

FCC Radio Test Report

FCC ID: APIHKOMNI50P

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

Project No. : 1510C025
Equipment : Streaming wireless speaker
Model Name : OMNI 50+
Applicant : Harman International Industries
Address : 8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES

Date of Receipt : Oct. 12, 2015
Date of Test : Oct. 12, 2015 ~ Apr. 18, 2016
Issued Date : Apr. 19, 2016
Tested by : BTL Inc.

Testing Engineer : Shawn Xiao
(Shawn Xiao)

Technical Manager : David Mao
(David Mao)

Authorized Signatory : Steven Lu
(Steven Lu)

B T L I N C .

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan,
Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with 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	6
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
3 . GENERAL INFORMATION	9
3.1 GENERAL DESCRIPTION OF EUT	9
3.2 DESCRIPTION OF TEST MODES	11
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	13
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	14
3.5 DESCRIPTION OF SUPPORT UNITS	14
4 . EMC EMISSION TEST	15
4.1 CONDUCTED EMISSION MEASUREMENT	15
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	15
4.1.2 TEST PROCEDURE	15
4.1.3 DEVIATION FROM TEST STANDARD	15
4.1.4 TEST SETUP	16
4.1.5 EUT OPERATING CONDITIONS	16
4.1.6 EUT TEST CONDITIONS	16
4.1.7 TEST RESULTS	16
4.2 RADIATED EMISSION MEASUREMENT	17
4.2.1 RADIATED EMISSION LIMITS	17
4.2.2 TEST PROCEDURE	18
4.2.3 DEVIATION FROM TEST STANDARD	18
4.2.4 TEST SETUP	19
4.2.5 EUT OPERATING CONDITIONS	20
4.2.6 EUT TEST CONDITIONS	20
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	21
4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)	21
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	21
5 . BANDWIDTH TEST	22
5.1 APPLIED PROCEDURES	22
5.1.1 TEST PROCEDURE	22
5.1.2 DEVIATION FROM STANDARD	22
5.1.3 TEST SETUP	22
5.1.4 EUT OPERATION CONDITIONS	22
5.1.5 EUT TEST CONDITIONS	22
5.1.6 TEST RESULTS	22
6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST	23

Table of Contents	Page
6.1 APPLIED PROCEDURES / LIMIT	23
6.1.1 TEST PROCEDURE	23
6.1.2 DEVIATION FROM STANDARD	23
6.1.3 TEST SETUP	23
6.1.4 EUT OPERATION CONDITIONS	23
6.1.5 EUT TEST CONDITIONS	23
6.1.6 TEST RESULTS	23
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	24
7.1 APPLIED PROCEDURES / LIMIT	24
7.1.1 TEST PROCEDURE	24
7.1.2 DEVIATION FROM STANDARD	24
7.1.3 TEST SETUP	24
7.1.4 EUT OPERATION CONDITIONS	24
7.1.5 EUT TEST CONDITIONS	24
7.1.6 TEST RESULTS	24
8 . POWER SPECTRAL DENSITY TEST	25
8.1 APPLIED PROCEDURES / LIMIT	25
8.1.1 TEST PROCEDURE	25
8.1.2 DEVIATION FROM STANDARD	25
8.1.3 TEST SETUP	25
8.1.4 EUT OPERATION CONDITIONS	25
8.1.5 EUT TEST CONDITIONS	25
8.1.6 TEST RESULTS	25
9 . MEASUREMENT INSTRUMENTS LIST	26
10 . EUT TEST PHOTO	28
ATTACHMENT A - CONDUCTED EMISSION	32
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	35
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	37
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)	44
ATTACHMENT E - BANDWIDTH	93
ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER	102
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION	107
ATTACHMENT H - POWER SPECTRAL DENSITY	132

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-3-1510C025	Original Issue.	Apr. 19, 2016

1. CERTIFICATION

Equipment : Streaming wireless speaker
Brand Name : Harman/Kardon
Model Name : OMNI 50+
Applicant : Harman International Industries
Manufacturer : Harman International Industries, Incorporated
Address : 8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES
Factory : 1. TCL Technoly Electronics(Huizhou) Co.,Ltd.
2. Huizhou TCL Audio Video Electronics Co., Ltd.
Address : Section 37,Zhongkai High-Tech Development Zone, Huizhou City, Guangdong Province , P.R.China
Date of Test : Oct. 12, 2015 ~ Apr. 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-3-1510C025) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C			
Standard(s) Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247(d)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	6dB Bandwidth	PASS	
15.247(b)(3)	Peak Output Power	PASS	
15.247(e)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
15.209/15.205	Transmitter Radiated Emissions	PASS	

NOTE:

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

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's test firm number for FCC: 319330

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The 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 Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150 KHz ~ 30MHz	2.32

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9KHz~30MHz	V	3.79
		9KHz~30MHz	H	3.57
		30MHz ~ 200MHz	V	3.82
		30MHz ~ 200MHz	H	3.78
		200MHz ~ 1,000MHz	V	4.10
		200MHz ~ 1,000MHz	H	4.06
		1GHz~18GHz	V	3.12
		1GHz~18GHz	H	3.68
		18GHz~40GHz	V	4.15
		18GHz~40GHz	H	4.14

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	Streaming wireless speaker	
Brand Name	Harman/Kardon	
Model Name	OMNI 50+	
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 280Mbps
	Output Power (Max.)	802.11b: 17.49dBm 802.11g: 26.56dBm 802.11n(20MHz): 27.13dBm 802.11n(40MHz): 25.50dBm
Power Source	#1 DC voltage supplied from AC/DC adapter. Manufacturer / Model: Group Intellect Power Technology Limited / NDT19V-3C-DC #2 Supplied from lithium polymer battery. Manufacture / Model: Great Power Energy & Technology CO., LTD / GPS0850110	
Power Rating	#1 I/P:100-240V~50/60Hz 1.5A Max O/P:19V --- 3A #2 DC 7.4V 5000mAh 37.0Wh	

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.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Harman/Kardon	N/A	Internal	N/A	2
2	Harman/Kardon	N/A	Internal	N/A	2

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

4.

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

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09
Mode 5	TX Mode

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 5	TX Mode

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

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

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:

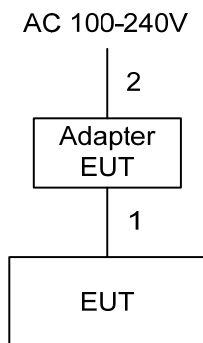
- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: DBPSK (1Mbps)
 802.11g mode: OFDM (6Mbps)
 802.11n HT20 mode : BPSK (13Mbps)
 802.11n HT40 mode : BPSK (27Mbps)
 For radiated emission tests, the highest output powers were set for final test.
- (3)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

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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

Test software version	MTOOL		
Frequency (MHz)	2412	2437	2462
802.11b	40	39	38
802.11g	48	62	59
802.11n (20MHz)	44	65	44
Frequency	2422	2437	2452
802.11n (40MHz)	38	55	55

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.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.2m	DC Cable
2	NO	NO	1.0m	AC Cable

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 (dB μ V)	
	Quasi-peak	Average
0.15 -0.50	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

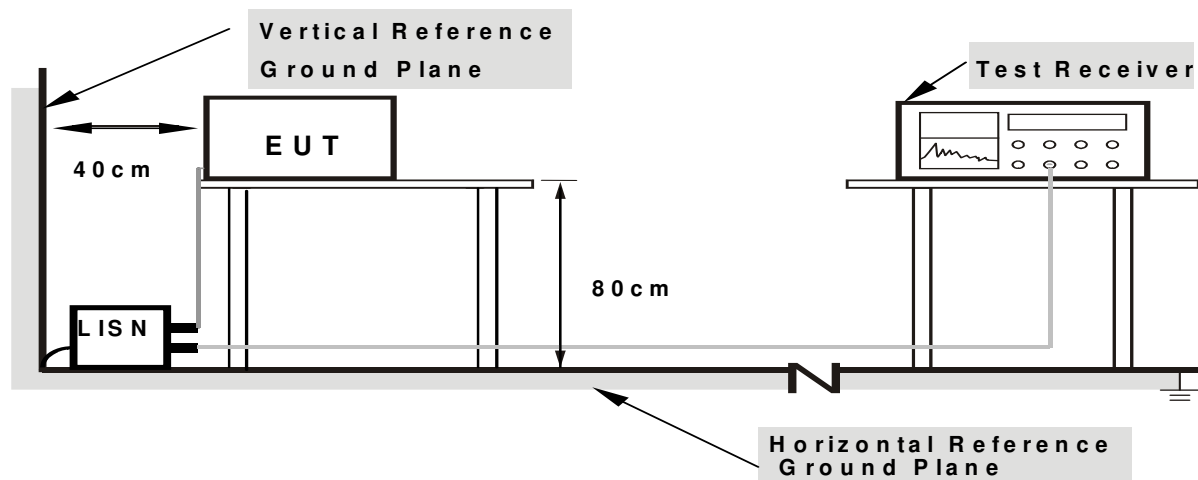
4.1.2 TEST PROCEDURE

- 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: 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

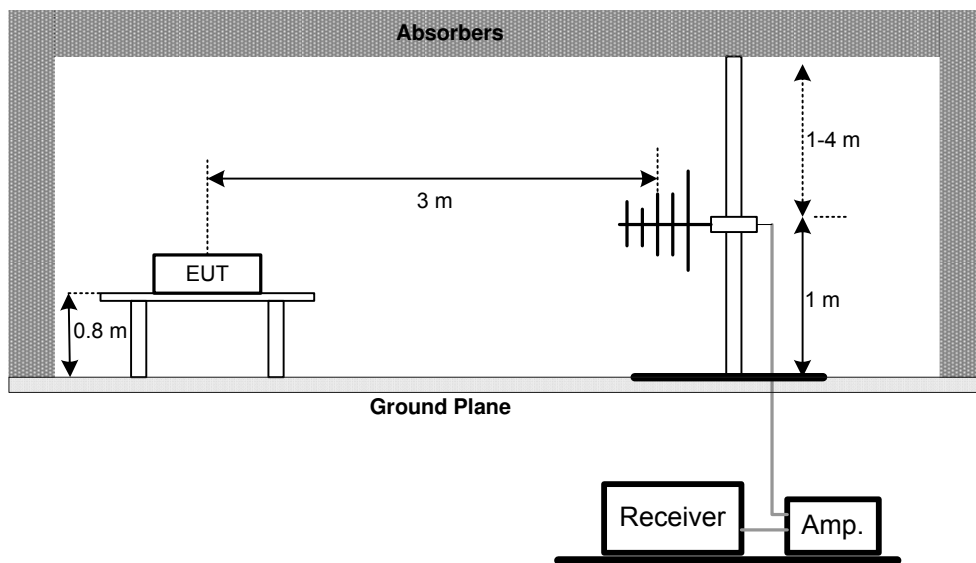
- a. The measuring distance of at 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of at 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. The initial step in collecting conducted 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.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

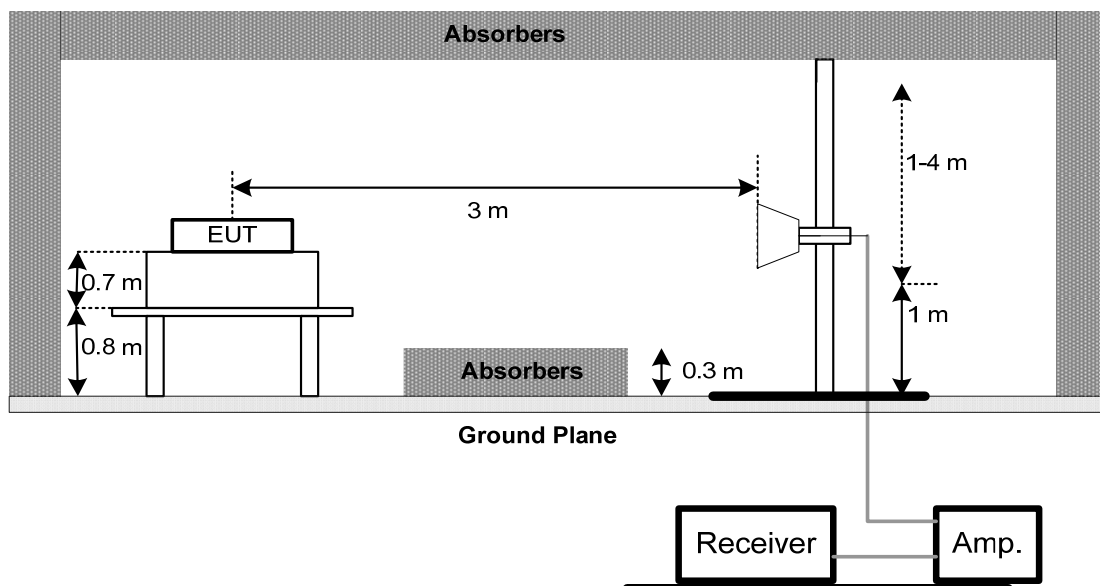
No deviation

4.2.4 TEST SETUP

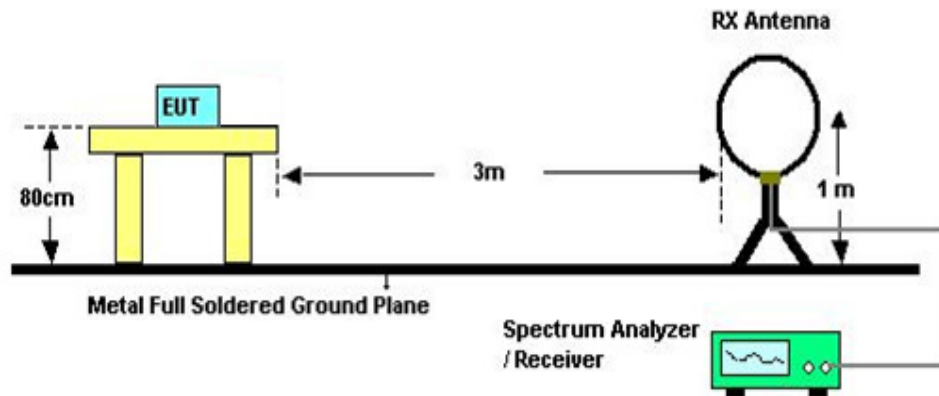
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For Radiated Emissions Below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

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

4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

Remark:

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

4.2.8 TEST RESULTS (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			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	2400-2483.5	PASS

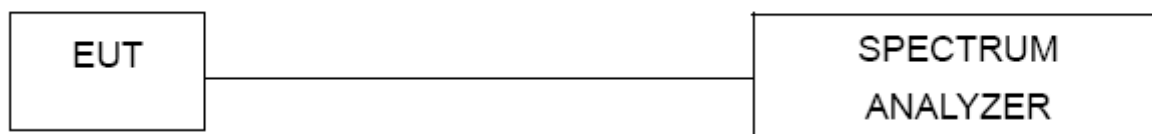
5.1.1 TEST PROCEDURE

- 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: 55% 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				
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 v03r04.

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: 55% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Attachment F.

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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: 55% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Attachment G.

8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

8.1.1 TEST PROCEDURE

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

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

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

8.1.6 TEST RESULTS

Please refer to the Attachment H.

9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	0052765	Mar. 27, 2017
2	LISN	R&S	ENV216	101447	Mar. 27, 2017
3	Test Cable	emci	RG223(9KHz-30MHz)	C_17	Mar. 10, 2017
4	EMI Test Receiver	R&S	ESCI	100382	Mar. 27, 2017
5	50Ω Terminator	SHX	TF2-3G-A	08122901	Mar. 27, 2017
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 27, 2017
2	Amplifier	HP	8447D	2944A09673	Nov. 09, 2016
3	Receiver	AGILENT	N9038A	MY5213003 9	Oct. 11, 2016
4	Test Cable	emci	LMR-400(30MHz-1GHz)	C-01	Jun. 28, 2016
5	Controller	CT	SC100	N/A	N/A
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Antenna	ETS	3115	00075789	Mar. 27, 2017
8	Amplifier	Agilent	8449B	3008A02274	Nov. 01, 2016
9	Receiver	AGILENT	N9038A	MY5213003 9	Oct. 11, 2016
10	Test Cable	emci	EMC104-SM-SM-10000(1GHz-26.5GHz)	C-68	Jun. 28, 2016
11	Controller	CT	SC100	N/A	N/A
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Mar. 27, 2017
13	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Sep. 07, 2016
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Oct. 11, 2016

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Mar. 27, 2017
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Mar. 27, 2017

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Oct. 11, 2016

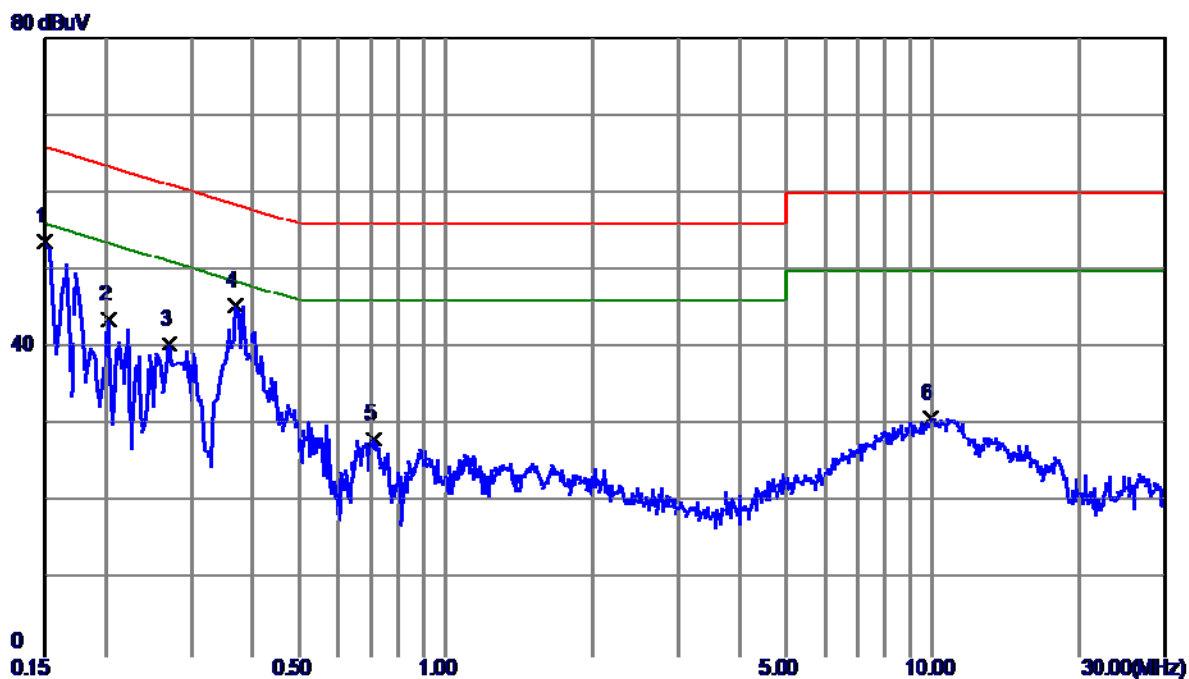
Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Oct. 11, 2016

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 : TX Mode

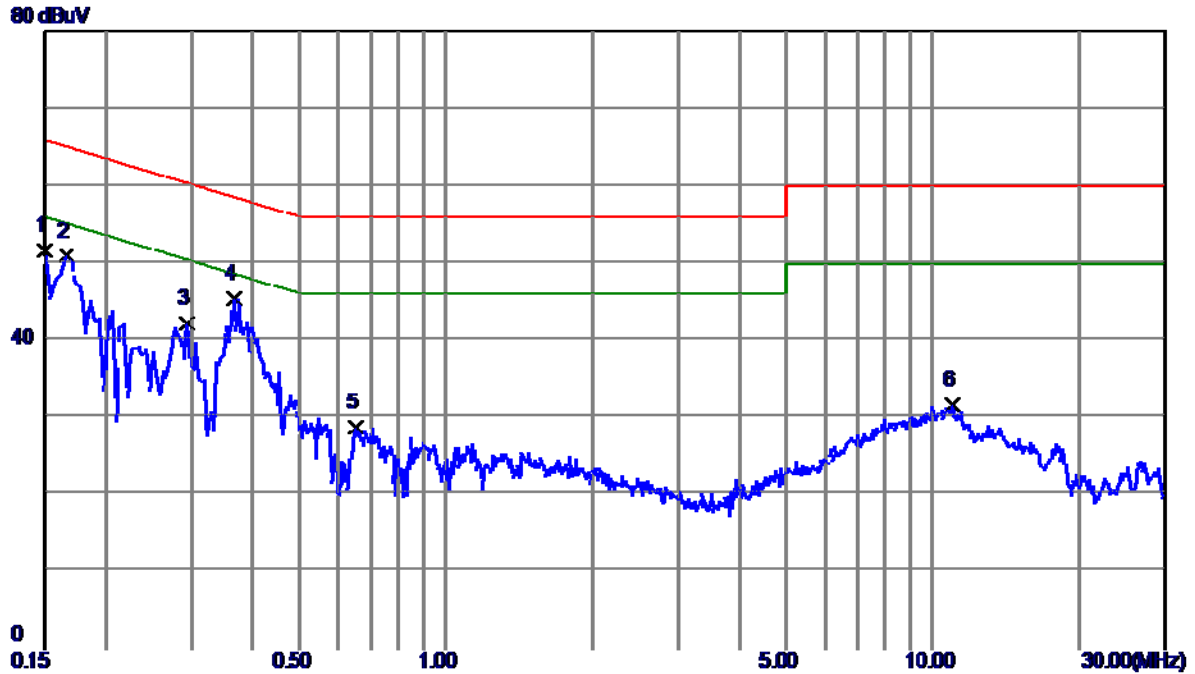
Line



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1500	44.33	9.47	53.80	66.00	-12.20	Peak	
2	0.2020	34.23	9.49	43.72	63.53	-19.81	Peak	
3	0.2700	31.01	9.51	40.52	61.12	-20.60	Peak	
4	0.3700	35.85	9.52	45.37	58.50	-13.13	Peak	
5	0.7100	18.66	9.54	28.20	56.00	-27.80	Peak	
6	9.9260	21.07	9.86	30.93	60.00	-29.07	Peak	

Test Mode : TX Mode

Neutral



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1500	42.26	9.47	51.73	66.00	-14.27	Peak	
2	0.1660	41.49	9.47	50.96	65.16	-14.20	Peak	
3	0.2940	32.76	9.51	42.27	60.41	-18.14	Peak	
4	0.3660	35.94	9.52	45.46	58.59	-13.13	Peak	
5	0.6540	19.23	9.54	28.77	56.00	-27.23	Peak	
6	10.9780	21.88	9.87	31.75	60.00	-28.25	Peak	

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

Test Mode:	TX Mode
------------	---------

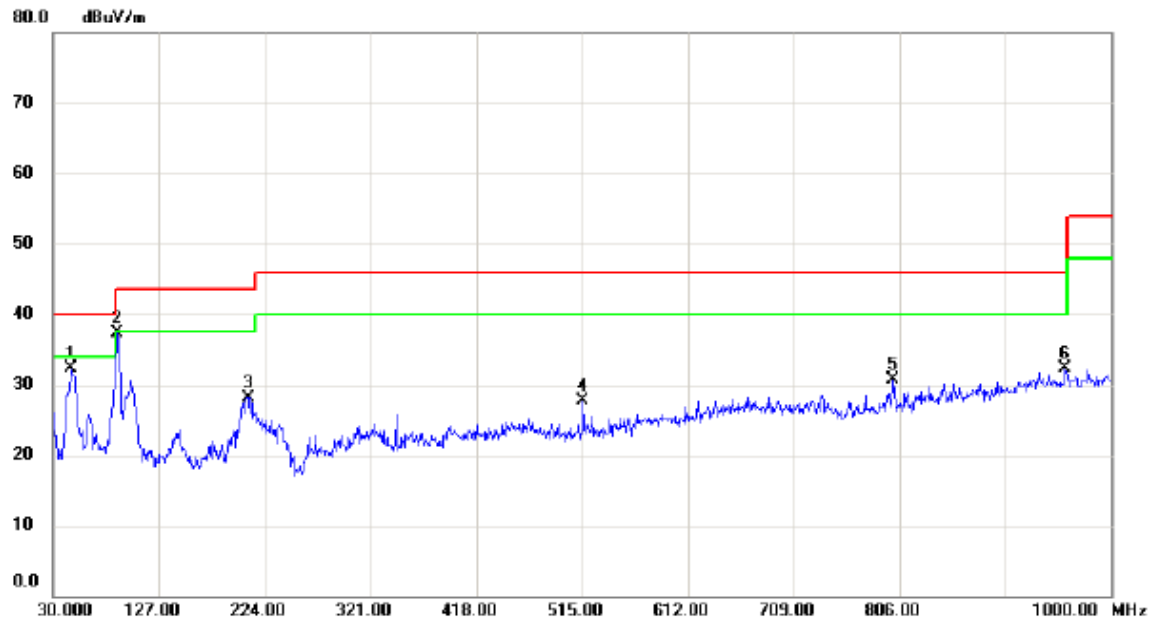
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0097	0°	13.57	24.9523	38.5223	127.8688	-89.3465	AVG
0.0097	0°	14.34	24.9523	39.2923	147.8688	-108.5765	PEAK
0.0281	0°	6.73	23.7870	30.5170	118.6301	-88.1131	AVG
0.0281	0°	8.1	23.7870	31.8870	138.6301	-106.7431	PEAK
0.0351	0°	3.23	23.3437	26.5737	116.6981	-90.1244	AVG
0.0351	0°	5.41	23.3437	28.7537	136.6981	-107.9444	PEAK
0.0563	0°	1.2	22.2740	23.4740	112.5941	-89.1201	AVG
0.0563	0°	2.48	22.2740	24.7540	132.5941	-107.8401	PEAK
0.5047	0°	19.39	19.8150	39.2050	73.5436	-34.3385	QP
1.9521	0°	23.52	19.5048	43.0248	69.5400	-26.5152	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0123	90°	13.35	24.3000	37.6500	125.8061	-88.1561	AVG
0.0123	90°	14.51	24.3000	38.8100	145.8061	-106.9961	PEAK
0.0259	90°	7.53	23.9263	31.4563	119.3382	-87.8819	AVG
0.0259	90°	8.61	23.9263	32.5363	139.3382	-106.8019	PEAK
0.0455	90°	5.27	22.6850	27.9550	114.4440	-86.4890	AVG
0.0455	90°	6.19	22.6850	28.8750	134.4440	-105.5690	PEAK
0.0564	90°	1.63	22.2720	23.9020	112.5786	-88.6766	AVG
0.0564	90°	2.36	22.2720	24.6320	132.5786	-107.9466	PEAK
0.6241	90°	22.14	20.1971	42.3371	71.6991	-29.3620	QP
2.0528	90°	24.25	19.4683	43.7183	69.5400	-25.8217	QP

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

Test Mode: TX B MODE CHANNEL 01

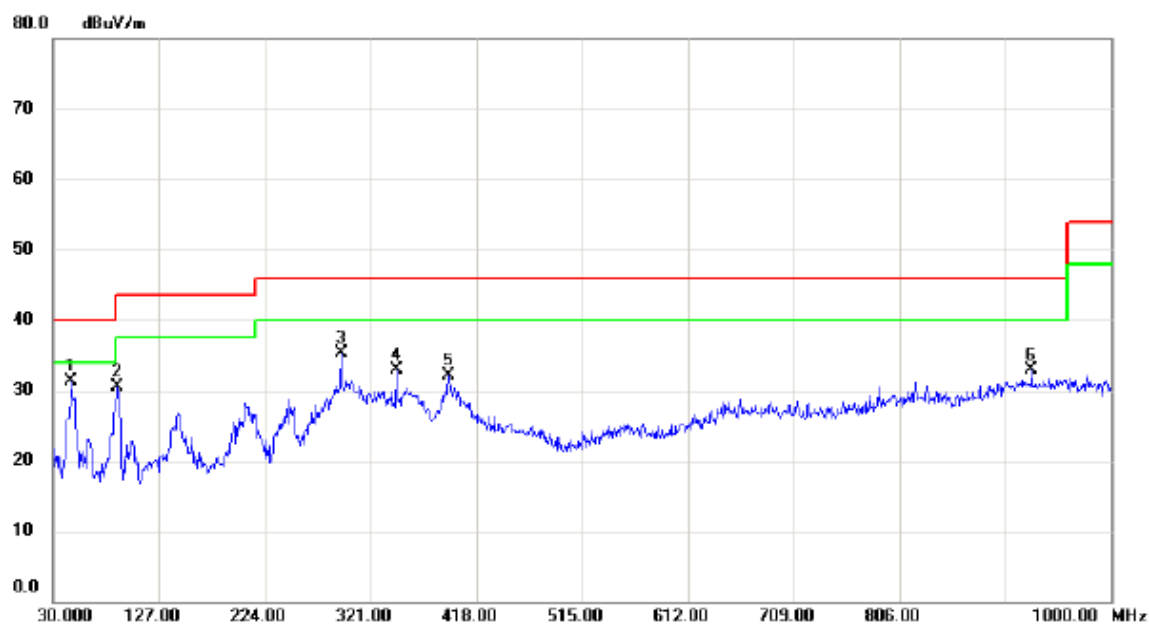
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		46.4900	44.31	-11.93	32.38	40.00	-7.62	peak	
2	*	89.1700	53.31	-16.00	37.31	43.50	-6.19	peak	
3		208.4800	41.89	-13.71	28.18	43.50	-15.32	peak	
4		515.9700	34.24	-6.50	27.74	46.00	-18.26	peak	
5		800.1800	30.46	0.16	30.62	46.00	-15.38	peak	
6		958.2900	29.23	3.07	32.30	46.00	-13.70	peak	

Test Mode: TX B MODE CHANNEL 01

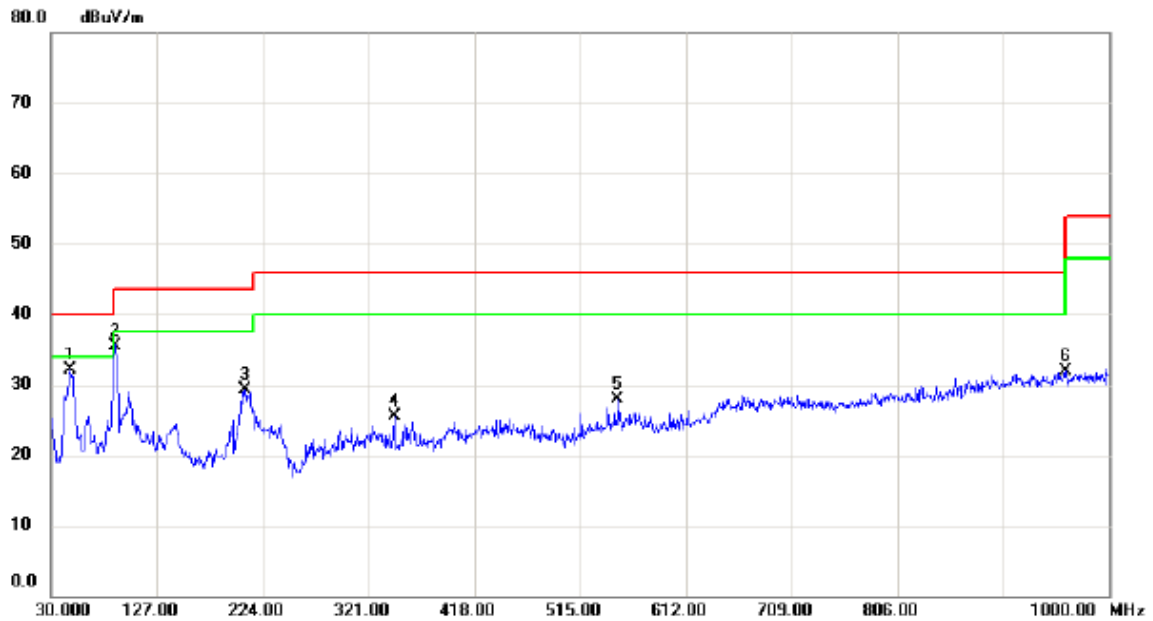
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	46.4900	43.27	-11.93	31.34	40.00	-8.66	peak	
2		89.1700	46.58	-16.00	30.58	43.50	-12.92	peak	
3		294.8100	44.96	-9.70	35.26	46.00	-10.74	peak	
4		344.2800	42.79	-9.89	32.90	46.00	-13.10	peak	
5		392.7800	39.71	-7.65	32.06	46.00	-13.94	peak	
6		927.2500	30.38	2.43	32.81	46.00	-13.19	peak	

Test Mode: TX B MODE CHANNEL 06

Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		47.4600	44.28	-12.21	32.07	40.00	-7.93	peak	
2	*	88.2000	51.57	-15.97	35.60	43.50	-7.90	peak	
3		207.5100	43.06	-13.69	29.37	43.50	-14.13	peak	
4		344.2800	35.44	-9.89	25.55	46.00	-20.45	peak	
5		549.9200	32.51	-4.62	27.89	46.00	-18.11	peak	
6		960.2300	28.89	3.07	31.96	54.00	-22.04	peak	

Test Mode: TX B MODE CHANNEL 06

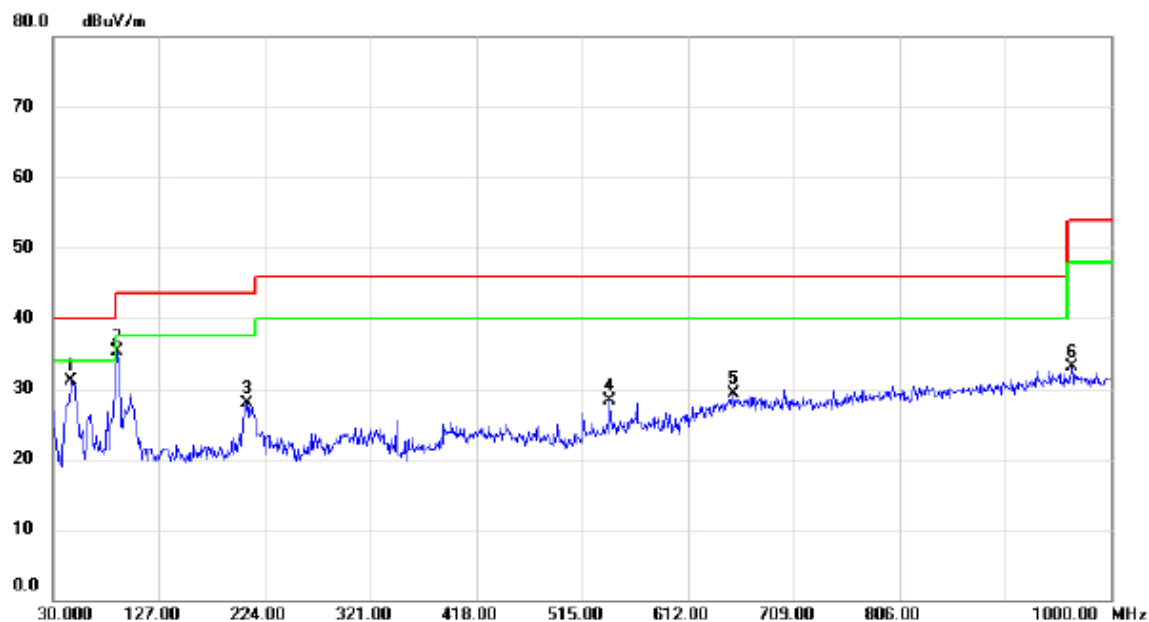
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		144.4600	38.69	-11.57	27.12	43.50	-16.38	peak	
2		205.5700	43.03	-13.66	29.37	43.50	-14.13	peak	
3	*	294.8100	44.88	-9.70	35.18	46.00	-10.82	peak	
4		344.2800	42.03	-9.89	32.14	46.00	-13.86	peak	
5		392.7800	38.86	-7.65	31.21	46.00	-14.79	peak	
6		943.7400	29.88	2.89	32.77	46.00	-13.23	peak	

Test Mode: TX B MODE CHANNEL 11

Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		46.4900	43.09	-11.93	31.16	40.00	-8.84	peak	
2	*	89.1700	51.24	-16.00	35.24	43.50	-8.26	peak	
3		207.5100	41.57	-13.69	27.88	43.50	-15.62	peak	
4		540.2200	33.38	-5.17	28.21	46.00	-17.79	peak	
5		653.7100	30.99	-1.63	29.36	46.00	-16.64	peak	
6		964.1100	30.04	3.05	33.09	54.00	-20.91	peak	

Test Mode: TX B MODE CHANNEL 11

Horizontal

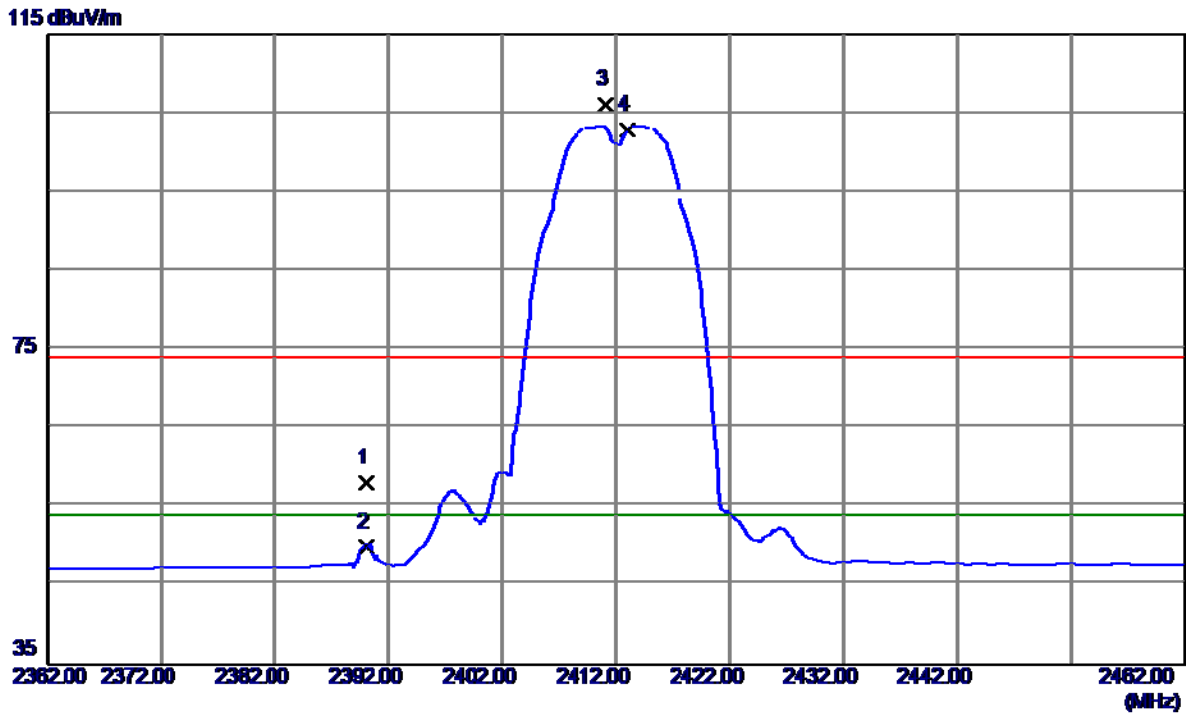


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		46.4900	40.17	-11.93	28.24	40.00	-11.76	peak	
2		89.1700	48.10	-16.00	32.10	43.50	-11.40	peak	
3		206.5400	42.81	-13.67	29.14	43.50	-14.36	peak	
4	*	294.8100	44.51	-9.70	34.81	46.00	-11.19	peak	
5		344.2800	42.97	-9.89	33.08	46.00	-12.92	peak	
6		399.5700	38.40	-7.28	31.12	46.00	-14.88	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

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

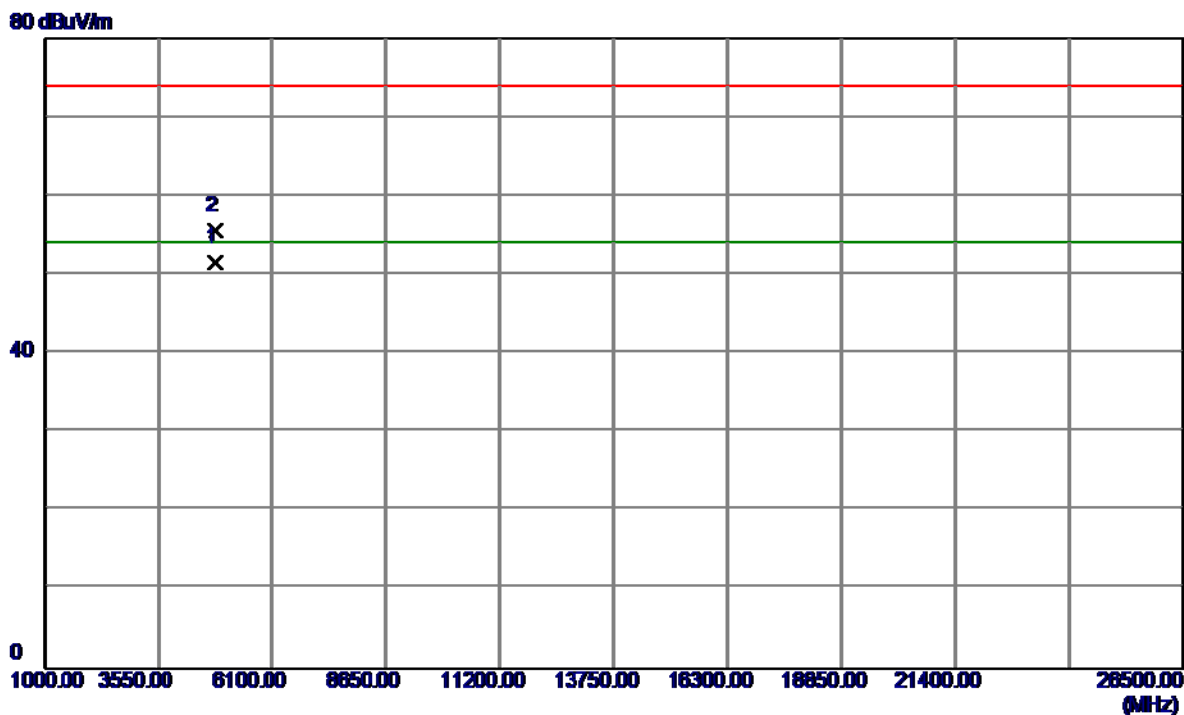
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	25.34	32.68	58.02	74.00	-15.98	Peak	
2	2390.0000	17.25	32.68	49.93	54.00	-4.07	AVG	
3	2411.1000	73.27	32.71	105.98	74.00	31.98	Peak	No Limit
4	2413.0000	70.20	32.71	102.91	54.00	48.91	AVG	No Limit

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

Vertical

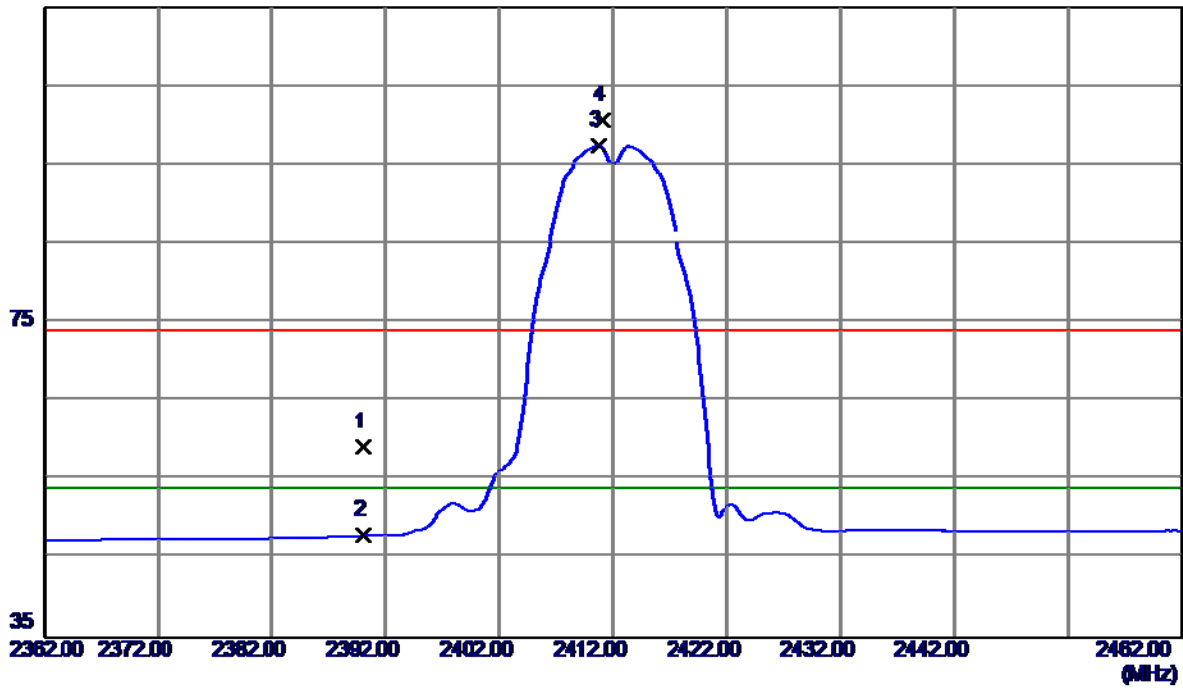


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.9800	48.54	3.00	51.54	54.00	-2.46	AVG	
2	4824.0200	52.54	3.00	55.54	74.00	-18.46	Peak	

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

Horizontal

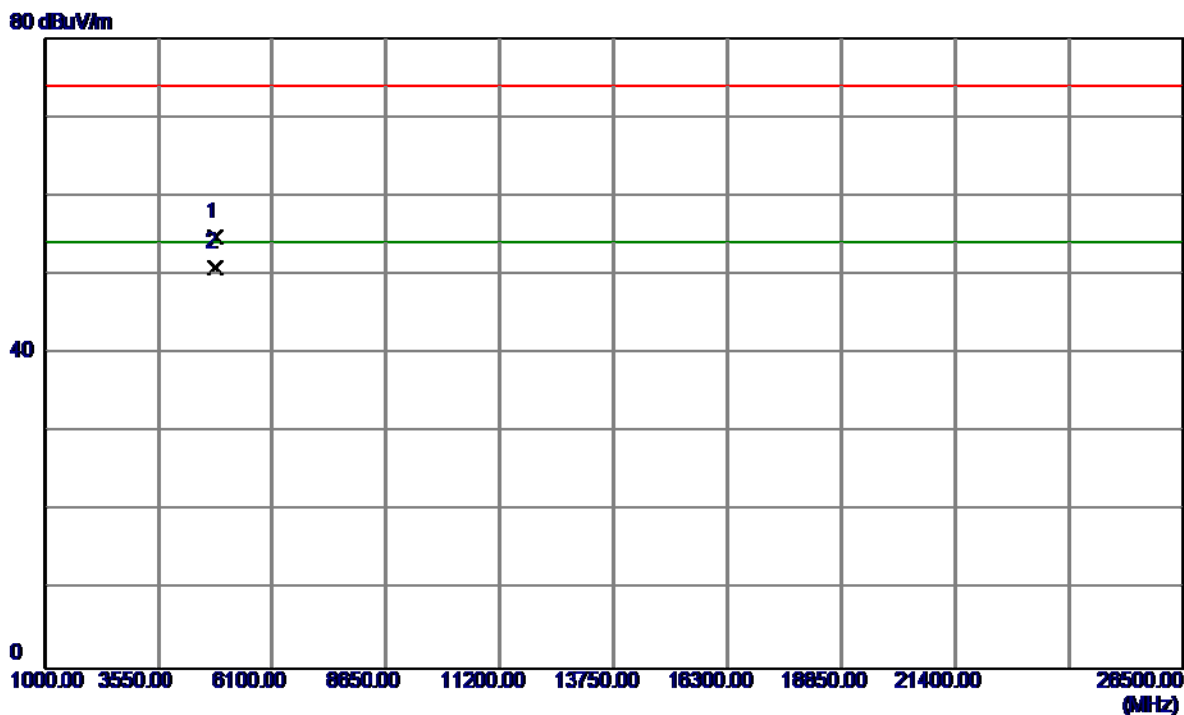
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	24.88	34.23	59.11	74.00	-14.89	Peak	
2	2390.0000	13.66	34.23	47.89	54.00	-6.11	AVG	
3	2410.8000	63.08	34.35	97.43	54.00	43.43	AVG	No Limit
4	2411.1000	66.23	34.35	100.58	74.00	26.58	Peak	No Limit

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

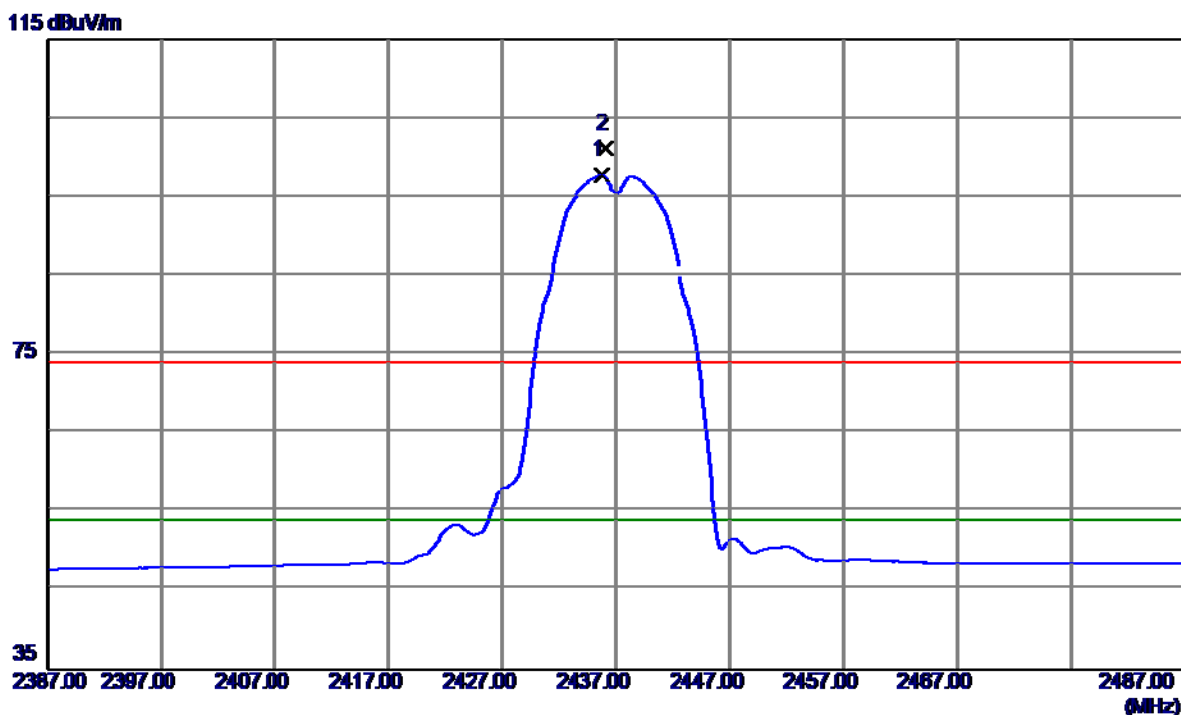
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.8600	51.73	3.00	54.73	74.00	-19.27	Peak	
2	4824.0200	47.89	3.00	50.89	54.00	-3.11	AVG	

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

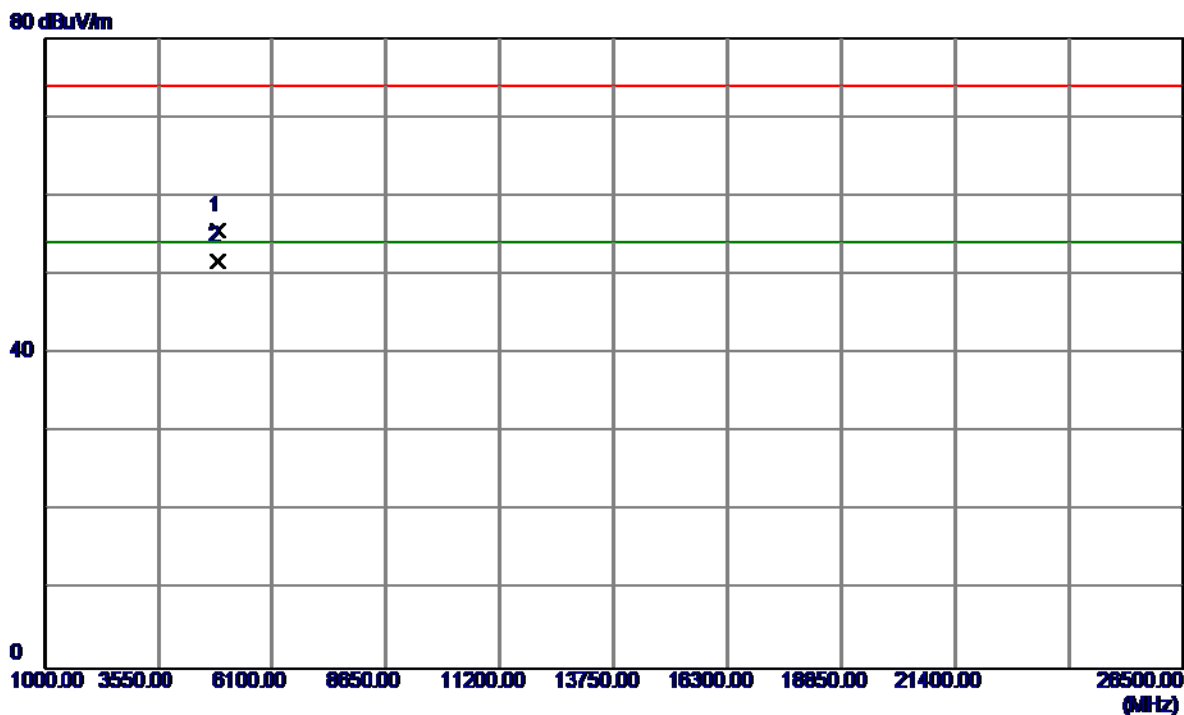
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2435.8000	63.27	34.50	97.77	54.00	43.77	AVG	No Limit
2	2436.1000	66.53	34.50	101.03	74.00	27.03	Peak	No Limit

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

Vertical

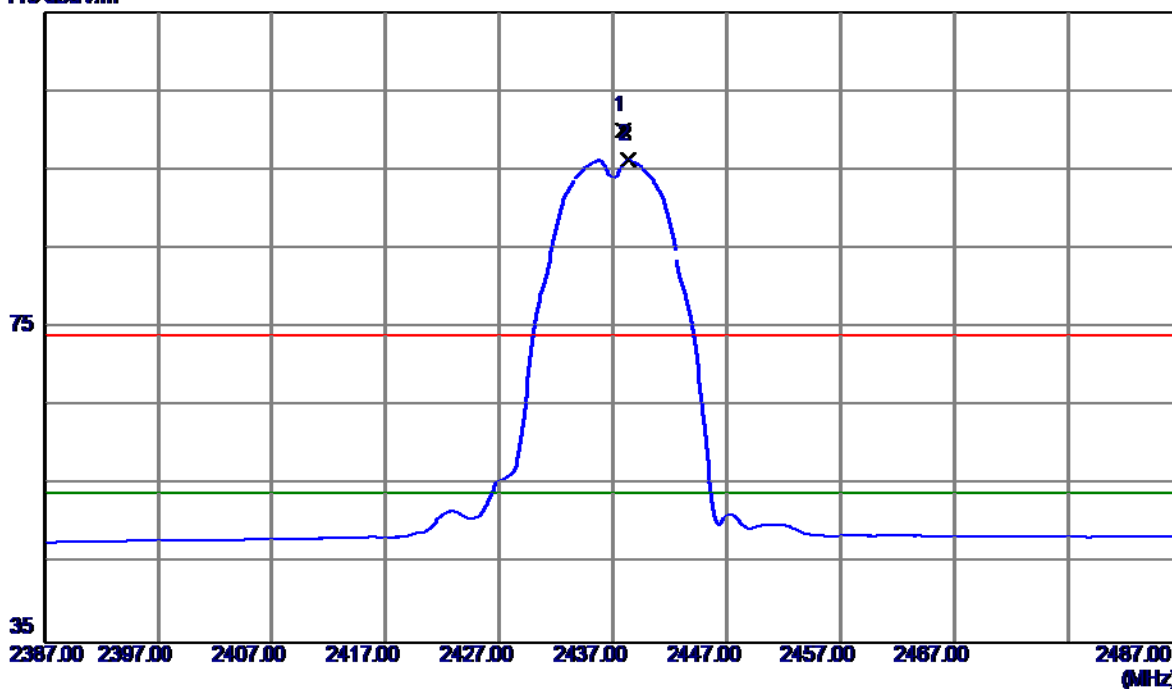


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.9800	52.44	3.03	55.47	74.00	-18.53	Peak	
2	4873.9800	48.66	3.03	51.69	54.00	-2.31	AVG	

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

Horizontal

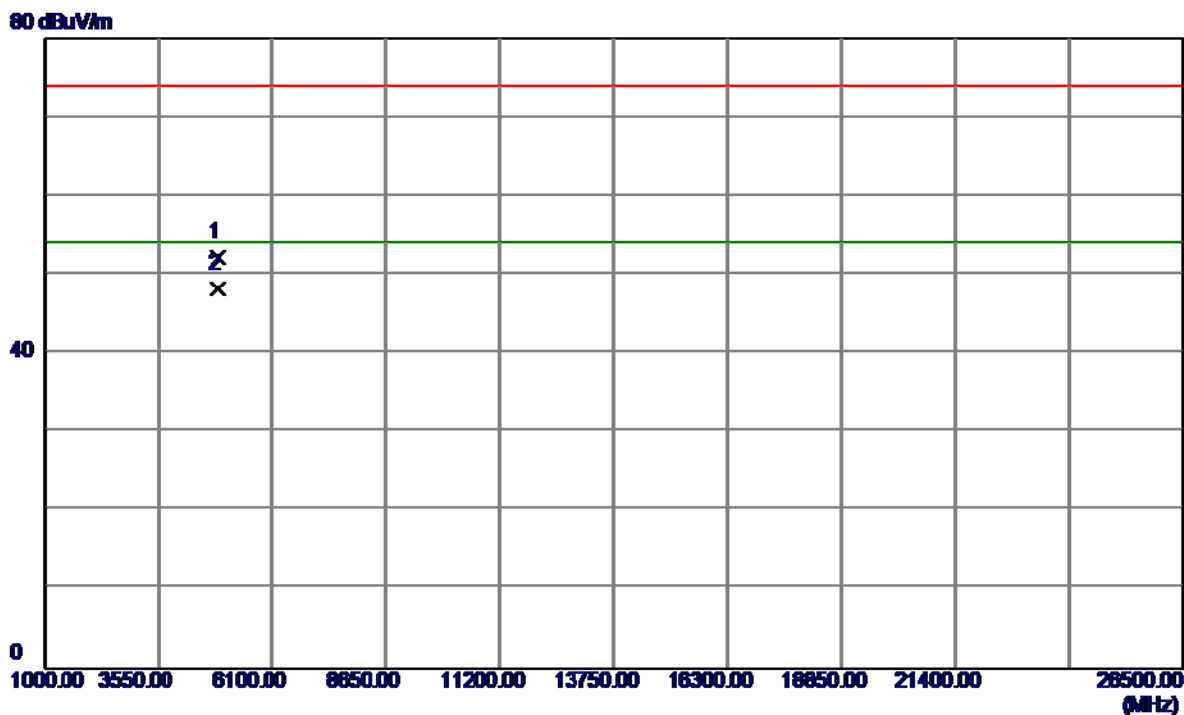
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2437.9000	65.44	34.51	99.95	74.00	25.95	Peak	No Limit
2	2438.3000	61.72	34.51	96.23	54.00	42.23	AVG	No Limit

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

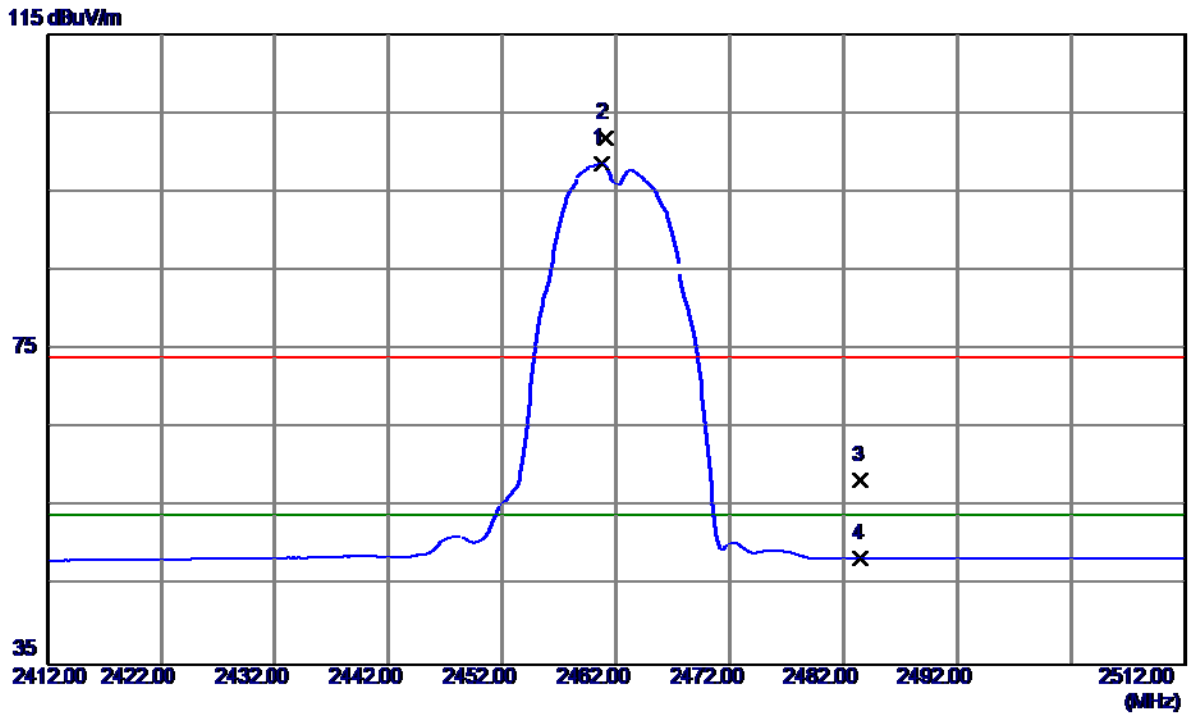
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.9400	49.10	3.03	52.13	74.00	-21.87	Peak	
2	4873.9800	45.15	3.03	48.18	54.00	-5.82	AVG	

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

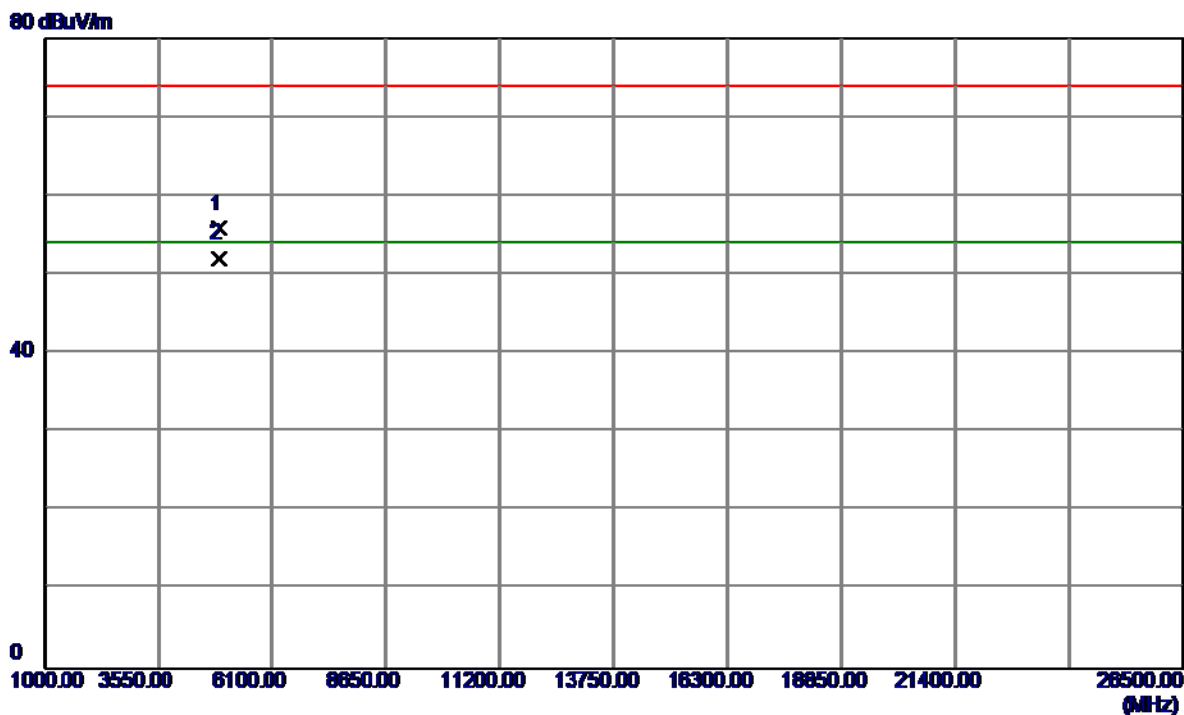
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2460.8000	63.94	34.64	98.58	54.00	44.58	AVG	No Limit
2	2461.1000	67.16	34.64	101.80	74.00	27.80	Peak	No Limit
3	2483.5000	23.62	34.77	58.39	74.00	-15.61	Peak	
4	2483.5000	13.64	34.77	48.41	54.00	-5.59	AVG	

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

Vertical

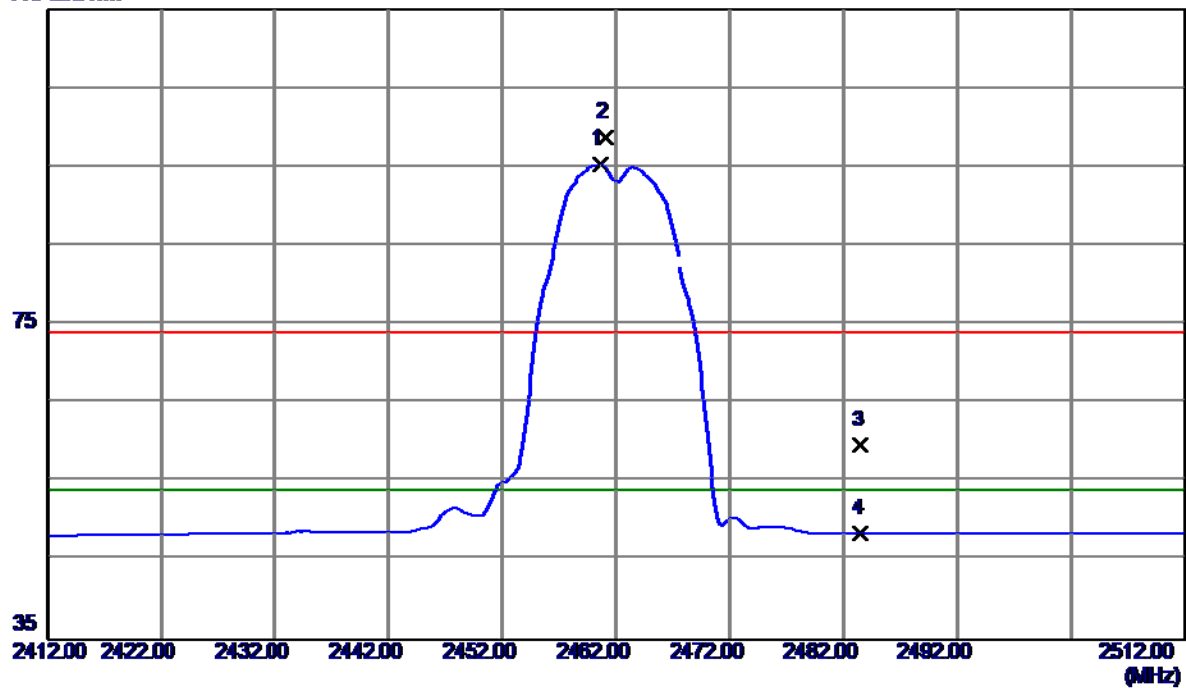


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.8800	52.71	3.05	55.76	74.00	-18.24	Peak	
2	4923.9800	48.99	3.05	52.04	54.00	-1.96	AVG	

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

Horizontal

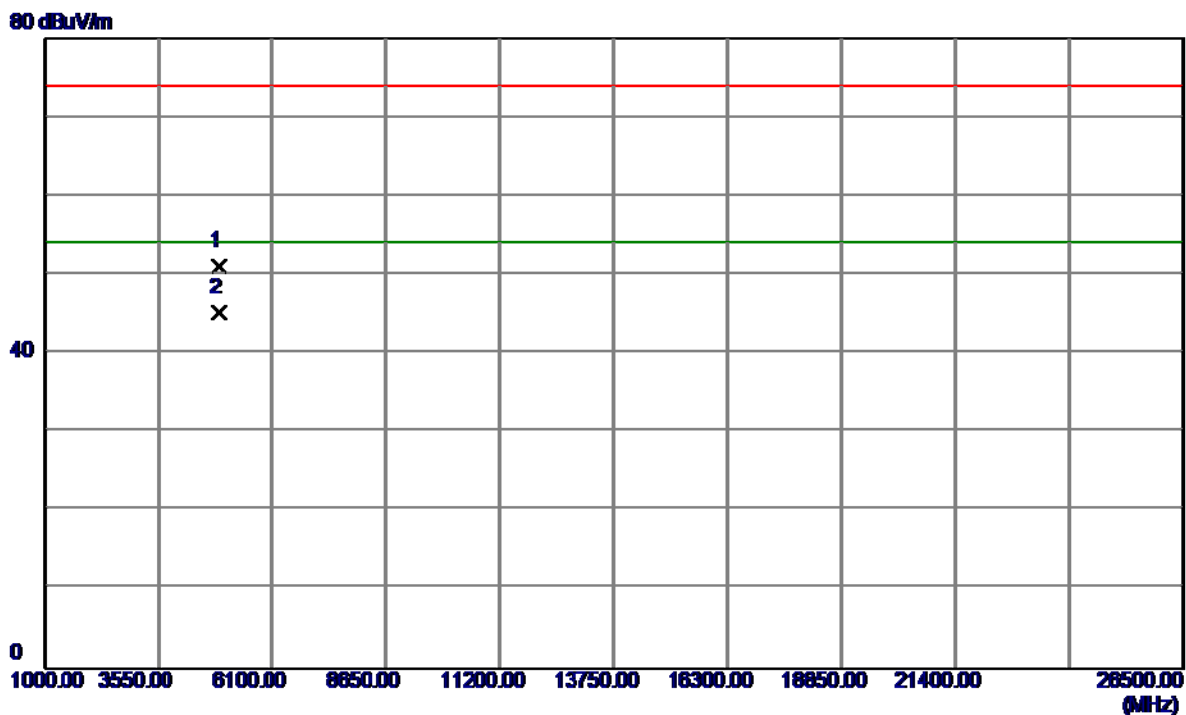
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2460.7000	60.61	34.64	95.25	54.00	41.25	AVG	No Limit
2	2461.1000	64.08	34.64	98.72	74.00	24.72	Peak	No Limit
3	2483.5000	24.86	34.77	59.63	74.00	-14.37	Peak	
4	2483.5000	13.65	34.77	48.42	54.00	-5.58	AVG	

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

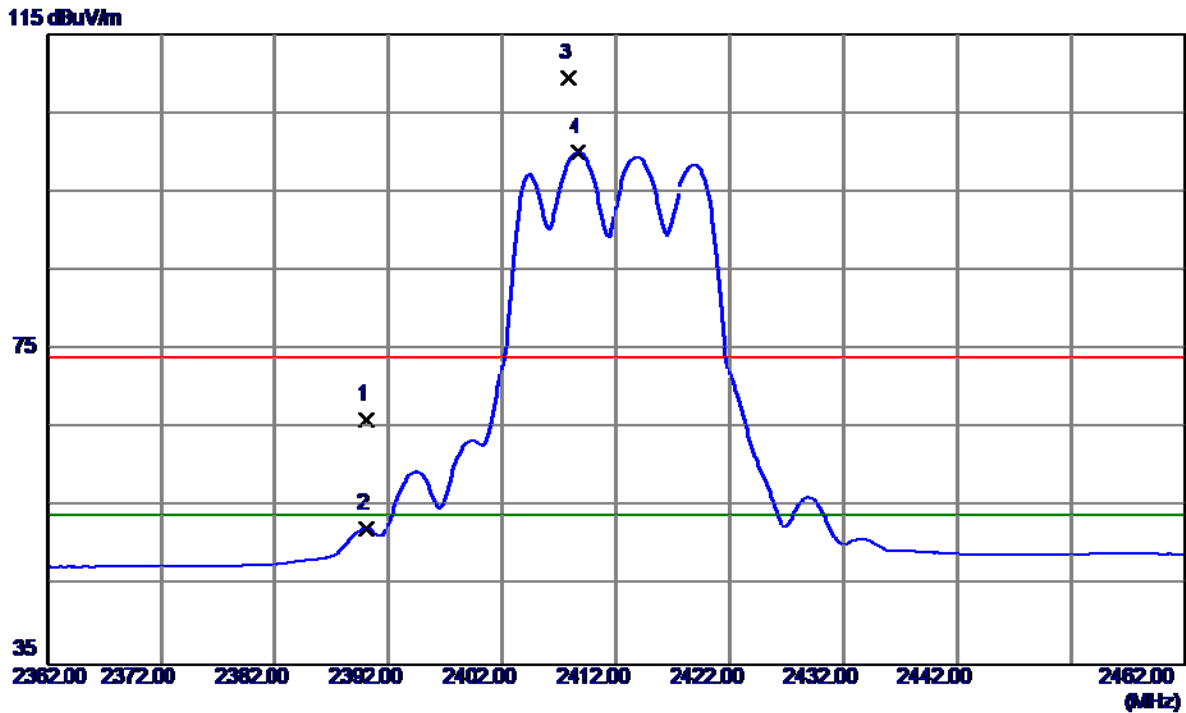
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.8600	47.99	3.05	51.04	74.00	-22.96	Peak	
2	4923.9800	42.03	3.05	45.08	54.00	-8.92	AVG	

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

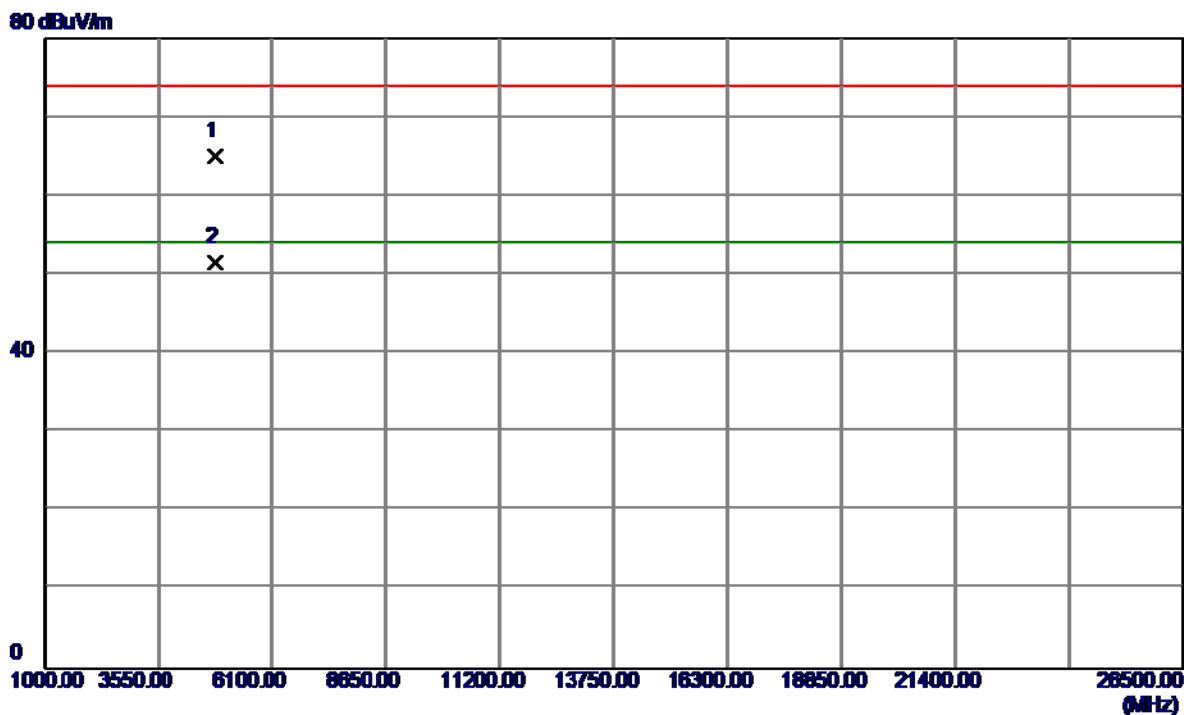
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	31.80	34.23	66.03	74.00	-7.97	Peak	
2	2390.0000	18.10	34.23	52.33	54.00	-1.67	AVG	
3	2407.8000	75.00	34.34	109.34	74.00	35.34	Peak	No Limit
4	2408.7000	65.69	34.34	100.03	54.00	46.03	AVG	No Limit

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

Vertical

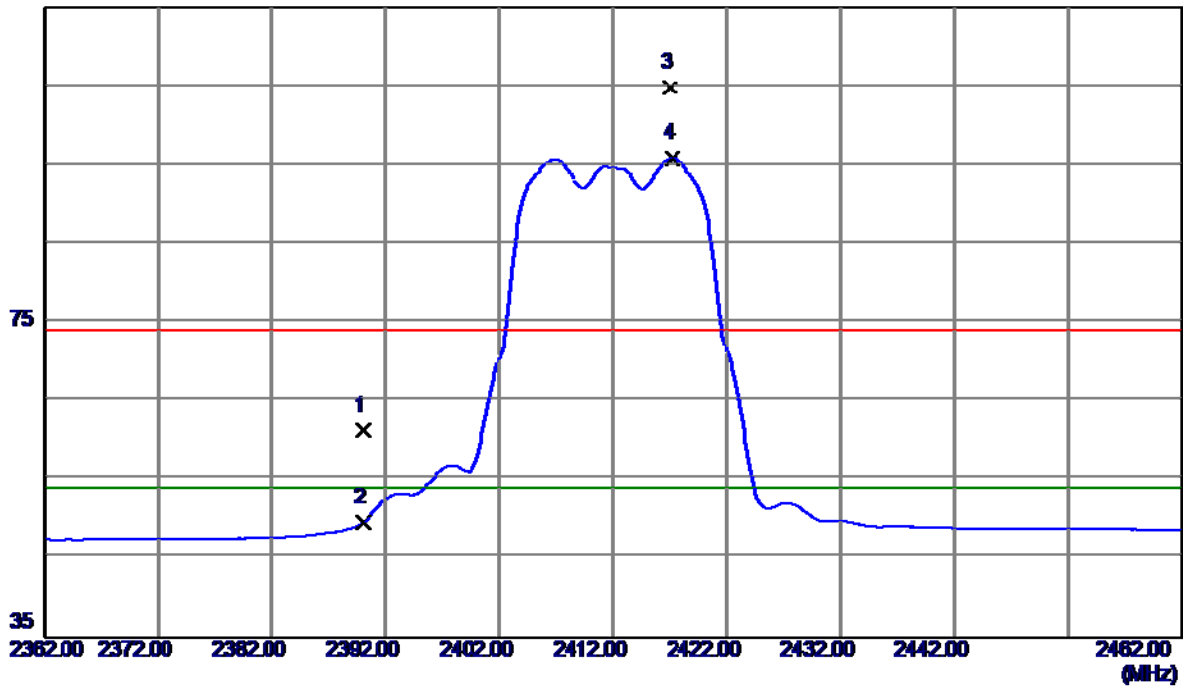


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.1000	62.00	3.00	65.00	74.00	-9.00	Peak	
2	4823.6000	48.51	3.00	51.51	54.00	-2.49	AVG	

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

Horizontal

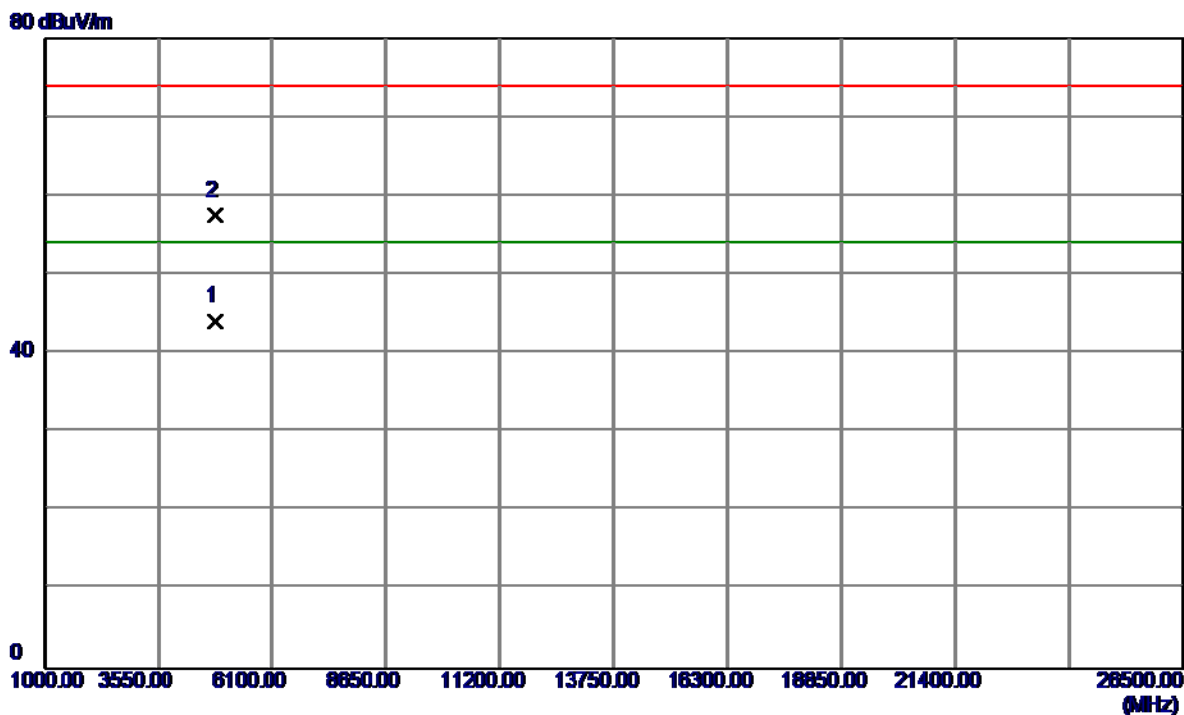
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	26.95	34.23	61.18	74.00	-12.82	Peak	
2	2390.0000	15.29	34.23	49.52	54.00	-4.48	AVG	
3	2417.0000	70.30	34.39	104.69	74.00	30.69	Peak	No Limit
4	2417.2000	61.47	34.39	95.86	54.00	41.86	AVG	No Limit

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

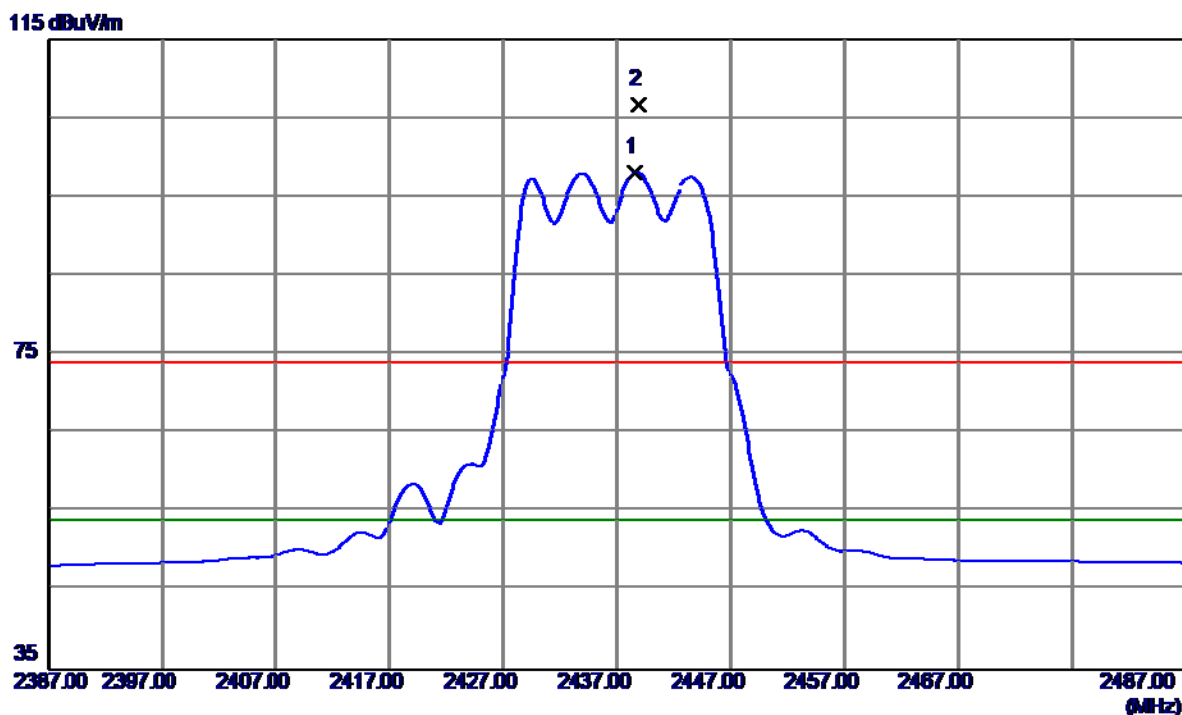
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.9800	41.01	3.00	44.01	54.00	-9.99	AVG	
2	4824.6800	54.37	3.00	57.37	74.00	-16.63	Peak	

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

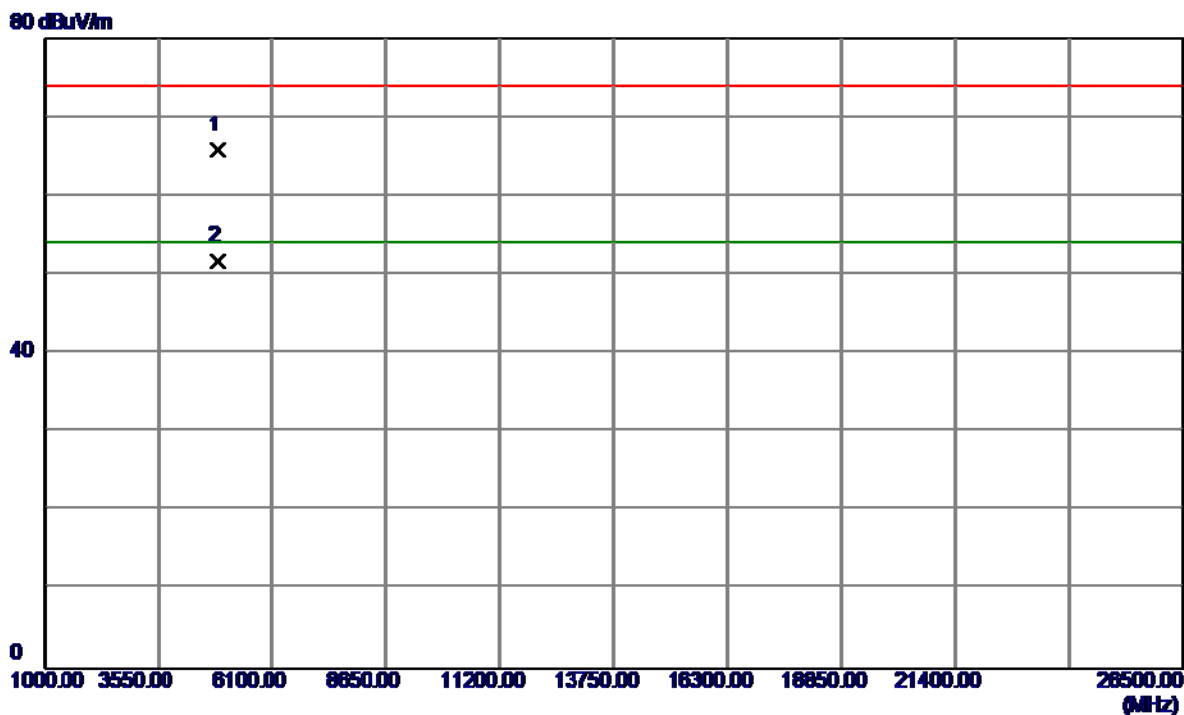
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2438.6000	63.56	34.51	98.07	54.00	44.07	AVG	No Limit
2	2438.9000	72.20	34.52	106.72	74.00	32.72	Peak	No Limit

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

Vertical

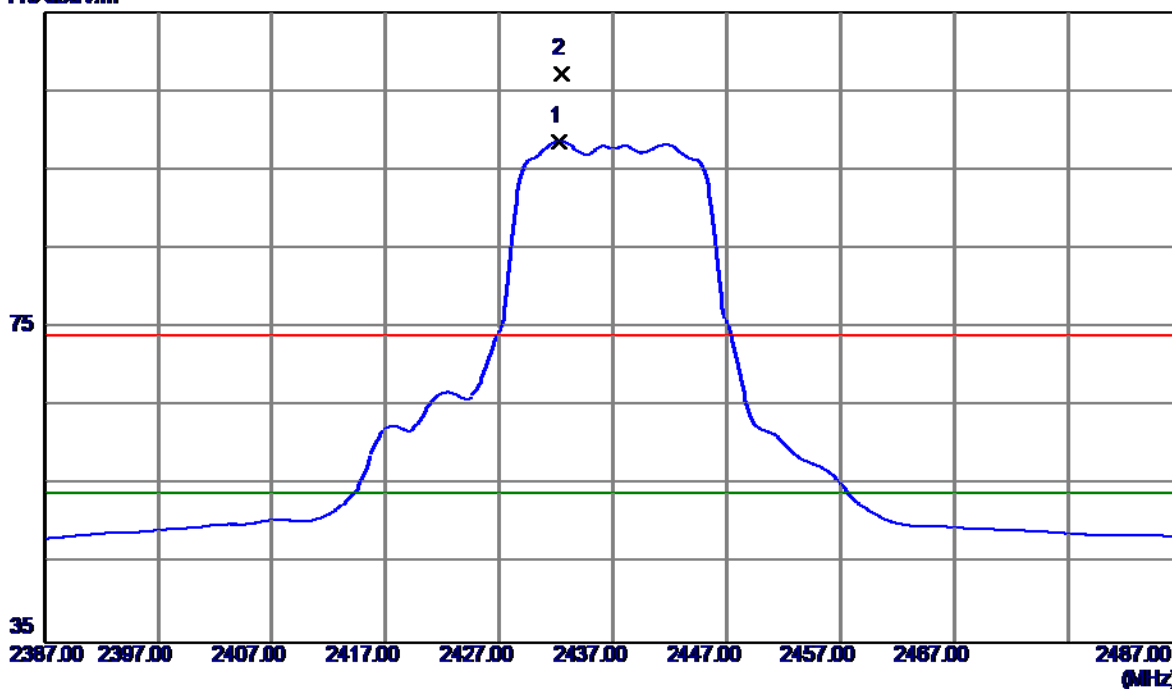


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.3400	62.72	3.03	65.75	74.00	-8.25	Peak	
2	4873.5600	48.63	3.03	51.66	54.00	-2.34	AVG	

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

Horizontal

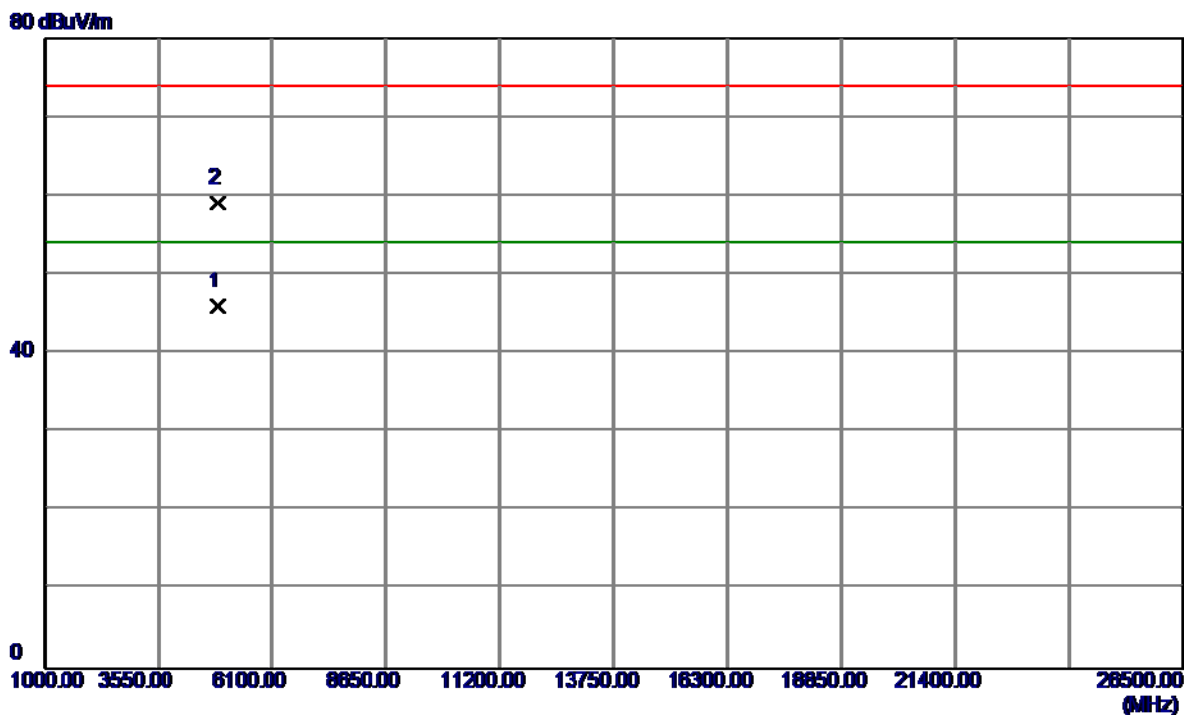
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2432.2000	64.08	34.48	98.56	54.00	44.56	AVG	No Limit
2	2432.4000	72.74	34.48	107.22	74.00	33.22	Peak	No Limit

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

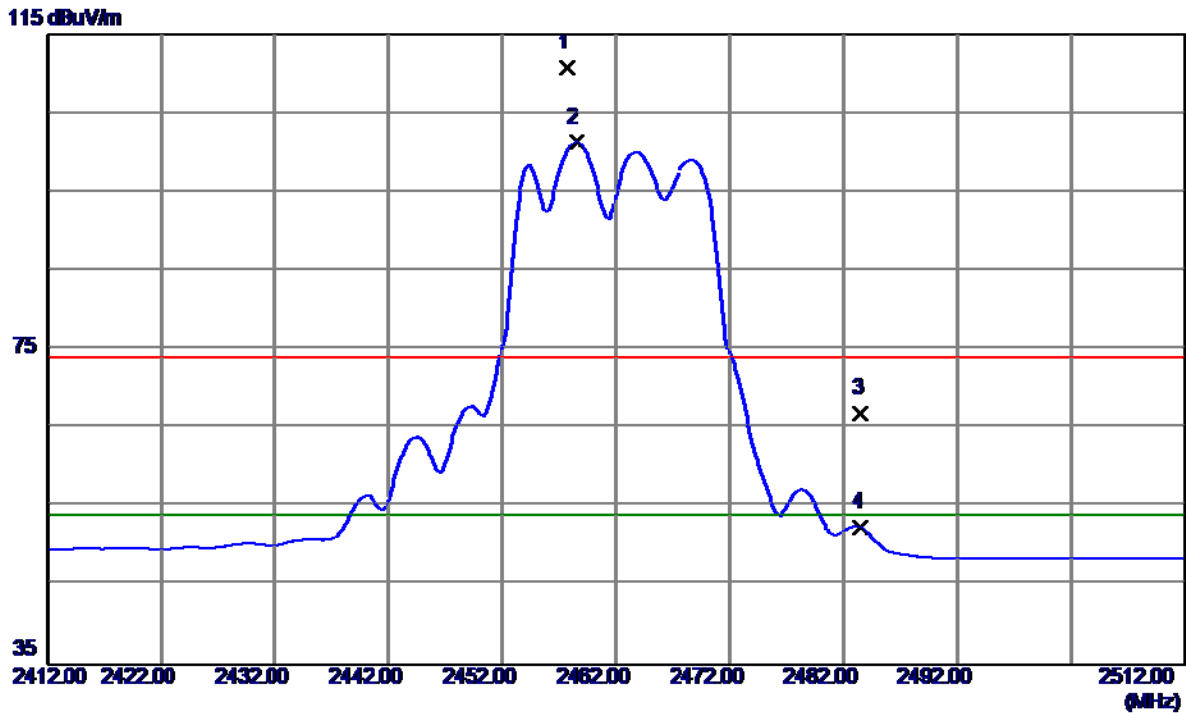
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.0200	42.82	3.03	45.85	54.00	-8.15	AVG	
2	4874.7200	56.08	3.03	59.11	74.00	-14.89	Peak	

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

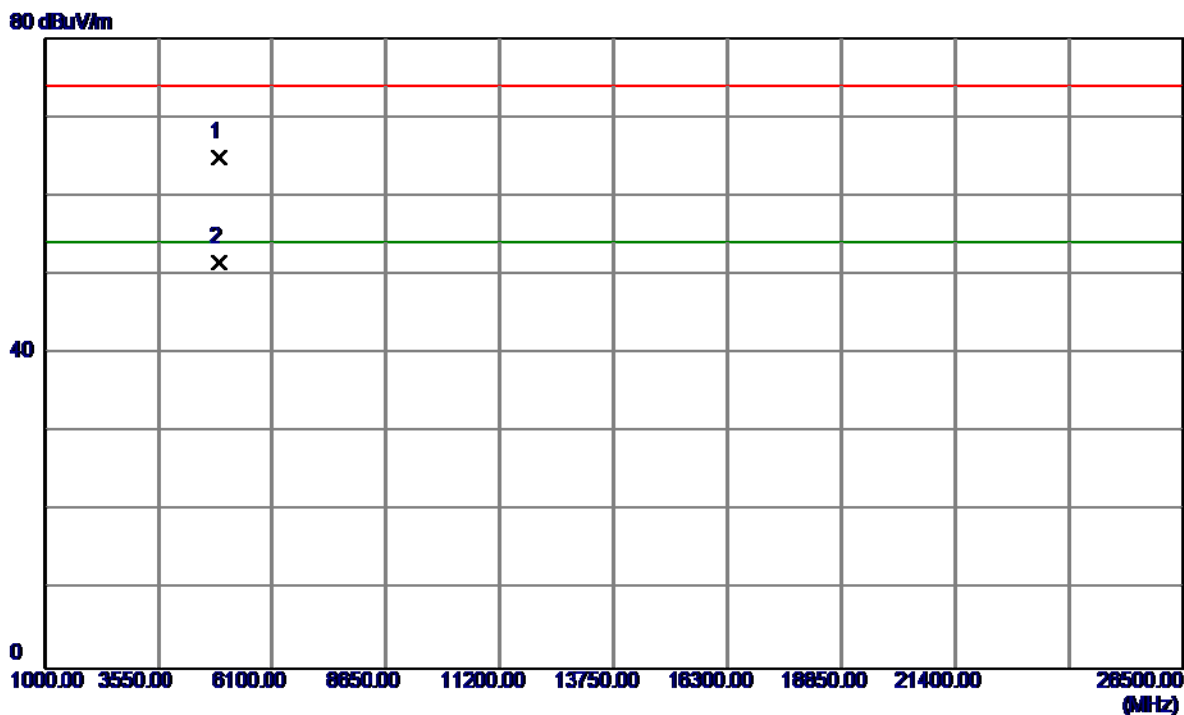
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2457.7000	76.05	34.62	110.67	74.00	36.67	Peak	No Limit
2	2458.5000	66.55	34.63	101.18	54.00	47.18	AVG	No Limit
3	2483.5000	32.10	34.77	66.87	74.00	-7.13	Peak	
4	2483.5000	17.61	34.77	52.38	54.00	-1.62	AVG	

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

Vertical

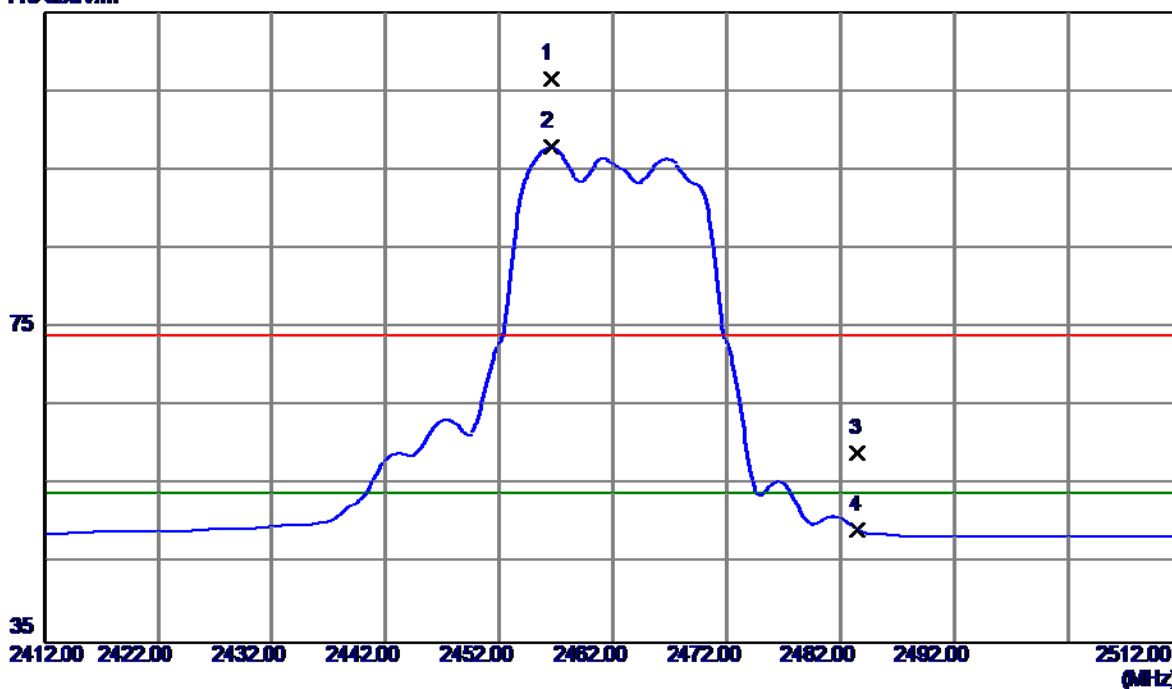


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.2799	61.81	3.05	64.86	74.00	-9.14	Peak	
2	4923.5800	48.46	3.05	51.51	54.00	-2.49	AVG	

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

Horizontal

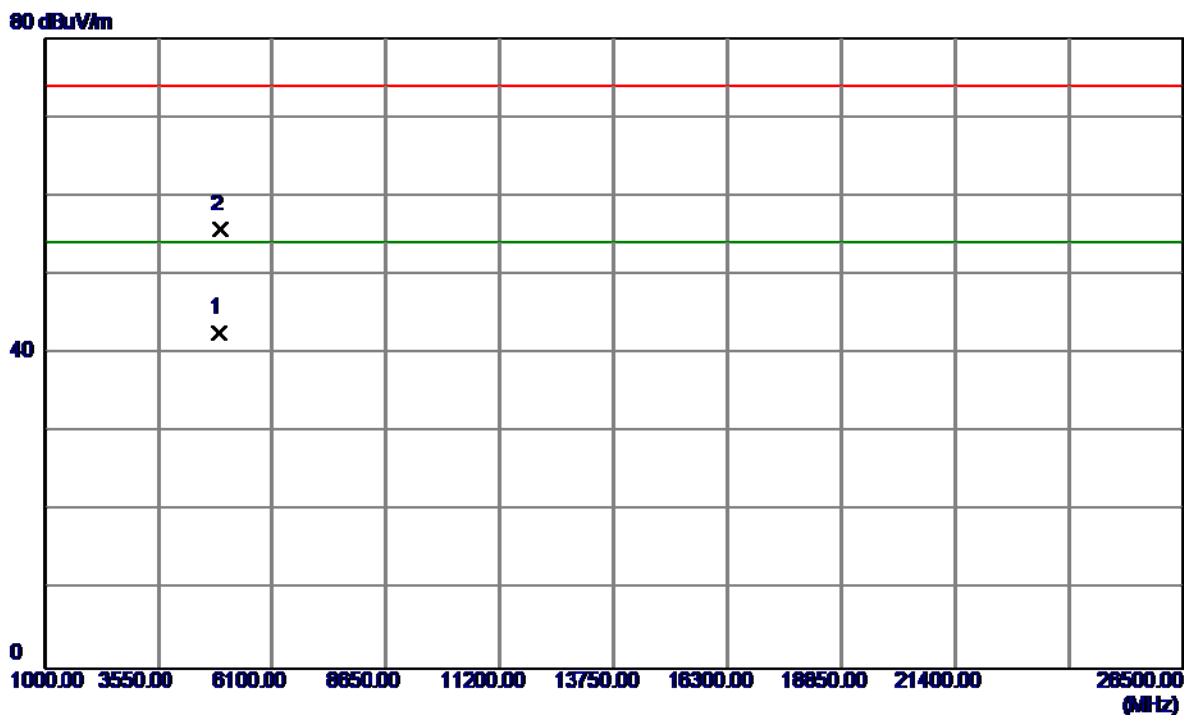
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2456.5000	71.90	34.62	106.52	74.00	32.52	Peak	No Limit
2	2456.5000	63.21	34.62	97.83	54.00	43.83	AVG	No Limit
3	2483.5000	24.18	34.77	58.95	74.00	-15.05	Peak	
4	2483.5000	14.49	34.77	49.26	54.00	-4.74	AVG	

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

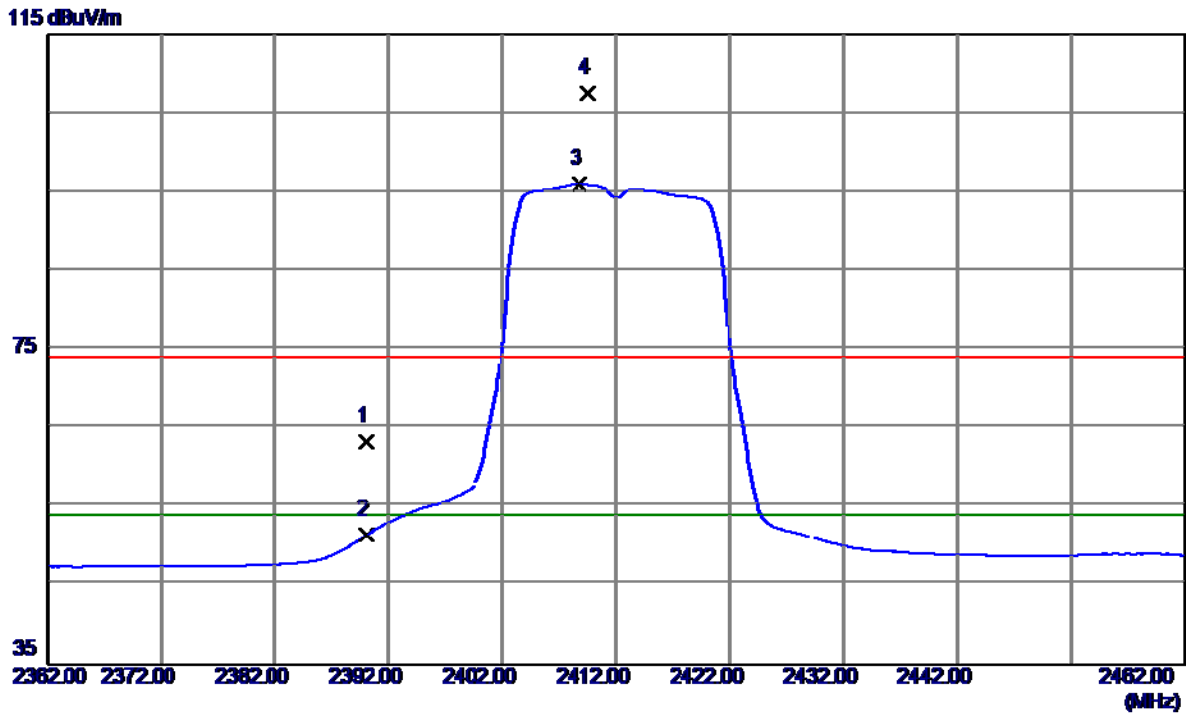
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.2799	39.44	3.05	42.49	54.00	-11.51	AVG	
2	4924.6200	52.63	3.05	55.68	74.00	-18.32	Peak	

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

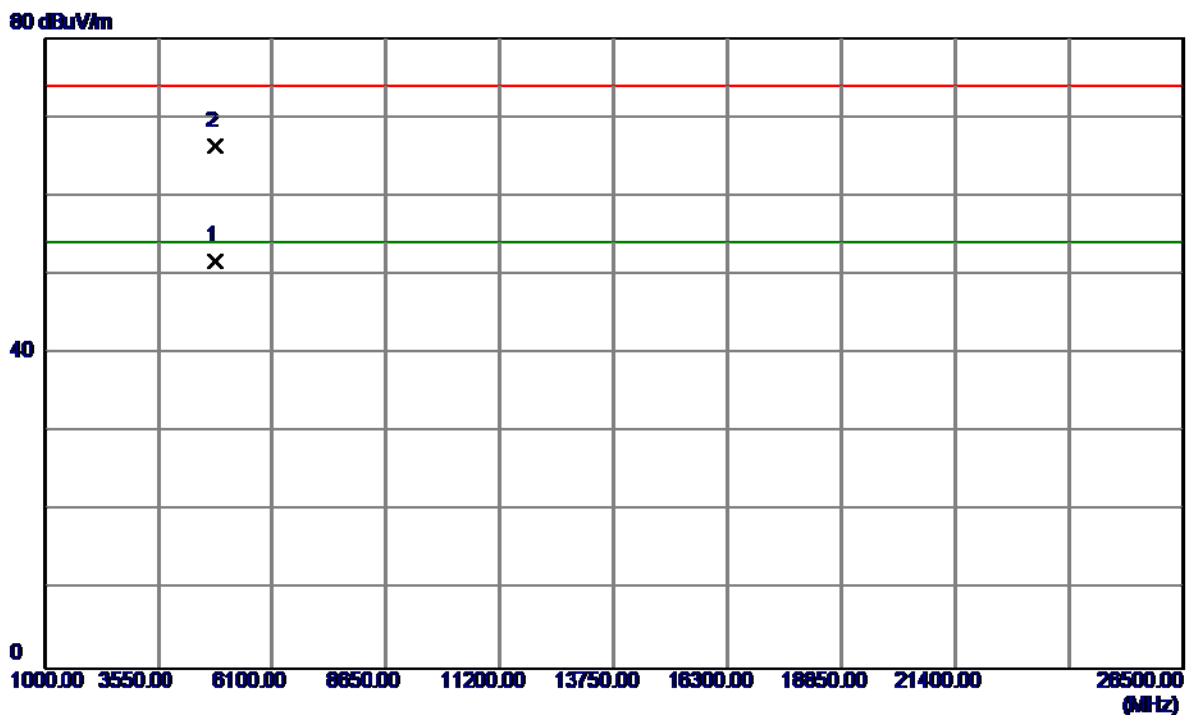
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	29.12	34.23	63.35	74.00	-10.65	Peak	
2	2390.0000	17.24	34.23	51.47	54.00	-2.53	AVG	
3	2408.8000	61.61	34.34	95.95	54.00	41.95	AVG	No Limit
4	2409.6000	73.14	34.35	107.49	74.00	33.49	Peak	No Limit

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

Vertical

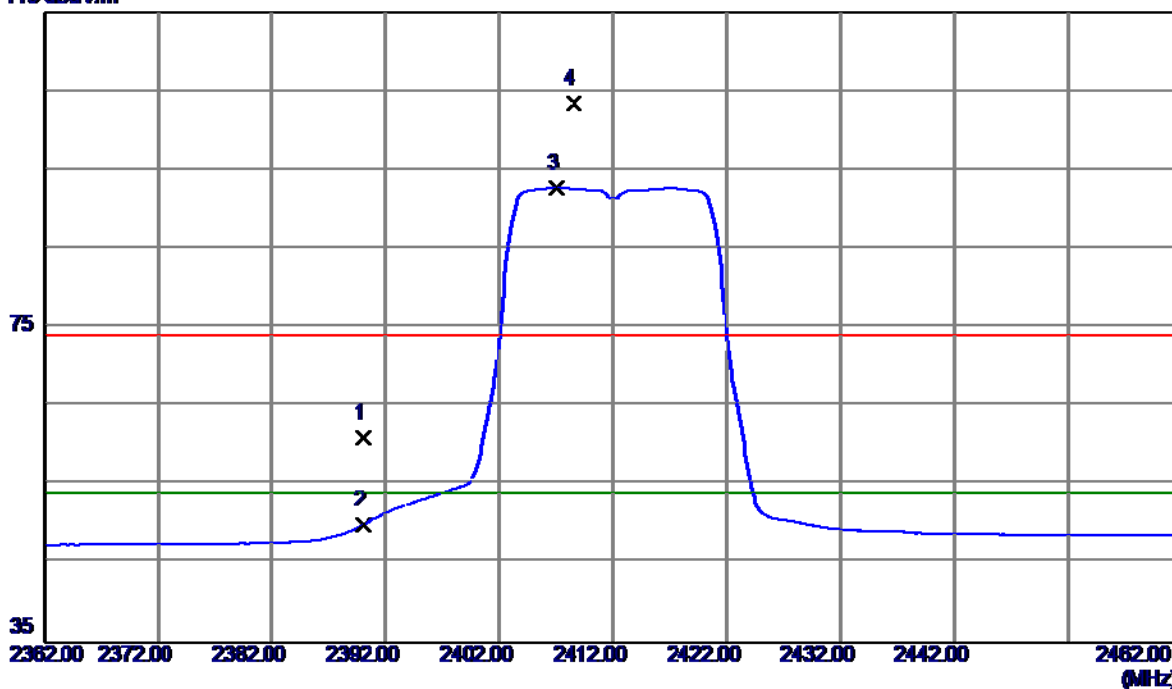


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4822.7400	48.73	3.00	51.73	54.00	-2.27	AVG	
2	4823.5200	63.22	3.00	66.22	74.00	-7.78	Peak	

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

Horizontal

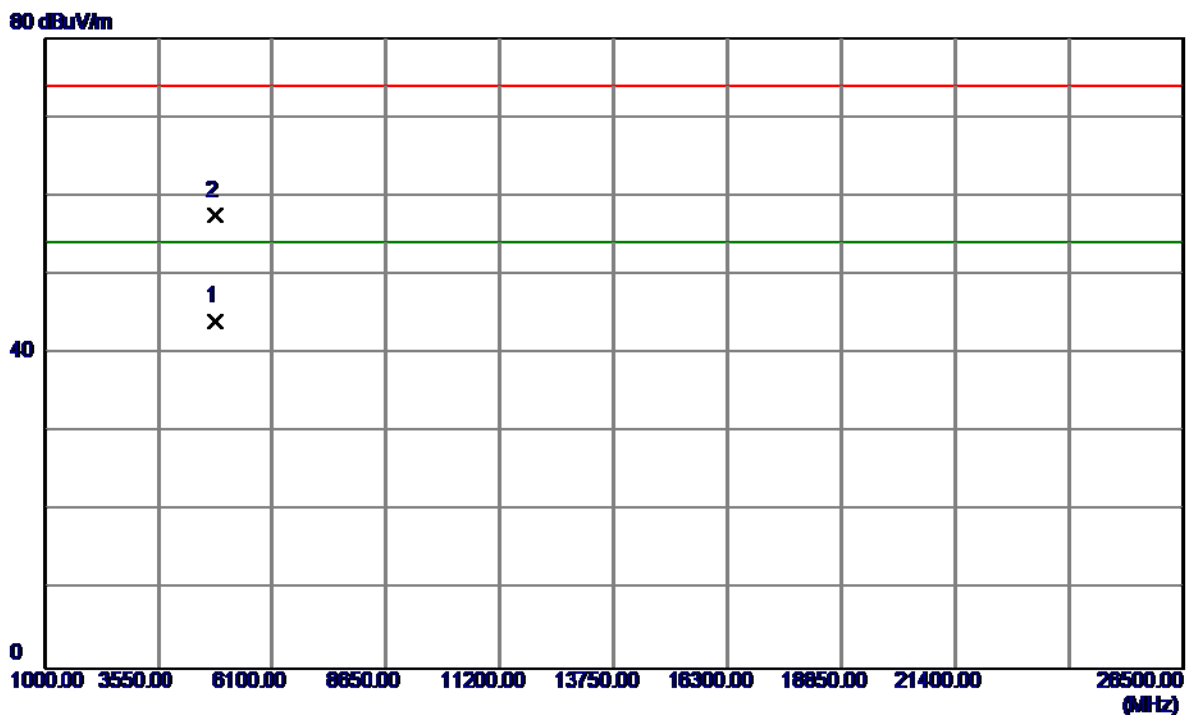
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	26.70	34.23	60.93	74.00	-13.07	Peak	
2	2390.0000	15.70	34.23	49.93	54.00	-4.07	AVG	
3	2407.0000	58.25	34.33	92.58	54.00	38.58	AVG	No Limit
4	2408.5000	68.97	34.34	103.31	74.00	29.31	Peak	No Limit

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

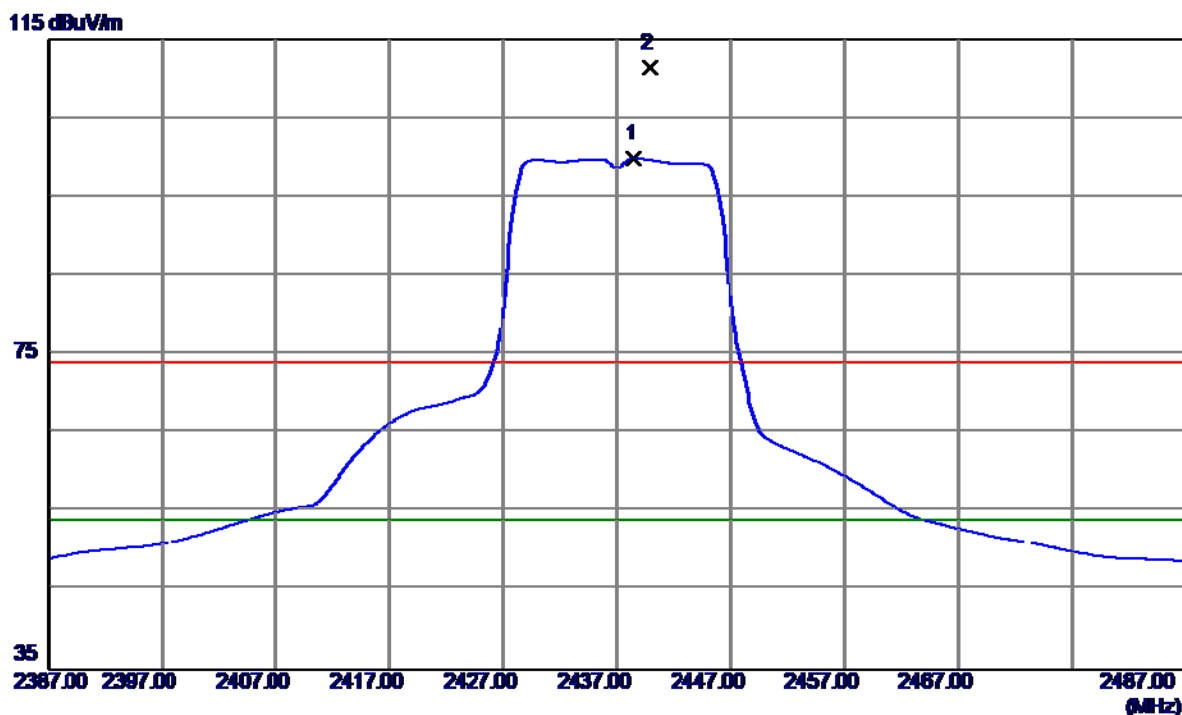
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.9800	41.04	3.00	44.04	54.00	-9.96	AVG	
2	4824.6800	54.43	3.00	57.43	74.00	-16.57	Peak	

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

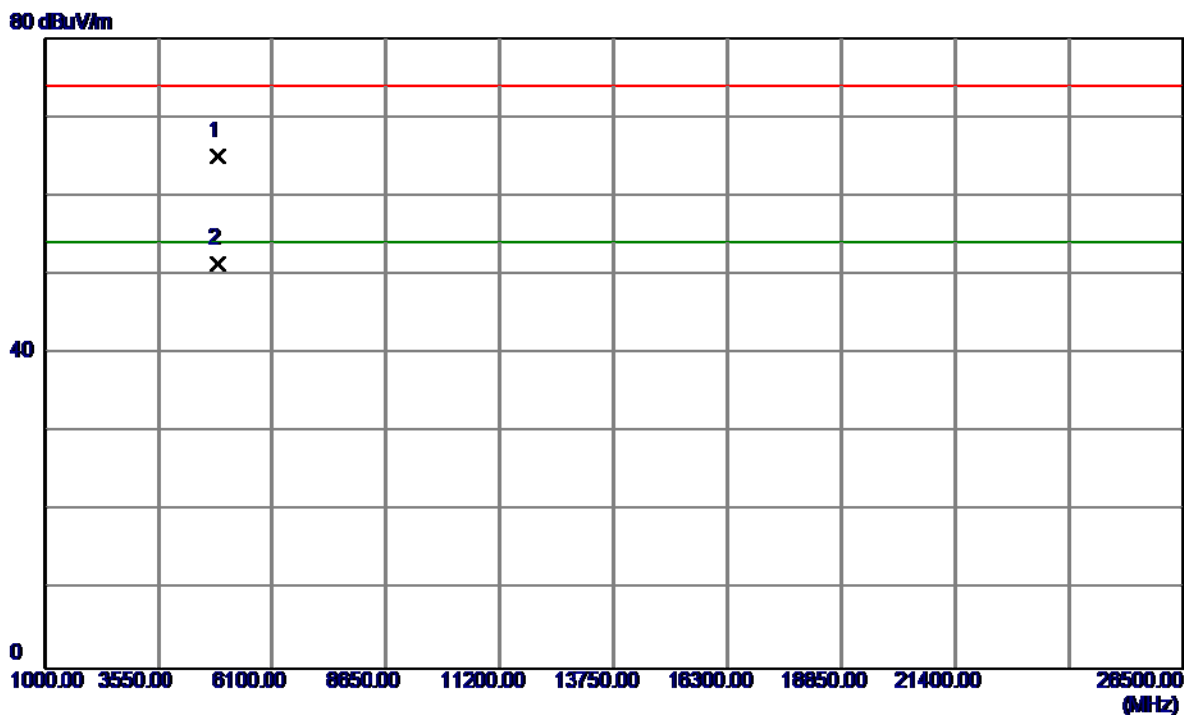
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2438.5000	65.29	34.51	99.80	54.00	45.80	AVG	No Limit
2	2439.9000	76.80	34.52	111.32	74.00	37.32	Peak	No Limit

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

Vertical

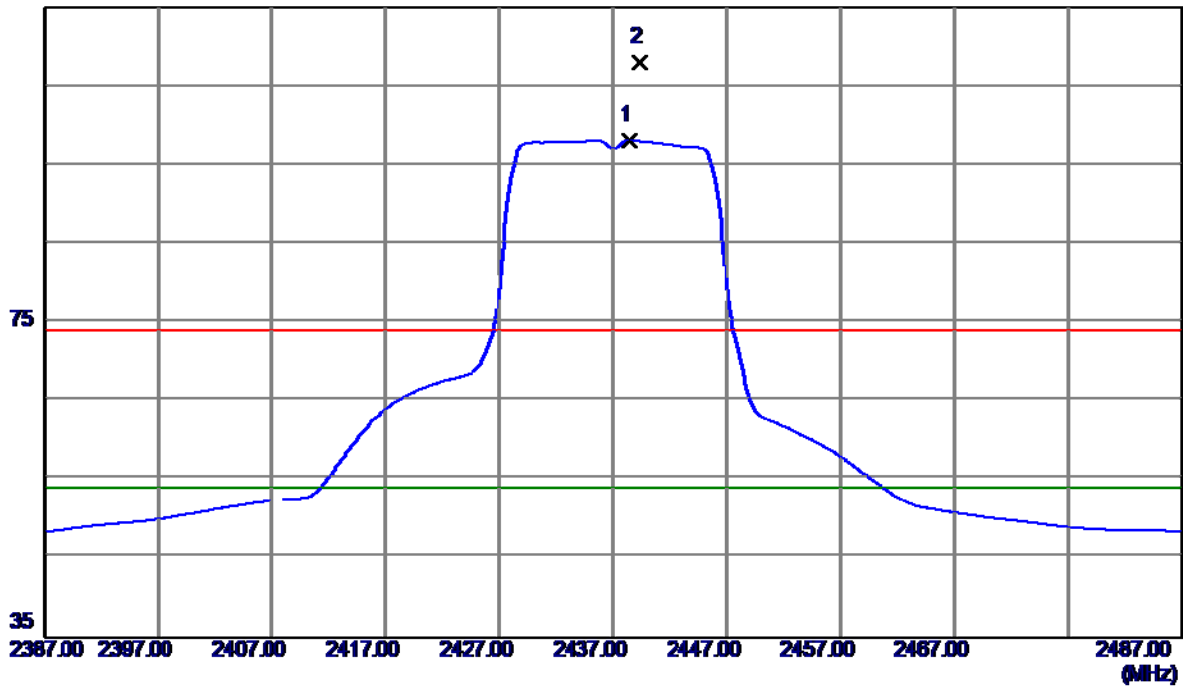


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4873.7400	61.90	3.03	64.93	74.00	-9.07	Peak	
2	4873.8600	48.33	3.03	51.36	54.00	-2.64	AVG	

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

Horizontal

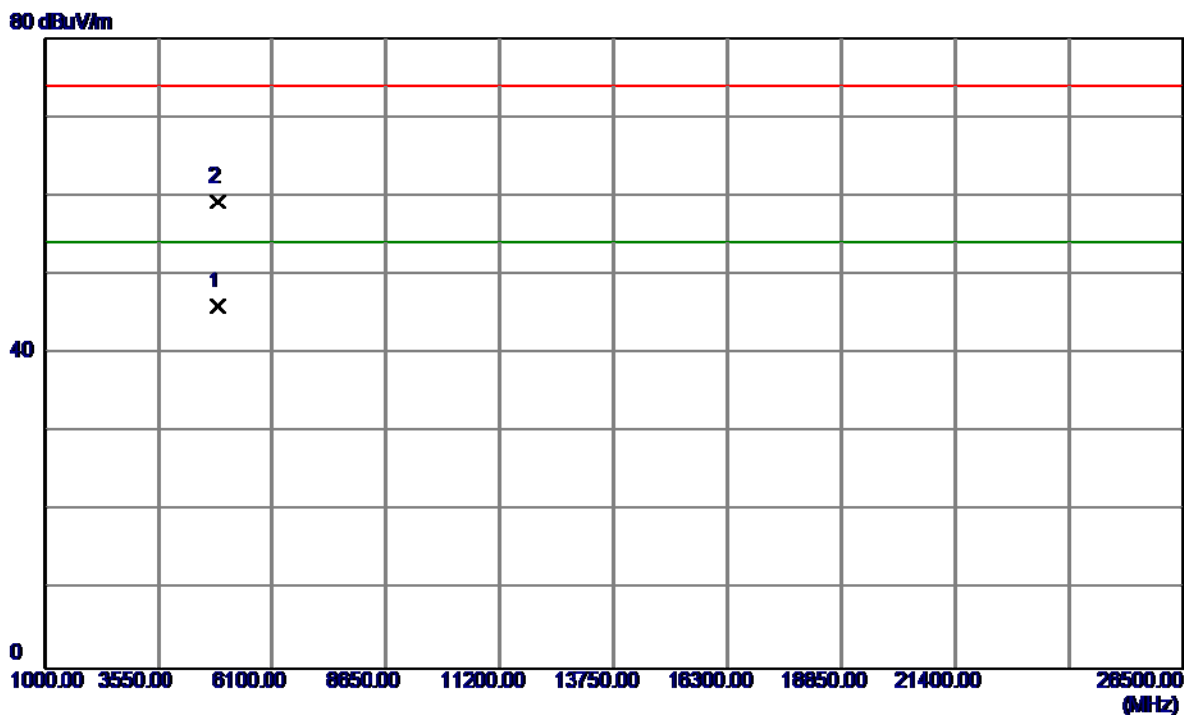
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2438.4000	63.56	34.51	98.07	54.00	44.07	AVG	No Limit
2	2439.3000	73.48	34.52	108.00	74.00	34.00	Peak	No Limit

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

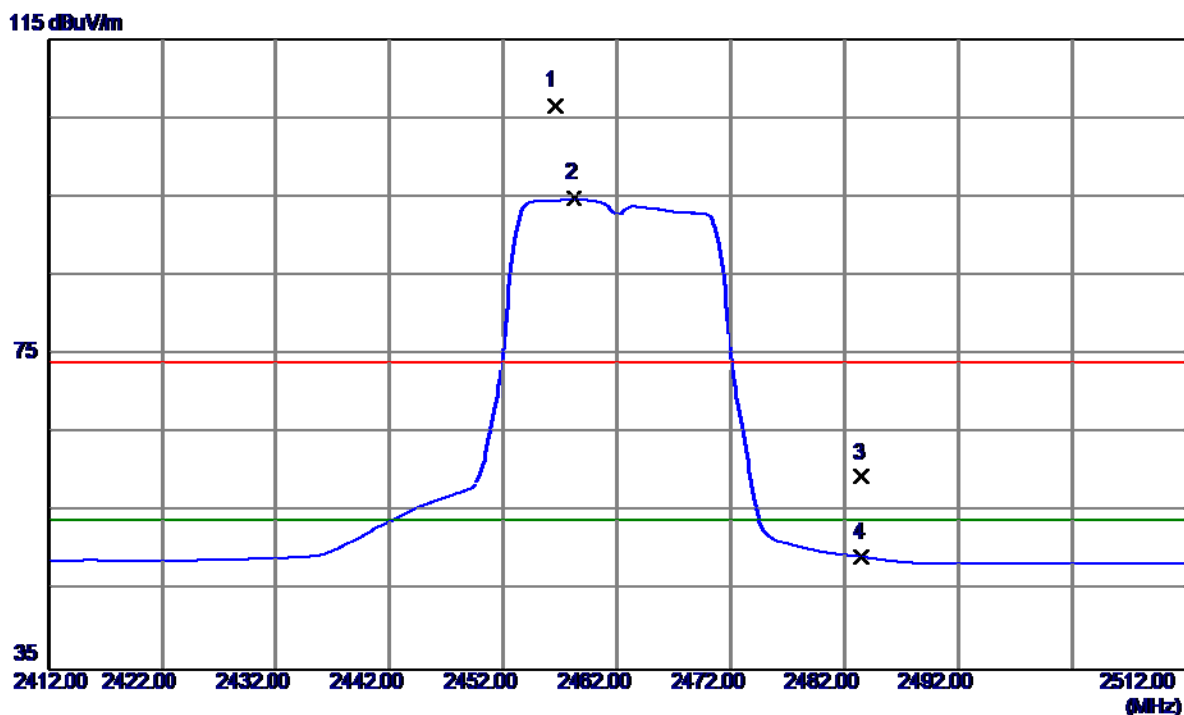
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.0200	42.87	3.03	45.90	54.00	-8.10	AVG	
2	4874.7200	56.12	3.03	59.15	74.00	-14.85	Peak	

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

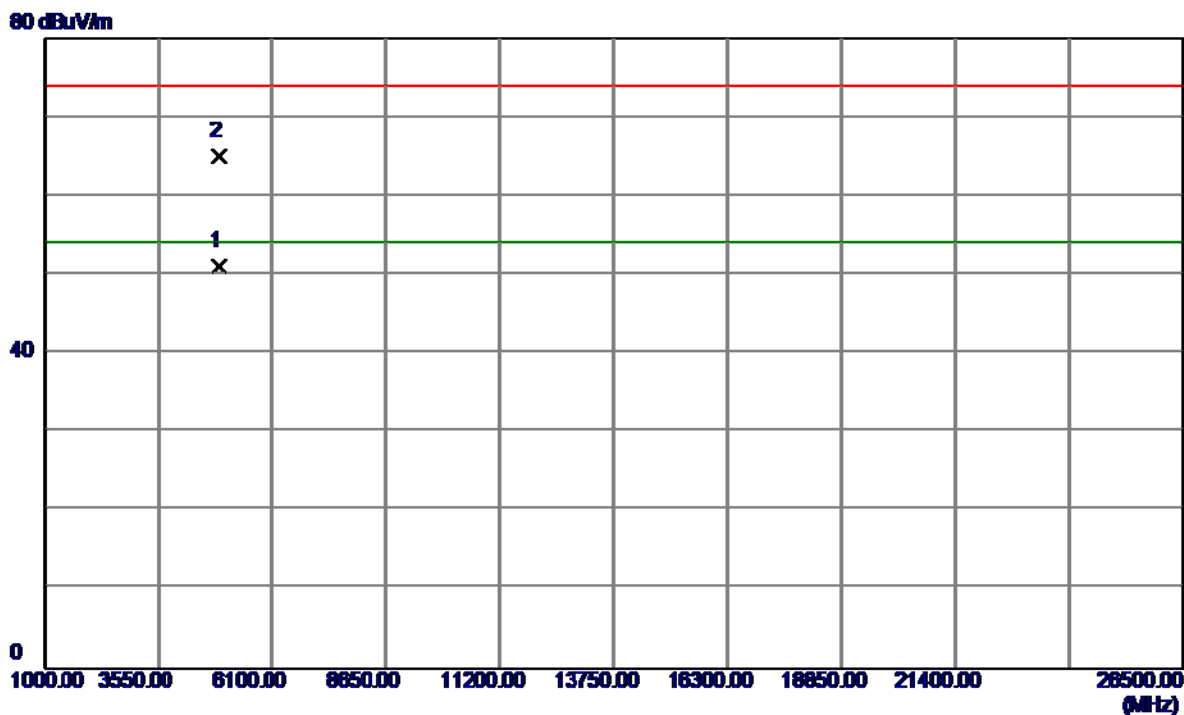
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2456.5000	71.88	34.62	106.50	74.00	32.50	Peak	No Limit
2	2458.2000	60.13	34.63	94.76	54.00	40.76	AVG	No Limit
3	2483.5000	24.63	34.77	59.40	74.00	-14.60	Peak	
4	2483.5000	14.47	34.77	49.24	54.00	-4.76	AVG	

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

Vertical

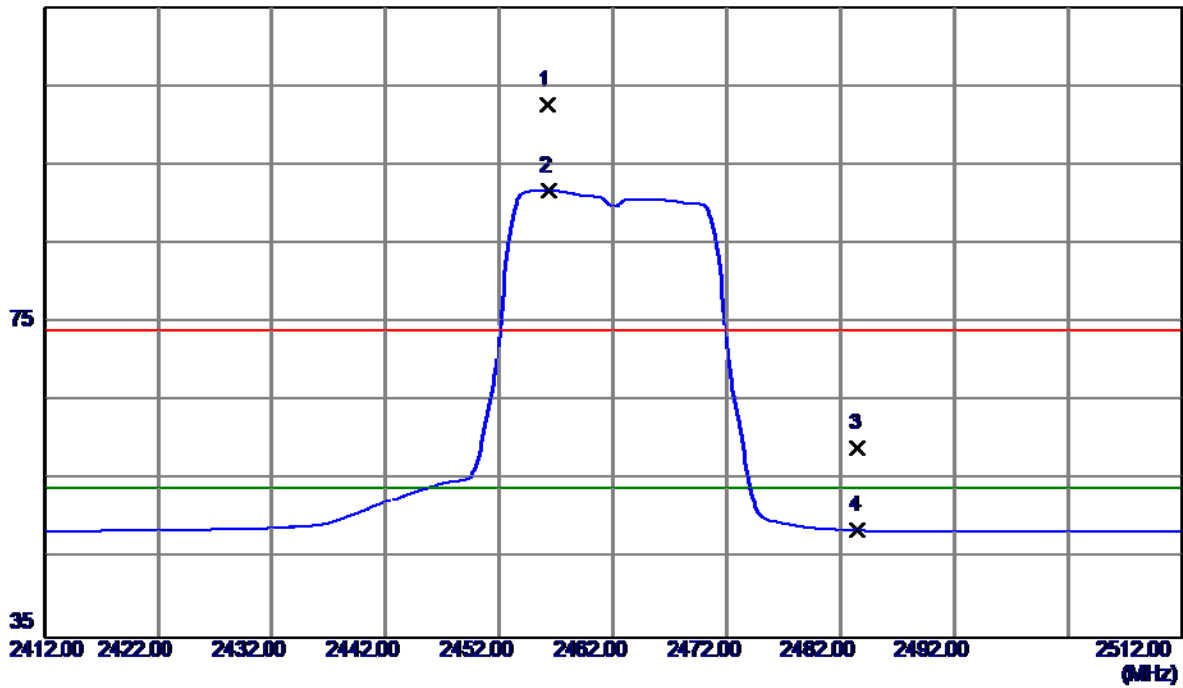


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4922.7799	48.06	3.05	51.11	54.00	-2.89	AVG	
2	4923.4000	61.91	3.05	64.96	74.00	-9.04	Peak	

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

Horizontal

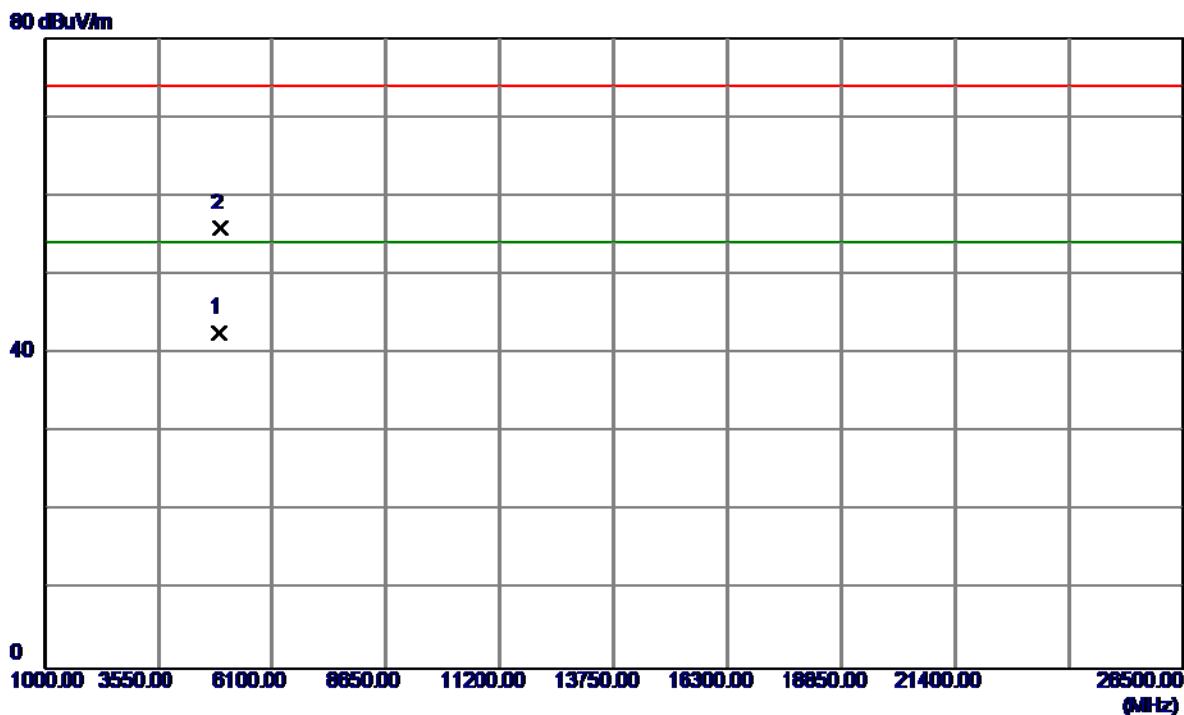
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2456.2000	67.86	34.62	102.48	74.00	28.48	Peak	No Limit
2	2456.3000	57.03	34.62	91.65	54.00	37.65	AVG	No Limit
3	2483.5000	24.23	34.77	59.00	74.00	-15.00	Peak	
4	2483.5000	13.78	34.77	48.55	54.00	-5.45	AVG	

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

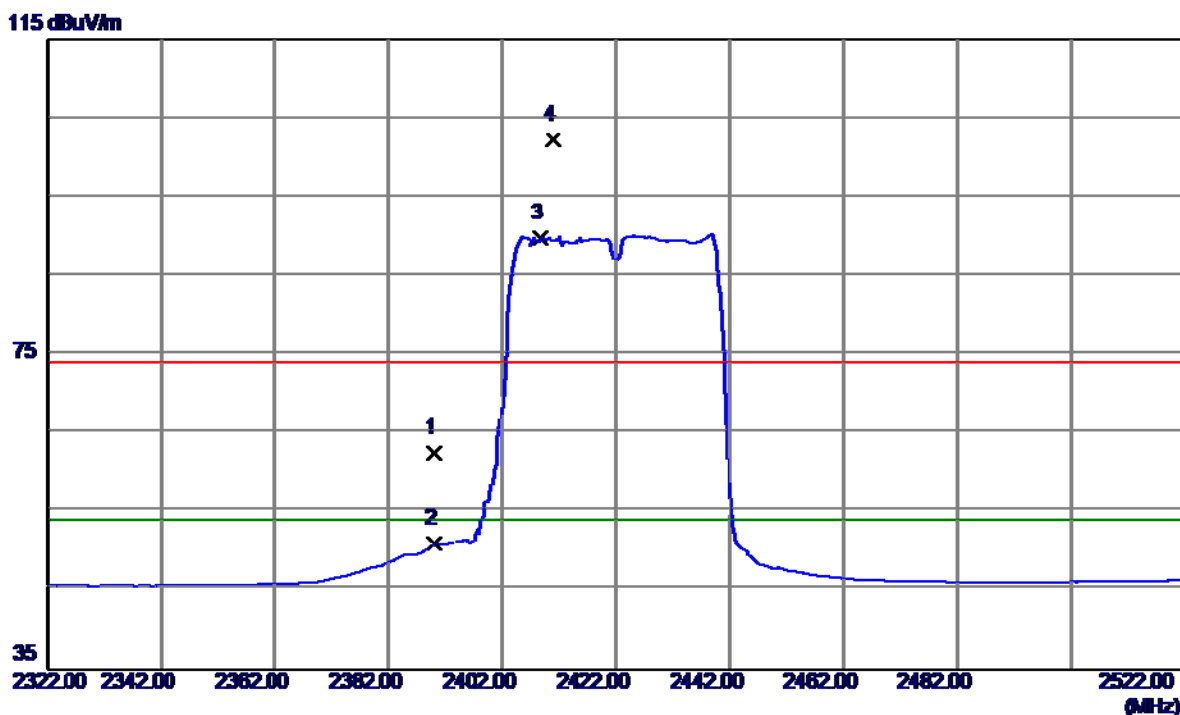
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.2799	39.50	3.05	42.55	54.00	-11.45	AVG	
2	4924.6200	52.72	3.05	55.77	74.00	-18.23	Peak	

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

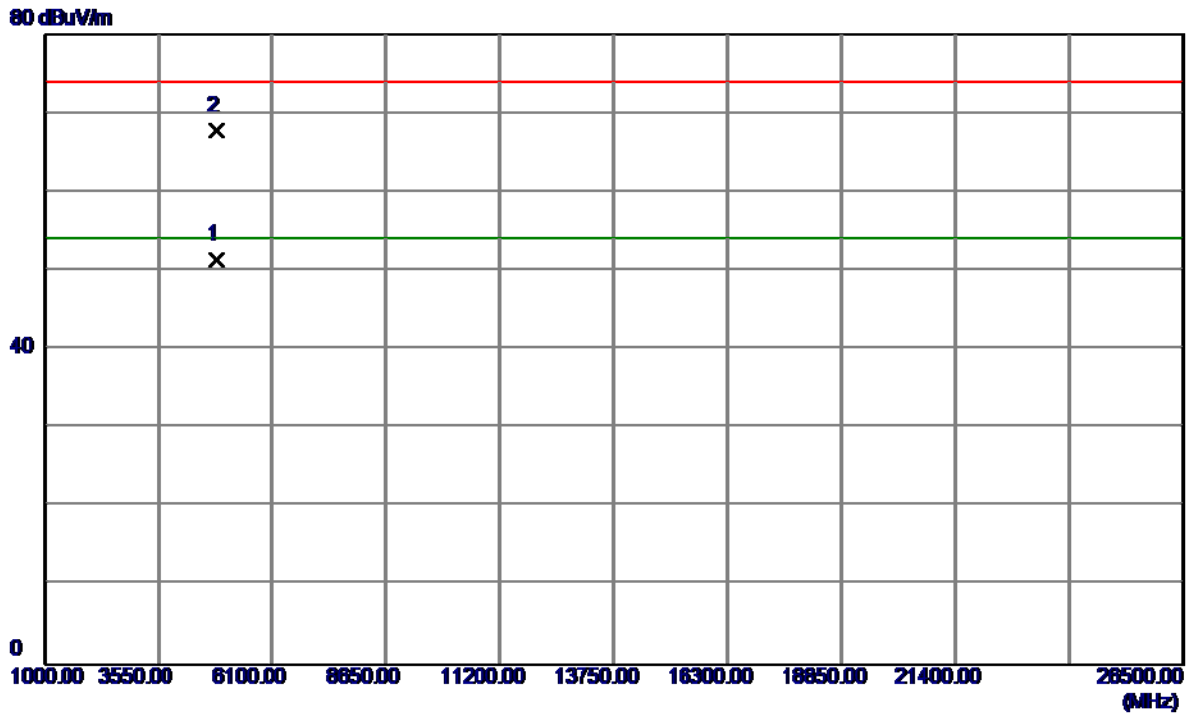
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	29.84	32.68	62.52	74.00	-11.48	Peak	
2	2390.0000	18.35	32.68	51.03	54.00	-2.97	AVG	
3	2408.7000	56.99	32.70	89.69	54.00	35.69	AVG	No Limit
4	2410.9000	69.46	32.71	102.17	74.00	28.17	Peak	No Limit

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

Vertical

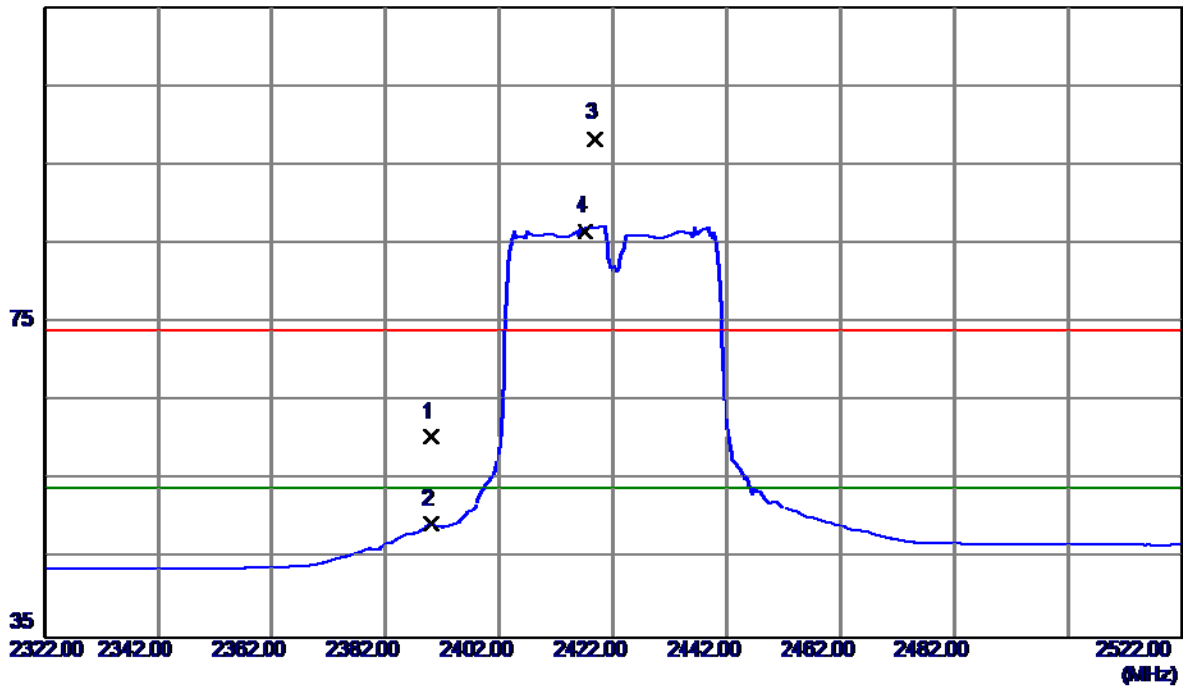


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4843.3000	48.30	3.01	51.31	54.00	-2.69	AVG	
2	4843.9000	64.65	3.01	67.66	74.00	-6.34	Peak	

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

Horizontal

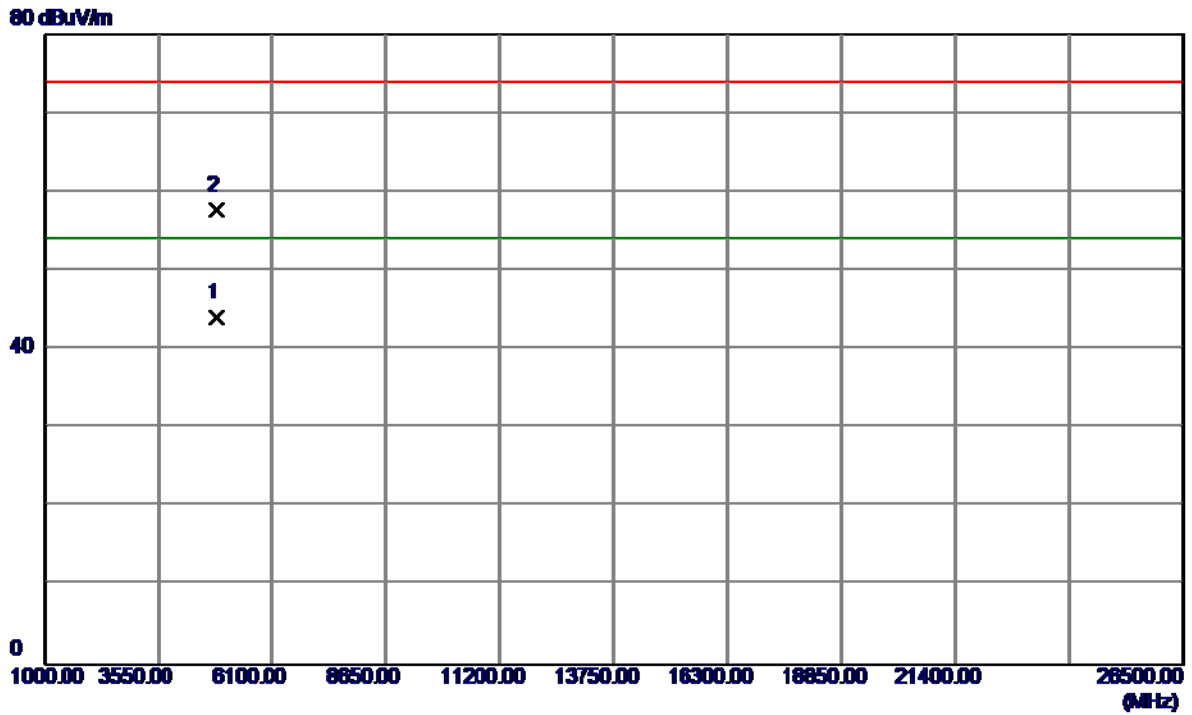
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	27.70	32.68	60.38	74.00	-13.62	Peak	
2	2390.0000	16.66	32.68	49.34	54.00	-4.66	AVG	
3	2418.8000	65.56	32.72	98.28	74.00	24.28	Peak	No Limit
4	2417.1000	53.84	32.72	86.56	54.00	32.56	AVG	No Limit

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

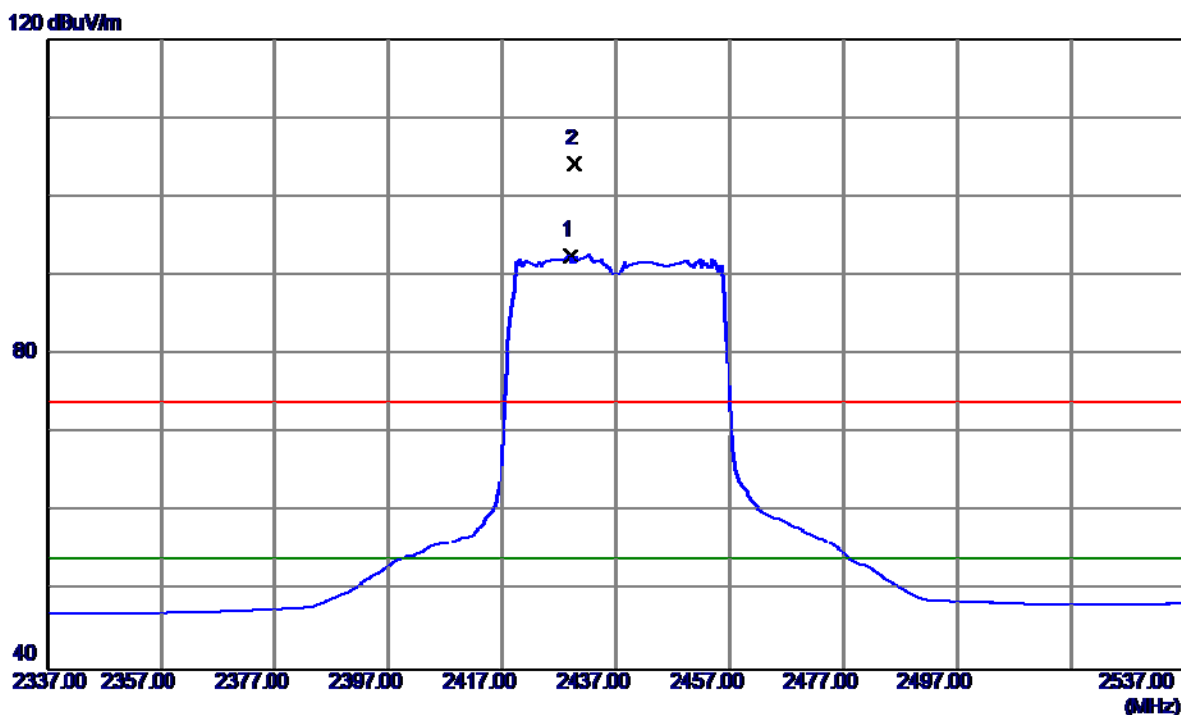
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4843.9800	41.03	3.01	44.04	54.00	-9.96	AVG	
2	4844.4500	54.61	3.01	57.62	74.00	-16.38	Peak	

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

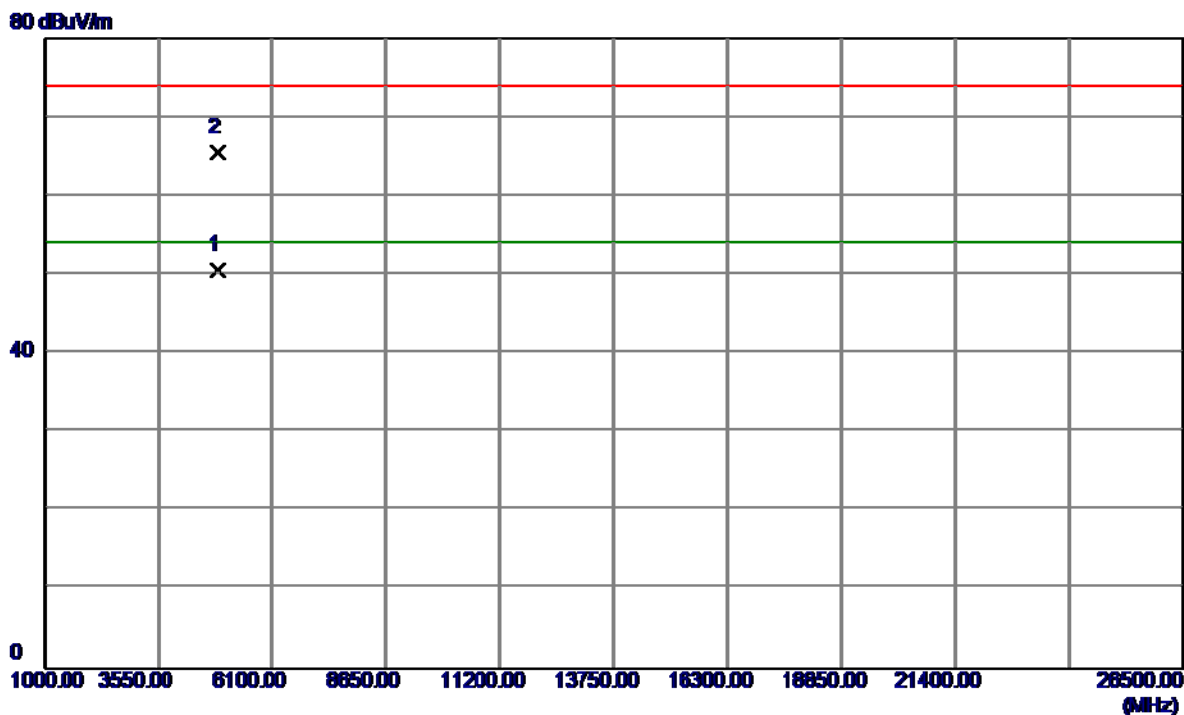
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2429.1000	59.78	32.73	92.51	54.00	38.51	AVG	No Limit
2	2429.7000	71.41	32.73	104.14	74.00	30.14	Peak	No Limit

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

Vertical

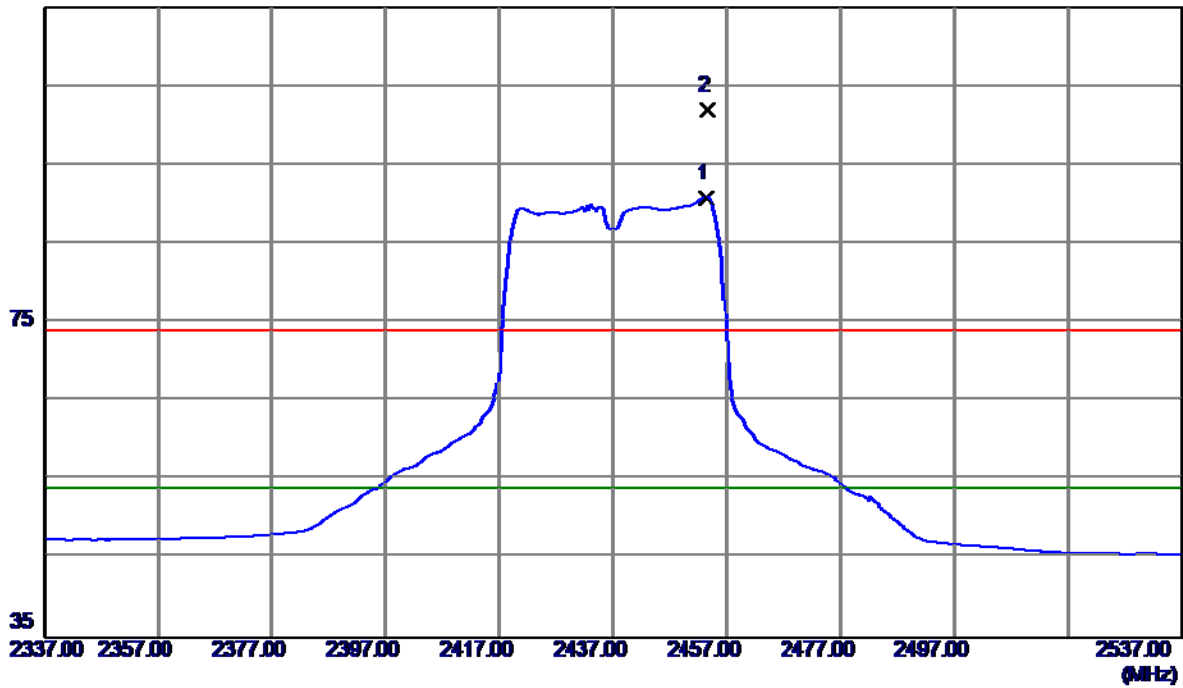


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4872.7799	47.58	3.03	50.61	54.00	-3.39	AVG	
2	4873.9400	62.38	3.03	65.41	74.00	-8.59	Peak	

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

Horizontal

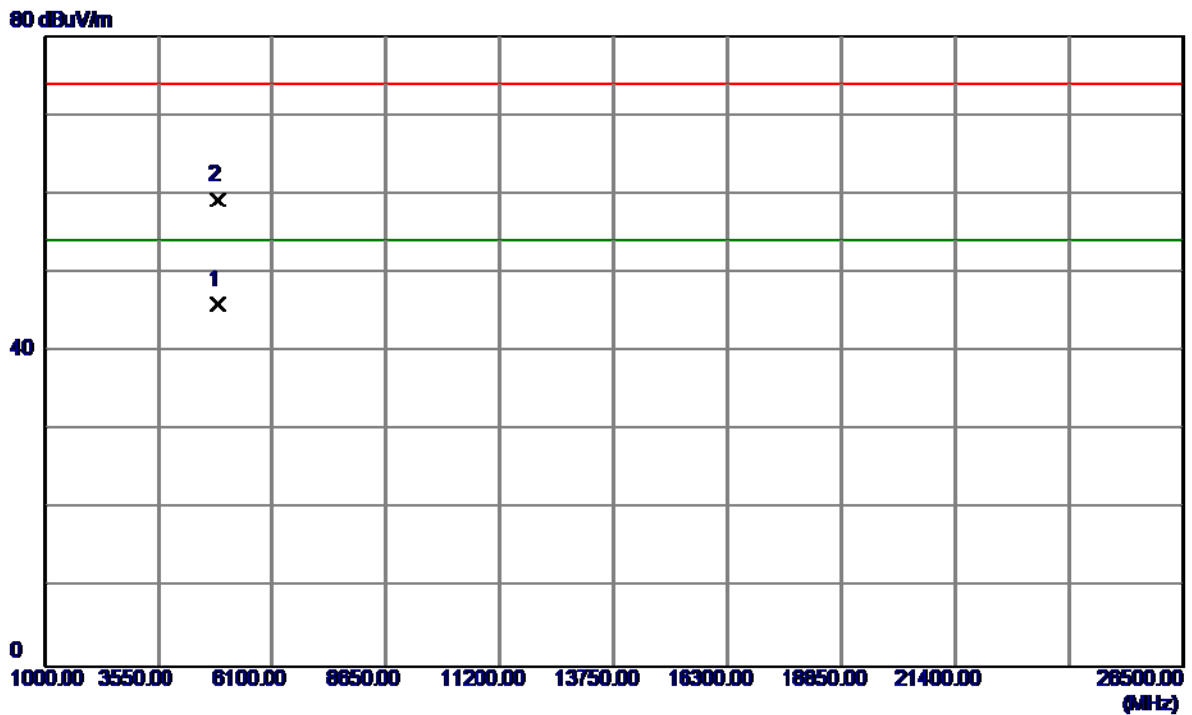
115 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2453.4000	57.96	32.77	90.73	54.00	36.73	AVG	No Limit
2	2453.6000	69.12	32.77	101.89	74.00	27.89	Peak	No Limit

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

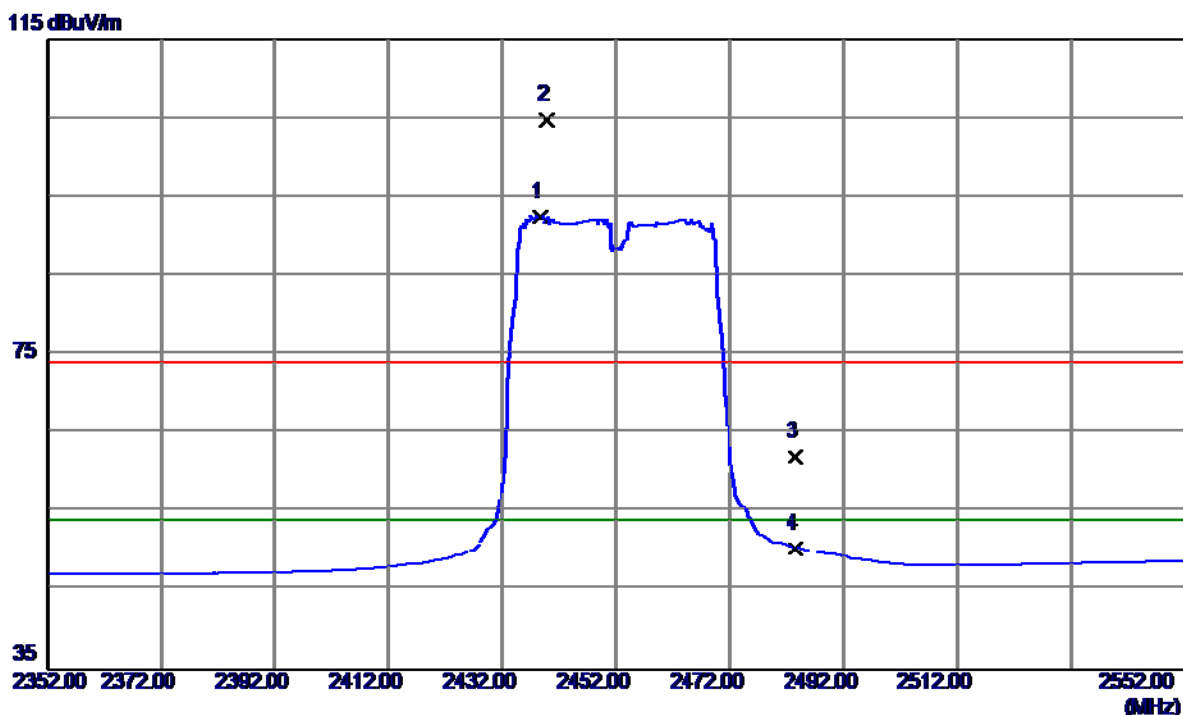
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.0200	42.95	3.03	45.98	54.00	-8.02	AVG	
2	4874.7200	56.12	3.03	59.15	74.00	-14.85	Peak	

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

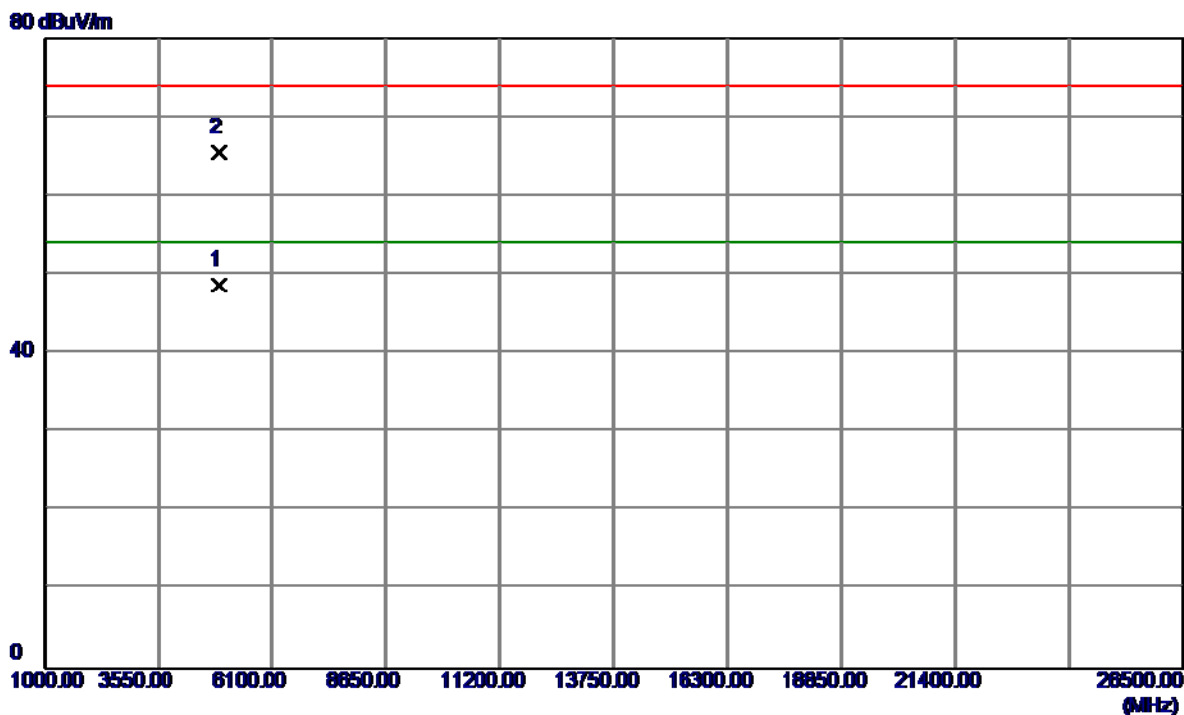
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2438.6000	59.77	32.75	92.52	54.00	38.52	AVG	No Limit
2	2439.8000	71.98	32.75	104.73	74.00	30.73	Peak	No Limit
3	2483.5000	29.17	32.81	61.98	74.00	-12.02	Peak	
4	2483.5000	17.49	32.81	50.30	54.00	-3.70	AVG	

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

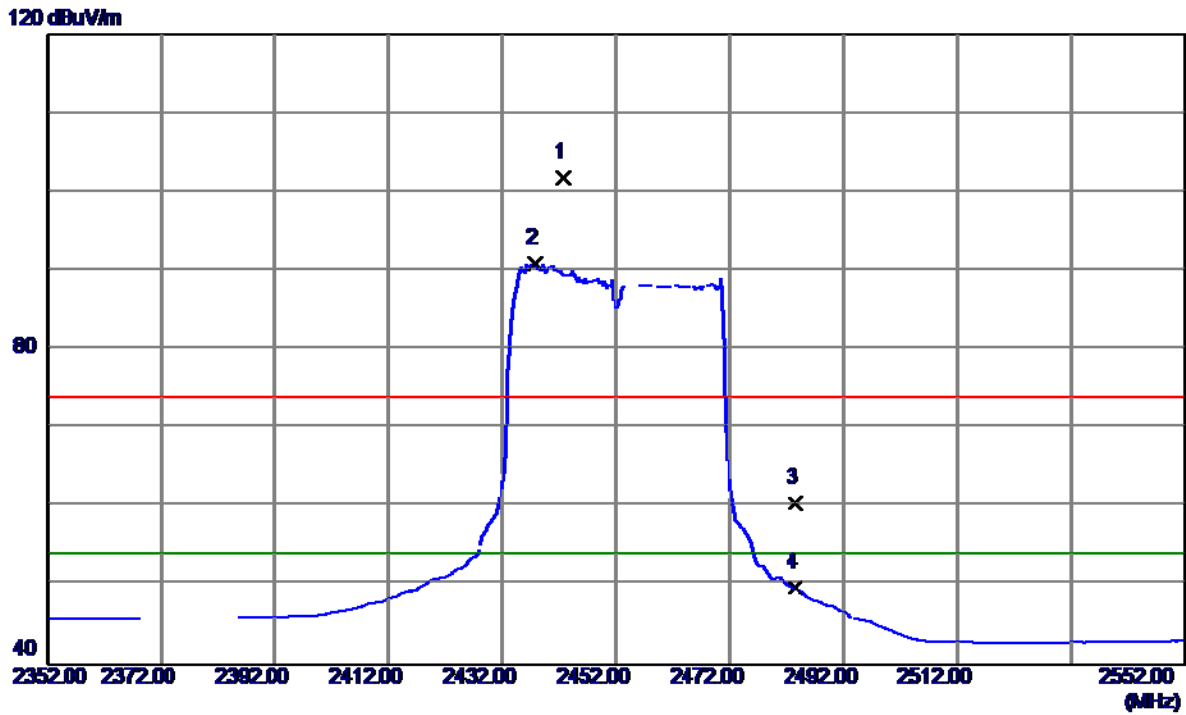
Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4903.4000	45.61	3.04	48.65	54.00	-5.35	AVG	
2	4904.0000	62.38	3.04	65.42	74.00	-8.58	Peak	

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

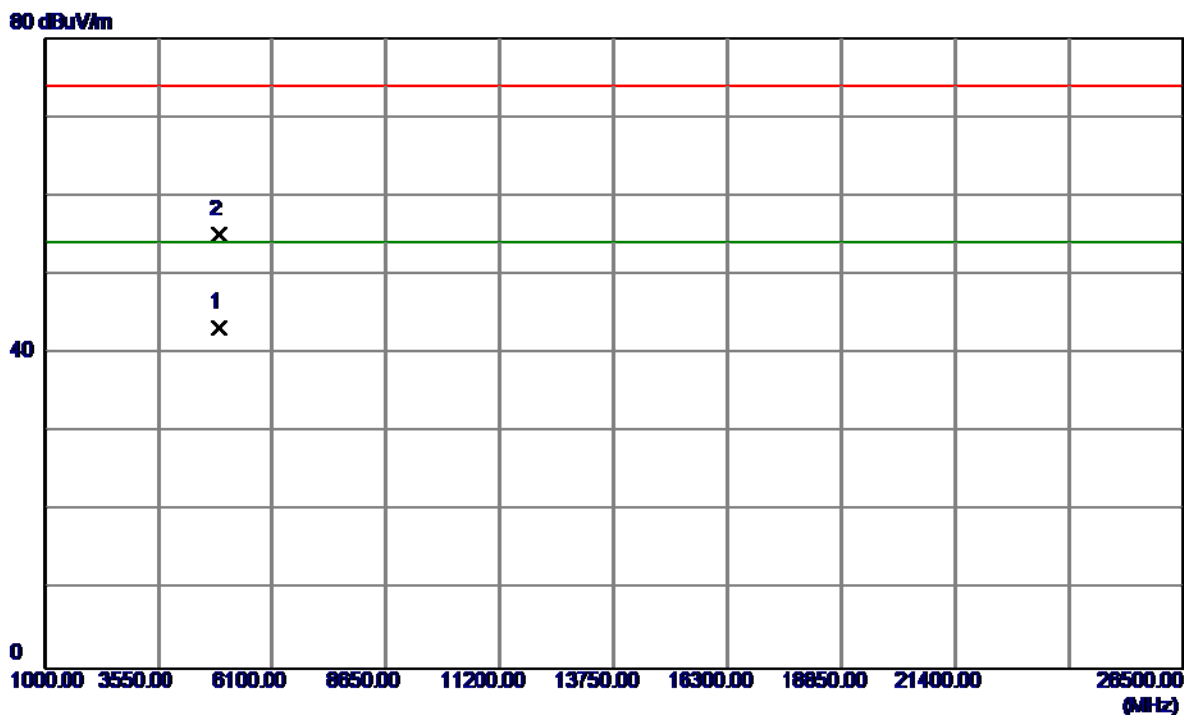
Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2442.7000	69.03	32.75	101.78	74.00	27.78	Peak	No Limit
2	2437.8000	58.20	32.74	90.94	54.00	36.94	AVG	No Limit
3	2483.5000	27.72	32.81	60.53	74.00	-13.47	Peak	
4	2483.5000	17.02	32.81	49.83	54.00	-4.17	AVG	

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

Horizontal



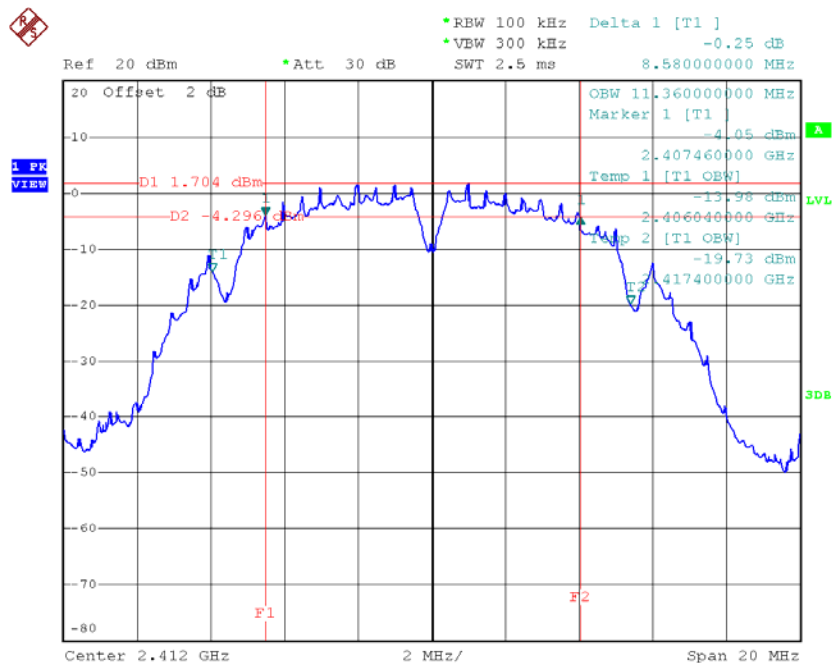
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4903.2799	40.14	3.04	43.18	54.00	-10.82	AVG	
2	4904.6100	51.99	3.04	55.03	74.00	-18.97	Peak	

ATTACHMENT E - BANDWIDTH

Test Mode : TX B Mode_CH01/06/11

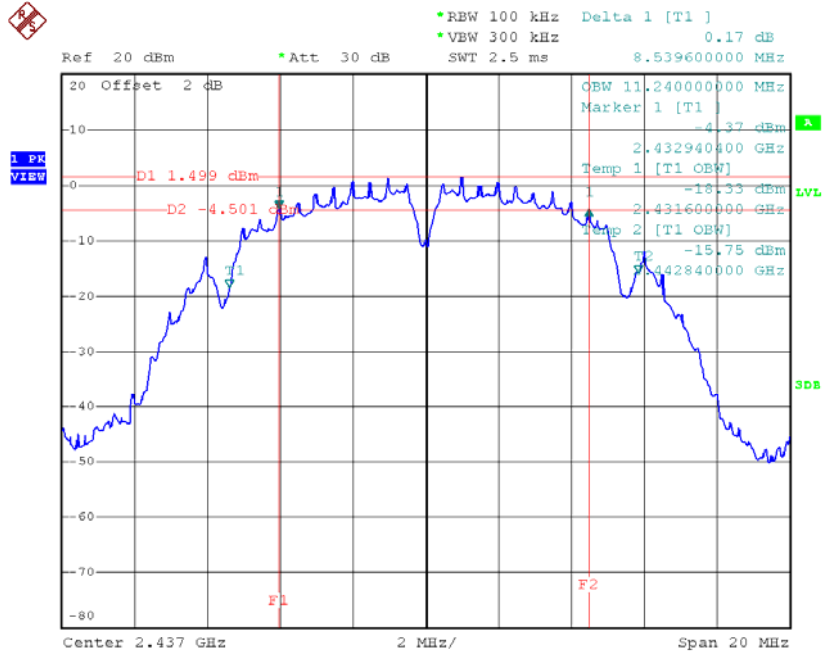
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.58	11.36	500	Complies
2437	8.54	11.24	500	Complies
2462	8.59	11.16	500	Complies

TX CH01



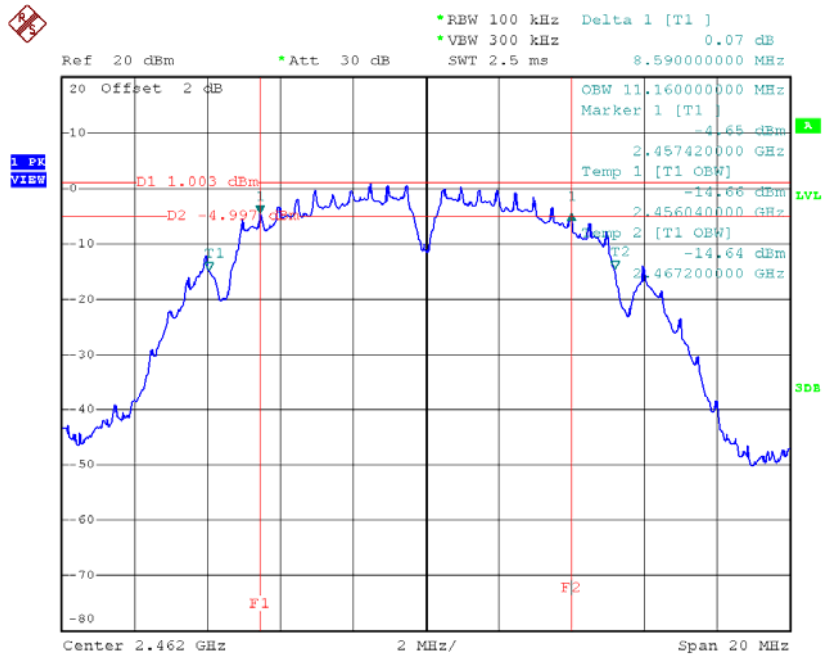
Date: 25.MAR.2016 10:41:20

TX CH06



Date: 25.MAR.2016 10:42:55

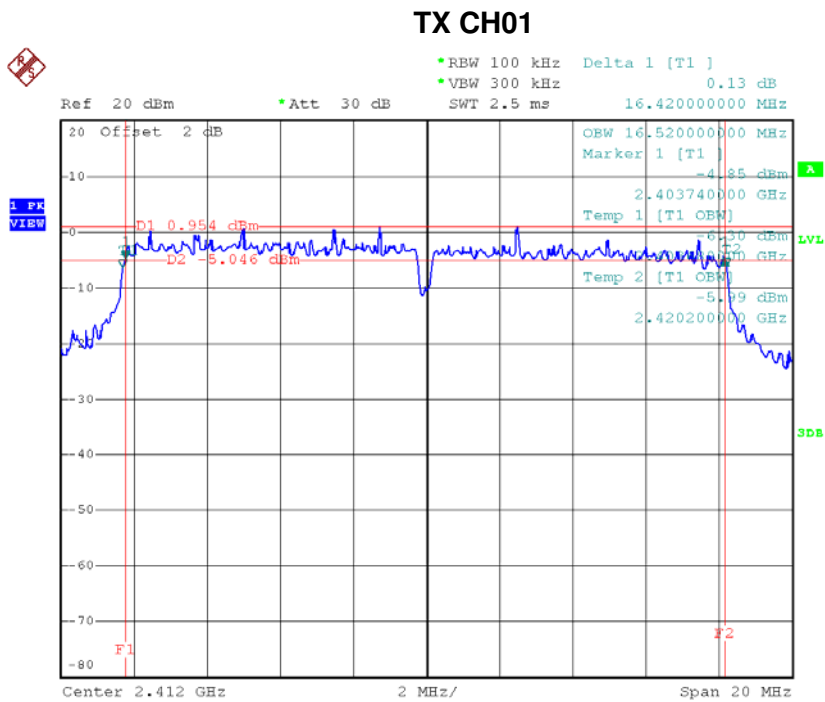
TX CH11



Date: 25.MAR.2016 10:44:10

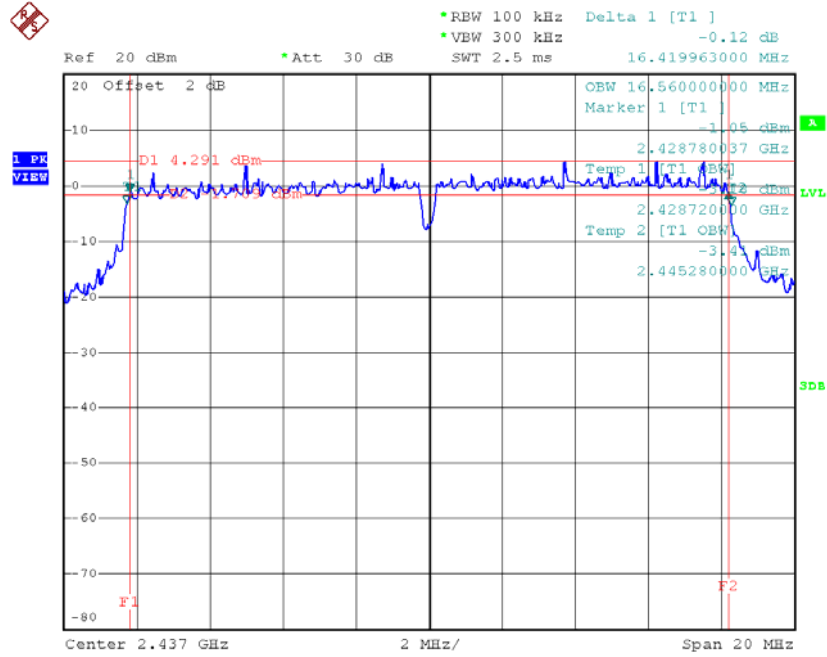
Test Mode: TX G Mode_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.42	16.52	500	Complies
2437	16.42	16.56	500	Complies
2462	16.46	16.56	500	Complies



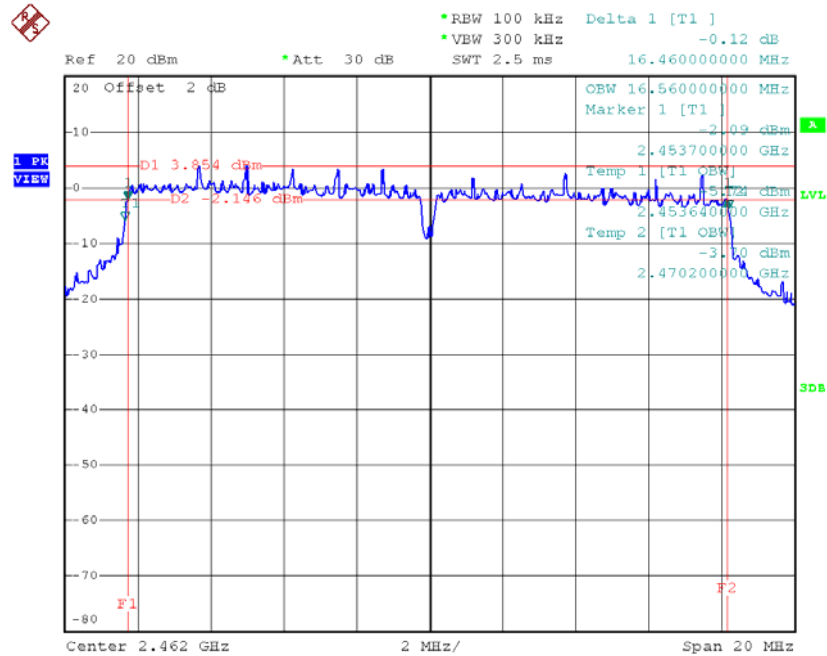
Date: 25.MAR.2016 10:45:16

TX CH06



Date: 25.MAR.2016 10:46:45

TX CH11

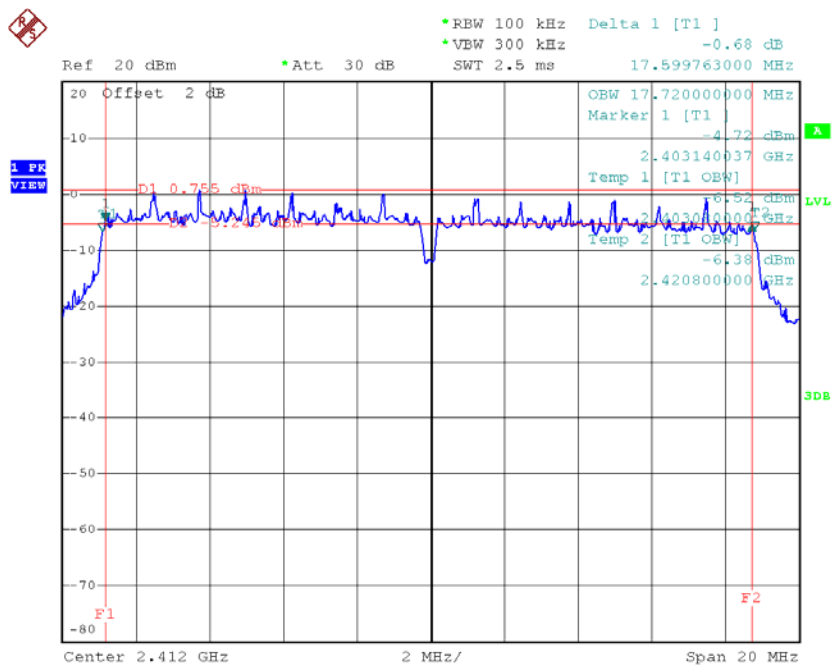


Date: 25.MAR.2016 10:47:55

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

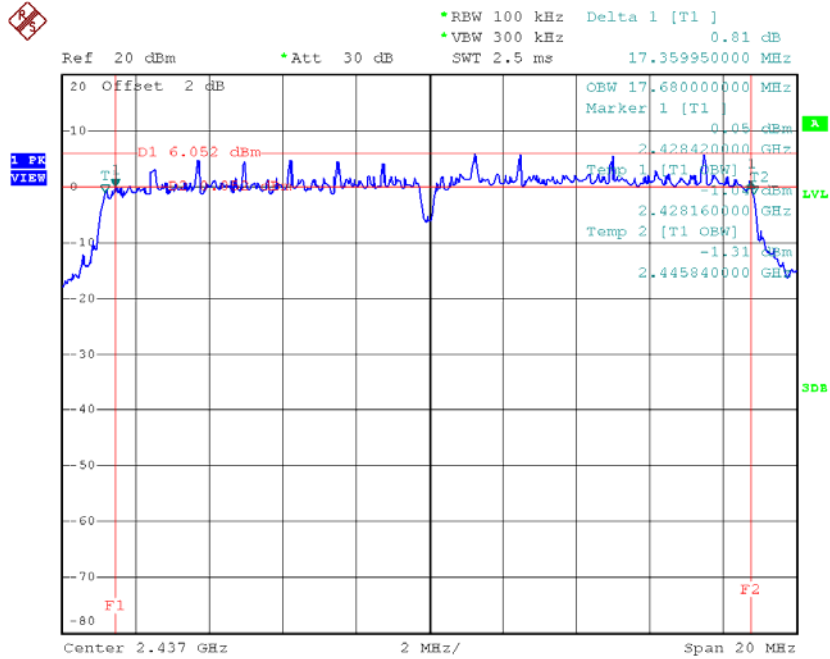
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.6	17.72	500	Complies
2437	17.36	17.68	500	Complies
2462	16.99	17.76	500	Complies

TX CH01



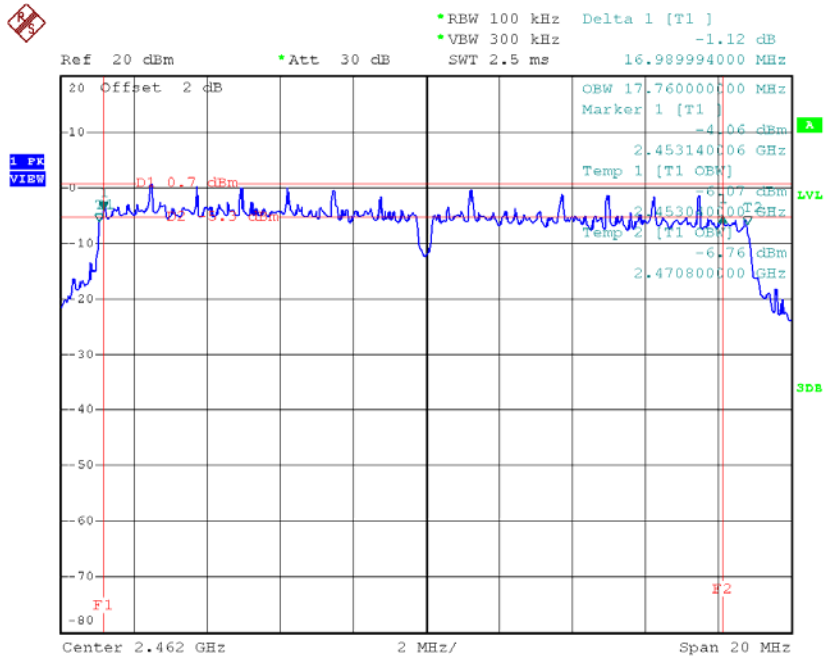
Date: 25.MAR.2016 10:51:12

TX CH06



Date: 25.MAR.2016 10:52:17

TX CH11

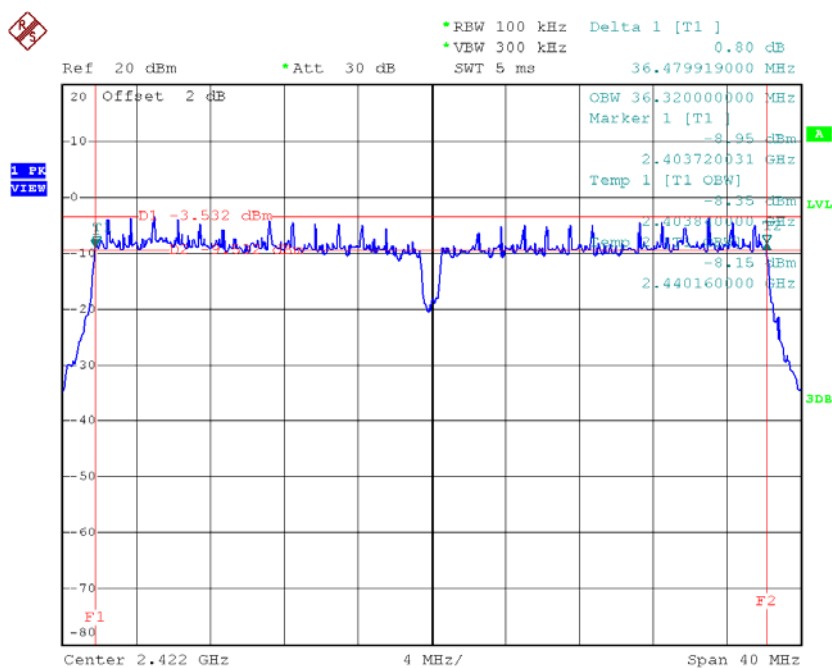


Date: 25.MAR.2016 10:53:27

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

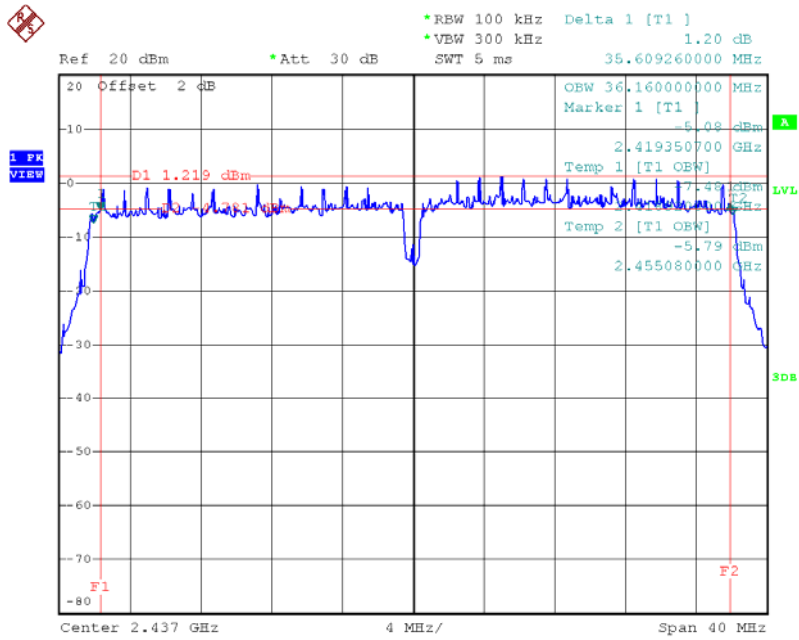
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	36.48	36.32	500	Complies
2437	35.61	36.16	500	Complies
2452	35.44	36.08	500	Complies

TX CH03



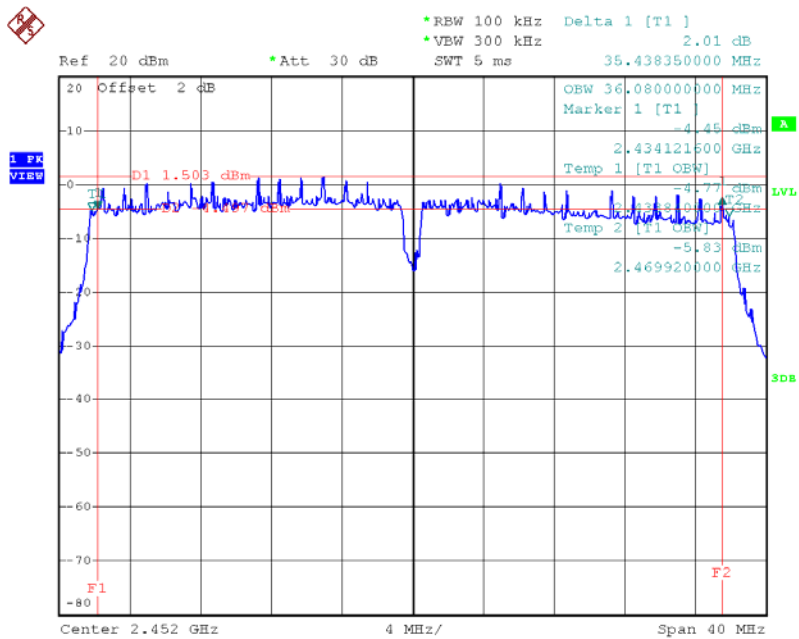
Date: 25.MAR.2016 10:54:45

TX CH06



Date: 25.MAR.2016 10:56:04

TX CH09



Date: 25.MAR.2016 10:57:52

ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER

Test Mode :TX B Mode_CH01/06/11_ANT 1					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	14.37	0.03	30.00	1.00	Complies
2437	13.67	0.02	30.00	1.00	Complies
2462	13.56	0.02	30.00	1.00	Complies

Test Mode :TX B Mode_CH01/06/11_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	14.58	0.03	30.00	1.00	Complies
2437	13.95	0.02	30.00	1.00	Complies
2462	13.71	0.02	30.00	1.00	Complies

Test Mode :TX B Mode_CH01/06/11_Total					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	17.49	0.06	30.00	1.00	Complies
2437	16.82	0.05	30.00	1.00	Complies
2462	16.65	0.05	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	20.23	0.11	30.00	1.00	Complies
2437	23.41	0.22	30.00	1.00	Complies
2462	22.63	0.18	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	20.47	0.11	30.00	1.00	Complies
2437	23.68	0.23	30.00	1.00	Complies
2462	22.89	0.19	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	23.36	0.22	30.00	1.00	Complies
2437	26.56	0.45	30.00	1.00	Complies
2462	25.77	0.38	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	19.11	0.08	30.00	1.00	Complies
2437	24.03	0.25	30.00	1.00	Complies
2462	19.05	0.08	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	19.51	0.09	30.00	1.00	Complies
2437	24.21	0.26	30.00	1.00	Complies
2462	19.41	0.09	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	22.32	0.17	30.00	1.00	Complies
2437	27.13	0.52	30.00	1.00	Complies
2462	22.24	0.17	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	17.71	0.06	30.00	1.00	Complies
2437	22.34	0.17	30.00	1.00	Complies
2452	22.35	0.17	30.00	1.00	Complies

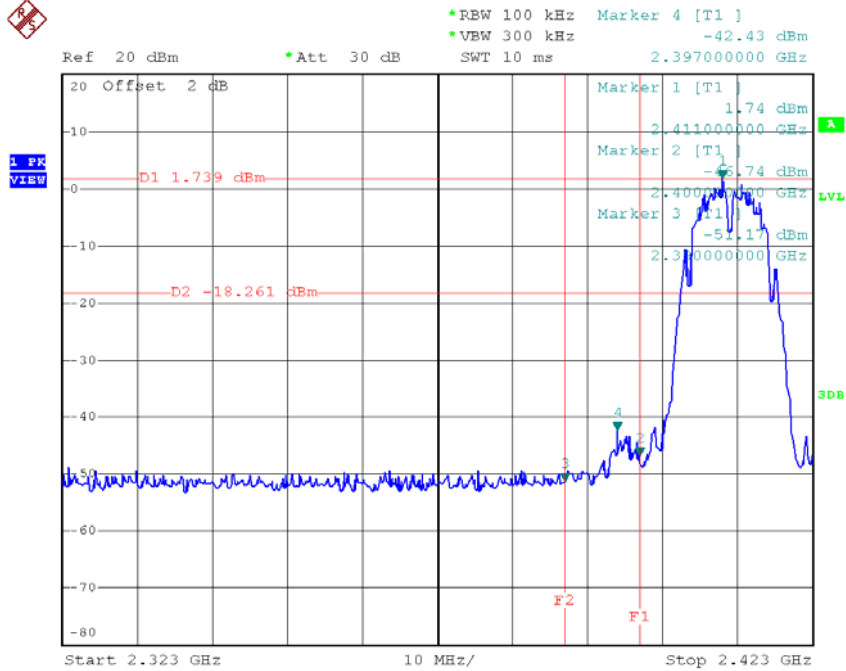
Test Mode :TX N40 Mode_CH03/06/09_ANT 2					
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	17.89	0.06	30.00	1.00	Complies
2437	22.59	0.18	30.00	1.00	Complies
2452	22.62	0.18	30.00	1.00	Complies

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	20.81	0.12	30.00	1.00	Complies
2437	25.48	0.35	30.00	1.00	Complies
2452	25.50	0.35	30.00	1.00	Complies

ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

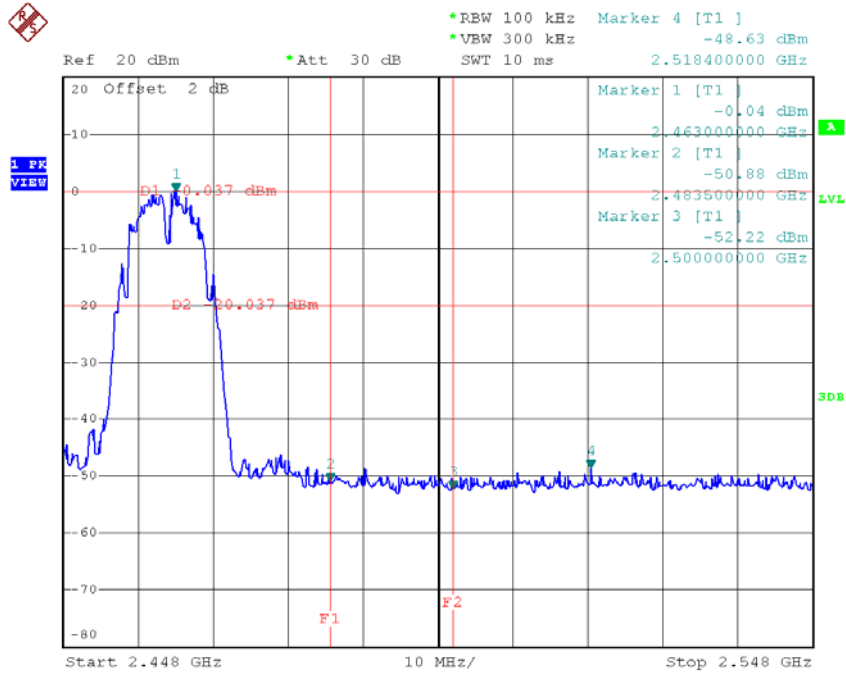
Test Mode : TX B Mode_ANT 1

TX B mode CH01



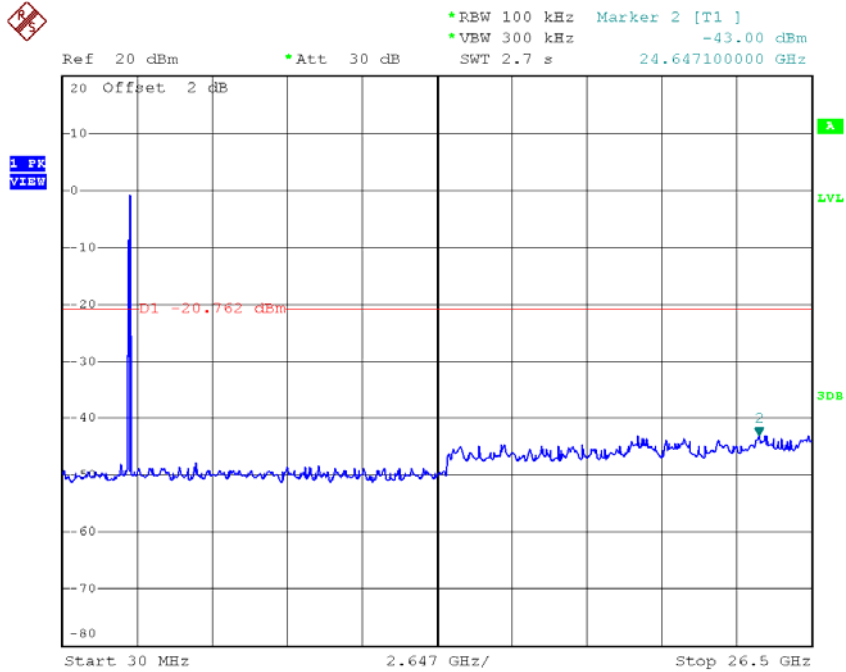
Date: 25.MAR.2016 10:41:42

TX B mode CH11



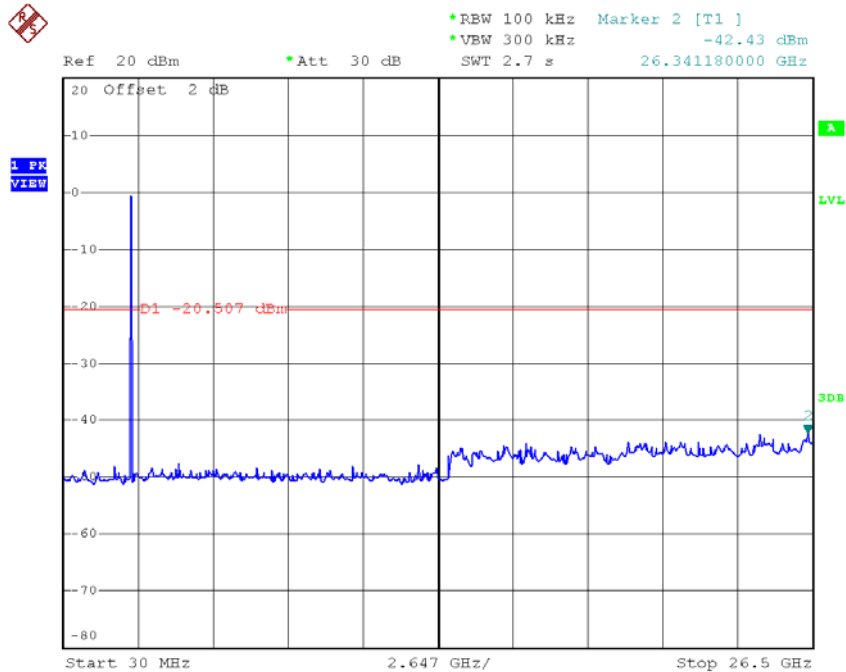
Date: 25.MAR.2016 10:44:32

TX B mode CH01 (10 Harmonic of the frequency)



Date: 25.MAR.2016 10:41:34

TX B mode CH06 (10 Harmonic of the frequency)

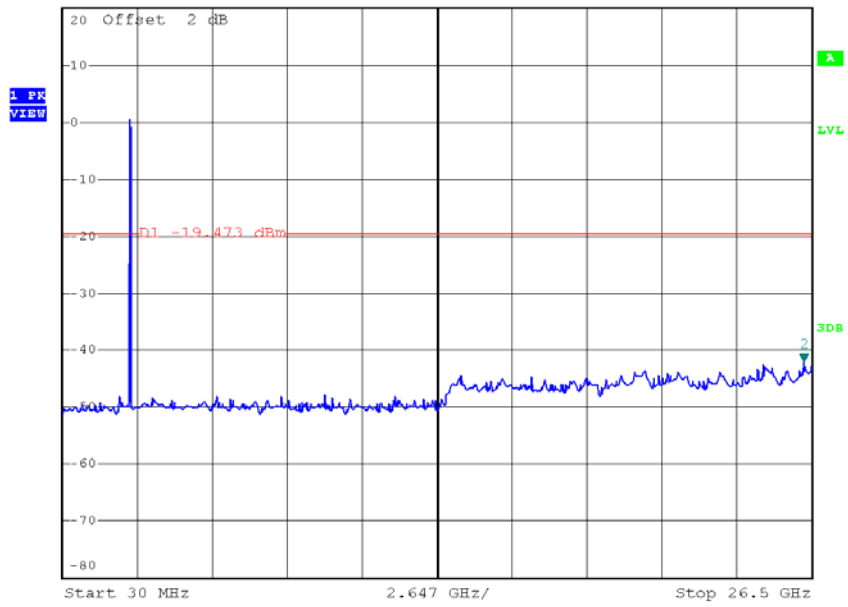


Date: 25.MAR.2016 10:43:09

TX B mode CH11 (10 Harmonic of the frequency)



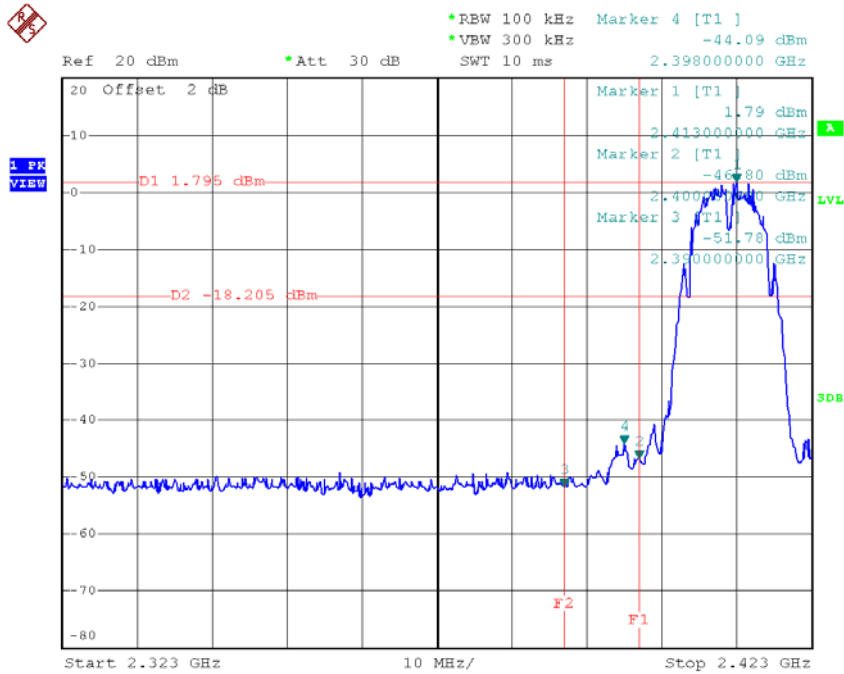
*REW 100 kHz Marker 2 [T1]
 *VBW 300 kHz -42.15 dBm
 Ref 20 dBm *Att 30 dB SWI 2.7 s 26.235300000 GHz



Date: 25.MAR.2016 10:44:24

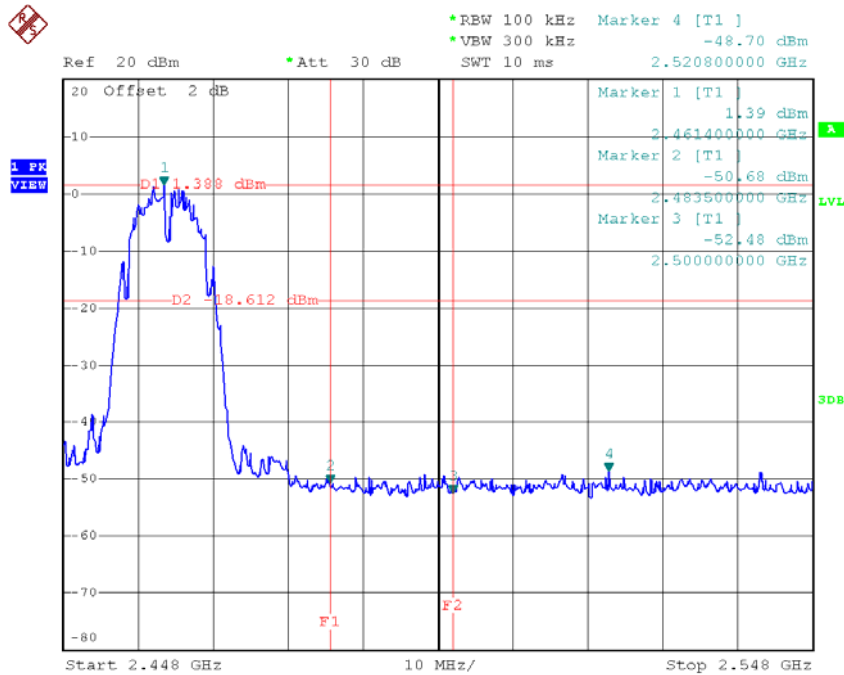
Test Mode : TX B Mode_ANT 2

TX B mode CH01



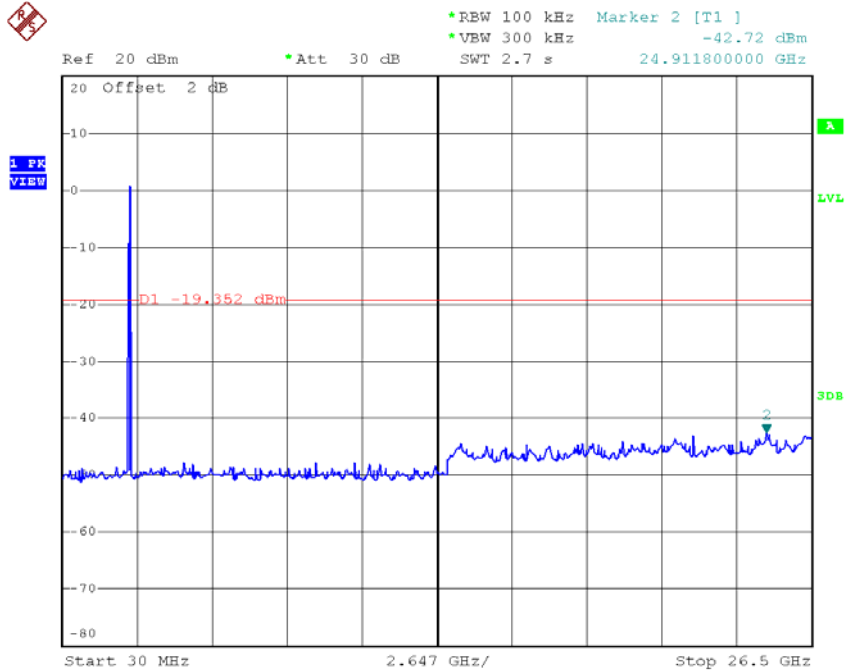
Date: 25.MAR.2016 11:01:24

TX B mode CH11



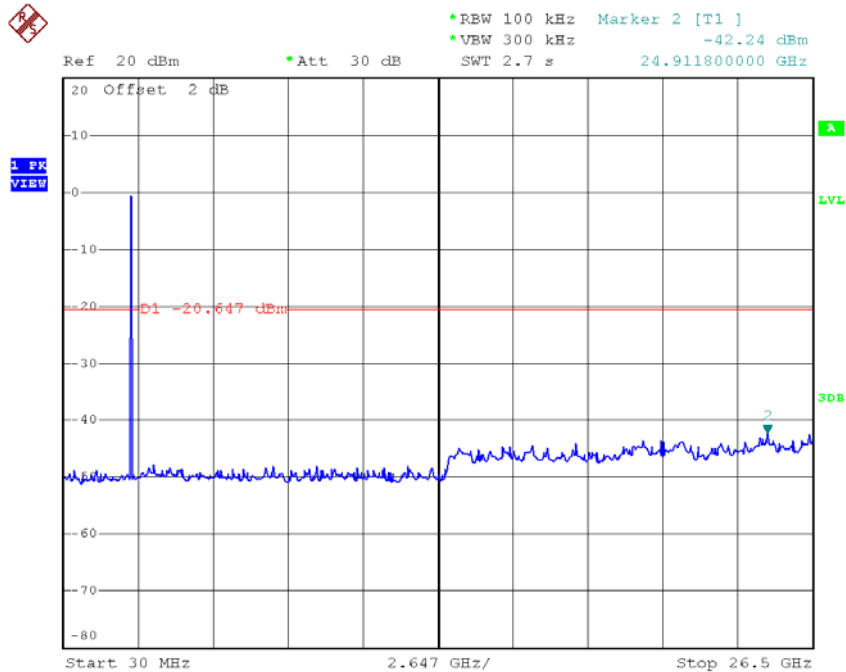
Date: 25.MAR.2016 11:04:06

TX B mode CH01 (10 Harmonic of the frequency)



Date: 25.MAR.2016 11:01:16

TX B mode CH06 (10 Harmonic of the frequency)

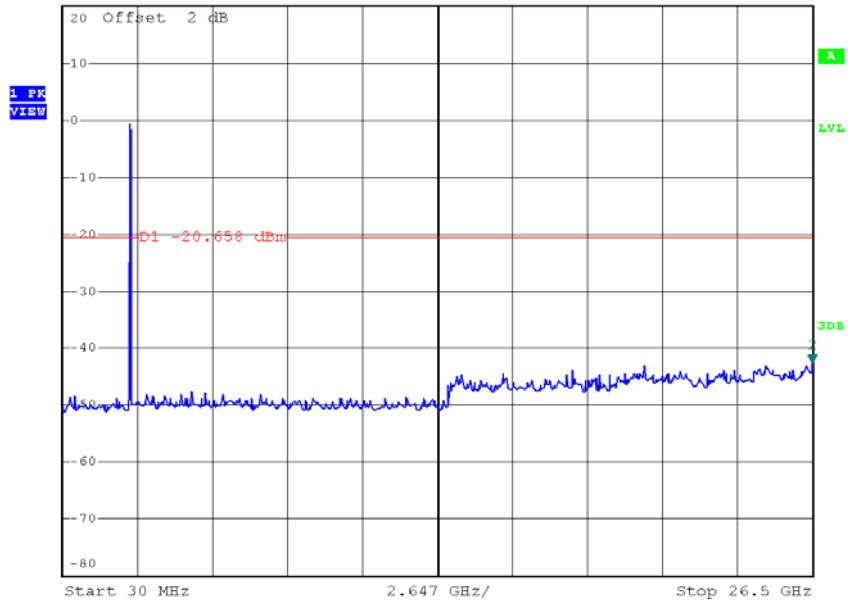


Date: 25.MAR.2016 11:02:49

TX B mode CH11 (10 Harmonic of the frequency)



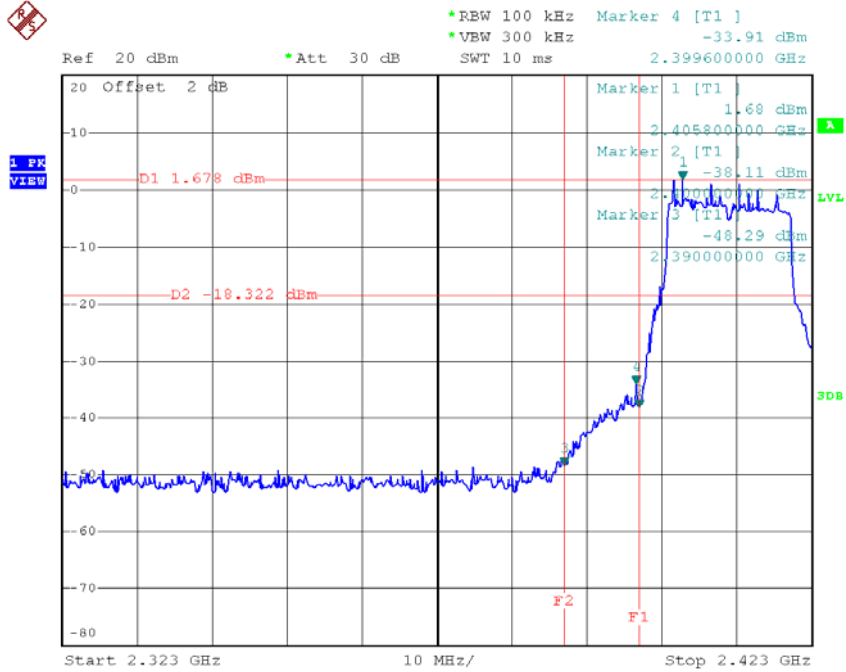
*REW 100 kHz Marker 2 [T1]
 *VBW 300 kHz -42.63 dBm
 Ref 20 dBm Att 30 dB SWT 2.7 s 26.500000000 GHz



Date: 25.MAR.2016 11:03:59

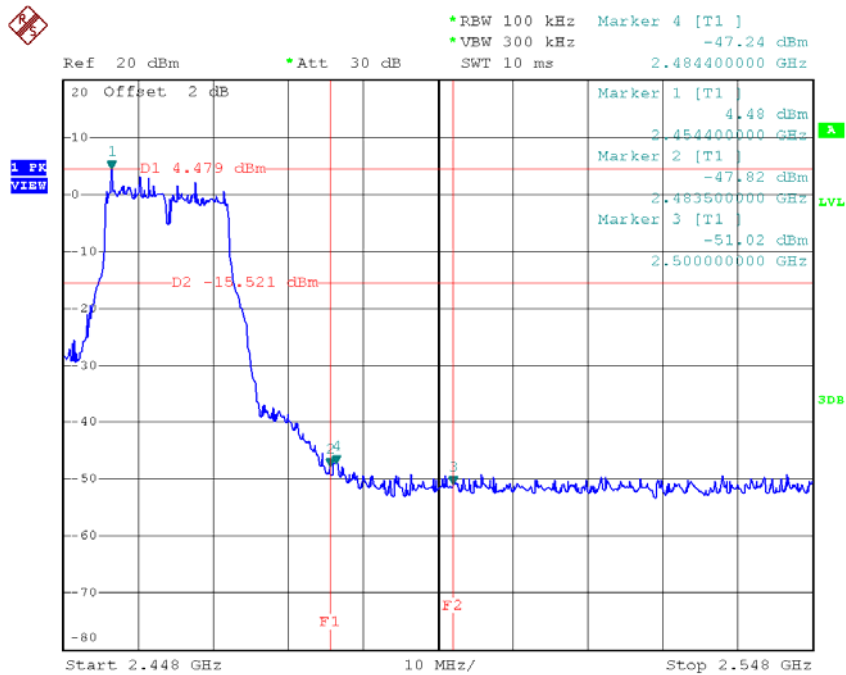
Test Mode : TX G Mode_ANT 1

TX G mode CH01



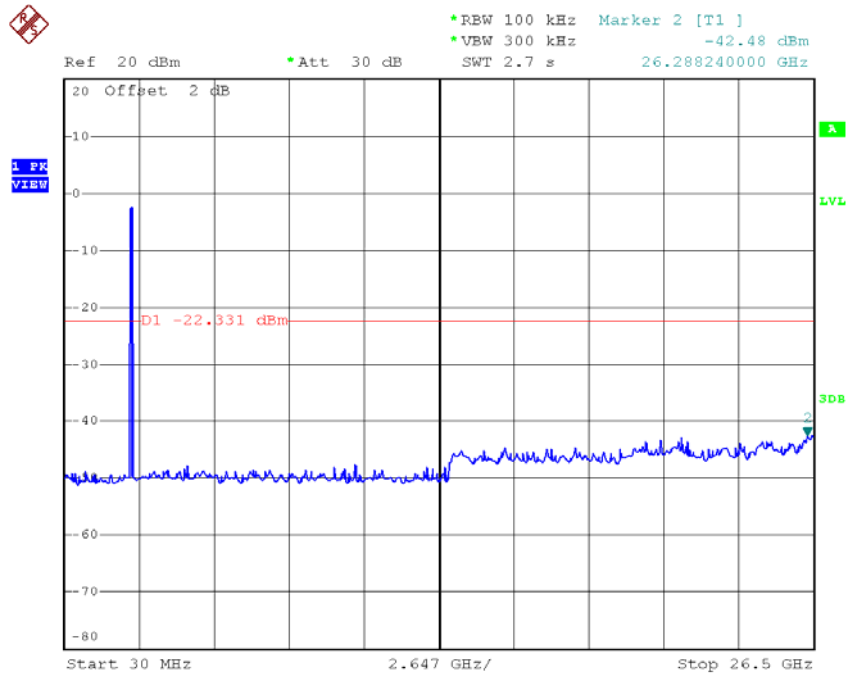
Date: 25.MAR.2016 10:45:38

TX G mode CH11



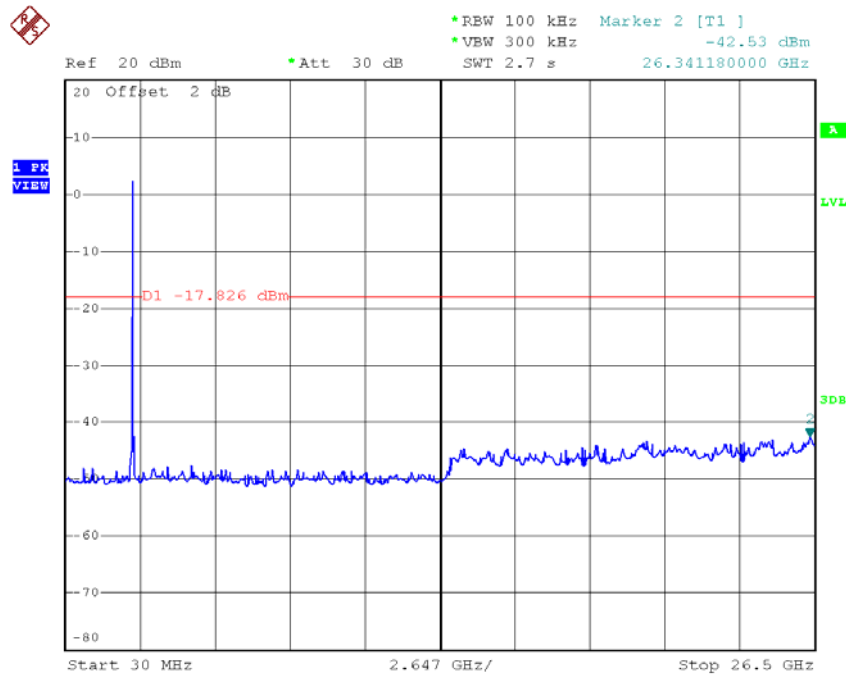
Date: 25.MAR.2016 10:48:17

TX G mode CH01 (10 Harmonic of the frequency)



Date: 25.MAR.2016 10:45:30

TX G mode CH06 (10 Harmonic of the frequency)

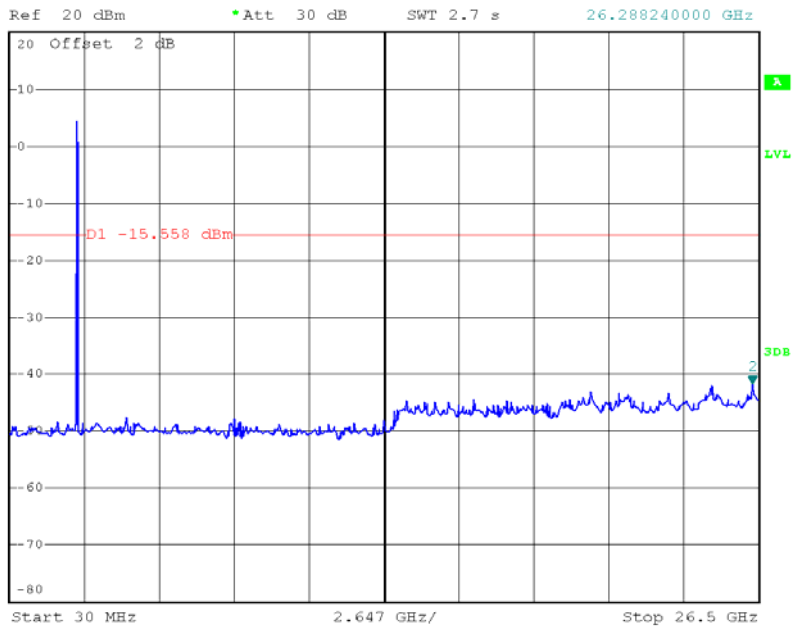


Date: 25.MAR.2016 10:46:59

TX G mode CH11 (10 Harmonic of the frequency)



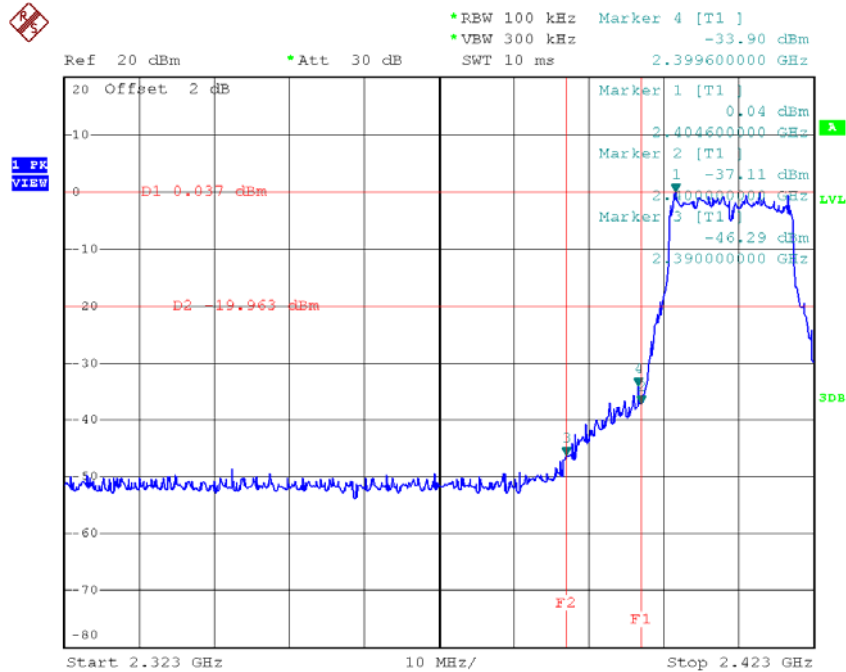
*REW 100 kHz Marker 2 [T1]
*VBW 300 kHz -41.77 dBm
SWT 2.7 s 26.288240000 GHz



Date: 25.MAR.2016 10:48:09

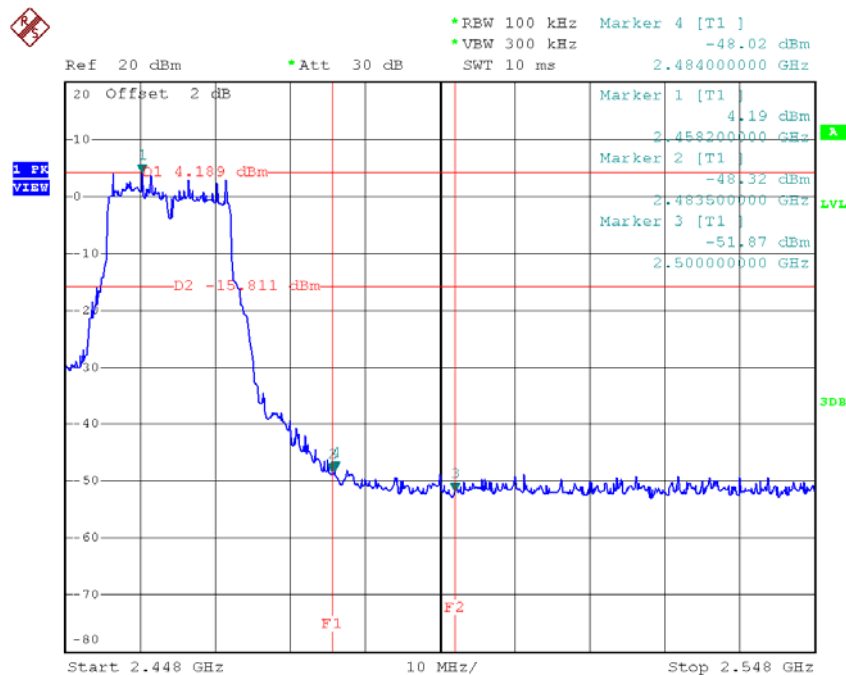
Test Mode : TX G Mode_ANT 2

TX G mode CH01



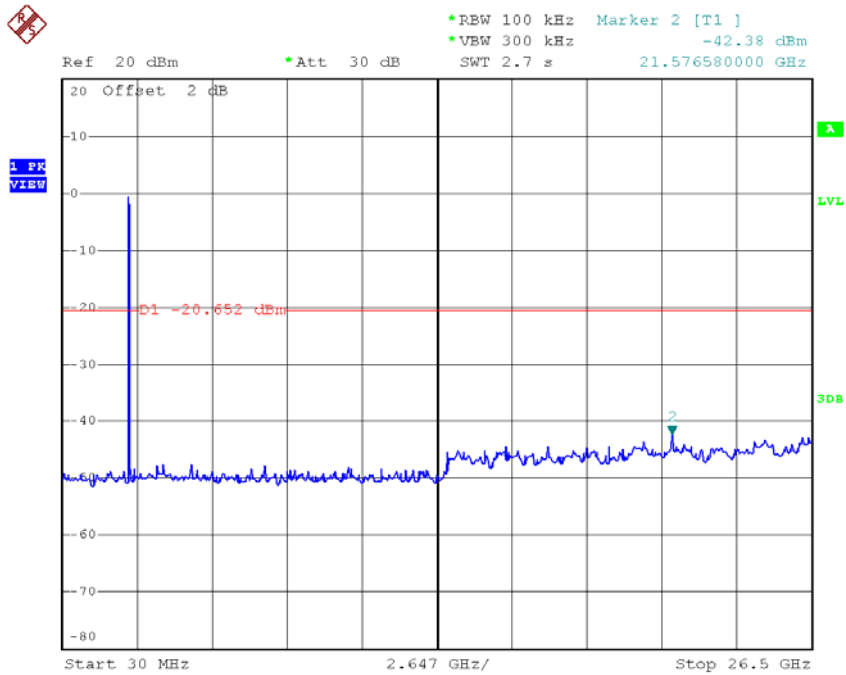
Date: 25.MAR.2016 11:05:33

TX G mode CH11



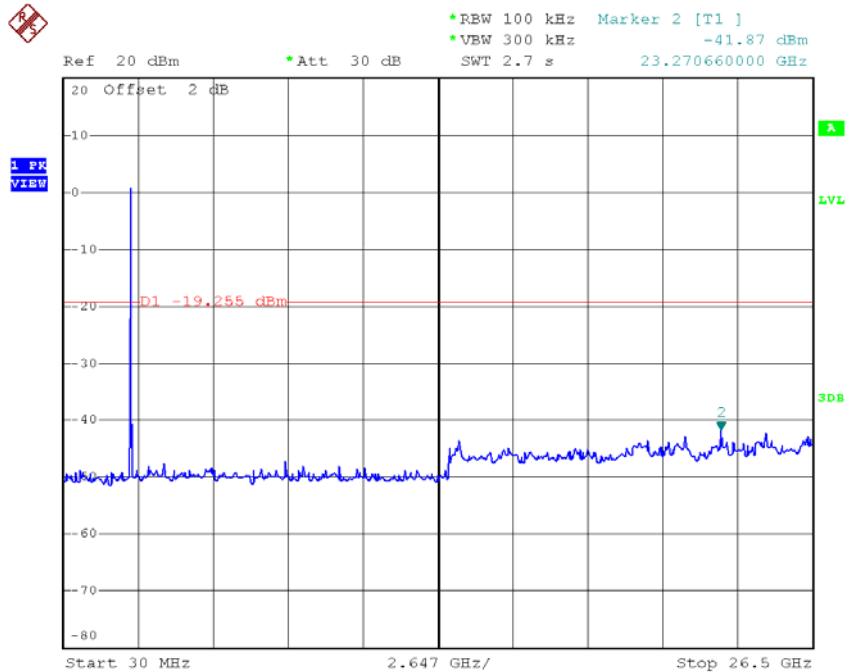
Date: 25.MAR.2016 11:07:44

TX G mode CH01 (10 Harmonic of the frequency)



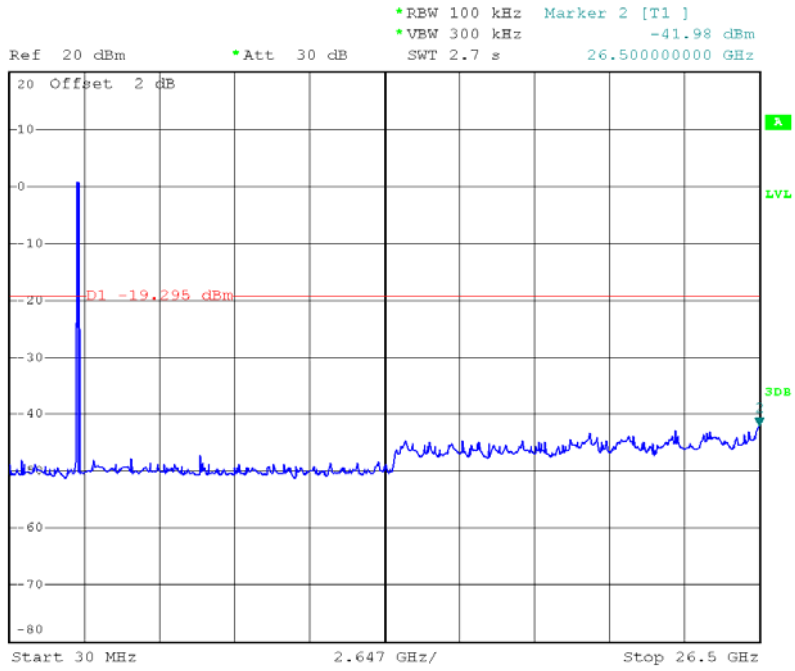
Date: 25.MAR.2016 11:05:26

TX G mode CH06 (10 Harmonic of the frequency)



Date: 25.MAR.2016 11:06:38

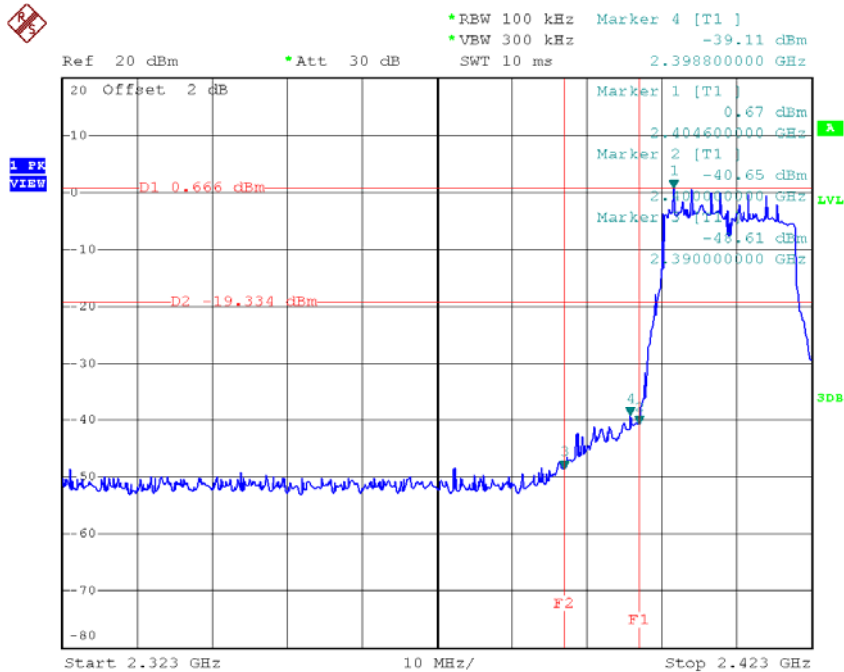
TX G mode CH11 (10 Harmonic of the frequency)



Date: 25.MAR.2016 11:07:36

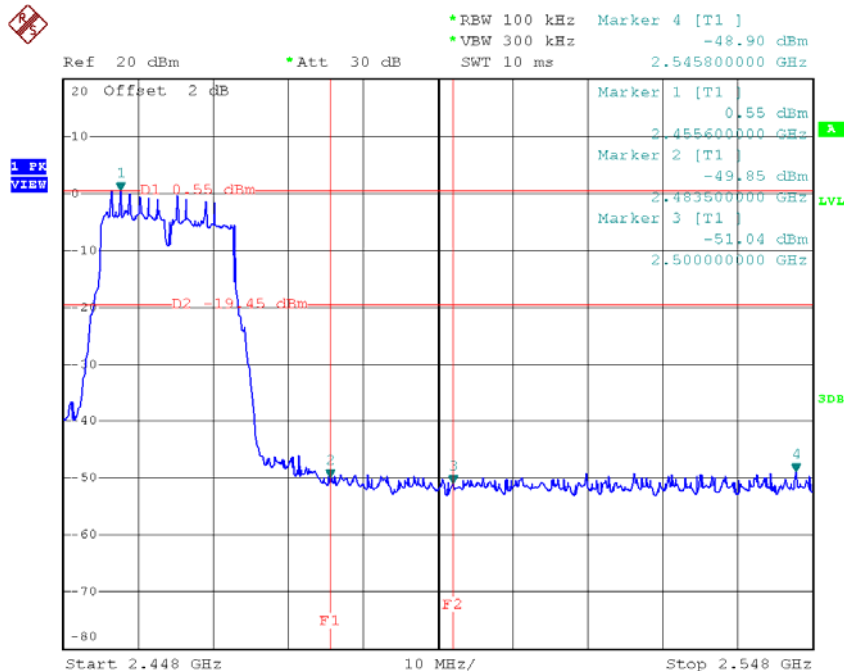
Test Mode : TX N-20M Mode_ANT 1

TX HT20 mode CH01



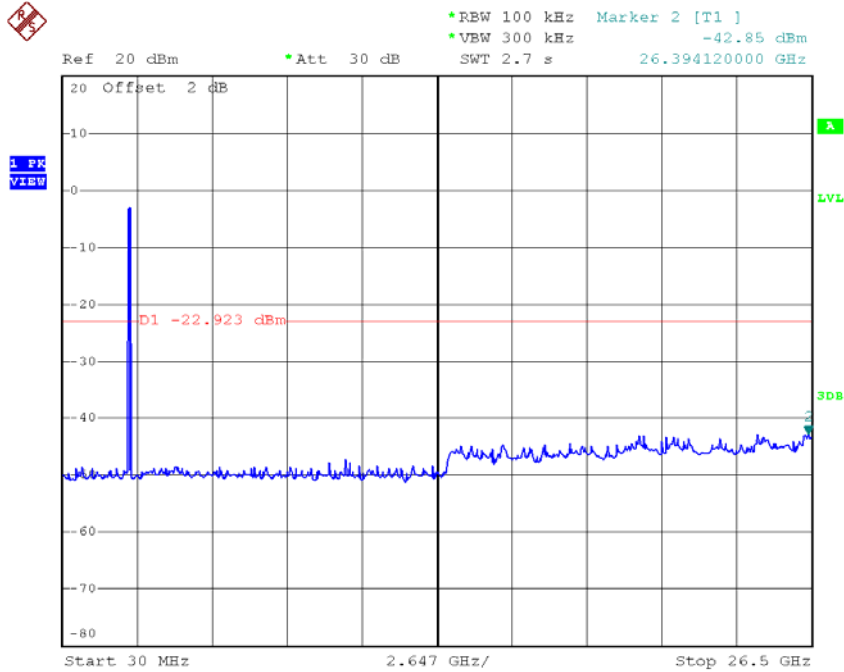
Date: 25.MAR.2016 10:51:34

TX HT20 mode CH11



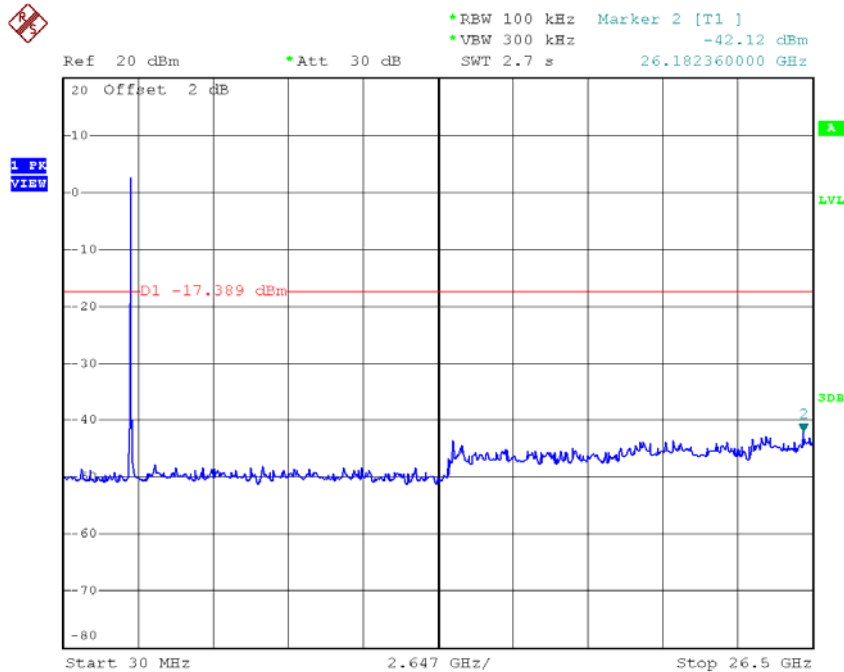
Date: 25.MAR.2016 10:53:49

TX HT20 mode CH01 (10 Harmonic of the frequency)



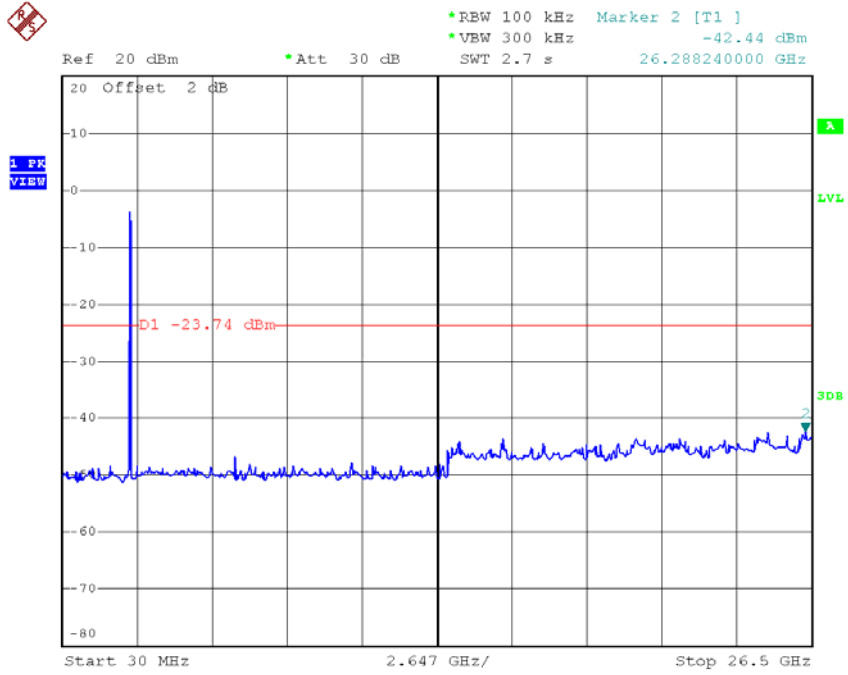
Date: 25.MAR.2016 10:51:26

TX HT20 mode CH06 (10 Harmonic of the frequency)



Date: 25.MAR.2016 10:52:32

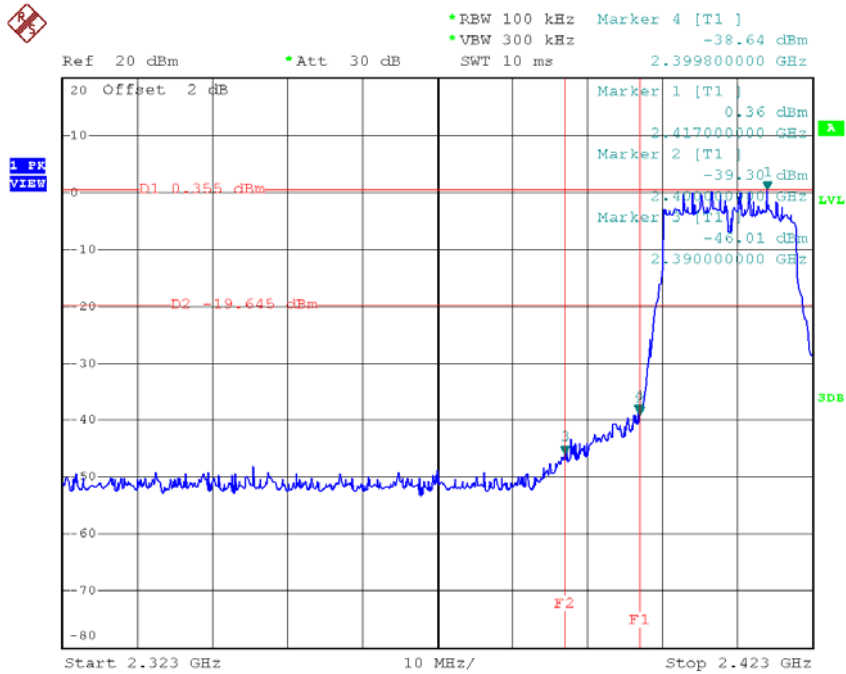
TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 25.MAR.2016 10:53:41

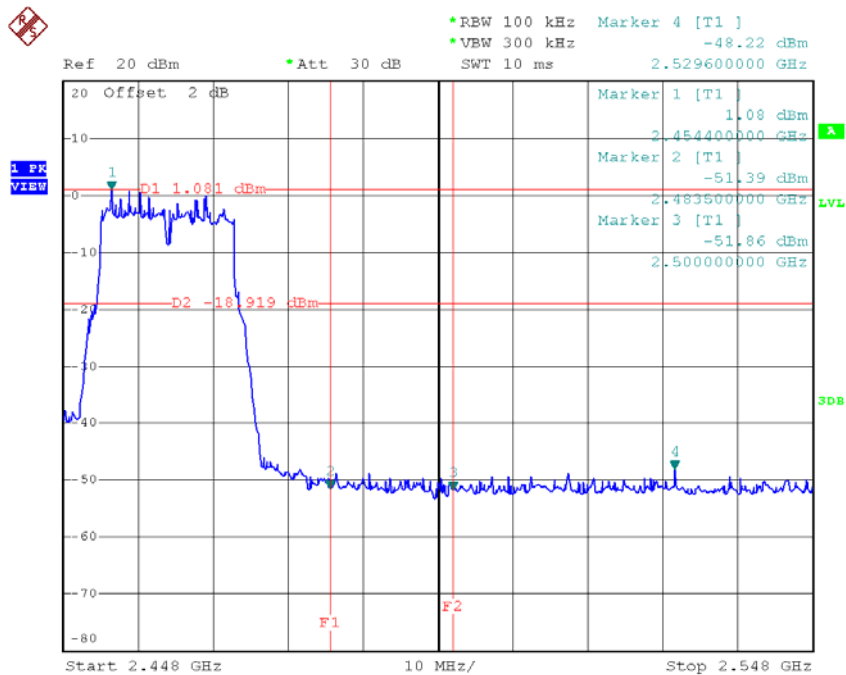
Test Mode : TX N-20M Mode_ANT 2

TX HT20 mode CH01



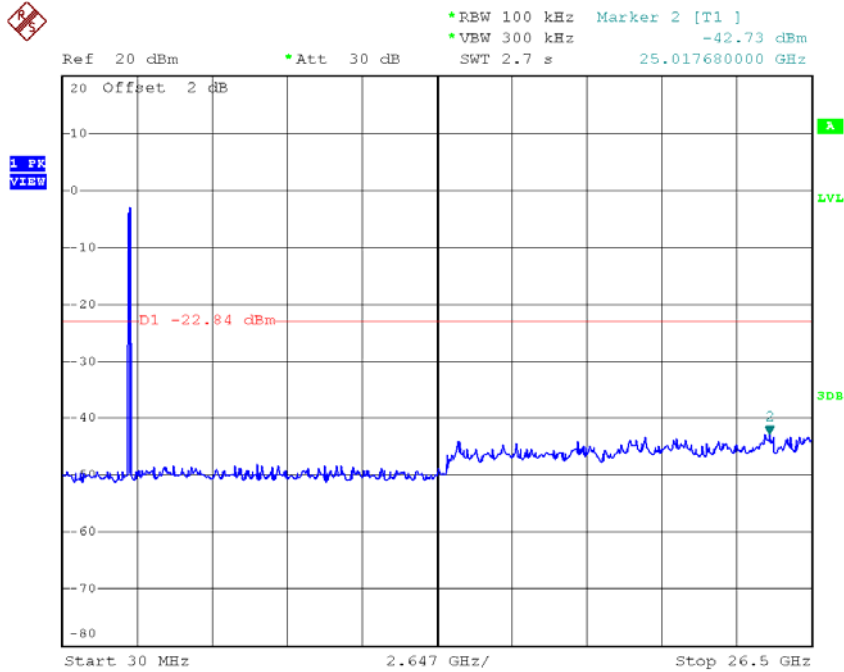
Date: 25.MAR.2016 11:09:17

TX HT20 mode CH11



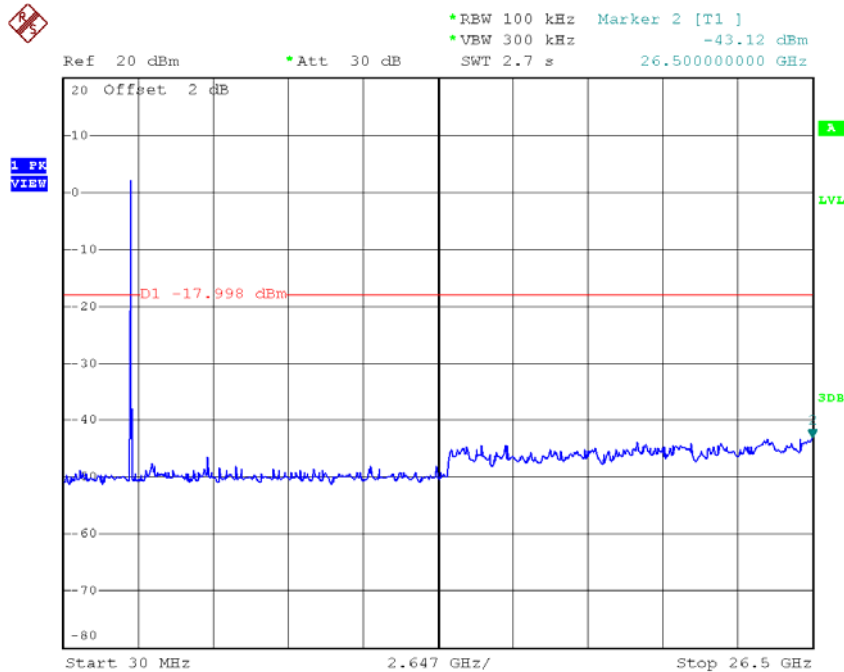
Date: 25.MAR.2016 11:12:42

TX HT20 mode CH01 (10 Harmonic of the frequency)



Date: 25.MAR.2016 11:09:09

TX HT20 mode CH06 (10 Harmonic of the frequency)

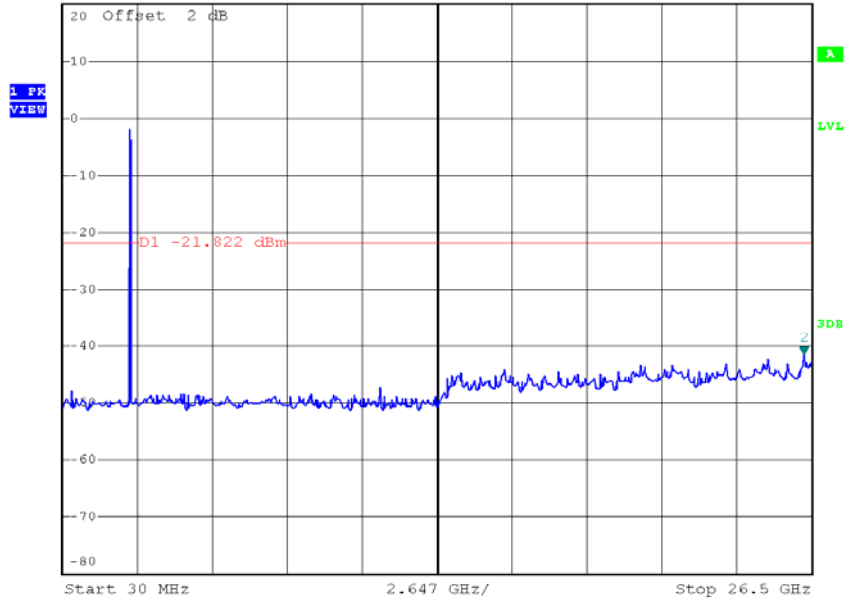


Date: 25.MAR.2016 11:10:20

TX HT20 mode CH11 (10 Harmonic of the frequency)



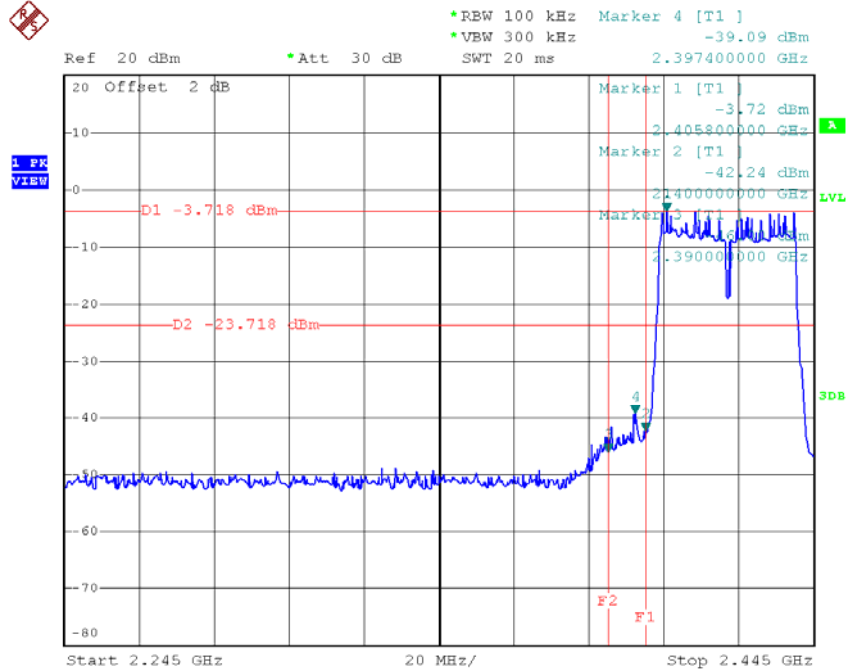
Ref 20 dBm *Att 30 dB *REW 100 kHz Marker 2 [T1]
*VEW 300 kHz -41.45 dBm
SWT 2.7 s 26.235300000 GHz



Date: 25.MAR.2016 11:12:35

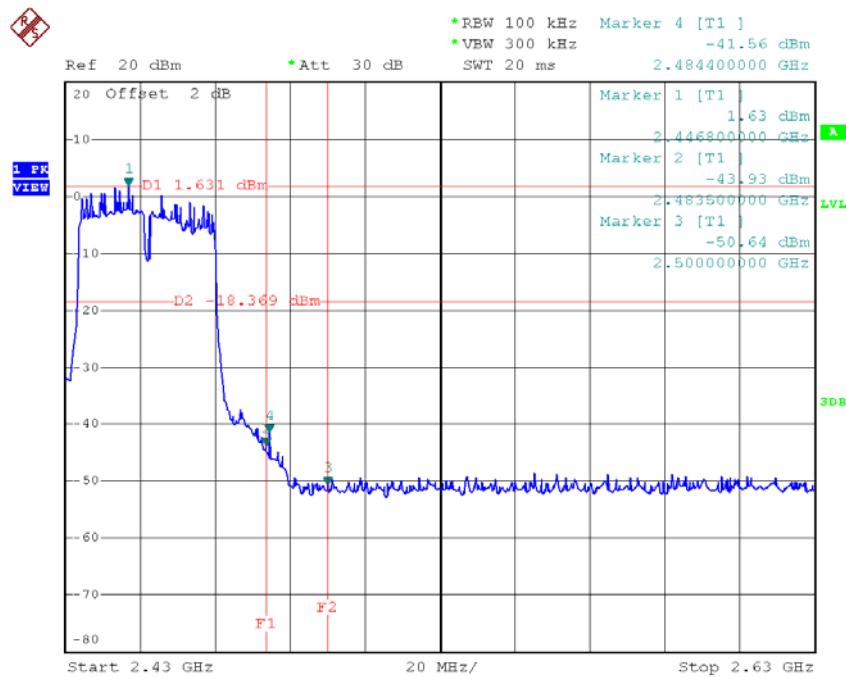
Test Mode : TX N-40M Mode_ANT 1

TX HT40 mode CH03



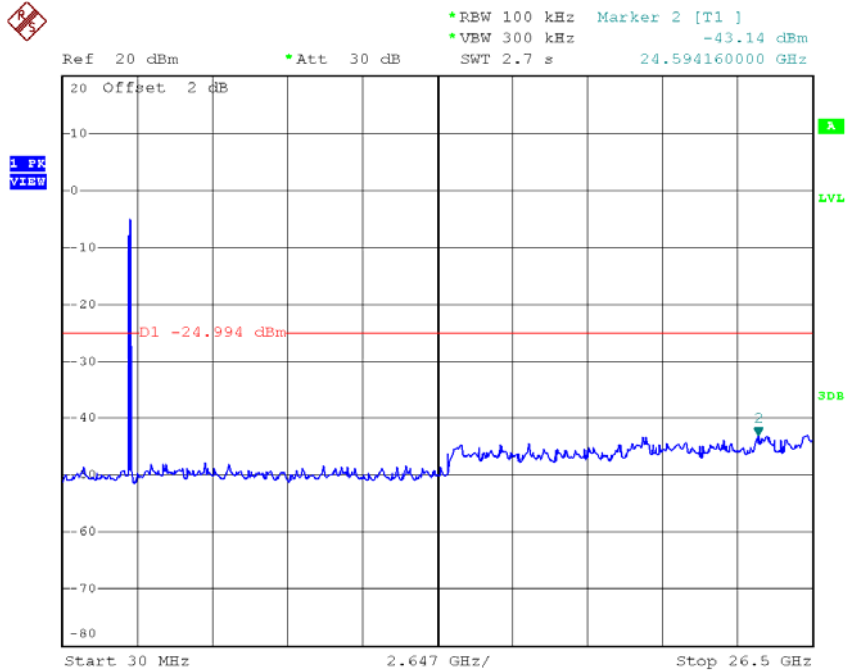
Date: 25.MAR.2016 10:55:07

TX HT40 mode CH09



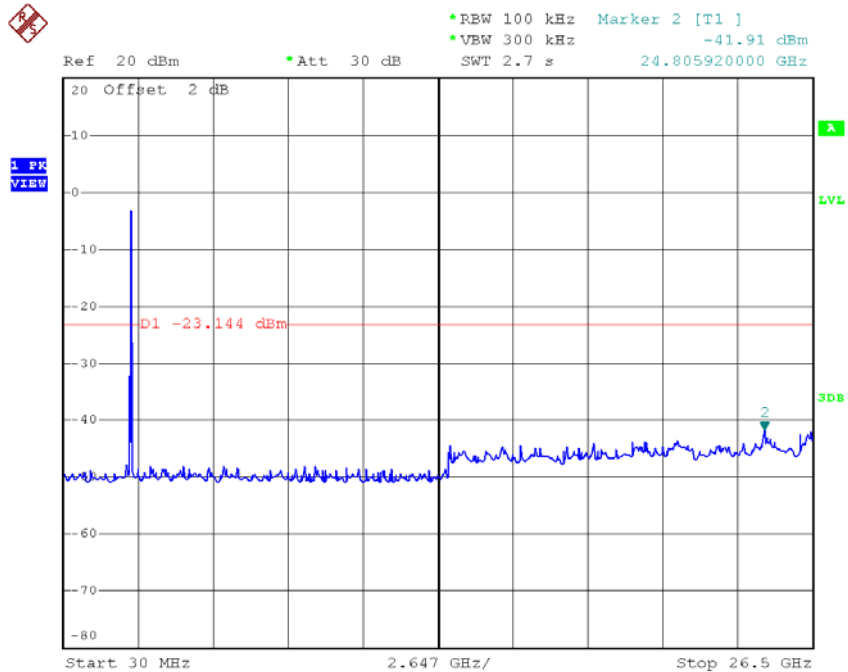
Date: 25.MAR.2016 10:58:14

TX HT40 mode CH03 (10 Harmonic of the frequency)



Date: 25.MAR.2016 10:54:59

TX HT40 mode CH06 (10 Harmonic of the frequency)



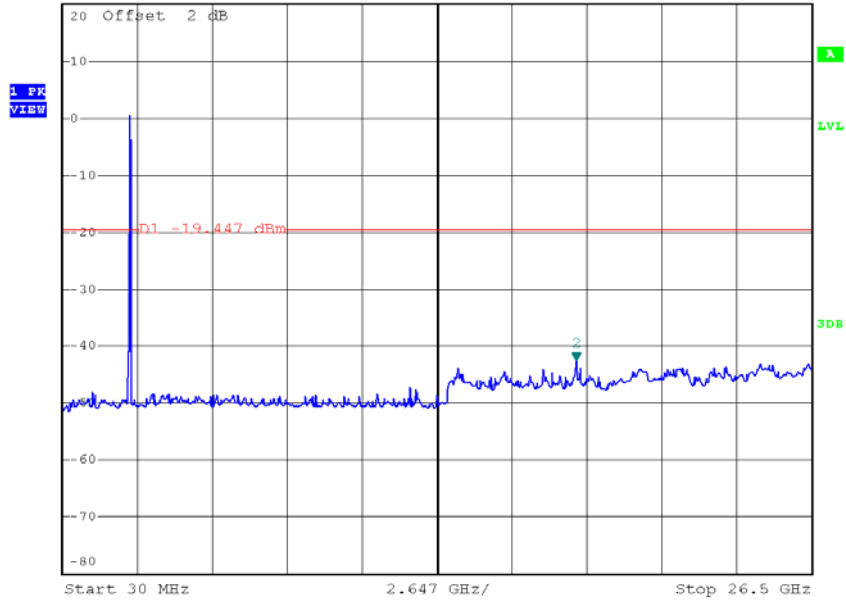
Date: 25.MAR.2016 10:56:18

TX HT40 mode CH09 (10 Harmonic of the frequency)



*REW 100 kHz Marker 2 [T1]
 *VBW 300 kHz -42.67 dBm

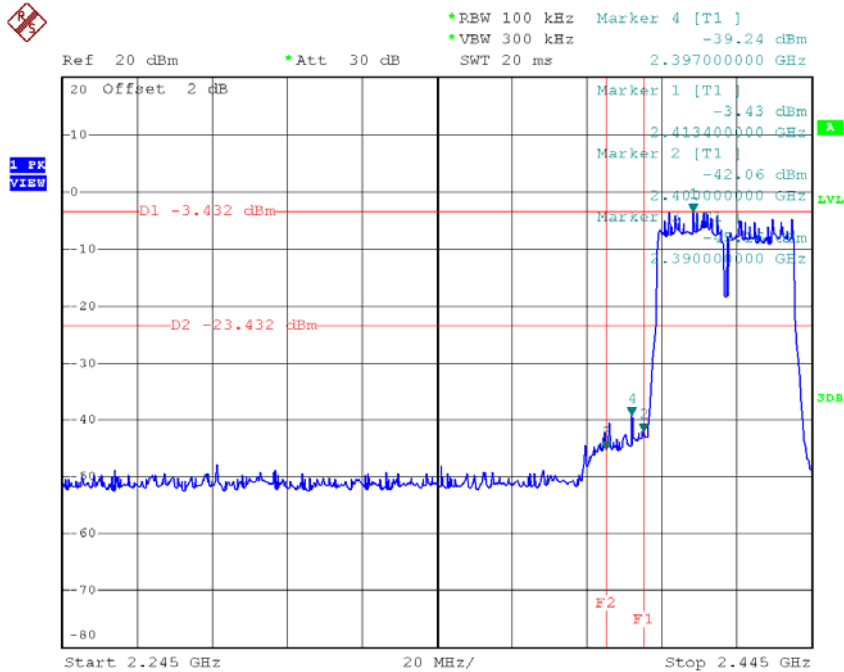
Ref 20 dBm *Att 30 dB SWT 2.7 s 18.188420000 GHz



Date: 25.MAR.2016 10:58:06

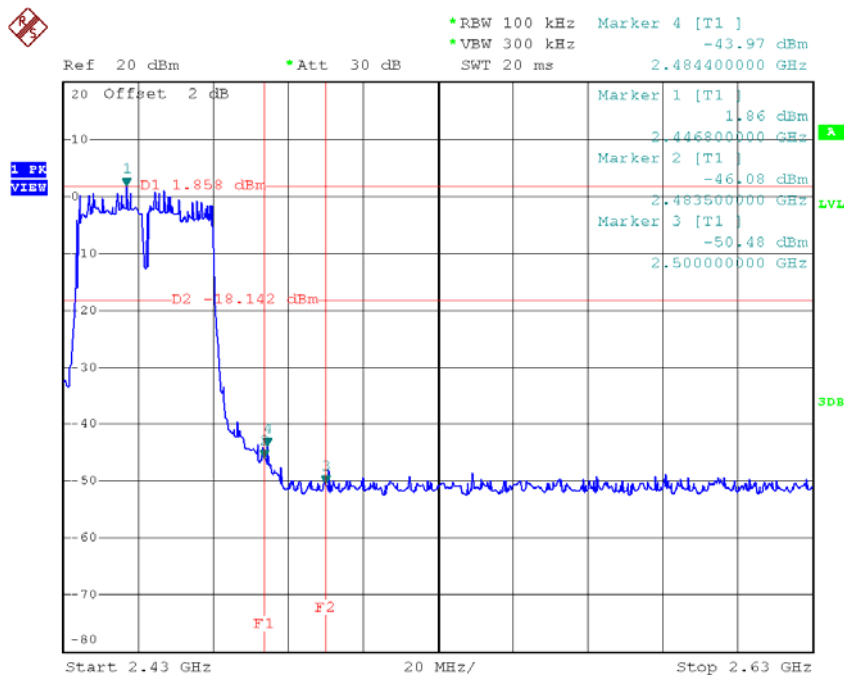
Test Mode : TX N-40M Mode_ANT 2

TX HT40 mode CH03



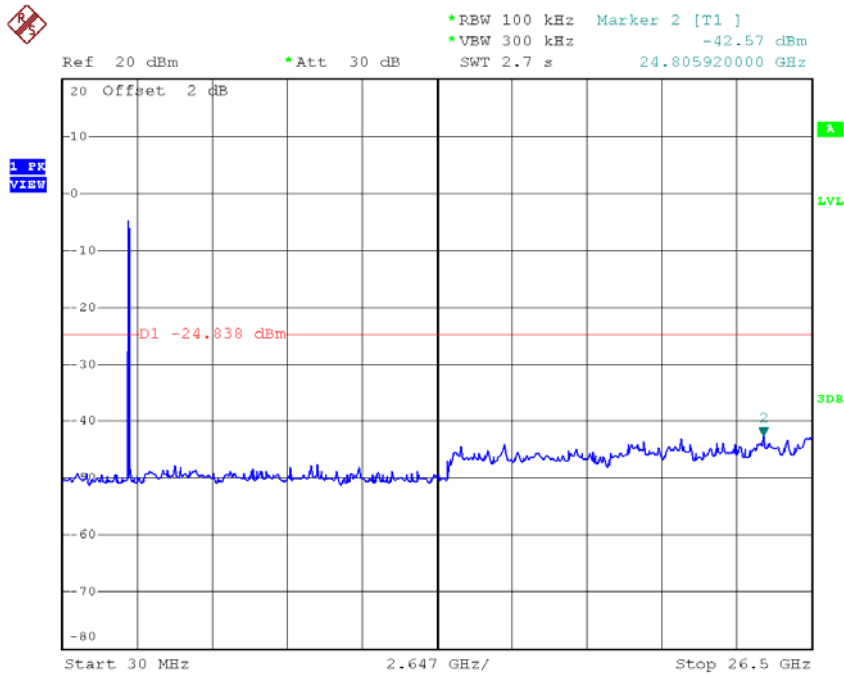
Date: 25.MAR.2016 11:14:22

TX HT40 mode CH09



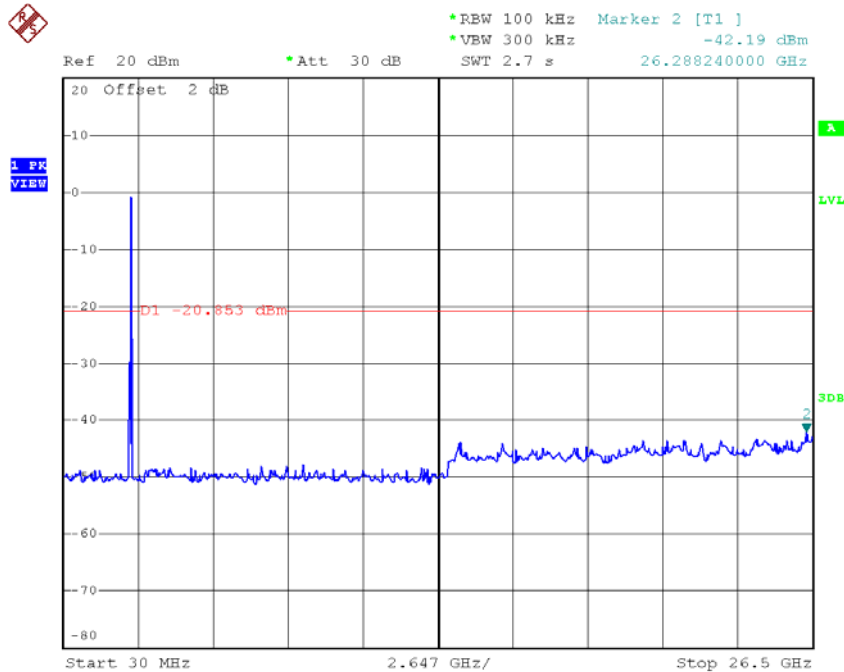
Date: 25.MAR.2016 11:16:31

TX HT40 mode CH03 (10 Harmonic of the frequency)



Date: 25.MAR.2016 11:14:15

TX HT40 mode CH06 (10 Harmonic of the frequency)

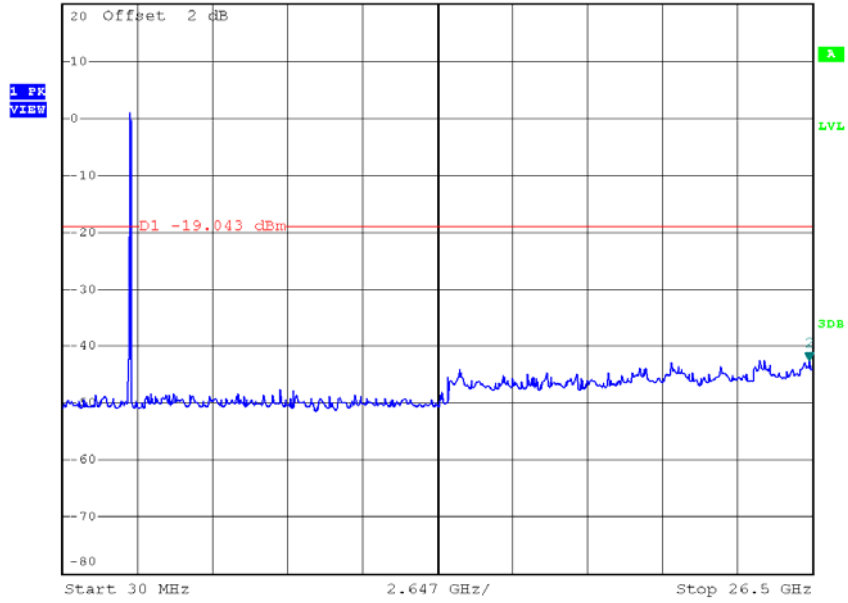


Date: 25.MAR.2016 11:15:23

TX HT40 mode CH09 (10 Harmonic of the frequency)



Ref 20 dBm *Att 30 dB *REW 100 kHz Marker 2 [T1]
*VBW 300 kHz -42.48 dBm
SWT 2.7 s 26.394120000 GHz

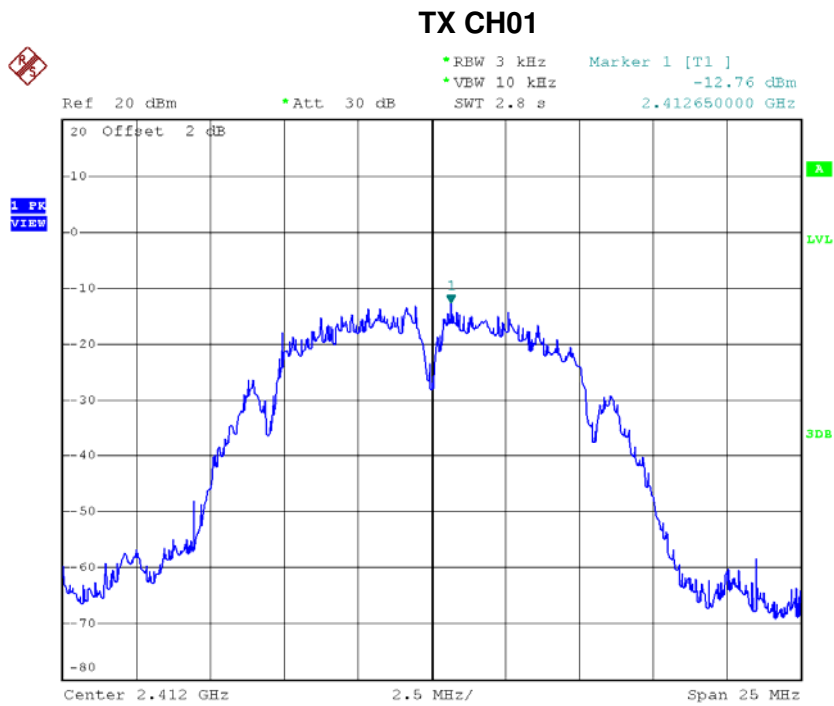


Date: 25.MAR.2016 11:16:23

ATTACHMENT H - POWER SPECTRAL DENSITY

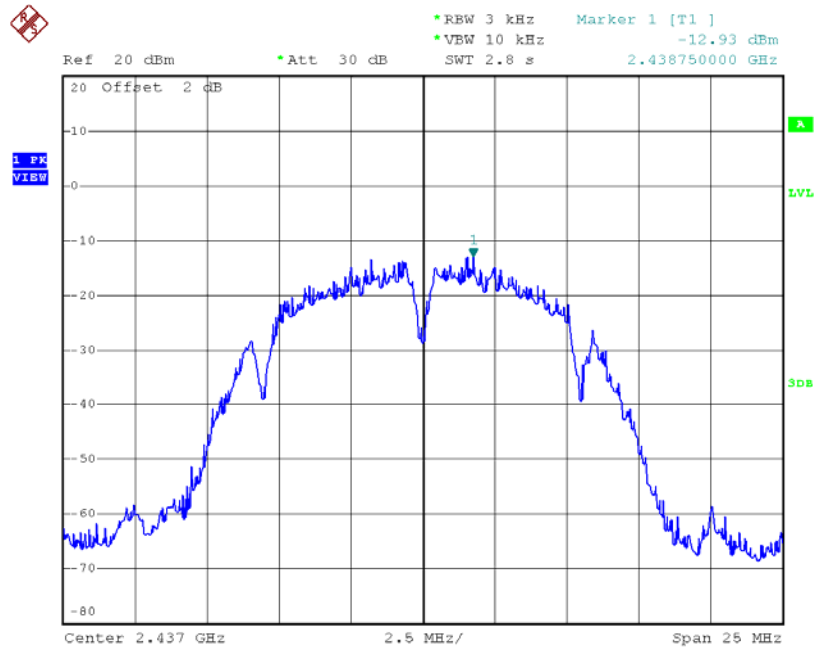
Test Mode :TX B Mode_CH01/06/11_ANT 1

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-12.76	0.0530	8.00	Complies
2437	-12.93	0.0509	8.00	Complies
2462	-13.97	0.0401	8.00	Complies



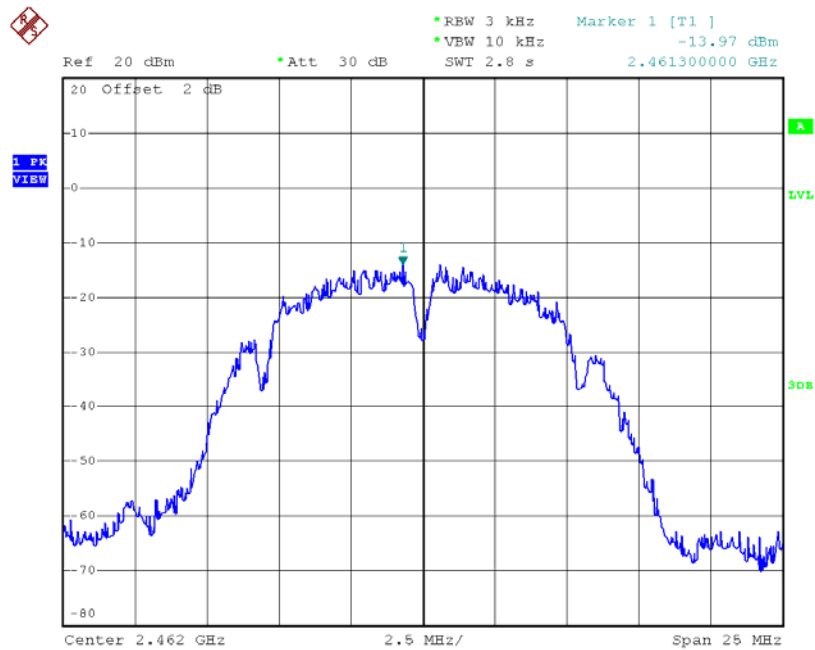
Date: 25.MAR.2016 10:41:51

TX CH06



Date: 25.MAR.2016 10:43:18

TX CH11

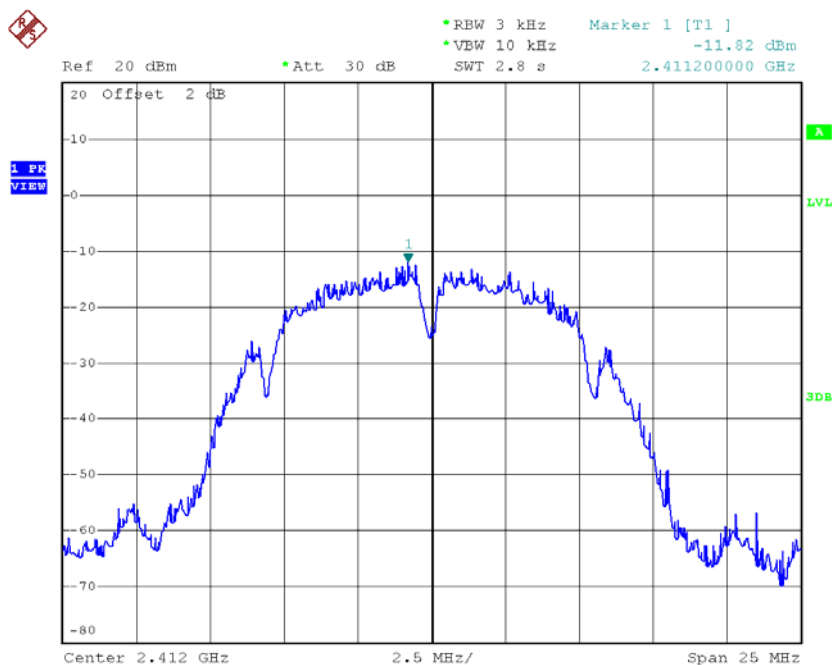


Date: 25.MAR.2016 10:44:41

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

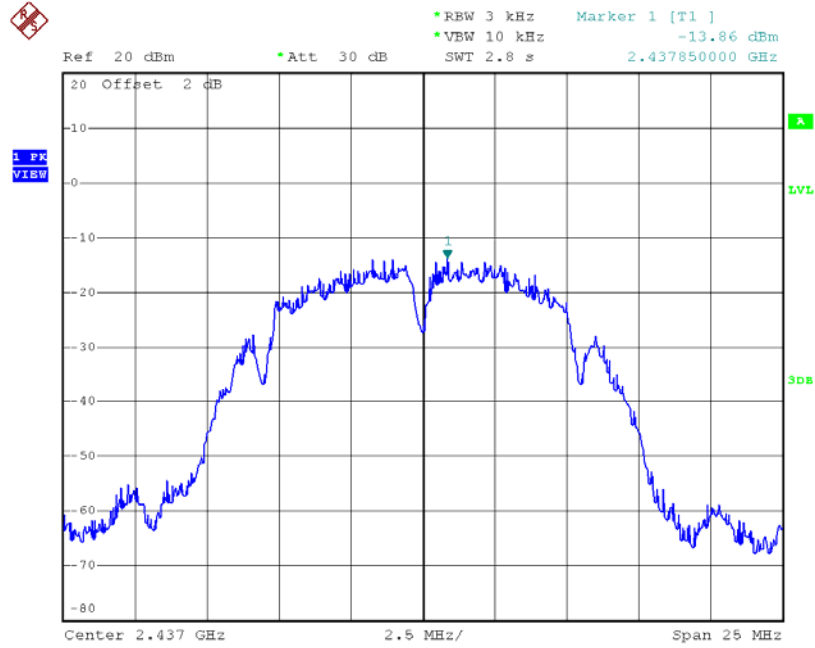
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.82	0.0658	8.00	Complies
2437	-13.86	0.0411	8.00	Complies
2462	-14.44	0.0360	8.00	Complies

TX CH01



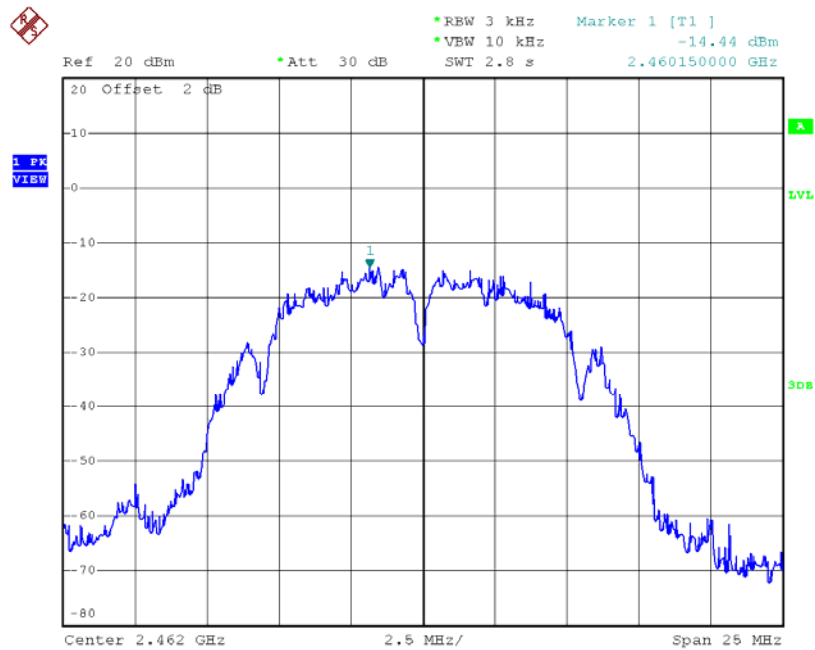
Date: 25.MAR.2016 11:01:33

TX CH06



Date: 25.MAR.2016 11:02:58

TX CH11



Date: 25.MAR.2016 11:04:15

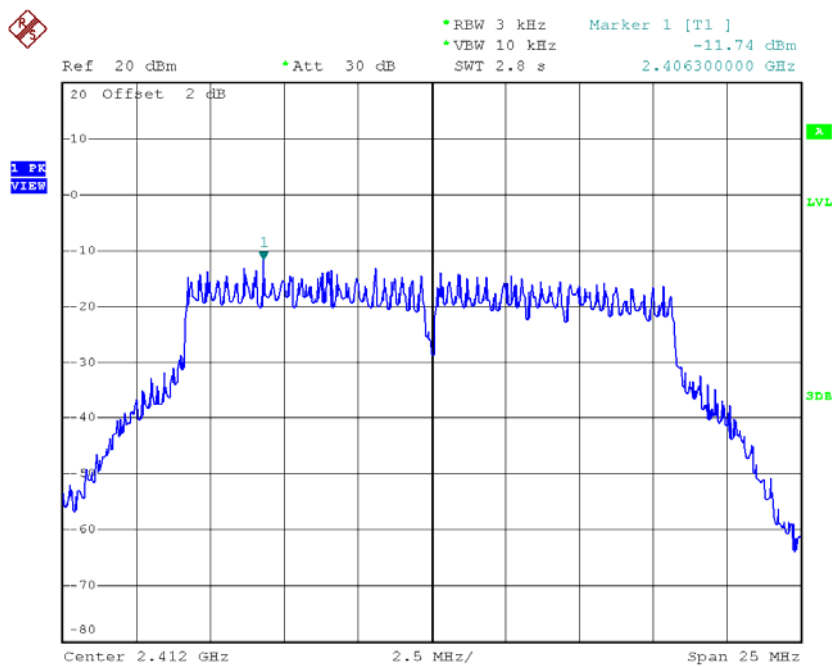
Test Mode :TX B Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-9.25	0.1188	8.00	Complies
2437	-10.36	0.0920	8.00	Complies
2462	-11.19	0.0761	8.00	Complies

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

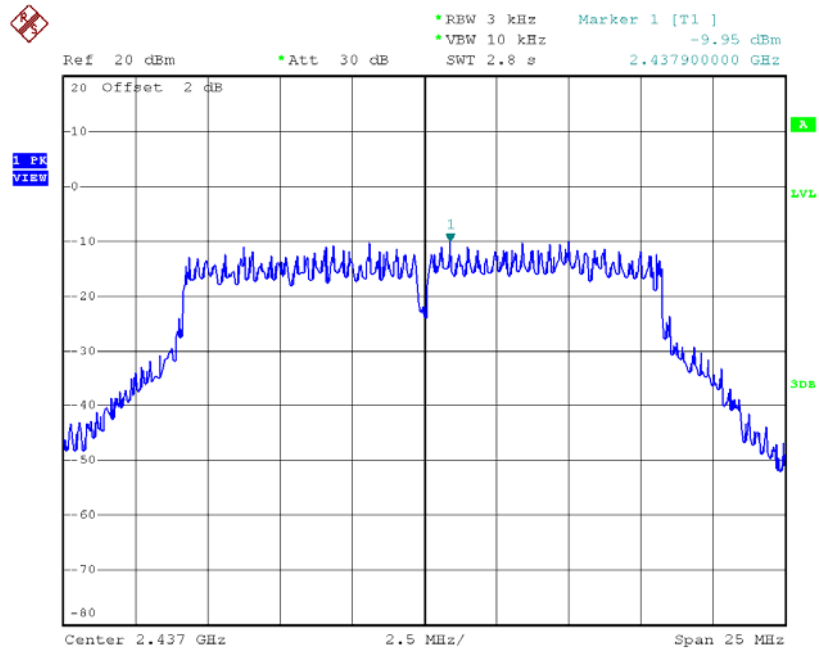
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.74	0.0670	8.00	Complies
2437	-9.95	0.1012	8.00	Complies
2462	-9.12	0.1225	8.00	Complies

TX CH01



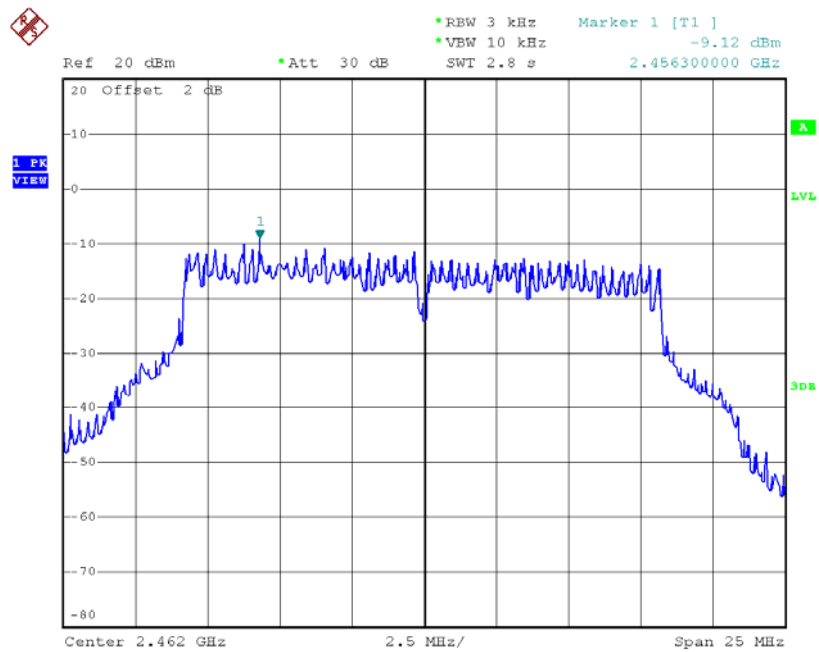
Date: 25.MAR.2016 10:45:47

TX CH06



Date: 25.MAR.2016 10:47:09

TX CH11

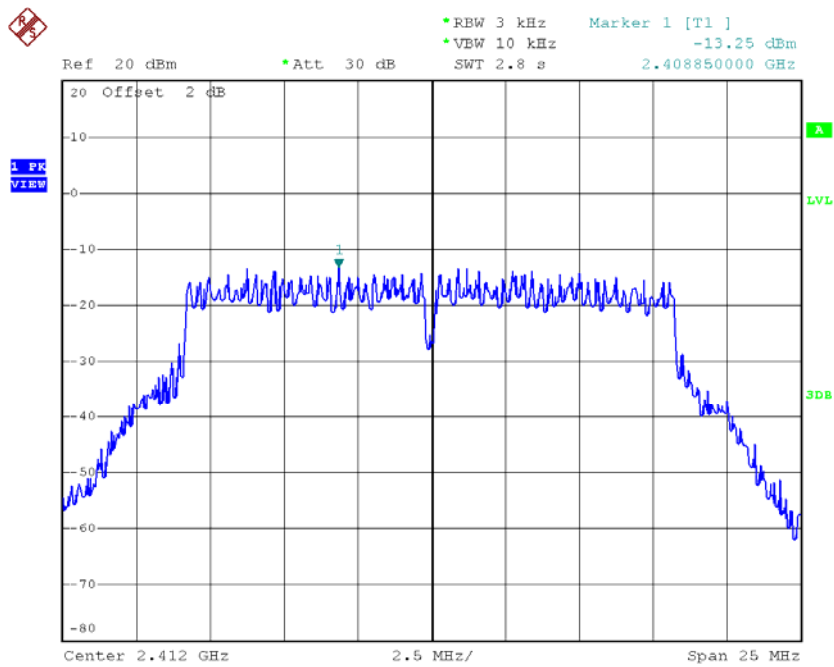


Date: 25.MAR.2016 10:48:26

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

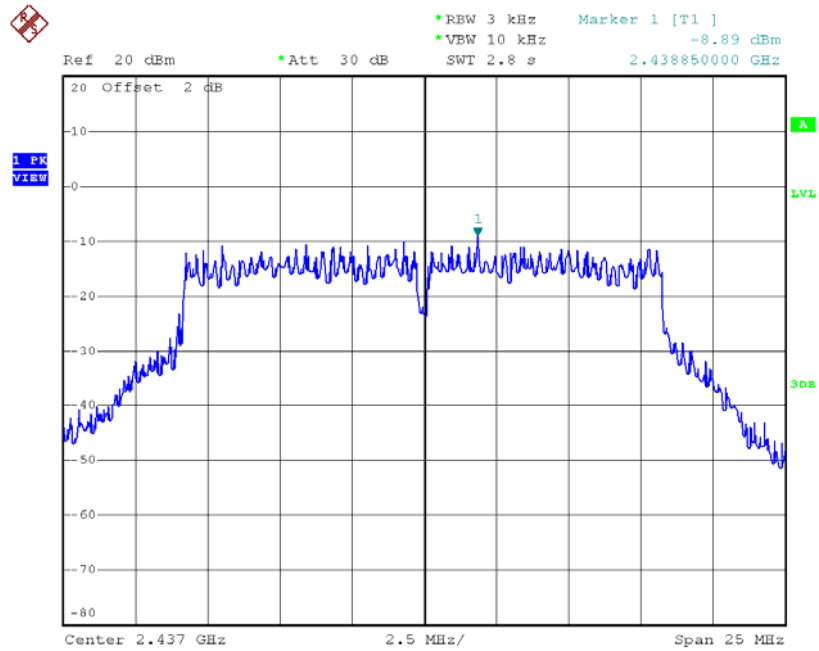
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-13.25	0.0473	8.00	Complies
2437	-8.89	0.1291	8.00	Complies
2462	-9.52	0.1117	8.00	Complies

TX CH01



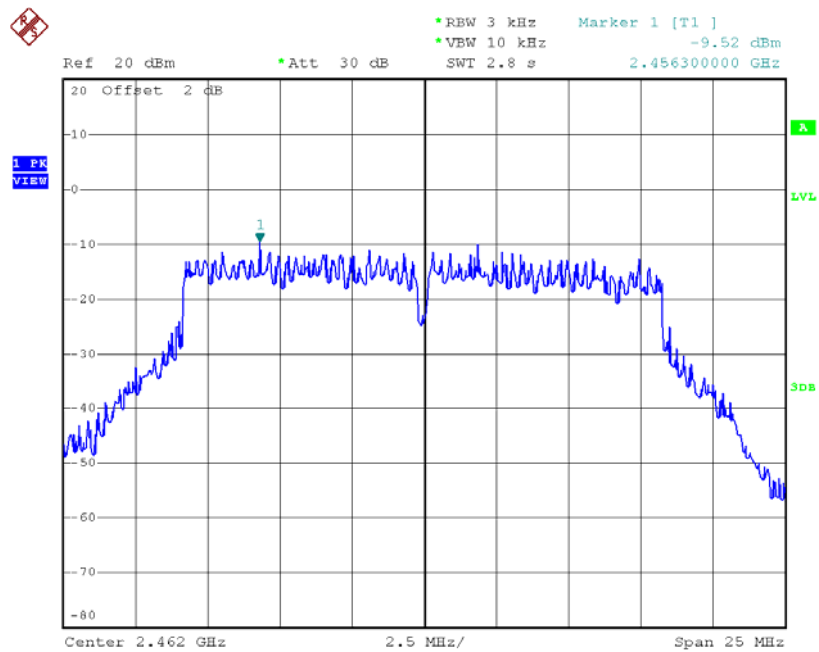
Date: 25.MAR.2016 11:05:42

TX CH06



Date: 25.MAR.2016 11:06:47

TX CH11



Date: 25.MAR.2016 11:07:53

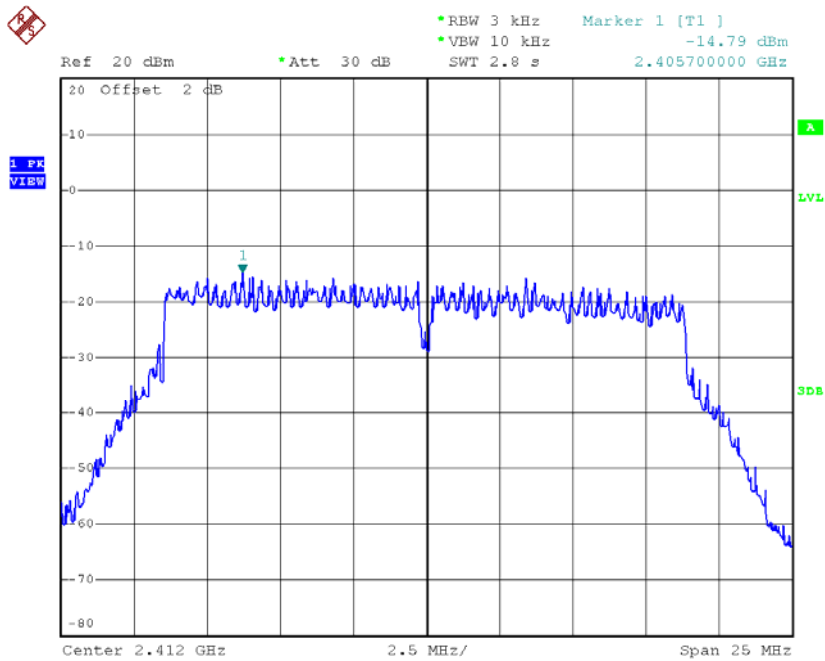
Test Mode :TX G Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-9.42	0.1143	8.00	Complies
2437	-6.38	0.2303	8.00	Complies
2462	-6.30	0.2342	8.00	Complies

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

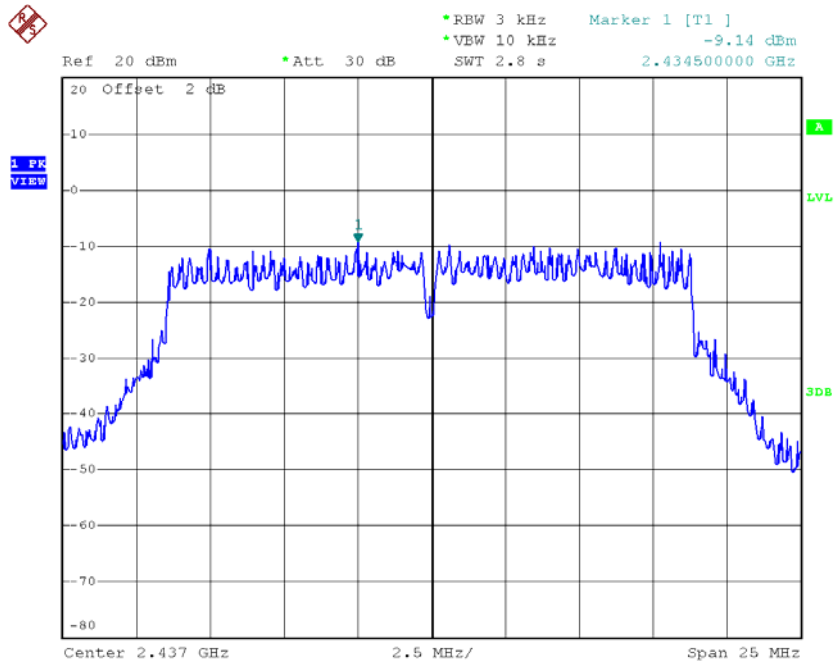
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-14.79	0.0332	8.00	Complies
2437	-9.14	0.1219	8.00	Complies
2462	-13.34	0.0463	8.00	Complies

TX CH01



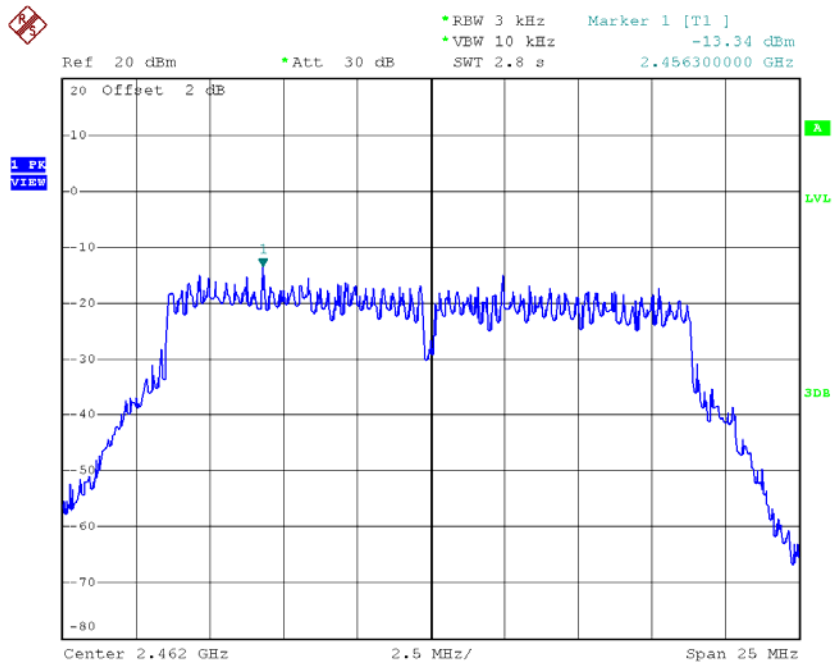
Date: 25.MAR.2016 10:51:43

TX CH06



Date: 25.MAR.2016 10:52:41

TX CH11

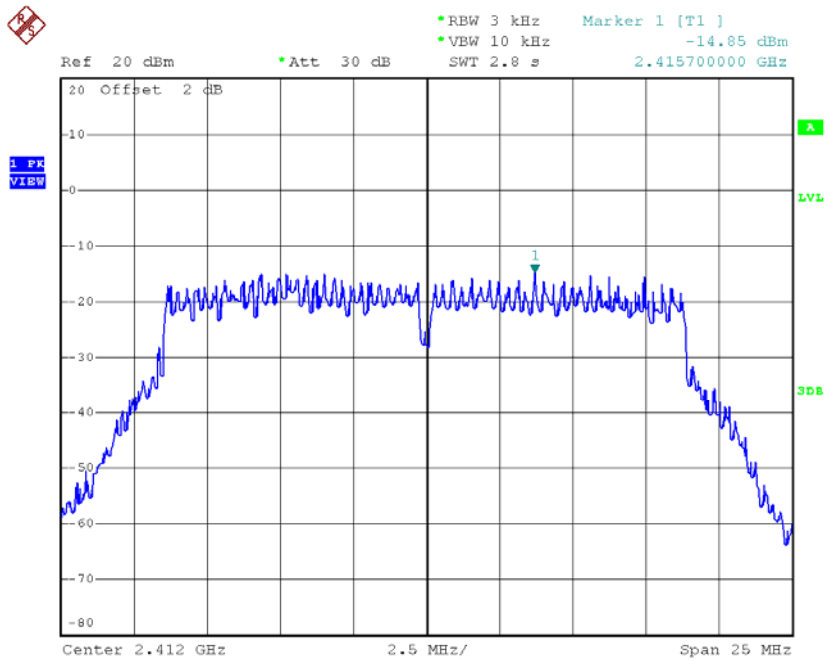


Date: 25.MAR.2016 10:53:58

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

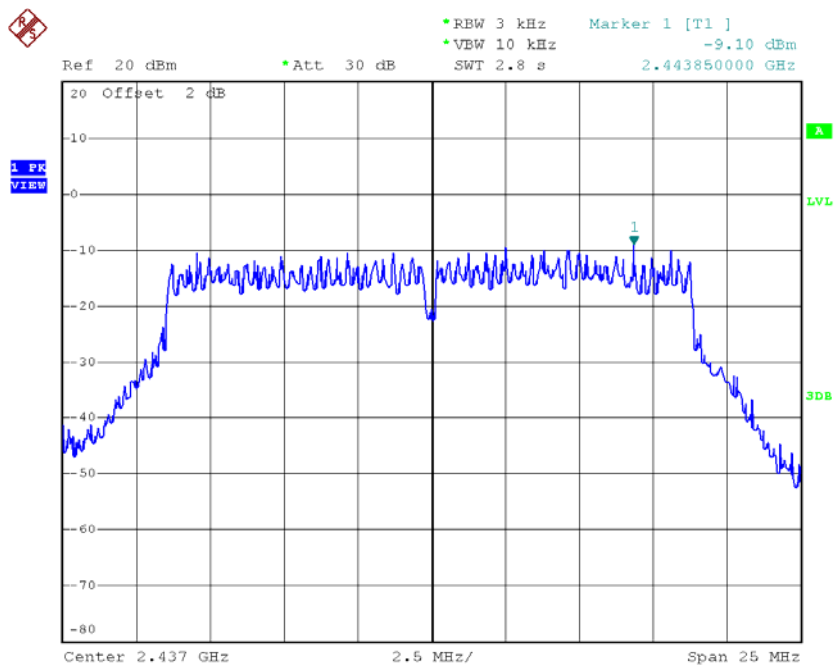
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-14.85	0.0327	8.00	Complies
2437	-9.10	0.1230	8.00	Complies
2462	-15.03	0.0314	8.00	Complies

TX CH01



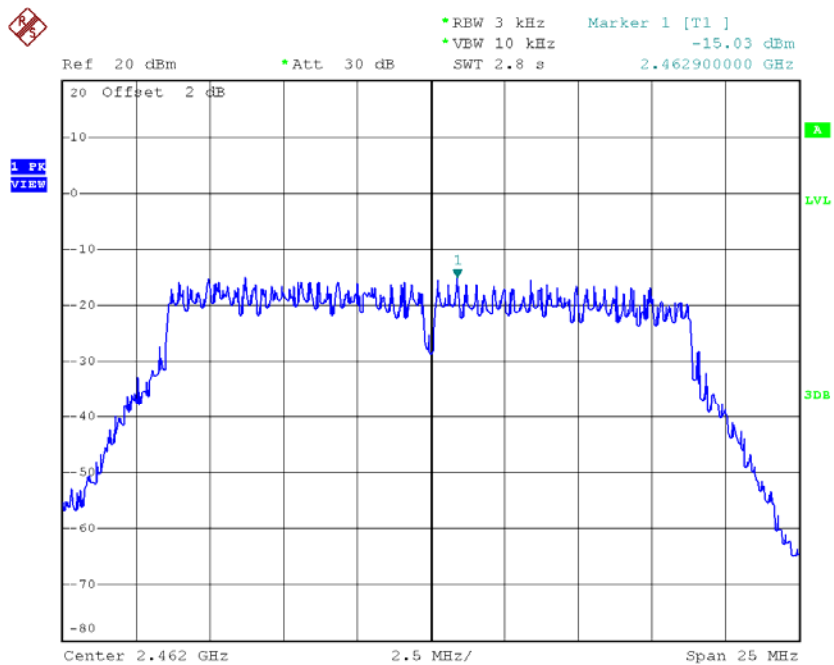
Date: 25.MAR.2016 11:09:26

TX CH06



Date: 25.MAR.2016 11:10:30

TX CH11



Date: 25.MAR.2016 11:12:52

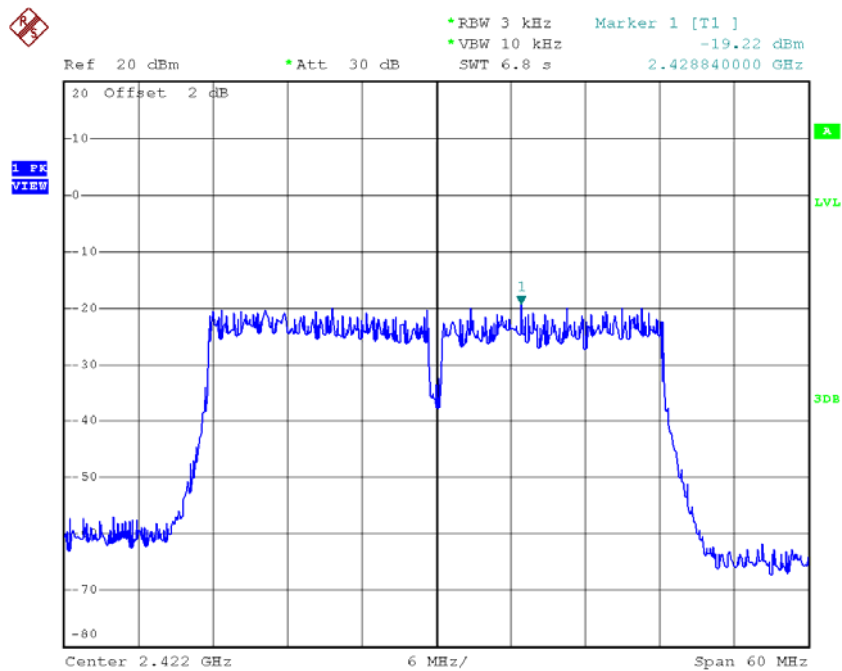
Test Mode : TX N-20M Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.81	0.0659	8.00	Complies
2437	-6.11	0.2449	8.00	Complies
2462	-11.10	0.0777	8.00	Complies

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

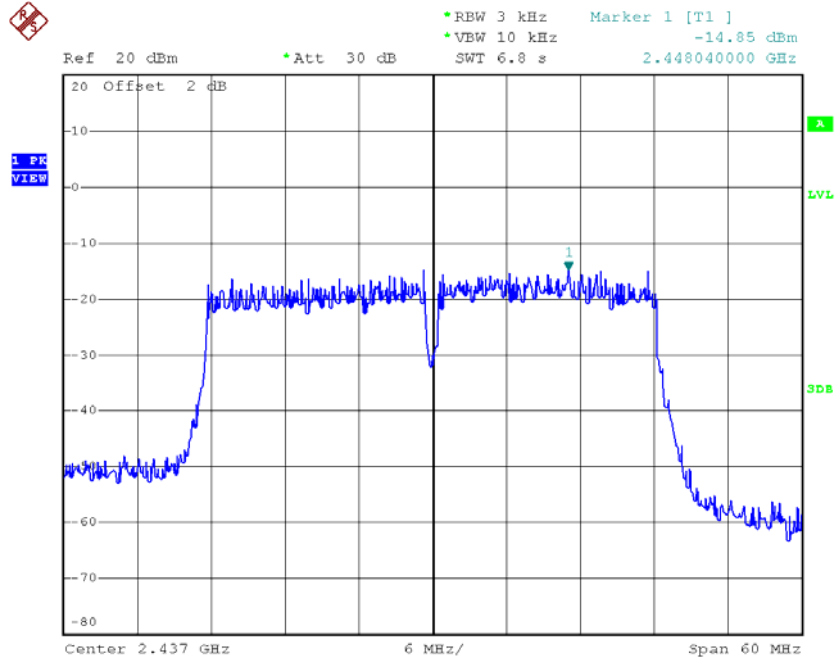
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-19.22	0.0120	8.00	Complies
2437	-14.85	0.0327	8.00	Complies
2452	-13.75	0.0422	8.00	Complies

TX CH03



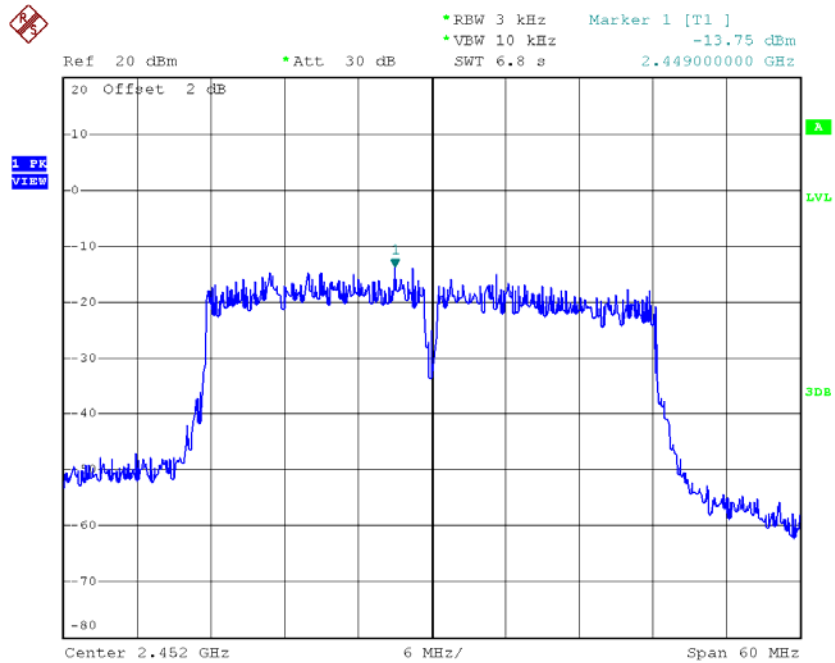
Date: 25.MAR.2016 10:55:19

TX CH06



Date: 25.MAR.2016 10:56:30

TX CH09

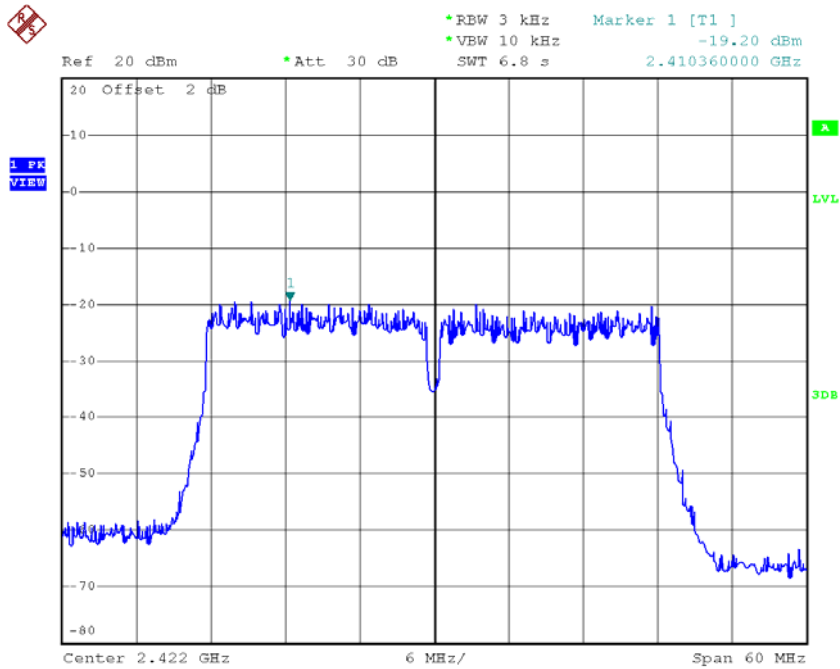


Date: 25.MAR.2016 10:58:26

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

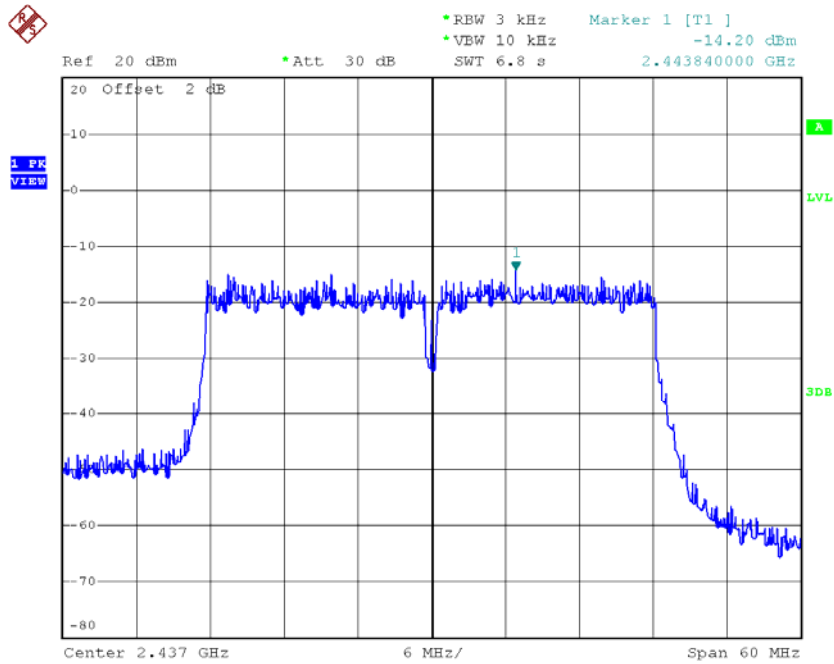
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-19.20	0.0120	8.00	Complies
2437	-14.20	0.0380	8.00	Complies
2452	-14.45	0.0359	8.00	Complies

TX CH03



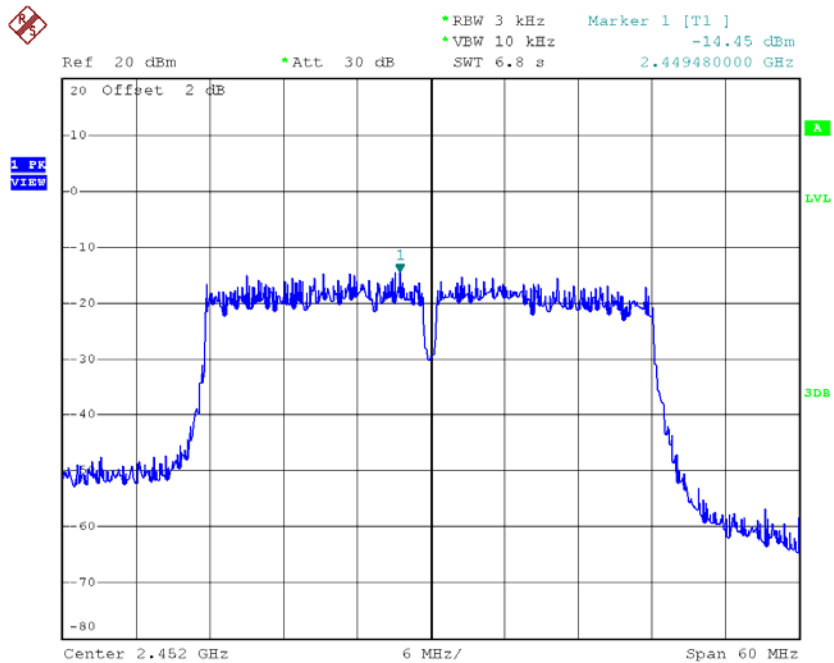
Date: 25.MAR.2016 11:14:35

TX CH06



Date: 25.MAR.2016 11:15:35

TX CH09



Date: 25.MAR.2016 11:16:43

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	-16.20	0.0240	8.00	Complies
2437	-11.51	0.0707	8.00	Complies
2452	-11.07	0.0781	8.00	Complies