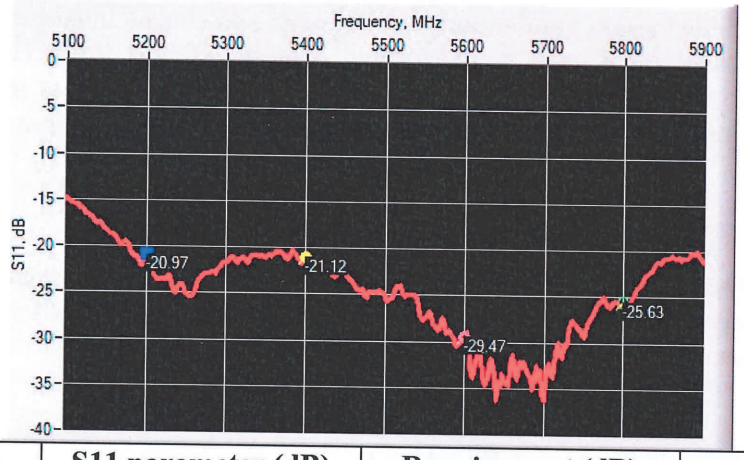
6 CALIBRATION RESULTS

6.1 MECHANICAL DIMENSIONS

L mm		h mm		d mm	
Measured	Required	Measured	Required	Measured	Required
20.42	20.60 +/- 2%	40.32	40.30 +/- 2%	3.58	3.60 +/- 2%

6.2 S11 PARAMETER

6.2.1 S11 parameter in Head Liquid



Frequency (MHz)	S11 parameter (dB)	Requirement (dB)	Impedance
5200	-20.97	-20	59.4Ω - 2.7jΩ
5400	-21.12	-20	45.7Ω + 7.3jΩ
5600	-29.47	-20	50.1Ω + 3.4jΩ
5800	-25.63	-20	46.5Ω + 3.6jΩ

6.3 SAR

The IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards state that the system validation measurements must be performed using a reference dipole meeting the fore mentioned return loss and mechanical dimension requirements. The validation measurement must be performed against a liquid filled flat phantom, with the phantom constructed as outlined in the fore mentioned standards. Per the standards, the dipole shall be positioned below the bottom of the phantom, with the dipole length centered and parallel to the longest dimension of the flat phantom, with the top surface of the dipole at the described distance from the bottom surface of the phantom.

6.3.1 SAR with Head Liquid

The IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards state that the system validation measurements should produce the SAR values shown below (for phantom thickness of 2 mm), within the uncertainty for the system validation. All SAR values are normalized to 1 W forward power. In bracket, the measured SAR is given with the used input power.

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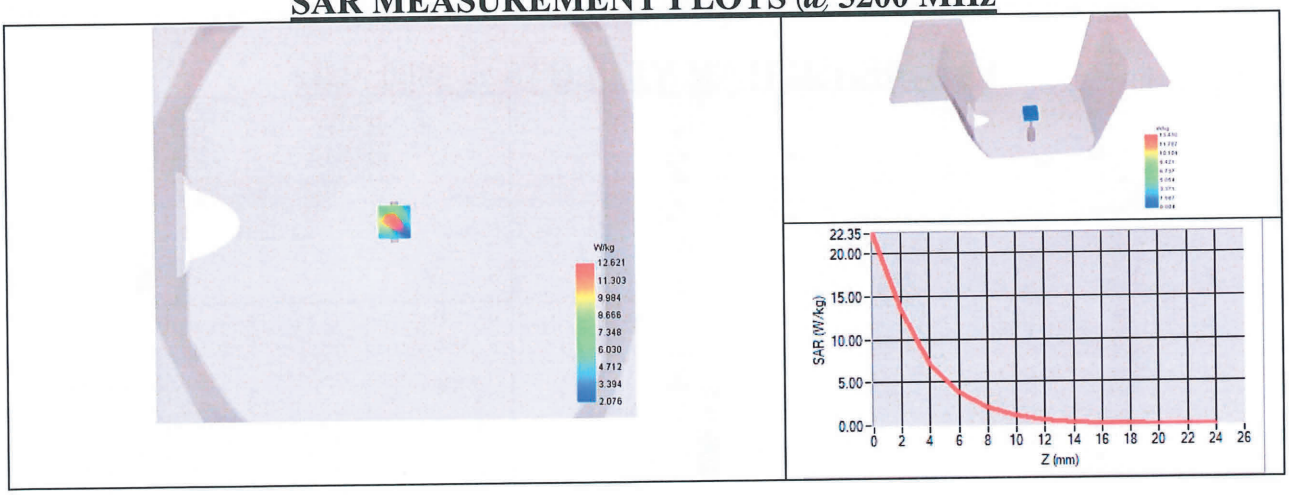
Software	OPENSAR V5
Phantom	SN 13/09 SAM68
Probe	SN 41/18 EPGO333
Liquid	Head Liquid Values @ 5200 MHz: eps' : 34.0 sigma : 4.86 Head Liquid Values @ 5400 MHz: eps' : 33.4 sigma : 5.09 Head Liquid Values @ 5600 MHz: eps' : 32.7 sigma : 5.32 Head Liquid Values @ 5800 MHz: eps' : 32.1 sigma : 5.57
Distance between dipole center and liquid	10.0 mm
Area scan resolution	dx=8mm/dy=8mm
Zoon Scan Resolution	dx=4mm/dy=4mm/dz=2mm
Frequency	5200 MHz 5400 MHz 5600 MHz 5800 MHz
Input power	20 dBm
Liquid Temperature	20 +/- 1 °C
Lab Temperature	20 +/- 1 °C
Lab Humidity	30-70 %

Frequency	1g SAR (W/kg)			10g SAR (W/kg)		
	Measured	Measured normalized to 1W	Target normalized to 1W	Measured	Measured normalized to 1W	Target normalized to 1W
5200 MHz	7.31	73.10	76.50	2.15	21.47	21.60
5400 MHz	8.22	82.19	79.60	2.42	24.20	23.40
5600 MHz	7.79	77.91	78.30	2.27	22.72	23.20
5800 MHz	7.60	76.01	78.00	2.23	22.28	21.90

SAR MEASUREMENT PLOTS @ 5200 MHz



Template_ACR.DDD.N.YY.MVGB.ISSUE_SAR Reference Dipole vL

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