FCC Radio Test Report

FCC ID: Z5N-WACDNA

This report concerns: Original Grant

Project No.	:	1811T020
Equipment	:	HomeKit WiFi module
Test Model	:	WACDNA_UR
Series Model	:	N/A
Applicant	:	LoongYee Industry Co.,Ltd
Address	:	No.14, Lane 103, Sec. 2, Chung Hsing Rd., WuKu Dis New Taipei City Taiwan

Date of Receipt	:	Nov. 05, 2018
Date of Test	:	Nov. 05, 2018 ~ Nov. 15, 2018
Issued Date	:	Dec. 25, 2018
Tested by	:	BTL Inc.

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Testing Laboratory
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The information, data and test plan are provided by manufacturer, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements in all the possible configurations as representative of its intended use.

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.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Nov. 16, 2018
R01	Modified Address.	Nov. 27, 2018
R02	Revised report to address TCB's comments.	Dec. 18, 2018
R03	Revised report to address TCB's comments.	Dec. 25, 2018

1 CERTIFICATION

Equipment	:	HomeKit WiFi module
Brand Name	:	PHYTREX
Test Model	:	WACDNA_UR
Series Model	:	N/A
Applicant	:	LoongYee Industry Co.,Ltd
Manufacturer	:	LoongYee Industry Co.,Ltd
Address	:	No.14, Lane 103, Sec. 2, Chung Hsing Rd., WuKu Dis New Taipei City Taiwan
Date of Test	:	Nov. 05, 2018 ~ Nov. 15, 2018
Test Sample	:	Engineering Sample
Standard(s)	:	FCC Part15, Subpart C (§15.247) ANSI C63.10-2013

The above equipment has been tested and found in 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-1-1811T020) 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 standards.

FCC Part15, Subpart C (§15.247)				
FCC Clause No	**Description**	**Test Result**	**Judgement**	**Remark**
§15.207	AC Power Line Conducted Emissions	APPENDIX A	Pass	------
§15.205 §15.209 §15.247(d)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	Pass	------
§15.247(a)	Bandwidth	APPENDIX E	Pass	------
§15.247(b)	Peak Output Power	APPENDIX F	Pass	------
§15.247(d)	Antenna Conducted Spurious Emissions	APPENDIX G	Pass	------
§15.247(e)	Power Spectral Density	APPENDIX H	Pass	------
§15.203	Antenna Requirement	------	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:
CB05: (FCC RN:674415; FCC DN:TW0659)
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
CB15: (VCCI RN: R-20020; FCC RN:674415; FCC DN:TW0659; ISED Assigned Code:20088-5)
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

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

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

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
C05	CISPR	150 kHz ~ 30MHz	2.68	C05

B. Radiated emissions below 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB15 (3m)	CISPR	30 MHz ~ 200 MHz	V	4.20
		30 MHz ~ 200 MHz	H	3.64
		200 MHz ~ 1,000 MHz	V	4.56
		200 MHz ~ 1,000 MHz	H	3.90

C. Radiated emissions above 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB15 (3m)	CISPR	1 GHz ~ 6 GHz	V	4.46
		1 GHz ~ 6 GHz	H	4.40
		6 GHz ~18 GHz	V	3.88
		6 GHz ~18 GHz	H	4.00

Test Site	Method	Measurement Frequency Range	U (dB)
CB15 (1m)	CISPR	18 GHz ~ 26.5 GHz	4.62
		26.5 GHz ~ 40 GHz	5.12

D. Conducted tests:

Item	Method	U
Bandwidth	ANSI	3.8 %
Output Power	ANSI	0.95 dB
Power Spectral Density	ANSI	0.86 dB
Conducted Spurious Emissions	ANSI	2.71 dB

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

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

3 GENERAL INFORMATION

3.1 DESCRIPTION OF EUT

Equipment	HomeKit WiFi module
Brand Name	PHYTREX
Test Model	WACDNA_UR
Series Model	N/A
Model Difference	N/A
Power Source	DC voltage supplied from host.
Power Rating	DC 3.3V/1.5V/1.2V
Products Covered	N/A
Operation Frequency	2412 MHz to 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 150 Mbps
Maximum Output Power	IEEE 802.11b: 18.36 dBm (0.0685 W) IEEE 802.11g: 23.62 dBm (0.2301 W) IEEE 802.11n (HT20): 22.76 dBm (0.1888 W) IEEE 802.11n (HT40): 22.97 dBm (0.1982 W)

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

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

(3) Table for Filed Antenna:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
1	CHENGYU	2504900073	PCB	I-PEX	-2.58

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
1	TX B MODE CHANNEL 01/06/11
2	TX G MODE CHANNEL 01/06/11
3	TX N (HT20) MODE CHANNEL 01/06/11
4	TX N (HT40) MODE CHANNEL 03/06/09

Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Test Mode	Description
1	TX B MODE CHANNEL 01

Radiated emissions test	
Test Mode	Description
1	TX B MODE CHANNEL 01/06/11
2	TX G MODE CHANNEL 01/06/11
3	TX N (HT20) MODE CHANNEL 01/06/11
4	TX N (HT40) MODE CHANNEL 03/06/09

Conducted test	
Test Mode	Description
1	TX B MODE CHANNEL 01/06/11
2	TX G MODE CHANNEL 01/06/11
3	TX N (HT20) MODE CHANNEL 01/06/11
4	TX N (HT40) MODE CHANNEL 03/06/09

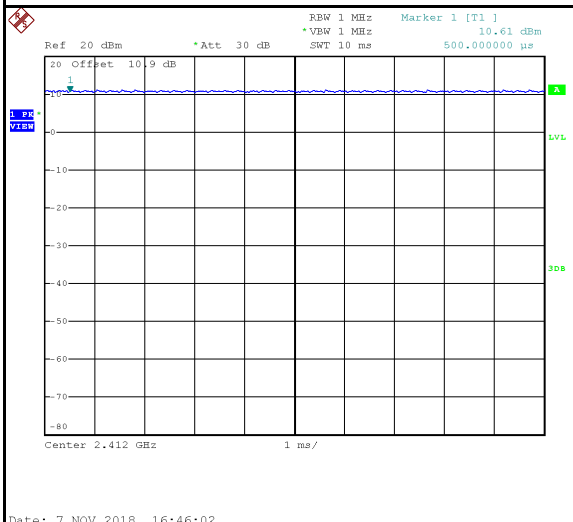
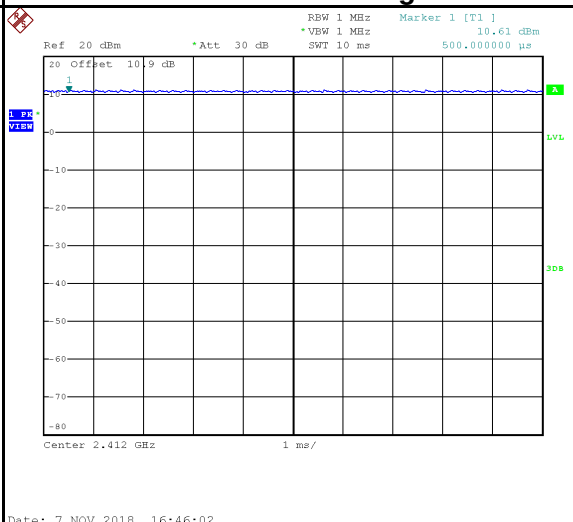
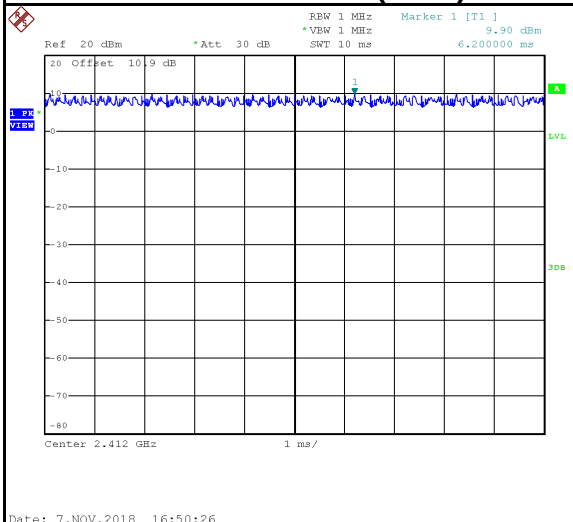
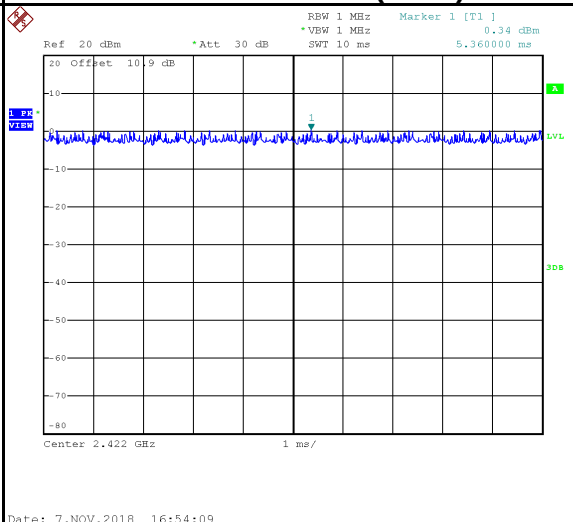
NOTE:
(1) The measurements are performed at the low, middle and high available channels.
(2) For radiated emission tests, the highest output powers were set for final test.
(3) For radiated emission below 1 GHz test, the IEEE 802.11b was found to be the worst case and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

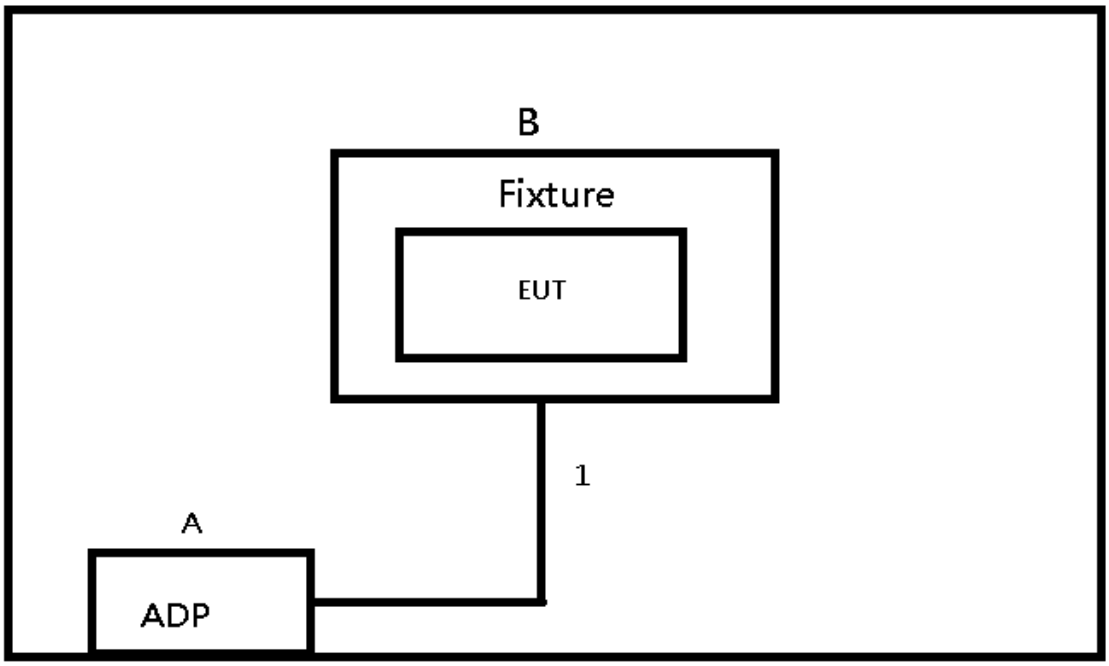
Test Software	UI_mptool			
Mode	2412 MHz	2437 MHz	2462 MHz	Data Rate
IEEE 802.11b	36	35	34	1 Mbps
IEEE 802.11g	45	43	41	6 Mbps
IEEE 802.11n (HT20)	44	42	40	MCS 0
Mode	2422 MHz	2437 MHz	2452 MHz	Data Rate
IEEE 802.11n (HT40)	44	43	42	MCS 0

3.4 DUTY CYCLE

If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.

IEEE 802.11b	IEEE 802.11g
	
Duty cycle = 100 %	Duty cycle = 100 %
IEEE 802.11n (HT20)	**IEEE 802.11n (HT40)**
	
Duty cycle = 100 %	Duty cycle = 100 %

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	**Adapter**	Apple	N/A	N/A	Furnished at test lab
B	Fixture	N/A	N/A	N/A	Supplied by Applicant

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	NO	NO	1m	USB Cable	Furnished at test lab

4 AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56 *	56 - 46 *
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
(3) 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 Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.2 TEST PROCEDURE

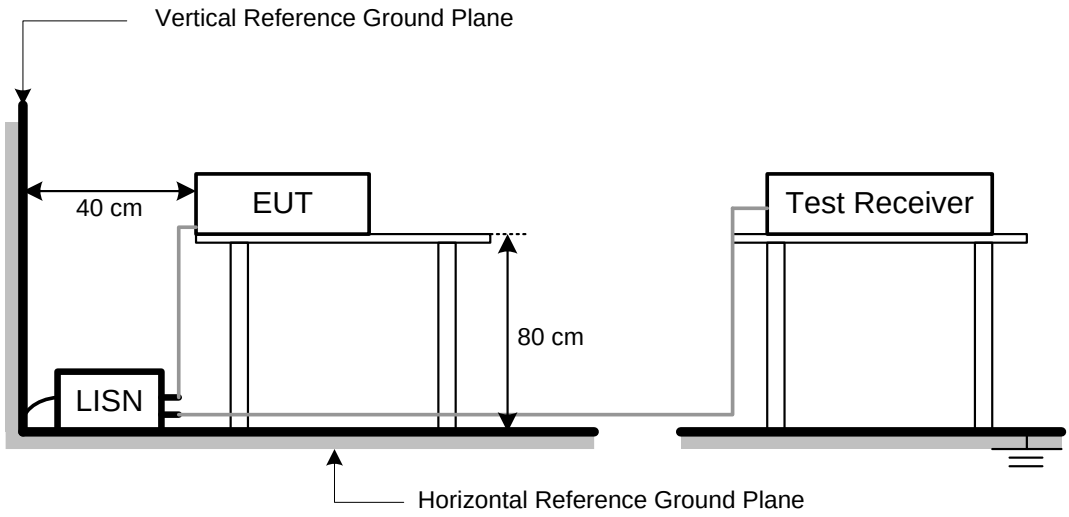
a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
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 to keep the cable above 40 cm.
c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
e. For the actual test configuration, please refer to the related Item - EUT Test Photos.

NOTE:
(1) In the results, each reading is marked as Peak, QP or AVG per the detector used.
BW=9 kHz (6 dB Bandwidth)
(2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in normal link mode.

4.6 TEST RESULT

Temperature: 25 °C Relative Humidity: 45 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX A.

5 RADIATED EMISSIONS TEST

5.1 LIMIT

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

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

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 EMISSIONS MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	Radiated Emissions (dBuV/m)		Measurement Distance (meters)
	Peak	Average	
Above 1000	74	54	3

NOTE:

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

Spectrum 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

5.2 TEST PROCEDURE

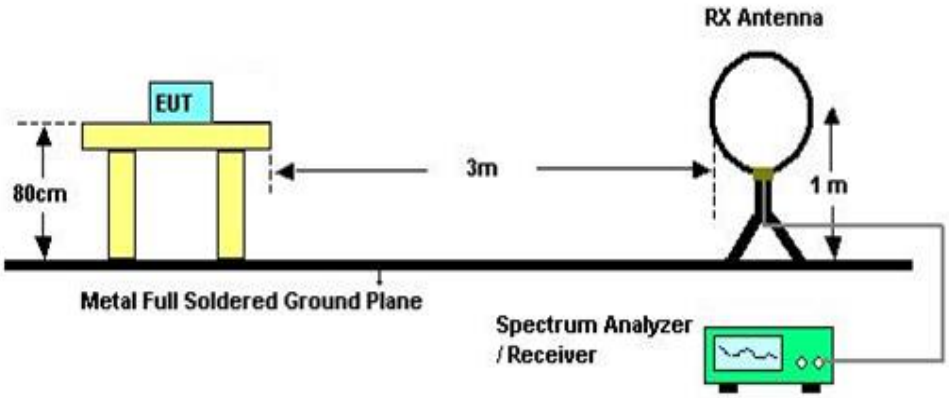
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

5.3 DEVIATION FROM TEST STANDARD

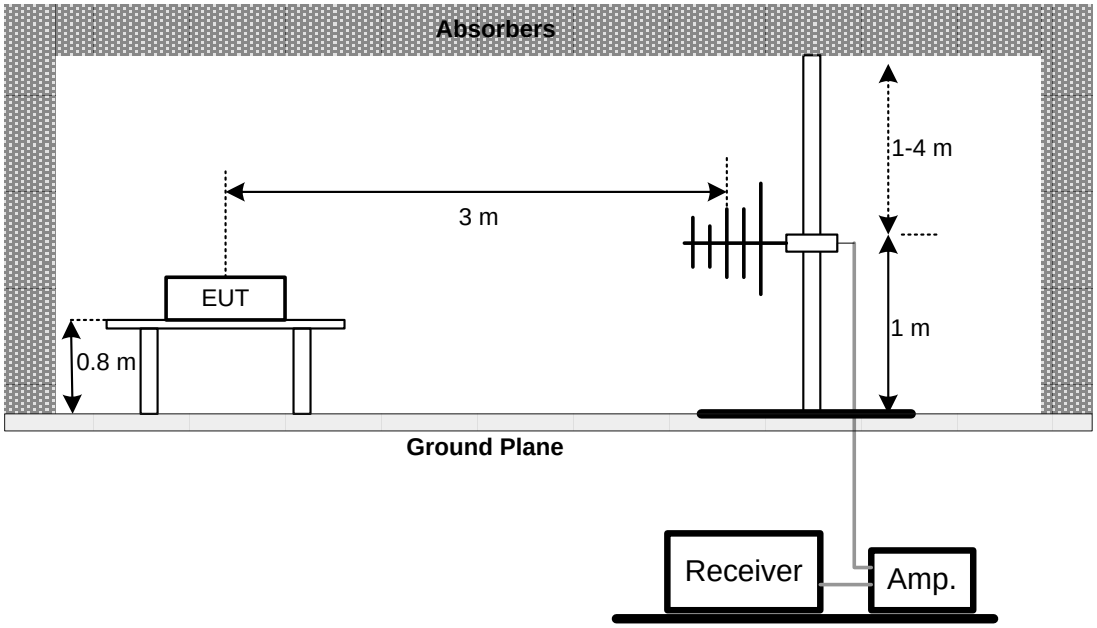
No deviation.

5.4 TEST SETUP

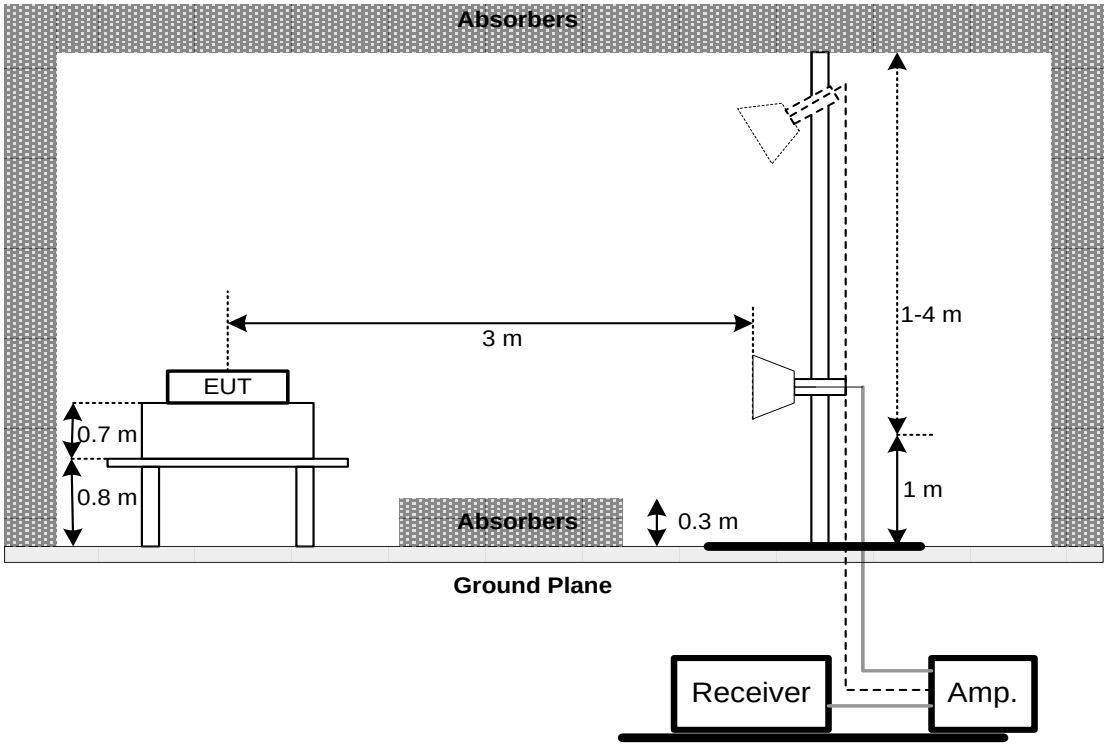
Below 30 MHz



30 MHz to 1 GHz



Above 1 GHz



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT – 9 KHZ TO 30 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX B.

NOTE:

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

5.7 TEST RESULT – 30MHZ TO 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX C.

5.8 TEST RESULT – ABOVE 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX D.

NOTE:

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

6 BANDWIDTH TEST

6.1 LIMIT

FCC Part15, Subpart C (§15.247)		
Section	Test Item	Limit
§15.247(a)	6 dB Bandwidth	500 kHz

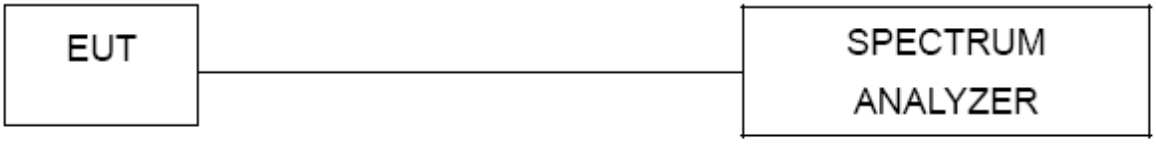
6.2 TEST PROCEDURE

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.

6.3 DEVIATION FROM TEST STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULT

Please refer to the APPENDIX E.

7 PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15, Subpart C (§15.247)		
Section	Test Item	Limit
§15.247(b)	Maximum Output Power	1 Watt or 30dBm

7.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
b. The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX F.

8 ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST

8.1 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.

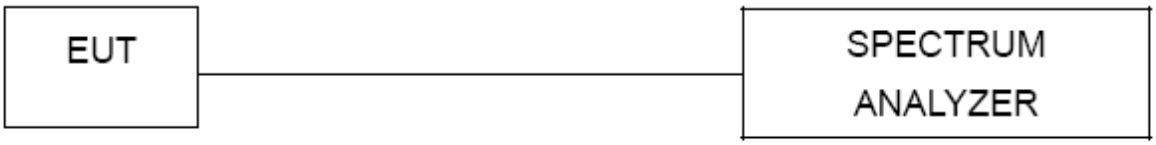
8.2 TEST PROCEDURE

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 = 100 kHz, VBW=300 kHz, Sweep time = Auto.
c. Offset = antenna gain + cable loss.

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULT

Please refer to the APPENDIX G.

9 POWER SPECTRAL DENSITY

9.1 LIMIT

FCC Part15, Subpart C (§15.247)		
Section	Test Item	Limit
§15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)

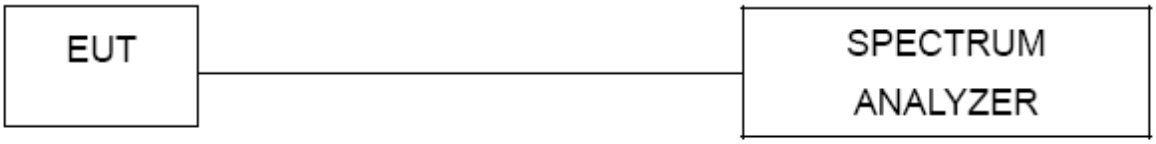
9.2 TEST PROCEDURE

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 = 3 kHz, VBW = 10 kHz, Sweep time = Auto.

9.3 DEVIATION FROM TEST STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULT

Please refer to the APPENDIX H.

10 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Mar. 08, 2019
2	Test Cable	EMCI	EMCCFD300-BM-BMR-6000	170715	Aug. 07, 2019
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 10, 2018
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

Radiated Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Preamplifier	EMCI	012645B	980267	Apr. 14, 2019
2	Preamplifier	EMCI	EMC02325	980217	Apr. 14, 2019
3	Preamplifier	EMCI	EMC2654045	980030	Apr. 14, 2019
4	Test Cable	EMCI	EMC104-SM-SM-8000	8m	Apr. 14, 2019
5	Test Cable	EMCI	EMC104-SM-SM-800	150207	Apr. 14, 2019
6	Test Cable	EMCI	EEMC104-SM-SM-3000	151205	Apr. 14, 2019
7	MXE EMI Receiver	Agilent	N9038A	MY55420127	Jan. 27, 2019
8	Signal Analyzer	Agilent	N9010A	MY52220990	May 22, 2019
9	Loop Ant	EMCO	6502	42960	May 03, 2019
10	Horm Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	May 02, 2019
11	Horm Ant	Schwarzbeck	BBHA 9170	187	Aug. 16, 2019
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-548	Mar. 22, 2019
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0623	Mar. 22, 2019
14	Measurement Software	Farad	EZ_EMC (Ver. NB-03A1-01)	N/A	N/A

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 24, 2019

Peak Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY51160196	Jul. 25, 2019
2	Power Meter	Anritsu	ML2495A	1128008	Aug.15, 2019
3	Power Sensor	Anritsu	MA2411B	1126001	Aug.15, 2019

Antenna Conducted Spurious Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 24, 2019

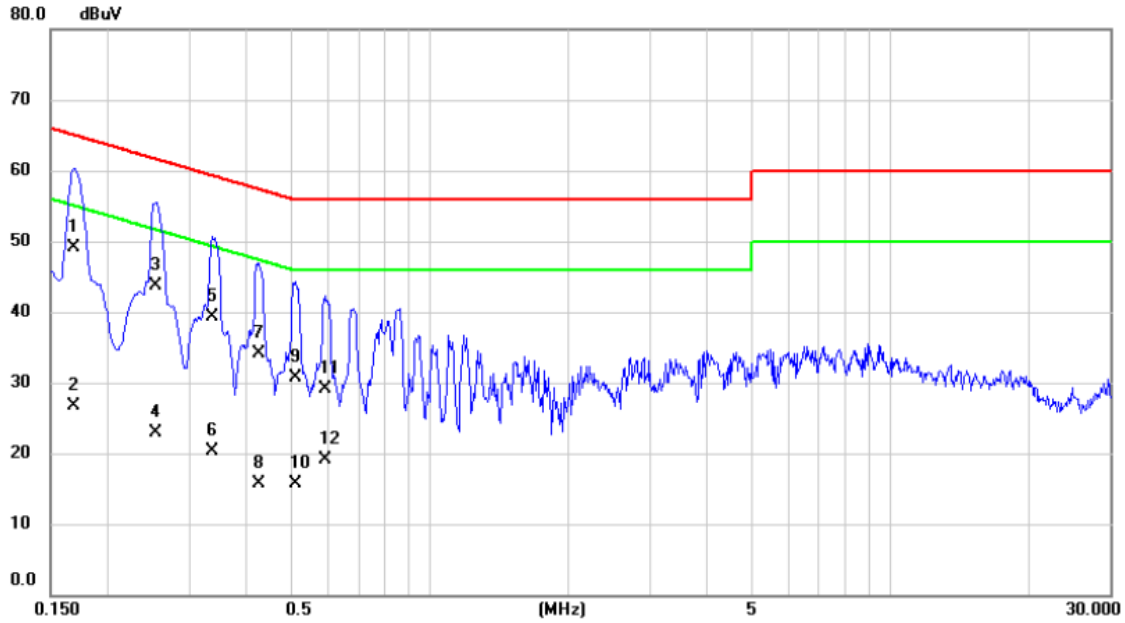
Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 24, 2019

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

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

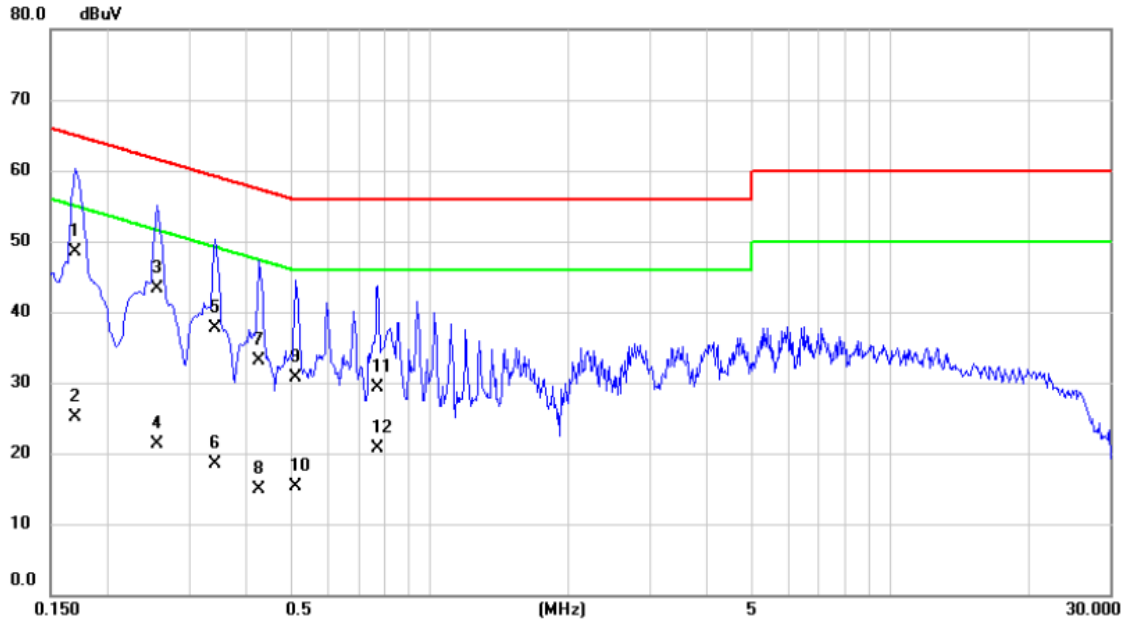
CONTINUE ON NEXT PAGE

Test Mode	TX B MODE CHANNEL 2412 MHz	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1680	39.40	9.66	49.06	65.06	-16.00	QP	
2		0.1680	17.00	9.66	26.66	55.06	-28.40	AVG	
3		0.2535	34.10	9.66	43.76	61.64	-17.88	QP	
4		0.2535	13.20	9.66	22.86	51.64	-28.78	AVG	
5		0.3367	29.70	9.65	39.35	59.28	-19.93	QP	
6		0.3367	10.60	9.65	20.25	49.28	-29.03	AVG	
7		0.4267	24.40	9.65	34.05	57.32	-23.27	QP	
8		0.4267	6.00	9.65	15.65	47.32	-31.67	AVG	
9		0.5122	21.10	9.65	30.75	56.00	-25.25	QP	
10		0.5122	6.10	9.65	15.75	46.00	-30.25	AVG	
11		0.5910	19.50	9.66	29.16	56.00	-26.84	QP	
12		0.5910	9.40	9.66	19.06	46.00	-26.94	AVG	

Test Mode	TX B MODE CHANNEL 2412 MHz	Phase	Neutral

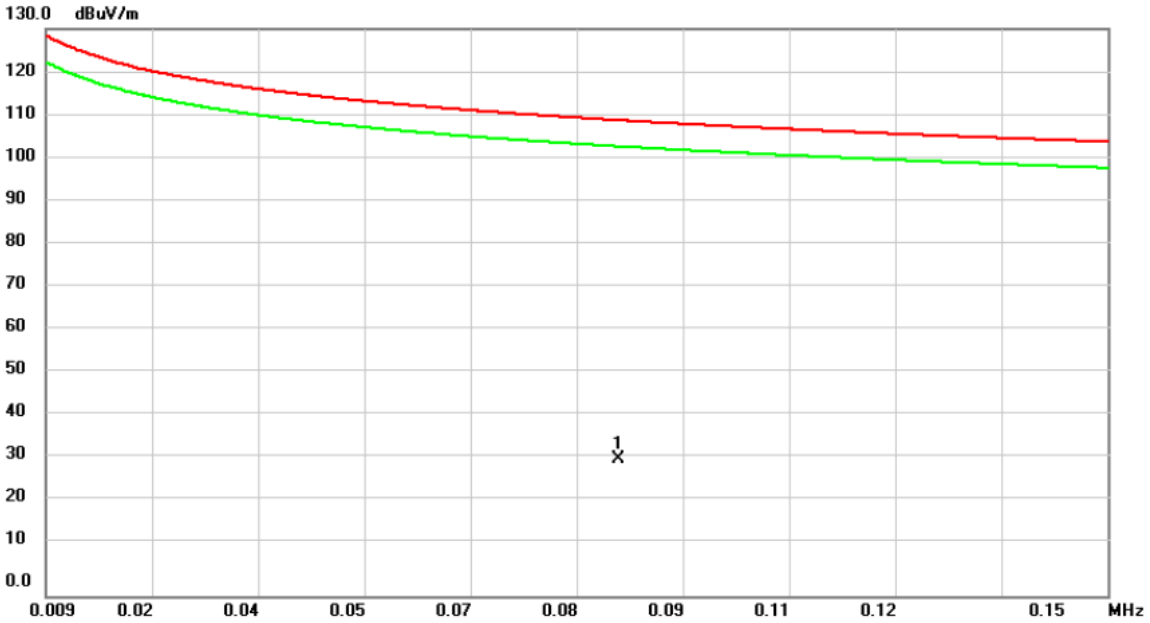


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1703	38.80	9.65	48.45	64.95	-16.50	QP	
2		0.1703	15.50	9.65	25.15	54.95	-29.80	AVG	
3		0.2558	33.70	9.64	43.34	61.57	-18.23	QP	
4		0.2558	11.60	9.64	21.24	51.57	-30.33	AVG	
5		0.3412	28.10	9.64	37.74	59.17	-21.43	QP	
6		0.3412	8.80	9.64	18.44	49.17	-30.73	AVG	
7		0.4267	23.40	9.64	33.04	57.32	-24.28	QP	
8		0.4267	5.30	9.64	14.94	47.32	-32.38	AVG	
9		0.5122	21.00	9.64	30.64	56.00	-25.36	QP	
10		0.5122	5.70	9.64	15.34	46.00	-30.66	AVG	
11		0.7687	19.70	9.67	29.37	56.00	-26.63	QP	
12		0.7687	11.10	9.67	20.77	46.00	-25.23	AVG	

APPENDIX B RADIATED EMISSIONS - 9 KHZ TO 30 MHZ

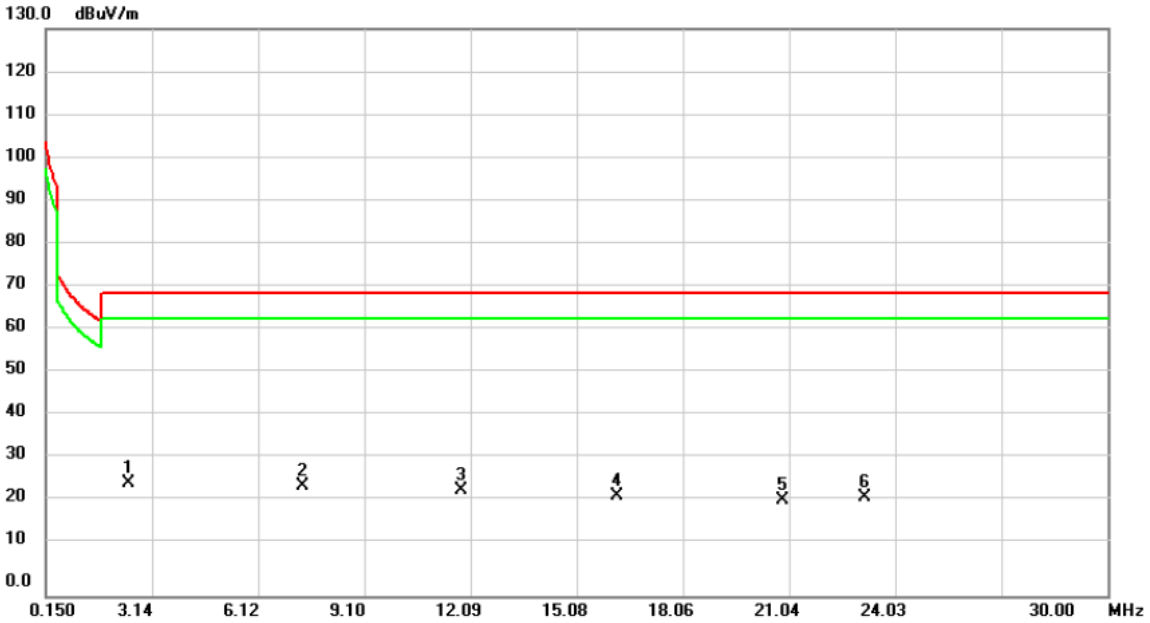
CONTINUE ON NEXT PAGE

Test Mode	TX B MODE CHANNEL 2412 MHz	Azimuth Angle	90°



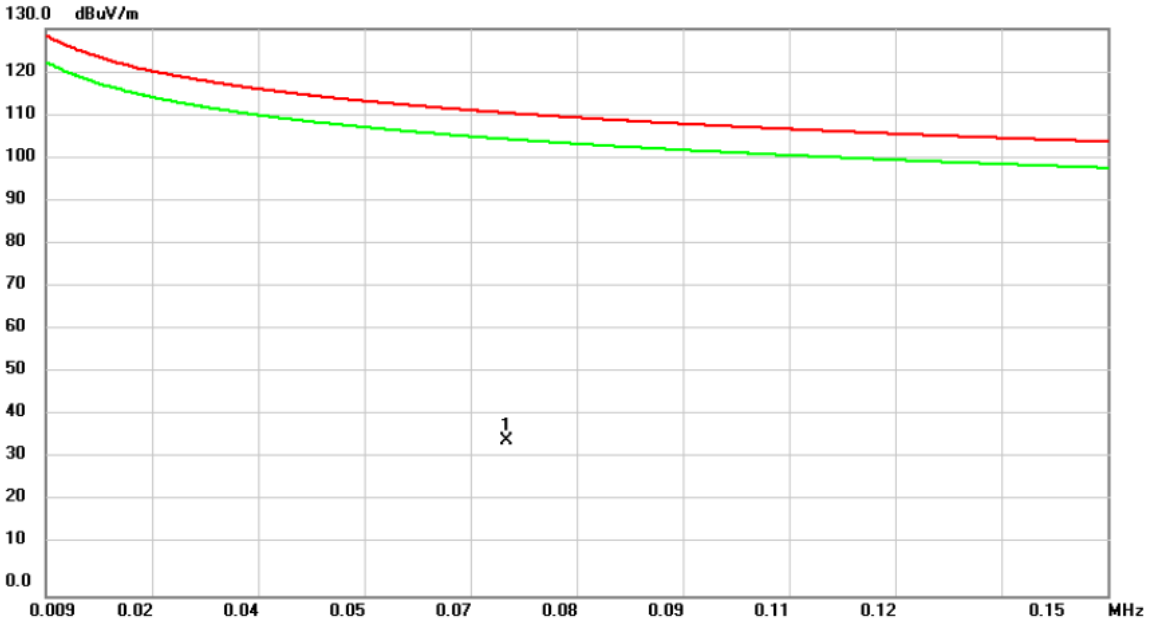
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0850	13.71	17.76	31.47	109.02	-77.55	peak	

Test Mode	TX B MODE CHANNEL 2412 MHz	Azimuth Angle	90°



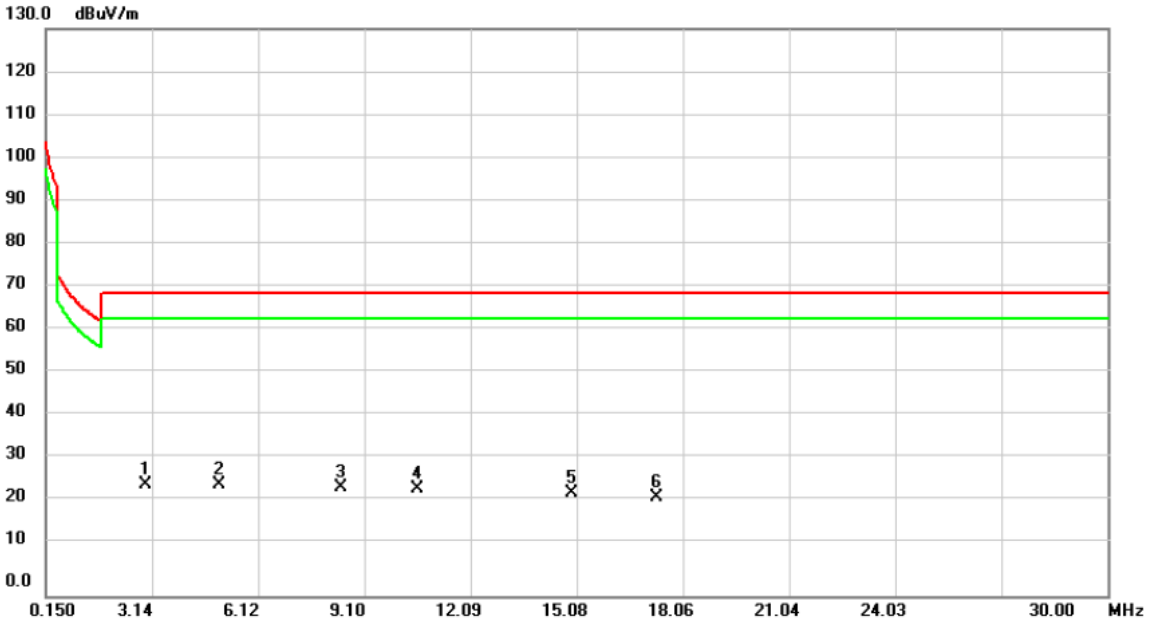
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2.4584	29.22	-3.27	25.95	69.54	-43.59	peak	
2		7.3538	29.38	-4.20	25.18	69.54	-44.36	peak	
3		11.8114	29.10	-4.82	24.28	69.54	-45.26	peak	
4		16.1894	28.32	-5.42	22.90	69.54	-46.64	peak	
5		20.8460	28.51	-6.54	21.97	69.54	-47.57	peak	
6		23.1544	29.89	-7.36	22.53	69.54	-47.01	peak	

Test Mode	TX B MODE CHANNEL 2412 MHz	Azimuth Angle	0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0701	16.15	19.28	35.43	110.69	-75.26	peak	

Test Mode	TX B MODE CHANNEL 2412 MHz	Azimuth Angle	0°

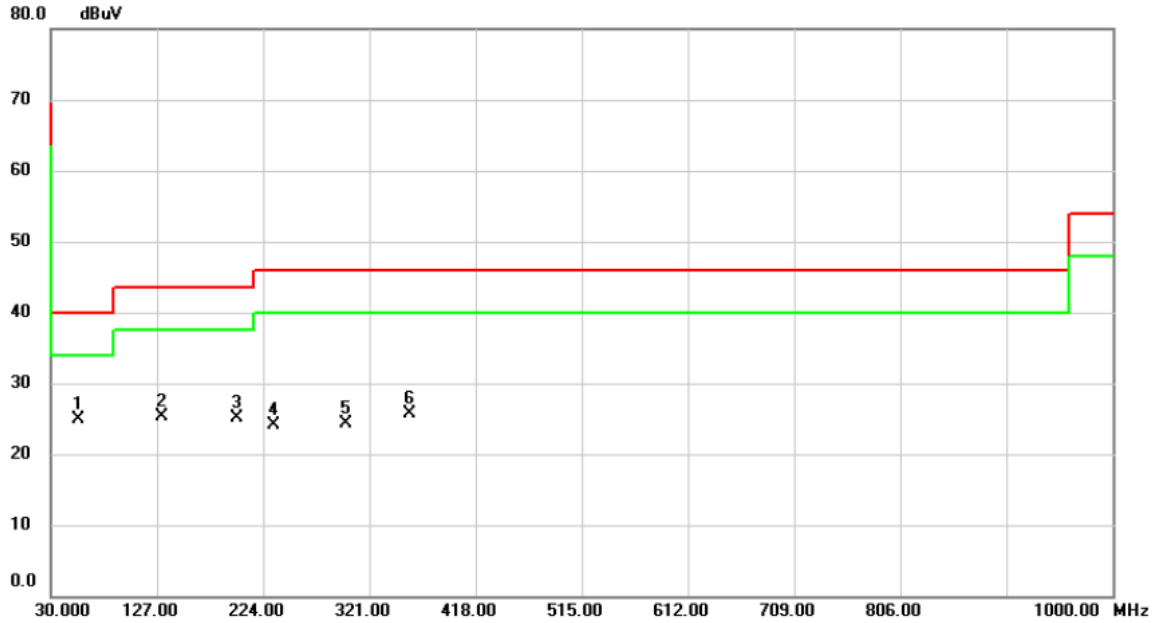


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2.9360	28.99	-3.62	25.37	69.54	-44.17	peak	
2	*	5.0056	29.54	-3.93	25.61	69.54	-43.93	peak	
3		8.4284	29.44	-4.49	24.95	69.54	-44.59	peak	
4		10.5776	29.18	-4.77	24.41	69.54	-45.13	peak	
5		14.9158	28.64	-5.00	23.64	69.54	-45.90	peak	
6		17.3435	28.44	-5.97	22.47	69.54	-47.07	peak	

APPENDIX C RADIATED EMISSIONS - 30 MHZ TO 1000 MHZ

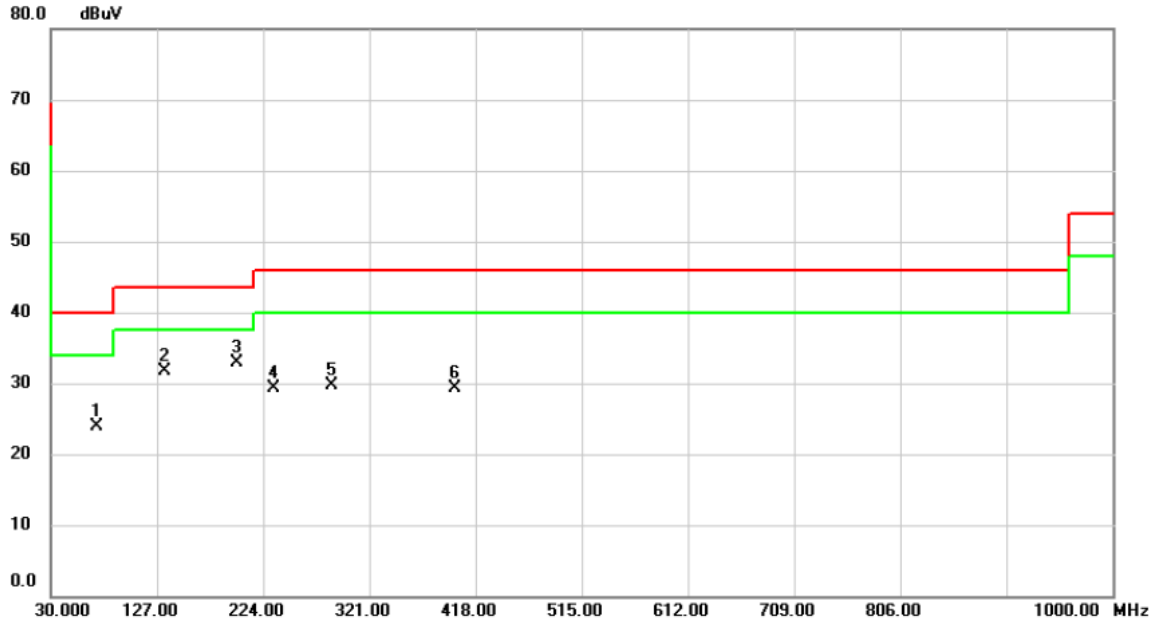
CONTINUE ON NEXT PAGE

Test Mode	TX B MODE CHANNEL 2412 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	55.2200	33.29	-8.41	24.88	40.00	-15.12	peak	
2		131.8500	35.01	-9.72	25.29	43.50	-18.21	peak	
3		199.7500	36.02	-10.90	25.12	43.50	-18.38	peak	
4		233.7000	33.48	-9.39	24.09	46.00	-21.91	peak	
5		299.6600	31.86	-7.52	24.34	46.00	-21.66	peak	
6		357.8600	31.71	-6.03	25.68	46.00	-20.32	peak	

Test Mode	TX B MODE CHANNEL 2412 MHz	Polarization	Horizontal

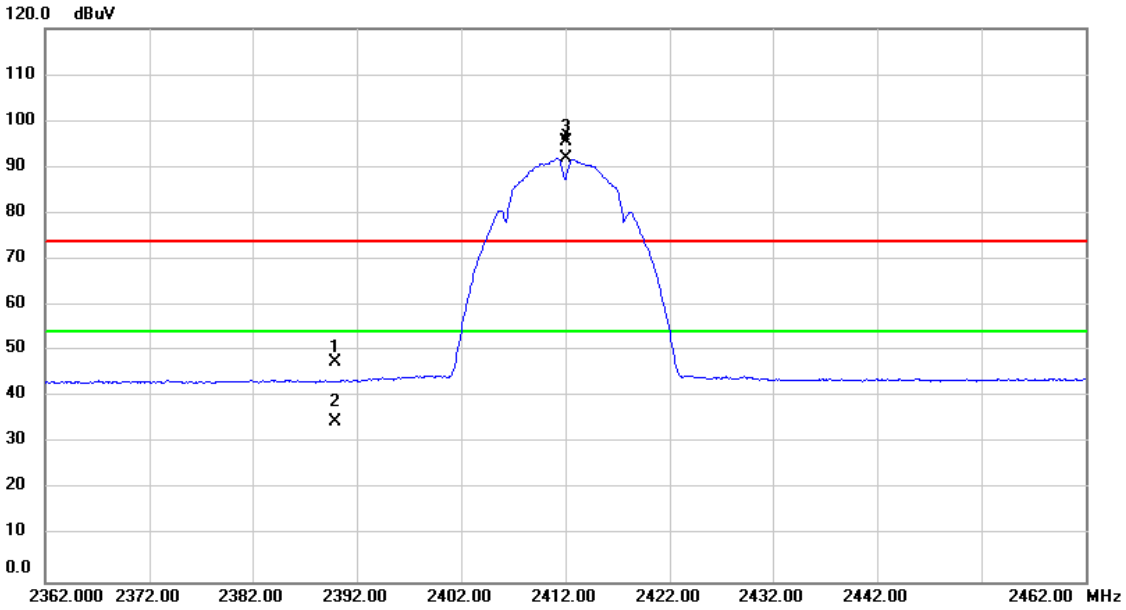


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		71.7100	34.88	-11.01	23.87	40.00	-16.13	peak	
2		133.7900	41.15	-9.50	31.65	43.50	-11.85	peak	
3	*	199.7500	43.80	-10.90	32.90	43.50	-10.60	peak	
4		233.7000	38.74	-9.39	29.35	46.00	-16.65	peak	
5		287.0500	37.44	-7.74	29.70	46.00	-16.30	peak	
6		398.6000	34.48	-5.10	29.38	46.00	-16.62	peak	

APPENDIX D RADIATED EMISSIONS - ABOVE 1000 MHZ

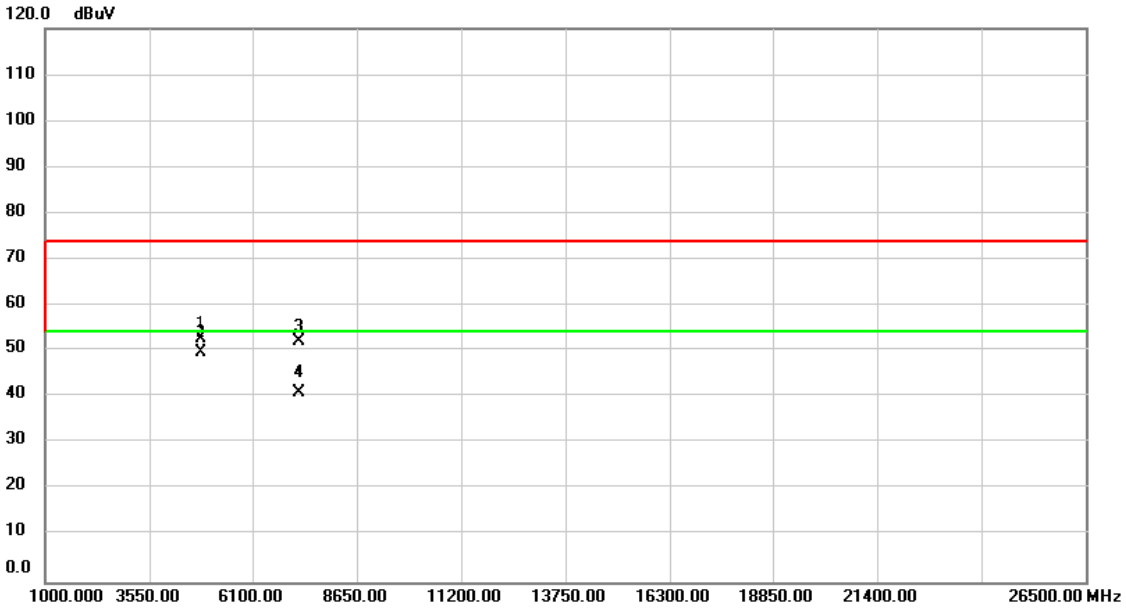
CONTINUE ON NEXT PAGE

Test Mode	TX B MODE _2412 MHz	Polarization	Vertical



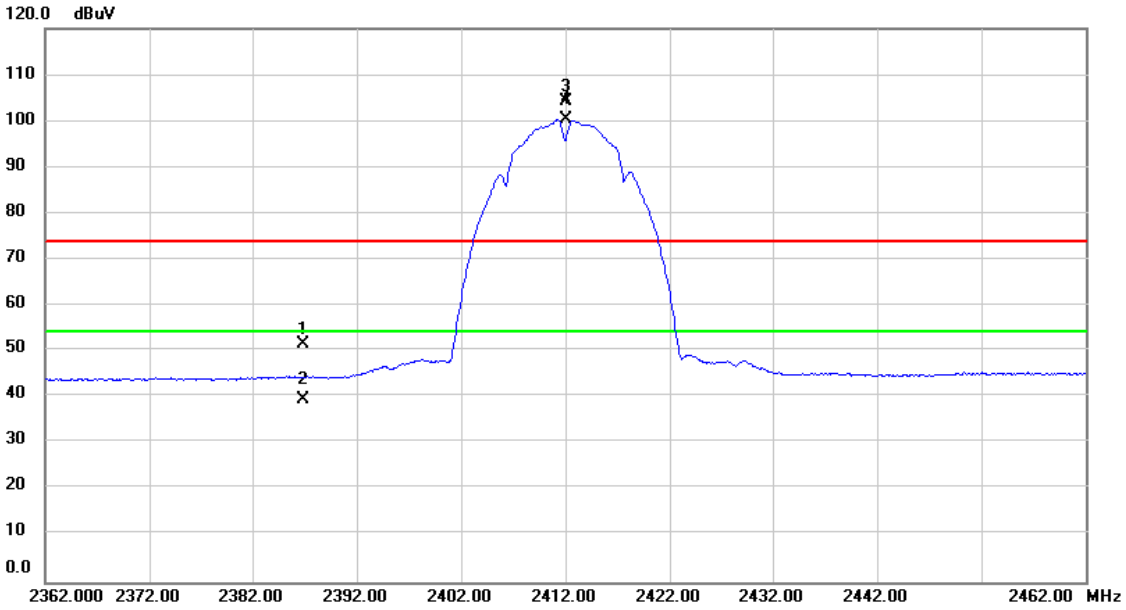
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2389.916	16.79	30.84	47.63	74.00	-26.37	peak	
2		2389.916	3.77	30.84	34.61	54.00	-19.39	AVG	
3	X	2412.000	64.78	30.92	95.70	74.00	21.70	peak	No Limit
4	*	2412.000	61.00	30.92	91.92	54.00	37.92	AVG	No Limit

Test Mode	TX B MODE _2412 MHz	Polarization	Vertical



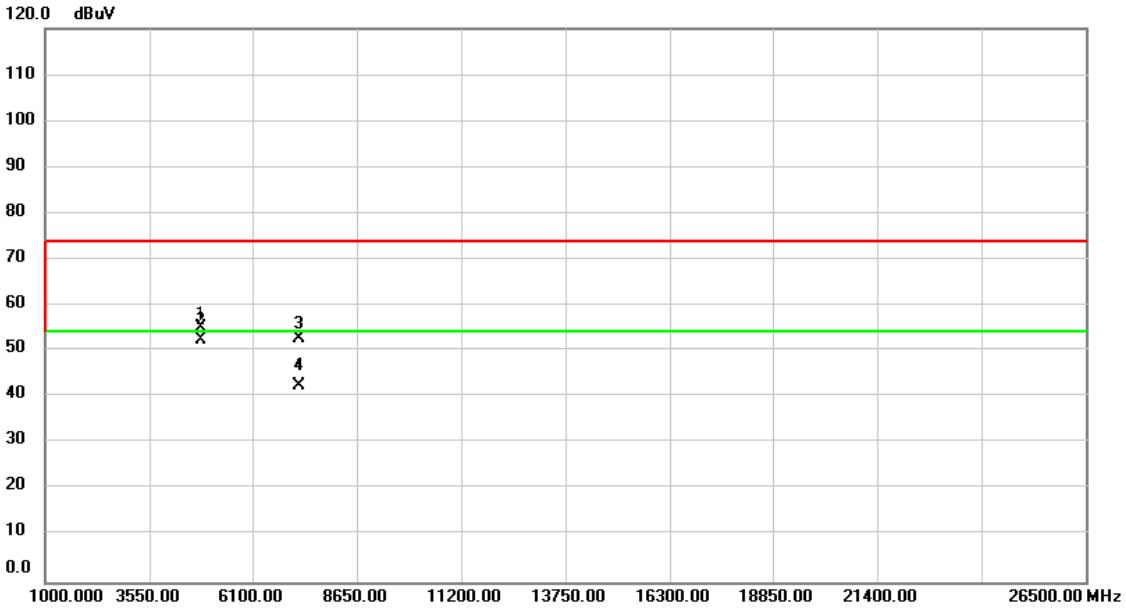
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4824.000	64.06	-11.48	52.58	74.00	-21.42	peak	
2	*	4824.000	61.27	-11.48	49.79	54.00	-4.21	AVG	
3		7236.000	57.37	-5.26	52.11	74.00	-21.89	peak	
4		7236.000	46.23	-5.26	40.97	54.00	-13.03	AVG	

Test Mode	TX B MODE _2412 MHz	Polarization	Horizontal



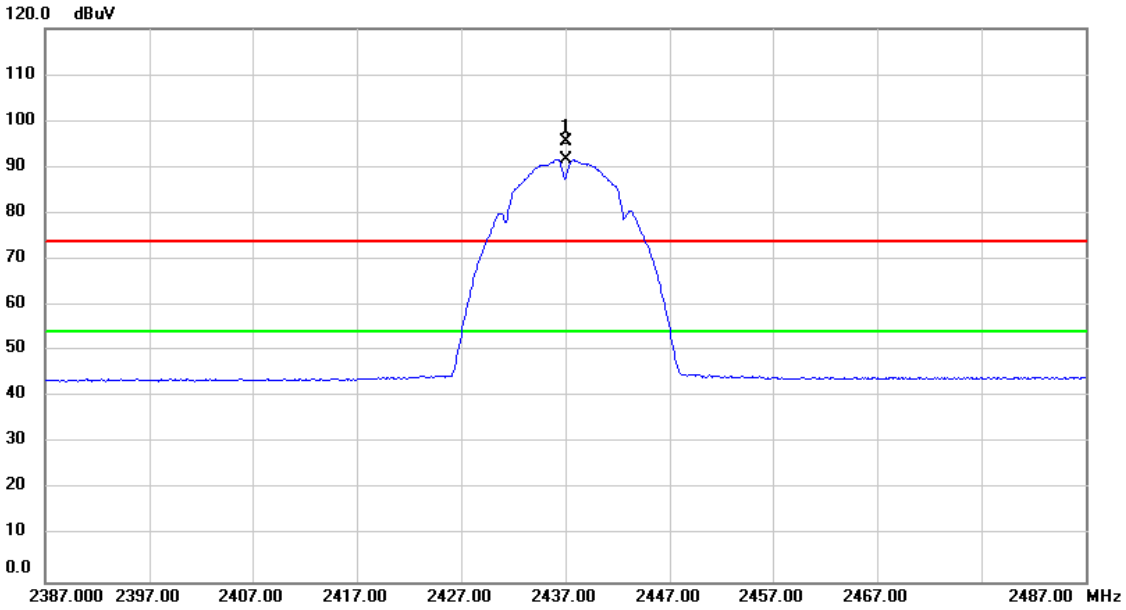
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2386.920	20.57	30.83	51.40	74.00	-22.60	peak	
2		2386.920	8.67	30.83	39.50	54.00	-14.50	AVG	
3	X	2412.000	73.23	30.92	104.15	74.00	30.15	peak	No Limit
4	*	2412.000	69.30	30.92	100.22	54.00	46.22	AVG	No Limit

Test Mode	TX B MODE _2412 MHz	Polarization	Horizontal



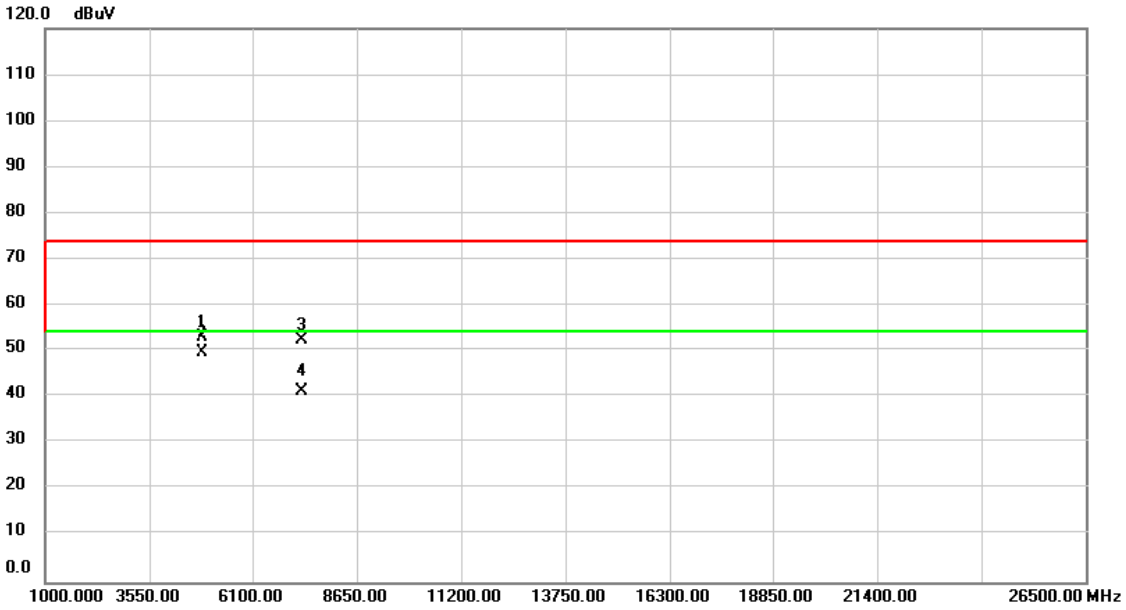
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4824.000	66.50	-11.48	55.02	74.00	-18.98	peak	
2	*	4824.000	63.87	-11.48	52.39	54.00	-1.61	AVG	
3		7236.000	57.90	-5.26	52.64	74.00	-21.36	peak	
4		7236.000	47.86	-5.26	42.60	54.00	-11.40	AVG	

Test Mode	TX B MODE _2437 MHz	Polarization	Vertical



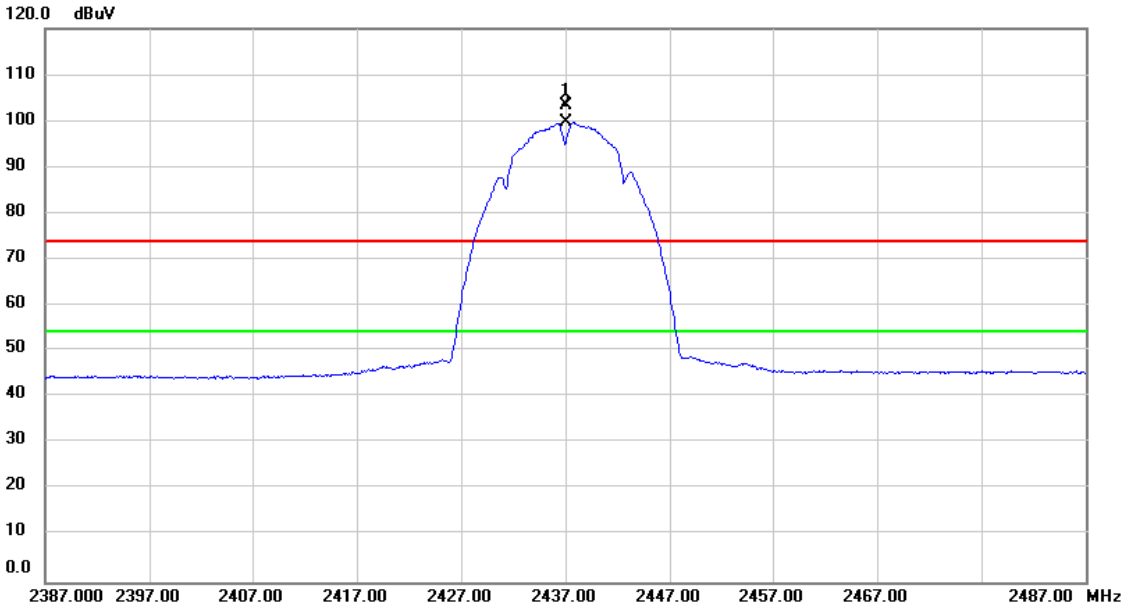
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	64.47	31.01	95.48	74.00	21.48	peak	No Limit
2	*	2437.000	60.70	31.01	91.71	54.00	37.71	AVG	No Limit

Test Mode	TX B MODE _2437 MHz	Polarization	Vertical



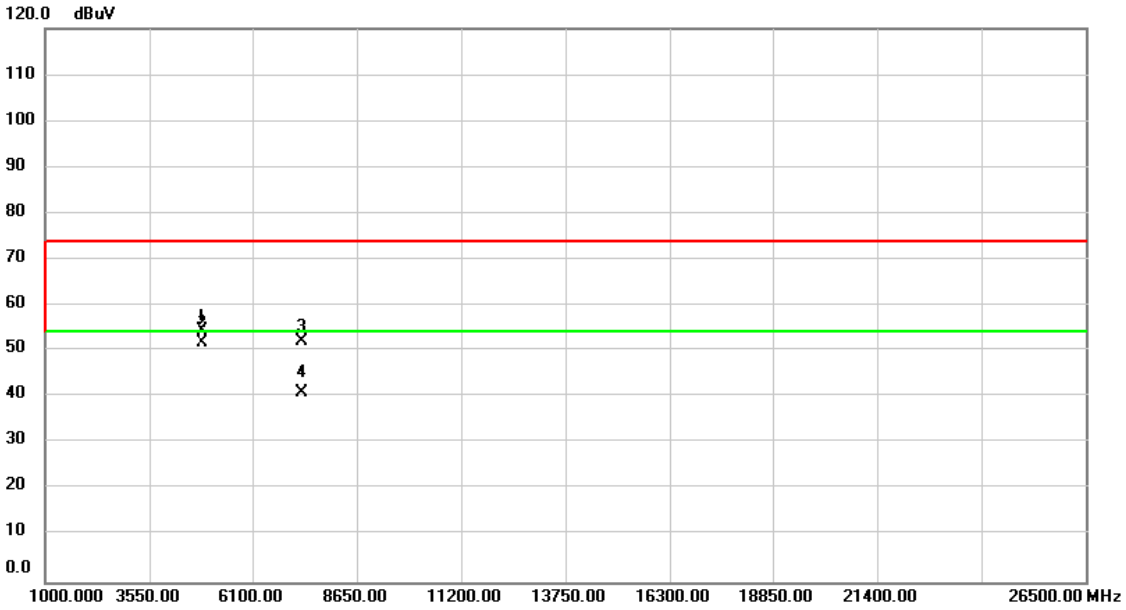
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	64.46	-11.42	53.04	74.00	-20.96	peak	
2	*	4874.000	61.17	-11.42	49.75	54.00	-4.25	AVG	
3		7311.000	57.39	-4.99	52.40	74.00	-21.60	peak	
4		7311.000	46.10	-4.99	41.11	54.00	-12.89	AVG	

Test Mode	TX B MODE _2437 MHz	Polarization	Horizontal



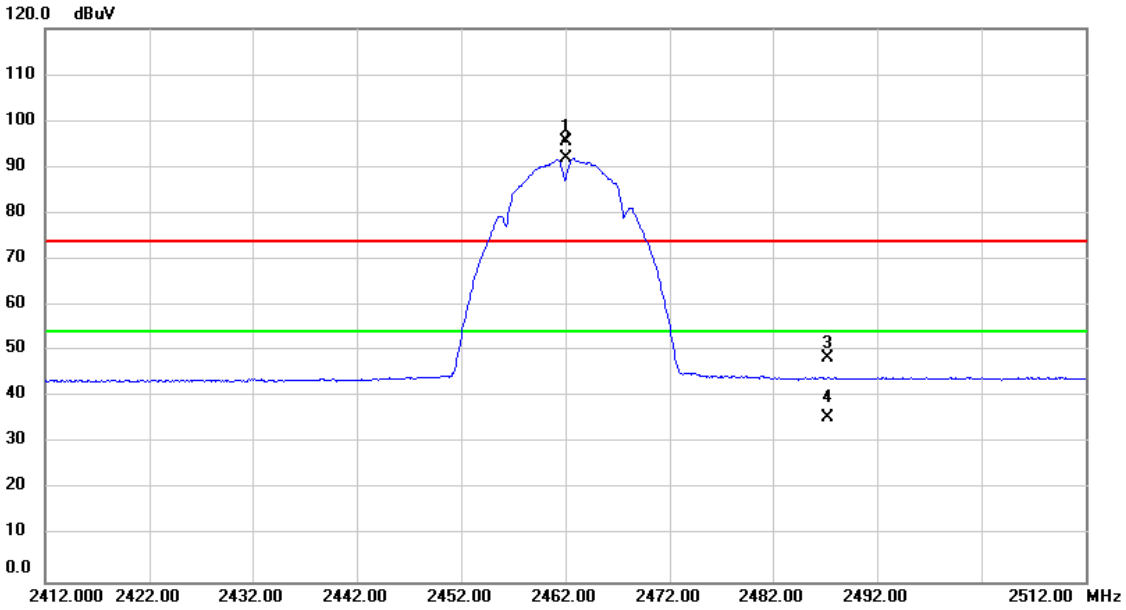
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	72.48	31.01	103.49	74.00	29.49	peak	No Limit
2	*	2437.000	68.64	31.01	99.65	54.00	45.65	AVG	No Limit

Test Mode	TX B MODE _2437 MHz	Polarization	Horizontal



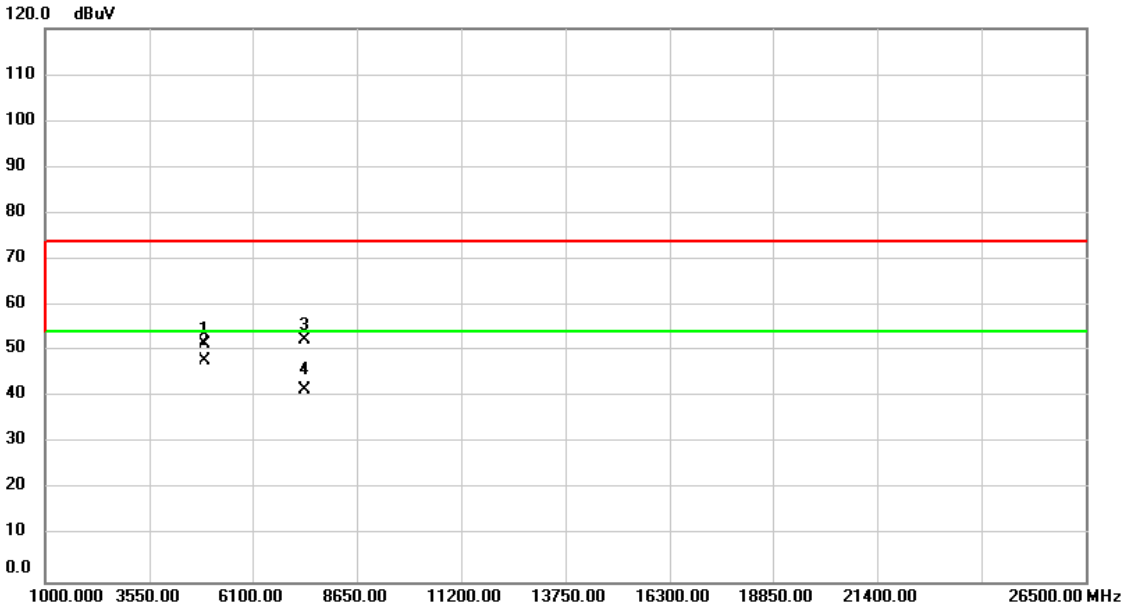
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	65.78	-11.42	54.36	74.00	-19.64	peak	
2	*	4874.000	63.06	-11.42	51.64	54.00	-2.36	AVG	
3		7311.000	56.97	-4.99	51.98	74.00	-22.02	peak	
4		7311.000	45.85	-4.99	40.86	54.00	-13.14	AVG	

Test Mode	TX B MODE _2462 MHz	Polarization	Vertical



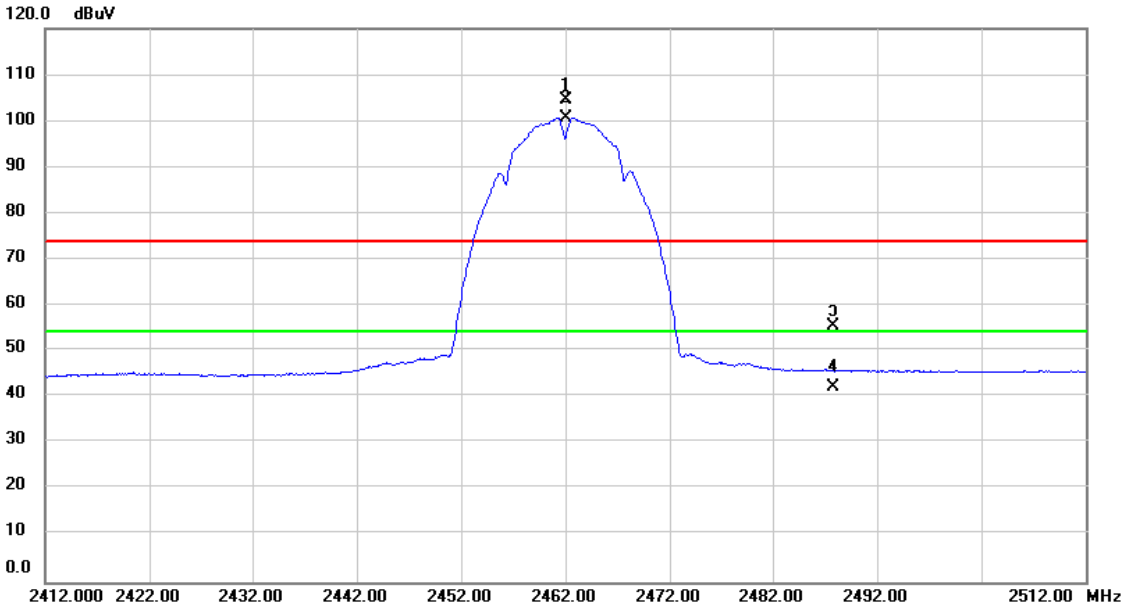
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2462.000	64.59	31.09	95.68	74.00	21.68	peak	No Limit
2	*	2462.000	60.76	31.09	91.85	54.00	37.85	AVG	No Limit
3		2487.229	17.42	31.18	48.60	74.00	-25.40	peak	
4		2487.229	4.34	31.18	35.52	54.00	-18.48	AVG	

Test Mode	TX B MODE _2462 MHz	Polarization	Vertical



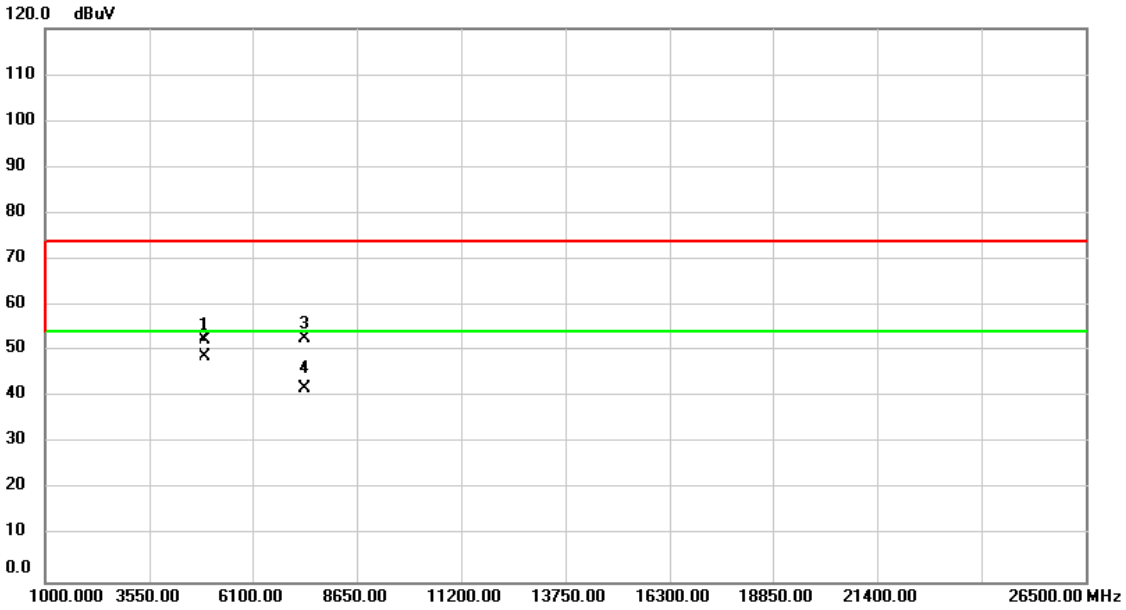
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4924.000	62.89	-11.37	51.52	74.00	-22.48	peak	
2	*	4924.000	59.24	-11.37	47.87	54.00	-6.13	AVG	
3		7386.000	57.22	-4.72	52.50	74.00	-21.50	peak	
4		7386.000	46.19	-4.72	41.47	54.00	-12.53	AVG	

Test Mode	TX B MODE _2462 MHz	Polarization	Horizontal



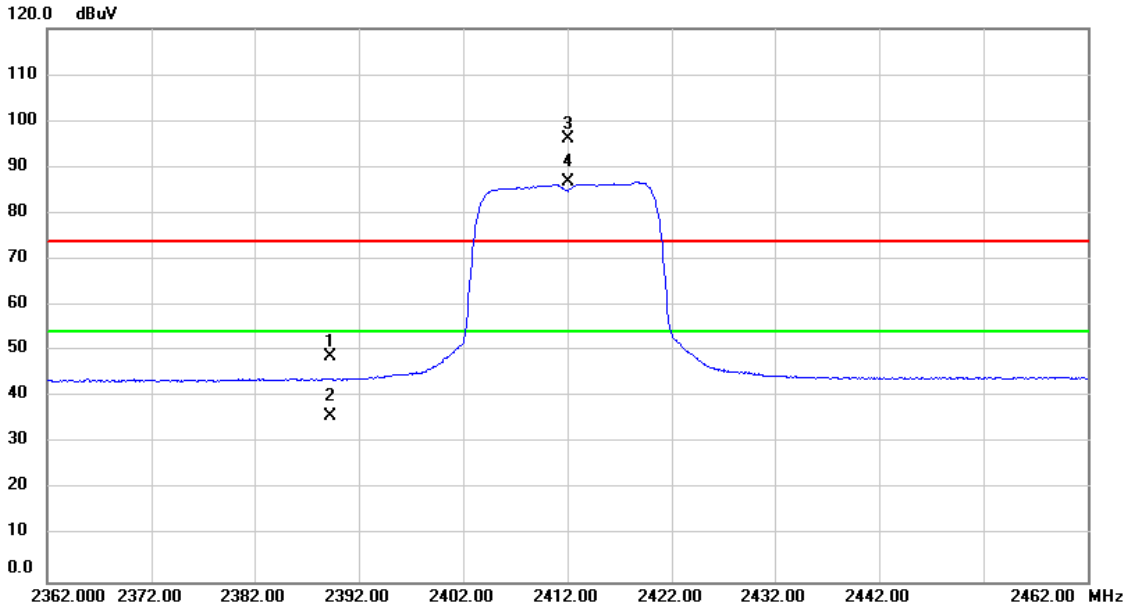
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2462.000	73.55	31.09	104.64	74.00	30.64	peak	No Limit
2	*	2462.000	69.64	31.09	100.73	54.00	46.73	AVG	No Limit
3		2487.856	24.05	31.19	55.24	74.00	-18.76	peak	
4		2487.856	11.05	31.19	42.24	54.00	-11.76	AVG	

Test Mode	TX B MODE _2462 MHz	Polarization	Horizontal



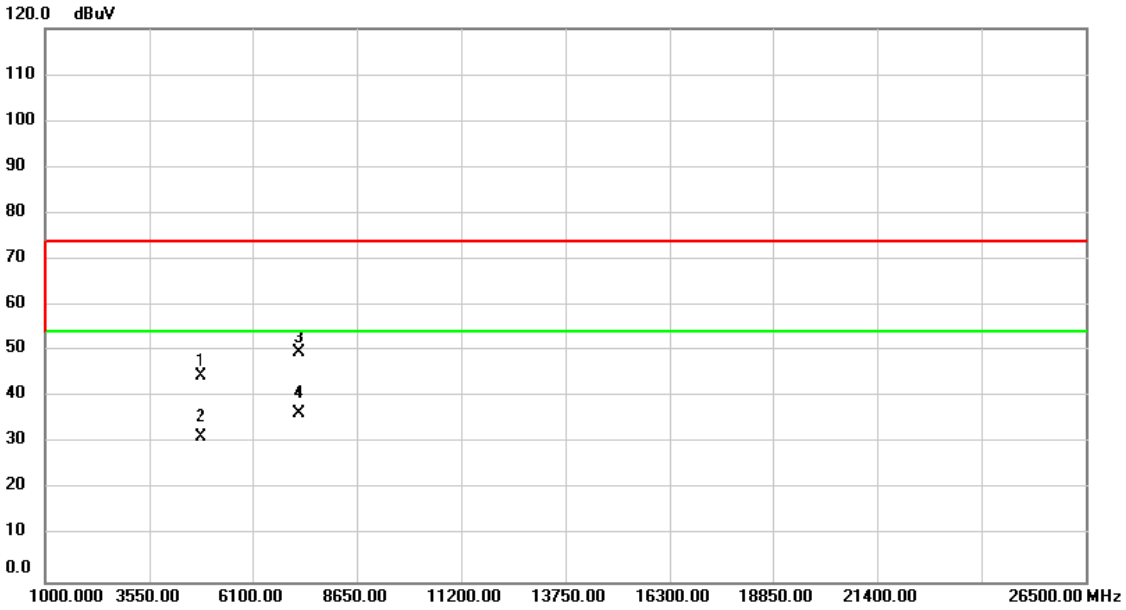
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4924.000	63.66	-11.37	52.29	74.00	-21.71	peak	
2	*	4924.000	60.19	-11.37	48.82	54.00	-5.18	AVG	
3		7386.000	57.23	-4.72	52.51	74.00	-21.49	peak	
4		7386.000	46.57	-4.72	41.85	54.00	-12.15	AVG	

Test Mode	TX G MODE _2412 MHz	Polarization	Vertical



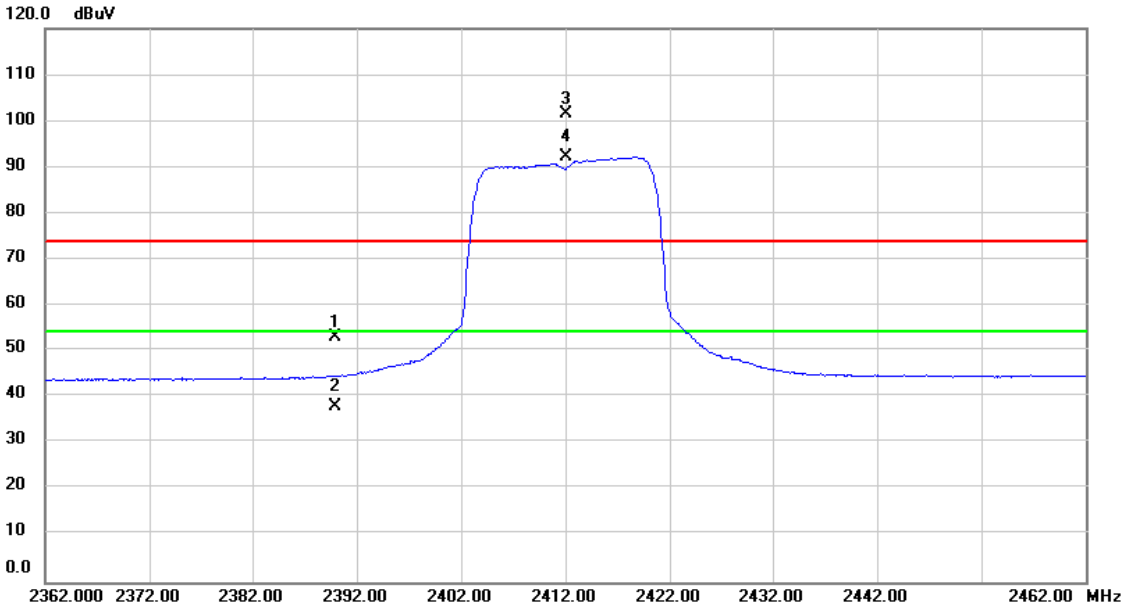
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2389.272	18.03	30.84	48.87	74.00	-25.13	peak	
2		2389.272	5.12	30.84	35.96	54.00	-18.04	AVG	
3	X	2412.000	65.30	30.92	96.22	74.00	22.22	peak	No Limit
4	*	2412.000	55.84	30.92	86.76	54.00	32.76	AVG	No Limit

Test Mode	TX G MODE _2412 MHz	Polarization	Vertical



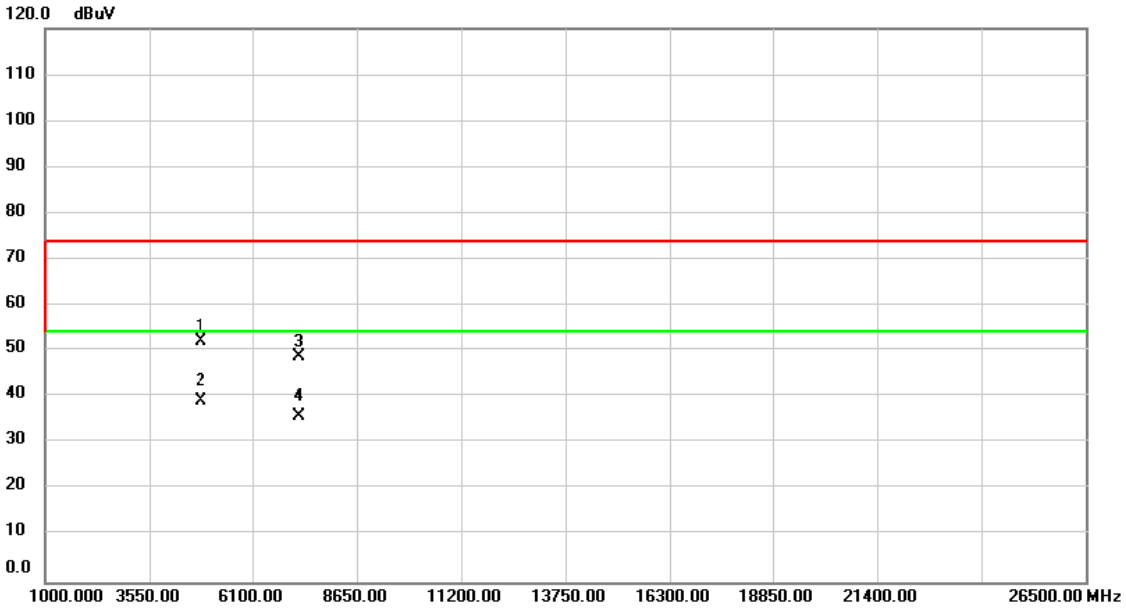
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4824.000	56.04	-11.48	44.56	74.00	-29.44	peak	
2		4824.000	42.77	-11.48	31.29	54.00	-22.71	AVG	
3		7236.000	54.98	-5.26	49.72	74.00	-24.28	peak	
4	*	7236.000	41.72	-5.26	36.46	54.00	-17.54	AVG	

Test Mode	TX G MODE _2412 MHz	Polarization	Horizontal



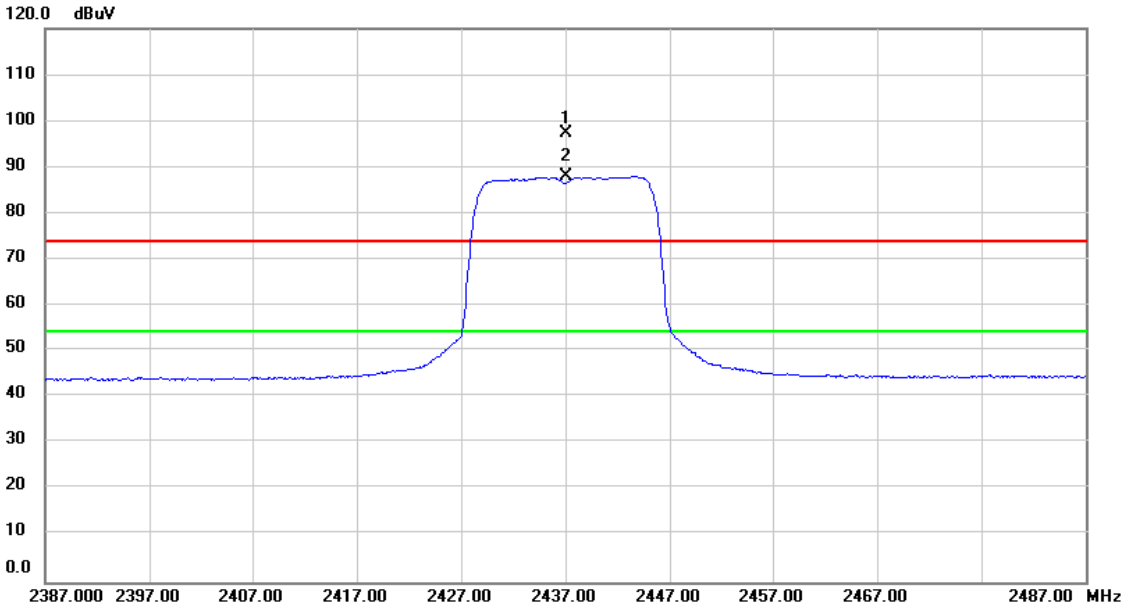
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2389.944	22.14	30.84	52.98	74.00	-21.02	peak	
2		2389.944	7.20	30.84	38.04	54.00	-15.96	AVG	
3	X	2412.000	70.76	30.92	101.68	74.00	27.68	peak	No Limit
4	*	2412.000	61.32	30.92	92.24	54.00	38.24	AVG	No Limit

Test Mode	TX G MODE _2412 MHz	Polarization	Horizontal



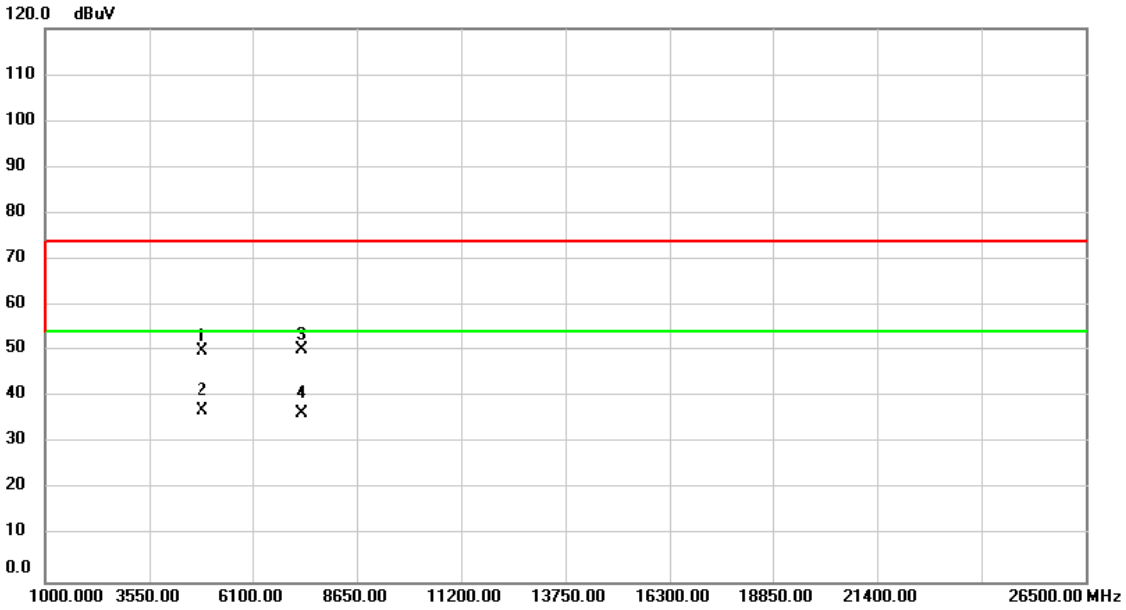
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4824.000	63.64	-11.48	52.16	74.00	-21.84	peak	
2	*	4824.000	50.55	-11.48	39.07	54.00	-14.93	AVG	
3		7236.000	54.15	-5.26	48.89	74.00	-25.11	peak	
4		7236.000	41.23	-5.26	35.97	54.00	-18.03	AVG	

Test Mode	TX G MODE _2437 MHz	Polarization	Vertical



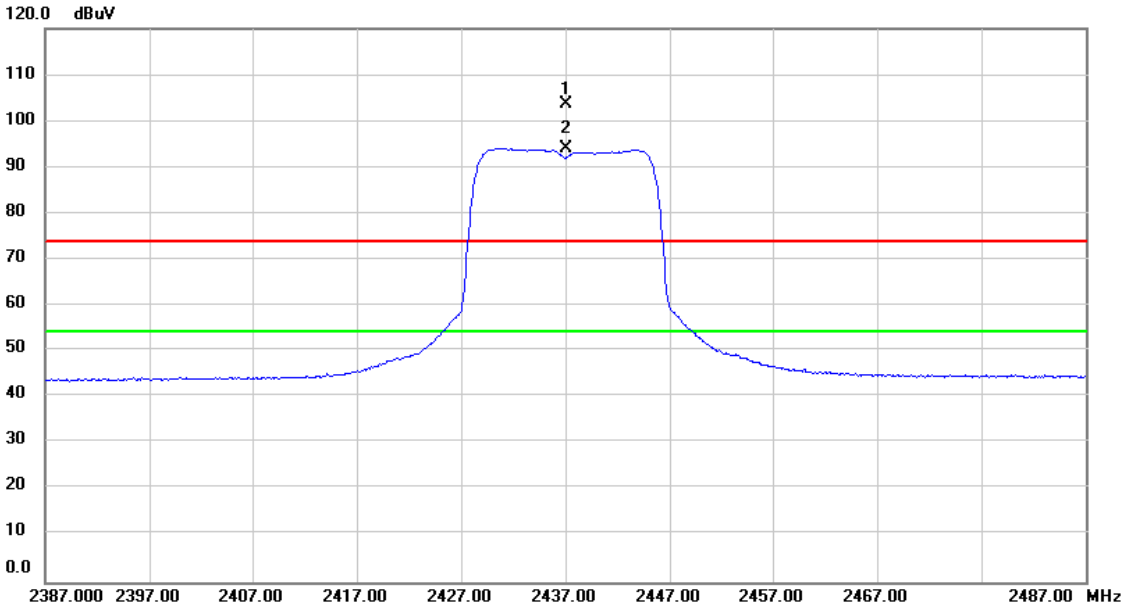
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	66.36	31.01	97.37	74.00	23.37	peak	No Limit
2	*	2437.000	57.11	31.01	88.12	54.00	34.12	AVG	No Limit

Test Mode	TX G MODE _2437 MHz	Polarization	Vertical



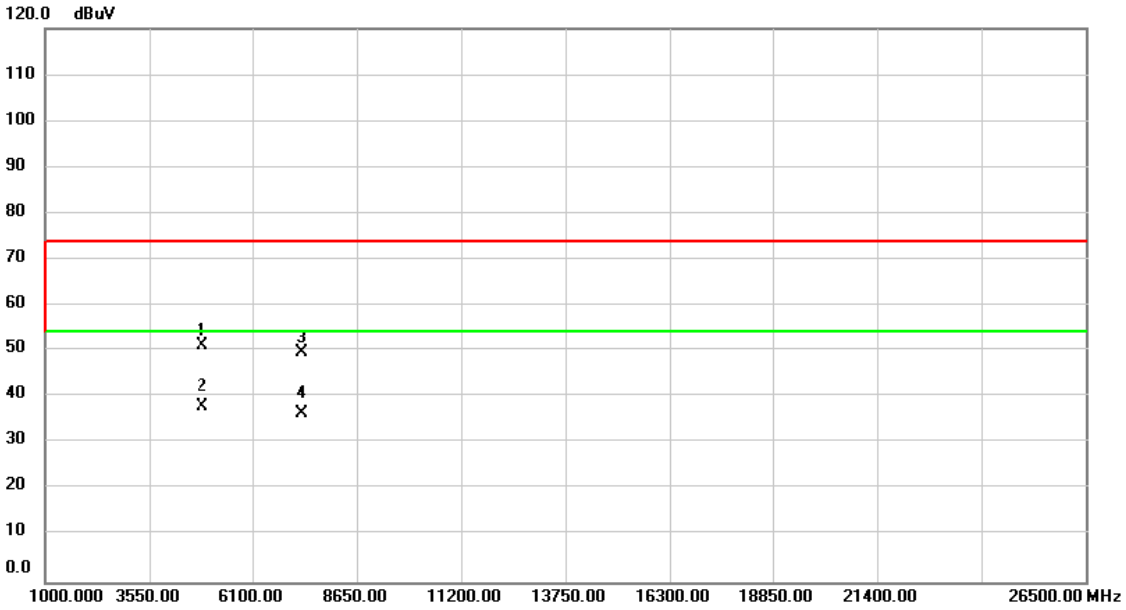
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	61.39	-11.42	49.97	74.00	-24.03	peak	
2	*	4874.000	48.40	-11.42	36.98	54.00	-17.02	AVG	
3		7311.000	55.19	-4.99	50.20	74.00	-23.80	peak	
4		7311.000	41.52	-4.99	36.53	54.00	-17.47	AVG	

Test Mode	TX G MODE _2437 MHz	Polarization	Horizontal



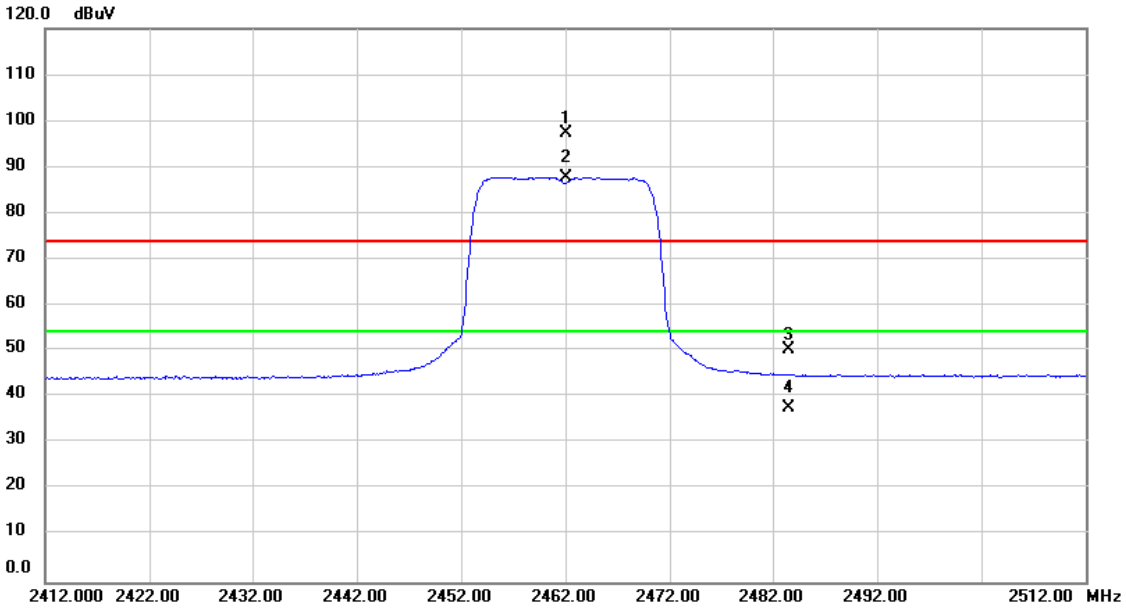
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	72.66	31.01	103.67	74.00	29.67	peak	No Limit
2	*	2437.000	62.96	31.01	93.97	54.00	39.97	AVG	No Limit

Test Mode	TX G MODE _2437 MHz	Polarization	Horizontal



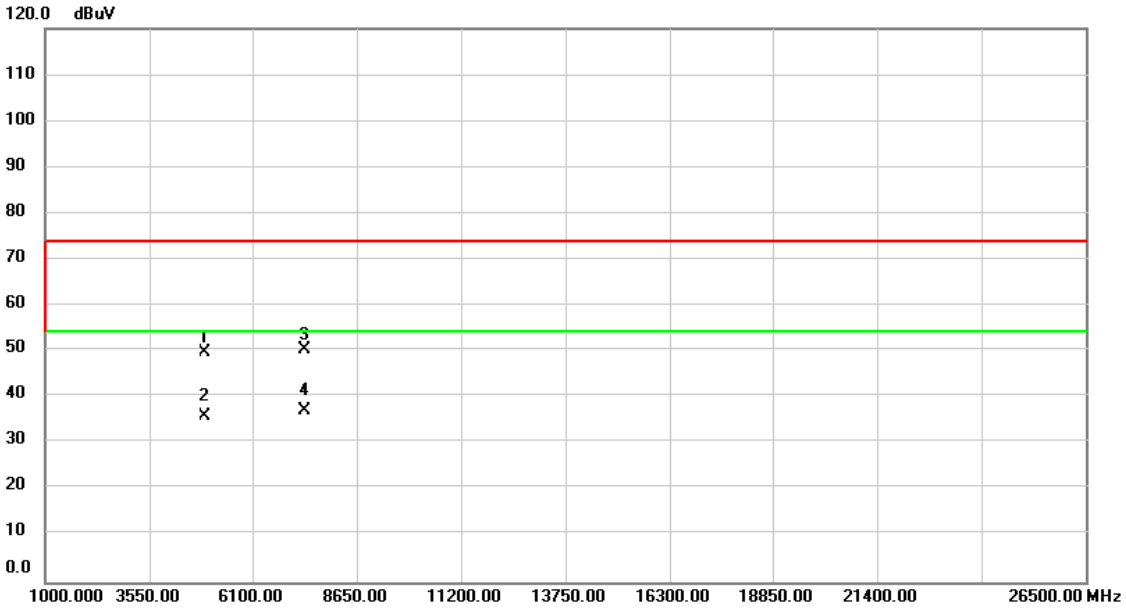
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	62.49	-11.42	51.07	74.00	-22.93	peak	
2	*	4874.000	49.30	-11.42	37.88	54.00	-16.12	AVG	
3		7311.000	54.71	-4.99	49.72	74.00	-24.28	peak	
4		7311.000	41.45	-4.99	36.46	54.00	-17.54	AVG	

Test Mode	TX G MODE _2462 MHz	Polarization	Vertical



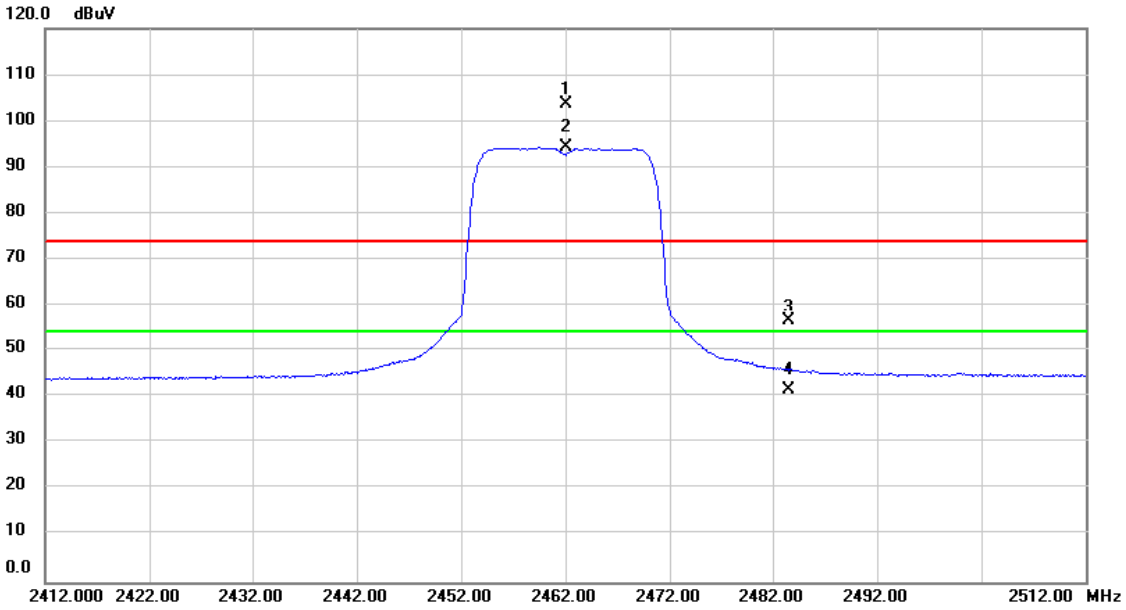
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2462.000	66.21	31.09	97.30	74.00	23.30	peak	No Limit
2	*	2462.000	56.73	31.09	87.82	54.00	33.82	AVG	No Limit
3		2483.586	19.14	31.17	50.31	74.00	-23.69	peak	
4		2483.586	6.40	31.17	37.57	54.00	-16.43	AVG	

Test Mode	TX G MODE _2462 MHz	Polarization	Vertical



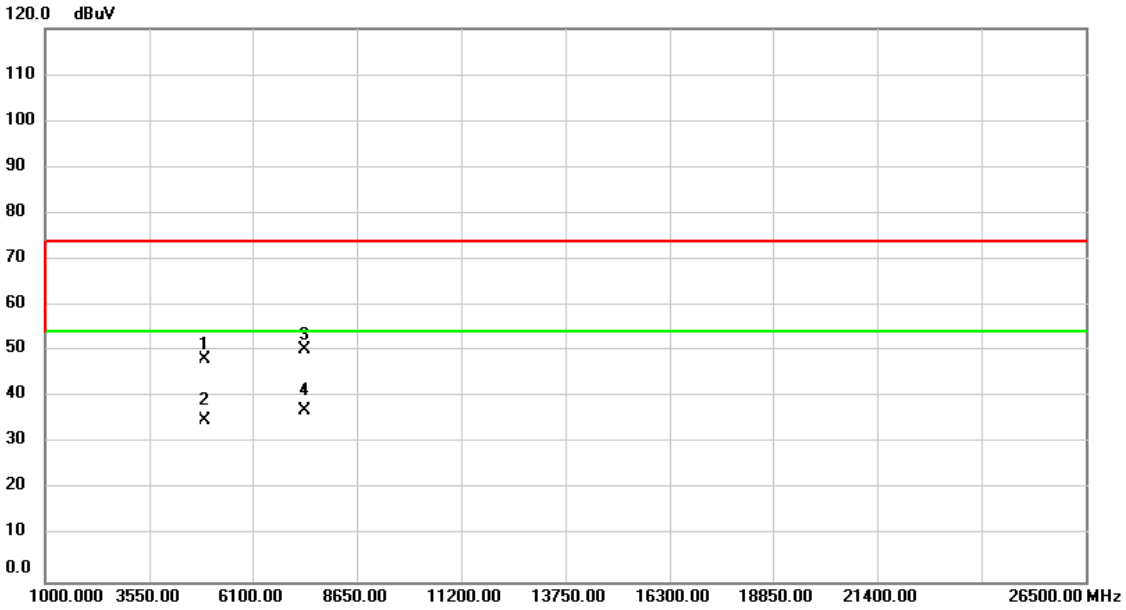
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4924.000	61.01	-11.37	49.64	74.00	-24.36	peak	
2		4924.000	47.13	-11.37	35.76	54.00	-18.24	AVG	
3		7386.000	55.11	-4.72	50.39	74.00	-23.61	peak	
4	*	7386.000	41.69	-4.72	36.97	54.00	-17.03	AVG	

Test Mode	TX G MODE _2462 MHz	Polarization	Horizontal



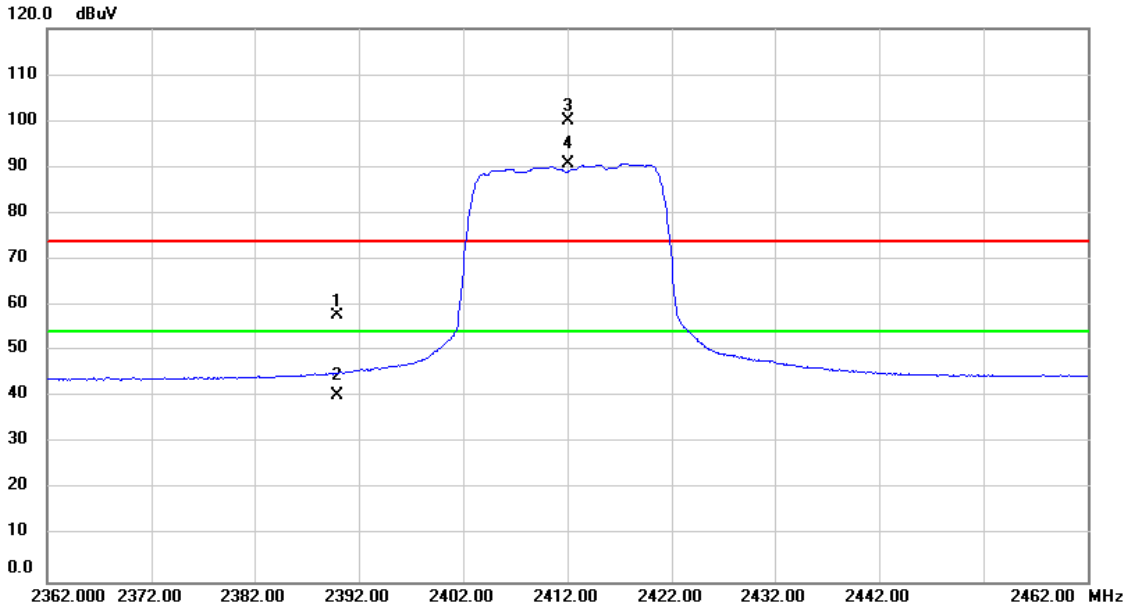
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2462.000	72.68	31.09	103.77	74.00	29.77	peak	No Limit
2	*	2462.000	63.15	31.09	94.24	54.00	40.24	AVG	No Limit
3		2483.500	25.26	31.17	56.43	74.00	-17.57	peak	
4		2483.500	10.49	31.17	41.66	54.00	-12.34	AVG	

Test Mode	TX G MODE _2462 MHz	Polarization	Horizontal



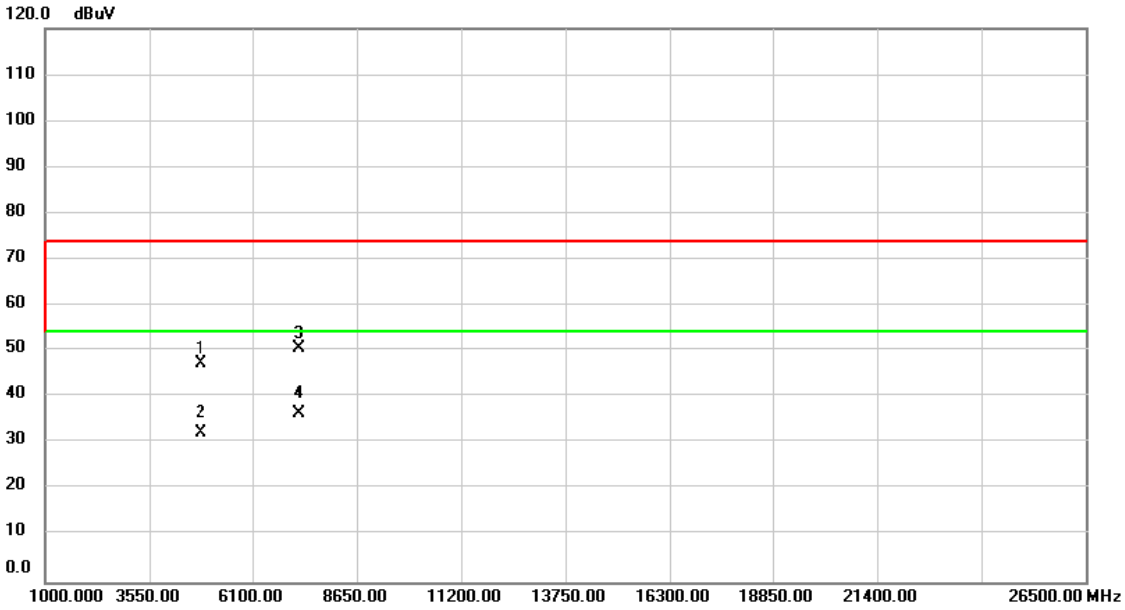
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4924.000	59.52	-11.37	48.15	74.00	-25.85	peak	
2		4924.000	46.24	-11.37	34.87	54.00	-19.13	AVG	
3		7386.000	54.88	-4.72	50.16	74.00	-23.84	peak	
4	*	7386.000	41.69	-4.72	36.97	54.00	-17.03	AVG	

Test Mode	TX N (HT20) MODE 2412MHz	Polarization	Vertical



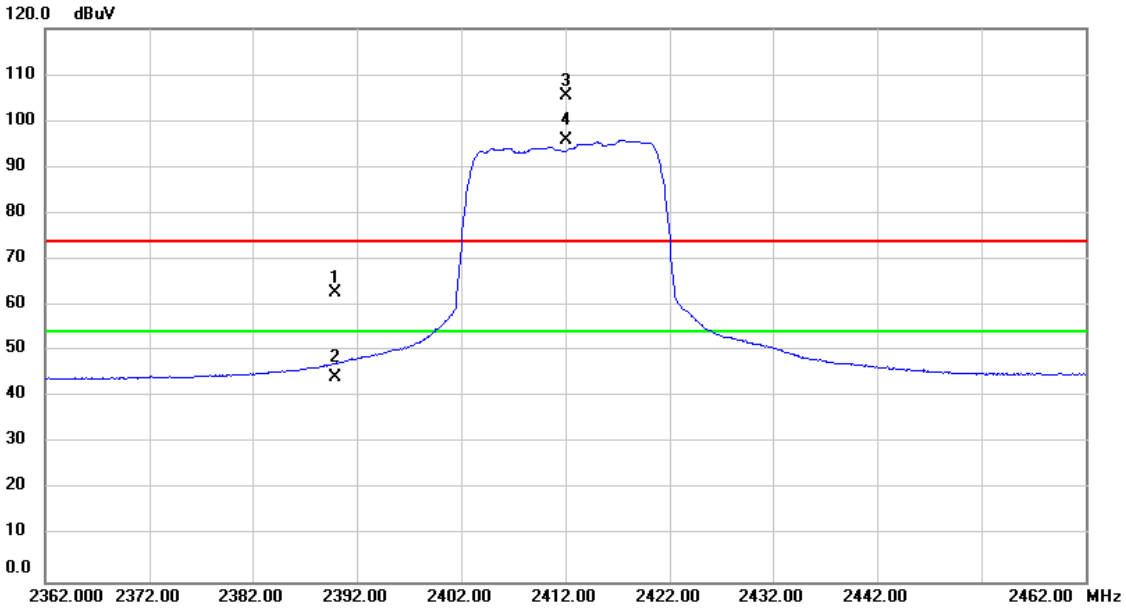
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2389.944	26.84	30.84	57.68	74.00	-16.32	peak	
2		2389.944	9.45	30.84	40.29	54.00	-13.71	AVG	
3	X	2412.000	69.28	30.92	100.20	74.00	26.20	peak	No Limit
4	*	2412.000	59.78	30.92	90.70	54.00	36.70	AVG	No Limit

Test Mode	TX N (HT20) MODE 2412MHz	Polarization	Vertical



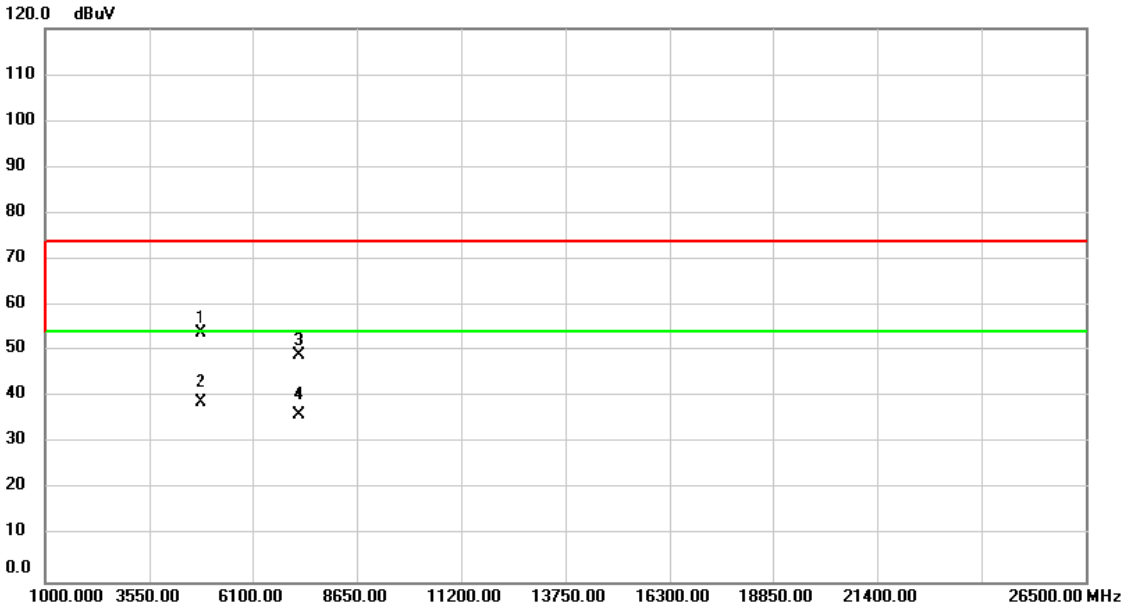
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4824.000	58.63	-11.48	47.15	74.00	-26.85	peak	
2		4824.000	43.61	-11.48	32.13	54.00	-21.87	AVG	
3		7236.000	55.87	-5.26	50.61	74.00	-23.39	peak	
4	*	7236.000	41.75	-5.26	36.49	54.00	-17.51	AVG	

Test Mode	TX N (HT20) MODE 2412MHz	Polarization	Horizontal



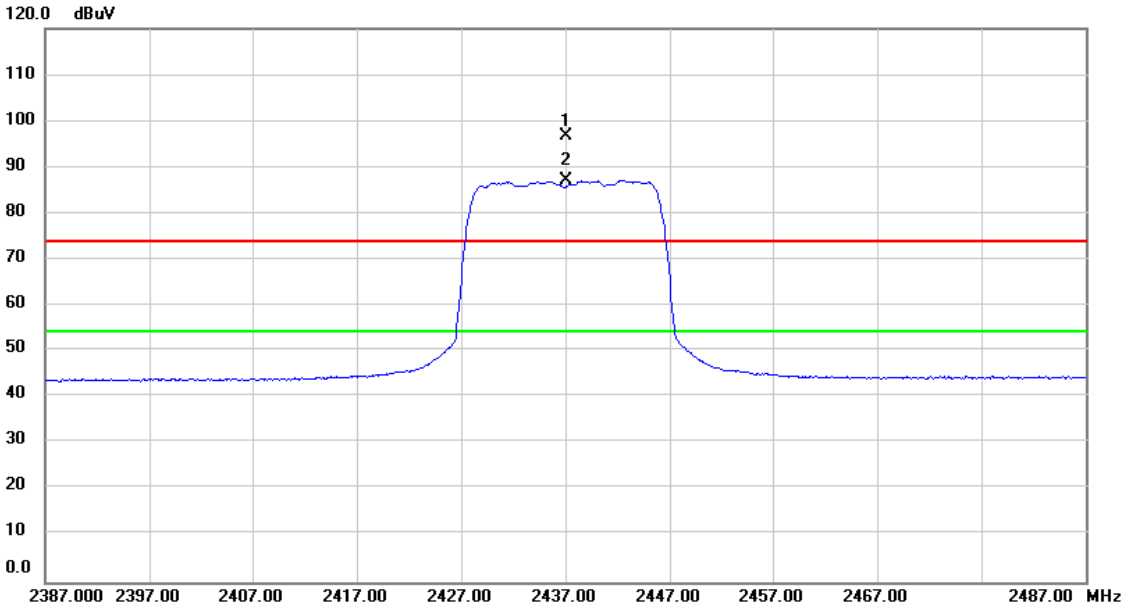
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2389.888	31.90	30.84	62.74	74.00	-11.26	peak	
2		2389.888	13.47	30.84	44.31	54.00	-9.69	AVG	
3	X	2412.000	74.40	30.92	105.32	74.00	31.32	peak	No Limit
4	*	2412.000	64.82	30.92	95.74	54.00	41.74	AVG	No Limit

Test Mode	TX N (HT20) MODE 2412MHz	Polarization	Horizontal



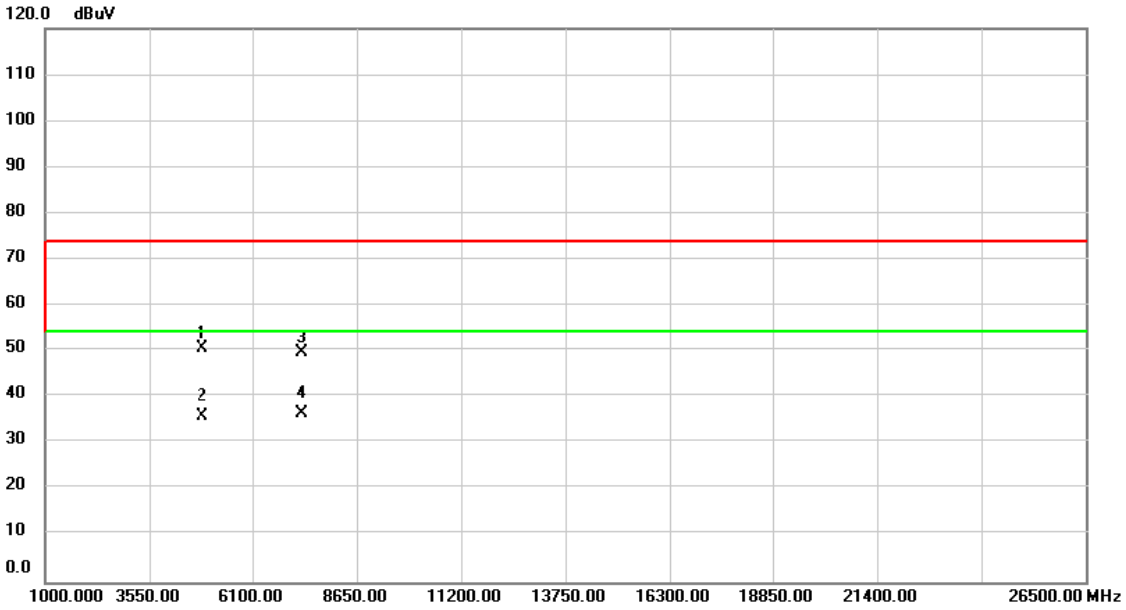
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4824.000	65.19	-11.48	53.71	74.00	-20.29	peak	
2	*	4824.000	50.46	-11.48	38.98	54.00	-15.02	AVG	
3		7236.000	54.22	-5.26	48.96	74.00	-25.04	peak	
4		7236.000	41.42	-5.26	36.16	54.00	-17.84	AVG	

Test Mode	TX N (HT20) MODE 2437MHz	Polarization	Vertical



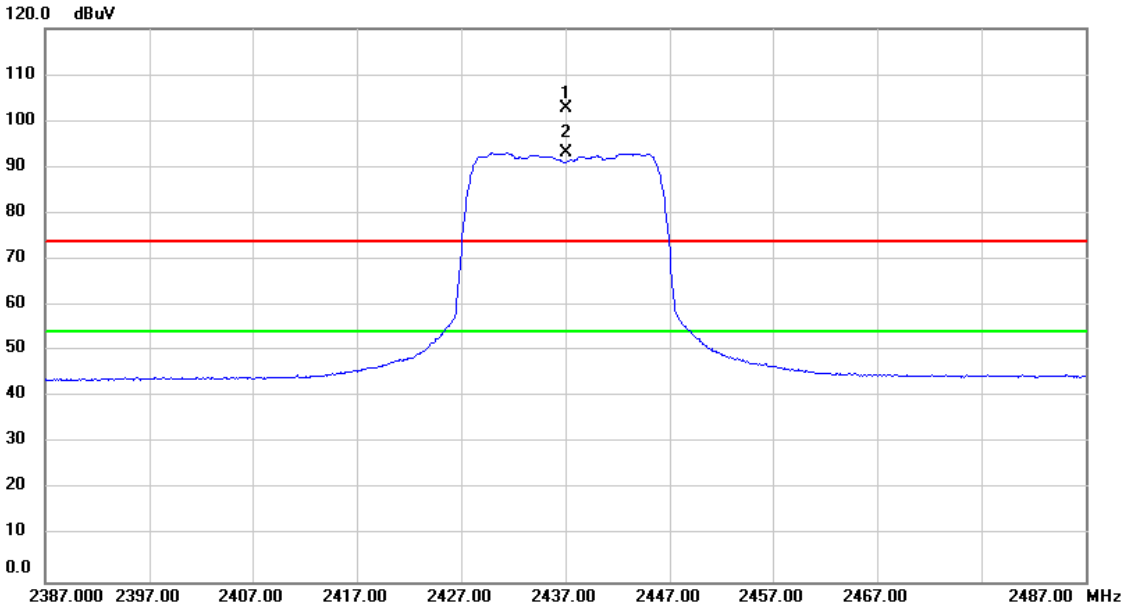
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	65.87	31.01	96.88	74.00	22.88	peak	No Limit
2	*	2437.000	56.07	31.01	87.08	54.00	33.08	AVG	No Limit

Test Mode	TX N (HT20) MODE 2437MHz	Polarization	Vertical



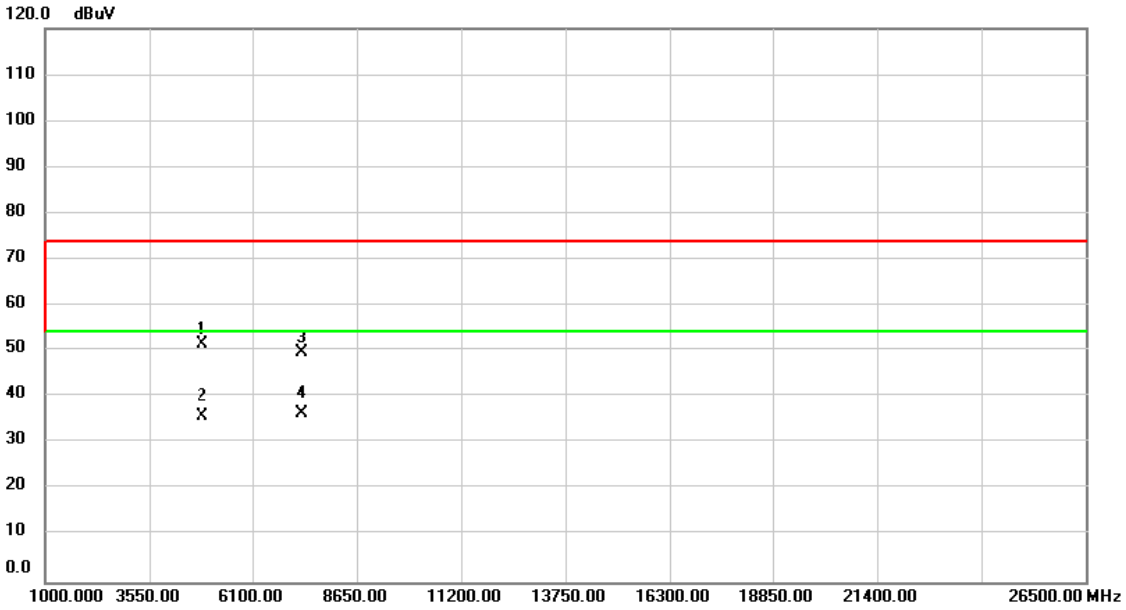
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	62.09	-11.42	50.67	74.00	-23.33	peak	
2		4874.000	47.33	-11.42	35.91	54.00	-18.09	AVG	
3		7311.000	54.54	-4.99	49.55	74.00	-24.45	peak	
4	*	7311.000	41.58	-4.99	36.59	54.00	-17.41	AVG	

Test Mode	TX N (HT20) MODE 2437MHz	Polarization	Horizontal



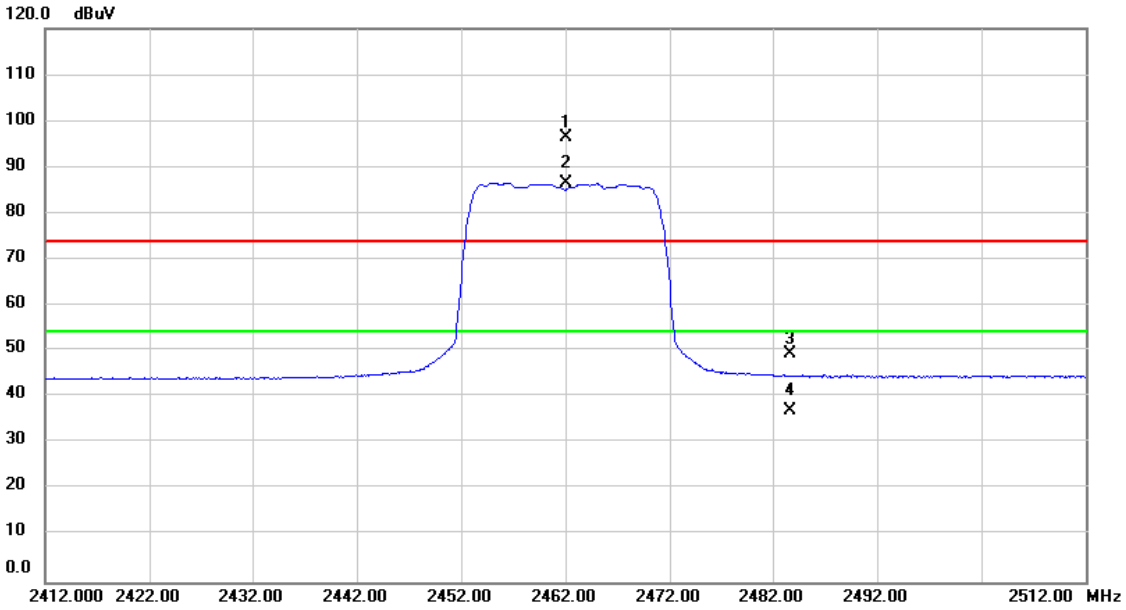
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	71.66	31.01	102.67	74.00	28.67	peak	No Limit
2	*	2437.000	62.00	31.01	93.01	54.00	39.01	AVG	No Limit

Test Mode	TX N (HT20) MODE 2437MHz	Polarization	Horizontal



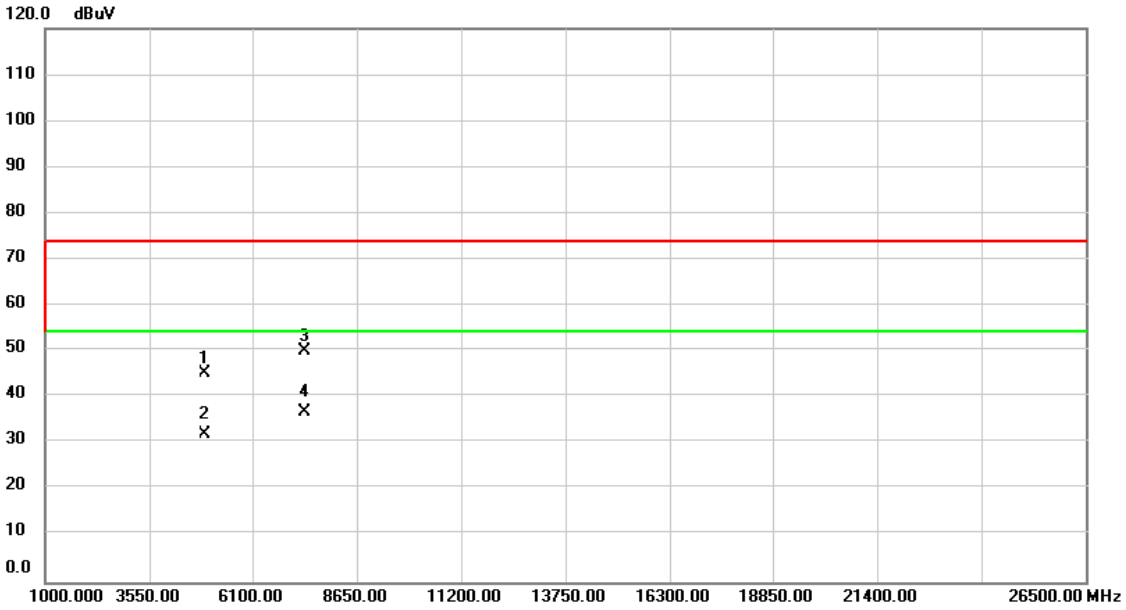
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	62.74	-11.42	51.32	74.00	-22.68	peak	
2		4874.000	47.28	-11.42	35.86	54.00	-18.14	AVG	
3		7311.000	54.50	-4.99	49.51	74.00	-24.49	peak	
4	*	7311.000	41.45	-4.99	36.46	54.00	-17.54	AVG	

Test Mode	TX N (HT20) MODE 2462MHz	Polarization	Vertical



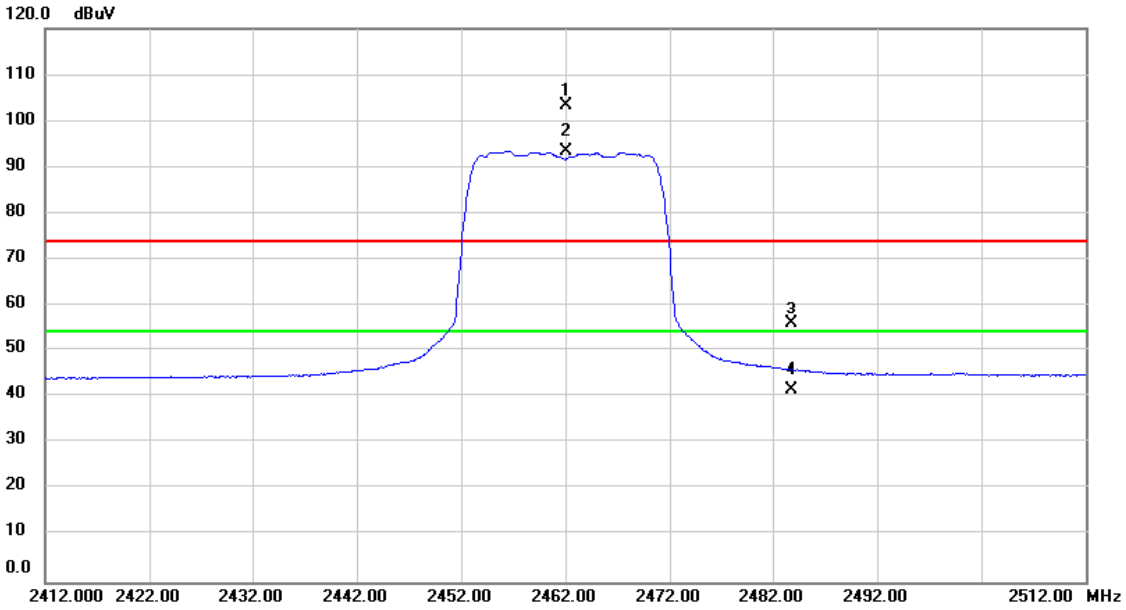
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2462.000	65.22	31.09	96.31	74.00	22.31	peak	No Limit
2	*	2462.000	55.45	31.09	86.54	54.00	32.54	AVG	No Limit
3		2483.615	18.31	31.17	49.48	74.00	-24.52	peak	
4		2483.615	5.94	31.17	37.11	54.00	-16.89	AVG	

Test Mode	TX N (HT20) MODE 2462MHz	Polarization	Vertical



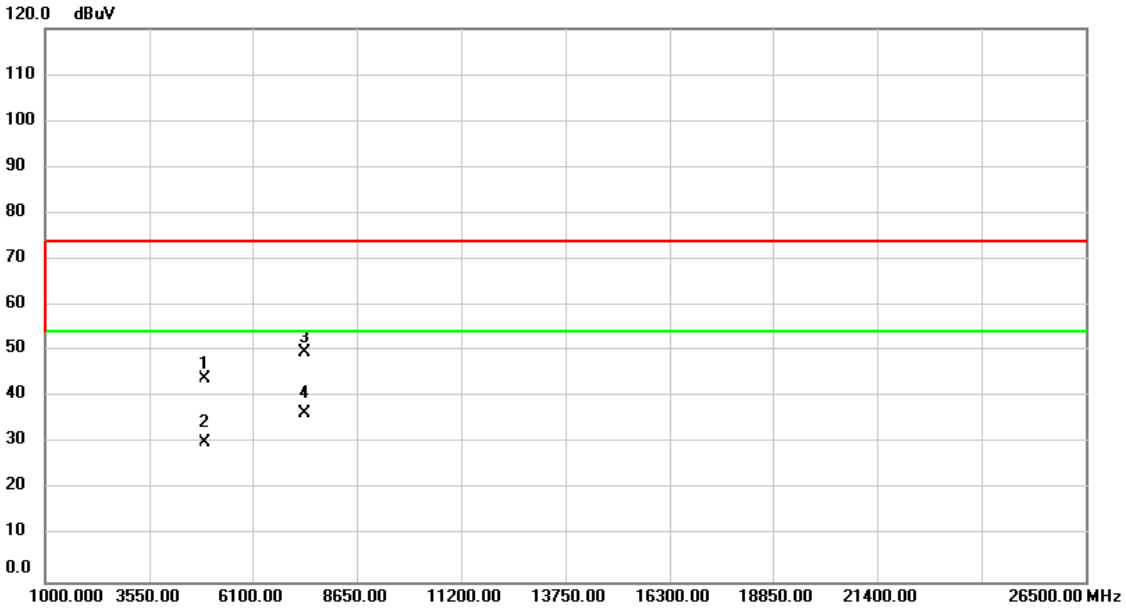
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4924.000	56.59	-11.37	45.22	74.00	-28.78	peak	
2		4924.000	43.28	-11.37	31.91	54.00	-22.09	AVG	
3		7386.000	54.63	-4.72	49.91	74.00	-24.09	peak	
4	*	7386.000	41.43	-4.72	36.71	54.00	-17.29	AVG	

Test Mode	TX N (HT20) MODE 2462MHz	Polarization	Horizontal



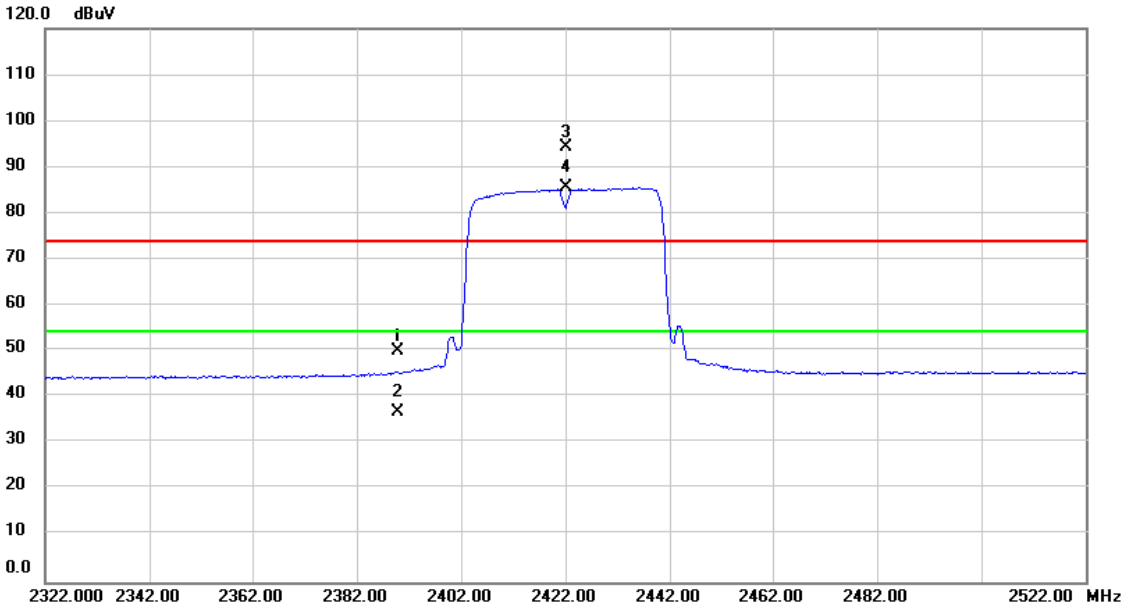
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2462.000	72.14	31.09	103.23	74.00	29.23	peak	No Limit
2	*	2462.000	62.27	31.09	93.36	54.00	39.36	AVG	No Limit
3		2483.830	24.67	31.17	55.84	74.00	-18.16	peak	
4		2483.830	10.32	31.17	41.49	54.00	-12.51	AVG	

Test Mode	TX N (HT20) MODE 2462MHz	Polarization	Horizontal



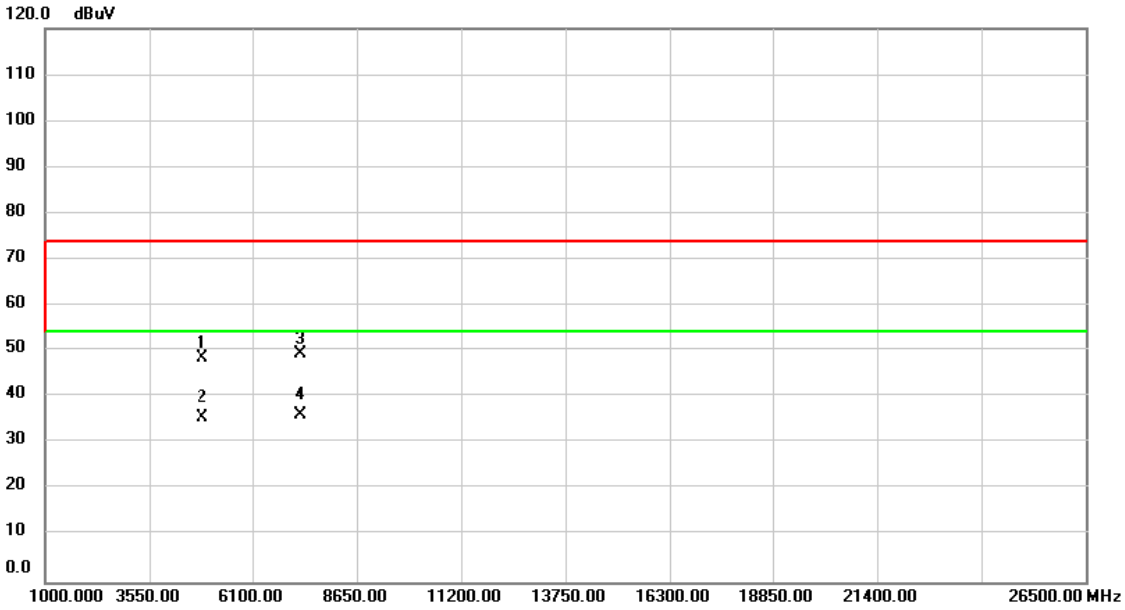
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4924.000	55.39	-11.37	44.02	74.00	-29.98	peak	
2		4924.000	41.60	-11.37	30.23	54.00	-23.77	AVG	
3		7386.000	54.39	-4.72	49.67	74.00	-24.33	peak	
4	*	7386.000	41.28	-4.72	36.56	54.00	-17.44	AVG	

Test Mode	TX N (HT40) MODE 2422MHz	Polarization	Vertical



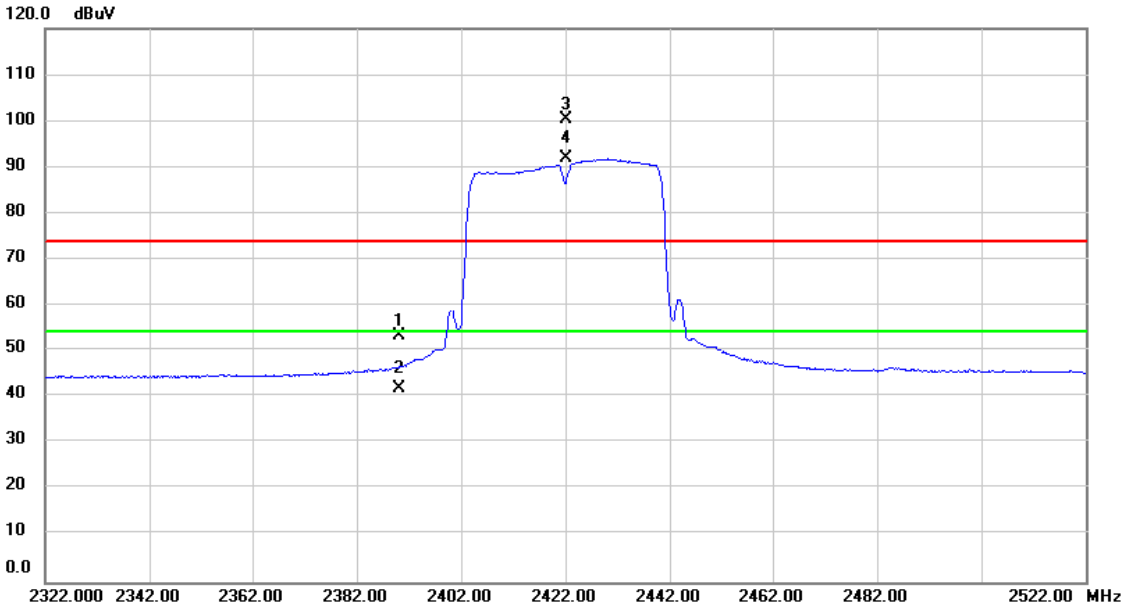
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2389.920	18.98	30.84	49.82	74.00	-24.18	peak	
2		2389.920	5.80	30.84	36.64	54.00	-17.36	AVG	
3	X	2422.000	63.26	30.96	94.22	74.00	20.22	peak	No Limit
4	*	2422.000	54.60	30.96	85.56	54.00	31.56	AVG	No Limit

Test Mode	TX N (HT40) MODE 2422MHz	Polarization	Vertical



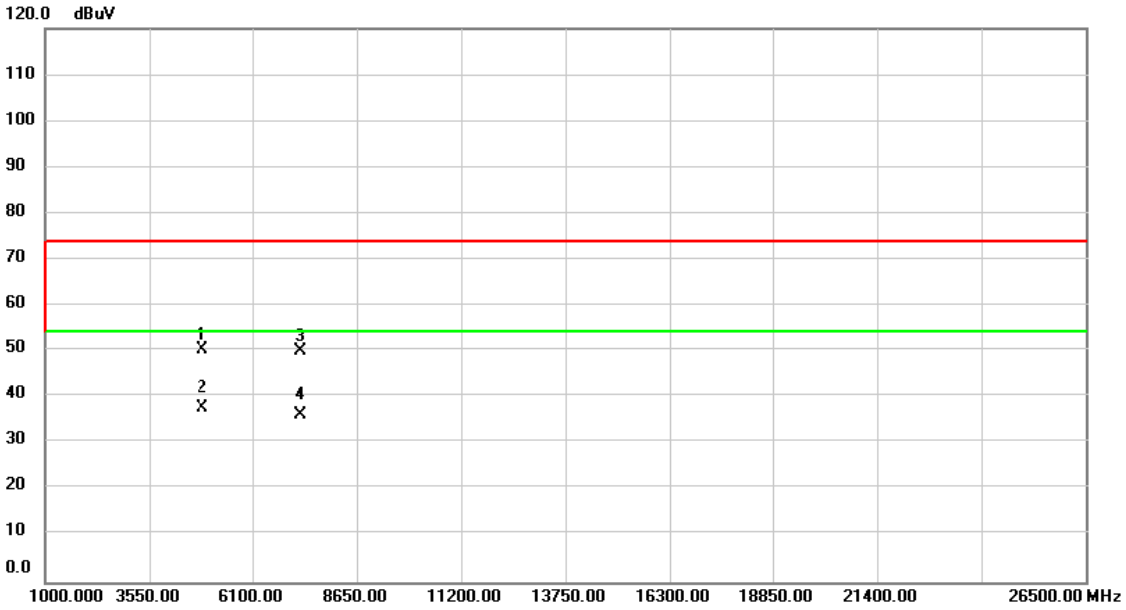
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4844.000	59.92	-11.46	48.46	74.00	-25.54	peak	
2		4844.000	47.00	-11.46	35.54	54.00	-18.46	AVG	
3		7266.000	54.47	-5.16	49.31	74.00	-24.69	peak	
4	*	7266.000	41.29	-5.16	36.13	54.00	-17.87	AVG	

Test Mode	TX N (HT40) MODE 2422MHz	Polarization	Horizontal



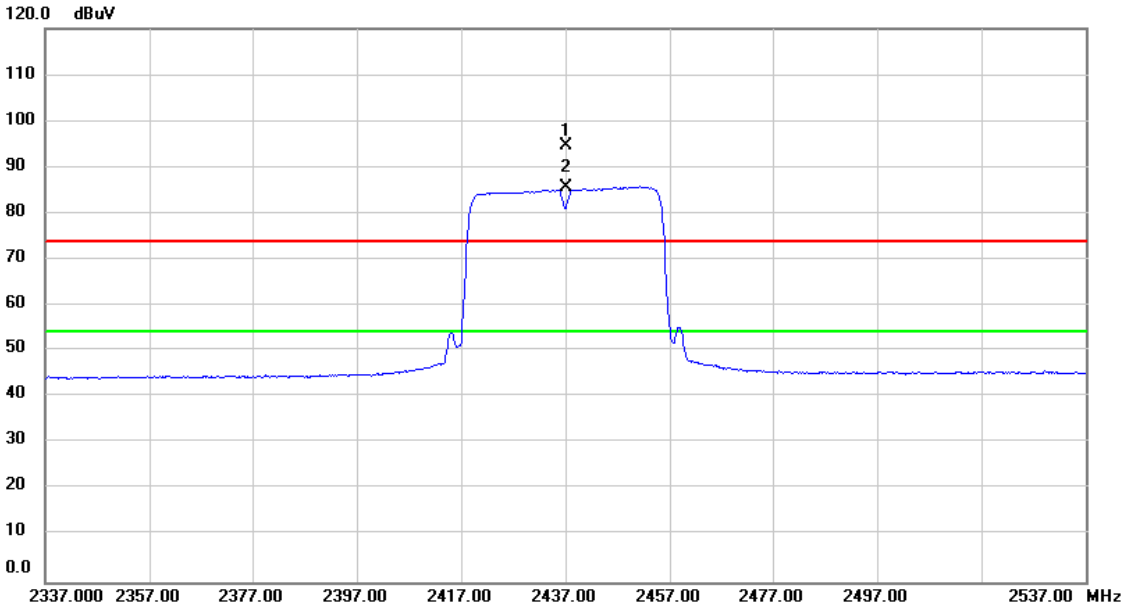
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		2390.000	22.50	30.84	53.34	74.00	-20.66	peak	
2		2390.000	11.02	30.84	41.86	54.00	-12.14	AVG	
3	X	2422.000	69.52	30.96	100.48	74.00	26.48	peak	No Limit
4	*	2422.000	60.85	30.96	91.81	54.00	37.81	AVG	No Limit

Test Mode	TX N (HT40) MODE 2422MHz	Polarization	Horizontal



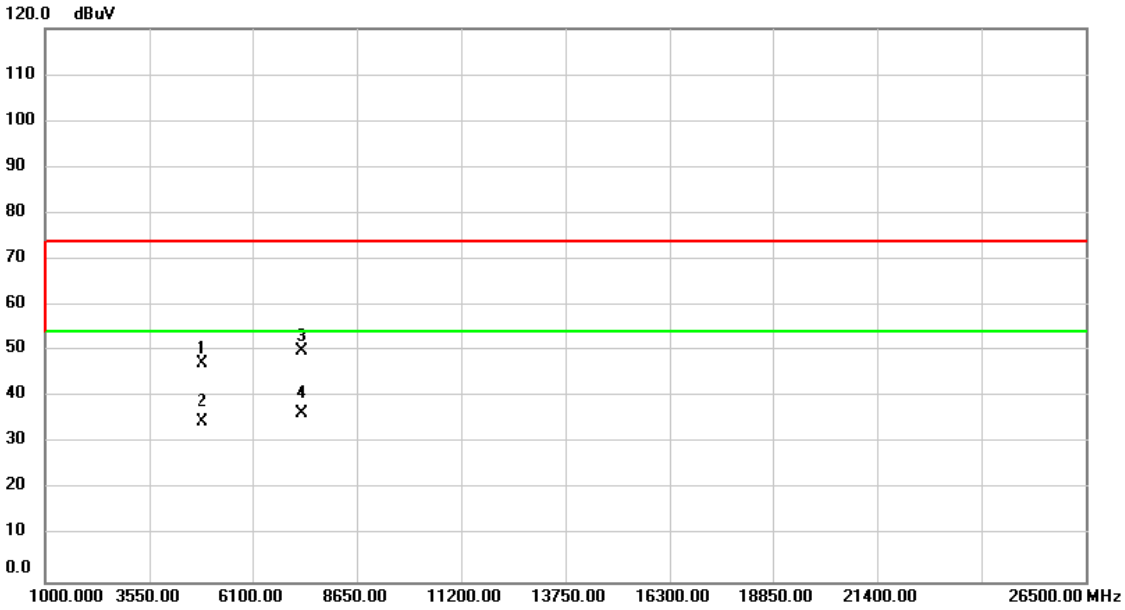
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4843.620	61.83	-11.46	50.37	74.00	-23.63	peak	
2	*	4844.095	49.04	-11.46	37.58	54.00	-16.42	AVG	
3		7266.000	55.16	-5.16	50.00	74.00	-24.00	peak	
4		7266.000	41.26	-5.16	36.10	54.00	-17.90	AVG	

Test Mode	TX N (HT40) MODE 2437MHz	Polarization	Vertical



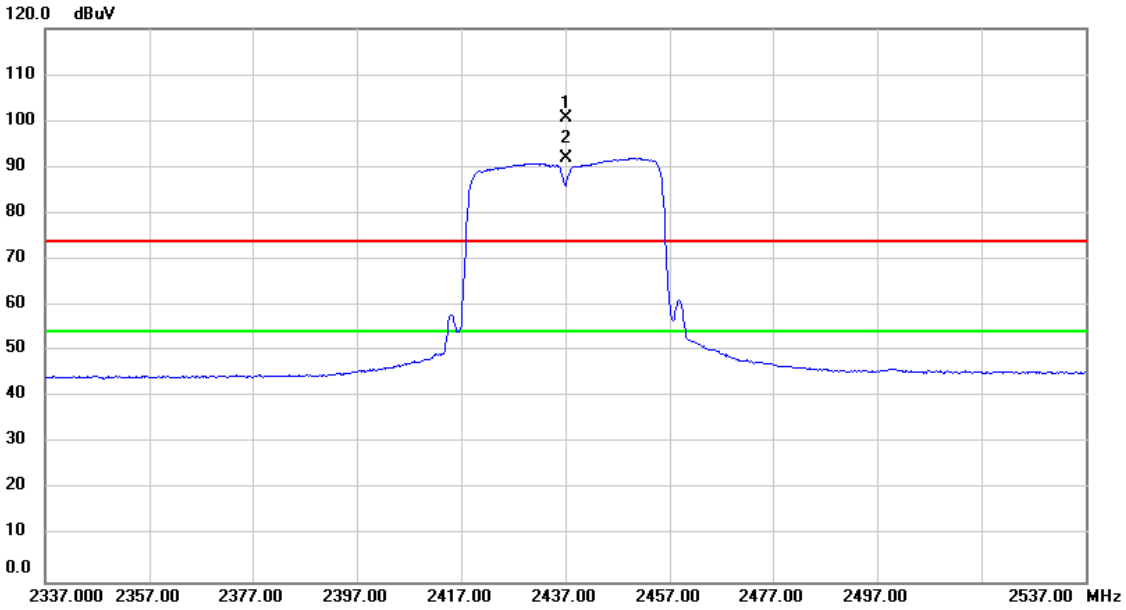
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	63.54	31.01	94.55	74.00	20.55	peak	No Limit
2	*	2437.000	54.71	31.01	85.72	54.00	31.72	AVG	No Limit

Test Mode	TX N (HT40) MODE 2437MHz	Polarization	Vertical



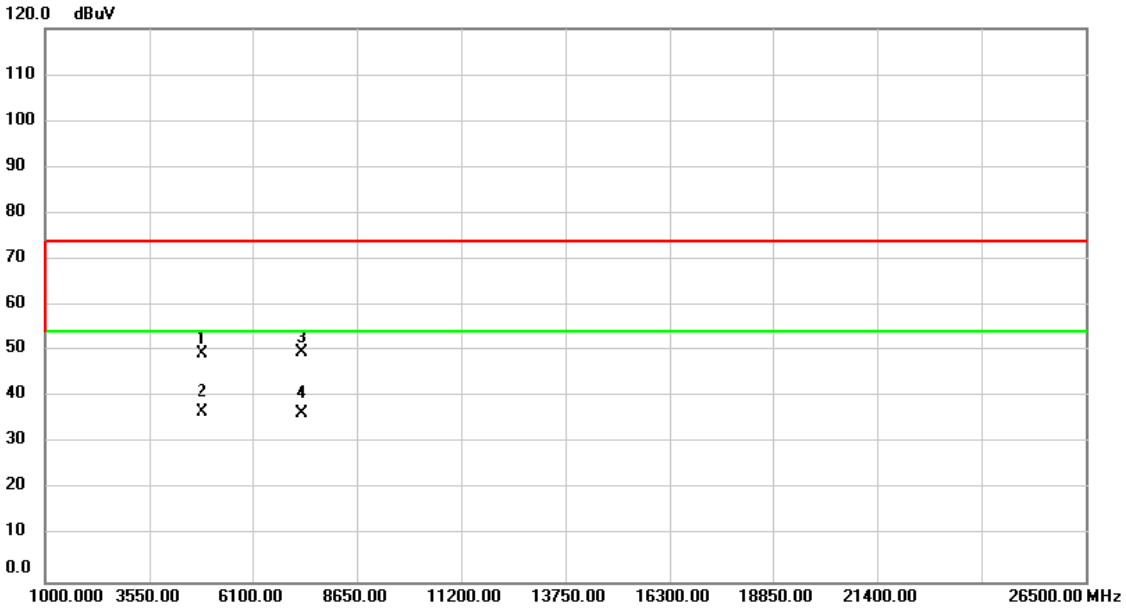
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	58.69	-11.42	47.27	74.00	-26.73	peak	
2		4874.000	46.21	-11.42	34.79	54.00	-19.21	AVG	
3		7311.000	54.84	-4.99	49.85	74.00	-24.15	peak	
4	*	7311.000	41.43	-4.99	36.44	54.00	-17.56	AVG	

Test Mode	TX N (HT40) MODE 2437MHz	Polarization	Horizontal



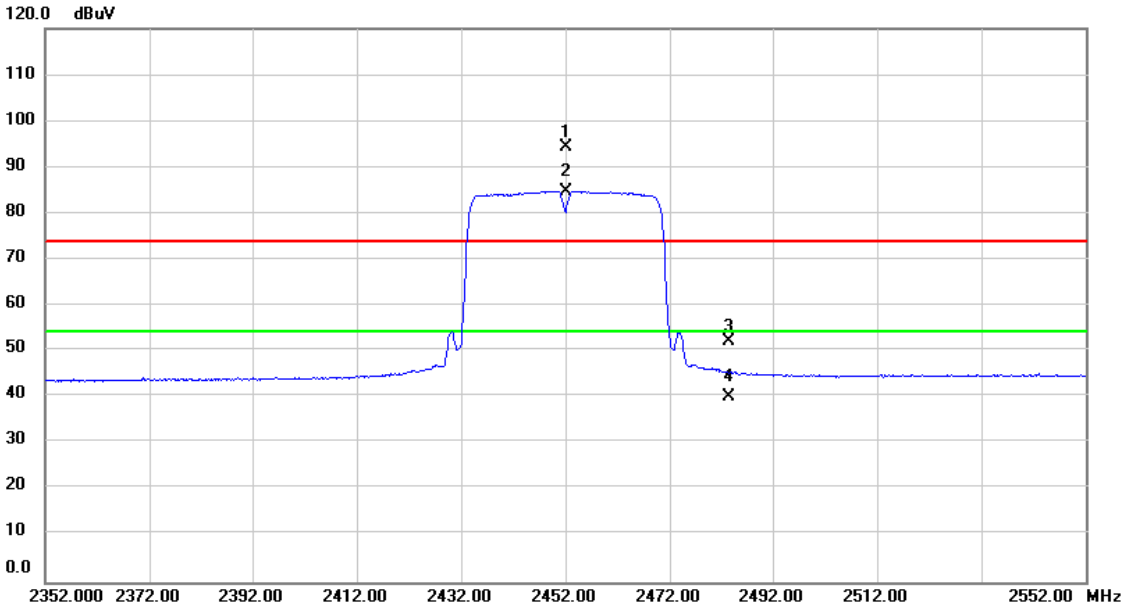
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2437.000	69.56	31.01	100.57	74.00	26.57	peak	No Limit
2	*	2437.000	60.86	31.01	91.87	54.00	37.87	AVG	No Limit

Test Mode	TX N (HT40) MODE 2437MHz	Polarization	Horizontal



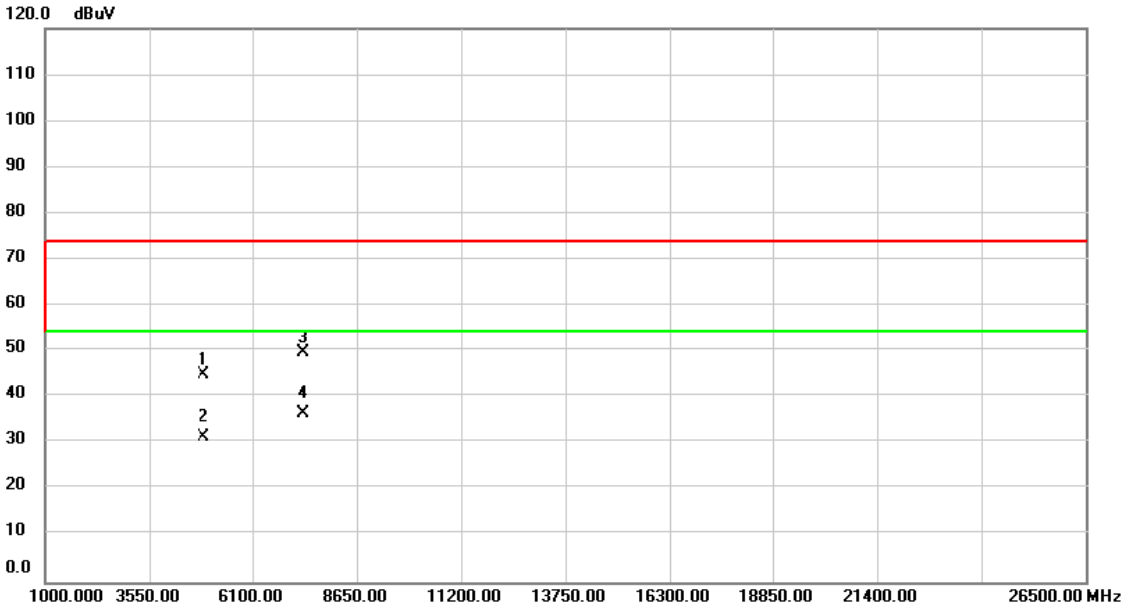
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4874.000	60.74	-11.42	49.32	74.00	-24.68	peak	
2	*	4874.000	48.11	-11.42	36.69	54.00	-17.31	AVG	
3		7311.000	54.69	-4.99	49.70	74.00	-24.30	peak	
4		7311.000	41.37	-4.99	36.38	54.00	-17.62	AVG	

Test Mode	TX N (HT40) MODE 2452MHz	Polarization	Vertical



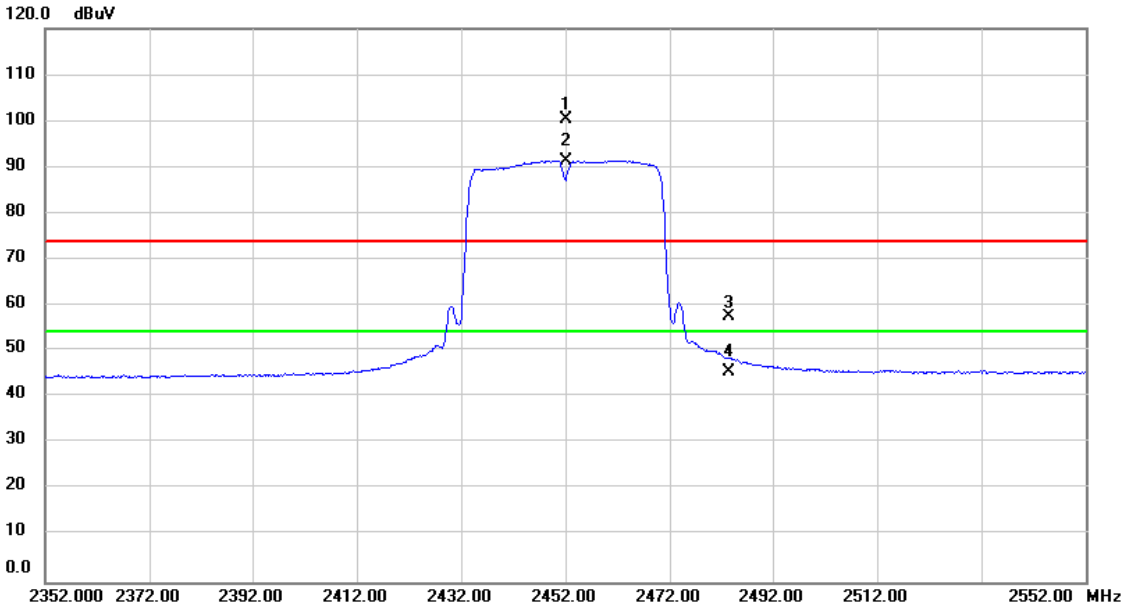
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2452.000	63.39	31.07	94.46	74.00	20.46	peak	No Limit
2	*	2452.000	53.81	31.07	84.88	54.00	30.88	AVG	No Limit
3		2483.517	20.97	31.17	52.14	74.00	-21.86	peak	
4		2483.517	8.78	31.17	39.95	54.00	-14.05	AVG	

Test Mode	TX N (HT40) MODE 2452MHz	Polarization	Vertical



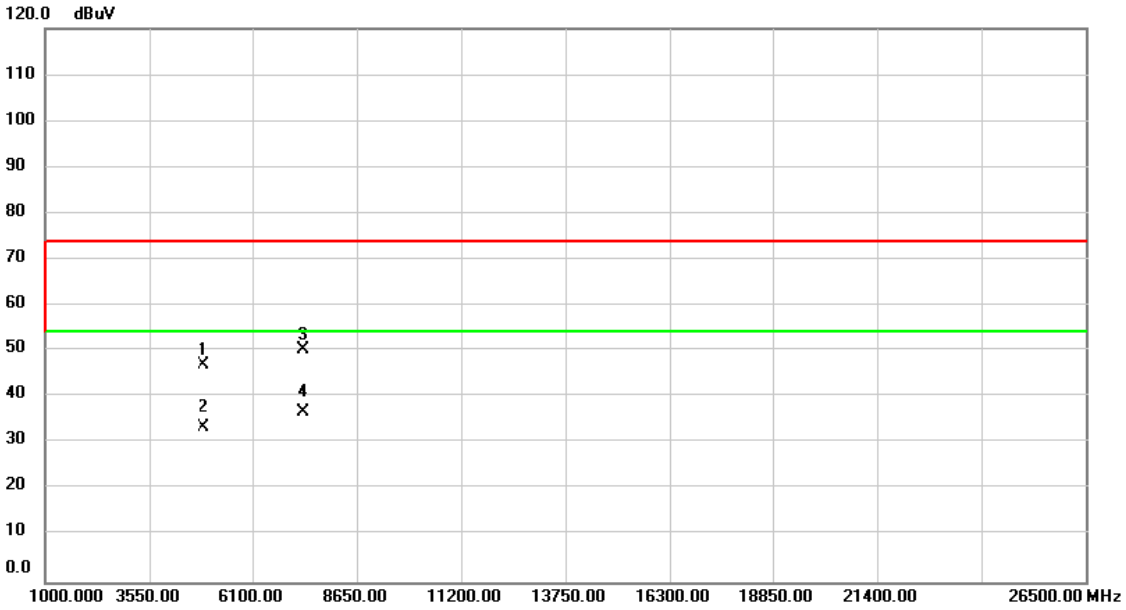
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4904.000	56.25	-11.39	44.86	74.00	-29.14	peak	
2		4904.000	42.74	-11.39	31.35	54.00	-22.65	AVG	
3		7356.000	54.64	-4.84	49.80	74.00	-24.20	peak	
4	*	7356.000	41.43	-4.84	36.59	54.00	-17.41	AVG	

Test Mode	TX N (HT40) MODE 2452MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	X	2452.000	69.31	31.07	100.38	74.00	26.38	peak	No Limit
2	*	2452.000	60.35	31.07	91.42	54.00	37.42	AVG	No Limit
3		2483.500	26.42	31.17	57.59	74.00	-16.41	peak	
4		2483.500	14.22	31.17	45.39	54.00	-8.61	AVG	

Test Mode	TX N (HT40) MODE 2452MHz	Polarization	Horizontal



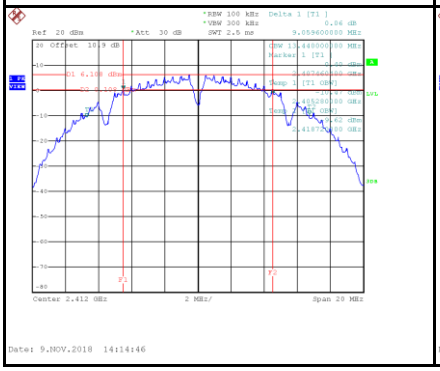
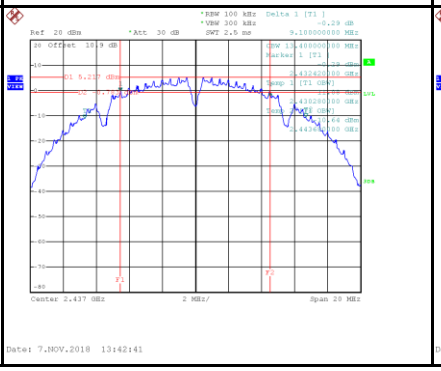
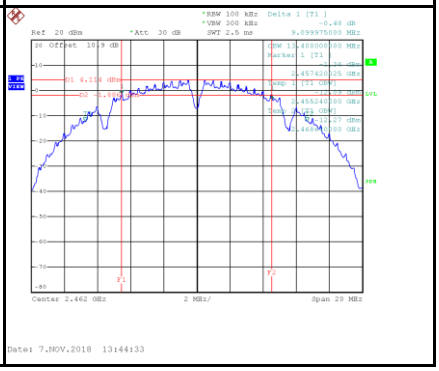
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		4904.000	58.25	-11.39	46.86	74.00	-27.14	peak	
2		4904.000	44.83	-11.39	33.44	54.00	-20.56	AVG	
3		7356.000	55.01	-4.84	50.17	74.00	-23.83	peak	
4	*	7356.000	41.50	-4.84	36.66	54.00	-17.34	AVG	

APPENDIX E BANDWIDTH

CONTINUE ON NEXT PAGE

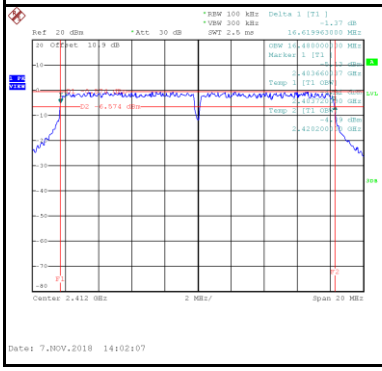
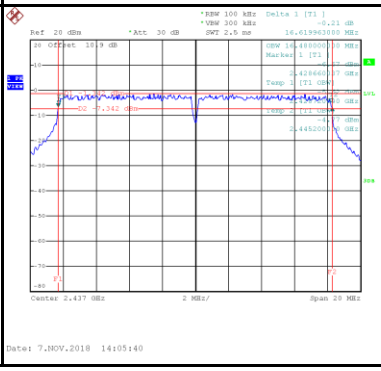
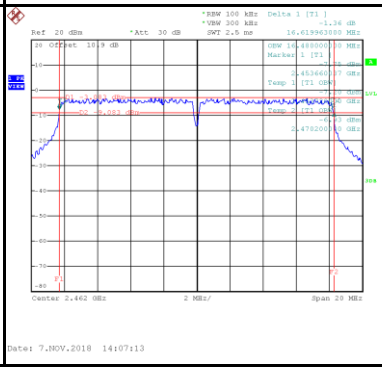
Test Mode	IEEE 802.11b

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Limit (kHz)	Result
2412	9.06	13.44	500	Complies
2437	9.10	13.40	500	Complies
2462	9.10	13.40	500	Complies

2412 MHz	2437 MHz	2462 MHz
		

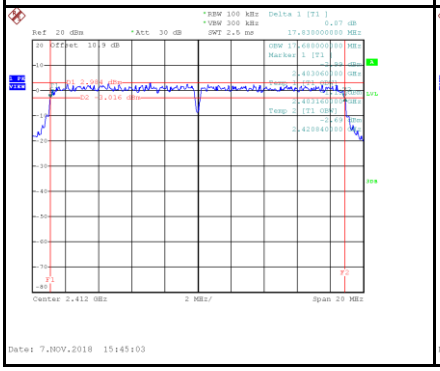
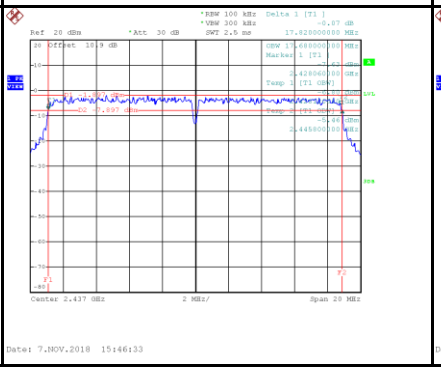
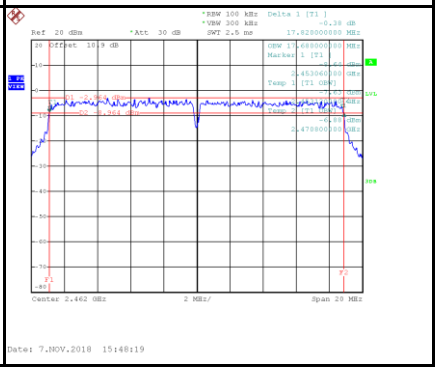
Test Mode	IEEE 802.11g

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Limit (kHz)	Result
2412	16.62	16.48	500	Complies
2437	16.62	16.48	500	Complies
2462	16.62	16.48	500	Complies

2412 MHz	2437 MHz	2462 MHz
		

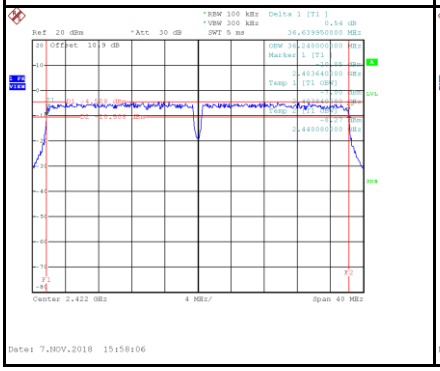
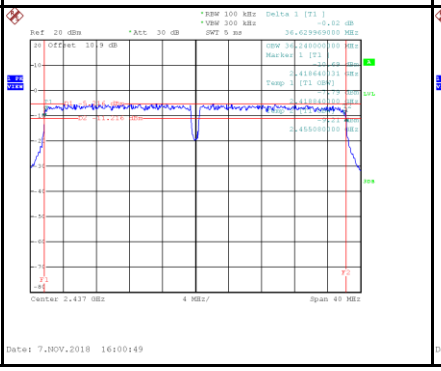
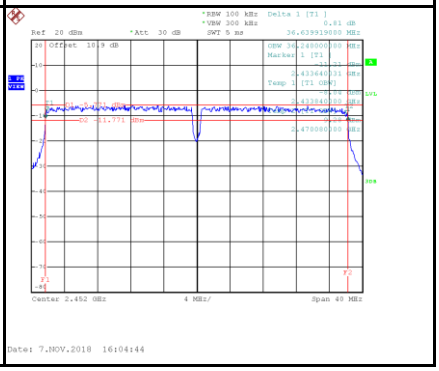
Test Mode	IEEE 802.11n (HT20)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Limit (kHz)	Result
2412	17.83	17.68	500	Complies
2437	17.82	17.68	500	Complies
2462	17.82	17.68	500	Complies

2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11n (HT40)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Limit (kHz)	Result
2422	36.64	36.24	500	Complies
2437	36.63	36.24	500	Complies
2452	36.64	36.24	500	Complies

2422 MHz	2437 MHz	2452 MHz
		

APPENDIX F PEAK OUTPUT POWER

CONTINUE ON NEXT PAGE

Test Mode	IEEE 802.11b

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	18.36	0.0685	30.00	1.0000	Complies
2437	17.71	0.0590	30.00	1.0000	Complies
2462	16.57	0.0454	30.00	1.0000	Complies

Test Mode	IEEE 802.11g

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	23.62	0.2301	30.00	1.0000	Complies
2437	22.78	0.1897	30.00	1.0000	Complies
2462	21.47	0.1403	30.00	1.0000	Complies

Test Mode	IEEE 802.11n (HT20)

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	22.76	0.1888	30.00	1.0000	Complies
2437	21.43	0.1390	30.00	1.0000	Complies
2462	20.42	0.1102	30.00	1.0000	Complies

Test Mode	IEEE 802.11n (HT40)

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2422	22.97	0.1982	30.00	1.0000	Complies
2437	22.37	0.1726	30.00	1.0000	Complies
2452	21.85	0.1531	30.00	1.0000	Complies

Test Mode	IEEE 802.11b

Frequency (MHz)	Average Power (dBm)	Average Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	15.66	0.0368	30.00	1.00	Complies
2437	15.04	0.0319	30.00	1.00	Complies
2462	13.92	0.0247	30.00	1.00	Complies

Test Mode	IEEE 802.11g

Frequency (MHz)	Average Power (dBm)	Average Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	14.11	0.0258	30.00	1.00	Complies
2437	13.03	0.0201	30.00	1.00	Complies
2462	11.73	0.0149	30.00	1.00	Complies

Test Mode	IEEE 802.11n (HT20)

Frequency (MHz)	Average Power (dBm)	Average Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	13.59	0.0229	30.00	1.00	Complies
2437	12.14	0.0164	30.00	1.00	Complies
2462	11.16	0.0131	30.00	1.00	Complies

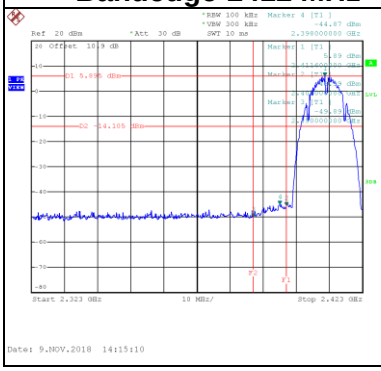
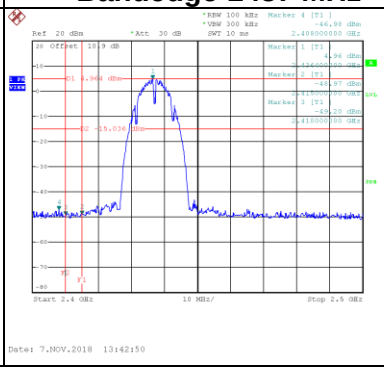
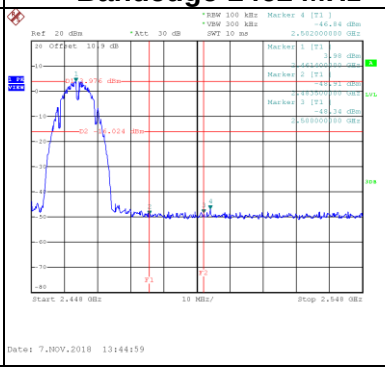
Test Mode	IEEE 802.11n (HT40)

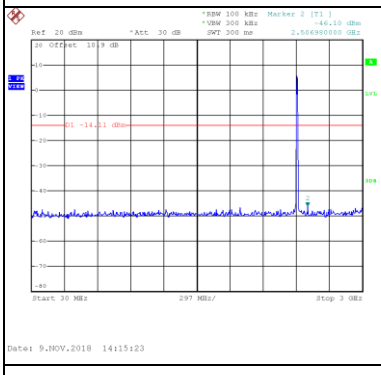
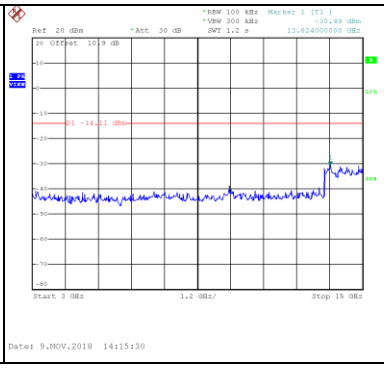
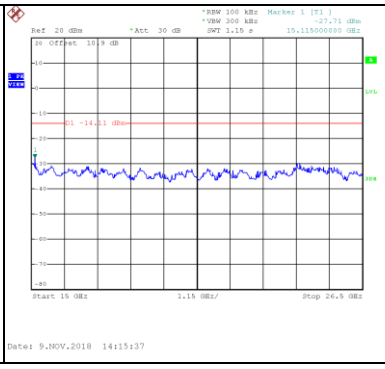
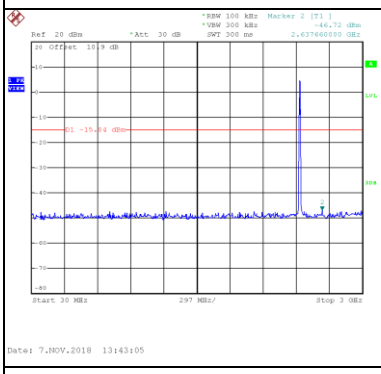
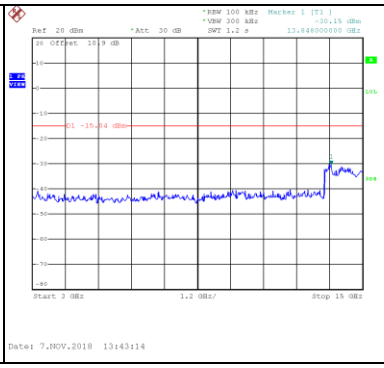
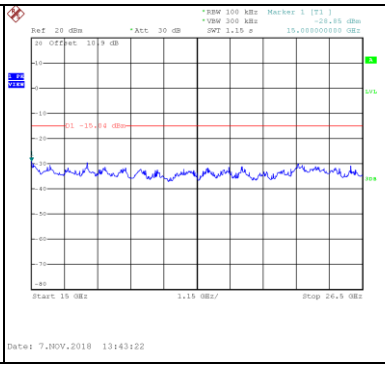
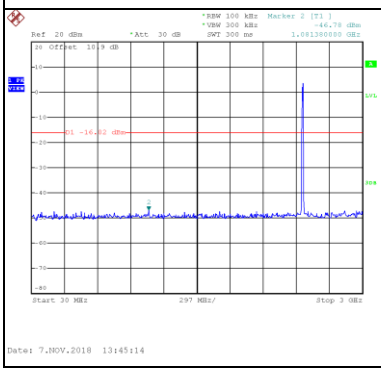
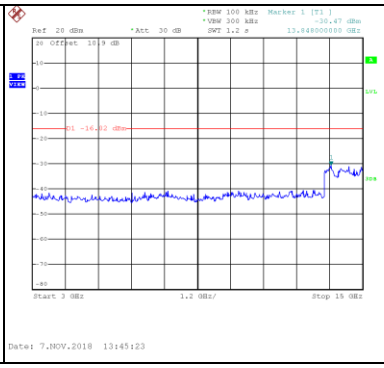
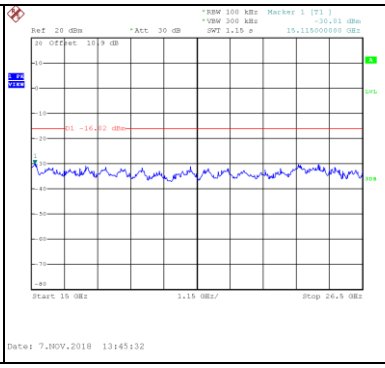
Frequency (MHz)	Average Power (dBm)	Average Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	13.47	0.0222	30.00	1.00	Complies
2437	12.75	0.0188	30.00	1.00	Complies
2452	12.14	0.0164	30.00	1.00	Complies

APPENDIX G ANTENNA CONDUCTED SPURIOUS EMISSIONS

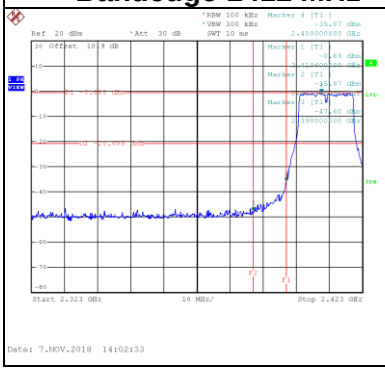
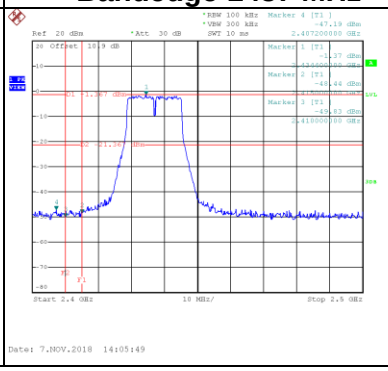
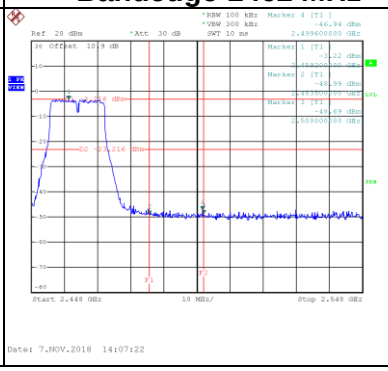
CONTINUE ON NEXT PAGE

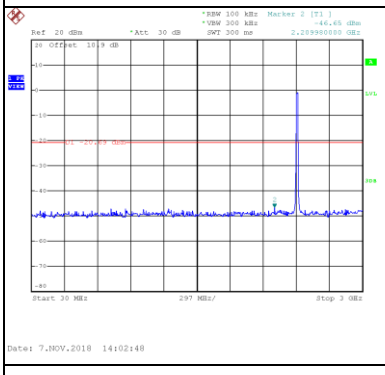
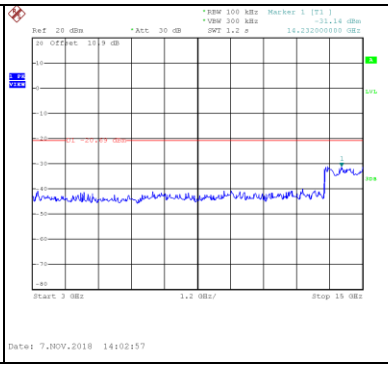
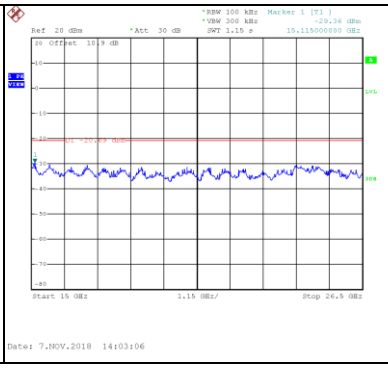
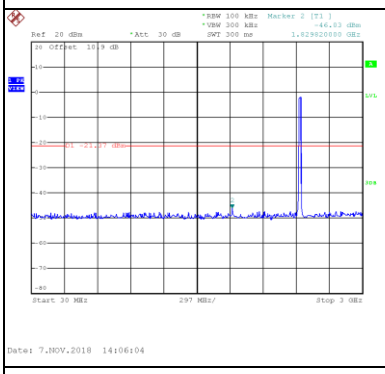
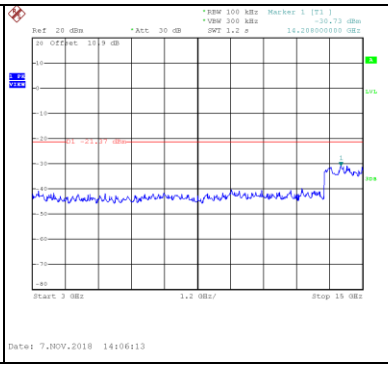
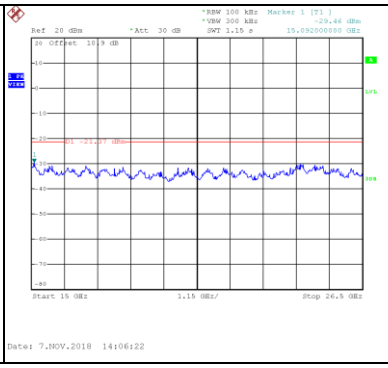
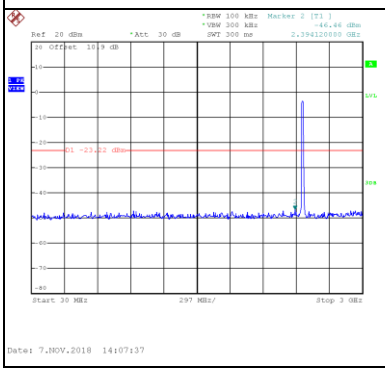
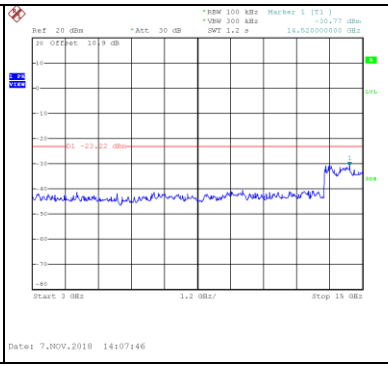
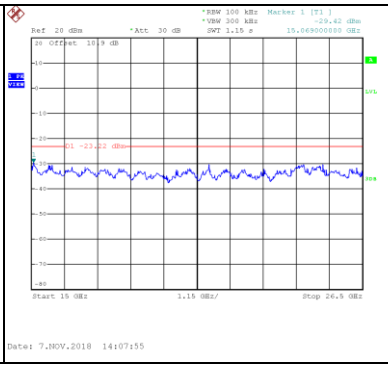
Test Mode	IEEE 802.11b

Bandedge-2412 MHz	Bandedge-2437 MHz	Bandedge-2462 MHz
		

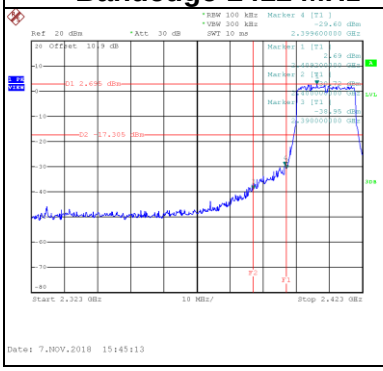
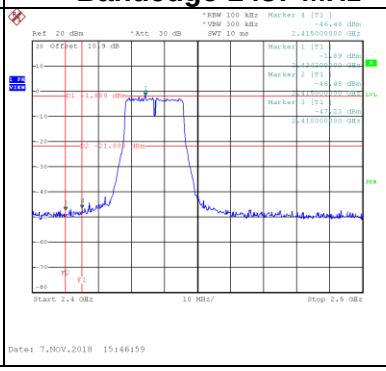
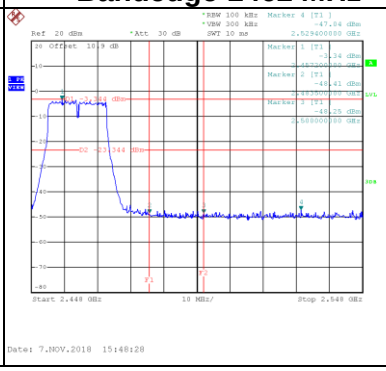
2412 MHz – 10 Harmonics		
		
2437 MHz – 10 Harmonics		
		
2462 MHz – 10 Harmonics		
		

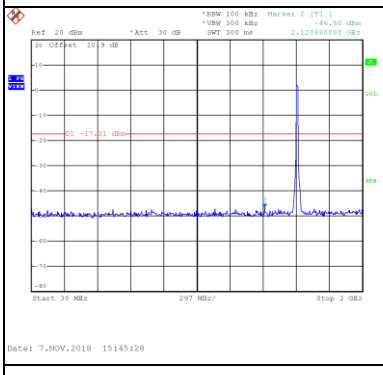
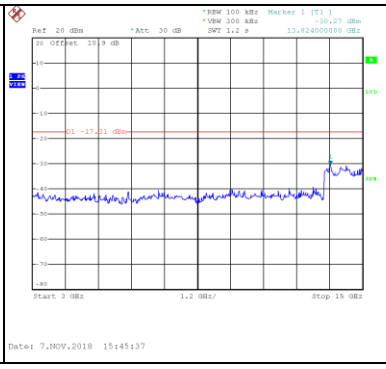
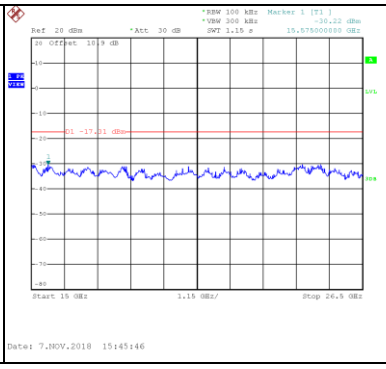
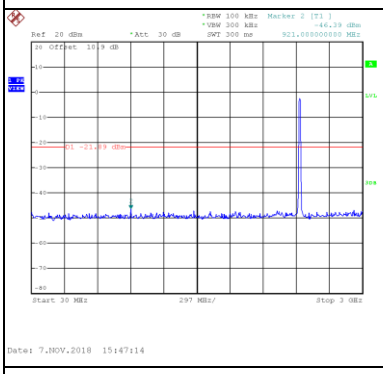
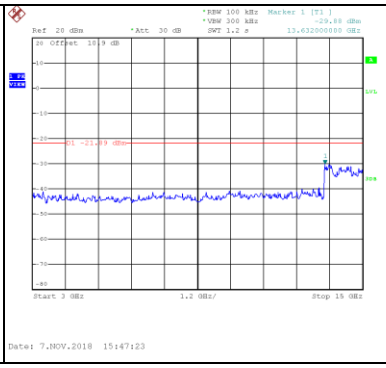
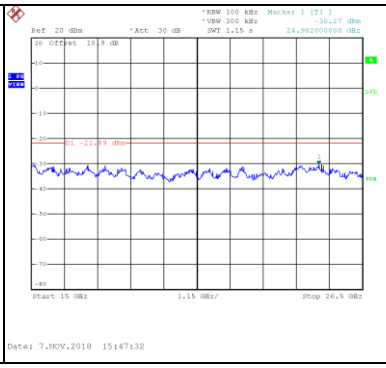
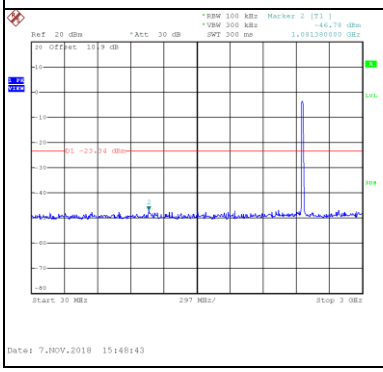
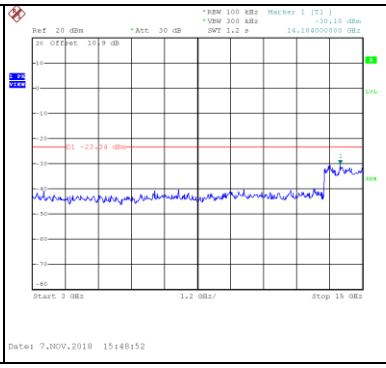
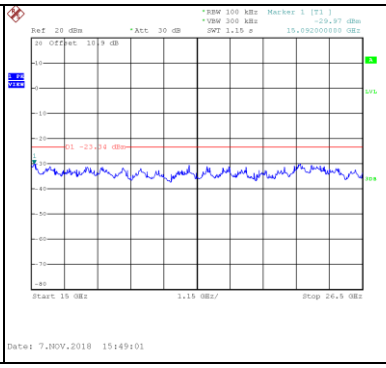
Test Mode	IEEE 802.11g

Bandedge-2412 MHz	Bandedge-2437 MHz	Bandedge-2462 MHz
		

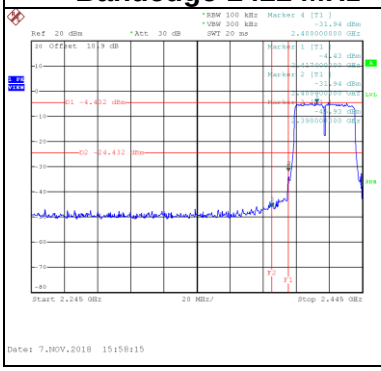
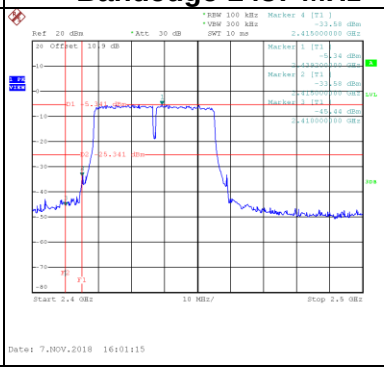
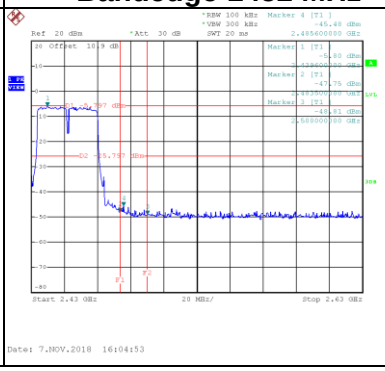
2412 MHz – 10 Harmonics		
		
2437 MHz – 10 Harmonics		
		
2462 MHz – 10 Harmonics		
		

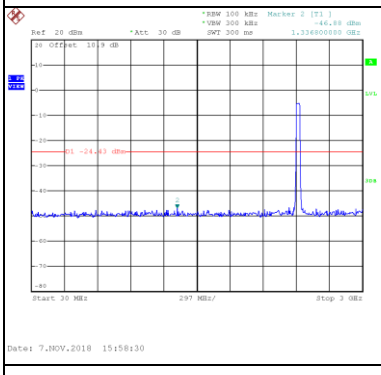
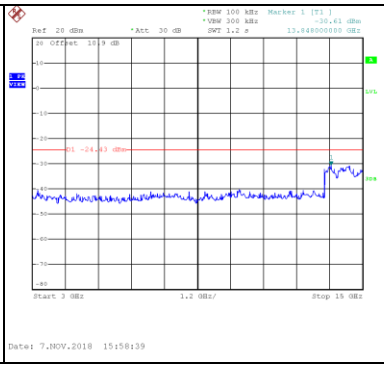
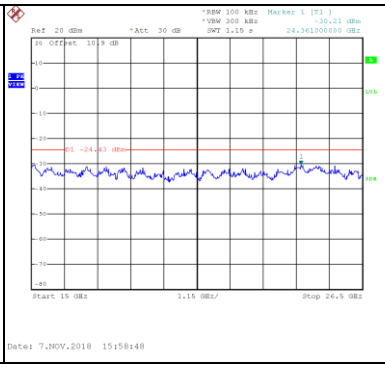
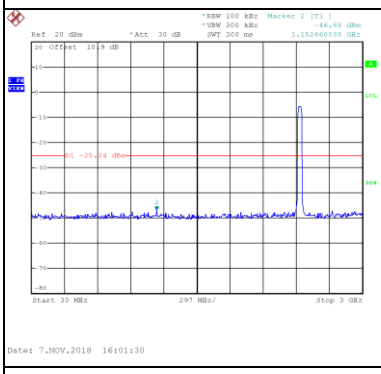
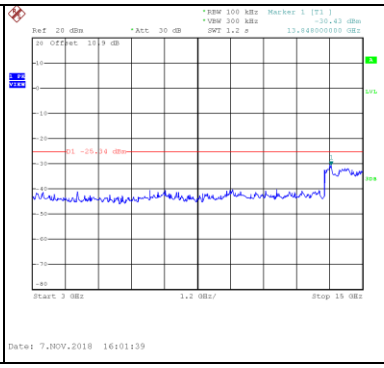
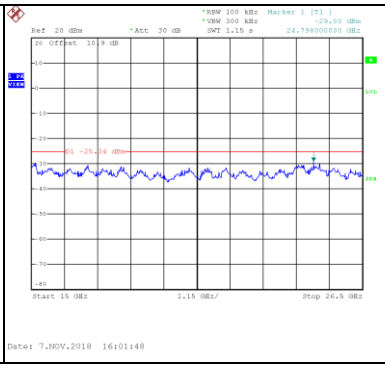
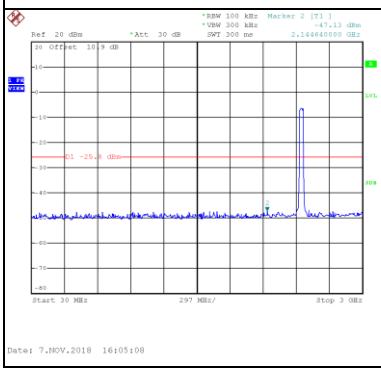
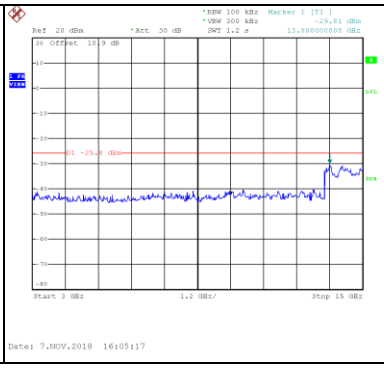
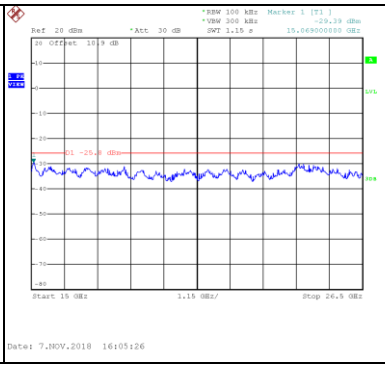
Test Mode	IEEE 802.11n (HT20)

Bandedge-2412 MHz	Bandedge-2437 MHz	Bandedge-2462 MHz
		

2412 MHz – 10 Harmonics		
		
2437 MHz – 10 Harmonics		
		
2462 MHz – 10 Harmonics		
		

Test Mode	IEEE 802.11n (HT40)

Bandedge-2422 MHz	Bandedge-2437 MHz	Bandedge-2452 MHz
		

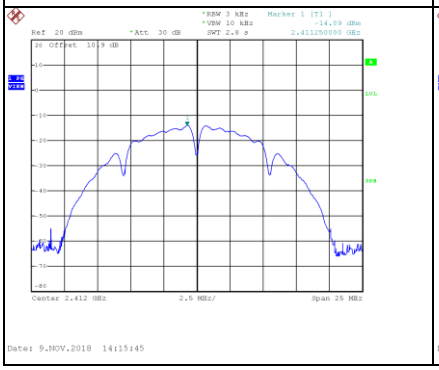
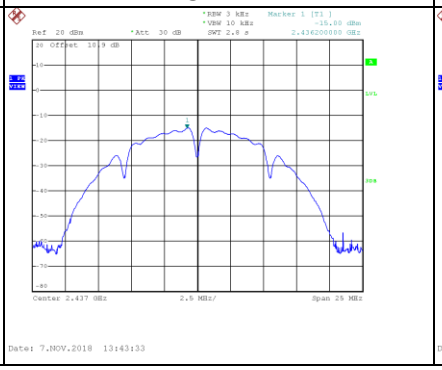
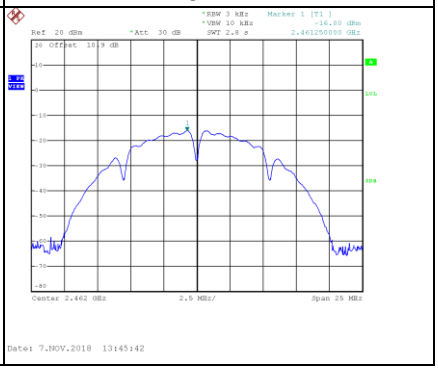
2422 MHz – 10 Harmonics		
		
2437 MHz – 10 Harmonics		
		
2452 MHz – 10 Harmonics		
		

APPENDIX H POWER SPECTRAL DENSITY

CONTINUE ON NEXT PAGE

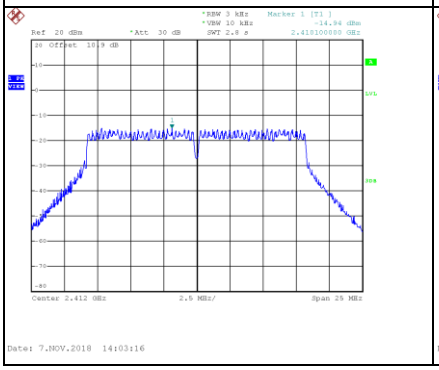
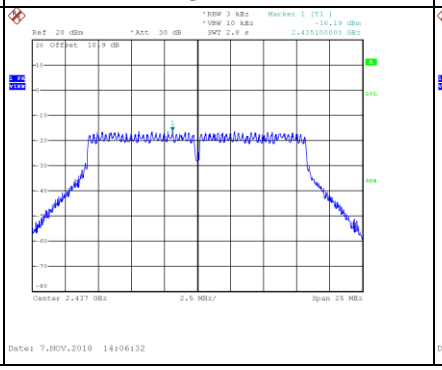
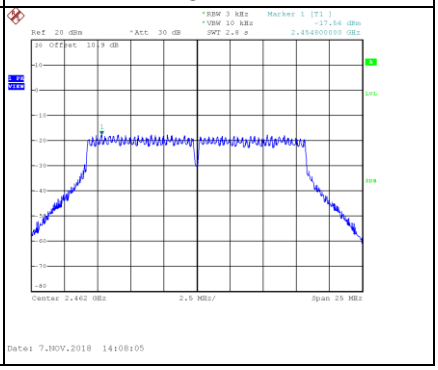
Test Mode	IEEE 802.11b

Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit (dBm/3 kHz)	Result
2412	-14.09	8.00	Complies
2437	-15.00	8.00	Complies
2462	-16.00	8.00	Complies

2412 MHz	2437 MHz	2462 MHz
		

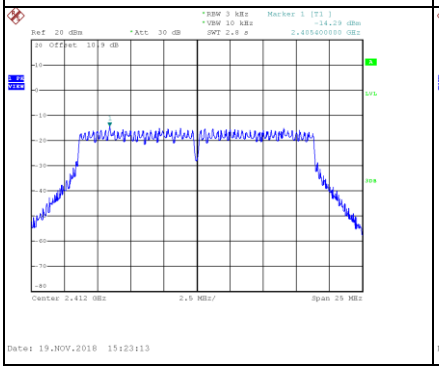
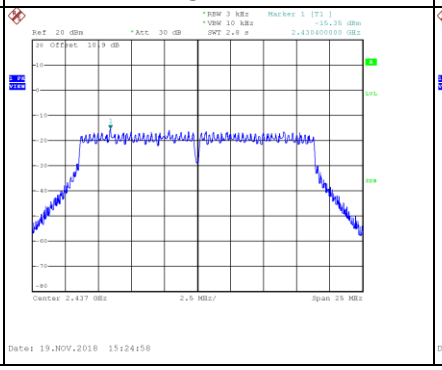
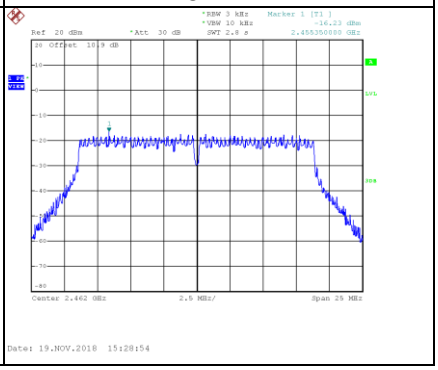
Test Mode	IEEE 802.11g

Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit (dBm)	Result
2412	-14.94	8.00	Complies
2437	-16.19	8.00	Complies
2462	-17.56	8.00	Complies

2412 MHz	2437 MHz	2462 MHz
		

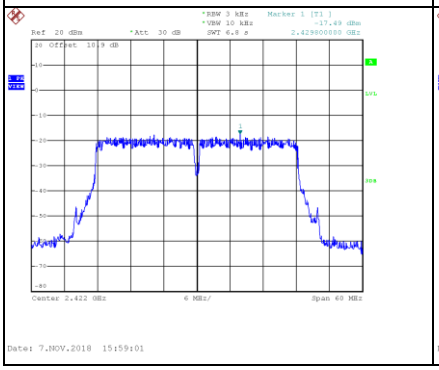
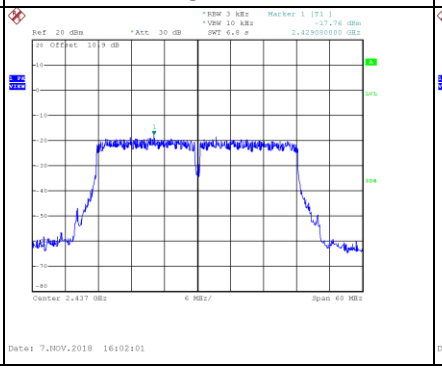
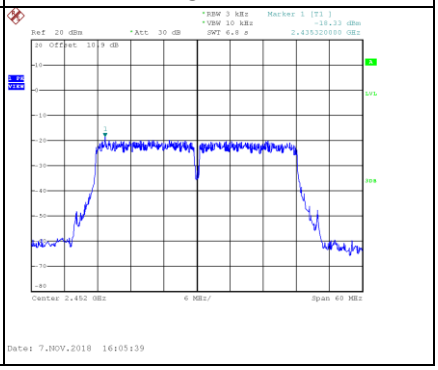
Test Mode	IEEE 802.11n (HT20)

Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit (dBm)	Result
2412	-14.29	8.00	Complies
2437	-15.35	8.00	Complies
2462	-16.23	8.00	Complies

2412 MHz	2437 MHz	2462 MHz
		

Test Mode	IEEE 802.11n (HT40)

Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit (dBm)	Result
2422	-17.49	8.00	Complies
2437	-17.76	8.00	Complies
2452	-18.33	8.00	Complies

2422 MHz	2437 MHz	2452 MHz
		

End of Test Report