



Neutron Engineering Inc.

FCC Radio Test Report

FCC ID: T58E1R

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

Project No. : 1406C021
Equipment : 300Mbps Wireless N Range Extender
Model Name : E1
Applicant : NETIS SYSTEMS CO., LTD
Address : 4F&5F R&D Building, Oriental Cyberport, High-Tech
Industrial Park, Nanshan, Shenzhen, China.

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Jun. 05, 2014
Date of Test: Jun. 05, 2014~ Jun.18, 2014
Issued Date: Jun. 19, 2014

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

Neutron Engineering Inc.

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



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.

Neutron'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. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

Neutron'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 **Neutron-self**, extracts from the test report shall not be reproduced except in full with **Neutron's** authorized written approval.

Neutron'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
3.5 DESCRIPTION OF SUPPORT UNITS	14
4 . EMC EMISSION TEST	15
4.1 CONDUCTED EMISSION MEASUREMENT	15
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	15
4.1.2 TEST PROCEDURE	15
4.1.3 DEVIATION FROM TEST STANDARD	15
4.1.4 TEST SETUP	16
4.1.5 EUT OPERATING CONDITIONS	16
4.1.6 EUT TEST CONDITIONS	16
4.1.7 TEST RESULTS	16
4.2 RADIATED EMISSION MEASUREMENT	17
4.2.1 RADIATED EMISSION LIMITS	17
4.2.2 TEST PROCEDURE	18
4.2.3 DEVIATION FROM TEST STANDARD	18
4.2.4 TEST SETUP	18
4.2.5 EUT OPERATING CONDITIONS	19
4.2.6 EUT TEST CONDITIONS	19
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	20
4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)	20
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	20
5 . BANDWIDTH TEST	21
5.1 APPLIED PROCEDURES	21
5.1.1 TEST PROCEDURE	21
5.1.2 DEVIATION FROM STANDARD	21
5.1.3 TEST SETUP	21
5.1.4 EUT OPERATION CONDITIONS	21
5.1.5 EUT TEST CONDITIONS	21
5.1.6 TEST RESULTS	21



Table of Contents	Page
6 . MAXIMUM OUTPUT POWER TEST	22
6.1 APPLIED PROCEDURES / LIMIT	22
6.1.1 TEST PROCEDURE	22
6.1.2 DEVIATION FROM STANDARD	22
6.1.3 TEST SETUP	22
6.1.4 EUT OPERATION CONDITIONS	22
6.1.5 EUT TEST CONDITIONS	22
6.1.6 TEST RESULTS	22
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	23
7.1 APPLIED PROCEDURES / LIMIT	23
7.1.1 TEST PROCEDURE	23
7.1.2 DEVIATION FROM STANDARD	23
7.1.3 TEST SETUP	23
7.1.4 EUT OPERATION CONDITIONS	23
7.1.5 EUT TEST CONDITIONS	23
7.1.6 TEST RESULTS	23
8 . POWER SPECTRAL DENSITY TEST	24
8.1 APPLIED PROCEDURES / LIMIT	24
8.1.1 TEST PROCEDURE	24
8.1.2 DEVIATION FROM STANDARD	24
8.1.3 TEST SETUP	24
8.1.4 EUT OPERATION CONDITIONS	24
8.1.5 EUT TEST CONDITIONS	24
8.1.6 TEST RESULTS	24
9 . MEASUREMENT INSTRUMENTS LIST	25
10 . EUT TEST PHOTO	27
ATTACHMENT A - CONDUCTED EMISSION	31
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	34
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	36
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)	43
ATTACHMENT E - BANDWIDTH	92
ATTACHMENT F - MAXIMUM OUTPUT POWER	105
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION	109
ATTACHMENT H - POWER SPECTRAL DENSITY	134



REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
NEI-FCCP-1-1406C021	Original Issue.	Jun. 19, 2014



1. CERTIFICATION

Equipment : 300Mbps Wireless N Range Extender
Brand Name : netis
Model Name : E1
Applicant : NETIS SYSTEMS CO., LTD
Date of Test : Jun. 05, 2014~ Jun.18, 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 Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1406C021) 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 (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 $y \pm U$, 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	300Mbps Wireless N Range Extender	
Brand Name	netis	
Model Name	E1	
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: 20.30dBm 802.11g: 22.49dBm 802.11n(20MHz): 25.05dBm 802.11n(40MHz): 23.68dBm
Power Source	AC Mains	
Power Rating	I/P: AC 100-240V, 50~60Hz, 1A	
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.	Manufacturer	Model Name	Antenna Type	Connector	Gain(dBi)	Note
1	PSA	RGFRA1903041A1T	Internal	N/A	2	-
2	PSA	RGFRA1903041A1T	Internal	N/A	2	TX/RX
3	PSA	RGFRA1903041A1T	Internal	N/A	2	TX/RX
4	PSA	RGFRA1903041A1T	Internal	N/A	2	-
5	PSA	RGFRA1903041A1T	Internal	N/A	2	-

(1)The EUT has 5 pcs antenna, but only Ant.2 and Ant.3 are used.

(2)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 (ANT 2 or ANT 3)	-
802.11g	V (ANT 2 or ANT 3)	-
802.11n(20MHz)	-	V (ANT 2 + ANT 3)
802.11n(40MHz)	-	V (ANT 2 + ANT 3)



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.



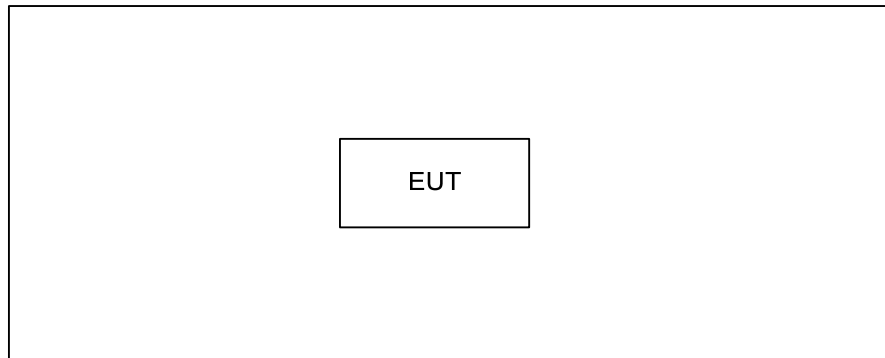
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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	Release 3.0		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b DSSS	54	55	54
IEEE 802.11g OFDM	49	58	55
IEEE 802.11n (20MHz)	49	55	51
Frequency	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n (40MHz)	49	50	50



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
-	-	-	-	-



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

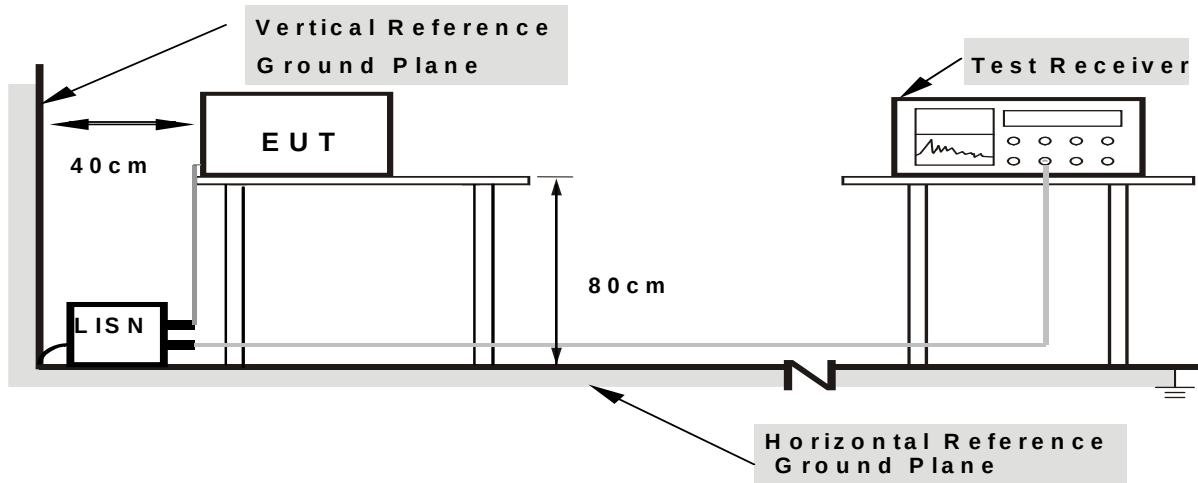
4.1.2 TEST PROCEDURE

- 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: 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

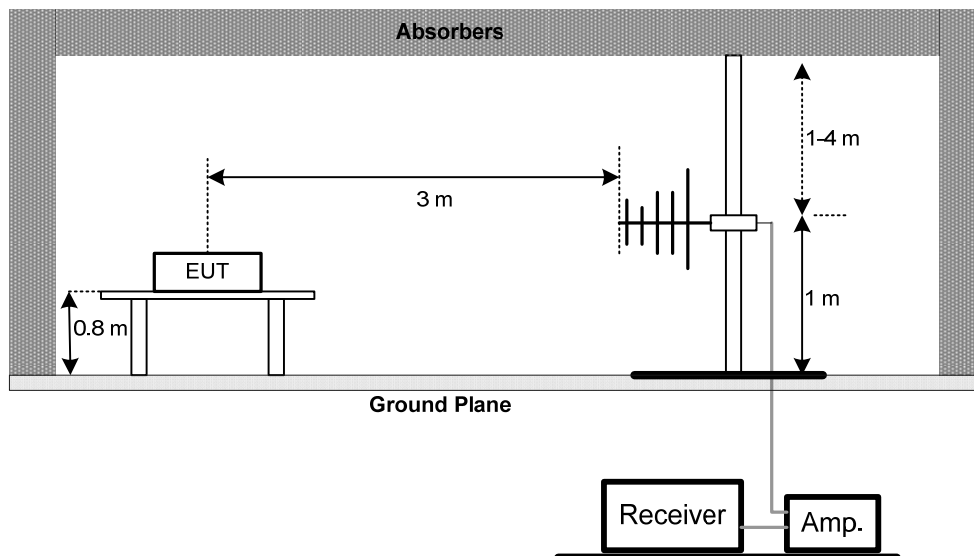
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- 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.
- 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.
- 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.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

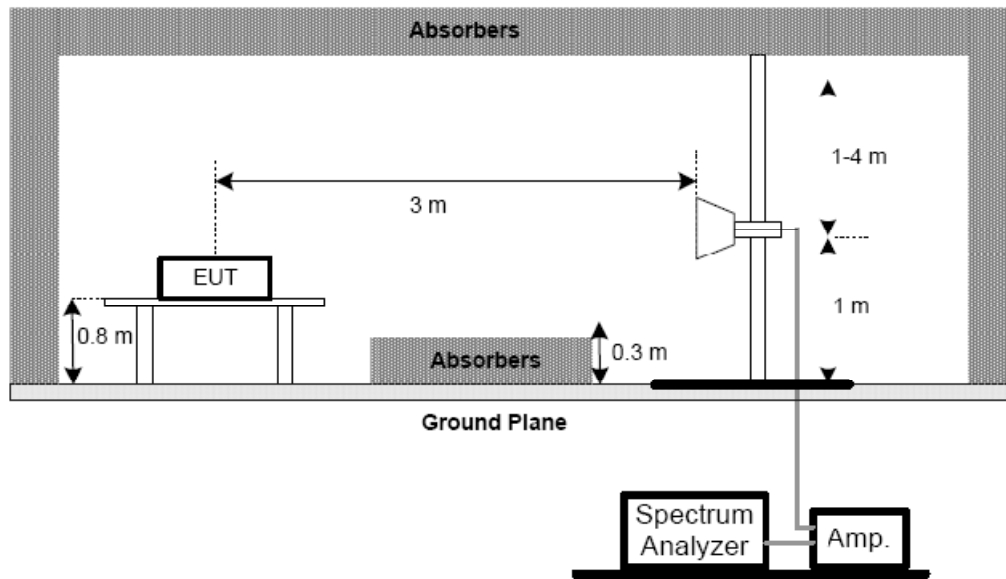
No deviation

4.2.4 TEST SETUP

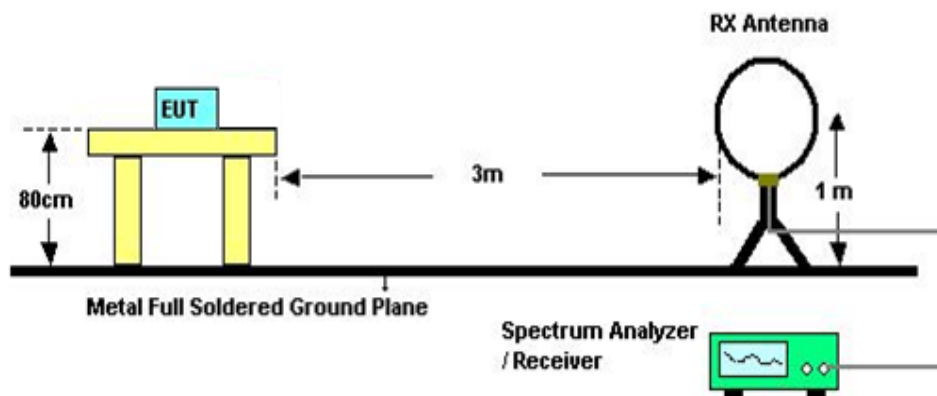
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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

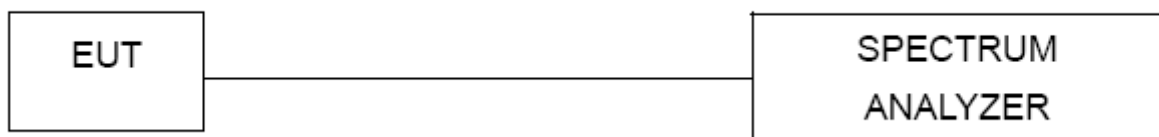
8.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- 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	Receiver	AGILENT	N9038A	MY52130039	Aug. 24, 2014
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 02, 2014
5	Controller	CT	SC100	N/A	N/A
6	Antenna	ETS	3115	00075789	Mar. 29, 2015
7	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015
8	Receiver	AGILENT	N9038A	MY52130039	Aug. 24, 2014
9	Test Cable	HUBER+SUHNER	C-48	N/A	Apr. 30, 2015
10	Controller	CT	SC100	N/A	N/A
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015
12	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Feb. 22, 2015
13	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**





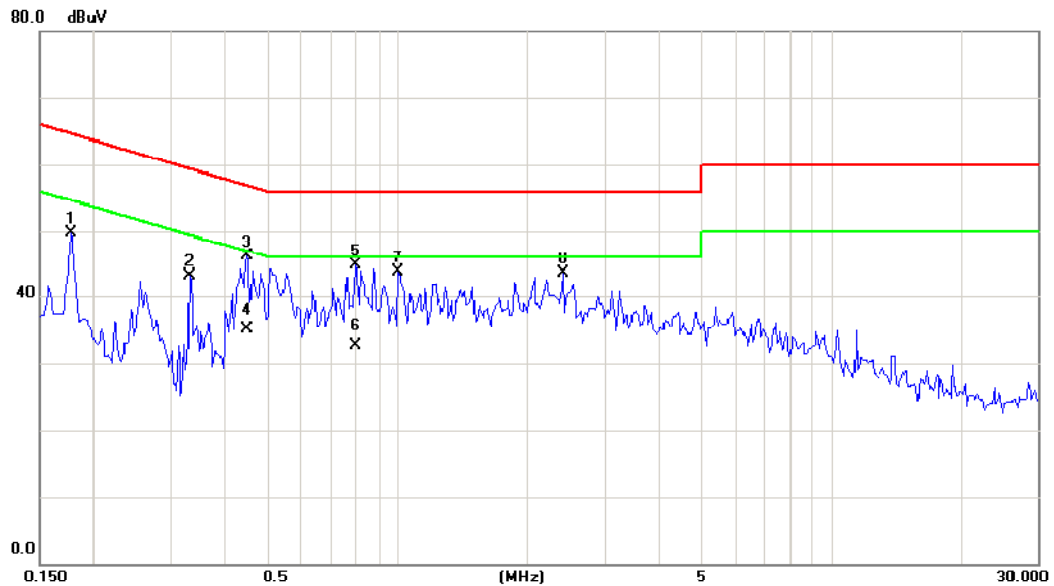
Neutron Engineering Inc.

ATTACHMENT A - CONDUCTED EMISSION



Test Mode : TX MODE

Line

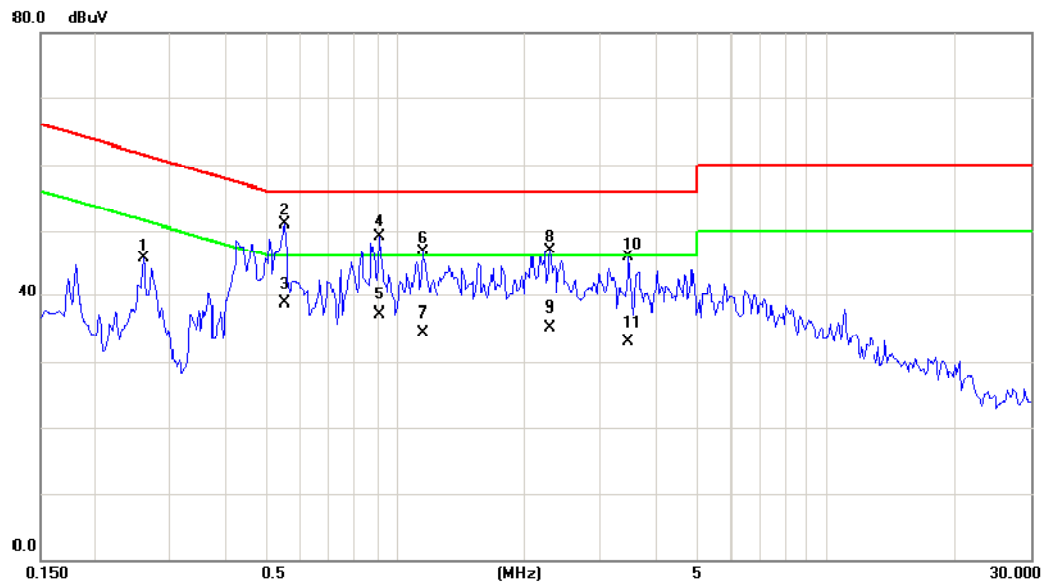


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1773	40.25	9.53	49.78	64.61	-14.83	peak	
2		0.3336	33.56	9.61	43.17	59.36	-16.19	peak	
3	*	0.4508	36.43	9.68	46.11	56.86	-10.75	peak	
4		0.4508	25.40	9.68	35.08	46.86	-11.78	AVG	
5		0.7984	35.02	9.65	44.67	56.00	-11.33	peak	
6		0.7984	23.07	9.65	32.72	46.00	-13.28	AVG	
7		1.0016	34.08	9.70	43.78	56.00	-12.22	peak	
8		2.4195	33.77	9.73	43.50	56.00	-12.50	peak	



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		0.2593	35.91	9.62	45.53	61.45	-15.92	peak	
2	*	0.5523	41.27	9.65	50.92	56.00	-5.08	peak	
3		0.5523	29.12	9.65	38.77	46.00	-7.23	AVG	
4		0.9117	39.40	9.67	49.07	56.00	-6.93	peak	
5		0.9117	27.42	9.67	37.09	46.00	-8.91	AVG	
6		1.1500	36.96	9.68	46.64	56.00	-9.36	peak	
7		1.1500	24.55	9.68	34.23	46.00	-11.77	AVG	
8		2.2867	37.22	9.75	46.97	56.00	-9.03	peak	
9		2.2867	25.37	9.75	35.12	46.00	-10.88	AVG	
10		3.4765	35.89	9.81	45.70	56.00	-10.30	peak	
11		3.4765	23.15	9.81	32.96	46.00	-13.04	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
0.0095	0°	68.35	24.30	92.65	128.12	-35.47	AVG
0.0095	0°	72.35	24.30	96.65	148.12	-51.47	PEAK
0.0139	0°	70.35	24.30	94.65	124.93	-30.28	AVG
0.0139	0°	79.35	24.30	103.65	144.93	-41.28	PEAK
0.0247	0°	56.36	24.02	80.38	119.82	-39.45	AVG
0.0247	0°	60.12	24.02	84.14	139.82	-55.69	PEAK
0.0329	0°	61.36	23.50	84.86	117.34	-32.48	AVG
0.0329	0°	65.38	23.50	88.88	137.34	-48.46	PEAK
0.5670	0°	18.72	20.01	38.73	72.53	-33.80	QP
1.7538	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
0.0094	90°	76.35	24.30	100.65	128.20	-27.55	AVG
0.0094	90°	82.36	24.30	106.66	148.20	-41.54	PEAK
0.0238	90°	56.38	24.08	80.46	120.18	-39.72	AVG
0.0238	90°	59.35	24.08	83.43	140.18	-56.75	PEAK
0.0316	90°	57.35	23.57	80.92	117.61	-36.70	AVG
0.0316	90°	58.35	23.57	81.92	137.61	-55.70	PEAK
0.0431	90°	59.35	22.86	82.21	115.00	-32.78	AVG
0.0431	90°	63.35	22.86	86.21	135.00	-48.78	PEAK
0.4914	90°	17.45	19.82	37.27	73.78	-36.50	QP
1.7157	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 = $40 \log (\text{specific distance} / \text{test distance})$ (dB);
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

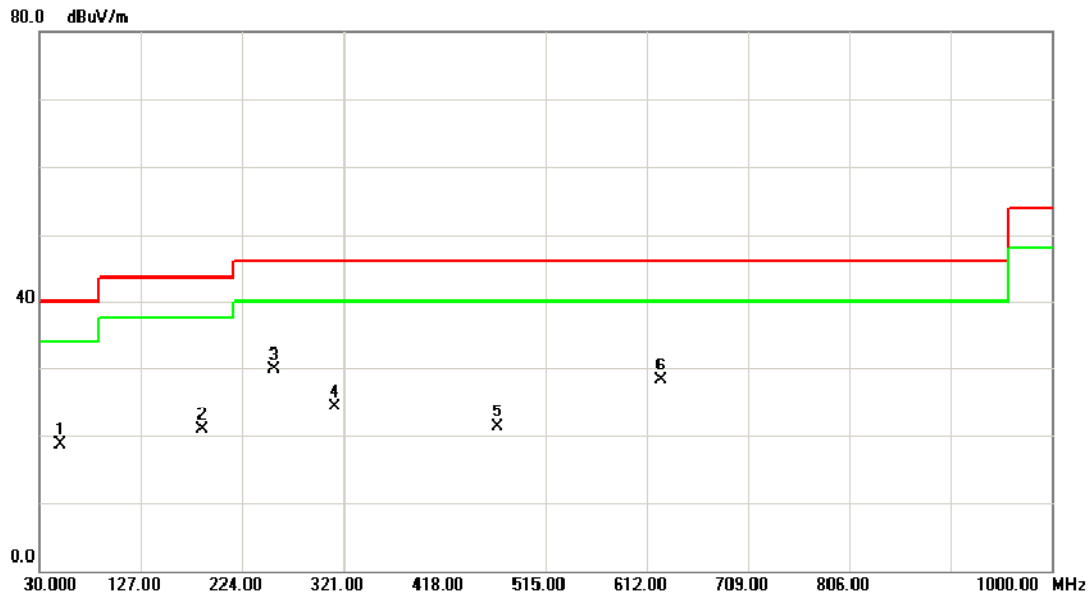


ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)



Test Mode:	TX B MODE CHANNEL 01
------------	----------------------

Vertical

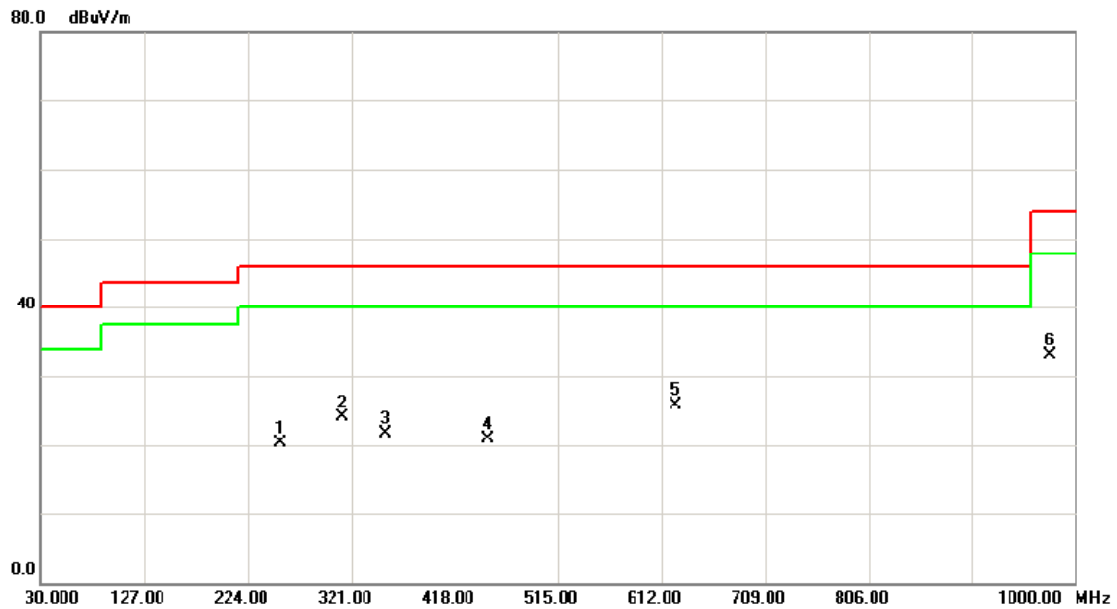


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		50.3700	39.24	-20.54	18.70	40.00	-21.30	peak	
2		185.2000	42.06	-21.07	20.99	43.50	-22.51	peak	
3	*	254.0700	47.10	-17.28	29.82	46.00	-16.18	peak	
4		312.2700	40.06	-15.85	24.21	46.00	-21.79	peak	
5		468.4400	33.66	-12.35	21.31	46.00	-24.69	peak	
6		625.5800	36.82	-8.54	28.28	46.00	-17.72	peak	



Test Mode: TX B MODE CHANNEL 01

Horizontal

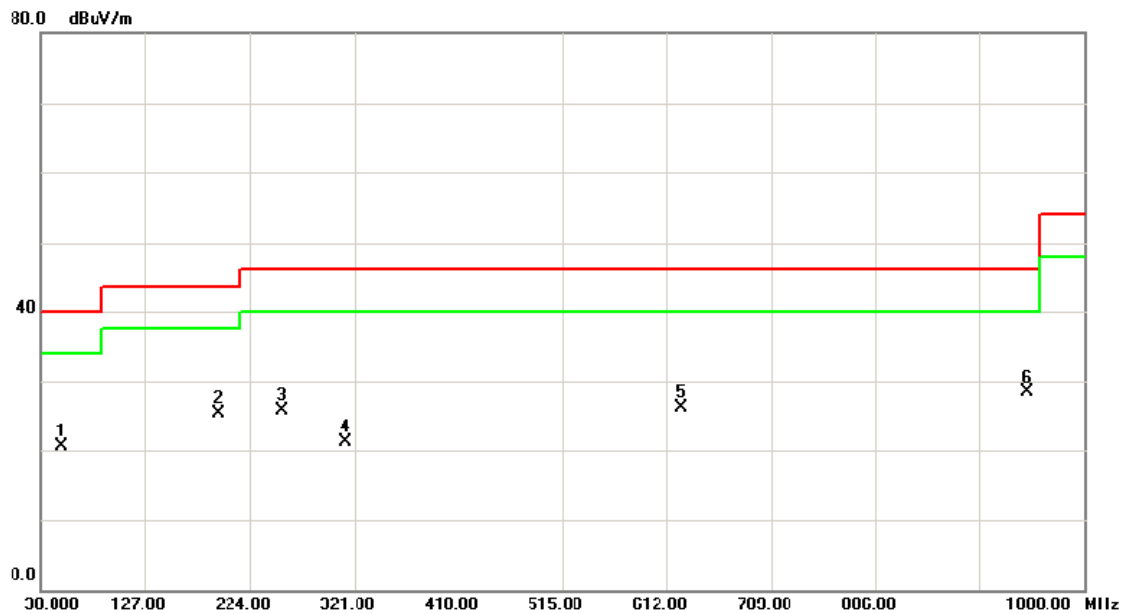


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		254.0700	37.68	-17.28	20.40	46.00	-25.60	peak	
2		312.2700	39.94	-15.85	24.09	46.00	-21.91	peak	
3		352.0400	35.96	-14.23	21.73	46.00	-24.27	peak	
4		449.0400	33.81	-12.95	20.86	46.00	-25.14	peak	
5	*	625.5800	34.46	-8.54	25.92	46.00	-20.08	peak	
6		976.7200	36.42	-3.26	33.16	54.00	-20.84	peak	



Test Mode: TX B MODE CHANNEL 06

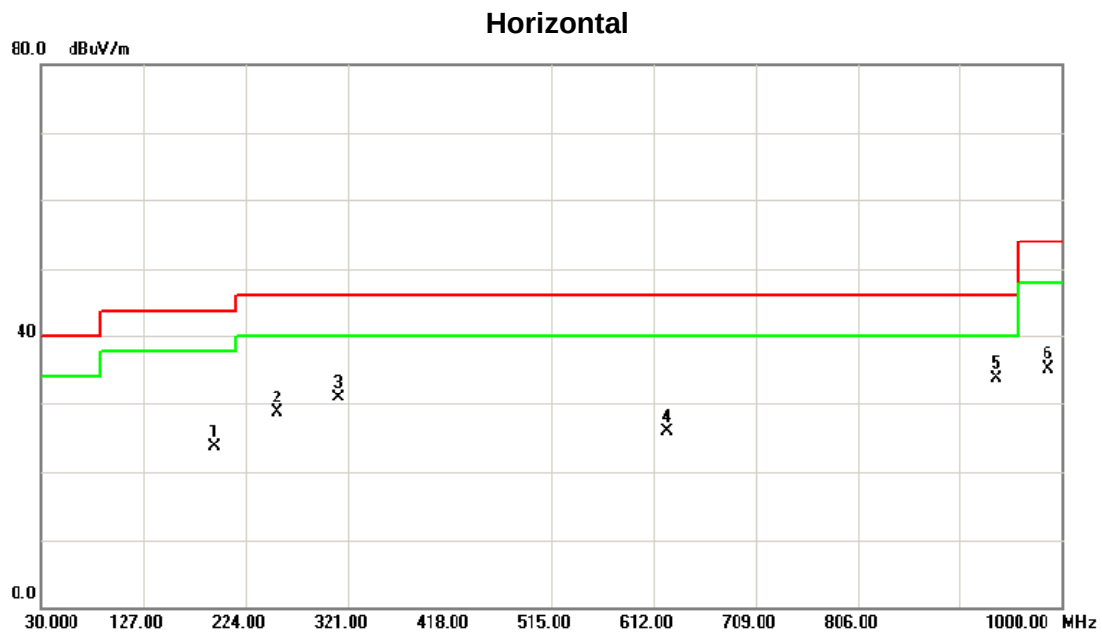
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		50.3700	41.12	-20.54	20.58	40.00	-19.42	peak	
2		194.9000	45.95	-20.59	25.36	43.50	-18.14	peak	
3		254.0700	43.06	-17.28	25.78	46.00	-20.22	peak	
4		312.2700	36.95	-15.85	21.10	40.00	-24.90	peak	
5		625.5800	34.72	8.54	26.18	46.00	19.82	peak	
6	*	947.6200	31.87	-3.56	28.31	46.00	-17.69	peak	



Test Mode:	TX B MODE CHANNEL 06
------------	----------------------

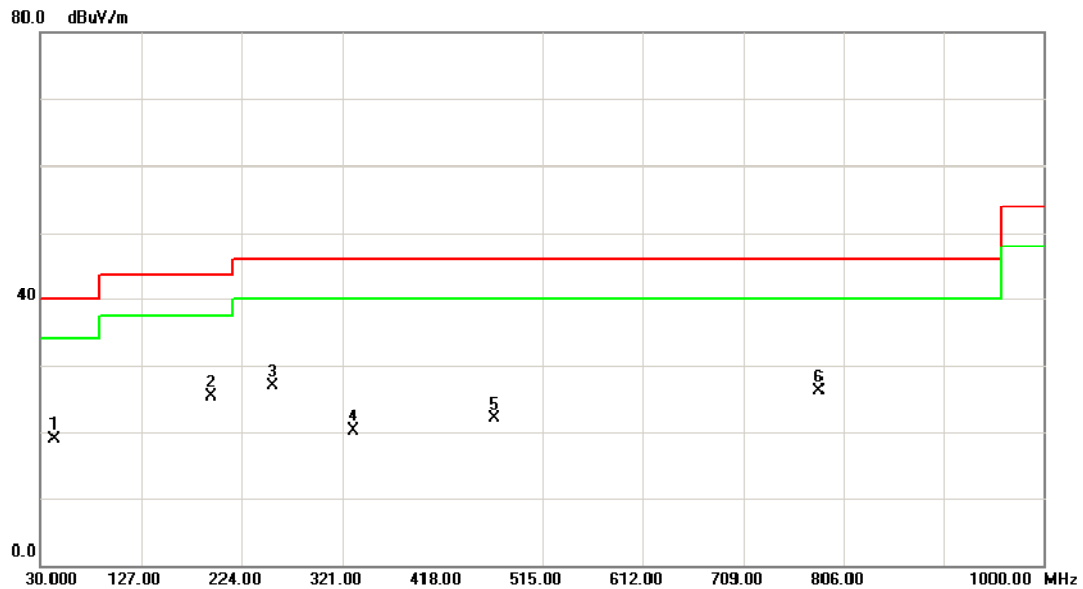


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		194.9000	44.22	-20.59	23.63	43.50	-19.87	peak	
2		254.0700	45.90	-17.28	28.62	46.00	-17.38	peak	
3		312.2700	46.67	-15.85	30.82	46.00	-15.18	peak	
4		625.5800	34.54	-8.54	26.00	46.00	-20.00	peak	
5	*	937.9200	37.45	-3.83	33.62	46.00	-12.38	peak	
6		987.3000	38.34	3.17	35.17	54.00	18.83	peak	



Test Mode:	TX B MODE CHANNEL 11
------------	----------------------

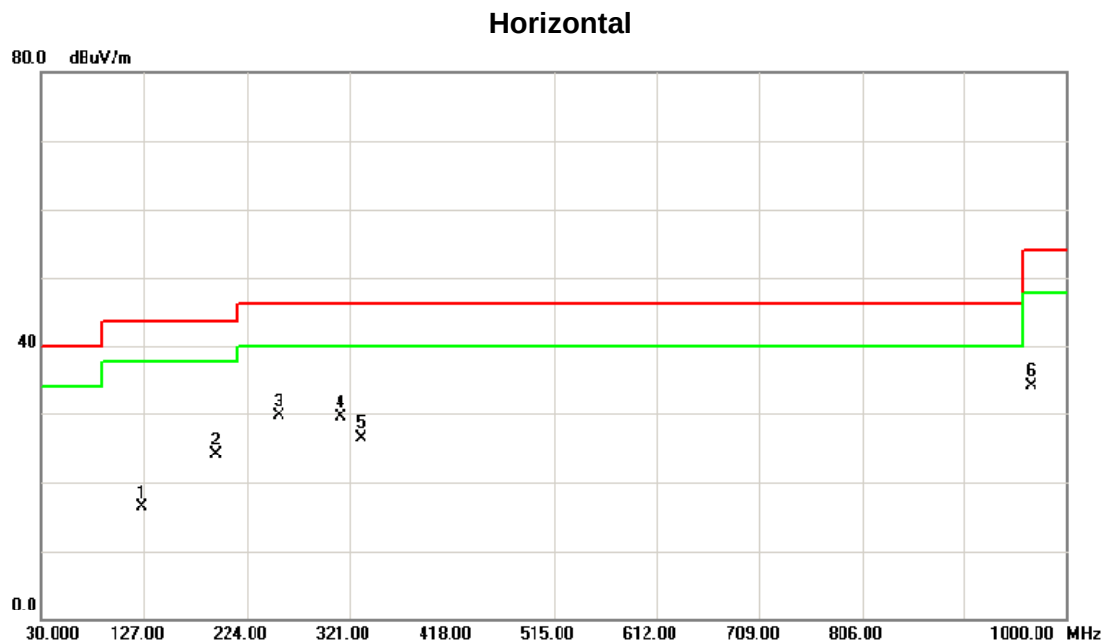
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		43.5800	37.11	-18.15	18.96	40.00	-21.04	peak	
2	*	194.9000	45.82	-20.59	25.23	43.50	-18.27	peak	
3		254.0700	44.24	-17.28	26.96	46.00	-19.04	peak	
4		331.6700	35.34	-15.16	20.18	46.00	-25.82	peak	
5		468.4400	34.27	-12.35	21.92	46.00	-24.08	peak	
6		781.7500	32.54	-6.40	26.14	46.00	-19.86	peak	



Test Mode:	TX B MODE CHANNEL 11
------------	----------------------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		125.0600	38.92	-22.58	16.34	43.50	-27.16	peak	
2		194.9000	44.73	-20.59	24.14	43.50	-19.36	peak	
3	*	254.0700	46.98	-17.28	29.70	46.00	-16.30	peak	
4		312.2700	45.40	-15.85	29.55	46.00	-16.45	peak	
5		331.6700	41.65	-15.16	26.49	46.00	-19.51	peak	
6		967.0200	37.40	-3.34	34.06	54.00	-19.94	peak	

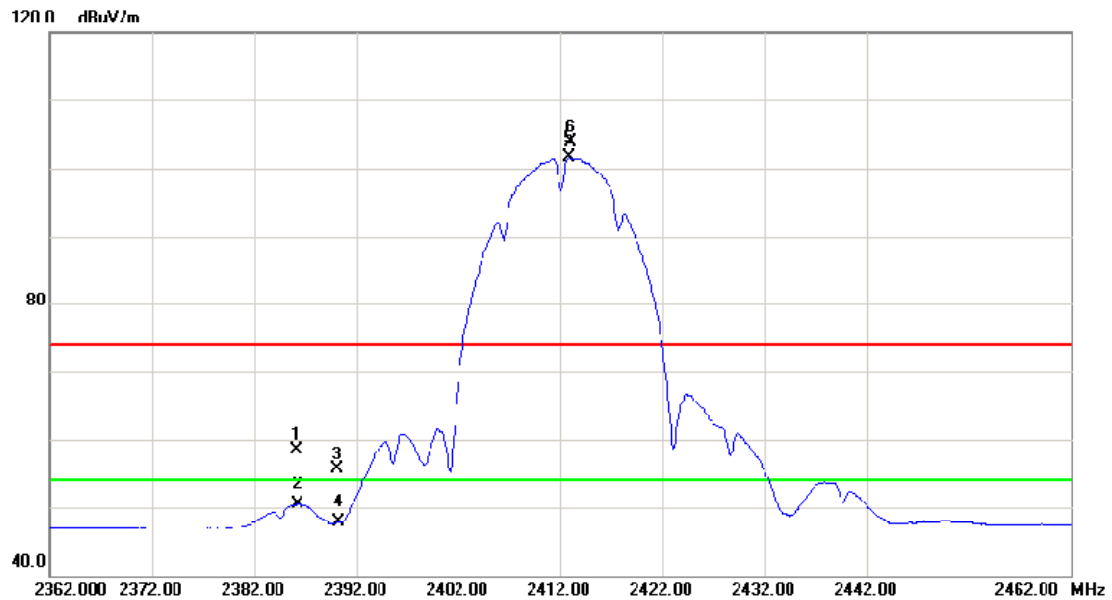


ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)



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

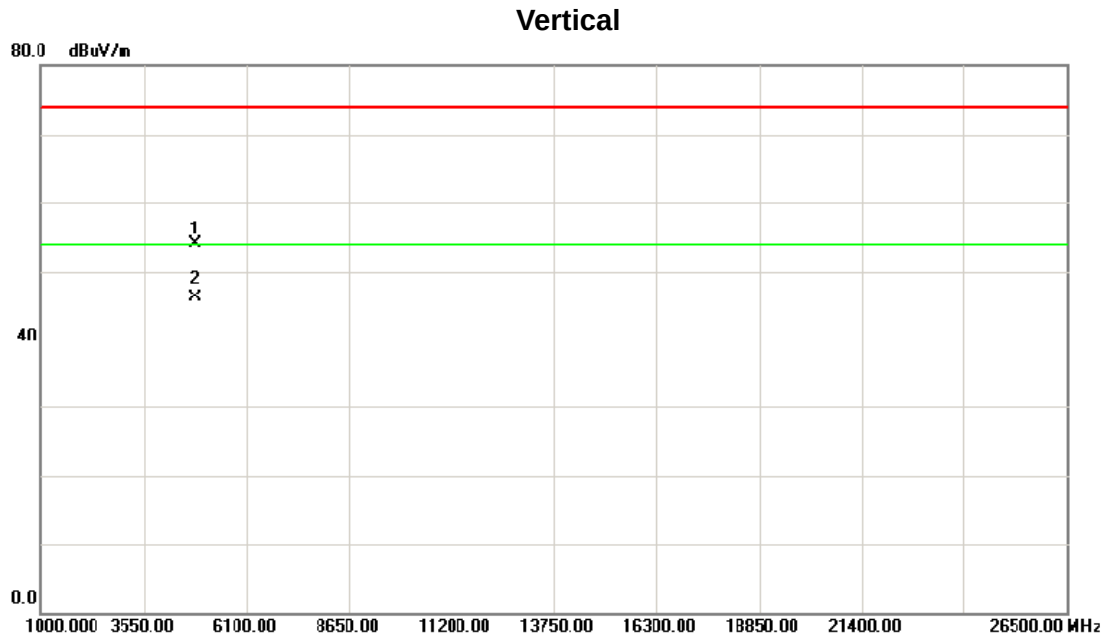
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2386.000	25.11	33.37	58.48	74.00	-15.52	peak	
2		2386.200	17.10	33.37	50.47	54.00	-3.53	AVG	
3		2390.000	22.26	33.38	55.64	74.00	-18.36	peak	
4		2390.000	14.45	33.38	47.83	54.00	-6.17	AVG	
5	*	2412.800	68.00	33.44	101.44	54.00	47.44	AVG	Fundamental frequency, no limit
6	X	2413.000	70.38	33.44	103.82	74.00	29.82	peak	Fundamental frequency, no limit



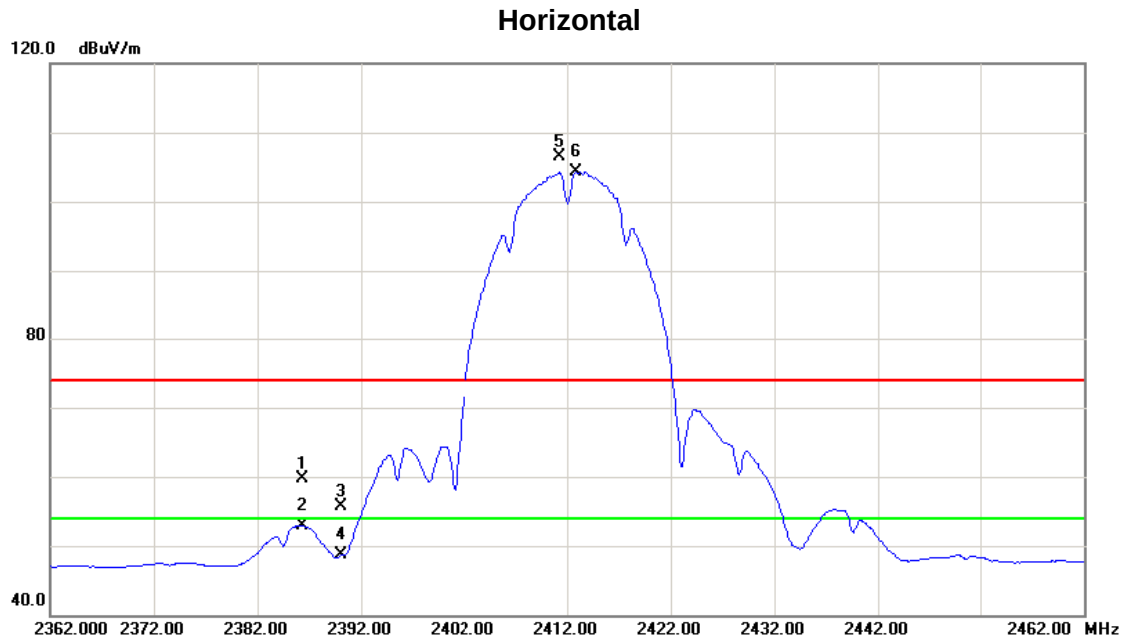
Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.500	47.66	6.44	54.10	74.00	-19.90	peak	
2	*	4824.900	39.70	6.44	46.14	54.00	-7.86	AVG	



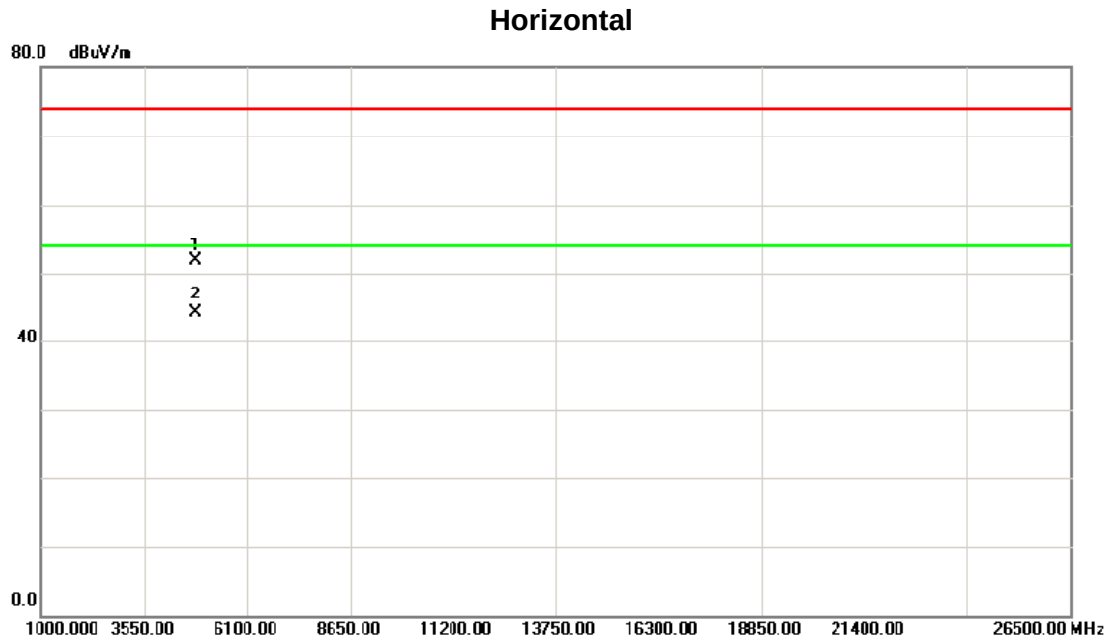
Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2386.300	26.32	33.37	59.69	74.00	-14.31	peak	
2		2386.300	19.59	33.37	52.96	54.00	-1.04	AVG	
3		2390.000	22.31	33.38	55.69	74.00	-18.31	peak	
4		2390.000	15.27	33.38	48.65	54.00	-5.35	AVG	
5	X	2411.200	72.98	33.44	106.42	74.00	32.42	peak	Fundamental frequency, no limit
6	*	2412.900	70.85	33.44	104.29	54.00	50.29	AVG	Fundamental frequency, no limit



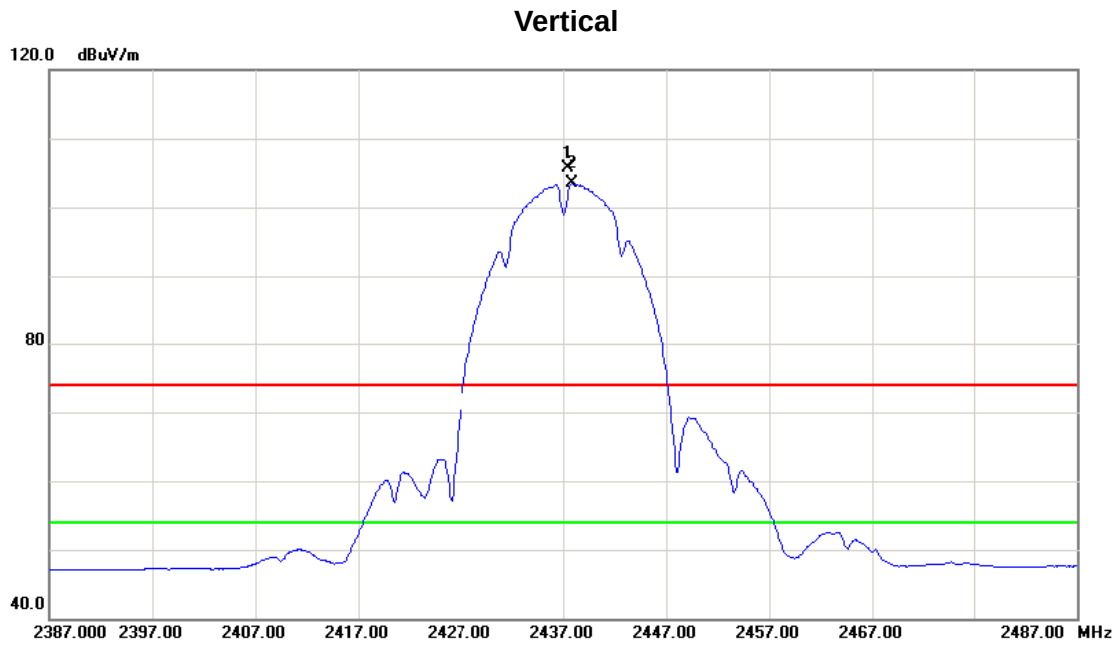
Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4823.400	45.39	6.44	51.83	74.00	-22.17	peak	
2	*	4824.300	37.64	6.44	44.08	54.00	-9.92	AVG	



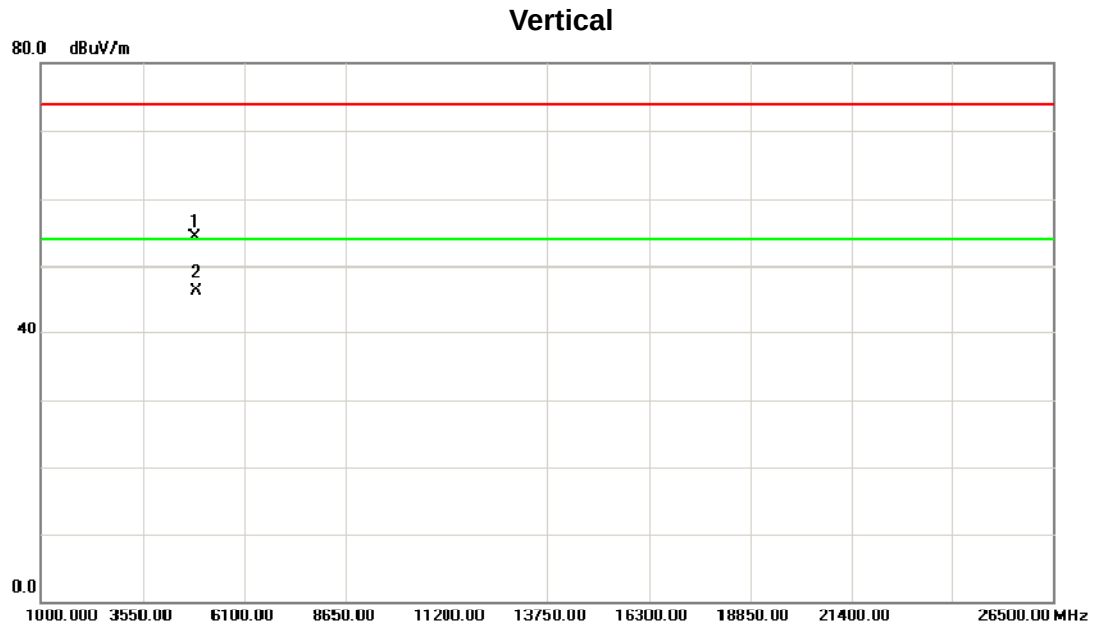
Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2437.500	72.25	33.50	105.75	74.00	31.75	peak	Fundamental frequency, no limit
2	*	2437.800	69.95	33.50	103.45	54.00	49.45	AVG	Fundamental frequency, no limit



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

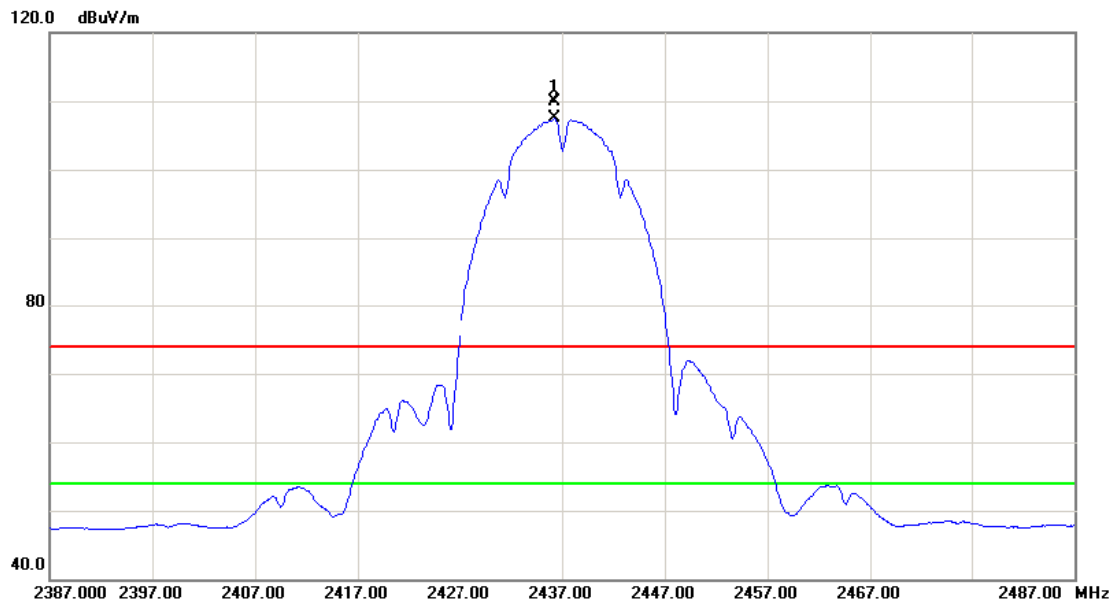


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.300	47.76	6.55	54.31	74.00	-19.69	peak	
2	*	4874.700	39.49	6.55	46.04	54.00	-7.96	AVG	



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

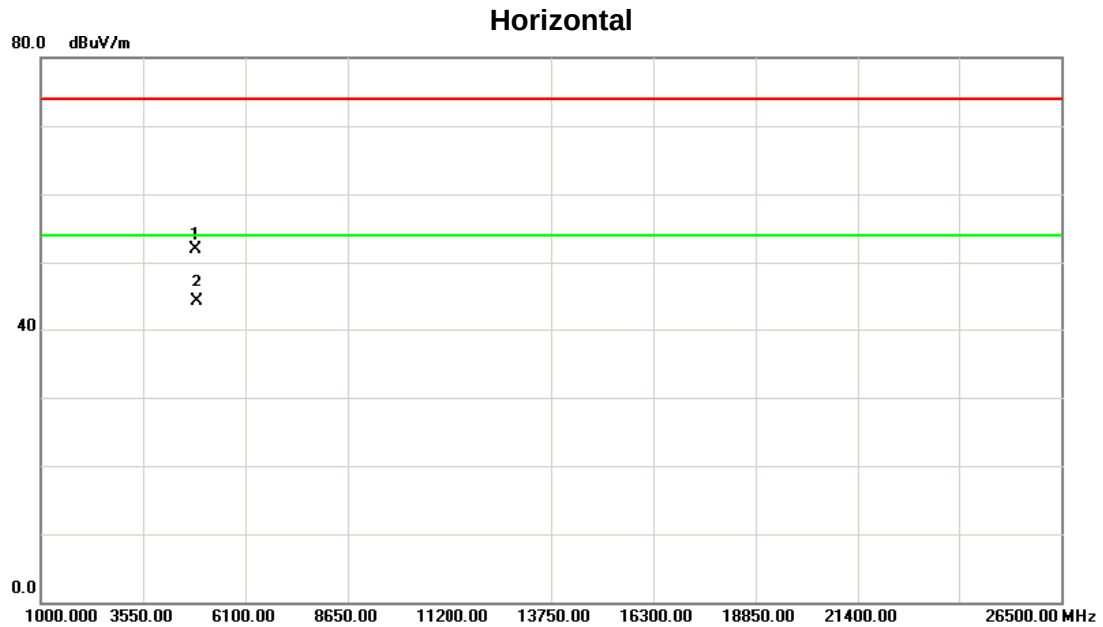
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2436.200	76.45	33.50	109.95	74.00	35.95	peak	Fundamental frequency, no limit
2	*	2436.300	73.94	33.50	107.44	54.00	53.44	AVG	Fundamental frequency, no limit



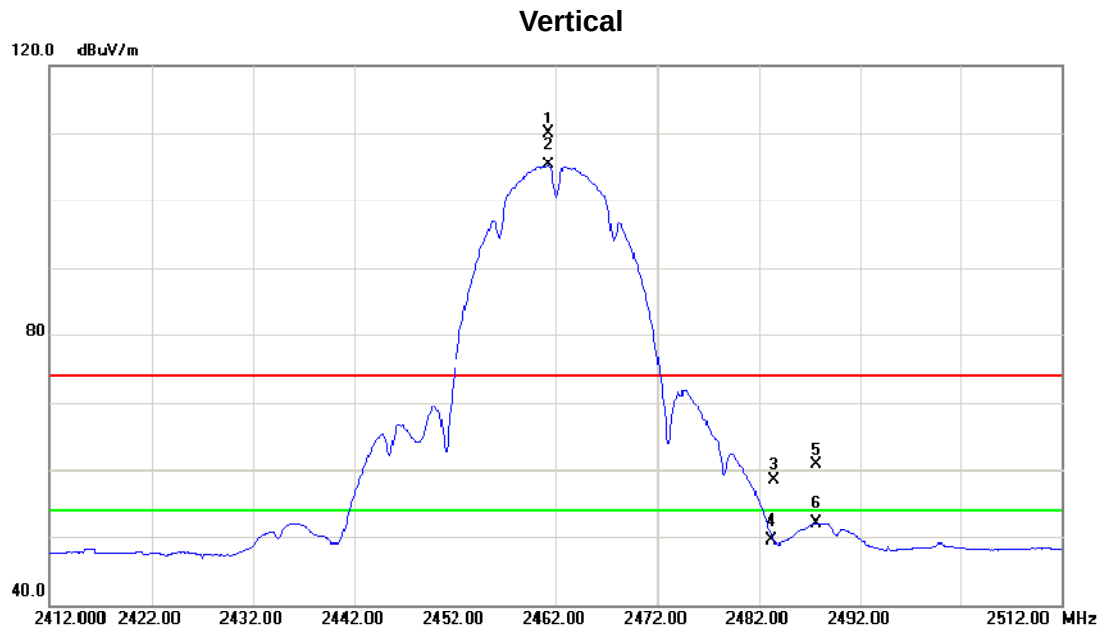
Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.200	45.28	6.55	51.83	74.00	-22.17	peak	
2	*	4874.500	37.53	6.55	44.08	54.00	-9.92	AVG	



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

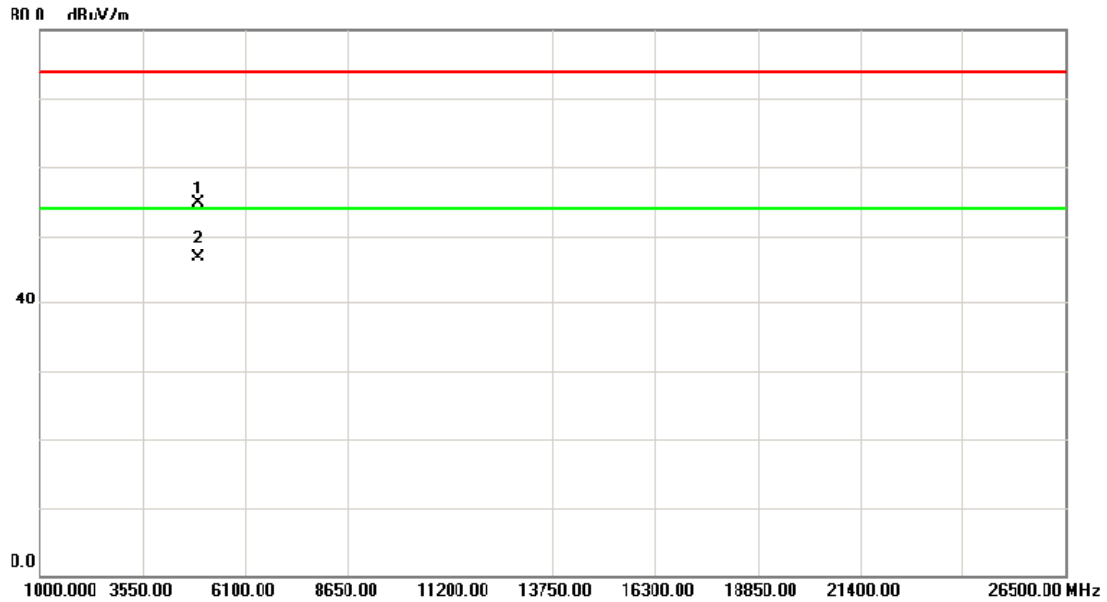


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2461.200	76.29	33.56	109.85	74.00	35.85	peak	Fundamental frequency, no limit
2	*	2461.200	71.66	33.56	105.22	54.00	51.22	AVG	Fundamental frequency, no limit
3		2483.500	24.86	33.62	58.48	74.00	-15.52	peak	
4		2483.500	15.91	33.62	49.53	54.00	-4.47	AVG	
5		2487.700	27.17	33.63	60.80	74.00	-13.20	peak	
6		2487.700	18.56	33.63	52.19	54.00	-1.81	AVG	



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

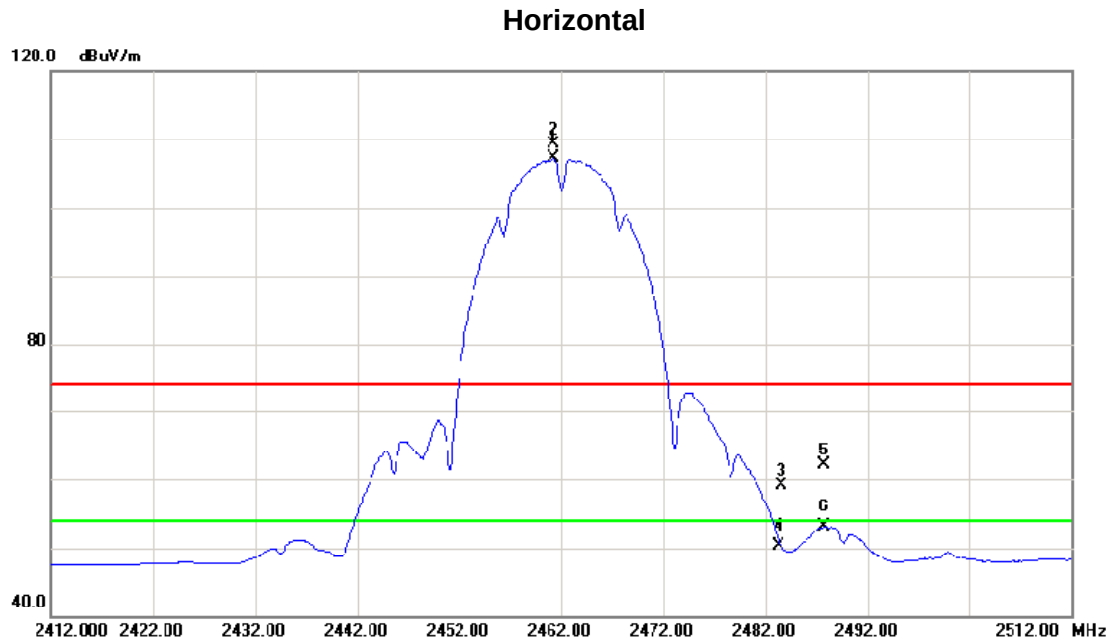
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4924.600	40.13	6.66	54.79	74.00	-19.21	peak	
2	*	4924.800	40.05	6.66	46.71	54.00	-7.29	AVG	



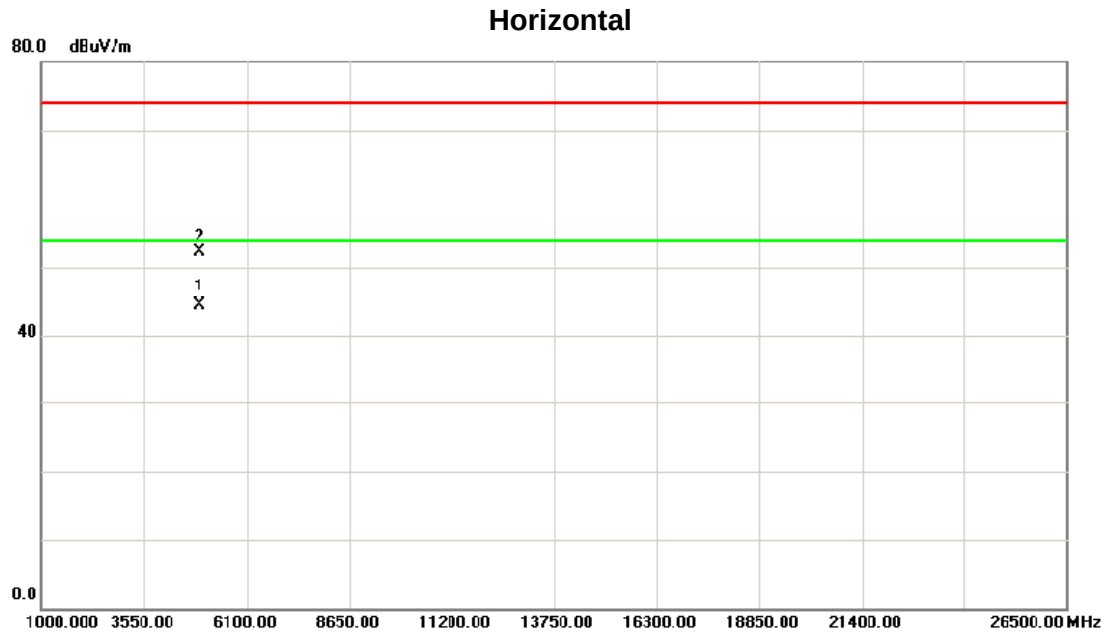
Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	^	2461.200	73.67	33.56	107.23	54.00	53.23	AVG	Fundamental frequency, no limit
2	X	2461.300	75.81	33.56	109.37	74.00	35.37	peak	Fundamental frequency, no limit
3		2483.500	25.57	33.62	59.19	74.00	-14.81	peak	
4		2483.500	16.69	33.62	50.31	54.00	-3.69	AVG	
5		2487.700	28.41	33.63	62.04	74.00	-11.96	peak	
6		2487.700	19.41	33.63	53.04	54.00	-0.96	AVG	



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

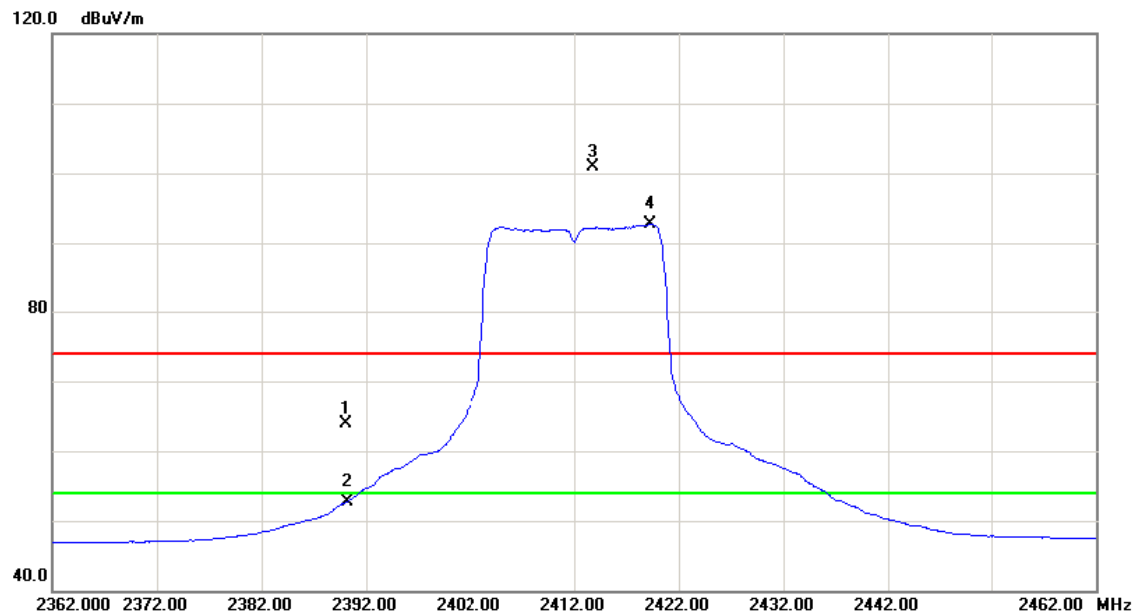


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4924.110	37.57	6.66	44.23	54.00	-9.77	AVG	
2		4924.150	45.69	6.66	52.35	74.00	-21.65	peak	



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

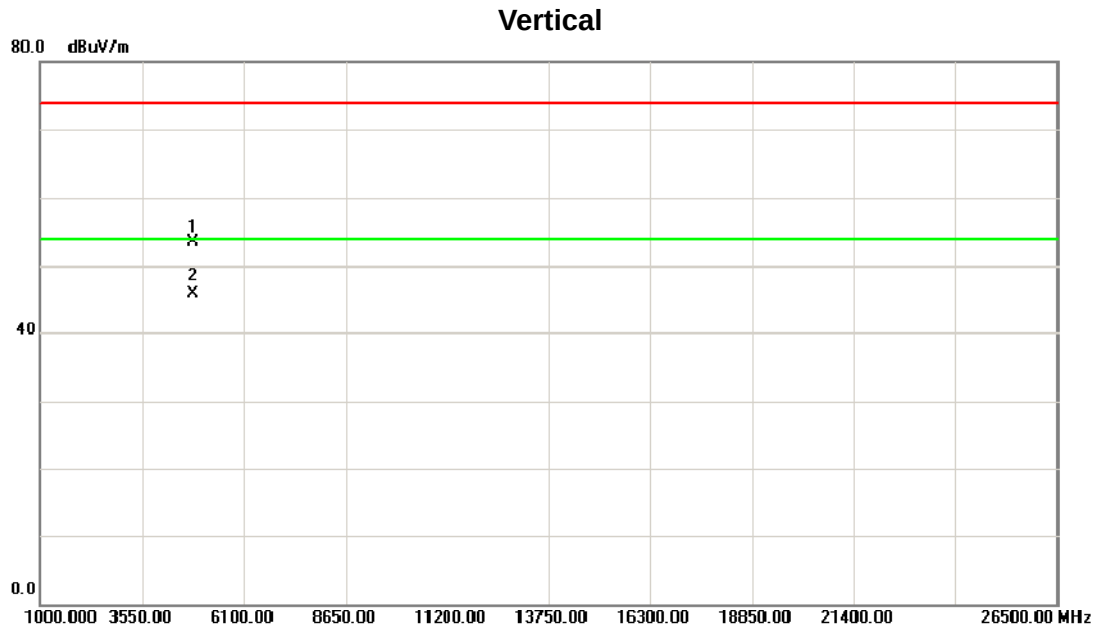
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	30.46	33.38	63.84	74.00	-10.16	peak	
2		2390.000	19.25	33.38	52.63	54.00	-1.37	AVG	
3	X	2413.800	67.38	33.44	100.82	74.00	26.82	peak	Fundamental frequency, no limit
4	*	2419.200	59.20	33.46	92.66	54.00	38.66	AVG	Fundamental frequency, no limit



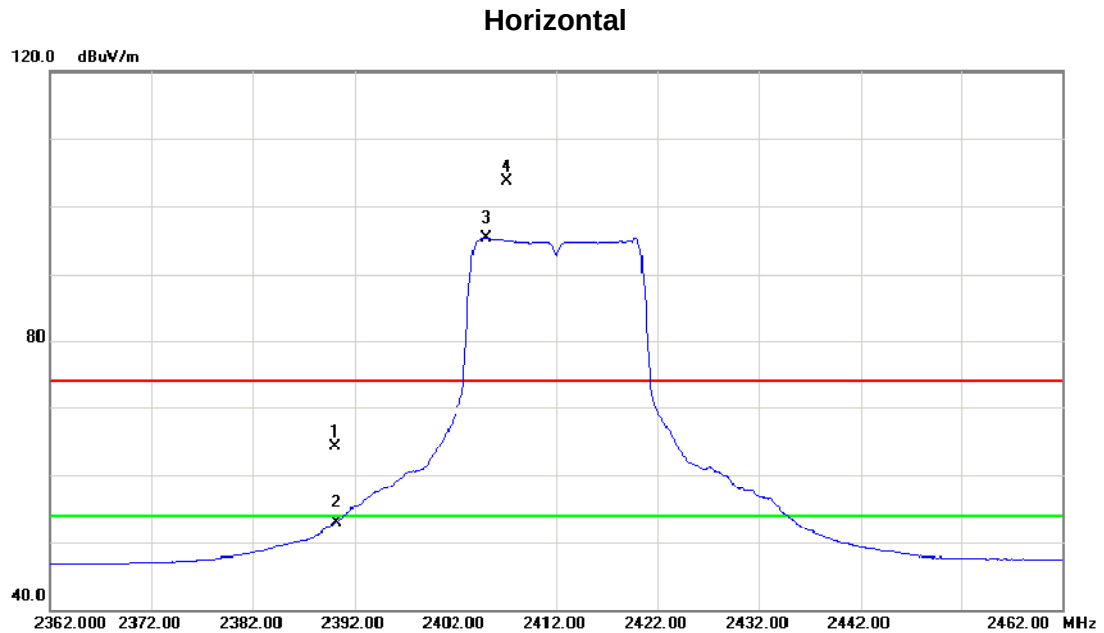
Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4823.790	47.08	6.44	53.52	74.00	-20.48	peak	
2	*	4824.100	39.23	6.44	45.67	54.00	-8.33	AVG	



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

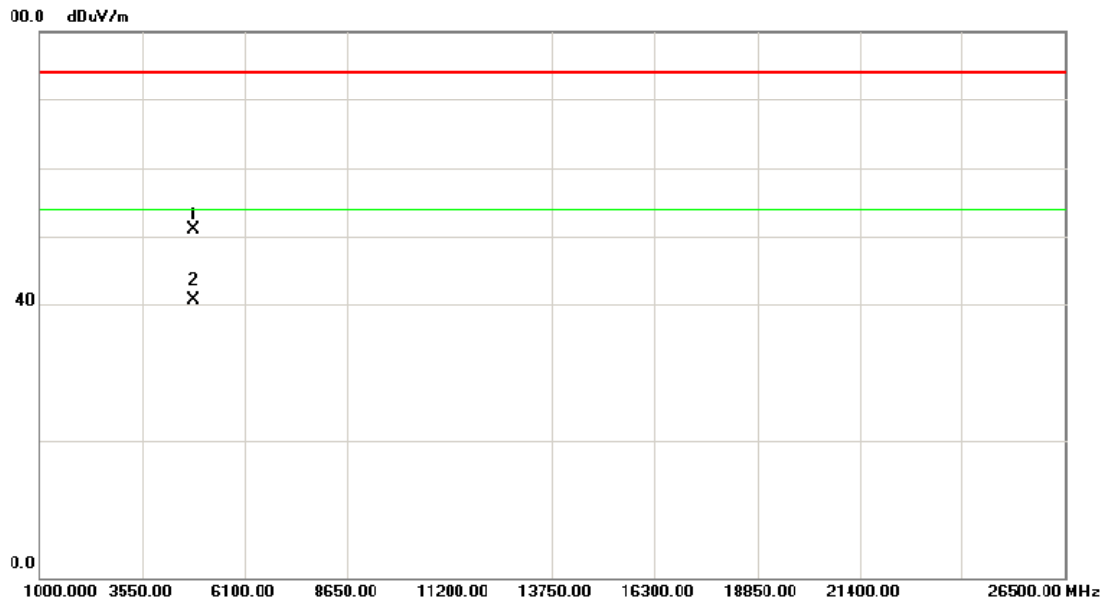


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	30.87	33.38	64.25	74.00	-9.75	peak	
2		2390.000	19.50	33.38	52.88	54.00	-1.12	AVG	
3	*	2405.100	61.94	33.42	95.36	54.00	41.36	AVG	Fundamental frequency, no limit
4	X	2407.100	70.31	33.43	103.74	74.00	29.74	peak	Fundamental frequency, no limit



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

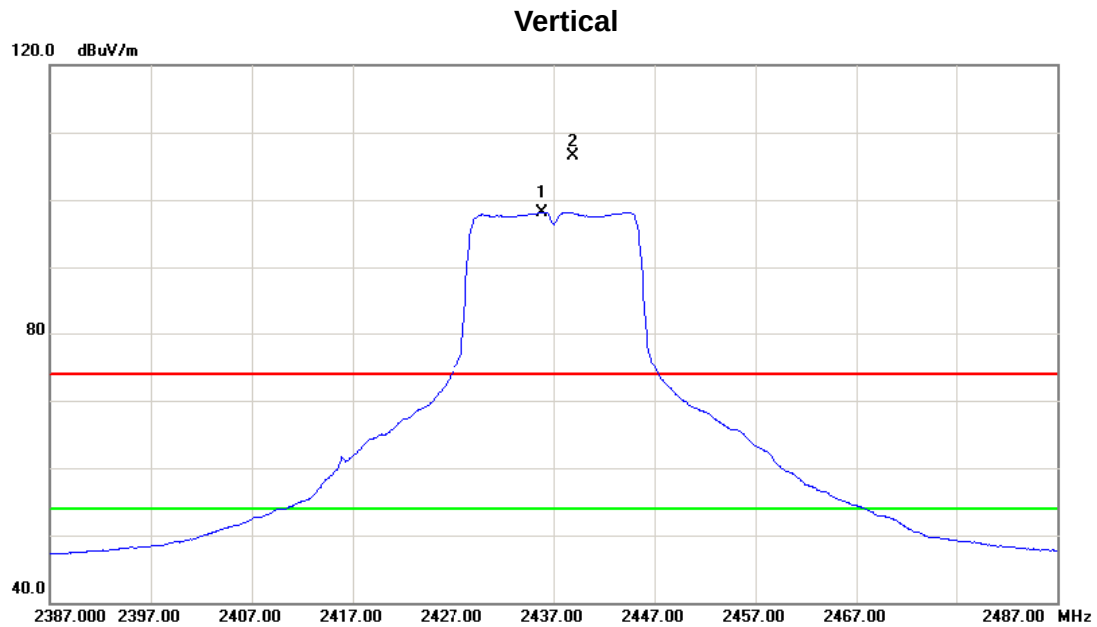
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4824.300	44.58	6.44	51.02	74.00	-22.98	peak	
2	*	4824.800	34.00	6.44	40.44	54.00	-13.56	AVG	



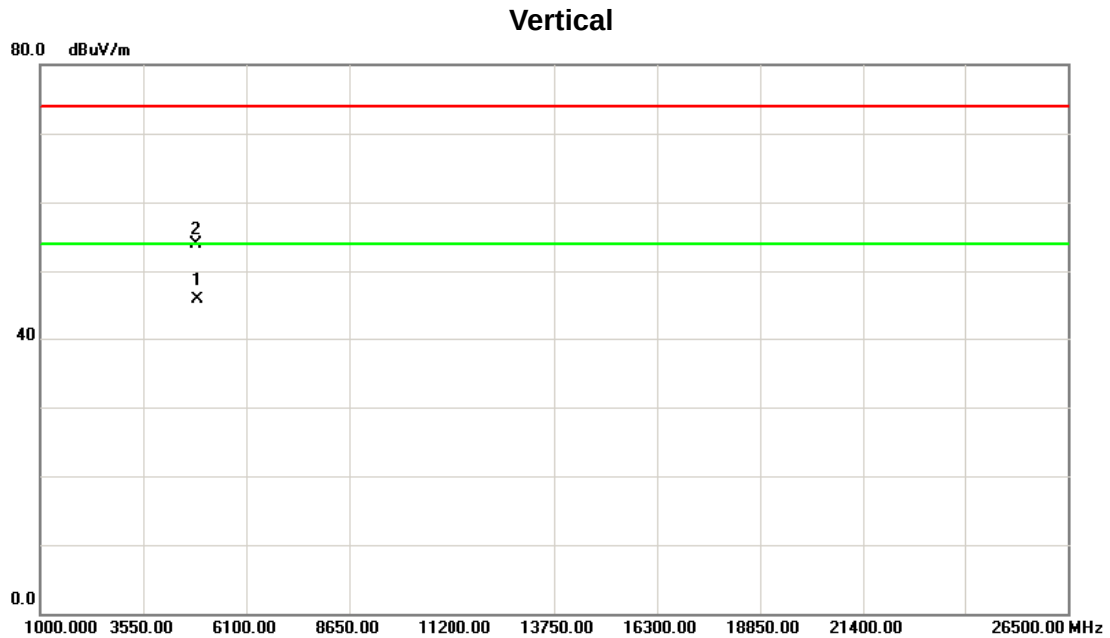
Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2435.900	64.67	33.50	98.17	54.00	44.17	AVG	Fundamental frequency, no limit
2	X	2438.900	72.94	33.50	106.44	74.00	32.44	peak	Fundamental frequency, no limit



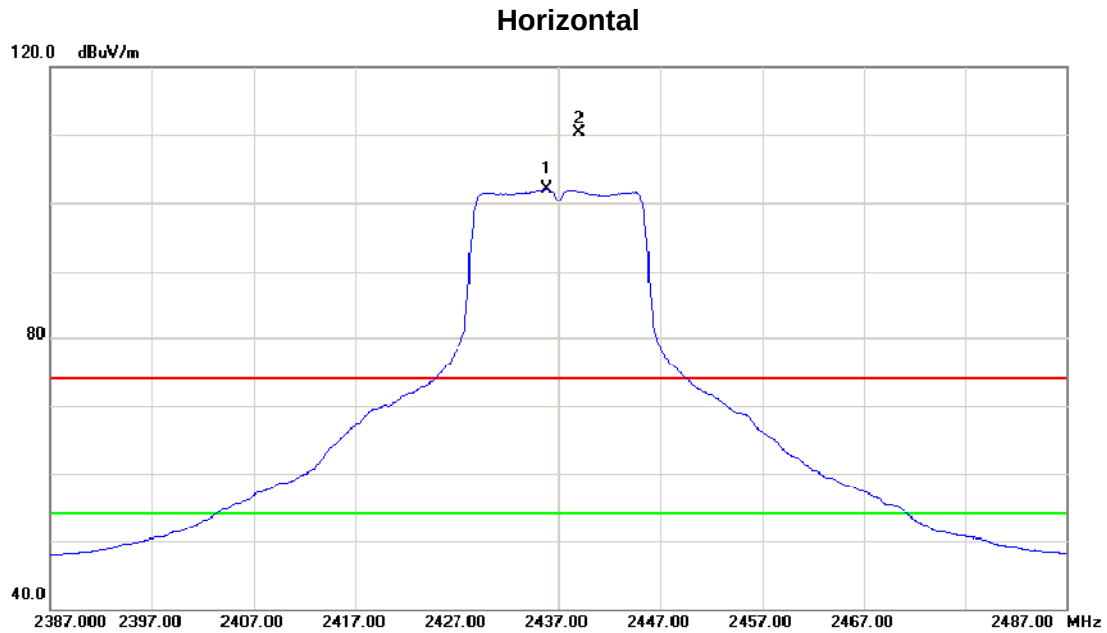
Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4874.060	39.25	6.55	45.80	54.00	-8.20	AVG	
2		4874.110	47.36	6.55	53.91	74.00	-20.09	peak	



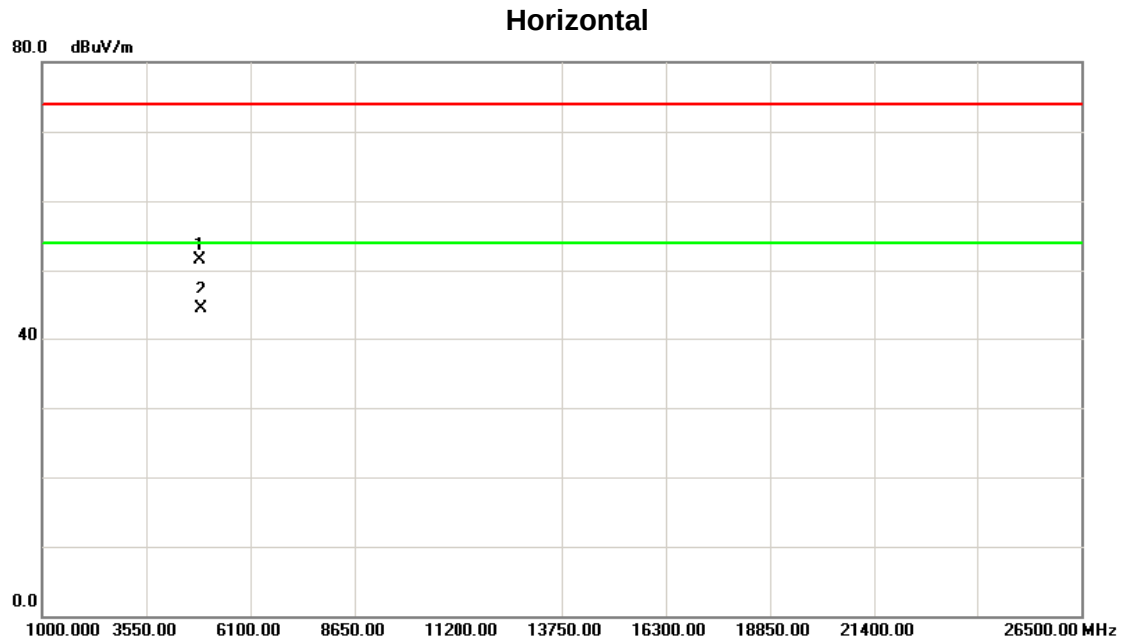
Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2435.900	68.60	33.50	102.10	54.00	48.10	AVG	Fundamental frequency, no limit
2	X	2439.000	76.87	33.51	110.38	74.00	36.38	peak	Fundamental frequency, no limit



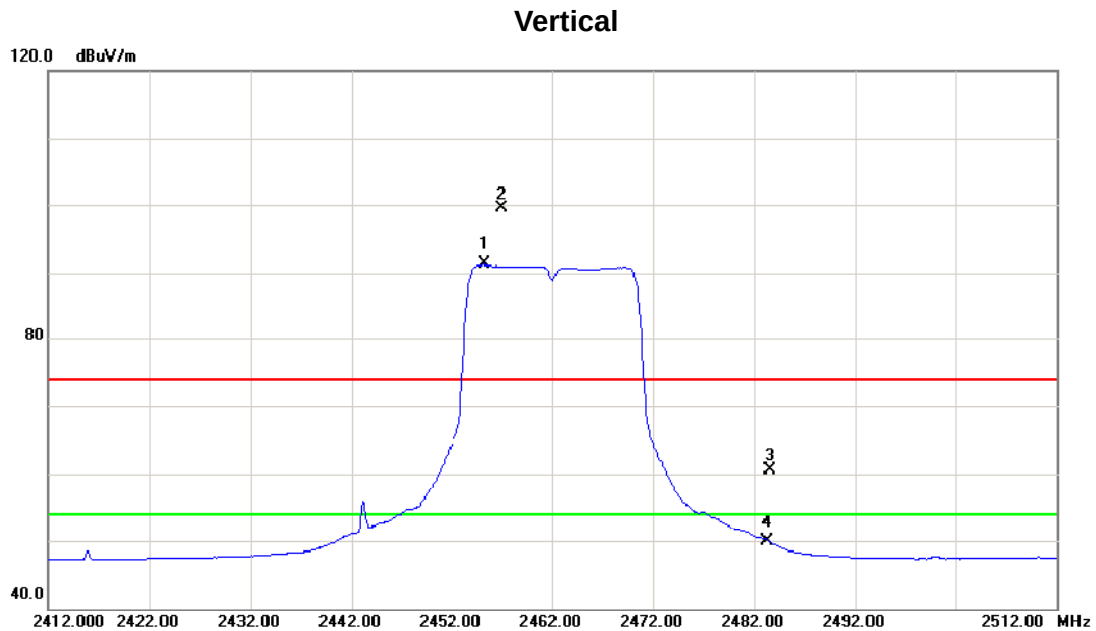
Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.130	45.05	6.55	51.60	74.00	-22.40	peak	
2	*	4874.900	37.74	6.55	44.29	54.00	-9.71	AVG	



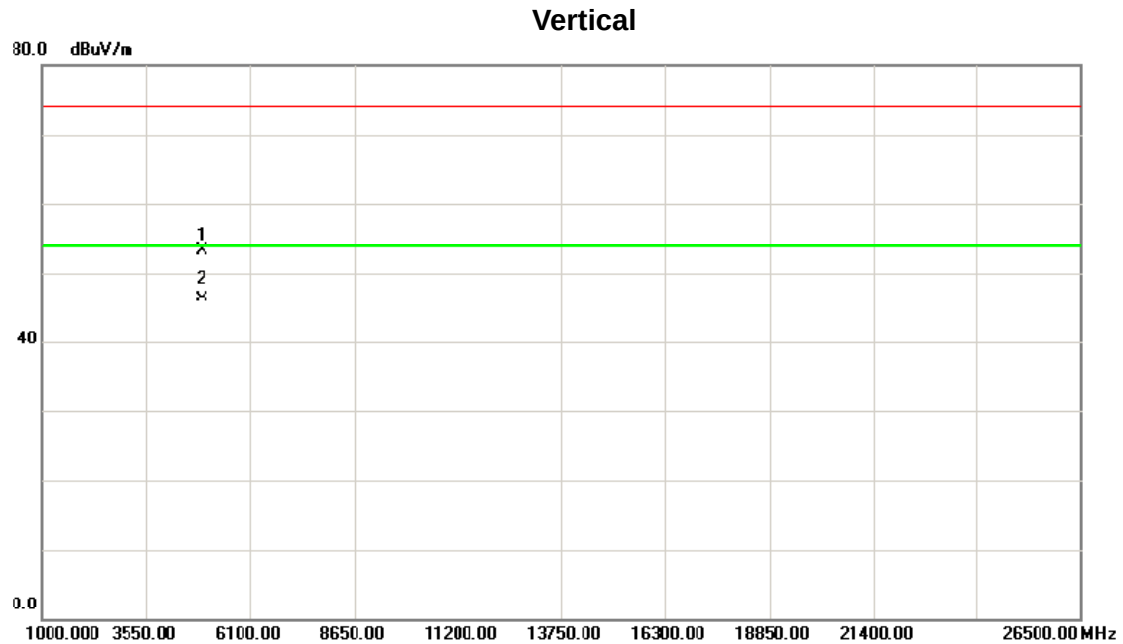
Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2455.200	57.68	33.54	91.22	54.00	37.22	AVG	Fundamental frequency, no limit
2	X	2457.000	65.99	33.56	99.55	74.00	25.55	peak	Fundamental frequency, no limit
3		2483.500	26.95	33.62	60.57	74.00	-13.43	peak	
4		2483.500	16.27	33.62	49.89	54.00	-4.11	AVG	



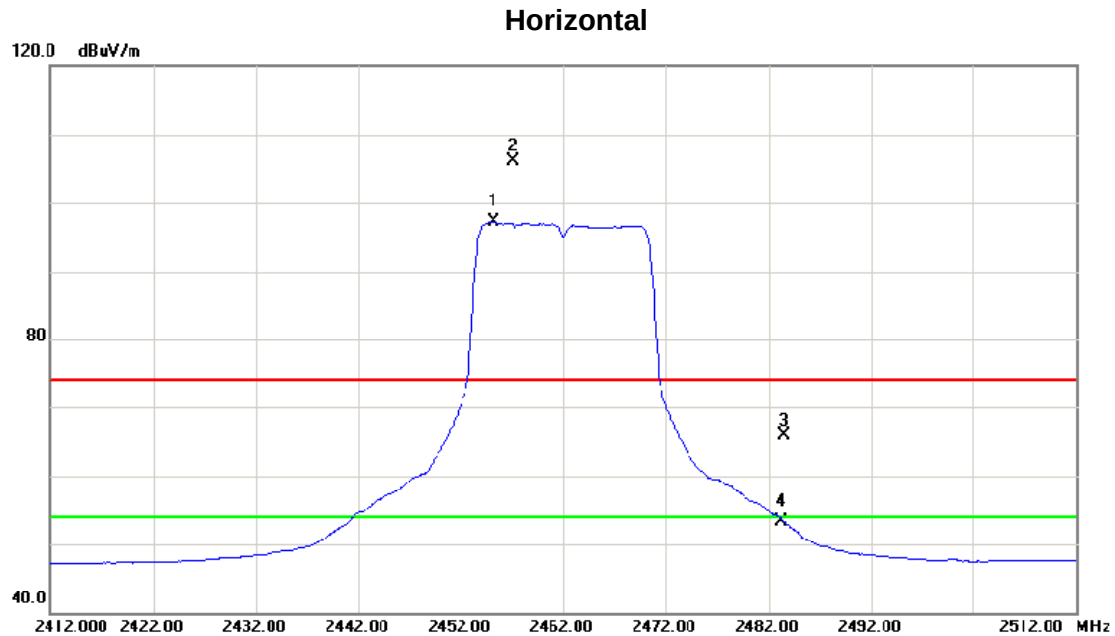
Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	4924.900	46.69	6.66	53.35	74.00	-20.65	peak	
2 *	4925.300	39.58	6.66	46.24	54.00	-7.76	AVG	



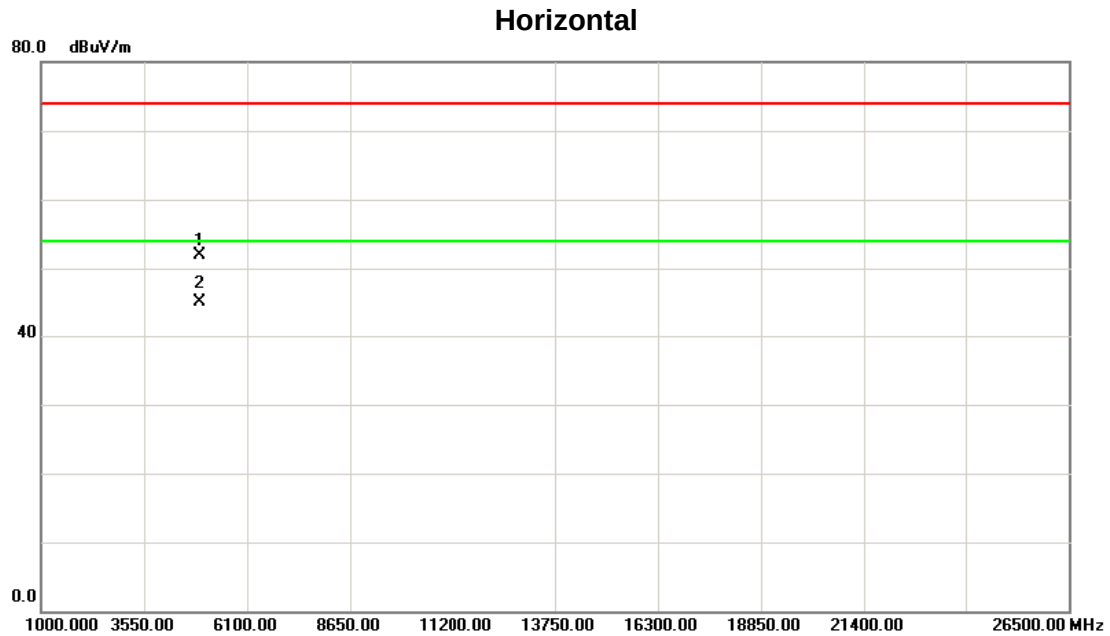
Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2455.200	63.78	33.54	97.32	54.00	43.32	AVG	Fundamental frequency, no limit
2	X	2457.100	72.48	33.56	106.04	74.00	32.04	peak	Fundamental frequency, no limit
3		2483.500	32.24	33.62	65.86	74.00	-8.14	peak	
4		2483.500	19.77	33.62	53.39	54.00	-0.61	AVG	



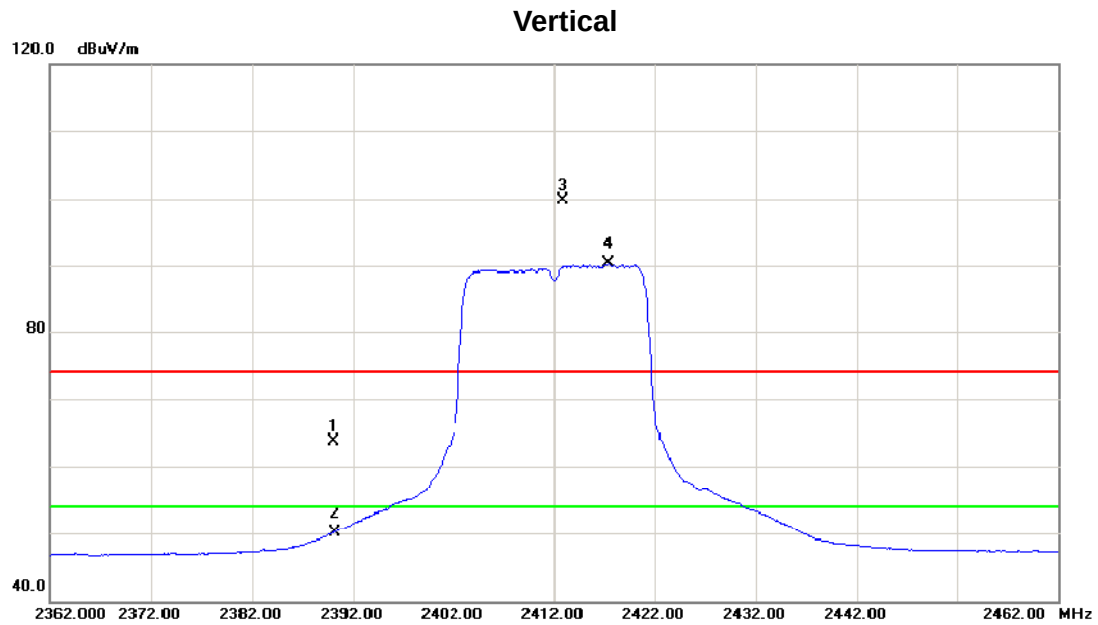
Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4924.080	45.25	6.66	51.91	74.00	-22.09	peak	
2	*	4924.140	38.32	6.66	44.98	54.00	-9.02	AVG	



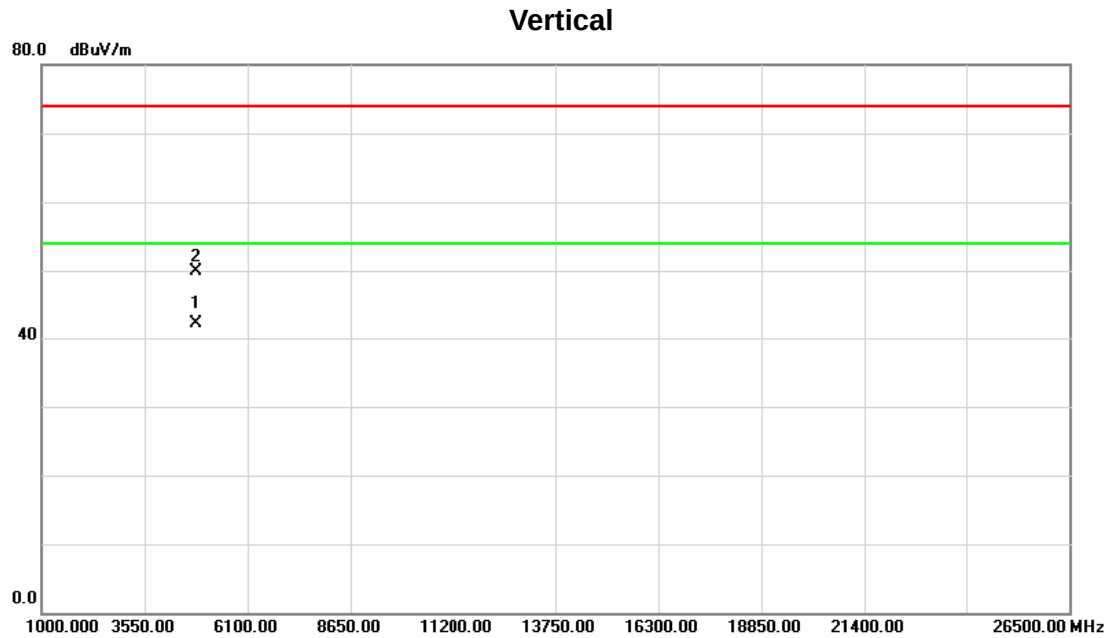
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	30.30	33.38	63.68	74.00	-10.32	peak	
2		2390.000	16.76	33.38	50.14	54.00	-3.86	AVG	
3	X	2412.900	66.20	33.44	99.64	74.00	25.64	peak	Fundamental frequency, no limit
4	*	2417.400	56.77	33.45	90.22	54.00	36.22	AVG	Fundamental frequency, no limit



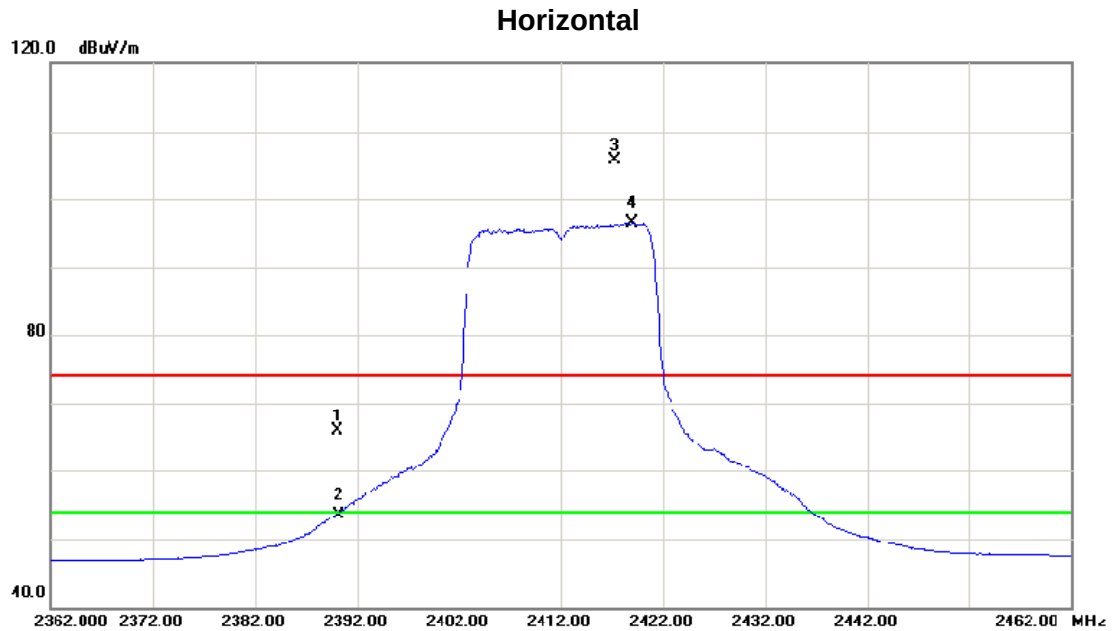
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4824.190	35.67	6.44	42.11	54.00	-11.89	AVG	
2		4824.260	43.48	6.44	49.92	74.00	-24.08	peak	



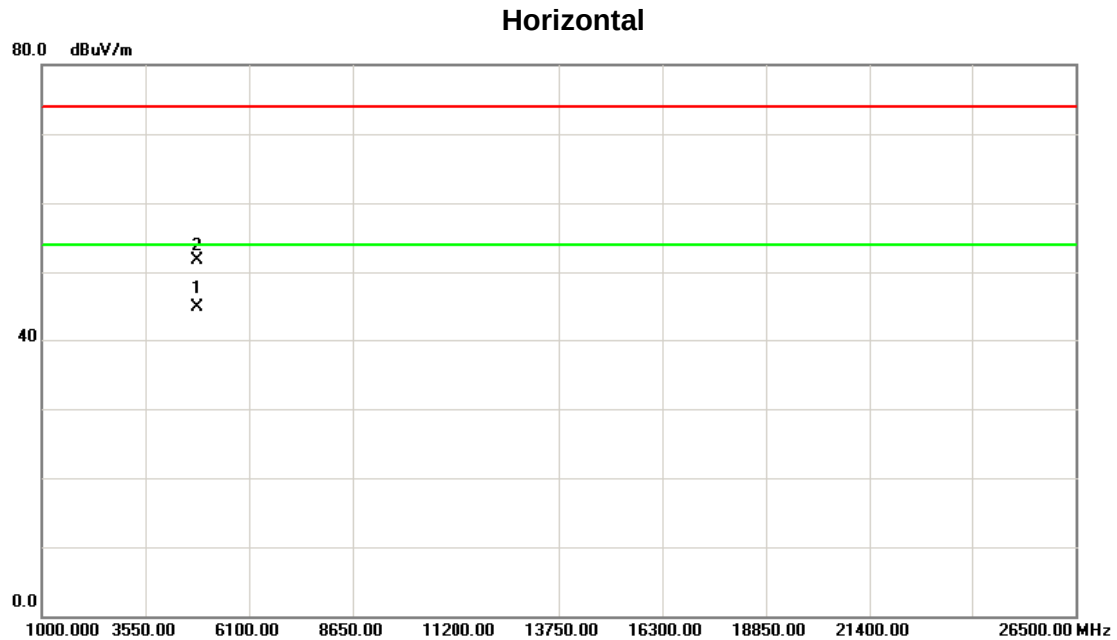
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz



No	Mk	Freq MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	32.44	33.38	65.82	74.00	-8.18	peak	
2		2390.000	20.21	33.38	53.59	54.00	-0.41	AVG	
3	X	2417.300	72.29	33.45	105.74	74.00	31.74	peak	Fundamental frequency, no limit
4	*	2419.000	63.10	33.46	96.56	54.00	42.56	AVG	Fundamental frequency, no limit



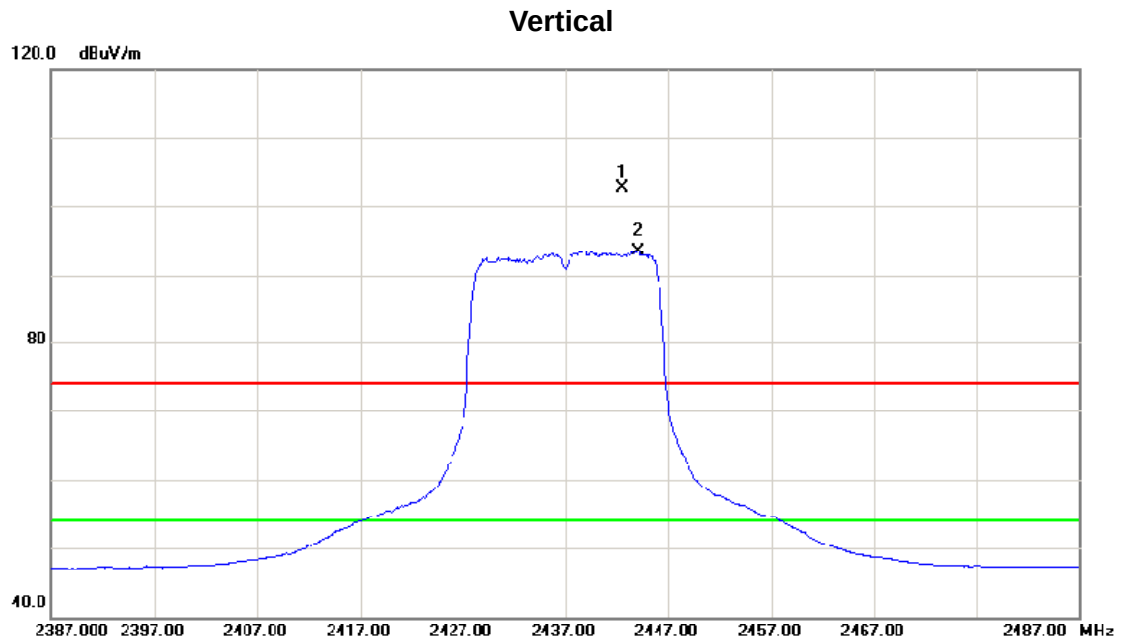
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4824.200	38.35	6.44	44.79	54.00	-9.21	AVG	
2		4824.600	45.26	6.44	51.70	74.00	-22.30	peak	



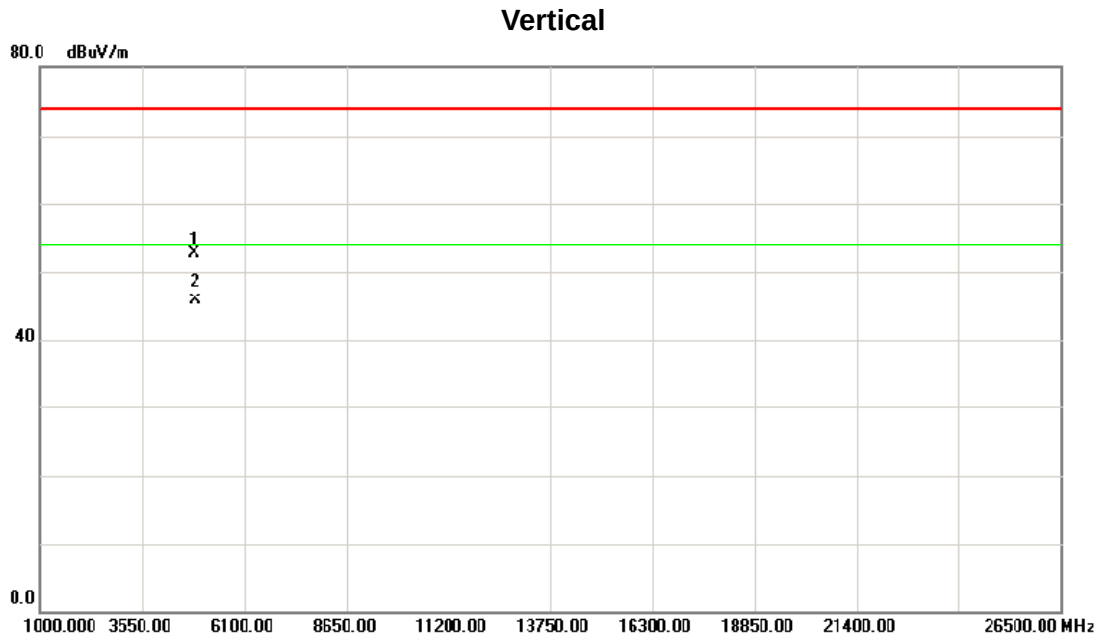
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2442.500	69.14	33.51	102.65	74.00	28.65	peak	Fundamental frequency, no limit
2	*	2444.100	59.92	33.52	93.44	54.00	39.44	AVG	Fundamental frequency, no limit



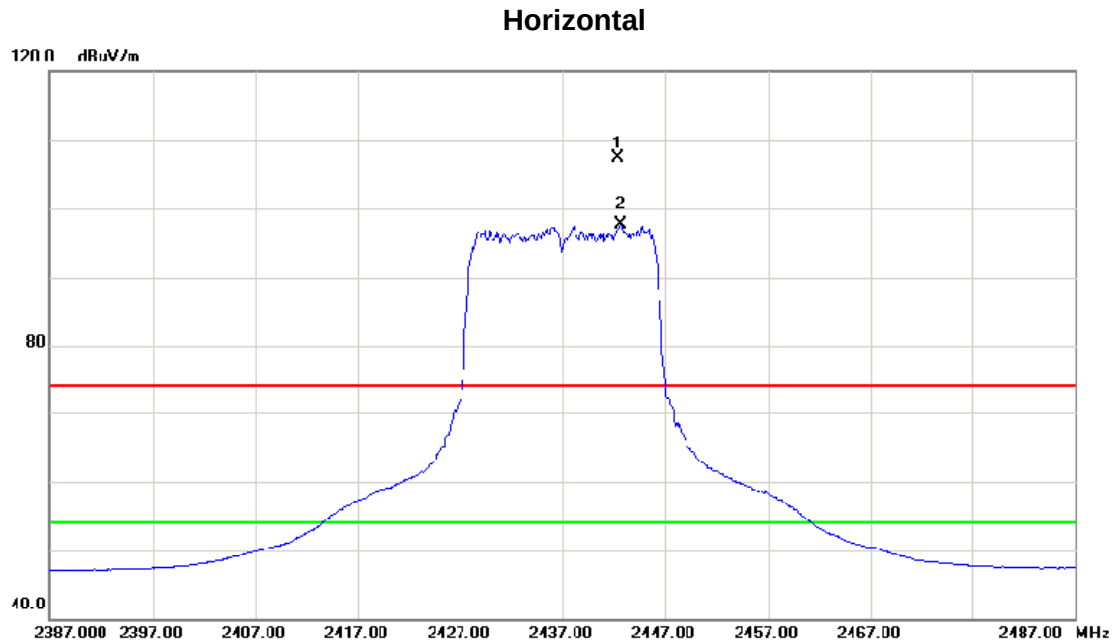
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.140	46.15	6.55	52.70	74.00	-21.30	peak	
2	*	4874.160	39.08	6.55	45.63	54.00	-8.37	AVG	



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

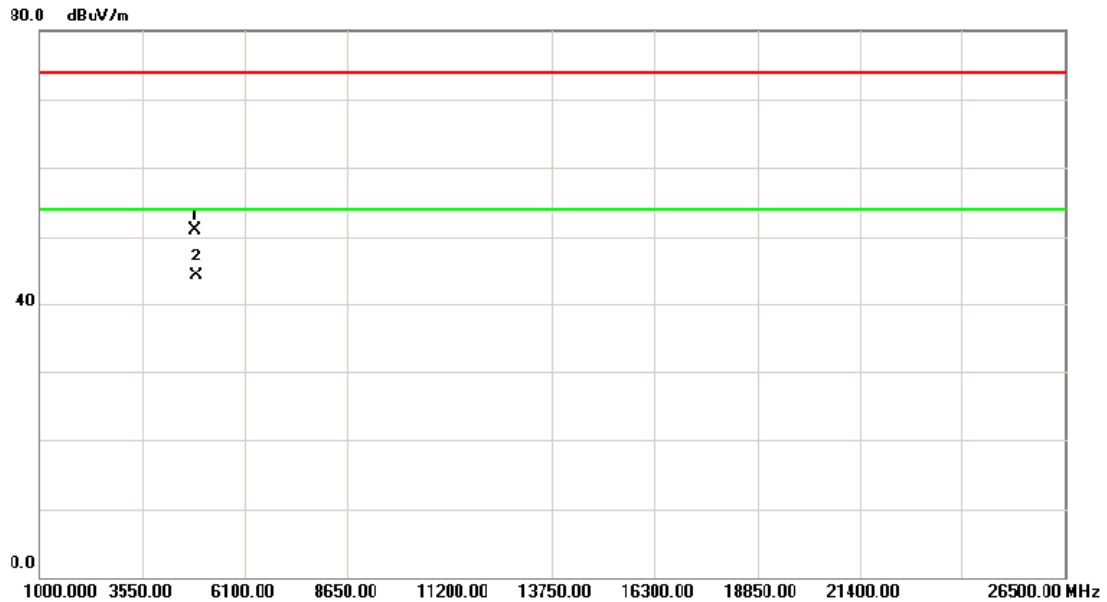


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2442.400	73.73	33.51	107.24	74.00	33.24	peak	Fundamental frequency, no limit
2	*	2442.600	64.25	33.51	97.76	54.00	43.76	AVG	Fundamental frequency, no limit



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

Horizontal

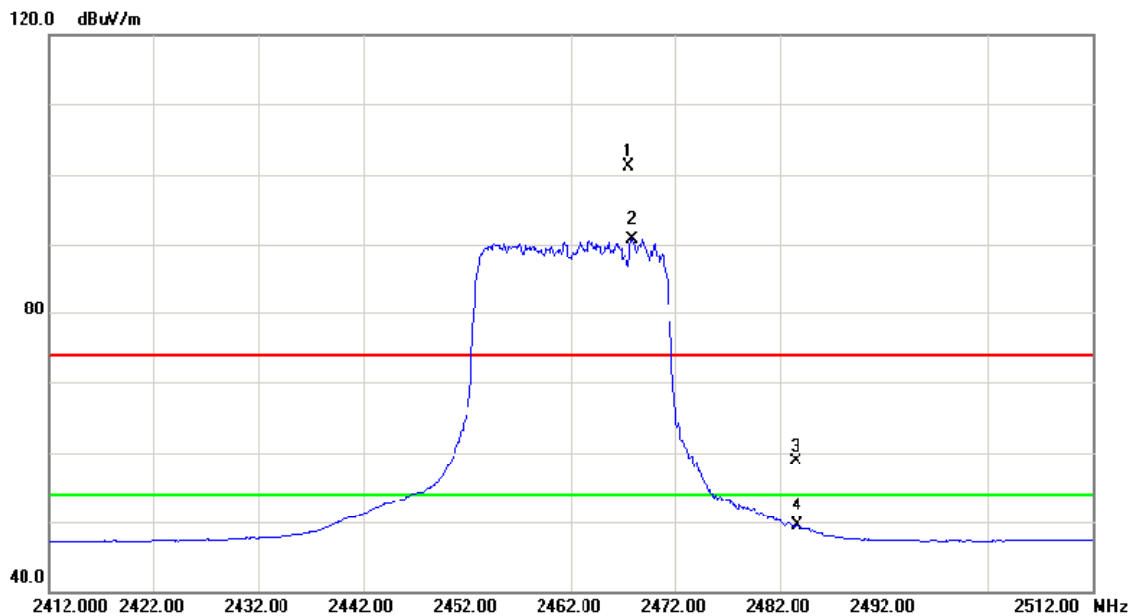


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4874.130	44.37	6.55	50.92	74.00	-23.08	peak	
2	*	4874.150	37.54	6.55	44.09	54.00	9.91	AVG	



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

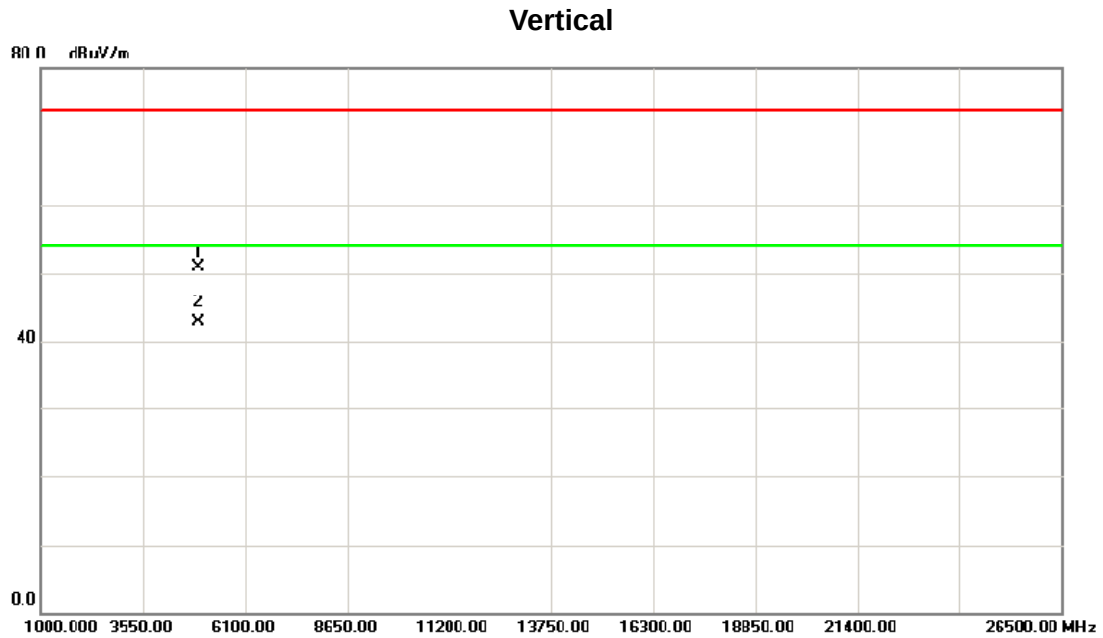
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2467.500	67.55	33.57	101.12	74.00	27.12	peak	Fundamental frequency, no limit
2	*	2467.900	57.16	33.57	90.73	54.00	36.73	AVG	Fundamental frequency, no limit
3		2483.500	25.02	33.62	58.64	74.00	-15.36	peak	
4		2483.500	15.82	33.62	49.44	54.00	-4.56	AVG	



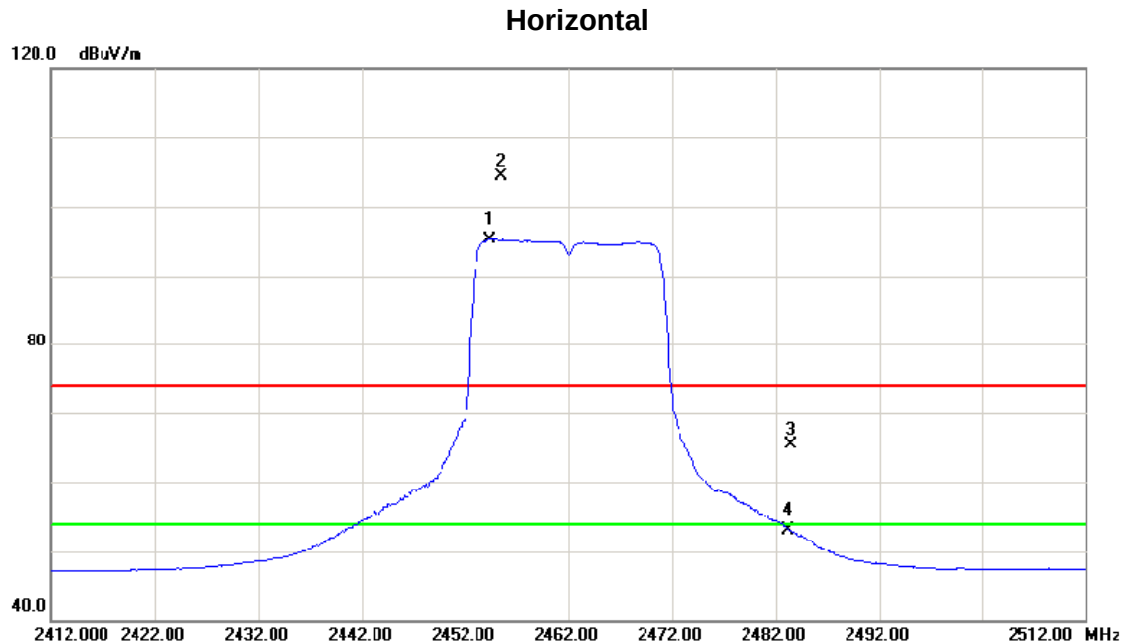
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2462MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4024.040	44.16	6.66	50.82	74.00	-23.18	peak	
2	*	4024.170	36.07	6.66	42.73	54.00	11.27	AVG	



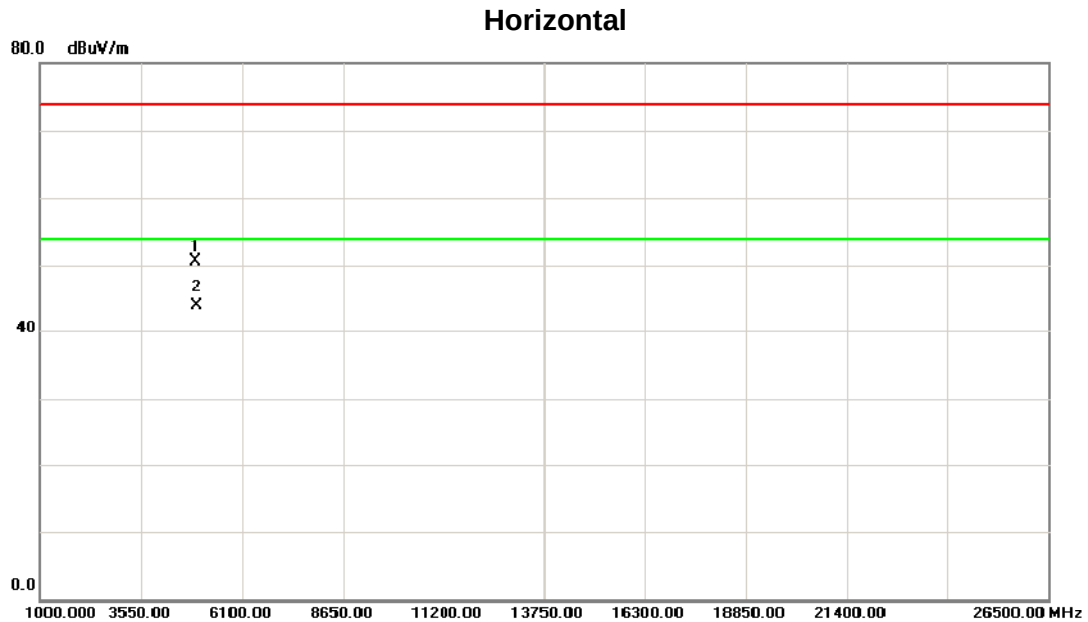
Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2462MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2454.500	61.76	33.54	95.30	54.00	41.30	AVG	Fundamental frequency, no limit
2	X	2455.500	70.91	33.54	104.45	74.00	30.45	peak	Fundamental frequency, no limit
3		2483.500	31.97	33.62	65.59	74.00	-0.41	peak	
4		2483.500	19.43	33.62	53.05	54.00	-0.95	AVG	



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

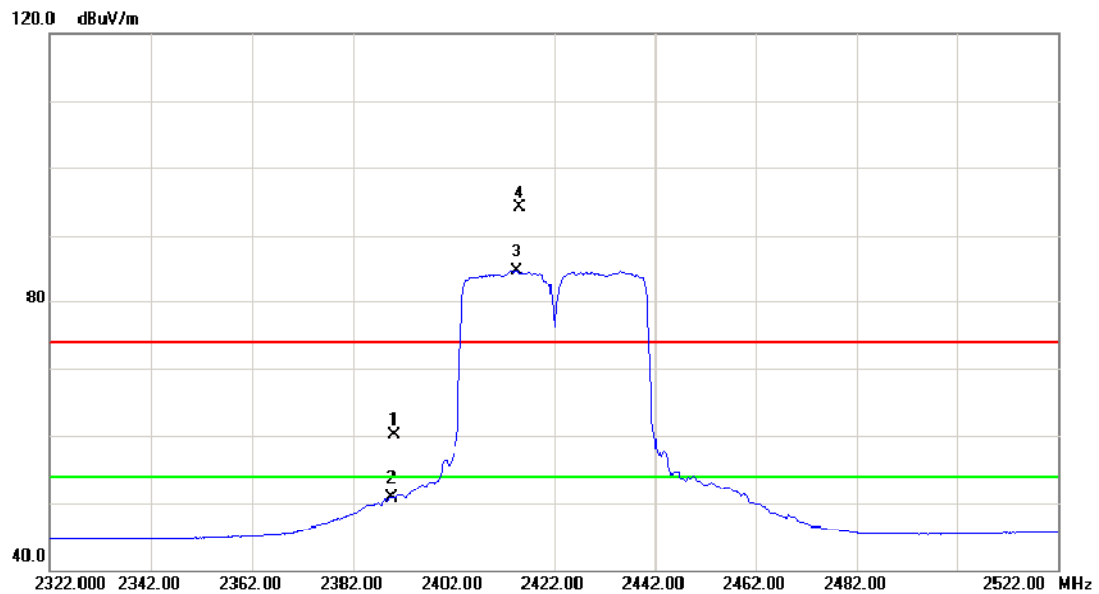


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4926.180	43.78	6.66	50.44	74.00	-23.56	peak	
2	*	4927.160	37.02	6.66	43.68	54.00	-10.32	AVG	



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

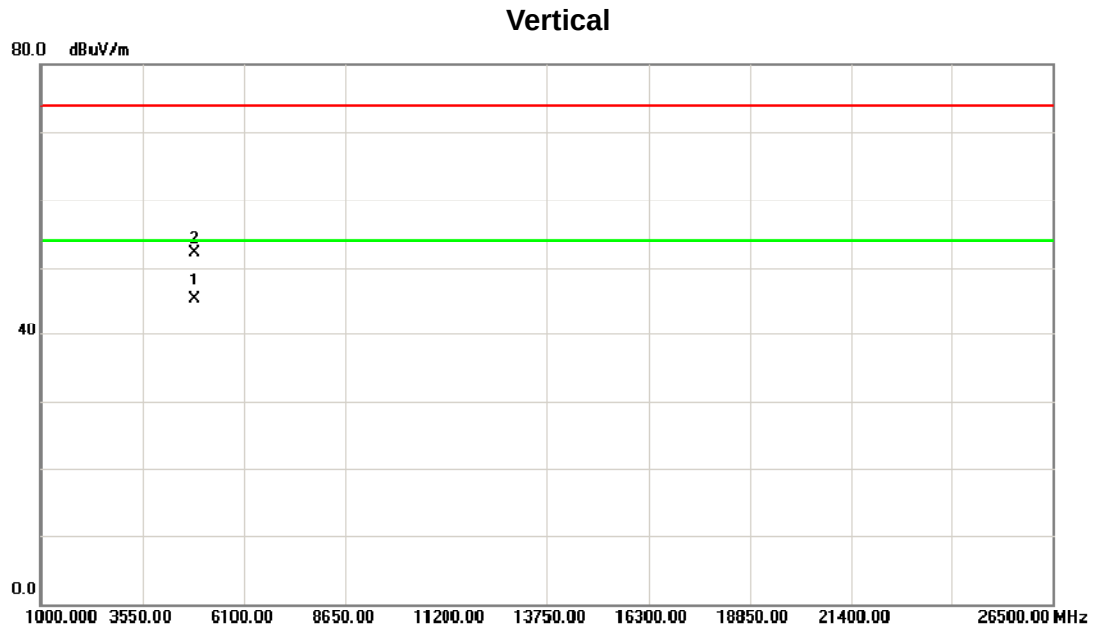
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	26.65	33.38	60.03	74.00	-13.97	peak	
2		2390.000	17.27	33.38	50.65	54.00	-3.35	AVG	
3	*	2414.600	51.14	33.44	84.58	54.00	30.58	AVG	Fundamental frequency, no limit
4	X	2415.250	60.73	33.44	94.17	74.00	20.17	peak	Fundamental frequency, no limit



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

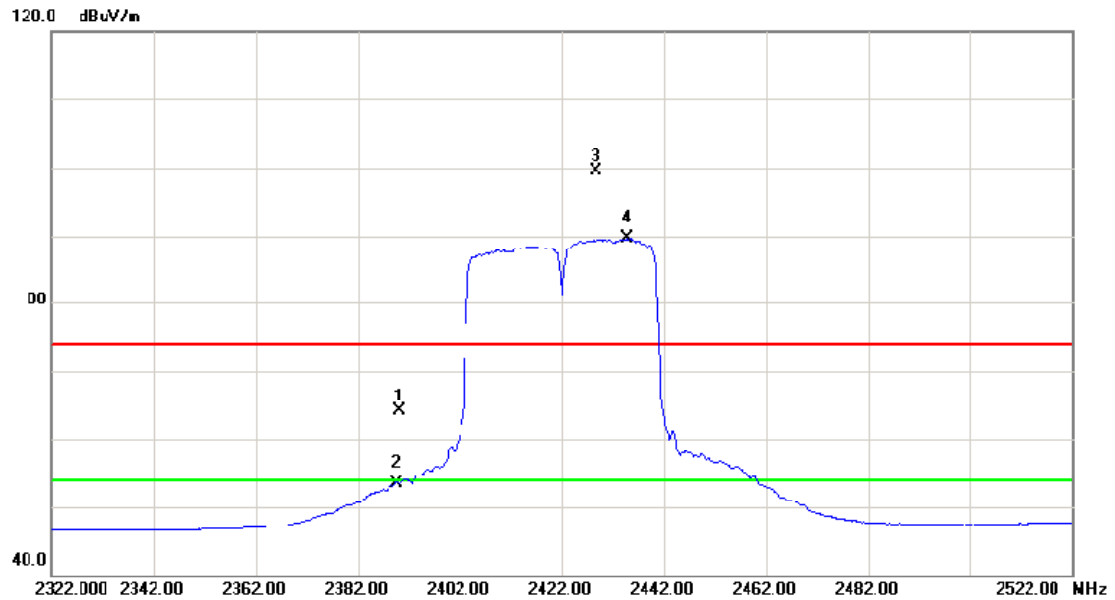


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4844.130	38.60	6.48	45.08	54.00	-8.92	AVG	
2		4844.700	45.69	6.48	52.17	74.00	-21.83	peak	



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

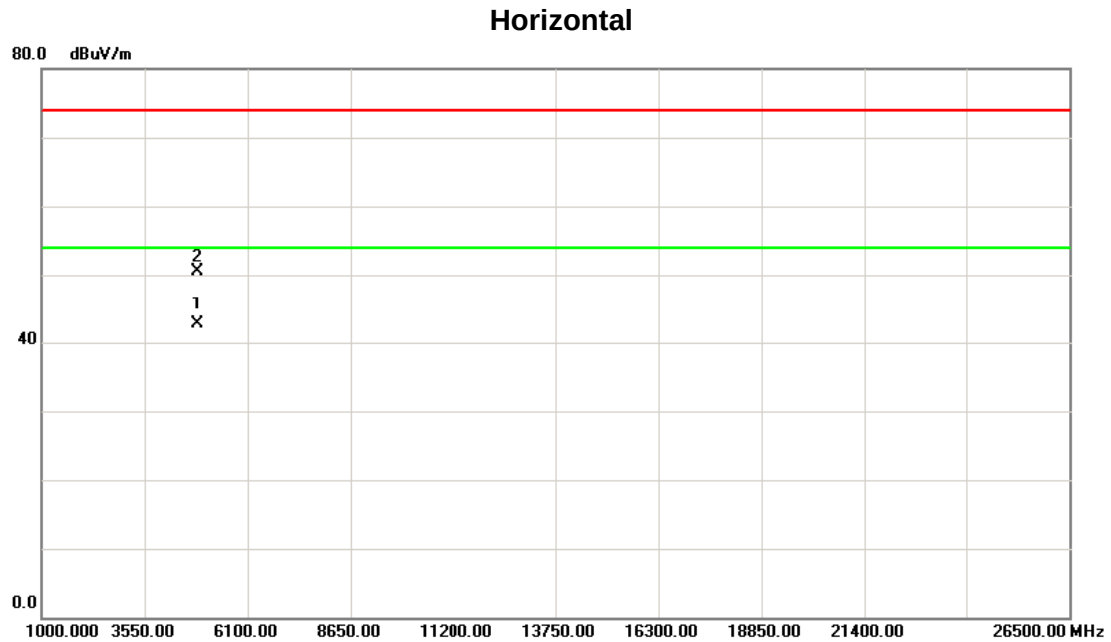
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2390.000	30.71	33.38	64.09	74.00	-9.91	peak	
2		2390.000	20.13	33.38	53.51	54.00	-0.49	AVG	
3	X	2428.800	65.98	33.48	99.46	74.00	25.46	peak	Fundamental frequency, no limit
4	*	2434.800	56.15	33.50	89.65	54.00	35.65	AVG	Fundamental frequency, no limit



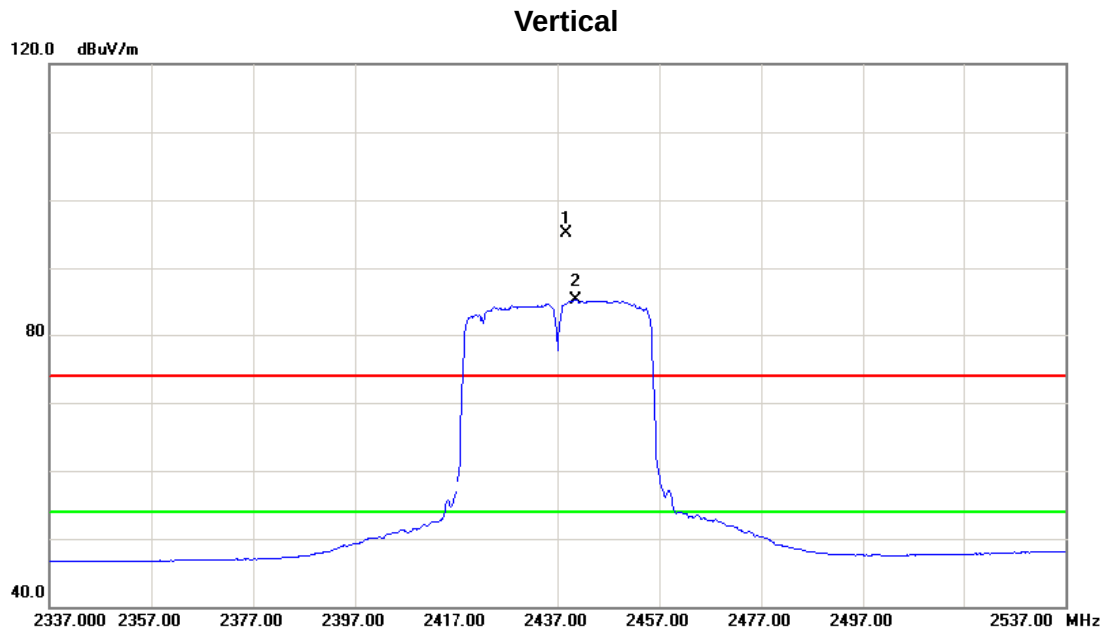
Orthogonal Axis :	X
Test Mode :	TX N-40M MODE 2422MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4844.500	36.25	6.48	42.73	54.00	-11.27	AVG	
2		4844.700	44.12	6.48	50.60	74.00	-23.40	peak	



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

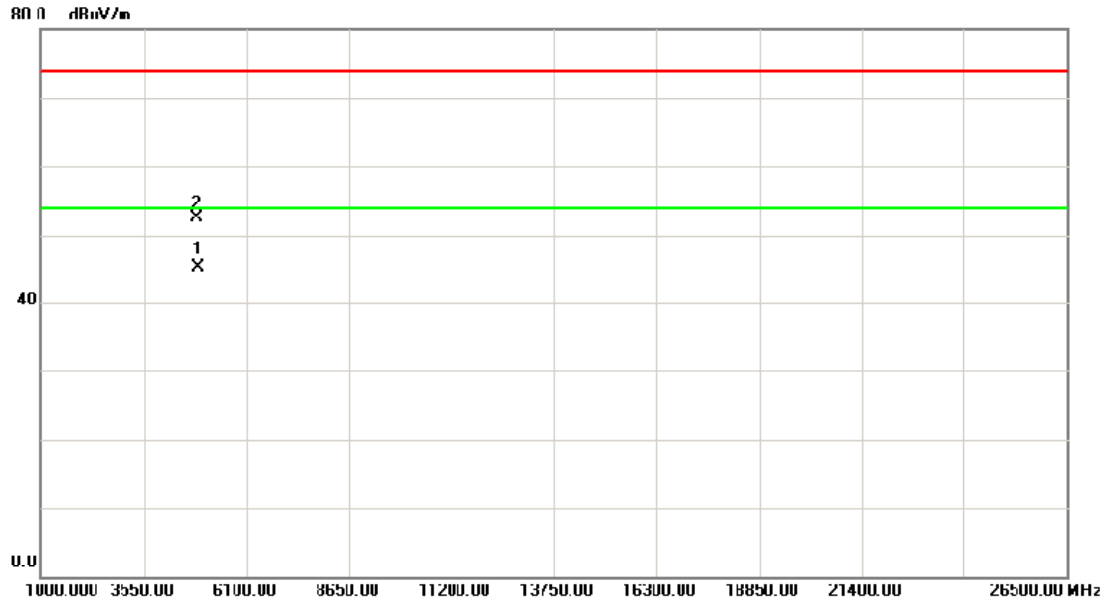


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2438.800	61.65	33.50	95.15	74.00	21.15	peak	Fundamental frequency, no limit
2	*	2440.600	51.63	33.51	85.14	54.00	31.14	AVG	Fundamental frequency, no limit



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

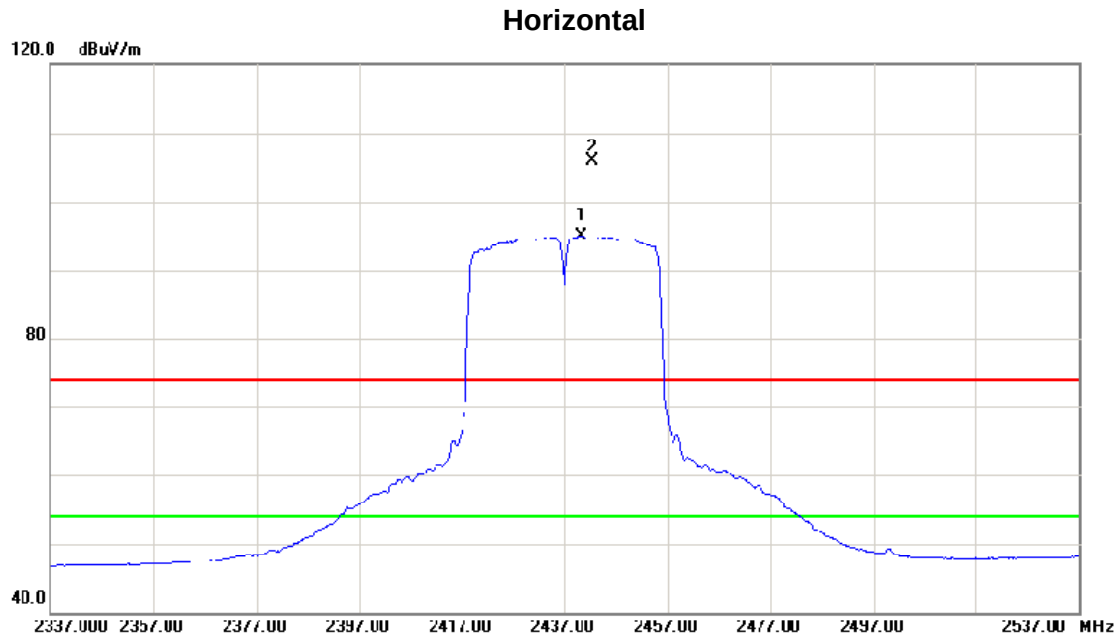
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4874.080	38.48	6.55	45.03	54.00	-8.97	AVG	
2		4874.140	46.02	6.55	52.57	74.00	-21.43	peak	



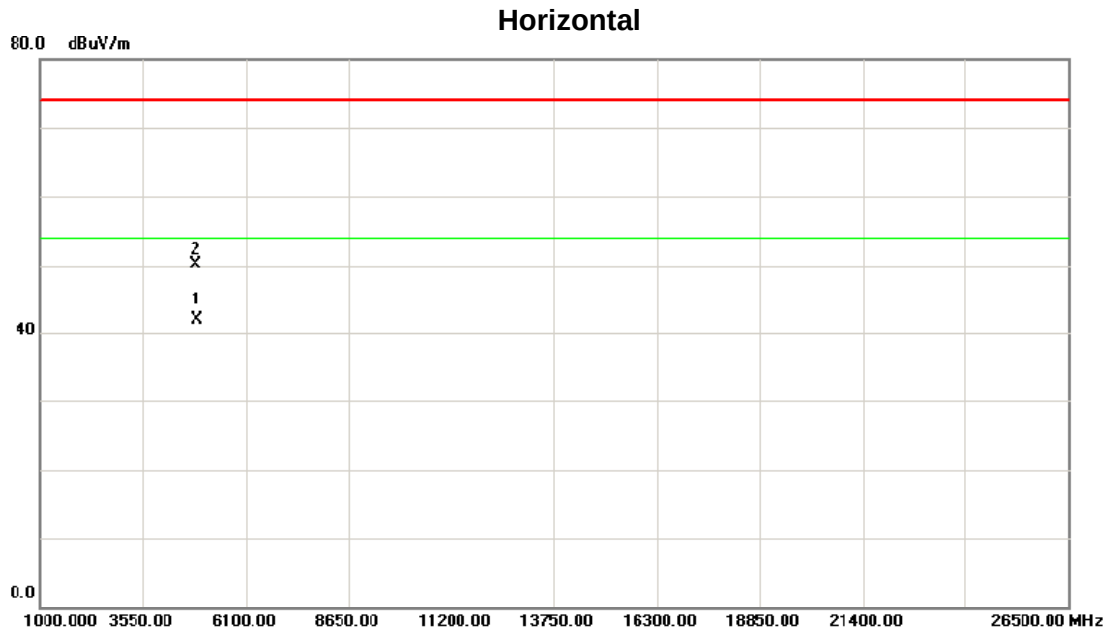
Orthogonal Axis :	X
Test Mode :	TX N-40M MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2440.200	61.62	33.51	95.13	54.00	41.13	AVG	Fundamental frequency, no limit
2	X	2442.400	72.42	33.51	105.93	74.00	31.93	peak	Fundamental frequency, no limit



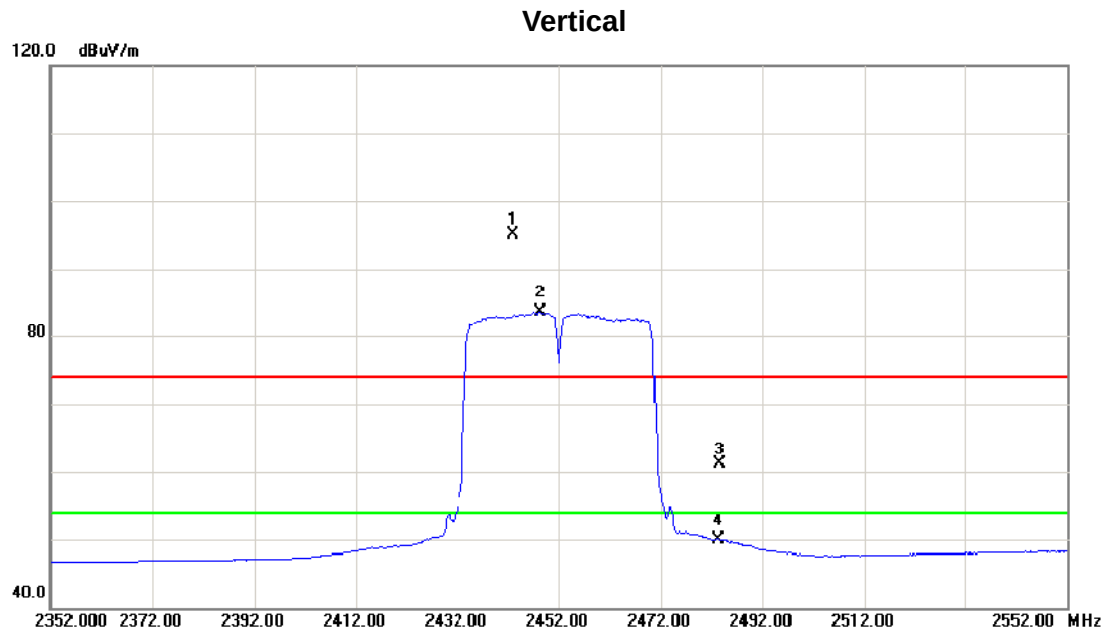
Orthogonal Axis :	X
Test Mode :	TX N-40M MODE 2437MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	4074.300	35.45	6.55	42.00	54.00	-12.00	AVG	
2		4874.900	43.57	6.55	50.12	74.00	-23.88	peak	



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

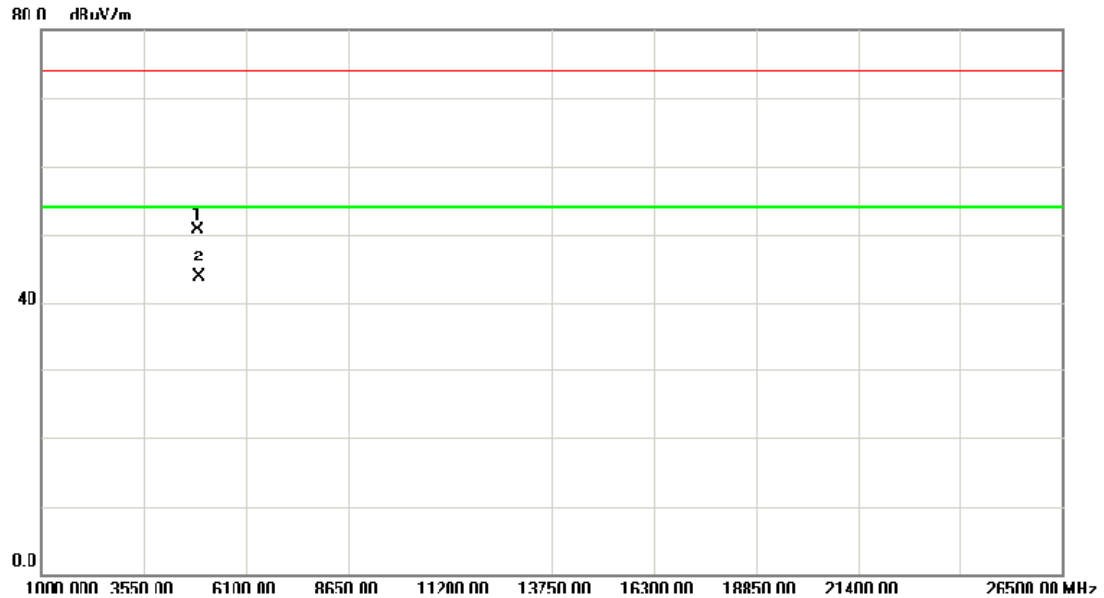


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2443.000	61.64	33.51	95.15	74.00	21.15	peak	Fundamental frequency, no limit
2	*	2448.400	49.93	33.53	83.46	54.00	29.46	AVG	Fundamental frequency, no limit
3		2483.500	27.49	33.62	61.11	74.00	-12.89	peak	
4		2483.500	16.34	33.62	49.96	54.00	-4.04	AVG	



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

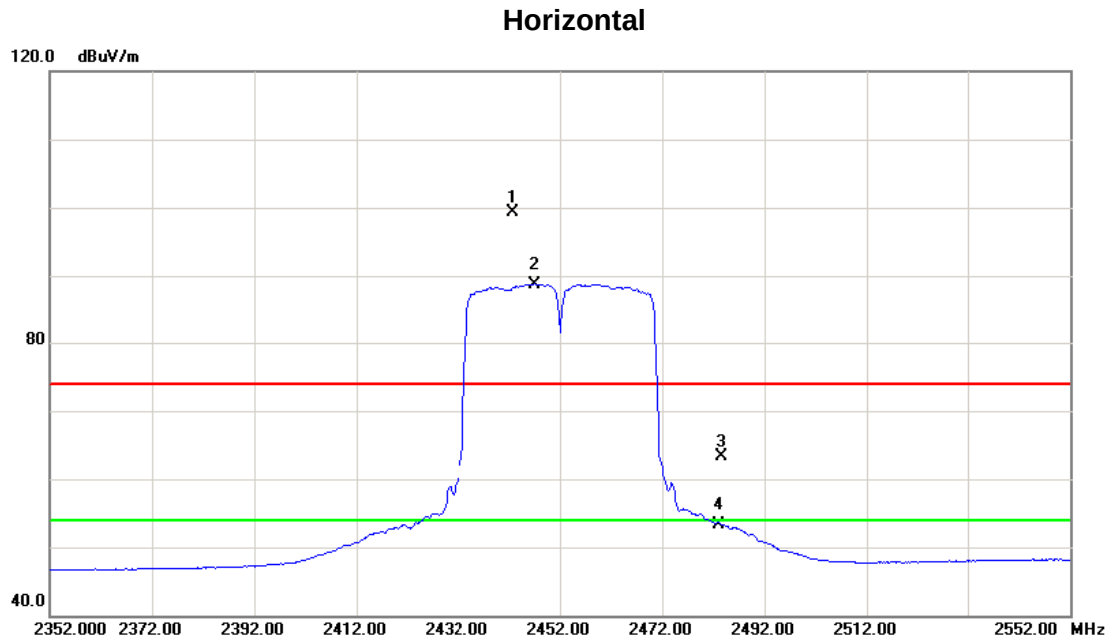
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4904.190	44.14	6.61	50.75	74.00	-23.25	peak	
2	*	4904.220	37.09	6.61	43.70	54.00	-10.30	AVG	



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



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	2442.800	65.88	33.51	99.39	74.00	25.39	peak	Fundamental frequency, no limit
2	*	2447.000	55.27	33.53	88.80	54.00	34.80	AVG	Fundamental frequency, no limit
3		2483.500	29.76	33.62	63.38	74.00	-10.62	peak	
4		2483.500	19.74	33.62	53.36	54.00	-0.64	AVG	