

TEST REPORT

FCC MPE Test for N20-HRDU_A_1900P_40W
Certification

APPLICANT
SOLiD, Inc.

REPORT NO.
HCT-RF-2005-FC004

DATE OF ISSUE
May 11, 2020

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FCC MPE Test for N20-
HRDU_A_1900P_40W

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Additional Model
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Applicant	SOLiD, Inc. 10, 9th Floor, SOLiD Space, Pangyoyeok-ro 220, Bundang-gu, Seongnam-si, Gyeonggi-do, 463-400, South Korea
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EUT Type	DAS
Model Name	N20-HRDU_A_1900P_40W

FCC ID	W6UNHA1900P-40W
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This test results were applied only to the test methods required by the standard.

Tested by
Kwang Il Yoon

(signature)

Technical Manager
Jong Seok Lee

(signature)

(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	May 11, 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

- PCS – GSM (Downlink)

Max Peak output Power at antenna input terminal	47.000	dBm
Max Peak output Power at antenna input terminal	50118.723	mW
Prediction distance	600.000	cm
Prediction frequency	1939.26	MHz
Antenna Gain(typical)	16.000	dBi
Antenna Gain(numeric)	39.811	-
Power density at prediction frequency(S)	0.4410	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	47.000	dBm
Max Peak output Power at antenna input terminal	50118.723	mW
Prediction distance	600.000	cm
Prediction frequency	1939.26	MHz
Antenna Gain(typical)	16.000	dBi
Antenna Gain(numeric)	39.811	-
Power density at prediction frequency(S)	0.4410	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	47.000	dBm
Max Peak output Power at antenna input terminal	50118.723	mW
Prediction distance	600.000	cm
Prediction frequency	1939.26	MHz
Antenna Gain(typical)	16.000	dBi
Antenna Gain(numeric)	39.811	-
Power density at prediction frequency(S)	0.4410	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	47.000	dBm
Max Peak output Power at antenna input terminal	50118.723	mW
Prediction distance	600.000	cm
Prediction frequency	1939.26	MHz
Antenna Gain(typical)	16.000	dBi
Antenna Gain(numeric)	39.811	-
Power density at prediction frequency(S)	0.4410	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	47.000	dBm
Max Peak output Power at antenna input terminal	50118.723	mW
Prediction distance	600.000	cm
Prediction frequency	1939.26	MHz
Antenna Gain(typical)	16.000	dBi
Antenna Gain(numeric)	39.811	-
Power density at prediction frequency(S)	0.4410	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²