

Appendix A. Plots of HAC T-Coil Measurement

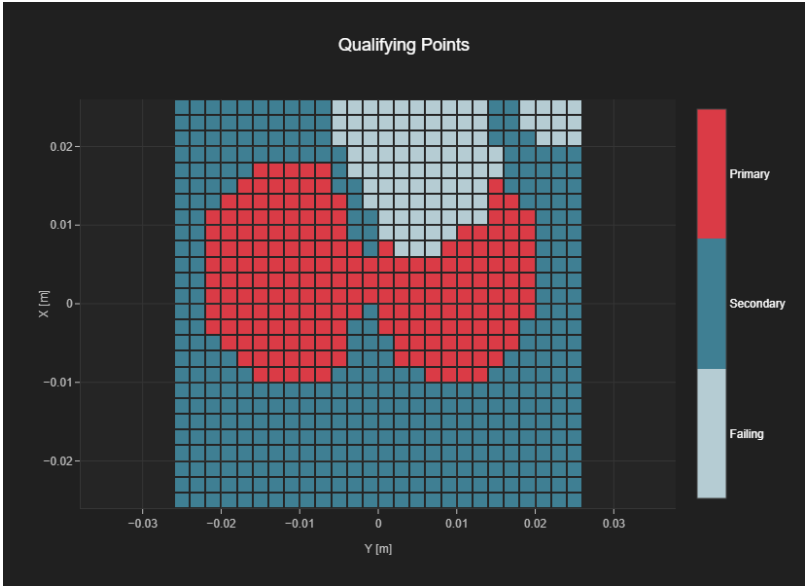
Testing Results are shown as below.



P01 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
205	584	26	26



P01 T-Coil Signal Test Report

Measurement performed on May 21, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

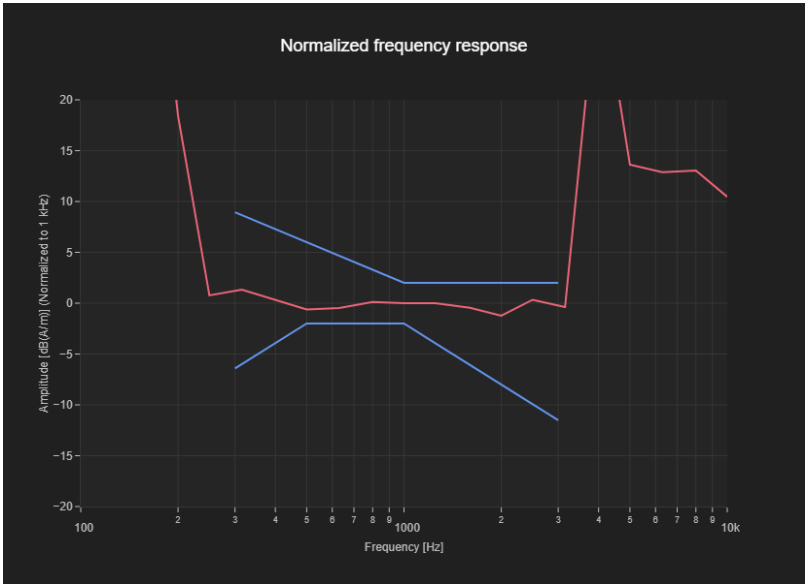
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 2, UTRA/FDD	UMTS-FDD (WCDMA)	9400	1880.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

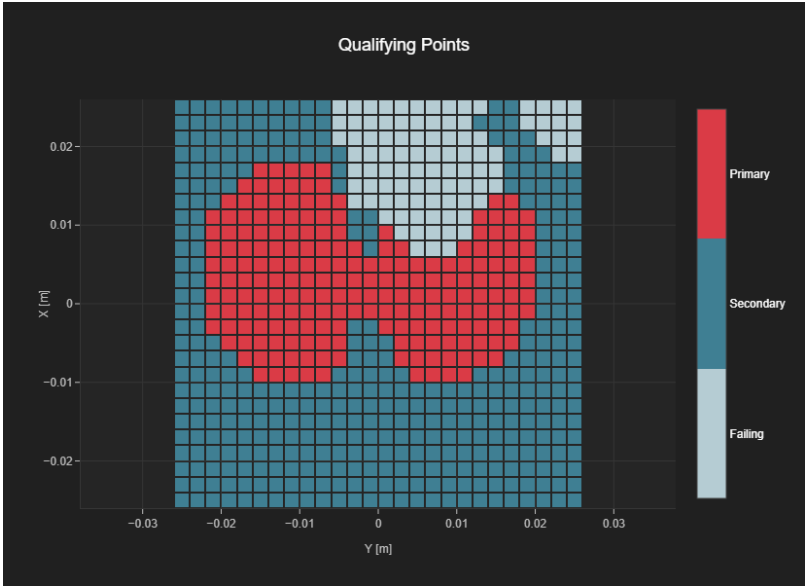
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.66	1.38



P02 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
206	581	26	26



P02 T-Coil Signal Test Report

Measurement performed on May 21, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

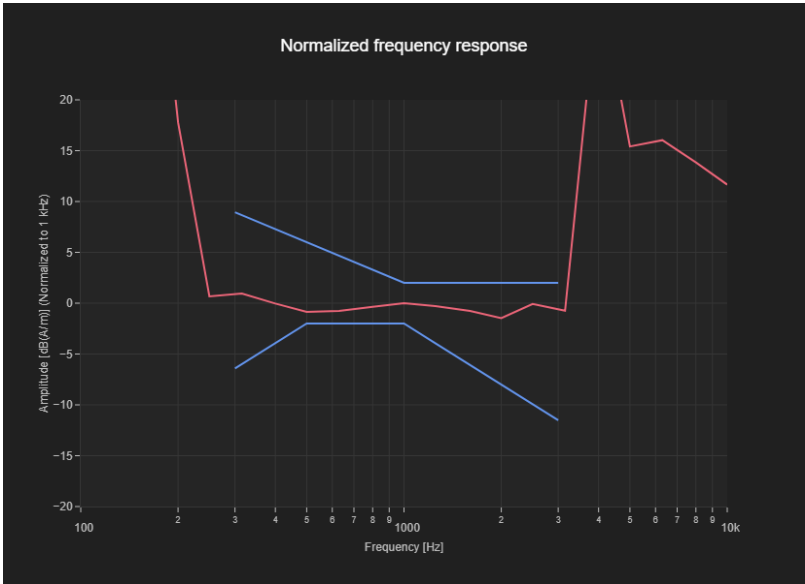
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 4, UTRA/FDD	UMTS-FDD (WCDMA)	1413	1732.6

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

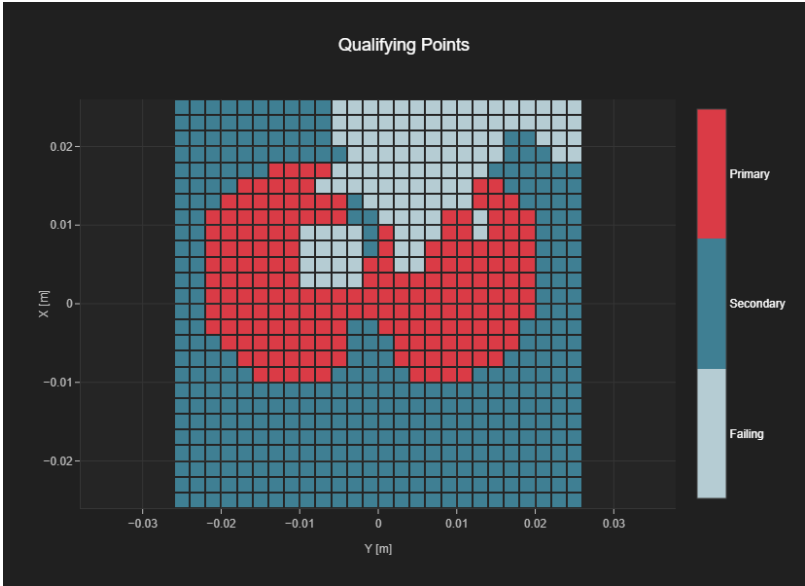
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	1.14



P03 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
193	562	26	26



P03 T-Coil Signal Test Report

Measurement performed on May 21, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

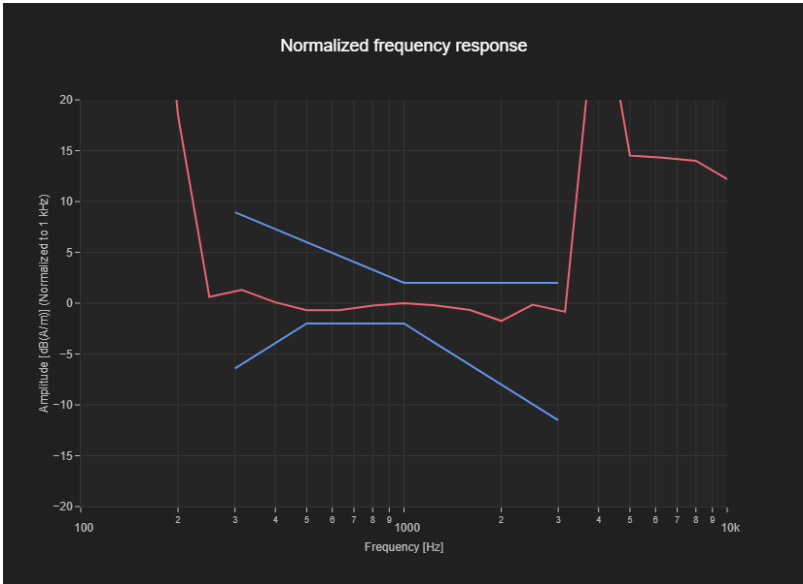
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 5, UTRA/FDD	UMTS-FDD (WCDMA)	4182	836.4

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

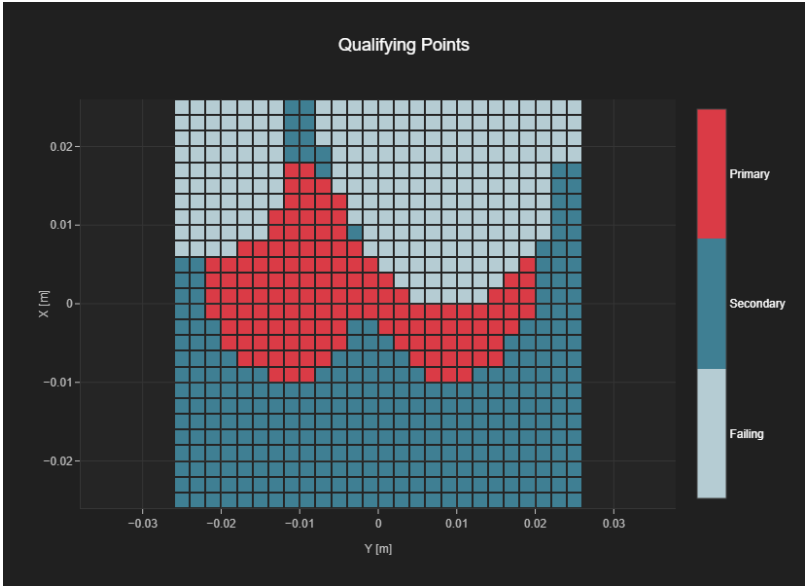
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	1.3



P04 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
140	446	26	26



P04 T-Coil Signal Test Report

Measurement performed on May 21, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

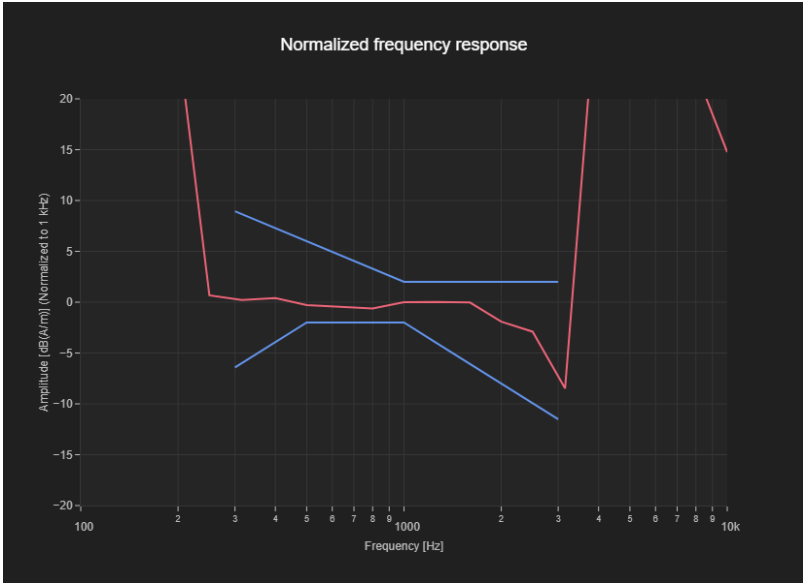
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 2, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	18900	1880.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

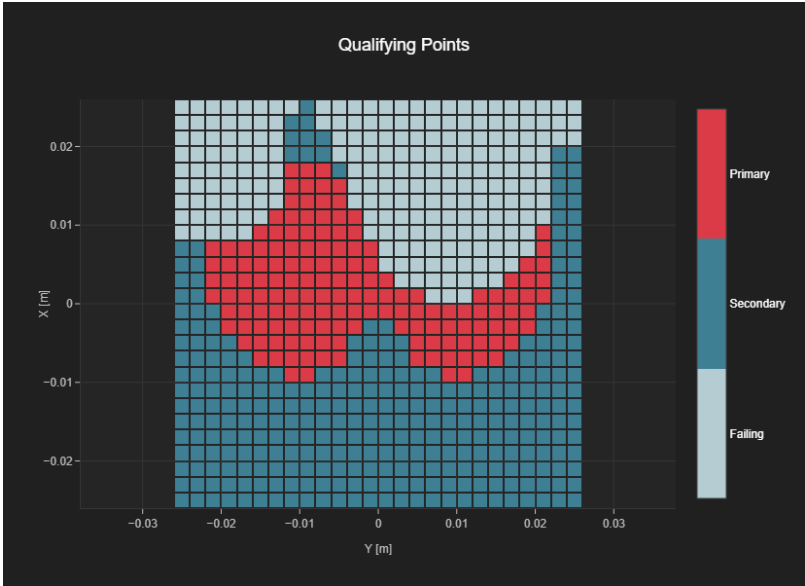
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.98	1.38



P05 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
152	460	26	26



P05 T-Coil Signal Test Report

Measurement performed on June 03, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

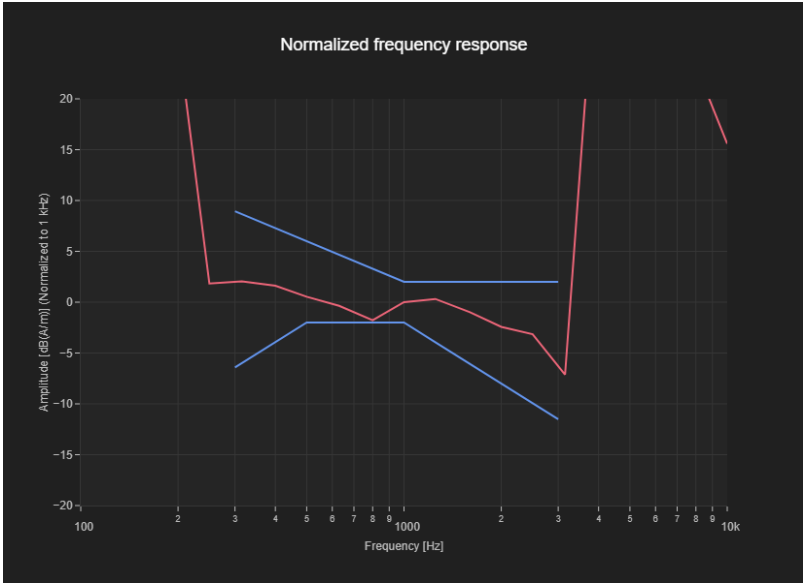
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 4, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	20175	1732.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

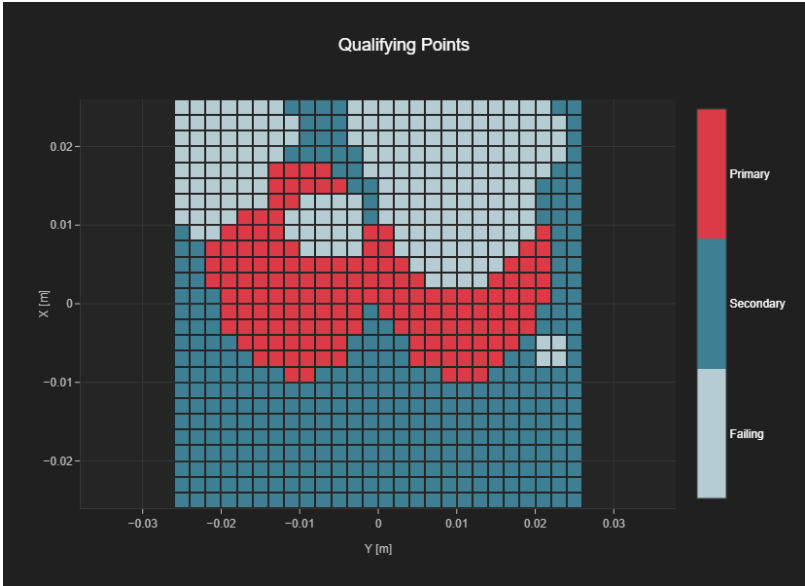
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.68	0.22



P06 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
154	477	26	26



P06 T-Coil Signal Test Report

Measurement performed on June 03, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

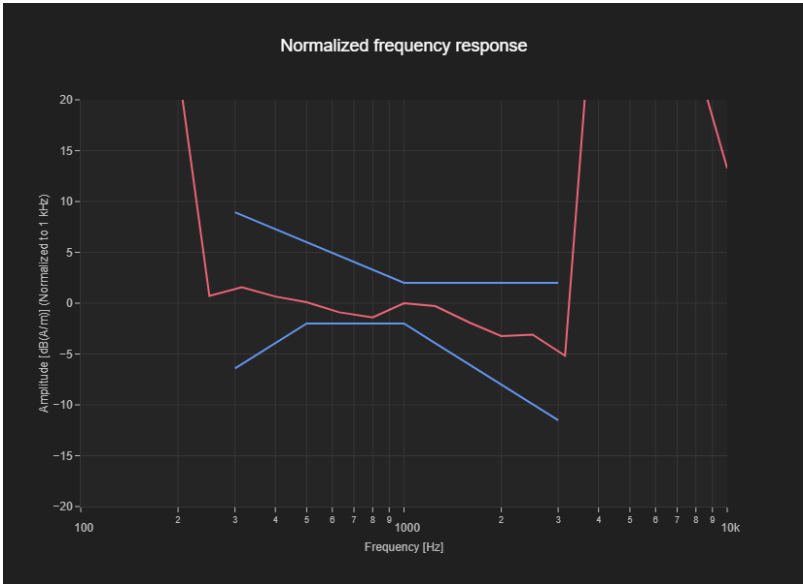
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 5, E-UTRA/FDD	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	20525	836.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

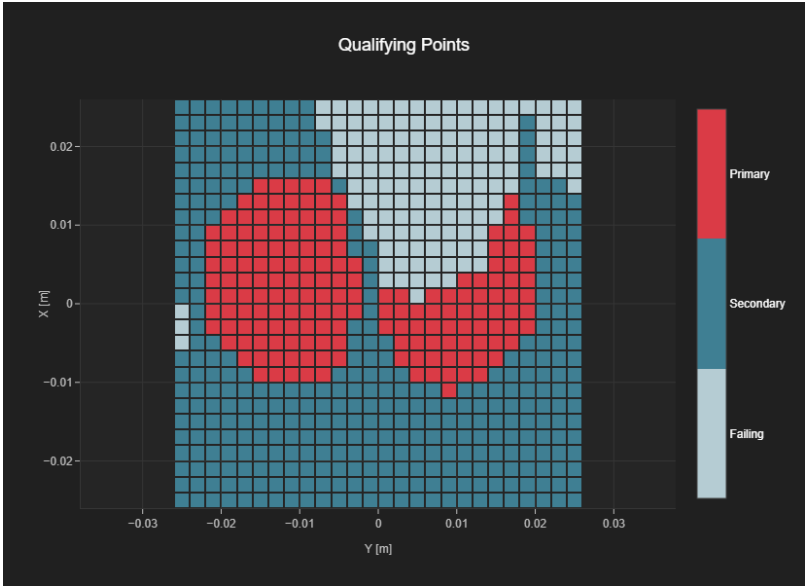
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.6



P07 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
173	536	26	26



P07 T-Coil Signal Test Report

Measurement performed on June 11, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

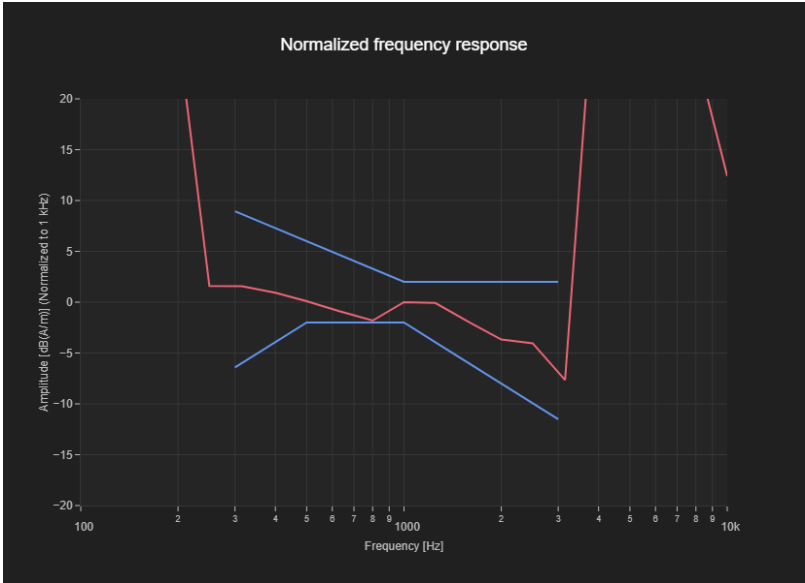
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 12, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	23095	707.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

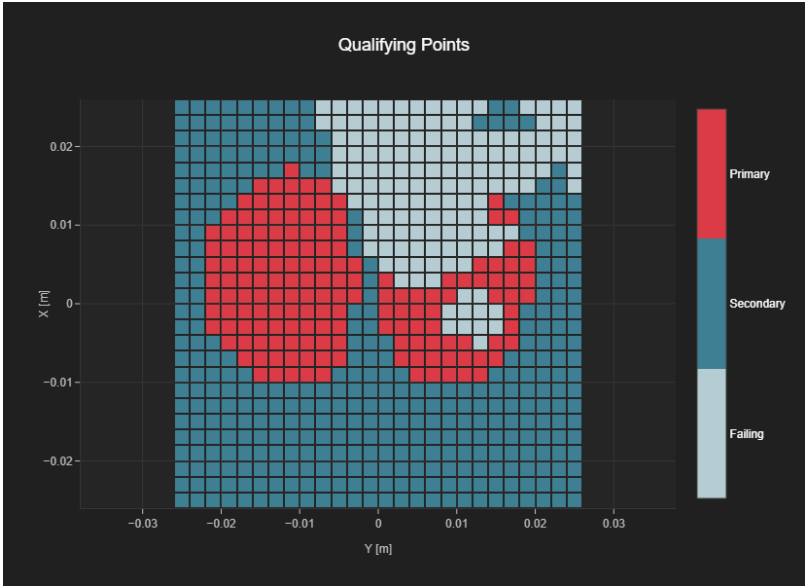
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.19



P08 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
160	531	26	26



P08 T-Coil Signal Test Report

Measurement performed on June 11, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

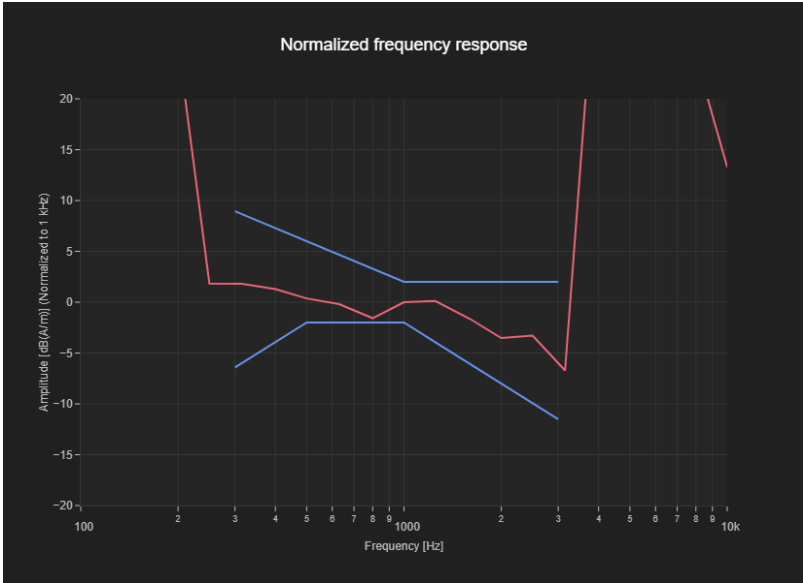
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 13, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	23230	782.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

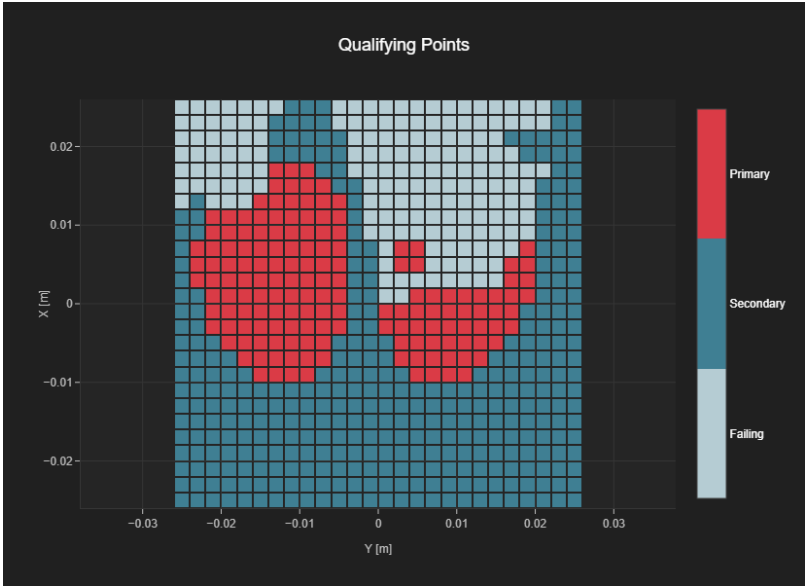
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.89	0.43



P09 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
157	506	26	26



P09 T-Coil Signal Test Report

Measurement performed on June 09, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

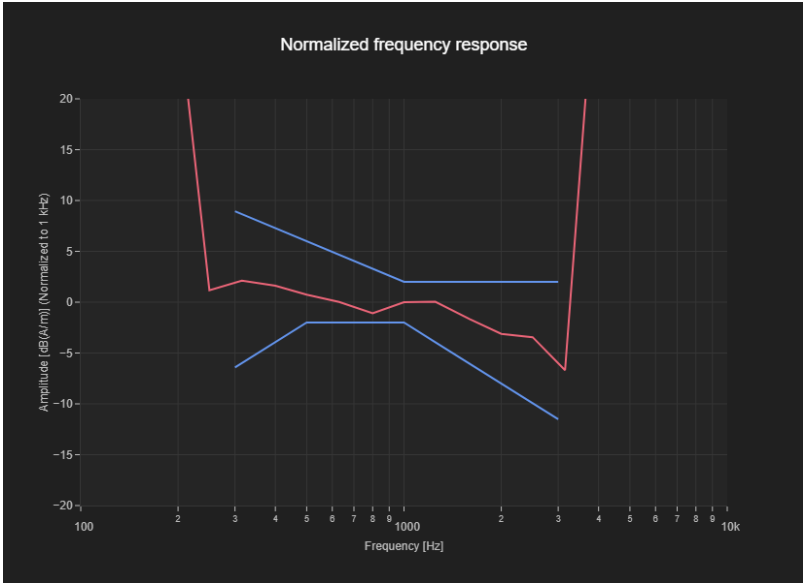
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 14, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	23330	793.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

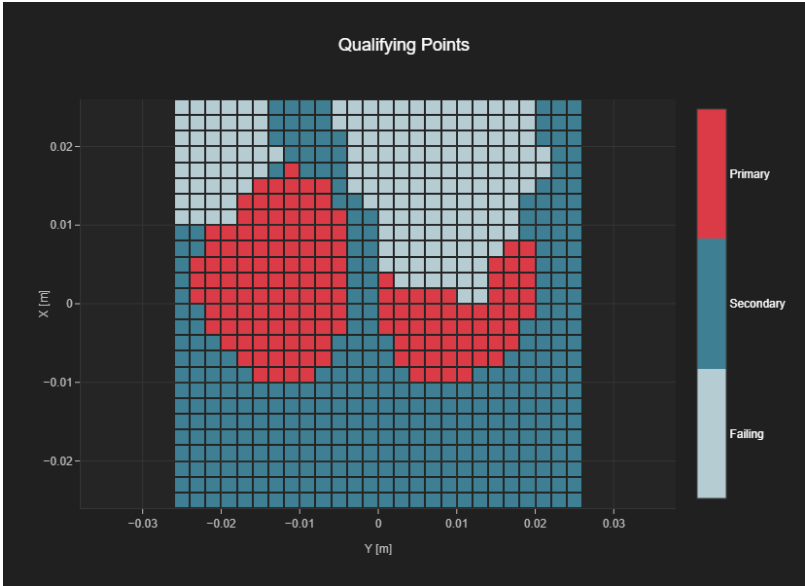
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.96	0.92



P10 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
157	505	26	26



P10 T-Coil Signal Test Report

Measurement performed on June 10, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

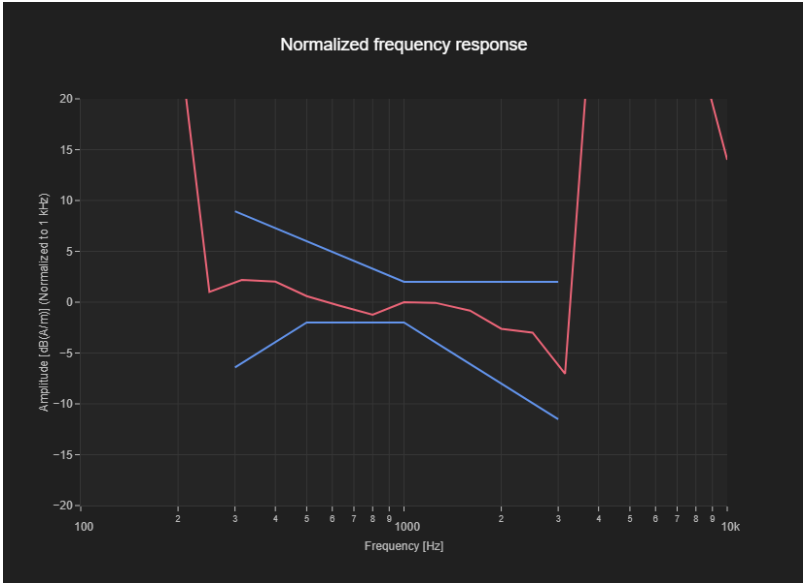
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 17, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	23790	710.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

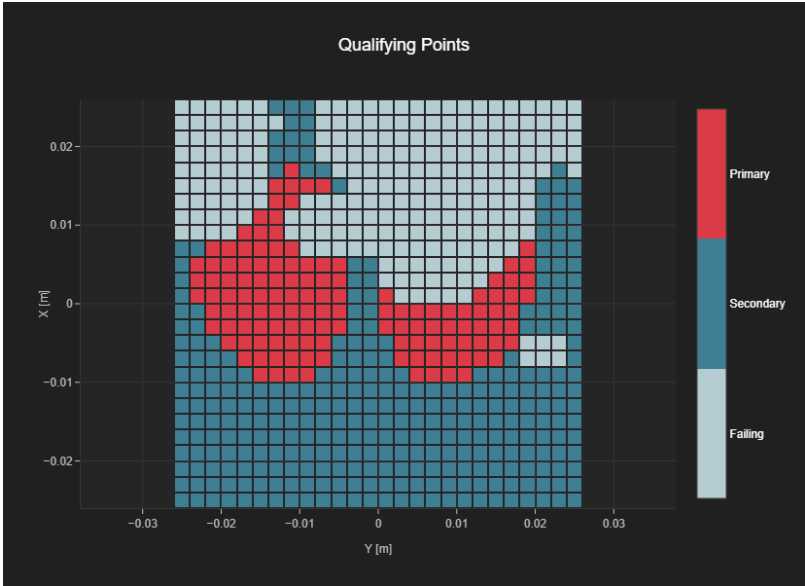
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.77



P11 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
131	442	25	26



P11 T-Coil Signal Test Report

Measurement performed on June 10, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

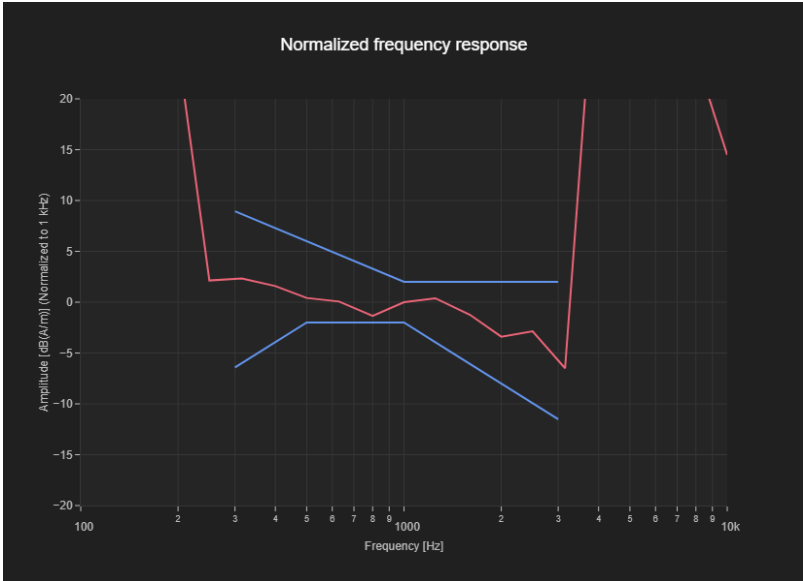
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 25, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	26365	1882.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

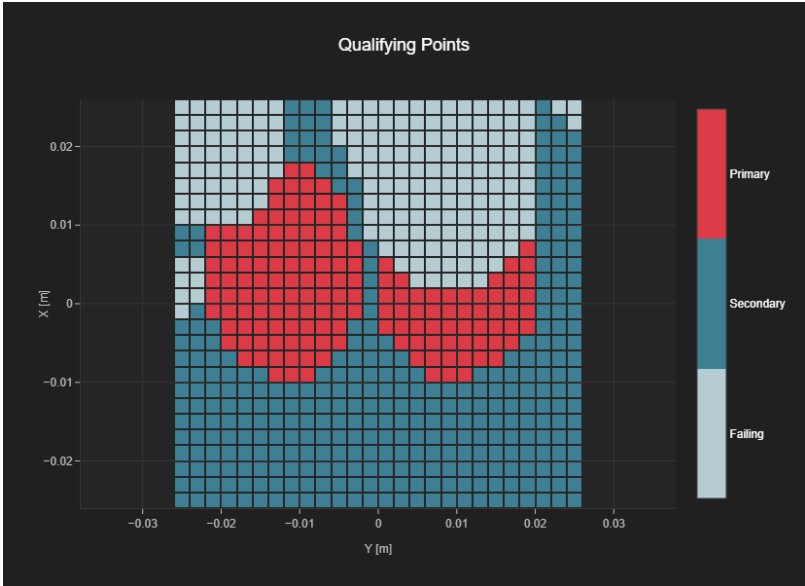
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.62	0.65



P12 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
157	486	26	26



P12 T-Coil Signal Test Report

Measurement performed on June 10, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

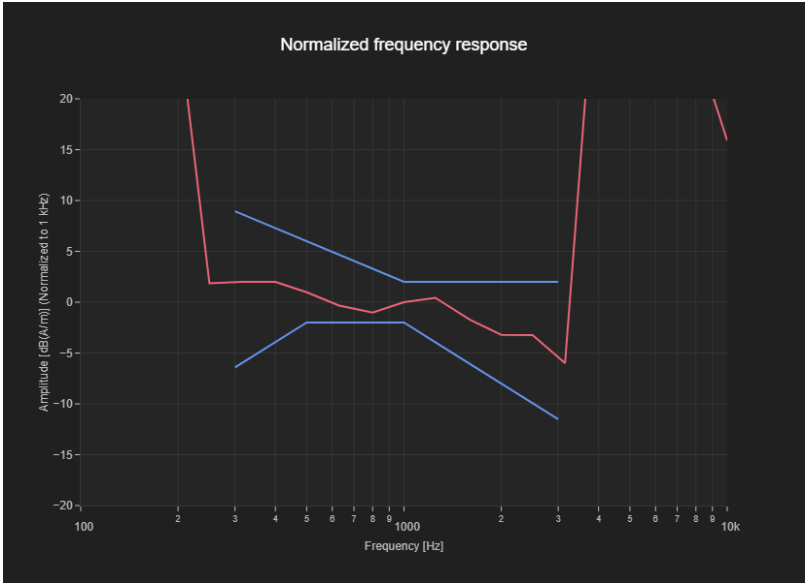
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 26 E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	26865	831.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

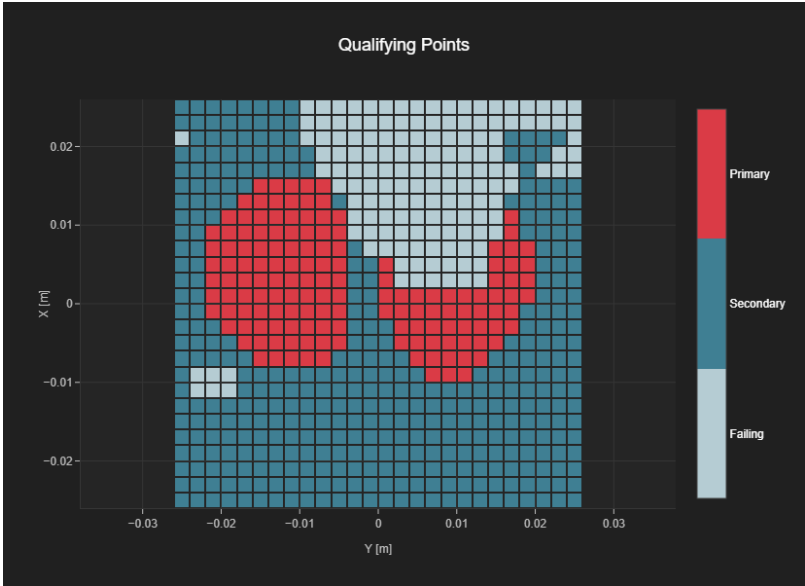
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.57	0.97



P13 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
148	527	26	26



P13 T-Coil Signal Test Report

Measurement performed on June 10, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

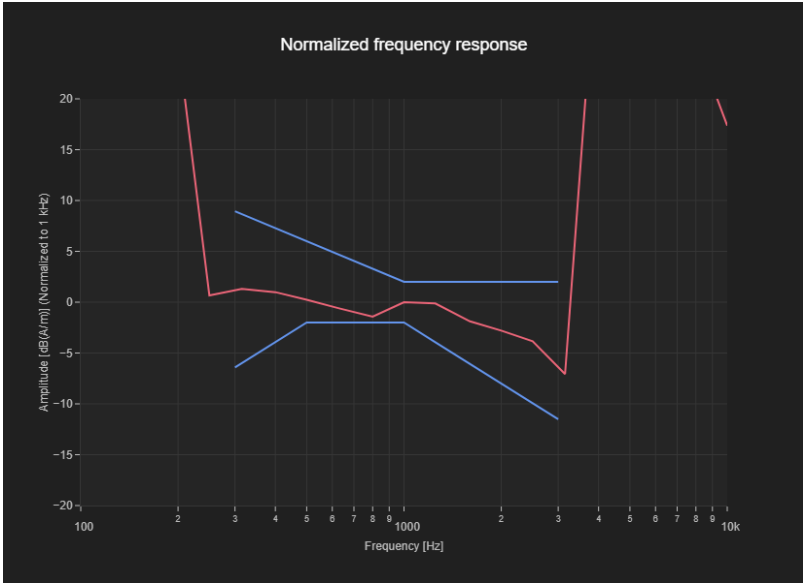
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 30, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	27710	2310.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

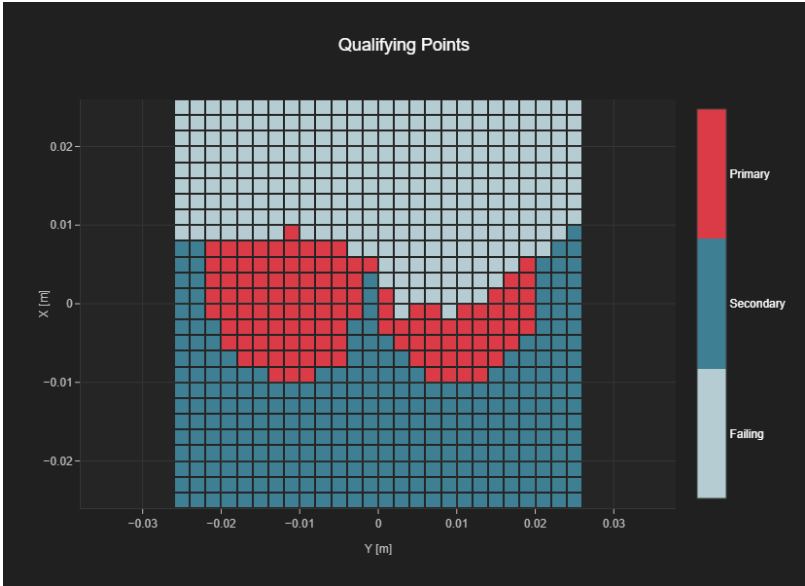
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.58



P14 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
120	406	18	26



P14 T-Coil Signal Test Report

Measurement performed on June 04, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

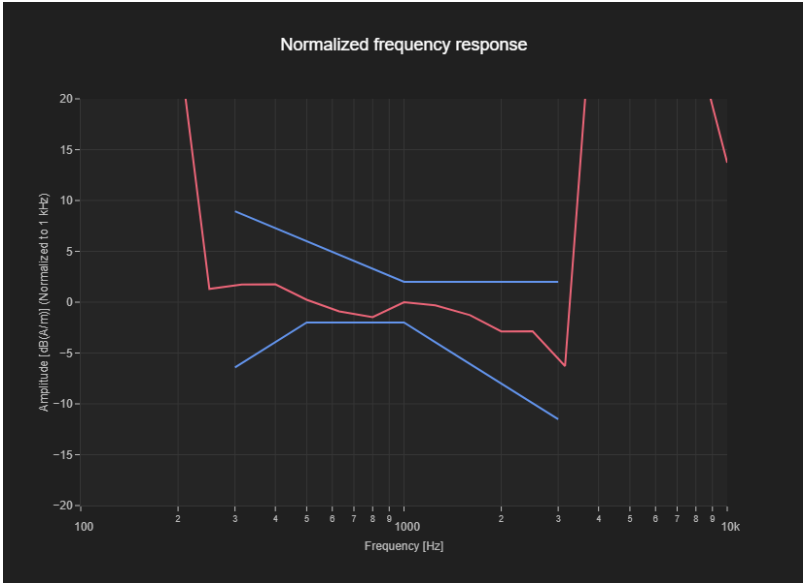
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 38, E-UTRA/TDD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	38000	2595.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

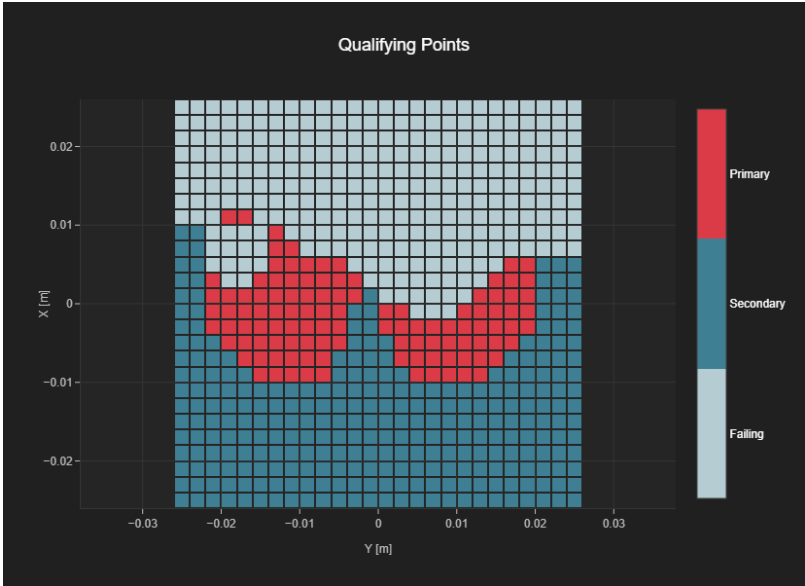
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.53



P15 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
111	392	18	26



P15 T-Coil Signal Test Report

Measurement performed on May 28, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

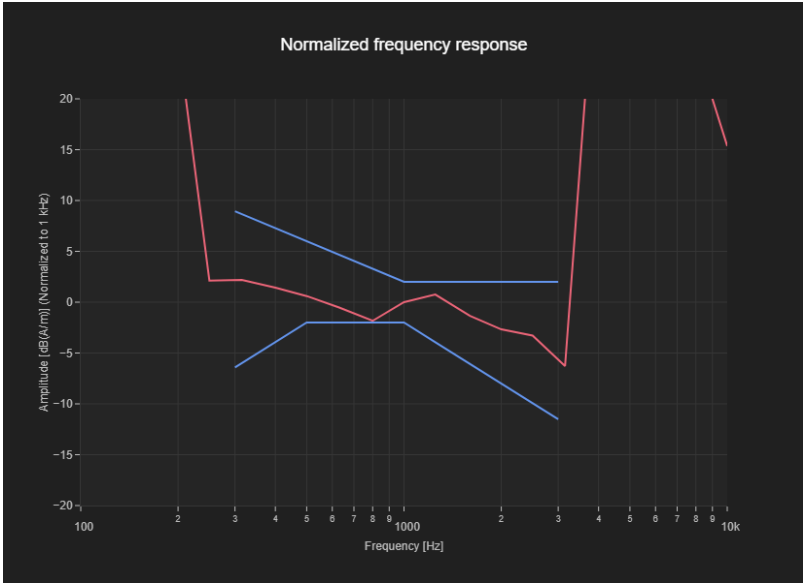
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 41, E-UTRA/TDD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	40620	2593.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

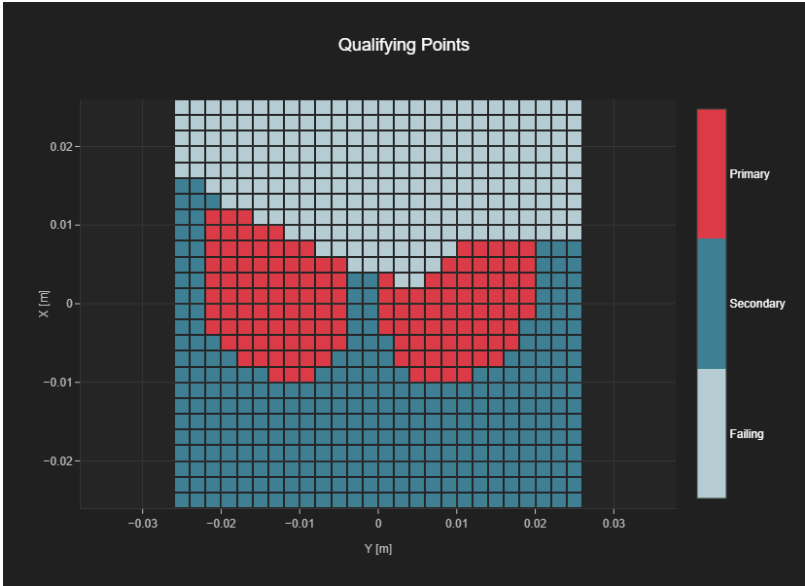
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.24	0.17



P16 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
144	442	21	26



P16 T-Coil Signal Test Report

Measurement performed on July 02, 2025 at 15:05

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		146.2 x 71.8 x 7.5	144.3

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

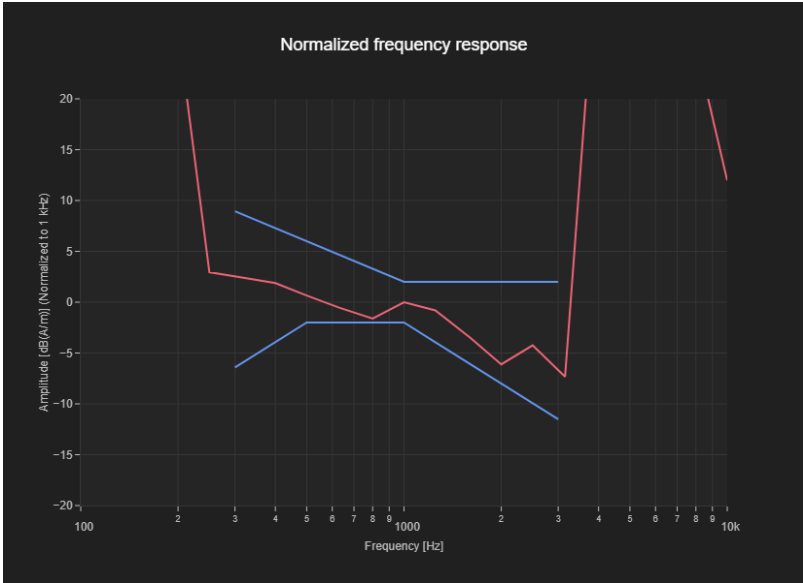
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 42, E-UTRA/TDD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	43190	3560.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

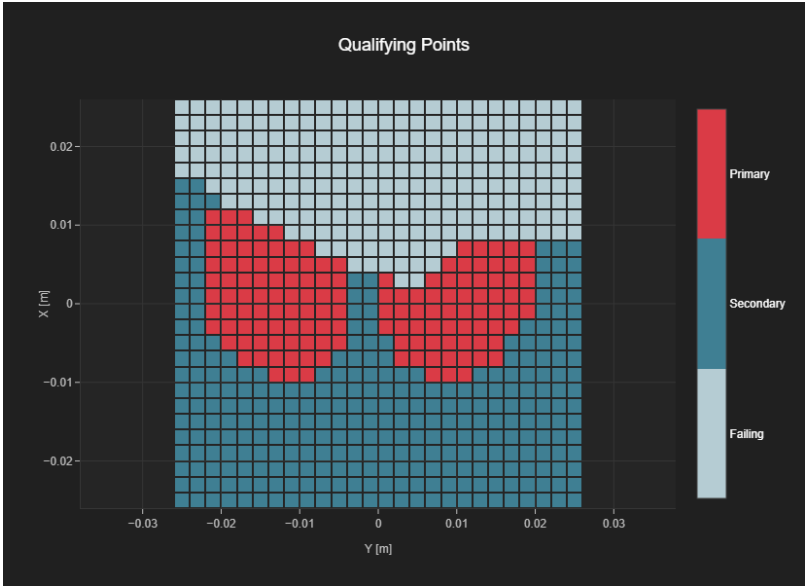
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.39



P27 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
142	442	21	26



P27 T-Coil Signal Test Report

Measurement performed on July 02, 2025 at 15:37

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		146.2 x 71.8 x 7.5	144.3

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

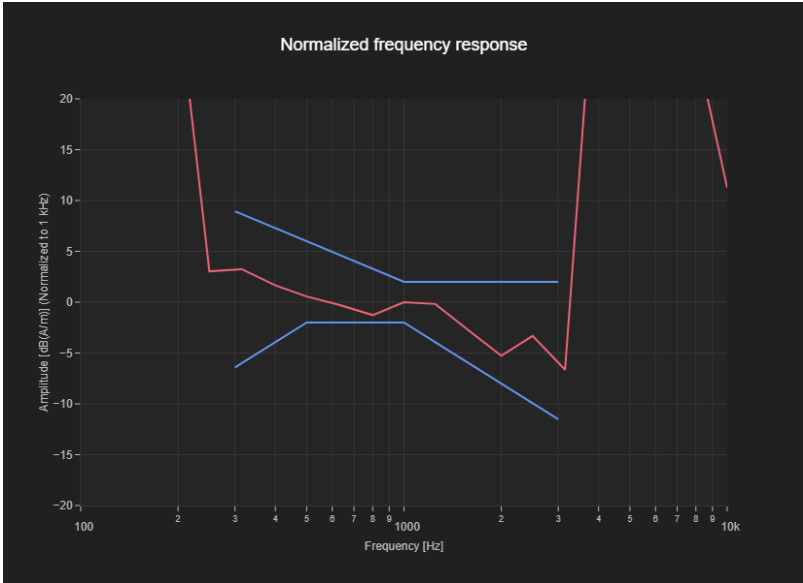
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 43, E-UTRA/TDD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	44490	3690.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

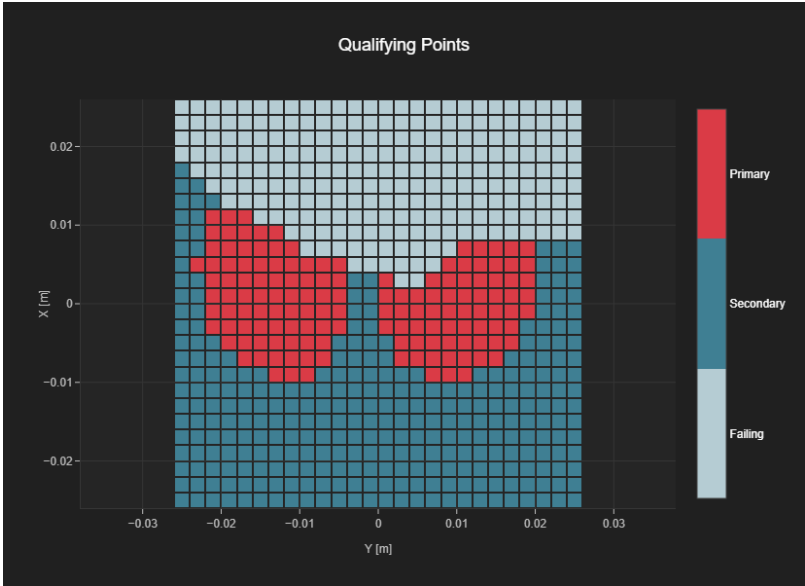
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.73



P18 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
142	442	22	26



P18 T-Coil Signal Test Report

Measurement performed on July 02, 2025 at 16:12

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		146.2 x 71.8 x 7.5	144.3

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

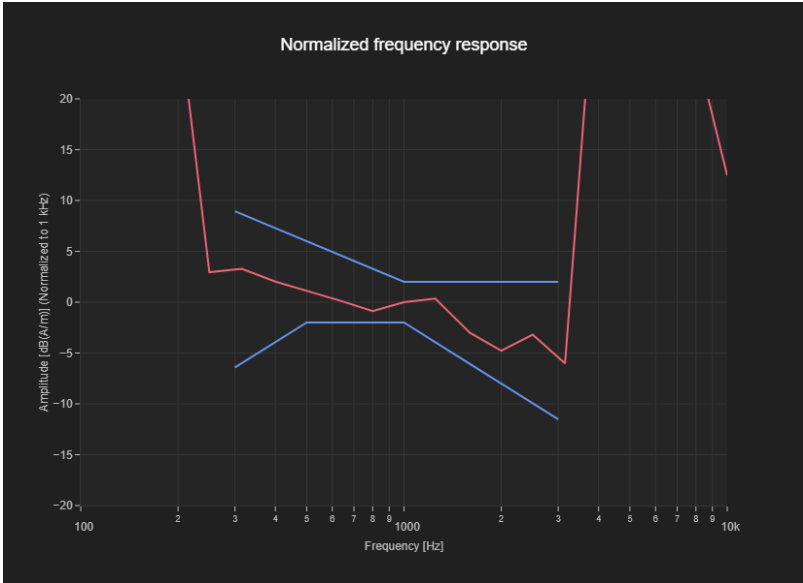
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 48, E-UTRA/TDD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	56210	3647.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

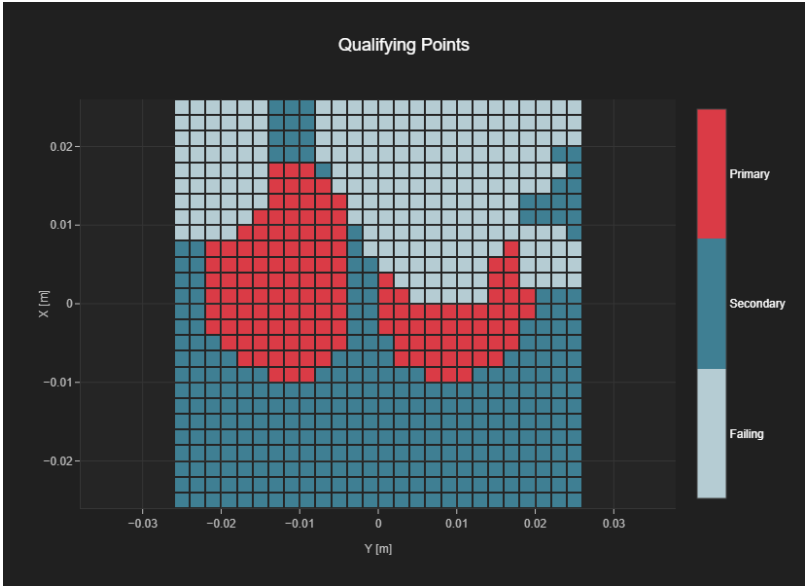
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.65	1.13



P19 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
144	456	26	26



P19 T-Coil Signal Test Report

Measurement performed on June 10, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

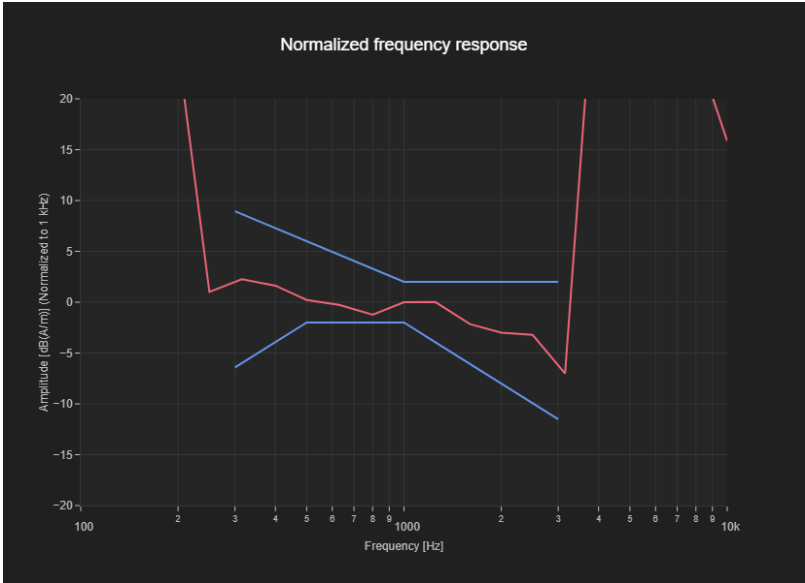
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 66, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	132322	1745.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

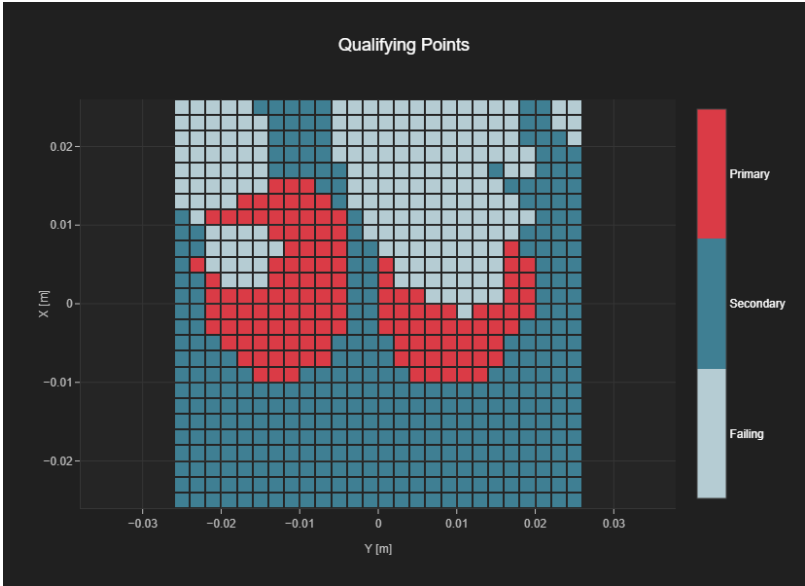
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.98	0.76



P20 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
131	484	26	26



P20 T-Coil Signal Test Report

Measurement performed on June 11, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

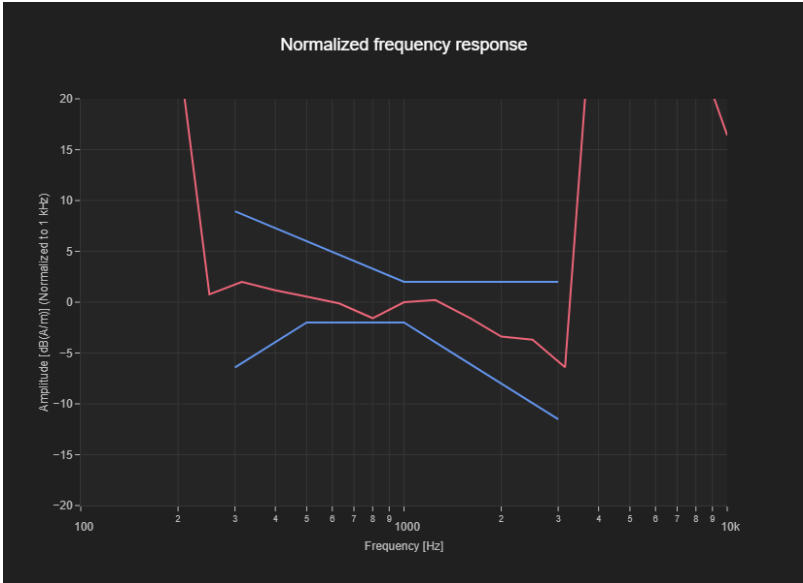
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 70, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	133047	1702.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

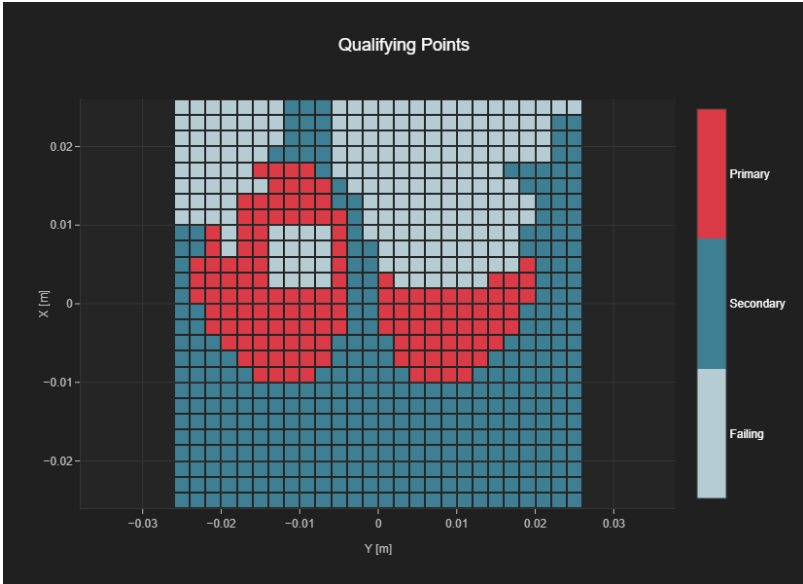
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.8	0.43



P21 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
136	476	25	26



P21 T-Coil Signal Test Report

Measurement performed on June 11, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

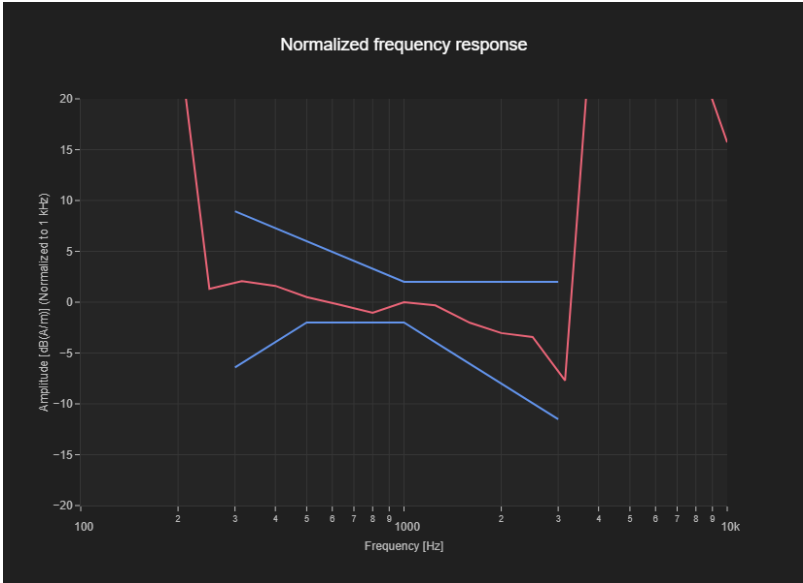
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 71, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	133297	680.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

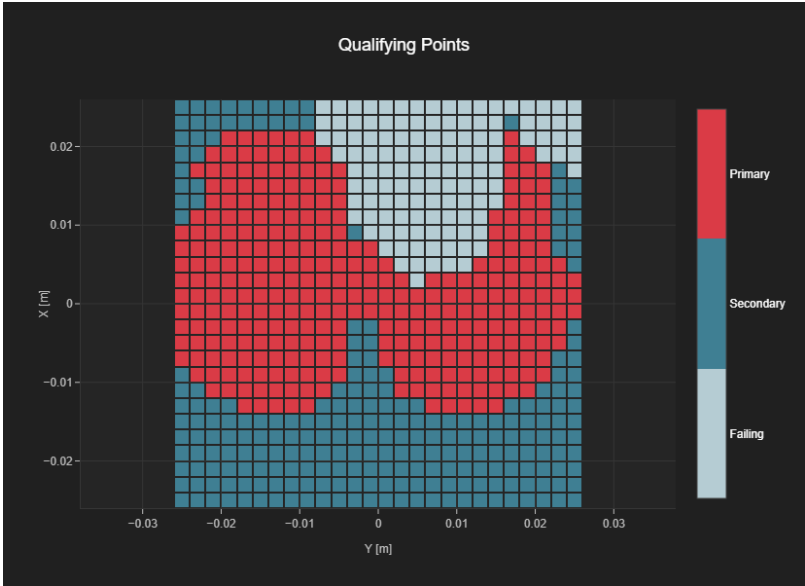
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	0.96



P22 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
312	552	26	26



P22 T-Coil Signal Test Report

Measurement performed on June 23, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

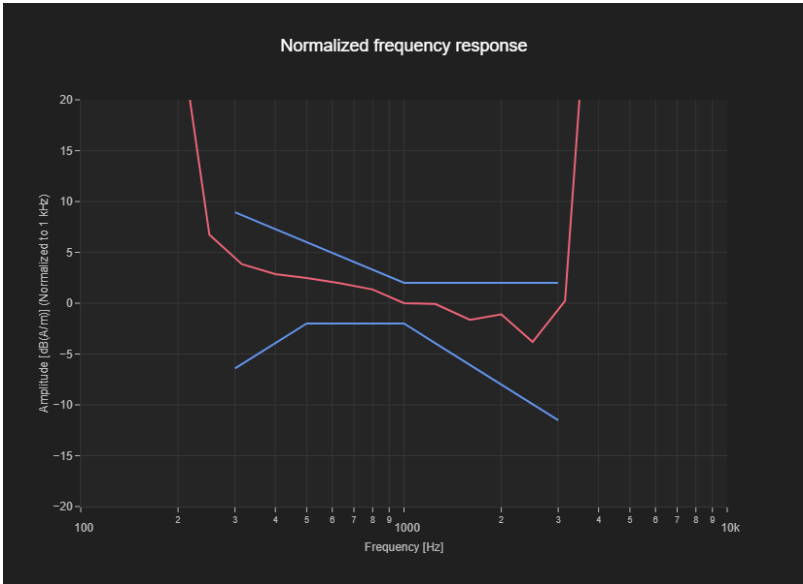
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 5, UTRA/FDD	UMTS-FDD (WCDMA)	4182	836.4

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

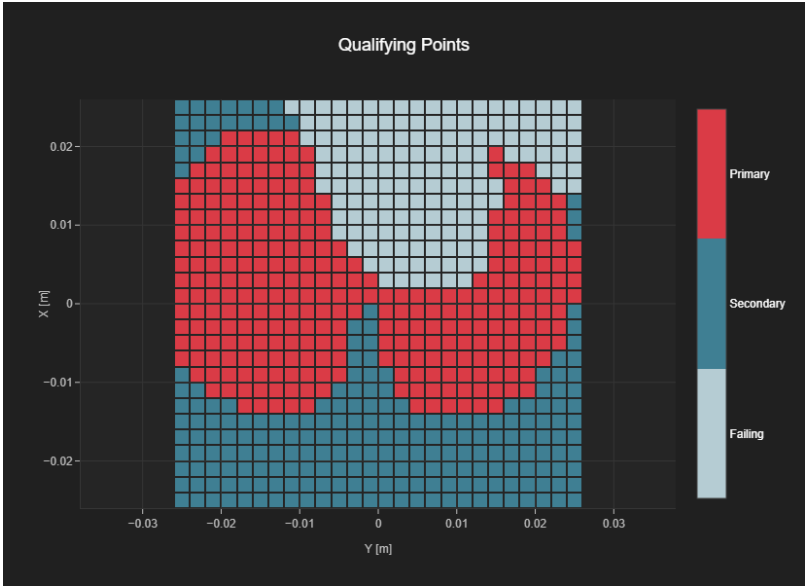
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.94	2.0



P25 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
300	523	26	26



P25 T-Coil Signal Test Report

Measurement performed on July 03, 2025 at 09:17

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		146.2 x 71.8 x 7.5	144.3

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

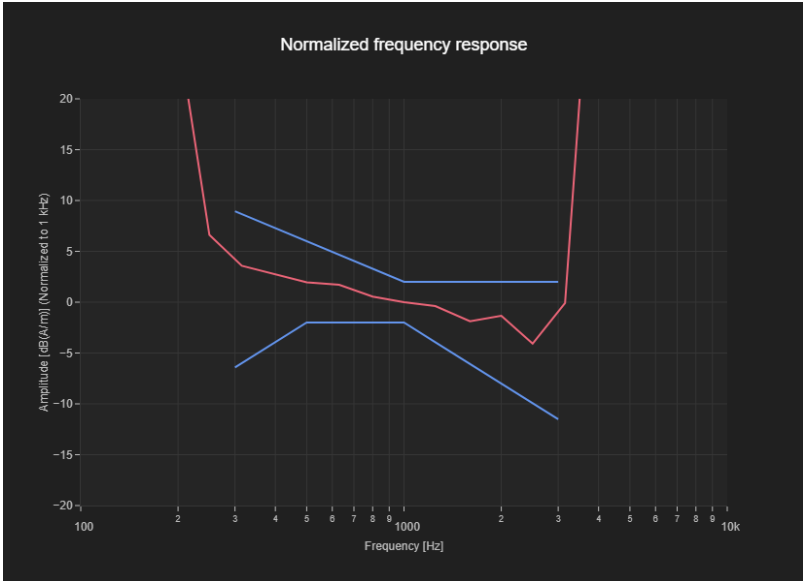
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 25, E-UTRA/FDD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	26365	1882.5

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

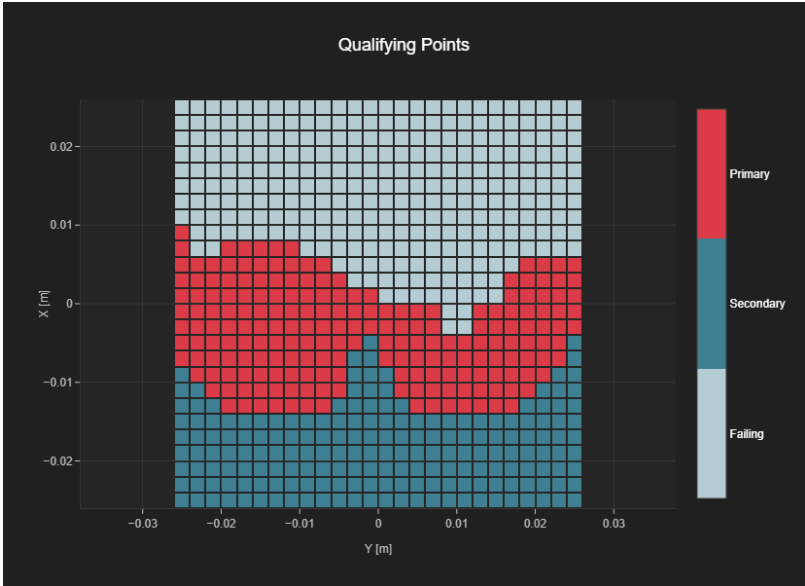
Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	2.0



P24 T-Coil Coupling Mode Test Report

Results

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
202	389	18	26



P24 T-Coil Signal Test Report

Measurement performed on June 23, 2025

Device Under Test

Manufacturer	Model	Dimensions [mm]	Speaker Position [mm]
		170 x 82 x 23	168

Hardware Setup

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3060	January 20, 2025	DAE4 Sn1698	November 20, 2024

Communication Systems

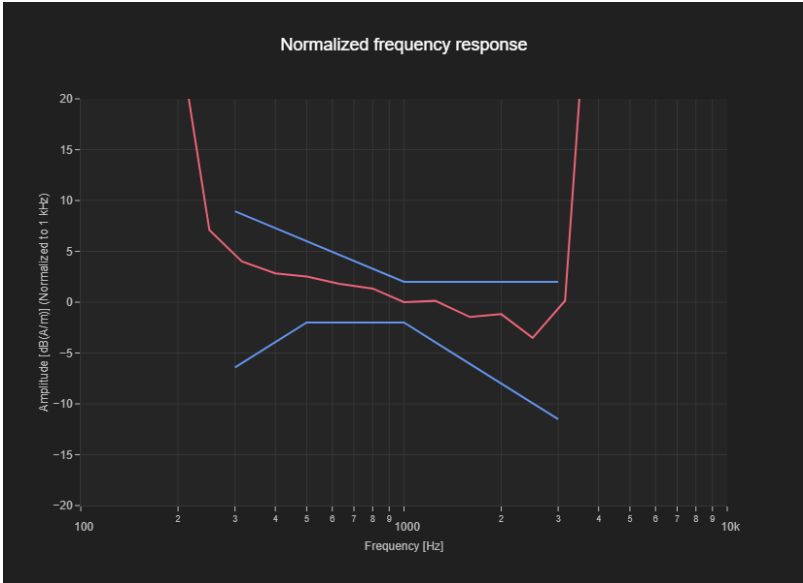
Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 41, E-UTRA/TDD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	40620	2593.0

Grid Settings

Extent X [mm]	Extent Y [mm]	Step X [mm]	Step Y [mm]	Distance [mm]
52.0	52.0	4.0	4.0	10.0

Results

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.87	2.0





Appendix B. HAC T-Coil Test Result

HAC Testing Results are shown as below.

Test Result for WCDMA**Codec Investigation**

	EUT Configuration	Band	Channel	Codec Setting	Probe Orientation	Primary Group Contiguous Point Count	Secondary Group Contiguous Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	Frequency Response Pass / Fail	
	1	WCDMA V	4182	AMR 4.75kbps	Transverse (Y)	196	574	26	26	1.6	Pass
P03	1	WCDMA V	4182	AMR 5.9kbps	Transverse (Y)	193	562	26	26	1.3	Pass
	1	WCDMA V	4182	AMR 7.4kbps	Transverse (Y)	204	579	26	26	1.44	Pass

Official Testing

Plot No.	EUT Configuration	Band	Channel	Codec Setting	Probe Orientation	Primary Group Contiguous Point Count	Secondary Group Contiguous Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	Frequency Response Pass / Fail		Ambinet Noise (dB A/m)
P01	1	WCDMA II	9400	AMR 5.9kbps	Transverse (Y)	205	584	26	26	1.38	Pass	-54.58
P02	1	WCDMA IV	1413	AMR 5.9kbps	Transverse (Y)	206	581	26	26	1.14	Pass	-54.58
P03	1	WCDMA V	4182	AMR 5.9kbps	Transverse (Y)	193	562	26	26	1.3	Pass	-54.58

Test Result for VoLTE
Radio Configuration Investigation

	EUT Configuration	Air Interface	Band	Modulation	Bandwidth (MHz)	RB Size	RB Offset	Channel	Codec Setting	UL-DL Configuration	Probe Orientation	Primary Group Contiguous Point Count	Secondary Group Contiguous Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	Frequency Response Pass / Fail	
	1	FDD-LTE	LTE B2	QPSK	20	1	0	18900	AMR WB 6.6kbps		Transverse (Y)	173	535	26	26	1.39	Pass
	1	FDD-LTE	LTE B2	QPSK	20	1	50	18900	AMR WB 6.6kbps		Transverse (Y)	159	499	26	26	0.93	Pass
	1	FDD-LTE	LTE B2	QPSK	20	1	99	18900	AMR WB 6.6kbps		Transverse (Y)	157	499	26	26	0.39	Pass
	1	FDD-LTE	LTE B2	QPSK	20	50	0	18900	AMR WB 6.6kbps		Transverse (Y)	168	524	26	26	1.82	Pass
	1	FDD-LTE	LTE B2	QPSK	20	50	25	18900	AMR WB 6.6kbps		Transverse (Y)	155	483	26	26	0.77	Pass
	1	FDD-LTE	LTE B2	QPSK	20	50	50	18900	AMR WB 6.6kbps		Transverse (Y)	145	472	26	26	0.65	Pass
	1	FDD-LTE	LTE B2	QPSK	20	100	0	18900	AMR WB 6.6kbps		Transverse (Y)	140	446	26	26	1.38	Pass
	1	FDD-LTE	LTE B2	16QAM	20	100	0	18900	AMR WB 6.6kbps		Transverse (Y)	152	486	26	26	0.23	Pass
	1	FDD-LTE	LTE B2	64QAM	20	100	0	18900	AMR WB 6.6kbps		Transverse (Y)	156	483	26	26	0.11	Pass
	1	FDD-LTE	LTE B2	256QAM	20	100	0	18900	AMR WB 6.6kbps		Transverse (Y)	153	481	26	26	0.26	Pass
	1	FDD-LTE	LTE B2	QPSK	15	75	0	18900	AMR WB 6.6kbps		Transverse (Y)	142	463	26	26	0.18	Pass
	1	FDD-LTE	LTE B2	QPSK	10	50	0	18900	AMR WB 6.6kbps		Transverse (Y)	145	466	26	26	0.14	Pass
	1	FDD-LTE	LTE B2	QPSK	5	25	0	18900	AMR WB 6.6kbps		Transverse (Y)	169	509	26	26	0.28	Pass
	1	FDD-LTE	LTE B2	QPSK	3	15	0	18900	AMR WB 6.6kbps		Transverse (Y)	170	499	26	26	0.21	Pass
	1	FDD-LTE	LTE B2	QPSK	1.4	6	0	18900	AMR WB 6.6kbps		Transverse (Y)	168	513	26	26	0.61	Pass
	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	0	Transverse (Y)	121	403	18	26	1.42	Pass
	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	1	Transverse (Y)	129	412	18	26	0.31	Pass
	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	2	Transverse (Y)	130	414	18	26	0.45	Pass
	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	3	Transverse (Y)	125	407	18	26	0.19	Pass
	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	4	Transverse (Y)	124	408	18	26	0.25	Pass
	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	5	Transverse (Y)	127	408	18	26	0.53	Pass
P15	1	TDD-LTE	LTE B41	QPSK	20	100	0	40620	AMR WB 6.6kbps	6	Transverse (Y)	111	392	18	26	0.17	Pass

Codec Investigation

	EUT Configuration	Band	Bandwidth (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Channel	Codec Setting	Probe Orientation	Primary Group Contiguous Point Count	Secondary Group Contiguous Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	Frequency Response Pass / Fail	
	1	LTE B41	20	20	100	0	40620	AMR NB 4.75kbps	Transverse (Y)	139	414	19	26	0.53	Pass
	1	LTE B41	20	20	100	0	40620	AMR NB 7.4kbps	Transverse (Y)	112	383	17	26	0.18	Pass
P15	1	LTE B41	20	20	100	0	40620	AMR WB 6.6kbps	Transverse (Y)	111	392	18	26	0.17	Pass
	1	LTE B41	20	20	100	0	40620	AMR WB 15.85kbps	Transverse (Y)	139	405	18	26	0.01	Pass
	1	LTE B41	20	20	100	0	40620	EVS NB 5.9kbps	Transverse (Y)	112	425	18	26	0.7	Pass
	1	LTE B41	20	20	100	0	40620	EVS NB 24.4kbps	Transverse (Y)	121	388	18	26	0.49	Pass
	1	LTE B41	20	20	100	0	40620	EVS WB 5.9kbps	Transverse (Y)	113	402	18	26	0.66	Pass
	1	LTE B41	20	20	100	0	40620	EVS WB 24.4kbps	Transverse (Y)	115	380	19	26	0.31	Pass
	1	LTE B41	20	20	100	0	40620	EVS SWB 9.6kbps	Transverse (Y)	147	432	19	26	0.6	Pass
	1	LTE B41	20	20	100	0	40620	EVS SWB 128kbps	Transverse (Y)	138	394	18	26	0.65	Pass

Official Testing

Plot No.	EUT Configuration	Band	Modulation	Bandwidth (MHz)	RB Size	RB Offset	Channel	UL-DL Configuration	Codec Setting	Probe Orientation	Primary Group Contiguous Point Count	Secondary Group Contiguous Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	Frequency Response Pass / Fail		Ambinet Noise (dB A/m)
P04	1	LTE B2	QPSK	20	100	0	18900		AMR WB 6.6kbps	Transverse (Y)	140	446	26	26	1.38	Pass	-55.35
P05	1	LTE B4	QPSK	20	100	0	20175		AMR WB 6.6kbps	Transverse (Y)	152	460	26	26	0.22	Pass	-55.15
P06	1	LTE B5	QPSK	10	50	0	20525		AMR WB 6.6kbps	Transverse (Y)	154	477	26	26	0.6	Pass	-55.12
P07	1	LTE B12	QPSK	10	50	0	23095		AMR WB 6.6kbps	Transverse (Y)	173	536	26	26	0.19	Pass	-55.54
P08	1	LTE B13	QPSK	10	50	0	23230		AMR WB 6.6kbps	Transverse (Y)	160	531	26	26	0.43	Pass	-55.68
P09	1	LTE B14	QPSK	10	50	0	23330		AMR WB 6.6kbps	Transverse (Y)	157	506	26	26	0.92	Pass	-55.64
P10	1	LTE B17	QPSK	10	50	0	23790		AMR WB 6.6kbps	Transverse (Y)	157	505	26	26	0.77	Pass	-55.77
P11	1	LTE B25	QPSK	20	100	0	26365		AMR WB 6.6kbps	Transverse (Y)	131	442	25	26	0.65	Pass	-55.80
P12	1	LTE B26	QPSK	15	75	0	26865		AMR WB 6.6kbps	Transverse (Y)	157	486	26	26	0.97	Pass	-55.78
P13	1	LTE B30	QPSK	10	50	0	27710		AMR WB 6.6kbps	Transverse (Y)	148	527	26	26	0.58	Pass	-55.53
P14	1	LTE B38	QPSK	20	100	0	38000		AMR WB 6.6kbps	Transverse (Y)	120	406	18	26	0.53	Pass	-55.04
P15	1	LTE B41	QPSK	20	100	0	40620		AMR WB 6.6kbps	Transverse (Y)	111	392	18	26	0.17	Pass	-55.09
P16	1	LTE B42	QPSK	20	100	0	43190		AMR WB 6.6kbps	Transverse (Y)	144	442	21	26	0.39	Pass	-54.98
P27	1	LTE B43	QPSK	20	100	0	44490		AMR WB 6.6kbps	Transverse (Y)	142	442	21	26	0.73	Pass	-55.27
P18	1	LTE B48	QPSK	20	100	0	56210		AMR WB 6.6kbps	Transverse (Y)	142	442	22	26	1.13	Pass	-55.56
P19	1	LTE B66	QPSK	20	100	0	132322		AMR WB 6.6kbps	Transverse (Y)	144	456	26	26	0.76	Pass	-55.54
P20	1	LTE B70	QPSK	15	75	0	133047		AMR WB 6.6kbps	Transverse (Y)	131	484	26	26	0.43	Pass	-55.61
P21	1	LTE B71	QPSK	20	100	0	133297		AMR WB 6.6kbps	Transverse (Y)	136	476	25	26	0.96	Pass	-55.60

Test Result for OTT Voice Calling**Official Testing**

Plot No.	EUT Configuration	Band	Mode	Channel	OTT	Probe Orientation	Primary Group Contiguous Point Count	Secondary Group Contiguous Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	Frequency Response Pass / Fail		Ambinet Noise (dB A/m)
P22	1	WCDMA V	HSPA	4182	Google Meet	Transverse (Y)	312	552	26	26	1.94	Pass	-54.81
P25	1	LTE 25	QPSK20M	26365	Google Meet	Transverse (Y)	300	523	26	26	2	Pass	-55
P24	1	LTE 41	QPSK20M	40620	Google Meet	Transverse (Y)	202	389	18	26	1.87	Pass	-55

Appendix Z. Calibration Certificate for Probe

The SPEAG calibration certificates are shown as follows.



Accredited by the Swiss Accreditation Service (SAS)
 The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **B.V. ADT**
Taoyuan City

Certificate No. **AM1DV3-3060_Jan25**

CALIBRATION CERTIFICATE

Object **AM1DV3 - SN: 3060**

Calibration procedure(s) **QA CAL-24.v4**
Calibration procedure for AM1D magnetic field probes and TMFS in the audio range

Calibration date: **January 20, 2025**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	27-Aug-24 (No. 40547)	Aug-25
Reference Probe AM1DV3	SN: 3000	25-Sep-24 (No. AM1DV3-3000_Sep24)	Sep-25
DAE4	SN: 781	16-Feb-24 (No. DAE4-781_Feb24)	Feb-25

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
AMCC	SN: 1050	01-Oct-13 (in house check Sep-24)	Sep-25
AMMI Audio Measuring Instrument	SN: 1062	26-Sep-12 (in house check Sep-24)	Sep-25

	Name	Function	Signature
Calibrated by:	Aidonia Georgiadou	Laboratory Technician	

Approved by:	Sven Kühn	Technical Manager
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Issued: January 20, 2025

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

[References]

- [1] ANSI-C63.19-2007
American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.
- [2] ANSI-C63.19-2019 (ANSI-C63.19-2011)
American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.
- [3] DASY System Handbook

Description of the AM1D probe

The AM1D Audio Magnetic Field Probe is a fully shielded magnetic field probe for the frequency range from 100 Hz to 20 kHz. The pickup coil is compliant with the dimensional requirements of [1+2]. The probe includes a symmetric low noise amplifier for the signal available at the shielded 3 pin connector at the side. Power is supplied via the same connector (phantom power supply) and monitored via the LED near the connector. The 7 pin connector at the end of the probe does not carry any signals, but determines the angle of the sensor when mounted on the DAE. The probe supports mechanical detection of the surface.

The single sensor in the probe is arranged in a tilt angle allowing measurement of 3 orthogonal field components when rotating the probe by 120° around its axis. It is aligned with the perpendicular component of the field, if the probe axis is tilted nominally 35.3° above the measurement plane, using the connector rotation and sensor angle stated below.

The probe is fully RF shielded when operated with the matching signal cable (shielded) and allows measurement of audio magnetic fields in the close vicinity of RF emitting wireless devices according to [1+2] without additional shielding.

Handling of the item

The probe is manufactured from stainless steel. In order to maintain the performance and calibration of the probe, it must not be opened. The probe is designed for operation in air and shall not be exposed to humidity or liquids. For proper operation of the surface detection and emergency stop functions in a DASY system, the probe must be operated with the special probe cup provided (larger diameter).

Methods Applied and Interpretation of Parameters

- *Coordinate System:* The AM1D probe is mounted in the DASY system for operation with a HAC Test Arch phantom with AMCC Helmholtz calibration coil according to [3], with the tip pointing to “southwest” orientation.
- *Functional Test:* The functional test preceding calibration includes test of Noise level
RF immunity (1kHz AM modulated signal). The shield of the probe cable must be well connected.
Frequency response verification from 100 Hz to 10 kHz.
- *Connector Rotation:* The connector at the end of the probe does not carry any signals and is used for fixation to the DAE only. The probe is operated in the center of the AMCC Helmholtz coil using a 1 kHz magnetic field signal. Its angle is determined from the two minima at nominally +120° and –120° rotation, so the sensor in the tip of the probe is aligned to the vertical plane in z-direction, corresponding to the field maximum in the AMCC Helmholtz calibration coil.
- *Sensor Angle:* The sensor tilting in the vertical plane from the ideal vertical direction is determined from the two minima at nominally +120° and –120°. DASY system uses this angle to align the sensor for radial measurements to the x and y axis in the horizontal plane.

Sensitivity: With the probe sensor aligned to the z-field in the AMCC, the output of the probe is compared to the magnetic field in the AMCC at 1 kHz. The field in the AMCC Helmholtz coil is given by the geometry and the current through the coil, which is monitored on the precision shunt resistor of the coil.

AM1D probe identification and configuration data

Item	AM1DV3 Audio Magnetic 1D Field Probe
Type No	SP AM1 001 BA
Serial No	3060

Overall length	296 mm
Tip diameter	6.0 mm (at the tip)
Sensor offset	3.0 mm (centre of sensor from tip)
Internal Amplifier	20 dB

Manufacturer / Origin	Schmid & Partner Engineering AG, Zurich, Switzerland
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Calibration data

Connector rotation angle	(in DASY system)	52.9°	+/- 3.6 ° (k=2)
Sensor angle	(in DASY system)	0.58°	+/- 0.5 ° (k=2)
Sensitivity at 1 kHz	(in DASY system)	0.00733 V/(A/m)	+/- 2.2 % (k=2)

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.