

TEST REPORT

FCC MPE Test for ADVX-L-1767S8C-S
Certification

APPLICANT
ADRF KOREA, Inc.

REPORT NO.
HCT-RF-2403-FC002

DATE OF ISSUE
March 12, 2024

Tested by
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Applicant

ADRF KOREA, Inc.

5-5, Mojeon-Ri, Backsa-Myun, Icheon-Citi, Kyunggi-Do, Korea

**Eut Type
Model Name**

DAS

ADXV-L-1767S8C-S

FCC ID

N52-ADL-67S8CS

Location of Test

Permanent Testing Lab On Site Testing

(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	March 12, 2024	Initial Release

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).

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. Limit

According to § 1.1310, § 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 -	1.0	30
100.000.....				

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 to the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

3. RESULTS

- 600 MHz Service - LTE 20 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	617.00	MHz
Antenna gain (typical)	3.00	dBi
Antenna gain (numeric)	2.00	-
Power density at prediction frequency (S)	0.0250	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4113	mW/cm ²

- 600 MHz Service - 5G NR 20 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	617.00	MHz
Antenna gain (typical)	3.00	dBi
Antenna gain (numeric)	2.00	-
Power density at prediction frequency (S)	0.0250	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4113	mW/cm ²

- Lower 700 MHz – LTE 15 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	728.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4853	mW/cm ²

- Lower 700 MHz – 5G NR 15 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	728.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4853	mW/cm ²

- Upper 700 MHz – LTE 10 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	746.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4973	mW/cm ²

- Upper 700 MHz – 5G NR 10 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	746.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.4973	mW/cm ²

- ESMR – LTE 5 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	862.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5747	mW/cm ²

- Cellular – LTE 20 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	869.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5793	mW/cm ²

- Cellular – 5G NR 20 MHz (Downlink)

Max output power at antenna input terminal	18.00	dBm
Max output power at antenna input terminal	63.10	mW
Prediction distance	20.00	cm
Prediction frequency	869.00	MHz
Antenna gain (typical)	3.50	dBi
Antenna gain (numeric)	2.24	-
Power density at prediction frequency (S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5793	mW/cm ²

Simultaneous band emission conditions

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
600 MHz Service	0.0609	0.2727	≤ 1
Lower 700 MHz	0.0579		
Upper 700 MHz	0.0565		
ESMR	0.0489		
Cellular	0.0485		

Note:

1. The result of each band was applied to the worst value.
2. MPE ratios are calculated as
$$[(\text{Power density}_1 / \text{MPE Limit}) + [(\text{Power density}_2 / \text{MPE Limit}) + \dots]] \leq 1$$