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## FCC MPE REPORT

### Certification

**Applicant Name:**  
Franklin Technology Inc.

**Address:**  
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Geumcheon-gu, Seoul, Korea, (08502)

**Date of Issue:**  
February 01, 2019

**Location:**  
HCT CO., LTD.,  
74, Seoicheon-ro 578beon-gil, Majang-myeon,  
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA  
**Report No.:** HCT-RF-1902-FC011

**FCC ID:** XHG-T720

**APPLICANT:** Franklin Technology Inc.

Model(s): T720

EUT Type: Home Phone Connect

The measurements shown in this report were made in accordance with the procedures specified in §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S.C. 853(a)

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Report approved by : Jong Seok Lee  
Manager of Telecommunication Testing Center

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## Version

| TEST REPORT NO.   | DATE              | DESCRIPTION             |
|-------------------|-------------------|-------------------------|
| HCT-RF-1902-FC011 | February 01, 2019 | - First Approval Report |
|                   |                   |                         |
|                   |                   |                         |
|                   |                   |                         |

# RF Exposure Statement

## 1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

### (B) Limits for General Population/Uncontrolled Exposures

| Frequency range<br>(MHz) | Electric field<br>Strength (V/m) | Magnetic field<br>Strength (A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
|--------------------------|----------------------------------|----------------------------------|----------------------------------------|-----------------------------|
| 0.3 - 1.34.....          | 614                              | 1.63                             | *(100)                                 | 30                          |
| 1.34 - 30.....           | 824/f                            | 2.19/f                           | *(180/ f <sup>2</sup> )                | 30                          |
| 30 - 300.....            | 27.5                             | 0.073                            | 0.2                                    | 30                          |
| 300 - 1500.....          | .....                            | .....                            | f/1500                                 | 30                          |
| 1500 - 100.000.....      | .....                            | .....                            | 1.0                                    | 30                          |

F = frequency in MHz

\* = Plane-wave equivalent power density

## 2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

### 3.RESULTS

#### 3-1. LTE5 BAND

|                                                             |           |                    |
|-------------------------------------------------------------|-----------|--------------------|
| Max Peak output Power at antenna input terminal             | 24.000    | dBm                |
| Max Peak output Power at antenna input terminal             | 0.2512    | W                  |
| Prediction distance                                         | 20.000    | cm                 |
| Prediction frequency                                        | 824 ~ 849 | MHz                |
| Antenna Gain(typical)                                       | 4.876     | dBi                |
| Antenna Gain(numeric)                                       | 3.073     | -                  |
| Power density at prediction frequency( S )                  | 0.154     | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.549     | mW/cm <sup>2</sup> |

2.1091

|           |              |
|-----------|--------------|
| EIRP      | 28.876 (dBm) |
| ERP       | 26.726 (dBm) |
| ERP       | 0.47 (W)     |
| ERP Limit | 1.50 (W)     |
| MARGIN    | 5.04 (dB)    |

### 3-2. LTE12 BAND

|                                                             |           |                    |
|-------------------------------------------------------------|-----------|--------------------|
| Max Peak output Power at antenna input terminal             | 24.000    | dBm                |
| Max Peak output Power at antenna input terminal             | 0.2512    | W                  |
| Prediction distance                                         | 20.000    | cm                 |
| Prediction frequency                                        | 699 ~ 716 | MHz                |
| Antenna Gain(typical)                                       | 3.767     | dBi                |
| Antenna Gain(numeric)                                       | 2.381     | -                  |
| Power density at prediction frequency( S)                   | 0.154     | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.466     | mW/cm <sup>2</sup> |

### 2.1091

|           |              |
|-----------|--------------|
| EIRP      | 27.767 (dBm) |
| ERP       | 25.617 (dBm) |
| ERP       | 0.37 (W)     |
| ERP Limit | 1.50 (W)     |
| MARGIN    | 6.08 (dB)    |

### 3-3. LTE25 BAND

|                                                             |             |                    |
|-------------------------------------------------------------|-------------|--------------------|
| Max Peak output Power at antenna input terminal             | 24.000      | dBm                |
| Max Peak output Power at antenna input terminal             | 0.2512      | W                  |
| Prediction distance                                         | 20.000      | cm                 |
| Prediction frequency                                        | 1850 ~ 1915 | MHz                |
| Antenna Gain(typical)                                       | 4.885       | dBi                |
| Antenna Gain(numeric)                                       | 3.080       | -                  |
| Power density at prediction frequency( S)                   | 0.154       | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000       | mW/cm <sup>2</sup> |

### 2.1091

|           |              |
|-----------|--------------|
| EIRP      | 28.885 (dBm) |
| ERP       | 26.735 (dBm) |
| ERP       | 0.47 (W)     |
| ERP Limit | 3.00 (W)     |
| MARGIN    | 8.04 (dB)    |

### 3-4. LTE41 BAND

|                                                             |             |                    |
|-------------------------------------------------------------|-------------|--------------------|
| Max Peak output Power at antenna input terminal             | 23.500      | dBm                |
| Max Peak output Power at antenna input terminal             | 0.2239      | W                  |
| Prediction distance                                         | 20.000      | cm                 |
| Prediction frequency                                        | 2496 ~ 2690 | MHz                |
| Antenna Gain(typical)                                       | 5.194       | dBi                |
| Antenna Gain(numeric)                                       | 3.307       | -                  |
| Power density at prediction frequency( S)                   | 0.137       | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000       | mW/cm <sup>2</sup> |

### 2.1091

|           |              |
|-----------|--------------|
| EIRP      | 28.694 (dBm) |
| ERP       | 26.544 (dBm) |
| ERP       | 0.45 (W)     |
| ERP Limit | 3.00 (W)     |
| MARGIN    | 8.23 (dB)    |

### 3-5. CDMA BAND(CDMA)

|                                                             |                 |                    |
|-------------------------------------------------------------|-----------------|--------------------|
| Max Peak output Power at antenna input terminal             | 24.000          | dBm                |
| Max Peak output Power at antenna input terminal             | 0.2512          | W                  |
| Prediction distance                                         | 20.000          | cm                 |
| Prediction frequency                                        | 824.70 ~ 848.31 | MHz                |
| Antenna Gain(typical)                                       | 4.876           | dBi                |
| Antenna Gain(numeric)                                       | 3.073           | -                  |
| Power density at prediction frequency( S)                   | 0.154           | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.550           | mW/cm <sup>2</sup> |

### 2.1091

|           |              |
|-----------|--------------|
| EIRP      | 28.876 (dBm) |
| ERP       | 26.726 (dBm) |
| ERP       | 0.47 (W)     |
| ERP Limit | 1.50 (W)     |
| MARGIN    | 5.03 (dB)    |

3-6. CDMA BAND(PCS CDMA)

|                                                             |                   |                    |
|-------------------------------------------------------------|-------------------|--------------------|
| Max Peak output Power at antenna input terminal             | 23.500            | dBm                |
| Max Peak output Power at antenna input terminal             | 0.2239            | W                  |
| Prediction distance                                         | 20.000            | cm                 |
| Prediction frequency                                        | 1851.25 ~ 1908.75 | MHz                |
| Antenna Gain(typical)                                       | 4.885             | dBi                |
| Antenna Gain(numeric)                                       | 3.080             | -                  |
| Power density at prediction frequency( S)                   | 0.137             | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000             | mW/cm <sup>2</sup> |

## 2.1091

|           |              |
|-----------|--------------|
| EIRP      | 28.385 (dBm) |
| ERP       | 30.535 (dBm) |
| ERP       | 1.13 (W)     |
| ERP Limit | 3.00 (W)     |
| MARGIN    | 4.24 (dB)    |