

# FCC RF Exposure Report

**FCC ID** : ACQ-VIP7802ATSC  
**Equipment** : WiFi Set Top Box  
**Model No.** : VIP7802ATSC  
**Brand Name** : ARRIS  
**Applicant** : ARRIS  
**Address** : 101 Tournament Drive, Horsham,  
Pennsylvania, United States 19044  
**Standard** : 47 CFR FCC Part 2.1091  
**Received Date** : Nov. 30, 2021  
**Tested Date** : Dec. 29, 2021 ~ Jan. 20, 2022

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:

  
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Along Chen / Assistant Manager

  
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Gary Chang / Manager

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## Release Record

Report No.	Version	Description	Issued Date
FA1N3001	Rev. 01	Initial issue	Feb. 10, 2022

# 1 MPE EVALUATION OF MOBILE DEVICES

## 1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm <sup>2</sup> )	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

## 1.2 MPE EVALUATION FORMULA

$$Pd = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm<sup>2</sup>

Pt= EIRP in mW

Pi= 3.1416

R= Measurement distance

## 1.3 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

## 1.4 MEASUREMENT UNCERTAINTY

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Parameters	Uncertainty
Conducted power	±0.808 dB

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

## 1.5 MPE EVALUATION RESULTS

### Non-beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	*Ratio	Pass / Fail
2412~2462 (Wi-Fi)	24.73	25	4.5	20	0.177	1	0.177	Pass
5150~5250 (Wi-Fi)	23.08	23.50	4.3	20	0.120	1	0.120	Pass
5250~5350 (Wi-Fi)	23.40	23.50	4.6	20	0.128	1	0.128	Pass
5470~5725 (Wi-Fi)	23.03	23.50	5.1	20	0.144	1	0.144	Pass
5725~5850 (Wi-Fi)	23.07	23.50	5	20	0.141	1	0.141	Pass
2402-2480 (BT EDR)	3.34	3.5	2.7	20	0.001	1	0.001	Pass
2402-2480 (BT LE)	3.05	3.5	2.7	20	0.001	1	0.001	Pass

### Beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	*Ratio	Pass / Fail
2412~2462 (Wi-Fi)	18.28	18.5	7.51	20	0.079	1	0.079	Pass
5150~5250 (Wi-Fi)	20.07	20.50	7.06	20	0.113	1	0.113	Pass
5250~5350 (Wi-Fi)	20.39	20.50	7.56	20	0.127	1	0.127	Pass
5470~5725 (Wi-Fi)	20.02	20.50	7.62	20	0.129	1	0.129	Pass
5725~5850 (Wi-Fi)	20.00	20.00	7.91	20	0.123	1	0.123	Pass

\*Ratio = Power density / Limit.

Note:

2412~2462MHz: Directional gain = 4.5 dBi + 10\*log(2/1) = 7.51 dBi

5150~5250MHz: Directional gain = 10 \* log((10<sup>3.8/20</sup>+10<sup>4.3/20</sup>)/2) = 7.06 dBi

5250~5350MHz: Directional gain = 10 \* log((10<sup>4.5/20</sup>+10<sup>4.6/20</sup>)/2) = 7.56 dBi

5470~5725MHz: Directional gain = 10 \* log((10<sup>5.1/20</sup>+10<sup>4.1/20</sup>)/2) = 7.62 dBi

5725~5850MHz: Directional gain = 10 \* log((10<sup>5/20</sup>+10<sup>4.8/20</sup>)/2) = 7.91 dBi

## 1.6 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

Mode	Max Ratio of Each Mode	
	<i>Non-beamforming</i>	<i>Beamforming</i>
Wi-Fi 2.4 GHz	0.177	0.079
Wi-Fi 5 GHz	0.144	0.129
BT	0.001	0.001
Sum (Wi-Fi 2.4 GHz+ BT)	0.178	0.080
Sum (Wi-Fi 5 GHz+ BT)	0.145	0.130
Limit	1	1
Pass / Fail	Pass	Pass

## 2 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

### **Linkou**

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If you have any suggestion, please feel free to contact us as below information.

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