

# TEST REPORT

FCC MPE Test for N20-HRDU\_600

Certification

APPLICANT

SOLiD, Inc.

REPORT NO.

HCT-RF-1907-FC026

DATE OF ISSUE

July 31, 2019

**HCT Co., Ltd.**

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**SOLiD, Inc.**

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

Eut Type  
Model Name

ALLIANCE\_N20  
N20-HRDU\_600

FCC ID

W6UNH600

Tested by  
Kwang Il Yoon

(signature)

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            | July 31, 2019 | 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<br>(MHz)                                 | Electric field<br>Strength<br>(V/m) | Magnetic field<br>Strength (A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
| 0.3 - 1.34.....                                          | 614                                 | 1.63                             | *(100)                                 | 30                          |
| 1.34 - 30.....                                           | 824/f                               | 2.19/f                           | *(180/<br>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

## - 600 MHz Service

|                                                             |          |                    |
|-------------------------------------------------------------|----------|--------------------|
| Max Peak output Power at antenna input terminal             | 44.00    | dBm                |
| Max Peak output Power at antenna input terminal             | 25118.86 | mW                 |
| Prediction distance                                         | 690.00   | cm                 |
| Prediction frequency                                        | 617.00   | MHz                |
| Antenna Gain(typical)                                       | 17.000   | dBi                |
| Antenna Gain(numeric)                                       | 50.119   | -                  |
| Power density at prediction frequency( S)                   | 0.210    | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.411    | mW/cm <sup>2</sup> |