

ASSA ABLOY Inc

RF Exposure Exhibit

SCOPE OF WORK

EMC TESTING – Transmitter Board, Model: ADA1012

REPORT NUMBER

106183429MPK-003

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**RF Exposure Exhibit
(Portable devices)**

Report Number: 106183429MPK-003

Project Number: G106183429

Report Issue Date: September 09, 2025

Revised Date: February 06, 2026

Product Designation: Transmitter Board

Model Tested: ADA1012

FCC ID: U4A5800ADAEZ2

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to

47CFR 2.1093

RSS-102 Issue 6

for

ASSA ABLOY Inc

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Report No. 106183429MPK-003	
Equipment Under Test:	Transmitter Board
Model(s) Tested:	ADA1012
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Applicable Regulation:	47CFR 2.1093 RSS-102 Issue 6

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1.0 RF Exposure Summary

Test	Reference FCC	Reference Industry Canada	Result
Radio frequency Radiation Exposure Evaluation	47 CFR§2.1093	RSS-102 Issue 6	Complies

2.0 RF Exposure Limits

2.1 FCC Limits

According to FCC KDB 447498 D01 v06, at frequency 315 MHz and separation distance of ≤ 5 mm the equation and threshold in section 4.3.1 must be applied to determine the SAR exclusion.

The SAR exclusion threshold is determined by the following formula (KDB 447498 D01 Section 4.3.1(a))

$$\left[\frac{\text{Max. tune up Power (mW)}}{\text{Min. Test Separation Distance (mm)}} \right] * \sqrt{F(\text{GHz})} \leq 3$$

2.2 Industry Canada Limits

According to RSS-102 sec. 6.3, at frequency 315MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 32 mW.

3.0 Test Results (Portable Configuration)

3.1 Classification

1. For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user. Per the applicant, ASSA ABLOY Inc, the AD1012 is not intended to be worn on the body; however, the user may be within 20cm of the device during transmission.

3.2 EIRP calculations

The Transmitter Board consists of a 315 MHz radio.

Note: The 315MHz radio complies with Field Strength limits of 47 CFR FCC Part 15 sub part 15.231 as per test Report # 106183429MPK-001.

3.3 Maximum RF Power

Frequency (MHz)	Average FS @ 3m (dBμV/m)	EIRP (dBm)	EIRP (mW)	Note
315	69.91	-25.35	0.00292	FS measurements were taken from Report #106183429MPK-001.

3.4 RF Exposure Calculation for Transmitter Board

3.4.1 RF Exposure calculation for FCC KDB 447498 D01 v06

According to FCC KDB 447498 D01 v06, at frequency 315 MHz and separation distance of ≤ 5 mm, SAR test exclusion threshold limit is less than 3 for 1-g SAR.

Maximum Average Field Strength measured = 69.91dB μ V/m or -25.35dBm or 0.00292mW (from Report #106183429MPK-001).

According to MICRF112 chip datasheet, the maximum output power of 10dBm was used for calculation as worse-case power. This value was provided by the client and may affect compliance. Intertek does not claim compliance for values other than those shown.

No duty cycle was considered.

According to KDB 447498 D01 Section 4.3.1 the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula (KDB 447498 D01 Section 4.3.1(a))

$$\left[\frac{\text{Max. tune up Power (mW)}}{\text{Min. Test Separation Distance (mm)}} \right] * \sqrt{F(\text{GHz})} \leq 3$$

$$[10 \text{ (mW)} / 5 \text{ (mm)}] * \sqrt{0.315 \text{ (GHz)}}$$

Which is less than 3

Results: SAR evaluation is not required since the higher of the maximum conducted or equivalent isotopically radiated power (EIRP) source-based, time averaged output power is below the exemption limit.

Note: Antenna gains below 0 are considered as 0dBi.

3.4.2 RF Exposure calculation for RSS-102 Issue 6

According to RSS-102 sec. 6.3, at frequency 315 MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 32 mW (the limit of 450MHz was used).

RSS-102 Issue 6 Section 7.1.8 SAR estimation for exempted transmitters:

$$SAR_{estimated} = \frac{P_{max}}{P_{max,exemption}} \times 0.25 \times SAR_{limit} W/kg$$

Frequency Range (MHz)	P_{max}^*	$P_{max, exemption}$	Distance	SAR_{limit}	SAR estimated
	(mW)	mW	(mm)	(W/kg)	(W/kg)
315	10	32	5	1.6	0.125

Maximum Average Field Strength measured = 69.91dB μ V/m or -25.35dBm or 0.00292mW (from Report #106183429MPK-001).

*According to MICRF112 chip datasheet, the maximum output power of 10dBm was used for calculation as worse-case power. This value was provided by the client and may affect compliance. Intertek does not claim compliance for values other than those shown.

No duty cycle was considered.

SAR_{estimated} is less than $P_{max,exemption}$, therefore EUT is exempt from routine evaluation.

4.0 Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
1.0/ G106183429	KT	ML	September 06, 2025	Original document
2.0/ G106183429	KT	ML	February 06, 2026	Updated the Maximum Average Field Strength measured and chip maximum output power in Section 3.4.1 and 3.4.2