



SPOT CHECK EVALUATION

FCC ID : A4RGLU0G
Equipment : Phone
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jun. 09, 2021 and testing was performed from Nov. 01, 2022 to Nov. 19, 2022. We, Sporton International Inc. Wensan 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 spot check report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

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Approved by: Louis Wu

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History of this test report

Version	Description	Issue Date
01	Initial issue of report	Dec. 02, 2022



1. Introduction Section

FCC ID: A4RG8V0U (parent model) and FCC ID: A4RGLU0G (variant model) use the same identical internal printed circuit board layouts, while the variant model depopulates mmWave related components, details are available in the operational description. Based on their similarity, FCC Part 15E (equipment class: NII, 6CD) 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: A4RGLU0G.



2. Model Difference Information

A4RG8V0U and A4RGLU0G use the identical internal printed circuit board layout, and the difference in the components population:

- A4RGLU0G: 5GNR FR2 mmWave 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 power and RSE spot check for each rule entry and technology is listed as below:

Test Item	Mode	A4RG8V0U Parent Worst Result	A4RGLU0G Variant Check Result	Difference (dB)
Conducted Power (dBm)	WLAN 5GHz UNII4	23.92	23.56	0.36
	WLAN 6GHz standard power client	22.97	22.85	0.12



Test Item	Mode	ANT	A4RG8V0U Parent Worst Result	A4RGLU0G Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBuV/m)	WLAN 5GHz UNII4	7+3	88.41	88.38	0.03
	WLAN 6GHz standard power client	7+3	65.73	63.25	2.48

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 not degraded more than 3dB, and the margin to the limit is greater than 1.5dB, data referencing is justified according to the guidance in the KDB inquiry



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)
15E	NII	Wi-Fi	5850~5895	A4RG8V0U	Original Grant	FR121931-24A	A4RGLU0G
	6CD	WiFi	5925~6425 6525~6875	A4RG8V0U	Original Grant	FR121931-24B	A4RGLU0G



5. List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303B	TP200735	N/A	Mar. 22, 2022	Nov. 15, 2022~ Nov. 19, 2022	Mar. 21, 2023	Conducted (TH05-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Nov. 01, 2022~ Nov. 14, 2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W #010	RPR6W-2101 002(NO:123)	10MHz~8GHz	Jan. 13, 2022	Nov. 01, 2022~ Nov. 19, 2022	Jan. 12, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101905	10Hz - 40GHz(amp)	Aug. 03, 2022	Nov. 01, 2022~ Nov. 19, 2022	Aug. 02, 2023	Conducted (TH05-HY)
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz~30 MHz	Mar. 18, 2022	Nov. 09, 2022~ Nov. 19, 2022	Mar. 17, 2023	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	41912 & 05	30MHz~1GHz	Feb. 06, 2022	Nov. 09, 2022~ Nov. 19, 2022	Feb. 05, 2023	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2021	Nov. 09, 2022~ Nov. 19, 2022	Dec. 26, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02294	1GHz~18GHz	Jun. 23, 2022	Nov. 09, 2022~ Nov. 19, 2022	Jun. 22, 2023	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00993	18GHz~40GHz	Nov. 30, 2021	Nov. 09, 2022~ Nov. 19, 2022	Nov. 29, 2022	Radiation (03CH15-HY)
Amplifier	EMEC	EM1G18G	060837	1GHz~18GHz	Sep. 01, 2022	Nov. 09, 2022~ Nov. 14, 2022	Aug. 31, 2023	Radiation (03CH15-HY)
Amplifier	EMEC	EM1G18G	060838	1GHz~18GHz	Sep. 01, 2022	Nov. 15, 2022~ Nov. 19, 2022	Aug. 31, 2023	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060803	1GHz-18GHz	Dec. 16, 2021	Nov. 09, 2022~ Nov. 19, 2022	Dec. 15, 2022	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060802	18-40GHz	Mar. 08, 2022	Nov. 09, 2022~ Nov. 19, 2022	Mar. 07, 2023	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 18, 2022	Nov. 09, 2022~ Nov. 19, 2022	Oct. 17, 2023	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010	MY54200485	10Hz~44GHz	May 07, 2022	Nov. 09, 2022~ Nov. 19, 2022	May 06, 2023	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Nov. 09, 2022~ Nov. 19, 2022	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Nov. 09, 2022~ Nov. 19, 2022	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Nov. 09, 2022~ Nov. 19, 2022	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY582185/4, MY9838/4PE, 519228/2	N/A	Jun. 21, 2022	Nov. 09, 2022~ Nov. 19, 2022	Jun. 20, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,804 012/2	30MHz-40GHz	Jan. 04, 2022	Nov. 09, 2022~ Nov. 19, 2022	Jan. 03, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Nov. 09, 2022~ Nov. 19, 2022	Mar. 09, 2023	Radiation (03CH15-HY)

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