



RF SPOT CHECK EVALUATION

FCC ID : PKRISGM3100
Equipment : M3100
Model Name : M3100
Applicant : Inseego Corp.
9710 Scranton Road Suite 200, San Diego,
CA 92121
Standard : 47 CFR Part 2, 96

The product was received on Jun 18, 2022 and testing was performed from Jun. 26, 2022 to Jul. 02, 2022. 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 from Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Approved by: Neil Kao

Sporton International (USA) Inc.
1175 Montague Expressway, Milpitas, CA 95035



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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Jul. 04, 2022



1. Introduction Section

FCC ID: PKRISGM3000A (parent model) and FCC ID: PKRISGM3100 (variant model) use the same identical internal printed circuit board layouts, while the variant model depopulates some LTE and NR band related components, details are available in the operational description. Based on their similarity, the FCC Part 96 (equipment class: CBE) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01. The spot check data in this report is used to justify the data reuse

The applicant should take full responsibility that the test data as referenced in this report represent compliance for this FCC ID: PKRISGM3100.



2. Model Difference Information

PKRISGM3000A and PKRISGM3100 use the identical internal printed circuit board layout, and the difference in the components population:

- PKRISGM3100: 4G-LTE Bands B29, B30, B71 related components are depopulated.
- PKRISGM3100: 5G FR1 Bands n7, n29, n30, n41, n70, n71 related components are depopulated.

The detail of similarity and difference is illustrated in the operational description, and based on the information spot check on conducted power and emission was performed for ensure compliance



3. Spot Check Verification Data Section

Conducted power test and radiated spurious emission test configurations were selected from the worst cases identified in the parent model and tested to demonstrate the test data from original model remains representative for the variant model.

Summary for RSE spot check is listed as below:

Test Item	Mode	ANT	PKRISGM3000A Parent Worst Result	PKRISGM3100 Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBm)	WWAN LTE Band 48	4	-46.03	-40.45	5.58
	WWAN NR n48 SISO	4	-46.03	-45.51	0.52
	WWAN NR n48 MIMO	4+6	-49.92	-44.91	5.01

Conclusion:

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

The spot check emission level is within the margin to the limit, data referencing is justified.



4. List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	6111D	54683	30MHz~1GHz	Oct. 15, 2021	Jun. 26, 2022~ Jul. 02, 2022	Oct. 14, 2022	Radiation (03CH01-CA)
Bilog Antenna	TESEQ	6111D	50391	30MHz~1GHz	Jul. 19, 2021	Jun. 26, 2022~ Jul. 02, 2022	Jul. 18, 2022	Radiation (03CH01-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02140	1GHz~18GHz	Sep. 30, 2021	Jun. 26, 2022~ Jul. 02, 2022	Sep. 29, 2022	Radiation (03CH01-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	01895	1GHz~18GHz	Aug. 25, 2021	Jun. 26, 2022~ Jul. 02, 2022	Aug. 24, 2022	Radiation (03CH01-CA)
Horn Antenna	SCHWARZBECK	BBHA 9170D	00842	18GHz~40GHz	Jul. 20, 2021	Jun. 26, 2022~ Jul. 02, 2022	Jul. 19, 2022	Radiation (03CH01-CA)
Horn Antenna	SCHWARZBECK	BBHA 9170D	00841	18GHz~40GHz	Aug. 26, 2021	Jun. 26, 2022~ Jul. 02, 2022	Aug. 25, 2022	Radiation (03CH01-CA)
Preamplifier	SONOMA	310N	372241	9kHz~1GHz	May 09, 2022	Jun. 26, 2022~ Jul. 02, 2022	May. 08, 2023	Radiation (03CH01-CA)
Preamplifier	E-instrument	ERA-100M-18 G-56-01-A70	EC1900252	1GHz~18GHz	May 09, 2022	Jun. 26, 2022~ Jul. 02, 2022	May 08, 2023	Radiation (03CH01-CA)
Preamplifier	EMEC	EMC18G40G	060725	18G-40G	May 10, 2022	Jun. 26, 2022~ Jul. 02, 2022	May 09, 2023	Radiation (03CH01-CA)
EMI Test Receiver	R&S	ESU26	100123	20Hz~26.5GHz	May 31, 2022	Jun. 26, 2022~ Jul. 02, 2022	May 30, 2023	Radiation (03CH01-CA)
Signal Generator	Rohde & Schwarz	FSV	101089	10Hz~40GHz	Jun. 01, 2022	Jun. 26, 2022~ Jul. 02, 2022	May 31, 2023	Radiation (03CH01-CA)
RF Cable	HUBER+SUHNER	SUCOFLEX 102	8015932/2, 8015762/2, 6015772/2	N/A	Aug. 09, 2021	Jun. 26, 2022~ Jul. 02, 2022	Aug. 08, 2022	Radiation (03CH01-CA)
Filter	Wainwright	WHKX8-5872.5 -6750-18000-4 OST	SN8	6.75GHz High Pass Filter	Jul. 22, 2021	Jun. 26, 2022~ Jul. 02, 2022	Jul. 21, 2022	Radiation (03CH01-CA)
Hygrometer	TESTO	608-H1	45141354	N/A	Jul. 30, 2021	Jun. 26, 2022~ Jul. 02, 2022	Jul. 29, 2022	Radiation (03CH01-CA)
Controller	Chaintek	EM-1000	060881	Control Turn Table & Antenna Mast	N/A	Jun. 26, 2022~ Jul. 02, 2022	N/A	Radiation (03CH01-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jun. 26, 2022~ Jul. 02, 2022	N/A	Radiation (03CH01-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jun. 26, 2022~ Jul. 02, 2022	N/A	Radiation (03CH01-CA)
Test Software	Audix E3	E6.2009-8-24d	PK-002093	N/A	N/A	Jun. 26, 2022~ Jul. 02, 2022	N/A	Radiation (03CH01-CA)



5. Reference detail Section

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	Reference FCC ID (Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)
96	CBE	LTE	LTE 48 ULCA 48C	PKR ISGM3000A	Original Grant	FG211223003B	PKR ISGM3100
		NR	n48	PKR ISGM3000A	Original Grant	FG211223003C FG211223003	PKR ISGM3100

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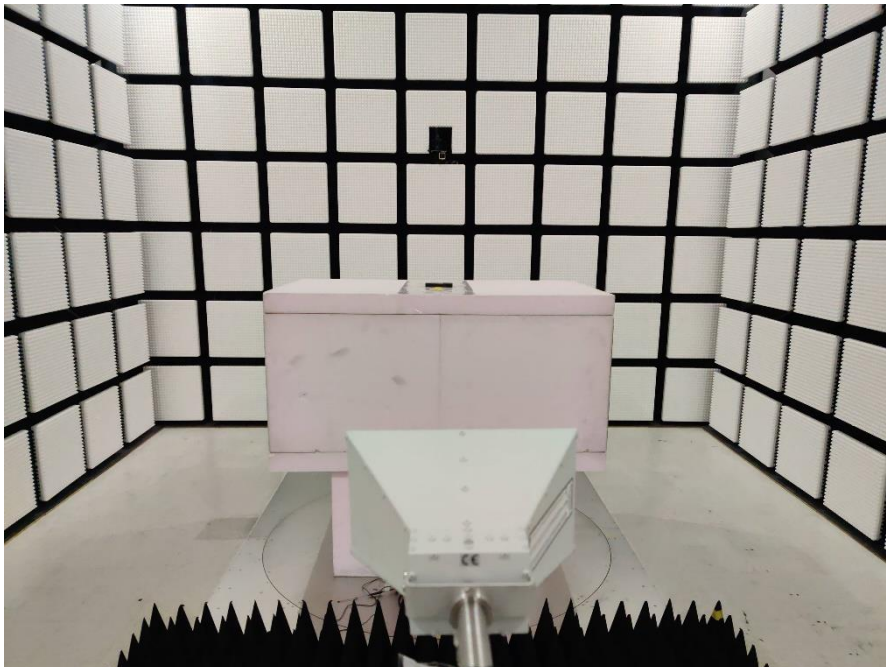
Radiated spurious Emission Setup Plots

X Plane

LF



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END of this report