SPOT CHECK EVALUATION

FCC ID	:	**PKRISGFX31001**
Equipment	:	**Indoor Router**
Model Name	:	**FX3100-1**
Applicant	:	**Inseego Corp.** **9710 Scranton Road Suite 200, San Diego, CA 92121**
Standard	:	**47 CFR Part 96**

The product was received on Mar. 10, 2023 and testing was performed from Mar. 13, 2023 to Apr. 13, 2023. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Lance Tang

Approved by: Lance Tang

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Revision History

Version	Description	Issue Date
01	Initial issue of report	Apr. 13, 2023
02	1. Power value updated 2. This report is an updated version, replacing the report issued on Apr. 13, 2023	Apr. 19, 2023

1. Introduction

Per guidelines provided in KDB Pub. 484596 for EMC data referencing, the applicant, Inseego Corp. is pursuing partial data reuse from a certified model deemed to be a parent to its variant model based on strong similarities which bear the same grantee code.

After the illustration and descriptions were reviewed through a KDB inquiry (Tracking# 911799) the test proposal is considered acceptable and consented by FCC. According to FCC, an important aspect of the data referencing procedure defined in the Apr. 2021 TCB workshop is the availability of spot check data, along with the specification of the acceptance criteria to define if the spot check data (compared to the original parent device data) are sufficient. This spot check evaluation report is made to give evidence presenting the feasibility of data reuse for all RF conducted test items, whereas the radiated test items will be fully evaluated and tested due to enclosure difference between the following two models.

Products:

• Model: M3000B (Parent model)

o FCC ID: PKRISGM3000B

o Product Type: Portable Hotspot Modem

• Model: FX3100-1 (Variant model)

o FCC ID: PKRISGFX31001

o Product Type: Indoor Router

2. Model Difference Information

The following are descriptions of similarities and differences between both models, M3000B (FCC ID: PKRISGM3000B) and FX3100-1(FCC ID: PKRISGFX31001):

As declared by the manufacturer, both models share the same Radio Modem PCB Circuitry and Board Layout between both M3000B Modem and FX3100-1 Modem Boards, while has some HW change when integrated into the Indoor Router (FX3100-1).

Differences in Hardware:
Hotspot/Modem PCB Changes when integrated into the Indoor Router:
o Remove Display (Required Only for Hotspot Configuration)
o Remove Proximity Sensor (Required Only on Hotspot Configuration SAR)
o Remove Replaceable Battery (Required Only on Hotspot Configuration)

Based on the manufacturer's declaration and the details submitted for test assessments through the KDB inquiry, there is No difference in Radio Modem PCB Circuitry and Board Layout between both M3000B Modem and FX3100-1 Modem Boards. Difference in hardware will not impact Conducted Radio Tx Performance for the supported 4G-LTE, 5G-FR1 (NR Sub6), and WLAN Radios. The details of similarity and difference are illustrated in the operational description, and based on the information, spot checks on conducted power were performed to ensure it is within the tune-up tolerance made for FX3100-1(FCC ID: PKRISGFX31001). The applicant shall be held accountable for the authenticity of what is declared, while the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PKRISGFX31001).

3. Spot Check Verification Data

Conducted power measurements performed on the variant model are based on the worst-case condition identified from the parent model to demonstrate the fact that the conducted test data from the original model remain representative for the variant model.

A summary of conducted power spot checks for each rule entry and technology is listed as follows.

Test Item	Mode	PKRISGM3000B Parent Worst Result (dBm)	PKRISGFX31001 Variant Check Result (dBm)	Difference (dB)
Conducted Power (dBm)	WWAN LTE Band 48	21.49	21.48	-0.01
	WWAN LTE Band 48C	17.43	17.42	-0.01
	WWAN NR n48	21.49	21.21	-0.28
	WWAN NR n48 (UL MIMO)	17.39	16.95	-0.44

Conclusion:

The power measurements show no prominent difference between both parent and variant models, based on the manufacturer's declaration about the product similarity and difference mentioned in the chapters above a full reuse of conducted test results from M3000B (FCC ID: PKRISGM3000B) to FX3100-1(FCC ID: PKRISGFX31001) is feasible and justifiable as the existing results still remain representative.

4. Measuring Equipment List

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	45141354	N/A	Jul. 27, 2022	Mar. 13, 2023~ Apr. 13, 2023	Jul. 26, 2023	Conducted (TH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101089	10Hz-40GHz	Jun. 01, 2022	Mar. 13, 2023~ Apr. 13, 2023	May 31, 2023	Conducted (TH01-CA)
Radio Communication Test Station	Anritsu	MT8000A	6262208375	N/A	Jun. 08, 2022	Mar. 13, 2023~ Apr. 13, 2023	Jun. 07, 2023	Conducted (TH01-CA)
Radio communication analyzer	Anritsu	MT8821C	6262257889	N/A	Aug. 17, 2022	Mar. 13, 2023~ Apr. 13, 2023	Aug. 16, 2023	Conducted (TH01-CA)

5. Reference Detail

Rule Part	Equipment Class	Wireless Technology	Frequency Band	Original FCC ID	Original Report	Variant Model FCC ID	Variant Model Report
Part 96	CBE	4G LTE	4G LTE B48 48C	PKRISGM3000B	FG1D2409F	PKRISGFX31001	Reference the conducted test results from the original reports for the parent model
		5G NR	5G FR1 n48	PKRISGM3000B	FG211223001B FG1D2409G	PKRISGFX31001	Reference the conducted test results from the original reports for the parent model

———THE END———