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FCC MPE REPORT

Certification

Applicant Name:
Franklin Technology Inc.

Address:
906 JEI Platz, 186, Gasan digital 1-ro, Gumcheon-gu
Seoul, 08502 South Korea

Date of Issue:
December 28, 2018

Location:
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

Report No.: HCT-RF-1812-FC018-R1

FCC ID:	**XHG-F800HPVL**
APPLICANT:	**Franklin Technology Inc.**

Model(s):	F800HPVL
EUT Type:	VoLTE 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)

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

Report approved by : Kwon Jeong
Manager of Telecommunication Testing Center

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1812-FC018	December 11, 2018	- First Approval Report
HCT-RF-1812-FC018-R1	December 28, 2018	- Revised the Antenna Gain of LTE B13

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 (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
0.3 - 1.34	614	1.63	*(100)	30
1.34 - 30	824/f	2.19/f	*(180/ f^2)	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. LTE13 BAND

Average Peak output Power at antenna input terminal	22.400	dBm
Average Peak output Power at antenna input terminal	0.1738	W
Prediction distance	20.000	cm
Prediction frequency	777 ~ 787	MHz
Antenna Gain(typical)	5.630	dBi
Antenna Gain(numeric)	3.656	-
Power density at prediction frequency(S)	0.126	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.518	mW/cm^2

2.1091

EIRP	28.030	(dBm)
ERP	25.88	(dBm)
ERP	0.39	(W)
ERP Limit	1.50	(W)
MARGIN	5.88	(dB)

3-2. LTE4 BAND

Average Peak output Power at antenna input terminal	23.400	dBm
Average Peak output Power at antenna input terminal	0.2188	W
Prediction distance	20.000	cm
Prediction frequency	1710 ~ 1755	MHz
Antenna Gain(typical)	4.247	dBi
Antenna Gain(numeric)	2.659	-
Power density at prediction frequency(S)	0.116	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	27.65	(dBm)
ERP	25.50	(dBm)
ERP	0.35	(W)
ERP Limit	3.0	(W)
MARGIN	9.27	(dB)