SPOT CHECK EVALUATION

FCC ID	:	**A4RGWKK3**
Equipment	:	**Phone**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**47 CFR Part 2, 22(H), 24(E), 27, 90(R), 90(S), 96**

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 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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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Dec. 07, 2022

1. Introduction Section

FCC ID: A4RG0DZQ (parent model) and FCC ID: A4RGWKK3 (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, the FCC Part 15C (equipment class: DXX) 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 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: A4RGP4BC.

2. Model Difference Information

A4RG0DZQ and A4RGWKK3 use the identical internal printed circuit board layout, and the difference in the components population:

- A4RGWKK3: 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 FCC rule part is listed as below:

Test Item	Mode	A4RG0DZQ Parent Worst Result	A4RGWKK3 Variant Check Result	Difference (dB)
Conducted Power (dBm)	WWAN GPRS 850	32.32	32.33	0.01
	WWAN GPRS 1900	29.66	29.38	-0.28
	WWAN WCDMA Band V	24.16	24.19	0.03
	WWAN WCDMA Band II	24.86	24.71	-0.15
	WWAN WCDMA Band IV	24.95	24.96	0.01
	WWAN LTE Band 5	24.56	24.45	-0.11
	WWAN LTE Band 7	24.86	24.53	-0.33
	WWAN LTE Band 25	24.48	24.17	-0.31
	WWAN LTE Band 30	23.95	23.71	-0.24
	WWAN LTE Band 48	24.02	23.70	-0.32
	WWAN NR n5	25.70	25.70	0.00
	WWAN NR n7	25.64	25.49	-0.15
	WWAN NR n25	25.25	24.96	-0.29
	WWAN NR n48	24.42	24.30	-0.12

Test Item	Mode	ANT	A4RG0DZQ Parent Worst Result	A4RGWKK3 Variant Check Result	Difference (dB)
Field Strength (dBuV/m)	NFC 13.56MHz	-	20.86	20.23	-0.63
Radiated Spurious Emission (dBuV/m)	NFC 13.56MHz	-	33.53	33.14	-0.39
Radiated Spurious Emission (dBm)	WWAN GPRS 850	0	-35.45	-36.05	-0.60
	WWAN GPRS 850	1	-32.62	-32.72	-0.10
	WWAN GPRS 1900	2	-46.19	-45.53	0.66
	WWAN WCDMA Band V	0	-36.36	-36.37	-0.01
	WWAN WCDMA Band II	2	-46.37	-45.79	0.58
	WWAN LTE Band 5	0	-47.27	-49.42	-2.15
	WWAN LTE Band 7	2	-43.55	-46.50	-2.95
	WWAN LTE Band 25	2	-46.77	-47.92	-1.15
	WWAN LTE Band 30	0	-46.33	-45.46	0.87
	WWAN LTE Band 48	6	-47.45	-48.46	-1.01
	WWAN NR n5	1	-46.86	-46.50	0.36
	WWAN NR n7	0	-37.24	-38.10	-0.86
	WWAN NR n25	2	-43.09	-45.30	-2.21
	WWAN NR n48	6	-48.70	-48.91	-0.21

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)
15C	DXX	NFC	13.56	A4RG0DZQ	Original Grant	FR241215-02D	A4RGWKK3
22, 24, 27, 90, 96	PCE CBE	GSM	GSM 850/1900	A4RG0DZQ	Original Grant	FG241215-02A	A4RGWKK3
		WCDMA	Band II, IV, V	A4RG0DZQ	Original Grant	FG241215-02A	A4RGWKK3
		LTE	2/4/5/7/12/13 /14/17/25/26 /30/38/41 /48/66/71 ULCA 5B/7C/ 41C/66B/66C	A4RG0DZQ	Original Grant	FG241215-02B FG241215-02G FG241215-02I	A4RGWKK3
		NR	n2/n5/n7/ n12/n14 n25/n30/ n41/n48/ n66/n71/n77	A4RG0DZQ	Original Grant	FG220925001 FG241215-02C FG241215-02E FG241215-02F	A4RGWKK3

5. List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	May 13, 2022	Nov. 21, 2022~ Nov. 23, 2022	May 12, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 03, 2021	Nov. 21, 2022~ Nov. 23, 2022	Dec. 02, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	40103 & 07	30MHz~1GHz	Apr. 24, 2022	Nov. 21, 2022~ Nov. 23, 2022	Apr. 23, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 06, 2022	Nov. 21, 2022~ Nov. 23, 2022	Feb. 05, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 10, 2022	Nov. 21, 2022~ Nov. 23, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 30, 2021	Nov. 21, 2022~ Nov. 23, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 14, 2022	Nov. 21, 2022~ Nov. 23, 2022	May 13, 2023	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2022	Nov. 21, 2022~ Nov. 23, 2022	Mar. 22, 2023	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Nov. 21, 2022~ Nov. 23, 2022	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900269	1GHz-18GHz	Dec. 27, 2021	Nov. 21, 2022~ Nov. 23, 2022	Dec. 26, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Nov. 21, 2022~ Nov. 23, 2022	Dec. 23, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY53470118	10Hz~44GHz	Jan. 12, 2022	Nov. 21, 2022~ Nov. 23, 2022	Jan. 11, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Nov. 21, 2022~ Nov. 23, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 10, 2021	Nov. 21, 2022~ Nov. 23, 2022	Dec. 09, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Nov. 21, 2022~ Nov. 23, 2022	Feb. 20, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Mar. 08, 2022	Nov. 21, 2022~ Nov. 23, 2022	Mar. 07, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 15, 2022	Nov. 21, 2022~ Nov. 23, 2022	Mar. 14, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60SS	SN1	1.2GHz High Pass Filter	Mar. 15, 2022	Nov. 21, 2022~ Nov. 23, 2022	Mar. 14, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Jul. 11, 2022	Nov. 21, 2022~ Nov. 23, 2022	Jul. 10, 2023	Radiation (03CH12-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Nov. 26, 2021	Nov. 21, 2022~ Nov. 23, 2022	Nov. 25, 2022	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 21, 2022~ Nov. 23, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 21, 2022~ Nov. 23, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 21, 2022~ Nov. 23, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Nov. 21, 2022~ Nov. 23, 2022	N/A	Radiation (03CH12-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Feb. 23, 2022	Nov. 21, 2022~ Nov. 23, 2022	Feb. 22, 2023	Conducted (TH03-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101048	10Hz~44GHz	May 05, 2022	Nov. 21, 2022~ Nov. 23, 2022	May 04, 2023	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 07, 2022	Nov. 21, 2022~ Nov. 23, 2022	Sep. 06, 2023	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8821C	6262116730	LTE	Jun. 15, 2022	Nov. 21, 2022~ Nov. 23, 2022	Jun. 14, 2023	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262134933	FR1	Jun. 13, 2022	Nov. 21, 2022~ Nov. 23, 2022	Jun. 12, 2023	Conducted (TH03-HY)
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 02, 2022	Nov. 21, 2022~ Nov. 23, 2022	Aug. 01, 2023	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Feb. 23, 2022	Nov. 21, 2022~ Nov. 23, 2022	Feb. 22, 2023	Conducted (TH03-HY)

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