EMI TEST REPORT FCC CERTIFICATION

Applicant:

Franklin Technology Inc.

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Date of Issue: February 22, 2019

Test Report No. HCT-EM-1902-FC005

Test Site: HCT CO., LTD.

MODEL:

LT70B

Rule Part(s) / Standard(s)

: FCC CFR 47 PART 15 Subpart B Class B

ANSI C63.4-2014

FCC ID

: XHG-LT70B

EUT Type

: Smart Locator

Manufacturer

: Franklin Technology Inc.

Date of Test

: January 28, 2019 to February 10, 2019

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2014. (See Test Report if any modifications were made for compliance)

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. HCT certifies that no party to application has been denial the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

Tested By

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Certification Division

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REVISION HISTORY

The revision history for this document is shown in table.

| Test Report No. | Issue Date Description | |
|-------------------|------------------------|-----------------|
| HCT-EM-1902-FC005 | February 22, 2019 | Initial Release |



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1. GENERAL INFORMATION

1.1 Description of EUT

The EUT is Smart Locator

| FCC ID | XHG-LT70B |
|--------------|---|
| Model | LT70B |
| EUT type | Smart Locator |
| TX frequency | LTE Cat.M1 Band 13: 779.5 MHz to 784.5 MHz (5 MHz) 782 MHz (10 MHz) WiFi: 2 412 MHz to 2 462 MHz BT: 2 402 MHz to 2 480 MHz |
| Voltage | DC 3.8 V(DC 3.5 V to DC 4.35 V) |
| Manufacturer | Franklin Technology Inc. |

1.2 Tested System Details

All equipment descriptions used in the tested system (including inserted cards) are:

| Equipment | Model No. | Serial Number | Manufacturer |
|----------------|------------|---------------|---------------------|
| EUT | LT70B | - | Franklin Technology |
| Travel Adapter | EP-TA20KWK | - | SAMSUNG |

1.3 Cable Description

| Product Name | Port | Power Cord Shielded (Y/N) | I/O Cable Shielded (Y/N) | Length (m) |
|-----------------|-----------|------------------------------|-----------------------------|------------|
| EUT | MICRO USB | N | N/A | 1.2 |

1.4 Noise Suppression Parts on Cable. (I/O Cable)

| Product Name | Port | Ferrite Bead (Y/N) | Location | Metal Hood (Y/N) | Location |
|-----------------|-----------|--------------------|----------|---------------------|----------|
| EUT | MICRO USB | N/A | N/A | Y | Both End |



1.5 Test Facility

Test site is located at 74, SEOICHEON-RO, 578BEON-GIL, MAJANG-MYEON, ICHEON-SI, GYEONGGI-DO, SOUTH KOREA. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4-2014. The Normalized site attenuations (30 MHz to 1 GHz) and site validation (1 GHz to 18 GHz) were performed in accordance with the standard in ANSI C63.4-2014

| Measurement Facilities | Registration Number | |
|--|---------------------|--|
| Radiated Field strength measurement facility 3 m Semi Anechoic chamber | 90661 | |
| Radiated Field strength measurement facility 10 m Semi Anechoic chamber | 90001 | |

1.6 Instrument Calibration

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturers recommendations for utilizing calibration equipment's, which is traceable to recognized national standards.

Espectially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2006).

1.7. Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the 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. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

| Parameter | Expanded Uncertainty (dB) |
|---|---------------------------|
| Conducted Emission (0.15 MHz to 30 MHz) | 1.82 dB |
| 3 m Radiated Emissions (30 MHz to 1 GHz) | 5.20 dB |
| 3 m Radiated Emissions (1 GHz to 18 GHz) | 5.24 dB |
| 3 m Radiated Emissions (18 GHz to 40 GHz) | 5.40 dB |



2 LIST OF TEST EQUIPMENT

| | Type | <u>Manufacturer</u> | Model Name | Serial Number | Calibration Cycle | CAL Date |
|-------------|---|---|--|---|--|---|
| Con | ducted Emission | | | | | |
| | EMI Test Receiver EMI Test Receiver LISN LISN Software | Rohde & Schwarz Rohde & Schwarz Rohde & Schwarz Rohde & Schwarz Rohde & Schwarz | ESCI ESCI ENV216 ENV216 EMC32 VER8.54.0 | 100584 100033 102245 100073 | 1 year 1 year 1 year 1 year | 06.25.2018 06.27.2018 12.12.2018 05.03.2018 |
| Radi | iated Emission | | | | | |
| -For | measurement below | 1 GHz | | | | |
| | EMI Test Receiver Trilog Antenna Antenna Master | Rohde & Schwarz Schwarzbeck INNCO Systems | ESU40 VULB 9168 MA4640-XP-ET | 100524 00847 | 1 year 2 year N/A | 07.27.2018 04.13.2018 |
| | Antenna master controller | INNCO Systems | CO 3000 | CO3000/870/ 35990515/L | N/A | - |
| \boxtimes | Turn Table Turn Table controller | INNCO Systems INNCO Systems | 1060-2M CO2000 | - CO2000/095/ 5790304/L | N/A N/A | - |
| | Low Noise Amplifier EMI Test Receiver Antenna master Turn Table Software | TESTEK Rohde & Schwarz INNCO Systems INNCO Systems Rohde & Schwarz | TK-PA01S ESU26 MA4000-EP DT3000-3T EMC32 VER.9.20.00 | 160014-L 100241 MA4000/283 DT3000/69 | 1 year 1 year N/A N/A | 01.21.2019 08.14.2018 - - |
| -For | measurement above | 1 GHz | | | | |
| | EMI Test Receiver Antenna master | Rohde & Schwarz INNCO Systems | ESU40 MA4640-XP-ET | 100524 - CO 3000/870/ | 1 year N/A N/A | 07.27.2018 |
| | Antenna master controller Turn Table | • | CO 3000 1060-2M | 35990515/L | N/A | - |
| | Turn Table controller | INNCO Systems INNCO Systems | CO2000 | CO2000/095/ 5790304/L | N/A | - |
| | Horn Antenna Low Noise Amplifier Power Amplifier Antenna master EMI Test Receiver Turn Table Software | Schwarzbeck TESTEK TESTEK HD GmbH Rohde & Schwarz INNCO Systems Rohde & Schwarz | BBHA 9120D TK-PA18H TK-PA1840H MA240 ESU26 DT3000-3T EMC32 VER8.40.0 | 01836 170034-L 170030-L 240/520 100241 DT3000/69 | 2 year 1 year 1 year N/A 1 year N/A | 05.14.2018 03.06.2018 12.17.2018 - 08.14.2018 |



3. DESCRIPTION OF TEST

3.1 Measurement of Conducted Emission

The test procedure was in accordance with ANSI C63.4-2014

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). If the EUT is connected to the PC through USB, the AC power-line adapter of the PC is directly connected to a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.
- c. The frequency range from 150 kHz to 30 MHz was searched.

[Conducted Emission Limit]

| Fraguency Resolution | | Clas | s A | Class B | |
|----------------------|-----------------|----------------------|-------------------|----------------------|----------------|
| Frequency (MHz) | Bandwidth (kHz) | Quasi-Peak (dBµV) | Average (dBμV) | Quasi-Peak (dBµV) | Average (dBµV) |
| 0.15 to 0.5 | 9 | 79 | 66 | 66 to 56* | 56 to 46* |
| 0.5 to 5 | 9 | 73 | 60 | 56 | 46 |
| 5 to 30 | 9 | 73 | 60 | 60 | 50 |

^{*}Decreases with the logarithm of the frequency.



3.2 Measurement of Radiated Emission

The test procedure was in accordance with ANSI C63.4-2014

- a. The EUT was placed on the top of a turn table 0.8 meters above the ground at a semi anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 m away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from 1 m to 4 m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 m to 4 m and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to Peak and Average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- g. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.(1 GHz to 40 GHz)

[Radiated Emission Limits]

| Class | | | Class A | | Class B | | |
|-----------------|----------------------------|-----------------------------|------------------------|----------------------------|-----------------------------|------------------------|--|
| Frequency (MHz) | Antenna Distance (m) | Field Strength (µV/m) | Quasi-Peak (dBμV/m) | Antenna Distance (m) | Field Strength (µV/m) | Quasi-Peak (dBµV/m) | |
| 30 to 88 | 10 | 90 | 39.0 | 3 | 100 | 40.0 | |
| 88 to 216 | 10 | 150 | 43.5 | 3 | 150 | 43.5 | |
| 216 to 960 | 10 | 210 | 46.4 | 3 | 200 | 46.0 | |
| Above 960 | 10 | 300 | 49.5 | 3 | 500 | 54.0 | |
| Frequency | Antonno | Distance | Clas | ss A | Clas | ss B | |
| (MHz) | 1 1111011110 | Antenna Distance (m) | | Average (dBµV/m) | Peak (dBµV/m) | Average (dBµV/m) | |
| Above 1 000 | 3 | } | 80 | 60 | 74 | 54 | |

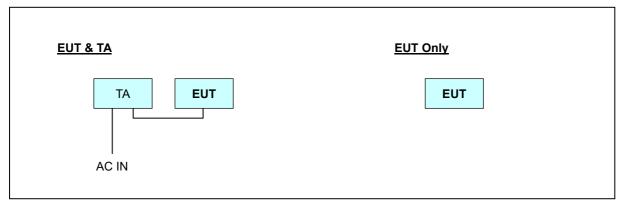


3.2.1 Frequency Range of Radiated Measurements

An unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a Radiated Emission limit is specified, up to the frequency shown in the following table

| Highest frequency generated or used in the device or on which the device operates or tunes (MHz) | Upper frequency of measurement range (MHz) |
|--|--|
| Below 1.705 | 30 |
| 1.705 to 108 | 1 000 |
| 108 to 500 | 2 000 |
| 500 to 1 000 | 5 000 |
| Above 1 000 | 5 th harmonic of the highest frequency or 40 GHz, whichever is lower |

3.3 Configuration of Tested System



Non-Conductive Table Power Line: 120 VAC, 60 Hz



4. PRELIMINARY TEST

4.1 Conducted Emission

During preliminary tests, the following operating mode was investigated:

Operation Mode:

Charging + LTE Cat. M1 RX Receiving + WIFI (2.4G Hz) + Bluetooth Idle mode

4.2 Radiated Emission

During preliminary tests, the following operating mode was investigated:

Operation Mode:

Charging + LTE Cat. M1 RX Receiving + WIFI (2.4 GHz) + Bluetooth Idle mode LTE Cat. M1 RX Receiving + WIFI (2.4 GHz) + Bluetooth Idle mode

NOTE.

1. All modes of operation were verified and the worst case configuration result was indicated in the test report.



5. CONDUCTED AND RADIATED EMISSION TEST SUMMARY

5.1 Conducted Emission

The test results of conducted emission at mains ports provide the following information:

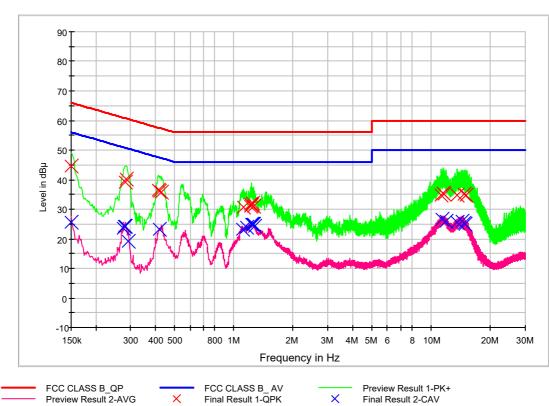
| Rule Part / Standard | FCC PART 15 Subpart B Class B |
|----------------------|-------------------------------|
| Detector | Quasi-Peak, CISPR-Average |
| Bandwidth | 9 kHz (6 dB) |
| Kind of Test Site | EMI Shielded Room |
| Temperature | 22.4 °C |
| Relative Humidity | 43.8 % |
| Test Date | January 28, 2019 |

- Calculation Formula:

- 1. Conductor L1 = Hot, Conductor N = Neutral
- 2. Corr. = LISN Factor + Cable Loss
- 3. QuasiPeak or CAverage= Receiver Reading + Corr.
- 4. Margin = Limit QuasiPeak or CAverage



Figure 1: Conducted Emission, Charging + LTE Cat. M1 RX Receiving + WIFI (2.4G Hz) + Bluetooth Idle mode, Line (L1)



FCC CLASS B_Exten Cable



QuasiPeak Final Result, Line (L1)

| Frequency (MHz) | QuasiPeak (dBuV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBuV) |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|
| 0.150000 | 44.5 | 9.000 | L1 | 9.7 | 21.5 | 66.0 |
| 0.282000 | 39.3 | 9.000 | L1 | 9.7 | 21.5 | 60.8 |
| 0.286000 | 40.2 | 9.000 | L1 | 9.7 | 20.4 | 60.6 |
| 0.414000 | 36.4 | 9.000 | L1 | 9.7 | 21.2 | 57.6 |
| 0.420000 | 36.1 | 9.000 | L1 | 9.7 | 21.3 | 57.4 |
| 0.428000 | 35.6 | 9.000 | L1 | 9.7 | 21.7 | 57.3 |
| 1.128000 | 30.6 | 9.000 | L1 | 9.8 | 25.4 | 56.0 |
| 1.214000 | 31.8 | 9.000 | L1 | 9.8 | 24.2 | 56.0 |
| 1.222000 | 30.9 | 9.000 | L1 | 9.8 | 25.1 | 56.0 |
| 1.234000 | 31.4 | 9.000 | L1 | 9.8 | 24.6 | 56.0 |
| 1.242000 | 31.9 | 9.000 | L1 | 9.9 | 24.1 | 56.0 |
| 1.258000 | 31.0 | 9.000 | L1 | 9.9 | 25.0 | 56.0 |
| 11.196000 | 34.7 | 9.000 | L1 | 10.3 | 25.3 | 60.0 |
| 11.474000 | 35.4 | 9.000 | L1 | 10.3 | 24.6 | 60.0 |
| 11.640000 | 35.2 | 9.000 | L1 | 10.3 | 24.8 | 60.0 |
| 13.584000 | 34.6 | 9.000 | L1 | 10.4 | 25.4 | 60.0 |
| 14.714000 | 35.2 | 9.000 | L1 | 10.4 | 24.8 | 60.0 |
| 15.056000 | 34.6 | 9.000 | L1 | 10.4 | 25.4 | 60.0 |

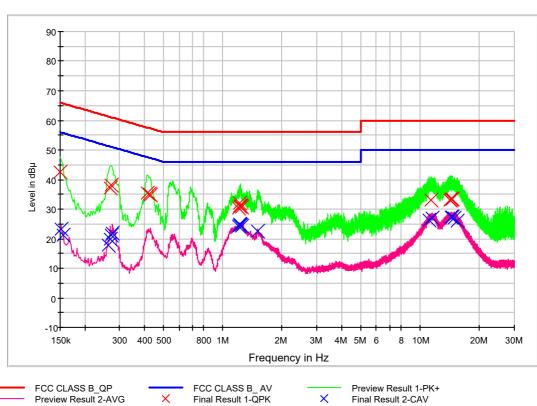


CAverage Final Result, Line (L1)

| Frequency (MHz) | CAverage (dBuV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBuV) |
|--------------------|--------------------|--------------------|------|---------------|----------------|-----------------|
| 0.150000 | 25.8 | 9.000 | L1 | 9.7 | 30.2 | 56.0 |
| 0.274000 | 23.6 | 9.000 | L1 | 9.7 | 27.4 | 51.0 |
| 0.278000 | 24.3 | 9.000 | L1 | 9.7 | 26.5 | 50.9 |
| 0.282000 | 24.2 | 9.000 | L1 | 9.7 | 26.6 | 50.8 |
| 0.292000 | 19.2 | 9.000 | L1 | 9.7 | 31.2 | 50.5 |
| 0.420000 | 23.3 | 9.000 | L1 | 9.7 | 24.2 | 47.4 |
| 1.114000 | 23.3 | 9.000 | L1 | 9.8 | 22.7 | 46.0 |
| 1.164000 | 23.9 | 9.000 | L1 | 9.8 | 22.1 | 46.0 |
| 1.232000 | 25.0 | 9.000 | L1 | 9.8 | 21.0 | 46.0 |
| 1.242000 | 24.8 | 9.000 | L1 | 9.9 | 21.2 | 46.0 |
| 1.258000 | 24.9 | 9.000 | L1 | 9.9 | 21.1 | 46.0 |
| 1.278000 | 24.2 | 9.000 | L1 | 9.9 | 21.8 | 46.0 |
| 11.416000 | 26.7 | 9.000 | L1 | 10.3 | 23.3 | 50.0 |
| 11.922000 | 25.8 | 9.000 | L1 | 10.3 | 24.2 | 50.0 |
| 13.584000 | 25.6 | 9.000 | L1 | 10.4 | 24.4 | 50.0 |
| 14.286000 | 26.0 | 9.000 | L1 | 10.4 | 24.0 | 50.0 |
| 14.700000 | 25.4 | 9.000 | L1 | 10.4 | 24.6 | 50.0 |
| 14.878000 | 25.0 | 9.000 | L1 | 10.4 | 25.0 | 50.0 |



Figure 2: Conducted Emission, Charging + LTE Cat. M1 RX Receiving + WIFI (2.4G Hz) + Bluetooth Idle mode, Line (N)



FCC CLASS B_Exten Cable



QuasiPeak Final Result, Line (N)

| Frequency (MHz) | QuasiPeak (dBuV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBuV) |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|
| 0.150000 | 42.7 | 9.000 | N | 9.8 | 23.3 | 66.0 |
| 0.268000 | 37.3 | 9.000 | N | 9.9 | 23.9 | 61.2 |
| 0.272000 | 38.3 | 9.000 | N | 9.9 | 22.8 | 61.1 |
| 0.414000 | 35.3 | 9.000 | N | 9.9 | 22.3 | 57.6 |
| 0.426000 | 35.0 | 9.000 | N | 9.9 | 22.3 | 57.3 |
| 0.432000 | 34.6 | 9.000 | N | 9.9 | 22.6 | 57.2 |
| 1.210000 | 30.3 | 9.000 | N | 10.0 | 25.7 | 56.0 |
| 1.214000 | 32.1 | 9.000 | N | 10.0 | 23.9 | 56.0 |
| 1.224000 | 31.0 | 9.000 | N | 10.0 | 25.0 | 56.0 |
| 1.230000 | 31.1 | 9.000 | N | 10.0 | 24.9 | 56.0 |
| 1.238000 | 31.1 | 9.000 | N | 10.0 | 24.9 | 56.0 |
| 1.246000 | 30.7 | 9.000 | N | 10.0 | 25.3 | 56.0 |
| 11.406000 | 32.9 | 9.000 | N | 10.5 | 27.1 | 60.0 |
| 14.122000 | 33.1 | 9.000 | N | 10.6 | 26.9 | 60.0 |
| 14.236000 | 33.2 | 9.000 | N | 10.6 | 26.8 | 60.0 |
| 14.364000 | 33.4 | 9.000 | N | 10.6 | 26.6 | 60.0 |
| 14.516000 | 33.4 | 9.000 | N | 10.6 | 26.6 | 60.0 |
| 14.596000 | 33.2 | 9.000 | N | 10.7 | 26.8 | 60.0 |



CAverage Final Result, Line (N)

| Frequency (MHz) | CAverage (dBuV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBuV) |
|--------------------|--------------------|--------------------|------|---------------|----------------|-----------------|
| 0.152000 | 23.3 | 9.000 | N | 9.8 | 32.6 | 55.9 |
| 0.156000 | 21.2 | 9.000 | N | 9.8 | 34.5 | 55.7 |
| 0.264000 | 17.9 | 9.000 | N | 9.9 | 33.4 | 51.3 |
| 0.268000 | 19.9 | 9.000 | N | 9.9 | 31.3 | 51.2 |
| 0.272000 | 21.2 | 9.000 | N | 9.9 | 29.8 | 51.1 |
| 0.276000 | 21.9 | 9.000 | N | 9.9 | 29.1 | 50.9 |
| 1.206000 | 24.2 | 9.000 | N | 10.0 | 21.8 | 46.0 |
| 1.214000 | 24.5 | 9.000 | N | 10.0 | 21.5 | 46.0 |
| 1.224000 | 24.8 | 9.000 | N | 10.0 | 21.2 | 46.0 |
| 1.232000 | 24.7 | 9.000 | N | 10.0 | 21.3 | 46.0 |
| 1.246000 | 24.3 | 9.000 | N | 10.0 | 21.7 | 46.0 |
| 1.504000 | 22.5 | 9.000 | N | 10.1 | 23.5 | 46.0 |
| 11.148000 | 26.2 | 9.000 | N | 10.5 | 23.8 | 50.0 |
| 11.540000 | 26.8 | 9.000 | N | 10.5 | 23.2 | 50.0 |
| 14.418000 | 27.2 | 9.000 | N | 10.6 | 22.8 | 50.0 |
| 14.596000 | 27.2 | 9.000 | N | 10.7 | 22.8 | 50.0 |
| 14.878000 | 26.9 | 9.000 | N | 10.7 | 23.1 | 50.0 |
| 15.488000 | 25.9 | 9.000 | N | 10.7 | 24.1 | 50.0 |



5.2 Radiated Emission

The test results of radiated emission provide the following information:

For Measurement Below 1 GHz

| Rule Part / Standard | FCC PART 15 Subpart B Class B |
|----------------------|-------------------------------|
| Detector | Quasi-Peak |
| Bandwidth | 120 kHz (6 dB) |
| Kind of Test Site | 3 m semi anechoic chamber |
| Temperature | 22.2 °C |
| Relative Humidity | 44.0 % |
| Test Date | February 02, 2019 |

- Calculation Formula:

- 1. POL. H = Horizontal, POL. V = Vertical
- 2. QuasiPeak = Reading (Receiver Reading) + Corr.
- 3. Corr. (Correction Factor) = Antenna Factor + Cable Loss
- 4. Margin = Limit QuasiPeak



Charging + LTE Cat. M1 RX Receiving + WIFI (2.4 GHz) + Bluetooth Idle mode

| Frequency (MHz) | Quasi Peak (dBμV/m) | Antenna Height (cm) | POL. (H/V) | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBμV/m) |
|--------------------|------------------------|---------------------------|---------------|---------------|---------------|----------------|-------------------|
| 41.132800 | 20.0 | 117.7 | Н | 308.0 | 20.0 | 20.0 | 40.0 |
| 45.704800 | 20.0 | 174.8 | V | 26.0 | 20.2 | 20.0 | 40.0 |
| 61.892800 | 20.0 | 99.8 | Н | 195.0 | 19.3 | 20.0 | 40.0 |
| 240.040000 | 26.0 | 125.3 | V | 336.0 | 18.4 | 20.0 | 46.0 |
| 482.549600 | 23.7 | 274.7 | V | 252.0 | 24.9 | 22.3 | 46.0 |
| 698.689600 | 28.5 | 207.9 | Н | 0.0 | 28.8 | 17.5 | 46.0 |

LTE Cat. M1 RX Receiving + WIFI (2.4 GHz) + Bluetooth Idle mode

| Frequency (MHz) | Quasi Peak (dBμV/m) | Antenna Height (cm) | POL. (H/V) | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|--------------------|------------------------|---------------------------|---------------|---------------|---------------|----------------|-------------------|
| 33.169600 | 20.0 | 275.0 | Н | 34.0 | 18.6 | 20.0 | 40.0 |
| 33.280800 | 21.0 | 100.0 | Н | 311.0 | 18.6 | 19.0 | 40.0 |
| 49.395200 | 20.0 | 307.9 | Н | 80.0 | 20.4 | 20.0 | 40.0 |
| 64.064000 | 21.0 | 274.9 | V | 63.0 | 19.0 | 19.0 | 40.0 |
| 148.934400 | 26.0 | 100.0 | Н | 345.0 | 19.9 | 17.5 | 43.5 |
| 885.739200 | 35.0 | 225.2 | V | 30.0 | 31.0 | 11.0 | 46.0 |



For Measurement Above 1 GHz

| Rule Part / Standard | FCC PART 15 Subpart B Class B |
|-----------------------------|--|
| Detector | Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz) |
| Highest Operating Frequency | 2 480 MHz |
| Tested Frequency Range | 1 GHz to 18 GHz |
| Kind of Test Site | 3 m semi anechoic chamber |
| Temperature | 21.5 °C |
| Relative Humidity | 42.5 % |
| Test Date | February 10, 2019 |

- Calculation Formula:

- 1. POL. H = Horizontal, POL. V = Vertical
- 2. Peak or CAverage = Reading (Receiver Reading) + Corr.
- 3. Corr. (Correction Factor) = Antenna Factor+ Cable Loss -Amplifier Gain
- 4. Margin = Limit Peak or CAverage



Charging + LTE Cat. M1 RX Receiving + WIFI (2.4 GHz) + Bluetooth Idle mode

| Frequency (MHz) | Peak (dBμV/m) | Antenna Height (cm) | POL. (H/V) | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBμV/m) |
|--------------------|------------------|---------------------------|---------------|---------------|---------------|----------------|-------------------|
| 1740.070000 | 31.4 | 160.5 | V | 23.0 | -27.3 | 42.6 | 74.0 |
| 4749.285000 | 35.6 | 113.4 | V | 309.0 | -19.0 | 38.4 | 74.0 |
| 5938.645000 | 37.7 | 150.0 | V | 55.0 | -17.2 | 36.3 | 74.0 |
| 7410.435000 | 41.3 | 350.0 | V | 278.0 | -13.0 | 32.7 | 74.0 |
| 9854.495000 | 43.7 | 99.7 | V | 330.0 | -9.5 | 30.3 | 74.0 |
| 11031.590000 | 45.5 | 99.7 | V | 50.0 | -5.6 | 28.5 | 74.0 |

| Frequency (MHz) | CAverage (dBμV/m) | Antenna Height (cm) | POL. (H/V) | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBμV/m) |
|--------------------|----------------------|---------------------------|---------------|---------------|---------------|----------------|----------------|
| 1740.070000 | 18.6 | 160.5 | V | 23.0 | -27.3 | 35.4 | 54.0 |
| 4749.285000 | 22.9 | 113.4 | V | 309.0 | -19.0 | 31.1 | 54.0 |
| 5938.645000 | 24.5 | 150.0 | V | 55.0 | -17.2 | 29.5 | 54.0 |
| 7410.435000 | 28.7 | 350.0 | V | 278.0 | -13.0 | 25.3 | 54.0 |
| 9854.495000 | 31.0 | 99.7 | V | 330.0 | -9.5 | 23.0 | 54.0 |
| 11031.590000 | 33.0 | 99.7 | V | 50.0 | -5.6 | 21.0 | 54.0 |

LTE Cat. M1 RX Receiving + WIFI (2.4 GHz) + Bluetooth Idle mode

| Frequency (MHz) | Peak (dBμV/m) | Antenna Height (cm) | POL. (H/V) | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBμV/m) |
|--------------------|------------------|---------------------------|---------------|---------------|---------------|----------------|----------------|
| 2044.340000 | 31.7 | 149.9 | V | 3.0 | -26.6 | 42.3 | 74.0 |
| 4277.700000 | 35.7 | 249.9 | Н | 256.0 | -20.1 | 38.3 | 74.0 |
| 5617.905000 | 36.8 | 124.6 | Н | 174.0 | -17.7 | 37.2 | 74.0 |
| 7471.050000 | 41.0 | 318.5 | Н | 0.0 | -12.8 | 33.0 | 74.0 |
| 9901.575000 | 43.4 | 338.6 | V | 316.0 | -9.5 | 30.6 | 74.0 |
| 10953.840000 | 45.2 | 249.4 | V | 190.0 | -5.8 | 28.8 | 74.0 |

| Frequency (MHz) | CAverage (dBμV/m) | Antenna Height (cm) | POL. (H/V) | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBμV/m) |
|--------------------|-------------------|---------------------------|---------------|---------------|---------------|----------------|-------------------|
| 2044.340000 | 18.8 | 149.9 | V | 3.0 | -26.6 | 35.2 | 54.0 |
| 4277.700000 | 22.6 | 249.9 | Н | 256.0 | -20.1 | 31.4 | 54.0 |
| 5617.905000 | 24.1 | 124.6 | Н | 174.0 | -17.7 | 29.9 | 54.0 |
| 7471.050000 | 28.3 | 318.5 | Н | 0.0 | -12.8 | 25.7 | 54.0 |
| 9901.575000 | 30.9 | 338.6 | V | 316.0 | -9.5 | 23.1 | 54.0 |
| 10953.840000 | 32.8 | 249.4 | V | 190.0 | -5.8 | 21.2 | 54.0 |



6. CONCLUSION

The data collected shows that the **EUT Type: Smart Locator, Model: LT70B** complies with §15.107 and §15.109 of the FCC rules.



7. APPENDIX A. TEST SETUP PHOTOGRAPHS

Please refer to Appendix A