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FCC MPE REPORT

FCC Certification

Applicant Name:
GS Instech Co., Ltd.

Date of Issue:
May 03, 2019

Address:
70, Gilpa-ro 71beon-gil, Nam-gu, Inchen, Korea

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-1905-FC002

FCC ID: U88-ICELITETNR43

APPLICANT: GS Instech Co., Ltd.

Model: IC-ELITE TNR43

EUT Type: ICS RF 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 : Jong Seok Lee
Manager of Telecommunication testing center

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1905-FC002	May 03, 2019	- First Approval Report

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

- BRS/EBS 4G LTE 20 MHz, 3 Carrier (TDD)

Max Peak output Power at antenna input terminal	41.000	dBm
Max Peak output Power at antenna input terminal	12589.25	mW
Prediction distance	360.00	cm
Prediction frequency	2540.60	MHz
Antenna Gain(typical)	21.000	dBi
Antenna Gain(numeric)	125.893	-
Power density at prediction frequency(S)	0.973	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

- BRS/EBS 5G NR 60 MHz, 1 Carrier (TDD)

Max Peak output Power at antenna input terminal	41.000	dBm
Max Peak output Power at antenna input terminal	12589.25	mW
Prediction distance	360.00	cm
Prediction frequency	2526.30	MHz
Antenna Gain(typical)	21.000	dBi
Antenna Gain(numeric)	125.893	-
Power density at prediction frequency(S)	0.973	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²