

# TEST REPORT

FCC MPE Test for RF2216d-D1A  
Class II Permissive Change

**APPLICANT**  
SAMSUNG Electronics Co., Ltd.

**REPORT NO.**  
HCT-RF-2412-FC044

**DATE OF ISSUE**  
December 10, 2024

**Tested by**  
Kyung Soo Kang



**Technical Manager**  
Jong Seok Lee



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Applicant	<b>SAMSUNG Electronics Co., Ltd.</b> 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Product Name	RRU(RF2216d)
Model Name	RF2216d-D1A
FCC ID	A3LRF2216D-D1A
Date of Test	November 14, 2024 ~ December 06, 2024
Location of Test	<input checked="" type="checkbox"/> Permanent Testing Lab <input type="checkbox"/> On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)
Test Standard Used	CFR 47 Part 2.1091
Test Results	PASS

## REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	December 10, 2024	Initial Release

## Notice

Content
<p>Engineering Statement:</p> <p>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.</p> <p>The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.</p> <p>The test results have only been applied with the test methods required by the standard(s).</p> <p>The laboratory is not accredited for the test results marked *.</p> <p>Information provided by the applicant is marked **.</p> <p>Test results provided by external providers are marked ***.</p> <p>When confirmation of authenticity of this test report is required, please contact <a href="http://www.hct.co.kr">www.hct.co.kr</a></p> <p>The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).</p>

## 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 <sup>2</sup> )	Averaging time (minutes)
0.3 - 1.34.....	614	1.63	<sup>#</sup> (100)	30
1.34 - 30.....	824/f	2.19/f	<sup>#</sup> (180/f <sup>2</sup> )	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

<sup>#</sup> = 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

(2 Port) 5G NR n66 25 MHz 1 Carrier

Max output Power at antenna input terminal	24.98	dBm
Max output Power at antenna input terminal	314.77	mW
Prediction distance	24.00	cm
Prediction frequency	2 110.00	MHz
Antenna Gain(typical)	8.00	dBi
Antenna Gain(numeric)	6.31	-
Power density at prediction frequency(S)	0.2744	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

(2 Port) 5G NR n66 25 MHz 1 Carrier + LTE B66 5 MHz 1 Carrier [2 Carrier] (Contiguous)

Max output Power at antenna input terminal	24.98	dBm
Max output Power at antenna input terminal	314.77	mW
Prediction distance	24.00	cm
Prediction frequency	2 110.00	MHz
Antenna Gain(typical)	8.00	dBi
Antenna Gain(numeric)	6.31	-
Power density at prediction frequency(S)	0.2744	mW/cm <sup>2</sup>
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## (2 Port) 5G NR n66 25 MHz 1 Carrier + LTE B66 5 MHz 1 Carrier [2 Carrier] (Non-Contiguous)

Max output Power at antenna input terminal	24.98	dBm
Max output Power at antenna input terminal	314.77	mW
Prediction distance	24.00	cm
Prediction frequency	2 110.00	MHz
Antenna Gain(typical)	8.00	dBi
Antenna Gain(numeric)	6.31	-
Power density at prediction frequency(S)	0.2744	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

## (2 Port) 5G NR n66 25 MHz 1 Carrier + 5G NR n66 5 MHz 1 Carrier [2 Carrier] (Non-Contiguous)

Max output Power at antenna input terminal	24.98	dBm
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