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## **Certification Exhibit**

**FCC ID: GV3-20Z3X00**

**FCC Rule Part: 47 CFR Part 2.1091**

**TÜV SÜD Project Number: 72159794**

Manufacturer: ACCO Brands USA LLC  
Model: Z-2500; Z-3500

## **RF Exposure**

**General Information:**

Applicant: ACCO Brands USA LLC  
 Device Category: Mobile  
 Environment: General Population/Uncontrolled Exposure

The model Z-2500; Z-3500 2.4GHz proprietary radio is collocated and transmits simultaneously with the GT-Tronics BLE and 802.11 (Model EC864FPA; FCCID: B4OEC864FPA) radios.

**Technical Information:**

**Table 1: Technical Information**

Detail	Z-2500; Z-3500 2.4GHz Proprietary (A)	GT-Tronics BLE (B)	GT-Tronics 802.11 (C)
Frequency Range	2402 – 2480MHz	2402 – 2480MHz	2412 – 2462MHz
Number of Channels	39	39	11
Modulation Format	GFSK	GFSK	802.11b/g/n20
Antenna Type / Gain	PCB Trace Antenna / 2.0 dBi	PCB Antenna / -0.30dBi	PCB Antenna / 2dBi

**MPE Calculation:**

The Power Density (mW/cm<sup>2</sup>) is calculated as follows:

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

Where:

S = 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

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 <sup>2</sup> )	Radio
2402	-5.48	1.00	0.28	2	1.585	20	0.00009	A
2402	3.42	1.00	2.20	-0.3	0.933	20	0.00041	B
2412	17.64	1.00	58.08	2	1.585	20	0.01831	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**

	Scenario 1	Scenario 2	Scenario 3
Radio A	x	x	x
Radio B	x		x
Radio C		x	x
Radio A MPE Ratio	0.00009	0.00009	0.00009
Radio B MPE Ratio	0.00041		0.00041
Radio C MPE Ratio		0.01831	0.01831
MPE Ratio Summation:	0.00050	0.01840	0.01881