

# **Certification Exhibit**

FCC ID: 2AG9G-FCL5324

FCC Rule Part: 47 CFR Part 2.1091

**TÜV SÜD Project Number: 72136736** 

Manufacturer: Flextronics America LLC

Model: FCL5324

**RF Exposure** 

Model: FCL5324 FCC ID: 2AG9G-FCL5324

#### **General Information:**

Applicant: Flextronics America LLC

Device Category: Mobile

Environment: General Population/Uncontrolled Exposure

The 2.4 GHz Wi-Fi is collocated and transmits simultaneously with the 900 MHz LoRa radio.

## **Technical Information:**

**Table 1: Technical Information** 

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	2.4 GHz Wi-Fi	900 MHz LoRa				
Antenna Type(s)	PIFA	PIFA				
Antenna Gain (dBi)	1	1				
Conducted Power (dBm)	23.804	19.86				
Conducted Power (mW)	240.10	96.83				
Maximum Peak EIRP (mW)	302.27	121.90				
Maximum Peak ERP (mW)	184.25	74.30				

### **MPE Calculation:**

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

#### Where:

S = power density (in appropriate units, e.g. mW/cm2)

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

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

**Table 2: MPE Calculation (Including Collocated Devices)** 

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)	Radio
2437	23.804	1.00	240.10	1	1.259	20	0.060	Α
923.3	19.86	0.62	96.83	1	1.259	20	0.024	В

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<u>Summation of MPE ratios – Simultaneous Transmissions</u>
This device contains multiple transmitters which can operate simultaneously; therefore the maximum RF exposure is determined by the summation of MPE ratios. The limit is such that the summation of MPE ratios is  $\leq 1.0$ .

**Table 3: Summation of MPE Ratios** 

Radio A (2.4 GHz Wi-Fi)	Х		
Radio B (900 MHz LoRa)	X		
Radio A MPE Ratio	0.060135392		
Radio B MPE Ratio	0.039398398		
MPE Ratio Summation:	0.099533790		

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