

Test Report on

Blues Wireless
Model: NOTE-NBNAW
SW Version: 5
HW Version: 5
PTCRB # 119757
SVN: 31

Test Report Reference: MUS_BLUES_2303_CON_Rev0

Date: 2023-08-25



Cert# 3699.02

Test Laboratory:
Bureau Veritas CPS Inc.
1293 Anvilwood Avenue
Sunnyvale, CA 94089
USA



Authorized
Test Lab

Lab Code: 20131001- 00

Note:

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory

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1 Administrative Data

1.1 Project Information

Project Name	MUS_BLUES_2303
Responsible for Testing	Jenil Nathwani
Date of Report	2023-08-25
Testing Time Frame	2023-07-10 to 2023-07-27

1.2 Applicant Information

Company	Blues Wireless
Address	50 Harbor Street Manchester, MA 01944 United States
Contact Person	James Batson
Phone	+1 (339) 293 7956
Email	jbatson@blues.com



1.3 Test Laboratory Information

The following list shows all Locations and Test Resources involved in the generation of test results:

Bureau Veritas, USA, CA, Sunnyvale

Company Name	Bureau Veritas Consumer Products Services, Inc.
Address	1293 Anvilwood Avenue Sunnyvale, CA 94089 United States
Contact	Detlef van't Hof
Phone	+1 (949) 297 8071
Email	Detlef.vantHof@7Layers.com
Laboratory accreditation no.	A2LA 3699.02

List of Test Resources

ID	Name	Responsible	Accreditation Info
1	TP118 - COMPRION UT3 USIM Simulator	Benjamin Ho	A2LA 3699.02

1.4 Signature of responsible for testing

Jenil Nathwani

Jenil Nathwani

1.5 Signature of responsible for accreditation scope

Marco Orantes

Marco Orantes

1.6 Revision History

Report version control			
Version	Release date	Change Description	Version validity
Initial	2023-08-25	Initial Release	Valid

2 Test Object Data

2.1 Object Under Test (OUT) Description(s)

The following section lists all Objects Under Test (OUTs) involved during testing.

Object Under Test: NOTE-NBNAW

Type / Model	Blues Wireless Model: NOTE-NBNAW SW Version: 5 HW Version: 5 PTCRB # 119757 SVN: 31
Normal Temperature	23 °C
Normal Voltage	5 V

Manufacturer:

Company	Blues Wireless
Address	50 Harbor Street Manchester, MA 01944 United States
Contact Person	James Batson
Phone	+1 (339) 293 7956
Email	jbatson@blues.com

3 Results

3.1 General

Documentation of tested devices

Available at the test laboratory.

Interpretation of the test results

The results of the inspection are described on the following pages, where 'Conformity' or 'Passed' means that the certification criteria were verified and that the tested device conforms to the applied standard.

In cases where 'Declaration' is stated, the required documents are available in the manufacturer's product documentation.

In cases where 'not applicable' is stated, the test case requirements are not relevant to the specific equipment implementation.

Notes

1. This report contains the abbreviated information content pertaining to services rendered. Supporting documentation not included herein is maintained and available at the test laboratory.
2. All tests are performed under environmental conditions within the requirements of the specifications. Environmental condition records are available at the test laboratory.
3. Test sample (NOTE-NBNAW) of this project received in good condition.

Project specific notes

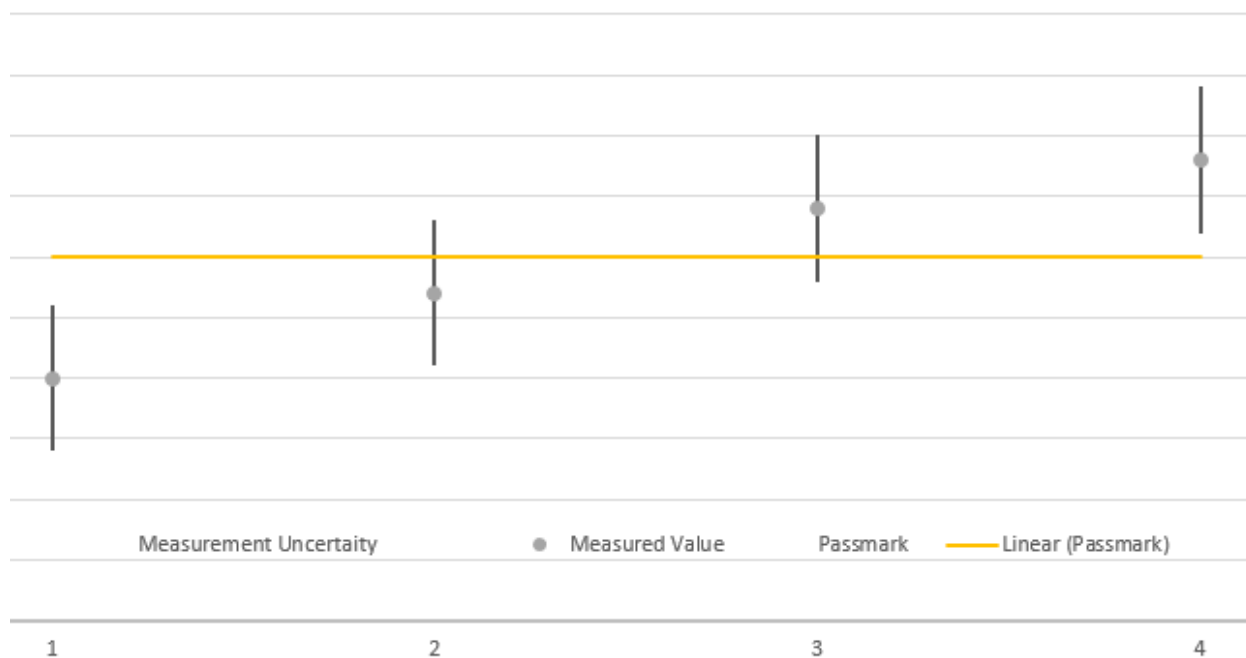
This is a delta test report based on PTCRB modular approval guideline for a final product that integrates a Quectel BG95-M1 Module which has been approved by PTCRB (Request# 117407) according to NAPRD.03 v6.11 with HW version: R2.1 and SW version: BG95M1LAR02A04 (SVN31) on April 26, 2023.

3.2 Measurement Uncertainties

Parameter	Uncertainty
Occupied channel Bandwidth	± 2%
Radiated Emissions	30 MHz – 1 GHz: ± 2.4 dB 180 MHz – 18 GHz: ± 2.6 dB
Spurious emissions, conducted	0.22 – 1.82 dB (*)
Transmitter tests, conducted	0.33 – 0.8 dB (*)
Receiver tests, conducted	0.22 – 1.027 dB (*)
Frequency error, conducted	< 15 Hz (*)
Phase error, conducted	≤ 02 °RMS EVM: ≤ 2.5%
Temperature	± 1.0 °C
Humidity	± 3%
DC and low frequency voltages	± 0.05%
Time	0.28 ms
Duty Cycle	± 5%

(*) Depending on the used test resource and the performed test case the uncertainty is in the given range. Detailed documentation is available at Bureau Veritas Consumer Products Services, Inc.

The measurement uncertainties for all parameters are calculated with an expansion factor (coverage factor) $k = 1.96$. This means, that the true value is in the corresponding interval with a probability of 95 %.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

3.3 Applicable Quality Policies

Quality Policy	Version	Expiration Date
NAPRD03	6.11	

3.4 Applicable Test Specification(s)

Test Specification	ETSI TS 102 230-1
Version	V14.1.0
Description	Smart Cards; UICC-Terminal interface; Physical, electrical and logical test specification (Release 14)

3.5 Result Statistics

Test Specification	Total	Result Verdict					Pass ratio
		Pass	Fail	Declaration	Blocked	Performed	
ETSI TS 102 230-1	13	13	0	0	0	0	100.00 %

Note: Pass, Declaration, Performed, Fail and Inconclusive results are regarded for the pass ratio calculation. Pass, Performed and Declaration are summarized as Pass results. Fail and Inconclusive are summarized as Fail results. All are summarized as total count (Pass + Declaration + Performed + Fail + Inconclusive). The pass ratio is calculated by the number of Pass results divided by the number of total results. All other results like Error, Not Tested or Blocked are not regarded for the calculation.

3.6 Result Summary

3.6.1 Pass Results

Test Specification: ETSI TS 102 230-1

Test Case Name / Description Test Condition	Category	Verdict	Date	Test Res. ID	Sample/Setup
5.1.1 / Phase preceding Terminal power on	A	Passed	2023-07-10	TR 1	AA01
5.1.2.2 / Phase during UICC power on: 1,8 V - 3 V Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
5.1.3.2 / Phase during Terminal power off: 1,8 V - 3 V Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
5.2.2.3 / Electrical tests on contact C1, Test 1: 1,8 V - 3 V Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
5.2.2.4 / Electrical tests on contact C1, Test 2: 1,8 V - 3 V Parameter = (1) 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
Parameter = (2) 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
Parameter = (3) 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
Parameter = (4) 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
Parameter = (5) 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
Parameter = (6) 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
5.2.3.2 / Electrical tests on contact C2: 1,8 V - 3 V Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
5.2.4.2 / Electrical tests on contact C3: 1,8 V - 3 V Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-10	TR 1	AA01
5.2.5.3 / Electrical tests on contact C7, Test 1: 1,8 V - 3 V Parameter = 1.8V-3V (1.8V mode)	B	Passed	2023-07-10	TR 1	AA01

4 Test Equipment Details

4.1 List of Test Equipment

The information shown below is valid for the testing time frame of this test report.

Test Resource 1: TP118 - COMPRION UT3 USIM Simulator

Description:

Single Devices of Test Resource TP118 - COMPRION UT3 USIM Simulator

Name	Serial Number	Manufacturer	
Analog Probe (UT3 APR) S/N 45175	45175	COMPRION GmbH	
Thermo-Hydrometer	200591895		
	<i>Deactivation</i>	<i>Start Date</i>	<i>End Date</i>
	Deactivated due to out-of-cal	2023-04-07	

Test System TP118 - COMPRION UT3 USIM Simulator of Test Resource TP118 - COMPRION UT3 USIM Simulator

Description: UT³ Platform s/n 40414
 Manufacturer: COMPRION GmbH
 Serial Number: 40414

Event	Execution Date	Next Execution
Calibration	2023-01	2024-01
Software Version	Start Date	End Date
UT3 DTC Version 8.5	2022-09-02	

Single Devices of Test System TP118 - COMPRION UT3 USIM Simulator

Name	Serial Number	Manufacturer
Analog Probe (UT3 APR) S/N 45175	45175	COMPRION GmbH
COMPRION UT3 SIM Simulator		COMPRION GmbH

5 Annex

5.1 Object Under Test (OUT) Features

Supported Features for Object Under Test: NOTE-NBNAW

Name	Short Description
3GPP TS 36.523-2	
A.4.1-1/1	E-UTRA FDD
A.4.3.1-1/1	eFDD1
A.4.3.1-1/2	eFDD2
A.4.3.1-1/3	eFDD3
A.4.3.1-1/4	eFDD4
A.4.3.1-1/5	eFDD5
A.4.3.1-1/8	eFDD8
A.4.3.1-1/12	eFDD12
A.4.3.1-1/13	eFDD13
A.4.3.1-1/18	eFDD18
A.4.3.1-1/19	eFDD19
A.4.3.1-1/20	eFDD20
A.4.3.1-1/25	eFDD25
A.4.3.1-1/26	eFDD26
A.4.3.1-1/28	eFDD28
A.4.3.1-1/34	eFDD66
A.4.3.1-1/85	eFDD85
ETSI TS 102 230-1	
A.1/3	Class A
A.1/4	Class B
A.1/5	Class C

5.2 Sample AA01

Sample Name: AA01	
Object Under Test	NOTE-NBNAW
Description	Sample_AA01
Hardware Version	5
Software Version	5
Parameter Name	Value
IMEI	861492069057567

APPENDIX A. EUT Set-up Photographs



Sample

End of Test Report