



SAR EVALUATION REPORT

Applicant Name:

Samsung Electronics Co., Ltd.
129, Samsung-ro, Maetan dong,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:

04/24/2023 - 05/15/2023

Test Site/Location:

Element Materials Technology,
Morgan Hill, CA, USA

Document Serial No.:

1M2303200036-01.A3L (Rev 1)

FCC ID:

A3LSMX910

APPLICANT:

SAMSUNG ELECTRONICS CO., LTD.

DUT Type:

Portable Computing Device

Application Type:

Certification

FCC Rule Part(s):

CFR §2.1093

Model(s):

SM-X910

Equipment Class	Band & Mode	Tx Frequency	SAR	
			1g Body (W/kg) Tablet	1g Body (W/kg) Laptop
DTS	2.4 GHz WLAN	2412 - 2472 MHz	0.61	0.11
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.74*	0.38*
NII	U-NII-2C	5500 - 5720 MHz	0.67*	0.37*
NII	U-NII-3	5745 - 5825 MHz	0.81*	0.57*
NII	U-NII-4	5845 - 5885 MHz	0.66*	0.52*
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.34	0.51
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.08

* Note: * SAR values represent RF exposure during MIMO operations.

Note: This revised Test Report supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.9 of this report; for North American frequency bands only.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.



RJ Ortanez
Executive Vice President



The SAR Tick is an initiative of the Mobile & Wireless Forum (MWF). While a product may be considered eligible, use of the SAR Tick logo requires an agreement with the MWF. Further details can be obtained by emailing: sartick@mwfai.info.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 1 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

TABLE OF CONTENTS

1	DEVICE UNDER TEST	3
2	INTRODUCTION	12
3	DOSIMETRIC ASSESSMENT	13
4	TEST CONFIGURATION POSITIONS.....	14
5	RF EXPOSURE LIMITS	15
6	FCC MEASUREMENT PROCEDURES.....	16
7	RF CONDUCTED POWERS.....	19
8	SYSTEM VERIFICATION.....	28
9	SAR DATA SUMMARY	31
10	SAR MEASUREMENT VARIABILITY	37
11	EQUIPMENT LIST	38
12	MEASUREMENT UNCERTAINTIES.....	39
13	CONCLUSION.....	40
14	REFERENCES	41
APPENDIX A: SAR TEST PLOTS		
APPENDIX B: SAR DIPOLE VERIFICATION PLOTS		
APPENDIX C: PROBE AND DIPOLE CALIBRATION CERTIFICATES		
APPENDIX D: SAR TISSUE SPECIFICATIONS		
APPENDIX E: MULTI-TX AND ANTENNA SAR CONSIDERATIONS		
APPENDIX F: POWER REDUCTION VERIFICATION		
APPENDIX G: SAR SYSTEM VALIDATION		
APPENDIX H: IEEE 802.11ax RU SAR EXCLUSION		
APPENDIX I: DUT ANTENNA DIAGRAM AND SAR TEST SETUP PHOTOGRAPHS		

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 2 of 42

REV 22.0
03/30/2022

1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
2.4 GHz WLAN	Data	2412 - 2472 MHz
U-NII-1	Data	5180 - 5240 MHz
U-NII-2A	Data	5260 - 5320 MHz
U-NII-2C	Data	5500 - 5720 MHz
U-NII-3	Data	5745 - 5825 MHz
U-NII-4	Data	5845 - 5885 MHz
U-NII-5	Data	5935 - 6415 MHz
U-NII-6	Data	6435 - 6515 MHz
U-NII-7	Data	6535 - 6875 MHz
U-NII-8	Data	6895 - 7115 MHz
Bluetooth	Data	2402 - 2480 MHz

1.2 Power Reduction for SAR

This device uses a power reduction mechanism for SAR compliance. The power reduction mechanism is activated when the device is used in close proximity to the user's body. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device. Detailed descriptions of the power reduction mechanism are included in the operational description.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 3 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

1.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v06.

Note: Targets for 802.11ax RU operations can be found in 802.11ax RU SAR Exclusion Appendix.

1.3.1 2.4 GHz Maximum SISO/MIMO WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)																			
		SISO										MIMO									
		Antenna 2																			
		b		g		n		ac		ax (SU)		b CDD + STBC		g (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.		
2.4 GHz WiFi	2.45 GHz	19.0	18.0	18.0	17.0	18.0	17.0	17.5	16.5	18.0	17.0	22.0	21.0	21.0	20.0	21.0	20.0	20.5	19.5	21.0	20.0
		ch. 1: 17.0		ch. 11: 16.0		ch. 11: 17.5		ch. 1: 17.0		ch. 11: 16.5		ch. 12: 9.0		ch. 1: 20.0		ch. 11: 20.5		ch. 1: 20.0		ch. 11: 19.5	
		ch. 12: 9.0		ch. 13: 3.0		ch. 12: 9.0		ch. 13: 3.0		ch. 12: 9.0		ch. 13: 3.0		ch. 12: 9.0		ch. 13: 3.0		ch. 12: 9.0		ch. 13: 3.0	
		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0		ch. 13: 3.0	

1.3.2 2.4 GHz Reduced WLAN Output Powers

The below table is applicable in the following conditions:

- Grip sensor active

Mode	Band	IEEE 802.11 (in dBm)																			
		SISO										MIMO									
		Antenna 2																			
		b		g		n		ac		ax (SU)		b CDD + STBC		g (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	
2.4 GHz WIFI	2.45 GHz	13.0	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	12.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0
		ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch. 12: 9.0	8.0	ch.12: 9.0	8.0	ch. 12: 9.0	8.0
		ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0	ch. 13: 3.0	2.0

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 4 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

1.3.3 5 GHz Maximum SISO/MIMO WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)							
		MIMO							
		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	UNII-1	21.0	20.0	21.0	20.0	21.0	20.0	21.0 ch. 36: 20.5	20.0 19.5
	UNII-2A	21.0	20.0	21.0 ch. 64: 20.5	20.0 19.5	21.0	20.0	21.0 ch. 64: 20.5	20.0 19.5
	UNII-2C	21.0	20.0	21.0	20.0	21.0	20.0	21.0 ch. 100: 20.5	20.0 19.5
	UNII-3	21.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0
	UNII-4	21.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0
5 GHz WIFI (40MHz BW)	UNII-1			20.0	19.0	20.0	19.0	20.0	19.0
	UNII-2A			20.0	19.0	20.0 ch. 62: 19.5	19.0 18.5	20.0 ch. 62: 19.5	19.0 18.5
	UNII-2C			20.0 ch. 102: 19.5	19.0 18.5	20.0 ch. 102: 19.5	19.0 18.5	20.0 ch. 102: 19.5	19.0 18.5
	UNII-3			20.0	19.0	20.0	19.0	20.0	19.0
	UNII-4			20.0	19.0	20.0	19.0	20.0	19.0
5 GHz WIFI (80MHz BW)	UNII-1					19.0	18.0	19.0	18.0
	UNII-2A					19.0	18.0	19.0	18.0
	UNII-2C					19.0	18.0	19.0	18.0
	UNII-3					19.0	18.0	19.0	18.0
	UNII-4					19.0	18.0	19.0	18.0
5 GHz WIFI (160MHz BW)	UNII-1/2A					18.0	17.0	18.0	17.0
	UNII-2C					18.0	17.0	18.0	17.0
	UNII-3/4					18.0	17.0	18.0	17.0

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 5 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

1.3.4 5 GHz Reduced WLAN Output Powers

The below table is applicable in the following conditions:

- Grip sensor active

Mode	Band	IEEE 802.11 (in dBm)							
		MIMO							
		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	UNII-1	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
	UNII-2A	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
	UNII-2C	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
	UNII-3	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
	UNII-4	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
5 GHz WIFI (40MHz BW)	UNII-1			12.0	11.0	12.0	11.0	12.0	11.0
	UNII-2A			12.0	11.0	12.0	11.0	12.0	11.0
	UNII-2C			12.0	11.0	12.0	11.0	12.0	11.0
	UNII-3			12.0	11.0	12.0	11.0	12.0	11.0
	UNII-4			12.0	11.0	12.0	11.0	12.0	11.0
5 GHz WIFI (80MHz BW)	UNII-1					12.0	11.0	12.0	11.0
	UNII-2A					12.0	11.0	12.0	11.0
	UNII-2C					12.0	11.0	12.0	11.0
	UNII-3					12.0	11.0	12.0	11.0
	UNII-4					12.0	11.0	12.0	11.0
5 GHz WIFI (160MHz BW)	UNII-1/2A					12.0	11.0	12.0	11.0
	UNII-2C					12.0	11.0	12.0	11.0
	UNII-3/4					12.0	11.0	12.0	11.0

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 6 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

1.3.5 2.4 GHz Maximum Bluetooth Output Power

Mode	Antenna 1		Antenna 2		Dual Tx	
	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal
Bluetooth(BDR) (dBm)	19	18	20	19	17	16
Bluetooth(EDR) (dBm)	15.5	14.5	16.5	15.5	13.5	12.5
Bluetooth LE 125/500 Kbps dBm	10.5	9.5	12	11		
Bluetooth LE 1/2 Mbps (dBm)	14	13	15.5	14.5		

1.3.6 2.4 GHz Reduced Bluetooth Output Power

The below table is applicable in the following conditions:

- Grip sensor active

Mode	Antenna 1		Antenna 2		Dual Tx	
	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal
Bluetooth(BDR) (dBm)	9.5	8.5	11	10	13	12
Bluetooth(EDR) (dBm)	9.5	8.5	11	10	13.5	12.5
Bluetooth LE 125/500 Kbps dBm	10	9	11.5	10.5		
Bluetooth LE 1/2 Mbps (dBm)	10	9	11.5	10.5		

FCC ID: A3LSMX910	SAR EVALUATION REPORT		Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device		Page 7 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

1.4 DUT Antenna Locations

The overall dimensions of this device are > 200 mm. A diagram showing the location of the device antennas can be found in the DUT Antenna Diagram and SAR Test Setup Photographs Appendix.

Table 1-1
Device Edges/Sides for SAR Testing - Tablet

Mode	Back	Top	Bottom	Right	Left
2.4 GHz WLAN Ant 2	Yes	Yes	No	No	Yes
2.4 GHz WLAN MIMO	Yes	Yes	No	Yes	Yes
5 GHz WLAN MIMO	Yes	Yes	No	Yes	Yes
Bluetooth Ant 1	Yes	Yes	No	Yes	No
Bluetooth Ant 2	Yes	Yes	No	No	Yes

Table 1-2
Device Edges/Sides for SAR Testing - Laptop

Mode	Back	Top	Bottom	Right	Left
2.4 GHz WLAN Ant 2	No	No	Yes	No	No
2.4 GHz WLAN MIMO	No	No	Yes	No	No
5 GHz WLAN MIMO	No	No	Yes	No	No
Bluetooth Ant 1	No	No	Yes	No	No
Bluetooth Ant 2	No	No	Yes	No	No

Note: Per FCC KDB Publication 616217 D04v01r01, particular edges were not required to be evaluated for SAR based on the SAR exclusion threshold in KDB 447498 D01V06. Additional edges may have been evaluated for simultaneous transmission analysis.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 8 of 42

REV 22.0
03/30/2022

1.5 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

Table 1-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Body
1	2.4 GHz WI-FI MIMO	Yes
2	2.4 GHz Bluetooth MIMO	Yes
3	5 GHz WI-FI MIMO	Yes
4	6 GHz WI-FI MIMO	Yes
5	2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2	Yes
6	2.4 GHz Bluetooth Ant 1+ 5 GHz WI-FI MIMO	Yes
7	2.4 GHz Bluetooth Ant 1+ 6 GHz WI-FI MIMO	Yes
8	2.4 GHz Bluetooth Ant 2+ 5 GHz WI-FI MIMO	Yes
9	2.4 GHz Bluetooth Ant 2+ 6 GHz WI-FI MIMO	Yes
10	2.4 GHz Bluetooth MIMO + 5 GHz WI-FI MIMO	Yes
11	2.4 GHz Bluetooth MIMO + 6 GHz WI-FI MIMO	Yes
12	2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes
13	2.4 GHz WI-FI MIMO + 6 GHz WI-FI MIMO	Yes
14	2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI MIMO	Yes
15	2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2 + 6 GHz WI-FI MIMO	Yes

1. No other simultaneous scenarios besides described above is supported for this model.
2. This device supports 2x2 MIMO Tx for WLAN 802.11b/a/g/n/ac/ax. 802.11b/a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. WLAN can transmit only when operating with MIMO.
3. Only Antenna 1 supports Bluetooth Tethering in SISO Mode.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 9 of 42

REV 22.0
03/30/2022

1.6 Miscellaneous SAR Test Considerations

(A) WIFI/BT

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.

This device supports IEEE 802.11ax with the following features:

- a) Up to 160 MHz Bandwidth only for 5/6 GHz
- b) Up to 20 MHz Bandwidth only for 2.4 GHz
- c) 2 Tx antenna output
- d) Up to 1024 QAM is supported
- e) TDWR and Band gap channels are supported for 5/6 GHz
- f) MU-MIMO UL Operations are not supported

Per April 2019 TCB Workshop Notes, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

This device supports 6 GHz WIFI Operations. RF Exposure assessment for these bands can be found in the WIFI6E RF Exposure Report (report SN can be found in Section 1.11 – Bibliography). Simultaneous transmission analysis is addressed in the Multi-Tx and Antenna SAR Considerations Appendix of this report.

This device supports channel 1-13 for 2.4 GHz WLAN. However, because channel 12/13 targets are not higher than that of channels 1-11, channels 1, 6, and 11 were considered for SAR testing per FCC KDB 248227 D01V02r02.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 10 of 42

REV 22.0
03/30/2022

1.7 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 616217 D04v01r02 (Proximity Sensor)
- April 2019 TCB Workshop Notes (IEEE 802.11ax)

1.8 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical, and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 9.

1.9 Bibliography

Report Type	Report Serial Number
WIFI 6GHz RF Exposure Report	1M2303200036-12.A3L

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 11 of 42

REV 22.0
03/30/2022

2 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

2.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 2-1).

Equation 2-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt} \left(\frac{dU}{dm} \right) = \frac{d}{dt} \left(\frac{dU}{\rho dv} \right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

- σ = conductivity of the tissue-simulating material (S/m)
- ρ = mass density of the tissue-simulating material (kg/m³)
- E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 12 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

3 DOSIMETRIC ASSESSMENT

3.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 3-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 3-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):
 - a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 3-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
 - b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
 - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

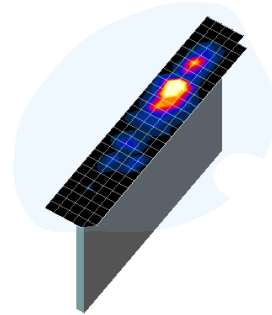


Figure 3-1
Sample SAR Area Scan

Table 3-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) ($\Delta x_{\text{area}}, \Delta y_{\text{area}}$)	Maximum Zoom Scan Resolution (mm) ($\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}}$)	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
				$\Delta z_{\text{zoom}}(n)$	$\Delta z_{\text{zoom}}(1)^*$	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 13 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

4 TEST CONFIGURATION POSITIONS

4.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$.

4.2 SAR Testing for Tablet per KDB Publication 616217 D04v01r02

Per FCC KDB Publication 616217 D04v01r02, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

4.3 Proximity Sensor Considerations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close the user's body.

When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in the Power Reduction Verification Appendix.

The sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the sensor entirely covers the antennas.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 14 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

5 RF EXPOSURE LIMITS

5.1 Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

5.2 Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e., as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 5-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT <i>General Population</i> (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT <i>Occupational</i> (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 15 of 42

REV 22.0
03/30/2022

6 FCC MEASUREMENT PROCEDURES

6.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as *reported* SAR. The highest *reported* SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

6.2 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

The device is placed into a simulated call using a base station simulator in an RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1-gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

6.3 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

6.3.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

6.3.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 16 of 42

REV 22.0
03/30/2022

by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

6.3.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless band gap channels are permanently disabled, SAR must be considered for these channels. Each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

6.3.4 2.4 GHz SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- 2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel, i.e., all channels require testing.

2.4 GHz 802.11 g/n/ax OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

6.3.5 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. Per April 2019 TCB Workshop guidance, 802.11ax was considered the highest order 802.11 mode. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

6.3.6 Initial Test Configuration Procedure

For OFDM, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order IEEE 802.11 mode. The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 17 of 42

REV 22.0
03/30/2022

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 6.3.5). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

6.3.7 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

6.3.8 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 18 of 42

REV 22.0
03/30/2022

7 RF CONDUCTED POWERS

7.1 WLAN Conducted Powers

Table 7-1
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	18.66	16.78	17.82	16.63
2417	2		17.35		17.33
2437	6	18.60	17.65	17.61	17.49
2457	10		17.51	17.48	17.40
2462	11	18.95	15.73	16.95	16.27

Table 7-2
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11b Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	18.64	18.97	21.82
2437	6	18.89	18.24	21.59
2462	11	18.98	18.80	21.90

Table 7-3
2.4 GHz WLAN Reduced Average RF Power with Grip sensor Active – Ant 2

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average	Average
2412	1	12.75	12.81	12.61	12.74	12.40
2437	6	12.77	12.66	12.57	12.60	12.23
2462	11	12.65	12.82	12.80	12.81	12.52

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 19 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

Table 7-4
2.4 GHz WLAN Reduced Average RF Power with Grip Sensor Active - MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	12.03	12.43	15.24
2437	6	12.60	12.63	15.63
2462	11	12.42	12.85	15.65

Table 7-5
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.88	17.49	20.70
5200	40	17.75	17.79	20.78
5220	44	17.38	17.23	20.32
5240	48	17.48	17.01	20.26
5260	52	17.52	17.11	20.33
5280	56	17.22	17.07	20.16
5300	60	16.89	17.19	20.05
5320	64	16.51	17.14	19.85
5500	100	17.35	17.49	20.43
5600	120	17.51	16.86	20.21
5620	124	17.52	16.85	20.21
5720	144	17.94	16.46	20.27
5745	149	17.68	16.58	20.18
5785	157	17.52	17.37	20.46
5825	165	17.57	17.10	20.35
5845	169	17.81	16.89	20.38
5865	173	17.71	17.09	20.42
5885	177	17.99	17.09	20.57

Table 7-6
5 GHz WLAN Reduced Average RF Power with Grip Sensor Active - MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	8.03	7.61	10.84
5290	58	8.32	8.25	11.30
5530	106	8.43	8.57	11.51
5610	122	8.45	8.36	11.42
5690	138	8.54	8.43	11.50
5775	155	8.70	8.70	11.71
5855	171	8.35	8.40	11.39

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 20 of 42

REV 22.0
03/30/2022

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

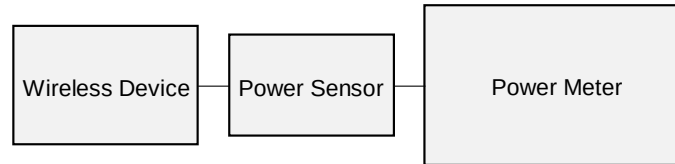


Figure 7-1
Power Measurement Setup

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 21 of 42

REV 22.0
03/30/2022

7.2 Bluetooth Conducted Powers

Table 7-7
Bluetooth Maximum Average RF Power– Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	GFSK	0	18.35	68.438
2441	1.0	GFSK	39	18.28	67.329
2480	1.0	GFSK	78	17.53	56.611

Table 7-8
Bluetooth Maximum Average RF Power– Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	GFSK	0	19.18	82.699
2441	1.0	GFSK	39	19.56	90.407
2480	1.0	GFSK	78	18.34	68.265

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 22 of 42

REV 22.0
03/30/2022

Table 7-9
Bluetooth Reduced Average RF Power (Grip Sensor Active) – Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth h Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	125 kbps	0	LE	9.35	8.614
2440	125 kbps	19	LE	9.72	9.369
2480	125 kbps	39	LE	8.85	7.681

Table 7-10
Bluetooth Reduced Average RF Power (Grip Sensor Active) – Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth h Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	125 kbps	0	LE	10.54	11.319
2440	125 kbps	19	LE	11.48	14.054
2480	125 kbps	39	LE	10.21	10.491

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 23 of 42

REV 22.0
03/30/2022

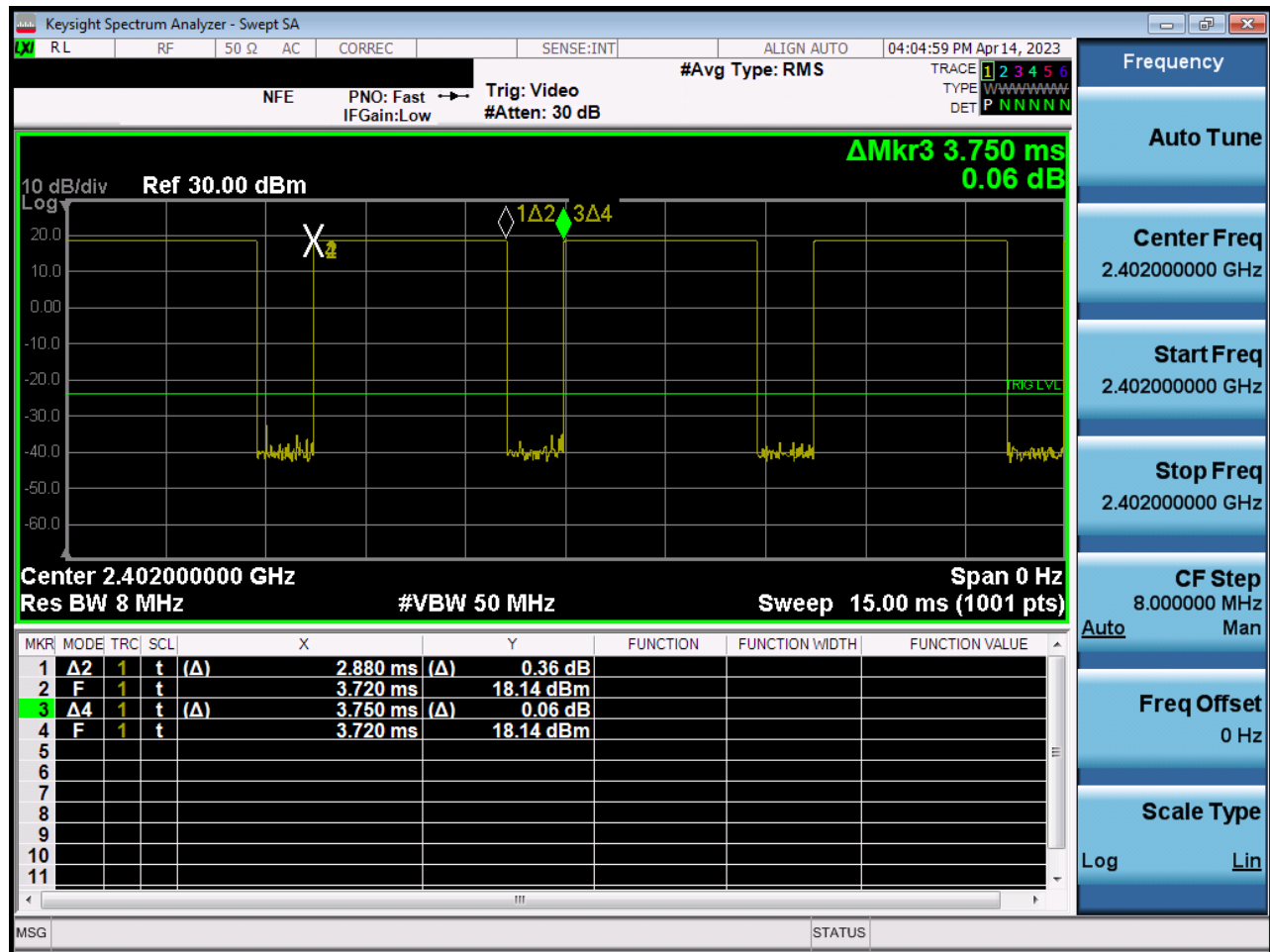


Figure 7-2
Bluetooth Antenna 1 Transmission Plot

Equation 7-1
Bluetooth Antenna 1 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.88ms}{3.75ms} * 100\% = 76.8\%$$

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 24 of 42

REV 22.0
03/30/2022

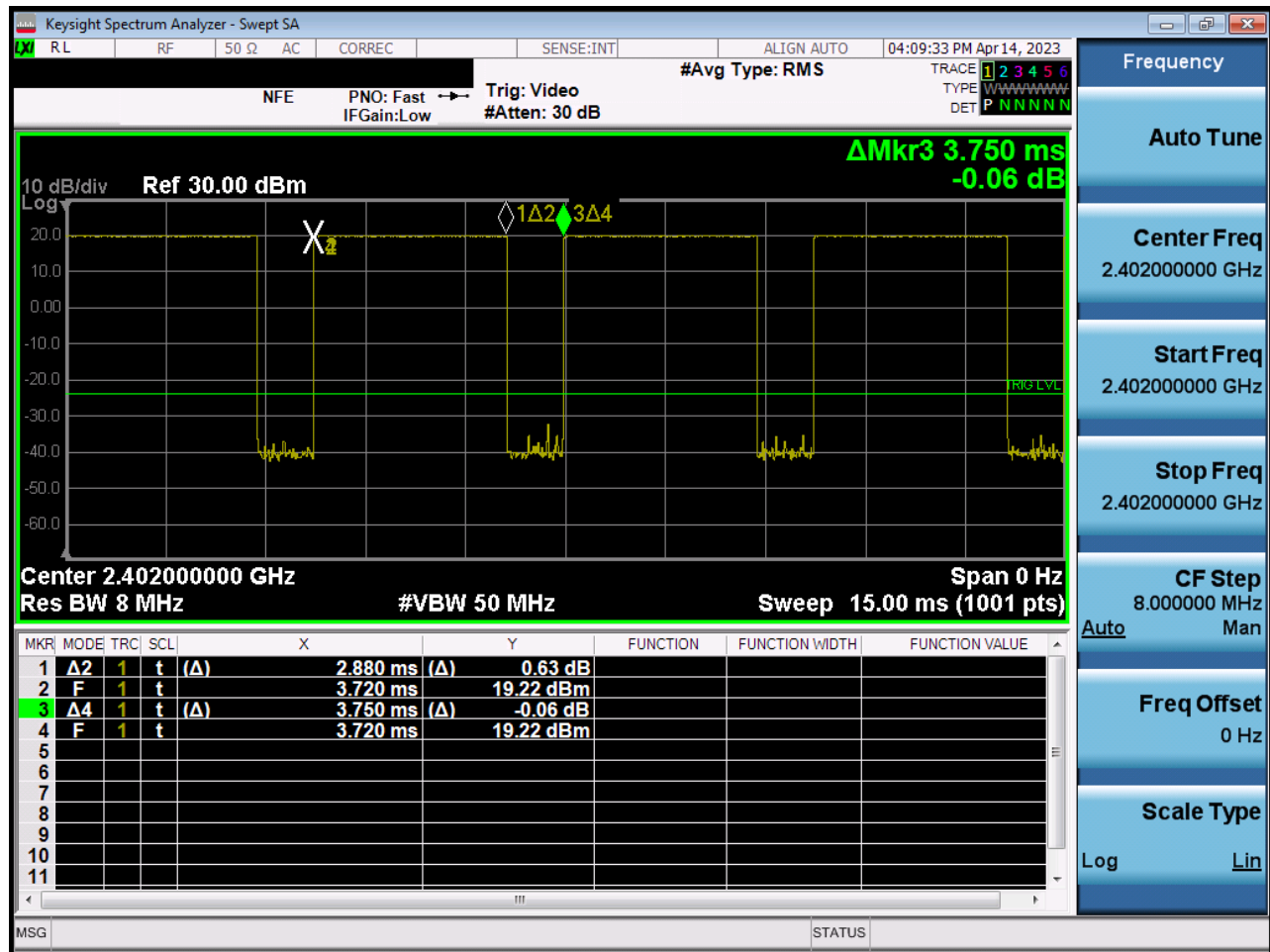


Figure 7-3
Bluetooth Antenna 2 Transmission Plot

Equation 7-2
Bluetooth Antenna 2 Duty Cycle Calculation

$$Duty Cycle = \frac{Pulse Width}{Period} * 100\% = \frac{2.88ms}{3.75ms} * 100\% = 76.8\%$$

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 25 of 42

REV 22.0
03/30/2022



Figure 7-4
Bluetooth LE Antenna 1 Transmission Plot

Equation 7-3
Bluetooth LE Antenna 1 Duty Cycle Calculation

$$Duty Cycle = \frac{Pulse Width}{Period} * 100\% = \frac{17.13ms}{18.14ms} * 100\% = 94.4\%$$

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 26 of 42

REV 22.0
03/30/2022

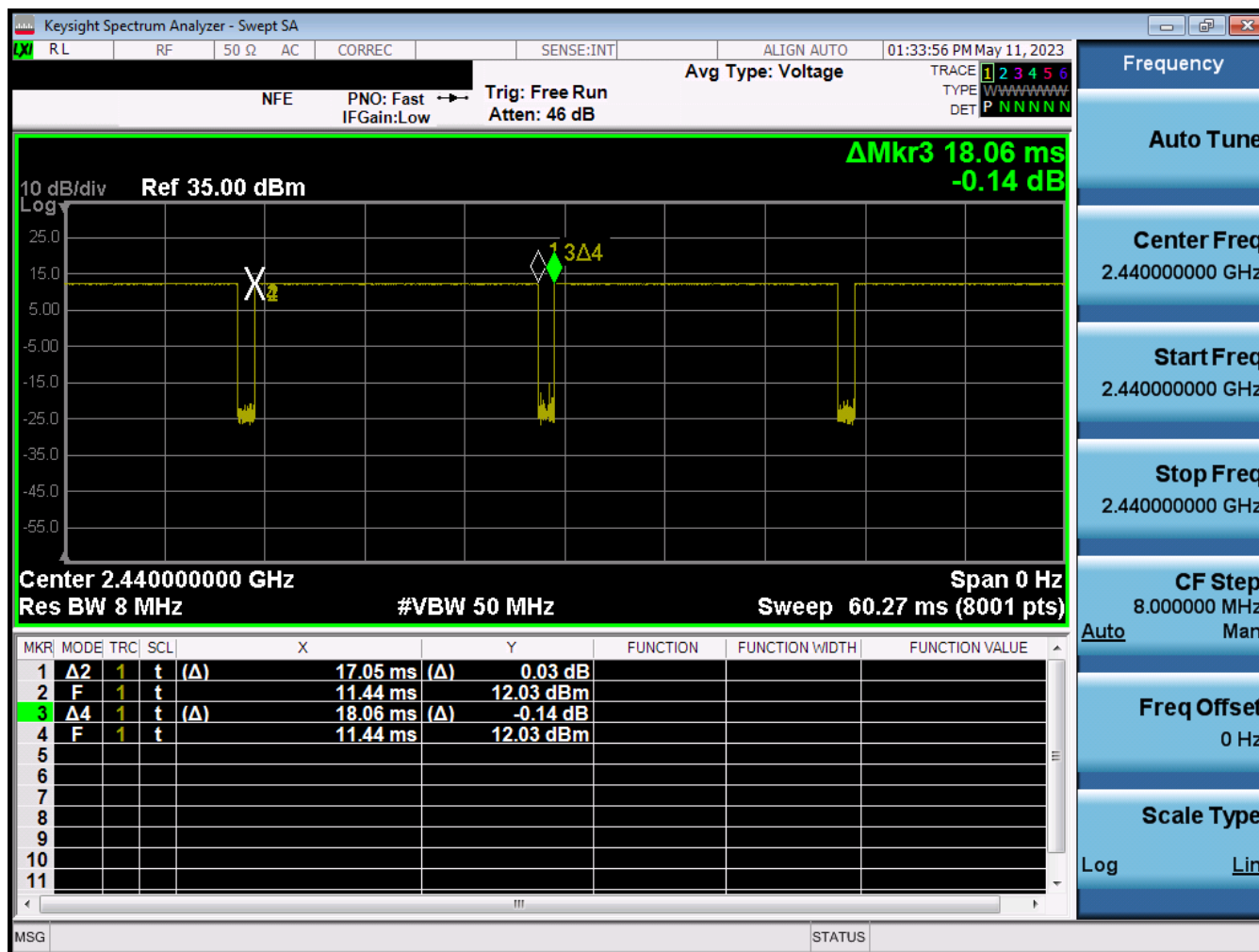


Figure 7-5
Bluetooth LE Antenna 2 Transmission Plot

Equation 7-4
Bluetooth LE Antenna 2 Duty Cycle Calculation

$$\text{Duty Cycle} = \frac{\text{Pulse Width}}{\text{Period}} * 100\% = \frac{17.05\text{ms}}{18.06\text{ms}} * 100\% = 94.4\%$$

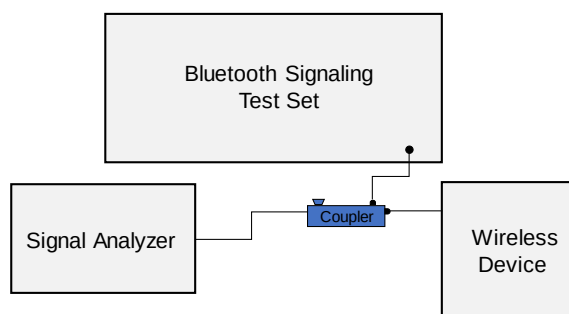


Figure 7-6
Power Measurement Setup

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 27 of 42

REV 22.0
03/30/2022

8 SYSTEM VERIFICATION

8.1 Tissue Verification

Table 8-1
Measured Body Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
04/24/2023	2450 Body	23.0	2300	1.800	51.507	1.809	52.900	-0.50%	-2.63%
			2310	1.813	51.479	1.816	52.887	-0.17%	-2.66%
			2320	1.825	51.452	1.826	52.873	-0.05%	-2.69%
			2400	1.931	51.153	1.902	52.767	1.52%	-3.06%
			2450	1.993	50.971	1.950	52.700	2.21%	-3.28%
			2480	2.036	50.846	1.993	52.662	2.16%	-3.45%
			2500	2.064	50.796	2.021	52.636	2.13%	-3.50%
			2510	2.076	50.765	2.035	52.623	2.01%	-3.53%
			2535	2.106	50.667	2.071	52.592	1.69%	-3.66%
			2550	2.127	50.597	2.092	52.573	1.67%	-3.76%
			2560	2.141	50.551	2.106	52.560	1.66%	-3.82%
			2600	2.200	50.420	2.163	52.509	1.71%	-3.98%
			2650	2.267	50.218	2.234	52.445	1.48%	-4.25%
			2680	2.312	50.084	2.277	52.407	1.54%	-4.43%
			2700	2.341	50.019	2.305	52.382	1.56%	-4.51%
04/27/2023	2450 Body	24.0	2300	1.850	51.201	1.809	52.900	2.27%	-3.21%
			2310	1.864	51.174	1.816	52.887	2.64%	-3.24%
			2320	1.877	51.151	1.826	52.873	2.79%	-3.26%
			2400	1.980	50.864	1.902	52.767	4.10%	-3.61%
			2450	2.043	50.734	1.950	52.700	4.77%	-3.73%
			2480	2.083	50.607	1.993	52.662	4.52%	-3.90%
			2500	2.113	50.544	2.021	52.636	4.55%	-3.97%
			2510	2.128	50.517	2.035	52.623	4.57%	-4.00%
			2535	2.160	50.448	2.071	52.592	4.30%	-4.08%
			2550	2.178	50.393	2.092	52.573	4.11%	-4.15%
			2560	2.191	50.353	2.106	52.560	4.04%	-4.20%
			2600	2.252	50.195	2.163	52.509	4.11%	-4.41%
			2650	2.321	50.037	2.234	52.445	3.89%	-4.59%
			2680	2.360	49.907	2.277	52.407	3.65%	-4.77%
			2700	2.391	49.815	2.305	52.382	3.73%	-4.90%
05/12/2023	2450 Body	22.2	2300	1.830	51.844	1.809	52.900	1.16%	-2.00%
			2310	1.841	51.838	1.816	52.887	1.38%	-1.98%
			2320	1.852	51.810	1.826	52.873	1.42%	-2.01%
			2400	1.969	51.499	1.902	52.767	3.52%	-2.40%
			2450	2.026	51.248	1.950	52.700	3.90%	-2.76%
			2480	2.079	51.113	1.993	52.662	4.32%	-2.94%
			2500	2.112	51.105	2.021	52.636	4.50%	-2.91%
			2510	2.124	51.090	2.035	52.623	4.37%	-2.91%
			2535	2.148	50.957	2.071	52.592	3.72%	-3.11%
			2550	2.167	50.839	2.092	52.573	3.59%	-3.30%
			2560	2.183	50.771	2.106	52.560	3.66%	-3.40%
			2600	2.254	50.666	2.163	52.509	4.21%	-3.51%
			2650	2.311	50.433	2.234	52.445	3.45%	-3.84%
			2680	2.362	50.273	2.277	52.407	3.73%	-4.07%
			2700	2.393	50.228	2.305	52.382	3.82%	-4.11%
05/15/2023	2450 Body	21.7	2300	1.823	51.898	1.809	52.900	0.77%	-1.89%
			2310	1.835	51.861	1.816	52.887	1.05%	-1.94%
			2320	1.847	51.821	1.826	52.873	1.15%	-1.99%
			2400	1.960	51.531	1.902	52.767	3.05%	-2.34%
			2450	2.027	51.354	1.950	52.700	3.95%	-2.55%
			2480	2.068	51.225	1.993	52.662	3.76%	-2.73%
			2500	2.097	51.145	2.021	52.636	3.76%	-2.83%
			2510	2.112	51.106	2.035	52.623	3.78%	-2.88%
			2535	2.148	51.024	2.071	52.592	3.72%	-2.98%
			2550	2.169	50.980	2.092	52.573	3.68%	-3.03%
			2560	2.183	50.946	2.106	52.560	3.66%	-3.07%
			2600	2.238	50.788	2.163	52.509	3.47%	-3.28%
			2650	2.312	50.580	2.234	52.445	3.49%	-3.56%
			2680	2.356	50.469	2.277	52.407	3.47%	-3.70%
			2700	2.384	50.393	2.305	52.382	3.43%	-3.80%

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 28 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

Table 8-2
Measured Body Tissue Properties Cont'd

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
05/08/2023	5200-5800 Body	20.3	5180	5.114	48.193	5.276	49.041	-3.07%	-1.73%
			5190	5.130	48.188	5.288	49.028	-2.99%	-1.75%
			5200	5.145	48.145	5.299	49.014	-2.91%	-1.77%
			5210	5.164	48.125	5.311	49.001	-2.77%	-1.79%
			5220	5.178	48.104	5.323	48.987	-2.72%	-1.80%
			5240	5.203	48.080	5.346	48.960	-2.67%	-1.80%
			5250	5.217	48.063	5.358	48.947	-2.63%	-1.81%
			5260	5.232	48.040	5.369	48.933	-2.59%	-1.82%
			5270	5.245	48.000	5.381	48.919	-2.53%	-1.88%
			5280	5.259	47.999	5.393	48.906	-2.50%	-1.92%
			5290	5.274	47.950	5.404	48.892	-2.41%	-1.93%
			5300	5.288	47.935	5.416	48.879	-2.36%	-1.93%
			5310	5.303	47.920	5.428	48.865	-2.30%	-1.93%
			5320	5.320	47.909	5.439	48.851	-2.19%	-1.93%
			5500	5.573	47.555	5.650	48.607	-1.36%	-2.16%
			5510	5.590	47.545	5.661	48.594	-1.25%	-2.16%
			5520	5.606	47.529	5.673	48.580	-1.18%	-2.16%
			5530	5.620	47.520	5.685	48.566	-1.14%	-2.15%
			5540	5.635	47.500	5.696	48.553	-1.07%	-2.17%
			5550	5.649	47.474	5.708	48.539	-1.03%	-2.19%
			5560	5.661	47.454	5.720	48.526	-1.03%	-2.21%
			5580	5.690	47.410	5.743	48.499	-0.92%	-2.25%
			5600	5.725	47.364	5.766	48.471	-0.71%	-2.28%
			5610	5.739	47.354	5.778	48.458	-0.67%	-2.28%
			5620	5.753	47.337	5.790	48.444	-0.64%	-2.29%
			5640	5.781	47.296	5.813	48.417	-0.55%	-2.32%
			5660	5.809	47.266	5.837	48.390	-0.48%	-2.32%
			5670	5.823	47.236	5.848	48.376	-0.43%	-2.36%
			5680	5.837	47.197	5.860	48.363	-0.39%	-2.41%
			5690	5.851	47.168	5.872	48.349	-0.36%	-2.44%
			5700	5.868	47.158	5.883	48.336	-0.25%	-2.44%
			5710	5.885	47.144	5.895	48.322	-0.17%	-2.44%
			5720	5.902	47.133	5.907	48.309	-0.08%	-2.43%
			5745	5.936	47.083	5.936	48.275	0.00%	-2.47%
			5750	5.944	47.069	5.942	48.268	0.03%	-2.48%
			5755	5.950	47.057	5.947	48.261	0.05%	-2.49%
			5765	5.965	47.034	5.959	48.248	0.10%	-2.52%
			5775	5.981	47.015	5.971	48.234	0.17%	-2.53%
			5785	5.995	46.996	5.982	48.220	0.22%	-2.56%
			5795	6.010	46.957	5.994	48.207	0.27%	-2.59%
			5800	6.019	46.942	6.000	48.200	0.32%	-2.61%
			5805	6.028	46.938	6.006	48.193	0.37%	-2.60%
			5825	6.060	46.920	6.029	48.166	0.51%	-2.59%
			5835	6.072	46.909	6.042	48.130	0.50%	-2.54%
			5845	6.083	46.892	6.054	48.110	0.48%	-2.53%
			5855	6.098	46.874	6.066	48.093	0.53%	-2.53%
			5865	6.112	46.847	6.077	48.080	0.58%	-2.56%
			5875	6.127	46.814	6.088	48.067	0.64%	-2.61%
			5885	6.143	46.796	6.100	48.053	0.70%	-2.64%
			5905	6.179	46.756	6.122	48.027	0.93%	-2.65%
05/12/2023	5200-5800 Body	21.2	5180	5.341	47.274	5.276	49.041	1.23%	-3.60%
			5190	5.362	47.243	5.288	49.028	1.40%	-3.64%
			5200	5.386	47.217	5.299	49.014	1.64%	-3.67%
			5210	5.409	47.203	5.311	49.001	1.85%	-3.67%
			5220	5.424	47.192	5.323	48.987	1.80%	-3.66%
			5240	5.442	47.184	5.346	48.960	1.80%	-3.67%
			5250	5.449	47.148	5.358	48.947	1.70%	-3.68%
			5260	5.458	47.121	5.369	48.933	1.66%	-3.70%
			5270	5.469	47.087	5.381	48.919	1.64%	-3.74%
			5280	5.483	47.040	5.393	48.906	1.67%	-3.82%
			5290	5.499	46.991	5.404	48.892	1.76%	-3.89%
			5300	5.517	46.960	5.416	48.879	1.86%	-3.93%
			5310	5.538	46.945	5.428	48.865	2.03%	-3.93%
			5320	5.559	46.941	5.439	48.851	2.21%	-3.91%
			5500	5.808	46.575	5.650	48.607	2.80%	-4.18%
			5510	5.829	46.544	5.661	48.594	2.97%	-4.22%
			5520	5.849	46.522	5.673	48.580	3.10%	-4.24%
			5530	5.867	46.511	5.685	48.566	3.20%	-4.23%
			5540	5.880	46.501	5.696	48.553	3.23%	-4.23%
			5550	5.890	46.488	5.708	48.539	3.19%	-4.23%
			5560	5.899	46.476	5.720	48.526	3.13%	-4.22%
			5580	5.927	46.419	5.743	48.499	3.20%	-4.29%
			5600	5.969	46.353	5.766	48.471	3.52%	-4.37%
			5610	5.990	46.338	5.778	48.458	3.67%	-4.37%
			5620	6.008	46.329	5.790	48.444	3.77%	-4.37%
			5640	6.030	46.313	5.813	48.417	3.73%	-4.35%
			5660	6.047	46.270	5.837	48.390	3.60%	-4.38%
			5670	6.062	46.230	5.848	48.376	3.66%	-4.44%
			5680	6.082	46.191	5.860	48.363	3.79%	-4.49%
			5690	6.106	46.195	5.872	48.349	3.99%	-4.52%
			5700	6.128	46.145	5.883	48.336	4.16%	-4.52%
			5710	6.146	46.131	5.895	48.322	4.26%	-4.53%
			5720	6.158	46.120	5.907	48.309	4.25%	-4.53%
			5745	6.176	46.094	5.936	48.275	4.04%	-4.52%
			5750	6.182	46.081	5.942	48.268	4.04%	-4.53%
			5755	6.186	46.069	5.947	48.261	4.02%	-4.54%
			5765	6.198	46.034	5.959	48.248	4.01%	-4.59%
			5775	6.217	45.992	5.971	48.234	4.12%	-4.65%
			5785	6.238	45.946	5.982	48.220	4.28%	-4.72%
			5795	6.260	45.910	5.994	48.207	4.44%	-4.76%
			5800	6.269	45.895	6.000	48.200	4.48%	-4.78%
			5805	6.278	45.884	6.006	48.193	4.53%	-4.79%
			5825	6.304	45.851	6.029	48.166	4.56%	-4.81%
			5835	6.310	45.840	6.042	48.130	4.44%	-4.76%
			5845	6.321	45.825	6.054	48.110	4.41%	-4.75%
			5855	6.334	45.797	6.066	48.093	4.42%	-4.77%
			5865	6.348	45.760	6.077	48.080	4.46%	-4.83%
			5875	6.361	45.716	6.088	48.067	4.48%	-4.89%
			5885	6.377	45.674	6.100	48.053	4.54%	-4.95%
			5905	6.427	45.632	6.122	48.027	4.98%	-4.99%

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2. The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 29 of 42

8.2 Test System Verification

Prior to SAR assessment, the system is verified to $\pm 10\%$ of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in the SAR System Validation Appendix.

Table 8-3
System Verification Results

System Verification TARGET & MEASURED																	
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	DAE	Measured SAR 1g (W/kg)	1W Target SAR 1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation 1g (%)	Measured SAR 10g (W/kg)	1W Target SAR 10g (W/kg)	1W Normalized SAR 10g (W/kg)	Deviation 10g (%)
AM5	2450	BODY	04/24/2023	20.9	21.3	0.10	750	7639	1646	5.110	50.500	51.100	1.19%	2.330	23.900	23.300	-2.51%
AM5	2450	BODY	04/27/2023	22.2	23.4	0.10	750	7639	1646	5.290	50.500	52.900	4.75%	2.440	23.900	24.400	2.09%
AM1	2450	BODY	05/12/2023	23.9	20.8	0.10	921	7420	1333	5.100	49.700	51.000	2.62%	2.320	23.600	23.200	-1.69%
AM1	2450	BODY	05/15/2023	22.0	21.6	0.10	921	7420	1333	4.990	49.700	49.900	0.40%	2.270	23.600	22.700	-3.81%
AM8	5250	BODY	05/08/2023	21.1	21.0	0.05	1123	7421	604	3.690	75.400	73.800	-2.12%	1.060	20.800	21.200	1.92%
K2	5250	BODY	05/12/2023	21.2	21.2	0.05	1237	7565	1466	3.540	73.900	70.800	-4.19%	0.990	20.600	19.800	-3.88%
AM8	5600	BODY	05/08/2023	21.1	21.0	0.05	1123	7421	604	4.040	77.800	80.800	3.86%	1.150	21.400	23.000	7.48%
K2	5600	BODY	05/12/2023	21.2	21.2	0.05	1237	7565	1466	4.010	78.200	80.200	2.56%	1.100	21.900	22.000	0.46%
AM8	5750	BODY	05/08/2023	21.1	21.0	0.05	1123	7421	604	3.780	75.300	75.600	0.40%	1.080	20.700	21.600	4.35%
K2	5750	BODY	05/12/2023	21.2	21.2	0.05	1237	7565	1466	3.470	74.800	69.400	-7.22%	0.972	20.700	19.440	-6.09%
AM8	5800	BODY	05/08/2023	21.1	21.0	0.05	1123	7421	604	3.450	74.300	69.000	-7.13%	0.974	20.200	19.480	-3.56%
K2	5800	BODY	05/12/2023	21.2	21.2	0.05	1237	7565	1466	3.440	73.100	68.800	-5.88%	0.950	20.200	19.000	-5.94%

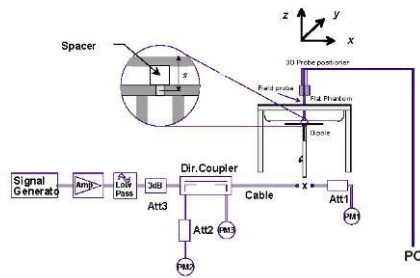


Figure 8-1
System Verification Setup Diagram



Figure 8-2
System Verification Setup Photo

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 30 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

9 SAR DATA SUMMARY

9.1 Standalone SAR Data - Tablet

Table 9-1
DTS SISO WLAN Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)			(W/kg)	
2462	11	back	15 mm	802.11b	DSSS	2	N/A	01GVA	22	1	19.0	18.95	0.00	100.0	98.9	0.136	1.012	1.011	0.139	
2462	11	top	19 mm	802.11b	DSSS	2	N/A	01GVA	22	1	19.0	18.95	0.02	100.0	98.9	0.050	1.012	1.011	0.051	
2462	11	right	0 mm	802.11b	DSSS	2	N/A	01GVA	22	1	19.0	18.95	0.07	100.0	98.9	0.005	1.012	1.011	0.005	
2462	11	left	9 mm	802.11b	DSSS	2	N/A	01GVA	22	1	19.0	18.95	0.00	100.0	98.9	0.207	1.012	1.011	0.212	
2437	6	back	0 mm	802.11b	DSSS	2	N/A	01GVA	22	1	13.0	12.77	0.00	100.0	98.9	0.576	1.054	1.011	0.614	
2437	6	back	0 mm	802.11b	DSSS	2	Keyboard Variant 1	01FXT	22	1	13.0	12.77	-0.08	100.0	98.9	0.092	1.054	1.011	0.098	
2437	6	back	0 mm	802.11b	DSSS	2	Keyboard Variant 2	01FXT	22	1	13.0	12.77	0.08	100.0	98.9	0.067	1.054	1.011	0.071	
2437	6	top	0 mm	802.11b	DSSS	2	N/A	01GVA	22	1	13.0	12.77	0.07	100.0	98.9	0.200	1.054	1.011	0.213	
2437	6	left	0 mm	802.11b	DSSS	2	N/A	01GVA	22	1	13.0	12.77	0.00	100.0	98.9	0.558	1.054	1.011	0.595	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 9-2
DTS MIMO Body SAR

MEASUREMENT RESULTS																							
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate [Mbps]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	Peak Number	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																						
2462	11	back	15 mm	802.11b	DSSS	MIMO	N/A	01GVA	22	1	19.0	18.98	19.0	18.80	-0.01	100.0	98.8	1	0.068	1.047	1.012	0.072	
2462	11	back	15 mm	802.11b	DSSS	MIMO	N/A	01GVA	22	1	19.0	18.98	19.0	18.80	0.01	100.0	98.8	2	0.069	1.047	1.012	0.073	
2462	11	top	19 mm	802.11b	DSSS	MIMO	N/A	01GVA	22	1	19.0	18.98	19.0	18.80	0.01	100.0	98.8	-	0.070	1.047	1.012	0.074	
2462	11	right	7 mm	802.11b	DSSS	MIMO	N/A	01GVA	22	1	19.0	18.98	19.0	18.80	0.00	100.0	98.8	-	0.242	1.047	1.012	0.256	
2462	11	left	9 mm	802.11b	DSSS	MIMO	N/A	01GVA	22	1	19.0	18.98	19.0	18.80	0.02	100.0	98.8	-	0.177	1.047	1.012	0.188	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body											
Spatial Peak												1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 1 gram											

Note: To achieve the 22.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19.0 dBm. Peak number 1 and 2 correspond to Ant 1 and Ant 2 of DUT respectively.

FCC ID: A3LSMX910	SAR EVALUATION REPORT		Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device		Page 31 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

Table 9-3
DTS MIMO Body SAR with Grip Sensor Active

MEASUREMENT RESULTS																							
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate [Mbps]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	Peak Number	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																						
2412	1	back	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.03	13.0	12.43	0.00	100.0	98.0	1	0.354	1.250	1.021	0.452	
2412	1	back	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.03	13.0	12.43	0.00	100.0	98.0	2	0.605	1.250	1.021	0.772	
2437	6	back	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.60	13.0	12.63	0.00	100.0	98.0	1	0.328	1.096	1.021	0.367	
2437	6	back	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.60	13.0	12.63	0.04	100.0	98.0	2	0.700	1.096	1.021	0.783	A1
2462	11	back	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.42	13.0	12.85	0.00	100.0	98.0	1	0.381	1.143	1.021	0.445	
2462	11	back	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.42	13.0	12.85	0.00	100.0	98.0	2	0.640	1.143	1.021	0.747	
2437	6	back	0 mm	802.11n	OFDM	MIMO	Keyboard Variant 1	01FXT	20	13	13.0	12.60	13.0	12.63	-0.06	100.0	98.0	2	0.106	1.096	1.021	0.119	
2437	6	back	0 mm	802.11n	OFDM	MIMO	Keyboard Variant 2	01FXT	20	13	13.0	12.60	13.0	12.63	0.11	100.0	98.0	2	0.101	1.096	1.021	0.113	
2462	11	top	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.42	13.0	12.85	0.01	100.0	98.0	-	0.260	1.143	1.021	0.303	
2462	11	right	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.42	13.0	12.85	-0.03	100.0	98.0	-	0.455	1.143	1.021	0.531	
2462	11	left	0 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	13.0	12.42	13.0	12.85	0.01	100.0	98.0	-	0.443	1.143	1.021	0.517	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body											
Spatial Peak												1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 1 gram											

Note: To achieve the 16.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 13.0 dBm. Peak number 1 and 2 correspond to Ant 1 and Ant 2 of DUT respectively.

Table 9-4
NII MIMO WLAN Body SAR

MEASUREMENT RESULTS																							
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate [Mbps]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	Peak Number	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																						
5260	52	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.11	0.05	100.0	98.1	1	0.030	1.227	1.020	0.038	
5260	52	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.11	0.10	100.0	98.1	2	0.090	1.227	1.020	0.113	
5260	52	top	19 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.11	0.08	100.0	98.1	-	0.046	1.227	1.020	0.058	
5260	52	right	7 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.11	0.18	100.0	98.1	-	0.169	1.227	1.020	0.212	
5260	52	left	9 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.11	-0.02	100.0	98.1	-	0.372	1.227	1.020	0.466	
5500	100	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.35	18.0	17.49	0.04	100.0	98.1	1	0.063	1.161	1.020	0.075	
5500	100	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.35	18.0	17.49	0.05	100.0	98.1	2	0.058	1.161	1.020	0.069	
5500	100	top	19 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.35	18.0	17.49	0.03	100.0	98.1	-	0.030	1.161	1.020	0.036	
5500	100	right	7 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.35	18.0	17.49	0.05	100.0	98.1	-	0.396	1.161	1.020	0.469	
5500	100	left	9 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.35	18.0	17.49	0.11	100.0	98.1	-	0.281	1.161	1.020	0.333	
5785	157	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.37	0.15	100.0	98.1	1	0.070	1.156	1.020	0.083	
5785	157	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.37	0.01	100.0	98.1	2	0.080	1.156	1.020	0.094	
5785	157	top	19 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.37	0.02	100.0	98.1	-	0.063	1.156	1.020	0.074	
5785	157	right	7 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.37	-0.05	100.0	98.1	-	0.400	1.156	1.020	0.472	
5785	157	left	9 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.52	18.0	17.37	-0.07	100.0	98.1	-	0.379	1.156	1.020	0.447	
5885	177	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.99	18.0	17.09	0.13	100.0	98.1	1	0.083	1.233	1.020	0.104	
5885	177	back	15 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.99	18.0	17.09	0.03	100.0	98.1	2	0.102	1.233	1.020	0.128	
5885	177	top	19 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.99	18.0	17.09	0.06	100.0	98.1	-	0.047	1.233	1.020	0.059	
5885	177	right	7 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.99	18.0	17.09	0.03	100.0	98.1	-	0.325	1.233	1.020	0.409	
5885	177	left	9 mm	802.11n	OFDM	MIMO	N/A	01GVA	20	13	18.0	17.99	18.0	17.09	0.06	100.0	98.1	-	0.366	1.233	1.020	0.460	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body											
Spatial Peak												1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 1 gram											

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm. Peak number 1 and 2 correspond to Ant 1 and Ant 2 of DUT respectively.

FCC ID: A3LSMX910	SAR EVALUATION REPORT		Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device		Page 32 of 42

Table 9-5
NII MIMO WLAN Body SAR with Grip Sensor Active

MEASUREMENT RESULTS																							
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	Peak Number	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																						
5290	58	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.32	9.0	8.25	0.05	100.0	92.1	1	0.058	1.189	1.085	0.075	
5290	58	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.32	9.0	8.25	0.13	100.0	92.1	2	0.570	1.189	1.085	0.735	
5290	58	top	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.32	9.0	8.25	0.00	100.0	92.1	-	0.102	1.189	1.085	0.132	
5290	58	right	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.32	9.0	8.25	0.13	100.0	92.1	-	0.171	1.189	1.085	0.221	
5290	58	left	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.32	9.0	8.25	0.01	100.0	92.1	-	0.490	1.189	1.085	0.632	
5530	106	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.43	9.0	8.57	0.01	100.0	92.1	1	0.154	1.140	1.085	0.190	
5530	106	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.43	9.0	8.57	0.13	100.0	92.1	2	0.467	1.140	1.085	0.578	
5530	106	top	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.43	9.0	8.57	0.07	100.0	92.1	-	0.098	1.140	1.085	0.121	
5530	106	right	0 mm	802.11ac	OFDM	MIMO	N/A	0DZKV	80	58.5	9.0	8.43	9.0	8.57	-0.01	100.0	92.1	-	0.538	1.140	1.085	0.665	
5530	106	left	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.43	9.0	8.57	0.04	100.0	92.1	-	0.457	1.140	1.085	0.565	
5775	155	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.70	9.0	8.70	-0.02	100.0	92.1	1	0.203	1.072	1.085	0.236	
5775	155	back	0 mm	802.11ac	OFDM	MIMO	N/A	0DZKV	80	58.5	9.0	8.70	9.0	8.70	0.05	100.0	92.1	2	0.693	1.072	1.085	0.806	A2
5775	155	back	0 mm	802.11ac	OFDM	MIMO	Keyboard Variant 1	01GVA	80	58.5	9.0	8.70	9.0	8.70	0.10	100.00	92.13	2	0.052	1.072	1.085	0.060	
5775	155	back	0 mm	802.11ac	OFDM	MIMO	Keyboard Variant 2	01GVA	80	58.5	9.0	8.70	9.0	8.70	0.04	100.00	92.13	2	0.070	1.072	1.085	0.081	
5775	155	top	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.70	9.0	8.70	0.14	100.0	92.1	-	0.147	1.072	1.085	0.171	
5775	155	right	0 mm	802.11ac	OFDM	MIMO	N/A	0DZKV	80	58.5	9.0	8.70	9.0	8.70	0.08	100.0	92.1	-	0.403	1.072	1.085	0.469	
5775	155	left	0 mm	802.11ac	OFDM	MIMO	N/A	0DZKV	80	58.5	9.0	8.70	9.0	8.70	0.11	100.0	92.1	-	0.392	1.072	1.085	0.456	
5855	171	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.35	9.0	8.40	0.01	100.0	92.1	1	0.185	1.161	1.085	0.233	
5855	171	back	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.35	9.0	8.40	0.06	100.0	92.1	2	0.526	1.161	1.085	0.663	
5855	171	top	0 mm	802.11ac	OFDM	MIMO	N/A	01GVA	80	58.5	9.0	8.35	9.0	8.40	0.02	100.0	92.1	-	0.153	1.161	1.085	0.193	
5855	171	right	0 mm	802.11ac	OFDM	MIMO	N/A	0DZKV	80	58.5	9.0	8.35	9.0	8.40	0.02	100.0	92.1	-	0.404	1.161	1.085	0.509	
5855	171	left	0 mm	802.11ac	OFDM	MIMO	N/A	0DZKV	80	58.5	9.0	8.35	9.0	8.40	0.17	100.0	92.1	-	0.428	1.161	1.085	0.539	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body											
Spatial Peak												1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 1 gram											

Note: To achieve the 12.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 9.0 dBm. Peak number 1 and 2 correspond to Ant 1 and Ant 2 of DUT respectively.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 33 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

Table 9-6
Bluetooth Body SAR

MEASUREMENT RESULTS																			
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2402	0	back	16 mm	Bluetooth	FHSS	1	N/A	01GVA	1	19.0	18.35	-0.09	78.0	76.8	0.026	1.161	1.016	0.031	
2402	0	top	20 mm	Bluetooth	FHSS	1	N/A	01GVA	1	19.0	18.35	0.02	78.0	76.8	0.030	1.161	1.016	0.035	
2402	0	right	7 mm	Bluetooth	FHSS	1	N/A	01GVA	1	19.0	18.35	0.02	78.0	76.8	0.144	1.161	1.016	0.170	
2402	0	right	7 mm	Bluetooth	FHSS	1	Keyboard Variant 1	01FXT	1	19.0	18.35	-0.07	78.0	76.8	0.150	1.161	1.016	0.177	
2402	0	right	7 mm	Bluetooth	FHSS	1	Keyboard Variant 2	01FXT	1	19.0	18.35	-0.14	78.0	76.8	0.132	1.161	1.016	0.156	
2402	0	left	0 mm	Bluetooth	FHSS	1	N/A	01GVA	1	19.0	18.35	0.07	78.0	76.8	0.006	1.161	1.016	0.007	
2441	39	back	15 mm	Bluetooth	FHSS	2	N/A	01GVA	1	20.0	19.56	0.17	78.0	76.8	0.088	1.107	1.016	0.099	
2441	39	top	19 mm	Bluetooth	FHSS	2	N/A	01GVA	1	20.0	19.56	-0.06	78.0	76.8	0.053	1.107	1.016	0.060	
2441	39	right	0 mm	Bluetooth	FHSS	2	N/A	01GVA	1	20.0	19.56	-0.03	78.0	76.8	0.011	1.107	1.016	0.012	
2441	39	left	9 mm	Bluetooth	FHSS	2	N/A	01GVA	1	20.0	19.56	0.00	78.0	76.8	0.189	1.107	1.016	0.213	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 9-7
Bluetooth Body SAR with Grip Sensor Active

MEASUREMENT RESULTS																			
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Accessory	Device Serial Number	Data Rate (Kbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2440	19	back	0 mm	Bluetooth LE	DSSS	1	N/A	01GVA	125	10.0	9.72	-0.10	96.0	94.4	0.084	1.067	1.017	0.091	
2440	19	top	0 mm	Bluetooth LE	DSSS	1	N/A	01GVA	125	10.0	9.72	0.00	96.0	94.4	0.037	1.067	1.017	0.040	
2440	19	right	0 mm	Bluetooth LE	DSSS	1	N/A	01GVA	125	10.0	9.72	0.18	96.0	94.4	0.098	1.067	1.017	0.106	
2440	19	back	0 mm	Bluetooth LE	DSSS	2	N/A	01GVA	125	11.5	11.48	0.09	96.0	94.4	0.336	1.005	1.017	0.343	A3
2440	19	back	0 mm	Bluetooth LE	DSSS	2	Keyboard Variant 1	01FXT	125	11.5	11.48	0.17	96.0	94.4	0.028	1.005	1.017	0.029	
2440	19	back	0 mm	Bluetooth LE	DSSS	2	Keyboard Variant 2	01FXT	125	11.5	11.48	0.05	96.0	94.4	0.020	1.005	1.017	0.020	
2440	19	top	0 mm	Bluetooth LE	DSSS	2	N/A	01GVA	125	11.5	11.48	0.01	96.0	94.4	0.090	1.005	1.017	0.092	
2440	19	left	0 mm	Bluetooth LE	DSSS	2	N/A	01GVA	125	11.5	11.48	0.03	96.0	94.4	0.249	1.005	1.017	0.254	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram									

FCC ID: A3LSMX910	SAR EVALUATION REPORT		Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device		Page 34 of 42

9.2 Standalone SAR Data - Laptop

Table 9-8
DTS SISO WLAN Body SAR

MEASUREMENT RESULTS																					
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Configuration	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
2462	11	bottom	0 mm	802.11b	DSSS	2	Laptop	Keyboard Variant 1	01GVA	22	1	19.0	18.95	0.05	100.0	98.9	0.098	1.012	1.011	0.100	
2462	11	bottom	0 mm	802.11b	DSSS	2	Laptop	Keyboard Variant 2	01GVA	22	1	19.0	18.95	0.01	100.0	98.9	0.103	1.012	1.011	0.105	A4
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 9-9
DTS MIMO WLAN Body SAR

MEASUREMENT RESULTS																								
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Configuration	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)		Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)	(W/kg)				
2462	11	bottom	0 mm	802.11b	DSSS	MIMO	Laptop	Keyboard Variant 1	01GVA	22	1	19.0	18.98	19.0	18.80	0.07	100.0	98.8	0.095	1.047	1.012		0.101	
2462	11	bottom	0 mm	802.11b	DSSS	MIMO	Laptop	Keyboard Variant 2	01GVA	22	1	19.0	18.98	19.0	18.80	-0.04	100.0	98.8	0.071	1.047	1.012		0.075	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 9-10
NII MIMO WLAN Body SAR

MEASUREMENT RESULTS																								
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Configuration	Accessory	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)		Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																		(W/kg)	(W/kg)				
5260	52	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 1	01GVA	20	13	18.0	17.52	18.0	17.11	0.00	100.0	98.1	0.307	1.227	1.020		0.384	
5260	52	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 2	01GVA	20	13	18.0	17.52	18.0	17.11	0.09	100.0	98.1	0.273	1.227	1.020		0.342	
5500	100	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 1	01GVA	20	13	18.0	17.35	18.0	17.49	-0.20	100.0	98.1	0.309	1.161	1.020		0.366	
5500	100	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 2	01GVA	20	13	18.0	17.35	18.0	17.49	-0.03	100.0	98.1	0.295	1.161	1.020		0.349	
5785	157	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 1	01GVA	20	13	18.0	17.52	18.0	17.37	-0.04	100.0	98.1	0.481	1.156	1.020		0.567	A5
5785	157	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 2	01GVA	20	13	18.0	17.52	18.0	17.37	-0.04	100.0	98.1	0.312	1.156	1.020		0.368	
5885	177	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 1	01GVA	20	13	18.0	17.99	18.0	17.09	0.00	100.0	98.1	0.411	1.233	1.020		0.517	
5885	177	bottom	0 mm	802.11n	OFDM	MIMO	Laptop	Keyboard Variant 2	01GVA	20	13	18.0	17.99	18.0	17.09	-0.01	100.0	98.1	0.234	1.233	1.020		0.294	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 9-11
Bluetooth Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Configuration	Accessory	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)			(W/kg)	
2402	0	bottom	0 mm	Bluetooth	FHSS	1	Laptop	Keyboard Variant 1	01FXT	1	19.0	18.35	0.03	78.0	76.8	0.000	1.161	1.016	0.000	
2402	0	bottom	0 mm	Bluetooth	FHSS	1	Laptop	Keyboard Variant 2	01FXT	1	19.0	18.35	0.20	78.0	76.8	0.000	1.161	1.016	0.000	
2441	39	bottom	0 mm	Bluetooth	FHSS	2	Laptop	Keyboard Variant 1	01FXT	1	20.0	19.56	-0.15	78.0	76.8	0.457	1.107	1.016	0.514	A6
2441	39	bottom	0 mm	Bluetooth	FHSS	2	Laptop	Keyboard Variant 2	01FXT	1	20.0	19.56	0.11	78.0	76.8	0.212	1.107	1.016	0.238	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram								

FCC ID: A3LSMX910	SAR EVALUATION REPORT															Approved by: Technical Manager					
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device															Page 35 of 42					

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

9.3 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Per FCC KDB Publication 865664 D01v01r04, variability SAR tests were not required since measured SAR results for all frequency bands were less than 0.8 W/kg.
7. Per FCC KDB 616217 D04, SAR is evaluated for the bottom surface of a keyboard when it is attached to the DUT in laptop configuration.
8. Per FCC KDB 648474 D04, highest reported SAR tablet configuration for a transmission band on an antenna was additionally evaluated with keyboard accessory attached and folded back at 360°.

WLAN Notes:

1. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 6.3.4 for more information.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 6.3.5 for more information.
3. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see the Simultaneous Numerical Calculations Appendix for complete analysis.
4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 78% transmission duty factor for Bluetooth and 96% transmission duty factor for Bluetooth LE to determine compliance. See RF Conducted Power Section for the time domain plot and calculation for the duty factor of the device.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 36 of 42

REV 22.0
03/30/2022

10 SAR MEASUREMENT VARIABILITY

10.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, variability SAR tests were not required since measured SAR results for all frequency bands were less than 0.8 W/kg for 1g SAR.

10.2 Measurement Uncertainty

The measured SAR was <1.5 W/kg for 1g for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 37 of 42

REV 22.0
03/30/2022

11 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer	N/A	N/A	N/A	MY45113242
Agilent	E4438C	ESG Vector Signal Generator	4/25/2023	Annual	4/25/2024	US41460739
Agilent	E4438C	ESG Vector Signal Generator	11/17/2022	Annual	11/17/2023	MY45093852
Agilent	N5182A	MXG Vector Signal Generator	4/1/2023	Annual	4/1/2024	MY47420837
Agilent	N5182A	MXG Vector Signal Generator	7/4/2022	Annual	7/4/2023	MY48180366
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/12/2023	Annual	1/12/2024	MY40001472
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118
Agilent	E5515C	Wireless Communications Test Set	5/4/2021	Biennial	5/4/2023	GB41450275
Agilent	E5515C	Wireless Communications Test Set	1/12/2023	Annual	1/12/2024	MY50262130
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	No cal required	CBT	343972
Amplifier Research	15S1G6	Amplifier	7/4/2022	Annual	7/4/2023	433971
Anritsu	ML2496A	Power Meter	8/16/2022	Annual	8/16/2023	1351001
Anritsu	MA2411B	Pulse Power Sensor	1/10/2023	Annual	1/10/2024	1315051
Anritsu	MA2411B	Pulse Power Sensor	10/21/2022	Annual	10/21/2023	1207364
Anritsu	MA24106A	USB Power Sensor	4/21/2023	Annual	4/21/2024	1244515
Anritsu	MA24106A	USB Power Sensor	1/13/2023	Annual	1/13/2024	1344557
Control Company	4352	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774678
Control Company	4352	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685
Control Company	4352	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774675
Control Company	4040	Therm./ Clock/ Humidity Monitor	1/17/2023	Annual	1/17/2024	160574418
Control Company	4410	Therm./ Clock/ Humidity Monitor	5/13/2021	Biennial	5/13/2023	210403099
Control Company	4410	Therm./ Clock/ Humidity Monitor	5/13/2021	Biennial	5/13/2023	2104031313
Mitutoyo	500-196-30	CD-6"ASX 6Inch Digital Caliper	2/16/2022	Triennial	2/16/2025	A20238413
Mitutoyo	500-196-30	CD-6"ASX 6Inch Digital Caliper	2/16/2022	Triennial	2/16/2025	B20263385
Keysight Technologies	N6705B	DC Power Analyzer	5/5/2021	Triennial	5/5/2024	MY53004059
Keysight Technologies	N9020A	MXA Signal Analyzer	4/6/2023	Annual	4/6/2024	MY48010233
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	7/5/2022	Annual	7/5/2023	31634
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	7/4/2022	Annual	7/4/2023	2111
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Seekonk	TSF-100	Torque Wrench	7/11/2022	Annual	7/11/2023	47639-29
SPEAG	DAK-3.5	Dielectric Assessment Kit	10/17/2022	Annual	10/17/2023	1091
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	7/5/2022	Annual	7/5/2023	1039
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1243
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1559
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1260
SPEAG	D2450V2	2450 MHz SAR Dipole	5/11/2022	Annual	5/11/2023	750
SPEAG	D2450V2	2450 MHz SAR Dipole	11/9/2021	Biennial	11/9/2023	921
SPEAG	D5GHzV2	5 GHz SAR Dipole	3/22/2022	Biennial	3/22/2024	1123
SPEAG	D5GHzV2	5 GHz SAR Dipole	4/17/2023	Annual	4/17/2024	1237
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/10/2022	Annual	11/10/2023	1646
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/13/2022	Annual	10/13/2023	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/15/2023	Annual	3/15/2024	604
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/20/2023	Annual	1/20/2024	1466
SPEAG	EX3DV4	SAR Probe	11/14/2022	Annual	11/14/2023	7639
SPEAG	EX3DV4	SAR Probe	10/20/2022	Annual	10/20/2023	7420
SPEAG	EX3DV4	SAR Probe	3/16/2023	Annual	3/16/2024	7421
SPEAG	EX3DV4	SAR Probe	1/12/2023	Annual	1/12/2024	7565

Note: 1) All equipment was used solely within its respective calibration period. 2) CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e., a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 38 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

12 MEASUREMENT UNCERTAINTIES

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c _i 1gm	c _i 10 gms	1gm u _i (± %)	10gms u _i (± %)	v _i
Measurement System									
Probe Calibration	E.2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.732	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.732	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.732	1	1	2.8	2.8	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.732	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.732	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.732	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.732	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.732	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.732	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.732	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.732	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.732	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Uncertainty	E.3.4	0.6	R	1.732	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)							RSS	12.2	12.0
Expanded Uncertainty (95% CONFIDENCE LEVEL)							k=2	24.4	24.0

The above measurement uncertainties are according to IEEE Std. 1528-2013

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 39 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

13 CONCLUSION

13.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 40 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

14 REFERENCES

- [1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, Aug. 1996.
- [2] ANSI/IEEE C95.1-2005, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, 2006.
- [3] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.
- [4] ANSI/IEEE C95.3-2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave, New York: IEEE, December 2002.
- [5] IEEE Standards Coordinating Committee 39 –Standards Coordinating Committee 34 – IEEE Std. 1528-2013, IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.
- [6] NCRP, National Council on Radiation Protection and Measurements, Biological Effects and Exposure Criteria for RadioFrequency Electromagnetic Fields, NCRP Report No. 86, 1986. Reprinted Feb. 1995.
- [7] T. Schmid, O. Egger, N. Kuster, Automated E-field scanning system for dosimetric assessments, IEEE Transaction on Microwave Theory and Techniques, vol. 44, Jan. 1996, pp. 105-113.
- [8] K. Pokovic, T. Schmid, N. Kuster, Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies, ICECOM97, Oct. 1997, pp. 1 -124.
- [9] K. Pokovic, T. Schmid, and N. Kuster, E-field Probe with improved isotropy in brain simulating liquids, Proceedings of the ELMAR, Zadar, Croatia, June 23-25, 1996, pp. 172-175.
- [10] Schmid & Partner Engineering AG, Application Note: Data Storage and Evaluation, June 1998, p2.
- [11] V. Hombach, K. Meier, M. Burkhardt, E. Kuhn, N. Kuster, The Dependence of EM Energy Absorption upon Human Modeling at 900 MHz, IEEE Transaction on Microwave Theory and Techniques, vol. 44 no. 10, Oct. 1996, pp. 1865-1873.
- [12] N. Kuster and Q. Balzano, Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz, IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.
- [13] G. Hartsgrrove, A. Kraszewski, A. Surowiec, Simulated Biological Materials for Electromagnetic Radiation Absorption Studies, University of Ottawa, Bioelectromagnetics, Canada: 1987, pp. 29-36.
- [14] Q. Balzano, O. Garay, T. Manning Jr., Electromagnetic Energy Exposure of Simulated Users of Portable Cellular Telephones, IEEE Transactions on Vehicular Technology, vol. 44, no.3, Aug. 1995.
- [15] W. Gander, Computermathematick, Birkhaeuser, Basel, 1992.
- [16] W.H. Press, S.A. Teukolsky, W.T. Vetterling, and B.P. Flannery, Numerical Recipes in C, The Art of Scientific Computing, Second edition, Cambridge University Press, 1992.
- [17] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.
- [18] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10kHz-300GHz, Jan. 1995.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 41 of 42

REV 22.0
03/30/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact CT.INFO@ELEMENT.COM.

- [19] Prof. Dr. Niels Kuster, ETH, Eidgenössische Technische Hochschule Zürich, Dosimetric Evaluation of the Cellular Phone.
- [20] IEC 62209-1, Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz), July 2016.
- [21] Innovation, Science, Economic Development Canada RSS-102 Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) Issue 5, March 2015.
- [22] Health Canada Safety Code 6 Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz – 300 GHz, 2015
- [23] FCC SAR Test Procedures for 2G-3G Devices, Mobile Hotspot and UMPC Devices KDB Publications 941225, D01-D07
- [24] SAR Measurement Guidance for IEEE 802.11 Transmitters, KDB Publication 248227 D01
- [25] FCC SAR Considerations for Handsets with Multiple Transmitters and Antennas, KDB Publications 648474 D03-D04
- [26] FCC SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers, FCC KDB Publication 616217 D04
- [27] FCC SAR Measurement and Reporting Requirements for 100MHz – 6 GHz, KDB Publications 865664 D01-D02
- [28] FCC General RF Exposure Guidance and SAR Procedures for Dongles, KDB Publication 447498, D01-D02
- [29] Anexo à Resolução No. 533, de 10 de Setembro de 2009.
- [30] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz), Mar. 2010.

FCC ID: A3LSMX910	SAR EVALUATION REPORT	Approved by: Technical Manager
Document S/N: 1M2303200036-01.A3L (Rev 1)	DUT Type: Portable Computing Device	Page 42 of 42

REV 22.0
03/30/2022