

# FCC MPE REPORT

## Certification

**Applicant Name:**

UCOMM TECHNOLOGY CO., LTD.

**Date of Issue:**

October 10, 2018

**Address:**

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**Location of test lab:**

HCT CO., LTD.,  
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Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

**Report No.:** HCT-RF-1809-FC106-R1

**FCC ID:**

**2ABTKSC300**

**APPLICANT:**

**UCOMM TECHNOLOGY CO., LTD.**

**Model:**

SC300

**EUT Type:**

Swing Caddie

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.



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**Engineer of telecommunication testing center**



**Approved by : Jong Seok Lee**  
**Manager of telecommunication testing center**

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## Version

| TEST REPORT NO.      | DATE               | DESCRIPTION                  |
|----------------------|--------------------|------------------------------|
| HCT-RF-1809-FC106    | September 28, 2018 | - First Approval Report      |
| HCT-RF-1809-FC106-R1 | October 10, 2018   | - Added the notes on page 5. |
|                      |                    |                              |
|                      |                    |                              |

## RF Exposure Statement

### 1. Limit

- According to § 1.1310 RF exposure is calculated.

Table 1 – Limits for Maximum Permissible Exposure (MPE)

| Frequency range (MHz)                                          | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposure</b>         |                               |                               |                                     |                          |
| 0.3-3.0                                                        | 614                           | 1.63                          | *100                                | 6                        |
| 3.0-30                                                         | 1842/f                        | 4.89/f                        | *900/f <sup>2</sup>                 | 6                        |
| 30-300                                                         | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1,500                                                      |                               |                               | f/300                               | 6                        |
| 1,500-100,000                                                  |                               |                               | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 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                       |
| 300-1,500                                                      |                               |                               | f/1500                              | 30                       |
| 1,500-100,000                                                  |                               |                               | 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 to 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. BT LE

|                                                             |                           |
|-------------------------------------------------------------|---------------------------|
| Max peak output power at antenna input terminal (dBm)       | -6.424 dBm                |
| Max peak output power at antenna input terminal (mW)        | 0.228 mW                  |
| Prediction distance                                         | 20.000 cm                 |
| Prediction frequency                                        | 2402.000 MHz              |
| Antenna gain (typical)                                      | 1.800 dBi                 |
| Antenna gain (numeric)                                      | 1.514 -                   |
| Power density at prediction frequency                       | 0.0001 mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000 mW/cm <sup>2</sup>  |

#### 3-2. Radar

|                                                             |                           |
|-------------------------------------------------------------|---------------------------|
| Max peak output power at antenna input terminal (dBm)       | 4.860 dBm                 |
| Max peak output power at antenna input terminal (mW)        | 3.062 mW                  |
| Prediction distance                                         | 20.000 cm                 |
| Prediction frequency                                        | 24125.000 MHz             |
| Antenna gain (typical)                                      | 8.600 dBi                 |
| Antenna gain (numeric)                                      | 7.244 -                   |
| Power density at prediction frequency                       | 0.0044 mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000 mW/cm <sup>2</sup>  |

### Simultaneous transmission operations

1. The power density level at 20 cm is **0.0001 mW/cm<sup>2</sup>**, which is below the uncontrolled exposure limit of **1.0 mW/cm<sup>2</sup>** at **Bluetooth**.
2. The power density level at 20 cm is **0.0044 mW/cm<sup>2</sup>**, which is below the uncontrolled exposure limit of **1.0 mW/cm<sup>2</sup>** at **Radar (24.125 GHz)**.

->Simultaneous MPE 20 cm is Radar(24.125 GHz) (0.0044/1.0) + Bluetooth (0.0001/1.0) = 0.0045 < 1

**\*Note:**

1. Because of provided actual use conditions, the 20 cm separation distance is allowed, even though this device is battery powered and can be handheld.