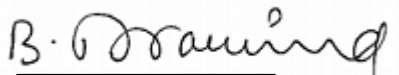




## Test Report

### Prepared for General Motors LLC

This report presents detailed information on  
**NAR VCUNH1**

Prepared by   
Aravind Buddana  
Engineer II

Approved by   
Jason Kanakry  
Automotive Lab Manager

Issue date : 09/01/2023

Report No.: J23159 MUS\_GM\_2302 TR1 v1

This test result relates only to the described test object.  
This document shall not be reproduced, except in full, without the written approval of Bureau Veritas Test Lab.  
Customer must not use this test report as the product certification of each accreditation body or each national organization.  
The test is traceable to national standard or related international standard

## Contents

|                                     |    |
|-------------------------------------|----|
| Contents .....                      | 2  |
| • Test Request Information .....    | 3  |
| • Test Laboratory Information ..... | 4  |
| • Test Summary.....                 | 5  |
| • Test Sample Information .....     | 6  |
| • Test Setup Pictures.....          | 7  |
| • Test Equipment Used .....         | 8  |
| • Test Results .....                | 9  |
| • Document Revisions.....           | 29 |

- **Test Request Information**

**Test Request #:** 4301692748  
**Test requested by:** Shashank Lakshmikanth  
GM Milford Proving Grounds  
Building 40  
3300 GM Road, Milford MI, 48380  
**Approved Test Plan Number:** MY24\_High\_RFRV\_EIRP\_Freq\_Stab\_Test Plan\_VCU\_1\_0 - BV\_0525  
**Test Plan Revision:** 1.0  
**Test Method:** FCC CFR 15.215c  
**Deviations from Test Plan:** None  
**Date test started:** 08/19/2023  
**Date test finished:** 09/01/2023

**Test Item Information**

**Test item description:** RF2.6 Frequency Stability  
**Sample Number(s):** J23159-NAR#3  
**Part Number(s):** 7511.401.147-08  
**Hardware Version of DUT:** N/A  
**Software Version:** N/A  
**Component Category of DUT:** N/A  
**Date test sample received:** 08/03/2023

- **Test Laboratory Information**

|                                   |   |
|-----------------------------------|---|
| <b>Location of Test Lab:</b>      | The radiated and conducted emissions test sites are located at<br>Bureau Veritas<br>815 N. Opdyke Rd #100,<br>Auburn Hills, MI 48326,<br>Phone: +1-248-836-4700   |
| <b>Key Contact:</b>               | Jason Kanakry (General Manager)<br><a href="mailto:Jason.Kanakry@BureauVeritas.com">Jason.Kanakry@BureauVeritas.com</a><br>Phone: +1-248-836-4747   |
| <b>Laboratory Accreditations:</b> | BUREAU VERITAS CONSUMER PRODUCTS SERVICES, INC is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. |
| <b>ISO/IEC 17025:2017:</b>        | 5678.01   |
| <b>FCC Test Site Number:</b>      | US1278 (242530)   |
| <b>IC Test Site Number:</b>       | US0229 (26240)  |

- **Test Summary**

The following is a summary of the test results.

The detailed test results can be found in the appropriate sections of this report:

| Test Item                 | Sample #     | Result             |
|---------------------------|--------------|--------------------|
| RF2.6 Frequency Stability | J23159-NAR#3 | Test Data Provided |

- Test Sample Information

J23159-NAR#3



- **Test Setup Pictures**

Frequency Stability Setup Pictures



• **Test Equipment Used**

| ID #    | Equipment  | Manufacturer    | Model # | Serial #   | Cal Due    |
|---------|--|-----------------|---------|------------|------------|
| BVD0414 | Temperature Chamber                                    | ESPEC           | EPZ-2H  | 0142398B   | 6/16/2025  |
| BVD0305 | DC power supply 1-15VDC 60A<br>110/220 11.5A max input | BK Precision    | 1693    | 257C19123  | N/A        |
| BVD0226 | Spectrum Analyzer 10Hz-44GHz                           | Rohde & Schwarz | FSV3044 | 101018     | 4/14/2024  |
| BVD0299 | Laptop   | Lenovo          | E480    | PF185FS3   | N/A        |
| BVD0430 | Multimeter   | Fluke           | 117     | 49710262SV | 11/11/2023 |

**Customer Supplied Equipment**

| ID # | Equipment                      | Manufacturer | Model    | Serial #      | Version No. |
|------|--------------------------------|--------------|----------|---------------|-------------|
| N/A  | Cable Harness                  | GM           | N/A      | 1002151265 A  | N/A         |
| N/A  | USB to Ethernet Dongle         | D-link       | DUB-E100 | S7291GC000740 | N/A         |
| N/A  | vcu_wlan_rta_tool_v3_0         | N/A          | N/A      | N/A           | 2_9_5       |
| N/A  | BTcli Tooling_bt_rta_tool_v0_3 | N/A          | N/A      | N/A           | 0_3         |



• **Test Results**

**1. RF2.6 Frequency Stability**

**1.1 Test Data**

| Test Mode | DUT Operation Mode   | Temperature Condition | Frequency Stability (GHz) |              |              |
|-----------|--|-----------------------|---------------------------|--------------|--------------|
|           |  |                       | 11.5V                     | 13.5V        | 15V          |
| 3         | Continuous transmitting on<br>2412 MHz<br>802.11 b-mode 2Mbps  | -40°C                 | 2.4120322320              | 2.4120321990 | 2.4120314990 |
|           | Continuous transmitting on<br>2412 MHz<br>802.11 b-mode 2Mbps  | 20°C                  | 2.4120063000              | 2.4120066000 | 2.4120086330 |
|           | Continuous transmitting on<br>2412 MHz<br>802.11 b-mode 2Mbps  | 50°C                  | 2.4119800000              | 2.4119796340 | 2.4119795670 |
| 4         | Continuous transmitting on<br>2437 MHz<br>802.11 b-mode 2Mbps  | -40°C                 | 2.4370325990              | 2.3470325650 | 2.4370325990 |
|           | Continuous transmitting on<br>2437 MHz<br>802.11 b-mode 2Mbps  | 20°C                  | 2.4370061330              | 2.4370059990 | 2.4370058660 |
|           | Continuous transmitting on<br>2437 MHz<br>802.11 b-mode 2Mbps  | 50°C                  | 2.4369792670              | 2.4369792670 | 2.4369793340 |
| 5         | Continuous transmitting on<br>2462 MHz<br>802.11 b-mode 2Mbps  | -40°C                 | 2.4620329660              | 2.4620329990 | 2.4620329320 |
|           | Continuous transmitting on<br>2462 MHz<br>802.11 b-mode 2Mbps  | 20°C                  | 2.4620056660              | 2.4620057660 | 2.4620059000 |
|           | Continuous transmitting on<br>2462 MHz<br>802.11 b-mode 2Mbps  | 50°C                  | 2.4619794670              | 2.4619794670 | 2.4619790000 |
|           | Continuous transmitting on<br>2412 MHz<br>802.11 g-mode 24Mbps | -40°C                 | 2.4120320990              | 2.4120319990 | 2.4120319660 |

|   |  |       |              |              |              |
|---|--|-------|--------------|--------------|--------------|
| 6 | Continuous transmitting on<br>2412 MHz<br>802.11 g-mode 24Mbps | 20°C  | 2.4120056000 | 2.4120055660 | 2.4120055660 |
|   | Continuous transmitting on<br>2412 MHz<br>802.11 g-mode 24Mbps | 50°C  | 2.4119793670 | 2.4119794000 | 2.4119795670 |
| 7 | Continuous transmitting on<br>2437 MHz<br>802.11 g-mode 24Mbps | -40°C | 2.4370325990 | 2.4370325320 | 2.4370324320 |
|   | Continuous transmitting on<br>2437 MHz<br>802.11 g-mode 24Mbps | 20°C  | 2.4370055330 | 2.4370055660 | 2.4370056660 |
|   | Continuous transmitting on<br>2437 MHz<br>802.11 g-mode 24Mbps | 50°C  | 2.4369792010 | 2.4369791670 | 2.4369791000 |
| 8 | Continuous transmitting on<br>2462 MHz<br>802.11 g-mode 24Mbps | -40°C | 2.4620327990 | 2.4620326650 | 2.4620326650 |
|   | Continuous transmitting on<br>2462 MHz<br>802.11 g-mode 24Mbps | 20°C  | 2.4620056000 | 2.4620055330 | 2.4620055330 |
|   | Continuous transmitting on<br>2462 MHz<br>802.11 g-mode 24Mbps | 50°C  | 2.4619788670 | 2.4619788670 | 2.4619789340 |
| 9 | Continuous transmitting on<br>2412 MHz<br>802.11 n20-mode MCS2 | -40°C | 2.4120320320 | 2.4120319990 | 2.4120319320 |
|   | Continuous transmitting on<br>2412 MHz<br>802.11 n20-mode MCS2 | 20°C  | 2.4120053660 | 2.4120053660 | 2.4120054660 |
|   | Continuous transmitting on<br>2412 MHz<br>802.11 n20-mode MCS2 | 50°C  | 2.4119792680 | 2.4119792680 | 2.4119792680 |
|   | Continuous transmitting on<br>2437 MHz<br>802.11 n20-mode MCS2 | -40°C | 2.4370324990 | 2.4370326320 | 2.4370327660 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
| 10 | Continuous transmitting on<br>2437 MHz<br>802.11 n20-mode MCS2  | 20°C  | 2.4370053660 | 2.4370053000 | 2.4370052330 |
|    | Continuous transmitting on<br>2437 MHz<br>802.11 n20-mode MCS2  | 50°C  | 2.4369790340 | 2.4369790670 | 2.4369790670 |
| 11 | Continuous transmitting on<br>2462 MHz<br>802.11 n20-mode MCS2  | -40°C | 2.4620326990 | 2.4620328990 | 2.4620326650 |
|    | Continuous transmitting on<br>2462 MHz<br>802.11 n20-mode MCS2  | 20°C  | 2.4620053660 | 2.4620053660 | 2.4620053660 |
|    | Continuous transmitting on<br>2462 MHz<br>802.11 n20-mode MCS2  | 50°C  | 2.4619788340 | 2.4619788340 | 2.4619788340 |
| 12 | Continuous transmitting on<br>2412 MHz<br>802.11 ax20-mode MCS0 | -40°C | 2.4120320320 | 2.4120320320 | 2.4120318990 |
|    | Continuous transmitting on<br>2412 MHz,802.11 ax20-mode         | 20°C  | 2.4120056000 | 2.4120055330 | 2.4120055330 |
|    | Continuous transmitting on<br>2412 MHz<br>802.11 ax20-mode MCS0 | 50°C  | 2.4119793010 | 2.4119793010 | 2.4119799010 |
| 13 | Continuous transmitting on<br>2437 MHz<br>802.11 ax20-mode MCS0 | -40°C | 2.4370322320 | 2.4370326990 | 2.4370326650 |
|    | Continuous transmitting on<br>2437 MHz<br>802.11 ax20-mode MCS0 | 20°C  | 2.4370048670 | 2.4370049330 | 2.4370052000 |
|    | Continuous transmitting on<br>2437 MHz<br>802.11 ax20-mode MCS0 | 50°C  | 2.4369790680 | 2.4369789340 | 2.4369788680 |
|    | Continuous transmitting on<br>2462 MHz<br>802.11 ax20-mode MCS0 | -40°C | 2.4620326990 | 2.4620327320 | 2.4620327320 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
| 14 | Continuous transmitting on<br>2462 MHz<br>802.11 ax20-mode MCS0 | 20°C  | 2.4620055330 | 2.4620055000 | 2.4620054000 |
|    | Continuous transmitting on<br>2462 MHz<br>802.11 ax20-mode MCS0 | 50°C  | 2.4619788000 | 2.4619787670 | 2.4619787670 |
| 15 | Continuous transmitting on<br>5180MHz<br>802.11 a-mode 24Mbps   | -40°C | 5.1800572320 | 5.1800568990 | 5.1800543990 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 a-mode 24Mbps   | 20°C  | 5.1800102660 | 5.1800083000 | 5.1800081000 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 a-mode 24Mbps   | 50°C  | 5.1799547680 | 5.1799543350 | 5.1799542680 |
| 16 | Continuous transmitting on<br>5200 MHz<br>802.11 a-mode 24Mbps  | -40°C | 5.2000576980 | 5.2000579310 | 5.2000580980 |
|    | Continuous transmitting on<br>5200 MHz<br>802.11 a-mode 24Mbps  | 20°C  | 5.2000079000 | 5.2000079000 | 5.2000079000 |
|    | Continuous transmitting on<br>5200 MHz<br>802.11 a-mode 24Mbps  | 50°C  | 5.1999539350 | 5.1999539680 | 5.1999540020 |
| 17 | Continuous transmitting on<br>5240 MHz<br>802.11 a-mode 24Mbps  | -40°C | 5.2400589980 | 5.2400583980 | 5.2400578650 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 a-mode 24Mbps  | 20°C  | 5.240025000  | 5.2400074660 | 5.2400074330 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 a-mode 24Mbps  | 50°C  | 5.2399534350 | 5.2399534350 | 5.2399535680 |
| 18 | Continuous transmitting on<br>5745 MHz<br>802.11 a-mode 24Mbps  | -40°C | 5.7450637640 | 5.7450655980 | 5.7450657310 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5745 MHz<br>802.11 a-mode 24Mbps  | 20°C  | 5.7450054000 | 5.7450054000 | 5.745023000  |
|    | Continuous transmitting on<br>5745 MHz<br>802.11 a-mode 24Mbps  | 50°C  | 5.7449487850 | 5.7449484180 | 5.7449483180 |
| 19 | Continuous transmitting on<br>5785 MHz<br>802.11 a-mode 24Mbps  | -40°C | 5.7850662000 | 5.7850662000 | 5.7850662000 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 a-mode 24Mbps  | 20°C  | 5.7850050330 | 5.7850054000 | 5.7850054330 |
|    | Continuous transmitting on<br>5785 MHz,<br>802.11 a-mode 24Mbps | 50°C  | 5.7849477350 | 5.7849477690 | 5.7849477690 |
| 20 | Continuous transmitting on<br>5825 MHz<br>802.11 a-mode 24Mbps  | -40°C | 5.8250676640 | 5.8250676640 | 5.8250686310 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 a-mode 24Mbps  | 20°C  | 5.8250047330 | 5.8250049000 | 5.8250053330 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 a-mode 24Mbps  | 50°C  | 5.8249473350 | 5.8249472680 | 5.8249472350 |
| 21 | Continuous transmitting on<br>5180MHz<br>802.11 n20-mode MCS6   | -40°C | 5.1800565650 | 5.1800579320 | 5.1800579980 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 n20-mode MCS6   | 20°C  | 5.1800054330 | 5.1800061000 | 5.1800061330 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 n20-mode MCS6   | 50°C  | 5.1799536690 | 5.1799536020 | 5.1799536020 |
| 22 | Continuous transmitting on<br>5200 MHz<br>802.11 n20-mode MCS6  | -40°C | 5.2000585310 | 5.2000584640 | 5.2000580310 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5200 MHz<br>802.11 n20-mode MCS6  | 20°C  | 5.2000063660 | 5.2000062660 | 5.200021000  |
|    | Continuous transmitting on<br>5200 MHz<br>802.11 n20-mode MCS6  | 50°C  | 5.1999535680 | 5.1999535680 | 5.1999535680 |
| 23 | Continuous transmitting on<br>5240 MHz<br>802.11 n20-mode MCS6  | -40°C | 5.2400585980 | 5.2400588980 | 5.2400590310 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 n20-mode       | 20°C  | 5.2400067000 | 5.2400065330 | 5.2400065000 |
|    | Continuous transmitting on<br>5240 MHz,<br>802.11 n20-mode MCS6 | 50°C  | 5.2399532350 | 5.2399532020 | 5.2399533020 |
| 24 | Continuous transmitting on<br>5745 MHz<br>802.11 n20-mode MCS0  | -40°C | 5.7450674640 | 5.7450674310 | 5.7450653310 |
|    | Continuous transmitting on<br>5745 MHz<br>802.11 n20-mode MCS0  | 20°C  | 5.7450041000 | 5.7450045670 | 5.7450066330 |
|    | Continuous transmitting on<br>5745 MHz<br>802.11 n20-mode MCS0  | 50°C  | 5.7449488350 | 5.7449484680 | 5.7449483350 |
| 25 | Continuous transmitting on<br>5785 MHz<br>802.11 n20-mode MCS0  | -40°C | 5.7850676310 | 5.7850675980 | 5.7850675650 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 n20-mode MCS0  | 20°C  | 5.7850040000 | 5.7850037000 | 5.7850035670 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 n20-mode MCS0  | 50°C  | 5.7849478020 | 5.7849478020 | 5.7849478690 |
| 26 | Continuous transmitting on<br>5825 MHz<br>802.11 n20-mode MCS0  | -40°C | 5.8250688970 | 5.8250687970 | 5.8250684310 |

|    |  |       |              |              |              |
|----|--|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5825 MHz<br>802.11 n20-mode MCS0 | 20°C  | 5.8250027000 | 5.8250029000 | 5.8250034670 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 n20-mode MCS0 | 50°C  | 5.8249472690 | 5.8249472690 | 5.8249474020 |
| 27 | Continuous transmitting on<br>5190 MHz<br>802.11 n40-mode MCS5 | -40°C | 5.1900596310 | 5.1900594310 | 5.1900583980 |
|    | Continuous transmitting on<br>5190 MHz<br>802.11 n40-mode MCS5 | 20°C  | 5.1900054660 | 5.1900054000 | 5.1900051000 |
|    | Continuous transmitting on<br>5190 MHz<br>802.11 n40-mode MCS5 | 50°C  | 5.1899533690 | 5.1899533690 | 5.1899531690 |
| 28 | Continuous transmitting on<br>5230 MHz<br>802.11 n40-mode MCS5 | -40°C | 5.2300596650 | 5.2300602650 | 5.2300603650 |
|    | Continuous transmitting on<br>5230 MHz<br>802.11 n40-mode MCS5 | 20°C  | 5.2300057330 | 5.2300057330 | 5.2300056000 |
|    | Continuous transmitting on<br>5230 MHz<br>802.11 n40-mode MCS5 | 50°C  | 5.2299531020 | 5.2299531020 | 5.2299531350 |
| 29 | Continuous transmitting on<br>5755 MHz<br>802.11 n40-mode MCS0 | -40°C | 5.7550680310 | 5.7550679650 | 5.7550677310 |
|    | Continuous transmitting on<br>5755 MHz<br>802.11 n40-mode MCS0 | 20°C  | 5.7550055000 | 5.7550055330 | 5.7550059660 |
|    | Continuous transmitting on<br>5755 MHz<br>802.11 n40-mode MCS0 | 50°C  | 5.7549483680 | 5.7549483350 | 5.7549481680 |
| 30 | Continuous transmitting on<br>5795 MHz<br>802.11 n40-mode MCS0 | -40°C | 5.7950683310 | 5.7950683310 | 5.7950683650 |

|    |  |       |              |              |              |
|----|--|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5795 MHz<br>802.11 n40-mode MCS0   | 20°C  | 5.7950056660 | 5.7950056660 | 5.7950056660 |
|    | Continuous transmitting on<br>5795 MHz<br>802.11 n40-mode MCS0   | 50°C  | 5.7949477020 | 5.7949477690 | 5.7949477690 |
| 31 | Continuous transmitting on<br>5180MHz<br>802.11 ac20-mode MCS8   | -40°C | 5.1800583320 | 5.1800583980 | 5.1800577650 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 ac20-mode MCS8   | 20°C  | 5.1800054000 | 5.1800058000 | 5.1800060330 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 ac20-mode MCS8   | 50°C  | 5.1799538690 | 5.1799537020 | 5.1799537350 |
| 32 | Continuous transmitting on<br>5200 MHz<br>802.11 ac20-mode MCS8  | -40°C | 5.2000561640 | 5.2000573310 | 5.2000576980 |
|    | Continuous transmitting on<br>5200 MHz,<br>802.11 ac20-mode MCS8 | 20°C  | 5.2000063660 | 5.2000063000 | 5.2000062000 |
|    | Continuous transmitting on<br>5200 MHz<br>802.11 ac20-mode MCS8  | 50°C  | 5.1999535680 | 5.1999535680 | 5.1999536350 |
| 33 | Continuous transmitting on<br>5240 MHz<br>802.11 ac20-mode MCS8  | -40°C | 5.2400586650 | 5.2400585320 | 5.2400580980 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 ac20-mode MCS8  | 20°C  | 5.2400066000 | 5.2400065660 | 5.2400066000 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 ac20-mode MCS8  | 50°C  | 5.2399533350 | 5.2399532680 | 5.2399532350 |
| 34 | Continuous transmitting on<br>5745 MHz<br>802.11 ac20-mode MCS5  | -40°C | 5.7450668640 | 5.7450668640 | 5.7450660980 |



|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5745 MHz<br>802.11 ac20-mode MCS5 | 20°C  | 5.7450070330 | 5.7450060660 | 5.7450058330 |
|    | Continuous transmitting on<br>5745 MHz<br>802.11 ac20-mode MCS5 | 50°C  | 5.7449482350 | 5.7449484350 | 5.7449495020 |
| 35 | Continuous transmitting on<br>5785 MHz<br>802.11 ac20-mode MCS5 | -40°C | 5.7850673310 | 5.7850673970 | 5.7850674310 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 ac20-mode MCS5 | 20°C  | 5.7850054660 | 5.7850055000 | 5.7850058330 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 ac20-mode MCS5 | 50°C  | 5.7849479020 | 5.7849478350 | 5.7849478020 |
| 36 | Continuous transmitting on<br>5825 MHz<br>802.11 ac20-mode MCS5 | -40°C | 5.8250681640 | 5.8250681310 | 5.8250680310 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 ac20-mode MCS5 | 20°C  | 5.8250053000 | 5.8250048330 | 5.8250046000 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 ac20-mode MCS5 | 50°C  | 5.8249473350 | 5.8249472680 | 5.8249472680 |
| 37 | Continuous transmitting on<br>5190 MHz<br>802.11 ac40-mode MCS4 | -40°C | 5.1900581310 | 5.1900590310 | 5.1900591980 |
|    | Continuous transmitting on<br>5190 MHz<br>802.11 ac40-mode MCS4 | 20°C  | 5.1900056000 | 5.1900055660 | 5.1900054000 |
|    | Continuous transmitting on<br>5190 MHz<br>802.11 ac40-mode MCS4 | 50°C  | 5.1899534350 | 5.1899535020 | 5.1899536020 |
| 38 | Continuous transmitting on<br>5230 MHz<br>802.11 ac40-mode MCS4 | -40°C | 5.2300604650 | 5.2300602980 | 5.2300596310 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5230 MHz<br>802.11 ac40-mode MCS4 | 20°C  | 5.2300057330 | 5.2300059000 | 5.2300059000 |
|    | Continuous transmitting on<br>5230 MHz<br>802.11 ac40-mode MCS4 | 50°C  | 5.2299533350 | 5.2299532680 | 5.2299532680 |
| 39 | Continuous transmitting on<br>5755 MHz<br>802.11 ac40-mode MCS1 | -40°C | 5.7550659650 | 5.7550673650 | 5.7550676310 |
|    | Continuous transmitting on<br>5755 MHz<br>802.11 ac40-mode MCS1 | 20°C  | 5.7550061330 | 5.7550055000 | 5.7550052330 |
|    | Continuous transmitting on<br>5755 MHz<br>802.11 ac40-mode MCS1 | 50°C  | 5.7549485690 | 5.7549483020 | 5.7549482350 |
| 40 | Continuous transmitting on<br>5795 MHz<br>802.11 ac40-mode MCS1 | -40°C | 5.7950681640 | 5.7950681640 | 5.7950680980 |
|    | Continuous transmitting on<br>5795 MHz<br>802.11 ac40-mode MCS1 | 20°C  | 5.7950049330 | 5.7950051000 | 5.7950053000 |
|    | Continuous transmitting on<br>5795 MHz<br>802.11 ac40-mode MCS1 | 50°C  | 5.7949478020 | 5.7949478350 | 5.7949478690 |
| 41 | Continuous transmitting on<br>5210 MHz<br>802.11 ac80-mode MCS7 | -40°C | 5.210017000  | 5.210017000  | 5.210018000  |
|    | Continuous transmitting on<br>5210 MHz<br>802.11 ac80-mode MCS7 | 20°C  | 5.2100049000 | 5.2100051000 | 5.2100052000 |
|    | Continuous transmitting on<br>5210 MHz<br>802.11 ac80-mode MCS7 | 50°C  | 5.2099534350 | 5.2099534350 | 5.2099534350 |
| 42 | Continuous transmitting on<br>5775 MHz<br>802.11 ac80-mode MCS7 | -40°C | 5.7750685310 | 5.7750685310 | 5.7750678310 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5775 MHz<br>802.11 ac80-mode MCS7 | 20°C  | 5.7750052330 | 5.7750052660 | 5.7750057000 |
|    | Continuous transmitting on<br>5775 MHz<br>802.11 ac80-mode MCS7 | 50°C  | 5.7749481690 | 5.7749482020 | 5.7749481690 |
| 43 | Continuous transmitting on<br>5180MHz<br>802.11 ax20-mode MCS0  | -40°C | 5.1800567320 | 5.1800578980 | 5.1800579980 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 ax20-mode MCS0  | 20°C  | 5.1800058330 | 5.1800057000 | 5.1800054660 |
|    | Continuous transmitting on<br>5180MHz<br>802.11 ax20-mode MCS0  | 50°C  | 5.1799536350 | 5.1799536020 | 5.1799534020 |
| 44 | Continuous transmitting on<br>5200 MHz<br>802.11 ax20-mode MCS0 | -40°C | 5.2000585980 | 5.2000583640 | 5.2000578980 |
|    | Continuous transmitting on<br>5200 MHz<br>802.11 ax20-mode MCS0 | 20°C  | 5.2000060660 | 5.2000059660 | 5.2000060330 |
|    | Continuous transmitting on<br>5200 MHz<br>802.11 ax20-mode MCS0 | 50°C  | 5.1999536020 | 5.1999535690 | 5.1999535350 |
| 45 | Continuous transmitting on<br>5240 MHz<br>802.11 ax20-mode MCS0 | -40°C | 5.2400587320 | 5.2400590650 | 5.2400592320 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 ax20-mode MCS0 | 20°C  | 5.2400062000 | 5.2400061660 | 5.2400062660 |
|    | Continuous transmitting on<br>5240 MHz<br>802.11 ax20-mode MCS0 | 50°C  | 5.2399532350 | 5.2399532680 | 5.2399532680 |
| 46 | Continuous transmitting on<br>5745 MHz<br>802.11 ax20-mode MCS2 | -40°C | 5.7450638310 | 5.7450666310 | 5.7450667650 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5745 MHz<br>802.11 ax20-mode MCS2 | 20°C  | 5.7450062330 | 5.7450053000 | 5.7450051660 |
|    | Continuous transmitting on<br>5745 MHz<br>802.11 ax20-mode MCS2 | 50°C  | 5.7449484690 | 5.7449483690 | 5.7449480350 |
| 47 | Continuous transmitting on<br>5785 MHz<br>802.11 ax20-mode MCS2 | -40°C | 5.7850674980 | 5.7850674980 | 5.7850674310 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 ax20-mode MCS2 | 20°C  | 5.7850047670 | 5.7850050660 | 5.7850052330 |
|    | Continuous transmitting on<br>5785 MHz<br>802.11 ax20-mode MCS2 | 50°C  | 5.8249470010 | 5.8249470680 | 5.8249472680 |
| 48 | Continuous transmitting on<br>5825 MHz<br>802.11 ax20-mode MCS2 | -40°C | 5.8250683980 | 5.8250686980 | 5.8250686980 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 ax20-mode MCS2 | 20°C  | 5.8250050660 | 5.8250049000 | 5.8250050000 |
|    | Continuous transmitting on<br>5825 MHz<br>802.11 ax20-mode MCS2 | 50°C  | 5.8249470010 | 5.8249469340 | 5.8249469010 |
| 49 | Continuous transmitting on<br>5190 MHz<br>802.11 ax40-mode MCS0 | -40°C | 5.1900593980 | 5.1900591310 | 5.1900580650 |
|    | Continuous transmitting on<br>5190 MHz<br>802.11 ax40-mode MCS0 | 20°C  | 5.1900052000 | 5.1900054330 | 5.1900055330 |
|    | Continuous transmitting on<br>5190 MHz<br>802.11 ax40-mode MCS0 | 50°C  | 5.1899534690 | 5.1899536350 | 5.1899536690 |
| 50 | Continuous transmitting on<br>5230 MHz<br>802.11 ax40-mode MCS0 | -40°C | 5.2300594980 | 5.2300601650 | 5.2300605320 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5230 MHz<br>802.11 ax40-mode MCS0 | 20°C  | 5.2300056660 | 5.2300056330 | 5.230017000  |
|    | Continuous transmitting on<br>5230 MHz<br>802.11 ax40-mode MCS0 | 50°C  | 5.2299533350 | 5.2299533010 | 5.2299533680 |
| 51 | Continuous transmitting on<br>5755 MHz<br>802.11 ax40-mode MCS0 | -40°C | 5.7550674310 | 5.7550678650 | 5.7550679310 |
|    | Continuous transmitting on<br>5755 MHz<br>802.11 ax40-mode MCS0 | 20°C  | 5.7550059000 | 5.7550052000 | 5.7550051000 |
|    | Continuous transmitting on<br>5755 MHz<br>802.11 ax40-mode MCS0 | 50°C  | 5.7549484690 | 5.7549482690 | 5.7549482690 |
| 52 | Continuous transmitting on<br>5795 MHz<br>802.11 ax40-mode MCS0 | -40°C | 5.7950682650 | 5.7950681310 | 5.7950682310 |
|    | Continuous transmitting on<br>5795 MHz<br>802.11 ax40-mode MCS0 | 20°C  | 5.7950050000 | 5.7950050000 | 5.7950051660 |
|    | Continuous transmitting on<br>5795 MHz<br>802.11 ax40-mode MCS0 | 50°C  | 5.7949478350 | 5.7949478350 | 5.7949479350 |
| 53 | Continuous transmitting on<br>5210 MHz<br>802.11 ax80-mode MCS2 | -40°C | 5.2100603310 | 5.2100600980 | 5.2100591310 |
|    | Continuous transmitting on<br>5210 MHz<br>802.11 ax80-mode MCS2 | 20°C  | 5.2100050660 | 5.2100050660 | 5.2100046000 |
|    | Continuous transmitting on<br>5210 MHz<br>802.11 ax80-mode MCS2 | 50°C  | 5.2099536350 | 5.2099534680 | 5.2099534350 |
| 54 | Continuous transmitting on<br>5775 MHz<br>802.11 ax80-mode MCS2 | -40°C | 5.7750680980 | 5.7750686980 | 5.7750687310 |

|    |   |       |              |              |              |
|----|---|-------|--------------|--------------|--------------|
|    | Continuous transmitting on<br>5775 MHz<br>802.11 ax80-mode MCS2 | 20°C  | 5.7750081660 | 5.7750050000 | 5.7750047670 |
|    | Continuous transmitting on<br>5775 MHz<br>802.11 ax80-mode MCS2 | 50°C  | 5.7749481680 | 5.7749481680 | 5.7749483350 |
| 55 | Continuous transmitting on<br>2402 MHz, BT 5.2 DM1              | -40°C | 2.402017393  | 2.402020342  | 2.40202017   |
|    | Continuous transmitting on<br>2402 MHz, BT 5.2 DM1              | 20°C  | 2.402005092  | 2.402003872  | 2.402006297  |
|    | Continuous transmitting on<br>2402 MHz, BT 5.2 DM1              | 50°C  | 2.401976945  | 2.401977342  | 2.40197751   |
| 56 | Continuous transmitting on<br>2441 MHz, BT 5.2 DM1              | -40°C | 2.441019798  | 2.441020028  | 2.441019823  |
|    | Continuous transmitting on<br>2441 MHz, BT 5.2 DM1              | 20°C  | 2.441006228  | 2.441005874  | 2.44100589   |
|    | Continuous transmitting on<br>2441 MHz, BT 5.2 DM1              | 50°C  | 2.440977101  | 2.440976969  | 2.44097702   |
| 57 | Continuous transmitting on<br>2480 MHz, BT 5.2 DM1              | -40°C | 2.480020165  | 2.480020246  | 2.480020976  |
|    | Continuous transmitting on<br>2480 MHz, BT 5.2 DM1              | 20°C  | 2.480006132  | 2.480005883  | 2.480005622  |
|    | Continuous transmitting on<br>2480 MHz, BT 5.2 DM1              | 50°C  | 2.479975953  | 2.479976308  | 2.479976235  |
| 58 | Continuous transmitting on<br>2402 MHz, BT 5.2 2-DH1            | -40°C | 2.402016097  | 2.402015908  | 2.402015765  |

|    |  |       |             |             |             |
|----|--|-------|-------------|-------------|-------------|
|    | Continuous transmitting on<br>2402 MHz, BT 5.2 2-DH1 | 20°C  | 2.402001992 | 2.402001979 | 2.402001974 |
|    | Continuous transmitting on<br>2402 MHz, BT 5.2 2-DH1 | 50°C  | 2.401973336 | 2.401973221 | 2.401973225 |
| 59 | Continuous transmitting on<br>2441 MHz, BT 5.2 2-DH1 | -40°C | 2.441016288 | 2.44101628  | 2.441016318 |
|    | Continuous transmitting on<br>2441 MHz, BT 5.2 2-DH1 | 20°C  | 2.441002356 | 2.441002055 | 2.441002142 |
|    | Continuous transmitting on<br>2441 MHz, BT 5.2 2-DH1 | 50°C  | 2.440972703 | 2.440972767 | 2.440972825 |
| 60 | Continuous transmitting on<br>2480 MHz, BT 5.2 2-DH1 | -40°C | 2.480016455 | 2.480016601 | 2.480016542 |
|    | Continuous transmitting on<br>2480 MHz, BT 5.2 2-DH1 | 20°C  | 2.480002392 | 2.480002163 | 2.480002211 |
|    | Continuous transmitting on<br>2480 MHz, BT 5.2 2-DH1 | 50°C  | 2.479972691 | 2.479972902 | 2.479972701 |
| 61 | Continuous transmitting on<br>2402 MHz, BT 5.2 3-DH5 | -40°C | 2.40201535  | 2.402015393 | 2.402015303 |
|    | Continuous transmitting on<br>2402 MHz, BT 5.2 3-DH5 | 20°C  | 2.402001335 | 2.402001395 | 2.402001336 |
|    | Continuous transmitting on<br>2402 MHz, BT 5.2 3-DH5 | 50°C  | 2.401972355 | 2.401972288 | 2.401972234 |
| 62 | Continuous transmitting on<br>2441 MHz, BT 5.2 3-DH5 | -40°C | 2.441016383 | 2.441016255 | 2.4410165   |

|    |  |       |             |             |             |
|----|--|-------|-------------|-------------|-------------|
|    | Continuous transmitting on<br>2441 MHz, BT 5.2 3-DH5 | 20°C  | 2.441002159 | 2.441002032 | 2.441001898 |
|    | Continuous transmitting on<br>2441 MHz, BT 5.2 3-DH5 | 50°C  | 2.440972237 | 2.44097242  | 2.440972181 |
| 63 | Continuous transmitting on<br>2480 MHz, BT 5.2 3-DH5 | -40°C | 2.48001669  | 2.480016882 | 2.480016565 |
|    | Continuous transmitting on<br>2480 MHz, BT 5.2 3-DH5 | 20°C  | 2.48000184  | 2.480001872 | 2.480001871 |
|    | Continuous transmitting on<br>2480 MHz, BT 5.2 3-DH5 | 50°C  | 2.47997172  | 2.479971778 | 2.479971823 |
| 64 | Hopping on all channels, BT<br>5.2                   | -40°C | N/A         |             |             |
|    | Hopping on all channels, BT<br>5.2                   | 20°C  | N/A         |             |             |
|    | Hopping on all channels, BT<br>5.2                   | 50°C  | N/A         |             |             |
| 65 | Hopping on all channels, BT<br>5.2                   | -40°C | N/A         |             |             |
|    | Hopping on all channels, BT<br>5.2                   | 20°C  | N/A         |             |             |
|    | Hopping on all channels, BT<br>5.2                   | 50°C  | N/A         |             |             |
| 66 | Hopping on all channels, BT<br>5.2                   | -40°C | N/A         |             |             |



|    |   |       |             |             |             |
|----|---|-------|-------------|-------------|-------------|
|    | Hopping on all channels, BT<br>5.2                    | 20°C  | N/A         |             |             |
|    | Hopping on all channels, BT<br>5.2                    | 50°C  | N/A         |             |             |
| 67 | Continuous transmitting on<br>2402 MHz, BT LE<br>1MHz | -40°C | 2.402023906 | 2.402024034 | 2.402024057 |
|    | Continuous transmitting on<br>2402 MHz, BT LE<br>1MHz | 20°C  | 2.402009819 | 2.402009735 | 2.402009995 |
|    | Continuous transmitting on<br>2402 MHz, BT LE<br>1MHz | 50°C  | 2.401980802 | 2.401980794 | 2.401980717 |
| 68 | Continuous transmitting on<br>2440 MHz, BT LE<br>1MHz | -40°C | 2.440024407 | 2.440024388 | 2.440024218 |
|    | Continuous transmitting on<br>2440 MHz, BT LE<br>1MHz | 20°C  | 2.440009962 | 2.44000989  | 2.440009915 |
|    | Continuous transmitting on<br>2440 MHz, BT LE<br>1MHz | 50°C  | 2.439980619 | 2.439980717 | 2.439980529 |
| 69 | Continuous transmitting on<br>2480 MHz, BT LE<br>1MHz | -40°C | 2.48002369  | 2.480023584 | 2.480023565 |
|    | Continuous transmitting on<br>2480 MHz, BT LE<br>1MHz | 20°C  | 2.480009621 | 2.480009625 | 2.480009883 |
|    | Continuous transmitting on<br>2480 MHz, BT LE<br>1MHz | 50°C  | 2.479980111 | 2.479979961 | 2.479980048 |
| 70 | Continuous transmitting on<br>2402 MHz, BT LE<br>2MHz | -40°C | 2.402031644 | 2.40203152  | 2.402031463 |

|    |   |       |             |             |             |
|----|---|-------|-------------|-------------|-------------|
|    | Continuous transmitting on<br>2402 MHz, BT LE<br>2MHz               | 20°C  | 2.402017923 | 2.402017897 | 2.402017891 |
|    | Continuous transmitting on<br>2402 MHz, BT LE<br>2MHz               | 50°C  | 2.401988713 | 2.401988756 | 2.401988805 |
| 71 | Continuous transmitting on<br>2440 MHz, BT LE<br>2MHz               | -40°C | 2.440031556 | 2.440031664 | 2.440031368 |
|    | Continuous transmitting on<br>2440 MHz, BT LE<br>2MHz               | 20°C  | 2.440017377 | 2.44001736  | 2.440017462 |
|    | Continuous transmitting on<br>2440 MHz, BT LE<br>2MHz               | 50°C  | 2.439987772 | 2.439987579 | 2.439987585 |
| 72 | Continuous transmitting on<br>2480 MHz, BT LE<br>2MHz               | -40°C | 2.480031308 | 2.480031429 | 2.480031453 |
|    | Continuous transmitting on<br>2480 MHz, BT LE<br>2MHz               | 20°C  | 2.480016823 | 2.480016274 | 2.480017041 |
|    | Continuous transmitting on<br>2480 MHz, BT LE<br>2MHz               | 50°C  | 2.479987078 | 2.479987097 | 2.479987129 |
| 73 | Continuous transmitting on<br>5745 MHz,<br>802.11 ax20 RU-mode MCS2 | -40°C | 5.745011885 | 5.745013425 | 5.745015681 |
|    | Continuous transmitting on<br>5745 MHz,<br>802.11 ax20 RU-mode MCS2 | 20°C  | 5.745085236 | 5.745069213 | 5.7450818   |
|    | Continuous transmitting on<br>5745 MHz,<br>802.11 ax20 RU-mode MCS2 | 50°C  | 5.745009645 | 5.745006879 | 5.745018427 |
| 74 | Continuous transmitting on<br>5785 MHz,<br>802.11 ax20 RU-mode MCS2 | -40°C | 5.785094983 | 5.78511702  | 5.785113104 |

|    |   |       |             |             |             |
|----|---|-------|-------------|-------------|-------------|
|    | Continuous transmitting on<br>5785 MHz,<br>802.11 ax20 RU-mode MCS2       | 20°C  | 5.785191415 | 5.785193817 | 5.785178636 |
|    | Continuous transmitting on<br>5785 MHz,<br>802.11 ax20 RU-mode MCS2       | 50°C  | 5.785120295 | 5.785047448 | 5.785151396 |
| 75 | Continuous transmitting on<br>5825 MHz,<br>802.11 ax20 RU-mode MCS2       | -40°C | 5.825007748 | 5.824992445 | 5.825036006 |
|    | Continuous transmitting on<br>5825 MHz,<br>802.11 ax20 RU-mode MCS2       | 20°C  | 5.825110858 | 5.825104407 | 5.825121009 |
|    | Continuous transmitting on<br>5825 MHz,<br>802.11 ax20 RU-mode MCS2       | 50°C  | 5.825042264 | 5.825042264 | 5.825032558 |
| 76 | Continuous transmitting on<br>5755 MHz,<br>802.11 ax40 RU242-mode<br>MCS0 | -40°C | 5.75442989  | 5.75446642  | 5.754460054 |
|    | Continuous transmitting on<br>5755 MHz,<br>802.11 ax40 RU242-mode<br>MCS0 | 20°C  | 5.754405919 | 5.754409222 | 5.754413417 |
|    | Continuous transmitting on<br>5755 MHz,<br>802.11 ax40 RU242-mode<br>MCS0 | 50°C  | 5.754364648 | 5.75436031  | 5.754385507 |
| 77 | Continuous transmitting on<br>5795 MHz,<br>802.11 ax40 RU242-mode<br>MCS0 | -40°C | 5.795773528 | 5.795693375 | 5.795693012 |
|    | Continuous transmitting on<br>5795 MHz,<br>802.11 ax40 RU242-mode<br>MCS0 | 20°C  | 5.795635944 | 5.795644018 | 7.79564103  |
|    | Continuous transmitting on<br>5795 MHz,<br>802.11 ax40 RU242-mode         | 50°C  | 5.795580413 | 5.795599284 | 5.795573535 |

|    | MCS0  |       |             |             |             |
|----|---|-------|-------------|-------------|-------------|
| 78 | Continuous transmitting on<br>5755 MHz,<br>802.11 ax40 RU484-mode<br>MCS0 | -40°C | 5.755148863 | 5.755167733 | 5.755177801 |
|    | Continuous transmitting on<br>5755 MHz,<br>802.11 ax40 RU484-mode<br>MCS0 | 20°C  | 5.755107554 | 5.755114291 | 5.755115128 |
|    | Continuous transmitting on<br>5755 MHz,<br>802.11 ax40 RU484-mode<br>MCS0 | 50°C  | 5.755027639 | 5.75500179  | 5.755024242 |
| 79 | Continuous transmitting on<br>5795 MHz,<br>802.11 ax40 RU484-mode<br>MCS0 | -40°C | 5.79512148  | 5.795166022 | 5.795176609 |
|    | Continuous transmitting on<br>5795 MHz,<br>802.11 ax40 RU484-mode<br>MCS0 | 20°C  | 5.795100994 | 5.795154064 | 5.795092548 |
|    | Continuous transmitting on<br>5795 MHz,<br>802.11 ax40 RU484-mode<br>MCS0 | 50°C  | 5.794985589 | 5.794990285 | 5.794964422 |
| 80 | Continuous transmitting on<br>5775 MHz,<br>802.11 ax80 RU484-mode<br>MCS2 | -40°C | 5.775108815 | 5.775104635 | 5.775114929 |
|    | Continuous transmitting on<br>5775 MHz,<br>802.11 ax80 RU484-mode<br>MCS2 | 20°C  | 5.775040469 | 5.77502552  | 5.775048622 |
|    | Continuous transmitting on<br>5775 MHz,<br>802.11 ax80 RU484-mode<br>MCS2 | 50°C  | 5.775003628 | 5.77500753  | 5.775004983 |

• **Document Revisions**

| <b>Version</b> | <b>Date</b> | <b>Modifier</b> | <b>Changes</b>  |
|----------------|-------------|-----------------|---|
| 1.0            | 09/01/2023  | Aravind Buddana | <ul style="list-style-type: none"><li>• Initial Release</li></ul> |

**End of Report**