



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
K2	750	09/23/2021	7402	750	Head	0.913	43.171	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
AM4	835	10/07/2021	7427	835	Head	0.939	40.800	PASS	PASS	PASS	GMSK	PASS	N/A
AM5	1750	08/25/2021	7546	1750	Head	1.340	38.600	PASS	PASS	PASS	N/A	N/A	N/A
AM2	1750	09/20/2021	7532	1750	Head	1.350	40.600	PASS	PASS	PASS	N/A	N/A	N/A
AM2	1900	09/20/2021	7532	1900	Head	1.440	40.400	PASS	PASS	PASS	GMSK	PASS	N/A
AM6	2450	09/08/2021	7416	2450	Head	1.760	37.500	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM9	2450	10/04/2021	3949	2450	Head	1.800	40.000	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM6	2600	09/08/2021	7416	2600	Head	1.880	37.300	PASS	PASS	PASS	TDD	PASS	N/A
AM2	5250	09/20/2021	7532	5250	Head	4.620	35.200	PASS	PASS	PASS	OFDM	N/A	PASS
AM2	5600	09/20/2021	7532	5600	Head	5.010	34.600	PASS	PASS	PASS	OFDM	N/A	PASS
AM2	5750	09/20/2021	7532	5750	Head	5.180	34.300	PASS	PASS	PASS	OFDM	N/A	PASS
B	5800	10/08/2021	7552	5800	Head	5.492	35.325	PASS	PASS	PASS	OFDM	N/A	PASS
K4	750	09/16/2021	7640	750	Body	0.975	55.472	PASS	PASS	PASS	N/A	N/A	N/A
AM5	835	08/20/2021	7546	835	Body	0.965	53.850	PASS	PASS	PASS	GMSK	PASS	N/A
K4	835	10/20/2021	7640	835	Body	1.008	55.267	PASS	PASS	PASS	GMSK	PASS	N/A
AM5	1750	08/20/2021	7546	1750	Body	1.420	52.478	PASS	PASS	PASS	N/A	N/A	N/A
AM6	1750	08/23/2021	7416	1750	Body	1.530	51.700	PASS	PASS	PASS	N/A	N/A	N/A
AM3	1750	09/09/2021	7421	1750	Body	1.490	51.000	PASS	PASS	PASS	N/A	N/A	N/A
AM5	1900	08/23/2021	7546	1900	Body	1.511	51.947	PASS	PASS	PASS	GMSK	PASS	N/A
AM3	1900	09/10/2021	7421	1900	Body	1.590	50.700	PASS	PASS	PASS	GMSK	PASS	N/A
AM6	2450	08/30/2021	7416	2450	Body	2.030	52.300	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2450	09/01/2021	3914	2450	Body	2.040	52.400	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM9	2450	09/28/2021	3949	2450	Body	2.020	51.400	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM9	2600	09/28/2021	3949	2600	Body	2.170	51.100	PASS	PASS	PASS	TDD	PASS	N/A
J	5250	08/10/2021	7526	5250	Body	5.412	48.914	PASS	PASS	PASS	OFDM	N/A	PASS
J	5600	08/10/2021	7526	5600	Body	5.925	48.311	PASS	PASS	PASS	OFDM	N/A	PASS
J	5750	08/11/2021	7526	5750	Body	6.084	46.123	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

FCC ID: A3LSMS901E		SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 10/08/21 – 12/14/21	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
AM5	1750	08/20/2021	7546	1750	Body	1.420	52.478	PASS	PASS	PASS	N/A	N/A	N/A
AM3	1750	09/09/2021	7421	1750	Body	1.490	51.000	PASS	PASS	PASS	N/A	N/A	N/A
AM5	1900	08/23/2021	7546	1900	Body	1.511	51.947	PASS	PASS	PASS	GMSK	PASS	N/A
AM3	1900	09/10/2021	7421	1900	Body	1.590	50.700	PASS	PASS	PASS	GMSK	PASS	N/A
AM6	2450	08/30/2021	7416	2450	Body	2.030	52.300	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM6	2600	08/27/2021	7416	2600	Body	2.187	50.945	PASS	PASS	PASS	TDD	PASS	N/A
J	5250	08/10/2021	7526	5250	Body	5.412	48.914	PASS	PASS	PASS	OFDM	N/A	PASS
J	5600	08/10/2021	7526	5600	Body	5.925	48.311	PASS	PASS	PASS	OFDM	N/A	PASS
J	5750	08/11/2021	7526	5750	Body	6.084	46.123	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

NOTE: 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.

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