

APPENDIX E: SAR SYSTEM VALIDATION

FCC ID: BCG-A3047	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Wireless Earbud		APPENDIX E: Page 1 of 2

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 E-1
SAR System Validation Summary – 1g**

SAR System	Freq. (MHz)	Date	Probe SN	DAE	Probe Cal Point		Cond. (σ)	Perm. (ϵ_r)	CW VALIDATION			MOD. VALIDATION		
									SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
AM9	2450	02/28/2023	7427	1403	2450	Head	1.870	39.800	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM9	5250	02/28/2023	7427	1403	5250	Head	4.686	34.916	PASS	PASS	PASS	OFDM	N/A	PASS
AM9	5600	02/28/2023	7427	1403	5600	Head	5.094	34.229	PASS	PASS	PASS	OFDM	N/A	PASS
AM9	5750	02/28/2023	7427	1403	5750	Head	5.283	33.936	PASS	PASS	PASS	OFDM	N/A	PASS
AM9	5800	05/10/2023	7427	1403	5850	Head	5.360	35.500	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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