



SPOT CHECK EVALUATION

FCC ID : A4RGP4BC
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 Apr. 12, 2022 and testing was performed from Oct. 05, 2022 to Nov. 18, 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.

Louis Wu

Approved by: Louis Wu

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History of this test report

| Version | Description | Issue Date |
|---------|-------------------------|---------------|
| 01 | Initial issue of report | Nov. 30, 2022 |
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1. Introduction Section

FCC ID: A4RGE2AE (parent model) and FCC ID: A4RGP4BC (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 15E (equipment class: 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: A4RGP4BC.



2. Model Difference Information

A4RGE2AE and A4RGP4BC use the identical internal printed circuit board layout, and the difference in the components population:

- A4RGP4BC: 5G NR 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 | A4RGE2AE Parent Worst Result | A4RGP4BC Variant Check Result | Difference (dB) |
|-----------------------|---------------------------------|------------------------------|-------------------------------|-----------------|
| Conducted Power (dBm) | WLAN 6GHz standard power client | 24.44 | 24.12 | -0.22 |

| Test Item | Mode | ANT | A4RGE2AE Parent Worst Result | A4RGP4BC Variant Check Result | Difference (dB) |
|-------------------------------------|---------------------------------|-----|------------------------------|-------------------------------|-----------------|
| Radiated Spurious Emission (dBuV/m) | WLAN 6GHz standard power client | 4+8 | 50.4 | 51.74 | 1.7 |

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 | 6CD | WiFi | 5925~6425 6525~6875 | A4RGE2AE | Original Grant | FR102919-17 | A4RGP4BC |



5. List of Measuring Equipment

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|----------------------|-----------------|-------------------------------|---------------------------|----------------------------------|------------------|----------------------------------|---------------|--------------------------|
| Hygrometer | TECPEL | DTM-303B | TP200886 | N/A | Mar. 21, 2022 | Oct. 28, 2022~ Nov. 18, 2022 | Mar. 20, 2023 | Conducted (TH05-HY) |
| Power Sensor | DARE | RPR3006W #010 | RPR6W-2101 002(NO:123) | 10MHz~8GHz | Jan. 13, 2022 | Oct. 28, 2022~ Nov. 18, 2022 | Jan. 12, 2023 | Conducted (TH05-HY) |
| Signal Analyzer | Rohde & Schwarz | FSV40 | 101905 | 10Hz - 40GHz | Aug. 03, 2022 | Oct. 28, 2022~ Nov. 18, 2022 | Aug. 02, 2023 | Conducted (TH05-HY) |
| Loop Antenna | Rohde & Schwarz | HFH2-Z2 | 100488 | 9 kHz~30 MHz | May 13, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | May 12, 2023 | Radiation (03CH16-HY) |
| Preamplifier | EMEC | EM18G40G | 060801 | 18GHz~40GHz | Jun. 28, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Jun. 27, 2023 | Radiation (03CH16-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA9170 | 00993 | 18GHz-40GHz | Nov. 30, 2021 | Oct. 05, 2022 ~ Nov. 14, 2022 | Nov. 29, 2022 | Radiation (03CH16-HY) |
| Horn Antenna | SCHWARZBECK | BBHA 9120 D | 9120D-1522 | 1GHz~18GHz | Mar. 10, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Mar. 09, 2023 | Radiation (03CH16-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00802N1D01N-06 | 47020 & 06 | 30MHz~1GHz | Oct. 08, 2022 | Oct. 08, 2022 ~ Nov. 14, 2022 | Oct. 07, 2023 | Radiation (03CH16-HY) |
| EMI Test Receiver | Keysight | N9038A(MXE) | MY57290111 | 3Hz~26.5GHz | Dec. 15, 2021 | Oct. 05, 2022 ~ Nov. 14, 2022 | Dec. 14, 2022 | Radiation (03CH16-HY) |
| Spectrum Analyzer | Keysigh | N9010A | MY55370526 | 10Hz~44GHz | Mar. 18, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Mar. 17, 2023 | Radiation (03CH16-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | 805935/4 | N/A | Aug. 09, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Aug. 08, 2023 | Radiation (03CH16-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | 802434/4 | N/A | Aug. 09, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Aug. 08, 2023 | Radiation (03CH16-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | EC-A5-300-5 757 | N/A | Aug. 09, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Aug. 08, 2023 | Radiation (03CH16-HY) |
| Amplifier | SONOMA | 310N | 371607 | 9kHz~1GHz | Jul. 04, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Jul. 03, 2023 | Radiation (03CH16-HY) |
| Preamplifier | EMEC | EM1G18G | 060812 | 1GHz~18GHz | Dec. 27, 2021 | Oct. 05, 2022 ~ Nov. 14, 2022 | Dec. 26, 2022 | Radiation (03CH16-HY) |
| Preamplifier | Keysight | 83017A | MY53270264 | 1GHz~26.5GHz | Dec. 09, 2021 | Oct. 05, 2022 ~ Nov. 14, 2022 | Dec. 08, 2022 | Radiation (03CH16-HY) |
| Preamplifier | EMEC | EM18G40G | 060801 | 18GHz~40GHz | Jun. 28, 2022 | Oct. 05, 2022 ~ Nov. 14, 2022 | Jun. 27, 2023 | Radiation (03CH16-HY) |
| Controller | EMEC | EM1000 | N/A | Control Turn table & Ant Mast | N/A | Oct. 05, 2022 ~ Nov. 14, 2022 | N/A | Radiation (03CH16-HY) |
| Antenna Mast | EMEC | AM-BS-4500-B | N/A | 1m~4m | N/A | Oct. 05, 2022 ~ Nov. 14, 2022 | N/A | Radiation (03CH16-HY) |
| Turn Table | EMEC | TT2000 | N/A | 0~360 Degree | N/A | Oct. 05, 2022 ~ Nov. 14, 2022 | N/A | Radiation (03CH16-HY) |
| Software | Audix | E3 6.2009-8-24 | RK-001136 | N/A | N/A | Oct. 05, 2022 ~ Nov. 14, 2022 | N/A | Radiation (03CH16-HY) |

————THE END————