
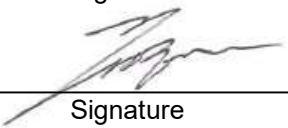


# FCC MPE TEST REPORT

**Project Number** : EA2009C-016  
**Test Report Number** : TR-W2009-011  
**Type of Equipment** : DIGITAL DOOR LOCK  
**Model Name** : T102K-TW  
**FCC ID** : 2AXLI-T102K-TW  
**Multiple Model Name** : N/A  
**Applicant** : KT&C CO., LTD.  
**Address** : KT&C BLDG, 7, Yangcheon-ro 11-gil, Gangseo-gu, Seoul, Republic of Korea  
**Manufacturer** : KT&C CO., LTD.  
**Address** : KT&C BLDG, 7, Yangcheon-ro 11-gil, Gangseo-gu, Seoul, Republic of Korea  
**Regulation** : FCC Part 15 Subpart C Section 15.247  
**Total page of Report** : 5 Pages  
**Date of Receipt** : 2020-07-02  
**Date of Issue** : 2020-09-21  
**Test Result** : PASS

This test report only contains the result of a single test of the sample supplied for the examination.  
 It is not a generally valid assessment of the features of the respective products of the mass-production.

Prepared by	Song, In-young / Senior Engineer		2020-09-21
		Signature	Date
Reviewed by	Choi, Yeong-min / Technical Manager		2020-09-21
		Signature	Date

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### Release Control Record

<b>Issue Report No.</b>	<b>Issued Date</b>	<b>Revisions</b>	<b>Effect Section</b>
TR-W2009-011	2020-09-21	Initial Release	All

## 1. EUT (Equipment Under Test) INFORMATION

### 1.1 General Description

The KT&C CO., LTD., Model T102K-TW (referred to as the EUT in this report) is a DIGITAL DOOR LOCK. The EUT is a device for transferring Bluetooth low energy signal to a Bluetooth low energy Device through wireless communication. The product specification described herein was obtained from product data sheet or user's manual.

Operating Frequency	2 402 MHz ~ 2 480 MHz
Kind of Class	DTS – Digital Transmission System
Generated or used Freq. in EUT	32.768 kHz, 16 MHz
Normal Test Voltage	DC 6 V
Electrical Rating	DC 6 V
Software Version	20200729-009
Hardware Version	PP-200701

### 1.2 Additional Model

None

## 2. TEST RESULT

### 2.1 Measured RF Output Level

Operating Mode	Conducted Output Power (dBm)	Antenna Gain (dBi)	EIRP	
			(dBm)	(mW)
GFSK	-8.22	-7.45	-15.67	0.03

Note: EIRP = Conducted Output Power + Antenna Gain

### 2.2 MPE Evaluation

The EUT will only be used with a separation of 0.5 centimeters (Worst Case) or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

$$S = \text{EIRP} / (4 \times R^2 \times \pi)$$

$$= 0.03 / (4 \times 0.5^2 \times \pi)$$

$$= 0.009549 \text{ mW/cm}^2$$

**Note:** S= Power density (mW/cm<sup>2</sup>)

EIRP= Equivalent Isotropic Radiated Power (mW)

R= Distance to the center of the radiation of the antenna

$$\pi \approx 3.1416$$

#### 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)
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