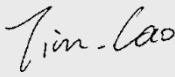
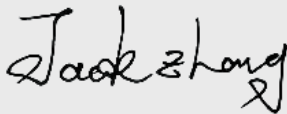




Test report No:
22B0907R-RF-US-P40V01

FCC & ISED TEST REPORT

| | |
|---|---|
| Product Name | iCG160 GNSS Receiver |
| Trademark | Leica |
| Model and /or type reference | iCG160 |
| FCC ID | RFD-iCG160 |
| IC | 3177A-iCG160 |
| Applicant's name / address | LEICA GEOSYSTEMS AG Heinrich-Wild-Strasse, 9435 Heerbrugg, Switzerland |
| Test method requested, standard | FCC CFR Title 47 Part 15,22,24,27,90 ANSI C63.10: 2013 ANSI C63.26: 2015 ANSI/TIA-603-E: 2016 RSS-247 Issue 2, RSS-130 Issue 2, RSS-132 Issue 3, RSS-133 Issue 6, RSS-139 Issue 3, RSS-199 Issue 3, RSS-Gen Issue 5 |
| Verdict Summary | IN COMPLIANCE |
| Documented by (name / position & signature) | Tim Cao/Project Engineer  |
| Approved by (name / position & signature) | Jack Zhang/ Supervisor  |
| Date of issue | 2023-03-09 |
| Report Version | V1.0 |
| Report template No | Template_Part 15&22&24&27&90-RF-V1.0 |

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

| | |
|----------------------|--|
| Test Location | No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China |
| Date(receive sample) | Dec. 08, 2022 |
| Date (start test) | Dec. 15, 2022 |
| Date (finish test) | Jan. 04, 2023 |

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

| | |
|-----------------------|---------------|
| Ambient temperature | 15 °C – 35 °C |
| Relative Humidity air | 30% - 60% |

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

| | |
|---|-----------------|
| Test case does not apply to test object | N/A |
| Test object does meet requirement | P (Pass) / PASS |
| Test object does not meet requirement | F (Fail) / FAIL |
| Not measured | N/M |

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

| | |
|-------|-------------------------------|
| EUT | : Equipment Under Test |
| QP | : Quasi-Peak |
| CAV | : CISPR Average |
| AV | : Average |
| CDN | : Coupling Decoupling Network |
| SAC | : Semi-Anechoic Chamber |
| OATS | : Open Area Test Site |
| BW | : Bandwidth |
| AM | : Amplitude Modulation |
| PM | : Pulse Modulation |
| HCP | : Horizontal Coupling Plane |
| VCP | : Vertical Coupling Plane |
| U_N | : Nominal voltage |
| T_x | : Transmitter |
| R_x | : Receiver |
| N/A | : Not Applicable |
| N/M | : Not Measured |

DOCUMENT HISTORY

| Report No. | Version | Description | Issued Date |
|-----------------------|---------|--------------------------|-------------|
| 22B0907R-RF-US-P40V01 | V1.0 | Initial issue of report. | 2023-03-09 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with FCC Part 15,22,24,27, RSS-247 Issue 2, RSS-130 Issue 2, RSS-132 Issue 3, RSS-133 Issue 6, RSS-139 Issue 3, RSS-199 Issue 3, RSS-195 Issue 2, RSS-Gen Issue 5.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results relate only to the samples tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Information;
 - Chapter 1.3 Channel List.

USED EQUIPMENT

Radiated Emission(30MHz-1GHz) / AC3

| Instrument | Manufacturer | Model No. | Serial No. | Cal. Date | Next Cal. Date |
|-------------------------------------|--------------|-----------|------------------------|------------|----------------|
| EMI Test Receiver | R&S | ESCI | 100573 | 2022.09.17 | 2023.09.16 |
| Wideband Radio Communication Tester | R&S | CMW 500 | 1201.0002K50-158243-jb | 2022.05.21 | 2023.05.20 |
| Loop Antenna | R&S | HFH2-Z2 | 833799/003 | 2022.04.15 | 2023.04.14 |
| Bilog Antenna | Teseq GmbH | CBL6112D | 27611 | 2022.11.21 | 2023.11.20 |
| Temperature/Humidity Meter | RTS | RTS-8S | AC3-TH | 2022.07.09 | 2023.07.08 |
| Coaxial Cable | Huber+Suhner | RG 214 | AC3-C | 2022.03.30 | 2023.03.29 |
| Dekra test software | Dekra | - | - | - | - |

Radiated Emission(1GHz-40GHz) / AC5

| Instrument | Manufacturer | Model No. | Serial No. | Cal. Date | Next Cal. Date |
|-------------------------------------|--------------|---------------|------------------------|------------|----------------|
| EXA Spectrum Analyzer | Keysight | N9010A | MY55370495 | 2022.08.12 | 2023.08.11 |
| Wideband Radio Communication Tester | R&S | CMW 500 | 1201.0002K50-158243-jb | 2022.05.21 | 2023.05.20 |
| Pre-Amplifier | SKET | LNPA_0118G-45 | SK2021090101 | 2022.04.15 | 2023.04.14 |
| Preamplifier | CHENGYI | EMC184045SE | 980263 | 2022.05.21 | 2023.05.20 |
| DRG Horn | ETS-Lindgren | 3117 | 00123988 | 2022.11.01 | 2023.10.31 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA9170 | 294 | 2022.05.19 | 2023.05.18 |
| Temperature/Humidity Meter | RTS | RTS-8S | AC5-TH | 2022.07.07 | 2023.07.06 |
| Temperature/Humidity Meter | RTS | RTS-8S | AC5-TH | 2022.07.07 | 2023.07.06 |
| Coaxial Cable | Huber+Suhner | SUCOFLEX 106 | AC5-C1 | 2022.03.21 | 2023.03.20 |
| Coaxial Cable | Huber+Suhner | SUCOFLEX 106 | AC5-C2 | 2022.03.21 | 2023.03.20 |
| Coaxial Cable | Huber+Suhner | SUCOFLEX 102 | AC5-C3 | 2022.03.21 | 2023.03.20 |
| Dekra test software | Dekra | - | - | - | - |

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

| Test item | Uncertainty |
|--------------------|--------------|
| Radiated Emissions | ± 3.2 dB |

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

| | |
|----------------------------|--|
| Product Name | iCG160 GNSS Receiver |
| Model No. | iCG160 |
| FCC ID..... | RFD-iCG160 |
| IC..... | 3177A-iCG160 |
| Software version | 0.1.248 |
| Hardware version | 3 |
| Manufacturer | LEICA GEOSYSTEMS AG |
| Manufacturer Address | Heinrich-Wild-Strasse, 9435 Heerbrugg, Switzerland |

| | |
|-----------------------------|---|
| Wireless specification..... | WCDMA |
| Support Band(s) | Band II / IV / V |
| Uplink Frequency | Band II: 1850-1910 MHz Band IV: 1710-1755 MHz Band V: 824-849 MHz |
| Downlink Frequency..... | Band II: 1930-1990 MHz Band IV: 2110-2155 MHz Band V: 869-894 MHz |
| Type of Modulation..... | QPSK |

| | |
|-----------------------------|--|
| Wireless specification..... | LTE |
| Support Band(s) | Band 2 / 4 / 5 / 7 / 12 / 13 / 26 / 41 / 66 |
| Uplink Frequency | Band 2: 1850-1910 MHz Band 4: 1710-1755 MHz Band 5: 824-849 MHz Band 7: 2500-2570 MHz Band 12: 699-716 MHz Band 13: 777-787 MHz Band 26: 814-849 MHz Band 41: 2496-2690 MHz Band 66: 1710-1780 MHz |
| Downlink Frequency | Band 2: 1930-1990 MHz Band 4: 2110-2155 MHz Band 5: 869-894 MHz Band 7: 2620-2690 MHz Band 12: 729-746 MHz Band 13: 746-756 MHz Band 26: 859-894 MHz Band 41: 2496-2690 MHz Band 66: 2110-2180 MHz |
| Type of Modulation..... | BPSK, QPSK, 16QAM |

| | |
|-----------------------------|------|
| Wireless specification..... | WLAN |
|-----------------------------|------|

| | |
|------------------------------------|---|
| Operating frequency range(s).....: | 2400~2483.5MHz |
| Type of modulation.....: | 802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM |
| Number of channel.....: | 802.11b/g/n(20MHz) : 11 802.11n(40MHz) : 9 |

| | | | | | | |
|------------------------------------|-------------------------------------|---------|-------------------------------------|------------|-------------------------------------|---------|
| Wireless specification.....: | Bluetooth V5.2 - BR/EDR | | | | | |
| Operating frequency range(s).....: | 2400~2483.5MHz | | | | | |
| Type of Modulation.....: | <input checked="" type="checkbox"/> | GFSK | <input checked="" type="checkbox"/> | Pi/4 DQPSK | <input checked="" type="checkbox"/> | 8DPSK |
| Data Rate.....: | <input checked="" type="checkbox"/> | 1Mbit/s | <input checked="" type="checkbox"/> | 2Mbit/s | <input checked="" type="checkbox"/> | 3Mbit/s |
| Number of channel.....: | 79 | | | | | |

| | |
|------------------------------------|------------|
| Wireless specification.....: | SRD 900 |
| Operating frequency range(s).....: | 902~928MHz |
| Type of modulation.....: | 8PSK |
| Number of channel.....: | 3 |

| | | |
|---------------------------|-------------------------------------|----------------------------------|
| Rated power supply..... : | Voltage and Frequency | |
| | <input type="checkbox"/> | AC: 220 – 240 V, 50/60 Hz |
| | <input type="checkbox"/> | AC: 100 – 120 V, 50/60 Hz |
| | <input checked="" type="checkbox"/> | DC: 12Vdc |
| | <input type="checkbox"/> | Battery: 3.7V |
| Mounting position : | <input type="checkbox"/> | Table top equipment |
| | <input type="checkbox"/> | Wall/Ceiling mounted equipment |
| | <input checked="" type="checkbox"/> | Floor standing equipment |
| | <input type="checkbox"/> | Hand-held equipment |
| | <input type="checkbox"/> | Other: vehicle-mounted equipment |

1.2 Antenna Information

| | | | | |
|-----------------------------|---|-----------|-------------------------------------|--------------|
| Antenna serial number | CU22005 For LTE/WCDMA CU22005 For WIFI/BT S161TC-915 For UHF 900MHz | | | |
| Antenna Delivery | <input checked="" type="checkbox"/> | 1TX + 1RX | | |
| | <input type="checkbox"/> | 2TX + 2RX | | |
| Antenna technology..... | <input checked="" type="checkbox"/> | SISO | | |
| | <input type="checkbox"/> | MIMO | <input type="checkbox"/> | CDD |
| | | | <input type="checkbox"/> | Beam-forming |
| Antenna Type..... | <input checked="" type="checkbox"/> | External | <input checked="" type="checkbox"/> | Dipole |
| | | | <input type="checkbox"/> | Sectorized |
| | <input checked="" type="checkbox"/> | Internal | <input type="checkbox"/> | PIFA |
| | | | <input checked="" type="checkbox"/> | FPC |
| | | | <input type="checkbox"/> | Ceramic Chip |
| | | | <input type="checkbox"/> | Others..... |
| Antenna Gain | LTE/WCDMA For 698-960MHz 2.80 dBi LTE/WCDMA For 1710-2170MHz 4.20 dBi LTE For 2300-2400MHz 2.80 dBi LTE For 2500-2690MHz 1.60 dBi WIFI/BT 2.80 dBi UHF 900MHz 2.50 dBi | | | |

1.3 Channel List

| WCDMA Band | Channel/ Frequency (MHz) | Channel & Frequency(MHz) | | |
|------------|-----------------------------|--------------------------|--------|---------|
| | | Lowest | Middle | Highest |
| 2 | Channel | 18601 | 18900 | 19199 |
| | Frequency | 1850.1 | 1880 | 1909.9 |
| 4 | Channel | 19951 | 20175 | 20399 |
| | Frequency | 1710.1 | 1732.5 | 1754.9 |
| 5 | Channel | 20401 | 20525 | 20649 |
| | Frequency | 824.1 | 836.5 | 848.9 |

| LTE Band | Bandwidth (MHz) | Channel/ Frequency (MHz) | Channel & Frequency(MHz) | | |
|----------|-----------------|-----------------------------|--------------------------|--------|---------|
| | | | Lowest | Middle | Highest |
| 2 | 1.4 | Channel | 18607 | 18900 | 19193 |
| | | Frequency | 1850.7 | 1880 | 1909.3 |
| | 3 | Channel | 18615 | 18900 | 19185 |
| | | Frequency | 1851.5 | 1880 | 1908.5 |
| | 5 | Channel | 18625 | 18900 | 19175 |
| | | Frequency | 1852.5 | 1880 | 1907.5 |
| | 10 | Channel | 18650 | 18900 | 19150 |
| | | Frequency | 1855 | 1880 | 1905 |
| | 15 | Channel | 18675 | 18900 | 19125 |
| | | Frequency | 1857.5 | 1880 | 1902.5 |
| | 20 | Channel | 18700 | 18900 | 19100 |
| | | Frequency | 1860 | 1880 | 1900 |
| 4 | 1.4 | Channel | 19957 | 20175 | 20393 |
| | | Frequency | 1710.7 | 1732.5 | 1754.3 |
| | 3 | Channel | 19965 | 20175 | 20385 |
| | | Frequency | 1711.5 | 1732.5 | 1753.5 |
| | 5 | Channel | 19975 | 20175 | 20375 |
| | | Frequency | 1712.5 | 1732.5 | 1752.5 |
| | 10 | Channel | 20000 | 20175 | 20350 |
| | | Frequency | 1715 | 1732.5 | 1750 |
| | 15 | Channel | 20025 | 20175 | 20325 |
| | | Frequency | 1717.5 | 1732.5 | 1747.5 |
| | 20 | Channel | 20050 | 20175 | 20300 |
| | | Frequency | 1720 | 1732.5 | 1745 |
| 5 | 1.4 | Channel | 20407 | 20525 | 20643 |
| | | Frequency | 824.7 | 836.5 | 848.3 |
| | 3 | Channel | 20415 | 20525 | 20635 |
| | | Frequency | 825.5 | 836.5 | 847.5 |
| | 5 | Channel | 20425 | 20525 | 20625 |
| | | Frequency | 826.5 | 836.5 | 846.5 |
| 10 | Channel | 20450 | 20525 | 20600 | |
| | Frequency | 829 | 836.5 | 844 | |
| 7 | 5 | Channel | 20775 | 21100 | 21425 |
| | | Frequency | 2502.5 | 2535 | 2567.5 |
| | 10 | Channel | 20800 | 21100 | 21400 |

| | | | | | | |
|------------|-----------|-----------|-----------|-------|--------|-------|
| | 15 | Frequency | 2505 | 2535 | 2565 | |
| | | Channel | 20825 | 21100 | 21375 | |
| | 20 | Frequency | 2507.5 | 2535 | 2562.5 | |
| | | Channel | 20850 | 21100 | 21350 | |
| | 12 | 1.4 | Channel | 23017 | 23095 | 23173 |
| | | | Frequency | 699.7 | 707.5 | 715.3 |
| 3 | | Channel | 23025 | 23095 | 23165 | |
| | | Frequency | 700.5 | 707.5 | 714.5 | |
| 5 | | Channel | 23035 | 23095 | 23155 | |
| | | Frequency | 701.5 | 707.5 | 713.5 | |
| 10 | | Channel | 23060 | 23095 | 23130 | |
| | | Frequency | 704 | 707.5 | 711 | |
| 13 | | 5 | Channel | 23205 | 23230 | 23255 |
| | | | Frequency | 779.5 | 782 | 784.5 |
| | | 10 | Channel | - | 23230 | - |
| | | | Frequency | - | 782 | - |
| 14 | 5 | Channel | 23305 | 23330 | 23355 | |
| | | Frequency | 790.5 | 793 | 795.5 | |
| | 10 | Channel | - | 23330 | - | |
| | | Frequency | - | 793 | - | |
| 26 For FCC | 1.4 | Channel | 26865 | 27033 | 26697 | |
| | | Frequency | 831.5 | 848.3 | 814.7 | |
| | 3 | Channel | 26705 | 26865 | 27025 | |
| | | Frequency | 815.5 | 831.5 | 847.5 | |
| | 5 | Channel | 26715 | 26865 | 27015 | |
| | | Frequency | 816.5 | 831.5 | 846.5 | |
| | 10 | Channel | 26740 | 26865 | 26990 | |
| | | Frequency | 819 | 831.5 | 844 | |
| | 15 | Channel | 26765 | 26865 | 26965 | |
| | | Frequency | 821.5 | 831.5 | 841.5 | |
| | 26 For IC | 1.4 | Channel | 26797 | 26915 | 27033 |
| | | | Frequency | 824.7 | 836.5 | 848.3 |
| 3 | | Channel | 26805 | 26915 | 27025 | |
| | | Frequency | 825.5 | 836.5 | 847.5 | |
| 5 | | Channel | 26815 | 26915 | 27015 | |
| | | Frequency | 826.5 | 836.5 | 846.5 | |
| 10 | | Channel | 26840 | 26915 | 26990 | |

| | | | | | | |
|----|----|-----------|-----------|--------|--------|--------|
| | 15 | Frequency | 829 | 836.5 | 844 | |
| | | Channel | 26865 | 26915 | 26965 | |
| | | Frequency | 831.5 | 836.5 | 841.5 | |
| 41 | 5 | Channel | 39715 | 40620 | 41565 | |
| | | Frequency | 2502.5 | 2593 | 2687.5 | |
| | 10 | Channel | 39740 | 40620 | 41540 | |
| | | Frequency | 2505 | 2593 | 2685 | |
| | 15 | Channel | 39765 | 40620 | 41515 | |
| | | Frequency | 2507.5 | 2593 | 2682.5 | |
| | 20 | Channel | 39790 | 40620 | 41490 | |
| | | Frequency | 2510 | 2593 | 2680 | |
| | 66 | 1.4 | Channel | 131979 | 132322 | 132665 |
| | | | Frequency | 1710.7 | 1745 | 1779.3 |
| | | 3 | Channel | 131987 | 132322 | 132657 |
| | | | Frequency | 1711.5 | 1745 | 1778.5 |
| 5 | | Channel | 131996 | 132322 | 132647 | |
| | | Frequency | 1712.5 | 1745 | 1777.5 | |
| 10 | | Channel | 132022 | 132322 | 132622 | |
| | | Frequency | 1715 | 1745 | 1775 | |
| 15 | | Channel | 132047 | 132322 | 132597 | |
| | | Frequency | 1717.5 | 1745 | 1772.5 | |
| 20 | | Channel | 132072 | 132322 | 132572 | |
| | | Frequency | 1720 | 1745 | 1770 | |

IEEE 802.11b/g & IEEE 802.11n (20MHz)

| Working Frequency of Each Channel | | | | | | | |
|-----------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 1 | 2412 MHz | 2 | 2417 MHz | 3 | 2422 MHz | 4 | 2427 MHz |
| 5 | 2432 MHz | 6 | 2437 MHz | 7 | 2442 MHz | 8 | 2447 MHz |
| 9 | 2452 MHz | 10 | 2457 MHz | 11 | 2462 MHz | - | - |

IEEE 802.11n(40MHz)

| Working Frequency of Each Channel | | | | | | | |
|-----------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 003 | 2422 MHz | 004 | 2427 MHz | 005 | 2432 MHz | 006 | 2437 MHz |
| 007 | 2442 MHz | 008 | 2447 MHz | 009 | 2452 MHz | 010 | 2457 MHz |
| 011 | 2462 MHz | N/A | N/A | N/A | N/A | N/A | N/A |

SRD 900MHz

| Working Frequency of Each Channel | | | | | | | |
|-----------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 1 | 902 MHz | 2 | 915 MHz | 3 | 928 MHz | N/A | N/A |

| Bluetooth Working Frequency of Each Channel: (For BR/EDR) | | | | | | | |
|---|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 00 | 2402 MHz | 01 | 2403 MHz | 02 | 2404 MHz | 03 | 2405 MHz |
| 04 | 2406 MHz | 05 | 2407 MHz | 06 | 2408 MHz | 07 | 2409 MHz |
| 08 | 2410 MHz | 09 | 2411 MHz | 10 | 2412 MHz | 11 | 2413 MHz |
| 12 | 2414 MHz | 13 | 2415 MHz | 14 | 2416 MHz | 15 | 2417 MHz |
| 16 | 2418 MHz | 17 | 2419 MHz | 18 | 2420 MHz | 19 | 2421 MHz |
| 20 | 2422 MHz | 21 | 2423 MHz | 22 | 2424 MHz | 23 | 2425 MHz |
| 24 | 2426 MHz | 25 | 2427 MHz | 26 | 2428 MHz | 27 | 2429 MHz |
| 28 | 2430 MHz | 29 | 2431 MHz | 30 | 2432 MHz | 31 | 2433 MHz |
| 32 | 2434 MHz | 33 | 2435 MHz | 34 | 2436 MHz | 35 | 2437 MHz |
| 36 | 2438 MHz | 37 | 2439 MHz | 38 | 2440 MHz | 39 | 2441 MHz |
| 40 | 2442 MHz | 41 | 2443 MHz | 42 | 2444 MHz | 43 | 2445 MHz |
| 44 | 2446 MHz | 45 | 2447 MHz | 46 | 2448 MHz | 47 | 2449 MHz |
| 48 | 2450 MHz | 49 | 2451 MHz | 50 | 2452 MHz | 51 | 2453 MHz |
| 52 | 2454 MHz | 53 | 2455 MHz | 54 | 2456 MHz | 55 | 2457 MHz |
| 56 | 2458 MHz | 57 | 2459 MHz | 58 | 2460 MHz | 59 | 2461 MHz |
| 60 | 2462 MHz | 61 | 2463 MHz | 62 | 2464 MHz | 63 | 2465 MHz |
| 64 | 2466 MHz | 65 | 2467 MHz | 66 | 2468 MHz | 67 | 2469 MHz |
| 68 | 2470 MHz | 69 | 2471 MHz | 70 | 2472 MHz | 71 | 2473 MHz |
| 72 | 2474 MHz | 73 | 2475 MHz | 74 | 2476 MHz | 75 | 2477 MHz |
| 76 | 2478 MHz | 77 | 2479 MHz | 78 | 2480 MHz | N/A | N/A |

Note 1: The General Description of the Item , antenna information, Data Rate, Channel List and Test Software for the EUT in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

| | |
|---|--|
| Test Mode For Simultaneous transmission | Mode 1: Transmitter: -Cellular worst case for bands below 1GHz+Bluetooth/WiFi 2.4 GHz worst case+SRD 902-928 MHz |
| | Mode 2: Transmitter: -Cellular worst case for bands between 1GHz and 2GHz+Bluetooth/WiFi 2.4 GHz worst case+SRD 902-928 MHz |
| | Mode 3: Transmitter: -Cellular worst case for bands between 2GHz and 3GHz+Bluetooth/WiFi 2.4 GHz worst case+SRD 902-928 MHz |
| | Mode 4: Transmitter: -Bluetooth/WiFi 2.4 GHz worst case+SRD 902-928 MHz |

Note : For client device, radiated tests was verified over X, Y, Z axis, and shown the worst case Z axis on this report.

2.2 Auxiliary equipment / Test software for the EUT

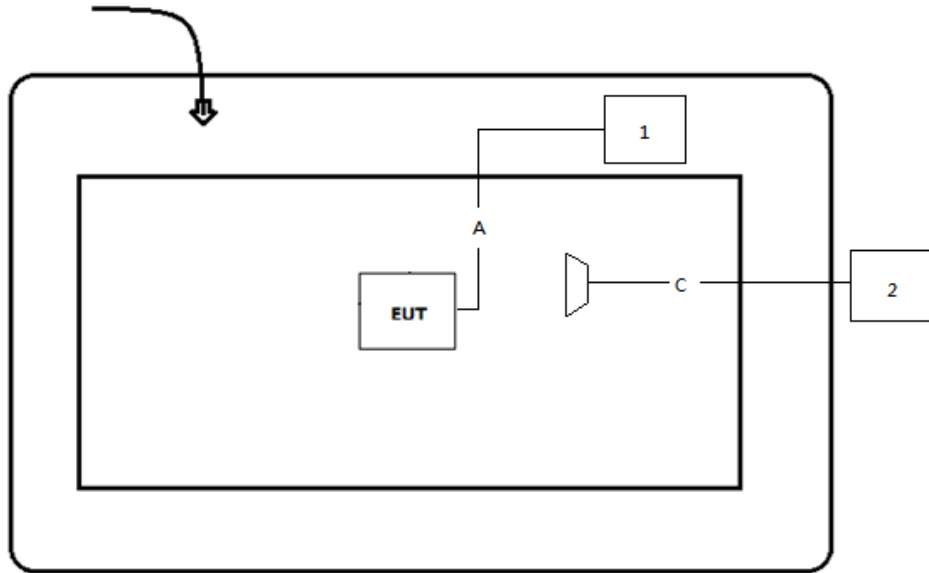
| No. | Auxiliary equipment | Model No. | Manufacturer | Supplied by |
|-----|-------------------------------------|-----------|--------------|-------------|
| 1 | DC Power External | GEB373 | LEICA | N/A |
| 2 | Wideband Radio Communication Tester | CMW 500 | R&S | N/A |

| No. | Signal Cable Type | Signal Cable Description |
|-----|-------------------|--------------------------|
| A | Control Cable | Non-Shielded, 2m |
| B | Coaxial Cable | Shielded, 1.5m |
| C | Coaxial Cable | Shielded, 10m |

2.3 Test Configuration / Block diagram used for tests

Radiated Connection Diagram

Chamber



| | |
|---|-----------------|
| 1 | Base Station |
| 2 | Signal Analyzer |

2.4 Testing process

| | |
|---|--|
| 1 | Setup the EUT and simulators as shown on above. |
| 2 | Turn on the power of all equipment. |
| 3 | EUT Communicate with CMW 500, then select channel to test. |

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

| Standard | Year | Description |
|---|------|--|
| FCC CFR Title 47 Part 15 Subpart C Section 15.247 | 2021 | Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz. |
| FCC CFR Title 47 Part 22 | 2020 | PUBLIC MOBILE SERVICES |
| FCC CFR Title 47 Part 24 | 2020 | PERSONAL COMMUNICATIONS SERVICES |
| FCC CFR Title 47 Part 27 | 2020 | MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES |
| FCC CFR Title 47 Part 90 | 2021 | PRIVATE LAND MOBILE RADIO SERVICES |
| ANSI C63.10 | 2013 | American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices |
| KDB558074 D01 v05r02 | 2019 | Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247 |
| RSS-247 Issue 2 | 2017 | Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices |
| RSS-132 Issue 3 | 2013 | Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz |
| RSS-133 Issue 6 | 2018 | 2 GHz Personal Communications Services |
| RSS-130 Issue 2 | 2019 | Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz |
| RSS-139 Issue 3 | 2015 | Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz |
| RSS-199 Issue 3 | 2015 | Broadband Radio Service (BRS) Equipment Operating in the Band 2500–2690 MHz |
| RSS-Gen Issue 5 Amendment 2 | 2021 | General Requirements for Compliance of Radio Apparatus |

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

WCDMA Band II/IV/V, LTE band 2/4/5/7/12/13/26/41/42/43/48/66:

| Requirement – Test case | Basic standard(s) | Verdict | Remark |
|-------------------------|---|---------|--------|
| Radiated Emissions | FCC Part 22/24/27/90 RSS-130/132/133/139/190 | PASS | |

WIFI 2.4G/Bluetooth

| Requirement – Test case | Basic standard(s) | Verdict | Remark |
|---|-------------------------------|---------|--------|
| Emissions in restricted frequency bands | FCC 15.247 RSS-Gen Issue 5 | PASS | --- |

3.4 Test Facility

| | | |
|------------|----------|---------------------------------------|
| USA | : | FCC Designation Number: CN1199 |
| CA | : | ISED CAB identifier: CN0040 |

4 TEST RESULTS

| | |
|-------------------------------|----------------------|
| 4.1 Radiated Emissions | VERDICT: PASS |
|-------------------------------|----------------------|

| 4.1.1 Limit | | | |
|---------------------------------------|---|-----------------|-----------------|
| Band | Standard | | |
| WCDMA Band V; LTE Band 5/26 | FCC §22.917: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. | | |
| | RSS-132: Section 5.5: The power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). | | |
| WCDMA Band II; LTE Band 2 | FCC §24.238: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. | | |
| | RSS-133 Section 6.5: The emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). | | |
| LTE Band 12/13 | FCC §27.53(g): For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. | | |
| | FCC §27.53(c): On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations. | | |
| | RSS-130 Section 4.7: The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least $43 + 10 \log_{10} p$ (watts), dB. Equipment operating in the frequency bands 746- 756 MHz and 777-787 MHz shall also comply with the following restrictions: The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least: $65 + 10 \log_{10} p$ (watts), dB, for mobile and portable equipment. The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz. | | |
| WCDMA Band IV; LTE Band 4/66 | FCC §27.53(h): The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB. | | |
| | RSS-139 Section 6.6: The emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB. | | |
| LTE Band 7/41 | FCC §27.53(h): The attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz | | |
| | RSS-199 Section 4.5: The mobile subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least: iii. $55 + 10 \log_{10} p$ at X MHz and beyond from the channel edges In addition, the attenuation shall not be less than $43 + 10 \log_{10} p$ on all frequencies between 2490.5 MHz and 2496 MHz, and $55 + 10 \log_{10} p$ at or below 2490.5 MHz. In (b), p is the transmitter power measured in watts and X is 6 MHz or the equipment occupied bandwidth, whichever is greater. | | |
| Restricted Bands of operation for FCC | | | |
| Frequency (MHz) | Frequency (MHz) | Frequency (MHz) | Frequency (GHz) |

| | | | |
|--|-----------------------|-----------------|---------------|
| 0.090 – 0.110 | 16.42 – 16.423 | 399.9 – 410 | 4.5 – 5.15 |
| 0.495 – 0.505 | 16.69475 – 16.69525 | 608 – 614 | 5.35 – 5.46 |
| 2.1735 – 2.1905 | 16.80425 – 16.80475 | 960 – 1240 | 7.25 – 7.75 |
| 4.125 – 4.128 | 25.5 – 25.67 | 1300 – 1427 | 8.025 – 8.5 |
| 4.17725 – 4.17775 | 37.5 – 38.25 | 1435 – 1626.5 | 9.0 – 9.2 |
| 4.20725 – 4.20775 | 73 – 74.6 | 1645.5 – 1646.5 | 9.3 – 9.5 |
| 6.215 – 6.218 | 74.8 – 75.2 | 1660 – 1710 | 10.6 – 12.7 |
| 6.26775 – 6.26825 | 108 – 121.94 | 1718.8 – 1722.2 | 13.25 – 13.4 |
| 6.31175 – 6.31225 | 123 – 138 | 2200 – 2300 | 14.47 – 14.5 |
| 8.291 – 8.294 | 149.9 – 150.05 | 2310 – 2390 | 15.35 – 16.2 |
| 8.362 – 8.366 | 156.52475 – 156.52525 | 2483.5 – 2500 | 17.7 – 21.4 |
| 8.37625 – 8.38675 | 156.7 – 156.9 | 2690 – 2900 | 22.01 – 23.12 |
| 8.81425 – 8.81475 | 162.0125 – 167.17 | 3260 – 3267 | 23.6 – 24.0 |
| 12.29 – 12.293 | 167.72 – 173.2 | 3332 – 3339 | 31.2 – 31.8 |
| 12.51975 – 12.52025 | 240 – 285 | 3345.8 – 3358 | 36.43 – 36.5 |
| 12.57675 – 12.57725 | 322 – 335.4 | 3600 – 4400 | |
| 13.36 – 13.41 | | | |
| Restricted Bands of operation for ISED | | | |
| 0.090 - 0.110 | 13.36 - 13.41 | 960 - 1427 | 9.0 - 9.2 |
| 0.495 - 0.505 | 16.42 - 16.423 | 1435 - 1626.5 | 9.3 - 9.5 |
| 2.1735 - 2.1905 | 16.69475 - 16.69525 | 1645.5 - 1646.5 | 10.6 - 12.7 |
| 3.020 - 3.026 | 16.80425 - 16.80475 | 1660 - 1710 | 13.25 - 13.4 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1718.8 - 1722.2 | 14.47 - 14.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 2200 - 2300 | 15.35 - 16.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 2310 - 2390 | 17.7 - 21.4 |
| 5.677 - 5.683 | 74.8 - 75.2 | 2483.5 - 2500 | 22.01 - 23.12 |
| 6.215 - 6.218 | 108 - 138 | 2655 - 2900 | 23.6 - 24.0 |
| 6.26775 - 6.26825 | 149.9 - 150.05 | 3260 - 3267 | 31.2 - 31.8 |
| 6.31175 - 6.31225 | 156.52475 - 156.52525 | 3332 - 3339 | 36.43 - 36.5 |
| 8.291 - 8.294 | 156.7 - 156.9 | 3345.8 - 3358 | Above 38.6 |
| 8.362 - 8.366 | 162.0125 - 167.17 | 3500 - 4400 | |
| 8.37625 - 8.38675 | 167.72 - 173.2 | 4500 - 5150 | |
| 8.41425 - 8.41475 | 240 - 285 | 5350 - 5460 | |
| 12.29 - 12.293 | 322 - 335.4 | 7250 - 7750 | |
| 12.51975 - 12.52025 | 399.9 - 410 | 8025 - 8500 | |
| 12.57675 - 12.57725 | 608 - 614 | -- | |

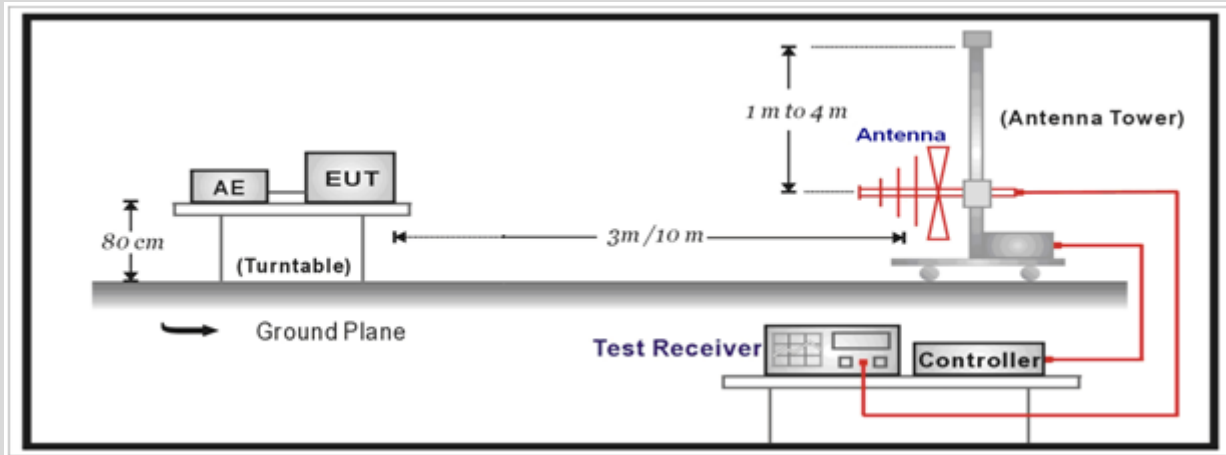
| Restricted Band Emissions Limit | | | |
|---------------------------------|-----------------------------|-------------------------------|--------------------------|
| Frequency (MHz) | Field strength (μ V/m) | Field strength (dB μ V/m) | Measurement distance (m) |
| 0.009 - 0.49 | 2400/F(kHz) | 48.5 – 13.8 | 300 _(Note 1) |
| 0.49 - 1.705 | 24000/F(kHz) | 33.8 - 23 | 30 _(Note 1) |
| 1.705 - 30 | 30 | 29.5 | 30 _(Note 1) |
| 30 -88 | 100 | 40 | 3 _(Note 2) |
| 88-216 | 150 | 43.5 | 3 _(Note 2) |
| 216 - 960 | 200 | 46 | 3 _(Note 2) |
| Above 960 | 500 | 54 | 3 _(Note 2) |

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

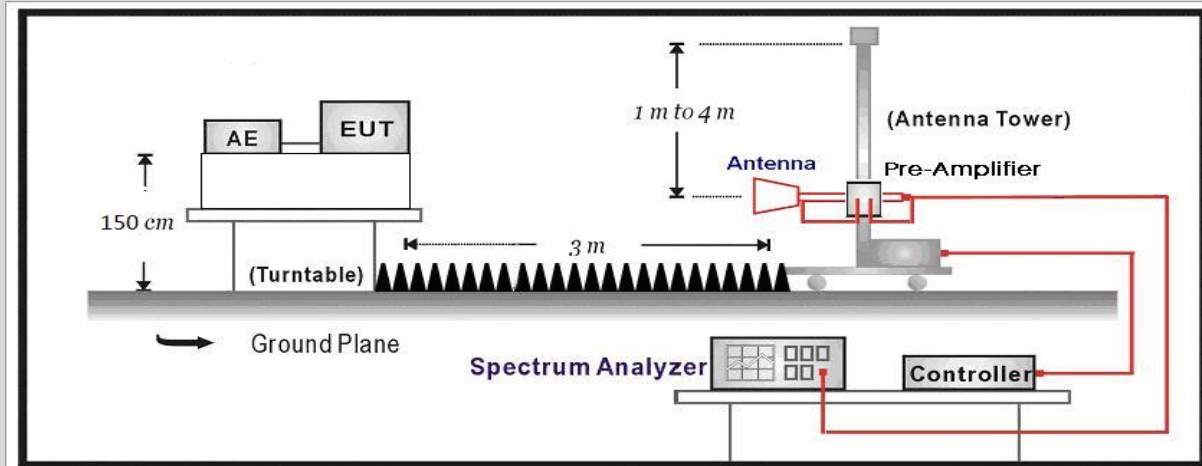
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.1.2 Test Setup

30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.1.3 Test Procedure

| | Reference Rule | Chapter | Description |
|-------------------------------------|----------------|---------|----------------------------|
| <input checked="" type="checkbox"/> | ANSI C63.26 | 5.5 | Radiated emissions testing |

The spectrum was scanned from 9 kHz to the 10th harmonic of the highest frequency generated within the equipment.

Emissions below 18 GHz were measured at a 3 meter test distance.

The EUT was tested in three orthogonal axes and in all possible test configurations and poisoning when measurement antenna is oriented in both horizontal and vertical polarization, the worst case emissions was showed in the report.

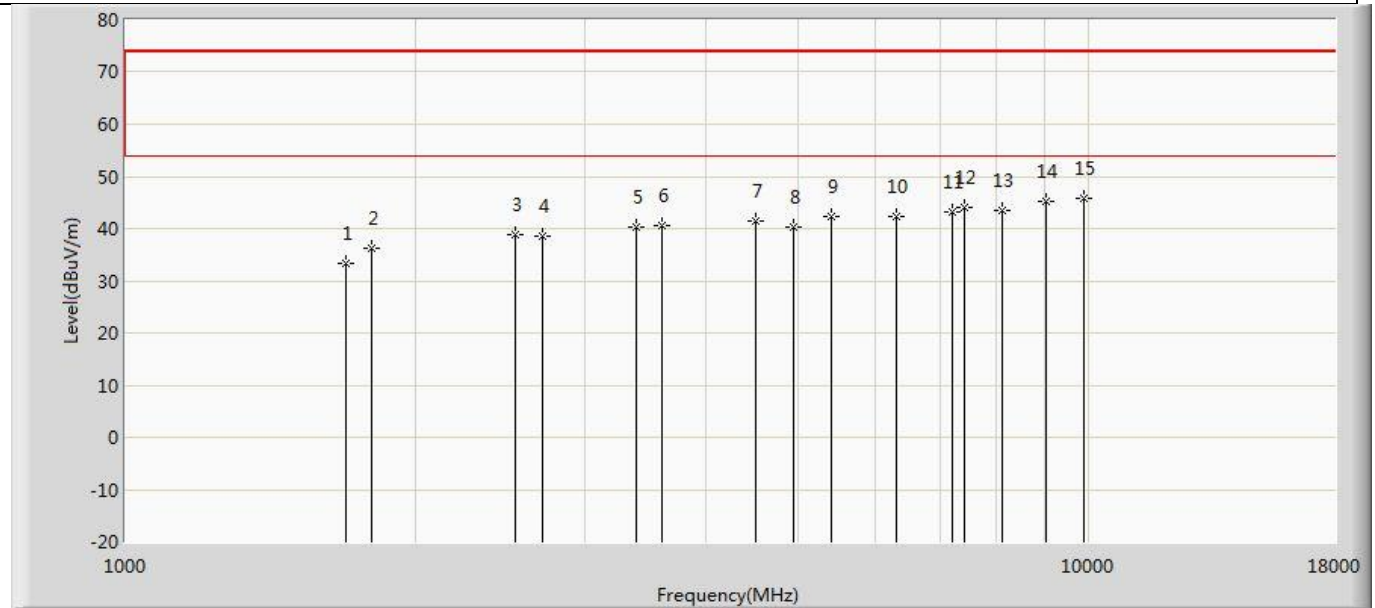
Radiated emissions were used the substitution method described in ANSI/TIA-603-E-2016.

Radiated emissions were measured with 100kHz RBW below 1GHz and 1MHz RBW above 1GHz.

According to specification, the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least $X + 10 \log (P)$ dB. P in watts. The specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e., $10 \log P - \{X + 10 \log P\}$], resulting in an absolute level of -X dBW [or $(-X + 30)$ dBm].

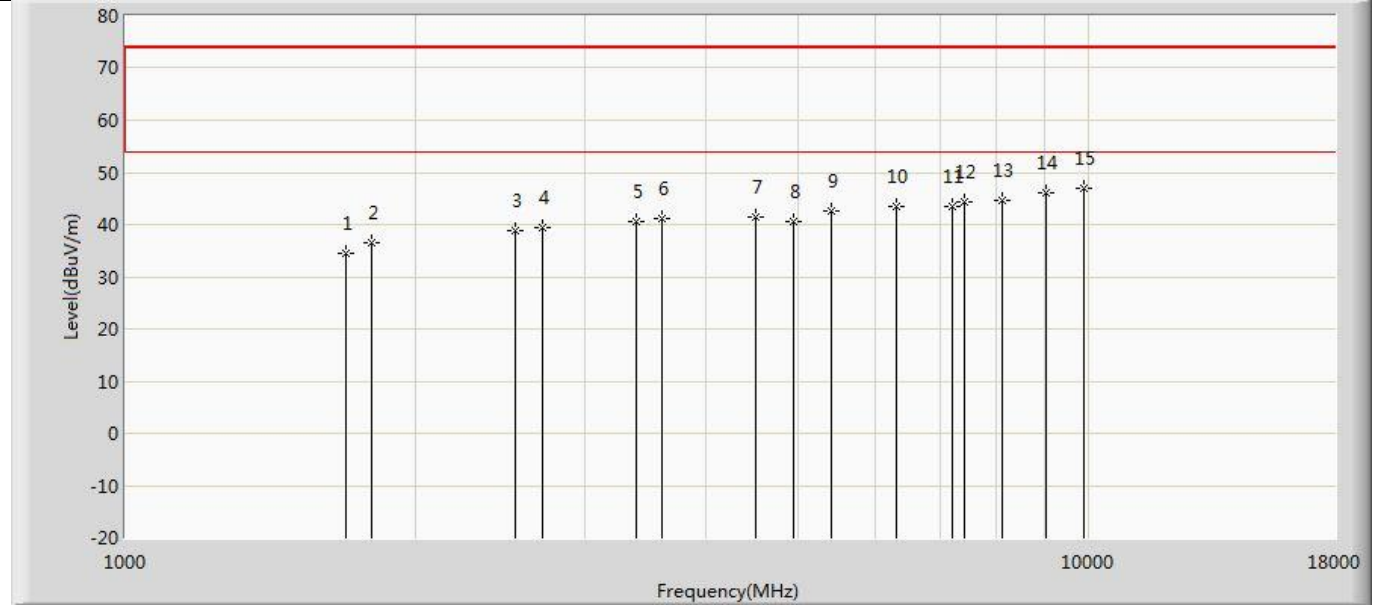
4.1.4 Test Data

| | |
|--|--------------------------|
| Profile: 22B0907R | Page No.: 11 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:30 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Horizontal |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 1: Transmit at LTE Band20(847MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



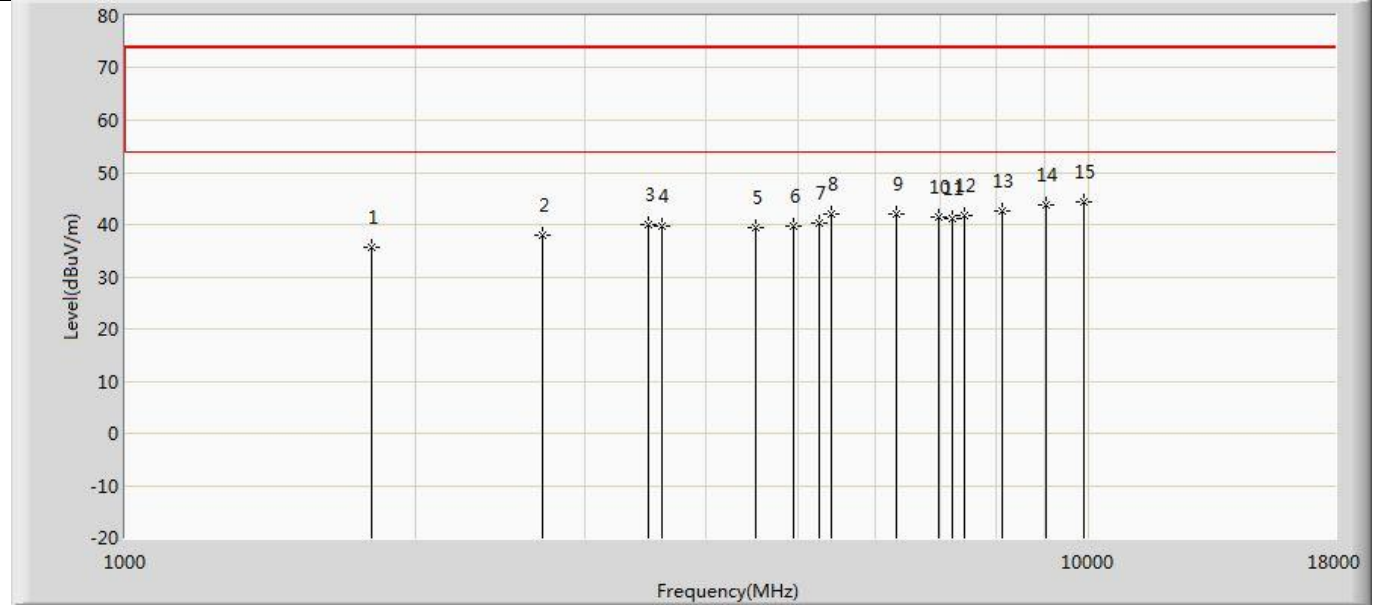
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1694.000 | 33.394 | 54.333 | -40.606 | 74.000 | -20.940 | PK |
| 2 | | 1804.000 | 36.359 | 55.629 | -37.641 | 74.000 | -19.270 | PK |
| 3 | | 2541.000 | 38.937 | 56.370 | -35.063 | 74.000 | -17.433 | PK |
| 4 | | 2706.000 | 38.611 | 55.881 | -35.389 | 74.000 | -17.270 | PK |
| 5 | | 3388.000 | 40.283 | 57.313 | -33.717 | 74.000 | -17.030 | PK |
| 6 | | 3608.000 | 40.715 | 57.621 | -33.285 | 74.000 | -16.906 | PK |
| 7 | | 4510.000 | 41.372 | 56.765 | -32.628 | 74.000 | -15.393 | PK |
| 8 | | 4944.000 | 40.254 | 54.898 | -33.746 | 74.000 | -14.644 | PK |
| 9 | | 5412.000 | 42.212 | 55.529 | -31.788 | 74.000 | -13.318 | PK |
| 10 | | 6314.000 | 42.289 | 53.430 | -31.711 | 74.000 | -11.141 | PK |
| 11 | | 7216.000 | 43.102 | 53.994 | -30.898 | 74.000 | -10.893 | PK |
| 12 | | 7416.000 | 44.158 | 54.863 | -29.842 | 74.000 | -10.705 | PK |
| 13 | | 8118.000 | 43.572 | 54.093 | -30.428 | 74.000 | -10.522 | PK |
| 14 | | 9020.000 | 45.290 | 54.718 | -28.710 | 74.000 | -9.429 | PK |
| 15 | * | 9888.000 | 45.867 | 53.253 | -28.133 | 74.000 | -7.387 | PK |

| | |
|--|--------------------------|
| Profile: 22B0907R | Page No.: 12 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Vertical |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 1: Transmit at LTE Band20(847MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



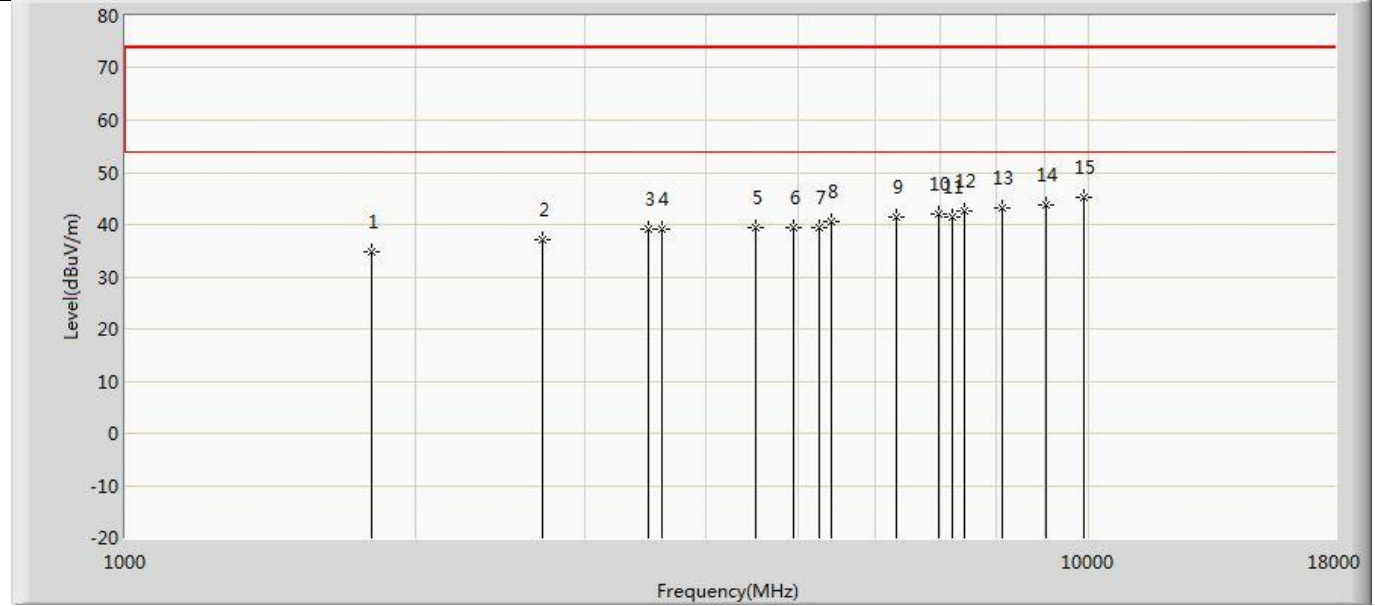
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1694.000 | 34.394 | 55.333 | -39.606 | 74.000 | -20.940 | PK |
| 2 | | 1804.000 | 36.576 | 55.846 | -37.424 | 74.000 | -19.270 | PK |
| 3 | | 2541.000 | 38.937 | 56.370 | -35.063 | 74.000 | -17.433 | PK |
| 4 | | 2706.000 | 39.296 | 56.566 | -34.704 | 74.000 | -17.270 | PK |
| 5 | | 3388.000 | 40.615 | 57.645 | -33.385 | 74.000 | -17.030 | PK |
| 6 | | 3608.000 | 41.136 | 58.042 | -32.864 | 74.000 | -16.906 | PK |
| 7 | | 4510.000 | 41.419 | 56.812 | -32.581 | 74.000 | -15.393 | PK |
| 8 | | 4944.000 | 40.720 | 55.364 | -33.280 | 74.000 | -14.644 | PK |
| 9 | | 5412.000 | 42.491 | 55.808 | -31.509 | 74.000 | -13.318 | PK |
| 10 | | 6314.000 | 43.593 | 54.734 | -30.407 | 74.000 | -11.141 | PK |
| 11 | | 7216.000 | 43.385 | 54.277 | -30.615 | 74.000 | -10.893 | PK |
| 12 | | 7416.000 | 44.250 | 54.955 | -29.750 | 74.000 | -10.705 | PK |
| 13 | | 8118.000 | 44.548 | 55.069 | -29.452 | 74.000 | -10.522 | PK |
| 14 | | 9020.000 | 46.046 | 55.474 | -27.954 | 74.000 | -9.429 | PK |
| 15 | * | 9888.000 | 47.016 | 54.402 | -26.984 | 74.000 | -7.387 | PK |

| | |
|--|--------------------------|
| Profile: 22B0907R | Page No.: 13 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Horizontal |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 2: Transmit at LTE Band4(1745MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



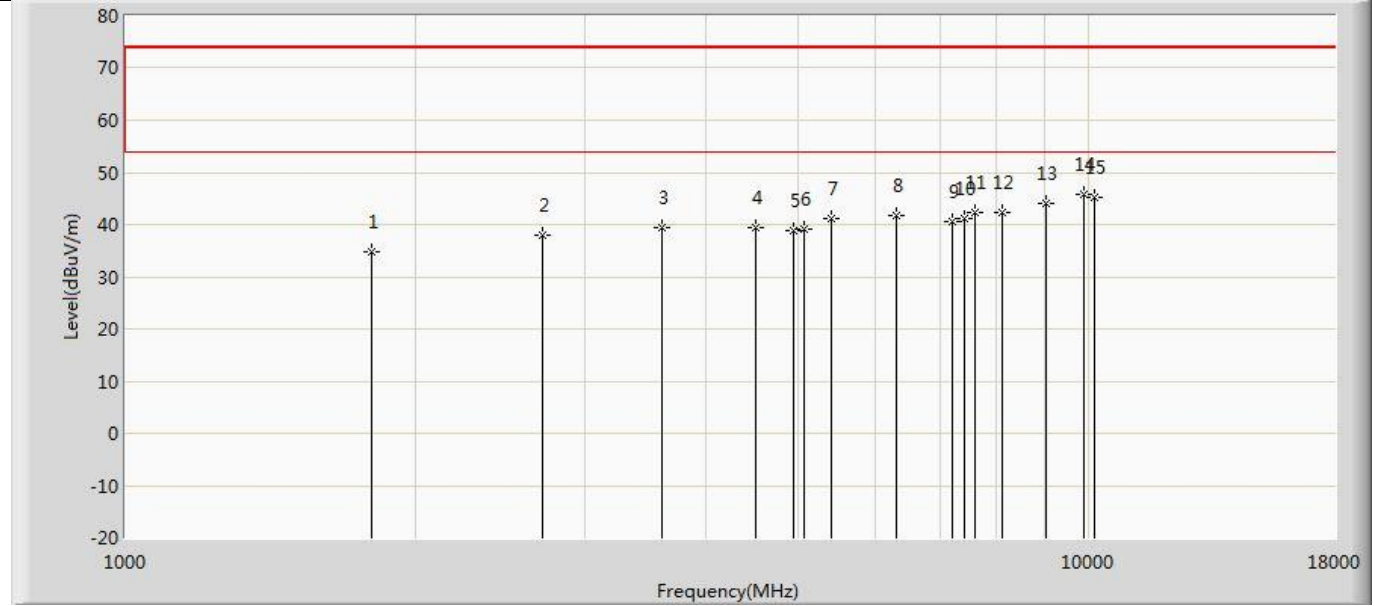
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1804.000 | 35.729 | 54.999 | -38.271 | 74.000 | -19.270 | PK |
| 2 | | 2706.000 | 37.849 | 55.119 | -36.151 | 74.000 | -17.270 | PK |
| 3 | | 3495.000 | 40.024 | 56.985 | -33.976 | 74.000 | -16.961 | PK |
| 4 | | 3608.000 | 39.609 | 56.515 | -34.391 | 74.000 | -16.906 | PK |
| 5 | | 4510.000 | 39.508 | 54.901 | -34.492 | 74.000 | -15.393 | PK |
| 6 | | 4944.000 | 39.671 | 54.315 | -34.329 | 74.000 | -14.644 | PK |
| 7 | | 5242.500 | 40.148 | 53.989 | -33.852 | 74.000 | -13.842 | PK |
| 8 | | 5412.000 | 42.011 | 55.328 | -31.989 | 74.000 | -13.318 | PK |
| 9 | | 6314.000 | 41.947 | 53.088 | -32.053 | 74.000 | -11.141 | PK |
| 10 | | 6990.000 | 41.589 | 53.185 | -32.411 | 74.000 | -11.595 | PK |
| 11 | | 7216.000 | 41.171 | 52.063 | -32.829 | 74.000 | -10.893 | PK |
| 12 | | 7416.000 | 41.630 | 52.335 | -32.370 | 74.000 | -10.705 | PK |
| 13 | | 8118.000 | 42.541 | 53.062 | -31.459 | 74.000 | -10.522 | PK |
| 14 | | 9020.000 | 43.721 | 53.149 | -30.279 | 74.000 | -9.429 | PK |
| 15 | * | 9888.000 | 44.397 | 51.783 | -29.603 | 74.000 | -7.387 | PK |

| | |
|--|--------------------------|
| Profile: 22B0907R | Page No.: 14 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Vertical |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 2: Transmit at LTE Band4(1745MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



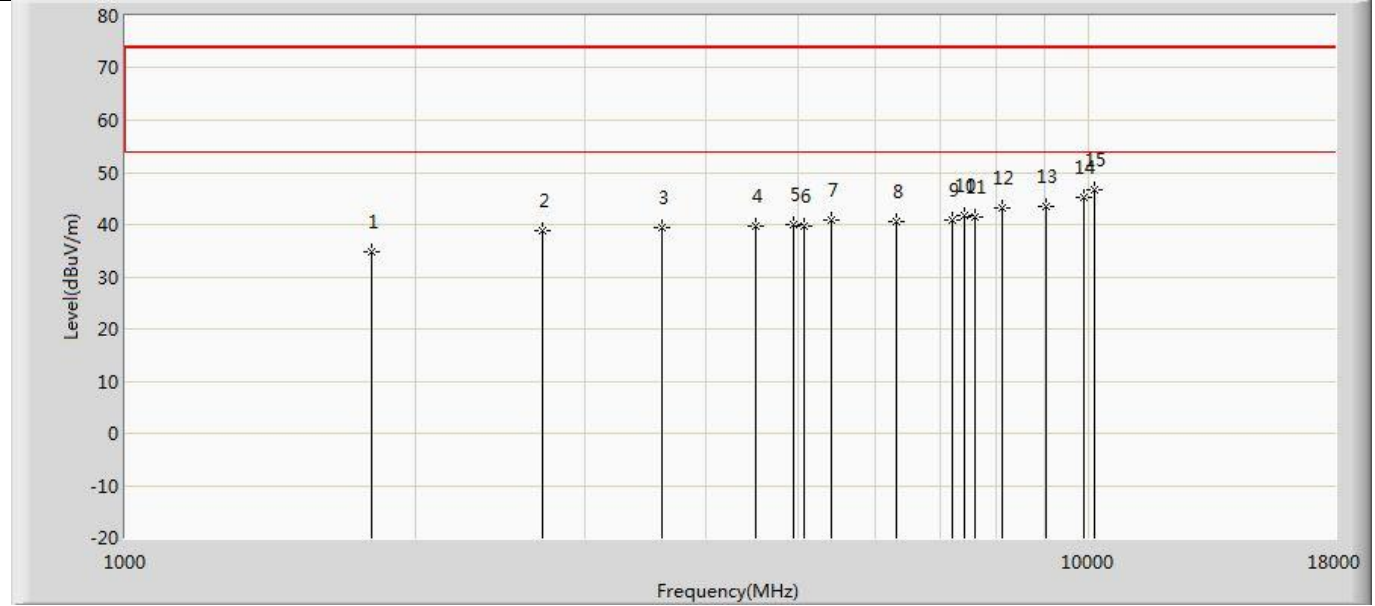
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1804.000 | 34.736 | 54.006 | -39.264 | 74.000 | -19.270 | PK |
| 2 | | 2706.000 | 37.089 | 54.359 | -36.911 | 74.000 | -17.270 | PK |
| 3 | | 3495.000 | 39.199 | 56.160 | -34.801 | 74.000 | -16.961 | PK |
| 4 | | 3608.000 | 39.085 | 55.991 | -34.915 | 74.000 | -16.906 | PK |
| 5 | | 4510.000 | 39.448 | 54.841 | -34.552 | 74.000 | -15.393 | PK |
| 6 | | 4944.000 | 39.330 | 53.974 | -34.670 | 74.000 | -14.644 | PK |
| 7 | | 5242.500 | 39.360 | 53.201 | -34.640 | 74.000 | -13.842 | PK |
| 8 | | 5412.000 | 40.469 | 53.786 | -33.531 | 74.000 | -13.318 | PK |
| 9 | | 6314.000 | 41.501 | 52.642 | -32.499 | 74.000 | -11.141 | PK |
| 10 | | 6990.000 | 41.946 | 53.542 | -32.054 | 74.000 | -11.595 | PK |
| 11 | | 7216.000 | 41.366 | 52.258 | -32.634 | 74.000 | -10.893 | PK |
| 12 | | 7416.000 | 42.547 | 53.252 | -31.453 | 74.000 | -10.705 | PK |
| 13 | | 8118.000 | 43.052 | 53.573 | -30.948 | 74.000 | -10.522 | PK |
| 14 | | 9020.000 | 43.710 | 53.138 | -30.290 | 74.000 | -9.429 | PK |
| 15 | * | 9888.000 | 45.312 | 52.698 | -28.688 | 74.000 | -7.387 | PK |

| | |
|--|--------------------------|
| Profile: 22B0907R | Page No.: 15 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Horizontal |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 3: Transmit at LTE Band7(2535MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



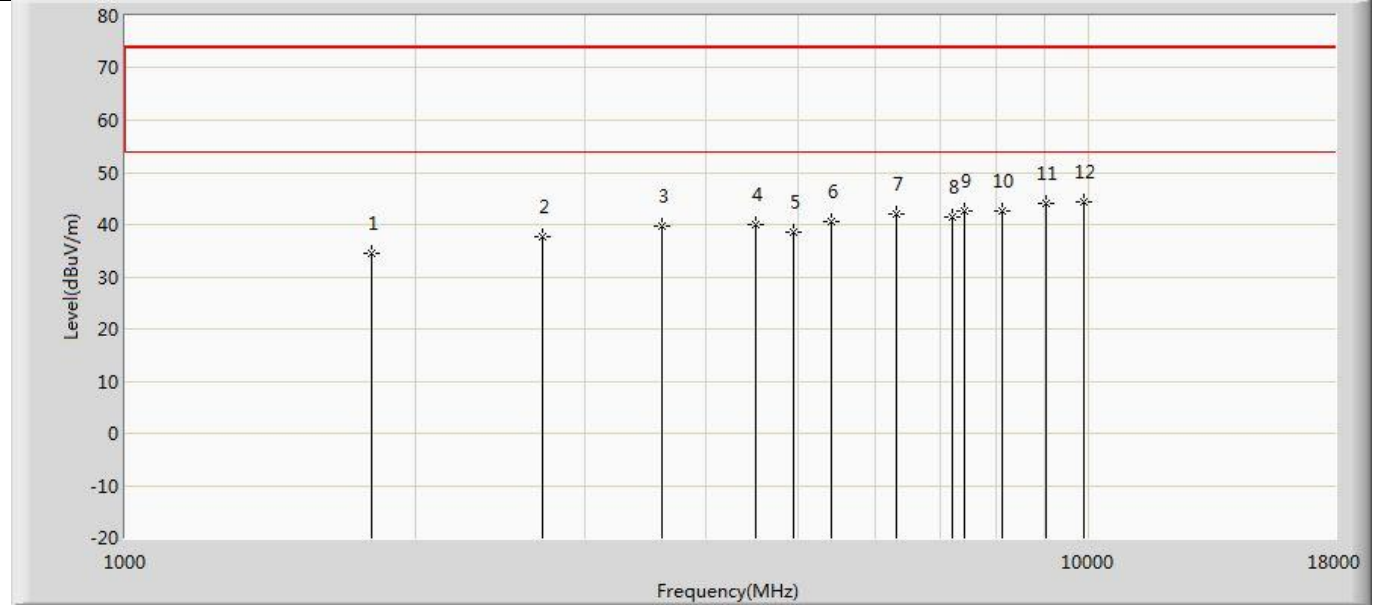
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1804.000 | 34.896 | 54.166 | -39.104 | 74.000 | -19.270 | PK |
| 2 | | 2706.000 | 38.034 | 55.304 | -35.966 | 74.000 | -17.270 | PK |
| 3 | | 3608.000 | 39.425 | 56.331 | -34.575 | 74.000 | -16.906 | PK |
| 4 | | 4510.000 | 39.418 | 54.811 | -34.582 | 74.000 | -15.393 | PK |
| 5 | | 4944.000 | 38.705 | 53.349 | -35.295 | 74.000 | -14.644 | PK |
| 6 | | 5070.000 | 39.161 | 53.453 | -34.839 | 74.000 | -14.292 | PK |
| 7 | | 5412.000 | 41.025 | 54.342 | -32.975 | 74.000 | -13.318 | PK |
| 8 | | 6314.000 | 41.773 | 52.914 | -32.227 | 74.000 | -11.141 | PK |
| 9 | | 7216.000 | 40.511 | 51.403 | -33.489 | 74.000 | -10.893 | PK |
| 10 | | 7416.000 | 41.191 | 51.896 | -32.809 | 74.000 | -10.705 | PK |
| 11 | | 7605.000 | 42.224 | 53.067 | -31.776 | 74.000 | -10.842 | PK |
| 12 | | 8118.000 | 42.334 | 52.855 | -31.666 | 74.000 | -10.522 | PK |
| 13 | | 9020.000 | 44.076 | 53.504 | -29.924 | 74.000 | -9.429 | PK |
| 14 | * | 9888.000 | 45.890 | 53.276 | -28.110 | 74.000 | -7.387 | PK |
| 15 | | 10140.000 | 45.310 | 52.621 | -28.690 | 74.000 | -7.312 | PK |

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|--|--------------------------|
| Profile: 22B0907R | Page No.: 16 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Vertical |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 3: Transmit at LTE Band7(2535MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



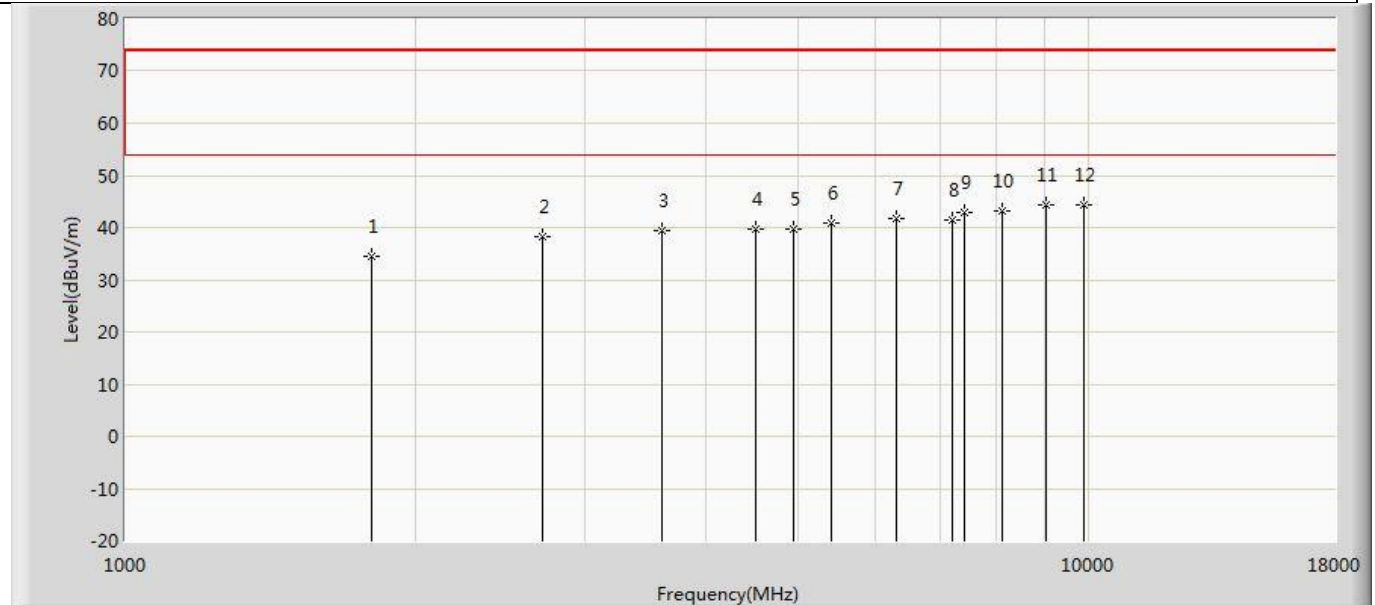
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1804.000 | 34.749 | 54.019 | -39.251 | 74.000 | -19.270 | PK |
| 2 | | 2706.000 | 38.754 | 56.024 | -35.246 | 74.000 | -17.270 | PK |
| 3 | | 3608.000 | 39.285 | 56.191 | -34.715 | 74.000 | -16.906 | PK |
| 4 | | 4510.000 | 39.751 | 55.144 | -34.249 | 74.000 | -15.393 | PK |
| 5 | | 4944.000 | 40.055 | 54.699 | -33.945 | 74.000 | -14.644 | PK |
| 6 | | 5070.000 | 39.566 | 53.858 | -34.434 | 74.000 | -14.292 | PK |
| 7 | | 5412.000 | 40.860 | 54.177 | -33.140 | 74.000 | -13.318 | PK |
| 8 | | 6314.000 | 40.493 | 51.634 | -33.507 | 74.000 | -11.141 | PK |
| 9 | | 7216.000 | 40.920 | 51.812 | -33.080 | 74.000 | -10.893 | PK |
| 10 | | 7416.000 | 41.848 | 52.553 | -32.152 | 74.000 | -10.705 | PK |
| 11 | | 7605.000 | 41.444 | 52.287 | -32.556 | 74.000 | -10.842 | PK |
| 12 | | 8118.000 | 43.047 | 53.568 | -30.953 | 74.000 | -10.522 | PK |
| 13 | | 9020.000 | 43.458 | 52.886 | -30.542 | 74.000 | -9.429 | PK |
| 14 | | 9888.000 | 45.092 | 52.478 | -28.908 | 74.000 | -7.387 | PK |
| 15 | * | 10140.000 | 46.699 | 54.010 | -27.301 | 74.000 | -7.312 | PK |

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| Profile: 22B0907R | Page No.: 19 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Horizontal |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 4: Transmit at WLAN2.4G(2462MHz)+SRD(902MHz) | |



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1804.000 | 34.374 | 53.644 | -39.626 | 74.000 | -19.270 | PK |
| 2 | | 2706.000 | 37.686 | 54.956 | -36.314 | 74.000 | -17.270 | PK |
| 3 | | 3608.000 | 39.712 | 56.618 | -34.288 | 74.000 | -16.906 | PK |
| 4 | | 4510.000 | 40.091 | 55.484 | -33.909 | 74.000 | -15.393 | PK |
| 5 | | 4944.000 | 38.503 | 53.147 | -35.497 | 74.000 | -14.644 | PK |
| 6 | | 5412.000 | 40.581 | 53.898 | -33.419 | 74.000 | -13.318 | PK |
| 7 | | 6314.000 | 41.991 | 53.132 | -32.009 | 74.000 | -11.141 | PK |
| 8 | | 7216.000 | 41.530 | 52.422 | -32.470 | 74.000 | -10.893 | PK |
| 9 | | 7416.000 | 42.605 | 53.310 | -31.395 | 74.000 | -10.705 | PK |
| 10 | | 8118.000 | 42.521 | 53.042 | -31.479 | 74.000 | -10.522 | PK |
| 11 | | 9020.000 | 44.047 | 53.475 | -29.953 | 74.000 | -9.429 | PK |
| 12 | * | 9888.000 | 44.224 | 51.610 | -29.776 | 74.000 | -7.387 | PK |

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| Profile: 22B0907R | Page No.: 20 |
| Engineer: Yuliu | |
| Site: AC5 | Time: 2022/12/29 - 21:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz)2022 | Polarity: Vertical |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 4: Transmit at WLAN2.4G(2462MHz)+SRD(902MHz) | |



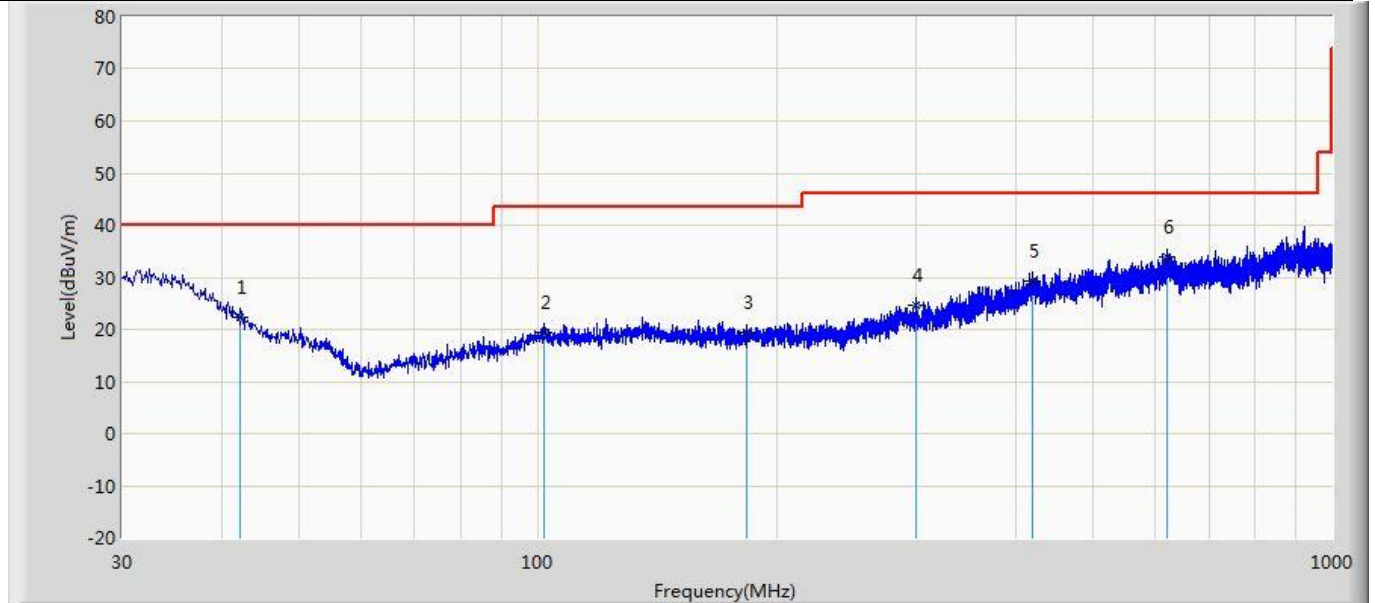
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 1804.000 | 34.585 | 53.855 | -39.415 | 74.000 | -19.270 | PK |
| 2 | | 2706.000 | 38.205 | 55.475 | -35.795 | 74.000 | -17.270 | PK |
| 3 | | 3608.000 | 39.520 | 56.426 | -34.480 | 74.000 | -16.906 | PK |
| 4 | | 4510.000 | 39.805 | 55.198 | -34.195 | 74.000 | -15.393 | PK |
| 5 | | 4944.000 | 39.618 | 54.262 | -34.382 | 74.000 | -14.644 | PK |
| 6 | | 5412.000 | 40.784 | 54.101 | -33.216 | 74.000 | -13.318 | PK |
| 7 | | 6314.000 | 41.837 | 52.978 | -32.163 | 74.000 | -11.141 | PK |
| 8 | | 7216.000 | 41.350 | 52.242 | -32.650 | 74.000 | -10.893 | PK |
| 9 | | 7416.000 | 42.865 | 53.570 | -31.135 | 74.000 | -10.705 | PK |
| 10 | | 8118.000 | 43.086 | 53.607 | -30.914 | 74.000 | -10.522 | PK |
| 11 | | 9020.000 | 44.432 | 53.860 | -29.568 | 74.000 | -9.429 | PK |
| 12 | * | 9888.000 | 44.459 | 51.845 | -29.541 | 74.000 | -7.387 | PK |

Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
3. This limit applies for both peak and average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. The points in graph are the highest data in test frequency range.

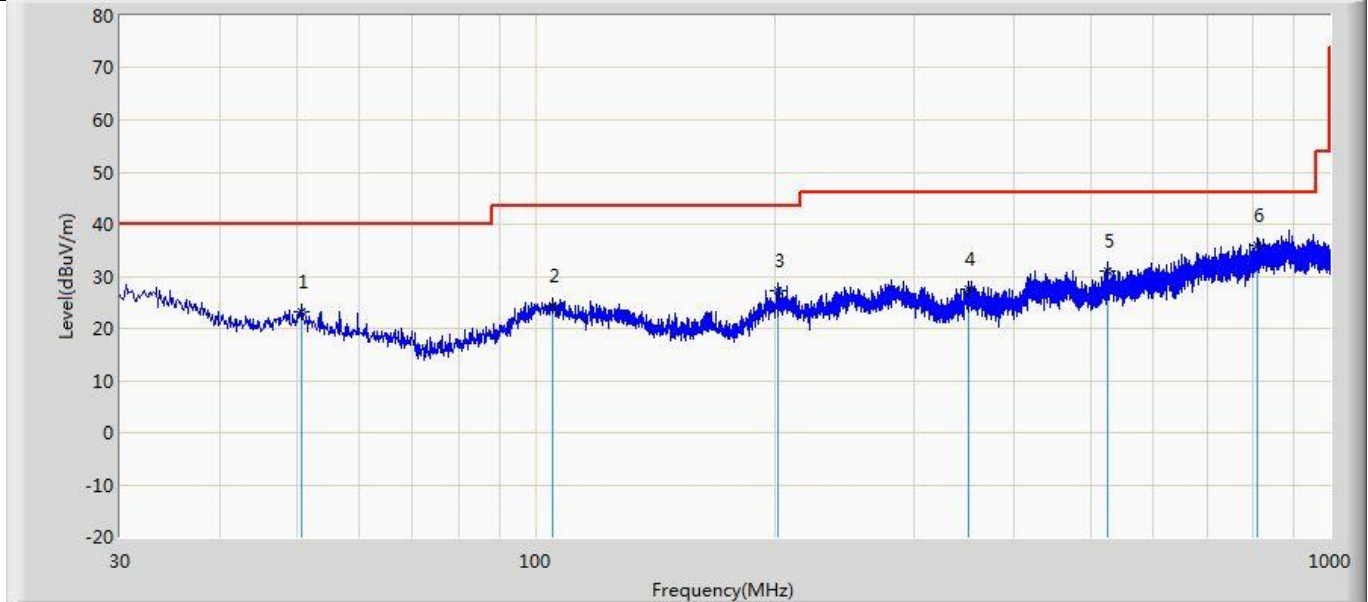
The worst case of Radiated Emission below 1GHz:

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|--|--------------------------|
| Profile: 22B0907R | Page No.: 9 |
| Engineer: Yuliu | |
| Site: AC3 | Time: 2023/01/05 - 20:42 |
| Limit: FCC_Part15.109_RE(3m)_ClassB | Margin: 0 |
| Probe: AC3_3M(30-1000M) | Polarity: Horizontal |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 2: Transmit at LTE Band4(1745MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 42.246 | 22.397 | 2.603 | -17.603 | 40.000 | 19.794 | QP |
| 2 | | 101.901 | 19.352 | 2.317 | -24.148 | 43.500 | 17.035 | QP |
| 3 | | 183.503 | 19.330 | 2.435 | -24.170 | 43.500 | 16.895 | QP |
| 4 | | 299.418 | 24.555 | 3.896 | -21.445 | 46.000 | 20.659 | QP |
| 5 | | 419.091 | 29.145 | 2.159 | -16.855 | 46.000 | 26.986 | QP |
| 6 | * | 620.003 | 33.964 | 3.190 | -12.036 | 46.000 | 30.775 | QP |

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| Profile: 22B0907R | Page No.: 10 |
| Engineer: Yuliu | |
| Site: AC2 | Time: 2023/01/05 - 20:42 |
| Limit: FCC_Part15.109_RE(3m)_ClassB | Margin: 0 |
| Probe: AC2_3M(30-1000M) | Polarity: Vertical |
| EUT: ICG160 | Power: DC 12Vdc |
| Note: Mode 2: Transmit at LTE Band4(1745MHz)+WLAN2.4G(2462MHz)+SRD(902MHz) | |



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1 | | 50.734 | 23.147 | 3.849 | -16.853 | 40.000 | 19.298 | QP |
| 2 | | 104.933 | 24.347 | 2.084 | -19.153 | 43.500 | 22.263 | QP |
| 3 | | 202.296 | 27.217 | 3.733 | -16.283 | 43.500 | 23.484 | QP |
| 4 | | 350.342 | 27.469 | 2.526 | -18.531 | 46.000 | 24.943 | QP |
| 5 | | 524.458 | 30.968 | 4.209 | -15.032 | 46.000 | 26.759 | QP |
| 6 | * | 811.941 | 36.079 | 3.513 | -9.921 | 46.000 | 32.565 | QP |

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)

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| 5 Test setup photo and EUT Photo |
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| VERDICT: PASS |
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Remark: The test setup photo and EUT Photo please see appendix.

_____ The End _____