FCC&IC Radio Test Report

FCC ID: 2AIUQ-N1001R31

IC: 21623-N1001R31

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

Project No.	:	1605084
Equipment	:	Intercom
Model Name	:	N1001R31
Applicant	:	CloudTalk Inc.
Address	:	325 Pembroke Road, Bala Cynwyd 19004 USA

Date of Receipt	:	Jul. 01, 2016
Date of Test	:	Jul. 01, 2016 ~ Jul. 06, 2016
Issued Date	:	Jul. 07, 2016
Tested by	:	BTL Inc.

Testing Engineer : Rush Kao
(Rush Kao)

Technical Manager : Jeff Yang
(Jeff Yang)

Authorized Signatory : Andy Chiu
(Andy Chiu)

BTL INC.

B1, No.37, Lane 365, Yang Guang St.,
Nei-Hu District, Taipei City 114, Taiwan.
TEL:+886-2-2657-3299 FAX: +886-2- 2657-3331

Declaration

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

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

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

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

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

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Table of Contents Page

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FICP-3-1605084	Original Issue.	Jul. 07, 2016

1. CERTIFICATION

Equipment	:	Intercom
Brand Name	:	Nucleus
Model Name	:	N1001R31
Applicant	:	CloudTalk Inc.
Date of Test	:	Jul. 01, 2016 ~ Jul. 06, 2016
Test Sample	:	Engineering Sample
Standard(s)	:	FCC Part15, Subpart C (15.247) / ANSI C63.10-2013 Canada RSS-247 Issue 1, May 2015 RSS-GEN Issue 4, Nov 2014

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FICP-3-1605084) 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).

Test results included in this report is only for the 2.4G WIFI part.

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247), Subpart C; Canada RSS-247 Issue 1, May 2015, RSS-GEN Issue 4, Nov				
Standard(s) Section		Test Item	Judgment	Remark
FCC	IC			
15.207	RSS-247 5.5	Conducted Emission	PASS	
15.247(d)	RSS-247 5.2 (1)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	RSS-247 5.4 (4)	6dB Bandwidth	PASS	
15.247(b)(3)	RSS-247 5.2 (2)	Peak Output Power	PASS	
15.247(e)	-	Power Spectral Density	PASS	
15.203	RSS-247 5.5	Antenna Requirement	PASS	
15.209/15.205	RSS-247 5.5	Transmitter Radiated Emissions	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

Conducted emission Test:

C05: (VCCI RN: C-4742; FCC RN:949005; FCC DN:TW1082)
No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Below 1GHz):

CB11: (VCCI RN: R-4260; FCC RN:949005; FCC DN:TW1082; IC Assigned Code:20088-2)
No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Above 1GHz):

CB11: (VCCI RN: G-868; FCC RN:949005; FCC DN:TW1082; IC Assigned Code:20088-2)
No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.
The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement **y** ± **U**, where expanded uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)
C05	CISPR	150 kHz~30MHz	2.04

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)
CB11 (3m)	CISPR	9kHz ~ 150kHz	4.00
		150kHz ~ 30MHz	4.00

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
CB11 (3m)	CISPR	30 MHz ~ 200 MHz	V	3.06
		30 MHz ~ 200 MHz	H	2.58
		200 MHz ~ 1, 000 MHz	V	3.50
		200 MHz ~ 1, 000 MHz	H	3.10

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
CB11 (3m)	CISPR	1GHz ~ 6GHz	V	4.14
		1GHz ~ 6GHz	H	4.14

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
CB11 (1m)	CISPR	6GHz ~ 18GHz	V	5.34
		6GHz ~ 18GHz	H	5.34

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.
Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.
Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB
Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR}.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Intercom	
Brand Name	Nucleus	
Model Name	N1001R31	
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 65 Mbps
	Output Power (Max.)	802.11b: 15.41 dBm 802.11g: 23.26 dBm 802.11n(20MHz): 22.56 dBm
Power Source	#1 Supplied from Power Supply. Adapter: 10FA3-05210U #2 Supplied from POE	
Power Rating	#1 EUT I/P: DC 5V⎓2.1A #2 I/P: DC 36-54V, 450mA	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. Channel List:

802.11b, 802.11g, 802.11n(20MHz)							
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)
1	WIESON	GY136HC0023-004	PIFA	N/A	3.04

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 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 4	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

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)
For radiated emission tests, the highest output powers were set for final test.

(3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.

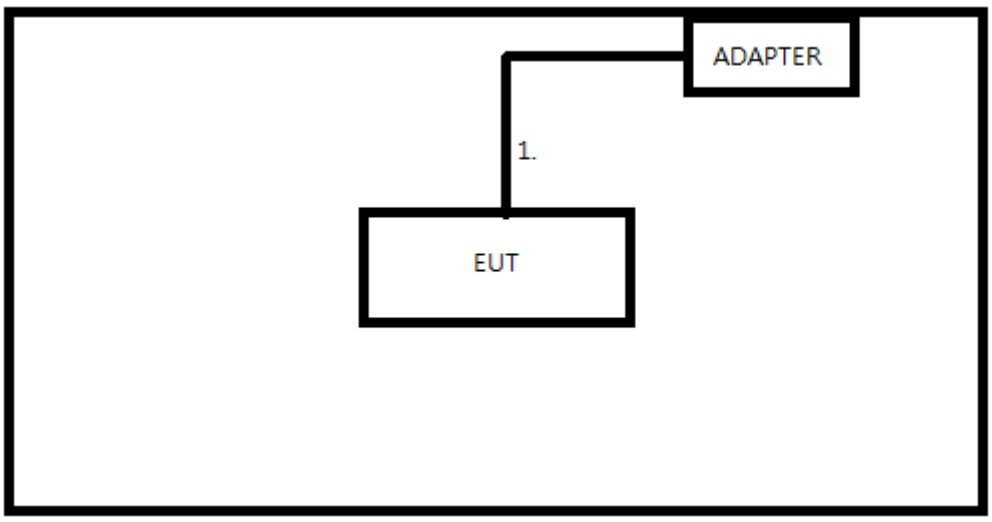
(4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software version	RF Test Tool Ver. 5.4		
Frequency (MHz)	2412	2437	2462
802.11b	50	50	50
802.11g	50	50	50
802.11n (20MHz)	50	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.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	2m	Power Cable

Note:

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

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

(1) The limit of " * " decreases with the logarithm of the frequency

(2) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

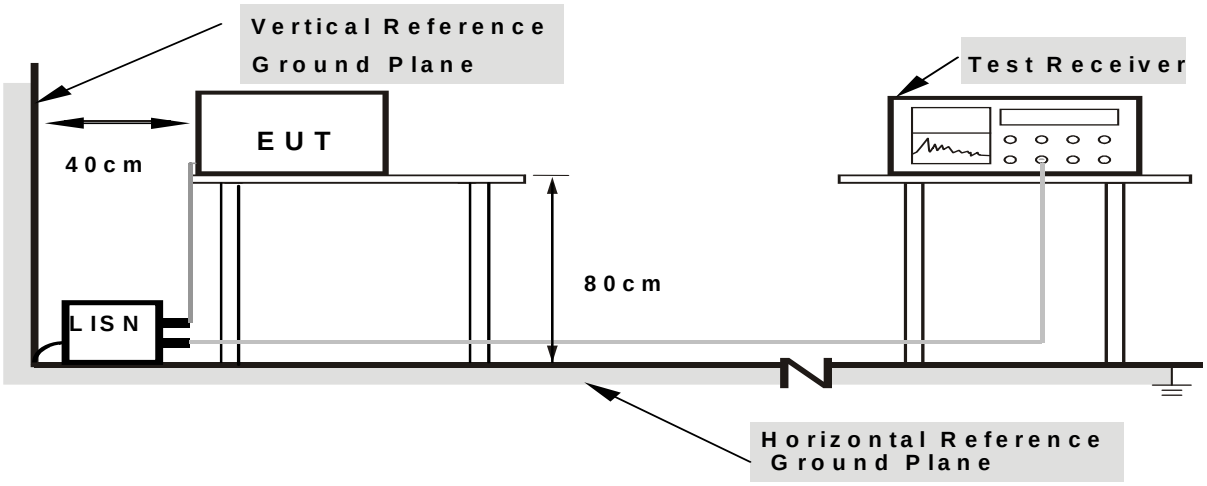
4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was placed on the test table and programmed in normal function.

4.1.6 EUT TEST CONDITIONS

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

4.1.7 TEST RESULTS

Please refer to the Attachment A.

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.2.2 TEST PROCEDURE

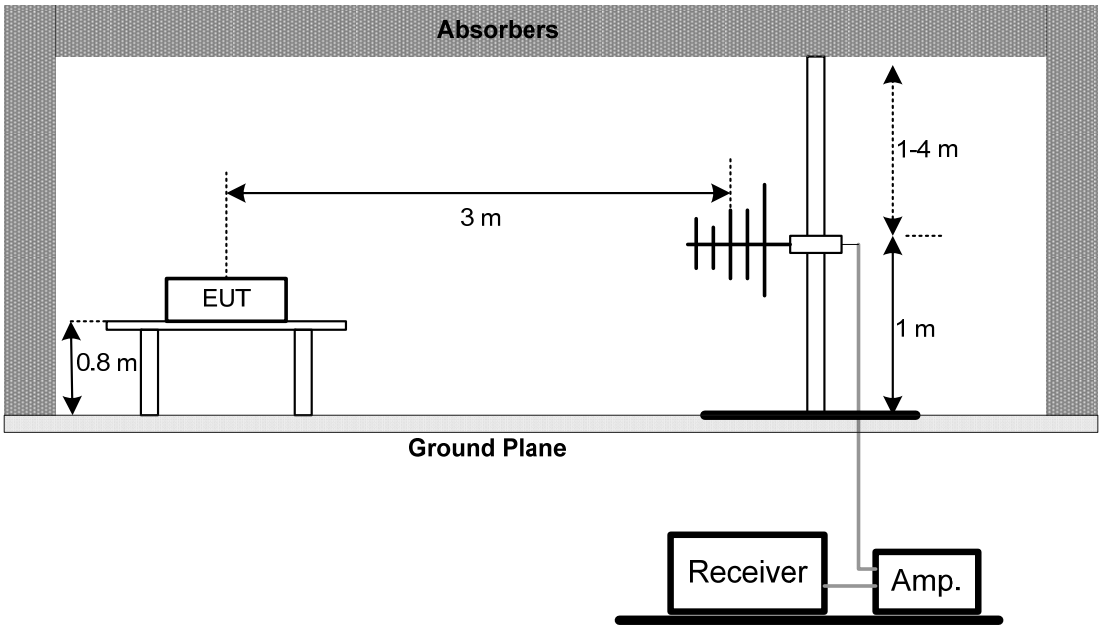
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 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. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

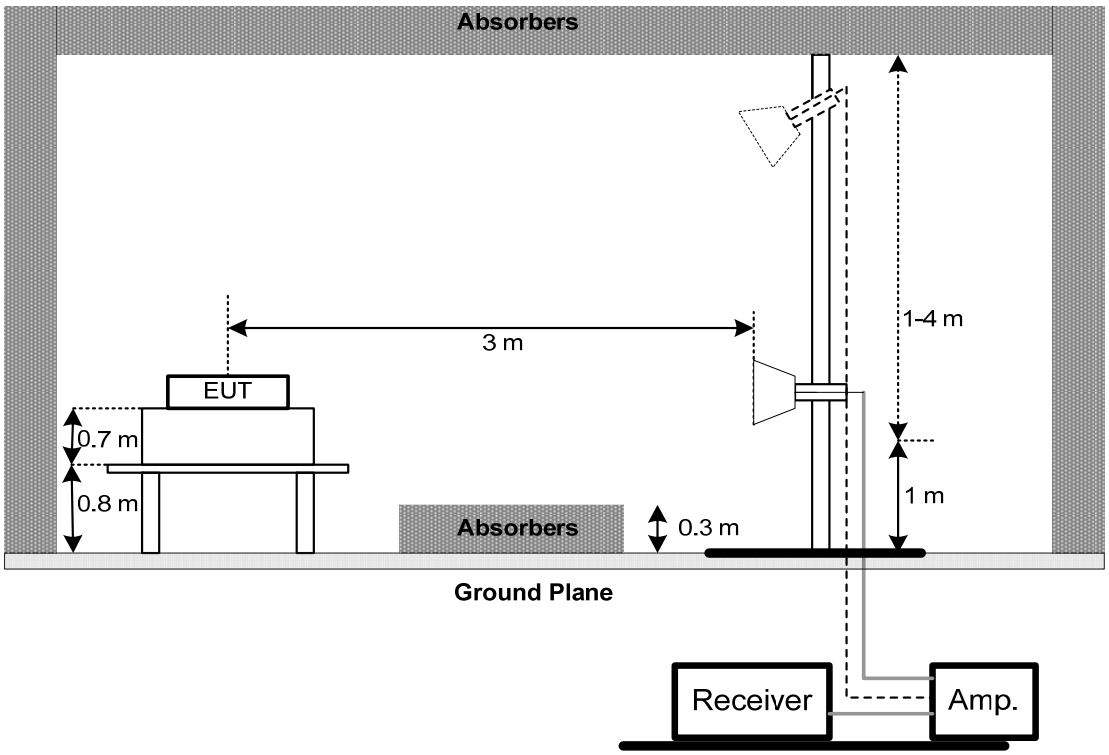
No deviation

4.2.4 TEST SETUP

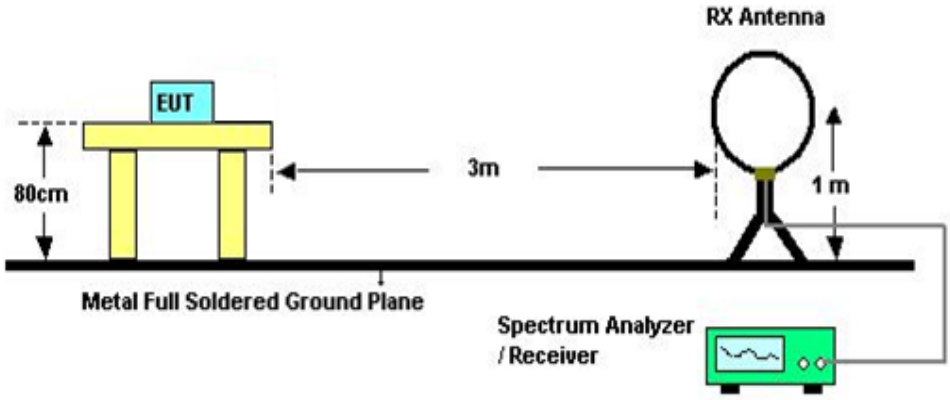
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For Radiated Emissions Below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 45%
Test Voltage: AC 120V/60Hz

4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

Remark:

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

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES

FCC Part15 (15.247) , Subpart C/ RSS-GEN and RSS-247			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2) RSS-GEN section 6.6 RSS-247 5.2 (1)	Bandwidth	2400-2483.5	PASS

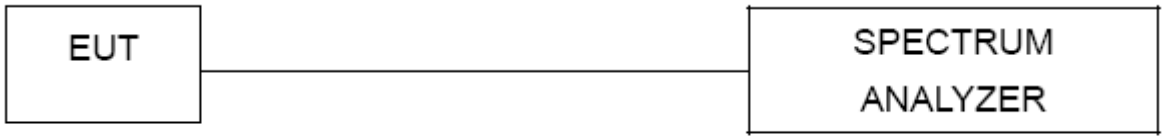
5.1.1 TEST PROCEDURE

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

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.1.5 EUT TEST CONDITIONS

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

5.1.6 TEST RESULTS

Please refer to the Attachment E.

6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C/ RSS-247				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3) RSS-247 5.4 (4)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS

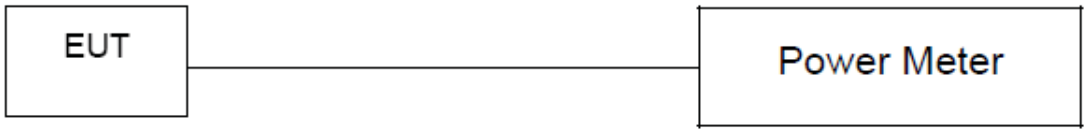
6.1.1 TEST PROCEDURE

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 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance v03r05.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 60%
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 device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

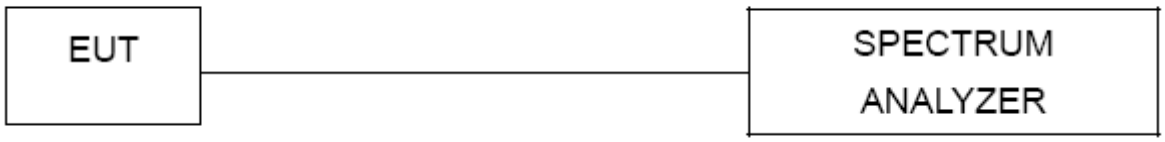
7.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.
c. Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.1.5 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 60%
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/ RSS-247				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e) RSS-247 5.4 (4)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

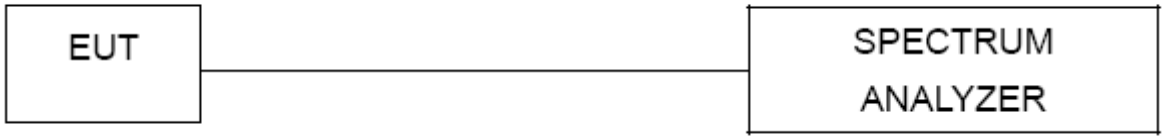
8.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 60%
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	TWO-LINE V-NETWORK	R&S	ENV216	101050	Jan. 26, 2017
2	Test Cable	TIMES	CFD300-NL	C02	Jun. 15, 2017
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 10, 2016
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB9168-352	9168-352	Feb. 04, 2017
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-546	Nov. 05, 2017
3	Pre-Amplifier	HP	8447D	2944A08891	Mar. 09 2017
4	Pre-Amplifier	Agilent	8449B	3008A02331	Jan. 24, 2017
5	Test Cable	EMCI	EMC8D-NM-NM-8000	150301	Mar. 09, 2017
6	Test Cable	EMCI	EMC104-SM-SM-2500	150303	Mar. 09, 2017
7	Test Cable	EMCI	EMC104-NM-SM-1000	150304	Mar. 09, 2017
8	Test Cable	EMCI	EMC104-SM-SM-5000	150302	Mar. 29, 2017
9	Test Cable	EMCI	EMC104-SM-SM-800	150305	Mar. 29, 2017
10	EXA Spectrum Analyzer	Agilent	N9010A	MY52220990	Feb. 24, 2017
11	EMI Test Receiver	Agilent	N9038A	MY51210215	Jan. 08, 2017
12	Loop Ant.	EMCO	6502	00042960	Nov. 16, 2016

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY51160196	Aug. 02, 2016

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	May 18, 2017
2	Power Meter Sensor	Anritsu	MA2491A	034138	May 17, 2017

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY51160196	Aug. 02, 2016

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY51160196	Aug. 02, 2016

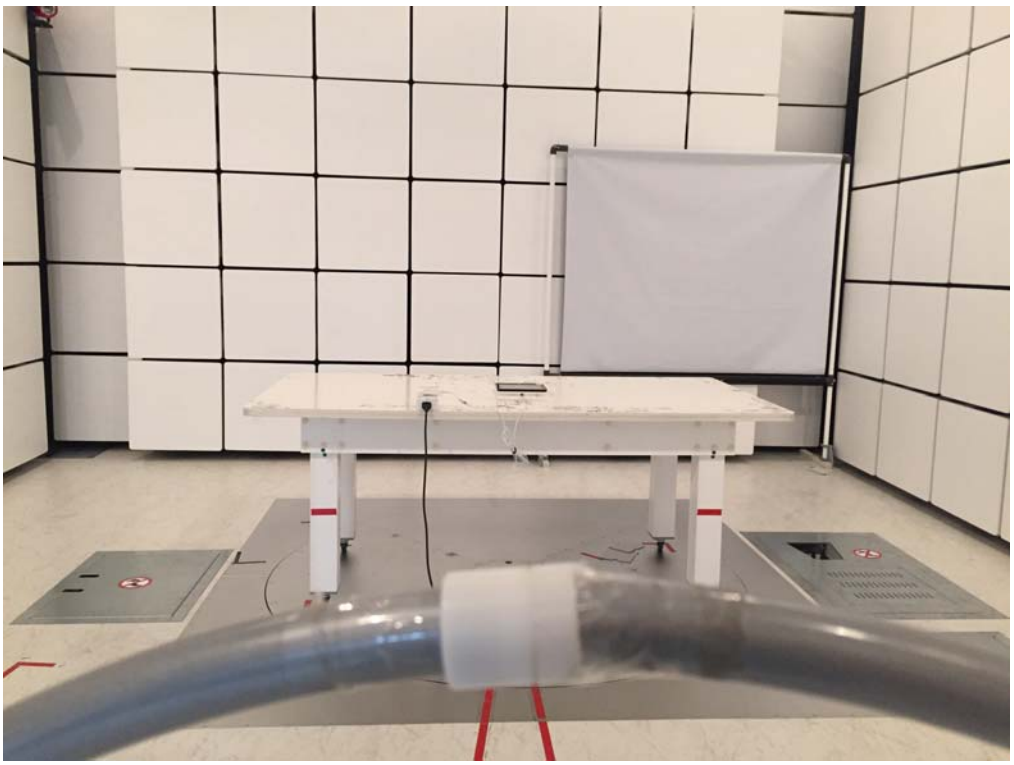
Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

10. EUT TEST PHOTO

Conducted Measurement Photos

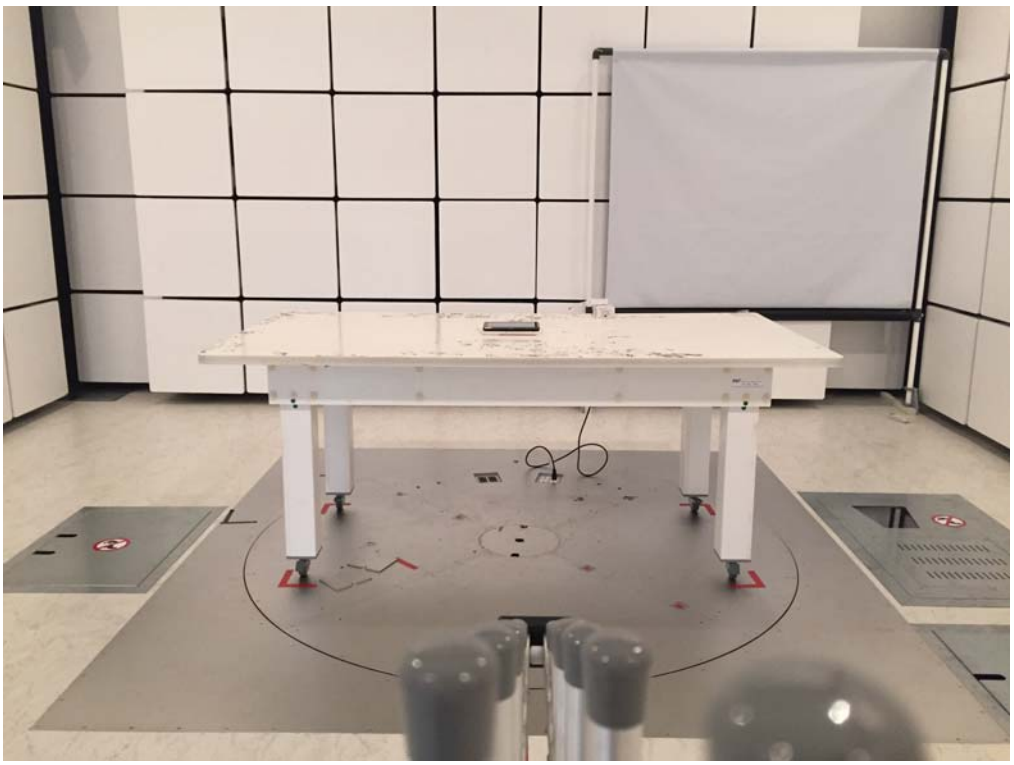
Radiated Measurement Photos

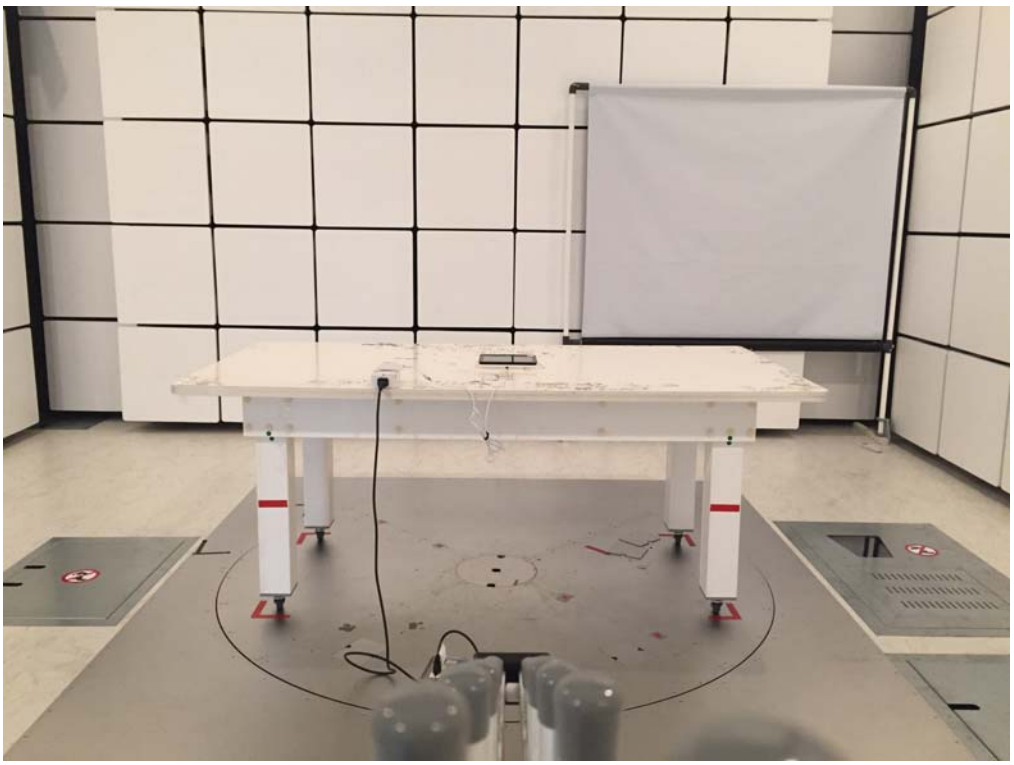
9KHz to 30MHz



Radiated Measurement Photos

30MHz to 1000MHz





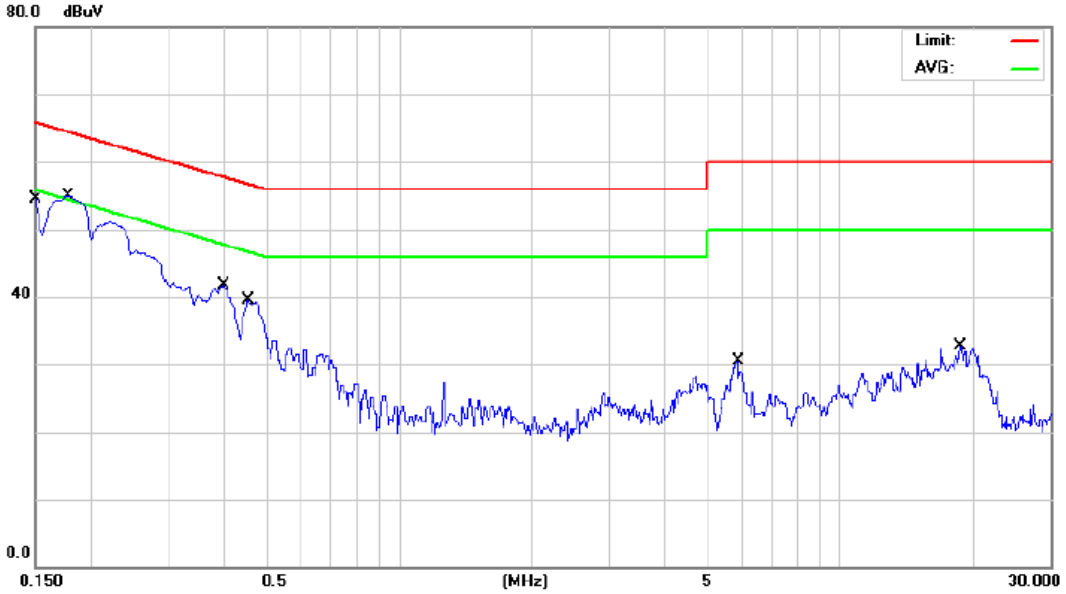
Radiated Measurement Photos

Above 1000MHz

ATTACHMENT A - CONDUCTED EMISSION

Test Mode:	TX Mode

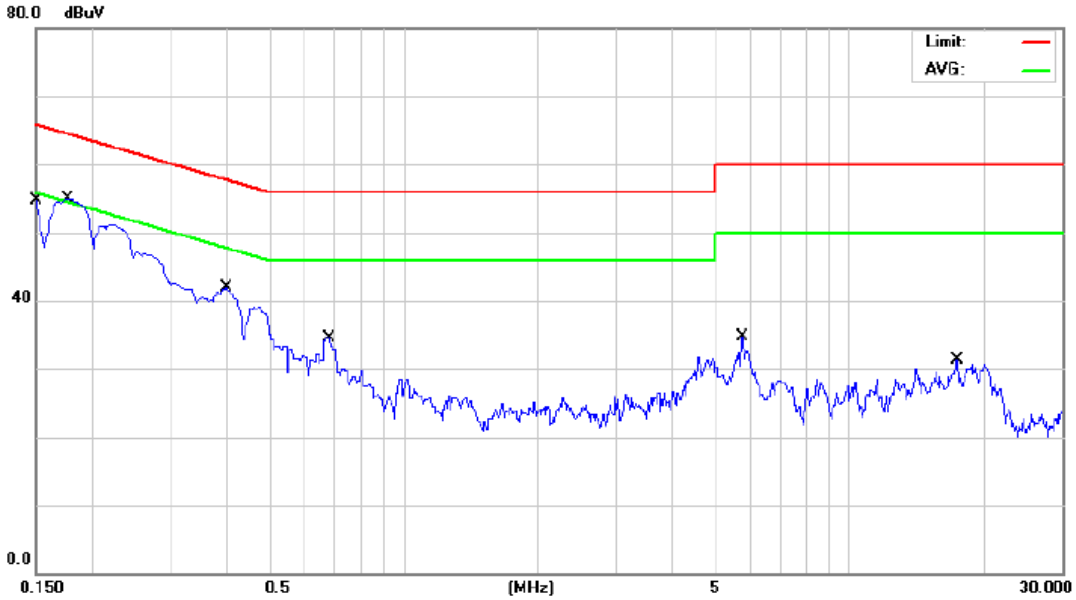
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	29.60	9.66	39.26	65.99	-26.73	QP	
2		0.1500	11.10	9.66	20.76	55.99	-35.23	AVG	
3	*	0.1773	41.80	9.66	51.46	64.61	-13.15	QP	
4		0.1773	22.00	9.66	31.66	54.61	-22.95	AVG	
5		0.3998	25.20	9.66	34.86	57.86	-23.00	QP	
6		0.3998	6.10	9.66	15.76	47.86	-32.10	AVG	
7		0.4545	22.80	9.67	32.47	56.79	-24.32	QP	
8		0.4545	5.80	9.67	15.47	46.79	-31.32	AVG	
9		5.8500	11.90	9.81	21.71	60.00	-38.29	QP	
10		5.8500	5.30	9.81	15.11	50.00	-34.89	AVG	
11		18.7000	15.50	9.97	25.47	60.00	-34.53	QP	
12		18.7000	9.60	9.97	19.57	50.00	-30.43	AVG	

Test Mode:	TX Mode

Neutral

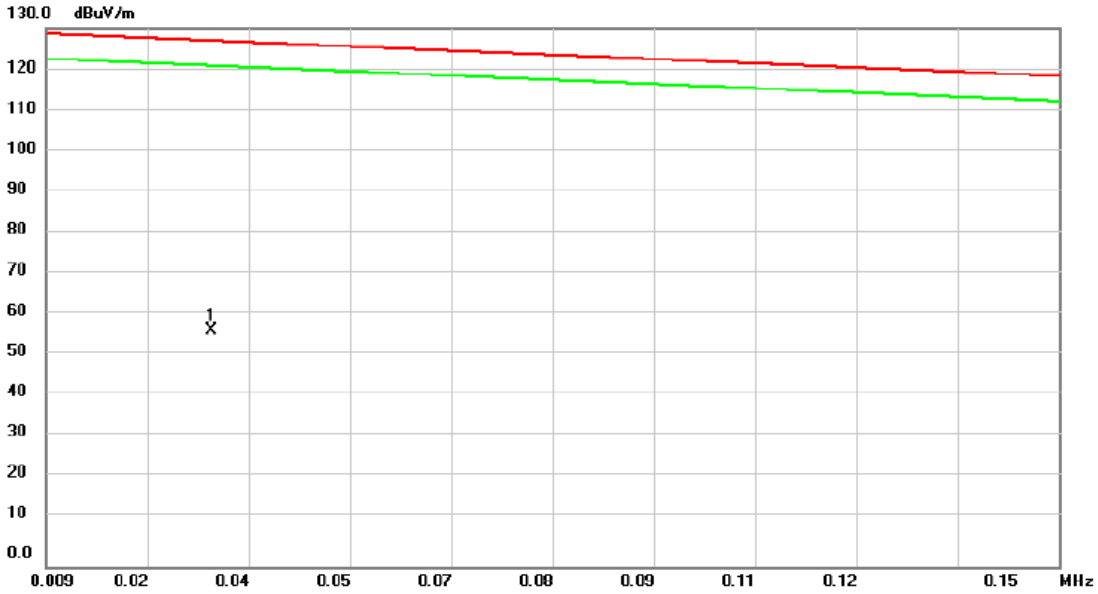


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	30.10	9.67	39.77	65.99	-26.22	QP	
2		0.1500	11.30	9.67	20.97	55.99	-35.02	AVG	
3	*	0.1766	41.90	9.66	51.56	64.64	-13.08	QP	
4		0.1766	23.20	9.66	32.86	54.64	-21.78	AVG	
5		0.3998	25.10	9.66	34.76	57.86	-23.10	QP	
6		0.3998	13.20	9.66	22.86	47.86	-25.00	AVG	
7		0.6800	17.80	9.67	27.47	56.00	-28.53	QP	
8		0.6800	10.30	9.67	19.97	46.00	-26.03	AVG	
9		5.7500	17.20	9.82	27.02	60.00	-32.98	QP	
10		5.7500	10.50	9.82	20.32	50.00	-29.68	AVG	
11		17.4000	12.90	9.95	22.85	60.00	-37.15	QP	
12		17.4000	7.30	9.95	17.25	50.00	-32.75	AVG	

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

Test Mode:	TX Mode

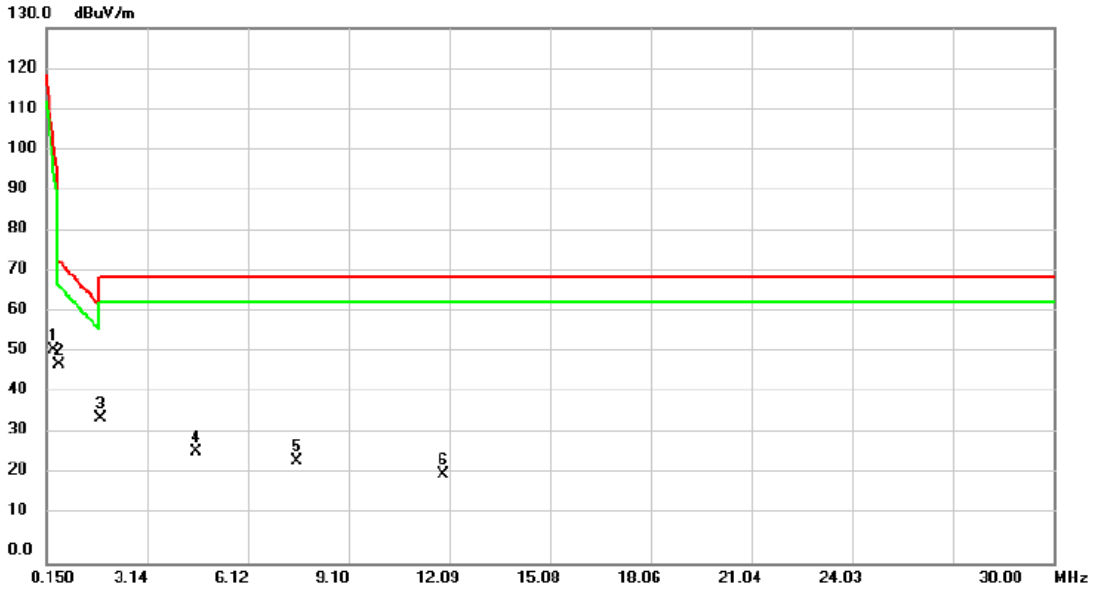
OPEN



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0320	42.16	14.80	56.96	126.86	-69.90	peak	

Test Mode:	TX Mode

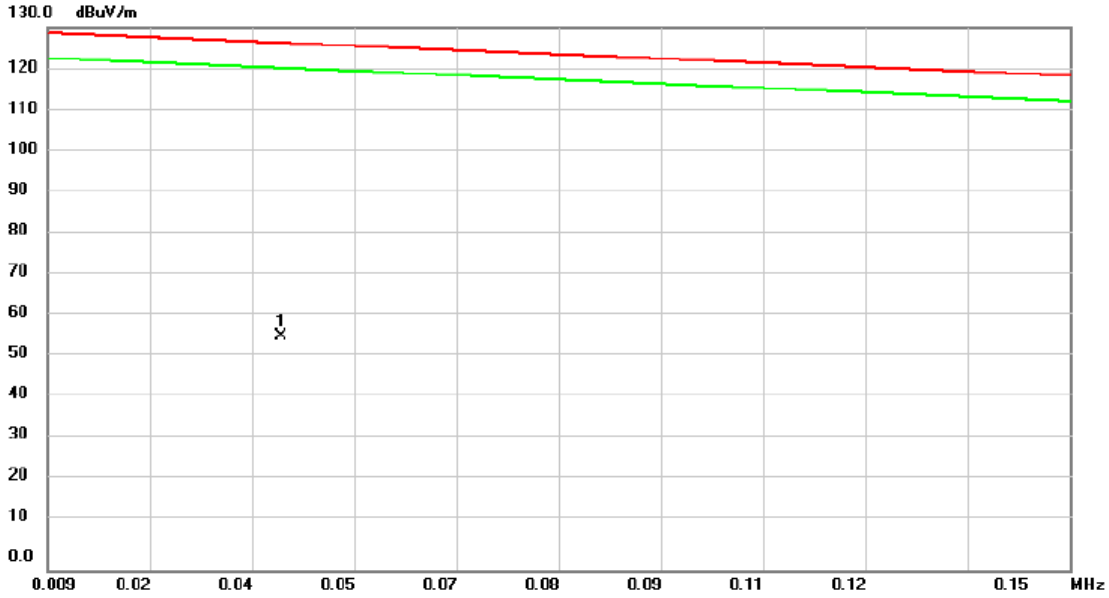
OPEN



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3490	39.98	11.80	51.78	103.98	-52.20	peak	
2	*	0.5082	36.54	11.80	48.34	73.64	-25.30	peak	
3		1.7420	23.58	11.67	35.25	69.54	-34.29	peak	
4		4.5678	15.65	11.34	26.99	69.54	-42.55	peak	
5		7.5528	13.60	11.35	24.95	69.54	-44.59	peak	
6		11.8910	10.30	11.24	21.54	69.54	-48.00	peak	

Test Mode:	TX Mode

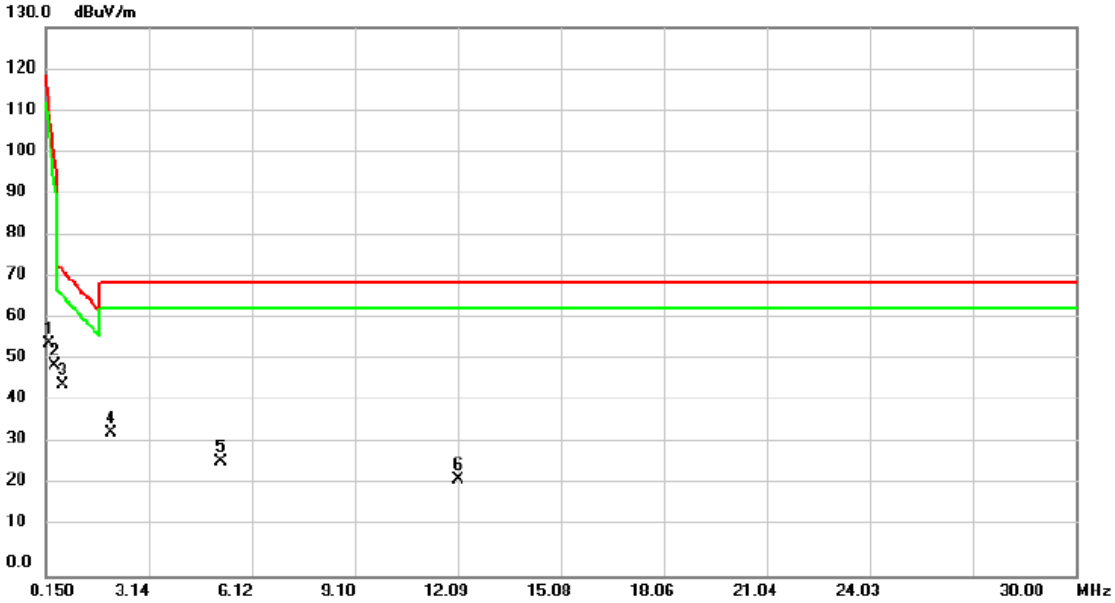
CLOSE



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0413	42.09	13.87	55.96	126.19	-70.23	peak	

Test Mode:	TX Mode

CLOSE

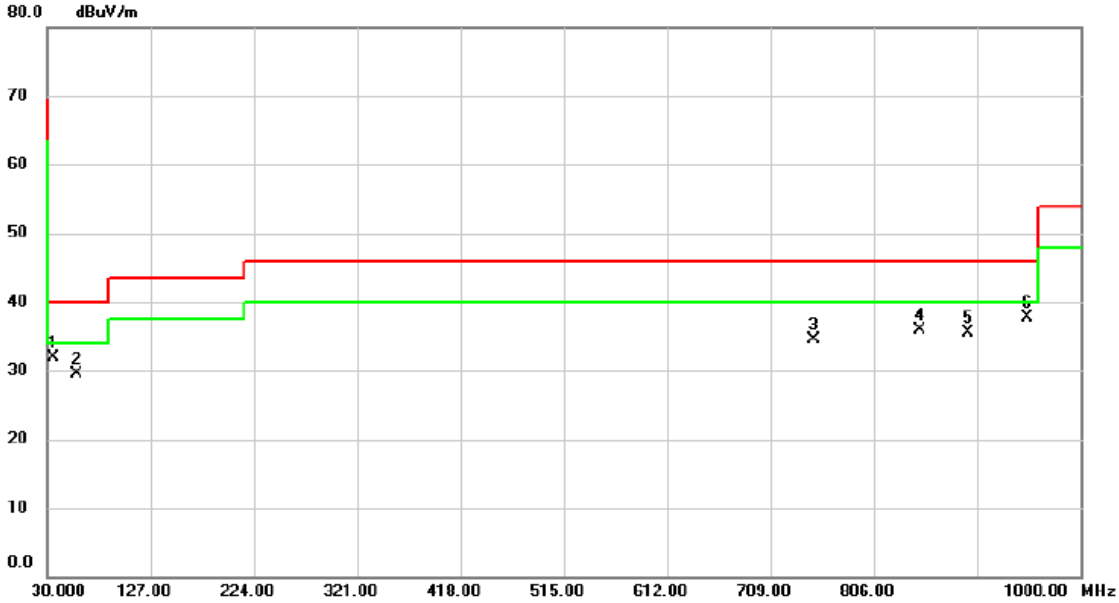


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2296	43.07	11.91	54.98	112.60	-57.62	peak	
2		0.3888	38.05	11.80	49.85	101.10	-51.25	peak	
3	*	0.6276	33.40	11.85	45.25	72.57	-27.32	peak	
4		2.0206	22.50	11.54	34.04	69.54	-35.50	peak	
5		5.2046	15.70	11.40	27.10	69.54	-42.44	peak	
6		12.1297	11.80	11.24	23.04	69.54	-46.50	peak	

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

Test Mode:	TX Mode

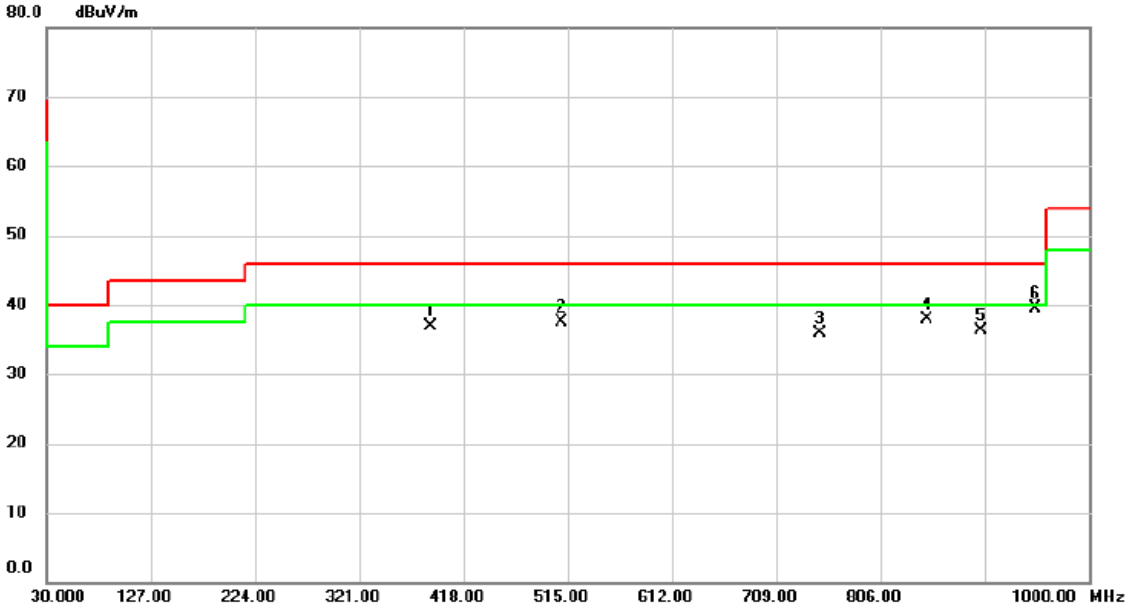
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	35.8200	40.92	-8.92	32.00	40.00	-8.00	peak	
2		58.1300	38.16	-8.72	29.44	40.00	-10.56	peak	
3		749.7400	32.24	2.33	34.57	46.00	-11.43	peak	
4		849.6500	32.24	3.59	35.83	46.00	-10.17	peak	
5		894.2700	31.05	4.50	35.55	46.00	-10.45	peak	
6		949.5600	32.27	5.47	37.74	46.00	-8.26	peak	

Test Mode:	TX Mode

Horizontal

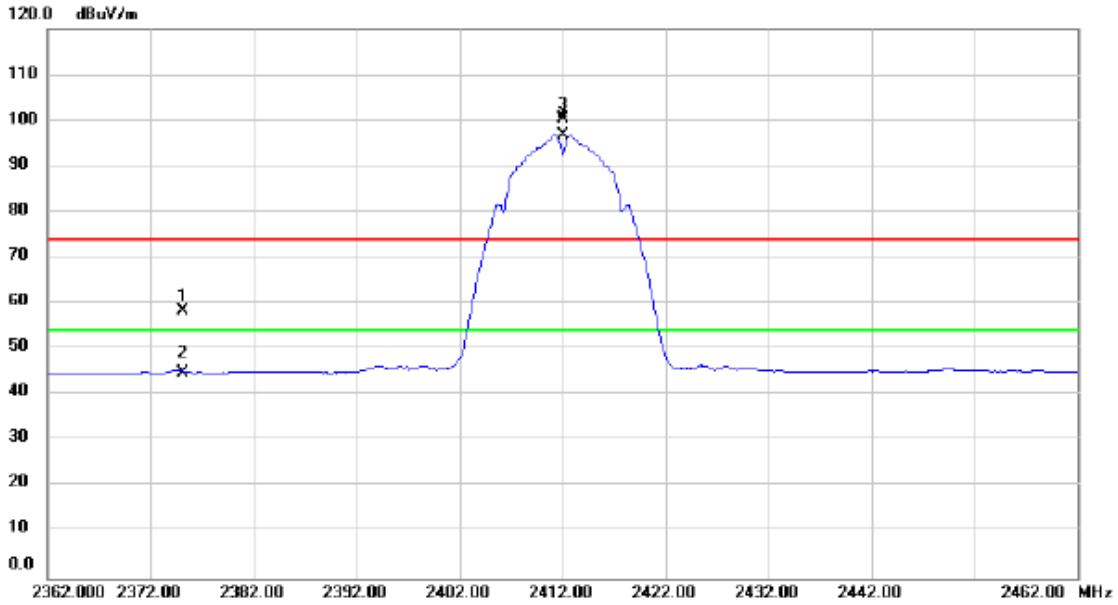


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		386.9600	42.12	-5.19	36.93	46.00	-9.07	peak	
2		509.1800	39.92	-2.45	37.47	46.00	-8.53	peak	
3		749.7400	33.66	2.33	35.99	46.00	-10.01	peak	
4		849.6500	34.28	3.59	37.87	46.00	-8.13	peak	
5		900.0900	31.72	4.61	36.33	46.00	-9.67	peak	
6	*	949.5600	34.06	5.47	39.53	46.00	-6.47	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

Test Mode:	TX B MODE 2412MHz

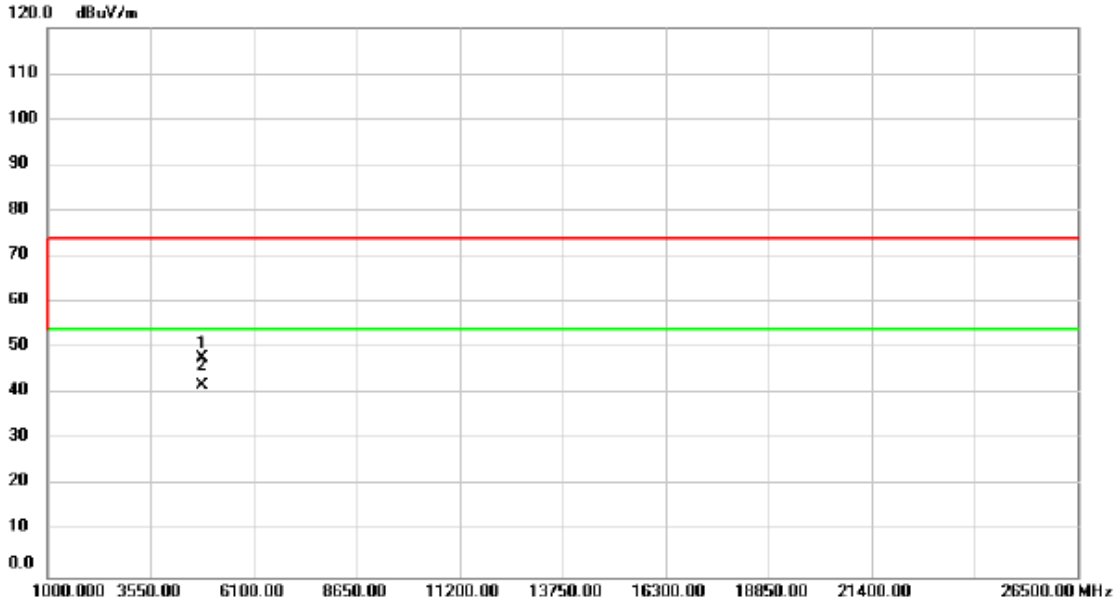
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2375.076	26.84	31.65	58.49	74.00	-15.51	peak	
2		2375.076	13.26	31.65	44.91	54.00	-9.09	AVG	
3	X	2412.000	68.63	31.79	100.42	74.00	26.42	peak	No Limit
4	*	2412.000	65.09	31.79	96.88	54.00	42.88	AVG	No Limit

Test Mode:	TX B MODE 2412MHz

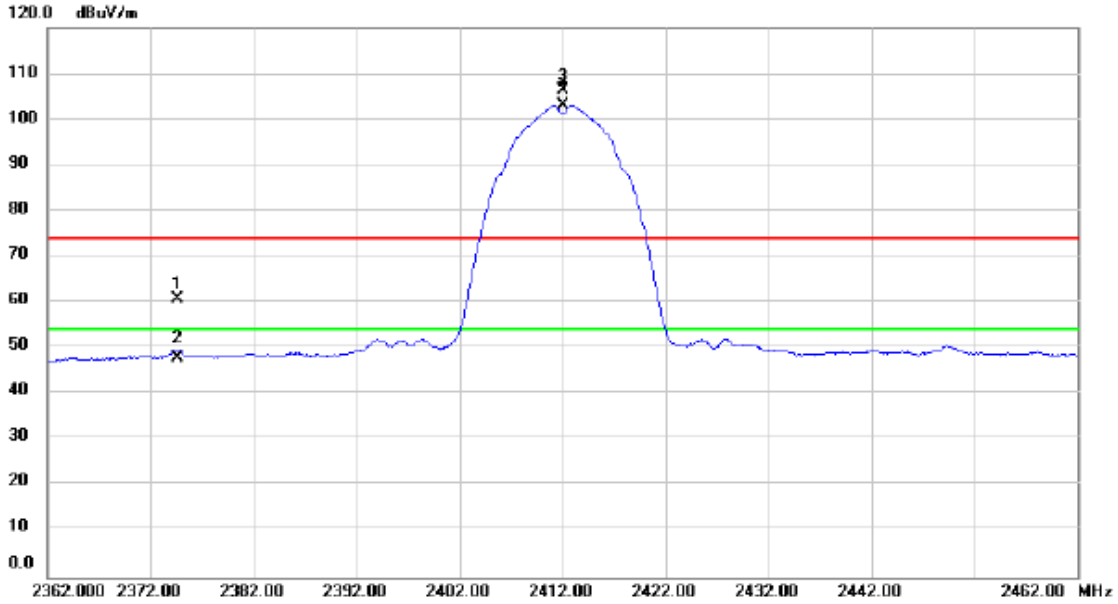
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	58.29	-10.48	47.81	74.00	-26.19	peak	
2	*	4824.000	52.47	-10.48	41.99	54.00	-12.01	AVG	

Test Mode:	TX B MODE 2412MHz

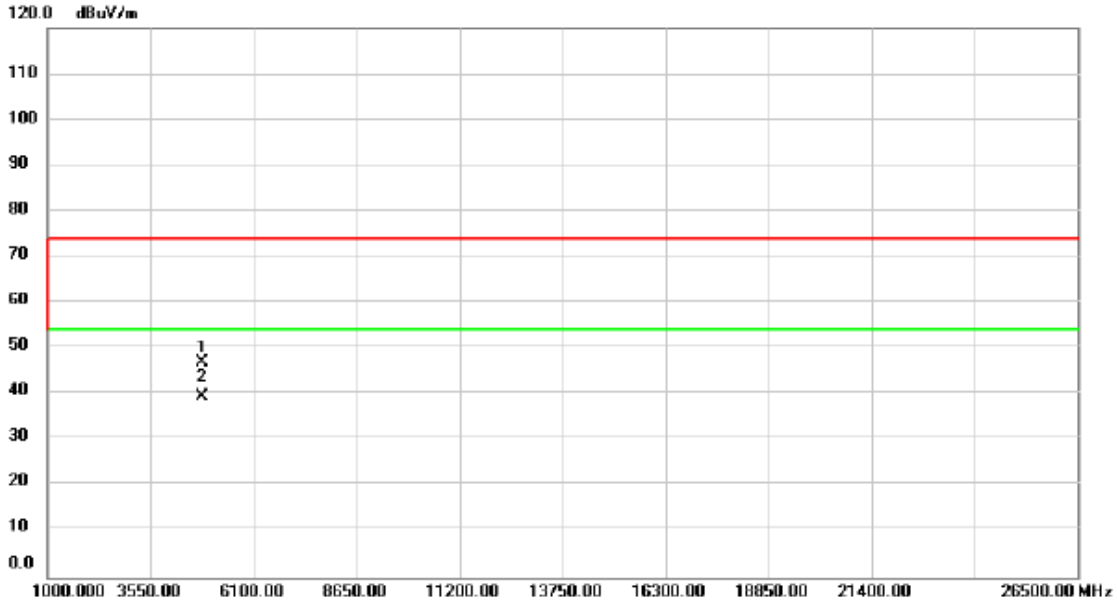
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2374.628	29.02	31.65	60.67	74.00	-13.33	peak	
2		2374.628	16.07	31.65	47.72	54.00	-6.28	AVG	
3	X	2412.000	74.55	31.79	106.34	74.00	32.34	peak	No Limit
4	*	2412.000	71.34	31.79	103.13	54.00	49.13	AVG	No Limit

Test Mode:	TX B MODE 2412MHz

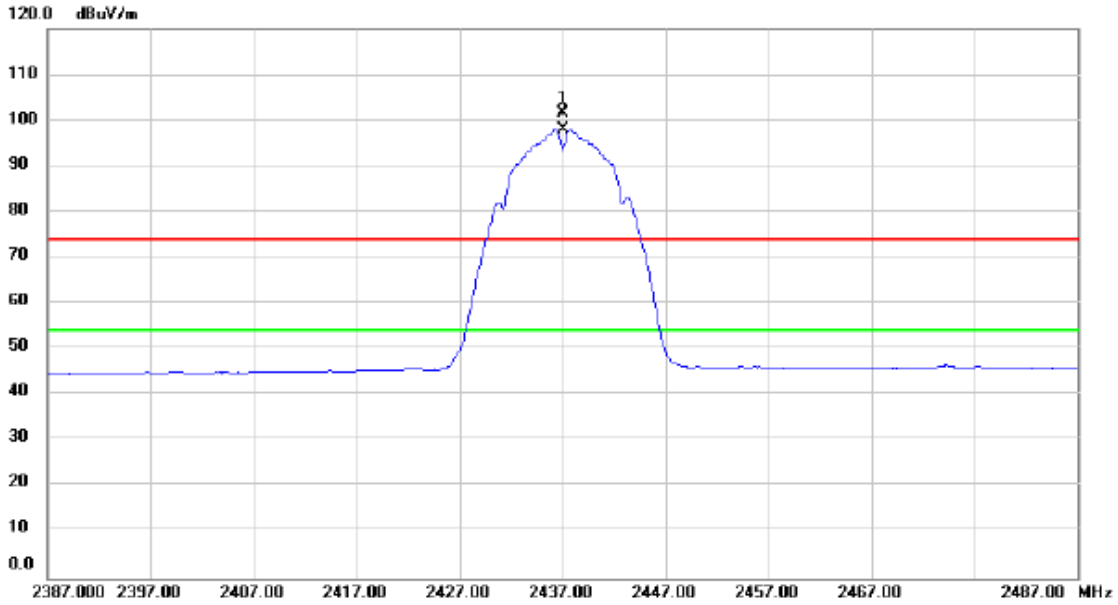
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	57.33	-10.48	46.85	74.00	-27.15	peak	
2	*	4824.000	49.81	-10.48	39.33	54.00	-14.67	AVG	

Test Mode:	TX B MODE 2437MHz

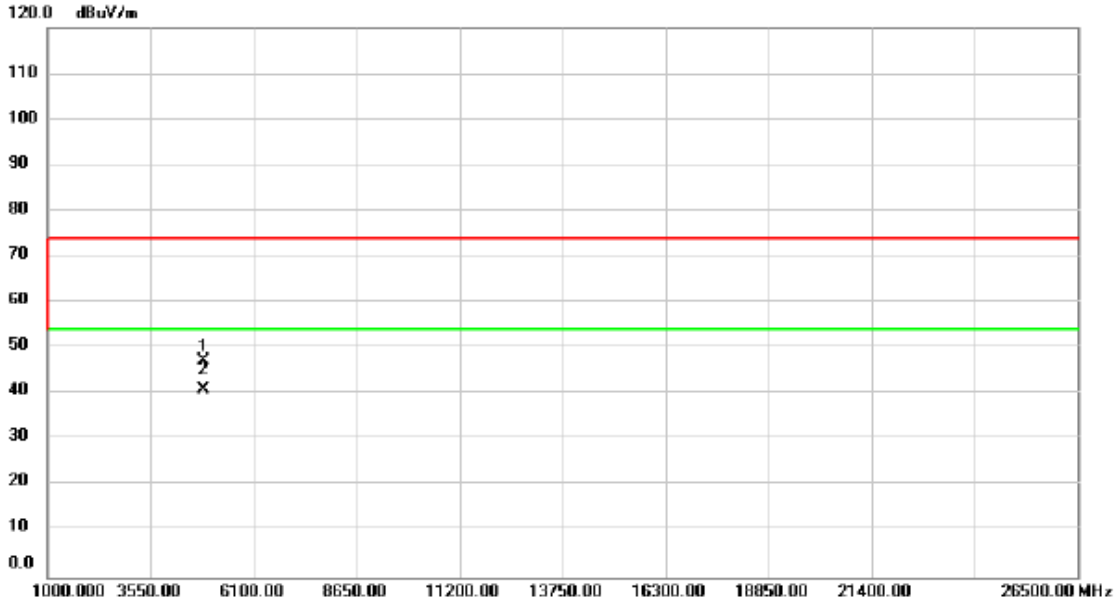
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.000	69.78	31.88	101.66	74.00	27.66	peak	No Limit
2	*	2437.000	66.14	31.88	98.02	54.00	44.02	AVG	No Limit

Test Mode:	TX B MODE 2437MHz

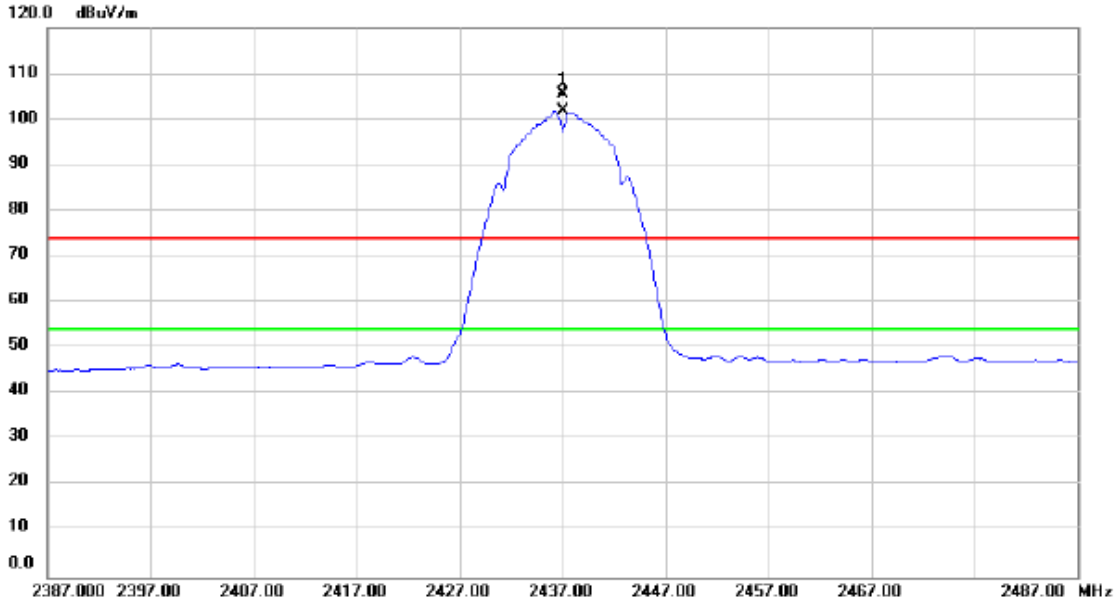
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	57.71	-10.40	47.31	74.00	-26.69	peak	
2	*	4874.000	51.29	-10.40	40.89	54.00	-13.11	AVG	

Test Mode:	TX B MODE 2437MHz

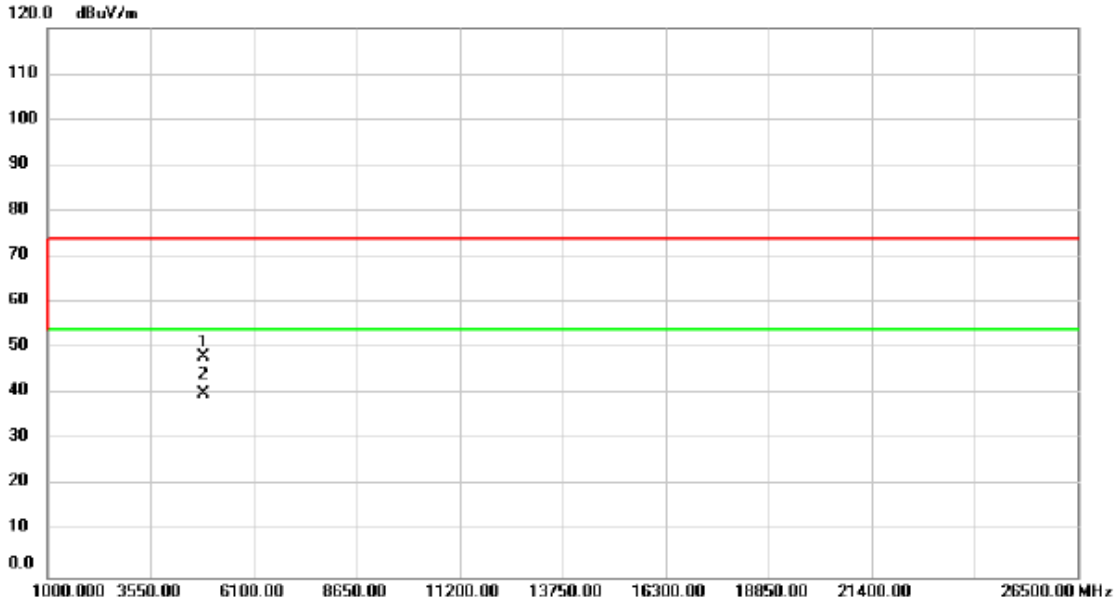
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.000	73.57	31.88	105.45	74.00	31.45	peak	No Limit
2	*	2437.000	69.86	31.88	101.74	54.00	47.74	AVG	No Limit

Test Mode:	TX B MODE 2437MHz

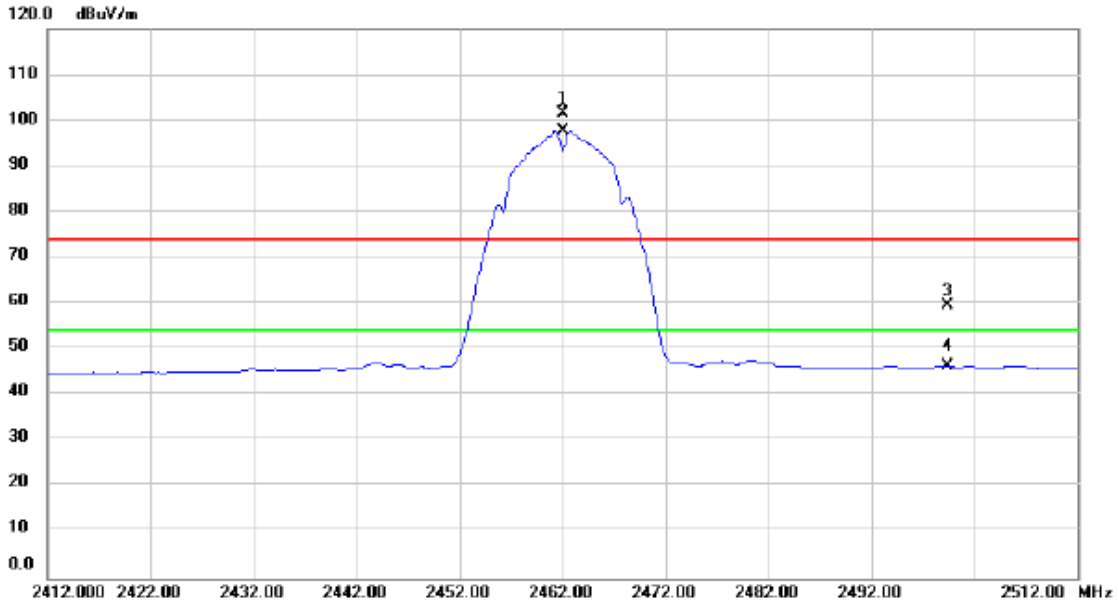
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	58.60	-10.40	48.20	74.00	-25.80	peak	
2	*	4874.000	50.46	-10.40	40.06	54.00	-13.94	AVG	

Test Mode:	TX B MODE 2462MHz

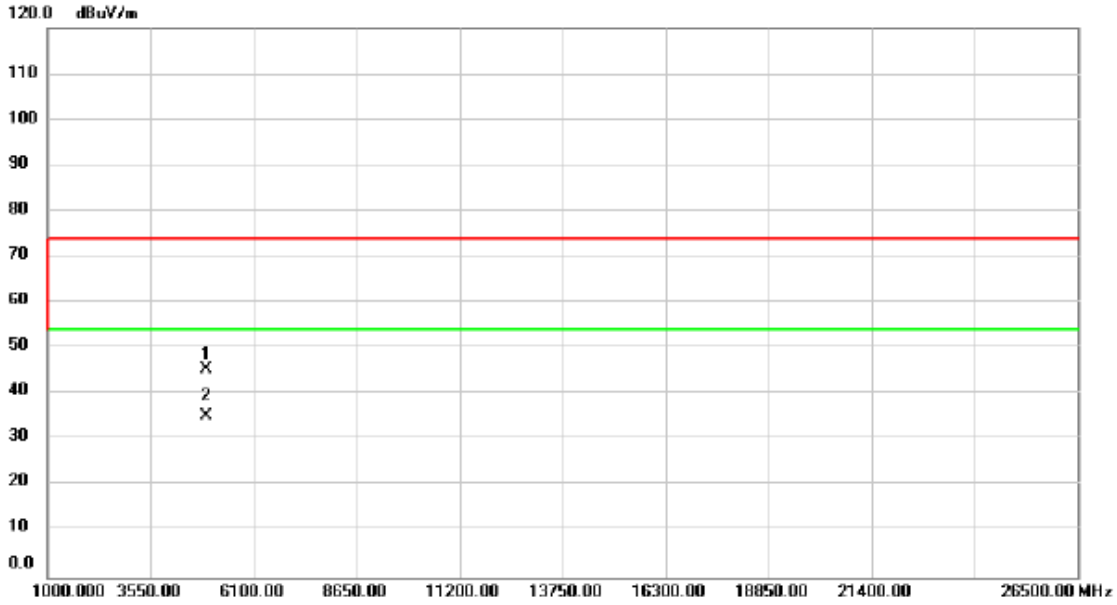
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2462.000	69.53	31.98	101.51	74.00	27.51	peak	No Limit
2	*	2462.000	65.61	31.98	97.59	54.00	43.59	AVG	No Limit
3		2499.460	27.56	32.13	59.69	74.00	-14.31	peak	
4		2499.460	14.28	32.13	46.41	54.00	-7.59	AVG	

Test Mode:	TX B MODE 2462MHz

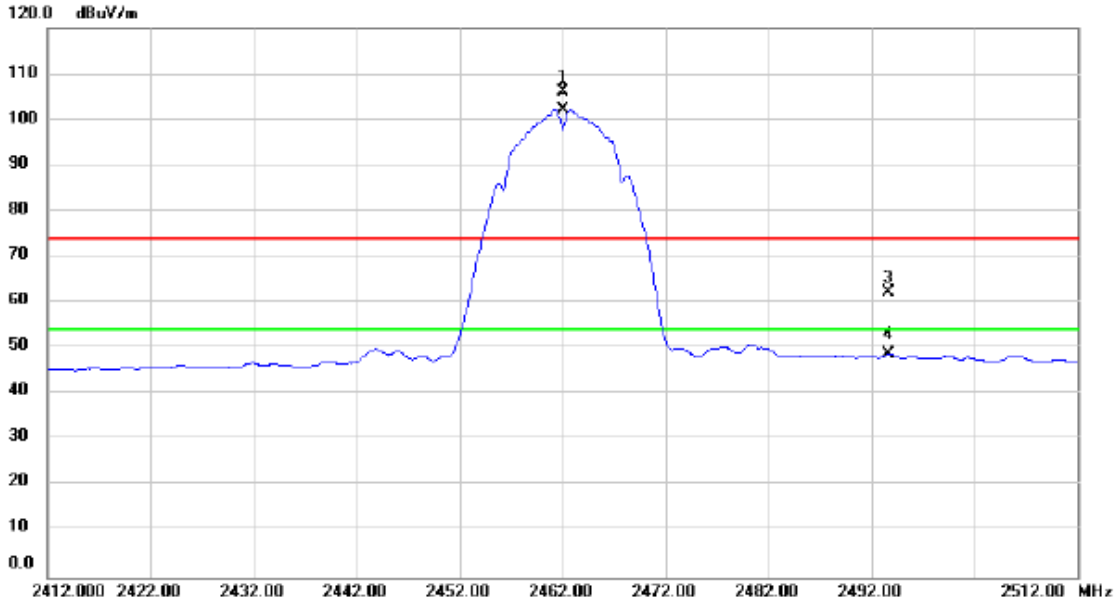
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	55.83	-10.32	45.51	74.00	-28.49	peak	
2	*	4924.000	45.42	-10.32	35.10	54.00	-18.90	AVG	

Test Mode:	TX B MODE 2462MHz

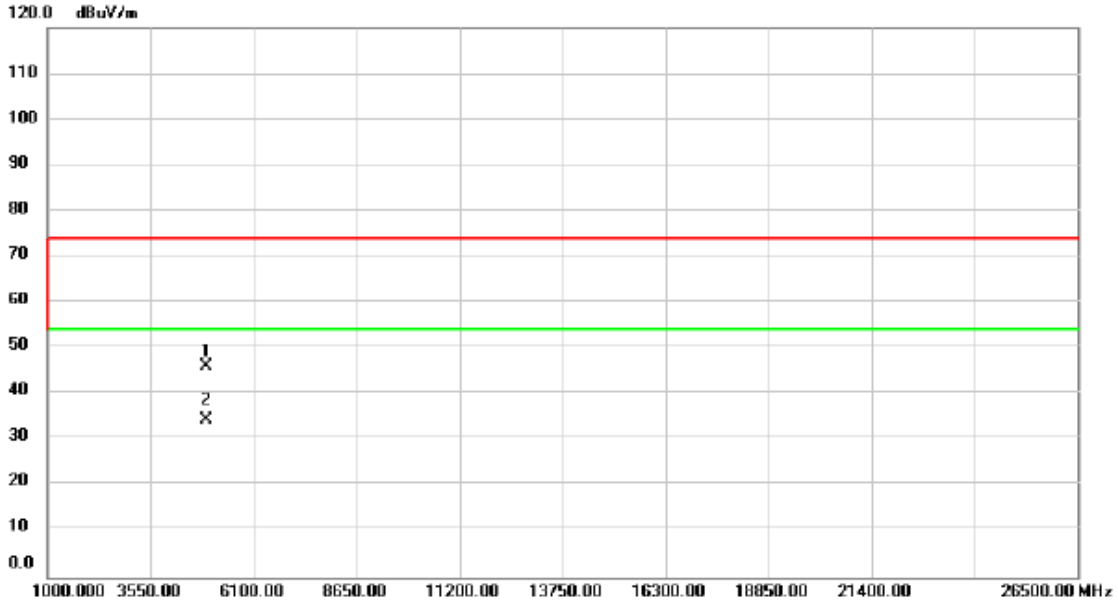
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2462.000	74.13	31.98	106.11	74.00	32.11	peak	No Limit
2	*	2462.000	70.23	31.98	102.21	54.00	48.21	AVG	No Limit
3		2493.617	30.17	32.10	62.27	74.00	-11.73	peak	
4		2493.617	16.57	32.10	48.67	54.00	-5.33	AVG	

Test Mode:	TX B MODE 2462MHz

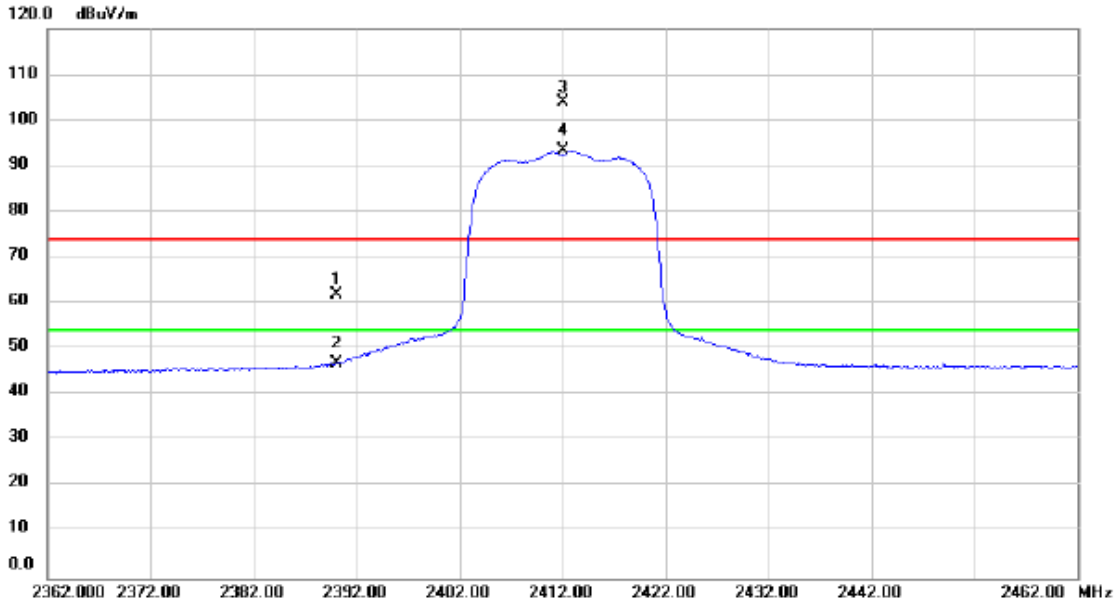
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	56.26	-10.32	45.94	74.00	-28.06	peak	
2	*	4924.000	44.66	-10.32	34.34	54.00	-19.66	AVG	

Test Mode:	TX G MODE 2412MHz

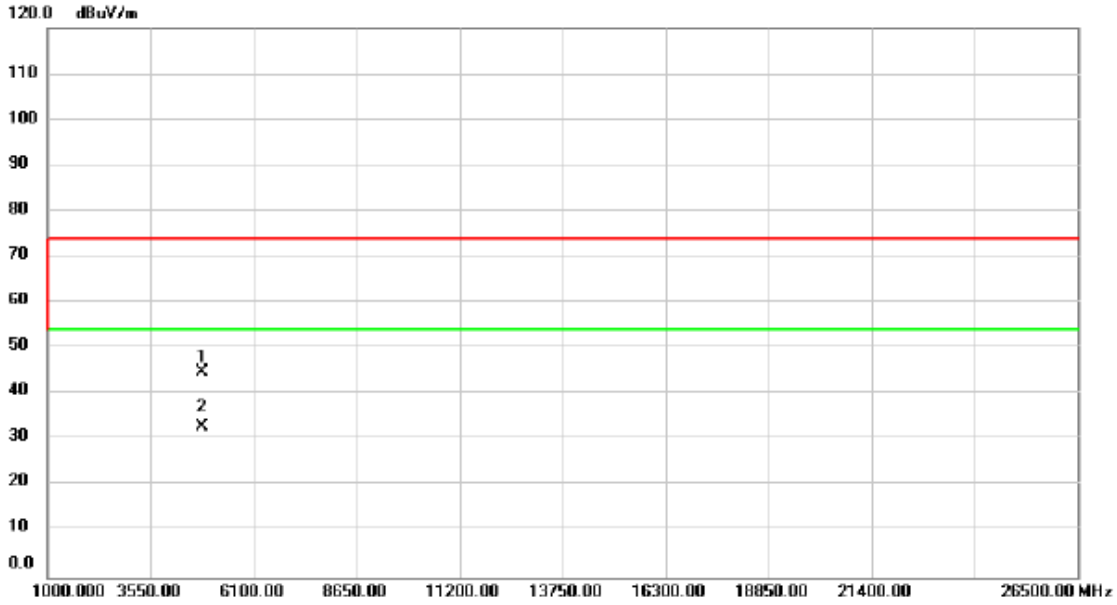
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.26	31.70	61.96	74.00	-12.04	peak	
2		2390.000	15.26	31.70	46.96	54.00	-7.04	AVG	
3	X	2412.000	72.30	31.79	104.09	74.00	30.09	peak	No Limit
4	*	2412.000	61.58	31.79	93.37	54.00	39.37	AVG	No Limit

Test Mode:	TX G MODE 2412MHz

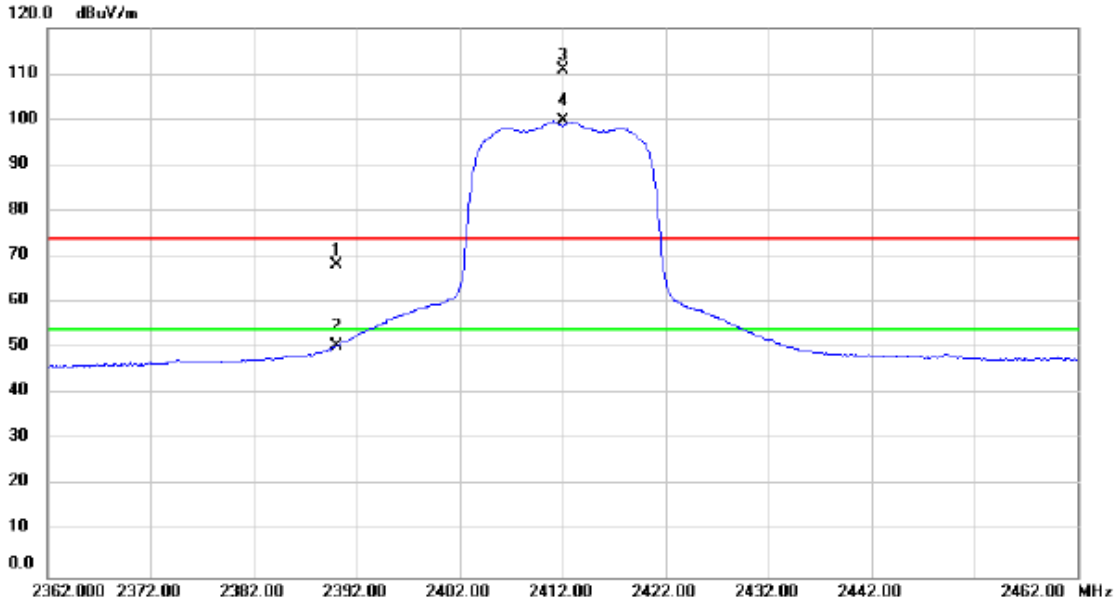
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	55.45	-10.48	44.97	74.00	-29.03	peak	
2	*	4824.000	43.27	-10.48	32.79	54.00	-21.21	AVG	

Test Mode:	TX G MODE 2412MHz

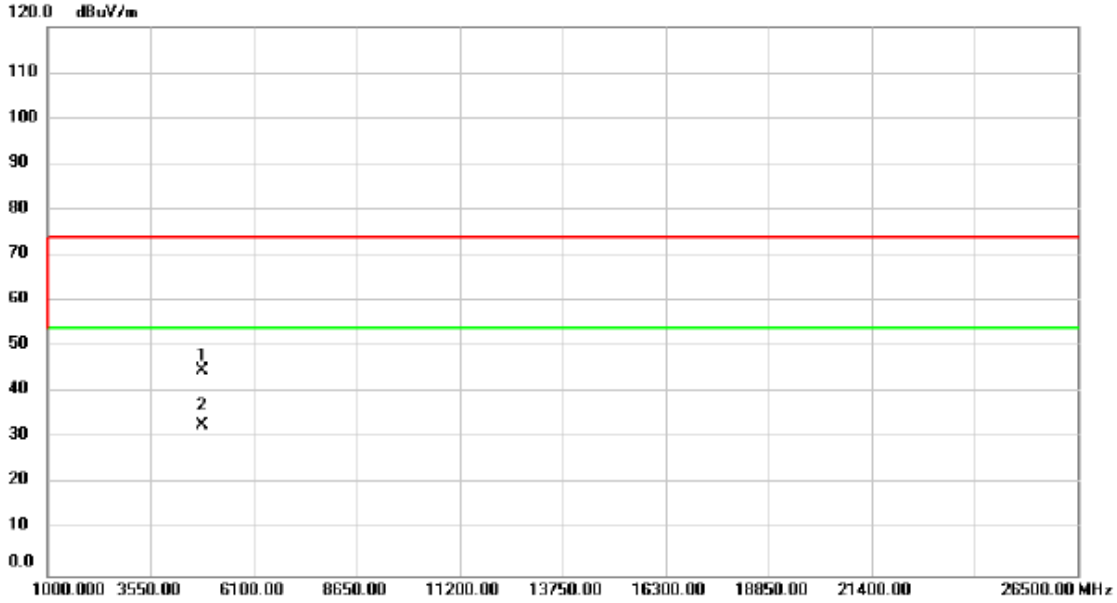
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	36.57	31.70	68.27	74.00	-5.73	peak	
2		2390.000	18.98	31.70	50.68	54.00	-3.32	AVG	
3	X	2412.000	79.08	31.79	110.87	74.00	36.87	peak	No Limit
4	*	2412.000	67.87	31.79	99.66	54.00	45.66	AVG	No Limit

Test Mode:	TX G MODE 2412MHz

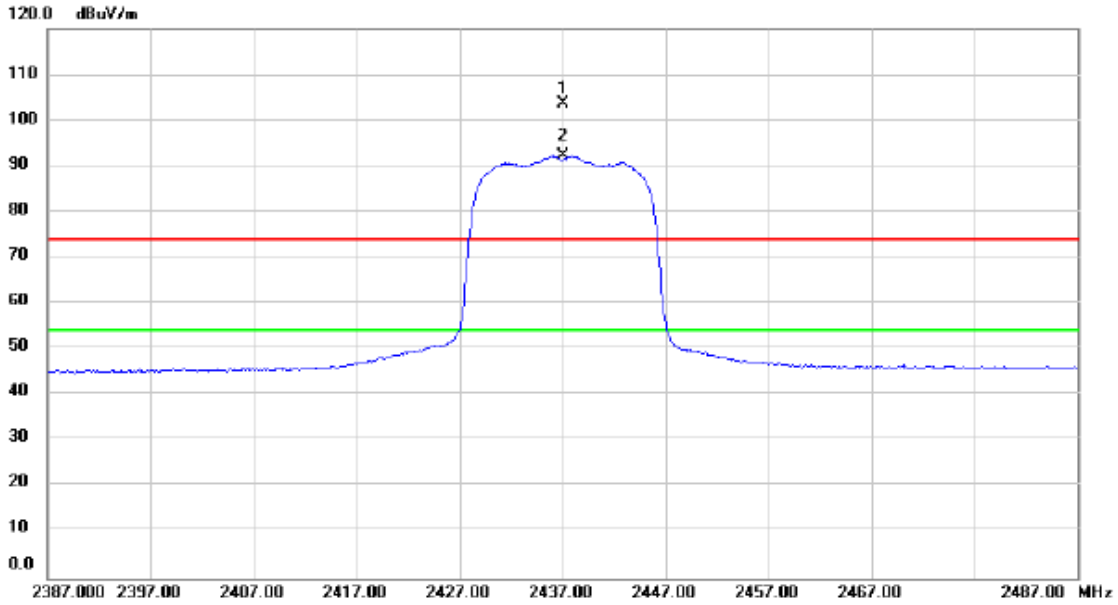
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	55.24	-10.48	44.76	74.00	-29.24	peak	
2	*	4824.000	43.45	-10.48	32.97	54.00	-21.03	AVG	

Test Mode:	TX G MODE 2437MHz

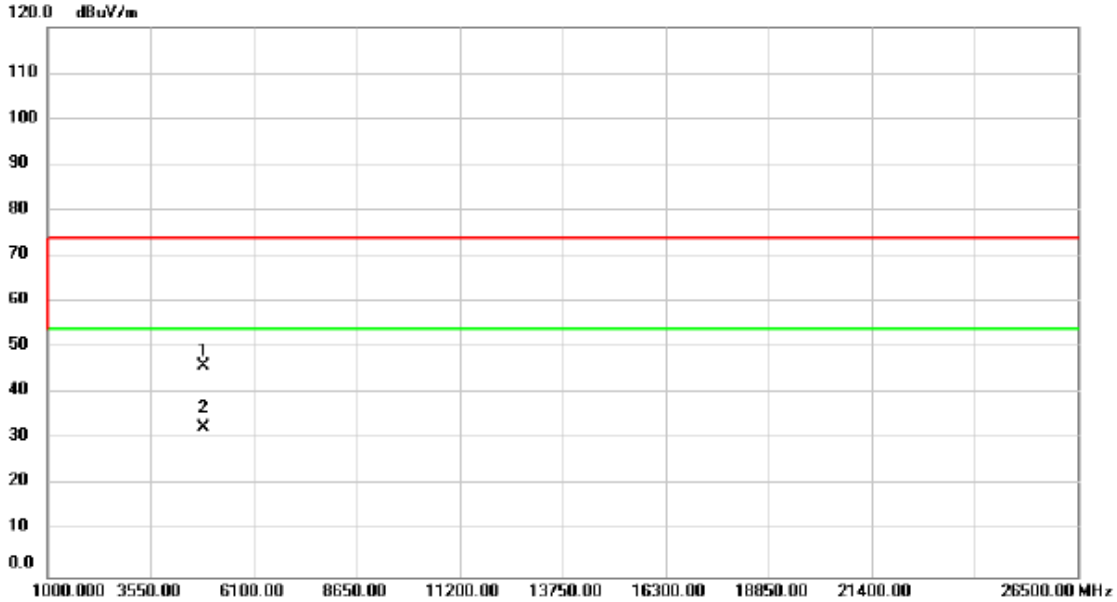
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.000	71.89	31.88	103.77	74.00	29.77	peak	No Limit
2	*	2437.000	60.34	31.88	92.22	54.00	38.22	AVG	No Limit

Test Mode:	TX G MODE 2437MHz

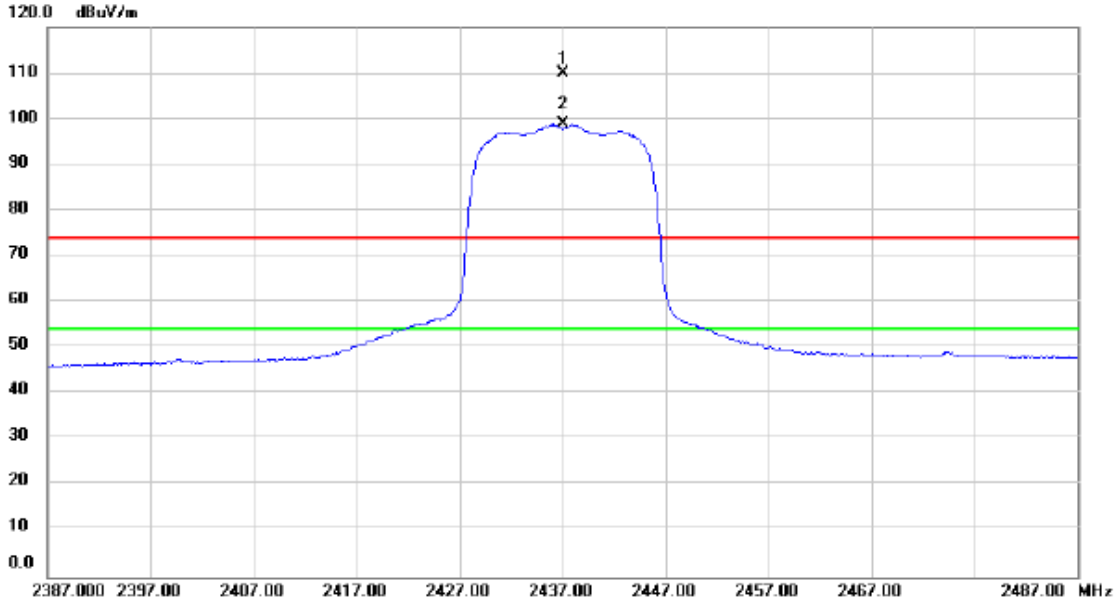
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	56.36	-10.40	45.96	74.00	-28.04	peak	
2	*	4874.000	42.98	-10.40	32.58	54.00	-21.42	AVG	

Test Mode:	TX G MODE 2437MHz

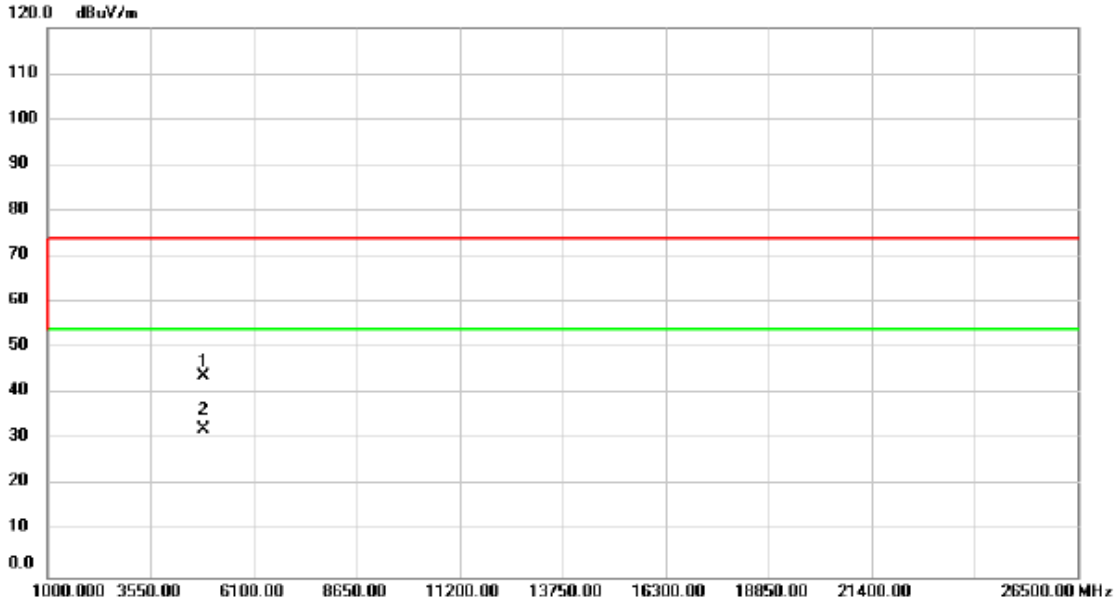
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.000	77.94	31.88	109.82	74.00	35.82	peak	No Limit
2	*	2437.000	66.87	31.88	98.75	54.00	44.75	AVG	No Limit

Test Mode:	TX G MODE 2437MHz

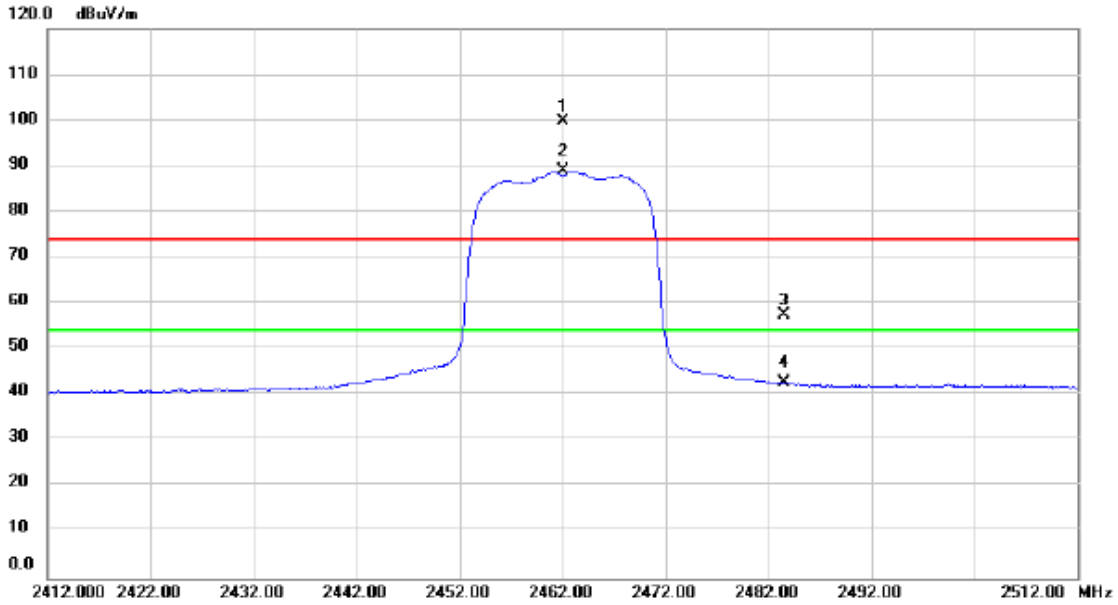
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	54.23	-10.40	43.83	74.00	-30.17	peak	
2	*	4874.000	42.80	-10.40	32.40	54.00	-21.60	AVG	

Test Mode:	TX G MODE 2462MHz

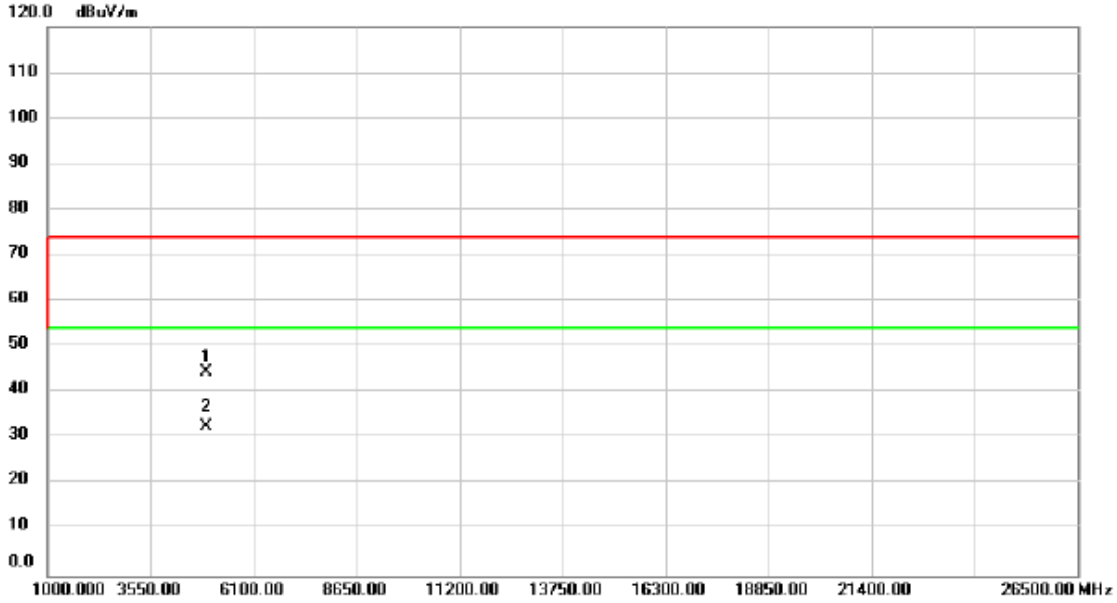
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2462.000	72.53	27.09	99.62	74.00	25.62	peak	No Limit
2	*	2462.000	61.89	27.09	88.98	54.00	34.98	AVG	No Limit
3		2483.500	30.21	27.15	57.36	74.00	-16.64	peak	
4		2483.500	15.46	27.15	42.61	54.00	-11.39	AVG	

Test Mode:	TX G MODE 2462MHz

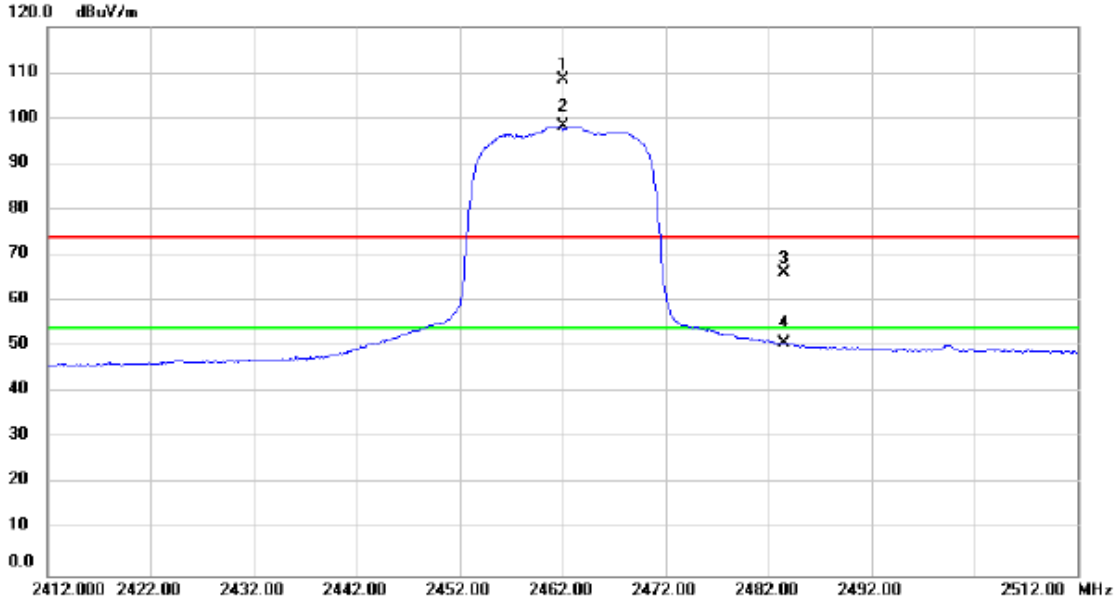
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.86	-10.32	44.54	74.00	-29.46	peak	
2	*	4924.000	42.94	-10.32	32.62	54.00	-21.38	AVG	

Test Mode:	TX G MODE 2462MHz

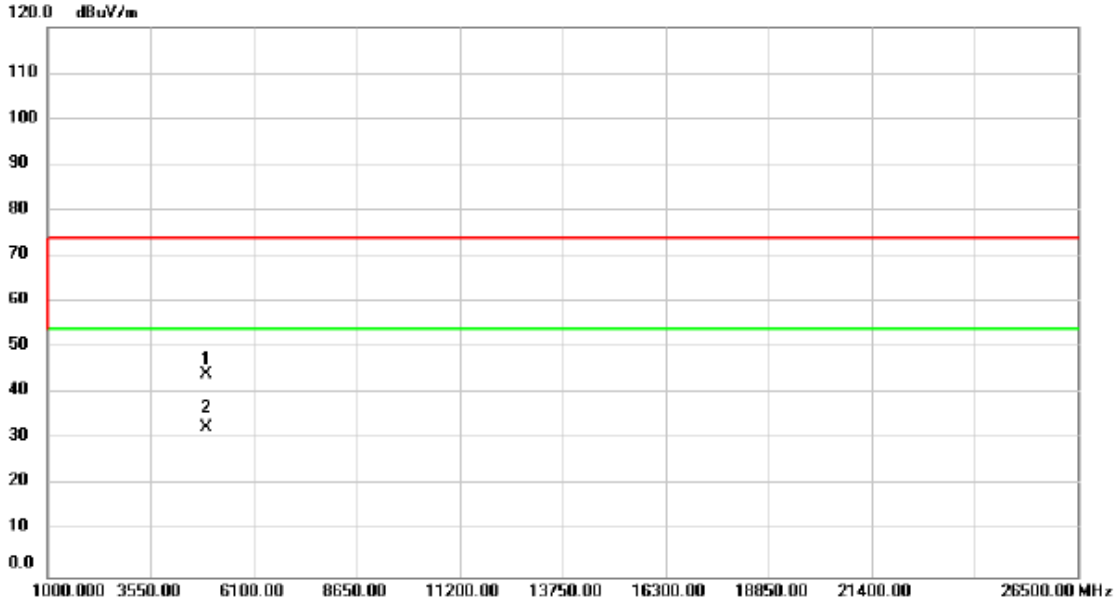
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2462.000	76.38	31.98	108.36	74.00	34.36	peak	No Limit
2	*	2462.000	66.39	31.98	98.37	54.00	44.37	AVG	No Limit
3		2483.500	33.99	32.06	66.05	74.00	-7.95	peak	
4		2483.500	18.77	32.06	50.83	54.00	-3.17	AVG	

Test Mode:	TX G MODE 2462MHz

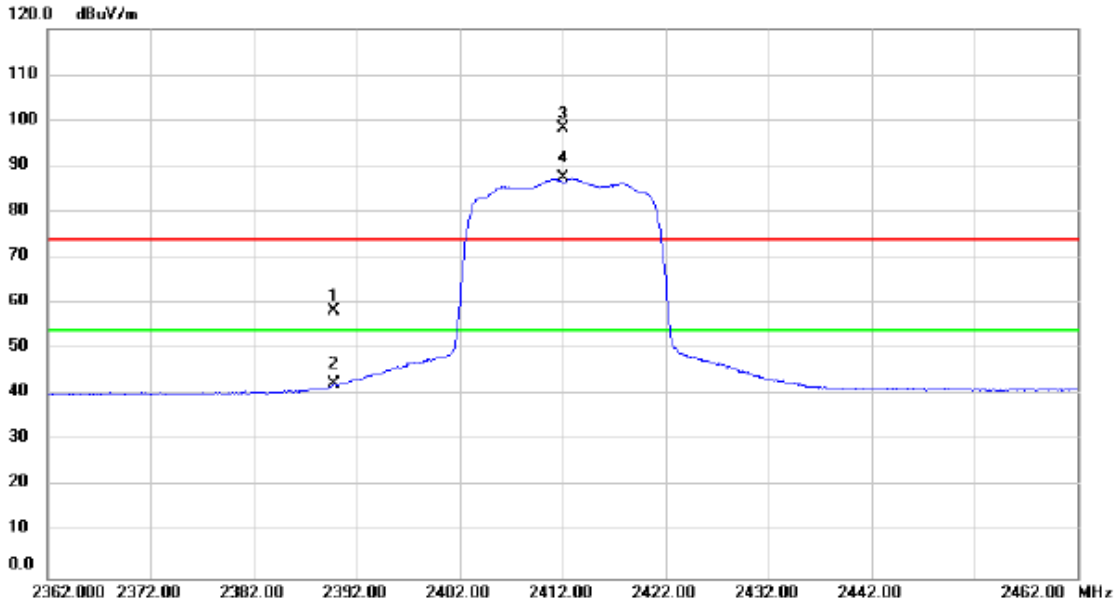
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.49	-10.32	44.17	74.00	-29.83	peak	
2	*	4924.000	42.95	-10.32	32.63	54.00	-21.37	AVG	

Test Mode:	TX N-20M MODE 2412MHz

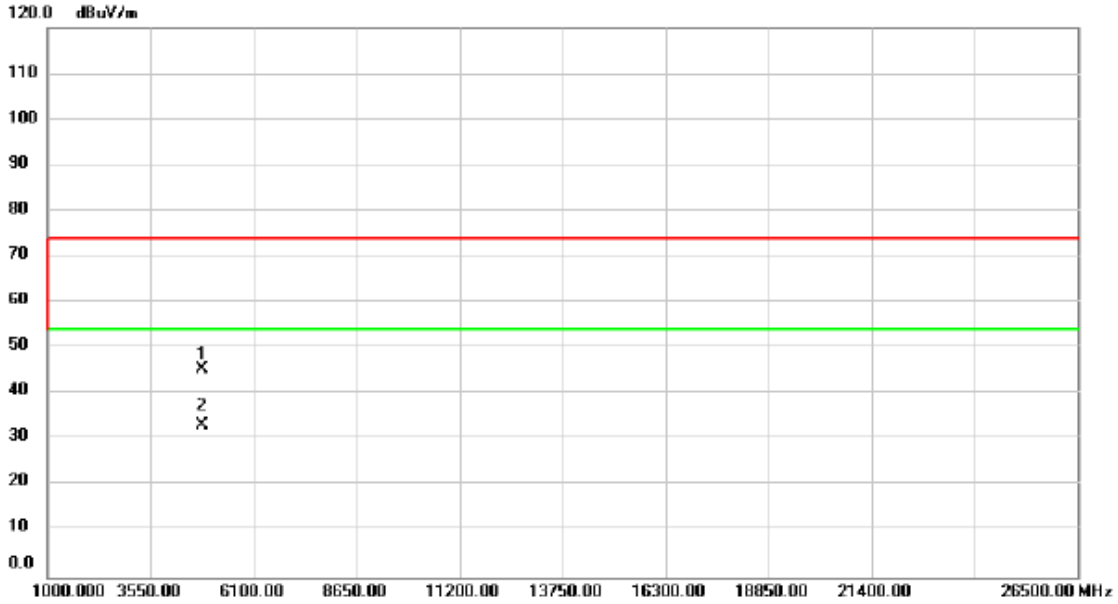
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.800	31.35	26.89	58.24	74.00	-15.76	peak	
2		2389.800	15.50	26.89	42.39	54.00	-11.61	AVG	
3	X	2412.000	71.20	26.95	98.15	74.00	24.15	peak	No Limit
4	*	2412.000	60.43	26.95	87.38	54.00	33.38	AVG	No Limit

Test Mode:	TX N-20M MODE 2412MHz

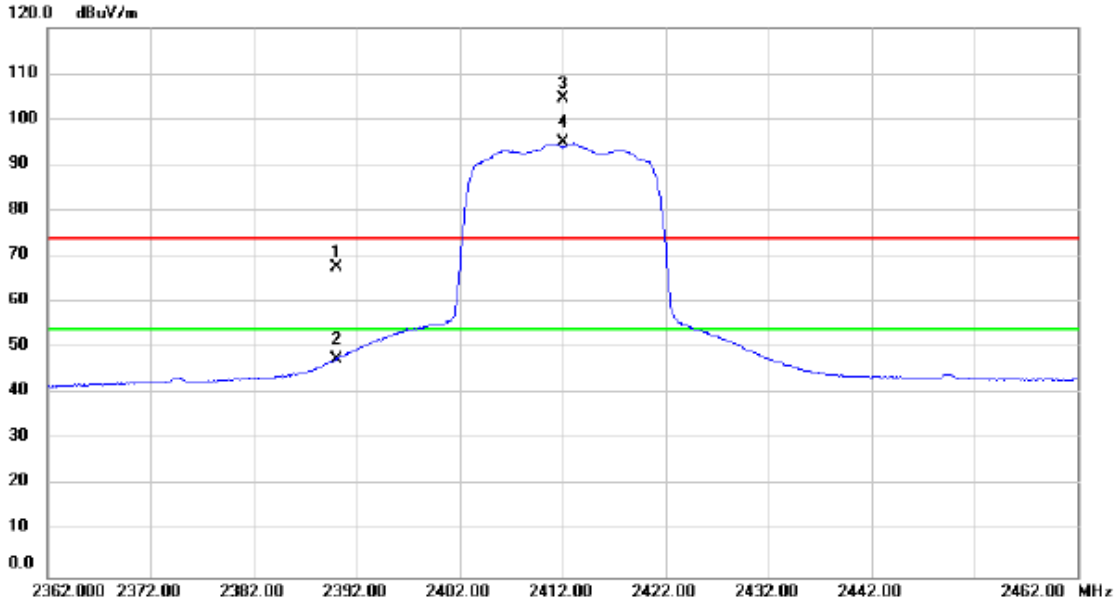
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	56.03	-10.48	45.55	74.00	-28.45	peak	
2	*	4824.000	43.71	-10.48	33.23	54.00	-20.77	AVG	

Test Mode:	TX N-20M MODE 2412MHz

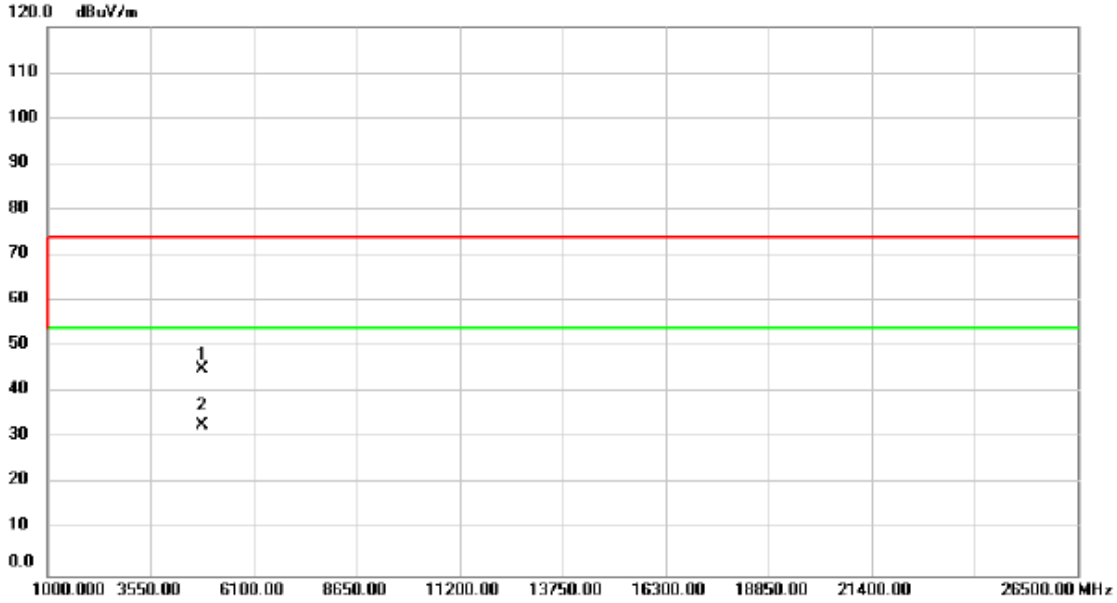
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	40.71	26.89	67.60	74.00	-6.40	peak	
2		2390.000	20.65	26.89	47.54	54.00	-6.46	AVG	
3	X	2412.000	77.63	26.95	104.58	74.00	30.58	peak	No Limit
4	*	2412.000	67.91	26.95	94.86	54.00	40.86	AVG	No Limit

Test Mode:	TX N-20M MODE 2412MHz

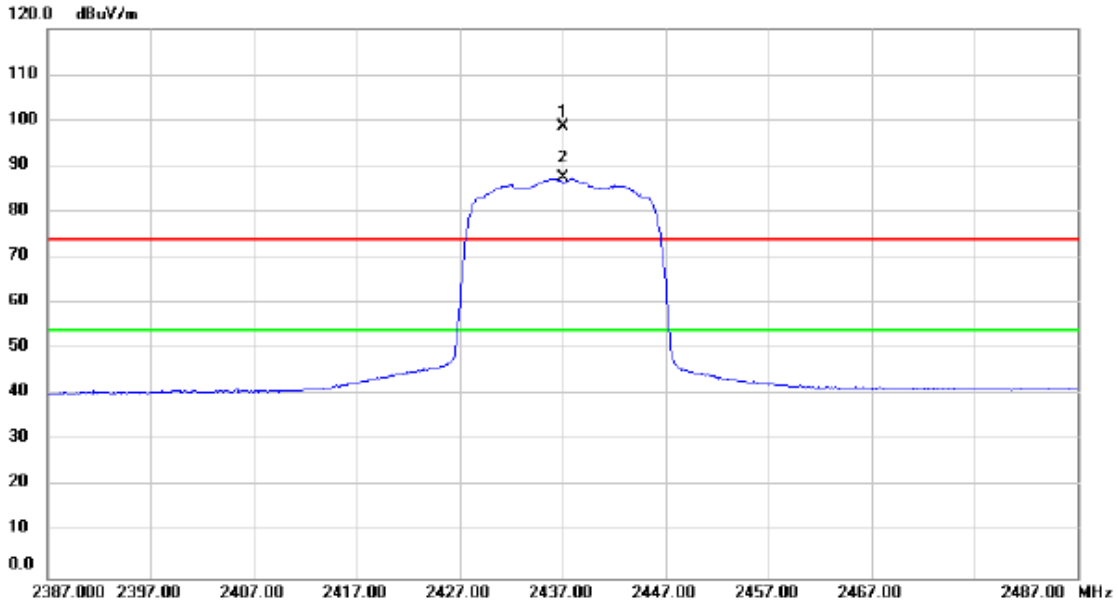
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	55.78	-10.48	45.30	74.00	-28.70	peak	
2	*	4824.000	43.48	-10.48	33.00	54.00	-21.00	AVG	

Test Mode:	TX N-20M MODE 2437MHz

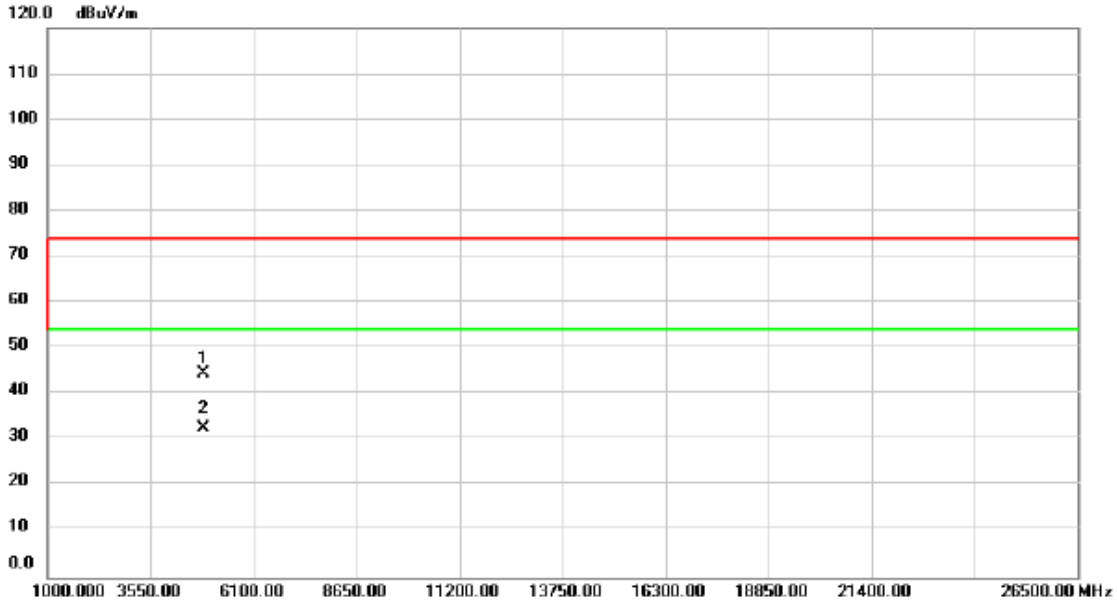
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.000	71.55	27.02	98.57	74.00	24.57	peak	No Limit
2	*	2437.000	60.31	27.02	87.33	54.00	33.33	AVG	No Limit

Test Mode:	TX N-20M MODE 2437MHz

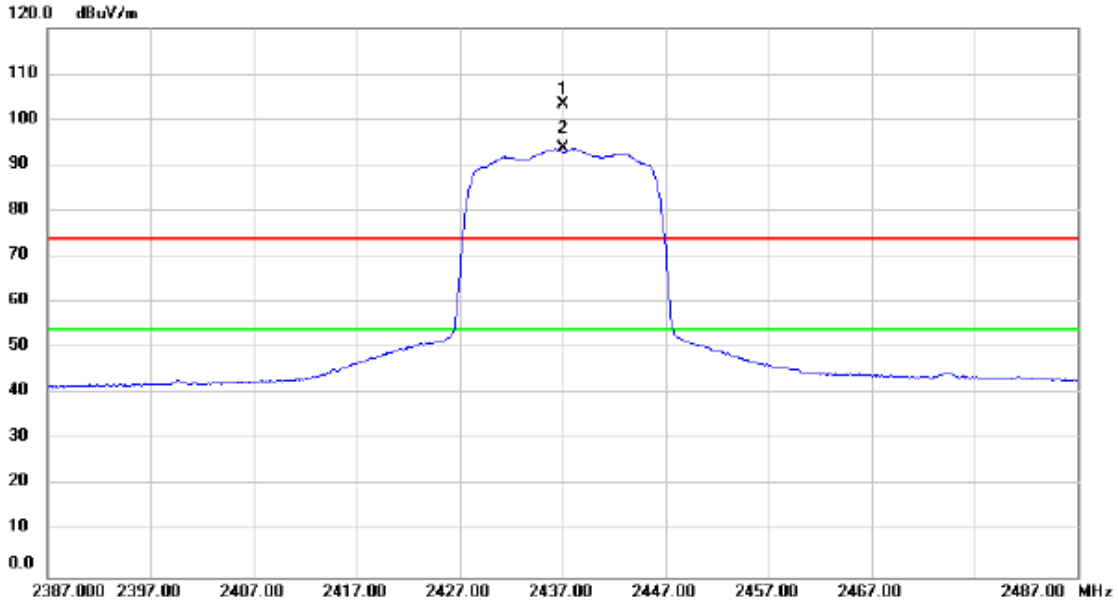
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	54.95	-10.40	44.55	74.00	-29.45	peak	
2	*	4874.000	42.82	-10.40	32.42	54.00	-21.58	AVG	

Test Mode:	TX N-20M MODE 2437MHz

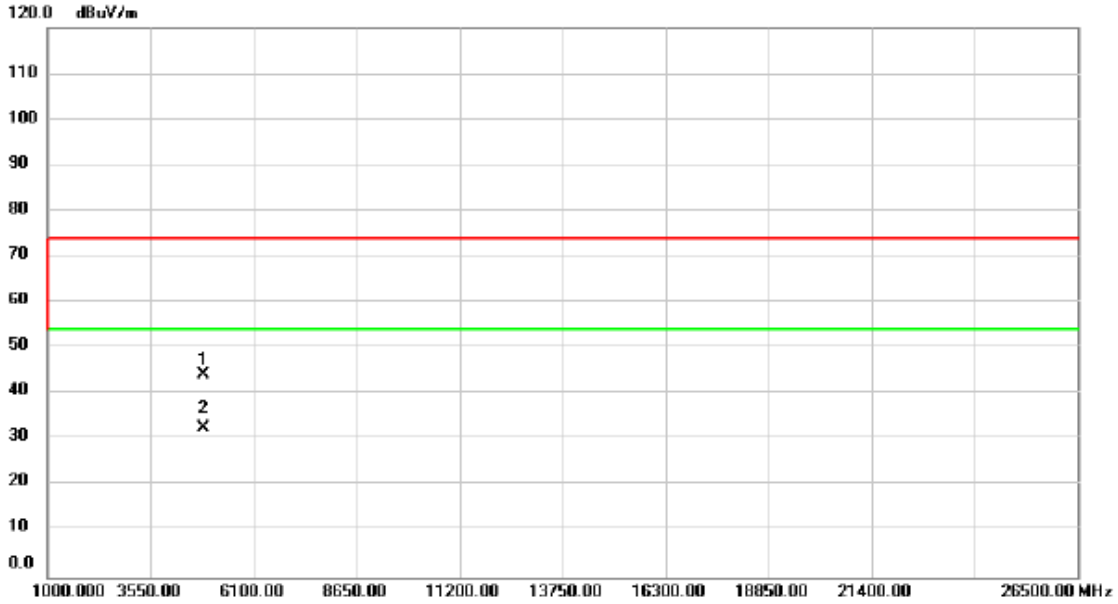
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.000	76.36	27.02	103.38	74.00	29.38	peak	No Limit
2	*	2437.000	66.86	27.02	93.88	54.00	39.88	AVG	No Limit

Test Mode:	TX N-20M MODE 2437MHz

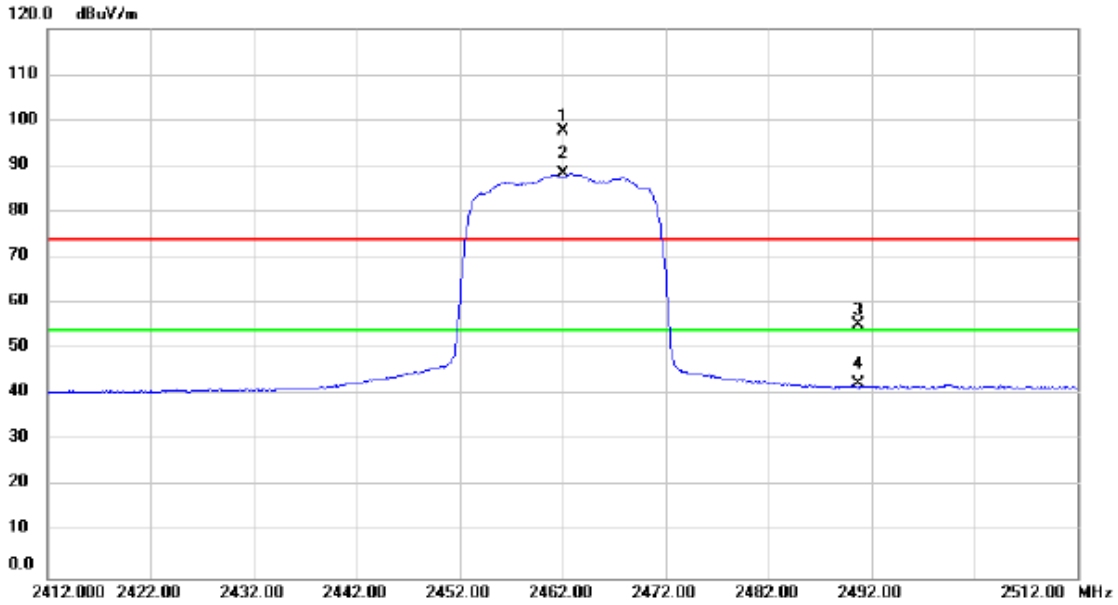
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	54.72	-10.40	44.32	74.00	-29.68	peak	
2	*	4874.000	42.81	-10.40	32.41	54.00	-21.59	AVG	

Test Mode:	TX N-20M MODE 2462MHz

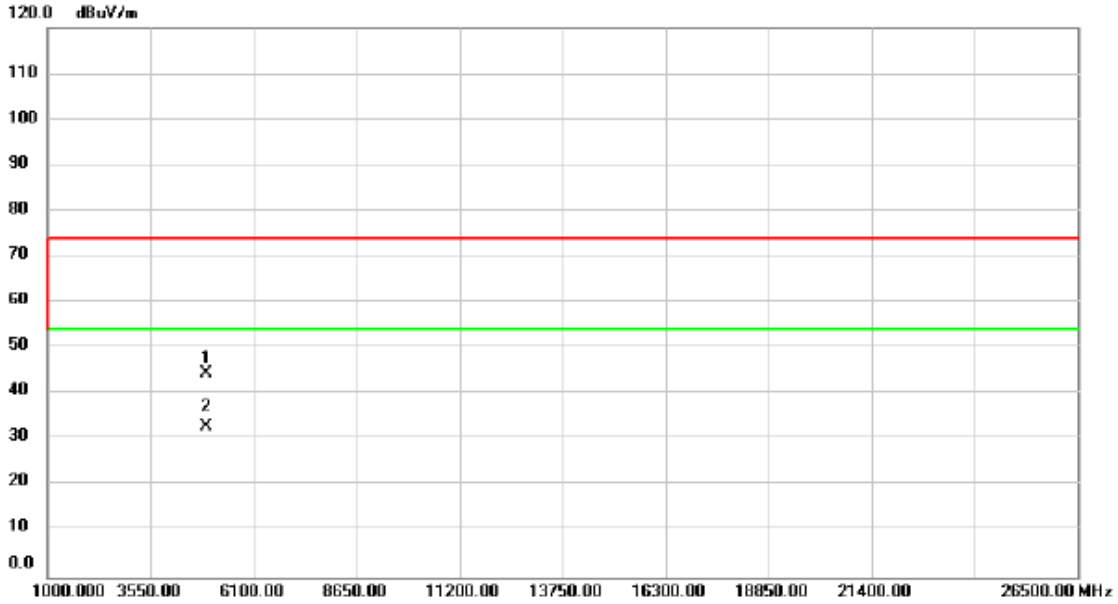
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2462.000	70.69	27.09	97.78	74.00	23.78	peak	No Limit
2	*	2462.000	61.27	27.09	88.36	54.00	34.36	AVG	No Limit
3		2490.796	28.20	27.17	55.37	74.00	-18.63	peak	
4		2490.796	15.26	27.17	42.43	54.00	-11.57	AVG	

Test Mode:	TX N-20M MODE 2462MHz

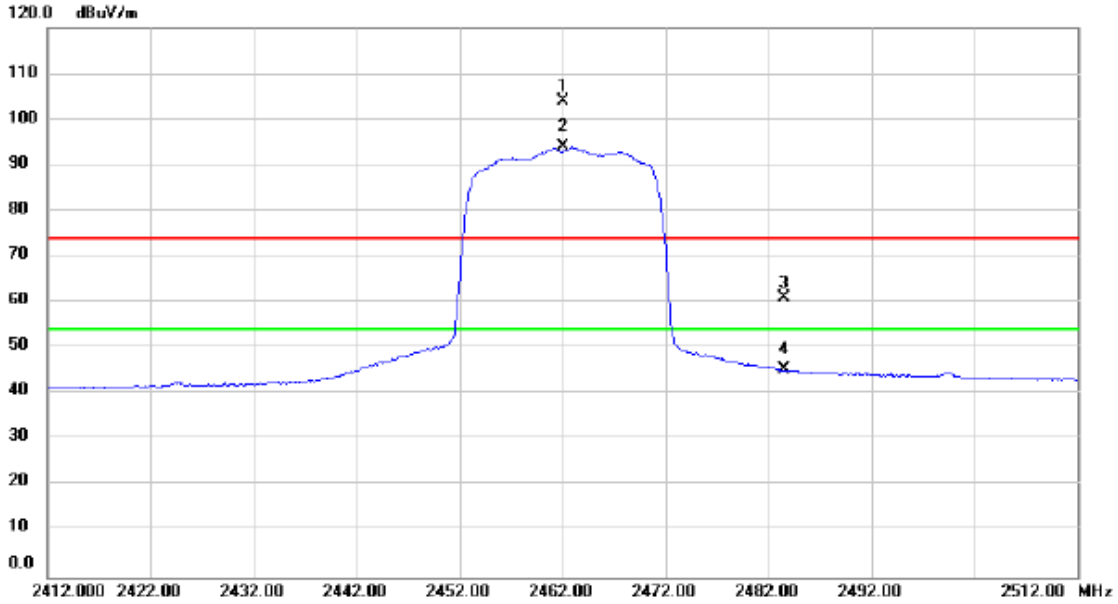
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.75	-10.32	44.43	74.00	-29.57	peak	
2	*	4924.000	43.03	-10.32	32.71	54.00	-21.29	AVG	

Test Mode:	TX N-20M MODE 2462MHz

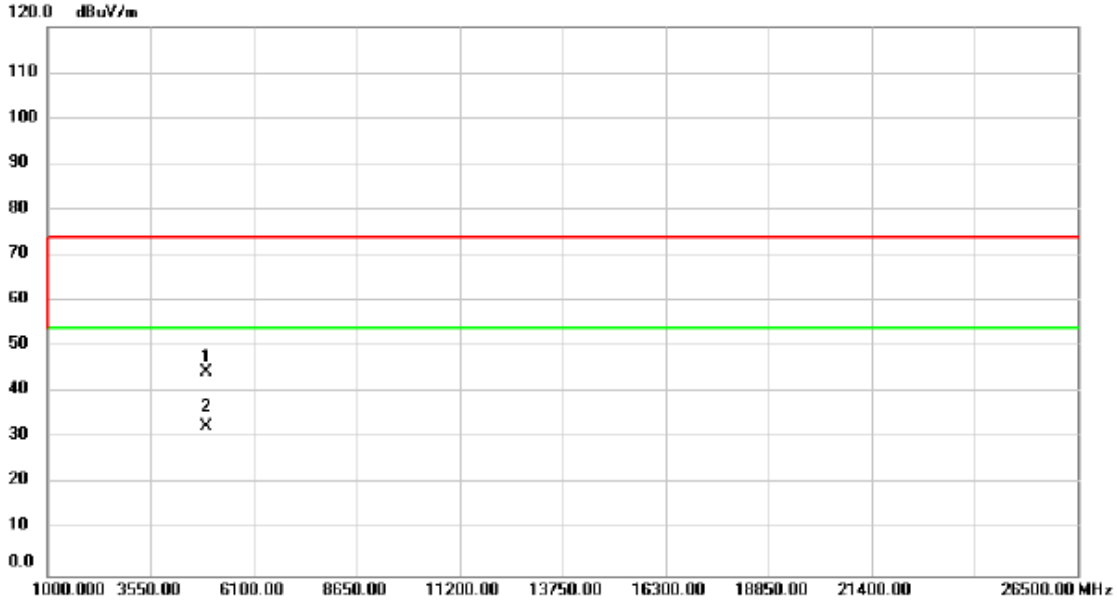
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2462.000	76.72	27.09	103.81	74.00	29.81	peak	No Limit
2	*	2462.000	67.02	27.09	94.11	54.00	40.11	AVG	No Limit
3		2483.517	33.95	27.15	61.10	74.00	-12.90	peak	
4		2483.517	18.17	27.15	45.32	54.00	-8.68	AVG	

Test Mode:	TX N-20M MODE 2462MHz

Horizontal

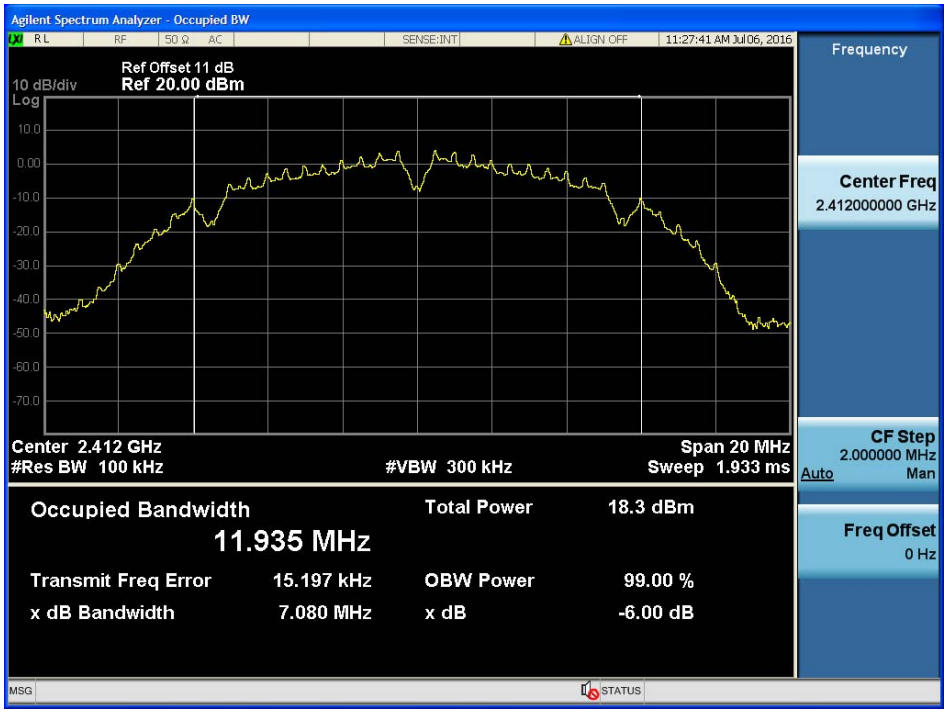


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.82	-10.32	44.50	74.00	-29.50	peak	
2	*	4924.000	43.01	-10.32	32.69	54.00	-21.31	AVG	

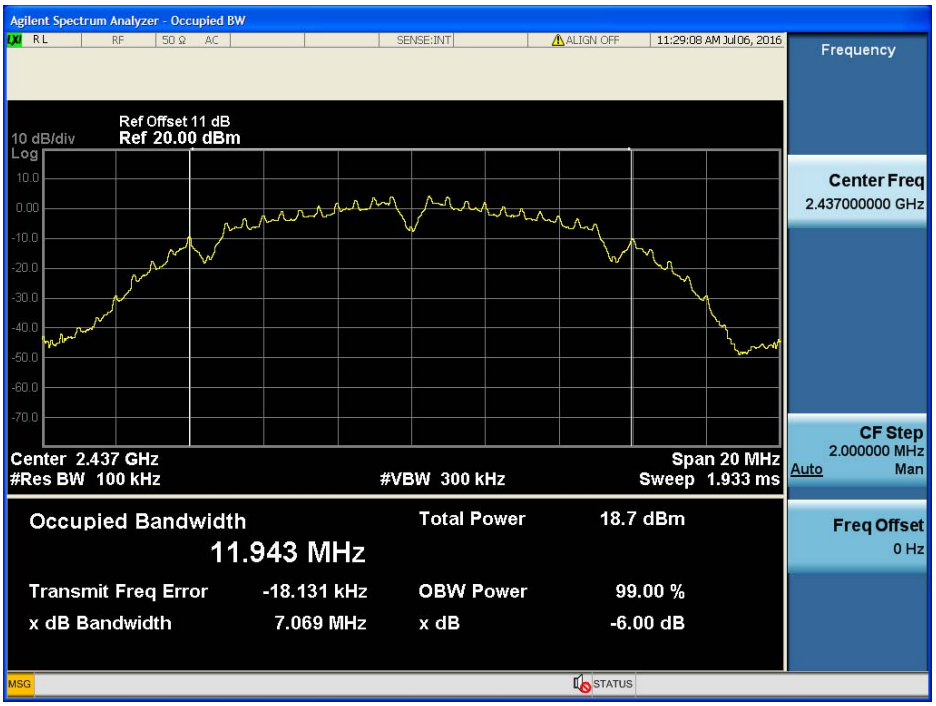
ATTACHMENT E - BANDWIDTH

Test Mode: TX B Mode_CH01/06/11				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	7.08	11.94	500	Complies
2437	7.07	11.94	500	Complies
2462	8.05	12.18	500	Complies

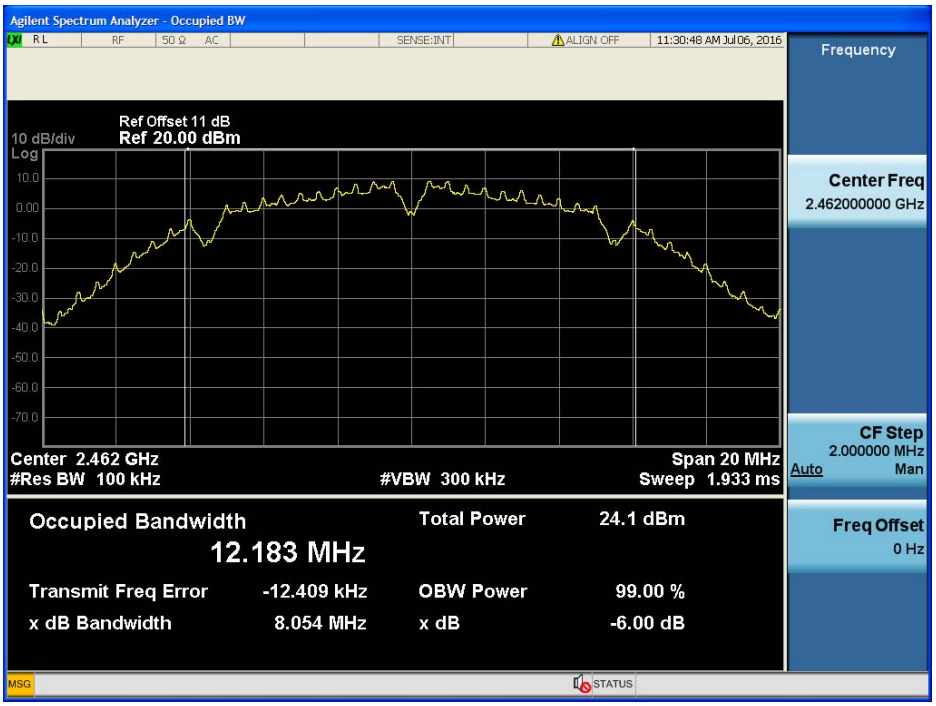
TX CH01



TX CH06

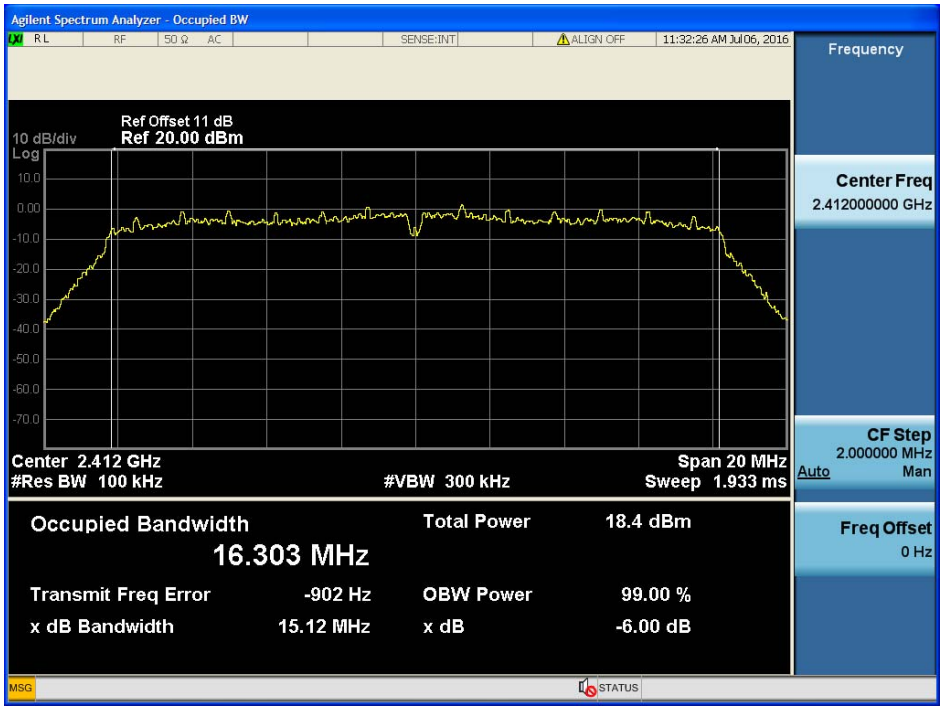


TX CH11

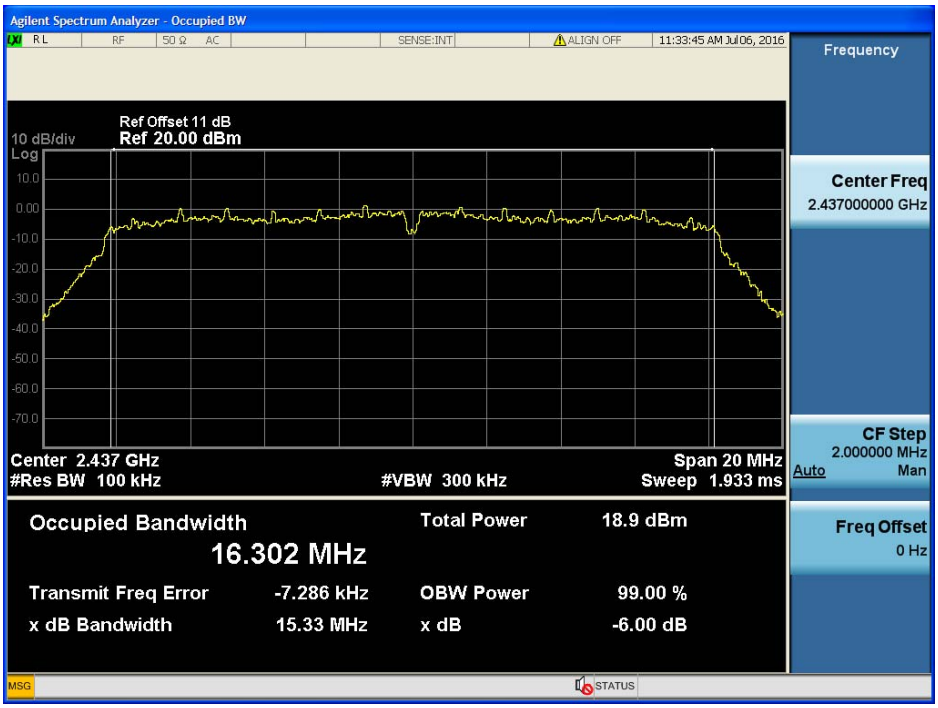


Test Mode: TX G Mode_CH01/06/11				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.12	16.30	500	Complies
2437	15.33	16.30	500	Complies
2462	15.11	16.30	500	Complies

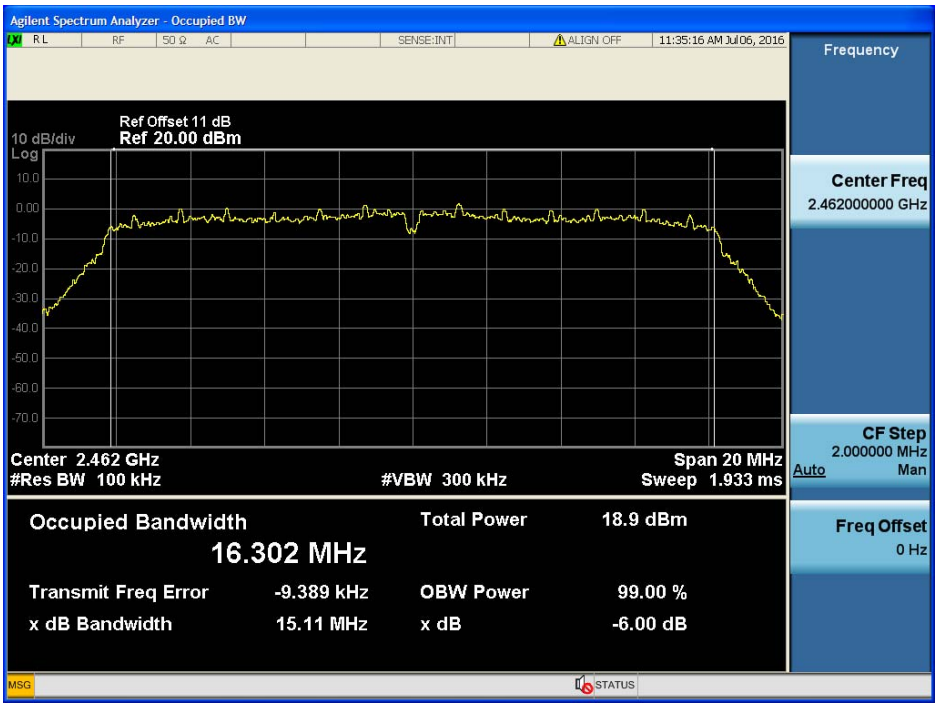
TX CH01



TX CH06

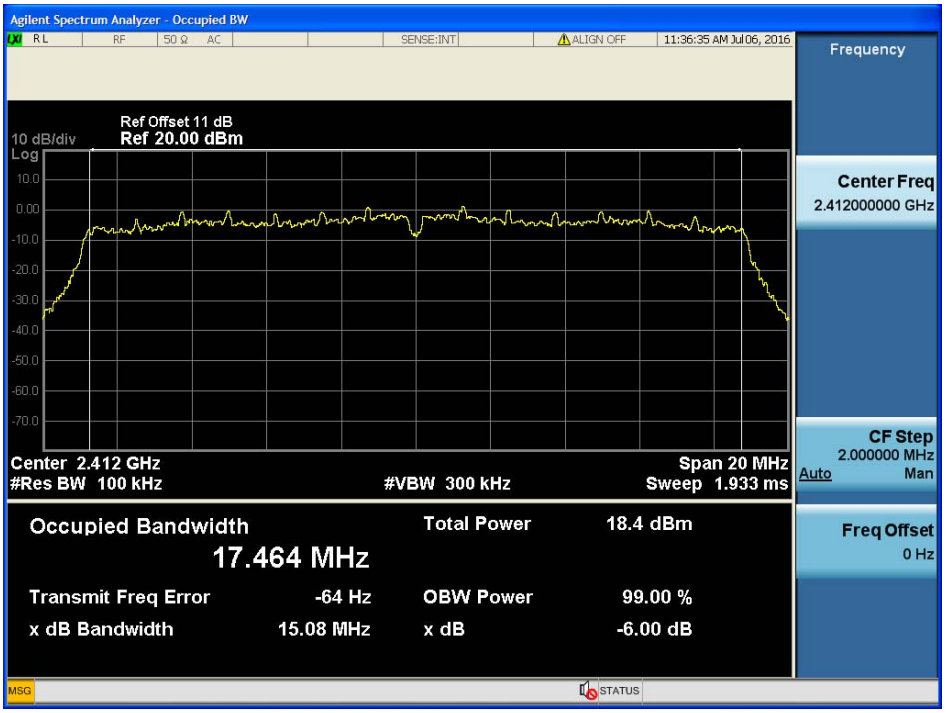


TX CH11

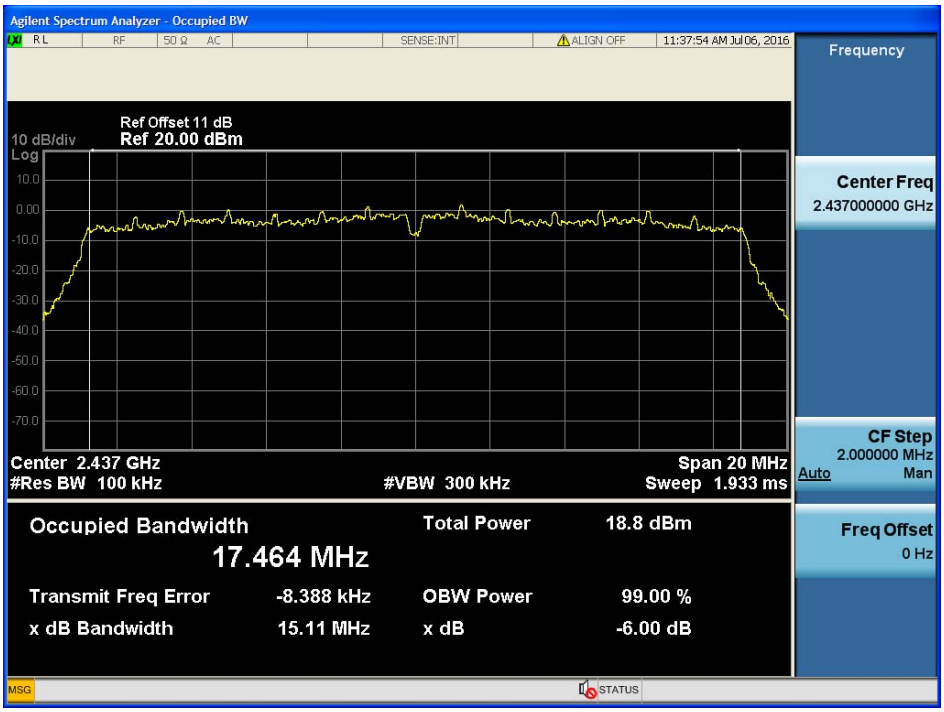


Test Mode: TX N-20MHz Mode_CH01/06/11				
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.08	17.46	500	Complies
2437	15.11	17.46	500	Complies
2462	15.10	17.46	500	Complies

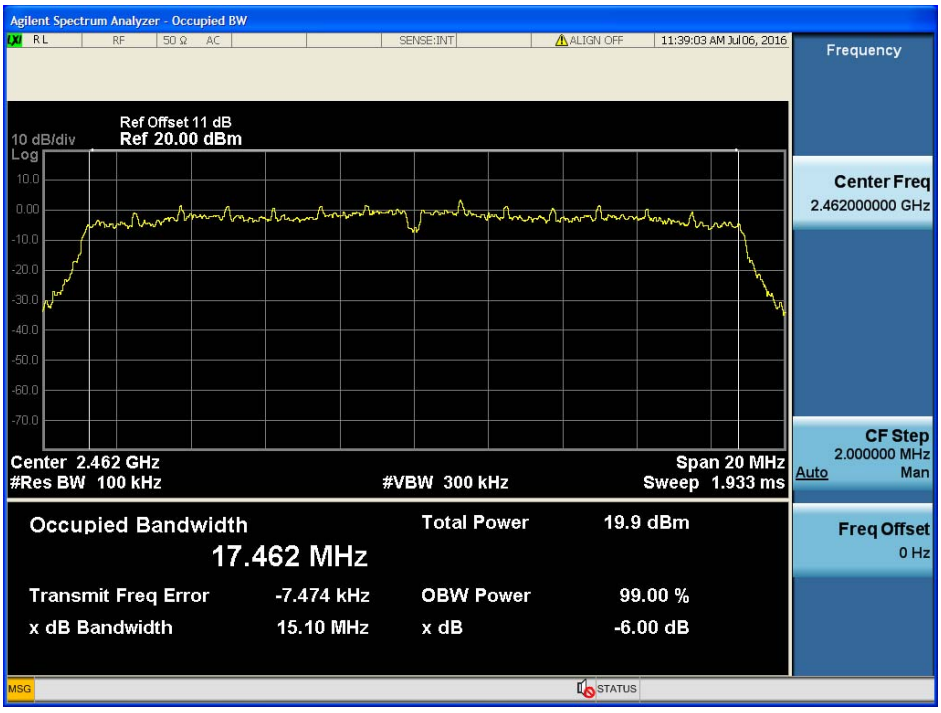
TX CH01



TX CH06



TX CH11



ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER

Test Mode: TX B Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	15.12	0.0325	30.00	1.00	Complies
2437	15.41	0.0348	30.00	1.00	Complies
2462	15.22	0.0333	30.00	1.00	Complies

Test Mode: TX G Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	22.73	0.1875	30.00	1.00	Complies
2437	23.26	0.2118	30.00	1.00	Complies
2462	22.22	0.1667	30.00	1.00	Complies

Test Mode: TX N20 Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	22.56	0.1803	30.00	1.00	Complies
2437	22.19	0.1656	30.00	1.00	Complies
2462	21.84	0.1528	30.00	1.00	Complies

ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

Test Mode:	TX B Mode

TX B mode CH01

TX B mode CH11

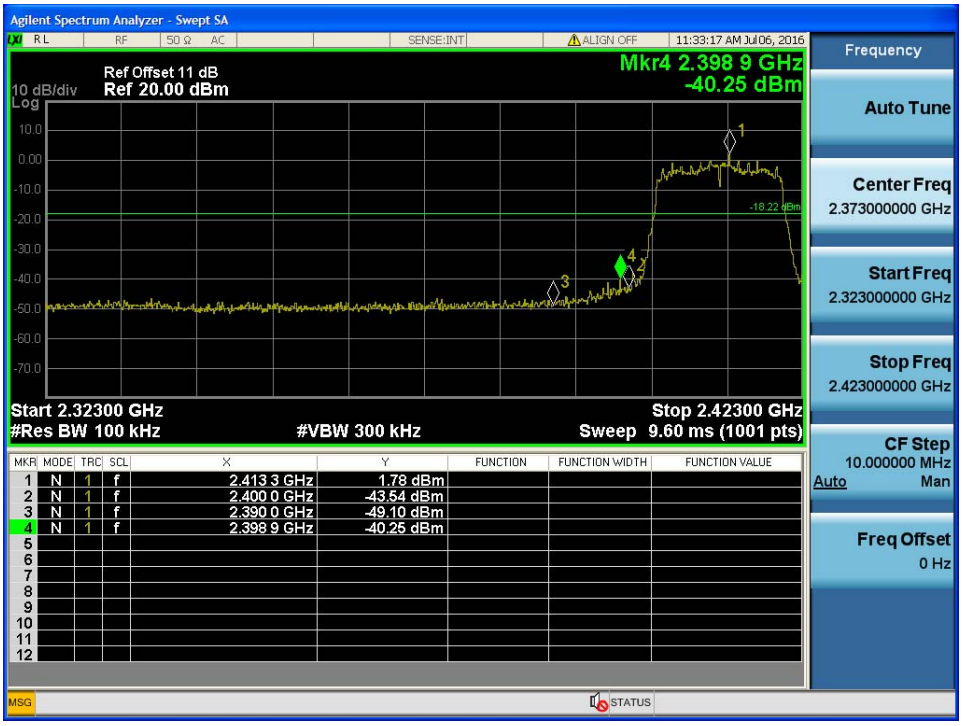
TX B mode CH01 (10 Harmonic of the frequency)

TX B mode CH06 (10 Harmonic of the frequency)

TX B mode CH11 (10 Harmonic of the frequency)

Test Mode:	TX G Mode

TX G mode CH01



TX G mode CH11

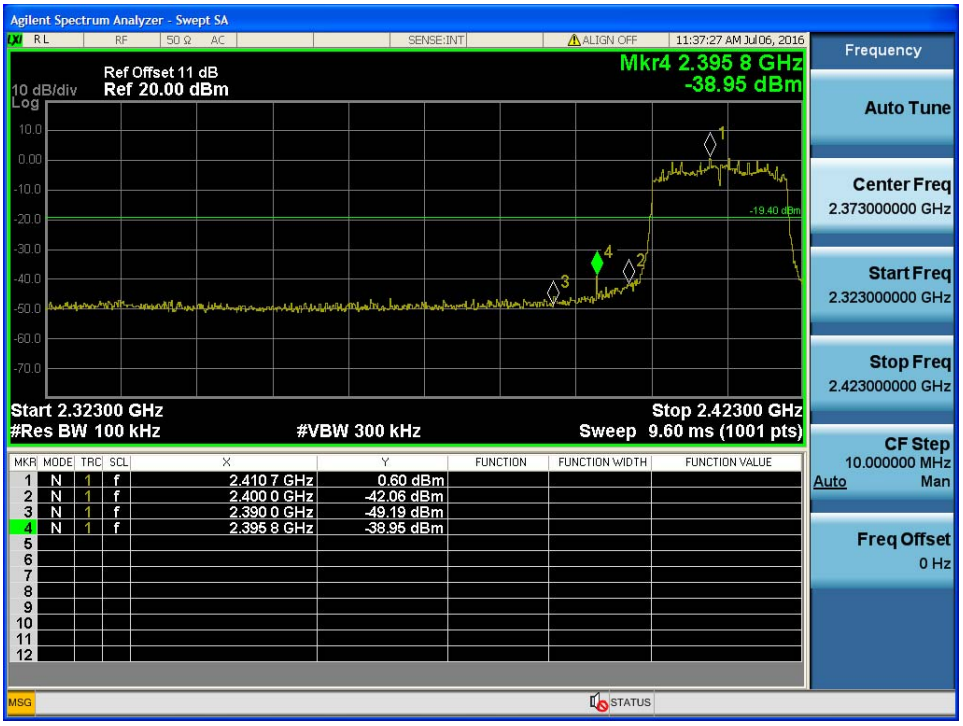
TX G mode CH01 (10 Harmonic of the frequency)

TX G mode CH06 (10 Harmonic of the frequency)

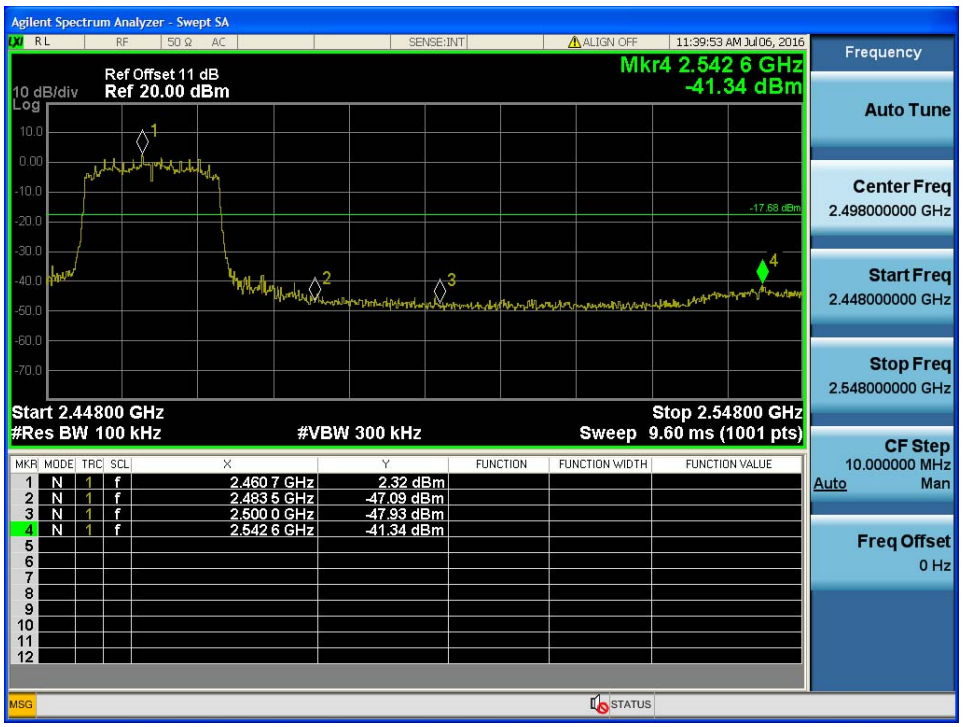
TX G mode CH11 (10 Harmonic of the frequency)

Test Mode:	TX N-20M Mode

TX HT20 mode CH01



TX HT20 mode CH11



TX HT20 mode CH01 (10 Harmonic of the frequency)

TX HT20 mode CH06 (10 Harmonic of the frequency)

TX HT20 mode CH11 (10 Harmonic of the frequency)

ATTACHMENT H - POWER SPECTRAL DENSITY

Test Mode: TX B Mode_CH01/06/11				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.12	0.08	8.00	Complies
2437	-10.83	0.08	8.00	Complies
2462	-6.02	0.25	8.00	Complies

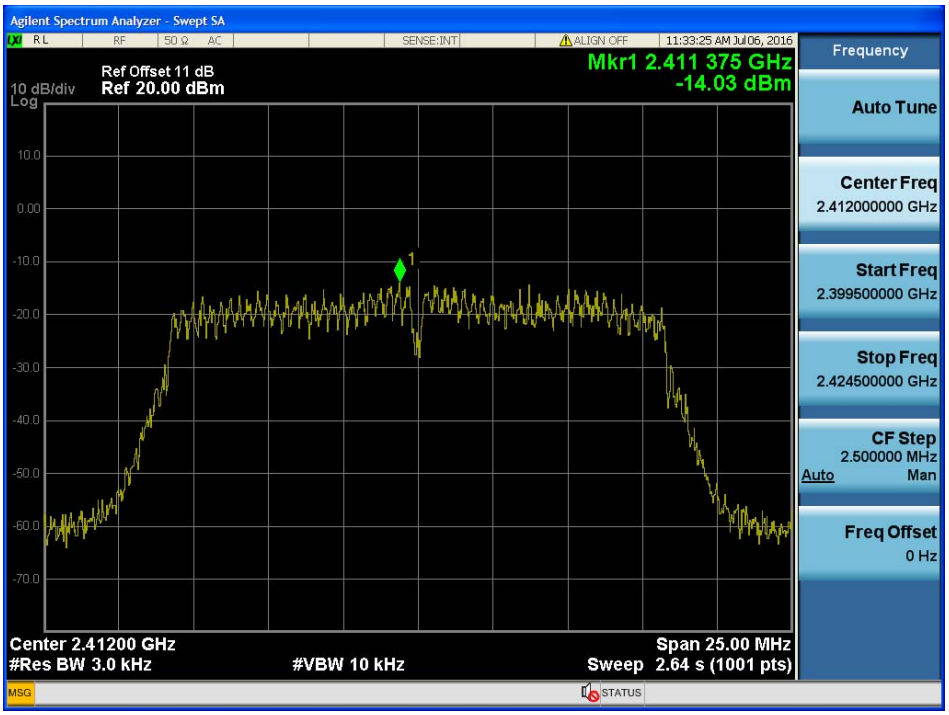
TX CH01

TX CH06

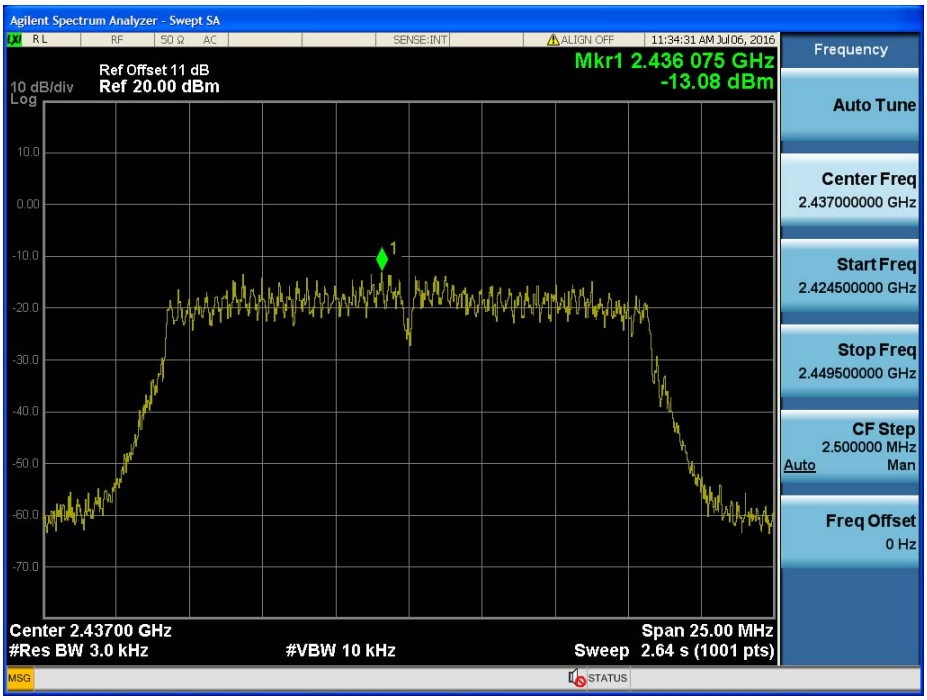
TX CH11

Test Mode: TX G Mode_CH01/06/11				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-14.03	0.04	8.00	Complies
2437	-13.08	0.05	8.00	Complies
2462	-12.42	0.06	8.00	Complies

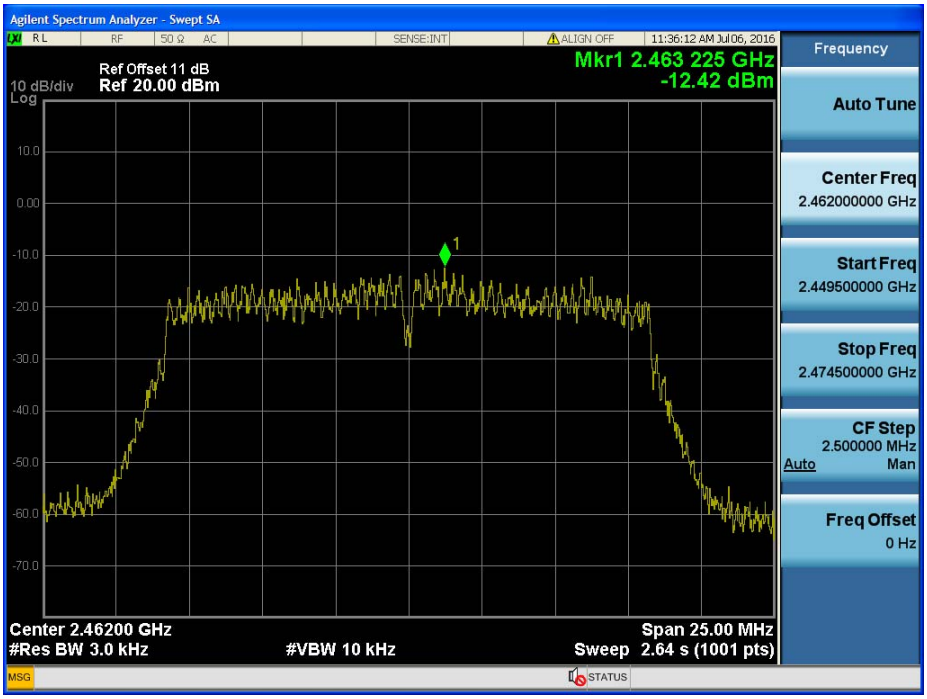
TX CH01



TX CH06

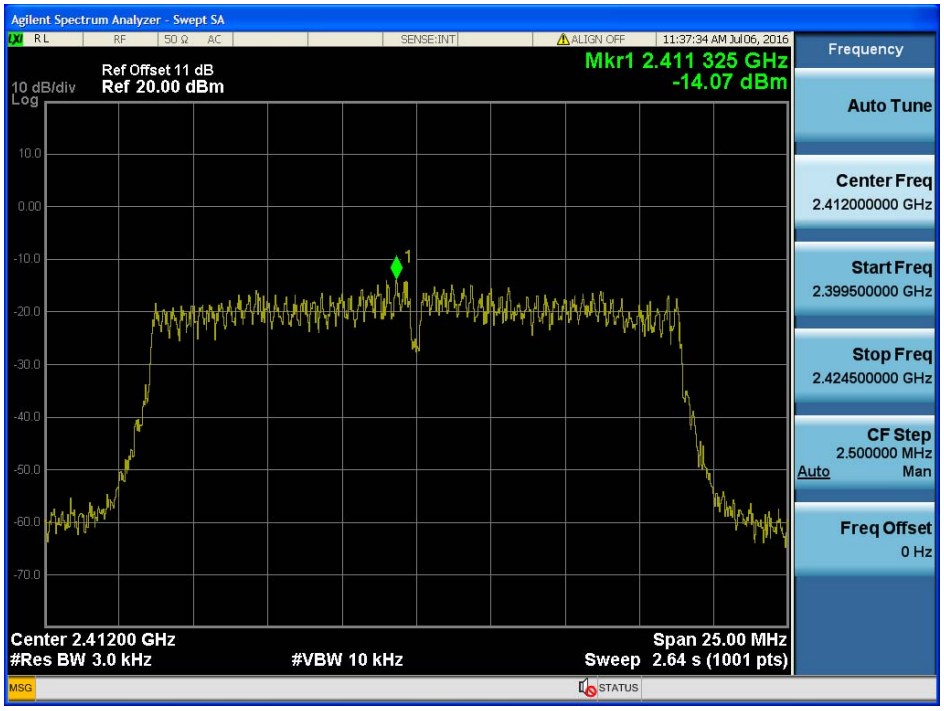


TX CH11

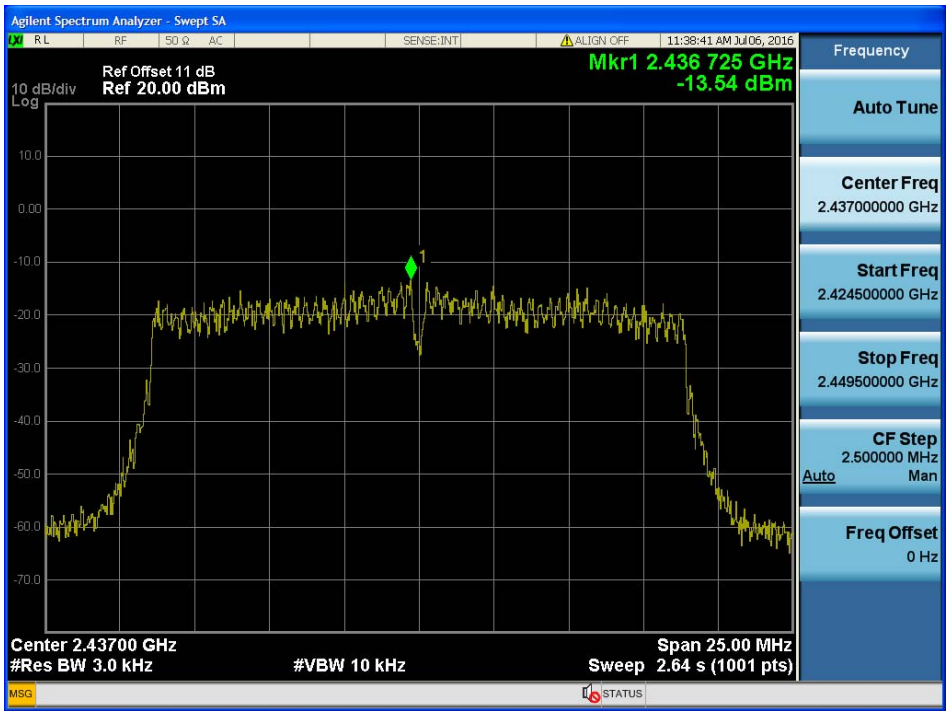


Test Mode: TX N-20M Mode_CH01/06/11				
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-14.07	0.04	8.00	Complies
2437	-13.54	0.04	8.00	Complies
2462	-12.89	0.05	8.00	Complies

TX CH01



TX CH06



TX CH11