# 01\_HAC T-coil\_GSM850\_Voice\_Ch189

Measurement performed on December 12, 2024 at 09:59

#### **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

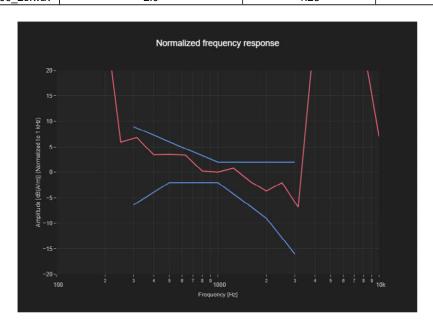
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
GSM 850	GSM-FDD (TDMA, GMSK)	189	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.way	2.0	1.23	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
33	266	14	26



### 02\_HAC T-coil\_GSM1900\_Voice\_Ch661

Measurement performed on December 15, 2024 at 15:16

#### **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

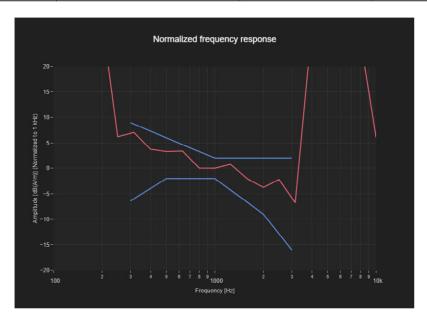
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
PCS 1900	GSM-FDD (TDMA, GMSK)	661	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	1.24	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse	
109	368	18	26	l



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

Measurement performed on December 15, 2024 at 16:06

#### **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

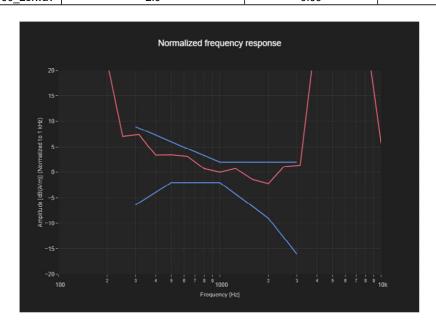
# **Communication Systems**

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	0.69	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
225	519	22	26



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

Measurement performed on December 15, 2024 at 15:39

#### **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

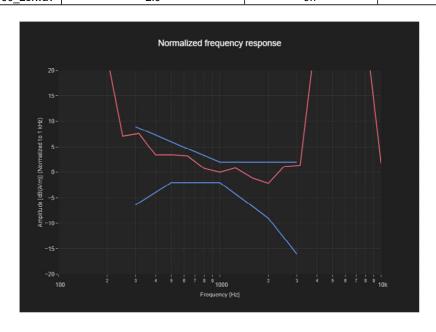
# **Communication Systems**

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	0.7	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
206	503	23	26



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

Measurement performed on December 12, 2024 at 14:45

#### **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

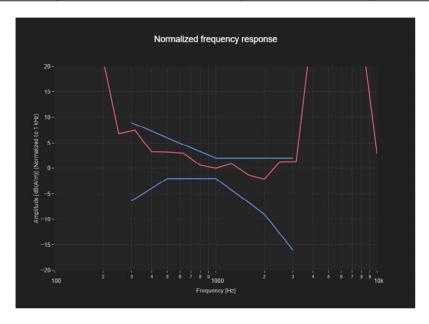
# **Communication Systems**

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

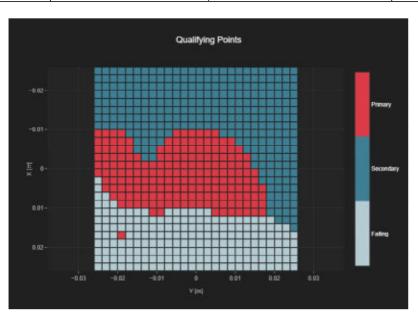
## **Grid Settings**

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	0.7	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
189	478	21	26



### 06\_HAC T-coil\_LTE Band 7\_20M\_QPSK\_1RB\_0Offset\_Ch21100

Measurement performed on December 14, 2024 at 07:22

#### **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

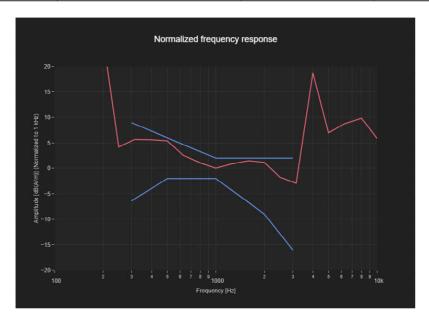
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 7	LTE-FDD (SC-FDMA, 1 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	0.54	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
192	480	21	26



# 07\_HAC T-coil\_LTE Band 7\_20M\_QPSK\_1RB\_0Offset\_Ch21100

Appendix A

Measurement performed on December 19, 2024 at 08:33

#### **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

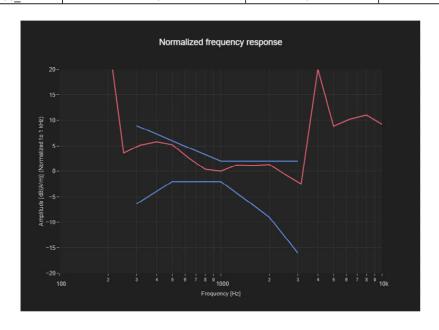
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 7	LTE-FDD (SC-FDMA, 1 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 way	2.0	0.7	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
166	438	18	26



## 08\_HAC T-coil\_LTE Band 12\_10M\_QPSK\_1RB\_0Offset\_Ch23095

Measurement performed on December 15, 2024 at 13:13

#### **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

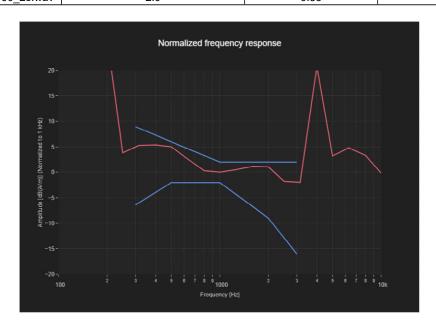
## **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 12	LTE-FDD (SC-FDMA, 1 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 way	2.0	0.85	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
226	523	23	26



## 09\_HAC T-coil\_LTE Band 13\_10M\_QPSK\_1RB\_0Offset\_Ch23230

Measurement performed on December 15, 2024 at 12:49

#### **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

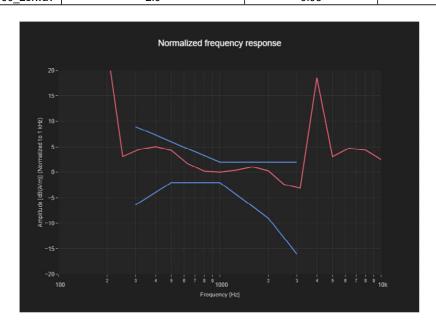
### **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 13	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	23230	782.0

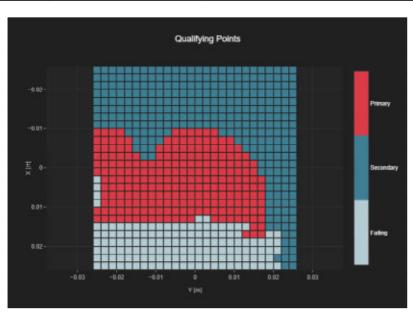
### **Grid Settings**

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 way	2.0	0.95	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
231	534	26	26



## 10\_HAC T-coil\_LTE Band 14\_10M\_QPSK\_1RB\_0Offset\_Ch23330

Measurement performed on December 16, 2024 at 10:38

#### **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

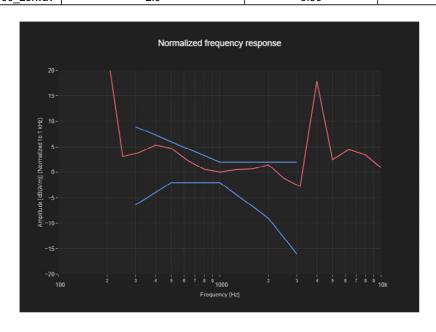
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 14	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	23330	793.0

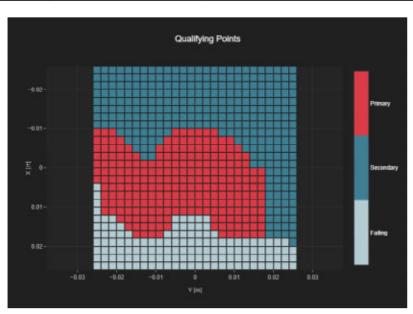
### **Grid Settings**

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 way	2.0	0.56	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
241	540	23	26



### 11\_HAC T-coil\_LTE Band 25\_20M\_QPSK\_1RB\_0Offset\_Ch26340

Measurement performed on December 10, 2024 at 10:48

#### **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

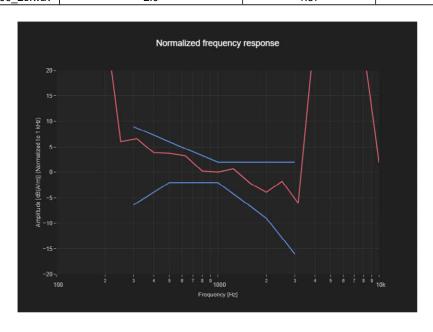
## **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 25	LTE-FDD (SC-FDMA, 1 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 way	2.0	1.37	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
211	505	22	26



### 12\_HAC T-coil\_LTE Band 2\_20M\_QPSK\_1RB\_0Offset\_Ch18900

Measurement performed on December 24, 2024 at 02:32

#### **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

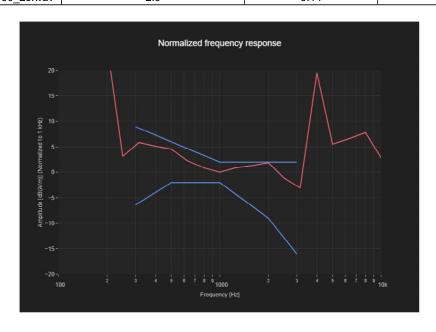
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 2	LTE-FDD (SC-FDMA, 1 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 way	2.0	0.14	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
184	461	19	26



## 13\_HAC T-coil\_LTE Band 26\_15M\_QPSK\_1RB\_0Offset\_Ch26865

Measurement performed on December 15, 2024 at 11:10

#### **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

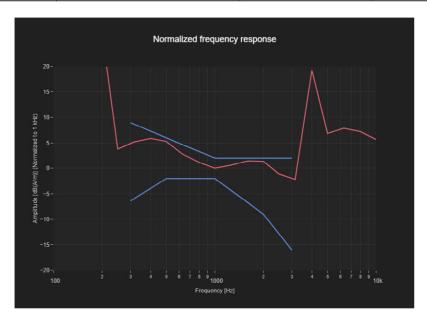
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 26	LTE-FDD (SC-FDMA, 1 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	0.58	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
210	509	22	26



### 14\_HAC T-coil\_LTE Band 30\_10M\_QPSK\_1RB\_0Offset\_Ch27710

Measurement performed on December 14, 2024 at 07:46

#### **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

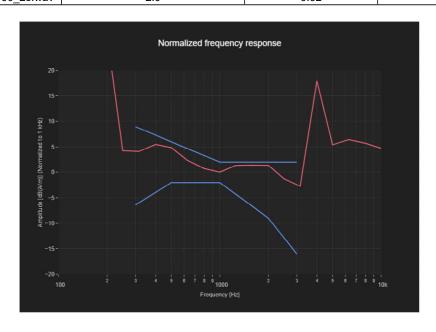
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 30	LTE-FDD (SC-FDMA, 1 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 way	2.0	0.62	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
199	493	21	26



### 15\_HAC T-coil\_LTE Band 66\_20M\_QPSK\_1RB\_0Offset\_Ch132322

Measurement performed on December 14, 2024 at 06:57

#### **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

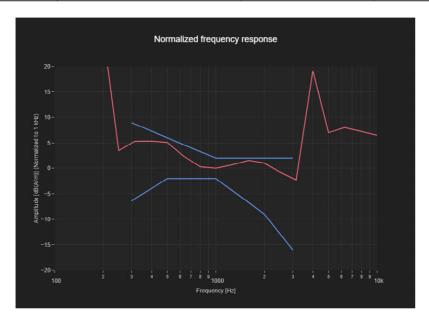
### **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 66	LTE-FDD (SC-FDMA, 1 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	0.48	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
205	495	22	26



# 16\_HAC T-coil\_LTE Band 66\_20M\_QPSK\_1RB\_0Offset\_Ch132322

Measurement performed on December 18, 2024 at 22:54

#### **Device Under Test**

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

Appendix A

#### **Hardware Setup**

Probe Name	Probe Calibration Date	DAE Name	DAE Calibration Date
AM1DV3 - 3093	June 05, 2024	DAE4 Sn1691	April 19, 2024

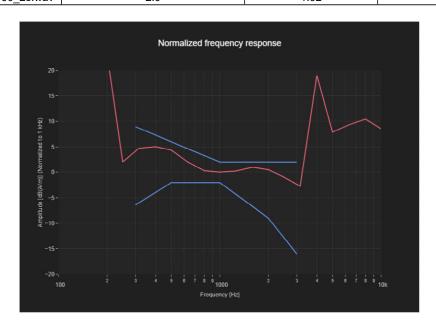
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 66	LTE-FDD (SC-FDMA, 1 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 way	2.0	1.02	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
229	526	23	26



### 17\_HAC T-coil\_LTE Band 71\_20M\_QPSK\_1RB\_0Offset\_Ch133297

Measurement performed on December 15, 2024 at 13:40

#### **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

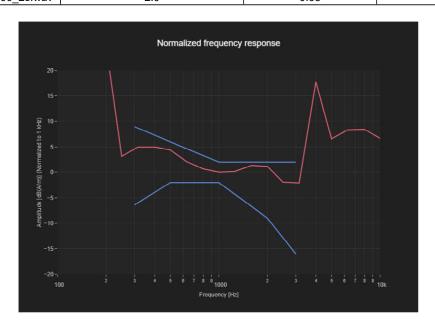
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 71	LTE-FDD (SC-FDMA, 1 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.way	2.0	0.68	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
220	520	23	26



### 18\_HAC T-coil\_LTE Band 41\_20M\_QPSK\_1RB\_0Offset\_Ch40620

Measurement performed on December 09, 2024 at 19:28

#### **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

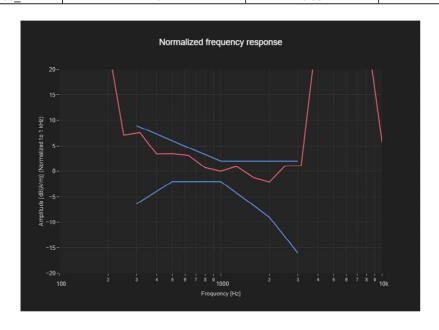
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 41	LTE-TDD (SC-FDMA, 1 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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k voice 300-3000 2s way	2.0	0.93	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
170	448	19	26



## 19\_HAC T-coil\_LTE Band 42\_20M\_QPSK\_1RB\_0Offset\_Ch42590

Measurement performed on December 15, 2024 at 09:58

#### **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

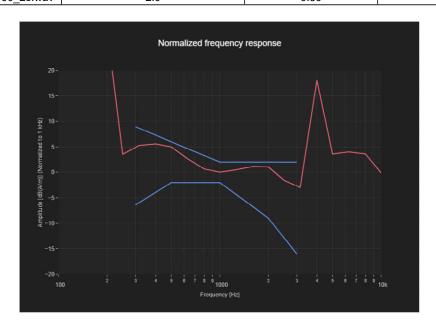
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 42	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	42590	3500.0

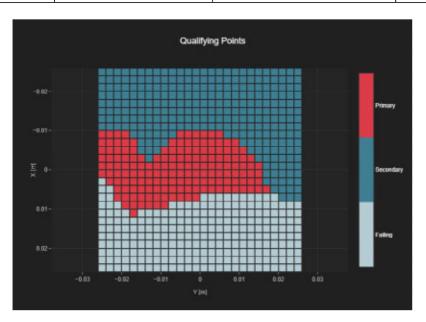
## **Grid Settings**

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	0.89	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
159	434	19	26



## 20\_HAC T-coil\_LTE Band 48\_20M\_QPSK\_1RB\_0Offset\_Ch55830

Measurement performed on December 15, 2024 at 10:30

#### **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

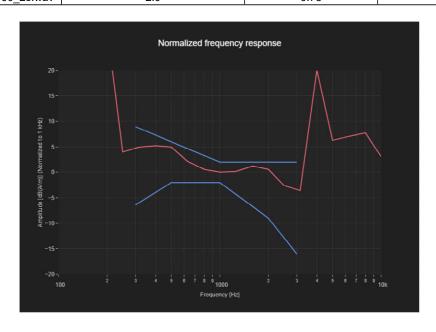
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band 48	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	55830	3609.0

## **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	0.78	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
161	432	19	26



## 21\_HAC T-coil\_FR1 n7\_50M\_QPSK\_1RB\_1Offset\_Ch507000

Measurement performed on December 11, 2024 at 07:44

#### **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

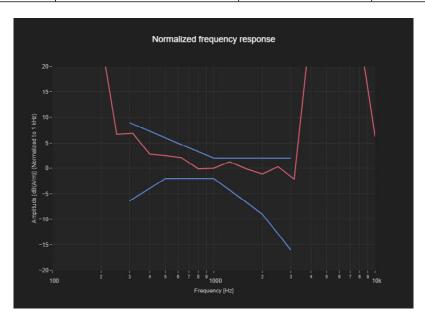
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n7	5G NR (DFT-s-OFDM, 1 RB, 50 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	0.75	1.89



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
192	508	22	26



## 22\_HAC T-coil\_FR1 n7\_50M\_QPSK\_1RB\_1Offset\_Ch507000

Measurement performed on December 24, 2024 at 06:22

#### **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

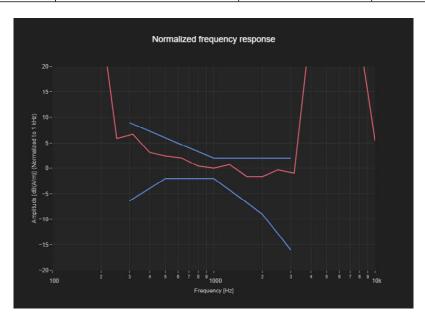
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n7	5G NR (DFT-s-OFDM, 1 RB, 50 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	1.29	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
195	505	22	26



## 23\_HAC T-coil\_FR1 n12\_15M\_QPSK\_1RB\_1Offset\_Ch141500

Measurement performed on December 11, 2024 at 05:58

#### **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

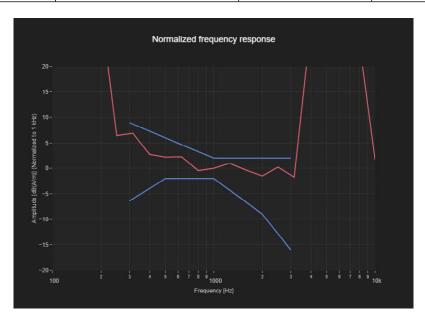
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n12	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	141500	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	1.03	1.54



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
203	524	23	26



## 24\_HAC T-coil\_FR1 n12\_15M\_QPSK\_1RB\_1Offset\_Ch141500

Measurement performed on December 24, 2024 at 06:42

#### **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

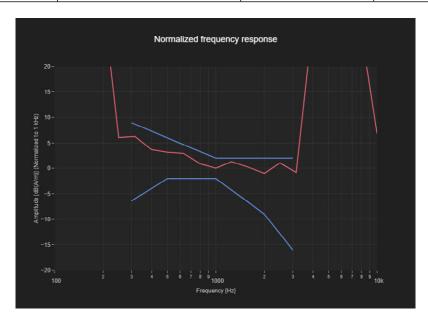
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n12	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	141500	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	0.72	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
172	503	22	26



## 25\_HAC T-coil\_FR1 n14\_10M\_QPSK\_1RB\_1Offset\_Ch158600

Measurement performed on December 11, 2024 at 06:17

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

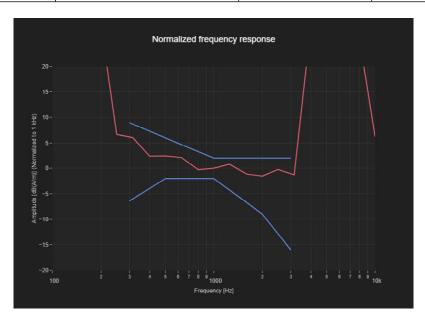
## **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n14	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	158600	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	1.21	1.71



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
194	515	24	26



## 26\_HAC T-coil\_FR1 n25\_40M\_QPSK\_1RB\_1Offset\_Ch376500

Measurement performed on December 12, 2024 at 02:04

#### **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

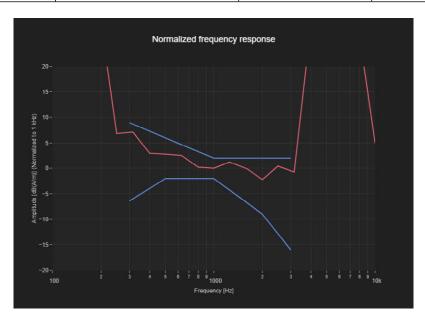
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n25	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	376500	1882.5

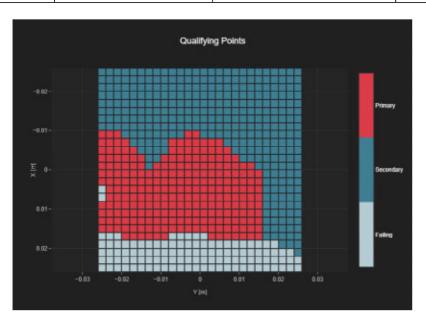
## **Grid Settings**

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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	0.78	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
243	566	24	26



#### 26\_1 HAC T-coil\_FR1 n25\_40M\_QPSK\_1RB\_1Offset\_Ch376500

Measurement performed on January 11, 2025 at 13:50

#### **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

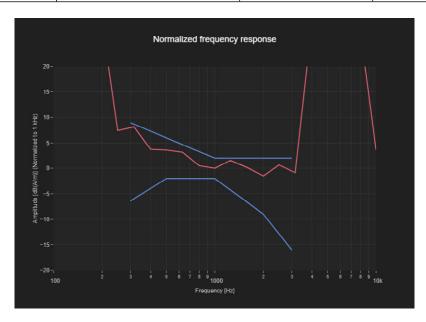
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n25	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	376500	1882.5

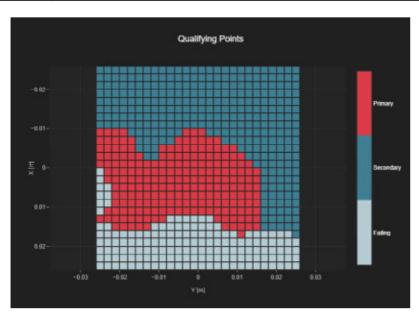
## **Grid Settings**

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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	0.47	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
213	522	22	26



## 27\_HAC T-coil\_FR1 n2\_40M\_QPSK\_1RB\_1Offset\_Ch376000

Measurement performed on December 19, 2024 at 01:57

#### **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

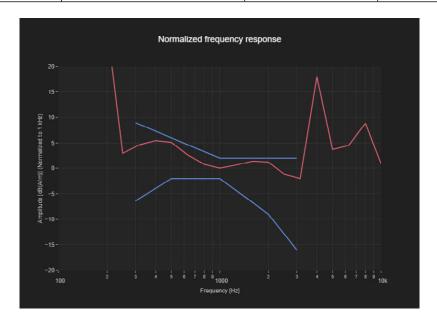
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n2	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	376000	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	0.64	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
190	472	20	26



## 28\_HAC T-coil\_FR1 n26\_20M\_QPSK\_1RB\_1Offset\_Ch166300

Appendix A

Measurement performed on December 11, 2024 at 07:04

#### **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

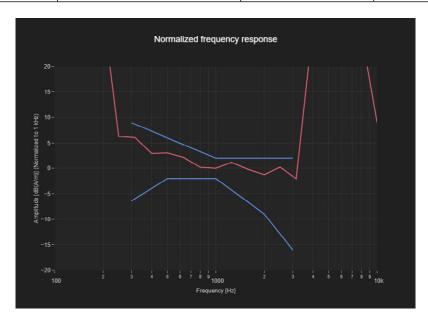
## **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IBand n/h	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	166300	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	0.87	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
201	516	22	26



## 29\_HAC T-coil\_FR1 n5\_20M\_QPSK\_1RB\_1Offset\_Ch167300

Measurement performed on December 24, 2024 at 07:08

#### **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

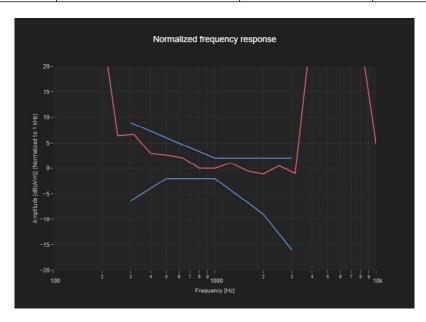
## **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
IBand n5	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	167300	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

Audio File	Measurement Duration [s]	Margin Upper Bound [dB]	Margin Lower Bound [dB]
48k_voice_300-3000_2s.wav	2.0	0.95	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
195	513	23	26



## 30\_HAC T-coil\_FR1 n26\_20M\_QPSK\_1RB\_1Offset\_Ch166300

Measurement performed on December 24, 2024 at 07:33

#### **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

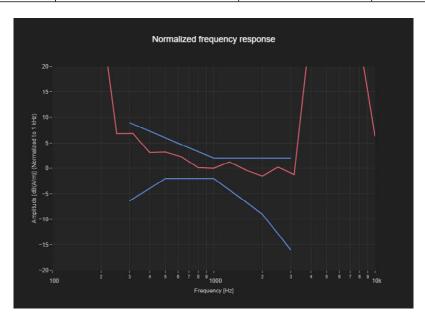
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n26	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	166300	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	0.77	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
198	513	23	26



## 31\_HAC T-coil\_FR1 n30\_10M\_QPSK\_1RB\_1Offset\_Ch462000

Measurement performed on December 12, 2024 at 02:34

#### **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

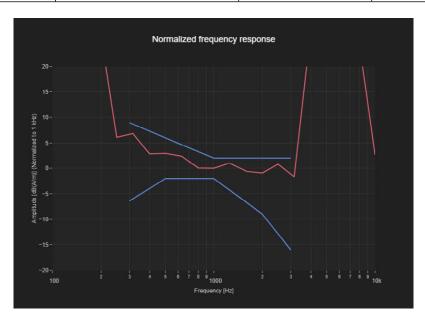
# **Communication Systems**

Band Name	nd Name Communication Systems Name		Frequency [MHz]
Band n30	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	462000	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	1.02	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
278	614	26	26



## 32\_HAC T-coil\_FR1 n66\_45M\_QPSK\_1RB\_1Offset\_Ch349000

Measurement performed on December 11, 2024 at 08:29

#### **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

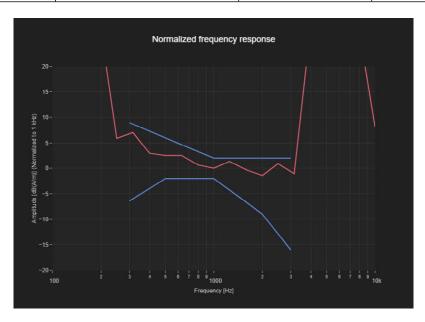
# **Communication Systems**

Band Name	Communication Systems Name	Channel	Frequency [MHz]
Band n66	5G NR (DFT-s-OFDM, 1 RB, 45 MHz, QPSK, 15 kHz)	349000	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	0.67	2.0



Primary Group Contiguous Point Count	Secondary Group Point Count	Secondary Group Max Longitudinal	Secondary Group Max Transverse
196	508	21	26



## 33\_HAC T-coil\_FR1 n66\_45M\_QPSK\_1RB\_1Offset\_Ch349000

Measurement performed on December 19, 2024 at 02:23

#### **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 n66	5G NR (DFT-s-OFDM, 1 RB, 45 MHz, QPSK, 15 kHz)	349000	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	1.01	2.0

