

TEST REPORT



DT&C Co., Ltd.

42, Yurim-ro, 154Beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 17042
Tel : 031-321-2664, Fax : 031-321-1664

1. Report No : DRTFCC1911-0284

2. Customer

- Name (FCC) : Point Mobile Co., LTD. / Name (IC) : POINTMOBILE CO.,LTD
- Address (FCC) : B-9F, Kabul Great Valley 32 Digital-ro 9-gil, Geumcheon-gu Seoul South Korea 153-709
- Address (IC) : B-9F Kabul Great Valley, 32, Digital-ro 9-gil, Geumcheon-gu Seoul Korea (Republic Of)

3. Use of Report : FCC & IC Original Grant

4. Product Name / Model Name : Mobile Computer / PM90G1
FCC ID : V2X-PM90G1 / IC : 10664A-PM90G1

5. Test Method Used : ANSI C63.10-2013

Test Specification : FCC Part 15.225

RSS-210 Issue 9, RSS-GEN Issue 5

6. Date of Test : 2019.08.09 ~ 2019.08.14

7. Testing Environment : Refer to appended test report.

8. Test Result : Refer to the attached test result.

| | | |
|-------------|----------------------------------|----------------------------------|
| Affirmation | Tested by | Reviewed by |
| | Name : JaeJin Lee (Signature) | Name : HyunSu Son (Signature) |

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

2019 . 11 . 06 .

DT&C Co., Ltd.

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

Test Report Version

| Test Report No. | Date | Description |
|-----------------|---------------|---------------|
| DRTFCC1911-0284 | Nov. 06, 2019 | Initial issue |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

CONTENTS

| | |
|---|-----------|
| 1. General Information..... | 4 |
| 1.1. Testing Laboratory..... | 4 |
| 1.2. Testing Environment..... | 4 |
| 1.3. Measurement Uncertainty | 4 |
| 1.4. Details of Applicant..... | 5 |
| 1.5. Description of EUT | 5 |
| 1.6. EUT Capabilities..... | 5 |
| 2. Information about test items..... | 6 |
| 2.1 Test mode..... | 6 |
| 2.2 Tested frequency | 6 |
| 2.3 EMI Suppression Device(s)/Modifications | 6 |
| 3. Antenna requirements..... | 6 |
| 4. Test report | 7 |
| 4.1 Summary of tests | 7 |
| 4.2 Transmitter requirements..... | 8 |
| 4.2.1 20dB bandwidth | 8 |
| 4.2.2 Occupied bandwidth..... | 9 |
| 4.2.3 In-band emissions..... | 10 |
| 4.2.4 Out-of-band emissions | 12 |
| 4.2.5 Frequency Stability..... | 14 |
| 4.2.6 AC Line Conducted Emissions | 15 |
| APPENDIX | 18 |

1. General Information

1.1. Testing Laboratory

| | | |
|---|---|------------------|
| DT&C Co., Ltd. | | |
| The 3 m test site and conducted measurement facility used to collect the radiated data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042. The test site complies with the requirements of § 2.948 according to ANSI C63.4-2014. | | |
| - FCC MRA Accredited Test Firm No. : KR0034 | | |
| - IC Test site No. : 5740A | | |
| www.dtnc.net | | |
| Telephone | : | + 82-31-321-2664 |
| FAX | : | + 82-31-321-1664 |

1.2. Testing Environment

| Ambient Condition | |
|---------------------|-----------------|
| ▪ Temperature | +20 °C ~ +23 °C |
| ▪ Relative Humidity | 35 % ~ 43 % |

1.3. Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence.

| Parameter | Measurement uncertainty |
|---------------------------------------|---|
| AC conducted emission | 2.4 dB (The confidence level is about 95 %, $k = 2$) |
| Radiated Disturbance (Below 1 GHz) | 5.1 dB (The confidence level is about 95 %, $k = 2$) |

1.4. Details of Applicant

Applicant (FCC) : Point Mobile Co., LTD.
Applicant (IC) : POINTMOBILE CO.,LTD
Address (FCC) : B-9F, Kabul Great Valley 32 Digital-ro 9-gil, Geumcheon-gu Seoul South Korea 153-709
Address (IC) : B-9F Kabul Great Valley, 32, Digital-ro 9-gil, Geumcheon-gu Seoul Korea (Republic Of)
Contact person (FCC) : Wilson Park
Contact person (IC) : Wilson Park

1.5. Description of EUT

| | |
|--------------------------------|--|
| Equipment Class | Low Power Communications Device Transmitter(DXX) |
| EUT | Mobile Computer |
| Model Name(FCC, IC) | PM90G1 |
| Add Model Name(FCC, IC) | NA |
| Hardware Version | 4 |
| Software Version | 90.02 |
| Serial Number | Identical prototype |
| Power Supply | DC 3.85 V |
| Frequency Band | 13.56 MHz |
| Modulation Type | ASK |
| Channel(s) | 1 |
| Antenna type | LDS Antenna |

1.6. EUT Capabilities

This EUT contains the following capabilities:

850/1900 GSM/EDGE, 850/1700/1900 WCDMA/HSUPA, Multi-band LTE, 802.11b/g/n/ac WLAN(2.4GHz)
802.11a/n/ac WLAN(5GHz), Bluetooth(BDR, EDR, LE), NFC.

2. Information about test items

2.1 Test mode

| | |
|------------|------------------------------|
| Test mode1 | Continuous transmitting mode |
|------------|------------------------------|

2.2 Tested frequency

| Channel | TX Frequency(MHz) |
|---------|-------------------|
| Lowest | 13.56 |
| Middle | - |
| Highest | - |

2.3 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing
→ None

3. Antenna requirements

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 internal antenna is attached on the main PCB using the special spring tension.
Therefore this E.U.T Complies with the requirement of §15.203

4. Test report

4.1 Summary of tests

| FCC part section(s) | RSS section(s) | Parameter | Limit | Test condition | Status Note 1 |
|----------------------|--------------------------------------|------------------------|--|---------------------------|---------------|
| 2.1049 | - | 20 dB Bandwidth | - | Radiated | C |
| - | RSS-Gen [6.7] | Occupied Bandwidth | - | | C |
| 15.225 (a) | RSS-210 [B6(a)] | In-Band Emissions | 15,848 $\mu\text{V/m}$ @ 30 m 13.553 – 13.567 MHz | | C |
| 15.225 (b) | RSS-210 [B6(b)] | In-Band Emissions | 334 $\mu\text{V/m}$ @ 30 m 13.410 – 13.553 MHz 13.567 – 13.710 MHz | | C |
| 15.225 (c) | RSS-210 [B6(c)] | In-Band Emissions | 106 $\mu\text{V/m}$ @ 30 m 13.110 – 13.410 MHz 13.710 – 14.010 MHz | | C |
| 15.225 (d) 15.209 | RSS-210 [B6(d)] RSS-GEN [8.9] | Out-of Band Emissions | Emissions outside of the specified band (13.110-14.010 MHz) must meet the radiated limits detailed in 15.209 | | C |
| 15.225 (e) | RSS-210 [B6] | Frequency Stability | ± 0.01 % of operating frequency | Temp & Humid Test Chamber | C |
| 15.207 | RSS-Gen [8.8] | AC Conducted Emissions | FCC Part 15.207 | AC Line Conducted | C |
| 15.203 | - | Antenna Requirements | FCC Part 15.203 | - | C |

Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable

Note 2: For radiated emission tests below 30 MHz were performed on semi-anechoic chamber which is correlated with OATS.

4.2 Transmitter requirements

4.2.1 20dB bandwidth

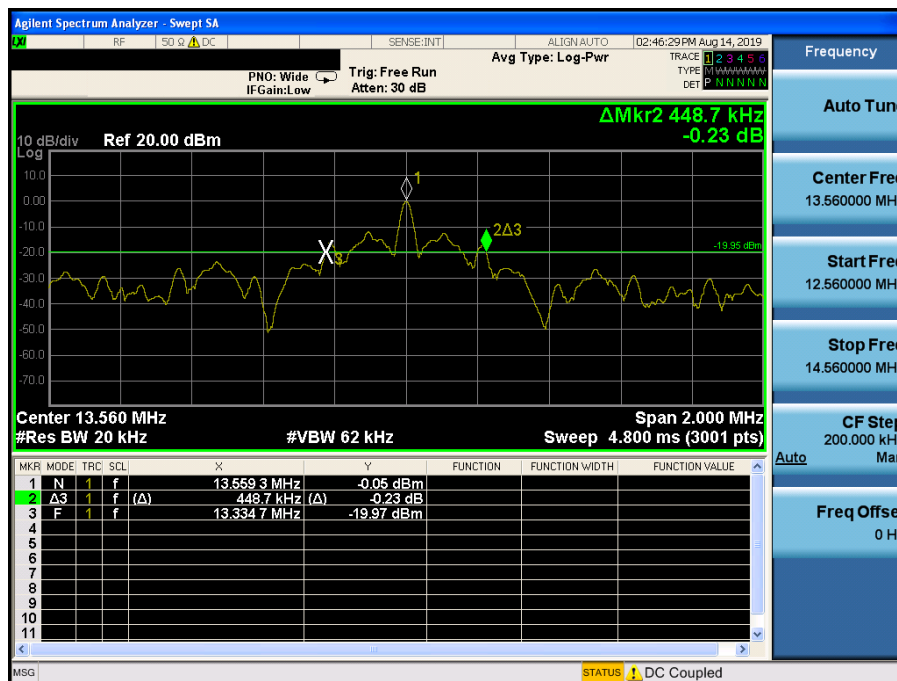
- Procedure:

The 20 dB Bandwidth is measured with a spectrum analyzer connected via a receive antenna placed near the EUT while the EUT is operating in transmission mode.

And spectrum analyzer setting use following test procedure of **ANCSI C63.10-2013 – Section 6.9.2.**

1. Center frequency = EUT channel center frequency
2. Span = 2 ~ 5 times the OBW
3. RBW = 1 % ~ 5 % OBW
4. VBW $\geq 3 \times$ RBW
5. Detector = Peak
6. Trace = Max hold
7. The trace was allowed to stabilize
8. Determine the reference value = Set the spectrum analyzer marker to the highest level of the displayed trace
9. Using the marker-delta function of the instrument, determine the “-xx dB down amplitude” using [(reference value) - xx].
10. Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

- Measurement Data: **Comply**



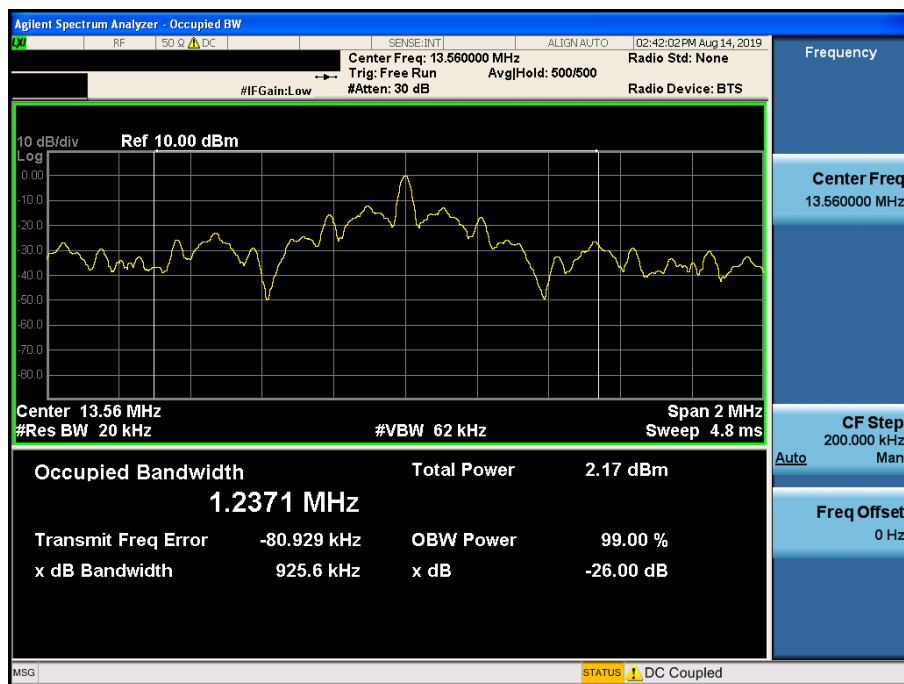
- Minimum Standard: NA

4.2.2 Occupied bandwidth

- Procedure:

The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth (RBW) shall be in the range of 1 % to 5 % of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3 x RBW.

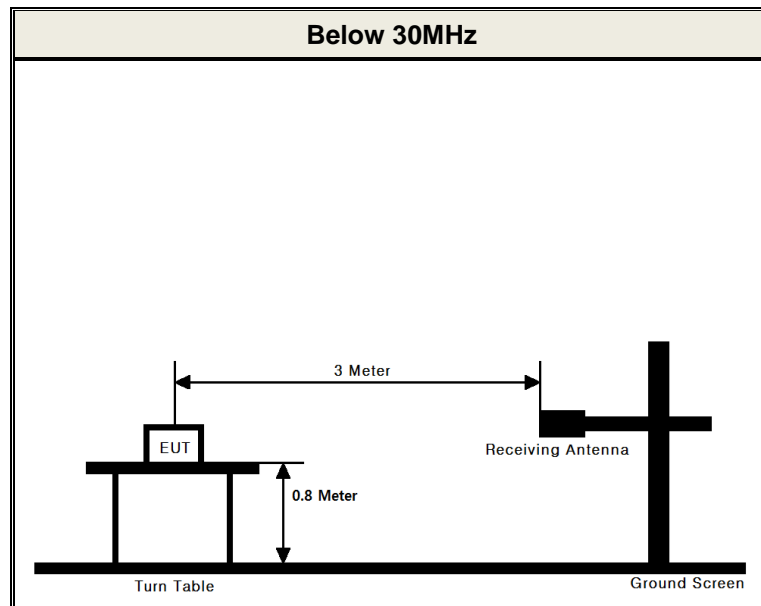
- Measurement Data: **Comply**



- Minimum Standard: NA

4.2.3 In-band emissions

- Test Configuration



- Procedure: The radiated emission was tested according to the **section 6.4 of the ANSI C63.10-2013**.

The EUT was placed on a 0.8 m high non-conductive table and it was placed at 3m distance from the antenna. Measurements were performed for each of the three antenna orientations. (ie. parallel, perpendicular, and ground-parallel)

Also, measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

RBW = As specified in below table, VBW $\geq 3 \times$ RBW, Sweep = Auto, Detector = Peak
Trace mode = Max Hold until the trace stabilizes.

| Frequency | RBW |
|-------------|-------------|
| 9-150 kHz | 200-300 Hz |
| 0.15-30 MHz | 9-10 kHz |
| 30-1000 MHz | 100-120 kHz |
| > 1000 MHz | 1 MHz |

- Minimum Standard: Part 15.225(a), (b), (c) & RSS-210 [B6(a), (b), (c)]

| Frequency Band [MHz] | Limit at 30 m measurement distance | |
|--------------------------------|------------------------------------|----------|
| | [uV/m] | [dBuV/m] |
| 13.553-13.567 | 15,848 | 84.00 |
| 13.410-13.553 13.567-13.710 | 334 | 50.47 |
| 13.110-13.410 13.710-14.010 | 106 | 40.51 |

- Measurement Data:

Tested Frequency : 13.56 MHz
Measurement Distance : 3 Meters

| Test Frequency Band [MHz] | Freq. [MHz] | EUT Axis. | ANT (Note 1) | Reading Level [dBuV] | T.F [dB/m] | Field Strength @3 m [dBuV/m] | Field Strength @30 m [dBuV/m] | Limit [dBuV/m] | Margin [dB] |
|---------------------------|-------------|-----------|--------------|----------------------|------------|------------------------------|-------------------------------|----------------|-------------|
| 13.110 ~ 13.410 | 13.349 | Y | P | 27.80 | 9.90 | 37.70 | -2.30 | 40.51 | 42.81 |
| 13.410 ~ 13.553 | 13.553 | Y | P | 39.70 | 9.90 | 49.60 | 9.60 | 50.47 | 40.87 |
| 13.553 ~ 13.567 | 13.560 | Y | P | 45.80 | 9.90 | 55.70 | 15.70 | 84.00 | 68.30 |
| 13.567 ~ 13.710 | 13.568 | Y | P | 38.50 | 9.90 | 48.40 | 8.40 | 50.47 | 42.07 |
| 13.710 ~ 14.010 | 13.774 | Y | P | 25.60 | 10.00 | 35.60 | -4.40 | 40.51 | 44.91 |

Note 1. Loop antenna orientation

“P”: Parallel, “V”: perpendicular, “G”: ground-parallel

Note 2. This test item was performed at 3 m and the data were extrapolated to the specified measurement distance of 30 m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)2.

▪ Extrapolation Factor = $20 \log_{10}(30/3)^2 = 40$ dB

Note 3. All data were recorded using a spectrum analyzer employing a peak detector.

If PK results were meet Quasi-peak limit, Quasi-peak measurements were omitted.

Note 4. Sample Calculation.

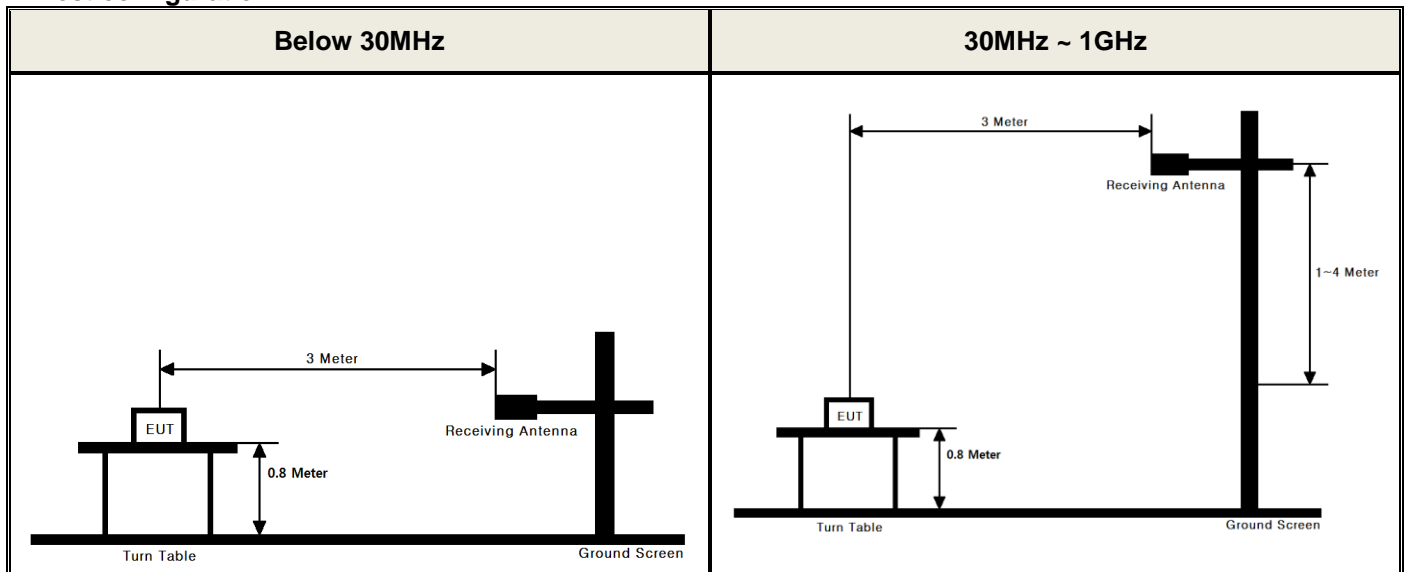
Margin = Limit – Field Strength @ 30 m / Field Strength @ 30 m = Field Strength @ 3 m – 40 dB

Field Strength @ 3 m = Reading + T.F / T.F = AF + CL

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss

4.2.4 Out-of-band emissions

- Test configuration



- **Procedure:** The radiated emission was tested according to the **section 6.4, 6.5 of the ANSI C63.10-2013.**

The EUT was tested from 9 kHz up to the 1 GHz excluding the band 13.110-14.010 MHz.

A The EUT was placed on a 0.8 m high non-conductive table and it was placed at 3m distance from the antenna. For measurements below 30MHz were performed for each of the three antenna orientations. (ie. parallel, perpendicular, and ground-parallel) For measurements above 30MHz were performed for each of the both horizontal and vertical polarizations.

Also, measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

RBW = As specified in below table, VBW $\geq 3 \times$ RBW, Sweep = Auto, Detector = Peak
Trace mode = Max Hold until the trace stabilizes.

| Frequency | RBW |
|-------------|-------------|
| 9-150 kHz | 200-300 Hz |
| 0.15-30 MHz | 9-10 kHz |
| 30-1000 MHz | 100-120 kHz |
| > 1000 MHz | 1 MHz |

- **Minimum Standard: Part 15.209, 225(d) & RSS-210[B6(d)], RSS-GEN[8.9]**

• **FCC Part 15.209(a):**

| Frequency [MHz] | Field Strength [μ V/m] | Measurement Distance [Meters] |
|-----------------|-----------------------------|-------------------------------|
| 0.009 ~ 0.490 | 2400/F(kHz) | 300 |
| 0.490 ~ 1.705 | 24000/F(kHz) | 30 |
| 1.705 ~ 30 | 30 | 30 |
| 30 ~ 88 | 100 ** | 3 |
| 88 ~ 216 | 150 ** | 3 |
| 216 ~ 960 | 200 ** | 3 |
| Above 960 | 200 | 3 |

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

• **FCC Part 15.209(b):**

In the emission table above, the tighter limit applies at the band edges.

- Measurement Data:

Tested Frequency : 13.56 MHz
Measurement Distance : 3 Meters

| Frequency [MHz] | EUT Axis. | ANT (Note 1) | Reading [dBuV] | T.F [dB/m] | Distance factor [dB] | Field Strength [dBuV/m] | Limit [dBuV/m] | Margin [dB] |
|-----------------|-----------|--------------|----------------|------------|----------------------|-------------------------|----------------|-------------|
| 1.523 | Y | P | 26.7 | 11.3 | 40.0 | -2.0 | 24.0 | 26.0 |
| 11.860 | Y | P | 16.3 | 10.1 | 40.0 | -13.6 | 29.5 | 43.1 |
| 12.720 | Y | P | 17.7 | 10.0 | 40.0 | -12.3 | 29.5 | 41.8 |
| 14.300 | Y | P | 16.6 | 9.9 | 40.0 | -13.5 | 29.5 | 43.0 |
| 14.360 | Y | P | 14.4 | 9.9 | 40.0 | -15.7 | 29.5 | 45.2 |
| 27.020 | Y | P | 12.0 | 7.9 | 40.0 | -20.1 | 29.5 | 49.6 |
| 873.890 | Y | H | 37.0 | 5.5 | NA | 42.5 | 46.0 | 3.5 |
| 894.259 | Y | H | 34.1 | 5.9 | NA | 40.0 | 46.0 | 6.0 |

Note 1. Loop antenna orientation (30 MHz Below)

“P”= Parallel, “V”= perpendicular, “G”= ground-parallel

Bilog antenna polarization (30 MHz above)

“H”= Horizontal, “V”= Vertical

Note 2. All data were recorded using a spectrum analyzer employing a peak detector.

If PK results were meet Quasi-peak limit, Quasi-peak measurements were omitted.

Note 3. No other spurious and harmonic emissions were reported greater than listed emissions above table.

Note 4. Sample calculation

Margin = Limit – Field Strength

Field Strength = Reading + T.F – Distance factor

T.F = AF + CL – AG

Distance factor = $20\log(\text{Measurement distance} / \text{The measured distance})^2$

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

4.2.5 Frequency Stability

- Procedure:

Part 15.225 requires that devices operating in the 13.553 – 13.567 MHz shall maintain the carrier frequency within 0.01 % of the operating frequency over the temperature variation of -20 degrees to + 50 degrees C at normal supply voltage.

- Measurement Data: **Comply**

Operating Frequency : 13,560,000 Hz

| VOLTAGE (%) | POWER (V _{DC}) | TEMP (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) |
|-------------|--------------------------|-----------|----------------|-----------------|---------------|
| 100% | 3.85 | +20(ref) | 13,559,308 | -692 | 0.005104 |
| 100% | | -20 | 13,559,384 | -616 | 0.004543 |
| 100% | | -10 | 13,559,376 | -624 | 0.004602 |
| 100% | | 0 | 13,559,382 | -618 | 0.004558 |
| 100% | | +10 | 13,559,322 | -678 | 0.005000 |
| 100% | | +20 | 13,559,308 | -692 | 0.005104 |
| 100% | | +30 | 13,559,332 | -668 | 0.004926 |
| 100% | | +40 | 13,559,348 | -652 | 0.004808 |
| 100% | | +50 | 13,559,261 | -739 | 0.005450 |
| 115% | 4.43 | +20 | 13,559,322 | -678 | 0.005000 |
| 85% | 3.27 | +20 | 13,559,317 | -683 | 0.005037 |

- Minimum Standard: Part 15. 225(e) & RSS-210 [B6]

| |
|---|
| The frequency tolerance of the carrier signal shall be maintained within ± 0.01 % of the operating frequency. |
|---|

4.2.6 AC Line Conducted Emissions

- Test Requirements and limit

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).

| Frequency Range (MHz) | Conducted Limit (dBuV) | |
|-----------------------|------------------------|------------|
| | Quasi-Peak | Average |
| 0.15 ~ 0.5 | 66 to 56 * | 56 to 46 * |
| 0.5 ~ 5 | 56 | 46 |
| 5 ~ 30 | 60 | 50 |

* Decreases with the logarithm of the frequency

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

- Test Configuration

See test photographs for the actual connections between EUT and support equipment.

- Test Procedure

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

- **Measurement Data:** **Comply** (refer to the next page)

Measurement Data

Results of Conducted Emission

DTNC

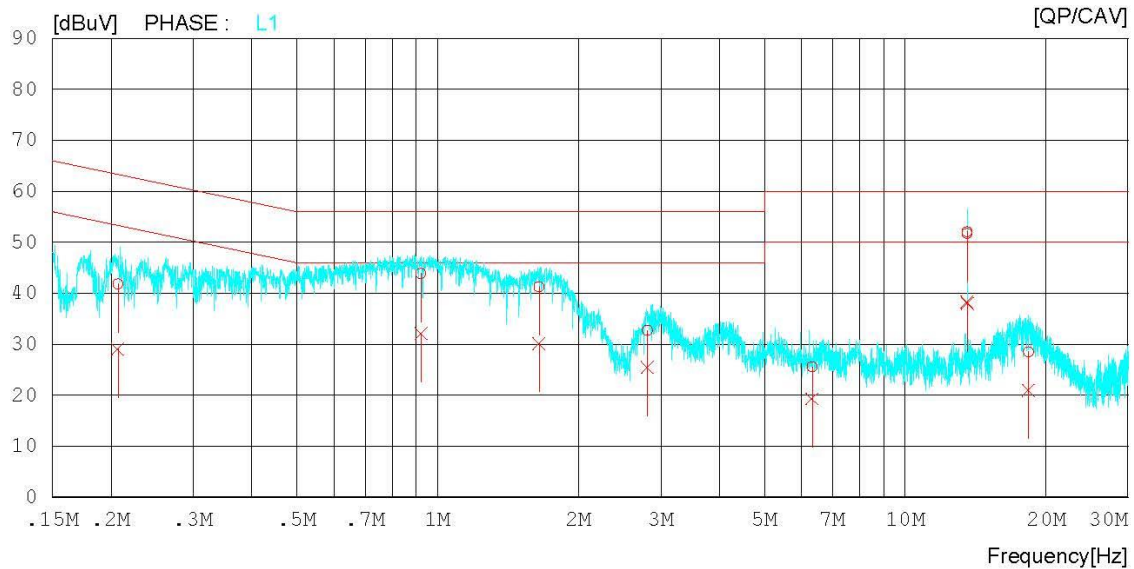
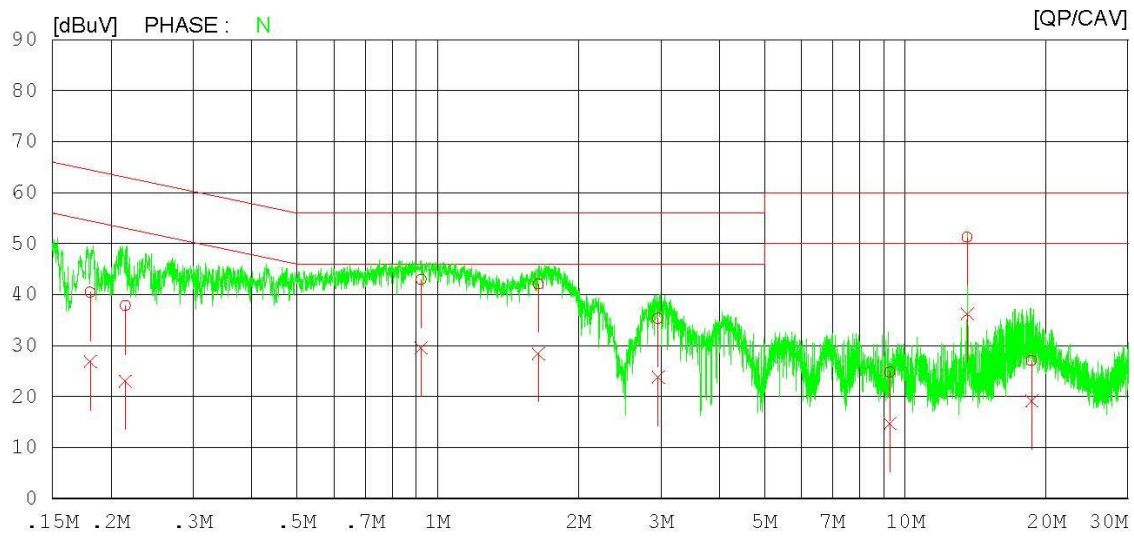
Date 2019-08-09

Order No.
Model No. PM90G1
Serial No.
Test Condition NFC

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 35 %
Operator Jaejin Lee

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV



Measurement Data

Results of Conducted Emission

DTNC

Date 2019-08-09

Order No.
Model No. PM90G1
Serial No.
Test Condition NFC

Reference No.
Power Supply 120 V, 60 Hz
Temp/Humi. 23 'C / 35 %
Operator Jaejin Lee

Memo

LIMIT : FCC P15.207 QP
FCC P15.207 AV

| NO | FREQ [MHz] | READING | | C.FACTOR [dB] | RESULT | | LIMIT | | MARGIN | | PHASE |
|----|---------------|--------------|---------------|------------------|--------------|---------------|--------------|---------------|--------------|---------------|-------|
| | | QP [dBuV] | CAV [dBuV] | | QP [dBuV] | CAV [dBuV] | QP [dBuV] | CAV [dBuV] | QP [dBuV] | CAV [dBuV] | |
| 1 | 0.18074 | 30.48 | 16.90 | 9.94 | 40.42 | 26.84 | 64.45 | 54.45 | 24.03 | 27.61 | N |
| 2 | 0.21472 | 27.89 | 13.09 | 9.94 | 37.83 | 23.03 | 63.02 | 53.02 | 25.19 | 29.99 | N |
| 3 | 0.92141 | 32.99 | 19.64 | 9.97 | 42.96 | 29.61 | 56.00 | 46.00 | 13.04 | 16.39 | N |
| 4 | 1.64040 | 32.03 | 18.42 | 10.01 | 42.04 | 28.43 | 56.00 | 46.00 | 13.96 | 17.57 | N |
| 5 | 2.96280 | 25.24 | 13.70 | 10.07 | 35.31 | 23.77 | 56.00 | 46.00 | 20.69 | 22.23 | N |
| 6 | 9.28500 | 14.42 | 4.37 | 10.32 | 24.74 | 14.69 | 60.00 | 50.00 | 35.26 | 35.31 | N |
| 7 | 13.56000 | 40.86 | 25.83 | 10.44 | 51.30 | 36.27 | 60.00 | 50.00 | 8.70 | 13.73 | N |
| 8 | 18.62920 | 16.49 | 8.64 | 10.53 | 27.02 | 19.17 | 60.00 | 50.00 | 32.98 | 30.83 | N |
| 9 | 0.20702 | 31.81 | 19.07 | 9.94 | 41.75 | 29.01 | 63.32 | 53.32 | 21.57 | 24.31 | L1 |
| 10 | 0.92073 | 33.87 | 22.10 | 9.97 | 43.84 | 32.07 | 56.00 | 46.00 | 12.16 | 13.93 | L1 |
| 11 | 1.64500 | 31.22 | 20.11 | 10.01 | 41.23 | 30.12 | 56.00 | 46.00 | 14.77 | 15.88 | L1 |
| 12 | 2.80760 | 22.68 | 15.38 | 10.06 | 32.74 | 25.44 | 56.00 | 46.00 | 23.26 | 20.56 | L1 |
| 13 | 6.32140 | 15.29 | 9.07 | 10.20 | 25.49 | 19.27 | 60.00 | 50.00 | 34.51 | 30.73 | L1 |
| 14 | 13.55940 | 41.58 | 27.90 | 10.42 | 52.00 | 38.32 | 60.00 | 50.00 | 8.00 | 11.68 | L1 |
| 15 | 13.56040 | 41.27 | 27.58 | 10.42 | 51.69 | 38.00 | 60.00 | 50.00 | 8.31 | 12.00 | L1 |
| 16 | 18.33360 | 18.01 | 10.38 | 10.51 | 28.52 | 20.89 | 60.00 | 50.00 | 31.48 | 29.11 | L1 |

APPENDIX

TEST EQUIPMENT FOR TESTS

| Type | Manufacturer | Model | Cal.Date (yy/mm/dd) | Next.Cal.Date (yy/mm/dd) | S/N |
|-------------------|----------------------|-----------------------------------|------------------------|-----------------------------|-------------------|
| Spectrum Analyzer | Agilent Technologies | N9020A | 19/03/11 | 20/03/11 | MY48010133 |
| Spectrum Analyzer | Agilent Technologies | N9020A | 19/06/26 | 20/06/26 | MY46471251 |
| Multimeter | FLUKE | 17B | 18/12/18 | 19/12/18 | 26030065WS |
| Signal Generator | Rohde Schwarz | SMBV100A | 18/12/19 | 19/12/19 | 255571 |
| Thermohygrometer | BODYCOM | BJ5478 | 18/12/27 | 19/12/27 | 120612-1 |
| Thermohygrometer | BODYCOM | BJ5478 | 18/12/27 | 19/12/27 | 120612-2 |
| HYGROMETER | TESTO | 608-H1 | 19/01/31 | 20/01/31 | 34862883 |
| Loop Antenna | ETS | 6502 | 19/03/21 | 21/03/21 | 3471 |
| BILOG ANTENNA | Schwarzbeck | VULB 9160 | 19/04/23 | 21/04/23 | 9160-3362 |
| PreAmplifier | H.P | 8447D | 18/12/18 | 19/12/18 | 2944A07774 |
| EMI Test Receiver | Rohde Schwarz | ESCI7 | 19/01/30 | 20/01/30 | 100910 |
| PULSE LIMITER | Rohde Schwarz | ESH3-Z2 | 19/09/17 | 20/09/17 | 101333 |
| LISN | SCHWARZBECK | NNLK 8121 | 19/05/23 | 20/05/23 | 06183 |
| Cable | Radiall | TESTPRO3 | 19/01/16 | 20/01/16 | M-01 |
| Cable | DTNC | Cable | 19/01/16 | 20/01/16 | M-04 |
| Cable | Junkosha | MWX315 | 19/01/16 | 20/01/16 | M-05 |
| Cable | Junkosha | MWX221 | 19/01/16 | 20/01/16 | M-06 |
| Test Software | tsj | Radiated EmissionMeasurement | NA | NA | Version 2.00.0177 |
| Test Software | tsj | Noise Terminal VoltageMeasurement | NA | NA | Version 2.00.0170 |

Note1: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017.

Note2: The cable is not a regular calibration item, so it has been calibrated by DT&C itself.