APPENDIX F: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented 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 FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. 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.

Table F-1
SAR System Validation Summary – 1g

SAR System	Freq. (MHz)	Date	Probe SN	DAE	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
									SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
AM1	750	10/17/2023	3949	1684	750	Head	0.868	41.834	PASS	PASS	PASS	N/A	N/A	N/A
AM15	835	02/13/2024	7668	1681	835	Head	0.888	42.426	PASS	PASS	PASS	GMSK	PASS	N/A
AM10	1750	05/07/2024	7546	1402	1750	Head	1.372	40.144	PASS	PASS	PASS	N/A	N/A	N/A
AM4	1900	11/29/2023	7639	1403	1900	Head	1.389	38.940	PASS	PASS	PASS	GMSK	PASS	N/A
AM15	1900	01/08/2024	7668	1681	1900	Head	1.406	38.655	PASS	PASS	PASS	GMSK	PASS	N/A
AM6	2450	04/01/2024	7499	1644	2450	Head	1.869	40.333	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM13	2450	06/03/2024	7682	1683	2450	Head	1.759	40.066	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM6	2600	04/03/2024	7499	1644	2600	Head	1.990	40.059	PASS	PASS	PASS	TDD	PASS	N/A
AM1	5250	10/23/2023	3949	1684	5250	Head	4.491	35.603	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5250	03/07/2024	7427	467	5250	Head	4.531	34.633	PASS	PASS	PASS	OFDM	N/A	PASS
AM1	5600	10/23/2023	3949	1684	5600	Head	4.883	34.987	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5600	03/07/2024	7427	467	5600	Head	4.917	33.974	PASS	PASS	PASS	OFDM	N/A	PASS
AM1	5750	10/23/2023	3949	1684	5750	Head	5.056	34.698	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5750	03/07/2024	7427	467	5750	Head	5.101	33.741	PASS	PASS	PASS	OFDM	N/A	PASS
AM1	5850	10/23/2023	3949	1684	5850	Head	5.115	34.636	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5850	03/07/2024	7427	467	5850	Head	5.208	33.577	PASS	PASS	PASS	OFDM	N/A	PASS

Table F-2
SAR System Validation Summary – 10g

SAR System	Freq. (MHz)	Date	Probe SN	DAE	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
									SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
AM14	13	06/20/2024	3746	1237	13	Head	0.725	54.300	PASS	PASS	PASS	N/A	N/A	N/A
AM1	750	10/17/2023	3949	1684	750	Head	0.868	41.834	PASS	PASS	PASS	N/A	N/A	N/A
AM15	835	02/13/2024	7668	1681	835	Head	0.888	42.426	PASS	PASS	PASS	GMSK	PASS	N/A
AM10	1750	05/07/2024	7546	1402	1750	Head	1.372	40.144	PASS	PASS	PASS	N/A	N/A	N/A
AM4	1900	11/29/2023	7639	1403	1900	Head	1.389	38.940	PASS	PASS	PASS	GMSK	PASS	N/A
AM6	2450	04/01/2024	7499	1644	2450	Head	1.869	40.333	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM13	2450	06/03/2024	7682	1683	2450	Head	1.759	40.066	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM6	2600	04/03/2024	7499	1644	2600	Head	1.990	40.059	PASS	PASS	PASS	TDD	PASS	N/A
AM8	5250	03/07/2024	7427	467	5250	Head	4.531	34.633	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5600	03/07/2024	7427	467	5600	Head	4.917	33.974	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5750	03/07/2024	7427	467	5750	Head	5.101	33.741	PASS	PASS	PASS	OFDM	N/A	PASS
AM8	5850	03/07/2024	7427	467	5850	Head	5.208	33.577	PASS	PASS	PASS	OFDM	N/A	PASS
AM7	6500	04/10/2024	7421	604	6500	Head	6.005	33.656	PASS	PASS	PASS	OFDM	N/A	PASS
AM7	8000	06/25/2024	7421	604	8000	Head	7.721	31.411	PASS	PASS	PASS	N/A	N/A	N/A

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems 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 FCC KDB Publication 865664 D01v01r04.