

FCC MPE REPORT

FCC Certification

Applicant Name:

SAMSUNG Electronics Co., Ltd.

Address:

129, Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:

April 19, 2017

Test Site/Location:

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

Report No.: HCT-R-1704-E004-2

HCT FRN: 0005866421

FCC ID : A3LSLS-BU10B

APPLICANT : SAMSUNG Electronics Co., Ltd.

Model: SLS-BU10B

EUT Type: sFemto 2

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 : Kyung Soo Kang
Engineer of Telecommunication testing center



Approved by : Yong Hyun Lee
Manager of Telecommunication testing center

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1704-E004	April 12, 2017	- First Approval Report
HCT-R-1704-E004-1	April 13, 2017	- Revised results of Band 13(700 MHz).
HCT-R-1704-E004-2	April 19, 2017	- Revised EUT Type

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. Band 13

700 MHz_1 TX

Max Peak output Power at antenna input terminal	19.000	dBm
Max Peak output Power at antenna input terminal	79.433	mW
Prediction distance	20.000	cm
Prediction frequency	746.000	MHz
Antenna Gain(typical)	4.310	dBi
Antenna Gain(numeric)	2.698	-
Power density at prediction frequency(S)	0.043	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.497	mW/cm ²

700 MHz_2 TX

Max Peak output Power at antenna input terminal	22.000	dBm
Max Peak output Power at antenna input terminal	158.489	mW
Prediction distance	20.000	cm
Prediction frequency	746.000	MHz
Antenna Gain(typical)	6.020	dBi
Antenna Gain(numeric)	3.999	-
Power density at prediction frequency(S)	0.126	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.497	mW/cm ²

3-2. Band 66

AWS2100 – 1 TX

Average Peak output Power at antenna input terminal	19.000	dBm
Average Peak output Power at antenna input terminal	79.433	mW
Prediction distance	20.000	cm
Prediction frequency	2110.000	MHz
Antenna Gain(typical)	3.480	dBi
Antenna Gain(numeric)	2.228	-
Power density at prediction frequency(S)	0.0352	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

AWS2100 – 2 TX

Average Peak output Power at antenna input terminal	22.000	dBm
Average Peak output Power at antenna input terminal	158.489	mW
Prediction distance	20.000	cm
Prediction frequency	2110.000	MHz
Antenna Gain(typical)	6.290	dBi
Antenna Gain(numeric)	4.256	-
Power density at prediction frequency(S)	0.1342	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

Simultaneous transmission operations

1. Simultaneous MPE 20 cm is $0.126 < 0.497$

*The Worst case Band 13(700 MHz)_2 TX : 22 dBm is Highest Power.

2. Simultaneous MPE 20 cm is $0.1342 < 1$

*The Worst case Band 66(AWS 2100)_2 TX : 22 dBm is Highest Power.