HCT

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FCC MPE REPORT

Certification

Applicant Name: Franklin Technology Inc. **Address:** 906 JEI Platz, 186, Gasan digital 1-ro, Geumcheon-gu, Seoul, Korea, (08502)	**Date of Issue:** February 07, 2018 **Location:** HCT CO., LTD., 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA **Report No.:** HCT-RF-1802-FC005

FCC ID:	**XHG-C801**
APPLICANT:	**Franklin Technology Inc.**

Model(s):	C801
EUT Type:	CPE

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)

Report prepared by : Jae Ryang Do
Engineer of Telecommunication Testing Center

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

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1802-FC005	February 07, 2018	- First Approval Report

RF Exposure Statement

1. LIMITS

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

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposures				
0.3 - 1.34......................................	614	1.63	*(100)	30
1.34 - 30......................................	824/f	2.19/f	*(180/ f²)	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. LTE25 BAND

Average Peak output Power at antenna input terminal	23.600	dBm
Average Peak output Power at antenna input terminal	0.229	W
Prediction distance	20.000	cm
Prediction frequency	1850.700	MHz
Antenna Gain(typical)	6.000	dBi
Antenna Gain(numeric)	3.981	-
Power density at prediction frequency(S)	0.181	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	29.60	(dBm)
ERP	27.45	(dBm)
ERP	0.56	(W)
ERP Limit	3.0	(W)
MARGIN	7.32	(dB)

3-2. LTE26 BAND

Average Peak output Power at antenna input terminal	23.600	dBm
Average Peak output Power at antenna input terminal	0.229	W
Prediction distance	20.000	cm
Prediction frequency	824.700	MHz
Antenna Gain(typical)	5.068	dBi
Antenna Gain(numeric)	3.212	-
Power density at prediction frequency(S)	0.146	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.550	mW/cm^2

2.1091

EIRP	28.67	(dBm)
ERP	26.52	(dBm)
ERP	0.45	(W)
ERP Limit	1.50	(W)
MARGIN	5.24	(dB)

3-3. LTE41 BAND

Average Peak output Power at antenna input terminal	23.300	dBm
Average Peak output Power at antenna input terminal	0.214	W
Prediction distance	20.000	cm
Prediction frequency	2498.500	MHz
Antenna Gain(typical)	7.513	dBi
Antenna Gain(numeric)	5.640	-
Power density at prediction frequency(S)	0.240	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	30.81	(dBm)
ERP	28.66	(dBm)
ERP	0.74	(W)
ERP Limit	3.0	(W)
MARGIN	6.11	(dB)