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TEST REPORT

FCC MPE Test for RT4429-77A
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2206-FC028

DATE OF ISSUE
July 27, 2022

Tested by
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Additional Model
-

Applicant	**SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Eut Type Model Name	RRU(RT4429) RT4429-77A
FCC ID	A3LRRT4429-77A

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	July 27, 2022	Initial Release

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.

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

RF Exposure Statement

1. Limit

According to § 1.1310, § 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 MPE calculation for standalone operations

3.7 GHz Service 5G NR 20 MHz 1 Carrier

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR 40 MHz 1 Carrier

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR 60 MHz 1 Carrier

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR 80 MHz 1 Carrier

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR 100 MHz 1 Carrier

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (Contiguous)

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] (Contiguous)

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

(Non-Contiguous)

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

(Non-Contiguous)

Max Average output Power at antenna input terminal	31.00	dBm
Max Average output Power at antenna input terminal	1 258.93	mW
Prediction distance	38.00	cm
Prediction frequency	3 700.00	MHz
Antenna gain (typical)	11.500	dBi
Antenna gain (numeric)	14.125	-
Power density at prediction frequency(S)	0.9800	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2