RF EXPOSURE EVALUATION

1. TEST RESULT CERTIFICATION

Applicant	Alinco Incorporated, Electronics Division
Address	Yodoyabashi Dai Building 13F,4-4-9 Korasibashi, Chuo-ku Osaka,541-0043 Japan
manufacturer	Alinco Incorporated, Electronics Division
Address	Yodoyabashi Dai Building 13F,4-4-9 Korasibashi, Chuo-ku Osaka,541-0043 Japan
Factory	Alinco Incorporated, Electronics Division
Address	Yodoyabashi Dai Building 13F,4-4-9 Korasibashi, Chuo-ku Osaka,541-0043 Japan
Product Designation:	VHF FM MOBILE TRANSCEIVER
Brand Name:	ALINCO
Test Model:	DR-06TA
FCC ID:	**PH3DR-06TA**
Date of Test:	Apr. 02, 2020~Apr. 30, 2020

2. TECHNICAL INFORMATION

A major technical description of EUT is described as following:

Operation Frequency	44.950 MHz to 47.930 MHz
Modulation	FM
Antenna Designation	Detachable
Antenna type	External antenna
Output power	50W
Antenna gain	0dBi
Power Supply	DC 13.8V

3. RF EXPOSURE MEASUREMENT

3.1 INTRODUCTION

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

The 1992 ANSI/IEEE standard (See Listed limit table) specifies a minimum separation distance of 20 cm for performing reliable field measurements to determine adherence to MPE limits.
If the minimum separation distance between a transmitter and nearby persons is more than 20 cm under normal operating conditions, compliance with MPE limits may be determined at such distance from the transmitter. When applicable, operation instructions and prominent warning labels may be used to alert the exposed persons to maintain a specified distance from the transmitter or to limit their exposure durations and usage conditions to ensure compliance.

3.2 FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (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

*Note:

1. f= Frequency in MHz * Plane-wave Equivalent Power Density

2.The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

4. CLASSIFICATION OF THE ASSESSMENT METHODS

According to user manual, The antenna of the product, under normal use condition is at least 139.7 cm away from the body of the user. Warning statement to the user for keeping at least 139.7 cm separation distance and the prohibition of operating to a person has been printed on the user's manual. So, this product under normal use is located on electromagnetic far field between the human body.

$S=PG/4\pi R^2$

Where:

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

5. EUT OPERATION CONDITION

Make the EUT to transmit at Bottom channel, Middle channel and Top channel individually.

6. TEST RESULTS

Note: report the worst result in this part

Antenna Gain=0 dBi (Numeric 1), π=3.141, Duty cycle=50%

Frequency	Output Power	Output Power	Correct Power	Power Density	Power Density Limit	Result
MHz	dBm	mW	mW	mW/cm^2	mW/cm^2	Pass/Fail
47.910	46.90	48980	24490	0.1998	0.2	Pass

Note:

1.The output power is refer to **AGC00725200401FE10.**

2.Correct Power=Output Power*Duty cycle.

3.According to the user manual, the minimum separate distance which used for MPE calculate is 139.7cm.