

FCC Radio Test Report

FCC ID: 2AG7C-SPEED12

This report concerns: Original Grant

Project No. 2101H051 Equipment : IP CAMERA

Brand Name

Test Model : Speed 12S Series Model : Speed 12X,P2

Applicant : Hangzhou Meari Technology Co., Ltd.

Address : Room 604-605, Building 1, No. 768 Jianghong Road,

Changhe street, Binjiang District, Hangzhou, Zhejiang, China

Manufacturer : Hangzhou Meari Technology Co., Ltd.

Address : No. 91 Chutian Road, Xixing Street, Binjiang District,

Hangzhou, Zhejiang, China

Factory : Hangzhou Meari Technology Co., Ltd.

Address : No. 91 Chutian Road, Xixing Street, Binjiang District,

Hangzhou, Zhejiang, China

Date of Receipt : Jan. 27, 2021

Date of Test : Jan. 27, 2021~Feb. 02, 2021

Issued Date : Feb. 23, 2021

: R00 Report Version

Test Sample : Engineering Sample No.: SH20210127117/SH20210127118,

SH2020110266-6

Standard(s) : FCC Part15, Subpart C (15.247)

ANSI C63.10-2013

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.

Maker Q Prepared by: Maker Qi



Certificate # 5123.03

Approved by: Ryan Wang

Add: No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China

TEL: +86-021-61765666 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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, A2LA, or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

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.



| Table of Contents | Page |
|--|------|
| | |
| REPORT ISSUED HISTORY | 6 |
| 1 . SUMMARY OF TEST RESULTS | 7 |
| 1.1 TEST FACILITY | 8 |
| 1.2 MEASUREMENT UNCERTAINTY | 8 |
| 1.3 TEST ENVIRONMENT CONDITIONS | 8 |
| 2 . GENERAL INFORMATION | 9 |
| 2.1 GENERAL DESCRIPTION OF EUT | 9 |
| 2.2 DESCRIPTION OF TEST MODES | 10 |
| 2.3 PARAMETERS OF TEST SOFTWARE | 12 |
| 2.4 DUTY CYCLE | 13 |
| 2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED | 14 |
| 2.6 SUPPORT UNITS | 14 |
| 3 . AC POWER LINE CONDUCTED EMISSIONS TEST | 15 |
| 3.1 LIMIT | 15 |
| 3.2 TEST PROCEDURE | 15 |
| 3.3 DEVIATION FROM TEST STANDARD | 15 |
| 3.4 TEST SETUP | 16 |
| 3.5 EUT OPERATION CONDITIONS | 16 |
| 3.6 TEST RESULTS | 16 |
| 4 . RADIATED EMISSIONS TEST | 17 |
| 4.1 LIMIT | 17 |
| 4.2 TEST PROCEDURE | 18 |
| 4.3 DEVIATION FROM TEST STANDARD | 18 |
| 4.4 TEST SETUP | 19 |
| 4.5 EUT OPERATION CONDITIONS | 20 |
| 4.6 TEST RESULTS - 9 KHZ TO 30 MHZ | 20 |
| 4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ | 20 |
| 4.8 TEST RESULTS - ABOVE 1000 MHZ | 20 |
| 5 . BANDWIDTH TEST | 21 |
| 5.1 LIMIT | 21 |
| 5.2 TEST PROCEDURE | 21 |
| 5.3 DEVIATION FROM STANDARD | 21 |
| 5.4 TEST SETUP | 21 |
| | |



| Table of Contents | Page |
|---|------|
| | |
| 5.5 EUT OPERATION CONDITIONS | 21 |
| 5.6 TEST RESULTS | 21 |
| 6 . MAXIMUM OUTPUT POWER TEST & E.I.R.P. TEST | 22 |
| 6.1 LIMIT | 22 |
| 6.2 TEST PROCEDURE | 22 |
| 6.3 DEVIATION FROM STANDARD | 22 |
| 6.4 TEST SETUP | 22 |
| 6.5 EUT OPERATION CONDITIONS | 22 |
| 6.6 TEST RESULTS | 22 |
| 7. CONDUCTED SPURIOUS EMISSIONS | 23 |
| 7.1 LIMIT | 23 |
| 7.2 TEST PROCEDURE | 23 |
| 7.3 DEVIATION FROM STANDARD | 23 |
| 7.4 TEST SETUP | 23 |
| 7.5 EUT OPERATION CONDITIONS | 23 |
| 7.6 TEST RESULTS | 23 |
| 8 . POWER SPECTRAL DENSITY TEST | 24 |
| 8.1 LIMIT | 24 |
| 8.2 TEST PROCEDURE | 24 |
| 8.3 DEVIATION FROM STANDARD | 24 |
| 8.4 TEST SETUP | 24 |
| 8.5 EUT OPERATION CONDITIONS | 24 |
| 8.6 TEST RESULTS | 24 |
| 9 . MEASUREMENT INSTRUMENTS LIST | 25 |
| 10 . EUT TEST PHOTO | 27 |
| APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS | 30 |
| APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ | 33 |
| APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ | 34 |
| APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ | 37 |
| APPENDIX E - BANDWIDTH | 86 |
| APPENDIX F - MAXIMUM OUTPUT POWER & E.I.R.P. | 91 |
| APPENDIX G - CONDUCTED SPURIOUS EMISSIONS | 93 |
| | |



| Table of Contents | Page |
|-------------------------------------|------|
| APPENDIX H - POWER SPECTRAL DENSITY | 98 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |



REPORT ISSUED HISTORY

| Report Version | Description | Issued Date |
|----------------|-----------------|---------------|
| R00 | Original Issue. | Feb. 23, 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) | 7(d) Conducted Spurious Emissions | | 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. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China

BTL's Test Firm Registration Number for FCC: 476765

BTL's Designation Number for FCC: CN1241

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) |
|-----------|--------|-----------------------------|---------|
| SH-C01 | CISPR | 150 kHz ~ 30 MHz | 2.70 |

B. Radiated emissions test:

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U, (dB) |
|-----------|--------|-----------------------------|---------------|---------|
| | | 9 KHz~30 MHz | V | 3.79 |
| | | 9 KHz~30 MHz | Ι | 3.57 |
| | | 30 MHz~200 MHz | V | 4.04 |
| | CISPR | 30 MHz~200 MHz | Ι | 3.76 |
| SH-CB01 | | 200 MHz~1,000 MHz | V | 4.24 |
| SH-CBUT | | 200 MHz~1,000 MHz | Ι | 3.84 |
| | | 1 GHz~18 GHz | V | 4.46 |
| | | 1 GHz~18 GHz | Ι | 4.40 |
| | | 18 GHz~40 GHz | V | 3.95 |
| | | 18 GHz~40 GHz | Н | 3.95 |

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 | 17°C | 49% | AC 120V/60Hz | Joven Xiong |
| Radiated Emissions-30 MHz to 1GHz | 24 ℃ | 58% | AC 120V/60Hz | Forest Li |
| Radiated Emissions-Above 1000 MHz | 24 ℃ | 58% | AC 120V/60Hz | Forest Li |
| Bandwidth | 21°C | 48% | AC 120V/60Hz | Vince Zong |
| Maximum output power & e.i.r.p. | 21°C | 48% | AC 120V/60Hz | Vince Zong |
| Conducted Spurious Emissions | 21°C | 48% | AC 120V/60Hz | Vince Zong |
| Power Spectral Density | 21°C | 48% | AC 120V/60Hz | Vince Zong |



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

| Equipment | IP CAMERA |
|---|---|
| Brand Name | N/A |
| Test Model | Speed 12S |
| Series Model | Speed 12X,P2 |
| Model Difference(s) | Only differ in the model name. |
| Software Version | Smart life |
| Hardware Version | PCB-SPEED12S-A2MB_F37 REV1_0 |
| Power Source | DC voltage supplied from AC/DC adapter. 1#Brand/Mode: TIANYIN/TPA-46B050100UU 2#Brand/Mode: GPO/GTA92-0501000US |
| Power Rating | 1# I/P: 100V-240V ~ 50Hz/60Hz |
| 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: 18.52 dBm (0.0711 W) IEEE 802.11g: 24.56 dBm (0.2858 W) IEEE 802.11n (HT20): 24.48 dBm (0.2805 W) IEEE 802.11n (HT40): 24.29 dBm (0.2685 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) | Note |
|------|-------|------------|--------------|-----------|---------------|------|
| 1 | N/A | N/A | FPC | N/A | 1.99 | N/A |

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 |
|--------------|---------------|-----------------------------------|
| | r retest wode | 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 |

Following mode(s) as (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 2 | TX G Mode Channel 06 |

| Radiated emissions test - Below 1GHz | |
|--------------------------------------|----------------------|
| Final Test Mode: | Description |
| Mode 2 | TX G 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 |

| 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) 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 and AC Power Line Conducted Emissions test, the IEEE 802.11g Channel 06 is found to be the worst case and recorded.

Page 11 of 100



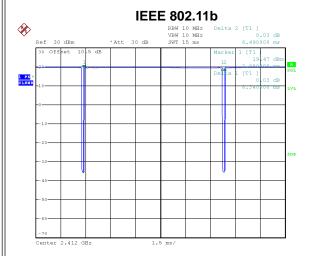
2.3 PARAMETERS OF TEST SOFTWARE

| Test Software | | IPOP_V4.0 | |
|---------------------|---------|-----------|---------|
| Frequency (MHz) | 2412 | 2437 | 2462 |
| IEEE 802.11b | default | default | default |
| IEEE 802.11g | default | default | default |
| IEEE 802.11n (HT20) | default | default | default |
| Frequency (MHz) | 2422 | 2437 | 2452 |
| IEEE 802.11n (HT40) | default | default | default |



2.4 DUTY CYCLE

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

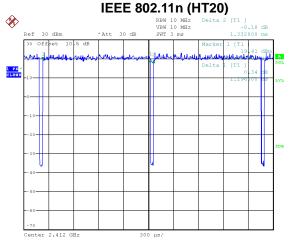


IEEE 802.11g

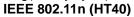
RBW 10 MHz VBW 10 MHz

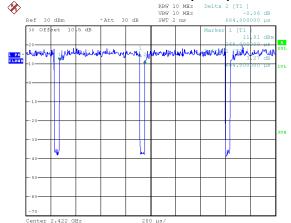
Date: 28.JAN.2021 16:59:53

Duty cycle = 8.34 ms / 8.49 ms = 98.23%Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.08$



Duty cycle = 1.39 ms / 1.52 ms = 91.45% Duty Factor = 10 log(1/Duty cycle) = 0.39





Date: 28.JAN.2021 17:04:27

Duty cycle = 1.296 ms / 1.332 ms = 97.30% Duty Factor = 10 log(1/Duty cycle) = 0.12, Date: 28.JAN.2021 17:05:28

Date: 28.JAN.2021 17:03:15

Duty cycle = 0.644 ms / 0.684 ms = 94.15% Duty Factor = 10 log(1/Duty cycle) = 0.26

NOTE:

For IEEE 802.11b:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle > 98%).

For IEEE 802.11g and IEEE 802.11n (HT20):

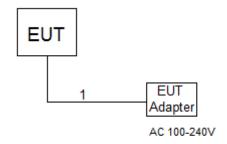
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

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 | Cable Type | Shielded Type | Ferrite Core | Length |
|------|------------|---------------|--------------|--------|
| 1 | DC | N/A | N/A | 2M |



3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

| Fraguency of Emission (MHz) | Limit (d | ΒμV) |
|-----------------------------|------------|-----------|
| Frequency of Emission (MHz) | 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

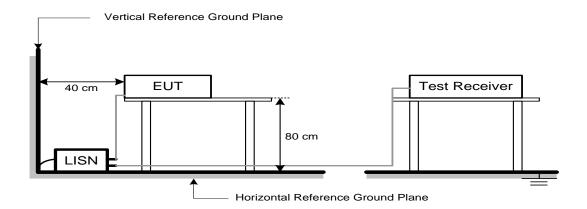
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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 | Field Strength | Measurement Distance |
|-------------|--------------------|----------------------|
| (MHz) | (microvolts/meter) | (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/n | n at 3 m) |
|-----------------|---------|-----------|
| Frequency (MHz) | 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).
- (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value



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

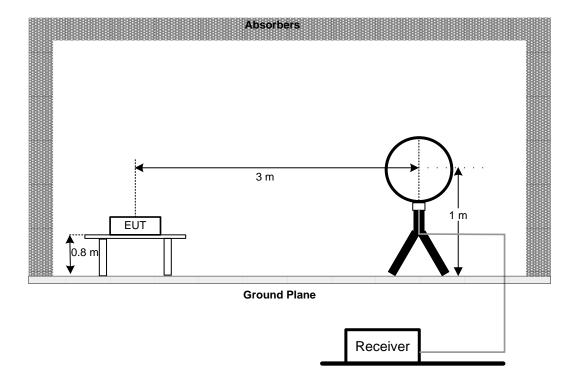
4.3 DEVIATION FROM TEST STANDARD

No deviation

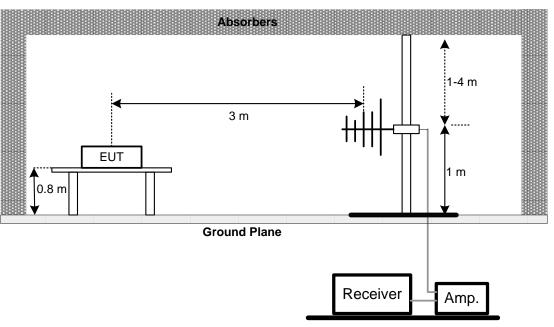


4.4 TEST SETUP

9 kHz-30 MHz

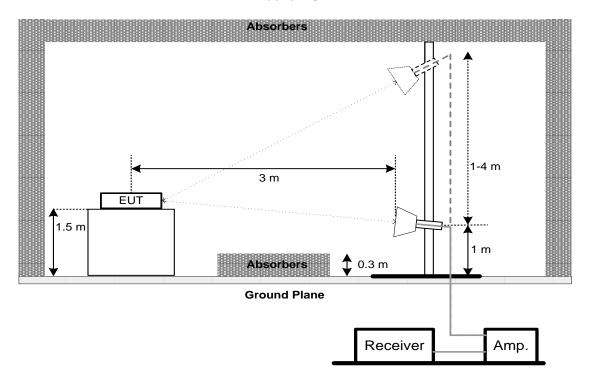


30 MHz to 1 GHz





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 | | | | | |
| 4F 247(a)/2) | 6 dB Bandwidth | Minimum 500 kHz | | | |
| 15.247(a)(2) | 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

| EUT | SPECTRUM | |
|-----|----------|--|
| | ANALYZER | |

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 (for peak power) or 11.9.2.3.1 (for AVG power) of ANSI C63.10-2013.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

| EUT | Power Meter |
|-----|----------------|
| | 1 5 WEI WICKET |

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

| EUT | SPECTRUM | |
|-----|----------|--|
| | ANALYZER | |

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

| EUT | SPECTRUM | |
|-----|----------|--|
| | ANALYZER | |

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 | Line Impedance Stabilisation Network | Schwarzbeck | NNLK 8121 | 8121-822 | Mar. 21, 2021 | |
| 2 | TWO-LINE V-NETWORK | R&S | ENV216 | 101340 | Aug. 23, 2021 | |
| 3 | Test Cable | emci | EMCRG400-BM-N M-10000 | 170628 | Jul. 15, 2021 | |
| 4 | EMI Test Receiver | R&S | ESCI | 100082 | Mar. 21, 2021 | |
| 5 | 50Ω Terminator | SHX | TF2-1G-A | 17051602 | Mar. 21, 2021 | |
| 6 | 50Ω coaxial switch | Anritsu | MP59B | 6201750902 | Mar. 21, 2021 | |
| 7 | 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 | TRILOG Broadband Antenna | Schwarzbeck | VULB 9168 | 719 | Apr. 02, 2021 | |
| 2 | Pre-Amplifier | emci | EMC9135 | 980400 | Mar. 21, 2021 | |
| 3 | MXE EMI Receiver | Keysight | N9038A | MY57150106 | Mar. 21, 2021 | |
| 4 | Test Cable | emci | EMC104-SM-SM-7 000 | 170330 | Apr. 13, 2021 | |
| 5 | Test Cable | emci | EMC104-SM-SM-1 000 | 170331 | Apr. 13, 2021 | |
| 6 | Test Cable | emci | EMC104-SM-NM-3 500 | 170621 | Apr. 13, 2021 | |
| 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 Waveguide Horn Antenna | ETS-Lindgren | 9120D | 00206960 | Apr. 02, 2021 |
| 2 | Pre-Amplifier | emci | EMC012645SE | 980421 | May. 11, 2021 |
| 3 | EXA Spectrum Analyzer | Keysight | N9010A | MY56480545 | Mar. 21, 2021 |
| 4 | Test Cable | emci | EMC104-SM-SM-7 000 | 170330 | Apr. 13, 2021 |
| 5 | Test Cable | emci | EMC104-SM-SM-1 000 | 170331 | Apr. 13, 2021 |
| 6 | Test Cable | emci | EMC104-SM-NM-3 500 | 170621 | Apr. 13, 2021 |
| 7 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |
| 8 | MXE EMI Receiver | Keysight | N9038A | MY57150106 | May. 06, 2021 |
| 9 | Double-Ridged Waveguide Horn Antenna | ETS-Lindgren | 3116C | 00203919 | Jul. 20, 2021 |
| 10 | Pre-Amplifier | emci | EMC184045SE | 980409 | Mar. 21, 2021 |
| 11 | EXA Spectrum Analyzer | Keysight | N9010A | MY56480579 | Mar. 21, 2021 |
| 12 | Test Cable | emci | EMC102-KM-KM-8 00 | 170654 | Apr. 13, 2021 |
| 13 | Test Cable | emci | Super Reliable-40G-SS11- 7000 | W0030860001 | Apr. 13, 2021 |
| 14 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |

| Bandwidth | | | | | |
|-----------|-------------------|--------------|----------|------------|------------------|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 06, 2021 |

| | Maximum Output Power | | | | | |
|------|--------------------------|--------------|----------|------------|------------------|--|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until | |
| 1 | Peak Power Analyze | Keysight | 8990B | MY51000507 | Mar. 06, 2021 | |
| 2 | Wideband Power Sensor | Keysight | N9123A | MY58310003 | Mar. 06, 2021 | |

| | Antenna Conducted Spurious Emissions | | | | | | | | | | |
|------|--------------------------------------|--------------|----------|------------|------------------|--|--|--|--|--|--|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until | | | | | | |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 06, 2021 | | | | | | |

| | Power Spectral Density | | | | | | | | | | |
|------|------------------------|--------------|----------|------------|------------------|--|--|--|--|--|--|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until | | | | | | |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 06, 2021 | | | | | | |

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

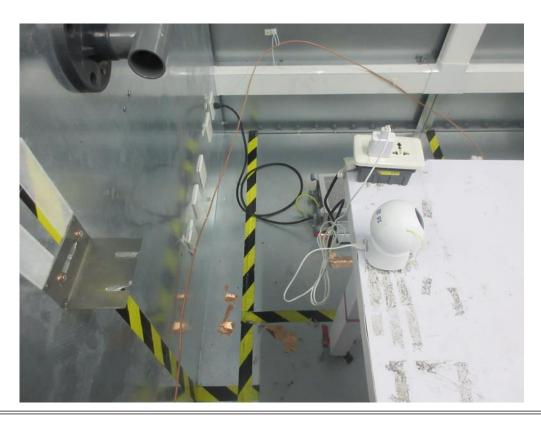
All calibration period of equipment list is one year.



10. EUT TEST PHOTO

Conducted Emissions Test Photos

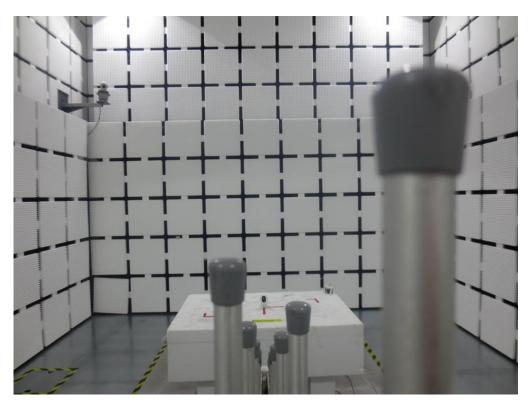


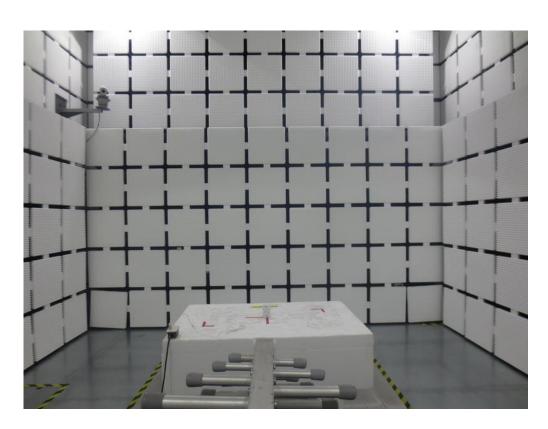




Radiated Emissions Test Photos

30 MHz to 1 GHz

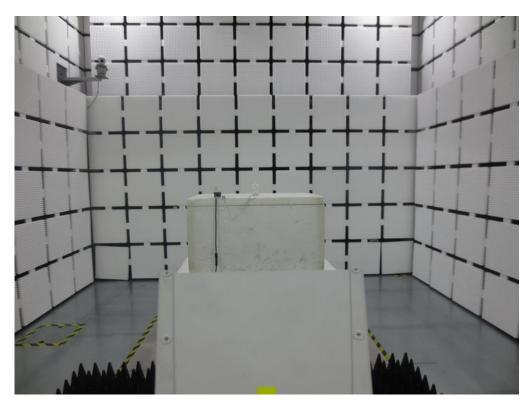


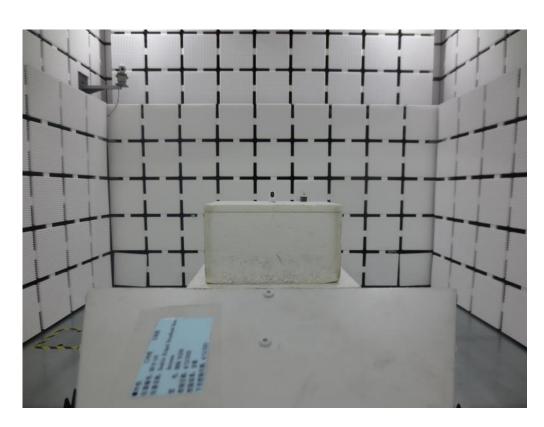




Radiated Emissions Test Photos

Above 1 GHz



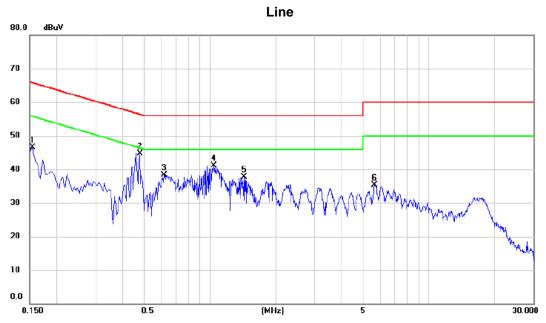




APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS



Test Mode: TX G Mode 2437 MHz



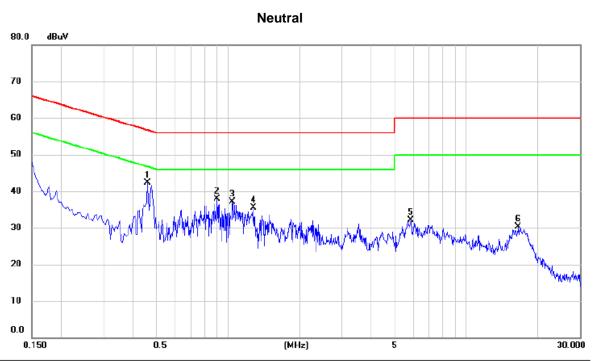
| No. Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
| | MHz | dBuV | dB | dBuV | dBu∀ | dB | Detector | Comment |
| 1 | 0.1545 | 36.88 | 9.72 | 46.60 | 65.75 | -19.15 | peak | |
| 2 * | 0.4785 | 34.94 | 9.79 | 44.73 | 56.37 | -11.64 | peak | |
| 3 | 0.6180 | 28.50 | 9.81 | 38.31 | 56.00 | -17.69 | peak | |
| 4 | 1.0455 | 31.19 | 9.84 | 41.03 | 56.00 | -14.97 | peak | |
| 5 | 1.4325 | 27.76 | 9.87 | 37.63 | 56.00 | -18.37 | peak | |
| 6 | 5.6490 | 25.29 | 10.05 | 35.34 | 60.00 | -24.66 | peak | |

REMARKS:

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



Test Mode: TX G Mode 2437 MHz



| No. M | k. Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-------|----------|------------------|-------------------|------------------|-------|--------|----------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 * | 0.4605 | 32.51 | 9.79 | 42.30 | 56.68 | -14.38 | peak | |
| 2 | 0.9015 | 28.02 | 9.82 | 37.84 | 56.00 | -18.16 | peak | |
| 3 | 1.0455 | 27.26 | 9.84 | 37.10 | 56.00 | -18.90 | peak | |
| 4 | 1.2840 | 25.60 | 9.86 | 35.46 | 56.00 | -20.54 | peak | |
| 5 | 5.8290 | 22.03 | 10.05 | 32.08 | 60.00 | -27.92 | peak | |
| 6 | 16.5525 | 19.70 | 10.51 | 30.21 | 60.00 | -29.79 | peak | |

REMARKS:

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

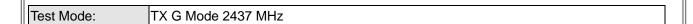


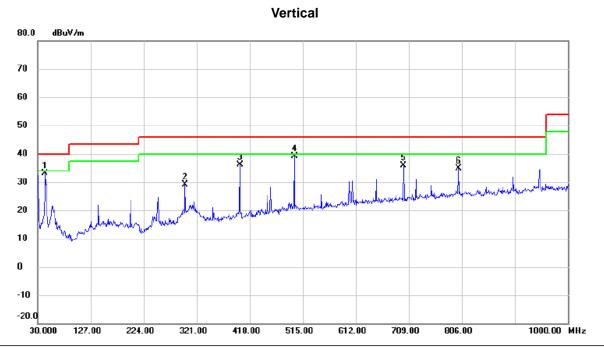
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ Note: The measured value have enough margin over 20dB than the limit, therefore they are not reported.



| APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ |
|---|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |







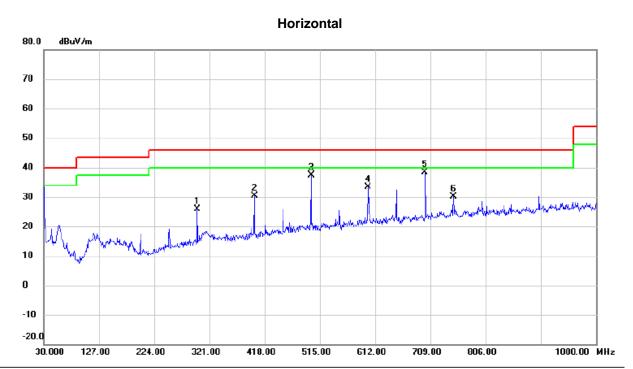
| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | * | 43.5800 | 50.23 | -17.03 | 33.20 | 40.00 | -6.80 | peak | |
| 2 | | 300.1450 | 44.69 | -15.66 | 29.03 | 46.00 | -16.97 | peak | |
| 3 | | 400.0550 | 49.49 | -13.33 | 36.16 | 46.00 | -9.84 | peak | |
| 4 | | 499.9650 | 50.37 | -11.21 | 39.16 | 46.00 | -6.84 | peak | |
| 5 | | 699.7850 | 44.03 | -8.03 | 36.00 | 46.00 | -10.00 | peak | |
| 6 | | 800.1800 | 41.30 | -6.53 | 34.77 | 46.00 | -11.23 | peak | |

REMARKS:

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







| No | . M | 1k. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|----|-----|-----|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 30 | 0.1450 | 41.51 | -15.66 | 25.85 | 46.00 | -20.15 | peak | |
| 2 | | 40 | 0.0550 | 43.71 | -13.33 | 30.38 | 46.00 | -15.62 | peak | |
| 3 | | 49 | 9.9650 | 48.49 | -11.21 | 37.28 | 46.00 | -8.72 | peak | |
| 4 | | 59 | 9.8750 | 42.65 | -9.16 | 33.49 | 46.00 | -12.51 | peak | |
| 5 | * | 69 | 9.7850 | 46.34 | -8.03 | 38.31 | 46.00 | -7.69 | peak | |
| 6 | | 75 | 0.2250 | 37.34 | -7.23 | 30.11 | 46.00 | -15.89 | peak | |

REMARKS:

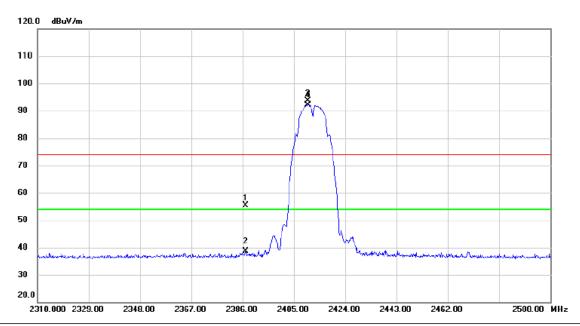
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ



Vertical

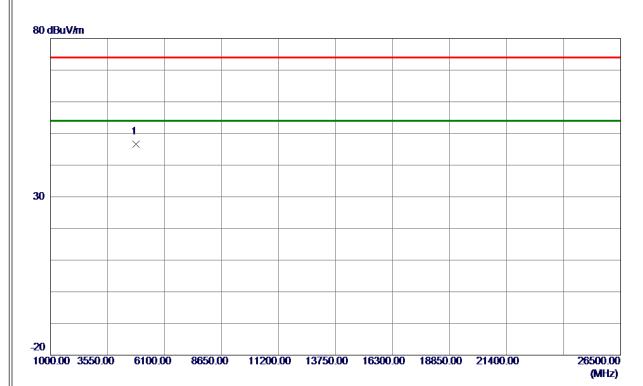


| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | | 2387.235 | 23.54 | 31.75 | 55.29 | 74.00 | -18.71 | peak | |
| | 2 | | 2387.235 | 6.99 | 31.75 | 38.74 | 54.00 | -15.26 | AVG | |
| | 3 | X | 2410.225 | 61.99 | 31.72 | 93.71 | 74.00 | 19.71 | peak | |
| • | 4 | * | 2410.225 | 60.38 | 31.72 | 92.10 | 54.00 | 38.10 | AVG | |

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



Vertical

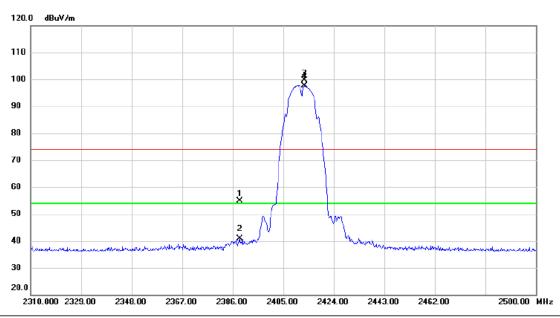


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4823, 7250 | 57, 52 | -10. 91 | 46. 61 | 74. 00 | -27. 39 | Peak | | |

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



Horizontal

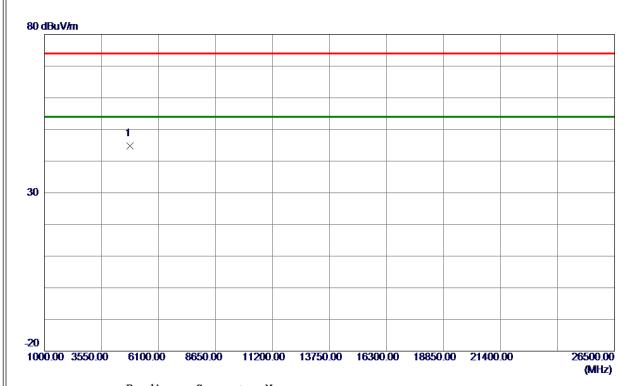


| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| _ | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| Ī | 1 | | 2388.565 | 23.08 | 31.75 | 54.83 | 74.00 | -19.17 | peak | |
| _ | 2 | | 2388.565 | 9.06 | 31.75 | 40.81 | 54.00 | -13.19 | AVG | |
| _ | 3 | X | 2412.980 | 67.85 | 31.72 | 99.57 | 74.00 | 25.57 | peak | |
| _ | 4 | * | 2412.980 | 65.95 | 31.72 | 97.67 | 54.00 | 43.67 | AVG | |

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



Horizontal

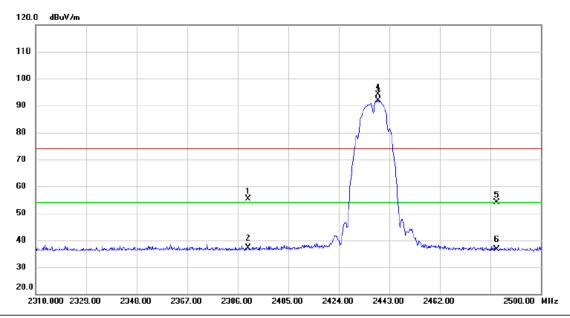


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4823, 7250 | 55. 68 | -10. 91 | 44.77 | 74.00 | -29. 23 | Peak | | |

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



Vertical

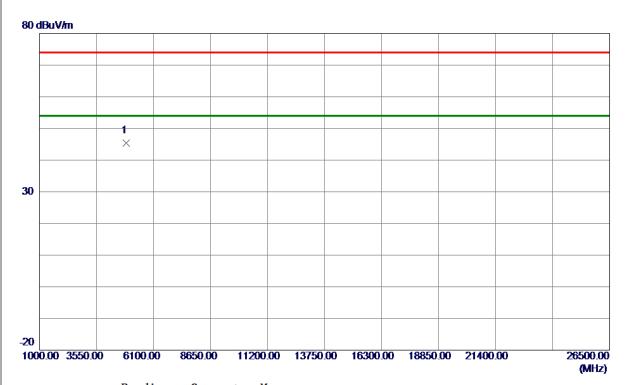


| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 2390.000 | 23.65 | 31.74 | 55.39 | 74.00 | -18.61 | peak | |
| 2 | | 2390.000 | 5.27 | 31.74 | 37.01 | 54.00 | -16.99 | AVG | |
| 3 | * | 2438.820 | 60.20 | 31.71 | 91.91 | 54.00 | 37.91 | AVG | |
| 4 | X | 2438.820 | 62.44 | 31.71 | 94.15 | 74.00 | 20.15 | peak | |
| 5 | | 2483.500 | 22.44 | 31.72 | 54.16 | 74.00 | -19.84 | peak | |
| 6 | | 2483.500 | 5.01 | 31.72 | 36.73 | 54.00 | -17.27 | AVG | |

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



Vertical

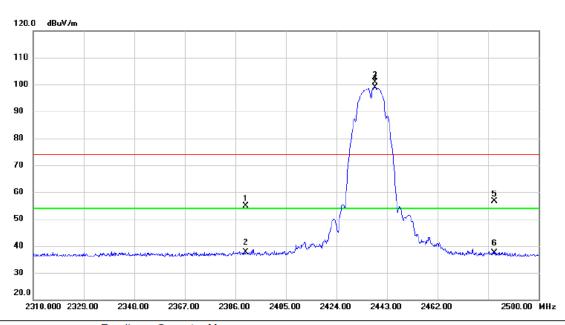


| No. | | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|-------------------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz 4873. 4500 | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4873. 4500 | 56. 28 | -10. 79 | 45. 49 | 74.00 | -28. 51 | Peak | | |

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



Horizontal



| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 2390.000 | 23.19 | 31.74 | 54.93 | 74.00 | -19.07 | peak | |
| 2 | | 2390.000 | 5.98 | 31.74 | 37.72 | 54.00 | -16.28 | AVG | |
| 3 | Χ | 2438.630 | 69.28 | 31.71 | 100.99 | 74.00 | 26.99 | peak | |
| 4 | * | 2438.630 | 67.29 | 31.71 | 99.00 | 54.00 | 45.00 | AVG | |
| 5 | | 2483.500 | 25.02 | 31.72 | 56.74 | 74.00 | -17.26 | peak | |
| 6 | | 2483.500 | 5.66 | 31.72 | 37.38 | 54.00 | -16.62 | AVG | |
| | | | | | | | | | |

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



Horizontal

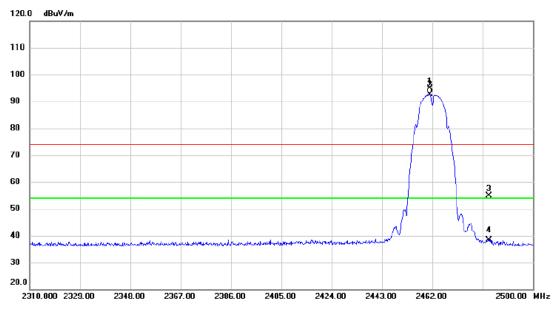


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|-----------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4874. 725 | 0 58.44 | -10. 79 | 47.65 | 74. 00 | -26. 35 | Peak | | |

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



Vertical



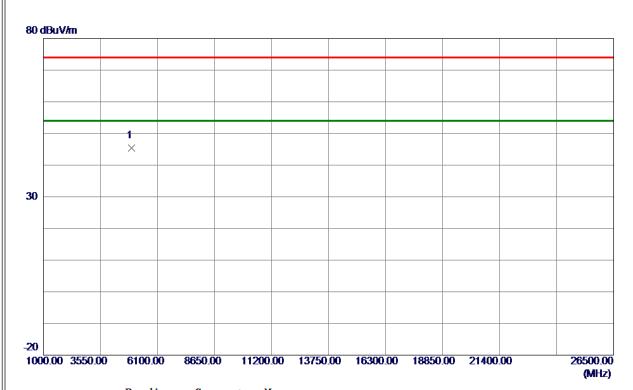
| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | Χ | 2461.240 | 63.28 | 31.72 | 95.00 | 74.00 | 21.00 | peak | |
| 2 | * | 2461.240 | 60.79 | 31.72 | 92.51 | 54.00 | 38.51 | AVG | |
| 3 | | 2483.500 | 23.17 | 31.72 | 54.89 | 74.00 | -19.11 | peak | |
| 4 | | 2483.500 | 6.61 | 31.72 | 38.33 | 54.00 | -15.67 | AVG | |

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





Vertical

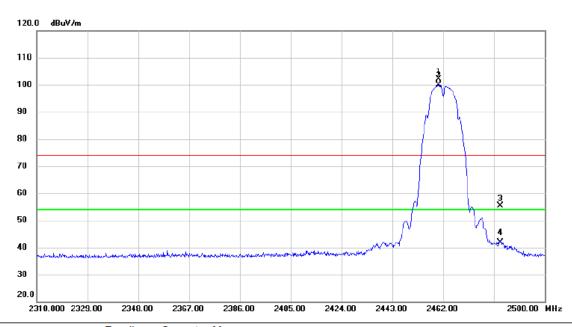


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4924. 4500 | 56. 10 | -10.62 | 45. 48 | 74.00 | -28. 52 | Peak | | |

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



Horizontal

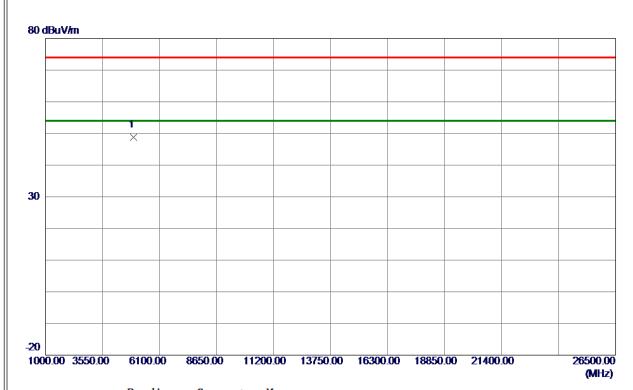


| | No. | М | k. Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|---|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| - | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | X | 2460.290 | 70.51 | 31.71 | 102.22 | 74.00 | 28.22 | peak | |
| _ | 2 | * | 2460.290 | 68.19 | 31.71 | 99.90 | 54.00 | 45.90 | AVG | |
| - | 3 | | 2483.500 | 23.72 | 31.72 | 55.44 | 74.00 | -18.56 | peak | |
| - | 4 | | 2483.500 | 10.05 | 31.72 | 41.77 | 54.00 | -12.23 | AVG | |

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



Horizontal

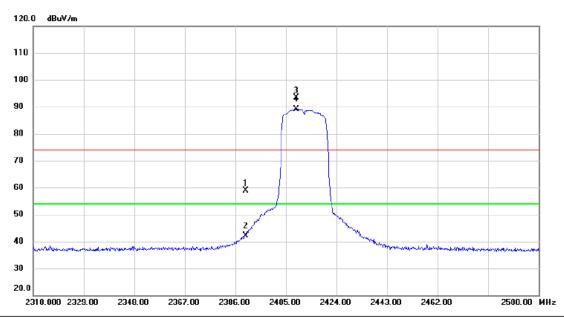


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4924. 4500 | 59. 39 | -10.62 | 48.77 | 74.00 | -25. 23 | Peak | | |

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



Vertical

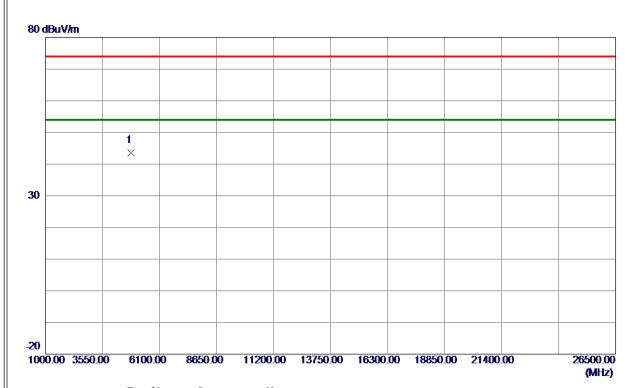


| | No. | Mk | . Freq. | Reading Level | | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------|------------------|--------|--------|----------|---------|
| • | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | | 2390.000 | 27.19 | 31.74 | 58.93 | 74.00 | -15.07 | peak | |
| • | 2 | | 2390.000 | 10.50 | 31.74 | 42.24 | 54.00 | -11.76 | AVG | |
| | 3 | Χ | 2408.800 | 61.71 | 31.72 | 93.43 | 74.00 | 19.43 | peak | |
| | 4 | * | 2408.800 | 57.41 | 31.72 | 89.13 | 54.00 | 35.13 | AVG | |

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



Vertical

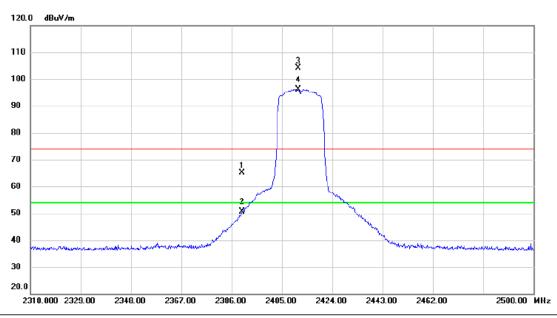


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|-----------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4832.6500 | 54. 54 | -10. 89 | 43.65 | 74.00 | -30. 35 | Peak | | |

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



Horizontal



| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| _ | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| _ | 1 | | 2390.000 | 33.31 | 31.74 | 65.05 | 74.00 | -8.95 | peak | |
| _ | 2 | | 2390.000 | 18.92 | 31.74 | 50.66 | 54.00 | -3.34 | AVG | |
| _ | 3 | X | 2411.270 | 72.53 | 31.72 | 104.25 | 74.00 | 30.25 | peak | |
| _ | 4 | * | 2411.270 | 64.34 | 31.72 | 96.06 | 54.00 | 42.06 | AVG | |

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



Horizontal

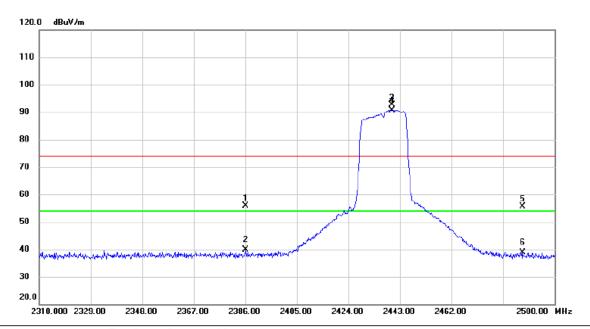


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4821. 1750 | 55. 87 | -10. 91 | 44.96 | 74.00 | -29.04 | Peak | |
| 2 * | 7230. 9250 | 52. 79 | -4. 18 | 48.61 | 74.00 | -25. 39 | Peak | |

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



Vertical

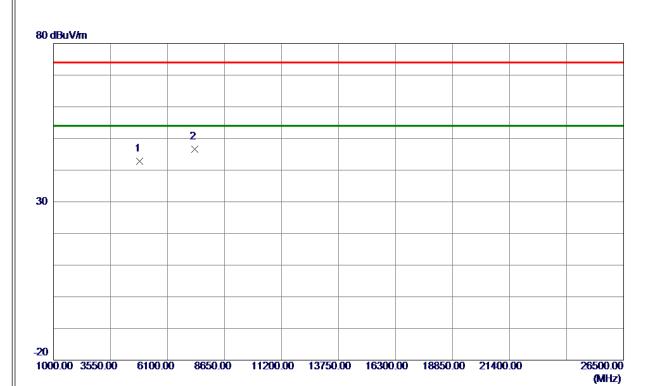


| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| _ | 1 | | 2386.095 | 24.09 | 31.74 | 55.83 | 74.00 | -18.17 | peak | |
| _ | 2 | | 2386.095 | 8.09 | 31.74 | 39.83 | 54.00 | -14.17 | AVG | |
| _ | 3 | Χ | 2439.960 | 61.02 | 31.72 | 92.74 | 74.00 | 18.74 | peak | |
| _ | 4 | * | 2439.960 | 59.02 | 31.72 | 90.74 | 54.00 | 36.74 | AVG | |
| - | 5 | | 2488.125 | 23.84 | 31.71 | 55.55 | 74.00 | -18.45 | peak | |
| _ | 6 | | 2488.125 | 7.10 | 31.71 | 38.81 | 54.00 | -15.19 | AVG | |

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



Vertical

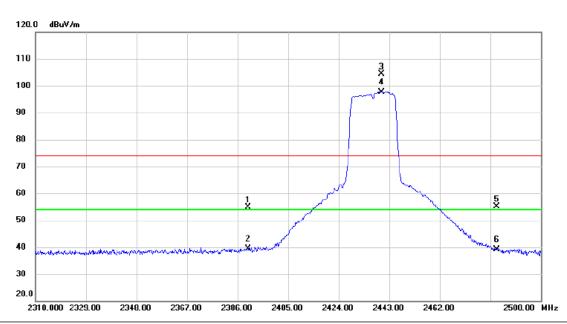


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4867.0750 | 53. 55 | -10.81 | 42.74 | 74.00 | -31. 26 | Peak | |
| 2 * | 7311. 2500 | 50. 76 | -4. 07 | 46. 69 | 74.00 | -27. 31 | Peak | |

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



Horizontal

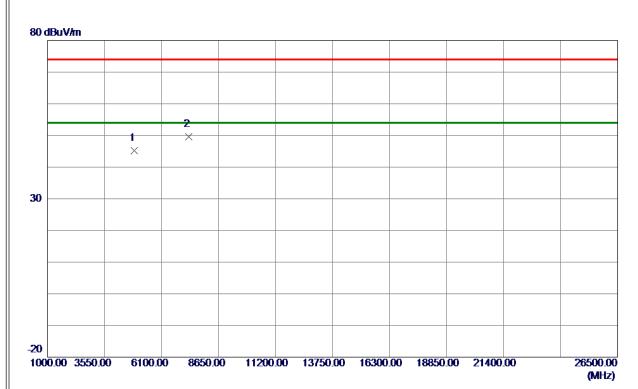


| No. | Mk | c. Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 2390.000 | 23.09 | 31.74 | 54.83 | 74.00 | -19.17 | peak | |
| 2 | | 2390.000 | 7.53 | 31.74 | 39.27 | 54.00 | -14.73 | AVG | |
| 3 | X | 2440.150 | 72.64 | 31.72 | 104.36 | 74.00 | 30.36 | peak | |
| 4 | * | 2440.150 | 66.00 | 31.72 | 97.72 | 54.00 | 43.72 | AVG | |
| 5 | | 2483.500 | 23.37 | 31.72 | 55.09 | 74.00 | -18.91 | peak | |
| 6 | | 2483.500 | 7.45 | 31.72 | 39.17 | 54.00 | -14.83 | AVG | |

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



Horizontal

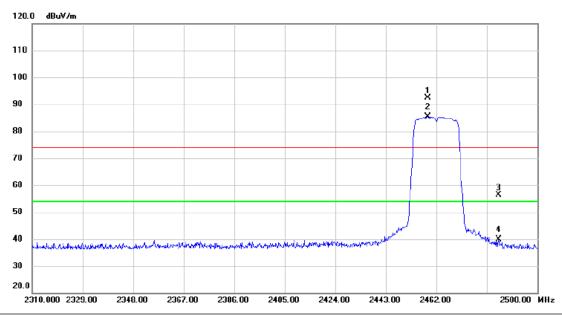


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4873. 4500 | 55. 92 | -10.79 | 45. 13 | 74.00 | -28.87 | Peak | |
| 2 * | 7313. 8000 | 53.64 | -4.07 | 49. 57 | 74.00 | -24.43 | Peak | |

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



Vertical

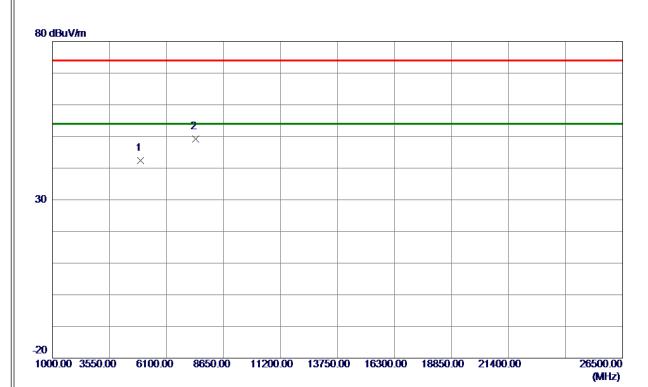


| | No. | Mk | c. Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | X | 2458.770 | 60.78 | 31.71 | 92.49 | 74.00 | 18.49 | peak | |
| | 2 | * | 2458.770 | 53.58 | 31.71 | 85.29 | 54.00 | 31.29 | AVG | |
| | 3 | | 2485.465 | 24.71 | 31.71 | 56.42 | 74.00 | -17.58 | peak | |
| • | 4 | | 2485.465 | 8.11 | 31.71 | 39.82 | 54.00 | -14.18 | AVG | |

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



Vertical

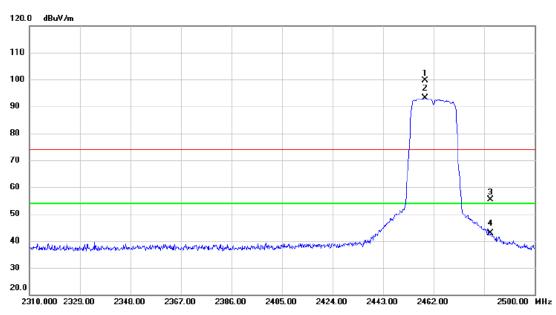


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4927.0000 | 52. 93 | -10.61 | 42.32 | 74.00 | -31.68 | Peak | |
| 2 * | 7392. 8500 | 53. 12 | -3.97 | 49. 15 | 74.00 | -24.85 | Peak | |

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



Horizontal

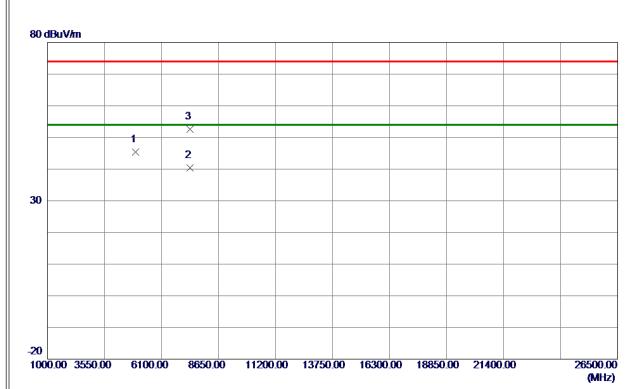


| No |). | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|----|----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | X | 2458.770 | 67.84 | 31.71 | 99.55 | 74.00 | 25.55 | peak | |
| 2 | 2 | * | 2458.770 | 61.31 | 31.71 | 93.02 | 54.00 | 39.02 | AVG | |
| 3 | 3 | | 2483.500 | 23.70 | 31.72 | 55.42 | 74.00 | -18.58 | peak | |
| 4 | 1 | | 2483.500 | 11.04 | 31.72 | 42.76 | 54.00 | -11.24 | AVG | |

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



Horizontal



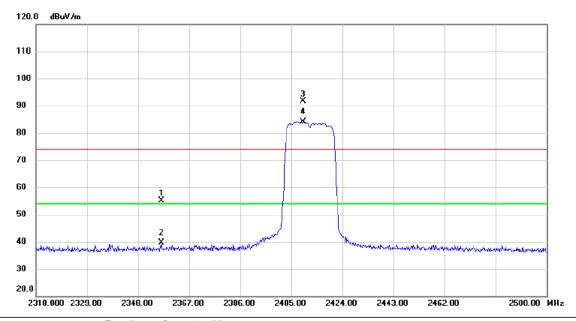
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4929. 5500 | 55. 96 | -10.60 | 45. 36 | 74.00 | -28.64 | Peak | |
| 2 * | 7385. 6130 | 44.44 | -3. 98 | 40.46 | 54.00 | -13.54 | AVG | |
| 3 | 7387. 7500 | 56. 63 | -3. 98 | 52.65 | 74.00 | -21. 35 | Peak | |

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



Test Mode: TX N-20M Mode 2412 MHz

Vertical



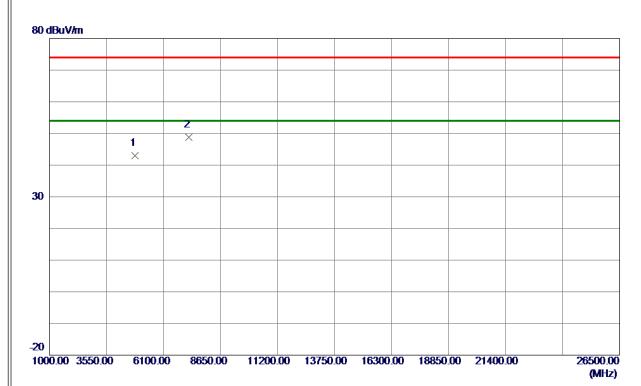
| | No. | Mk | . Freq. | Reading Level | | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------|------------------|--------|--------|----------|---------|
| • | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | | 2356.835 | 23.33 | 31.80 | 55.13 | 74.00 | -18.87 | peak | |
| • | 2 | | 2356.835 | 7.89 | 31.80 | 39.69 | 54.00 | -14.31 | AVG | |
| | 3 | Χ | 2409.370 | 60.02 | 31.72 | 91.74 | 74.00 | 17.74 | peak | |
| | 4 | * | 2409.370 | 52.35 | 31.72 | 84.07 | 54.00 | 30.07 | AVG | |

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



Test Mode: TX N-20M Mode 2412 MHz

Vertical



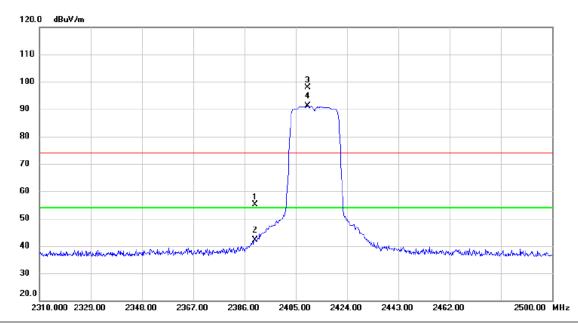
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|-----------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4828.8250 | 53. 93 | -10. 90 | 43.03 | 74.00 | -30. 97 | Peak | |
| 2 * | 7234.7500 | 52. 90 | -4. 17 | 48.73 | 74.00 | -25. 27 | Peak | |

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



Test Mode: TX N-20M Mode 2412 MHz

Horizontal



| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| - | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| - | 1 | | 2390.000 | 23.49 | 31.74 | 55.23 | 74.00 | -18.77 | peak | |
| - | 2 | | 2390.000 | 10.50 | 31.74 | 42.24 | 54.00 | -11.76 | AVG | |
| - | 3 | X | 2409.560 | 66.27 | 31.72 | 97.99 | 74.00 | 23.99 | peak | |
| - | 4 | * | 2409.560 | 59.41 | 31.72 | 91.13 | 54.00 | 37.13 | AVG | |

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



Test Mode: TX N-20M Mode 2412 MHz

Horizontal



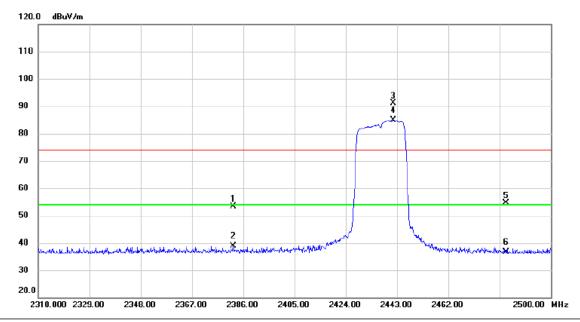
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4832.6500 | 57. 50 | -10.89 | 46. 61 | 74.00 | -27.39 | Peak | |
| 2 * | 7233. 4750 | 51.87 | -4. 17 | 47.70 | 74.00 | -26. 30 | Peak | |

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



Test Mode: TX N-20M Mode 2437 MHz

Vertical



| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| - | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| Ī | 1 | | 2382.295 | 21.56 | 31.75 | 53.31 | 74.00 | -20.69 | peak | |
| - | 2 | | 2382.295 | 7.01 | 31.75 | 38.76 | 54.00 | -15.24 | AVG | |
| Ī | 3 | X | 2441.670 | 59.42 | 31.72 | 91.14 | 74.00 | 17.14 | peak | |
| - | 4 | * | 2441.670 | 53.07 | 31.72 | 84.79 | 54.00 | 30.79 | AVG | |
| - | 5 | | 2483.500 | 22.85 | 31.72 | 54.57 | 74.00 | -19.43 | peak | |
| - | 6 | | 2483.500 | 4.89 | 31.72 | 36.61 | 54.00 | -17.39 | AVG | |

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



Test Mode: TX N-20M Mode 2437 MHz

Vertical



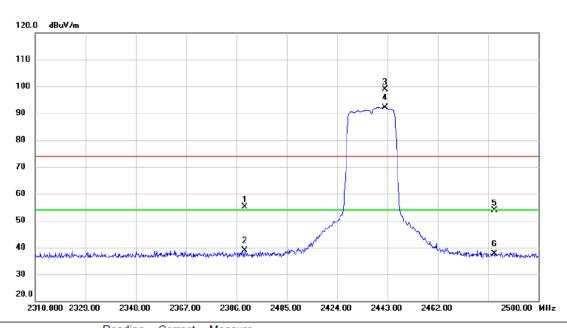
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4869.6250 | 54.41 | -10.80 | 43.61 | 74.00 | -30. 39 | Peak | |
| 2 * | 7309. 9750 | 51.60 | -4.08 | 47. 52 | 74.00 | -26.48 | Peak | |

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



Test Mode: TX N-20M Mode 2437 MHz

Horizontal



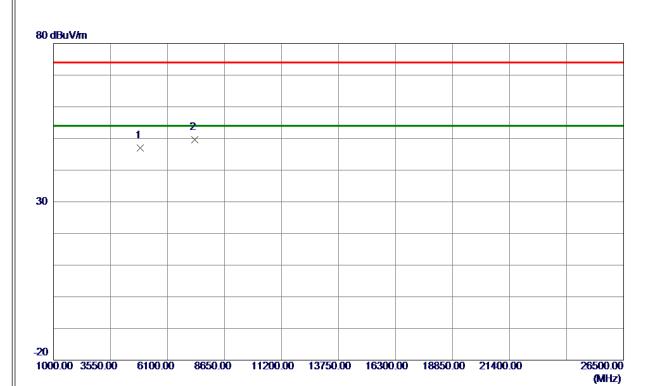
| | No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| _ | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| _ | 1 | | 2389.135 | 23.41 | 31.74 | 55.15 | 74.00 | -18.85 | peak | |
| - | 2 | | 2389.135 | 7.04 | 31.74 | 38.78 | 54.00 | -15.22 | AVG | |
| _ | 3 | X | 2442.240 | 67.14 | 31.72 | 98.86 | 74.00 | 24.86 | peak | |
| _ | 4 | * | 2442.240 | 60.48 | 31.72 | 92.20 | 54.00 | 38.20 | AVG | |
| _ | 5 | | 2483.500 | 22.04 | 31.72 | 53.76 | 74.00 | -20.24 | peak | |
| - | 6 | | 2483.500 | 5.92 | 31.72 | 37.64 | 54.00 | -16.36 | AVG | |
| - | | | | | | | | | | |

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



Test Mode: TX N-20M Mode 2437 MHz

Horizontal



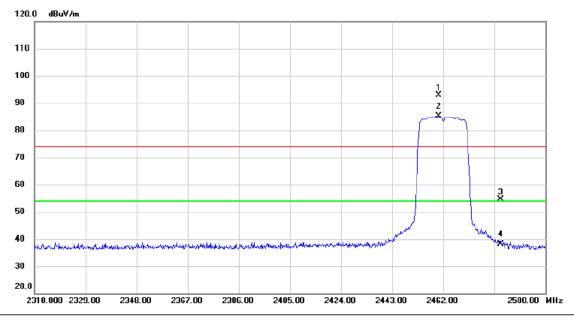
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4877.2750 | 57.83 | -10.79 | 47.04 | 74.00 | -26.96 | Peak | |
| 2 * | 7309. 9750 | 53.64 | -4.08 | 49. 56 | 74.00 | -24.44 | Peak | |

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



Test Mode: TX N-20M Mode 2462 MHz

Vertical



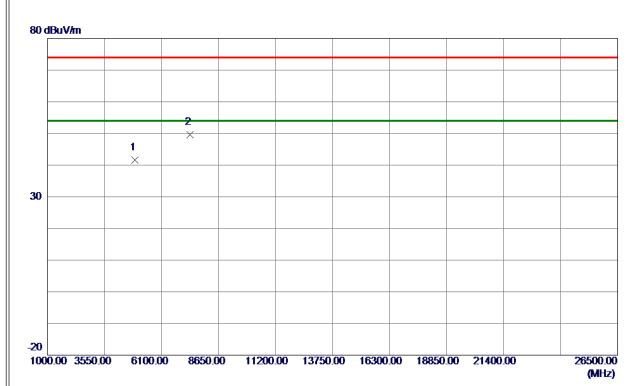
| No. | Mk | c. Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | X | 2460.385 | 61.10 | 31.71 | 92.81 | 74.00 | 18.81 | peak | |
| 2 | * | 2460.385 | 53.43 | 31.71 | 85.14 | 54.00 | 31.14 | AVG | |
| 3 | | 2483.500 | 23.02 | 31.72 | 54.74 | 74.00 | -19.26 | peak | |
| 4 | | 2483.500 | 6.37 | 31.72 | 38.09 | 54.00 | -15.91 | AVG | |

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



Test Mode: TX N-20M Mode 2462 MHz

Vertical



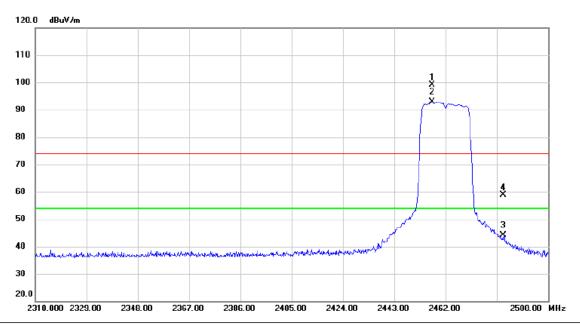
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4921. 9000 | 52. 26 | -10.64 | 41.62 | 74.00 | -32.38 | Peak | |
| 2 * | 7372. 4500 | 53. 51 | -4.00 | 49. 51 | 74.00 | -24.49 | Peak | |

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



Test Mode: TX N-20M Mode 2462 MHz

Horizontal



| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | X | 2456.965 | 67.38 | 31.71 | 99.09 | 74.00 | 25.09 | peak | |
| 2 | * | 2456.965 | 61.15 | 31.71 | 92.86 | 54.00 | 38.86 | AVG | |
| 3 | | 2483.500 | 12.45 | 31.72 | 44.17 | 54.00 | -9.83 | AVG | |
| 4 | | 2483.500 | 27.12 | 31.72 | 58.84 | 74.00 | -15.16 | peak | |

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

(MHz)



Test Mode: TX N-20M Mode 2462 MHz

Horizontal

80 dBuV/m 3 \times 2 **30 -20** 1000.00 3550.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 6100.00 8650.00

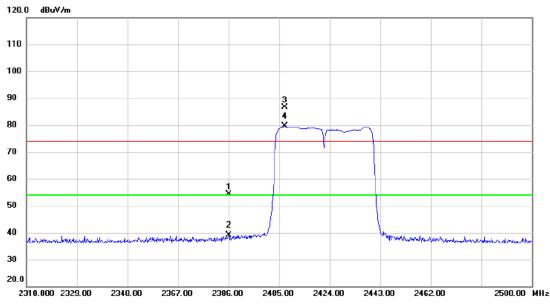
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4927.0000 | 55. 52 | -10.61 | 44. 91 | 74.00 | -29.09 | Peak | |
| 2 * | 7385. 9270 | 44.21 | -3. 98 | 40. 23 | 54.00 | -13.77 | AVG | |
| 3 | 7389. 0250 | 57. 24 | -3. 97 | 53. 27 | 74.00 | -20.73 | Peak | |

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



Test Mode: TX N-40M Mode 2422MHz

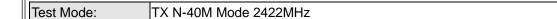
Vertical



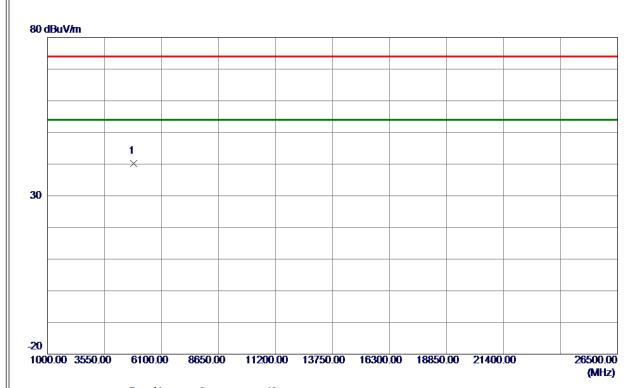
| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 2386.000 | 22.64 | 31.74 | 54.38 | 74.00 | -19.62 | peak | |
| 2 | | 2386.000 | 7.49 | 31.74 | 39.23 | 54.00 | -14.77 | AVG | |
| 3 | Χ | 2407.090 | 55.02 | 31.72 | 86.74 | 74.00 | 12.74 | peak | |
| 4 | * | 2407.090 | 47.89 | 31.72 | 79.61 | 54.00 | 25.61 | AVG | |

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





Vertical



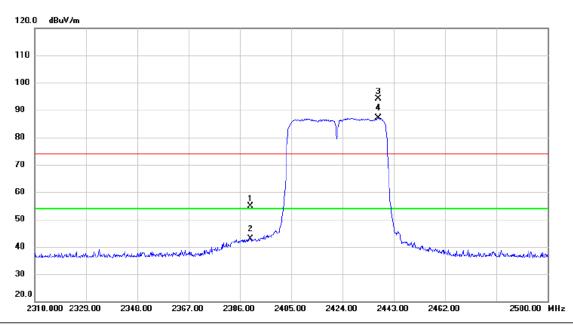
| No. | Freq. | Reading Level | Correct Factor | | | Margin | | | |
|-----|-----------|------------------|-------------------|--------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4844. 000 | 0 51.02 | -10.86 | 40. 16 | 74. 00 | -33. 84 | Peak | | |

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



Test Mode: TX N-40M Mode 2422MHz

Horizontal



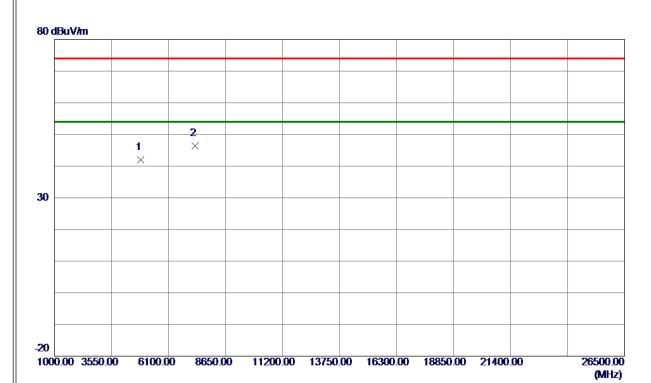
| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | | 2390.000 | 23.06 | 31.74 | 54.80 | 74.00 | -19.20 | peak | |
| Ī | 2 | | 2390.000 | 11.03 | 31.74 | 42.77 | 54.00 | -11.23 | AVG | |
| | 3 | X | 2437.300 | 62.46 | 31.71 | 94.17 | 74.00 | 20.17 | peak | |
| | 4 | * | 2437.300 | 55.33 | 31.71 | 87.04 | 54.00 | 33.04 | AVG | |

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



Test Mode: TX N-40M Mode 2422MHz

Horizontal



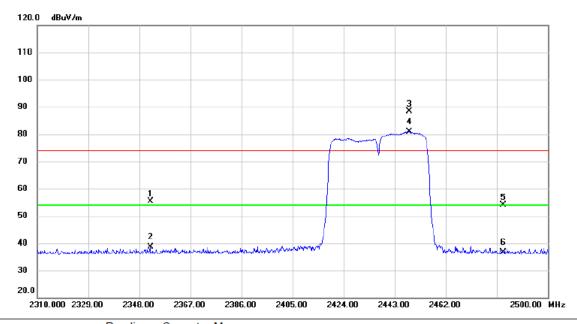
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4849. 2250 | 52. 94 | -10.85 | 42.09 | 74.00 | -31.91 | Peak | |
| 2 * | 7278. 1000 | 50. 47 | -4. 12 | 46. 35 | 74.00 | -27.65 | Peak | |

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



Test Mode: TX N-40M Mode 2437 MHz

Vertical



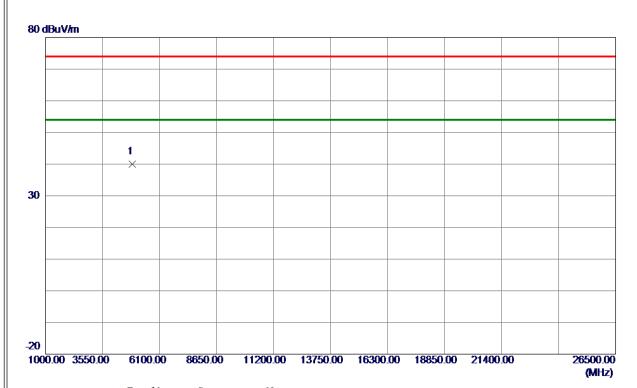
| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| - | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | | 2352.085 | 23.48 | 31.81 | 55.29 | 74.00 | -18.71 | peak | |
| - | 2 | | 2352.085 | 6.83 | 31.81 | 38.64 | 54.00 | -15.36 | AVG | |
| - | 3 | X | 2448.320 | 56.76 | 31.71 | 88.47 | 74.00 | 14.47 | peak | |
| - | 4 | * | 2448.320 | 49.29 | 31.71 | 81.00 | 54.00 | 27.00 | AVG | |
| - | 5 | | 2483.500 | 22.50 | 31.72 | 54.22 | 74.00 | -19.78 | peak | |
| - | 6 | | 2483.500 | 4.94 | 31.72 | 36.66 | 54.00 | -17.34 | AVG | |

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



Test Mode: TX N-40M Mode 2437 MHz

Vertical



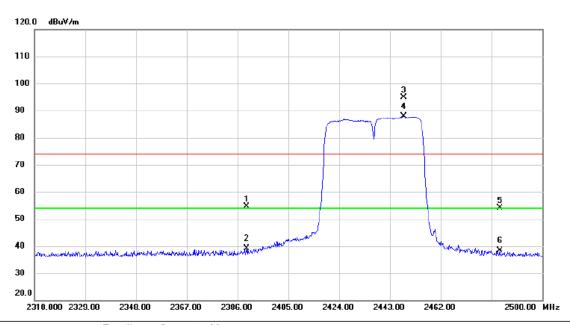
| No. | Freq. | Reading Level | Correct Measure Factor ment | | Limit | Margin | | | |
|-----|------------|------------------|--------------------------------|--------|--------|--------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4874. 7250 | 50. 73 | -10. 79 | 39. 94 | 74. 00 | -34.06 | Peak | | |

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



Test Mode: TX N-40M Mode 2437 MHz

Horizontal



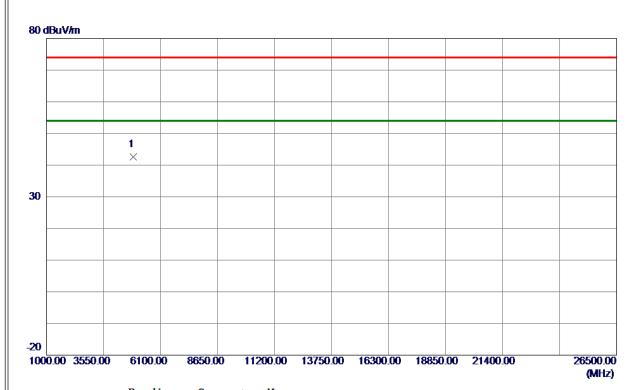
| | No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
| - | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| Ī | 1 | | 2389.325 | 22.98 | 31.74 | 54.72 | 74.00 | -19.28 | peak | |
| - | 2 | | 2389.325 | 7.28 | 31.74 | 39.02 | 54.00 | -14.98 | AVG | |
| | 3 | X | 2448.225 | 63.19 | 31.71 | 94.90 | 74.00 | 20.90 | peak | |
| - | 4 | * | 2448.225 | 56.16 | 31.71 | 87.87 | 54.00 | 33.87 | AVG | |
| - | 5 | | 2484.135 | 22.49 | 31.72 | 54.21 | 74.00 | -19.79 | peak | |
| - | 6 | | 2484.135 | 6.68 | 31.72 | 38.40 | 54.00 | -15.60 | AVG | |
| - | | | | | | | | | | |

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



Test Mode: TX N-40M Mode 2437 MHz

Horizontal



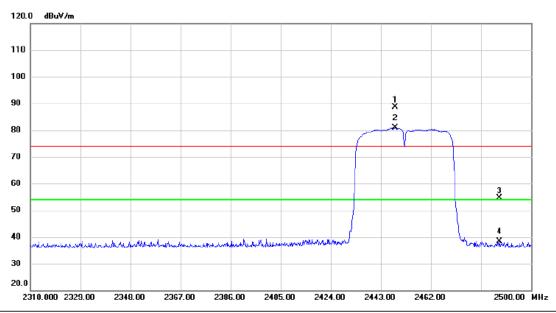
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4876. 0000 | 53.41 | -10. 79 | 42.62 | 74. 00 | -31. 38 | Peak | | |

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



Test Mode: TX N-40M Mode 2452 MHz

Vertical



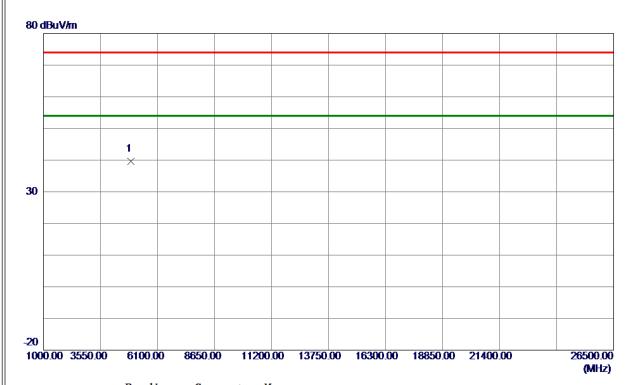
| No. M | k. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|-------|----|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 X | 24 | 48.510 | 56.91 | 31.71 | 88.62 | 74.00 | 14.62 | peak | |
| 2 * | 24 | 48.510 | 49.16 | 31.71 | 80.87 | 54.00 | 26.87 | AVG | |
| 3 | 24 | 88.030 | 22.84 | 31.71 | 54.55 | 74.00 | -19.45 | peak | |
| 4 | 24 | 88.030 | 6.76 | 31.71 | 38.47 | 54.00 | -15.53 | AVG | |

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



Test Mode: TX N-40M Mode 2452 MHz

Vertical



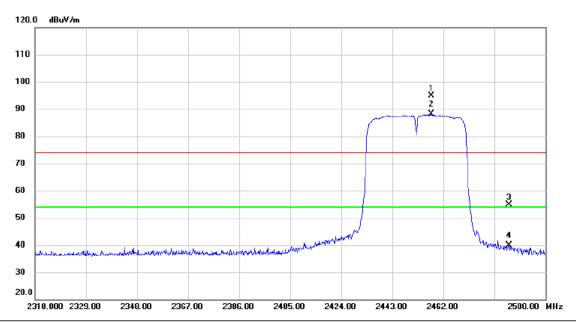
| No. | Freq. | Reading Level | Correct Measure Factor ment | | Limit | Margin | | | |
|-----|------------|------------------|--------------------------------|--------|--------|---------|----------|---------|--|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment | |
| 1 * | 4904. 0000 | 50. 38 | -10.72 | 39. 66 | 74. 00 | -34. 34 | Peak | | |

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



Test Mode: TX N-40M Mode 2452 MHz

Horizontal



| | No. | Mk | c. Freq. | Reading Level | | Measure- ment | Limit | Margin | | |
|---|-----|----|----------|------------------|-------|------------------|--------|--------|----------|---------|
| • | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | X | 2457.440 | 63.20 | 31.71 | 94.91 | 74.00 | 20.91 | peak | |
| | 2 | * | 2457.440 | 56.38 | 31.71 | 88.09 | 54.00 | 34.09 | AVG | |
| | 3 | | 2486.320 | 23.19 | 31.71 | 54.90 | 74.00 | -19.10 | peak | |
| • | 4 | | 2486.320 | 8.16 | 31.71 | 39.87 | 54.00 | -14.13 | AVG | |

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

(MHz)



Test Mode: TX N-40M Mode 2452 MHz

Horizontal

80 dBuV/m 1 **30 -20** 1000.00 3550.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 6100.00

| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4898.9500 | 52. 33 | -10.74 | 41.59 | 74.00 | -32.41 | Peak | |
| 2 * | 7338. 0250 | 52. 19 | -4.04 | 48. 15 | 74.00 | -25.85 | Peak | |

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



| APPENDIX E - BANDWIDTH | |
|------------------------|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

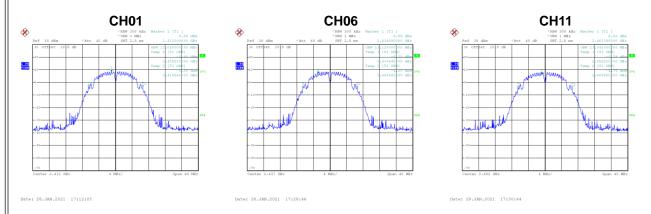


| Test Mode | TX B Mode |
|-----------|-----------|

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result |
|---------|--------------------|-------------------------|---------------------------------|----------|
| 01 | 2412 | 10.07 | 500 | Complies |
| 06 | 2437 | 10.10 | 500 | Complies |
| 11 | 2462 | 9.14 | 500 | Complies |



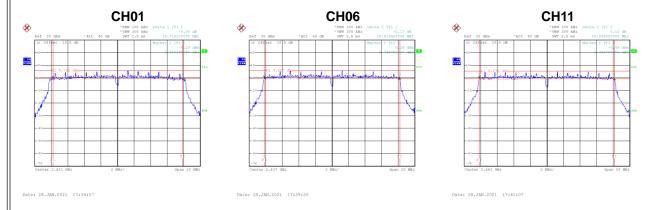
| Channel | Frequency (MHz) | 99 % Emission Bandwidth (MHz) | Result |
|---------|--------------------|-------------------------------|----------|
| 01 | 2412 | 13.04 | Complies |
| 06 | 2437 | 13.12 | Complies |
| 11 | 2462 | 13.04 | Complies |



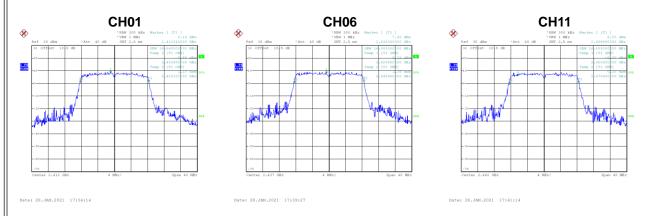


| Test Mode | TX G Mode |
|-----------|-----------|

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result |
|---------|--------------------|-------------------------|---------------------------------|----------|
| 01 | 2412 | 15.72 | 500 | Complies |
| 06 | 2437 | 16.42 | 500 | Complies |
| 11 | 2462 | 16.39 | 500 | Complies |



| Channel | Frequency (MHz) | 99 % Emission Bandwidth (MHz) | Result |
|---------|--------------------|-------------------------------|----------|
| 01 | 2412 | 16.64 | Complies |
| 06 | 2437 | 16.88 | Complies |
| 11 | 2462 | 16.80 | Complies |



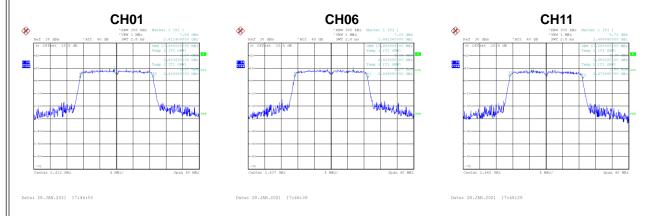


| Test Mode | TX N-20M Mode |
|------------|------------------------|
| TOOL WIDGE | I I / I I ZOIVI IVIOGO |

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result |
|---------|--------------------|-------------------------|---------------------------------|----------|
| 01 | 2412 | 16.98 | 500 | Complies |
| 06 | 2437 | 17.07 | 500 | Complies |
| 11 | 2462 | 17.11 | 500 | Complies |



| Channel | Frequency (MHz) | 99 % Emission Bandwidth (MHz) | Result |
|---------|--------------------|-------------------------------|----------|
| 01 | 2412 | 17.68 | Complies |
| 06 | 2437 | 17.68 | Complies |
| 11 | 2462 | 17.68 | Complies |



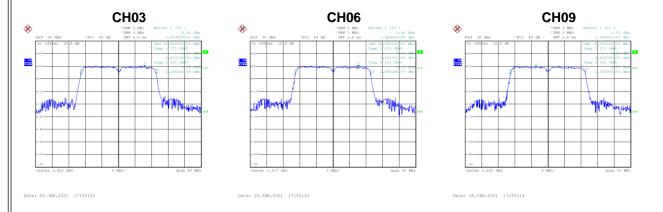


| Test Mode | TX N-40M Mode |
|------------|---|
| 100t Woodo | I I A I I I I I I I I I I I I I I I I I |

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result |
|---------|--------------------|-------------------------|---------------------------------|----------|
| 03 | 2422 | 35.60 | 500 | Complies |
| 06 | 2437 | 35.43 | 500 | Complies |
| 09 | 2452 | 35.44 | 500 | Complies |



| Channel | Frequency (MHz) | 99 % Emission Bandwidth (MHz) | Result |
|---------|--------------------|-------------------------------|----------|
| 03 | 2422 | 36.48 | Complies |
| 06 | 2437 | 36.48 | Complies |
| 09 | 2452 | 36.32 | Complies |





APPENDIX F - MAXIMUM OUTPUT POWER



| | Test Mode | TX B Mode |
|---|-----------|------------|
| ı | 103t Wood | I A D MOGC |

| Channel | Frequency (MHz) | Peak Output Power (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-------------------------|-------------------|----------|
| 01 | 2412 | 18.52 | 1.0000 | Complies |
| 06 | 2437 | 18.47 | 1.0000 | Complies |
| 11 | 2462 | 18.07 | 1.0000 | Complies |

Test Mode TX G Mode

| Channel | Frequency (MHz) | Peak Output Power (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-------------------------|-------------------|----------|
| 01 | 2412 | 24.35 | 1.0000 | Complies |
| 06 | 2437 | 24.56 | 1.0000 | Complies |
| 11 | 2462 | 21.41 | 1.0000 | Complies |

Test Mode TX N-20M Mode

| Channel | Frequency (MHz) | Peak Output Power (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-------------------------|-------------------|----------|
| 01 | 2412 | 24.46 | 1.0000 | Complies |
| 06 | 2437 | 24.43 | 1.0000 | Complies |
| 11 | 2462 | 24.48 | 1.0000 | Complies |

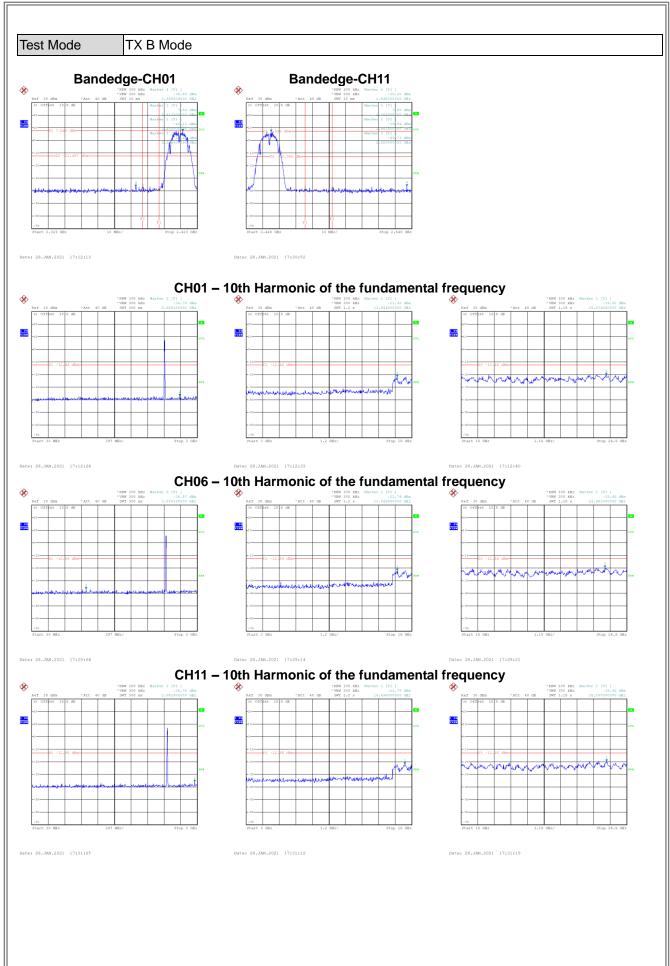
Test Mode TX N-40M Mode

| Channel | Frequency (MHz) | Peak Output Power (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-------------------------|-------------------|----------|
| 03 | 2422 | 24.19 | 1.0000 | Complies |
| 06 | 2437 | 24.13 | 1.0000 | Complies |
| 09 | 2452 | 24.29 | 1.0000 | Complies |

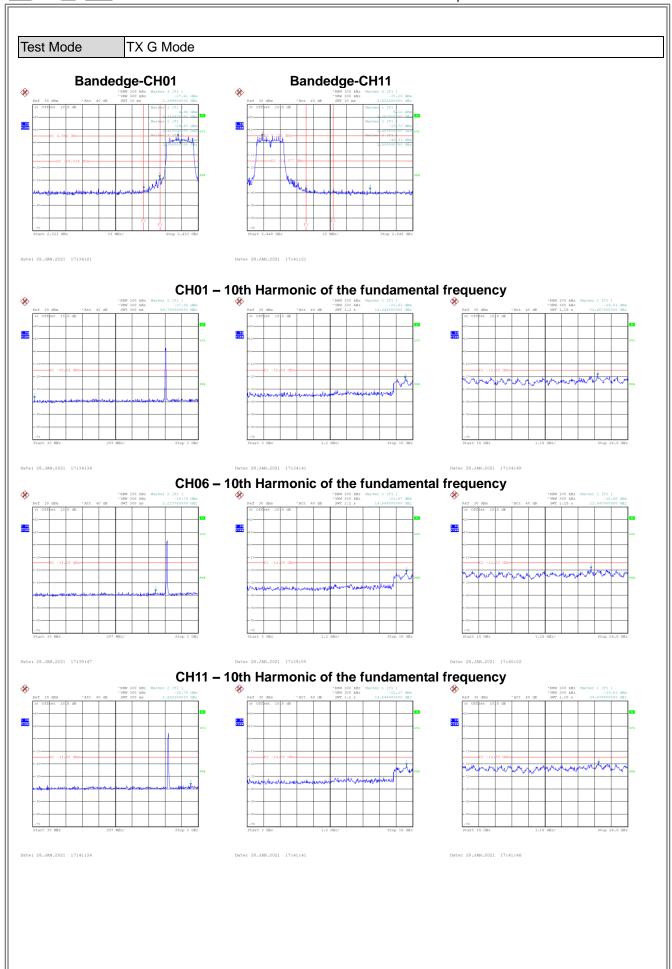


APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

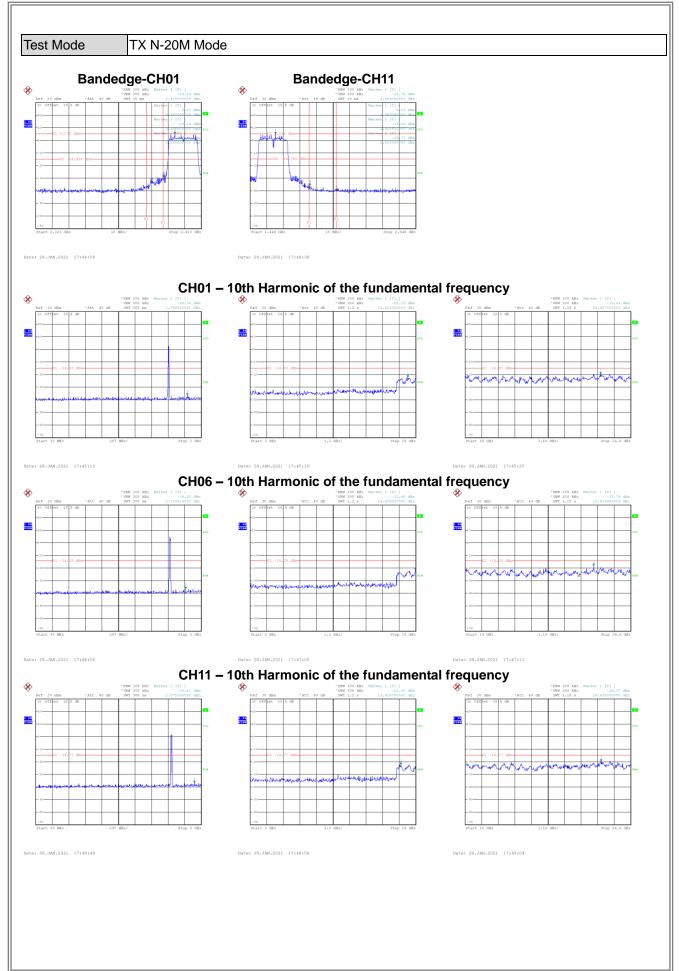




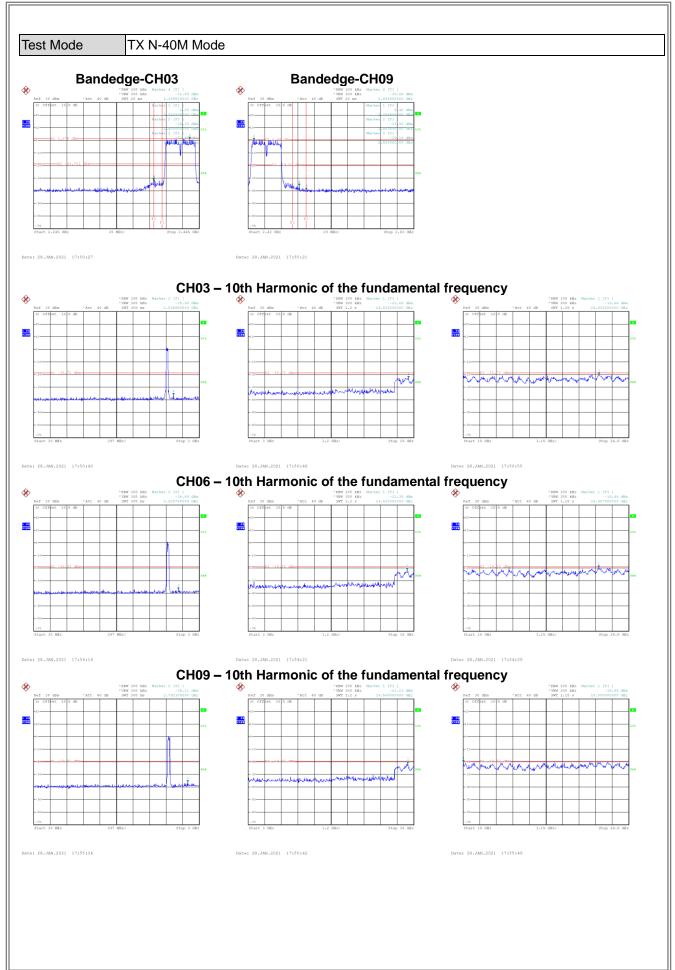














APPENDIX H - POWER SPECTRAL DENSITY



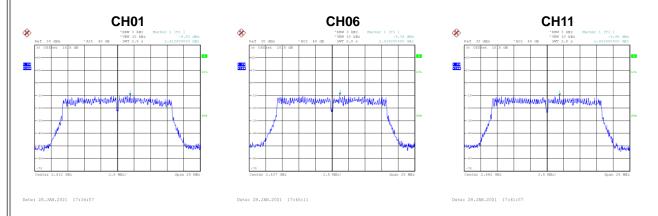
| Test Mode | TX B Mode |
|------------|--------------|
| 100t Wiodo | I A D IVIOGO |

| Channel | Frequency (MHz) | Power Spectral Density (dBm/3kHz) | Max. Limit (dBm/3kHz) | Result |
|---------|--------------------|--------------------------------------|--------------------------|----------|
| 01 | 2412 | -7.53 | 8 | Complies |
| 06 | 2437 | -4.31 | 8 | Complies |
| 11 | 2462 | -6.64 | 8 | Complies |



| | Test Mode | TX G Mode | |
|---|-------------|---------------|--|
| ш | 1000 111000 | 117. 3 111040 | |

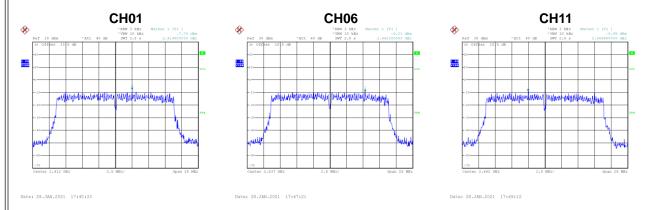
| Channel | Frequency (MHz) | Power Spectral Density (dBm/3kHz) | Max. Limit (dBm/3kHz) | Result |
|---------|--------------------|--------------------------------------|--------------------------|----------|
| 01 | 2412 | -9.82 | 8 | Complies |
| 06 | 2437 | -9.36 | 8 | Complies |
| 11 | 2462 | -9.95 | 8 | Complies |





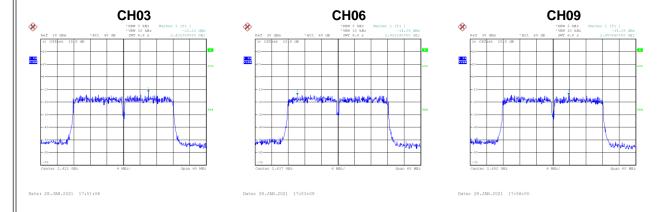
| Test Mode | TX N-20M Mode |
|-------------|--------------------|
| 1000 111000 | 17111 -0111 111040 |

| Channel | Frequency (MHz) | Power Spectral Density (dBm/3kHz) | Max. Limit (dBm/3kHz) | Result |
|---------|--------------------|--------------------------------------|--------------------------|----------|
| 01 | 2412 | -7.74 | 8 | Complies |
| 06 | 2437 | -9.23 | 8 | Complies |
| 11 | 2462 | -8.95 | 8 | Complies |



| Test Mode | TX N-40M Mode |
|-----------|---------------|
| | |

| Channel | Frequency (MHz) | Power Spectral Density (dBm/3kHz) | Max. Limit (dBm/3kHz) | Result |
|---------|--------------------|--------------------------------------|--------------------------|----------|
| 03 | 2422 | -12.21 | 8 | Complies |
| 06 | 2437 | -14.24 | 8 | Complies |
| 09 | 2452 | -14.19 | 8 | Complies |



End of Test Report