



**Calibration Laboratory of  
 Schmid & Partner  
 Engineering AG**  
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Accreditation No.: **SCS 0108**

Client **TÜV SÜD**  
 Fareham, United Kingdom

Certificate No. **EX-7809\_May23**

**CALIBRATION CERTIFICATE**

Object **EX3DV4 - SN:7809**

Calibration procedure(s) **QA CAL-01.v10, QA CAL-12.v10, QA CAL-14.v7, QA CAL-23.v6,  
 QA CAL-25.v8  
 Calibration procedure for dosimetric E-field probes**

Calibration date **May 03, 2023**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.  
 All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3) °C and humidity < 70%.  
 Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
OCP DAK-3.5 (weighted)	SN: 1249	20-Oct-22 (OCP-DAK3.5-1249_Oct22)	Oct-23
OCP DAK-12	SN: 1016	20-Oct-22 (OCP-DAK12-1016_Oct22)	Oct-23
Reference 20 dB Attenuator	SN: CC2552 (20x)	30-Mar-23 (No. 217-03809)	Mar-24
DAE4	SN: 660	16-Mar-23 (No. DAE4-660_Mar23)	Mar-24
Reference Probe ES3DV2	SN: 3013	06-Jan-23 (No. ES3-3013_Jan23)	Jan-24

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
Power sensor E4412A	SN: MY41498097	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-22)	In house check: Jun-24
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

Calibrated by	Name <b>Aidonia Georgiadou</b>	Function <b>Laboratory Technician</b>	Signature 
Approved by	Name <b>Sven Kühn</b>	Function <b>Technical Manager</b>	Signature 

Issued: May 03, 2023

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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### Glossary

TSL	tissue simulating liquid
NORM <sub>x,y,z</sub>	sensitivity in free space
ConvF	sensitivity in TSL / NORM <sub>x,y,z</sub>
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization $\varphi$	$\varphi$ rotation around probe axis
Polarization $\theta$	$\theta$ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

### Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices – Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

### Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\theta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub> = NORM<sub>x,y,z</sub> \* frequency\_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>; A, B, C, D** are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).



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**Parameters of Probe: EX3DV4 - SN:7809**

**Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k = 2)
Norm ( $\mu V/(V/m)^2$ ) <sup>A</sup>	0.66	0.71	0.67	±10.1%
DCP (mV) <sup>B</sup>	104.0	103.0	104.0	±4.7%

**Calibration Results for Modulation Response**

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Max dev.	Max Unc <sup>E</sup> k = 2
0	CW	X	0.00	0.00	1.00	0.00	131.0	±2.9%	±4.7%
		Y	0.00	0.00	1.00		133.3		
		Z	0.00	0.00	1.00		131.9		
10352	Pulse Waveform (200Hz, 10%)	X	-1.36	60.00	5.96	10.00	60.0	±3.0%	±9.6%
		Y	-1.60	61.03	6.53		60.0		
		Z	-1.36	60.00	6.01		60.0		
10353	Pulse Waveform (200Hz, 20%)	X	0.83	60.00	4.66	6.99	80.0	±3.2%	±9.6%
		Y	0.84	60.00	5.02		80.0		
		Z	0.83	60.00	4.87		80.0		
10354	Pulse Waveform (200Hz, 40%)	X	0.01	27.66	0.11	3.98	95.0	±2.7%	±9.6%
		Y	0.47	60.00	3.95		95.0		
		Z	0.05	31.99	0.02		95.0		
10355	Pulse Waveform (200Hz, 60%)	X	4.14	159.99	3.87	2.22	120.0	±1.5%	±9.6%
		Y	0.32	60.00	3.21		120.0		
		Z	5.48	159.97	11.62		120.0		
10387	QPSK Waveform, 1 MHz	X	0.50	63.91	12.59	1.00	150.0	±3.5%	±9.6%
		Y	0.67	66.01	15.32		150.0		
		Z	0.48	63.21	11.96		150.0		
10388	QPSK Waveform, 10 MHz	X	1.32	66.36	14.15	0.00	150.0	±0.9%	±9.6%
		Y	1.53	68.70	15.44		150.0		
		Z	1.27	65.78	13.79		150.0		
10396	64-QAM Waveform, 100 kHz	X	1.66	64.51	15.95	3.01	150.0	±1.1%	±9.6%
		Y	1.84	66.07	16.64		150.0		
		Z	1.67	64.66	15.96		150.0		
10399	64-QAM Waveform, 40 MHz	X	2.77	66.29	15.14	0.00	150.0	±1.9%	±9.6%
		Y	2.89	67.16	15.65		150.0		
		Z	2.74	66.10	14.99		150.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.86	66.51	15.53	0.00	150.0	±3.3%	±9.6%
		Y	3.81	65.54	15.56		150.0		
		Z	3.84	66.37	15.43		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>A</sup> The uncertainties of Norm X, Y, Z do not affect the E<sub>RF</sub> etc. uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Linearization parameter uncertainty for maximum specified field strength.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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**Parameters of Probe: EX3DV4 - SN:7809**

**Sensor Model Parameters**

	C1 1F	C2 1F	$\alpha$ V <sup>-1</sup>	T1 msV <sup>-2</sup>	T2 msV <sup>-1</sup>	T3 ms	T4 V <sup>-2</sup>	T5 V <sup>-1</sup>	T6
x	9.4	67.60	33.41	3.60	0.00	4.90	0.41	0.02	1.00
y	8.6	62.63	32.87	5.10	0.00	4.90	0.71	0.00	1.00
z	9.5	66.56	33.23	4.33	0.00	4.93	0.52	0.01	1.00

**Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle	R3.8°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an Area Scan job



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**Parameters of Probe: EX3DV4 - SN:7809**

**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) <sup>C</sup>	Relative Permittivity <sup>F</sup>	Conductivity <sup>F</sup> (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unc (k = 2)
128	52.5	0.76	12.88	12.88	12.88	0.00	1.25	±13.3%
450	43.5	0.87	11.04	11.04	11.04	0.16	1.30	±13.3%
750	41.9	0.89	9.50	9.61	9.18	0.36	1.27	±12.0%
835	41.5	0.90	9.34	9.35	9.18	0.36	1.27	±12.0%
900	41.5	0.97	9.41	9.53	9.29	0.36	1.27	±12.0%
1300	40.8	1.14	8.26	8.18	8.09	0.48	1.27	±12.0%
1450	40.5	1.20	8.10	8.01	7.88	0.46	1.27	±12.0%
1640	40.2	1.31	8.05	8.02	7.78	0.43	1.27	±12.0%
1750	40.1	1.37	8.53	8.47	8.26	0.20	1.27	±12.0%
1810	40.0	1.40	8.30	8.26	8.12	0.29	1.27	±12.0%
1900	40.0	1.40	8.17	8.11	7.99	0.29	1.27	±12.0%
2000	40.0	1.40	7.90	7.85	7.74	0.28	1.27	±12.0%
2100	39.8	1.49	7.81	7.77	7.63	0.29	1.27	±12.0%
2300	39.5	1.67	7.53	7.48	7.38	0.30	1.27	±12.0%
2450	39.2	1.80	7.22	7.17	7.09	0.29	1.27	±12.0%
2500	39.0	1.93	7.33	7.29	7.20	0.27	1.27	±12.0%
3300	38.2	2.71	6.99	7.03	6.87	0.33	1.27	±14.0%
3500	37.9	2.91	6.85	6.88	6.73	0.34	1.27	±14.0%
3700	37.7	3.12	6.74	6.76	6.63	0.34	1.27	±14.0%
4100	37.2	3.53	6.57	6.57	6.48	0.35	1.27	±14.0%
5200	36.0	4.66	5.53	5.48	5.43	0.34	1.00	±14.0%
5300	35.9	4.75	5.27	5.27	5.27	0.36	1.55	±14.0%
5500	35.6	4.96	4.84	4.82	4.84	0.39	1.51	±14.0%
5600	35.5	5.07	4.75	4.71	4.62	0.39	1.57	±14.0%
5800	35.3	5.27	4.83	4.79	4.71	0.38	1.78	±14.0%

<sup>C</sup> Frequency validity above 300 MHz of ±100 MHz only applies for DAS-V4.4 and higher (see Page 2); else it is restricted to ±50 MHz. The uncertainty is the RSD of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±0, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 5 MHz is 4–9 MHz, and ConvF assessed at 13 MHz is 9–19 MHz. Above 5 GHz frequency validity can be extended to ±110 MHz.

<sup>F</sup> The probes are calibrated using tissue simulating liquids (TSL) that deviate for  $\epsilon'$  and  $\sigma$  by less than ±5% from the target values (typically between ±3%) and are valid for TSL with deviations of up to ±10%. If TSL with deviations from the target of less than ±5% are used, the calibration uncertainties are ±1.1% for 0.7–3 GHz and 13.1% for 3–6 GHz.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warns that the remaining deviation due to the boundary effect after compensation is always less than 11% for frequencies below 3 GHz and below ±2% for frequencies between 3–6 GHz at any distance larger than half the probe diameter from the boundary.



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**Parameters of Probe: EX3DV4 - SN:7809**

**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) <sup>G</sup>	Relative Permittivity <sup>F</sup>	Conductivity <sup>F</sup> (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unc (k = 2)
8500	34.5	6.07	5.11	5.07	5.03	0.20	2.00	±18.8%

<sup>G</sup> Frequency validity at 6.5 GHz is  $-600 \pm 700$  MHz, and  $\pm 700$  MHz at or above 7 GHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

<sup>F</sup> The probes are calibrated using tissue simulating media (TSM) that deviate for  $\epsilon$  and  $\sigma$  by less than  $\pm 10\%$  from the target values (typically better than  $\pm 6\%$ ) and are valid for TSM with deviations of up to  $\pm 10\%$ .

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than  $\pm 1\%$  for frequencies below 3 GHz; below  $\pm 2\%$  for frequencies between 3–6 GHz; and below  $\pm 4\%$  for frequencies between 6–10 GHz at any distance larger than half the probe tip diameter from the boundary.

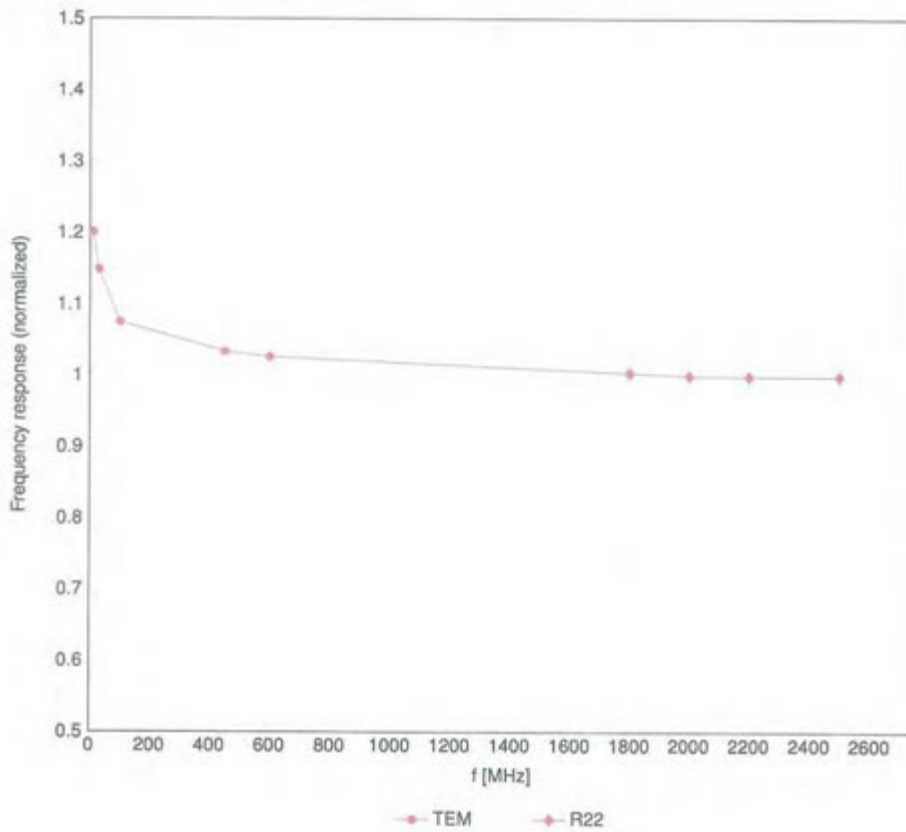




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### Frequency Response of E-Field (TEM-Cell:if110 EXX, Waveguide:R22)

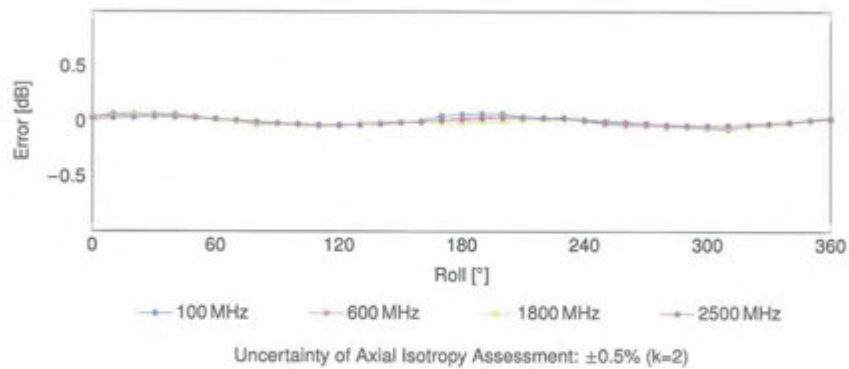
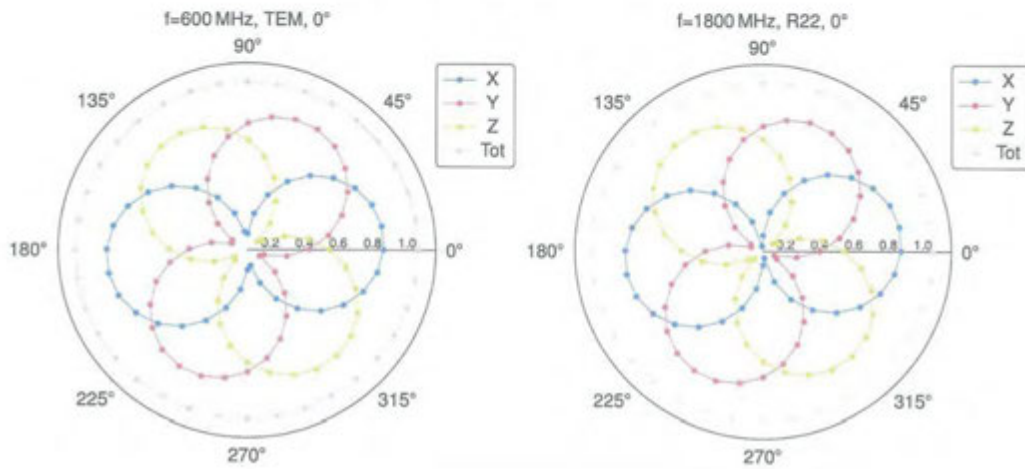


Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

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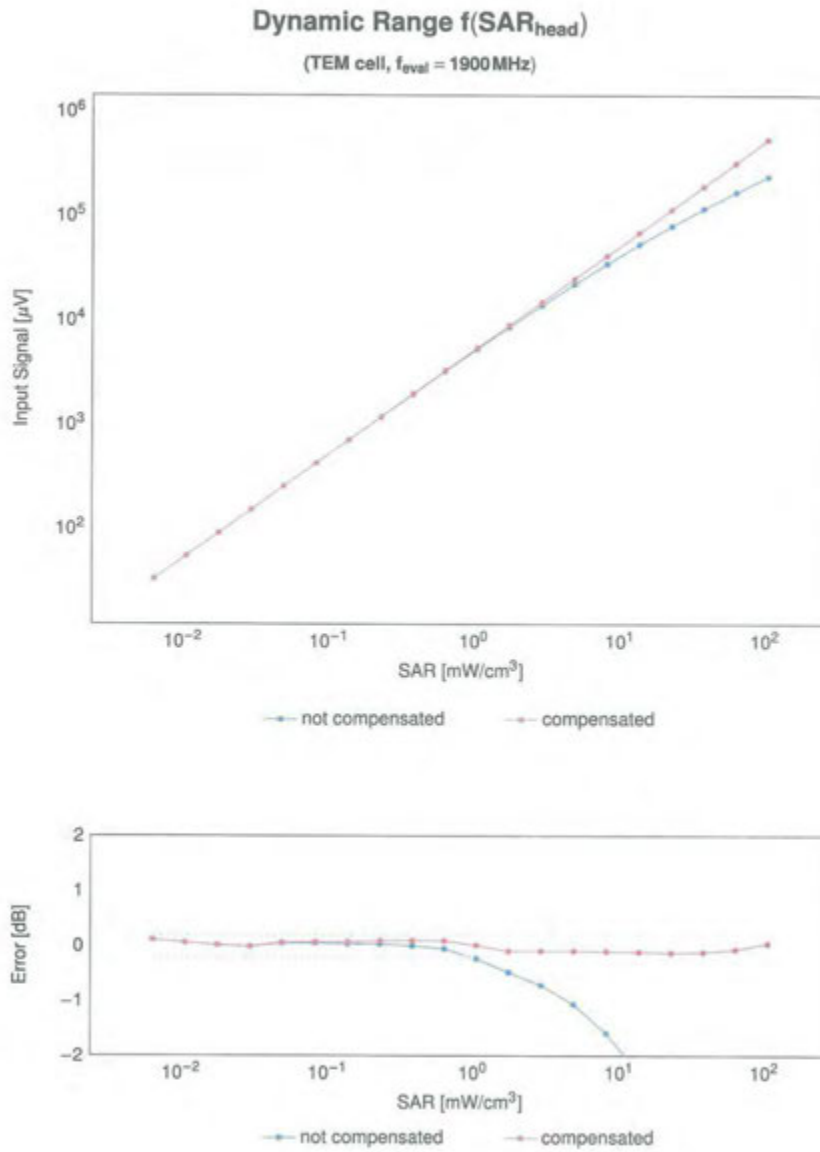
### Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$





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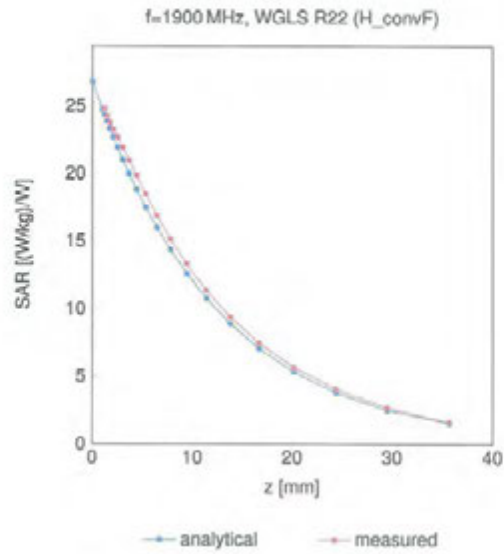


Uncertainty of Linearity Assessment:  $\pm 0.6\%$  (k=2)

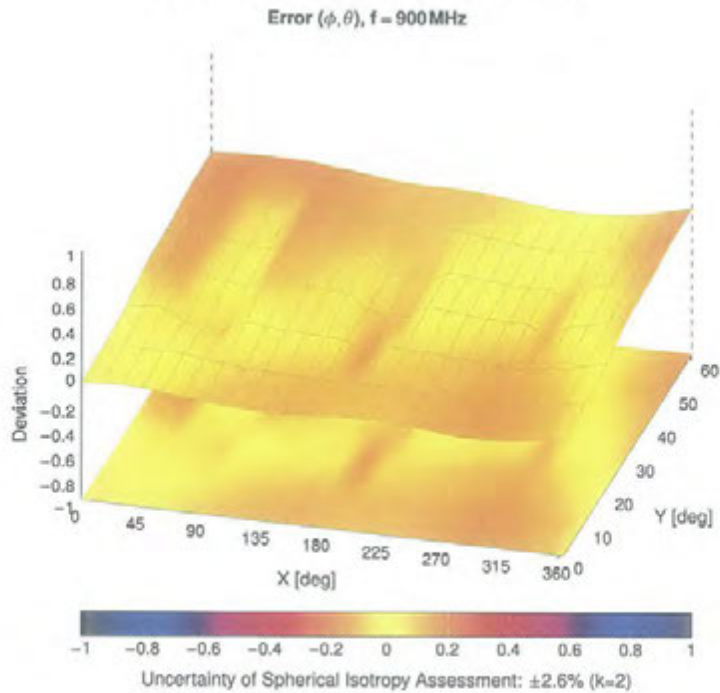
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### Conversion Factor Assessment



### Deviation from Isotropy in Liquid





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**Appendix: Modulation Calibration Parameters**

UID	Rev	Communication System Name	Group	PAR [dB]	Unc <sup>2</sup> k - 2
0		CW	CW	3.00	±4.7
10010	CAB	SAR Validation (Square, 100 ms, 10ms)	Test	10.00	±9.6
10011	CAC	UMTS FDD (WCDMA)	WCDMA	2.91	±9.6
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1Mbps)	WLAN	1.87	±9.6
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6Mbps)	WLAN	3.48	±9.6
10017	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	±9.6
10023	DAC	GPRS-FDD (TDMA, GMSK, TN C)	GSM	9.57	±9.6
10024	DAC	GPRS-FDD (TDMA, GMSK, TN C-1)	GSM	6.56	±9.6
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN C)	GSM	12.82	±9.6
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN C-1)	GSM	3.55	±9.6
10027	DAC	GPRS-FDD (TDMA, GMSK, TN C-1-2)	GSM	4.80	±9.6
10028	CAC	GPRS-FDD (TDMA, GMSK, TN C-1-2-3)	GSM	3.55	±9.6
10029	CAC	EDGE-FDD (TDMA, 8PSK, TN C-1-2)	GSM	7.78	±9.6
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, D-1)	Bluetooth	5.30	±9.6
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, D-3)	Bluetooth	1.87	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, D-5)	Bluetooth	1.18	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PI4-DQPSK, D-1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PI4-DQPSK, D-3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PI4-DQPSK, D-5)	Bluetooth	3.93	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (B-DPSK, D-1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (B-DPSK, D-3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (B-DPSK, D-5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAR	IS-54 / IS-136 FDD (TDMA-FDM, 8K DQPSK, Fullrate)	AMPS	7.78	±9.6
10044	CAA	IS-54 / IS-136 FDD (FDMA, FM)	AMPS	3.00	±9.6
10048	CAA	DECT (TDD, TDMA-FDM, GFSK, Full Slot 24)	DECT	13.80	±9.6
10049	CAA	DECT (TDD, TDMA-FDM, GFSK, Double Slot 12)	DECT	10.79	±9.6
10056	CAA	UMTS-TDD (TD-SCDMA, 28Mbps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN C-1-2-3)	GSM	9.52	±9.6
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11Mbps)	WLAN	3.60	±9.6
10062	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 6Mbps)	WLAN	8.68	±9.6
10063	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 9Mbps)	WLAN	8.65	±9.6
10064	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 12Mbps)	WLAN	9.00	±9.6
10065	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 18Mbps)	WLAN	9.00	±9.6
10066	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 24Mbps)	WLAN	10.38	±9.6
10067	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 36Mbps)	WLAN	10.12	±9.6
10068	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 48Mbps)	WLAN	10.24	±9.6
10069	CAD	IEEE 802.11a WiFi 5 GHz (OFDM, 54Mbps)	WLAN	10.55	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12Mbps)	WLAN	9.52	±9.6
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18Mbps)	WLAN	9.94	±9.6
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24Mbps)	WLAN	10.30	±9.6
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36Mbps)	WLAN	10.77	±9.6
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48Mbps)	WLAN	10.94	±9.6
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54Mbps)	WLAN	11.00	±9.6
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	±9.6
10082	CAR	IS-54 / IS-136 FDD (TDMA-FDM, PI4-DQPSK, Fullrate)	AMPS	4.77	±9.6
10093	DAC	GPRS-FDD (TDMA, GMSK, TN C-4)	GSM	6.56	±9.6
10097	CAC	UMTS-FDD (HSPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSPA, Subtest 2)	WCDMA	3.98	±9.6
10099	CAC	EDGE-FDD (TDMA, 8PSK, TN C-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20MHz, QPSK)	LTE-TDD	9.29	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20MHz, 16-QAM)	LTE-TDD	9.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10106	CAH	LTE-FDD (SC-FDMA, 100% RB, 10MHz, QPSK)	LTE-FDD	5.60	±9.6
10109	CAH	LTE-FDD (SC-FDMA, 100% RB, 10MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10110	CAH	LTE-FDD (SC-FDMA, 100% RB, 5MHz, QPSK)	LTE-FDD	5.75	±9.6
10111	CAF	LTE-FDD (SC-FDMA, 100% RB, 5MHz, 16-QAM)	LTE-FDD	6.44	±9.6



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10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10113	CAH	LTE-FDD (SC-FDMA, 100% RB, 5MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10114	CAD	IEEE 802.11n (HT Greenfield, 13.5Mbps, BPSK)	WLAN	8.13	±9.6
10115	CAD	IEEE 802.11n (HT Greenfield, 81Mbps, 16-QAM)	WLAN	8.46	±9.6
10116	CAD	IEEE 802.11n (HT Mixed, 135Mbps, 64-QAM)	WLAN	8.15	±9.6
10117	CAD	IEEE 802.11n (HT Mixed, 13.5Mbps, BPSK)	WLAN	8.07	±9.6
10118	CAD	IEEE 802.11n (HT Mixed, 81Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAD	IEEE 802.11n (HT Mixed, 135Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 3MHz, QPSK)	LTE-FDD	5.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 3MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 3MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20MHz, 64-QAM)	LTE-FDD	6.69	±9.6
10151	CAH	LTE-FDD (SC-FDMA, 50% RB, 20MHz, QPSK)	LTE-FDD	9.25	±9.6
10152	CAH	LTE-FDD (SC-FDMA, 50% RB, 20MHz, 16-QAM)	LTE-FDD	9.92	±9.6
10153	CAH	LTE-FDD (SC-FDMA, 50% RB, 20MHz, 64-QAM)	LTE-FDD	10.05	±9.6
10154	CAH	LTE-FDD (SC-FDMA, 50% RB, 10MHz, QPSK)	LTE-FDD	5.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10MHz, 16-QAM)	LTE-FDD	6.40	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5MHz, QPSK)	LTE-FDD	5.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 5MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAH	LTE-FDD (SC-FDMA, 50% RB, 10MHz, 64-QAM)	LTE-FDD	6.67	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15MHz, QPSK)	LTE-FDD	5.82	±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4MHz, QPSK)	LTE-FDD	5.45	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAF	LTE-FDD (SC-FDMA, 1 RB, 20MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20MHz, QPSK)	LTE-FDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 16-QAM)	LTE-FDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 64-QAM)	LTE-FDD	10.25	±9.6
10175	CAH	LTE-FDD (SC-FDMA, 1 RB, 10MHz, QPSK)	LTE-FDD	5.72	±9.6
10176	CAH	LTE-FDD (SC-FDMA, 1 RB, 10MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10177	CAH	LTE-FDD (SC-FDMA, 1 RB, 5MHz, QPSK)	LTE-FDD	5.79	±9.6
10178	CAH	LTE-FDD (SC-FDMA, 1 RB, 5MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	CAH	LTE-FDD (SC-FDMA, 1 RB, 10MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10180	CAH	LTE-FDD (SC-FDMA, 1 RB, 5MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10181	CAF	LTE-FDD (SC-FDMA, 1 RB, 15MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	CAF	LTE-FDD (SC-FDMA, 1 RB, 15MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10183	AAE	LTE-FDD (SC-FDMA, 1 RB, 15MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3MHz, QPSK)	LTE-FDD	5.79	±9.6
10185	CAF	LTE-FDD (SC-FDMA, 1 RB, 3MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4MHz, QPSK)	LTE-FDD	5.73	±9.6
10198	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10193	AAE	LTE-FDD (SC-FDMA, 1 RB, 1.4MHz, 64-QAM)	LTE-FDD	5.53	±9.6
10199	CAD	IEEE 802.11n (HT Greenfield, 6.5Mbps, BPSK)	WLAN	8.39	±9.6
10194	CAD	IEEE 802.11n (HT Greenfield, 39Mbps, 16-QAM)	WLAN	8.12	±9.6
10195	CAD	IEEE 802.11n (HT Greenfield, 65Mbps, 64-QAM)	WLAN	8.21	±9.6
10198	CAD	IEEE 802.11n (HT Mixed, 6.5Mbps, BPSK)	WLAN	5.10	±9.6
10197	CAD	IEEE 802.11n (HT Mixed, 39Mbps, 16-QAM)	WLAN	8.13	±9.6
10199	CAD	IEEE 802.11n (HT Mixed, 65Mbps, 64-QAM)	WLAN	5.27	±9.6
10219	CAD	IEEE 802.11n (HT Mixed, 7.8Mbps, BPSK)	WLAN	8.03	±9.6
10220	CAD	IEEE 802.11n (HT Mixed, 49.3Mbps, 16-QAM)	WLAN	8.13	±9.6
10221	CAD	IEEE 802.11n (HT Mixed, 78.2Mbps, 64-QAM)	WLAN	8.27	±9.6
10222	CAD	IEEE 802.11n (HT Mixed, 15Mbps, BPSK)	WLAN	8.36	±9.6
10223	CAD	IEEE 802.11n (HT Mixed, 90Mbps, 16-QAM)	WLAN	8.48	±9.6
10224	CAD	IEEE 802.11n (HT Mixed, 150Mbps, 64-QAM)	WLAN	8.08	±9.6



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10225	CAC	UMTS-FDD (HSPA+)	WCDMA	5.97	-9.6
10226	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 16-QAM)	LTE-TDD	8.19	-9.6
10227	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 64-QAM)	LTE-TDD	10.26	-9.6
10228	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, QPSK)	LTE-TDD	8.22	-9.6
10229	CAE	LTE-TDD (SC-FDMA, 1 RB, 3MHz, 16-QAM)	LTE-TDD	5.48	-9.6
10230	CAG	LTE-TDD (SC-FDMA, 1 RB, 3MHz, 64-QAM)	LTE-TDD	10.25	-9.6
10231	CAE	LTE-TDD (SC-FDMA, 1 RB, 3MHz, QPSK)	LTE-TDD	9.15	-9.6
10232	CAH	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 16-QAM)	LTE-TDD	9.48	-9.6
10233	CAH	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 64-QAM)	LTE-TDD	10.25	-9.6
10234	CAH	LTE-TDD (SC-FDMA, 1 RB, 5MHz, QPSK)	LTE-TDD	9.21	-9.6
10235	CAH	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 16-QAM)	LTE-TDD	3.48	-9.6
10236	CAH	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 64-QAM)	LTE-TDD	10.25	-9.6
10237	CAH	LTE-TDD (SC-FDMA, 1 RB, 10MHz, QPSK)	LTE-TDD	9.21	-9.6
10238	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.5MHz, 16-QAM)	LTE-TDD	9.48	-9.6
10239	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.5MHz, 64-QAM)	LTE-TDD	10.25	-9.6
10240	CAG	LTE-TDD (SC-FDMA, 1 RB, 1.5MHz, QPSK)	LTE-TDD	9.21	-9.6
10241	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, 16-QAM)	LTE-TDD	9.89	-9.6
10242	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, 64-QAM)	LTE-TDD	9.95	-9.6
10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, QPSK)	LTE-TDD	9.48	-9.6
10244	CAE	LTE-TDD (SC-FDMA, 50% RB, 3MHz, 16-QAM)	LTE-TDD	10.26	-9.6
10245	CAE	LTE-TDD (SC-FDMA, 50% RB, 3MHz, 64-QAM)	LTE-TDD	10.26	-9.6
10246	CAE	LTE-TDD (SC-FDMA, 50% RB, 3MHz, QPSK)	LTE-TDD	9.30	-9.6
10247	CAH	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 16-QAM)	LTE-TDD	9.91	-9.6
10248	CAH	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 64-QAM)	LTE-TDD	11.39	-9.6
10249	CAH	LTE-TDD (SC-FDMA, 50% RB, 5MHz, QPSK)	LTE-TDD	9.29	-9.6
10250	CAH	LTE-TDD (SC-FDMA, 50% RB, 10MHz, 16-QAM)	LTE-TDD	9.91	-9.6
10251	CAH	LTE-TDD (SC-FDMA, 50% RB, 10MHz, 64-QAM)	LTE-TDD	10.17	-9.6
10252	CAH	LTE-TDD (SC-FDMA, 50% RB, 10MHz, QPSK)	LTE-TDD	9.24	-9.6
10253	CAG	LTE-TDD (SC-FDMA, 50% RB, 15MHz, 16-QAM)	LTE-TDD	9.30	-9.6
10254	CAG	LTE-TDD (SC-FDMA, 50% RB, 15MHz, 64-QAM)	LTE-TDD	10.14	-9.6
10255	CAG	LTE-TDD (SC-FDMA, 50% RB, 15MHz, QPSK)	LTE-TDD	9.20	-9.6
10256	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, 16-QAM)	LTE-TDD	9.90	-9.6
10257	CAG	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, 64-QAM)	LTE-TDD	10.38	-9.6
10258	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, QPSK)	LTE-TDD	9.34	-9.6
10259	CAE	LTE-TDD (SC-FDMA, 100% RB, 3MHz, 16-QAM)	LTE-TDD	9.99	-9.6
10260	CAE	LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM)	LTE-TDD	9.97	-9.6
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3MHz, QPSK)	LTE-TDD	9.24	-9.6
10262	CAH	LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM)	LTE-TDD	9.53	-9.6
10263	CAH	LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM)	LTE-TDD	10.16	-9.6
10264	CAH	LTE-TDD (SC-FDMA, 100% RB, 5MHz, QPSK)	LTE-TDD	9.23	-9.6
10265	CAH	LTE-TDD (SC-FDMA, 100% RB, 10MHz, 16-QAM)	LTE-TDD	9.92	-9.6
10266	CAH	LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM)	LTE-TDD	10.07	-9.6
10267	CAH	LTE-TDD (SC-FDMA, 100% RB, 10MHz, QPSK)	LTE-TDD	9.30	-9.6
10268	CAG	LTE-TDD (SC-FDMA, 100% RB, 15MHz, 16-QAM)	LTE-TDD	10.06	-9.6
10269	CAG	LTE-TDD (SC-FDMA, 100% RB, 15MHz, 64-QAM)	LTE-TDD	10.13	-9.6
10270	CAG	LTE-TDD (SC-FDMA, 100% RB, 15MHz, QPSK)	LTE-TDD	9.58	-9.6
10274	CAC	UMTS-FDD (HSPA+ Subcat 5, SGPP R8-13)	WCDMA	4.87	-9.6
10275	CAC	UMTS-FDD (HSPA+ Subcat 5, SGPP R8-14)	WCDMA	3.96	-9.6
10277	CAA	PHS (QPSK)	PHS	11.81	-9.6
10278	CAA	PHS (QPSK, BW 884 MHz, Rate 0.5)	PHS	11.81	-9.6
10279	CAA	PHS (QPSK, BW 884 MHz, Rate 0.58)	PHS	12.13	-9.6
10280	AAB	CDMA2000, RC1, SOSS, Full Rate	CDMA2000	3.91	-9.6
10281	AAB	CDMA2000, RC3, SOSS, Full Rate	CDMA2000	3.46	-9.6
10282	AAB	CDMA2000, RC3, SOSS, Full Rate	CDMA2000	3.39	-9.6
10283	AAB	CDMA2000, RC1, SOSS, Full Rate	CDMA2000	3.60	-9.6
10285	AAB	CDMA2000, RC1, SOSS, Full Rate	CDMA2000	2.49	-9.6
10287	AAE	LTE-FDD (SC-FDMA, 50% RB, 20MHz, QPSK)	LTE-FDD	5.61	-9.6
10288	AAE	LTE-FDD (SC-FDMA, 50% RB, 3MHz, QPSK)	LTE-FDD	5.72	-9.6
10289	AAE	LTE-FDD (SC-FDMA, 50% RB, 3MHz, 16-QAM)	LTE-FDD	6.39	-9.6
10330	AAE	LTE-FDD (SC-FDMA, 50% RB, 3MHz, 64-QAM)	LTE-FDD	6.60	-9.6
10301	AAA	IEEE 802.11e WiMAX (25.18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	-9.6
10332	AAA	IEEE 802.11e WiMAX (25.18, 5ms, 10MHz, QPSK, PUSC, 3 CTRF symbols)	WiMAX	12.57	-9.6
10303	AAA	IEEE 802.11e WiMAX (31.15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	-9.6
10304	AAA	IEEE 802.11e WiMAX (25.18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	-9.6
10305	AAA	IEEE 802.11e WiMAX (31.15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WiMAX	15.24	-9.6
10306	AAA	IEEE 802.11e WiMAX (25.18, 10ms, 10MHz, 64QAM, PUSC, 13 symbols)	WiMAX	14.67	-9.6



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10307	AAA	IEEE 802.11e WMAX (29.18, 13ms, 10MHz, QPSK, PUSC, 18 symbols)	WLAN	14.48	±9.6
10308	AAA	IEEE 802.11e WMAX (29.18, 13ms, 10MHz, 16QAM, PUSC)	WLAN	14.46	±9.6
10309	AAA	IEEE 802.11e WMAX (29.18, 13ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	WLAN	14.58	±9.6
10310	AAA	IEEE 802.11e WMAX (29.18, 13ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	WLAN	14.57	±9.6
10311	AAE	LTE-FDD (SC-FDMA, 1RB, 1.4MHz, QPSK)	LTE-FDD	6.06	±9.6
10313	AAA	iDEN 1.3	iDEN	10.51	±9.6
10314	AAA	iDEN 1.6	iDEN	13.48	±9.6
10315	AAB	IEEE 802.11a WiFi (2.4GHz, DSSS, 1Mbps, 99pc duty cycle)	WLAN	1.71	±9.6
10316	AAB	IEEE 802.11g WiFi (2.4GHz, ERP-OFDM, 6Mbps, 99pc duty cycle)	WLAN	8.36	±9.6
10317	AAC	IEEE 802.11a WiFi (2.4GHz, OFDM, 6Mbps, 99pc duty cycle)	WLAN	3.36	±9.6
10352	AAA	Pulse Wavelform (200Hz, 10%)	Generic	10.09	±9.6
10353	AAA	Pulse Wavelform (200Hz, 20%)	Generic	6.99	±9.6
10354	AAA	Pulse Wavelform (200Hz, 40%)	Generic	3.38	±9.6
10355	AAA	Pulse Wavelform (200Hz, 60%)	Generic	2.22	±9.6
10356	AAA	Pulse Wavelform (200Hz, 80%)	Generic	0.97	±9.6
10387	AAA	QPSK Wavelform, 1 MHz	Generic	5.10	±9.6
10388	AAA	QPSK Wavelform, 10 MHz	Generic	5.22	±9.6
10356	AAA	64-QAM Wavelform, 100 MHz	Generic	6.27	±9.6
10399	AAA	64-QAM Wavelform, 40 MHz	Generic	5.27	±9.6
10400	AAE	IEEE 802.11a WiFi (2.4GHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	±9.6
10401	AAE	IEEE 802.11a WiFi (2.4GHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	±9.6
10402	AAE	IEEE 802.11a WiFi (2.4GHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	±9.6
10403	AAB	CDMA2000 (1xEV-DO, Rev. E)	CDMA2000	5.76	±9.6
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	±9.6
10408	AAB	CDMA2000, FCC, SC02, SCH0, Full Rate	CDMA2000	5.22	±9.6
10410	AAH	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, QPSK, UL Subframe=2,3,4,7,8,9; Subframe=0,1,5,6)	LTE-TDD	7.82	±9.6
10414	AAA	WLAN CCK4, 64-QAM, 40 MHz	Generic	8.54	±9.6
10415	AAA	IEEE 802.11g WiFi (2.4GHz, DSSS, 1Mbps, 99pc duty cycle)	WLAN	1.54	±9.6
10416	AAA	IEEE 802.11g WiFi (2.4GHz, ERP-OFDM, 6Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10417	AAC	IEEE 802.11a WiFi (2.4GHz, OFDM, 6Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10418	AAA	IEEE 802.11g WiFi (2.4GHz, DSSS-OFDM, 6Mbps, 99pc duty cycle, Long preamble)	WLAN	8.14	±9.6
10419	AAA	IEEE 802.11g WiFi (2.4GHz, DSSS-OFDM, 6Mbps, 99pc duty cycle, Short preamble)	WLAN	9.19	±9.6
10422	AAC	IEEE 802.11n (HT Greenfield, 7.2Mbps, BPSK)	WLAN	9.32	±9.6
10423	AAC	IEEE 802.11n (HT Greenfield, 43.5Mbps, 16-QAM)	WLAN	8.47	±9.6
10424	AAC	IEEE 802.11n (HT Greenfield, 72.2Mbps, 64-QAM)	WLAN	8.40	±9.6
10425	AAC	IEEE 802.11n (HT Greenfield, 15Mbps, BPSK)	WLAN	9.41	±9.6
10426	AAC	IEEE 802.11n (HT Greenfield, 80.4Mbps, 16-QAM)	WLAN	8.45	±9.6
10427	AAC	IEEE 802.11n (HT Greenfield, 150Mbps, 64-QAM)	WLAN	8.41	±9.6
10430	AAE	LTE-FDD (OFDMA, 5MHz, E-TM 3.1)	LTE-FDD	8.28	±9.6
10431	AAE	LTE-FDD (OFDMA, 10MHz, E-TM 3.1)	LTE-FDD	8.38	±9.6
10432	AAE	LTE-FDD (OFDMA, 15MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10433	AAE	LTE-FDD (OFDMA, 20MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10434	AAB	W-CDMA (HS Test Model 1, 64 DPCH)	WCDMA	9.00	±9.6
10435	AAG	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10447	AAE	LTE-FDD (OFDMA, 5MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	±9.6
10448	AAE	LTE-FDD (OFDMA, 10MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	±9.6
10449	AAE	LTE-FDD (OFDMA, 15MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	±9.6
10450	AAE	LTE-FDD (OFDMA, 20MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	±9.6
10451	AAB	W-CDMA (HS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9.6
10453	AAE	Validation Source, 10ms, 1ms	Test	10.30	±9.6
10456	AAC	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	±9.6
10457	AAB	UMTS-FDD (DC-SSSPA)	WCDMA	8.62	±9.6
10458	AAA	CDMA2000 (1xEV-DO, Rev. E, 2 carriers)	CDMA2000	5.55	±9.6
10459	AAA	CDMA2000 (1xEV-DO, Rev. E, 3 carriers)	CDMA2000	8.25	±9.6
10460	AAB	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	±9.6
10463	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	±9.6
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10465	AAD	LTE-TDD (SC-FDMA, 1 RB, 3MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10466	AAD	LTE-TDD (SC-FDMA, 1 RB, 3MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10467	AAG	LTE-TDD (SC-FDMA, 1 RB, 5MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10468	AAG	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10469	AAG	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	±9.6
10470	AAG	LTE-TDD (SC-FDMA, 1 RB, 10MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10471	AAC	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6





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10472	AAG	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10473	AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.92	±9.6
10474	AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	±9.6
10475	AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10477	AAG	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	±9.6
10478	AAG	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10480	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±9.6
10481	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6
10482	AAC	LTE-TDD (SC-FDMA, 50% RB, 3MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	±9.6
10483	AAC	LTE-TDD (SC-FDMA, 50% RB, 3MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	±9.6
10484	AAD	LTE-TDD (SC-FDMA, 50% RB, 3MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	±9.6
10485	AAG	LTE-TDD (SC-FDMA, 50% RB, 5MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	±9.6
10486	AAG	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	±9.6
10487	AAG	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	±9.6
10488	AAG	LTE-TDD (SC-FDMA, 50% RB, 10MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	±9.6
10489	AAG	LTE-TDD (SC-FDMA, 50% RB, 10MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10490	AAG	LTE-TDD (SC-FDMA, 50% RB, 10MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	±9.6
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±9.6
10494	AAG	LTE-TDD (SC-FDMA, 50% RB, 20MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10495	AAG	LTE-TDD (SC-FDMA, 50% RB, 20MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	±9.6
10496	AAG	LTE-TDD (SC-FDMA, 50% RB, 20MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10497	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10498	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.43	±9.6
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.69	±9.6
10500	AAD	LTE-TDD (SC-FDMA, 100% RB, 3MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10501	AAD	LTE-TDD (SC-FDMA, 100% RB, 3MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	±9.6
10502	AAD	LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	±9.6
10503	AAG	LTE-TDD (SC-FDMA, 100% RB, 5MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	±9.6
10504	AAG	LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10505	AAG	LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10506	AAG	LTE-TDD (SC-FDMA, 100% RB, 10MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10507	AAG	LTE-TDD (SC-FDMA, 100% RB, 10MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	±9.6
10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±9.6
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	±9.6
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.43	±9.6
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	±9.6
10512	AAG	LTE-TDD (SC-FDMA, 100% RB, 20MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10513	AAG	LTE-TDD (SC-FDMA, 100% RB, 20MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	±9.6
10514	AAG	LTE-TDD (SC-FDMA, 100% RB, 20MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6
10515	AAA	IEEE 802.11b W/F 2.4GHz (DSSS, 2Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10516	AAA	IEEE 802.11b W/F 2.4GHz (DSSS, 5.5Mbps, 99pc duty cycle)	WLAN	1.57	±9.6
10517	AAA	IEEE 802.11b W/F 2.4GHz (DSSS, 11Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10518	AAC	IEEE 802.11a W/F 5GHz (OFDM, 6Mbps, 99pc duty cycle)	WLAN	8.29	±9.6
10519	AAC	IEEE 802.11a W/F 5GHz (OFDM, 12Mbps, 99pc duty cycle)	WLAN	8.39	±9.6
10520	AAC	IEEE 802.11a W/F 5GHz (OFDM, 18Mbps, 99pc duty cycle)	WLAN	8.12	±9.6
10521	AAC	IEEE 802.11a W/F 5GHz (OFDM, 24Mbps, 99pc duty cycle)	WLAN	7.97	±9.6
10522	AAC	IEEE 802.11a W/F 5GHz (OFDM, 36Mbps, 99pc duty cycle)	WLAN	8.45	±9.6
10523	AAC	IEEE 802.11a W/F 5GHz (OFDM, 48Mbps, 99pc duty cycle)	WLAN	8.08	±9.6
10524	AAC	IEEE 802.11a W/F 5GHz (OFDM, 54Mbps, 99pc duty cycle)	WLAN	8.27	±9.6
10525	AAC	IEEE 802.11ac W/F (20MHz, MCS0, 99pc duty cycle)	WLAN	8.38	±9.6
10526	AAC	IEEE 802.11ac W/F (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	±9.6
10527	AAC	IEEE 802.11ac W/F (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	±9.6
10528	AAC	IEEE 802.11ac W/F (20MHz, MCS3, 99pc duty cycle)	WLAN	8.38	±9.6
10529	AAC	IEEE 802.11ac W/F (20MHz, MCS4, 99pc duty cycle)	WLAN	8.38	±9.6
10530	AAC	IEEE 802.11ac W/F (20MHz, MCS5, 99pc duty cycle)	WLAN	8.43	±9.6
10531	AAC	IEEE 802.11ac W/F (20MHz, MCS6, 99pc duty cycle)	WLAN	8.29	±9.6
10532	AAC	IEEE 802.11ac W/F (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
10533	AAC	IEEE 802.11ac W/F (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	±9.6
10534	AAC	IEEE 802.11ac W/F (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	±9.6
10535	AAC	IEEE 802.11ac W/F (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	±9.6
10536	AAC	IEEE 802.11ac W/F (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	±9.6
10537	AAC	IEEE 802.11ac W/F (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
10538	AAC	IEEE 802.11ac W/F (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	±9.6
10540	AAC	IEEE 802.11ac W/F (40MHz, MCS5, 99pc duty cycle)	WLAN	8.59	±9.6



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10541	AAC	IEEE 802.11ac WiFi (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.46	±9.6
10542	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.65	±9.6
10543	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.65	±9.6
10544	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.47	±9.6
10545	AAC	IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.50	±9.6
10546	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.55	±9.6
10547	AAC	IEEE 802.11ac WiFi (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.49	±9.6
10548	AAC	IEEE 802.11ac WiFi (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.37	±9.6
10550	AAC	IEEE 802.11ac WiFi (40 MHz, MCS5, 99pc duty cycle)	WLAN	8.38	±9.6
10551	AAC	IEEE 802.11ac WiFi (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.51	±9.6
10552	AAC	IEEE 802.11ac WiFi (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6
10553	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.45	±9.6
10554	AAD	IEEE 802.11ac WiFi (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.48	±9.6
10555	AAD	IEEE 802.11ac WiFi (160 MHz, MCS1, 99pc duty cycle)	WLAN	6.47	±9.6
10556	AAD	IEEE 802.11ac WiFi (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.50	±9.6
10557	AAD	IEEE 802.11ac WiFi (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.52	±9.6
10558	AAD	IEEE 802.11ac WiFi (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.61	±9.6
10560	AAD	IEEE 802.11ac WiFi (160 MHz, MCS5, 99pc duty cycle)	WLAN	8.73	±9.6
10561	AAD	IEEE 802.11ac WiFi (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.56	±9.6
10562	AAD	IEEE 802.11ac WiFi (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.69	±9.6
10563	AAD	IEEE 802.11ac WiFi (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.77	±9.6
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	±9.6
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 55pc duty cycle)	WLAN	8.45	±9.6
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 19 Mbps, 99pc duty cycle)	WLAN	8.13	±9.6
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 55pc duty cycle)	WLAN	8.00	±9.6
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 35 Mbps, 89pc duty cycle)	WLAN	8.37	±9.6
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 55pc duty cycle)	WLAN	8.10	±9.6
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 89pc duty cycle)	WLAN	8.33	±9.6
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.63	±9.6
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 55pc duty cycle)	WLAN	8.50	±9.6
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 50pc duty cycle)	WLAN	8.70	±9.6
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.40	±9.6
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 50pc duty cycle)	WLAN	8.38	±9.6
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 50pc duty cycle)	WLAN	8.76	±9.6
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 50pc duty cycle)	WLAN	8.67	±9.6
10583	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.58	±9.6
10584	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 9 Mbps, 50pc duty cycle)	WLAN	8.60	±9.6
10585	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10586	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.48	±9.6
10587	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	±9.6
10588	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6
10589	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10590	AAC	IEEE 802.12a WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10591	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS0, 90pc duty cycle)	WLAN	8.63	±9.6
10592	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10593	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS2, 90pc duty cycle)	WLAN	8.64	±9.6
10594	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS5, 90pc duty cycle)	WLAN	8.74	±9.6
10595	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS4, 90pc duty cycle)	WLAN	8.74	±9.6
10596	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS5, 90pc duty cycle)	WLAN	8.71	±9.6
10597	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS6, 90pc duty cycle)	WLAN	8.72	±9.6
10598	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS7, 90pc duty cycle)	WLAN	8.50	±9.6
10599	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS0, 90pc duty cycle)	WLAN	8.79	±9.6
10600	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6
10601	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS2, 90pc duty cycle)	WLAN	8.82	±9.6
10602	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS3, 90pc duty cycle)	WLAN	8.84	±9.6
10603	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS4, 90pc duty cycle)	WLAN	8.93	±9.6
10604	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS5, 90pc duty cycle)	WLAN	8.76	±9.6
10605	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS6, 90pc duty cycle)	WLAN	8.97	±9.6
10606	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10607	AAC	IEEE 802.11ac WiFi (20 MHz, MCS0, 90pc duty cycle)	WLAN	8.64	±9.6
10608	AAC	IEEE 802.11ac WiFi (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.77	±9.6



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10609	AAC	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	±9.6
10610	AAC	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	±9.6
10611	AAC	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10612	AAC	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10613	AAC	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	±9.6
10614	AAC	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.55	±9.6
10615	AAC	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10616	AAC	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.82	±9.6
10617	AAC	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.81	±9.6
10618	AAC	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.58	±9.6
10619	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.86	±9.6
10620	AAC	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	±9.6
10621	AAC	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10622	AAC	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	±9.6
10623	AAC	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10624	AAC	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	±9.6
10625	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	±9.6
10626	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.89	±9.6
10627	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	WLAN	8.88	±9.6
10628	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.71	±9.6
10629	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.85	±9.6
10630	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	±9.6
10631	AAC	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	±9.6
10632	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10633	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	WLAN	8.85	±9.6
10634	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6
10635	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6
10636	AAD	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	8.83	±9.6
10637	AAD	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	8.79	±9.6
10638	AAD	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.86	±9.6
10639	AAD	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	8.85	±9.6
10640	AAD	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	WLAN	8.98	±9.6
10641	AAD	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	9.36	±9.6
10642	AAD	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	8.76	±9.6
10643	AAD	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	8.89	±9.6
10644	AAD	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	9.05	±9.6
10645	AAD	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.11	±9.6
10646	AAB	LTE-TDD (SC-FDMA, 1 RB, 5MHz, QPSK, UL Subframe=2/7)	LTE-TDD	11.96	±9.6
10647	AAG	LTE-TDD (SC-FDMA, 1 RB, 20MHz, QPSK, UL Subframe=2/7)	LTE-TDD	11.96	±9.6
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6
10652	AAF	LTE-TDD (OFDMA, 5MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.51	±9.6
10653	AAF	LTE-TDD (OFDMA, 10MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	±9.6
10654	AAF	LTE-TDD (OFDMA, 15MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.56	±9.6
10655	AAF	LTE-TDD (OFDMA, 20MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10659	AAB	Pulse Waveform (200Hz, 10%)	Test	13.00	±9.6
10658	AAB	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6
10660	AAB	Pulse Waveform (600Hz, 40%)	Test	3.58	±9.6
10661	AAB	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6
10662	AAB	Pulse Waveform (200Hz, 80%)	Test	0.87	±9.6
10670	AAA	Bluetooth Low Energy	Bluetooth	2.18	±9.6
10671	AAC	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	9.09	±9.6
10672	AAC	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6
10673	AAC	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6
10674	AAC	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10675	AAC	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6
10676	AAC	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10677	AAC	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8.73	±9.6
10678	AAC	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	±9.6
10679	AAC	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN	8.89	±9.6
10680	AAC	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6
10681	AAC	IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6
10682	AAC	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.80	±9.6
10683	AAC	IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6
10684	AAC	IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle)	WLAN	8.26	±9.6
10685	AAC	IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle)	WLAN	8.33	±9.6
10686	AAC	IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.20	±9.6



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10687	AAC	IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.42	±9.6
10688	AAC	IEEE 802.11ax (20 MHz, MCS5, 99pc duty cycle)	WLAN	8.29	±9.6
10689	AAC	IEEE 802.11ax (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.55	±9.6
10690	AAC	IEEE 802.11ax (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.28	±9.6
10691	AAC	IEEE 802.11ax (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.25	±9.6
10692	AAC	IEEE 802.11ax (20 MHz, MCS9, 99pc duty cycle)	WLAN	8.78	±9.6
10693	AAC	IEEE 802.11ax (20 MHz, MCS10, 99pc duty cycle)	WLAN	8.25	±9.6
10694	AAC	IEEE 802.11ax (20 MHz, MCS11, 99pc duty cycle)	WLAN	8.57	±9.6
10695	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.78	±9.6
10696	AAC	IEEE 802.11ax (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.91	±9.6
10697	AAC	IEEE 802.11ax (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.61	±9.6
10698	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.89	±9.6
10699	AAC	IEEE 802.11ax (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.62	±9.6
10700	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc duty cycle)	WLAN	8.73	±9.6
10701	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.65	±9.6
10702	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.70	±9.6
10703	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.67	±9.6
10704	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.50	±9.6
10705	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.64	±9.6
10706	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc duty cycle)	WLAN	8.66	±9.6
10707	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.32	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10709	AAC	IEEE 802.11ax (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10710	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.29	±9.6
10711	AAC	IEEE 802.11ax (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc duty cycle)	WLAN	8.67	±9.6
10713	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6
10714	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6
10715	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6
10716	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6
10717	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6
10718	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc duty cycle)	WLAN	8.21	±9.6
10719	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.81	±9.6
10720	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.87	±9.6
10721	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.76	±9.6
10722	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc duty cycle)	WLAN	9.55	±9.6
10723	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.70	±9.6
10724	AAC	IEEE 802.11ax (80 MHz, MCS5, 99pc duty cycle)	WLAN	9.50	±9.6
10725	AAC	IEEE 802.11ax (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.74	±9.6
10726	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc duty cycle)	WLAN	9.72	±9.6
10727	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.66	±9.6
10728	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.68	±9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	9.64	±9.6
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	9.67	±9.6
10731	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10732	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.46	±9.6
10733	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.40	±9.6
10734	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.25	±9.6
10735	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.33	±9.6
10736	AAC	IEEE 802.11ax (80 MHz, MCS5, 99pc duty cycle)	WLAN	8.27	±9.6
10737	AAC	IEEE 802.11ax (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.36	±9.6
10738	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.42	±9.6
10739	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.25	±9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.40	±9.6
10741	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	8.40	±9.6
10742	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	8.43	±9.6
10743	AAC	IEEE 802.11ax (160 MHz, MCS0, 50pc duty cycle)	WLAN	8.94	±9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 50pc duty cycle)	WLAN	9.16	±9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 50pc duty cycle)	WLAN	8.93	±9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 50pc duty cycle)	WLAN	9.11	±9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 50pc duty cycle)	WLAN	9.04	±9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 50pc duty cycle)	WLAN	8.93	±9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 50pc duty cycle)	WLAN	8.90	±9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 50pc duty cycle)	WLAN	8.73	±9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS8, 50pc duty cycle)	WLAN	8.92	±9.6
10752	AAC	IEEE 802.11ax (160 MHz, MCS9, 50pc duty cycle)	WLAN	8.81	±9.6



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13753	AAC	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	WLAN	8.01	±9.6
13754	AAC	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.94	±9.6
13755	AAC	IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6
13756	AAC	IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6
13757	AAC	IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle)	WLAN	8.77	±9.6
13758	AAC	IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle)	WLAN	8.69	±9.6
13759	AAC	IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle)	WLAN	8.58	±9.6
13760	AAC	IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle)	WLAN	8.49	±9.6
13761	AAC	IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle)	WLAN	8.58	±9.6
13762	AAC	IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle)	WLAN	8.49	±9.6
13763	AAC	IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle)	WLAN	8.53	±9.6
13764	AAC	IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle)	WLAN	8.54	±9.6
13765	AAC	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	WLAN	8.54	±9.6
13766	AAC	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.51	±9.6
13767	AAD	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	±9.6
13768	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
13769	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
13770	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
13771	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
13772	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	±9.6
13773	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.00	±9.6
13774	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
13775	AAD	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
13776	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
13777	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.00	±9.6
13778	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	±9.6
13779	AAD	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.42	±9.6
13780	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.08	±9.6
13781	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.28	±9.6
13782	AAD	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6
13783	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
13784	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	±9.6
13785	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.48	±9.6
13786	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	±9.6
13787	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
13788	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
13789	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	±9.6
13790	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
13791	AAD	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	±9.6
13792	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6
13793	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	±9.6
13794	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.98	±9.6
13795	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.96	±9.6
13796	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.98	±9.6
13797	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	±9.6
13798	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
13799	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
13800	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
13801	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6
13802	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.99	±9.6
13803	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
13804	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	±9.6
13805	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
13806	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
13807	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
13808	AAD	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
13809	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
13810	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.5
13811	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	±9.5
13812	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	±9.5
13813	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.5
13814	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.5
13815	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.5
13816	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.5
13817	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.5
13818	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	±9.5
13819	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.5



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10839	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6
10830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.63	±9.6
10831	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	±9.6
10832	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6
10833	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10834	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6
10835	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	±9.6
10836	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
10837	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
10838	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10840	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6
10841	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	±9.6
10843	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
10844	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10846	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10854	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.38	±9.6
10856	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10858	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10859	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6
10863	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10864	AAD	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10865	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10866	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10868	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	±9.6
10869	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10870	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	±9.6
10871	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10872	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
10873	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10874	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.55	±9.6
10875	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10976	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	±9.6
10977	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	±9.6
10978	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10979	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
10980	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	±9.6
10981	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10982	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	±9.6
10983	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
10984	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
10985	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10986	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10987	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10988	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6
10989	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6
10990	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6
10991	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
10992	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10993	AAE	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.56	±9.6
10994	AAE	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.57	±9.6
10995	AAE	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10996	AAE	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.58	±9.6
10997	AAE	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.58	±9.6
10998	AAE	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.88	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.58	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.88	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.88	±9.6





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10911	AAB	5G NR (DFT-s-OFDM, 50% RB, 25MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.93	±0.6
10912	AAB	5G NR (DFT-s-OFDM, 50% RB, 30MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.84	±0.6
10913	AAB	5G NR (DFT-s-OFDM, 50% RB, 40MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.84	±0.6
10914	AAB	5G NR (DFT-s-OFDM, 50% RB, 50MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.85	±0.6
10915	AAB	5G NR (DFT-s-OFDM, 50% RB, 60MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.83	±0.6
10916	AAB	5G NR (DFT-s-OFDM, 50% RB, 80MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.87	±0.6
10917	AAB	5G NR (DFT-s-OFDM, 50% RB, 100MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.94	±0.6
10918	AAC	5G NR (DFT-s-OFDM, 100% RB, 5MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.86	±0.6
10919	AAB	5G NR (DFT-s-OFDM, 100% RB, 10MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.86	±0.6
10920	AAB	5G NR (DFT-s-OFDM, 100% RB, 15MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.87	±0.6
10921	AAB	5G NR (DFT-s-OFDM, 100% RB, 20MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.84	±0.6
10922	AAB	5G NR (DFT-s-OFDM, 100% RB, 25MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.82	±0.6
10923	AAB	5G NR (DFT-s-OFDM, 100% RB, 30MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.84	±0.6
10924	AAB	5G NR (DFT-s-OFDM, 100% RB, 40MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.84	±0.6
10925	AAB	5G NR (DFT-s-OFDM, 100% RB, 50MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.95	±0.6
10926	AAB	5G NR (DFT-s-OFDM, 100% RB, 60MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.84	±0.6
10927	AAB	5G NR (DFT-s-OFDM, 100% RB, 80MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.94	±0.6
10928	AAC	5G NR (DFT-s-OFDM, 1 RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.52	±0.6
10929	AAC	5G NR (DFT-s-OFDM, 1 RB, 10MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.52	±0.6
10930	AAC	5G NR (DFT-s-OFDM, 1 RB, 15MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.52	±0.6
10931	AAC	5G NR (DFT-s-OFDM, 1 RB, 20MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.51	±0.6
10932	AAC	5G NR (DFT-s-OFDM, 1 RB, 25MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.51	±0.6
10933	AAC	5G NR (DFT-s-OFDM, 1 RB, 30MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.51	±0.6
10934	AAC	5G NR (DFT-s-OFDM, 1 RB, 40MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.51	±0.6
10935	AAC	5G NR (DFT-s-OFDM, 1 RB, 50MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.51	±0.6
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.50	±0.6
10937	AAC	5G NR (DFT-s-OFDM, 50% RB, 10MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.77	±0.6
10938	AAC	5G NR (DFT-s-OFDM, 50% RB, 15MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.90	±0.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 20MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.89	±0.6
10940	AAC	5G NR (DFT-s-OFDM, 50% RB, 25MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.89	±0.6
10941	AAC	5G NR (DFT-s-OFDM, 50% RB, 30MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.83	±0.6
10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.85	±0.6
10943	AAC	5G NR (DFT-s-OFDM, 50% RB, 50MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.95	±0.6
10944	AAC	5G NR (DFT-s-OFDM, 100% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.81	±0.6
10945	AAC	5G NR (DFT-s-OFDM, 100% RB, 10MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.85	±0.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.83	±0.6
10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.87	±0.6
10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.94	±0.6
10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.87	±0.6
10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.94	±0.6
10951	AAD	5G NR (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	5.92	±0.6
10952	AAA	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.25	±0.6
10953	AAA	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.15	±0.6
10954	AAA	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.23	±0.6
10955	AAA	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.42	±0.6
10956	AAA	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30kHz)	5G NR FR1 FDD	8.14	±0.6
10957	AAA	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30kHz)	5G NR FR1 FDD	8.31	±0.6
10958	AAA	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 30kHz)	5G NR FR1 FDD	8.61	±0.6
10959	AAA	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30kHz)	5G NR FR1 FDD	8.33	±0.6
10960	AAC	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz)	5G NR FR1 TDD	9.32	±0.6
10961	AAB	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz)	5G NR FR1 TDD	9.38	±0.6
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15kHz)	5G NR FR1 TDD	9.43	±0.6
10963	AAB	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15kHz)	5G NR FR1 TDD	9.55	±0.6
10964	AAC	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30kHz)	5G NR FR1 TDD	9.29	±0.6
10965	AAB	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30kHz)	5G NR FR1 TDD	9.37	±0.6
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 30kHz)	5G NR FR1 TDD	9.55	±0.6
10967	AAB	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30kHz)	5G NR FR1 TDD	9.42	±0.6
10968	AAB	5G NR DL (CP-OFDM, TM 3.1, 100MHz, 64-QAM, 30kHz)	5G NR FR1 TDD	9.43	±0.6
10972	AAB	5G NR (CP-OFDM, 1 RB, 20MHz, QPSK, 15kHz)	5G NR FR1 TDD	1.59	±0.6
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100MHz, QPSK, 30kHz)	5G NR FR1 TDD	0.05	±0.6
10974	AAB	5G NR (CP-OFDM, 1 RB, 100MHz, 256-QAM, 30kHz)	5G NR FR1 TDD	0.29	±0.6
10978	AAA	LLLA BDR	U.LA	1.18	±0.6
10979	AAA	LLLA HDR4	U.LA	8.58	±0.6
10980	AAA	LLLA HDR8	U.LA	0.32	±0.6
10981	AAA	LLLA HDR4	U.LA	3.19	±0.6
10982	AAA	LLLA HDR8	U.LA	3.43	±0.6



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10983	AAA	5G NR DL (CP-OFDM, TM 3, 1, 40 MHz, 64-QAM, 154MHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAA	5G NR DL (CP-OFDM, TM 3, 1, 50 MHz, 64-QAM, 154MHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAA	5G NR DL (CP-OFDM, TM 3, 1, 40 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAA	5G NR DL (CP-OFDM, TM 3, 1, 50 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAA	5G NR DL (CP-OFDM, TM 3, 1, 60 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	9.59	±9.6
10988	AAA	5G NR DL (CP-OFDM, TM 3, 1, 70 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAA	5G NR DL (CP-OFDM, TM 3, 1, 80 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	9.39	±9.6
10990	AAA	5G NR DL (CP-OFDM, TM 3, 1, 90 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	9.52	±9.6
11003	AAA	5G NR DL (CP-OFDM, TM 3, 1, 50 MHz, 64-QAM, 154MHz)	5G NR FR1 TDD	10.24	±9.6
11004	AAA	5G NR DL (CP-OFDM, TM 3, 1, 30 MHz, 64-QAM, 30MHz)	5G NR FR1 TDD	10.73	±9.6
11005	AAA	5G NR DL (CP-OFDM, TM 3, 1, 25 MHz, 64-QAM, 154MHz)	5G NR FR1 FDD	8.70	±9.6
11006	AAA	5G NR DL (CP-OFDM, TM 3, 1, 30 MHz, 64-QAM, 154MHz)	5G NR FR1 FDD	9.50	±9.6
11007	AAA	5G NR DL (CP-OFDM, TM 3, 1, 40 MHz, 64-QAM, 154MHz)	5G NR FR1 FDD	9.46	±9.6
11009	AAA	5G NR DL (CP-OFDM, TM 3, 1, 50 MHz, 64-QAM, 154MHz)	5G NR FR1 FDD	9.51	±9.6
11009	AAA	5G NR DL (CP-OFDM, TM 3, 1, 25 MHz, 64-QAM, 30MHz)	5G NR FR1 FDD	9.76	±9.6
11010	AAA	5G NR DL (CP-OFDM, TM 3, 1, 30 MHz, 64-QAM, 30MHz)	5G NR FR1 FDD	9.95	±9.6
11011	AAA	5G NR DL (CP-OFDM, TM 3, 1, 40 MHz, 64-QAM, 30MHz)	5G NR FR1 FDD	9.96	±9.6
11012	AAA	5G NR DL (CP-OFDM, TM 3, 1, 50 MHz, 64-QAM, 30MHz)	5G NR FR1 FDD	9.88	±9.6
11013	AAA	IEEE 802.11be (320MHz, MCS1, 99pc duty cycle)	WLAN	9.67	±9.6
11014	AAA	IEEE 802.11be (320MHz, MCS2, 99pc duty cycle)	WLAN	9.45	±9.6
11015	AAA	IEEE 802.11be (320MHz, MCS3, 99pc duty cycle)	WLAN	9.44	±9.6
11016	AAA	IEEE 802.11be (320MHz, MCS4, 99pc duty cycle)	WLAN	9.44	±9.6
11017	AAA	IEEE 802.11be (320MHz, MCS5, 99pc duty cycle)	WLAN	9.41	±9.6
11018	AAA	IEEE 802.11be (320MHz, MCS6, 99pc duty cycle)	WLAN	9.40	±9.6
11019	AAA	IEEE 802.11be (320MHz, MCS7, 99pc duty cycle)	WLAN	9.29	±9.6
11020	AAA	IEEE 802.11be (320MHz, MCS8, 99pc duty cycle)	WLAN	9.27	±9.6
11021	AAA	IEEE 802.11be (320MHz, MCS9, 99pc duty cycle)	WLAN	9.46	±9.6
11022	AAA	IEEE 802.11be (320MHz, MCS10, 99pc duty cycle)	WLAN	9.30	±9.6
11023	AAA	IEEE 802.11be (320MHz, MCS11, 99pc duty cycle)	WLAN	9.09	±9.6
11024	AAA	IEEE 802.11be (320MHz, MCS12, 99pc duty cycle)	WLAN	9.42	±9.6
11025	AAA	IEEE 802.11be (320MHz, MCS13, 99pc duty cycle)	WLAN	9.37	±9.6
11026	AAA	IEEE 802.11be (320MHz, MCS0, 99pc duty cycle)	WLAN	9.35	±9.6

<sup>k</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value



## **ANNEX B**

### **DIPOLE CALIBRATION REPORTS**



**Calibration Laboratory of  
 Schmid & Partner  
 Engineering AG**  
 Zeughausstrasse 43, 8004 Zurich, Switzerland



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **TüV SÜD**  
 Fareham, United Kingdom

Certificate No. **D2450V2-1026\_Jun23**

**CALIBRATION CERTIFICATE**

Object **D2450V2 - SN:1026**

Calibration procedure(s) **QA CAL-05.v12  
 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

Calibration date: **June 05, 2023**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
Reference Probe EX3DV4	SN: 7349	10-Jan-23 (No. EX3-7349_Jan23)	Jan-24
DAE4	SN: 601	19-Dec-22 (No. DAE4-601_Dec22)	Dec-23

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

Calibrated by: **Krešimir Franjić** (Name), **Laboratory Technician** (Function), *[Signature]* (Signature)

Approved by: **Sven Kühn** (Name), **Technical Manager** (Function), *[Signature]* (Signature)

Issued: June 5, 2023

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Accreditation No.: **SCS 0108**

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#### Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

#### Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

#### Additional Documentation:

- DASY System Handbook

#### Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss:** This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.



**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY62	V52 10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	$dx, dy, dz = 5 \text{ mm}$	
Frequency	$2450 \text{ MHz} \pm 1 \text{ MHz}$	

**Head TSL parameters**

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	$(22.0 \pm 0.2) \text{ °C}$	$37.7 \pm 6 \%$	$1.64 \text{ mho/m} \pm 6 \%$
Head TSL temperature change during test	< 0.5 °C	----	----

**SAR result with Head TSL**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>52.2 W/kg <math>\pm</math> 17.0 % (k=2)</b>

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.21 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>24.5 W/kg <math>\pm</math> 16.5 % (k=2)</b>





### Appendix (Additional assessments outside the scope of SCS 0108)

#### Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.1 $\Omega$ + 1.9 $\mu\Omega$
Return Loss	-27.2 dB

#### General Antenna Parameters and Design

Electrical Delay (one direction)	1.157 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

#### Additional EUT Data

Manufactured by	SPEAG
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## DASY5 Validation Report for Head TSL

Date: 05.06.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:1026**

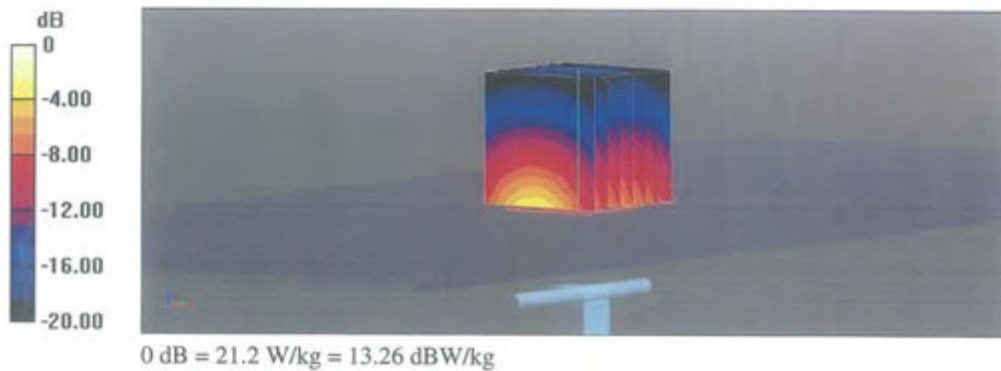
Communication System: UID 0 - CW; Frequency: 2450 MHz  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.84$  S/m;  $\epsilon_r = 37.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.9, 7.9, 7.9) @ 2450 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

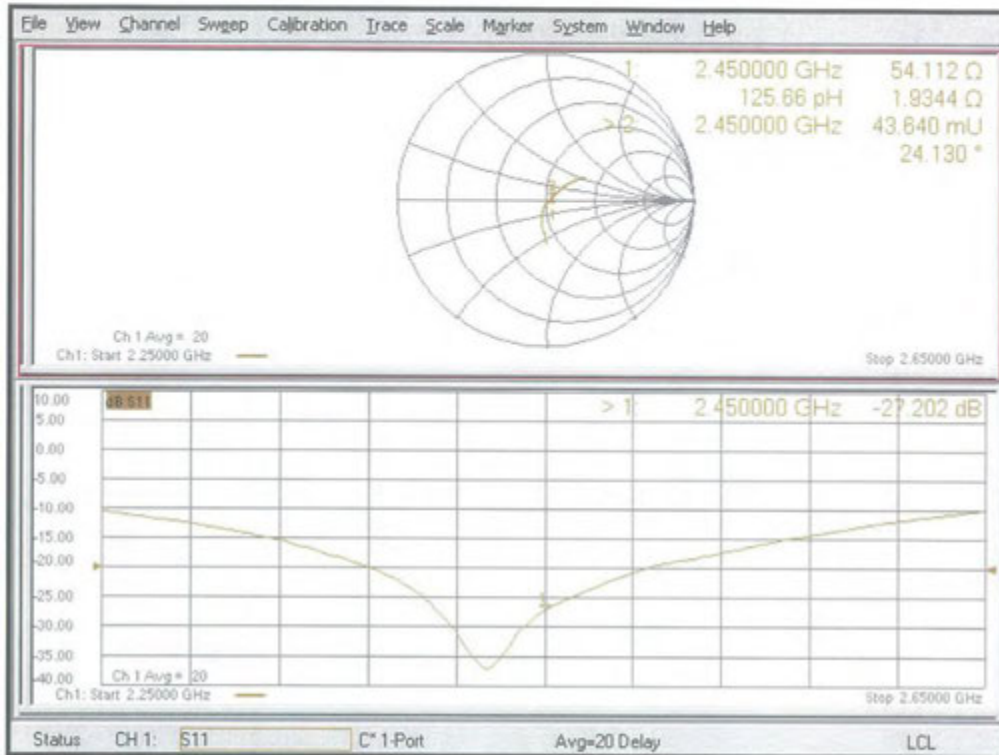
### Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 116.4 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 25.9 W/kg  
**SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.21 W/kg**  
Smallest distance from peaks to all points 3 dB below = 9 mm  
Ratio of SAR at M2 to SAR at M1 = 51.3%  
Maximum value of SAR (measured) = 21.2 W/kg





### Impedance Measurement Plot for Head TSL





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**S** Swiss Calibration Service

Accreditation No.: **SCS 0108**

Client **TÜV SÜD**  
 Fareham, United Kingdom

Certificate No. **D5GHzV2-1291\_Jun23**

**CALIBRATION CERTIFICATE**

Object **D5GHzV2 - SN:1291**

Calibration procedure(s) **QA CAL-22.v7  
 Calibration Procedure for SAR Validation Sources between 3-10 GHz**

Calibration date: **June 06, 2023**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
Reference Probe EX3DV4	SN: 3503	07-Mar-23 (No. EX3-3503_Mar23)	Mar-24
DAE4	SN: 601	19-Dec-22 (No. DAE4-601_Dec22)	Dec-23

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

Calibrated by: **Krešimir Franjić** (Name), **Laboratory Technician** (Function), *[Signature]* (Signature)

Approved by: **Sven Kühn** (Name), **Technical Manager** (Function), *[Signature]* (Signature)

Issued: June 7, 2023

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Accreditation No.: **SCS 0108**

**Glossary:**

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- c) DASY System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The source is mounted in a touch configuration below the center marking of the flat phantom.
- *Return Loss:* This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.



### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5300 MHz ± 1 MHz 5500 MHz ± 1 MHz 5600 MHz ± 1 MHz 5800 MHz ± 1 MHz	

### Head TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	36.0	4.66 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.5 ± 6 %	4.53 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Head TSL at 5200 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.66 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	76.3 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.20 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	21.9 W/kg ± 19.5 % (k=2)





### Head TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.76 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.5 ± 6 %	4.67 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Head TSL at 5300 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>80.0 W/kg ± 19.9 % (k=2)</b>

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.30 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>22.9 W/kg ± 19.5 % (k=2)</b>

### Head TSL parameters at 5500 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.6	4.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.4 ± 6 %	4.89 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Head TSL at 5500 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.18 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>81.7 W/kg ± 19.9 % (k=2)</b>

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.33 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>23.3 W/kg ± 19.5 % (k=2)</b>



### Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.3 ± 6 %	4.97 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.20 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.34 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.3 W/kg ± 19.5 % (k=2)

### Head TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.3	5.27 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.0 ± 6 %	5.11 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

### SAR result with Head TSL at 5800 MHz

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.93 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.0 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.24 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.4 W/kg ± 19.5 % (k=2)



### Appendix (Additional assessments outside the scope of SCS 0108)

#### Antenna Parameters with Head TSL at 5200 MHz

Impedance, transformed to feed point	47.9 $\Omega$ - 9.2 j $\Omega$
Return Loss	- 20.4 dB

#### Antenna Parameters with Head TSL at 5300 MHz

Impedance, transformed to feed point	48.7 $\Omega$ - 4.6 j $\Omega$
Return Loss	- 26.3 dB

#### Antenna Parameters with Head TSL at 5500 MHz

Impedance, transformed to feed point	47.5 $\Omega$ - 5.2 j $\Omega$
Return Loss	- 24.6 dB

#### Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	52.1 $\Omega$ - 5.3 j $\Omega$
Return Loss	- 25.0 dB

#### Antenna Parameters with Head TSL at 5800 MHz

Impedance, transformed to feed point	51.8 $\Omega$ - 4.2 j $\Omega$
Return Loss	- 27.0 dB

#### General Antenna Parameters and Design

Electrical Delay (one direction)	1.185 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

#### Additional EUT Data

Manufactured by	SPEAG
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## DASY5 Validation Report for Head TSL

Date: 06.06.2023

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1291**

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5500 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.53$  S/m;  $\epsilon_r = 35.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 4.67$  S/m;  $\epsilon_r = 35.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5500$  MHz;  $\sigma = 4.89$  S/m;  $\epsilon_r = 35.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 4.97$  S/m;  $\epsilon_r = 35.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.11$  S/m;  $\epsilon_r = 35$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.8, 5.8, 5.8) @ 5200 MHz, ConvF(5.49, 5.49, 5.49) @ 5300 MHz, ConvF(5.25, 5.25, 5.25) @ 5500 MHz, ConvF(5.1, 5.1, 5.1) @ 5600 MHz, ConvF(5.01, 5.01, 5.01) @ 5800 MHz; Calibrated: 07.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 73.94 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 26.6 W/kg

SAR(1 g) = 7.66 W/kg; SAR(10 g) = 2.2 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 70.7%

Maximum value of SAR (measured) = 17.2 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 74.72 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 27.8 W/kg

SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.3 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

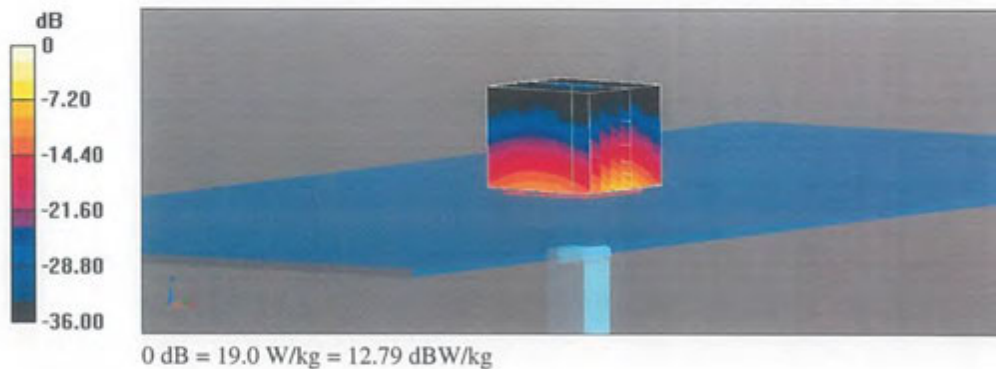
Ratio of SAR at M2 to SAR at M1 = 70.8%

Maximum value of SAR (measured) = 18.1 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 74.08 V/m; Power Drift = 0.03 dB  
Peak SAR (extrapolated) = 30.7 W/kg  
**SAR(1 g) = 8.18 W/kg; SAR(10 g) = 2.33 W/kg**  
Smallest distance from peaks to all points 3 dB below = 7.4 mm  
Ratio of SAR at M2 to SAR at M1 = 68.1%  
Maximum value of SAR (measured) = 18.9 W/kg

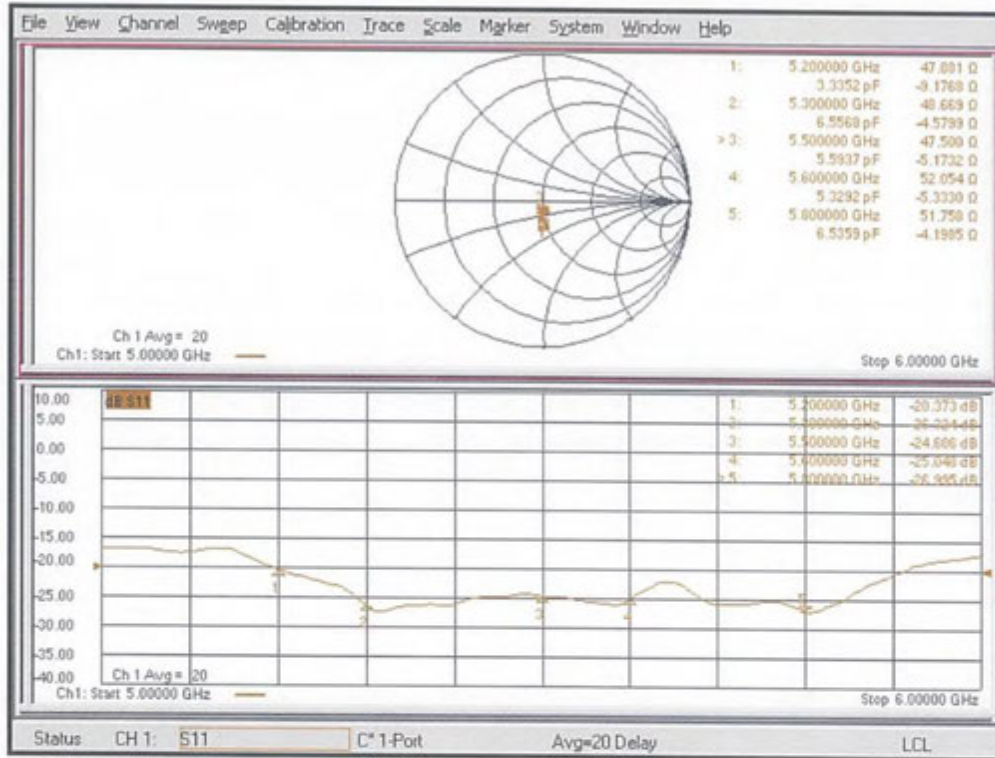
**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 75.16 V/m; Power Drift = 0.03 dB  
Peak SAR (extrapolated) = 29.8 W/kg  
**SAR(1 g) = 8.2 W/kg; SAR(10 g) = 2.34 W/kg**  
Smallest distance from peaks to all points 3 dB below = 7.4 mm  
Ratio of SAR at M2 to SAR at M1 = 69%  
Maximum value of SAR (measured) = 19.0 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 72.36 V/m; Power Drift = 0.03 dB  
Peak SAR (extrapolated) = 30.8 W/kg  
**SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.24 W/kg**  
Smallest distance from peaks to all points 3 dB below = 7.5 mm  
Ratio of SAR at M2 to SAR at M1 = 67%  
Maximum value of SAR (measured) = 18.8 W/kg





### Impedance Measurement Plot for Head TSL







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Accreditation No.: **SCS 0108**

Client **TÜV SÜD**  
 Fareham, United Kingdom

Certificate No. **D6.5GHzV2-1071\_Jul23**

**CALIBRATION CERTIFICATE**

Object **D6.5GHzV2 - SN:1071**

Calibration procedure(s) **QA CAL-22.v7  
 Calibration Procedure for SAR Validation Sources between 3-10 GHz**

Calibration date: **July 06, 2023**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power sensor R&S NRP33T	SN: 100967	03-Apr-23 (No. 217-03806)	Apr-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Mismatch combination	SN: 84224 / 360D	03-Apr-23 (No. 217-03812)	Apr-24
Reference Probe EX3DV4	SN: 7405	12-Jun-23 (No. EX3-7405_Jun23)	Jun-24
DAE4	SN: 908	03-Jul-23 (No. DAE4-908_Jul23)	Jul-24
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator Anapico APSIN20G	SN: 827	18-Dec-18 (in house check Dec-21)	In house check: Dec-23
Power sensor NRP-Z23	SN: 100169	10-Jan-19 (in house check Nov-22)	In house check: Nov-23
Power sensor NRP-18T	SN: 100950	28-Sep-22 (in house check Nov-22)	In house check: Nov-23
Network Analyzer Keysight E5063A	SN:MY54504221	31-Oct-19 (in house check Oct-22)	In house check: Oct-25

Calibrated by: **Jeton Kastrati** (Name), **Laboratory Technician** (Function), *[Signature]* (Signature)

Approved by: **Sven Kühn** (Name), **Technical Manager** (Function), *[Signature]* (Signature)

Issued: July 10, 2023

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**Glossary:**

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

**Calibration is Performed According to the Following Standards:**

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range Of 4 MHz To 10 GHz)", October 2020.

**Additional Documentation:**

- b) DASYS System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.
- *The absorbed power density (APD):* The absorbed power density is evaluated according to Samaras T, Christ A, Kuster N, "Compliance assessment of the epithelial or absorbed power density above 6 GHz using SAR measurement systems", Bioelectromagnetics, 2021 (submitted). The additional evaluation uncertainty of 0.55 dB (rectangular distribution) is considered.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.



**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASYG	V16.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	5 mm	with Spacer
Zoom Scan Resolution	$dx, dy = 3.4 \text{ mm}, dz = 1.4 \text{ mm}$	Graded Ratio = 1.4 (Z direction)
Frequency	6500 MHz $\pm$ 1 MHz	

**Head TSL parameters**

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	34.5	6.07 mho/m
Measured Head TSL parameters	$(22.0 \pm 0.2) \text{ °C}$	$33.5 \pm 6 \%$	$5.88 \text{ mho/m} \pm 6 \%$
Head TSL temperature change during test	$< 0.5 \text{ °C}$	...	...

**SAR result with Head TSL**

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	29.4 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	292 W/kg $\pm$ 24.7 % (k=2)
<b>SAR averaged over 8 cm<sup>3</sup> (8 g) of Head TSL</b>		
SAR measured	100 mW input power	6.66 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	66.1 W/kg $\pm$ 24.4 % (k=2)
<b>SAR averaged over 10 cm<sup>3</sup> (10 g) of Head TSL</b>		
SAR measured	100 mW input power	5.46 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	54.2 W/kg $\pm$ 24.4 % (k=2)



**Appendix**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	48.0 Ω - j1.7 jΩ
Return Loss	-31.6 dB

**APD (Absorbed Power Density)**

APD averaged over 1 cm <sup>2</sup>	Condition	
APD measured	100 mW input power	292 W/m <sup>2</sup>
APD measured	normalized to 1W	2920 W/m <sup>2</sup> ± 29.2 % (k=2)

APD averaged over 4 cm <sup>2</sup>	Condition	
APD measured	100 mW input power	133 W/m <sup>2</sup>
APD measured	normalized to 1W	1330 W/m <sup>2</sup> ± 28.9 % (k=2)

\*The reported APD values have been derived using the psSAR1g and psSAR5g.

**General Antenna Parameters and Design**

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

**Additional EUT Data**

Manufactured by	SPEAG
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### DASY6 Validation Report for Head TSL

Measurement Report for D6.5GHz-1071, UID 0 -, Channel 6500 (6500.0MHz)

#### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D6.5GHz	10.0 x 10.0 x 10.0	SN: 1029	

#### Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Cond. [S/m]	TSL Permittivity
Flat, HSL	5.00	Band	CW,	6500	5.50	5.88	33.5

#### Hardware Setup

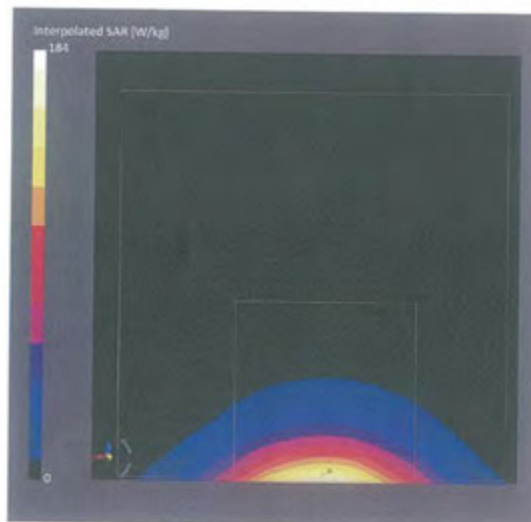
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
MFP V8.0 Center - 1182	HBBL600-10000V6	EX3DV4 - SN7405, 2023-06-12	DAE4 Sn908, 2023-07-03

#### Scan Setup

	Zoom Scan
Grid Extents [mm]	22.0 x 22.0 x 22.0
Grid Steps [mm]	3.4 x 3.4 x 1.4
Sensor Surface [mm]	1.4
Graded Grid	Yes
Grading Ratio	1.4
MAIA	N/A
Surface Detection	VMS + 6p
Scan Method	Measured

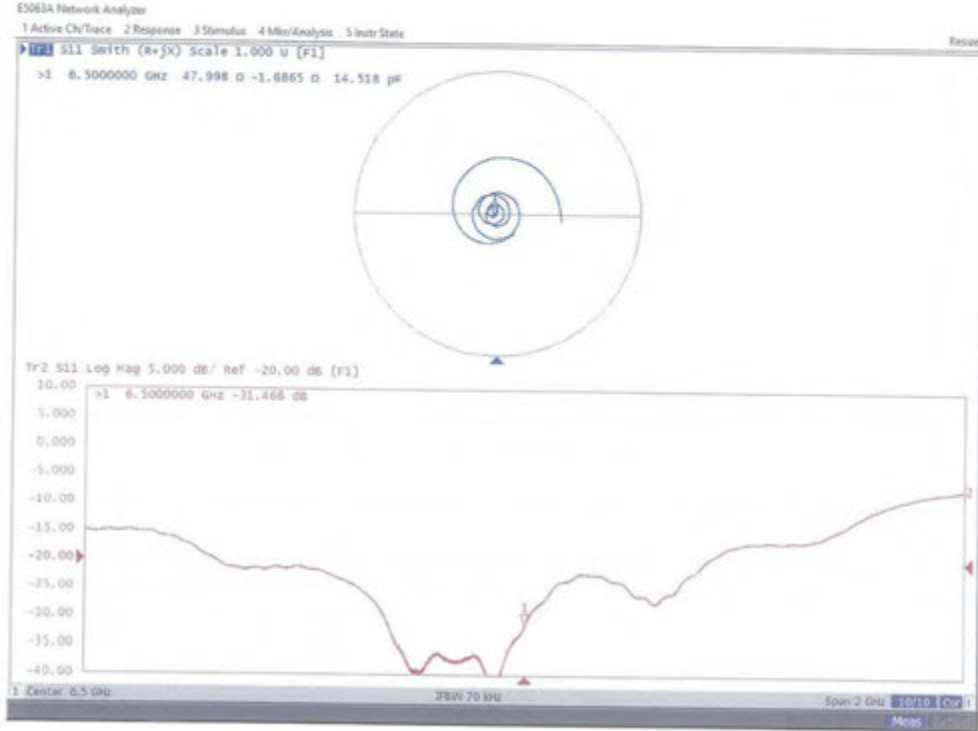
#### Measurement Results

	Zoom Scan
Date	2023-07-20, 13:28
psSAR1g [W/Kg]	29.4
psSAR8g [W/Kg]	6.66
psSAR10g [W/Kg]	5.46
Power Drift [dB]	0.01
Power Scaling	Disabled
Scaling Factor [dB]	
TSL Correction	No correction
M2/M1 [%]	51.3
Dist 3dB Peak [mm]	4.8





### Impedance Measurement Plot for Head TSL







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Accreditation No.: **SCS 0108**

Client **TÜV SÜD**  
 Fareham, United Kingdom

Certificate No. **5G-Veri10-1053\_Oct23**

**CALIBRATION CERTIFICATE**

Object **5G Verification Source 10 GHz - SN: 1053**

Calibration procedure(s) **QA CAL-45.v4  
 Calibration procedure for sources in air above 6 GHz**

Calibration date: **October 27, 2023**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Reference Probe EUmmWV3	SN: 9374	22-May-23 (No. EUmm-9374_May23)	May-24
DAE4ip	SN: 1602	05-Jul-23 (No. DAE4ip-1602_Jul23)	Jul-24
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMF100A	SN: 100184	19-May-22 (in house check Nov-22)	In house check: Nov-23
Power sensor R&S NRP18S-10	SN: 101258	31-May-22 (in house check Nov-22)	In house check: Nov-23
Network Analyzer Keysight E5063A	SN: MY54504221	31-Oct-19 (in house check Oct-22)	In house check: Oct-25

Calibrated by:	Name <b>Joanna Lieshaj</b>	Function <b>Laboratory Technician</b>	Signature 
Approved by:	Name <b>Sven Kühn</b>	Function <b>Technical Manager</b>	

Issued: October 27, 2023

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### Glossary

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**CW** Continuous wave

### Calibration is Performed According to the Following Standards

- Internal procedure QA CAL-45, Calibration procedure for sources in air above 6 GHz.
- IEC/IEEE 63195-1, "Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz)", May 2022

### Methods Applied and Interpretation of Parameters

- *Coordinate System:* z-axis in the waveguide horn boresight, x-axis is in the direction of the E-field, y-axis normal to the others in the field scanning plane parallel to the horn flare and horn flange.
- *Measurement Conditions:* (1) 10 GHz: The radiated power is the forward power to the horn antenna minus ohmic and mismatch loss. The forward power is measured prior and after the measurement with a power sensor. During the measurements, the horn is directly connected to the cable and the antenna ohmic and mismatch losses are determined by far-field measurements. (2) 30, 45, 60 and 90 GHz: The verification sources are switched on for at least 30 minutes. Absorbers are used around the probe cub and at the ceiling to minimize reflections.
- *Horn Positioning:* The waveguide horn is mounted vertically on the flange of the waveguide source to allow vertical positioning of the EUMmW probe during the scan. The plane is parallel to the phantom surface. Probe distance is verified using mechanical gauges positioned on the flare of the horn.
- *E-field distribution:* E field is measured in two x-y-plane (10mm, 10mm +  $\lambda/4$ ) with a vectorial E-field probe. The E-field value stated as calibration value represents the E-field-maxima and the averaged (1cm<sup>2</sup> and 4cm<sup>2</sup>) power density values at 10mm in front of the horn.
- *Field polarization:* Above the open horn, linear polarization of the field is expected. This is verified graphically in the field representation.

### Calibrated Quantity

- Local peak E-field (V/m) and average of peak spatial components of the poynting vector (W/m<sup>2</sup>) averaged over the surface area of 1 cm<sup>2</sup> and 4cm<sup>2</sup> at the nominal operational frequency of the verification source. Both square and circular averaging results are listed.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.



**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY8 Module mmWave	V3.2
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
Number of measured planes	2 (10mm, 10mm + $\lambda/4$ )	
Frequency	10 GHz $\pm$ 10 MHz	

**Calibration Parameters, 10 GHz**

**Circular Averaging**

Distance Horn Aperture to Measured Plane	Prad <sup>1</sup> (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density Avg (psPDn+, psPDtot+, psPDmod+) (W/m <sup>2</sup> )		Uncertainty (k = 2)
				1 cm <sup>2</sup>	4 cm <sup>2</sup>	
10 mm	93.3	155	1.27 dB	62.1	57.8	1.28 dB

Distance Horn Aperture to Measured Plane	Prad <sup>1</sup> (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Power Density psPDn+, psPDtot+, psPDmod+ (W/m <sup>2</sup> )		Uncertainty (k = 2)
				1 cm <sup>2</sup>	4 cm <sup>2</sup>	
10 mm	93.3	155	1.27 dB	61.9, 62.0, 62.3	57.5, 57.8, 58.1	1.28 dB

**Square Averaging**

Distance Horn Aperture to Measured Plane	Prad <sup>1</sup> (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density Avg (psPDn+, psPDtot+, psPDmod+) (W/m <sup>2</sup> )		Uncertainty (k = 2)
				1 cm <sup>2</sup>	4 cm <sup>2</sup>	
10 mm	93.3	155	1.27 dB	62.0	57.7	1.28 dB

Distance Horn Aperture to Measured Plane	Prad <sup>1</sup> (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Power Density psPDn+, psPDtot+, psPDmod+ (W/m <sup>2</sup> )		Uncertainty (k = 2)
				1 cm <sup>2</sup>	4 cm <sup>2</sup>	
10 mm	93.3	155	1.27 dB	61.8, 62.0, 62.3	57.4, 57.7, 58.0	1.28 dB

**Max Power Density**

Distance Horn Aperture to Measured Plane	Prad <sup>1</sup> (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Max Power Density Sn, Stot,  Stot  (W/m <sup>2</sup> )	Uncertainty (k = 2)
10 mm	93.3	155	1.27 dB	63.5, 63.6, 63.6	1.28 dB

<sup>1</sup> Assessed ohmic and mismatch loss plus numerical offset: 0.30 dB

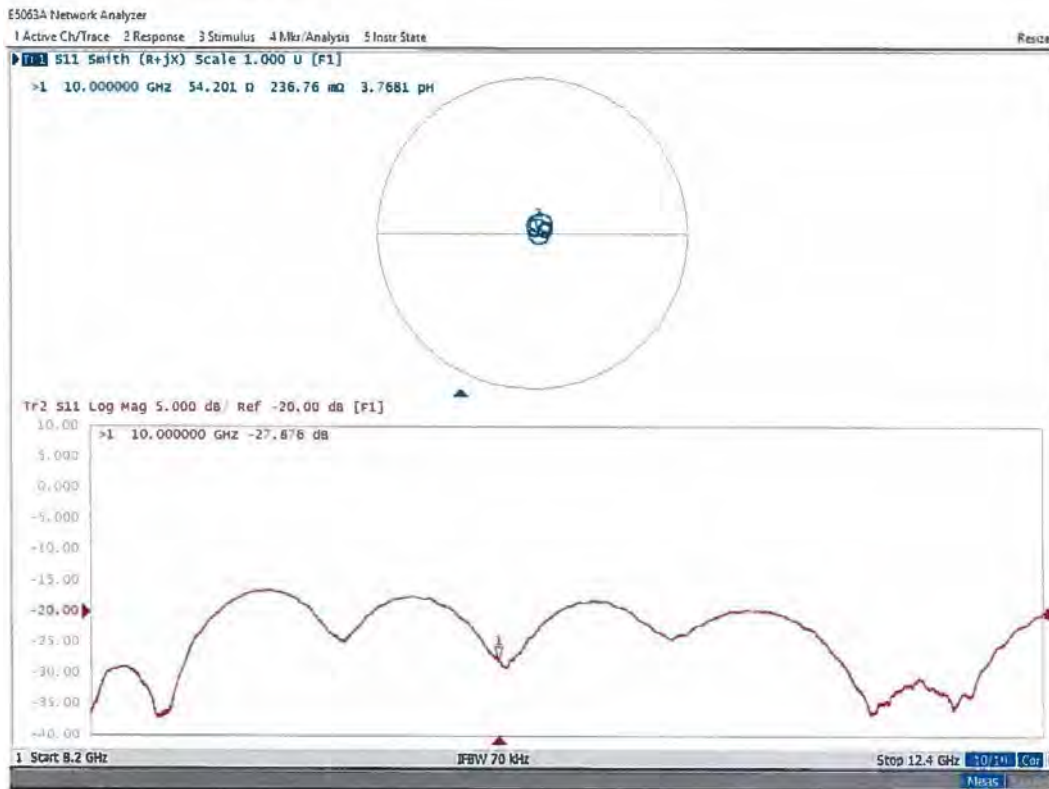


### Appendix (Additional assessments outside the scope of SCS 0108)

#### Antenna Parameters

Impedance, transformed to feed point	54.2 $\Omega$ + 0.24 j $\Omega$
Return Loss	- 27.9 dB

#### Impedance Measurement Plot







## DASY Report

### Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

#### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1053	-

#### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

#### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2023-07-05

#### Scan Setup

Sensor Surface [mm]
MAIA

5G Scan
10.0
MAIA not used

#### Measurement Results

Date	5G Scan
2023-10-27, 09:25	2023-10-27, 09:25
Avg. Area [cm <sup>2</sup> ]	1.00
Avg. Type	Circular Averaging
psPDn+ [W/m <sup>2</sup> ]	61.9
psPDtot+ [W/m <sup>2</sup> ]	62.0
psPDmod+ [W/m <sup>2</sup> ]	62.3
Max(Sn) [W/m <sup>2</sup> ]	63.5
Max(Stot) [W/m <sup>2</sup> ]	63.6
Max( Stot ) [W/m <sup>2</sup> ]	63.6
E <sub>max</sub> [V/m]	155
Power Drift [dB]	-0.02





## DASY Report

### Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

#### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1053	-

#### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

#### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2023-07-05

#### Scan Setup

Sensor Surface [mm]  
MAIA

5G Scan  
10.0  
MAIA not used

#### Measurement Results

Date  
Avg. Area [cm<sup>2</sup>]  
Avg. Type  
psPDn+ [W/m<sup>2</sup>]  
psPDtot+ [W/m<sup>2</sup>]  
psPDmod+ [W/m<sup>2</sup>]  
Max{Sn} [W/m<sup>2</sup>]  
Max{Stot} [W/m<sup>2</sup>]  
Max{|Stot|} [W/m<sup>2</sup>]  
E<sub>max</sub> [V/m]  
Power Drift [dB]

5G Scan  
2023-10-27, 09:25  
4.00  
Circular Averaging  
57.5  
57.8  
58.1  
63.5  
63.6  
63.6  
155  
-0.02







## DASY Report

### Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

#### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1053	-

#### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

#### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2023-07-05

#### Scan Setup

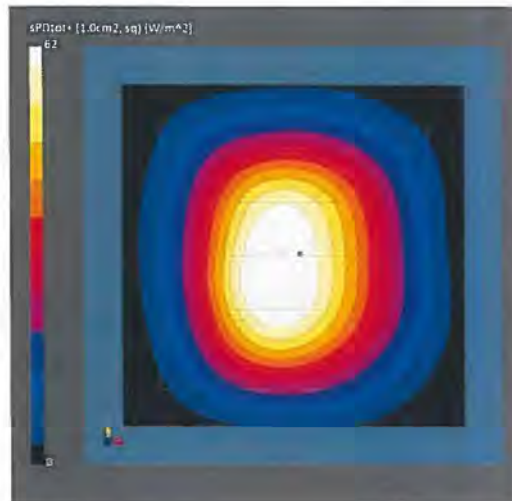
Sensor Surface [mm]
MAIA

5G Scan
10.0
MAIA not used

#### Measurement Results

Date
2023-10-27, 09:25
Avg. Area [cm <sup>2</sup> ]
1.00
Avg. Type
Square Averaging
psPDn+ [W/m <sup>2</sup> ]
61.8
psPDtot+ [W/m <sup>2</sup> ]
62.0
psPDmod+ [W/m <sup>2</sup> ]
62.3
Max(Sn) [W/m <sup>2</sup> ]
63.5
Max(Stot) [W/m <sup>2</sup> ]
63.6
Max( Stot ) [W/m <sup>2</sup> ]
63.6
E <sub>max</sub> [V/m]
155
Power Drift [dB]
-0.02

5G Scan
2023-10-27, 09:25
1.00
Square Averaging
61.8
62.0
62.3
63.5
63.6
63.6
155
-0.02



## DASY Report

### Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

#### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1053	-

#### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000 0, 10000	1.0

#### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2023-07-05

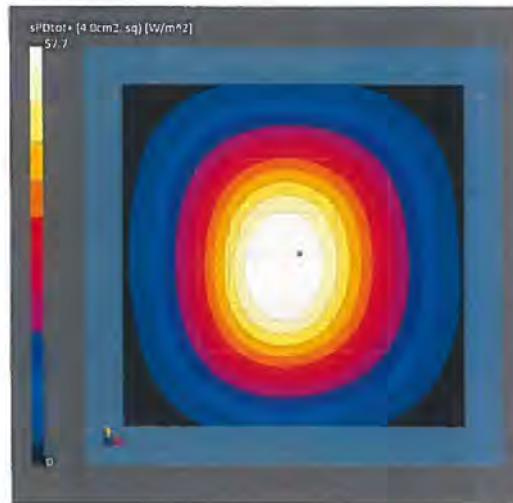
#### Scan Setup

Sensor Surface [mm]
MAIA

5G Scan
10.0
MAIA not used

#### Measurement Results

Date	5G Scan
2023-10-27, 09:25	2023-10-27, 09:25
Avg. Area [cm <sup>2</sup> ]	4.00
Avg. Type	Square Averaging
psPDn+ [W/m <sup>2</sup> ]	57.4
psPDtot+ [W/m <sup>2</sup> ]	57.7
psPDmod+ [W/m <sup>2</sup> ]	58.0
Max(Sn) [W/m <sup>2</sup> ]	63.5
Max(Stot) [W/m <sup>2</sup> ]	63.6
Max( Stot ) [W/m <sup>2</sup> ]	63.6
E <sub>max</sub> [V/m]	155
Power Drift [dB]	-0.02





## **ANNEX C**

### **TEST RESULTS**



**Measurement Report for A3114, BACK, ISM 2.4 GHz Band, IEEE 802.15.1 Bluetooth (GFSK, DH5), Channel 78 (2480.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2480.0, 78	7.22	1.86	39.5

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 20.76 deg.C 2023-Oct-25 SYS3 B3.prn, 2023-Oct-25	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-26, 11:39	2023-10-26, 11:51
psSAR1g [W/Kg]	0.407	0.430
psSAR10g [W/Kg]	0.188	0.192
Power Drift [dB]	0.03	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.1
Dist 3dB Peak [mm]		7.3

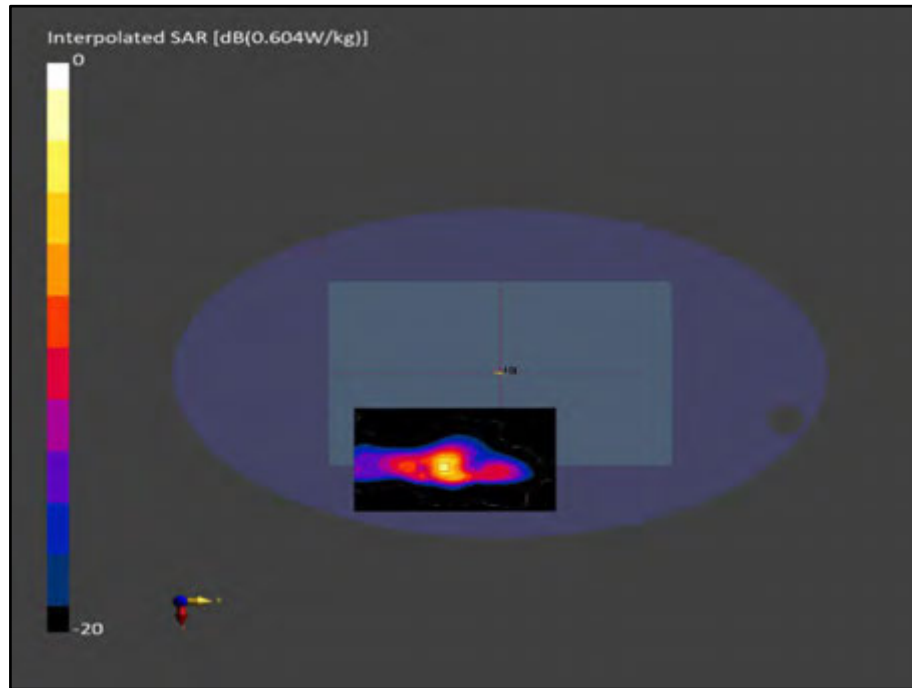


Figure C.1: SAR Testing Results for the A3114 at 2480 MHz Core 0



## Measurement Report for A3114, BACK, ISM 2.4 GHz Band, IEEE 802.15.1 Bluetooth (GFSK, DH5), Channel 0 (2402.0 MHz)

### Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

### Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2402.0, 0	7.22	1.80	39.6

### Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 20.76 deg.C 2023-Oct-25 SYS3 B3.prn, 2023-Oct-25	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

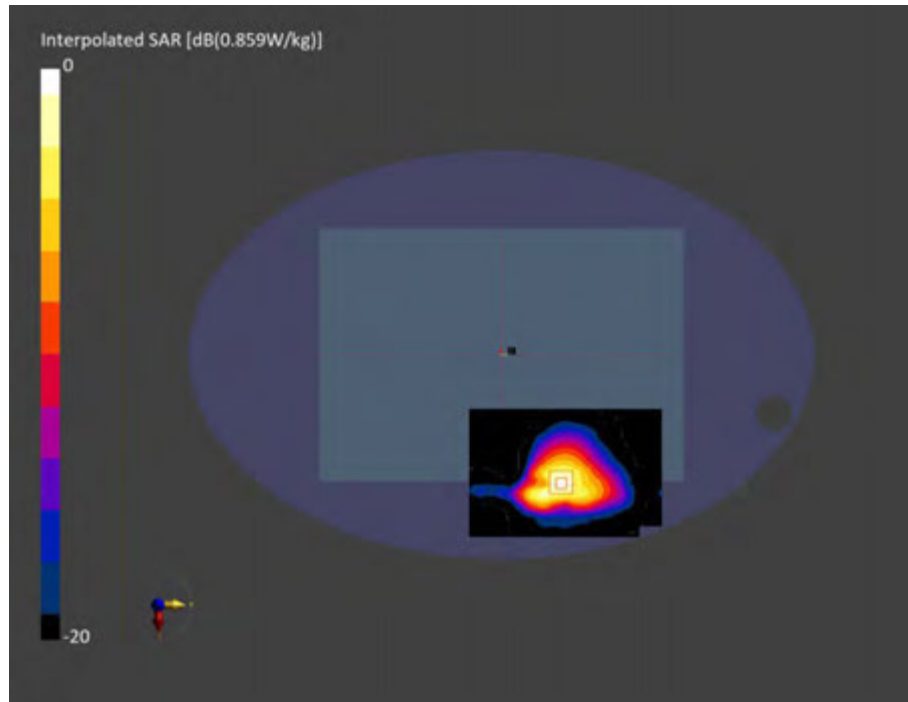
### Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

### Measurement Results

	Area Scan	Zoom Scan
Date	2023-10-26, 12:41	2023-10-26, 12:52
psSAR1g [W/Kg]	0.332	0.368
psSAR10g [W/Kg]	0.154	0.161
Power Drift [dB]	0.09	0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.8
Dist 3dB Peak [mm]		8.0





**Figure C.2: SAR Testing Results for the A3114 at 2402 MHz Core 1**



**Measurement Report for A3114, BACK, ISM 2.4 GHz Band, IEEE 802.15.1 Bluetooth (GFSK, DH5), Channel 78 (2480.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2480.0, 78	7.22	1.86	39.5

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 20.76 deg.C 2023-Oct-25 SYS3 B3.prn, 2023-Oct-25	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-26, 11:39	2023-10-26, 11:51
psSAR1g [W/Kg]	0.407	0.430
psSAR10g [W/Kg]	0.188	0.192
Power Drift [dB]	0.03	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.1
Dist 3dB Peak [mm]		7.3

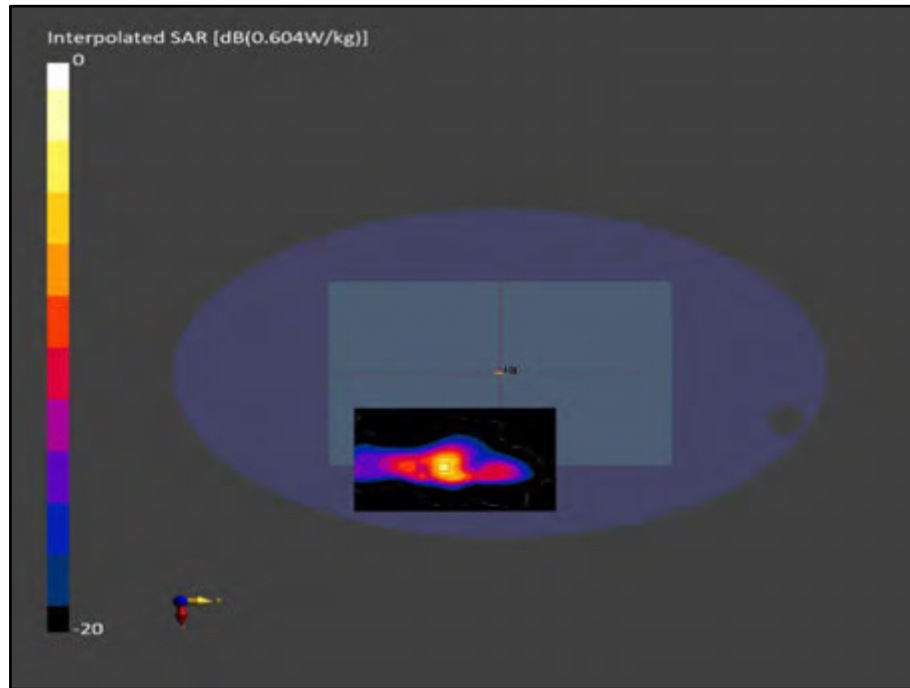


Figure C.3: SAR Testing Results for the A3114 at 2480 MHz Core 0



**Measurement Report for A3114, BACK, ISM 2.4 GHz Band, IEEE 802.15.1 Bluetooth (GFSK, DH5), Channel 0 (2402.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2402.0, 0	7.22	1.80	39.6

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 20.76 deg.C 2023-Oct-25 SYS3 B3.prn, 2023-Oct-25	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-26, 12:41	2023-10-26, 12:52
psSAR1g [W/Kg]	0.332	0.368
psSAR10g [W/Kg]	0.154	0.161
Power Drift [dB]	0.09	0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.8
Dist 3dB Peak [mm]		8.0

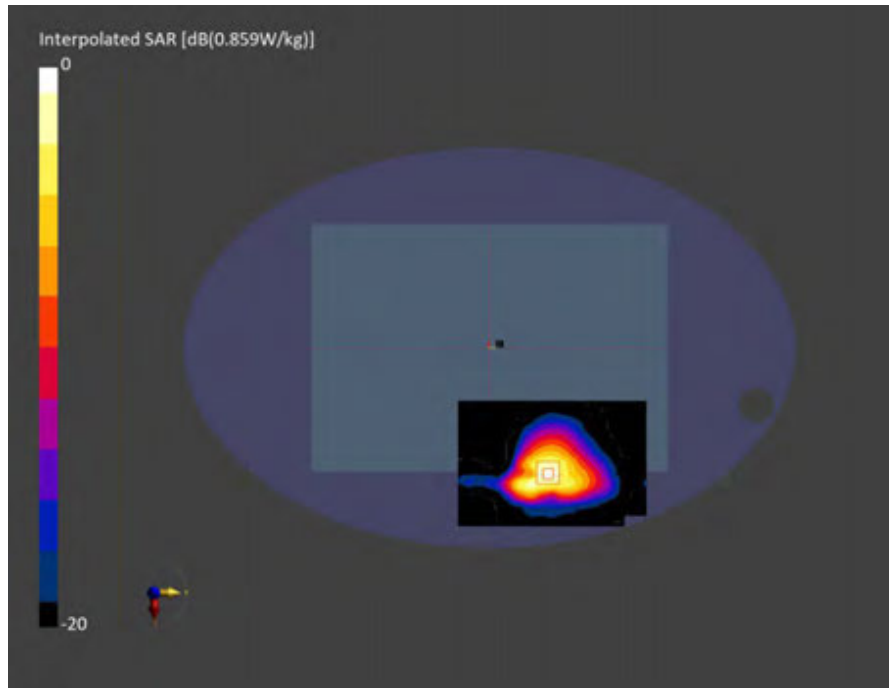


Figure C.4: SAR Testing Results for the A3114 at 2402 MHz Core 1



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 5250000 (5250.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	5250.0, 5250000	5.53	4.47	33.7

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.06 deg.C 2023-Oct-27 SYS6 B6.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

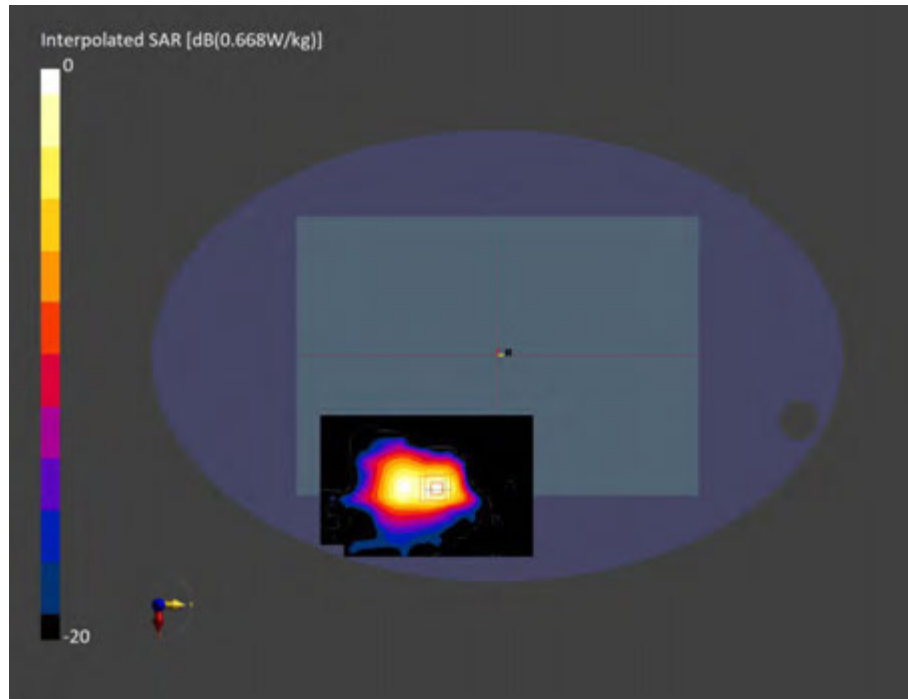
**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-27, 13:38	2023-10-27, 13:45
psSAR1g [W/Kg]	0.155	0.171
psSAR10g [W/Kg]	0.057	0.058
Power Drift [dB]	-0.00	0.15
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.1
Dist 3dB Peak [mm]		7.9





**Figure C.5: SAR Testing Results for the A3114 at 5250 MHz Core 0**



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 5150000 (5150.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	5150.0, 5150000	5.53	4.36	33.9

**Hardware Setup**

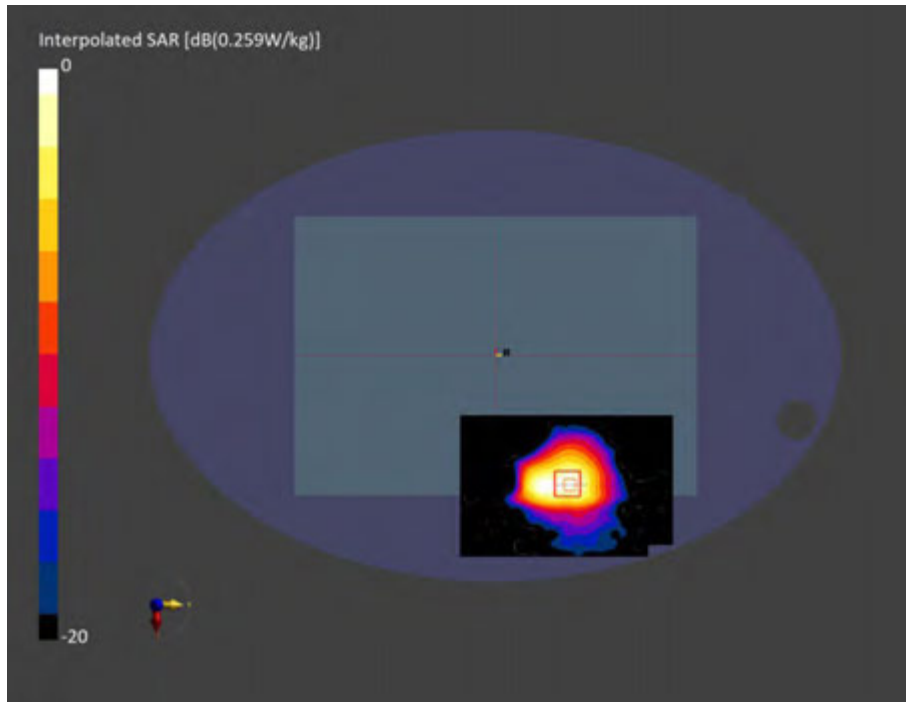
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.06 deg.C 2023-Oct-27 SYS6 B6.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-27, 13:59	2023-10-27, 14:08
psSAR1g [W/Kg]	0.186	0.202
psSAR10g [W/Kg]	0.073	0.075
Power Drift [dB]	-0.05	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		63.2
Dist 3dB Peak [mm]		8.0



**Figure C.6: SAR Testing Results for the A3114 at 5150 MHz Core 1**



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 5850000 (5850.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	5850.0, 5850000	4.83	5.13	32.7

**Hardware Setup**

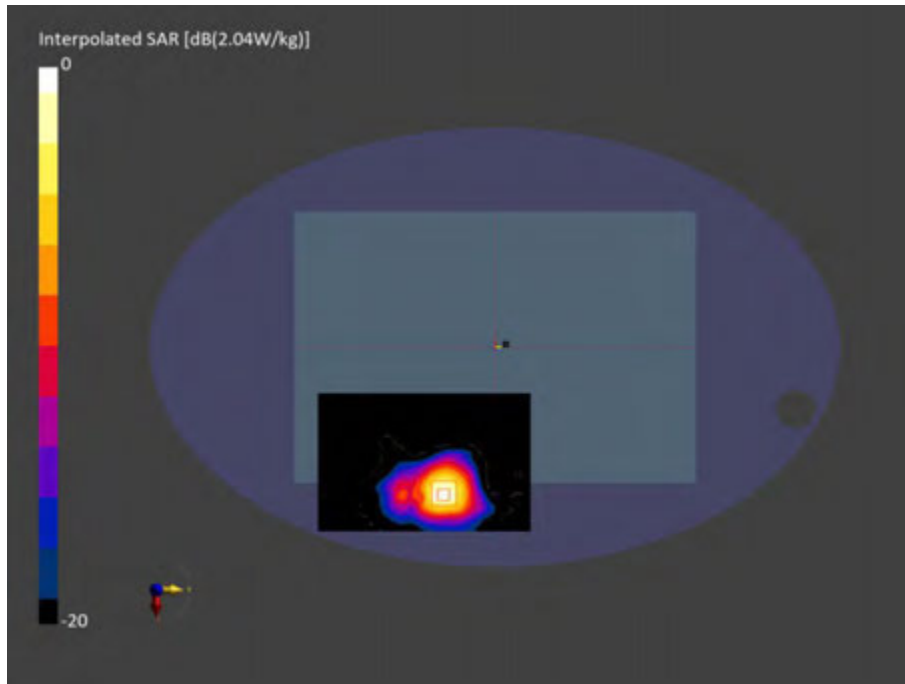
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.06 deg.C 2023-Oct-27 SYS6 B6.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-28, 02:12	2023-10-28, 02:21
psSAR1g [W/Kg]	0.473	0.482
psSAR10g [W/Kg]	0.160	0.157
Power Drift [dB]	0.05	-0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		58.4
Dist 3dB Peak [mm]		7.2



**Figure C.7: SAR Testing Results for the A3114 at 5850 MHz Core 0**



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 5850000 (5850.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	5850.0, 5850000	4.83	5.13	32.7

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.06 deg.C 2023-Oct-27 SYS6 B6.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

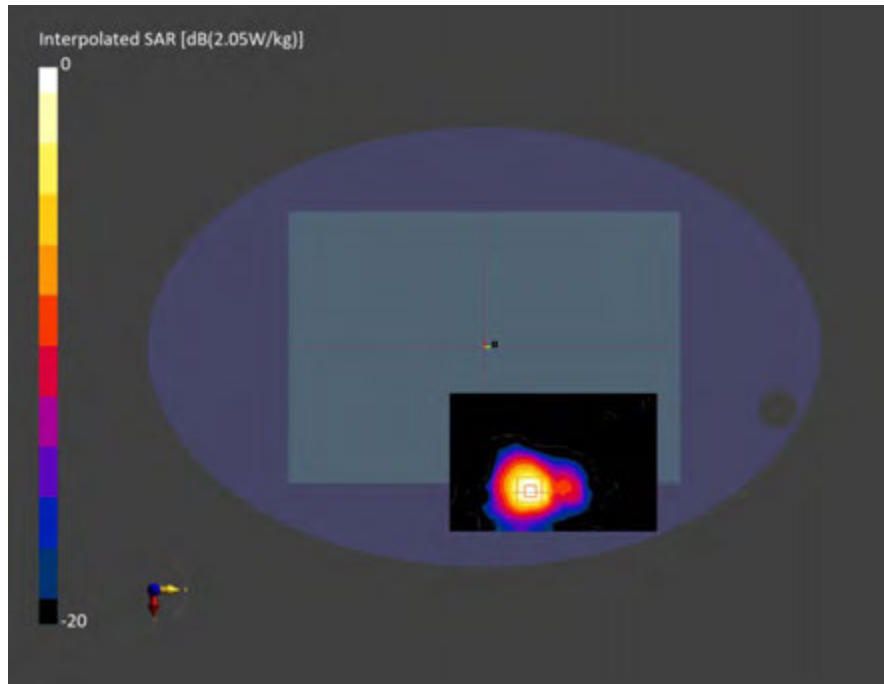
**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-28, 03:20	2023-10-28, 03:31
psSAR1g [W/Kg]	0.484	0.495
psSAR10g [W/Kg]	0.171	0.165
Power Drift [dB]	-0.10	-0.12
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		58.9
Dist 3dB Peak [mm]		7.9





**Figure C.8: SAR Testing Results for the A3114 at 5850 MHz Core 1**



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 5850000 (5850.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	5850.0, 5850000	4.83	5.13	32.7

**Hardware Setup**

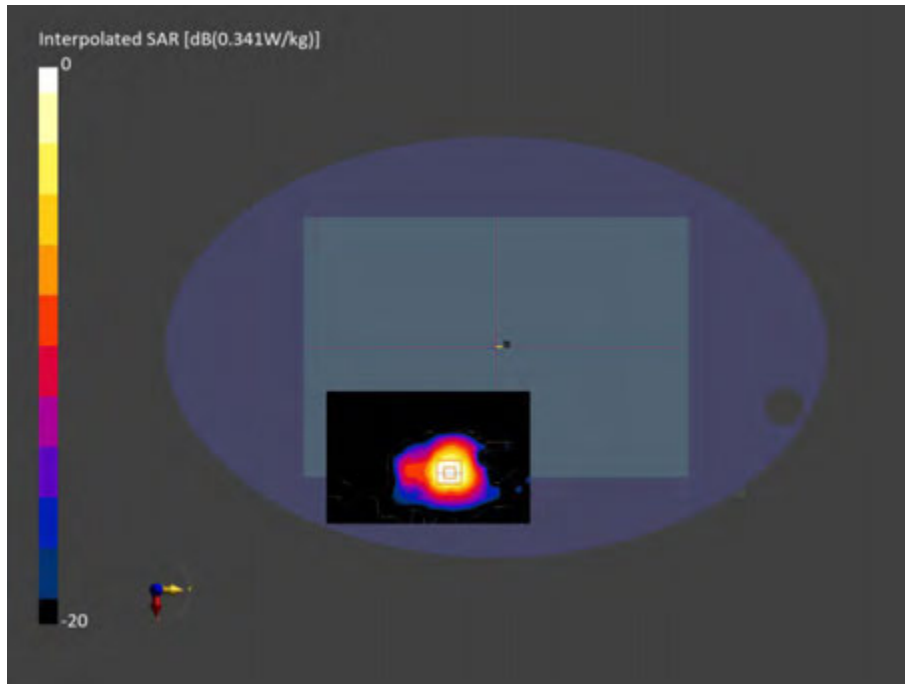
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.06 deg.C 2023-Oct-27 SYS6 B6.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-28, 05:23	2023-10-28, 05:31
psSAR1g [W/Kg]	0.299	0.329
psSAR10g [W/Kg]	0.106	0.106
Power Drift [dB]	0.19	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		57.1
Dist 3dB Peak [mm]		7.2



**Figure C.9: SAR Testing Results for the A3114 at 5850 MHz Core 0**



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 5850000 (5850.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	5850.0, 5850000	4.83	5.13	32.7

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.06 deg.C 2023-Oct-27 SYS6 B6.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-28, 07:03	2023-10-28, 07:12
psSAR1g [W/Kg]	0.292	0.329
psSAR10g [W/Kg]	0.103	0.107
Power Drift [dB]	-0.07	0.14
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		57.4
Dist 3dB Peak [mm]		7.2

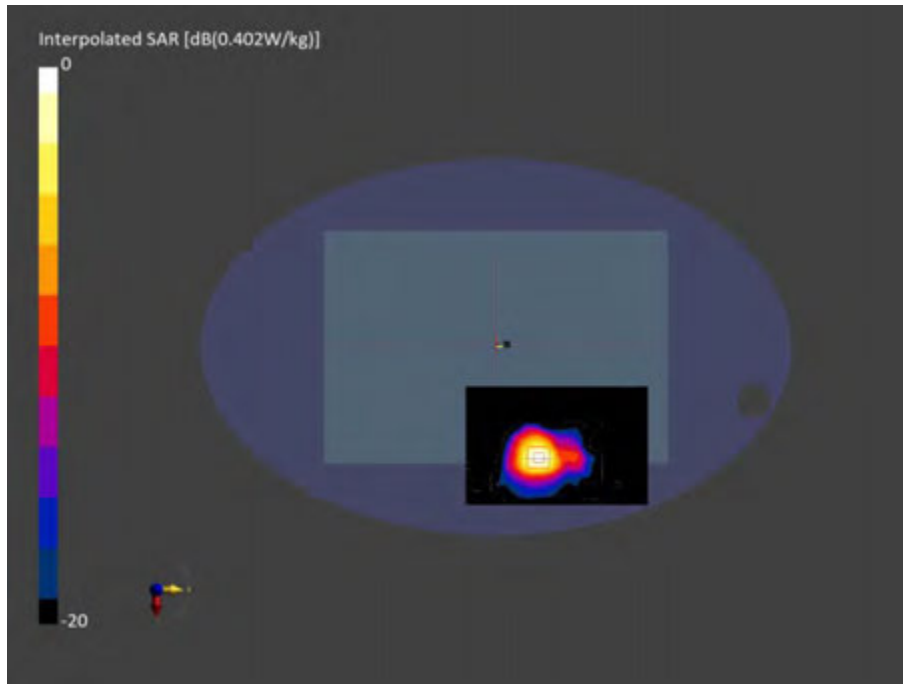


Figure C.10: SAR Testing Results for the A3114 at 5850 MHz Core 1



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 2405000 (2405.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	2405.0, 2405000	7.22	1.81	39.6

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 20.76 deg.C 2023-Oct-25 SYS3 B3.prn, 2023-Oct-25	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 160.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-26, 15:26	2023-10-26, 15:38
psSAR1g [W/Kg]	0.281	0.295
psSAR10g [W/Kg]	0.129	0.130
Power Drift [dB]	0.01	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.2
Dist 3dB Peak [mm]		7.7



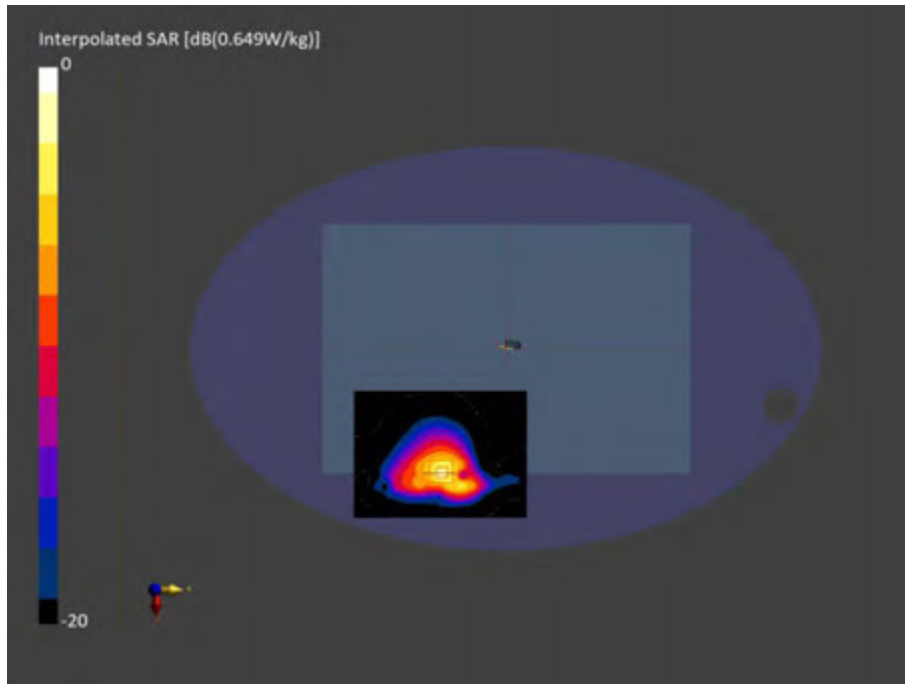


Figure C.11: SAR Testing Results for the A3114 at 2405 MHz Core 0



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 2440000 (2440.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	2440.0, 2440000	7.22	1.80	38.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 21.08 deg.C 2023-Oct-27 SYS3 B3.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-27, 18:31	2023-10-27, 18:42
psSAR1g [W/Kg]	0.241	0.254
psSAR10g [W/Kg]	0.112	0.114
Power Drift [dB]	-0.08	-0.12
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.5
Dist 3dB Peak [mm]		8.0

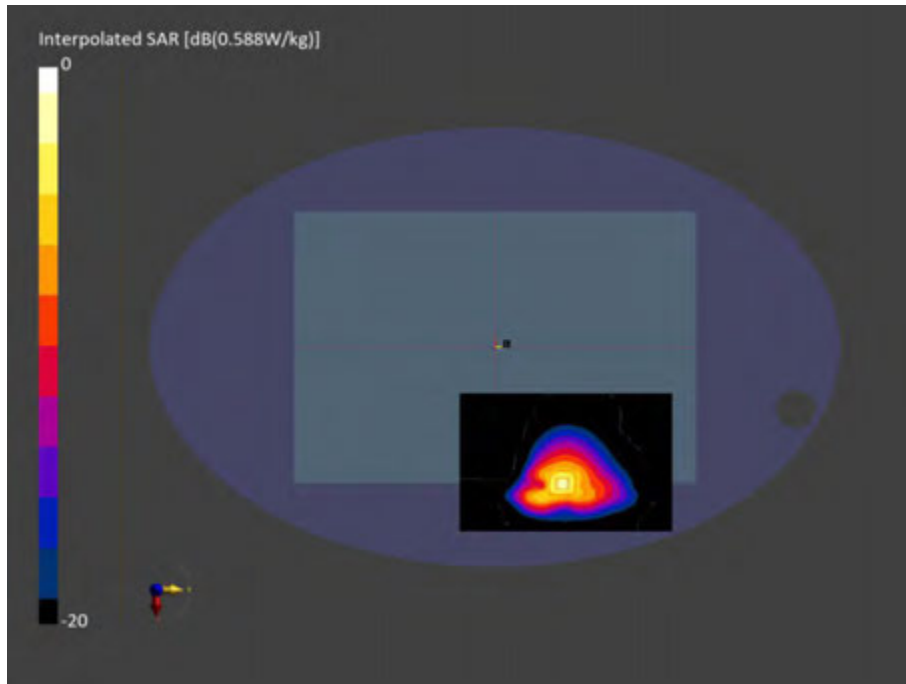


Figure C.12: SAR Testing Results for the A3114 at 2440 MHz Core 1



**Measurement Report for A3114, BACK, Custom Band, CW, Channel 2440000 (2440.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	2440.0, 2440000	7.22	1.80	38.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 21.08 deg.C 2023-Oct-27 SYS3 B3.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-27, 21:00	2023-10-27, 21:12
psSAR1g [W/Kg]	0.192	0.204
psSAR10g [W/Kg]	0.090	0.090
Power Drift [dB]	0.02	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		77.5
Dist 3dB Peak [mm]		7.1

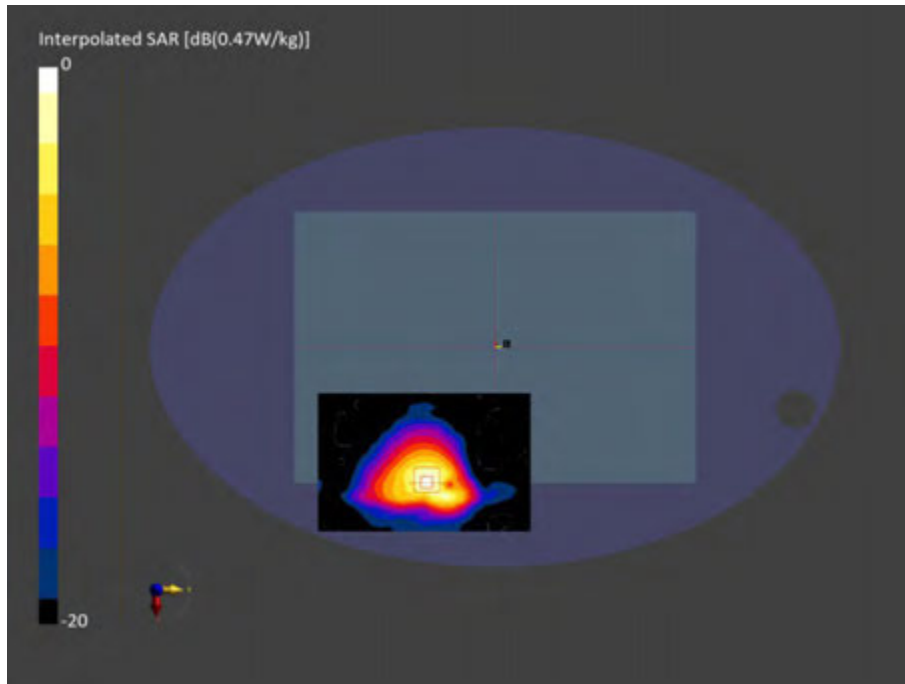


Figure C.13: SAR Testing Results for the A3114 at 2440 MHz Core 0



### Measurement Report for A3114, BACK, Custom Band, CW, Channel 2440000 (2440.0 MHz)

#### Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

#### Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Custom Band	CW, 0--	2440.0, 2440000	7.22	1.80	38.9

#### Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 21.08 deg.C 2023-Oct-27 SYS3 B3.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

#### Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

#### Measurement Results

	Area Scan	Zoom Scan
Date	2023-10-27, 19:48	2023-10-27, 19:59
psSAR1g [W/Kg]	0.181	0.192
psSAR10g [W/Kg]	0.084	0.086
Power Drift [dB]	-0.02	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		78.2
Dist 3dB Peak [mm]		8.0

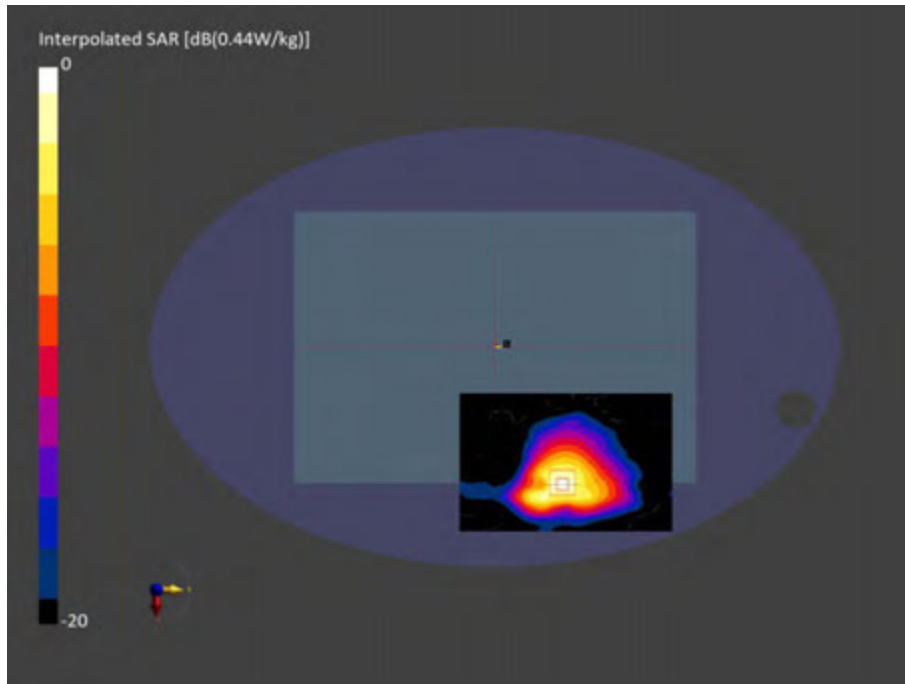


Figure C.14: SAR Testing Results for the A3114 at 2440 MHz Core 1





**Measurement Report for A3114, BACK, WLAN 2.4GHz, IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle), Channel 6 (2437.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 2.4GHz	WLAN, 10416-AAA	2437.0, 6	7.22	1.80	38.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 21.08 deg.C 2023-Oct-27 SYS3 B3.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-28, 11:45	2023-10-28, 11:56
psSAR1g [W/Kg]	0.694	0.731
psSAR10g [W/Kg]	0.322	0.326
Power Drift [dB]	0.00	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		76.9
Dist 3dB Peak [mm]		7.3

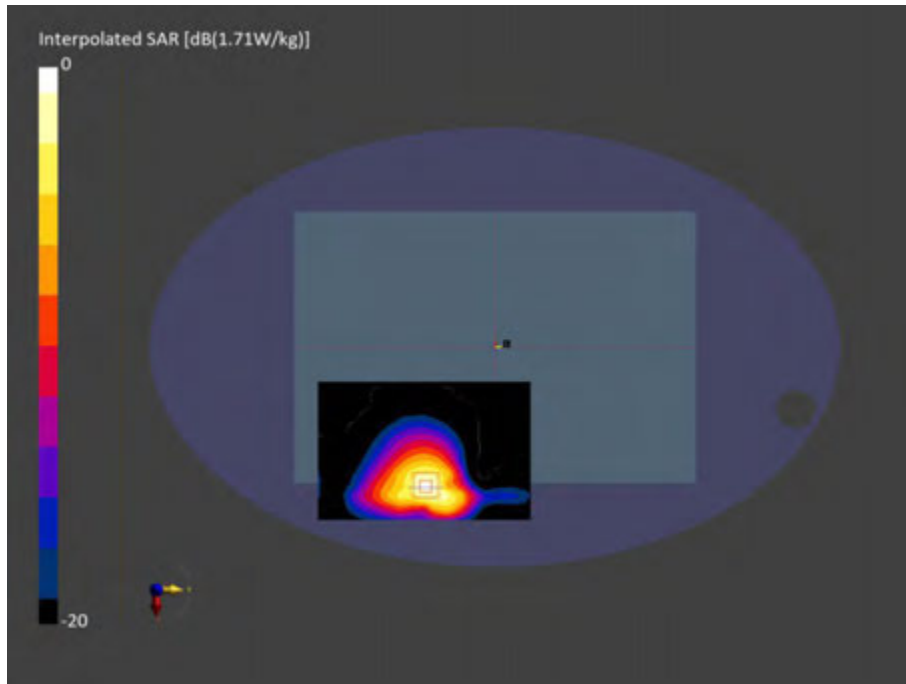


Figure C.15: SAR Testing Results for the A3114 at 2437 MHz Core 0



**Measurement Report for A3114, BACK, WLAN 2.4GHz, IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle), Channel 10 (2457.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 2.4GHz	WLAN, 10416-AAA	2457.0, 10	7.22	1.81	38.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 21.08 deg.C 2023-Oct-27 SYS3 B3.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-28, 13:49	2023-10-28, 14:01
psSAR1g [W/Kg]	0.651	0.720
psSAR10g [W/Kg]	0.316	0.323
Power Drift [dB]	0.00	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		76.6
Dist 3dB Peak [mm]		7.0

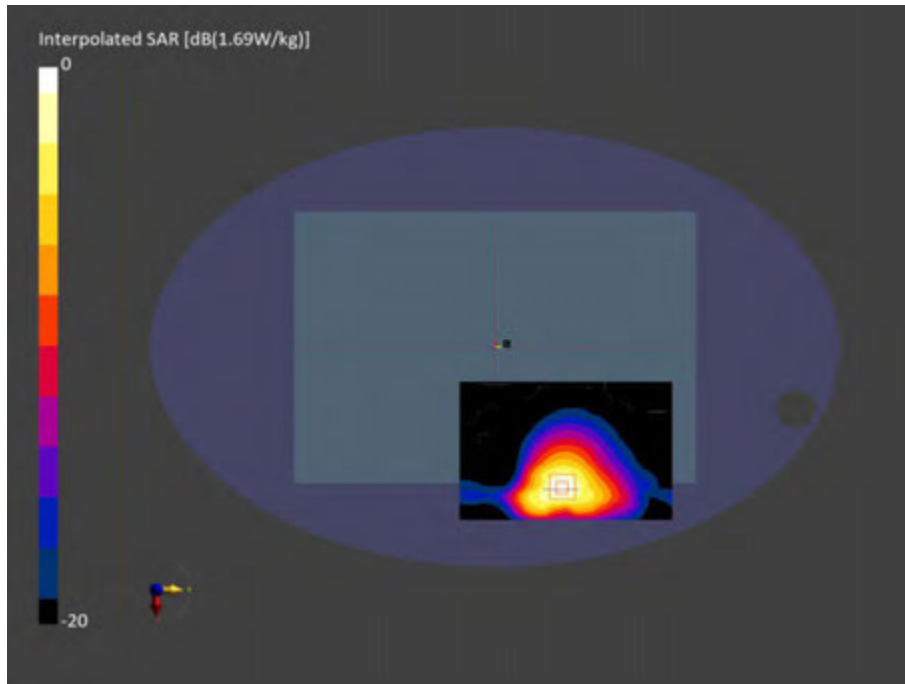


Figure C.16: SAR Testing Results for the A3114 at 2457 MHz Core 1



**Measurement Report for A3114, BACK, WLAN 2.4GHz, IEEE 802.11n  
 (HT Greenfield, 6.5 Mbps, BPSK), Channel 6 (2437.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 2.4GHz	WLAN, 10193-CAD	, 6	7.22	1.80	38.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2102	HBBL-600-10000 DAK 3.5 Head 21.08 deg.C 2023-Oct-27 SYS3 B3.prn, 2023-Oct-27	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 260.0	30.0 x 30.0 x 30.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	n/a	Yes	Yes
Grading Ratio	n/a	1.5	1.5
MAIA	N/A	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-10-28, 19:50	2023-10-28, 20:02	2023-10-28, 20:13
psSAR1g [W/Kg]	0.578	0.604	0.626
psSAR10g [W/Kg]	0.275	0.272	0.281
Power Drift [dB]	0.01	0.02	0.03
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	Positive only	Positive only	Positive only
M2/M1 [%]		77.7	78.0
Dist 3dB Peak [mm]		7.3	8.0

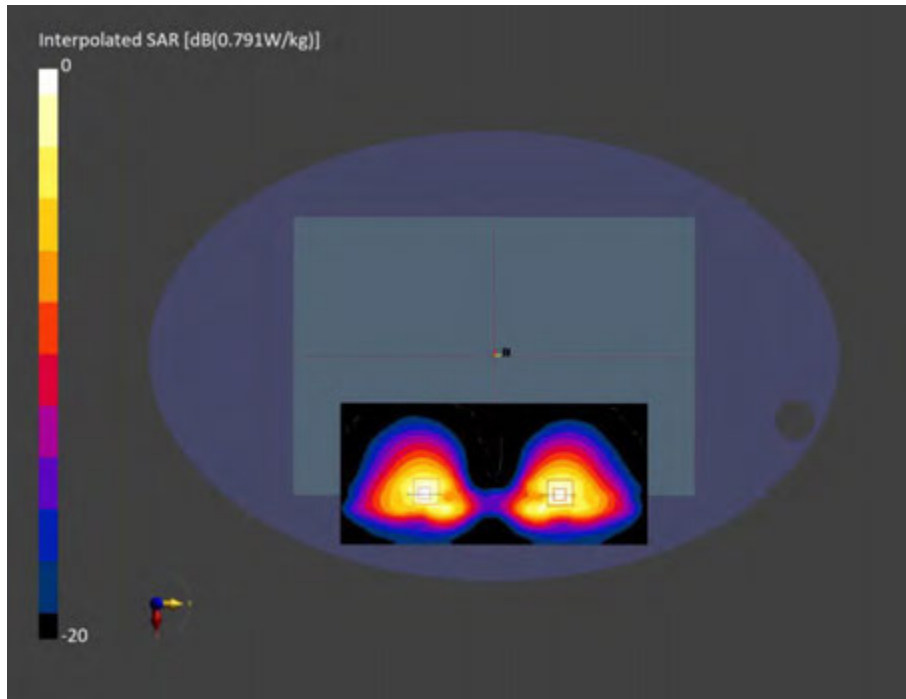


Figure C.17: SAR Testing Results for the A3113 at 2437 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, WLAN 5GHz, IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK), Channel 46 (5230.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5GHz	WLAN, 10114-CAD	5230.0, 46	5.53	4.50	33.5

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 18.97 deg.C 2023-Nov-28 SYS6 B6.prn, 2023-Nov-28	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-11-29, 09:29	2023-11-29, 09:41
psSAR1g [W/Kg]	0.504	0.548
psSAR10g [W/Kg]	0.190	0.192
Power Drift [dB]	-0.01	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.6
Dist 3dB Peak [mm]		7.4



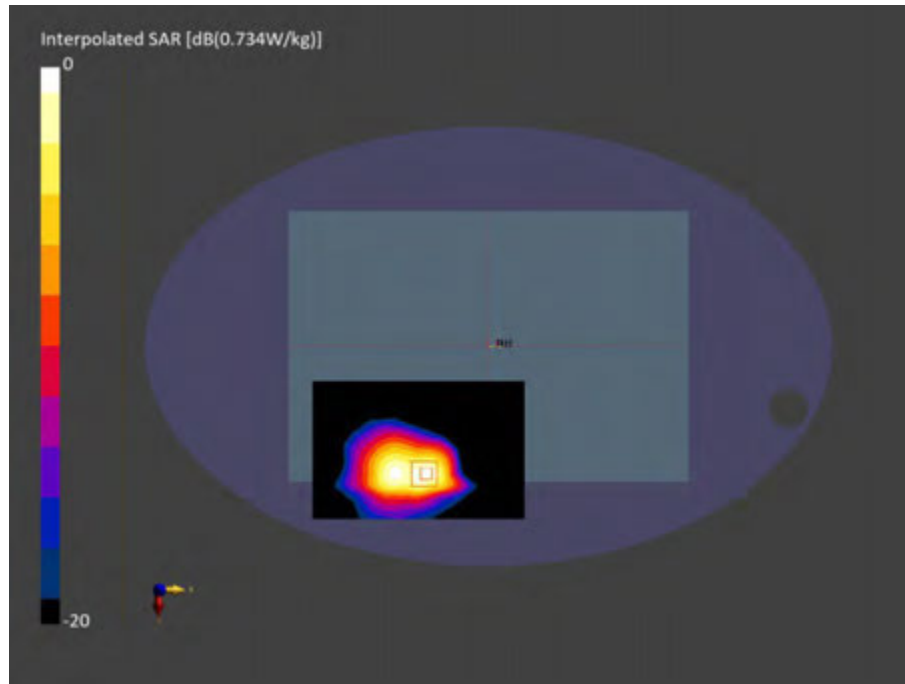


Figure C.18: SAR Testing Results for the A3114 at 5230 MHz Core 0



**Measurement Report for A3114, BACK, WLAN 5GHz, IEEE 802.11n  
 (HT Greenfield, 13.5 Mbps, BPSK), Channel 46 (5230.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5GHz	WLAN, 10114-CAD	5230.0, 46	5.53	4.50	33.5

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 18.97 deg.C 2023-Nov-28 SYS6 B6.prn, 2023-Nov-28	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-11-29, 10:16	2023-11-29, 10:25
psSAR1g [W/Kg]	0.536	0.565
psSAR10g [W/Kg]	0.192	0.196
Power Drift [dB]	-0.08	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.1
Dist 3dB Peak [mm]		7.2

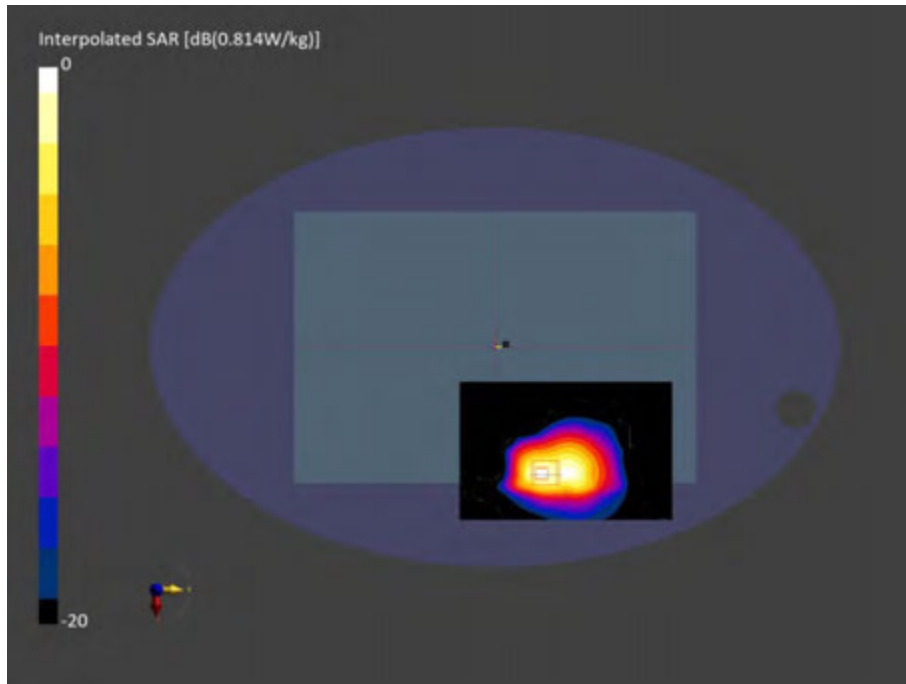


Figure C.19: SAR Testing Results for the A3114 at 5230 MHz Core 1



**Measurement Report for A3114, BACK, WLAN 5 GHz, IEEE 802.11n  
 (HT Greenfield, 13.5 Mbps, BPSK), Channel 46 (5230.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5 GHz	WLAN, 10114-CAD	, 46	5.53	4.47	34.4

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.7 deg.C 2023-Oct-31 SYS5 B5.prn, 2023-Oct-31	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 260.0	22.0 x 22.0 x 22.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	n/a	Yes	Yes
Grading Ratio	n/a	1.4	1.4
MAIA	Y	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-10-31, 20:44	2023-10-31, 20:53	2023-10-31, 21:05
psSAR1g [W/Kg]	0.538	0.580	0.570
psSAR10g [W/Kg]	0.205	0.202	0.200
Power Drift [dB]	-0.01	-0.03	-0.03
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	Positive only	Positive only	Positive only
M2/M1 [%]		61.6	62.1
Dist 3dB Peak [mm]		7.3	7.6

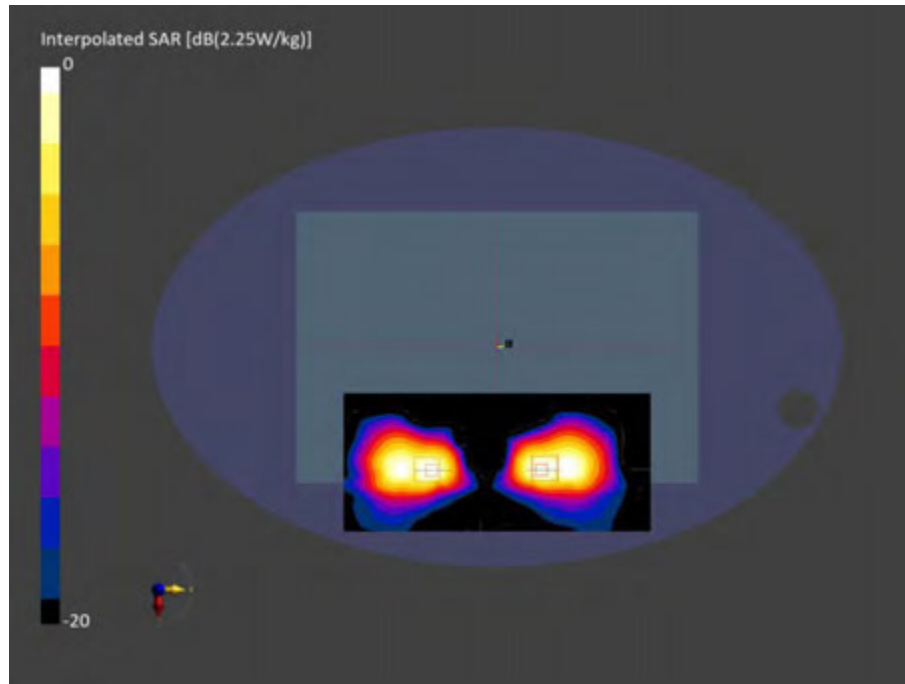


Figure C.20: SAR Testing Results for the A3114 at 5230 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, U-NII-1, U-NII-2A, IEEE 802.11n  
 (HT Mixed, 13.5 Mbps, BPSK), Channel 54 (5270.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-1, U-NII-2A	WLAN, 10117-CAD	5270.0, 54	5.27	4.45	33.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-29, 11:15	2023-10-29, 11:24
psSAR1g [W/Kg]	0.510	0.568
psSAR10g [W/Kg]	0.195	0.198
Power Drift [dB]	-0.01	-0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.5
Dist 3dB Peak [mm]		7.3

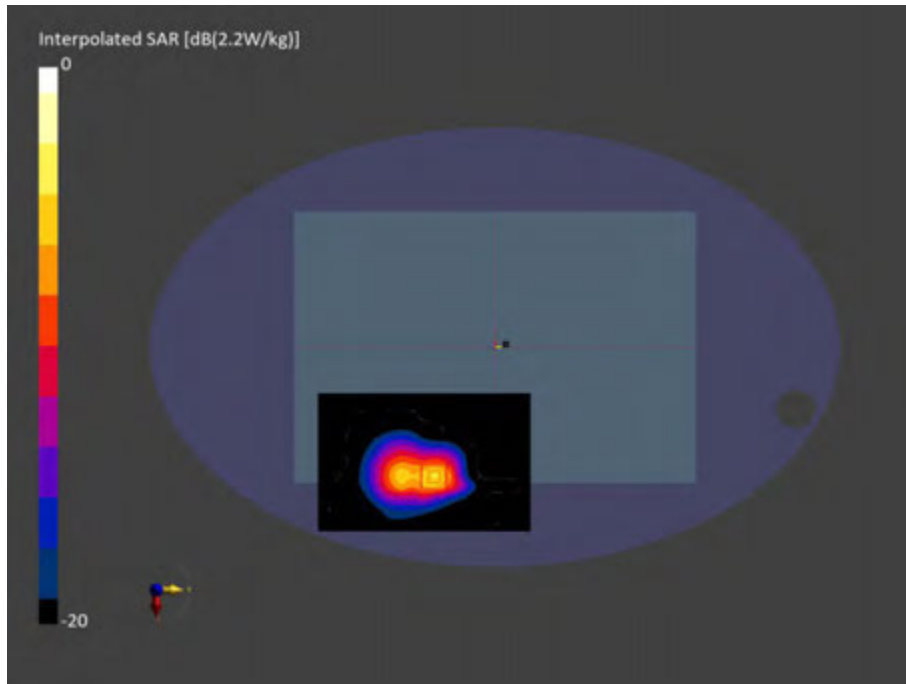


Figure C.21: SAR Testing Results for the A3114 at 5270 MHz Core 0





**Measurement Report for A3114, BACK, U-NII-1, U-NII-2A, IEEE 802.11n  
 (HT Mixed, 13.5 Mbps, BPSK), Channel 54 (5270.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-1, U-NII-2A	WLAN, 10117-CAD	5270.0, 54	5.27	4.45	33.9

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-29, 12:24	2023-10-29, 12:34
psSAR1g [W/Kg]	0.399	0.445
psSAR10g [W/Kg]	0.147	0.154
Power Drift [dB]	0.05	0.13
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.6
Dist 3dB Peak [mm]		7.2

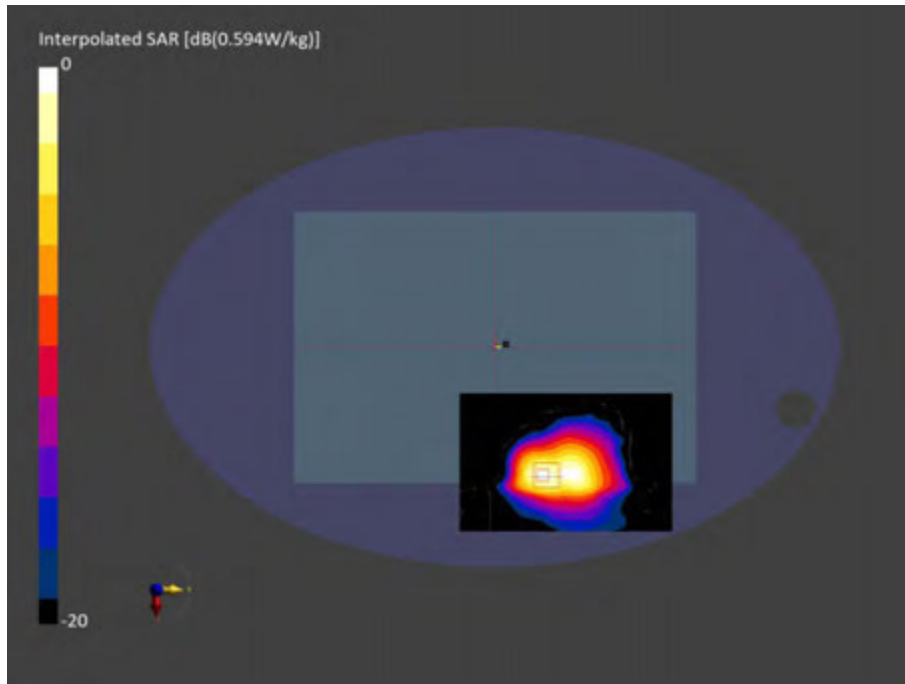


Figure C.22: SAR Testing Results for the A3114 at 5270 MHz Core 1



**Measurement Report for A3114, BACK, WLAN 5 GHz, IEEE 802.11n  
 (HT Greenfield, 13.5 Mbps, BPSK), Channel 54 (5270.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5 GHz	WLAN, 10114-CAD	, 54	5.27	4.51	34.3

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.7 deg.C 2023-Oct-31 SYS5 B5.pn, 2023-Oct-31	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 260.0	22.0 x 22.0 x 22.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	n/a	Yes	Yes
Grading Ratio	n/a	1.4	1.4
MAIA	Y	N/A	N/A
Surface Detection	All points	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-10-31, 21:39	2023-10-31, 21:51	2023-10-31, 22:00
psSAR1g [W/Kg]	0.544	0.632	0.549
psSAR10g [W/Kg]	0.203	0.216	0.188
Power Drift [dB]	-0.02	-0.03	-0.04
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	Positive only	Positive only	Positive only
M2/M1 [%]		62.4	61.5
Dist 3dB Peak [mm]		7.4	7.4

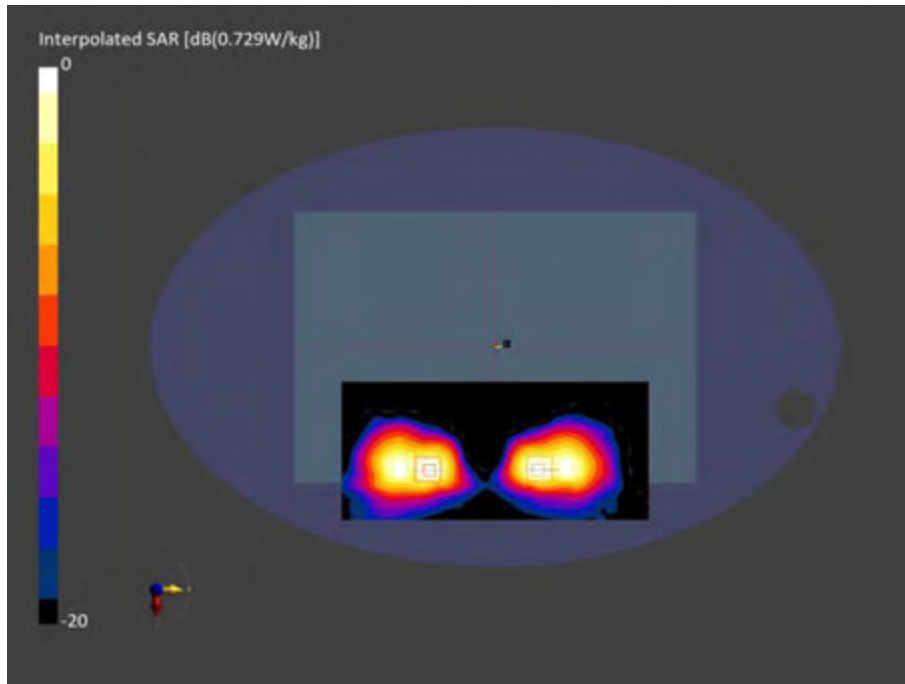


Figure C.23: SAR Testing Results for the A3114 at 5270 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, U-NII-1, U-NII-2A, IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle), Channel 64 (5320.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-1, U-NII-2A	WLAN, 10417-AAC	5320.0, 64	5.27	4.50	33.8

**Hardware Setup**

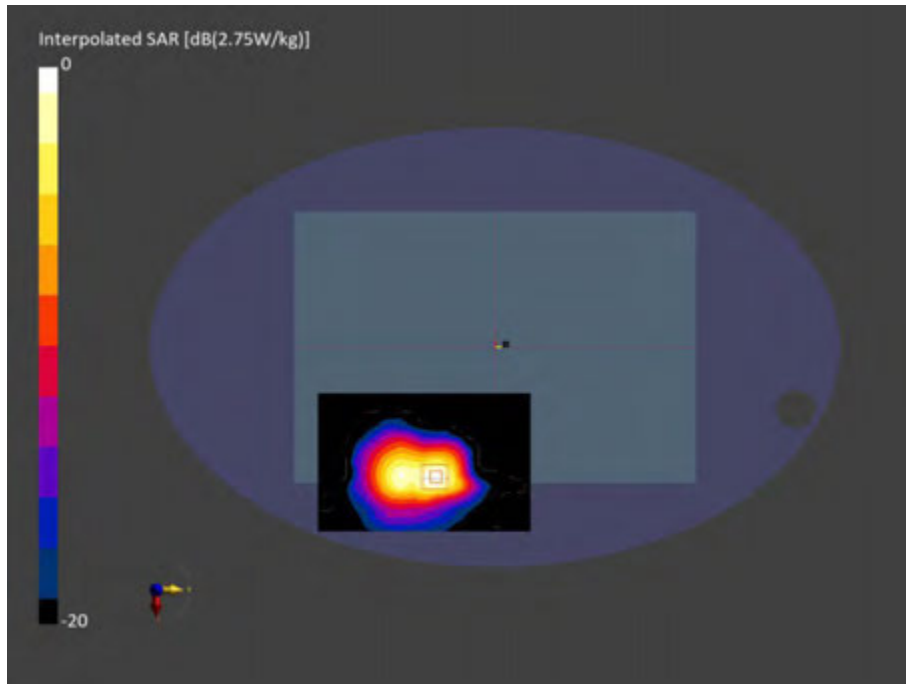
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-29, 11:55	2023-10-29, 12:03
psSAR1g [W/Kg]	0.631	0.717
psSAR10g [W/Kg]	0.237	0.248
Power Drift [dB]	0.04	-0.07
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.8
Dist 3dB Peak [mm]		8.1



**Figure C.24: SAR Testing Results for the A3114 at 5320 MHz Core 0**



**Measurement Report for A3114, BACK, U-NII-1, U-NII-2A, IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle), Channel 64 (5320.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-1, U-NII-2A	WLAN, 10417-AAC	5320.0, 64	5.27	4.50	33.8

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-29, 13:02	2023-10-29, 13:10
psSAR1g [W/Kg]	0.467	0.509
psSAR10g [W/Kg]	0.169	0.176
Power Drift [dB]	-0.01	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		61.4
Dist 3dB Peak [mm]		7.3



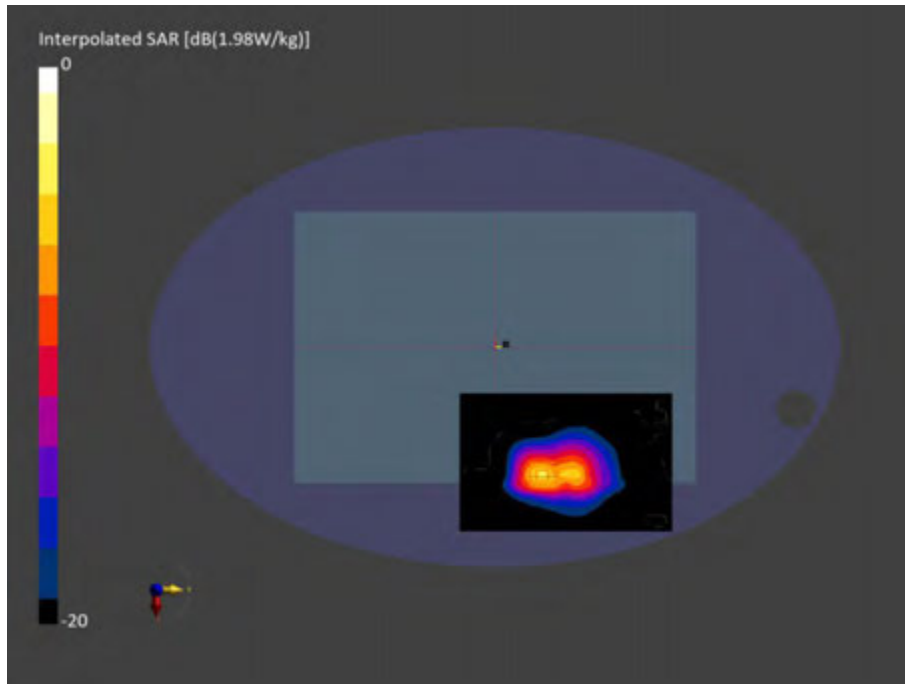


Figure C.25: SAR Testing Results for the A3114 at 5320 MHz Core 1



**Measurement Report for A3114, BACK, WLAN 5 GHz, IEEE 802.11n  
 (HT Greenfield, 13.5 Mbps, BPSK), Channel 64 (5320.000 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5 GHz	WLAN, 10114-CAD	5320.000, 64	5.27	4.56	34.2

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.7 deg.C 2023-Oct-31 SYS5 B5.pn, 2023-Oct-31	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 260.0	22.0 x 22.0 x 22.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	N/A	Yes	Yes
Grading Ratio	N/A	1.4	1.4
MAIA	Y	N/A	N/A
Surface Detection	All points	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-10-31, 23:38	2023-10-31, 23:46	2023-10-31, 23:55
psSAR1g [W/Kg]	0.522	0.594	0.469
psSAR10g [W/Kg]	0.191	0.201	0.160
Power Drift [dB]	0.00	0.01	0.00
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	No correction	No correction	No correction
M2/M1 [%]		62.3	61.8
Dist 3dB Peak [mm]		7.3	7.2

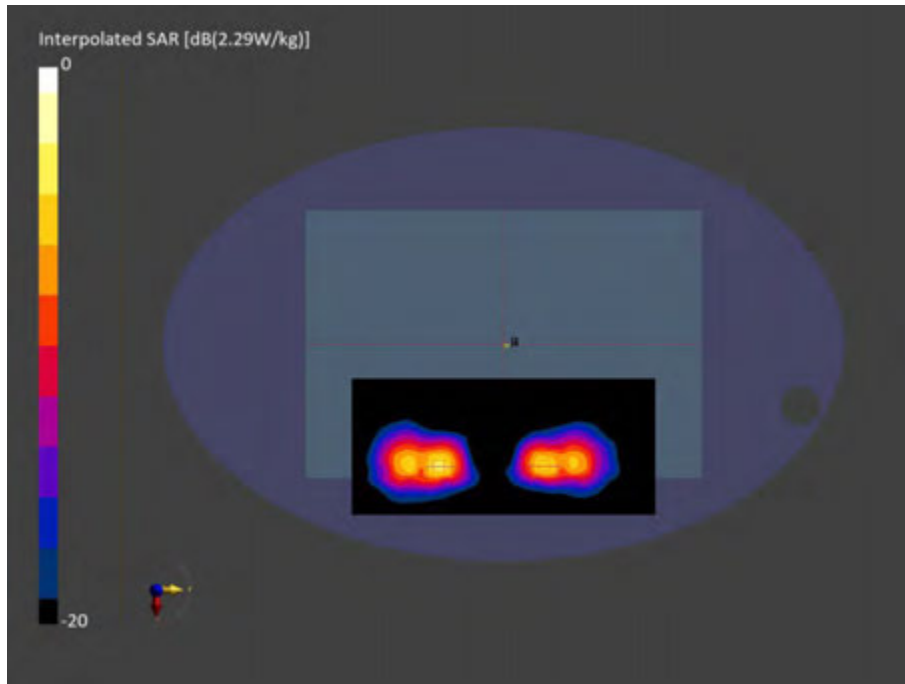


Figure C.26: SAR Testing Results for the A3114 at 5320 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, U-NII-2C < 5.65 GHz, IEEE 802.11ac WiFi (80 MHz, MCS0, 99pc duty cycle), Channel 122 (5610.000 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-2C < 5.65 GHz	WLAN, 10544-AAC	5610.000, 122	4.75	4.81	33.3

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-30, 01:42	2023-10-30, 01:49
psSAR1g [W/Kg]	0.621	0.686
psSAR10g [W/Kg]	0.226	0.236
Power Drift [dB]	0.02	-0.10
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		60.9
Dist 3dB Peak [mm]		7.3

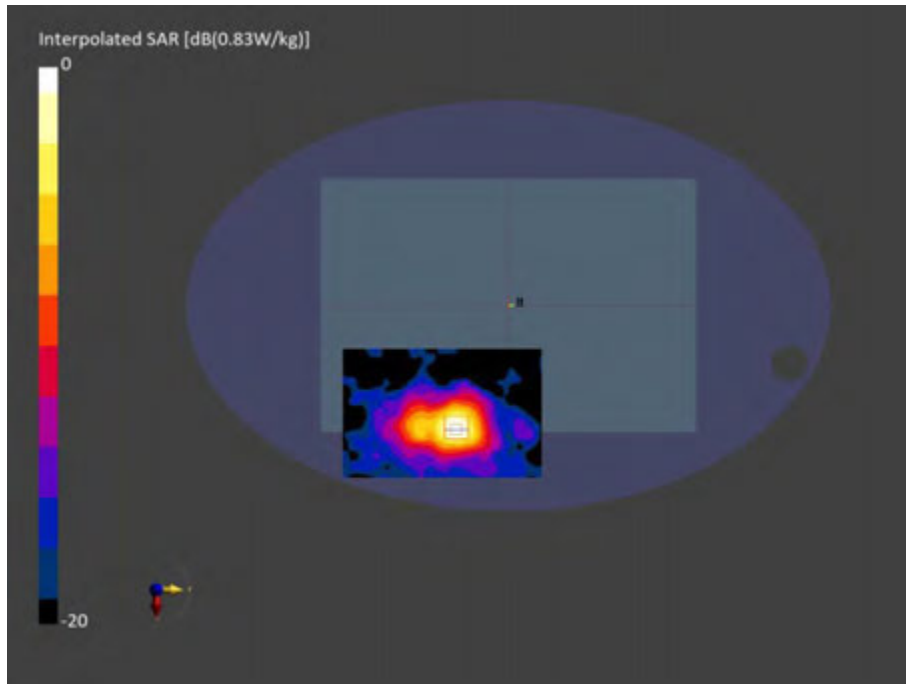


Figure C.27: SAR Testing Results for the A3114 at 5610 MHz Core 0



**Measurement Report for A3114, BACK, U-NII-2C, U-NII-3, IEEE 802.11ac WiFi  
 (80 MHz, MCS0, 99pc duty cycle), Channel 138 (5690.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-2C, U-NII-3	WLAN, 10544-AAC	5690.0, 138	4.75	4.90	33.2

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-30, 03:19	2023-10-30, 03:27
psSAR1g [W/Kg]	0.498	0.564
psSAR10g [W/Kg]	0.180	0.200
Power Drift [dB]	0.01	-0.14
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		59.0
Dist 3dB Peak [mm]		8.0

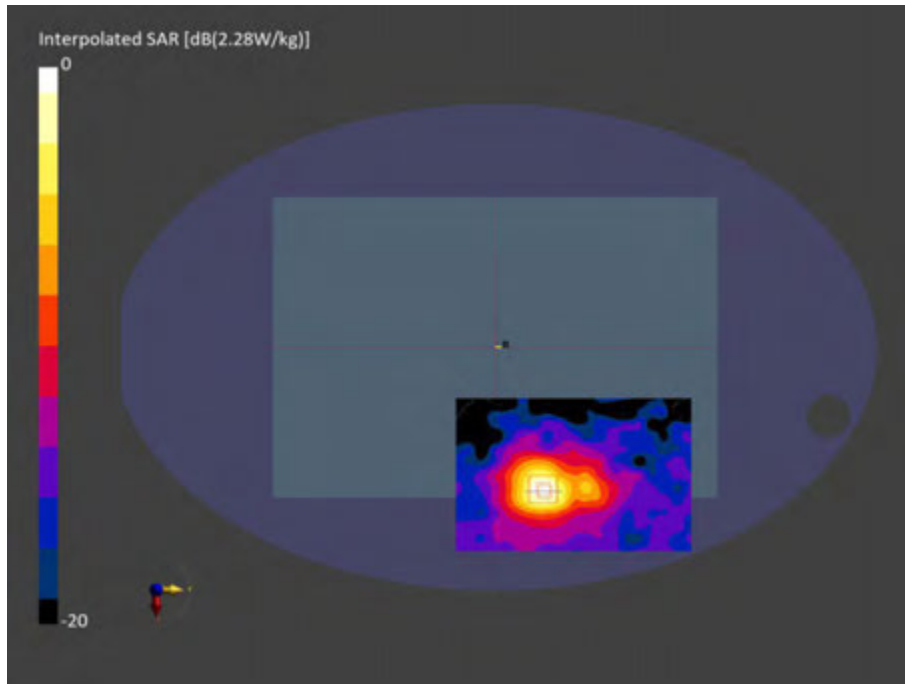


Figure C.28: SAR Testing Results for the A3114 at 5690 MHz Core 1



**Measurement Report for A3114, BACK, U-NII-2C, U-NII-3, IEEE 802.11n  
 (HT Greenfield, 13.5 Mbps, BPSK), Channel 134 (5670.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-2C, U-NII-3	WLAN, 10114-CAD	, 134	4.75	4.95	33.6

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.7 deg.C 2023-Oct-31 SYS5 B5.pn, 2023-Oct-31	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 240.0	22.0 x 22.0 x 22.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	n/a	Yes	Yes
Grading Ratio	n/a	1.4	1.4
MAIA	Y	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-11-01, 05:29	2023-11-01, 05:38	2023-11-01, 05:47
psSAR1g [W/Kg]	0.575	0.615	0.605
psSAR10g [W/Kg]	0.208	0.204	0.203
Power Drift [dB]	0.12	0.10	0.13
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	No correction	No correction	No correction
M2/M1 [%]		59.0	60.2
Dist 3dB Peak [mm]		7.3	8.0



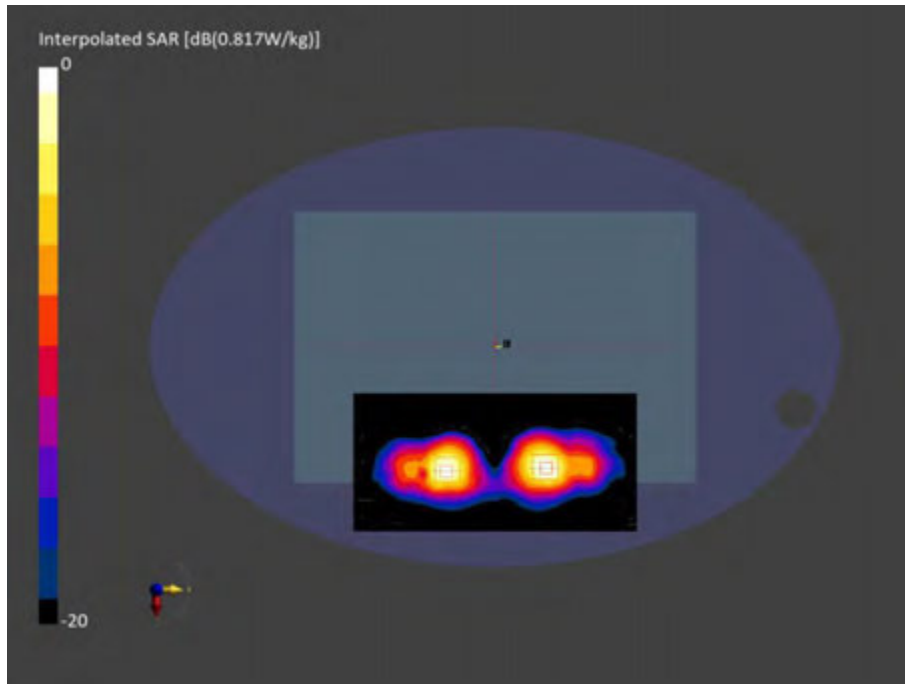


Figure C.29: SAR Testing Results for the A3114 at 5670 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, WLAN 5 GHz, IEEE 802.11ac WiFi  
 (80 MHz, MCS0, 99pc duty cycle), Channel 155 (5775.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5 GHz	WLAN, 10544-AAC	5775.0, 155	4.83	4.99	33.0

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-30, 04:39	2023-10-30, 04:46
psSAR1g [W/Kg]	0.654	0.695
psSAR10g [W/Kg]	0.233	0.227
Power Drift [dB]	0.07	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		59.7
Dist 3dB Peak [mm]		7.3

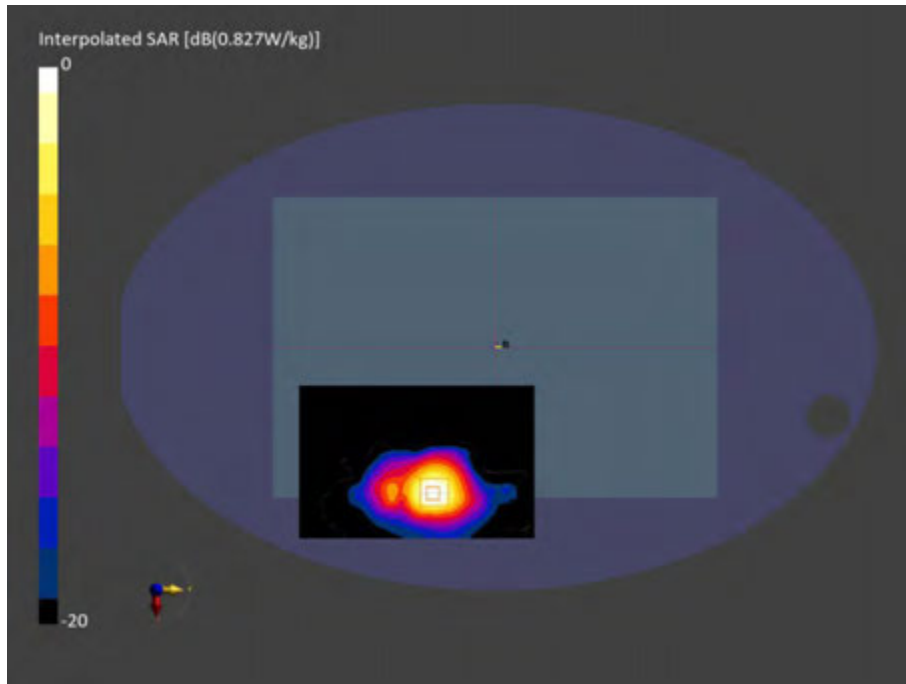


Figure C.30: SAR Testing Results for the A3114 at 5775 MHz Core 0



**Measurement Report for A3114, BACK, WLAN 5 GHz, IEEE 802.11ac WiFi  
 (80 MHz, MCS0, 99pc duty cycle), Channel 155 (5775.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5 GHz	WLAN, 10544-AAC	5775.0, 155	4.83	4.99	33.0

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 20.95 deg.C 2023-Oct-29 SYS6 B6.prn, 2023-Oct-29	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-30, 03:48	2023-10-30, 03:58
psSAR1g [W/Kg]	0.538	0.588
psSAR10g [W/Kg]	0.192	0.203
Power Drift [dB]	-0.14	0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		58.9
Dist 3dB Peak [mm]		7.9

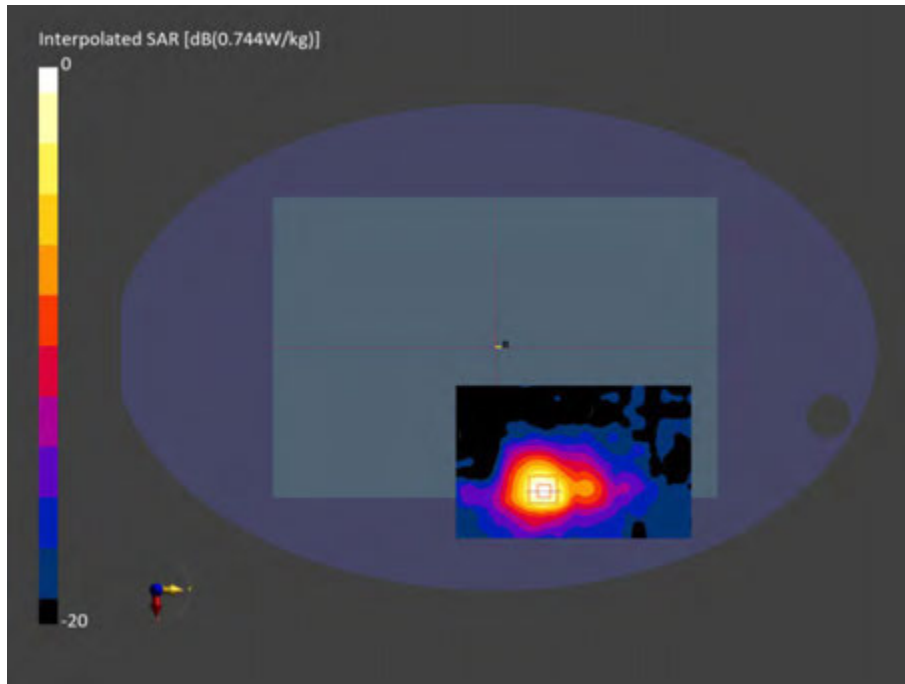


Figure C.31: SAR Testing Results for the A3114 at 5775 MHz Core 1



**Measurement Report for A3114, BACK, WLAN 5 GHz, IEEE 802.11ac WiFi  
 (80 MHz, MCS0, 99pc duty cycle), Channel 155 (5775.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5 GHz	WLAN, 10544-AAC	, 155	4.83	5.06	33.4

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2203	HBBL-600-10000 DAK 3.5 Head 21.7 deg.C 2023-Oct-31 SYS5 B5.pn, 2023-Oct-31	EX3DV4 - SN7809, 2023-05-03	DAE4ip Sn1789, 2023-05-02

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 240.0	22.0 x 22.0 x 22.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	n/a	Yes	Yes
Grading Ratio	n/a	1.4	1.4
MAIA	Y	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-11-01, 06:33	2023-11-01, 06:42	2023-11-01, 06:50
psSAR1g [W/Kg]	0.553	0.579	0.583
psSAR10g [W/Kg]	0.197	0.191	0.192
Power Drift [dB]	0.01	-0.06	-0.08
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	Positive only	Positive only	Positive only
M2/M1 [%]		58.4	59.2
Dist 3dB Peak [mm]		7.3	8.0

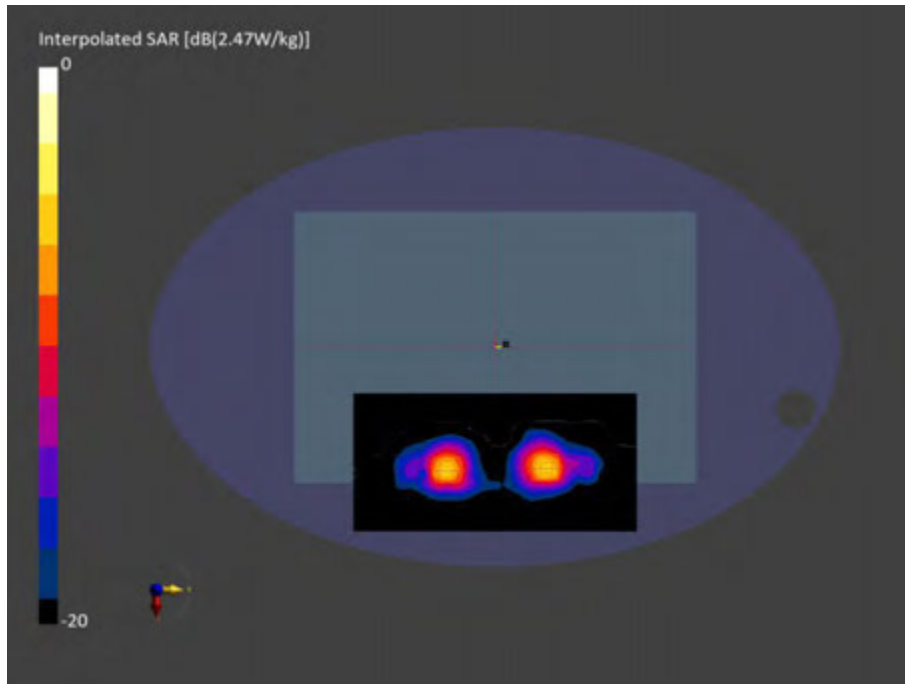


Figure C.32: SAR Testing Results for the A3114 at 5775 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, U-NII-5, IEEE 802.11ax  
 (160 MHz, MCS0, 99pc duty cycle), Channel 15 (6025.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-5	WLAN, 10755-AAC	6025.0, 15	5.07	5.22	32.6

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 21.41 deg.C 2023-Oct-29 SYS5 B5.prn, 2023-Oct-29	EX3DV4 - SN7805, 2023-04-06	DAE4ip Sn1786, 2023-04-03

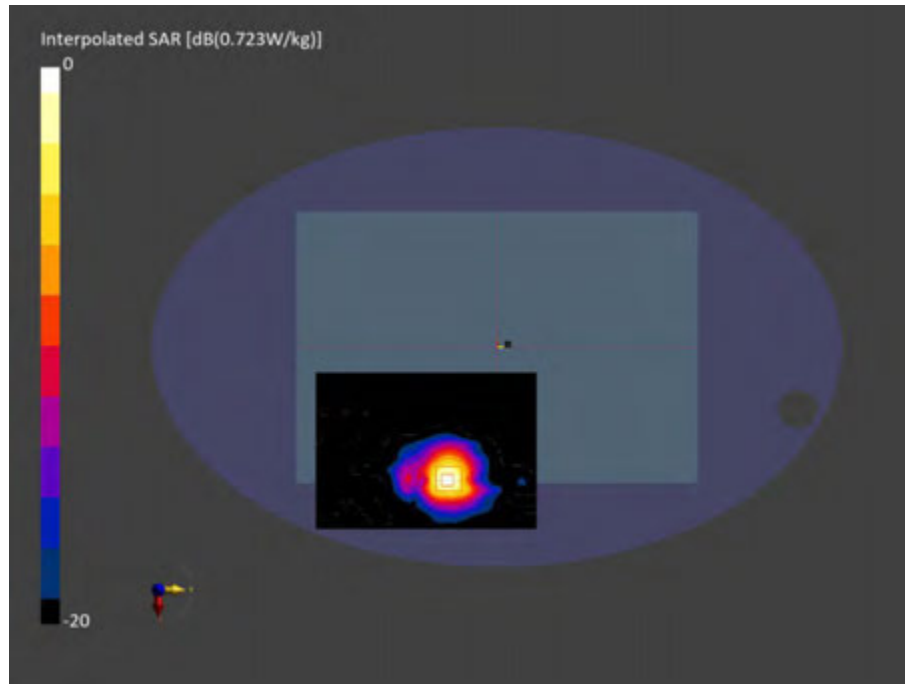
**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	136.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-30, 01:13	2023-10-30, 01:22
psSAR1g [W/Kg]	0.491	0.520
psSAR10g [W/Kg]	0.161	0.169
Power Drift [dB]	-0.16	0.10
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		53.5
Dist 3dB Peak [mm]		7.5





**Figure C.33: SAR Testing Results for the A3114 at 6025 MHz Core 0**



**Measurement Report for A3114, BACK, U-NII-7, IEEE 802.11ax  
 (160 MHz, MCS0, 99pc duty cycle), Channel 143 (6665.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-7	WLAN, 10755-AAC	6665.0, 143	5.07	5.95	31.6

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 21.41 deg.C 2023-Oct-29 SYS5 B5.prn, 2023-Oct-29	EX3DV4 - SN7805, 2023-04-06	DAE4ip Sn1786, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan
Grid Extents [mm]	136.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan
Date	2023-10-30, 05:16	2023-10-30, 05:30
psSAR1g [W/Kg]	0.701	0.714
psSAR10g [W/Kg]	0.226	0.223
Power Drift [dB]	-0.01	0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		49.9
Dist 3dB Peak [mm]		7.5

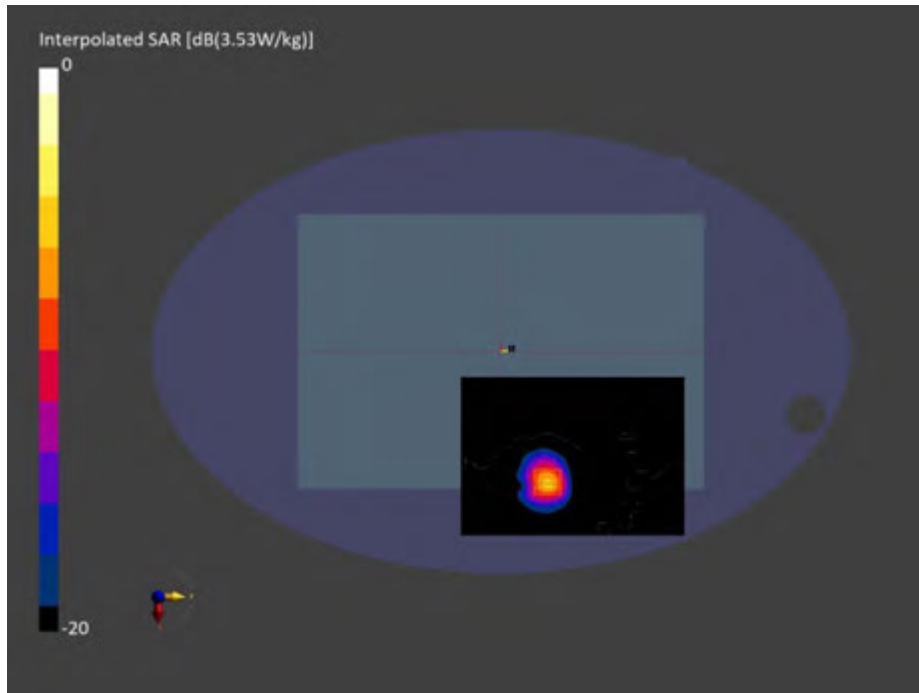


Figure C.34: SAR Testing Results for the A3114 at 6665 MHz Core 1



**Measurement Report for A3114, BACK, U-NII-7, IEEE 802.11ax  
 (160 MHz, MCS0, 99pc duty cycle), Channel 143 (6665.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	340.0 x 236.0 x 10.0		Phone

**Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-7	WLAN, 10755-AAC	, 143	5.07	5.95	31.6

**Hardware Setup**

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2202	HBBL-600-10000 DAK 3.5 Head 21.41 deg.C 2023-Oct-29 SYS5 B5.prn, 2023-Oct-29	EX3DV4 - SN7805, 2023-04-06	DAE4ip Sn1786, 2023-04-03

**Scans Setup**

	Area Scan	Zoom Scan	Zoom Scan
Grid Extents [mm]	x 255.0	22.0 x 22.0 x 22.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4	1.4
Graded Grid	n/a	Yes	Yes
Grading Ratio	n/a	1.4	1.4
MAIA	Y	N/A	Y
Surface Detection	VMS + 6p	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured	Measured

**Measurement Results**

	Area Scan	Zoom Scan	Zoom Scan
Date	2023-10-30, 11:14	2023-10-30, 11:27	2023-10-30, 11:41
psSAR1g [W/Kg]	0.611	0.655	0.479
psSAR10g [W/Kg]	0.202	0.205	0.148
Power Drift [dB]	0.18	-0.01	0.05
Power Scaling	Disabled	Disabled	Disabled
Scaling Factor [dB]			
TSL Correction	No correction	No correction	No correction
M2/M1 [%]		49.4	49.7
Dist 3dB Peak [mm]		7.8	7.4

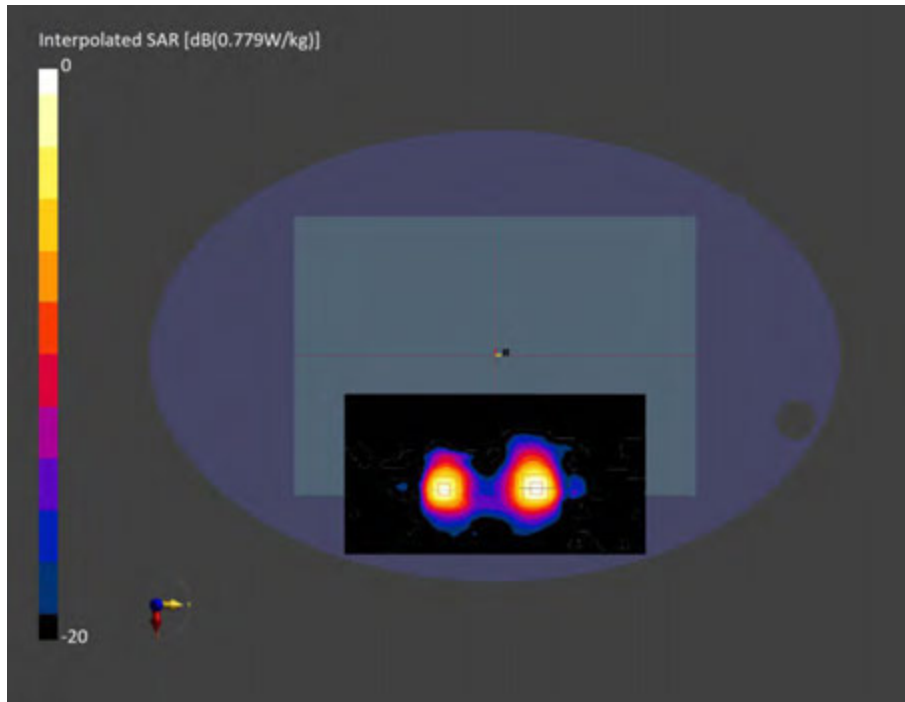


Figure C.36: SAR Testing Results for the A3114 at 6665 MHz Core 0 & Core 1



**Measurement Report for A3114, BACK, U-NII-7, IEEE 802.11ax  
 (160 MHz, MCS0, 99pc duty cycle), Channel 143 (6665.0 MHz)**

**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
A3114	314.0 x 236.0 x 10.0		Laptop

**Exposure Conditions**

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	BACK, 2.00	U-NII-7	WLAN, 10755-AAC	6665.0, 143	1.0

**Hardware Setup**

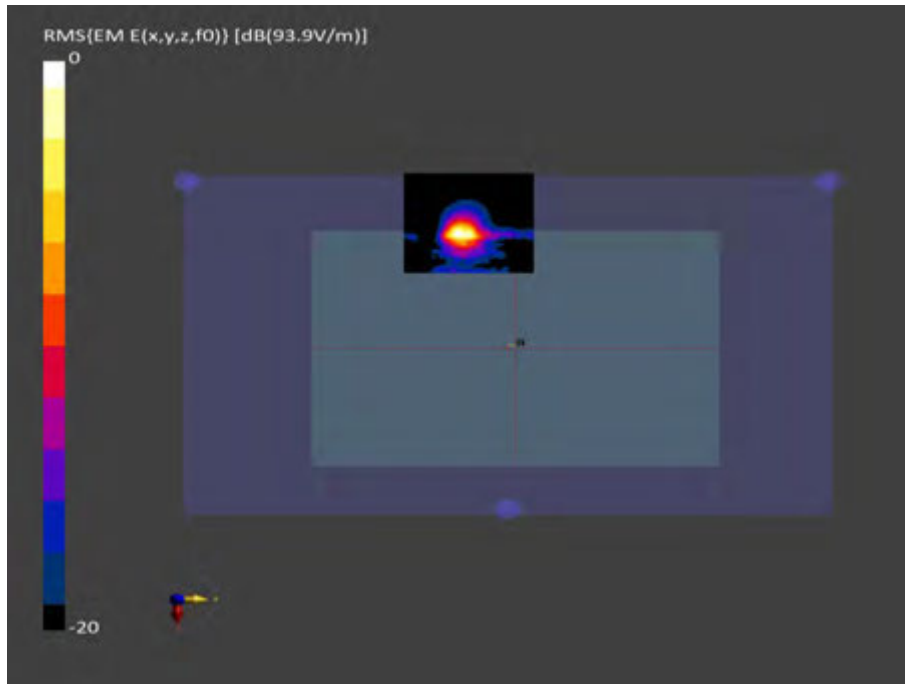
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - 1112	Air -	EUmmWV4 - SN9641_F1-55 GHz, 2022-10-25	DAE4ip Sn1785, 2023-04-03

**Scans Setup**

Scan Type	5G Scan
Grid Extents [mm]	100.0 x 100.0
Grid Steps [lambda]	0.04538097579395488 x 0.04538097579395488
Sensor Surface [mm]	2.0
MAIA	Y

**Measurement Results**

Scan Type	5G Scan
Date	2023-11-10, 11:27
Avg. Area [cm <sup>2</sup> ]	4.00
psPDn+ [W/m <sup>2</sup> ]	3.00
psPDtot+ [W/m <sup>2</sup> ]	6.24
psPDmod+ [W/m <sup>2</sup> ]	8.45
E <sub>max</sub> [V/m]	93.9
Power Drift [dB]	-0.09



**Figure C.37: iPD Testing Results for the A3114 at 6665 MHz**



## **ANNEX D**

### **THREAD TECHNOLOGY DUTY FACTOR CORRECTION**





### A3114 Thread Scaling Rationale

The measured SAR Results for the Thread technology, as detailed in this document, are scaled down to 59.68% to adjust for the normal operating conditions of this technology as shown in figure 10. With the measured SAR Results having been taken with the device operating in a test mode, on a fixed channel with 100% duty cycle, as shown below in figure 9.

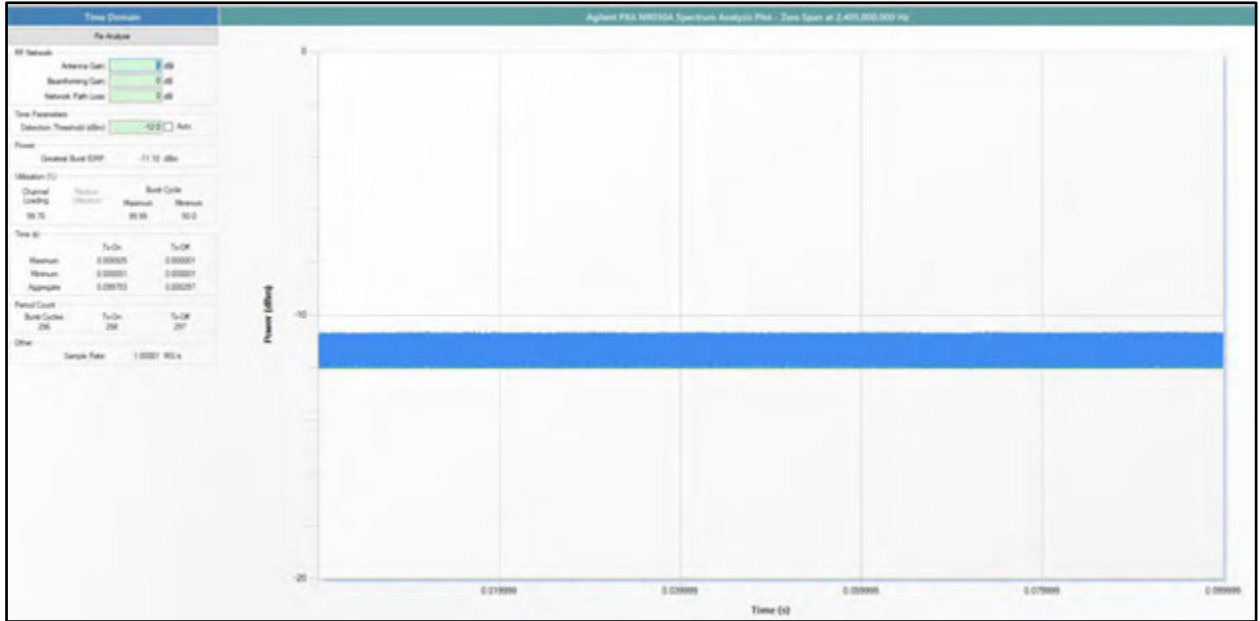


Figure 8 - Thread ePA - Frequency of 2405MHz (100% Duty Cycle)

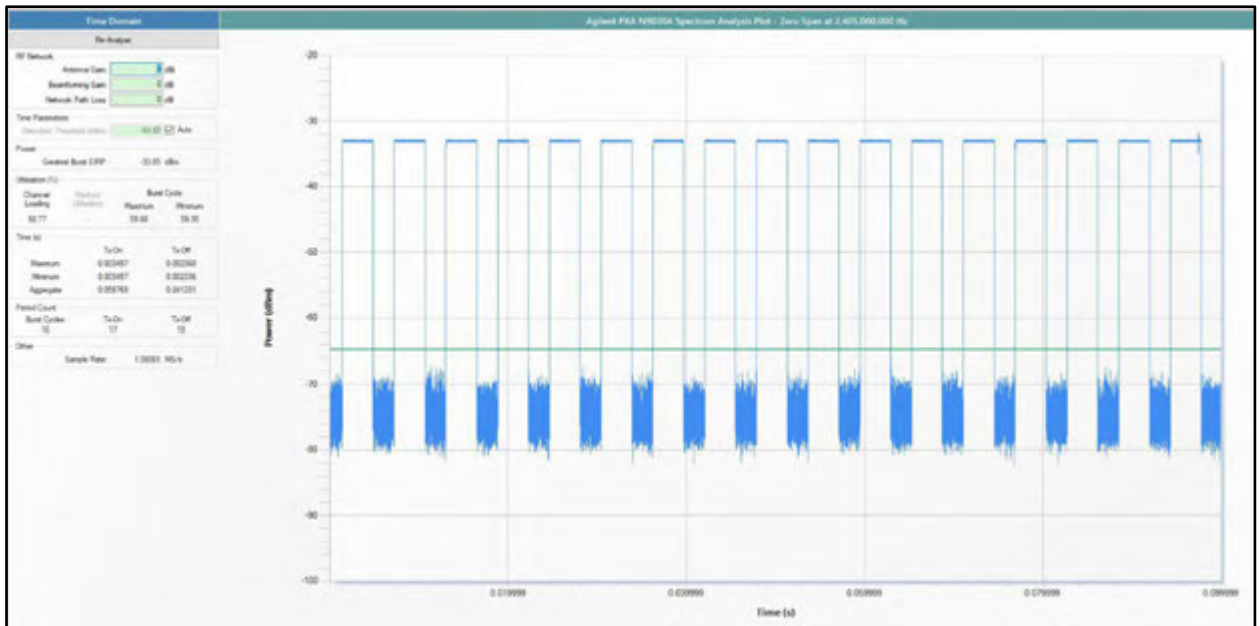


Figure 9 - Thread ePA - Frequency of 2405MHz (59.68% Duty Cycle)