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FCC MPE REPORT

FCC Certification

Applicant Name:
ADVANCED RF TECHNOLOGIES, INC

Address:
3116 WEST VANOWEN STREET, BURBANK, CA 91505, USA

Date of Issue:
March 27, 2019

Location of test lab:
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

Report No.: HCT-RF-1903-FC003-R2

FCC ID:	**N52-SDR-AF**
APPLICANT:	**ADVANCED RF TECHNOLOGIES, INC**

Model: SDR-AF

EUT Type: REPEATER

The measurements shown in this report were made in accordance with the procedures specified in §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

Report prepared by : Kyung Soo Kang
Engineer of Telecommunication testing center

Approved by : Kwon Jeong
Manager of Telecommunication testing center

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1903-FC003	March 08, 2019	- First Approval Report
HCT-RF-1903-FC003-R1	March 18, 2019	- Corrected typo on the page 4.
HCT-RF-1903-FC003-R2	March 27, 2019	- Revised the results.

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/m^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

- AWS – LTE 20 MHz_Uplink

Max Peak output Power at antenna input terminal	33.50	dBm
Max Peak output Power at antenna input terminal	2.239	W
Prediction distance	0.20	m
Prediction frequency	1 720.00	MHz
Cable loss	24.000	dB
Antenna Gain(typical)	19.100	dBi
Calculate factor	-4.900	dB
Antenna Gain(numeric)	0.324	-
Power density at prediction frequency(S)	0.1441	mW/cm2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm2

* According to the manual, the donor antenna cable must be used with 24 dB Loss.
Calculate gain with the following formula:
Calculate factor (dB) = Antenna gain (typical) (dBi) – Cable loss (dB)

- AWS – LTE 20 MHz_Downlink

Max Peak output Power at antenna input terminal	33.50	dBm
Max Peak output Power at antenna input terminal	2.239	W
Prediction distance	0.30	m
Prediction frequency	2 120.00	MHz
Antenna Gain(typical)	3.000	dBi
Antenna Gain(numeric)	1.995	-
Power density at prediction frequency(S)	0.3950	mW/cm2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm2