

## EXHIBIT C - RF EXPOSURE EVALUATION

### Applicable Standard

According to subpart §1.1310, 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 level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
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;

According to §1.1310 and §2.1091 RF exposure is calculated.

### Calculation formula:

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

**Calculated Data:**

Radio	Operation Modes	Frequency (MHz)	Antenna Gain		Output power <sup>▲</sup>		Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
			(dBi)	(numeric)	(dBm)	(mW)			
Bluetooth/ WiFi Module	BT	2402-2480	3.02	2.00	7.59	5.74	20.00	0.002	1.0
	BLE	2402-2480	3.02	2.00	4.81	3.03	20.00	0.001	1.0
	WiFi 2.4G	2412-2462	3.02	2.00	15.92	39.08	20.00	0.016	1.0
NFC	NFC	13.56	/	/	-24.18	0.004	20.00	<<0.001	0.98

Note:

1. The Antenna Type of BT/BLE/WiFi 2.4G is PIFA.
2. For BT/BLE/WiFi 2.4G use conducted output power and NFC use EIRP.
3. The Conducted output power provided by manufacturer (Please refer to report No.: CN21212O 002, issued on 12/24/2021).
4. The device contains a certified Bluetooth & Wi-Fi module, FCC ID: 2AC7Z-ESPWROOM32UE, certified on 01/25/2022.

Note:

1. The output power provided by manufacturer
2. EIRP(dBm)=E(dBuV/m)-95.2 for 3 meters distance  
NFC E Field = 71.02dBuV/m@3m  
==> EIRP= -24.18dBm

**Simultaneous transmission:**

BT/BLE and WiFi can't transmit simultaneously, WiFi/BT/BLE and NFC can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$$S_{WiFi}/S_{limit-WiFi} + S_{NFC}/S_{limit-NFC}$$

$$=0.016/1.0+0.001/0.98$$

$$=0.017$$

$$< 1.0$$

**Result: Compliant. The device compliant RF Exposure at 20cm distances.**

\*\*\*\*\* END OF REPORT \*\*\*\*\*