



FCC Radio Test Report

FCC ID: 2A3BD-OSRDP01

This report concerns: Class II Permissive Change

Project No. : 2403C222A

Equipment : Al Service Robot

Brand Name : ORIONSTAR

Test Model : OS-R-DP01

Series Model : N/A

Applicant : Beijing Orion Star Technology Co., Ltd

Address : Room A-2570, 2nd Floor, No. 30, Shixing Street, Shijingshan District,

Beijing, P.R. China

Manufacturer : Beijing Orion Star Technology Co., Ltd

Address : Room A-2570, 2nd Floor, No. 30, Shixing Street, Shijingshan District,

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Factory : Guangdong Mingji Hi-Tech Electronics Co.,Ltd

Address : No.12 Changfu Road, Qinghutou, Tangxia Town, Dongguan, Guangdong,

China

Date of Receipt : May 16, 2024

Date of Test : Jun. 11, 2024 ~ Jul. 25, 2024

Issued Date : Aug. 12, 2024

Report Version : R01

Test Sample: Engineering Sample No.: DG20240516219-3 for output power,

DG20240516219 for other items.

Standard(s) : FCC CFR Title 47, Part 15, Subpart C

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

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Declaration

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

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 assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

The report must not be used by the client to claim product certification, approval, or endorsement by 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: 2017 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 No. | Version | Description | Issued Date | Note |
|----------------------|---------|---|---------------|---------|
| BTL-FCCP-1-2403C222A | R00 | Original Report. | Jul. 31, 2024 | Invalid |
| BTL-FCCP-1-2403C222A | R01 | Modified the calculation of Directional gain. | Aug. 12, 2024 | Valid |



1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of A2LA:

KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| FCC CFR Title 47, Part 15, Subpart C | | | | | |
|--------------------------------------|-----------------------------------|--|----------|---------|--|
| 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 | | PASS | | |
| 15.247(b)(3) | Maximum Output Power | APPENDIX E | PASS | | |
| 15.247(d) | Conducted Spurious Emissions | | PASS | | |
| 15.247(e) | Power Spectral Density | | 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.
- (3) The RF module of this Al Service Robot has been tested and certified. Please refer to the module report as listed in the below table for the test results of the RF module.

| RF Module Model | Module Function | Report Number | Standard | |
|-------------------------------|--------------------|------------------|-----------------|--|
| Thursdayaoft Turk ay D045 COM | WLAN 2.4G | RSZ181105003-00C | FCC PART 15.247 | |
| Thundersoft TurboX D845 SOM | RLAN 5G | RSZ181105003-00A | FCC PART 15.407 | |

Thus, only the ac power line conducted emissions, radiated spurious emissions and output power were evaluated and recorded in this report. For the test results of all other test items please refer to above module test report.



2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Dalang, Dongguan City, Guangdong People's Republic of China.

BTL's Registration Number for FCC: 747969 BTL's Designation Number for FCC: CN1377

2.2 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 95.45% 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 | 2.88 |

B. Radiated emissions test:

| Test Site | Method | Measurement Frequency Range | <i>U</i> ,(dB) | |
|-----------|--------|-----------------------------|----------------|--|
| DG-CB01 | CISPR | 9kHz ~ 30MHz | 2.36 | |

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U,(dB) |
|-----------|----------------|-----------------------------|---------------|--------|
| DG-CB03 | 30MHz ~ 200MHz | V | 4.40 | |
| | CISPR | 30MHz ~ 200MHz | Н | 3.62 |
| (3m) | CIOPK | 200MHz ~ 1,000MHz | V | 4.58 |
| | | 200MHz ~ 1,000MHz | Н | 3.98 |

| Test Site | Method | Measurement Frequency Range | U,(dB) |
|---------------|-------------|-----------------------------|--------|
| DG-CB03 CISPR | 1GHz ~ 6GHz | 4.08 | |
| (3m) | CIOPK | 6GHz ~ 18GHz | 4.62 |

| Test Site | Method | Measurement Frequency Range | U,(dB) |
|-----------------|--------|-----------------------------|--------|
| DG-CB03 (1m) | CISPR | 18 ~ 26.5 GHz | 3.36 |

C. Other Measurement:

| Test Item | Uncertainty |
|----------------------|-------------|
| Maximum Output Power | 1.3 dB |
| Temperature | 0.8 °C |
| Humidity | 2.2 % |

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



2.3 TEST ENVIRONMENT CONDITIONS

| Test Item | Temperature | Humidity | Test Voltage | Tested By | Test Date |
|--------------------------------------|-------------|----------|--------------|-------------|---------------|
| AC Power Line Conducted Emissions | 25°C | 50% | AC 120V/60Hz | Hayden Chen | Jul. 24, 2024 |
| Radiated Emissions-9kHz to 30 MHz | 24°C | 48% | AC 120V/60Hz | Hayden Chen | Jul. 24, 2024 |
| Radiated Emissions-30MHz to 1000MHz | 25°C | 53% | AC 120V/60Hz | Chen Mo | Jul. 22, 2024 |
| Radiated Emissions-Above | 25°C | 55% | AC 120V/60Hz | Jensen Zhou | Jul. 19, 2024 |
| 1000MHz | 25°C | 53% | AC 120V/60Hz | Chen Mo | Jul. 22, 2024 |
| Maximum Output Power | 22°C | 54% | DC 12V | Steve Zhou | Jul. 05, 2024 |



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

| Equipment | Al Service Robot |
|-------------------------|---|
| Brand Name | ORIONSTAR |
| Test Model | OS-R-DP01 |
| Series Model | N/A |
| Model Difference(s) | N/A |
| Software Version | V10.1 |
| Hardware Version | V1.3 |
| | Charging Pile: AC Mains. |
| Power Source | Robot: 1# Supplied from Rechargeable Li-ion Battery. Model:7S8P |
| | 2# DC Voltage supplied from Charging Pile. Model: OS-CS03 |
| Power Rating | Charging Pile: I/P: 100-240VAC ~ 50/60Hz O/P: DC 32V, 7.8A |
| r ower realing | Robot: 1# Rated Voltage: 25.55V, 24.3Ah 2# DC 32V, 7.8A |
| 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 144.4 Mbps |
| Maximum Output Power | IEEE 802.11g: 23.77 dBm (0.2382 W) |
| Notes | |

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) | | | | | | |
|---------|--|---------|--------------------|---------|--------------------|---------|--------------------|
| 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 | SPEED | N/A | FPC | N/A | 0.37 |
| 2 | SPEED | N/A | FPC | N/A | 1.32 |

Note:

This EUT supports CDD, and all antenna gains are not equal, so Directional gain= $10\log[(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2/N]dBi$, that is Directional gain= $10\log[(10^{0.37/20}+10^{1.32/20})^2/2]dBi$ =3.87.



4. Table for Antenna Configuration:

| Operating Mode TX Mode | 2TX |
|------------------------|--------------------|
| IEEE 802.11b | V(Ant. 1 + Ant. 2) |
| IEEE 802.11g | V(Ant. 1 + Ant. 2) |
| IEEE 802.11n(HT20) | V(Ant. 1 + Ant. 2) |



3.2 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(HT20) Mode Channel 01/06/11 |
| Mode 4 | TX G Mode Channel 01 |

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 4 | TX G Mode Channel 01 | | | |

| Radiated emissions test - Below 1GHz | | | | |
|--------------------------------------|----------------------|--|--|--|
| Final Test Mode | Description | | | |
| Mode 4 | TX G Mode Channel 01 | | | |

| 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(HT20) Mode Channel 01/06/11 | | | |

| Maximum Output Power 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(HT20) Mode Channel 01/06/11 | | | |



NOTE:

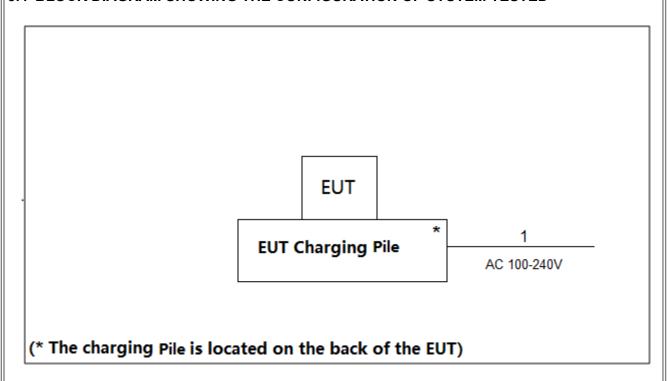
- (1) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
- (2) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX G Mode Channel 01 is found to be the worst case and recorded.
- (3) For radiated emission above 1 GHz test, the spurious points of 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.
- (4) For radiated emission Harmonic 18-26.5GHz test, only tested the worst case and recorded.
- (5) For radiated emission above 1 GHz test, the polarization of Vertical and Horizontal are evaluated, the worst case is Horizontal and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

| Test Software Version | QRCT_V4.0 | | |
|-----------------------|-----------|------|------|
| Frequency (MHz) | 2412 | 2437 | 2462 |
| IEEE 802.11b | 14 | 14 | 14 |
| IEEE 802.11g | 15 | 15 | 15 |
| IEEE 802.11n(HT20) | 13 | 13 | 13 |



3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 SUPPORT UNITS

| Item | Equipment | Brand | Model No. | Series No. |
|------|-----------|-------|-----------|------------|
| - | - | - | - | - |

| Item | Cable Type | Shielded Type | Ferrite Core | Length |
|------|------------|---------------|--------------|--------|
| 1 | AC Cable | NO | NO | 0.5m |

3.6 CUSTOMER INFORMATION DESCRIPTION

- 1) The antenna gain is provided by the manufacturer.
- 2) Except for AC power line conducted emissions and radiated emissions, the results of all test items include cable losses. All cable losses are provided by the testing laboratory.



4. AC POWER LINE CONDUCTED EMISSIONS

4.1 LIMIT

| Frequency of Emission (MHz) | Limit (dBμV) | | |
|-----------------------------|--------------|-----------|--|
| Frequency of Emission (MHZ) | 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.

4.2 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.

The following table is the setting of the receiver:

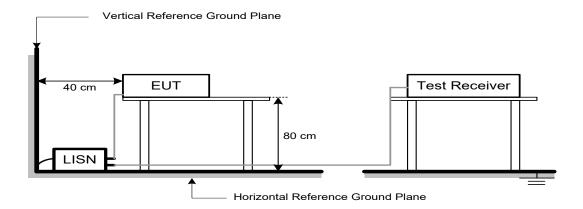
| Receiver Parameters | Setting |
|---------------------|----------|
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

4.3 DEVIATION FROM TEST STANDARD

No deviation.



4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS

Please refer to the APPENDIX A.



5. RADIATED EMISSIONS

5.1 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) | Band edge/ Harmonic at 3m (dBµV/m) | | Harmonic at 1m (dBµV/m) | |
|-----------------|---------------------------------------|---------|-------------------------|---------------|
| , , , | Peak | Average | Peak | Average |
| Above 1000 | 74 | 54 | 83.5 (Note 4) | 63.5 (Note 4) |

NOTE:

- (1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

(4)

$$FS_{\text{limit}} = FS_{\text{max}} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log ($d_{limit}/d_{measure}$)=20log (3/1)=9.5 dB.



5.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b. The measuring distance of 3 m or 1m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m 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.

The following table is the setting of the receiver:

| Spectrum Parameters | Setting |
|------------------------|---------------------------------|
| Start ~ Stop Frequency | 9 kHz~150 kHz for RBW 200 Hz |
| Start ~ Stop Frequency | 0.15 MHz~30 MHz for RBW 9 kHz |
| Start ~ Stop Frequency | 30 MHz~1000 MHz for RBW 100 kHz |

| Spectrum Parameters | Setting | |
|-------------------------------|------------------------------|--|
| Start Frequency | 1000 MHz | |
| Stop Frequency | 10th carrier harmonic | |
| RBW / VBW | 1 MHz / 3 MHz for PK value | |
| (Emission in restricted band) | 1 MHz / 1/T Hz for AVG value | |

| Receiver Parameters | Setting | |
|------------------------|-------------------------------------|--|
| 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 | |
| Start ~ Stop Frequency | 1 GHz~26.5 GHz for PK/AVG detector | |

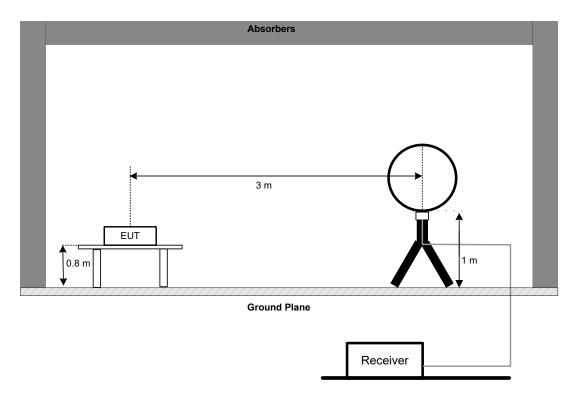


5.3 DEVIATION FROM TEST STANDARD

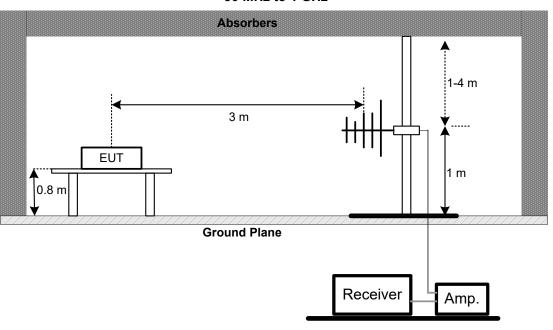
No deviation.

5.4 TEST SETUP

9 kHz to 30 MHz

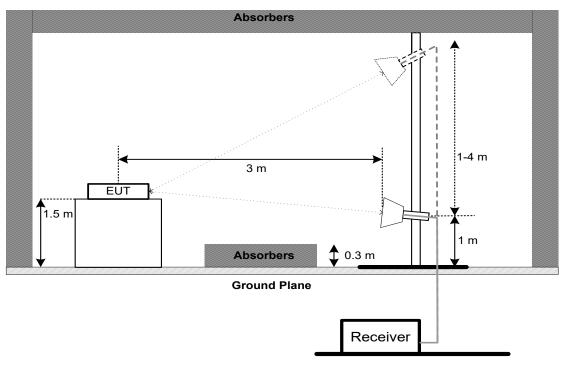


30 MHz to 1 GHz

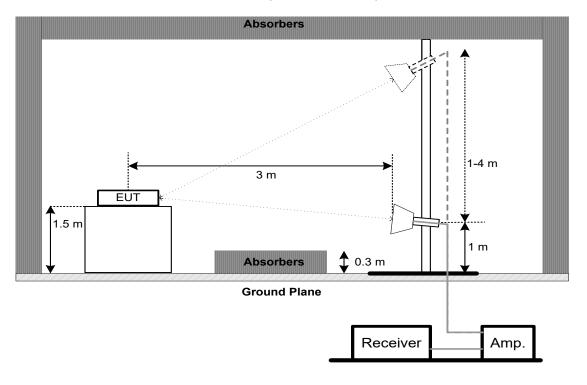




Above 1 GHz Band edge

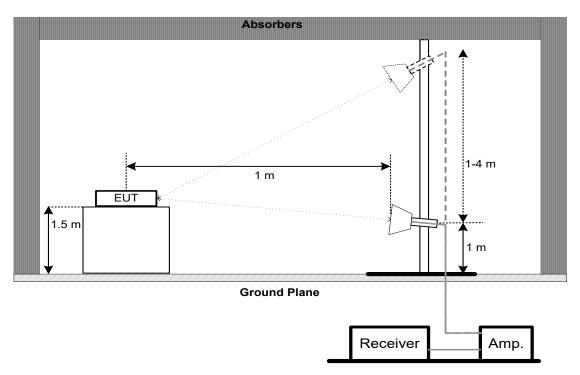


Harmonic(1 GHz to 18 GHz)





Harmonic(18 GHz to 26.5 GHz)



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 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.

5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

5.8 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.



6. MAXIMUM OUTPUT POWER

6.1 LIMIT

| Section | Test Item | Limit | |
|------------------|----------------------|--------------------------|--|
| FCC 15.247(b)(3) | Maximum Output Power | 1.0000 Watt or 30.00 dBm | |

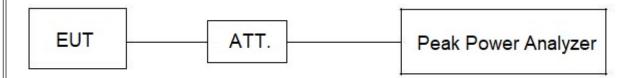
6.2 TEST PROCEDURE

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

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX E.



7. 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 | Dec. 22, 2024 | | |
| 2 | TWO-LINE V-NETWORK | R&S | ENV216 | 101447 | Dec. 22, 2024 | | |
| 3 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A | | |
| 4 | Cable | N/A | SFT205-NMNM-9M-001 | 9M | Nov. 27, 2024 | | |
| 5 | 643 Shield Room | ETS | 6*4*3 | N/A | N/A | | |

| | Radiated Emissions - 9 kHz to 30 MHz | | | | | |
|------|--------------------------------------|--------------|---------------------------|---------------|------------------|--|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until | |
| 1 | Active Loop Antenna | Schwarzbeck | FMZB 1513-60B | 1513-60 B-034 | Mar. 30, 2025 | |
| 2 | MXE EMI Receiver | Keysight | N9038A | MY56400091 | Dec. 22, 2024 | |
| 3 | Cable | N/A | RW2350-3.8A-NMB M-1.5M | N/A | Jun. 09, 2025 | |
| 4 | Cable | N/A | RG 213/U | N/A | Jun. 09, 2025 | |
| 5 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A | |
| 6 | 966 Chamber room | ETS | 9*6*6 | N/A | May 16, 2025 | |

| | 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 | 1462 | Dec. 13, 2024 | | |
| 2 | Attenuator | EMC INSTRUMENT | EMCI-N-6-06 | AT-06009 | Dec. 13, 2024 | | |
| 3 | Preamplifier | EMC INSTRUMENT | EMC001330 | 980998 | Nov. 17, 2024 | | |
| 4 | Cable | RegalWay | LMR400-NMNM -12.5m | N/A | Jun. 06, 2025 | | |
| 5 | Cable | RegalWay | LMR400-NMNM -3m | N/A | Jun. 06, 2025 | | |
| 6 | Cable | RegalWay | LMR400-NMNM -0.5m | N/A | Jun. 06, 2025 | | |
| 7 | Receiver | Agilent | N9038A | MY52130039 | Dec. 22, 2024 | | |
| 8 | Filter | STI | STI15-9923 | N/A | May 31, 2025 | | |
| 9 | Positioning Controller | MF | MF-7802 | N/A | N/A | | |
| 10 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A | | |
| 11 | 966 Chamber room | CM | 9*6*6 | N/A | May 16, 2025 | | |



| | Radiated Emissions - Above 1 GHz | | | | | | |
|------|----------------------------------|-------------------|---------------------------------|------------|------------------|--|--|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until | | |
| 1 | MXA Signal Analyzer | KEYSIGHT | N9020B | MY63380204 | Nov. 17, 2024 | | |
| 2 | Receiver | Agilent | N9038A | MY52130039 | Dec. 22, 2024 | | |
| 3 | Preamplifier | EMC INSTRUMENT | EMC118A45SE | 980888 | Nov. 17, 2024 | | |
| 4 | EXA Spectrum Analyzer | Keysight | N9010A | MY55150209 | May 31, 2025 | | |
| 5 | Double Ridged Guide Antenna | ETS | 3115 | 75789 | Jun. 15, 2025 | | |
| 6 | Cable | RegalWay | RWLP50-4.0A-SMS M-12.5M | N/A | Jul. 03, 2025 | | |
| 7 | Cable | RegalWay | RWLP50-4.0A-NM RASM-2.5M | N/A | Jul. 03, 2025 | | |
| 8 | Cable | RegalWay | RWLP50-4.0A-NM RASMRA-0.8M | N/A | Jul. 03, 2025 | | |
| 9 | Preamplifier | EMC INSTRUMENT | EMC184045SE | 980905 | Nov. 19, 2024 | | |
| 10 | Cable | RegalWay | RWLP50-2.6A-2.92 M2.92M-1.1M | N/A | Jul. 26, 2024 | | |
| 11 | Cable | Tonscend | HF160-KMKM-3M | N/A | Jul. 26, 2024 | | |
| 12 | Broad-Band Horn Antenna | Schwarzbeck | BBHA9170(3m) | 9170-319 | Jun. 16, 2025 | | |
| 13 | 966 Chamber room | СМ | 9*6*6 | N/A | May 19, 2025 | | |
| 14 | Attenuator | Talent Microwave | TA10A2-S-18 | N/A | N/A | | |
| 15 | Filter | STI | STI15-9912 | N/A | May 31, 2025 | | |
| 16 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A | | |
| 17 | 966 Chamber room | CM | 9*6*6 | N/A | May 16, 2025 | | |
| 18 | Positioning Controller | MF | MF-7802 | N/A | N/A | | |

| | Maximum Output Power | | | | | | | | | |
|----------------|--|------------------|-------------|------------|--------------|--|--|--|--|--|
| Item | Item Kind of Equipment Manufacturer Type No. Serial No. Calibrated uni | | | | | | | | | |
| 1 | Peak Power Analyzer | Keysight | 8990B | MY51000506 | May 31, 2025 | | | | | |
| 2 | Wideband power sensor | Keysight | N1923A | MY58310004 | May 31, 2025 | | | | | |
| 3 Attenuator T | | Talent Microwave | TA10A2-S-18 | N/A | N/A | | | | | |

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

All calibration period of equipment list is one year.



8. EUT TEST PHOTO



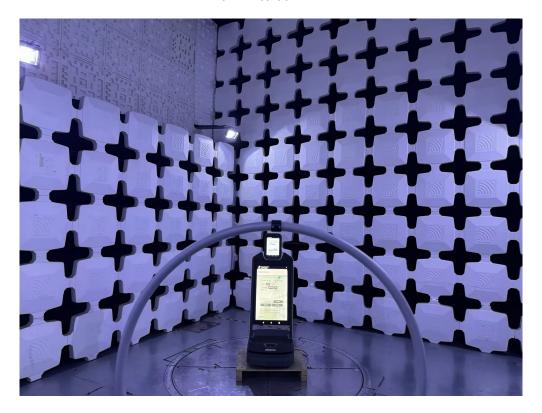






Radiated Emissions Test Photos

9 kHz to 30 MHz

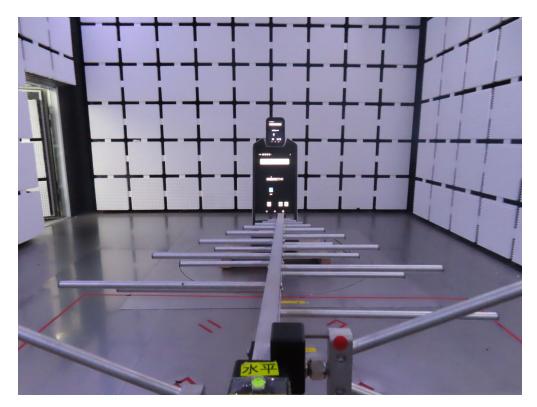


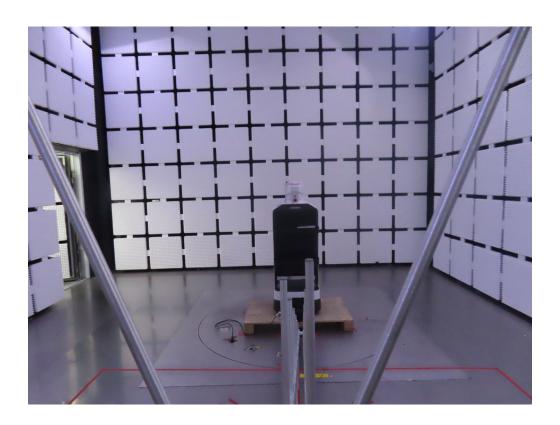




Radiated Emissions Test Photos

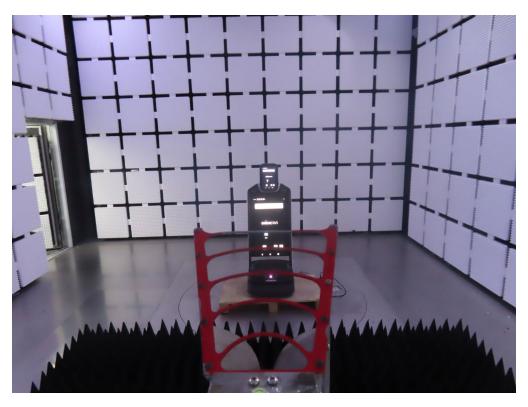
30 MHz to 1 GHz

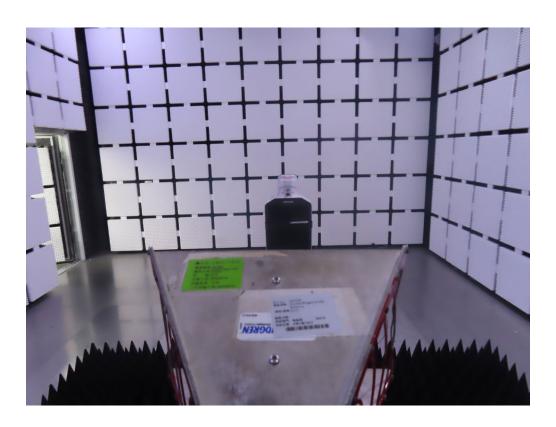






Radiated Emissions Test Photos Harmonic (1 GHz to 18 GHz) & Band edge



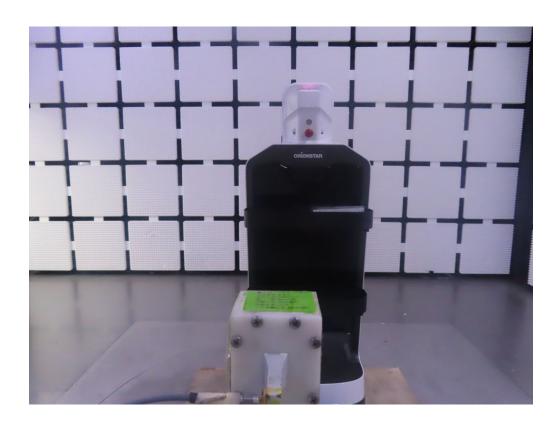




Radiated Emissions Test Photos

Harmonic (18 GHz to 26.5 GHz)



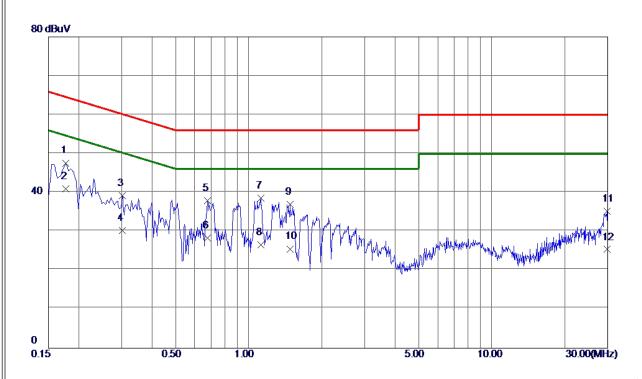




APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS





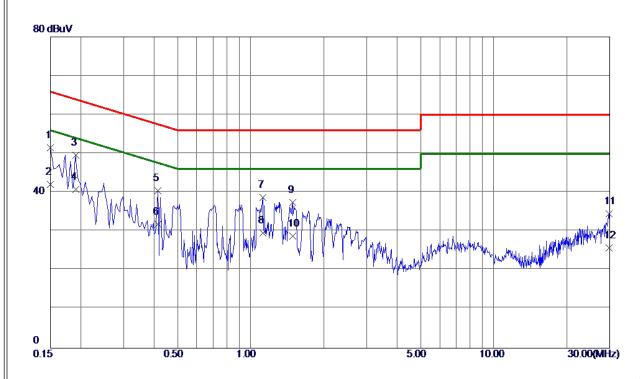


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|----------|------------------|-------------------|-----------------|--------|----------------|----------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | 0. 1770 | 37. 63 | 9. 97 | 47. 60 | 64. 63 | -17. 03 | QP | |
| 2 * | 0. 1770 | 30. 97 | 9. 97 | 40. 94 | 54. 63 | -13. 69 | AVG | |
| 3 | 0.3030 | 29. 09 | 10. 18 | 39. 27 | 60. 16 | -20.89 | QP | |
| 4 | 0. 3030 | 20.00 | 10. 18 | 30. 18 | 50. 16 | -19. 98 | AVG | |
| 5 | 0.6765 | 26. 90 | 10. 96 | 37. 86 | 56. 00 | -18. 14 | QP | |
| 6 | 0.6765 | 17. 40 | 10. 96 | 28. 36 | 46.00 | -17. 64 | AVG | |
| 7 | 1. 1220 | 27. 21 | 11. 29 | 38. 50 | 56.00 | −17. 50 | QP | |
| 8 | 1. 1220 | 15. 29 | 11. 29 | 26. 58 | 46.00 | -19. 42 | AVG | |
| 9 | 1. 4819 | 25. 75 | 11. 27 | 37. 02 | 56.00 | -18. 98 | QP | |
| 10 | 1. 4819 | 14. 25 | 11. 27 | 25. 52 | 46.00 | -20. 48 | AVG | |
| 11 | 29. 8320 | 18. 89 | 16. 26 | 35. 15 | 60.00 | -24. 85 | QP | |
| 12 | 29. 8320 | 9. 10 | 16. 26 | 25. 36 | 50.00 | -24. 64 | AVG | |

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







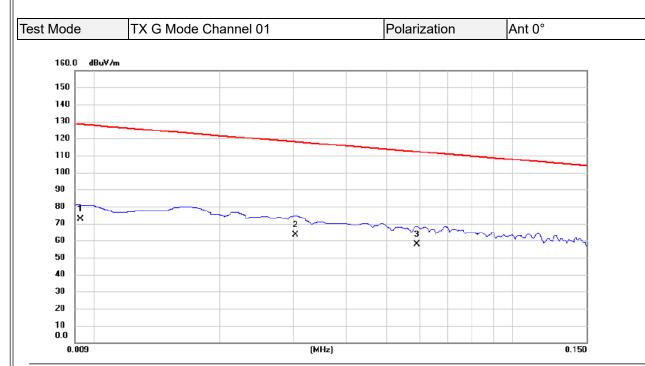
| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|----------|------------------|-------------------|-----------------|--------|------------------|----------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | 0. 1500 | 41. 55 | 9. 93 | 51. 48 | 66.00 | -14. 52 | QP | |
| 2 | 0. 1500 | 32. 10 | 9. 93 | 42. 03 | 56.00 | -13. 97 | AVG | |
| 3 | 0. 1905 | 39. 58 | 9. 94 | 49. 52 | 64. 01 | -14. 49 | QP | |
| 4 * | 0. 1905 | 30. 80 | 9. 94 | 40. 74 | 54.01 | -13. 27 | AVG | |
| 5 | 0. 4155 | 30. 06 | 10. 40 | 40. 46 | 57. 54 | −17 . 0 8 | QP | |
| 6 | 0. 4155 | 21. 39 | 10. 40 | 31. 79 | 47. 54 | -15. 75 | AVG | |
| 7 | 1. 1220 | 27. 52 | 11. 25 | 38. 77 | 56.00 | -17. 23 | QP | |
| 8 | 1. 1220 | 18. 40 | 11. 25 | 29. 65 | 46.00 | -16. 35 | AVG | |
| 9 | 1. 4865 | 26. 29 | 11. 22 | 37. 51 | 56.00 | -18 . 49 | QP | |
| 10 | 1. 4865 | 17. 59 | 11. 22 | 28. 81 | 46.00 | -17. 19 | AVG | |
| 11 | 29. 8410 | 18. 42 | 16. 21 | 34. 63 | 60.00 | -25. 37 | QP | |
| 12 | 29. 8410 | 9. 50 | 16. 21 | 25. 71 | 50.00 | -24. 29 | AVG | |

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



APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

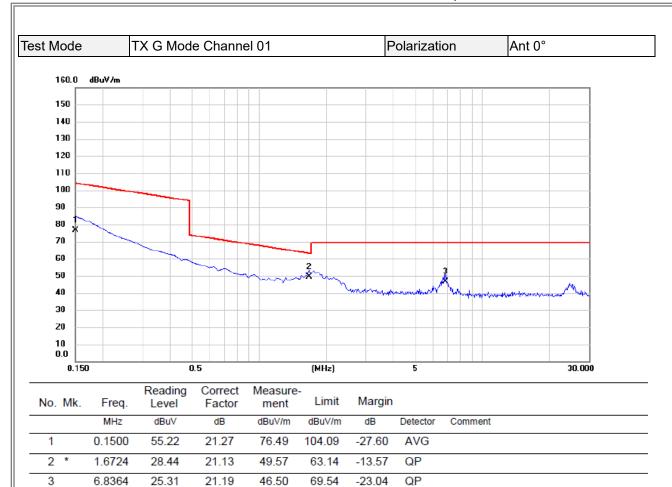




| | No. | Mk. | Freq. | Reading Level | | Measure- ment | Limit | Margin | | |
|---|-----|-----|--------|------------------|-------|------------------|--------|--------|----------|---------|
| _ | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| _ | 1 | | 0.0093 | 52.36 | 20.43 | 72.79 | 128.24 | -55.45 | AVG | |
| _ | 2 | | 0.0303 | 42.36 | 21.10 | 63.46 | 117.98 | -54.52 | AVG | |
| _ | 3 | * | 0.0590 | 36.59 | 21.23 | 57.82 | 112.19 | -54.37 | AVG | |

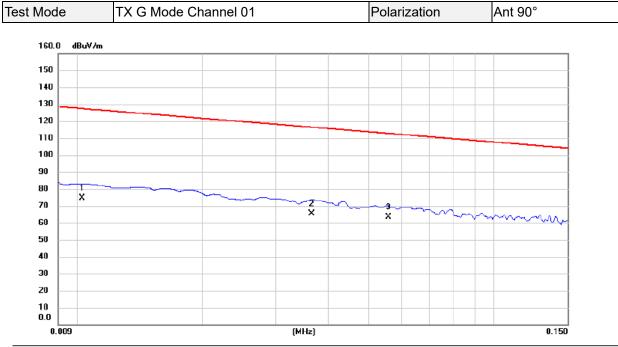
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.





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

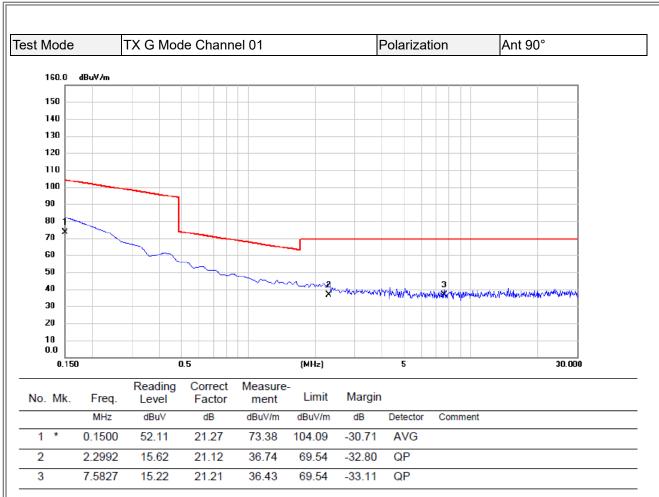




| | No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Margin | | |
|---|-----|-----|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| _ | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| | 1 | | 0.0103 | 54.23 | 20.51 | 74.74 | 127.35 | -52.61 | AVG | |
| | 2 | | 0.0366 | 44.25 | 21.13 | 65.38 | 116.34 | -50.96 | AVG | |
| - | 3 | * | 0.0558 | 42.33 | 21.22 | 63.55 | 112.67 | -49.12 | AVG | |

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



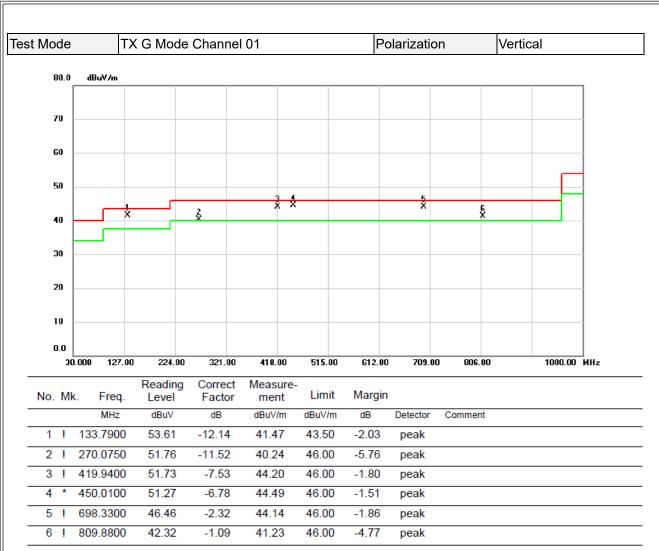


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



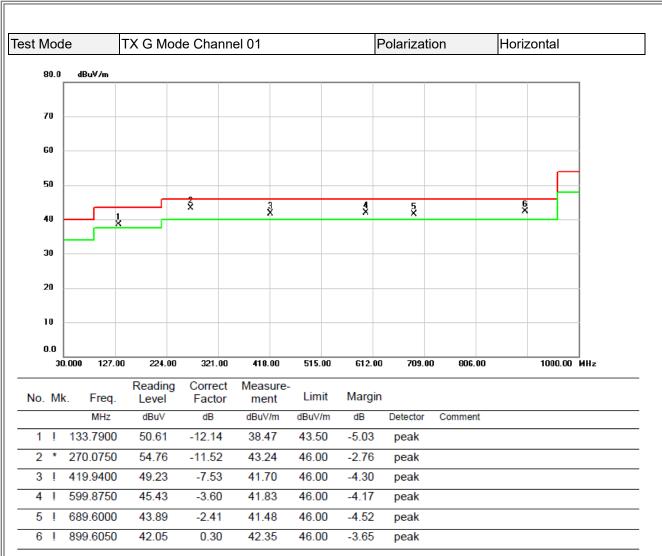
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ





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





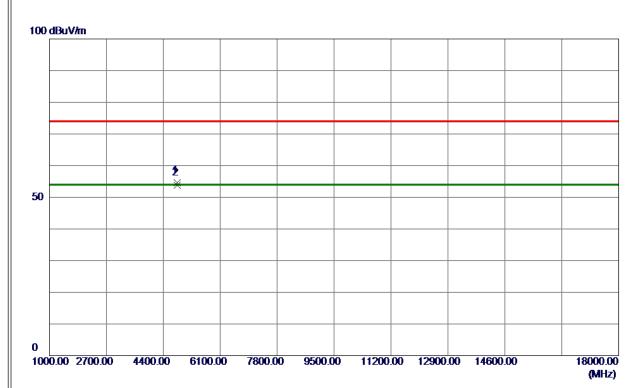
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ





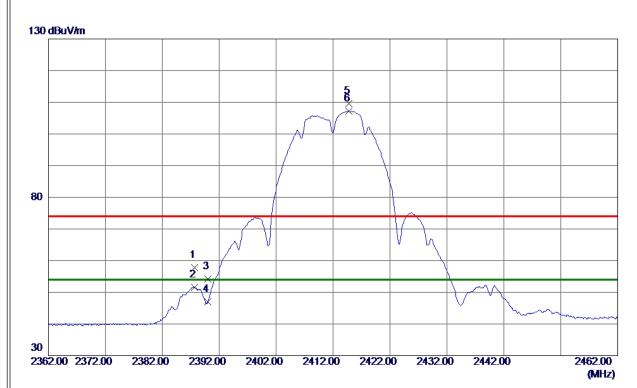


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4823. 9750 | 51. 78 | 2. 84 | 54. 62 | 74.00 | -19. 38 | Peak | |
| 2 * | 4824. 0000 | 50. 93 | 2.84 | 53. 77 | 54.00 | -0. 23 | AVG | |

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



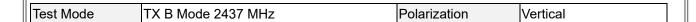


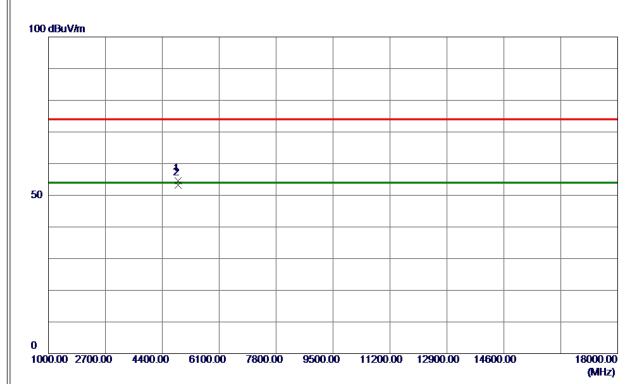


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2387. 6500 | 50 . 12 | 7. 70 | 57. 82 | 74.00 | -16. 18 | Peak | |
| 2 | 2387. 6500 | 43. 92 | 7. 70 | 51. 62 | 54.00 | -2. 38 | AVG | |
| 3 | 2390. 0000 | 46. 52 | 7. 70 | 54 . 22 | 74.00 | -19. 78 | Peak | |
| 4 | 2390. 0000 | 39. 29 | 7. 70 | 46. 99 | 54.00 | −7. 01 | AVG | |
| 5 | 2414. 7500 | 101. 91 | 7. 73 | 109. 64 | 74.00 | 35. 64 | Peak | No Limit |
| 6 * | 2414. 7500 | 99. 45 | 7. 73 | 107. 18 | 54.00 | 53. 18 | AVG | No Limit |

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





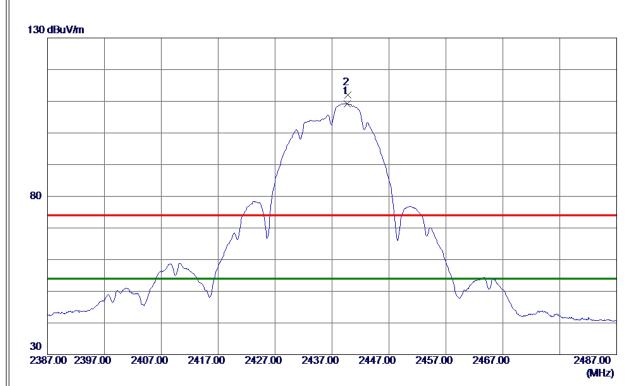


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4873. 9500 | 51. 64 | 2. 96 | 54. 60 | 74.00 | -19. 40 | Peak | |
| 2 * | 4874. 0000 | 50. 22 | 2. 96 | 53. 18 | 54. 00 | -0. 82 | AVG | |

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



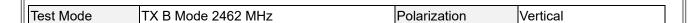


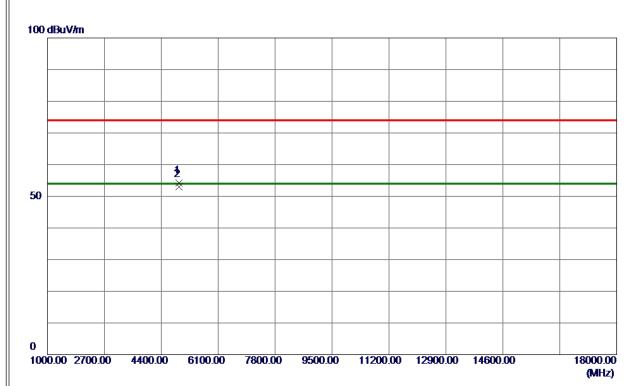


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2439. 7000 | 101. 53 | 7. 76 | 109. 29 | 54.00 | 55. 29 | AVG | No Limit |
| 2 | 2439. 8000 | 104. 14 | 7. 76 | 111. 90 | 74.00 | 37. 90 | Peak | No Limit |

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





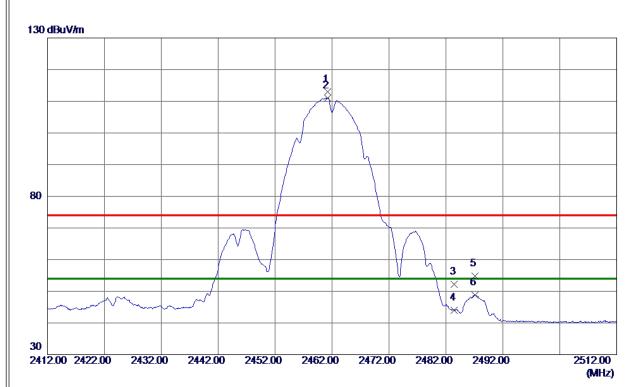


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4924. 0000 | 51. 08 | 3. 07 | 54. 15 | 74.00 | -19.85 | Peak | |
| 2 * | 4924. 0250 | 49. 92 | 3. 07 | 52. 99 | 54. 00 | -1. 01 | AVG | |

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



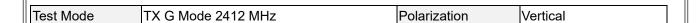


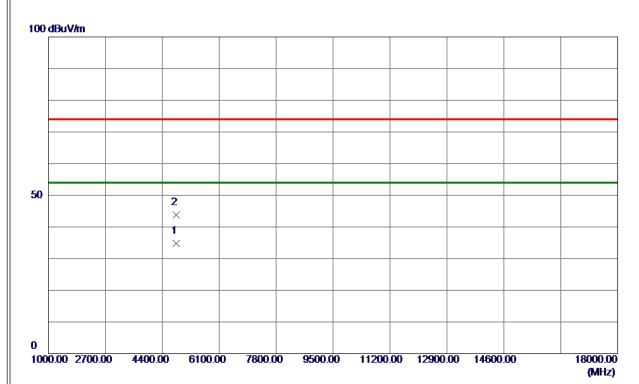


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------------|---------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2461. 2000 | 105. 21 | 7. 78 | 112. 99 | 74.00 | 38. 99 | Peak | No Limit |
| 2 * | 2461. 2500 | 103. 28 | 7. 78 | 111. 06 | 54.00 | 57. 06 | AVG | No Limit |
| 3 | 2483. 5000 | 44. 30 | 7. 81 | 52. 11 | 74.00 | -21. 89 | Peak | |
| 4 | 2483. 5000 | 36. 23 | 7. 81 | 44. 04 | 54.00 | -9. 96 | AVG | |
| 5 | 2487. 1000 | 46. 92 | 7. 81 | 54. 73 | 74.00 | -19. 27 | Peak | |
| 6 | 2487. 1000 | 40. 91 | 7. 81 | 48. 72 | 54.00 | -5. 28 | AVG | |

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





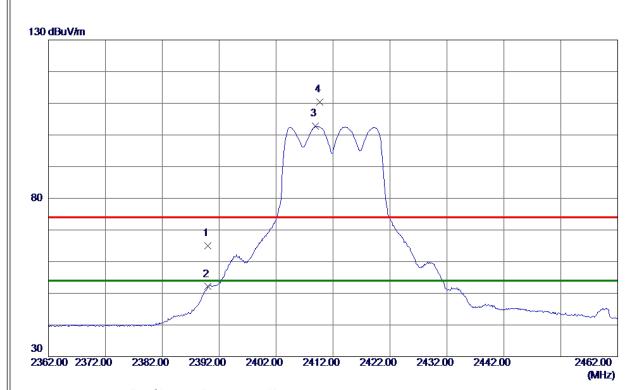


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4824. 2000 | 32. 03 | 2.84 | 34. 87 | 54.00 | -19. 13 | AVG | |
| 2 | 4824, 4250 | 41. 00 | 2, 84 | 43.84 | 74. 00 | -30. 16 | Peak | |

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



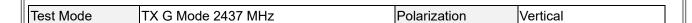


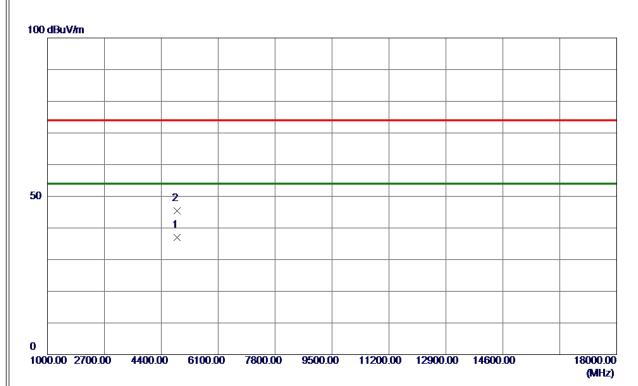


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2390. 0000 | 57. 39 | 7. 70 | 65. 09 | 74.00 | -8. 91 | Peak | |
| 2 | 2390. 0000 | 44. 40 | 7. 70 | 52. 10 | 54.00 | -1. 90 | AVG | |
| 3 * | 2408. 9000 | 95. 00 | 7. 72 | 102. 72 | 54.00 | 48. 72 | AVG | No Limit |
| 4 | 2409. 6500 | 102. 63 | 7. 72 | 110. 35 | 74.00 | 36. 35 | Peak | No Limit |

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





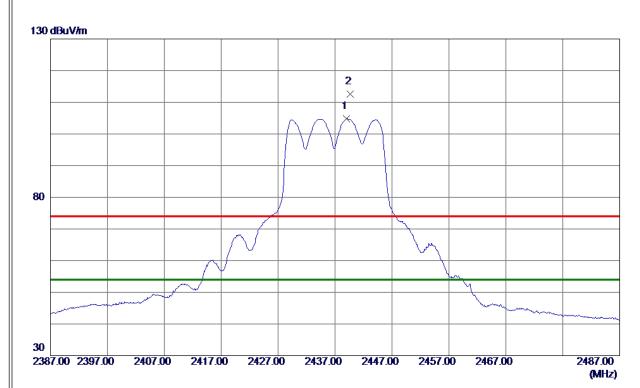


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4873. 8750 | 33. 95 | 2. 96 | 36. 91 | 54.00 | -17. 09 | AVG | |
| 2 | 4873, 9250 | 42, 42 | 2, 96 | 45. 38 | 74.00 | -28, 62 | Peak | |

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



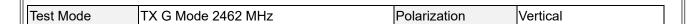


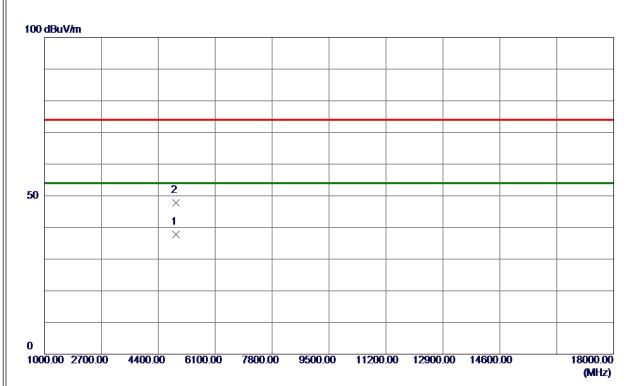


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2439. 0500 | 96. 98 | 7. 76 | 104. 74 | 54.00 | 50. 74 | AVG | No Limit |
| 2 | 2439.6500 | 104. 77 | 7. 76 | 112. 53 | 74.00 | 38. 53 | Peak | No Limit |

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





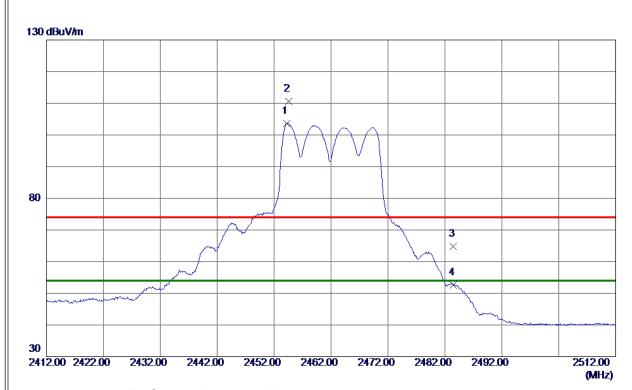


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4923. 8000 | 34. 65 | 3. 07 | 37. 72 | 54.00 | -16. 28 | AVG | |
| 2 | 4924. 6000 | 44. 67 | 3. 07 | 47. 74 | 74. 00 | -26. 26 | Peak | |

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



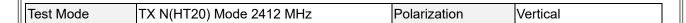


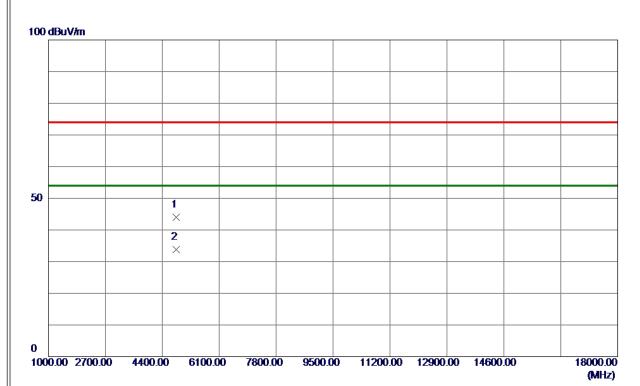


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------------|--------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2454. 2500 | 95. 89 | 7. 77 | 103. 66 | 54.00 | 49.66 | AVG | No Limit |
| 2 | 2454. 5500 | 102.82 | 7. 78 | 110.60 | 74.00 | 36. 60 | Peak | No Limit |
| 3 | 2483. 5000 | 57. 03 | 7. 81 | 64. 84 | 74.00 | -9. 16 | Peak | |
| 4 | 2483. 5000 | 44. 87 | 7. 81 | 52. 68 | 54. 00 | -1. 32 | AVG | |

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





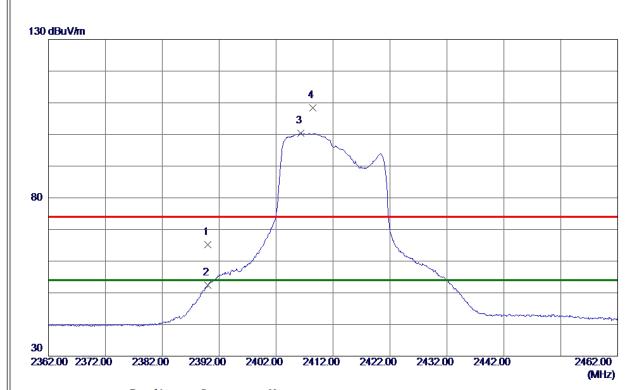


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4821. 6250 | 41. 11 | 2. 83 | 43. 94 | 74.00 | -30.06 | Peak | |
| 2 * | 4824. 0500 | 31. 03 | 2. 84 | 33. 87 | 54. 00 | -20. 13 | AVG | |

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



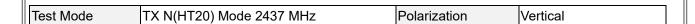


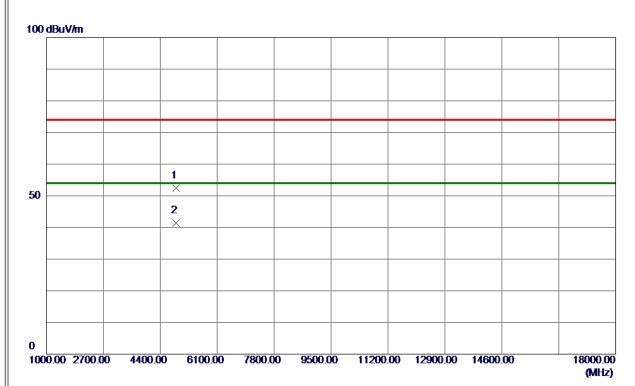


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2390. 0000 | 57. 52 | 7. 70 | 65. 22 | 74.00 | -8. 78 | Peak | |
| 2 | 2390. 0000 | 44. 76 | 7. 70 | 52.46 | 54.00 | -1. 54 | AVG | |
| 3 * | 2406. 3500 | 92. 66 | 7. 72 | 100. 38 | 54.00 | 46. 38 | AVG | No Limit |
| 4 | 2408. 4500 | 100. 60 | 7. 72 | 108. 32 | 74. 00 | 34. 32 | Peak | No Limit |

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





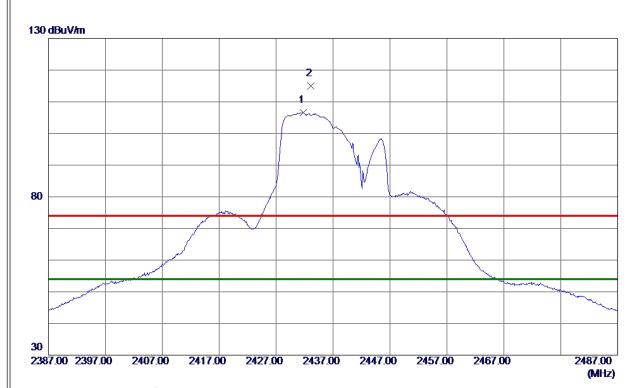


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4867. 9000 | 49. 44 | 2. 94 | 52. 38 | 74.00 | -21. 62 | Peak | |
| 2 * | 4870. 3750 | 38. 47 | 2. 95 | 41. 42 | 54.00 | -12. 58 | AVG | |

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



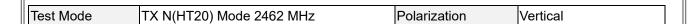


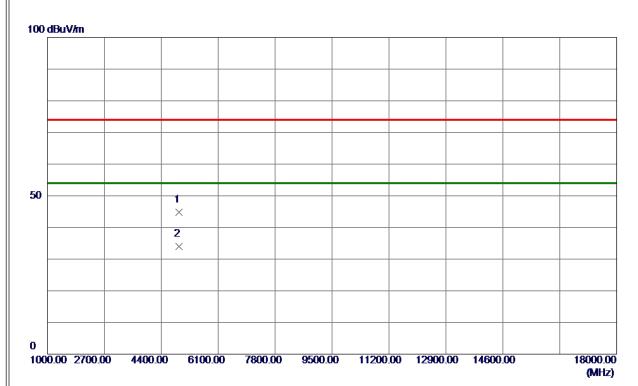


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|--------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2431. 8000 | 98. 77 | 7. 75 | 106. 52 | 54.00 | 52. 52 | AVG | No Limit |
| 2 | 2433. 1500 | 107. 16 | 7. 75 | 114. 91 | 74.00 | 40. 91 | Peak | No Limit |

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





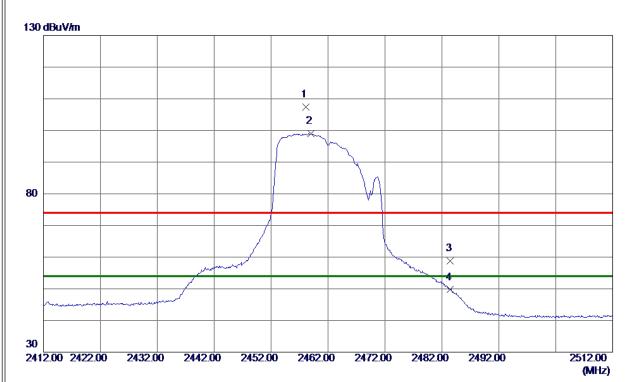


| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4922. 4000 | 41.68 | 3. 07 | 44. 75 | 74.00 | -29. 25 | Peak | |
| 2 * | 4923. 7500 | 31. 02 | 3. 07 | 34. 09 | 54.00 | -19. 91 | AVG | |

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



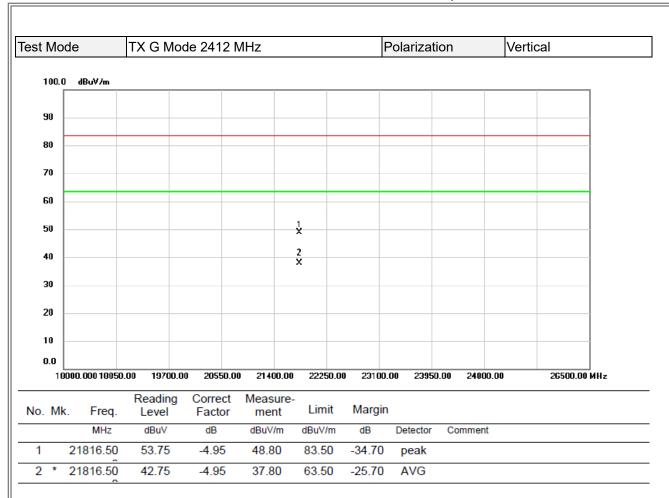




| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|-----|------------|------------------|-------------------|-----------------|--------|---------|----------|----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2458. 1000 | 99. 70 | 7. 78 | 107. 48 | 74.00 | 33. 48 | Peak | No Limit |
| 2 * | 2459. 0000 | 91. 20 | 7. 78 | 98. 98 | 54.00 | 44. 98 | AVG | No Limit |
| 3 | 2483. 5000 | 51. 01 | 7. 81 | 58. 82 | 74.00 | -15. 18 | Peak | |
| 4 | 2483, 5000 | 41.89 | 7. 81 | 49. 70 | 54. 00 | -4. 30 | AVG | |

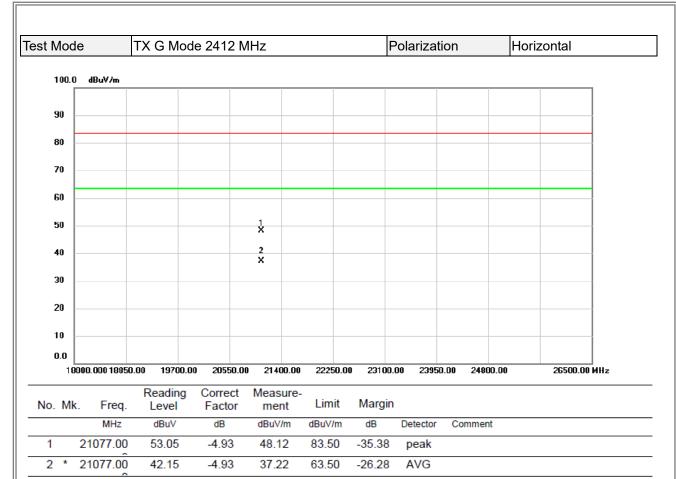
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.





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





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



APPENDIX E - MAXIMUM OUTPUT POWER



| Test Mode | TX B Mode | Ant. | 1 |
|------------|------------|------|---|
| 100t Wiodo | IN D MICGO | _, | • |

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 16.47 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 16.14 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 16.37 | 30.00 | 1.0000 | Complies |

Test Mode TX B Mode_Ant. 2

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 16.39 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 16.05 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 16.27 | 30.00 | 1.0000 | Complies |

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

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 19.44 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 19.11 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 19.33 | 30.00 | 1.0000 | Complies |



| Test Mode | TX G Mode | Ant 1 |
|-------------|-------------|--------|
| rest ivioue | IA G Mode / | Ant. I |

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 20.87 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 20.69 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 20.65 | 30.00 | 1.0000 | Complies |

| Test Mode | TX G Mode Ant. 2 |
|------------|------------------|
| 103t Widac | IN O MOGE AIR. 2 |

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 20.65 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 20.24 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 20.39 | 30.00 | 1.0000 | Complies |

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

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|--------------------|---------------------|-------------------|----------|
| 01 | 2412 | 23.77 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 23.48 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 23.53 | 30.00 | 1.0000 | Complies |





| Test Mode | TX N(HT20) Mode_Ant. 1 |
|-----------|------------------------|
| | |

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 18.78 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 18.69 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 18.57 | 30.00 | 1.0000 | Complies |

| ı | Test Mode | TX N(HT20) Mode_Ant. 2 | |
|---|-----------|----------------------------|--|
| ı | Test Mode | 1 / 14(11120) WOUG_/III. Z | |

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 19.47 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 19.13 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 19.35 | 30.00 | 1.0000 | Complies |

| Test Mode | TX N(HT20) Mode_Total |
|-----------|-----------------------|
|-----------|-----------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Max. Limit (dBm) | Max. Limit (W) | Result |
|---------|--------------------|-----------------------|---------------------|-------------------|----------|
| 01 | 2412 | 22.15 | 30.00 | 1.0000 | Complies |
| 06 | 2437 | 21.93 | 30.00 | 1.0000 | Complies |
| 11 | 2462 | 21.99 | 30.00 | 1.0000 | Complies |

End of Test Report