TEST REPORT

FCC MPE Test for HRDU_25_25_S
Certification

APPLICANT
SOLiD, Inc.

REPORT NO.
HCT-RF-2410-FC003-R2

DATE OF ISSUE
November 14, 2024

Tested by
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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
Product Name Model Name	HRDU HRDU_25_25_S
FCC ID	W6UNH2525S
Date of Test	August 14, 2024 ~ October 02, 2024
Location of Test	■ Permanent Testing Lab ☐ On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)
Test Standard Used	CFR 47 Part 2.1091
Test Results	PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	October 07, 2024	Initial Release
1	November 11, 2024	Added note 3 in the 'Simultaneous Band Emission Conditions.'.
2	November 14, 2024	Revised the results for outdoor and simultaneous, as well as note 3 under 'Simultaneous Band Emission Conditions.

Notice

Content
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 results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated. The test results have only been applied with the test methods required by the standard(s).
The laboratory is not accredited for the test results marked *. Information provided by the applicant is marked **. Test results provided by external providers are marked ***.
When confirmation of authenticity of this test report is required, please contact www.hct.co.kr
The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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

3. RESULTS

[Outdoor]

- BRS (Ant 1, Downlink)

Max output Power at antenna input terminal	44.00	dBm
Max output Power at antenna input terminal	25 118.86	mW
Prediction distance	580.00	cm
Prediction frequency	2 496.00	MHz
Antenna Gain(typical)	15.00	dBi
Antenna Gain(numeric)	31.62	-
Power density at prediction frequency(S)	0.1879	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

- BRS (2Tx MIMO, Downlink)

Max output Power at antenna input terminal	47.00	dBm
Max output Power at antenna input terminal	50 118.72	mW
Prediction distance	580.00	cm
Prediction frequency	2 496.00	MHz
Antenna Gain(typical)	15.00	dBi
Antenna Gain(numeric)	31.62	-
Power density at prediction frequency(S)	0.3749	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

[Indoor]

- BRS (Ant 1, Downlink)

Max output Power at antenna input terminal	44.00	dBm
Max output Power at antenna input terminal	25 118.86	mW
Prediction distance	60.00	cm
Prediction frequency	2 496.00	MHz
# Total Antenna Gain(typical)	-16.00	dBi
Total Antenna Gain(numeric)	0.03	-
Power density at prediction frequency(S)	0.0139	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

Total Antenna Gain = Maximum Antenna Gain + Cable Loss

- BRS (2Tx MIMO, Downlink)

Max output Power at antenna input terminal	47.00	dBm
Max output Power at antenna input terminal	50 118.72	mW
Prediction distance	60.00	cm
Prediction frequency	2 496.00	MHz
# Total Antenna Gain(typical)	-13.00	dBi
Total Antenna Gain(numeric)	0.05	-
Power density at prediction frequency(S)	0.0555	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm^2

Total Antenna Gain = Maximum Antenna Gain + Cable Loss

Simultaneous band emission conditions

[Outdoor]

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
BRS/EBS	0.3749	0.9691	≤ 1
3.7 GHz Service	0.5942		

[Indoor]

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
BRS/EBS	0.0221	0.0721	≤ 1
3.7 GHz Service	0.0139		

Note:

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

   [(Power density1 / MPE Limit) + [(Power density2 / MPE Limit) + ⋯] ≤ 1
3. There are several scenarios of simultaneous emissions.

   This MPE report contains the results for Scenario No.1 in the table below.

   - Scenarios of Simultaneous Emissions

Scenario No.	Band 1	Band 2
1	BRS&EBS	3.7 GHz Service
2	3.45 GHz Service	3.7 GHz Service

Number 2 and 3 in the table below are already certified. After spot-checking, conducted and radiated spurious emissions have been tested under the conditions of simultaneous emissions.

- Simultaneous Emission Bands and Certification Information

No.	Band	Model Name	FCC ID	MPE Report No.
1	BRS&EBS	HRDU_25_25_S	W6UNH2525S	HCT-RF-2410-FC003-R2
		HRDU_25_25_M	W6UNH2525M	HCT-RF-2410-FC005-R2
2	3.45 GHz Service	HRDU_345	W6UNH345	HCT-RF-2301-FC002
		HRDU_345_M	W6UNH345M	HCT-RF-2301-FC004
3	3.7 GHz Service	HRDU_Cband_R	W6UNHCBANDR	HCT-RF-2305-FC002
		HRDU_Cband_M_R	W6UNHCBANDMR	HCT-RF-2305-FC004