APPENDIX G: 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 G-1
SAR System Validation Summary - Head

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
G	13	06/09/2022	7527	13	Head	0.762	52.537	PASS	PASS	PASS	N/A	N/A	N/A
P	750	08/01/2022	7409	750	Head	0.896	42.583	PASS	PASS	PASS	N/A	N/A	N/A
K1	750	08/23/2022	7491	750	Head	0.886	41.040	PASS	PASS	PASS	N/A	N/A	N/A
K4	835	04/15/2022	7637	835	Head	0.923	43.560	PASS	PASS	PASS	GMSK	PASS	N/A
P	835	08/08/2022	7409	835	Head	0.919	42.655	PASS	PASS	PASS	GMSK	PASS	N/A
S	1750	08/08/2022	7488	1750	Head	1.351	39.441	PASS	PASS	PASS	N/A	N/A	N/A
I	1750	09/12/2022	7660	1750	Head	1.385	39.887	PASS	PASS	PASS	N/A	N/A	N/A
AM6	1900	06/08/2022	7532	1900	Head	1.451	40.772	PASS	PASS	PASS	GMSK	PASS	N/A
S	1900	08/08/2022	7488	1900	Head	1.443	39.203	PASS	PASS	PASS	GMSK	PASS	N/A
P	2300	08/01/2022	7409	2300	Head	1.753	39.718	PASS	PASS	PASS	N/A	N/A	N/A
K2	2450	04/04/2022	7640	2450	Head	1.841	38.698	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM8	2450	05/04/2022	7546	2450	Head	1.780	39.800	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	2450	08/11/2022	7410	2450	Head	1.862	39.716	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K4	2600	04/21/2022	7637	2600	Head	1.967	40.773	PASS	PASS	PASS	TDD	PASS	N/A
AM8	2600	05/04/2022	7546	2600	Head	1.900	39.600	PASS	PASS	PASS	TDD	PASS	N/A
L	2600	08/11/2022	7410	2600	Head	1.987	39.461	PASS	PASS	PASS	TDD	PASS	N/A
AM1	3500	02/21/2022	7639	3500	Head	2.772	38.754	PASS	PASS	PASS	TDD	PASS	N/A
AM7	3500	06/18/2022	7416	3500	Head	2.865	36.230	PASS	PASS	PASS	TDD	PASS	N/A
L	3500	08/02/2022	7410	3500	Head	2.779	36.839	PASS	PASS	PASS	TDD	PASS	N/A
AM7	3700	06/18/2022	7416	3700	Head	3.022	35.958	PASS	PASS	PASS	TDD	PASS	N/A
L	3700	08/02/2022	7410	3700	Head	2.967	36.484	PASS	PASS	PASS	TDD	PASS	N/A
AM7	3900	06/18/2022	7416	3900	Head	3.198	35.716	PASS	PASS	PASS	TDD	PASS	N/A
K3	5250	03/16/2022	7565	5250	Head	4.625	36.172	PASS	PASS	PASS	OFDM	N/A	PASS
K3	5600	03/16/2022	7565	5600	Head	5.018	35.554	PASS	PASS	PASS	OFDM	N/A	PASS
K3	5750	03/16/2022	7565	5750	Head	5.194	35.286	PASS	PASS	PASS	OFDM	N/A	PASS
G	5800	04/04/2022	7527	5800	Head	5.500	34.891	PASS	PASS	PASS	OFDM	N/A	PASS

Table G-2
SAR System Validation Summary - Body

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
K3	750	02/22/2022	7565	750	Body	0.947	55.511	PASS	PASS	PASS	N/A	N/A	N/A
E	750	09/06/2022	7668	750	Body	0.936	54.436	PASS	PASS	PASS	N/A	N/A	N/A
K2	835	03/19/2022	7640	835	Body	1.004	54.002	PASS	PASS	PASS	GMSK	PASS	N/A
I	835	07/01/2022	7660	835	Body	0.953	57.558	PASS	PASS	PASS	GMSK	PASS	N/A
K5	835	07/11/2022	7402	835	Body	1.002	55.060	PASS	PASS	PASS	GMSK	PASS	N/A
D	1750	01/05/2022	7571	1750	Body	1.511	52.181	PASS	PASS	PASS	N/A	N/A	N/A
J	1750	02/17/2022	7570	1750	Body	1.476	54.062	PASS	PASS	PASS	N/A	N/A	N/A
I	1750	07/01/2022	7660	1750	Body	1.467	53.907	PASS	PASS	PASS	N/A	N/A	N/A
J	1900	02/17/2022	7570	1900	Body	1.578	53.899	PASS	PASS	PASS	GMSK	PASS	N/A
O	1900	03/24/2022	7417	1900	Body	1.536	52.790	PASS	PASS	PASS	GMSK	PASS	N/A
P	1900	08/16/2022	7409	1900	Body	1.521	53.285	PASS	PASS	PASS	GMSK	PASS	N/A
O	2300	03/23/2022	7417	2300	Body	1.849	52.296	PASS	PASS	PASS	N/A	N/A	N/A
K	2300	08/08/2022	7659	2300	Body	1.863	52.019	PASS	PASS	PASS	N/A	N/A	N/A
AM4	2450	03/08/2022	3837	2450	Body	1.909	52.733	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K2	2450	03/30/2022	7640	2450	Body	2.018	51.437	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2450	08/08/2022	7659	2450	Body	2.003	51.761	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
C	2450	08/16/2022	7406	2450	Body	1.870	52.695	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
E	2450	09/07/2022	7668	2450	Body	2.002	51.995	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM10	2450	09/29/2022	7308	2450	Body	2.017	51.459	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM4	2600	03/09/2022	3837	2600	Body	2.064	53.545	PASS	PASS	PASS	TDD	PASS	N/A
O	2600	03/23/2022	7417	2600	Body	2.129	51.871	PASS	PASS	PASS	TDD	PASS	N/A
K	2600	08/08/2022	7659	2600	Body	2.147	51.553	PASS	PASS	PASS	TDD	PASS	N/A
C	2600	08/16/2022	7406	2600	Body	2.156	52.352	PASS	PASS	PASS	TDD	PASS	N/A
K1	2600	08/31/2022	7491	2600	Body	2.103	51.476	PASS	PASS	PASS	TDD	PASS	N/A
AM10	2600	09/29/2022	7308	2600	Body	2.224	50.917	PASS	PASS	PASS	TDD	PASS	N/A
AM1	3500	03/03/2022	7639	3500	Body	3.179	50.981	PASS	PASS	PASS	TDD	PASS	N/A
AM4	3500	03/17/2022	3837	3500	Body	3.380	49.947	PASS	PASS	PASS	TDD	PASS	N/A
AM3	3500	04/07/2022	7427	3500	Body	3.430	50.138	PASS	PASS	PASS	TDD	PASS	N/A
L	3500	08/04/2022	7410	3500	Body	3.159	51.062	PASS	PASS	PASS	TDD	PASS	N/A
AM4	3700	03/17/2022	3837	3700	Body	3.590	49.600	PASS	PASS	PASS	TDD	PASS	N/A
AM3	3700	04/06/2022	7427	3700	Body	3.650	49.800	PASS	PASS	PASS	TDD	PASS	N/A
L	3700	08/04/2022	7410	3700	Body	3.395	50.732	PASS	PASS	PASS	TDD	PASS	N/A
AM4	3900	03/17/2022	3837	3900	Body	3.832	49.362	PASS	PASS	PASS	TDD	PASS	N/A
AM3	3900	04/06/2022	7427	3900	Body	3.890	49.500	PASS	PASS	PASS	TDD	PASS	N/A
K	5250	05/03/2022	7659	5250	Body	5.389	47.450	PASS	PASS	PASS	OFDM	N/A	PASS
K	5600	05/03/2022	7659	5600	Body	5.891	46.819	PASS	PASS	PASS	OFDM	N/A	PASS
K	5750	05/03/2022	7659	5750	Body	6.105	46.554	PASS	PASS	PASS	OFDM	N/A	PASS
K	5800	05/03/2022	7659	5800	Body	6.178	46.433	PASS	PASS	PASS	OFDM	N/A	PASS

NOTE: The probes have been calibrated for both CW and modulated signals. 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.