

Appendix B. – SAR Test Plots

EUT Type: LTE Mobile Router
Ambient Temperature: 20.4 °C
Liquid Temperature: 20.3 °C
Test Date: 11/06/2025
Band: LoRa
Plot No.: A1
Measurement Report for Device, BACK, Custom Band, CW, Channel 902300 (902.300 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	BACK, 0.00	Custom Band	CW, 0--	902.300, 902300	5.5	0.962	41.3

Hardware Setup

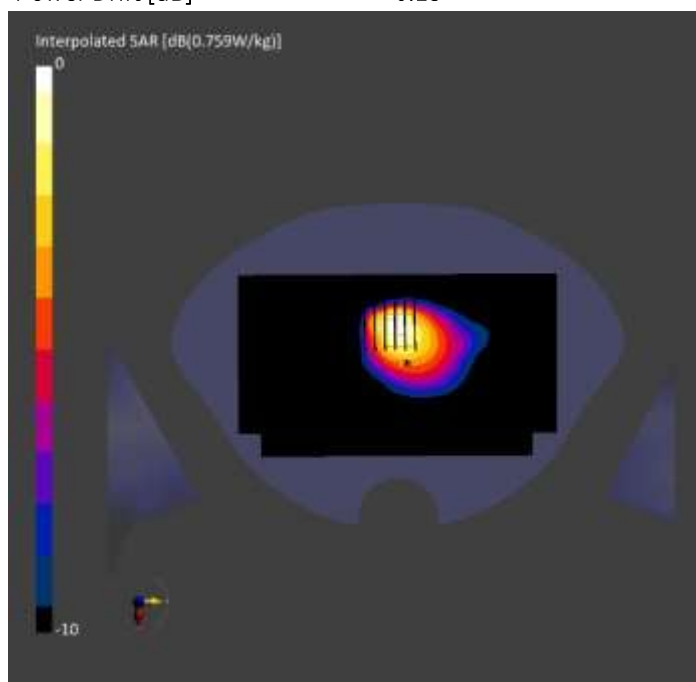
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	ES3DV3 - SN3076, 2025-07-22	DAE4 Sn1720, 2025-04-23

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	3.0

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.121	0.215
psSAR10g [W/Kg]	0.072	0.091
Power Drift [dB]	-0.13	-0.18



EUT Type: LTE Mobile Router
 Ambient Temperature: 20.4 °C
 Liquid Temperature: 20.3 °C
 Test Date: 11/06/2025
 Band: LoRa
 Plot No.: A2
 Measurement Report for Device, BACK, Custom Band, CW, Channel 915200 (915.200 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	BACK, 0.00	Custom Band	CW, 0--	915.200, 915200	5.5	0.971	41.2

Hardware Setup

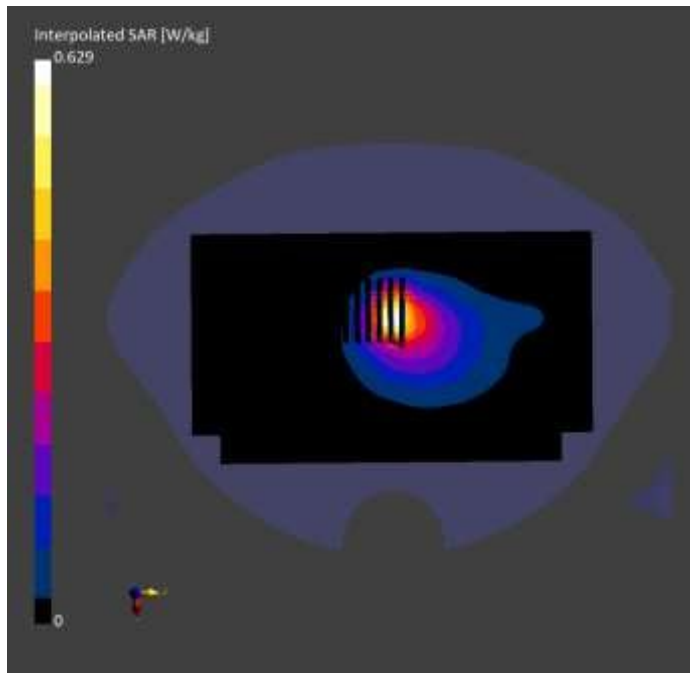
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	ES3DV3 - SN3076, 2025-07-22	DAE4 Sn1720, 2025-04-23

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	3.0

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.139	0.195
psSAR10g [W/Kg]	0.078	0.087
Power Drift [dB]	-0.02	-0.12



Appendix C. – Dipole Verification Plots

EUT Type: LTE Mobile Router
Ambient Temperature: 20.4 °C
Liquid Temperature: 20.3 °C
Test Date: 11/06/2025
Band: LoRa
Plot No.: V1
Measurement Report for Device, , , CW, Channel 0 (900.000 MHz)
Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	,		CW, 0--	900.000, 0	5.5	0.961	41.4

Hardware Setup

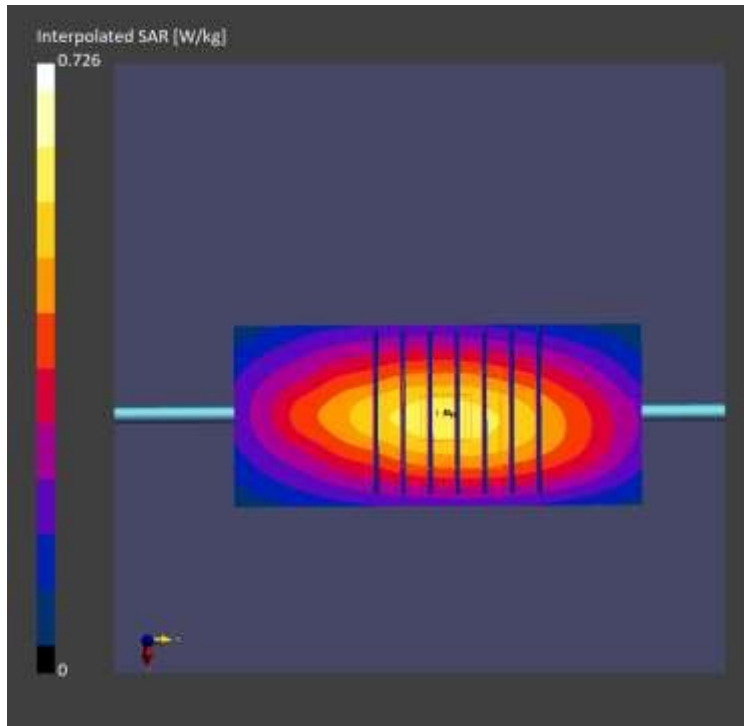
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	ES3DV3 - SN3076, 2025-07-22	DAE4 Sn1720, 2025-04-23

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	3.0

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.503	0.535
psSAR10g [W/Kg]	0.325	0.346
Power Drift [dB]	-0.01	-0.01



Appendix D.– SAR Tissue Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bactericide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Harts grove.

Ingredients (% by weight)	Frequency (MHz)									
	750		835		1 900		2 450 – 2 700		3500 - 5 800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	41.1	51.7	40.45	53.06	54.9	70.17	71.88	73.2	65.52	78.66
Salt (NaCl)	1.4	0.9	1.45	0.94	0.18	0.39	0.16	0.1	0.0	0.0
Sugar	57.0	47.2	57.0	44.9	0.0	0	0.0	0.0	0.0	0.0
HEC	0.2	0	1.0	1.0	0.0	0	0.0	0.0	0.0	0.0
Bactericide	0.2	0.1	0.1	0.1	0.0	0	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	19.97	0.0	17.24	10.67
DGBE	0.0	0.0	0.0	0.0	44.92	29.44	7.99	26.7	0.0	0.0
Diethylene glycol hexyl ether	-	-	-	-	-	-	-	-	-	-

Salt:	99 % Pure Sodium Chloride	Sugar:	98 % Pure Sucrose
Water:	De-ionized, 16M resistivity	HEC:	Hydroxyethyl Cellulose
DGBE:	99 % Di (ethylene glycol) butyl ether, [2-(2-butoxyethoxy) ethanol]		
Triton X-100(ultra-pure):	Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl) phenyl] ether		

Composition of the Tissue Equivalent Matter

Appendix E. – SAR System Validation

Per FCC KDB 865664 D02v01r02, SAR system validation status should be document to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in IEEE 1528-2013 and FCC KDB 865664 D01v01r04. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

SAR System No.	Probe	Probe Type	Probe Calibration Point		Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
							Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
5	3076	ES3DV3	Head	900	130	2025-07-28	41.6	0.99	PASS	PASS	PASS	N/A	N/A	N/A

SAR System Validation Summary 1g

Note;

All measurement was performed using probes calibrated for CW signal only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04. SAR system were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to KDB 865664 D01v01r04.