

Appendix C. Calibration Certificate

C.1. E-Field Probe EX3DV4 (Serial No. 3921 / Control No. WA0002)

Please see the following pages.

Calibration Laboratory ofSchmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland

**S** Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration ServiceAccredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificatesAccreditation No.: **SCS 0108**

Client

SONY Global M&O
Kisarazu, Japan

Certificate No.

EX-3921_Nov23**CALIBRATION CERTIFICATE**

Object

EX3DV4 - SN:3921

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

November 16, 2023This 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	05-Oct-23 (OCP-DAK3.5-1249_Oct23)	Oct-24
OCP DAK-12	SN: 1016	05-Oct-23 (OCP-DAK12-1016_Oct23)	Oct-24
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: MY41498087	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

	Name	Function	Signature
Calibrated by	Joanna Lieshaj	Laboratory Technician	
Approved by	Sven Kühn	Technical Manager	
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

Issued: November 15, 2023

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Calibration Laboratory ofSchmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: SCS 0108

Glossary

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization θ	θ 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 885664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * 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_{x,y,z}**: 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_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: 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_{x,y,z} * 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 ± 50 MHz to ± 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_x (no uncertainty required).

EX3DV4 - SN:3921

November 16, 2023

Parameters of Probe: EX3DV4 - SN:3921**Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k = 2)
Norm: ($\mu V/(V/m)^2$) ^A	0.47	0.41	0.59	±10.1%
DCP (mV) ^B	107.0	102.7	107.4	±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 ^E k = 2
0	CW	X	0.00	0.00	1.00	0.00	135.4	±2.2%	±4.7%
		Y	0.00	0.00	1.00		128.6		
		Z	0.00	0.00	1.00		133.3		
10352	Pulse Waveform (200Hz, 10%)	X	1.48	60.32	6.05	10.00	60.0	±2.7%	±9.6%
		Y	12.00	74.00	11.00		60.0		
		Z	1.52	60.46	6.15		60.0		
10353	Pulse Waveform (200Hz, 20%)	X	0.79	60.00	4.62	6.99	80.0	±2.5%	±9.6%
		Y	22.00	74.00	9.00		80.0		
		Z	0.79	60.00	4.64		80.0		
10354	Pulse Waveform (200Hz, 40%)	X	0.00	126.31	0.33	3.98	95.0	±2.6%	±9.6%
		Y	0.12	136.97	0.30		95.0		
		Z	0.00	127.20	0.28		95.0		
10355	Pulse Waveform (200Hz, 60%)	X	10.80	158.95	0.01	2.22	120.0	±1.5%	±9.6%
		Y	7.21	159.80	13.06		120.0		
		Z	2.69	159.99	1.77		120.0		
10387	QPSK Waveform, 1 MHz	X	0.58	64.09	12.25	1.00	150.0	±3.6%	±9.6%
		Y	0.50	63.35	11.94		150.0		
		Z	0.52	63.82	12.17		150.0		
10388	QPSK Waveform, 10 MHz	X	1.35	65.77	13.85	0.00	150.0	±0.8%	±9.6%
		Y	1.28	65.77	13.49		150.0		
		Z	1.31	65.92	13.75		150.0		
10396	64-QAM Waveform, 100 kHz	X	1.74	65.08	16.22	3.01	150.0	±0.8%	±9.6%
		Y	1.74	65.13	16.07		150.0		
		Z	1.73	65.12	16.21		150.0		
10399	64-QAM Waveform, 40 MHz	X	2.83	66.21	15.03	0.00	150.0	±2.2%	±9.6%
		Y	2.90	66.43	15.04		150.0		
		Z	2.80	66.32	15.06		150.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.83	65.84	15.21	0.00	150.0	±3.8%	±9.6%
		Y	3.74	66.12	15.19		150.0		
		Z	3.76	65.97	15.21		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%.

^A The uncertainties of Norm X,Y,Z do not affect the E_{field} field uncertainty inside TSL (see Pages 5 and 6).

^B Linearization parameter uncertainty for maximum specified field strength.

^E 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:3921**Sensor Model Parameters**

	C1 fF	C2 fF	α V ⁻¹	T1 mV ⁻²	T2 mV ⁻¹	T3 mV	T4 V ⁻²	T5 V ⁻¹	T6
x	10.4	75.73	33.58	1.69	0.00	4.90	0.32	0.00	1.00
y	8.7	62.23	32.98	3.35	0.00	4.90	0.51	0.00	1.00
z	9.4	57.84	33.49	1.57	0.00	4.91	0.51	0.00	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle	177.6°
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:3921**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k = 2)
835	41.5	0.90	9.83	9.83	9.83	0.34	0.98	±12.0%
1450	40.5	1.20	9.04	9.04	9.04	0.51	0.80	±12.0%
1950	40.0	1.40	8.22	8.22	8.22	0.32	0.86	±12.0%
2450	39.2	1.80	7.92	7.92	7.92	0.32	0.90	±12.0%
5200	36.0	4.66	5.63	5.63	5.63	0.40	1.80	±14.0%
5300	35.9	4.76	5.46	5.46	5.46	0.40	1.80	±14.0%
5500	35.6	4.96	4.97	4.97	4.97	0.40	1.80	±14.0%
5600	35.5	5.07	4.82	4.82	4.82	0.40	1.80	±14.0%
5800	35.3	5.27	4.85	4.85	4.85	0.40	1.80	±14.0%

^C Frequency validity above 300 MHz of ±100 MHz only applies for DASy v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±10, 25, 40, 50 and 70 MHz for ConvF assessments of 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 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.

^F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ϵ and σ by less than ±5% from the target values (typically better than ±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 11.1% for 0.7–3 GHz and 13.1% for 3–6 GHz.

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

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Parameters of Probe: EX3DV4 - SN:3921**Calibration Parameter Determined in Body Tissue Simulating Media**

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k = 2)
2450	52.7	1.95	7.78	7.78	7.78	0.30	0.90	+12.0%
5200	49.0	5.30	4.96	4.96	4.96	0.50	1.90	±14.0%
5300	48.9	5.42	4.86	4.86	4.86	0.50	1.90	±14.0%
5500	48.6	5.65	4.38	4.38	4.38	0.50	1.90	±14.0%
5600	48.5	5.77	4.25	4.25	4.25	0.50	1.90	±14.0%
5800	48.2	6.00	4.30	4.30	4.30	0.50	1.90	±14.0%

^C Frequency validity above 300 MHz of ±100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±10, 25, 40, 60 and 70 MHz for ConvF assessments at 30, 64, 125, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 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.

^F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ϵ and σ by less than ±5% from the target values (typically better than ±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 11.1% for 0.7–3 GHz and 13.1% for 3–6 GHz.

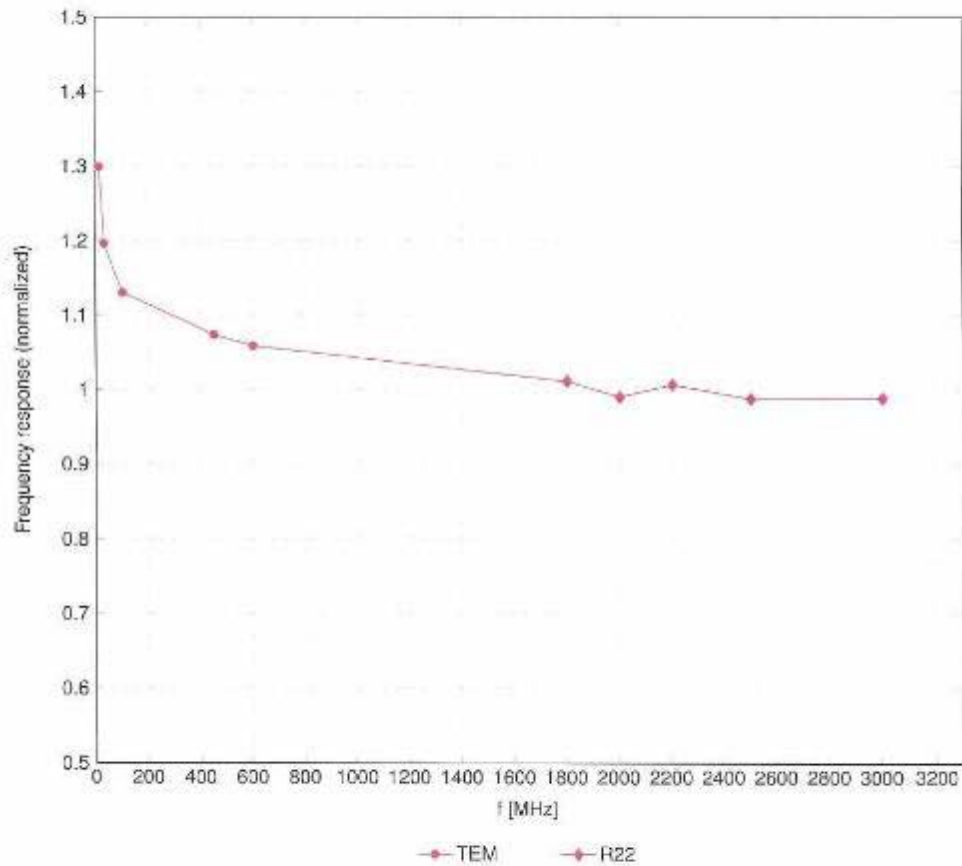
^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz and below ±2% for frequencies between 3–6 GHz at any distance larger than half the probe tip diameter from the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

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Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide:R22)

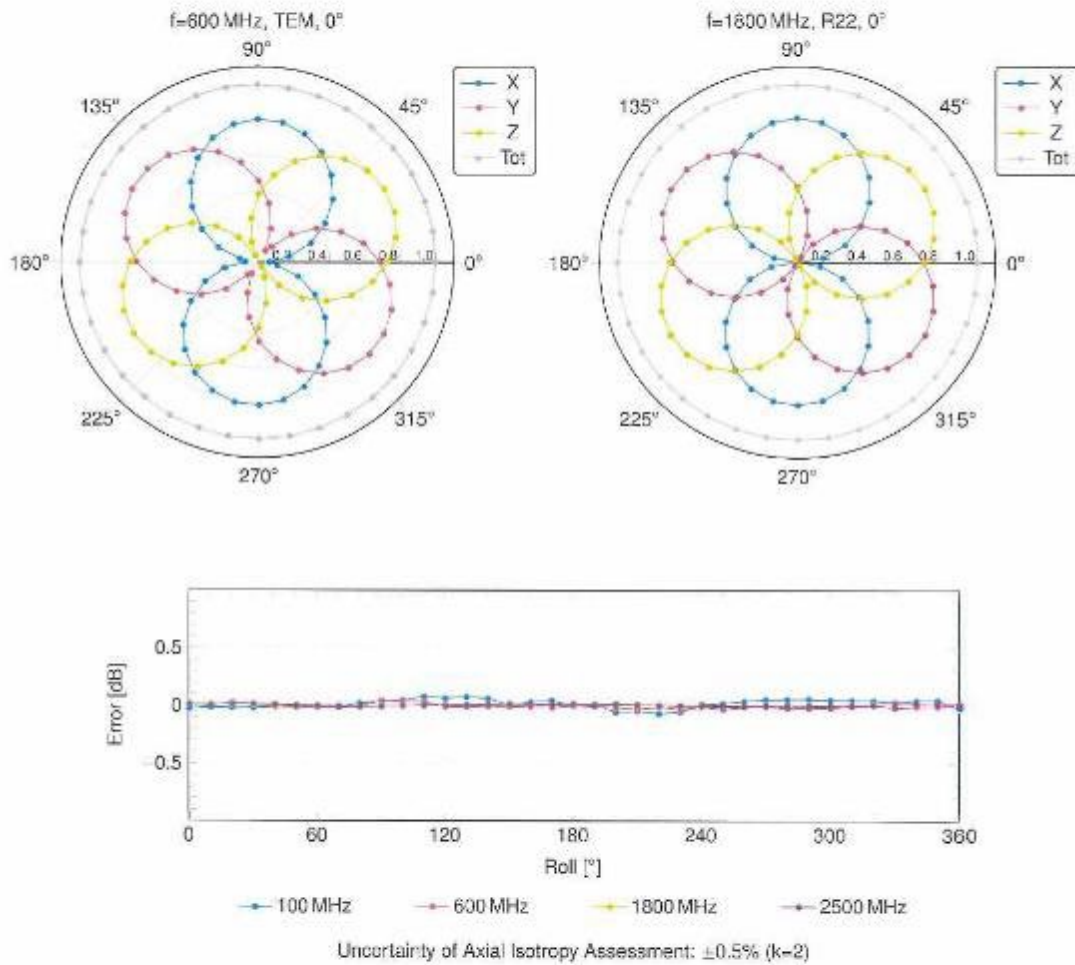
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

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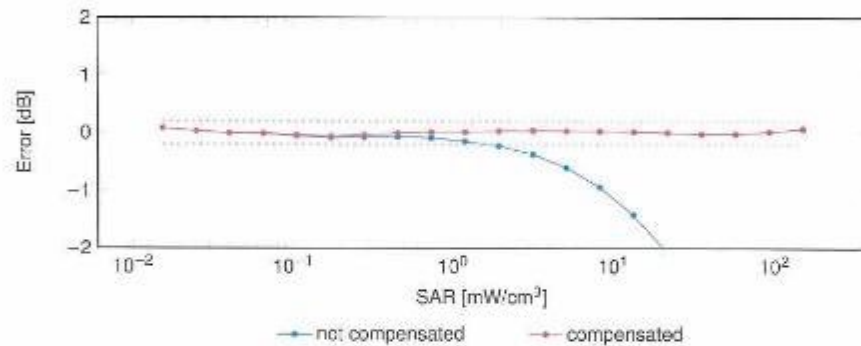
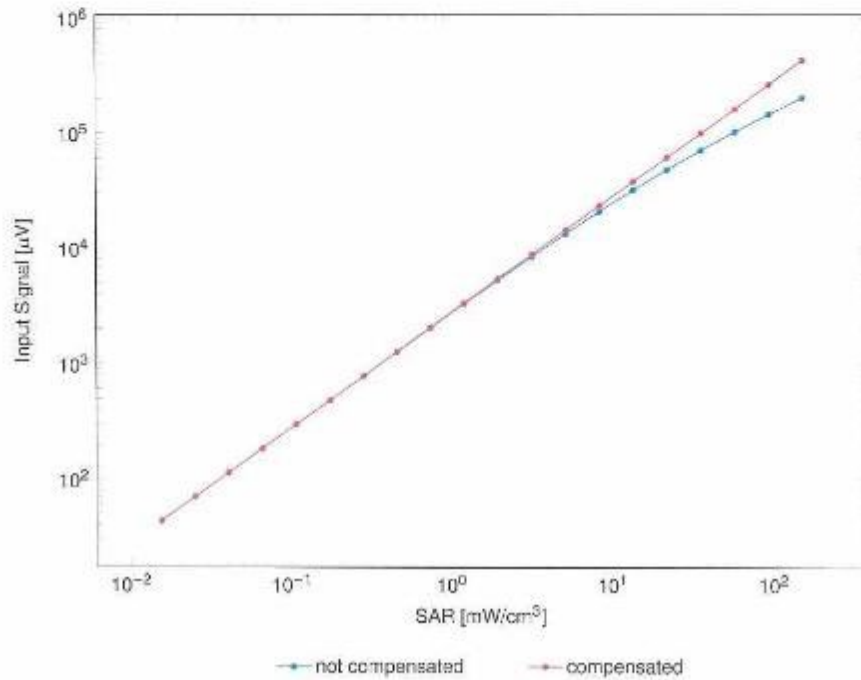
Receiving Pattern (ϕ), $\theta = 0^\circ$ 

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Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900\text{MHz}$)Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

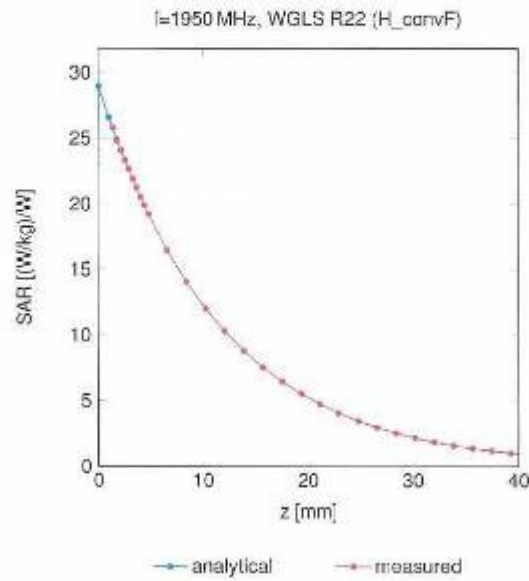
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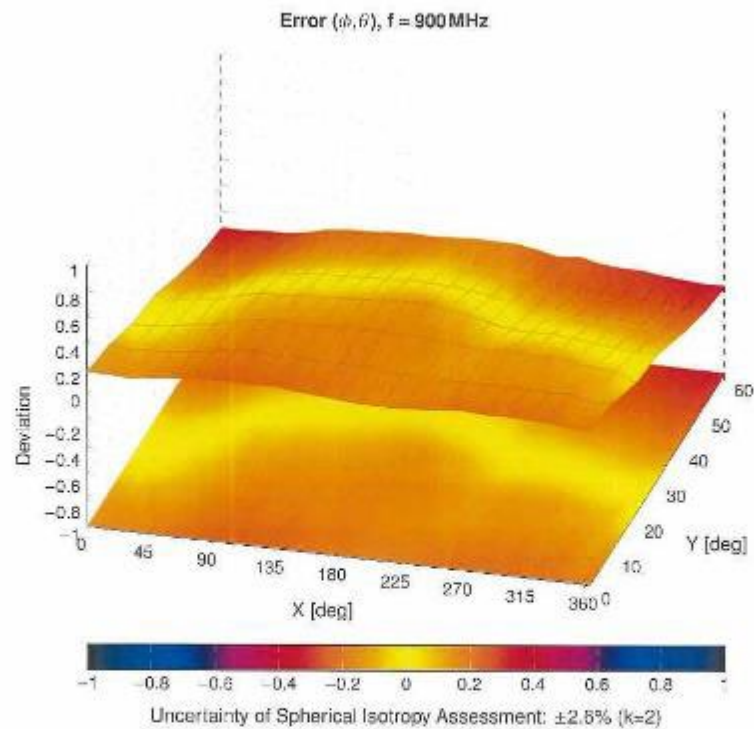
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Conversion Factor Assessment



Deviation from Isotropy in Liquid



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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^F k = 2
0		CW	CW	3.00	±4.7
10010	CAB	SAR Validation (Squares, 100 ms, 10 ms)	Test	13.03	±9.6
10011	CAC	UMTS-FDD (WCDMA)	WCDMA	3.91	±9.6
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.67	±9.6
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	8.46	±9.6
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	8.39	±9.6
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	±9.6
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	8.53	±9.6
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	±9.6
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.6
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.83	±9.6
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	2.55	±9.6
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.79	±9.6
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	±9.6
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	7.16	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PM-QPSK, DH1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PM-QPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PM-QPSK, DH5)	Bluetooth	3.85	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-QPSK, D-1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (8-QPSK, D-3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-QPSK, DH5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PM-QPSK, Fullrate)	AMPS	7.78	±9.6
10044	CAA	IS 91/91A/TIA 553 FDD (FDMA, FM)	AMPS	9.00	±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, 1.28 Mbps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	5.52	±9.6
10059	CAB	IEEE 802.11a WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11a WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11a WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10062	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 8 Mbps)	WLAN	8.69	±9.6
10063	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6
10064	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6
10065	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6
10066	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6
10067	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAD	IEEE 802.11ah WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.58	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.82	±9.6
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	±9.6
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	±9.6
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	±9.6
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	±9.6
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	±9.6
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	±9.6
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	±9.6
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PM-QPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	8.56	±9.6
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6
10099	DAC	EDGE FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	5.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	5.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	3.20	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	3.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10108	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.6
10109	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	5.43	±9.6
10110	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	±9.6
10111	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	5.41	±9.6

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10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10113	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10114	CAD	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6
10115	CAD	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.16	±9.6
10116	CAD	IEEE 802.11n (HT Greenfield, 126 Mbps, 64-QAM)	WLAN	8.15	±9.6
10117	CAD	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	±9.6
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAD	IEEE 802.11n (HT Mixed, 126 Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	6.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.55	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	6.78	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.11	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.80	±9.6
10151	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	6.28	±9.6
10152	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	6.92	±9.6
10153	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6
10154	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	6.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	6.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.92	±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	6.46	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	6.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10171	AAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.19	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10175	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	6.72	±9.6
10176	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	6.73	±9.6
10178	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10180	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10181	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10183	AAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	6.73	±9.6
10185	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10186	AAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	6.73	±9.6
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10189	AAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10193	CAD	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6
10194	CAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	±9.6
10195	CAD	IEEE 802.11n (HT Greenfield, 85 Mbps, 64-QAM)	WLAN	8.21	±9.6
10198	CAD	IEEE 802.11n (HT Mixed, 6.5 Mbps, QPSK)	WLAN	8.10	±9.6
10197	CAD	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6
10198	CAD	IEEE 802.11n (HT Mixed, 85 Mbps, 64-QAM)	WLAN	8.27	±9.6
10219	CAD	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.09	±9.6
10220	CAD	IEEE 802.11n (HT Mixed, 43.5 Mbps, 16-QAM)	WLAN	8.13	±9.6
10221	CAD	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±9.6
10222	CAD	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	±9.6
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	±9.6

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10225	CAC	UMTS-FDD (HS-PA+)	WCDMA	5.97	+9.6
10226	CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	+9.6
10227	CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	13.29	+9.6
10228	CAC	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	+9.6
10229	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10230	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	13.25	+9.6
10231	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	8.19	+9.6
10232	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10233	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10234	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	8.21	+9.6
10235	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10236	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10237	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	+9.6
10238	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10239	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10240	CAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	+9.6
10241	CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	+9.6
10242	CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.85	+9.6
10243	CAC	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	+9.6
10244	CAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	+9.6
10245	CAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	+9.6
10246	CAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	+9.6
10247	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	+9.6
10248	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	+9.6
10249	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.20	+9.6
10250	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	+9.6
10251	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	+9.6
10252	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	+9.6
10253	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.80	+9.6
10254	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	+9.6
10255	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	+9.6
10256	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	+9.6
10257	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	+9.6
10258	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	+9.6
10259	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	+9.6
10260	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	+9.6
10261	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	+9.6
10262	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	+9.6
10263	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	+9.6
10264	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	+9.6
10265	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	+9.6
10266	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	+9.6
10267	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	+9.6
10268	CAG	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	+9.6
10269	CAG	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	+9.6
10270	CAG	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.55	+9.6
10274	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	+9.6
10275	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.95	+9.6
10277	CAA	PHS (QPSK)	PHS	11.61	+9.6
10278	CAA	PHS (QPSK, BW 884 MHz, Roll-off 0.5)	PHS	11.61	+9.6
10279	CAA	PHS (QPSK, BW 884 MHz, Roll-off 0.38)	PHS	12.18	+9.6
10280	AAB	CDMA2000, RC1, SQ55, Full Rate	CDMA2000	3.91	+9.6
10291	AAB	CDMA2000, RC2, SQ55, Full Rate	CDMA2000	3.46	+9.6
10292	AAB	CDMA2000, RC2, SQ32, Full Rate	CDMA2000	3.35	+9.6
10293	AAB	CDMA2000, RC3, SQ3, Full Rate	CDMA2000	3.50	+9.6
10295	AAB	CDMA2000, RC1, SQ3, 1/8th Rate 25 k	CDMA2000	2.49	+9.6
10297	AAE	LTE-FDD (SC-FDMA, 50% RB, 30 MHz, QPSK)	LTE-FDD	5.81	+9.6
10298	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	+9.6
10299	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	+9.6
10300	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	+9.6
10301	AAA	IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC)	WiMAX	12.03	+9.6
10302	AAA	IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols)	WiMAX	12.57	+9.6
10303	AAA	IEEE 802.16e WiMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC)	WiMAX	12.52	+9.6
10304	AAA	IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC)	WiMAX	11.95	+9.6
10305	AAA	IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC, 15 symbols)	WiMAX	13.24	+9.6
10306	AAA	IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 64QAM, PUSC, 18 symbols)	WiMAX	14.67	+9.6

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10307	AAA	IEEE 802.16e WiMAX (25.16, 10 ms, 10 MHz, QPSK, PUSC, 16 symbols)	WiMAX	14.49	+9.6
10308	AAA	IEEE 802.16e WiMAX (25.16, 10 ms, 10 MHz, 16QAM, PUSC)	WiMAX	14.46	+9.6
10309	AAA	IEEE 802.16e WiMAX (25.16, 10 ms, 10 MHz, 16QAM, AMC 2x3, 16 symbols)	WiMAX	14.54	+9.6
10310	AAA	IEEE 802.16e WiMAX (25.16, 10 ms, 10 MHz, QPSK, AMC 2x3, 16 symbols)	WiMAX	14.57	+9.6
10311	AAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	TF-FDD	6.06	+9.6
10313	AAA	IDEN 1.3	IDEN	10.51	+9.6
10314	AAA	IDEN 1.3	IDEN	13.48	+9.6
10315	AAB	IEEE 802.11b Wi-Fi 2.4 GHz (DSSS, 1 Mbps, 80pc duty cycle)	WLAN	1.71	+9.6
10316	AAB	IEEE 802.11g Wi-Fi 2.4 GHz (ERP-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	3.39	+9.6
10317	AAE	IEEE 802.11a Wi-Fi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	3.39	+9.6
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	13.00	+9.6
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	9.99	+9.6
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.95	+9.6
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	+9.6
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	+9.6
10367	AAA	QPSK Waveform, 1 MHz	Generic	5.10	+9.6
10368	AAA	QPSK Waveform, 10 MHz	Generic	5.22	+9.6
10369	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	+9.6
10369	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	+9.6
10400	AAC	IEEE 802.11ac Wi-Fi (20 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	+9.6
10401	AAC	IEEE 802.11ac Wi-Fi (40 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.80	+9.6
10402	AAE	IEEE 802.11ac Wi-Fi (80 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	+9.6
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	+9.6
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	+9.6
10406	AAB	CDMA2000, RCS, SO32, SCH0, Full Rate	CDMA2000	5.22	+9.6
10410	AAH	LTE-DU (SC-FDMA, 1 RB, 0 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Cont=4)	LTE-FDD	7.82	+9.6
10414	AAA	WLAN QOFD 64-QAM, 40 MHz	Generic	8.54	+9.6
10415	AAA	IEEE 802.11b Wi-Fi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.54	+9.6
10416	AAA	IEEE 802.11g Wi-Fi 2.4 GHz (ERP-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.23	+9.6
10417	AAC	IEEE 802.11a Wi-Fi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.23	+9.6
10418	AAA	IEEE 802.11g Wi-Fi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle, Long preamble)	WLAN	0.14	+9.6
10419	AAA	IEEE 802.11g Wi-Fi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle, Short preamble)	WLAN	8.19	+9.6
10422	AAC	IEEE 802.11n (HT Greenfield, 7.2 Mbps, 5PSK)	WLAN	8.32	+9.6
10423	AAC	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	+9.6
10424	AAC	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	+9.6
10425	AAC	IEEE 802.11n (HT Greenfield, 15 Mbps, 5PSK)	WLAN	8.41	+9.6
10426	AAC	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	+9.6
10427	AAC	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	+9.6
10430	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	+9.6
10431	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	+9.6
10432	AAD	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	+9.6
10433	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	9.34	+9.6
10434	AAB	WCDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	+9.6
10435	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	+9.6
10447	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.96	+9.6
10448	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	+9.6
10449	AAD	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	+9.6
10450	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.46	+9.6
10451	AAB	WCDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	+9.6
10453	AAE	Validation (Square, 50 ms, 1 ms)	Test	13.00	+9.6
10456	AAC	IEEE 802.11ac Wi-Fi (160 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	+9.6
10457	AAB	UMTS-FDD (DC-HS-PA)	WCDMA	8.62	+9.6
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	8.95	+9.6
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 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, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	+9.6
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	+9.6
10463	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	+9.6
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.62	+9.6
10465	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	+9.6
10466	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	+9.6
10467	AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	+9.6
10468	AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	+9.6
10469	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.58	+9.6
10470	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	+9.6
10471	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 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, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	+9.6
10473	AAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	+9.6
10474	AAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	+9.6
10475	AAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	+9.6
10477	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	+9.6
10478	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	+9.6
10479	AAG	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	+9.6
10480	AAG	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	+9.6
10481	AAG	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	+9.6
10482	AAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	+9.6
10483	AAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	+9.6
10484	AAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	+9.6
10485	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.58	+9.6
10486	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	+9.6
10487	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	+9.6
10488	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	+9.6
10489	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	+9.6
10490	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	+9.6
10491	AAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	+9.6
10492	AAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	+9.6
10493	AAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	+9.6
10494	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	+9.6
10495	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	+9.6
10496	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	+9.6
10497	AAG	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	+9.6
10499	AAG	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	+9.6
10499	AAG	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	+9.6
10500	AAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	+9.6
10501	AAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	+9.6
10502	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	+9.6
10503	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	+9.6
10504	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	+9.6
10505	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	+9.6
10506	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	+9.6
10507	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.36	+9.6
10508	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	+9.6
10508	AAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.89	+9.6
10510	AAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	+9.6
10511	AAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	+9.6
10512	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	+9.6
10513	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	+9.6
10514	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	+9.6
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	+9.6
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	+9.6
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	+9.6
10518	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	+9.6
10519	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.30	+9.6
10520	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	+9.6
10521	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	+9.6
10522	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	+9.6
10523	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.06	+9.6
10524	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	+9.6
10525	AAC	IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.36	+9.6
10526	AAC	IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.42	+9.6
10527	AAC	IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle)	WLAN	8.21	+9.6
10528	AAC	IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle)	WLAN	8.36	+9.6
10529	AAC	IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.36	+9.6
10531	AAC	IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.43	+9.6
10532	AAC	IEEE 802.11ac WiFi (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	+9.6
10533	AAC	IEEE 802.11ac WiFi (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.38	+9.6
10534	AAC	IEEE 802.11ac WiFi (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.45	+9.6
10535	AAC	IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.45	+9.6
10536	AAC	IEEE 802.11ac WiFi (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.32	+9.6
10537	AAC	IEEE 802.11ac WiFi (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	+9.6
10538	AAC	IEEE 802.11ac WiFi (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.54	+9.6
10540	AAC	IEEE 802.11ac WiFi (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.39	+9.6

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10541	AAC	IEEE 802.11ac WiFi (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.48	±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 (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.47	±9.6
10545	AAC	IEEE 802.11ac WiFi (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10546	AAC	IEEE 802.11ac WiFi (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.35	±9.6
10547	AAC	IEEE 802.11ac WiFi (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.48	±9.6
10548	AAC	IEEE 802.11ac WiFi (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.37	±9.6
10550	AAC	IEEE 802.11ac WiFi (80 MHz, MCS5, 99pc duty cycle)	WLAN	8.36	±9.6
10551	AAC	IEEE 802.11ac WiFi (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±9.6
10552	AAC	IEEE 802.11ac WiFi (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6
10553	AAC	IEEE 802.11ac WiFi (80 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	8.47	±9.6
10556	AAD	IEEE 802.11ac WiFi (160 MHz, MCS2, 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, MCS6, 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	8.60	±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, 99pc duty cycle)	WLAN	8.45	±9.6
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	±9.6
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	±9.6
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	±9.6
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	±9.6
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.35	±9.6
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.98	±9.6
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.98	±9.6
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.95	±9.6
10574	AAA	IEEE 802.11a WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.95	±9.6
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.58	±9.6
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.80	±9.6
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.70	±9.6
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.49	±9.6
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.36	±9.6
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.76	±9.6
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.35	±9.6
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.67	±9.6
10583	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.59	±9.6
10584	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.60	±9.6
10585	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.70	±9.6
10586	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.49	±9.6
10587	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.36	±9.6
10588	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.76	±9.6
10589	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.35	±9.6
10590	AAC	IEEE 802.11ah WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	9.07	±9.6
10591	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS0, 99pc duty cycle)	WLAN	8.82	±9.6
10592	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS1, 99pc duty cycle)	WLAN	8.79	±9.6
10593	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS2, 99pc duty cycle)	WLAN	8.84	±9.6
10594	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS3, 99pc duty cycle)	WLAN	8.74	±9.6
10595	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS4, 99pc duty cycle)	WLAN	8.74	±9.6
10596	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS5, 99pc duty cycle)	WLAN	8.71	±9.6
10597	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS6, 99pc duty cycle)	WLAN	8.72	±9.6
10598	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±9.6
10599	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS0, 99pc duty cycle)	WLAN	8.79	±9.6
10600	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS1, 99pc duty cycle)	WLAN	8.88	±9.6
10601	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS2, 99pc duty cycle)	WLAN	8.82	±9.6
10602	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS3, 99pc duty cycle)	WLAN	8.94	±9.6
10603	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS4, 99pc duty cycle)	WLAN	9.03	±9.6
10604	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS5, 99pc duty cycle)	WLAN	8.76	±9.6
10605	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS6, 99pc duty cycle)	WLAN	8.97	±9.6
10606	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS7, 99pc duty cycle)	WLAN	8.82	±9.6
10607	AAC	IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6
10608	AAC	IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6

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10609	AAC	IEEE 802.11ac WiFi (20 MHz, MCS2, 90ps duty cycle)	WLAN	8.57	±9.6
10610	AAC	IEEE 802.11ac WiFi (20 MHz, MCS3, 90ps duty cycle)	WLAN	8.78	±9.6
10611	AAC	IEEE 802.11ac WiFi (20 MHz, MCS4, 90ps duty cycle)	WLAN	8.70	±9.6
10612	AAC	IEEE 802.11ac WiFi (20 MHz, MCS5, 90ps duty cycle)	WLAN	8.77	±9.6
10613	AAC	IEEE 802.11ac WiFi (20 MHz, MCS6, 90ps duty cycle)	WLAN	8.91	±9.6
10614	AAC	IEEE 802.11ac WiFi (20 MHz, MCS7, 90ps duty cycle)	WLAN	8.59	±9.6
10615	AAC	IEEE 802.11ac WiFi (20 MHz, MCS8, 90ps duty cycle)	WLAN	8.82	±9.6
10616	AAC	IEEE 802.11ac WiFi (40 MHz, MCS0, 90ps duty cycle)	WLAN	8.82	±9.6
10617	AAC	IEEE 802.11ac WiFi (40 MHz, MCS1, 90ps duty cycle)	WLAN	8.81	±9.6
10618	AAC	IEEE 802.11ac WiFi (40 MHz, MCS2, 90ps duty cycle)	WLAN	8.50	±9.6
10619	AAC	IEEE 802.11ac WiFi (40 MHz, MCS3, 90ps duty cycle)	WLAN	8.86	±9.6
10620	AAC	IEEE 802.11ac WiFi (40 MHz, MCS4, 90ps duty cycle)	WLAN	8.87	±9.6
10621	AAC	IEEE 802.11ac WiFi (40 MHz, MCS5, 90ps duty cycle)	WLAN	8.77	±9.6
10622	AAC	IEEE 802.11ac WiFi (40 MHz, MCS6, 90ps duty cycle)	WLAN	8.68	±9.6
10623	AAC	IEEE 802.11ac WiFi (40 MHz, MCS7, 90ps duty cycle)	WLAN	8.82	±9.6
10624	AAC	IEEE 802.11ac WiFi (40 MHz, MCS8, 90ps duty cycle)	WLAN	8.86	±9.6
10625	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 90ps duty cycle)	WLAN	8.86	±9.6
10626	AAC	IEEE 802.11ac WiFi (80 MHz, MCS0, 90ps duty cycle)	WLAN	8.63	±9.6
10627	AAC	IEEE 802.11ac WiFi (80 MHz, MCS1, 90ps duty cycle)	WLAN	8.88	±9.6
10628	AAC	IEEE 802.11ac WiFi (80 MHz, MCS2, 90ps duty cycle)	WLAN	8.71	±9.6
10629	AAC	IEEE 802.11ac WiFi (80 MHz, MCS3, 90ps duty cycle)	WLAN	8.05	±9.6
10630	AAC	IEEE 802.11ac WiFi (80 MHz, MCS4, 90ps duty cycle)	WLAN	8.72	±9.6
10631	AAC	IEEE 802.11ac WiFi (80 MHz, MCS5, 90ps duty cycle)	WLAN	8.81	±9.6
10632	AAC	IEEE 802.11ac WiFi (80 MHz, MCS6, 90ps duty cycle)	WLAN	8.74	±9.6
10633	AAC	IEEE 802.11ac WiFi (80 MHz, MCS7, 90ps duty cycle)	WLAN	8.83	±9.6
10634	AAC	IEEE 802.11ac WiFi (80 MHz, MCS8, 90ps duty cycle)	WLAN	8.80	±9.6
10635	AAC	IEEE 802.11ac WiFi (80 MHz, MCS9, 90ps duty cycle)	WLAN	8.81	±9.6
10636	AAC	IEEE 802.11ac WiFi (160 MHz, MCS0, 90ps duty cycle)	WLAN	8.63	±9.6
10637	AAC	IEEE 802.11ac WiFi (160 MHz, MCS1, 90ps duty cycle)	WLAN	8.79	±9.6
10638	AAC	IEEE 802.11ac WiFi (160 MHz, MCS2, 90ps duty cycle)	WLAN	8.66	±9.6
10639	AAC	IEEE 802.11ac WiFi (160 MHz, MCS3, 90ps duty cycle)	WLAN	8.85	±9.6
10640	AAC	IEEE 802.11ac WiFi (160 MHz, MCS4, 90ps duty cycle)	WLAN	8.08	±9.6
10641	AAC	IEEE 802.11ac WiFi (160 MHz, MCS5, 90ps duty cycle)	WLAN	8.05	±9.6
10642	AAC	IEEE 802.11ac WiFi (160 MHz, MCS6, 90ps duty cycle)	WLAN	8.08	±9.6
10643	AAC	IEEE 802.11ac WiFi (160 MHz, MCS7, 90ps duty cycle)	WLAN	8.83	±9.6
10644	AAC	IEEE 802.11ac WiFi (160 MHz, MCS8, 90ps duty cycle)	WLAN	8.05	±9.6
10645	AAC	IEEE 802.11ac WiFi (160 MHz, MCS9, 90ps duty cycle)	WLAN	8.11	±9.6
10646	AAC	LTE-TDD (SC-FDMA, 1 RB, 6 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10647	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10648	AAC	CDMA2000 (1x Advanced)	CDMA2000	8.45	±9.6
10652	AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6
10653	AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	±9.6
10654	AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	±9.6
10655	AAC	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10658	AAC	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6
10659	AAC	Pulse Waveform (200Hz, 20%)	Test	8.90	±9.6
10660	AAC	Pulse Waveform (200Hz, 40%)	Test	9.98	±9.6
10661	AAC	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6
10662	AAC	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6
10670	AAC	Bluetooth Low Energy	Bluetooth	2.19	±9.6
10671	AAC	IEEE 802.11ax (20 MHz, MCS0, 90ps duty cycle)	WLAN	8.09	±9.6
10672	AAC	IEEE 802.11ax (20 MHz, MCS1, 90ps duty cycle)	WLAN	8.57	±9.6
10673	AAC	IEEE 802.11ax (20 MHz, MCS2, 90ps duty cycle)	WLAN	8.78	±9.6
10674	AAC	IEEE 802.11ax (20 MHz, MCS3, 90ps duty cycle)	WLAN	8.74	±9.6
10675	AAC	IEEE 802.11ax (20 MHz, MCS4, 90ps duty cycle)	WLAN	8.90	±9.6
10676	AAC	IEEE 802.11ax (20 MHz, MCS5, 90ps duty cycle)	WLAN	8.77	±9.6
10677	AAC	IEEE 802.11ax (20 MHz, MCS6, 90ps duty cycle)	WLAN	8.73	±9.6
10678	AAC	IEEE 802.11ax (20 MHz, MCS7, 90ps duty cycle)	WLAN	8.78	±9.6
10679	AAC	IEEE 802.11ax (20 MHz, MCS8, 90ps duty cycle)	WLAN	8.89	±9.6
10680	AAC	IEEE 802.11ax (20 MHz, MCS9, 90ps duty cycle)	WLAN	8.80	±9.6
10681	AAC	IEEE 802.11ax (20 MHz, MCS10, 90ps duty cycle)	WLAN	8.82	±9.6
10682	AAC	IEEE 802.11ax (20 MHz, MCS11, 90ps duty cycle)	WLAN	8.83	±9.6
10683	AAC	IEEE 802.11ax (20 MHz, MCS0, 99ps duty cycle)	WLAN	8.42	±9.6
10684	AAC	IEEE 802.11ax (20 MHz, MCS1, 99ps duty cycle)	WLAN	8.20	±9.6
10685	AAC	IEEE 802.11ax (20 MHz, MCS2, 99ps duty cycle)	WLAN	8.33	±9.6
10686	AAC	IEEE 802.11ax (20 MHz, MCS3, 99ps duty cycle)	WLAN	8.28	±9.6

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10687	AAC	IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.43	+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	8.29	+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	8.29	+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	8.82	+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	8.05	+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	8.82	+9.6
10704	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	9.55	+9.6
10705	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.69	+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	8.39	+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	8.90	+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	8.72	+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	8.85	+9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	8.61	+9.6
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	8.67	+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	8.29	+9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.48	+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, 99pc duty cycle)	WLAN	8.94	+9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 99pc duty cycle)	WLAN	9.16	+9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.93	+9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 99pc duty cycle)	WLAN	9.11	+9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 99pc duty cycle)	WLAN	9.04	+9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 99pc duty cycle)	WLAN	8.93	+9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.90	+9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.79	+9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.82	+9.6
10752	AAC	IEEE 802.11ax (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.81	+9.6

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10753	AAC	IEEE 802.11ax (180 MHz, MCS10, 99pc duty cycle)	WLAN	8.60	+9.6
10754	AAC	IEEE 802.11ax (180 MHz, MCS11, 99pc duty cycle)	WLAN	8.64	+9.6
10755	AAC	IEEE 802.11ax (180 MHz, MCS0, 99pc duty cycle)	WLAN	8.64	+9.6
10756	AAC	IEEE 802.11ax (180 MHz, MCS1, 99pc duty cycle)	WLAN	8.77	+9.6
10757	AAC	IEEE 802.11ax (180 MHz, MCS2, 99pc duty cycle)	WLAN	8.77	+9.6
10758	AAC	IEEE 802.11ax (180 MHz, MCS3, 99pc duty cycle)	WLAN	8.89	+9.6
10759	AAC	IEEE 802.11ax (180 MHz, MCS4, 99pc duty cycle)	WLAN	8.88	+9.6
10760	AAC	IEEE 802.11ax (180 MHz, MCS5, 99pc duty cycle)	WLAN	8.49	+9.6
10761	AAC	IEEE 802.11ax (180 MHz, MCS6, 99pc duty cycle)	WLAN	8.56	+9.6
10762	AAC	IEEE 802.11ax (180 MHz, MCS7, 99pc duty cycle)	WLAN	8.49	+9.6
10763	AAC	IEEE 802.11ax (180 MHz, MCS8, 99pc duty cycle)	WLAN	8.53	+9.6
10764	AAC	IEEE 802.11ax (180 MHz, MCS9, 99pc duty cycle)	WLAN	8.54	+9.6
10765	AAC	IEEE 802.11ax (180 MHz, MCS10, 99pc duty cycle)	WLAN	8.54	+9.6
10766	AAC	IEEE 802.11ax (180 MHz, MCS11, 99pc duty cycle)	WLAN	8.51	+9.6
10767	AAD	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	+9.6
10768	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	+9.6
10769	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	+9.6
10770	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	+9.6
10771	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	+9.6
10772	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	+9.6
10773	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	+9.6
10774	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	+9.6
10775	AAD	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	+9.6
10776	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	+9.6
10777	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	+9.6
10778	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	+9.6
10779	AAD	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.42	+9.6
10780	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	+9.6
10781	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	+9.6
10782	AAD	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	+9.6
10783	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	+9.6
10784	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	+9.6
10785	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	+9.6
10786	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	+9.6
10787	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	+9.6
10788	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	+9.6
10789	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	+9.6
10790	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	+9.6
10791	AAD	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	+9.6
10792	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	+9.6
10793	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	+9.6
10794	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	+9.6
10795	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	+9.6
10796	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	+9.6
10797	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	+9.6
10798	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	+9.6
10799	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	+9.6
10801	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.88	+9.6
10802	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	+9.6
10803	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	+9.6
10805	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	+9.6
10806	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	+9.6
10808	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	+9.6
10810	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	+9.6
10812	AAD	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	+9.6
10817	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	+9.6
10818	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	+9.6
10819	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	+9.6
10820	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	+9.6
10821	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	+9.6
10822	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	+9.6
10823	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	+9.6
10824	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	+9.6
10825	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	+9.6
10827	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	+9.6
10828	AAD	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	+9.6

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10829	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	±9.6
10830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 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	7.70	±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
10839	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
10943	AAD	5G NR (CP-OFDM, 53% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
10944	AAD	5G NR (CP-OFDM, 53% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10945	AAD	5G NR (CP-OFDM, 53% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10954	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10955	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.38	±9.6
10956	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10957	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10958	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10959	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10960	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10961	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6
10983	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10984	AAD	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10985	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10986	AAD	5G NR (DFT-s-OFDM, 1 RB, 150 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10988	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10989	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.73	±9.6
10990	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.66	±9.6
10991	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10992	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
10993	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10994	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10995	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10996	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.39	±9.6
10997	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.55	±9.6
10998	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10999	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
10999	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	6.75	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.95	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10999	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.79	±9.6
10999	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6
10999	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6
10999	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6
10999	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
10999	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 53% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 53% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	±9.6
10999	AAD	5G NR (DFT-s-OFDM, 53% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E k = 2
10911	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±0.6
10912	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±0.6
10913	AAB	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±0.6
10914	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	±0.6
10915	AAB	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±0.6
10916	AAB	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±0.6
10917	AAB	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±0.6
10918	AAC	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±0.6
10919	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.88	±0.6
10920	AAB	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±0.6
10921	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±0.6
10922	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	±0.6
10923	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±0.6
10924	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±0.6
10925	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±0.6
10926	AAB	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.81	±0.6
10927	AAB	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±0.6
10928	AAC	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±0.6
10929	AAC	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±0.6
10930	AAC	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±0.6
10931	AAC	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±0.6
10932	AAC	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±0.6
10933	AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±0.6
10934	AAC	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±0.6
10935	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±0.6
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±0.6
10937	AAC	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	±0.6
10938	AAC	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±0.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	±0.6
10940	AAC	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	±0.6
10941	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±0.6
10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±0.6
10943	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±0.6
10944	AAC	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±0.6
10945	AAC	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±0.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±0.6
10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.97	±0.6
10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±0.6
10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±0.6
10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±0.6
10951	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	±0.6
10952	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	9.25	±0.6
10953	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	9.15	±0.6
10954	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	9.23	±0.6
10955	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	9.42	±0.6
10956	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	9.14	±0.6
10957	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	9.31	±0.6
10958	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	9.61	±0.6
10959	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	9.33	±0.6
10960	AAC	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	±0.6
10961	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.36	±0.6
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.40	±0.6
10963	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	±0.6
10964	AAC	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	±0.6
10965	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	±0.6
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.55	±0.6
10967	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	±0.6
10968	AAD	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.40	±0.6
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.58	±0.6
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.06	±0.6
10974	AAB	5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	±0.6
10978	AAA	ULLA BDR	ULLA	1.18	±0.6
10979	AAA	ULLA HDR4	ULLA	0.58	±0.6
10980	AAA	ULLA HDR8	ULLA	10.32	±0.6
10981	AAA	ULLA HDR16	ULLA	3.19	±0.6
10982	AAA	ULLA HDR32	ULLA	3.43	±0.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ² k = 2
10983	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6
10987	AAA	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAA	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAA	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	8.33	±9.6
10990	AAA	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	8.52	±9.6
11303	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	10.24	±9.6
11304	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	10.73	±9.6
11305	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.70	±9.6
11306	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.55	±9.6
11307	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.40	±9.6
11308	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.51	±9.6
11309	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.76	±9.6
11310	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.95	±9.6
11311	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.96	±9.6
11312	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.68	±9.6
11313	AAA	IEEE 802.11be (320 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
11314	AAA	IEEE 802.11be (320 MHz, MCS2, 99pc duty cycle)	WLAN	8.45	±9.6
11315	AAA	IEEE 802.11be (320 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
11316	AAA	IEEE 802.11be (320 MHz, MCS4, 99pc duty cycle)	WLAN	8.44	±9.6
11317	AAA	IEEE 802.11be (320 MHz, MCS5, 99pc duty cycle)	WLAN	8.41	±9.6
11318	AAA	IEEE 802.11be (320 MHz, MCS6, 99pc duty cycle)	WLAN	8.40	±9.6
11319	AAA	IEEE 802.11be (320 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
11320	AAA	IEEE 802.11be (320 MHz, MCS8, 99pc duty cycle)	WLAN	8.27	±9.6
11321	AAA	IEEE 802.11be (320 MHz, MCS9, 99pc duty cycle)	WLAN	8.40	±9.6
11322	AAA	IEEE 802.11be (320 MHz, MCS10, 99pc duty cycle)	WLAN	8.36	±9.6
11323	AAA	IEEE 802.11be (320 MHz, MCS11, 99pc duty cycle)	WLAN	8.09	±9.6
11324	AAA	IEEE 802.11be (320 MHz, MCS12, 99pc duty cycle)	WLAN	8.42	±9.6
11325	AAA	IEEE 802.11be (320 MHz, MCS13, 99pc duty cycle)	WLAN	8.37	±9.6
11326	AAA	IEEE 802.11be (320 MHz, MCS14, 99pc duty cycle)	WLAN	8.30	±9.6

² Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

C.2. System Validation Dipole D2450V2 (Serial No. 894 / Control No. WA0064)

Please see the following pages.

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



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accreditation No.: **SCS 0108**

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificatesClient **MWF**
Yokohama, JapanCertificate No. **D2450V2-894_Apr24****CALIBRATION CERTIFICATE**Object **D2450V2 - SN:894**Calibration procedure(s) **QA CAL-05.v12
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**Calibration date: **April 16, 2024**

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 $(22 \pm 3)^\circ\text{C}$ 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	26-Mar-24 (No. 217-04038/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
Power sensor NRP-Z91	SN: 103245	26-Mar-24 (No. 217-04037)	Mar-25
Reference 20 dB Attenuator	SN: BH9394 (20k)	26-Mar-24 (No. 217-04046)	Mar-25
Type-N mismatch combination	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25
Reference Probe EX3DV4	SN: 7349	03-Nov-23 (No. EX3-7349_Nov23)	Nov-24
DAE4	SN: 601	30-Jan-24 (No. DAE4-601_Jan24)	Jan-25
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: MY41053315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator N&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: **Paulo Fina** Name: **Paulo Fina** Function: **Laboratory Technician**Approved by: **Sven Kühn** Technical Manager

Signature

Issued: April 17, 2024

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

Certificate No: D2450V2-894_Apr24

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



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

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:

- 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	DASY52	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 mm	
Frequency	2450 MHz $\pm$ 1 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) °C	37.9 $\pm$ 6 %	1.85 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.6 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	53.4 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.31 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.9 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	52.3 $\pm$ 6 %	2.02 mho/m $\pm$ 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.8 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.7 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.12 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	24.2 W/kg $\pm$ 16.5 % (k=2)

DASY5 Validation Report for Head TSL

Date: 16.04.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:894

Communication System: UTD 0 - CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.85$ S/m; $\epsilon_r = 37.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.96, 7.96, 7.96) @ 2450 MHz; Calibrated: 03.11.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2024
- 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 = 118.9 V/m; Power Drift = 0.06 dB

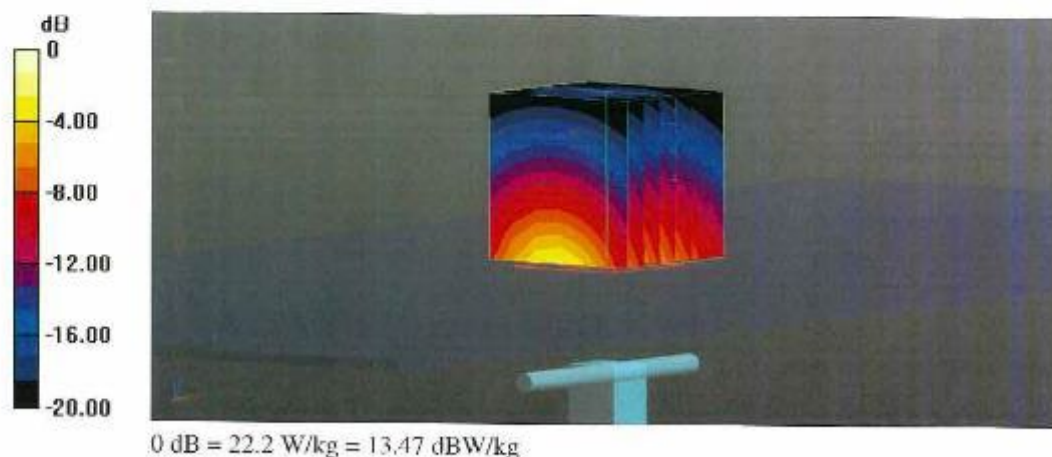
Peak SAR (extrapolated) = 27.2 W/kg

SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.31 W/kg

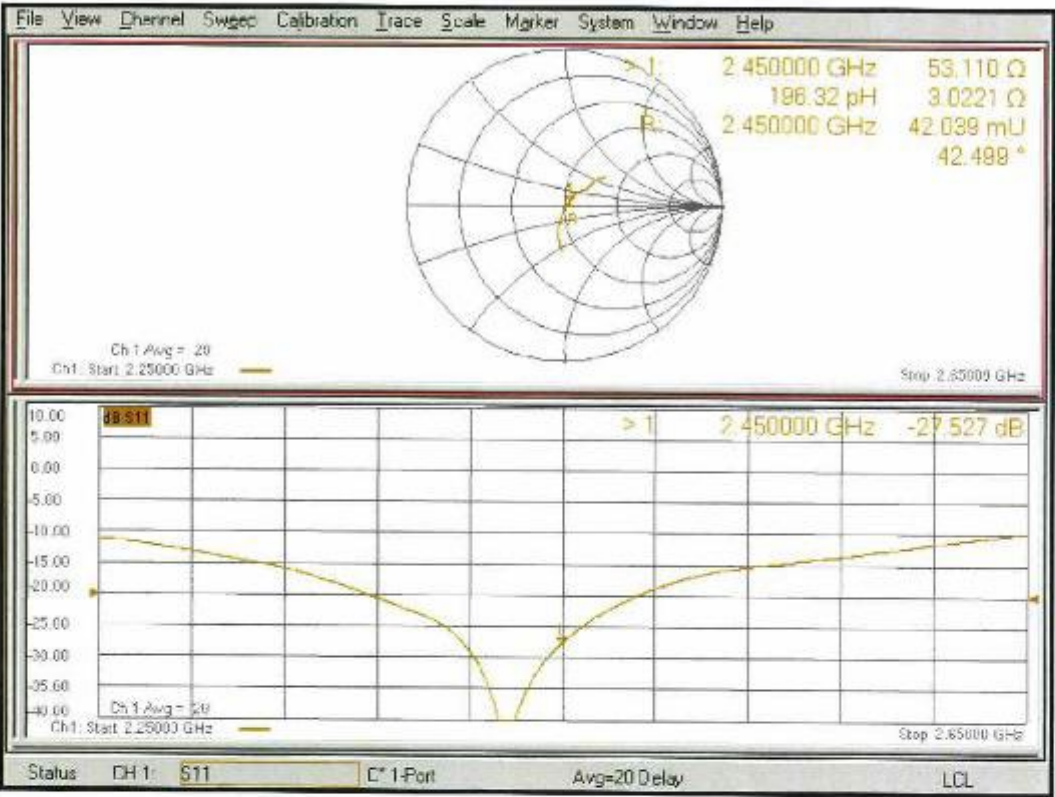
Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 50.1%

Maximum value of SAR (measured) = 22.2 W/kg



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 12.04.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:894

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ S/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(8.12, 8.12, 8.12) @ 2450 MHz; Calibrated: 03.11.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2024
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.9 V/m; Power Drift = -0.06 dB

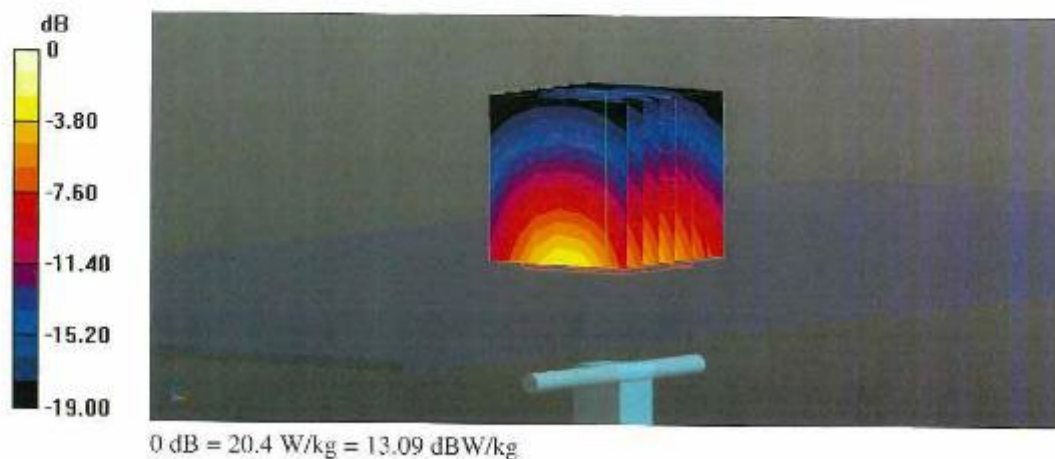
Peak SAR (extrapolated) = 24.3 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.12 W/kg

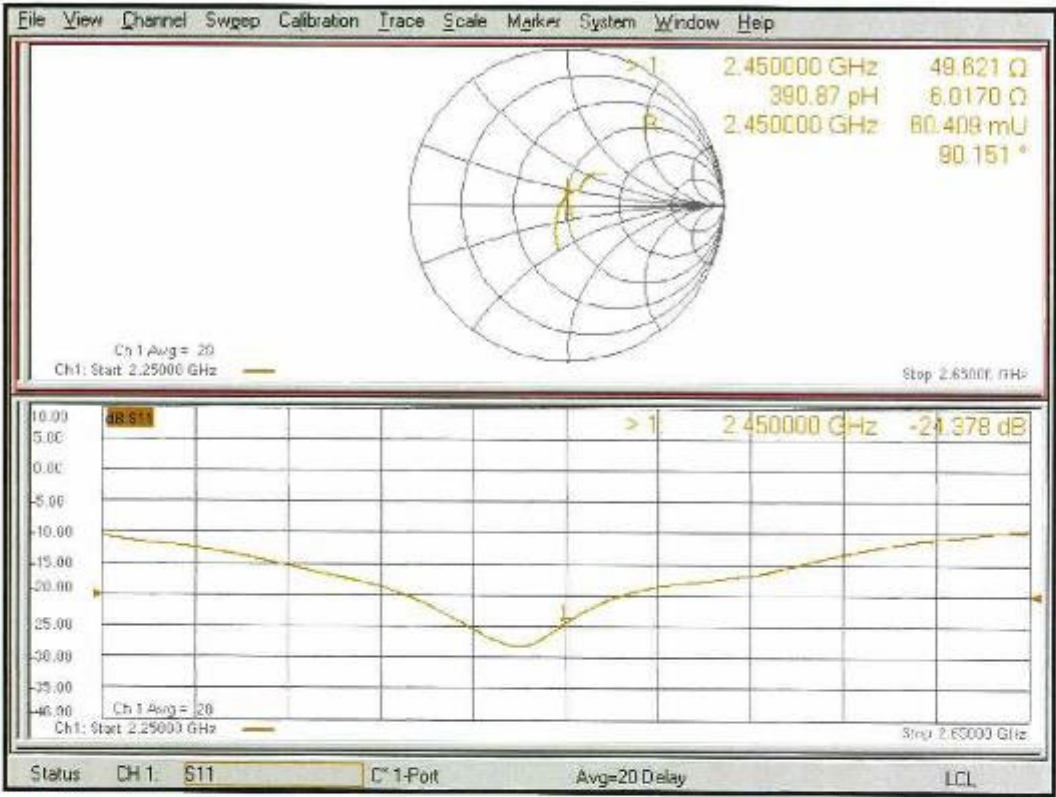
Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 54.4%

Maximum value of SAR (measured) = 20.4 W/kg



Impedance Measurement Plot for Body TSL



C.3. System Validation Dipole D5GHzV2 (Serial No. 1039 / Control No. WA0042)

Please see the following pages.

**Calibration Laboratory of
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Accreditation No.: **SCS 0108**

Client **MWF**
Yokohama, Japan

Certificate No. **D5GHzV2-1039_Apr24**

CALIBRATION CERTIFICATE

Object **D5GHzV2 - SN:1039**

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

Calibration date: **April 11, 2024**

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 $(22 \pm 3)^{\circ}\text{C}$ 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	26-Mar-24 (No. 217-04036/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
Power sensor NRP-Z91	SN: 103245	26-Mar-24 (No. 217-04037)	Mar-25
Reference 20 dB Attenuator	SN: BH9394 (20k)	26-Mar-24 (No. 217-04046)	Mar-25
Type-N mismatch combination	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25
Reference Probe EX3DV4	SN: 3503	07-Mar-24 (No. EX3-3503 Mar24)	Mar-25
DAE4	SN: 601	30-Jan-24 (No. DAE4-601_Jan24)	Jan-25
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 8461A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8461A	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:	Name Aidonia Georgiadou	Function Laboratory Technician	Signature
Approved by:	Name Sven Kühn	Function Technical Manager	Signature

Issued: April 12, 2024

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

Certificate No: D5GHzV2-1039_Apr24

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Calibration Laboratory of
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ConvF	sensitivity in TSL / NORM x,y,z
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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	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 $\pm$ 1 MHz 5300 MHz $\pm$ 1 MHz 5500 MHz $\pm$ 1 MHz 5600 MHz $\pm$ 1 MHz 5800 MHz $\pm$ 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 $\pm$ 0.2) °C	36.5 $\pm$ 6 %	4.56 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

SAR result with Head TSL at 5200 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.85 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	78.7 W/kg $\pm$ 19.9 % (k=2)

SAR averaged over 10 cm³ (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	22.5 W/kg $\pm$ 19.5 % (k=2)

Head TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.4 ± 6 %	4.60 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.95 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.7 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.28 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.9 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	36.3 ± 6 %	4.65 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5300 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.08 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (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	23.0 W/kg ± 19.5 % (k=2)

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	35.9 ± 6 %	4.87 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5500 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.49 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	85.0 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.0 W/kg ± 19.5 % (k=2)

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	35.8 ± 6 %	4.99 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.31 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	83.2 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.8 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	35.5 ± 6 %	5.21 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5800 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.01 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.27 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.7 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	49.4 ± 6 %	5.42 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5200 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.26 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	72.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.04 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.5 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.42 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	49.1 ± 6 %	5.56 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5300 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.37 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	73.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.07 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.8 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5500 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.6	5.65 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.7 ± 6 %	5.85 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

SAR result with Body TSL at 5500 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.91 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	79.2 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.0 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.6 ± 6 %	6.00 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.89 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	79.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.21 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.2 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.3 ± 6 %	6.28 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	74.7 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.08 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.8 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	50.1 Ω - 7.2 j Ω
Return Loss	- 22.9 dB

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	51.3 Ω - 4.8 j Ω
Return Loss	- 26.1 dB

Antenna Parameters with Head TSL at 5300 MHz

Impedance, transformed to feed point	51.4 Ω + 0.2 j Ω
Return Loss	- 37.0 dB

Antenna Parameters with Head TSL at 5500 MHz

Impedance, transformed to feed point	48.0 Ω + 0.5 j Ω
Return Loss	- 33.4 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	54.9 Ω - 1.9 j Ω
Return Loss	- 26.1 dB

Antenna Parameters with Head TSL at 5800 MHz

Impedance, transformed to feed point	56.7 Ω + 3.6 j Ω
Return Loss	- 22.9 dB

Antenna Parameters with Body TSL at 5200 MHz

Impedance, transformed to feed point	50.0 Ω - 6.3 j Ω
Return Loss	- 24.0 dB

Antenna Parameters with Body TSL at 5300 MHz

Impedance, transformed to feed point	51.3 Ω + 0.5 j Ω
Return Loss	- 37.2 dB

Antenna Parameters with Body TSL at 5500 MHz

Impedance, transformed to feed point	48.6 Ω + 0.6 j Ω
Return Loss	- 36.2 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	56.7 Ω - 0.2 j Ω
Return Loss	- 24.0 dB

Antenna Parameters with Body TSL at 5800 MHz

Impedance, transformed to feed point	57.7 Ω + 3.0 j Ω
Return Loss	- 22.3 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.198 ns
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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: 11.04.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1039

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5250 MHz, Frequency: 5300 MHz, Frequency: 5500 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.56$ S/m; $\epsilon_r = 36.5$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5250$ MHz; $\sigma = 4.6$ S/m; $\epsilon_r = 36.4$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5300$ MHz; $\sigma = 4.65$ S/m; $\epsilon_r = 36.3$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5500$ MHz; $\sigma = 4.87$ S/m; $\epsilon_r = 35.9$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5600$ MHz; $\sigma = 4.99$ S/m; $\epsilon_r = 35.8$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5800$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 35.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.63, 5.63, 5.63) @ 5200 MHz, ConvF(5.39, 5.39, 5.39) @ 5250 MHz, ConvF(5.38, 5.38, 5.38) @ 5300 MHz, ConvF(5.04, 5.04, 5.04) @ 5500 MHz, ConvF(5, 5, 5) @ 5600 MHz, ConvF(4.86, 4.86, 4.86) @ 5800 MHz; Calibrated: 07.03.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2024
- 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=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 = 73.52 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 27.8 W/kg

SAR(1 g) = 7.85 W/kg; SAR(10 g) = 2.24 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 69.1%

Maximum value of SAR (measured) = 18.0 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 74.70 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 27.2 W/kg

SAR(1 g) = 7.95 W/kg; SAR(10 g) = 2.28 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 70.4%

Maximum value of SAR (measured) = 18.2 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 = 74.45 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 28.6 W/kg

SAR(1 g) = 8.08 W/kg; SAR(10 g) = 2.3 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 69.3%

Maximum value of SAR (measured) = 18.7 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 = 74.98 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 32.5 W/kg

SAR(1 g) = 8.49 W/kg; SAR(10 g) = 2.4 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 66.6%

Maximum value of SAR (measured) = 20.1 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 = 74.06 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 30.8 W/kg

SAR(1 g) = 8.31 W/kg; SAR(10 g) = 2.37 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 67.8%

Maximum value of SAR (measured) = 19.6 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 = 72.11 V/m; Power Drift = 0.09 dB

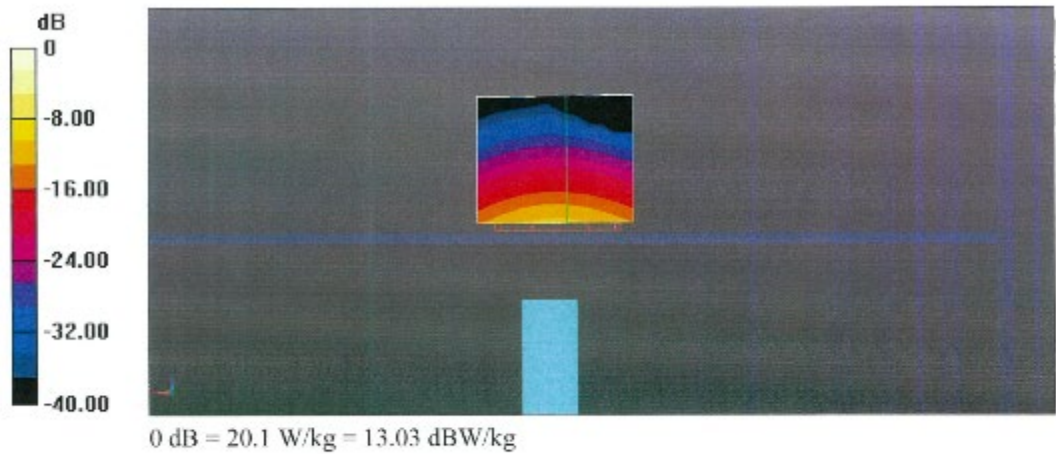
Peak SAR (extrapolated) = 31.7 W/kg

SAR(1 g) = 8.01 W/kg; SAR(10 g) = 2.27 W/kg

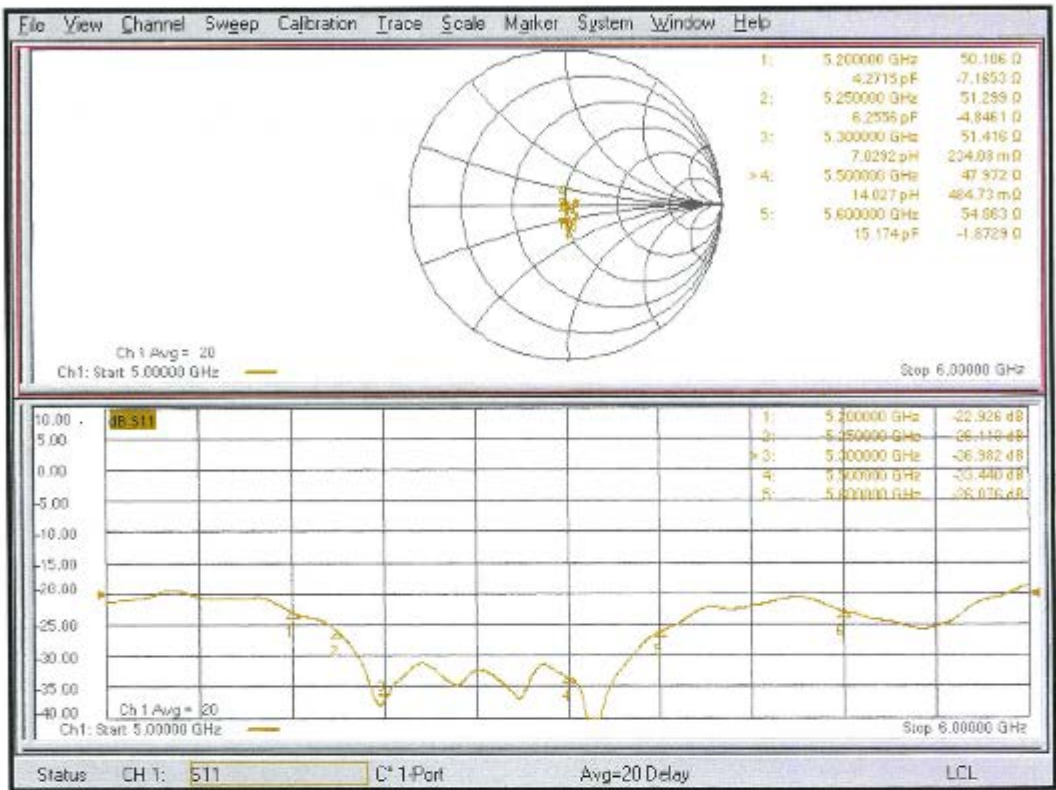
Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 65.3%

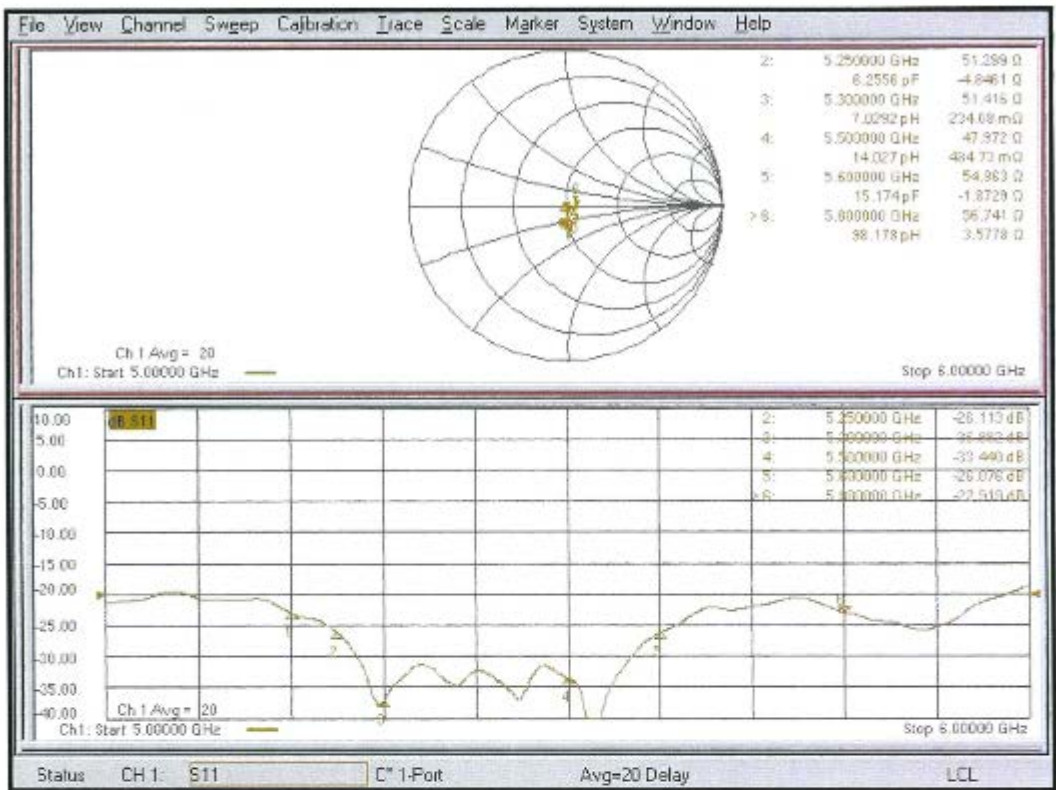
Maximum value of SAR (measured) = 19.5 W/kg



Impedance Measurement Plot for Head TSL(5200, 5250, 5300, 5500, 5600 MHz)



Impedance Measurement Plot for Head TSL(5800 MHz)



DASY5 Validation Report for Body TSL

Date: 10.04.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1039

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; $\sigma = 5.42$ S/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5300$ MHz; $\sigma = 5.56$ S/m; $\epsilon_r = 49.1$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5500$ MHz; $\sigma = 5.85$ S/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5600$ MHz; $\sigma = 6$ S/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 5800$ MHz; $\sigma = 6.28$ S/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.13, 5.13, 5.13) @ 5200 MHz, ConvF(5.13, 5.13, 5.13) @ 5300 MHz, ConvF(4.69, 4.69, 4.69) @ 5500 MHz, ConvF(4.65, 4.65, 4.65) @ 5600 MHz, ConvF(4.48, 4.48, 4.48) @ 5800 MHz; Calibrated: 07.03.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2024
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body 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 = 65.33 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 7.26 W/kg; SAR(10 g) = 2.04 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 68.4%

Maximum value of SAR (measured) = 16.9 W/kg

Dipole Calibration for Body 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 = 64.55 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 28.2 W/kg

SAR(1 g) = 7.37 W/kg; SAR(10 g) = 2.07 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 66.9%

Maximum value of SAR (measured) = 17.3 W/kg

Dipole Calibration for Body 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 = 65.34 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 31.8 W/kg

SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.19 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 65.1%

Maximum value of SAR (measured) = 18.9 W/kg

Dipole Calibration for Body 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 = 65.25 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 32.7 W/kg

SAR(1 g) = 7.89 W/kg; SAR(10 g) = 2.21 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 63.9%

Maximum value of SAR (measured) = 19.3 W/kg

Dipole Calibration for Body 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 = 63.20 V/m; Power Drift = -0.08 dB

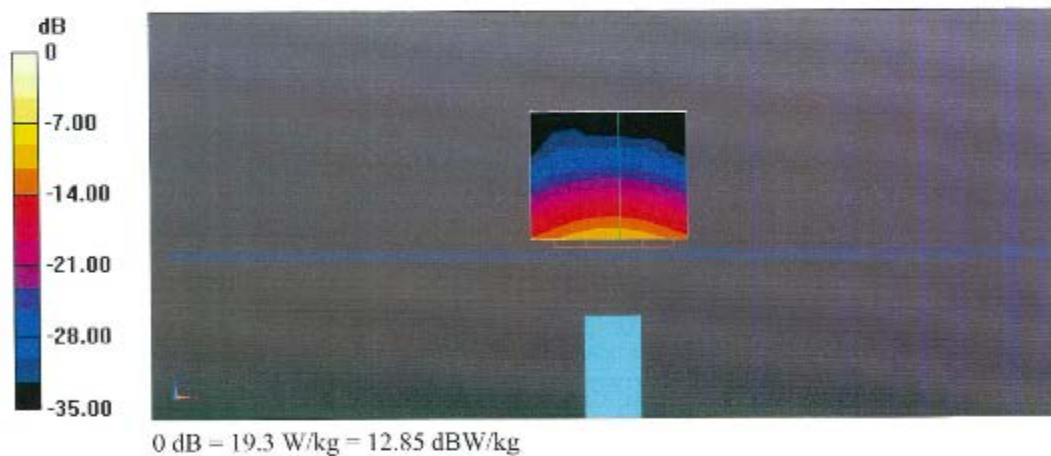
Peak SAR (extrapolated) = 31.4 W/kg

SAR(1 g) = 7.46 W/kg; SAR(10 g) = 2.08 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 63.5%

Maximum value of SAR (measured) = 18.4 W/kg



Impedance Measurement Plot for Body TSL

