

TEST REPORT

FCC MPE Test for IT109A017B
Certification

APPLICANT

Innertron

REPORT NO.

HCT-RF-2608-FC009-R1

DATE OF ISSUE

September 4, 2026

Tested by

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(signature)

Technical Manager

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Applicant	Innertron 301, Harmony-ro, Yeonsu-gu, Incheon, Republic of Korea
Product Name	UHF 380-512MHZ 32-CH BASE CONFIG BDA
Model Name	IT109A017B
FCC ID	2BCYP-IT109A017B
Date of Test	June 29, 2026 ~ August 21, 2026
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	August 21, 2026	Initial Release
1	September 4, 2026	Revised the Applicant Information.

Notice

Content
Engineering Statement: 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

[Uplink]

- UHF (406.1 ~ 420 MHz)

Maximum output Power at antenna input terminal	28.00	dBm
Maximum output Power at antenna input terminal	630.96	mW
Prediction distance	55.00	cm
Prediction frequency	406.10	MHz
Total Gain(typical) #	11.13	dBi
Total Gain(numeric)	12.97	-
Power density at prediction frequency(S)	0.2153	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.2707	mW/cm ²

Total Gain = Peak Antenna Gain + Cable Loss = 13 dBi – 1.87 dB = 11.13 dBi

- UHF (421 ~ 430 MHz)

Maximum output Power at antenna input terminal	28.00	dBm
Maximum output Power at antenna input terminal	630.96	mW
Prediction distance	55.00	cm
Prediction frequency	421.00	MHz
Total Gain(typical) #	10.13	dBi
Total Gain(numeric)	10.30	-
Power density at prediction frequency(S)	0.1710	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.2807	mW/cm ²

Total Gain = Peak Antenna Gain + Cable Loss = 12 dBi – 1.87 dB = 10.13 dBi

- UHF (450 ~ 512 MHz)

Maximum output Power at antenna input terminal	28.00	dBm
Maximum output Power at antenna input terminal	630.96	mW
Prediction distance	55.00	cm
Prediction frequency	450.00	MHz
Total Gain(typical) #	10.13	dBi
Total Gain(numeric)	10.30	-
Power density at prediction frequency(S)	0.1710	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.3000	mW/cm ²

Total Gain = Peak Antenna Gain + Cable Loss = 12 dBi – 1.87 dB = 10.13 dBi

[Downlink]

- UHF (406.1 ~ 420 MHz)

Maximum output Power at antenna input terminal	38.00	dBm
Maximum output Power at antenna input terminal	6 309.57	mW
Prediction distance	55.00	cm
Prediction frequency	406.10	MHz
Total Gain(typical) #	1.13	dBi
Total Gain(numeric)	1.30	-
Power density at prediction frequency(S)	0.2153	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.2707	mW/cm ²

Total Gain = Peak Antenna Gain + Cable Loss = 3 dBi – 1.87 dB = 1.13 dBi

- UHF (421 ~ 430 MHz)

Maximum output Power at antenna input terminal	38.00	dBm
Maximum output Power at antenna input terminal	6 309.57	mW
Prediction distance	55.00	cm
Prediction frequency	421.00	MHz
Total Gain(typical) #	1.13	dBi
Total Gain(numeric)	1.30	-
Power density at prediction frequency(S)	0.2153	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.2807	mW/cm ²

Total Gain = Peak Antenna Gain + Cable Loss = 3 dBi – 1.87 dB = 1.13 dBi

- UHF (450 ~ 512 MHz)

Maximum output Power at antenna input terminal	38.00	dBm
Maximum output Power at antenna input terminal	6 309.57	mW
Prediction distance	55.00	cm
Prediction frequency	450.00	MHz
Total Gain(typical) #	1.13	dBi
Total Gain(numeric)	1.30	-
Power density at prediction frequency(S)	0.2153	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.3000	mW/cm ²

Total Gain = Peak Antenna Gain + Cable Loss = 3 dBi – 1.87 dB = 1.13 dBi