

# TEST REPORT

FCC MPE Test for eROU\_17192325L1\_X  
Certification

**APPLICANT**  
SOLiD, Inc.

**REPORT NO.**  
HCT-RF-2102-FC034

**DATE OF ISSUE**  
February 23, 2021

**Tested by**  
Kyung Soo Kang



**Technical Manager**  
Jong Seok Lee



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**TEST  
REPORT**

FCC MPE Test for  
eROU\_17192325L1\_X

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Additional Model  
-

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**Eut Type**      DAS System  
**Model Name**    eROU\_17192325L1\_X

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**FCC ID**      W6UER17192325

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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	February 23, 2021	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.

\* 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 <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

- Broadband PCS – GSM (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	1947.44	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- Broadband PCS – CDMA (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	1947.44	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- Broadband PCS – WCDMA (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	1947.44	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- Broadband PCS – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	1947.44	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- Broadband PCS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	1947.44	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- Broadband PCS – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	1947.44	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- AWS13 – CDMA (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2116.48	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- AWS13 – WCDMA (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2116.48	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>



- AWS13 – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2116.48	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- AWS13 – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2116.48	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- AWS13 – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2120.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- WCS – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2357.50	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- WCS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2355.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2506.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2506.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2516.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2526.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2536.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

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

Max Peak output Power at antenna input terminal	22.50	dBm
Max Peak output Power at antenna input terminal	177.83	mW
Prediction distance	80.00	cm
Prediction frequency	2546.00	MHz
Antenna Gain(typical)	17.00	dBi
Antenna Gain(numeric)	50.12	-
Power density at prediction frequency( S)	0.1108	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

**Simultaneous band emission conditions**

**[Downlink]**

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
Broadband PCS	0.1108	0.4433	≤ 1
AWS13	0.1108		
WCS	0.1108		
BRS/EBS United	0.1108		

**\*Note**

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

$$[(\text{Power density}_1 / \text{MPE Limit}) + [(\text{Power density}_2 / \text{MPE Limit}) + \dots]] \leq 1$$