

TEST REPORT

Applicant: ShenZhen FLYSKY Technology Co.,Ltd

Address of Applicant: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

Manufacturer: ShenZhen FLYSKY Technology Co.,Ltd

Address of Manufacturer: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

Factory: Dongguan Flysky RC Model technology Co.,Ltd

Address of Factory: West building 3, HuangjinyuanInd Park, Qiaoli North Gate, Changping Town, Dongguan, China

Equipment Under Test (EUT)

Product Name: Digital Proportional Radio Control System

Model No.: FMS-G3, G3

Trade Mark: FLYSKY

FCC ID: 2A2UNG300

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: July 15, 2022

Date of Test: July 15-28, 2022

Date of report issued: July 28, 2022

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



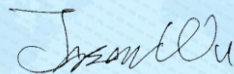
Robinson Luo
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

| Version No. | Date | Description |
|-------------|---------------|-------------|
| 00 | July 28, 2022 | Original |
| | | |
| | | |
| | | |
| | | |

Prepared By:

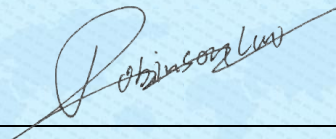


Date:

July 28, 2022

Project Engineer

Check By:



Date:

July 28, 2022

Reviewer

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4 Test Summary

| Test Item | Section | Result |
|----------------------------------|--------------------|--------|
| Antenna Requirement | 15.203/15.247 (c) | Pass |
| AC Power Line Conducted Emission | 15.207 | N/A |
| Conducted Peak Output Power | 15.247 (b)(1) | Pass |
| 20dB Occupied Bandwidth | 15.247 (a)(1) | Pass |
| Carrier Frequencies Separation | 15.247 (a)(1) | Pass |
| Hopping Channel Number | 15.247 (a)(1)(iii) | Pass |
| Dwell Time | 15.247 (a)(1)(iii) | Pass |
| Radiated Emission | 15.205/15.209 | Pass |
| Band Edge | 15.247(d) | Pass |

Pass: The EUT complies with the essential requirements in the standard.

Remark : Test according to ANSI C63.10:2013.

4.1 Measurement Uncertainty

| Test Item | Frequency Range | Measurement Uncertainty | Notes |
|----------------------------------|-----------------|-------------------------|-------|
| Radiated Emission | 9kHz-30MHz | 3.1dB | (1) |
| Radiated Emission | 30MHz-200MHz | 3.8039dB | (1) |
| Radiated Emission | 200MHz-1GHz | 3.9679dB | (1) |
| Radiated Emission | 1GHz-18GHz | 4.29dB | (1) |
| Radiated Emission | 18GHz-40GHz | 3.30dB | (1) |
| AC Power Line Conducted Emission | 0.15MHz ~ 30MHz | 3.44dB | (1) |

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

| | |
|--|---|
| Product Name: | Digital Proportional Radio Control System |
| Model No.: | FMS-G3, G3 |
| Test Model No.: | FMS-G3 |
| Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The only difference is model name for commercial purpose. | |
| Serial No.: | NO.:2F004855 |
| Hardware version: | FMS-G3-V1.0 |
| Software version: | FMS-G3 1.0.9 |
| Test sample(s) ID: | GTS202207000138-1 |
| Sample(s) Status | Engineer sample |
| Operation Frequency: | 2408MHz~2475MHz |
| Channel numbers: | 135 |
| Modulation method: | FHSS |
| Modulation technology: | GFSK |
| Antenna Type: | PCB Antenna |
| Antenna gain: | 1dBi |
| Power supply: | DC 6.0V (4*1.5V Size "AAA" Battery) |

Remark: The system works in the frequency range of 2408MHz to 2475MHz. This band has been divided to 135 independent channels. Each radio system uses 16 different channels; the minimum channel separation is ≥ 2.0 MHz. By using various switch-on times, hopping scheme and channel frequencies, the system can guarantee a jamming free radio transmission. Pre-testing all radio systems, this radio system recorded in the report is the worst mode. The channel list is below.

The test frequencies are below:

| Channel | Frequency |
|---------------------|-----------|
| The lowest channel | 2408MHz |
| The middle channel | 2440MHz |
| The Highest channel | 2475MHz |

| Operation Frequency each of channel | | | | | | | |
|-------------------------------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 1 | 2408 | 36 | 2425.5 | 71 | 2443 | 106 | 2460.5 |
| 2 | 2408.5 | 37 | 2426 | 72 | 2443.5 | 107 | 2461 |
| 3 | 2409 | 38 | 2426.5 | 73 | 2444 | 108 | 2461.5 |
| 4 | 2409.5 | 39 | 2427 | 74 | 2444.5 | 109 | 2462 |
| 5 | 2410 | 40 | 2427.5 | 75 | 2445 | 110 | 2462.5 |
| 6 | 2410.5 | 41 | 2428 | 76 | 2445.5 | 111 | 2463 |
| 7 | 2411 | 42 | 2428.5 | 77 | 2446 | 112 | 2463.5 |
| 8 | 2411.5 | 43 | 2429 | 78 | 2446.5 | 113 | 2464 |
| 9 | 2412 | 44 | 2429.5 | 79 | 2447 | 114 | 2464.5 |
| 10 | 2412.5 | 45 | 2430 | 80 | 2447.5 | 115 | 2465 |
| 11 | 2413 | 46 | 2430.5 | 81 | 2448 | 116 | 2465.5 |
| 12 | 2413.5 | 47 | 2431 | 82 | 2448.5 | 117 | 2466 |
| 13 | 2414 | 48 | 2431.5 | 83 | 2449 | 118 | 2466.5 |
| 14 | 2414.5 | 49 | 2432 | 84 | 2449.5 | 119 | 2467 |
| 15 | 2415 | 50 | 2432.5 | 85 | 2450 | 120 | 2467.5 |
| 16 | 2415.5 | 51 | 2433 | 86 | 2450.5 | 121 | 2468 |
| 17 | 2416 | 52 | 2433.5 | 87 | 2451 | 122 | 2468.5 |
| 18 | 2416.5 | 53 | 2434 | 88 | 2451.5 | 123 | 2469 |
| 19 | 2417 | 54 | 2434.5 | 89 | 2452 | 124 | 2469.5 |
| 20 | 2417.5 | 55 | 2435 | 90 | 2452.5 | 125 | 2470 |
| 21 | 2418 | 56 | 2435.5 | 91 | 2453 | 126 | 2470.5 |
| 22 | 2418.5 | 57 | 2436 | 92 | 2453.5 | 127 | 2471 |
| 23 | 2419 | 58 | 2436.5 | 93 | 2454 | 128 | 2471.5 |
| 24 | 2419.5 | 59 | 2437 | 94 | 2454.5 | 129 | 2472 |
| 25 | 2420 | 60 | 2437.5 | 95 | 2455 | 130 | 2472.5 |
| 26 | 2420.5 | 61 | 2438 | 96 | 2455.5 | 131 | 2473 |
| 27 | 2421 | 62 | 2438.5 | 97 | 2456 | 132 | 2473.5 |
| 28 | 2421.5 | 63 | 2439 | 98 | 2456.5 | 133 | 2474 |
| 29 | 2422 | 64 | 2439.5 | 99 | 2457 | 134 | 2474.5 |
| 30 | 2422.5 | 65 | 2440 | 100 | 2457.5 | 135 | 2475 |
| 31 | 2423 | 66 | 2440.5 | 101 | 2458 | | |
| 32 | 2423.5 | 67 | 2441 | 102 | 2458.5 | | |
| 33 | 2424 | 68 | 2441.5 | 103 | 2459 | | |
| 34 | 2424.5 | 69 | 2442 | 104 | 2459.5 | | |
| 35 | 2425 | 70 | 2442.5 | 105 | 2460 | | |

5.2 Test mode

| | |
|---|------------------------------------|
| Transmitting mode | Keep the EUT in transmitting mode. |
| Remark: During the test, the duty cycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. New battery is used during all test. | |

5.3 Test Facility

| |
|--|
| <p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC —Registration No.: 381383 Designation Number: CN5029 Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. ● IC —Registration No.: 9079A CAB identifier: CN0091 The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. ● NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). |
|--|

5.4 Test Location

| |
|---|
| All other tests were performed at: |
| <p>Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960</p> |

5.5 Description of Support Units

| Manufacturer | Description | Model | Serial Number |
|------------------------------------|----------------|---------|---------------|
| ShenZhen FLYSKY Technology Co.,Ltd | Remote control | FMS-R3A | N/A |

5.6 Deviation from Standards

| |
|-------|
| None. |
|-------|

5.7 Abnormalities from Standard Conditions

| |
|-------|
| None. |
|-------|

5.8 Additional Instructions

| |
|--|
| Software (Used for test) from client |
| Built-in by manufacturer, power set default. |

6 Test Instruments list

| Radiated Emission: | | | | | | |
|--------------------|-------------------------------------|--------------------------------|-----------------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | 3m Semi- Anechoic Chamber | ZhongYu Electron | 9.2(L)*6.2(W)* 6.4(H) | GTS250 | July. 02 2020 | July. 01 2025 |
| 2 | Control Room | ZhongYu Electron | 6.2(L)*2.5(W)* 2.4(H) | GTS251 | N/A | N/A |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESU26 | GTS203 | April. 22 2022 | April. 21 2023 |
| 4 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB918 | GTS640 | March. 21 2022 | March. 20 2023 |
| 5 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | BBHA 9120 D | GTS208 | June. 12 2022 | June. 11 2023 |
| 6 | Horn Antenna | ETS-LINDGREN | 3160 | GTS217 | June. 23 2022 | June. 22 2023 |
| 7 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 8 | Coaxial Cable | GTS | N/A | GTS213 | April. 22 2022 | April. 21 2023 |
| 9 | Coaxial Cable | GTS | N/A | GTS211 | April. 22 2022 | April. 21 2023 |
| 10 | Coaxial cable | GTS | N/A | GTS210 | April. 22 2022 | April. 21 2023 |
| 11 | Coaxial Cable | GTS | N/A | GTS212 | April. 22 2022 | April. 21 2023 |
| 12 | Amplifier(100kHz-3GHz) | HP | 8347A | GTS204 | April. 22 2022 | April. 21 2023 |
| 13 | Amplifier (18-26GHz) | Rohde & Schwarz | AFS33-18002 650-30-8P-44 | GTS218 | June. 23 2022 | June. 22 2023 |
| 14 | Band filter | Amindeon | 82346 | GTS219 | June. 23 2022 | June. 22 2023 |
| 15 | Power Meter | Anritsu | ML2495A | GTS540 | June. 23 2022 | June. 22 2023 |
| 16 | Power Sensor | Anritsu | MA2411B | GTS541 | June. 23 2022 | June. 22 2023 |
| 17 | Wideband Radio Communication Tester | Rohde & Schwarz | CMW500 | GTS575 | April. 22 2022 | April. 21 2023 |
| 18 | Splitter | Agilent | 11636B | GTS237 | June. 23 2022 | June. 22 2023 |
| 19 | Loop Antenna | ZHINAN | ZN30900A | GTS534 | Nov. 30 2021 | Nov. 29 2022 |
| 20 | Broadband Preamplifier | SCHWARZBECK | BBV9718 | GTS535 | April. 22 2022 | April. 21 2023 |
| 21 | Breitband hornantenna | SCHWARZBECK | BBHA 9170 | GTS579 | Oct. 17 2021 | Oct. 16 2022 |
| 22 | Amplifier | TDK | PA-02-02 | GTS574 | Oct. 17 2021 | Oct. 16 2022 |
| 23 | Amplifier | TDK | PA-02-03 | GTS576 | Oct. 17 2021 | Oct. 16 2022 |
| 24 | PSA Series Spectrum Analyzer | Rohde & Schwarz | FSP | GTS578 | June. 23 2022 | June. 22 2023 |
| 25 | Amplifier(1GHz-26.5GHz) | HP | 8449B | GTS601 | April. 22 2022 | April. 21 2023 |

| RF Conducted Test: | | | | | | |
|--------------------|--|--------------|------------------|------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | MXA Signal Analyzer | Agilent | N9020A | GTS566 | April. 22 2022 | April. 21 2023 |
| 2 | EMI Test Receiver | R&S | ESCI 7 | GTS552 | April. 24 2022 | April. 23 2023 |
| 3 | Spectrum Analyzer | Agilent | E4440A | GTS536 | April. 22 2022 | April. 21 2023 |
| 4 | MXG vector Signal Generator | Agilent | N5182A | GTS567 | April. 22 2022 | April. 21 2023 |
| 5 | ESG Analog Signal Generator | Agilent | E4428C | GTS568 | April. 22 2022 | April. 21 2023 |
| 6 | USB RF Power Sensor | DARE | RPR3006W | GTS569 | April. 22 2022 | April. 21 2023 |
| 7 | RF Switch Box | Shongyi | RFSW3003328 | GTS571 | April. 22 2022 | April. 21 2023 |
| 8 | Programmable Constant Temp & Humi Test Chamber | WEWON | WHTH-150L-40-880 | GTS572 | April. 22 2022 | April. 21 2023 |

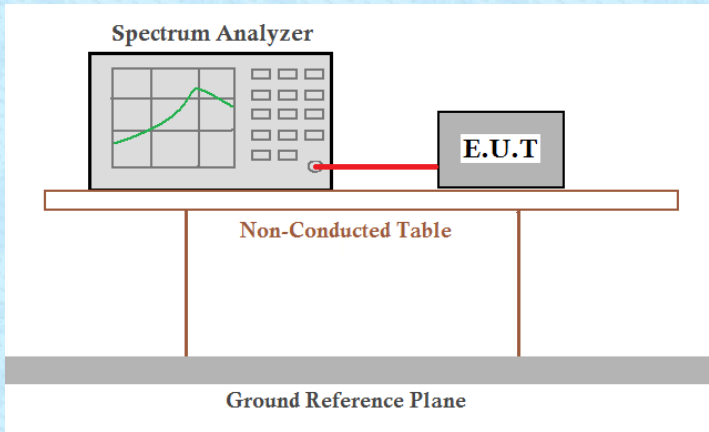
| General used equipment: | | | | | | |
|-------------------------|---------------------------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Humidity/ Temperature Indicator | KTJ | TA328 | GTS243 | April. 25 2022 | April. 24 2023 |
| 2 | Barometer | ChangChun | DYM3 | GTS255 | June. 23 2022 | June. 22 2023 |

7 Test results and Measurement Data

7.1 Antenna requirement

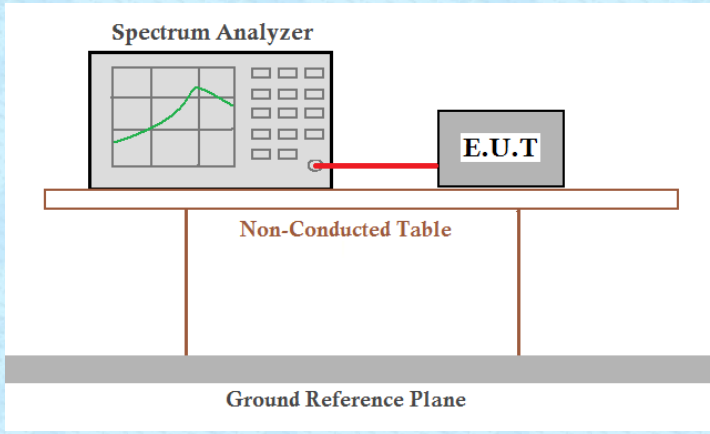
| | |
|--|-------------------------------------|
| Standard requirement: | FCC Part15 C Section 15.203 /247(c) |
| <p>15.203 requirement:</p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>15.247(c) (1)(i) requirement:</p> <p>(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.</p> | |
| EUT Antenna: | |
| <p><i>The antenna is PCB antenna, the best case gain of the antenna is 1dBi, reference to the appendix II for details.</i></p> | |

7.2 Conducted Peak Output Power

| | |
|-------------------|---|
| Test Requirement: | FCC Part15 C Section 15.247(a)(1) |
| Test Method: | ANSI C63.10:2013 |
| Limit: | 20.97dBm |
| Test setup: |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which sits on a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

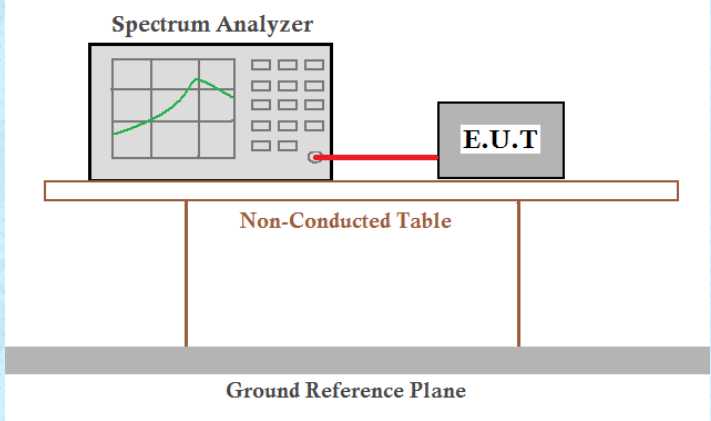
Measurement Data: The detailed test data see Appendix for 2.4G.

7.3 20dB Emission Bandwidth

| | |
|-------------------|---|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(1) |
| Test Method: | ANSI C63.10:2013 |
| Limit: | N/A |
| Test setup: |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

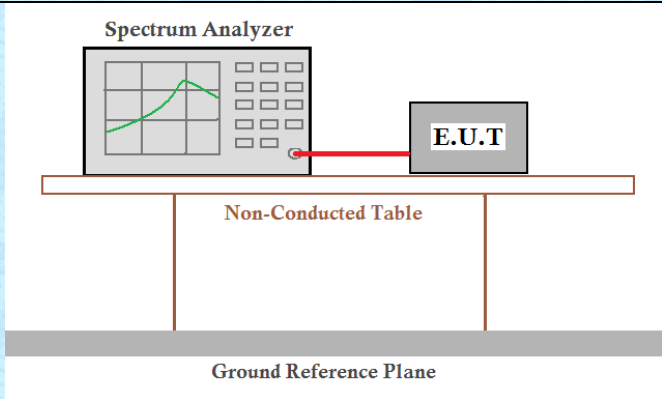
Measurement Data: The detailed test data see Appendix for 2.4G.

7.4 Carrier Frequencies Separation

| | |
|-------------------|---|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(1) |
| Test Method: | ANSI C63.10:2013 |
| Receiver setup: | RBW=100KHz, VBW=300KHz, detector=Peak |
| Limit: | 0.025MHz or 2/3 of the 20dB bandwidth (whichever is greater) |
| Test setup: |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

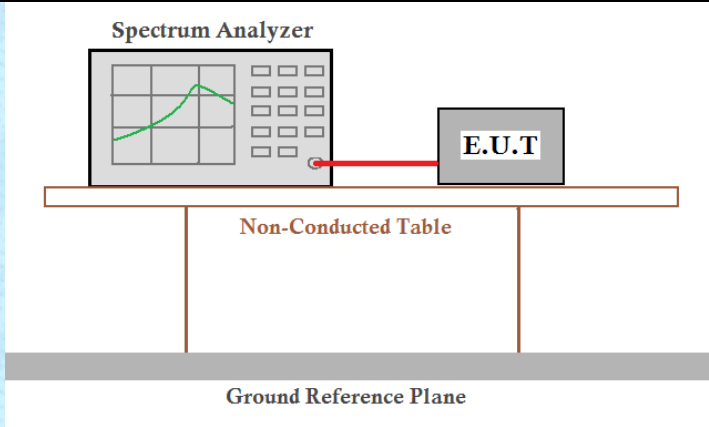
Measurement Data: The detailed test data see Appendix for 2.4G.

7.5 Hopping Channel Number

| | |
|-------------------|---|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(1)(iii) |
| Test Method: | ANSI C63.10:2013 |
| Receiver setup: | RBW=100kHz, VBW=300kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak |
| Limit: | 15 channels |
| Test setup: |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which sits on a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

Measurement Data: The detailed test data see Appendix for 2.4G.

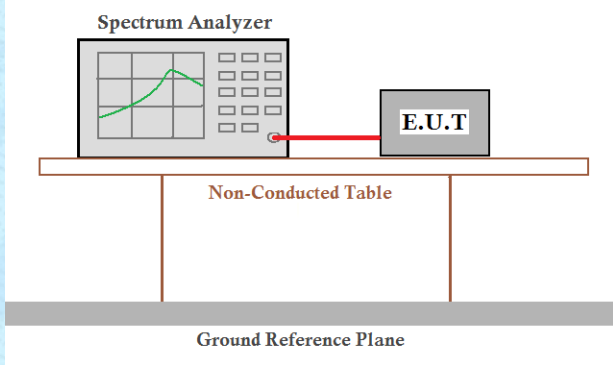
7.6 Dwell Time

| | |
|-------------------|---|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(1)(iii) |
| Test Method: | ANSI C63.10:2013 |
| Receiver setup: | RBW=1MHz, VBW=1MHz, Span=0Hz, Detector=Peak |
| Limit: | 0.4 Second |
| Test setup: |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

Measurement Data: The detailed test data see Appendix for 2.4G.

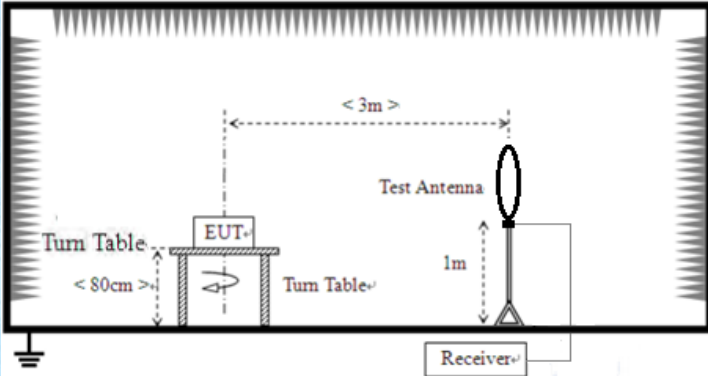
7.7 Spurious Emission in Non-restricted & restricted Bands

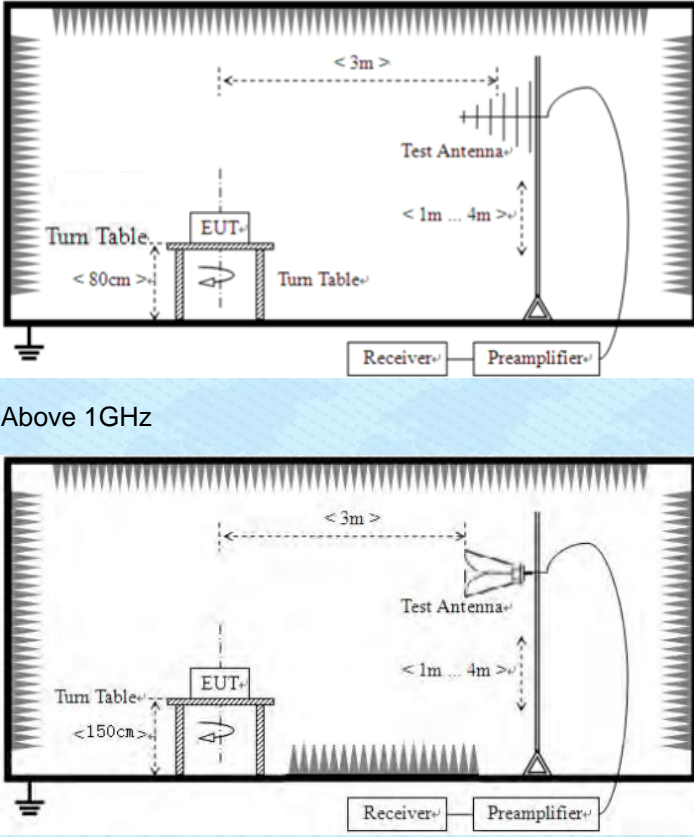
7.7.1 Conducted Emission Method

| | |
|-------------------|---|
| Test Requirement: | FCC Part15 C Section 15.247 (d) |
| Test Method: | ANSI C63.10:2013 |
| Receiver setup: | RBW=100kHz, VBW=300kHz, Detector=Peak |
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. |
| Test setup: |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which sits on a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

Measurement Data: The detailed test data see Appendix for 2.4G.

7.7.2 Radiated Emission Method

| | | | | | |
|--------------------------------|--|--------------|---------|----------------------|------------|
| Test Requirement: | FCC Part15 C Section 15.209 and 15.205 | | | | |
| Test Method: | ANSI C63.10:2013 | | | | |
| Test Frequency Range: | 9kHz to 25GHz | | | | |
| Test site: | Measurement Distance: 3m | | | | |
| Receiver setup: | Frequency | Detector | RBW | VBW | Value |
| | 9KHz-150KHz | Quasi-peak | 200Hz | 600Hz | Quasi-peak |
| | 150KHz-30MHz | Quasi-peak | 9KHz | 30KHz | Quasi-peak |
| | 30MHz-1GHz | Quasi-peak | 120KHz | 300KHz | Quasi-peak |
| | Above 1GHz | Peak | 1MHz | 3MHz | Peak |
| Peak | | 1MHz | 10Hz | Average | |
| Limit: (Spurious Emissions) | Frequency | Limit (uV/m) | Value | Measurement Distance | |
| | 0.009MHz-0.490MHz | 2400/F(KHz) | QP | 300m | |
| | 0.490MHz-1.705MHz | 24000/F(KHz) | QP | 300m | |
| | 1.705MHz-30MHz | 30 | QP | 30m | |
| | 30MHz-88MHz | 100 | QP | 3m | |
| | 88MHz-216MHz | 150 | QP | | |
| | 216MHz-960MHz | 200 | QP | | |
| | 960MHz-1GHz | 500 | QP | | |
| | Above 1GHz | 500 | Average | | |
| 5000 | | Peak | | | |
| Test setup: | Below 30MHz | | | | |
| |  <p>Below 1GHz</p> | | | | |

| | | | | | | | |
|--------------------------|---|---------|-------|---------|-----------|---------|-----------|
| |  <p>Above 1GHz</p> | | | | | | |
| <p>Test Procedure:</p> | <ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table (0.8 meters for below 1GHz and 1.5meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. | | | | | | |
| <p>Test Instruments:</p> | <p>Refer to section 5.8 for details</p> | | | | | | |
| <p>Test mode:</p> | <p>Refer to section 5.2 for details</p> | | | | | | |
| <p>Temp. / Hum.</p> | <table border="1"> <tr> <td>Temp.:</td> <td>25 °C</td> <td>Humid.:</td> <td>52%</td> <td>Press.:</td> <td>1 012mbar</td> </tr> </table> | Temp.: | 25 °C | Humid.: | 52% | Press.: | 1 012mbar |
| Temp.: | 25 °C | Humid.: | 52% | Press.: | 1 012mbar | | |

| | |
|---------------|------|
| Test results: | Pass |
|---------------|------|

Remark:

1. *Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.*

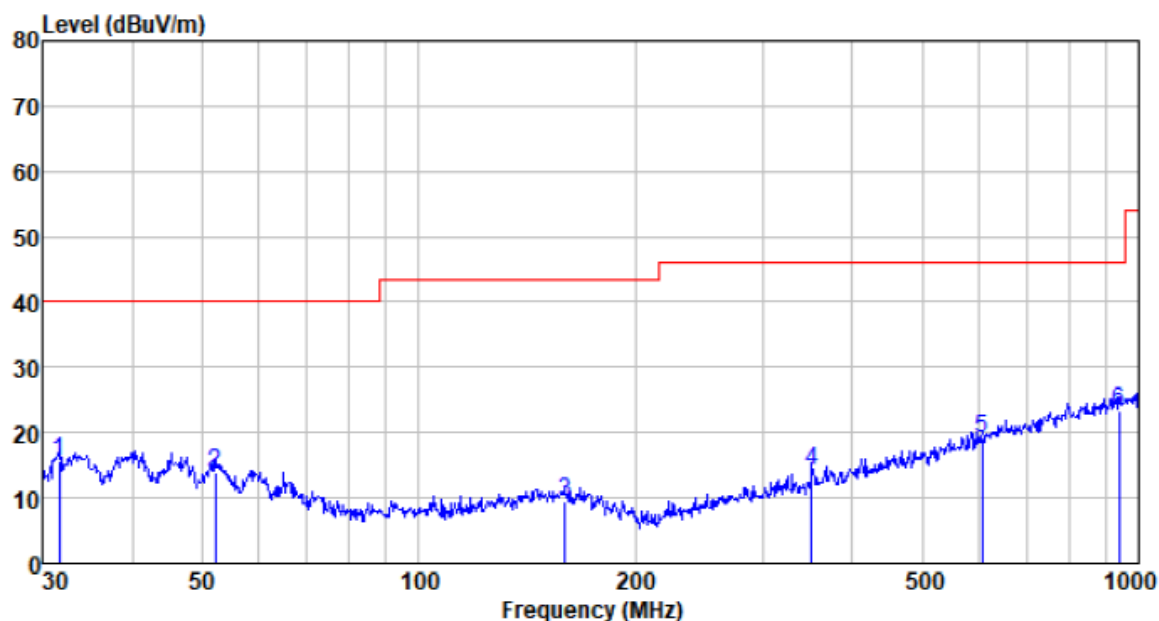
Measurement data:

■ **Below 30MHz**

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

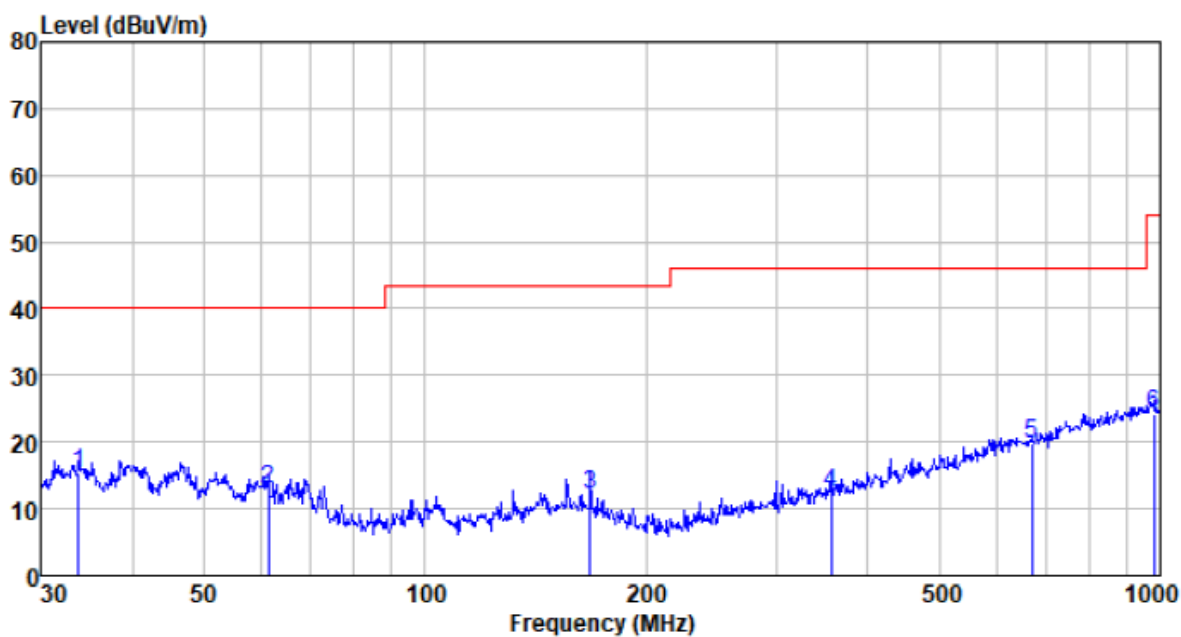
30MHz ~ 1GHz

| | | | |
|---------------|--------|---------------|------------|
| Test channel: | Lowest | Polarization: | Horizontal |
|---------------|--------|---------------|------------|



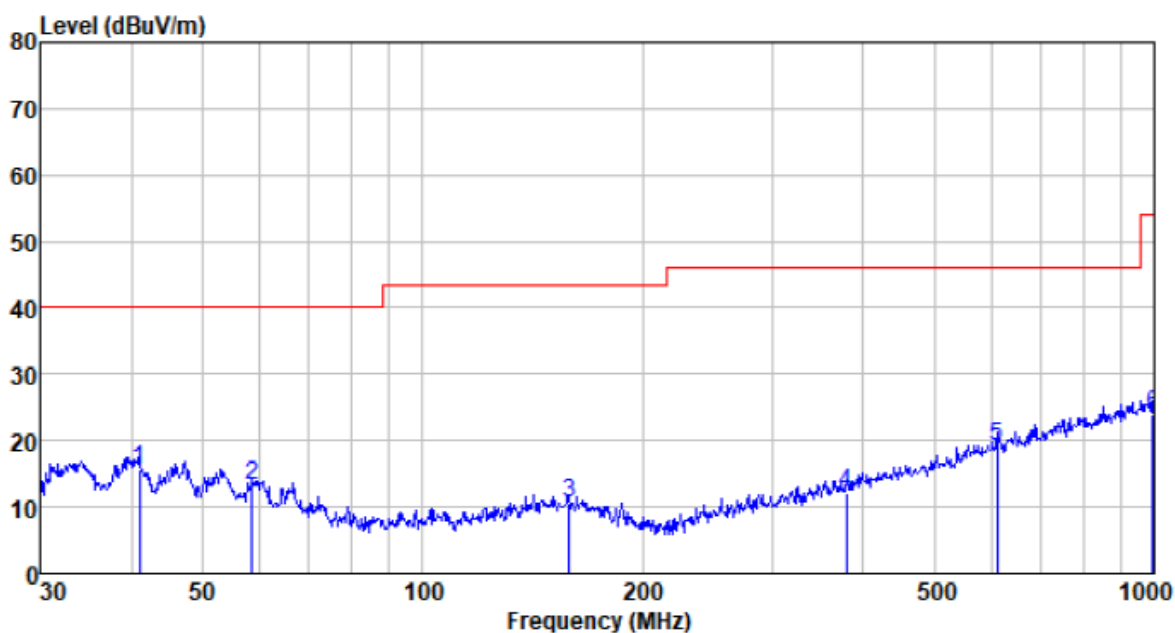
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 31.620 | 37.81 | 12.28 | 0.57 | 35.12 | 15.54 | 40.00 | -24.46 | QP |
| 52.208 | 36.46 | 12.82 | 0.79 | 36.21 | 13.86 | 40.00 | -26.14 | QP |
| 159.784 | 32.28 | 12.76 | 1.63 | 37.13 | 9.54 | 43.50 | -33.96 | QP |
| 351.708 | 35.47 | 13.59 | 2.63 | 37.48 | 14.21 | 46.00 | -31.79 | QP |
| 605.659 | 33.73 | 19.34 | 3.74 | 37.55 | 19.26 | 46.00 | -26.74 | QP |
| 938.833 | 32.15 | 23.75 | 4.99 | 37.56 | 23.33 | 46.00 | -22.67 | QP |

| | | | |
|---------------|--------|---------------|----------|
| Test channel: | Lowest | Polarization: | Vertical |
|---------------|--------|---------------|----------|



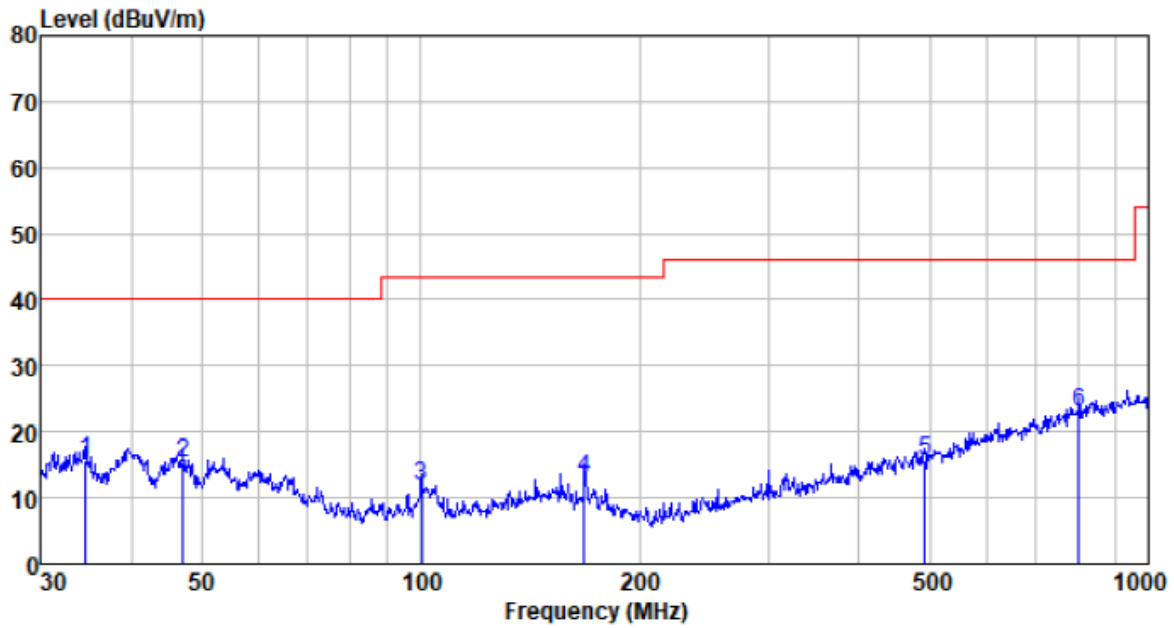
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 33.799 | 37.54 | 12.42 | 0.59 | 35.28 | 15.27 | 40.00 | -24.73 | QP |
| 61.132 | 36.40 | 12.12 | 0.87 | 36.34 | 13.05 | 40.00 | -26.95 | QP |
| 167.824 | 35.21 | 12.52 | 1.67 | 37.18 | 12.22 | 43.50 | -31.28 | QP |
| 356.676 | 33.45 | 13.72 | 2.65 | 37.48 | 12.34 | 46.00 | -33.66 | QP |
| 668.142 | 33.38 | 20.06 | 3.97 | 37.60 | 19.81 | 46.00 | -26.19 | QP |
| 979.180 | 32.73 | 23.99 | 5.14 | 37.53 | 24.33 | 54.00 | -29.67 | QP |

| | | | |
|---------------|--------|---------------|------------|
| Test channel: | Middle | Polarization: | Horizontal |
|---------------|--------|---------------|------------|



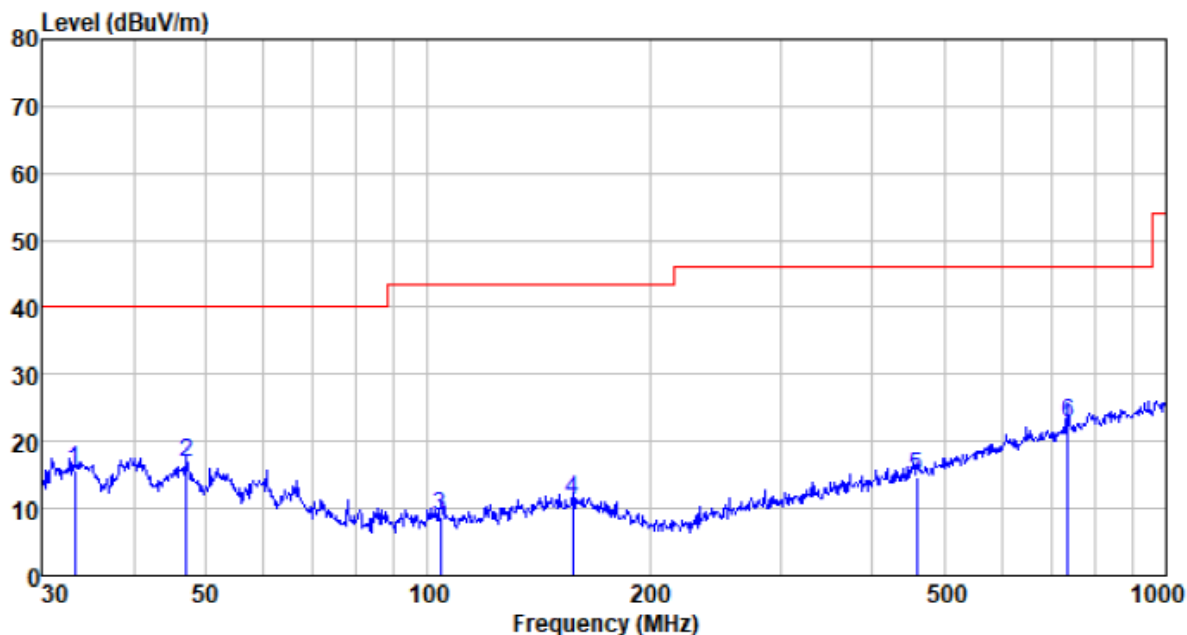
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 40.988 | 37.42 | 13.20 | 0.67 | 35.72 | 15.57 | 40.00 | -24.43 | QP |
| 58.407 | 36.26 | 12.39 | 0.85 | 36.30 | 13.20 | 40.00 | -26.80 | QP |
| 158.668 | 33.49 | 12.77 | 1.62 | 37.13 | 10.75 | 43.50 | -32.75 | QP |
| 379.914 | 32.69 | 14.29 | 2.76 | 37.50 | 12.24 | 46.00 | -33.76 | QP |
| 609.922 | 33.70 | 19.42 | 3.76 | 37.55 | 19.33 | 46.00 | -26.67 | QP |
| 996.500 | 32.29 | 24.00 | 5.20 | 37.51 | 23.98 | 54.00 | -30.02 | QP |

| | | | |
|---------------|--------|---------------|----------|
| Test channel: | Middle | Polarization: | Vertical |
|---------------|--------|---------------|----------|



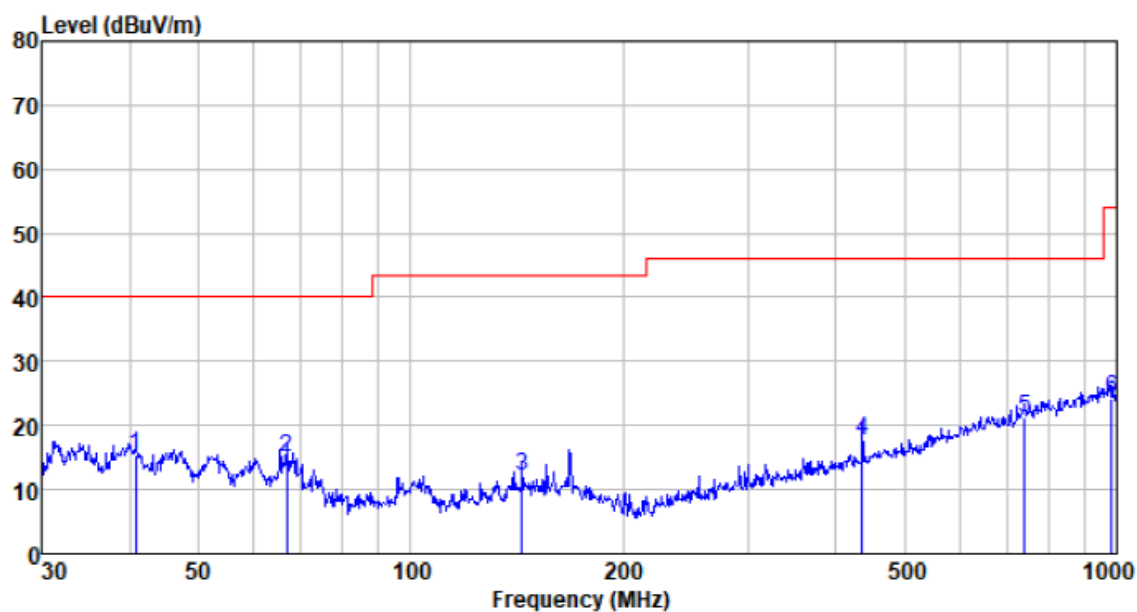
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 34.639 | 37.82 | 12.48 | 0.61 | 35.33 | 15.58 | 40.00 | -24.42 | QP |
| 47.160 | 37.65 | 12.99 | 0.74 | 36.04 | 15.34 | 40.00 | -24.66 | QP |
| 100.229 | 38.07 | 9.13 | 1.19 | 36.72 | 11.67 | 43.50 | -31.83 | QP |
| 167.824 | 35.96 | 12.52 | 1.67 | 37.18 | 12.97 | 43.50 | -30.53 | QP |
| 492.469 | 33.23 | 16.53 | 3.27 | 37.51 | 15.52 | 46.00 | -30.48 | QP |
| 801.786 | 34.04 | 22.25 | 4.46 | 37.62 | 23.13 | 46.00 | -22.87 | QP |

| | | | |
|---------------|---------|---------------|------------|
| Test channel: | Highest | Polarization: | Horizontal |
|---------------|---------|---------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 33.211 | 37.98 | 12.38 | 0.59 | 35.23 | 15.72 | 40.00 | -24.28 | QP |
| 47.160 | 39.20 | 12.99 | 0.74 | 36.04 | 16.89 | 40.00 | -23.11 | QP |
| 104.170 | 35.00 | 9.47 | 1.23 | 36.76 | 8.94 | 43.50 | -34.56 | QP |
| 157.007 | 34.01 | 12.77 | 1.61 | 37.12 | 11.27 | 43.50 | -32.23 | QP |
| 459.114 | 32.94 | 16.12 | 3.13 | 37.51 | 14.68 | 46.00 | -31.32 | QP |
| 737.071 | 34.74 | 21.25 | 4.23 | 37.63 | 22.59 | 46.00 | -23.41 | QP |

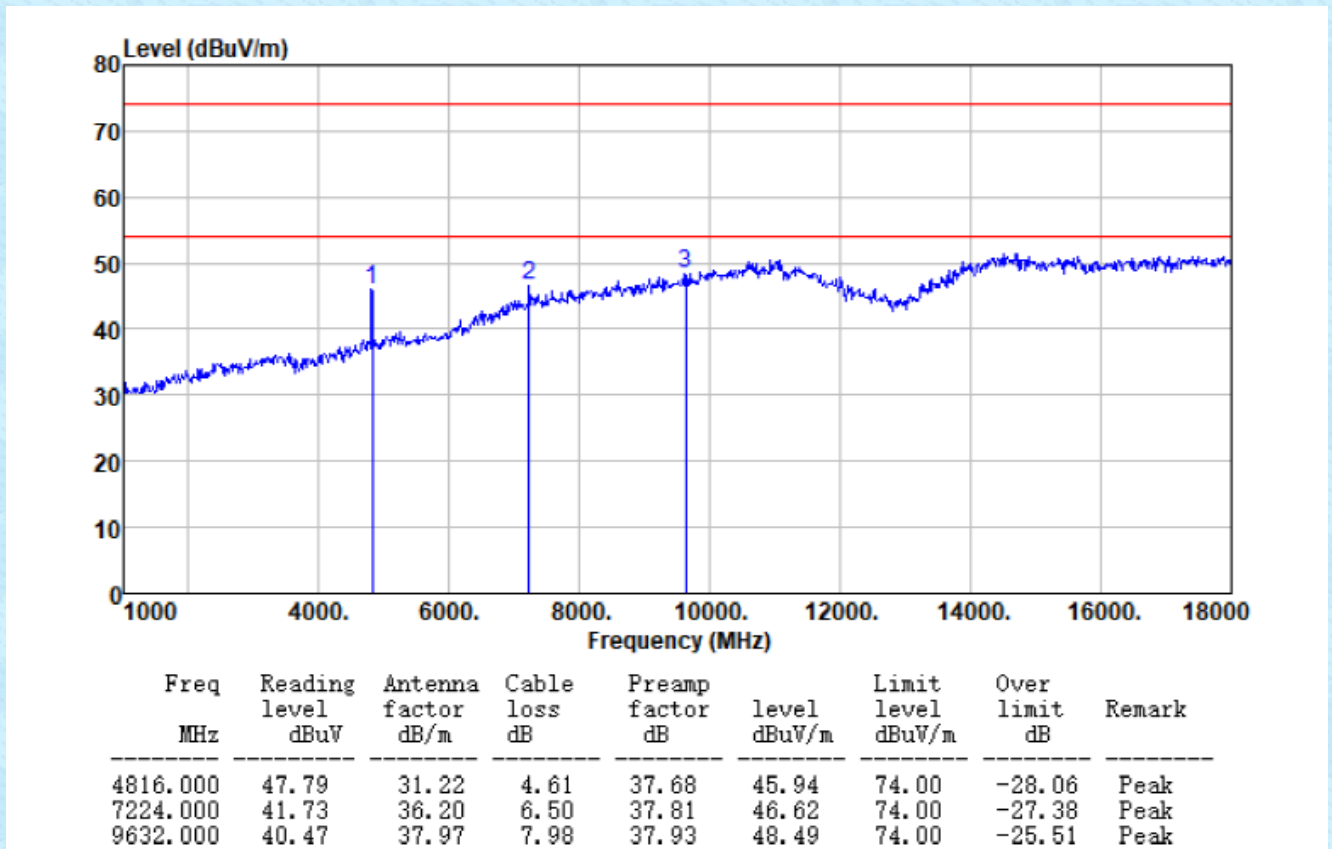
| | | | |
|---------------|---------|---------------|----------|
| Test channel: | Highest | Polarization: | Vertical |
|---------------|---------|---------------|----------|



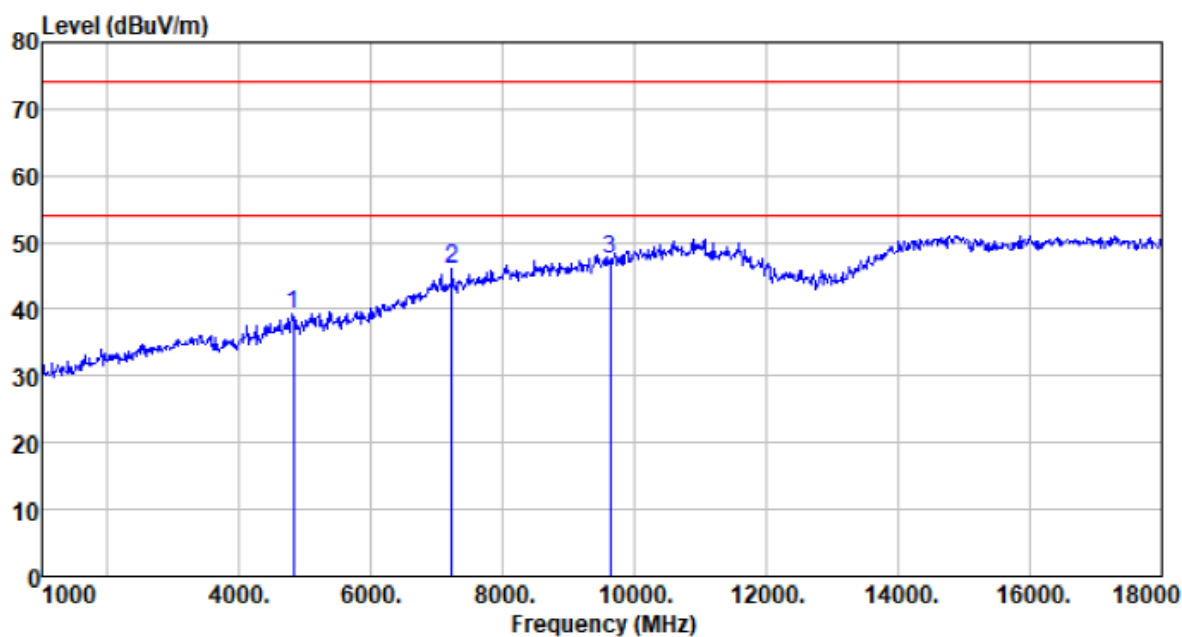
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 40.702 | 37.05 | 13.22 | 0.67 | 35.70 | 15.24 | 40.00 | -24.76 | QP |
| 66.733 | 39.38 | 11.16 | 0.91 | 36.40 | 15.05 | 40.00 | -24.95 | QP |
| 143.830 | 35.43 | 12.32 | 1.53 | 37.04 | 12.24 | 43.50 | -31.26 | QP |
| 435.590 | 36.47 | 15.62 | 3.03 | 37.52 | 17.60 | 46.00 | -28.40 | QP |
| 739.661 | 33.46 | 21.31 | 4.24 | 37.63 | 21.38 | 46.00 | -24.62 | QP |
| 982.620 | 32.67 | 23.99 | 5.16 | 37.52 | 24.30 | 54.00 | -29.70 | QP |

- Unwanted Emissions in Restricted Frequency Bands
- Above 1GHz

| | | | |
|---------------|--------|---------------|------------|
| Test channel: | Lowest | Polarization: | Horizontal |
|---------------|--------|---------------|------------|

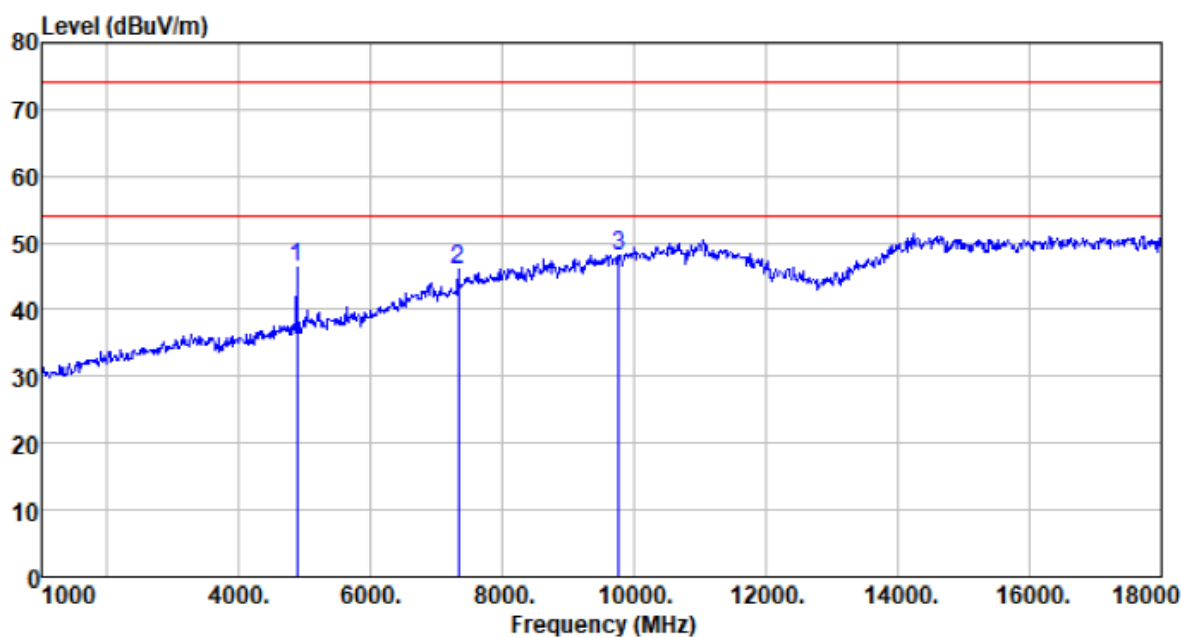


| | | | |
|---------------|--------|---------------|----------|
| Test channel: | Lowest | Polarization: | Vertical |
|---------------|--------|---------------|----------|



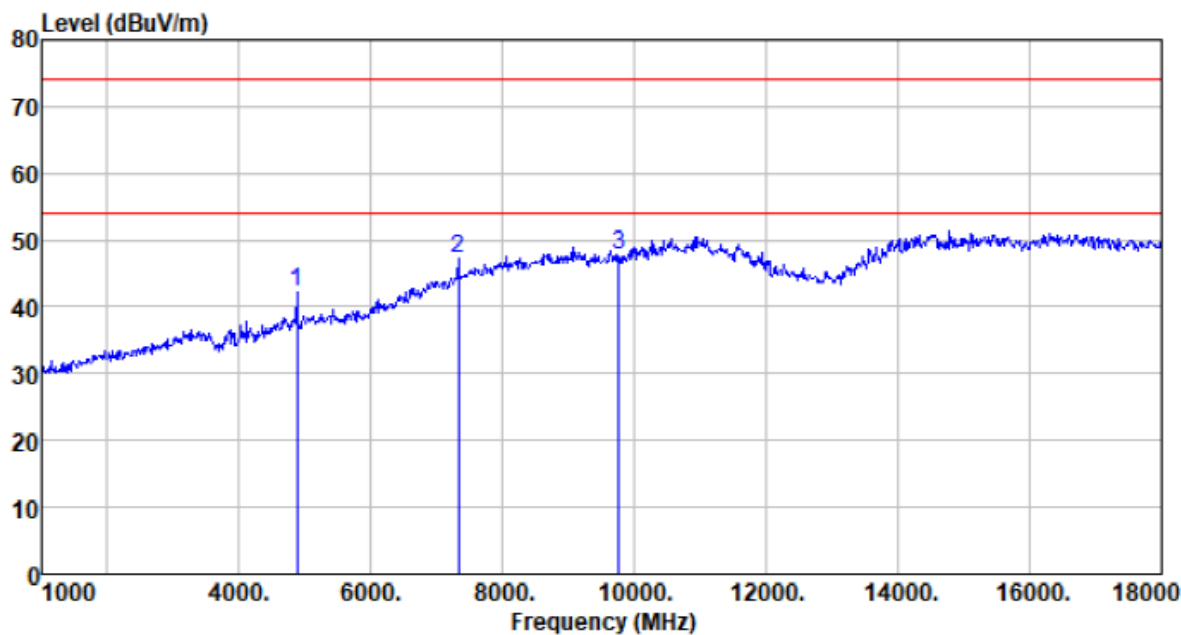
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 4816.000 | 41.11 | 31.22 | 4.61 | 37.68 | 39.26 | 74.00 | -34.74 | Peak |
| 7224.000 | 41.09 | 36.20 | 6.50 | 37.81 | 45.98 | 74.00 | -28.02 | Peak |
| 9632.000 | 39.59 | 37.97 | 7.98 | 37.93 | 47.61 | 74.00 | -26.39 | Peak |

| | | | |
|---------------|--------|---------------|------------|
| Test channel: | Middle | Polarization: | Horizontal |
|---------------|--------|---------------|------------|



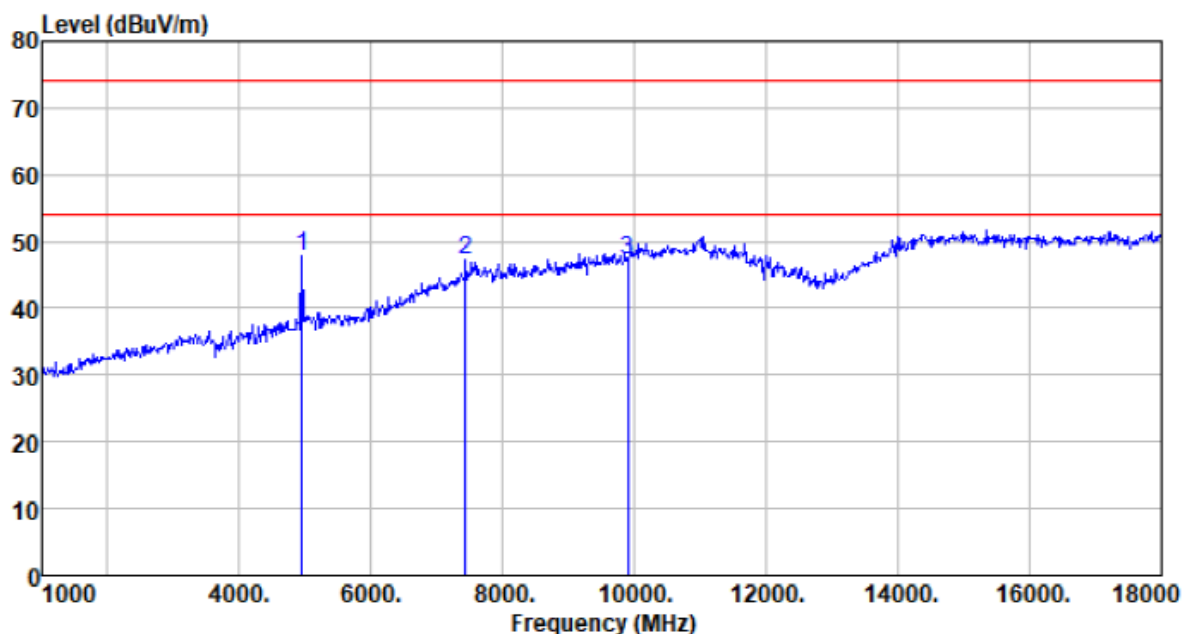
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 4880.000 | 48.01 | 31.31 | 4.69 | 37.62 | 46.39 | 74.00 | -27.61 | Peak |
| 7320.000 | 40.77 | 36.43 | 6.63 | 37.77 | 46.06 | 74.00 | -27.94 | Peak |
| 9760.000 | 39.93 | 38.10 | 8.03 | 37.95 | 48.11 | 74.00 | -25.89 | Peak |

| | | | |
|---------------|--------|---------------|----------|
| Test channel: | Middle | Polarization: | Vertical |
|---------------|--------|---------------|----------|



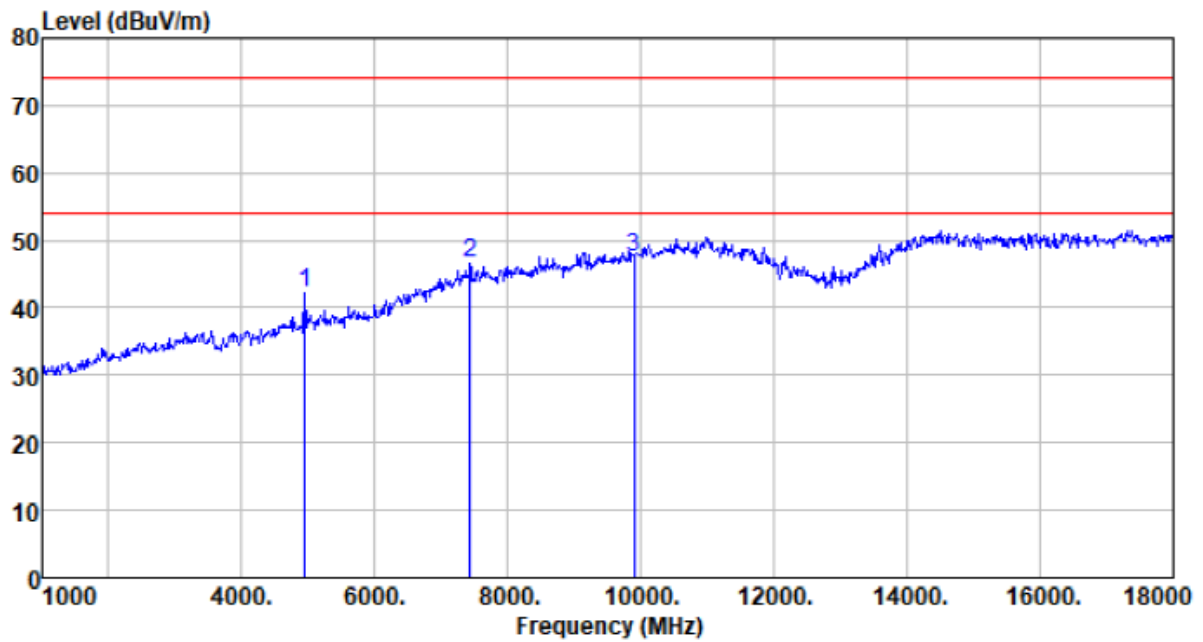
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 4880.000 | 43.69 | 31.31 | 4.69 | 37.62 | 42.07 | 74.00 | -31.93 | Peak |
| 7320.000 | 41.95 | 36.43 | 6.63 | 37.77 | 47.24 | 74.00 | -26.76 | Peak |
| 9760.000 | 39.76 | 38.10 | 8.03 | 37.95 | 47.94 | 74.00 | -26.06 | Peak |

| | | | |
|---------------|---------|---------------|------------|
| Test channel: | Highest | Polarization: | Horizontal |
|---------------|---------|---------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 4950.000 | 49.34 | 31.41 | 4.77 | 37.55 | 47.97 | 74.00 | -26.03 | Peak |
| 7425.000 | 41.63 | 36.66 | 6.75 | 37.73 | 47.31 | 74.00 | -26.69 | Peak |
| 9900.000 | 38.85 | 38.27 | 8.09 | 37.98 | 47.23 | 74.00 | -26.77 | Peak |

| | | | |
|---------------|---------|---------------|----------|
| Test channel: | Highest | Polarization: | Vertical |
|---------------|---------|---------------|----------|



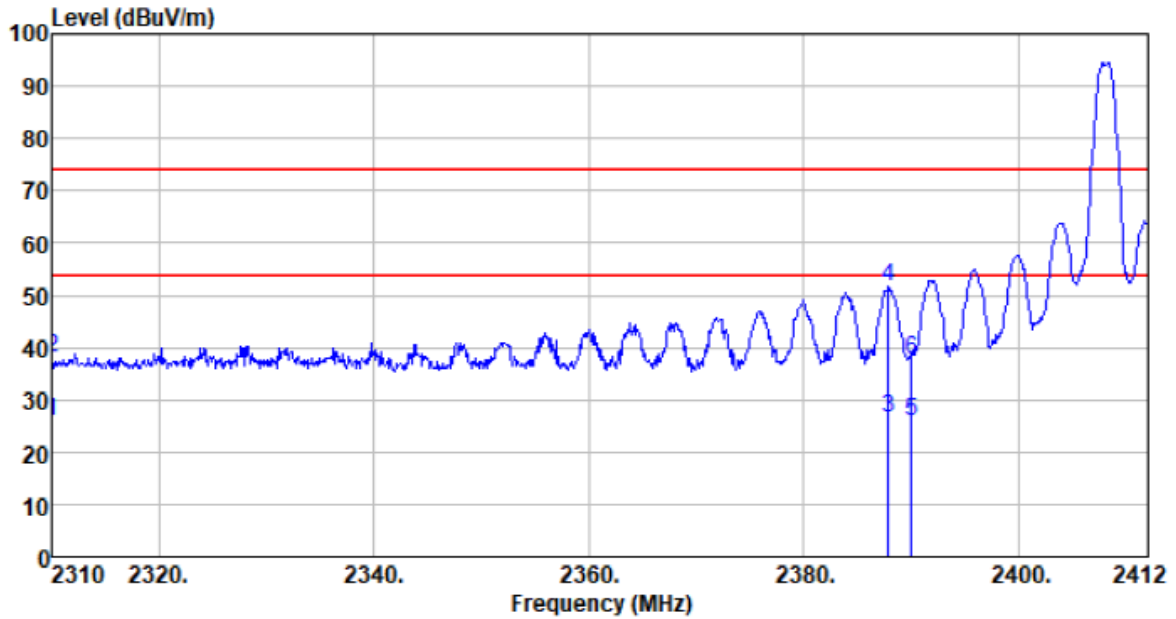
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 4950.000 | 43.51 | 31.41 | 4.77 | 37.55 | 42.14 | 74.00 | -31.86 | Peak |
| 7425.000 | 40.98 | 36.66 | 6.75 | 37.73 | 46.66 | 74.00 | -27.34 | Peak |
| 9900.000 | 39.04 | 38.27 | 8.09 | 37.98 | 47.42 | 74.00 | -26.58 | Peak |

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *“*” means this data is too weak; instrument of signal is unable to test.*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *For above 18GHz, no emission found.*

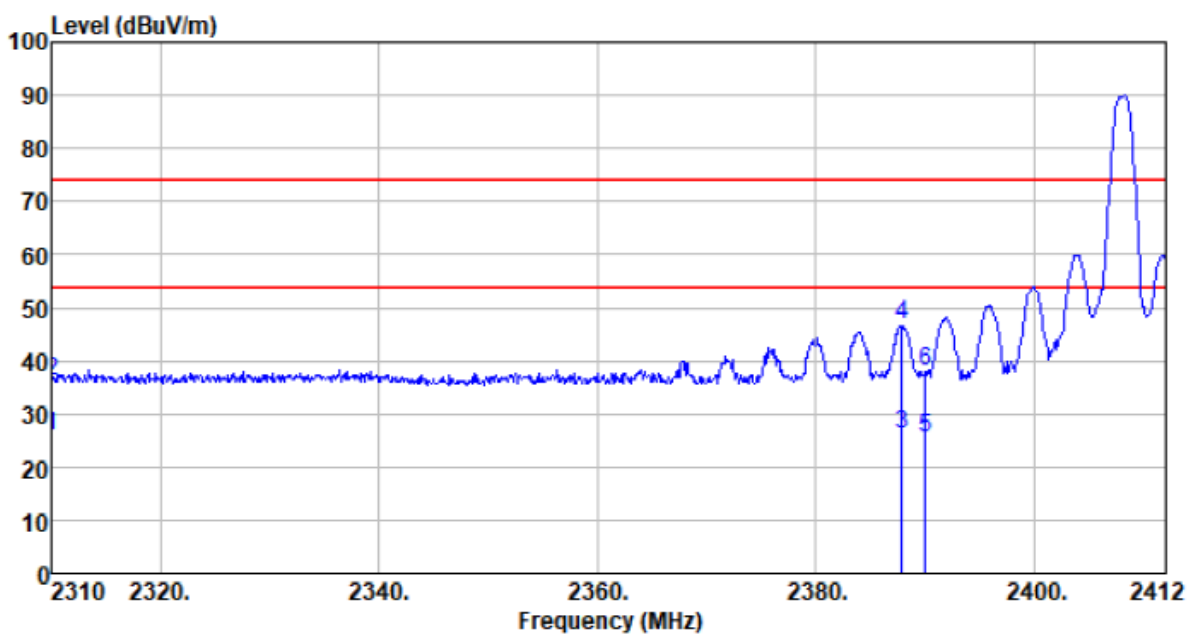
Unwanted Emissions in Non-restricted Frequency Bands

| | | | |
|---------------|--------|---------------|------------|
| Test channel: | Lowest | Polarization: | Horizontal |
|---------------|--------|---------------|------------|



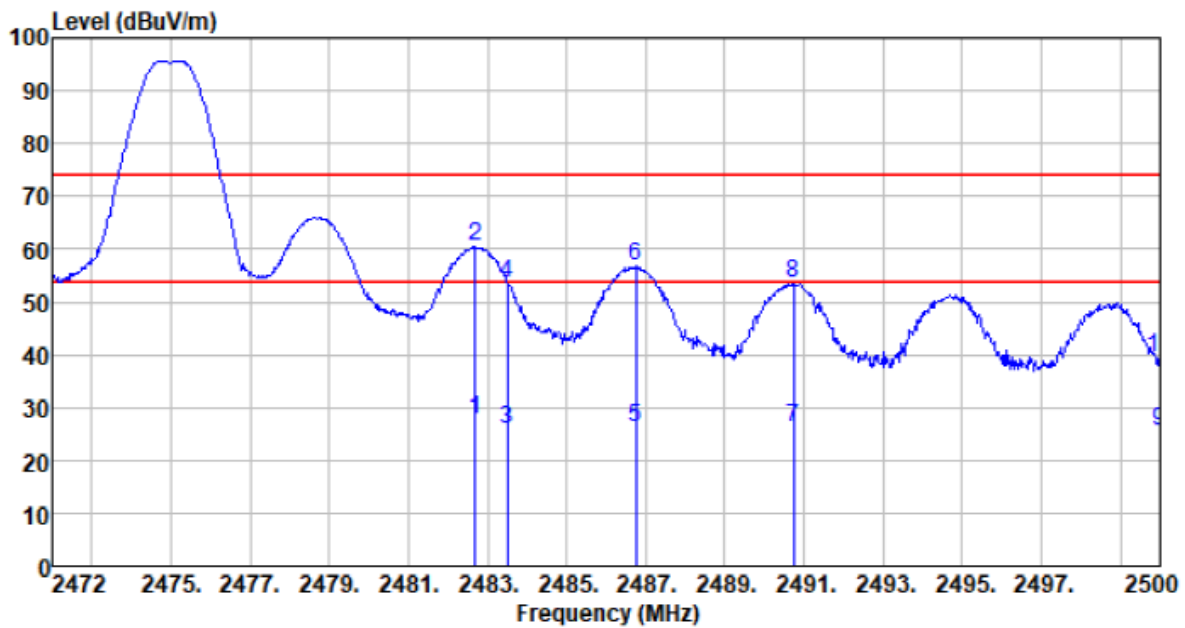
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|---------|
| 2310.000 | 34.56 | 27.14 | 2.81 | 38.64 | 25.87 | 54.00 | -28.13 | Average |
| 2310.000 | 46.62 | 27.14 | 2.81 | 38.64 | 37.93 | 74.00 | -36.07 | Peak |
| 2387.826 | 35.03 | 27.37 | 2.91 | 38.83 | 26.48 | 54.00 | -27.52 | Average |
| 2387.826 | 60.31 | 27.37 | 2.91 | 38.83 | 51.76 | 74.00 | -22.24 | Peak |
| 2390.000 | 34.45 | 27.37 | 2.91 | 38.84 | 25.89 | 54.00 | -28.11 | Average |
| 2390.000 | 46.18 | 27.37 | 2.91 | 38.84 | 37.62 | 74.00 | -36.38 | Peak |

| | | | |
|---------------|--------|---------------|----------|
| Test channel: | Lowest | Polarization: | Vertical |
|---------------|--------|---------------|----------|



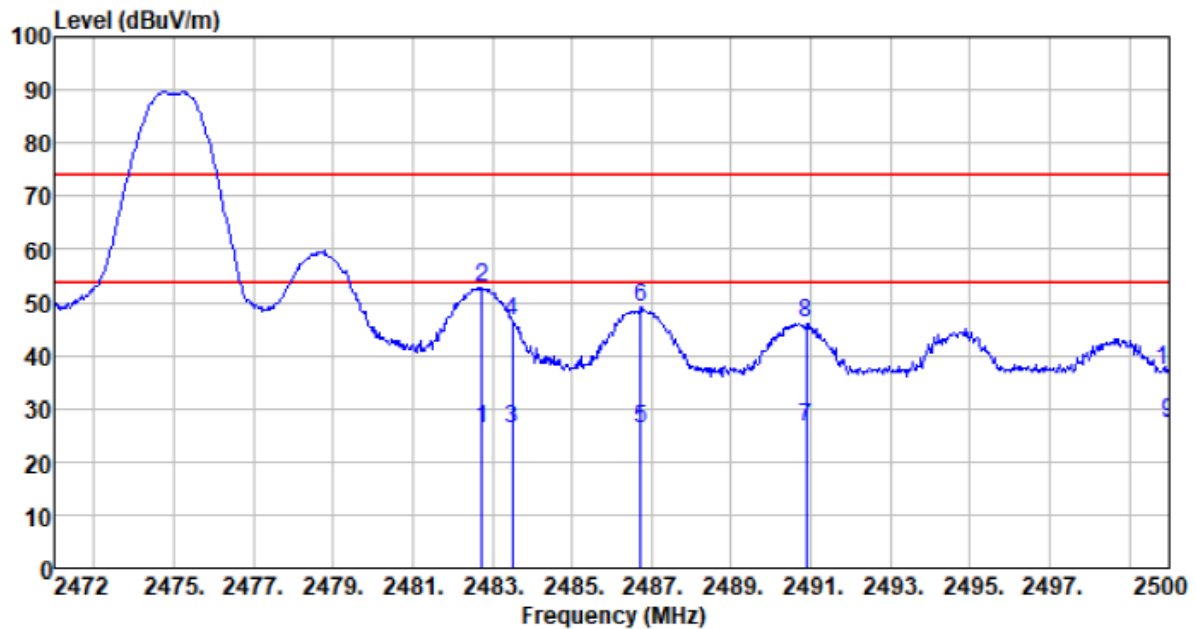
| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|---------|
| 2310.000 | 34.42 | 27.14 | 2.81 | 38.64 | 25.73 | 54.00 | -28.27 | Average |
| 2310.000 | 44.99 | 27.14 | 2.81 | 38.64 | 36.30 | 74.00 | -37.70 | Peak |
| 2387.826 | 34.58 | 27.37 | 2.91 | 38.83 | 26.03 | 54.00 | -27.97 | Average |
| 2387.826 | 55.49 | 27.37 | 2.91 | 38.83 | 46.94 | 74.00 | -27.06 | Peak |
| 2390.000 | 34.00 | 27.37 | 2.91 | 38.84 | 25.44 | 54.00 | -28.56 | Average |
| 2390.000 | 46.70 | 27.37 | 2.91 | 38.84 | 38.14 | 74.00 | -35.86 | Peak |

| | | | |
|---------------|---------|---------------|------------|
| Test channel: | Highest | Polarization: | Horizontal |
|---------------|---------|---------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|---------|
| 2482.696 | 35.97 | 27.66 | 2.99 | 39.06 | 27.56 | 54.00 | -26.44 | Average |
| 2482.696 | 68.81 | 27.66 | 2.99 | 39.06 | 60.40 | 74.00 | -13.60 | Peak |
| 2483.500 | 34.36 | 27.66 | 2.99 | 39.06 | 25.95 | 54.00 | -28.05 | Average |
| 2483.500 | 61.90 | 27.66 | 2.99 | 39.06 | 53.49 | 74.00 | -20.51 | Peak |
| 2486.756 | 34.63 | 27.66 | 2.99 | 39.07 | 26.21 | 54.00 | -27.79 | Average |
| 2486.756 | 65.15 | 27.66 | 2.99 | 39.07 | 56.73 | 74.00 | -17.27 | Peak |
| 2490.732 | 34.56 | 27.68 | 3.01 | 39.08 | 26.17 | 54.00 | -27.83 | Average |
| 2490.732 | 61.93 | 27.68 | 3.01 | 39.08 | 53.54 | 74.00 | -20.46 | Peak |
| 2500.000 | 33.96 | 27.70 | 3.01 | 39.10 | 25.57 | 54.00 | -28.43 | Average |
| 2500.000 | 47.90 | 27.70 | 3.01 | 39.10 | 39.51 | 74.00 | -34.49 | Peak |

| | | | |
|---------------|---------|---------------|----------|
| Test channel: | Highest | Polarization: | Vertical |
|---------------|---------|---------------|----------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|---------|
| 2482.752 | 34.67 | 27.66 | 2.99 | 39.06 | 26.26 | 54.00 | -27.74 | Average |
| 2482.752 | 61.06 | 27.66 | 2.99 | 39.06 | 52.65 | 74.00 | -21.35 | Peak |
| 2483.500 | 34.74 | 27.66 | 2.99 | 39.06 | 26.33 | 54.00 | -27.67 | Average |
| 2483.500 | 54.94 | 27.66 | 2.99 | 39.06 | 46.53 | 74.00 | -27.47 | Peak |
| 2486.728 | 34.57 | 27.66 | 2.99 | 39.07 | 26.15 | 54.00 | -27.85 | Average |
| 2486.728 | 57.33 | 27.66 | 2.99 | 39.07 | 48.91 | 74.00 | -25.09 | Peak |
| 2490.872 | 34.97 | 27.68 | 3.01 | 39.08 | 26.58 | 54.00 | -27.42 | Average |
| 2490.872 | 54.58 | 27.68 | 3.01 | 39.08 | 46.19 | 74.00 | -27.81 | Peak |
| 2500.000 | 35.75 | 27.70 | 3.01 | 39.10 | 27.36 | 54.00 | -26.64 | Average |
| 2500.000 | 45.71 | 27.70 | 3.01 | 39.10 | 37.32 | 74.00 | -36.68 | Peak |

Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

---End---