

## RF Exposure Report

**Report No.:** SABHQC-WTW-P21090134

**FCC ID:** AK8J20H103

**Test Model:** J20H103

**Received Date:** 2021/9/3

**Test Date:** 2021/10/28

**Issued Date:** 2021/12/1

**Applicant:** Sony Corporation

**Address:** 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Hsin Chu Laboratory

**Lab Address:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan

**Test Location:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
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**FCC Registration /  
Designation Number:** 723255 / TW2022



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### Release Control Record

Issue No.	Description	Date Issued
SABHQC-WTW-P21090134	Original release.	2021/12/1

## 1 Certificate of Conformity

**Product:** 2TX 11ax (WiFi6E) + BT/BLE Combo Card  
**Brand:** FOXCONN  
**Test Model:** J20H103  
**Sample Status:** Engineering sample  
**Applicant:** Sony Corporation  
**Test Date:** 2021/10/28  
**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :** Vivian Huang , **Date:** 2021/12/1  
Vivian Huang / Specialist

**Approved by :** Clark Lin , **Date:** 2021/12/1  
Clark Lin / Technical Manager

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	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

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

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

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20 cm away from the body of the user. So, this device is classified as **Mobile Device**.

## 2.4 Antenna Gain

For WLAN					
Antenna NO.	RF Chain NO.	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
0	0	-0.33	2.4~2.4835	Monopole	none
		1.45	5.15~5.25		
		1.52	5.25~5.35		
		1.58	5.47~5.725		
		1.22	5.725~5.85		
		1.72	5.955~6.415		
		0.29	6.435~6.515		
		0.2	6.535~6.855		
		2.08	6.875~7.115		
1	1	-0.2	2.4~2.4835	Monopole	none
		1.97	5.15~5.25		
		2.16	5.25~5.35		
		1.12	5.47~5.725		
		0.89	5.725~5.85		
		1.81	5.955~6.415		
		-0.06	6.435~6.515		
		-0.05	6.535~6.855		
		1.29	6.875~7.115		
For Bluetooth					
Antenna NO.	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type	
0	-3.1	2.4~2.4835	PIFA	none	
1	-3.13	2.4~2.4835	PIFA	none	

\*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

## 2.5 Calculation Result

Operation Mode	Evaluation Frequency (MHz)	Max. Average Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Pass/ Fail
WiFi 2.4GHz	2412-2462	335.401	-0.2	20	0.06372	1	Pass
WiFi 5GHz (U-NII-1)	5180-5240	234.698	1.97	20	0.07349	1	Pass
WiFi 5GHz (U-NII-2A)	5240-5320	235.18	2.16	20	0.07694	1	Pass
WiFi 5GHz (U-NII-2C)	5500-5720	245.798	1.58	20	0.07036	1	Pass
WiFi 5GHz (U-NII-3)	5745-5825	631.459	1.22	20	0.16637	1	Pass
BT-EDR	2402-2480	22.336	-3.1	20	0.00218	1	Pass
BT-LE	2402-2480	99.541	-3.1	20	0.00970	1	Pass

Operation Mode	Evaluation Frequency (MHz)	Max. EIRP (mW)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
WLAN 6GHz (U-NII-5)	5955-6415	33.189	20	0.0066	1	Pass
WLAN 6GHz (U-NII-6)	6425-6525	34.754	20	0.00692	1	Pass
WLAN 6GHz (U-NII-7)	6525-6875	33.806	20	0.00673	1	Pass
WLAN 6GHz (U-NII-8)	6875-7115	24.491	20	0.00487	1	Pass

**Note:**

Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Simultaneously transmission condition:

Condition	Technology	
1	WLAN (2.4GHz)	WLAN (6GHz)
2	WLAN (2.4GHz)	WLAN (5GHz)
3	WLAN (6GHz)	Bluetooth
4	WLAN (5GHz)	Bluetooth
5	WLAN (2.4GHz)	Bluetooth

**Conclusion:**

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

Condition 1:  $WLAN\ 2.4GHz + WLAN\ 6GHz = 0.06372 / 1 + 0.00692 / 1 = 0.07064$

Condition 2:  $WLAN\ 2.4GHz + WLAN\ 5GHz = 0.06372 / 1 + 0.16637 / 1 = 0.23009$

Condition 3:  $WLAN\ 6GHz + Bluetooth = 0.00692 / 1 + 0.00970 / 1 = 0.01662$

Condition 4:  $WLAN\ 5GHz + Bluetooth = 0.16637 / 1 + 0.00970 / 1 = 0.17607$

Condition 5:  $WLAN\ 2.4GHz + Bluetooth = 0.06372 / 1 + 0.00970 / 1 = 0.07342$

**Therefore the maximum calculations of above situations are less than the “1” limit.**

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