

TEST REPORT

FCC MPE Test for eROU_7191725L1_X
Certification

APPLICANT
SOLiD, Inc.

REPORT NO.
HCT-RF-2003-FC016

DATE OF ISSUE
March 26, 2020

HCT Co., Ltd.

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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 System
eROU_7191725L1_X

FCC ID

W6UEROU7191725

This test results were applied only to the test methods required by the
standard.

Tested by
Kyung Soo Kang

Technical Manager
Jong Seok Lee

(signature)

HCT CO., LTD.

Soo Chan Lee
SooChan Lee / CEO

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	March 26, 2020	Initial Release

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

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.

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

- Lower 700 MHz – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	20.00	dBm
Max Peak output Power at antenna input terminal	100.00	mW
Prediction distance	50.00	cm
Prediction frequency	731.50	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.1595	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4877	mW/cm ²

- Lower 700 MHz – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	20.00	dBm
Max Peak output Power at antenna input terminal	100.00	mW
Prediction distance	50.00	cm
Prediction frequency	734.00	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.1595	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4893	mW/cm ²

- Upper 700 MHz – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	20.00	dBm
Max Peak output Power at antenna input terminal	100.00	mW
Prediction distance	50.00	cm
Prediction frequency	748.50	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.1595	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4990	mW/cm ²

- Upper 700 MHz – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	20.00	dBm
Max Peak output Power at antenna input terminal	100.00	mW
Prediction distance	50.00	cm
Prediction frequency	751.00	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.1595	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5007	mW/cm ²

- FirstNet – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	20.00	dBm
Max Peak output Power at antenna input terminal	100.00	mW
Prediction distance	50.00	cm
Prediction frequency	760.50	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.1595	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5070	mW/cm ²

- FirstNet – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	20.00	dBm
Max Peak output Power at antenna input terminal	100.00	mW
Prediction distance	50.00	cm
Prediction frequency	763.00	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.1595	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5087	mW/cm ²

- AWS – CDMA (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2135.03	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- AWS – WCDMA (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2135.03	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- AWS – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2135.03	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- AWS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2135.03	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- AWS – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2135.03	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- PCS – GSM (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	1940.89	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- PCS – CDMA (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	1940.89	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- PCS – WCDMA (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	1940.89	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- PCS – LTE 5 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	1940.89	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- PCS – LTE 10 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	1940.89	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- PCS – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	1940.89	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS – LTE 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2652.66	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS – 5G NR 20 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2652.66	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS – 5G NR 40 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2652.66	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS – 5G NR 60 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2652.66	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS – 5G NR 80 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2650.00	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- BRS/EBS – 5G NR 100 MHz (Downlink)

Max Peak output Power at antenna input terminal	24.000	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	50.000	cm
Prediction frequency	2640.00	MHz
Antenna Gain(typical)	17.000	dBi
Antenna Gain(numeric)	50.119	-
Power density at prediction frequency(S)	0.4007	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²