

APPENDIX H: 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 H-1
SAR System Validation Summary – 1g

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (ε _r)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
K4	750	10/20/2021	7640	750	Head	0.904	42.653	PASS	PASS	PASS	N/A	N/A	N/A
K1	750	11/08/2021	7558	750	Head	0.922	40.385	PASS	PASS	PASS	N/A	N/A	N/A
K2	835	09/22/2021	7402	835	Head	0.945	42.933	PASS	PASS	PASS	GMSK	PASS	N/A
K4	835	10/20/2021	7640	835	Head	0.935	42.411	PASS	PASS	PASS	GMSK	PASS	N/A
A	1750	08/13/2021	7406	1750	Head	1.373	38.653	PASS	PASS	PASS	N/A	N/A	N/A
A	1900	08/31/2021	7406	1900	Head	1.459	38.754	PASS	PASS	PASS	GMSK	PASS	N/A
B	2450	08/12/2021	7660	2450	Head	1.856	39.026	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
E	2450	12/10/2021	7538	2450	Head	1.855	39.540	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
E	2600	12/09/2021	7538	2600	Head	2.037	38.912	PASS	PASS	PASS	TDD	PASS	N/A
J	5250	01/03/2022	7668	5250	Head	4.732	35.929	PASS	PASS	PASS	OFDM	N/A	PASS
J	5600	01/03/2022	7668	5600	Head	5.153	35.455	PASS	PASS	PASS	OFDM	N/A	PASS
J	5750	01/04/2022	7668	5750	Head	5.340	35.178	PASS	PASS	PASS	OFDM	N/A	PASS
B	5800	10/8/2021	7552	5800	Head	5.492	35.325	PASS	PASS	PASS	OFDM	N/A	PASS
K2	750	09/16/2021	7402	750	Body	0.982	54.692	PASS	PASS	PASS	N/A	N/A	N/A
K1	750	10/21/2021	7558	750	Body	0.968	54.027	PASS	PASS	PASS	N/A	N/A	N/A
K3	835	12/21/2021	7637	835	Body	0.994	55.263	PASS	PASS	PASS	GMSK	PASS	N/A
G	1750	08/27/2021	7357	1750	Body	1.488	51.324	PASS	PASS	PASS	N/A	N/A	N/A
G	1750	12/21/2021	7357	1750	Body	1.502	52.717	PASS	PASS	PASS	N/A	N/A	N/A
P	1900	12/21/2021	7410	1900	Body	1.568	52.329	PASS	PASS	PASS	GMSK	PASS	N/A
E	1900	01/17/2022	7538	1900	Body	1.584	51.410	PASS	PASS	PASS	GMSK	PASS	N/A
K	2450	09/01/2021	3914	2450	Body	2.040	52.400	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	09/01/2021	3914	2600	Body	2.220	51.900	PASS	PASS	PASS	TDD	PASS	N/A
J	5250	12/26/2021	7668	5250	Body	5.403	47.258	PASS	PASS	PASS	OFDM	N/A	PASS
J	5600	12/26/2021	7668	5600	Body	5.911	46.657	PASS	PASS	PASS	OFDM	N/A	PASS
J	5750	12/26/2021	7668	5750	Body	6.125	46.381	PASS	PASS	PASS	OFDM	N/A	PASS
B	5800	10/08/2021	7552	5800	Body	6.239	47.912	PASS	PASS	PASS	OFDM	N/A	PASS

Table H-2
SAR System Validation Summary – 10g

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (ε _r)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
G	1750	12/21/2021	7357	1750	Body	1.502	52.717	PASS	PASS	PASS	N/A	N/A	N/A
P	1900	12/21/2021	7410	1900	Body	1.568	52.329	PASS	PASS	PASS	GMSK	PASS	N/A
K	2450	09/01/2021	3914	2450	Body	2.040	52.400	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	9/1/2021	3914	2600	Body	2.22	51.9	PASS	PASS	PASS	TDD	PASS	N/A
J	5250	12/26/2021	7668	5250	Body	5.403	47.258	PASS	PASS	PASS	OFDM	N/A	PASS
J	5600	12/26/2021	7668	5600	Body	5.911	46.657	PASS	PASS	PASS	OFDM	N/A	PASS
J	5750	12/26/2021	7668	5750	Body	6.125	46.381	PASS	PASS	PASS	OFDM	N/A	PASS
B	5800	10/8/2021	7552	5800	Body	6.239	47.912	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.

FCC ID A3LSMS901JPN	 PCTEST Proud to be part of the Samsung ecosystem	SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 12/20/21 - 02/02/22	DUT Type: Portable Handset	APPENDIX H: Page 1 of 1		