

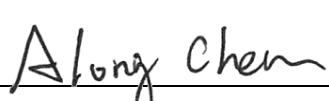


# FCC RF Exposure Report

**FCC ID** : 2A7G3XS5G01  
**Equipment** : 5G SOM  
**Model No.** : XS5G01-GBO  
(refer to item 1.1.1 for more details)  
**Brand Name** : XSquare  
**Applicant** : XSquare Communications Corporation  
**Address** : NO.6 INNOVATION ROAD Ⅱ, SCIENCE PARK,  
HSINCHU 30076, TAIWAN, R.O.C  
**Standard** : 47 CFR FCC Part 2.1091  
**Received Date** : Dec. 01, 2022  
**Tested Date** : Dec. 23, 2022 ~ Feb. 09, 2023

We, International Certification Corp., 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 may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:



Along Chen / Assistant Manager

Approved by:



Gary Chang / Manager

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## Release Record

Report No.	Version	Description	Issued Date
FA132502-04	Rev. 01	Initial issue	Apr. 18, 2023

## 1 General Description

### 1.1 Information

#### 1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
XSquare	XS5G01-GBO	5G SOM	With GPS Component
	XS5G01-GBI		Without GPS Component

◆ The above models, model **XS5G01-GBO** was selected as a representative one for the final test and only its data was recorded in this report.

## 2 MPE EVALUATION OF MOBILE DEVICES

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.

### 2.1 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

### 2.2 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

## 2.3 MPE EVALUATION RESULTS

Mode	Frequency (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> )	Pass / Fail
LTE Band 2	1850	22.66	23	0.2	20	0.042	1.000	Pass
LTE Band 4	1710	22.58	23	1.9	20	0.061	1.000	Pass
LTE Band 5	824	22.99	23	-1.2	20	0.030	0.549	Pass
LTE Band 12	699	22.77	23	-0.7	20	0.034	0.466	Pass
LTE Band 13	777	22.85	23	-0.7	20	0.034	0.518	Pass
LTE Band 17	704	22.76	23	-0.7	20	0.034	0.469	Pass
LTE Band 25	1850	22.71	23	0.2	20	0.042	1.000	Pass
LTE Band 26	814	23.11	23.5	-1.2	20	0.034	0.543	Pass
LTE Band 30	2305	23.17	23.5	-2.1	20	0.027	1.000	Pass
LTE Band 38	2570	23.5	24	-1.1	20	0.039	1.000	Pass
LTE Band 40	2300	23.34	23.5	-2.1	20	0.027	1.000	Pass
LTE Band 41	2496	23.98	24	-1.1	20	0.039	1.000	Pass
LTE Band 42	3450	22.86	23	-0.4	20	0.036	1.000	Pass
LTE Band 42	3550	22.76	23	-0.4	20	0.036	1.000	Pass
LTE Band 43	3600	22.73	23	-0.4	20	0.036	1.000	Pass
LTE Band 48	3550	22.89	23	-0.4	20	0.036	1.000	Pass
LTE Band 66	1770	22.74	23	1.9	20	0.061	1.000	Pass
5G NR n2	1850	23.47	23.5	0.2	20	0.047	1.000	Pass
5G NR n71	663	22.32	22.5	-2.8	20	0.019	0.442	Pass
5G NR n77	3450	22.87	23	-0.2	20	0.034	1.000	Pass
5G NR n77	3700	22.97	23	-0.2	20	0.038	1.000	Pass

## 2.4 MAXIMUM ANTENNA GAIN EVALUATION (REFERENCE ONLY)

Mode	Rated power (dBm)	Max Gain to comply with MPE			Max Gain to comply with ERP/EIRP		Max Gain to comply with MPE and ERP/EIRP (dBi)
		Antenna Gain (dBi)	Distance (cm)	Limit (mW/cm <sup>2</sup> )	Antenna Gain (dBi)	Limit (W)	
LTE Band 2	23	14.01	20	1.000	10.01	2	10.01
LTE Band 4	23	14.01	20	1.000	7.00	1	7.00
LTE Band 5	23	11.41	20	0.549	17.60	7	11.41
LTE Band 12	23	10.70	20	0.466	13.92	3	10.70
LTE Band 13	23	11.16	20	0.518	13.92	3	11.16
LTE Band 17	23	10.73	20	0.469	13.92	3	10.73
LTE Band 25	23	14.01	20	1.000	10.01	2	10.01
LTE Band 26	23.5	10.86	20	0.543	17.10	7	10.86
LTE Band 30	23.5	13.51	20	1.000	0.48	0.25	0.48
LTE Band 38	24	13.01	20	1.000	9.01	2	9.01
LTE Band 40	23.5	13.51	20	1.000	0.48	0.25	0.48
LTE Band 41	24	13.01	20	1.000	9.01	2	9.01
LTE Band 42 (3450MHz)	23	14.01	20	1.000	7.00	1	7.00
LTE Band 42 (3550 MHz)	23	14.01	20	1.000	0.01	0.2	0.01
LTE Band 43	23	14.01	20	1.000	0.01	0.2	0.01
LTE Band 48	23	14.01	20	1.000	0.01	0.2	0.01
LTE Band 66	23	14.01	20	1.000	7.00	1	7.00
5G NR n2	22.5	14.51	20	1.000	10.51	2	10.51
5G NR n71	22.5	10.97	20	0.442	14.42	3	10.97
5G NR n77 (3450 MHz)	23	14.01	20	1.000	7.00	1	7.00
5G NR n77 (3700 MHz)	23	14.01	20	1.000	7.00	1	7.00

### 3 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

Tel: 886-2-2601-1640  
No.30-2, Ding Fwu Tsuen, Lin Kou  
District, New Taipei City, Taiwan  
(R.O.C.)

#### Kwei Shan

Tel: 886-3-271-8666  
No.3-1, Lane 6, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)  
No.2-1, Lane 6, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)

#### Kwei Shan Site II

Tel: 886-3-271-8640  
No.14-1, Lane 19, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)

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

Tel: 886-3-271-8666  
Fax: 886-3-318-0345  
Email: [ICC\\_Service@icertifi.com.tw](mailto:ICC_Service@icertifi.com.tw)

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