

TEST REPORT

No. I21N02292-BLE

for

Guangdong OPPO Mobile Telecommunications Corp., Ltd.

Mobile Phone

Model Name: A102OP

with

Hardware Version: 11

Software Version: ColorOS V11

FCC ID: R9C-A102OP

Issued Date: 2021-08-26

Designation Number: CN1210

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

Test Laboratory:

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1. Summary of Test Report

1.1. Test Items

| Product Name | Mobile Phone |
|---------------------|------------------------------------------------------|
| Model Name | A102OP |
| Applicant's name | Guangdong OPPO Mobile Telecommunications Corp., Ltd. |
| Manufacturer's Name | Guangdong OPPO Mobile Telecommunications Corp., Ltd. |

1.2. Test Standards

FCC Part15-2019; ANSI C63.10-2013

1.3. Test Result

Pass

Please refer to "5.2. Test Results"

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China

1.5. Project data

| Testing Start Date: | 2021-07-25 |
|---------------------|------------|
| Testing End Date: | 2021-08-25 |

1.6. Signature

Lin Zechuang (Prepared this test report)

Tang Weisheng (Reviewed this test report)

Zhang Bojun (Approved this test report)



2. Client Information

2.1. Applicant Information

| Company Name: | Guangdong OPPO Mobile Telecommunications Corp., Ltd. | |
|----------------|-----------------------------------------------------------------|--|
| Address: | NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, | |
| Address. | Guangdong, China | |
| Contact Person | Mei XiLi | |
| E-Mail | meixili@oppo.com | |
| Telephone: | (86)76986076999 | |
| Fax: | / | |

2.2. Manufacturer Information

| Company Name: | Guangdong OPPO Mobile Telecommunications Corp., Ltd. | | |
|----------------|-----------------------------------------------------------------|--|--|
| Address: | NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, | | |
| Audress. | Guangdong, China | | |
| Contact Person | Mei XiLi | | |
| E-Mail | meixili@oppo.com | | |
| Telephone: | (86)76986076999 | | |
| Fax: | / | | |



3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

| Product Name | Mobile Phone |
|------------------------------|------------------------------|
| Model Name | A102OP |
| Frequency Range | 2400MHz~2483.5MHz |
| Type of Modulation | GFSK |
| Number of Channels | 40 |
| Antenna Type | Integrated |
| Antenna Gain | -3.0dBi |
| Power Supply | 3.85V DC by Battery |
| FCC ID | R9C-A102OP |
| Condition of EUT as received | No abnormality in appearance |

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

3.2. Internal Identification of EUT used during the test

| EUT ID* | IMEI | HW Version | SW Version | Receive Date |
|---------|-----------------|------------|-------------|---------------------|
| UT03aa | 868994050054571 | 11 | | 2021-07-23 |
| | 868994050054563 | 11 | ColorOS V11 | 2021-07-23 |
| UT02aa | 868994050055578 | 11 | | 2024 07 22 |
| | 868994050055560 | 11 | ColorOS V11 | 2021-07-23 |

*EUT ID: is used to identify the test sample in the lab internally.

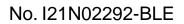
UT03aa is used for conduction test, UT02aa is used for radiation test and AC Power line Conducted Emission test.

3.3. Internal Identification of AE used during the test

| AE ID* | Description | AE ID* |
|--------|-------------|--------|
| AE1 | Battery | / |
| AE2 | Charger | / |
| AE3 | USB Cable | / |
| AE4 | Headset | / |

AE1

| Model | BLP779 |
|-----------------|--------------------------------------|
| Manufacturer | TWS TECHNOLOGY (GUANGZHOU) LIMITED |
| Capacity | 3890mAh |
| Nominal Voltage | 3.85V |
| AE2 | |
| Model | OP92KAJH |
| Manufacturer | Shenzhen Kunxing Technology Co.,Ltd. |





| Specification AE3 | Japan Standard Charger | |
|----------------------|---------------------------------------|--|
| Model | DL143 | |
| Manufacturer | Dongguan Fuqiang Electronics Co., Ltd | |
| AE4 | | |
| Model | MH156 | |
| Manufacturer | JiangXi Risound Electronics CO.,LTD | |
| | | |

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

The Equipment under Test (EUT) is a model of Mobile Phone with integrated antenna and battery. It consists of normal options: Lithium Battery, Charger, USB Cable and Headset.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.



4. <u>Reference Documents</u>

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

| Reference | Title | Version |
|-------------|---------------------------------------------------------|---------|
| FCC Part 15 | FCC CFR 47, Part 15, Subpart C: | 2019 |
| | 15.205 Restricted bands of operation; | |
| | 15.209 Radiated emission limits, general requirements; | |
| | 15.247 Operation within the bands 902–928MHz, | |
| | 2400–2483.5 MHz, and 5725–5850 MHz | |
| ANSI C63.10 | American National Standard of Procedures for Compliance | 2013 |
| | Testing of Unlicensed Wireless Devices | |



5. Test Results

5.1. Testing Environment

| Normal Temperature: | 15~35°C |
|---------------------|---------|
| Relative Humidity: | 20~75% |

5.2. Test Results

| No | Test cases | Sub-clause of Part 15C | Verdict |
|----|-------------------------------------------|------------------------|---------|
| 0 | Antenna Requirement | 15.203 | Р |
| 1 | Maximum Peak Output Power | 15.247 (b) | Р |
| 2 | Peak Power Spectral Density | 15.247 (e) | Р |
| 3 | 6dB Bandwidth | 15.247 (a) | Р |
| 4 | Band Edges Compliance | 15.247 (d) | Р |
| 5 | Transmitter Spurious Emission - Conducted | 15.247 (d) | Р |
| 6 | Transmitter Spurious Emission - Radiated | 15.247, 15.205, 15.209 | Р |
| 7 | AC Power line Conducted Emission | 15.107, 15.207 | Р |

See **ANNEX A** for details.

5.3. Statements

SAICT has evaluated the test cases requested by the applicant/manufacturer as listed in section 5.2 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.



6. Test Equipments Utilized

Conducted test system

| No. | Equipment | Model | Serial Number | Manufacturer | Calibration Due date | Calibration Period |
|-----|---------------------------|----------|------------------|-----------------|-------------------------|-----------------------|
| 1 | Vector Signal Analyzer | FSV40 | 100903 | Rohde & Schwarz | 2021-12-30 | 1 year |
| 2 | RF Control Unit | JS0806-2 | 21C8060398 | Tonscend | 2022-05-09 | 1 year |
| 3 | Test Receiver | ESCI | 100702 | Rohde & Schwarz | 2022-01-13 | 1 year |
| 4 | LISN | ENV216 | 102067 | Rohde & Schwarz | 2022-07-15 | 1 year |

Radiated test system

| No. | Equipmont | Model | Serial | Serial Manufacturer | | Calibration |
|-----|---------------|-----------|--------------------------|---------------------|------------|-------------|
| NO. | Equipment | Model | Number | Manufacturer | Due date | Period |
| 1 | Loop Antenna | HLA6120 | 35779 | TESEQ | 2022-04-25 | 3 years |
| 2 | BiLog Antenna | 3142E | 0224831 | ETS-Lindgren | 2024-05-27 | 3 years |
| 3 | Horn Antenna | 3117 | 00066577 | ETS-Lindgren | 2022-04-02 | 3 years |
| 4 | Horn Antenna | QSH-SL-18 | ³ 17013 Q-par | O-par | 2023-01-06 | 3 years |
| - | Tiom Antenna | -26-S-20 | | 2020 01 00 | o years | |
| 5 | Test Receiver | ESR7 | 101676 | Rohde & Schwarz | 2021-11-25 | 1 year |
| 6 | Spectrum | FSV40 | 101192 | Rohde & Schwarz | 2022-01-13 | 1 voor |
| 0 | Analyser | 13040 | 101192 | | 2022-01-13 | 1 year |
| 7 | Chamber | FACT3-2.0 | 1285 | ETS-Lindgren | 2023-05-29 | 2 years |

Test software

| No. | Equipment | Manufacturer | Version |
|-----|----------------|-----------------|----------|
| 1 | RF Test System | Tonscend | JS1120-3 |
| 2 | EMC32 | Rohde & Schwarz | 10.50.40 |

EUT is engineering software provided by the customer to control the transmitting signal. The EUT was programmed to be in continuously transmitting mode.

Anechoic chamber

Fully anechoic chamber by ETS-Lindgren



7. Laboratory Environment

Semi-anechoic chamber

| Temperature | Min. = 15 °C, Max. = 35 °C |
|-----------------------------------|-------------------------------------------------|
| Relative humidity | Min. = 20 %, Max. = 75 % |
| Shielding effectiveness | 0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB |
| Electrical insulation | > 2MΩ |
| Ground system resistance | <4 Ω |
| Normalised site attenuation (NSA) | $< \pm 4$ dB, 3 m distance, from 30 to 1000 MHz |

Shielded room

| Temperature | Min. = 15 °C, Max. = 35 °C |
|--------------------------|------------------------------------------|
| Relative humidity | Min. = 20 %, Max. = 75 % |
| Shielding effectiveness | 0.014MHz-1MHz> 60 dB; 1MHz-1000MHz>90 dB |
| Electrical insulation | > 2MΩ |
| Ground system resistance | <4 Ω |

Fully-anechoic chamber

| Temperature | Min. = 15 °C, Max. = 35 °C |
|---------------------------------------|---------------------------------------------|
| Relative humidity | Min. = 20 %, Max. = 75 % |
| Shielding effectiveness | 0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB |
| Electrical insulation | > 2MΩ |
| Ground system resistance | <4 Ω |
| Voltage Standing Wave Ratio (VSWR) | \leq 6 dB, from 1 to 18 GHz, 3 m distance |
| Uniformity of field strength | Between 0 and 6 dB, from 80 to 6000 MHz |



8. <u>Measurement Uncertainty</u>

| Test Name | Uncertainty (<i>k</i> =2) | |
|----------------------------------------------|----------------------------|--------|
| 1. Maximum Peak Output Power | 1.32dB | |
| 2. Peak Power Spectral Density | 2.32dB | |
| 3. 6dB Bandwidth | 66H | lz |
| 4. Band Edges Compliance | 1.92dB | |
| | 30MHz≤f<1GHz | 1.41dB |
| 5 Transmitter Spurious Emission Conducted | 1GHz≤f<7GHz | 1.92dB |
| 5. Transmitter Spurious Emission - Conducted | 7GHz≤f<13GHz | 2.31dB |
| | 13GHz≤f≤26GHz | 2.61dB |
| 6. Transmitter Spurious Emission - Radiated | 9kHz≤f<30MHz | 1.74dB |
| | 30MHz≤f<1GHz | 4.84dB |
| | 1GHz≤f<18GHz | 4.68dB |
| | 18GHz≤f≤40GHz | 3.76dB |
| 7. AC Power line Conducted Emission | 150kHz≤f≤30MHz | 3.00dB |



ANNEX A: Detailed Test Results

Test Configuration

The measurement is made according to ANSI C63.10.

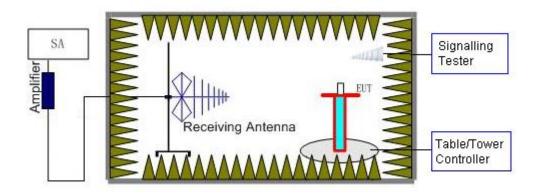
1) Conducted Measurements

- 1. Connect the EUT to the test system correctly.
- 2. Set the EUT to the required work mode.
- 3. Set the EUT to the required channel.
- 4. Set the spectrum analyzer to start measurement.
- 5. Record the values.



2) Radiated Measurements

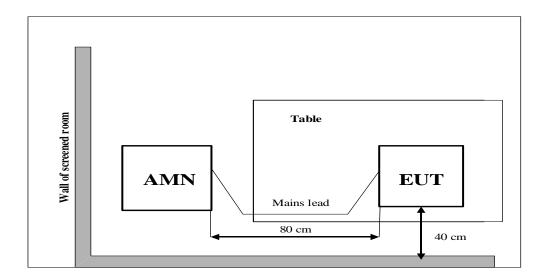
Test setup: EUT was placed on a 1.5 meter high non-conductive table at a 3 meter test distance from the receive antenna. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiving antenna polarization.

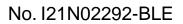




3) AC Power line Conducted Emission Measurement

For Bluetooth LE, the EUT is working under test mode. The EUT is commanded to operate at maximum transmitting power.







A.0 Antenna requirement

Measurement Limit:

| Standard | Requirement |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard FCC CRF Part 15.203 | Requirement 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 shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, |
| | §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded. |

Conclusion: The Directional gains of antenna used for transmitting is -3.0dBi. The RF transmitter uses an integrate antenna without connector.



A.1 Maximum Peak Output Power

Method of Measurement: See ANSI C63.10-clause 11.9.1.3

The maximum peak conducted output power may be measured using a broadband peak RF power meter.

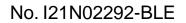
Measurement Limit:

| Standard | Limit (dBm) |
|---------------------------|-------------|
| FCC 47 CRF Part 15.247(b) | < 30 |

Measurement Results:

| Mode | Frequency (MHz) | RF output power (dBm) | Conclusion |
|-------|-----------------|-----------------------|------------|
| | 2402(CH0) | 5.59 | Р |
| LE 1M | 2440(CH19) | 6.16 | Р |
| | 2480(CH39) | 7.38 | Р |
| | 2402(CH0) | 5.84 | Р |
| LE 2M | 2440(CH19) | 6.45 | Р |
| | 2480(CH39) | 7.44 | Р |

Conclusion: Pass





A.2 Peak Power Spectral Density

Method of Measurement: See ANSI C63.10-clause 11.10.2

Measurement Limit:

| Standard | Limit (dBm/3 kHz) |
|---------------------------|-------------------|
| FCC 47 CRF Part 15.247(e) | < 8 dBm/3 kHz |

Measurement Results:

| Mode | Frequency (MHz) | - | Peak Power Spectral Density (dBm) | | |
|-------|-----------------|-------|--------------------------------------|---|--|
| | 2402(CH0) | Fig.1 | -3.87 | Р | |
| LE 1M | 2440(CH19) | Fig.2 | -3.11 | Р | |
| | 2480(CH39) | Fig.3 | -2.07 | Р | |
| | 2402(CH0) | Fig.4 | -5.56 | Р | |
| LE 2M | 2440(CH19) | Fig.5 | -4.92 | Р | |
| | 2480(CH39) | Fig.6 | -3.91 | Р | |

See below for test graphs. Conclusion: PASS

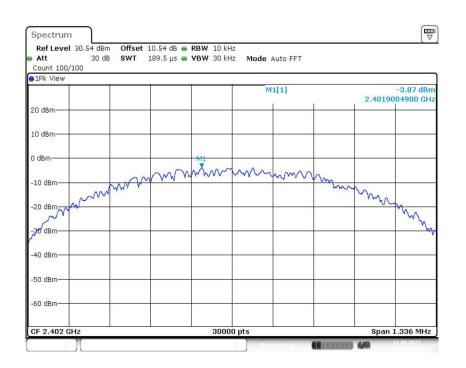
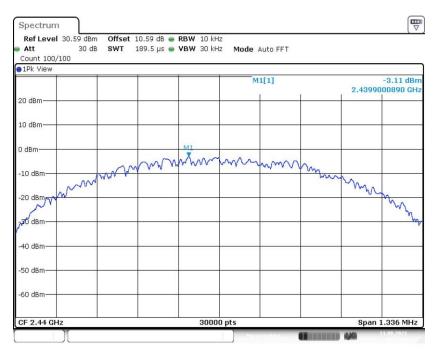
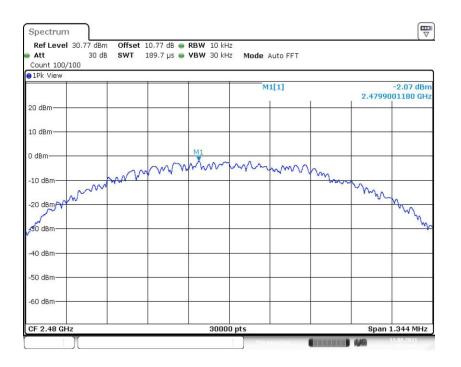


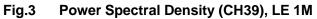
Fig.1 Power Spectral Density (CH0), LE 1M



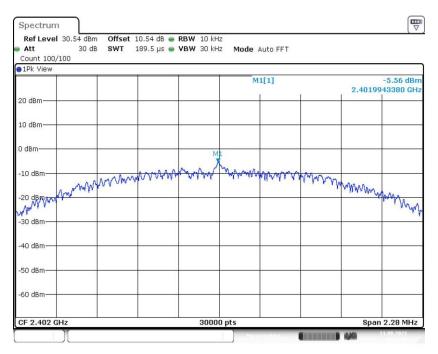




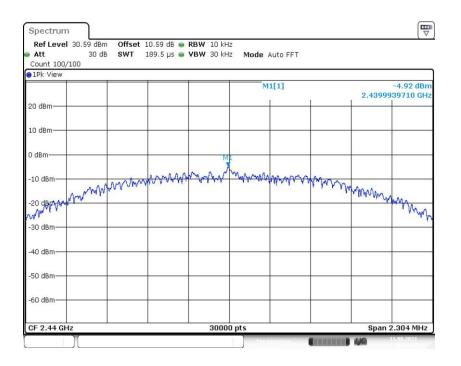


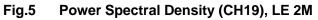


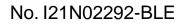














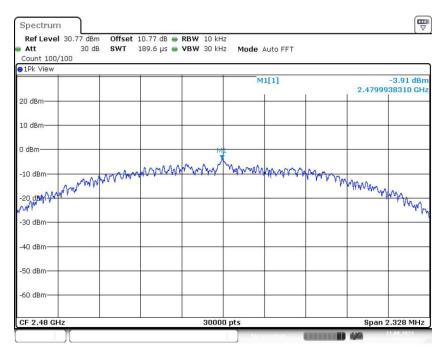


Fig.6 Power Spectral Density (CH39), LE 2M



A.3 6dB Bandwidth

Measurement Limit:

| Standard | Limit (kHz) |
|----------------------------|-------------|
| FCC 47 CFR Part 15.247 (a) | ≥ 500 |

Measurement Result:

| Mode | Frequency (MHz) | Test Res | ults (kHz) | Conclusion |
|-------|-----------------|----------|------------|------------|
| | 2402(CH0) | Fig.7 | 668.00 | Р |
| LE 1M | 2440(CH19) | Fig.8 | 668.00 | Р |
| | 2480(CH39) | Fig.9 | 672.00 | Р |
| | 2402(CH0) | Fig.10 | 1144.00 | Р |
| LE 2M | 2440(CH19) | Fig.11 | 1152.00 | Р |
| | 2480(CH39) | Fig.12 | 1152.00 | Р |

See below for test graphs. Conclusion: PASS

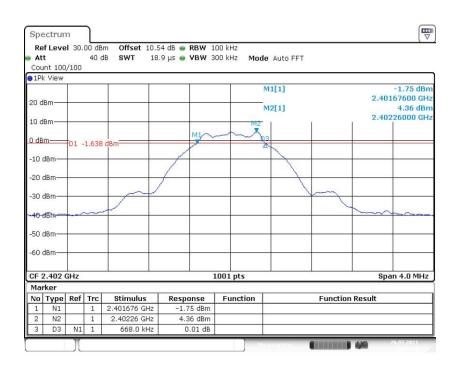
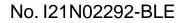


Fig.7 6dB Bandwidth (CH0), LE 1M





| Spe | ectrun | n | 1 | | | | | |
|-------------------|------------------------|------|---------------|-------------|---------------------------------|----------|----------------|----------------------------------------|
| At | f Leve t int 100 | | 00 dB 40 d | | 59 dB 👄 RBW 1 3.9 μs 👄 VBW 3 | | e Auto FFT | |
| | View | , | | | | | | |
| 20 d | Bm | | | | | | M1[1] M2[1] | -0.54 dBr 2.43967600 GH 5.50 dBr |
| 10 d | Bm | - | | | | M2 | 1 1 | 2.44026000 GH |
| <mark>0 dB</mark> | m | D1 - | 0.500 | dBm | MI | | 23 | |
| -10 | dBm— | | | | | | | |
| -20 | dBm— | | | | | | | |
| -30 | dBm— | | | \square | <u> </u> | | | |
| 40 | dBm— | ~ | ~~ | | | | | |
| -50 | dBm— | | | | | | | |
| -60 | dBm— | | | | | | | |
| | 2.44 G | Hz | | | | 1001 pts | | Span 4.0 MHz |
| | rker | D-C | Tur | 01 | Demons | E | | |
| N0 1 | Type N1 | Ref | 1 Trc | Stimulus | -0.54 dBm | Function | Fund | ction Result |
| 2 | N2 | | 1 | 2.44026 GHz | 5.50 dBm | | | |
| 3 | DЗ | N1 | 1 | 668.0 kHz | -0.00 dB | | | |



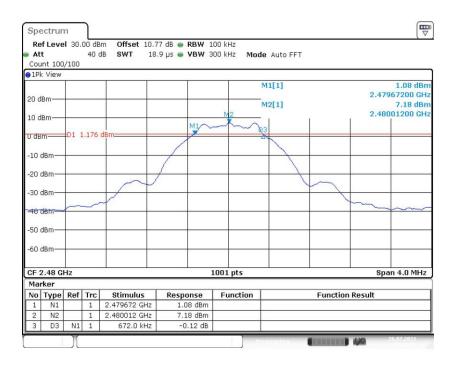
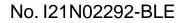
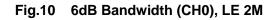


Fig.9 6dB Bandwidth (CH39), LE 1M





| Re | f Leve | 1 30. | 00 dB | m Offset 10 | .54 dB 👄 RBW 1 | LOO kHz | | | |
|------|---------|----------|-------|--------------|----------------|----------|------------------|----------------|------------|
| At | | | 40 0 | | 8.9 µs 👄 VBW 3 | | ode Auto FFT | | |
| Cou | int 100 | /100 | | Non Marchael | | | | | |
| 1P | (View | | | | 18455 | 02 | | | |
| | | | | | | | M1[1] | | -1.94 dBn |
| 20 d | Bm | | | | | | and the state of | 2.40 | 144800 GH |
| | | | | | | | M2[1] | | 4.10 dBn |
| 10 d | Bm | <u> </u> | | | | NZ | - 1 - 1 | 2.40 | 201600 GH |
| | | | | | M1 | X | 0 | | |
| 0 dB | m | D1 - | 1.895 | dBm | 2 m | ~ ~~~ | | | |
| | lo. | | | 1 - | | | | ~ | |
| -10 | dBm— | | | | | | | | |
| 20 | dBm | | | 1 | | | | Y | |
| 20 | abin | | 1 | | | | | 2 | |
| -30 | dBm— | - | / | - | | | | | |
| _ | | ~ | | | | | | | m |
| -40 | dBm— | - | | - | | | | | |
| | In | | | | | | | | |
| -50 | dBm— | | | | | | | | |
| -60 | dBm— | | | | | | | | |
| 00 | abin | | | | | | | | |
| CE 1 | 2.402 (| GHZ | | | | 1001 pts | | Sn | an 4.0 MHz |
| | ker | | | | | | | | |
| | Туре | Ref | Trc | Stimulus | Response | Function | E | unction Result | |
| 1 | N1 | | 1 | 2.401448 GHz | | | 1 | | |
| 2 | N2 | | 1 | 2.402016 GHz | 4.10 dBm | | | | |
| 3 | D3 | N1 | 1 | 1.144 MHz | -0.32 dB | | | | |



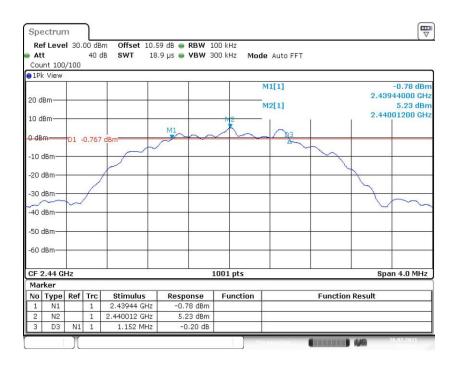
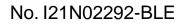


Fig.11 6dB Bandwidth (CH19), LE 2M





| Re | ectrur ef Leve | | 00 dB | m Offset 10.7 | 7 dB 👄 RBW 1 | 00 kHz | | T |
|------|-------------------|----------|-------|---------------|----------------------|----------|-------------|---------------------------|
| At | | | 40 | | .9 µs 🖷 VBW 3 | | le Auto FFT | |
| | int 100 | /100 | | | | | | |
| D1P | k View | | | | | | | |
| | | | | | | | M1[1] | 1.01 dBi 2.47944000 GH |
| 20 c | IBm— | + | | | | | M2[1] | 7.03 dBi |
| | ID | | | | | M2 | matal. | 2.48001200 GH |
| 10 c | IBW | | | | M1 | X | | |
| 0 de | m | D1 1 | 1.033 | dBm- | m | 15 | - D3 | |
| | | | | ~~~ | | | | |
| -10 | dBm— | - | | 1 | | _ | | |
| | 10 | | | | | | | \mathcal{A} |
| -20 | dBm— | | / | | | | | |
| -30 | dBm | - | 1 | | | | | |
| ~ | ~~~ | - | | | | | | y m |
| -40 | dBm— | - | | - | | | | |
| 50 | dBm | | | | | | | |
| -30 | | | | | | | | |
| -60 | dBm— | <u> </u> | | | | | | |
| | | | | | | | | |
| CF : | 2.48 G | Hz | | | 1 | 001 pts | | Span 4.0 MHz |
| Ma | rker | | | | | | | |
| No | Туре | Ref | Trc | Stimulus | Response | Function | Func | tion Result |
| 1 | N1 | | 1 | 2.47944 GHz | 1.01 dBm | | | |
| 2 | N2 | | 1 | 2.480012 GHz | 7.03 dBm | | | |
| 3 | D3 | N1 | 1 | 1.152 MHz | -0.21 dB | | | |

Fig.12 6dB Bandwidth (CH39), LE 2M



A.4 Band Edges Compliance

Measurement Limit:

| Standard | Limit (dBm) |
|----------------------------|-------------|
| FCC 47 CFR Part 15.247 (d) | > 20 |

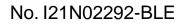
Measurement Result:

| Mode | Frequency (MHz) | Test Resu | lts (dBm) | Conclusion |
|-------|-----------------|-----------|-----------|------------|
| LE 1M | 2402(CH0) | Fig.13 | 50.75 | Р |
| | 2480(CH39) | Fig.14 | 53.13 | Р |
| LE 2M | 2402(CH0) | Fig.15 | 47.76 | Р |
| | 2480(CH39) | Fig.16 | 52.71 | Р |

See below for test graphs. Conclusion: PASS

| At | f Leve t int 300 | | 00 dBr 30 d | | 4 dB 👄 RBW 1 L ms 👄 VBW 3 | | le Auto Sw | veep | |
|-------|------------------------|-------|----------------|---------------|------------------------------|-----------|-------------------|-------------|----------------------------------------|
| | (View | / 300 | | | | | | | |
| 10 d | Bm | | | | | | M1[1] M2[1] | | 4.41 dBr 2.4022540 GH -48.63rdBr |
| 0 dB | m | | | | | | - | 74 97 | 2.400000 GH |
| -10 | dBm | | | | | | | | |
| _ | dBm- | D1 - | 15.590 | D dBm | | | | | |
| | dBm— | | | | | | | | |
| | dBm— | | | | | | _ | | |
| | | um | water up to | methodem | naunument | mound | n4 | Manulus | monor he |
| | dBm— | | | | | | | | |
| -70 (| dBm— | | | | | | _ | | |
| | | | | | | | | | |
| | t 2.35 ker | GHz | | | | 691 pts | | | Stop 2.405 GHz |
| | Туре | Ref | Trc | Stimulus | Response | Function | | Function f | Result |
| 1 | N1 | | 1 | 2.402254 GHz | 4.41 dBm | . anotion | | . anotion i | |
| 2 | N2 | | 1 | 2.4 GHz | -48.63 dBm | | | | |
| 3 | NЗ | | 1 | 2.39 GHz | -49.67 dBm | | | | |
| 4 | N4 | | 1 | 2.3821232 GHz | -46.34 dBm | | | | |

Fig.13 Band Edges (CH0), LE 1M



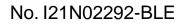


| Spe | ectrur | n | ٦ | | | | | | |
|-------|-----------------------|-----|---------------|---------------------------|-------------------------------|----------|---------------------|----------|---------------------------------------|
| At | f Leve t nt 300 | | 00 dB 30 d | | 77 dB 👄 RBW 1 1 ms 👄 VBW 3 | | le Auto Swee | эр | , , , , , , , , , , , , , , , , , , , |
| • 1P | View | | | | | | | | |
| 10 d | Bm | M1 | | | | | M1[1] M2[1] | | 7.18 dBn 2.480250 GH -48.85 dBn |
| 0 dB | m | 1 | _ | | | | mz[1] | 1 1 | 2.483500 GH |
| -10 | dBm— | 11 | | | | | | _ | |
| -20 (| dBm | | -12.82 | 20 dBm | | | | | |
| -30 (| dBm— | | | | | | _ | - | |
| -40 (| dBm— | | M2 | | M3 | | | 1914 | |
| -501 | 18m | - | hourse | nothing | antenne | manna | manufathere | muchaman | manhammandadered |
| -60 (| dBm— | _ | | | | | | ~ | |
| -70 (| dBm— | | | | | | | - | |
| Star | t 2.47 | GHz | (| | | 691 pts | | 78 | Stop 2.55 GHz |
| | ker | | | | | | | | |
| | Туре | Ref | | Stimulus | Response | Function | | Function | Result |
| 1 | N1 N2 | | 1 | 2.48025 GHz 2.4835 GHz | 7.18 dBm -48.85 dBm | | | | |
| 3 | N3 | | 1 | 2.4005 GHz | -47.91 dBm | | | | |
| 4 | N4 | | 1 | 2.528667 GHz | -45.95 dBm | | | | |
| | | | | | | | cesurios | | 25.07.2021 |



| | nt 300 | /300 | 30 d | ib SWT 1 | .1 ms 🕳 V | BW 3 | 00 kHz Moo | le Auto Swee | эр | | |
|--------------|--------------|-------|----------|---------------------------|-----------|-------------|------------|----------------|----------|----------|---------|
| 10 d 0 dB | | | | | | | | M1[1] M2[1] | | 2.4020 | .80 dBr |
| | dBm— | -D1 - | 15.82 | 0 dBm | | | | | | | Д |
| | dBm— dBm— | | | | | | | | | | |
| | dBm | un | henry | weighter | hummen | wheney | empedenter | hathinsonal | M3 | wayman | 4 |
| | dBm— | | | | | | | | | | |
| | dBm | GHz | | | | | 691 pts | | | Stop 2.4 | 05 GHz |
| Mai | rker | | | | | | | | | | |
| No 1 | Type N1 | Ref | Trc 1 | Stimulus 2.402015 GHz | Respon | dBm | Function | | Function | Result | |
| 2 | N1 N2 | | 1 | 2.402013 GHz 2.4 GHz | -42.80 | | | | | | |
| 3 | NЗ | | 1 | 2.39 GHz | -47.26 | | | | | | |
| 3 | N3 N4 | | 1 | 2.39 GHz 2.3999783 GHz | -47.26 | | | | | | |

Fig.15 Band Edges (CH0), LE 2M





| Spe | ctrun | n | ٦ | | | | | | |
|-------|-------------------------------|------|---------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------|--------------------|-----------------------|-------------------------------------|
| Att | f Leve : nt 300, | | 00 dB 30 d | | 77 dB 👄 RBW 1 .1 ms 👄 VBW 3 | | le Auto Swe | ер | |
| ●1Pk | View | | | - W | | | | | |
| 10 dB | 3m | M1 | | | | | M1[1] M2[1] | | 6.95 dB 2.480010 GF -48.41 dB |
| 0 dBn | n | A | | | | | | 1 | 2.483500 GH |
| -10 d | IBm— | D1 - | 13.05 | 0 dBm | | | _ | _ | |
| -20 d | IBm— | | | | | | - | | |
| -30 d | IBm— | - | 5 | | | | | | _ |
| -40 d | | | M2 | | M3 | | | | 1/14 |
| -50 d | Bm | | | And the second | a share the second s | kan laga kanga danga | menter and the | Uniphan mana han dite | when the whole the second |
| -60 d | lBm— | - | | | | | - | | |
| -70 d | IBm— | | | | | | | | |
| Start | t 2.47 | GHz | | | | 691 pts | | | Stop 2.55 GH: |
| Mark | ker | | | | | | | | |
| | | Ref | | Stimulus | Response | Function | | Functio | on Result |
| 1 | N1 | | 1 | 2.48001 GHz | 6.95 dBm | | | | |
| 2 | N2 | | 1 | 2.4835 GHz | -48.41 dBm | | | | |
| 3 | N3 | | 1 | 2.5 GHz | -48.10 dBm | | | | |
| 4 | N4 | | 1 | 2.538754 GHz | -45.76 dBm | | | | |

Fig.16 Band Edges (CH39), LE 2M



A.5 Transmitter Spurious Emission - Conducted

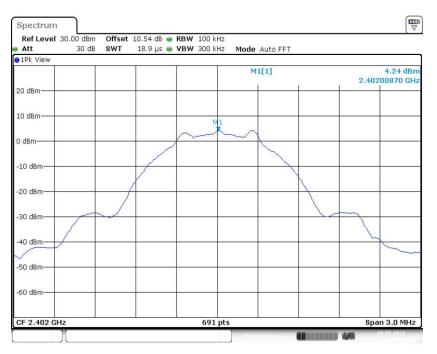
Measurement Limit:

| | Standard | | Limit (dBm) | | | | | |
|------------|-----------------|--------------|-------------------------------------------------------|--------------|------------|--|--|--|
| FCC 4 | 7 CFR Part 15.2 | 47 (d) | 20dBm below peak output power in 100 kHz bandwidth | | | | | |
| Measuremen | t Results: | | | | | | | |
| MODE | Channel | Frequency | Range | Test Results | Conclusion | | | |
| | | 2.402 GHz | | Fig.17 | Р | | | |
| | 0 | 30MHz -1GHz | | Fig.18 | Р | | | |
| | | 1GHz-26.5GHz | | Fig.19 | Р | | | |
| | 19 | 2.440 GHz | | Fig.20 | Р | | | |
| LE 1M | | 30MHz -1GHz | | Fig.21 | Р | | | |
| | | 1GHz-26.5GHz | | Fig.22 | Р | | | |
| | 39 | 2.480 GHz | | Fig.23 | Р | | | |
| | | 30MHz -1GHz | | Fig.24 | Р | | | |
| | | 1GHz-26 | .5GHz | Fig.25 | Р | | | |
| | | 2.402 GHz | | Fig.26 | Р | | | |
| | 0 | 30MHz -1GHz | | Fig.27 | Р | | | |
| | | 1GHz-26.5GHz | | Fig.28 | Р | | | |
| | | 2.440 GHz | | Fig.29 | Р | | | |
| LE 2M | 19 | 30MHz -1GHz | | Fig.30 | Р | | | |
| | | 1GHz-26.5GHz | | Fig.31 | Р | | | |
| | | 2.480 (| GHz | Fig.32 | Р | | | |
| | 39 | 30MHz - | 1GHz | Fig.33 | Р | | | |
| | | 1GHz-26 | .5GHz | Fig.34 | Р | | | |

See below for test graphs.

Conclusion: Pass







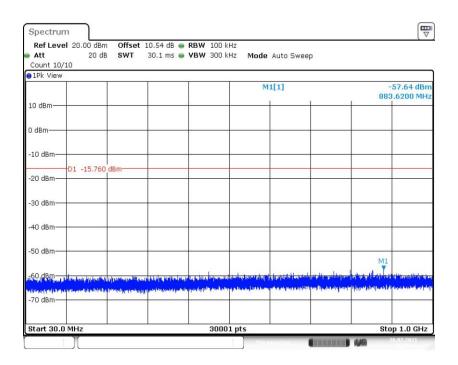
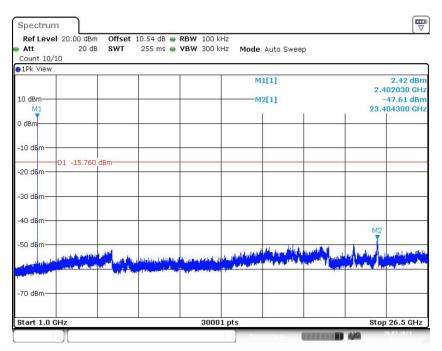


Fig.18 Conducted Spurious Emission (CH0, 30MHz -1GHz), LE 1M









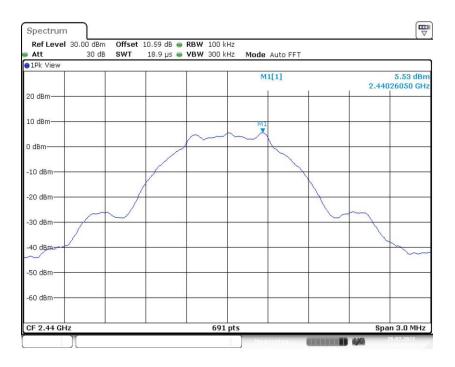
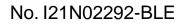


Fig.20 Conducted Spurious Emission (CH19, Center Frequency), LE 1M





| 20 dE 10 | SWT | 30.1 ms 👄 | VBW 300 k | Hz Mode | Auto Swee | р | | |
|---------------------------|-----------------------|----------------|-------------------------|--------------------------------|----------------------------|---------------------|----------------------------------|------------------------------------------------------------------------|
| r | 1 | T | Т | | | | | 57 00 ID |
| | | | | IVI | 1[1] | | | -57.98 dBn 9.9140 MH |
| | | | | | | | | |
| | | | | | | | | |
| | | | ~ | | | | | |
| D1 -14.470 | dBm | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | M1 | | | | |
| | | | | Contra to state in the | | | | |
| Press Second distances of | nan falfa-sinaa faqua | | a (kapar Palis) arketer | and the property of the second | and the provident sectors. | adate at the public | an the district why district the | ann and and |
| | 01 -14.470 | D1 -14.470 dBm | 10 | 10 | 10 M | 10 M1[1] | 10 M1[1] | 10 M1[1] 58 00 00 01 -14.470 dBm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 |



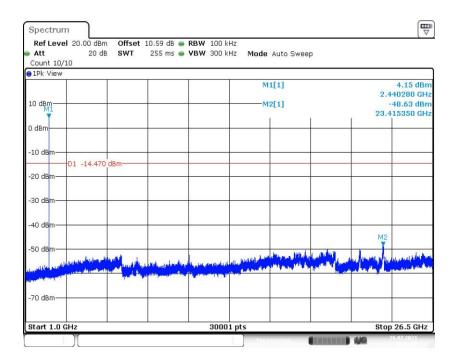
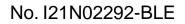
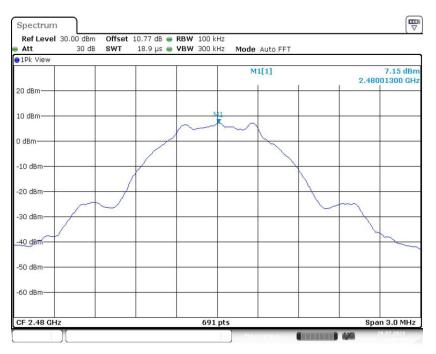


Fig.22 Conducted Spurious Emission (CH19, 1GHz-26.5GHz), LE 1M









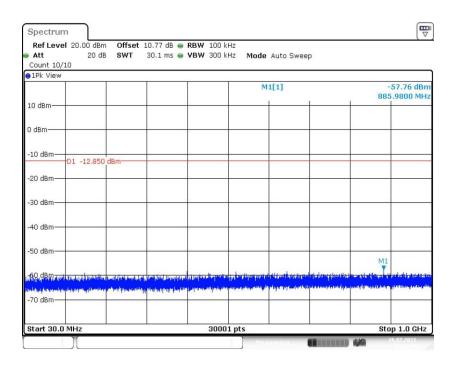
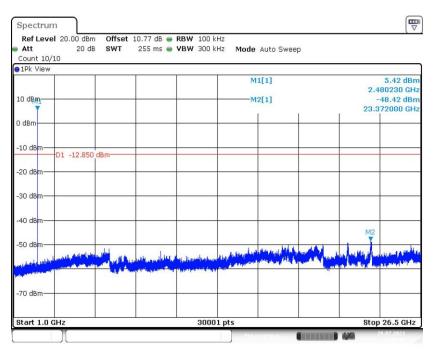


Fig.24 Conducted Spurious Emission (CH39, 30MHz -1GHz), LE 1M









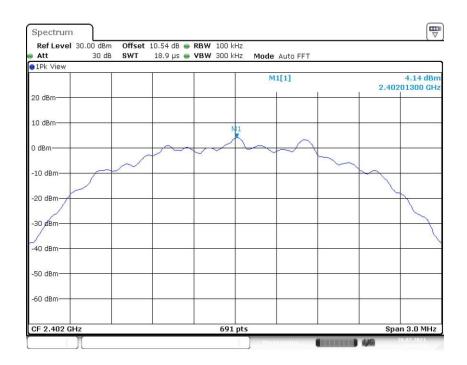
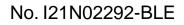


Fig.26 Conducted Spurious Emission (CH0, Center Frequency), LE 2M





| Ref Leve | el 20.00 dBm 20 dB | | 10.54 dB 👄 | RBW 100 k VBW 300 k | | Auto Sweer | | | |
|------------|-----------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------|------------------------------------------|-----------------------------------|
| Count 10/ | | 3 3 11 | 30.1 ms 🖶 | 4BW 300 K | moue | Auto Sweet | | | |
| 1Pk View | | | | (dd) | | | | | |
| | | | | | M | 1[1] | | | -58.23 dBn 7.5360 MH |
| 10 dBm | | | | | | | | 98 | 7.5360 MH |
|) dBm | | | | 21 | | | | | |
| 10 dBm— | | | | | | | | | |
| 20 dBm— | -D1 -15.860 | dBm | | | | | | | |
| 30 dBm— | | | | | | 1.2 × 2 | | | |
| -40 dBm— | | | | | | | | | |
| 50 dBm— | | | | | | | | | M |
| 60 dBm | Apothesportab | din per brauduj | and the second s | and a still so that of the | ndetre andre | harding bit, give | the investment | | |
| 70 dBm— | | | - firstlandageneiseren | angangurahiraga, | . New York and the second s | a an | and the submitted of the | an a | a la <mark>la navana</mark> ta se |
| Start 30.0 | | | | | 1 pts | | | | op 1.0 GHz |



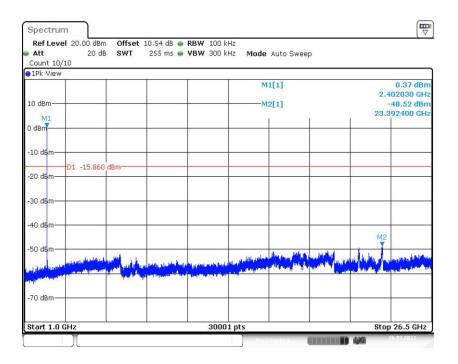
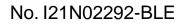
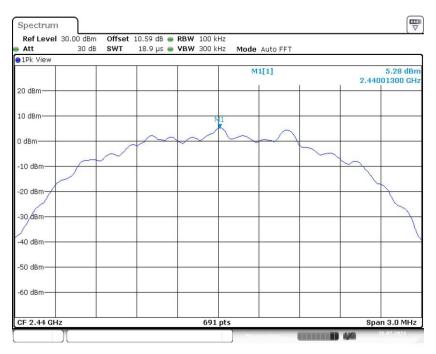


Fig.28 Conducted Spurious Emission (CH0, 1GHz-26.5GHz), LE 2M









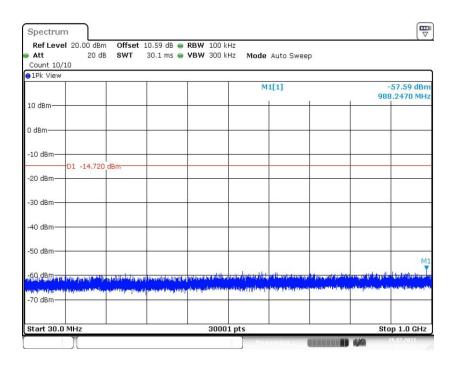
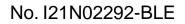
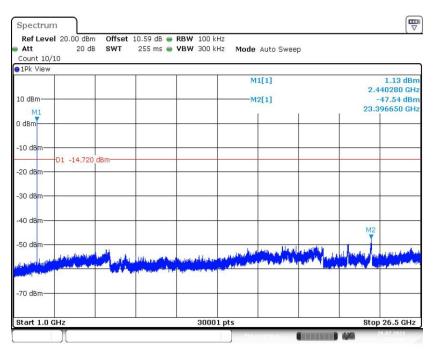


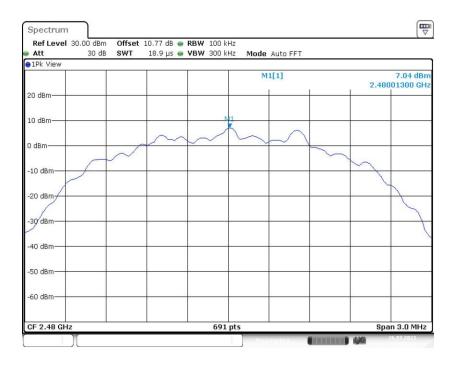
Fig.30 Conducted Spurious Emission (CH19, 30MHz -1GHz), LE 2M



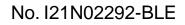














| Ref Leve | el 20.00 dBr 20 d | | 10.77 dB 👄 | RBW 100 k VBW 300 k | | Auto Cureo | | | | | |
|------------|-------------------------------------------|-------------------------------|-----------------------|----------------------------|---------------------------------------------|------------------------------------------|-------------------|--------------------------|---------------------------------|--|--|
| Count 10/ | | 5 391 | 30.1 ms 🖷 | YDW 300 K | nz Mode | Auto Swee | þ | | | | |
| 1Pk View | | | | | | | | | | | |
| | | | | | M | 1[1] | | | -58.54 dBn 565.4380 MH | | |
| 10 dBm | | ~ | | | | | | 563 | 5.4380 MH | | |
|) dBm | | | | 0 | | | | | | | |
| 10 dBm | | | | | | | | | | | |
| 20 dBm— | -D1 -12.960 | | | | | | | | | | |
| 30 dBm— | | | | | | | | | | | |
| 40 dBm— | | | | | | | | | | | |
| 50 dBm— | | | | | | | | | | | |
| 60 dBm | - | a dil di milia di sina di bia | and a superior | ultray attractions | M1 | - | and some offer | uter all a total | and the state | | |
| 70 dBm— | a sina () _e ntrin a fata parte | n staanen kerkete | aldura hafar san da h | an that to a second second | onlinitetetetetetetetetetetetetetetetetetet | a da na da na polici na principa da filo | andrad (data) and | ange tayangan dan angera | Laboration of the second second | | |
| Start 30.0 | MU ₂ | | | 3000 | 1 nts | | | Ste | p 1.0 GHz | | |



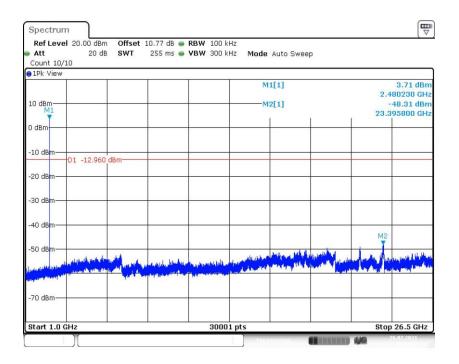


Fig.34 Conducted Spurious Emission (CH39, 1GHz-26.5GHz), LE 2M



A.6 Transmitter Spurious Emission - Radiated

Measurement Limit:

| Standard | Limit (dBm) | |
|----------------------------------------|-------------------------------|--|
| FCC 47 CFR Part 15.247, 15.205, 15.209 | 20dBm below peak output power | |

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

| Frequency of emission (MHz) | Field strength(µV/m) | Measurement distance(meters) |
|--------------------------------|----------------------|---------------------------------|
| 0.009-0.490 | 2400/F(kHz) | 300 |
| 0.490-1.705 | 24000/F(kHz) | 30 |
| 1.705-30.0 | 30 | 30 |
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| Above 960 | 500 | 3 |

Test Condition:

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

| Frequency of emission (MHz) | RBW/VBW | Sweep Time(s) |
|--------------------------------|---------------|---------------|
| 30-1000 | 120kHz/300kHz | 5 |
| 1000-4000 | 1MHz/3MHz | 15 |
| 4000-18000 | 1MHz/3MHz | 40 |
| 18000-26500 | 1MHz/3MHz | 20 |

Note: According to the performance evaluation, the radiated emission margin of EUT is over 20dB in the band from 9kHz to 30MHz.Therefore, the measurement starts from 30MHz to tenth harmonic. The measurement results include the horizontal polarization and vertical polarization measurements.



Measurement Results:

| Mode | Channel | Frequency Range | Test Results | Conclusion |
|-------|-----------------------|------------------------|--------------|------------|
| | 0 | 1 GHz ~18 GHz | Fig.35 | Р |
| | 19 | 1 GHz ~18 GHz | Fig.36 | Р |
| | 39 | 1 GHz ~18 GHz | Fig.37 | Р |
| LE 1M | Restricted Band(CH0) | 2.38 GHz ~ 2.45 GHz | Fig.38 | Р |
| | Restricted Band(CH39) | 2.45 GHz ~ 2.5 GHz | Fig.39 | Р |
| | | 9 kHz ~30 MHz | Fig.40 | Р |
| | All channels | 30 MHz ~1 GHz | Fig.41 | Р |
| | | 18 GHz ~ 26.5 GHz | Fig.42 | Р |
| | 0 | 1 GHz ~18 GHz | Fig.43 | Р |
| | 19 | 1 GHz ~18 GHz | Fig.44 | Р |
| | 39 | 1 GHz ~18 GHz | Fig.45 | Р |
| LE 2M | Restricted Band(CH0) | 2.38 GHz ~ 2.45 GHz | Fig.46 | Р |
| | Restricted Band(CH39) | 2.45 GHz ~ 2.5 GHz | Fig.47 | Р |
| | | 9 kHz ~30 MHz | Fig.48 | Р |
| | All channels | channels 30 MHz ~1 GHz | | Р |
| | | 18 GHz ~ 26.5 GHz | Fig.50 | Р |

Worst Case Result

For LE 1M:

CH39 (1-18GHz)

| Frequency | MaxPeak | Limit | Margin | Pol | Corr. |
|--------------|----------|----------|--------|-----|--------|
| (MHz) | (dBµV/m) | (dBµV/m) | (dB) | 101 | (dB/m) |
| 11851.714286 | 47.67 | 74.00 | 26.33 | V | 10.1 |
| 13367.571429 | 48.96 | 74.00 | 25.04 | Н | 11.4 |
| 14595.000000 | 50.95 | 74.00 | 23.05 | Н | 11.9 |
| 15877.714286 | 52.76 | 74.00 | 21.24 | V | 14.0 |
| 16888.285714 | 55.25 | 74.00 | 18.75 | V | 18.0 |
| 17959.285714 | 54.70 | 74.00 | 19.30 | V | 19.1 |

| Frequency (MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----|-----------------|
| 11851.714286 | 35.62 | 54.00 | 18.38 | V | 10.1 |
| 13367.571429 | 37.19 | 54.00 | 16.81 | Н | 11.4 |
| 14595.000000 | 37.68 | 54.00 | 16.32 | Н | 11.9 |
| 15877.714286 | 40.51 | 54.00 | 13.49 | V | 14.0 |
| 16888.285714 | 42.44 | 54.00 | 11.56 | V | 18.0 |
| 17959.285714 | 42.88 | 54.00 | 11.12 | V | 19.1 |



For LE 2M: CH39 (1-18GHz)

| Frequency | MaxPeak | Limit | Margin | Pol | Corr. |
|--------------|----------|----------|--------|-----|--------|
| (MHz) | (dBµV/m) | (dBµV/m) | (dB) | FOI | (dB/m) |
| 12267.428572 | 49.16 | 74.00 | 24.84 | V | 11.0 |
| 13421.142857 | 48.83 | 74.00 | 25.17 | Н | 11.5 |
| 14856.428572 | 50.79 | 74.00 | 23.21 | V | 13.0 |
| 15925.714286 | 52.38 | 74.00 | 21.62 | Н | 14.1 |
| 16963.714286 | 55.67 | 74.00 | 18.33 | Н | 18.3 |
| 17926.285714 | 56.25 | 74.00 | 17.75 | Н | 18.9 |

| Frequency (MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----|-----------------|
| 12267.428572 | 37.00 | 54.00 | 17.00 | V | 11.0 |
| 13421.142857 | 36.65 | 54.00 | 17.35 | Н | 11.5 |
| 14856.428572 | 38.71 | 54.00 | 15.29 | V | 13.0 |
| 15925.714286 | 40.12 | 54.00 | 13.88 | Н | 14.1 |
| 16963.714286 | 42.67 | 54.00 | 11.33 | Н | 18.3 |
| 17926.285714 | 43.31 | 54.00 | 10.69 | Н | 18.9 |

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and Antenna Factor, the gain of the preamplifier, the cable loss. P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result= P_{Mea} +Cable Loss +Antenna Factor-Gain of the preamplifier.

See below for test graphs.

Conclusion: Pass



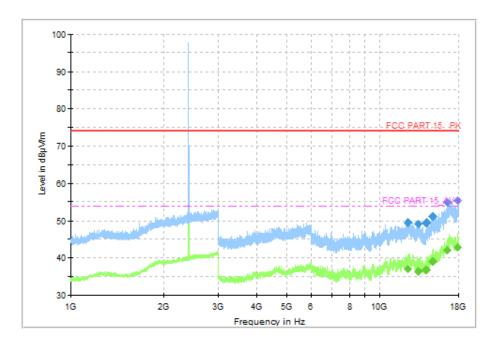


Fig.35 Radiated Spurious Emission (CH0, 1 GHz ~18 GHz), LE 1M

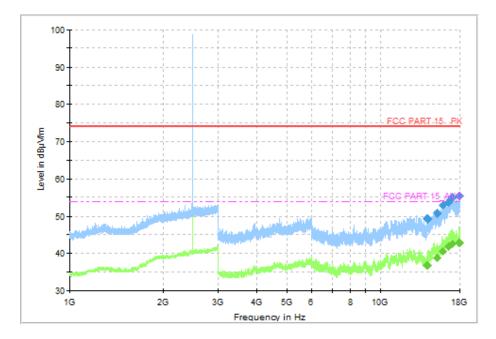


Fig.36 Radiated Spurious Emission (CH19, 1 GHz ~18 GHz), LE 1M



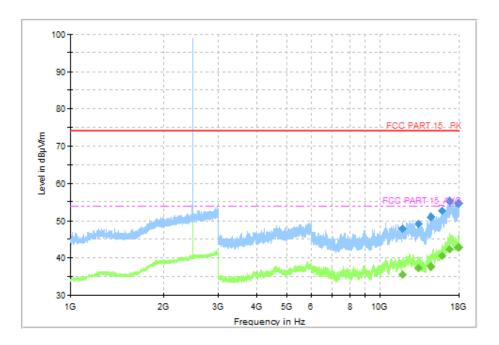


Fig.37 Radiated Spurious Emission (CH39, 1 GHz ~18 GHz), LE 1M

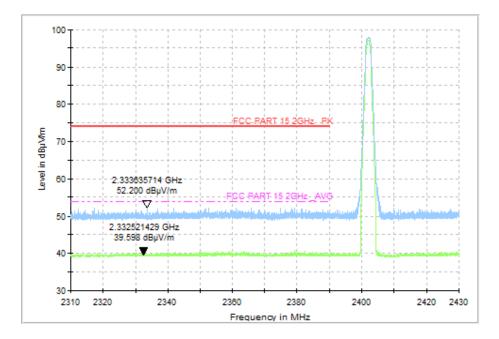


Fig.38 Radiated Band Edges (CH0, 2380GHz~2450GHz), LE 1M



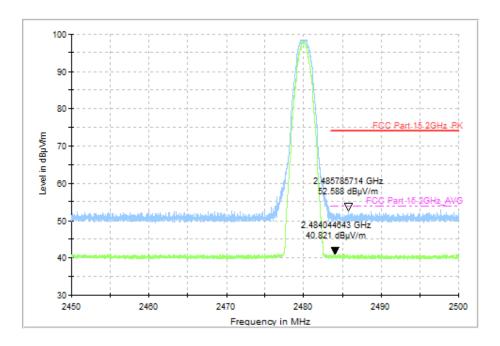


Fig.39 Radiated Band Edges (CH39, 2450GHz~2500GHz), LE 1M

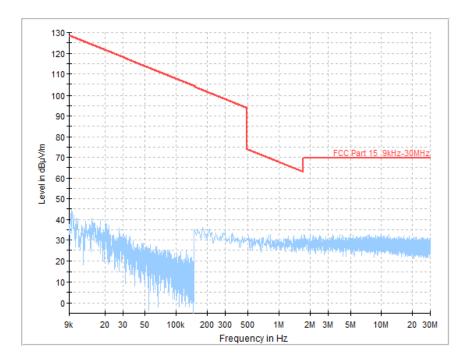


Fig.40 Radiated Spurious Emission (All Channels, 9 kHz-30 MHz), LE 1M



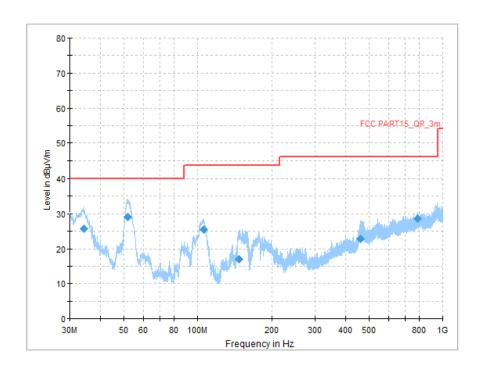


Fig.41 Radiated Spurious Emission (All Channels, 30 MHz-1 GHz), LE 1M

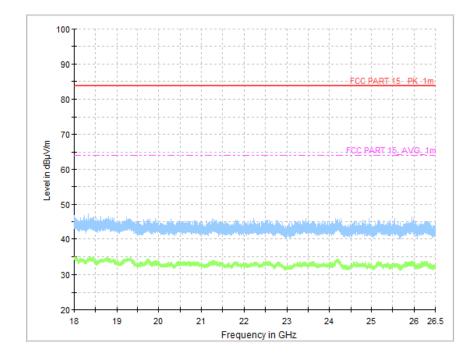


Fig.42 Radiated Spurious Emission (All Channels, 18 GHz-26.5 GHz), LE 1M



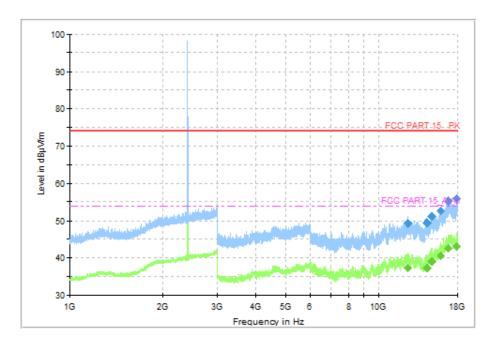


Fig.43 Radiated Spurious Emission (CH0, 1 GHz ~18 GHz), LE 2M

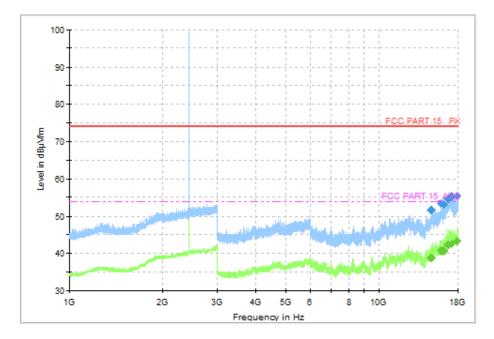


Fig.44 Radiated Spurious Emission (CH19, 1 GHz ~18 GHz), LE 2M



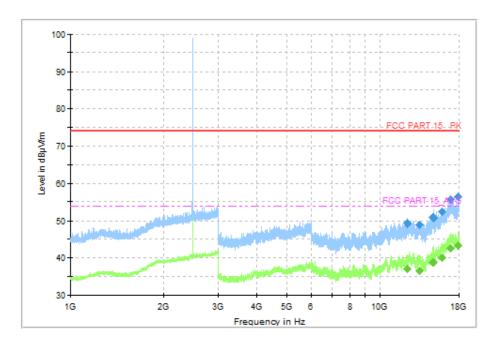


Fig.45 Radiated Spurious Emission (CH39, 1 GHz ~18 GHz), LE 2M

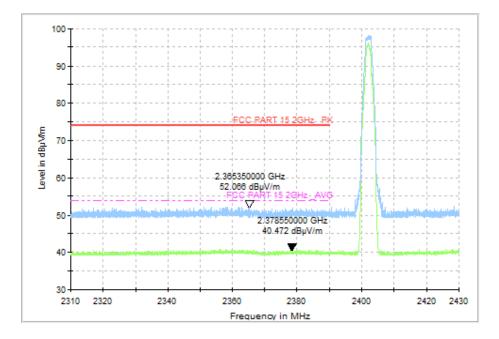


Fig.46 Radiated Band Edges (CH0, 2380GHz~2450GHz), LE 2M



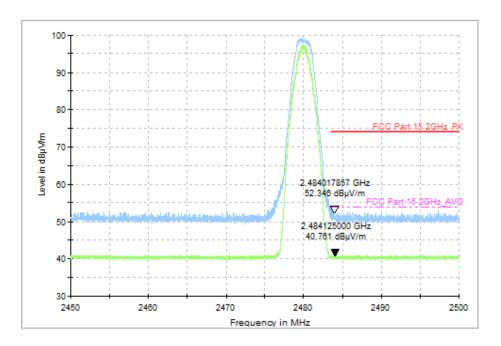


Fig.47 Radiated Band Edges (CH39, 2450GHz~2500GHz), LE 2M

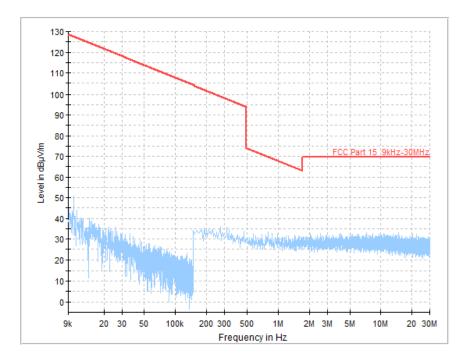


Fig.48 Radiated Spurious Emission (All Channels, 9 kHz-30 MHz), LE 2M



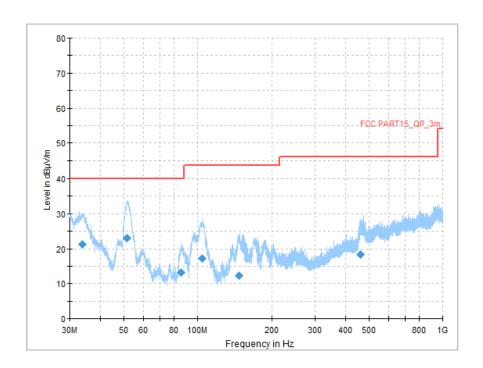


Fig.49 Radiated Spurious Emission (All Channels, 30 MHz-1 GHz), LE 2M

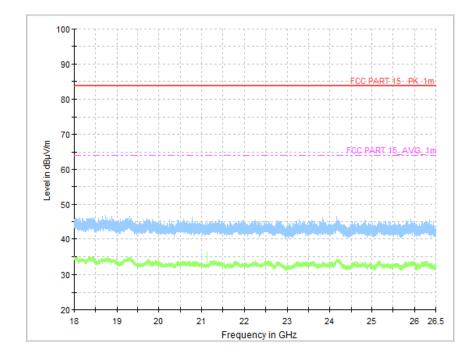


Fig.50 Radiated Spurious Emission (All Channels, 18 GHz-26.5 GHz), LE 2M



A.7 AC Power line Conducted Emission

Test Condition:

| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 120 | 60 |

Measurement Result and limit:

LE 1M-AE2, AE3, AE4

| Frequency range | Quasi-peak | Average-peak | Result (dBμV) | | Conclusion |
|-----------------|--------------|--------------|---------------|--------|----------------|
| (MHz) | Limit (dBµV) | Limit (dBμV) | Traffic | Idle | Conclusion |
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | | | |
| 0.5 to 5 | 56 | 46 | Fig.51 | Fig.52 | Р |
| 5 to 30 | 60 | 50 | | | |
| | | | | | l • • • • • |

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

LE 2M-AE2, AE3, AE4

| Frequency range | Quasi-peak | Average-peak | Result | (dBµV) | Conclusion | | |
|------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------|--------------|--|------------|
| (MHz) | Limit (dBμV) | Limit (dBμV) | Traffic Idle | | Traffic Idle | | Conclusion |
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | | | | | |
| 0.5 to 5 | 56 | 46 | Fig.53 | Fig.54 | Р | | |
| 5 to 30 | 60 | 50 | | | | | |
| NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 | | | | | | | |
| MHz to 0.5 MHz. | | | | | | | |

Note: The measurement results include the L1 and N measurements.

See below for test graphs.

Conclusion: Pass



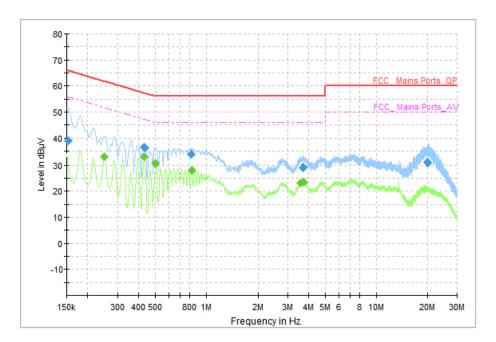


Fig.51 AC Power line Conducted Emission (Traffic), LE 1M

| Frequency (MHz) | Quasi Peak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Filter | Corr. (dB) |
|--------------------|----------------------|-----------------|----------------|------|--------|---------------|
| 0.154000 | 39.00 | 65.78 | 26.78 | N | ON | 10 |
| 0.430000 | 36.46 | 57.25 | 20.79 | L1 | ON | 10 |
| 0.434000 | 36.34 | 57.18 | 20.83 | L1 | ON | 10 |
| 0.814000 | 33.94 | 56.00 | 22.06 | L1 | ON | 10 |
| 3.690000 | 28.80 | 56.00 | 27.20 | L1 | ON | 10 |
| 20.154000 | 30.65 | 60.00 | 29.35 | Ν | ON | 10 |

Measurement Results: Average

| Frequency | Average | Limit | Margin | Line | Filter | Corr. |
|-----------|---------|--------|--------|------|--------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | | (dB) |
| 0.250000 | 33.05 | 51.76 | 18.71 | L1 | ON | 10 |
| 0.430000 | 32.83 | 47.25 | 14.43 | L1 | ON | 10 |
| 0.502000 | 30.57 | 46.00 | 15.43 | L1 | ON | 10 |
| 0.826000 | 28.15 | 46.00 | 17.85 | L1 | ON | 10 |
| 3.582000 | 23.16 | 46.00 | 22.84 | L1 | ON | 10 |
| 3.722000 | 23.31 | 46.00 | 22.69 | L1 | ON | 10 |



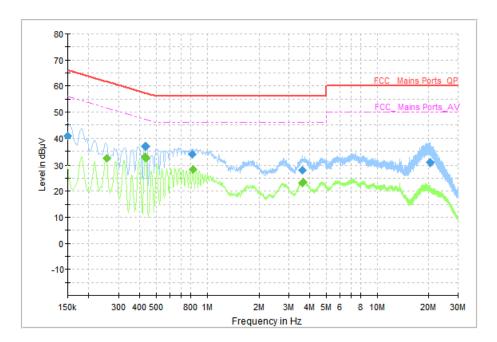


Fig.52 AC Power line Conducted Emission (Idle), LE 1M

| Frequency | Quasi Peak | Limit | Margin | Line | Filter | Corr. |
|-----------|------------|--------|--------|------|--------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | | (dB) |
| 0.150000 | 40.76 | 66.00 | 25.24 | Ν | ON | 10 |
| 0.430000 | 36.90 | 57.25 | 20.36 | L1 | ON | 10 |
| 0.434000 | 36.77 | 57.18 | 20.41 | L1 | ON | 10 |
| 0.814000 | 33.79 | 56.00 | 22.21 | L1 | ON | 10 |
| 3.598000 | 28.09 | 56.00 | 27.91 | L1 | ON | 10 |
| 20.506000 | 30.69 | 60.00 | 29.31 | Ν | ON | 10 |

Measurement Results: Average

| Frequency | Average | Limit | Margin | Line | Filter | Corr. |
|-----------|---------|--------|--------|------|--------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | | (dB) |
| 0.254000 | 32.40 | 51.63 | 19.22 | L1 | ON | 10 |
| 0.430000 | 32.94 | 47.25 | 14.31 | L1 | ON | 10 |
| 0.434000 | 32.44 | 47.18 | 14.74 | L1 | ON | 10 |
| 0.826000 | 28.45 | 46.00 | 17.55 | L1 | ON | 10 |
| 3.598000 | 23.24 | 46.00 | 22.76 | L1 | ON | 10 |
| 3.666000 | 23.30 | 46.00 | 22.70 | L1 | ON | 10 |



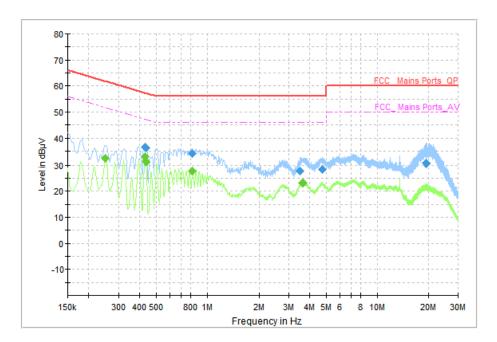


Fig.53 AC Power line Conducted Emission (Traffic), LE 2M

| Frequency | Quasi Peak | Limit | Margin | Line | Filter | Corr. |
|-----------|------------|--------|--------|------|--------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | | (dB) |
| 0.430000 | 36.44 | 57.25 | 20.82 | L1 | ON | 10 |
| 0.434000 | 36.26 | 57.18 | 20.92 | L1 | ON | 10 |
| 0.818000 | 34.07 | 56.00 | 21.93 | L1 | ON | 10 |
| 3.502000 | 27.66 | 56.00 | 28.34 | L1 | ON | 10 |
| 4.726000 | 28.34 | 56.00 | 27.66 | L1 | ON | 10 |
| 19.350000 | 30.54 | 60.00 | 29.46 | Ν | ON | 10 |

Measurement Results: Average

| Frequency | Average | Limit | Margin | Line | Filter | Corr. |
|-----------|---------|--------|--------|------|--------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | | (dB) |
| 0.250000 | 32.40 | 51.76 | 19.35 | L1 | ON | 10 |
| 0.430000 | 32.77 | 47.25 | 14.48 | L1 | ON | 10 |
| 0.434000 | 31.10 | 47.18 | 16.08 | L1 | ON | 10 |
| 0.818000 | 27.74 | 46.00 | 18.26 | L1 | ON | 10 |
| 3.602000 | 23.18 | 46.00 | 22.82 | L1 | ON | 10 |
| 3.634000 | 23.15 | 46.00 | 22.85 | L1 | ON | 10 |



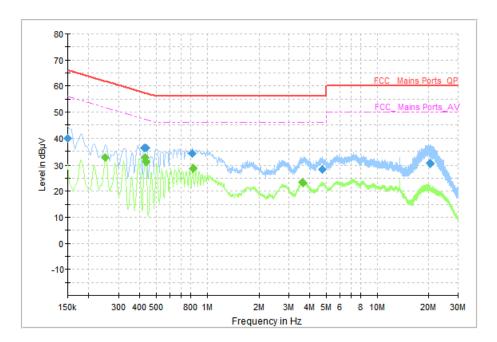


Fig.54 AC Power line Conducted Emission (Idle), LE 2M

| Frequency | Quasi Peak | Limit | Margin | Line | Filter | Corr. |
|-----------|------------|--------|--------|------|---------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | i iitoi | (dB) |
| 0.150000 | 39.85 | 66.00 | 26.15 | Ν | ON | 10 |
| 0.426000 | 36.37 | 57.33 | 20.96 | L1 | ON | 10 |
| 0.434000 | 36.28 | 57.18 | 20.90 | L1 | ON | 10 |
| 0.818000 | 34.08 | 56.00 | 21.92 | L1 | ON | 10 |
| 4.718000 | 28.35 | 56.00 | 27.65 | L1 | ON | 10 |
| 20.554000 | 30.38 | 60.00 | 29.62 | Ν | ON | 10 |

Measurement Results: Average

| Frequency | Average | Limit | Margin | Line | Filter | Corr. |
|-----------|---------|--------|--------|------|--------|-------|
| (MHz) | (dBµV) | (dBµV) | (dB) | | | (dB) |
| 0.250000 | 32.60 | 51.76 | 19.15 | L1 | ON | 10 |
| 0.430000 | 32.75 | 47.25 | 14.50 | L1 | ON | 10 |
| 0.434000 | 31.10 | 47.18 | 16.08 | L1 | ON | 10 |
| 0.822000 | 28.48 | 46.00 | 17.52 | L1 | ON | 10 |
| 3.602000 | 23.28 | 46.00 | 22.72 | L1 | ON | 10 |
| 3.658000 | 23.09 | 46.00 | 22.91 | L1 | ON | 10 |

END OF REPORT