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TEST REPORT

FCC MPE Test for IC-ELITE TNR33

Certification

APPLICANT
GS Instech Co., Ltd.

REPORT NO.
HCT-RF-1906-FC003

DATE OF ISSUE
June 05, 2019

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Applicant	GS Instech Co., Ltd. 70, Gilpa-ro 71beon-gil, Nam-gu, Inchen, Korea
Eut Type	ICS RF Repeater
Model Name	IC-ELITE TNR33

Tested by
Kyung Soo Kang (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	June 05, 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 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)

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	31.000	dBm
Max Peak output Power at antenna input terminal	1258.925	mW
Prediction distance	120.00	cm
Prediction frequency	2540.60	MHz
Antenna Gain(typical)	21.000	dBi
Antenna Gain(numeric)	125.893	-
Power density at prediction frequency(S)	0.876	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	31.000	dBm
Max Peak output Power at antenna input terminal	1258.925	mW
Prediction distance	120.00	cm
Prediction frequency	2526.30	MHz
Antenna Gain(typical)	21.000	dBi
Antenna Gain(numeric)	125.893	-
Power density at prediction frequency(S)	0.876	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2