# 01\_HAC T-coil\_WCDMA II\_Voice\_Ch9400

Measurement performed on October 18, 2024 at 04:19

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

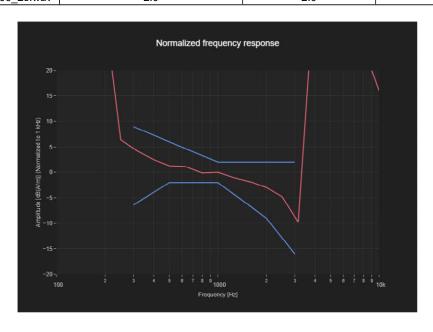
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 2	UMTS-FDD (WCDMA, AMR)	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k voice 300-3000 2s way	2.0	2.0	1.86



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
421	676	26	26



# 02\_HAC T-coil\_WCDMA IV\_Voice\_Ch1413

Measurement performed on October 18, 2024 at 06:29

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

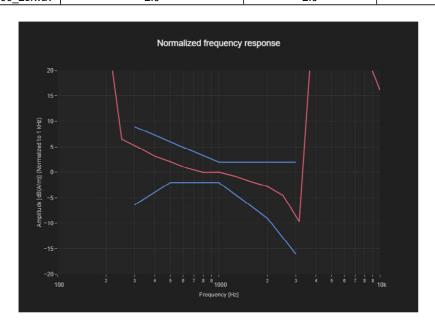
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 4	UMTS-FDD (WCDMA, AMR)	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k voice 300-3000 2s.way	2.0	2.0	1.95



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
424	676	26	26



# 03\_HAC T-coil\_WCDMA V\_Voice\_Ch4182

Measurement performed on October 08, 2024 at 14:05

## **Device Under Test**

Manufacturer	Model Dimensions [mm] Speaker Positio		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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

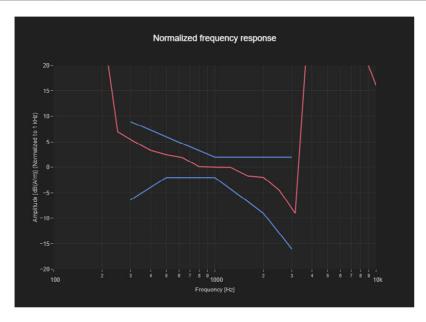
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 5	UMTS-FDD (WCDMA, AMR)	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

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



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
427	676	26	26



# 04\_HAC T-coil\_LTE Band 7\_20M\_QPSK\_100RB\_0Offset\_Ch21100

Measurement performed on October 18, 2024 at 06:45

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

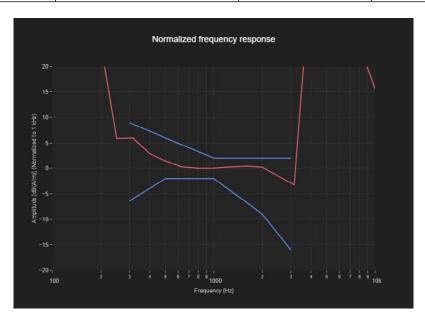
## **Communication Systems**

Band Name Communication Systems Name		Channel	Frequency [MHz]
IRand /	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	21100	2535.0

## **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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.6	1.97



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
313	596	26	26



## 05\_HAC T-coil\_LTE Band 7\_20M\_QPSK\_100RB\_0Offset\_Ch21100

Measurement performed on October 21, 2024 at 12:02

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

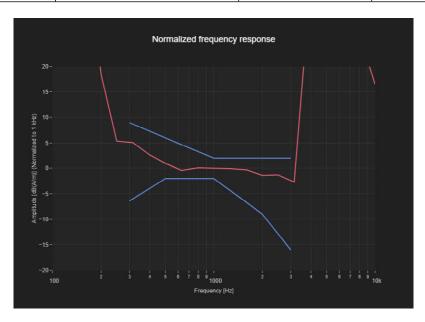
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IRand /	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	21100	2535.0

## **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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	2.0	1.55



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
269	561	25	26



# 06\_HAC T-coil\_LTE Band 12\_10M\_QPSK\_50RB\_0Offset\_Ch23095

Measurement performed on October 18, 2024 at 07:51

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

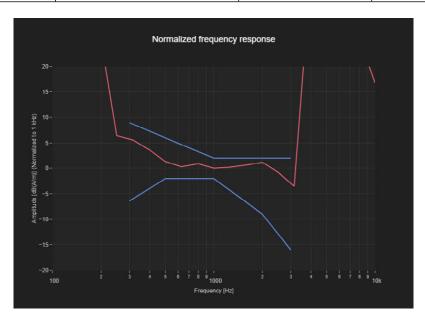
## **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 12	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	0.85	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
318	646	26	26



# 07\_HAC T-coil\_LTE Band 13\_10M\_QPSK\_50RB\_0Offset\_Ch23230

Measurement performed on October 18, 2024 at 08:30

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

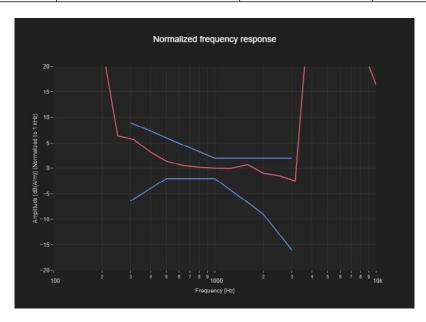
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IRand 13	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.34	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
342	652	26	26



# 08\_HAC T-coil\_LTE Band 14\_10M\_QPSK\_50RB\_0Offset\_Ch23330

Measurement performed on October 21, 2024 at 18:49

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

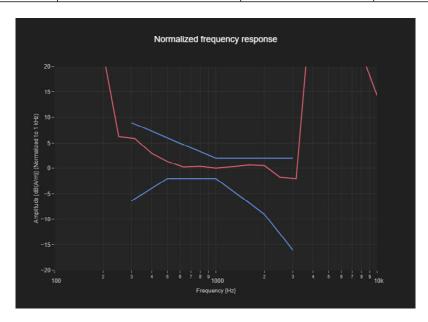
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IRand 14	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

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



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
312	648	26	26



## 09\_HAC T-coil\_LTE Band 25\_20M\_QPSK\_100RB\_0Offset\_Ch26340

Measurement performed on October 16, 2024 at 17:05

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

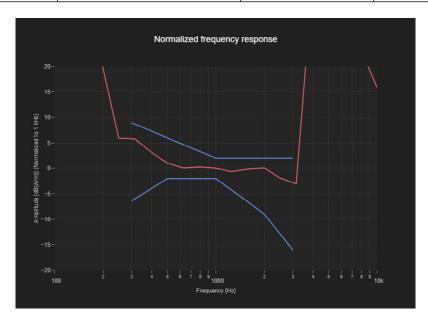
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 25	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	26340	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

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



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
308	597	26	26



## 10\_HAC T-coil\_LTE Band 2\_20M\_QPSK\_100RB\_0Offset\_Ch18900

Measurement performed on October 21, 2024 at 14:38

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

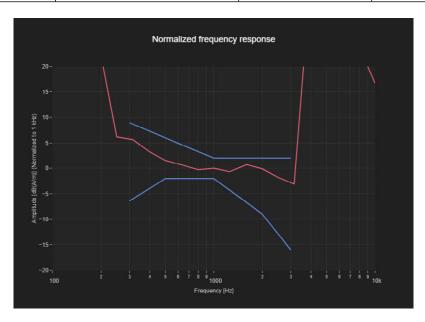
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 2	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.28	1.72



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
233	519	24	26



## 11\_HAC T-coil\_LTE Band 26\_15M\_QPSK\_75RB\_0Offset\_Ch26865

Measurement performed on October 21, 2024 at 18:12

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

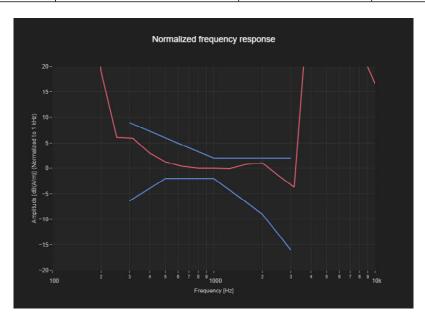
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 26	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

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



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
322	650	26	26



# 12\_HAC T-coil\_LTE Band 30\_10M\_QPSK\_50RB\_0Offset\_Ch27710

Measurement performed on October 21, 2024 at 20:00

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

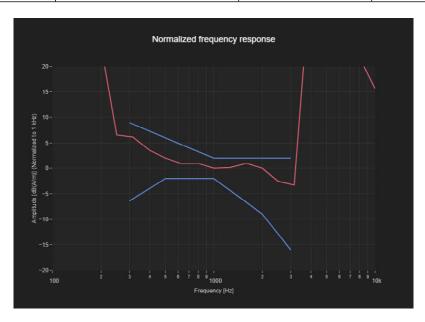
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IBand 30	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.05	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
274	610	26	26



# 13\_HAC T-coil\_LTE Band 30\_10M\_QPSK\_50RB\_0Offset\_Ch27710

Measurement performed on October 21, 2024 at 16:22

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

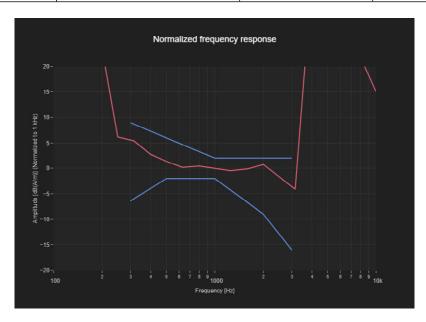
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IBand 30	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.26	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
225	517	24	26



## 14\_HAC T-coil\_LTE Band 66\_20M\_QPSK\_100RB\_0Offset\_Ch132322

Measurement performed on October 21, 2024 at 19:42

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

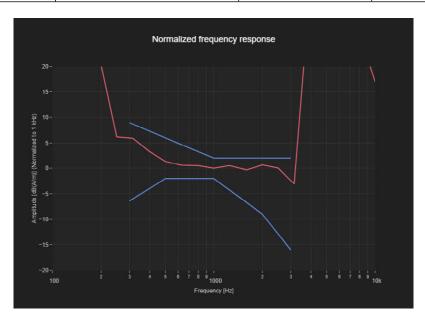
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 66	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.33	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
282	596	26	26



## 15\_HAC T-coil\_LTE Band 66\_20M\_QPSK\_100RB\_0Offset\_Ch132322

Measurement performed on October 21, 2024 at 15:41

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

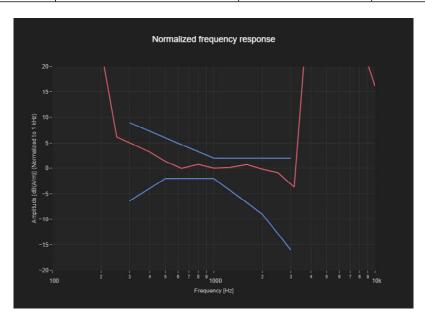
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 66	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.3	1.97



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
248	532	24	26



# 16\_HAC T-coil\_LTE Band 71\_20M\_QPSK\_100RB\_0Offset\_Ch133297

Measurement performed on October 21, 2024 at 18:34

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

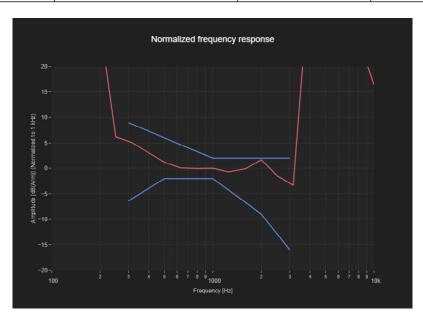
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 71	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	0.34	1.95



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
311	638	26	26



# 17\_HAC T-coil\_FR1 n7\_40M\_QPSK\_1RB\_1Offset\_Ch507000

Appendix A

Measurement performed on October 16, 2024 at 23:56

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

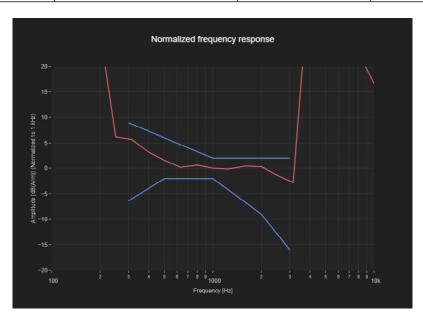
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n7	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	507000	2535.0

## **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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.58	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
237	539	26	26



# 18\_HAC T-coil\_FR1 n7\_40M\_QPSK\_1RB\_1Offset\_Ch507000

Appendix A

Measurement performed on October 18, 2024 at 10:05

## **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 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

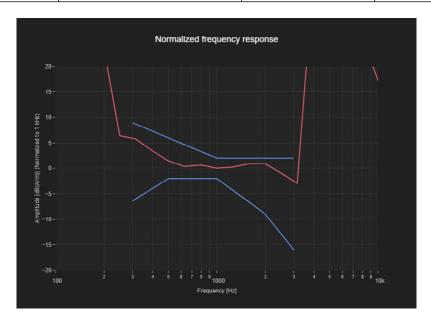
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n7	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	507000	2535.0

## **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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	1.1	2.0



# **T-Coil Coupling Mode Test Report**

Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
227	530	24	26

