

FCC Radio Test Report

FCC ID: Q87-RE7000

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

Project No. : 1602056
Equipment : WiFi repeater
Model Name : RE7000
Applicant : Linksys LLC
Address : 121 Theory Drive, Irvine, CA, 92617, USA

Date of Receipt : Feb. 18, 2016
Date of Test : Feb. 18, 2016 ~ Mar. 18, 2016
Issued Date : Mar. 21, 2016
Tested by : BTL Inc.

Testing Engineer : Rush Kao
(Rush Kao)

Technical Manager : Jeff Yang
(Jeff Yang)

Authorized Signatory : Andy Chiu
(Andy Chiu)

B T L I N C .

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
1 . CERTIFICATION	7
2 . SUMMARY OF TEST RESULTS	8
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	9
3 . GENERAL INFORMATION	10
3.1 GENERAL DESCRIPTION OF EUT	10
3.2 DESCRIPTION OF TEST MODES	12
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	15
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	16
3.5 DESCRIPTION OF SUPPORT UNITS	16
4 . EMC EMISSION TEST	17
4.1 CONDUCTED EMISSION MEASUREMENT	17
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	17
4.1.2 TEST PROCEDURE	17
4.1.3 DEVIATION FROM TEST STANDARD	17
4.1.4 TEST SETUP	18
4.1.5 EUT OPERATING CONDITIONS	18
4.1.6 EUT TEST CONDITIONS	18
4.1.7 TEST RESULTS	18
4.2 RADIATED EMISSION MEASUREMENT	19
4.2.1 RADIATED EMISSION LIMITS	19
4.2.2 TEST PROCEDURE	20
4.2.3 DEVIATION FROM TEST STANDARD	20
4.2.4 TEST SETUP	21
4.2.5 EUT OPERATING CONDITIONS	22
4.2.6 EUT TEST CONDITIONS	22
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	23
4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)	23
4.2.9 TEST RESULTS (1GHZ~10 TH HARMONIC)	23
4.3 BAND EDGE MEASUREMENT	24
4.3.1 RADIATED EMISSION LIMITS	24
4.3.2 TEST PROCEDURE	25
4.3.3 TEST SETUP LAYOUT	25
4.3.4 DEVIATION FROM TEST STANDARD	25
4.3.5 EUT OPERATING CONDITIONS	25
4.3.6 TEST RESULTS (BAND EDGE AND FUNDAMENTAL EMISSIONS)	25
5 . BANDWIDTH TEST	26
5.1 APPLIED PROCEDURES	26

Table of Contents	Page
5.1.1 TEST PROCEDURE	26
5.1.2 DEVIATION FROM STANDARD	26
5.1.3 TEST SETUP	26
5.1.4 EUT OPERATION CONDITIONS	26
5.1.5 EUT TEST CONDITIONS	26
5.1.6 TEST RESULTS	26
6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST	27
6.1 APPLIED PROCEDURES / LIMIT	27
6.1.1 TEST PROCEDURE	27
6.1.2 DEVIATION FROM STANDARD	27
6.1.3 TEST SETUP	27
6.1.4 EUT OPERATION CONDITIONS	27
6.1.5 EUT TEST CONDITIONS	27
6.1.6 TEST RESULTS	27
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	28
7.1 APPLIED PROCEDURES / LIMIT	28
7.1.1 TEST PROCEDURE	28
7.1.2 DEVIATION FROM STANDARD	28
7.1.3 TEST SETUP	28
7.1.4 EUT OPERATION CONDITIONS	28
7.1.5 EUT TEST CONDITIONS	28
7.1.6 TEST RESULTS	28
8 . POWER SPECTRAL DENSITY TEST	29
8.1 APPLIED PROCEDURES / LIMIT	29
8.1.1 TEST PROCEDURE	29
8.1.2 DEVIATION FROM STANDARD	29
8.1.3 TEST SETUP	29
8.1.4 EUT OPERATION CONDITIONS	29
8.1.5 EUT TEST CONDITIONS	29
8.1.6 TEST RESULTS	29
9 . MEASUREMENT INSTRUMENTS LIST	30
10 . EUT TEST PHOTO	32
ATTACHMENT A - CONDUCTED EMISSION	36
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	41
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	44
ATTACHMENT D - RADIATED EMISSION (1GHZ~10TH HARMONIC)	49
ATTACHMENT E - BAND EDGE AND FUNDAMENTAL EMISSIONS	74
ATTACHMENT F - BANDWIDTH	99

Table of Contents	Page
ATTACHMENT G – MAXIMUM PEAK CONDUCTED OUTPUT POWER	114
ATTACHMENT H - ANTENNA CONDUCTED SPURIOUS EMISSION	118
ATTACHMENT I - POWER SPECTRAL DENSITY	140

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1602056	Original Issue.	Mar. 21, 2016

1. CERTIFICATION

Equipment : WiFi repeater
Brand Name : LINKSYS
Model Name : RE7000
Applicant : Linksys LLC
Date of Test : Feb. 18, 2016 ~ Mar. 18, 2016
Test Sample : Engineering Sample
Standard(s) : FCC Part15, Subpart C (15.247) / ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1602056) 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			
Standard(s) Section	Test Item	Judgment	Under Limit
15.207	Conducted Emission	PASS	Limit Minimum passing margin is -4.41 dB at 0.7250 MHz
15.247(d)	Antenna conducted Spurious Emission	PASS	-----
15.247(a)(2)	6dB Bandwidth	PASS	-----
15.247(b)(3)	Peak Output Power	PASS	Limit Minimum passing margin is -3.96 dB at 2462 MHz
15.247(e)	Power Spectral Density	PASS	-----
15.203	Antenna Requirement	PASS	-----
15.209/15.205	Transmitter Radiated Emissions	PASS	Limit Minimum passing margin is -8.51 dB at 9848.000 MHz
15.247(d)	Band Edge Emissions	PASS	Limit Minimum passing margin is -1.91 dB at 2389.800 MHz

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:965108; FCC DN:TW1082)

No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Below 1 GHz):

CB11: (VCCI RN: R-4260; FCC RN:949005; FCC DN:TW1082; IC Assigned Code:20088)

No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Above 1 GHz):

CB11: (VCCI RN: G-868; FCC RN:949005; FCC DN:TW1082; IC Assigned Code:20088)

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 $y \pm U$, 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 emission test:

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

B. Radiated emission test:

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	30MHz ~ 200MHz	V	3.06
		30MHz ~ 200MHz	H	2.58
		200MHz ~ 1,000MHz	V	3.50
		200MHz ~ 1,000MHz	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
		6GHz ~ 18GHz	V	5.34
		6GHz ~ 18GHz	H	5.34

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} .

Note: unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	WiFi repeater	
Brand Name	LINKSYS	
Model Name	RE7000	
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: 16.91 dBm 802.11g: 26.04 dBm 802.11n(20MHz): 25.61 dBm 802.11n(40MHz): 25.53 dBm
Power Source	AC Mains Power Board: #1 Brand / Model: HON-KWANG / HK-XX24-A12 #2 Brand / Model: AMIGO / AMS151-1202000F	
Power Rating	I/P: 100-240V~50/60Hz 0.5A O/P: 12V---2.0A	

Note:

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

CH01 – CH11 for 802.11b, 802.11g, 802.11n(20MHz) CH03 – CH11 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	Aristotle	N/A	PCB	iPEX	3.48	TX/RX
2	Aristotle	N/A	PCB	iPEX	0.56	TX/RX

Note:

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

4.

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

Note:

For IEEE 802.11b mode (1TX/1RX):

The EUT supports the antenna with TX and RX diversity functions.

Both Ant. 1 and Ant. 2 support transmit and receive functions, but only one of them will be used at one time.

The Ant. 1 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11g/n mode (2TX/2RX):

Both Ant. 1 and Ant. 2 can be used as transmitting/receiving antenna.

Ant. 1 and Ant. 2 could both transmit/receive simultaneously.

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	Normal Link

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	Normal Link

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

For Band Edge 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

6dB Spectrum Bandwidth	
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

Maximum Conducted Output Power	
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

Antenna conducted Spurious Emission	
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

Power Spectral Density	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09

Note:

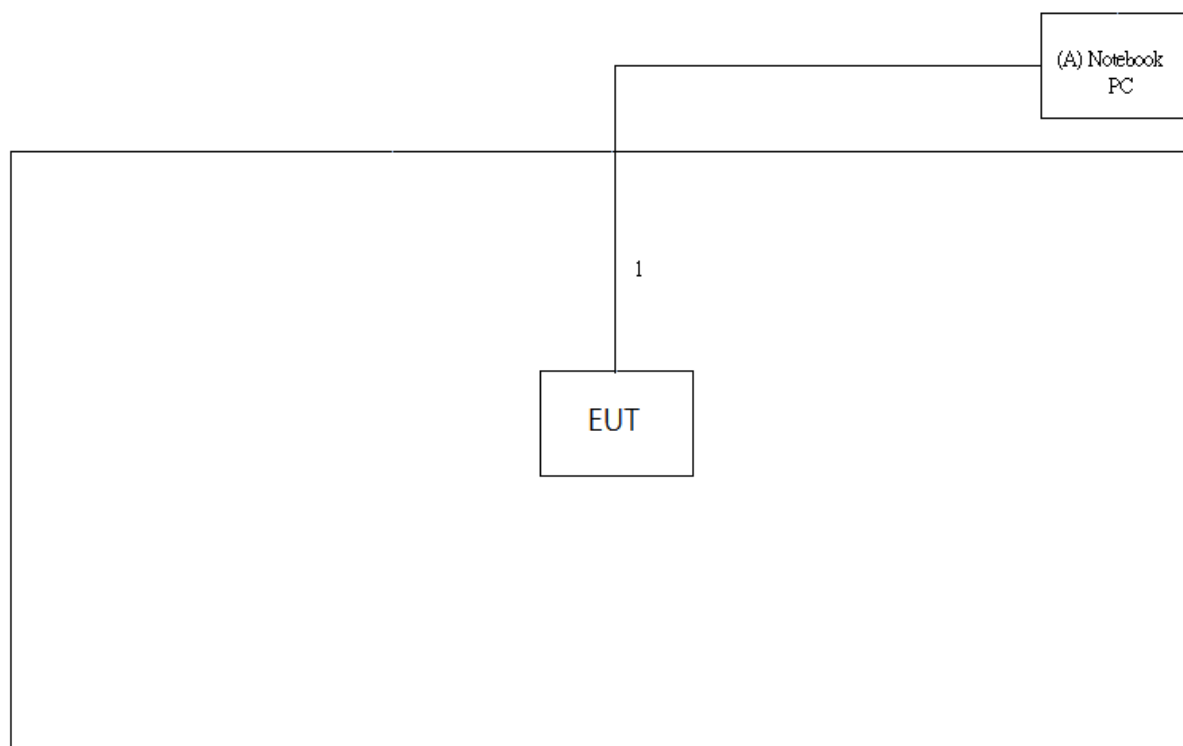
- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: DBPSK (1Mbps)
802.11g mode: OFDM (6Mbps)
802.11n HT20 mode : BPSK (13Mbps)
802.11n HT40 mode : BPSK (27Mbps)
For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.
- (4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.
- (5) The EUT was pre-tested on the positioned of each 3 axis. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

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	RT5x7xQA		
Frequency (MHz)	2412	2437	2462
802.11b	13	13	11
802.11g	13	12	12
802.11n (20MHz)	16	15	15
Frequency (MHz)	2422	2437	2452
802.11n (40MHz)	15	15	15

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
A	Notebook PC	Acer	ZH2	DOC	LXTCY050356360BDB 52500

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	8m	RJ45

Note:

(1) The support equipment was authorized by Declaration of Conformity (DOC).

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

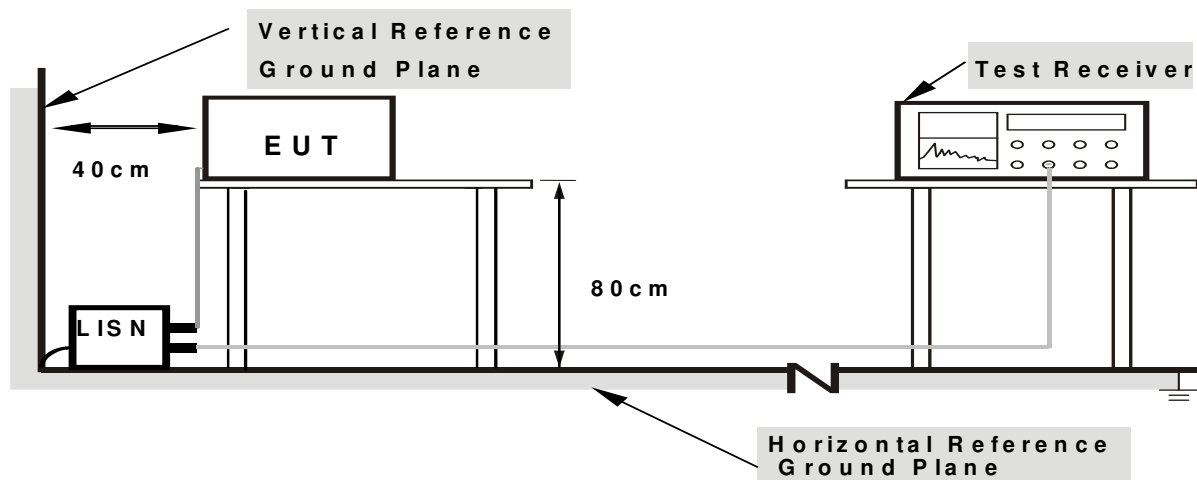
4.1.2 TEST PROCEDURE

- 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 cm 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: 65% 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

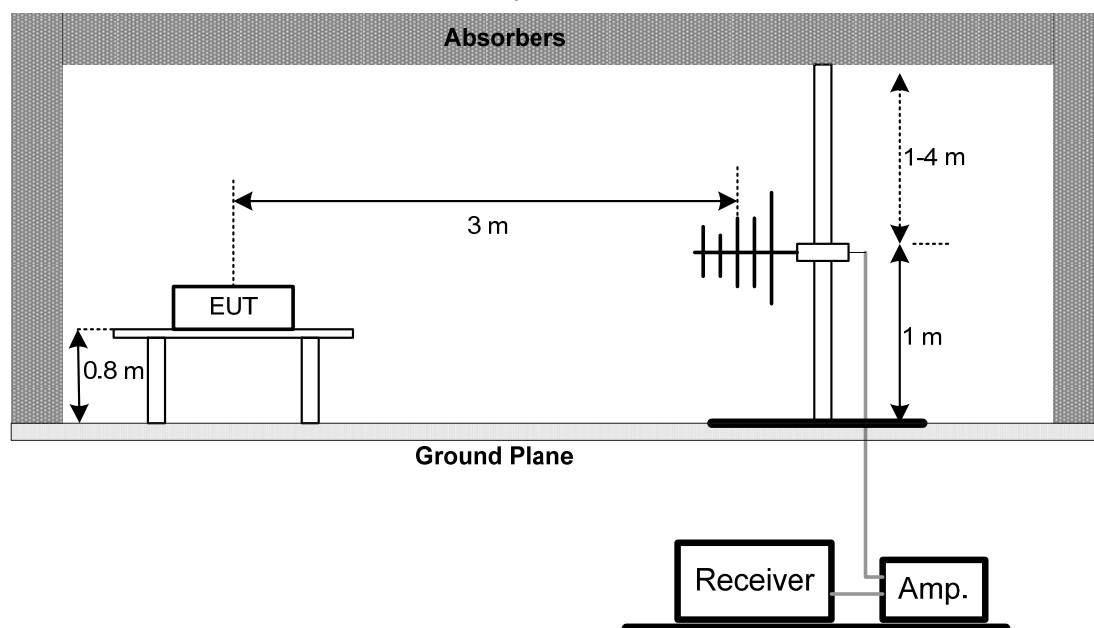
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The measuring distance of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

4.2.3 DEVIATION FROM TEST STANDARD

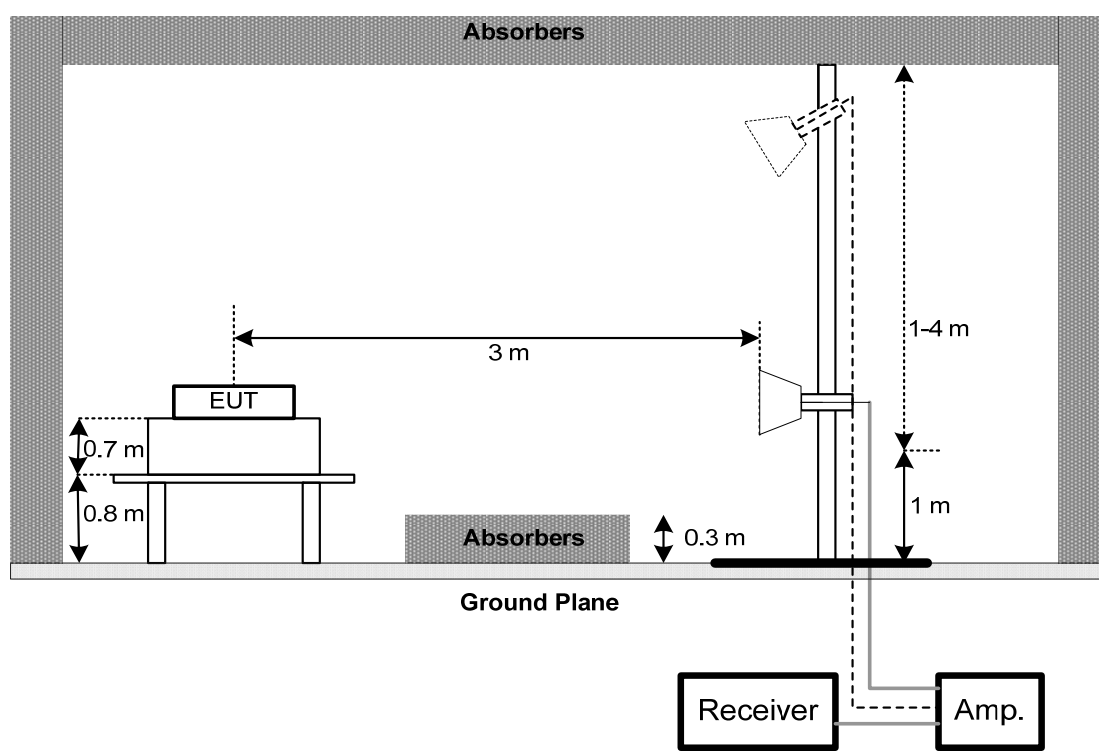
No deviation

4.2.4 TEST SETUP

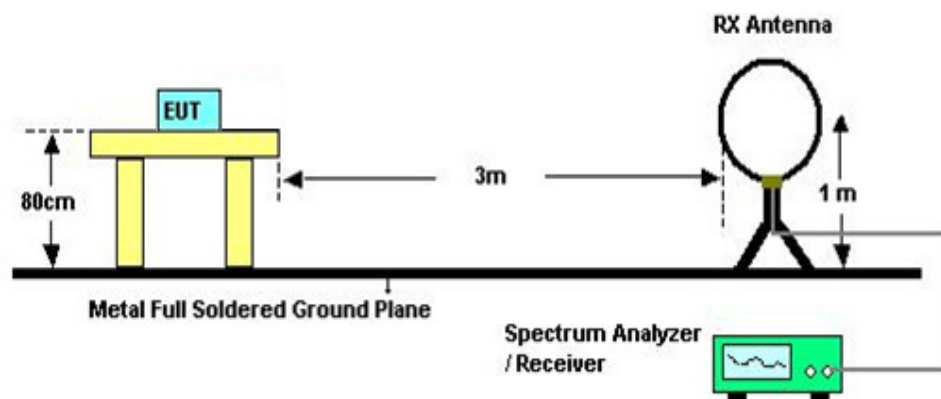
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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 = $40 \log (\text{specific distance} / \text{test distance})$ (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 (1GHZ~10TH HARMONIC)

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.

4.3 BAND EDGE MEASUREMENT

4.3.1 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

4.3.2 TEST PROCEDURE

For Radiated band edges Measurement:

- a. The test procedure is the same as section 4.2.2, only the frequency range investigated is limited to 100MHz around band edges.

For Radiated Out of Band Emission Measurement:

- a. Test was performed in accordance with KDB 558074 D01 v03r02 for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 10.1 Unwanted Emissions into Non-Restricted Frequency Bands Measurement Procedure.

4.3.3 TEST SETUP LAYOUT

For Radiated band edges Measurement:

This test setup layout is the same as that shown in section 4.2.4.

For Radiated Out of Band Emission Measurement:

This test setup layout is the same as that shown in section 4.2.4.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.3.6 TEST RESULTS (BAND EDGE AND FUNDAMENTAL EMISSIONS)

Please refer to the Attachment E.

Remark:

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

5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES

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

5.1.1 TEST PROCEDURE

- 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 = Auto.

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: 65% Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Attachment F.

6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

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

6.1.1 TEST PROCEDURE

- 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 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance v03r03.

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: 65% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Attachment G.

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: 65% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Attachment H.

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 was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 65% Test Voltage: AC 120V/60Hz

8.1.6 TEST RESULTS

Please refer to the Attachment I.

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. 14, 2016
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 09, 2016
4	Power Dividers	HP	11636A	8103	May 04, 2016
5	Measurement Software	EZ	EZ EMC (Version NB-03A)	N/A	N/A

Radiated Emission & Band edge Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jul. 30, 2016
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Apr. 20, 2016
3	Horn Antenna	Schwarzbeck	BBHA 9120	9120D-1333	May 20, 2016
4	Pre-Amplifier	Anritsu	MH648A	M92649	Jun. 16, 2016
5	Pre-Amplifier	Agilent	8449B	3008A01714	Apr. 14, 2016
6	Test Cable	LMR	LMR-400	01(10M)	May 12, 2016
7	Test Cable	LMR	LMR-400	01(3M)	May 12, 2016
8	Test Cable	Harbour industries	27478LL142	1M	May 13, 2016
9	Test Cable	Harbour industries	27478LL142	3M	May 13, 2016
10	Test Cable	AISI	S104-SMAP-1	8M	May 13, 2016
11	Spectrum Analyzer	Agilent	N9020A	MY51160196	Aug. 02, 2016
12	EMI Test Receiver	R&S	ESCI	100080	May 13, 2016
13	Measurement Software	Farad	EZ EMC (Version NB-03A)	N/A	N/A
14	Loop Ant	EMCO	6502	42960	Nov.15.2016

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Jan. 17, 2017

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	May 19, 2016
2	Power Meter Sensor	Anritsu	MA2491A	034138	May 18, 2016
3	Spectrum Analyzer	R&S	FSP-40	100129	Jan. 17, 2017

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Jan. 17, 2017

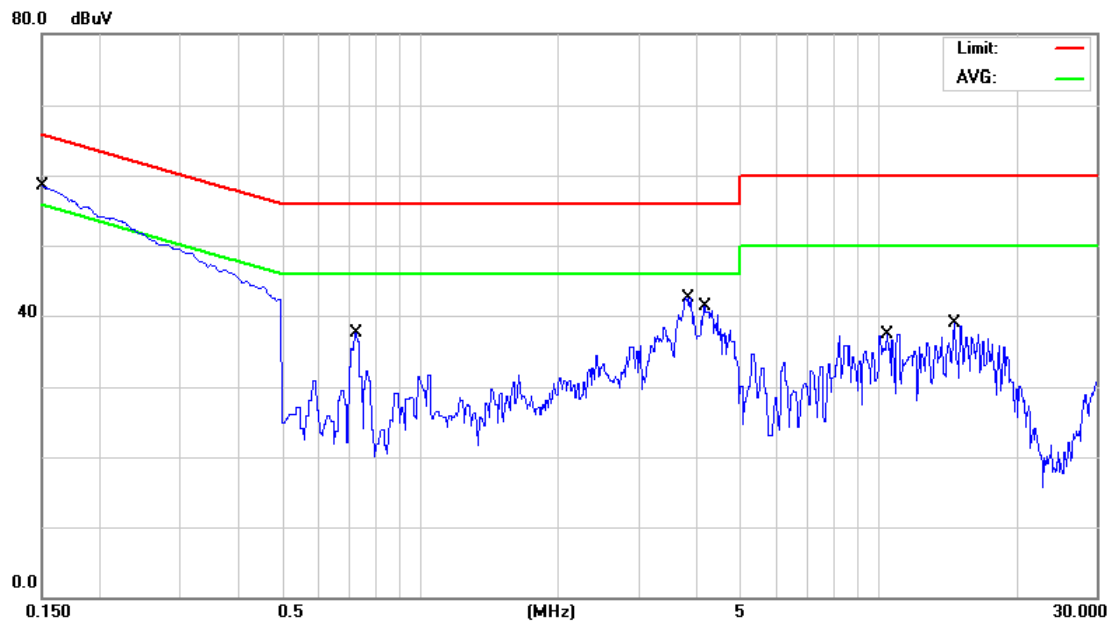
Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Jan. 17, 2017

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

ATTACHMENT A - CONDUCTED EMISSION

Test Mode: Normal Link_Adapter: HON-KWANG / HK-XX24-A12

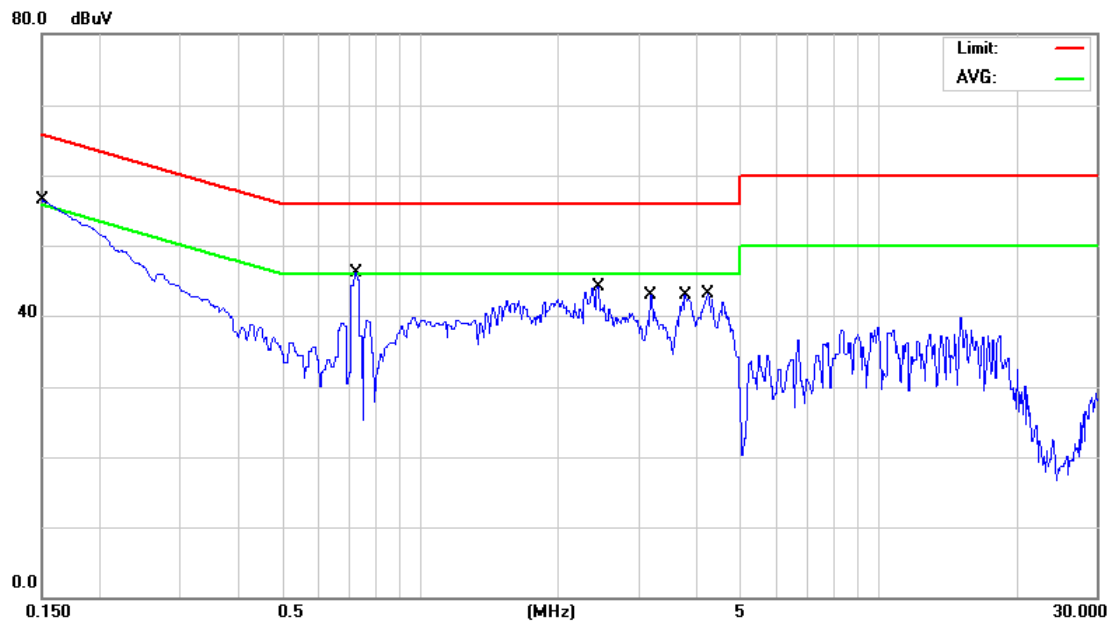
Line



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1500	28.30	9.67	37.97	65.99	-28.02	QP	
2		0.1500	14.30	9.67	23.97	55.99	-32.02	AVG	
3		0.7250	26.30	9.69	35.99	56.00	-20.01	QP	
4		0.7250	21.20	9.69	30.89	46.00	-15.11	AVG	
5		3.8390	31.40	9.84	41.24	56.00	-14.76	QP	
6	*	3.8390	22.00	9.84	31.84	46.00	-14.16	AVG	
7		4.1630	25.10	9.85	34.95	56.00	-21.05	QP	
8		4.1630	16.60	9.85	26.45	46.00	-19.55	AVG	
9		10.4000	24.90	9.94	34.84	60.00	-25.16	QP	
10		10.4000	17.50	9.94	27.44	50.00	-22.56	AVG	
11		14.6000	24.00	9.85	33.85	60.00	-26.15	QP	
12		14.6000	16.10	9.85	25.95	50.00	-24.05	AVG	

Test Mode: Normal Link_Adapter: HON-KWANG / HK-XX24-A12

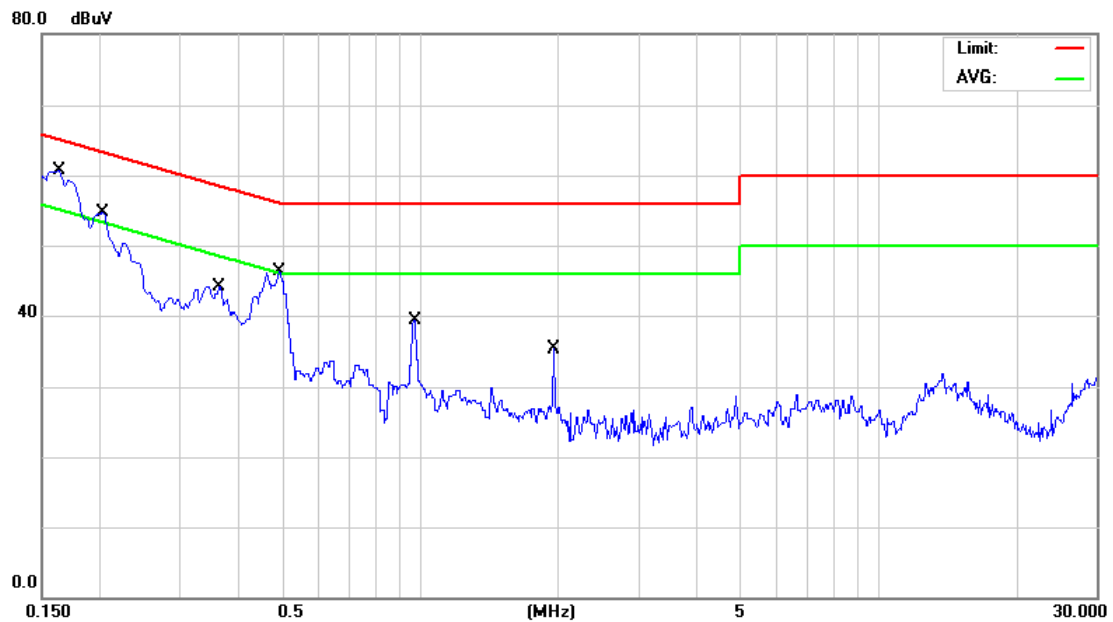
Neutral



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1500	28.30	9.66	37.96	65.99	-28.03	QP	
2		0.1500	12.20	9.66	21.86	55.99	-34.13	AVG	
3		0.7250	35.70	9.69	45.39	56.00	-10.61	QP	
4	*	0.7250	31.90	9.69	41.59	46.00	-4.41	AVG	
5		2.4350	28.80	9.76	38.56	56.00	-17.44	QP	
6		2.4350	22.60	9.76	32.36	46.00	-13.64	AVG	
7		3.1820	26.30	9.80	36.10	56.00	-19.90	QP	
8		3.1820	16.00	9.80	25.80	46.00	-20.20	AVG	
9		3.7850	31.00	9.83	40.83	56.00	-15.17	QP	
10		3.7850	23.10	9.83	32.93	46.00	-13.07	AVG	
11		4.2350	27.40	9.84	37.24	56.00	-18.76	QP	
12		4.2350	19.20	9.84	29.04	46.00	-16.96	AVG	

Test Mode: Normal Link_Adapter: AMIGO / AMS151-1202000F

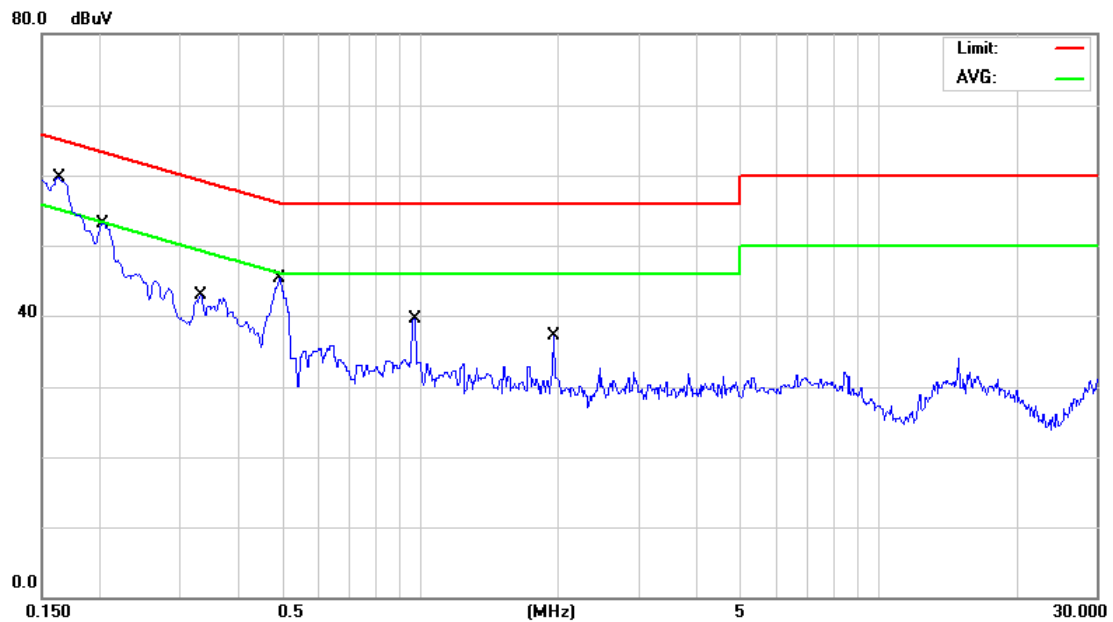
Line



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1626	44.20	9.67	53.87	65.32	-11.45	QP	
2		0.1626	28.40	9.67	38.07	55.32	-17.25	AVG	
3		0.2031	40.20	9.66	49.86	63.48	-13.62	QP	
4		0.2031	26.20	9.66	35.86	53.48	-17.62	AVG	
5		0.3670	26.50	9.66	36.16	58.57	-22.41	QP	
6		0.3670	17.80	9.66	27.46	48.57	-21.11	AVG	
7		0.4923	34.00	9.67	43.67	56.13	-12.46	QP	
8		0.4923	26.20	9.67	35.87	46.13	-10.26	AVG	
9		0.9770	28.70	9.70	38.40	56.00	-17.60	QP	
10	*	0.9770	27.30	9.70	37.00	46.00	-9.00	AVG	
11		1.9490	24.20	9.76	33.96	56.00	-22.04	QP	
12		1.9490	23.40	9.76	33.16	46.00	-12.84	AVG	

Test Mode: Normal Link_Adapter: AMIGO / AMS151-1202000F

Neutral



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1626	43.00	9.66	52.66	65.32	-12.66	QP	
2		0.1626	26.20	9.66	35.86	55.32	-19.46	AVG	
3		0.2039	39.50	9.66	49.16	63.45	-14.29	QP	
4		0.2039	23.90	9.66	33.56	53.45	-19.89	AVG	
5		0.3334	22.00	9.67	31.67	59.36	-27.69	QP	
6		0.3334	12.90	9.67	22.57	49.36	-26.79	AVG	
7		0.4937	32.40	9.68	42.08	56.11	-14.03	QP	
8		0.4937	25.00	9.68	34.68	46.11	-11.43	AVG	
9		0.9770	28.80	9.70	38.50	56.00	-17.50	QP	
10	*	0.9770	27.60	9.70	37.30	46.00	-8.70	AVG	
11		1.9490	25.50	9.75	35.25	56.00	-20.75	QP	
12		1.9490	23.90	9.75	33.65	46.00	-12.35	AVG	

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

Test Mode:	TX_Adapter: HON-KWANG / HK-XX24-A12
------------	-------------------------------------

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.2296	0°	41.68	11.91	53.59	80.38	-26.80	AVG
0.2296	0°	43.1	11.91	55.01	100.38	-45.38	PK
0.3092	0°	39.31	11.91	51.22	77.80	-26.58	AVG
0.3092	0°	40.72	11.91	52.63	97.80	-45.17	PK
1.1848	0°	27.91	11.80	39.71	66.13	-26.42	QP
2.4186	0°	20.92	11.80	32.72	69.54	-36.82	QP
4.8464	0°	16.28	11.80	28.08	69.54	-41.46	QP
7.9110	0°	12.87	11.80	24.67	69.54	-44.87	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.1500	90°	45.22	12.03	57.25	84.08	-26.84	AVG
0.1500	90°	47.12	12.03	59.15	104.08	-44.94	PK
0.3888	90°	36.48	11.80	48.28	75.81	-27.53	AVG
0.3888	90°	38.05	11.80	49.85	95.81	-45.96	PK
1.0654	90°	28.54	11.80	40.34	67.05	-26.71	QP
2.6972	90°	19.98	11.80	31.78	69.54	-37.76	QP
5.0056	90°	15.26	11.97	27.23	69.54	-42.31	QP
8.7468	90°	11.9	11.97	23.87	69.54	-45.67	QP

Test Mode:	TX_Adapter: AMIGO / AMS151-1202000F
------------	-------------------------------------

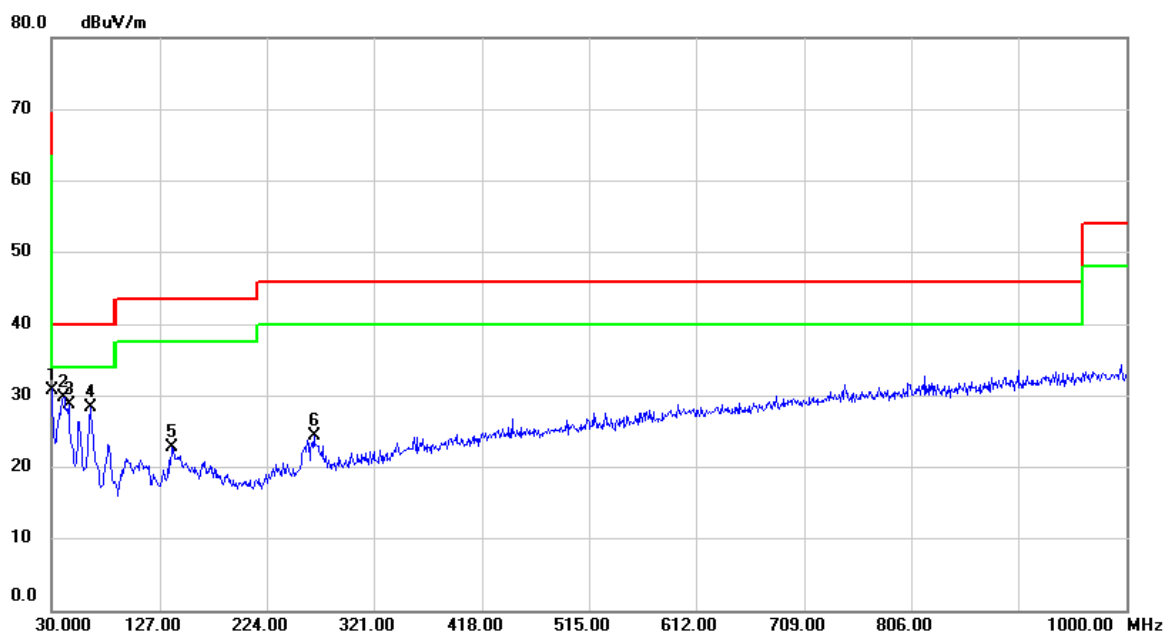
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.5480	0°	35.35	11.82	47.17	72.83	-25.66	QP
1.7818	0°	23.92	11.82	35.74	69.54	-33.80	QP
3.9310	0°	18.34	11.65	29.99	69.54	-39.55	QP
6.7568	0°	13.41	11.65	25.06	69.54	-44.48	QP
9.5826	0°	11.13	11.24	22.37	69.54	-47.17	QP
14.1198	0°	9.54	11.24	20.78	69.54	-48.76	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.1500	90°	45.38	12.03	57.41	84.08	-26.68	AVG
0.1500	90°	47.16	12.03	59.19	104.08	-44.90	PK
0.7072	90°	33.53	11.88	45.41	70.61	-25.20	QP
2.1400	90°	21.38	11.88	33.26	69.54	-36.28	QP
3.4534	90°	17.79	11.49	29.28	69.54	-40.26	QP
6.1200	90°	15.19	11.49	26.68	69.54	-42.86	QP
14.1596	90°	9.97	11.17	21.14	69.54	-48.40	QP

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

Test Mode: TX_Adapter: HON-KWANG / HK-XX24-A12

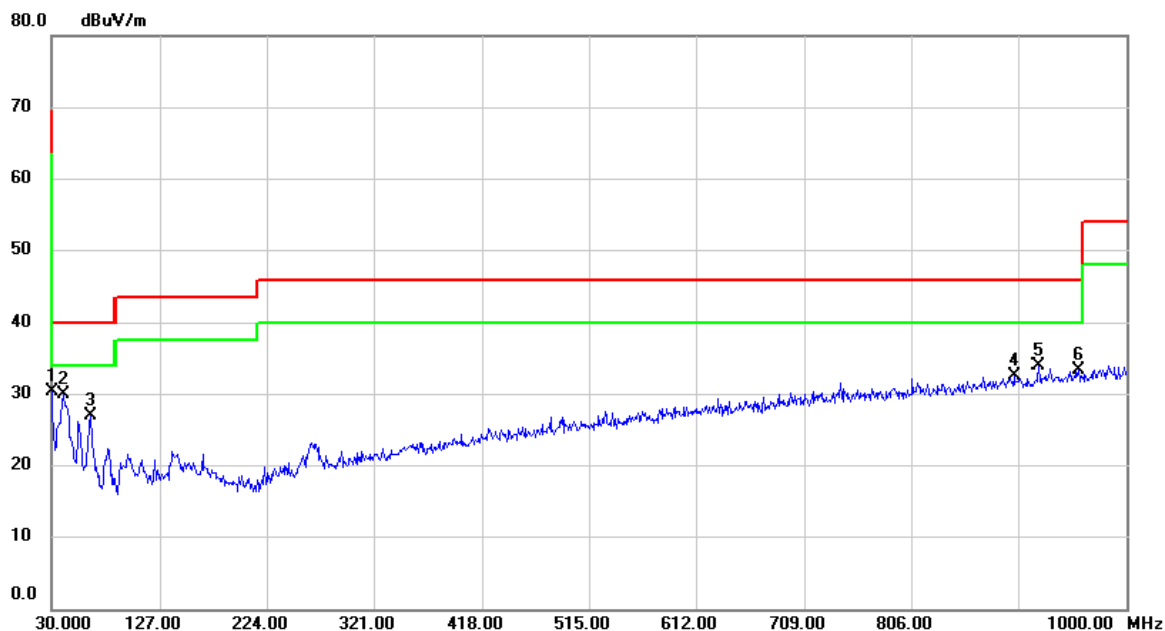
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	30.0000	39.71	-8.91	30.80	40.00	-9.20	peak	
2		40.6700	38.34	-8.61	29.73	40.00	-10.27	peak	
3		45.5200	36.88	-8.25	28.63	40.00	-11.37	peak	
4		64.9200	37.92	-9.64	28.28	40.00	-11.72	peak	
5		138.6400	31.51	-8.77	22.74	43.50	-20.76	peak	
6		266.6800	32.86	-8.51	24.35	46.00	-21.65	peak	

Test Mode: TX_Adapter: HON-KWANG / HK-XX24-A12

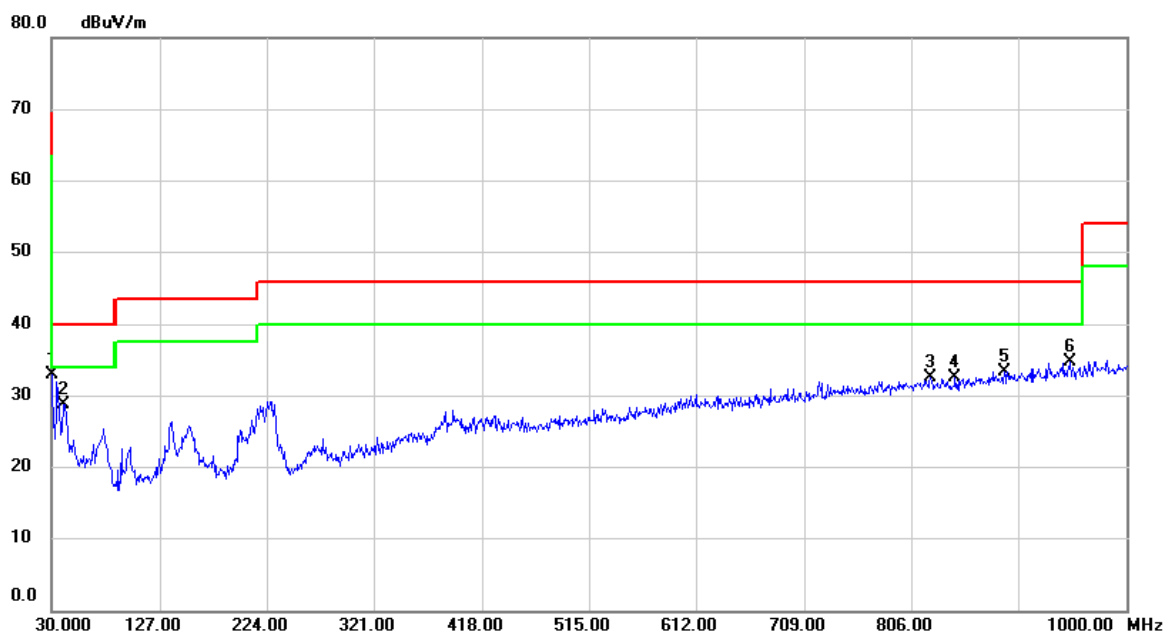
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	30.0000	39.23	-8.91	30.32	40.00	-9.68	peak	
2		40.6700	38.52	-8.61	29.91	40.00	-10.09	peak	
3		64.9200	36.63	-9.64	26.99	40.00	-13.01	peak	
4		899.1200	27.98	4.60	32.58	46.00	-13.42	peak	
5		920.4600	28.88	4.97	33.85	46.00	-12.15	peak	
6		956.3500	27.75	5.57	33.32	46.00	-12.68	peak	

Test Mode: TX_Adapter: AMIGO / AMS151-1202000F

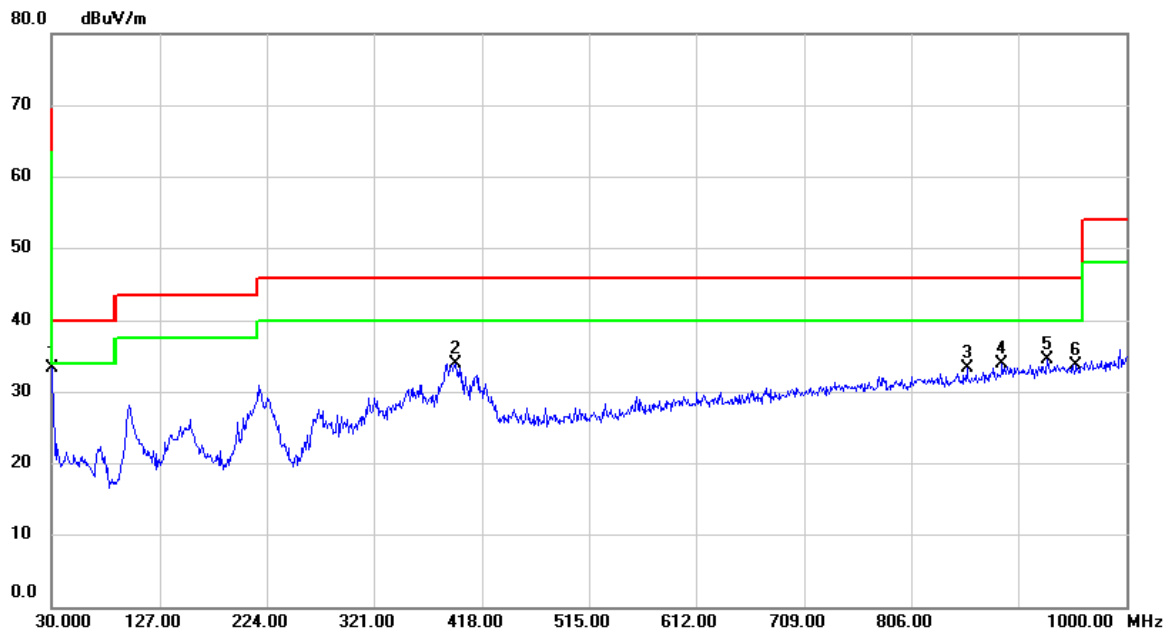
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	30.0000	41.74	-8.91	32.83	40.00	-7.17	peak	
2		40.6700	37.25	-8.61	28.64	40.00	-11.36	peak	
3		823.4600	29.21	3.21	32.42	46.00	-13.58	peak	
4		845.7700	29.02	3.54	32.56	46.00	-13.44	peak	
5		890.3900	28.94	4.42	33.36	46.00	-12.64	peak	
6		948.5900	29.21	5.45	34.66	46.00	-11.34	peak	

Test Mode: TX_Adapter: AMIGO / AMS151-1202000F

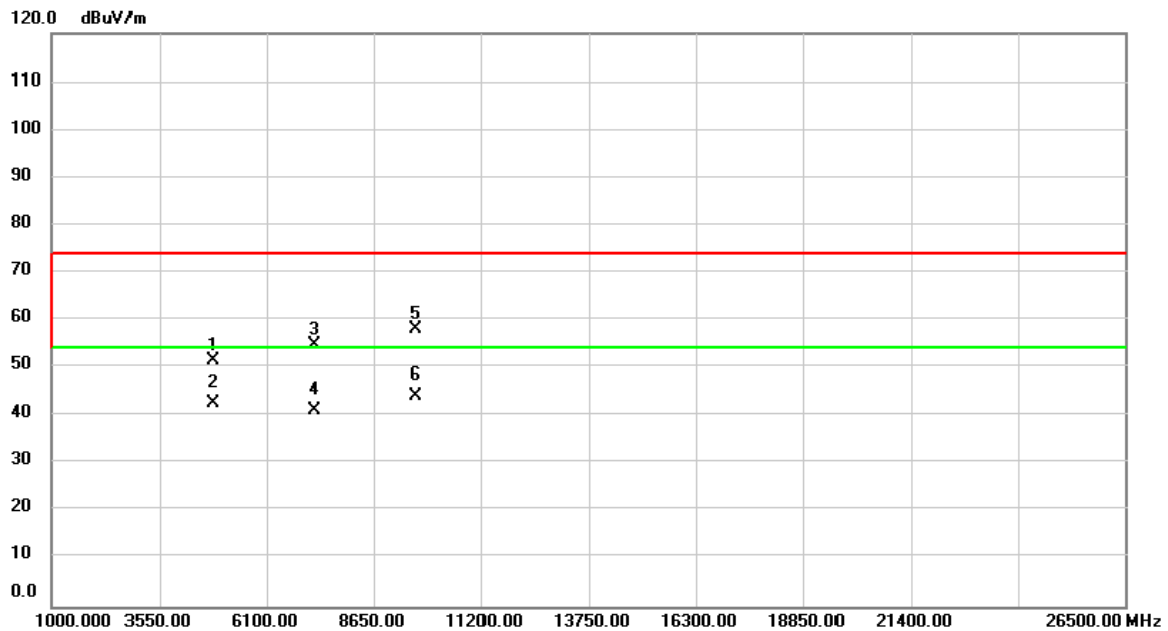
Horizontal



ATTACHMENT D - RADIATED EMISSION (1GHZ~10TH HARMONIC)

Test Mode: TX B MODE 2412MHz

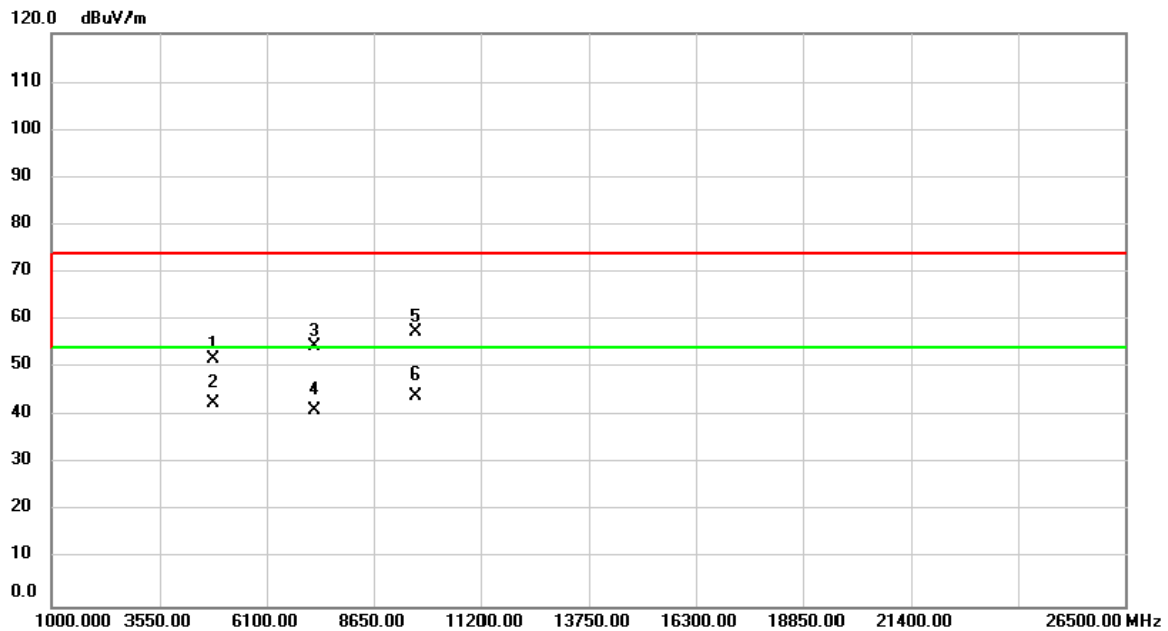
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4823.925	61.03	-9.63	51.40	74.00	-22.60	peak	
2		4824.000	52.39	-9.63	42.76	54.00	-11.24	AVG	
3		7236.000	58.40	-3.68	54.72	74.00	-19.28	peak	
4		7236.000	44.92	-3.68	41.24	54.00	-12.76	AVG	
5		9648.000	58.91	-0.91	58.00	74.00	-16.00	peak	
6	*	9648.000	45.11	-0.91	44.20	54.00	-9.80	AVG	

Test Mode: TX B MODE 2412MHz

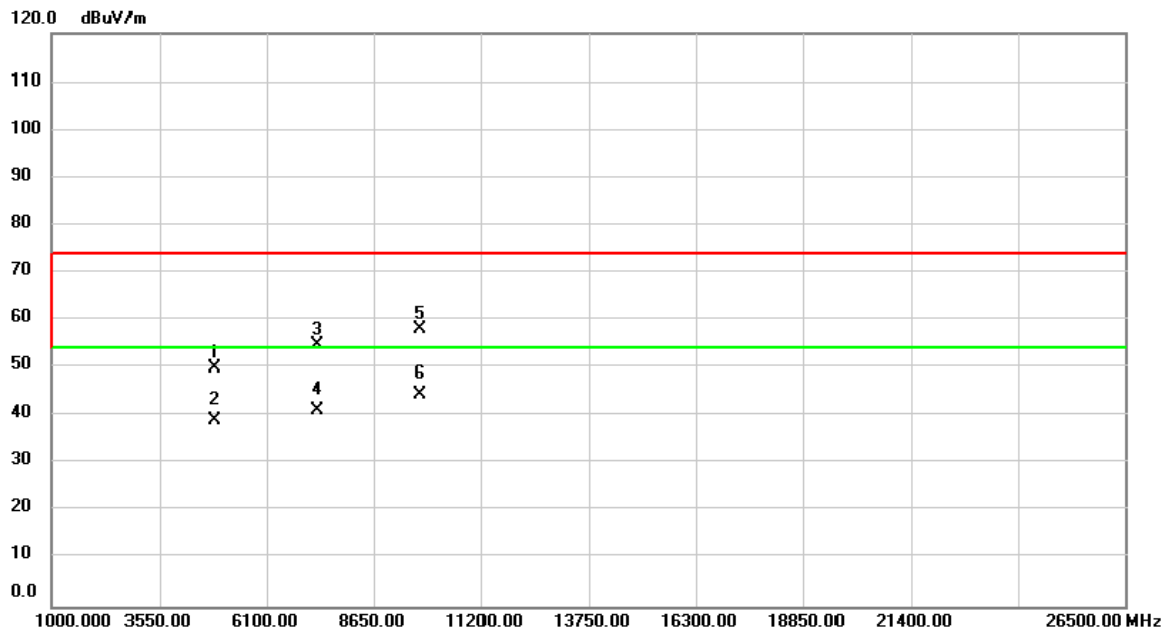
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4823.715	61.51	-9.63	51.88	74.00	-22.12	peak	
2		4824.000	52.33	-9.63	42.70	54.00	-11.30	AVG	
3		7236.000	58.03	-3.68	54.35	74.00	-19.65	peak	
4		7236.000	44.95	-3.68	41.27	54.00	-12.73	AVG	
5		9648.000	58.42	-0.91	57.51	74.00	-16.49	peak	
6	*	9648.000	45.13	-0.91	44.22	54.00	-9.78	AVG	

Test Mode: TX B MODE 2437MHz

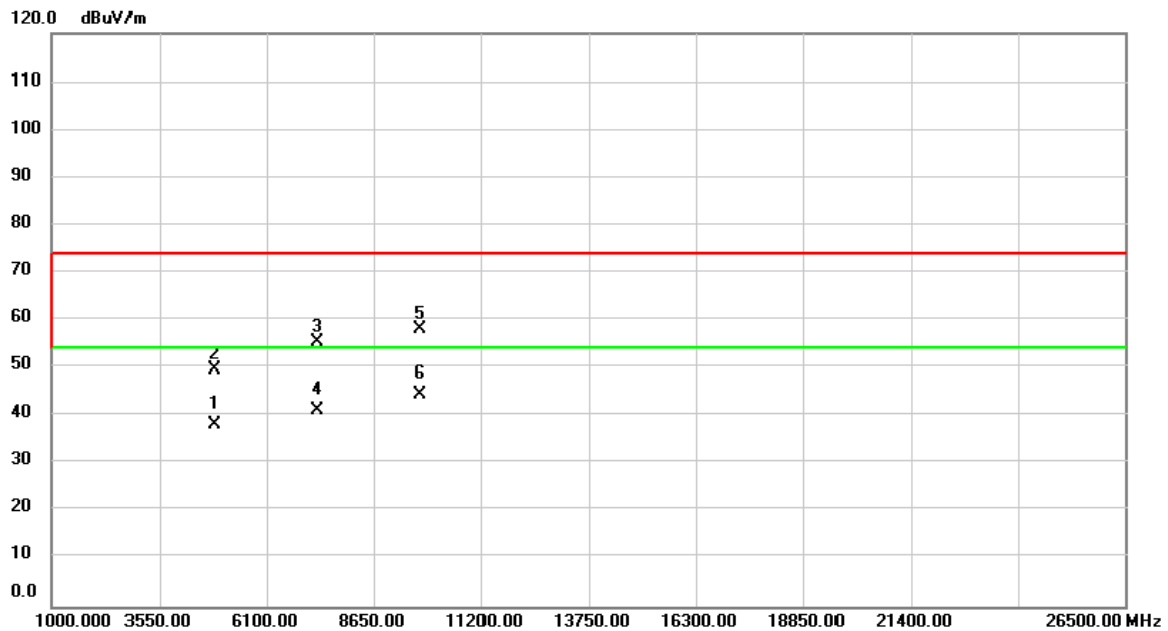
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4874.000	59.40	-9.44	49.96	74.00	-24.04	peak	
2		4874.000	48.73	-9.44	39.29	54.00	-14.71	AVG	
3		7311.000	58.40	-3.50	54.90	74.00	-19.10	peak	
4		7311.000	44.89	-3.50	41.39	54.00	-12.61	AVG	
5		9748.000	58.36	-0.42	57.94	74.00	-16.06	peak	
6	*	9748.000	44.97	-0.42	44.55	54.00	-9.45	AVG	

Test Mode: TX B MODE 2437MHz

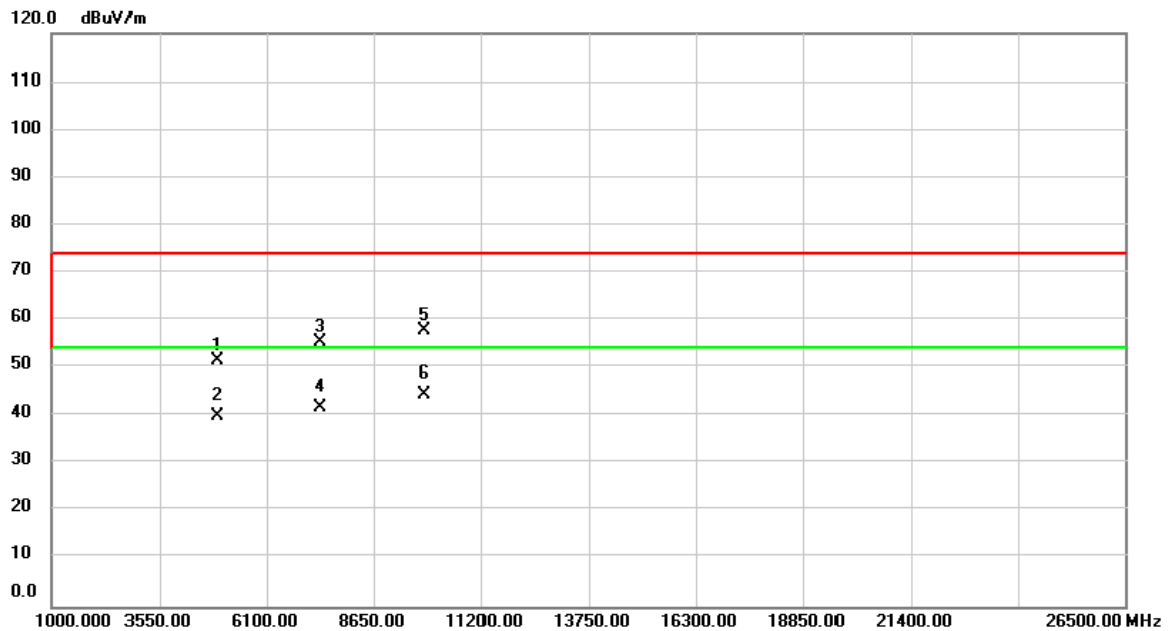
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4874.000	47.66	-9.44	38.22	54.00	-15.78	AVG	
2		4874.570	59.10	-9.44	49.66	74.00	-24.34	peak	
3		7311.000	59.00	-3.50	55.50	74.00	-18.50	peak	
4		7311.000	44.88	-3.50	41.38	54.00	-12.62	AVG	
5		9748.000	58.38	-0.42	57.96	74.00	-16.04	peak	
6	*	9748.000	44.96	-0.42	44.54	54.00	-9.46	AVG	

Test Mode: TX B MODE 2462MHz

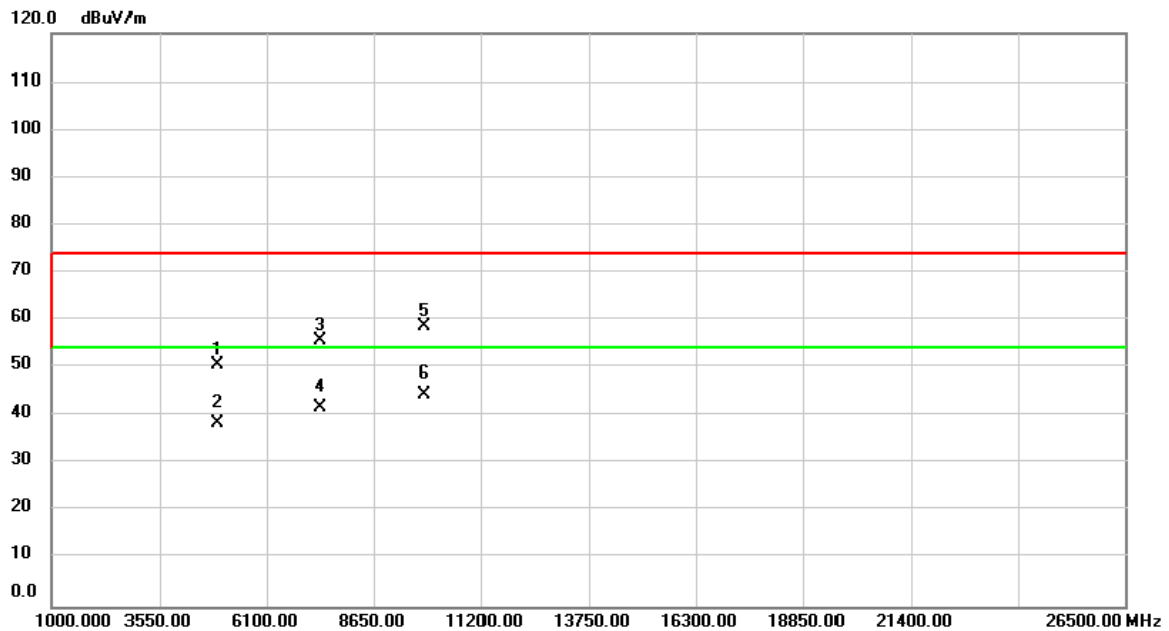
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4924.000	60.58	-9.25	51.33	74.00	-22.67	peak	
2		4924.000	49.44	-9.25	40.19	54.00	-13.81	AVG	
3		7386.000	58.73	-3.33	55.40	74.00	-18.60	peak	
4		7386.000	45.21	-3.33	41.88	54.00	-12.12	AVG	
5		9848.000	57.81	0.06	57.87	74.00	-16.13	peak	
6	*	9848.000	44.54	0.06	44.60	54.00	-9.40	AVG	

Test Mode:	TX B MODE 2462MHz
------------	-------------------

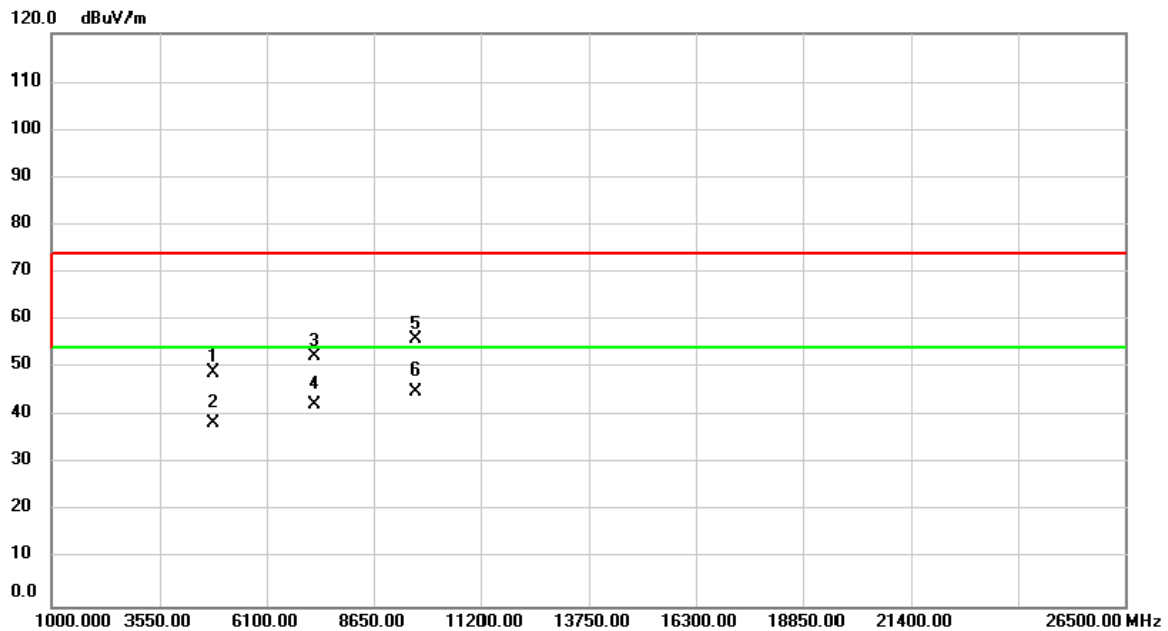
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4924.000	59.90	-9.25	50.65	74.00	-23.35	peak	
2		4924.000	47.84	-9.25	38.59	54.00	-15.41	AVG	
3		7386.000	59.03	-3.33	55.70	74.00	-18.30	peak	
4		7386.000	45.23	-3.33	41.90	54.00	-12.10	AVG	
5		9848.000	58.63	0.06	58.69	74.00	-15.31	peak	
6	*	9848.000	44.52	0.06	44.58	54.00	-9.42	AVG	

Test Mode: TX G MODE 2412MHz

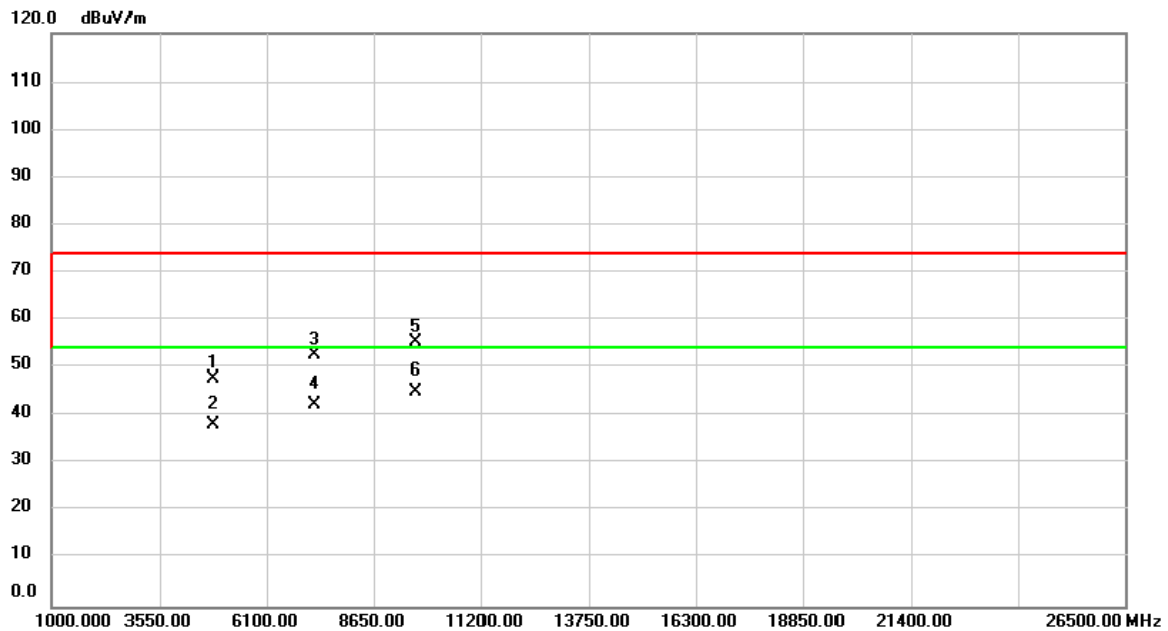
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4824.000	58.79	-9.63	49.16	74.00	-24.84	peak	
2		4824.000	48.25	-9.63	38.62	54.00	-15.38	AVG	
3		7236.000	56.14	-3.68	52.46	74.00	-21.54	peak	
4		7236.000	46.22	-3.68	42.54	54.00	-11.46	AVG	
5		9648.000	56.89	-0.91	55.98	74.00	-18.02	peak	
6	*	9648.000	46.19	-0.91	45.28	54.00	-8.72	AVG	

Test Mode: TX G MODE 2412MHz

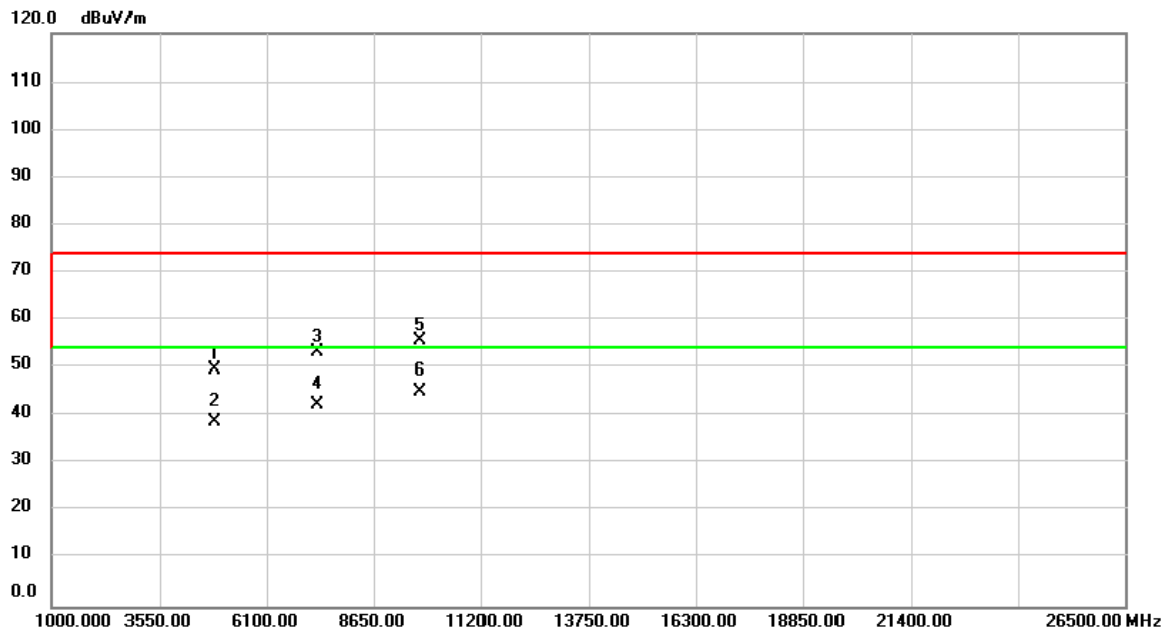
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4824.000	57.49	-9.63	47.86	74.00	-26.14	peak	
2		4824.000	47.85	-9.63	38.22	54.00	-15.78	AVG	
3		7236.000	56.39	-3.68	52.71	74.00	-21.29	peak	
4		7236.000	46.25	-3.68	42.57	54.00	-11.43	AVG	
5		9648.000	56.22	-0.91	55.31	74.00	-18.69	peak	
6	*	9648.000	46.21	-0.91	45.30	54.00	-8.70	AVG	

Test Mode: TX G MODE 2437MHz

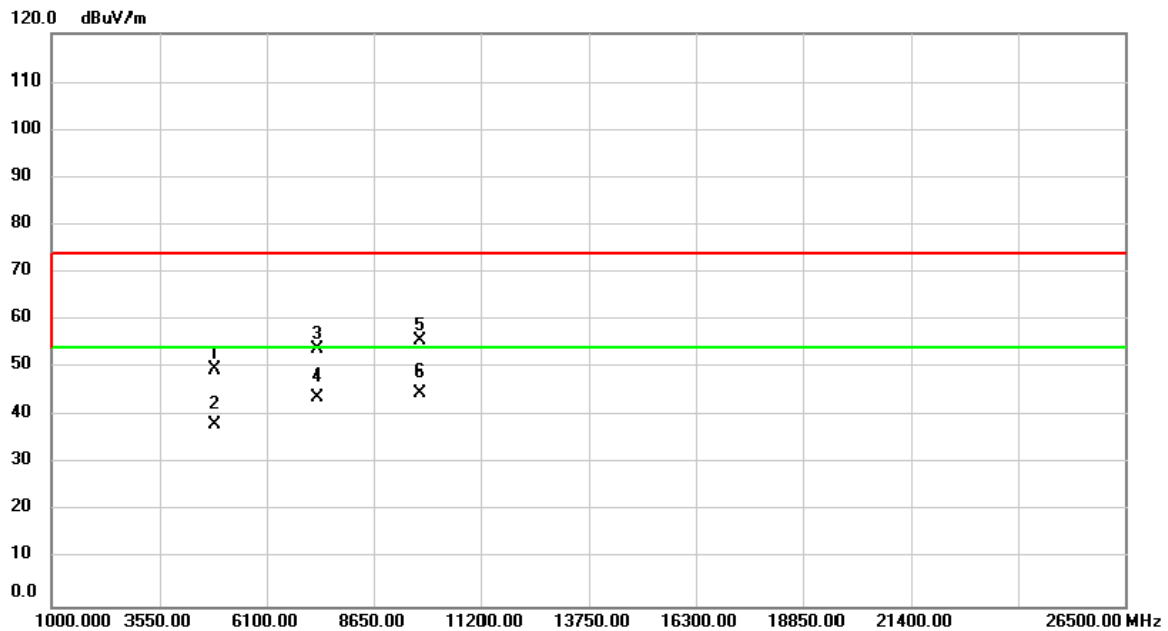
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4874.000	58.96	-9.44	49.52	74.00	-24.48	peak	
2		4874.000	48.31	-9.44	38.87	54.00	-15.13	AVG	
3		7311.000	56.74	-3.50	53.24	74.00	-20.76	peak	
4		7311.000	45.95	-3.50	42.45	54.00	-11.55	AVG	
5		9748.000	56.15	-0.42	55.73	74.00	-18.27	peak	
6	*	9748.000	45.69	-0.42	45.27	54.00	-8.73	AVG	

Test Mode: TX G MODE 2437MHz

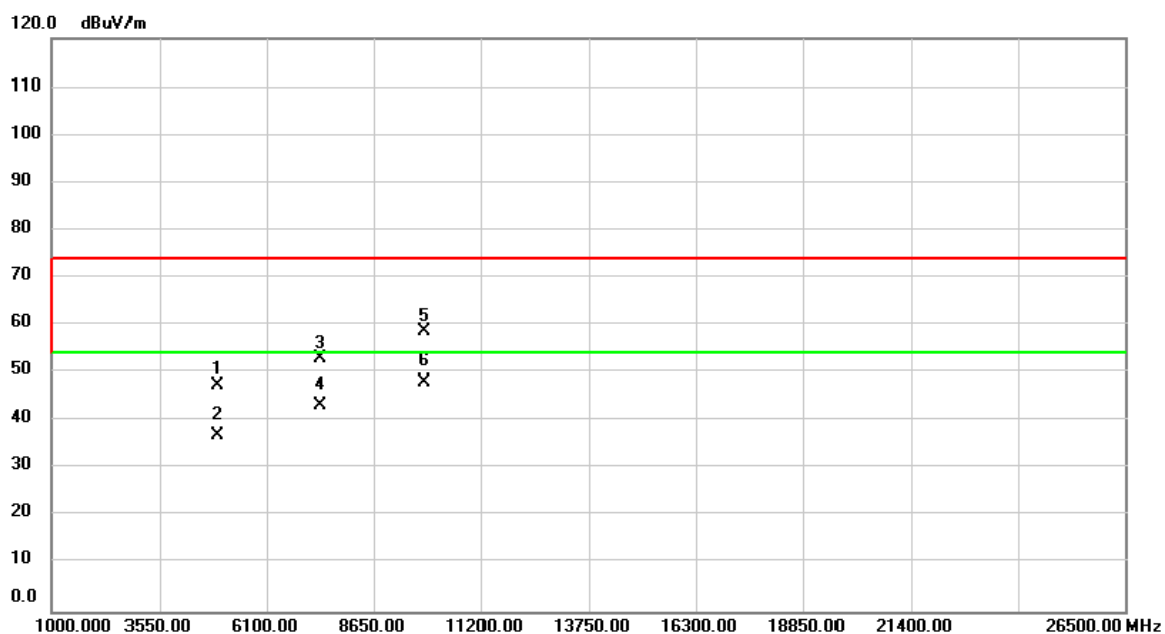
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4874.000	58.98	-9.44	49.54	74.00	-24.46	peak	
2		4874.000	47.69	-9.44	38.25	54.00	-15.75	AVG	
3		7311.000	57.49	-3.50	53.99	74.00	-20.01	peak	
4		7311.000	47.31	-3.50	43.81	54.00	-10.19	AVG	
5		9748.000	56.18	-0.42	55.76	74.00	-18.24	peak	
6	*	9748.000	45.26	-0.42	44.84	54.00	-9.16	AVG	

Test Mode:	TX G MODE 2462MHz
------------	-------------------

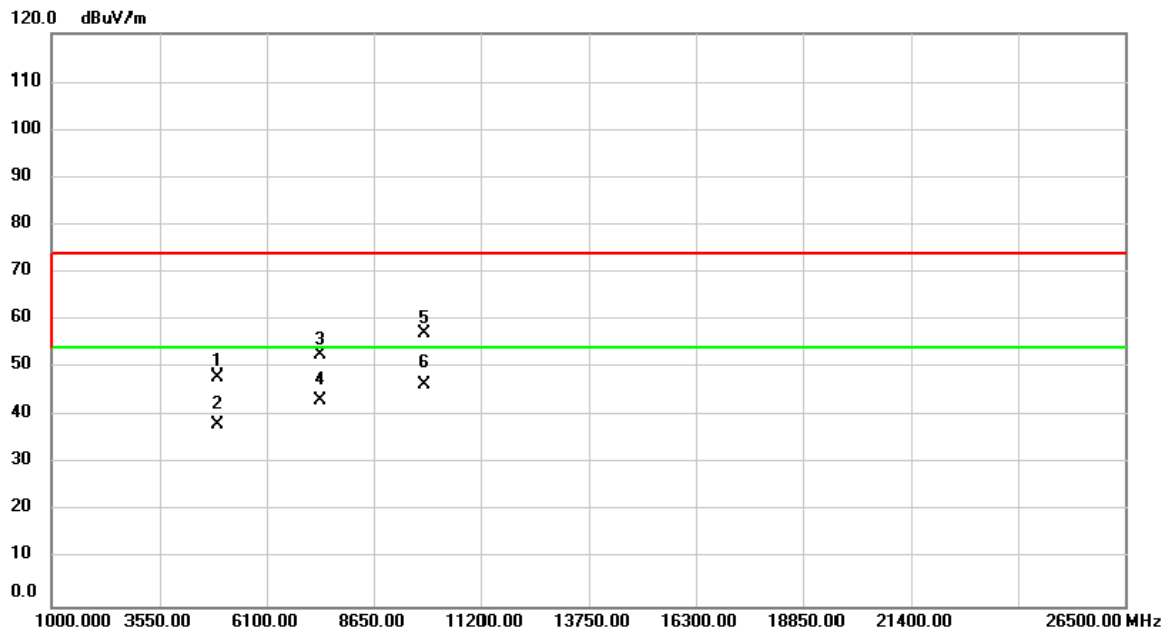
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	56.70	-9.25	47.45	74.00	-26.55	peak	
2		4924.000	46.19	-9.25	36.94	54.00	-17.06	AVG	
3		7386.000	56.18	-3.33	52.85	74.00	-21.15	peak	
4		7386.000	46.80	-3.33	43.47	54.00	-10.53	AVG	
5		9848.000	58.46	0.06	58.52	74.00	-15.48	peak	
6	*	9848.000	48.13	0.06	48.19	54.00	-5.81	AVG	

Test Mode: TX G MODE 2462MHz

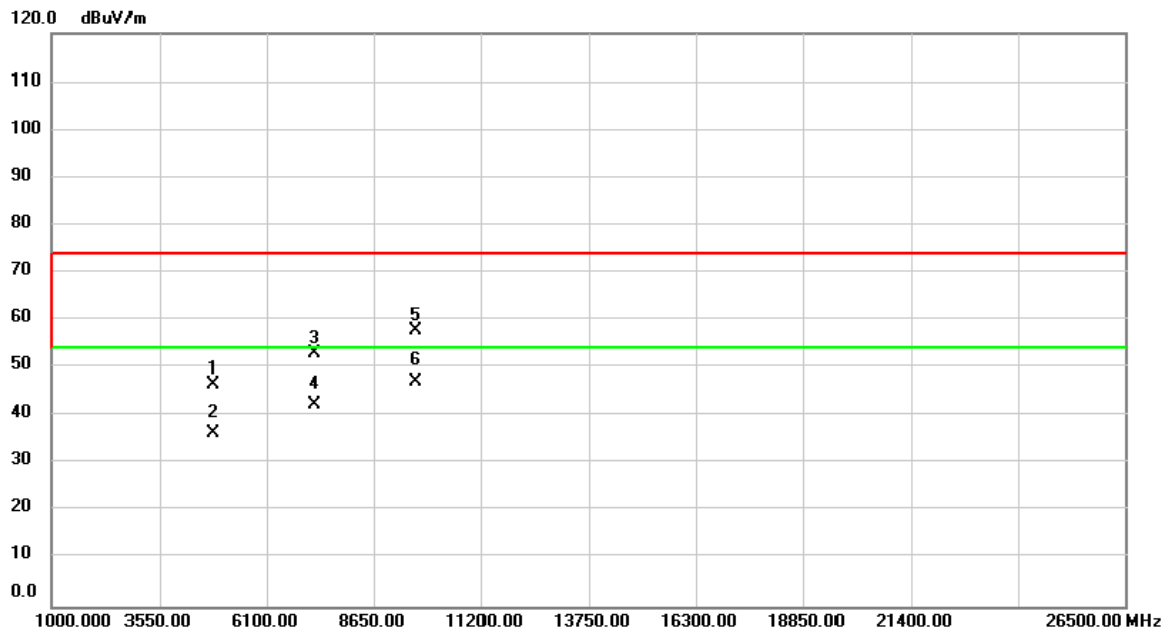
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4924.000	57.49	-9.25	48.24	74.00	-25.76	peak	
2		4924.000	47.50	-9.25	38.25	54.00	-15.75	AVG	
3		7386.000	56.13	-3.33	52.80	74.00	-21.20	peak	
4		7386.000	46.73	-3.33	43.40	54.00	-10.60	AVG	
5		9848.000	56.99	0.06	57.05	74.00	-16.95	peak	
6	*	9848.000	46.57	0.06	46.63	54.00	-7.37	AVG	

Test Mode: TX N-20M MODE 2412MHz

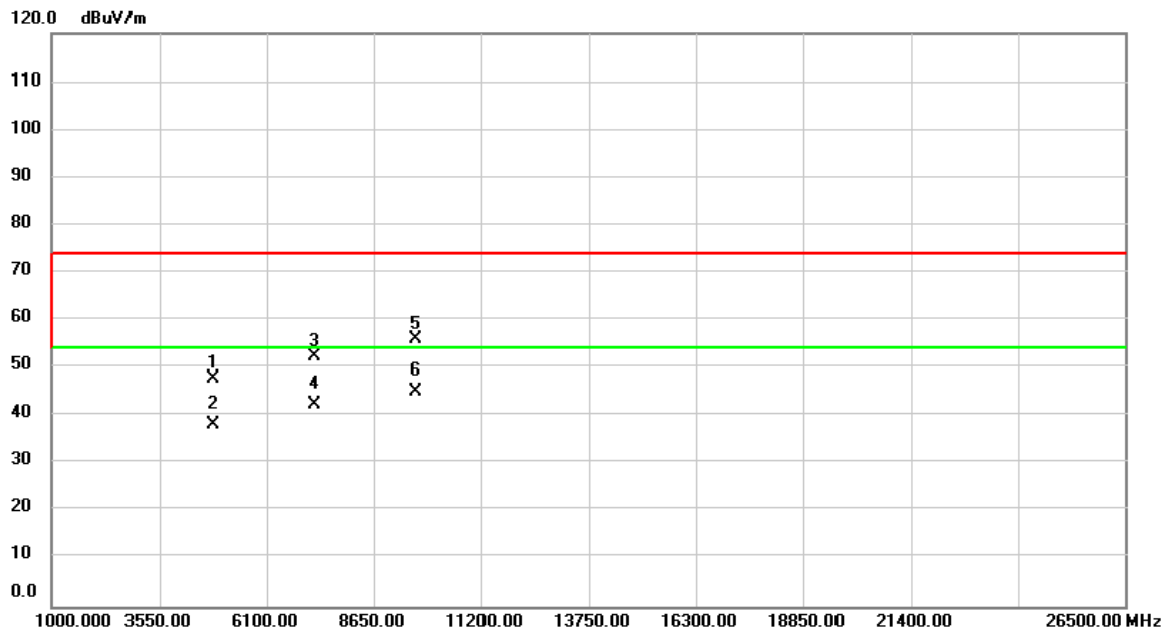
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	56.19	-9.63	46.56	74.00	-27.44	peak	
2		4824.000	46.10	-9.63	36.47	54.00	-17.53	AVG	
3		7236.000	56.73	-3.68	53.05	74.00	-20.95	peak	
4		7236.000	46.13	-3.68	42.45	54.00	-11.55	AVG	
5		9648.000	58.76	-0.91	57.85	74.00	-16.15	peak	
6	*	9648.000	48.26	-0.91	47.35	54.00	-6.65	AVG	

Test Mode: TX N-20M MODE 2412MHz

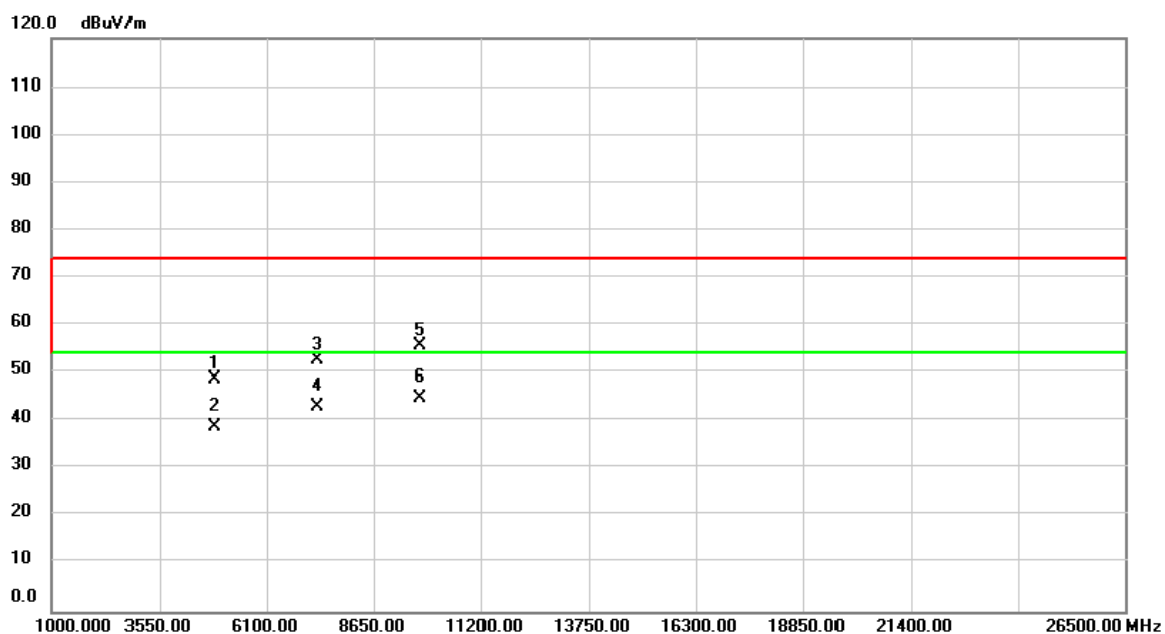
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		4824.000	57.60	-9.63	47.97	74.00	-26.03	peak	
2		4824.000	47.89	-9.63	38.26	54.00	-15.74	AVG	
3		7236.000	56.13	-3.68	52.45	74.00	-21.55	peak	
4		7236.000	46.15	-3.68	42.47	54.00	-11.53	AVG	
5		9648.000	56.85	-0.91	55.94	74.00	-18.06	peak	
6	*	9648.000	46.20	-0.91	45.29	54.00	-8.71	AVG	

Test Mode:	TX N-20M MODE 2437MHz
------------	-----------------------

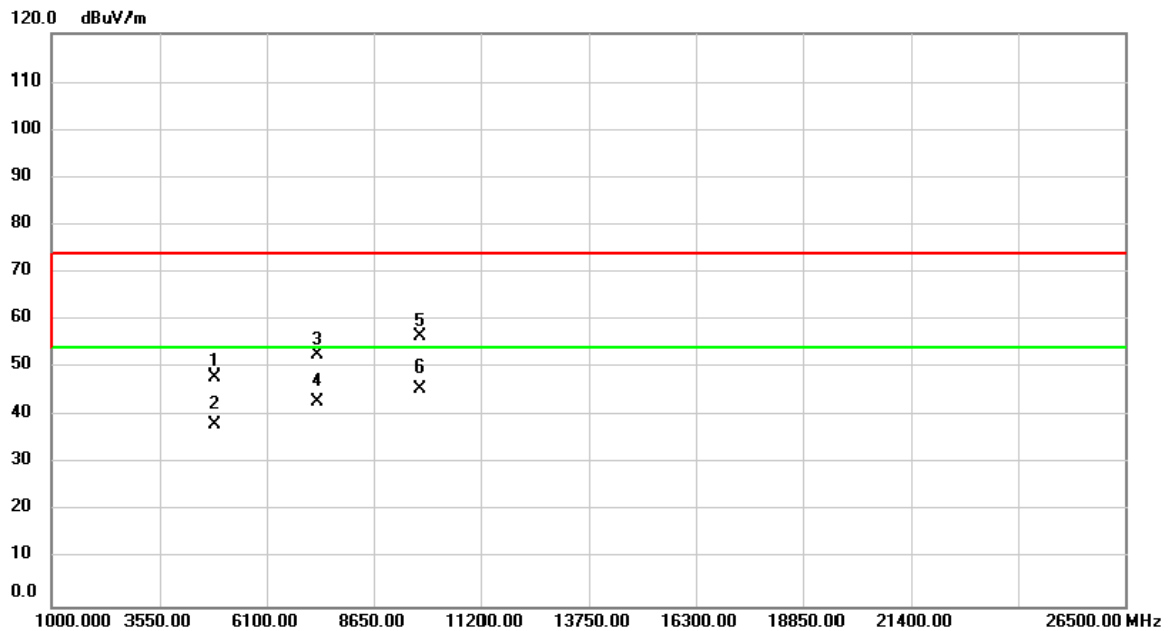
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4874.000	58.13	-9.44	48.69	74.00	-25.31	peak	
2		4874.000	48.15	-9.44	38.71	54.00	-15.29	AVG	
3		7311.000	56.18	-3.50	52.68	74.00	-21.32	peak	
4		7311.000	46.55	-3.50	43.05	54.00	-10.95	AVG	
5		9748.000	56.16	-0.42	55.74	74.00	-18.26	peak	
6	*	9748.000	45.26	-0.42	44.84	54.00	-9.16	AVG	

Test Mode:	TX N-20M MODE 2437MHz
------------	-----------------------

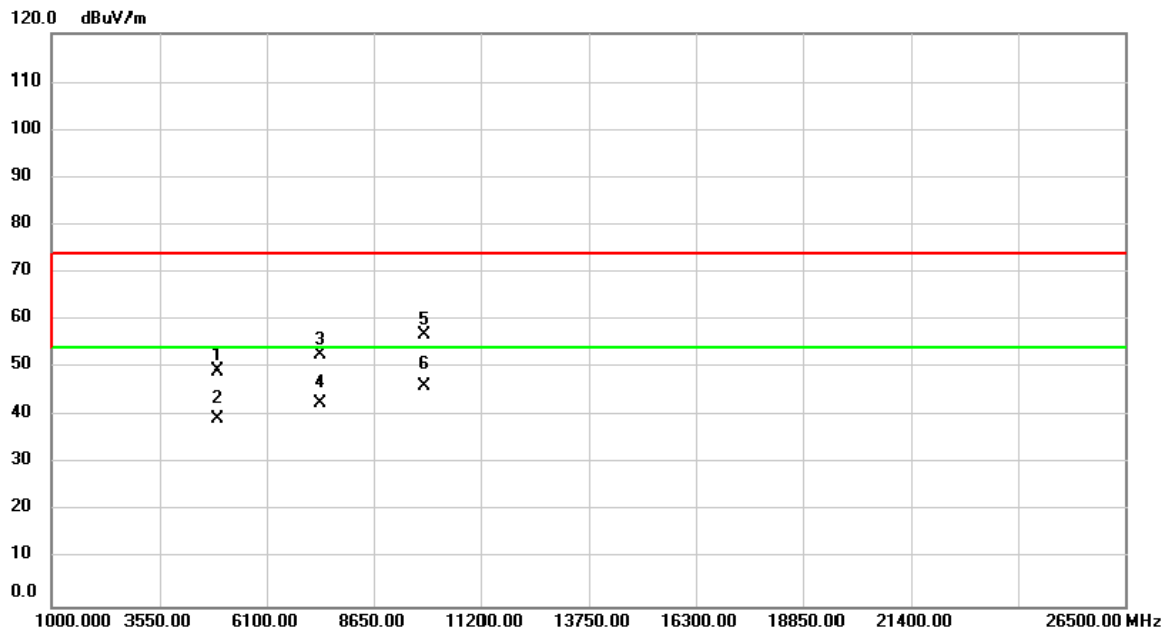
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	57.63	-9.44	48.19	74.00	-25.81	peak	
2		4874.000	47.56	-9.44	38.12	54.00	-15.88	AVG	
3		7311.000	56.15	-3.50	52.65	74.00	-21.35	peak	
4		7311.000	46.58	-3.50	43.08	54.00	-10.92	AVG	
5		9748.000	56.88	-0.42	56.46	74.00	-17.54	peak	
6	*	9748.000	46.25	-0.42	45.83	54.00	-8.17	AVG	

Test Mode:	TX N-20M MODE 2462MHz
------------	-----------------------

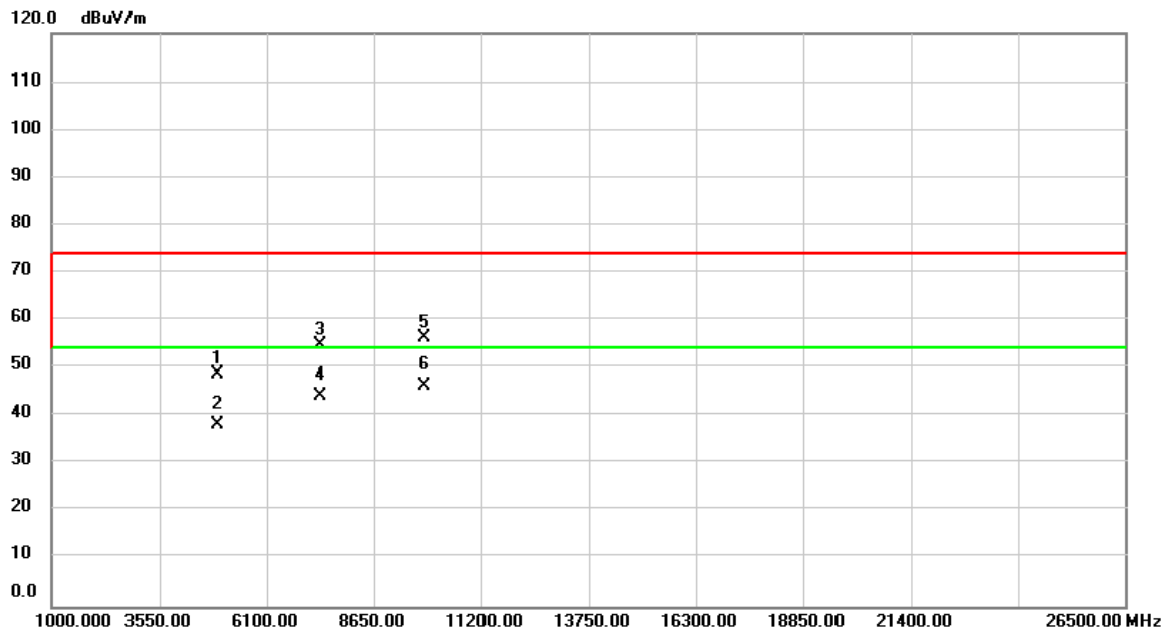
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4924.000	58.49	-9.25	49.24	74.00	-24.76	peak	
2		4924.000	48.56	-9.25	39.31	54.00	-14.69	AVG	
3		7386.000	56.13	-3.33	52.80	74.00	-21.20	peak	
4		7386.000	46.15	-3.33	42.82	54.00	-11.18	AVG	
5		9848.000	56.88	0.06	56.94	74.00	-17.06	peak	
6	*	9848.000	46.21	0.06	46.27	54.00	-7.73	AVG	

Test Mode:	TX N-20M MODE 2462MHz
------------	-----------------------

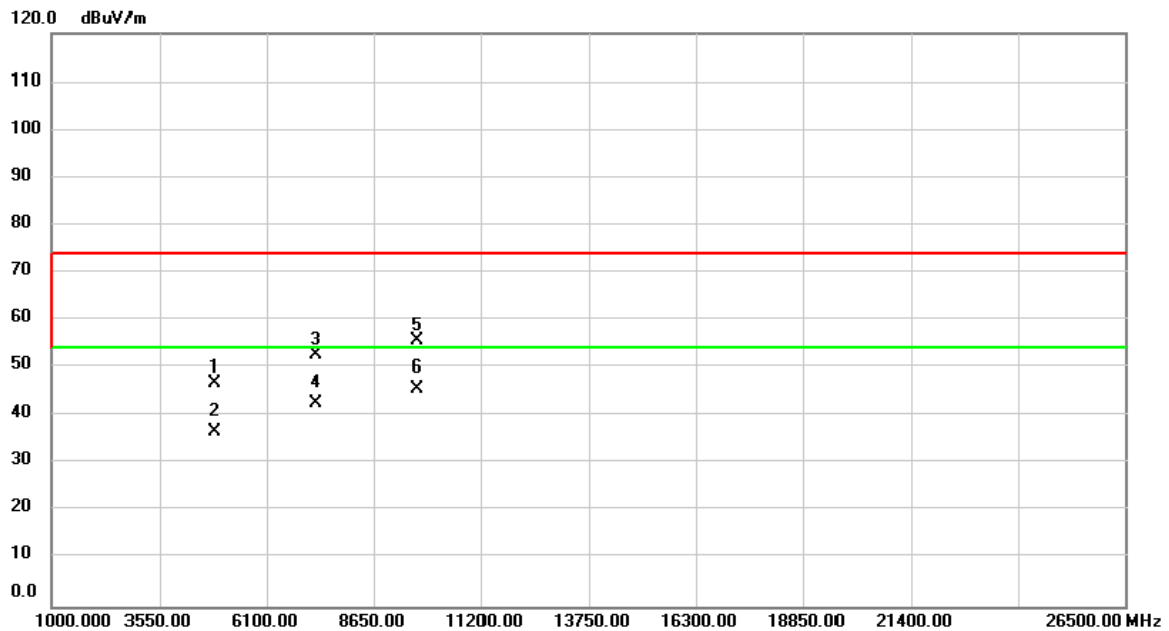
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4924.000	57.89	-9.25	48.64	74.00	-25.36	peak	
2		4924.000	47.50	-9.25	38.25	54.00	-15.75	AVG	
3		7386.000	57.96	-3.33	54.63	74.00	-19.37	peak	
4		7386.000	47.64	-3.33	44.31	54.00	-9.69	AVG	
5		9848.000	56.16	0.06	56.22	74.00	-17.78	peak	
6	*	9848.000	46.36	0.06	46.42	54.00	-7.58	AVG	

Test Mode:	TX N-40M MODE 2422MHz
------------	-----------------------

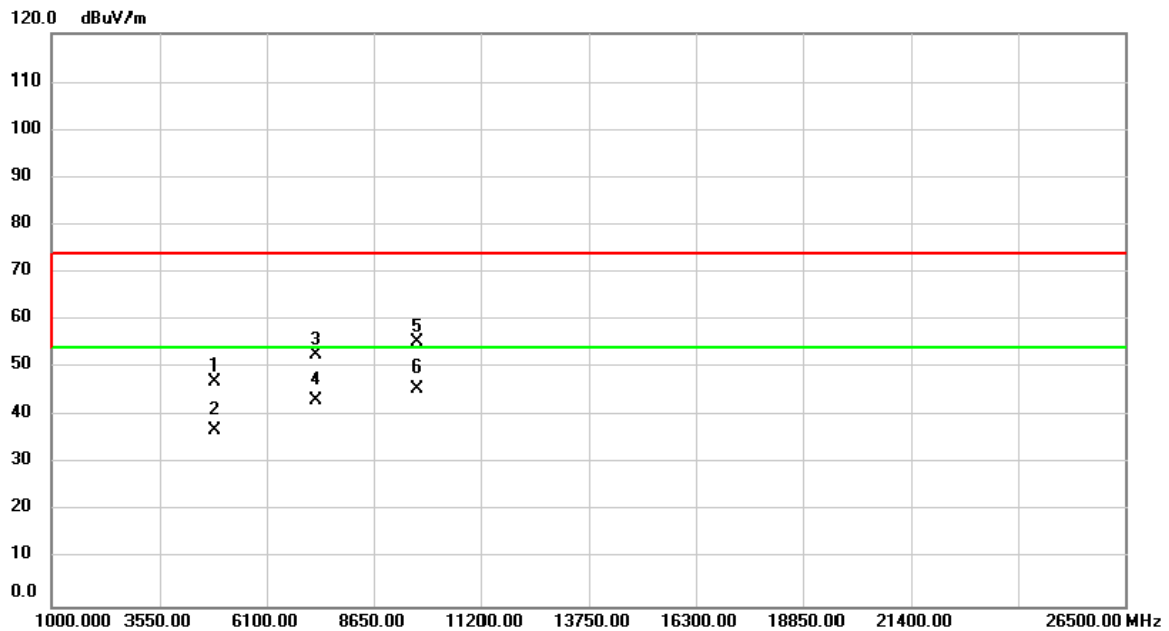
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4844.000	56.47	-9.55	46.92	74.00	-27.08	peak	
2		4844.000	46.28	-9.55	36.73	54.00	-17.27	AVG	
3		7266.000	56.19	-3.60	52.59	74.00	-21.41	peak	
4		7266.000	46.26	-3.60	42.66	54.00	-11.34	AVG	
5		9688.000	56.44	-0.72	55.72	74.00	-18.28	peak	
6	*	9688.000	46.55	-0.72	45.83	54.00	-8.17	AVG	

Test Mode:	TX N-40M MODE 2422MHz
------------	-----------------------

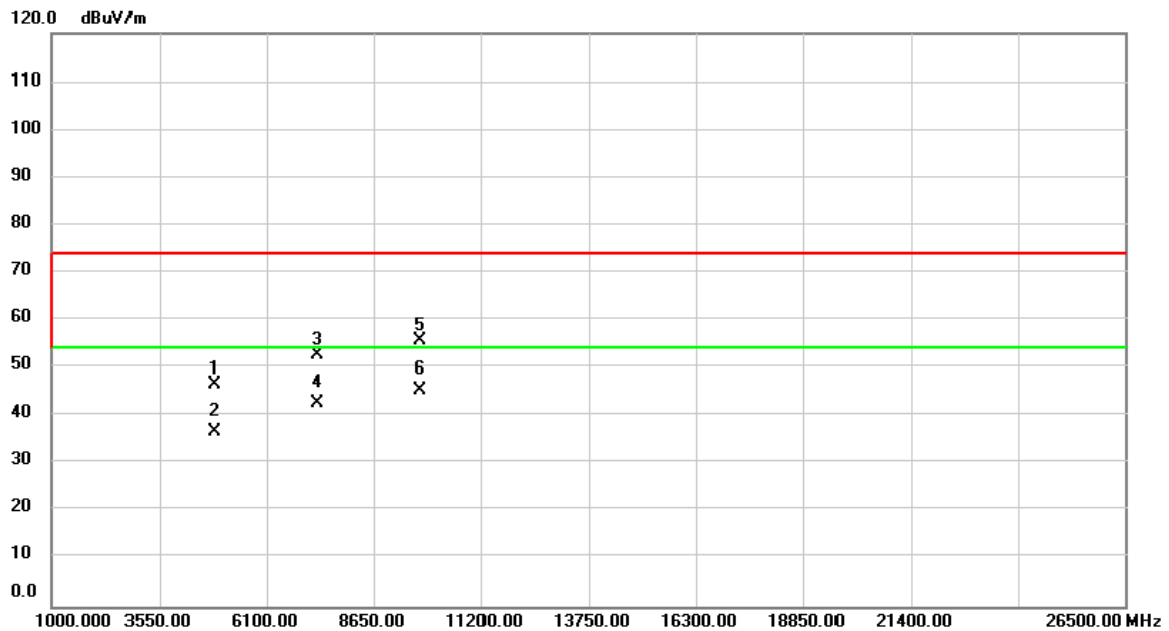
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4844.000	56.91	-9.55	47.36	74.00	-26.64	peak	
2		4844.000	46.66	-9.55	37.11	54.00	-16.89	AVG	
3		7266.000	56.25	-3.60	52.65	74.00	-21.35	peak	
4		7266.000	46.87	-3.60	43.27	54.00	-10.73	AVG	
5		9688.000	56.19	-0.72	55.47	74.00	-18.53	peak	
6	*	9688.000	46.55	-0.72	45.83	54.00	-8.17	AVG	

Test Mode:	TX N-40M MODE 2437MHz
------------	-----------------------

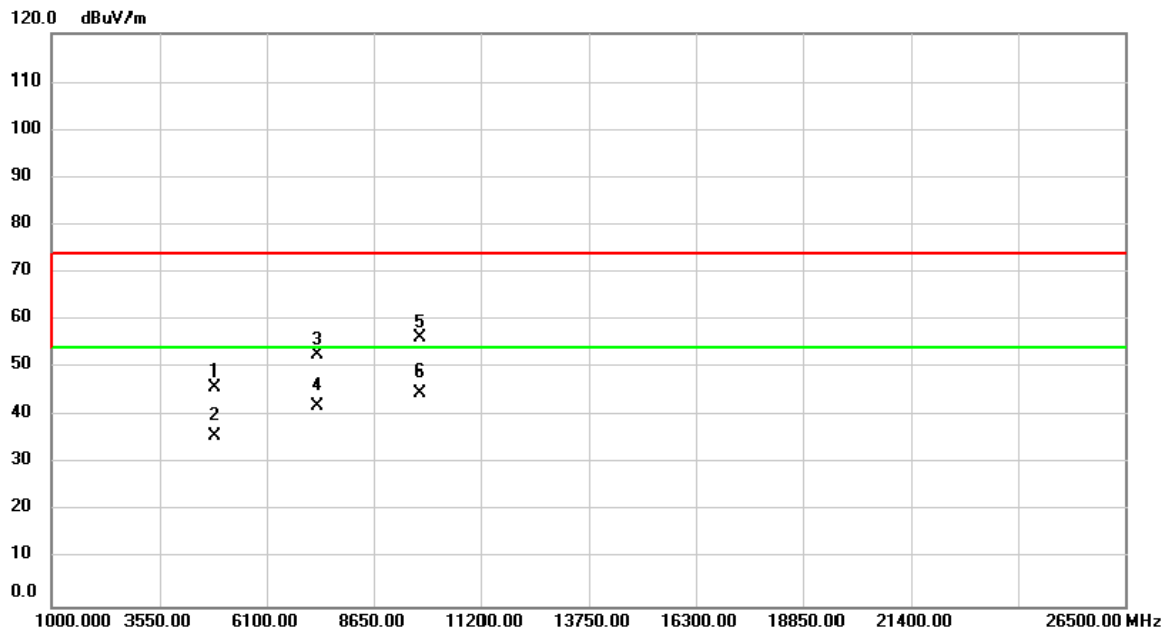
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.000	56.13	-9.44	46.69	74.00	-27.31	peak	
2		4874.000	46.19	-9.44	36.75	54.00	-17.25	AVG	
3		7311.000	56.28	-3.50	52.78	74.00	-21.22	peak	
4		7311.000	46.18	-3.50	42.68	54.00	-11.32	AVG	
5		9748.000	55.96	-0.42	55.54	74.00	-18.46	peak	
6	*	9748.000	45.88	-0.42	45.46	54.00	-8.54	AVG	

Test Mode:	TX N-40M MODE 2437MHz
------------	-----------------------

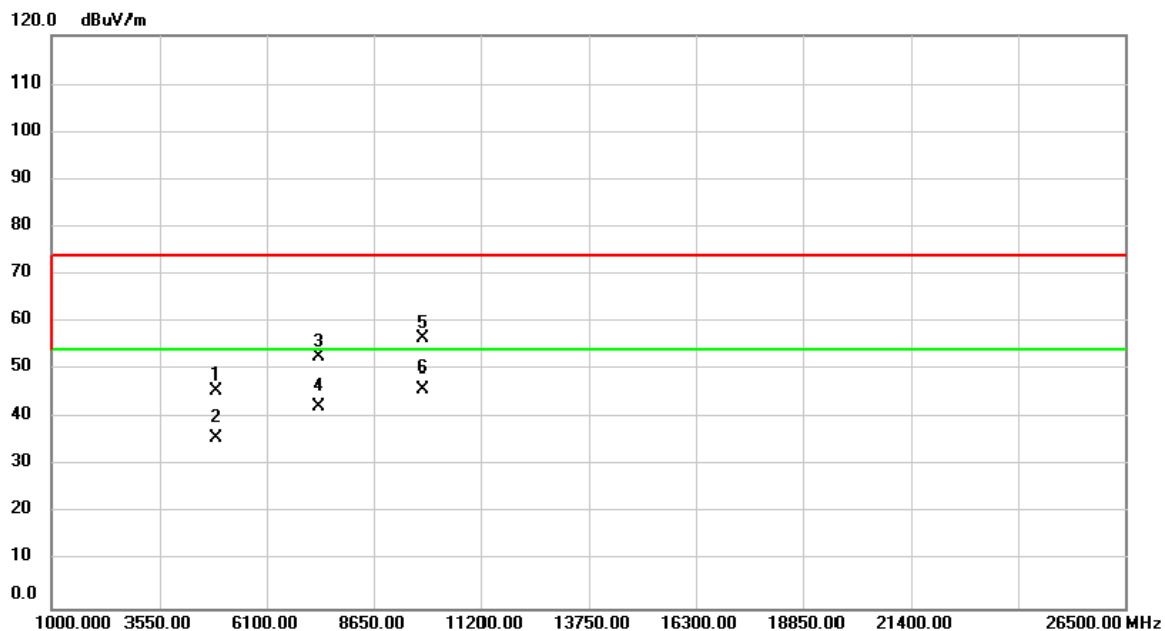
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4874.000	55.36	-9.44	45.92	74.00	-28.08	peak	
2		4874.000	45.16	-9.44	35.72	54.00	-18.28	AVG	
3		7311.000	56.13	-3.50	52.63	74.00	-21.37	peak	
4		7311.000	45.56	-3.50	42.06	54.00	-11.94	AVG	
5		9748.000	56.77	-0.42	56.35	74.00	-17.65	peak	
6	*	9748.000	45.29	-0.42	44.87	54.00	-9.13	AVG	

Test Mode:	TX N-40M MODE 2452MHz
------------	-----------------------

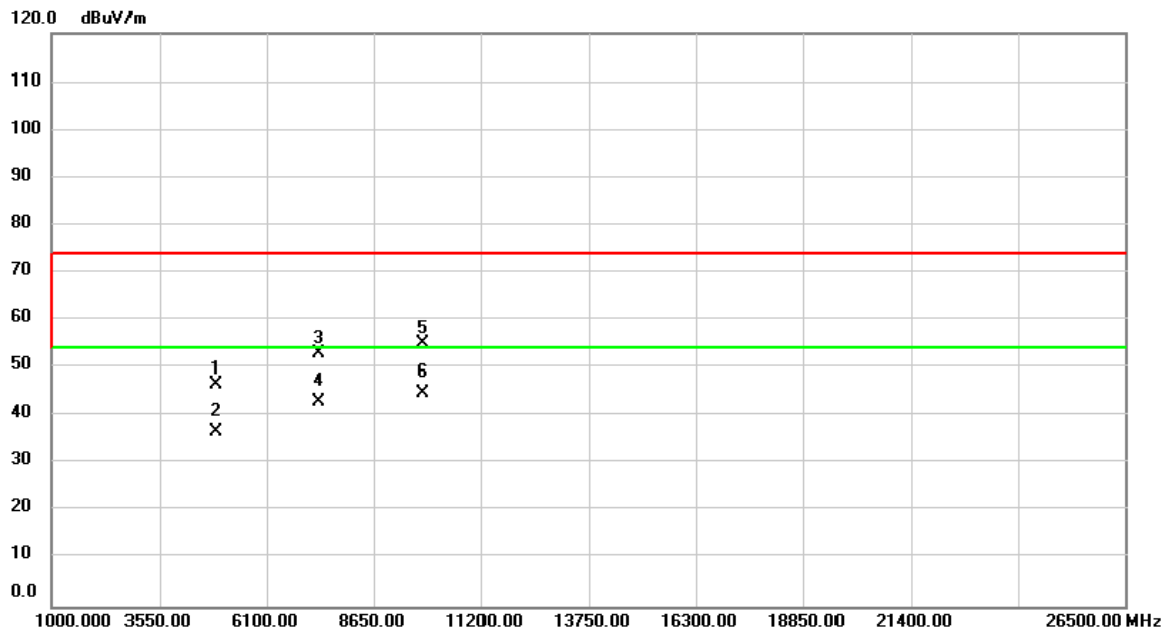
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4904.000	55.17	-9.33	45.84	74.00	-28.16	peak	
2		4904.000	45.13	-9.33	35.80	54.00	-18.20	AVG	
3		7356.000	56.13	-3.40	52.73	74.00	-21.27	peak	
4		7356.000	45.74	-3.40	42.34	54.00	-11.66	AVG	
5		9808.000	56.74	-0.14	56.60	74.00	-17.40	peak	
6	*	9808.000	46.13	-0.14	45.99	54.00	-8.01	AVG	

Test Mode:	TX N-40M MODE 2452MHz
------------	-----------------------

Horizontal

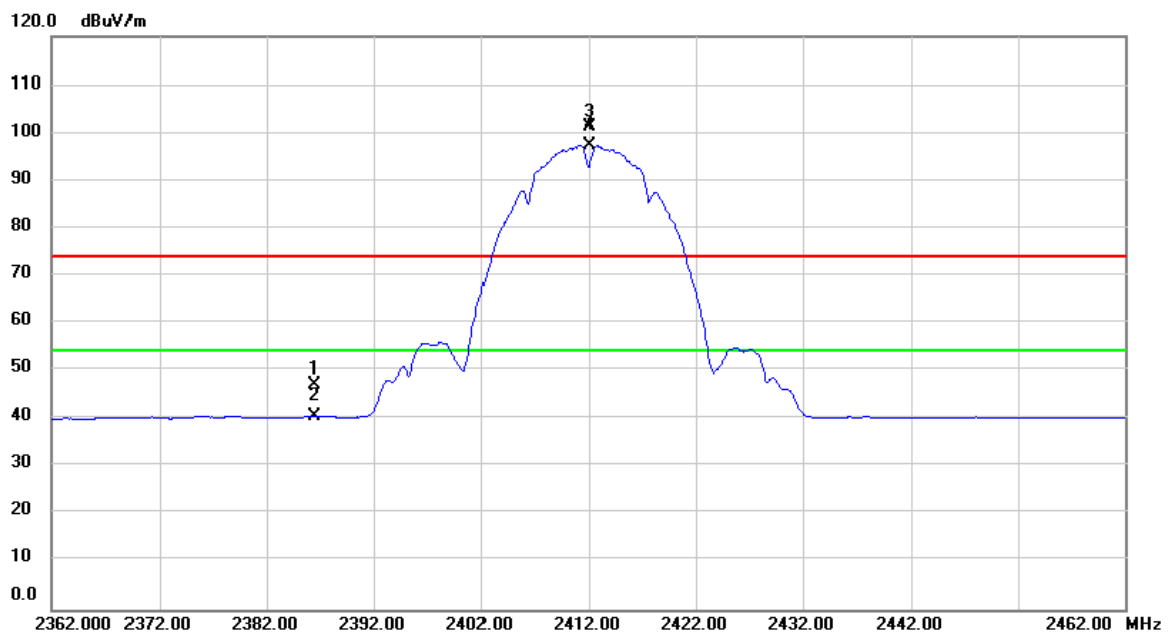


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4904.000	56.13	-9.33	46.80	74.00	-27.20	peak	
2		4904.000	46.20	-9.33	36.87	54.00	-17.13	AVG	
3		7356.000	56.43	-3.40	53.03	74.00	-20.97	peak	
4		7356.000	46.59	-3.40	43.19	54.00	-10.81	AVG	
5		9808.000	55.13	-0.14	54.99	74.00	-19.01	peak	
6	*	9808.000	45.13	-0.14	44.99	54.00	-9.01	AVG	

ATTACHMENT E - BAND EDGE AND FUNDAMENTAL EMISSIONS

Test Mode: TX B MODE 2412MHz

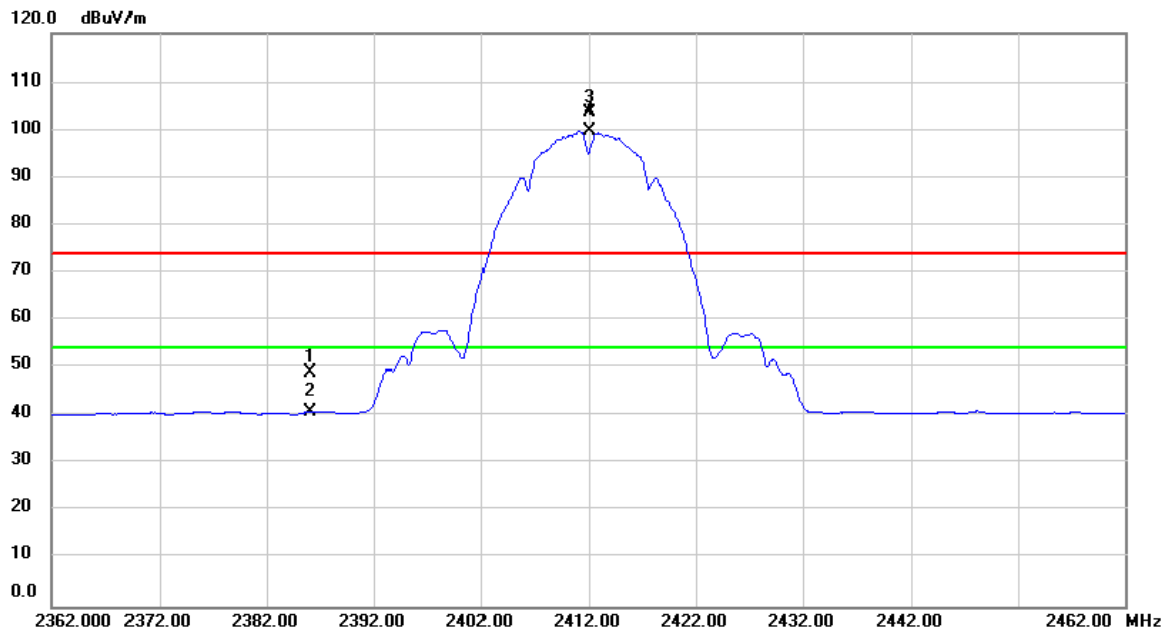
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2386.400	20.01	27.31	47.32	74.00	-26.68	peak	Band Edge
2		2386.400	13.39	27.31	40.70	54.00	-13.30	AVG	Band Edge
3	X	2412.000	73.81	27.40	101.21	74.00	27.21	peak	No Limit
4	*	2412.000	70.07	27.40	97.47	54.00	43.47	AVG	No Limit

Test Mode:	TX B MODE 2412MHz
------------	-------------------

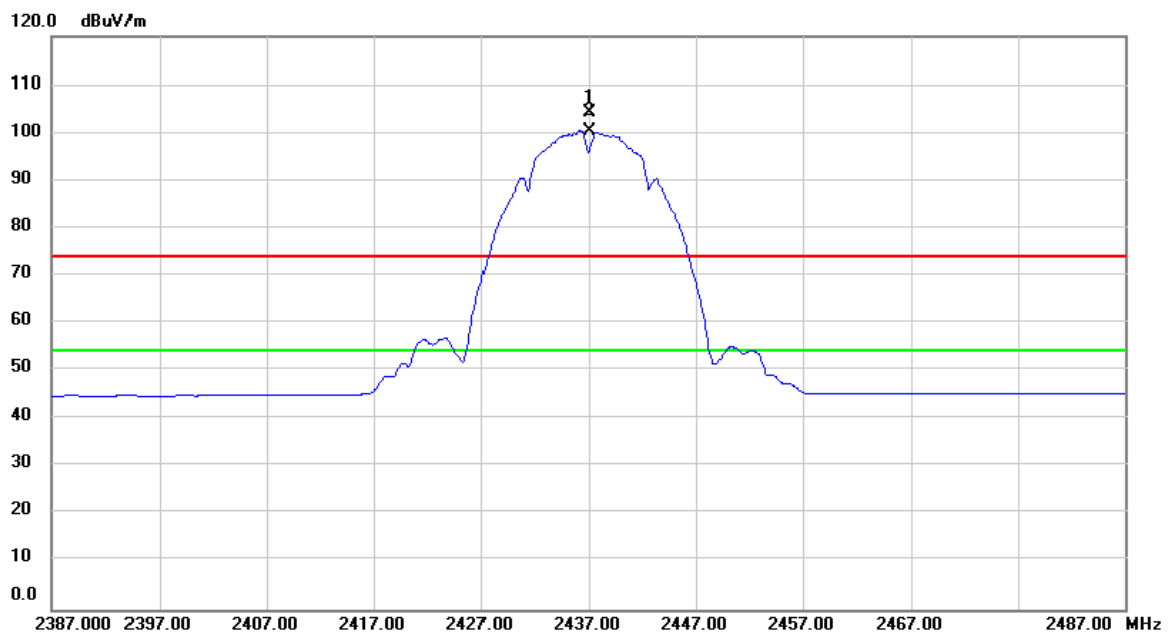
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2386.000	21.63	27.31	48.94	74.00	-25.06	peak	Band Edge
2		2386.000	13.79	27.31	41.10	54.00	-12.90	AVG	Band Edge
3	X	2412.000	76.27	27.40	103.67	74.00	29.67	peak	No Limit
4	*	2412.000	72.31	27.40	99.71	54.00	45.71	AVG	No Limit

Test Mode: TX B MODE 2437MHz

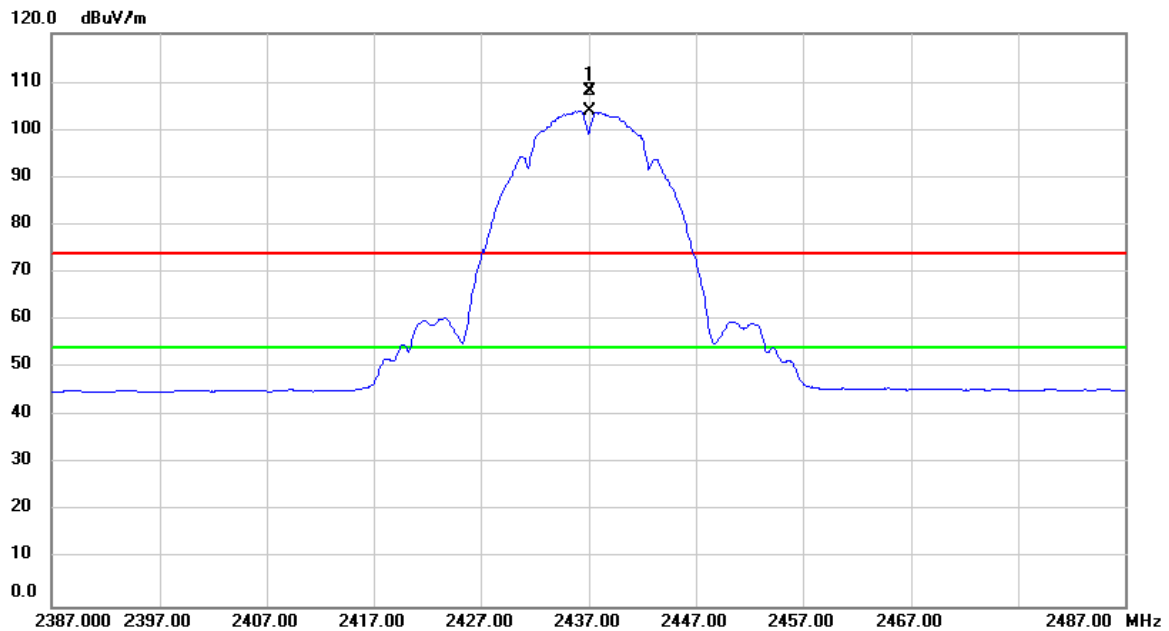
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	71.87	32.35	104.22	74.00	30.22	peak	No Limit
2	*	2437.000	68.15	32.35	100.50	54.00	46.50	AVG	No Limit

Test Mode: TX B MODE 2437MHz

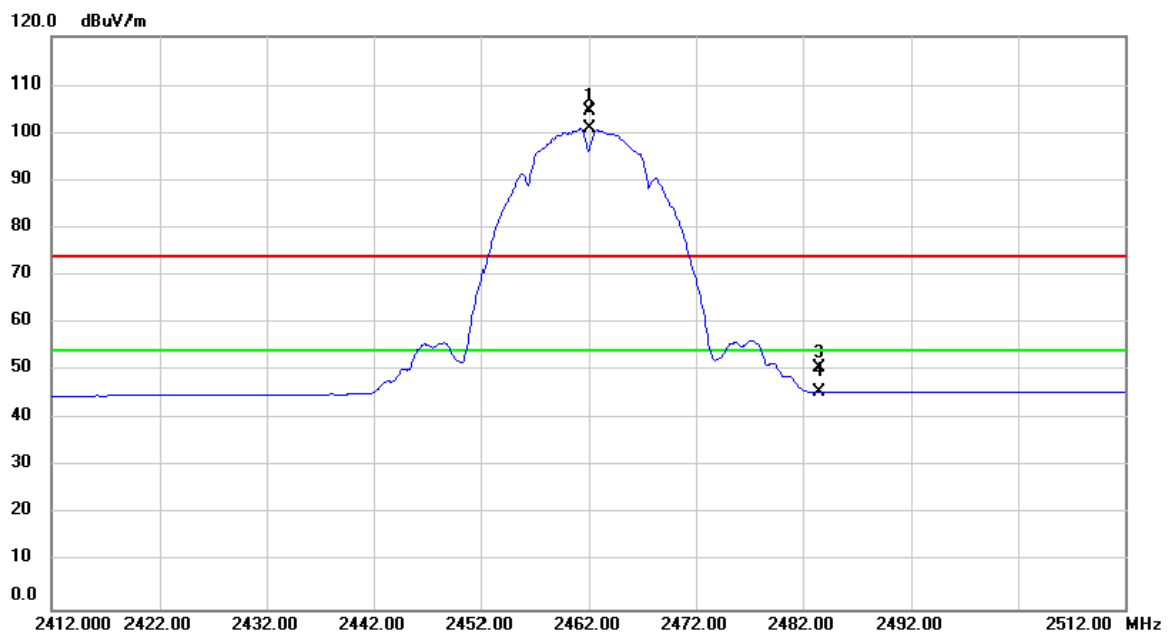
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	75.69	32.35	108.04	74.00	34.04	peak	No Limit
2	*	2437.000	71.72	32.35	104.07	54.00	50.07	AVG	No Limit

Test Mode: TX B MODE 2462MHz

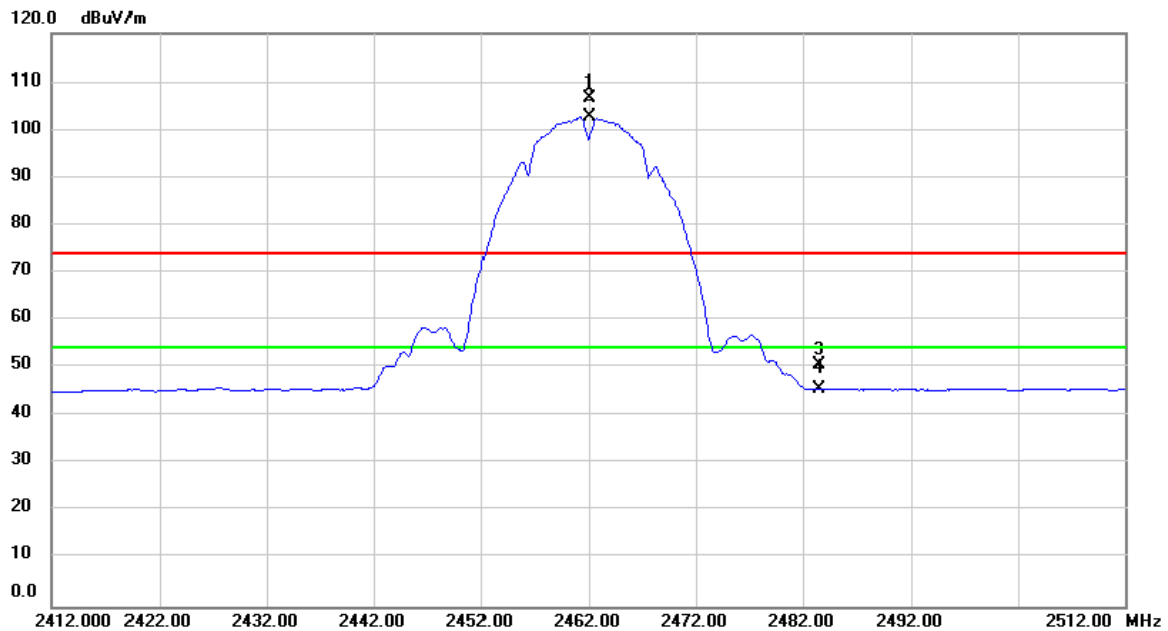
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2462.000	72.16	32.46	104.62	74.00	30.62	peak	No Limit
2	*	2462.000	68.44	32.46	100.90	54.00	46.90	AVG	No Limit
3		2483.500	18.11	32.55	50.66	74.00	-23.34	peak	Band Edge
4		2483.500	13.33	32.55	45.88	54.00	-8.12	AVG	Band Edge

Test Mode: TX B MODE 2462MHz

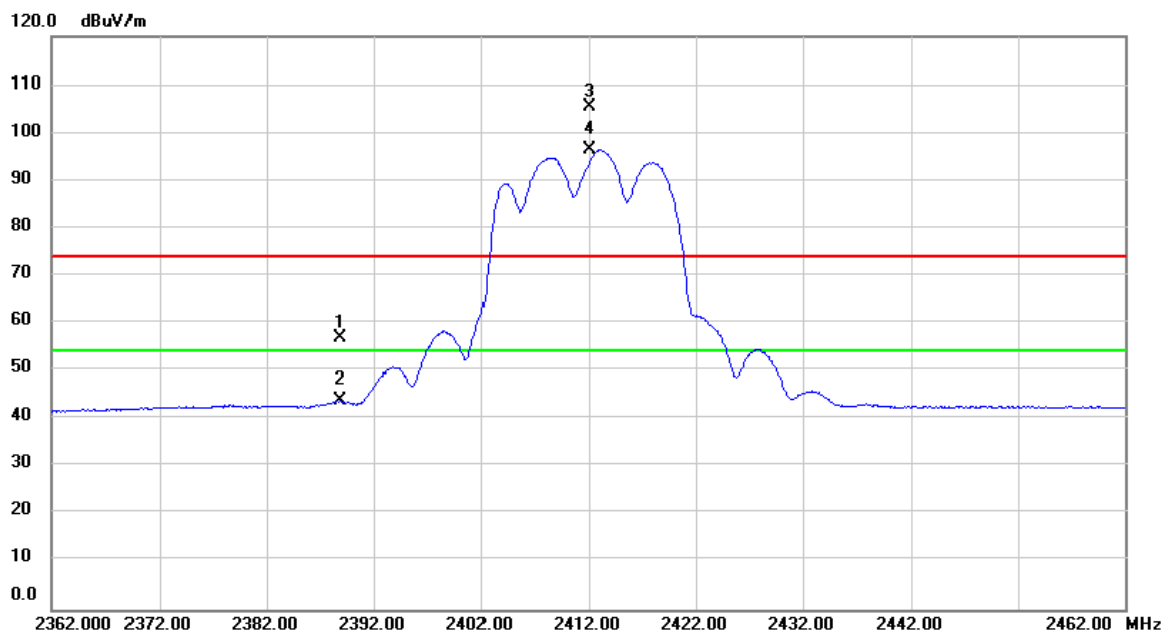
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2462.000	74.06	32.46	106.52	74.00	32.52	peak	No Limit
2	*	2462.000	70.20	32.46	102.66	54.00	48.66	AVG	No Limit
3		2483.600	18.13	32.55	50.68	74.00	-23.32	peak	Band Edge
4		2483.600	13.26	32.55	45.81	54.00	-8.19	AVG	Band Edge

Test Mode: TX G MODE 2412MHz

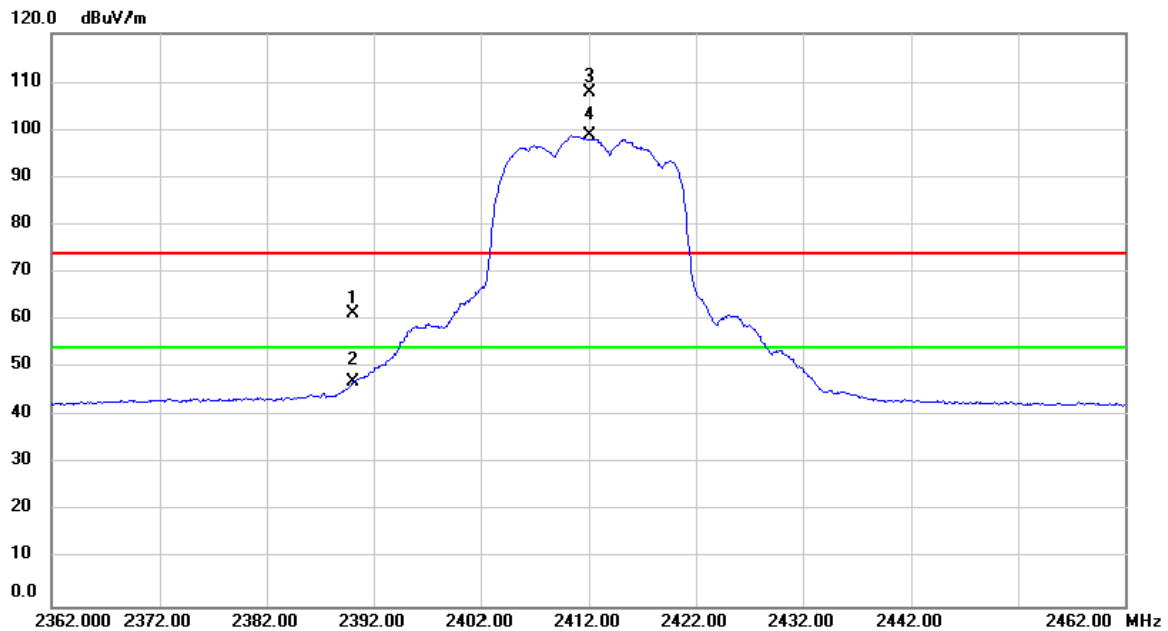
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2388.900	29.68	27.32	57.00	74.00	-17.00	peak	Band Edge
2		2388.900	16.52	27.32	43.84	54.00	-10.16	AVG	Band Edge
3	X	2412.000	78.04	27.40	105.44	74.00	31.44	peak	No Limit
4	*	2412.000	69.09	27.40	96.49	54.00	42.49	AVG	No Limit

Test Mode: TX G MODE 2412MHz

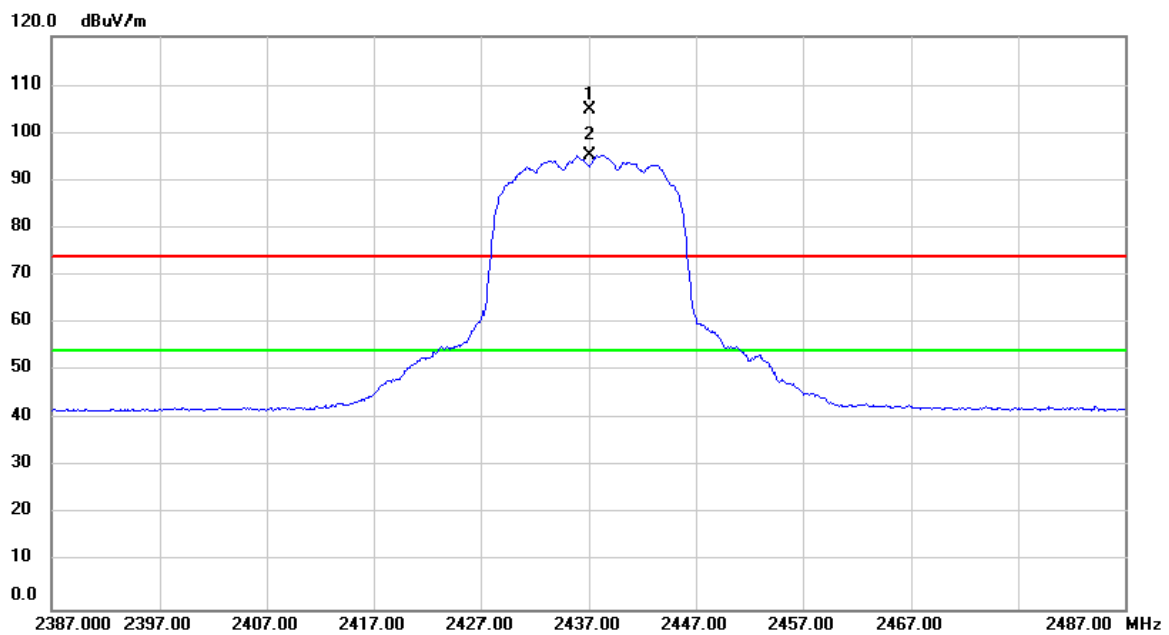
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	33.91	27.33	61.24	74.00	-12.76	peak	Band Edge
2		2390.000	19.78	27.33	47.11	54.00	-6.89	AVG	Band Edge
3	X	2412.000	80.54	27.40	107.94	74.00	33.94	peak	No Limit
4	*	2412.000	71.36	27.40	98.76	54.00	44.76	AVG	No Limit

Test Mode: TX G MODE 2437MHz

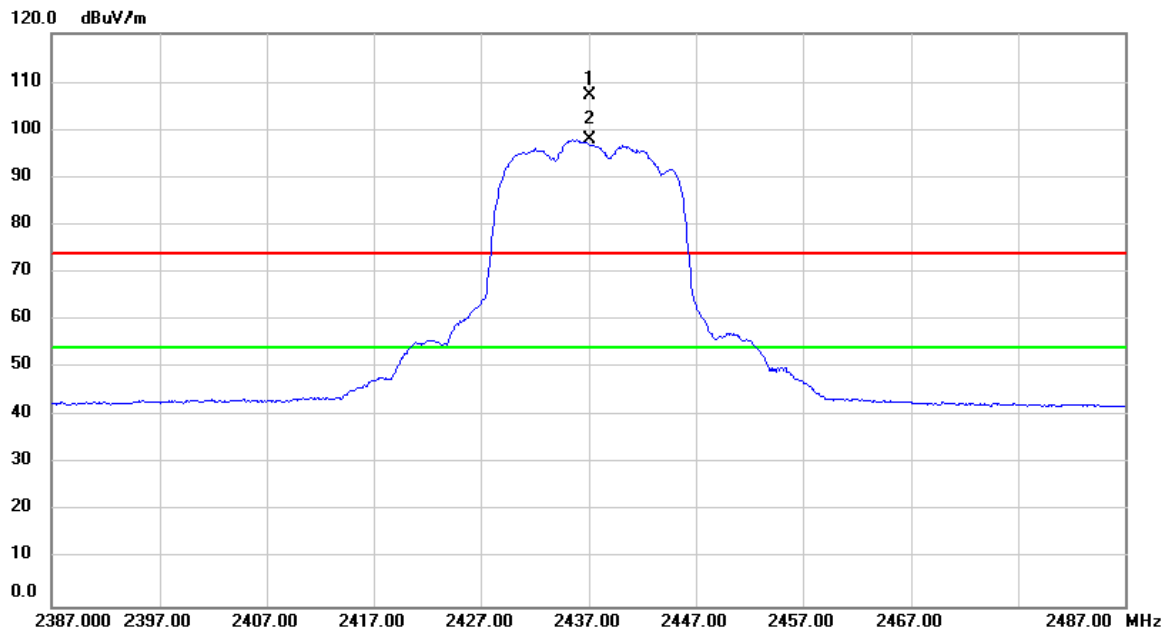
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	77.41	27.49	104.90	74.00	30.90	peak	No Limit
2	*	2437.000	67.86	27.49	95.35	54.00	41.35	AVG	No Limit

Test Mode: TX G MODE 2437MHz

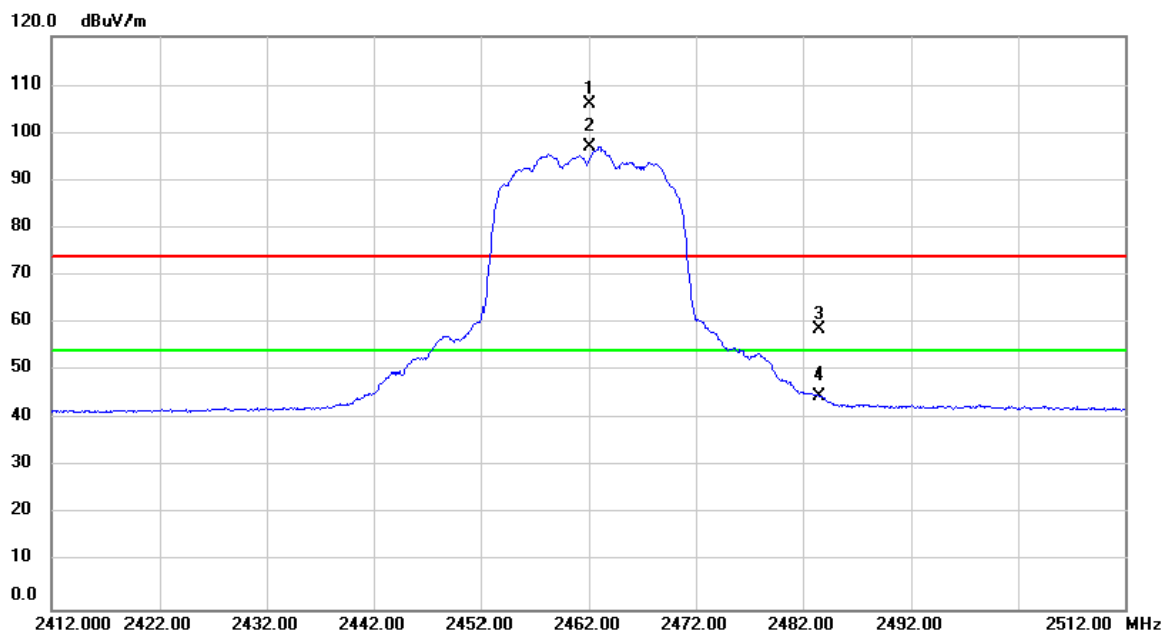
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	79.85	27.49	107.34	74.00	33.34	peak	No Limit
2	*	2437.000	70.50	27.49	97.99	54.00	43.99	AVG	No Limit

Test Mode: TX G MODE 2462MHz

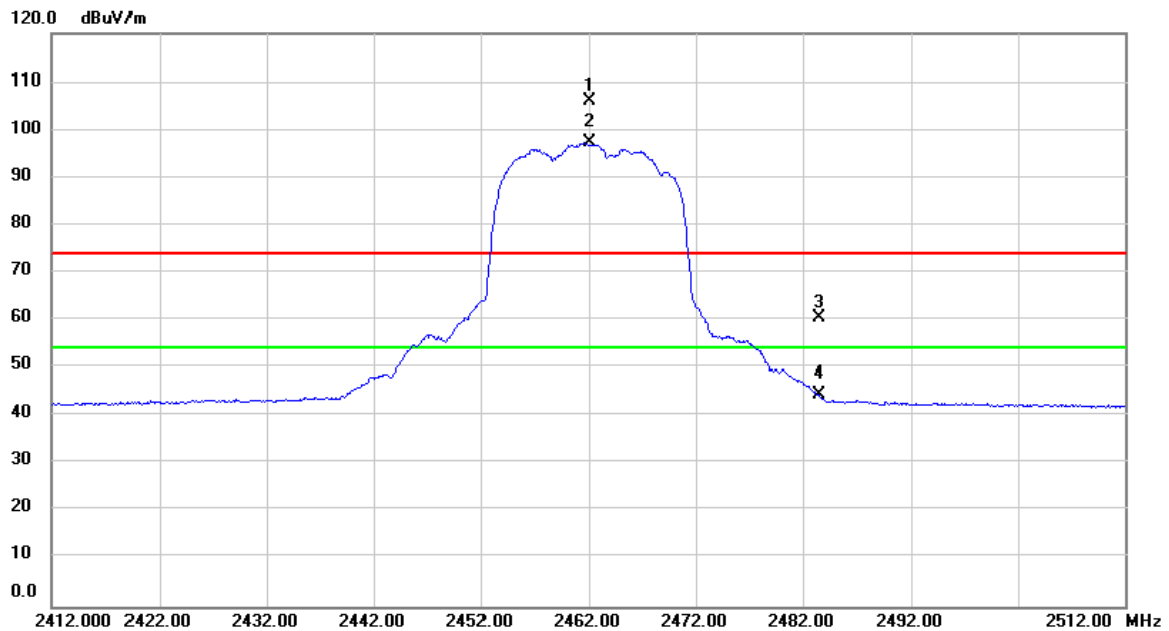
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2462.000	78.58	27.57	106.15	74.00	32.15	peak	No Limit
2	*	2462.000	69.41	27.57	96.98	54.00	42.98	AVG	No Limit
3		2483.500	30.96	27.64	58.60	74.00	-15.40	peak	Band Edge
4		2483.500	17.34	27.64	44.98	54.00	-9.02	AVG	Band Edge

Test Mode:	TX G MODE 2462MHz
------------	-------------------

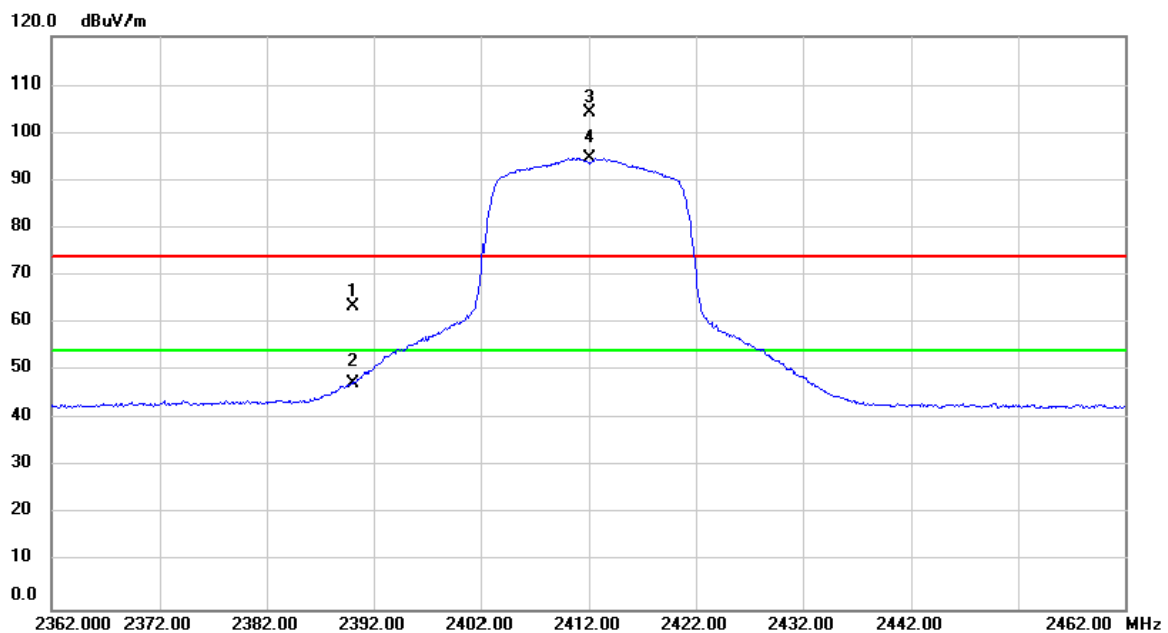
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2462.000	78.57	27.57	106.14	74.00	32.14	peak	No Limit
2	*	2462.000	69.64	27.57	97.21	54.00	43.21	AVG	No Limit
3		2483.500	32.70	27.64	60.34	74.00	-13.66	peak	Band Edge
4		2483.500	16.77	27.64	44.41	54.00	-9.59	AVG	Band Edge

Test Mode: TX N-20M MODE 2412MHz

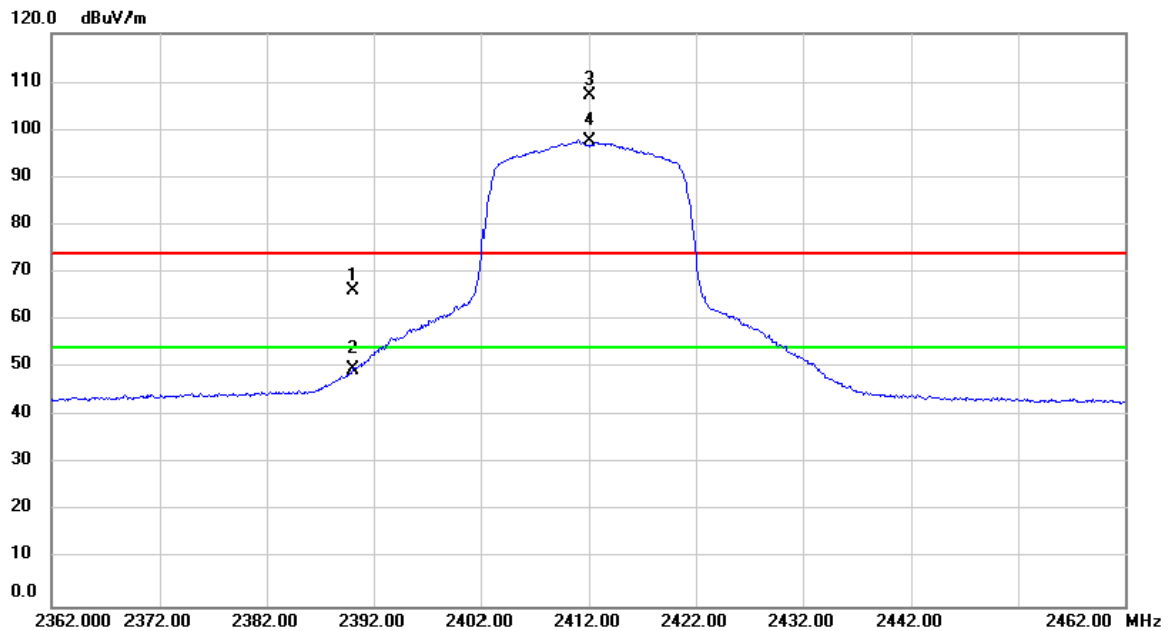
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	36.06	27.33	63.39	74.00	-10.61	peak	Band Edge
2		2390.000	20.17	27.33	47.50	54.00	-6.50	AVG	Band Edge
3	X	2412.000	76.95	27.40	104.35	74.00	30.35	peak	No Limit
4	*	2412.000	67.34	27.40	94.74	54.00	40.74	AVG	No Limit

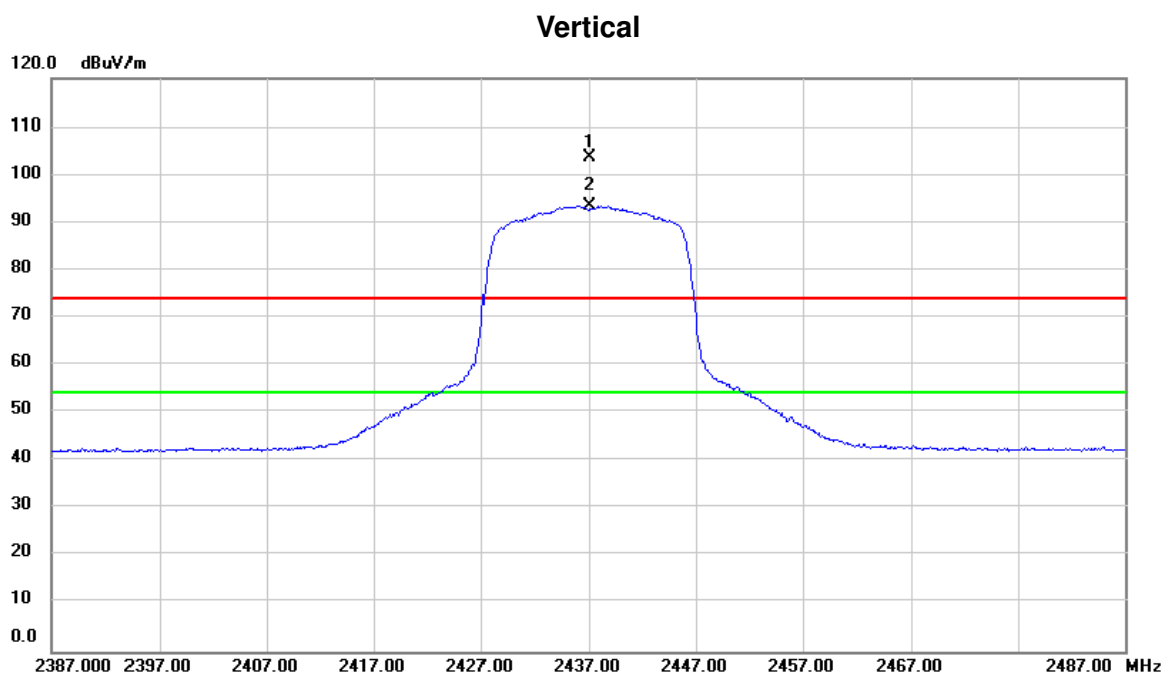
Test Mode:	TX N-20M MODE 2412MHz
------------	-----------------------

Horizontal



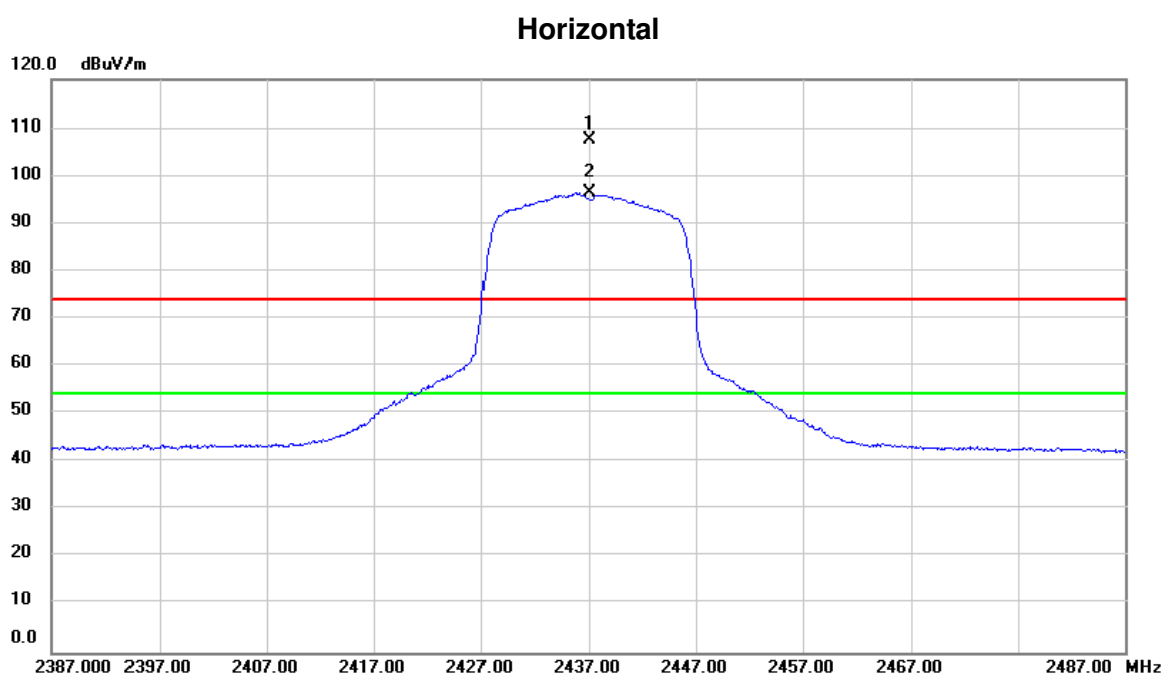
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	38.90	27.33	66.23	74.00	-7.77	peak	Band Edge
2		2390.000	22.25	27.33	49.58	54.00	-4.42	AVG	Band Edge
3	X	2412.000	79.98	27.40	107.38	74.00	33.38	peak	No Limit
4	*	2412.000	70.39	27.40	97.79	54.00	43.79	AVG	No Limit

Test Mode:	TX N-20M MODE 2437MHz
------------	-----------------------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	76.25	27.49	103.74	74.00	29.74	peak	No Limit
2	*	2437.000	66.08	27.49	93.57	54.00	39.57	AVG	No Limit

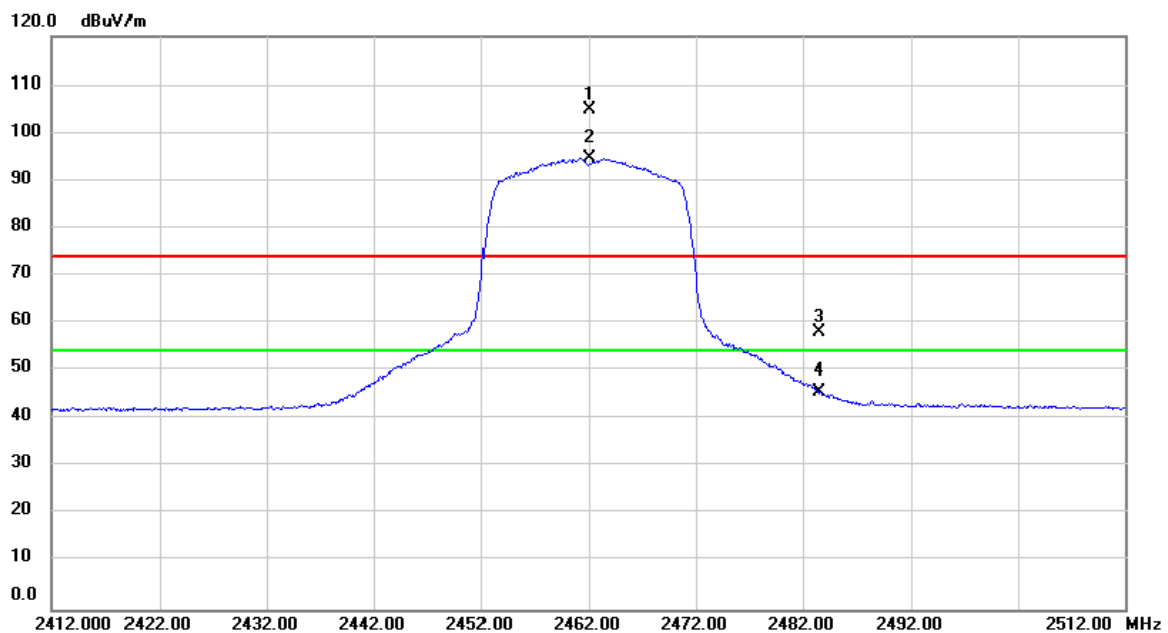
Test Mode:	TX N-20M MODE 2437MHz
------------	-----------------------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	80.07	27.49	107.56	74.00	33.56	peak	No Limit
2	*	2437.000	68.92	27.49	96.41	54.00	42.41	AVG	No Limit

Test Mode: TX N-20M MODE 2462MHz

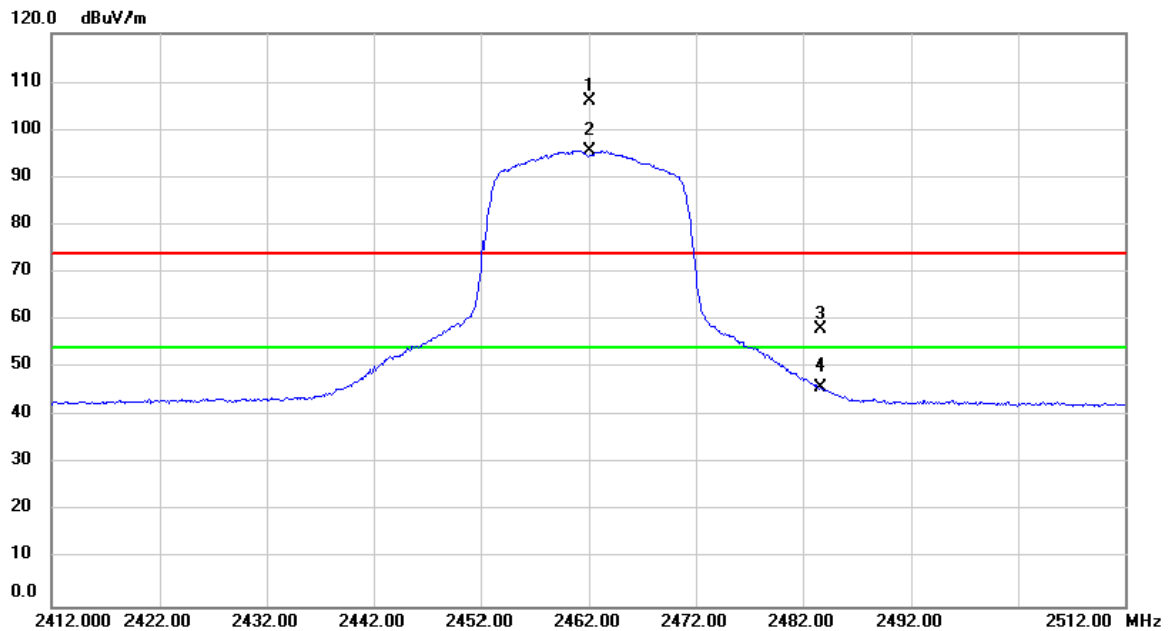
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2462.000	77.15	27.57	104.72	74.00	30.72	peak	No Limit
2	*	2462.000	67.16	27.57	94.73	54.00	40.73	AVG	No Limit
3		2483.600	30.53	27.64	58.17	74.00	-15.83	peak	Band Edge
4		2483.600	18.05	27.64	45.69	54.00	-8.31	AVG	Band Edge

Test Mode:	TX N-20M MODE 2462MHz
------------	-----------------------

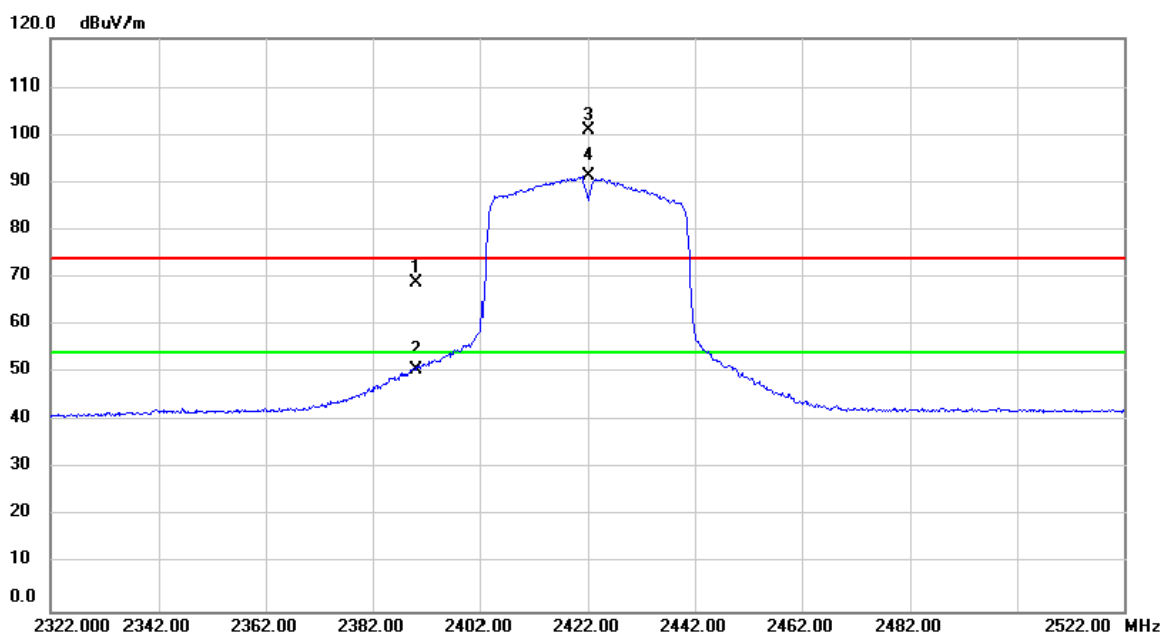
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2462.000	78.36	27.57	105.93	74.00	31.93	peak	No Limit
2	*	2462.000	67.99	27.57	95.56	54.00	41.56	AVG	No Limit
3		2483.700	30.52	27.64	58.16	74.00	-15.84	peak	Band Edge
4		2483.700	18.32	27.64	45.96	54.00	-8.04	AVG	Band Edge

Test Mode:	TX N-40M MODE 2422MHz
------------	-----------------------

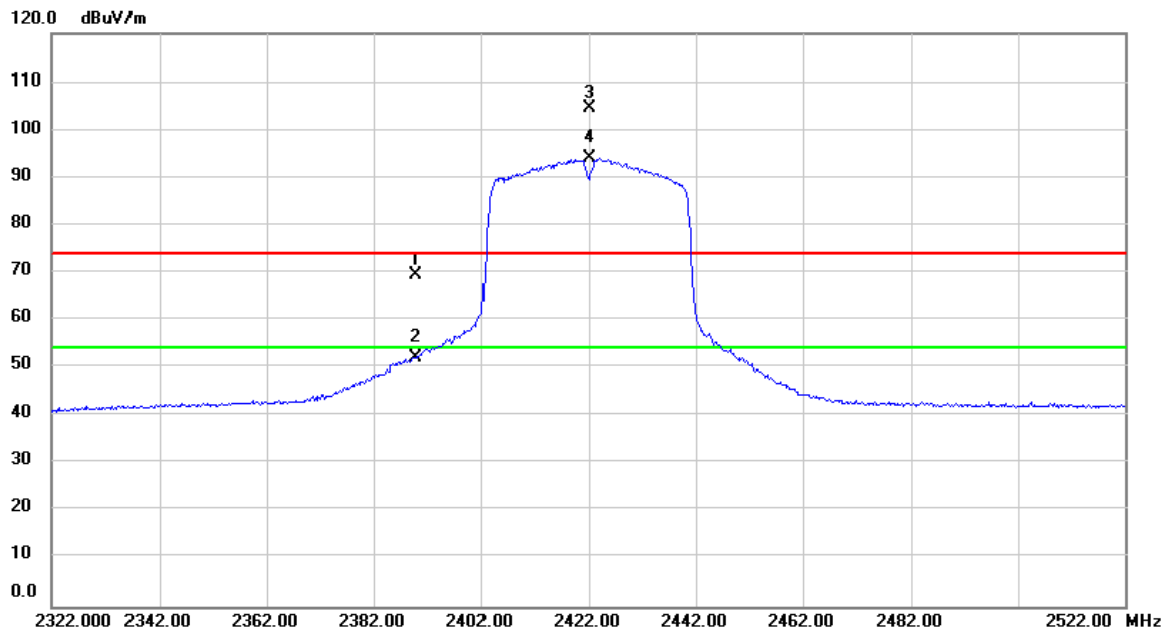
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	41.54	27.33	68.87	74.00	-5.13	peak	Band Edge
2		2390.000	23.36	27.33	50.69	54.00	-3.31	AVG	Band Edge
3	X	2422.000	73.61	27.43	101.04	74.00	27.04	peak	No Limit
4	*	2422.000	63.80	27.43	91.23	54.00	37.23	AVG	No Limit

Test Mode: TX N-40M MODE 2422MHz

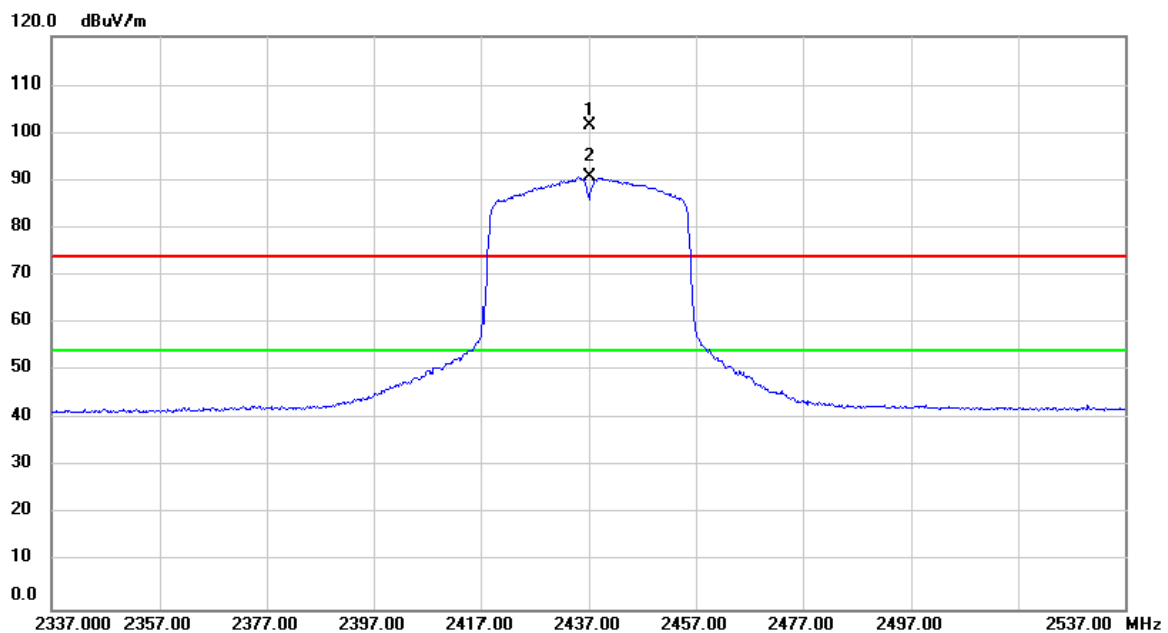
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2389.800	42.00	27.33	69.33	74.00	-4.67	peak	Band Edge
2		2389.800	24.76	27.33	52.09	54.00	-1.91	AVG	Band Edge
3	X	2422.000	77.18	27.43	104.61	74.00	30.61	peak	No Limit
4	*	2422.000	66.51	27.43	93.94	54.00	39.94	AVG	No Limit

Test Mode: TX N-40M MODE 2437MHz

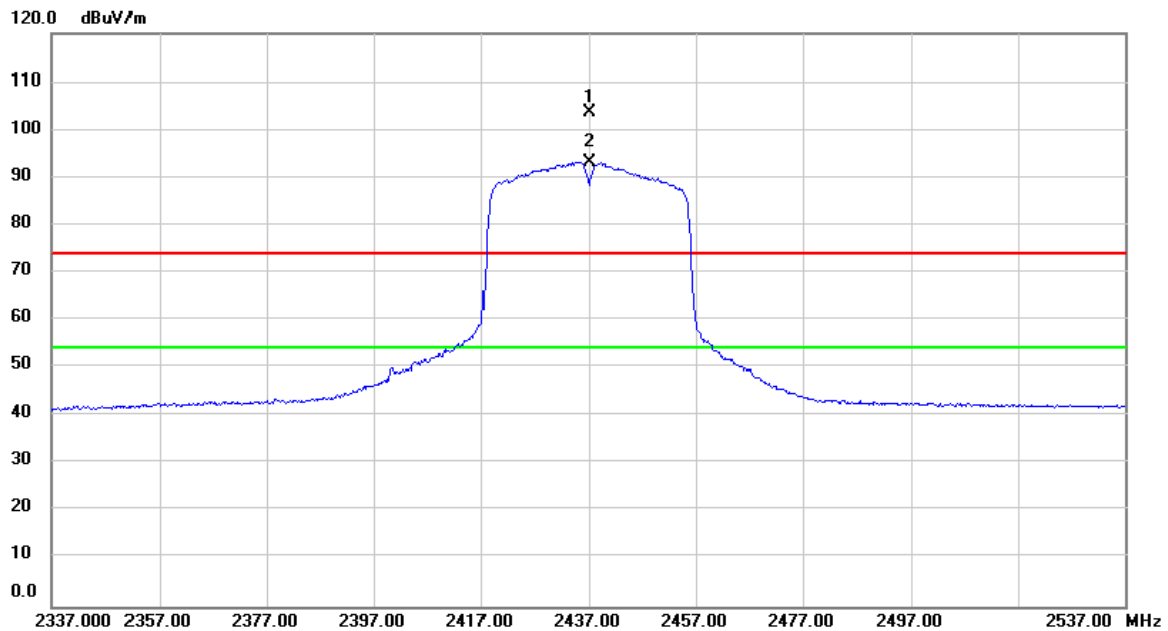
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	73.96	27.49	101.45	74.00	27.45	peak	No Limit
2	*	2437.000	63.15	27.49	90.64	54.00	36.64	AVG	No Limit

Test Mode: TX N-40M MODE 2437MHz

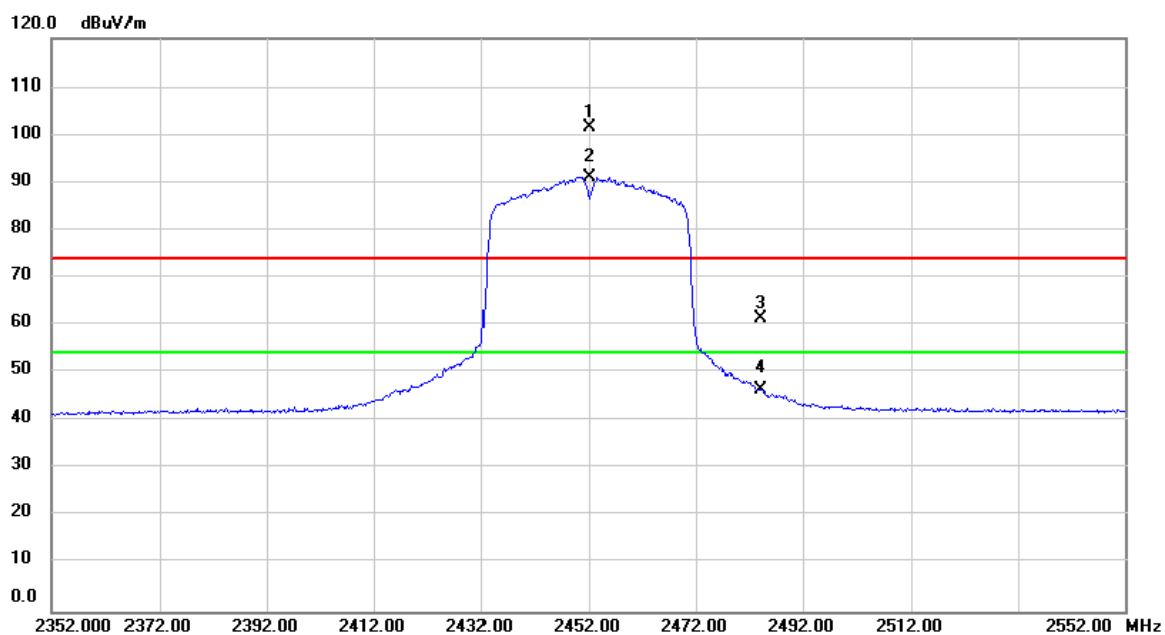
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2437.000	76.15	27.49	103.64	74.00	29.64	peak	No Limit
2	*	2437.000	65.77	27.49	93.26	54.00	39.26	AVG	No Limit

Test Mode: TX N-40M MODE 2452MHz

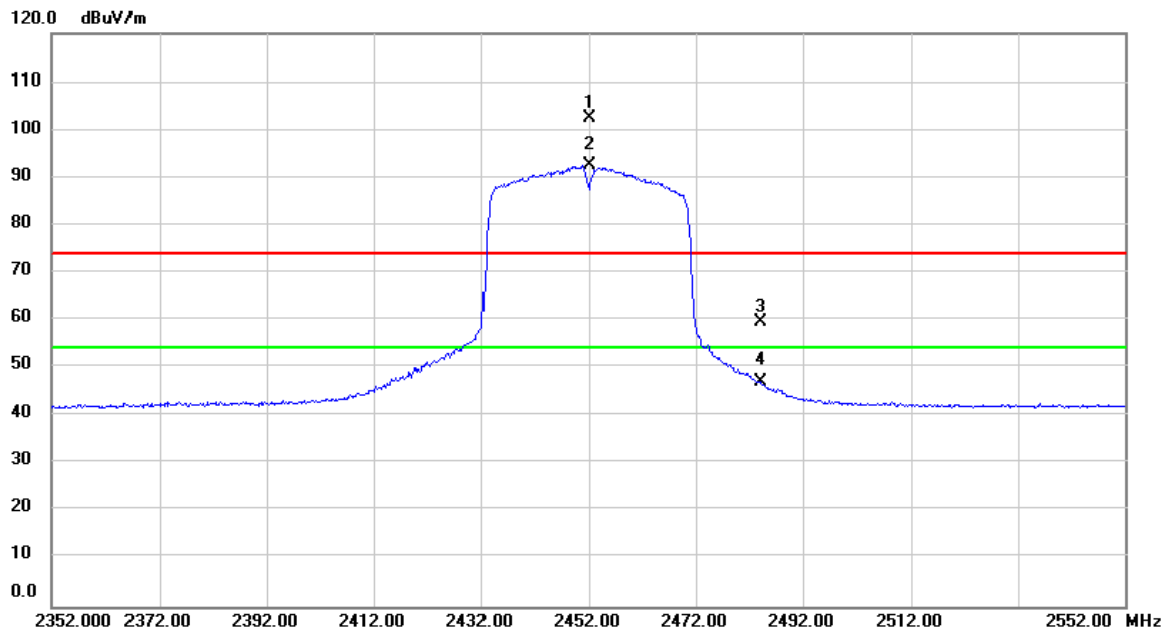
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2452.000	73.90	27.54	101.44	74.00	27.44	peak	No Limit
2	*	2452.000	63.50	27.54	91.04	54.00	37.04	AVG	No Limit
3		2484.200	33.74	27.65	61.39	74.00	-12.61	peak	Band Edge
4		2484.200	19.14	27.65	46.79	54.00	-7.21	AVG	Band Edge

Test Mode: TX N-40M MODE 2452MHz

Horizontal



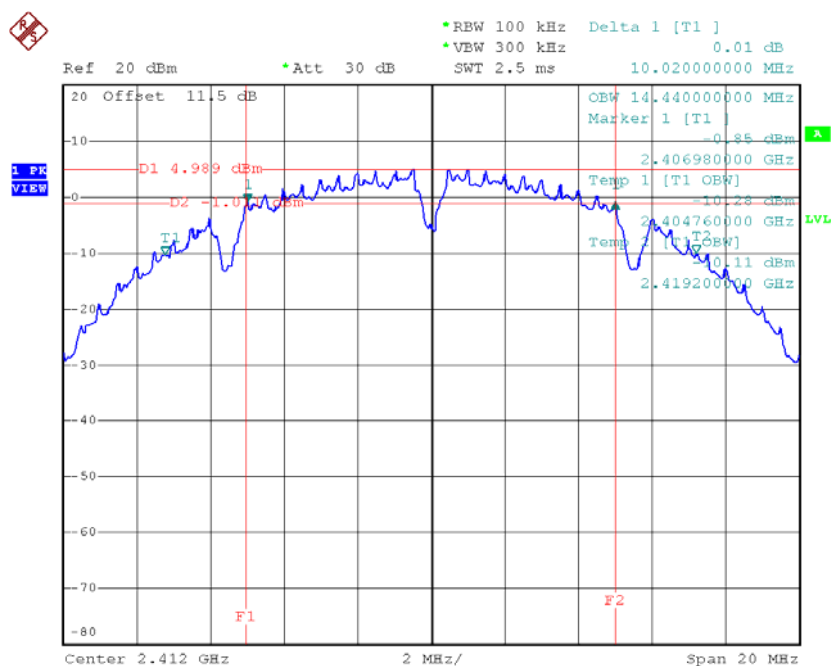
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2452.000	75.03	27.54	102.57	74.00	28.57	peak	No Limit
2	*	2452.000	64.87	27.54	92.41	54.00	38.41	AVG	No Limit
3		2484.000	31.89	27.65	59.54	74.00	-14.46	peak	Band Edge
4		2484.000	19.66	27.65	47.31	54.00	-6.69	AVG	Band Edge

ATTACHMENT F - BANDWIDTH

Test Mode: TX B Mode_CH01/06/11

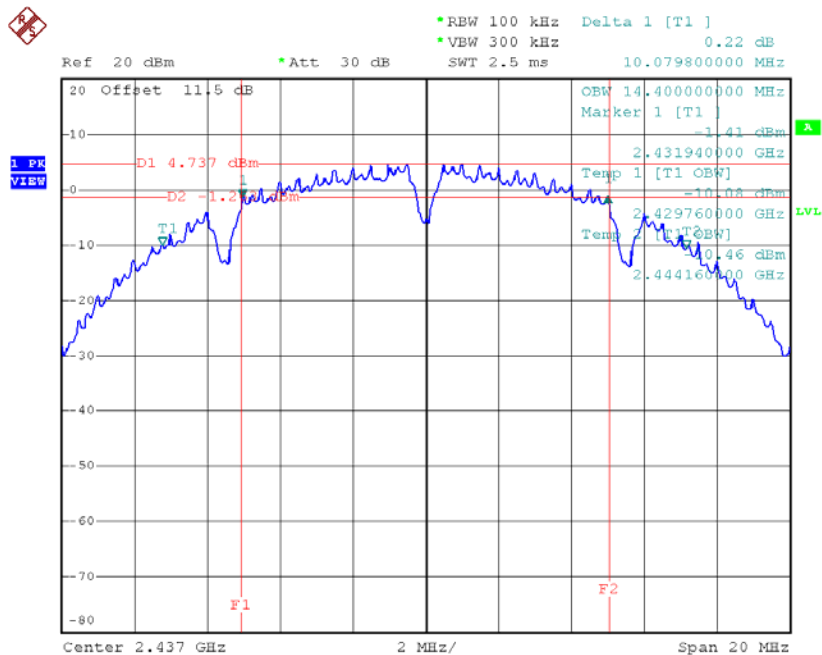
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	10.02	14.44	500	Complies
2437	10.08	14.40	500	Complies
2462	10.08	14.32	500	Complies

TX CH01



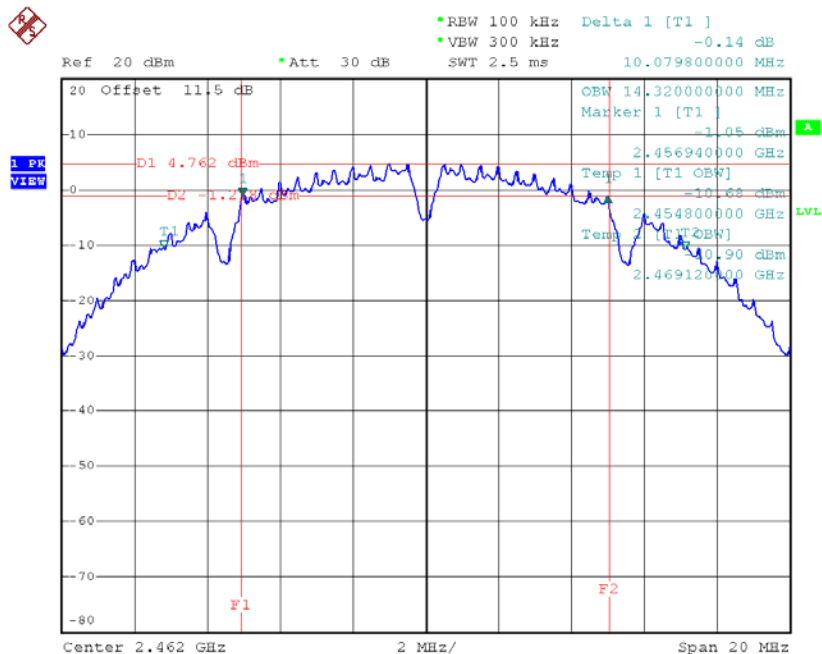
Date: 2.MAR.2016 19:51:10

TX CH06



Date: 2.MAR.2016 19:53:00

TX CH11

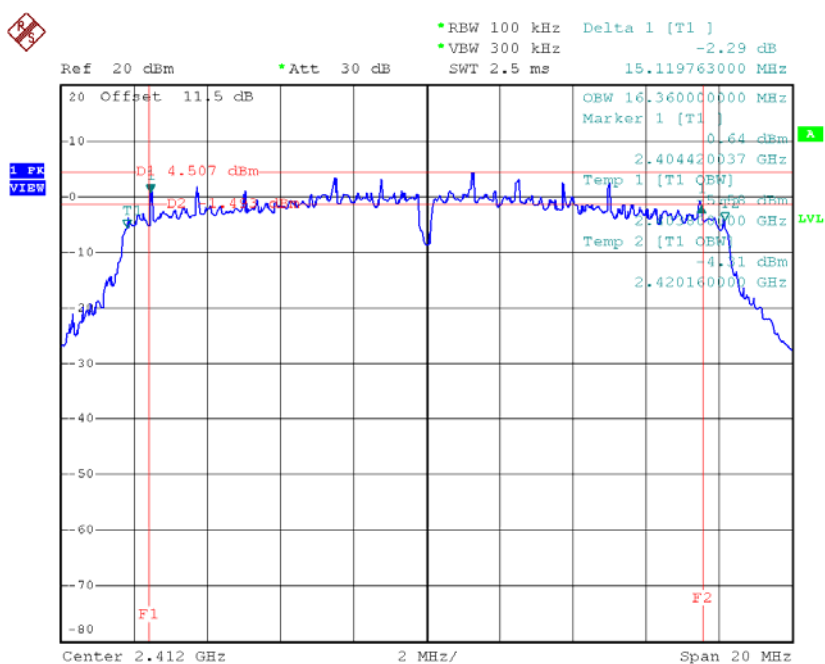


Date: 2.MAR.2016 19:54:21

Test Mode: TX G Mode_CH01/06/11_ANT 1

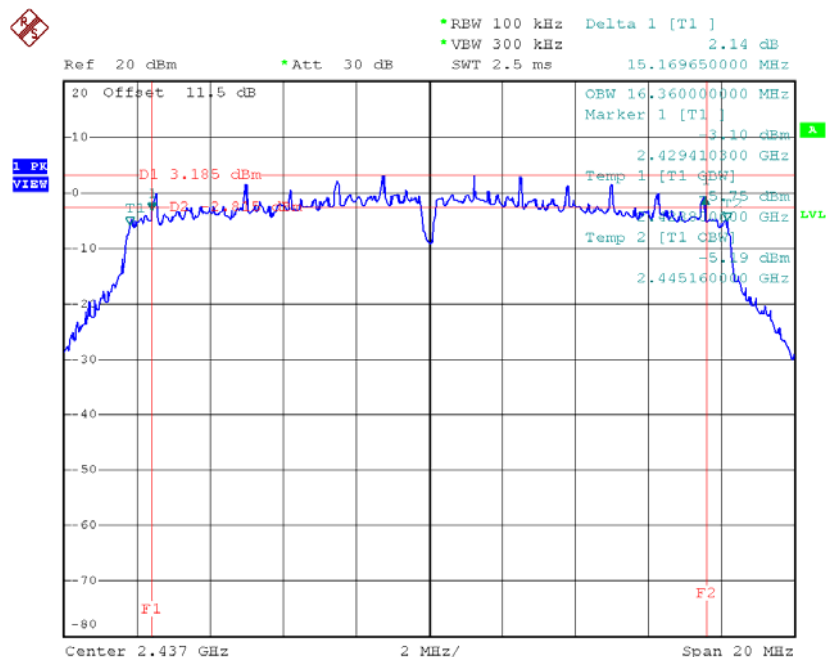
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.12	16.36	500	Complies
2437	15.17	16.36	500	Complies
2462	13.87	16.36	500	Complies

TX CH01



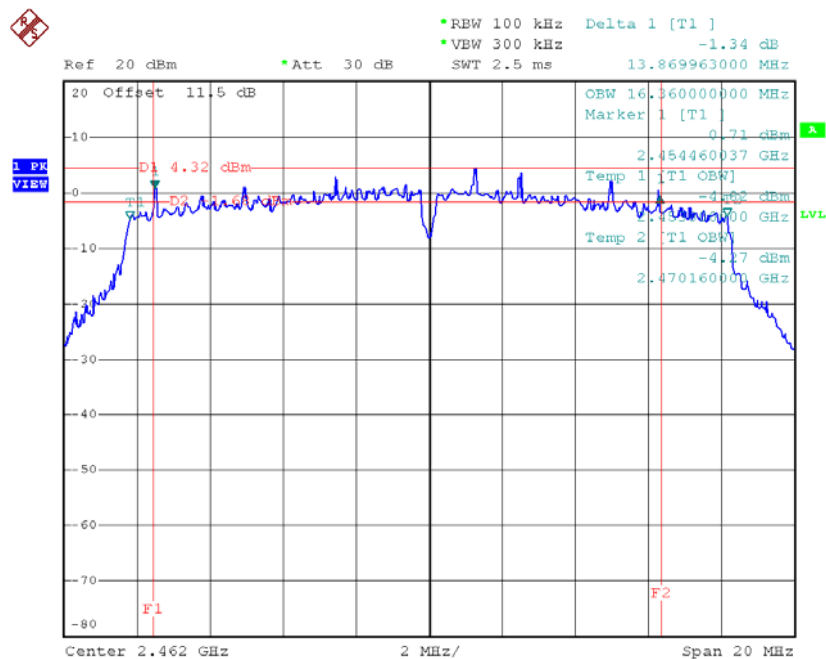
Date: 2.MAR.2016 19:59:52

TX CH06



Date: 2.MAR.2016 20:01:22

TX CH11

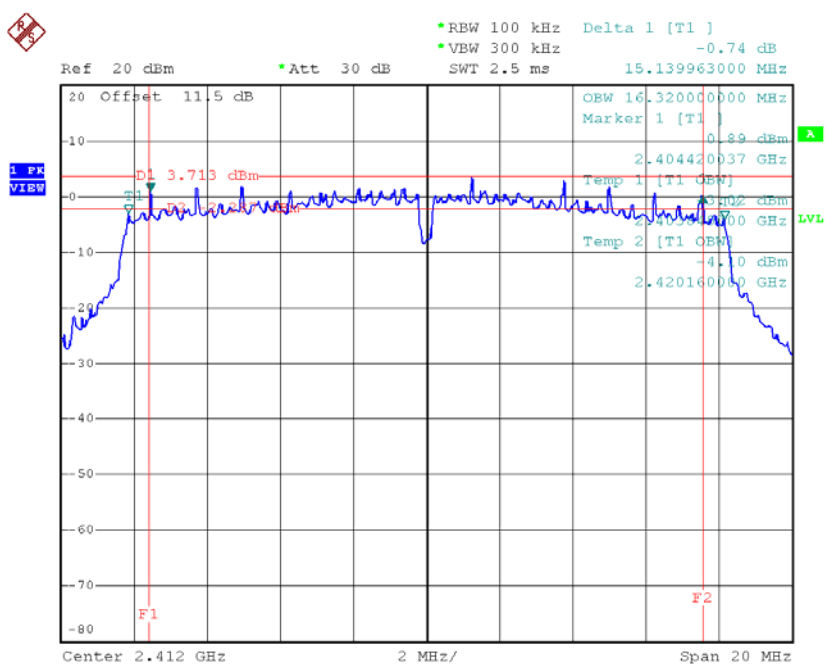


Date: 2.MAR.2016 20:02:32

Test Mode: TX G Mode_CH01/06/11_ANT 2

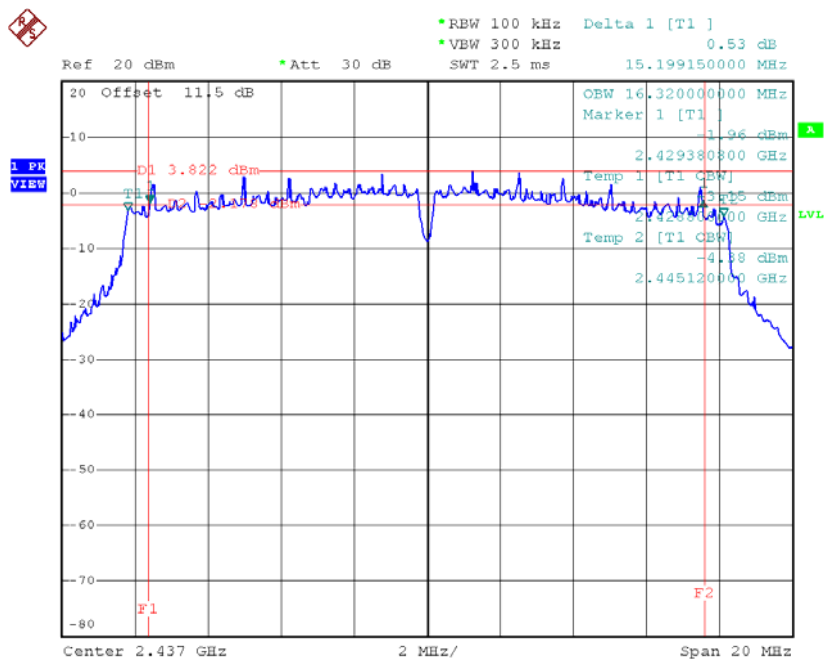
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.14	16.32	500	Complies
2437	15.20	16.32	500	Complies
2462	15.18	16.36	500	Complies

TX CH01



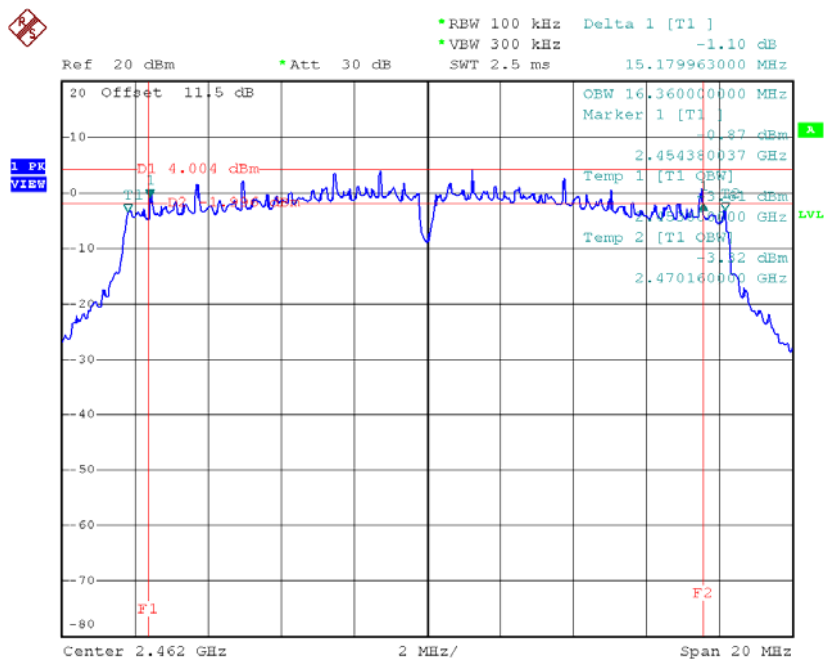
Date: 2.MAR.2016 20:16:19

TX CH06



Date: 2.MAR.2016 20:17:59

TX CH11

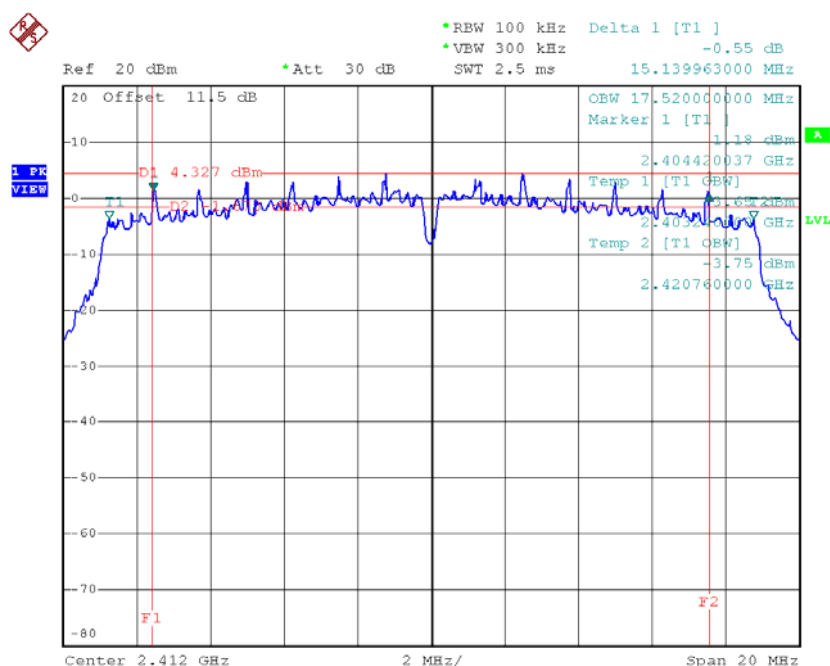


Date: 2.MAR.2016 20:19:16

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

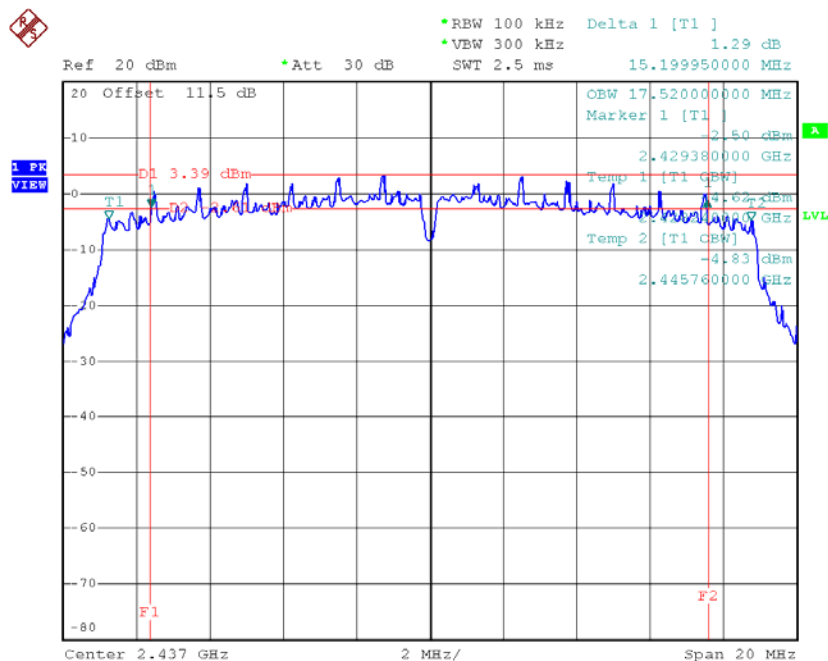
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.14	17.52	500	Complies
2437	15.20	17.52	500	Complies
2462	15.14	17.48	500	Complies

TX CH01



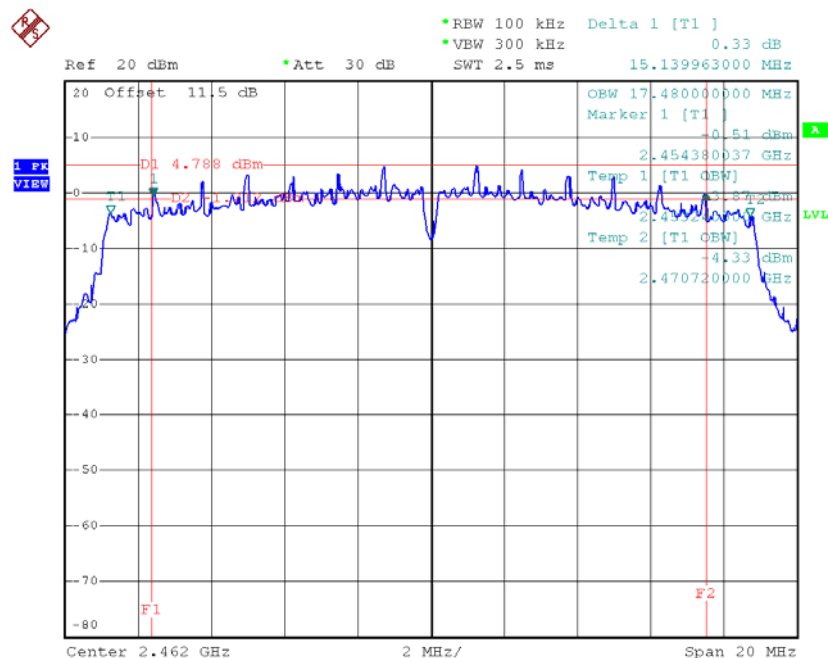
Date: 2.MAR.2016 20:05:04

TX CH06



Date: 2.MAR.2016 20:06:15

TX CH11

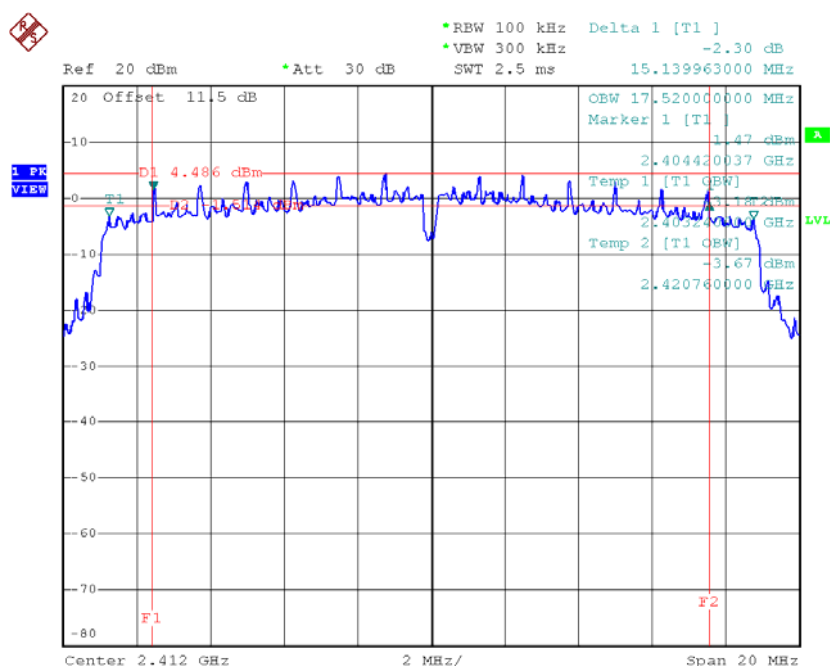


Date: 2.MAR.2016 20:07:18

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

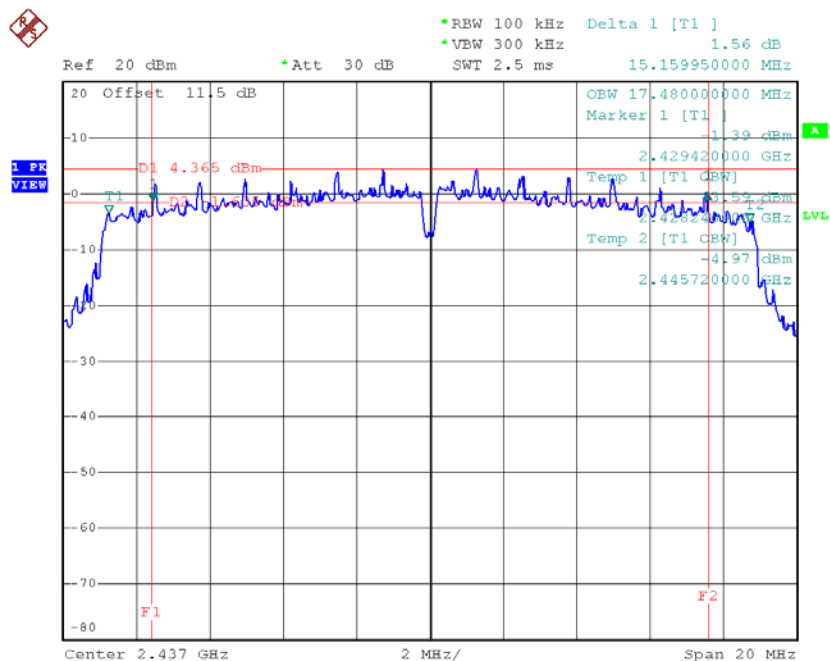
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.14	17.52	500	Complies
2437	15.16	17.48	500	Complies
2462	15.12	17.52	500	Complies

TX CH01



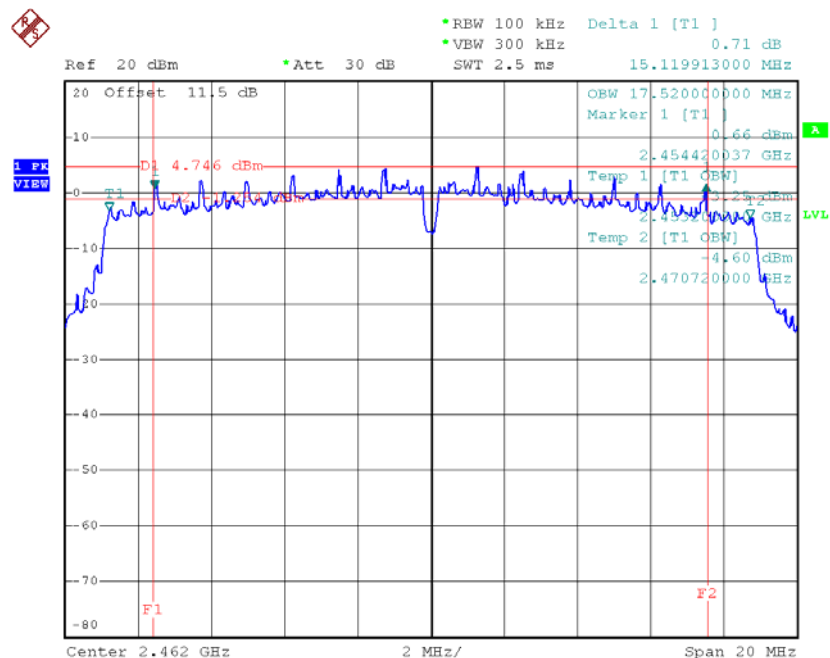
Date: 2.MAR.2016 20:25:32

TX CH06



Date: 2.MAR.2016 20:27:04

TX CH11

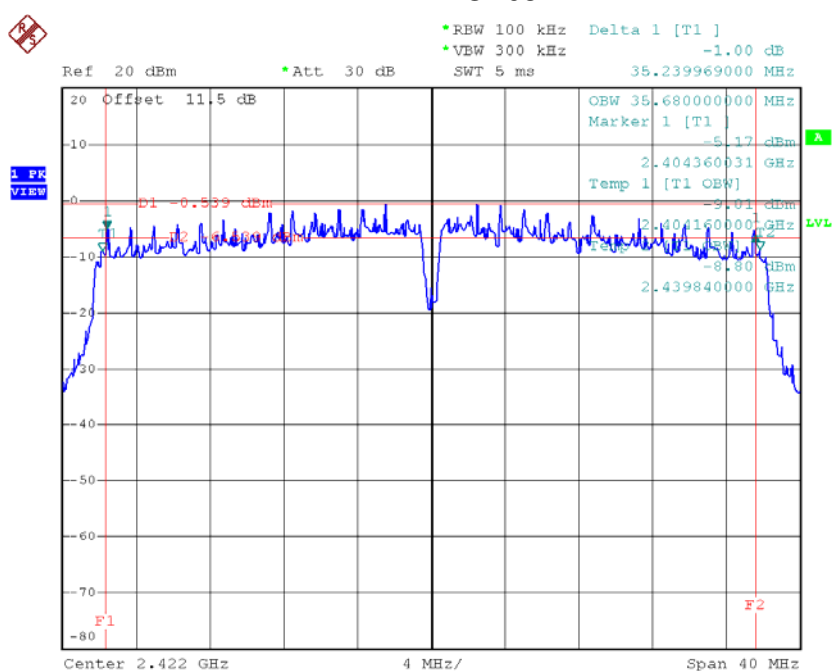


Date: 2.MAR.2016 20:29:30

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

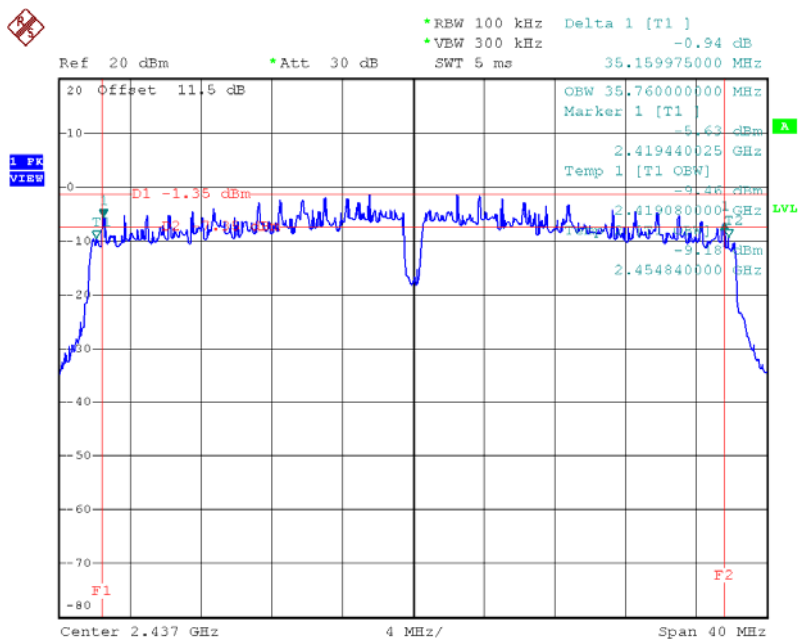
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	35.24	35.68	500	Complies
2437	35.16	35.76	500	Complies
2452	35.08	35.76	500	Complies

TX CH03



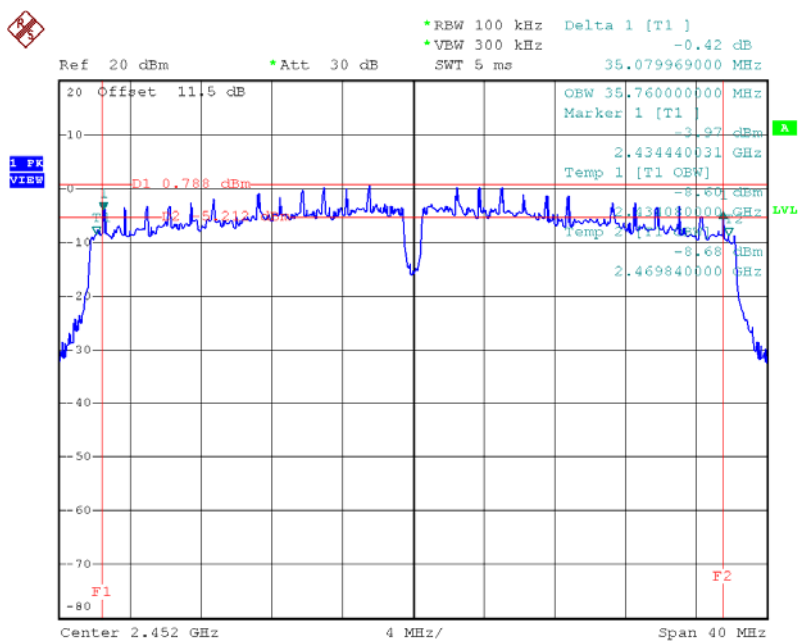
Date: 2.MAR.2016 20:10:19

TX CH06



Date: 2.MAR.2016 20:11:50

TX CH09

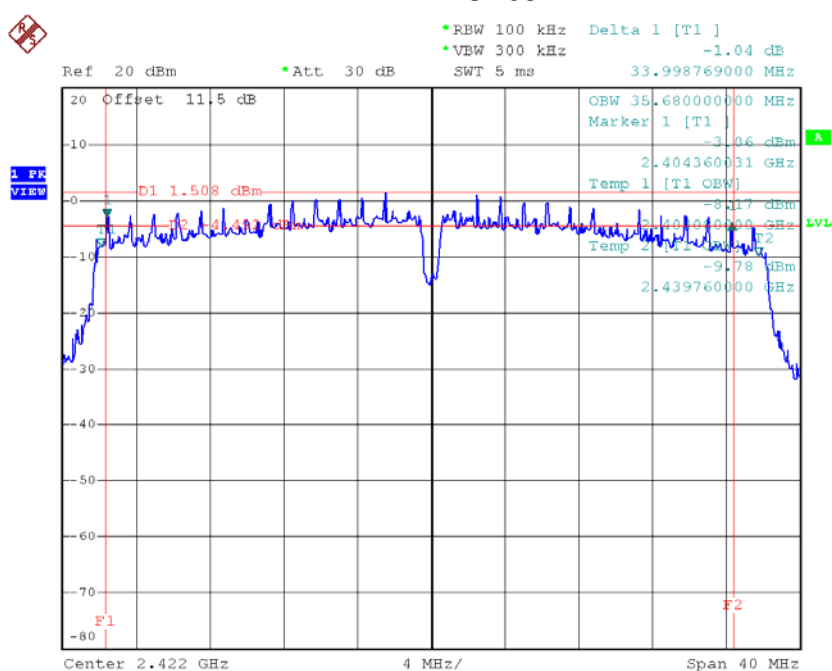


Date: 2.MAR.2016 20:13:05

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

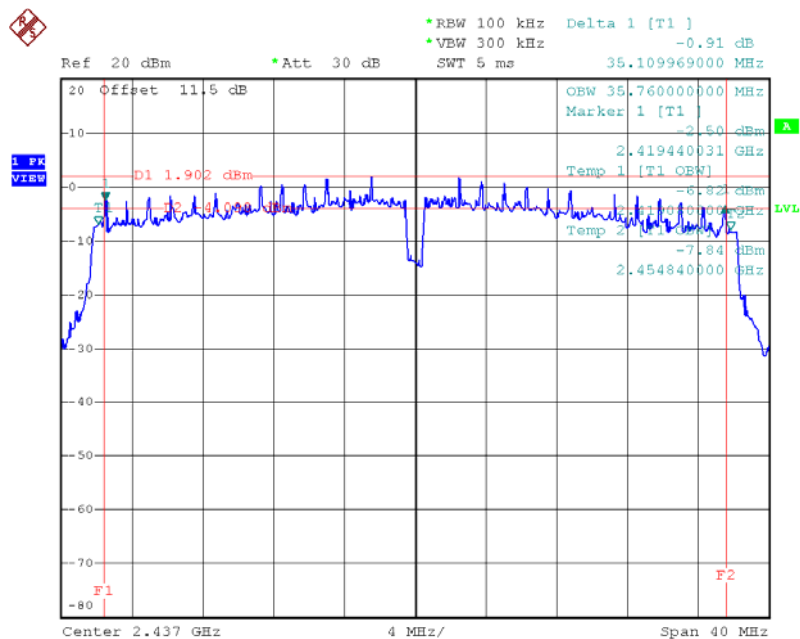
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	34.00	35.68	500	Complies
2437	35.11	35.76	500	Complies
2452	35.08	35.76	500	Complies

TX CH03



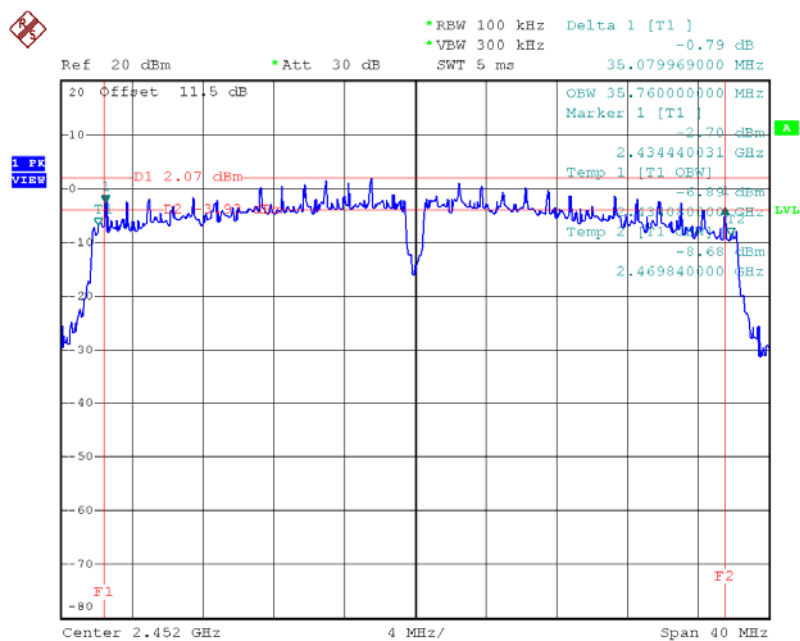
Date: 2.MAR.2016 20:32:38

TX CH06



Date: 2.MAR.2016 20:33:55

TX CH09



Date: 2.MAR.2016 20:35:13

ATTACHMENT G – MAXIMUM PEAK CONDUCTED OUTPUT POWER

Test Mode: TX B Mode_CH01/06/11					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	16.91	0.05	30.00	1.00	Complies
2437	16.39	0.04	30.00	1.00	Complies
2462	16.34	0.04	30.00	1.00	Complies

Test Mode: TX G Mode_CH01/06/11_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	22.54	0.18	30.00	1.00	Complies
2437	22.43	0.17	30.00	1.00	Complies
2462	22.76	0.19	30.00	1.00	Complies

Test Mode: TX G Mode_CH01/06/11_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	22.90	0.19	30.00	1.00	Complies
2437	23.23	0.21	30.00	1.00	Complies
2462	23.28	0.21	30.00	1.00	Complies

Test Mode: TX G Mode_CH01/06/11_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	25.73	0.37	30.00	1.00	Complies
2437	25.86	0.39	30.00	1.00	Complies
2462	26.04	0.40	30.00	1.00	Complies

Test Mode: TX N20 Mode_CH01/06/11_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	22.53	0.18	30.00	1.00	Complies
2437	21.54	0.14	30.00	1.00	Complies
2462	22.51	0.18	30.00	1.00	Complies

Test Mode: TX N20 Mode_CH01/06/11_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	22.60	0.18	30.00	1.00	Complies
2437	22.69	0.19	30.00	1.00	Complies
2462	22.68	0.19	30.00	1.00	Complies

Test Mode: TX N20 Mode_CH01/06/11_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	25.58	0.36	30.00	1.00	Complies
2437	25.16	0.33	30.00	1.00	Complies
2462	25.61	0.36	30.00	1.00	Complies

Test Mode: TX N40 Mode_CH03/06/09_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	22.23	0.17	30.00	1.00	Complies
2437	21.60	0.14	30.00	1.00	Complies
2452	22.44	0.18	30.00	1.00	Complies

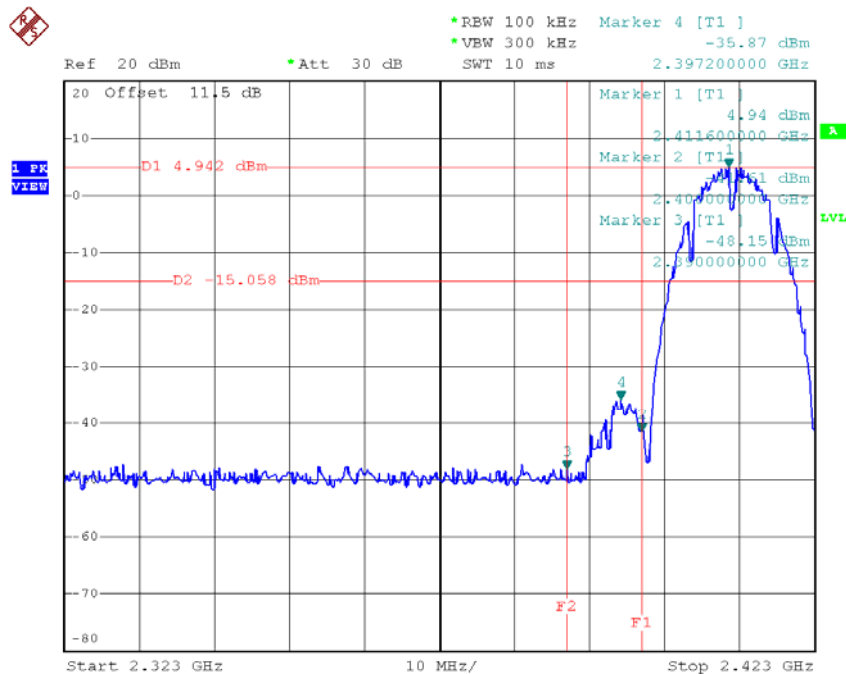
Test Mode: TX N40 Mode_CH03/06/09_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	22.42	0.17	30.00	1.00	Complies
2437	22.83	0.19	30.00	1.00	Complies
2452	22.60	0.18	30.00	1.00	Complies

Test Mode: TX N40 Mode_CH03/06/09_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	25.34	0.34	30.00	1.00	Complies
2437	25.27	0.34	30.00	1.00	Complies
2452	25.53	0.36	30.00	1.00	Complies

ATTACHMENT H - ANTENNA CONDUCTED SPURIOUS EMISSION

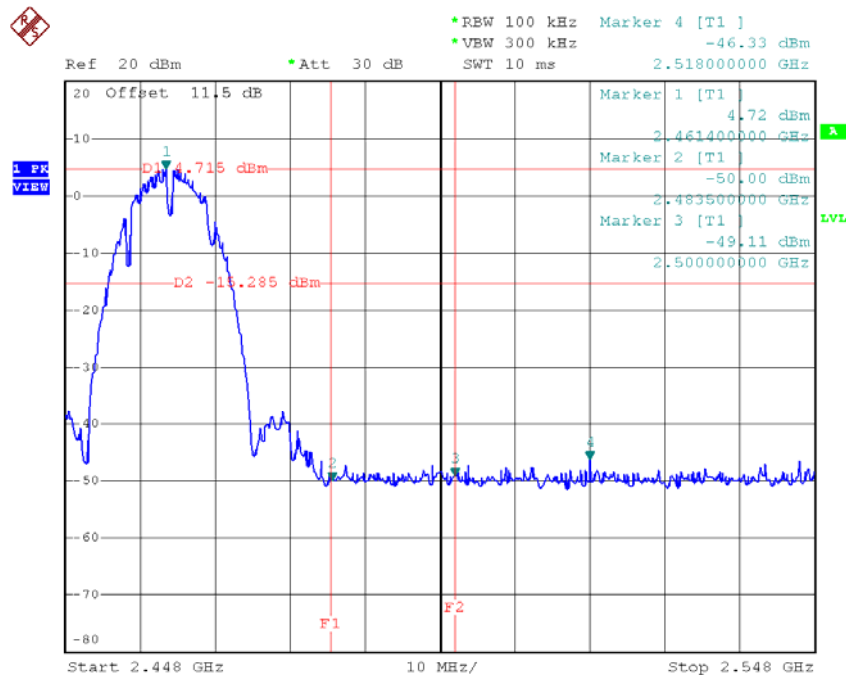
Test Mode: TX B Mode

TX B mode CH01



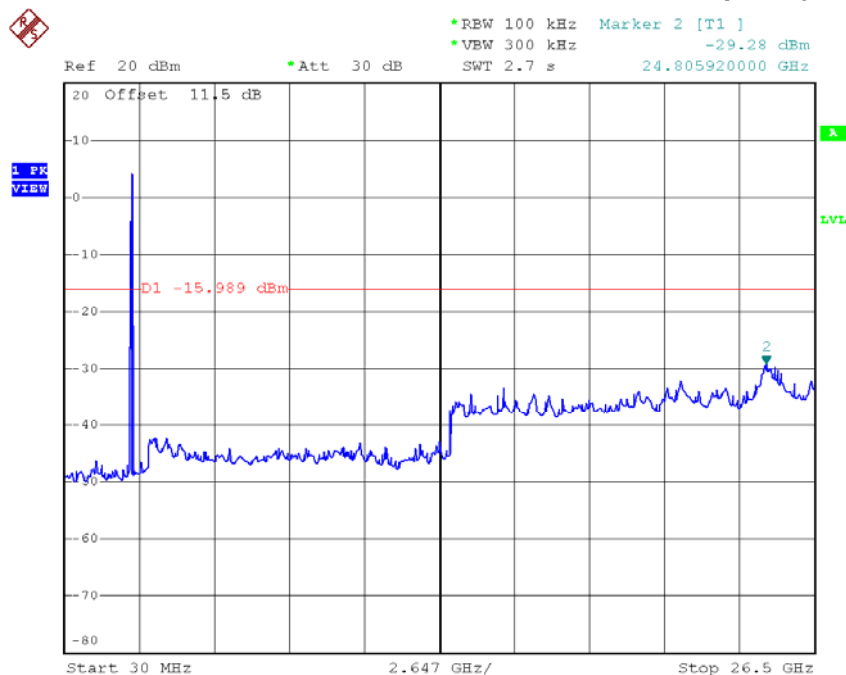
Date: 2.MAR.2016 19:51:46

TX B mode CH11



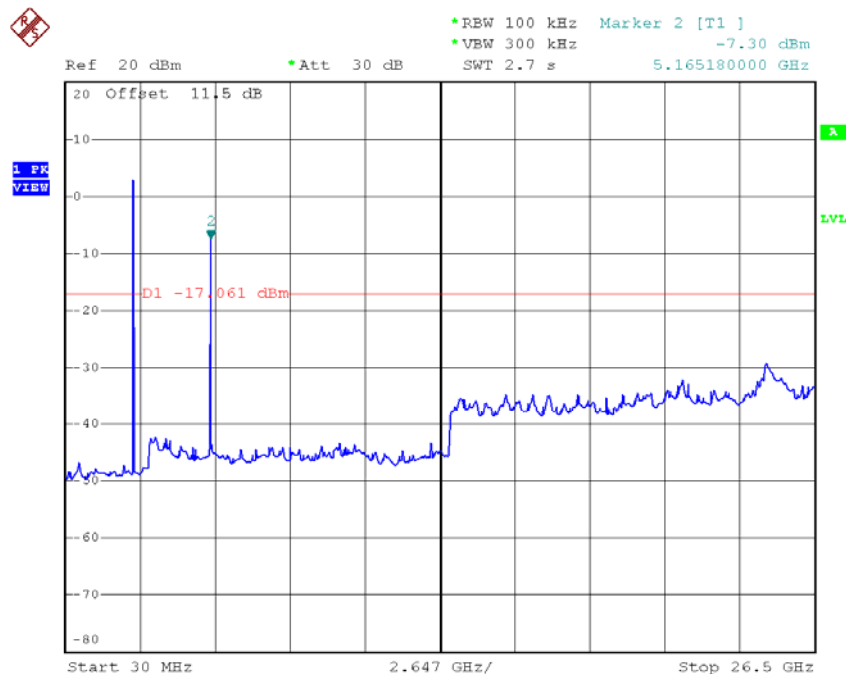
Date: 2.MAR.2016 19:54:56

TX B mode CH01 (10 Harmonic of the frequency)



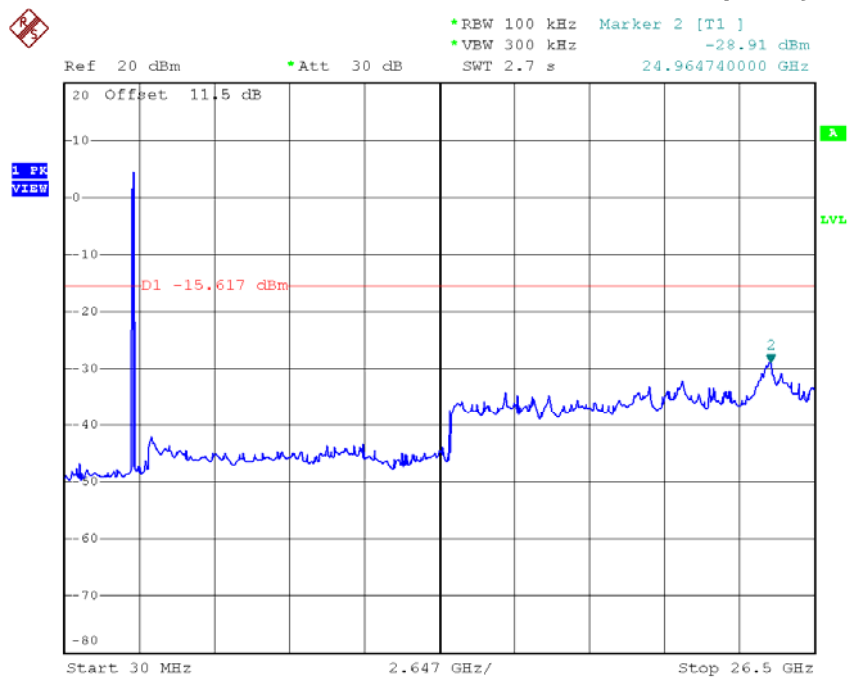
Date: 2.MAR.2016 19:51:23

TX B mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 19:53:12

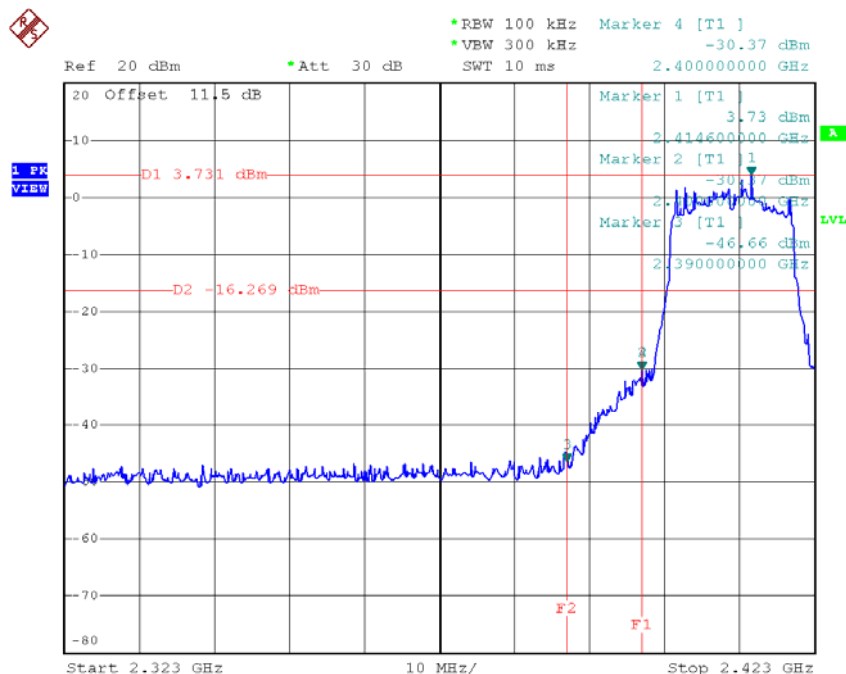
TX B mode CH11 (10 Harmonic of the frequency)



Date: 2.MAR.2016 19:54:33

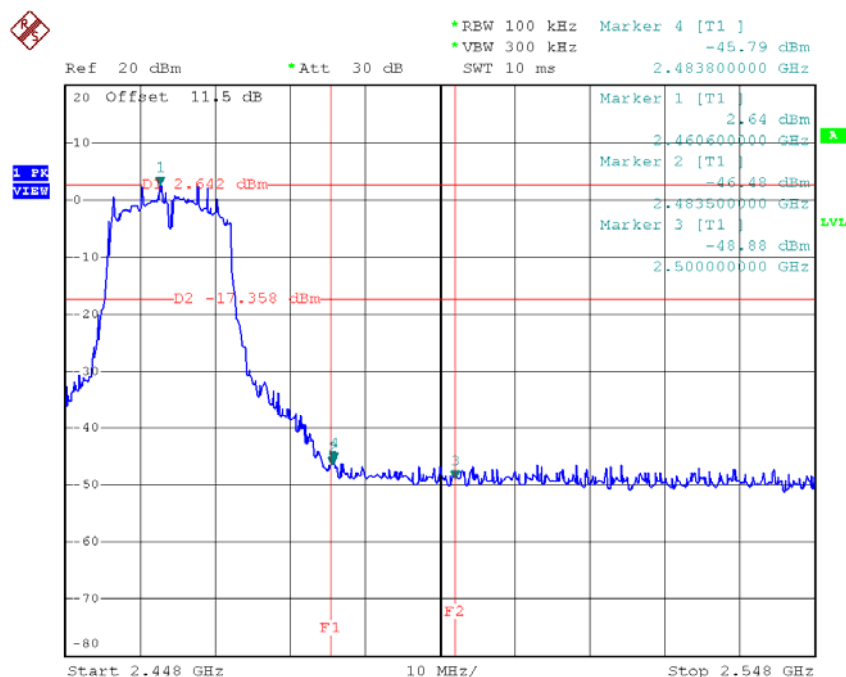
Test Mode: TX G Mode_ANT 1

TX G mode CH01



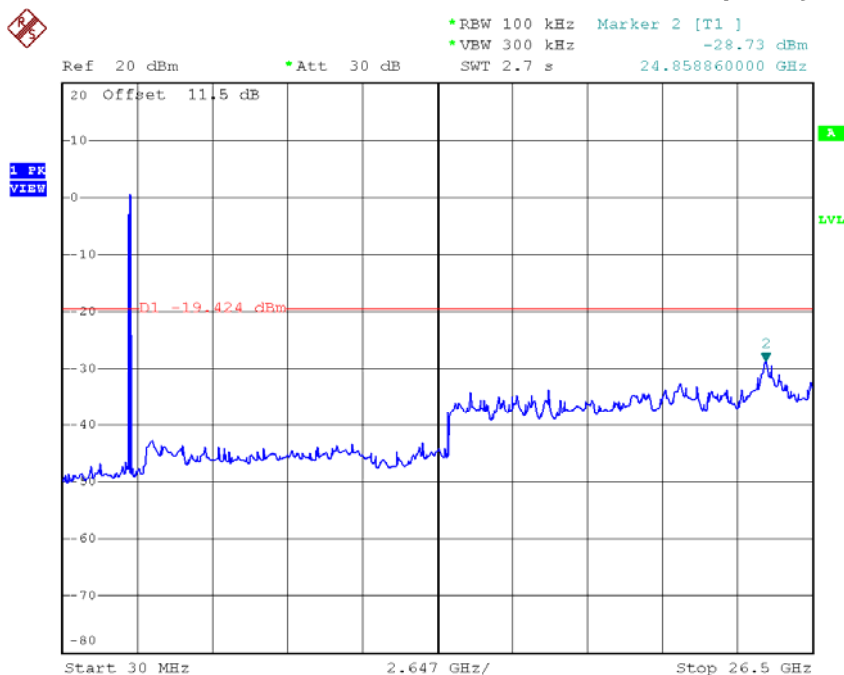
Date: 2.MAR.2016 20:00:27

TX G mode CH11



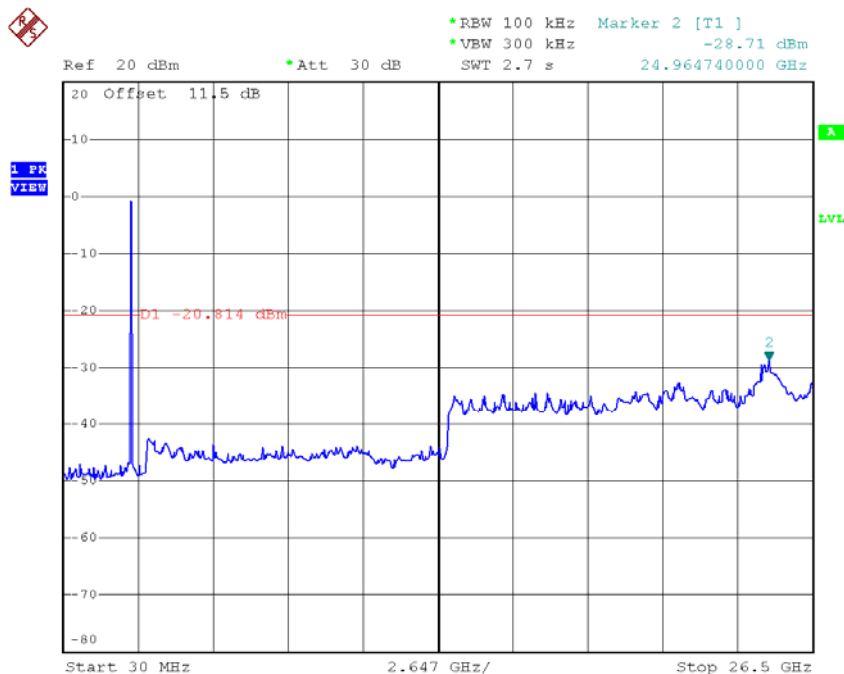
Date: 2.MAR.2016 20:03:08

TX G mode CH01 (10 Harmonic of the frequency)



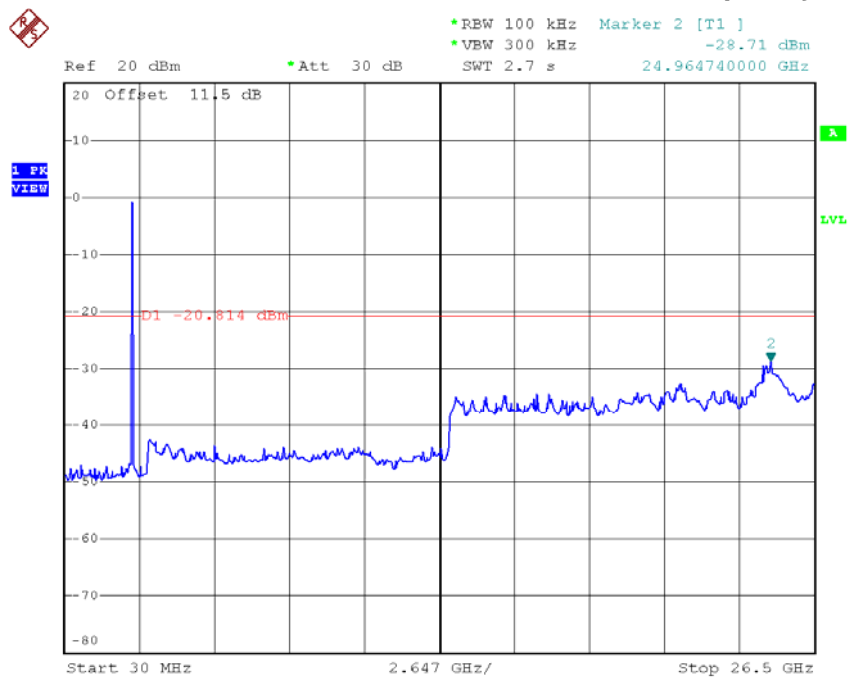
Date: 2.MAR.2016 20:00:04

TX G mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:01:35

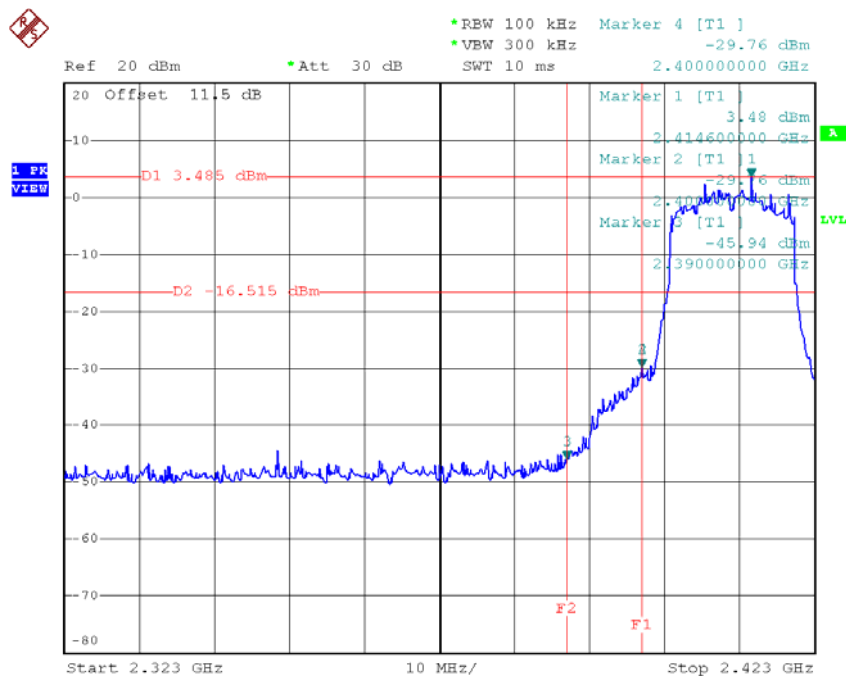
TX G mode CH11 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:01:35

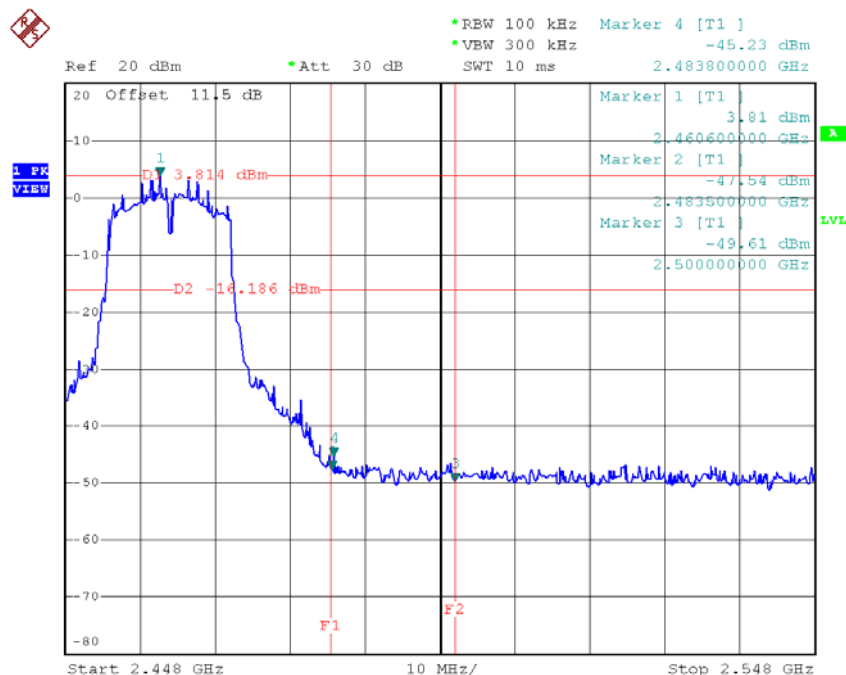
Test Mode: TX G Mode_ANT 2

TX G mode CH01



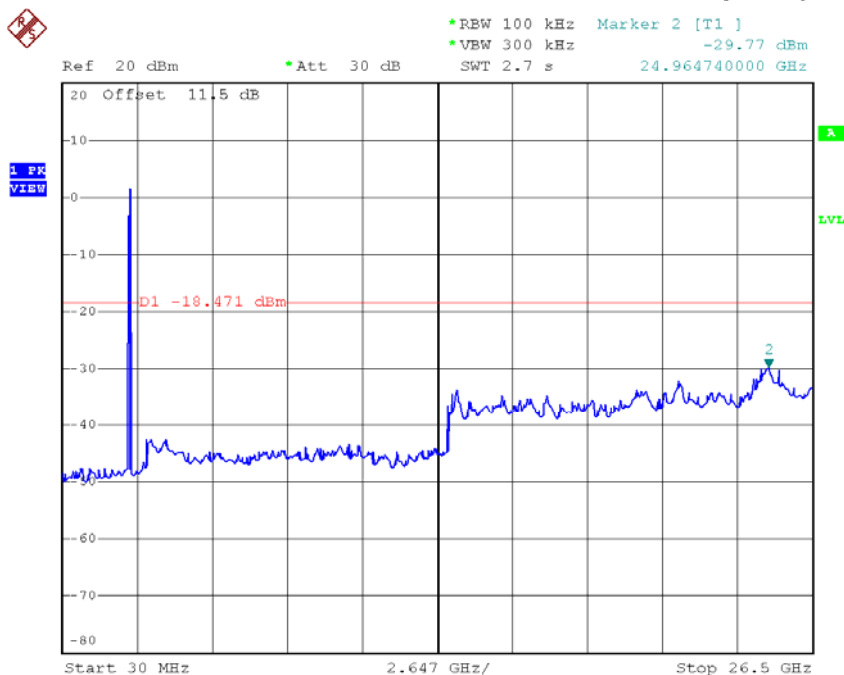
Date: 2.MAR.2016 20:16:54

TX G mode CH11



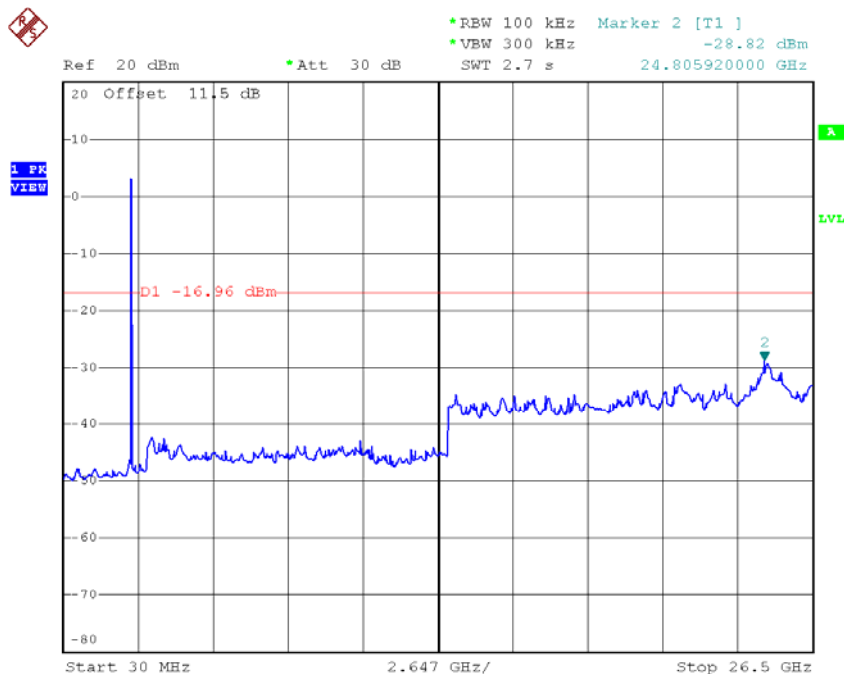
Date: 2.MAR.2016 20:19:51

TX G mode CH01 (10 Harmonic of the frequency)



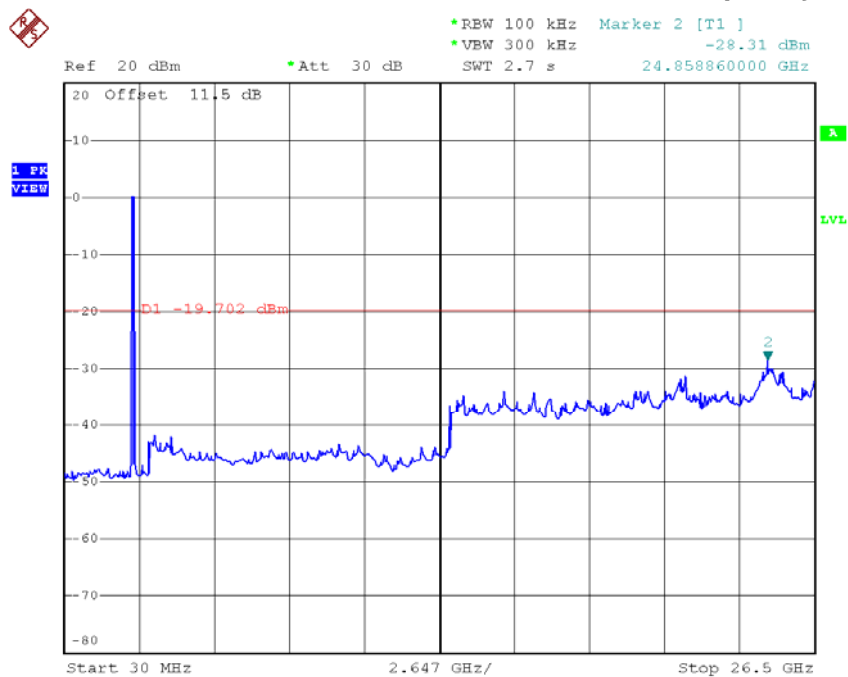
Date: 2.MAR.2016 20:16:31

TX G mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:18:12

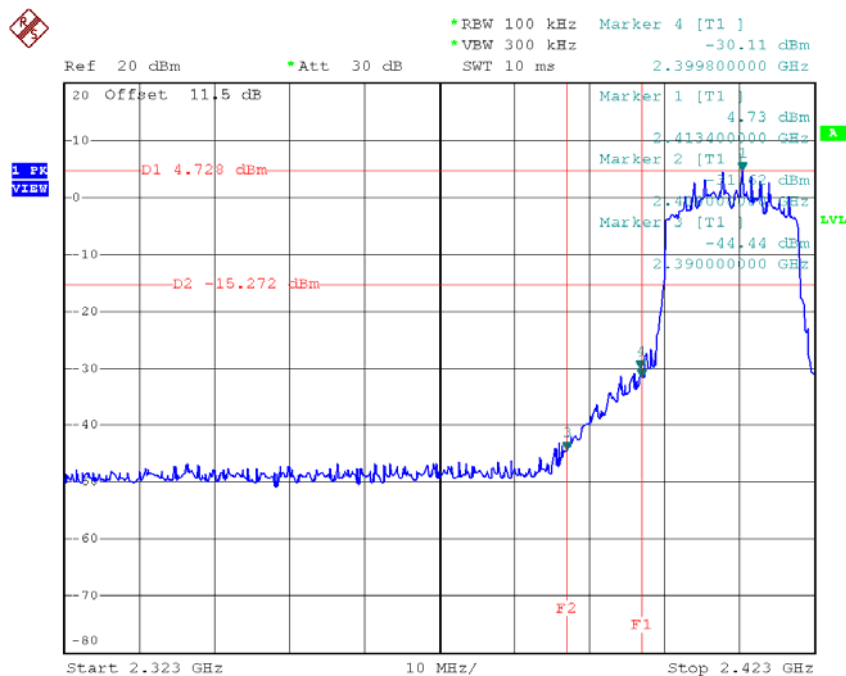
TX G mode CH11 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:19:28

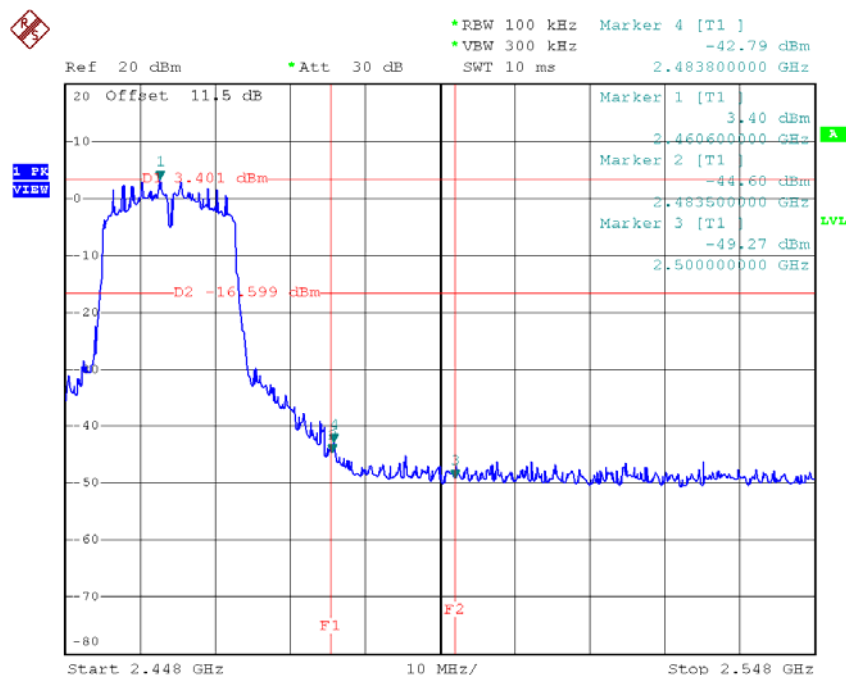
Test Mode: TX N-20M Mode_ANT 1

TX HT20 mode CH01



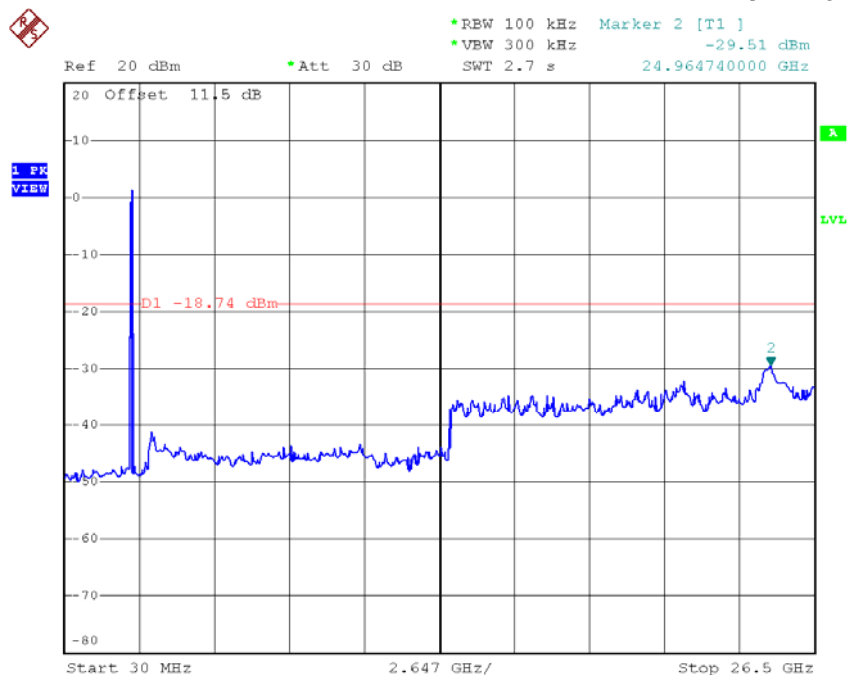
Date: 2.MAR.2016 20:05:23

TX HT20 mode CH11



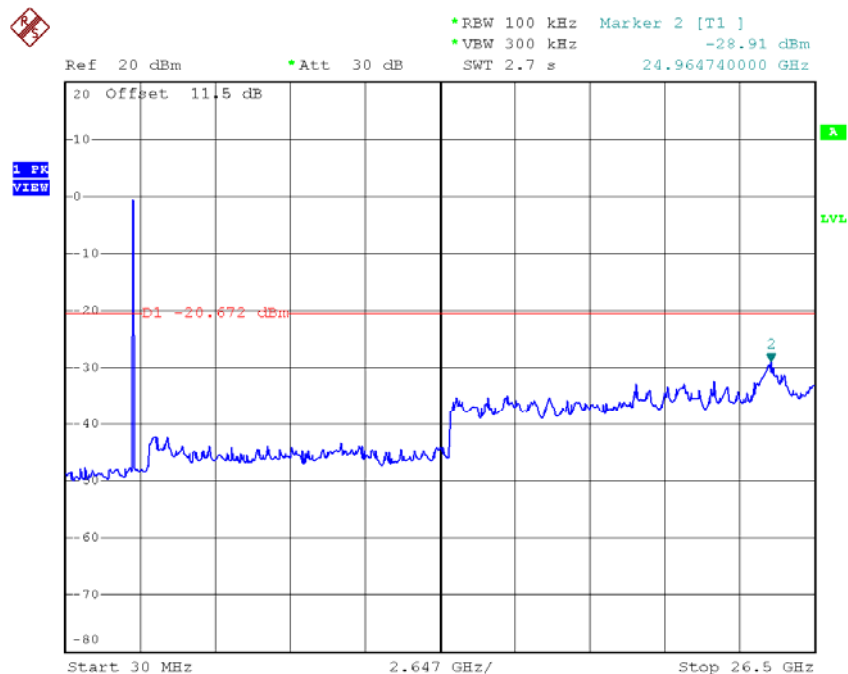
Date: 2.MAR.2016 20:07:54

TX HT20 mode CH01 (10 Harmonic of the frequency)



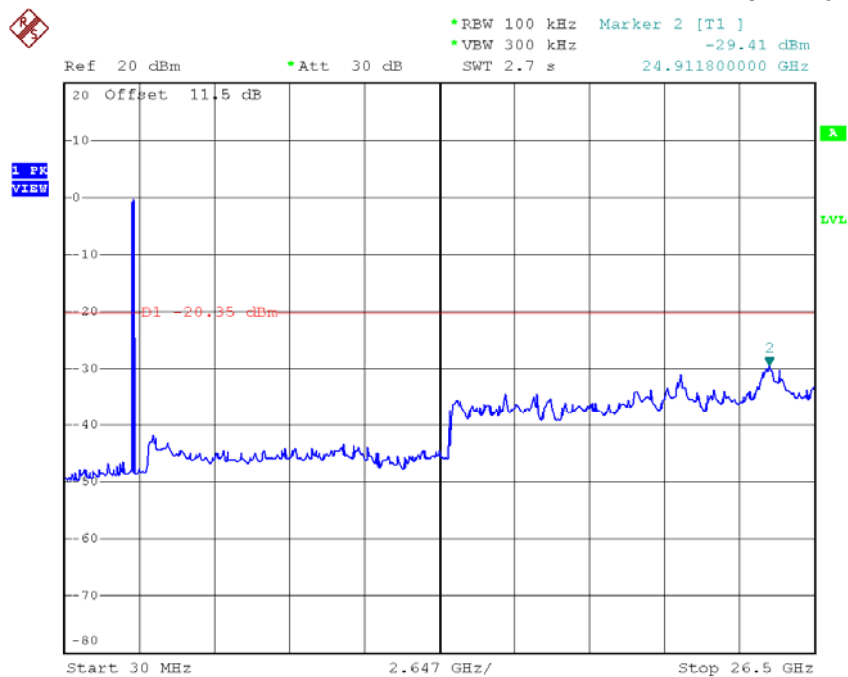
Date: 2.MAR.2016 20:05:16

TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:06:27

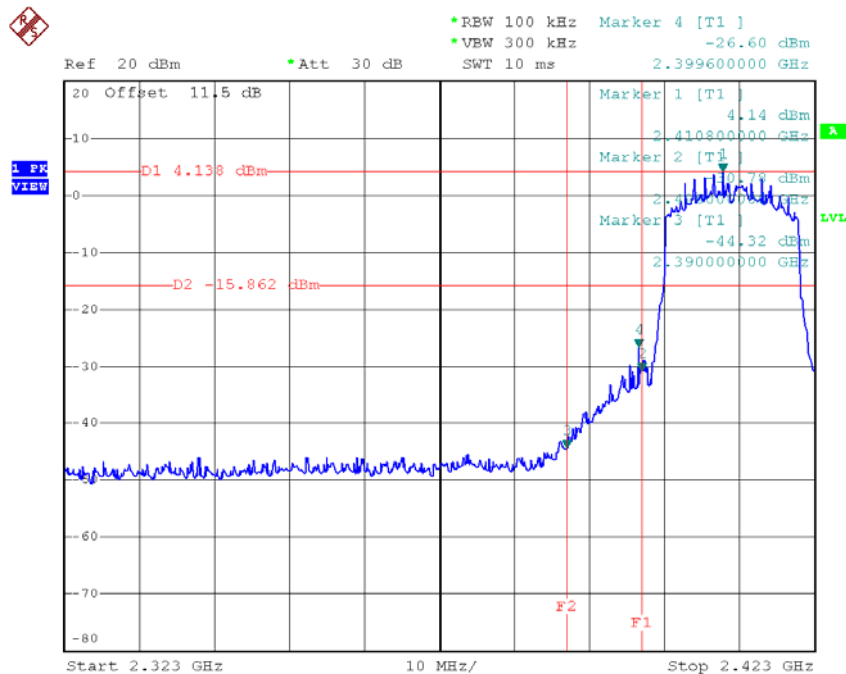
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:07:31

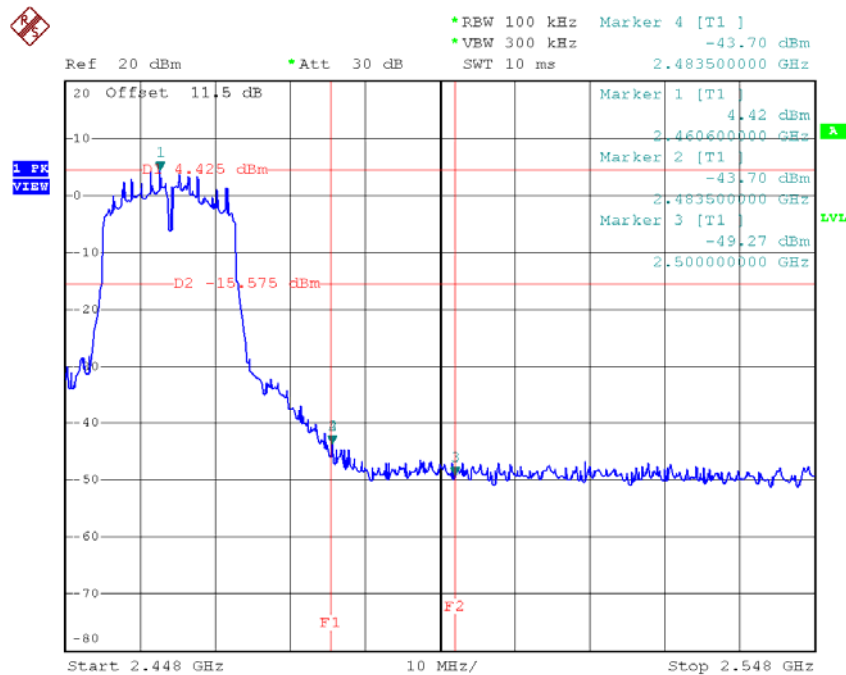
Test Mode: TX N-20M Mode_ANT 2

TX HT20 mode CH01



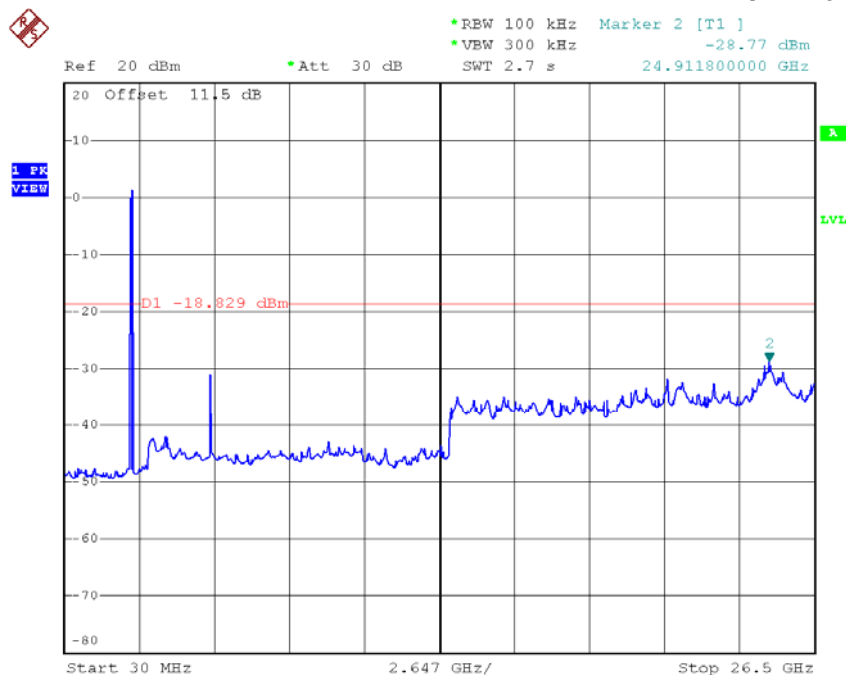
Date: 2.MAR.2016 20:26:07

TX HT20 mode CH11



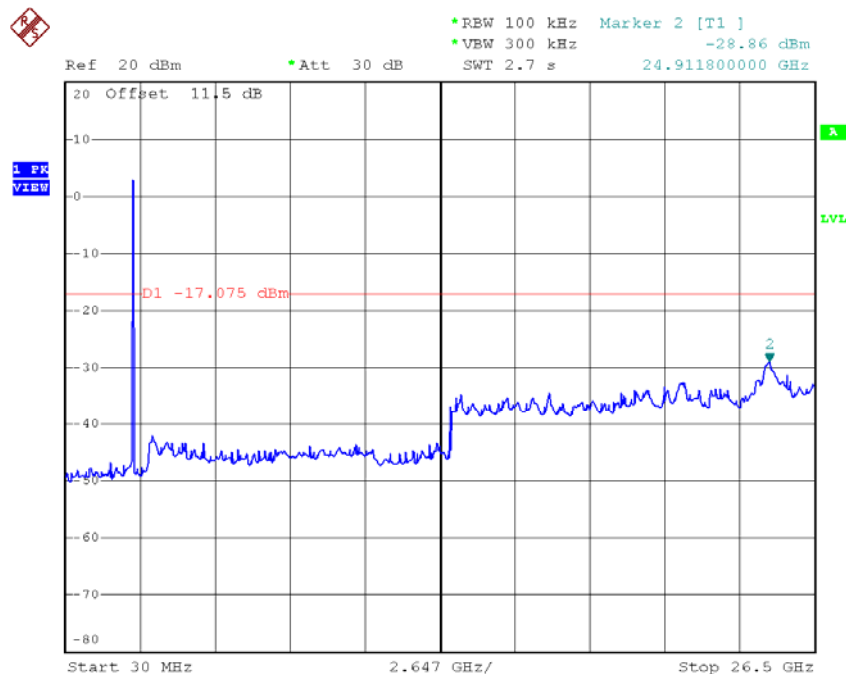
Date: 2.MAR.2016 20:30:05

TX HT20 mode CH01 (10 Harmonic of the frequency)



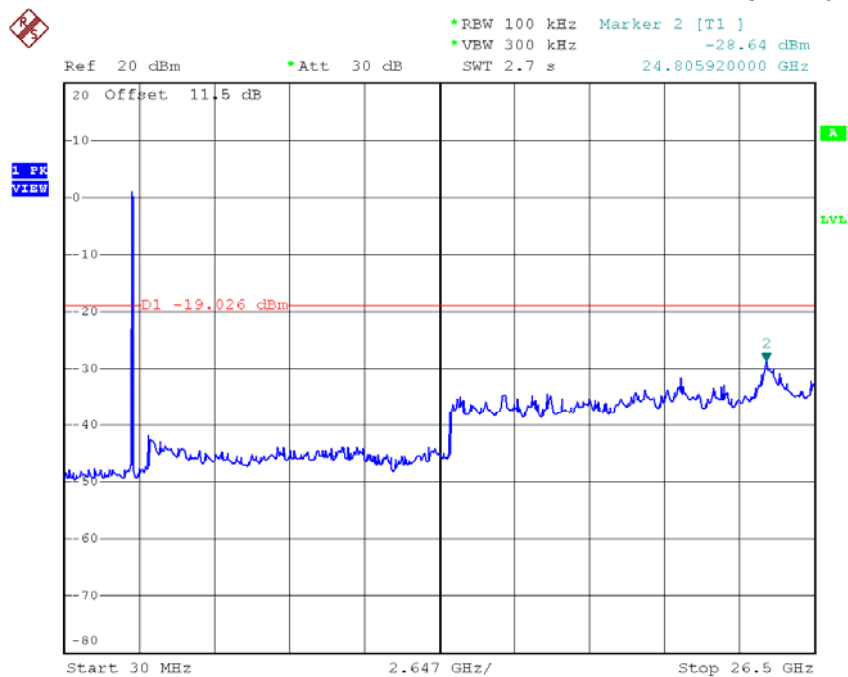
Date: 2.MAR.2016 20:25:44

TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:28:04

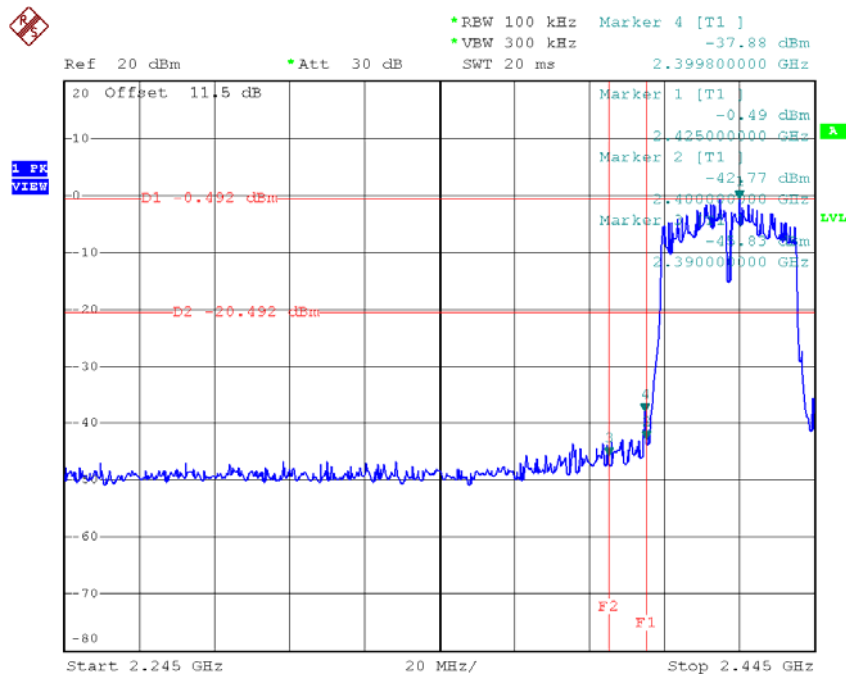
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:29:42

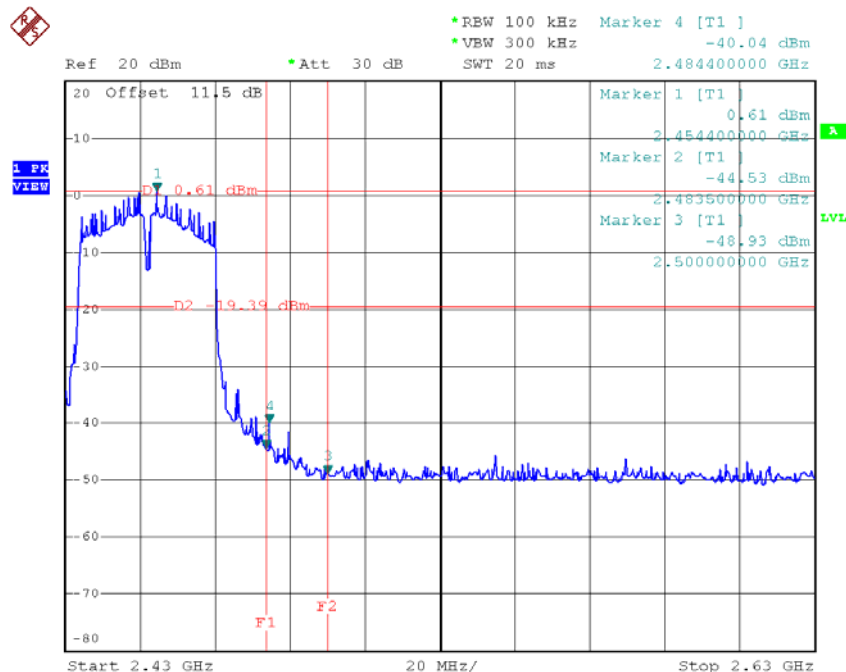
Test Mode: TX N-40M Mode_ANT 1

TX HT40 mode CH03



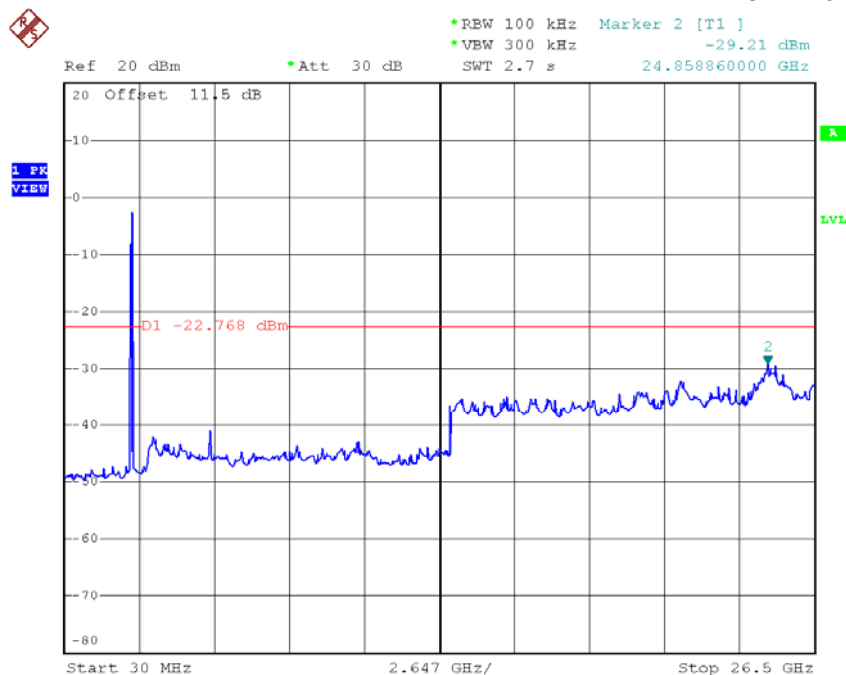
Date: 2.MAR.2016 20:10:55

TX HT40 mode CH09



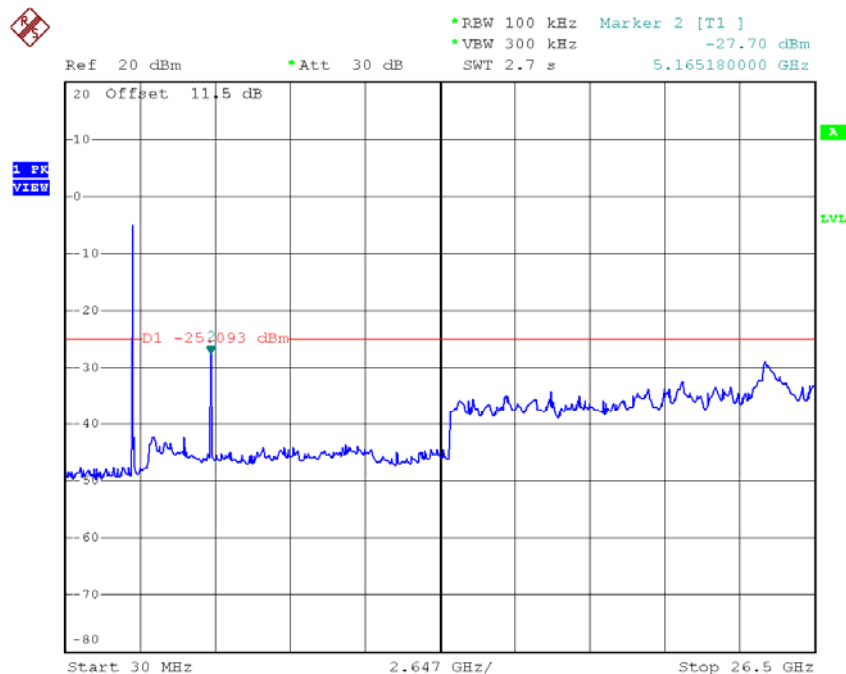
Date: 2.MAR.2016 20:13:40

TX HT40 mode CH03 (10 Harmonic of the frequency)



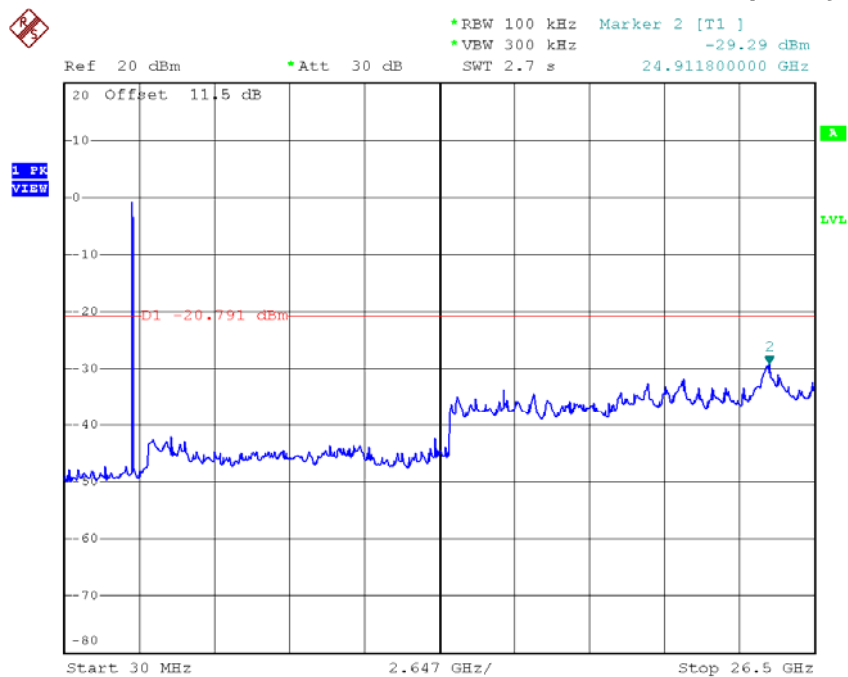
Date: 2.MAR.2016 20:10:32

TX HT40 mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:12:02

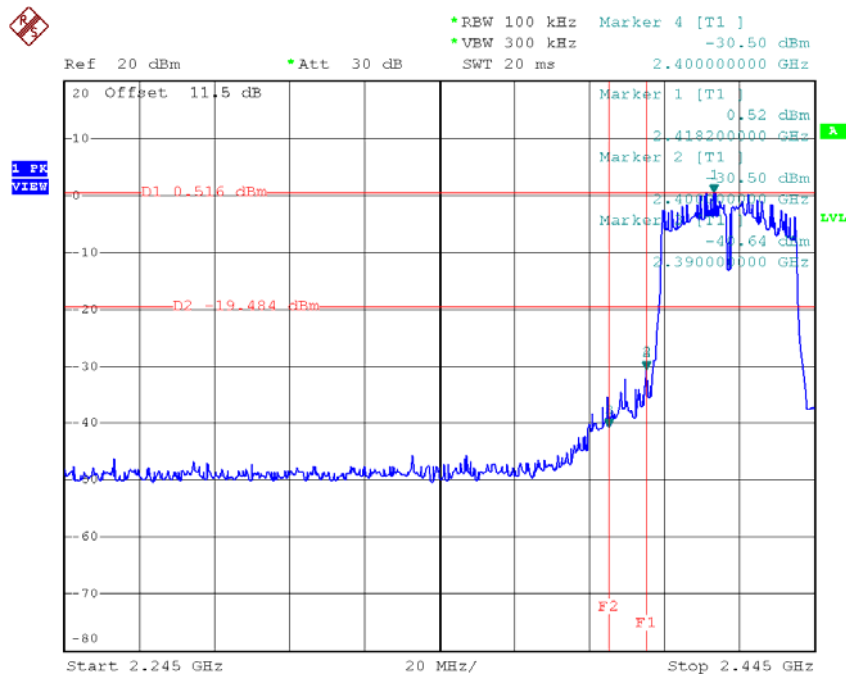
TX HT40 mode CH09 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:13:17

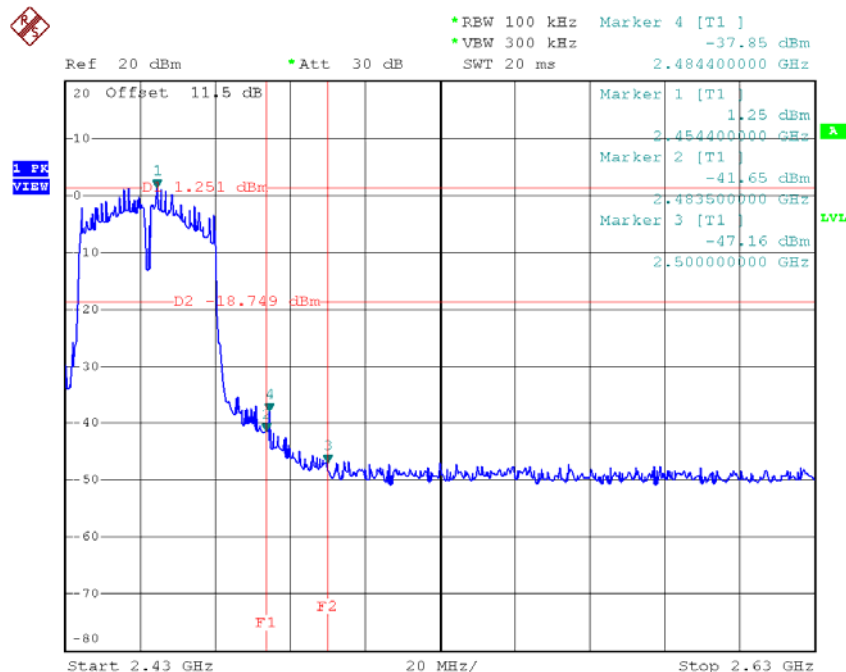
Test Mode: TX N-40M Mode_ANT 2

TX HT40 mode CH03



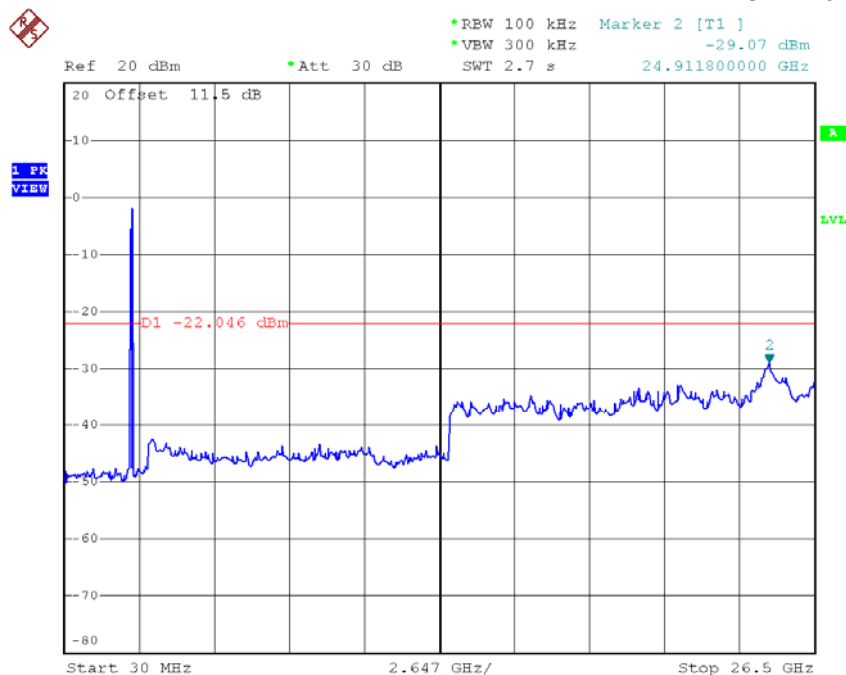
Date: 2.MAR.2016 20:33:13

TX HT40 mode CH09



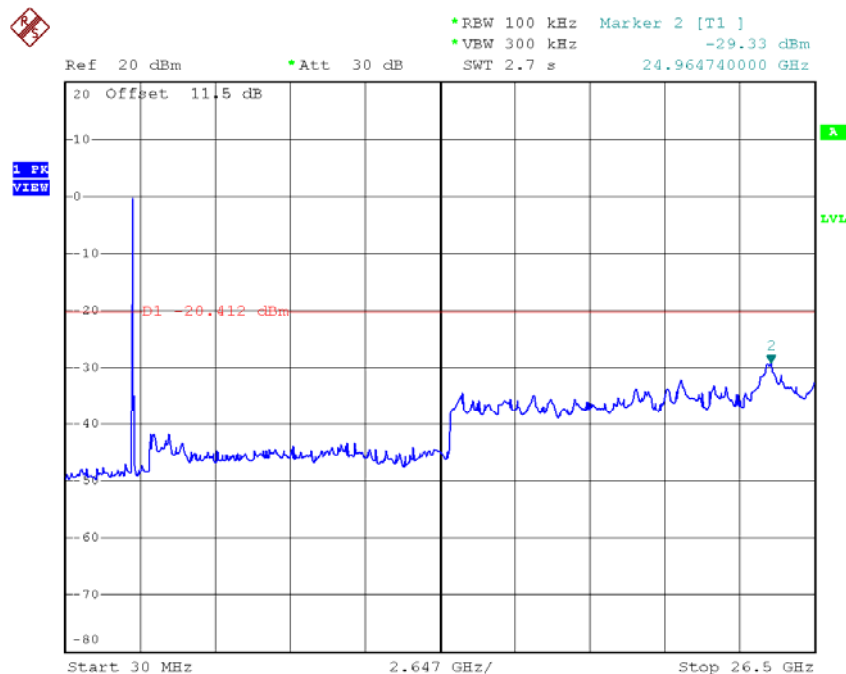
Date: 2.MAR.2016 20:35:49

TX HT40 mode CH03 (10 Harmonic of the frequency)



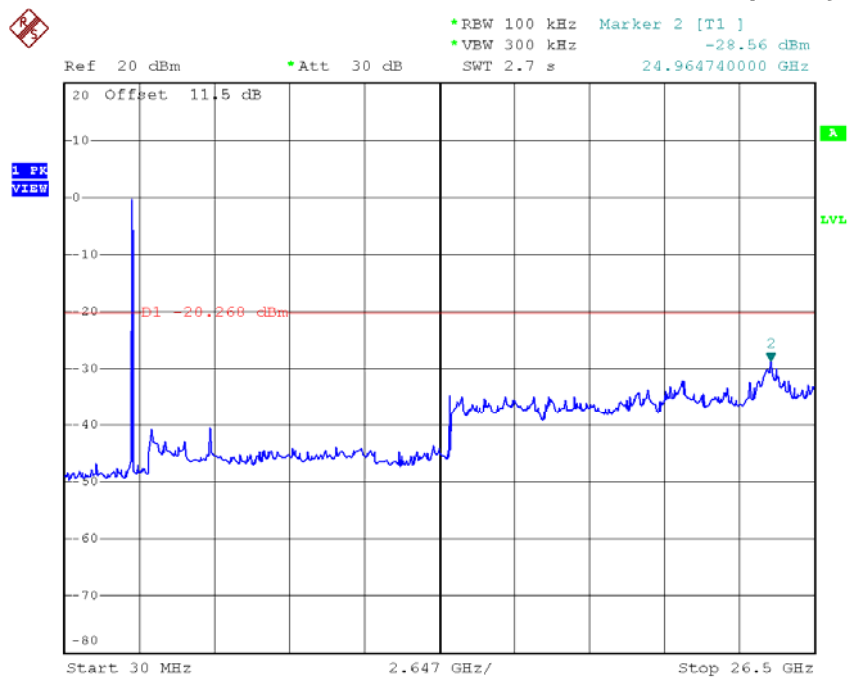
Date: 2.MAR.2016 20:32:50

TX HT40 mode CH06 (10 Harmonic of the frequency)



Date: 2.MAR.2016 20:34:07

TX HT40 mode CH09 (10 Harmonic of the frequency)



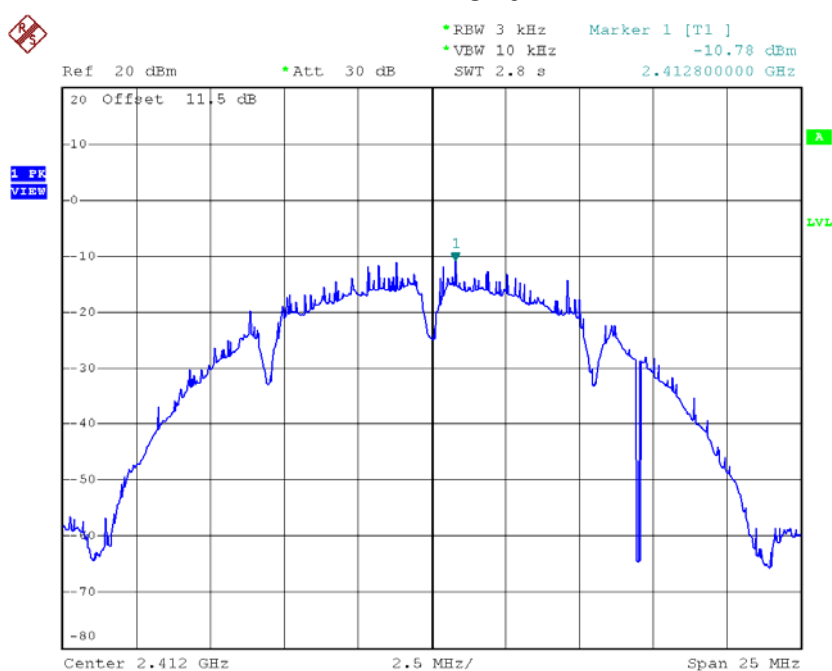
Date: 2.MAR.2016 20:35:25

ATTACHMENT I - POWER SPECTRAL DENSITY

Test Mode: TX B Mode_CH01/06/11

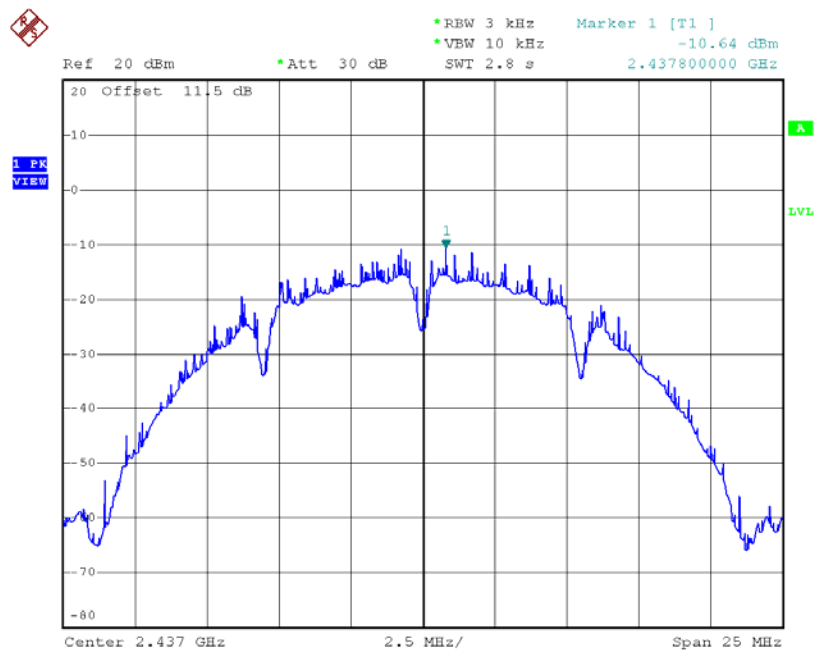
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-10.78	0.08	8.00	Complies
2437	-10.64	0.09	8.00	Complies
2462	-10.45	0.09	8.00	Complies

TX CH01



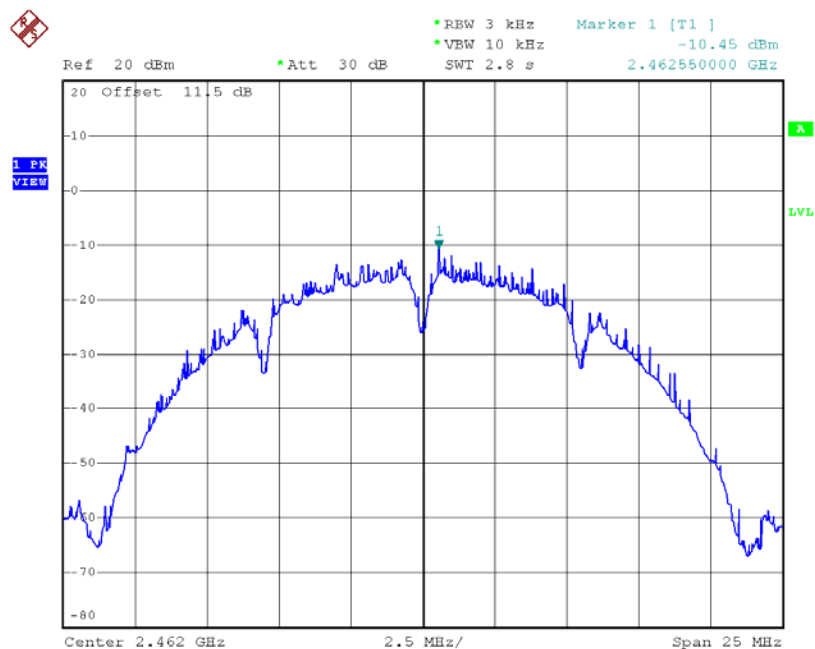
Date: 2.MAR.2016 19:57:25

TX CH06



Date: 2.MAR.2016 19:53:20

TX CH11

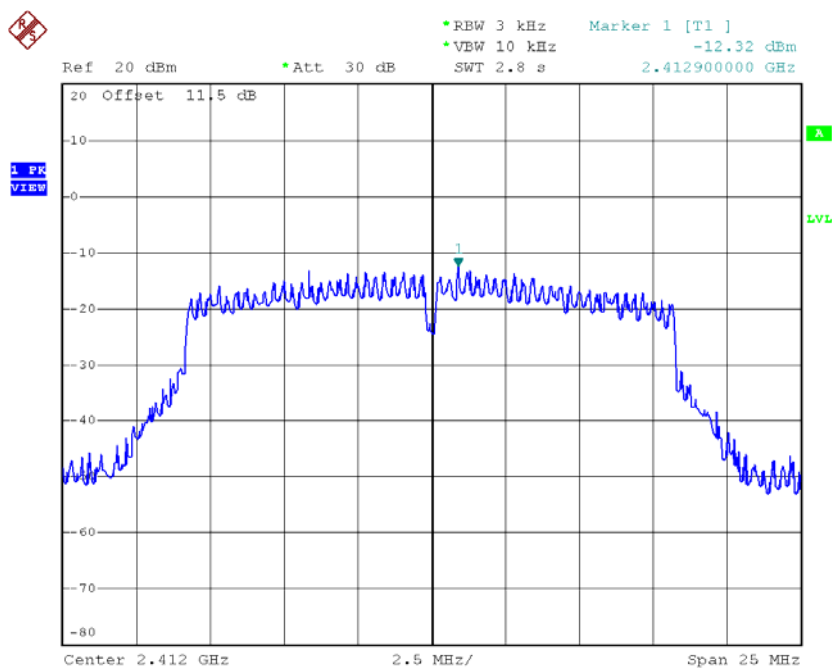


Date: 2.MAR.2016 19:56:11

Test Mode: TX G Mode_CH01/06/11_ANT 1

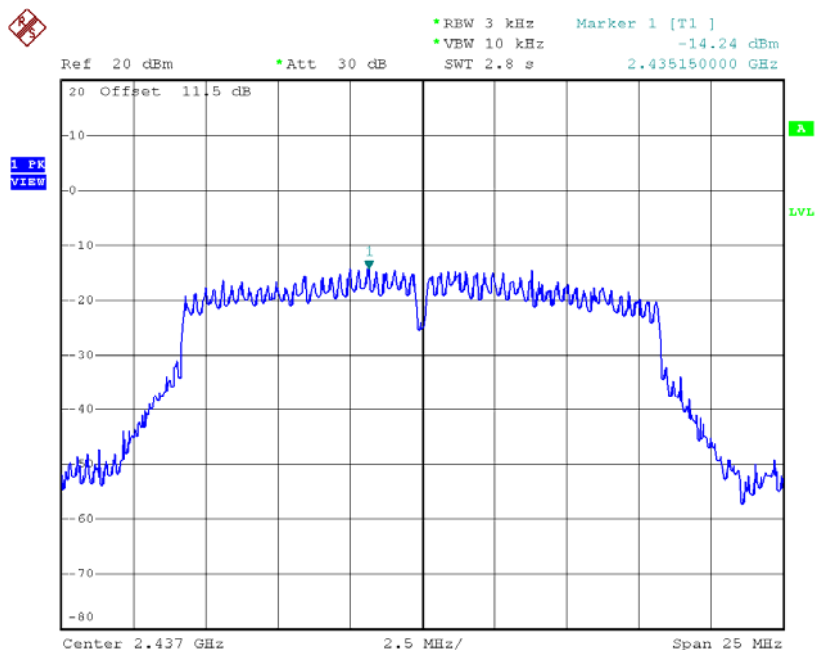
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-12.32	0.06	8.00	Complies
2437	-14.24	0.04	8.00	Complies
2462	-12.22	0.06	8.00	Complies

TX CH01



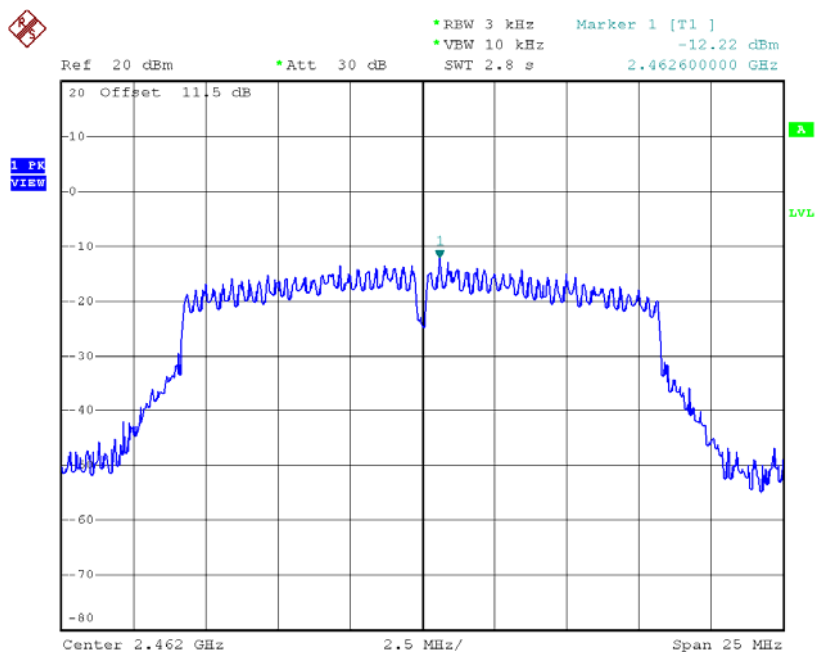
Date: 2.MAR.2016 20:00:35

TX CH06



Date: 2.MAR.2016 20:01:43

TX CH11

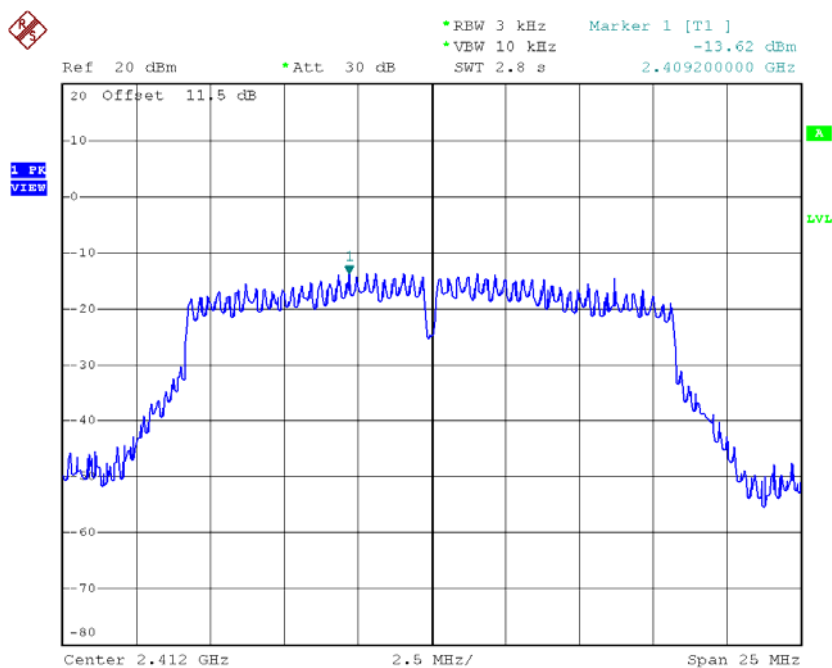


Date: 2.MAR.2016 20:03:16

Test Mode: TX G Mode_CH01/06/11_ANT 2

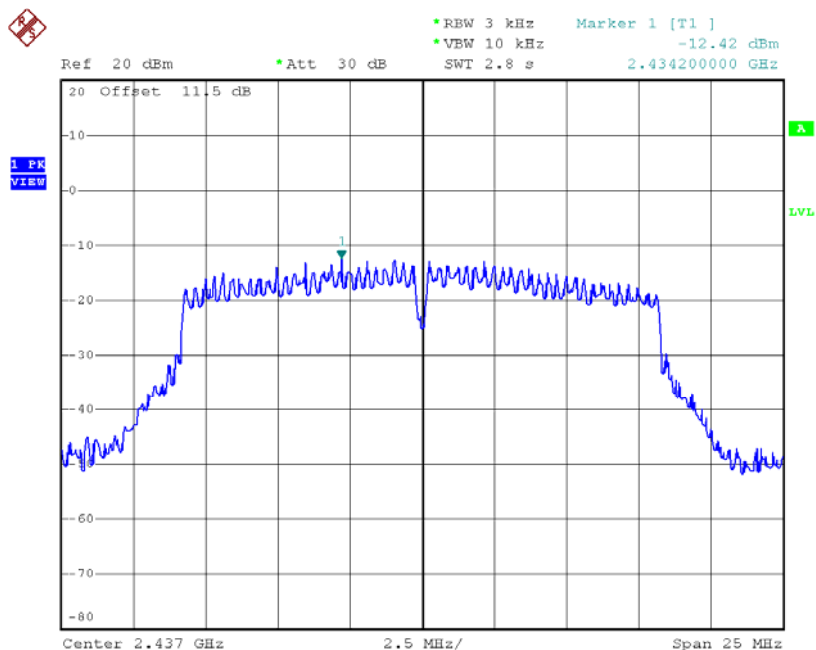
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-13.62	0.04	8.00	Complies
2437	-12.42	0.06	8.00	Complies
2462	-12.72	0.05	8.00	Complies

TX CH01



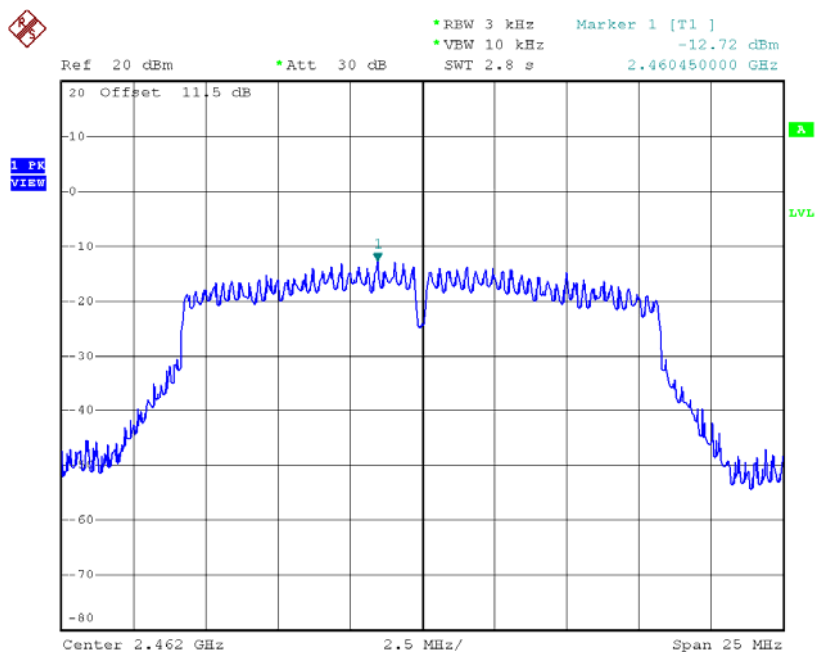
Date: 2.MAR.2016 20:17:02

TX CH06



Date: 2.MAR.2016 20:18:20

TX CH11



Date: 2.MAR.2016 20:19:59

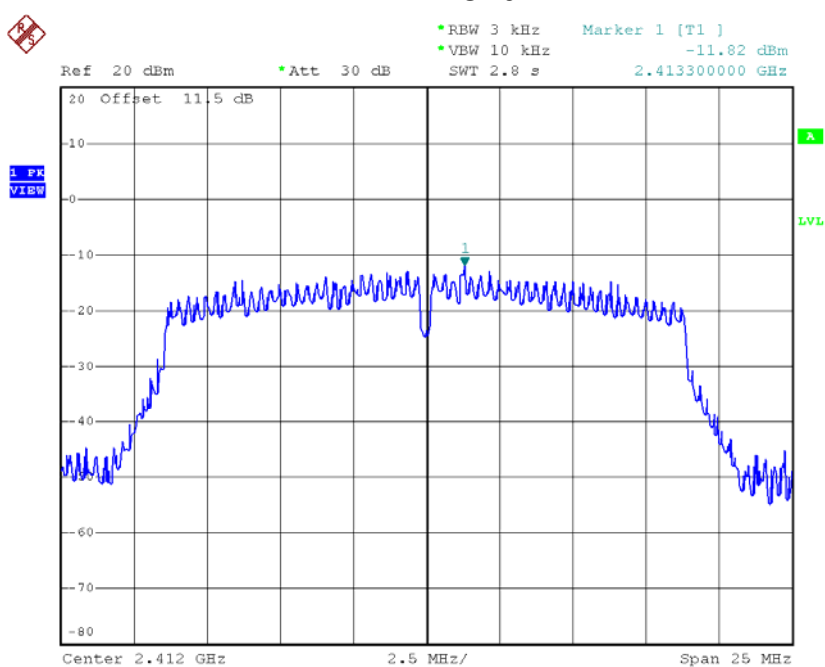
Test Mode: TX G Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-9.91	0.10	8.00	Complies
2437	-10.23	0.09	8.00	Complies
2462	-9.45	0.11	8.00	Complies

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

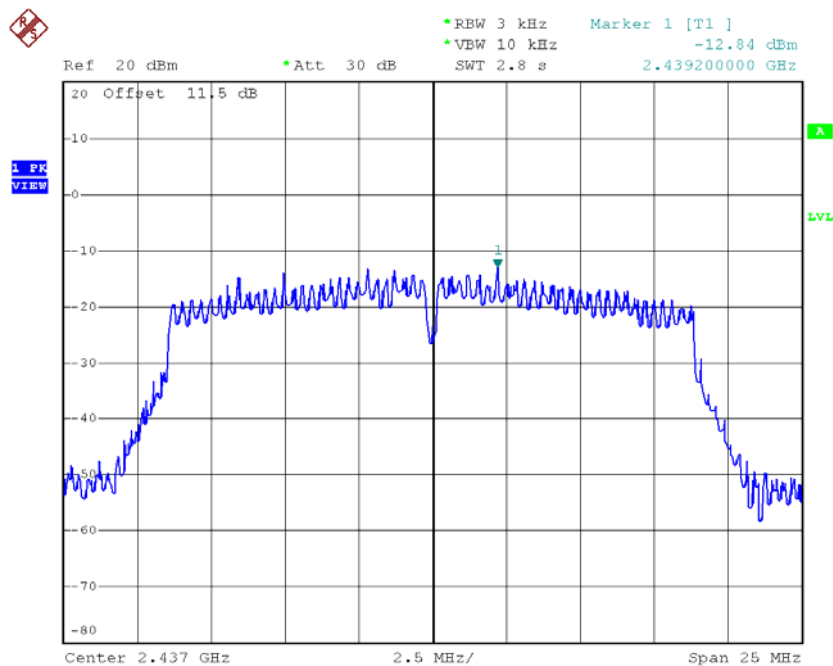
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.82	0.07	8.00	Complies
2437	-12.84	0.05	8.00	Complies
2462	-12.06	0.06	8.00	Complies

TX CH01



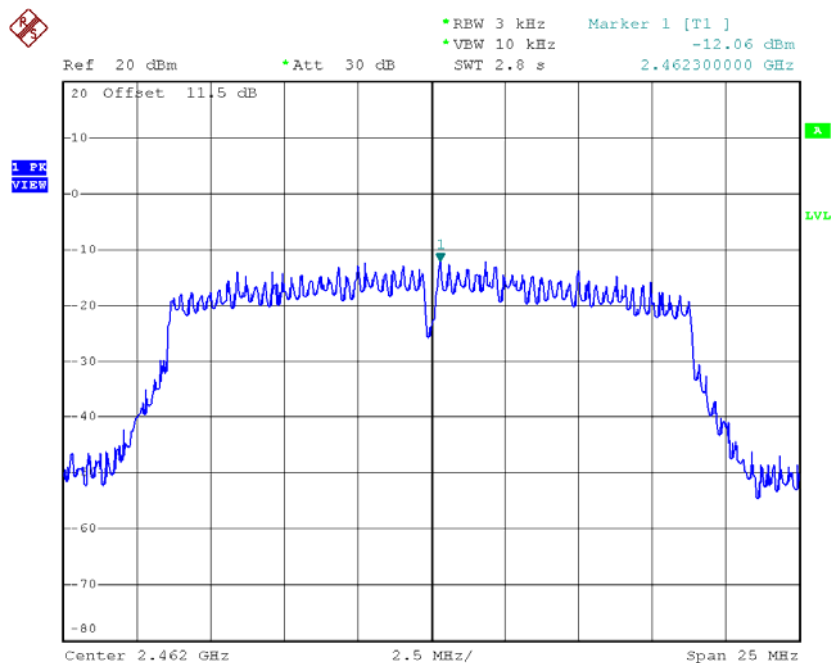
Date: 2.MAR.2016 20:05:31

TX CH06



Date: 2.MAR.2016 20:06:35

TX CH11

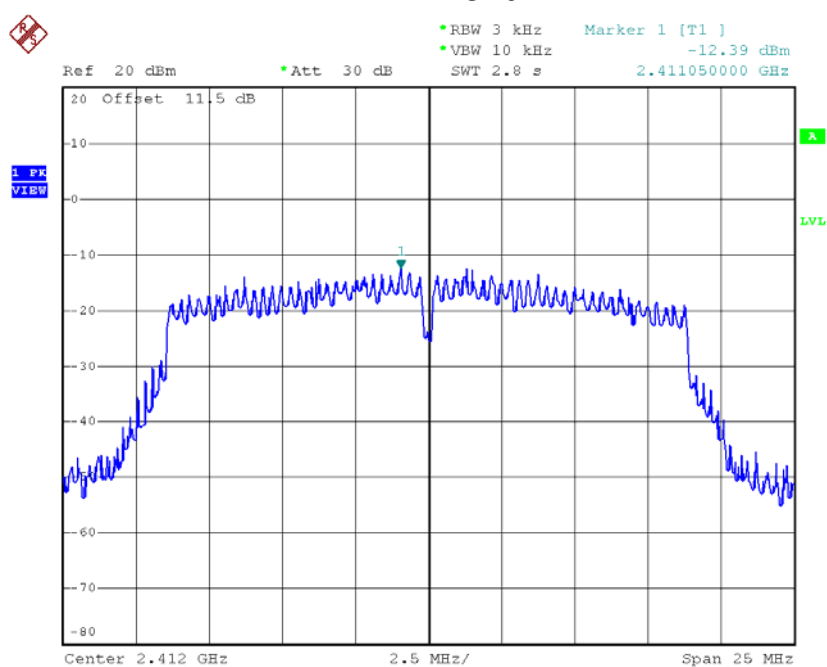


Date: 2.MAR.2016 20:08:02

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

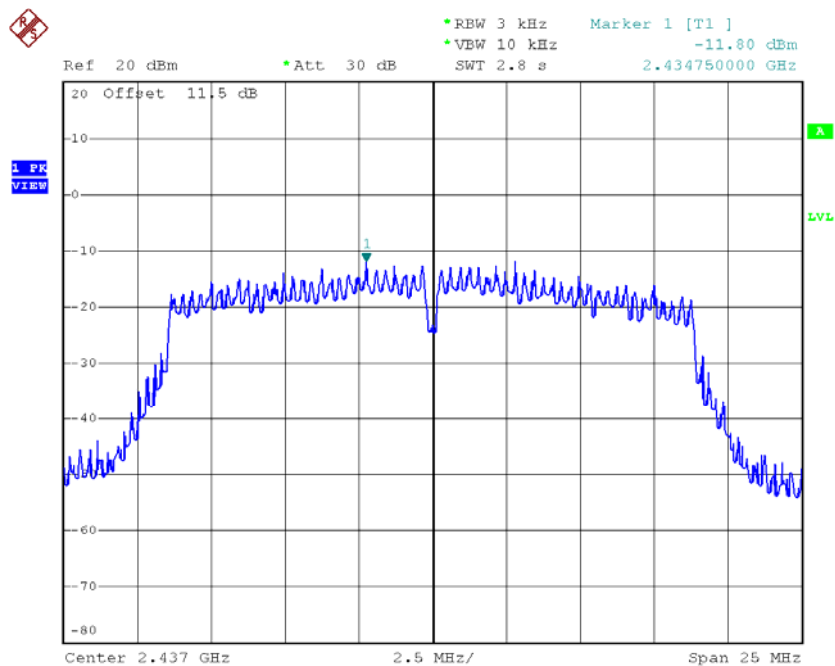
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-12.39	0.06	8.00	Complies
2437	-11.80	0.07	8.00	Complies
2462	-11.93	0.06	8.00	Complies

TX CH01



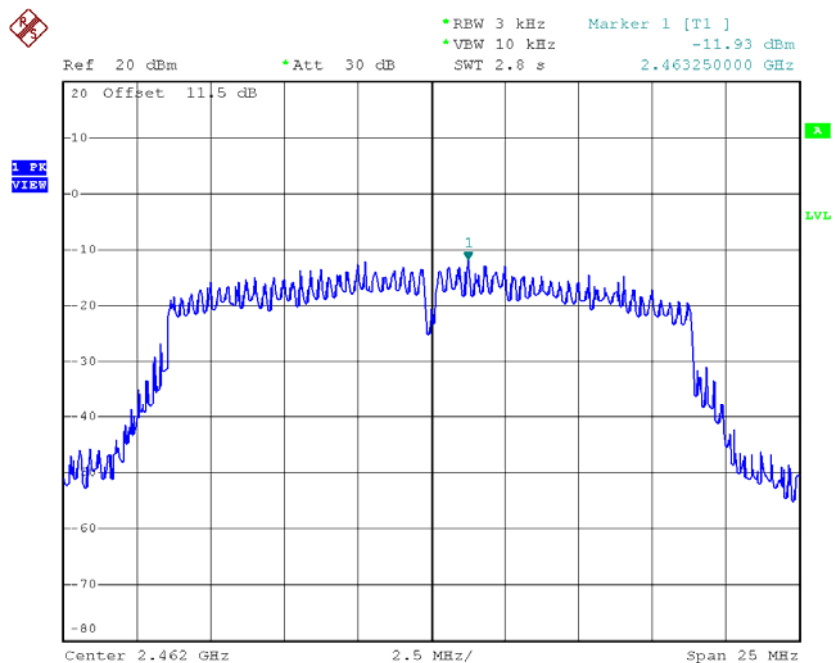
Date: 2.MAR.2016 20:26:16

TX CH06



Date: 2.MAR.2016 20:28:12

TX CH11



Date: 2.MAR.2016 20:30:13

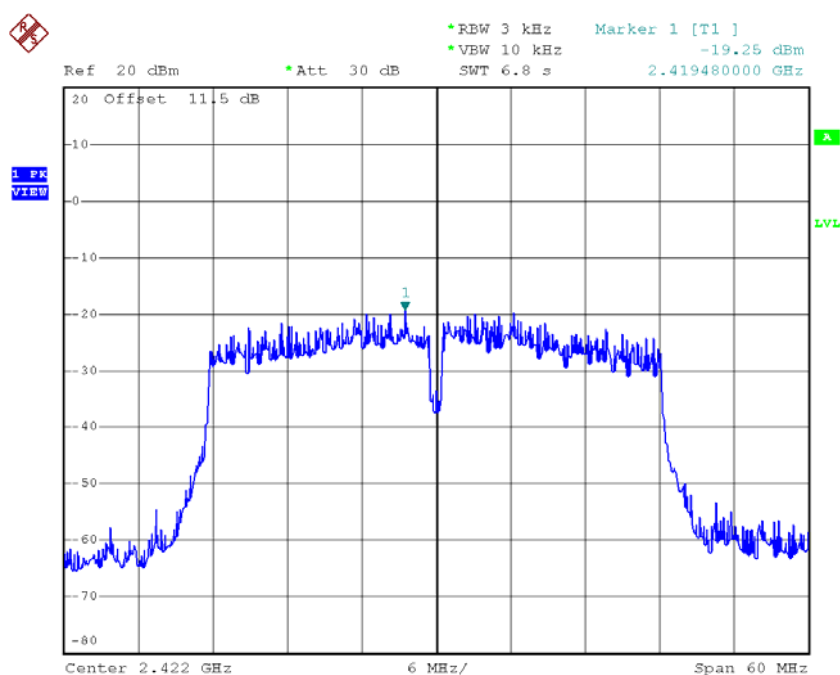
Test Mode: TX N-20M Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-9.09	0.12	8.00	Complies
2437	-9.28	0.12	8.00	Complies
2462	-8.98	0.13	8.00	Complies

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

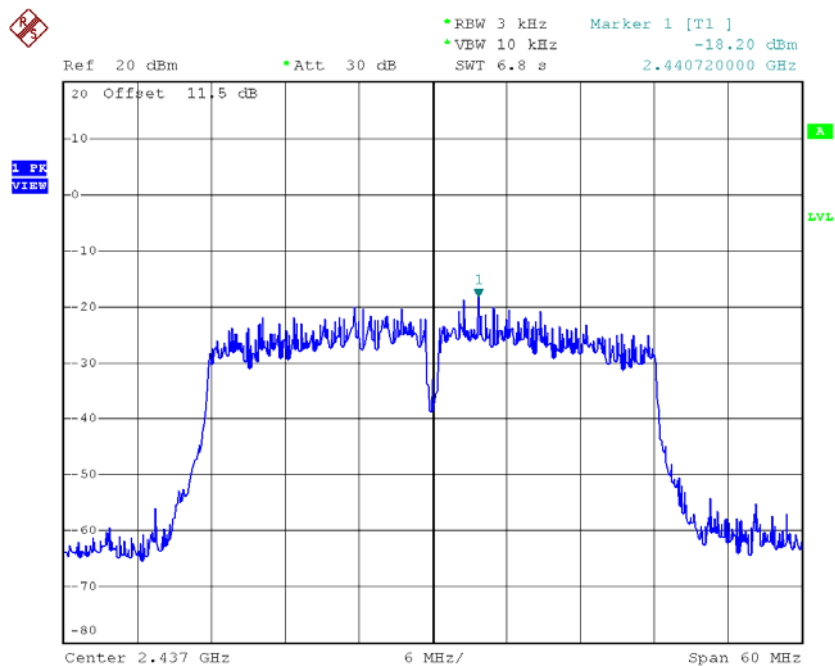
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-19.25	0.01	8.00	Complies
2437	-18.20	0.02	8.00	Complies
2452	-16.15	0.02	8.00	Complies

TX CH03



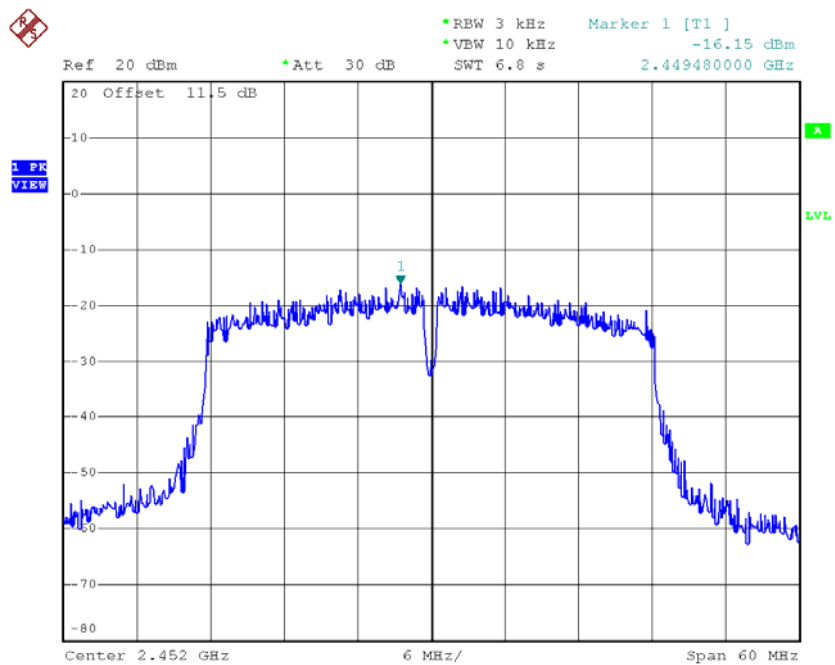
Date: 2.MAR.2016 20:11:06

TX CH06



Date: 2.MAR.2016 20:12:13

TX CH09

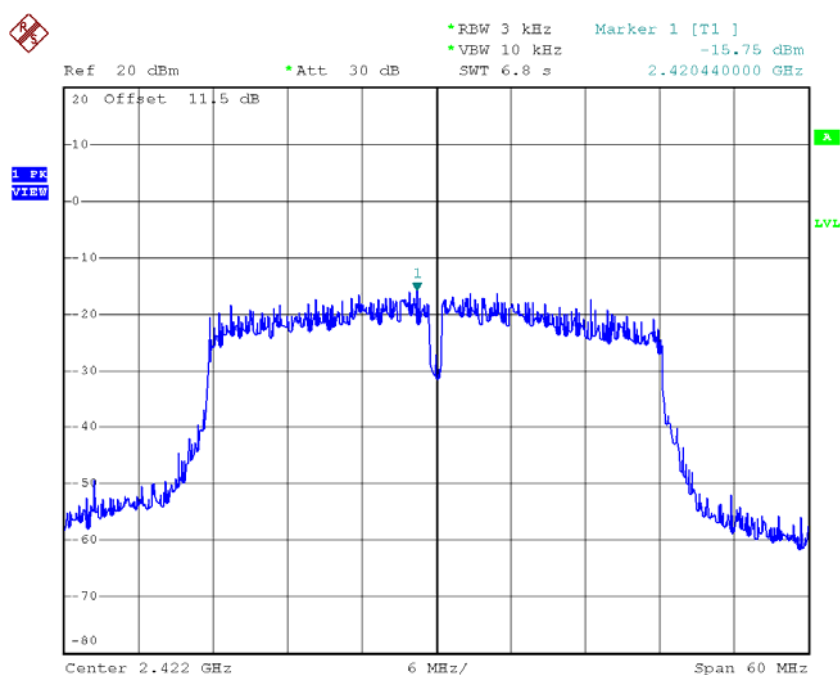


Date: 2.MAR.2016 20:13:51

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

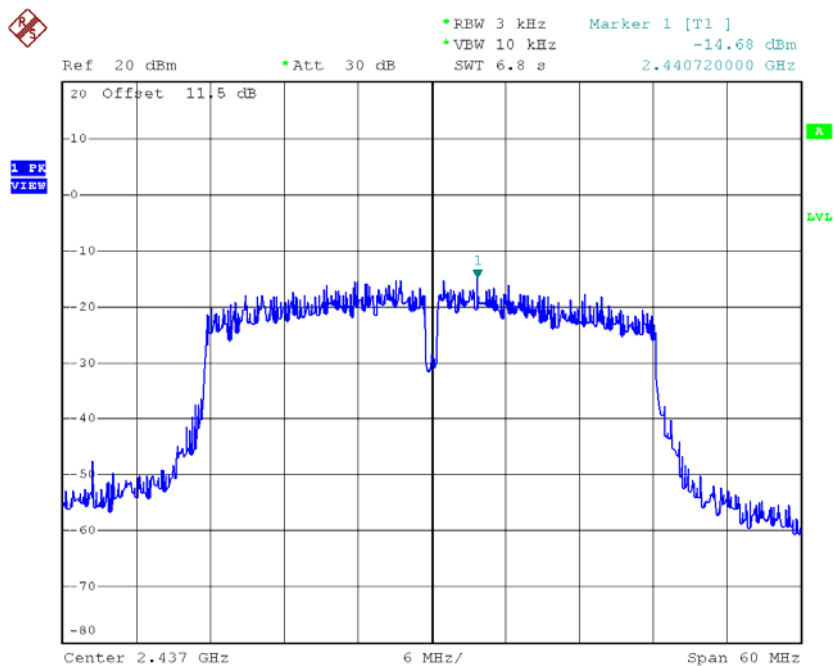
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-15.75	0.03	8.00	Complies
2437	-14.68	0.03	8.00	Complies
2452	-14.27	0.04	8.00	Complies

TX CH03



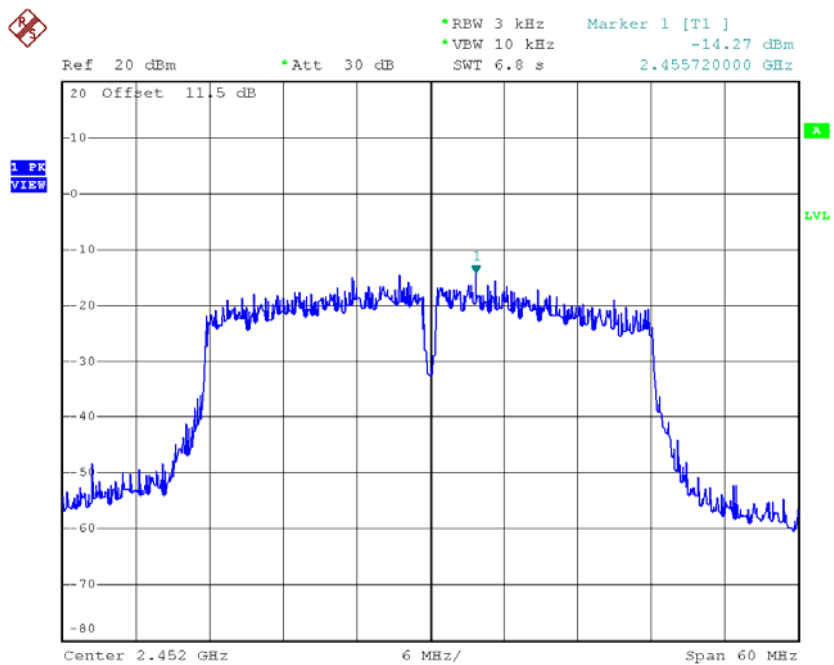
Date: 2.MAR.2016 20:33:24

TX CH06



Date: 2.MAR.2016 20:34:18

TX CH09



Date: 2.MAR.2016 20:36:00

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

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-14.15	0.04	8.00	Complies
2437	-13.08	0.05	8.00	Complies
2452	-12.10	0.06	8.00	Complies