



Excellence in Compliance Testing

Certification Exhibit

FCC ID: 2AG9G-FCL5320A

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 16-0157

Manufacturer: Flextronics America LLC
Model: FCL5320v02

RF Exposure

General Information:

Applicant: Flextronics America LLC
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

The FCL5320v02 Zigbee radio, Wi-Fi and BLE radios are collocated and can transmit simultaneously.

Technical Information:**Table 1: Technical Information**

	<i>Device 1: Zigbee</i>	<i>Device 2: WiFi</i>	<i>Device 3: BLE</i>
Frequency Band(s) (MHz)	2405 - 2480	2412 - 2462	2402 - 2480
Antenna Type(s)	Inverted F Antenna	PIFA	PIFA
Antenna Gain (dBi)	2.5	2.5	2.5
Conducted Power (dBm)	18.78	24.43	-4.54
Conducted Power (mW)	75.51	277.33	0.35
Maximum Peak EIRP (mW)	134.28	493.17	0.63
Maximum Peak ERP (mW)	81.85	300.61	0.38

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
2475	18.78	1.00	75.51	2.5	1.778	20	0.0267	A
2462	24.43	1.00	277.33	2.5	1.778	20	0.0981	B
2402	-4.54	1.00	0.35	2.5	1.778	20	0.0001	C

Summation of MPE ratios – Simultaneous Transmissions

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 ≤ 1.0.

Table 3: Summation of MPE Ratios

Radio A	x
Radio B	x
Radio C	x
Radio A MPE Ratio	0.02671346
Radio B MPE Ratio	0.098113811
Radio C MPE Ratio	0.000124374
MPE Ratio Summation:	0.124951645