

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. (εr)	CW VALIDATION			MOD. VALIDATION		
							SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
A	750	08/13/2021	7406	750 Head	0.896	40.771	PASS	PASS	PASS	N/A	N/A	N/A
K2	750	09/22/2021	7402	750 Head	0.913	43.171	PASS	PASS	PASS	N/A	N/A	N/A
K1	835	02/23/2021	7565	835 Head	0.909	41.848	PASS	PASS	PASS	GMSK	PASS	N/A
A	835	08/17/2021	7406	835 Head	0.930	41.121	PASS	PASS	PASS	GMSK	PASS	N/A
K2	835	09/23/2021	7402	835 Head	0.945	42.933	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
H	1750	10/19/2021	7409	1750 Head	1.326	39.382	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	2300	08/12/2021	7660	2300 Head	1.742	39.282	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
E	2450	10/21/2021	7571	2450 Head	1.840	37.400	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
E	2600	10/21/2021	7571	2600 Head	1.960	37.200	PASS	PASS	PASS	TDD	PASS	N/A
L	3500	10/13/2021	7670	3500 Head	2.786	38.172	PASS	PASS	PASS	TDD	PASS	N/A
L	3700	10/13/2021	7670	3700 Head	2.881	38.022	PASS	PASS	PASS	TDD	PASS	N/A
L	3900	10/13/2021	7670	3900 Head	2.975	37.851	PASS	PASS	PASS	TDD	PASS	N/A
J	5250	09/07/2021	7526	5250 Head	4.641	36.217	PASS	PASS	PASS	OFDM	N/A	PASS
J	5600	09/07/2021	7526	5600 Head	5.051	35.633	PASS	PASS	PASS	OFDM	N/A	PASS
J	5750	09/07/2021	7526	5750 Head	5.238	35.349	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
K1	750	03/09/2021	7565	750 Body	0.947	57.164	PASS	PASS	PASS	N/A	N/A	N/A
E	750	08/23/2021	7571	750 Body	0.971	53.715	PASS	PASS	PASS	N/A	N/A	N/A
H	750	09/10/2021	7409	750 Body	0.958	55.775	PASS	PASS	PASS	N/A	N/A	N/A
K1	835	02/17/2021	7565	835 Body	0.972	53.253	PASS	PASS	PASS	GMSK	PASS	N/A
H	835	08/23/2021	7409	835 Body	0.943	52.956	PASS	PASS	PASS	GMSK	PASS	N/A
K2	835	09/16/2021	7402	835 Body	1.014	54.489	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
D	1750	09/30/2021	3589	1750 Body	1.505	52.345	PASS	PASS	PASS	N/A	N/A	N/A
P	1900	08/23/2021	7410	1900 Body	1.582	52.055	PASS	PASS	PASS	GMSK	PASS	N/A
D	1900	10/18/2021	3589	1900 Body	1.581	51.941	PASS	PASS	PASS	GMSK	PASS	N/A
L	2300	07/06/2021	7539	2300 Body	1.741	52.641	PASS	PASS	PASS	N/A	N/A	N/A
K	2300	09/01/2021	3914	2300 Body	1.860	52.800	PASS	PASS	PASS	N/A	N/A	N/A
L	2450	07/02/2021	7539	2450 Body	2.020	52.209	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
O	2450	10/25/2021	7659	2450 Body	1.992	52.833	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	2450	10/26/2021	7670	2450 Body	1.955	51.493	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	2600	07/06/2021	7539	2600 Body	2.142	51.597	PASS	PASS	PASS	TDD	PASS	N/A
K	2600	09/01/2021	3914	2600 Body	2.220	51.900	PASS	PASS	PASS	TDD	PASS	N/A
O	2600	10/25/2021	7659	2600 Body	2.200	52.270	PASS	PASS	PASS	TDD	PASS	N/A
L	2600	10/26/2021	7670	2600 Body	2.155	50.983	PASS	PASS	PASS	TDD	PASS	N/A
I	3500	08/03/2021	7551	3500 Body	3.325	49.471	PASS	PASS	PASS	TDD	PASS	N/A
I	3500	10/13/2021	7661	3500 Body	3.198	49.804	PASS	PASS	PASS	TDD	PASS	N/A
I	3700	08/03/2021	7551	3700 Body	3.515	49.242	PASS	PASS	PASS	TDD	PASS	N/A
I	3700	10/13/2021	7661	3700 Body	3.429	49.469	PASS	PASS	PASS	TDD	PASS	N/A
I	3900	08/03/2021	7551	3900 Body	3.700	48.985	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

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Test Dates: 09/12/21 – 11/08/21	DUT Type: Portable Handset			APPENDIX H: Page 1 of 2

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	08/27/2021	7357	1750	Body	1.488	51.324	PASS	PASS	PASS	N/A	N/A	N/A
P	1900	08/23/2021	7410	1900	Body	1.582	52.055	PASS	PASS	PASS	GMSK	PASS	N/A
D	1900	10/18/2021	3589	1900	Body	1.581	51.941	PASS	PASS	PASS	GMSK	PASS	N/A
L	2300	07/06/2021	7539	2300	Body	1.741	52.641	PASS	PASS	PASS	N/A	N/A	N/A
K	2300	10/26/2021	7538	2300	Body	1.870	53.100	PASS	PASS	PASS	N/A	N/A	N/A
L	2450	07/02/2021	7539	2450	Body	2.020	52.209	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	2450	10/26/2021	7670	2450	Body	1.955	51.493	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	2600	07/06/2021	7539	2600	Body	2.142	51.597	PASS	PASS	PASS	TDD	PASS	N/A
L	2600	10/26/2021	7670	2600	Body	2.155	50.983	PASS	PASS	PASS	TDD	PASS	N/A
I	3500	08/03/2021	7551	3500	Body	3.325	49.471	PASS	PASS	PASS	TDD	PASS	N/A
I	3700	10/13/2021	7661	3700	Body	3.429	49.469	PASS	PASS	PASS	TDD	PASS	N/A
I	3900	10/13/2021	7661	3900	Body	3.675	49.133	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: 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.

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