

TEST REPORT

FCC MPE Test for MS-RA11M
Certification

APPLICANT
KOTECHSEMICOM CO., LTD.

REPORT NO.
HCT-RF-2002-FC024

DATE OF ISSUE
March 06, 2020

HCT Co., Ltd.

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Additional Model

-

Applicant

KOTECHSEMICOM CO., LTD.

SILICONPARK BUILDING 3F, 35, Pangyo-ro 255beon-gil, Bundang-gu,
Seongnam-si, Gyeonggi-do, Republic of Korea

Eut Type
Model Name

Public Safety Repeater (PSR-9536)
MS-RA11M

FCC ID

2VAQO-RA11M

This test results were applied only to the test methods required by the standard.

Tested by
Kwang Il Yoon

(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	March 06, 2020	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 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.

RF Exposure Statement

1. Limit

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

3-1. 24GHz Radar

Max Peak output Power at antenna input terminal	7.000	dBm
Max Peak output Power at antenna input terminal	5.012	mW
Prediction distance	20.00	cm
Prediction frequency	24250~24500	MHz
Antenna Gain(typical)	0.970	dBi
Antenna Gain(numeric)	1.250	-
Power density at prediction frequency(S)	0.0012	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

2.1091

EIRP	7.97 (dBm)
ERP	5.82 (dBm)
ERP	0.004 (W)
ERP Limit	3.00 (W)
MARGIN	28.95 (dB)