

TEST REPORT

FCC MPE Test for N2RDU_2500_FB_TDD
Certification

APPLICANT
SOLiD, Inc.

REPORT NO.
HCT-RF-2103-FC033-R1

DATE OF ISSUE
April 1, 2021

Tested by
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Additional Model

-

Applicant

SOLiD, Inc.

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Gyeonggi-do, 463-400, South Korea

**Eut Type
Model Name**

DAS
N2RDU_2500_FB_TDD

FCC ID

W6UL25GFBTDD

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	March 30, 2021	Initial Release
1	April 01, 2021	Revised the CEO signature.

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.

* The report shall not be reproduced except in full(only partly) without approval of the laboratory.

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 MPE calculation for standalone operations

- BRS/EBS United – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.50	dBm
Max Peak output Power at antenna input terminal	2818.38	mW
Prediction distance	150.00	cm
Prediction frequency	2674.71	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.4996	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS United – 5G NR 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.50	dBm
Max Peak output Power at antenna input terminal	2818.38	mW
Prediction distance	150.00	cm
Prediction frequency	2674.71	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.4996	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS United – 5G NR 40 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.50	dBm
Max Peak output Power at antenna input terminal	2818.38	mW
Prediction distance	150.00	cm
Prediction frequency	2670.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.4996	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS United – 5G NR 60 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.50	dBm
Max Peak output Power at antenna input terminal	2818.38	mW
Prediction distance	150.00	cm
Prediction frequency	2660.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.4996	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS United – 5G NR 80 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.50	dBm
Max Peak output Power at antenna input terminal	2818.38	mW
Prediction distance	150.00	cm
Prediction frequency	2650.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.4996	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS United – 5G NR 100 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.50	dBm
Max Peak output Power at antenna input terminal	2818.38	mW
Prediction distance	150.00	cm
Prediction frequency	2640.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.4996	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

3.2 Simultaneous band emission conditions

- BRS/EBS United – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	31.50	dBm
Max Peak output Power at antenna input terminal	1412.54	mW
Prediction distance	150.00	cm
Prediction frequency	2674.71	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.2504	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS United – 5G NR 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	31.50	dBm
Max Peak output Power at antenna input terminal	1412.54	mW
Prediction distance	150.00	cm
Prediction frequency	2674.71	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency(S)	0.2504	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

[Downlink]

Band	Signal	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
BRS/EBS	LTE	0.2504	0.5008	≤ 1
United	5G NR	0.2504		

*Note

1. The result of each band was applied to the worst value.
2. MPE ratios are calculated as

$$[(\text{Power density1} / \text{MPE Limit}) + [(\text{Power density2} / \text{MPE Limit}) + \dots] \leq 1$$