FCC&IC Radio Test Report

FCC ID: VOB-P1988W

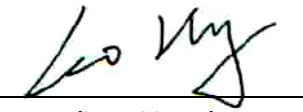
IC: 7361A-P1988W

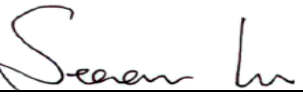
This report concerns (check one): ■ **Original Grant** □ **Class II Change**

Issued Date	:	May. 22, 2014
Project No.	:	1405C177
Equipment	:	Tablet
Model Name	:	P1988w
Applicant	:	NVIDIA CORPORATION
Address	:	2701 SAN TOMAS EXPRESSWAY, SANTA CLARA,CALIFORNIA 95050, UNITED STATES OF AMERICA

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Feb. 10, 2014
Date of Test: Feb. 10, 2014 ~ May. 21, 2014

Testing Engineer :  (David Mao)

Technical Manager :  (Leo Hung)

Authorized Signatory :  (Steven Lu)

Neutron Engineering Inc.
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Declaration

Neutron 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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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
NEI-FICP-3-1405C177	Original Issue.	May. 22, 2014

1. CERTIFICATION

Equipment	:	Tablet
Brand Name	:	NVIDIA
Model Name	:	P1988w
Applicant	:	NVIDIA CORPORATION
Manufacturer	:	NVIDIA CORPORATION
Address	:	2701 SAN TOMAS EXPRESSWAY, SANTA CLARA,CALIFORNIA 95050, UNITED STATES OF AMERICA
Factory	:	HONGFUJIN PRECISION ELECTRONICS (TIANJIN) CO., LTD
Address	:	A01,NO.36, North Street, West Zone, Economic & Technological Development Area, Tianjin
Date of Test	:	Feb. 10, 2014 ~ May. 21, 2014
Test Item	:	ENGINEERING SAMPLE
Standard(s)	:	FCC Part15, Subpart C(15.247) / ANSI C63.4-2009 Canada RSS-210:2010 RSS-GEN Issue 3, Dec 2010

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FICP-3-1405C177) 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 Canada RSS-210:2010; RSS-GEN Issue 3, Dec 2010				
Standard(s) Section		Test Item	Judgment	Remark
FCC	IC			
15.207	RSS-GEN 7.2.2	Conducted Emission	PASS	
15.247(d)	RSS-210 Annex 8 (A8.5)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	RSS-210 Annex 8 (A8.2(a))	6dB Bandwidth	PASS	
15.247(b)(3)	RSS-210 Annex 8 (A8.4(4))	Peak Output Power	PASS	
15.247(e)	RSS-210 Annex 8 (A8.2(b))	Power Spectral Density	PASS	
15.203	-	Antenna Requirement	PASS	
15.209/15.205	RSS-210 Annex 8 (A8.5)	Transmitter Radiated Emissions	PASS	
-	RSS-Gen 7.2.3	Receiver 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 v03r01 (Measurement Guidelines of DTS)

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
Neutron'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 ± U，where expended 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	Tablet	
Brand Name	NVIDIA	
Model Name	P1988w	
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 135 Mbps
	Output Power (Max.)	802.11b: 15.43 dBm 802.11g: 13.26 dBm 802.11n(20MHz): 13.01 dBm 802.11n(40MHz): 13.87 dBm
Power Source	#1 DC voltage supplied from AC adapter. 1) Brand/ Model: NVIDIA / P2551 2) Brand/ Model: Chicony / W12-010N3A #2 Supplied from lithium-ion battery. 1) Brand/ Model: YOKU/ 32102102 #3 Supplied from USB charging.	
Power Rating	#1 AC adapter 1) I/P: AC 100-240V~, 50-60Hz, 0.3A O/P: DC 5.2V, 2.1A 2) I/P: AC 100-240V~, 50/60Hz, 0.3A O/P: DC 5.35V, 2A #2 Lithium-ion battery 1) DC 3.7V 4100mAh #3 USB charging 1) DC 5V 2A	

Note:

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

2. CH 01 – CH 11 for 802.11b, 802.11g, 802.11n(20MHz)
   CH 03 – CH 09 for 802.11n(40MHz)

Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	SPEED	G-KW-0002	Monopole	N/A	6.3

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	WIFI

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	WIFI

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 (6.5Mbps)
802.11n HT40 mode : BPSK (13.5Mbps)
For radiated emission tests, the highest output powers were set for final test.

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

(4) The EUT system operated in these modes (AC adapter and Lithium-ion battery) and AC adapter found to be the worst case during the pre-scanning test.

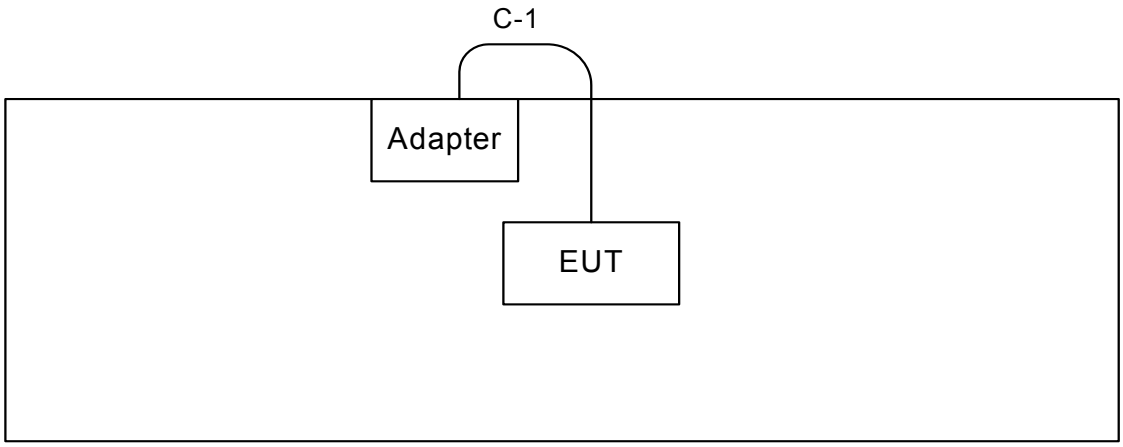
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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	N/A		
Frequency	**2412 MHz**	**2437 MHz**	**2462 MHz**
IEEE 802.11b DSSS	17	17	17
IEEE 802.11g OFDM	12	17	15

Test software version	N/A		
Frequency (MHz)	**2412 MHz**	**2437 MHz**	**2462 MHz**
IEEE 802.11n (20MHz)	12	17	16
Frequency (MHz)	**2422 MHz**	**2437 MHz**	**2452 MHz**
IEEE 802.11n (40MHz)	16	17	14

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
-	-	-	-	-	-	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	0.8m	USB Cable

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.

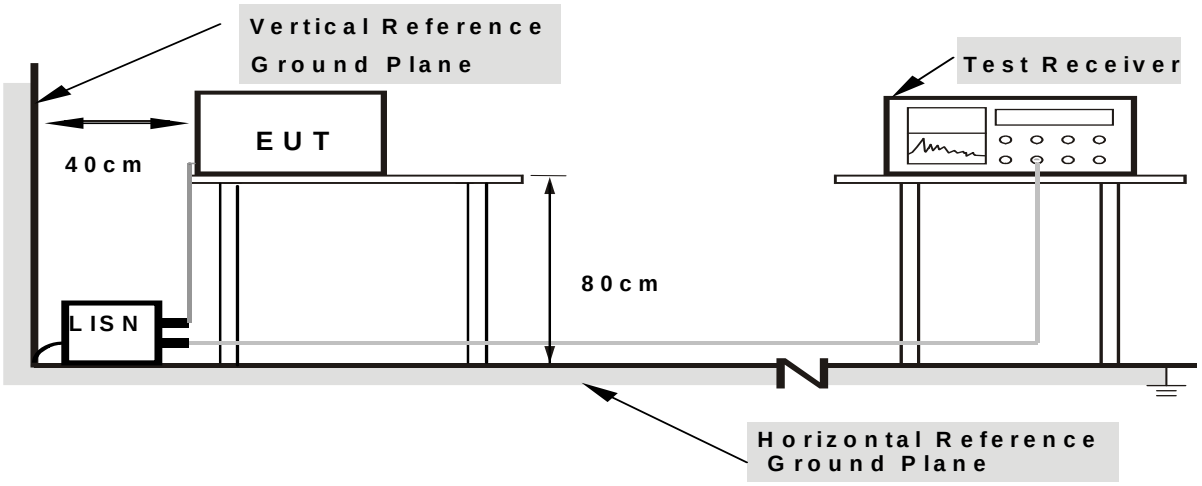
d. LISN at least 80 cm from nearest part of EUT chassis.

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 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: 120V/60Hz

4.1.7 TEST RESULTS

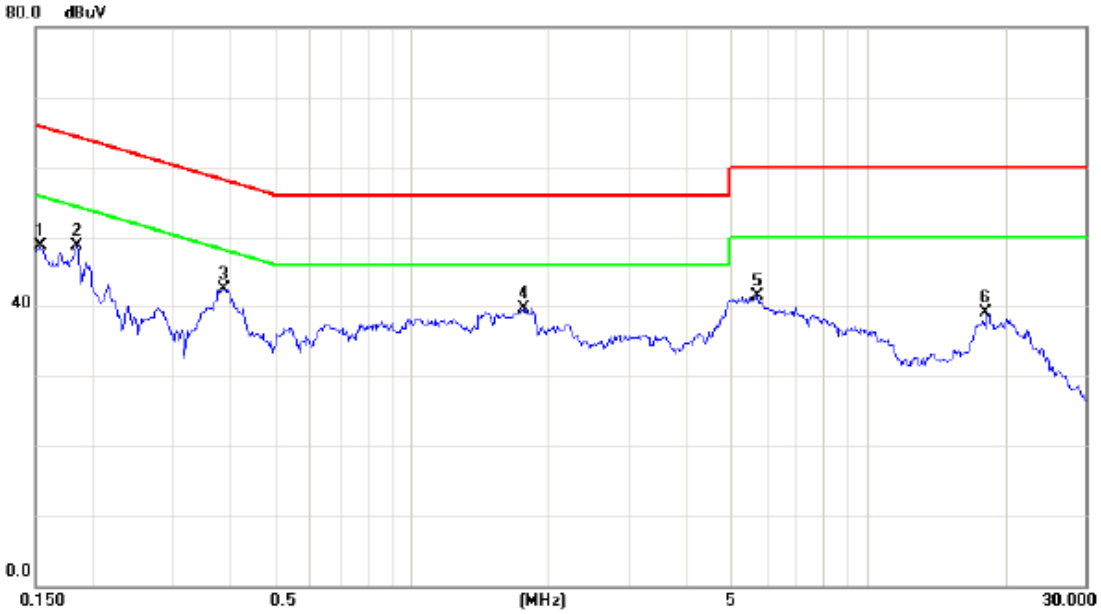
Remark:

(1) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform.In this case, a " * " marked in AVG Mode column of Interference Voltage Measured.

(2) Measuring frequency range from 150KHz to 30MHz.

Test Mode:	WIFI (Adapter: P2551)

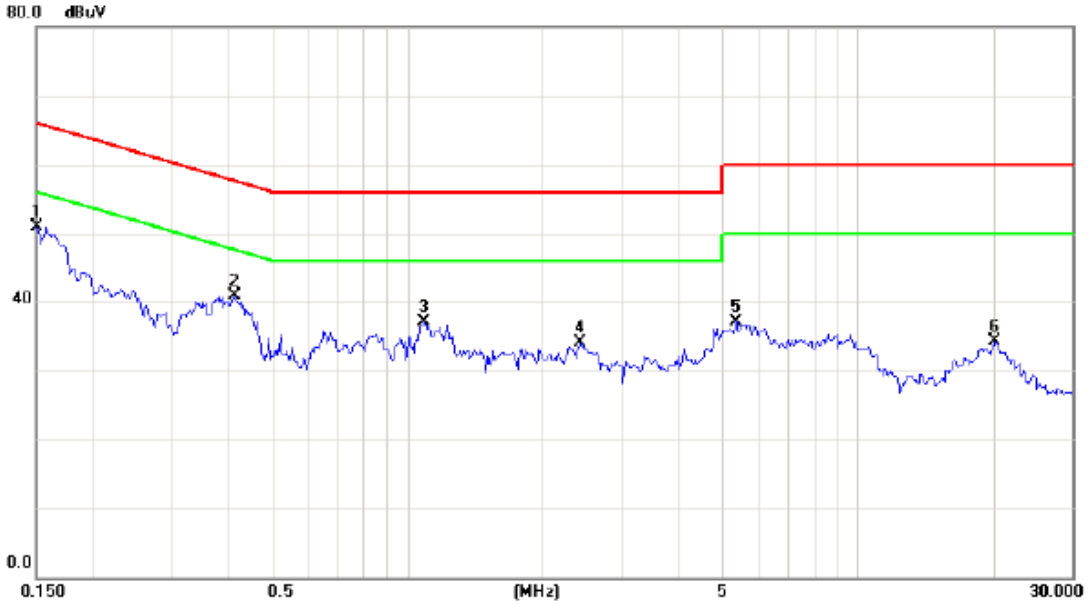
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1540	38.99	9.63	48.62	65.78	-17.16	peak	
2		0.1850	39.05	9.65	48.70	64.26	-15.56	peak	
3	*	0.3881	32.91	9.68	42.59	58.10	-15.51	peak	
4		1.7593	29.90	9.82	39.72	56.00	-16.28	peak	
5		5.7134	31.50	9.94	41.44	60.00	-18.56	peak	
6		18.2030	28.80	10.28	39.08	60.00	-20.92	peak	

Test Mode:	WIFI (Adapter: P2551)

Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1507	41.23	9.70	50.93	65.96	-15.03	peak	
2		0.4126	31.09	9.73	40.82	57.60	-16.78	peak	
3		1.0910	27.29	9.78	37.07	56.00	-18.93	peak	
4		2.4312	24.29	9.88	34.17	56.00	-21.83	peak	
5		5.3867	27.23	9.97	37.20	60.00	-22.80	peak	
6		20.1992	23.82	10.39	34.21	60.00	-25.79	peak	

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9KHz-1000MHz)

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) & RSS-210 section 2.2& Annex 8 (A8.5), then the 15.209(a)& RSS-Gen limit in the table below has to be followed.

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

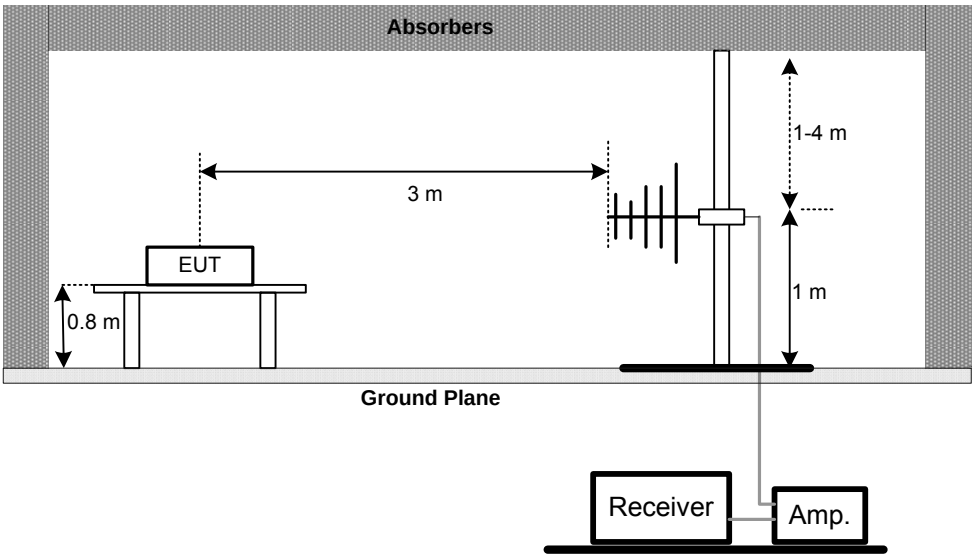
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a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

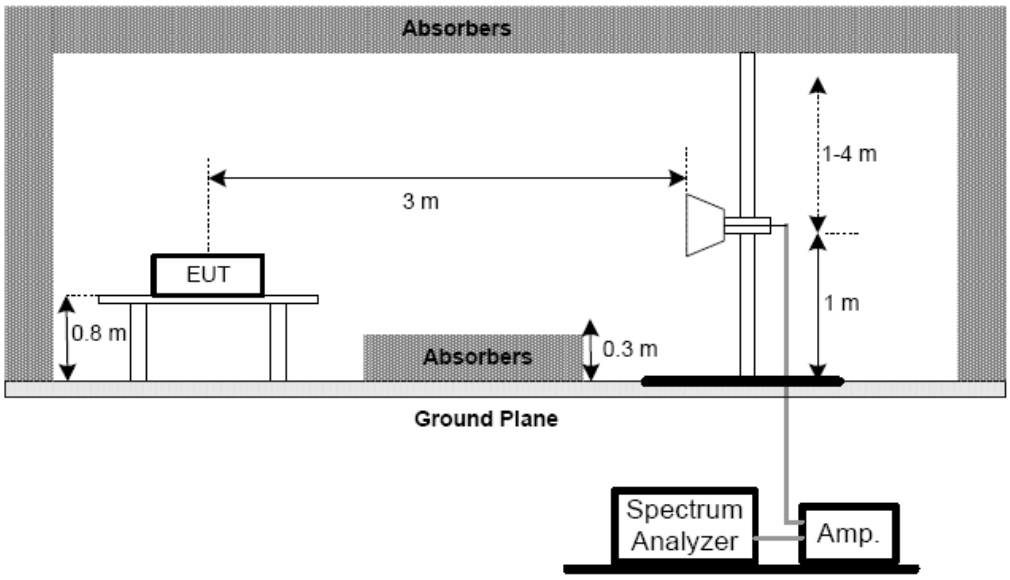
No deviation

4.2.4 TEST SETUP

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

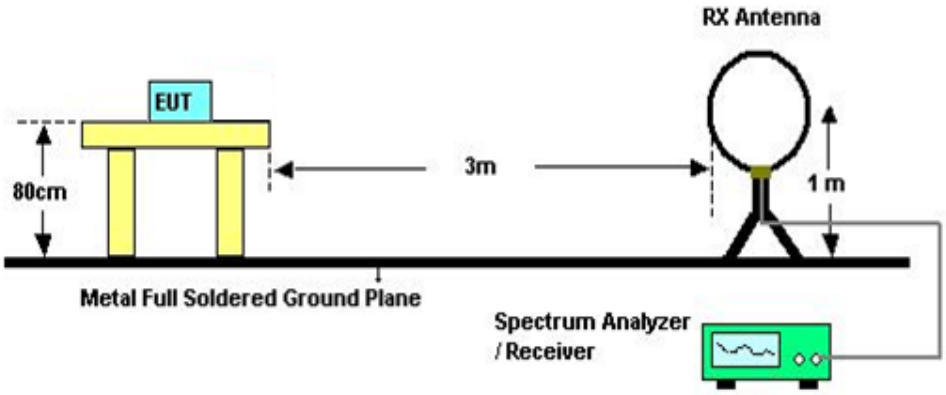


(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



Note: The antenna can be moved between 1 to 4 meters above the ground.

(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: 120V/60Hz

4.2.7 TEST RESULTS (9K~ 30MHZ)

Test Mode :	TX Mode 2412MHz (Adapter: P2551)

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0094	0°	68.35	24.30	92.65	128.12	-35.47	AV
0.0094	0°	72.35	24.30	96.65	148.12	-51.47	PK
0.0137	0°	70.35	24.30	94.65	124.87	-30.22	AV
0.0137	0°	79.35	24.30	103.65	144.87	-41.22	PK
0.0245	0°	56.36	24.02	80.38	119.82	-39.45	AV
0.0245	0°	60.12	24.02	84.14	139.82	-55.69	PK
0.0328	0°	61.36	23.49	84.85	117.29	-32.44	AV
0.0328	0°	65.38	23.49	88.87	137.29	-48.42	PK
0.5680	0°	18.72	20.02	38.74	72.52	-33.78	QP
1.7536	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
0.0095	90°	76.35	24.30	100.65	128.10	-27.45	AVG
0.0095	90°	82.36	24.30	106.66	148.10	-41.44	PK
0.0312	90°	56.38	23.59	79.97	117.72	-37.75	AVG
0.0312	90°	59.35	23.59	82.94	137.72	-54.78	PK
0.0356	90°	57.35	23.31	80.66	116.58	-35.91	AVG
0.0356	90°	58.35	23.31	81.66	136.58	-54.91	PK
0.0474	90°	59.35	22.56	81.91	114.09	-32.17	AVG
0.0474	90°	63.35	22.56	85.91	134.09	-48.17	PK
0.4978	90°	17.45	19.81	37.26	73.66	-36.41	QP
1.7597	90°	18.63	19.52	38.15	69.54	-31.39	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.

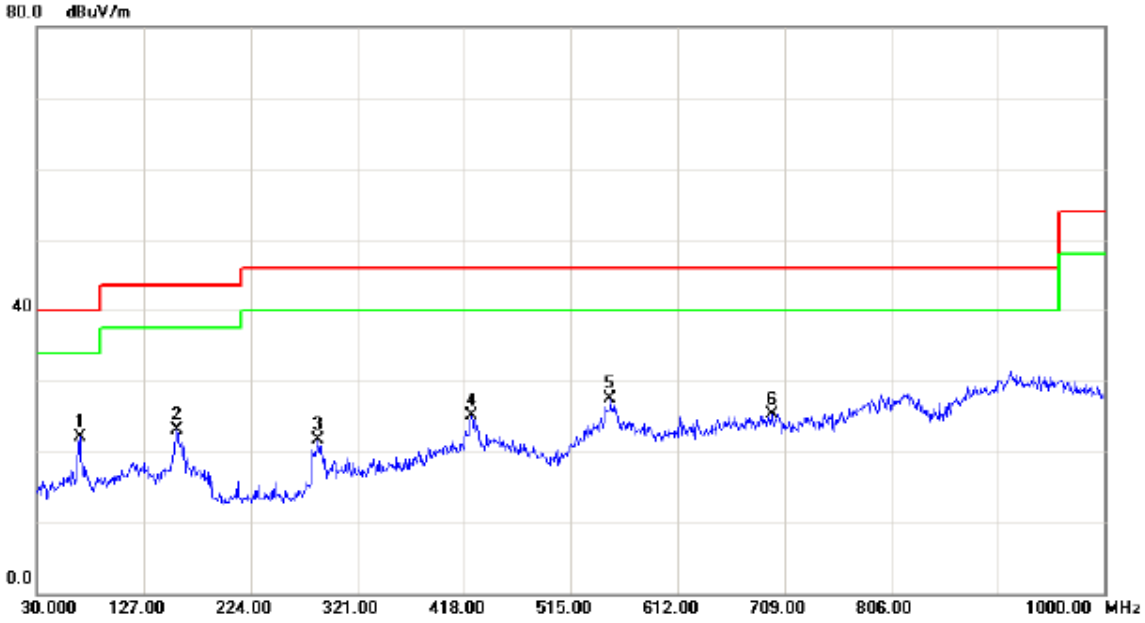
4.2.8 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

Remark:

(1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz.
(2) All readings are Peak unless otherwise stated QP in column of『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform.
(3) Measuring frequency range from 30MHz to 1000MHz.
(4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

Test Mode:	TX B MODE CHANNEL 01 (Adapter: P2551)

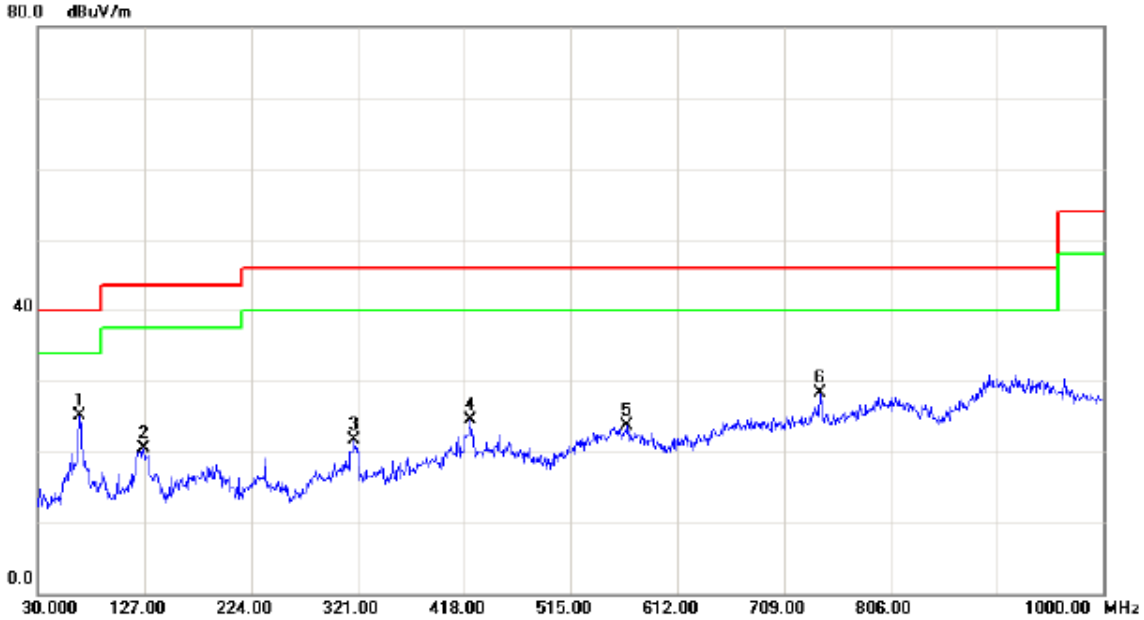
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	68.8000	37.63	-15.57	22.06	40.00	-17.94	peak	
2		157.0700	36.12	-12.98	23.14	43.50	-20.36	peak	
3		285.1100	33.87	-12.11	21.76	46.00	-24.24	peak	
4		424.7900	34.43	-9.25	25.18	46.00	-20.82	peak	
5		550.8900	33.40	-5.89	27.51	46.00	-18.49	peak	
6		697.3600	29.86	-4.49	25.37	46.00	-20.63	peak	

Test Mode:	TX B MODE CHANNEL 01 (Adapter: P2551)

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	67.8300	40.52	-15.46	25.06	40.00	-14.94	peak	
2		126.0300	34.33	-13.86	20.47	43.50	-23.03	peak	
3		318.0900	32.71	-11.10	21.61	46.00	-24.39	peak	
4		423.8200	33.77	-9.27	24.50	46.00	-21.50	peak	
5		566.4100	30.23	-6.62	23.61	46.00	-22.39	peak	
6		741.9800	33.47	-5.16	28.31	46.00	-17.69	peak	

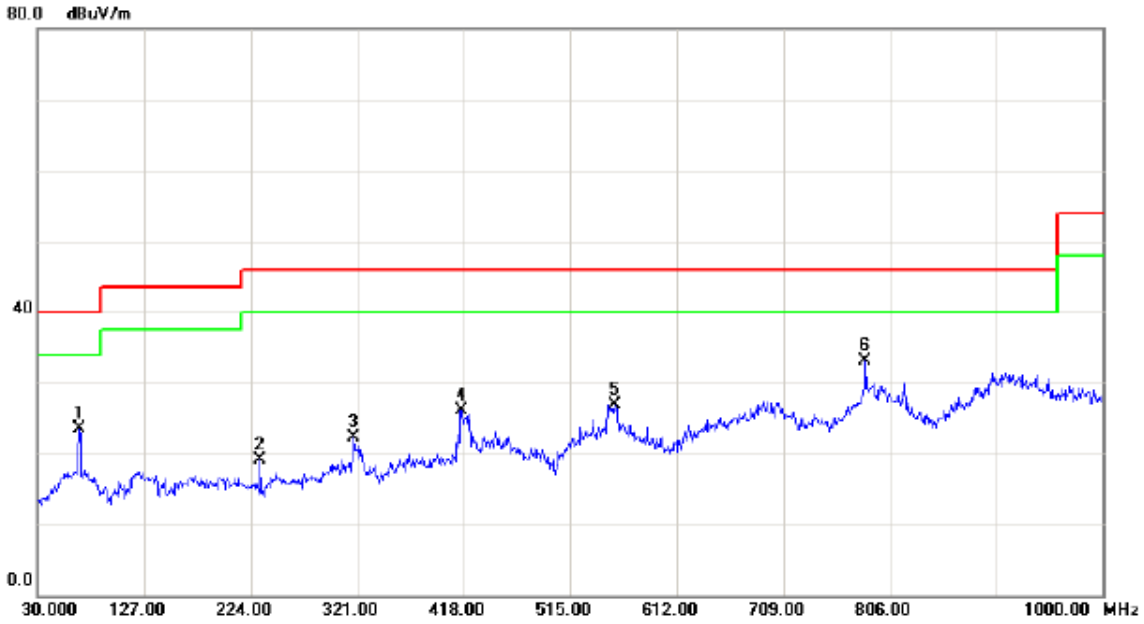
Test Mode:	TX B MODE CHANNEL 06 (Adapter: P2551)

Vertical

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		67.8300	38.92	-15.46	23.46	40.00	-16.54	peak	
2		232.7300	33.70	-14.66	19.04	46.00	-26.96	peak	
3		318.0900	33.41	-11.10	22.31	46.00	-23.69	peak	
4		416.0600	35.59	-9.43	26.16	46.00	-19.84	peak	
5		555.7400	32.95	-6.12	26.83	46.00	-19.17	peak	
6	*	783.6900	35.93	-2.81	33.12	46.00	-12.88	peak	

Test Mode:	TX B MODE CHANNEL 06 (Adapter: P2551)

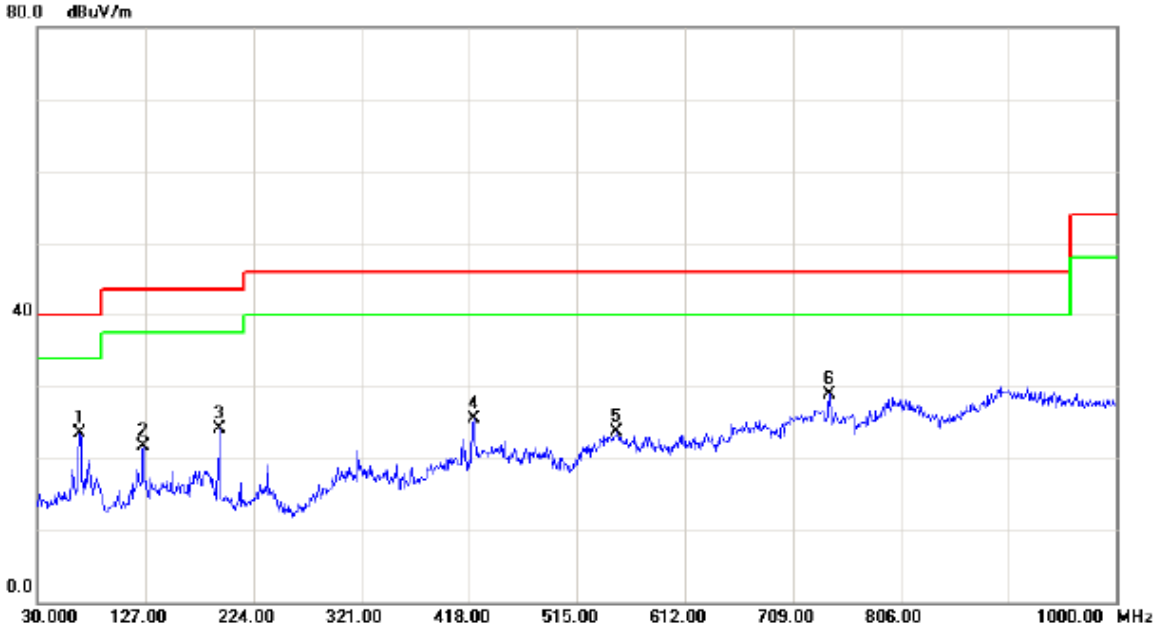
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		67.8300	38.92	-15.46	23.46	40.00	-16.54	peak	
2		232.7300	33.70	-14.66	19.04	46.00	-26.96	peak	
3		318.0900	33.41	-11.10	22.31	46.00	-23.69	peak	
4		416.0600	35.59	-9.43	26.16	46.00	-19.84	peak	
5		555.7400	32.95	-6.12	26.83	46.00	-19.17	peak	
6	*	783.6900	35.93	-2.81	33.12	46.00	-12.88	peak	

Test Mode:	TX B MODE CHANNEL 11 (Adapter: P2551)

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	67.8300	39.02	-15.46	23.56	40.00	-16.44	peak	
2		125.0600	35.62	-13.86	21.76	43.50	-21.74	peak	
3		193.9300	39.05	-15.00	24.05	43.50	-19.45	peak	
4		421.8800	34.80	-9.31	25.49	46.00	-20.51	peak	
5		550.8900	29.52	-5.89	23.63	46.00	-22.37	peak	
6		741.9800	33.97	-5.16	28.81	46.00	-17.19	peak	

Test Mode:	TX B MODE CHANNEL 11 (Adapter: P2551)

Horizontal

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		68.8000	36.62	-15.57	21.05	40.00	-18.95	peak	
2		232.7300	34.70	-14.66	20.04	46.00	-25.96	peak	
3		416.0600	36.09	-9.43	26.66	46.00	-19.34	peak	
4		551.8600	32.80	-5.94	26.86	46.00	-19.14	peak	
5		702.2100	32.67	-4.45	28.22	46.00	-17.78	peak	
6	*	783.6900	32.93	-2.81	30.12	46.00	-15.88	peak	

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Remark:

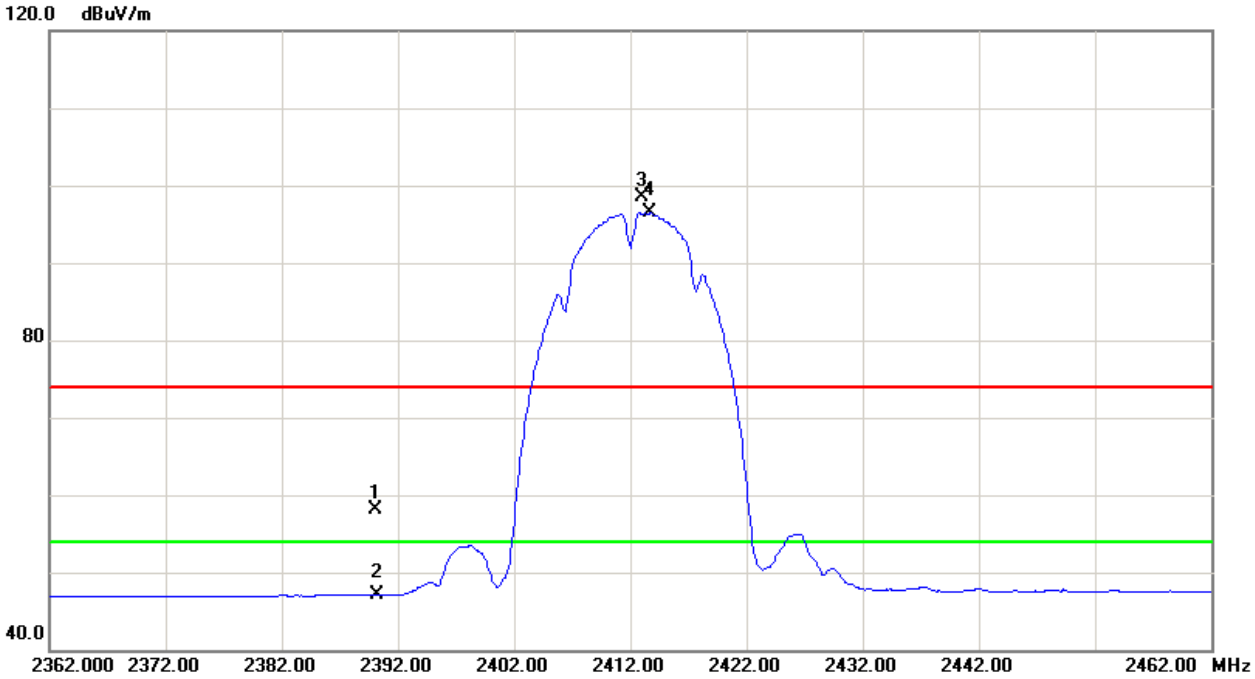
(1) All readings are Peak unless otherwise stated QP in column of『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
(2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency; "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
(3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
(4) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
(5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
(6) EUT Orthogonal Axis:
"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand
(7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

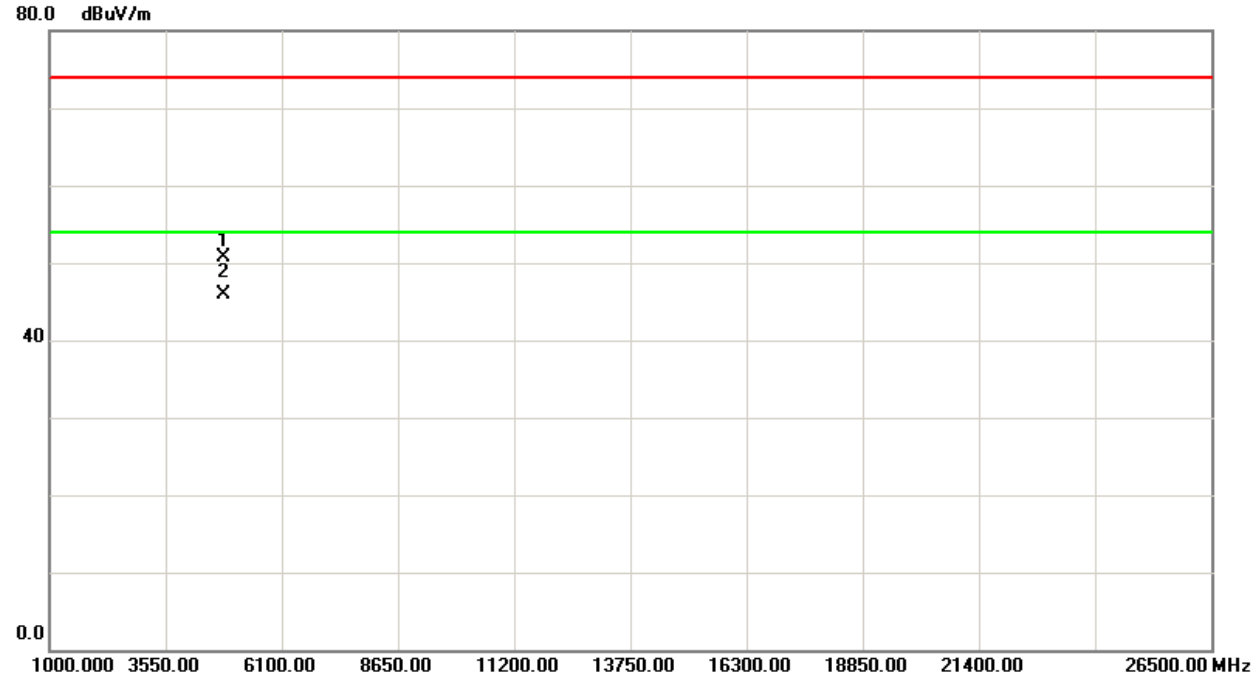
Test Mode :	TX B MODE 2412MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	24.73	13.71	33.38	58.11	47.09	74.00	54.00	X/E
2413.00	**V**	**65.09**	**63.03**	**33.44**	**98.53**	**96.47**			**X/F**
4824.00	V	44.21	39.48	6.43	50.64	45.91	74.00	54.00	X/H

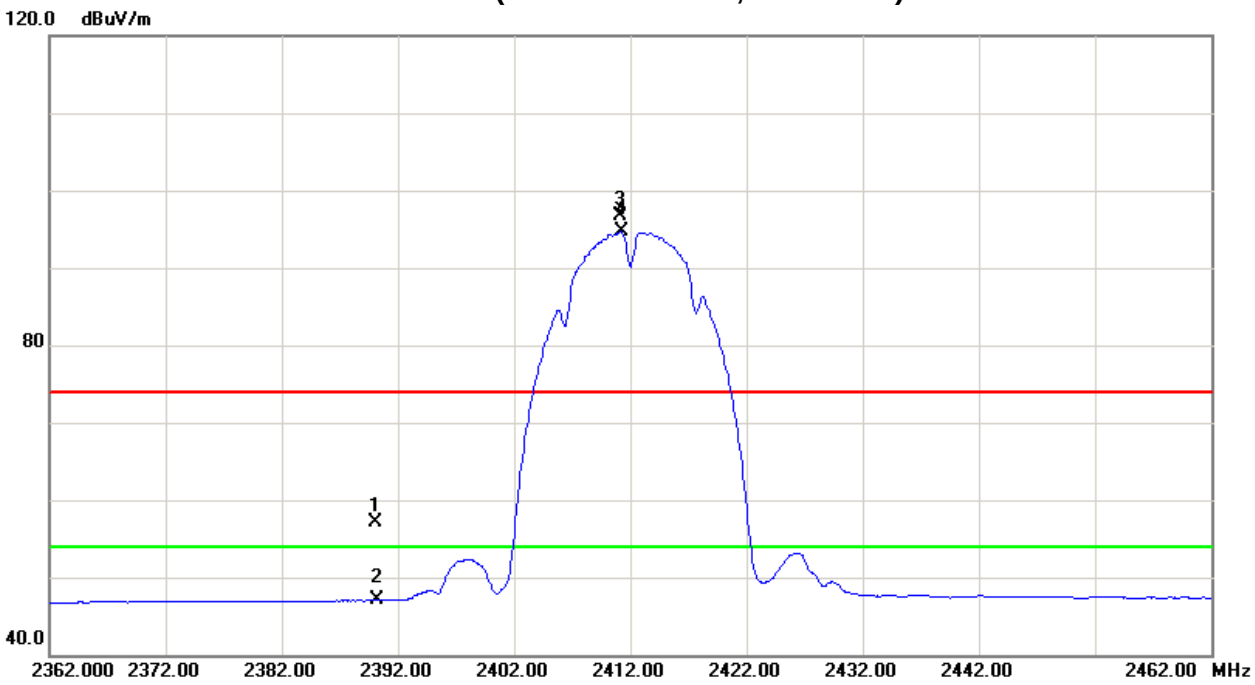
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	H	23.66	13.65	33.38	57.04	47.03	74.00	54.00	X/E
2411.10	**H**	**63.22**	**61.20**	**33.44**	**96.66**	**94.64**			**X/F**
4823.87	H	39.63	34.72	6.43	46.06	41.15	74.00	54.00	X/H

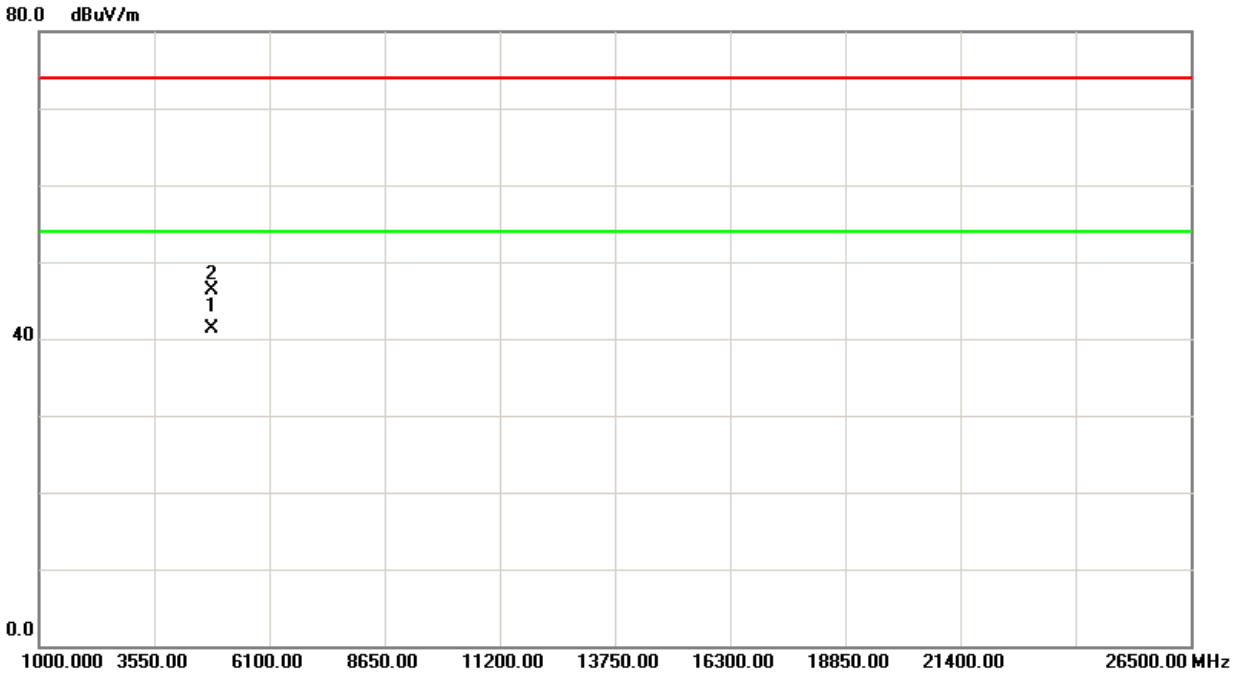
TX CH01 (Above 1000 MHz, Vertical)





TX CH01 (Above 1000 MHz, Horizontal)



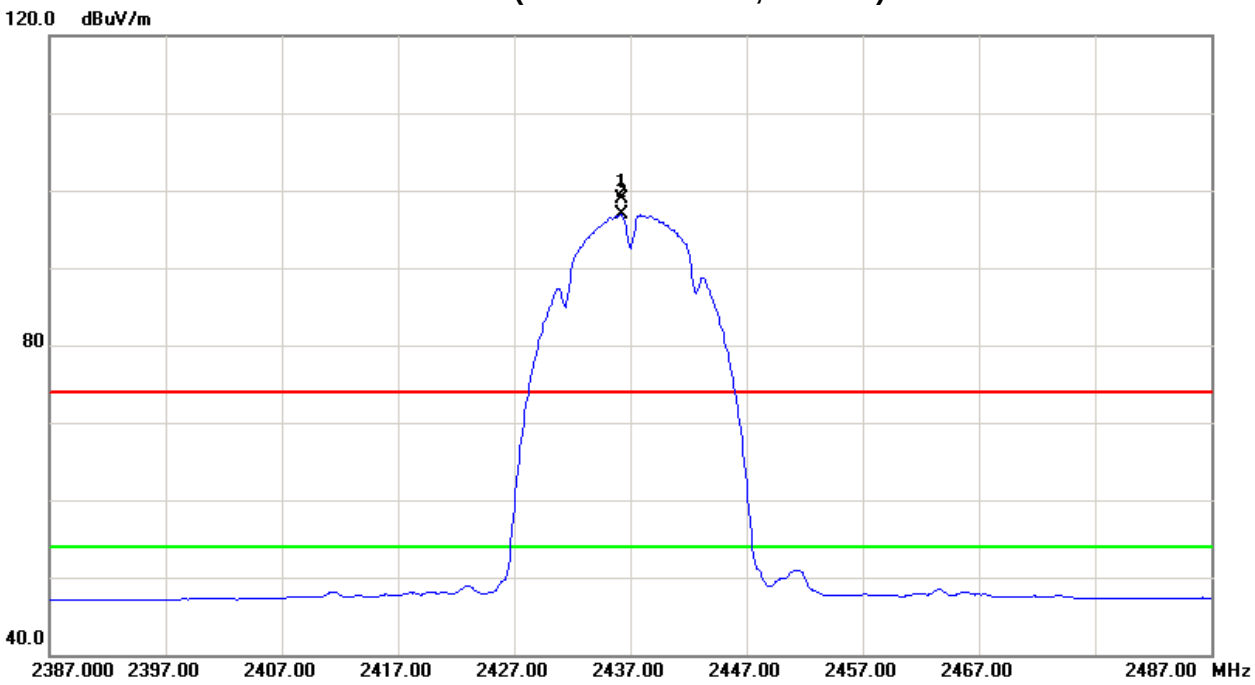


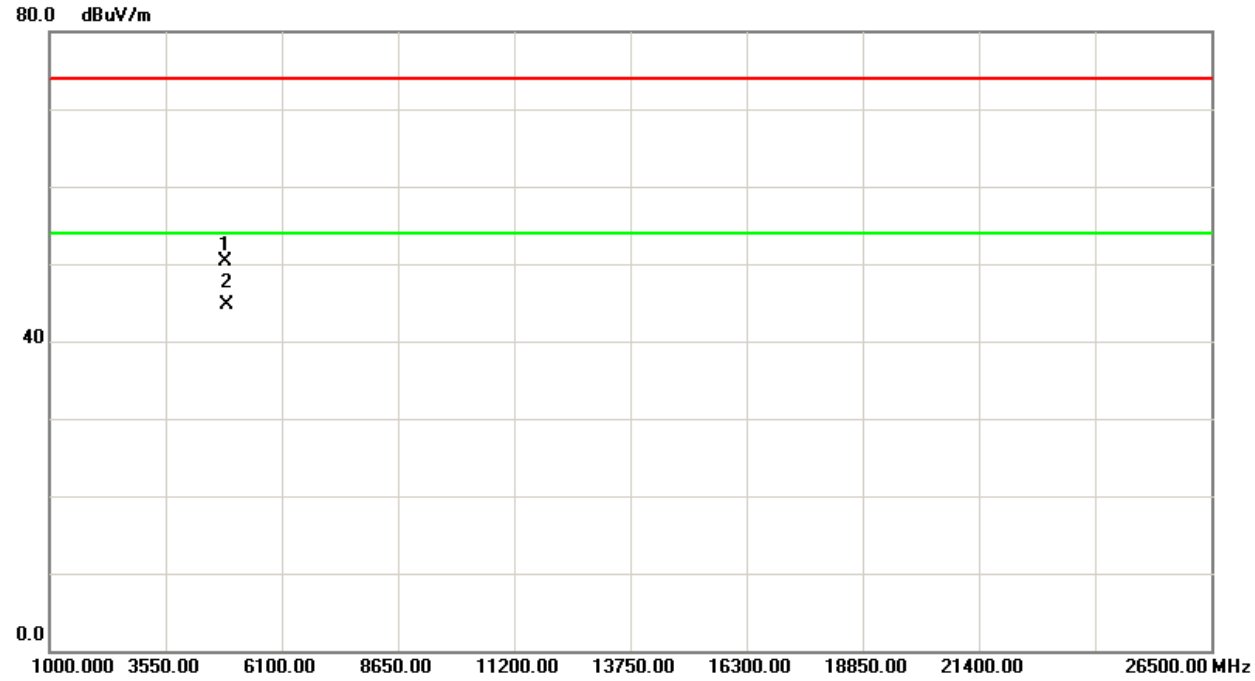
Test Mode :	TX B MODE 2437MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2436.20	**V**	**65.47**	**63.44**	**33.50**	**98.97**	**96.94**			**X/F**
4874.00	V	43.72	38.21	6.58	50.30	44.79	74.00	54.00	X/H

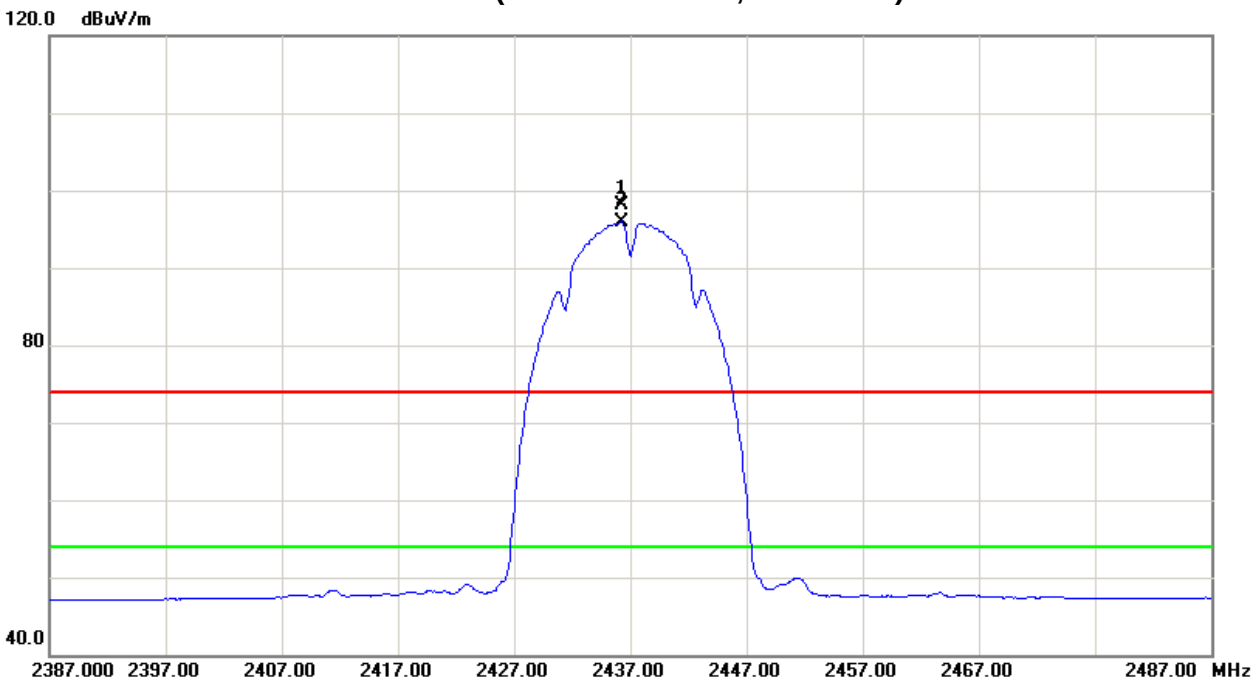
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2436.20	**H**	**64.55**	**62.50**	**33.50**	**98.05**	**96.00**			**X/F**
4873.75	H	39.13	34.02	6.58	45.71	40.60	74.00	54.00	X/H

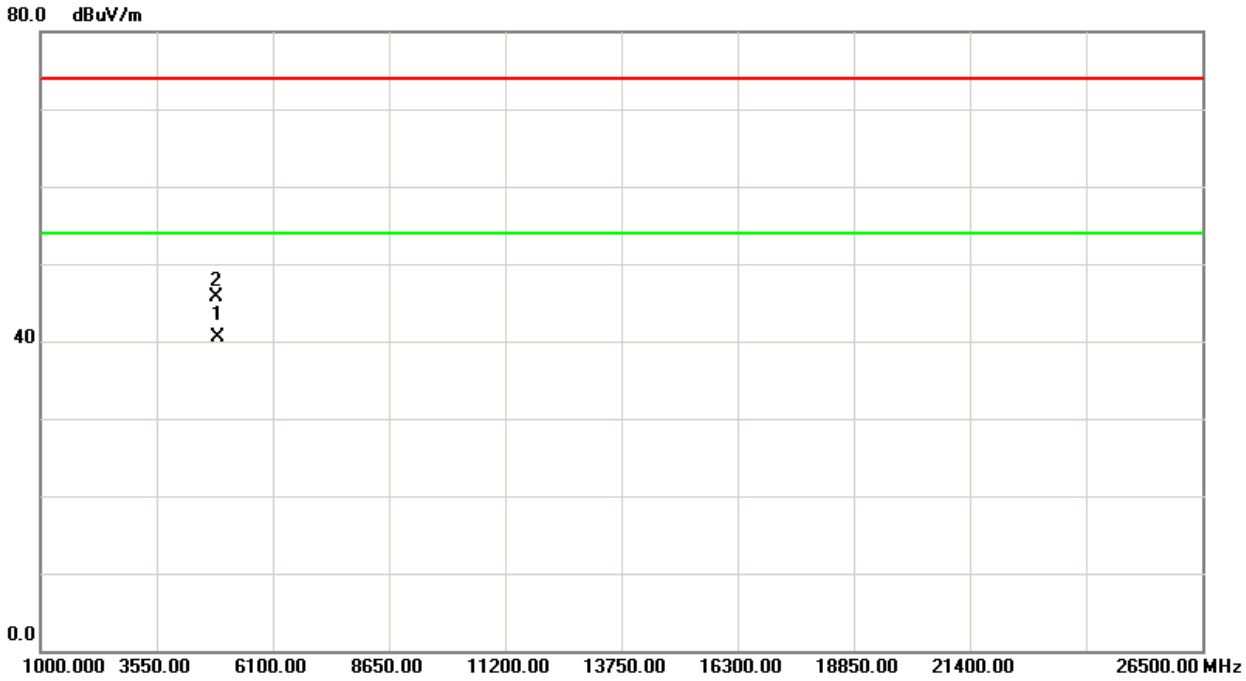
TX CH06 (Above 1000 MHz, Vertical)





TX CH06 (Above 1000 MHz, Horizontal)



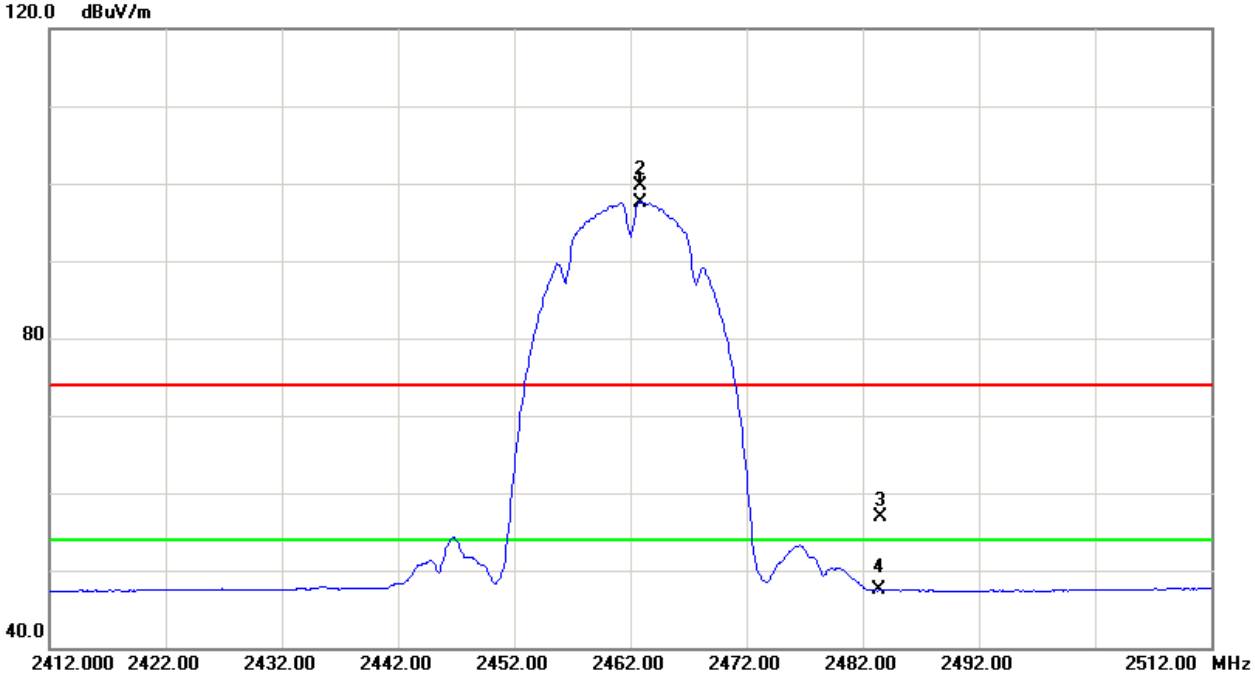


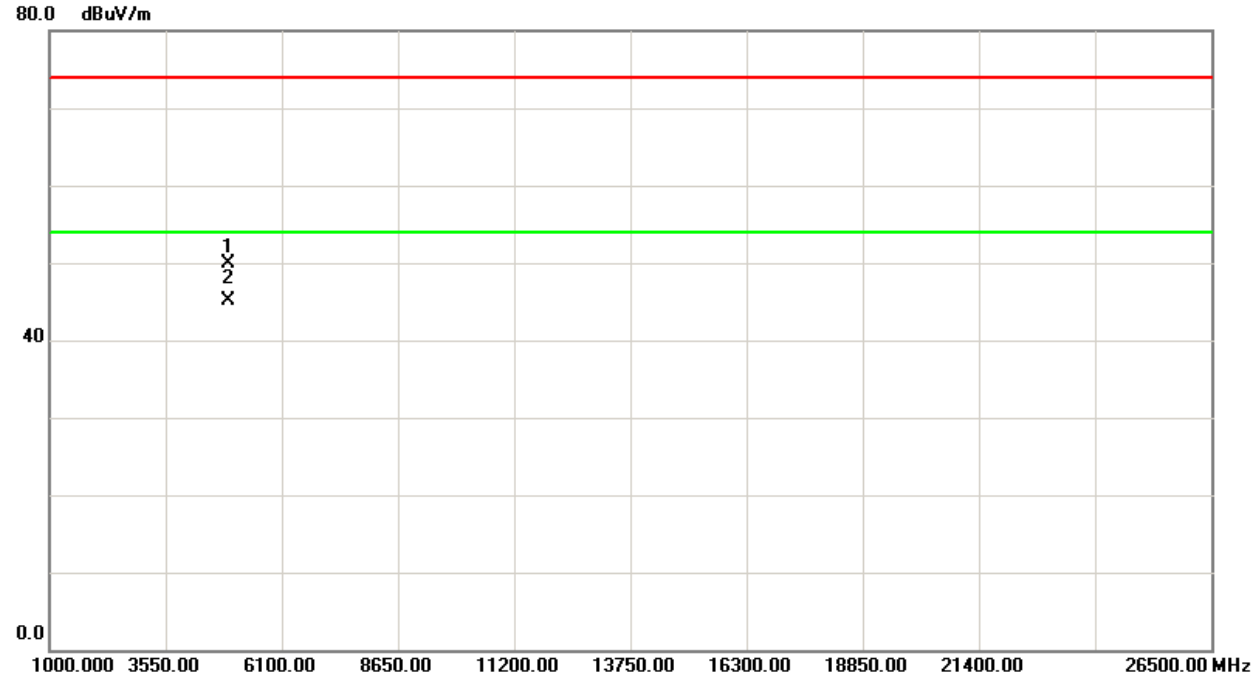
Test Mode :	TX B MODE 2462MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2462.80	**V**	**66.12**	**64.03**	**33.57**	**99.69**	**97.60**			**X/F**
2483.50	V	23.33	13.79	33.62	56.95	47.41	74.00	54.00	X/E
4924.00	V	43.15	38.29	6.72	49.87	45.01	74.00	54.00	X/H

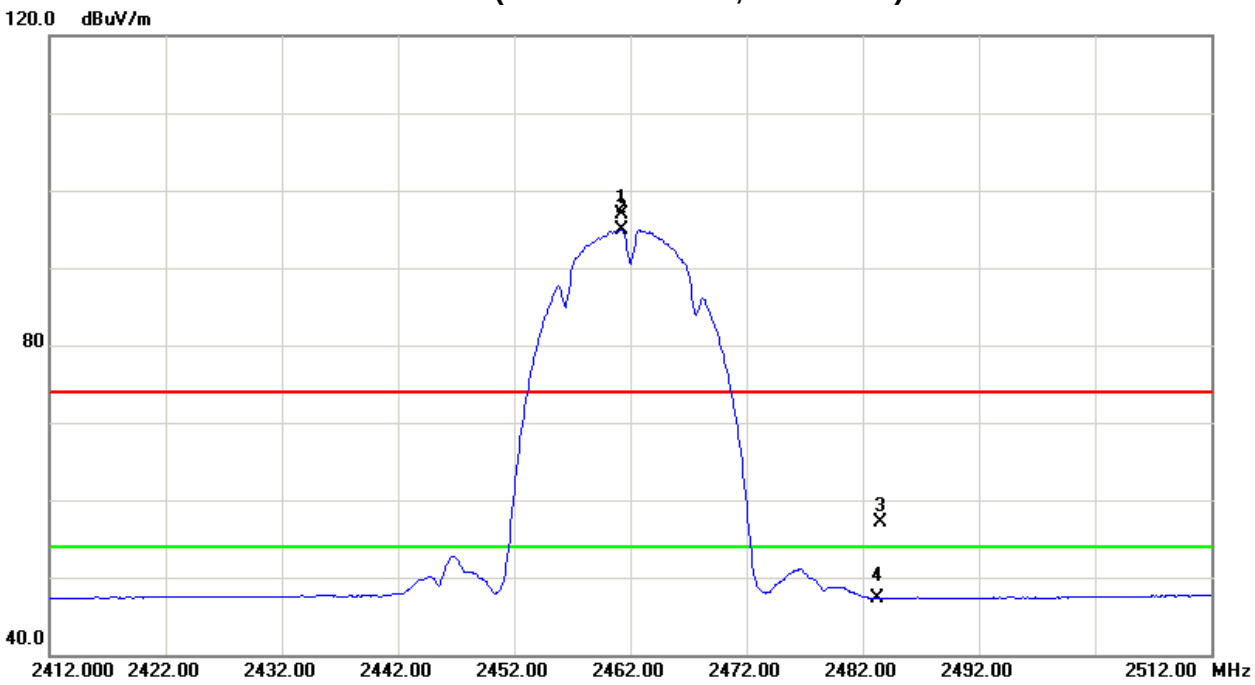
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.20	**H**	**63.40**	**61.38**	**33.56**	**96.96**	**94.94**			**X/F**
2483.50	H	23.42	13.71	33.62	57.04	47.33	74.00	54.00	X/E
4924.00	H	39.19	34.24	6.72	45.91	40.96	74.00	54.00	X/H

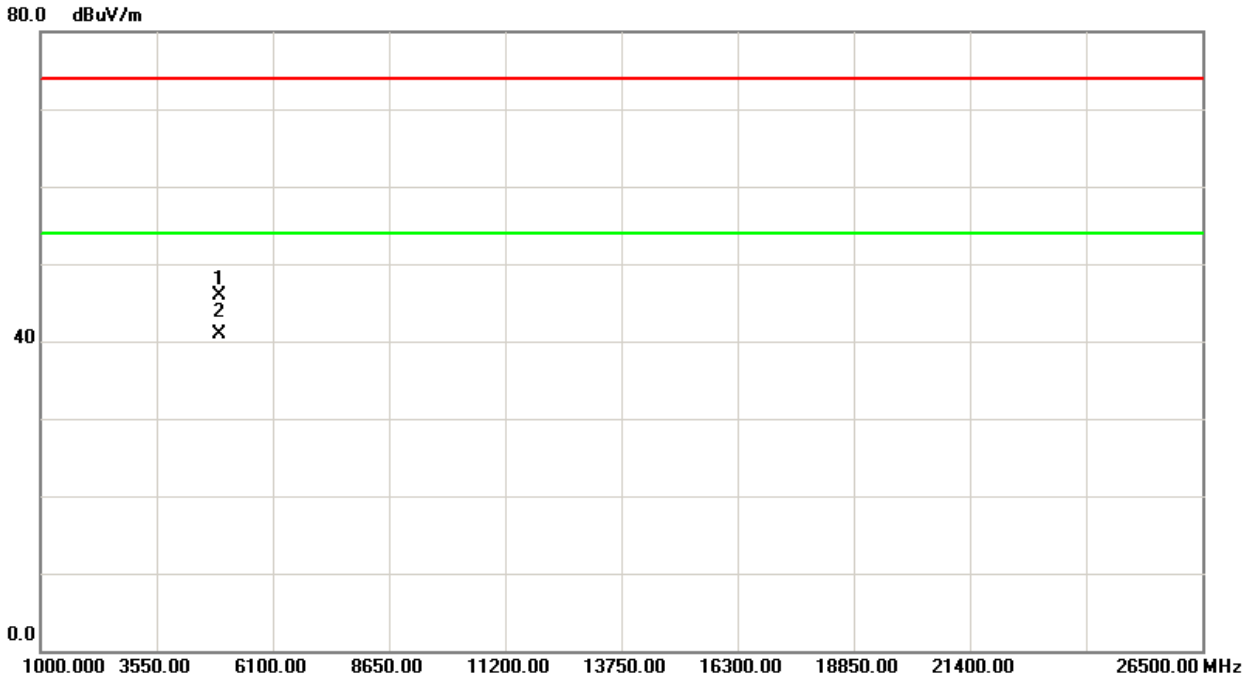
TX CH11 (Above 1000 MHz, Vertical)





TX CH11 (Above 1000 MHz, Horizontal)



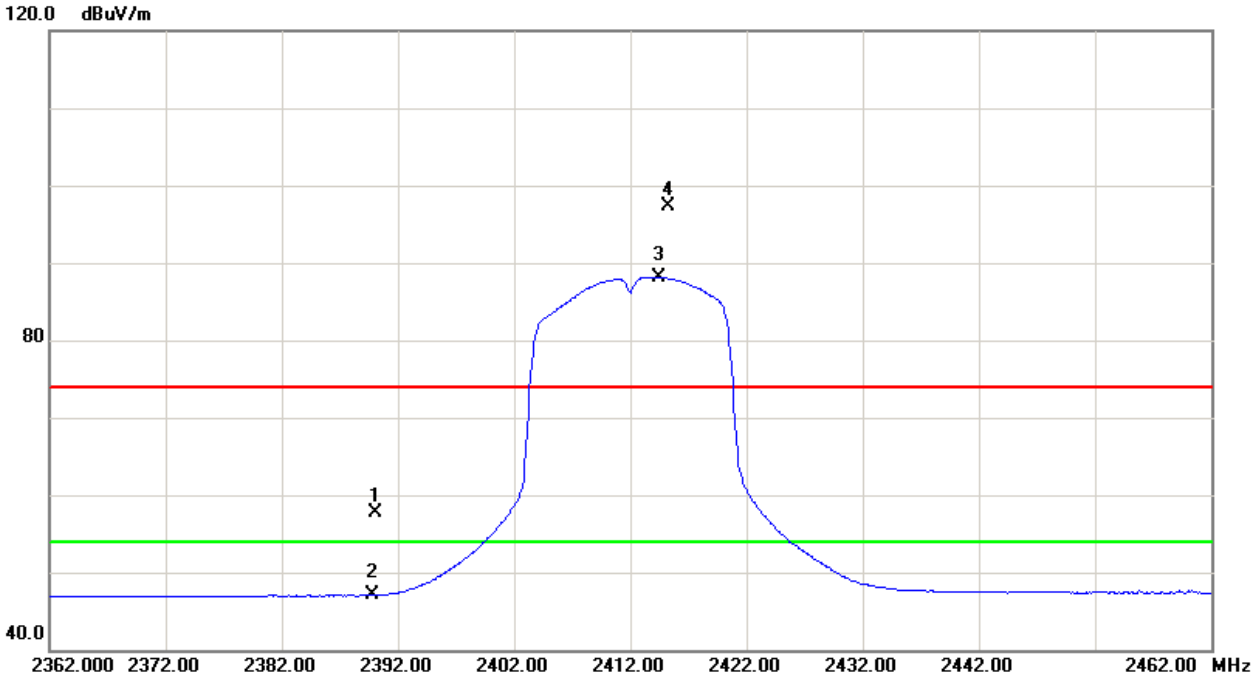


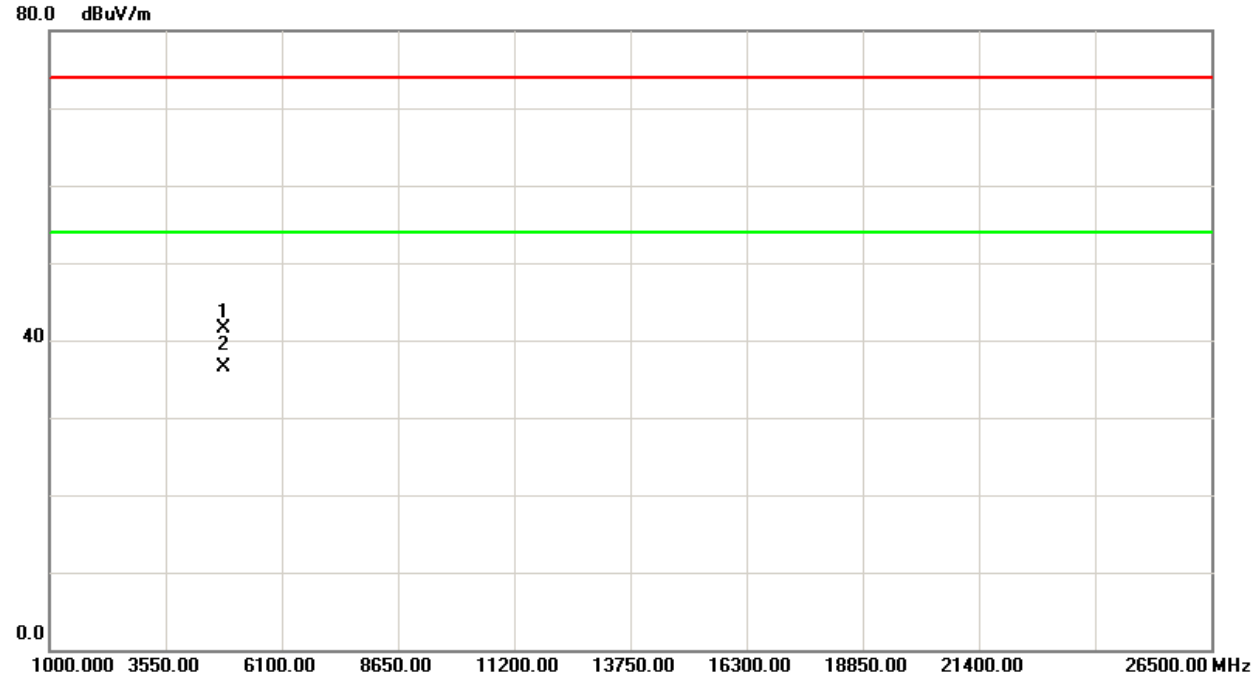
Test Mode :	TX G MODE 2412MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	24.39	13.73	33.38	57.77	47.11	74.00	54.00	X/E
2414.40	**V**	**63.95**	**54.71**	**33.44**	**97.39**	**88.15**			**X/F**
4824.00	V	35.14	30.05	6.43	41.57	36.48	74.00	54.00	X/H

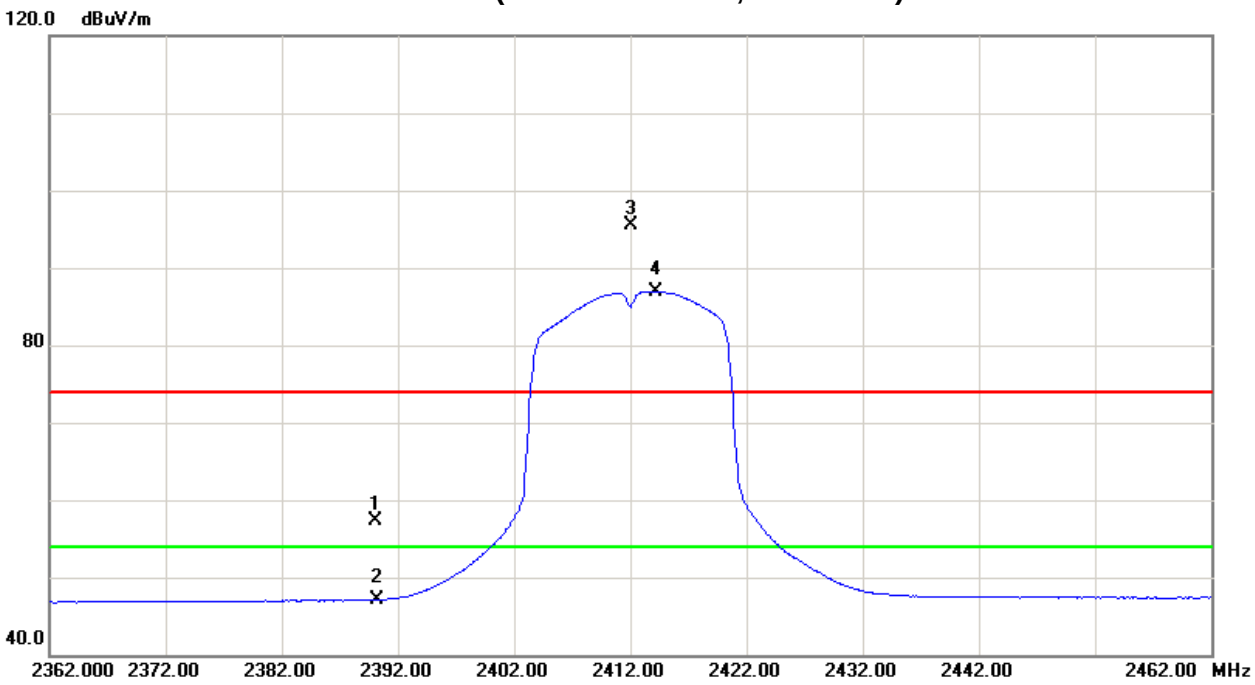
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	H	24.00	13.68	33.38	57.38	47.06	74.00	54.00	X/E
2412.00	**H**	**62.16**	**53.47**	**33.44**	**95.60**	**86.91**			**X/F**
4824.00	H	33.41	28.52	6.43	39.84	34.95	74.00	54.00	X/H

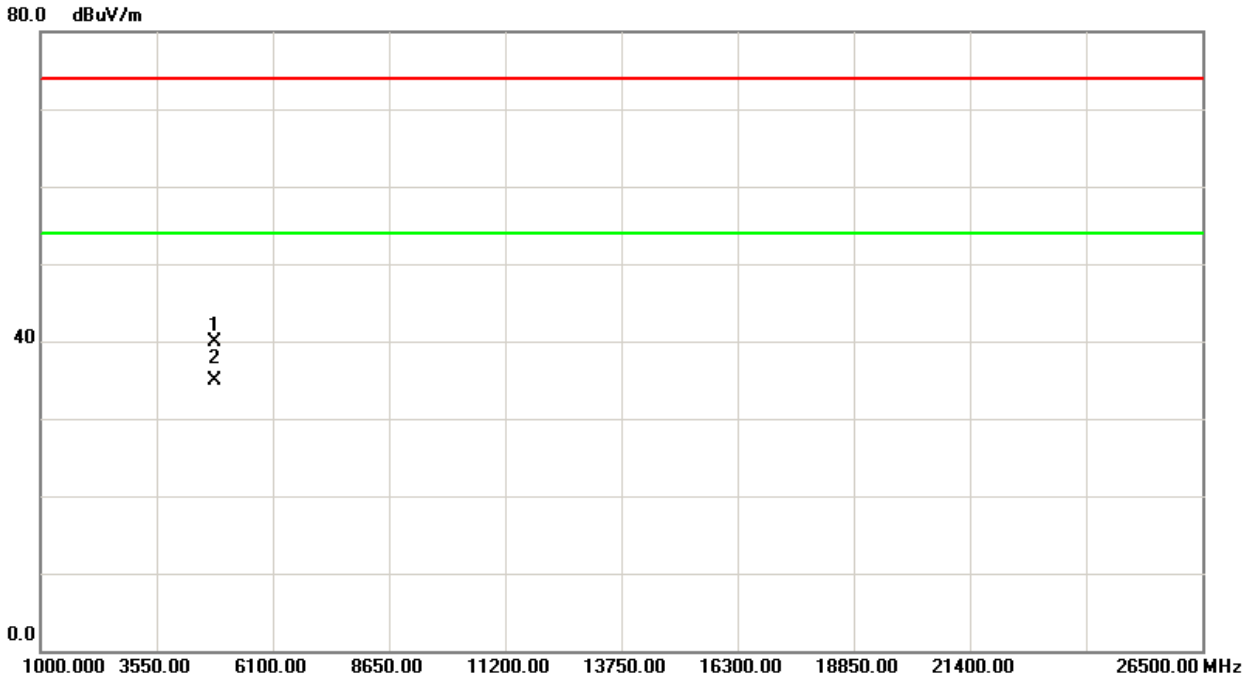
TX CH01 (Above 1000 MHz, Vertical)





TX CH01 (Above 1000 MHz, Horizontal)



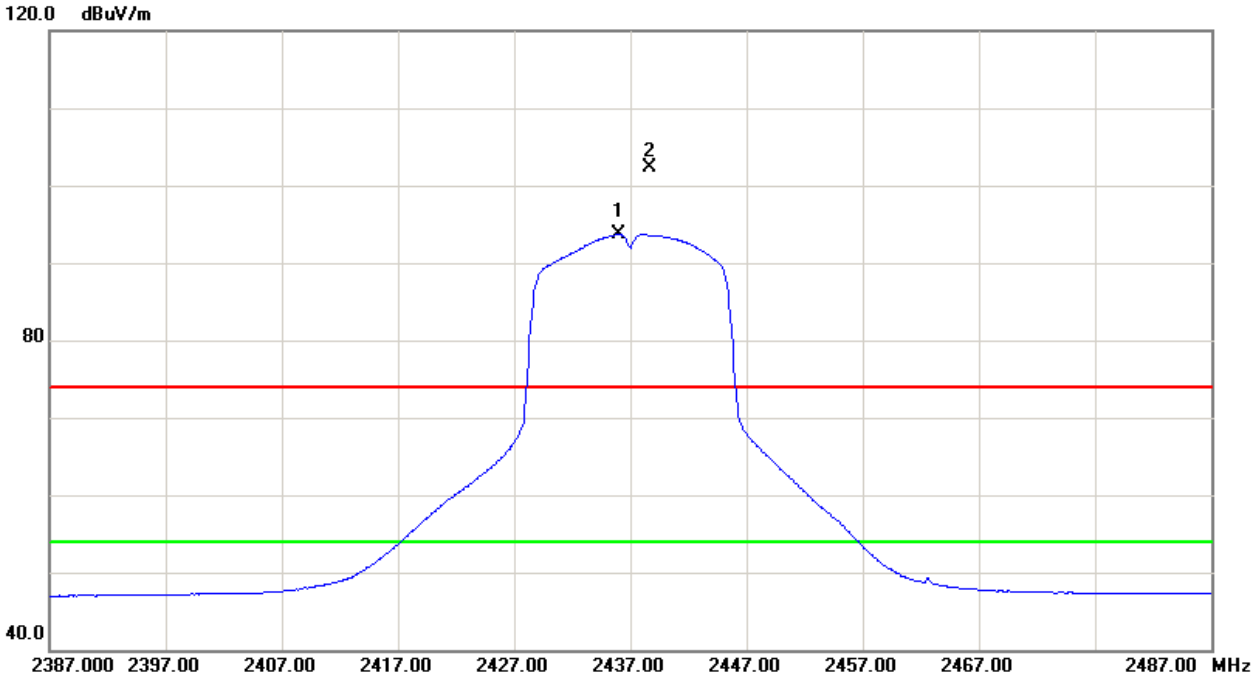


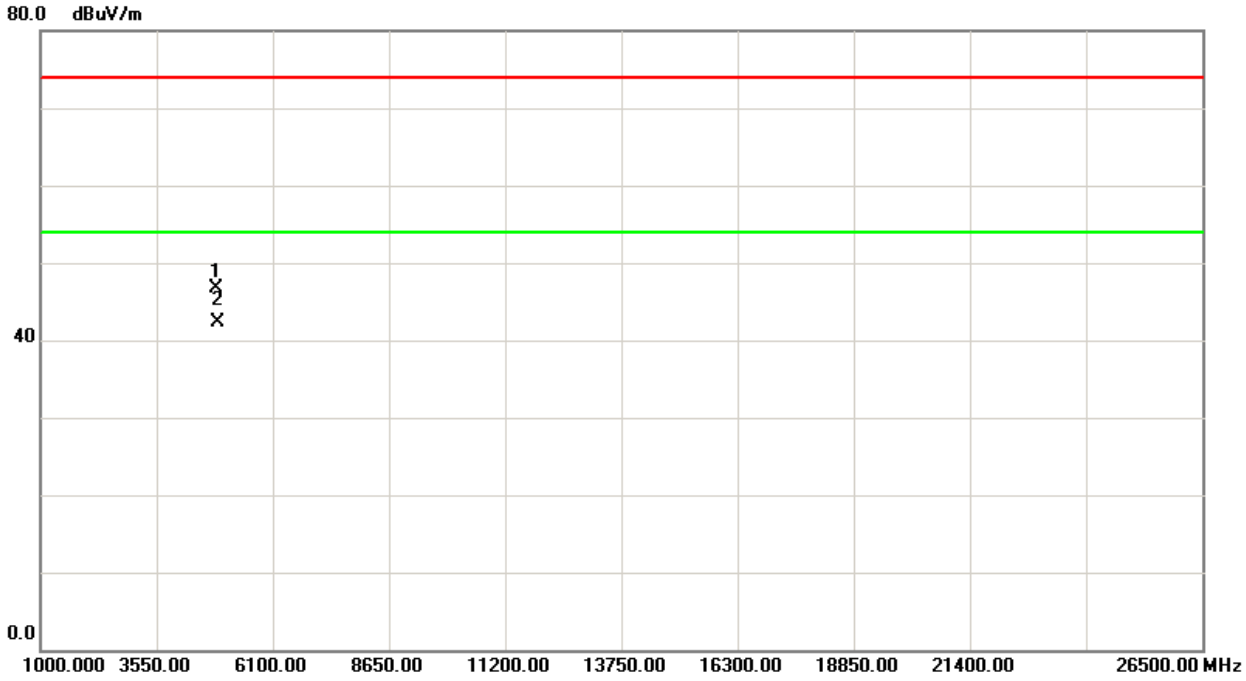
Test Mode :	TX G MODE 2437MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2436.00	**V**	**68.81**	**60.17**	**33.50**	**102.31**	**93.67**			**X/F**
4874.00	V	40.11	35.65	6.58	46.69	42.23	74.00	54.00	X/H

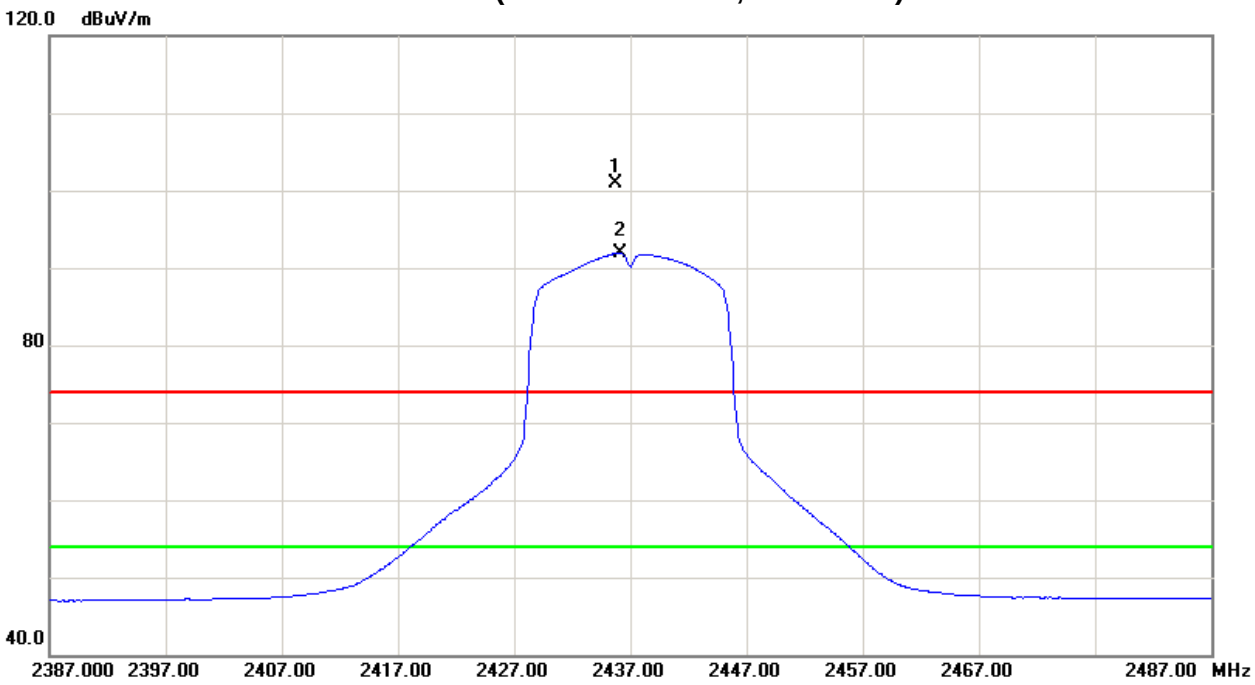
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2435.70	**H**	**67.38**	**58.39**	**33.50**	**100.88**	**91.89**			**X/F**
4874.00	H	35.24	32.02	6.58	41.82	38.60	74.00	54.00	X/H

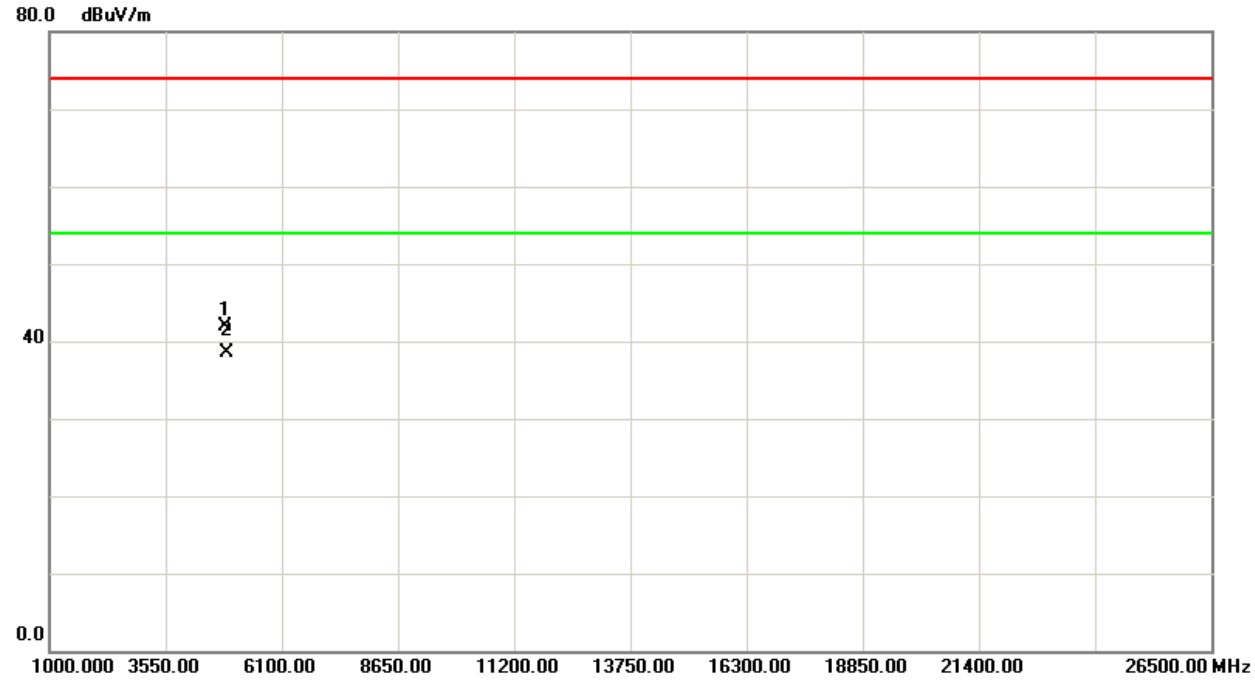
TX CH06 (Above 1000 MHz, Vertical)





TX CH06 (Above 1000 MHz, Horizontal)



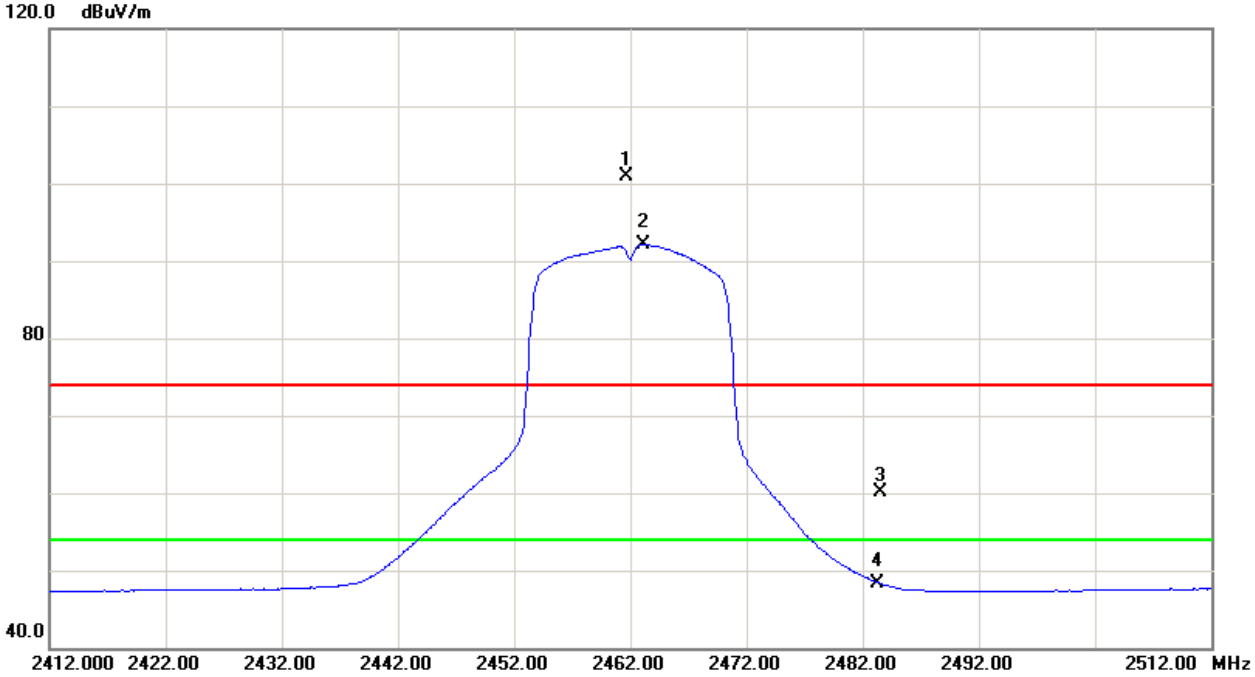


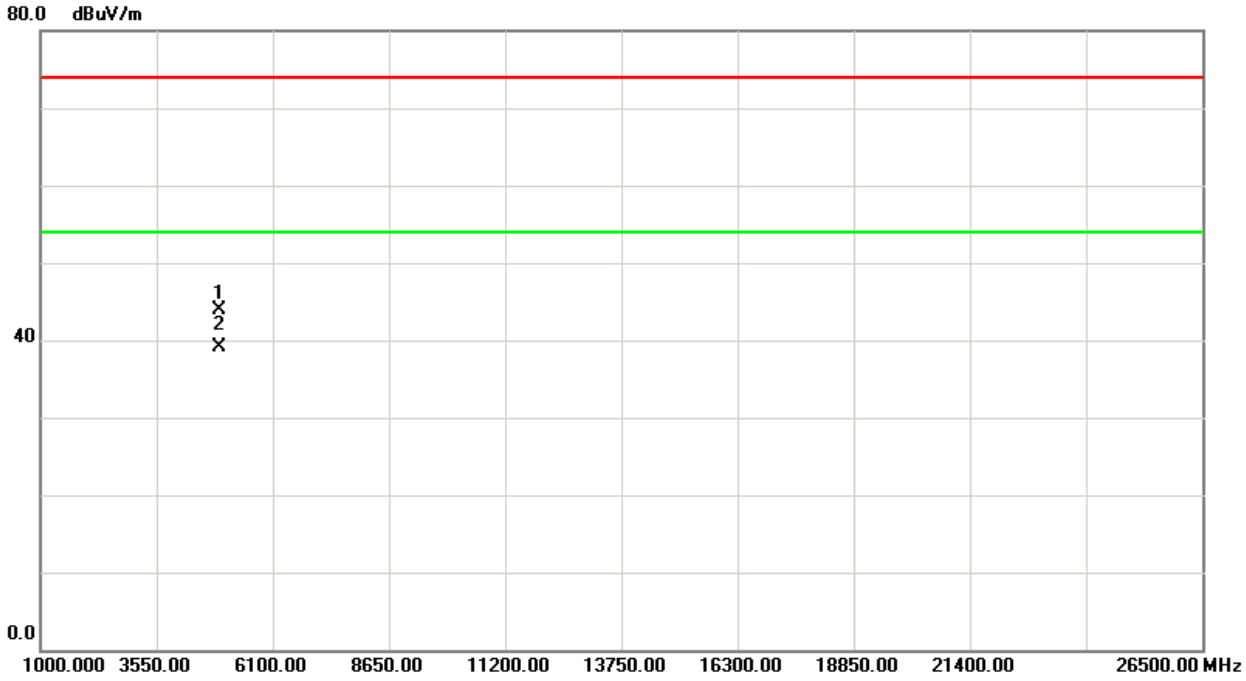
Test Mode :	TX G MODE 2462MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.70	**V**	**67.40**	**58.53**	**33.56**	**100.96**	**92.09**			**X/F**
2483.50	V	26.55	14.76	33.62	60.17	48.38	74.00	54.00	X/E
4924.00	V	37.24	32.29	6.72	43.96	39.01	74.00	54.00	X/H

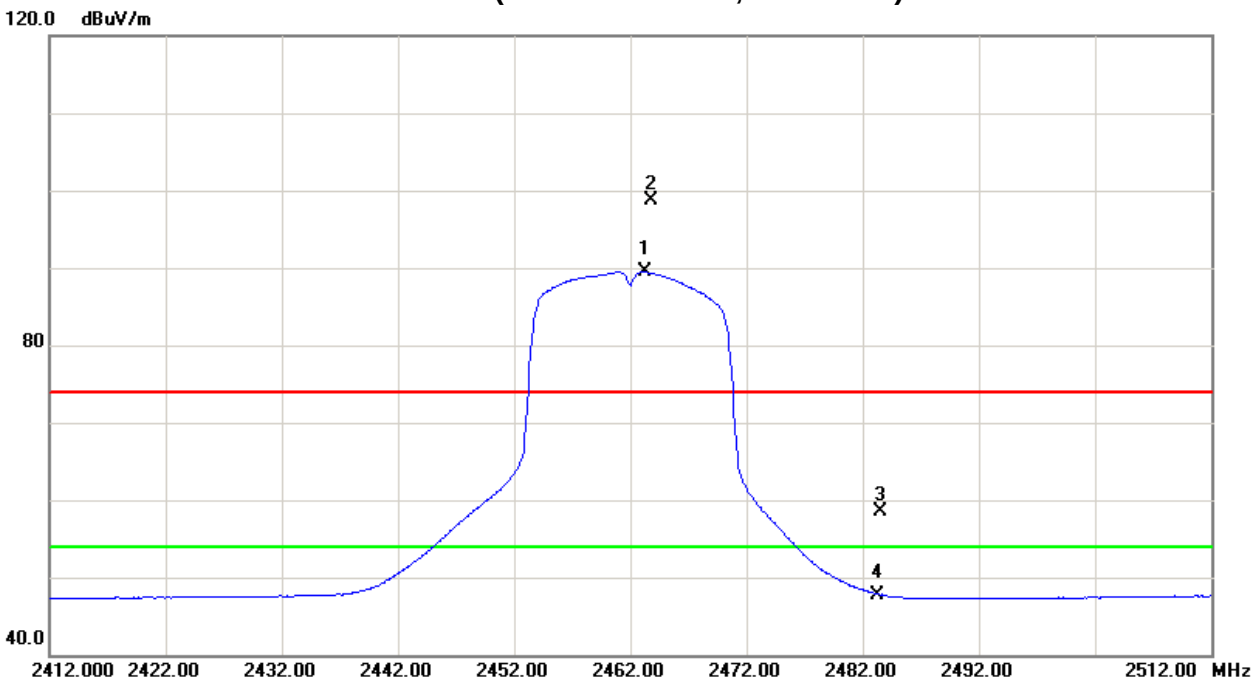
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2463.20	**H**	**65.10**	**55.90**	**33.57**	**98.67**	**89.47**			**X/F**
2483.50	H	24.85	14.16	33.62	58.47	47.78	74.00	54.00	X/E
4924.00	H	34.65	30.14	6.72	41.37	36.86	74.00	54.00	X/H

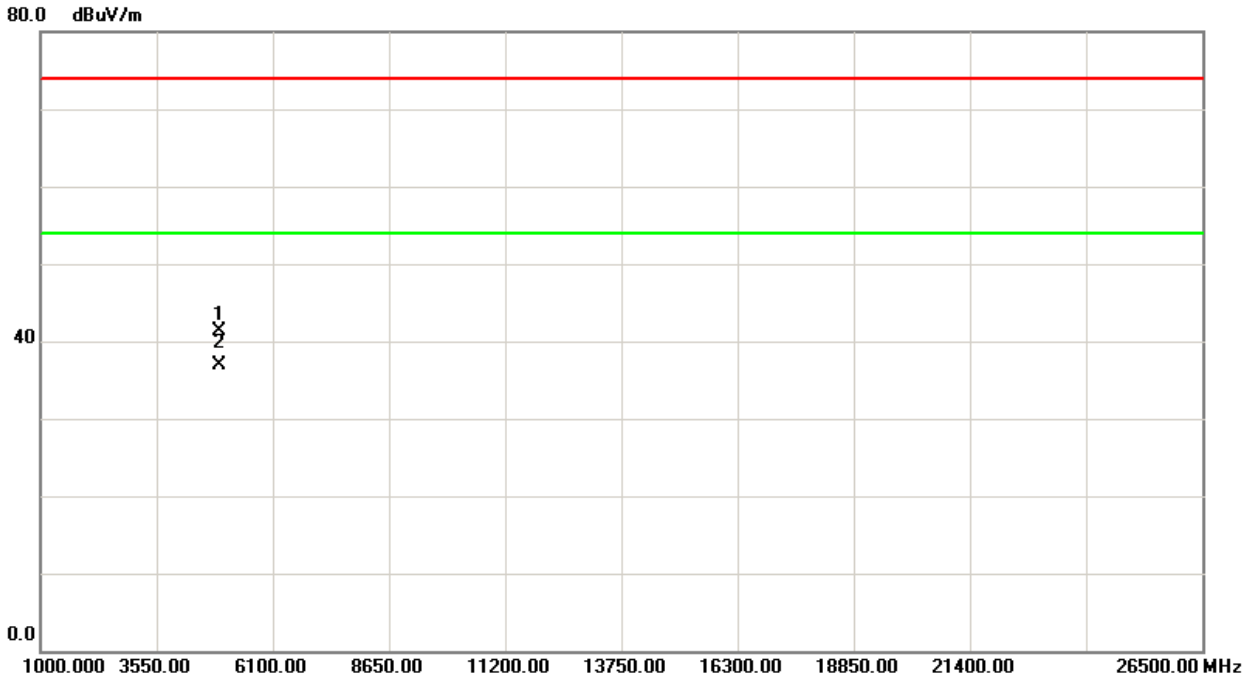
TX CH11 (Above 1000 MHz, Vertical)





TX CH11 (Above 1000 MHz, Horizontal)



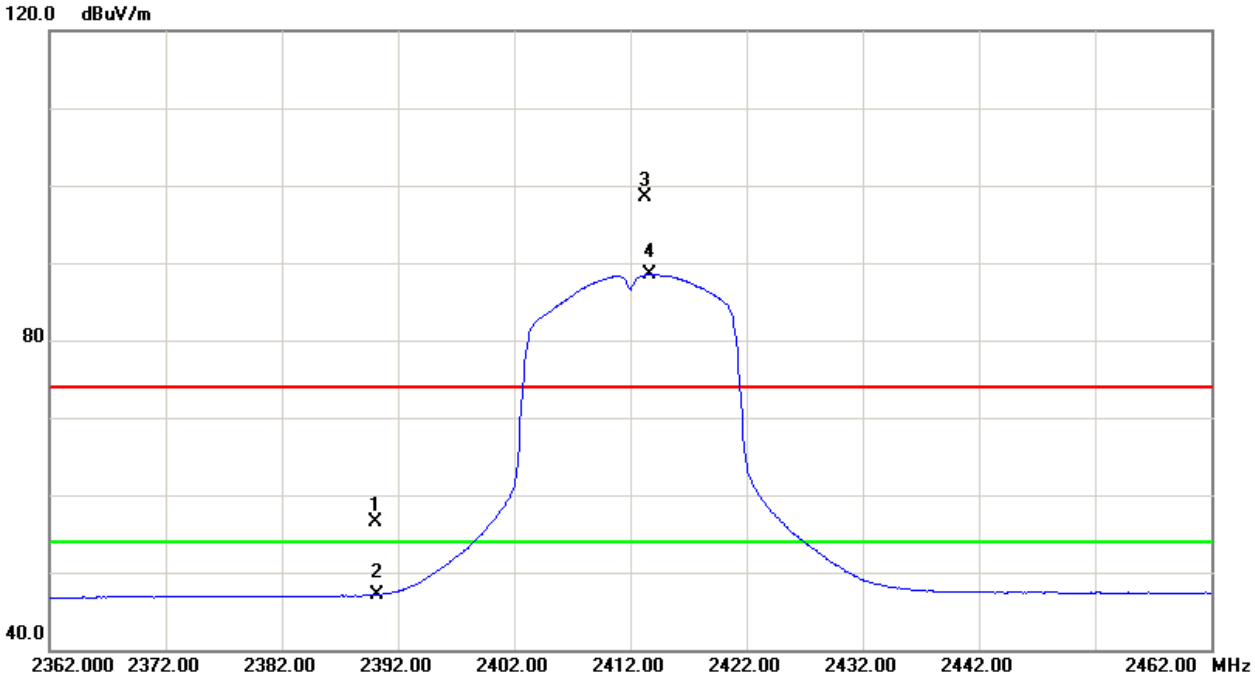


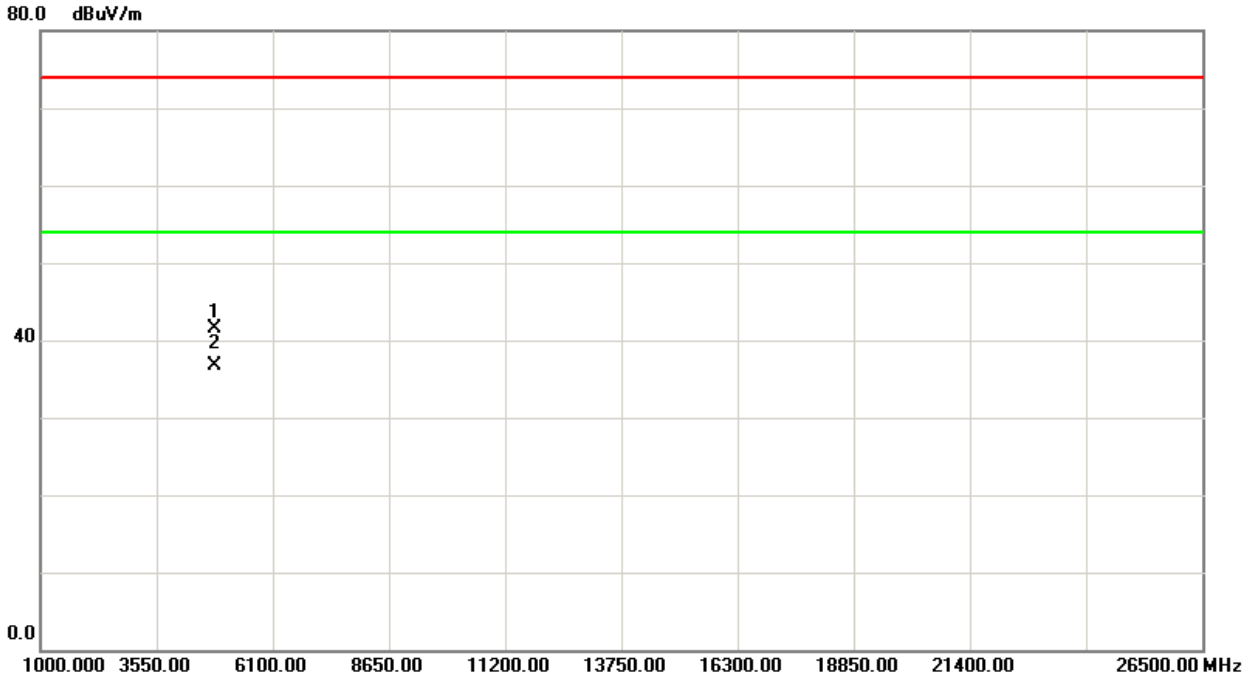
Test Mode :	TX N-20M MODE 2412MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	23.09	13.72	33.38	56.47	47.10	74.00	54.00	X/E
2413.30	**V**	**65.03**	**55.00**	**33.44**	**98.47**	**88.44**			**X/F**
4824.00	V	35.12	30.25	6.43	41.55	36.68	74.00	54.00	X/H

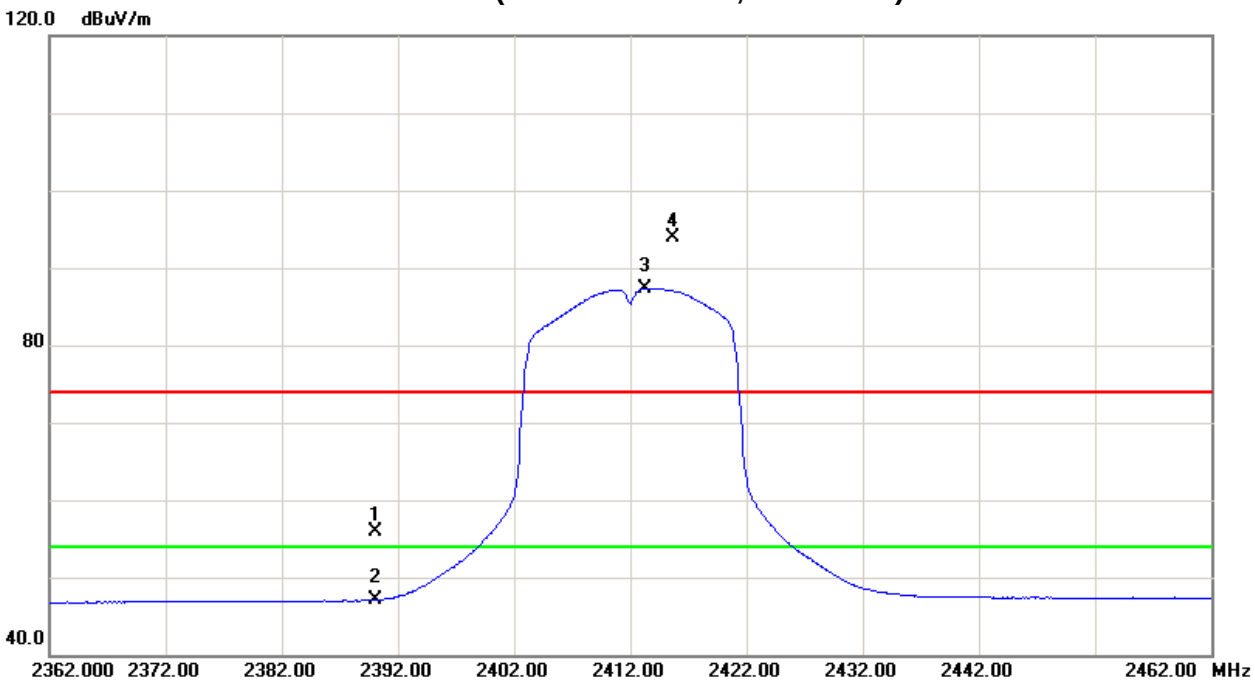
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	H	22.48	13.73	33.38	55.86	47.11	74.00	54.00	X/E
2413.30	**H**	**60.37**	**53.85**	**33.44**	**93.81**	**87.29**			**X/F**
4824.00	H	32.42	29.36	6.43	38.85	35.79	74.00	54.00	X/H

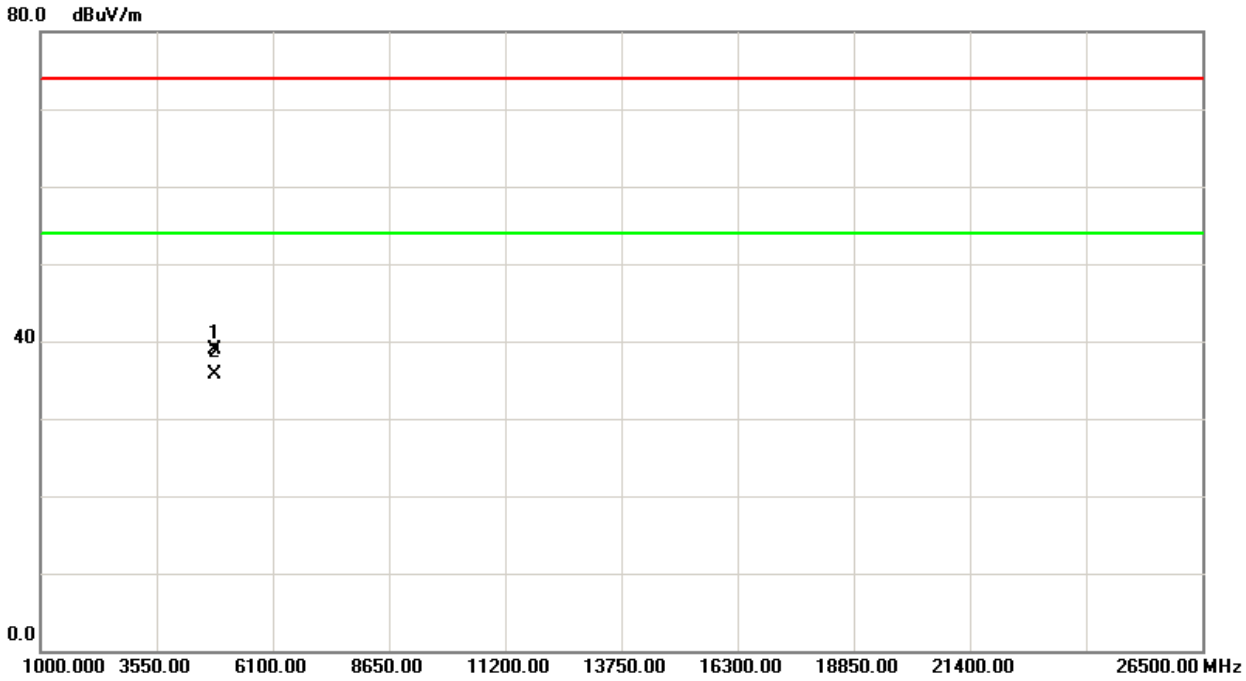
TX CH01 (Above 1000 MHz, Vertical)





TX CH01 (Above 1000 MHz, Horizontal)



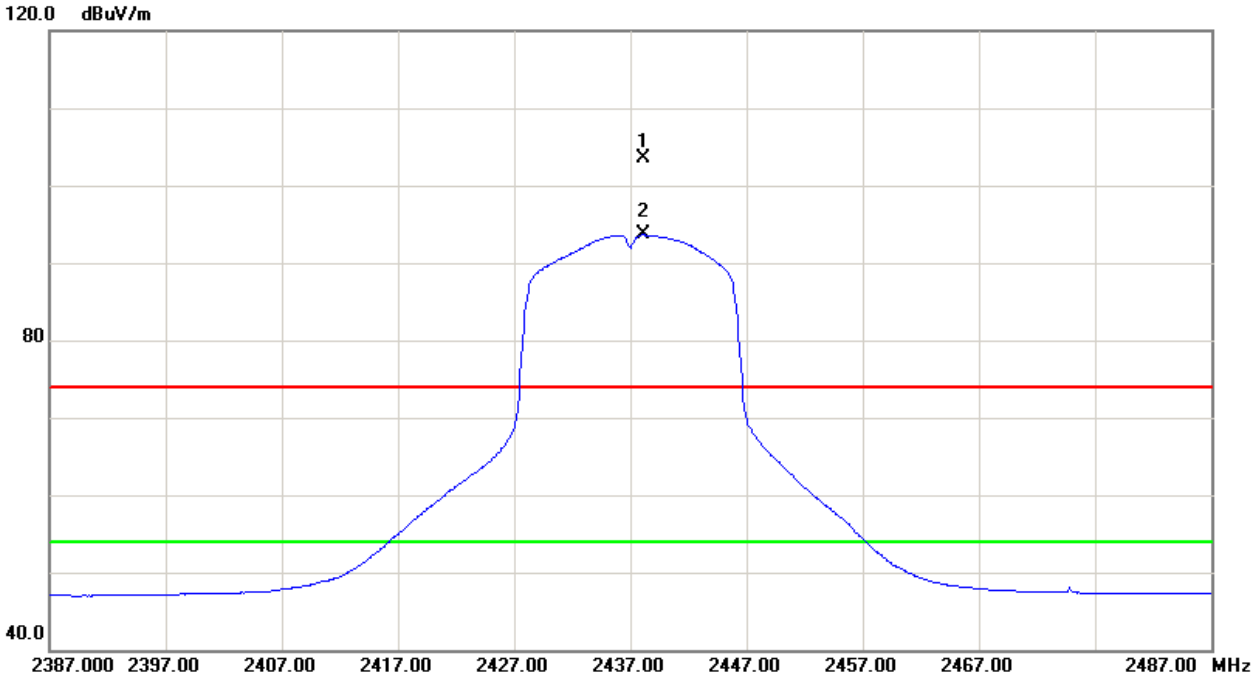


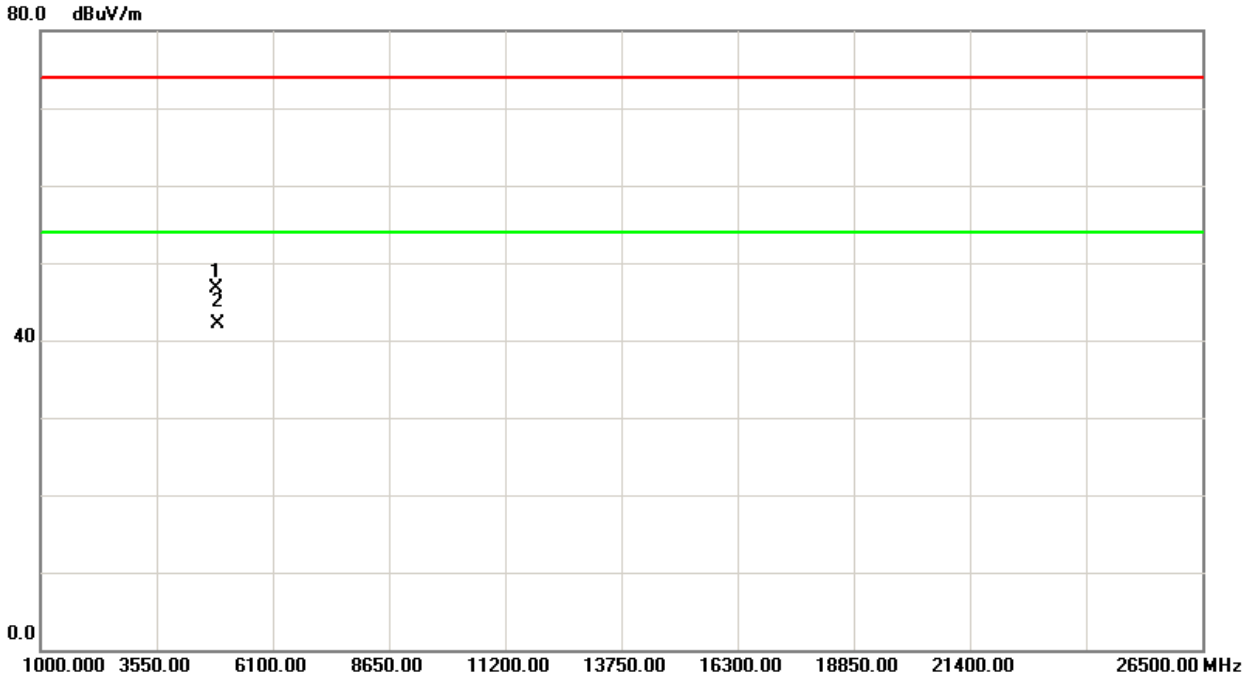
Test Mode :	TX N-20M MODE 2437MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2438.10	**V**	**70.05**	**60.11**	**33.50**	**103.55**	**93.61**			**X/F**
4874.00	V	40.14	35.62	6.58	46.72	42.20	74.00	54.00	X/H

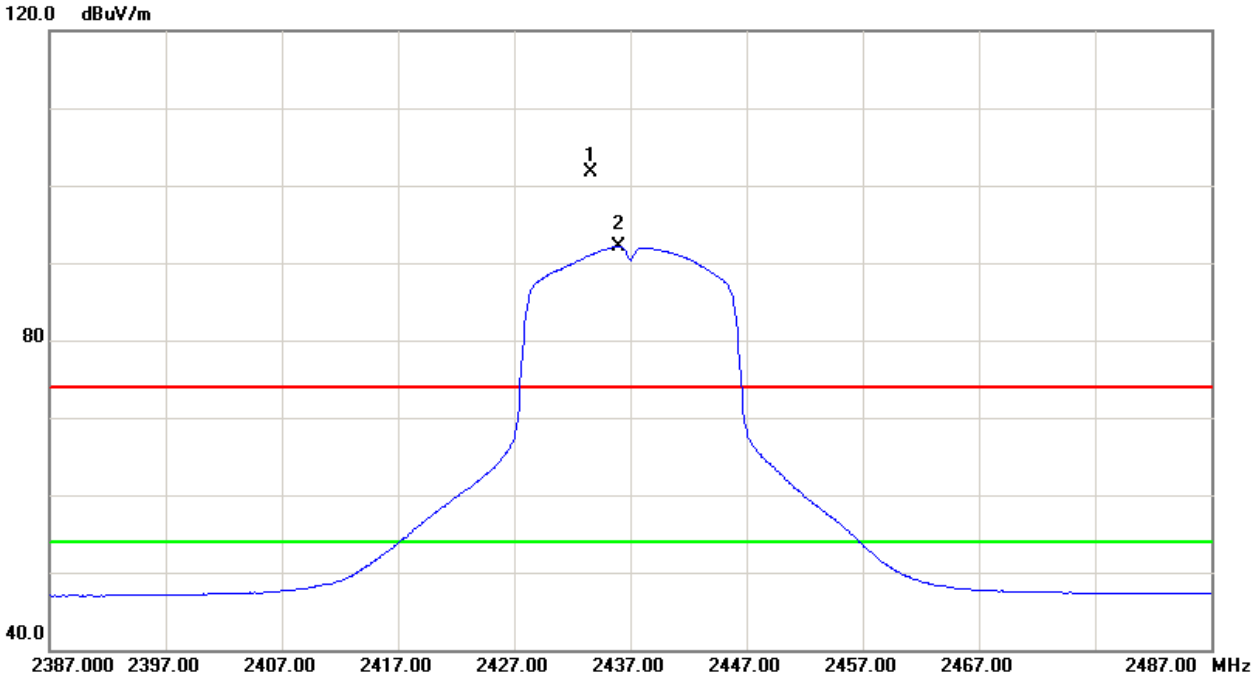
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2433.60	**H**	**68.22**	**58.62**	**33.50**	**101.72**	**92.12**			**X/F**
4874.00	H	36.28	32.21	6.58	42.86	38.79	74.00	54.00	X/H

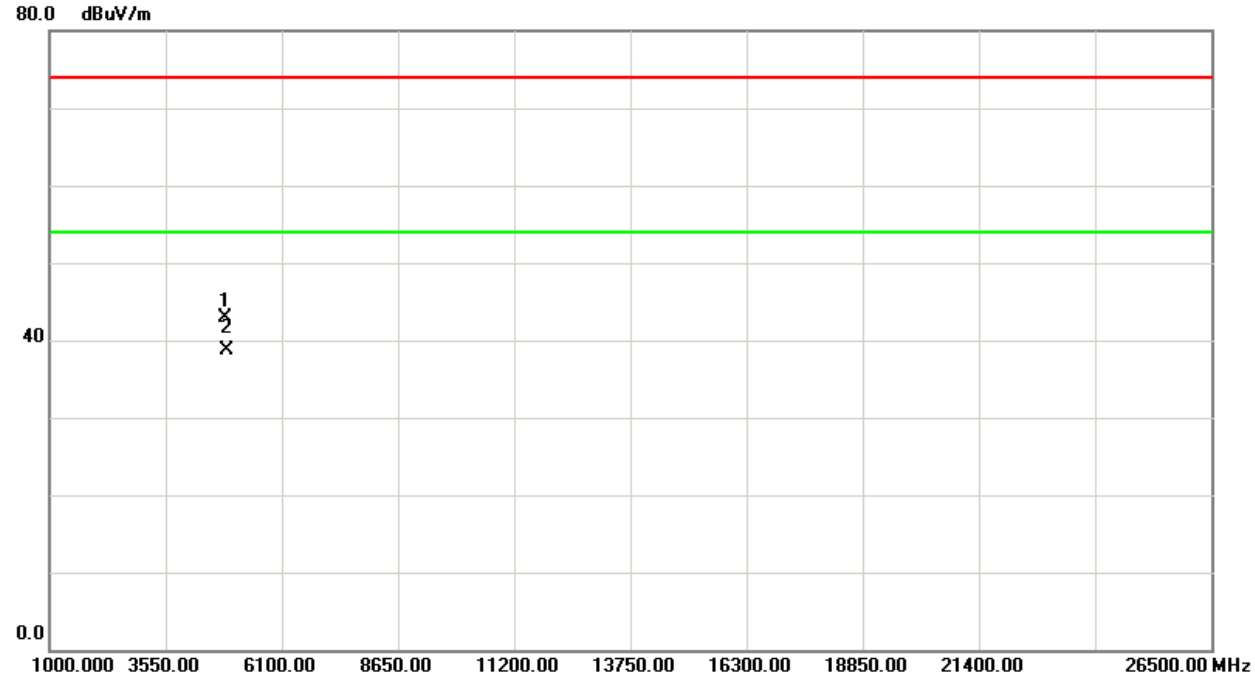
TX CH06 (Above 1000 MHz, Vertical)





TX CH06 (Above 1000 MHz, Horizontal)



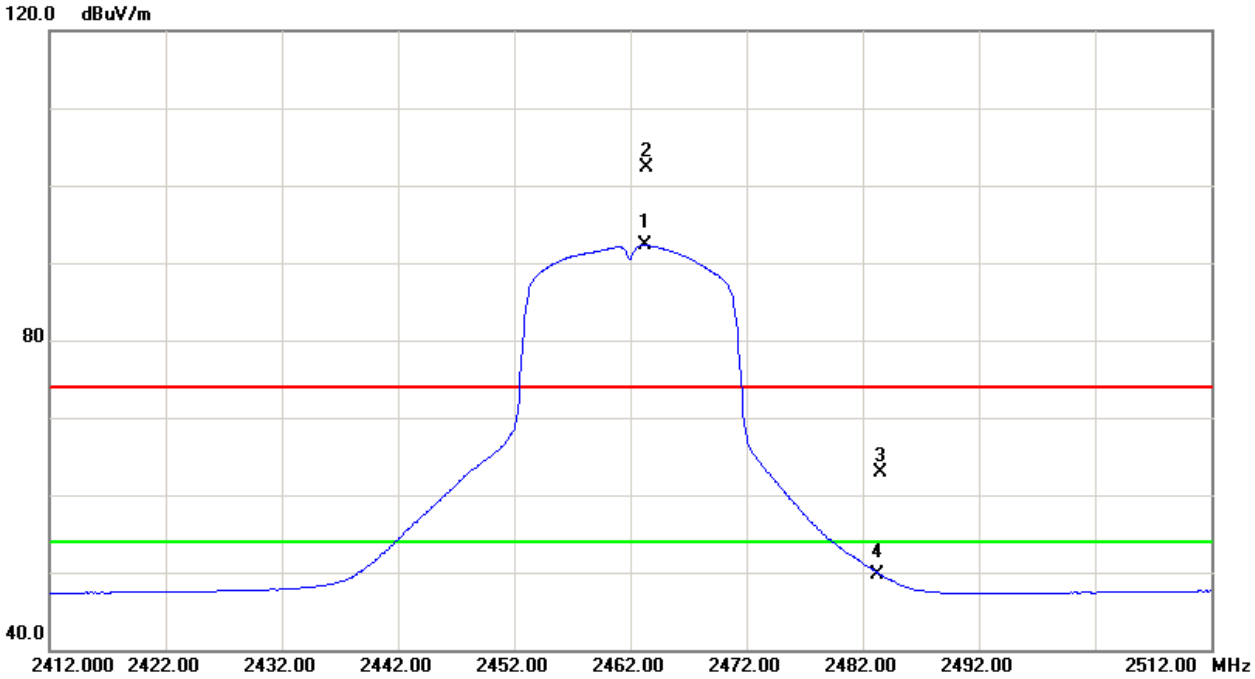


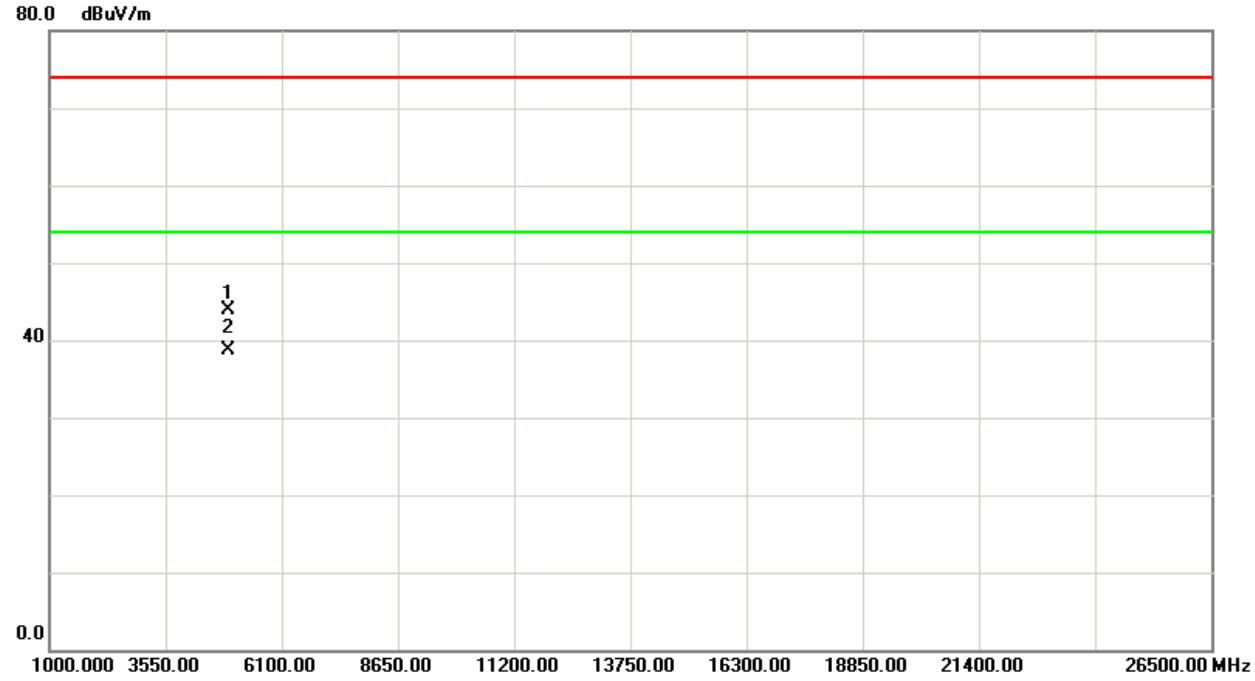
Test Mode :	TX N-20M MODE 2462MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2463.20	**V**	**68.82**	**58.74**	**33.57**	**102.39**	**92.31**			**X/F**
2483.50	V	29.25	16.10	33.62	62.87	49.72	74.00	54.00	X/E
4924.00	V	37.13	32.05	6.72	43.85	38.77	74.00	54.00	X/H

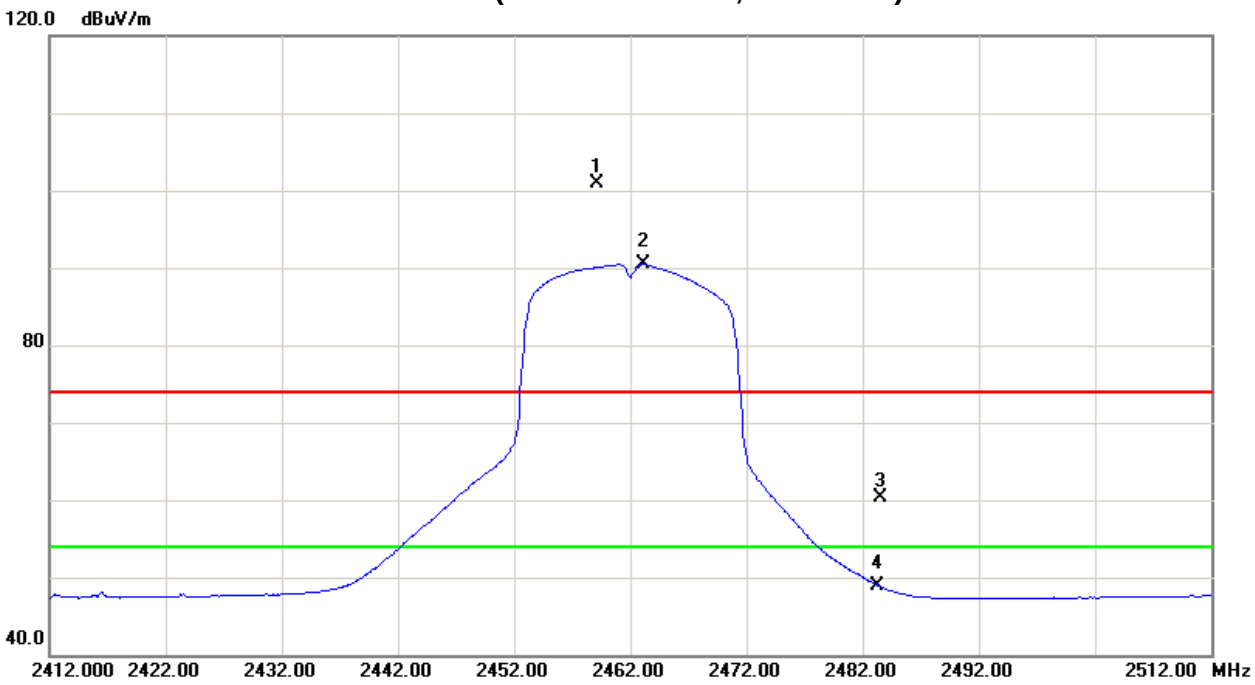
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2459.10	**H**	**67.37**	**56.89**	**33.56**	**100.93**	**90.45**			**X/F**
2483.50	H	26.66	15.24	33.62	60.28	48.86	74.00	54.00	X/E
4924.00	H	35.29	31.10	6.72	42.01	37.82	74.00	54.00	X/H

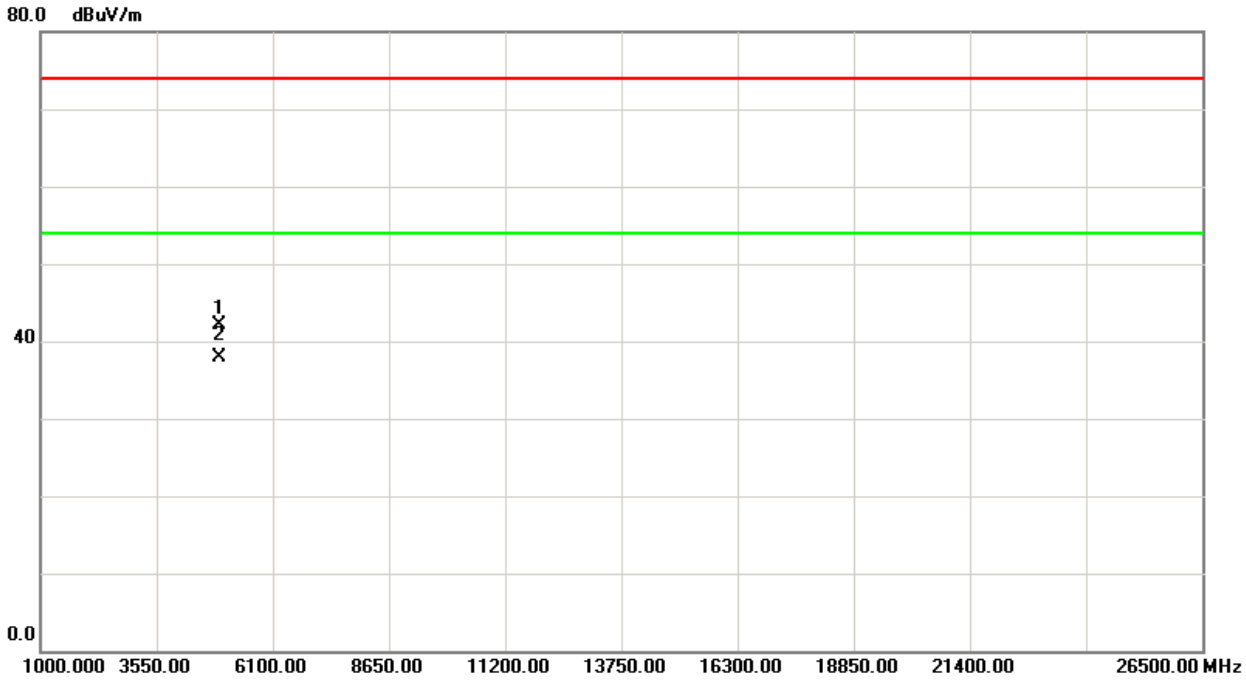
TX CH11 (Above 1000 MHz, Vertical)





TX CH11 (Above 1000 MHz, Horizontal)



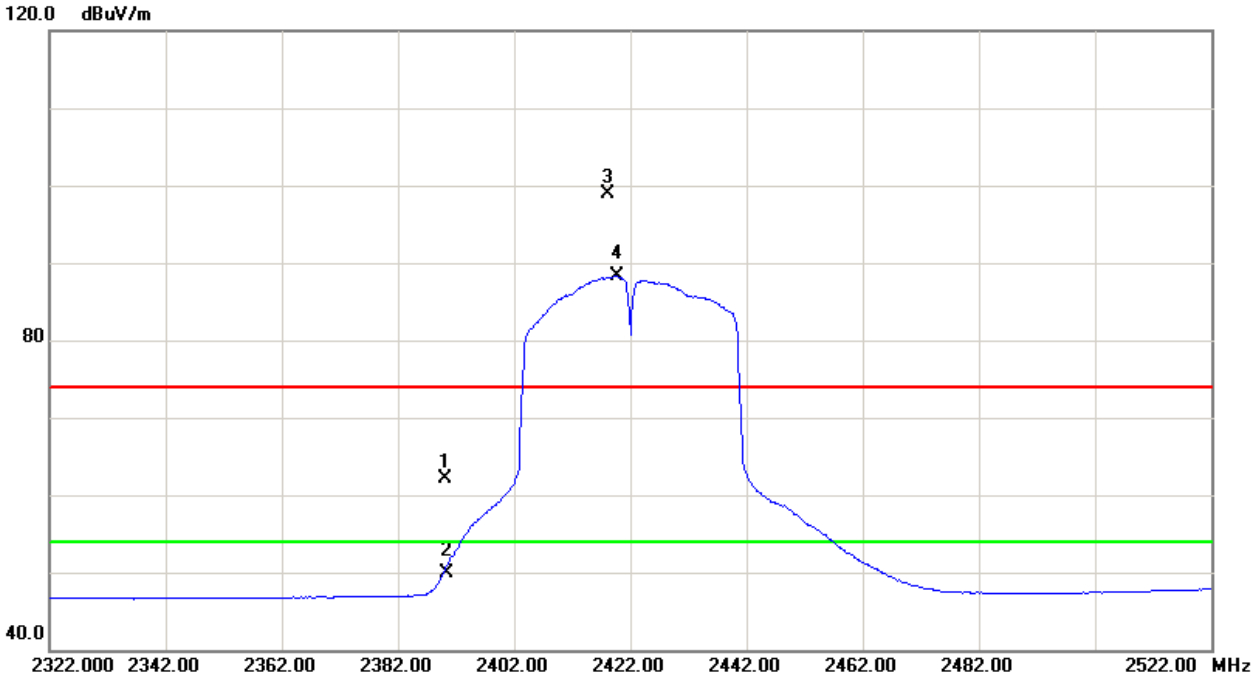


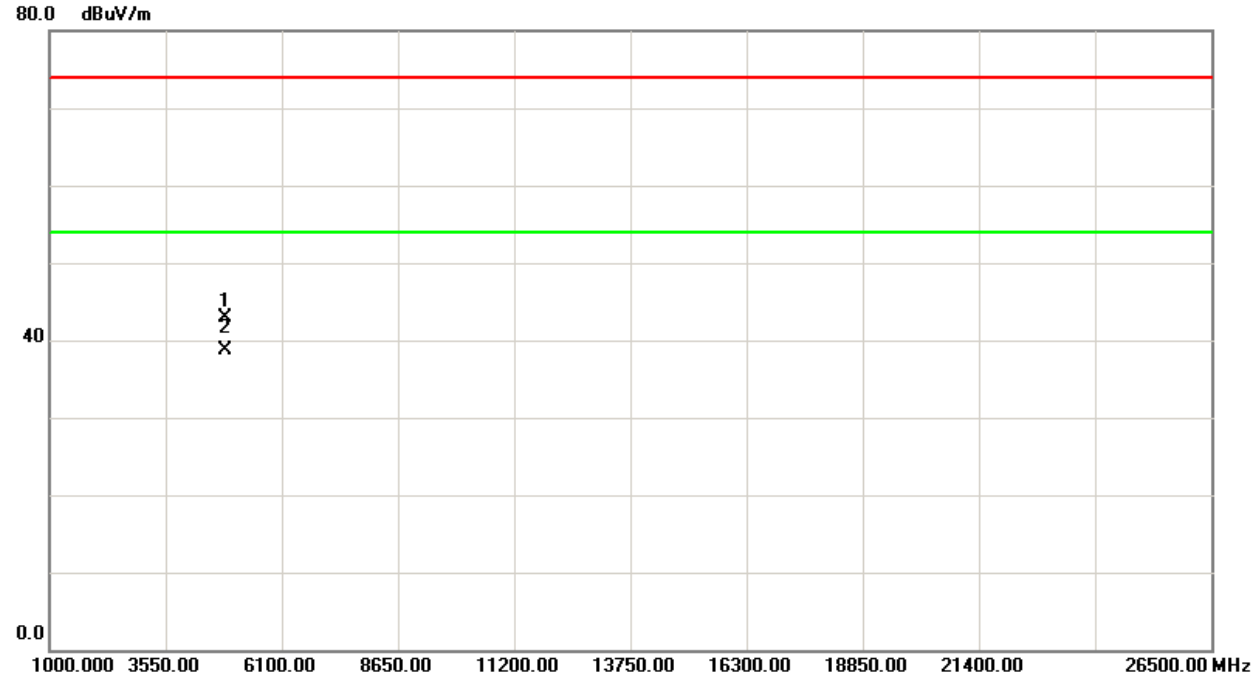
Test Mode :	TX N-40M MODE 2422MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	28.74	16.55	33.88	62.62	50.43	74.00	54.00	X/E
2418.20	**V**	**65.53**	**54.80**	**33.45**	**98.98**	**88.25**			**X/F**
4844.00	V	36.41	32.23	6.50	42.91	38.73	74.00	54.00	X/H

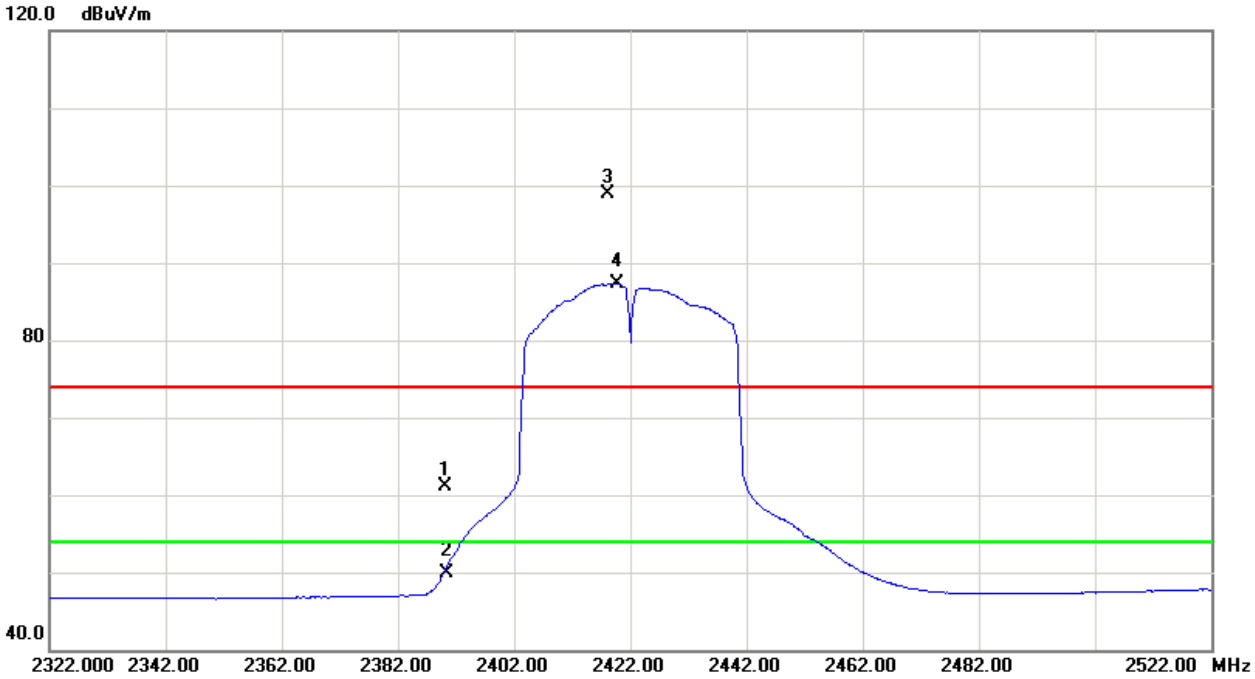
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	H	27.74	16.61	33.38	61.12	49.99	74.00	54.00	X/E
2418.20	**H**	**65.48**	**53.91**	**33.45**	**98.93**	**87.36**			**X/F**
4844.00	H	35.24	31.34	6.50	41.74	37.84	74.00	54.00	X/H

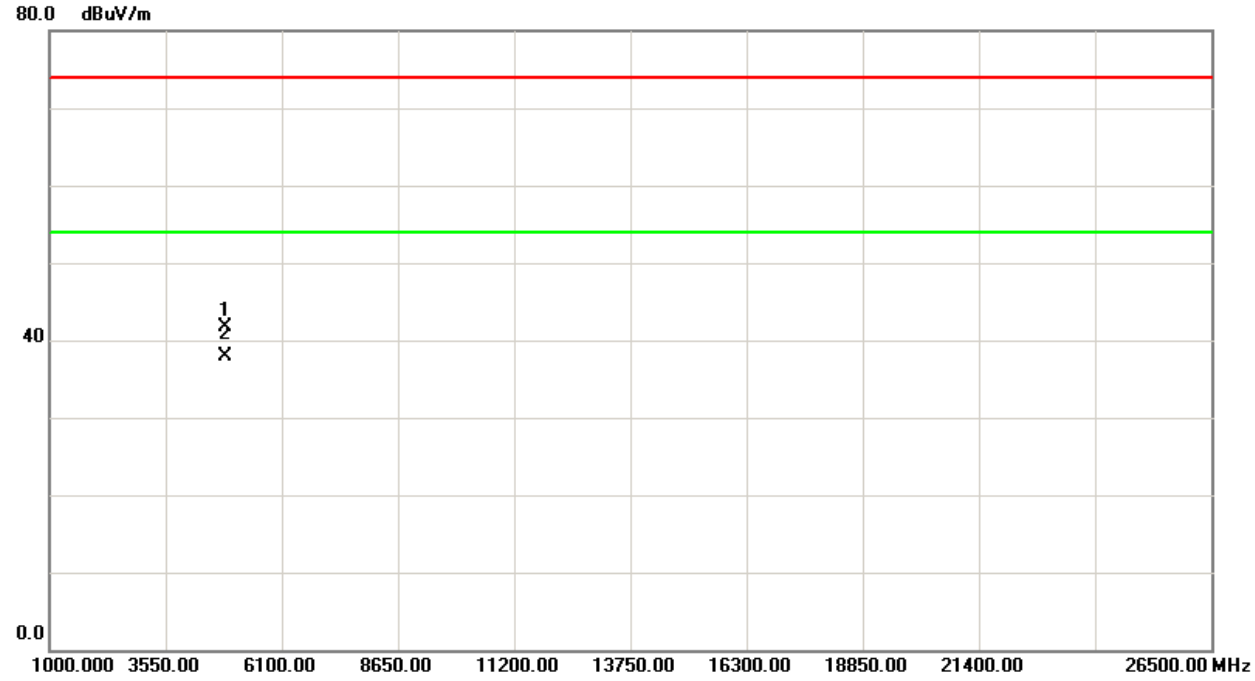
TX CH03 (Above 1000 MHz, Vertical)





TX CH03 (Above 1000 MHz, Horizontal)



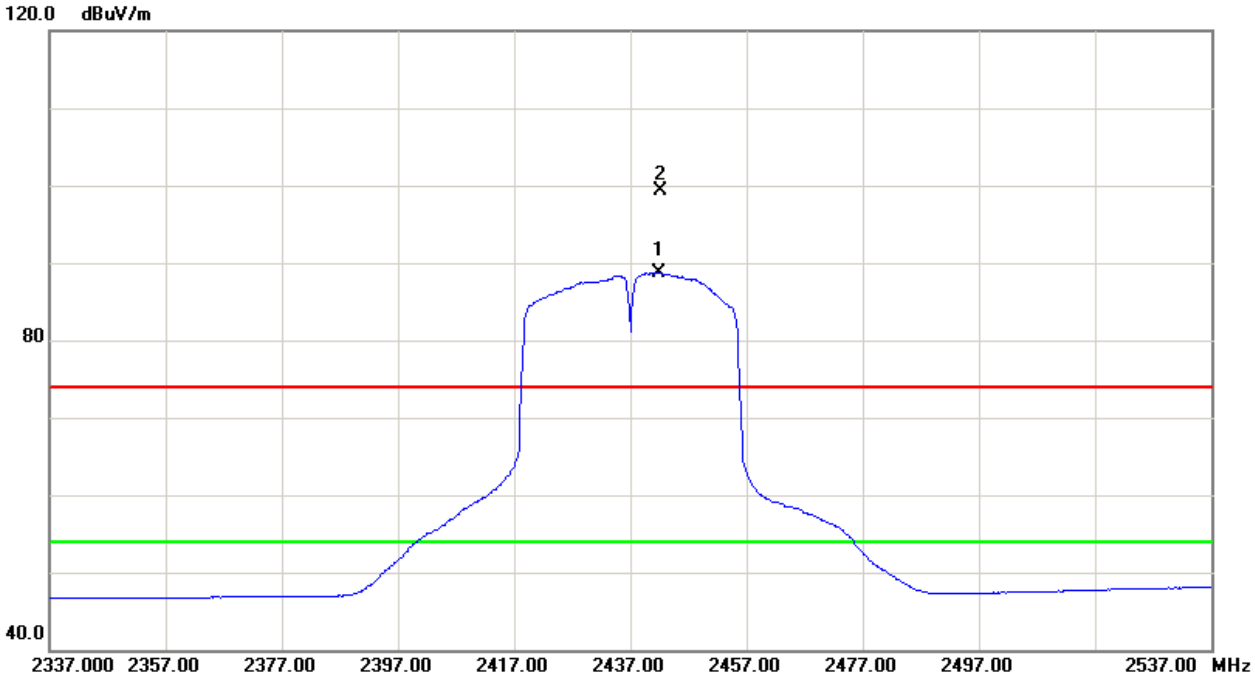


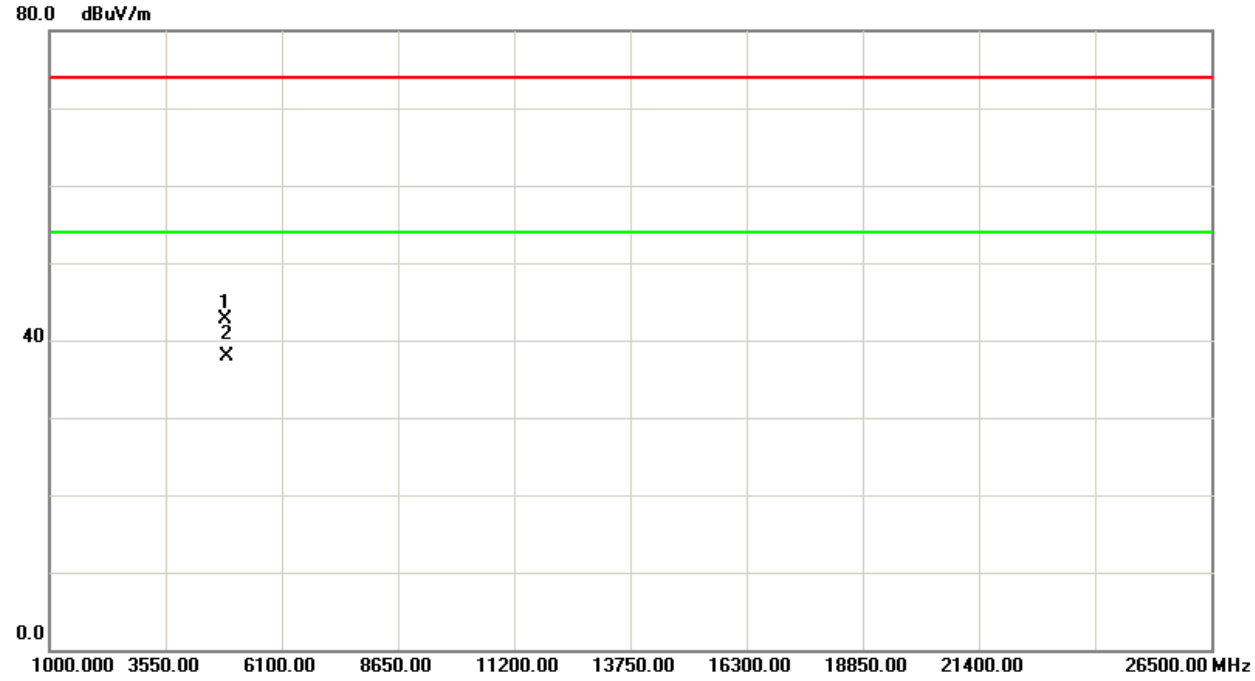
Test Mode :	TX N-40M MODE 2437MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2441.80	**V**	**65.77**	**55.17**	**33.51**	**99.28**	**88.68**			**X/F**
4874.00	V	36.11	31.37	6.58	42.69	37.95	74.00	54.00	X/H

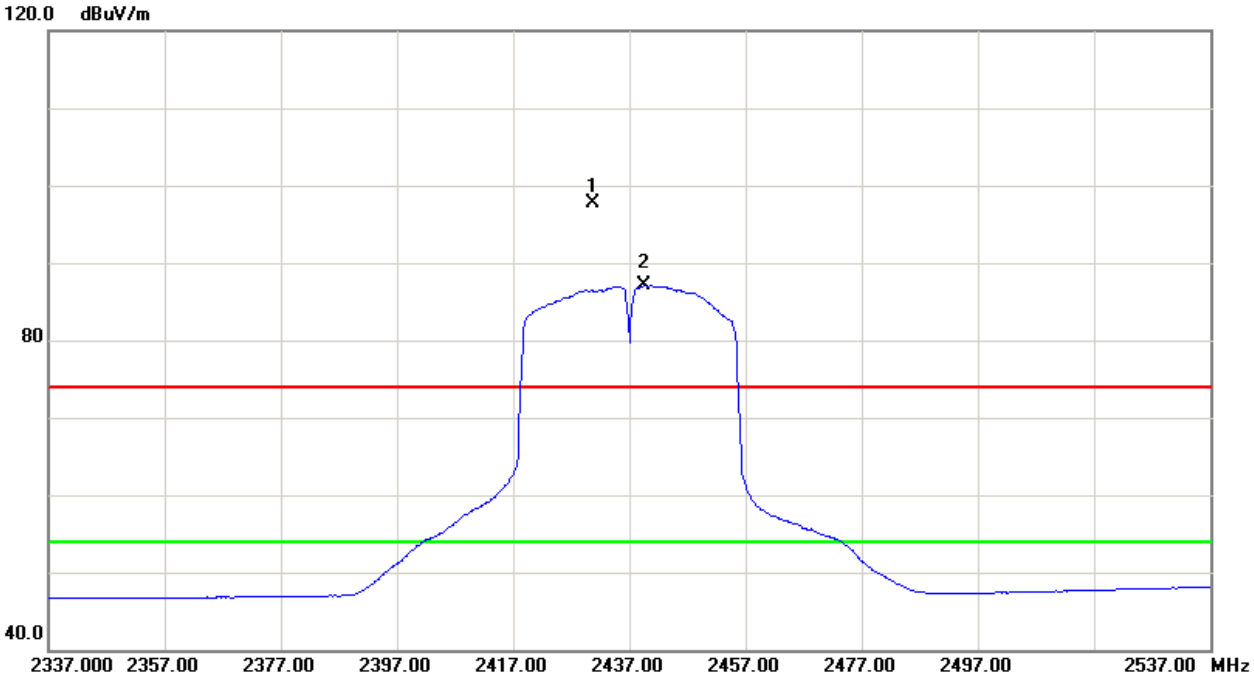
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2430.80	**H**	**64.27**	**53.53**	**33.51**	**97.78**	**87.04**			**X/F**
4874.00	H	34.26	30.14	6.58	40.84	36.72	74.00	54.00	X/H

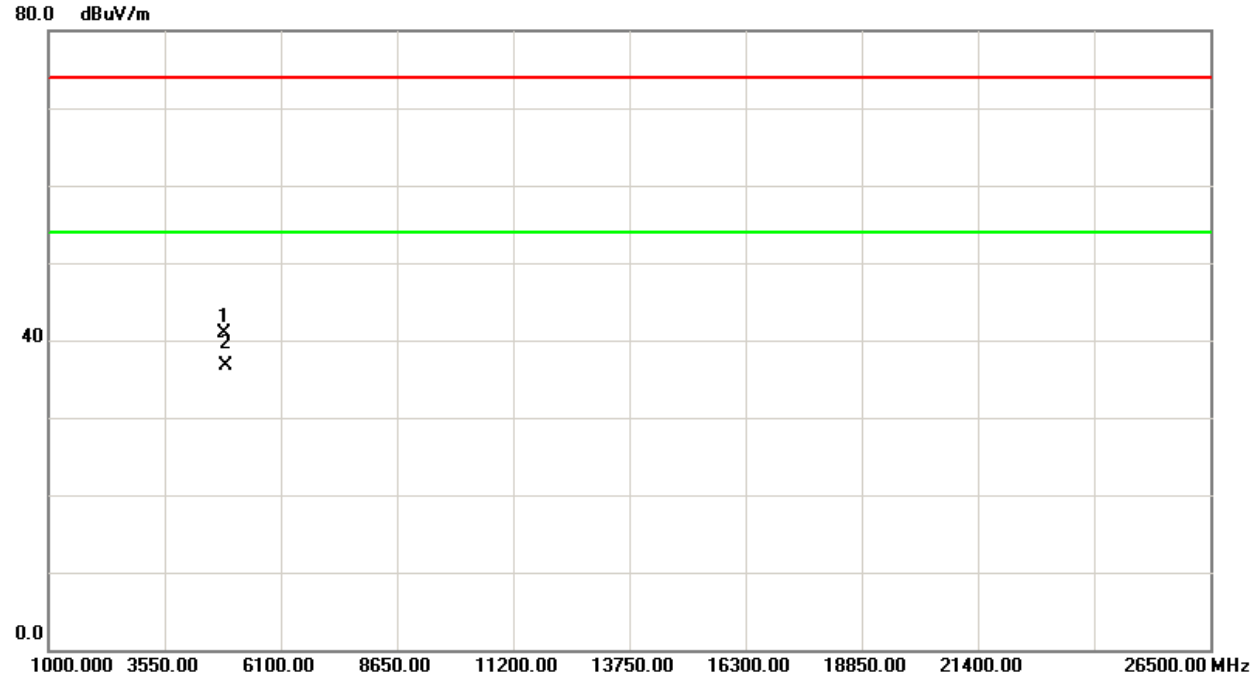
TX CH06 (Above 1000 MHz, Vertical)





TX CH06 (Above 1000 MHz, Horizontal)



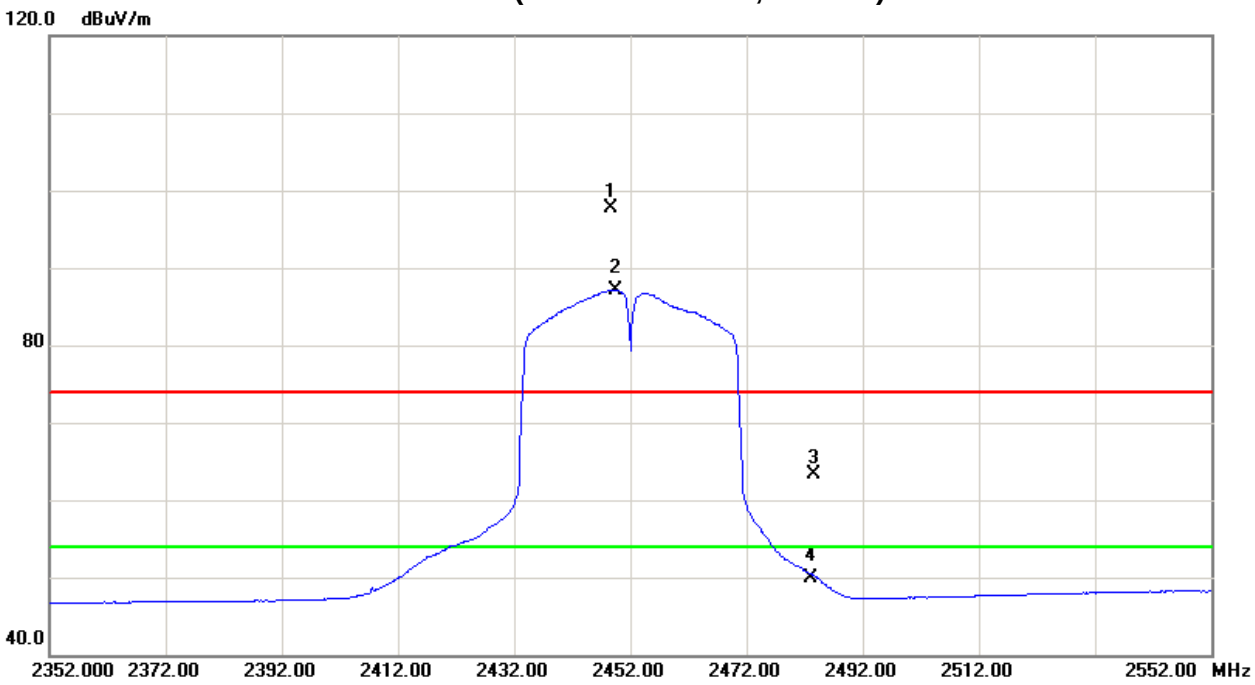


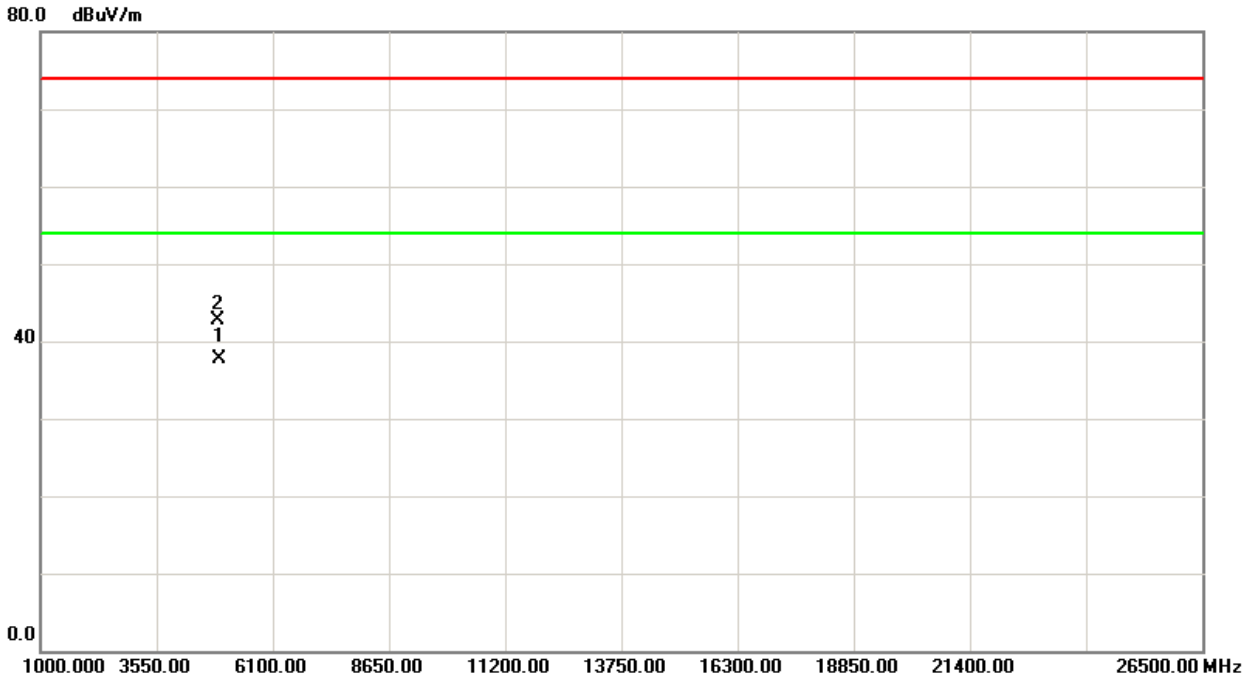
Test Mode :	TX N-40M MODE 2452MHz

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2448.60	**V**	**64.17**	**53.66**	**33.53**	**97.70**	**87.19**			**X/F**
2483.50	V	29.61	16.34	33.62	63.23	49.96	74.00	54.00	X/E
4804.87	V	36.12	31.05	6.67	42.79	37.72	74.00	54.00	X/H

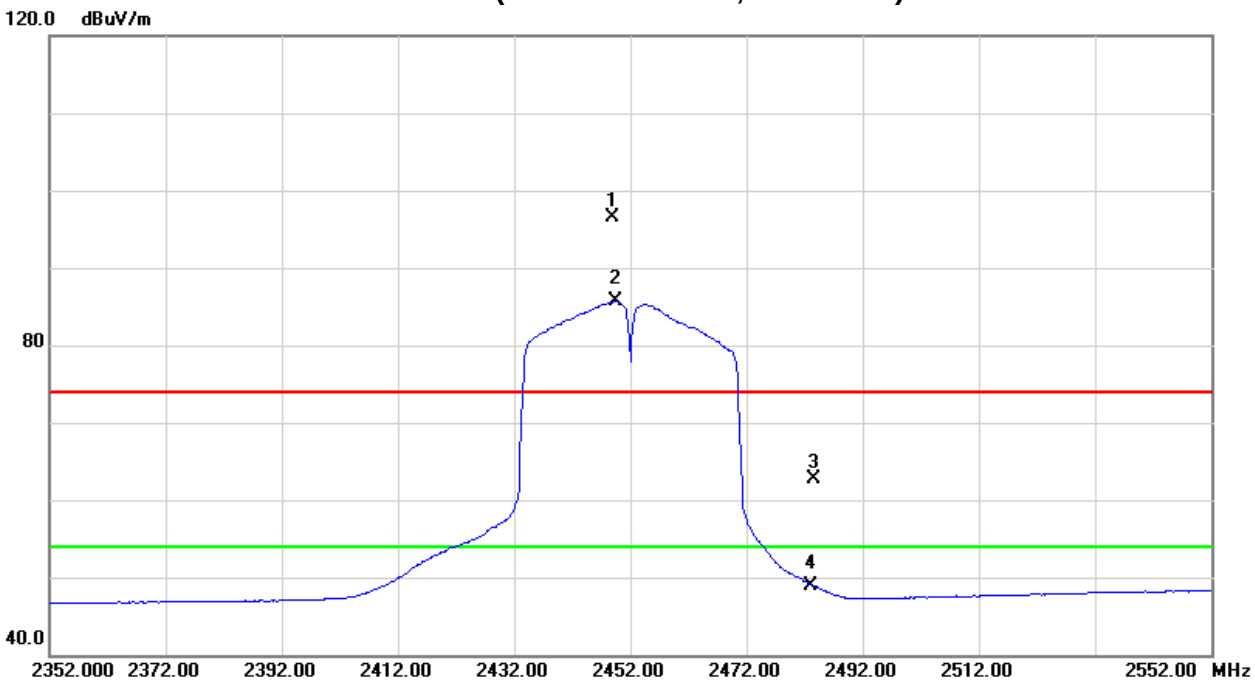
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2448.80	**H**	**63.00**	**52.15**	**33.53**	**96.53**	**85.68**			**X/F**
2483.50	H	29.07	15.34	33.62	62.69	48.96	74.00	54.00	X/E
4904.00	H	34.12	30.02	6.67	40.79	36.69	74.00	54.00	X/H

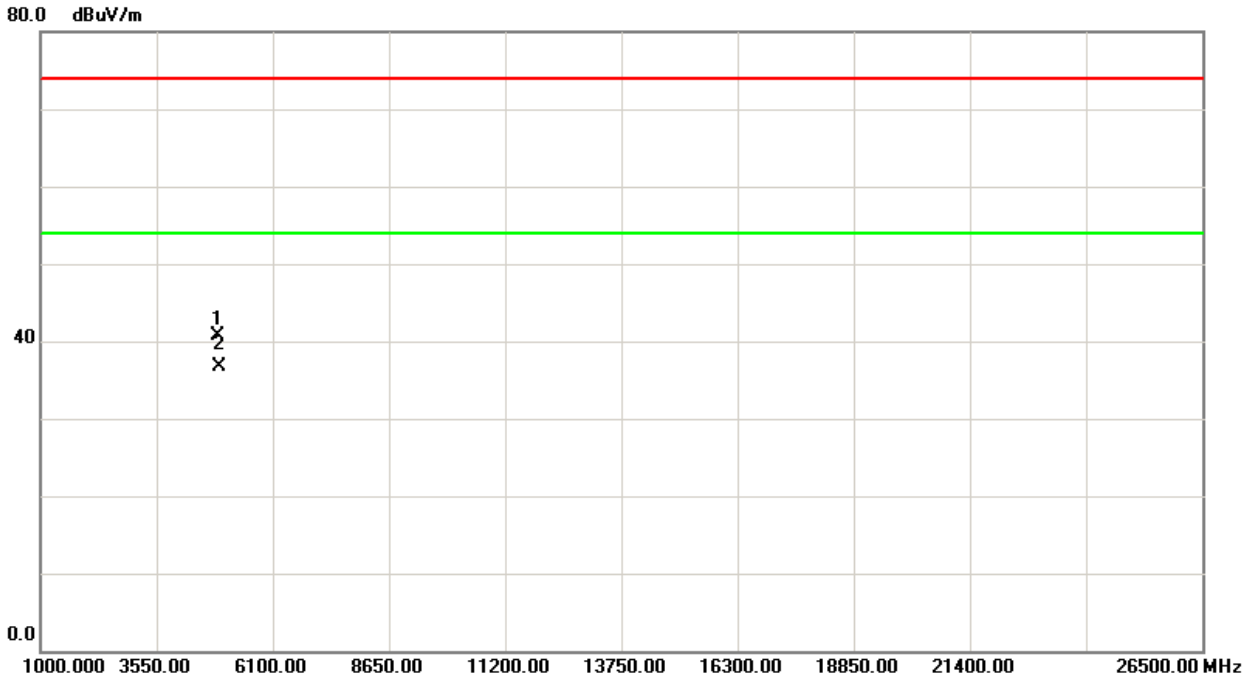
TX CH09 (Above 1000 MHz, Vertical)





TX CH09 (Above 1000 MHz, Horizontal)





5. BANDWIDTH TEST

5.1 Applied procedures

FCC Part15 (15.247) , Subpart C/ RSS-GEN and RSS-210			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2) RSS-GEN section 4.6.1 RSS-210 Annex 8 (A8.2(a))	Bandwidth	2400-2483.5	PASS

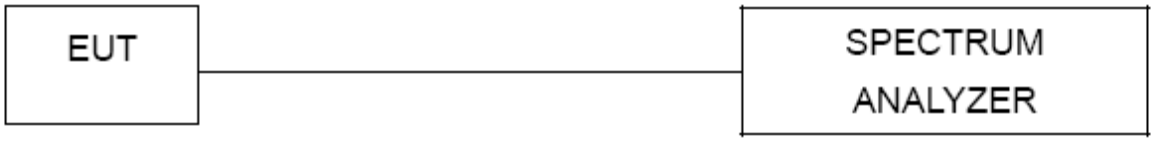
5.1.1 TEST PROCEDURE

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 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

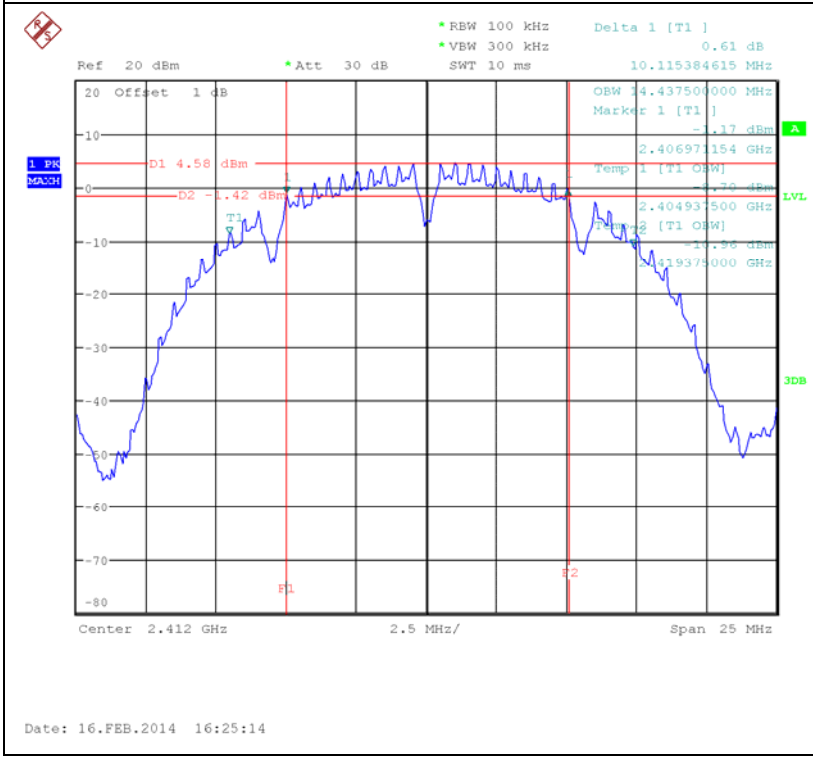
5.1.5 EUT TEST CONDITIONS

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

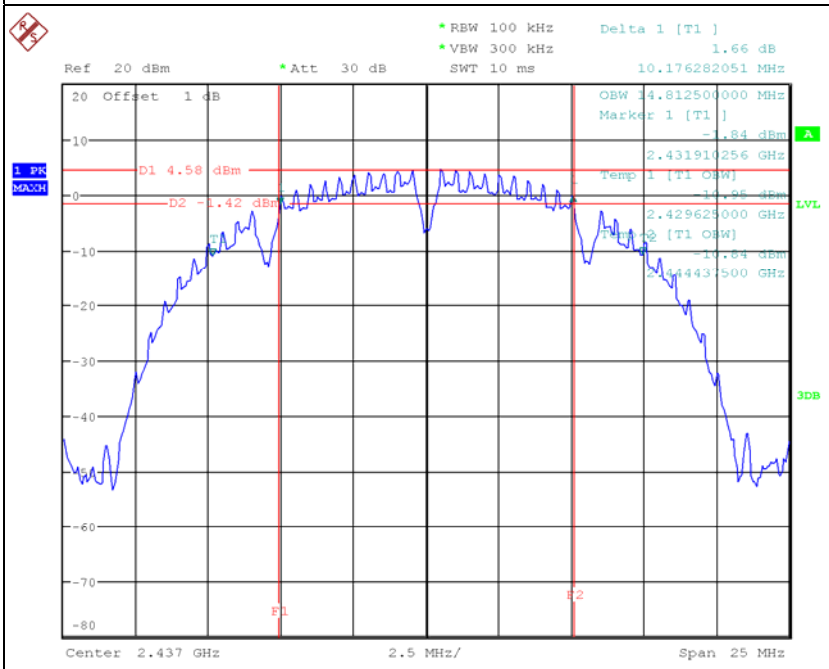
5.1.6 TEST RESULTS

Test Mode : TX B Mode				
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwith (MHz)	Result
CH01	2412	10.12	14.44	PASS
CH06	2437	10.18	14.81	PASS
CH11	2462	10.10	14.88	PASS

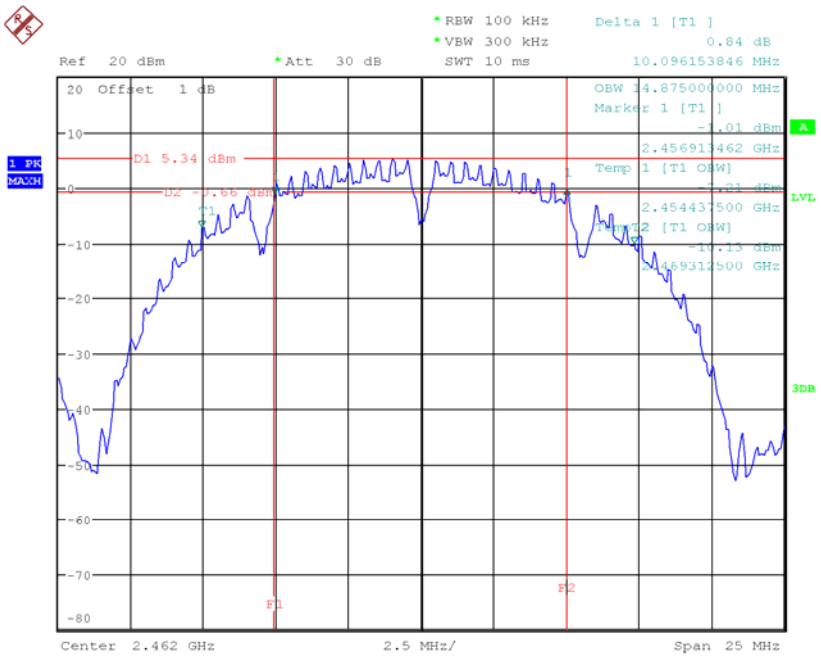
TX CH 01



TX CH 06

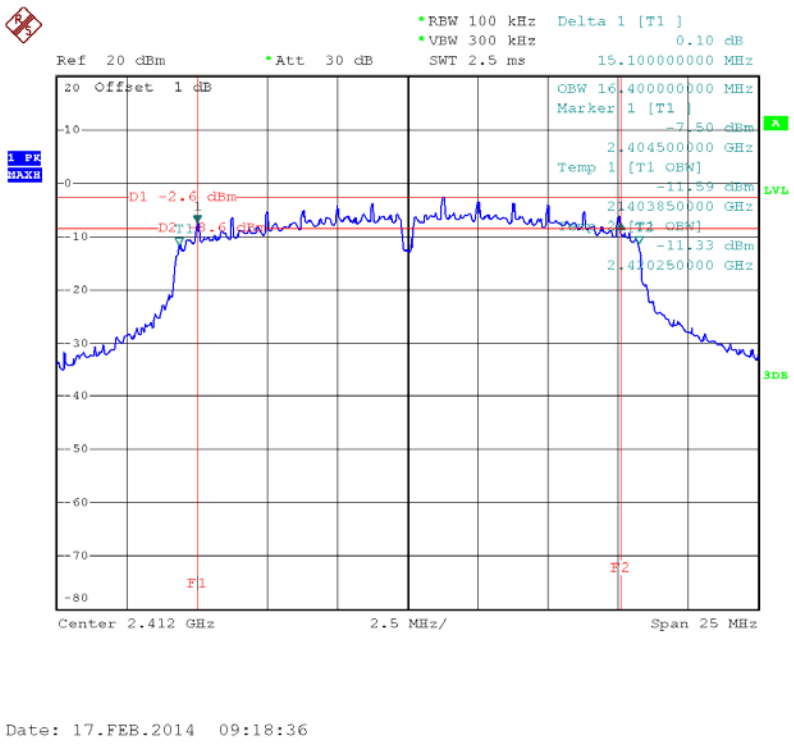


TX CH 11

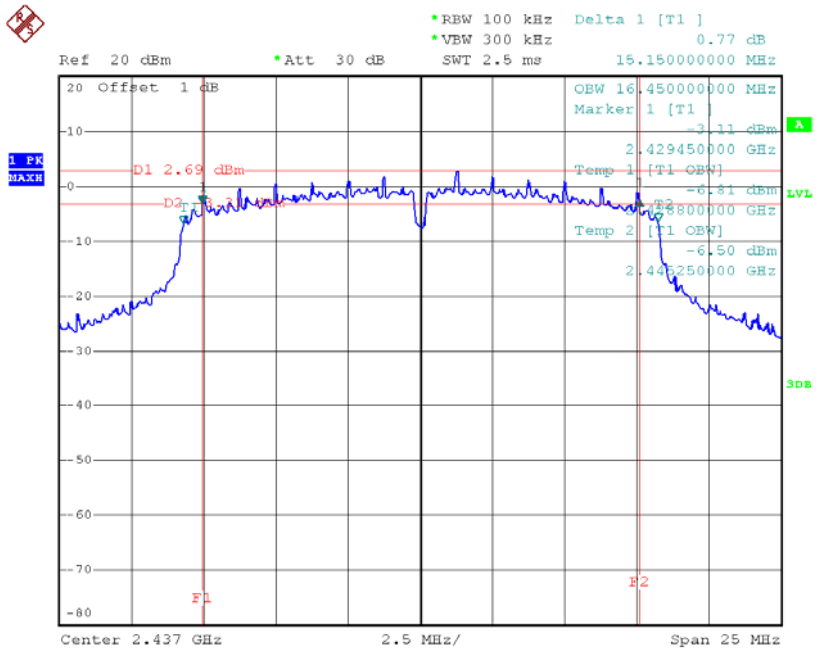


Test Mode: TX G Mode				
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwith (MHz)	Result
CH01	2412	15.10	16.40	PASS
CH06	2437	15.15	16.45	PASS
CH11	2462	15.10	16.45	PASS

TX CH 01

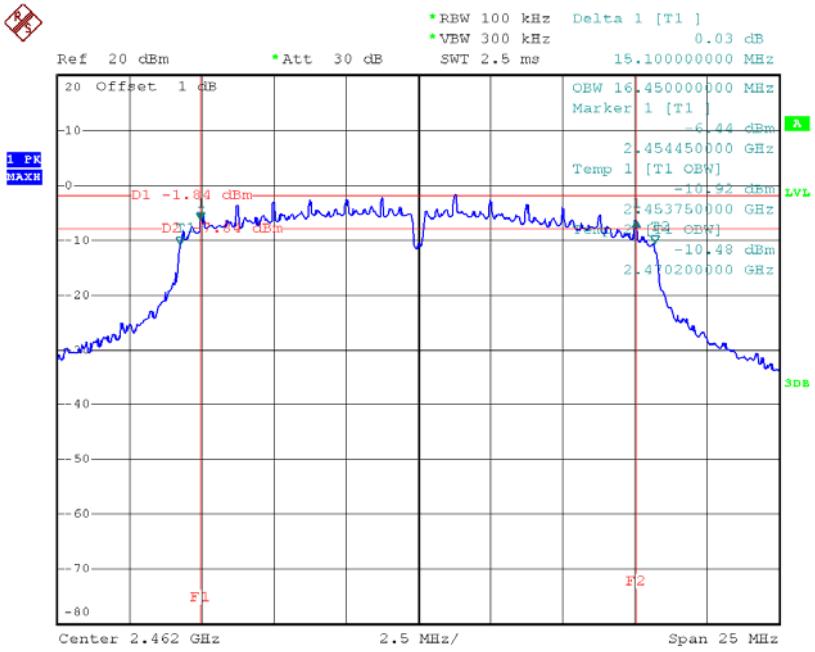


TX CH 06



Date: 17.FEB.2014 09:28:15

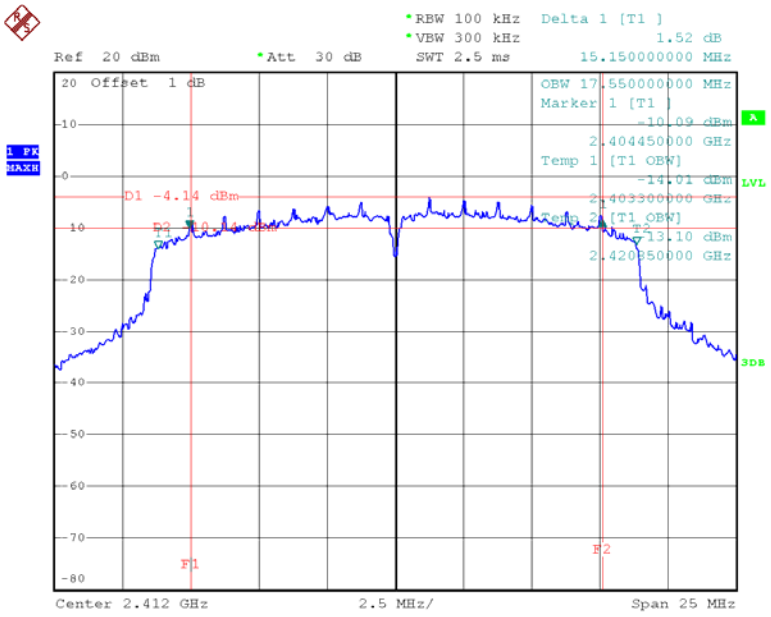
TX CH 11



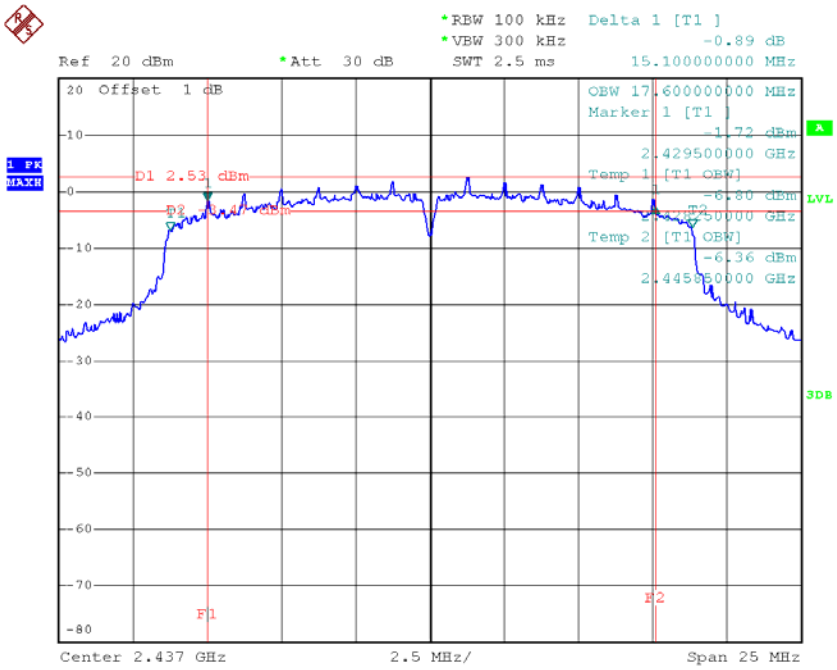
Date: 17.FEB.2014 09:34:31

Test Mode : TX N-20MHz Mode				
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwith (MHz)	Result
CH01	2412	15.15	17.55	PASS
CH06	2437	15.10	17.60	PASS
CH11	2462	15.10	17.55	PASS

TX CH 01

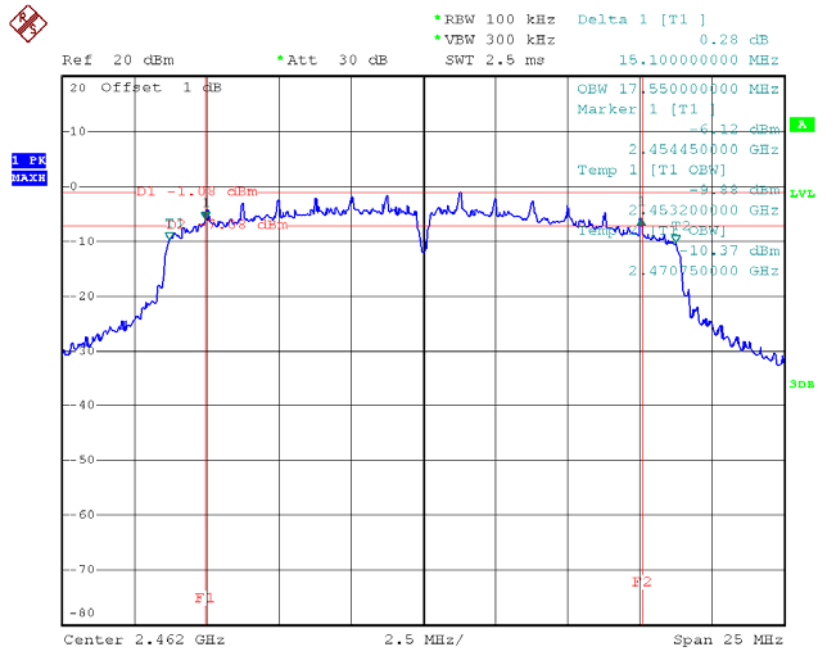


TX CH 06



Date: 17.FEB.2014 09:53:04

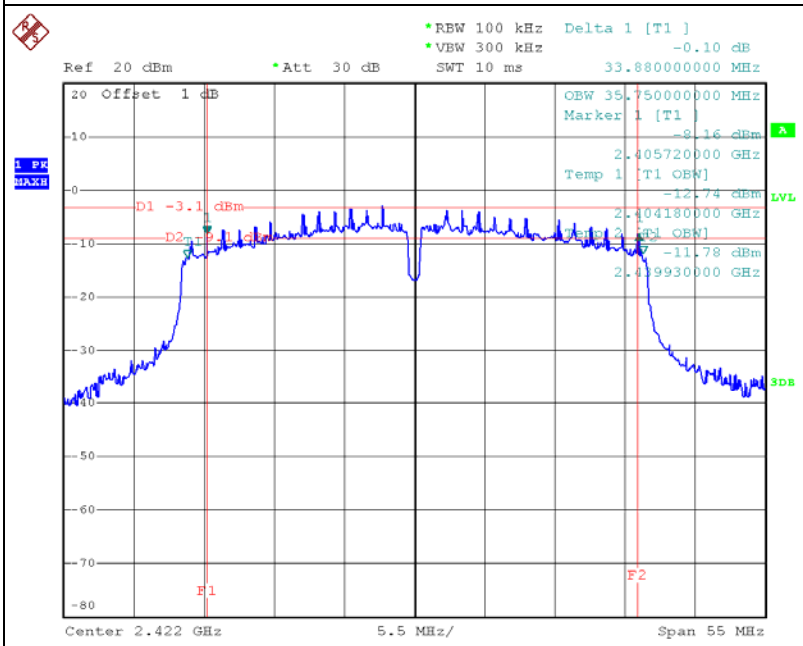
TX CH 11



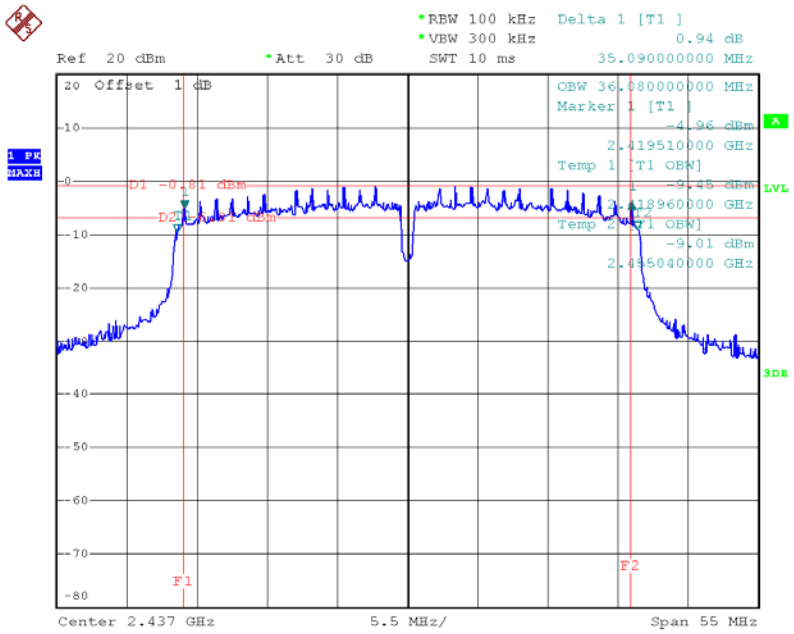
Date: 17.FEB.2014 09:57:24

Test Mode : TX N-40MHz Mode				
Test Channel	Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwith (MHz)	Result
CH03	2422	33.88	35.75	PASS
CH06	2437	35.09	36.08	PASS
CH09	2452	31.35	35.64	PASS

TX CH 03

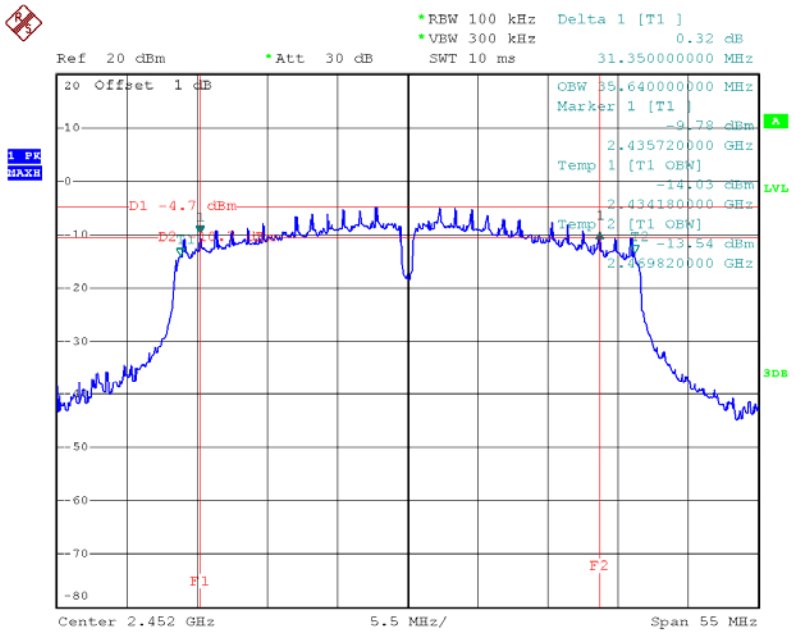


TX CH 06



Date: 17.FEB.2014 10:07:43

TX CH 09



Date: 17.FEB.2014 10:12:01

6. MAXIMUM OUTPUT POWER TEST

6.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C/ RSS-210				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3) RSS-210 Annex 8.4(4)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS

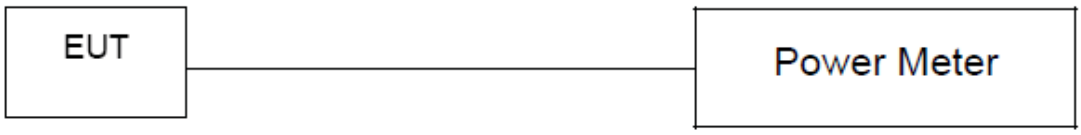
6.1.1 TEST PROCEDURE

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 9.1.3 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: 120V/60Hz

6.1.6 TEST RESULTS

Test Mode : TX B Mode				
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	13.51	30	1
CH06	2437	14.13	30	1
CH11	2462	15.43	30	1

Test Mode : TX G Mode				
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	8.79	30	1
CH06	2437	13.26	30	1
CH11	2462	11.73	30	1

Test Mode : TX N-20M Mode				
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH01	2412	8.62	30	1
CH06	2437	13.01	30	1
CH11	2462	12.15	30	1

Test Mode : TX N-40M Mode				
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH03	2422	12.10	30	1
CH06	2437	13.87	30	1
CH09	2452	10.25	30	1

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 Applied procedures / limit

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) & RSS-210 section 2.2& Annex 8 (A8.5), then the 15.209(a) & RSS-GEN limit in the table below has to be followed.

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

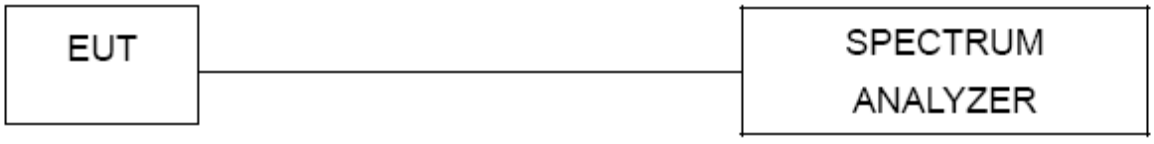
7.1.1 TEST PROCEDURE

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.

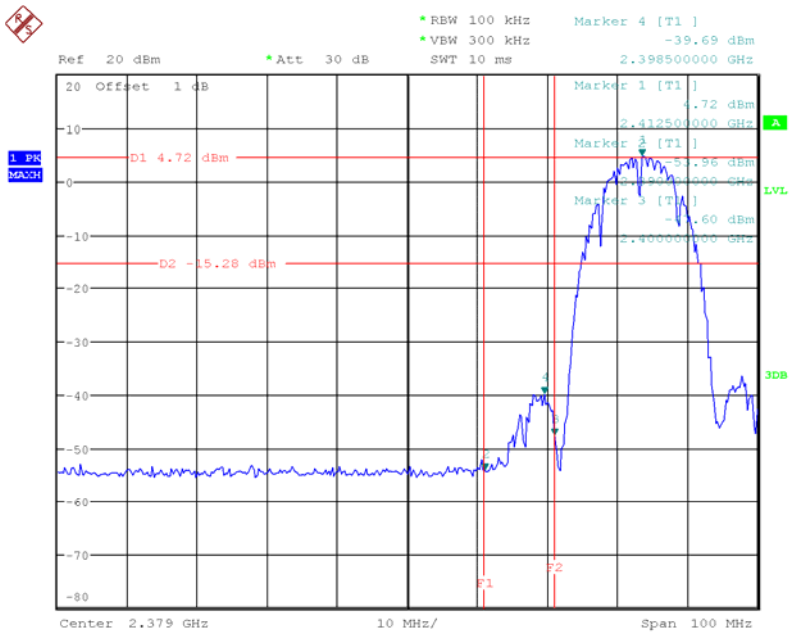
7.1.5 EUT TEST CONDITIONS

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

7.1.6 TEST RESULTS

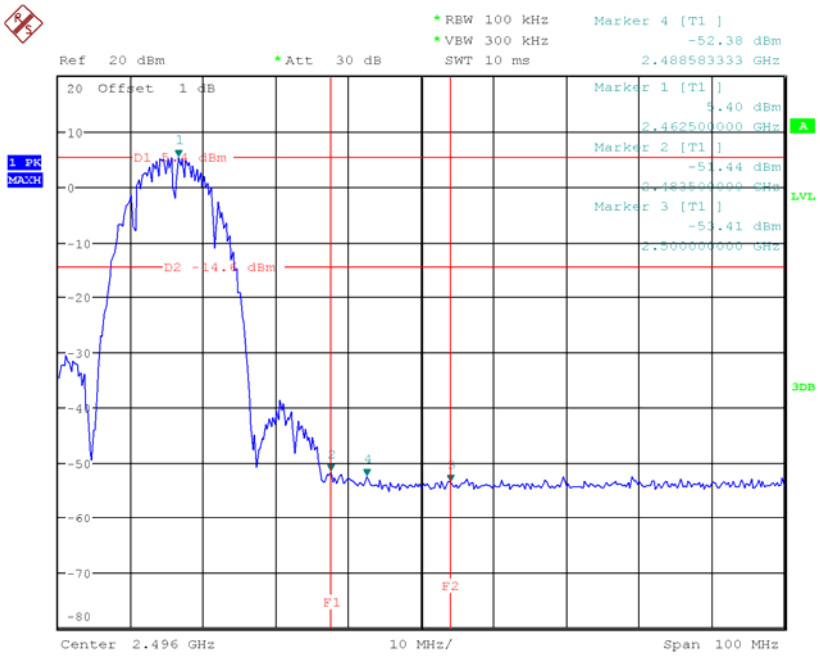
Test Mode :	TX B Mode

TX B mode CH01



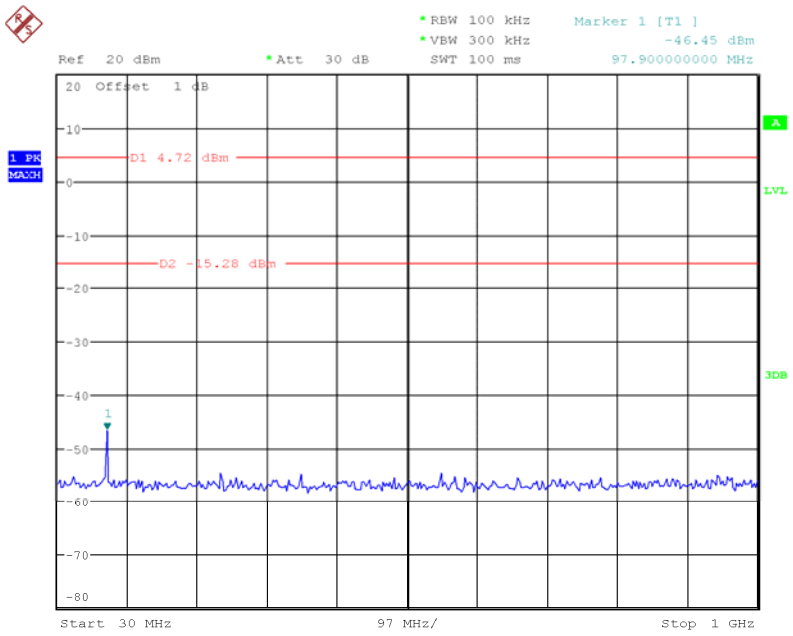
Date: 16.FEB.2014 16:27:30

TX B mode CH11



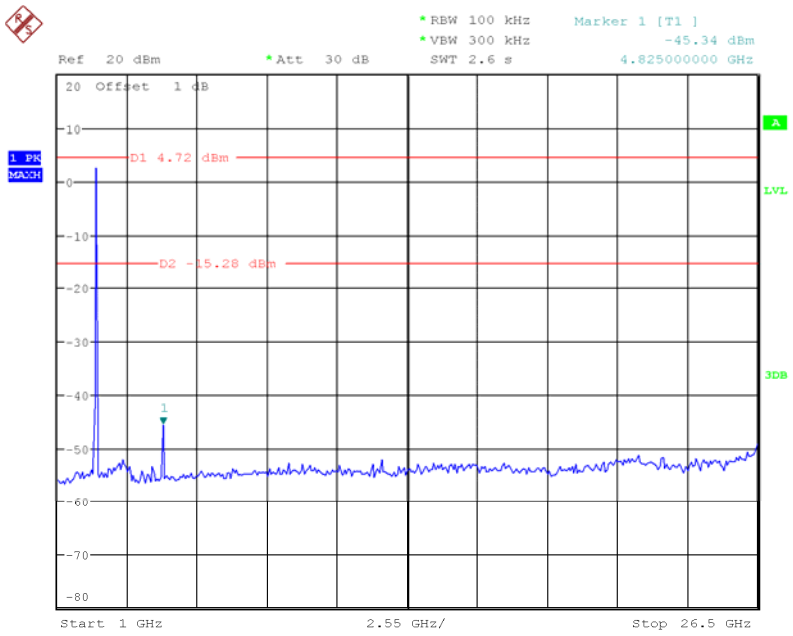
Date: 16.FEB.2014 16:41:02

TX B mode CH01 (30M~1000MHz)



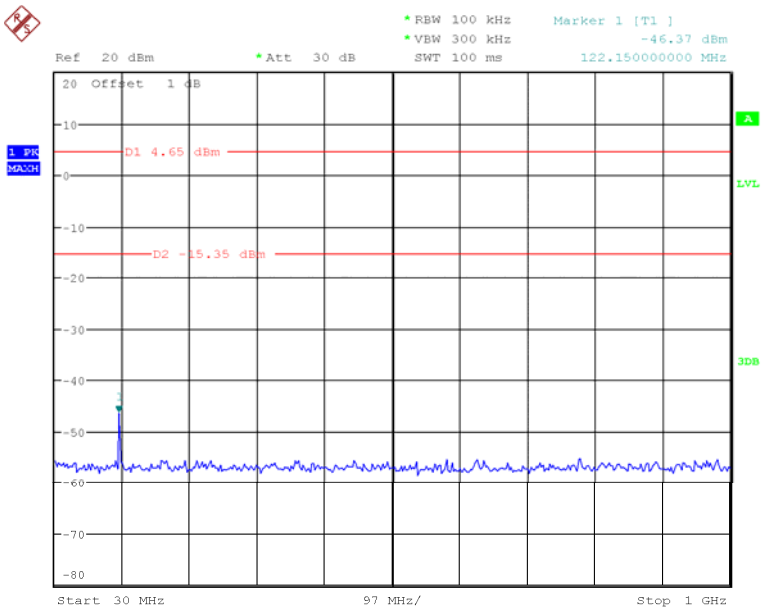
Date: 16.FEB.2014 16:27:55

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

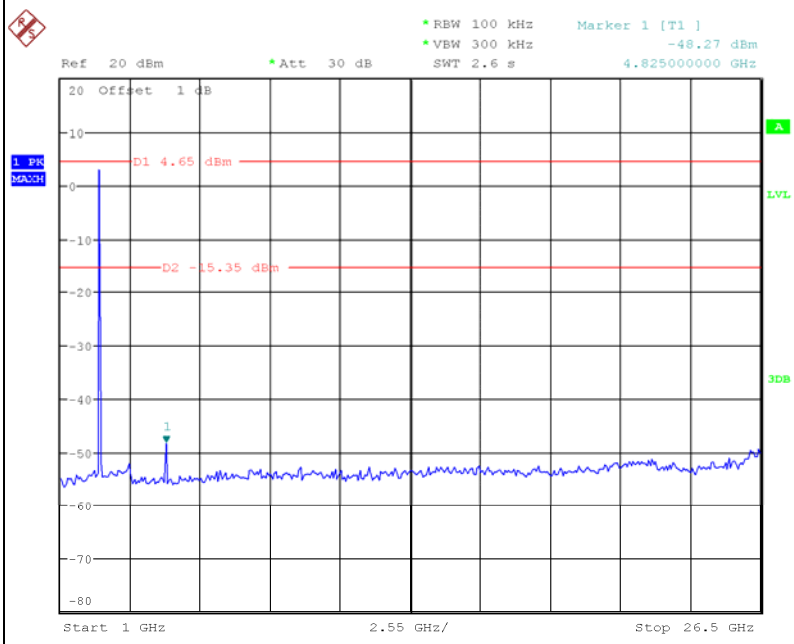


Date: 16.FEB.2014 16:28:27

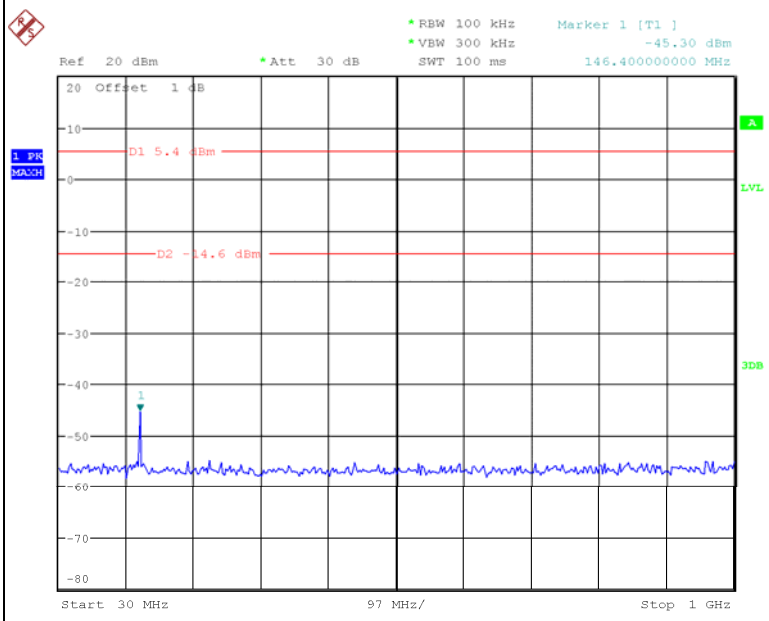
TX B mode CH06 (30M~1000MHz)



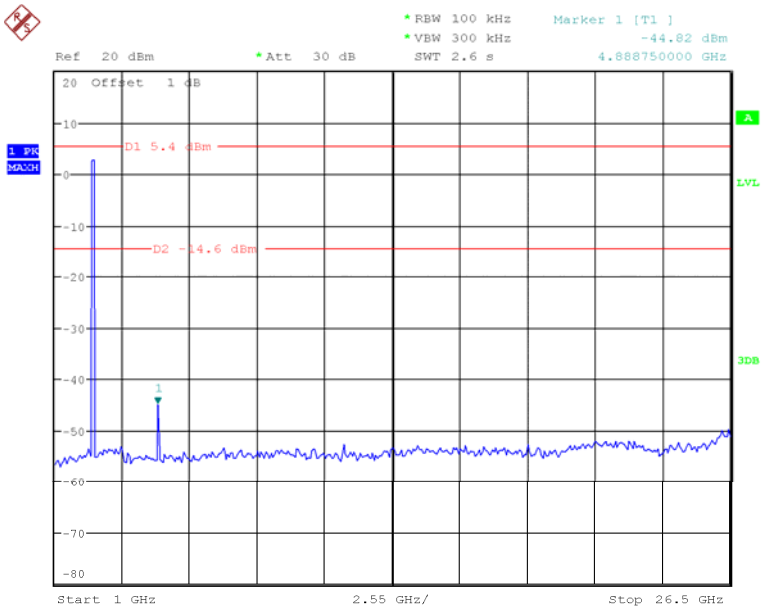
TX B mode CH06 (1000MHz~10th Harmonic)



TX B mode CH11 (30M~1000MHz)

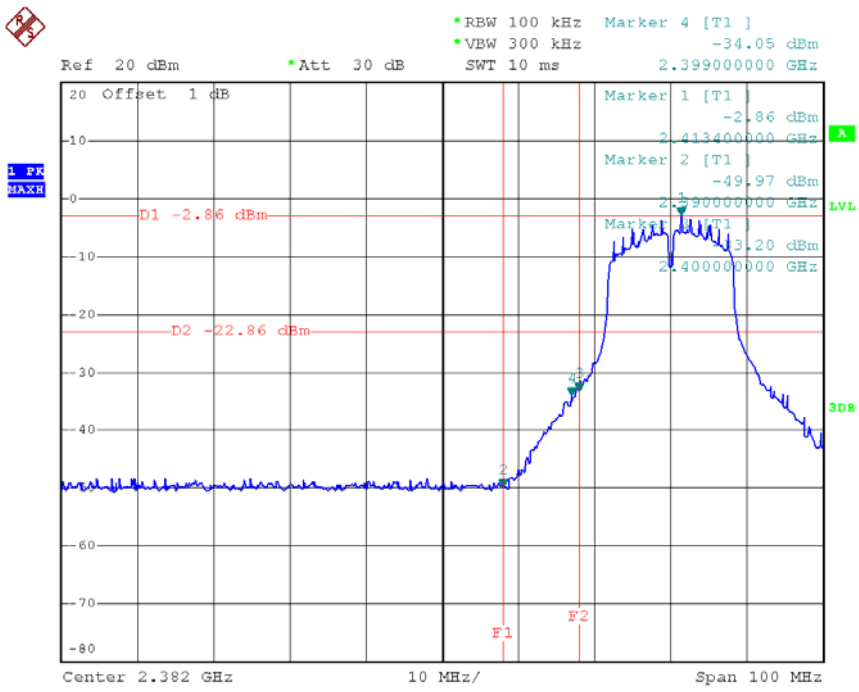


TX B mode CH11 (1000MHz~10th Harmonic)



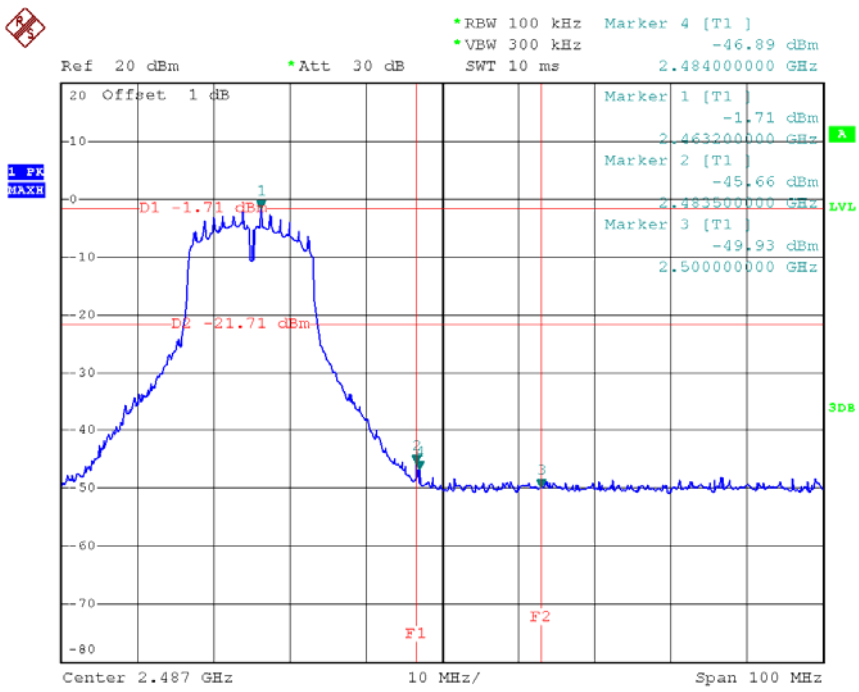
Test Mode :	TX G Mode

TX G mode CH01



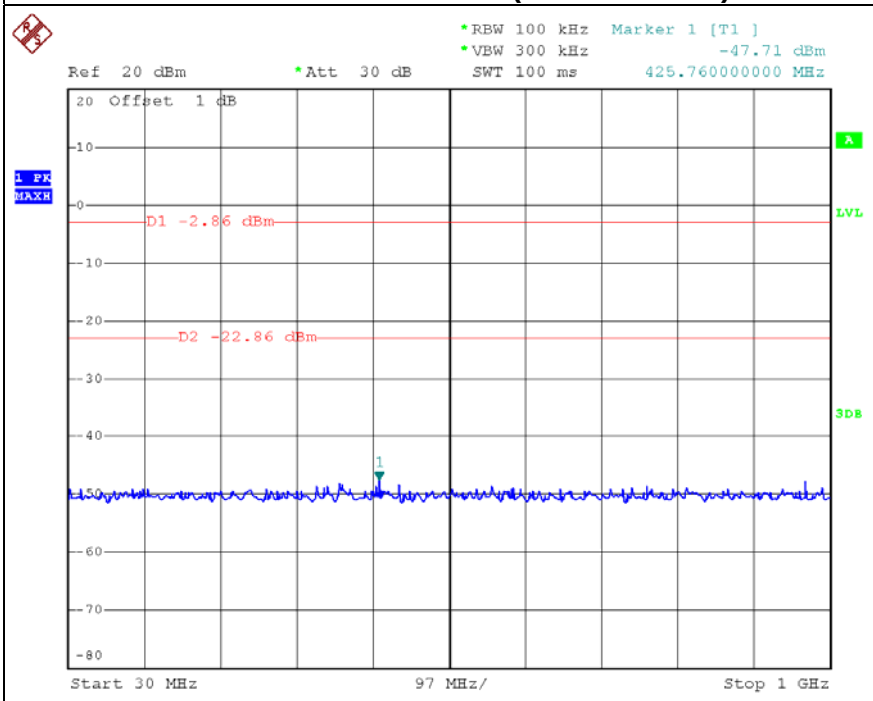
Date: 17.FEB.2014 09:23:01

TX G mode CH11



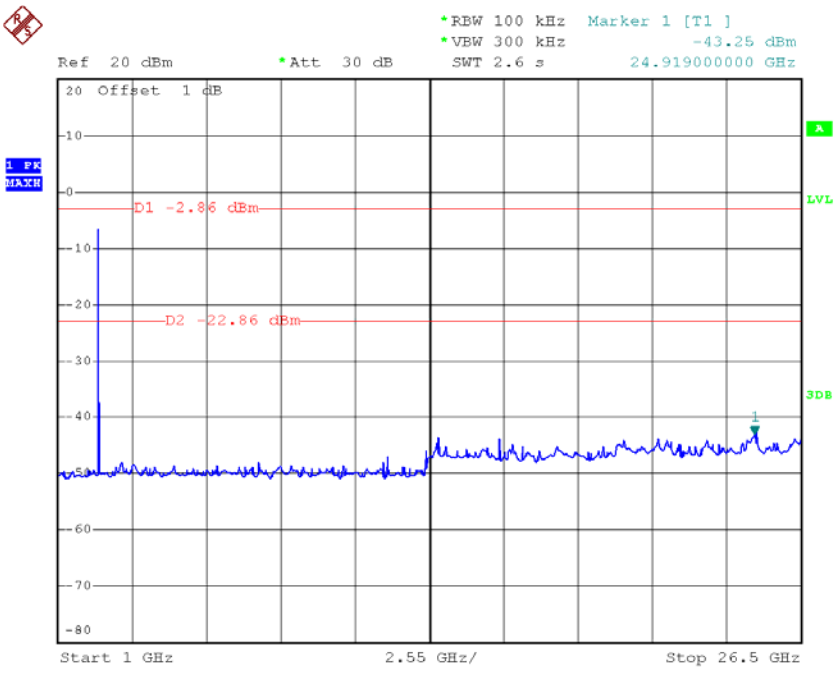
Date: 17.FEB.2014 09:35:52

TX G mode CH01 (30M~1000MHz)



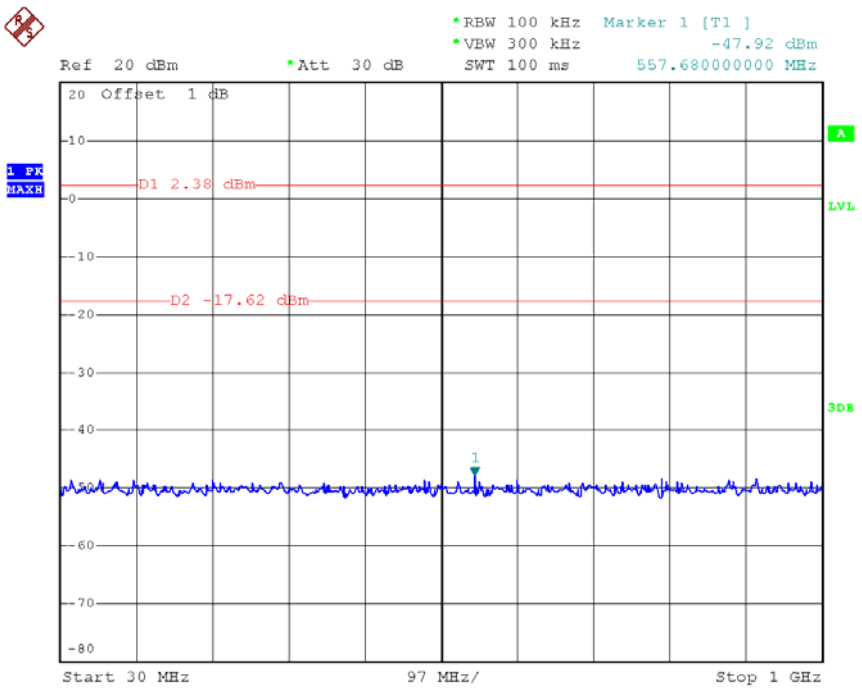
Date: 17.FEB.2014 09:23:32

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



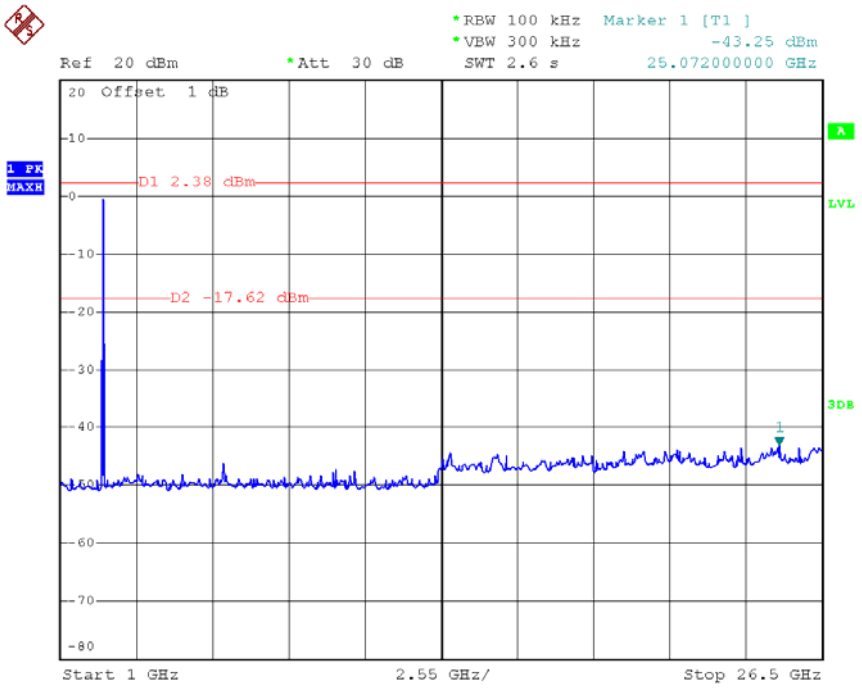
Date: 17.FEB.2014 09:23:54

TX G mode CH06 (30M~1000MHz)



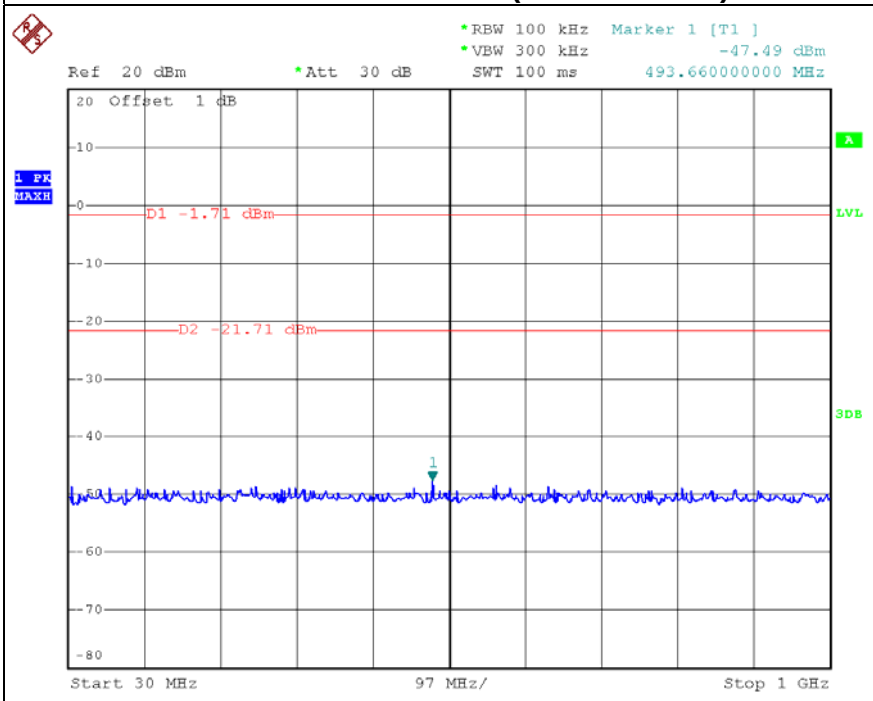
Date: 17.FEB.2014 09:29:33

TX G mode CH06 (1000MHz~10th Harmonic)



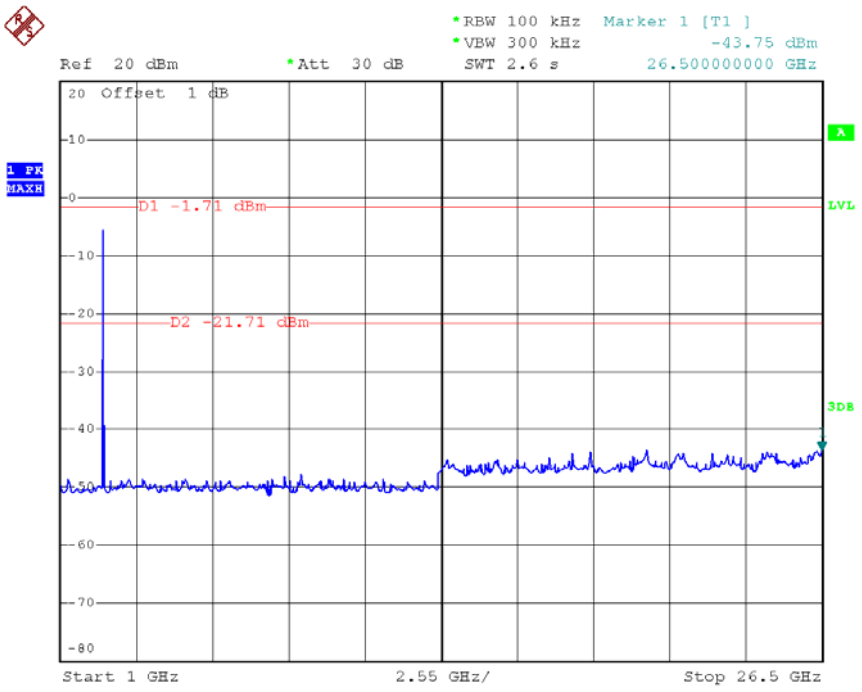
Date: 17.FEB.2014 09:29:59

TX G mode CH11 (30M~1000MHz)



Date: 17.FEB.2014 09:36:15

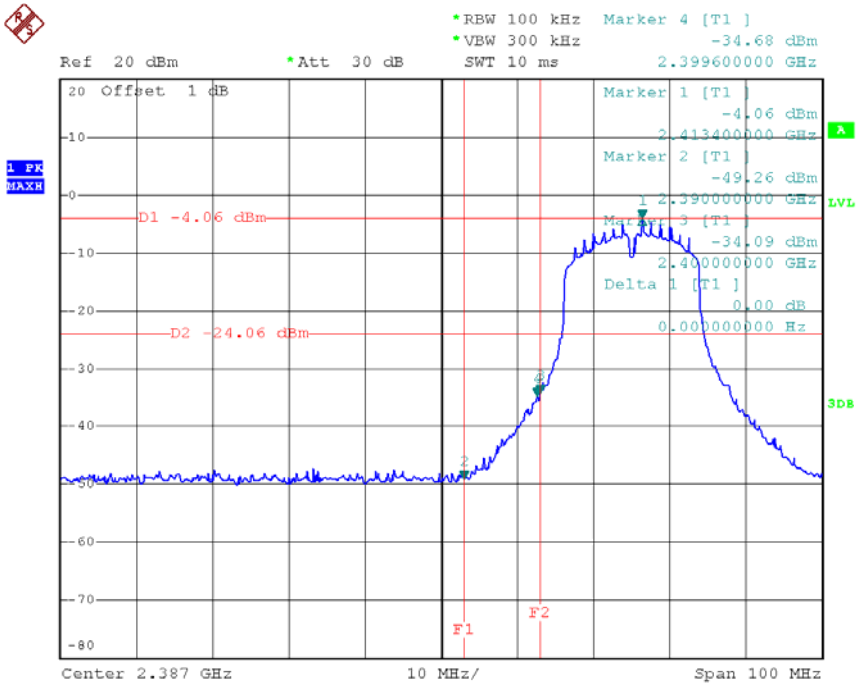
TX G mode CH11 (1000MHz~10th Harmonic)



Date: 17.FEB.2014 09:36:38

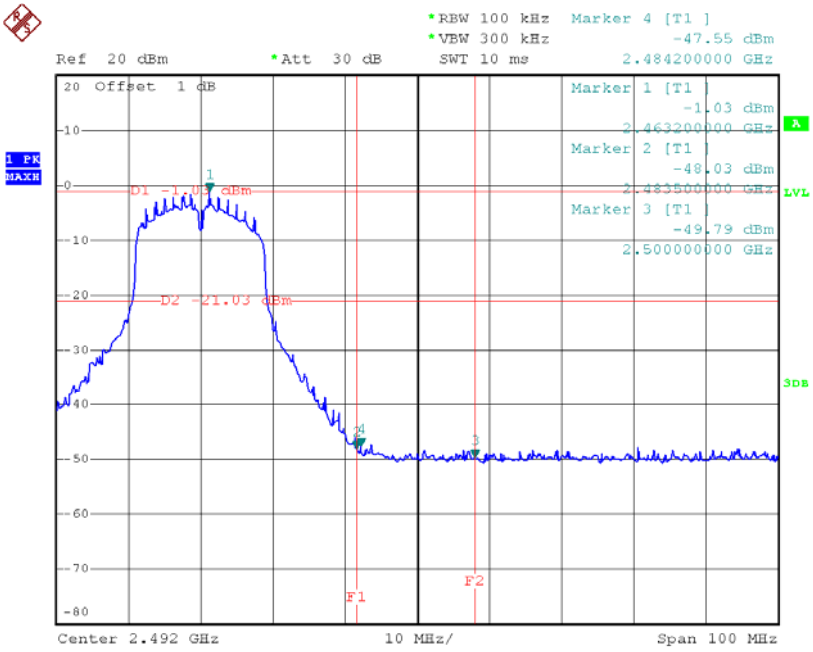
Test Mode :	TX N-20M Mode

TX HT20 mode CH01



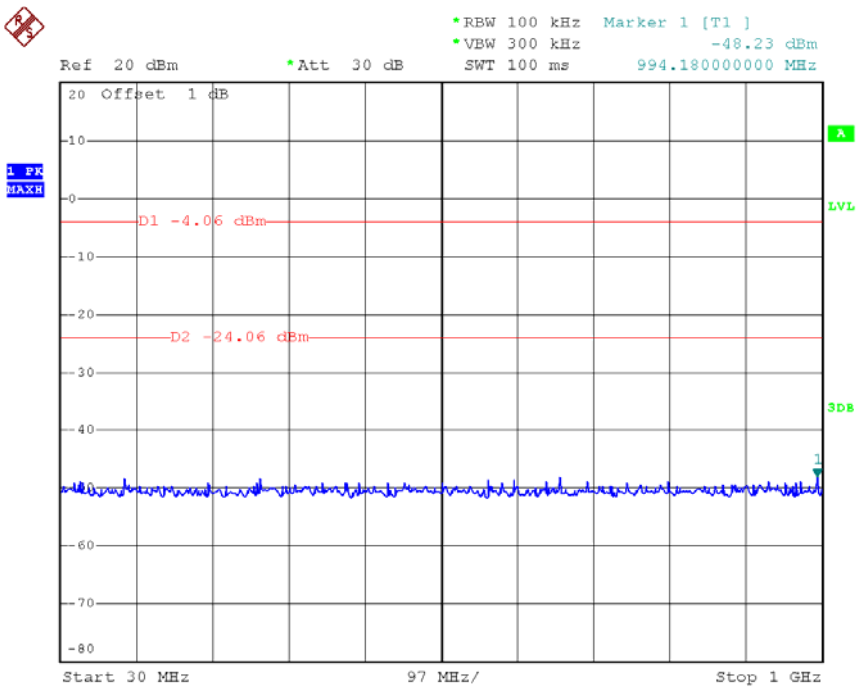
Date: 17.FEB.2014 09:47:23

TX HT20 mode CH11

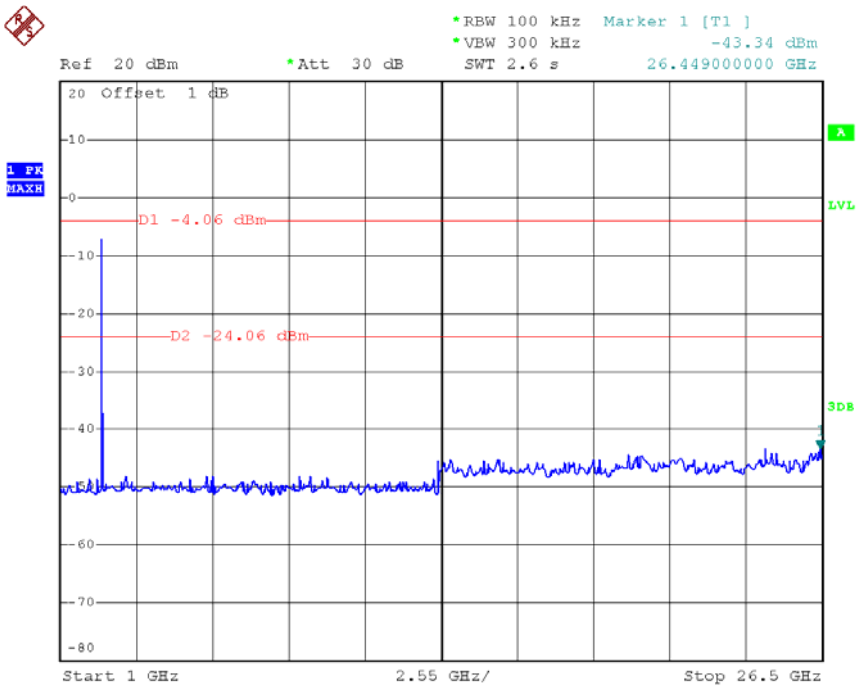


Date: 17.FEB.2014 09:59:02

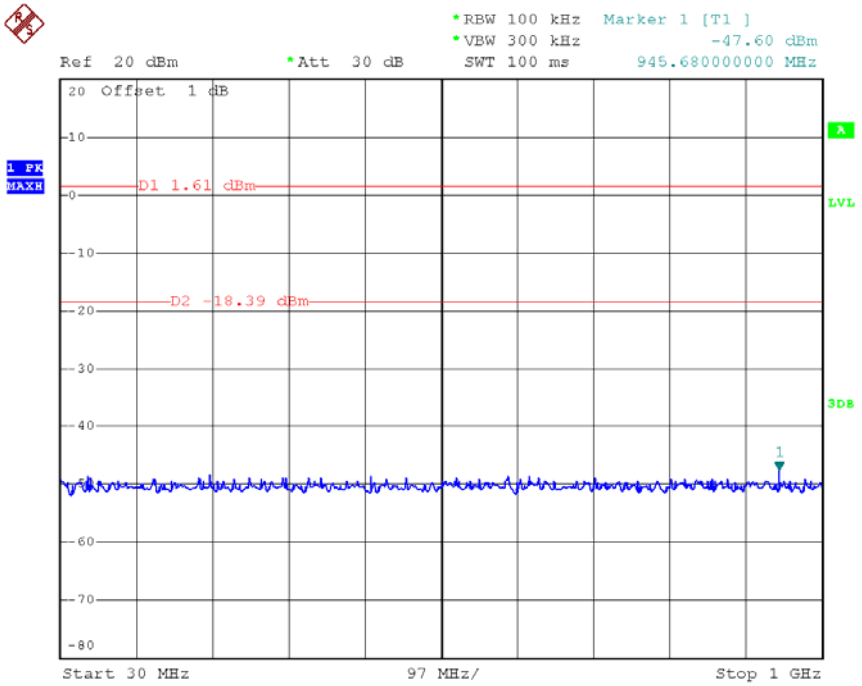
TX HT20 mode CH01 (30M~1000MHz)



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

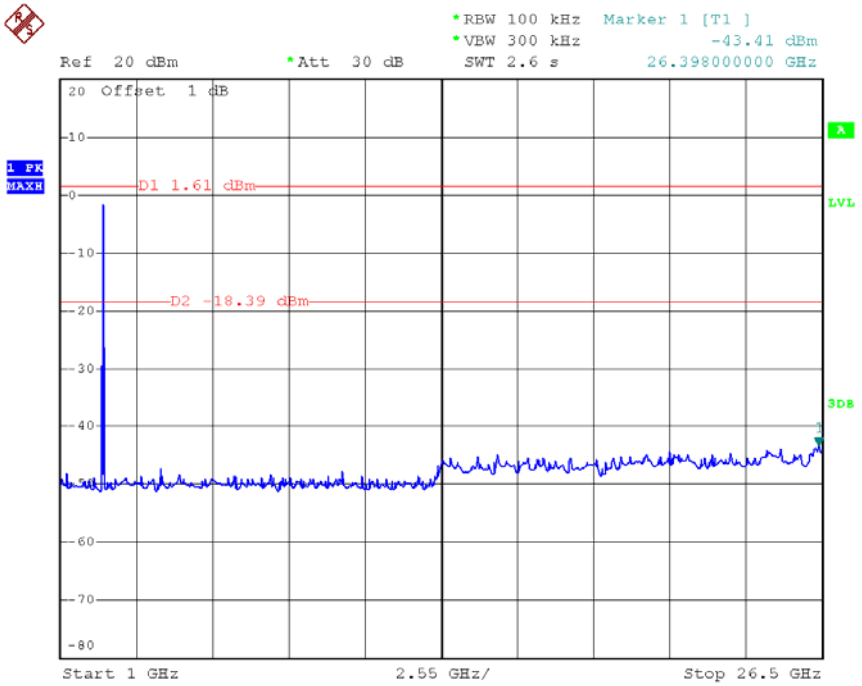


TX HT20 mode CH06 (30M~1000MHz)



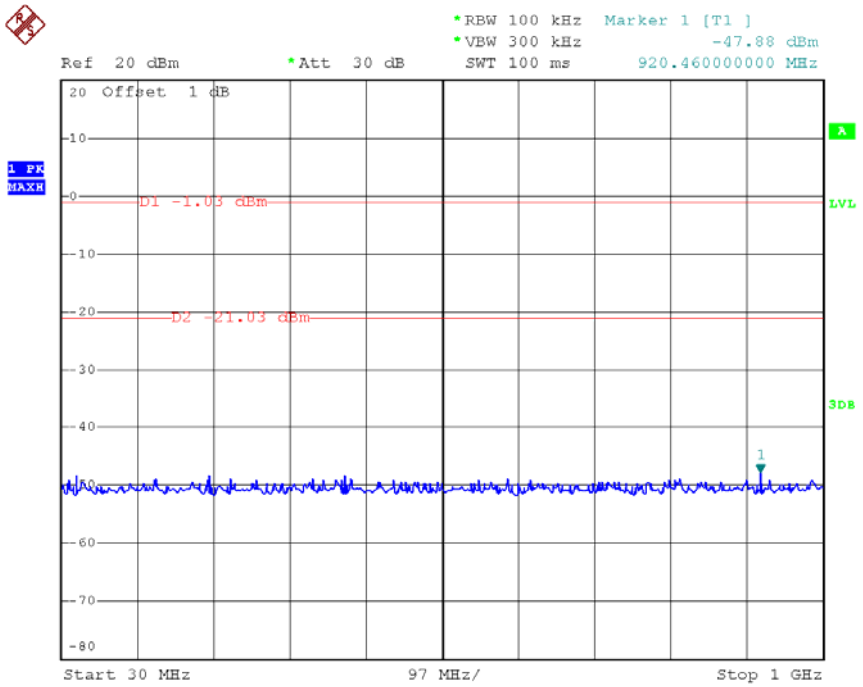
Date: 17.FEB.2014 09:54:09

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



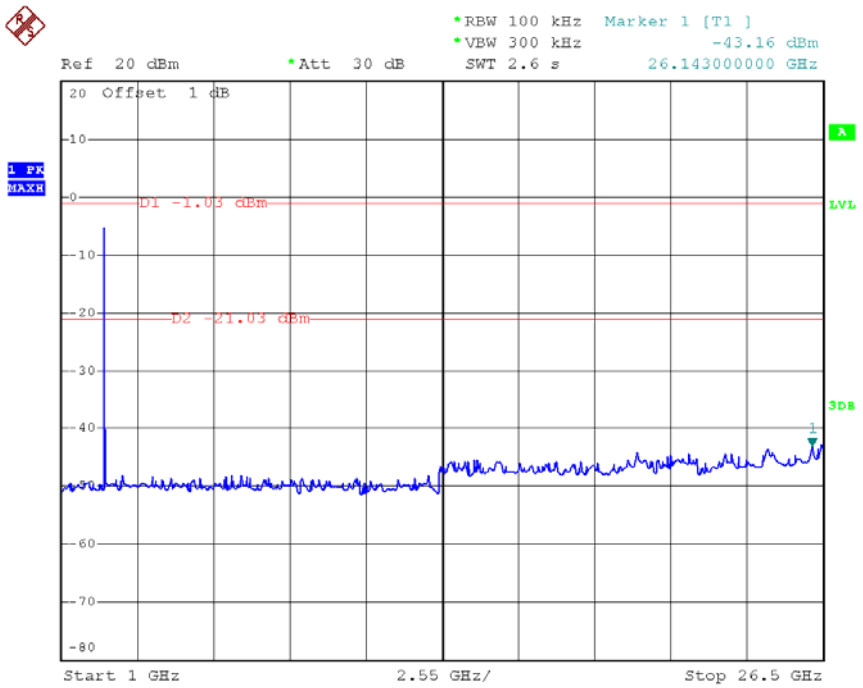
Date: 17.FEB.2014 09:54:29

TX HT20 mode CH11 (30M~1000MHz)



Date: 17.FEB.2014 09:59:29

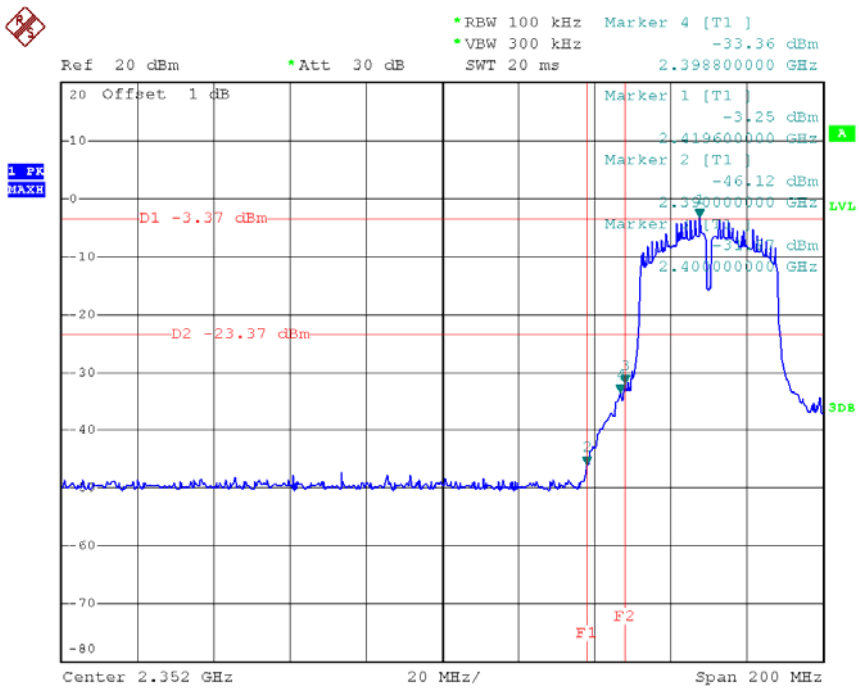
TX HT20 mode CH11 (1000MHz~10th Harmonic)



Date: 17.FEB.2014 09:59:47

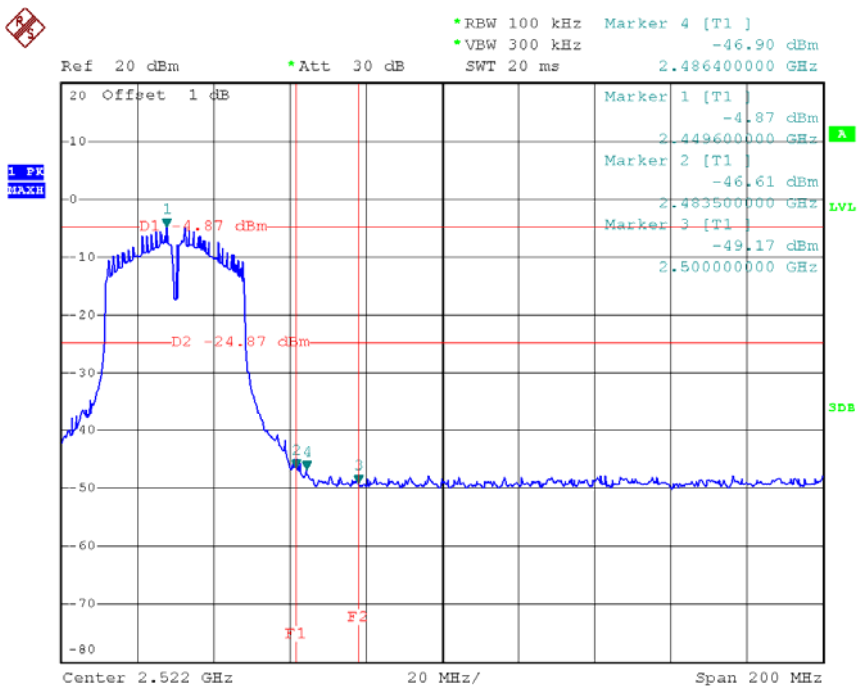
Test Mode :	TX N-40M Mode

TX HT40 mode CH03



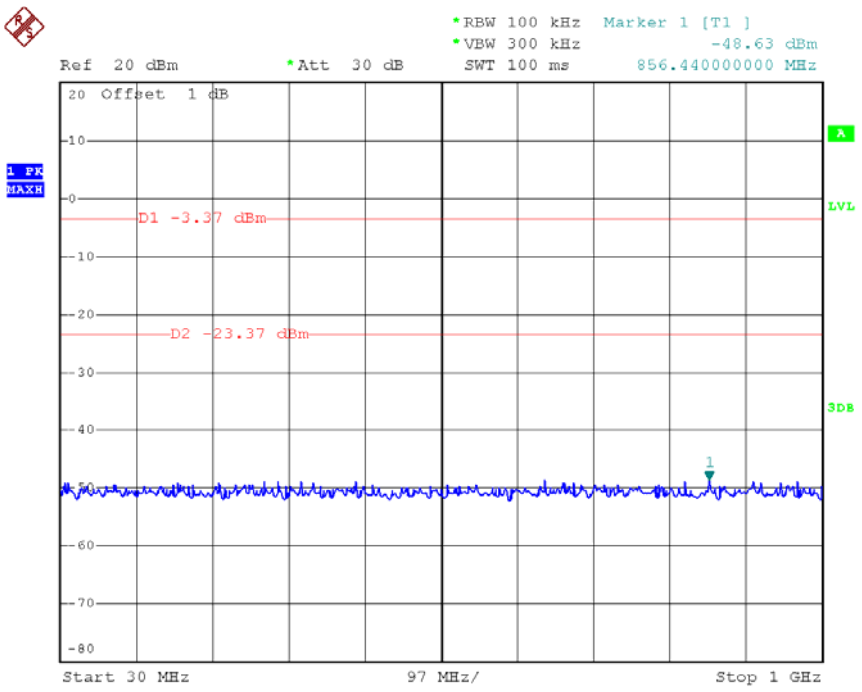
Date: 17.FEB.2014 10:04:27

TX HT40 mode CH09



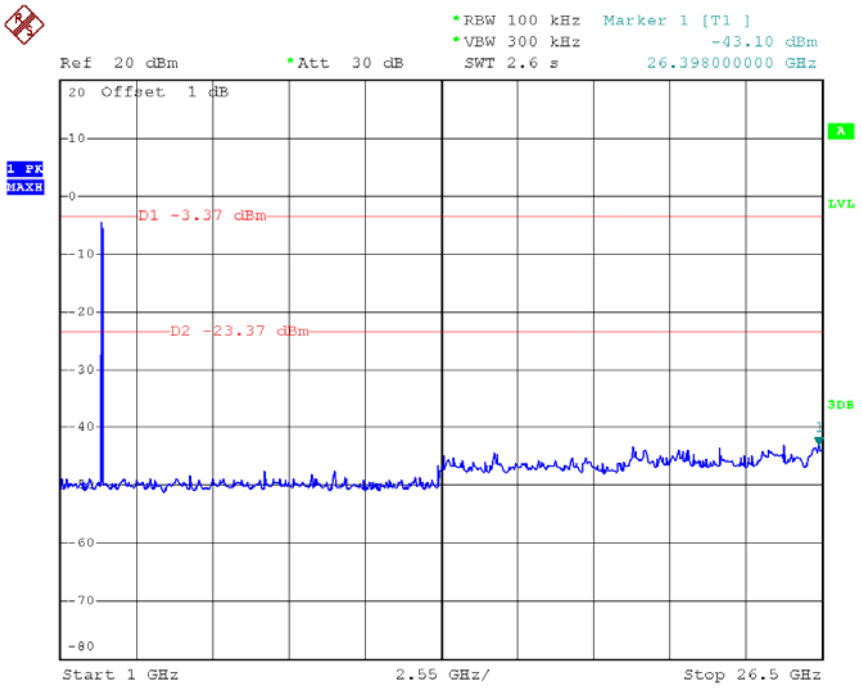
Date: 17.FEB.2014 10:16:03

TX HT40 mode CH03 (30M~1000MHz)



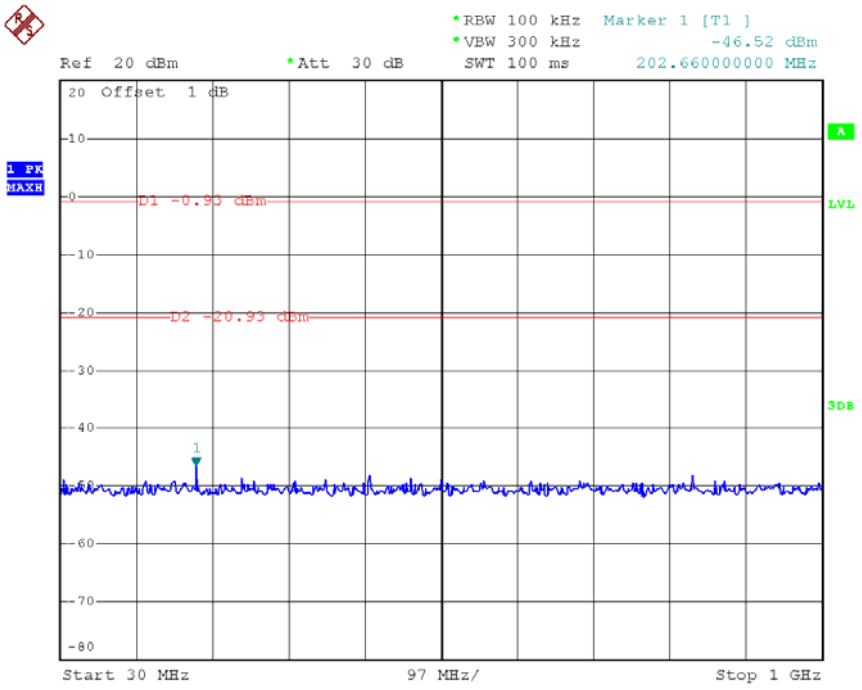
Date: 17.FEB.2014 10:04:55

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



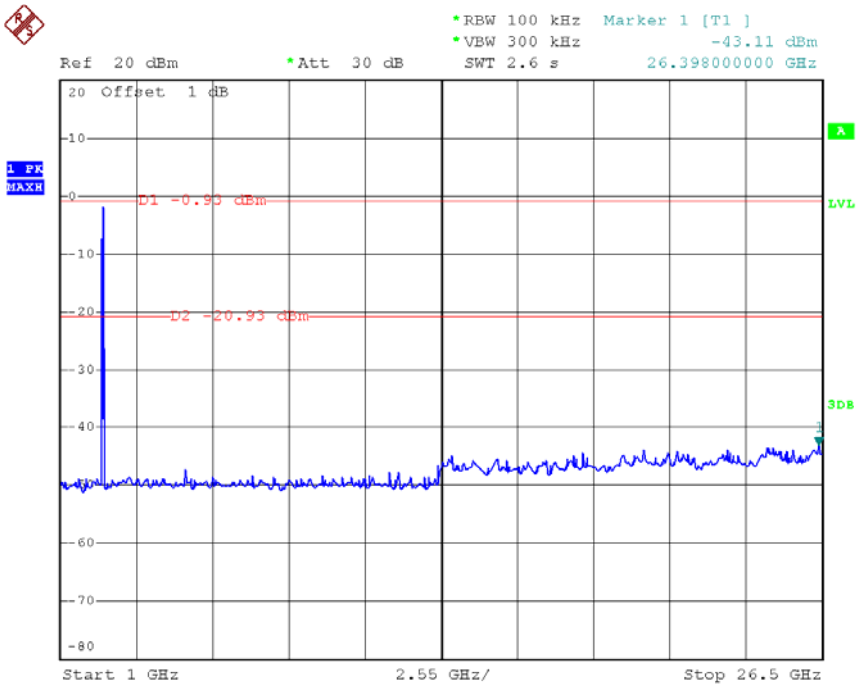
Date: 17.FEB.2014 10:05:15

TX HT40 mode CH06 (30M~1000MHz)



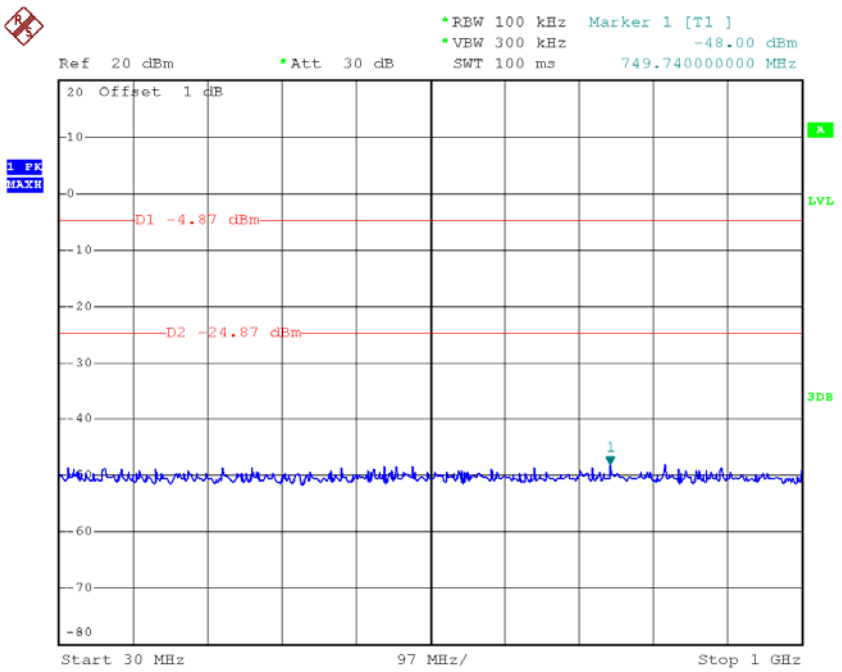
Date: 17.FEB.2014 10:08:54

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



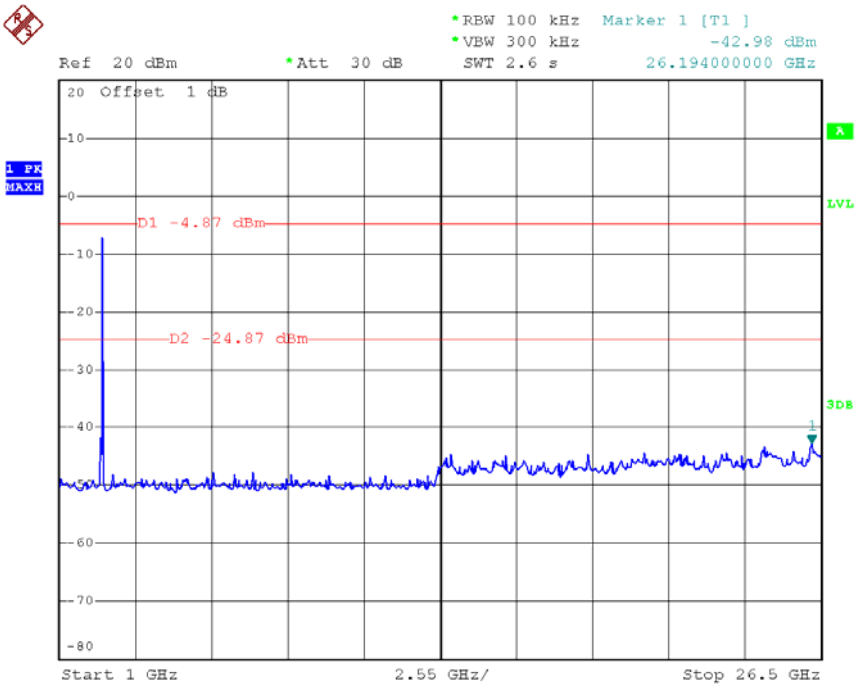
Date: 17.FEB.2014 10:09:18

TX HT40 mode CH09 (30M~1000MHz)



Date: 17.FEB.2014 10:18:26

TX HT40 mode CH09 (1000MHz~10th Harmonic)



Date: 17.FEB.2014 10:18:46

8. POWER SPECTRAL DENSITY TEST

8.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C / RSS-210				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e) RSS-210 Annex 8(A8.2(b))	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

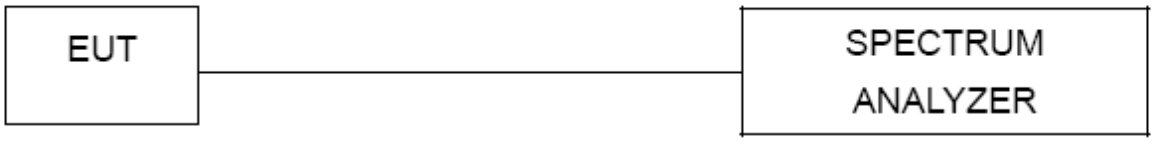
8.1.1 TEST PROCEDURE

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.

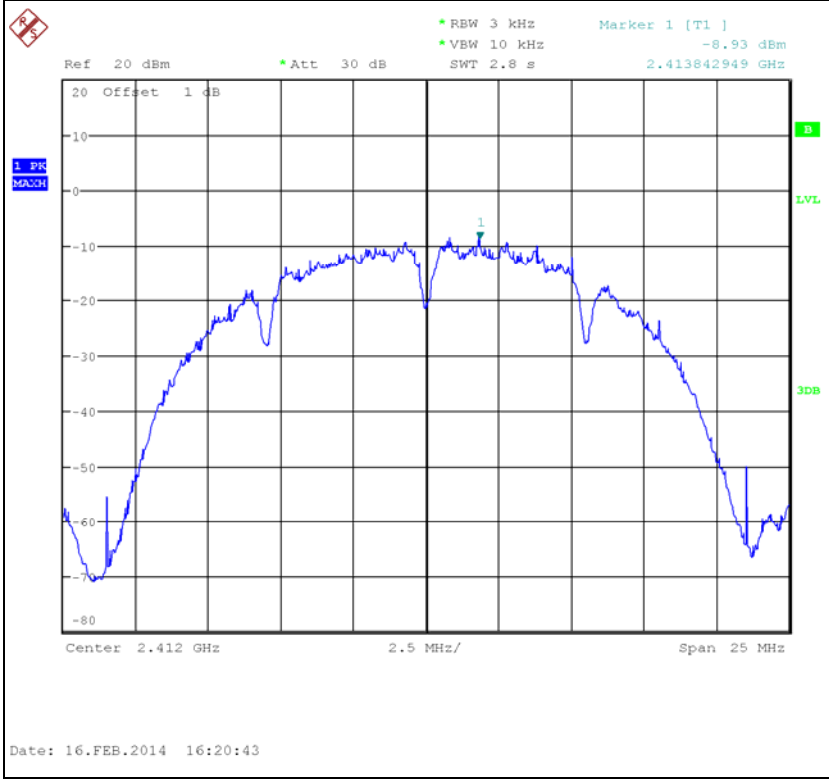
8.1.5 EUT TEST CONDITIONS

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

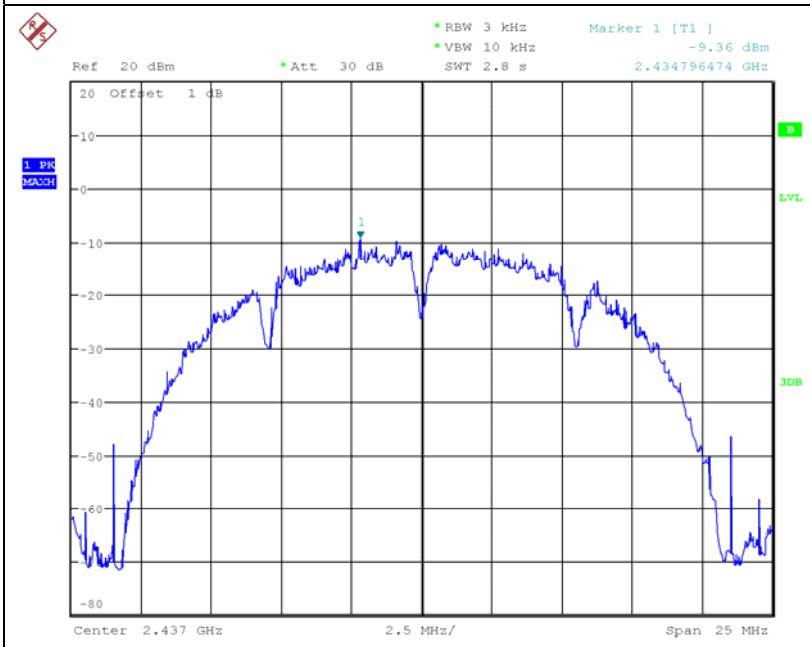
8.1.6 TEST RESULTS

Test Mode :TX B Mode			
Test Channel	Frequency (MHz)	Power Density (dBm)	Limit (dBm)
CH01	2412	-8.93	8
CH06	2437	-9.36	8
CH11	2462	-9.72	8

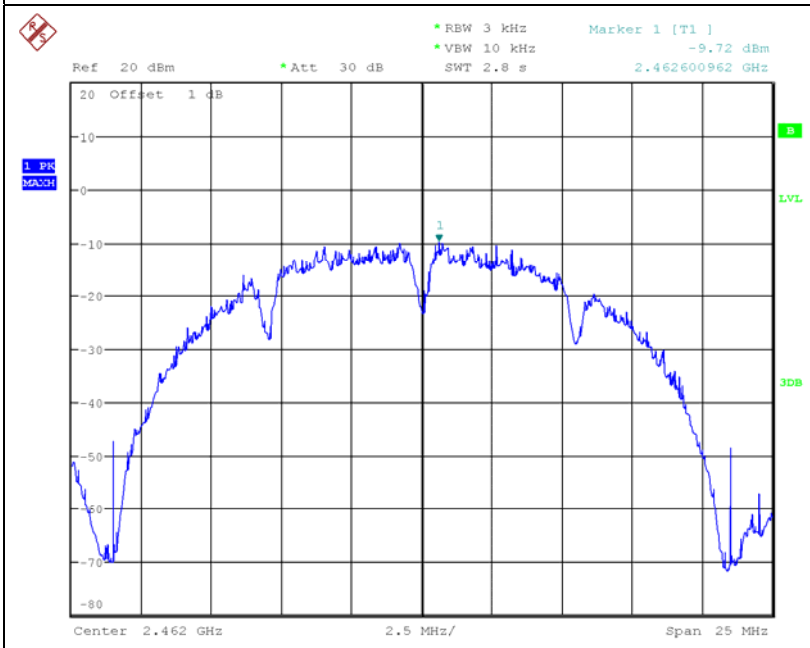
TX CH01



TX CH06

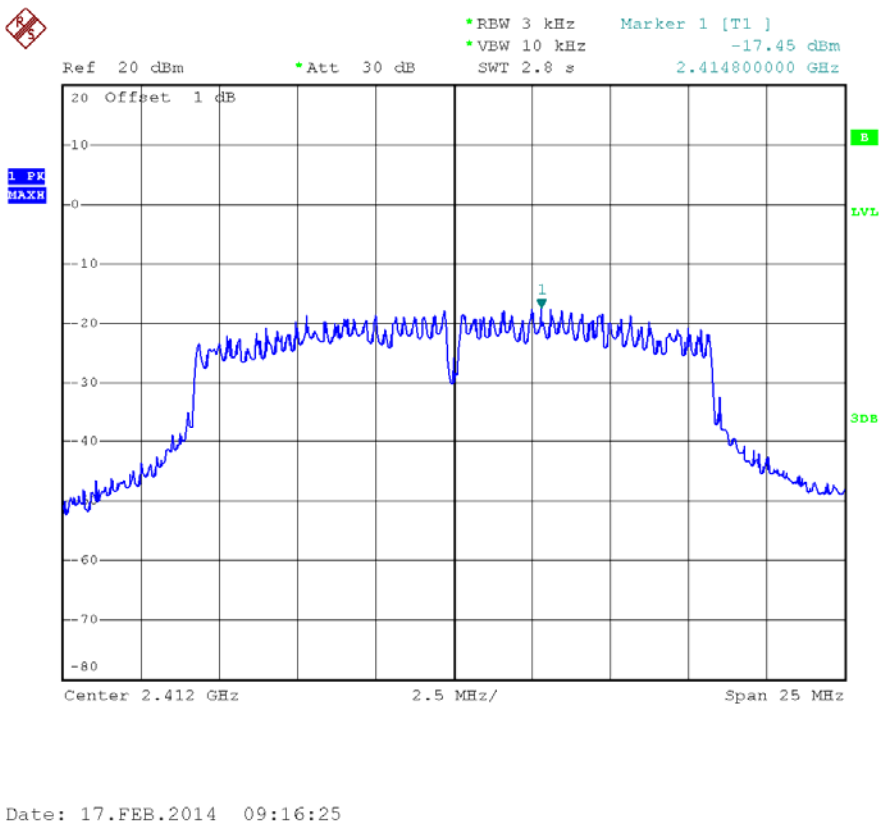


TX CH11

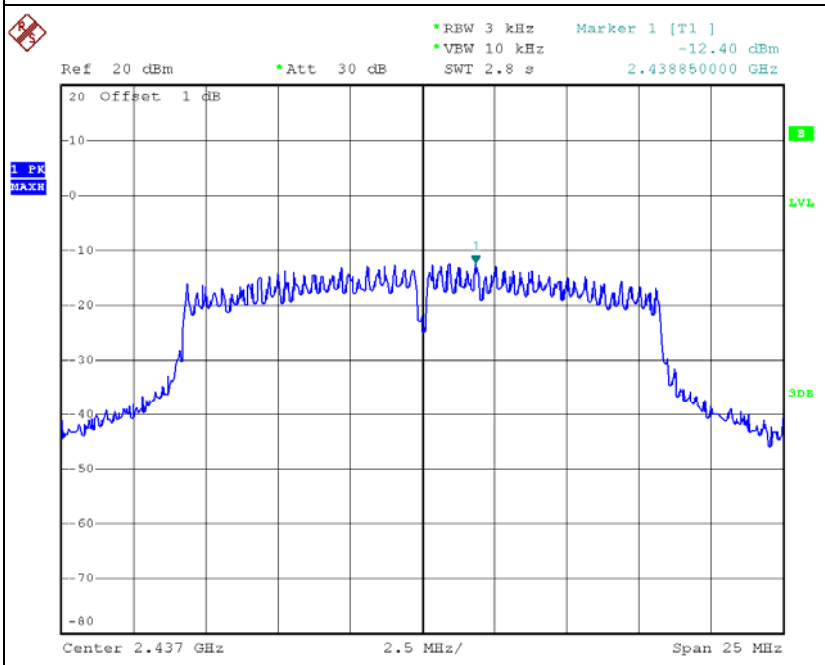


Test Mode :TX G Mode			
Test Channel	Frequency (MHz)	Power Density (dBm)	Limit (dBm)
CH01	2412	-17.45	8
CH06	2437	-12.40	8
CH11	2462	-16.50	8

TX CH01

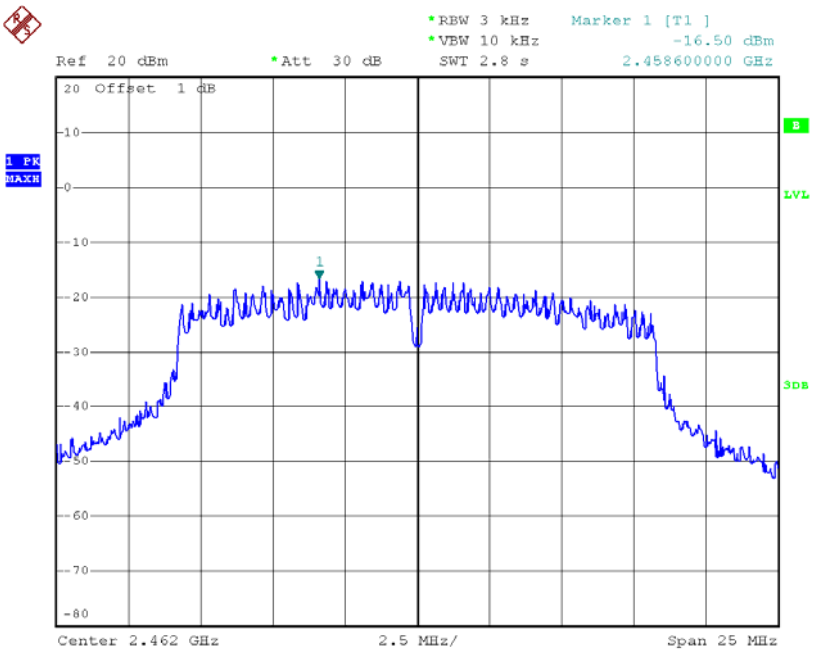


TX CH06



Date: 17.FEB.2014 09:25:56

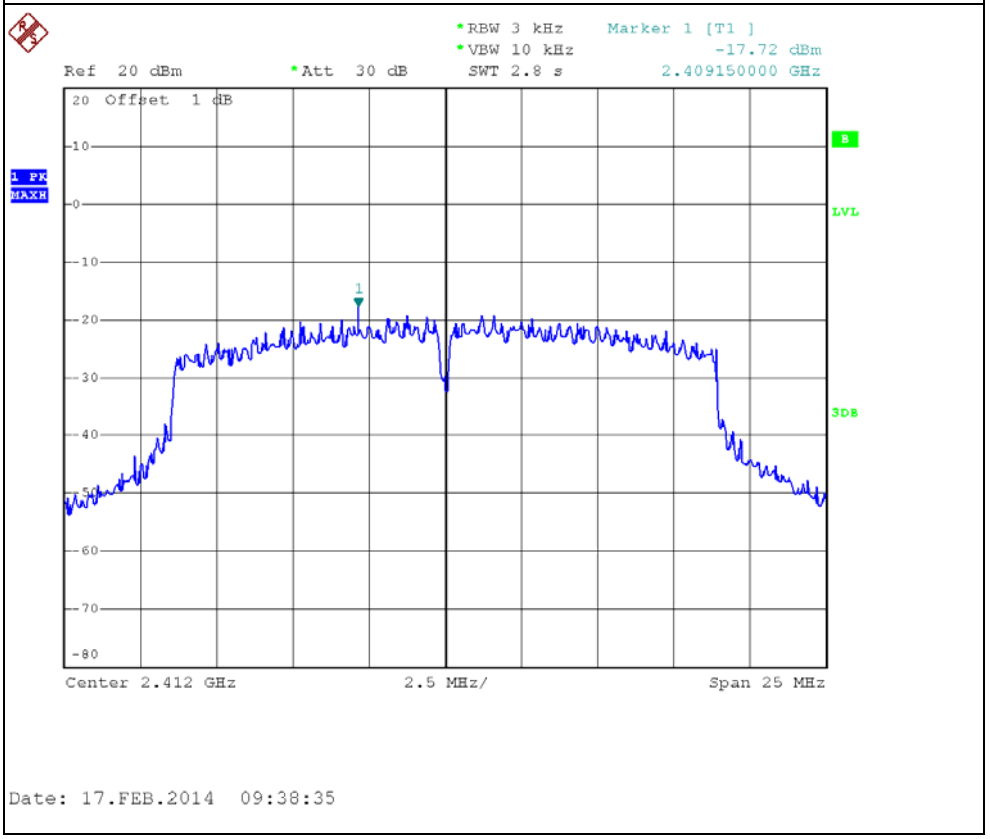
TX CH11



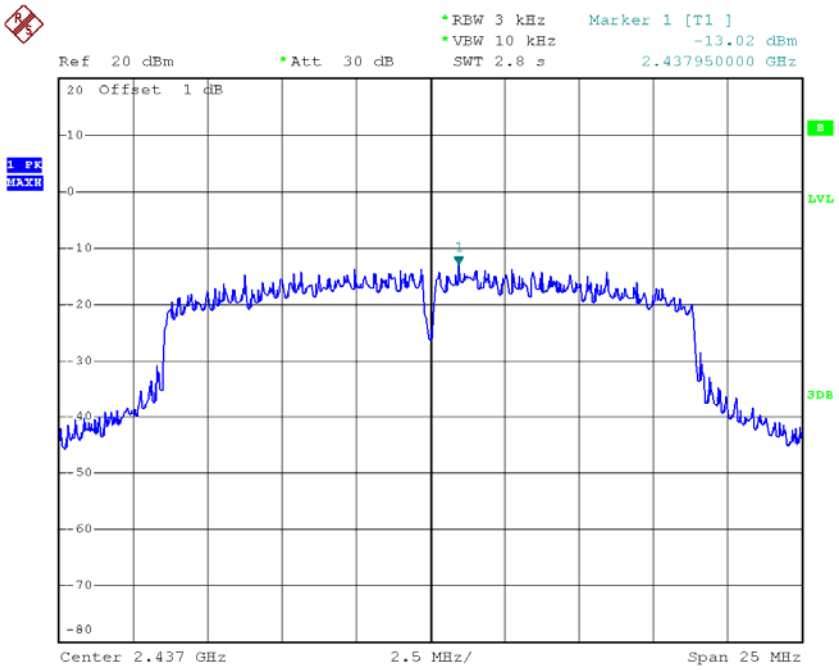
Date: 17.FEB.2014 09:32:36

Test Mode : TX N-20M Mode			
Test Channel	Frequency (MHz)	Power Density (dBm)	Limit (dBm)
CH01	2412	-17.72	8
CH06	2437	-13.02	8
CH11	2462	-15.69	8

TX CH01

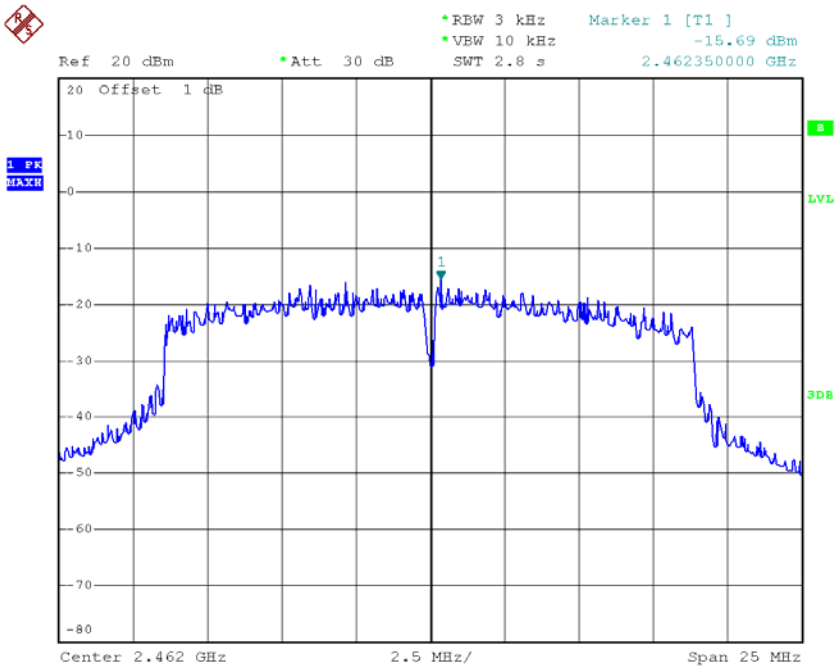


TX CH06



Date: 17.FEB.2014 09:49:46

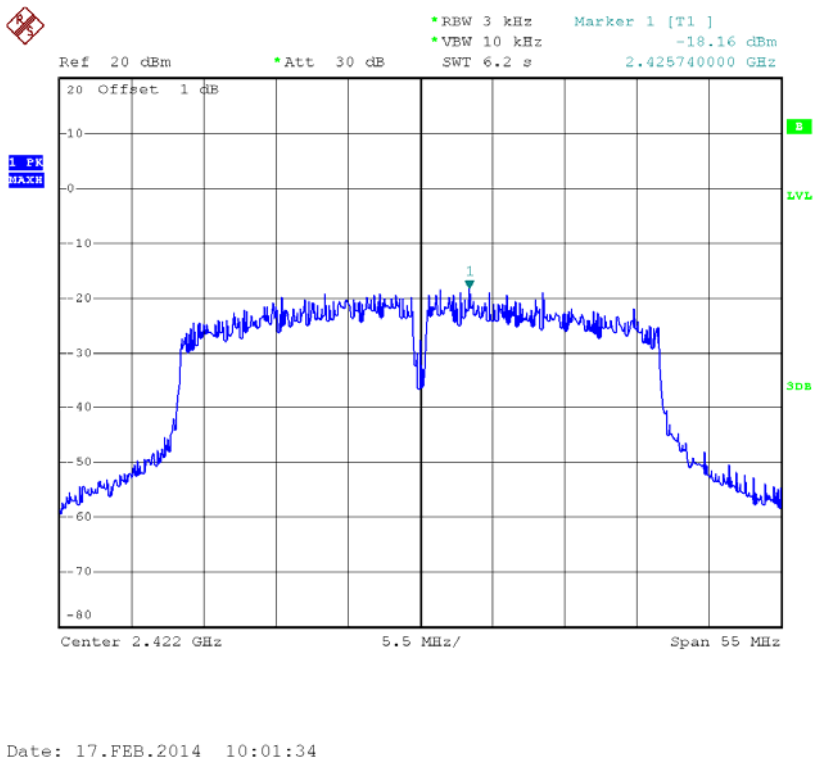
TX CH11



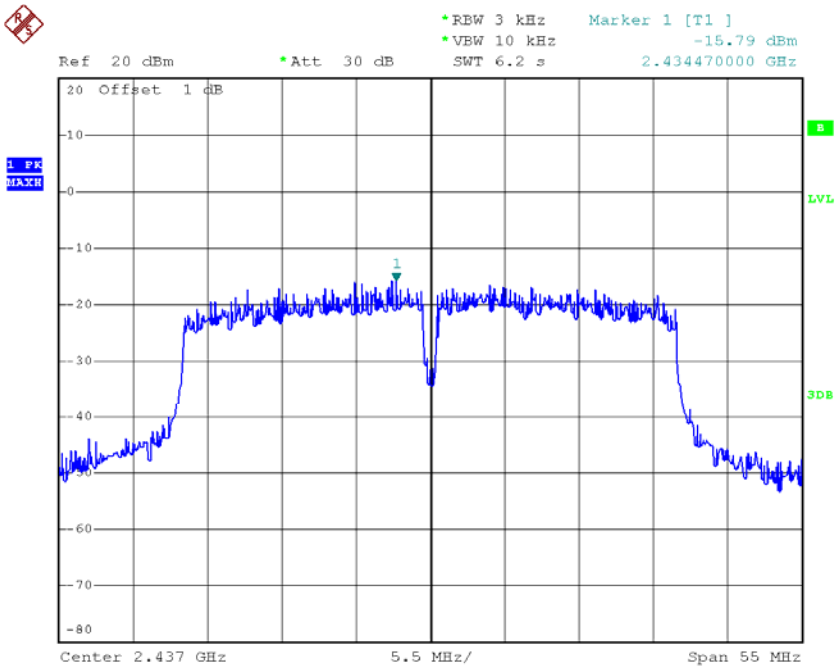
Date: 17.FEB.2014 09:55:55

Test Mode : TX N-40M Mode			
Test Channel	Frequency (MHz)	Power Density (dBm)	Limit (dBm)
CH03	2422	-18.16	8
CH06	2437	-15.79	8
CH09	2452	-17.69	8

TX CH03

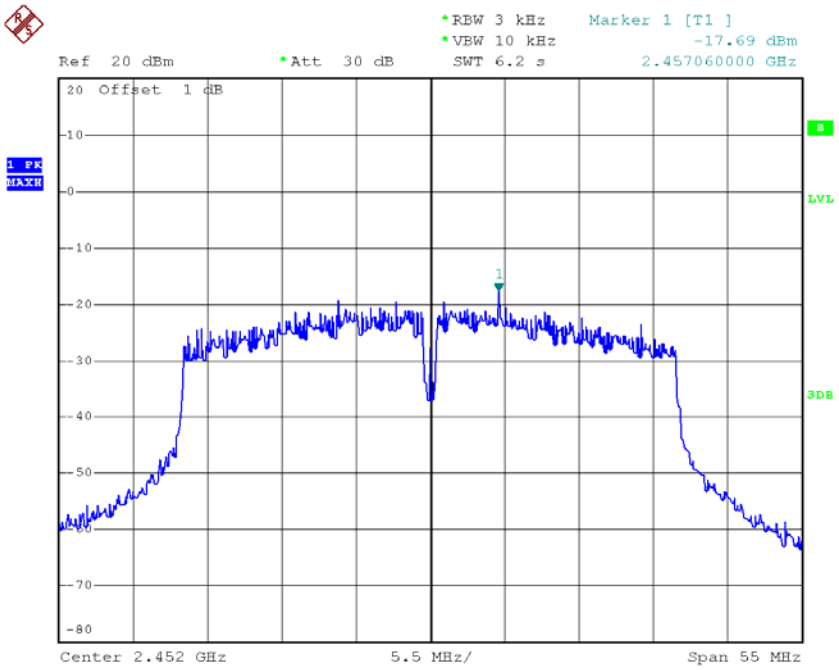


TX CH06



Date: 17.FEB.2014 10:06:28

TX CH09



Date: 17.FEB.2014 10:10:48

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	Receiver	AGILENT	N9038A	MY52130039	Aug. 24, 2014
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 02, 2014
5	Antenna	ETS	3115	00075789	Mar. 29, 2015
6	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015
7	Receiver	AGILENT	N9038A	MY52130039	Aug. 24, 2014
8	Test Cable	HUBER+SUHNER	C-48	N/A	Apr. 30, 2015
9	Controller	CT	SC100	N/A	N/A
10	Horn Antenna	EMCO	3115	9605-4803	Mar. 29, 2015
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015
12	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 29, 2015

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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	power Meter	ANRITSU	ML2495A	1128009	May. 24, 2014
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	May. 24, 2014

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.