



SPOT CHECK EVALUATION

FCC ID : PKRISGM2000B
Equipment : Wireless Hotspot Modem
Model Name : M2000B
Applicant : Inseego Corporation
9710 Scranton Road Suite 200, San Diego, CA 92121
Standard : 47 CFR Part 2, 22(H), 24(E), 27(D), 27(L) , 90(R), 90(S), 96
FCC Part 15 Subpart C §15.209
FCC Part 15 Subpart C §15.225
FCC Part 15 Subpart C §15.247
FCC Part 15 Subpart E §15.407

We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, 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 INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Sep. 25, 2020



1. Introduction Section

FCC ID: PKRISGM2000A (original model) and FCC ID: PKRISGM2000B (variant model) are HW identical Turn Sub-6G and mmWave Band on or off by software. Other than this item, the RF and antenna design is the same.

Based on their similarity, the FCC Part 15C (equipment class: DCD, DTS, DSS, DXX) and FCC Part 15E (equipment class: NII) and FCC Part 22, 24, 27, 90, 96 (equipment class: PCE, CBE) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PKRISGM2000B).

PKRISGM2000A and PKRISGM2000B are identical to each other, two different model names are for marketing purpose only.



2. Model Difference Information

The difference between FCC ID: A4RGD1YQ and FCC ID: A4RGTT9Q is as below:

Product Variants:

- Model: M2000A
- Model: M2000B

Difference in Hardware:

- M2000B Does Not support 5G NR FR2 (mmW). All components related to mmW operation are depopulated.

There is no difference in PCB Circuitry/Board between both M2000A and M2000B models. Difference in hardware will not impart Conducted Radio Performance for all other supported 3G-UMTS/WCDMA, 4G-LTE, and 5G-NR FR1 (Sub6) radios.

The details of similarity and difference can be found in the confidential documents.



3. Spot Check Verification Data Section

Conducted power test and 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.

Summary for power and RSE spot check for each rule entry and technology is listed as below:

Test Item	Mode	PKRISGM2000A Parent Worst Result	PKRISGM2000B Variant Check Result	Difference (dB)
Conducted Power (dBm)	WLAN 2.4GHz (MIMO)	16.9	16.76	0.14
	WLAN 5GHz (MIMO)	16	15.82	0.18
	WWAN WCDMA Band V	23.82	23.78	0.04
	WWAN WCDMA Band II	23.89	23.88	0.01
	WWAN WCDMA Band IV	23.94	23.99	-0.05
	WWAN LTE Band 2	23.44	23.84	-0.4
	WWAN LTE Band 4	23.84	23.92	-0.08
	WWAN LTE Band 5	23.68	23.99	-0.31
	WWAN LTE Band 7	23.64	23.97	-0.33
	WWAN LTE Band 12	23.44	23.78	-0.34
	WWAN LTE Band 13	23.68	23.65	0.03
	WWAN LTE Band 14	23.80	23.67	0.13
	WWAN LTE Band 17	23.52	23.70	-0.18
	WWAN LTE Band 25	23.40	23.83	-0.43
	WWAN LTE Band 26 (part 22)	23.81	24	-0.19
	WWAN LTE Band 26 (part 90)	23.68	24	-0.32
	WWAN LTE Band 30	20.77	20.99	-0.22
	WWAN LTE Band 38	23.76	23.97	-0.21
	WWAN LTE Band 41	23.86	23.10	0.76
	WWAN LTE Band 41 (HPUE)	26.05	26.10	-0.05
	WWAN LTE Band 48	19.17	19.50	-0.33
	WWAN LTE Band 66	23.86	23.99	-0.13
	WWAN LTE Band 71	23.92	23.99	-0.07
WWAN NR n2	23.78	23.70	0.08	
WWAN NR n66	23.95	23.85	0.1	
WWAN NR n71	23.2	23.9	-0.7	



Test Item	Mode	PKRISGM2000A Parent Worst Result	PKRISGM2000B Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBuV/m)	WLAN 2.4GHz (MIMO)	-1.51	-1.75	0.24
	WLAN 5GHz (MIMO)	-5.08	-5.48	0.4
Radiated Spurious Emission (dBm)	WWAN WCDMA Band V	-43.83	-44.22	0.39
	WWAN WCDMA Band II	-33	-35.45	2.45
	WWAN WCDMA Band IV	-34.42	-34.68	0.26
	WWAN LTE Band 7	-19.32	-18.71	-0.61
	WWAN LTE Band 12	-38.55	-44.19	5.64
	WWAN LTE Band 13	-16.1	-20.15	4.05
	WWAN LTE Band 14	-19.24	-21.20	1.96
	WWAN LTE Band 25	-32.42	-34.55	2.13
	WWAN LTE Band 26 (part 22)	-43.68	-43.92	0.24
	WWAN LTE Band 26 (part 90)	-37.02	-43.86	6.84
	WWAN LTE Band 30	-3.19	-8.25	5.06
	WWAN LTE Band 38	-19.02	-18.82	-0.2
	WWAN LTE Band 41 (HPUE)	-18.81	-18.69	-0.12
	WWAN LTE Band 48	-1.02	-5.84	4.82
	WWAN LTE Band 66	-34.45	-35.06	0.61
	WWAN LTE Band 71	-45.19	-45.14	-0.05
	WWAN NR n2	-16.47	-18.24	1.77
WWAN NR n66	-33.15	-34.37	1.22	
WWAN NR n71	-25.43	-25.02	-0.41	



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.

Based on the spot check test result, the test data from the original model is representative for the variant model. The power level and RSE spot check are shown within expected level compliant to limit line.

We are using power and ERP/EIRP measurements from the original parent model reports to list on the grant.

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and take full responsibility that the test data as referenced from the parent model report represents compliance for the new FCC ID.



4. 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)
15C	DTS	Wi-Fi	2400~2483.5	PKRISGM2000A	Original Grant	FR041657A	PKRISGM2000B
15E	NII	Wi-Fi	5150~5250 5725~5850	PKRISGM2000A	Original Grant	FR041657B FR041657C	PKRISGM2000B
22, 24, 27, 90, 96	PCE CBE	WCDMA	Band II, IV, V	PKRISGM2000A	Original Grant	FG041657-01A	PKRISGM2000B
		LTE	B2/4/5/7/12/13 /14/17/25/26/ 30/38/41/42/48 /66/71	PKRISGM2000A	Original Grant	FG041657-01B FG041657-01D FG041657-01E FG041657-01F FG041657-01G	PKRISGM2000B
		NR (EN-DC)	n2/n66/n71	PKRISGM2000A	Original Grant	FG041657-01C	PKRISGM2000B

END of this report