FCC Radio Test Report

FCC ID: 2AR2STAW6205

This report concerns: Original Grant

Project No.	:	2006C046C
Equipment	:	Wireless Home Speaker
Brand Name	:	PHILIPS or
Test Model	:	TAW6205
Series Model	:	TAW6205/10, TAW6205/12, TAW6205/98, TAW6205/37, W6205, W6205/10, W6205/12, W6205/98, W6205/xx, TAW6205/xx (xx=00-99, for country code)
Applicant	:	MMD Hong Kong Holding Limited
Address	:	Unit 1006, 10th Floor, C-Bons International Center, 108 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Manufacturer	:	MMD Hong Kong Holding Limited
Address	:	Unit 1006, 10th Floor, C-Bons International Center, 108 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Factory	:	Guoguang Electric Co.,Ltd.
Address	:	No.8 Jinghu Road, Xinya Street, Huadu Reg, Guangzhou, China
Date of Receipt	:	Jan. 12, 2021
Date of Test	:	Jan. 22, 2021 ~ Feb. 25, 2021
Issued Date	:	Mar. 10, 2021
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG2021012263
Standard(s)	:	FCC Part15, Subpart C (15.247) ANSI C63.10-2013 FCC KDB 558074 D01 15.247 Meas Guidance v05r02

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

Vincent. Tan

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Ethan Ma

Approved by : Ethan Ma

Certificate #5123.02

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Web: www.newbtl.com

Declaration

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

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

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

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.	Mar. 10, 2021

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 permanently attached 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	150kHz ~ 30MHz	2.68

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9kHz ~ 30MHz	-	3.02
		30MHz ~ 200MHz	V	4.26
		30MHz ~ 200MHz	H	3.38
		200MHz ~ 1,000MHz	V	3.98
		200MHz ~ 1,000MHz	H	3.94
		1GHz ~ 6GHz	-	3.96
		6GHz ~ 18GHz	-	5.24
		18GHz ~ 26.5GHz	-	3.62
		26.5GHz ~ 40GHz	-	4.00

C. Other Measurement:

Test Item	Uncertainty
Bandwidth	±3.8 %
Maximum Output Power	±0.95 dB
Conducted Spurious Emission	±2.71 dB
Power Spectral Density	±0.86 dB
Temperature	±0.08 °C
Humidity	±1.5%

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	Luca Jiang
Radiated Emissions-9K-30MHz	25°C	60%	AC 120V/60Hz	Hayden Chen
Radiated Emissions-30 MHz to 1GHz	26°C	52%	AC 120V/60Hz	Hayden Chen
Radiated Emissions-Above 1000 MHz	26°C	52%	AC 120V/60Hz	Hayden Chen
Bandwidth	24°C	52%	AC 230V/50Hz	Jesse Wang
Maximum output power	24°C	52%	AC 230V/50Hz	Hand Huang
Conducted Spurious Emissions	24°C	52%	AC 230V/50Hz	Jesse Wang
Power Spectral Density	24°C	52%	AC 230V/50Hz	Jesse Wang

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Home Speaker
Brand Name	PHILIPS or
Test Model	TAW6205
Series Model	TAW6205/10, TAW6205/12, TAW6205/98, TAW6205/37, W6205, W6205/10, W6205/12, W6205/98, W6205/xx, TAW6205/xx (xx=00-99, for country code)
Model Difference(s)	Only differ in model name.
RF Module Model	Play-FI
Power Source	AC Mains.
Power Rating	100-240V~ 50/60Hz 1.5A
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 150 Mbps
Maximum Output Power	IEEE 802.11b: 14.61 dBm (0.0289 W) IEEE 802.11g: 14.27 dBm (0.0267 W) IEEE 802.11n (HT20): 13.27 dBm (0.0212 W) IEEE 802.11n (HT40): 13.07 dBm (0.0203 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		N/A	FPC	N/A	4.20

Note: The antenna gain is provided by the manufacturer.

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 B Mode Channel 11

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 B Mode Channel 11

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 5	TX B Mode Channel 11

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

Conducted test	
Final Test Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-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) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.

(3) For radiated emission below 1 GHz test, the IEEE 802.11b Channel 11 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.

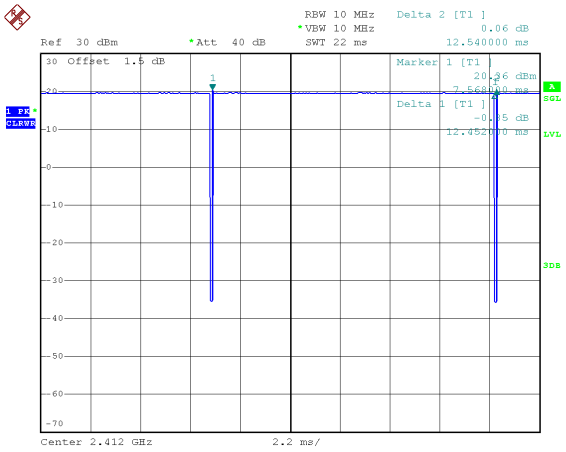
2.3 PARAMETERS OF TEST SOFTWARE

Test Software	Project1		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	34	35	37
IEEE 802.11g	42	43	45
IEEE 802.11n (HT20)	40	41	43
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	40	41	42

2.4 DUTY CYCLE

If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.
The output power = measured power + duty factor.

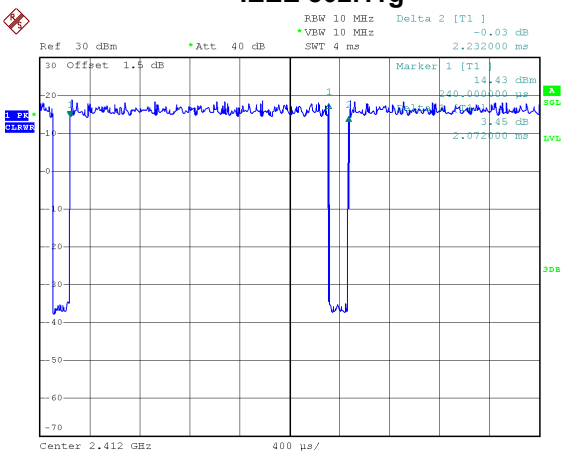
IEEE 802.11b



Date: 25.JAN.2021 19:52:44

Duty cycle = 12.452 ms / 12.540 ms = 99.30%
Duty Factor = 10 log(1/Duty cycle) = 0.00

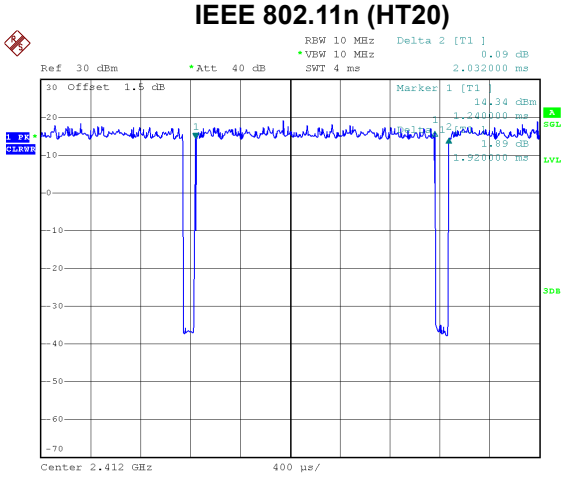
IEEE 802.11g



Date: 25.JAN.2021 19:53:48

Duty cycle = 2.072 ms / 2.232 ms = 92.83%
Duty Factor = 10 log(1/Duty cycle) = 0.32

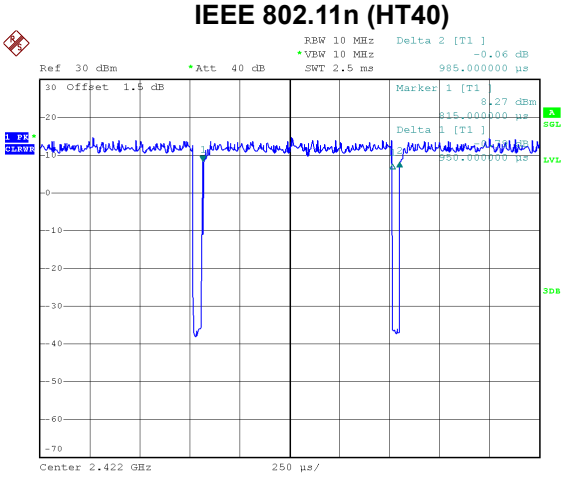
IEEE 802.11n (HT20)



Date: 25.JAN.2021 19:53:24

Duty cycle = 1.920 ms / 2.032 ms = 94.49%
Duty Factor = 10 log(1/Duty cycle) = 0.25

IEEE 802.11n (HT40)



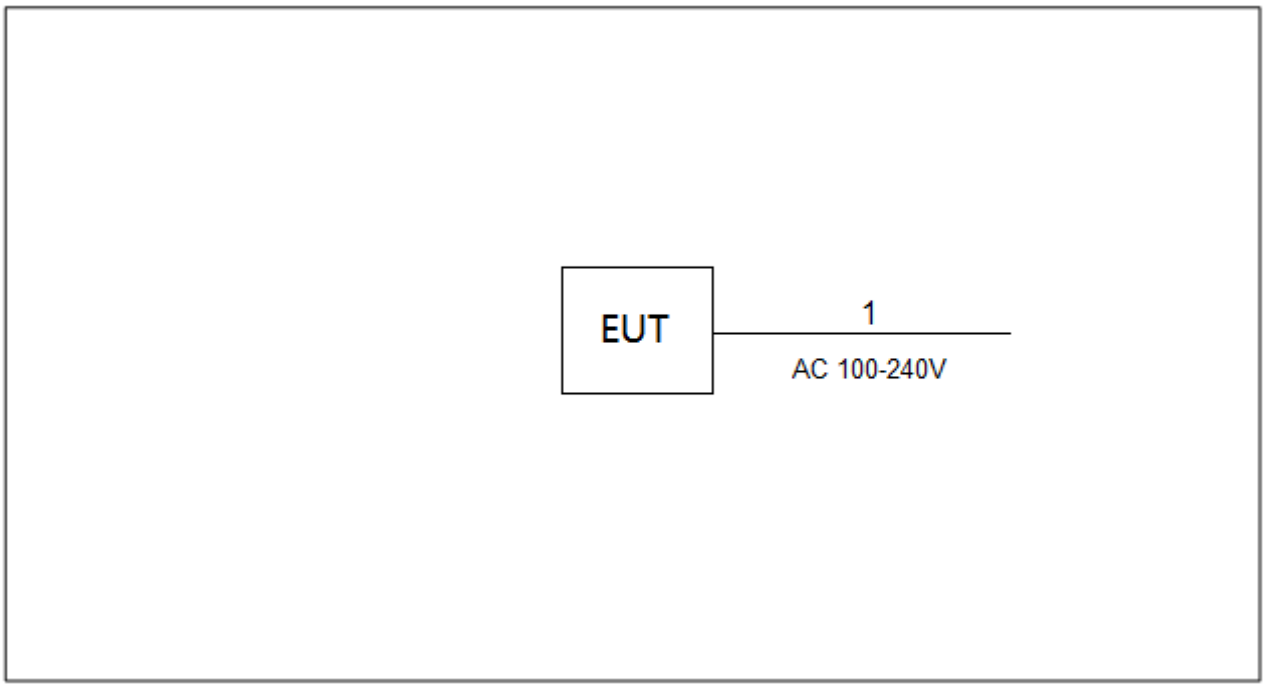
Date: 25.JAN.2021 19:51:50

Duty cycle = 0.950 ms / 0.985 ms = 96.45%
Duty Factor = 10 log(1/Duty cycle) = 0.16

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.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	AC Cable	NO	NO	1.5m

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 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

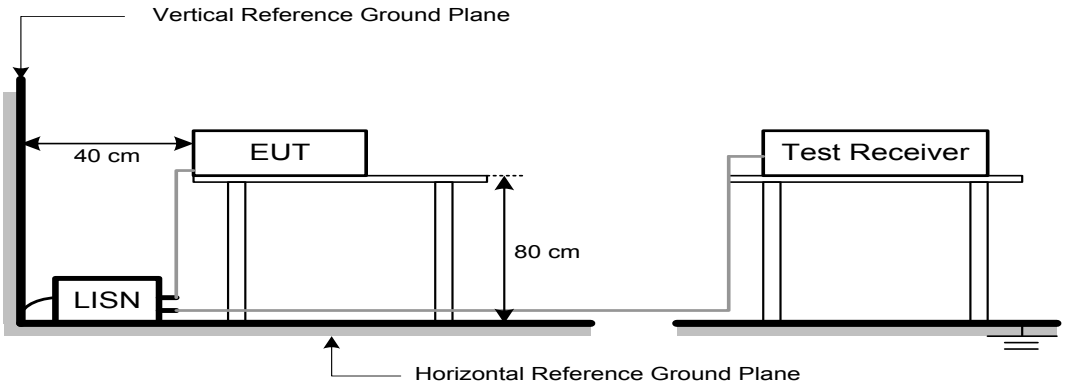
3.2 TEST PROCEDURE

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

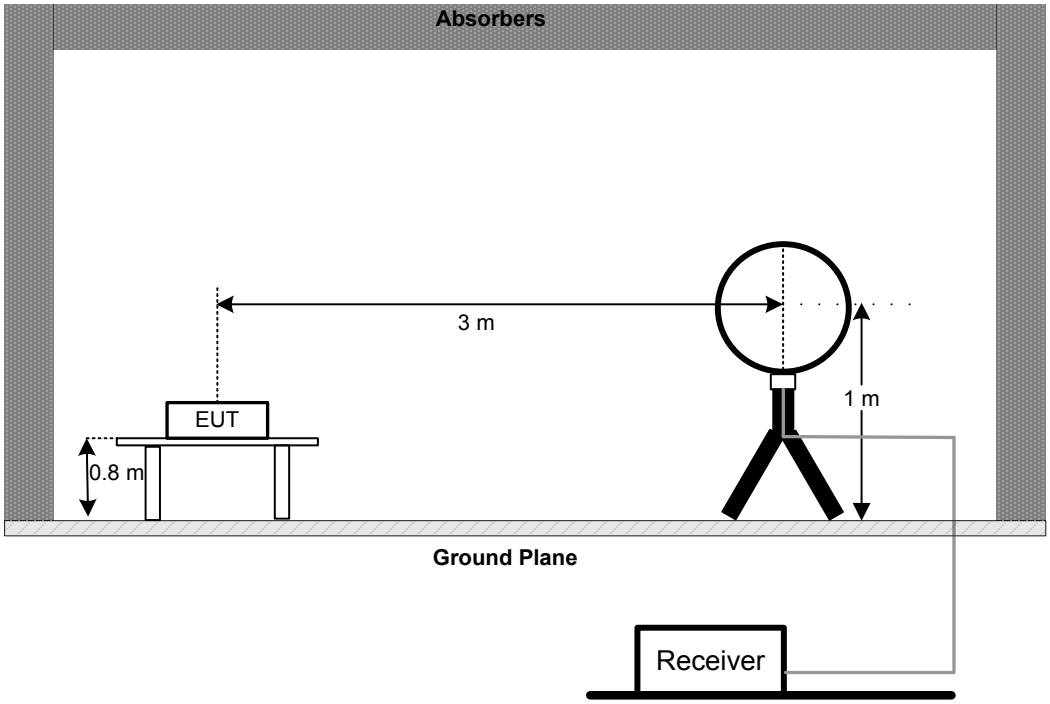
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
b. The measuring distance 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

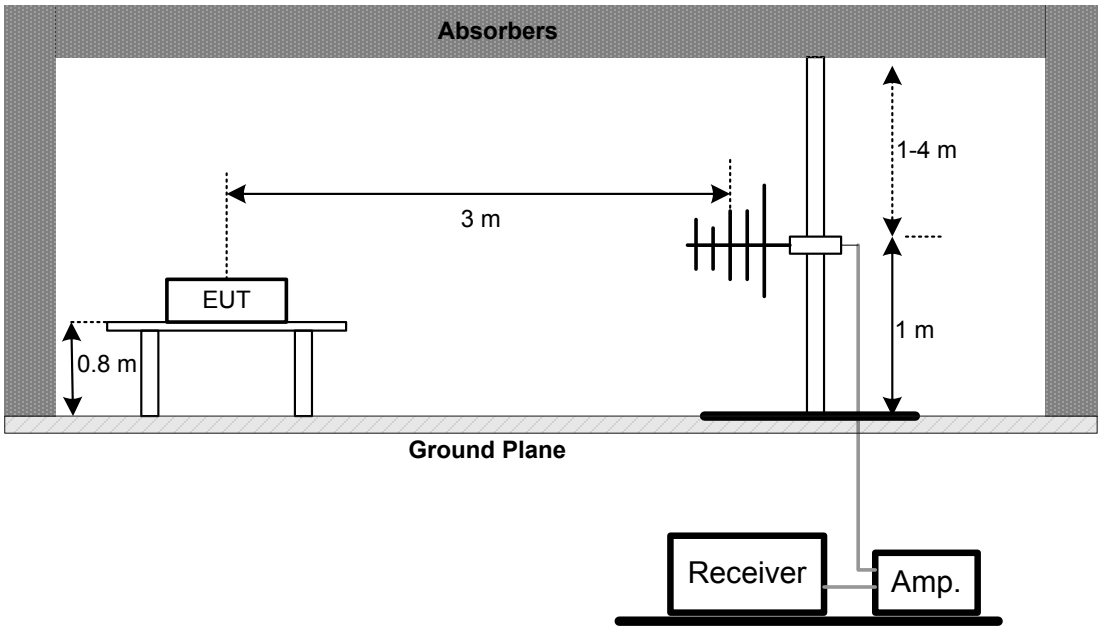
No deviation

4.4 TEST SETUP

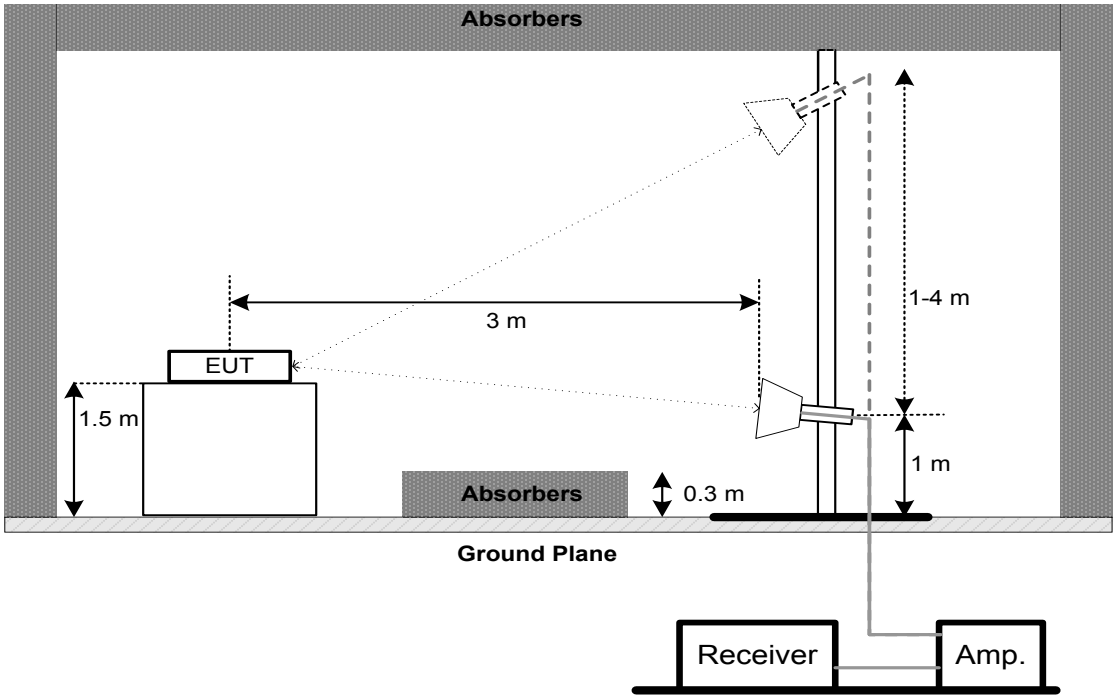
9 kHz-30 MHz



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	-

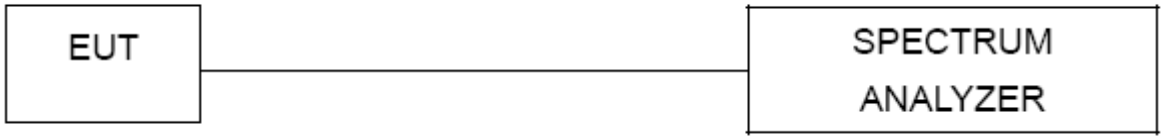
5.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting:
For 6 dB Bandwidth : RBW= 100 kHz, VBW=300 kHz, Sweep time = auto.
For 99% Emission Bandwidth B/G/N-20 Mode: RBW= 300 KHz, VBW=1 MHz, Sweep time = 2.5 ms.
For 99% Emission Bandwidth N-40 Mode: RBW= 1 MHz, VBW=3 MHz, 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

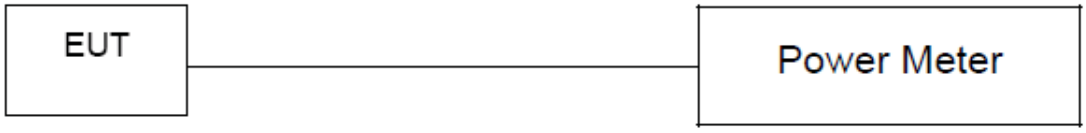
6.2 TEST PROCEDURE

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 11.9.2.3.1 of ANSI C63.10-2013.

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.

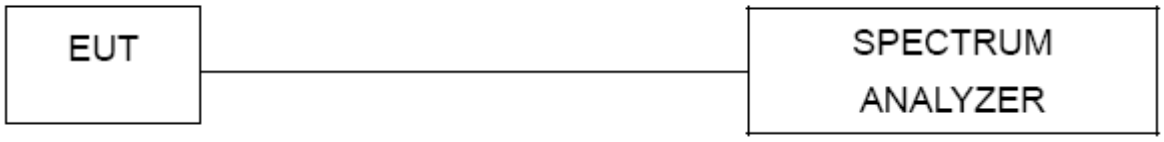
7.2 TEST PROCEDURE

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)

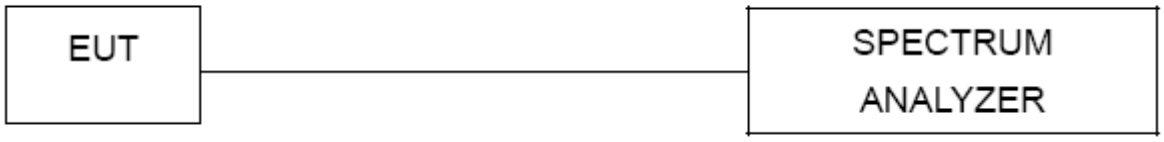
8.2 TEST PROCEDURE

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	Feb. 28, 2021
2	LISN	EMCO	3816/2	52765	Mar. 01, 2021
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 28, 2021
4	50Ω Terminator	SHX	TF5-3	15041305	Mar. 01, 2021
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 10, 2021
7	643 Shield Room	ETS	6*4*3m	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	EM	EM-6876-1	230	Apr. 16, 2021
2	Cable	N/A	RG 213/U	N/A	May 29, 2021
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 28, 2021
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021

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, 2021
2*	Amplifier	HP	8447D	2944A09673	Aug. 11, 2021
3	Receiver	Agilent	N9038A	MY52130039	Jul. 25, 2021
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 22, 2021
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
8	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	May 12, 2021
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jul. 07, 2021
3	Amplifier	Agilent	8449B	3008A02333	Mar. 01, 2021
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 07, 2021
5	Receiver	Agilent	N9038A	MY52130039	Jul. 25, 2021
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	N/A	EMC104-SM-SM-6 000	N/A	May 09, 2021
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	Filter	STI	STI15-9912	N/A	Jul. 25, 2021
11	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021

Bandwidth & Conducted Spurious Emissions & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Jul. 25, 2021
2	RF Cable	Tongkaichuan	N/A	N/A	N/A
3	DC Block	Mini	N/A	N/A	N/A
4	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 07, 2022

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Aug. 07, 2021
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jul. 25, 2021
3	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 07, 2022
4	RF Cable	Tongkaichuan	N/A	N/A	N/A

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

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

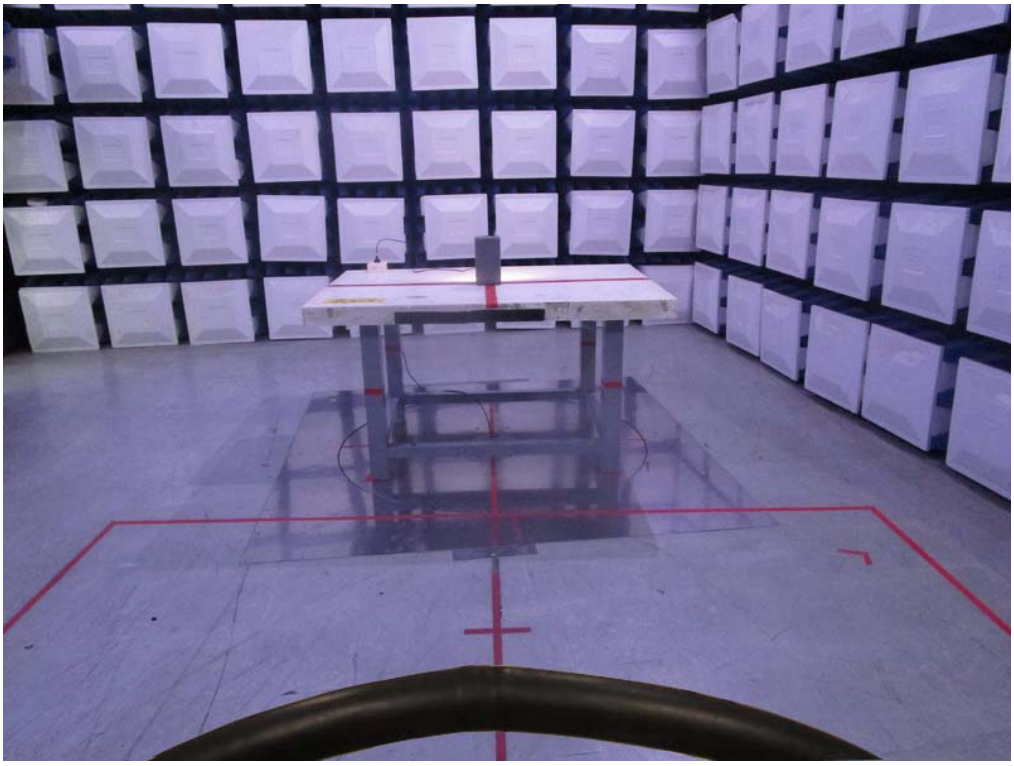
Except * item, all calibration period of equipment list is one year.

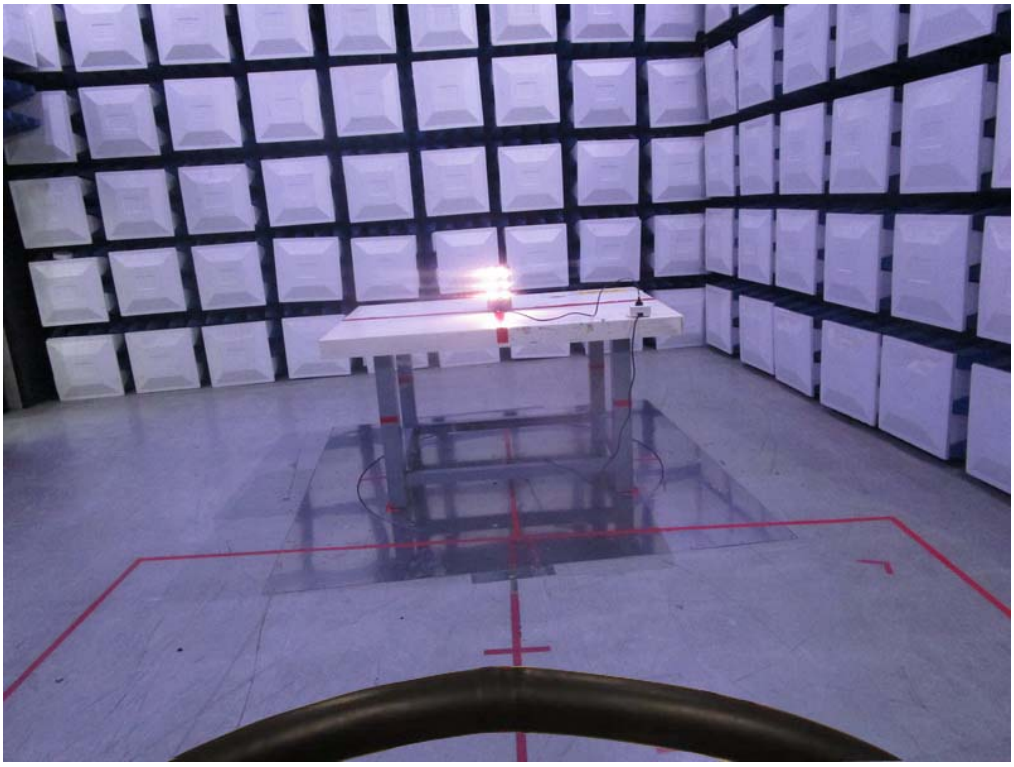
10. EUT TEST PHOTO

AC Power Line Conducted Emissions Test Photos

Radiated Emissions Test Photos

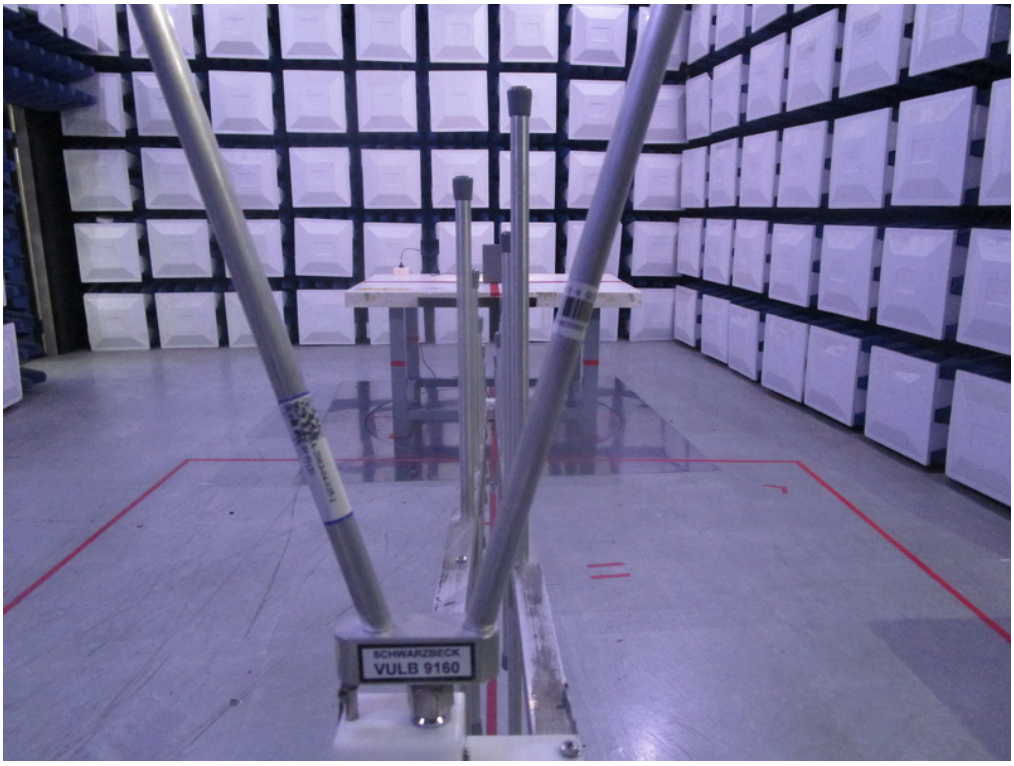
9 kHz to 30 MHz

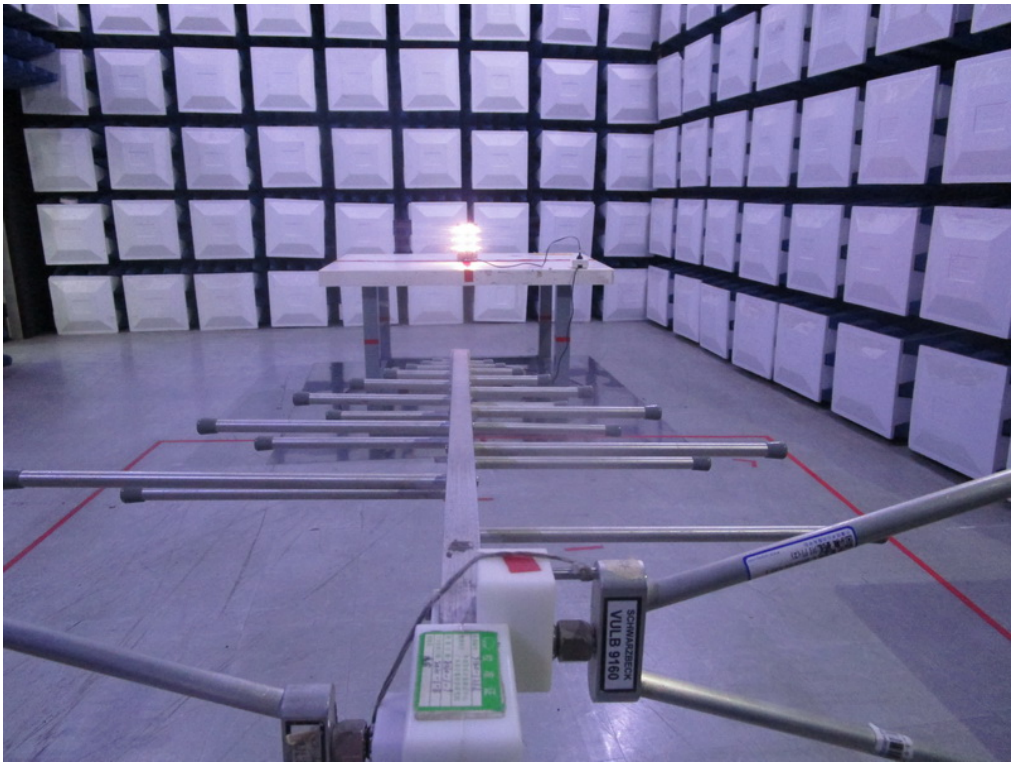




Radiated Emissions Test Photos

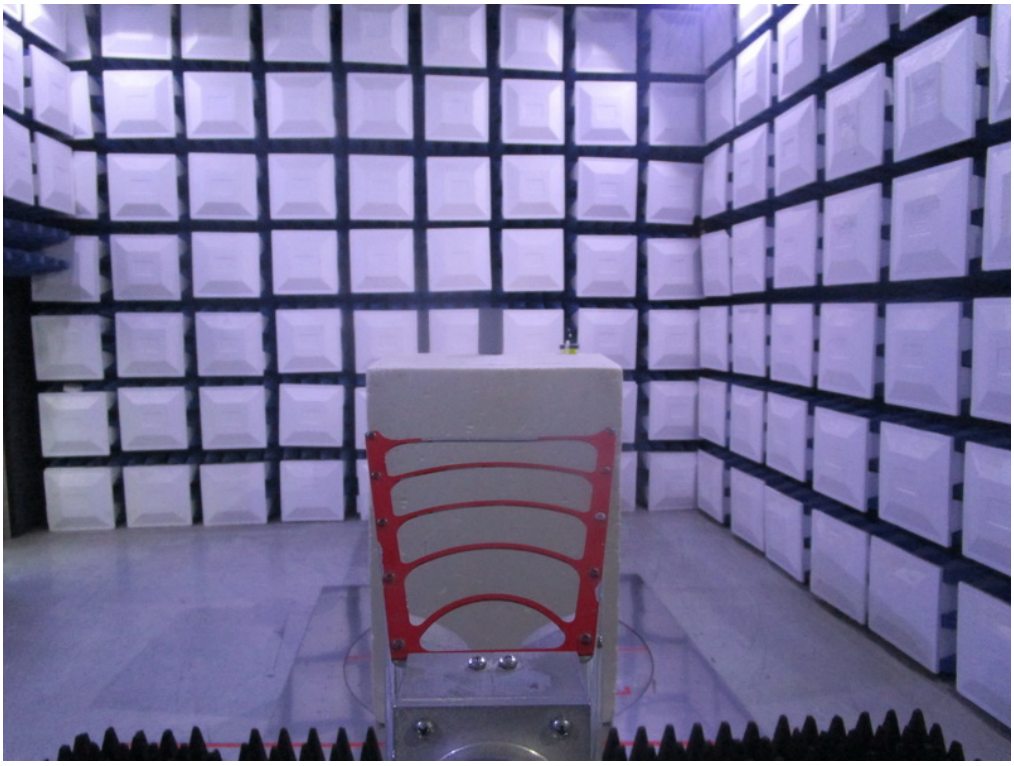
30 MHz to 1000 MHz

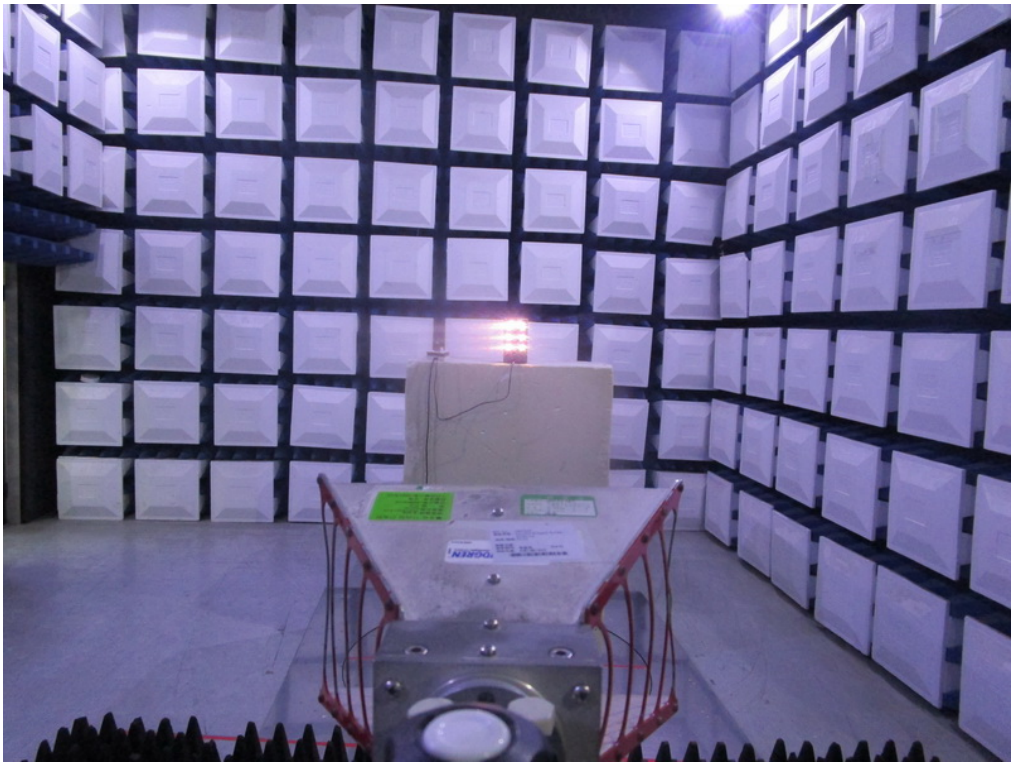




Radiated Emissions Test Photos

Above 1 GHz

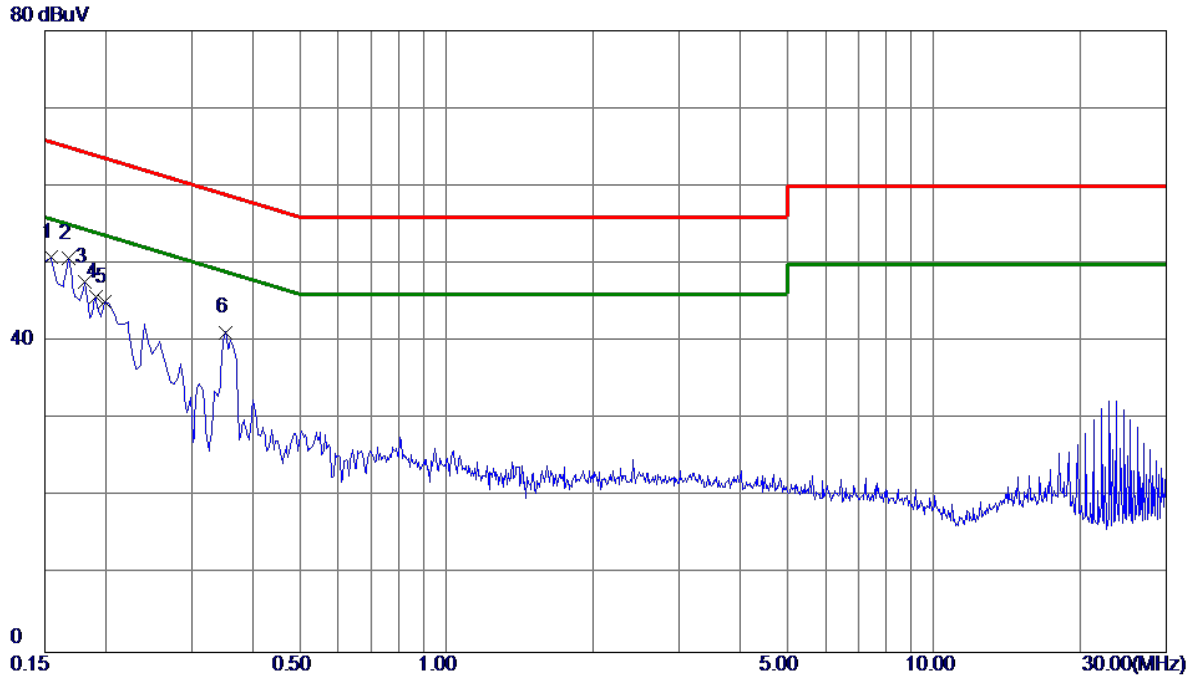




APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode:	TX B Mode Channel 11

Line

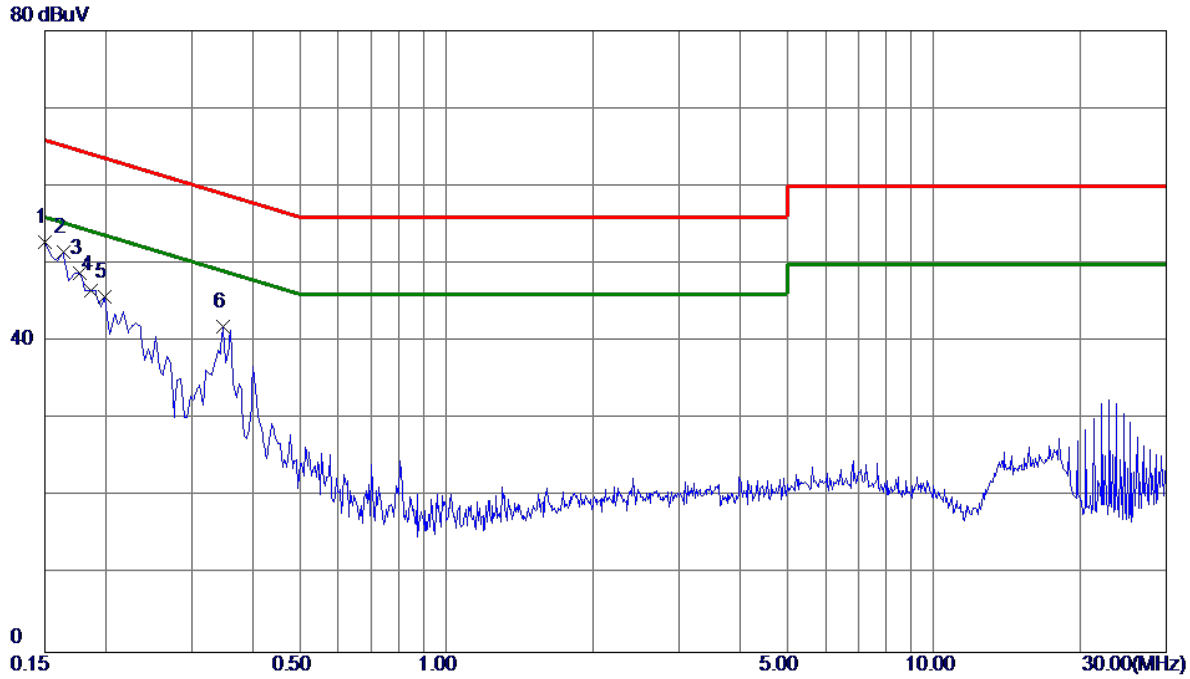


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1545	41.19	9.70	50.89	65.75	-14.86	Peak	
2 *	0.1680	40.93	9.80	50.73	65.06	-14.33	Peak	
3	0.1815	37.80	9.85	47.65	64.42	-16.77	Peak	
4	0.1905	35.81	9.88	45.69	64.01	-18.32	Peak	
5	0.1995	35.24	9.91	45.15	63.63	-18.48	Peak	
6	0.3525	31.30	9.90	41.20	58.90	-17.70	Peak	

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

Test Mode:	TX B Mode Channel 11

Neutral



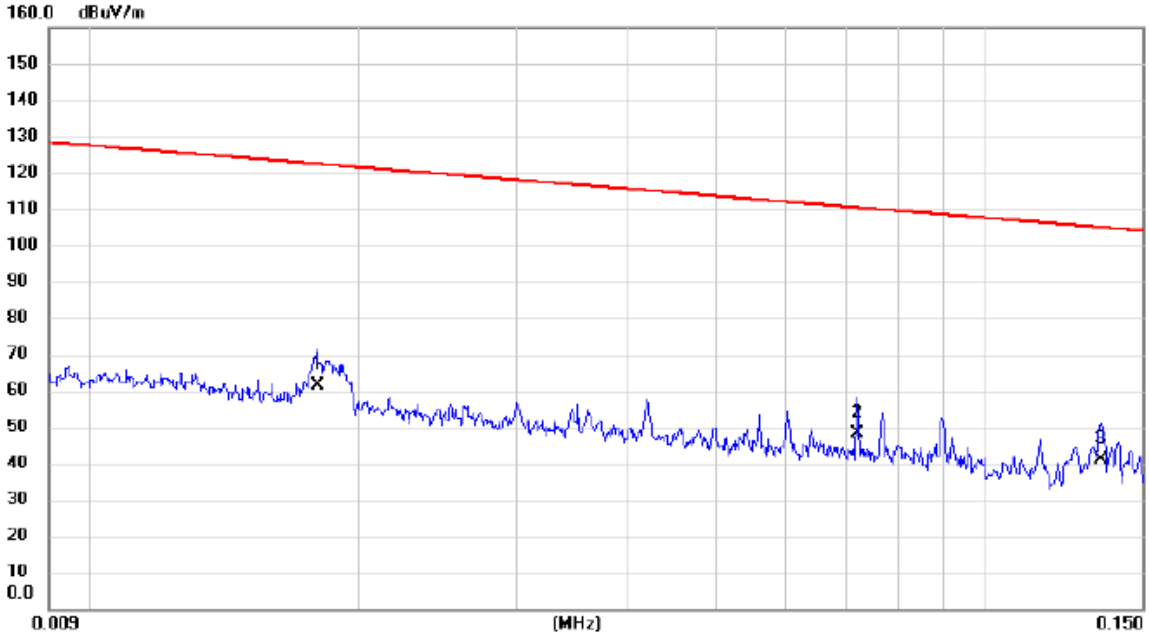
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1500	43.02	9.74	52.76	66.00	-13.24	Peak	
2	0.1635	41.73	9.85	51.58	65.28	-13.70	Peak	
3	0.1770	38.95	9.92	48.87	64.63	-15.76	Peak	
4	0.1860	36.68	9.96	46.64	64.21	-17.57	Peak	
5	0.1995	35.79	10.01	45.80	63.63	-17.83	Peak	
6	0.3480	31.89	10.03	41.92	59.01	-17.09	Peak	

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 B Mode Channel 11

Ant 0°

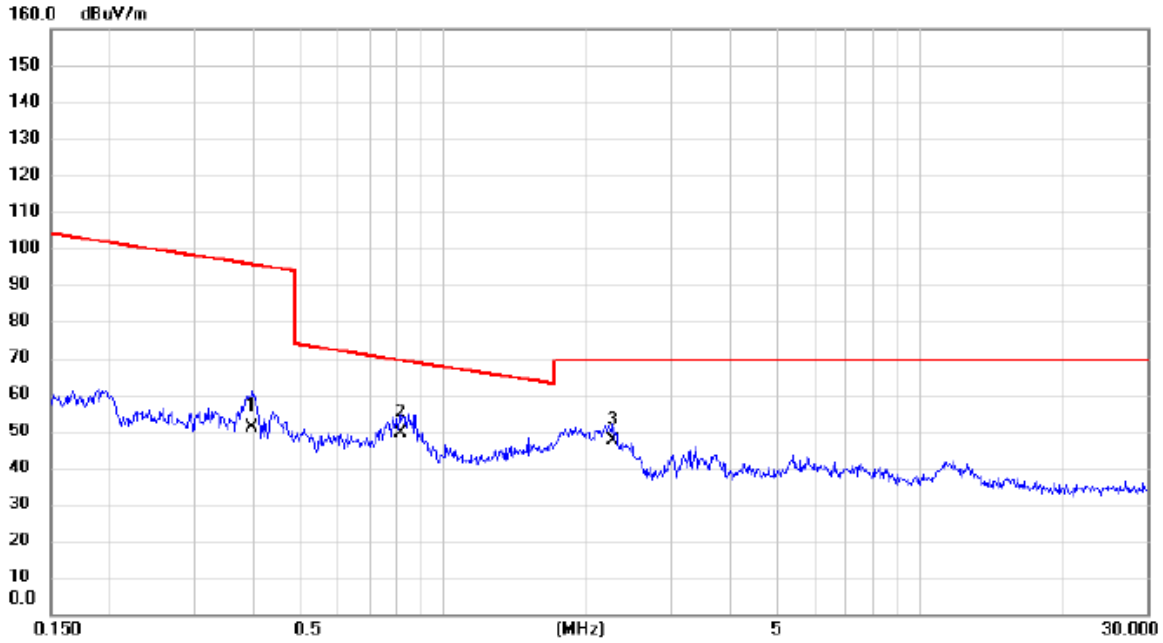


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	0.0180	47.41	13.84	61.25	122.50	-61.25	AVG			
2		0.0720	35.69	12.55	48.24	110.46	-62.22	AVG			
3		0.1348	28.21	12.73	40.94	105.01	-64.07	AVG			

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

Test Mode:	TX B Mode Channel 11

Ant 0°

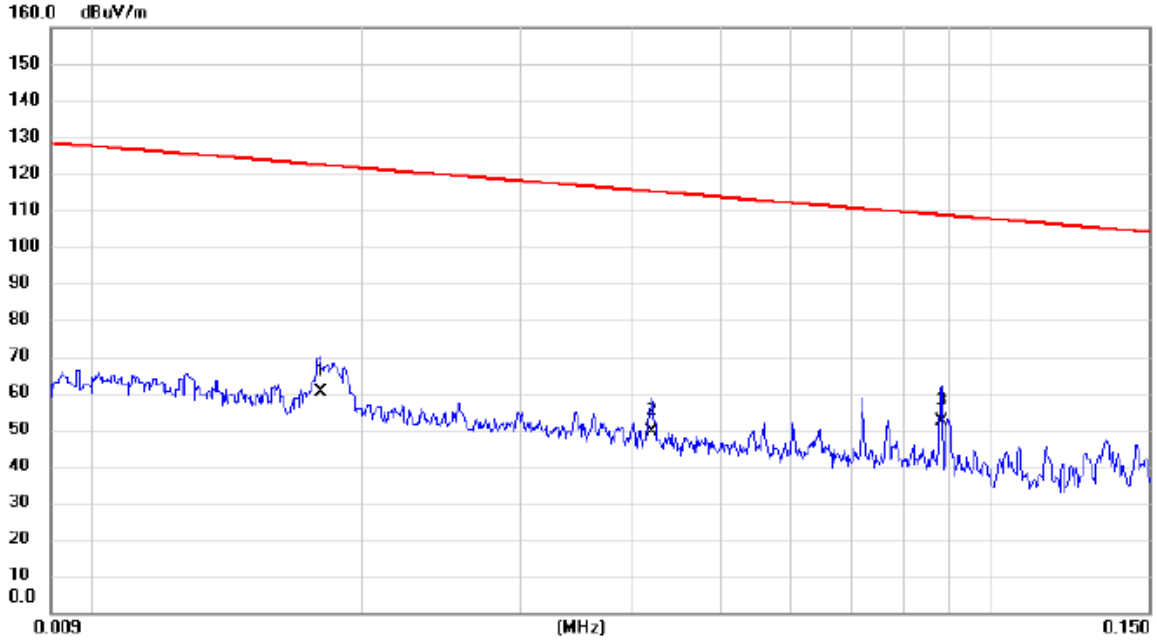


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.3976	38.92	12.27	51.19	95.62	-44.43	AVG			
2	*	0.8131	37.46	11.87	49.33	69.40	-20.07	QP			
3		2.2606	36.12	11.17	47.29	69.54	-22.25	QP			

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

Test Mode:	TX B Mode Channel 11

Ant 90°

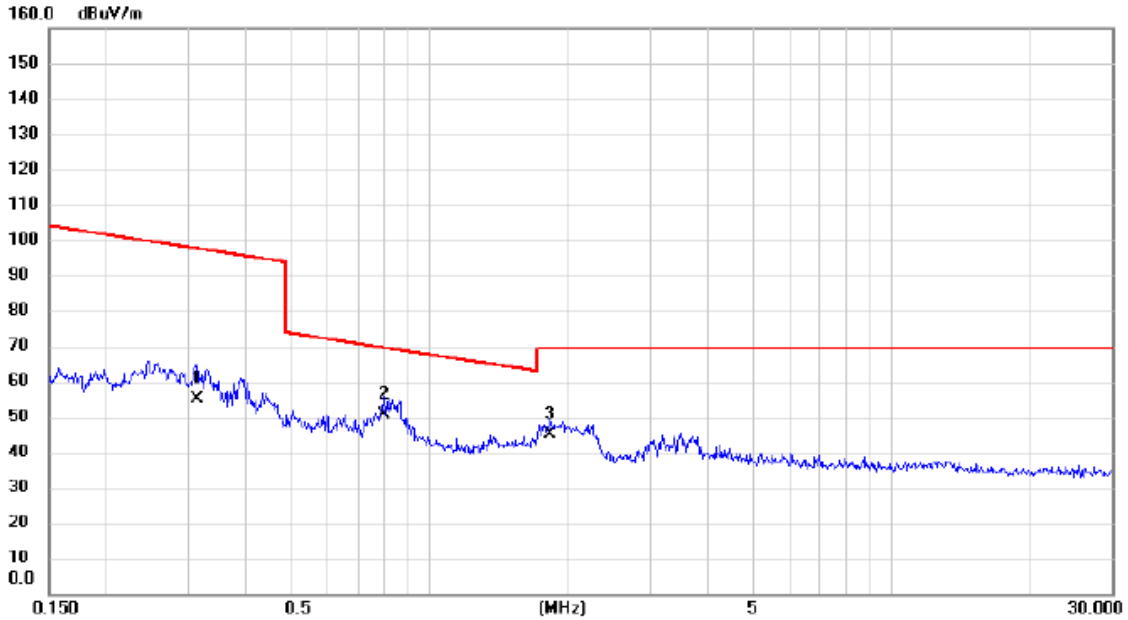


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0180	46.29	13.84	60.13	122.50	-62.37	AVG			
2		0.0420	36.83	12.63	49.46	115.14	-65.68	AVG			
3	*	0.0881	39.57	12.65	52.22	108.71	-56.49	AVG			

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

Test Mode:	TX B Mode Channel 11

Ant 90°



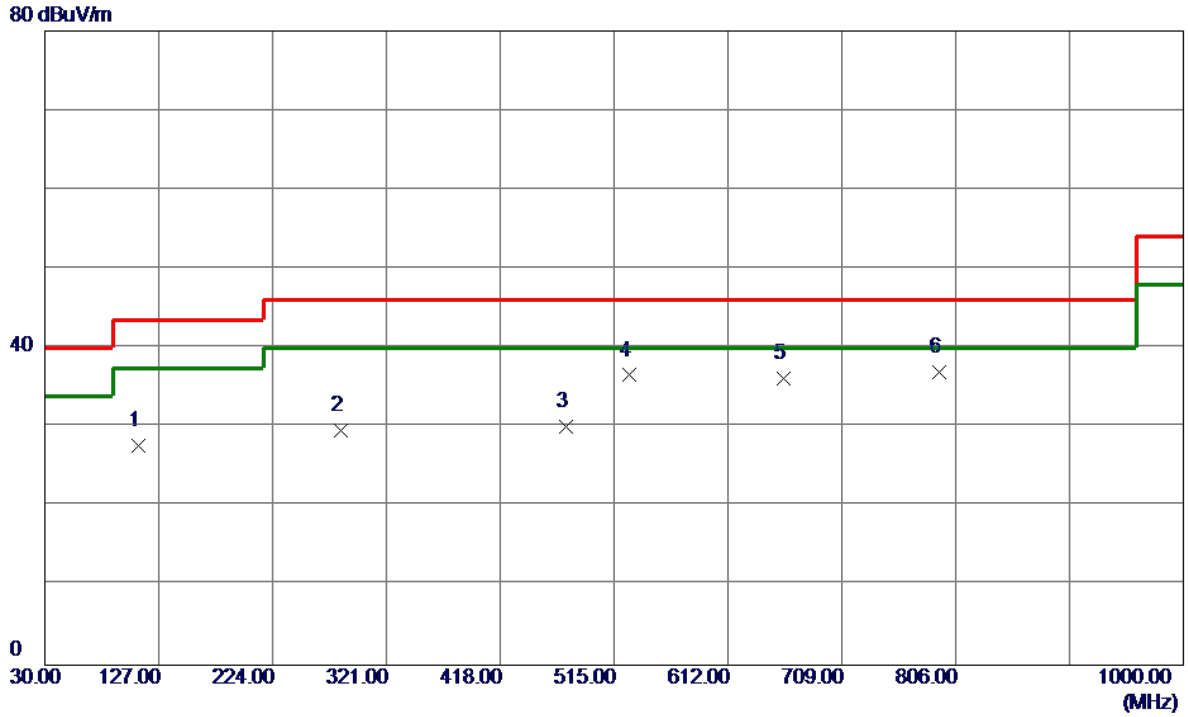
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.3133	42.65	12.48	55.13	97.69	-42.56	AVG			
2	*	0.8002	38.56	11.88	50.44	69.54	-19.10	QP			
3		1.8288	33.74	11.38	45.12	69.54	-24.42	QP			

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 B Mode Channel 11

Vertical

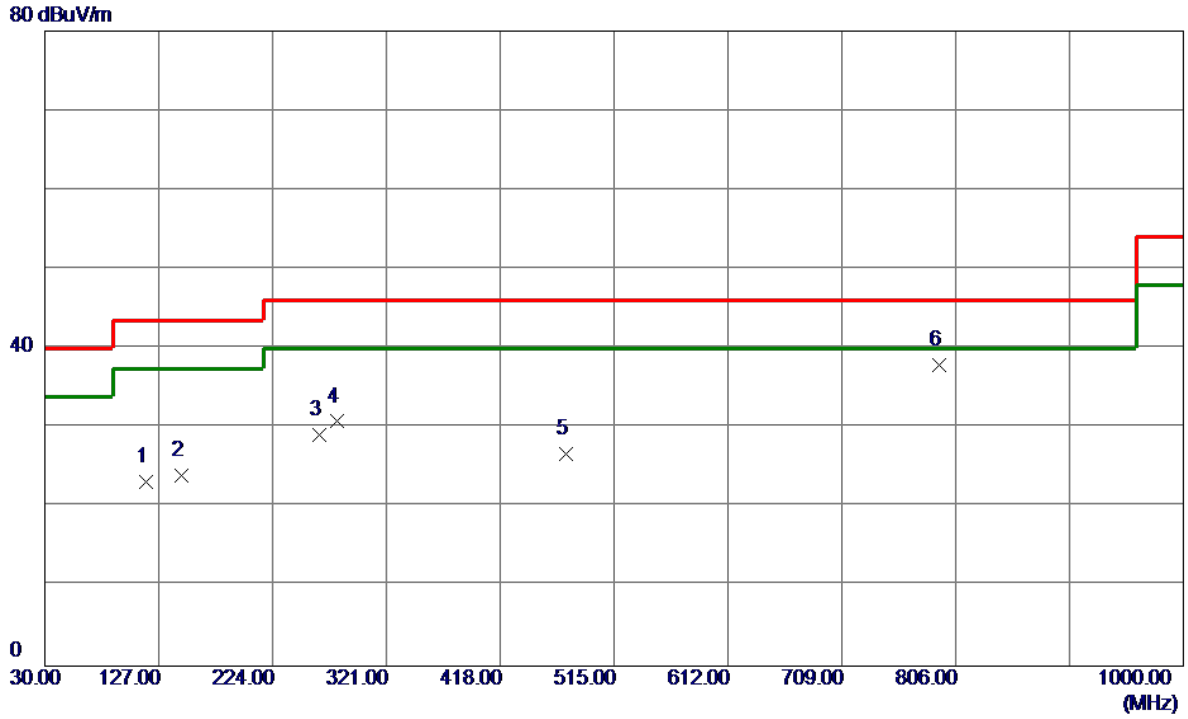


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	109.5400	41.92	-14.26	27.66	43.50	-15.84	Peak	
2	282.2000	41.57	-12.01	29.56	46.00	-16.44	Peak	
3	474.2600	37.56	-7.45	30.11	46.00	-15.89	Peak	
4	527.6100	43.57	-7.01	36.56	46.00	-9.44	Peak	
5	659.5300	40.35	-4.13	36.22	46.00	-9.78	Peak	
6 *	792.4200	39.62	-2.63	36.99	46.00	-9.01	Peak	

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

Test Mode:	TX B Mode Channel 11

Horizontal



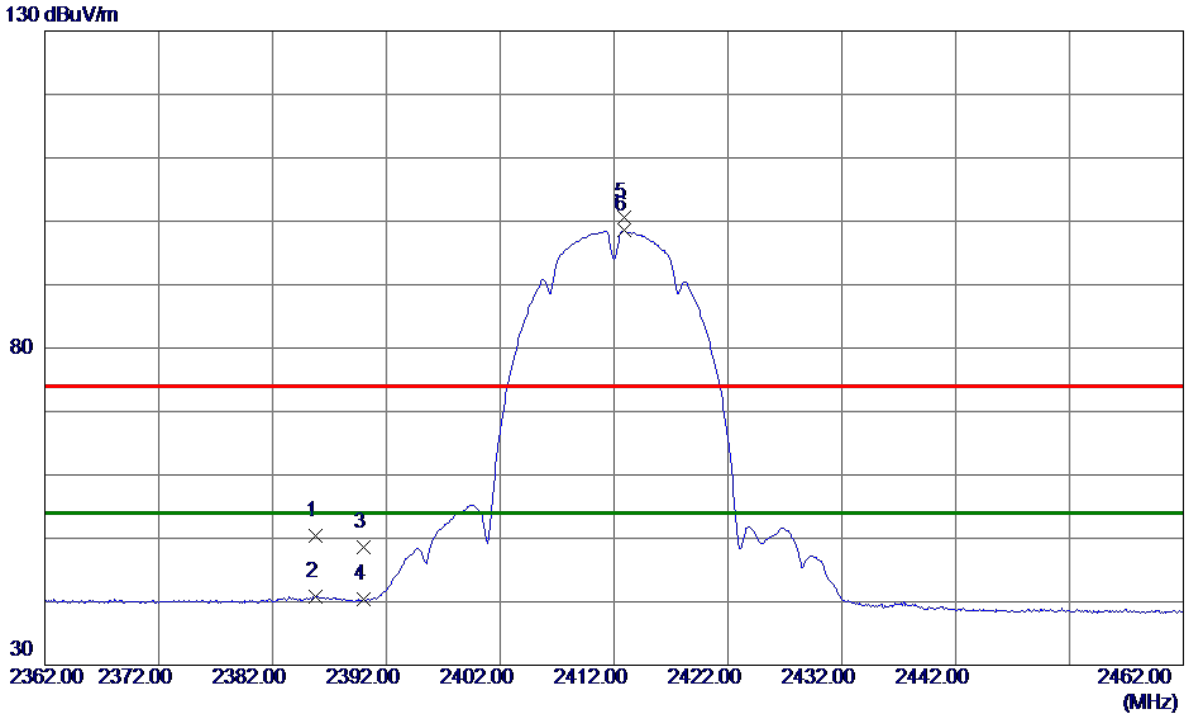
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	116.3300	36.43	-13.28	23.15	43.50	-20.35	Peak	
2	146.4000	36.24	-12.18	24.06	43.50	-19.44	Peak	
3	263.7700	41.50	-12.38	29.12	46.00	-16.88	Peak	
4	279.2900	43.00	-12.20	30.80	46.00	-15.20	Peak	
5	474.2600	34.19	-7.45	26.74	46.00	-19.26	Peak	
6 *	792.4200	40.48	-2.63	37.85	46.00	-8.15	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	2385.8000	43.07	7.26	50.33	74.00	-23.67	Peak	
2	2385.8000	33.53	7.26	40.79	54.00	-13.21	AVG	
3	2390.0000	41.34	7.26	48.60	74.00	-25.40	Peak	
4	2390.0000	33.16	7.26	40.42	54.00	-13.58	AVG	
5	2412.9000	93.25	7.26	100.51	74.00	26.51	Peak	No Limit
6 *	2412.9000	91.28	7.26	98.54	54.00	44.54	AVG	No Limit

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

Test Mode:	TX B Mode 2412 MHz

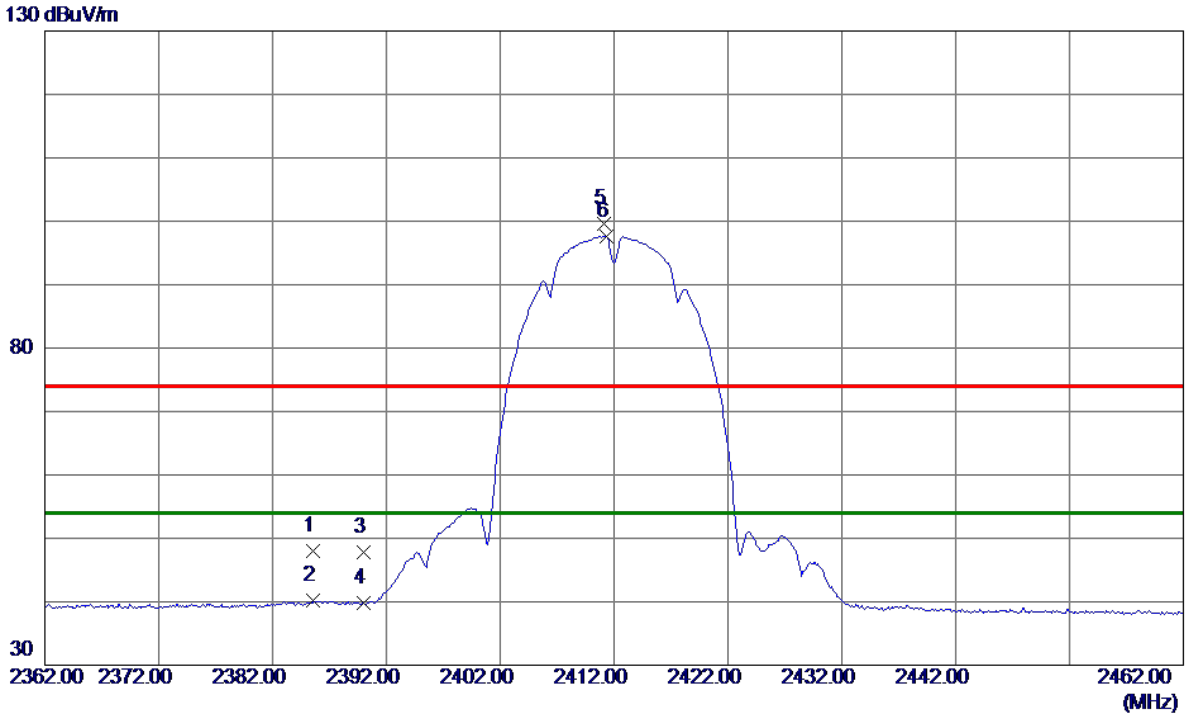
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4824.0080	33.16	4.45	37.61	54.00	-16.39	AVG	
2	4824.0660	40.98	4.45	45.43	74.00	-28.57	Peak	

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	2385.6000	40.69	7.26	47.95	74.00	-26.05	Peak	
2	2385.6000	32.87	7.26	40.13	54.00	-13.87	AVG	
3	2390.0000	40.60	7.26	47.86	74.00	-26.14	Peak	
4	2390.0000	32.45	7.26	39.71	54.00	-14.29	AVG	
5	2411.1000	92.34	7.26	99.60	74.00	25.60	Peak	No Limit
6 *	2411.3000	90.41	7.26	97.67	54.00	43.67	AVG	No Limit

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

Test Mode:	TX B Mode 2412 MHz

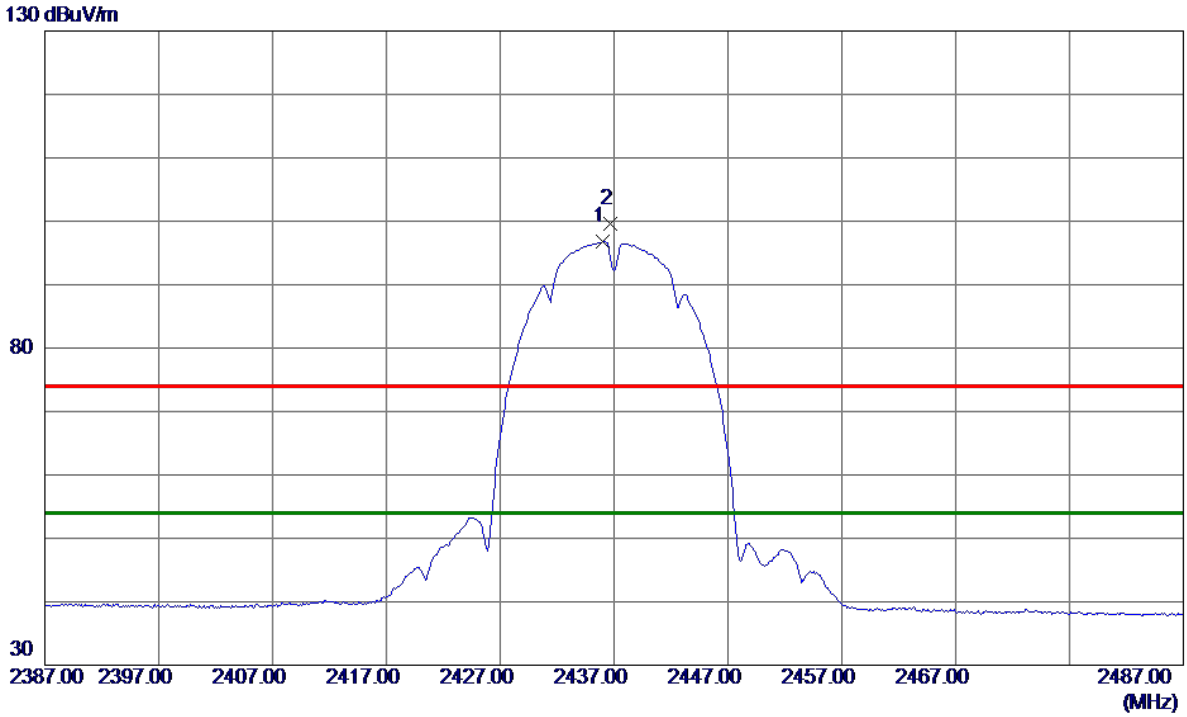
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.7580	42.76	4.45	47.21	74.00	-26.79	Peak	
2 *	4824.0299	35.49	4.45	39.94	54.00	-14.06	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 *	2436.0000	89.54	7.25	96.79	54.00	42.79	AVG	No Limit
2	2436.7000	92.31	7.25	99.56	74.00	25.56	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

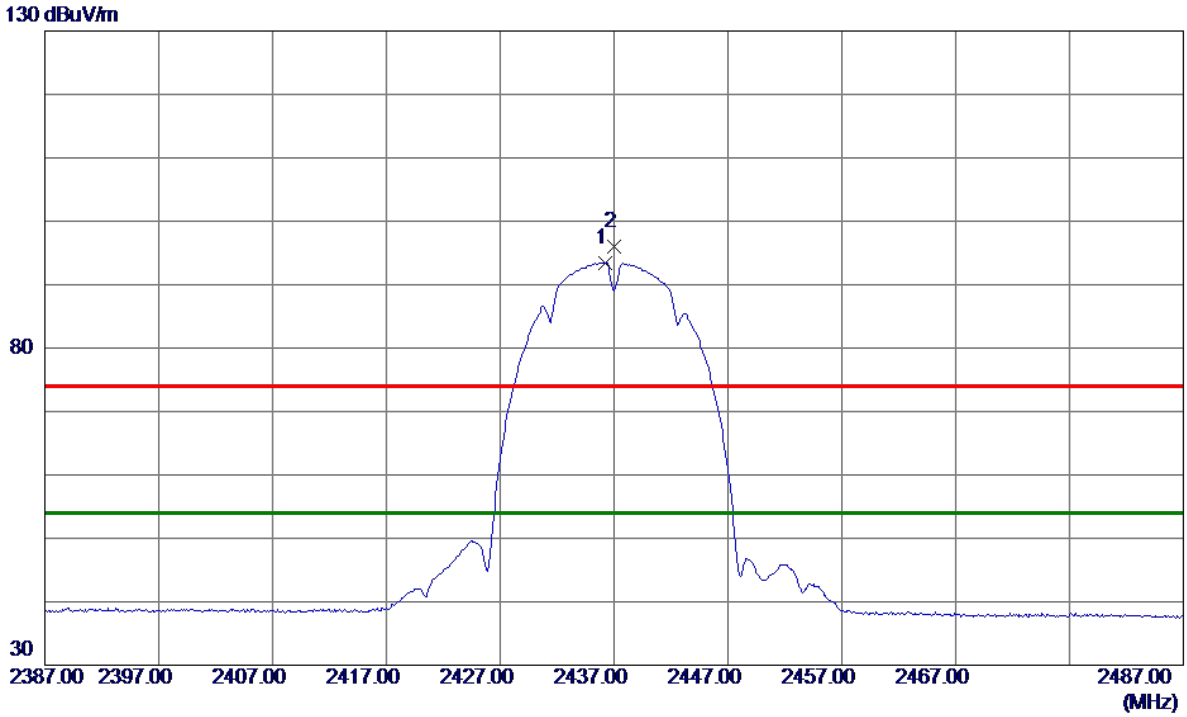
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4874.1580	28.35	4.58	32.93	54.00	-21.07	AVG	
2	4874.6980	39.05	4.59	43.64	74.00	-30.36	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 *	2436.2000	86.20	7.25	93.45	54.00	39.45	AVG	No Limit
2	2437.0000	88.76	7.25	96.01	74.00	22.01	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

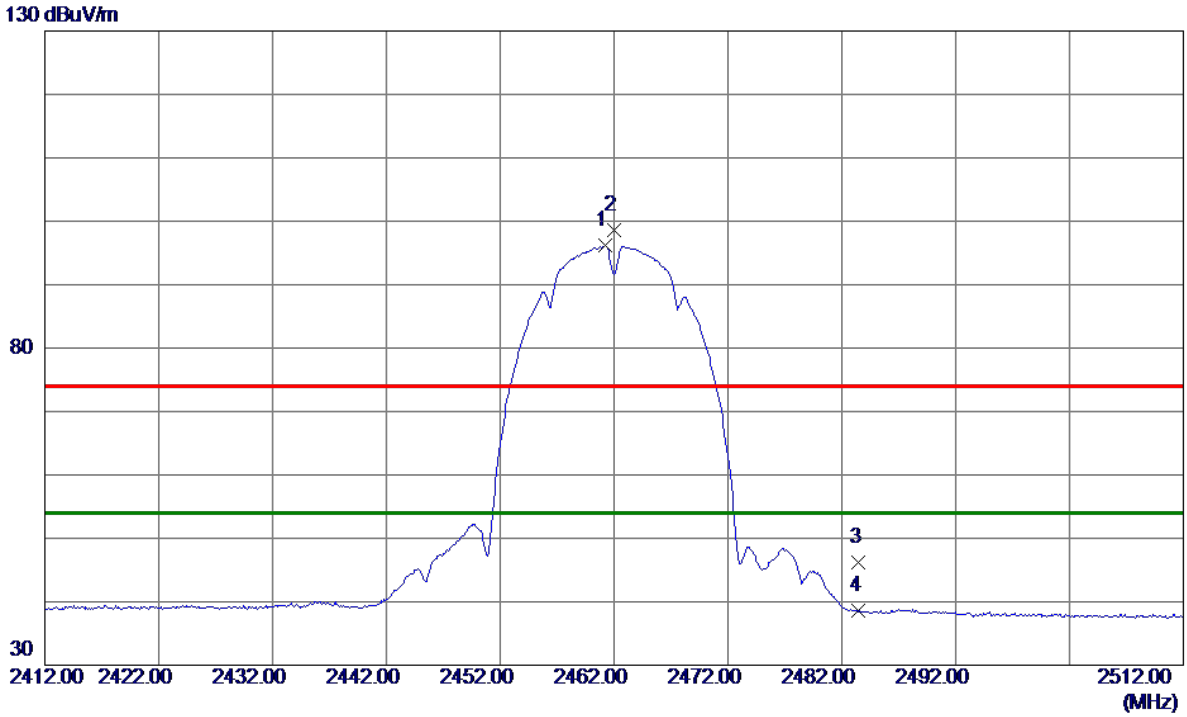
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873.9780	30.39	4.58	34.97	54.00	-19.03	AVG	
2	4874.2480	40.77	4.58	45.35	74.00	-28.65	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 *	2461.2000	88.89	7.25	96.14	54.00	42.14	AVG	No Limit
2	2462.0000	91.30	7.25	98.55	74.00	24.55	Peak	No Limit
3	2483.5000	39.02	7.25	46.27	74.00	-27.73	Peak	
4	2483.5000	31.30	7.25	38.55	54.00	-15.45	AVG	

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

Test Mode:	TX B Mode 2462 MHz

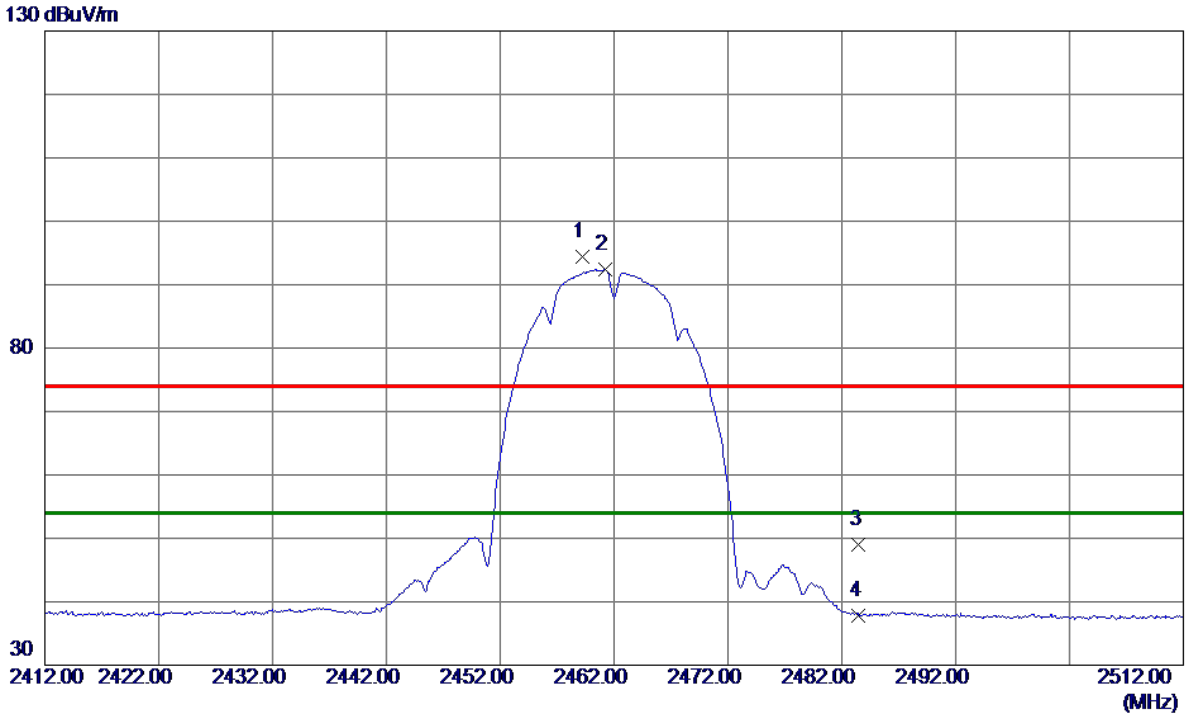
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.9200	28.73	4.72	33.45	54.00	-20.55	AVG	
2	4924.5019	39.38	4.72	44.10	74.00	-29.90	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	2459.2000	87.15	7.25	94.40	74.00	20.40	Peak	No Limit
2 *	2461.2000	85.10	7.25	92.35	54.00	38.35	AVG	No Limit
3	2483.5000	41.71	7.25	48.96	74.00	-25.04	Peak	
4	2483.5000	30.60	7.25	37.85	54.00	-16.15	AVG	

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

Test Mode:	TX B Mode 2462 MHz

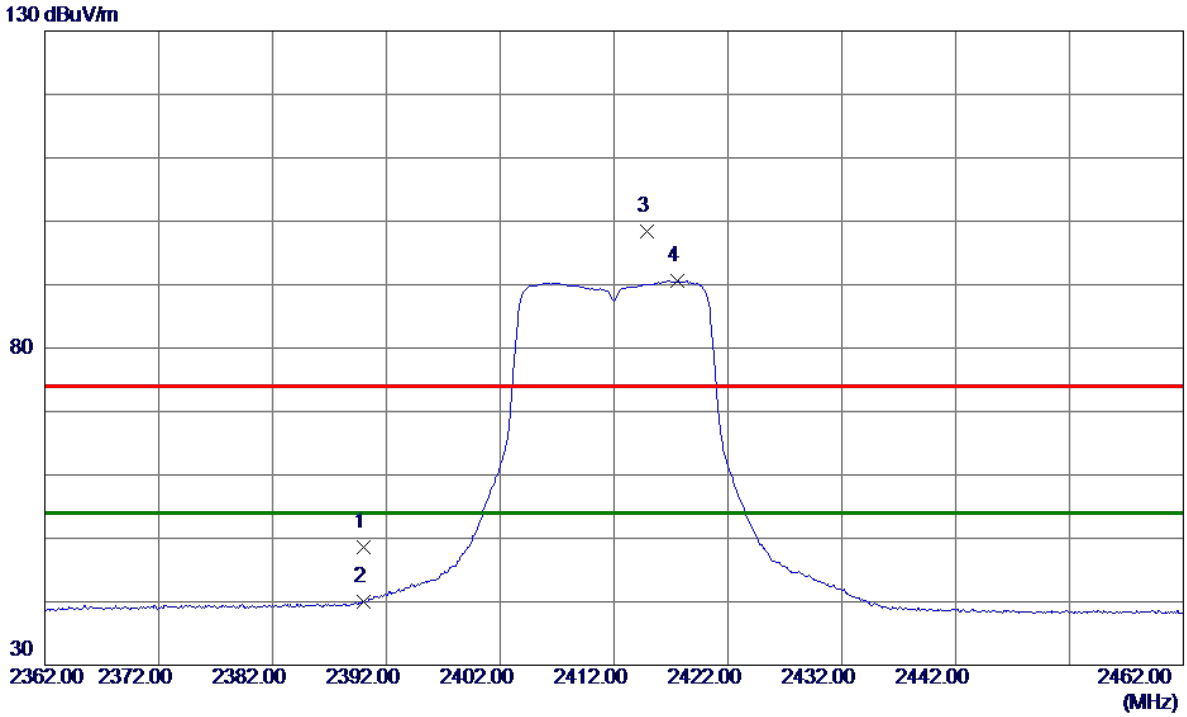
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923.8440	29.72	4.72	34.44	54.00	-19.56	AVG	
2	4924.3840	40.15	4.72	44.87	74.00	-29.13	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	41.39	7.26	48.65	74.00	-25.35	Peak	
2	2390.0000	32.66	7.26	39.92	54.00	-14.08	AVG	
3	2414.9000	91.21	7.26	98.47	74.00	24.47	Peak	No Limit
4 *	2417.6000	83.30	7.26	90.56	54.00	36.56	AVG	No Limit

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

Test Mode:	TX G Mode 2412 MHz

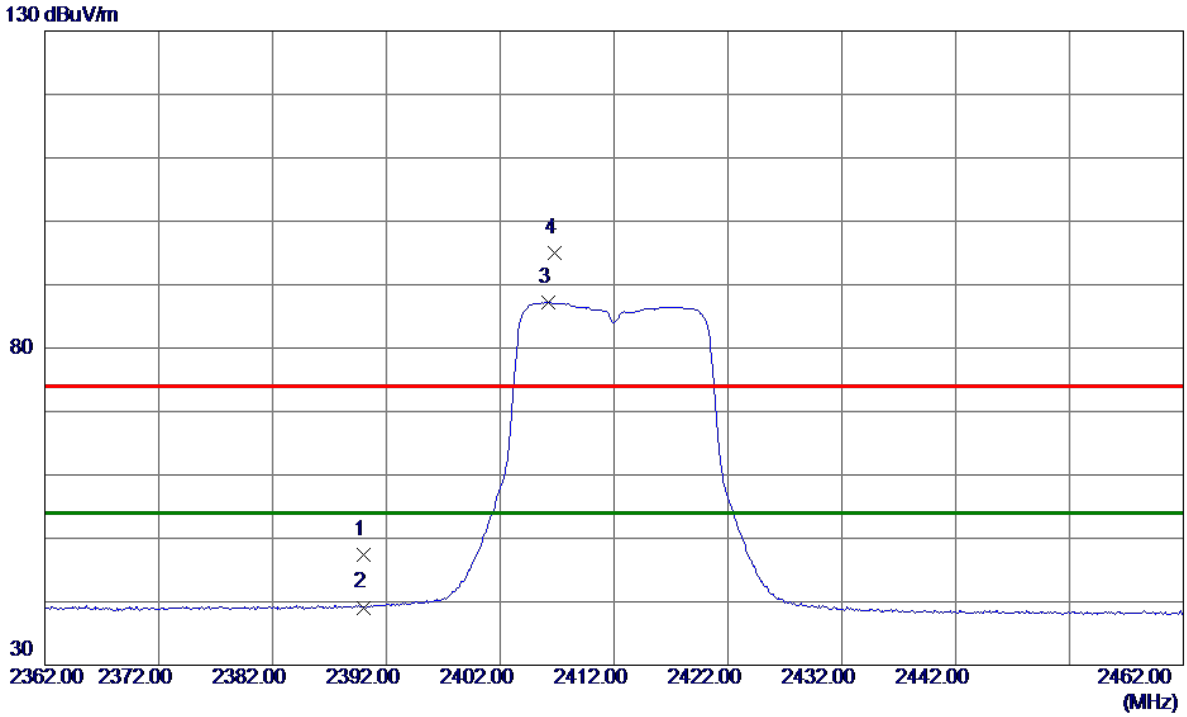
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4826.9900	28.29	4.46	32.75	54.00	-21.25	AVG	
2	4827.4100	40.01	4.46	44.47	74.00	-29.53	Peak	

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	40.23	7.26	47.49	74.00	-26.51	Peak	
2	2390.0000	31.84	7.26	39.10	54.00	-14.90	AVG	
3 *	2406.2000	80.02	7.26	87.28	54.00	33.28	AVG	No Limit
4	2406.8000	87.66	7.26	94.92	74.00	20.92	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

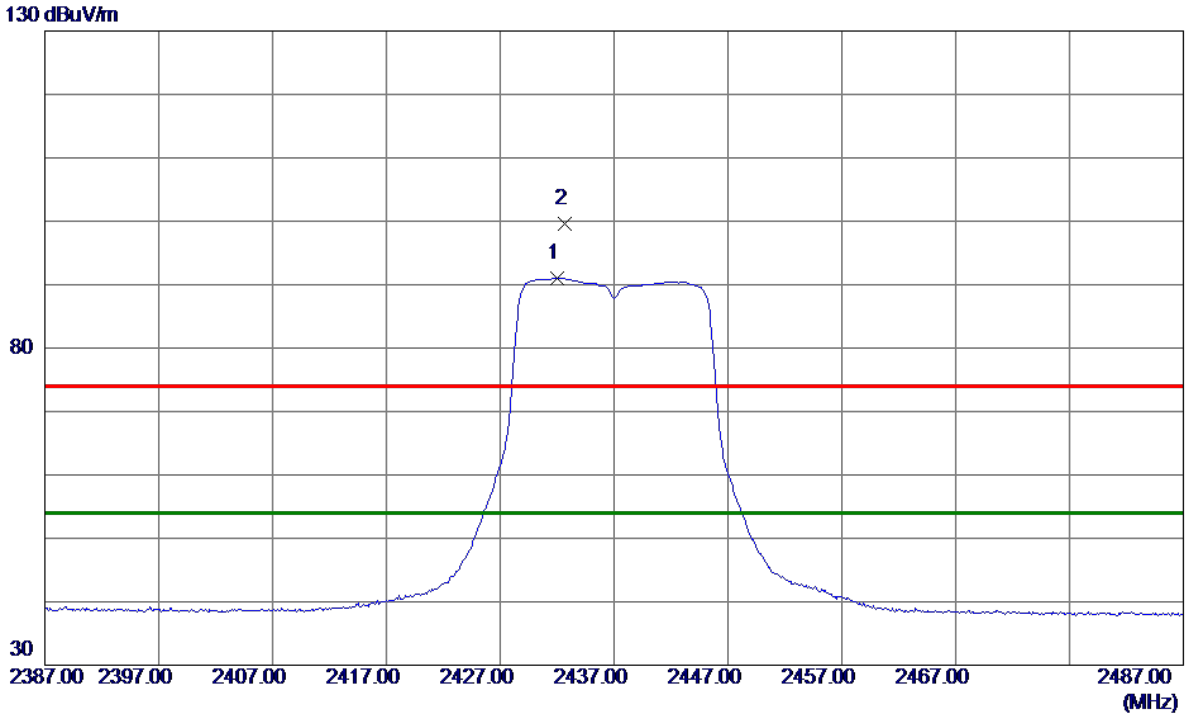
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4819.8800	28.18	4.44	32.62	54.00	-21.38	AVG	
2	4819.9500	39.68	4.44	44.12	74.00	-29.88	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 *	2432.0000	83.74	7.25	90.99	54.00	36.99	AVG	No Limit
2	2432.7000	92.36	7.25	99.61	74.00	25.61	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

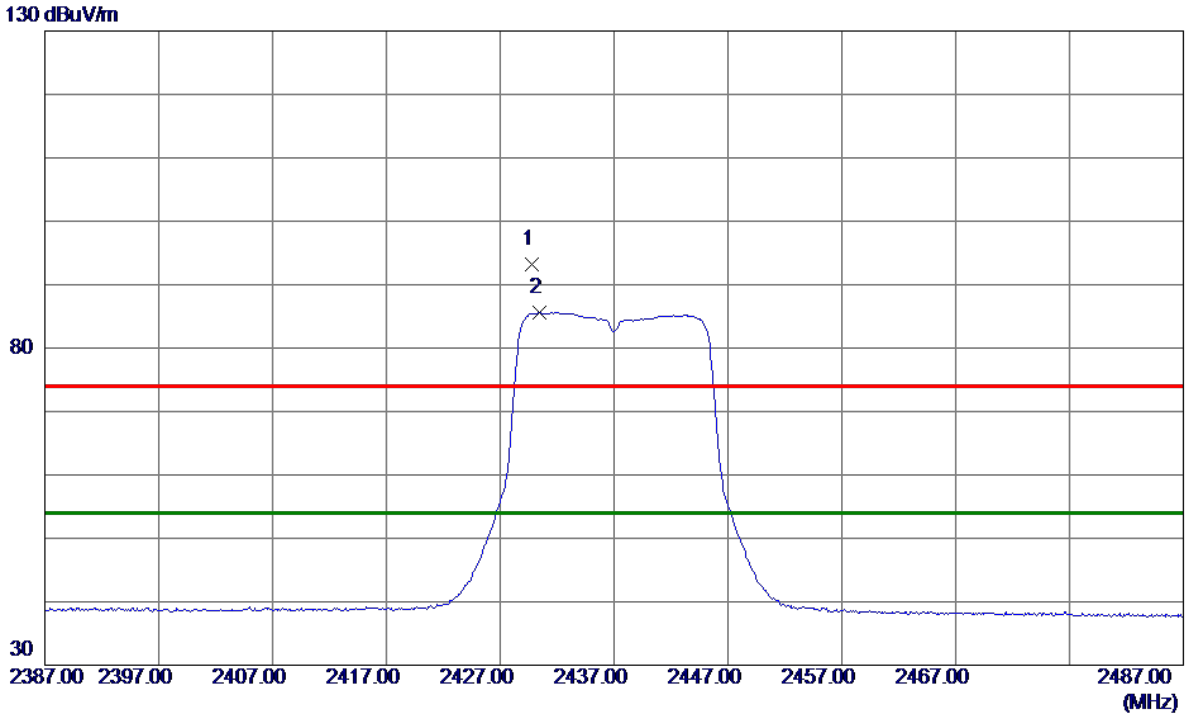
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4869.9700	39.82	4.57	44.39	74.00	-29.61	Peak	
2 *	4876.1100	28.08	4.59	32.67	54.00	-21.33	AVG	

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	2429.8000	85.98	7.25	93.23	74.00	19.23	Peak	No Limit
2 *	2430.4000	78.36	7.25	85.61	54.00	31.61	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

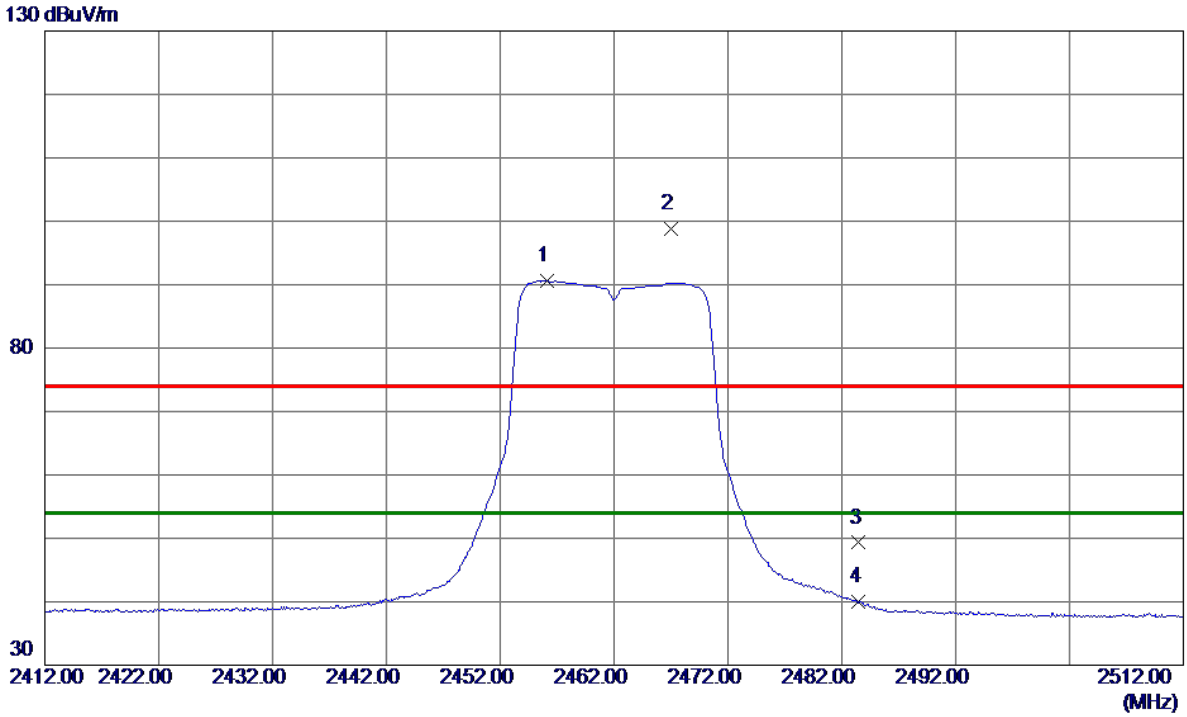
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4870.6500	28.09	4.57	32.66	54.00	-21.34	AVG	
2	4870.9200	39.62	4.58	44.20	74.00	-29.80	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 *	2456.1000	83.30	7.25	90.55	54.00	36.55	AVG	No Limit
2	2467.0000	91.46	7.25	98.71	74.00	24.71	Peak	No Limit
3	2483.5000	42.05	7.25	49.30	74.00	-24.70	Peak	
4	2483.5000	32.69	7.25	39.94	54.00	-14.06	AVG	

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

Test Mode:	TX G Mode 2462 MHz

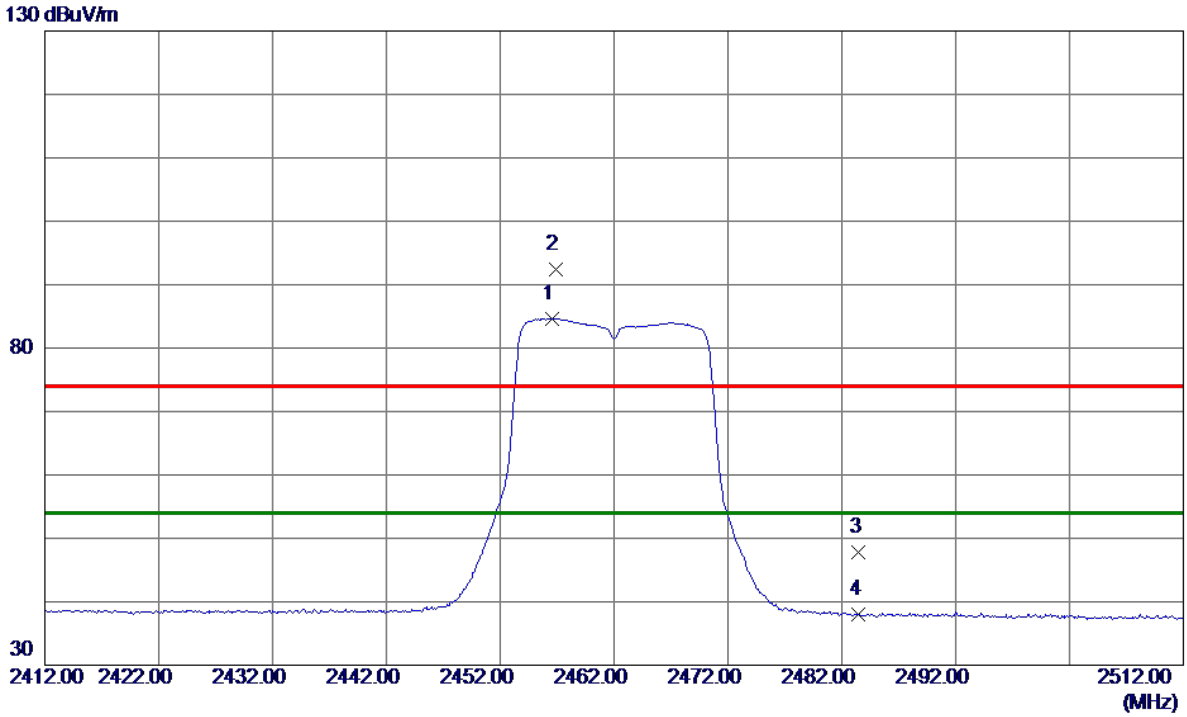
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4922.2200	28.39	4.71	33.10	54.00	-20.90	AVG	
2	4923.3600	40.18	4.72	44.90	74.00	-29.10	Peak	

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 *	2456.6000	77.41	7.25	84.66	54.00	30.66	AVG	No Limit
2	2456.9000	85.07	7.25	92.32	74.00	18.32	Peak	No Limit
3	2483.5000	40.62	7.25	47.87	74.00	-26.13	Peak	
4	2483.5000	30.69	7.25	37.94	54.00	-16.06	AVG	

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

Test Mode:	TX G Mode 2462 MHz

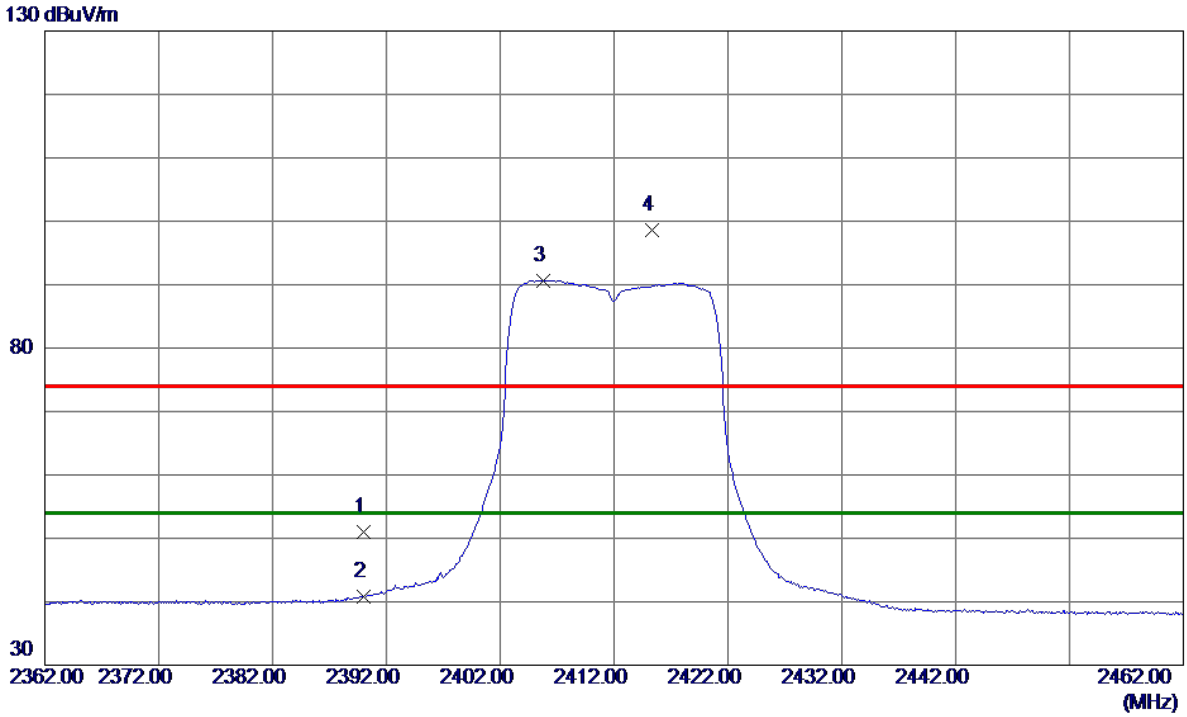
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4920.6100	28.52	4.71	33.23	54.00	-20.77	AVG	
2	4927.3700	40.43	4.73	45.16	74.00	-28.84	Peak	

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	43.69	7.26	50.95	74.00	-23.05	Peak	
2	2390.0000	33.51	7.26	40.77	54.00	-13.23	AVG	
3 *	2405.8000	83.43	7.26	90.69	54.00	36.69	AVG	No Limit
4	2415.3000	91.43	7.26	98.69	74.00	24.69	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

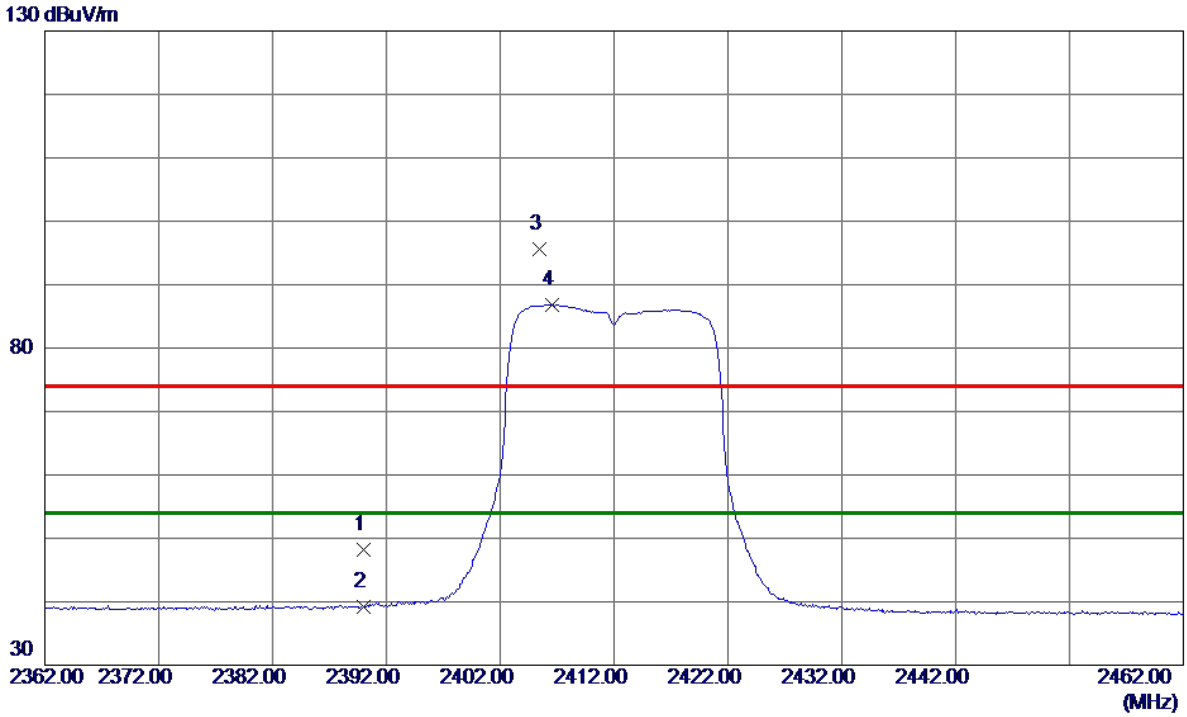
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4825.1900	39.99	4.45	44.44	74.00	-29.56	Peak	
2 *	4827.8800	28.13	4.46	32.59	54.00	-21.41	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	41.02	7.26	48.28	74.00	-25.72	Peak	
2	2390.0000	32.00	7.26	39.26	54.00	-14.74	AVG	
3	2405.4000	88.25	7.26	95.51	74.00	21.51	Peak	No Limit
4 *	2406.6000	79.49	7.26	86.75	54.00	32.75	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

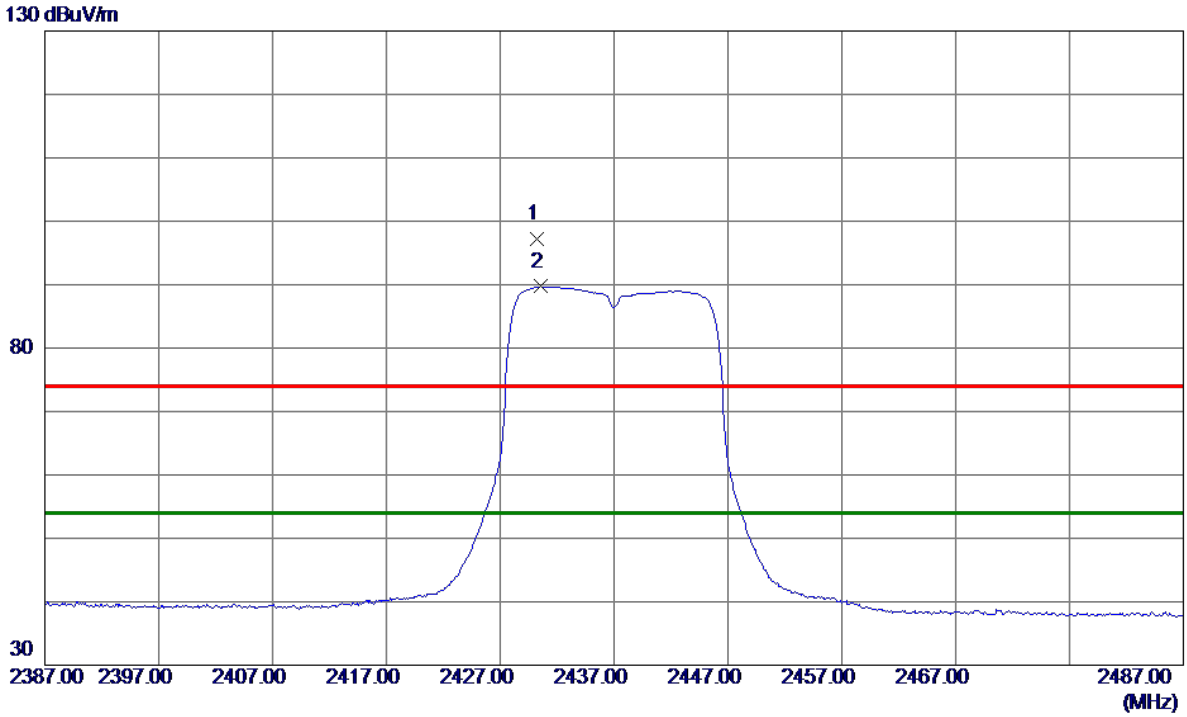
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4819.7000	39.82	4.44	44.26	74.00	-29.74	Peak	
2 *	4823.1700	28.09	4.45	32.54	54.00	-21.46	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	2430.2000	89.97	7.25	97.22	74.00	23.22	Peak	No Limit
2 *	2430.6000	82.45	7.25	89.70	54.00	35.70	AVG	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

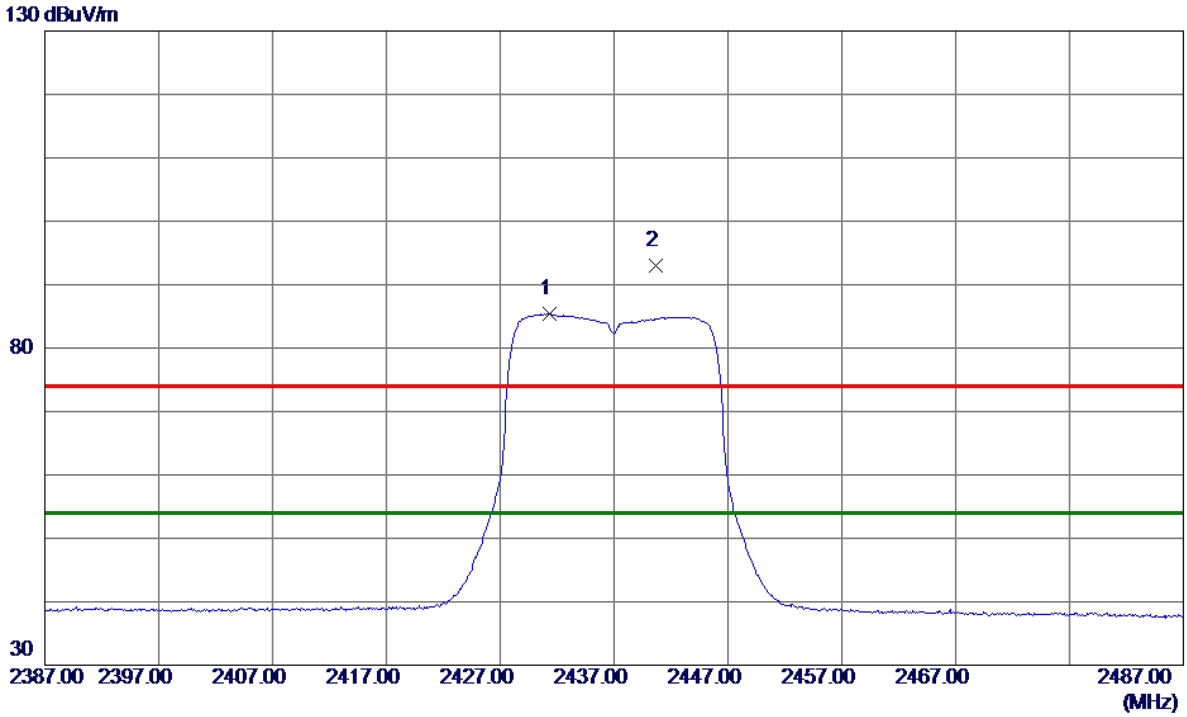
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4870.2599	40.00	4.57	44.57	74.00	-29.43	Peak	
2 *	4870.8800	28.21	4.58	32.79	54.00	-21.21	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 *	2431.3000	78.14	7.25	85.39	54.00	31.39	AVG	No Limit
2	2440.7000	85.73	7.25	92.98	74.00	18.98	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

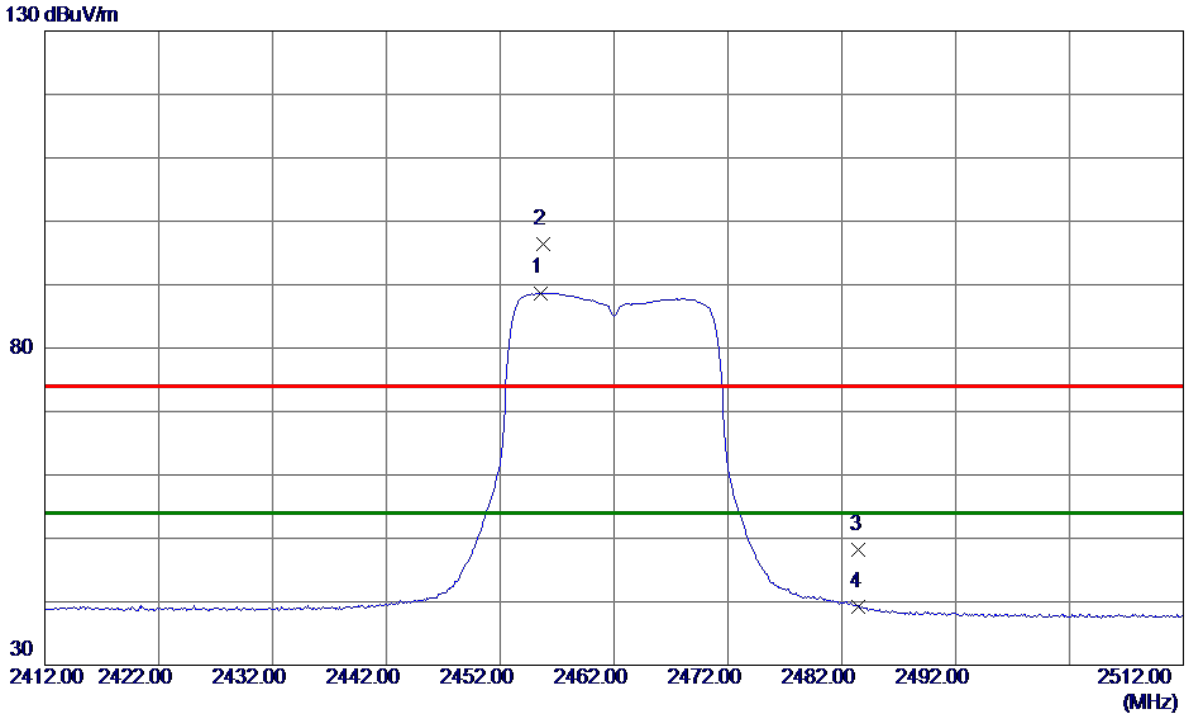
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873.3400	40.14	4.58	44.72	74.00	-29.28	Peak	
2 *	4876.5700	28.13	4.59	32.72	54.00	-21.28	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 *	2455.6000	81.45	7.25	88.70	54.00	34.70	AVG	No Limit
2	2455.8000	89.13	7.25	96.38	74.00	22.38	Peak	No Limit
3	2483.5000	40.91	7.25	48.16	74.00	-25.84	Peak	
4	2483.5000	31.96	7.25	39.21	54.00	-14.79	AVG	

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

Test Mode:	TX N-20M Mode 2462 MHz

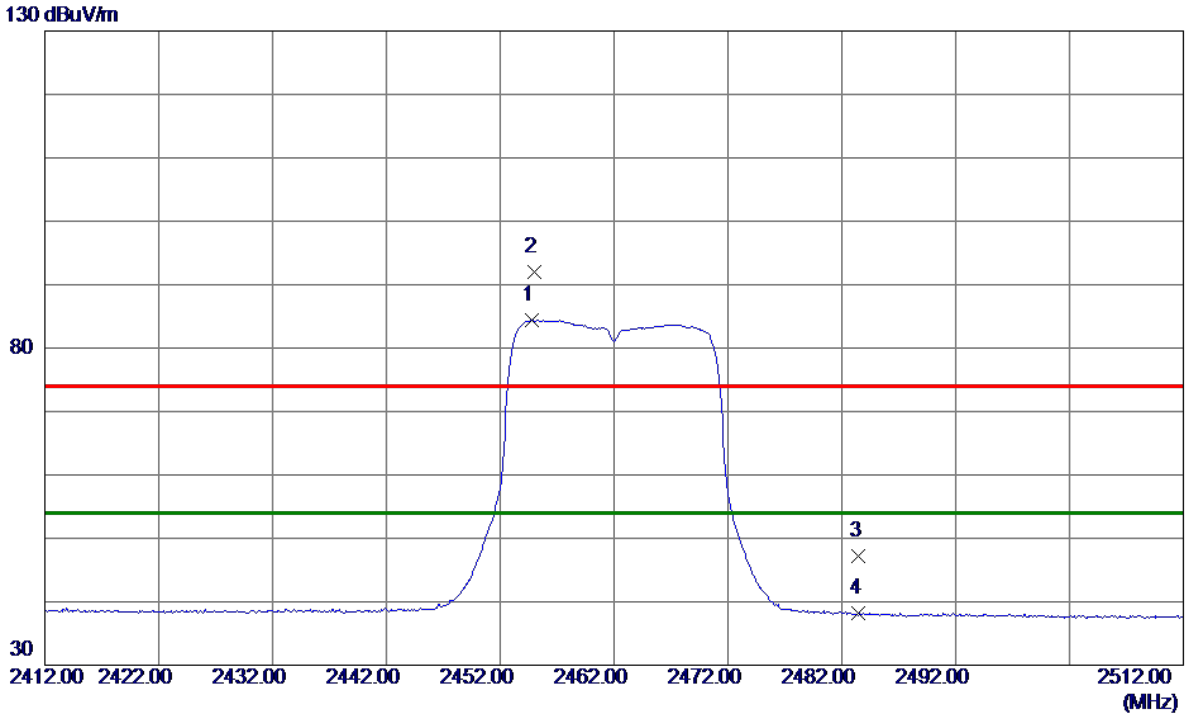
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4920.2700	40.88	4.71	45.59	74.00	-28.41	Peak	
2 *	4921.7100	28.34	4.71	33.05	54.00	-20.95	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 *	2454.8000	77.12	7.25	84.37	54.00	30.37	AVG	No Limit
2	2455.0000	84.77	7.25	92.02	74.00	18.02	Peak	No Limit
3	2483.5000	39.96	7.25	47.21	74.00	-26.79	Peak	
4	2483.5000	30.88	7.25	38.13	54.00	-15.87	AVG	

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

Test Mode:	TX N-20M Mode 2462 MHz

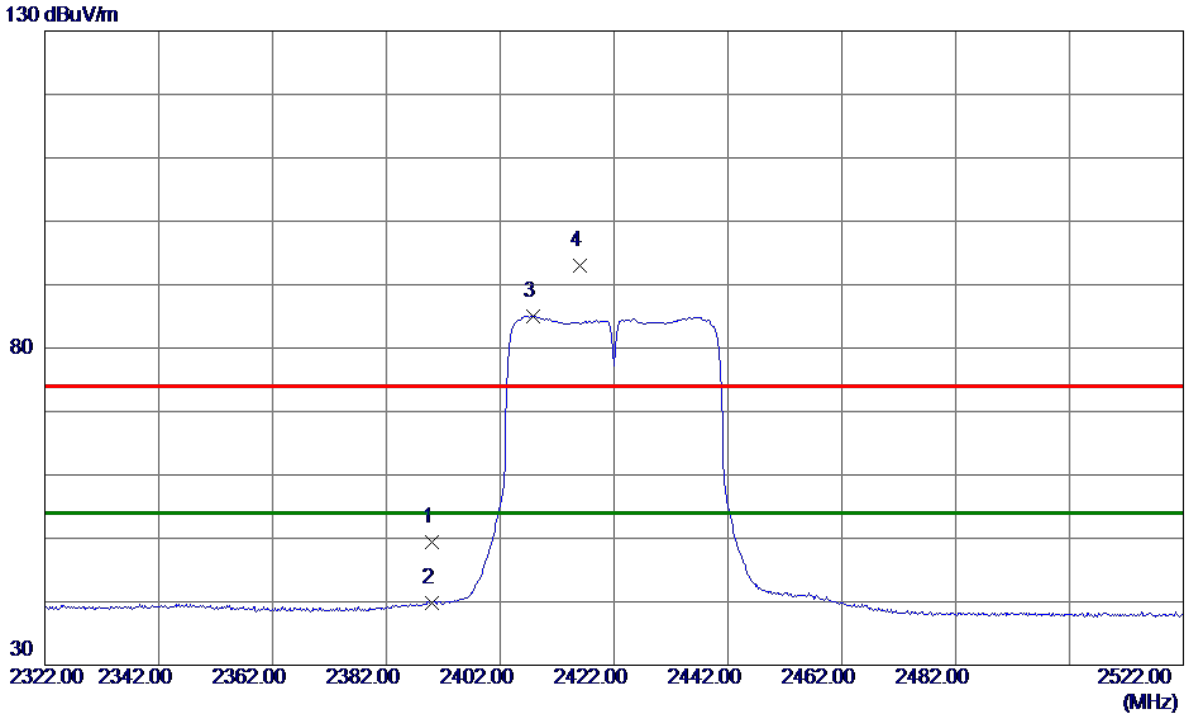
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4921.3200	39.93	4.71	44.64	74.00	-29.36	Peak	
2 *	4922.3500	28.34	4.71	33.05	54.00	-20.95	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	2390.0000	42.21	7.26	49.47	74.00	-24.53	Peak	
2	2390.0000	32.59	7.26	39.85	54.00	-14.15	AVG	
3 *	2407.8000	77.83	7.26	85.09	54.00	31.09	AVG	No Limit
4	2416.0000	85.79	7.26	93.05	74.00	19.05	Peak	No Limit

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

Test Mode:	TX N-40M Mode 2422MHz

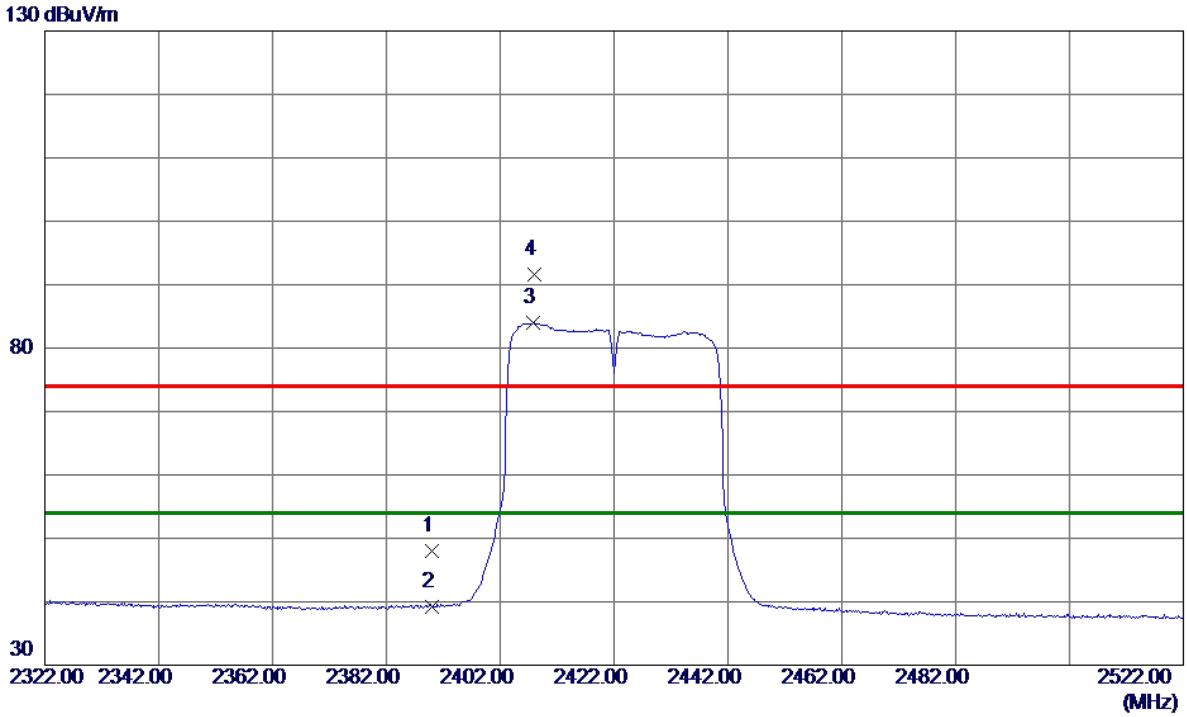
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4846.8200	39.51	4.51	44.02	74.00	-29.98	Peak	
2 *	4848.2599	28.28	4.51	32.79	54.00	-21.21	AVG	

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	40.69	7.26	47.95	74.00	-26.05	Peak	
2	2390.0000	31.90	7.26	39.16	54.00	-14.84	AVG	
3 *	2407.8000	76.66	7.26	83.92	54.00	29.92	AVG	No Limit
4	2408.0000	84.27	7.26	91.53	74.00	17.53	Peak	No Limit

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

Test Mode:	TX N-40M Mode 2422MHz

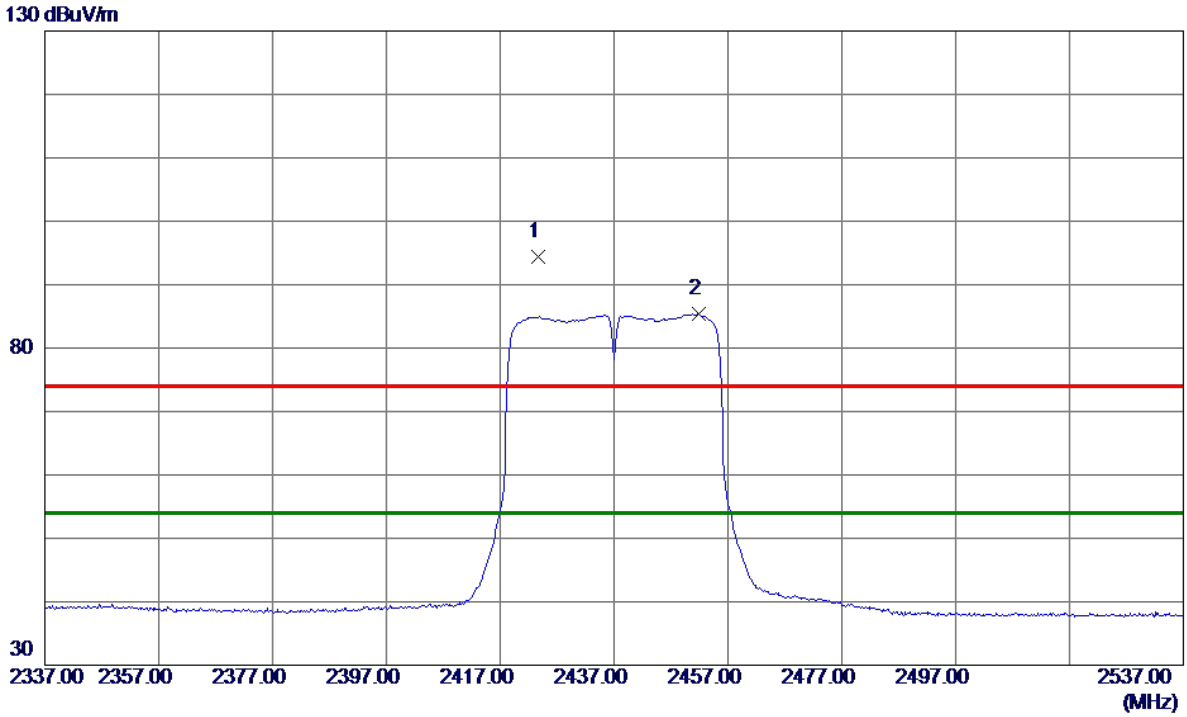
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4839.1700	40.46	4.49	44.95	74.00	-29.05	Peak	
2 *	4844.2500	28.32	4.50	32.82	54.00	-21.18	AVG	

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	2423.6000	87.21	7.25	94.46	74.00	20.46	Peak	No Limit
2 *	2451.8000	78.12	7.25	85.37	54.00	31.37	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

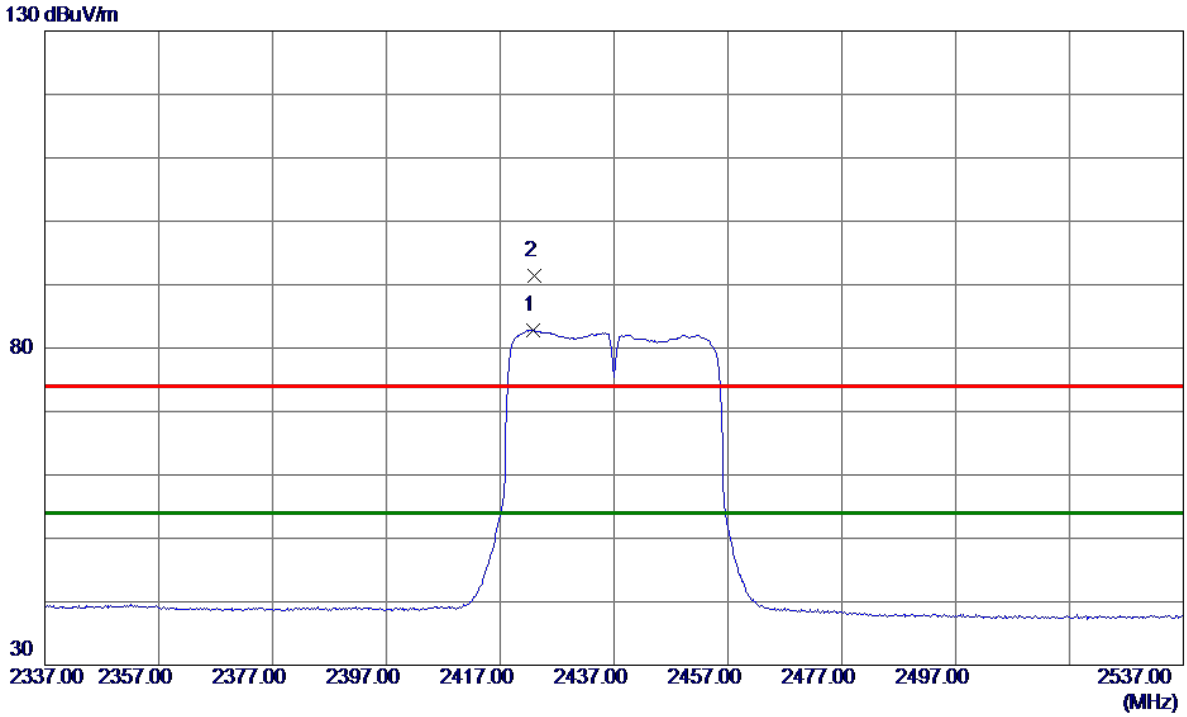
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4875.6300	28.13	4.59	32.72	54.00	-21.28	AVG	
2	4878.7300	39.87	4.60	44.47	74.00	-29.53	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 *	2422.8000	75.56	7.26	82.82	54.00	28.82	AVG	No Limit
2	2423.0000	84.18	7.26	91.44	74.00	17.44	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

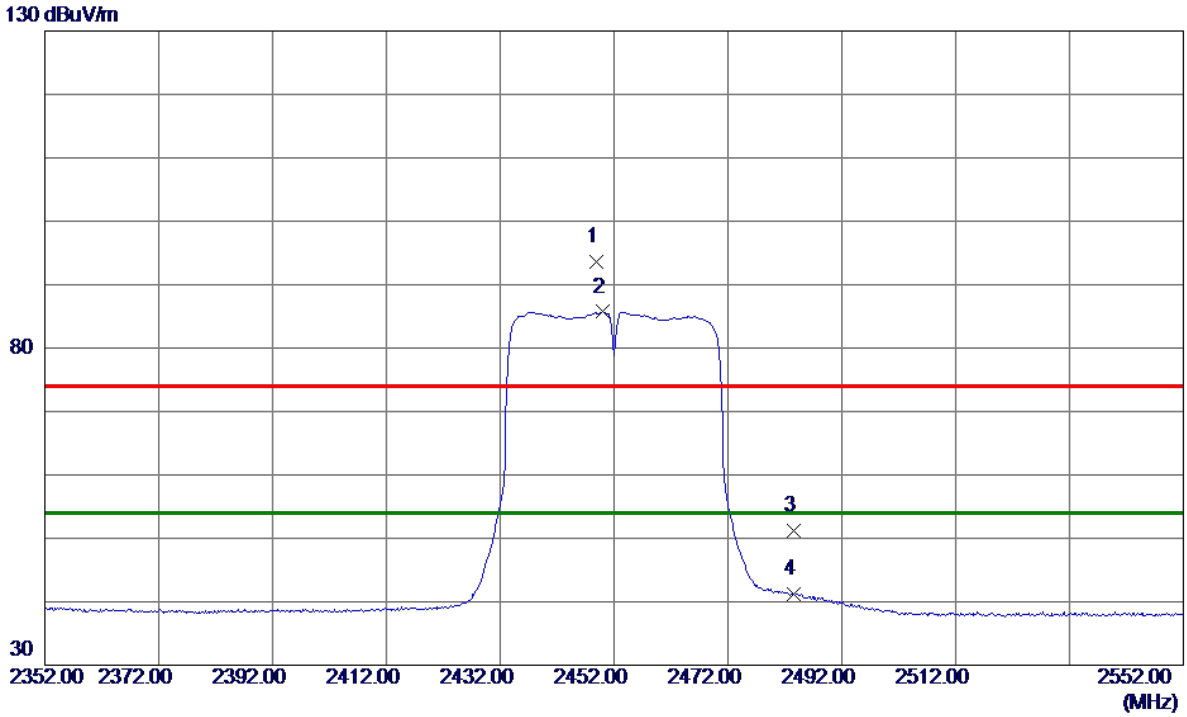
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4878.8600	28.29	4.60	32.89	54.00	-21.11	AVG	
2	4878.8800	39.52	4.60	44.12	74.00	-29.88	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	86.44	7.25	93.69	74.00	19.69	Peak	No Limit
2 *	2450.0000	78.45	7.25	85.70	54.00	31.70	AVG	No Limit
3	2483.5000	43.99	7.25	51.24	74.00	-22.76	Peak	
4	2483.5000	34.04	7.25	41.29	54.00	-12.71	AVG	

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

Test Mode:	TX N-40M Mode 2452 MHz

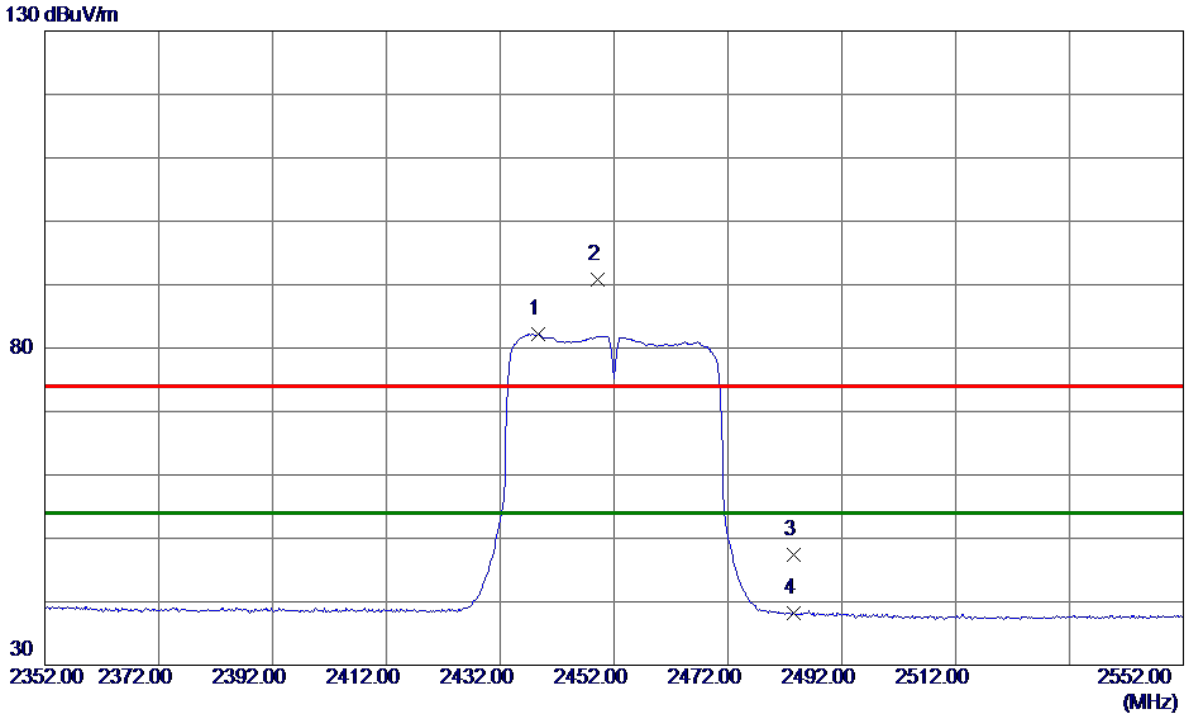
Vertical

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4901.8500	39.76	4.66	44.42	74.00	-29.58	Peak	
2 *	4907.6200	28.24	4.67	32.91	54.00	-21.09	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 *	2438.6000	74.89	7.25	82.14	54.00	28.14	AVG	No Limit
2	2449.2000	83.53	7.25	90.78	74.00	16.78	Peak	No Limit
3	2483.5000	40.11	7.25	47.36	74.00	-26.64	Peak	
4	2483.5000	30.88	7.25	38.13	54.00	-15.87	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	4904.9400	40.17	4.67	44.84	74.00	-29.16	Peak	
2 *	4906.1500	28.06	4.67	32.73	54.00	-21.27	AVG	

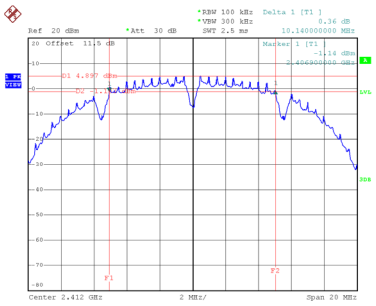
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

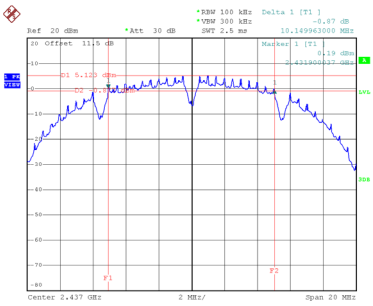
Test Mode	TX B Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	10.14	500	Complies
06	2437	10.15	500	Complies
11	2462	10.10	500	Complies

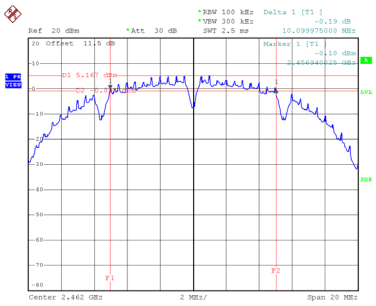
CH01



CH06

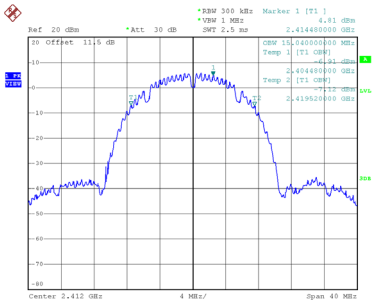


CH11

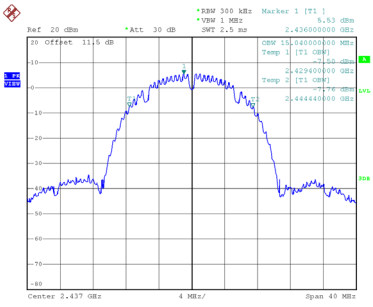


Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	15.04	Complies
06	2437	15.04	Complies
11	2462	15.04	Complies

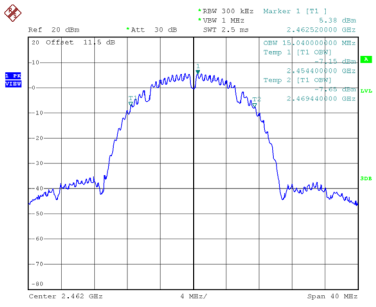
CH01



CH06



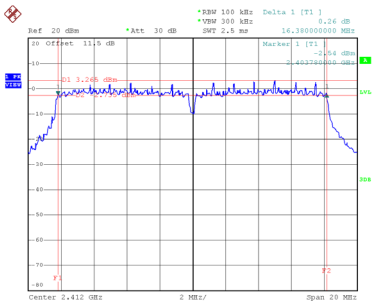
CH11



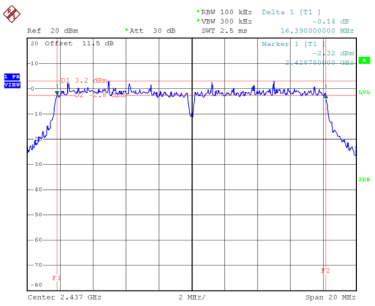
Test Mode	TX G Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.38	500	Complies
06	2437	16.39	500	Complies
11	2462	16.38	500	Complies

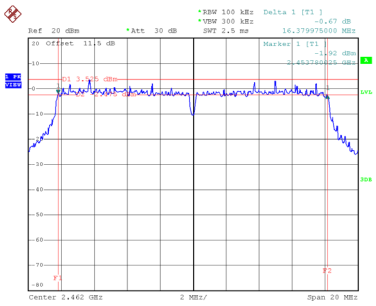
CH01



CH06

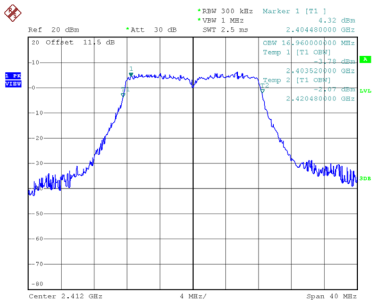


CH11

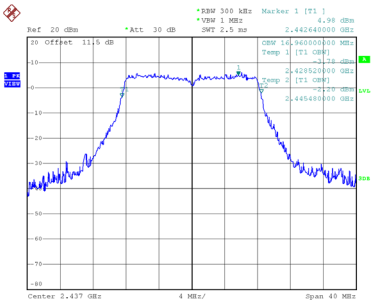


Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	16.96	Complies
06	2437	16.96	Complies
11	2462	16.96	Complies

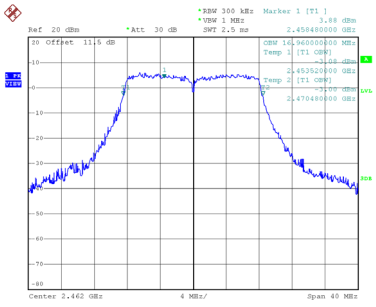
CH01



CH06



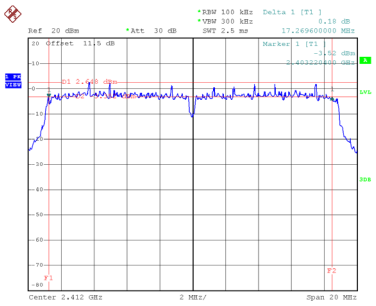
CH11



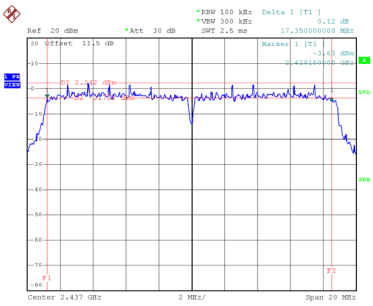
Test Mode	TX N-20M Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.27	500	Complies
06	2437	17.35	500	Complies
11	2462	17.34	500	Complies

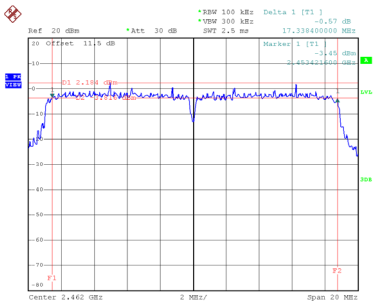
CH01



CH06

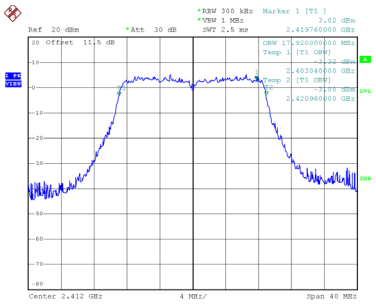


CH11

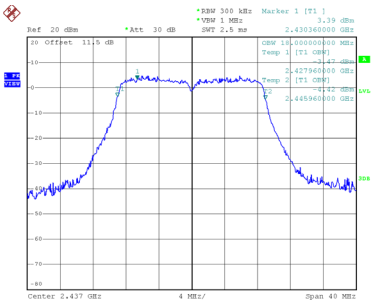


Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	17.92	Complies
06	2437	18.00	Complies
11	2462	17.84	Complies

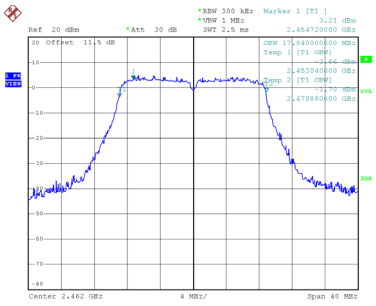
CH01



CH06



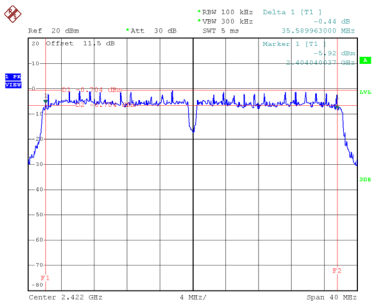
CH11



Test Mode	TX N-40M Mode

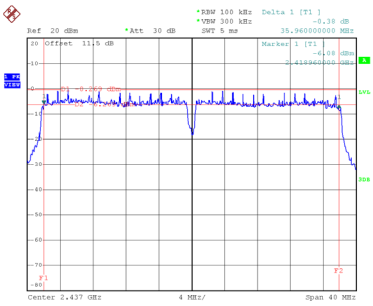
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	35.59	500	Complies
06	2437	35.96	500	Complies
09	2452	35.76	500	Complies

CH03



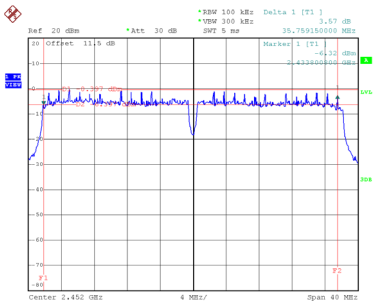
Date: 27.JAN.2021 10:08:42

CH06



Date: 27.JAN.2021 10:10:13

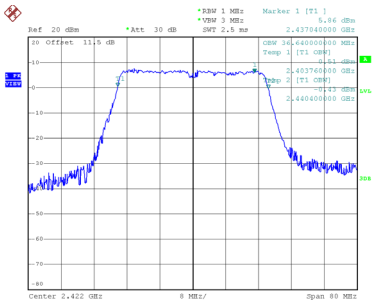
CH09



Date: 27.JAN.2021 10:11:36

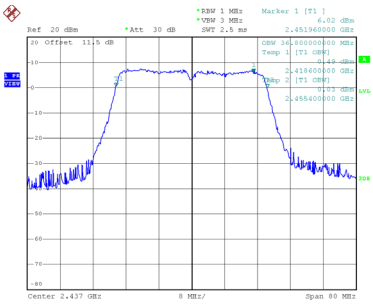
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
03	2422	36.64	Complies
06	2437	36.80	Complies
09	2452	36.96	Complies

CH03



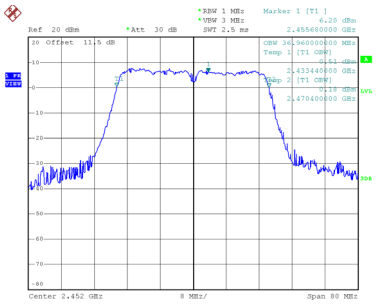
Date: 27.JAN.2021 10:08:49

CH06



Date: 27.JAN.2021 10:10:20

CH09



Date: 27.JAN.2021 10:11:44

APPENDIX F - MAXIMUM OUTPUT POWER

Test Mode	TX B Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.56	0.00	14.56	30.00	1.0000	Complies
06	2437	14.52	0.00	14.52	30.00	1.0000	Complies
11	2462	14.61	0.00	14.61	30.00	1.0000	Complies

Test Mode	TX G Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	13.95	0.32	14.27	30.00	1.0000	Complies
06	2437	13.76	0.32	14.08	30.00	1.0000	Complies
11	2462	13.87	0.32	14.19	30.00	1.0000	Complies

Test Mode	TX N-20M Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	12.97	0.25	13.22	30.00	1.0000	Complies
06	2437	12.68	0.25	12.93	30.00	1.0000	Complies
11	2462	13.02	0.25	13.27	30.00	1.0000	Complies

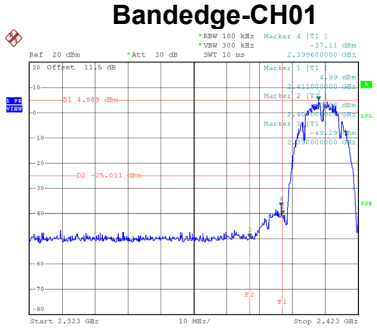
Test Mode	TX N-40M Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	12.91	0.16	13.07	30.00	1.0000	Complies
06	2437	12.89	0.16	13.05	30.00	1.0000	Complies
09	2452	12.86	0.16	13.02	30.00	1.0000	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

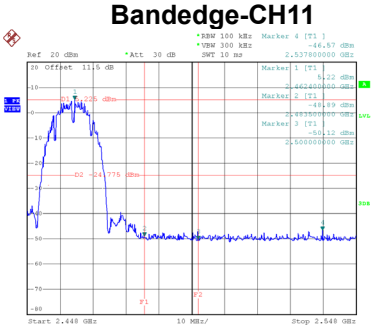
Test Mode	TX B Mode

Bandedge-CH01



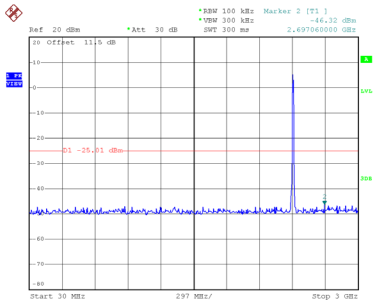
Date: 27.JAN.2021 09:53:53

Bandedge-CH11

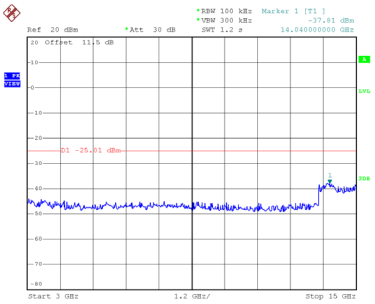


Date: 27.JAN.2021 09:57:14

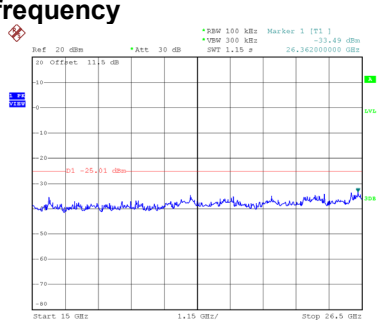
CH01 – 10th Harmonic of the fundamental frequency



Date: 27.JAN.2021 09:54:07

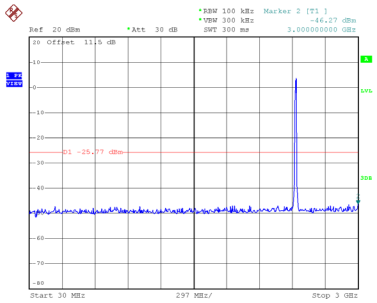


Date: 27.JAN.2021 09:54:15

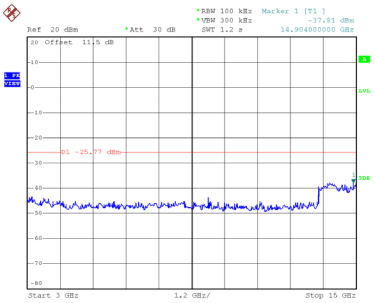


Date: 27.JAN.2021 09:54:23

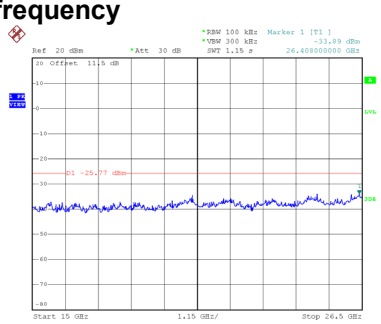
CH06 – 10th Harmonic of the fundamental frequency



Date: 27.JAN.2021 09:55:51

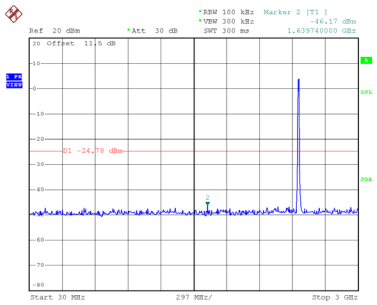


Date: 27.JAN.2021 09:55:59

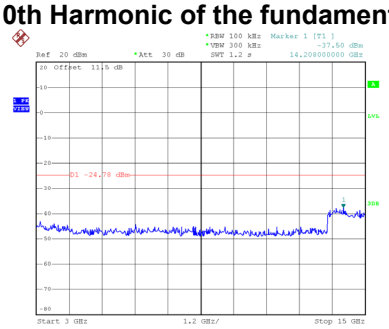


Date: 27.JAN.2021 09:56:07

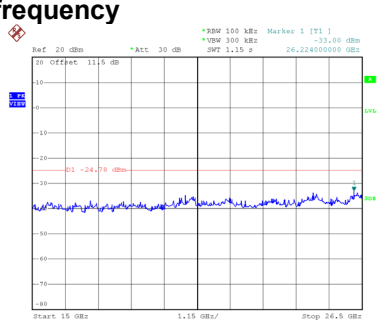
CH11 – 10th Harmonic of the fundamental frequency



Date: 27.JAN.2021 09:57:27



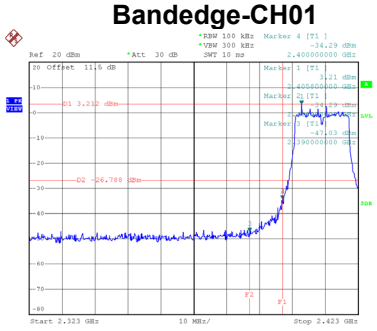
Date: 27.JAN.2021 09:57:35



Date: 27.JAN.2021 09:57:44

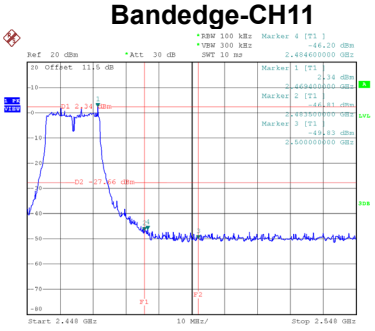
Test Mode	TX G Mode

Bandedge-CH01



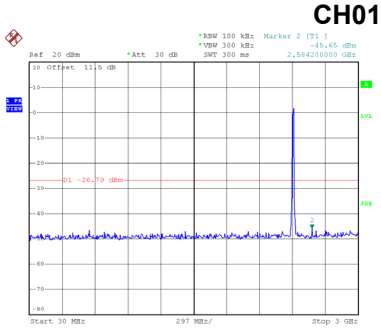
Date: 27.JAN.2021 09:59:03

Bandedge-CH11



Date: 27.JAN.2021 10:01:59

CH01 – 10th Harmonic of the fundamental frequency



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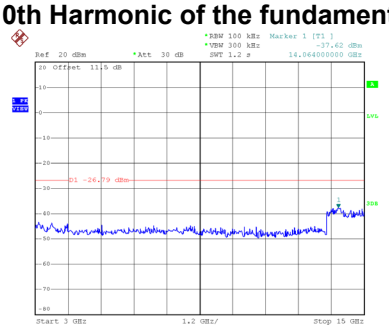
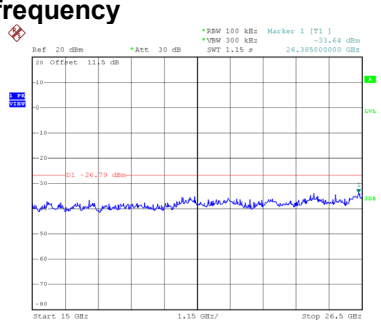


Date: 27.JAN.2021 09:59:24



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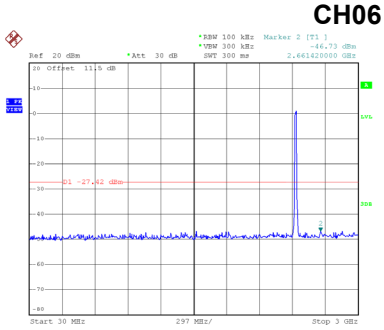
CH06 – 10th Harmonic of the fundamental frequency



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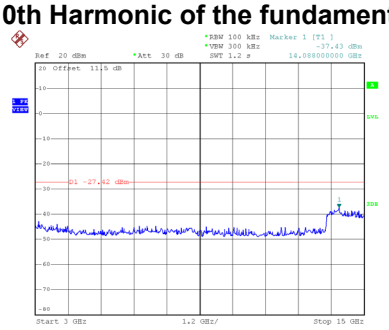

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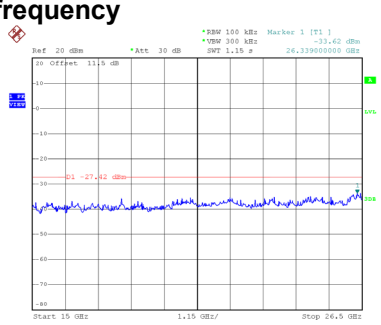
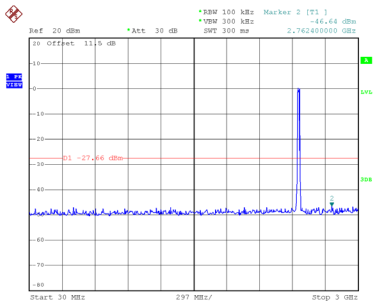
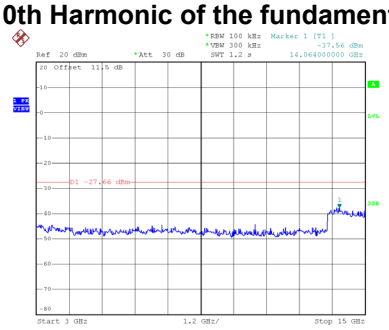


Date: 27.JAN.2021 10:01:00

CH11 – 10th Harmonic of the fundamental frequency



Date: 27.JAN.2021 10:02:12



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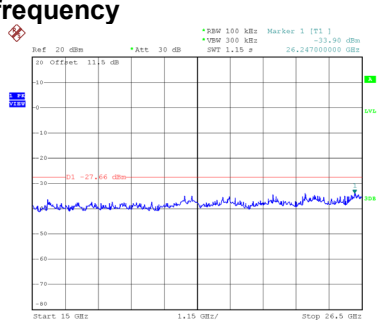

Date: 27.JAN.2021 10:02:29