RF Exposure Report (FCC)

Report No.:	WIR130084-FCC-RF Exposure Rev. 1
Test Model:	AMI-I210-TL-ME9-SP
Received Date:	January 26, 2024
Test Date:	February 23, 2024
Issued Date:	March 4, 2024
Applicant:	EasyMetering, LLC
Address:	3651 FAU Boulevard, Boca Raton, FL 33431
Issued By:	Eurofins Electrical and Electronic Testing NA, Inc.
Lab Address:	914 W. Patapsco Avenue, Baltimore, MD 21230

1. Certificate of Conformity

Product:	Watthour Meter
Brand:	EasyMetering, LLC
Test Model:	AMI-I210-TL-ME9-SP
Cellular FCC ID	2BD5W-I210-ME9-SP
BT/WIFI FCC ID	2AC7Z-ESPPICOMINI
Applicant:	EasyMetering, LLC
Test Date:	February 23, 2024
Standard:	47 CFR FCC Part 2.1093

Donald Salguero
Wireless Lab

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of Part 22 Subpart H and Part 24 Subpart E and Part 27 Subpart L of the FCC Rules under normal use and maintenance.

Michael Griffiths
Manager, Wireless Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	February 27, 2024	Initial Issue.
1	March 4, 2024	Added Cellular FCC ID; BT/WIFI FCC ID; Updated section 2.1; Updated section 3.

2. RF Exposure

Requirement:

47 CFR 2.1091(c)(1)

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), whichever is greater. For mobile devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 of this chapter is necessary if the ERP of the device is greater than ERP20cm in the formula below. If the ERP of a single RF source at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP) in comparison with the following formula only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of λ/4 or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

47 CFR 2.1091(c)(2)

For multiple mobile or portable RF sources within a device operating in the same time averaging period, routine environmental evaluation is required if the formula in § 1.1307(b)(3)(ii)(B) of this chapter is applied to determine the exemption ratio and the result is greater than 1.

2.1 MPE Calculation Formula

Pd = (Pout*G) / (4*pi*R²)

Where

Pd = power density in mW/cm²

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

	Band	Max Power + Tune up (dBm)	Antenna Gain (dBi)	Max EIRP (dBm)	Min. Distance (cm)	Calculation (mW/cm²)	FCC Limit (mW/cm²)	Ratio
2BD5W-I210-ME9-SP	2	25	3	28	20	0.126	1.000	0.126
	4	25	3	28	20	0.126	1.000	0.126
	5	25	3	28	20	0.126	0.549	0.23
	8	25	3	28	20	0.126	0.598	0.211
	12	25	3	28	20	0.126	0.466	0.27
	13	25	3	28	20	0.126	0.518	0.243
	25	25	3	28	20	0.126	1.000	0.126
	26	25	3	28	20	0.126	0.543	0.232
	66	25	3	28	20	0.126	1.000	0.126
	71	22	3	25	20	0.063	0.442	0.143
	85	25	3	28	20	0.126	0.466	0.27
2AC7Z-ESPPICOMINI	Mode	Max Power + Tune up (dBm)	Antenna Gain (dBi)	Max EIRP (dBm)	Min. Distance (cm)	Calculation (mW/cm²)	FCC Limit (mW/cm²)	Ratio
	WLAN 2.4GHz	18	2	20	20	0.02	1.000	0.02
	BLE	8	2	10	20	0.002	1.000	0.002

3. Conclusion

Conclusion:

The formula for the MPE calculation of multiple transmitters with simultaneous emissions is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Co-location worse case (BT, WLAN 2.4GHz & LTE)

Total MPE Percentage for

1. LTE, WLAN 2.4GHz, & BT to transmit simultaneously.

0.27 + 0.02 + 0.002 = 0.292 < 1

Therefore, the maximum calculations of above situations are less than the "1" limit.