



Part 1: Test Under Static Transmission Scenario

For
PHONE

FCC ID: A4RG2YBB
Model Name: G2YBB

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Revision History

Rev.	Date	Revisions	Revised By
V1	2024/05/09	Initial Issue	--
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1. Attestation of Test Results

Applicant Name	Google LLC
FCC ID	A4RG2YBB
Model Name	G2YBB
Reference SAR Report	15107843-S1
Exposure Category	PD Limit (W/m ²)
General Population (Uncontrolled Exposure)	10
Date Tested	2024/02/20 to 2024/05/06
<p>UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report.</p> <p>This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.</p> <p>The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.</p> <p>This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the U.S. Government, or any agency of the U.S. government.</p>	
Approved & Released By:	Prepared By:
	
Dave Weaver Senior Staff Engineer UL Verification Services Inc.	Nathan Sousa Senior Laboratory Engineer UL Verification Services Inc.

2. Test Specifications, Methods/Procedures, Facilities, and Accreditation

The tests documented in this report were performed in accordance with FCC 47 CFR §2.1093 and the following FCC published RF Exposure KDB procedures:

- 447498 D01 v06
- 865664 D02 v01r02
- 648474 D04 v01r03
- IEC TR 63170:2018

The test sites and measurement facilities used to collect data are located at:

47173 Benicia Street	47266 Benicia Street
SAR Labs A to H	SAR Labs 1 to 15

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05

The Test Lab Conformity Assessment Body Identifier (CABID)

Location	CABID	Company Number
47173 Benicia Street, Fremont, CA, 94538 UNITED STATES	US0104	2324A
47266 Benicia Street, Fremont, CA, 94538 UNITED STATES		

3. Introduction

The equipment under test (EUT) contains a Samsung S.LSI modem supporting 2G/3G/4G/5G technologies and a modem supporting mmW 5G NR bands. Both WWAN modems are enabled with Samsung's S.LSI TAS feature with algorithms to control and manage transmitting power in real time and to ensure the time-averaged RF exposure from the WWAN modems are always in compliance with FCC requirements.

In addition to these WWAN modems, the EUT contains a different modem to support WLAN (time-averaging is not applicable for the WLAN modem).

The purpose of this Part 1 report is to demonstrate that this EUT complies with FCC RF exposure limits at maximum time-averaged transmit power limits for WWAN technologies, and at maximum transmit power limits for WLAN technologies. The specifics of this report are, as listed:

- SAR and power density (PD) compliance for all WWAN radios (Sub-6 GHz + 5G mmW NR) is assessed based on maximum time-averaged transmit power (static transmission condition). Relevant FCC KDBs and exclusion criteria are applied on a time-average power basis for WWAN technologies. The maximum time-averaged transmit power limits for supported WWAN technologies, bands, and antennas in this report are derived in the Part 0 report. The validation of Samsung's S.LSI TAS time-averaging algorithm and compliance under the Tx varying transmission scenario for WWAN technologies are reported in the Part 2 report.
- SAR compliance for WLAN radios is assessed based on maximum transmit power as per relevant FCC KDBs.
- Demonstrated compliance in simultaneous transmission scenarios involving both WWAN and WLAN transmissions, where WWAN exposure is assessed based on time-averaged transmit power limits, and WLAN exposure is assessed based on maximum transmit power limits.

The P_{limits} used in this report are determined and listed in the Part 0 report.

4. Measurement Setup and General Information

This section provides the details of the test setup used for PD measurement.

4.1. Test Environment

Test Location	UL Verification Services
Ambient Temperature	22±2°C
Tissue Simulating Liquid	22±2°C
Humidity Range	30% ~ 49%

4.2. Power Density Measurement System

The power density measurement system is constructed based on the DASY6 platform by SPEAG. The DASY6 with EUmmWv2 and 5G software module (V3.2.2) can measure the electromagnetic exposure (electromagnetic and power density) up to 110GHz as close as 2 mm from any transmitter.

4.2.1. Power Density Probe

The novel EUmmWV2 probe is used in the power density measurement. It is designed for precise near-field measurements in the millimeter wave range by Schmid & Partner Engineering AG of Zurich, Switzerland. The specifications are:

- Frequency range: 0.75 ~ 110 GHz
- Dynamic range: <50 – 3000 V/m (up to 10000 V/m with additional PRE-10 voltage divider)
- Linearity: < ± 0.2 dB
- Supports sensor model calibration (SMC)
- ISO17025 accredited calibration

4.2.2. Power Density Measurement System Verification

The power density system verification is performed using the SPEAG verification device. It consists of a ka-band horn antenna with a corresponding gun oscillator packaged within a cube-shaped housing.

The specification of the verification device is:

- Calibrated frequency: 30 GHz at 10 mm from the case surface
- Frequency accuracy: ± 100 MHz
- E-field polarization: linear
- Harmonics: -20 dBc (typ)
- Total radiated power: 14 dBm (typ)
- Power stability: 0.05 dB
- Power consumption: 5 W (max)
- Size: 100 × 100 × 100 mm
- Weight: 1 kg

Table 4-1 shows the verification test results. The measured power density (PD) value is within 0.66 dB/±16% of target level; for the 5G verification source's uncertainty, please refer to Appendix B.

Table 4-1: System Validation Results

SAR Lab	Test Date	5G Probe SN	Probe Cal. Due Date	DAESN	DAE Cal. Due Date	Frequency (GHz)	5G Verification Source SN	Source Cal. Due Date	Averaging Type	Measured psPDn (W/m ²) over 4cm ²	Target psPDn (W/m ²) over 4cm ²	Deviation (dB)	Delta	Measured psPDtot (W/m ²) over 4cm ²	Target psPDtot (W/m ²) over 4cm ²	Deviation (dB)	Delta	Measured psPDmod (W/m ²) over 4cm ²	Target psPDmod (W/m ²) over 4cm ²	Deviation (dB)	Delta
6	10/18/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	82.8	80.1	0.14	3%	84.8	80.1	0.25	6%	85.2	80.1	0.27	6%
6	10/18/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	81.3	80.1	0.06	1%	83.3	80.1	0.17	4%	83.7	80.1	0.19	4%
6	10/18/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	81.3	80.1	0.06	1%	83.2	80.1	0.16	4%	83.6	80.1	0.19	4%
6	10/18/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	80.7	80.1	0.03	1%	82.7	80.1	0.14	3%	83.0	80.1	0.15	4%
6	10/19/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	80.9	80.1	0.04	1%	82.8	80.1	0.14	3%	83.1	80.1	0.16	4%
6	10/20/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	78.7	80.1	-0.08	-2%	80.2	80.1	0.01	0%	80.6	80.1	0.03	1%
6	10/23/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	79.1	80.1	-0.05	-1%	80.6	80.1	0.03	1%	80.9	80.1	0.04	1%
6	10/23/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	78.5	80.1	-0.09	-2%	79.6	80.1	-0.03	-1%	79.9	80.1	-0.01	0%
6	10/23/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	77.6	80.1	-0.14	-3%	79.0	80.1	-0.06	-1%	79.3	80.1	-0.04	-1%
6	10/23/2023	9589	9/5/2024	1257	9/12/2024	30	1117	9/20/2024	Square	77.9	80.1	-0.12	-3%	79.1	80.1	-0.05	-1%	79.4	80.1	-0.04	-1%
Average										79.9	80.1	-0.01	0%	81.5	80.1	0.08	2%	81.9	80.1	0.09	2%

Table 4-2: System Check Results

SAR Lab	Date	Frequency (GHz)	5G Verification Source SN	Source Cal. Due Date	Measured psPDn (W/m ²) over 4cm ²	Target psPDn (W/m ²) over 4cm ²	Deviation (dB)	Delta ±16 %	Measured psPDtot (W/m ²) over 4cm ²	Target psPDtot (W/m ²) over 4cm ²	Deviation (dB)	Delta ±16 %	Measured psPDmod (W/m ²) over 4cm ²	Target psPDmod (W/m ²) over 4cm ²	Deviation (dB)	Delta ±16 %
6	2/20/2024	30	1117	9/20/2024	80.9	79.9	0.06	1.28%	82.6	81.5	0.06	1.31%	83.0	81.9	0.06	1.38%
6	2/26/2024	30	1117	9/20/2024	89.9	79.9	0.51	12.54%	92.1	81.5	0.53	12.96%	92.5	81.9	0.53	12.98%
6	2/29/2024	30	1117	9/20/2024	81.9	79.9	0.11	2.53%	83.8	81.5	0.12	2.78%	84.2	81.9	0.12	2.85%
6	3/4/2024	30	1117	9/20/2024	82.2	79.9	0.12	2.90%	83.9	81.5	0.12	2.91%	84.2	81.9	0.12	2.85%
6	3/8/2024	30	1117	9/20/2024	83.7	79.9	0.20	4.78%	85.8	81.5	0.22	5.24%	86.2	81.9	0.22	5.29%
6	3/26/2024	30	1117	9/20/2024	84.4	79.9	0.24	5.66%	86.6	81.5	0.26	6.22%	87.0	81.9	0.26	6.27%
6	4/1/2024	30	1117	9/20/2024	83.0	79.9	0.17	3.91%	84.8	81.5	0.17	4.01%	85.2	81.9	0.17	4.07%

Validation band: CW, FRONT Scan 1

Exposure Conditions

Band	Validation band	Phantom Section	5G
Frequency [MHz] Channel Number	30000.0 0	Conversion Factor	1.0
Group UID	CW, 0--	Position Test Distance [mm]	FRONT 5.55

Hardware Setup

Probe Calibration Date	EUmmWV4 - SN9589_F1-55GHz 2023-09-05	Phantom	mmWave xxxx
DAE Calibration Date	DAE4 Sn1257 2023-09-12	Medium	Air -
Software Version	3.2.2.2358		

Scan Setup

Scan Type	5G Scan	Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25	Sensor Surface [mm]	5.55

Measurement Results

Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	82.8
psPDtot+ [W/m ²]	84.8
psPDmod+ [W/m ²]	85.2
E _{max} [V/m]	204
Power Drift [dB]	-0.24

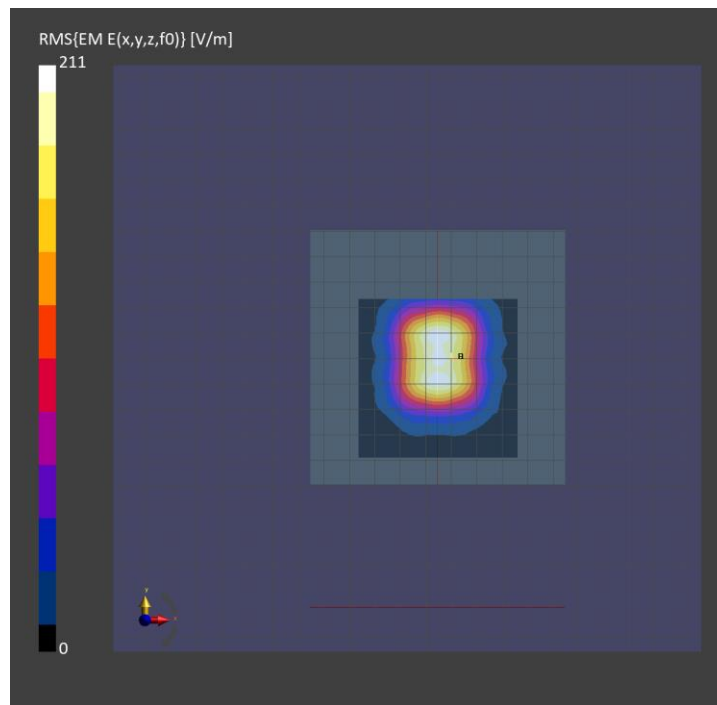


Figure 4-1: 4cm²PD for source validation (worst-case Δ)

Validation band: CW, FRONT

Exposure Conditions

Band	Validation band	Phantom Section	5G
Frequency [MHz] Channel Number	30000.0 30000	Conversion Factor	1.0
Group UID	CW, 0--	Position Test Distance [mm]	FRONT 5.55

Hardware Setup

Probe Calibration Date	EUmmWV4 - SN9589_F1-55GHz 2023-09-05	Phantom	mmWave xxxx
DAE Calibration Date	DAE4 Sn1257 2023-09-12	Medium	Air -
Software Version	3.2.2.2358		

Scan Setup

Scan Type	5G Scan	Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25	Sensor Surface [mm]	5.55

Measurement Results

Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	89.9
psPDtot+ [W/m ²]	92.1
psPDmod+ [W/m ²]	92.5
E _{max} [V/m]	212
H _{max} [A/m]	0.568
Power Drift [dB]	-0.14

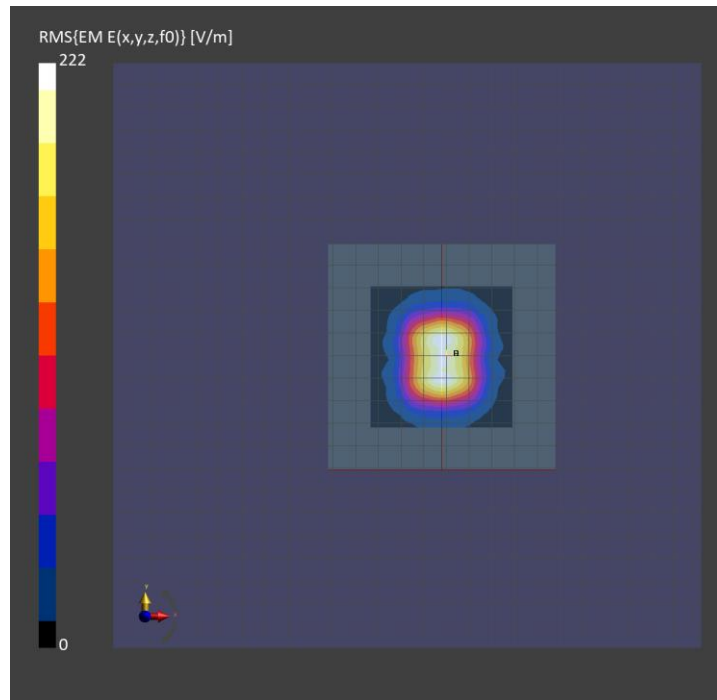


Figure 4-2: 4cm²PD for System Check (worst-case Δ)

5. Test Condition, Configuration, and Assessment

5.1. Samsung S.LSI TAS Parameters

The Part 0 report documents the determination of P_{limit} for Sub-6 GHz WWAN bands and the P_{limit} for 5G mmW NR bands using the design targets and device related uncertainties.

5.1.1. Samsung S.LSI TAS Parameters for the Sub-6 Modem

For this EUT, the input parameters listed in §4.3 of the Part 0 report are populated in the EUT's software.

5.1.2. Samsung S.LSI TAS parameters for the 5G modem

For this EUT, the P_{limit} parameters for the 5G mmW NR radio(s) are listed in §5.7.3 of the Part 0 report and are populated in the EUT's software.

5.2. Device Test Configuration for SAR Measurements

In summary, SAR is evaluated on this EUT in test configurations and test conditions listed below:

- Test configurations: Hotspot SAR exposure (1-g SAR) from all device surfaces/edges (front, back, left, right, top, bottom) having a transmitting antenna located $\leq 25\text{mm}$ from that device surface/edge when in direct contact with flat section of SAM phantom. Hotspot SAR is evaluated at 10 mm separation distance for all selected device surfaces as per FCC KDB publication 648474 D04.
- Test condition: The SAR measurements on all supported Sub-6 WWAN technologies and bands are conducted with the EUT transmitting at maximum time-average transmit power (P_{limit}) or maximum RF tune-up power (P_{max}) if $P_{max} \leq P_{limit}$.

5.3. Device Test Configuration for PD Measurements

As can be seen in §5 of the Part 0 report, the PD exposure for this EUT has been assessed against the $PD_{Design Target}$ listed in §5.1 of this report using a validated simulation approach for the worst cases for all its beams. To further confirm the compliance, a subset of beams and test cases were selected for PD verification, see §6.2.

The below beam selection criteria for the PD verification test is followed:

- Select one single beam (antenna array config) per antenna type (dipole or patch) and per mmW antenna module
 - The single beam containing highest number of active antenna ports. For example, the single beam with 4 active patch ports should be selected over the beam with a single active patch port
- Select one beam pair (if applicable) per antenna type (dipole or patch) and per mmW antenna module
 - The beam pair containing the highest number of active antenna ports.

Additionally, since the worst-case surface dictates the compliance, the PD measurement is made on the worst channel and worst surface determined through the validated simulation approach, see Appendix B of the Part 0 report.

Based on the aforementioned criteria and the EUT codebook in §5.3 of the Part 0 report, Table 5-1 lists the selected beams and test cases for PD verification measurement(s). The definition of the EUT surface is illustrated in Figure 5-1.

Table 5-1: PD verification test cases

n258						
Module/Plane	Ch.	Polarization	Beam ID 1	Beam ID 2	BW	DUT Surface
A-Plane	2070831	H	N/A	0	100	S5 (Top)
	2043749	V	0	N/A	100	S5 (Top)
	2043749	H+V	0	0	100	S5 (Top)
	2043749	H+V	0	0	100	S1 (Front)
	2043749	H+V	0	0	100	S2 Visor (Back)
Module/Plane	Ch.	Polarization	Beam ID1	Beam ID2	BW	DUT Surface
B-Plane	2070831	H	N/A	5	100	S2 Visor (Back)
	2070831	V	2	N/A	100	S2 Visor (Back)
	2070831	H+V	0	0	100	S2 Visor (Back)
	2070831	H+V	0	0	100	S5 (Top)
	2070831	H+V	0	0	100	S3 (Left)
n260						
Module/Plane	Ch.	Polarization	Beam ID 1	Beam ID 2	BW	DUT Surface
A-Plane	2254167	V	4	N/A	100	S5 (Top)
	2229167	H+V	1	1	100	S5 (Top)
	2279165	H	N/A	0	100	S5 (Top)
	2279165	H	N/A	0	100	S1 (Front)
	2279165	H	N/A	0	100	S2 Visor (Back)
Module/Plane	Ch.	Polarization	Beam ID1	Beam ID2	BW	DUT Surface
B-Plane	2279165	V	3	N/A	100	S2 Visor (Back)
	2279165	H+V	3	3	100	S2 Visor (Back)
	2254167	H	N/A	2	100	S2 Visor (Back)
	2254167	H	N/A	2	100	S5 (Top)
	2254167	H	N/A	2	100	S3 (Left)
n261						
Module/Plane	Ch.	Polarization	Beam ID 1	Beam ID 2	BW	DUT Surface
A-Plane	2084999	H	N/A	1	100	S5 (Top)
	2070833	V	0	N/A	100	S5 (Top)
	2070833	H+V	0	0	100	S5 (Top)
	2070833	H+V	0	0	100	S1 (Front)
	2070833	H+V	0	0	100	S2 Visor (Back)
Module/Plane	Ch.	Polarization	Beam ID1	Beam ID2	BW	DUT Surface
B-Plane	2070833	H	N/A	4	100	S2 Visor (Back)
	2084999	V	2	N/A	100	S2 Visor (Back)
	2084999	H+V	5	5	100	S2 Visor (Back)
	2084999	H+V	5	5	100	S5 (Top)
	2084999	H+V	5	5	100	S3 (Left)

Table 5-2: Scaled PD Simulated Results to P_{limit} (uncorrected)

Module/ Plane	Polarity	Beam ID 1	Beam ID 2	n258			n260			n261		
				Low	Mid	High	Low	Mid	High	Low	Mid	High
A-Plane	H	N/A	0	2.94	3.33	3.31	3.08	3.06	3.12	3.32	3.33	3.32
		N/A	1	3.16	3.33	3.18	3.23	3.22	3.23	3.28	3.32	3.35
		N/A	2	3.18	3.21	3.17	3.03	2.92	2.91	3.19	3.25	3.34
		N/A	3	3.12	3.11	3.20	2.71	2.77	2.85	3.12	3.16	3.22
		N/A	4	3.11	3.33	3.31	3.07	2.96	2.99	3.11	3.20	3.23
		N/A	5	2.93	3.32	3.20	3.06	3.13	3.18	3.28	3.34	3.33
	V	0	N/A	2.87	3.45	3.48	3.04	2.98	3.02	3.44	3.40	3.37
		1	N/A	2.88	3.21	3.12	3.14	3.14	3.13	3.44	3.43	3.43
		2	N/A	3.08	3.39	3.27	3.09	3.03	3.02	3.31	3.33	3.34
		3	N/A	3.03	3.11	3.17	3.03	3.04	3.15	3.22	3.28	3.32
		4	N/A	3.14	3.39	3.36	3.26	3.32	3.30	3.16	3.19	3.23
		5	N/A	2.92	3.17	3.07	3.07	3.13	3.20	3.07	3.12	3.24
	H+V	0	0	3.66	4.35	4.40	3.95	3.84	3.95	4.41	4.35	4.28
		1	1	4.20	4.36	4.15	4.42	4.14	4.27	4.38	4.35	4.38
		2	2	4.36	4.32	4.21	4.05	4.06	4.04	4.12	4.24	4.28
		3	3	4.28	3.99	4.10	3.89	3.74	3.88	4.20	4.31	4.35
		4	4	4.25	4.42	4.33	4.14	4.14	4.26	4.15	4.27	4.35
		5	5	3.90	4.29	3.97	4.08	4.16	4.19	4.14	4.30	4.42
B-Plane	H	N/A	0	2.86	3.03	2.98	2.92	3.02	3.20	3.25	3.25	3.25
		N/A	1	2.90	2.97	3.09	3.01	3.22	3.20	3.24	3.24	3.22
		N/A	2	3.21	2.83	3.16	2.98	3.26	3.29	3.24	3.31	3.31
		N/A	3	2.75	2.97	2.95	2.98	3.12	3.19	3.26	3.28	3.29
		N/A	4	3.17	3.03	3.16	3.02	3.23	3.22	3.30	3.26	3.24
		N/A	5	2.89	3.06	3.14	2.93	3.06	3.14	3.14	3.09	3.08
	V	0	N/A	2.89	2.86	3.08	3.07	3.22	3.35	3.21	3.23	3.18
		1	N/A	2.82	3.02	3.26	3.06	3.21	3.36	3.21	3.23	3.18
		2	N/A	2.85	3.09	3.42	3.06	3.22	3.29	3.24	3.26	3.27
		3	N/A	2.88	3.09	3.13	3.06	3.16	3.27	3.13	3.17	3.23
		4	N/A	3.00	3.05	3.25	3.14	3.37	3.38	3.19	3.19	3.18
		5	N/A	2.96	3.10	3.25	3.02	3.32	3.32	3.23	3.18	3.20
	H+V	0	0	3.61	3.84	4.24	3.87	3.96	4.26	4.20	4.27	4.23
		1	1	3.80	3.88	4.28	3.97	4.19	4.26	4.30	4.27	4.28
		2	2	3.90	3.99	4.42	3.90	4.16	4.34	4.33	4.42	4.38
		3	3	3.63	3.94	4.08	4.05	4.30	4.40	4.17	4.27	4.33
		4	4	4.23	3.91	4.33	4.01	4.38	4.42	4.32	4.29	4.27
		5	5	3.81	4.06	4.27	3.93	4.16	4.22	4.36	4.33	4.27
6	6	4.03	4.31	4.25	3.66	3.84	4.15	4.23	4.18	4.11		

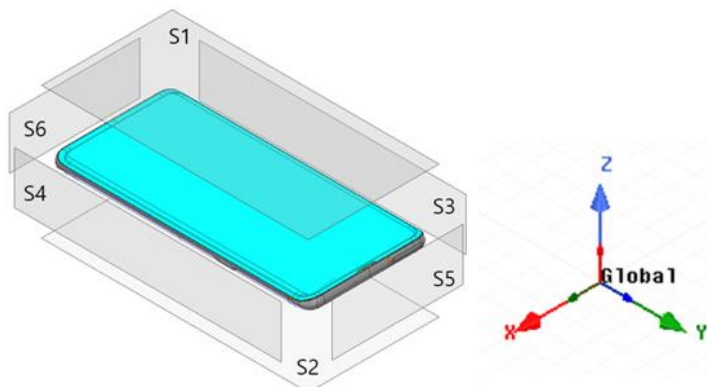


Figure 5-1: EUT surface definition (S1=Front, S2=Back, S3=Edge Left, S4=Edge Right, S5=Edge Top, S6=Edge Bottom)

6. Summary of Results

6.1. SAR Measurement and Conducted Power Results at P_{limit}

The worst-case reported SAR values for Sub-6 GHz are listed in §4.4 of the Part 0 report and the worst-case reported WLAN SAR results are listed in Table 6-1.

Table 6-1: Worst-case reported WLAN, Bluetooth, and 802.15.4 SAR

Technology	Freq (GHz)	ANT (Chain)				Reported 1-g SAR (W/kg)				P_{max}			
		Head	Body-worn	Hotspot	Extremity	Head	Body-worn	Hotspot	Extremity	Head	Body-worn	Hotspot	Extremity
WLAN	2.4	ANT 3 (Chain 1)	ANT 3 (Chain 1)	ANT 3 (Chain 1)	N/A	0.247	0.238	0.238	N/A	11.00	15.00	15.00	N/A
	2.4	ANT 3 (Chain 1)	ANT 3 (Chain 1)	ANT 3 (Chain 1)	N/A	0.258	0.229	0.229	N/A	11.00	15.00	15.00	N/A
	5.2	N/A	N/A	ANT 3 (Chain 1)	N/A	N/A	N/A	0.126	N/A	N/A	N/A	15.00	N/A
	5.3	ANT 3 (Chain 1)	ANT 3 (Chain 1)	N/A	ANT 3 (Chain 1)	0.230	0.231	N/A	0.758	9.60	18.00	N/A	18.00
	5.5	ANT 4 (Chain 0)	ANT 3 (Chain 1)	N/A	ANT 4 (Chain 0)	0.213	0.274	N/A	0.829	10.00	18.00	N/A	18.00
	5.8	ANT 3 (Chain 1)	ANT 3 (Chain 1)	ANT 3 (Chain 1)	N/A	0.161	0.296	0.296	N/A	9.60	16.50	16.50	N/A
	5.9	ANT 3 (Chain 1)	ANT 3 (Chain 1)	N/A	ANT 3 (Chain 1)	0.233	0.318	N/A	0.817	9.60	18.00	N/A	18.00
Technology	Freq (GHz)	ANT (Chain)				Reported 1-g SAR (W/kg)				P_{max}			
		Head	Body-worn	Hotspot	Extremity	Head	Body-worn	Hotspot	Extremity	Head	Body-worn	Hotspot	Extremity
WLAN	5.925 - 7.125	ANT 3 (Chain 1)	ANT 3 (Chain 1)	N/A	ANT 3 (Chain 1)	0.238	0.109	N/A	0.350	10.00	15.00	N/A	15.00
Technology	Freq (GHz)	ANT (Chain)				Reported 1-g SAR (W/kg)				P_{max}			
		Head	Body-worn	Hotspot	Extremity	Head	Body-worn	Hotspot	Extremity	Head	Body-worn	Hotspot	Extremity
Bluetooth	2.4	ANT 3	ANT 3	ANT 3	N/A	0.142	0.275	0.275	N/A	10.00	15.00	15.00	N/A
802.15.4	2.4	ANT 4	ANT 4	ANT 4	N/A	0.181	0.080	0.127	N/A	12.50	17.00	17.00	N/A

Note that WLAN SAR for each of the bands in the above table lists the worst-case SAR out of both WLAN antennas and WLAN MIMO.

6.2. PD Measurement Results at P_{limit}

Table 5-3 lists the beams selected for PD verification test for this EUT and Table 6-2 lists the corresponding PD measurement results at 2 mm spacing. Samsung’s S.LSI TAS algorithm operates based on time-averaged transmit power reported on a per symbol basis, which is independent of modulation, channel, and bandwidth (RBs). Therefore, PD measurements in Table 6-2 were conducted with a CW modulation and on the worst-case channel determined through simulations (See Appendix B of the Part 0 report), with the EUT transmitting at P_{limit} (listed in Table 5-7 of the Part 0 report) corresponding to the tested beams.

All 4cm² PD values for the selected beams are listed in Table 6-2. In addition to these selected beams, 4cm² PD for a few more beams were used in the Part 2 report.

Table 6-2: PD Measurement results

n258																			
Module/Plane	Polarization	Modulation	BW (MHz)	Beam ID 1	Beam ID 2	Channel	Freq. (MHz)	Distance (mm)	DUT Surface	P _{limit} (dBm)	Signal Type	Uncertainty Scaling Factor	Power Drift (dB)	Meas. psPD _n (W/m ²)	Meas. psPD _{ext} (W/m ²)	Meas. psPD _{mod} (W/m ²)	Scaled psPD _n (W/m ²)	Scaled psPD _{ext} (W/m ²)	Scaled psPD _{mod} (W/m ²)
A-Plane	H	QPSK	100	N/A	0	2070831	27500	2	S5 (Top)	9.81	CW	1.116	-0.180	1.030	1.330	1.590	1.149	1.484	1.774
	V	QPSK	100	0	N/A	2043749	25875.1	2	S5 (Top)	9.81	CW	1.116	0.240	0.671	1.030	1.280	0.749	1.149	1.428
	H+V	QPSK	100	0	0	2043749	25875.1	2	S5 (Top)	9.81	CW	1.116	-0.010	1.500	1.970	2.580	1.674	2.199	2.879
	H+V	QPSK	100	0	0	2043749	25875.1	2	S1 (Front)	9.81	CW	1.116	-0.040	0.455	0.567	0.709	0.508	0.633	0.791
	H+V	QPSK	100	0	0	2043749	25875.1	2	S2 Visor (Back)	9.81	CW	1.116	-0.150	0.231	0.285	0.377	0.258	0.318	0.421
B-Plane	H	QPSK	100	N/A	5	2070831	27500	2	S2 Visor (Back)	9.94	CW	1.116	0.060	0.445	0.520	0.580	0.497	0.580	0.647
	V	QPSK	100	2	N/A	2070831	27500	2	S2 Visor (Back)	9.94	CW	1.116	-0.080	0.461	0.577	0.607	0.514	0.644	0.677
	H+V	QPSK	100	0	0	2070831	27500	2	S2 Visor (Back)	9.94	CW	1.116	-0.150	0.960	1.280	1.360	1.071	1.428	1.518
	H+V	QPSK	100	0	0	2070831	27500	2	S5 (Top)	9.94	CW	1.116	0.170	0.820	0.889	0.945	0.915	0.992	1.055
	H+V	QPSK	100	0	0	2070831	27500	2	S3 (Left)	9.94	CW	1.116	1.190	0.116	0.125	0.135	0.129	0.140	0.151
n260																			
Module/Plane	Polarization	Modulation	BW (MHz)	Beam ID 1	Beam ID 2	Channel	Freq. (MHz)	Distance (mm)	DUT Surface	P _{limit} (dBm)	Signal Type	Uncertainty Scaling Factor	Power Drift (dB)	Meas. psPD _n (W/m ²)	Meas. psPD _{ext} (W/m ²)	Meas. psPD _{mod} (W/m ²)	Scaled psPD _n (W/m ²)	Scaled psPD _{ext} (W/m ²)	Scaled psPD _{mod} (W/m ²)
A-Plane	V	QPSK	100	4	N/A	2254167	38500	2	S5 (Top)	9.67	CW	1.116	0.130	0.830	1.070	1.200	0.926	1.194	1.339
	H+V	QPSK	100	1	1	2229167	37000	2	S5 (Top)	9.67	CW	1.116	-0.220	1.060	1.420	1.730	1.183	1.585	1.931
	H	QPSK	100	N/A	0	2279165	40000	2	S5 (Top)	9.67	CW	1.116	0.690	2.050	2.760	3.430	2.288	3.080	3.828
	H	QPSK	100	N/A	0	2279165	40000	2	S1 (Front)	9.67	CW	1.116	-0.060	0.532	0.665	0.716	0.594	0.742	0.799
	H	QPSK	100	N/A	0	2279165	40000	2	S2 Visor (Back)	9.67	CW	1.116	1.800	0.081	0.093	0.110	0.090	0.104	0.123
B-Plane	V	QPSK	100	3	N/A	2279165	40000	2	S2 Visor (Back)	10.04	CW	1.116	1.260	0.967	1.070	1.130	1.079	1.194	1.261
	H+V	QPSK	100	3	3	2279165	40000	2	S2 Visor (Back)	10.04	CW	1.116	-0.030	0.854	0.946	1.030	0.953	1.056	1.149
	H	QPSK	100	N/A	2	2254167	38500	2	S2 Visor (Back)	10.04	CW	1.116	-2.900	1.890	2.210	2.440	2.109	2.466	2.723
	H	QPSK	100	N/A	2	2254167	38500	2	S5 (Top)	10.04	CW	1.116	0.040	0.763	0.911	0.965	0.852	1.017	1.077
	H	QPSK	100	N/A	2	2254167	38500	2	S3 (Left)	10.04	CW	1.116	-0.310	0.144	0.172	0.198	0.161	0.192	0.221
n260																			
Module/Plane	Polarization	Modulation	BW (MHz)	Beam ID 1	Beam ID 2	Channel	Freq. (MHz)	Distance (mm)	DUT Surface	P _{limit} (dBm)	Signal Type	Uncertainty Scaling Factor	Power Drift (dB)	Meas. psPD _n (W/m ²)	Meas. psPD _{ext} (W/m ²)	Meas. psPD _{mod} (W/m ²)	Scaled psPD _n (W/m ²)	Scaled psPD _{ext} (W/m ²)	Scaled psPD _{mod} (W/m ²)
A-Plane	H	QPSK	100	N/A	1	2084999	28350	2	S5 (Top)	11.51	CW	1.116	-0.620	0.360	0.438	0.524	0.402	0.489	0.585
	V	QPSK	100	0	N/A	2070833	27500	2	S5 (Top)	11.51	CW	1.116	0.400	0.471	0.596	0.671	0.526	0.665	0.749
	H+V	QPSK	100	0	0	2070833	27500	2	S5 (Top)	11.51	CW	1.116	-0.100	1.010	1.390	1.630	1.127	1.551	1.819
	H+V	QPSK	100	0	0	2070833	27500	2	S1 (Front)	11.51	CW	1.116	-0.100	0.181	0.257	0.309	0.202	0.287	0.345
	H+V	QPSK	100	0	0	2070833	27500	2	S2 Visor (Back)	11.51	CW	1.116	2.480	0.076	0.112	0.153	0.085	0.125	0.171
B-Plane	H	QPSK	100	N/A	4	2070833	27500	2	S2 Visor (Back)	12.33	CW	1.116	0.650	0.345	0.403	0.462	0.385	0.450	0.516
	V	QPSK	100	2	N/A	2084999	28350	2	S2 Visor (Back)	12.33	CW	1.116	-0.040	0.516	0.632	0.686	0.576	0.705	0.766
	H+V	QPSK	100	5	5	2084999	28350	2	S2 Visor (Back)	12.33	CW	1.116	0.490	0.786	1.000	1.070	0.877	1.116	1.194
	H+V	QPSK	100	5	5	2084999	28350	2	S5 (Top)	12.33	CW	1.116	-0.130	0.450	0.501	0.514	0.502	0.559	0.574
	H+V	QPSK	100	5	5	2084999	28350	2	S3 (Left)	12.33	CW	1.116	-3.870	0.106	0.113	0.118	0.118	0.126	0.132

The PD distribution plots for both point PD and 4cm² avg PD for the highest PD configuration in Table 6-2 is given below.

UL Verification Services Inc. SAR Lab 6

Date/Time: 2024-03-29, 22:16

Custom Band: CW, EDGE TOP

Exposure Conditions

Band	Custom Band	Phantom Section	5G
Frequency [MHz] Channel Number	25875.0 25875000	Conversion Factor	1.0
Group UID	CW, 0--	Position Test Distance [mm]	EDGE TOP 2.00

Hardware Setup

Probe Calibration Date	EUmmWV4 - SN9589_F1-55GHz 2023-09-05	Phantom	mmWave xxxx
DAE Calibration Date	DAE4 Sn1257 2023-09-12	Medium	Air -
Software Version	3.2.2.2358		

Scan Setup

Scan Type	5G Scan	Grid Extents [mm]	25.0 x 25.0
Grid Steps [lambda]	0.1761789570395473 x 0.1761789570395473	Sensor Surface [mm]	2.0

Measurement Results

Avg. Area [cm²]	4.00
psPDn+ [W/m²]	1.50
psPDtot+ [W/m²]	1.97
psPDmod+ [W/m²]	2.58
E_{max} [V/m]	85.6
H_{max} [A/m]	0.254
Power Drift [dB]	-0.01

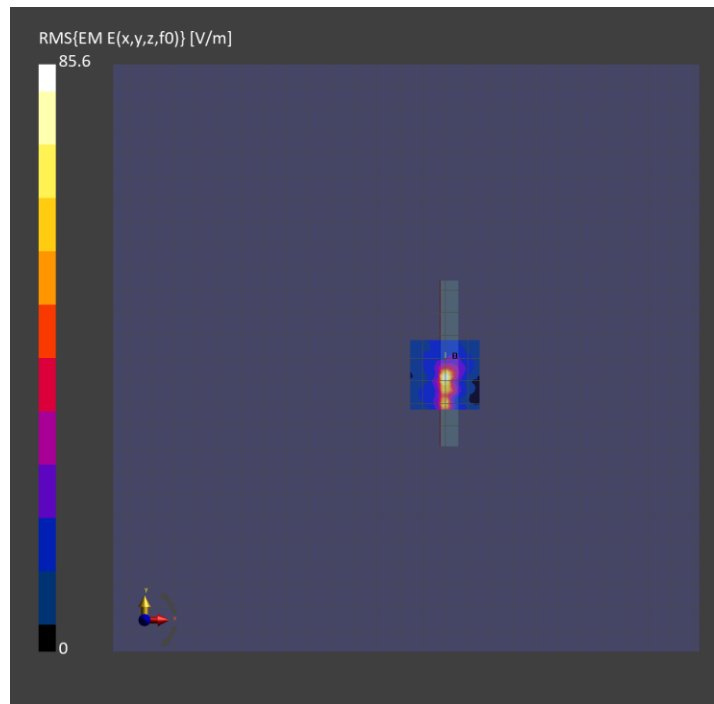


Figure 6-1: Band n258, Beam ID 0, 4cm² PD, S5

Custom Band: CW, EDGE TOP

Exposure Conditions

Band	Custom Band	Phantom Section	5G
Frequency [MHz] Channel Number	40000.0 40000000	Conversion Factor	1.0
Group UID	CW, 0--	Position Test Distance [mm]	EDGE TOP 2.00

Hardware Setup

Probe Calibration Date	EUmmWV4 - SN9589_F1-55GHz 2023-09-05	Phantom	mmWave xxxx
DAE Calibration Date	DAE4 Sn1257 2023-09-12	Medium	Air -
Software Version	3.2.2.2358		

Scan Setup

Scan Type	5G Scan	Grid Extents [mm]	25.0 x 25.0
Grid Steps [lambda]	0.25 x 0.25	Sensor Surface [mm]	2.0

Measurement Results

Avg. Area [cm²]	4.00
psPDn+ [W/m²]	2.05
psPDtot+ [W/m²]	2.76
psPDmod+ [W/m²]	3.43
E_{max} [V/m]	109
H_{max} [A/m]	0.322
Power Drift [dB]	0.69

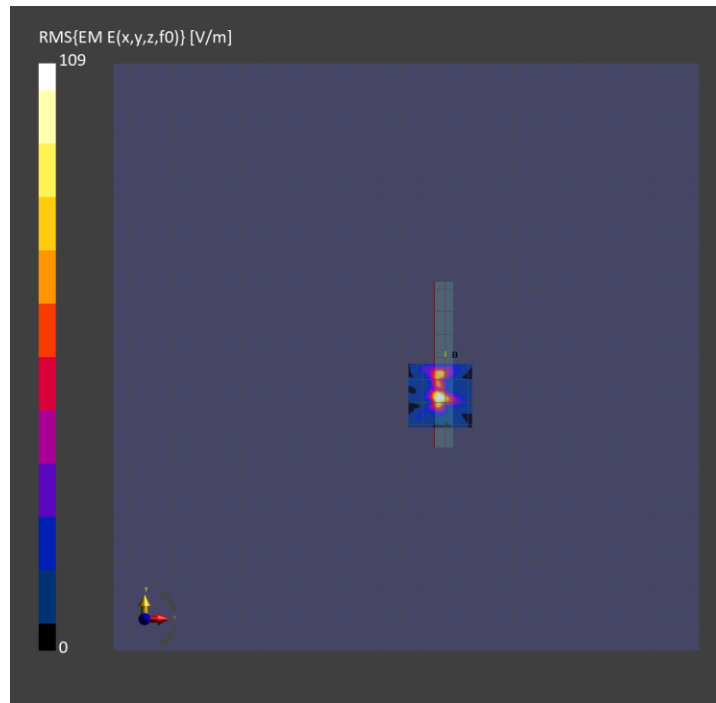


Figure 6-2: Band n260, Beam ID 0, 4cm² PD, S5

Custom Band: CW, EDGE TOP

Exposure Conditions

Band	Custom Band	Phantom Section	5G
Frequency [MHz] Channel Number	27500.0 27500000	Conversion Factor	1.0
Group UID	CW, 0--	Position Test Distance [mm]	EDGE TOP 2.00

Hardware Setup

Probe Calibration Date	EUmmWV4 - SN9589_F1-55GHz 2023-09-05	Phantom	mmWave xxxx
DAE Calibration Date	DAE4 Sn1257 2023-09-12	Medium	Air -
Software Version	3.2.2.2358		

Scan Setup

Scan Type	5G Scan	Grid Extents [mm]	25.0 x 25.0
Grid Steps [lambda]	0.18724333598405993 x 0.18724333598405993	Sensor Surface [mm]	2.0

Measurement Results

Avg. Area [cm²]	4.00
psPDn+ [W/m²]	1.01
psPDtot+ [W/m²]	1.39
psPDmod+ [W/m²]	1.63
E_{max} [V/m]	66.0
H_{max} [A/m]	0.190
Power Drift [dB]	-0.10

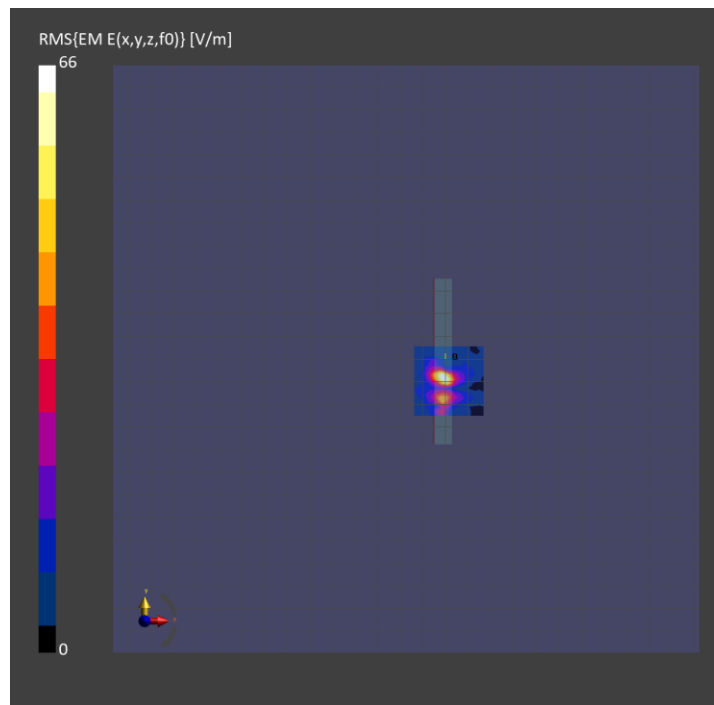


Figure 6-3: Band n261, Beam ID 0, 4cm² PD, S5

6.3. Simultaneous Transmission Analysis

The EUT supports simultaneous transmission of multiple radios. RF exposure compliance in simultaneous transmission scenarios is evaluated in this section.

It must be noted here that Samsung’s S.LSI TAS time-averaging algorithm was applied to only WWAN (Sub-6GHz/5G mmW NR) on this device, where the time-averaged power level is controlled so that the RF exposure is $\leq SAR_{Design\ Target}$ (corresponding to P_{limit}) for Sub-6 GHz WWAN and $\leq PD_{Design\ Target}$ (corresponding to P_{limit}) for 5G mmW NR. Since there is total design-related uncertainty arising from TxAGC and device-to-device variation, the worst-case RF exposure should be determined by accounting for this uncertainty in the corresponding design target, listed in Table 6-3.

Table 6-3: Worst-case time-averaged RF exposure for WWAN

Scenario	WWAN
	5G mmW NR
Maximum time-averaged power level	P_{limit}
Maximum time-averaged exposure (Design Limits)	7.5 W/m ²
Design-related uncertainty (dB)	2.30
Worst-case time-averaged RF exposure	Reported PD = 7.5 W/m ²

Samsung S.LSI TAS allows only 75% of maximum PD exposure for this EUT utilizing entries listed in Tables 5-1. See §6.3.1 for details.

WLAN does not employ time-averaging in this device, reported 1-g/10-g SAR at the maximum RF tune-up output power is listed in Table 6-1.

6.3.1. Analysis

RF exposure compliance with WWAN+WLAN simultaneous transmission scenarios is demonstrated for various radio configurations using the equation below:

$$\text{Total norm. RF exposure} = \text{norm. RF exposure from S.LSI TAS enabled WWAN (norm. SAR from Sub-6 GHz} + \text{norm. PD from 5G mmW NR)} + \text{norm. SAR from WLAN} \leq 1.0 \text{ normalized limit (1)}$$

S.LSI TAS algorithm in WWAN adds directly the time-averaged RF exposure from Sub-6 GHz WWAN and time-averaged RF exposure from 5G mmW NR, i.e.,

$$\text{norm. RF exposure from S.LSI TAS enabled WWAN: (normalized SAR exposure from Sub-6 GHz)} + \text{(normalized PD exposure from 5G mmW NR)} \leq 1.0 \text{ normalized limit (2)}$$

In other words, S.LSI TAS algorithm controls the total RF exposure from both Sub-6 GHz radio and 5G mmW NR to not exceed the FCC limit. S.LSI TAS algorithm assumes hotspots are collocated (i.e., ignoring spatial distribution of hotspots) and directly adds normalized RF exposures from Sub-6 GHz WWAN and from 5G mmW NR, i.e.,

- If A = max normalized time-averaged SAR exposure from 4G,
- B = max normalized time-averaged PD exposure from 5G mmW NR,

Then, equation (2) can be re-written as below because S.LSI TAS assumes Sub-6 GHz WWAN hotspots are collocated with 5G mmW NR hotspot:

$$\text{S.LSI TAS enabled WWAN: } x(t) * A + (1-x(t)) * B \leq 1.0 \text{ normalized limit (3)}$$

Here, “ $x(t)*A$ ” represents percentage of normalized time-averaged RF exposure from Sub-6 GHz WWAN, and $x(t)$ ranges between [0,1]; “ $(1-x(t))*B$ ” is remaining percentage of RF exposure contribution from 5G mmW NR. S.LSI TAS controls ‘ x ’ in real time such that the sum of these exposures never exceeds the 1.0 normalized limit.

Note that mathematically:

$$x(t) * A + (1 - x(t)) * B \leq \max(A, B) \leq 1.0 \text{ normalized limit for } x(t) \in [0,1] \text{ (4)}$$

Therefore, if equations (5a) and (5b) are proven:

$$A + \text{norm. SAR from WLAN} \leq 1.0 \text{ norm. limit (5a),}$$

$$B + \text{norm. SAR from WLAN} \leq 1.0 \text{ norm. limit (5b),}$$

Then, based on equation (4), the condition below is also proved:

$$[x(t) * A + (1 - x(t)) * B] + \text{norm. SAR from WLAN} \leq 1.0 \text{ norm. limit (5c)}$$

which is the same as equation (1), as a means to demonstrate compliance for simultaneous transmission.

Additionally, it should be noted that in the absence of 5G mmW NR, S.LSI TAS limits the maximum RF exposure contributed from Sub-6 GHz WWAN to 100% normalized exposure (i.e., $x=1.0$ in equation 3), while with 5G mmW NR active, S.LSI TAS limits the maximum RF exposure contributed from 5G mmW NR to 75% normalized exposure to guarantee at least 25% margin allocated to the Sub-6 GHz WWAN anchor to maintain the link (i.e., $x=0.25$ in equation 3). Therefore:

$$\text{S.LSI TAS enabled WWAN: } A = \max(\text{normalized SAR exposure from 4G}) \leq 1.0 \text{ normalized limit (6a)}$$

$$\text{S.LSI TAS enabled WWAN: } B = \max(\text{normalized PD exposure from 5G mmW NR}) \leq 0.75 \text{ normalized limit (6b)}$$

Thus, for compliance demonstration given by equation (1), equation (7) is obtained by combining equations (5a & 5b) and (6a & 6b) and should be proven to guarantee simultaneous transmission compliance:

$$\text{Total normalized RF exposure} = \text{norm. SAR from 4G WWAN} + \text{norm. SAR from WLAN} < 1.0 \text{ normalized FCC limit (7a)}$$

$$\text{Total normalized RF exposure} = 0.75 * \text{norm. PD from 5G mmW NR WWAN} + \text{norm. SAR from WLAN} < 1.0 \text{ normalized FCC limit (7b)}$$

The compliance for simultaneous transmission scenarios of WWAN (Sub-6 GHz/5G mmW NR) radio enabled with S.LSI TAS and WLAN without S.LSI TAS is re-evaluated for all transmission scenarios supported by this EUT.

As described in equation (7), simultaneous transmission analysis for WWAN + WLAN is performed in two parts:

1. Sub-6 GHz WWAN + WLAN (i.e., Eq. (7a) with compliance demonstration in §6.3.2)
2. 5G mmW NR WWAN + WLAN (i.e., Eq. (7b) with compliance demonstration in §6.3.3)

By combining the equations *a* and *b* variants, the FCC requirement expressed in Eq. (1) is re-written below:

$$\text{Total norm. RF exposure} = \text{norm. RF exposure from S.LSI TAS enabled WWAN (norm. SAR from Sub-6 GHz WWAN} + \text{norm. PD from 5G mmW NR)} + \text{norm. SAR from WLAN} \leq 1.0 \text{ normalized limit (1)}$$

6.3.2. Simultaneous Transmission Compliance Demonstration for Sub-6 GHz WWAN + WLAN

For this EUT, select Sub-6 GHz WWAN technologies, bands, antennas and D/RSIs, denote $P_{limit} \geq P_{max}$ (maximum RF tune-up power). Therefore, simultaneous transmission analysis for Sub-6 GHz WWAN + WLAN is performed at P_{max} , where applicable. Refer to the reference SAR report for a full exhibit of the simultaneous transmission compliance.

6.3.3. Simultaneous Transmission Compliance demonstration for 5G mmW NR WWAN + WLAN

Simultaneous transmission analysis is performed in this section using worst-case PD values listed in Table 6-2 for compliance demonstration of 5G mmW NR WWAN + WLAN, along with all worst-case reported SAR values for WLAN listed in Table 6-2.

Simultaneous transmission analysis on all 5G mmW NR WWAN + WLAN scenarios are listed below:

Table 6-4: Simultaneous transmission analysis scenarios for 5G mmW NR WWAN + WLAN

1	5G millimeter wave NR + 2.4 GHz SISO WLAN
2	5G millimeter wave NR + 2.4 GHz MIMO/CDD WLAN*
3	5G millimeter wave NR + 5 GHz MIMO WLAN*
4	5G millimeter wave NR + Wi-Fi 6E MIMO WLAN*
5	5G millimeter wave NR + 2.4 GHz SISO WLAN + 5 GHz MIMO WLAN*
6	5G millimeter wave NR + 2.4 GHz SISO WLAN + Wi-Fi 6E MIMO WLAN*
7	5G millimeter wave NR + 2.4 GHz MIMO/CDD WLAN* + 5 GHz MIMO WLAN*
8	5G millimeter wave NR + 2.4 GHz MIMO/CDD WLAN* + Wi-Fi 6E MIMO WLAN*
9	5G millimeter wave NR + 5 GHz MIMO WLAN* + Bluetooth SISO
10	5G millimeter wave NR + Wi-Fi 6E MIMO WLAN* + Bluetooth SISO
11	5G millimeter wave NR + 5 GHz MIMO WLAN* + Thread
12	5G millimeter wave NR + Wi-Fi 6E MIMO WLAN* + Thread

*: For each of the WLAN bands, worst-case SAR out of both WLAN antennas and WLAN MIMO scenarios is used during simultaneous transmission analysis.

The total exposure ratio (TER) is calculated using the equation below, followed by the calculated TER for this EUT:

$$TER = \sum_{n=1}^N \frac{SAR_n}{SAR_{n,limit}} + \sum_{n=1}^N \frac{S_{m,avg}}{S_{m,limit}} < 1$$

Table 6-5: 5G mmW NR Simulation PD Surface Ratio

n258						
Surface	PD Magnitude Ratio		Head	Body ¹		Meas. Total PD (W/m ²)
	PD Measurement Plane 2 mm	SAR Measurement Plane 10 mm	PD Measurement Plane 2 mm (W/m ²)	SAR Measurement Plane 10 mm (W/m ²)	SAR Measurement Plane 0 mm (W/m ²)	
S1	0.605	0.295	4.537	3.158	4.537	0.633
S2	1.000	0.696	-	5.220	7.500	1.428
S3	0.060	0.052	-	0.315	0.454	0.140
S4	0.368	0.196	-	1.928	2.764	-
S5	1.000	0.622	-	5.220	7.500	2.199
S6	-	-	-	-	-	-

¹ Results for Body were calculated using the most conservative ratio between the PD Magnitudes for 2 mm and 10 mm with the following multiplier: PD_{Design Limit}

n260						
Surface	PD Magnitude Ratio		Head	Body ¹		Meas. Total PD (W/m ²)
	PD Measurement Plane 2 mm	SAR Measurement Plane 10 mm	PD Measurement Plane 2 mm (W/m ²)	SAR Measurement Plane 10 mm (W/m ²)	SAR Measurement Plane 0 mm (W/m ²)	
S1	0.587	0.274	4.400	2.565	4.400	0.742
S2	1.000	0.512	-	4.380	7.500	2.466
S3	0.062	0.052	-	0.270	0.468	0.192
S4	0.190	0.132	-	0.833	1.426	-
S5	1.000	0.584	-	4.380	7.500	3.080
S6	-	-	-	-	-	-

¹ Results for Body were calculated using the most conservative ratio between the PD Magnitudes for 2 mm and 10 mm with the following multiplier: PD_{Design Limit}

n261						
Surface	PD Magnitude Ratio		Head	Body ¹		Meas. Total PD (W/m ²)
	PD Measurement Plane 2 mm	SAR Measurement Plane 10 mm	PD Measurement Plane 2 mm (W/m ²)	SAR Measurement Plane 10 mm (W/m ²)	SAR Measurement Plane 0 mm (W/m ²)	
S1	0.518	0.220	3.883	2.513	3.883	0.287
S2	1.000	0.647	-	4.853	7.500	1.116
S3	0.074	0.059	-	0.360	0.558	0.126
S4	0.383	0.218	-	1.860	2.873	-
S5	1.000	0.597	-	4.853	7.500	1.551
S6	-	-	-	-	-	-

¹ Results for Body were calculated using the most conservative ratio between the PD Magnitudes for 2 mm and 10 mm with the following multiplier: PD_{Design Limit}

Table 6-6: TER for WLAN + 5G mmW NR (Head)

n258									
Head TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 2	Wi-Fi 2.4 GHz 802.11g Index 2	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	1+2	1+3	1+4	1+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	4.537	0.247	0.258	0.233	0.238	-	-	-	-
Ratio to Limit	0.454	0.154	0.161	0.146	0.149	0.608	0.615	0.600	0.603

n258									
Head TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 2	Wi-Fi 2.4 GHz 802.11g Index 2	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	4.537	0.247	0.258	0.233	0.238	-	-	-	-
Ratio to Limit	0.454	0.154	0.161	0.146	0.149	0.754	0.757	0.761	0.764

n258									
Head TER	psPD	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	Bluetooth (2.4 GHz) Index 1	802.15.4 Index 1	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	4.537	0.233	0.238	0.142	0.181	-	-	-	-
Ratio to Limit	0.454	0.146	0.149	0.089	0.113	0.689	0.713	0.692	0.716

n260									
Head TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 2	Wi-Fi 2.4 GHz 802.11g Index 2	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	1+2	1+3	1+4	1+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	4.400	0.247	0.258	0.233	0.238	-	-	-	-
Ratio to Limit	0.440	0.154	0.161	0.146	0.149	0.594	0.601	0.586	0.589

n260									
Head TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 2	Wi-Fi 2.4 GHz 802.11g Index 2	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	4.400	0.247	0.258	0.233	0.238	-	-	-	-
Ratio to Limit	0.440	0.154	0.161	0.146	0.149	0.740	0.743	0.747	0.750

n260									
Head TER	psPD	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	Bluetooth (2.4 GHz) Index 1	802.15.4 Index 1	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	4.400	0.233	0.238	0.142	0.181	-	-	-	-
Ratio to Limit	0.440	0.146	0.149	0.089	0.113	0.675	0.699	0.678	0.702

n261									
Head TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 2	Wi-Fi 2.4 GHz 802.11g Index 2	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	1+2	1+3	1+4	1+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	3.883	0.247	0.258	0.233	0.238	-	-	-	-
Ratio to Limit	0.388	0.154	0.161	0.146	0.149	0.542	0.549	0.534	0.537

n261									
Head TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 2	Wi-Fi 2.4 GHz 802.11g Index 2	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	3.883	0.247	0.258	0.233	0.238	-	-	-	-
Ratio to Limit	0.388	0.154	0.161	0.146	0.149	0.688	0.691	0.695	0.698

n261									
Head TER	psPD	Wi-Fi 5 GHz Index 2	Wi-Fi 6E Index 2	Bluetooth (2.4 GHz) Index 1	802.15.4 Index 1	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
TER Combinations	1	2	3	4	5				
Applicable limit	10	1.6	1.6	1.6	1.6	1	1	1	1
Reported Exposure	3.883	0.233	0.238	0.142	0.181	-	-	-	-
Ratio to Limit	0.388	0.146	0.149	0.089	0.113	0.623	0.647	0.626	0.650

Table 6-7: TER for WLAN + 5G mmW NR (Hotspot)

n258							
Hotspot TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	1+2	1+3	1+4
	W/m ²	W/kg	W/kg	W/kg			
Scenario	1	2	3	4			
Applicable limit	10	1.6	1.6	1.6	1	1	1
S1 @ 10 mm	Reported Exposure	3.158	0.155	0.229	0.147	-	-
	Ratio to Limit	0.316	0.097	0.143	0.092	0.413	0.459
S2 @ 10 mm	Reported Exposure	5.220	0.238	0.218	0.318	-	-
	Ratio to Limit	0.522	0.149	0.136	0.199	0.671	0.658
S3 @ 10 mm	Reported Exposure	0.315	0.125	0.151	0.146	-	-
	Ratio to Limit	0.032	0.078	0.094	0.091	0.110	0.126
S4 @ 10 mm	Reported Exposure	1.928	0.209	0.118	0.057	-	-
	Ratio to Limit	0.193	0.130	0.074	0.035	0.323	0.266
S5 @ 10 mm	Reported Exposure	5.220	0.045	0.050	0.093	-	-
	Ratio to Limit	0.522	0.028	0.031	0.058	0.550	0.553
S6 @ 10 mm	Reported Exposure	-	0.045	0.050	0.057	-	-
	Ratio to Limit	-	0.004	0.005	0.006	-	-

n258						
Hotspot TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	1+2+4	1+3+4
	W/m ²	W/kg	W/kg	W/kg		
Scenario	1	2	3	4		
Applicable limit	10	1.6	1.6	1.6	1	1
S1 @ 10 mm	Reported Exposure	3.158	0.155	0.229	0.147	-
	Ratio to Limit	0.316	0.097	0.143	0.092	0.505
S2 @ 10 mm	Reported Exposure	5.220	0.238	0.218	0.318	-
	Ratio to Limit	0.522	0.149	0.136	0.199	0.870
S3 @ 10 mm	Reported Exposure	0.315	0.125	0.151	0.146	-
	Ratio to Limit	0.032	0.078	0.094	0.091	0.201
S4 @ 10 mm	Reported Exposure	1.928	0.209	0.118	0.057	-
	Ratio to Limit	0.193	0.130	0.074	0.035	0.359
S5 @ 10 mm	Reported Exposure	5.220	0.045	0.050	0.093	-
	Ratio to Limit	0.522	0.028	0.031	0.058	0.608
S6 @ 10 mm	Reported Exposure	-	0.045	0.050	0.057	-
	Ratio to Limit	-	0.004	0.005	0.006	-

n258						
Hotspot TER	psPD	Wi-Fi 5 GHz Index 4	Bluetooth (2.4 GHz) Index 2	802.15.4 Index 2	1+2+4	1+2+5
	W/m ²	W/kg	W/kg	W/kg		
Scenario	1	2	4	5		
Applicable limit	10	1.6	1.6	1.6	1	1
S1 @ 10 mm	Reported Exposure	3.158	0.147	0.270	0.070	-
	Ratio to Limit	0.316	0.092	0.169	0.044	0.576
S2 @ 10 mm	Reported Exposure	5.220	0.318	0.275	0.080	-
	Ratio to Limit	0.522	0.199	0.172	0.050	0.893
S3 @ 10 mm	Reported Exposure	0.315	0.146	0.156	0.005	-
	Ratio to Limit	0.032	0.091	0.097	0.003	0.220
S4 @ 10 mm	Reported Exposure	1.928	0.057	0.195	0.127	-
	Ratio to Limit	0.193	0.035	0.122	0.079	0.350
S5 @ 10 mm	Reported Exposure	5.220	0.093	0.054	0.038	-
	Ratio to Limit	0.522	0.058	0.034	0.024	0.614
S6 @ 10 mm	Reported Exposure	-	0.057	0.054	0.005	-
	Ratio to Limit	-	0.006	0.005	0.001	-

n260							
Hotspot TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	1+2	1+3	1+4
	W/m ²	W/kg	W/kg	W/kg			
Scenario	1	2	3	4			
Applicable limit	10	1.6	1.6	1.6	1	1	1
S1 @ 10 mm	Reported Exposure	2.565	0.155	0.229	0.147	-	-
	Ratio to Limit	0.257	0.097	0.143	0.092	0.354	0.400
S2 @ 10 mm	Reported Exposure	4.380	0.238	0.218	0.318	-	-
	Ratio to Limit	0.438	0.149	0.136	0.199	0.587	0.574
S3 @ 10 mm	Reported Exposure	0.270	0.125	0.151	0.146	-	-
	Ratio to Limit	0.027	0.078	0.094	0.091	0.105	0.121
S4 @ 10 mm	Reported Exposure	0.833	0.209	0.118	0.057	-	-
	Ratio to Limit	0.083	0.130	0.074	0.035	0.214	0.157
S5 @ 10 mm	Reported Exposure	4.380	0.045	0.050	0.093	-	-
	Ratio to Limit	0.438	0.028	0.031	0.058	0.466	0.469
S6 @ 10 mm	Reported Exposure	-	0.045	0.050	0.057	-	-
	Ratio to Limit	-	0.004	0.005	0.006	-	-

n260						
Hotspot TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	1+2+4	1+3+4
	W/m ²	W/kg	W/kg	W/kg		
Scenario	1	2	3	4		
Applicable limit	10	1.6	1.6	1.6	1	1
S1 @ 10 mm	Reported Exposure	2.565	0.155	0.229	0.147	-
	Ratio to Limit	0.257	0.097	0.143	0.092	0.446
S2 @ 10 mm	Reported Exposure	4.380	0.238	0.218	0.318	-
	Ratio to Limit	0.438	0.149	0.136	0.199	0.786
S3 @ 10 mm	Reported Exposure	0.270	0.125	0.151	0.146	-
	Ratio to Limit	0.027	0.078	0.094	0.091	0.197
S4 @ 10 mm	Reported Exposure	0.833	0.209	0.118	0.057	-
	Ratio to Limit	0.083	0.130	0.074	0.035	0.249
S5 @ 10 mm	Reported Exposure	4.380	0.045	0.050	0.093	-
	Ratio to Limit	0.438	0.028	0.031	0.058	0.524
S6 @ 10 mm	Reported Exposure	-	0.045	0.050	0.057	-
	Ratio to Limit	-	0.004	0.005	0.006	-

n260						
Hotspot TER	psPD	Wi-Fi 5 GHz Index 4	Bluetooth (2.4 GHz) Index 2	802.15.4 Index 2	1+2+4	1+2+5
	W/m ²	W/kg	W/kg	W/kg		
Scenario	1	2	4	5		
Applicable limit	10	1.6	1.6	1.6	1	1
S1 @ 10 mm	Reported Exposure	2.565	0.147	0.270	0.070	-
	Ratio to Limit	0.257	0.092	0.169	0.044	0.517
S2 @ 10 mm	Reported Exposure	4.380	0.318	0.275	0.080	-
	Ratio to Limit	0.438	0.199	0.172	0.050	0.809
S3 @ 10 mm	Reported Exposure	0.270	0.146	0.156	0.005	-
	Ratio to Limit	0.027	0.091	0.097	0.003	0.215
S4 @ 10 mm	Reported Exposure	0.833	0.057	0.195	0.127	-
	Ratio to Limit	0.083	0.035	0.122	0.079	0.241
S5 @ 10 mm	Reported Exposure	4.380	0.093	0.054	0.038	-
	Ratio to Limit	0.438	0.058	0.034	0.024	0.530
S6 @ 10 mm	Reported Exposure	-	0.057	0.054	0.005	-
	Ratio to Limit	-	0.006	0.005	0.001	-

n261							
Hotspot TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	1+2	1+3	1+4
	W/m ²	W/kg	W/kg	W/kg			
Scenario	1	2	3	4			
Applicable limit	10	1.6	1.6	1.6	1	1	1
S1 @ 10 mm	Reported Exposure	2.513	0.155	0.229	0.147	-	-
	Ratio to Limit	0.251	0.097	0.143	0.092	0.348	0.395
S2 @ 10 mm	Reported Exposure	4.853	0.238	0.218	0.318	-	-
	Ratio to Limit	0.485	0.149	0.136	0.199	0.634	0.622
S3 @ 10 mm	Reported Exposure	0.360	0.125	0.151	0.146	-	-
	Ratio to Limit	0.036	0.078	0.094	0.091	0.114	0.130
S4 @ 10 mm	Reported Exposure	1.860	0.209	0.118	0.057	-	-
	Ratio to Limit	0.186	0.130	0.074	0.035	0.316	0.260
S5 @ 10 mm	Reported Exposure	4.853	0.045	0.050	0.093	-	-
	Ratio to Limit	0.485	0.028	0.031	0.058	0.513	0.517
S6 @ 10 mm	Reported Exposure	-	0.045	0.050	0.057	-	-
	Ratio to Limit	-	0.004	0.005	0.006	-	-

n261						
Hotspot TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	1+2+4	1+3+4
	W/m ²	W/kg	W/kg	W/kg		
Scenario	1	2	3	4		
Applicable limit	10	1.6	1.6	1.6	1	1
S1 @ 10 mm	Reported Exposure	2.513	0.155	0.229	0.147	-
	Ratio to Limit	0.251	0.097	0.143	0.092	0.440
S2 @ 10 mm	Reported Exposure	4.853	0.238	0.218	0.318	-
	Ratio to Limit	0.485	0.149	0.136	0.199	0.833
S3 @ 10 mm	Reported Exposure	0.360	0.125	0.151	0.146	-
	Ratio to Limit	0.036	0.078	0.094	0.091	0.206
S4 @ 10 mm	Reported Exposure	1.860	0.209	0.118	0.057	-
	Ratio to Limit	0.186	0.130	0.074	0.035	0.352
S5 @ 10 mm	Reported Exposure	4.853	0.045	0.050	0.093	-
	Ratio to Limit	0.485	0.028	0.031	0.058	0.571
S6 @ 10 mm	Reported Exposure	-	0.045	0.050	0.057	-
	Ratio to Limit	-	0.004	0.005	0.006	-

n261						
Hotspot TER	psPD	Wi-Fi 5 GHz Index 4	Bluetooth (2.4 GHz) Index 2	802.15.4 Index 2	1+2+4	1+2+5
	W/m ²	W/kg	W/kg	W/kg		
Scenario	1	2	4	5		
Applicable limit	10	1.6	1.6	1.6	1	1
S1 @ 10 mm	Reported Exposure	2.513	0.147	0.270	0.070	-
	Ratio to Limit	0.251	0.092	0.169	0.044	0.512
S2 @ 10 mm	Reported Exposure	4.853	0.318	0.275	0.080	-
	Ratio to Limit	0.485	0.199	0.172	0.050	0.856
S3 @ 10 mm	Reported Exposure	0.360	0.146	0.156	0.005	-
	Ratio to Limit	0.036	0.091	0.097	0.003	0.224
S4 @ 10 mm	Reported Exposure	1.860	0.057	0.195	0.127	-
	Ratio to Limit	0.186	0.035	0.122	0.079	0.344
S5 @ 10 mm	Reported Exposure	4.853	0.093	0.054	0.038	-
	Ratio to Limit	0.485	0.058	0.034	0.024	0.577
S6 @ 10 mm	Reported Exposure	-	0.057	0.054	0.005	-
	Ratio to Limit	-	0.006	0.005	0.001	-

Table 6-8: TER for WLAN + 5G mmW NR (Extremity)

n258									
Extremity TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	1+2	1+3	1+4	1+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	4.537	-	-	0.829	0.259	-	-	-
	Ratio to Limit	0.454	-	-	0.207	0.065	0.454	0.454	0.661
S2 @ 0 mm	Reported Exposure	7.500	-	-	0.330	0.154	-	-	-
	Ratio to Limit	0.750	-	-	0.082	0.038	0.750	0.750	0.832
S3 @ 0 mm	Reported Exposure	0.315	-	-	0.822	0.350	-	-	-
	Ratio to Limit	0.032	-	-	0.206	0.088	0.032	0.032	0.237
S4 @ 0 mm	Reported Exposure	2.764	-	-	0.166	0.045	-	-	-
	Ratio to Limit	0.276	-	-	0.042	0.011	0.276	0.276	0.318
S5 @ 0 mm	Reported Exposure	7.500	-	-	0.513	0.183	-	-	-
	Ratio to Limit	0.750	-	-	0.128	0.046	0.750	0.750	0.878
S6 @ 0 mm	Reported Exposure	-	-	-	0.166	0.045	-	-	-
	Ratio to Limit	-	-	-	0.017	0.005	-	-	-

n258									
Extremity TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	4.537	-	-	0.829	0.259	-	-	-
	Ratio to Limit	0.454	-	-	0.207	0.065	0.661	0.519	0.661
S2 @ 0 mm	Reported Exposure	7.500	-	-	0.330	0.154	-	-	-
	Ratio to Limit	0.750	-	-	0.082	0.038	0.832	0.788	0.832
S3 @ 0 mm	Reported Exposure	0.454	-	-	0.822	0.350	-	-	-
	Ratio to Limit	0.045	-	-	0.206	0.088	0.251	0.133	0.251
S4 @ 0 mm	Reported Exposure	2.764	-	-	0.166	0.045	-	-	-
	Ratio to Limit	0.276	-	-	0.042	0.011	0.318	0.288	0.318
S5 @ 0 mm	Reported Exposure	7.500	-	-	0.513	0.183	-	-	-
	Ratio to Limit	0.750	-	-	0.128	0.046	0.878	0.796	0.878
S6 @ 0 mm	Reported Exposure	-	-	-	0.166	0.045	-	-	-
	Ratio to Limit	-	-	-	0.042	0.011	-	-	-

n258									
Extremity TER	psPD	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	Bluetooth (2.4 GHz) Index 2	802.15.4 Index 2	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	4.537	0.829	0.259	-	-	-	-	-
	Ratio to Limit	0.454	0.207	0.065	-	-	0.661	0.661	0.519
S2 @ 0 mm	Reported Exposure	7.500	0.330	0.154	-	-	-	-	-
	Ratio to Limit	0.750	0.082	0.038	-	-	0.832	0.832	0.788
S3 @ 0 mm	Reported Exposure	0.454	0.822	0.350	-	-	-	-	-
	Ratio to Limit	0.045	0.206	0.088	-	-	0.251	0.251	0.133
S4 @ 0 mm	Reported Exposure	2.764	0.166	0.045	-	-	-	-	-
	Ratio to Limit	0.276	0.042	0.011	-	-	0.318	0.318	0.288
S5 @ 0 mm	Reported Exposure	7.500	0.513	0.183	-	-	-	-	-
	Ratio to Limit	0.750	0.128	0.046	-	-	0.878	0.878	0.796
S6 @ 0 mm	Reported Exposure	-	0.166	0.045	-	-	-	-	-
	Ratio to Limit	-	0.042	0.011	-	-	-	-	-

n260									
Extremity TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	1+2	1+3	1+4	1+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	4.400	-	-	0.829	0.259	-	-	-
	Ratio to Limit	0.440	-	-	0.207	0.065	0.440	0.440	0.647
S2 @ 0 mm	Reported Exposure	7.500	-	-	0.330	0.154	-	-	-
	Ratio to Limit	0.750	-	-	0.082	0.038	0.750	0.750	0.832
S3 @ 0 mm	Reported Exposure	0.468	-	-	0.822	0.350	-	-	-
	Ratio to Limit	0.047	-	-	0.206	0.088	0.047	0.047	0.252
S4 @ 0 mm	Reported Exposure	1.426	-	-	0.166	0.045	-	-	-
	Ratio to Limit	0.143	-	-	0.042	0.011	0.143	0.143	0.184
S5 @ 0 mm	Reported Exposure	4.380	-	-	0.513	0.183	-	-	-
	Ratio to Limit	0.438	-	-	0.128	0.046	0.438	0.438	0.566
S6 @ 0 mm	Reported Exposure	-	-	-	0.166	0.045	-	-	-
	Ratio to Limit	-	-	-	0.017	0.005	-	-	-

n260									
Extremity TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	4.400	-	-	0.829	0.259	-	-	-
	Ratio to Limit	0.440	-	-	0.207	0.065	0.647	0.505	0.647
S2 @ 0 mm	Reported Exposure	7.500	-	-	0.330	0.154	-	-	-
	Ratio to Limit	0.750	-	-	0.082	0.038	0.832	0.788	0.832
S3 @ 0 mm	Reported Exposure	0.468	-	-	0.822	0.350	-	-	-
	Ratio to Limit	0.047	-	-	0.206	0.088	0.252	0.134	0.252
S4 @ 0 mm	Reported Exposure	1.426	-	-	0.166	0.045	-	-	-
	Ratio to Limit	0.143	-	-	0.042	0.011	0.184	0.154	0.184
S5 @ 0 mm	Reported Exposure	7.500	-	-	0.513	0.183	-	-	-
	Ratio to Limit	0.750	-	-	0.128	0.046	0.878	0.796	0.878
S6 @ 0 mm	Reported Exposure	-	-	-	0.166	0.045	-	-	-
	Ratio to Limit	-	-	-	0.042	0.011	-	-	-

n260									
Extremity TER	psPD	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	Bluetooth (2.4 GHz) Index 2	802.15.4 Index 2	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	4.400	0.829	0.259	-	-	-	-	-
	Ratio to Limit	0.440	0.207	0.065	-	-	0.647	0.647	0.505
S2 @ 0 mm	Reported Exposure	7.500	0.330	0.154	-	-	-	-	-
	Ratio to Limit	0.750	0.082	0.038	-	-	0.832	0.832	0.788
S3 @ 0 mm	Reported Exposure	0.468	0.822	0.350	-	-	-	-	-
	Ratio to Limit	0.047	0.206	0.088	-	-	0.252	0.252	0.134
S4 @ 0 mm	Reported Exposure	1.426	0.166	0.045	-	-	-	-	-
	Ratio to Limit	0.143	0.042	0.011	-	-	0.184	0.184	0.154
S5 @ 0 mm	Reported Exposure	7.500	0.513	0.183	-	-	-	-	-
	Ratio to Limit	0.750	0.128	0.046	-	-	0.878	0.878	0.796
S6 @ 0 mm	Reported Exposure	-	0.166	0.045	-	-	-	-	-
	Ratio to Limit	-	0.042	0.011	-	-	-	-	-

n261									
Extremity TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	1+2	1+3	1+4	1+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	3.883	-	-	0.829	0.259	-	-	-
	Ratio to Limit	0.388	-	-	0.207	0.065	0.388	0.388	0.596
S2 @ 0 mm	Reported Exposure	7.500	-	-	0.330	0.154	-	-	-
	Ratio to Limit	0.750	-	-	0.082	0.038	0.750	0.750	0.832
S3 @ 0 mm	Reported Exposure	0.558	-	-	0.822	0.350	-	-	-
	Ratio to Limit	0.056	-	-	0.206	0.088	0.056	0.056	0.261
S4 @ 0 mm	Reported Exposure	2.873	-	-	0.166	0.045	-	-	-
	Ratio to Limit	0.287	-	-	0.042	0.011	0.287	0.287	0.329
S5 @ 0 mm	Reported Exposure	7.500	-	-	0.513	0.183	-	-	-
	Ratio to Limit	0.750	-	-	0.128	0.046	0.750	0.750	0.878
S6 @ 0 mm	Reported Exposure	-	-	-	0.166	0.045	-	-	-
	Ratio to Limit	-	-	-	0.017	0.005	-	-	-

n261									
Extremity TER	psPD	Wi-Fi 2.4 GHz 802.11b Index 4	Wi-Fi 2.4 GHz 802.11g Index 4	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	3.883	-	-	0.829	0.259	-	-	-
	Ratio to Limit	0.388	-	-	0.207	0.065	0.596	0.453	0.596
S2 @ 0 mm	Reported Exposure	7.500	-	-	0.330	0.154	-	-	-
	Ratio to Limit	0.750	-	-	0.082	0.038	0.832	0.788	0.832
S3 @ 0 mm	Reported Exposure	0.558	-	-	0.822	0.350	-	-	-
	Ratio to Limit	0.056	-	-	0.206	0.088	0.261	0.143	0.261
S4 @ 0 mm	Reported Exposure	2.873	-	-	0.166	0.045	-	-	-
	Ratio to Limit	0.287	-	-	0.042	0.011	0.329	0.299	0.329
S5 @ 0 mm	Reported Exposure	7.500	-	-	0.513	0.183	-	-	-
	Ratio to Limit	0.750	-	-	0.128	0.046	0.878	0.796	0.878
S6 @ 0 mm	Reported Exposure	-	-	-	0.166	0.045	-	-	-
	Ratio to Limit	-	-	-	0.042	0.011	-	-	-

n261									
Extremity TER	psPD	Wi-Fi 5 GHz Index 4	Wi-Fi 6E Index 4	Bluetooth (2.4 GHz) Index 2	802.15.4 Index 2	1+2+4	1+2+5	1+3+4	1+3+5
	W/m ²	W/kg	W/kg	W/kg	W/kg				
Scenario	1	2	3	4	5				
Applicable limit	10	4	4	4	4	1	1	1	1
S1 @ 0 mm	Reported Exposure	3.883	0.829	0.259	-	-	-	-	-
	Ratio to Limit	0.388	0.207	0.065	-	-	0.596	0.596	0.453
S2 @ 0 mm	Reported Exposure	7.500	0.330	0.154	-	-	-	-	-
	Ratio to Limit	0.750	0.082	0.038	-	-	0.832	0.832	0.788
S3 @ 0 mm	Reported Exposure	0.558	0.822	0.350	-	-	-	-	-
	Ratio to Limit	0.056	0.206	0.088	-	-	0.261	0.261	0.143
S4 @ 0 mm	Reported Exposure	2.873	0.166	0.045	-	-	-	-	-
	Ratio to Limit	0.287	0.042	0.011	-	-	0.329	0.329	0.299
S5 @ 0 mm	Reported Exposure	7.500	0.513	0.183	-	-	-	-	-
	Ratio to Limit	0.750	0.128	0.046	-	-	0.878	0.878	0.796
S6 @ 0 mm	Reported Exposure	-	0.166	0.045	-	-	-	-	-
	Ratio to Limit	-	0.042	0.011	-	-	-	-	-

7. Conclusions

Table 7-1 shows the worst-case 1-g/10-g SAR at P_{limit} and worst-case 4cm²-avg PD at P_{limit} .

Table 7-1: Reported RF exposure level

Reported RF Exposure Level(s)		Notes
Highest 1-g SAR at P_{limit} (W/kg)	0.984	Refer to §1 for the reference SAR Report
Highest 10-g SAR at P_{limit} (W/kg)	2.469	Refer to §1 for the reference SAR Report
Highest 4cm ² -avg PD at P_{limit} (W/m ²)	7.500	§6.2
Highest 1-g SAR (W/kg) for simultaneous Tx (Sub-6 WWAN + WLAN)	1.594	Refer to §1 for the reference SAR Report
Highest 10-g SAR (W/kg) for simultaneous Tx (Sub-6 WWAN + WLAN)	2.288	Refer to §1 for the reference SAR Report
Highest Total Exposure Ratio for simultaneous Tx (5G mmW NR + WLAN 1-g)	0.893	§6.3
Highest Total Exposure Ratio for simultaneous Tx (5G mmW NR + WLAN 10-g)	0.878	§6.3

Samsung's S.LSI TAS feature employed in the EUT meets the $SAR_{Design\ Target}$ and $PD_{Design\ Target}$ (within the design uncertainties) when operating in the static transmission condition at P_{limit} and is compliant with the FCC RF exposure limits.

Appendices

- A. mmW Probe Certificate
- B. Verification Source Certificate
- C. Setup Photos