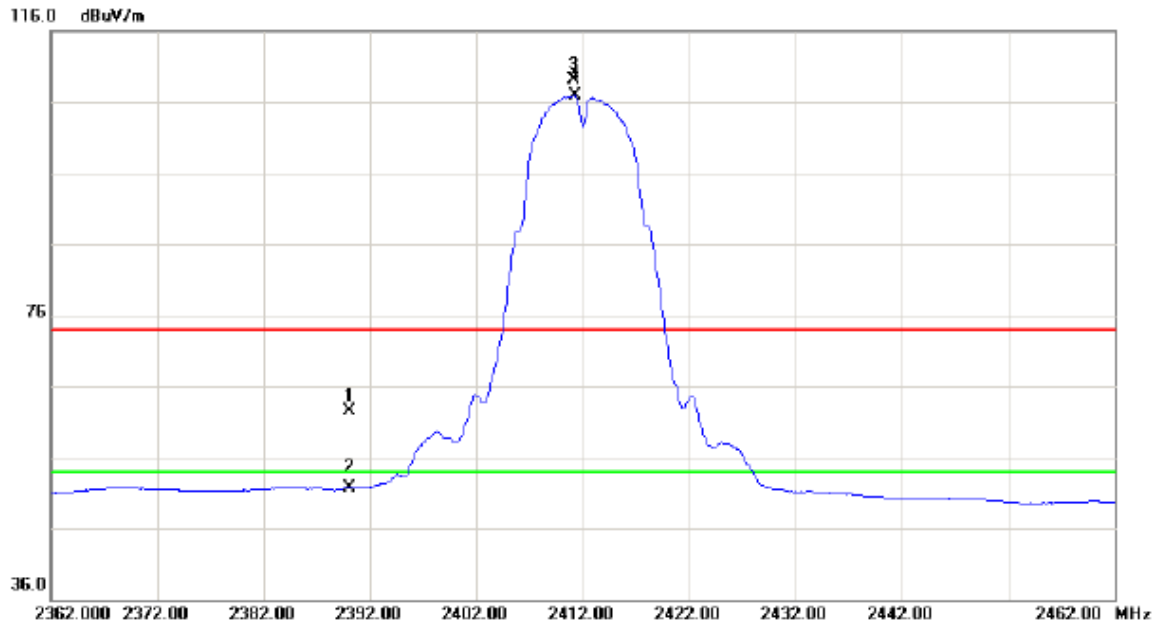
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4824.010	45.34	6.44	51.78	54.00	-2.22	AVG	
2		4824.130	48.87	6.44	55.31	74.00	-18.69	peak	

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

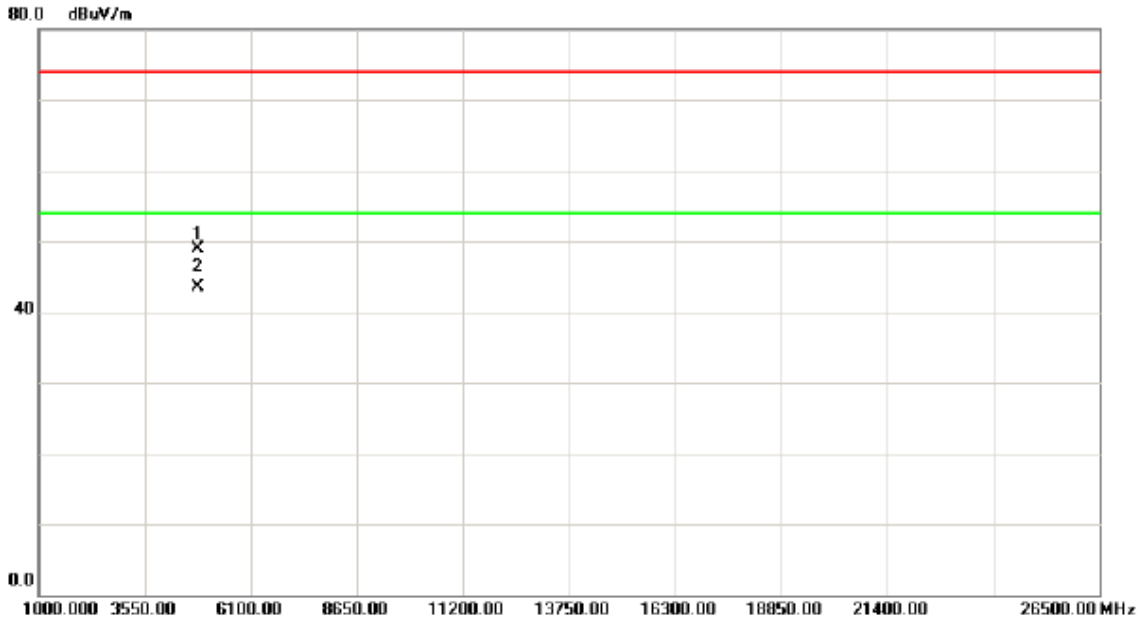
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	29.14	33.38	62.52	74.00	-11.48	peak	
2		2390.000	18.29	33.38	51.67	54.00	-2.33	AVG	
3	X	2411.100	75.74	33.44	109.18	74.00	35.18	peak	Fundamental frequency, no limit
4	*	2411.200	73.53	33.44	106.97	54.00	52.97	AVG	Fundamental frequency, no limit

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

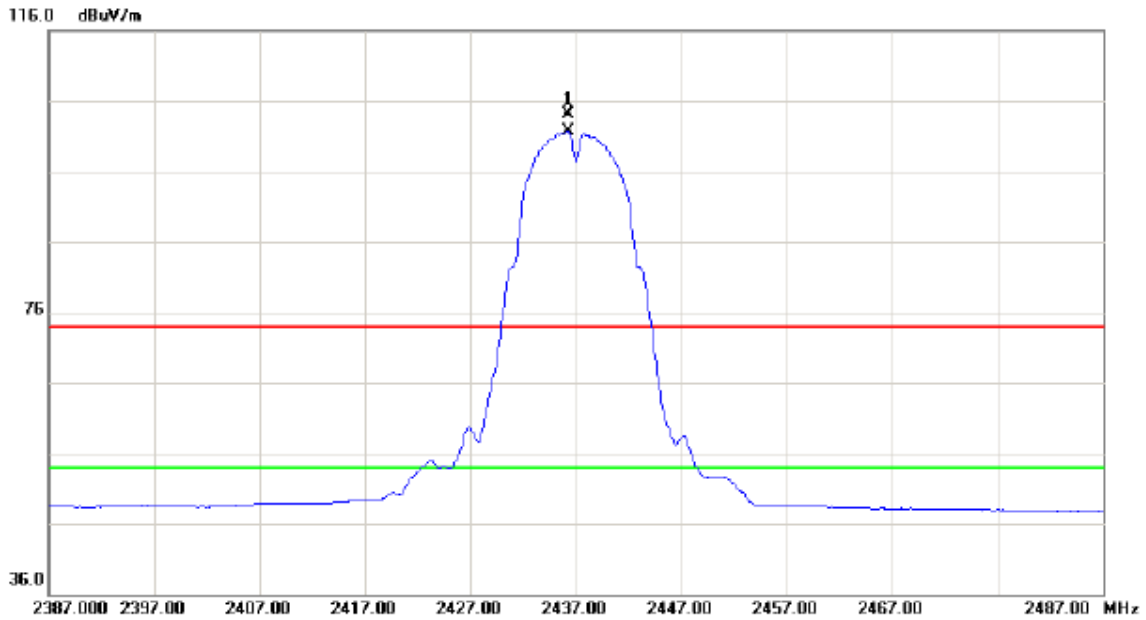
Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	4824.040	42.39	6.44	48.83	74.00	-25.17	peak	
2 *	4824.060	36.99	6.44	43.43	54.00	-10.57	AVG	

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

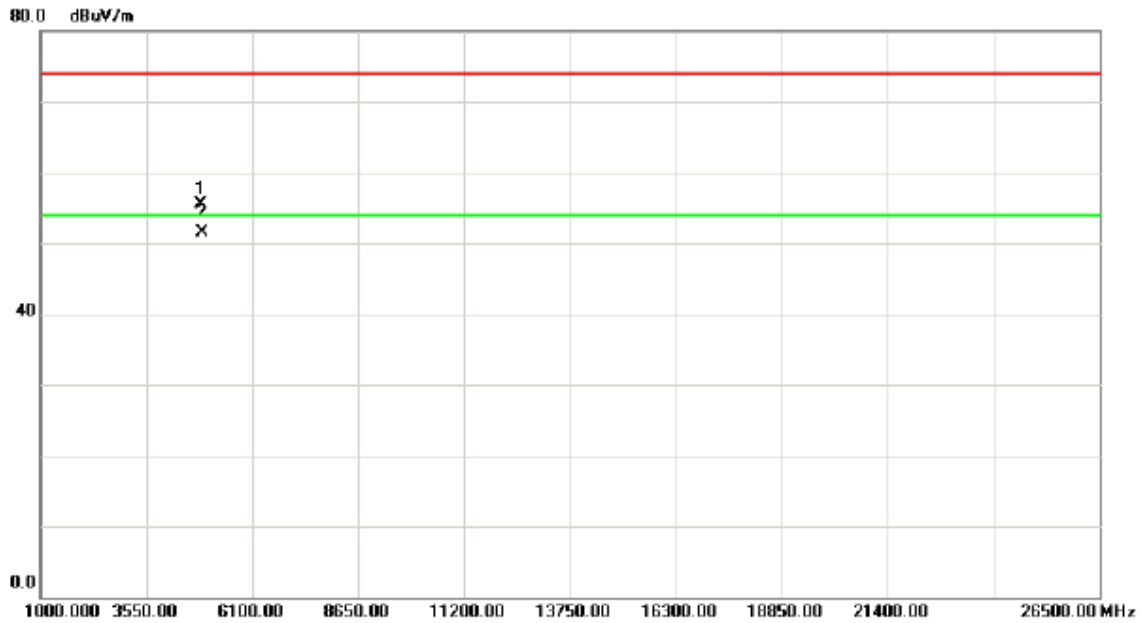
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	2436.200	70.70	33.50	104.20	74.00	30.20	peak	Fundamental frequency, no limit
2	*	2436.200	68.19	33.50	101.69	54.00	47.69	AVG	Fundamental frequency, no limit

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

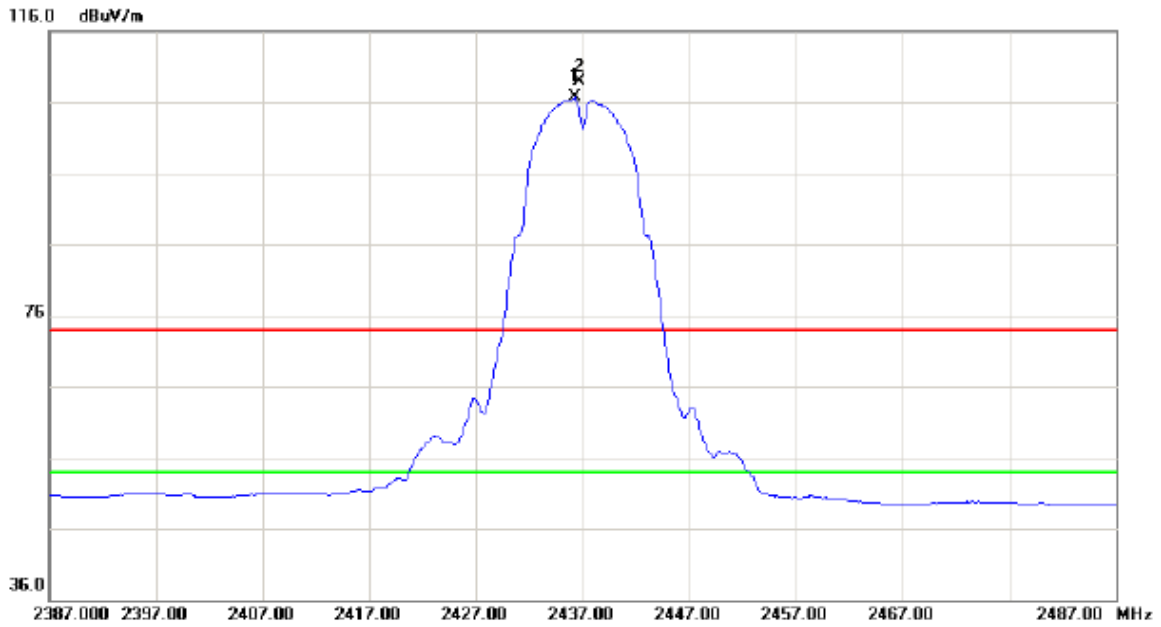
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4874.010	49.03	6.55	55.58	74.00	-18.42	peak	
2	*	4874.070	44.95	6.55	51.50	54.00	-2.50	AVG	

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

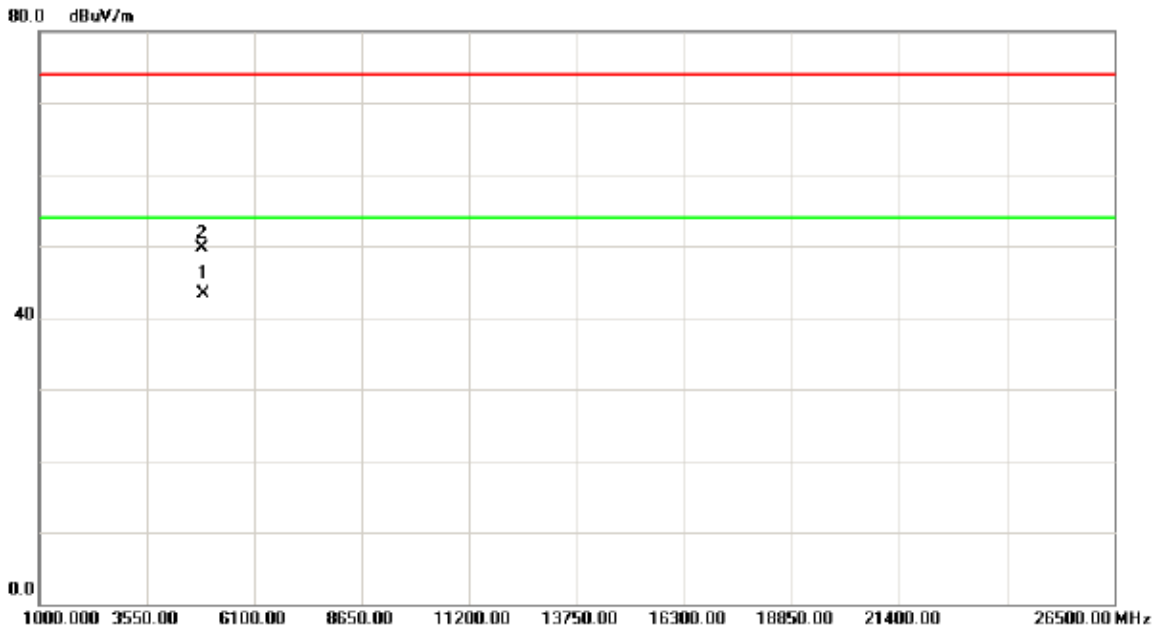
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2436.200	73.14	33.50	106.64	54.00	52.64	AVG	Fundamental frequency, no limit
2	X	2436.600	75.32	33.50	108.82	74.00	34.82	peak	Fundamental frequency, no limit

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

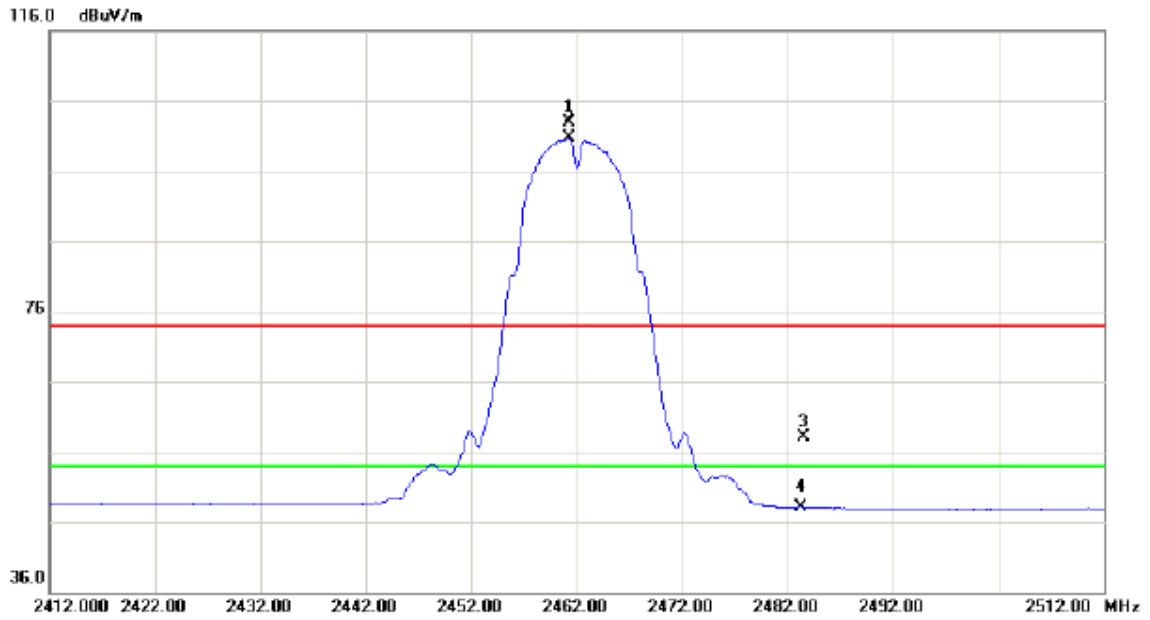
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4874.000	36.79	6.55	43.34	54.00	-10.66	AVG	
2		4874.085	43.06	6.55	49.61	74.00	-24.39	peak	

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

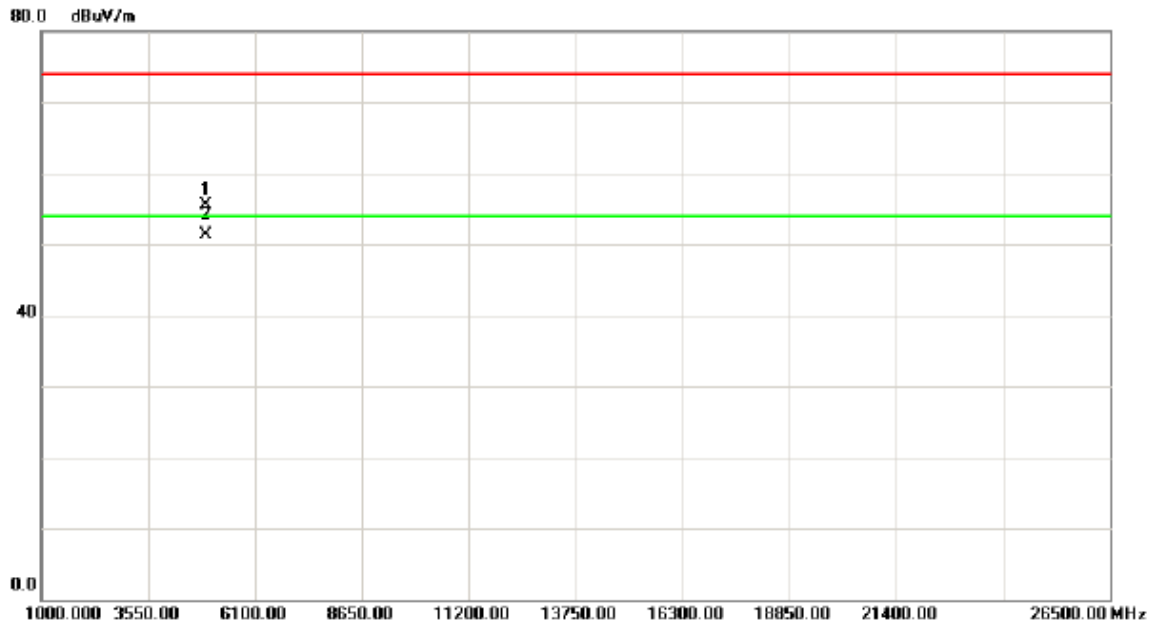
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2461.200	69.39	33.56	102.95	74.00	28.95	peak	Fundamental frequency, no limit
2	*	2461.200	67.14	33.56	100.70	54.00	46.70	AVG	Fundamental frequency, no limit
3		2483.500	24.52	33.62	58.14	74.00	-15.86	peak	
4		2483.500	14.57	33.62	48.19	54.00	-5.81	AVG	

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

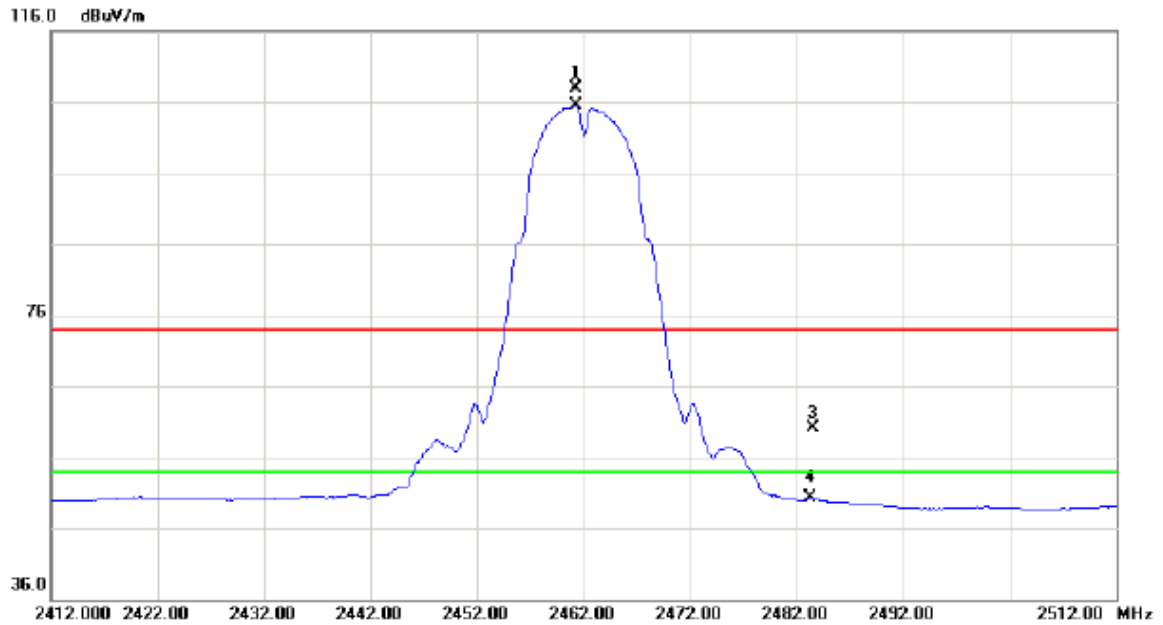
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4923.990	48.91	6.66	55.57	74.00	-18.43	peak	
2	*	4924.030	44.67	6.66	51.33	54.00	-2.67	AVG	

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

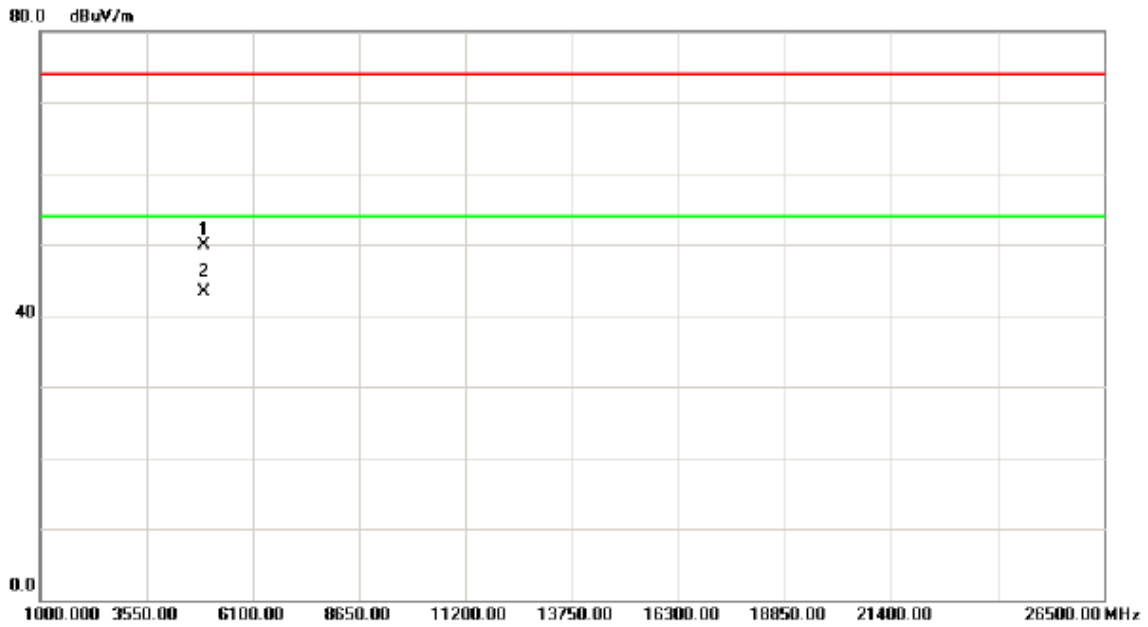
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2461.200	74.25	33.56	107.81	74.00	33.81	peak	Fundamental frequency, no limit
2	*	2461.200	71.98	33.56	105.54	54.00	51.54	AVG	Fundamental frequency, no limit
3		2483.500	26.55	33.62	60.17	74.00	-13.83	peak	
4		2483.500	16.60	33.62	50.22	54.00	-3.78	AVG	

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

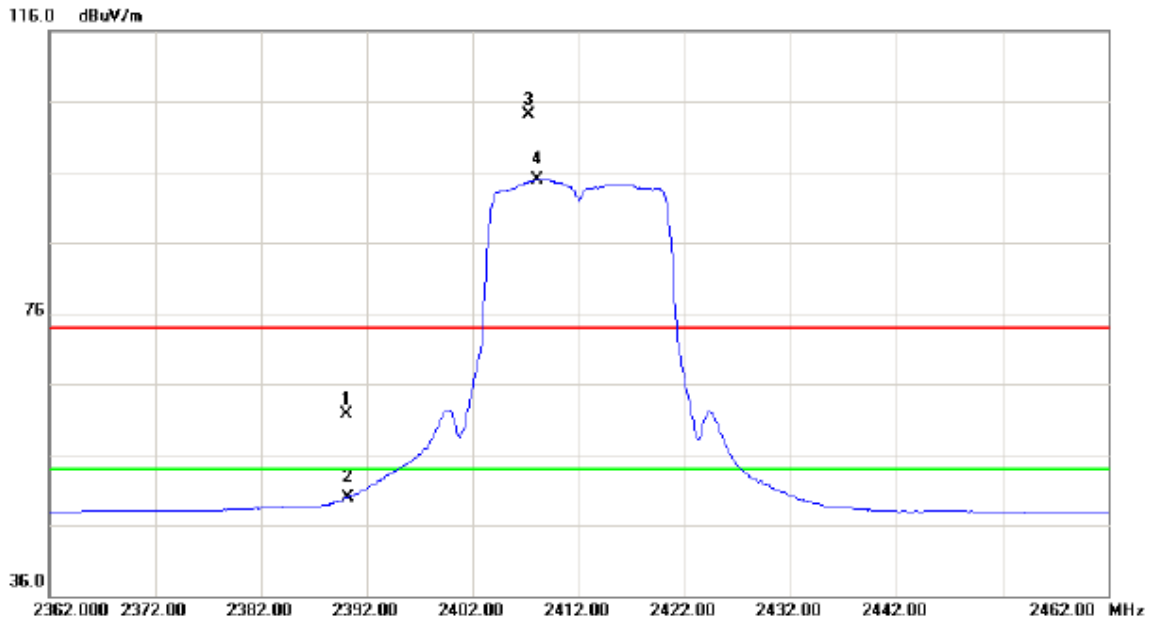
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4924.055	43.23	6.66	49.89	74.00	-24.11	peak	
2	*	4924.060	36.71	6.66	43.37	54.00	-10.63	AVG	

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

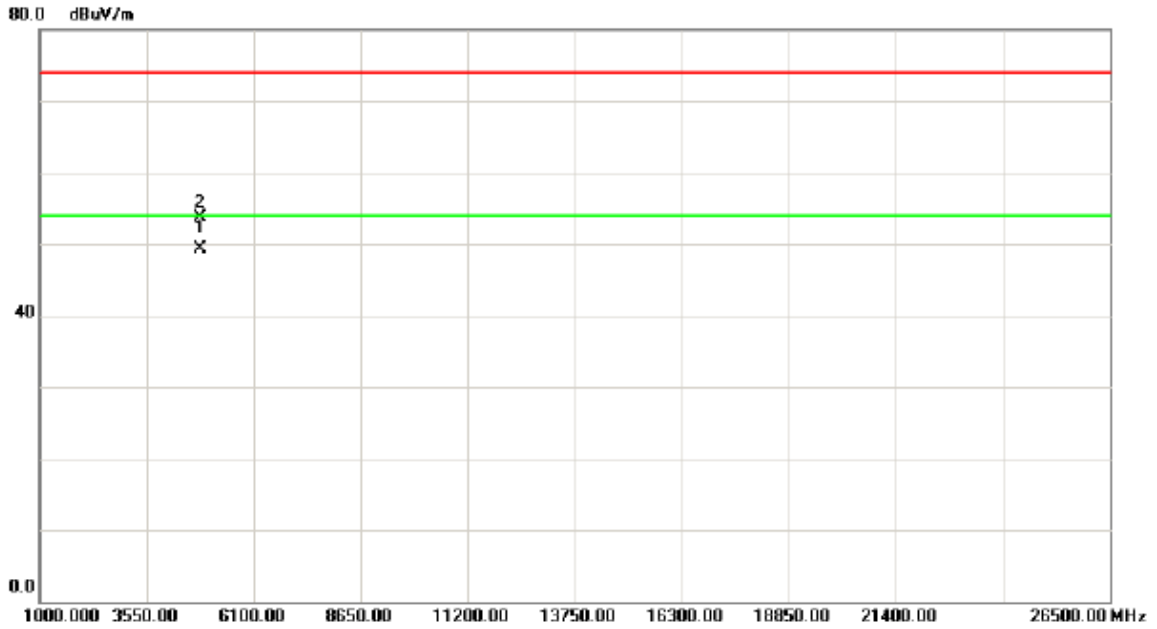
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	28.29	33.38	61.67	74.00	-12.33	peak	
2		2390.000	16.51	33.38	49.89	54.00	-4.11	AVG	
3	X	2407.300	70.60	33.43	104.03	74.00	30.03	peak	Fundamental frequency, no limit
4	*	2408.100	61.54	33.43	94.97	54.00	40.97	AVG	Fundamental frequency, no limit

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

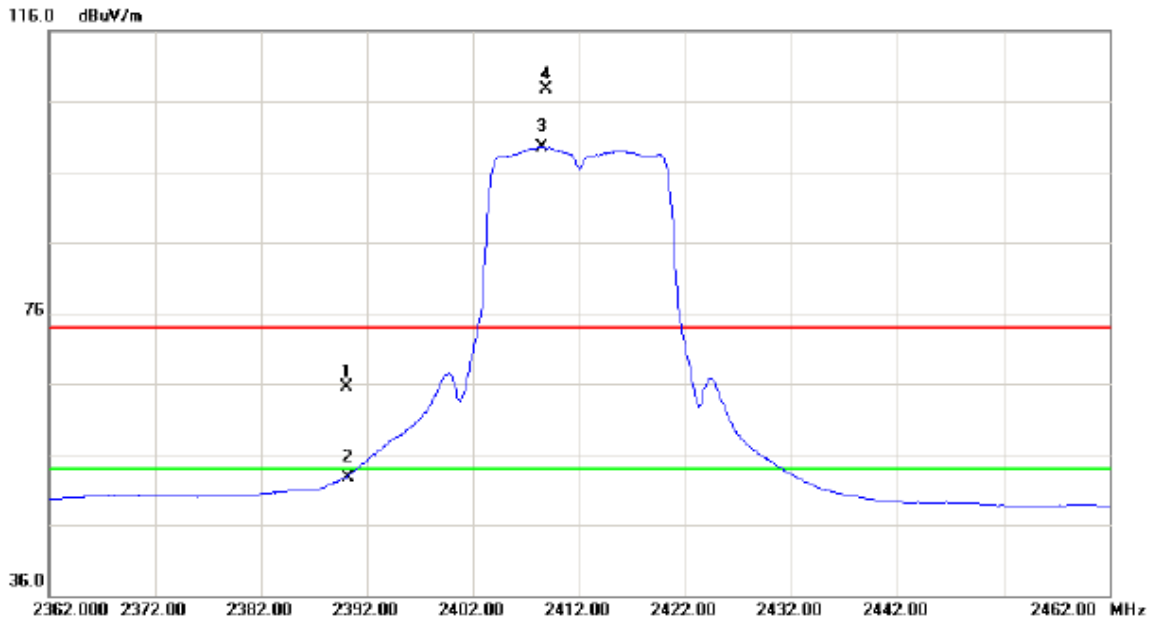
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4823.980	42.84	6.44	49.28	54.00	-4.72	AVG	
2		4824.030	47.23	6.44	53.67	74.00	-20.33	peak	

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

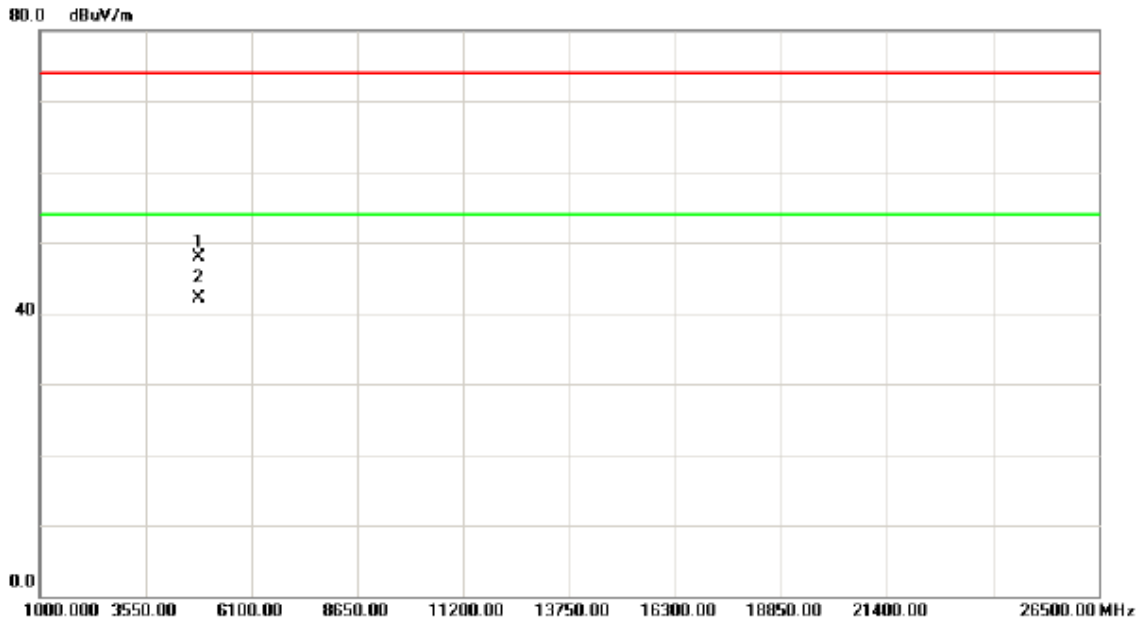
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	32.12	33.38	65.50	74.00	-8.50	peak	
2		2390.000	19.40	33.38	52.78	54.00	-1.22	AVG	
3	*	2408.400	66.12	33.43	99.55	54.00	45.55	AVG	Fundamental frequency, no limit
4	X	2408.800	74.27	33.43	107.70	74.00	33.70	peak	Fundamental frequency, no limit

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

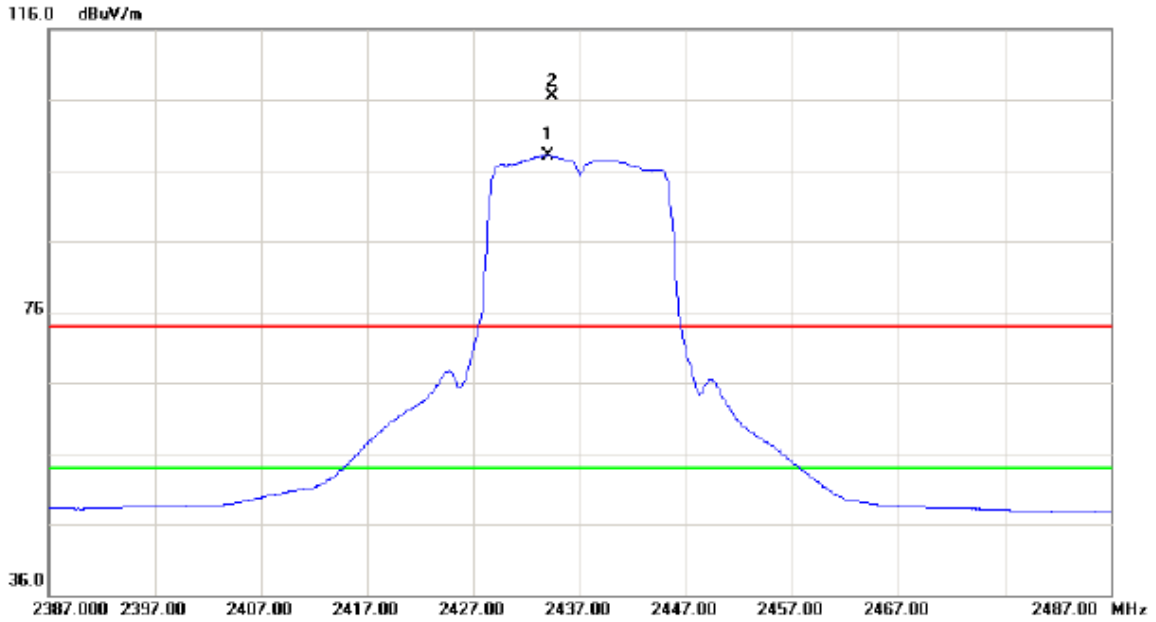
Horizontal



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	4824.025	41.37	6.44	47.81	74.00	-26.19	peak	
2 *	4824.073	35.64	6.44	42.08	54.00	-11.92	AVG	

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

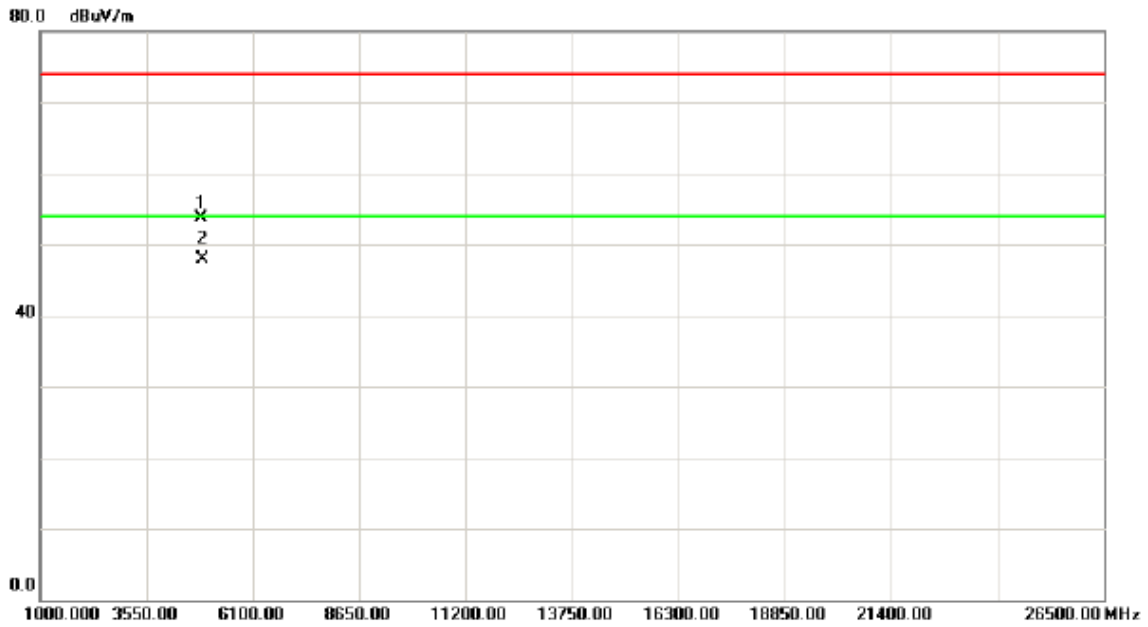
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2434.000	64.56	33.50	98.06	54.00	44.06	AVG	Fundamental frequency, no limit
2	X	2434.400	73.05	33.50	106.55	74.00	32.55	peak	Fundamental frequency, no limit

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

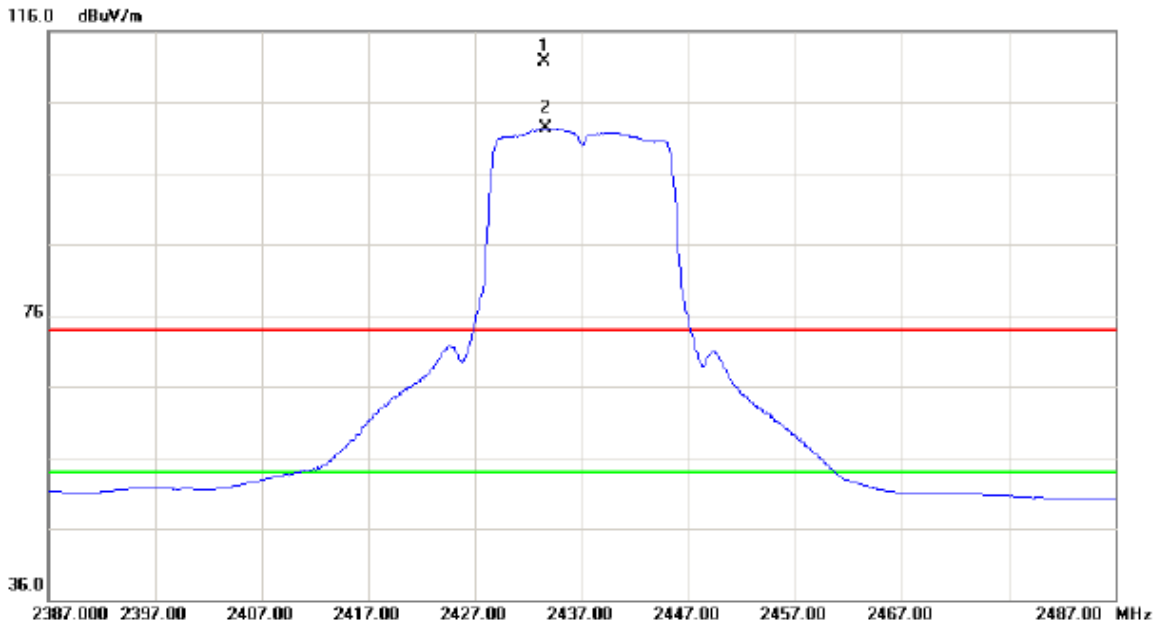
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4873.890	47.15	6.55	53.70	74.00	-20.30	peak	
2	*	4874.020	41.26	6.55	47.81	54.00	-6.19	AVG	

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

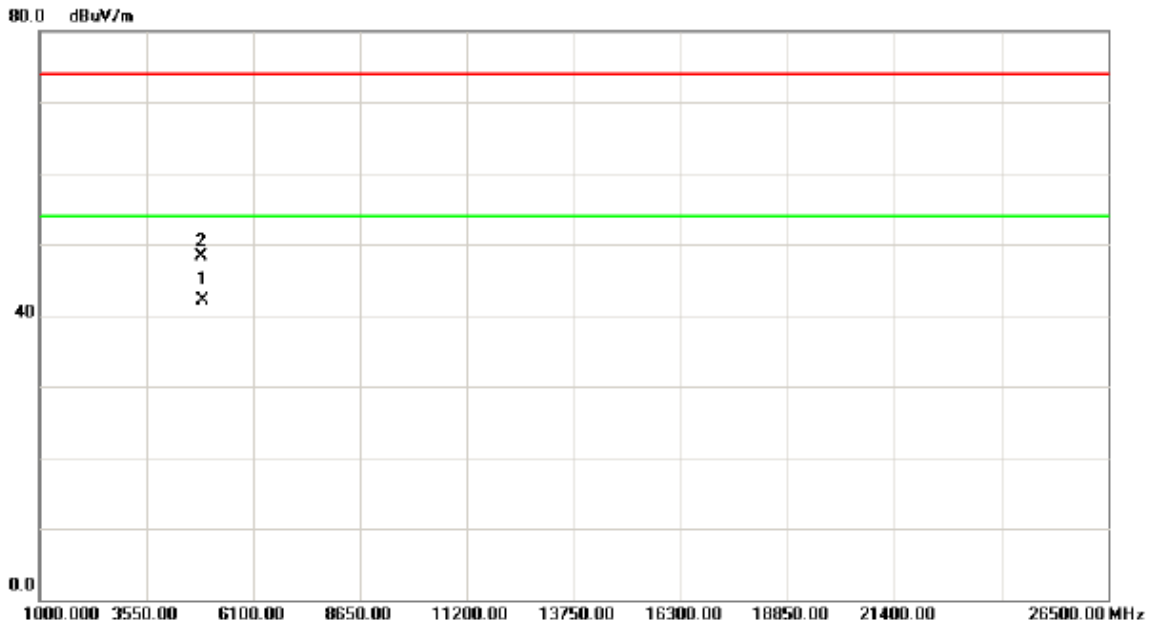
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2433.500	78.19	33.50	111.69	74.00	37.69	peak	Fundamental frequency, no limit
2	*	2433.600	68.88	33.50	102.38	54.00	48.38	AVG	Fundamental frequency, no limit

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

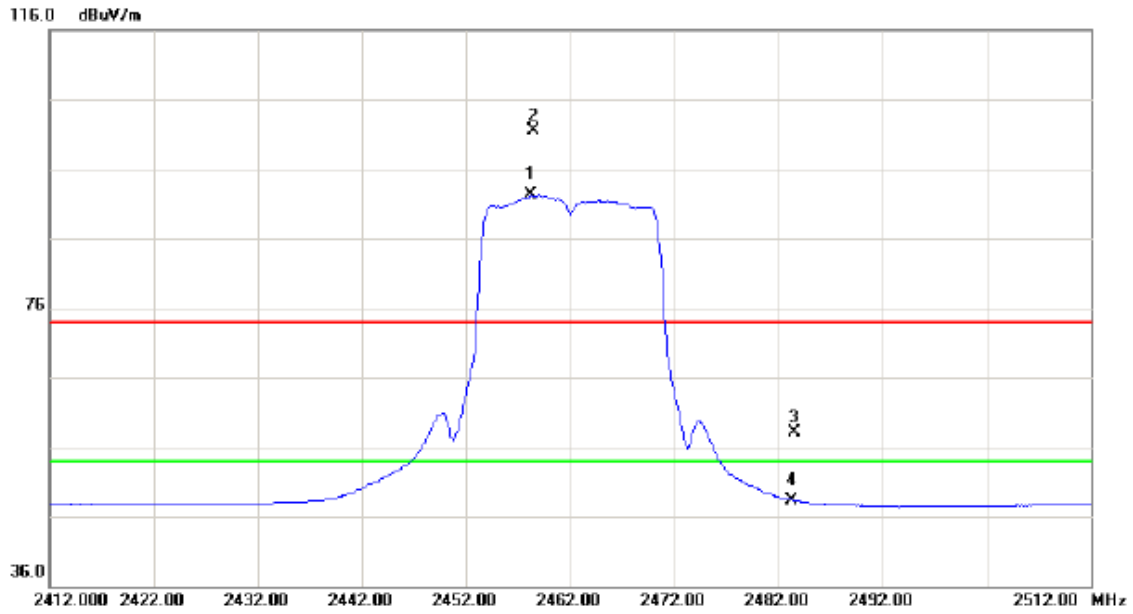
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4874.027	35.61	6.55	42.16	54.00	-11.84	AVG	
2		4874.039	41.82	6.55	48.37	74.00	-25.63	peak	

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

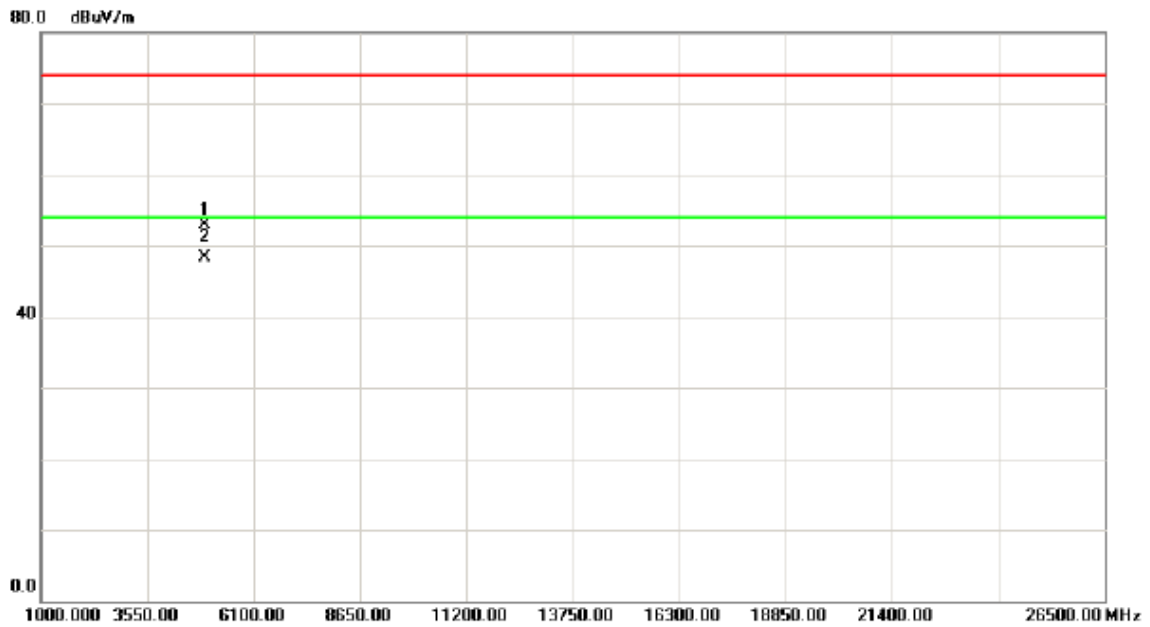
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2458.200	58.67	33.56	92.23	54.00	38.23	AVG	Fundamental frequency, no limit
2	X	2458.500	67.95	33.56	101.51	74.00	27.51	peak	Fundamental frequency, no limit
3		2483.500	24.58	33.62	58.20	74.00	-15.80	peak	
4		2483.500	14.67	33.62	48.29	54.00	-5.71	AVG	

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

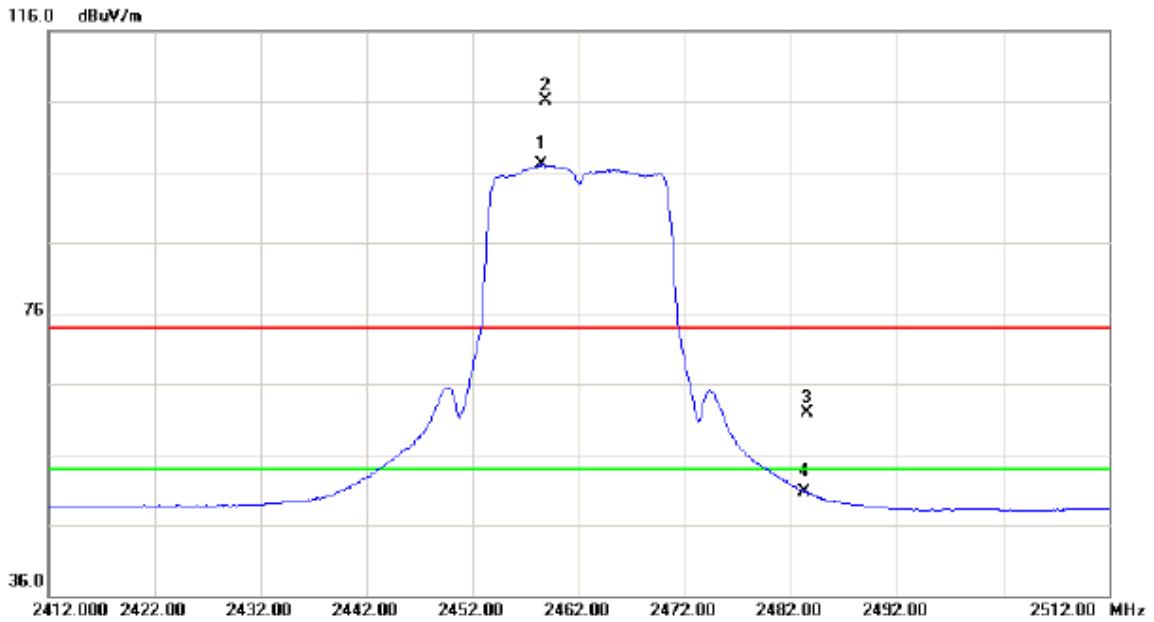
Vertical



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	4923.900	46.21	6.66	52.87	74.00	-21.13	peak	
2 *	4924.034	41.57	6.66	48.23	54.00	-5.77	AVG	

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

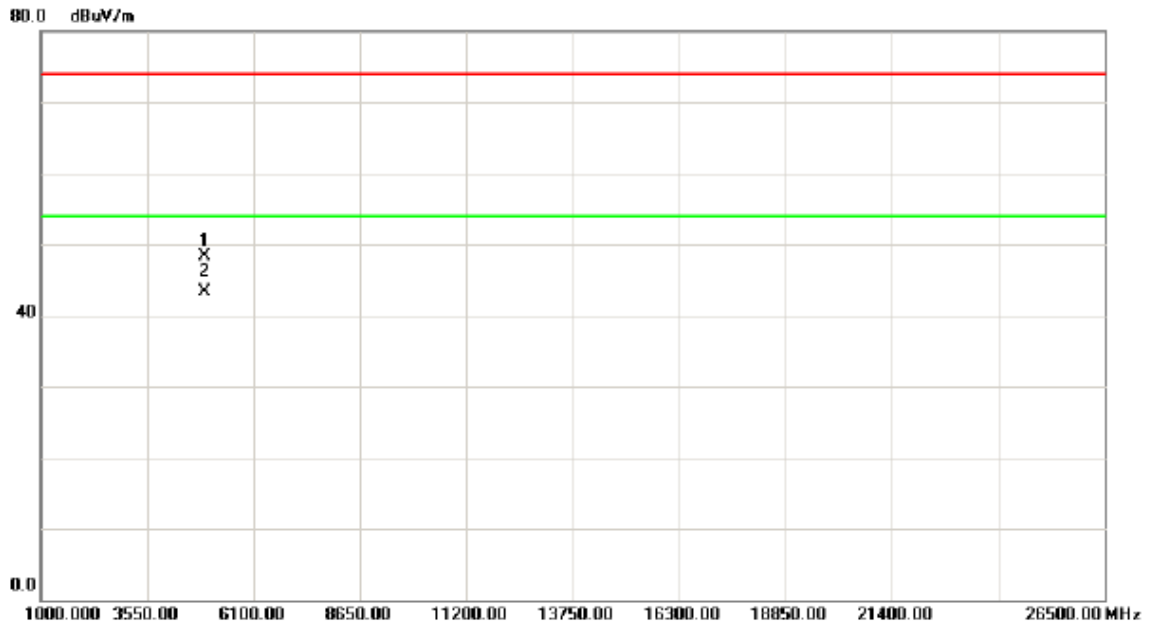
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2458.500	63.46	33.56	97.02	54.00	43.02	AVG	Fundamental frequency, no limit
2	X	2458.900	72.57	33.56	106.13	74.00	32.13	peak	Fundamental frequency, no limit
3		2483.500	28.20	33.62	61.82	74.00	-12.18	peak	
4		2483.500	17.04	33.62	50.66	54.00	-3.34	AVG	

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

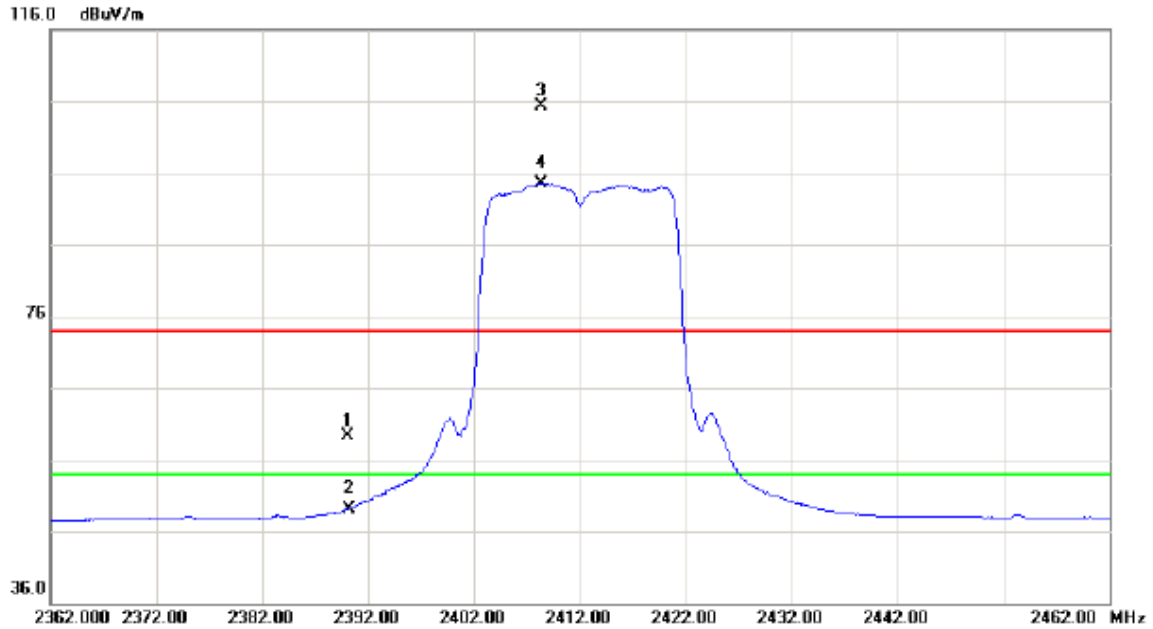
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4924.030	41.63	6.66	48.29	74.00	-25.71	peak	
2	*	4924.047	36.71	6.66	43.37	54.00	-10.63	AVG	

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

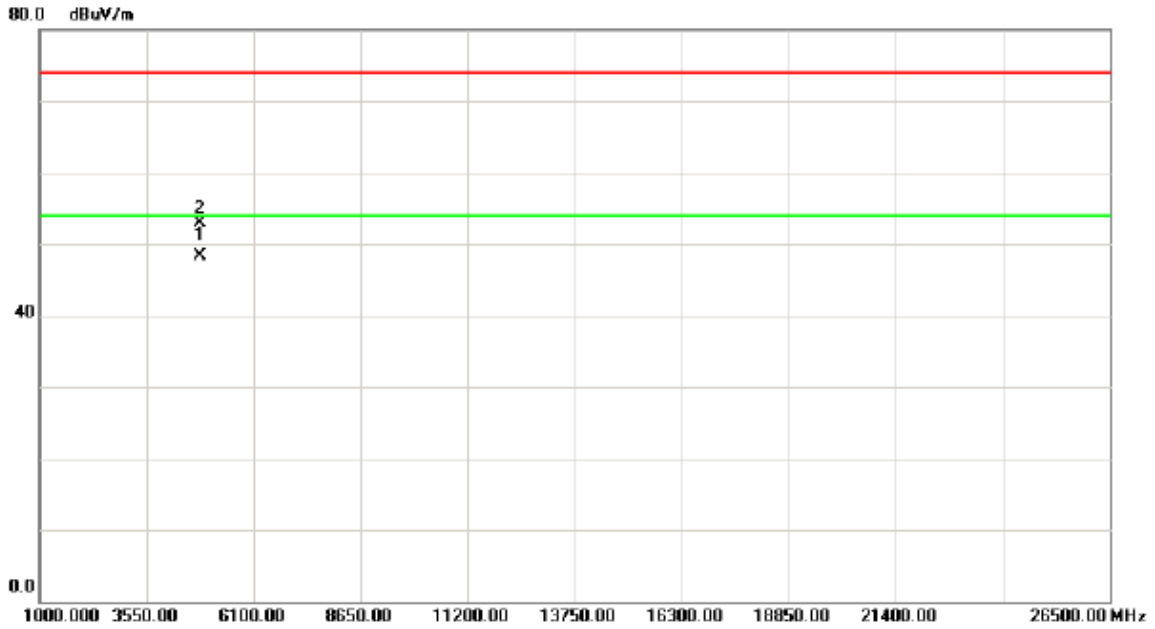
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	25.94	33.38	59.32	74.00	-14.68	peak	
2		2390.000	15.64	33.38	49.02	54.00	-4.98	AVG	
3	X	2408.300	71.91	33.43	105.34	74.00	31.34	peak	Fundamental frequency, no limit
4	*	2408.300	61.13	33.43	94.56	54.00	40.56	AVG	Fundamental frequency, no limit

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

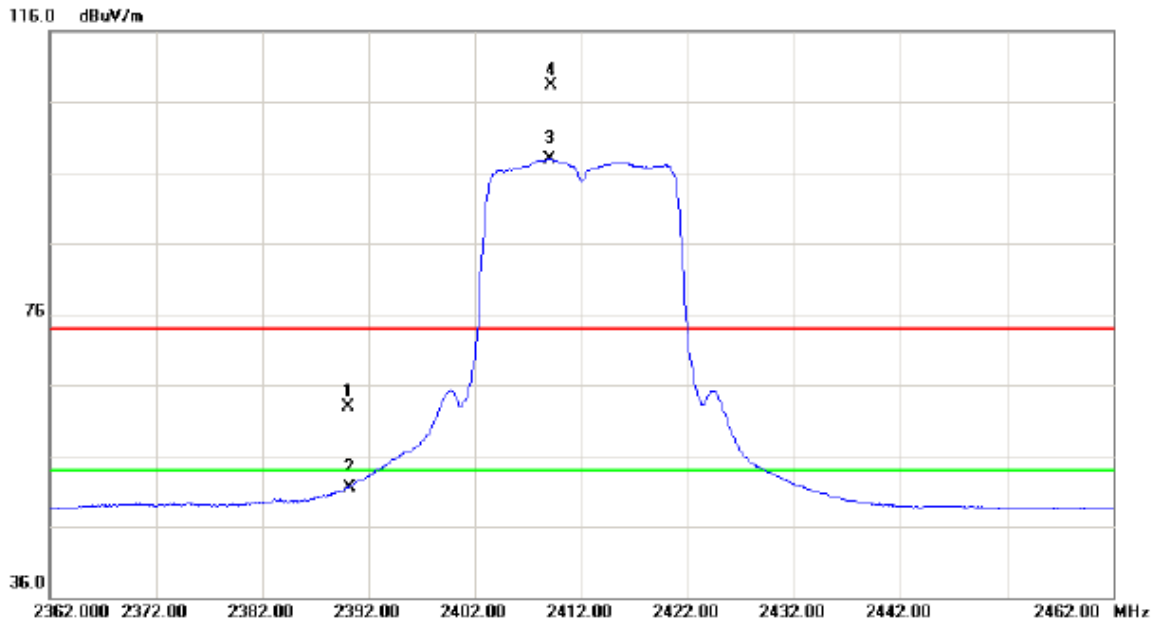
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4823.860	41.84	6.44	48.28	54.00	-5.72	AVG	
2		4824.056	46.37	6.44	52.81	74.00	-21.19	peak	

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

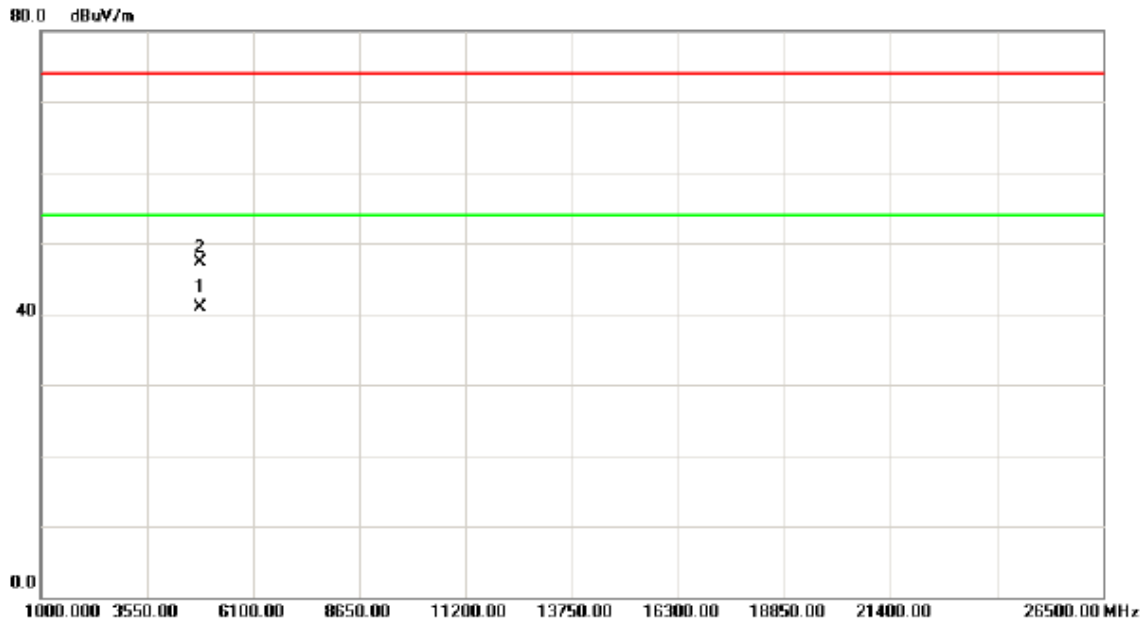
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	29.43	33.38	62.81	74.00	-11.19	peak	
2		2390.000	18.17	33.38	51.55	54.00	-2.45	AVG	
3	*	2409.000	64.47	33.43	97.90	54.00	43.90	AVG	Fundamental frequency, no limit
4	X	2409.100	74.85	33.43	108.28	74.00	34.28	peak	Fundamental frequency, no limit

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

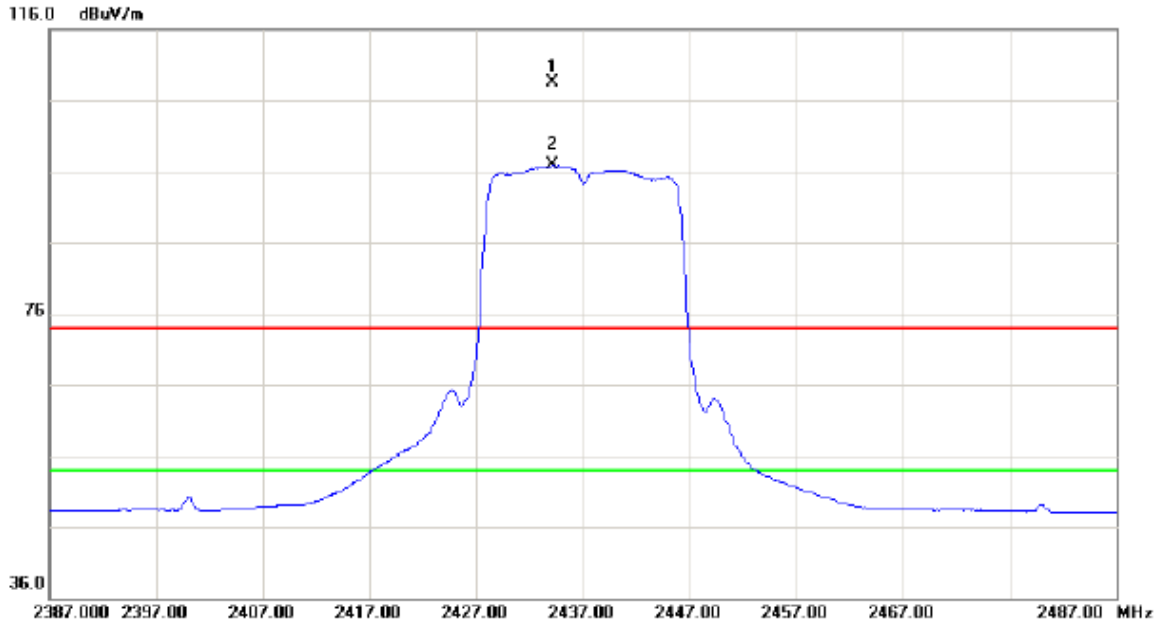
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4824.025	34.52	6.44	40.96	54.00	-13.04	AVG	
2		4824.130	40.87	6.44	47.31	74.00	-26.69	peak	

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

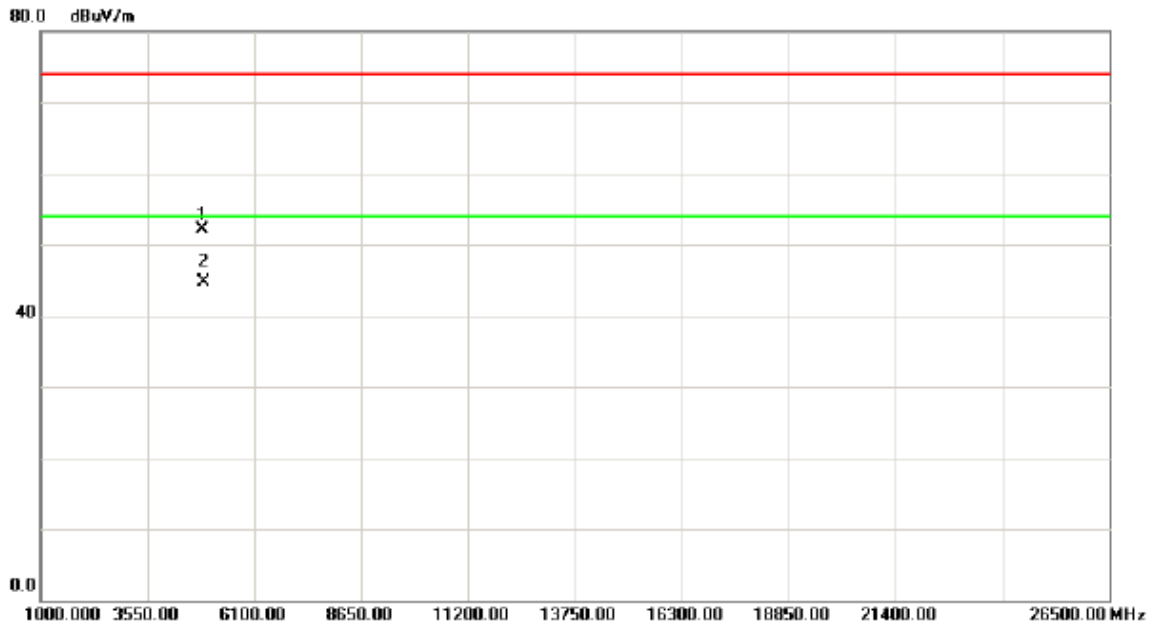
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	2434.100	75.01	33.50	108.51	74.00	34.51	peak	Fundamental frequency, no limit
2	*	2434.100	63.32	33.50	96.82	54.00	42.82	AVG	Fundamental frequency, no limit

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

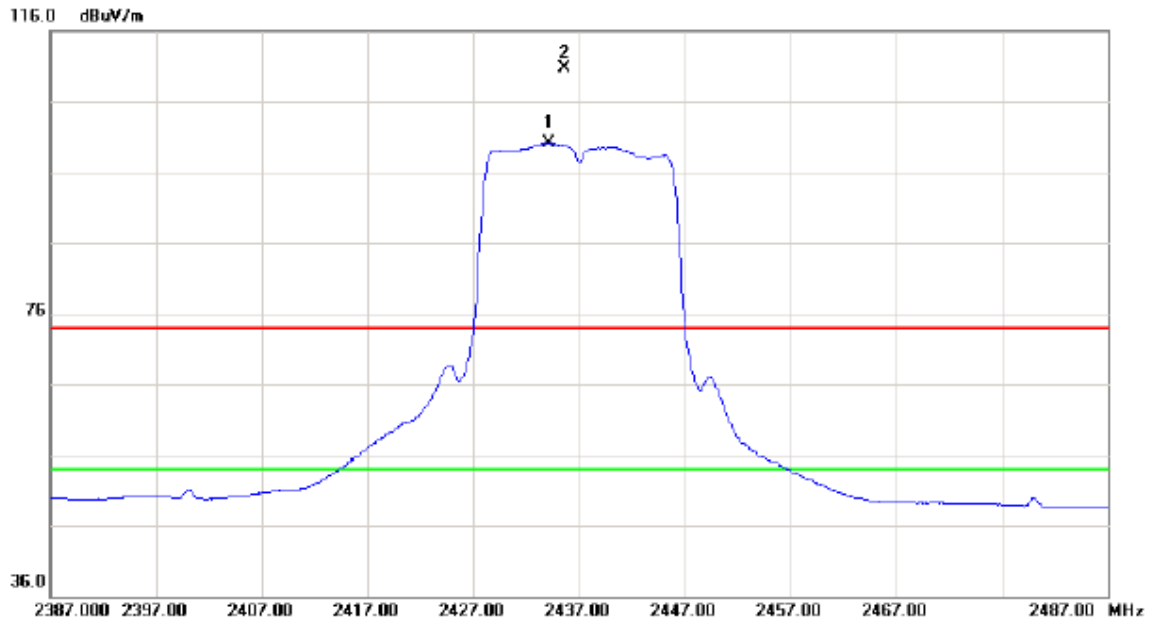
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4873.920	45.63	6.55	52.18	74.00	-21.82	peak	
2	*	4874.000	38.25	6.55	44.80	54.00	-9.20	AVG	

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

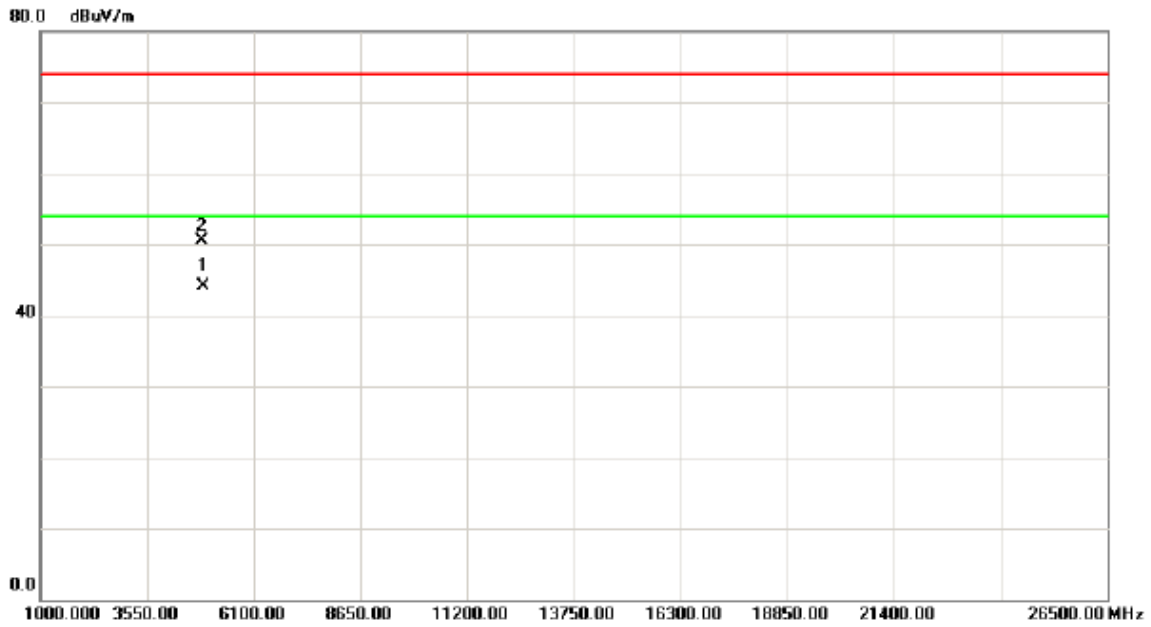
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2434.100	66.58	33.50	100.08	54.00	46.08	AVG	Fundamental frequency, no limit
2	X	2435.600	77.20	33.50	110.70	74.00	36.70	peak	Fundamental frequency, no limit

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

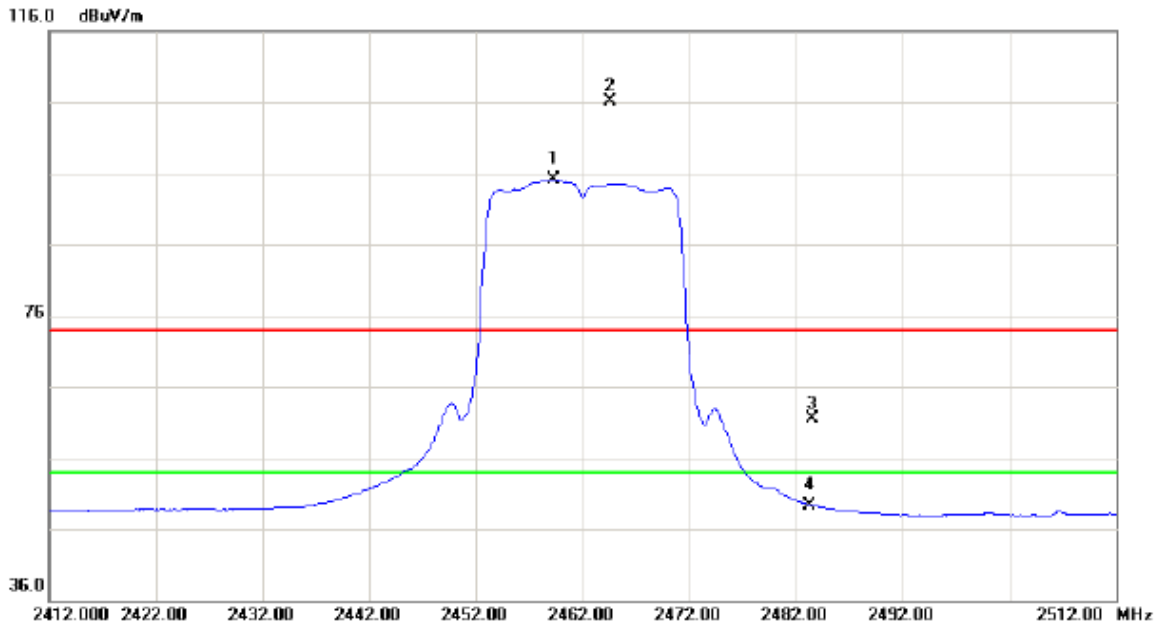
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4874.015	37.54	6.55	44.09	54.00	-9.91	AVG	
2		4874.062	43.89	6.55	50.44	74.00	-23.56	peak	

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

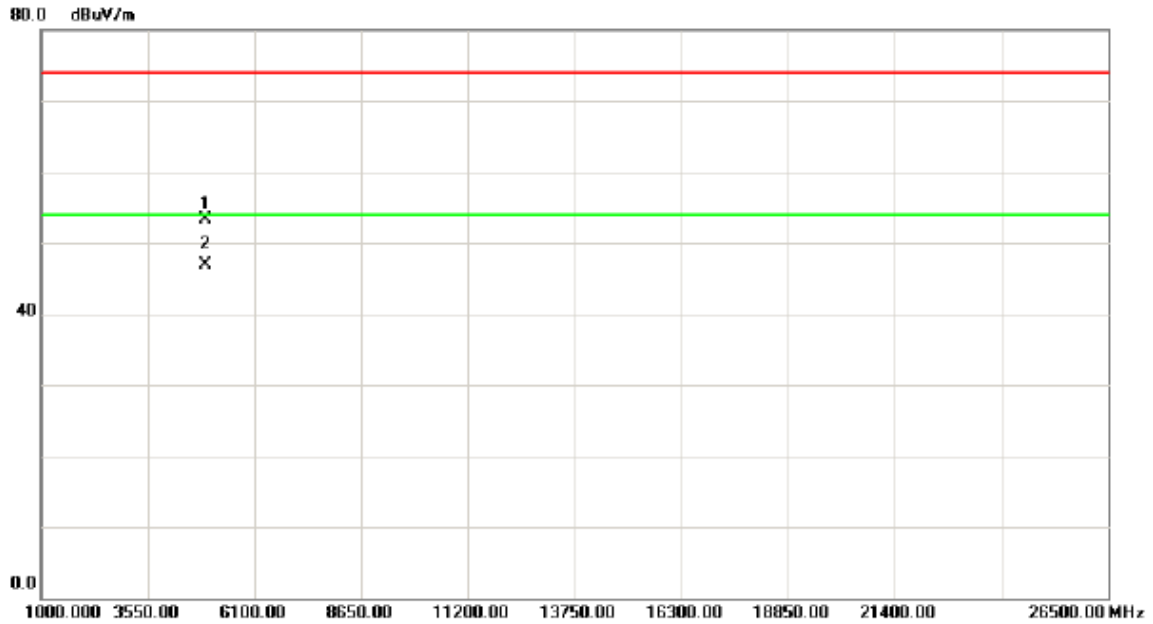
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2459.200	61.51	33.56	95.07	54.00	41.07	AVG	Fundamental frequency, no limit
2	X	2464.600	72.56	33.57	106.13	74.00	32.13	peak	Fundamental frequency, no limit
3		2483.500	27.89	33.62	61.51	74.00	-12.49	peak	
4		2483.500	15.76	33.62	49.38	54.00	-4.62	AVG	

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

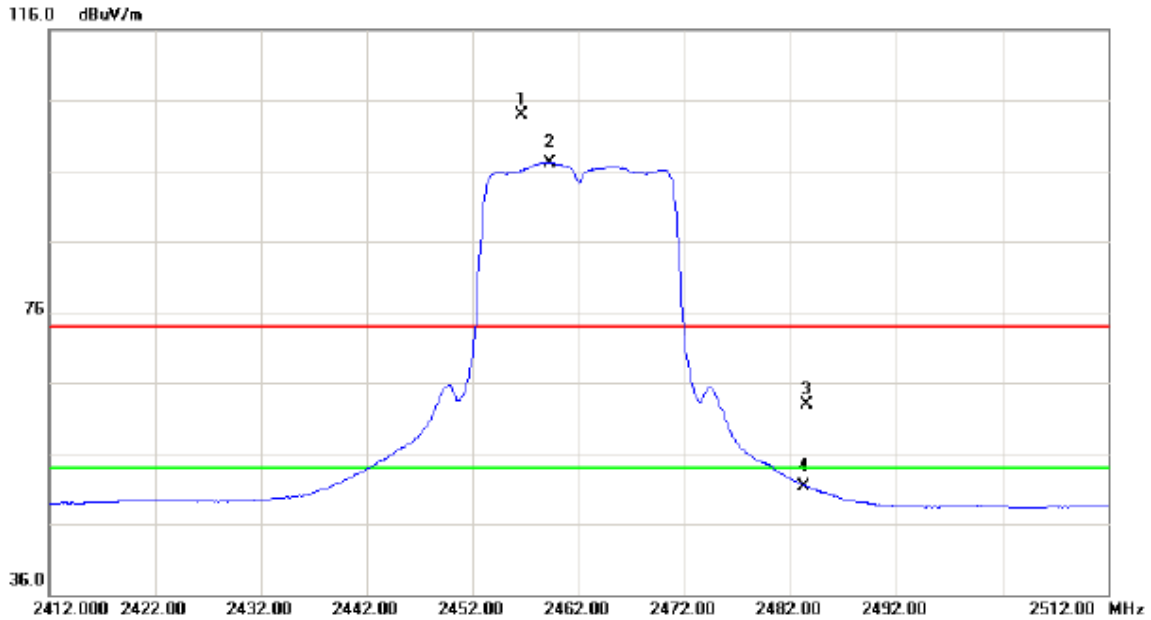
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4924.000	46.64	6.66	53.30	74.00	-20.70	peak	
2	*	4924.057	40.23	6.66	46.89	54.00	-7.11	AVG	

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

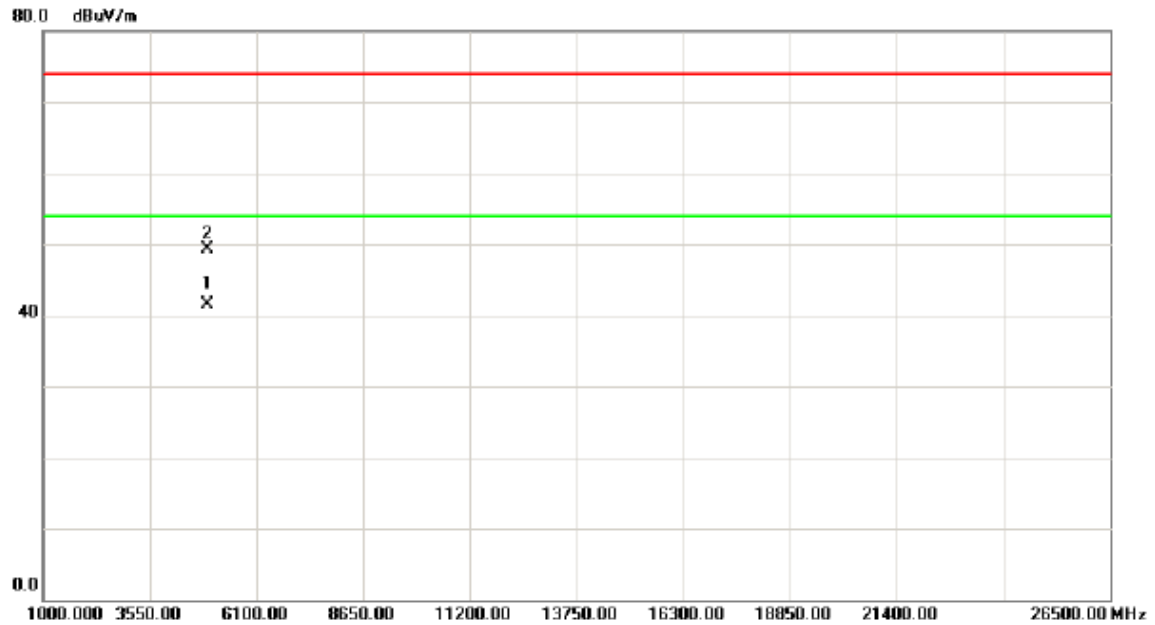
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	2456.600	70.44	33.56	104.00	74.00	30.00	peak	Fundamental frequency, no limit
2	*	2459.200	63.61	33.56	97.17	54.00	43.17	AVG	Fundamental frequency, no limit
3		2483.500	29.21	33.62	62.83	74.00	-11.17	peak	
4		2483.500	17.77	33.62	51.39	54.00	-2.61	AVG	

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

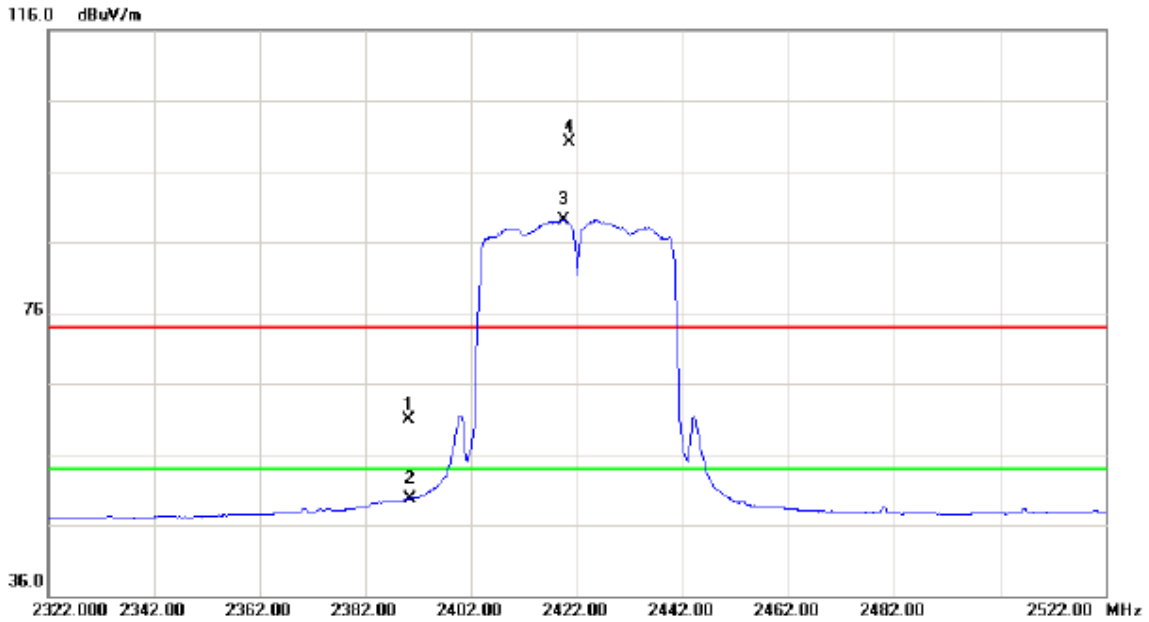
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4923.960	34.81	6.66	41.47	54.00	-12.53	AVG	
2		4924.030	42.63	6.66	49.29	74.00	-24.71	peak	

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

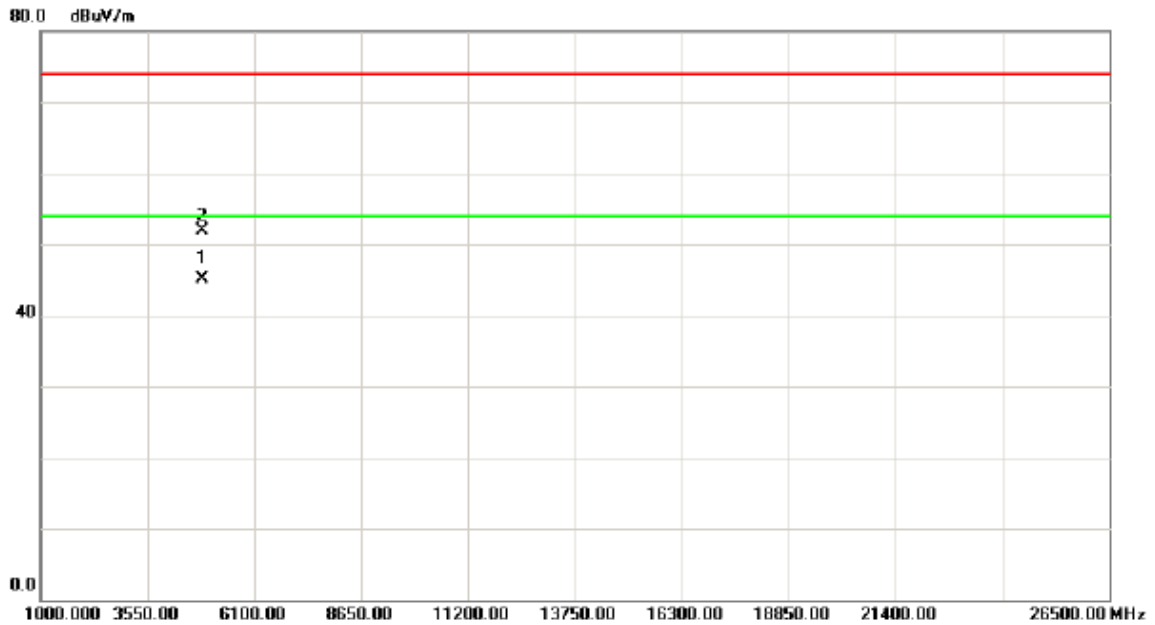
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2390.000	27.55	33.38	60.93	74.00	-13.07	peak	
2		2390.000	16.29	33.38	49.67	54.00	-4.33	AVG	
3	*	2419.400	55.63	33.46	89.09	54.00	35.09	AVG	Fundamental frequency, no limit
4	X	2420.400	66.73	33.46	100.19	74.00	26.19	peak	Fundamental frequency, no limit

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

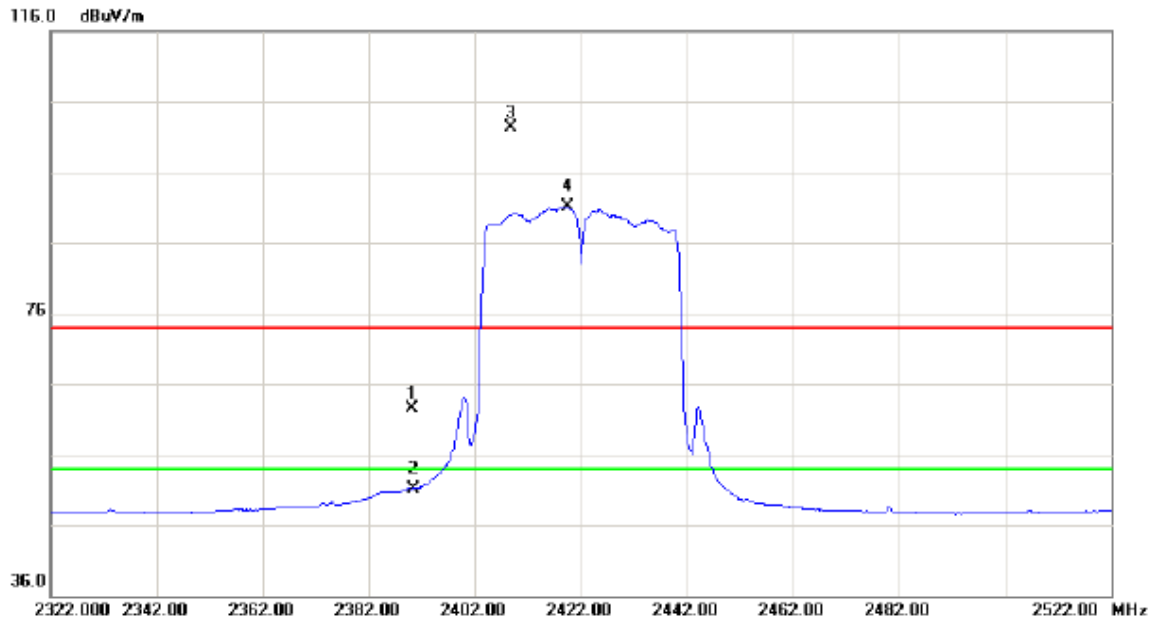
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4843.990	38.64	6.48	45.12	54.00	-8.88	AVG	
2		4844.030	45.36	6.48	51.84	74.00	-22.16	peak	

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

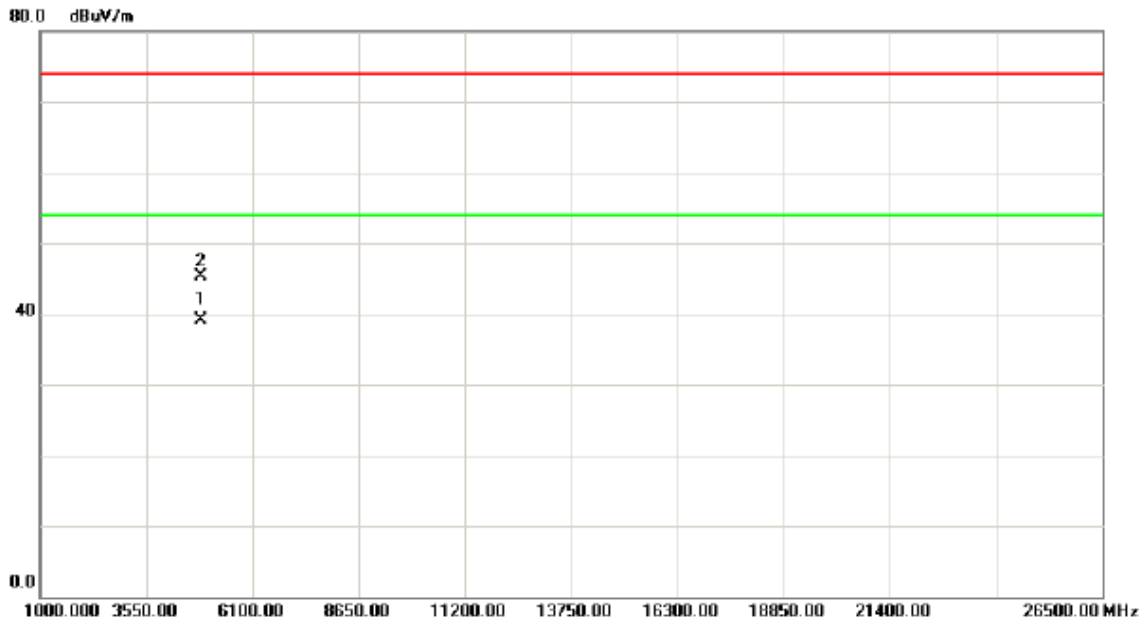
Horizontal



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	2390.000	29.16	33.38	62.54	74.00	-11.46	peak	
2	2390.000	17.79	33.38	51.17	54.00	-2.83	AVG	
3 X	2408.800	68.84	33.43	102.27	74.00	28.27	peak	Fundamental frequency, no limit
4 *	2419.400	57.61	33.46	91.07	54.00	37.07	AVG	Fundamental frequency, no limit

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

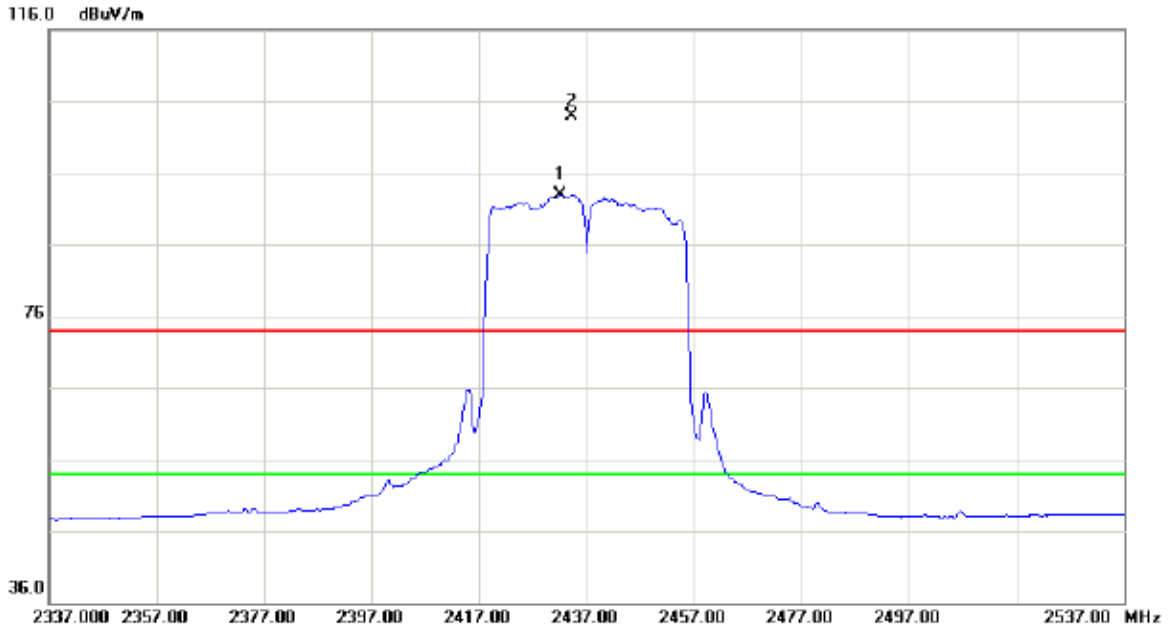
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4843.870	32.62	6.48	39.10	54.00	-14.90	AVG	
2		4844.020	38.76	6.48	45.24	74.00	-28.76	peak	

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

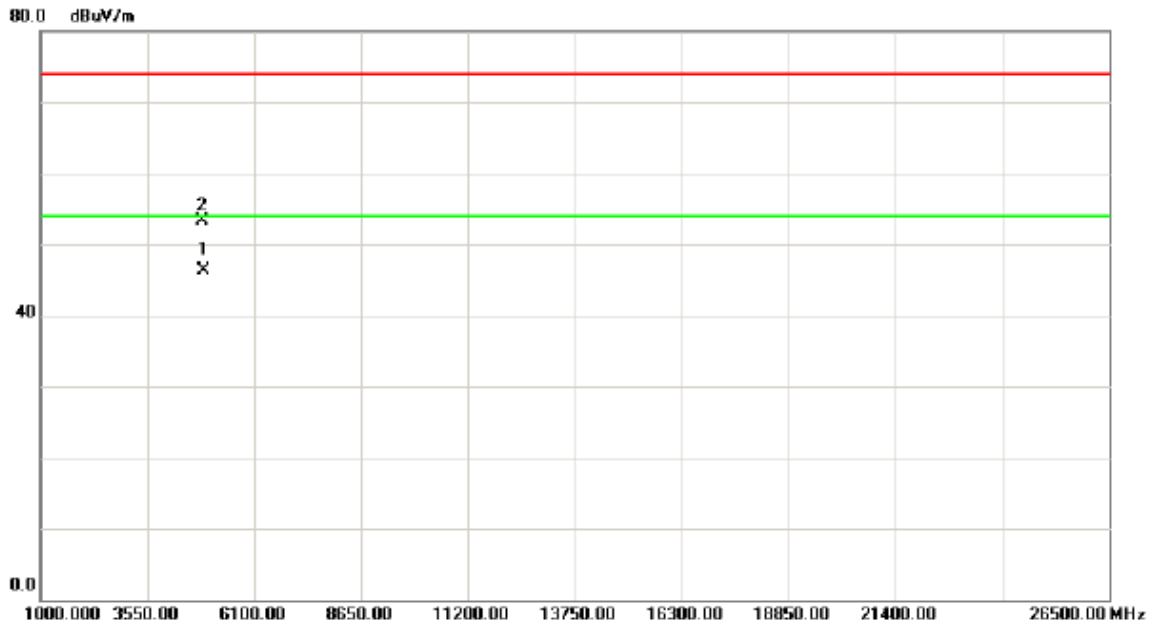
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2432.000	59.39	33.49	92.88	54.00	38.88	AVG	Fundamental frequency, no limit
2	X	2434.200	70.42	33.50	103.92	74.00	29.92	peak	Fundamental frequency, no limit

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

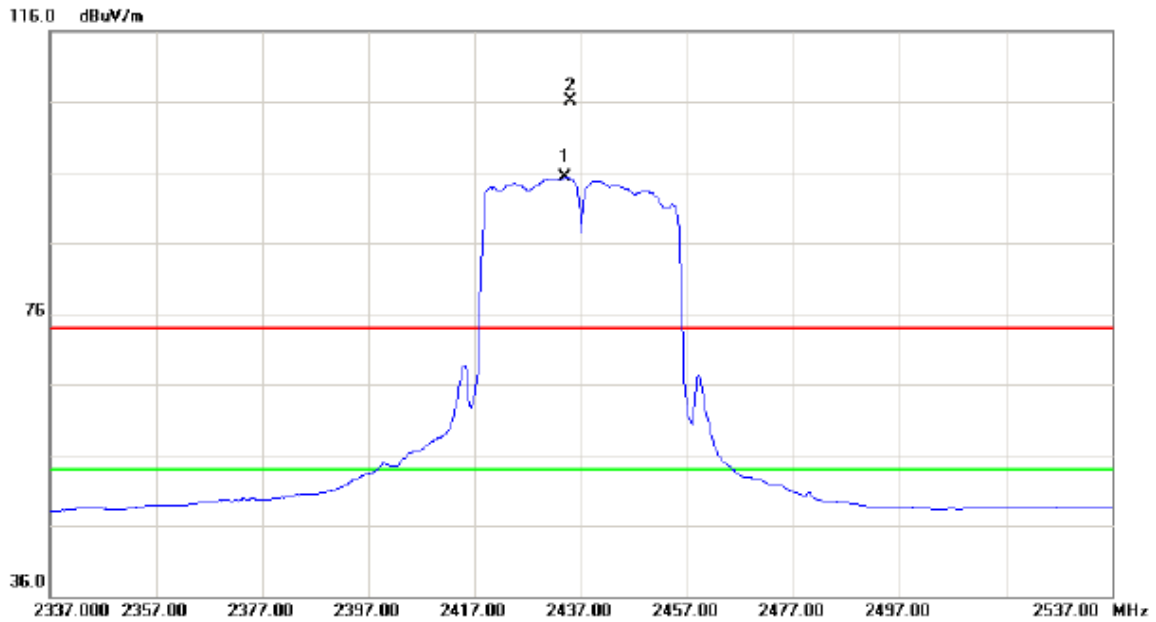
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4874.010	39.68	6.55	46.23	54.00	-7.77	AVG	
2		4874.026	46.83	6.55	53.38	74.00	-20.62	peak	

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

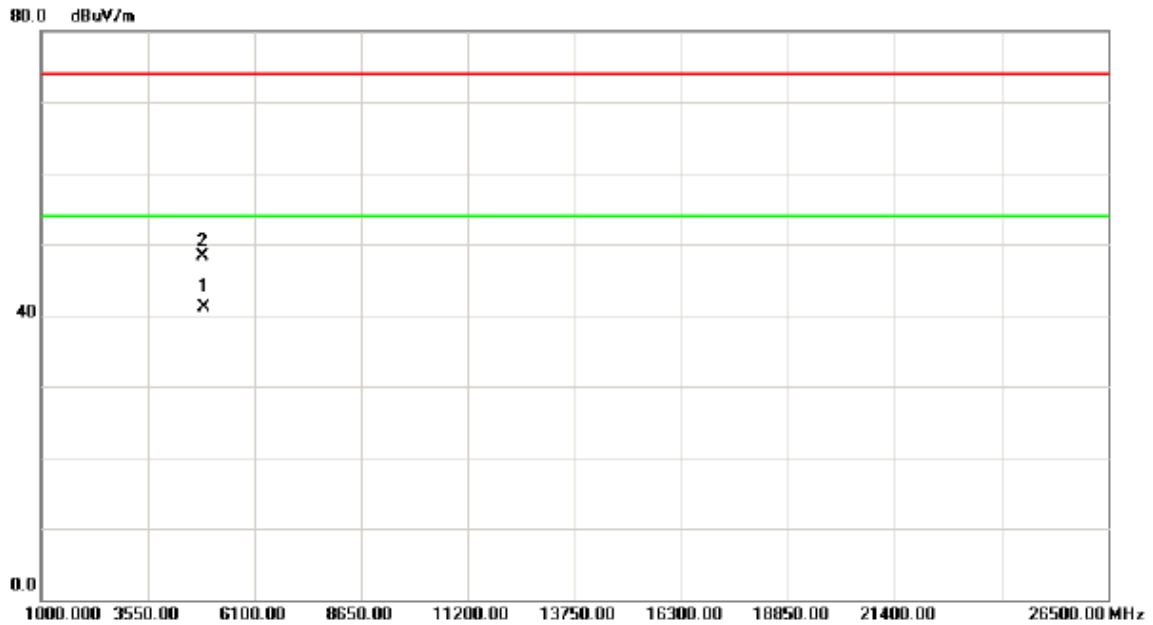
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2434.000	61.82	33.50	95.32	54.00	41.32	AVG	Fundamental frequency, no limit
2	X	2435.000	72.60	33.50	106.10	74.00	32.10	peak	Fundamental frequency, no limit

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

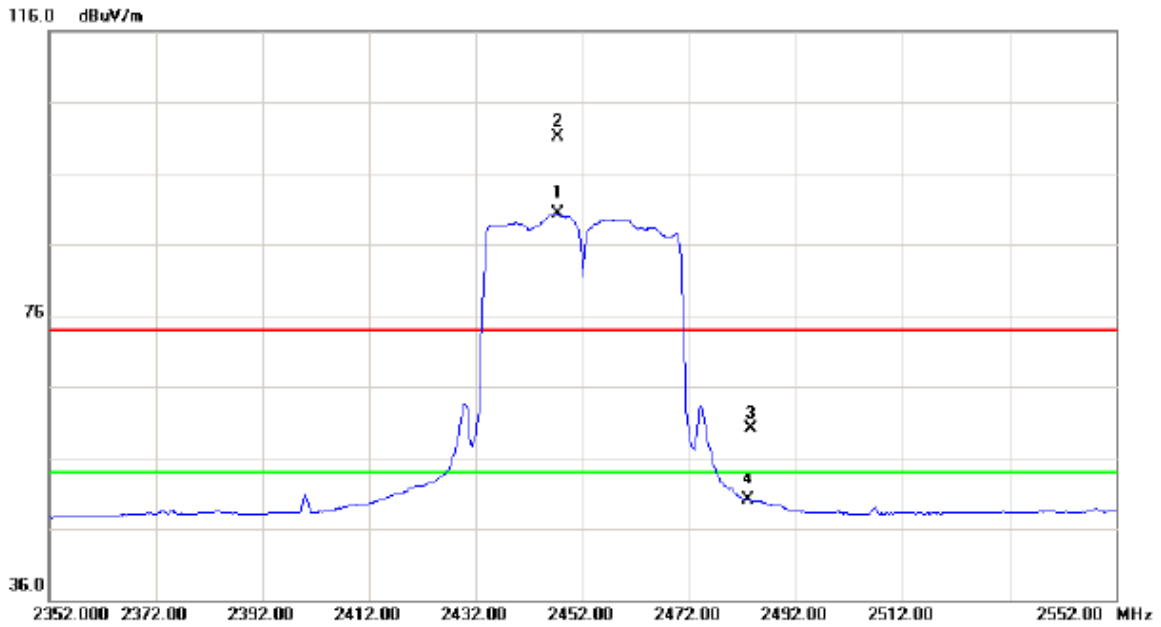
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4873.980	34.52	6.55	41.07	54.00	-12.93	AVG	
2		4874.035	41.76	6.55	48.31	74.00	-25.69	peak	

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

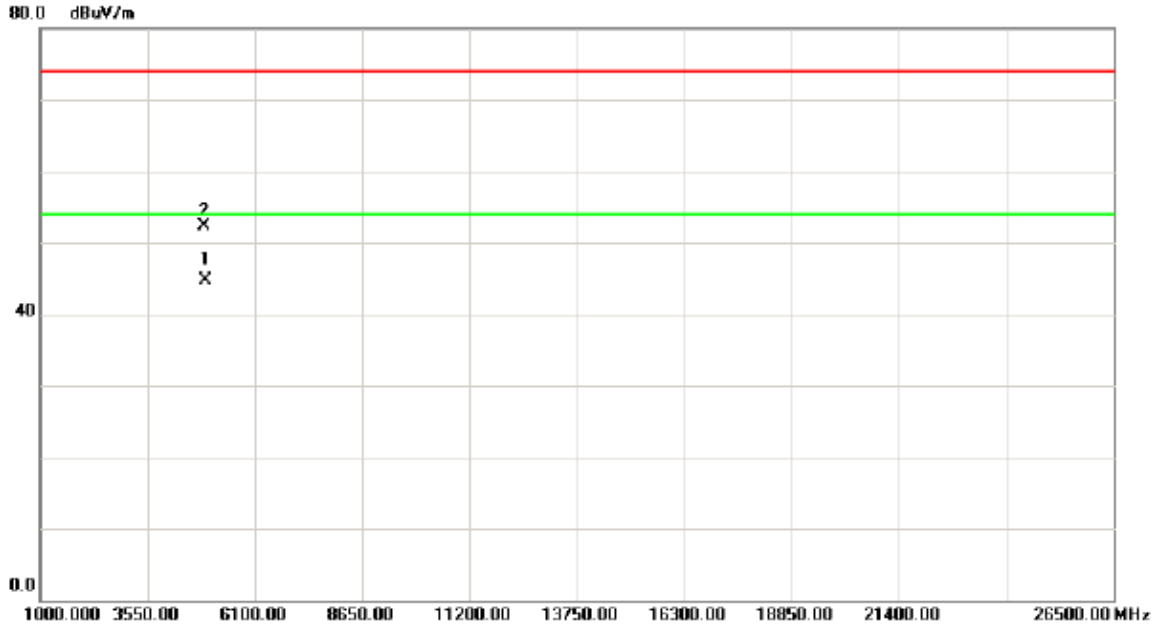
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2447.200	56.73	33.53	90.26	54.00	36.26	AVG	Fundamental frequency, no limit
2	X	2447.400	67.51	33.53	101.04	74.00	27.04	peak	Fundamental frequency, no limit
3		2483.500	26.47	33.62	60.09	74.00	-13.91	peak	
4		2483.500	16.42	33.62	50.04	54.00	-3.96	AVG	

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

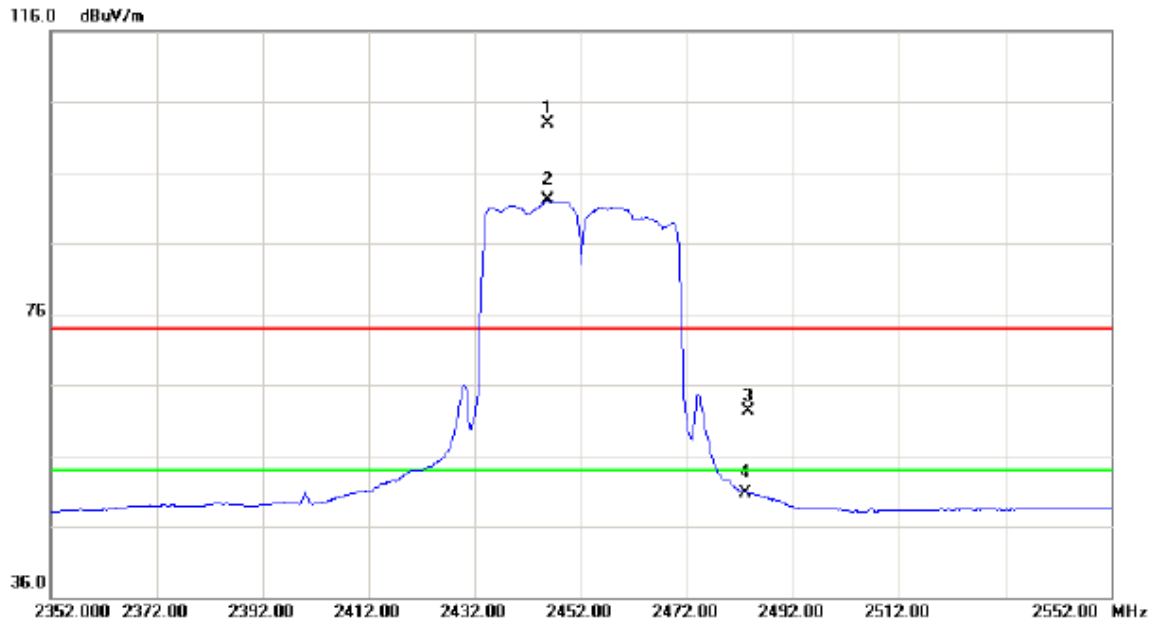
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4904.010	38.17	6.61	44.78	54.00	-9.22	AVG	
2		4904.038	45.60	6.61	52.21	74.00	-21.79	peak	

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

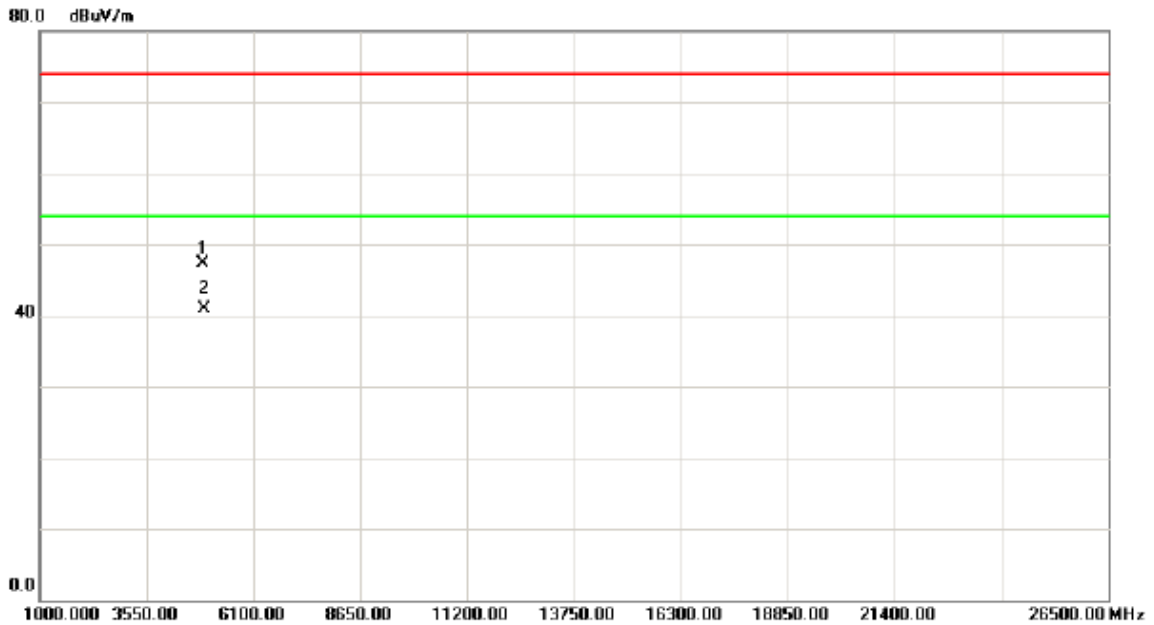
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2445.600	69.45	33.53	102.98	74.00	28.98	peak	Fundamental frequency, no limit
2	*	2445.600	58.56	33.53	92.09	54.00	38.09	AVG	Fundamental frequency, no limit
3		2483.500	28.73	33.62	62.35	74.00	-11.65	peak	
4		2483.500	17.15	33.62	50.77	54.00	-3.23	AVG	

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

Horizontal

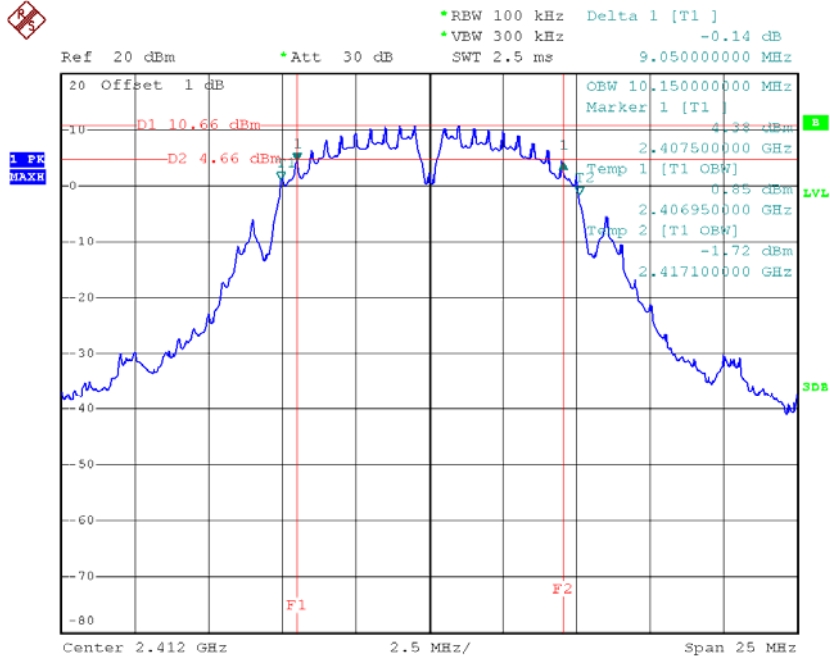


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4904.010	40.72	6.61	47.33	74.00	-26.67	peak	
2	*	4904.060	34.26	6.61	40.87	54.00	-13.13	AVG	

ATTACHMENT E - BANDWIDTH

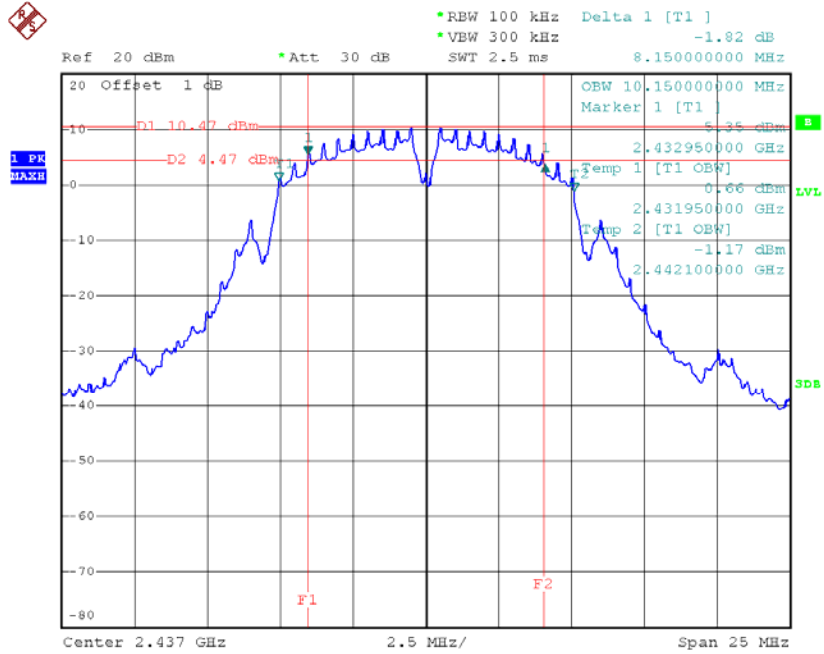
Test Mode : TX B Mode_CH01/06/11

TX CH 01



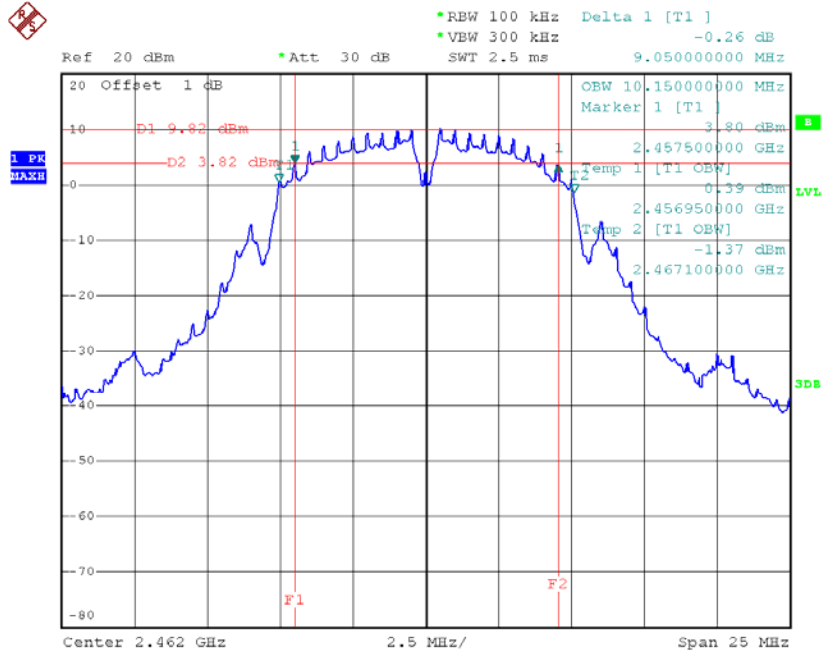
Date: 25.JUN.2014 05:47:50

TX CH 06



Date: 25.JUN.2014 05:52:01

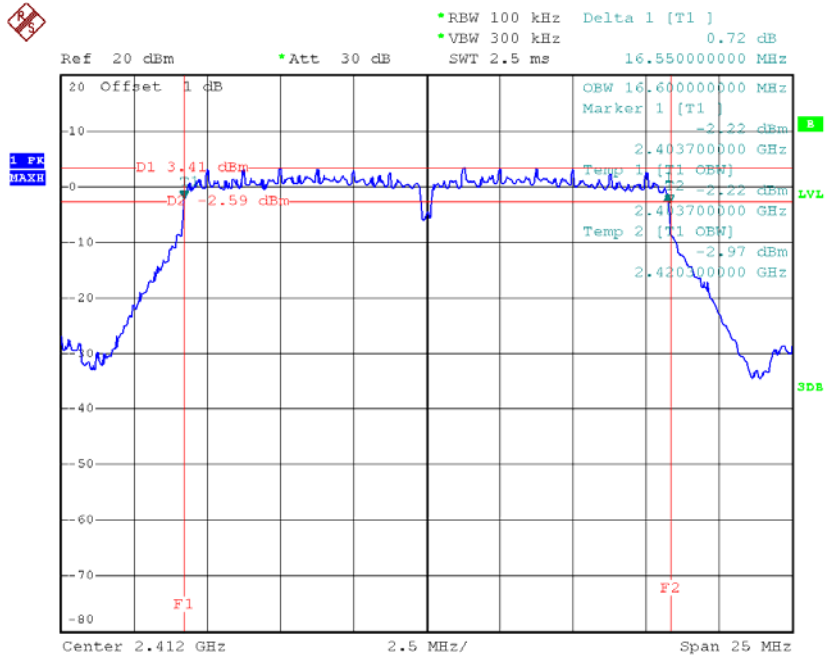
TX CH 11



Date: 25.JUN.2014 05:54:10

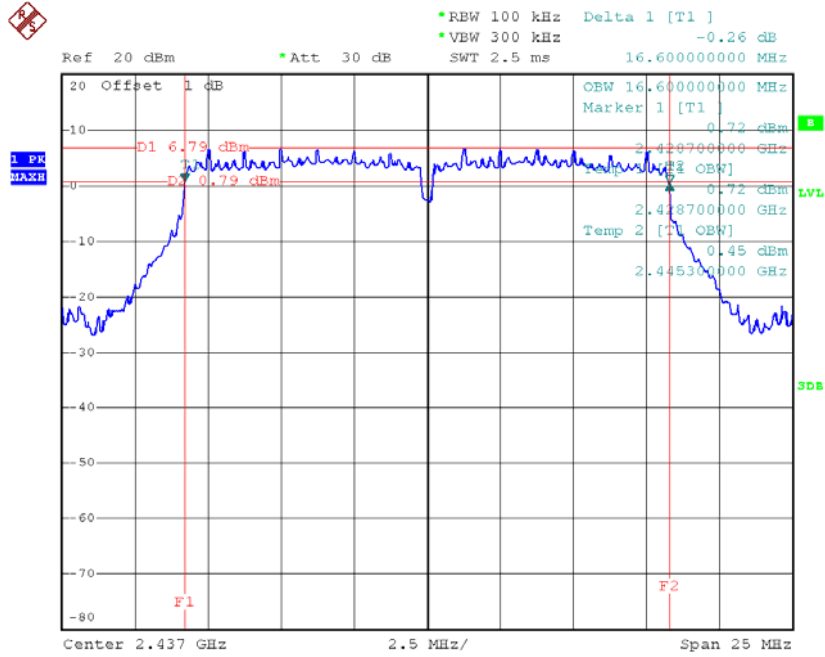
Test Mode: TX G Mode_CH01/06/11

TX CH 01



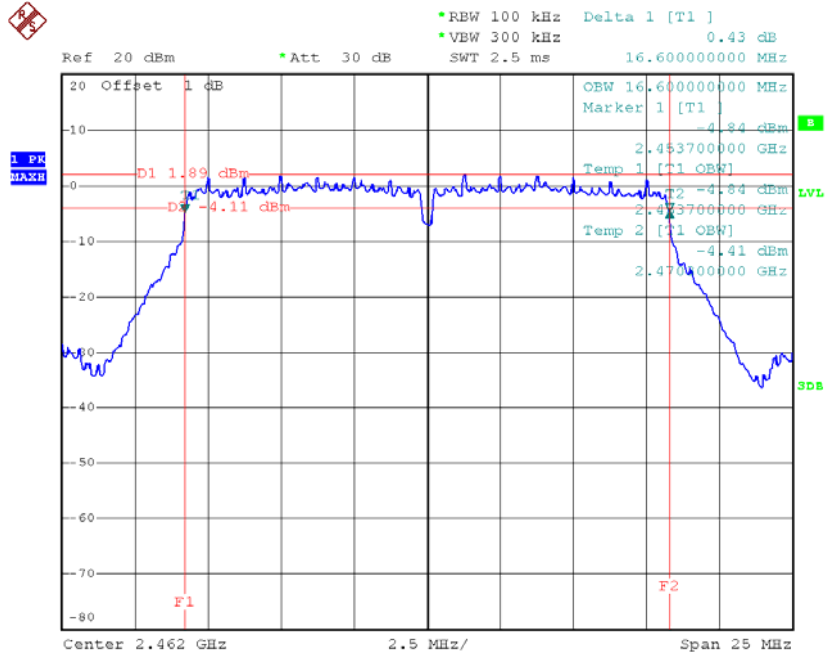
Date: 25.JUN.2014 06:11:59

TX CH 06



Date: 25.JUN.2014 06:53:46

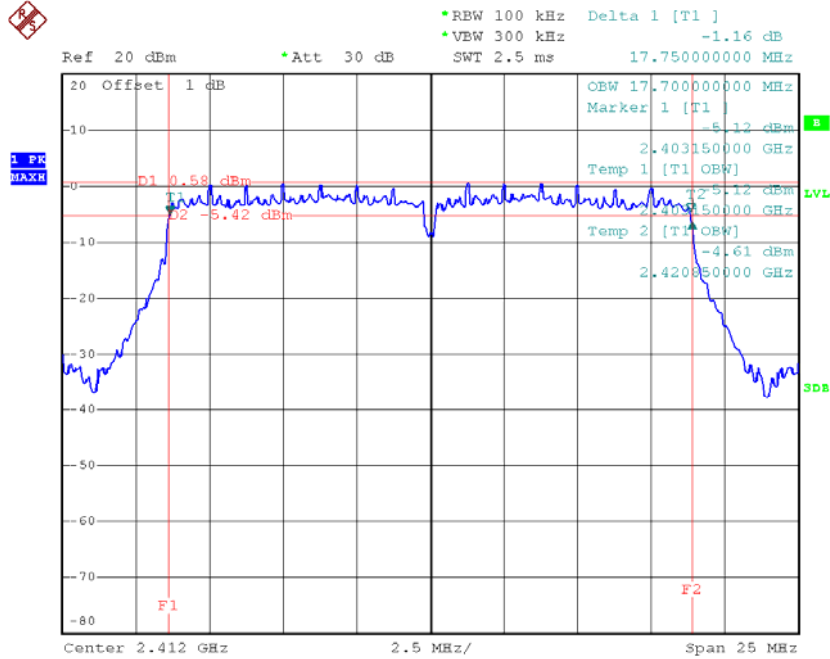
TX CH 11



Date: 25.JUN.2014 07:00:31

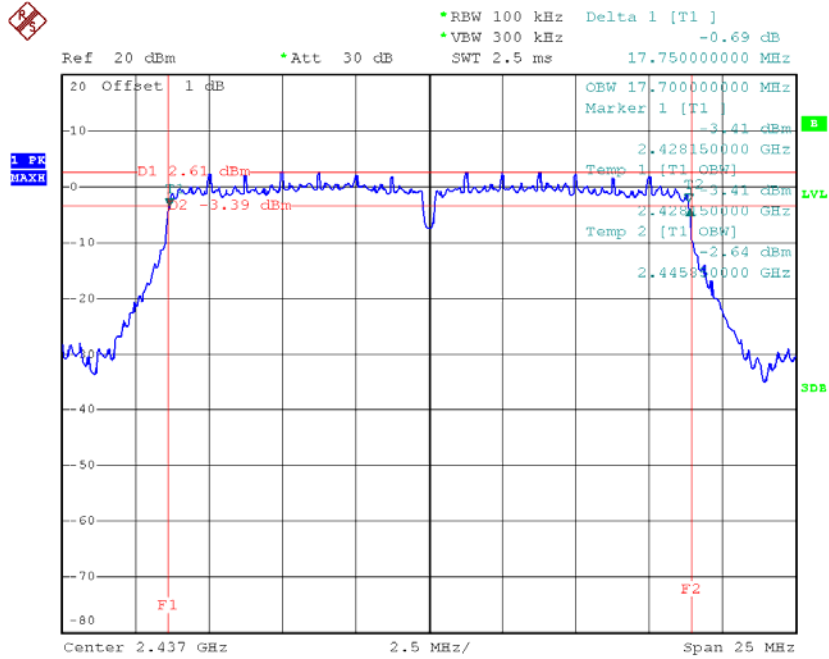
Test Mode : TX N-20MHz Mode_CH01/06/11_ANT 1

TX CH 01



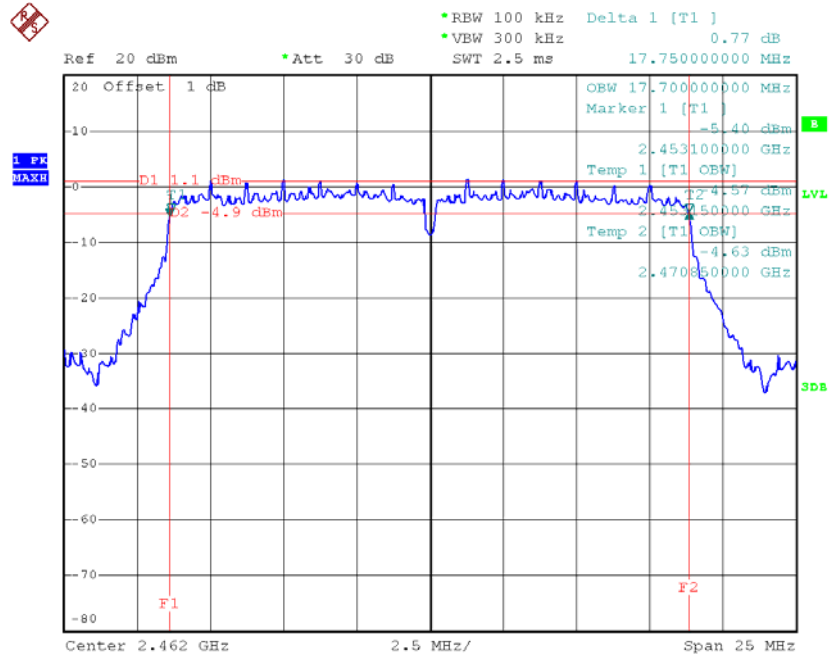
Date: 25.JUN.2014 07:44:35

TX CH 06



Date: 25.JUN.2014 07:47:24

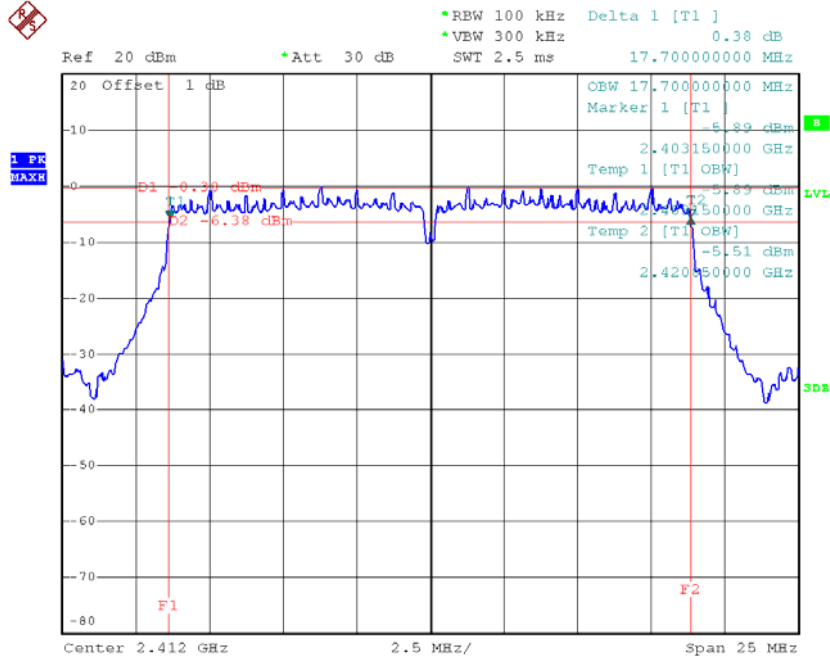
TX CH 11



Date: 25.JUN.2014 07:50:29

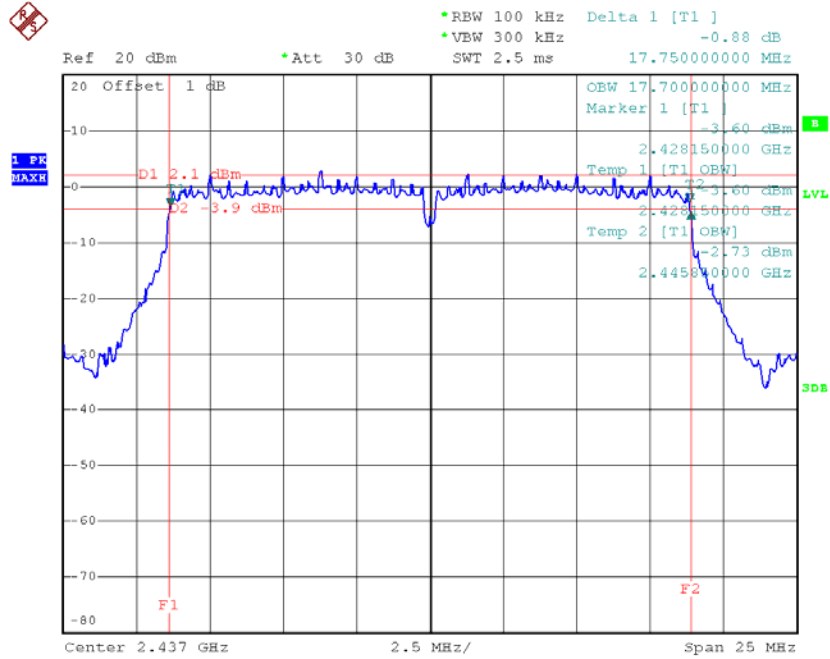
Test Mode : TX N-20MHz Mode_CH01/06/11_ANT 2

TX CH 01



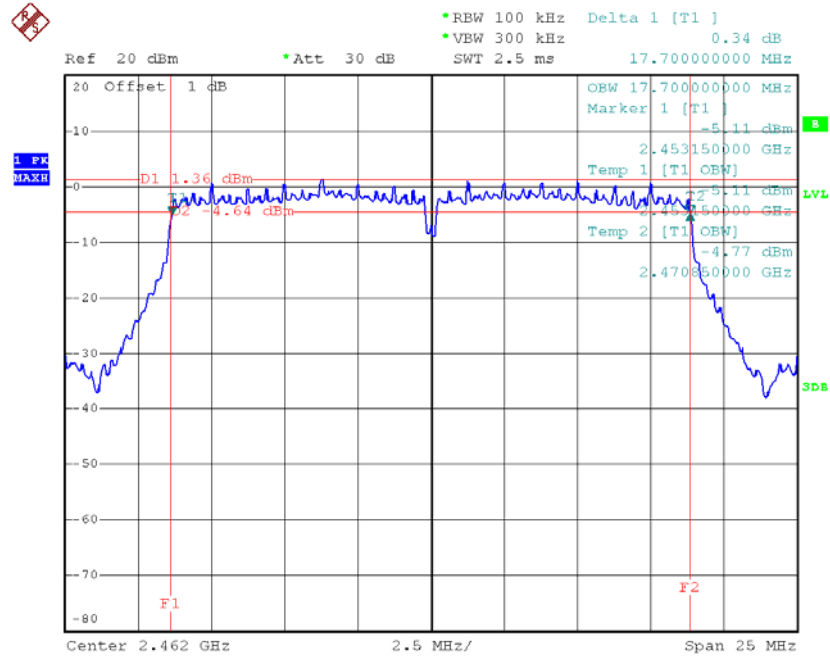
Date: 25.JUN.2014 08:03:36

TX CH 06



Date: 25.JUN.2014 08:05:56

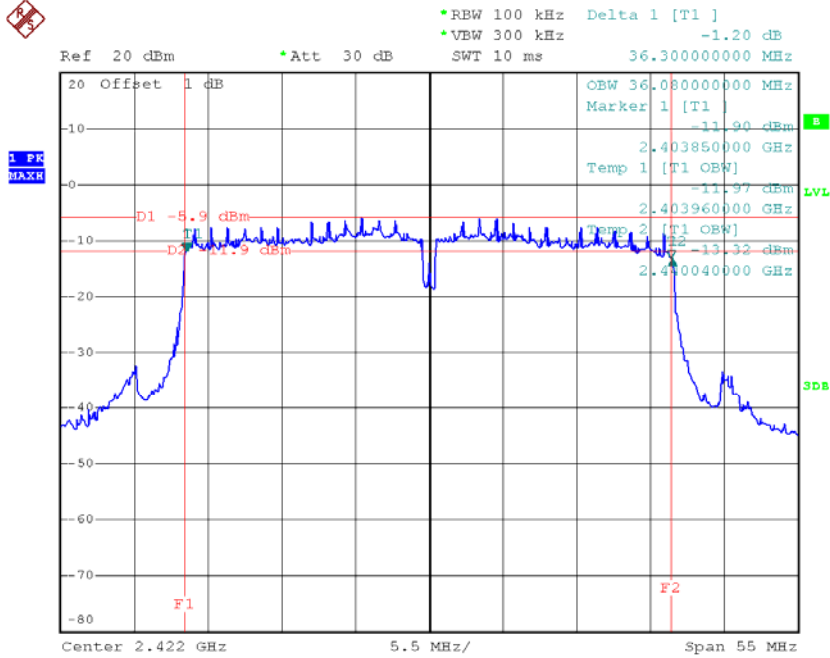
TX CH 11



Date: 25.JUN.2014 08:09:00

Test Mode : TX N-40MHz Mode_CH03/06/09_ANT 1

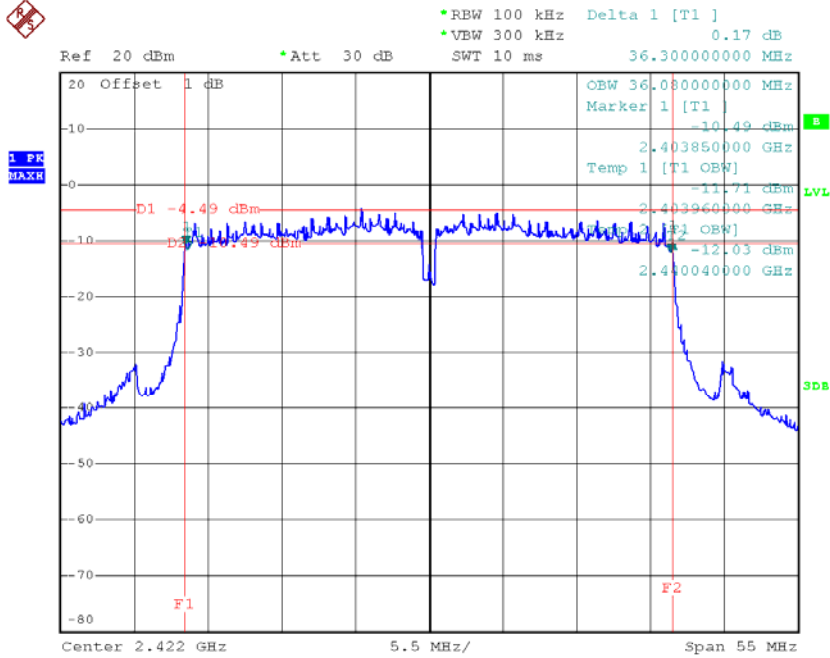
TX CH 03



Date: 26.JUN.2014 01:28:50

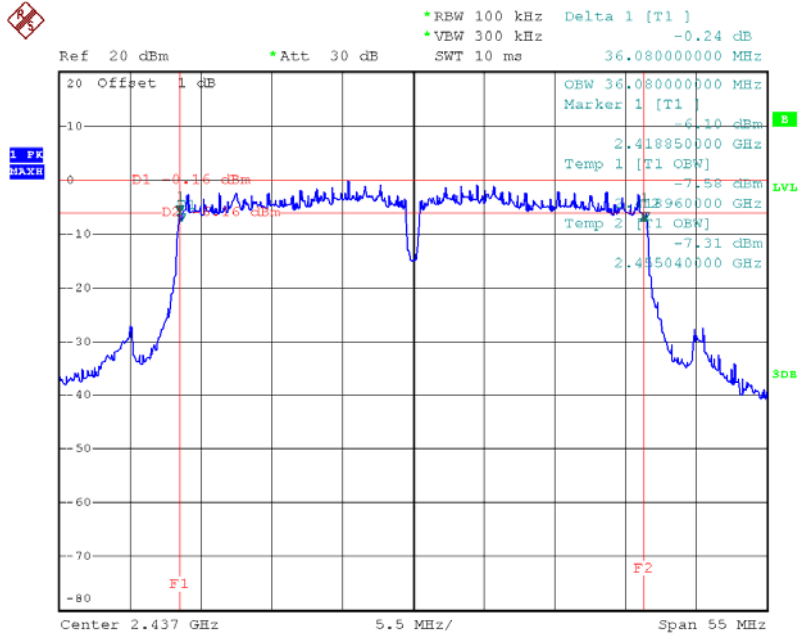
Test Mode : TX N-40MHz Mode_CH03/06/09_ANT 2

TX CH 03



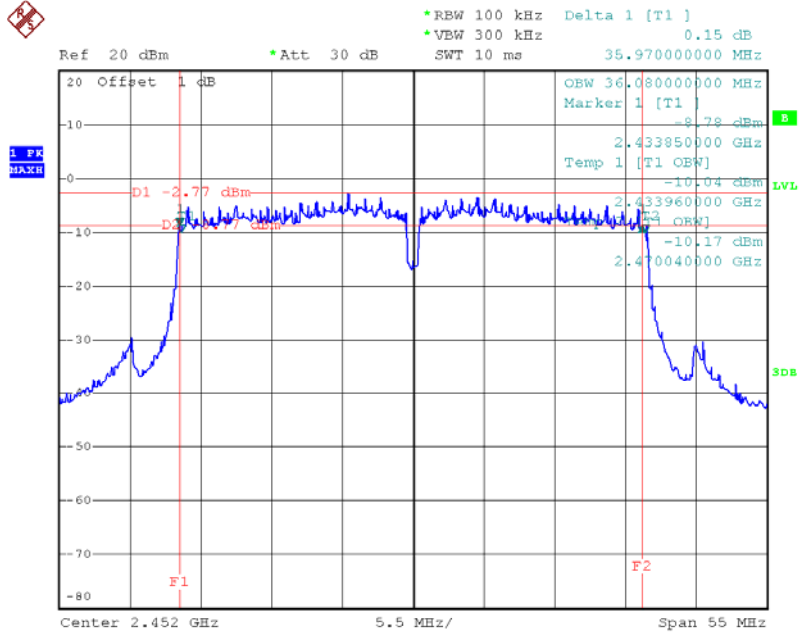
Date: 26.JUN.2014 01:50:03

TX CH 06



Date: 26.JUN.2014 01:52:31

TX CH 09



Date: 26.JUN.2014 01:56:53

ATTACHMENT F - MAXIMUM OUTPUT POWER

Test Mode : TX B Mode

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	23.78	30	1
CH06	2437	24.30	30	1
CH11	2462	23.60	30	1

Test Mode : TX G Mode

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	25.84	30	1
CH06	2437	26.27	30	1
CH11	2462	26.06	30	1

Test Mode : TX N-20M Mode_ANT 1

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	23.52	30	1
CH06	2437	23.23	30	1
CH11	2462	22.74	30	1

Test Mode : TX N-20M Mode_ANT 2

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	23.59	30	1
CH06	2437	24.54	30	1
CH11	2462	23.63	30	1

Test Mode : TX N-20M Mode_Total

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	26.57	30	1
CH06	2437	26.94	30	1
CH11	2462	26.22	30	1

Test Mode : TX N-40M Mode_ANT 1

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH03	2422	21.04	30	1
CH06	2437	22.12	30	1
CH09	2452	21.03	30	1

Test Mode : TX N-40M Mode_ANT 2

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH03	2422	20.81	30	1
CH06	2437	22.72	30	1
CH09	2452	21.08	30	1

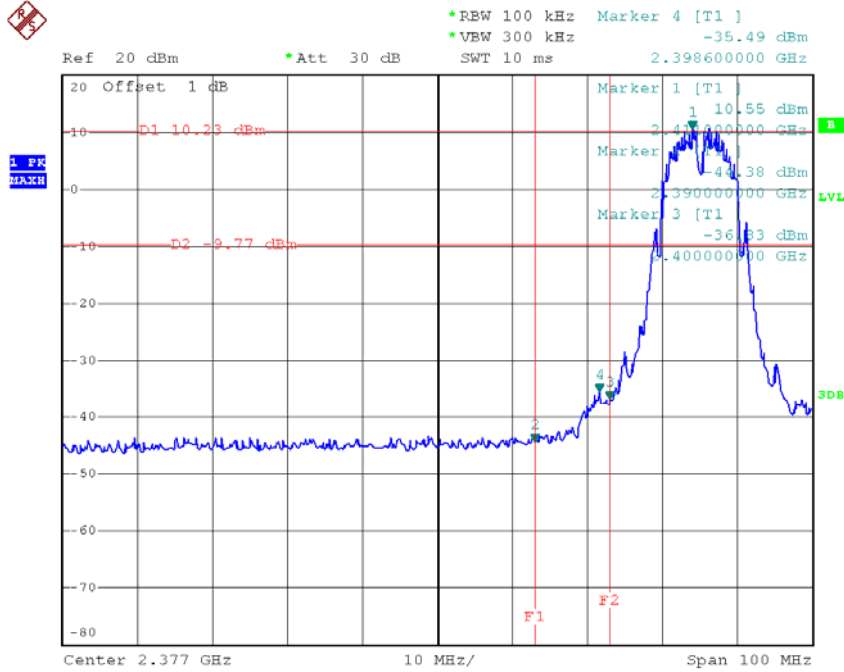
Test Mode : TX N-40M Mode_Total

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH03	2422	23.94	30	1
CH06	2437	25.44	30	1
CH09	2452	24.07	30	1

**ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS
EMISSION**

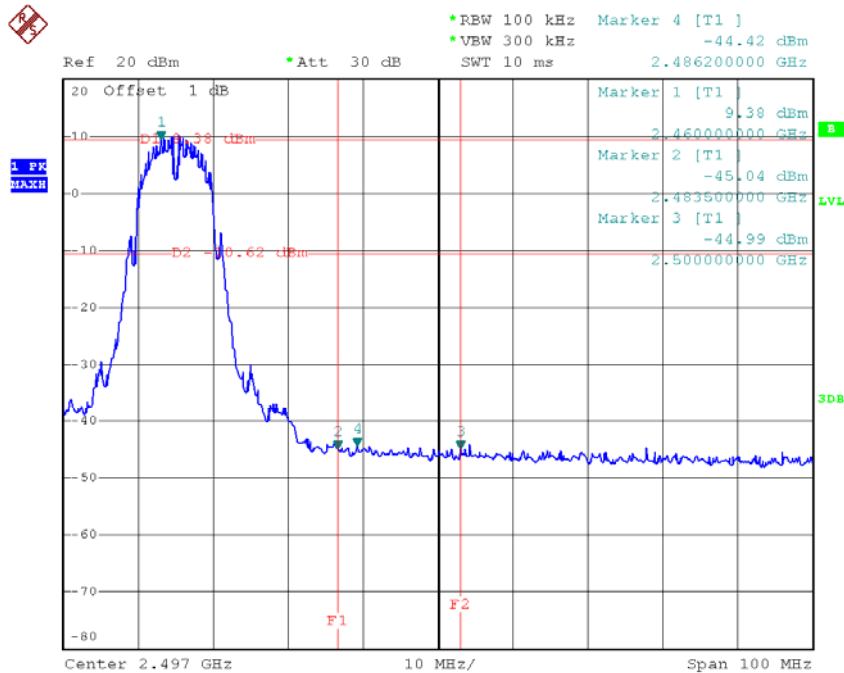
Test Mode : TX B Mode

TX B mode CH01



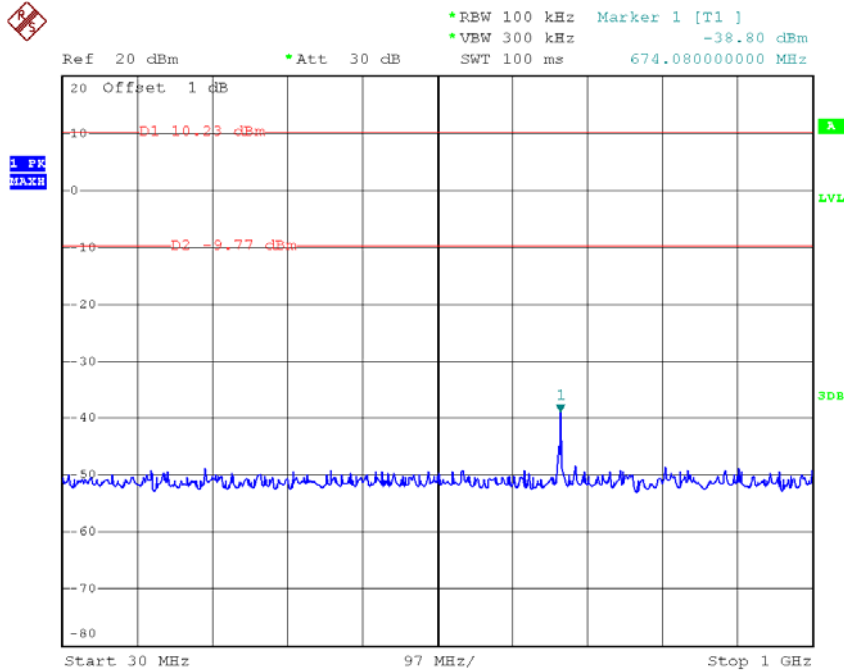
Date: 25.JUN.2014 06:03:55

TX B mode CH11



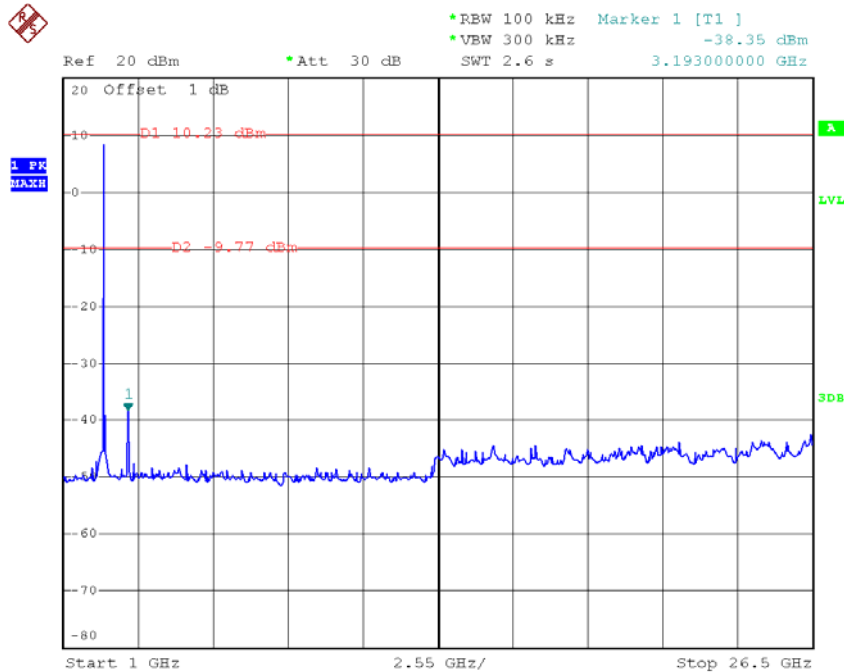
Date: 25.JUN.2014 05:57:02

TX B mode CH01 (30MHz to 1000MHz)



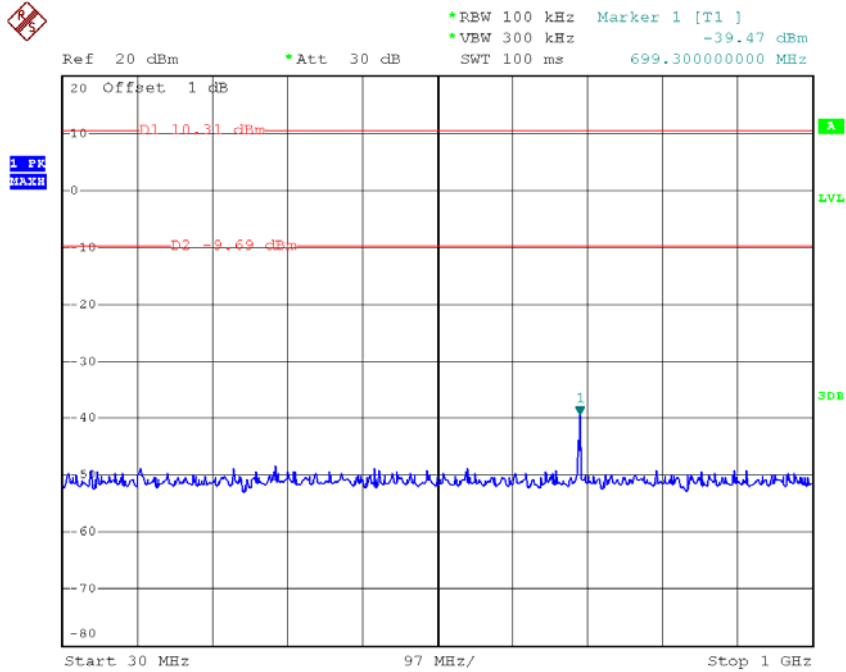
Date: 25.JUN.2014 06:04:34

TX B mode CH01 (1000MHz to 10th Harmonic)



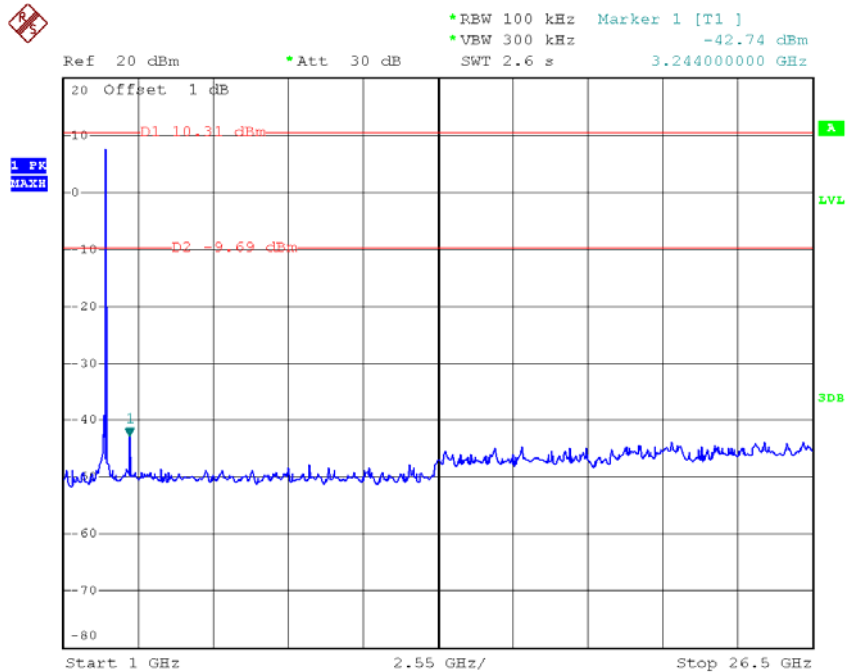
Date: 25.JUN.2014 06:04:52

TX B mode CH06 (30MHz to 1000MHz)



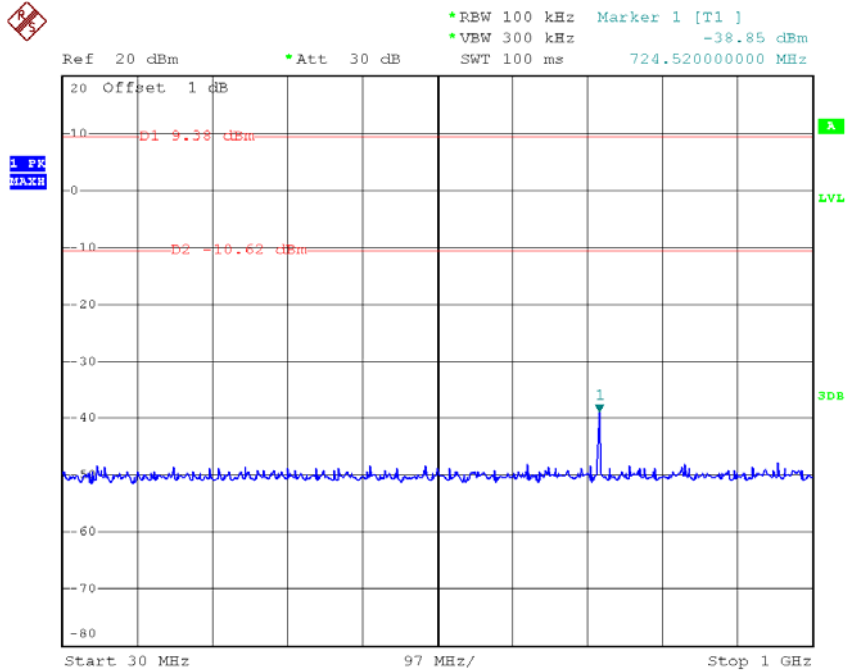
Date: 25.JUN.2014 06:01:42

TX B mode CH06 (1000MHz to 10th Harmonic)



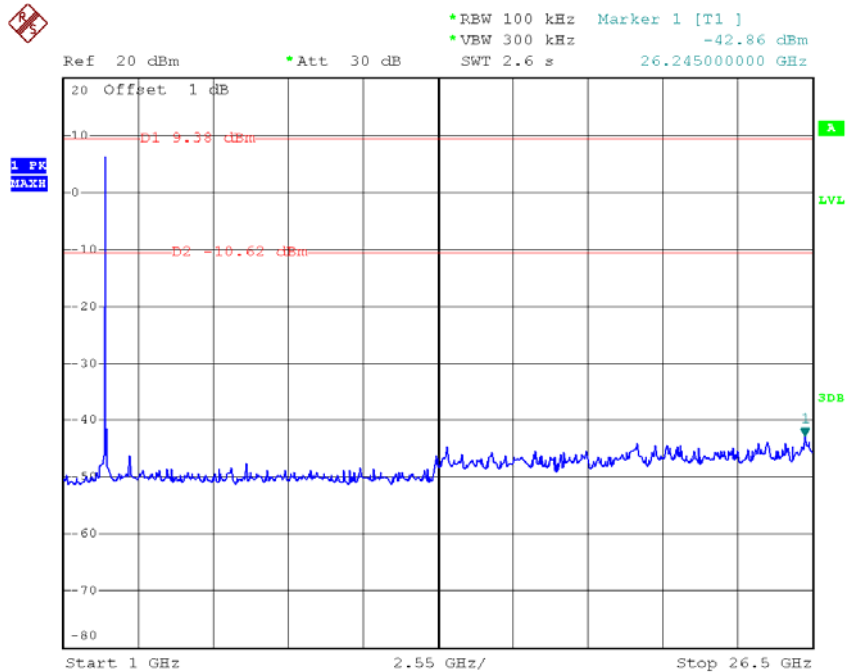
Date: 25.JUN.2014 06:02:03

TX B mode CH11 (30MHz to 1000MHz)



Date: 25.JUN.2014 05:58:55

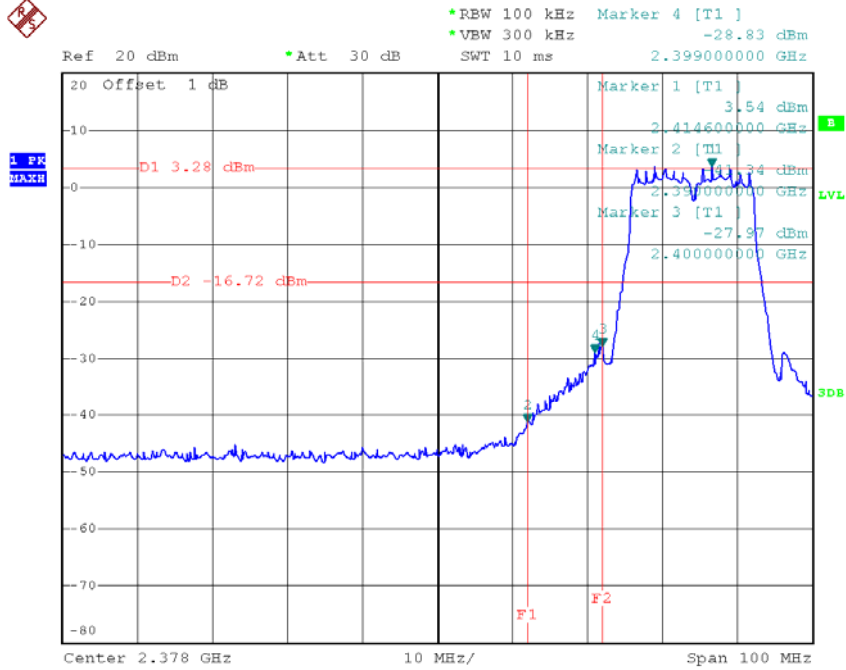
TX B mode CH11 (1000MHz to 10th Harmonic)



Date: 25.JUN.2014 05:59:18

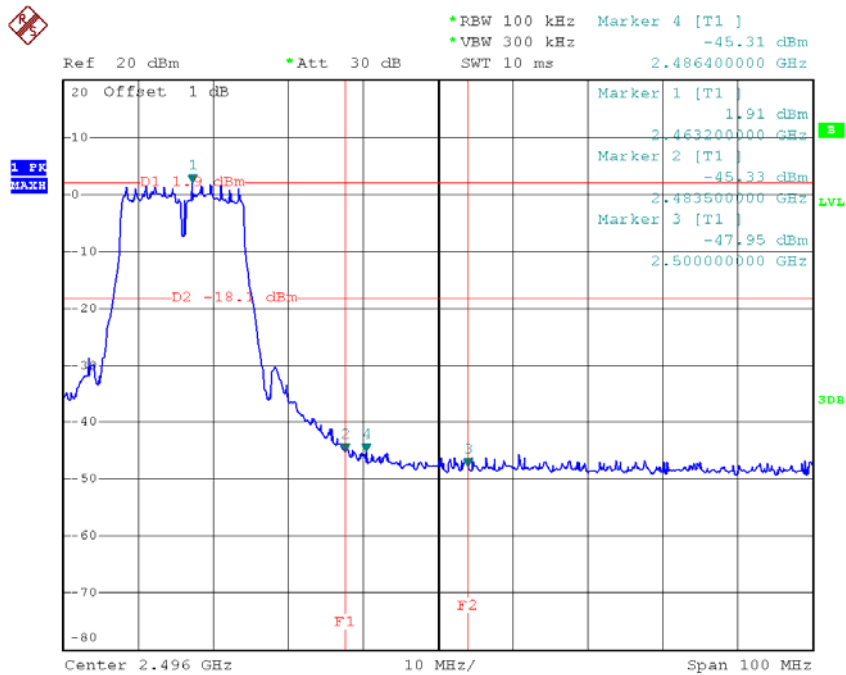
Test Mode : TX G Mode

TX G mode CH01



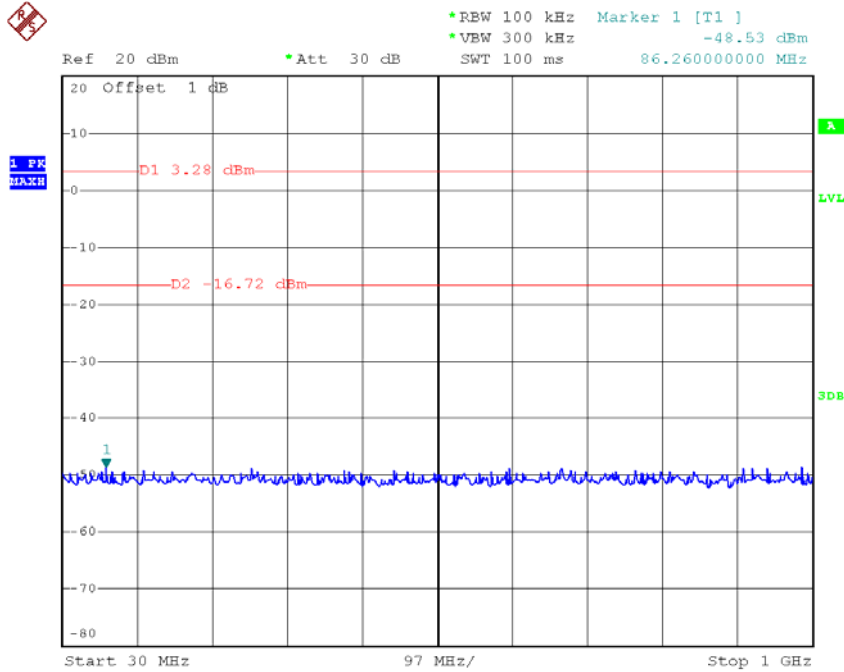
Date: 25.JUN.2014 07:17:42

TX G mode CH11



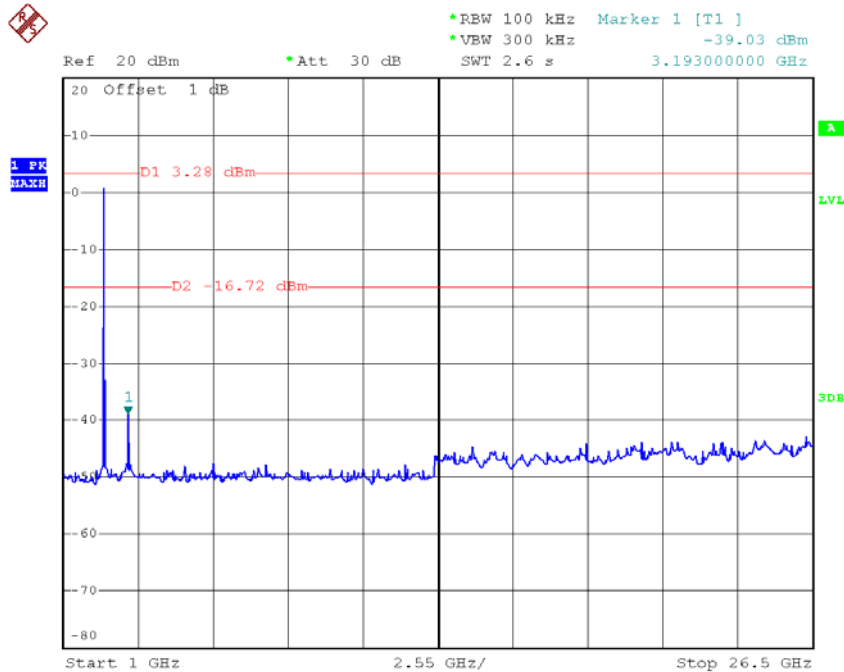
Date: 25.JUN.2014 07:02:23

TX G mode CH01 (30MHz to 1000MHz)



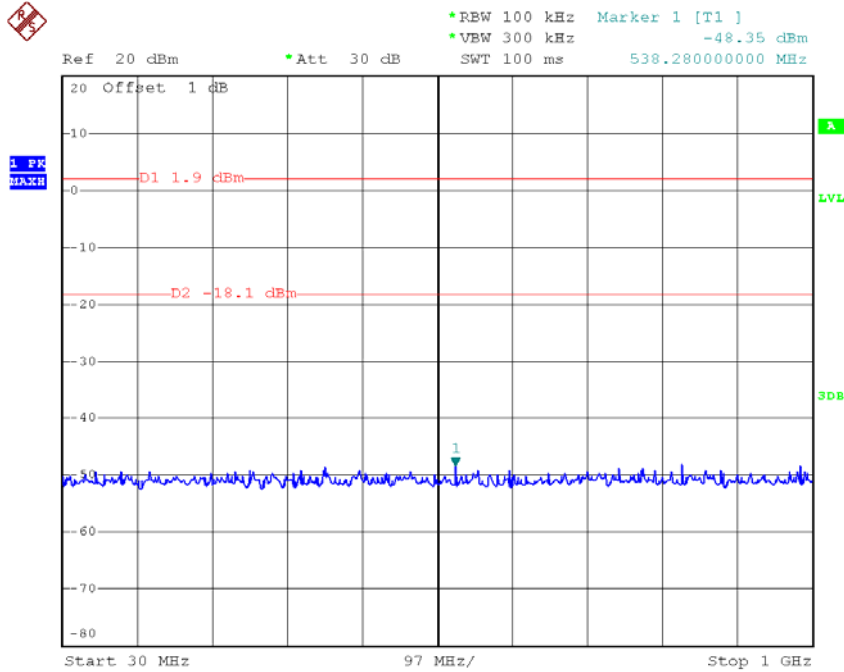
Date: 25.JUN.2014 07:18:16

TX G mode CH01 (1000MHz to 10th Harmonic)



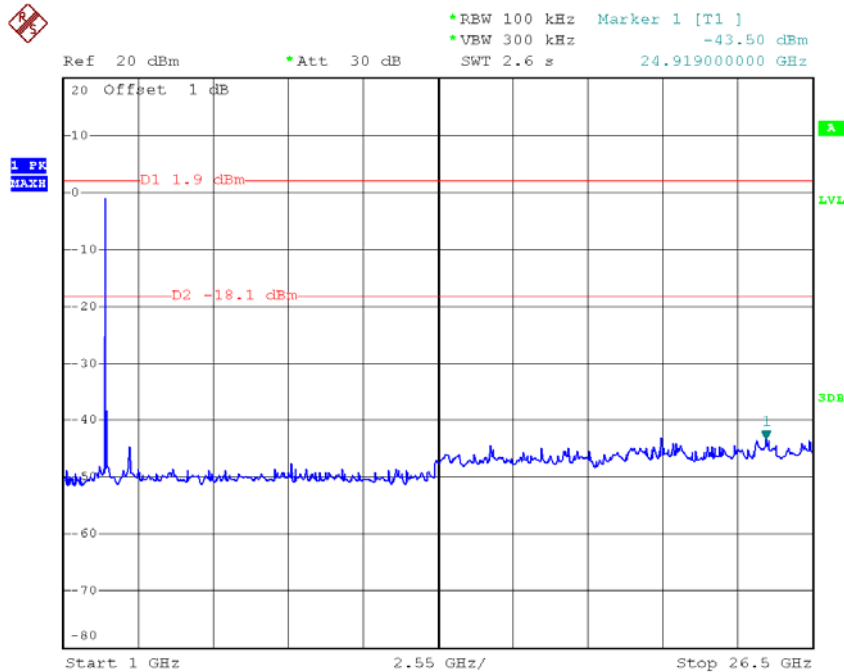
Date: 25.JUN.2014 07:18:35

TX G mode CH11 (30MHz to 1000MHz)



Date: 25.JUN.2014 07:03:17

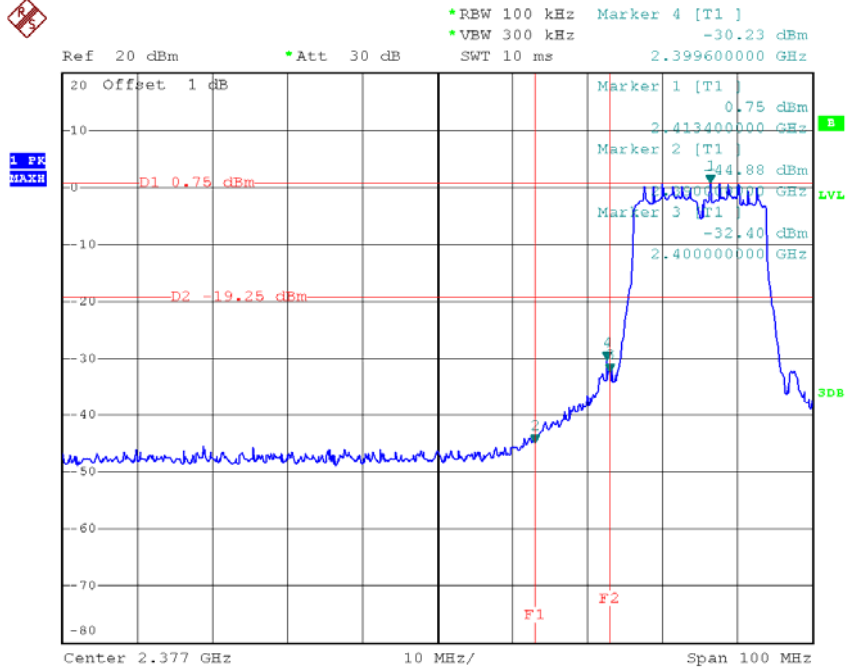
TX G mode CH11 (1000MHz to 10th Harmonic)



Date: 25.JUN.2014 07:03:33

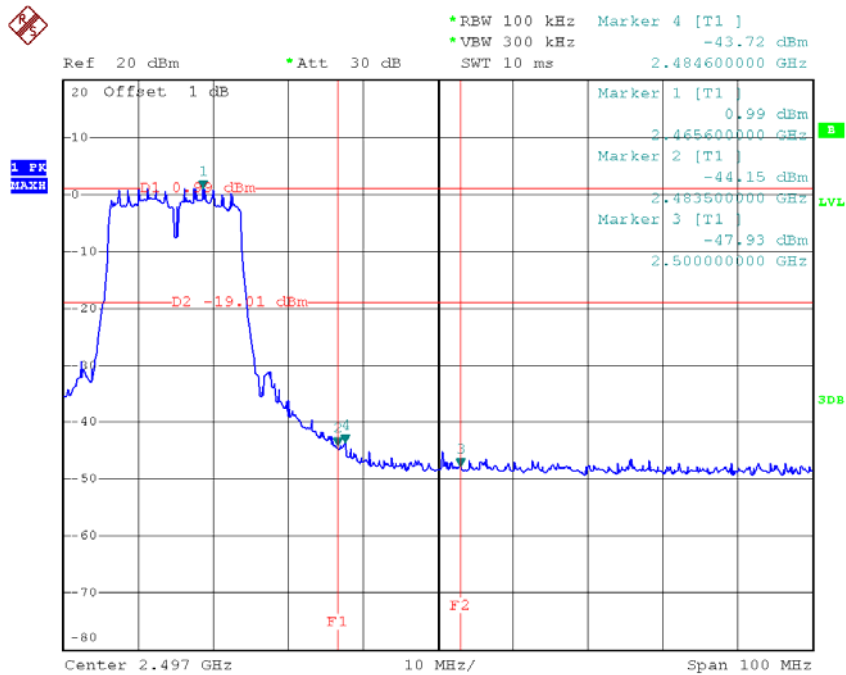
Test Mode : TX N-20M Mode_ANT 1

TX HT20 mode CH01



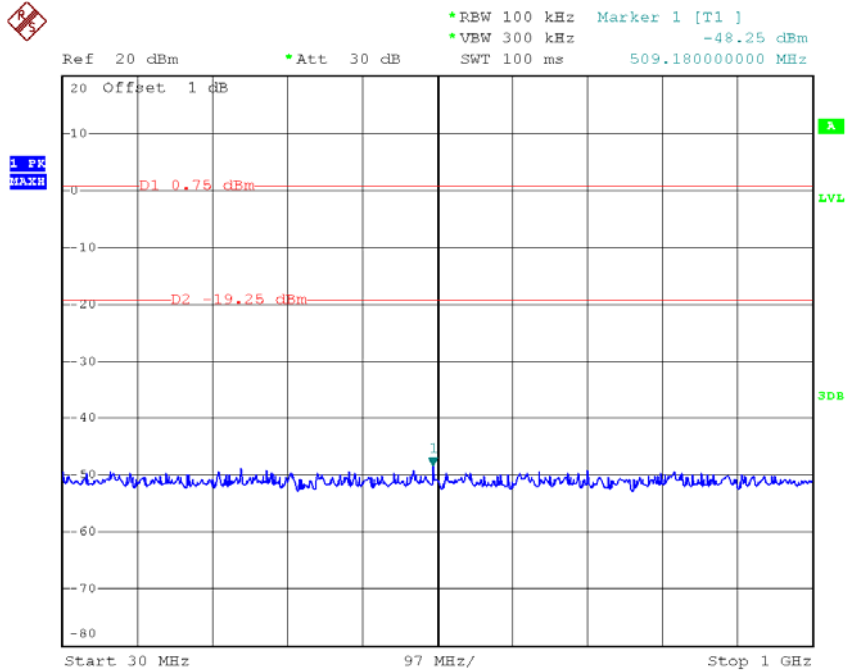
Date: 25.JUN.2014 07:58:07

TX HT20 mode CH11



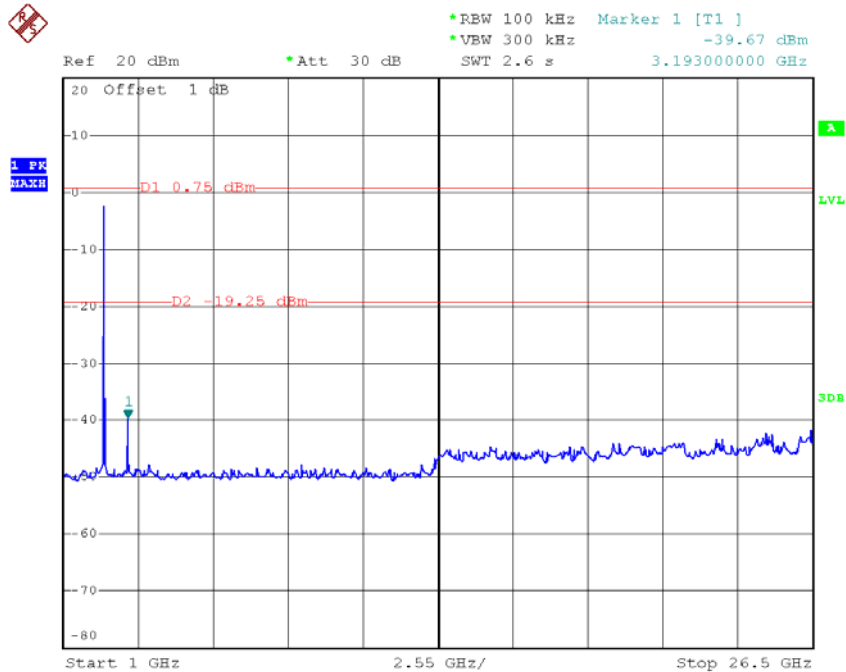
Date: 25.JUN.2014 07:52:56

TX HT20 mode CH01 (30MHz to 1000MHz)



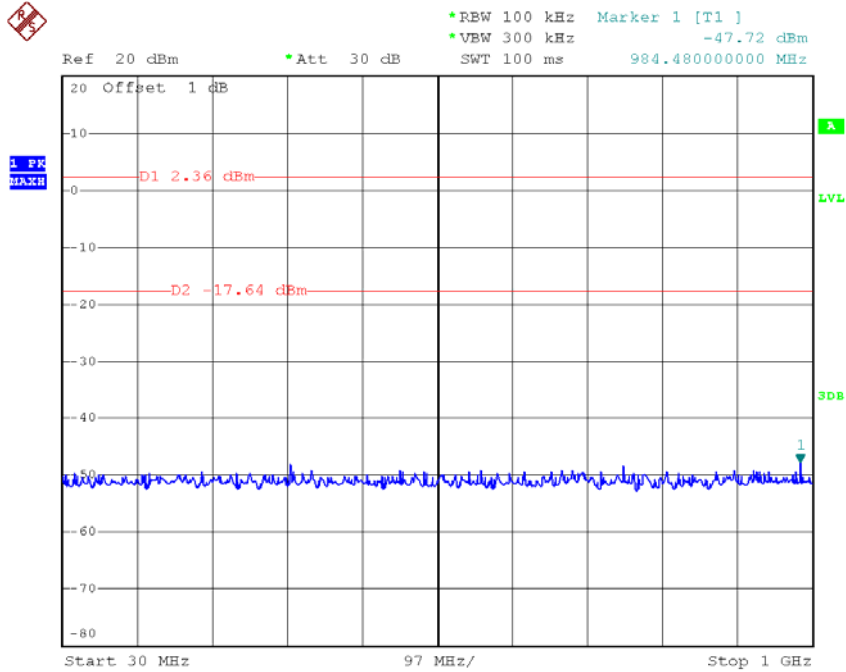
Date: 25.JUN.2014 07:58:49

TX HT20 mode CH01 (1000MHz to 10th Harmonic)



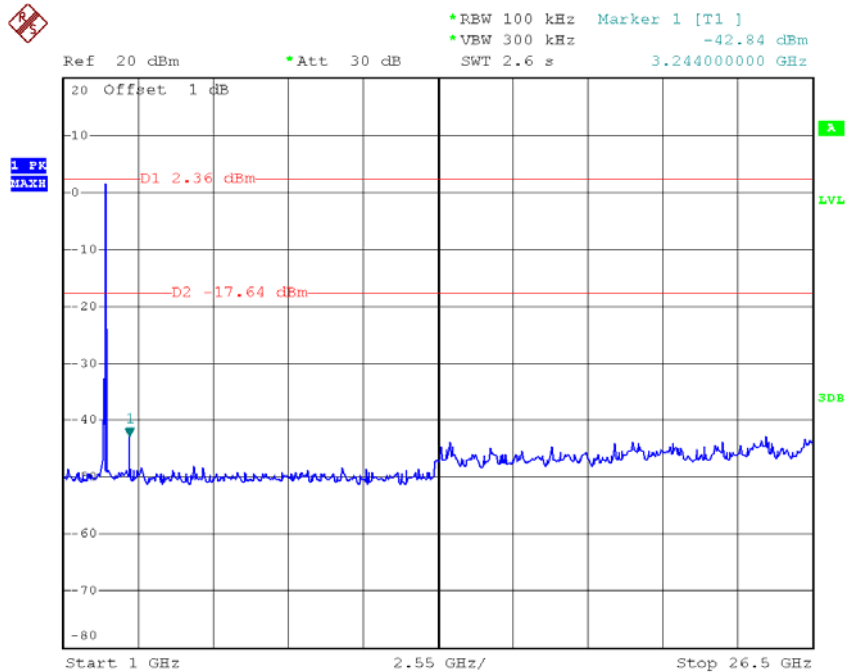
Date: 25.JUN.2014 07:59:25

TX HT20 mode CH06 (30MHz to 1000MHz)



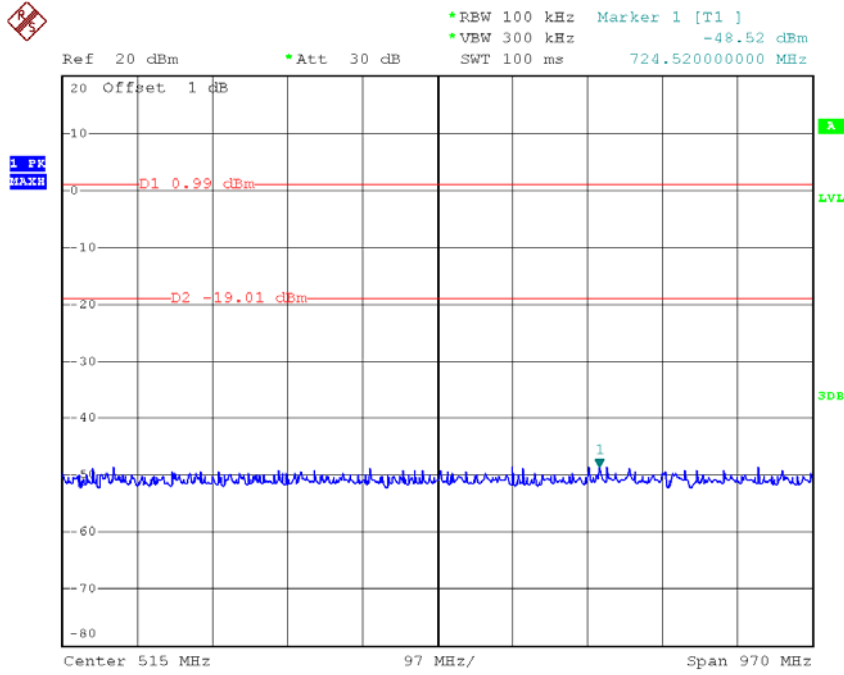
Date: 25.JUN.2014 07:55:52

TX HT20 mode CH06 (1000MHz to 10th Harmonic)



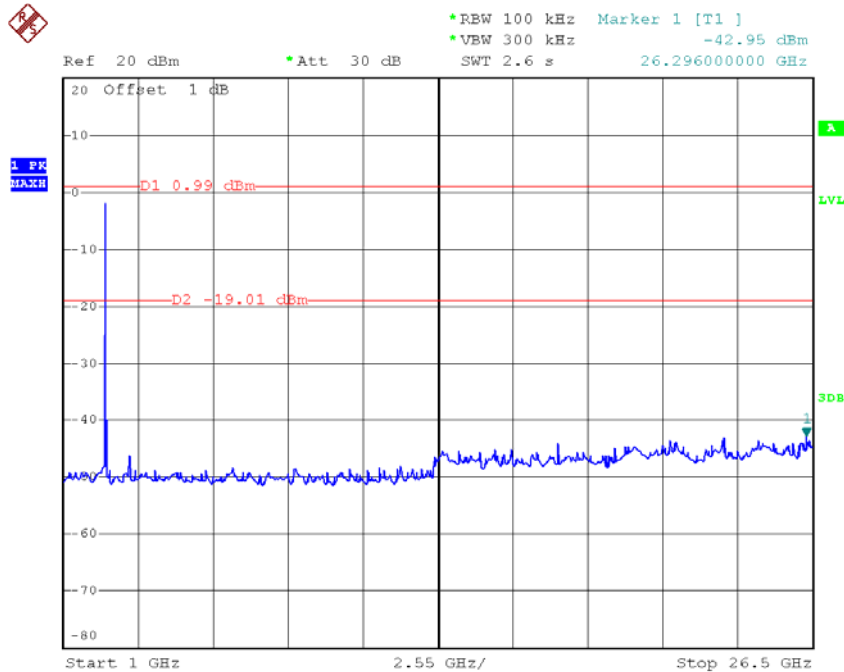
Date: 25.JUN.2014 07:56:09

TX HT20 mode CH11 (30MHz to 1000MHz)



Date: 25.JUN.2014 07:53:48

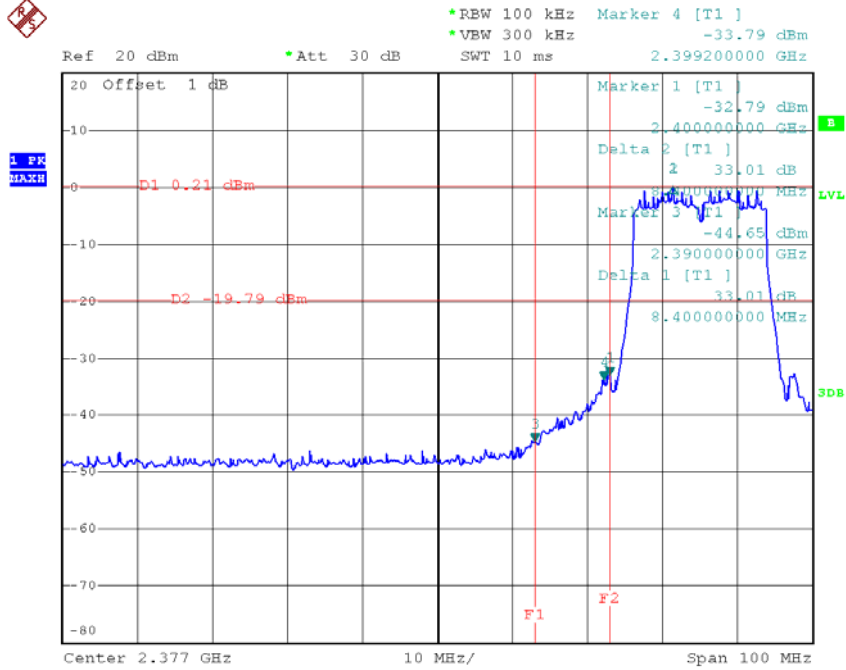
TX HT20 mode CH11 (1000MHz to 10th Harmonic)



Date: 25.JUN.2014 07:54:11

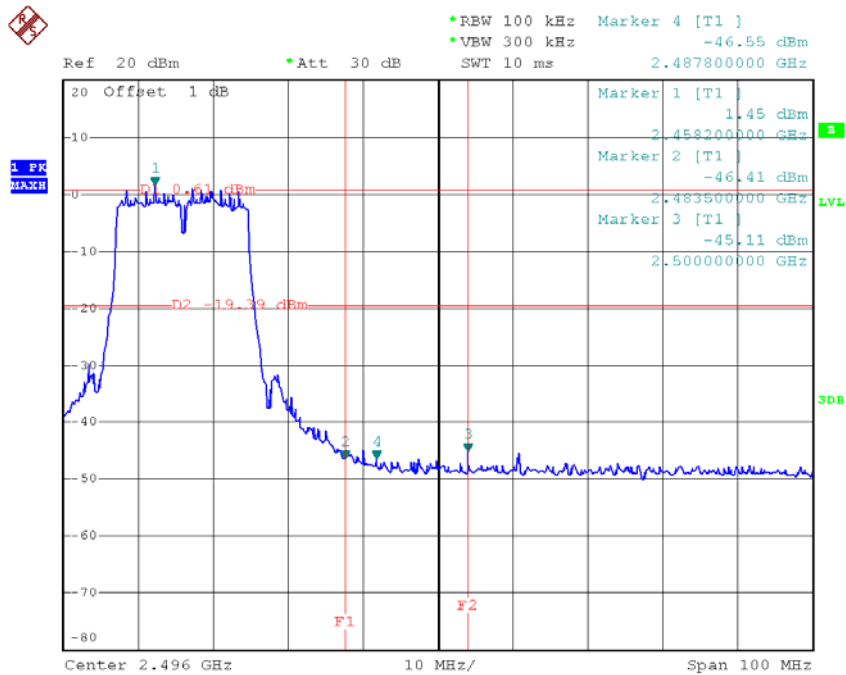
Test Mode : TX N-20M Mode_ANT 2

TX HT20 mode CH01



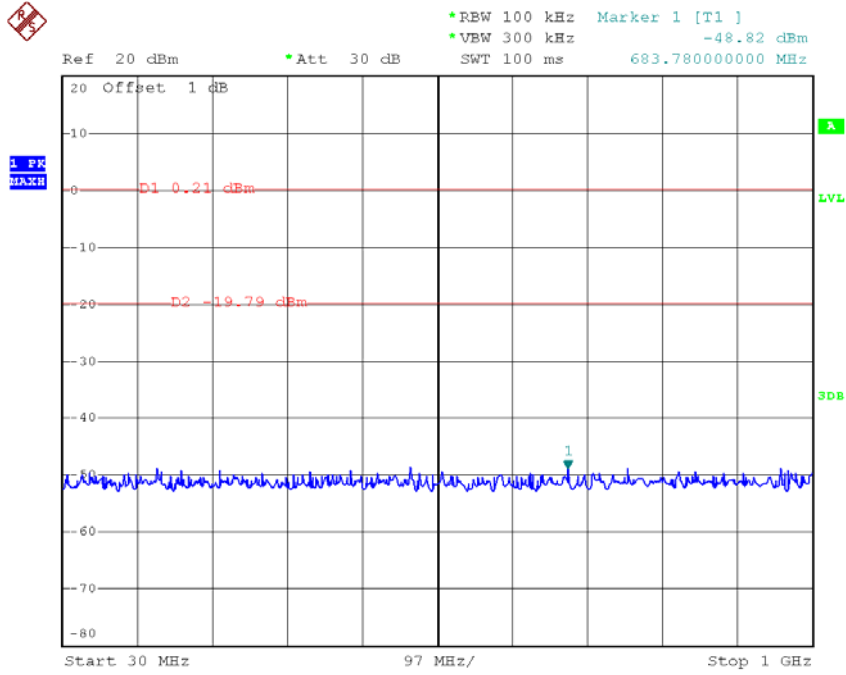
Date: 25.JUN.2014 08:18:10

TX HT20 mode CH11



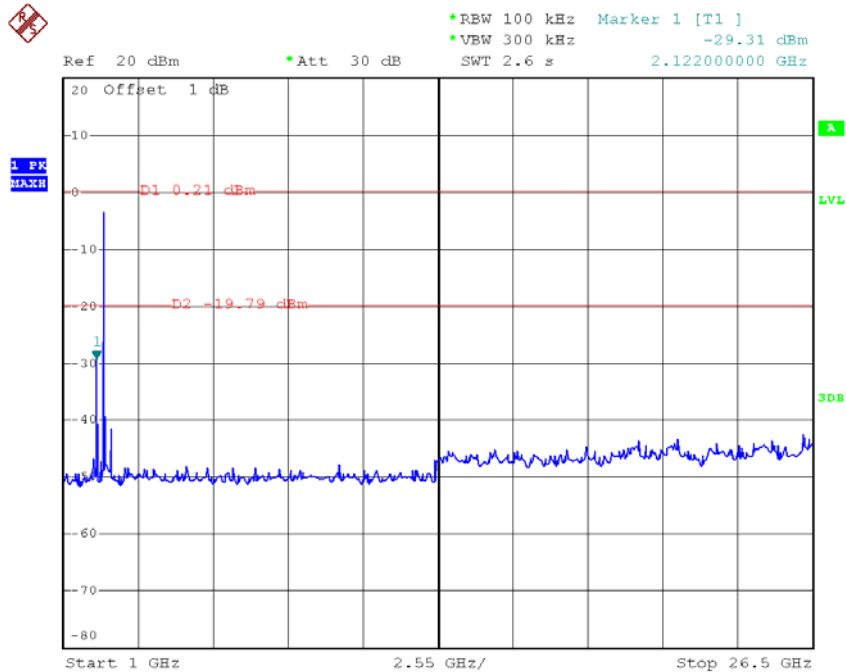
Date: 25.JUN.2014 08:10:21

TX HT20 mode CH01 (30MHz to 1000MHz)



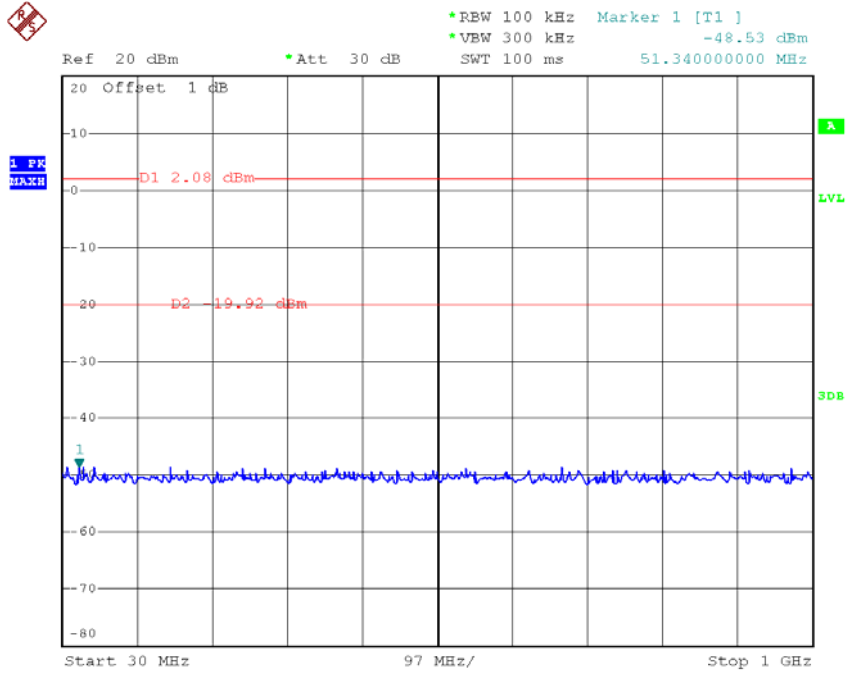
Date: 25.JUN.2014 08:18:53

TX HT20 mode CH01 (1000MHz to 10th Harmonic)



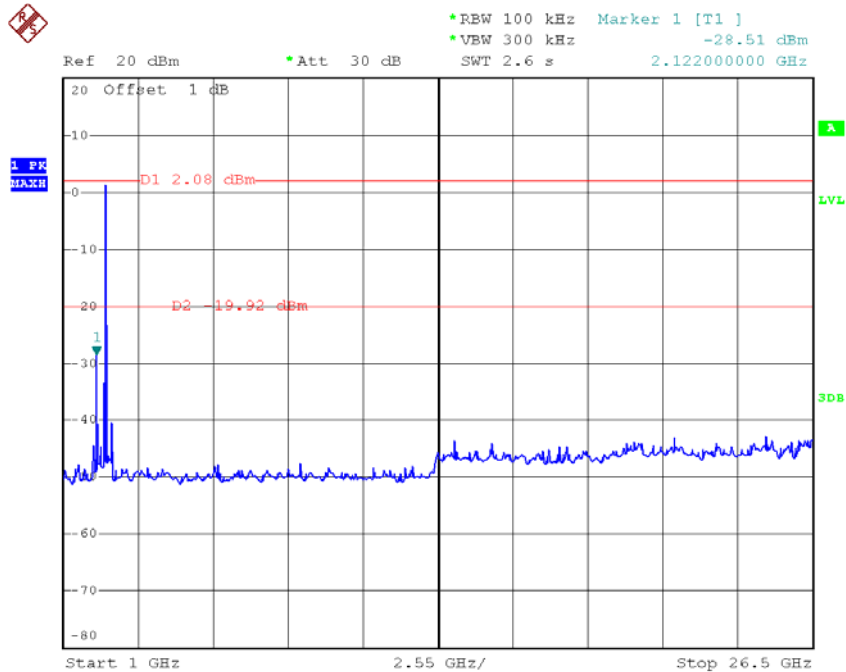
Date: 25.JUN.2014 08:19:10

TX HT20 mode CH06 (30MHz to 1000MHz)



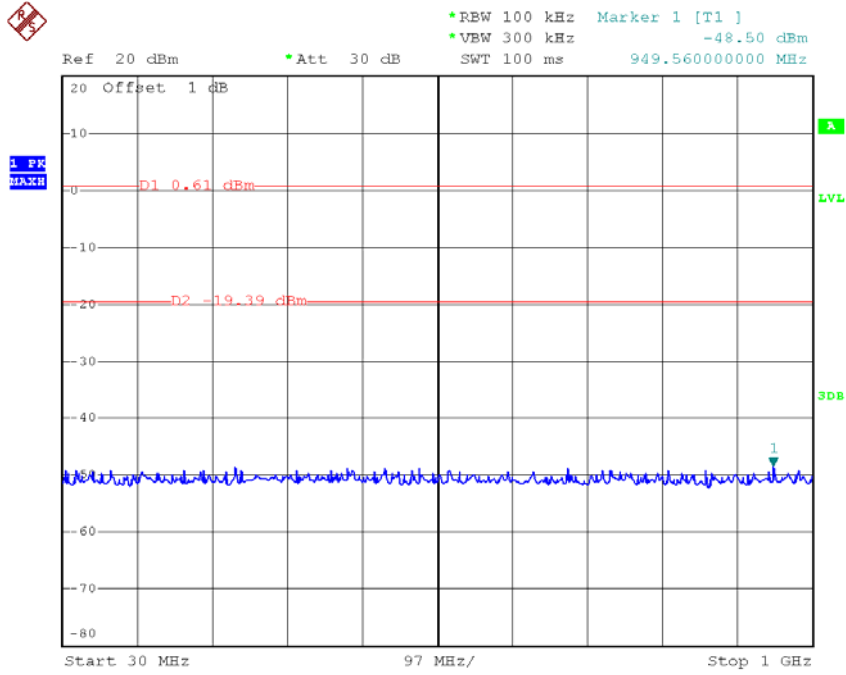
Date: 25.JUN.2014 08:15:00

TX HT20 mode CH06 (1000MHz to 10th Harmonic)



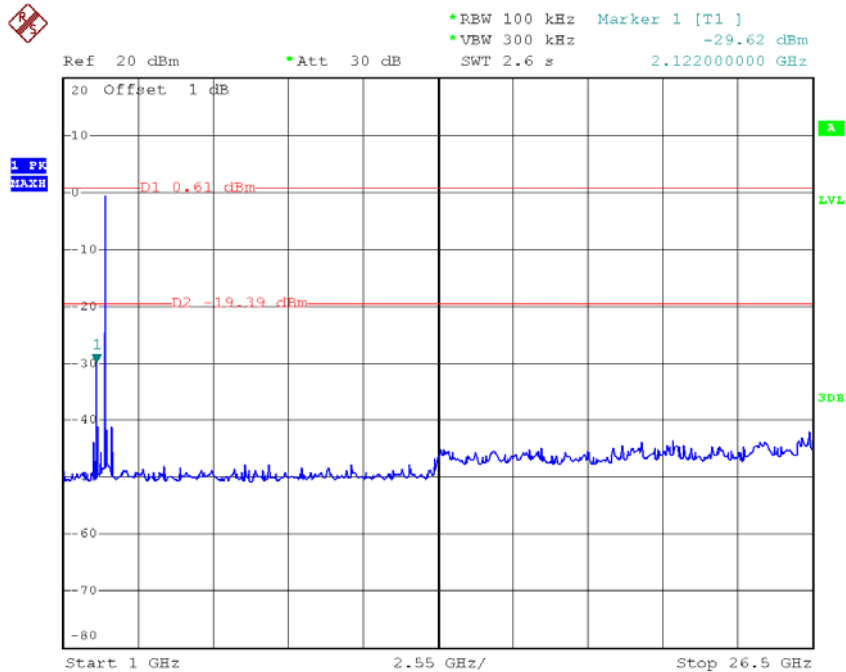
Date: 25.JUN.2014 08:15:24

TX HT20 mode CH11 (30MHz to 1000MHz)



Date: 25.JUN.2014 08:11:45

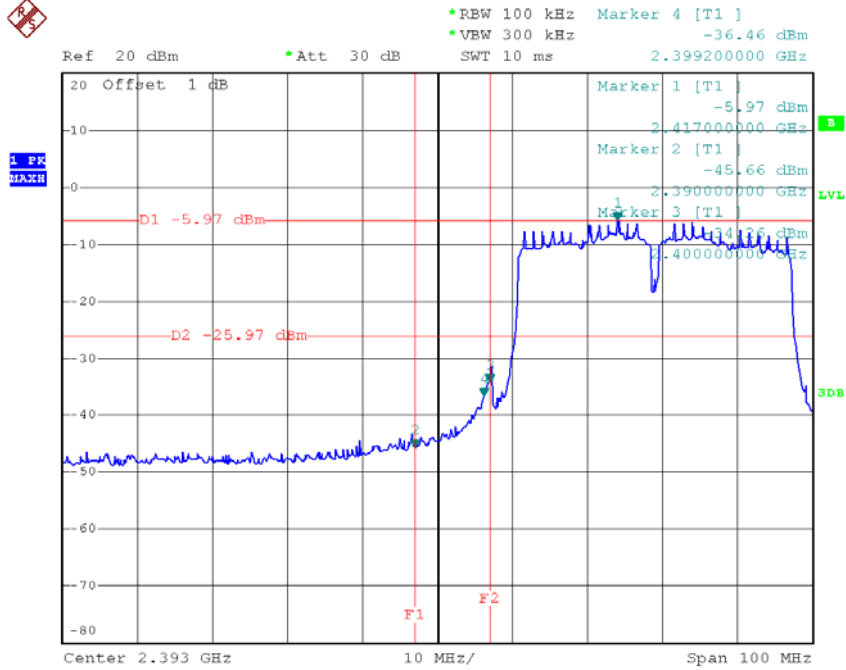
TX HT20 mode CH11 (1000MHz to 10th Harmonic)



Date: 25.JUN.2014 08:12:17

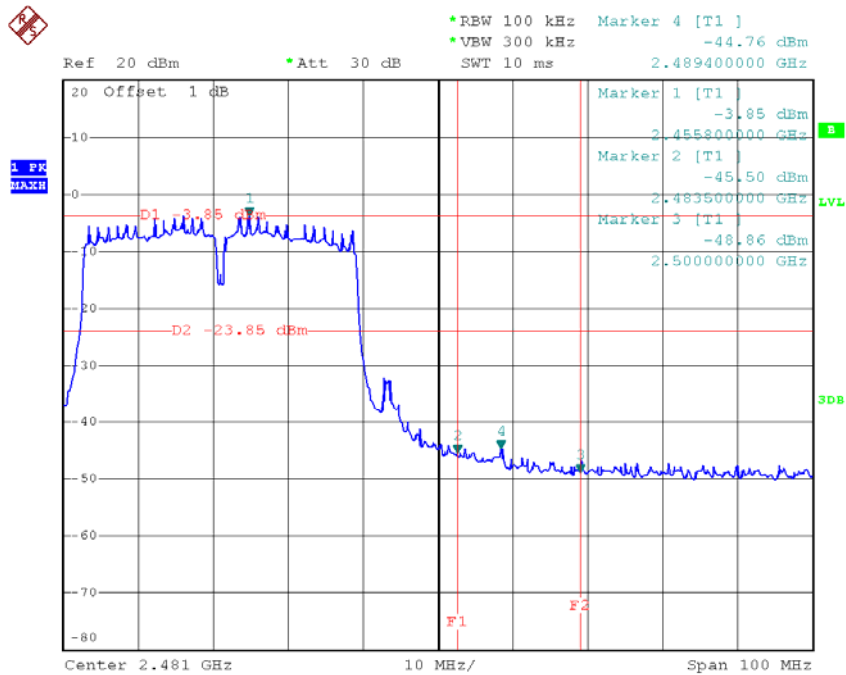
Test Mode : TX N-40M Mode_ANT 1

TX HT40 mode CH03



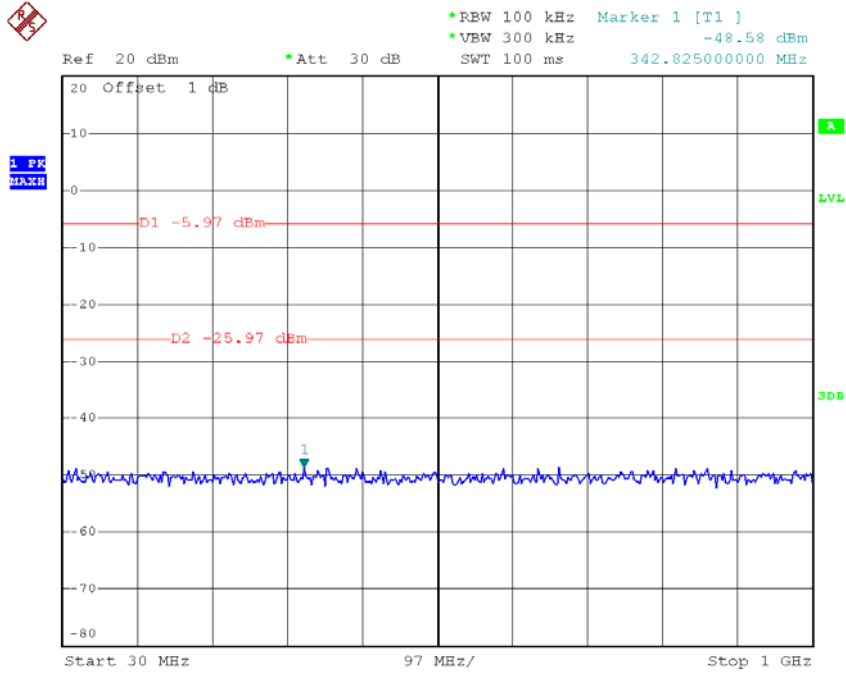
Date: 26.JUN.2014 01:45:03

TX HT40 mode CH09



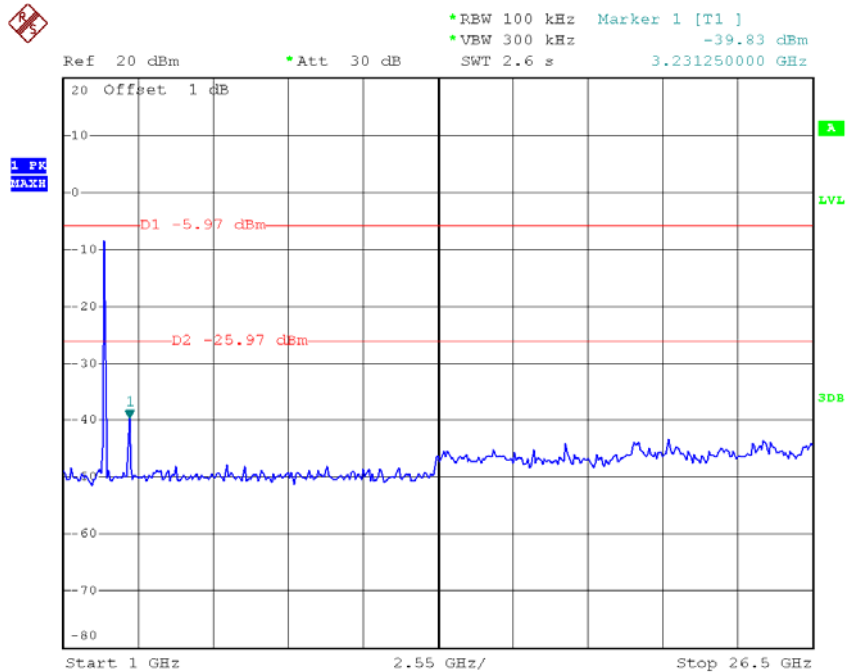
Date: 26.JUN.2014 01:38:48

TX HT40 mode CH03 (30MHz to 1000MHz)



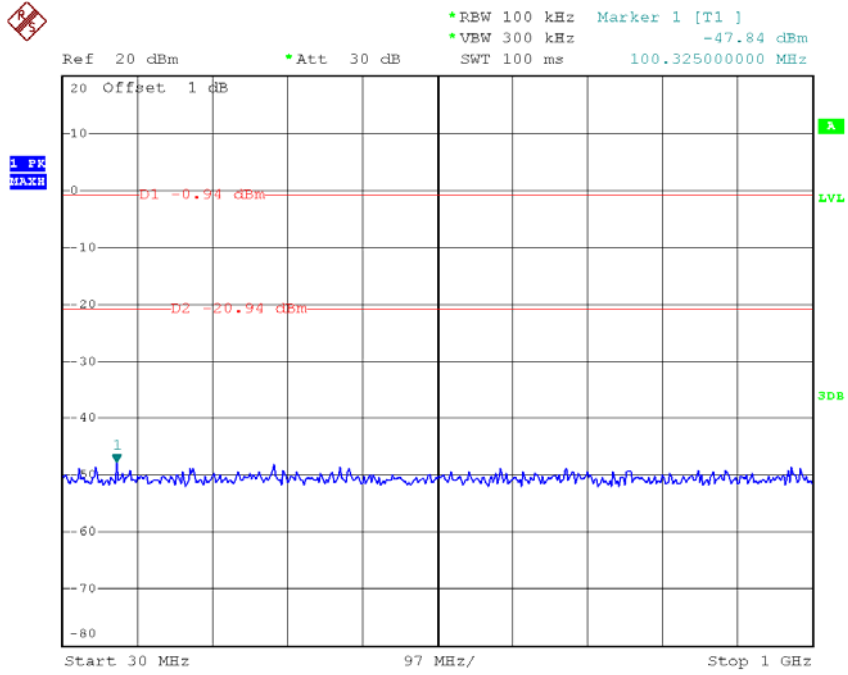
Date: 26.JUN.2014 01:45:41

TX HT40 mode CH03 (1000MHz to 10th Harmonic)



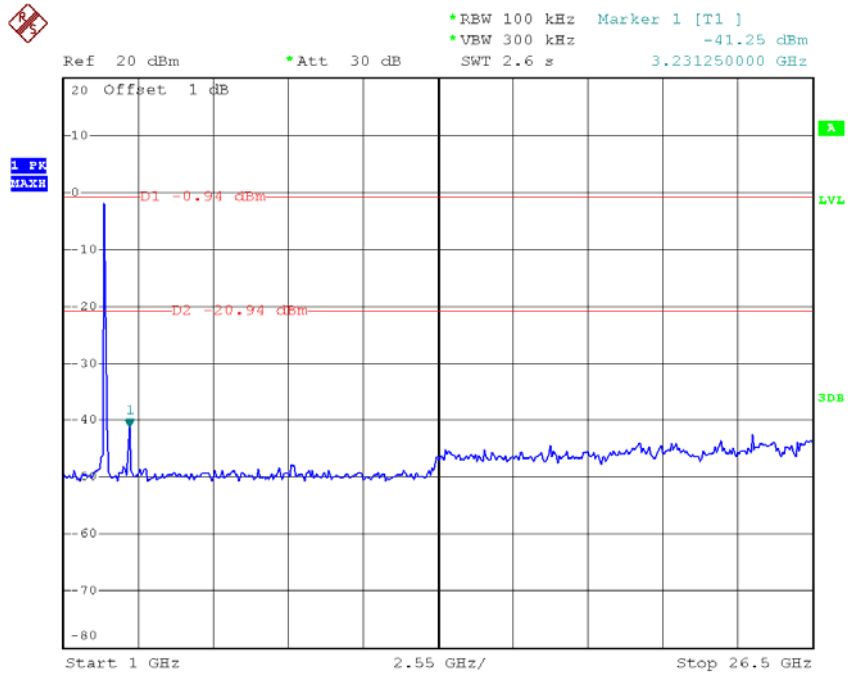
Date: 26.JUN.2014 01:45:59

TX HT40 mode CH06 (30MHz to 1000MHz)



Date: 26.JUN.2014 01:42:08

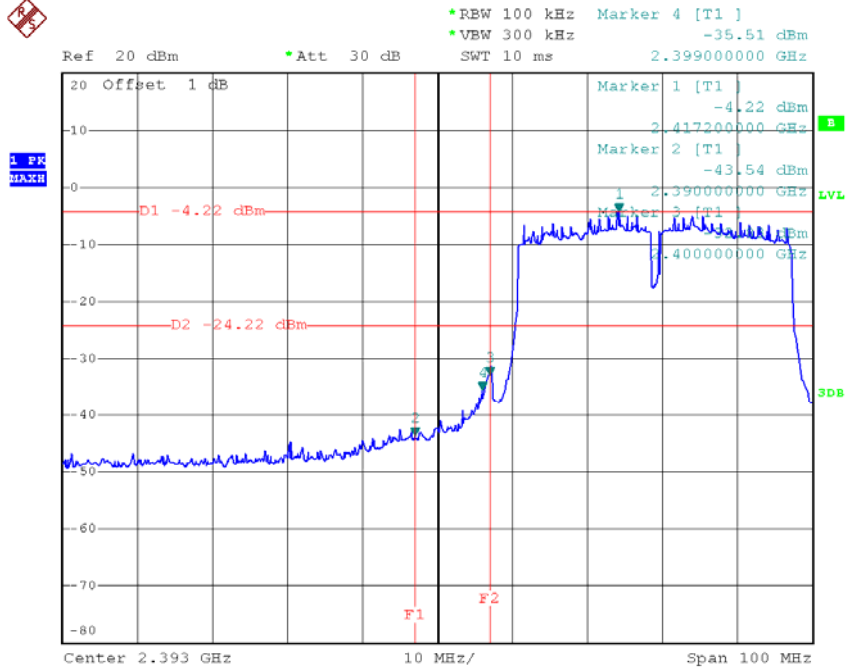
TX HT40 mode CH06 (1000MHz to 10th Harmonic)



Date: 26.JUN.2014 01:42:33

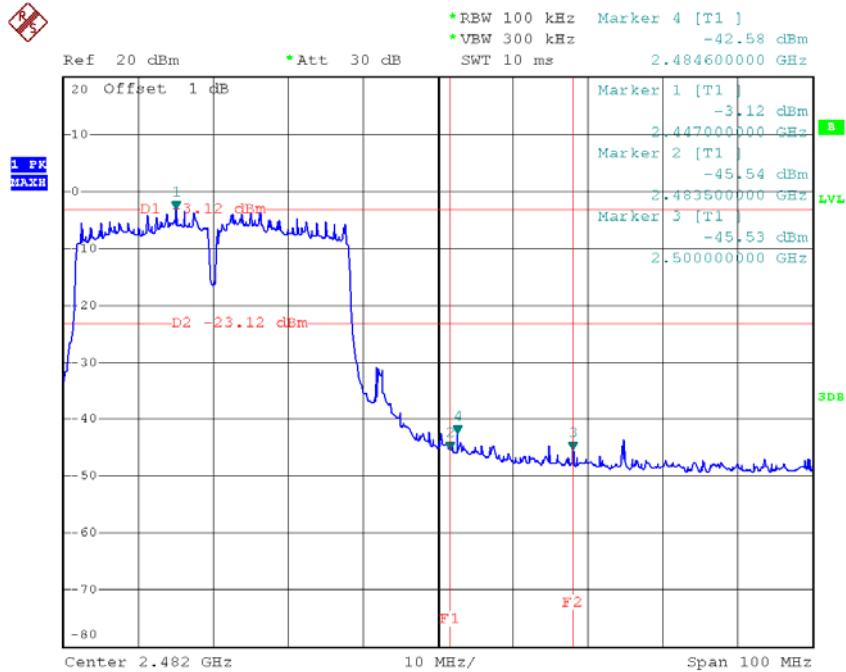
Test Mode : TX N-40M Mode_ANT 2

TX HT40 mode CH03



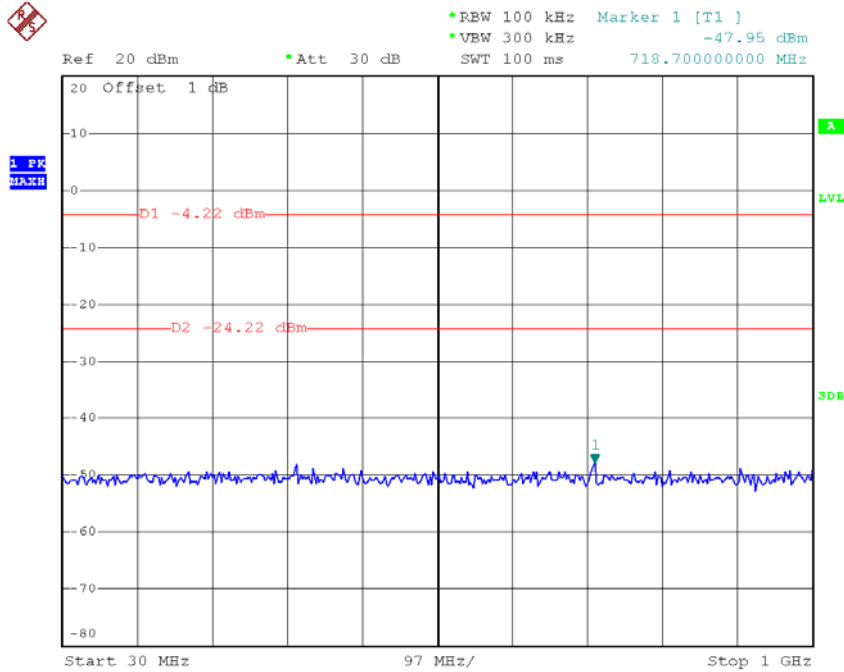
Date: 26.JUN.2014 02:04:47

TX HT40 mode CH09



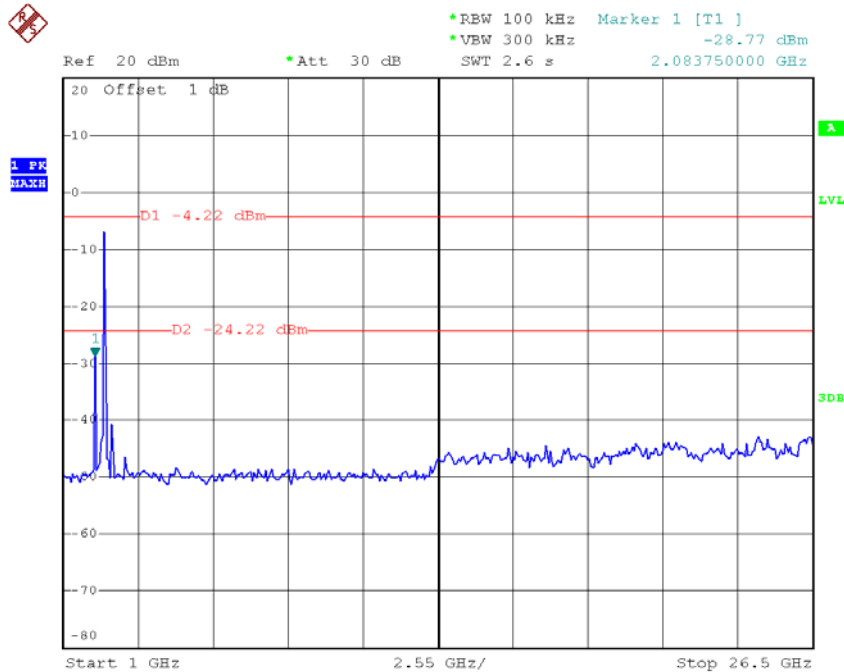
Date: 26.JUN.2014 01:58:39

TX HT40 mode CH03 (30MHz to 1000MHz)



Date: 26.JUN.2014 02:05:34

TX HT40 mode CH03 (1000MHz to 10th Harmonic)



Date: 26.JUN.2014 02:05:53