RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

FCC ID	2AIOGR-900S
Product Description	R/C CAR
Model Name	R-903S
Series Model	R-901S, R-902S, R-904S, R-905S, R-911S, R-912S, R-913S, R-914S, R-915S, R-921S, R-922S, R-923S, R-924S, R-925S, R-931S, R-932S, R-933S, R-934S, R-935S, R-941S, R-942S, R-943S, R-944S, R-945S, DE82, R-701S, R-702S, R-703S, R-704S, R-705S, R-711S, R-712S, R-713S, R-714S, R-715S, R-751S, R-752S, R-753S, R-754S, R-755S, R-601S, R-602S, R-603S, R-604S, R-611S, R-612S, R-613S, R-614S, R-110S, R-111S, R-112S, R-120S, R-121S, R-122S, R-761S, R-762S, R-763S, R-764S, R-765S, R-771S, R-772S, R-773S, R-774S, R-775S, R-781S, R-782S, R-783S, R-784S, R-785S, R-791S, R-792S, R-793S, R-794S, R-795S, R-101S, R-102S, R-103S, R-401S, R-402S, R-403S, R-404S, R-501, R-502, R-511, R-512, R-501S, R-502S, R-504S, R-511S, R-512S, R-521S, R-522S, R-523S, R-524S, R-524, R-531S, R-532S, R-533S, R-534S
Frequency band (Operating)	☐WLAN: 2.412GHz ~ 2.462GHz ☐WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz ☐WLAN: 5.745GHz ~ 5825GHz ☒Others (SRD: 2.410GHz ~ 2.473GHz)
Device category	☒Portable (<20cm separation) ☐Mobile (>20cm separation) ☐Others:
Antenna diversity	☒Single antenna ☐Multiple antennas ☐Tx diversity ☐Rx diversity ☐Tx/Rx diversity
Antenna gain	0dBi
Evaluation applied	☒MPE Evaluation ☐SAR Evaluation

2. PORTABLE DEVICE EVALUATION METHOD AND LIMIT

According to §15.247(i) and §1.1307b(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See KDB 447498 D01 General RF Exposure Guidance v05, section 4.3.1.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,16 where

- ·f(GHz) is the RF channel transmit frequency in GHz
- ·Power and distance are rounded to the nearest mW and mm before calculation17
- ·The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

3. MOBILE DEVICE EVALUATION METHOD AND LIMIT

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.

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.

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

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

4. MEASUREMENT RESULT

Test Mode	Channel Frequency (MHz)	Field Strength (dB μ V/m)	Max Output power (mW)	Calculati on Value (Note 1)	Threshold Value
GFSK					
SRD	2473	88.37	0.2060	0.0647	3.0

Note 1: Calculation Value =[(max. power of channel, mW)/(min. test separation distance, mm)] ·[√f(GHz)].

Fox example: 0.2060/5*√2.473=0.0647≤ 3.0

Note 2:Max Power (dBm) = Field Strength of Fundamental (dBuV/m@3m)-95.23

Note 3:Max Power (mW) = 10^(Max power (dBm)/10)

According to KDB447498 D01 V06, threshold at which no SAR required is ≤3.0 for 1-g SAR, separation distance is 5mm, and no simultaneous SAR measurement is required.