TEST REPORT

FCC MPE Test for IT109B016CB
Certification

APPLICANT
DKK North America, Inc.

REPORT NO.
HCT-RF-2408-FC017

DATE OF ISSUE
October 2, 2024

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HCT-RF-2408-FC017

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Applicant	**DKK North America, Inc.** 8105 Rasor Blvd, Suite 222, Plano, TX USA 75024
Product Name Model Name	700/800 0.5W Public Safety BDA IT109B016CB
FCC ID	2BKJD-IT109B016-UB
Date of Test	July 10, 2024 ~ September 11, 2024
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
Manufacturer	**innertron** 301, Harmony-ro, Yeonsu-gu, Incheon City 22014 Korea

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	October 02, 2024	Initial Release

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]

- Public Safety Narrowband

Max Peak output Power at antenna input terminal	25.50	dBm
Max Peak output Power at antenna input terminal	354.81	mW
Prediction distance	90.00	cm
Prediction frequency	799.00	MHz
Antenna Gain(typical)	9.00	dBi
Antenna Gain(numeric)	7.94	-
Power density at prediction frequency(S)	0.0277	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.5327	mW/cm^2

- NPSPAC

Max Peak output Power at antenna input terminal	25.50	dBm
Max Peak output Power at antenna input terminal	354.81	mW
Prediction distance	90.00	cm
Prediction frequency	806.00	MHz
Antenna Gain(typical)	9.00	dBi
Antenna Gain(numeric)	7.94	-
Power density at prediction frequency(S)	0.0277	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.5373	mW/cm^2

- B/ILT; SMR

Max Peak output Power at antenna input terminal	25.50	dBm
Max Peak output Power at antenna input terminal	354.81	mW
Prediction distance	90.00	cm
Prediction frequency	809.00	MHz
Antenna Gain(typical)	9.00	dBi
Antenna Gain(numeric)	7.94	-
Power density at prediction frequency(S)	0.0277	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.5393	mW/cm^2

[Downlink]

- Public Safety Narrowband

Max Peak output Power at antenna input terminal	28.50	dBm
Max Peak output Power at antenna input terminal	707.95	mW
Prediction distance	100.00	cm
Prediction frequency	769.00	MHz
Antenna Gain(typical)	8.00	dBi
Antenna Gain(numeric)	6.31	-
Power density at prediction frequency(S)	0.0355	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.5127	mW/cm^2

- NPSPAC

Max Peak output Power at antenna input terminal	28.50	dBm
Max Peak output Power at antenna input terminal	707.95	mW
Prediction distance	100.00	cm
Prediction frequency	851.00	MHz
Antenna Gain(typical)	8.00	dBi
Antenna Gain(numeric)	6.31	-
Power density at prediction frequency(S)	0.0355	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.5673	mW/cm^2

- B/ILT; SMR

Max Peak output Power at antenna input terminal	28.50	dBm
Max Peak output Power at antenna input terminal	707.95	mW
Prediction distance	100.00	cm
Prediction frequency	854.00	MHz
Antenna Gain(typical)	8.00	dBi
Antenna Gain(numeric)	6.31	-
Power density at prediction frequency(S)	0.0355	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.5693	mW/cm^2

Simultaneous band emission conditions

[Uplink]

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
Public Safety Narrowband	0.0520	0.1548	≤ 1
NPSPAC	0.0515		
B/ILT; SMR	0.0513		

[Downlink]

Band	MPE Ratio (Power density / Limit)	Sum of MPE Ratio	
Public Safety Narrowband	0.0693	0.1944	≤ 1
NPSPAC	0.0627		
B/ILT; SMR	0.0624		

 # Note

1. The result of each band was applied to the worst value.
2. MPE ratios are calculated as

   [(Power density1 / MPE Limit) + [(Power density2 / MPE Limit) + ⋯] ≤ 1