FCC Radio Test Report

FCC ID: TVE-120757

This report concerns: Original Grant

Project No.	:	1909C046
Equipment	:	PCIEV1.0-FRT01 WLAN 802.11AC 3x3 PCIE Module
Brand Name	:	FORTINET
Test Model	:	P25037-01
Series Model	:	N/A
Applicant	:	Fortinet, Inc.
Address	:	899 Kifer Road, Sunnyvale, CA 94086 USA
Manufacturer	:	Fortinet, Inc.
Address	:	899 Kifer Road, Sunnyvale, CA 94086 USA
Date of Receipt	:	Sep. 11, 2019
Date of Test	:	Sep. 12, 2019 ~ Nov. 07, 2019
Issued Date	:	Dec. 13, 2019
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG2019091147
Standard(s)	:	FCC Part15, Subpart C (15.247) ANSI C63.10-2013 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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

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Certificate #5123.02

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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).

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BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and 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.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Dec. 13, 2019

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart C (15.247)				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS	------
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.247(a)(2)	Bandwidth	APPENDIX E	PASS	------
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS	------
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS	------
15.247(e)	Power Spectral Density	APPENDIX H	PASS	------
15.203	Antenna Requirement	------	PASS	Note(2)

Note:

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

(2) The device what use a non-standard antenna were considered sufficient to comply with the provisions of 15.203.

1.1 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 Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

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

B. Radiated emissions test:

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	4.88
		30MHz ~ 200MHz	H	4.14
		200MHz ~ 1,000MHz	V	4.62
		200MHz ~ 1,000MHz	H	4.80
		1GHz ~ 6GHz	-	4.58
		6GHz ~ 18GHz	-	5.18
		18GHz ~ 26.5GHz	-	3.80
		26.5GHz ~ 40GHz	-	4.30

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	53%	AC 120V/60Hz	Damon Deng
Radiated Emissions - 9K-30MHz	25°C	60%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions - 30 MHz to 1GHz	24°C	68%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions - Above 1000 MHz	24°C	68%	AC 120V/60Hz	Sheldon Ou
Bandwidth	24°C	45%	AC 120V/60Hz	Jonas Chen
Maximum output power	24°C	45%	AC 120V/60Hz	Jonas Chen
Conducted Spurious Emissions	24°C	45%	AC 120V/60Hz	Jonas Chen
Power Spectral Density	24°C	45%	AC 120V/60Hz	Jonas Chen

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	PCIEV1.0-FRT01 WLAN 802.11AC 3x3 PCIE Module
Brand Name	FORTINET
Test Model	P25037-01
Series Model	N/A
Model Difference(s)	N/A
Power Source	DC Voltage supplied from AC/DC adapter (support unit).
Power Rating	I/P: 100-240V ~50/60Hz O/P: 12V ⎓ 1.5A EUT: 3.3V ⎓
Operation Frequency	2412 MHz ~ 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 450 Mbps
Maximum Output Power Non Beamforming	IEEE 802.11b: 28.84 dBm (0.7656 W) IEEE 802.11g: 29.58 dBm (0.9078 W) IEEE 802.11n (HT20): 29.67 dBm (0.9268 W) IEEE 802.11n (HT40): 26.97 dBm (0.4977 W)
Maximum Output Power Beamforming	IEEE 802.11n (HT20): 25.94 dBm (0.3926 W) IEEE 802.11n (HT40): 26.33 dBm (0.4295 W)

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 IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20) CH03 - CH09 for IEEE 802.11n (HT40)							
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. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Tenda	W1800R	Dipole	SMA Male Reverse	4.16
2	Tenda	W1800R	Dipole	SMA Male Reverse	4.16
3	Tenda	W1800R	Dipole	SMA Male Reverse	4.16

Note: This EUT supports CDD, and all antennas have the same gain,

(1)For Non Beamforming function, Directional gain=G_{ANT}+Array Gain,

For output power measurements, Array Gain=0 ($N_{ANT} \leq 4$), so the Directional gain=4.16.

For power spectral density measurements, Array Gain=10log(N_{ANT}/N_{SS}) dB, so the Directional gain=4.16+10log(3/1)=8.93. So, the power density limit is 8-8.93+6=5.07.

(2)For Beamforming function, Beamforming gain: 4.5dB,

so the Directional gain=4.16+4.5=8.66, Then, the output Power limit is 30-8.66+6=27.34.

4. The worst case for 3TX as follow:

For Non Beamforming:

Operating Mode / TX Mode	3TX
IEEE 802.11b	V (Ant. 1+Ant. 2+Ant. 3)
IEEE 802.11g	V (Ant. 1+Ant. 2+Ant. 3)
IEEE 802.11n(HT20)	V (Ant. 1+Ant. 2+Ant. 3)
IEEE 802.11n(HT40)	V (Ant. 1+Ant. 2+Ant. 3)

For Beamforming:

Operating Mode / TX Mode	3TX
IEEE 802.11n(HT20)	V (Ant. 1+Ant. 2+Ant. 3)
IEEE 802.11n(HT40)	V (Ant. 1+Ant. 2+Ant. 3)

2.2 DESCRIPTION OF TEST MODES

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

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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09
Mode 5	TX N-20 MHz Mode Channel 06

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

AC power line conducted emissions test	
Final Test Mode:	Description
Mode 5	TX N-20 MHz Mode Channel 06

Radiated emissions test - Below 1GHz	
Final Test Mode:	Description
Mode 5	TX N-20 MHz Mode Channel 06

Radiated emissions test - Above 1GHz	
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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

Output Power test for Non Beamforming	
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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

Output Power test for Beamforming	
Final Test Mode:	Description
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

Others Conducted test for Non Beamforming	
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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

NOTE:

(1) The measurements are performed at the high, middle, low available channels.

(2) 802.11b mode: CCK (1 Mbps)
802.11g mode: OFDM (6 Mbps)
802.11n HT20 mode : BPSK (6.5 Mbps)
802.11n HT40 mode : BPSK (13.5 Mbps)
For radiated emission tests, the highest output powers were set for final test.

(3) For radiated emission below 1 GHz test, the IEEE 802.11n20 channel 06 is found to be the worst case and recorded.

(4) For radiated emission above 1 GHz test, 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.

(5) The measurements for Power were tested, the worst case were Non Beamforming, only worst case were documented for other test items

2.3 PARAMETERS OF TEST SOFTWARE

Non Beamforming

Test Software	QSPR v5.0-00071		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	18	20	17
IEEE 802.11g	16	18	17
IEEE 802.11n (HT20)	14	18	16
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	13	16	14

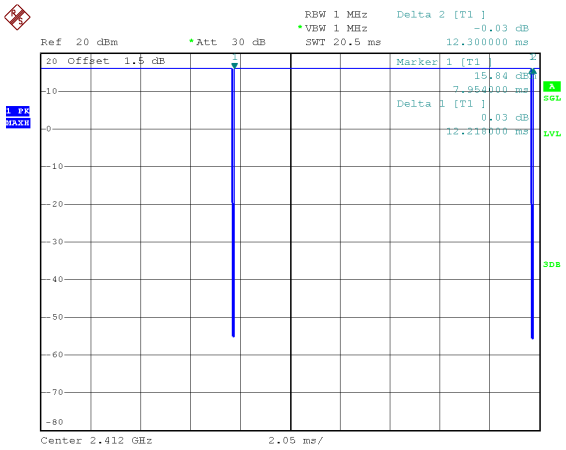
Beamforming

Test Software	QSPR v5.0-00071		
Frequency (MHz)	2412	2437	2462
IEEE 802.11n (HT20)	14	14	14
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	13	15	13

2.4 DUTY CYCLE

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

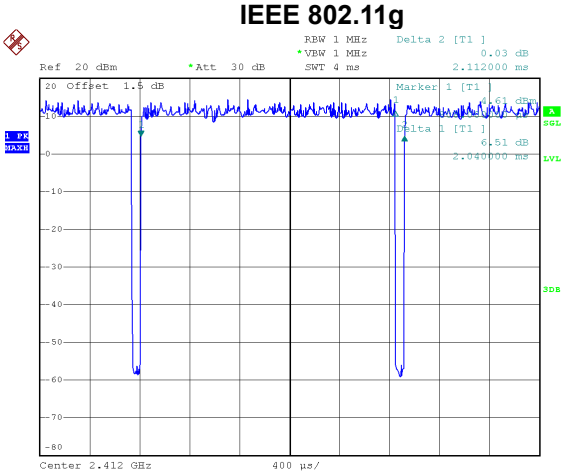
IEEE 802.11b



Date: 19.SEP.2019 13:53:59

Duty cycle = 12.218 ms / 12.300 ms = 99.33%
Duty Factor = 10 log(1/Duty cycle) = 0.00

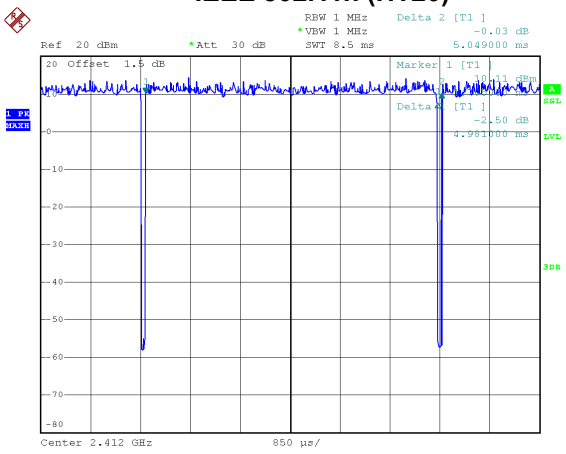
IEEE 802.11g



Date: 19.SEP.2019 13:54:30

Duty cycle = 2.040 ms / 2.112 ms = 96.59%
Duty Factor = 10 log(1/Duty cycle) = 0.15

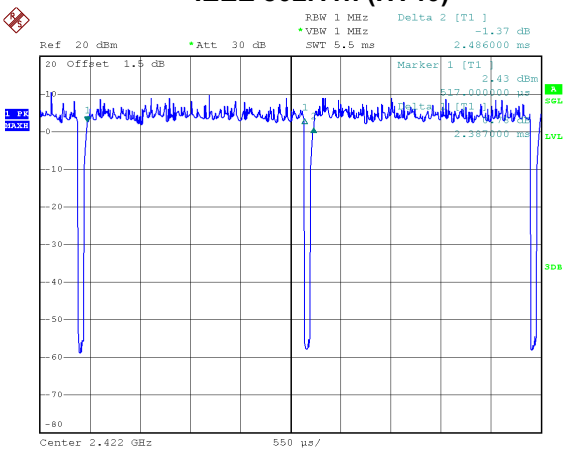
IEEE 802.11n (HT20)



Date: 19.SEP.2019 13:55:09

Duty cycle = 4.981 ms / 5.049 ms = 98.65%
Duty Factor = 10 log(1/Duty cycle) = 0.00

IEEE 802.11n (HT40)



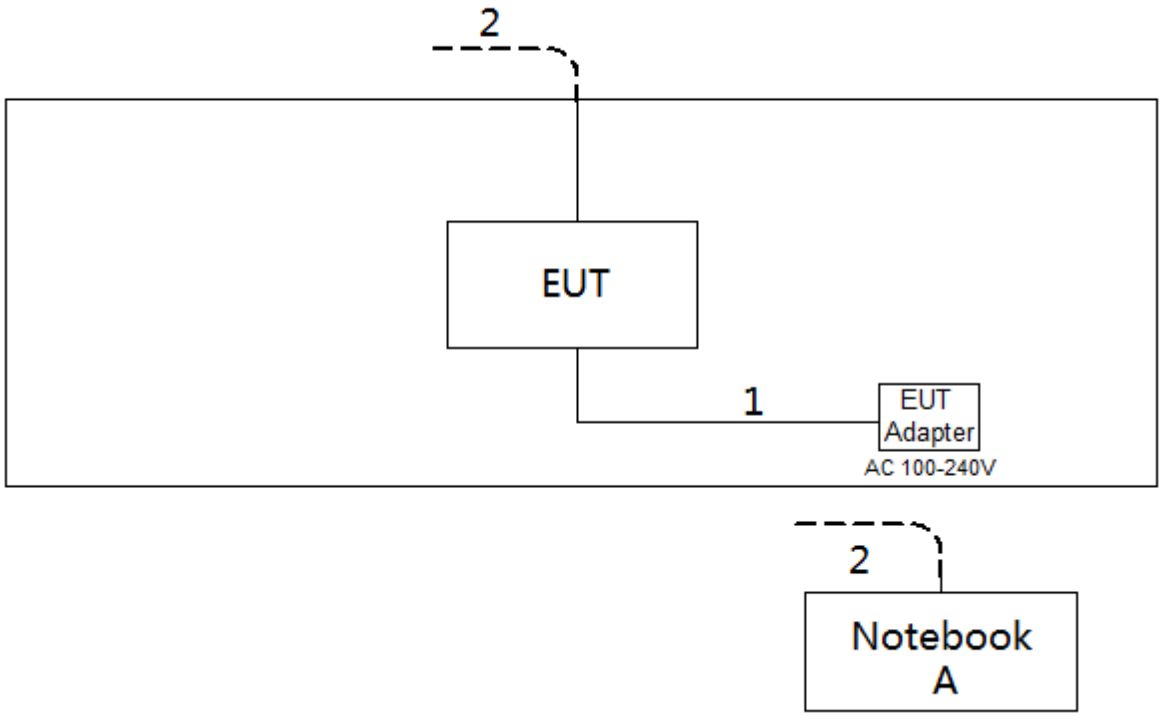
Date: 19.SEP.2019 13:55:48

Duty cycle = 2.387 ms / 2.486 ms = 96.02%
Duty Factor = 10 log(1/Duty cycle) = 0.18

NOTE:
For IEEE 802.11g and IEEE 802.11n (HT20):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

For IEEE 802.11n (HT40):
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Dell	Inspiron 15-7559	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.2m
2	RJ45 Cable	NO	NO	10m

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dBμV)	
	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 tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

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

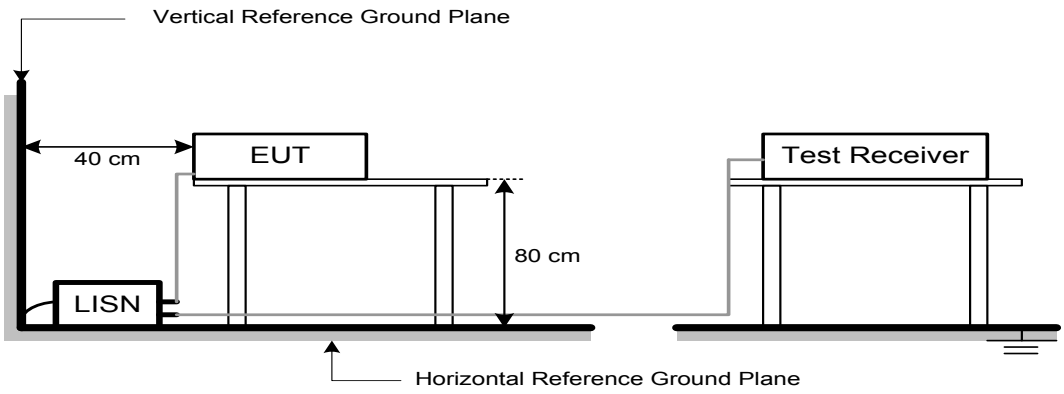
3.2 TEST PROCEDURE

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 equipment 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.

3.3 DEVIATION FROM TEST STANDARD

No deviation

3.4 TEST SETUP



3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULTS

Please refer to the APPENDIX A.

4. RADIATED EMISSIONS TEST

4.1 LIMIT

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 (9 kHz-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
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	(dBuV/m at 3 m)	
	Peak	Average
Above 1000	74	54

NOTE:

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

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

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

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

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

4.2 TEST PROCEDURE

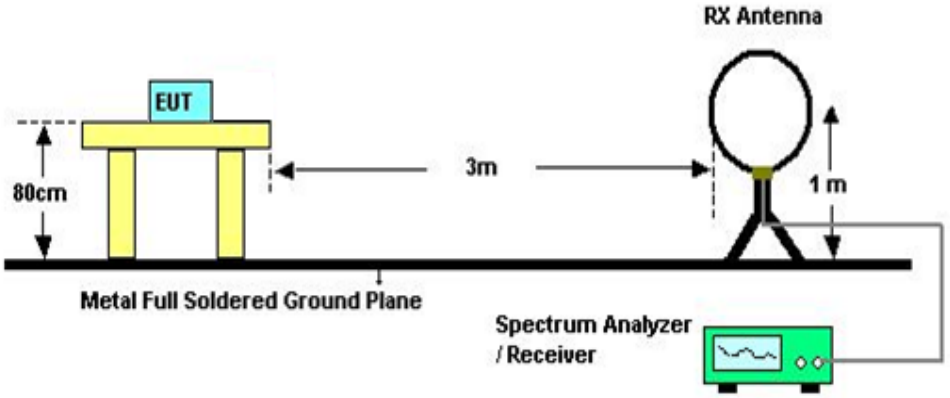
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
b. The measuring distance 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 1 GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; 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 1 GHz.
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 1 GHz)
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 1 GHz)
i. For the actual test configuration, please refer to the related Item -EUT Test Photos.

4.3 DEVIATION FROM TEST STANDARD

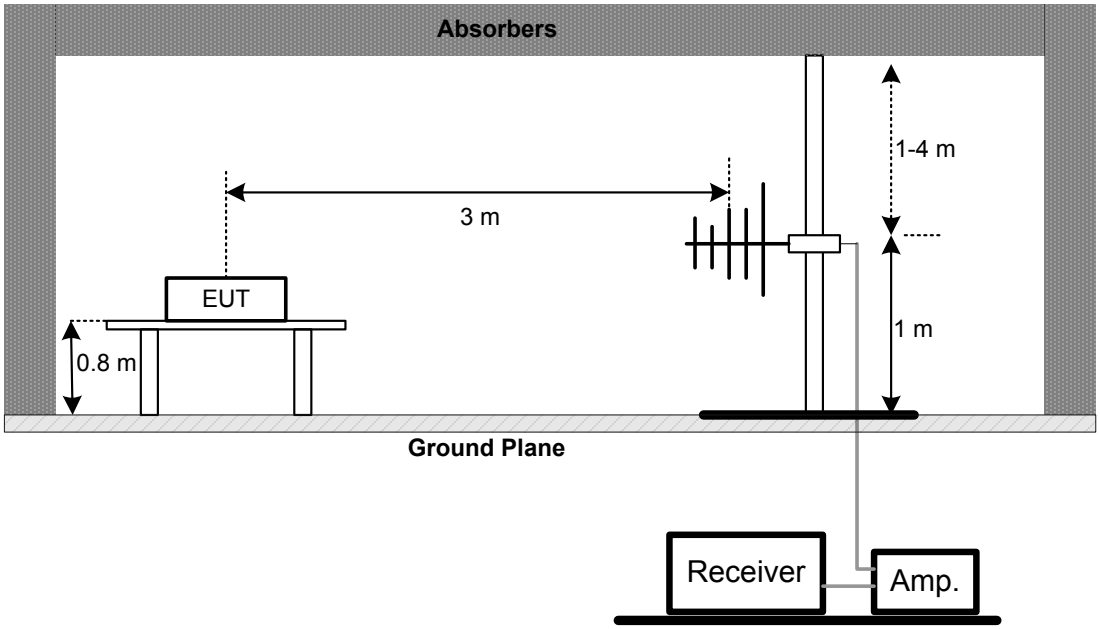
No deviation

4.4 TEST SETUP

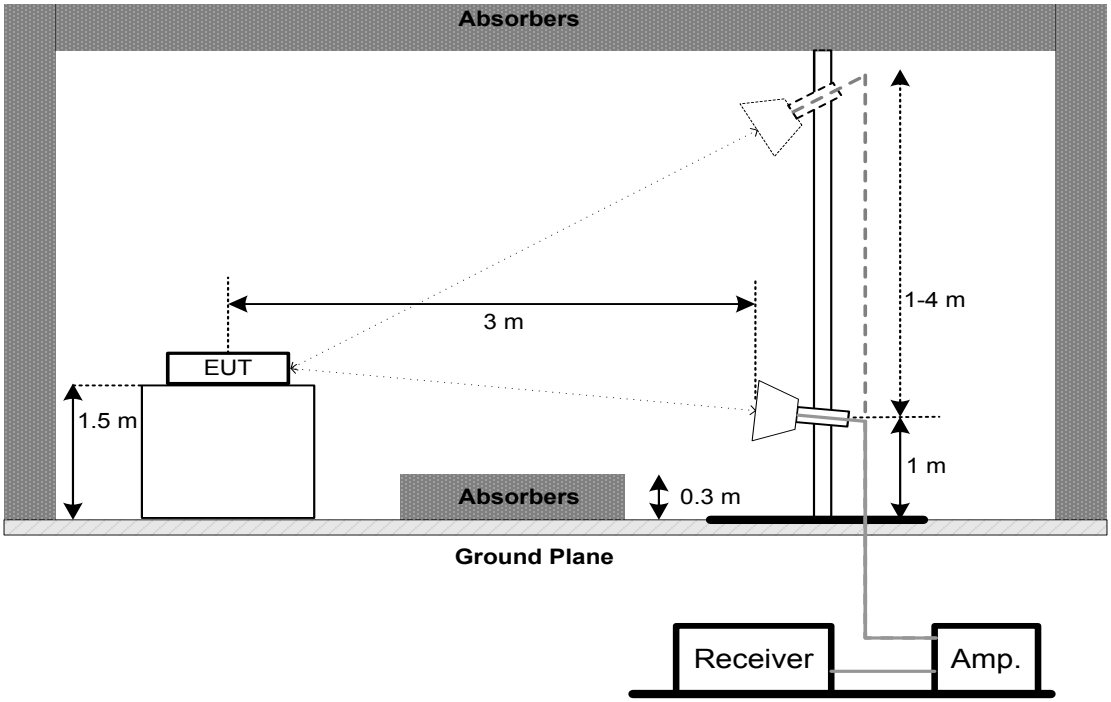
9 kHz-30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B

Remark:

(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

4.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX 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 LIMIT

FCC Part15, Subpart C (15.247)		
Section	Test Item	Limit
15.247(a)(2)	6 dB Bandwidth	Minimum 500 kHz
	99% Emission Bandwidth	-

5.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. For 6dB Bandwidth Spectrum setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.
For 99% OBW Spectrum Setting: For B,G,N20 mode: RBW= 300KHz, VBW=1MHz, For N40 mode: RBW= 1MHz, VBW=3MHz, Sweep time = 2.5 ms.
c. The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.

6. MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section	Test Item	Limit
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm

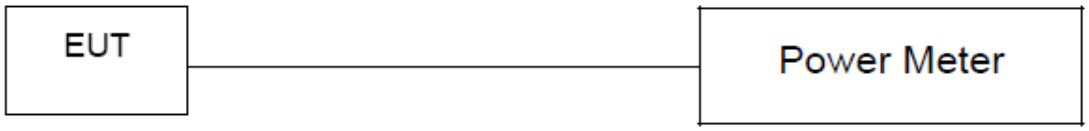
6.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
b. The maximum conducted output power was performed in accordance with method 11.9.1.3 of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX F.

7. CONDUCTED SPURIOUS EMISSIONS

7.1 LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required.

7.2 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.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX G.

8. POWER SPECTRAL DENSITY TEST

8.1 LIMIT

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

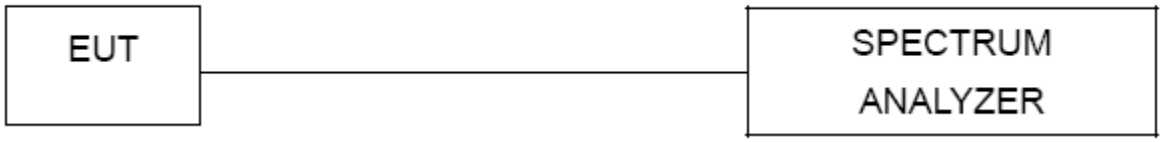
8.2 TEST PROCEDURE

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=3 kHz, VBW=10 kHz, Sweep time = Auto.
c. The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX H.

9. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 10, 2020
2	LISN	EMCO	3816/2	52765	Mar. 10, 2020
3	50ohm Terminator	SHX	TF5-3	15041305	Mar. 10, 2020
4	TWO-LINE V-NETWORK	R&S	ENV216	101447	May 19, 2020
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 12, 2020

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Loop Antenna	EM	EM-6876-1	230	Jan. 15, 2020
2	Cable	N/A	RG 213/U	C-102	May 31, 2020
3	EMI Test Receiver	R&S	ESCI	100895	Mar. 10, 2020
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 09, 2020
2*	Amplifier	HP	8447D	2944A09673	Aug. 11, 2021
3	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 24, 2020
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 09, 2020
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 23, 2020
3	Amplifier	Agilent	8449B	3008A02333	Mar. 10, 2020
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 10, 2020
5	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	mitron	B10-01-01-12M	18072744	Jun. 29, 2020
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth & Antenna Conducted Spurious Emissions & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Aug. 03, 2020
2	Wideband power sensor	Keysight	N1923A	MY58310004	Aug. 03, 2020

Remark: ”N/A” denotes no model name, serial no. or calibration specified.

“*” calibration period of equipment list is three year.

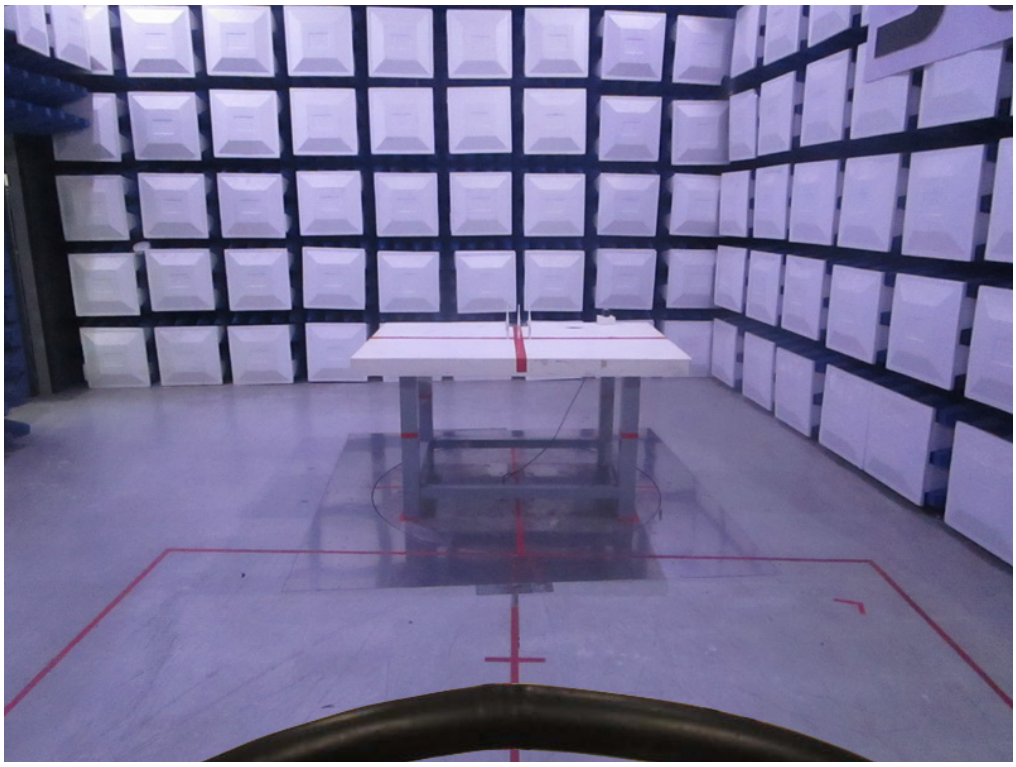
Except * item, all calibration period of equipment list is one year.

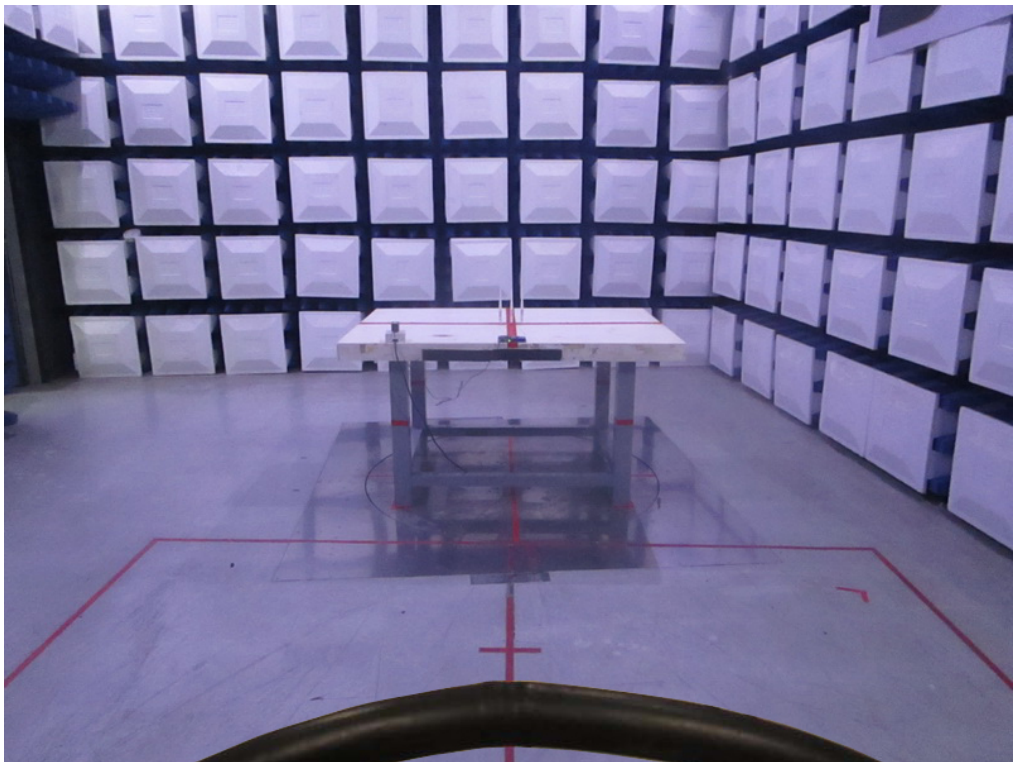
10. EUT TEST PHOTO

AC Power Line Conducted Emissions Test Photos

Radiated Emissions Test Photos

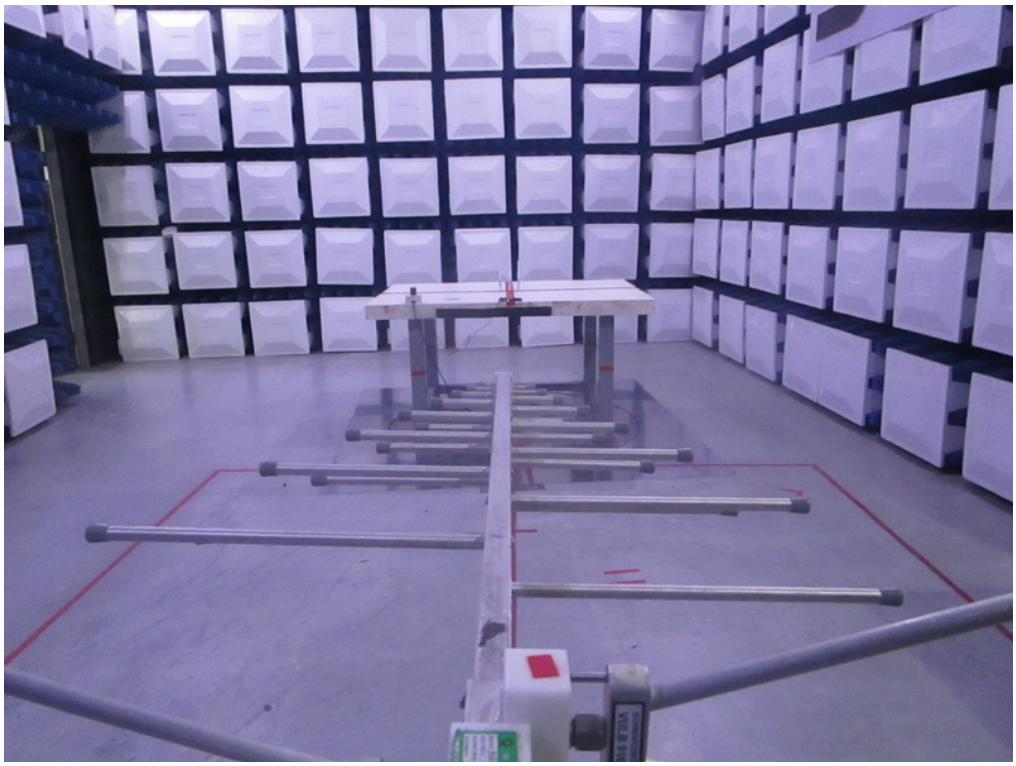
9 kHz to 30 MHz





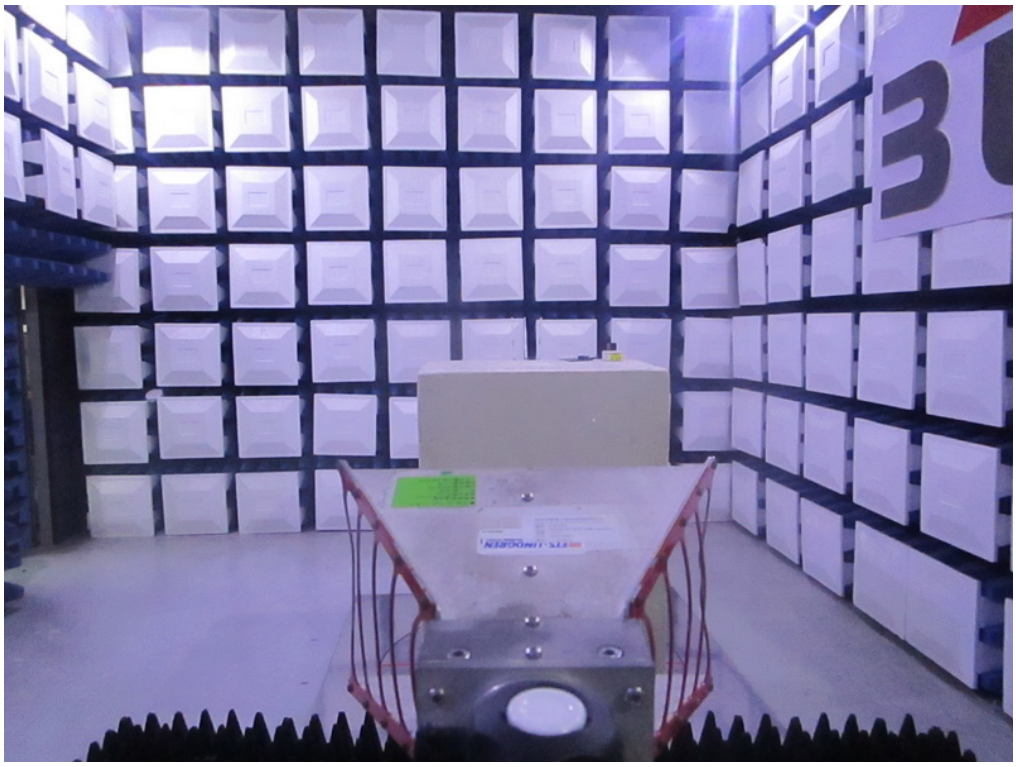
Radiated Emissions Test Photos

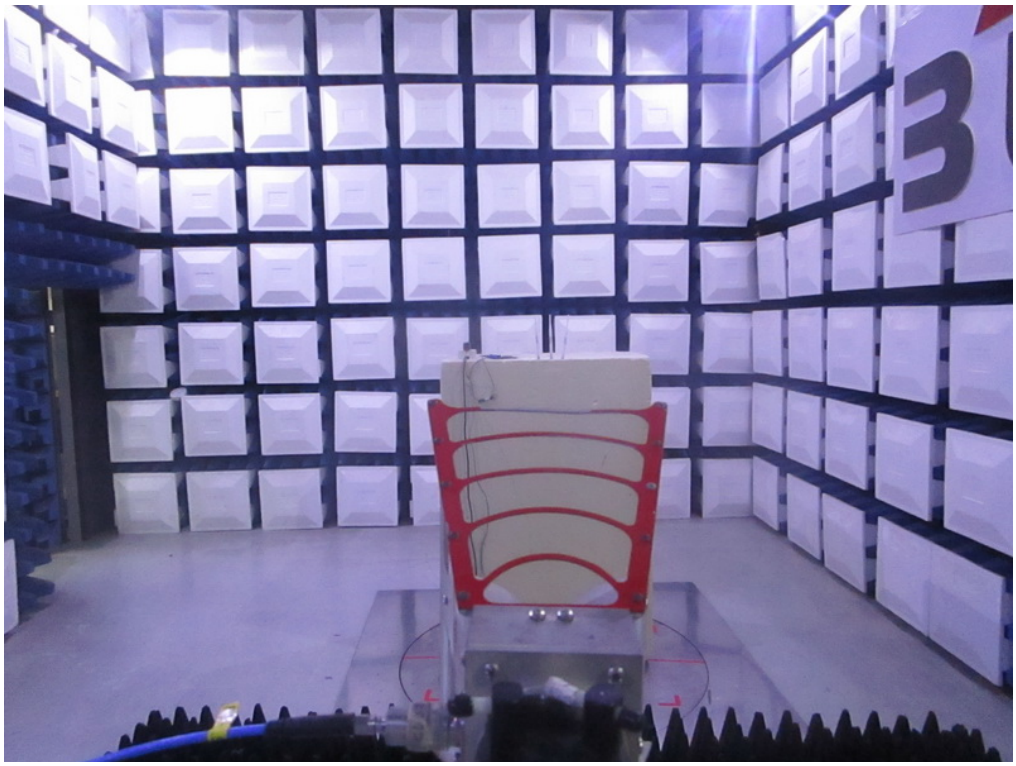
30 MHz to 1 GHz



Radiated Emissions Test Photos

Above 1 GHz

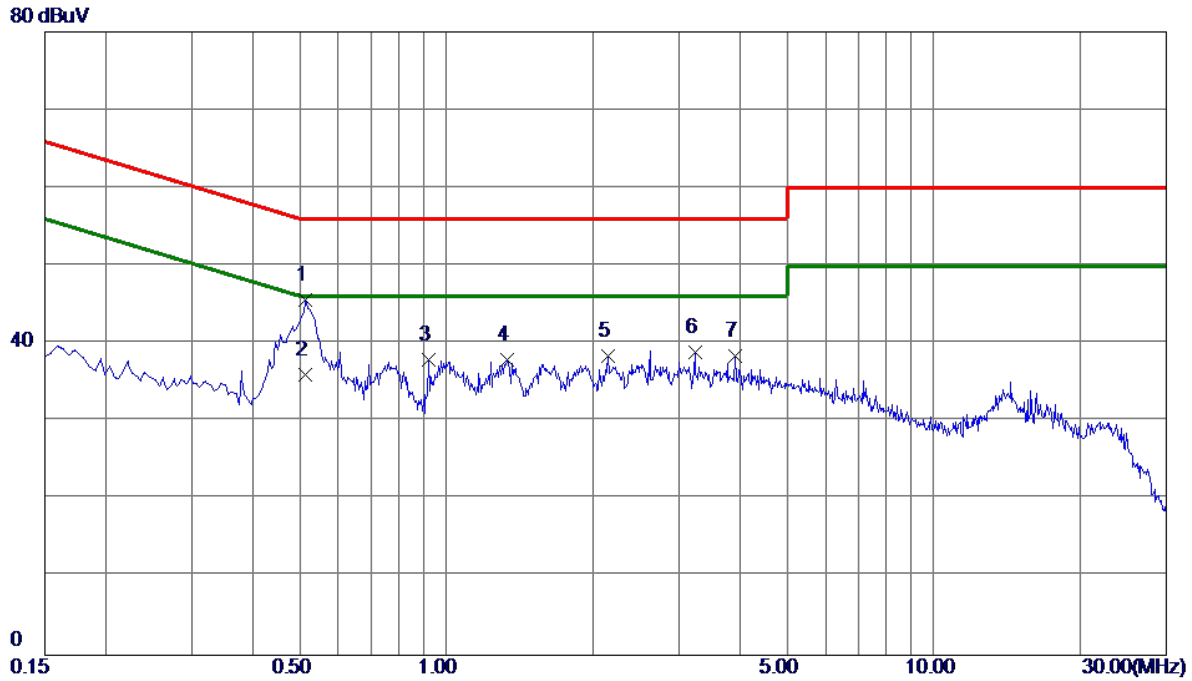




APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode:	TX N20 Mode Channel 06

Line

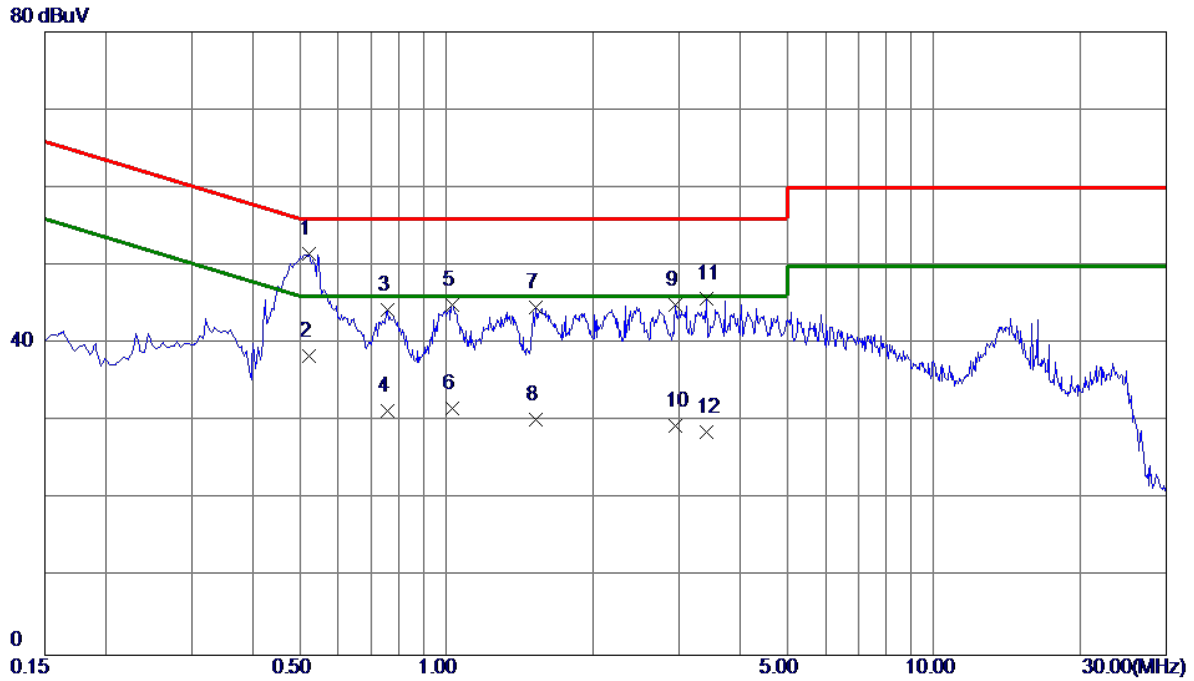


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.5144	35.72	9.88	45.60	56.00	-10.40	Peak	
2 *	0.5144	26.10	9.88	35.98	46.00	-10.02	AVG	
3	0.9195	28.05	9.92	37.97	56.00	-18.03	Peak	
4	1.3335	28.00	9.94	37.94	56.00	-18.06	Peak	
5	2.1480	28.42	10.01	38.43	56.00	-17.57	Peak	
6	3.2370	28.81	10.08	38.89	56.00	-17.11	Peak	
7	3.9210	28.31	10.12	38.43	56.00	-17.57	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N20 Mode Channel 06

Neutral



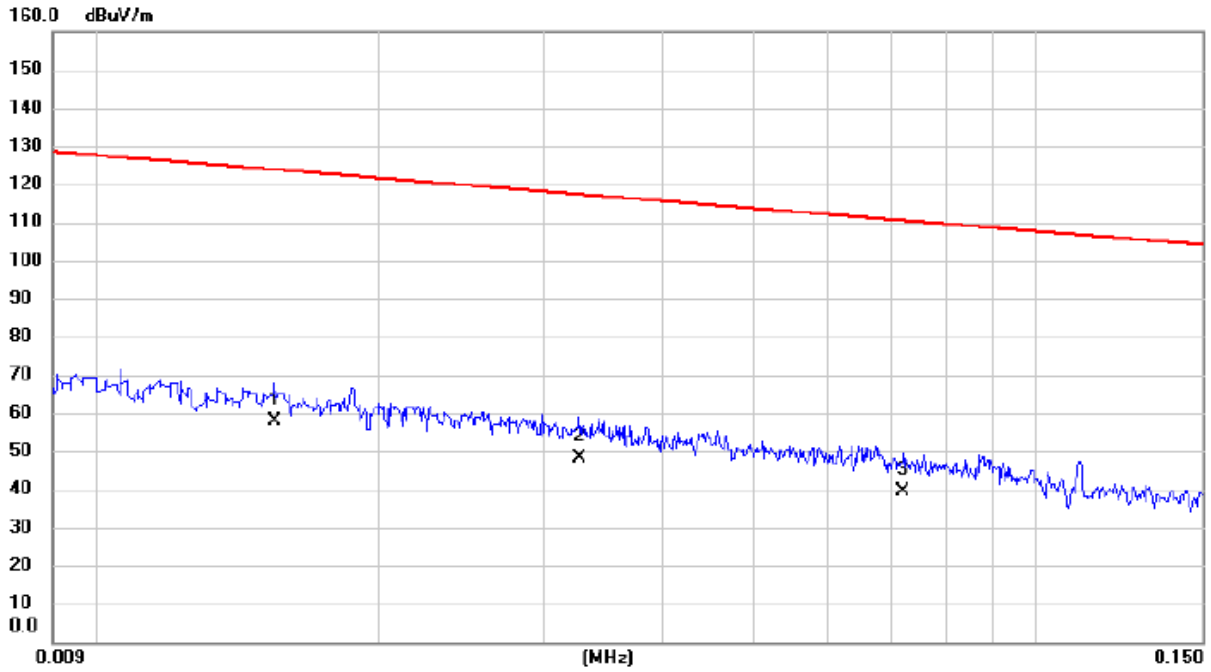
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.5235	41.49	10.03	51.52	56.00	-4.48	Peak	
2	0.5235	28.30	10.03	38.33	46.00	-7.67	AVG	
3	0.7575	34.23	10.08	44.31	56.00	-11.69	Peak	
4	0.7575	21.31	10.08	31.39	46.00	-14.61	AVG	
5	1.0275	34.83	10.12	44.95	56.00	-11.05	Peak	
6	1.0275	21.50	10.12	31.62	46.00	-14.38	AVG	
7	1.5270	34.42	10.16	44.58	56.00	-11.42	Peak	
8	1.5270	20.10	10.16	30.26	46.00	-15.74	AVG	
9	2.9490	34.65	10.25	44.90	56.00	-11.10	Peak	
10	2.9490	19.20	10.25	29.45	46.00	-16.55	AVG	
11	3.4125	35.43	10.28	45.71	56.00	-10.29	Peak	
12	3.4125	18.30	10.28	28.58	46.00	-17.42	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Test Mode:	TX N20 Mode Channel 06

Ant 0°

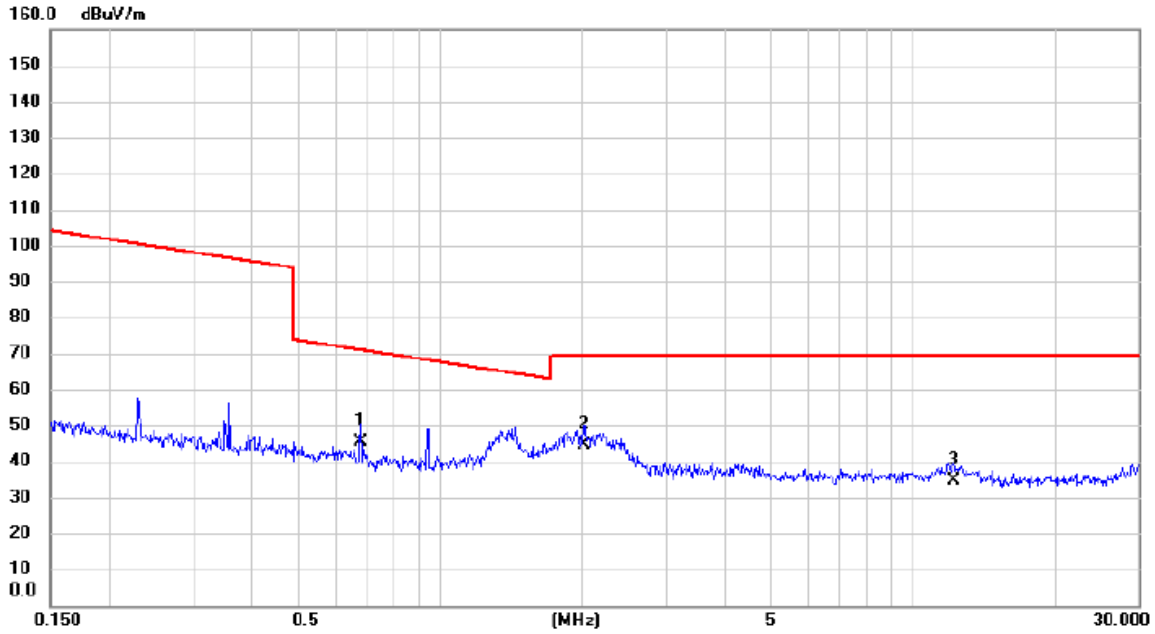


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0155	37.51	20.20	57.71	123.80	-66.09	AVG	
2		0.0326	28.97	19.24	48.21	117.34	-69.13	AVG	
3		0.0720	21.04	18.29	39.33	110.46	-71.13	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N20 Mode Channel 06

Ant 0°

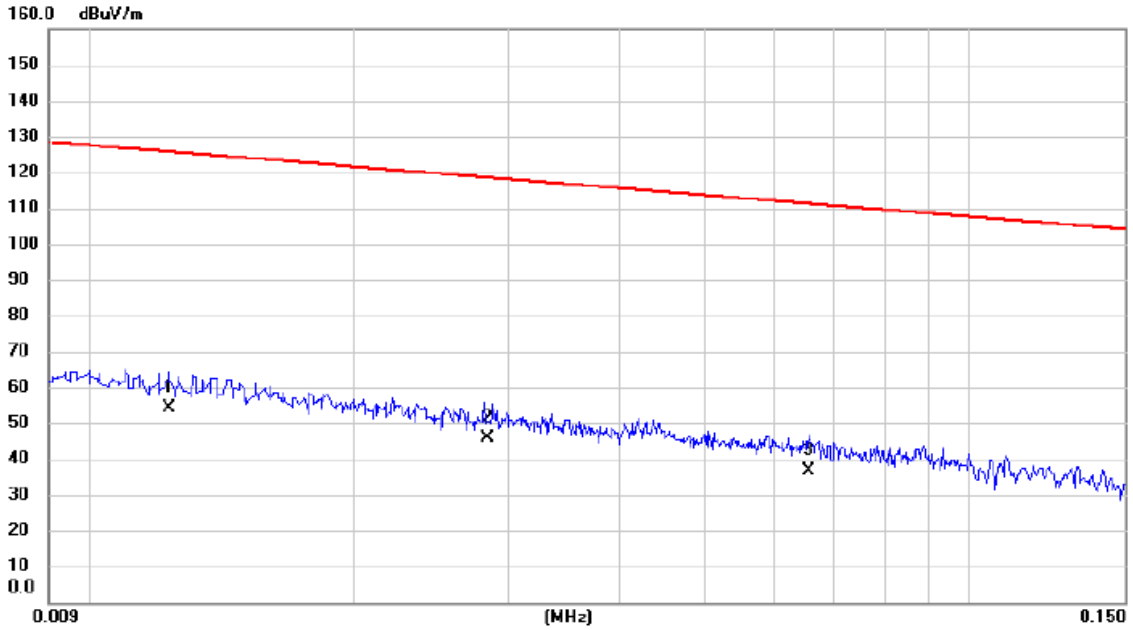


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.6790	32.73	12.71	45.44	70.97	-25.53	QP	
2	*	2.0118	32.88	11.81	44.69	69.54	-24.85	QP	
3		12.1883	22.91	11.61	34.52	69.54	-35.02	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N20 Mode Channel 06

Ant 90°

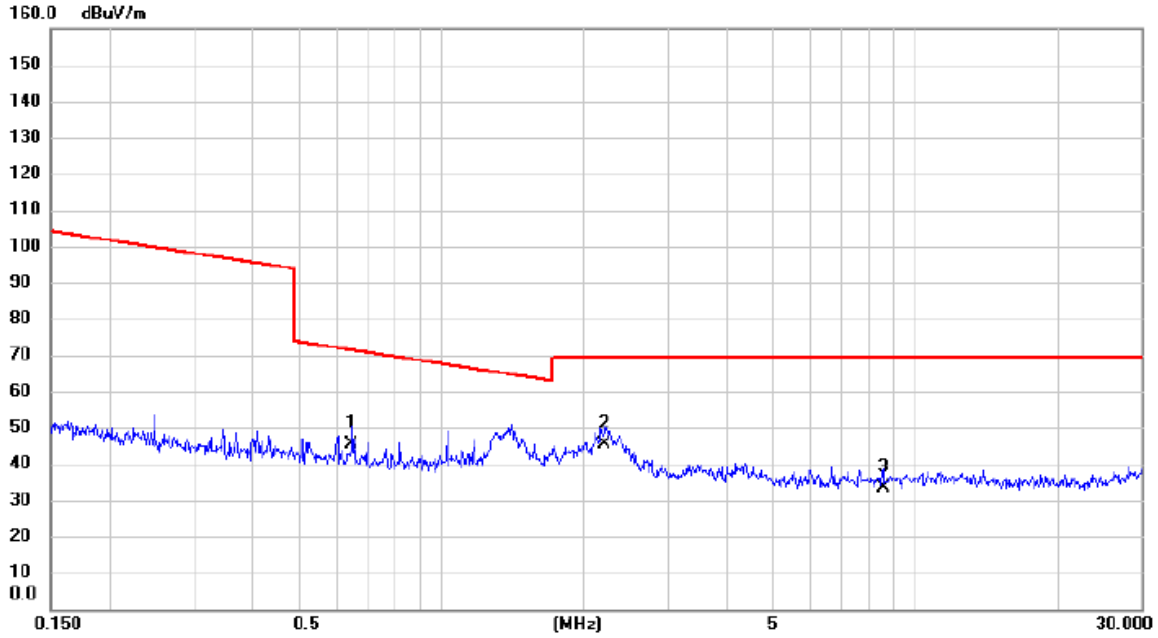


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0123	37.95	16.13	54.08	125.81	-71.73	AVG	
2		0.0283	31.82	13.85	45.67	118.57	-72.90	AVG	
3		0.0656	22.84	13.68	36.52	111.27	-74.75	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N20 Mode Channel 06

Ant 90°



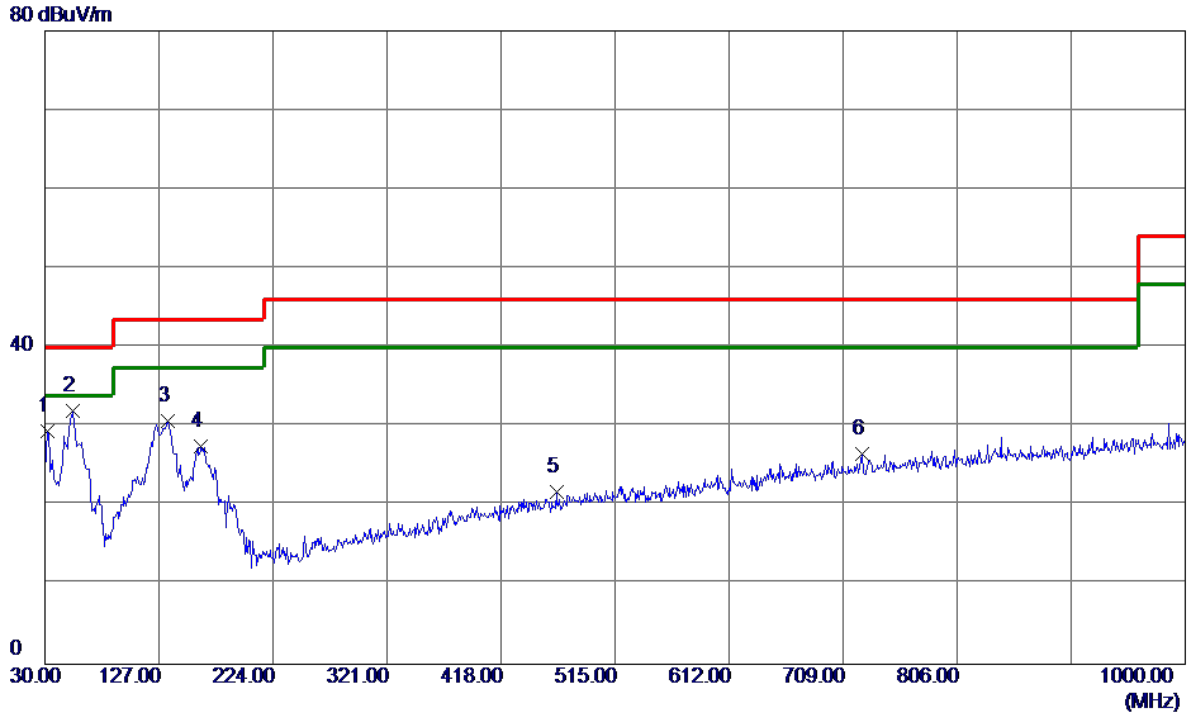
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.6474	32.72	12.78	45.50	71.38	-25.88	QP	
2	*	2.2131	33.61	11.69	45.30	69.54	-24.24	QP	
3		8.5462	22.18	11.41	33.59	69.54	-35.95	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode:	TX N20 Mode Channel 06

Vertical

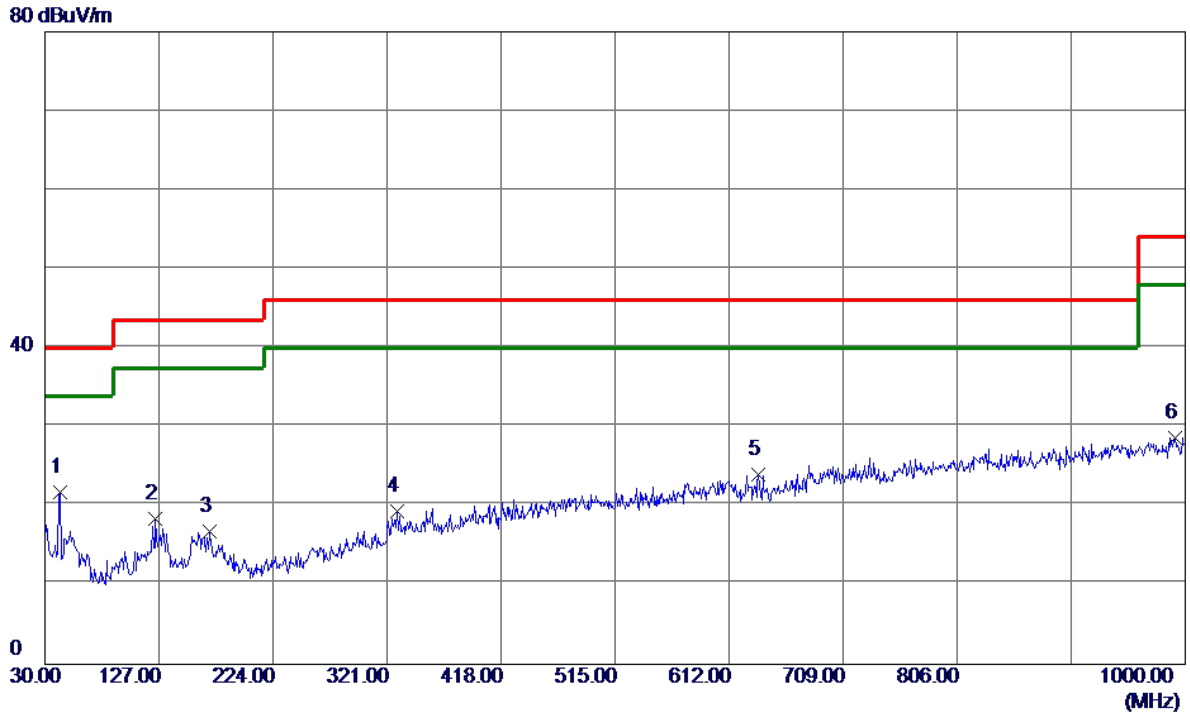


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	32.4250	44.37	-14.86	29.51	40.00	-10.49	Peak	
2 *	53.7650	45.87	-13.91	31.96	40.00	-8.04	Peak	
3	134.7600	43.62	-12.96	30.66	43.50	-12.84	Peak	
4	162.8900	38.87	-11.41	27.46	43.50	-16.04	Peak	
5	465.0450	29.76	-7.96	21.80	46.00	-24.20	Peak	
6	725.0050	30.38	-3.83	26.55	46.00	-19.45	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N20 Mode Channel 06

Horizontal



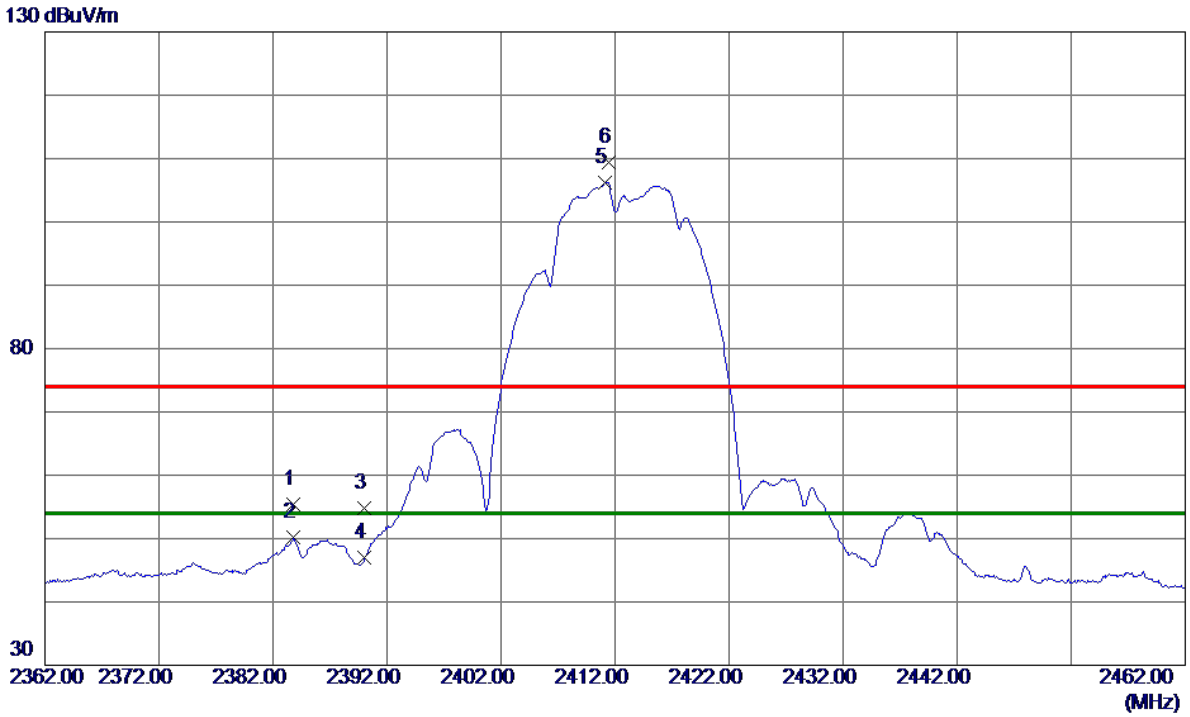
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	42.6100	36.26	-14.49	21.77	40.00	-18.23	Peak	
2	124.0900	31.39	-13.04	18.35	43.50	-25.15	Peak	
3	169.6799	29.20	-12.37	16.83	43.50	-26.67	Peak	
4	329.2450	30.40	-11.01	19.39	46.00	-26.61	Peak	
5	637.2199	28.92	-4.95	23.97	46.00	-22.03	Peak	
6	991.7550	28.70	-0.07	28.63	54.00	-25.37	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

Test Mode:	TX B Mode 2412 MHz

Vertical

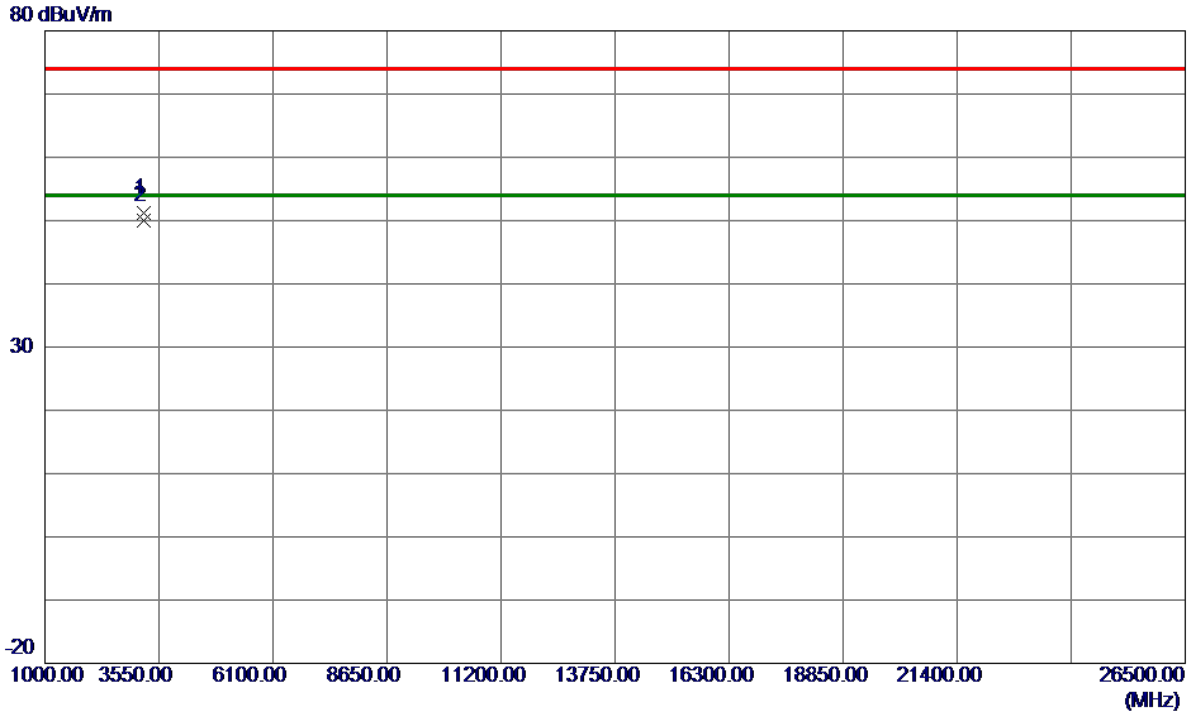


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2383.8000	49.21	6.25	55.46	74.00	-18.54	Peak	
2	2383.8000	43.91	6.25	50.16	54.00	-3.84	AVG	
3	2390.0000	48.50	6.24	54.74	74.00	-19.26	Peak	
4	2390.0000	40.76	6.24	47.00	54.00	-7.00	AVG	
5 *	2411.1500	100.05	6.20	106.25	54.00	52.25	AVG	No Limit
6	2411.4500	103.20	6.20	109.40	74.00	35.40	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2412 MHz

Vertical

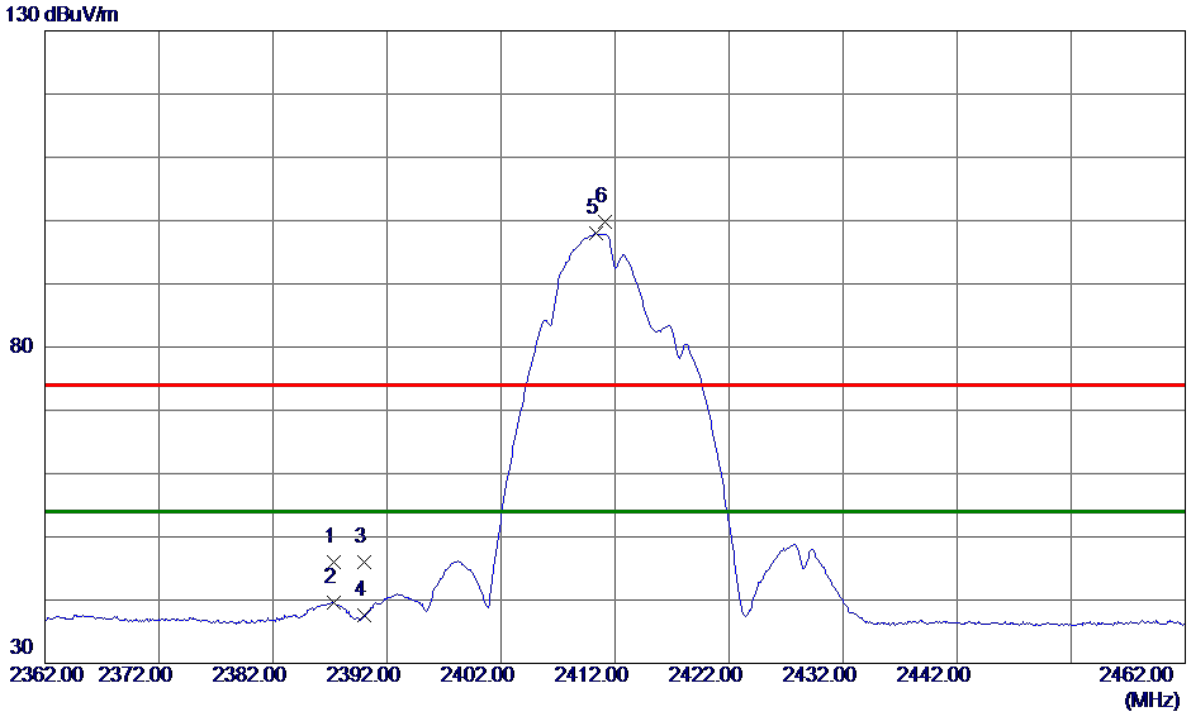


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3216.0000	52.01	-0.77	51.24	74.00	-22.76	Peak	
2 *	3216.0100	50.68	-0.77	49.91	54.00	-4.09	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2412 MHz

Horizontal

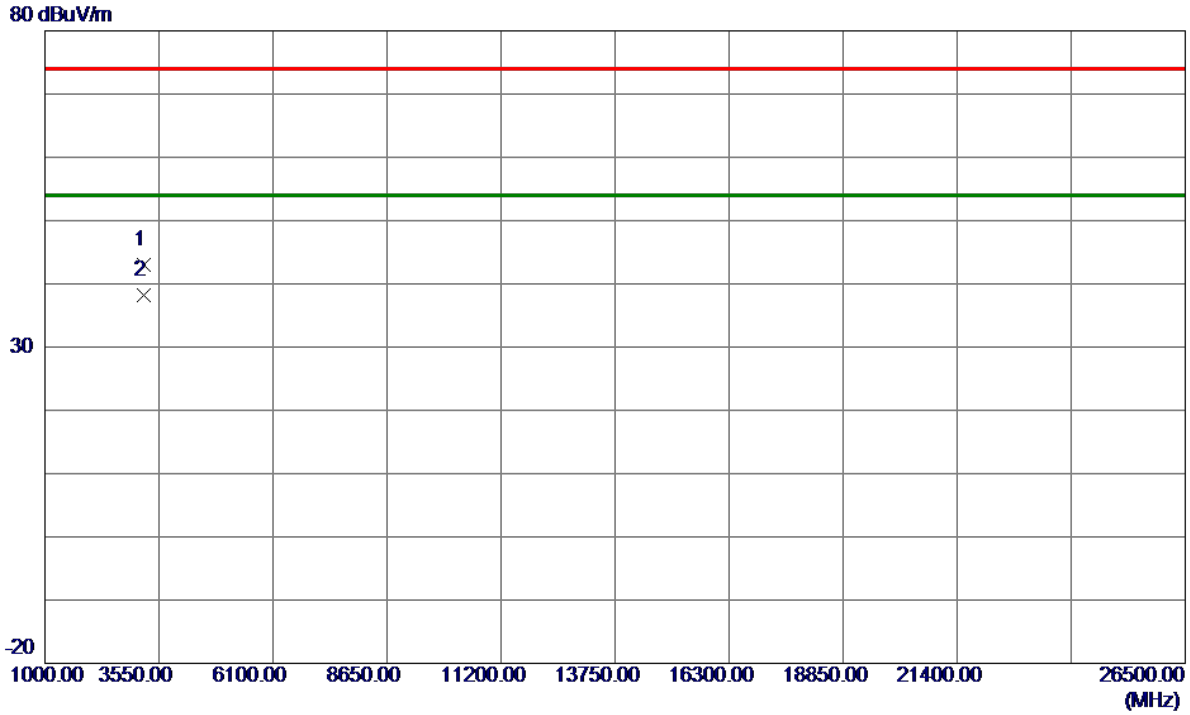


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2387.3000	39.85	6.24	46.09	74.00	-27.91	Peak	
2	2387.3000	33.41	6.24	39.65	54.00	-14.35	AVG	
3	2390.0000	39.74	6.24	45.98	74.00	-28.02	Peak	
4	2390.0000	31.32	6.24	37.56	54.00	-16.44	AVG	
5 *	2410.3500	91.75	6.20	97.95	54.00	43.95	AVG	No Limit
6	2411.1000	93.57	6.20	99.77	74.00	25.77	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2412 MHz

Horizontal

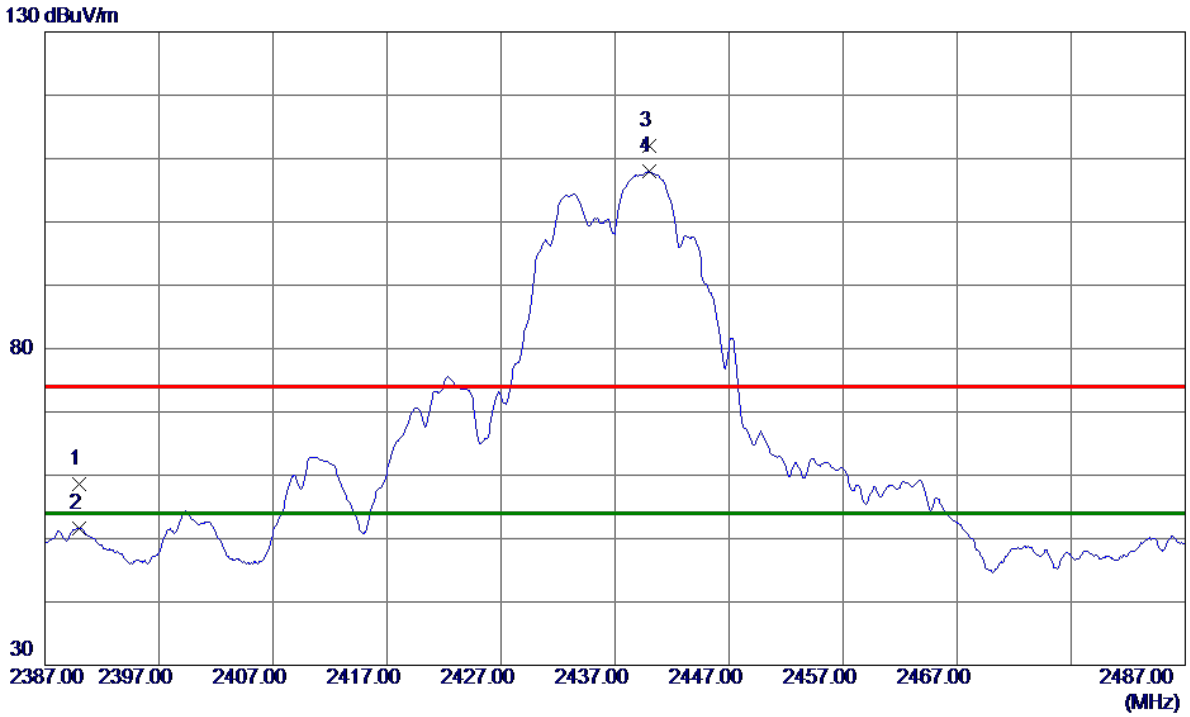


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3215.9550	43.80	-0.77	43.03	74.00	-30.97	Peak	
2 *	3216.0250	38.96	-0.77	38.19	54.00	-15.81	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2437 MHz

Vertical

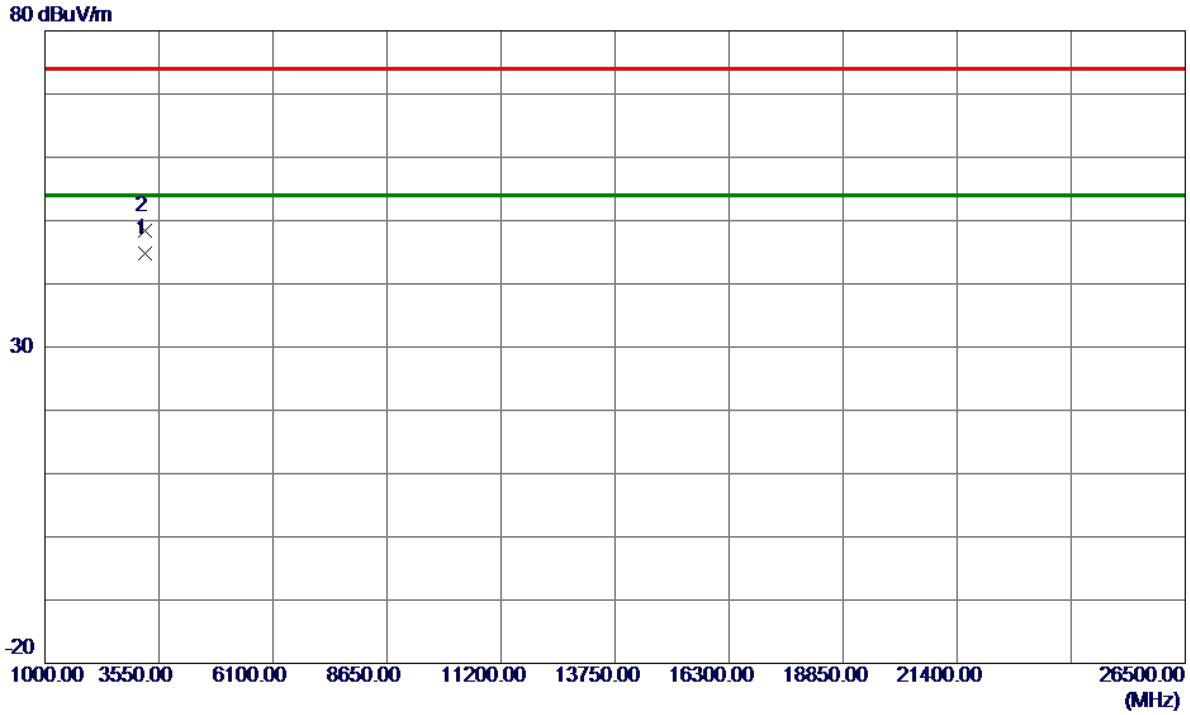


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	52.44	6.24	58.68	74.00	-15.32	Peak	
2	2390.0000	45.36	6.24	51.60	54.00	-2.40	AVG	
3	2439.9500	105.82	6.15	111.97	74.00	37.97	Peak	No Limit
4 *	2439.9500	101.82	6.15	107.97	54.00	53.97	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2437 MHz

Vertical

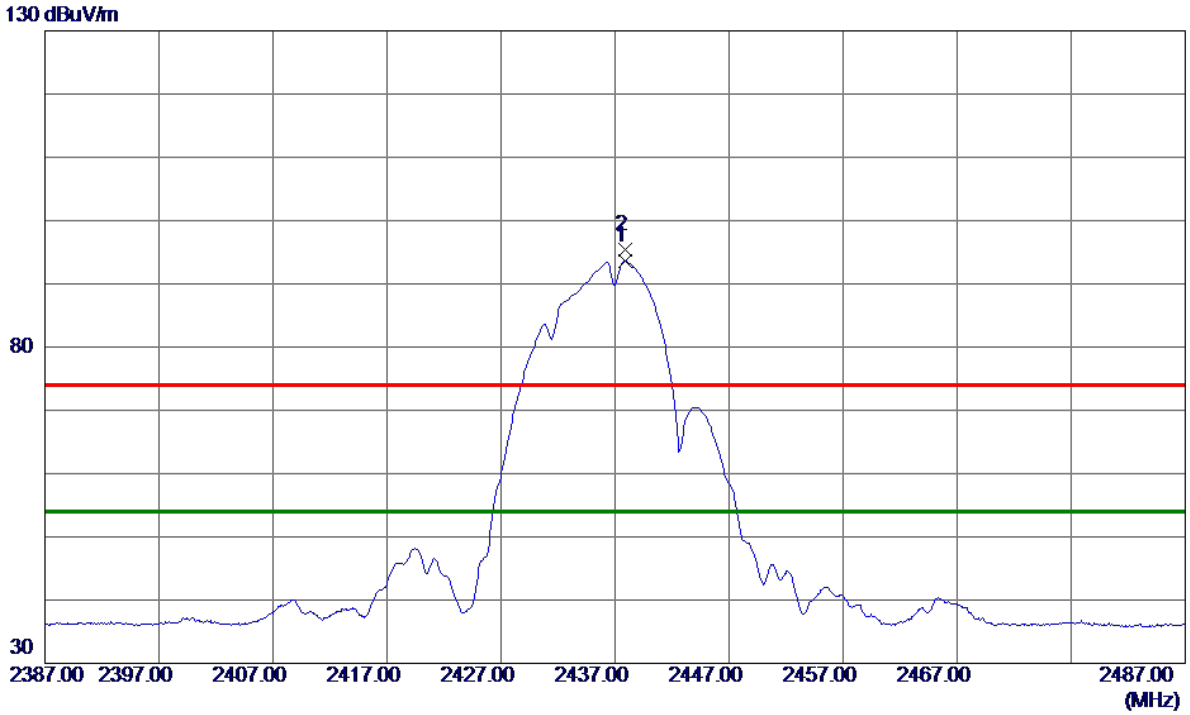


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.3550	45.42	-0.65	44.77	54.00	-9.23	AVG	
2	3249.3899	48.98	-0.65	48.33	74.00	-25.67	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2437 MHz

Horizontal

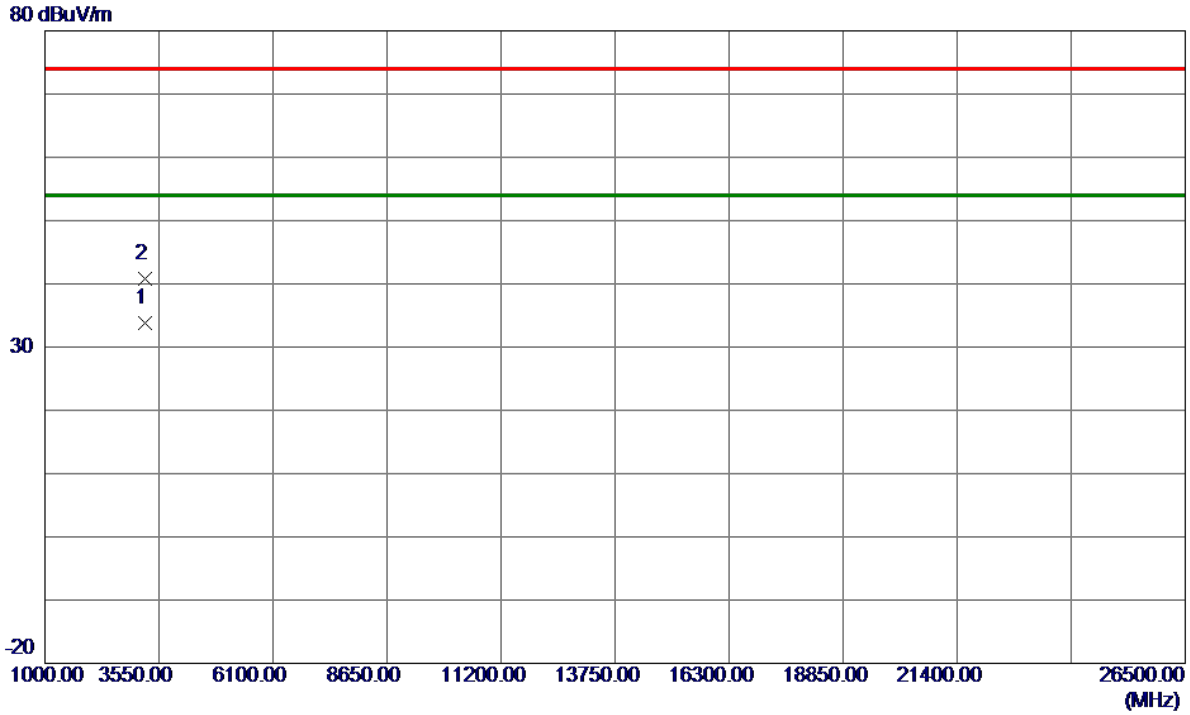


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437.8500	87.51	6.16	93.67	54.00	39.67	AVG	No Limit
2	2437.9000	89.32	6.16	95.48	74.00	21.48	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2437 MHz

Horizontal

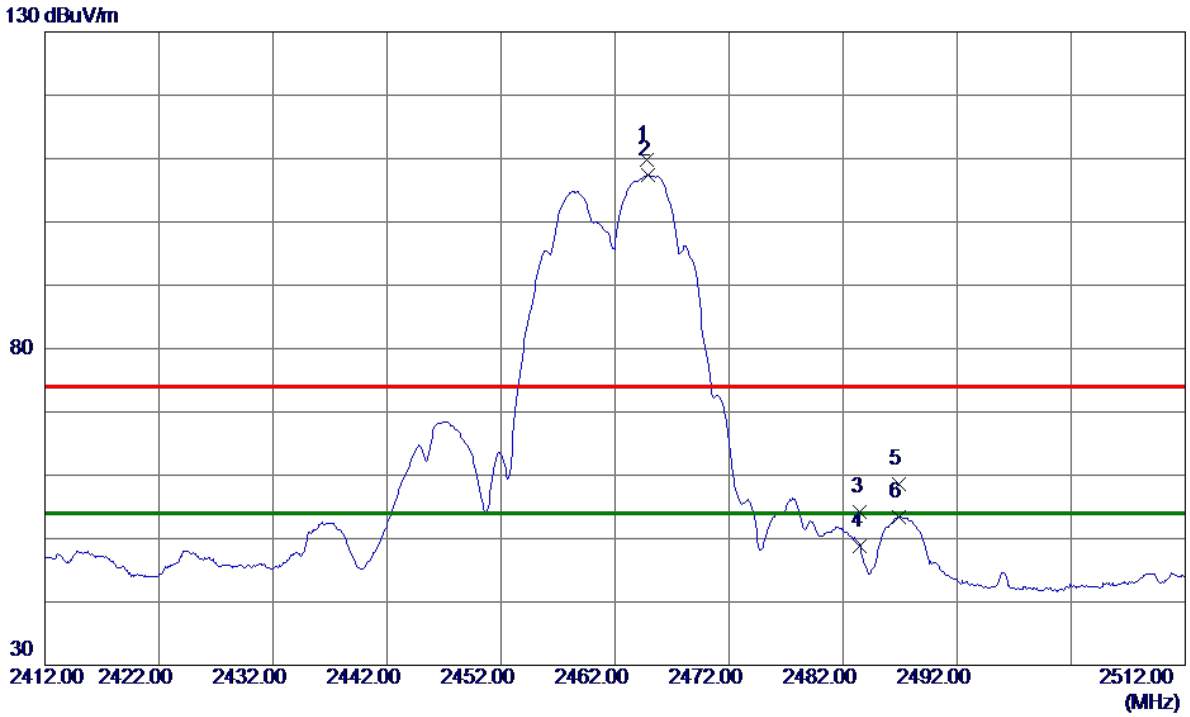


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.3300	34.45	-0.65	33.80	54.00	-20.20	AVG	
2	3249.4900	41.49	-0.65	40.84	74.00	-33.16	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2462 MHz

Vertical

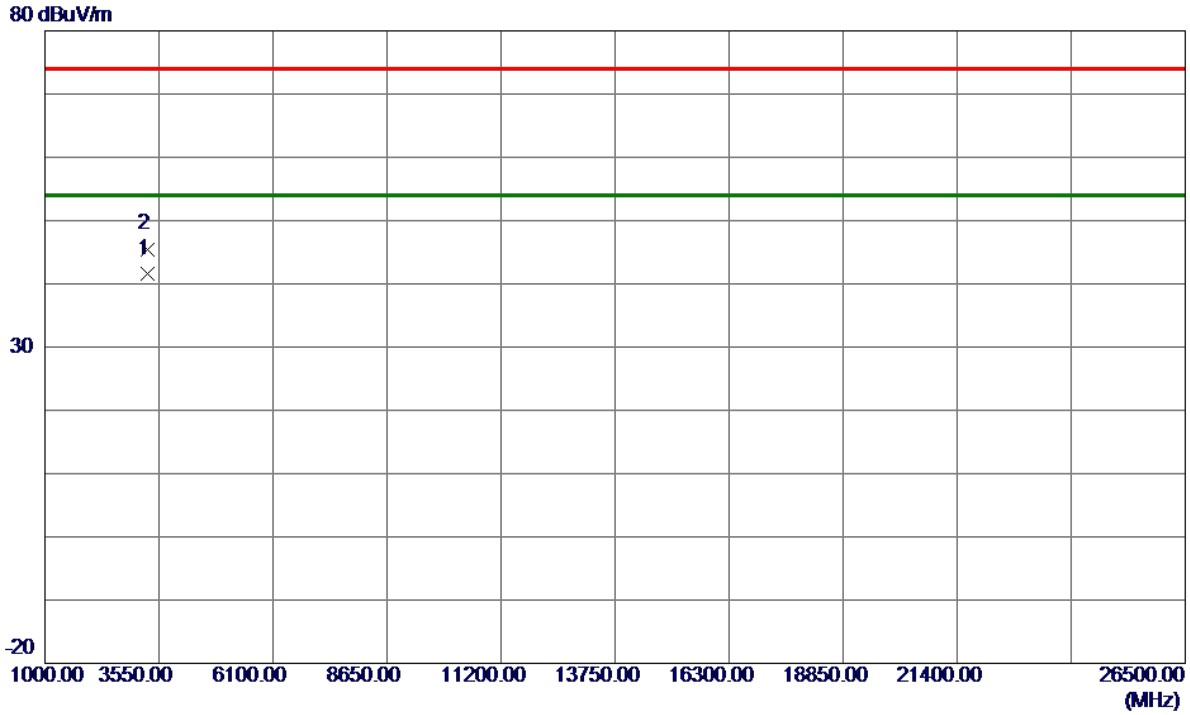


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2464.7500	103.74	6.11	109.85	74.00	35.85	Peak	No Limit
2 *	2464.8500	101.33	6.11	107.44	54.00	53.44	AVG	No Limit
3	2483.5000	48.19	6.08	54.27	74.00	-19.73	Peak	
4	2483.5000	42.75	6.08	48.83	54.00	-5.17	AVG	
5	2486.8500	52.57	6.08	58.65	74.00	-15.35	Peak	
6	2486.8500	47.34	6.08	53.42	54.00	-0.58	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2462 MHz

Vertical

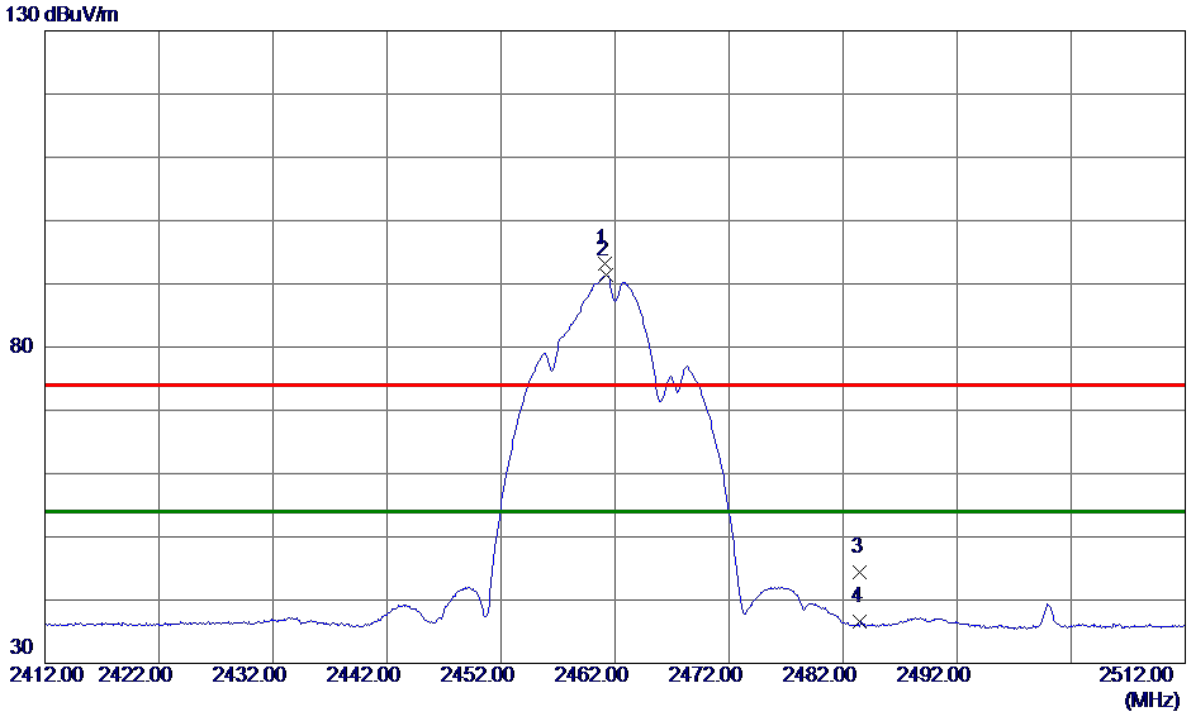


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3282.6399	42.08	-0.53	41.55	54.00	-12.45	AVG	
2	3282.6750	46.03	-0.53	45.50	74.00	-28.50	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2462 MHz

Horizontal

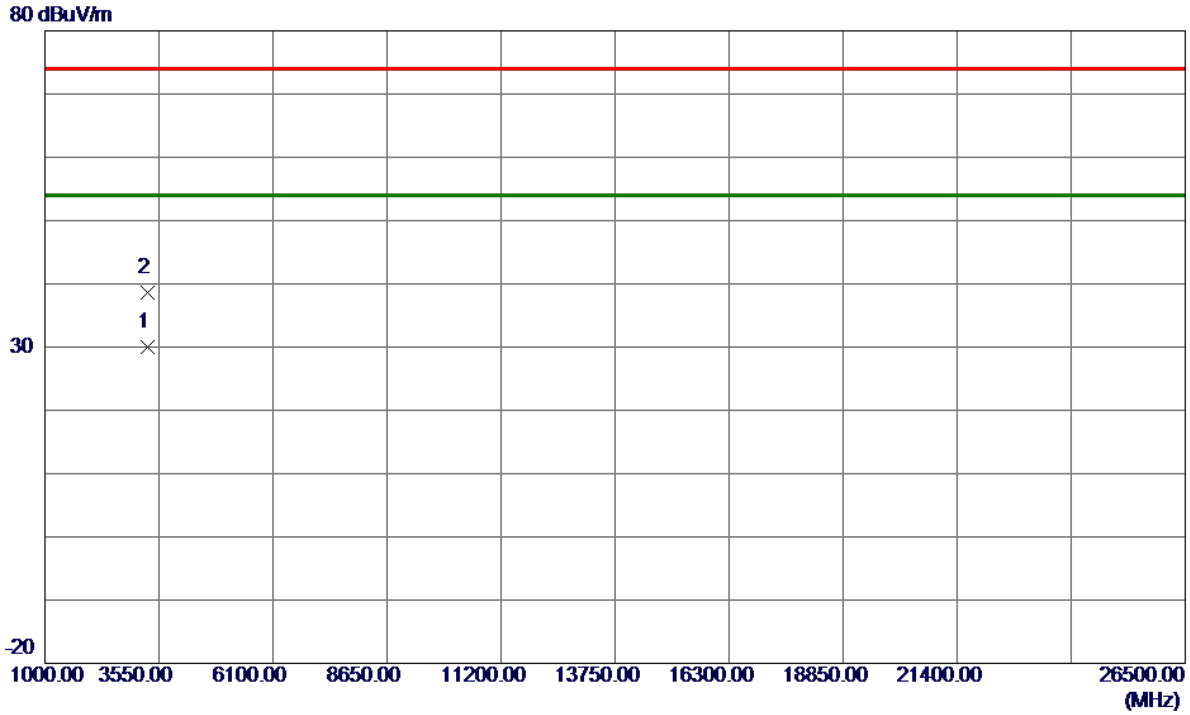


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461.1500	86.99	6.12	93.11	74.00	19.11	Peak	No Limit
2 *	2461.2000	85.22	6.12	91.34	54.00	37.34	AVG	No Limit
3	2483.5000	38.37	6.08	44.45	74.00	-29.55	Peak	
4	2483.5000	30.47	6.08	36.55	54.00	-17.45	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX B Mode 2462 MHz

Horizontal

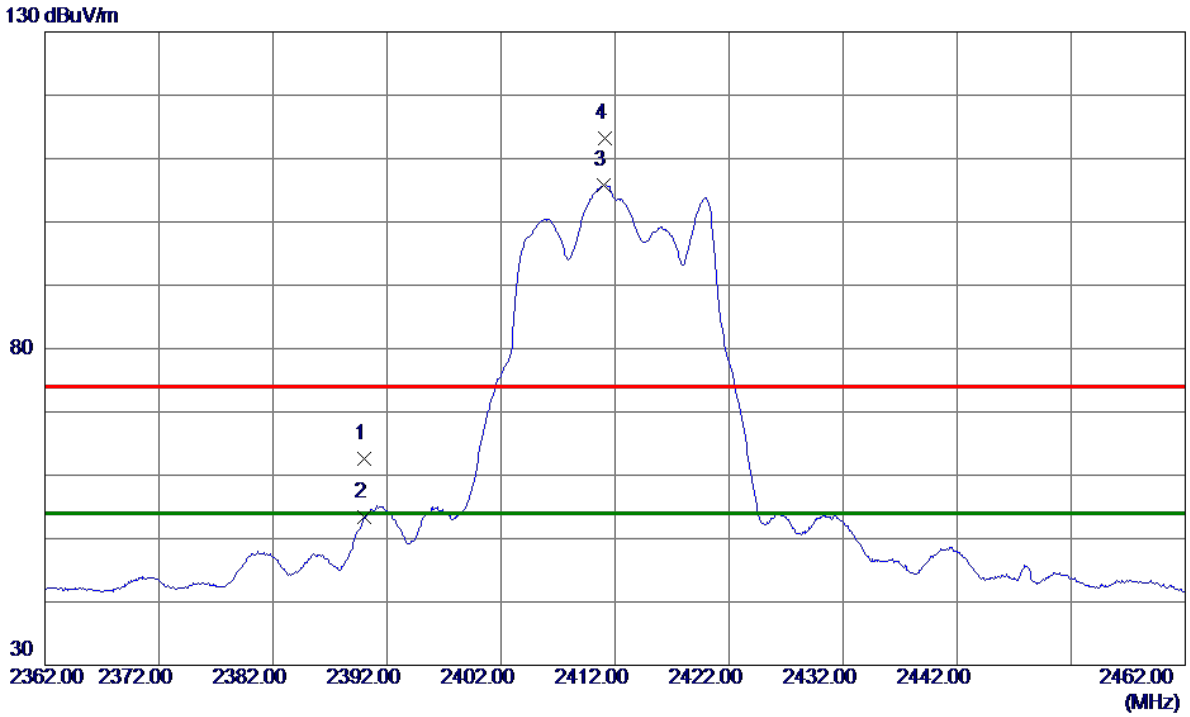


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3282.6800	30.54	-0.53	30.01	54.00	-23.99	AVG	
2	3282.9250	39.06	-0.53	38.53	74.00	-35.47	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2412 MHz

Vertical

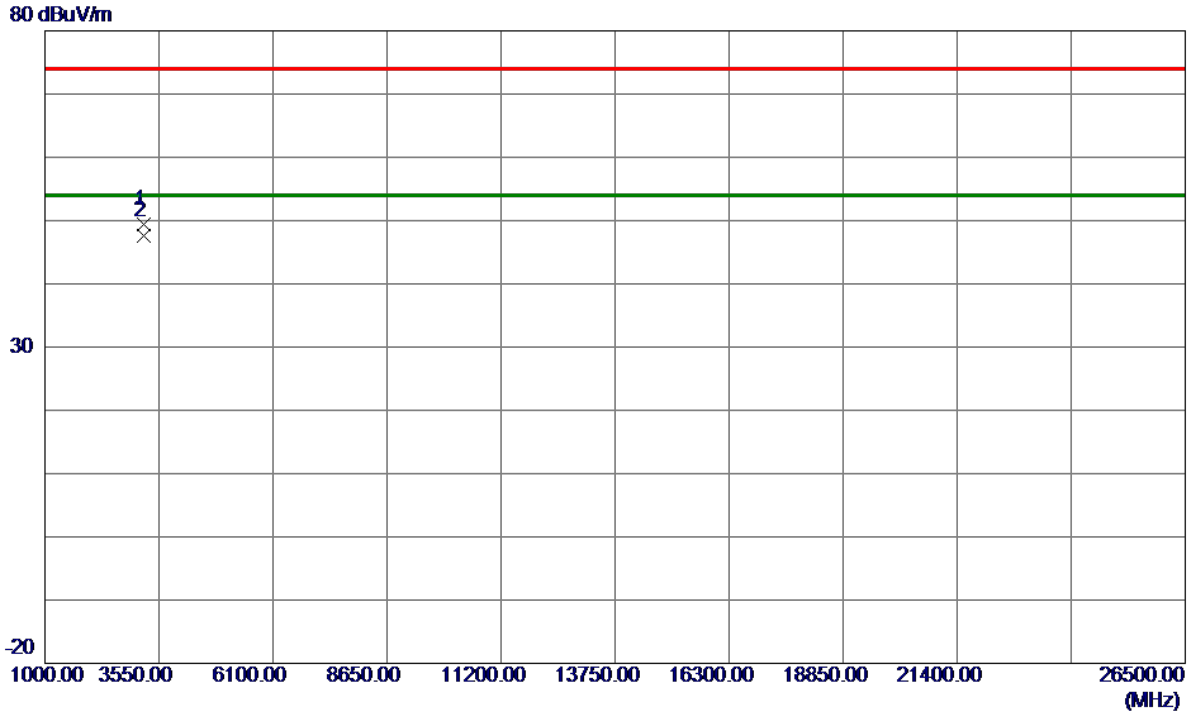


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	56.37	6.24	62.61	74.00	-11.39	Peak	
2	2390.0000	47.12	6.24	53.36	54.00	-0.64	AVG	
3 *	2411.0500	99.55	6.20	105.75	54.00	51.75	AVG	No Limit
4	2411.1500	106.96	6.20	113.16	74.00	39.16	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2412 MHz

Vertical

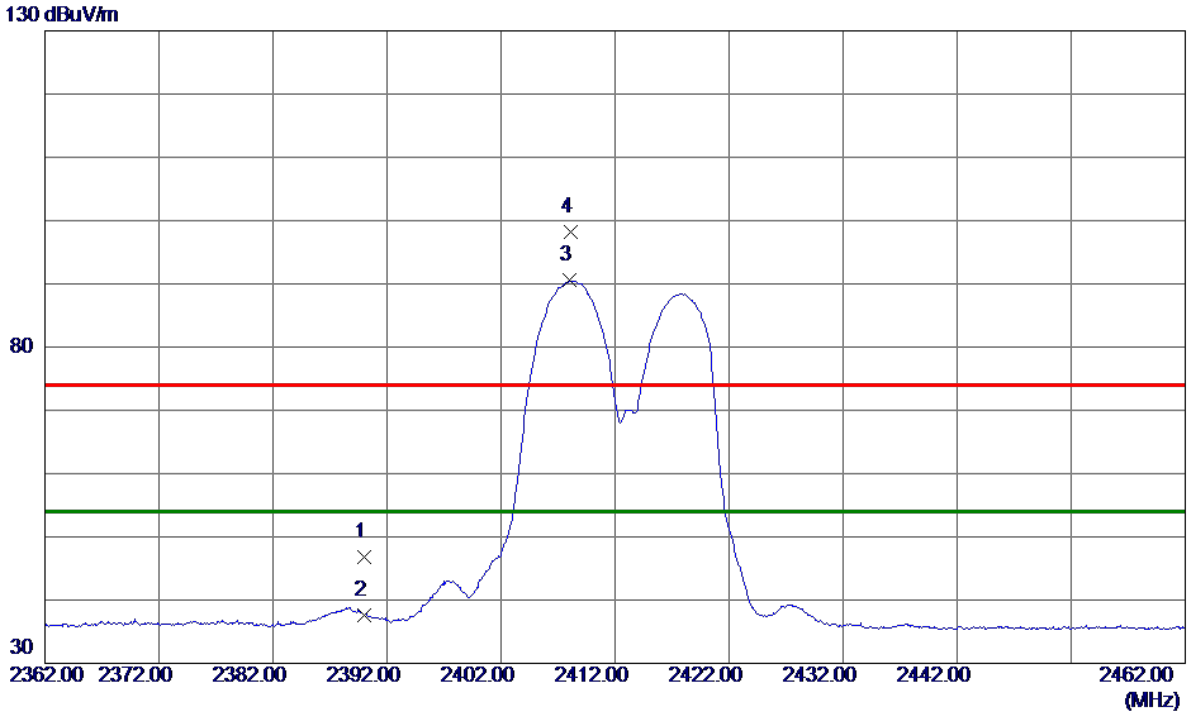


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3216.0200	50.26	-0.77	49.49	74.00	-24.51	Peak	
2 *	3216.0200	48.42	-0.77	47.65	54.00	-6.35	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2412 MHz

Horizontal

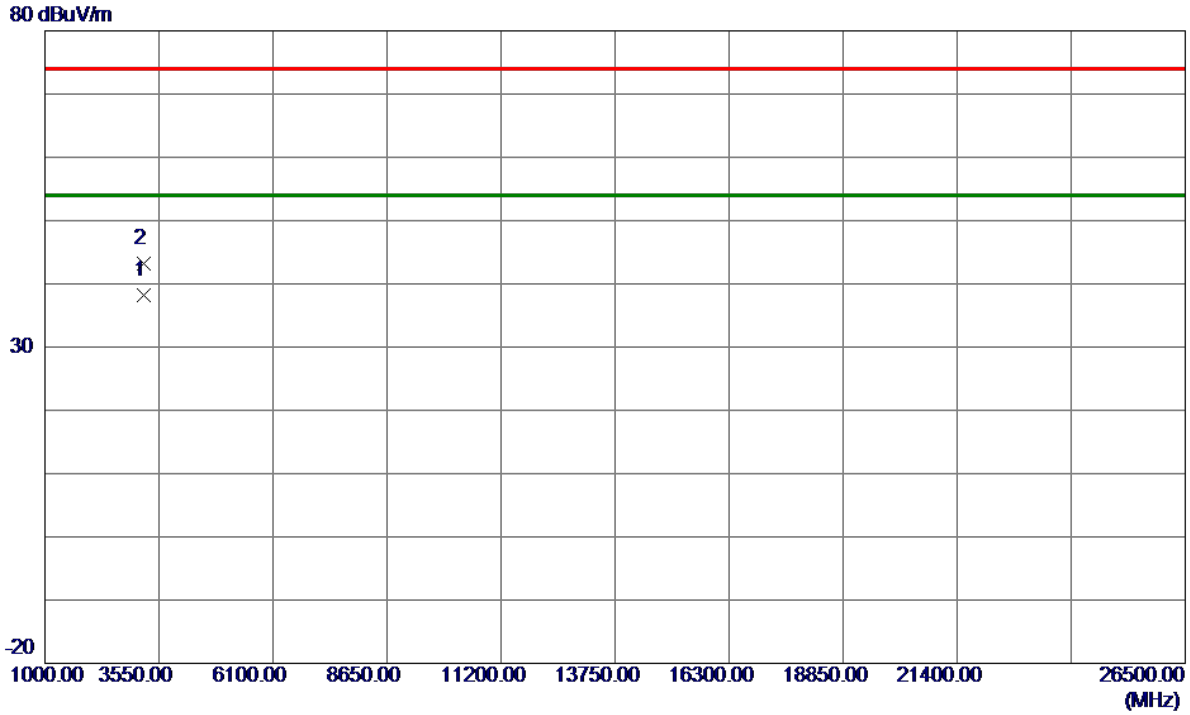


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	40.55	6.24	46.79	74.00	-27.21	Peak	
2	2390.0000	31.45	6.24	37.69	54.00	-16.31	AVG	
3 *	2408.0000	84.30	6.21	90.51	54.00	36.51	AVG	No Limit
4	2408.1000	92.03	6.21	98.24	74.00	24.24	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2412 MHz

Horizontal

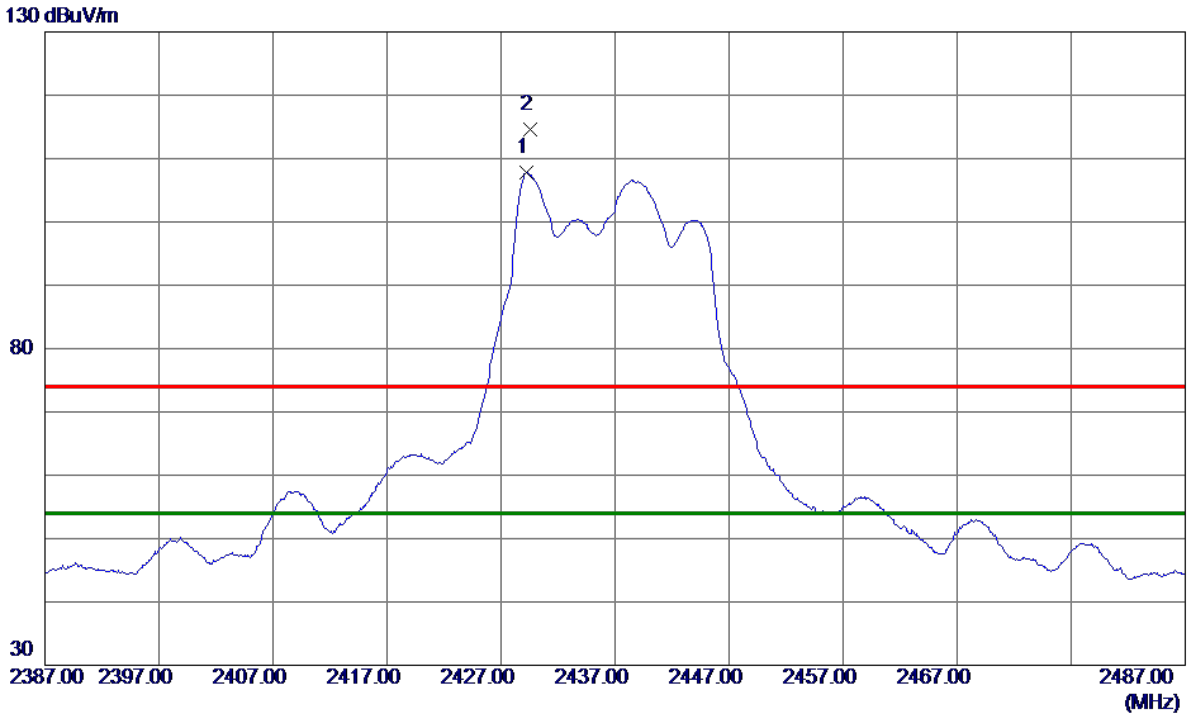


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3216.0100	38.91	-0.77	38.14	54.00	-15.86	AVG	
2	3216.2750	44.06	-0.77	43.29	74.00	-30.71	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2437 MHz

Vertical

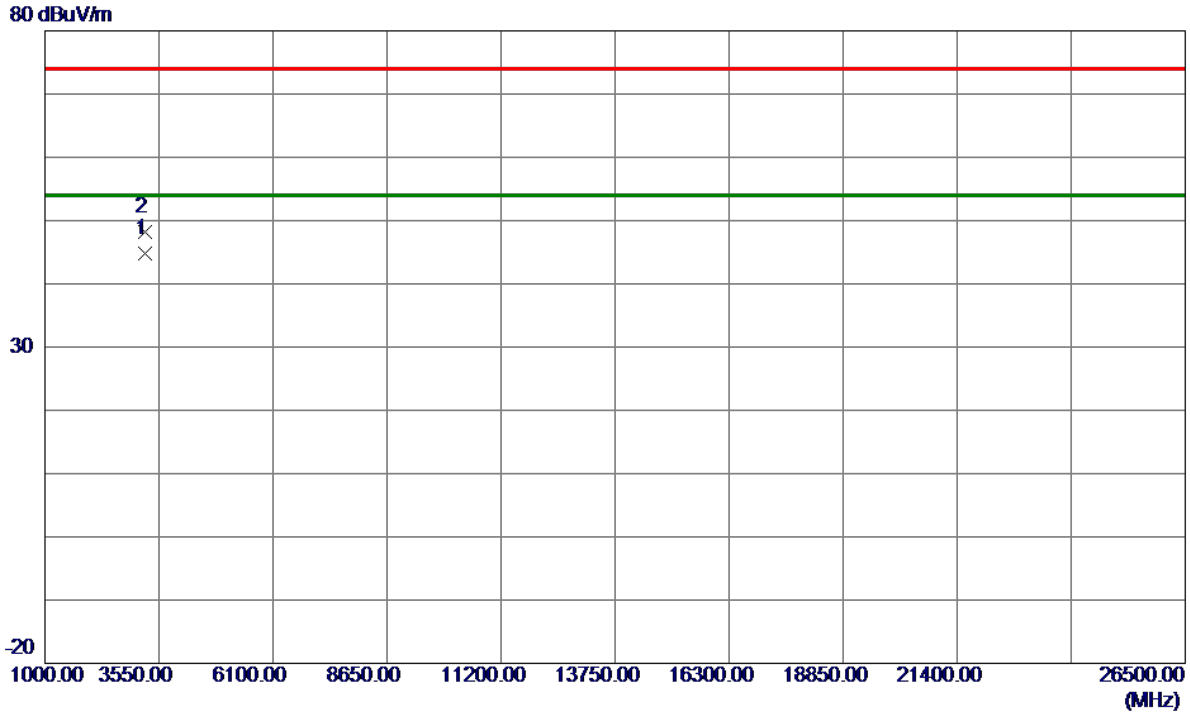


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2429.2500	101.61	6.17	107.78	54.00	53.78	AVG	No Limit
2	2429.6000	108.52	6.17	114.69	74.00	40.69	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2437 MHz

Vertical

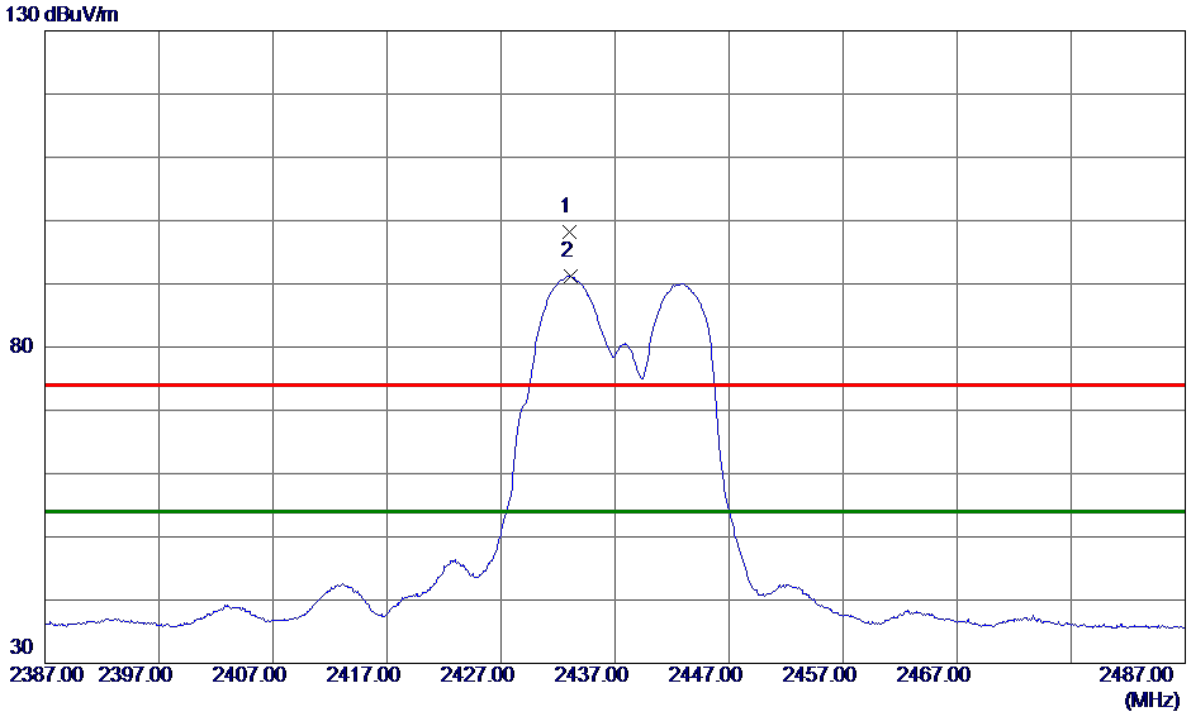


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.3350	45.38	-0.65	44.73	54.00	-9.27	AVG	
2	3249.4200	48.81	-0.65	48.16	74.00	-25.84	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2437 MHz

Horizontal

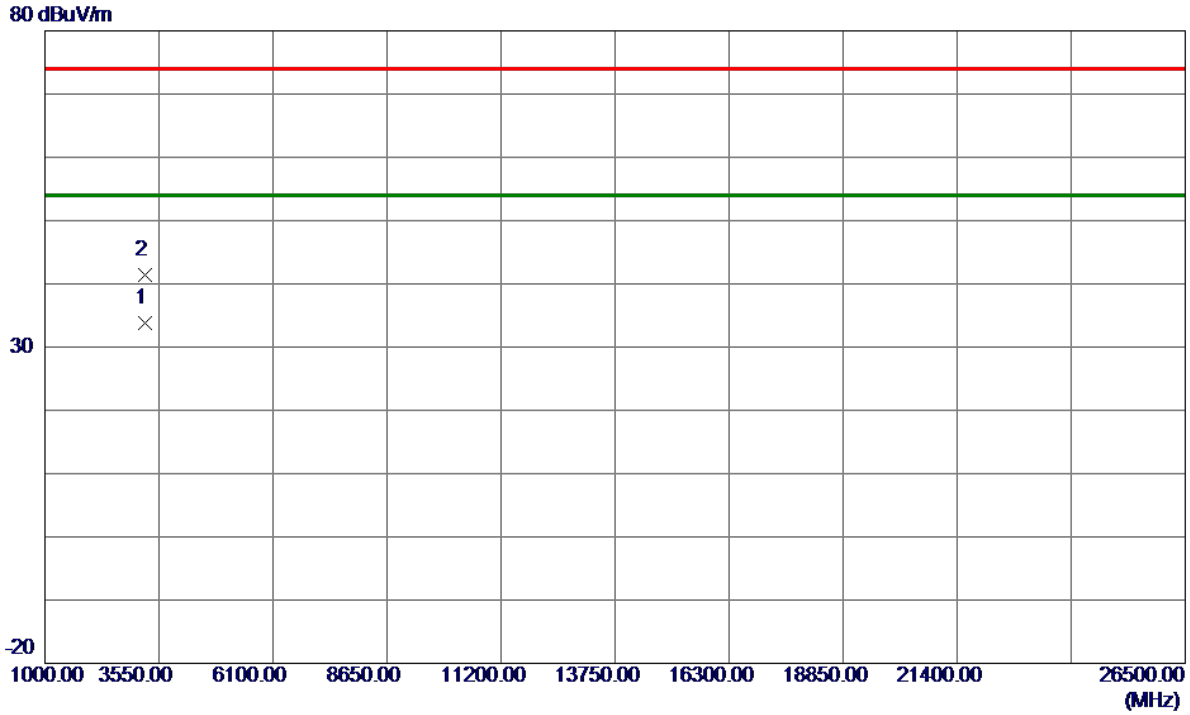


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2433.0500	92.00	6.17	98.17	74.00	24.17	Peak	No Limit
2 *	2433.1000	84.99	6.17	91.16	54.00	37.16	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2437 MHz

Horizontal

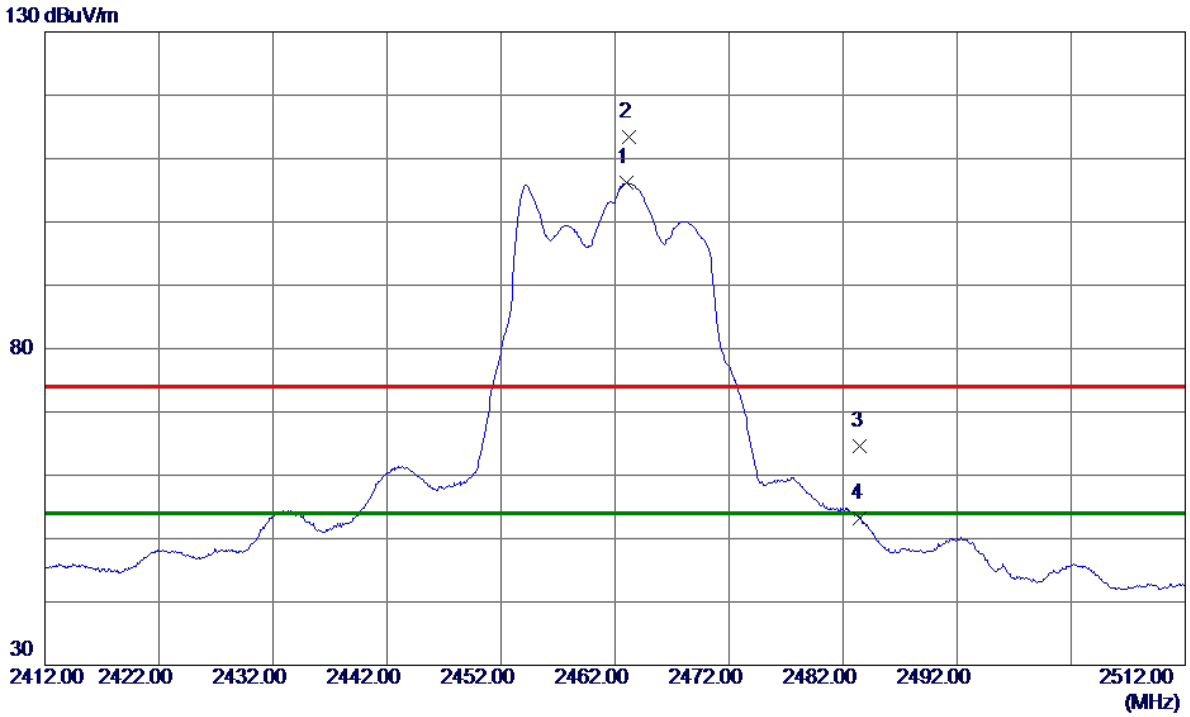


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.3200	34.43	-0.65	33.78	54.00	-20.22	AVG	
2	3249.6150	41.98	-0.65	41.33	74.00	-32.67	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2462 MHz

Vertical

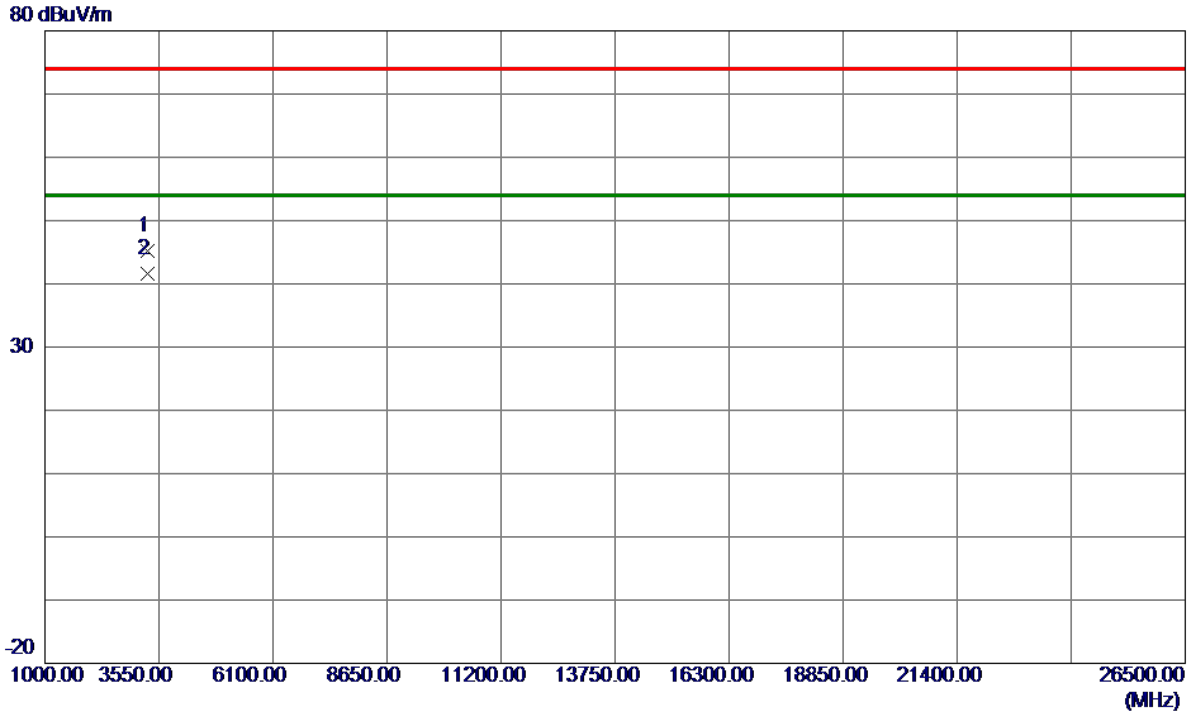


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2463.0500	100.08	6.12	106.20	54.00	52.20	AVG	No Limit
2	2463.2500	107.35	6.12	113.47	74.00	39.47	Peak	No Limit
3	2483.5000	58.45	6.08	64.53	74.00	-9.47	Peak	
4	2483.5000	47.19	6.08	53.27	54.00	-0.73	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2462 MHz

Vertical

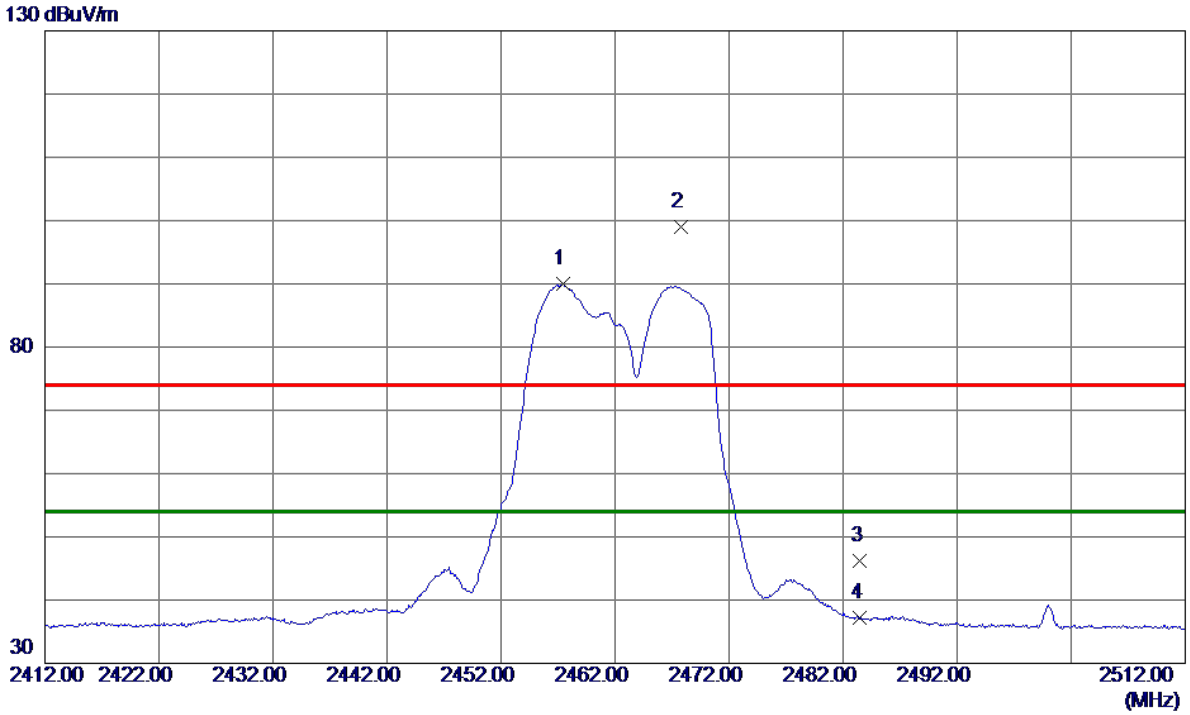


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3282.6050	45.77	-0.53	45.24	74.00	-28.76	Peak	
2 *	3282.6299	42.13	-0.53	41.60	54.00	-12.40	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2462 MHz

Horizontal

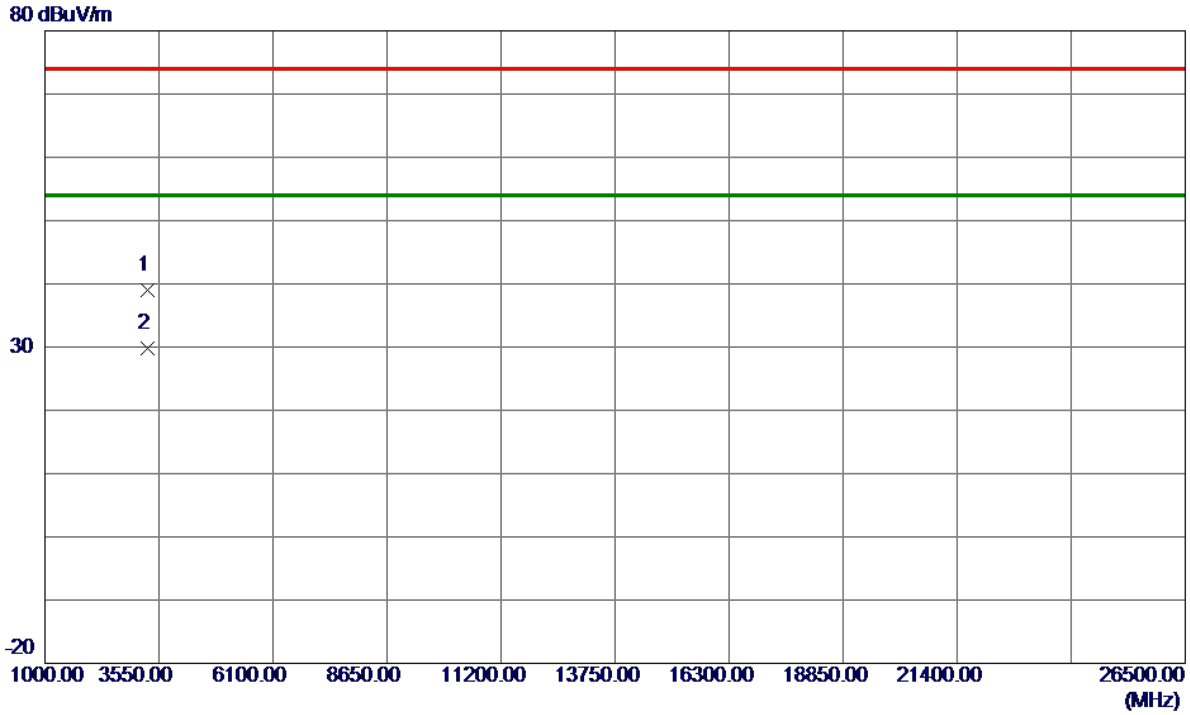


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2457.4000	83.78	6.13	89.91	54.00	35.91	AVG	No Limit
2	2467.7500	92.81	6.11	98.92	74.00	24.92	Peak	No Limit
3	2483.5000	40.17	6.08	46.25	74.00	-27.75	Peak	
4	2483.5000	31.04	6.08	37.12	54.00	-16.88	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX G Mode 2462 MHz

Horizontal

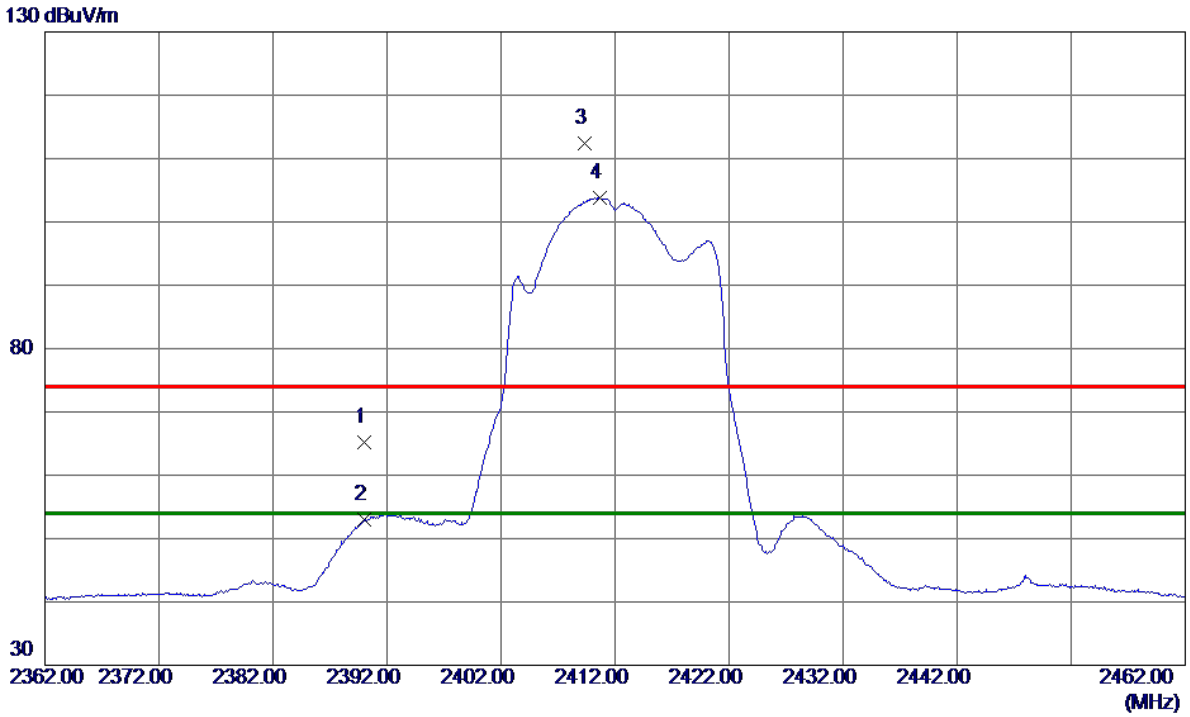


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3282.5350	39.58	-0.53	39.05	74.00	-34.95	Peak	
2 *	3282.6700	30.28	-0.53	29.75	54.00	-24.25	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2412 MHz

Vertical

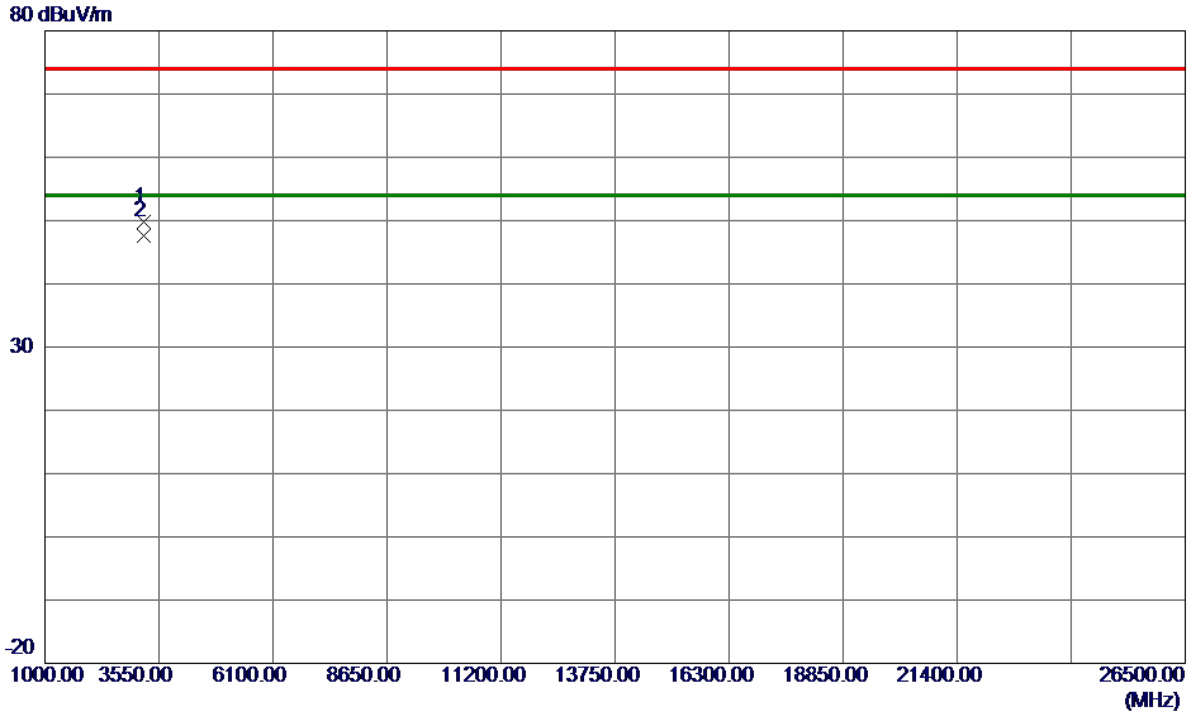


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	59.03	6.24	65.27	74.00	-8.73	Peak	
2	2390.0000	46.77	6.24	53.01	54.00	-0.99	AVG	
3	2409.3000	106.14	6.20	112.34	74.00	38.34	Peak	No Limit
4 *	2410.6500	97.58	6.20	103.78	54.00	49.78	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2412 MHz

Vertical

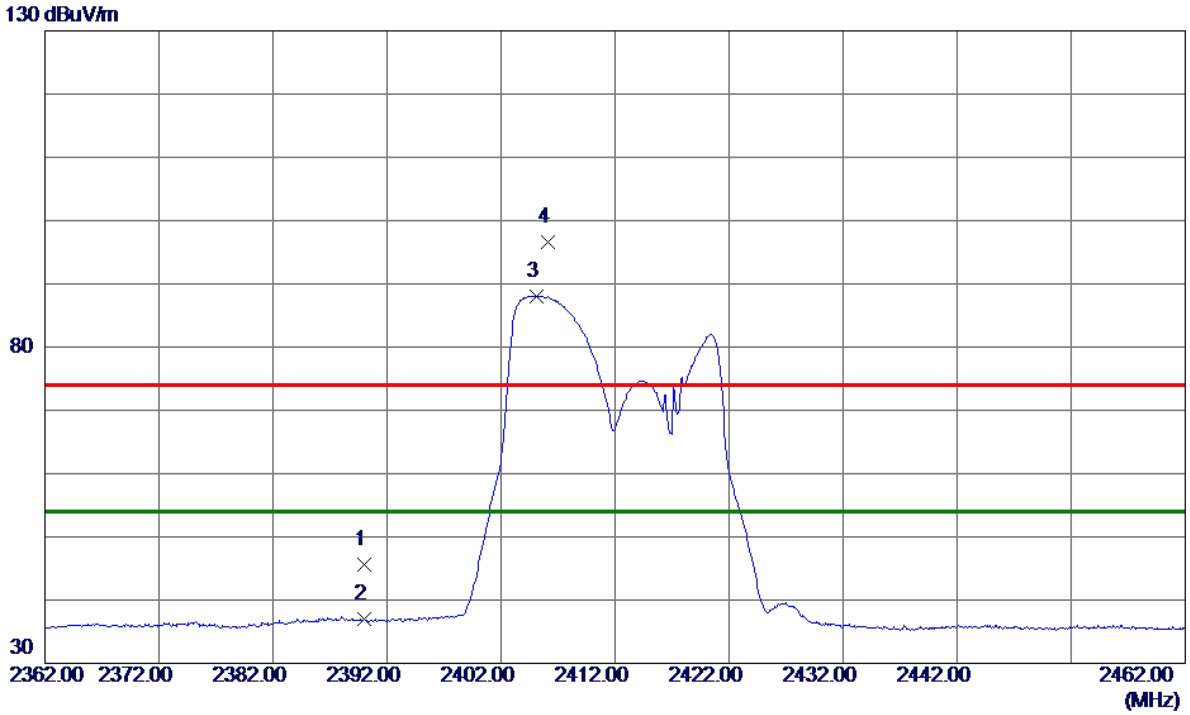


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3215.9700	50.50	-0.77	49.73	74.00	-24.27	Peak	
2 *	3215.9900	48.38	-0.77	47.61	54.00	-6.39	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2412 MHz

Horizontal

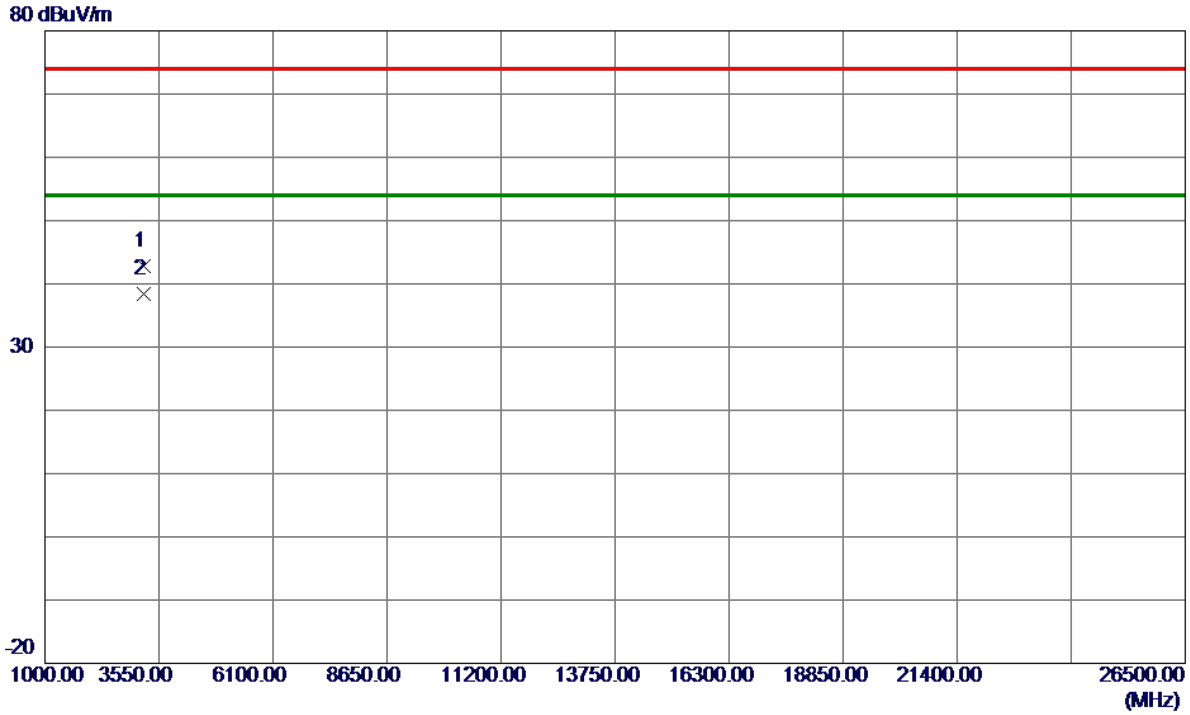


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	39.44	6.24	45.68	74.00	-28.32	Peak	
2	2390.0000	30.73	6.24	36.97	54.00	-17.03	AVG	
3 *	2405.1000	81.87	6.21	88.08	54.00	34.08	AVG	No Limit
4	2406.1500	90.40	6.21	96.61	74.00	22.61	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2412 MHz

Horizontal

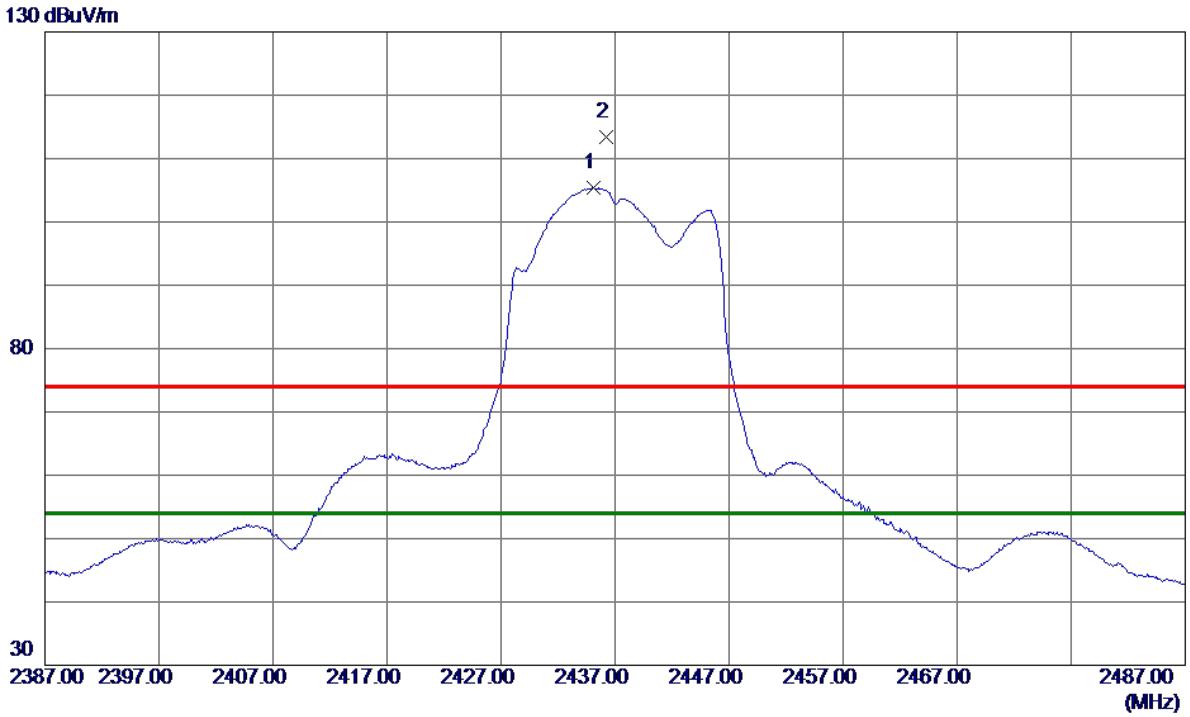


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3215.9050	43.61	-0.77	42.84	74.00	-31.16	Peak	
2 *	3215.9850	39.13	-0.77	38.36	54.00	-15.64	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2437 MHz

Vertical

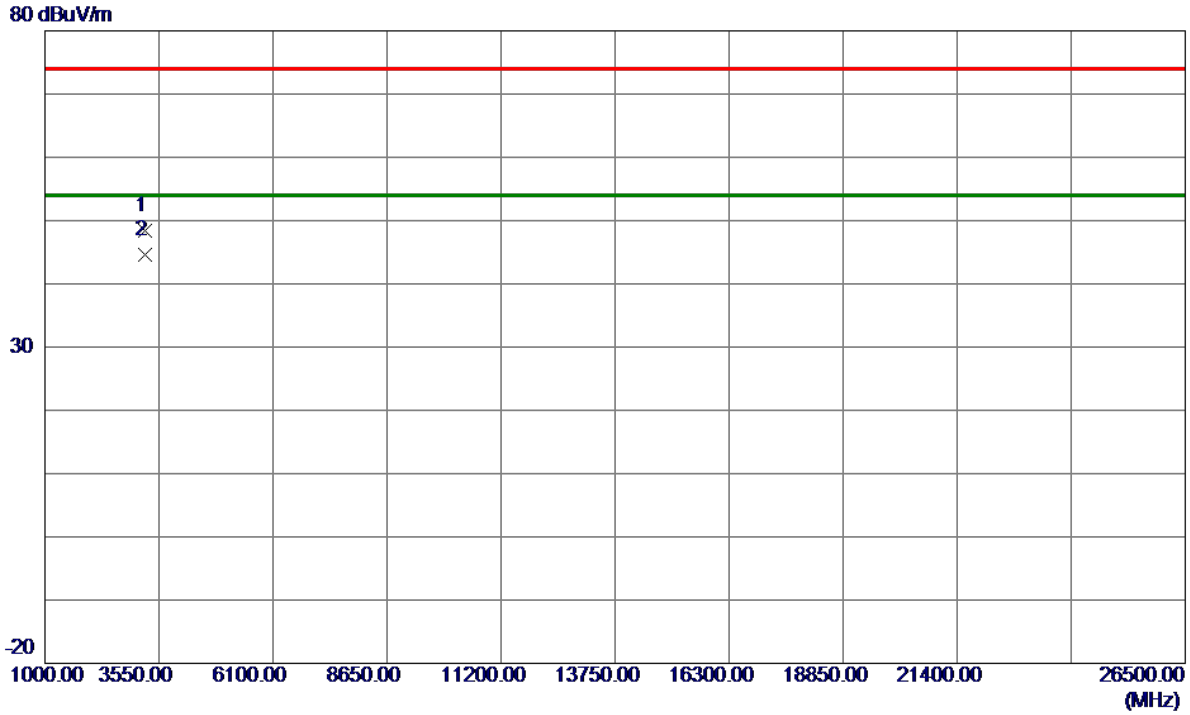


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435.1000	99.23	6.16	105.39	54.00	51.39	AVG	No Limit
2	2436.2500	107.20	6.16	113.36	74.00	39.36	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2437 MHz

Vertical

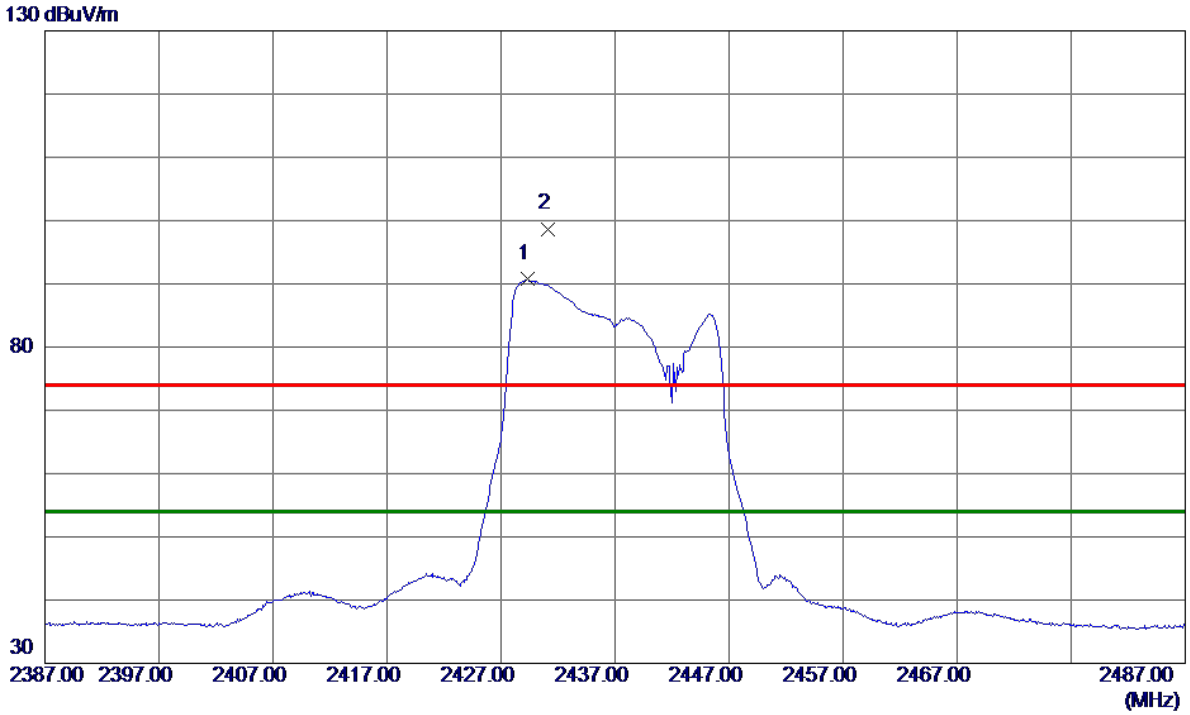


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3249.3200	48.97	-0.65	48.32	74.00	-25.68	Peak	
2 *	3249.3750	45.33	-0.65	44.68	54.00	-9.32	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2437 MHz

Horizontal

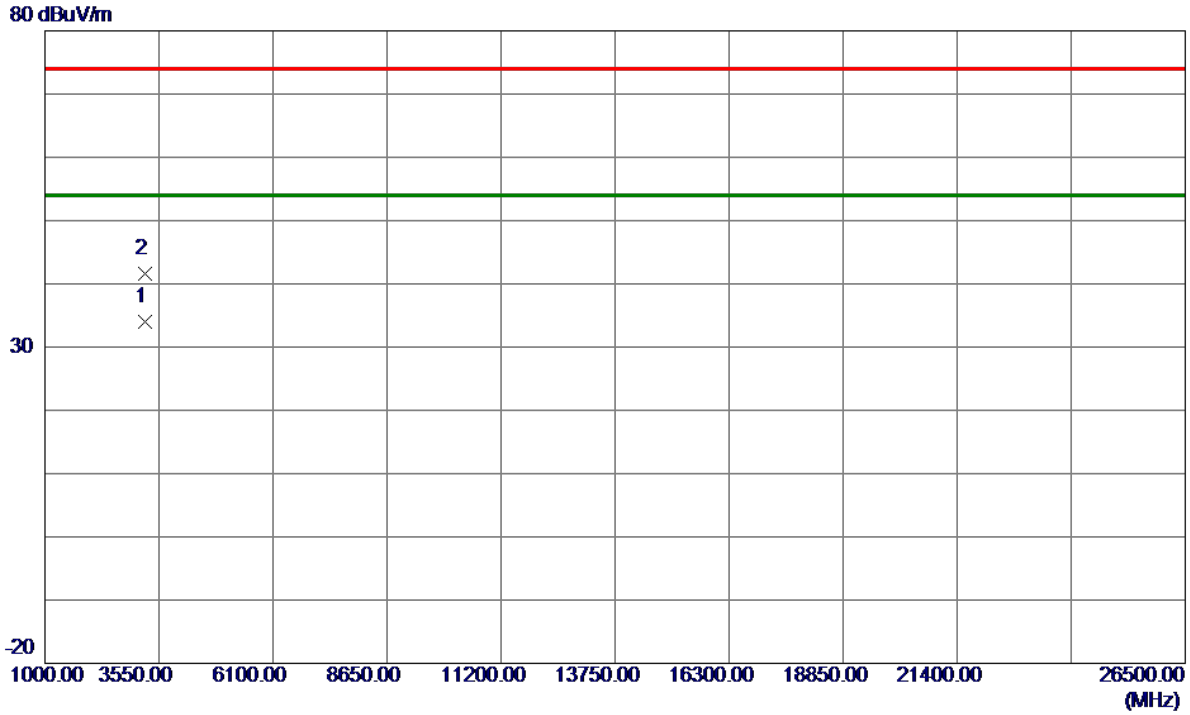


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2429.3000	84.56	6.17	90.73	54.00	36.73	AVG	No Limit
2	2431.1500	92.53	6.17	98.70	74.00	24.70	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2437 MHz

Horizontal

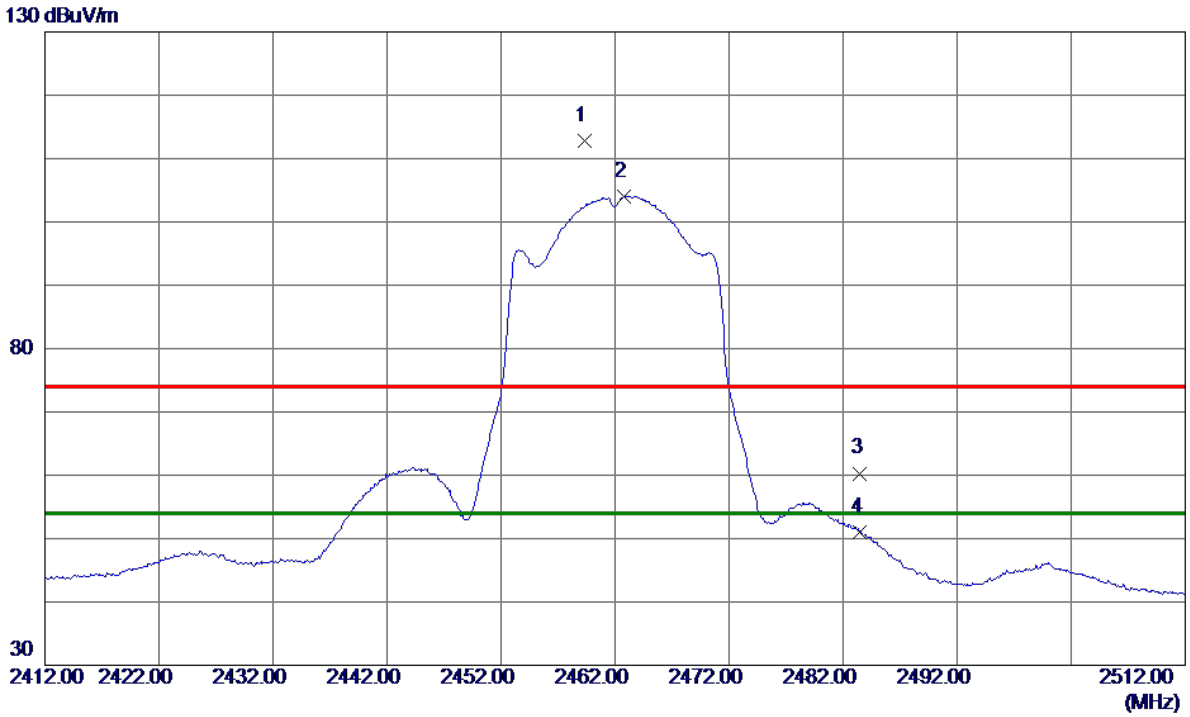


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.3300	34.70	-0.65	34.05	54.00	-19.95	AVG	
2	3249.4500	42.30	-0.65	41.65	74.00	-32.35	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2462 MHz

Vertical

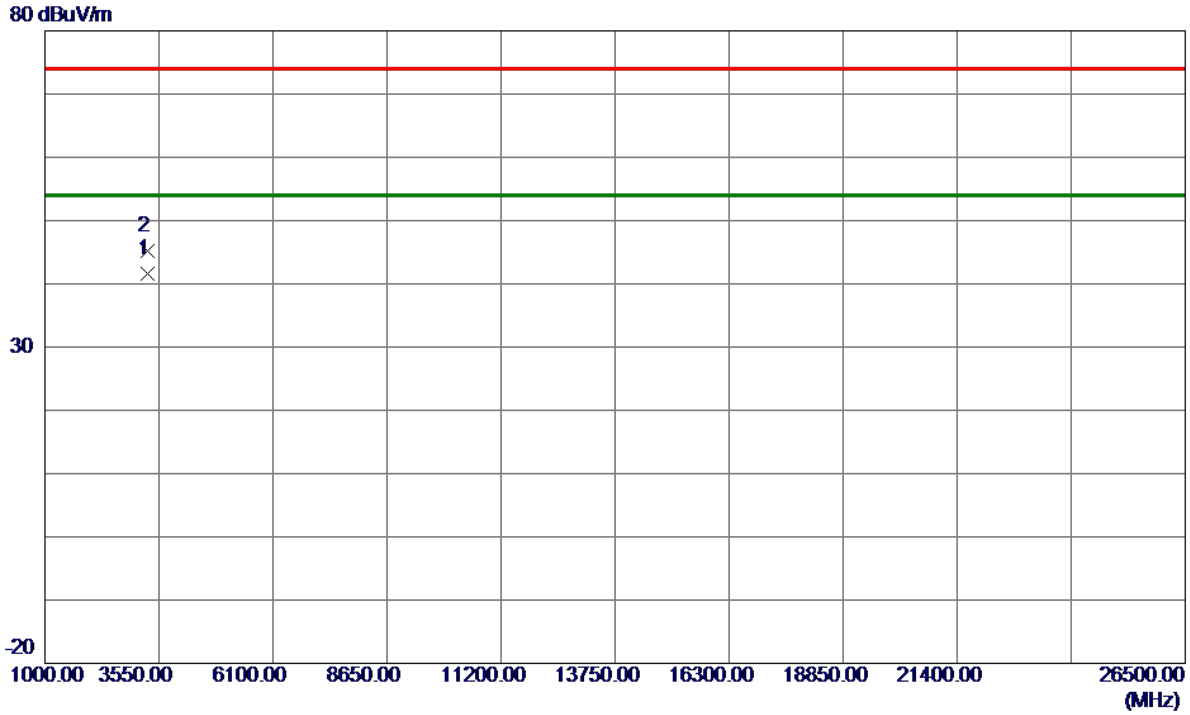


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2459.3000	106.75	6.12	112.87	74.00	38.87	Peak	No Limit
2 *	2462.7500	97.93	6.12	104.05	54.00	50.05	AVG	No Limit
3	2483.5000	54.22	6.08	60.30	74.00	-13.70	Peak	
4	2483.5000	44.83	6.08	50.91	54.00	-3.09	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2462 MHz

Vertical

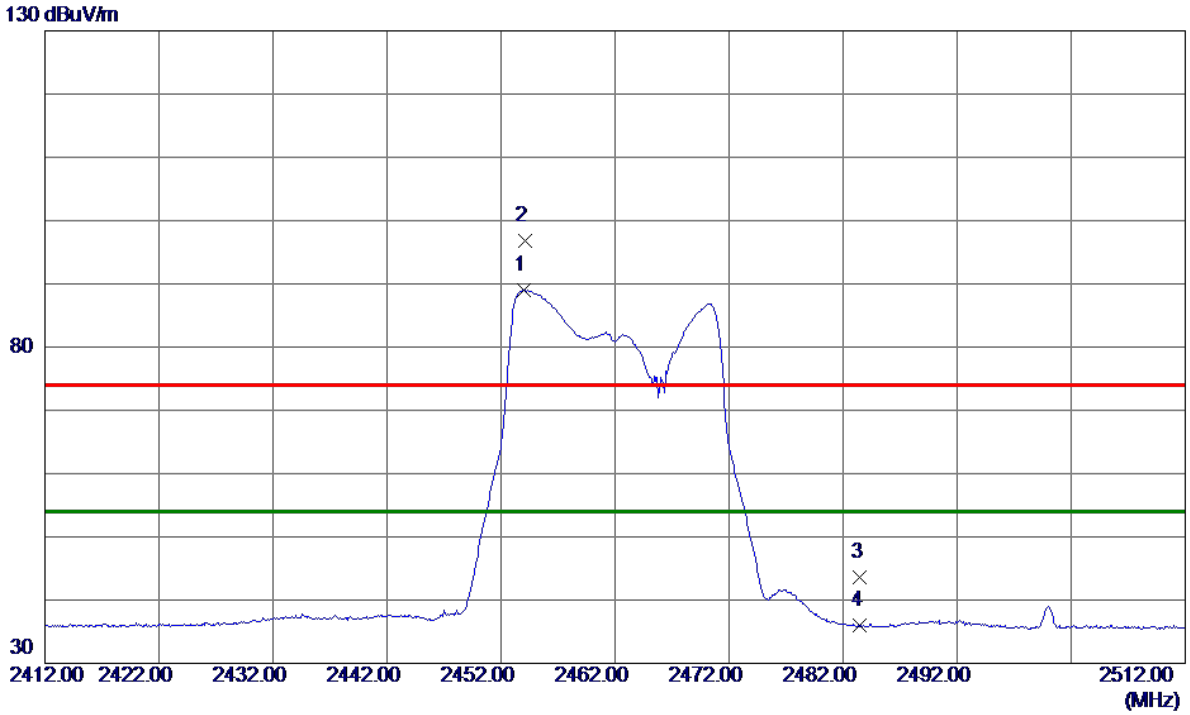


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3282.6900	42.16	-0.53	41.63	54.00	-12.37	AVG	
2	3282.7750	45.64	-0.53	45.11	74.00	-28.89	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2462 MHz

Horizontal

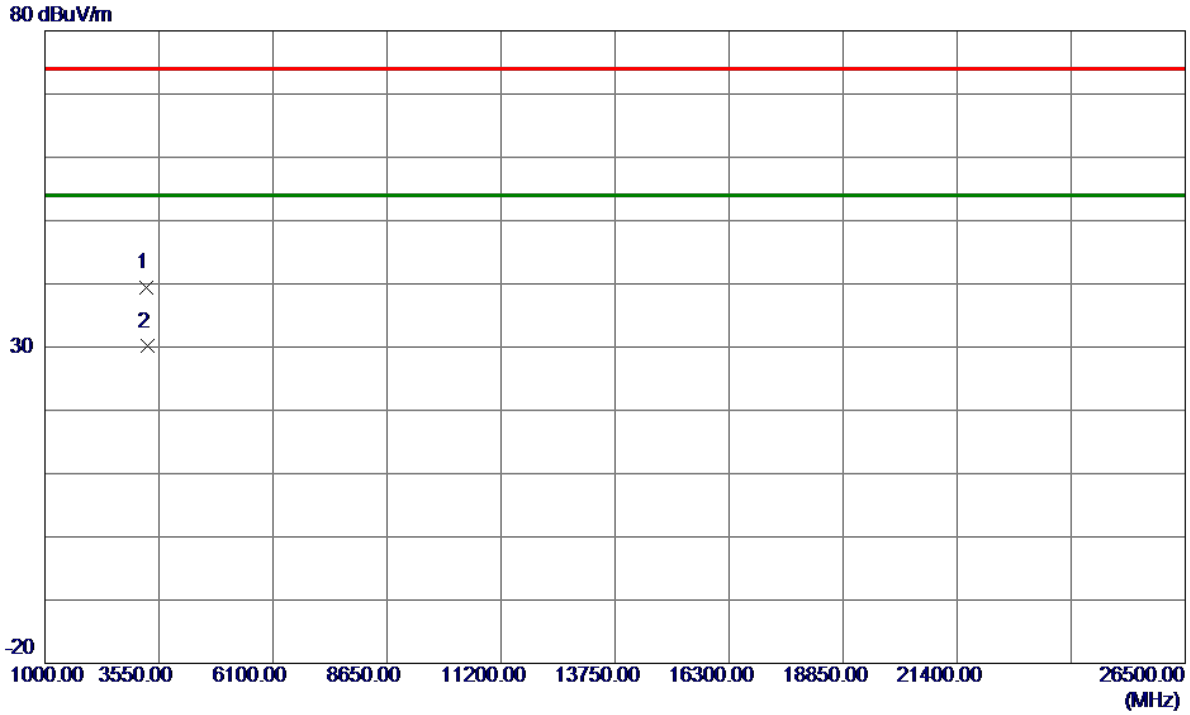


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2454.0000	82.97	6.13	89.10	54.00	35.10	AVG	No Limit
2	2454.1000	90.73	6.13	96.86	74.00	22.86	Peak	No Limit
3	2483.5000	37.49	6.08	43.57	74.00	-30.43	Peak	
4	2483.5000	29.84	6.08	35.92	54.00	-18.08	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-20M Mode 2462 MHz

Horizontal

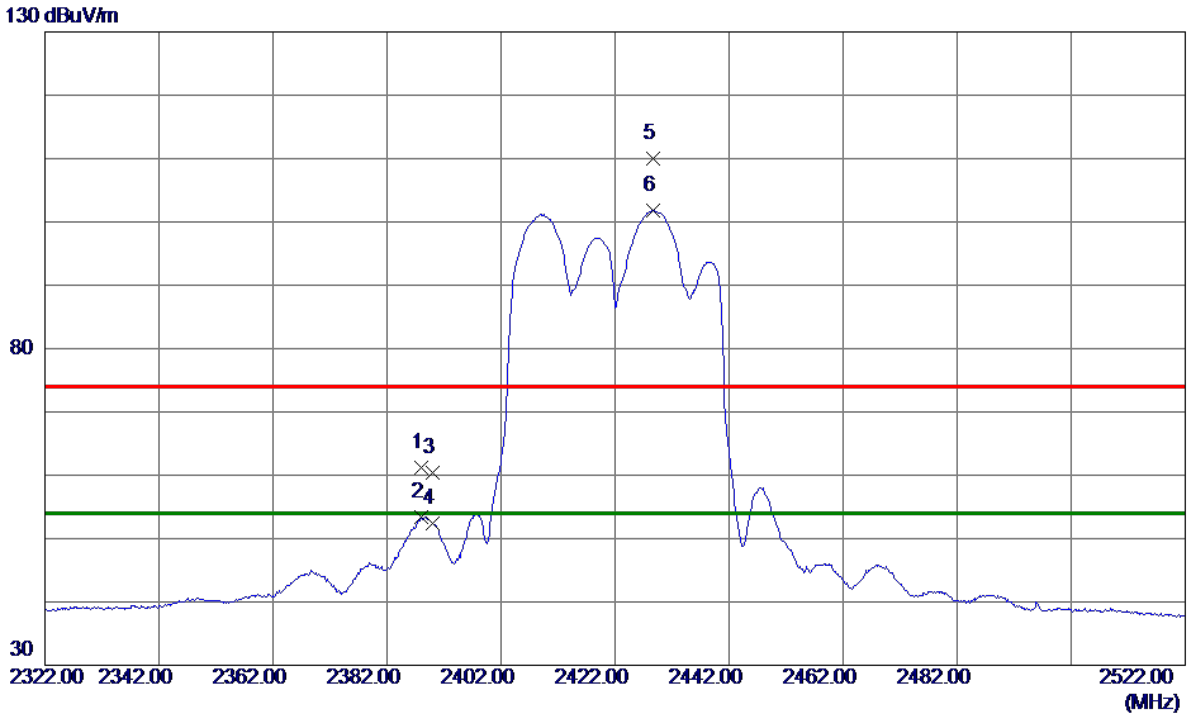


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3280.6050	40.00	-0.54	39.46	74.00	-34.54	Peak	
2 *	3282.5900	30.63	-0.53	30.10	54.00	-23.90	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2422MHz

Vertical

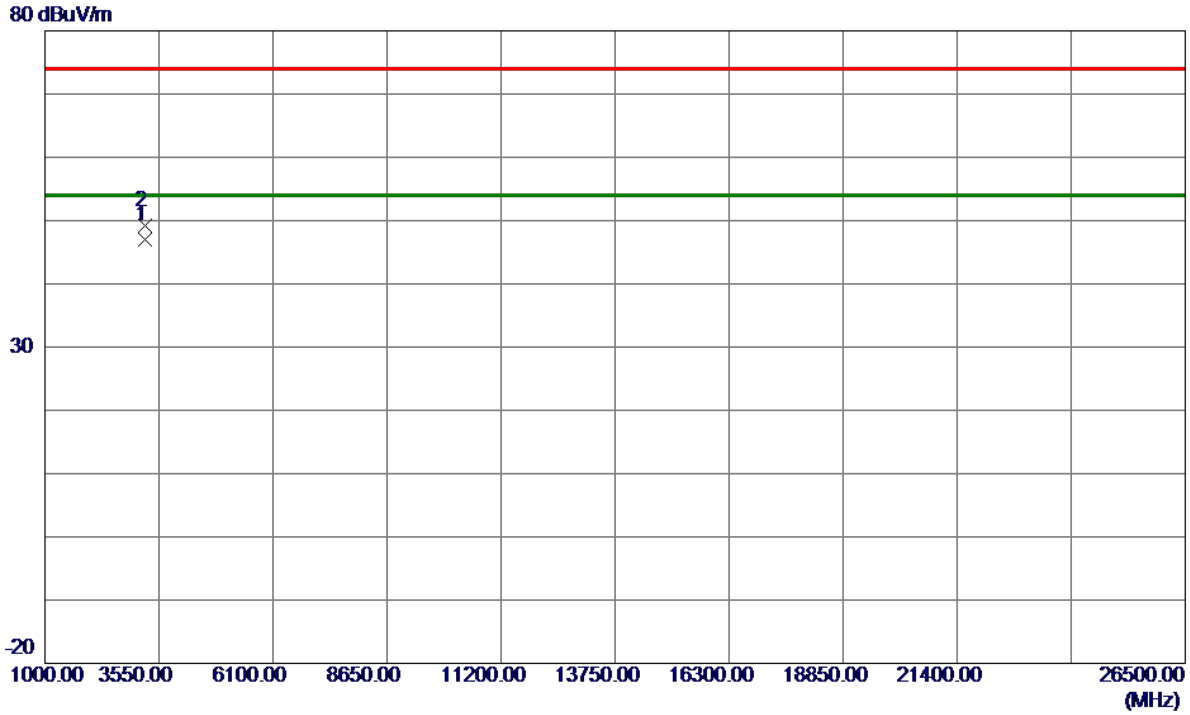


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2388.1000	54.96	6.24	61.20	74.00	-12.80	Peak	
2	2388.1000	47.12	6.24	53.36	54.00	-0.64	AVG	
3	2390.0000	54.23	6.24	60.47	74.00	-13.53	Peak	
4	2390.0000	46.15	6.24	52.39	54.00	-1.61	AVG	
5	2428.6000	103.77	6.17	109.94	74.00	35.94	Peak	No Limit
6 *	2428.6000	95.66	6.17	101.83	54.00	47.83	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2422MHz

Vertical

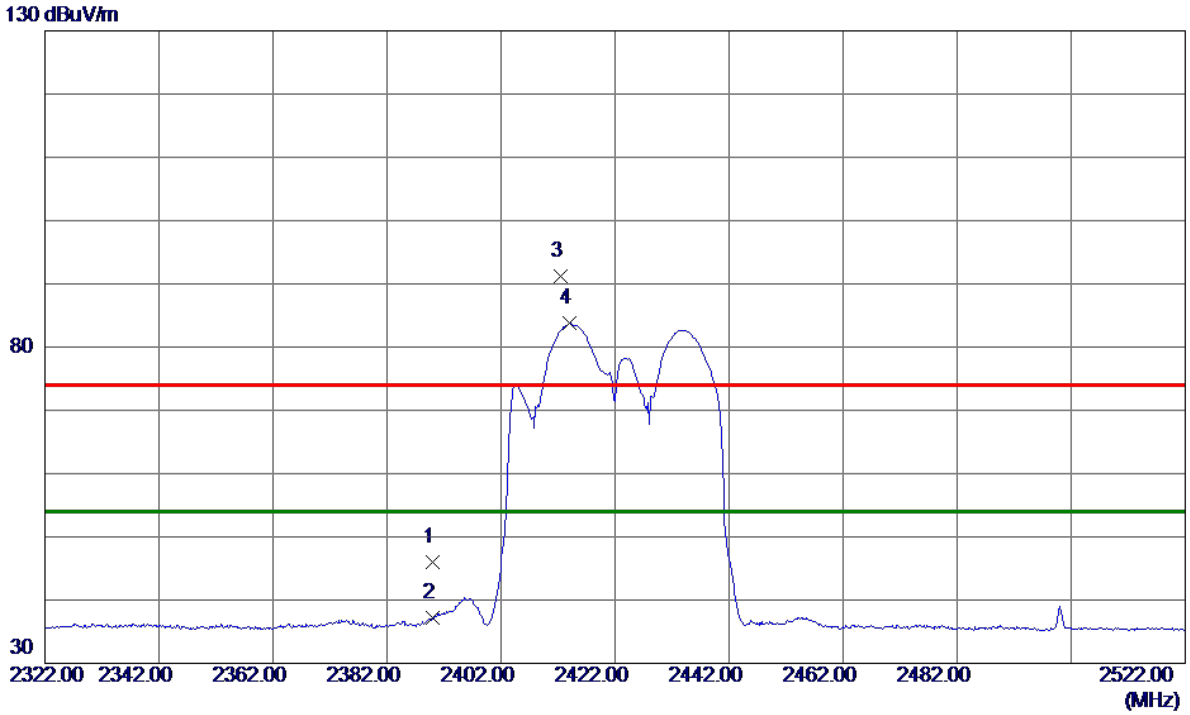


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3229.3300	47.70	-0.72	46.98	54.00	-7.02	AVG	
2	3229.3950	49.83	-0.72	49.11	74.00	-24.89	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2422MHz

Horizontal

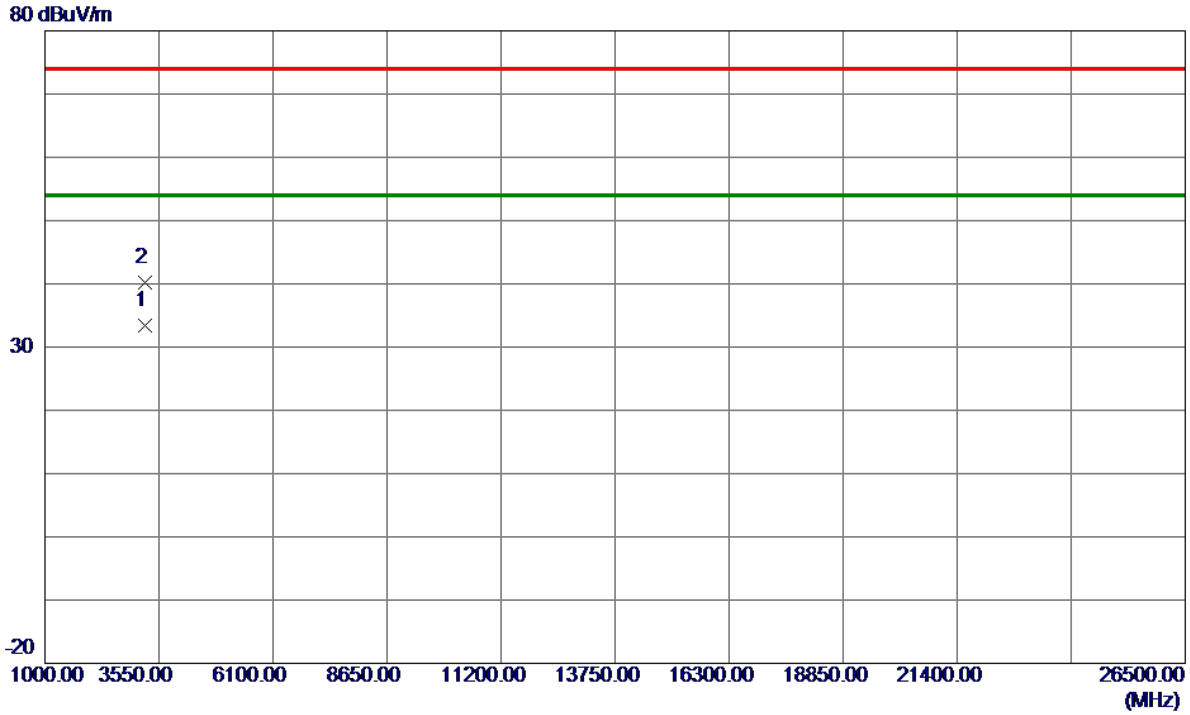


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	39.83	6.24	46.07	74.00	-27.93	Peak	
2	2390.0000	30.90	6.24	37.14	54.00	-16.86	AVG	
3	2412.5000	84.94	6.20	91.14	74.00	17.14	Peak	No Limit
4 *	2414.0000	77.53	6.20	83.73	54.00	29.73	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2422MHz

Horizontal

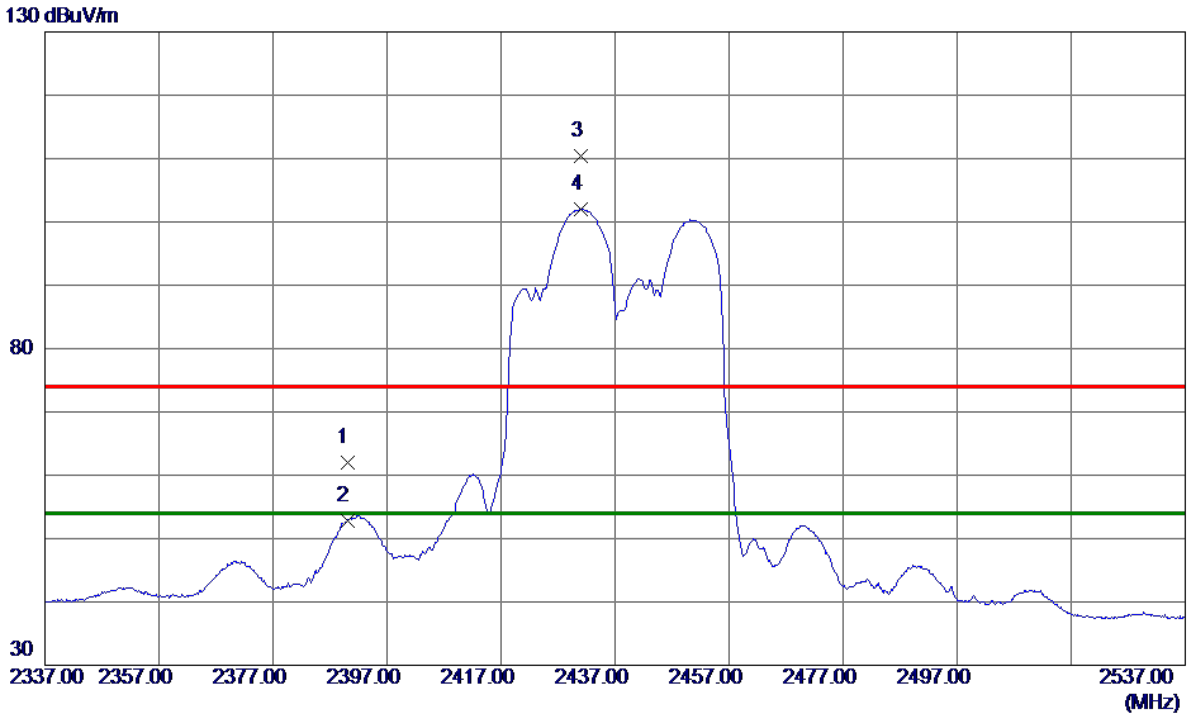


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3229.3550	34.10	-0.72	33.38	54.00	-20.62	AVG	
2	3229.4100	40.84	-0.72	40.12	74.00	-33.88	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2437 MHz

Vertical

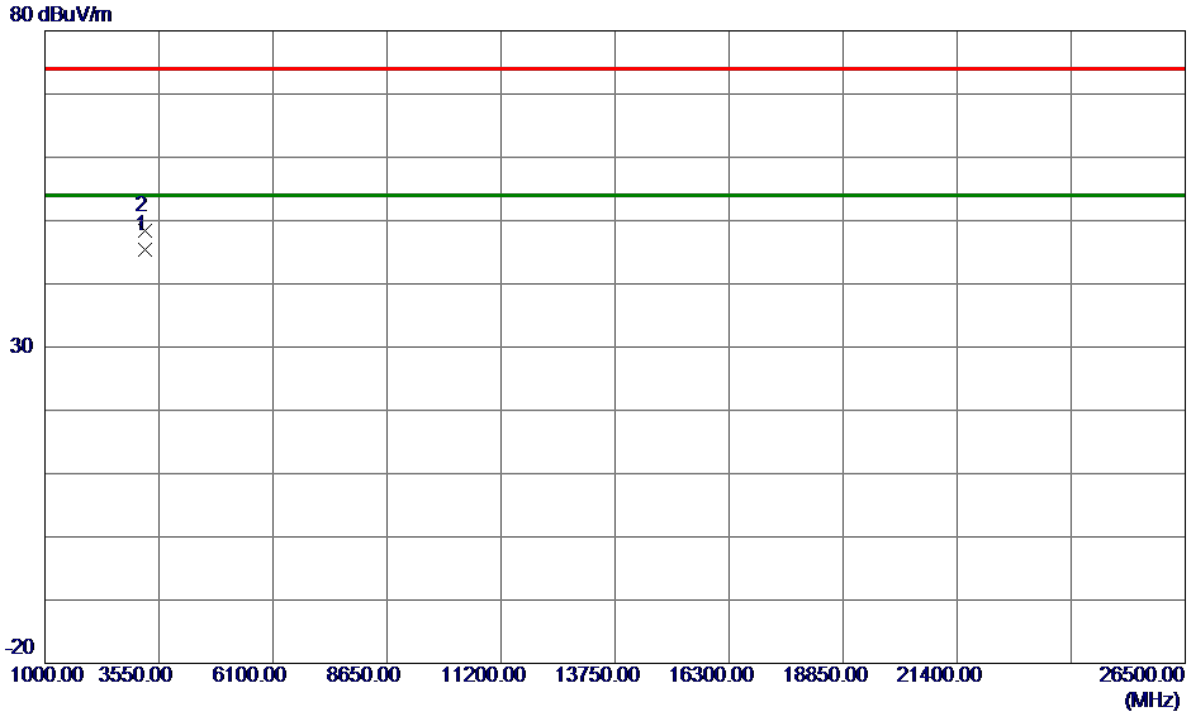


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	55.73	6.24	61.97	74.00	-12.03	Peak	
2	2390.0000	46.59	6.24	52.83	54.00	-1.17	AVG	
3	2431.1000	104.18	6.17	110.35	74.00	36.35	Peak	No Limit
4 *	2431.1000	95.90	6.17	102.07	54.00	48.07	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2437 MHz

Vertical

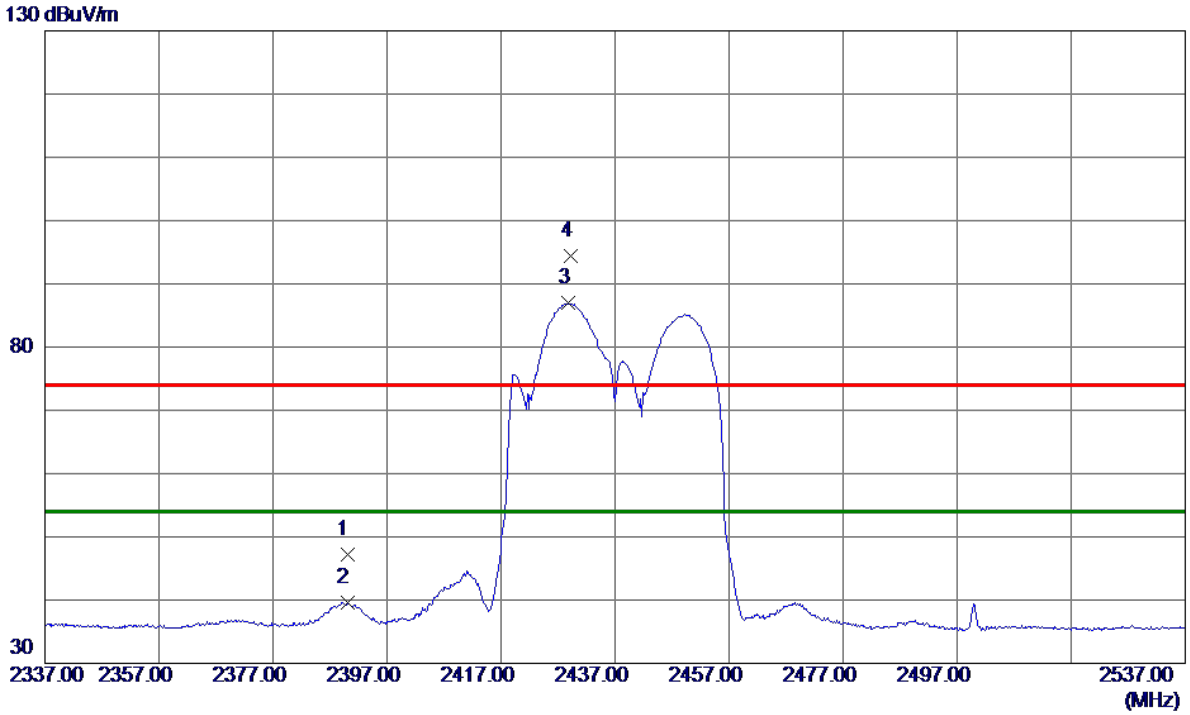


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.3600	46.07	-0.65	45.42	54.00	-8.58	AVG	
2	3249.4300	49.07	-0.65	48.42	74.00	-25.58	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2437 MHz

Horizontal

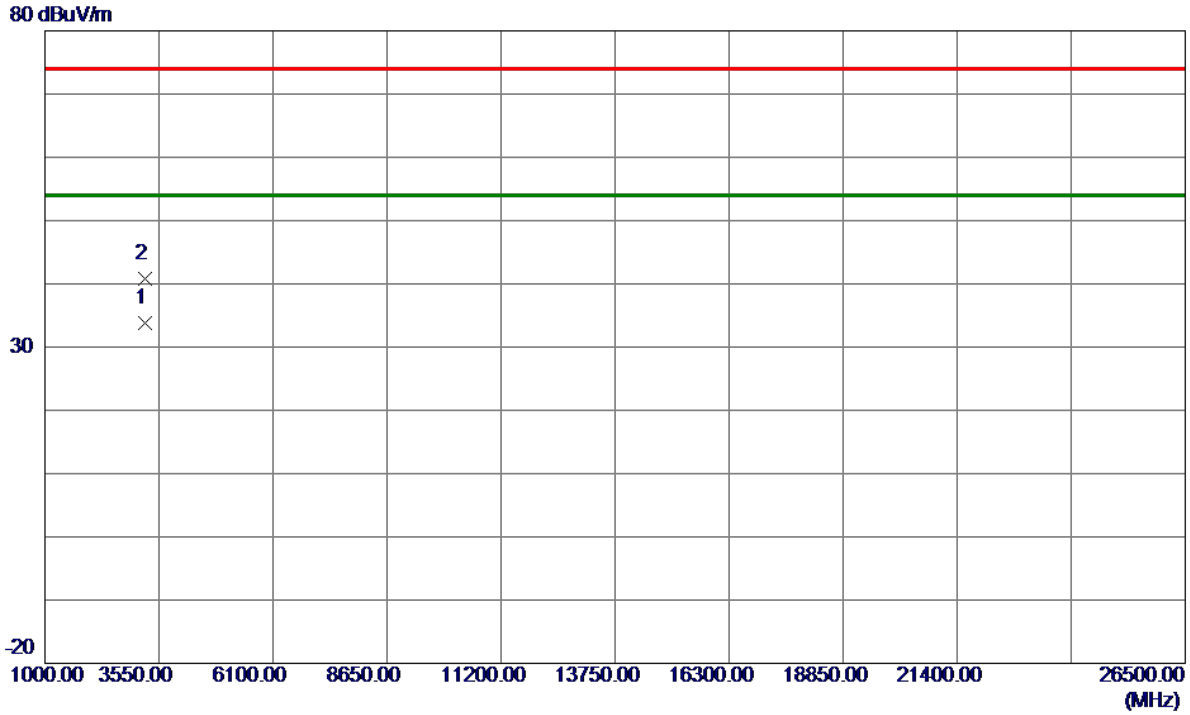


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	40.91	6.24	47.15	74.00	-26.85	Peak	
2	2390.0000	33.42	6.24	39.66	54.00	-14.34	AVG	
3 *	2428.8000	80.74	6.17	86.91	54.00	32.91	AVG	No Limit
4	2429.3000	88.23	6.17	94.40	74.00	20.40	Peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2437 MHz

Horizontal

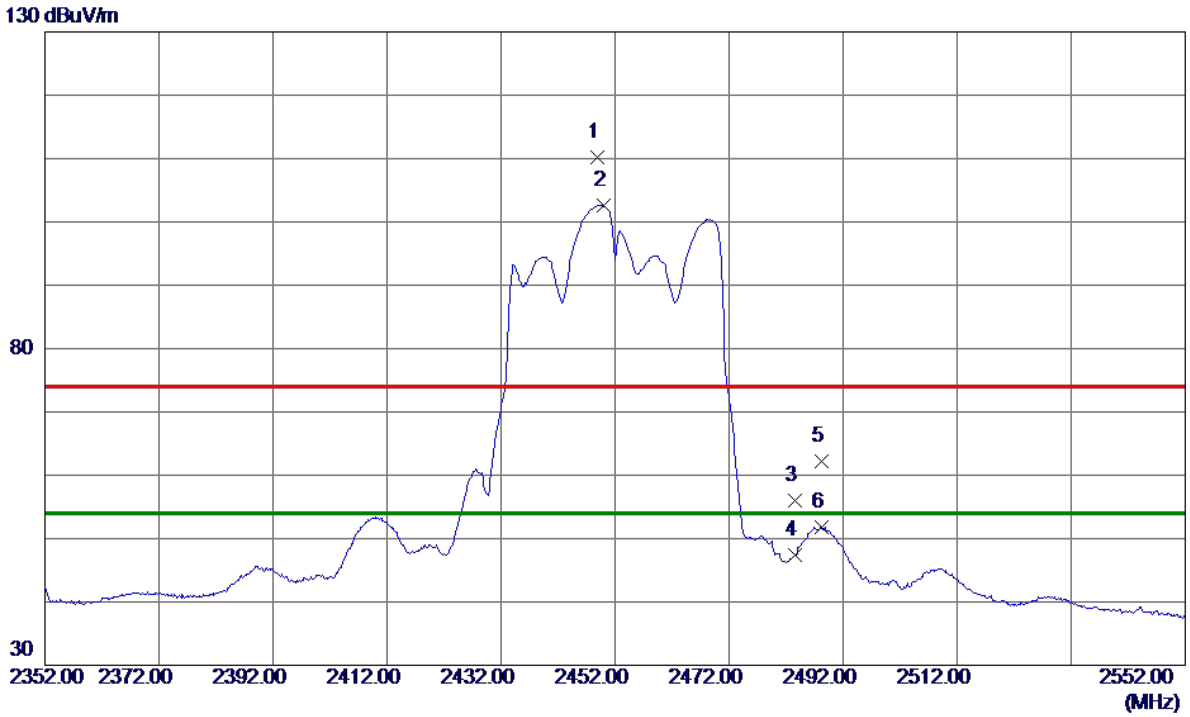


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3249.2600	34.44	-0.65	33.79	54.00	-20.21	AVG	
2	3249.3050	41.49	-0.65	40.84	74.00	-33.16	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2452 MHz

Vertical

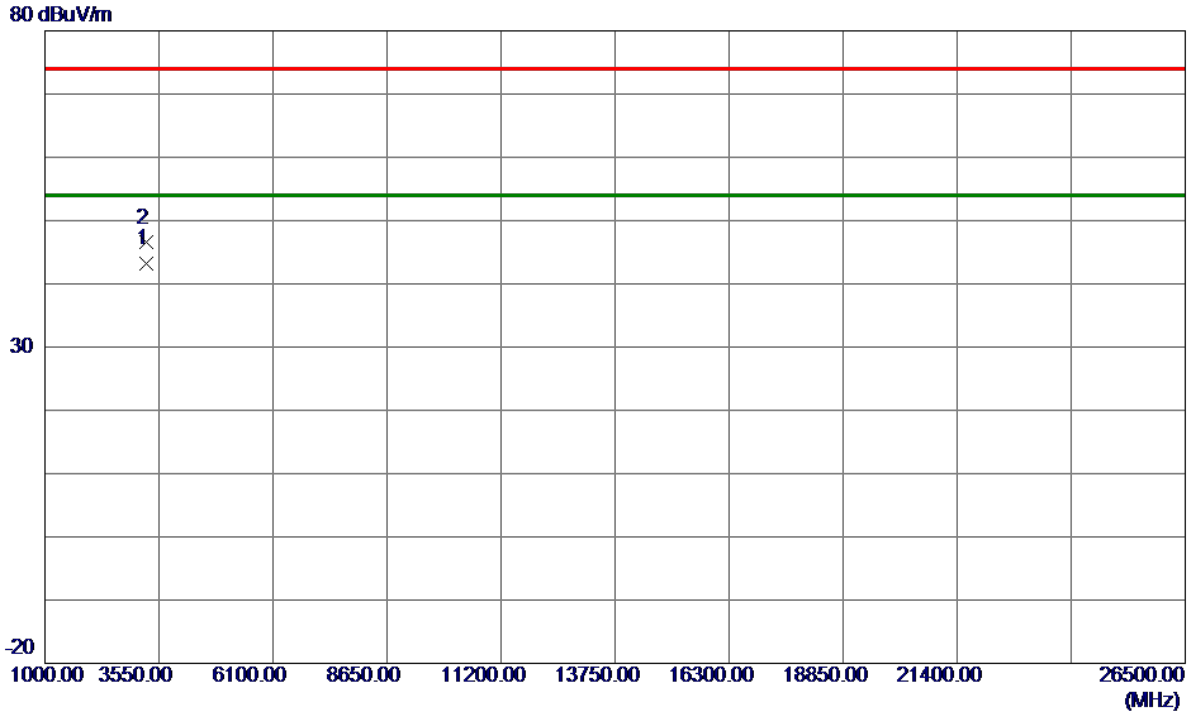


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2448.8000	104.06	6.14	110.20	74.00	36.20	Peak	No Limit
2 *	2449.9000	96.49	6.14	102.63	54.00	48.63	AVG	No Limit
3	2483.5000	49.99	6.08	56.07	74.00	-17.93	Peak	
4	2483.5000	41.34	6.08	47.42	54.00	-6.58	AVG	
5	2488.2000	56.19	6.07	62.26	74.00	-11.74	Peak	
6	2488.2000	45.78	6.07	51.85	54.00	-2.15	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2452 MHz

Vertical

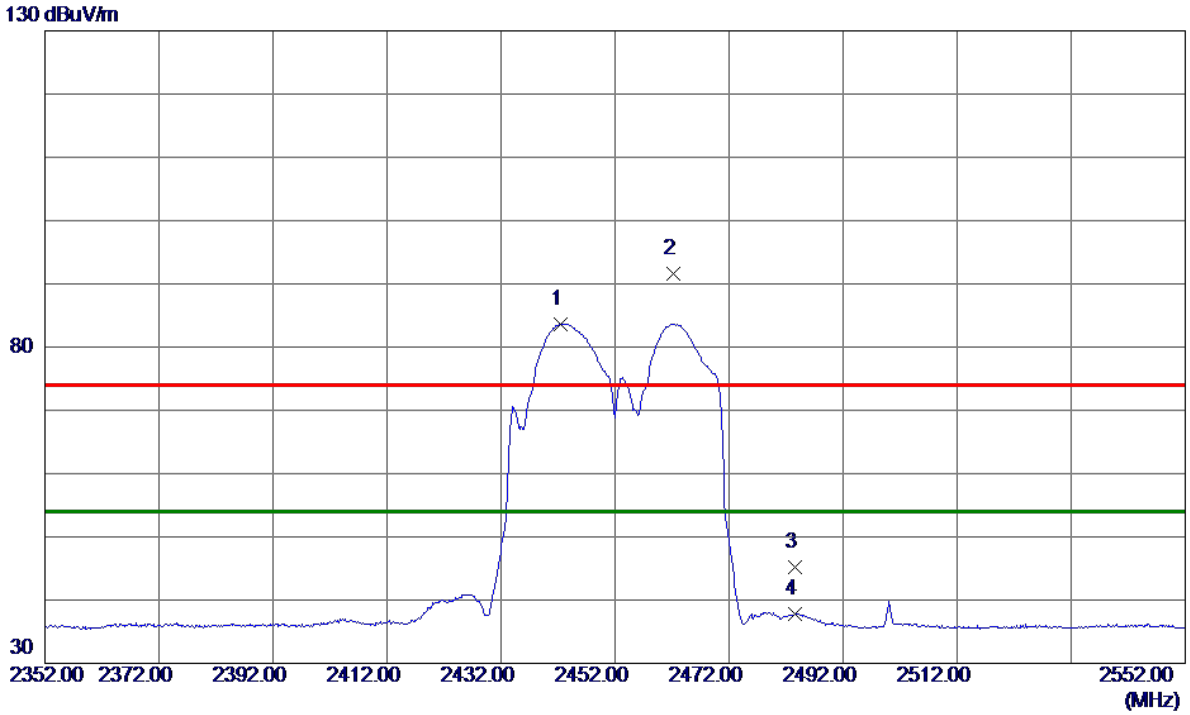


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	3269.3350	43.81	-0.58	43.23	54.00	-10.77	AVG	
2	3269.4000	47.08	-0.58	46.50	74.00	-27.50	Peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2452 MHz

Horizontal

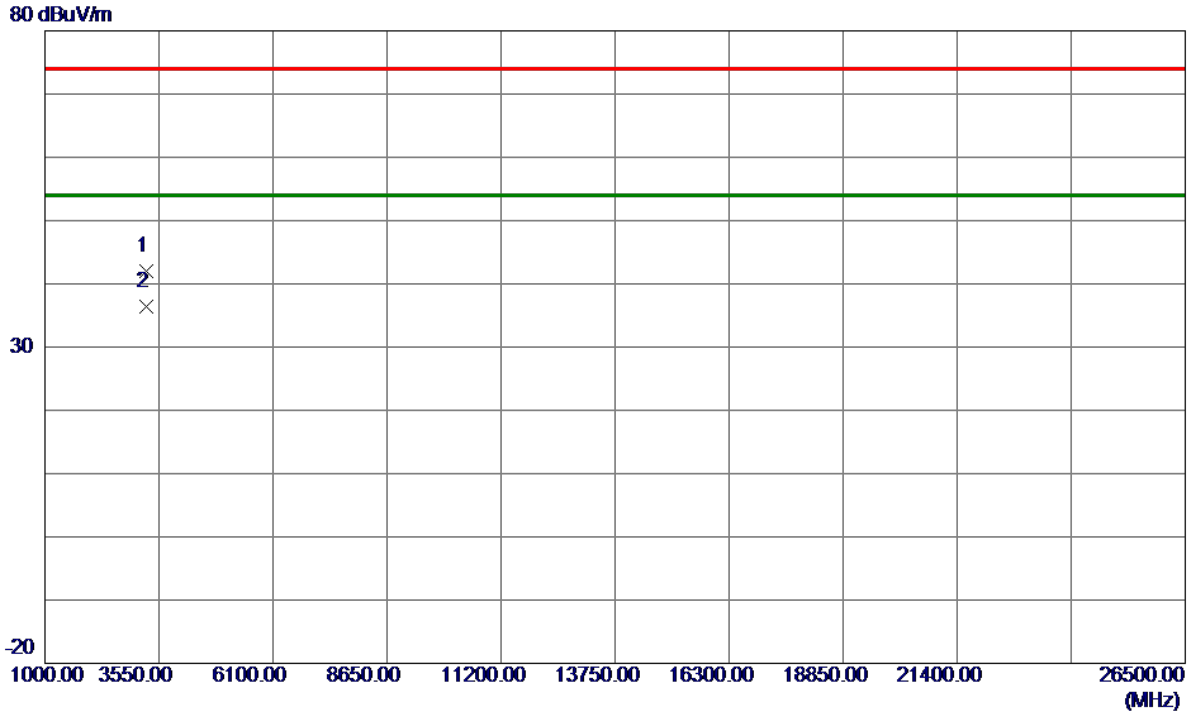


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2442.5000	77.50	6.15	83.65	54.00	29.65	AVG	No Limit
2	2462.3000	85.52	6.12	91.64	74.00	17.64	Peak	No Limit
3	2483.5000	39.20	6.08	45.28	74.00	-28.72	Peak	
4	2483.5000	31.75	6.08	37.83	54.00	-16.17	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX N-40M Mode 2452 MHz

Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	3268.1250	42.64	-0.58	42.06	74.00	-31.94	Peak	
2 *	3269.3250	36.96	-0.58	36.38	54.00	-17.62	AVG	

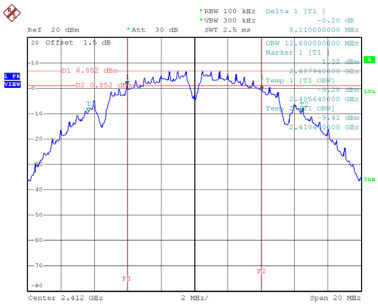
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

Test Mode	TX B Mode

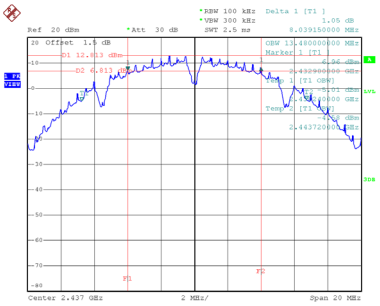
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	8.11	500	Complies
06	2437	8.04	500	Complies
11	2462	8.11	500	Complies

CH01



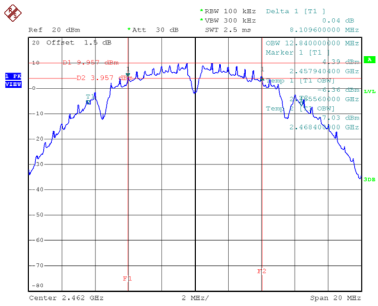
Date: 23.SEP.2019 19:52:54

CH06



Date: 23.SEP.2019 20:03:23

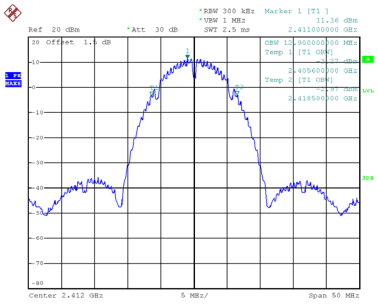
CH11



Date: 23.SEP.2019 20:05:50

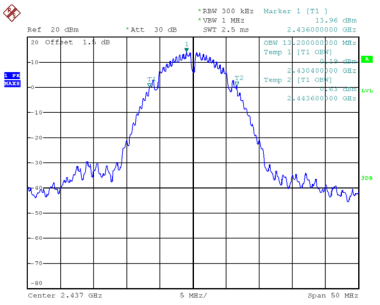
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	12.90	Complies
06	2437	13.20	Complies
11	2462	12.80	Complies

CH01



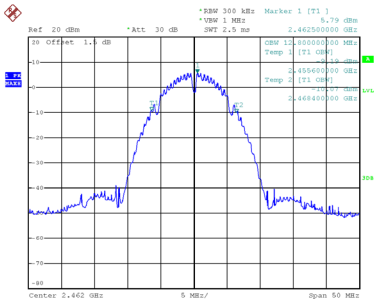
Date: 8.NOV.2019 14:48:08

CH06



Date: 8.NOV.2019 14:47:48

CH11

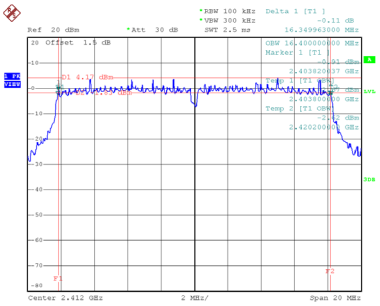


Date: 8.NOV.2019 14:47:14

Test Mode	TX G Mode

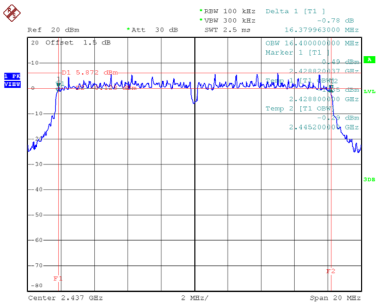
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.35	500	Complies
06	2437	16.38	500	Complies
11	2462	16.38	500	Complies

CH01



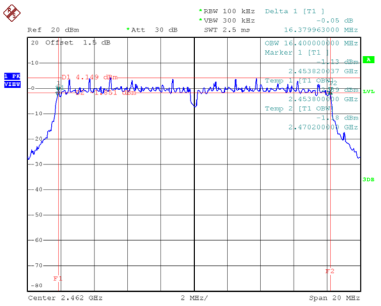
Date: 23.SEP.2019 20:17:18

CH06



Date: 23.SEP.2019 20:19:18

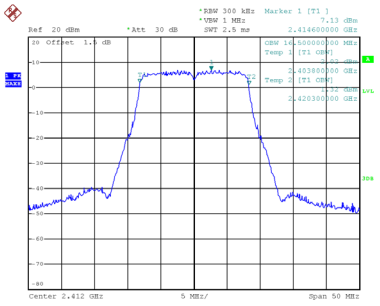
CH11



Date: 23.SEP.2019 20:34:24

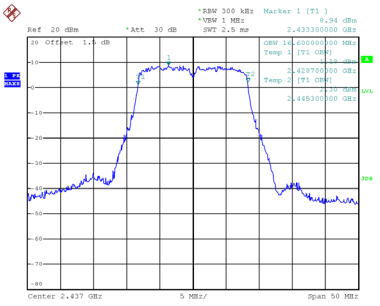
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	16.50	Complies
06	2437	16.60	Complies
11	2462	16.60	Complies

CH01



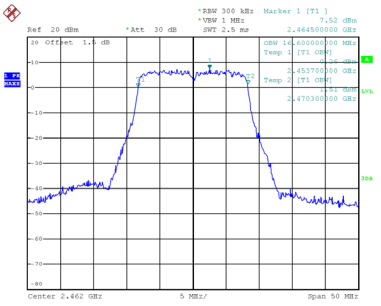
Date: 8.NOV.2019 14:49:09

CH06



Date: 8.NOV.2019 14:49:31

CH11

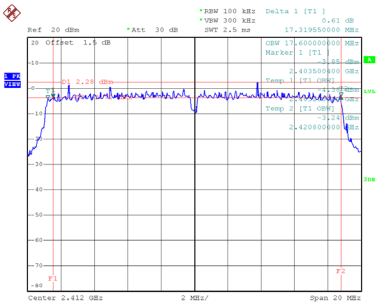


Date: 8.NOV.2019 14:49:52

Test Mode	TX N-20M Mode

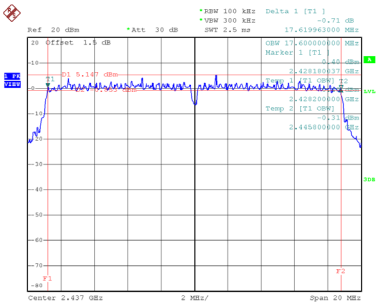
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.32	500	Complies
06	2437	17.62	500	Complies
11	2462	17.62	500	Complies

CH01



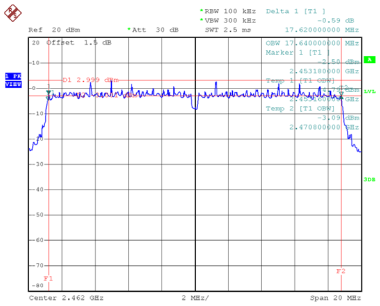
Date: 23.SEP.2019 20:36:19

CH06



Date: 23.SEP.2019 20:37:55

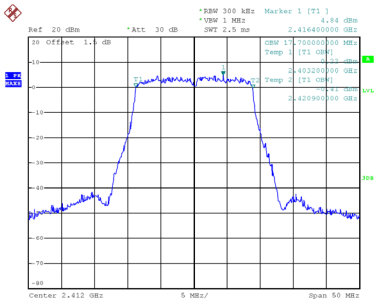
CH11



Date: 23.SEP.2019 20:39:45

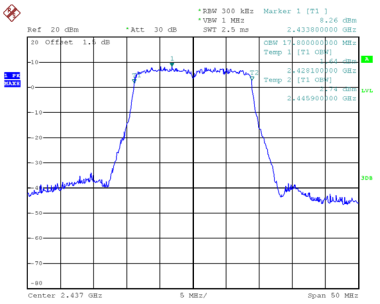
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	17.70	Complies
06	2437	17.80	Complies
11	2462	17.80	Complies

CH01



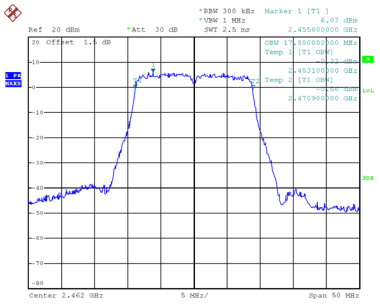
Date: 8.NOV.2019 14:50:36

CH06



Date: 8.NOV.2019 14:50:55

CH11

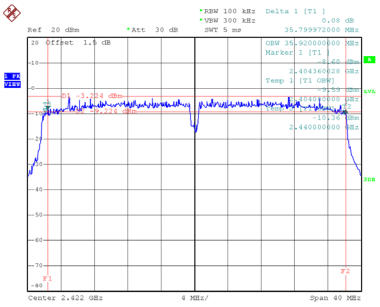


Date: 8.NOV.2019 14:51:36

Test Mode	TX N-40M Mode

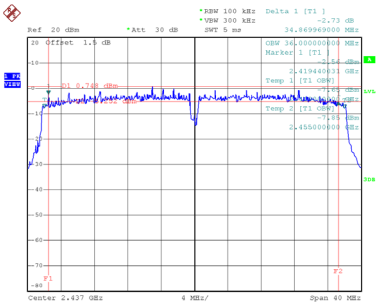
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	35.80	500	Complies
06	2437	34.87	500	Complies
09	2452	35.16	500	Complies

CH03



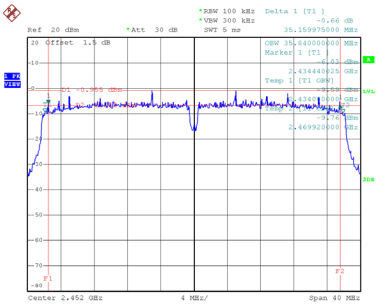
Date: 23.SEP.2019 20:42:13

CH06



Date: 23.SEP.2019 20:45:02

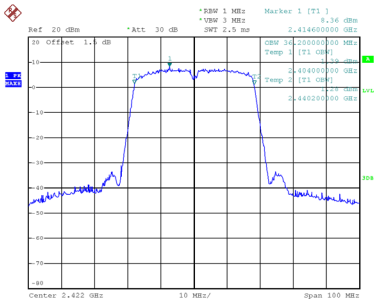
CH09



Date: 23.SEP.2019 20:46:32

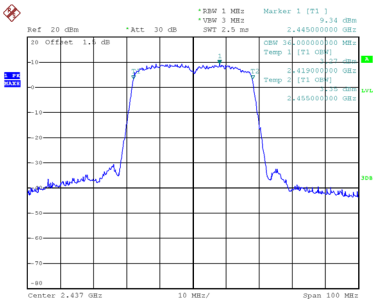
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
03	2422	36.20	Complies
06	2437	36.00	Complies
09	2452	36.20	Complies

CH03



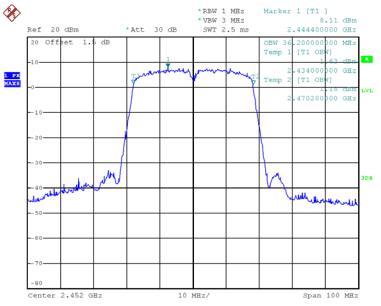
Date: 8.NOV.2019 15:07:29

CH06



Date: 8.NOV.2019 15:07:49

CH09



Date: 8.NOV.2019 15:08:11

APPENDIX F - MAXIMUM OUTPUT POWER

Non Beamforming

Test Mode	TX B Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.94	0.0783	30.00	1.0000	Complies
06	2437	24.89	0.3083	30.00	1.0000	Complies
11	2462	22.12	0.1629	30.00	1.0000	Complies

Test Mode	TX B Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	19.42	0.0875	30.00	1.0000	Complies
06	2437	23.54	0.2259	30.00	1.0000	Complies
11	2462	20.53	0.1130	30.00	1.0000	Complies

Test Mode	TX B Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	19.01	0.0796	30.00	1.0000	Complies
06	2437	23.63	0.2307	30.00	1.0000	Complies
11	2462	20.47	0.1114	30.00	1.0000	Complies

Test Mode	TX B Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	23.90	0.2455	30.00	1.0000	Complies
06	2437	28.84	0.7656	30.00	1.0000	Complies
11	2462	25.88	0.3873	30.00	1.0000	Complies

Test Mode	TX G Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	22.11	0.1626	30.00	1.0000	Complies
06	2437	23.77	0.2382	30.00	1.0000	Complies
11	2462	22.36	0.1722	30.00	1.0000	Complies

Test Mode	TX G Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	23.08	0.2032	30.00	1.0000	Complies
06	2437	25.37	0.3443	30.00	1.0000	Complies
11	2462	24.23	0.2649	30.00	1.0000	Complies

Test Mode	TX G Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	24.00	0.2512	30.00	1.0000	Complies
06	2437	25.11	0.3243	30.00	1.0000	Complies
11	2462	24.96	0.3133	30.00	1.0000	Complies

Test Mode	TX G Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	27.90	0.6166	30.00	1.0000	Complies
06	2437	29.58	0.9078	30.00	1.0000	Complies
11	2462	28.75	0.7599	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	20.16	0.1038	30.00	1.0000	Complies
06	2437	23.72	0.2355	30.00	1.0000	Complies
11	2462	21.36	0.1368	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.35	0.1365	30.00	1.0000	Complies
06	2437	25.32	0.3404	30.00	1.0000	Complies
11	2462	23.32	0.2148	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	20.69	0.1172	30.00	1.0000	Complies
06	2437	25.45	0.3508	30.00	1.0000	Complies
11	2462	23.15	0.2065	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	25.53	0.3573	30.00	1.0000	Complies
06	2437	29.67	0.9268	30.00	1.0000	Complies
11	2462	27.47	0.5585	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.46	0.0883	30.00	1.0000	Complies
06	2437	21.38	0.1374	30.00	1.0000	Complies
09	2452	19.21	0.0834	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.51	0.0893	30.00	1.0000	Complies
06	2437	22.66	0.1845	30.00	1.0000	Complies
09	2452	20.37	0.1089	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.37	0.0865	30.00	1.0000	Complies
06	2437	22.46	0.1762	30.00	1.0000	Complies
09	2452	21.21	0.1321	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	24.22	0.2642	30.00	1.0000	Complies
06	2437	26.97	0.4977	30.00	1.0000	Complies
09	2452	25.11	0.3243	30.00	1.0000	Complies

Beamforming

Test Mode	TX N-20M Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	19.89	0.0975	27.34	0.5420	Complies
06	2437	19.97	0.0993	27.34	0.5420	Complies
11	2462	19.50	0.0891	27.34	0.5420	Complies

Test Mode	TX N-20M Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.24	0.1330	27.34	0.5420	Complies
06	2437	21.64	0.1459	27.34	0.5420	Complies
11	2462	21.73	0.1489	27.34	0.5420	Complies

Test Mode	TX N-20M Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	20.96	0.1247	27.34	0.5420	Complies
06	2437	20.87	0.1222	27.34	0.5420	Complies
11	2462	21.89	0.1545	27.34	0.5420	Complies

Test Mode	TX N-20M Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	25.51	0.3556	27.34	0.5420	Complies
06	2437	25.65	0.3673	27.34	0.5420	Complies
11	2462	25.94	0.3926	27.34	0.5420	Complies

Test Mode	TX N-40M Mode_Ant. 1

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.24	0.0839	27.34	0.5420	Complies
06	2437	21.15	0.1303	27.34	0.5420	Complies
09	2452	19.99	0.0998	27.34	0.5420	Complies

Test Mode	TX N-40M Mode_Ant. 2

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.18	0.0828	27.34	0.5420	Complies
06	2437	21.81	0.1517	27.34	0.5420	Complies
09	2452	19.50	0.0891	27.34	0.5420	Complies

Test Mode	TX N-40M Mode_Ant. 3

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	19.10	0.0813	27.34	0.5420	Complies
06	2437	21.68	0.1472	27.34	0.5420	Complies
09	2452	20.02	0.1005	27.34	0.5420	Complies

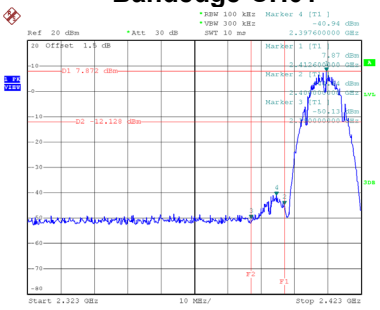
Test Mode	TX N-40M Mode_Total

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	23.94	0.2477	27.34	0.5420	Complies
06	2437	26.33	0.4295	27.34	0.5420	Complies
09	2452	24.61	0.2891	27.34	0.5420	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

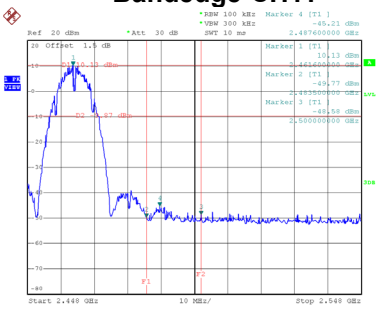
Test Mode	TX B Mode_Ant. 1

Bandedge-CH01



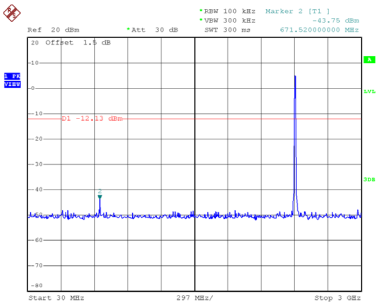
Date: 23.SEP.2019 19:53:14

Bandedge-CH11

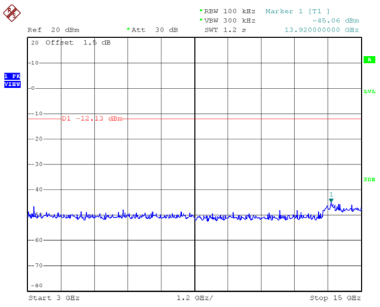


Date: 23.SEP.2019 20:05:59

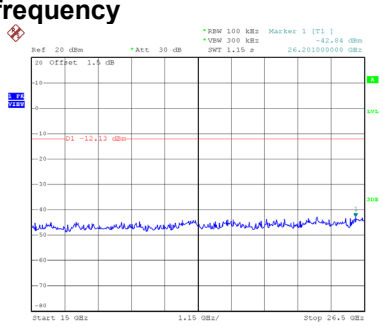
CH01 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 19:53:28

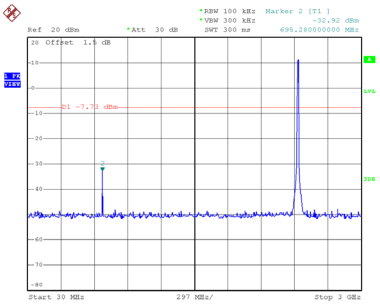


Date: 23.SEP.2019 19:53:37

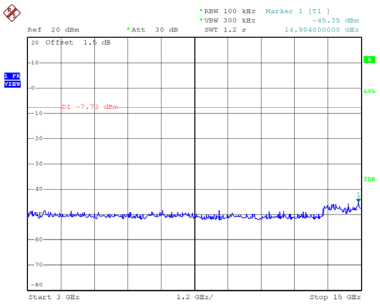


Date: 23.SEP.2019 19:53:45

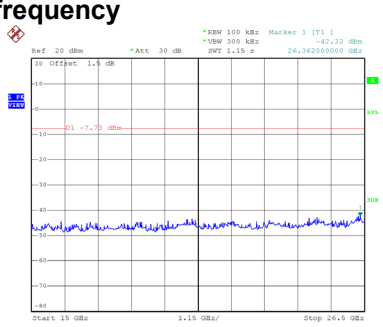
CH06 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 20:03:45

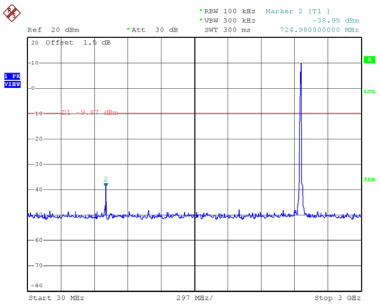


Date: 23.SEP.2019 20:03:54

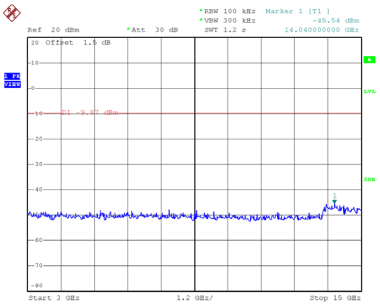


Date: 23.SEP.2019 20:04:02

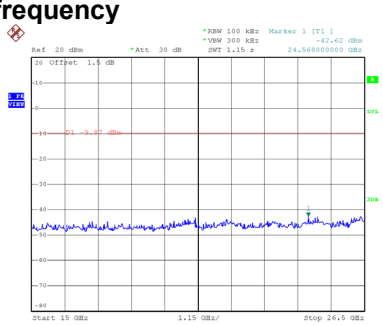
CH11 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 20:06:13



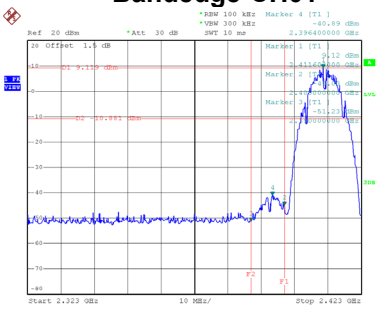
Date: 23.SEP.2019 20:06:22



Date: 23.SEP.2019 20:06:30

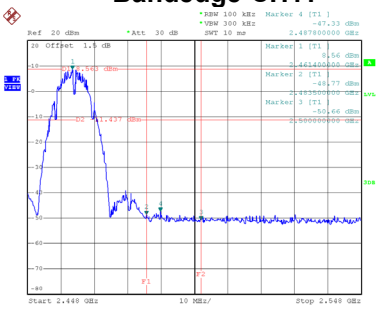
Test Mode	TX B Mode_Ant. 2

Bandedge-CH01



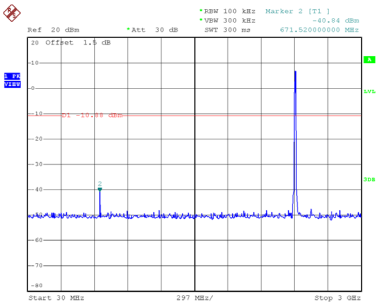
Date: 23.SEP.2019 21:24:22

Bandedge-CH11

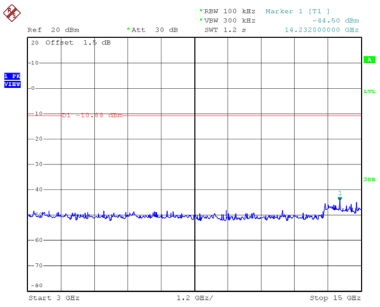


Date: 23.SEP.2019 21:29:14

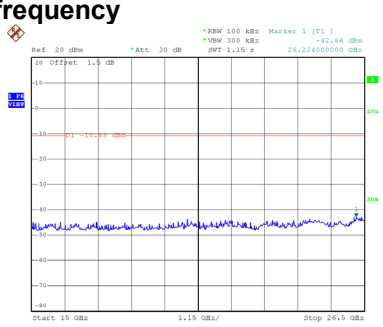
CH01 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 21:24:36

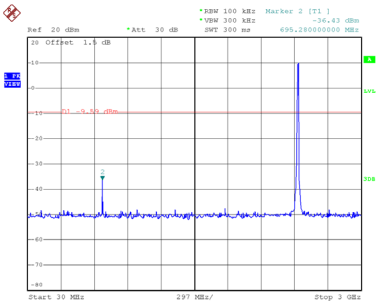


Date: 23.SEP.2019 21:24:44

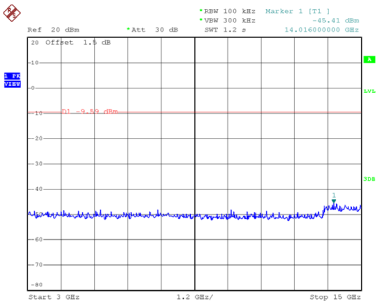


Date: 23.SEP.2019 21:24:53

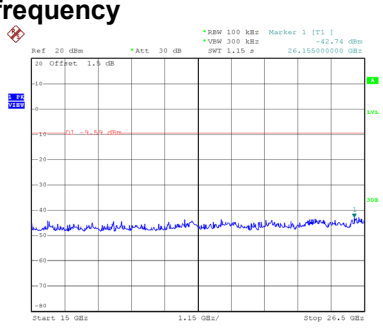
CH06 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 21:26:52

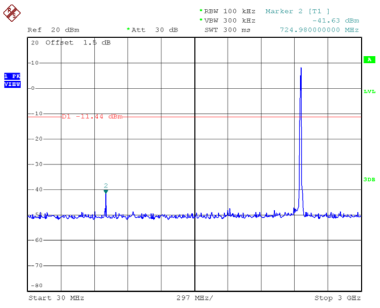


Date: 23.SEP.2019 21:27:01

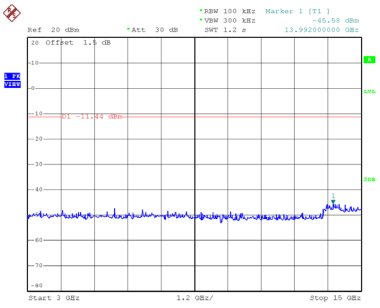


Date: 23.SEP.2019 21:27:09

CH11 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 21:29:28



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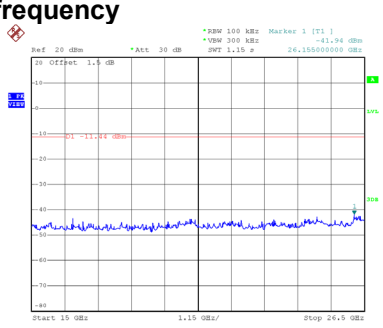

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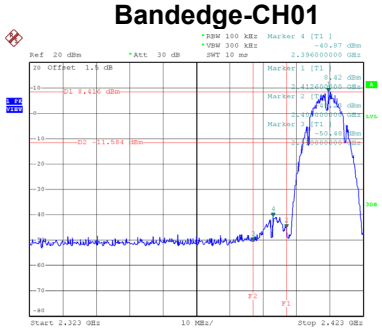
Test Mode	TX B Mode_Ant. 3

Bandedge-CH01



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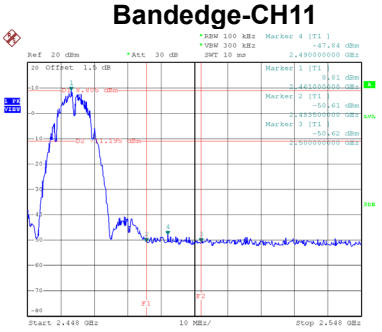
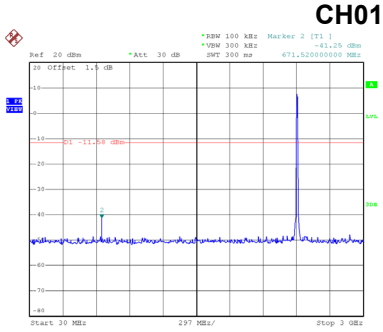
Bandedge-CH11



Date: 23.SEP.2019 21:00:13

CH01 – 10th Harmonic of the fundamental frequency



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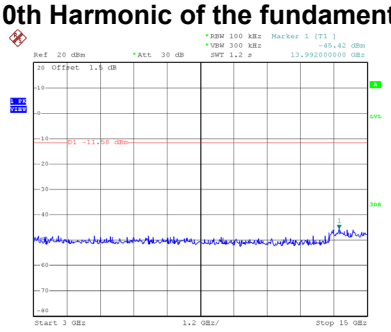

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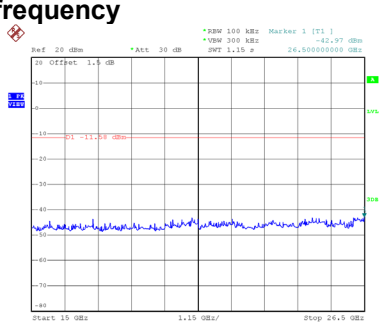

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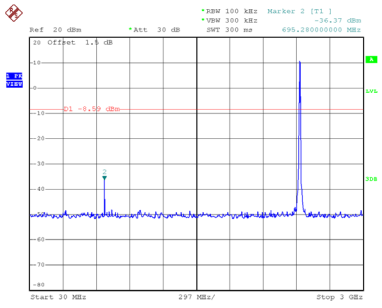
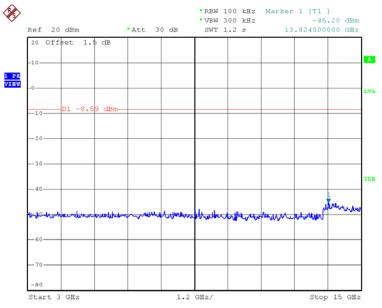
CH06 – 10th Harmonic of the fundamental frequency



Date: 23.SEP.2019 20:54:13



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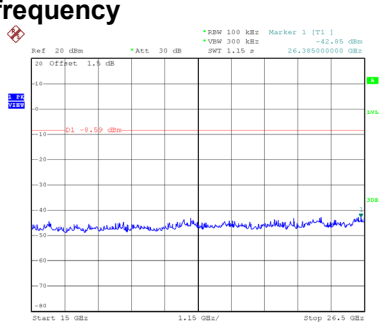

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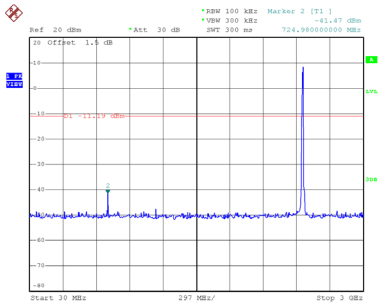
CH11 – 10th Harmonic of the fundamental frequency



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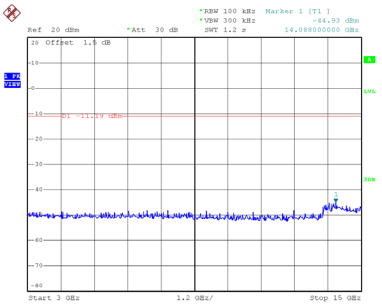

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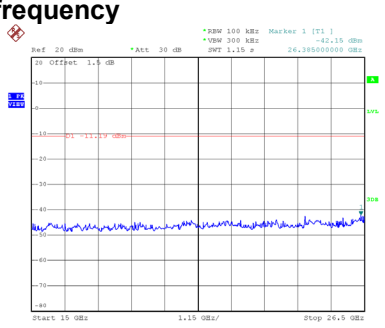

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