

# TEST REPORT

FCC MPE Test for TR\_N2RDU\_8519A1326

**APPLICANT**  
SOLiD, Inc.

**REPORT NO.**  
HCT-RF-2005-FC024-R2

**DATE OF ISSUE**  
29 June 2020

**Tested by**  
Kyung Soo Kang



**Technical Manager**  
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FCC MPE Test for  
TR\_N2RDU\_8519A1326

**REPORT NO.**

HCT-RF-2005-FC024-R2

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**Additional Model**

-

**Applicant**

**SOLiD, Inc.**

10, 9th Floor, SOLiD Space, Pangyoyeok-ro 220, Bundang-gu, Seongnam-si,  
Gyeonggi-do, 463-400, South Korea

**Eut Type  
Model Name**

DAS  
TR\_N2RDU\_8519A1326

**FCC ID**

W6UL8519A1326

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	June 09, 2020	Initial Release
1	June 16, 2020	- Revised Eut Type from 'Alliance TR N2ROU CALA' to 'DAS' - Revised the data table. - Added MIMO data(optional) and the simultaneous band emission conditions.
2	June 29, 2020	-Revised model name.

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.

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## 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	*(100)	30
1.34 - 30.....	824/f	2.19/f	*(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

\* = 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

## - Cellular – CDMA (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	870.25	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.5802	mW/cm <sup>2</sup>

## - Cellular – WCDMA (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	890.19	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.5935	mW/cm <sup>2</sup>

## - Cellular – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	889.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	0.5927	mW/cm <sup>2</sup>

- AWS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	2168.45	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- PCS – WCDMA (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	1935.85	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- PCS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	1935.85	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- BRS/EBS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	34.00	dBm
Max Peak output Power at antenna input terminal	2511.89	mW
Prediction distance	320.00	cm
Prediction frequency	2681.08	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.0978	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

[Optional: Ant 1 + Ant 2 (MIMO)]

- AWS (Downlink)

Max Peak output Power at antenna input terminal	37.00	dBm
Max Peak output Power at antenna input terminal	5011.87	mW
Prediction distance	320.00	cm
Prediction frequency	2168.45	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1952	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- PCS (Downlink)

Max Peak output Power at antenna input terminal	37.00	dBm
Max Peak output Power at antenna input terminal	5011.87	mW
Prediction distance	320.00	cm
Prediction frequency	1935.85	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1952	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- BRS/EBS (Downlink)

Max Peak output Power at antenna input terminal	37.00	dBm
Max Peak output Power at antenna input terminal	5011.87	mW
Prediction distance	320.00	cm
Prediction frequency	2681.08	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1952	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>



**Simultaneous band emission conditions**

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
Cellular	0.1686	0.4621	$\leq 1$
AWS	0.0978		
PCS	0.0978		
BRS/EBS	0.0978		

**\*Note**

1. The result of each band was applied to the worst value.
2. MPE ratios are calculated as  
$$[(\text{Power density1} / \text{MPE Limit}) + [(\text{Power density2} / \text{MPE Limit}) + \dots] \leq 1$$