



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	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
K4	750	01/05/2022	7565	750	Head	0.913	42.073	PASS	PASS	PASS	N/A	N/A	N/A
K1	835	10/22/2021	7558	835	Head	0.892	40.715	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
B	1900	08/19/2021	7660	1900	Head	1.456	38.927	PASS	PASS	PASS	GMSK	PASS	N/A
S	2300	01/20/2022	7552	2300	Head	1.750	39.849	PASS	PASS	PASS	N/A	N/A	N/A
B	2450	08/12/2021	7660	2450	Head	1.856	39.026	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
S	2450	01/20/2022	7552	2450	Head	1.867	39.608	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
B	2600	08/11/2021	7660	2600	Head	1.972	38.826	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	01/11/2022	7357	5250	Head	4.708	37.077	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	01/11/2022	7357	5600	Head	5.123	36.482	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	01/11/2022	7357	5750	Head	5.308	36.232	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
K3	750	12/21/2021	7637	750	Body	0.961	55.453	PASS	PASS	PASS	N/A	N/A	N/A
K2	835	09/16/2021	7402	835	Body	1.014	54.489	PASS	PASS	PASS	GMSK	PASS	N/A
K3	835	12/21/2021	7637	835	Body	0.994	55.263	PASS	PASS	PASS	GMSK	PASS	N/A
L	1750	01/05/2022	7670	1750	Body	1.477	53.736	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
A	1900	01/10/2022	7406	1900	Body	1.545	53.143	PASS	PASS	PASS	GMSK	PASS	N/A
H	2300	01/12/2022	7409	2300	Body	1.897	51.354	PASS	PASS	PASS	N/A	N/A	N/A
K	2450	09/01/2021	3914	2450	Body	2.040	52.400	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
H	2450	01/12/2022	7409	2450	Body	2.027	51.112	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
G	5250	01/10/2022	7357	5250	Body	5.378	48.193	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	01/10/2022	7357	5600	Body	5.886	47.515	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	01/10/2022	7357	5750	Body	6.107	47.242	PASS	PASS	PASS	OFDM	N/A	PASS

FCC ID: A3LSMA135U	 <small>Proud to be part of Samsung</small>	SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 1/3/22- 2/16/22	DUT Type: Portable Handset			Appendix F: Page 1 of 2

**Table F-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
L	1750	1/5/2022	7670	1750	Body	1.477	53.736	PASS	PASS	PASS	N/A	N/A	N/A
A	1900	1/10/2022	7406	1900	Body	1.545	53.143	PASS	PASS	PASS	GMSK	PASS	N/A
H	2300	1/12/2022	7409	2300	Body	1.897	51.354	PASS	PASS	PASS	N/A	N/A	N/A
K	2450	9/1/2021	3914	2450	Body	2.040	52.400	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	9/1/2021	3914	2600	Body	2.220	51.900	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	1/10/2022	7357	5250	Body	5.378	48.193	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	1/10/2022	7357	5600	Body	5.886	47.515	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	1/10/2022	7357	5750	Body	6.107	47.242	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 D01v01r0

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Test Dates: 1/3/22- 2/16/22	DUT Type: Portable Handset			Appendix F: Page 2 of 2